



Shanghai Yongming Electronics Co., Ltd.



ALUMINUM ELECTROLYTIC CAPACITORS

LARGE LIQUID

LARGE LIQUID ALUMINUM ELECTROLYTIC CAPACITOR

Capacitor Solutions, Ask YMIN for your Applications

Table of contents

Company Profile	1
Product Overview	2
Product System Diagram	3-4
Product Coding Rules	5-6
Packaging Quantity Table	7
Liquid Large Aluminum Electrolytic Capacitors	8-94
Substrate Self-standing Type	8-74
Screw Type	75-94
Application Areas	95
Cooperating Brands	96
Usage Precautions	97-103
Typical Failure Modes and Their Main Causes	104
Yongming Other Product Lines	105



Shanghai Yongming Electronics Co., Ltd.

Shanghai Yongming Electronics Co., Ltd., established in 2001, has always adhered to the service philosophy of "For capacitor applications, if you have any problems, find Yongming." It is a high-tech enterprise specializing in the development of new products, high-precision manufacturing, and application promotion of various capacitors. It is a key new product enterprise in Shanghai, a high-tech enterprise in Shanghai, a brand product enterprise in Shanghai, and an AAA credit-rated enterprise. With a registered capital of 30 million yuan and a land area of 40,000 square meters (60 mu), it has obtained ISO9001, ISO14001, ISO45001, IATF16949 (international standard for the automotive industry), and national military standard quality management system certifications. Its products comply with national grid metrology and testing certifications, RoHS, REACH, and AEC-Q200 (passive component automotive-grade quality certification). Yongming insists on developing innovative products based on customer needs, increasing research investment, and contributing to industry progress.



Business Unit Introduction



- In 2009, a production line for large-capacity 600V series ultra-high voltage electrolytic capacitors was established to meet the demand. The production line consists of snap-in and bolt-type products.
- We introduce advanced equipment, materials, and technologies from both domestic and international sources to develop and produce various series of large aluminum electrolytic capacitors, including snap-in and bolt-type capacitors.



- Currently, we have the R&D and production capabilities for 12 snap-in series and 7 bolt series, and we can also customize large-sized snap-in and bolt products with special requirements for customers.
- To meet the market's demand for high reliability, YMIN has designed its own unique capacitor defect handling technology in the process, which significantly reduces the failure rate of large products.

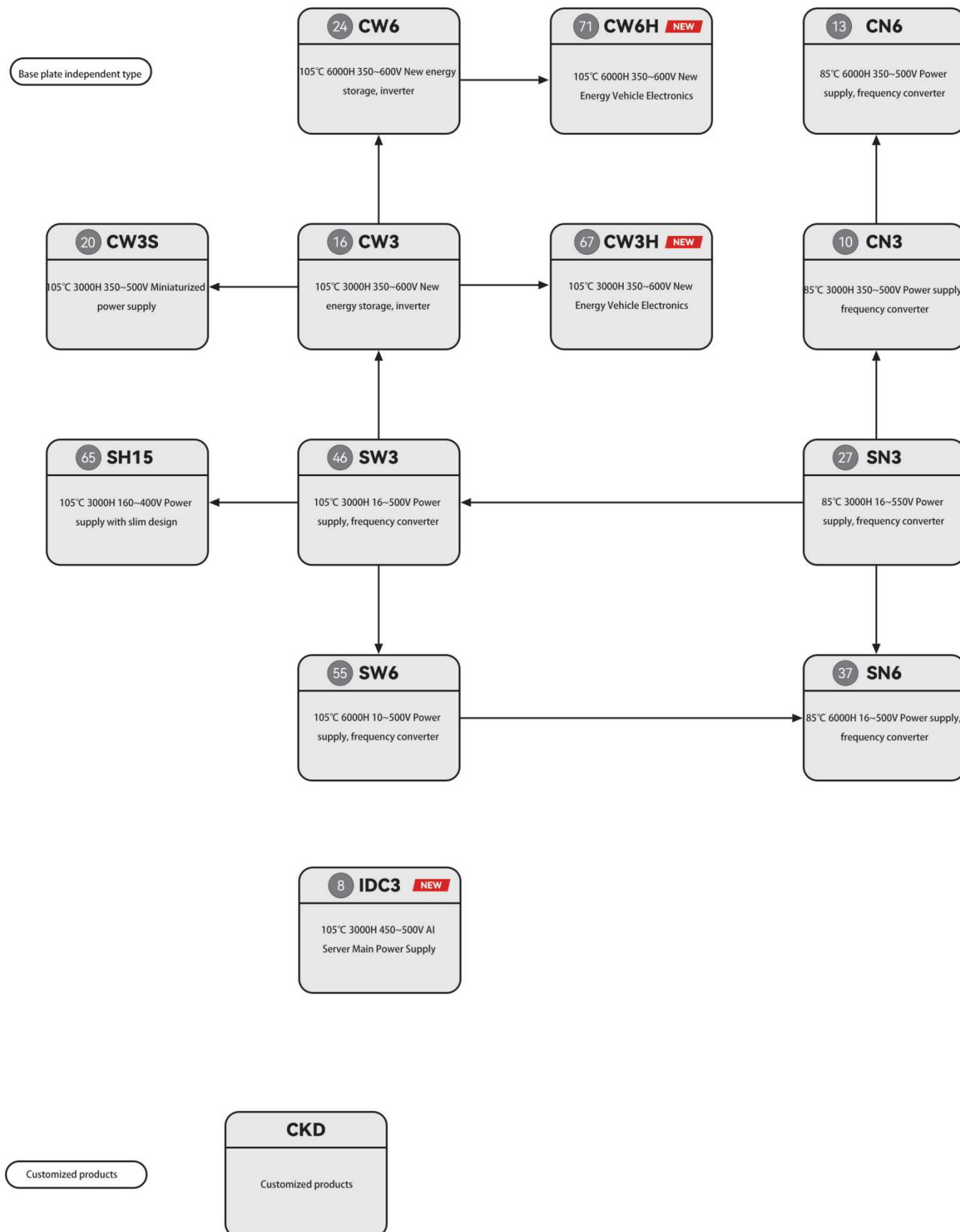


■ Large liquid aluminum electrolytic capacitors

category	series	Features	Standard products	Miniaturized products	High-ripple products	Long-life products	High temperature resistant products	low impedance products	AEC — Q200	Customized products	Rated Voltage Range (V)	Rated capacitance range (μF)	Operating temperature range (°C)	Lifespan (Hrs)	page number
Base plate independent type	IDC3 ^{NEW}	Ultra-high capacity and high energy density		●					●		450~500	1000~1700	-40~+105	3000	8
	CN3	Ultra-low temperature, high stability, low leakage current		●				●	●		350~500	47~1000	-40~+85	3000	10
	CN6	Ultra-low temperature, high stability, low leakage current		●	●	●		●	●		350~500	47~1000	-40~+85	6000	13
	CW3	Ultra-low temperature, high stability, low leakage current		●	●			●	●		350~600	47~1000	-40~+105	3000	16
	CW3S	Ultra-low temperature, high stability, low leakage current		●	●			●	●		350~500	47~1000	-40~+105	3000	20
	CW6	Ultra-low temperature, high stability, low leakage current		●	●	●		●	●		350~600	82~1000	-40~+105	6000	24
	SN3	High ripple current withstand standard products	●		●			●			16~550	100~56000	-40(-25)~+85	3000	27
	SN6	High ripple current withstand, long lifespan			●	●		●			16~500	82~22000	-40(-25)~+85	6000	37
	SW3	High ripple current withstand standard products	●		●			●			16~500	68~47000	-40(-25)~+105	3000	46
	SW6	High ripple current withstand, long lifespan			●	●		●			10~500	47~56000	-25~+105	6000	55
	SH15	Withstands high ripple current 15mml			●		●	●			160~400	39~390	-40(-25)~+105	3000	65
	CW3H ^{NEW}	Ultra-low temperature, high stability, low leakage current		●	●			●	●		350~600	120~1000	-40~+105	3000	67
	CW6H ^{NEW}	Ultra-low temperature, high stability, low leakage current		●	●			●	●		350~600	120~1000	-40~+105	6000	71
	CKD	Customized products								●	Voltage requirements	Capacity requirements	Temperature requirements	Lifespan requirements	/
Bolt type	ES3	High ripple current withstand standard products	●					●			200~500	1000~22000	-40(-25)~+85	3000	75
	ES3M	High ripple current withstand, small size		●	●			●			200~500	1000~39000	-25~+85	3000	78
	ES6	High ripple current withstand, long lifespan			●	●		●			200~500	1000~47000	-25~+85	6000	82
	EW3	Wide-temperature standard products	●		●			●			200~500	1000~33000	-25~+105	3000	86
	EW6	High ripple current withstand, long lifespan			●	●		●			350~500	1000~22000	-25~+105	6000	89
	EH3	Ultra-high pressure response products	●					●			550~630	1000~10000	-25~+85	3000	91
	EH6	Ultra-high pressure response products, long lifespan				●		●			550~630	1000~10000	-25~+85	6000	93
	EKD	Customized products								●	Voltage requirements	Capacity requirements	Temperature requirements	Lifespan requirements	/

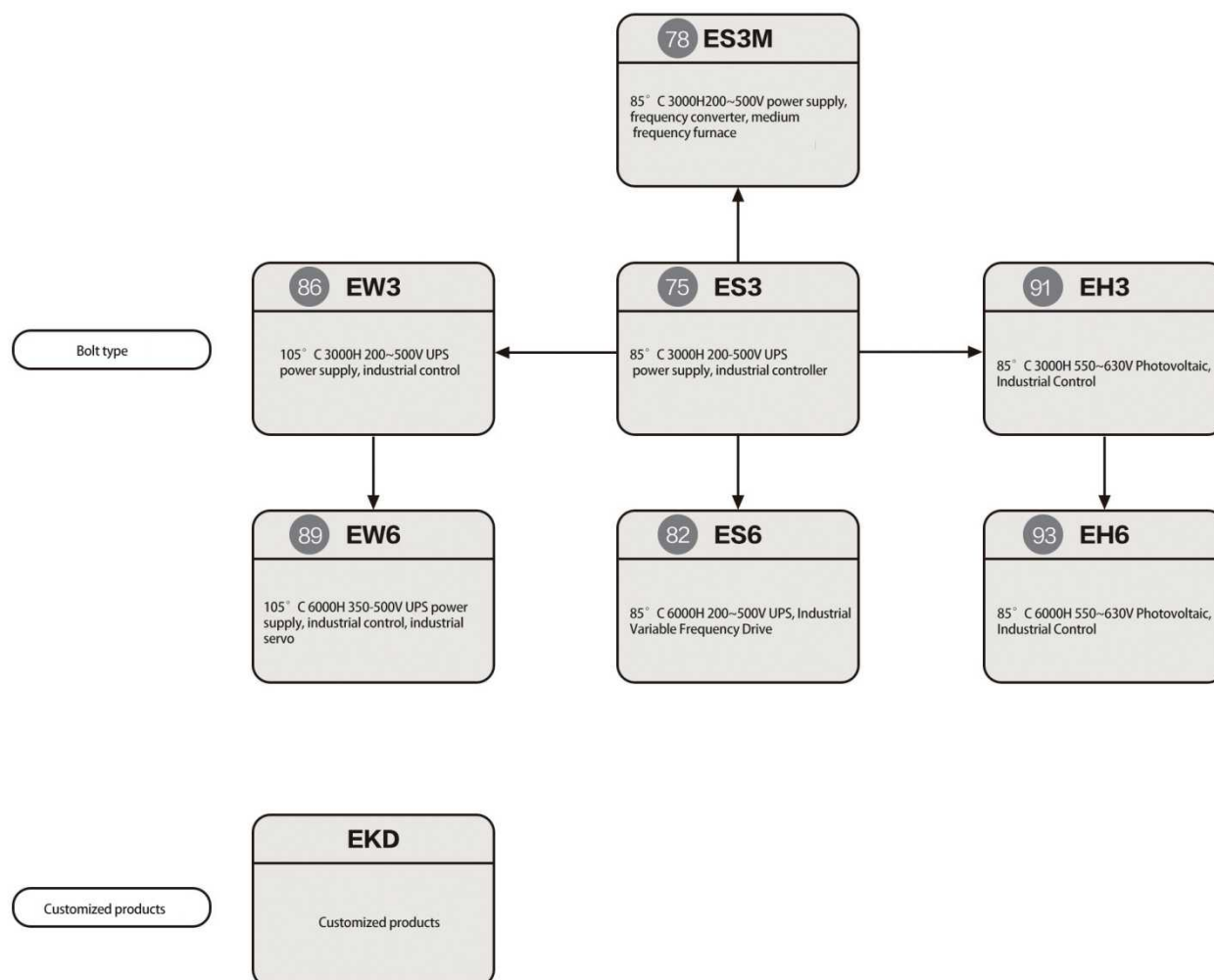


Large liquid aluminum electrolytic capacitors





■ Large liquid aluminum electrolytic capacitors





■ Substrate Self-Supporting Type

1		2		3		4		5		6		7		8		9	
↓		↓		↓		↓		↓		↓		↓		↓		↓	
series	code	Rated voltage(V)	code	Rated capacity(μF)	code	Capacity tolerance	code	Tape/Clasp	code	Tail column type	code	outer diameter	code	code	length	Terminal type code	
SN3	SN3	16V	2F	0.1μF	0R1	±5%	D	Unwoven tape	N	No tail column	N	22	Z	S00	15	S2	
SN6	SN6	25V	2N	1.0μF	1R0	±10%	K					25	Y	S01	20	S3	
SW3	SW3	35V	1N	10μF	100	±15%	V					28	P	S02	25	S4	
SW6	SW6	40V	1H	100μF	101	±20%	M					30	X	S03	30		
CN3	CN3	50V	2Q	1000μF	102	0%~+5%	F					35	A	S04	35		
CN6	CN6	63V	1R	10000μF	103	+10%	T					40	B	S05	40		
CW3	CW3	68V	1C	2200μF	222	+15%	C					42	H	S06	45		
CW3H	CW3H	75V	2A	3300μF	332	+20%	A					45	W	S07	50		
CW6	CW6	80V	1B	4700μF	472									S08	55		
CW6H	CW6H	100V	2R											S09	60		
CW3S	CW3S	110V	2S											S10	65		
SH15	SH15	120V	1D											G01	70		
IDC3	IDC3	125V	1X											G02	75		
		160V	2C											G03	80		
		180V	1A											G04	85		
		200V	2D											G05	90		
		220V	1P											G06	95		
		250V	2E											G07	100		
		300V	2K											G08	105		
		315V	2X											G09	110		
		330V	2T														
		350V	2V														
		360V	2Z														
		375V	2F														
		400V	2G														
		410V	2B														
		420V	2I														
		450V	2W														
		475V	2Y														
		500V	2H														
		525V	2U														
		550V	2L														
		600V	2M														
		630V	2J														

Code rule: Add the number of zeros to the first two digits.



■ Bolt type

1		2		3		4		5		6		7		8		9	
↓		↓		↓		↓		↓		↓		↓		↓		↓	
series	code	Rated voltage (V)	code	Rated capacity (μF)	code	Capacity tolerance	code	Tape/Clasp	code	Tail column type	code	outer diameter	code	code	length	Terminal type code	
ES3	ES3	16V	2F	0.1μF	0R1	±5%	D	Three-legged braided ribbon	Y	With tailstock	M	51	C	G01	70	M5	
ES3M	ES3M	25V	2N	1.0μF	1R0	±10%	K	Two-legged braided ribbon	I	Without tailstock	N	64	D	G02	75	M6	
ES6	ES6	35V	1N	10μF	100	±15%	V					77	E	G03	80	M8	
EW3	EW3	40V	1H	100μF	101	±20%	M					90	F	G04	85		
EW6	EW6	50V	2Q	1000μF	102	0%~+5%	F					101	G	G05	88		
EH3	EH3	63V	1R	10000μF	103	+10%	T							G06	90		
EH6	EH6	68V	1C	2200μF	222	+15%	C							G07	96		
		75V	2A	3300μF	332	+20%	A							G08	100		
		80V	1B	4700μF	472									G09	105		
		100V	2R	5600μF	562									G10	110		
		110V	2S	6800μF	682									G11	115		
		120V	1D	8200μF	822									G12	120		
		125V	1X	27000μF	273									G13	125		
		160V	2C	33000μF	333									G14	130		
		180V	1A											G15	135		
		200V	2D											G16	140		
		220V	1P											G17	145		
		250V	2E											G18	150		
		300V	2K											G19	155		
		315V	2X											G20	158		
		330V	2T											G21	160		
		350V	2V											G22	165		
		360V	2Z											G23	170		
		375V	2F											G24	175		
		400V	2G											G25	180		
		410V	2B											G26	185		
		420V	2I											G26	190		
		450V	2W											G27	195		
		475V	2Y											G28	200		
		500V	2H											G29	205		
		525V	2U											G30	210		
		550V	2L											G31	220		
		600V	2M											G32	230		
		630V	2J											G33	235		
														G34	238		
														G35	240		
														G36	250		

Code rule: Add the number of zeros to the first two digits.



Packaging Method and Quantity for Substrate Self-Supporting & Bolt-in Capacitors

Types	height(mm)	Quantity per carton (pcs)
Substrate self-supporting type	15~110	43×41×17.5
Bolt type	75~115	51.9×34.1×20
Bolt type	120~145	51.9×34.1×22.1
Bolt type	150~170	51.9×34.1×26.4
Bolt type	175~190	51.9×34.1×30.2
Bolt type	195~245	51.9×34.1×34.4

Due to differences in product dimensions, we will use different shims to compensate for the height difference ($51.9 \times 34.1 \times 10 \sim 20\text{mm}$) to avoid damage to the product due to shaking during transportation.

Packing Quantity for Substrate Self-Supporting Products

height(mm)	Quantity per carton (pcs)	
	height(mm)	number(pcs)
22	20~30	810
	35~60	540
25	20~30	624
	35~60	416
30	25~30	432
	35~60	288
	65~110	144
35	20~30	300
	35~60	200
	65~110	100
40	30~60	160
	65~110	80

Packing Quantity for Bolt Terminal Type Products

height(mm)	Quantity per carton (pcs)
35	40
42	40
51	40
64	24
77	15
90	12
101	4

IDC3

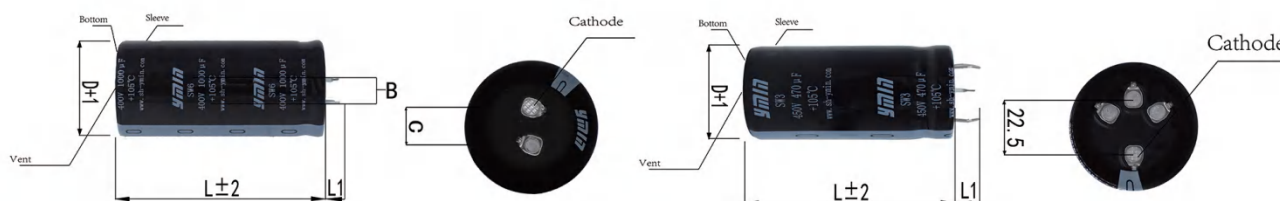
- ◆ Ultra-high capacity and high energy density
- ◆ 105°C, 3000 hours
- ◆ Suitable for main power supply of AI servers
- ◆ RoHS compliant



Main technical parameters

project	characteristic						
Operating Temperature Range	-40 ~ +105°C						
Rated Voltage Range	450 ~ 500V						
Rated Capacitance Range	1000 ~ 1700μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 3\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20°C)	0.20 (20°C 120Hz)						
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C}) \geq 0.8$; $C(-40^{\circ}\text{C})/C(+20^{\circ}\text{C}) \geq 0.65$						
Impedance Characteristics (120Hz)	$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 5$; $Z(-40^{\circ}\text{C})/Z(+20^{\circ}\text{C}) \leq 8$						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table border="1"> <tr> <td>Capacity change rate (ΔC)</td><td>$\leq \pm 20\%$ of the initial value</td></tr> <tr> <td>Loss value ($\text{tg } \delta$)</td><td>$\leq 200\%$ of the initial specification value</td></tr> <tr> <td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr> </table>	Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value	Loss value ($\text{tg } \delta$)	$\leq 200\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value						
Loss value ($\text{tg } \delta$)	$\leq 200\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table border="1"> <tr> <td>Capacity change rate (ΔC)</td><td>$\leq \pm 15\%$ of the initial value</td></tr> <tr> <td>Loss value ($\text{tg } \delta$)</td><td>$\leq 150\%$ of the initial specification value</td></tr> <tr> <td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr> </table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value	Loss value ($\text{tg } \delta$)	$\leq 150\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value						
Loss value ($\text{tg } \delta$)	$\leq 150\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						

Product dimension drawing (unit: mm)



ΦD	Φ30
B	11.8
C	10
L1	6.5

Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (°C)	40°C	60°C	85°C	105°C
Coefficient	2.7	2.2	1.7	1.0



IDC3

■ List of Standard Products

Operating voltage (V)	450(500)			475(525)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000	30×60	1.96	301			
1100				30×65	2.36	273
1200	30×65	2.37	252			
1400	30×70	2.75	215			
1600	30×80	3.14	188			

Operating voltage (V)	500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)			
1300	30×75	3.35	261
1500	30×85	3.75	226
1700	30×95	4.12	199

CN3

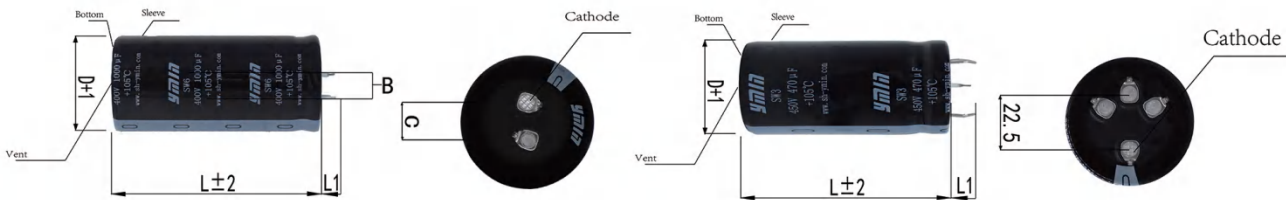
- ◆ Compact size, ultra-low temperature operation
- ◆ 85°C, 3000 hours operating time
- ◆ Suitable for frequency converters and industrial drives
- ◆ RoHS compliant



Main technical parameters

project	characteristic						
Operating Temperature Range	-40 ~ +85°C						
Rated Voltage Range	350 ~ 500V						
Rated Capacitance Range	47 ~ 1000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 3\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.15 (20°C 120Hz)						
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.8$; $C(-40^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.65$						
Impedance Characteristics (120Hz)	$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 5$; $Z(-40^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 8$						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 20\%$ of the initial value</td></tr><tr><td>Loss value ($\text{tg } \delta$)</td><td>$\leq 200\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value	Loss value ($\text{tg } \delta$)	$\leq 200\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value						
Loss value ($\text{tg } \delta$)	$\leq 200\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 15\%$ of the initial value</td></tr><tr><td>Loss value ($\text{tg } \delta$)</td><td>$\leq 150\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value	Loss value ($\text{tg } \delta$)	$\leq 150\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value						
Loss value ($\text{tg } \delta$)	$\leq 150\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						

Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C
Coefficient	1.7	1.4	1.0



CN3

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
68				22×20	0.59	2536
82	22×20	0.70	1941	22×25	0.70	2103
82				25×20	0.69	2103
100				22×25	0.77	1724
100				25×25	0.83	1724
120	22×25	0.91	1326	22×30	0.90	1437
120	25×25	0.97	1326	25×25	0.90	1437
120				30×20	0.92	1437
150	22×30	1.08	1061	22×35	1.07	1149
150	25×25	1.07	1061	25×30	1.07	1149
150	30×20	1.10	1061	30×25	1.11	1149
180	22×30	1.17	884	22×40	1.23	958
180	25×25	1.16	884	25×30	1.16	958
180	30×20	1.19	884	30×25	1.20	958
180				35×20	1.22	958
220	22×35	1.36	723	22×45	1.41	784
220	25×30	1.36	723	25×35	1.35	784
220	30×25	1.41	723	30×30	1.41	784
220	35×20	1.42	723	35×20	1.33	784
270	22×40	1.57	589	22×50	1.61	639
270	25×35	1.59	589	25×40	1.56	639
270	30×25	1.54	589	30×30	1.54	639
270	35×20	1.55	589	35×25	1.57	639
330	22×45	1.80	482	25×45	1.80	522
330	25×40	1.83	482	30×35	1.79	522
330	30×30	1.80	482	35×30	1.84	522
330	35×25	1.83	482			
390	25×45	2.07	408	25×50	2.03	442
390	30×35	2.06	408	30×40	2.03	442
390	35×30	2.11	408	35×35	2.10	442
470	25×50	2.36	339	30×45	2.33	367
470	30×35	2.23	339	35×35	2.29	367
470	35×30	2.30	339			
560	30×40	2.56	284	30×50	2.62	308
560	35×35	2.65	284	35×40	2.61	308
680	30×50	3.08	234	35×50	3.12	254
680	35×40	3.06	234			
820	35×45	3.51	194	35×55	3.49	210
1000	35×50	4.04	159	35×60	3.93	172



CN3

■ List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
47	22×20	0.45	3951	22×25	0.43	4233
56	22×20	0.49	3316	22×25	0.47	3553
68	22×25	0.59	2731	22×30	0.56	2926
68	25×20	0.59	2731	25×25	0.56	2926
82	22×25	0.65	2264	22×30	0.61	2426
82	25×20	0.64	2264	25×25	0.61	2426
82	30×20	0.71	2264	30×20	0.62	2426
100	22×30	0.76	1857	22×35	0.71	1989
100	25×25	0.76	1857	25×30	0.72	1989
100	30×20	0.78	1857	30×25	0.74	1989
120	22×35	0.89	1547	22×40	0.82	1658
120	25×30	0.89	1547	25×35	0.83	1658
120	30×25	0.92	1547	30×25	0.81	1658
120	35×20	0.93	1547	35×20	0.82	1658
150	22×40	1.04	1238	22×45	0.96	1326
150	25×30	0.98	1238	25×35	0.92	1326
150	30×25	1.02	1238	30×30	0.96	1326
150	35×20	1.03	1238	35×25	0.98	1326
180	22×45	1.18	1032	22×50	1.09	1105
180	25×35	1.14	1032	25×40	1.06	1105
180	30×30	1.18	1032	30×35	1.11	1105
180	35×25	1.21	1032	35×25	1.06	1105
220	22×50	1.36	844	22×60	1.30	904
220	25×40	1.32	844	25×50	1.28	904
220	30×30	1.29	844	30×35	1.21	904
220	35×25	1.32	844	35×30	1.25	904
270	25×45	1.52	688	25×55	1.47	737
270	30×35	1.51	688	30×40	1.41	737
270	35×30	1.56	688	35×35	1.46	737
330	25×50	1.75	563	25×65	1.74	603
330	30×40	1.75	563	30×50	1.71	603
330	35×35	1.81	563	35×40	1.69	603
390	30×45	1.99	476	30×55	1.93	510
390	35×40	2.07	476	35×45	1.93	510
470	30×50	2.28	395	35×50	2.21	423
470	35×45	2.37	395			
560	35×50	2.69	332	35×55	2.49	355
680	35×55	3.00	273	35×65	2.92	293
820	35×60	3.49	226	35×65	3.37	243
1000	35×75	4.16	186	35×75	1.88	199

CN6

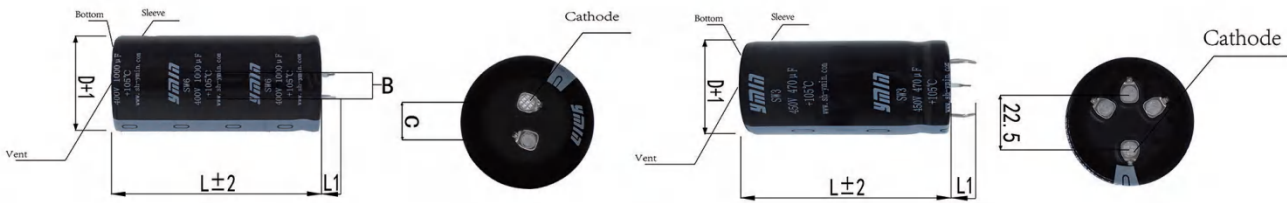
- ◆ Compact size, ultra-low temperature operation
- ◆ 85°C, 6000 hours operating time
- ◆ Suitable for frequency converters and industrial drives
- ◆ RoHS compliant



■ Main technical parameters

project	characteristic						
Operating Temperature Range	-40 ~ +85°C						
Rated Voltage Range	350 ~ 500V						
Rated Capacitance Range	47 ~ 1000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 3\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.15 (20°C , 120Hz)						
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.8$; $C(-40^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.65$						
Impedance Characteristics (120Hz)	$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 5$; $Z(-40^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 8$						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 20\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 200\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value	Loss value (tg δ)	$\leq 200\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value						
Loss value (tg δ)	$\leq 200\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 15\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 150\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value	Loss value (tg δ)	$\leq 150\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value						
Loss value (tg δ)	$\leq 150\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						

■ Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

■ Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C
Coefficient	1.7	1.4	1.0



CN6

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
100				22×25	0.78	1592
120	22×25	0.92	1216	22×30	0.92	1326
150	22×30	1.11	973	22×30	1.02	1061
150				25×25	1.02	1061
180	22×30	1.20	811	22×35	1.19	884
180	25×25	1.20	811	25×30	1.19	884
220	22×35	1.41	663	22×45	1.45	723
220	25×30	1.41	663	25×35	1.39	723
220				30×30	1.45	723
270	22×40	1.63	540	22×50	1.67	589
270	25×35	1.65	540	25×40	1.62	589
270	30×30	1.72	540	30×30	1.59	589
270				35×25	1.62	589
330	22×45	1.87	442	25×45	1.86	482
330	25×40	1.90	442	30×35	1.85	482
330	30×30	1.87	442	35×30	1.90	482
390	25×45	2.16	374	25×50	2.10	408
390	30×35	2.14	374	30×40	2.11	408
390				35×30	2.05	408
470	25×50	2.45	310	30×45	2.42	339
470	30×40	2.46	310	35×35	2.37	339
470	35×30	2.39	310			
560	30×45	2.78	261	30×50	2.72	284
560	35×35	2.74	261	35×40	2.70	284
680	30×50	3.16	215	35×45	3.09	234
680	35×40	3.14	215			
820	35×45	3.56	178	35×55	3.60	194
1000	35×55	4.06	146	35×65	4.09	159



CN6

■ List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
68	22×25	0.50	2536	22×30	0.46	2731
82	22×30	0.56	2103	22×35	0.54	2264
100	22×30	0.64	1724	22×35	0.60	1857
100	25×25	0.64	1724	25×30	0.60	1857
120	22×35	0.72	1437	22×40	0.66	1547
120	25×30	0.72	1437	25×35	0.66	1547
150	22×40	0.79	1149	22×45	0.74	1238
150	25×30	0.79	1149	25×40	0.73	1238
150	30×25	0.79	1149	30×30	0.73	1238
180	22×45	0.87	958	25×45	0.86	1032
180	25×35	0.87	958	30×35	0.85	1032
180	30×30	0.87	958	35×30	0.85	1032
220	25×45	1.00	784	25×50	0.98	844
220	30×30	1.00	784	30×40	0.96	844
220	35×25	1.00	784	35×30	0.96	844
270	25×45	1.19	639	25×55	1.11	688
270	30×40	1.19	639	30×45	1.08	688
270	35×30	1.19	639	35×35	0.08	688
330	30×45	1.38	522	30×50	1.27	563
330	35×35	1.38	522	35×40	1.25	563
390	30×50	1.55	442	30×55	1.30	476
390	35×40	1.55	442	35×45	1.29	476
470	35×45	1.74	367	35×50	1.59	395
560	35×50	1.88	308	35×55	1.75	332
680	35×55	1.98	254	35×70	1.89	273
820	35×65	2.08	210	35×80	2.03	226

CW3

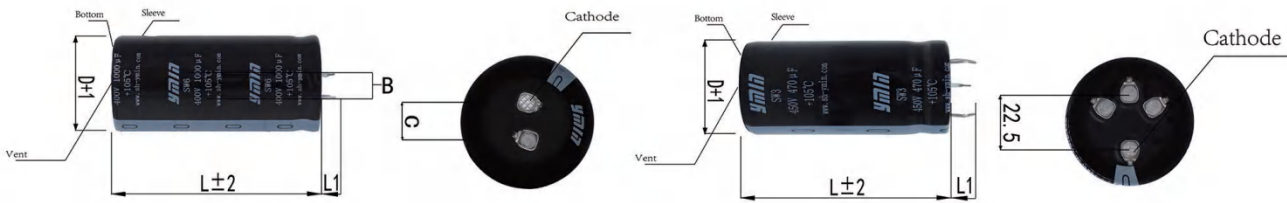
- ◆ Compact size, ultra-low temperature operation
- ◆ 105°C, 3000 hours operating time
- ◆ Suitable for home inverter and servo applications
- ◆ RoHS compliant



Main technical parameters

project	characteristic						
Operating Temperature Range	-40 ~ +105°C						
Rated Voltage Range	350 ~ 600V						
Rated Capacitance Range	47 ~ 1000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 3\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.20 (20°C 120Hz)						
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.8$; $C(-40^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.65$						
Impedance Characteristics (120Hz)	$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 5$; $Z(-40^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 8$						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 20\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 200\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value	Loss value (tg δ)	$\leq 200\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value						
Loss value (tg δ)	$\leq 200\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 15\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 150\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value	Loss value (tg δ)	$\leq 150\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value						
Loss value (tg δ)	$\leq 150\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						

Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C	105°C
Coefficient	2.7	2.2	1.7	1.0



CW3

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
47				22×20	0.34	3386
56	22×20	0.40	2605	22×20	0.37	2842
68	25×20	0.48	2145	22×25	0.44	2341
68				25×20	0.43	2341
82	22×25	0.52	1779	22×25	0.48	1941
82	25×20	0.52	1779	25×20	0.47	1941
100	22×25	0.57	1459	22×30	0.57	1592
100	30×20	0.63	1459	25×25	0.57	1592
100				30×20	0.58	1592
120	22×30	0.67	1216	22×30	0.62	1326
120	25×25	0.67	1216	25×25	0.61	1326
120	30×20	0.68	1216	30×20	0.63	1326
120				35×20	0.69	1326
150	22×35	0.79	973	22×35	0.73	1061
150	25×30	0.73	973	25×30	0.73	1061
150	30×25	0.82	973	30×25	0.75	1061
150	35×20	0.82	973	35×20	0.76	1061
180	22×40	0.90	811	22×40	0.83	884
180	25×30	0.85	811	25×30	0.79	884
180	30×25	0.88	811	30×25	0.82	884
180				35×25	0.89	884
220	22×45	1.03	663	22×45	0.96	723
220	25×35	0.99	663	25×40	0.97	723
220	30×25	0.96	663	30×30	0.96	723
220	35×25	1.05	663	35×25	0.98	723
270	22×50	1.18	540	25×45	1.12	589
270	25×40	1.14	540	30×30	1.05	589
270	30×30	1.12	540	35×25	1.07	589
270	35×25	1.15	540			
330	25×45	1.31	442	25×50	1.28	482
330	30×35	1.31	442	30×35	1.22	482
330	35×30	1.34	442	35×30	1.25	482
390	25×50	1.48	374	25×55	1.44	408
390	30×35	1.41	374	30×40	1.39	408
390	35×30	1.44	374	35×35	1.43	408
470	25×60	1.75	310	30×45	1.59	339
470	30×45	1.70	310	35×40	1.65	339
470	35×35	1.67	310			
560	30×50	1.92	261	30×50	1.79	284



CW3

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
560	35×40	1.91	261	35×45	1.87	284
680	30×60	2.26	215	35×50	2.13	234
680	35×45	2.18	215			
820	35×50	2.44	178	35×55	2.38	194
1000	35×55	2.68	146	35×70	2.80	159

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
47				22×25	0.30	3951
56	22×25	0.38	3079	22×30	0.35	3316
68	22×30	0.45	2536	22×30	0.39	2731
68	25×25	0.41	2536	25×25	0.38	2731
82	22×25	0.45	2103	22×35	0.45	2264
82	25×20	0.44	2103	25×30	0.45	2264
100	22×35	0.57	1724	22×45	0.55	1857
100	25×30	0.53	1724	25×35	0.53	1857
100	30×25	0.59	1724	30×25	0.51	1857
120	22×40	0.66	1437	22×50	0.63	1547
120	25×25	0.58	1437	25×40	0.61	1547
120	30×25	0.64	1437	30×30	0.60	1547
120	35×20	0.65	1437	35×25	0.61	1547
150	22×45	0.76	1149	22×50	0.70	1238
150	25×30	0.69	1149	25×40	0.68	1238
150	30×25	0.71	1149	30×30	0.67	1238
150	35×25	0.72	1149	35×25	0.68	1238
180				22×60	0.82	1032
180	22×40	0.78	958	25×50	0.81	1032
180	25×35	0.79	958	30×35	0.77	1032
180	30×30	0.82	958	35×30	0.79	1032
220				22×65	0.93	844
220	25×40	0.92	784	25×55	0.93	844
220	30×30	0.91	784	30×40	0.89	844
220	35×25	0.93	784	35×25	0.81	844
270	25×45	1.07	639	25×60	1.06	688



CW3

■ List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
270	30×35	1.06	639	30×45	1.03	688
270	35×30	1.09	639	35×35	1.01	688
330				25×70	1.25	563
330	30×40	1.23	522	30×50	1.18	563
330	35×35	1.27	522	35×40	1.17	563
390	30×45	1.40	442	30×60	1.39	476
390	35×35	1.38	442	35×45	1.33	476
470	30×50	1.60	367	30×65	1.57	395
470	35×40	1.59	367	35×50	1.52	395
560	30×60	1.88	308	30×65	1.81	332
560	35×45	1.81	308	35×50	1.79	332
680	35×55	2.15	254	35×65	2.15	273
820	35×60	2.40	210	35×70	2.55	226
1000	35×70	2.72	172	35×85	2.91	186

CW3S

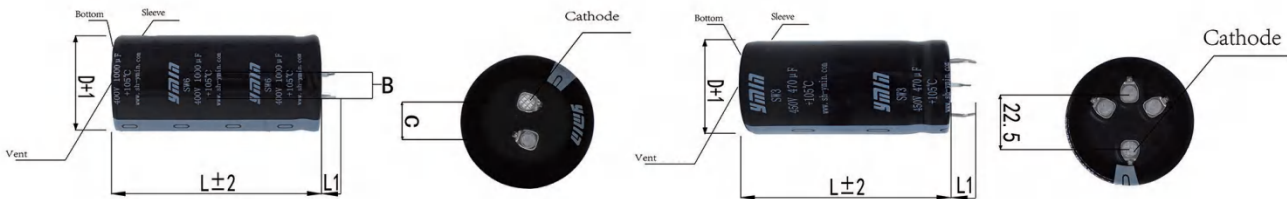
- ◆Ultra-compact size, high reliability, ultra-low temperature capability
- ◆105°C, 3000 hours
- ◆Suitable for industrial drives and servos
- ◆RoHS compliant



Main technical parameters

project	characteristic						
Operating Temperature Range	-40 ~ +105°C						
Rated Voltage Range	350 ~ 500V						
Rated Capacitance Range	47 ~ 1000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 3\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.15 (20°C 120Hz)						
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.8$; $C(-40^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.65$						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 20\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 200\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value	Loss value (tg δ)	$\leq 200\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value						
Loss value (tg δ)	$\leq 200\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 15\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 150\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value	Loss value (tg δ)	$\leq 150\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value						
Loss value (tg δ)	$\leq 150\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						

Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

Ripple current correction factor
Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C	105°C
Coefficient	2.7	2.2	1.7	1.0



CW3S

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
47				22×20	0.32	3454
56	22×20	0.38	2657	22×20	0.35	2899
68	22×20	0.45	2188	22×20	0.42	2387
82	22×20	0.50	1815	22×20	0.46	1980
100	22×25	0.55	1488	22×25	0.54	1623
100	25×20	0.60	1488	25×20	0.54	1623
120	22×25	0.64	1240	22×25	0.59	1353
120	25×20	0.63	1240	25×25	0.59	1353
150	22×30	0.75	992	22×30	0.69	1082
150	25×25	0.70	992	25×25	0.69	1082
150	30×20	0.78	992	30×20	0.72	1082
180	22×30	0.85	827	22×30	0.79	902
180	25×25	0.81	827	25×25	0.75	902
180	30×20	0.84	827	30×20	0.78	902
220	22×35	0.98	676	22×35	0.91	738
220	25×30	0.94	676	25×30	0.93	738
220	30×20	0.91	676	30×25	0.91	738
220				35×20	0.93	738
270	22×40	1.12	551	22×45	1.07	601
270	25×30	1.09	551	25×35	1.00	601
270	30×25	1.07	551	30×25	1.02	601
270	35×20	1.09	551			
330	22×45	1.25	451	22×50	1.22	492
330	25×35	1.25	451	25×40	1.22	492
330	30×25	1.24	451	30×30	1.16	492
330	35×20	1.28	451	35×25	1.19	492
390	25×40	1.41	382	22×55	1.37	416
390	30×30	1.34	382	25×45	1.37	416
390	35×25	1.38	382	30×35	1.32	416
390				35×30	1.37	416
470	25×45	1.66	317	25×50	1.52	345
470	30×35	1.62	317	30×40	1.57	345
470	35×30	1.59	317	35×30	1.57	345
560	30×40	1.83	266	30×45	1.71	290
560	35×30	1.82	266	35×35	1.78	290
680	30×45	2.15	219	35×40	2.03	239
680	35×35	2.08	219			
820	35×40	2.32	181	35×45	2.27	198
1000	35×45	2.55	149	35×55	2.67	162



CW3S

■ List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
47				22×20	0.28	4030
56	22×20	0.36	3140	22×25	0.33	3382
68	22×20	0.42	2586	22×25	0.37	2785
68				25×20	0.37	2785
82	22×25	0.43	2145	22×25	0.43	2310
82	25×20	0.42	2145	25×20	0.43	2310
100	22×25	0.54	1759	22×30	0.53	1894
100	25×20	0.51	1759	25×25	0.51	1894
100				30×20	0.49	1894
120	22×30	0.62	1466	22×35	0.60	1578
120	25×25	0.55	1466	25×30	0.58	1578
120	30×20	0.61	1466	30×20	0.57	1578
150	22×30	0.73	1172	22×40	0.66	1263
150	25×25	0.65	1172	25×30	0.64	1263
150	30×20	0.68	1172	30×25	0.63	1263
150				35×20	0.65	1263
180	22×35	0.75	977	22×45	0.78	1052
180	25×30	0.75	977	25×35	0.77	1052
180	30×25	0.79	977	30×30	0.73	1052
180				35×25	0.75	1052
220	25×30	0.88	799	22×50	0.89	861
220	30×25	0.86	799	25×40	0.88	861
220	35×20	0.88	799	30×30	0.85	861
220				35×25	0.77	861
270	22×45	1.01	651	25×50	1.01	701
270	25×35	1.01	651	30×35	0.98	701
270	30×30	1.01	651	35×30	0.96	701
270	35×25	1.04	651			
330	25×45	1.17	533	25×55	1.19	574
330	30×35	1.17	533	30×40	1.13	574
330	35×30	1.21	533	35×35	1.12	574
390	25×50	1.33	451	30×45	1.32	486
390	30×40	1.33	451	35×40	1.27	486
390	35×30	1.31	451			
470	25×60	1.52	374	30×50	1.49	403
470	30×45	1.52	374	35×45	1.45	403
470	35×35	1.51	374			
560	30×50	1.79	314	30×60	1.72	338
560	35×40	1.72	314	35×50	1.70	338



CW3S

List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
680	35×45	2.04	259	35×55	2.05	279
820	35×50	2.28	214	35×65	2.43	231
1000	35×60	2.59	176	35×75	2.77	189

CW6

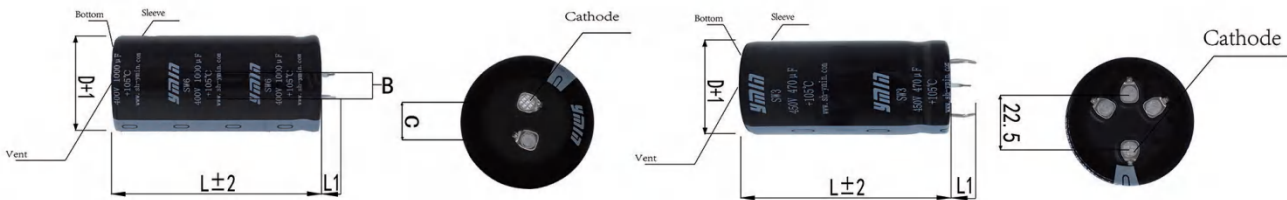
- ◆ Compact size, high reliability, ultra-low temperature capability
- ◆ 105°C, 6000 hours
- ◆ Suitable for photovoltaic and industrial applications
- ◆ RoHS compliant



Main technical parameters

project	characteristic						
Operating Temperature Range	-40 ~ +105°C						
Rated Voltage Range	350 ~ 600V						
Rated Capacitance Range	82 ~ 1000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 3\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.20 (20°C 120Hz)						
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.8$; $C(-40^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.65$						
Impedance Characteristics (120Hz)	$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 5$; $Z(-40^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 8$						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 6000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 20\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 200\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value	Loss value (tg δ)	$\leq 200\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value						
Loss value (tg δ)	$\leq 200\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 15\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 150\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value	Loss value (tg δ)	$\leq 150\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value						
Loss value (tg δ)	$\leq 150\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						

Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C	105°C
Coefficient	2.7	2.2	1.7	1.0



CW6

List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
100				22×25	0.54	1459
120	22×25	0.64	1105	22×30	0.63	1216
150	22×30	0.77	884	22×35	0.76	973
150				25×30	0.76	973
180	25×30	0.90	737	22×40	0.87	811
180				25×30	0.83	811
180				30×25	0.85	811
220	22×40	1.03	603	22×45	1.00	663
220	25×30	0.98	603	25×35	0.96	663
220	30×25	1.01	603	35×25	1.03	663
270	22×45	1.19	491	22×50	1.15	540
270	25×35	1.14	491	25×45	1.18	540
270	30×30	1.18	491	30×30	1.10	540
270	35×25	1.21	491			
330	22×50	1.35	402	25×50	1.35	442
330	25×40	1.31	402	30×35	1.28	442
330	30×35	1.37	402	35×30	1.31	442
390	25×45	1.49	340	30×40	1.46	374
390	30×40	1.56	340	35×35	1.51	374
390	35×30	1.52	340			
470	25×55	1.77	282	30×45	1.67	310
470	30×45	1.78	282	35×40	1.73	310
470	35×35	1.75	282			
560	30×50	2.02	237	35×45	1.96	261
560	35×40	2.00	237			
680	35×45	2.29	195	35×50	2.23	215
820	35×50	2.55	162	35×55	2.49	178
1000	35×55	2.79	133	35×65	2.83	146

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
82	22×25	0.45	1941	22×35	0.45	2103
100	22×30	0.54	1592	22×40	0.53	1724
100	25×25	0.54	1592	25×35	0.54	1724
120	22×35	0.63	1326	25×40	0.62	1437
150	22×40	0.74	1061	25×50	0.76	1149
150	25×30	0.70	1061	30×35	0.73	1149



CW6

■ List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
150	30×25	0.73	1061	35×30	0.75	1149
180	22×45	0.85	884	30×35	0.79	958
180	25×35	0.81	884	35×30	0.81	958
180	30×30	0.85	884			
180	35×25	0.87	884			
220	25×40	0.94	723	30×40	0.92	784
220	30×35	0.99	723	35×35	0.95	784
220	35×30	1.02	723			
270	25×45	1.09	589	30×50	1.11	639
270	30×40	1.15	589	35×40	1.10	639
270	35×35	1.19	589			
330	30×45	1.33	482	30×55	1.27	522
390	30×50	1.50	408	30×65	1.48	442
390	35×40	1.49	408	35×50	1.44	442
470	35×40	1.63	339	35×55	1.64	367
560	35×50	1.93	284	35×65	1.91	308
680	35×55	2.19	234	35×65	2.22	254
820	35×60	2.45	194	35×90	2.61	210
1000	35×70	2.78	159			

Operating voltage (V)	550(600)			600(650)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
120	30×30	0.91	1547	30×40	0.96	1658
				35×30	0.95	1658
150	30×35	1.04	1237	30×45	1.10	1325
				35×35	1.07	1325
180	30×40	1.17	1032	30×50	1.22	1092
	35×30	1.10	1032	35×40	1.22	1092
220	30×50	1.35	844	30×60	1.40	893
	35×40	1.28	844	35×45	1.38	893
270	35×45	1.45	688	35×50	1.56	728
330	35×50	1.64	563	35×60	1.79	522
390	35×60	1.85	476			
470	35×60	2.22	390	35×65	2.15	317
680	35×75	3.87	305	40×70	3.74	223

SN3

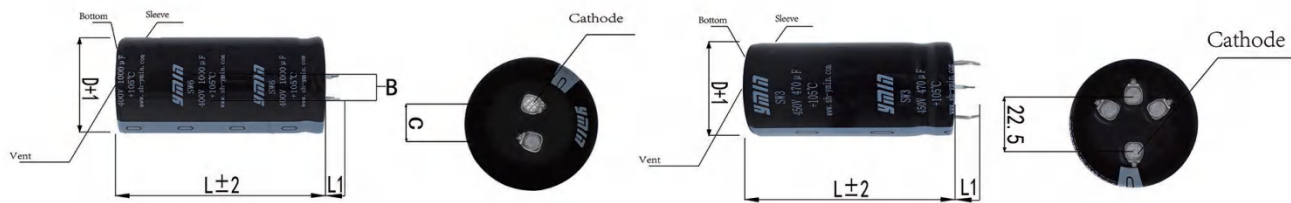
- ◆ Standard product
- ◆ 85°C, 3000 hours
- ◆ Suitable for industrial drives, servos, and power supplies
- ◆ RoHS compliant



■ Main technical parameters

project	characteristic							
Operating Temperature Range	(16 ~ 100V)−40 ~ +85°C ; (160 ~ 550V)−25 ~ +85°C							
Rated Voltage Range	16 ~ 550V							
Rated Capacitance Range	100 ~ 56000μF (20°C 120Hz)							
Rated Capacitance Tolerance	±20%							
Leakage Current (mA)	≦0.01√CV (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.							
Maximum Loss (20° C)	Rated voltage (V)	16	25	35	50	63~100	160~400	450~550
	tg δ	0.5	0.4	0.35	0.3	0.2	0.15	0.2
Temperature Characteristics (120Hz)	C(−25°C)/C(+20°C)≧0.6							
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was ≧100MΩ.							
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.							
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met.							
	Capacity change rate (ΔC)		≦ ±20% of the initial value					
	Loss value (tg δ)		≦ 200% of the initial specification value					
	Leakage current (LC)		≦ Initial specification value					
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test.							
	Capacity change rate (ΔC)		≦ ±15% of the initial value					
	Loss value (tg δ)		≦ 150% of the initial specification value					
	Leakage current (LC)		≦ Initial specification value					
Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.								

■ Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

■ Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C
Coefficient	1.7	1.4	1.0



SN3

■ List of Standard Products

Operating voltage (V)	16(20)			25(32)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
5600				22×25	2.10	84
6800				22×30	2.40	69
6800				25×25	2.42	68
8200	22×25	2.20	65	22×35	2.59	57
10000	22×30	2.50	66	22×40	2.84	48
10000	25×25	2.60	67	25×30	2.86	48
10000				30×25	2.88	47
12000	22×35	2.90	46	22×45	3.28	40
12000				25×35	3.30	40
12000				30×30	3.32	39
15000	22×40	3.20	37	25×40	3.68	32
15000	25×30	3.30	36	35×25	3.70	31
15000	30×25	3.40	36			
18000	22×45	3.60	30	25×50	4.31	27
18000	25×35	3.70	30	30×35	4.34	26
18000				35×30	4.36	26
22000	22×50	4.10	25	30×40	4.86	23
22000	25×40	4.20	25	35×35	4.88	23
22000	30×30	4.30	25			
22000	35×25	4.40	25			
27000	25×45	5.00	21			
27000	30×35	5.00	20			
33000	30×40	5.60	18	35×40	6.53	15
33000	35×30	5.40	17			
39000	30×45	6.20	15	35×45	7.52	12
39000	35×35	6.30	15			
47000	30×50	7.00	12			
47000	35×40	7.20	12			
56000	35×45	8.00	10			



SN3

■ List of Standard Products

Operating voltage (V)	35(44)			50(63)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
2200				22×25	1.62	122
2700				22×30	1.86	102
2700				25×25	1.89	103
3300	22×25	1.82	101	22×35	1.99	99
3900	22×30	2.13	87	22×35	2.11	87
3900				25×30	2.13	87
3900				30×25	2.14	88
4700	25×25	2.16	72	22×40	2.41	73
4700				25×35	2.43	73
5600	22×35	2.32	73	22×50	2.54	75
5600	25×30	2.36	74	25×40	2.56	75
5600				30×30	2.58	75
5600				35×25	2.6	75
6800	22×40	2.73	59	25×45	2.82	60
6800	25×35	2.76	63	30×35	2.84	61
6800	30×25	2.79	65			
8200	22×50	3.05	58	25×50	3.24	59
8200	25×40	3.08	56	30×40	3.26	59
8200	30×30	3.11	55	35×30	3.28	59
8200	35×25	3.14	52			
10000	25×45	3.31	49	30×45	3.42	48
10000	30×35	3.34	49	35×35	3.44	48
12000	25×50	3.54	40	30×50	3.82	39
12000	30×40	3.56	40	35×40	3.84	40
12000	35×30	3.58	40			
15000	30×45	4.12	31	35×50	4.52	32
15000	35×35	4.15	31			
18000	30×50	4.65	26			
18000	35×40	4.68	26			
22000	35×45	5.26	22			
27000	35×50	7.10	19			



SN3

■ List of Standard Products

Operating voltage (V)	63(79)			80(100)		
	Dimensions: $\Phi D \times L$ (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: $\Phi D \times L$ (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000				22×25	1.26	199
1200				22×30	1.46	166
1500	22×25	1.62	138	25×25	1.68	135
1800	22×30	1.81	112	22×35	1.86	112
1800				25×30	1.90	113
2200	22×30	2.1	92	22×40	2.14	92
2200	25×25	2.12	93	25×35	2.16	93
2200				30×25	2.18	93
2700	22×35	2.23	75	22×50	2.41	75
2700	25×30	2.26	75	25×40	2.43	75
2700				30×30	4.45	75
2700				35×25	4.47	75
3300	22×40	2.35	84	25×45	2.74	62
3300	25×35	2.37	83	30×35	2.76	62
3300	30×25	2.39	83			63
3900	22×45	2.63	69	25×50	3.14	52
3900	25×40	2.66	69	30×40	3.16	53
3900	30×30	2.69	70	35×30	3.18	53
3900	35×25	2.72	70			
4700				30×45	3.54	45
4700				30×50	3.57	45
5600	25×45	3.14	49	30×50	3.46	49
5600	30×35	3.17	49	35×40	3.48	49
5600	35×30	3.21	49			
6800	30×40	3.62	41	35×40	4.12	41
6800	35×35	3.66	41			
8200	30×50	3.72	40			
8200	35×40	3.76	40			
10000	35×45	4.28	35			
12000	35×50	4.76	28			



SN3

■ List of Standard Products

Operating voltage (V)	100(125)			160(200)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
220				22×25	1.06	603
270				22×25	1.18	492
330				22×25	1.29	406
390				22×30	1.46	343
390				25×25	1.50	343
470				25×30	1.58	285
560				22×35	1.92	239
560				25×30	1.94	239
560				30×25	1.96	239
680	22×25	1.05	294	22×40	2.16	198
680				25×35	2.18	198
820	22×30	1.18	245	22×50	2.41	166
820				25×40	2.43	166
820				30×30	2.45	171
820				35×25	2.47	172
1000	25×25	1.38	203	25×45	2.72	136
1000				30×35	2.74	136
1000				35×30	2.76	136
1200	22×35	1.54	167	25×50	3.12	115
1200	25×30	1.58	168	30×40	3.14	115
1200				35×35	3.16	115
1500	22×40	1.74	135	30×45	3.62	94
1500	25×35	1.76	135	35×40	3.67	94
1500	30×25	1.78	135			
1800	22×50	2.06	112	35×45	3.85	90
1800	25×40	2.08	113			
1800	30×30	2.10	113			
1800	35×25	2.12	113			
2200	25×45	2.32	93	35×50	4.46	75
2200	30×35	2.36	93			
2200	35×30	2.40	93			
2700	25×50	2.62	76			
2700	30×40	2.67	76			
3300	30×45	3.04	62			
3300	35×35	3.07	63			
3900	30×50	3.34	52			
3900	35×40	3.38	53			
4700	35×50	3.92	45			



SN3

■ List of Standard Products

Operating voltage (V)	180(225)			200(250)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
220				22×25	1.02	605
270	22×25	1.18	497	22×30	1.16	495
330	22×30	1.36	404	22×30	1.36	407
330				25×25	1.39	407
390	25×25	1.48	343	22×35	1.56	343
390				25×30	1.58	344
470	22×35	1.71	285	22×40	1.82	285
470	25×30	1.74	285	30×25	1.86	285
470	30×25	1.77	285			
560	22×40	1.93	238	22×45	2.06	239
560	25×35	1.96	238	25×35	2.09	240
560				30×30	2.11	241
560				35×25	2.14	241
680	22×50	2.22	198	25×40	2.31	197
680	25×40	2.26	199	30×35	2.35	198
680	30×30	2.28	199			
680	35×25	2.34	199			
820	25×45	2.51	164	25×50	2.63	168
820	30×35	2.53	165	30×40	2.65	168
820	35×30	2.57	165			
820	25×50	2.84	136			
1000	30×40	2.87	136	30×45	2.92	137
1000				35×35	2.96	137
1200	30×45	3.12	116	30×50	3.32	114
1200	35×35	3.16	116	35×40	3.36	114
1500	35×45	3.58	110	35×40	3.76	109
1800	35×50	4.08	93			



SN3

■ List of Standard Products

Operating voltage (V)	250(300)			315(365)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
100	22×25	0.65	1992	22×25	0.62	1994
150				22×30	0.84	1329
150				25×25	0.85	1330
180	22×25	0.89	1109	22×35	0.95	1109
180				25×30	0.96	1110
220	22×30	1.02	908	22×40	1.06	909
220	25×25	1.06	909	25×35	1.10	909
220				30×25	1.14	909
270	22×35	1.16	738	22×45	1.24	738
270				25×40	1.26	738
270				30×30	1.28	738
270				35×25	1.30	738
330	22×40	1.36	605	25×45	1.32	605
330	25×30	1.38	605	30×35	1.36	605
330	30×25	1.40	605			
390	22×45	1.66	513	25×50	1.52	514
390	25×35	1.69	513	30×40	1.56	514
390				35×30	1.59	514
470	22×50	1.76	427	30×45	1.72	426
470	25×40	1.78	427	35×35	1.76	426
470	30×30	1.80	427			
470	35×25	1.82	427			
560	25×45	2.13	357	30×50	1.96	357
560	30×35	2.16	357	35×40	1.97	357
680	30×40	2.45	294	35×45	2.26	296
680	35×30	2.49	294			
820	30×45	2.56	246			
820	35×35	2.58	246			
1000	35×40	2.96	202			
1200	35×45	3.36	166			



SN3

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
100	22×25	0.78	1993			
120	22×30	0.81	1659			
120	25×25	0.82	1660			
150	22×35	0.93	1329			
150	25×30	0.94	1330			
180	22×40	1.1	1108			
180	30×25	1.14	1109			
220	22×45	1.22	909	22×45	1.3	870
220	25×35	1.26	909	25×35	1.23	870
220	30×30	1.28	909	30×30	1.17	870
220	35×25	1.3	910			
270	25×45	1.36	740	22×50	1.47	725
270	30×35	1.38	740	25×40	1.45	725
270				30×35	1.43	725
330	25×50	1.56	605	22×60	1.74	589
330	30×40	1.58	605	25×50	1.72	589
330				30×35	1.69	589
390	30×40	1.73	514	22×70	1.89	493
390	35×35	1.76	514	25×55	1.87	420
390				30×40	1.85	420
470	30×40	1.96	427	25×65	2.16	413
470	35×40	1.98	427	30×50	2.13	413
470				35×40	2.11	413
560	35×45	2.24	360	30×55	2.35	353
560				35×45	2.33	353
560				40×35	2.31	353
680	35×50	2.56	295	30×65	2.60	285
680				35×50	2.57	285
680				40×40	2.55	285
820	35×60	2.78	248	35×55	2.84	241
820				40×45	2.82	241
820				45×40	2.79	242
1000				35×65	3.10	224
1000				40×50	3.08	224
1000				45×45	3.06	224
1200				40×60	3.34	201
1200				45×50	3.32	201
1500				40×70	3.54	166
1500				45×60	3.52	166



SN3

■ List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
100				30×25	0.86	1995
120				30×30	0.96	1660
120				35×25	0.98	1670
150				30×35	1.19	1329
180				30×40	1.32	1110
180				35×30	1.36	1110
220	22×55	1.01	890	30×45	1.56	910
220	25×45	0.97	890	30×35	1.59	910
220	30×30	0.92	890			
270	22×65	1.28	722	30×50	1.74	738
270	25×50	1.19	722	35×40	1.76	739
270	30×40	1.12	722			
330	25×55	1.36	598	35×45	1.98	605
330	30×40	1.34	598			
330	35×35	1.32	598			
390	30×50	1.61	501	35×50	1.28	515
390	35×40	1.58	501			
390	40×30	1.56	501			
470	30×55	1.85	415			
470	35×45	1.83	415			
470	40×35	1.80	415			
560	30×60	2.08	355			
560	35×50	2.06	355			
560	40×40	2.04	355			
680	35×55	2.24	288			
680	40×45	2.22	288			
680	45×40	2.20	288			
820	35×65	2.48	246			
820	40×55	2.45	246			
820	45×45	2.43	246			
1000	40×60	2.76	226			
1000	45×50	2.74	226			
1200	40×70	2.99	209			
1200	45×60	2.97	210			
1500	40×85	3.23	170			
1500	45×70	3.21	170			

SN3

List of Standard Products

Operating voltage (V)	550(600)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)			
180	30×50	1.06	1474
	35×35	1.06	1474
220	35×60	1.06	1206
	30×55	1.18	1206
270	35×45	1.31	983
330	35×50	1.50	804
390	35×60	1.67	681
470	35×70	1.95	565
560	35×70	2.10	472

SN6

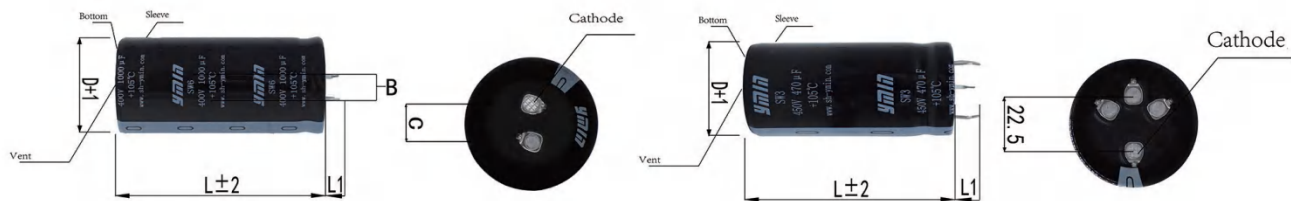
- ◆ Standard product
- ◆ 85°C, 6000 hours
- ◆ Suitable for frequency converters, servo drives, and power supplies
- ◆ RoHS compliant



■ Main technical parameters

project	characteristic						
Operating Temperature Range	(16 ~ 100V)−40 ~ +85°C ; (160 ~ 550V)−25 ~ +85°C						
Rated Voltage Range	16 ~ 500V						
Rated Capacitance Range	82 ~ 22000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	≦0.01√CV (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	Rated voltage (V)	16	25	35	50	63~100	160~500
	tg δ	0.6	0.5	0.4	0.3	0.2	0.15
Temperature Characteristics (120Hz)	C(−25°C)/C(+20°C)≧0.6						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was ≧ 100MΩ.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 6000 hours and then returning to 20°C, the following requirements should be met.						
	Capacity change rate (ΔC)		≦ ± 20% of the initial value				
	Loss value (tg δ)		≦ 200% of the initial specification value				
	Leakage current (LC)		≦ Initial specification value				
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test.						
	Capacity change rate (ΔC)		≦ ± 15% of the initial value				
	Loss value (tg δ)		≦ 150% of the initial specification value				
	Leakage current (LC)		≦ Initial specification value				
Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.							

■ Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

■ Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C
Coefficient	1.7	1.4	1.0



SN6

■ List of Standard Products

Operating voltage (V)	16(20)			25(32)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
5600				22×25	2.00	119
6800				22×30	2.30	98
				25×25	2.30	98
8200	22×25	2.20	97	22×35	2.60	81
10000				22×40	2.90	66
	22×30	2.60	80	25×30	2.80	66
	25×25	2.60	80	30×25	3.00	66
12000				22×45	3.30	55
				25×35	3.20	55
	22×35	2.90	66	30×30	3.40	55
15000	22×40	3.30	53	25×40	3.70	44
	25×30	3.30	53	35×25	3.90	44
	30×25	3.40	53			
18000	22×45	3.80	44	25×50	4.30	37
	25×35	3.70	44	30×35	4.20	37
				35×30	4.40	37
22000	22×50	4.20	36	30×40	4.80	30
	25×40	4.20	36	35×35	5.00	30
	30×30	4.20	36			
	35×25	4.40	36			



SN6

■ List of Standard Products

Operating voltage (V)	35(44)			50(63)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
2200				22×25	1.70	181
2700				22×30	1.90	147
				25×25	1.90	147
3300	22×25	1.80	161	22×30	2.00	121
3900	22×30	2.10	136	22×35	2.10	102
				25×30	2.10	102
				30×25	2.40	102
4700	25×25	2.20	113	22×40	2.40	85
				25×35	2.40	85
5600	22×35	2.30	95	22×50	2.50	71
	25×30	2.30	95	25×40	2.50	71
				30×30	2.50	71
				35×25	2.60	71
6800	22×40	2.90	78	25×45	2.80	59
	25×35	2.60	78	30×35	2.80	59
	30×25	2.70	78			
8200	22×50	2.80	65	25×50	3.20	49
	25×40	2.80	65	30×40	3.00	49
	30×30	2.80	65	35×30	3.00	49
	35×25	2.90	65			
10000	25×45	3.10	53	30×45	3.40	40
	30×35	3.20	53			
12000	25×50	3.50	44	30×50	3.80	33
	35×30	3.60	44	35×40	3.80	33
15000	30×45	4.10	35	35×50	4.50	27
	35×35	4.10	35			
18000	30×50	4.60	30			
	35×40	4.70	34			
22000	35×45	5.3	24			



SN6

■ List of Standard Products

Operating voltage (V)	63(79)			80(100)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000				22×25	1.30	265
1200				22×30	1.50	221
1500	22×25	1.60	177	25×25	1.70	177
1800	22×25	1.80	147	22×35	1.90	147
				25×30	1.90	147
2200	22×30	2.00	121	22×40	2.10	121
	25×25	2.00	121	25×35	2.20	121
				30×25	2.20	121
2700	22×35	2.20	98	22×50	2.50	98
	25×30	2.30	98	25×40	2.50	98
				30×30	2.50	98
				35×25	2.50	98
3300	22×40	2.30	80	25×45	2.80	80
	25×35	2.30	80	30×35	2.80	80
	30×25	2.30	80			
3900	22×45	2.50	68	25×50	3.10	68
	25×40	2.60	68	30×40	3.20	68
	30×30	2.60	68	35×30	3.20	68
	35×25	2.70	68			
4700	30×30	2.90	57	30×45	3.60	57
				35×35	3.60	57
5600	25×45	3.10	47	30×50	3.80	47
	30×35	3.20	47	35×40	3.80	47
	35×30	3.30	47			
6800	30×40	3.60	39	35×50	4.10	39
	35×35	3.70	39			
8200	30×50	3.70	32			
	35×40	3.80	32			
10000	35×45	4.30	27			
12000	35×50	4.80	22			



SN6

■ List of Standard Products

Operating voltage (V)	100(125)			160(200)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
220				22×25	1.00	905
270				22×25	1.10	737
330				22×25	1.30	603
390				22×30	1.50	510
				25×25	1.50	510
470				25×25	1.70	424
				22×35	1.90	355
560				25×30	1.90	355
				30×25	2.00	355
680	22×25	1.10	390	22×40	2.10	293
				25×35	2.20	293
	22×30	1.20	324	22×50	2.50	243
820				25×40	2.40	243
				30×30	2.50	243
				35×25	2.40	243
	25×25	1.40	265	25×45	2.70	199
1000				30×35	2.80	199
				35×30	2.70	199
	22×35	1.60	221	25×50	3.10	166
1200	25×30	1.60	221	30×40	3.20	166
				35×35	3	166
	22×40	1.80	177	30×45	3.70	133
1500	25×35	1.70	177	35×40	3.5	133
	30×25	1.80	177			
	22×50	2.10	147	35×45	3.90	111
1800	30×30	2.10	147			
	35×25	2.20	147			
	25×45	2.20	121	35×50	4.50	91
2200	30×35	2.30	121			
	35×30	2.50	121			
	25×50	2.60	98			
2700	30×40	2.70	98			
	30×45	3.00	80			
3300	35×35	3.10	80			
	30×50	3.40	68			
3900	35×40	3.40	68			
4700	35×50	4.00	57			



SN6

■ List of Standard Products

Operating voltage (V)	180(225)			200(250)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
220				22×25	1.10	905
270	22×25	1.20	737	22×25	1.20	797
330	22×30	1.40	603	22×30	1.40	603
				25×25	1.40	603
390	25×25	1.50	510	22×35	1.60	510
				25×30	1.60	510
470	22×35	1.70	424	22×40	1.80	424
	25×30	1.70	424	30×25	1.90	424
	30×25	1.80	424			
560	22×40	1.90	355	22×45	2.00	355
	25×35	2.00	355	25×35	2.00	355
				30×30	2.10	355
				35×25	2.00	355
680	22×50	2.30	293	25×40	2.30	293
	25×40	2.20	293	30×35	2.40	293
	30×30	2.30	293			
	35×25	2.20	293			
820	25×45	2.50	243	25×50	2.60	243
	30×35	2.60	243	30×40	2.70	243
	35×30	2.50	243	35×30	2.50	243
1000	25×50	2.90	199	30×45	3.10	199
	30×40	2.90	199	35×35	2.80	199
1200	30×45	3.30	166	30×50	3.40	166
	35×35	3.10	166	35×40	3.20	166
1500	35×45	3.60	133	35×50	3.80	133
1800	35×50	4.10	111			



SN6

■ List of Standard Products

Operating voltage (V)	250(300)			315(365)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
100				22×25	0.60	1990
120				22×30	0.70	1659
150				22×30	0.80	1327
				25×25	0.80	1327
180	22×25	0.90	1106	22×35	0.90	1106
				25×30	0.90	1106
220	22×30	1.10	905	22×40	1.10	905
	25×25	1.10	905	25×35	1.10	905
				30×25	1.10	905
270	22×35	1.20	737	22×45	1.20	737
				25×40	1.30	737
				30×30	1.30	737
				35×25	1.30	737
330	22×40	1.40	603	25×45	1.40	603
	25×30	1.40	603	30×35	1.40	603
	30×25	1.50	603			
390	22×45	1.60	510	25×50	1.60	510
	25×35	1.60	510	30×40	1.60	510
				35×30	1.60	510
470	22×50	1.80	424	30×45	1.80	424
	25×40	1.80	424	35×35	1.80	424
	30×30	1.80	424			
	35×25	1.90	424			
560	25×45	2.00	355	30×50	2.00	355
	30×35	2.00	355	35×40	2.00	355
680	30×40	2.30	293	35×45	2.30	293
	35×30	2.40	293			
820	30×45	2.60	243			
	35×35	2.60	243			
1000	35×40	3.00	199			
1200	35×45	3.40	166			



SN6

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
82	22×25	0.64	2427			
100	22×25	0.72	1990			
120	22×30	0.82	1659			
	25×25	0.81	1659			
150	22×35	0.94	1327			
	25×30	0.94	1327			
180	22×40	1.10	1106			
	30×25	1.10	1106			
220	22×45	1.20	905	22×45	1.60	973
	25×35	1.20	905	25×35	1.52	973
	30×30	1.20	905	30×30	1.44	973
	35×25	1.30	905			
270	25×45	1.40	737	22×50	1.81	810
	30×25	1.40	737	25×40	1.79	810
				30×35	1.76	811
330	25×50	1.60	603	22×60	2.14	659
	35×30	1.60	603	25×50	2.12	659
				30×35	2.08	659
390	30×40	1.70	510	22×70	2.33	551
	35×35	1.80	510	25×55	2.30	469
	25×35	1.60	510	30×40	2.28	469
470	30×45	2.00	424	25×65	2.66	461
	35×40	2.00	424	30×50	2.62	462
	35×45	2.30	355	35×40	2.60	462
560				25×75	2.90	394
				30×55	2.87	394
				35×45	2.93	394
680	35×50	2.60	293	30×60	3.20	394
				35×50	3.17	318
820				30×70	3.50	318
				35×55	3.47	318
1000				30×85	3.82	270
				35×65	3.79	270
1200				35×75	4.11	270
1500				35×90	4.36	250

SN6

List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
100				25×30	0.90	1990
				30×25	0.88	1990
120				25×35	1.00	1658
				30×30	1.00	1658
				35×25	0.95	1658
150				25×40	1.20	1327
				30×35	1.20	1327
180				30×40	1.40	1106
				35×30	1.30	1106
220	22×55	1.24	1019	30×45	1.60	905
	25×45	1.19	1019	35×35	1.50	905
	30×35	1.14	1020			
270	22×65	1.57	849	30×50	1.80	737
	25×50	1.47	849	35×40	1.70	737
	30×40	1.38	849			
330	25×60	1.68	690	30×50	2.00	603
	30×45	1.66	691	35×45	1.90	603
	35×35	1.62	691			
390	25×70	1.98	577	35×50	2.30	511
	30×50	1.95	492			
	35×40	1.93	492			
470	30×55	2.27	484	35×60	2.50	424
	35×45	2.25	484			
560	30×65	2.56	413	35×65	2.80	356
	35×50	2.53	413			
680	30×75	2.77	413	35×70	3.20	293
	35×60	2.73	334			
820	35×70	3.05	334			
1000	35×80	3.40	283			
1200	35×95	3.68	283			
1500	35×115	3.99	262			



SW3

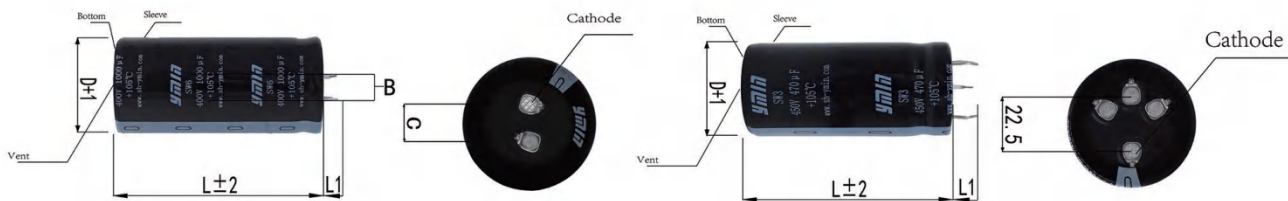
- ◆High temperature resistance
- ◆105°C for 3000 hours
- ◆Suitable for frequency converters, industrial drives, and power supplies
- ◆RoHS compliant



■ Main technical parameters

project	characteristic						
Operating Temperature Range	(16 ~ 100V)−40 ~ +105℃ ; (160 ~ 500V)−25 ~ +105℃						
Rated Voltage Range	16 ~ 500V						
Rated Capacitance Range	68 ~ 47000μF (20℃ 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	≦0.01√CV (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20℃.						
Maximum Loss (20 ° C)	Rated voltage (V)	16	25	35	50	63~100	160~500
	tg δ	0.6	0.5	0.4	0.3	0.2	0.15
Temperature Characteristics (120Hz)	C(−25℃)/C(+20℃)≧0.6						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was ≧100MΩ.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105℃ and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20℃, the following requirements should be met.						
	Capacity change rate (ΔC)		≦ ±20% of the initial value				
	Loss value (tg δ)		≦ 200% of the initial specification value				
	Leakage current (LC)		≦ Initial specification value				
High Temperature No-Load Characteristics	After being stored at 105℃ for 1000 hours and then restored to 20℃, the following requirements should be met during the test.						
	Capacity change rate (ΔC)		≦ ±15% of the initial value				
	Loss value (tg δ)		≦ 150% of the initial specification value				
	Leakage current (LC)		≦ Initial specification value				
Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.							

■ Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

■ Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C	105°C
Coefficient	2.7	2.2	1.7	1.0



SW3

■ List of Standard Products

Operating voltage (V)	16(20)			25(32)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
4700				22×25	1.52	112
6800	22×25	1.53	96	22×30	1.86	76
6800				25×25	1.90	76
8200				22×35	2.14	64
8200				25×30	2.18	64
8200				30×25	2.22	64
10000	22×30	1.92	65	22×40	2.38	52
10000	25×25	1.98	66	25×35	2.42	52
12000	22×35	2.32	54	22×45	2.66	42
12000	25×30	2.36	54	25×40	2.70	42
12000	30×25	2.40	54	30×30	2.74	42
12000				35×25	2.90	42
15000	22×40	2.58	42	25×45	3.14	35
15000	25×35	2.62	43	30×35	3.18	35
15000				35×30	3.22	35
18000	22×45	2.98	36	25×50	3.48	29
18000	25×40	3.04	37	30×40	3.52	29
18000	30×30	3.10	37			
18000	35×25	3.14	37			
22000	25×45	3.32	29	30×45	3.98	23
22000	30×35	3.38	29	35×35	4.04	23
27000	25×50	3.74	24	35×45	4.74	20
27000	30×40	3.78	25			
27000	35×30	3.42	25			
33000	30×45	4.22	19	35×50	5.36	16
33000	35×35	4.26	19			
39000	30×50	4.68	17			
39000	35×40	4.72	17			
47000	35×45	5.24	13			



SW3

■ List of Standard Products

Operating voltage (V)	35(44)			50(63)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1800				22×25	1.28	219
2200				22×30	1.42	177
2700				22×30	1.66	143
2700				25×25	1.70	143
3300	22×25	1.37	139	22×35	1.96	120
3300				25×30	2.00	120
3900	22×30	1.62	117	22×40	2.20	98
3900				25×35	2.24	98
3900				30×25	2.28	98
4700	25×25	1.72	97	22×45	2.56	82
4700				30×30	2.60	83
4700				35×25	2.64	83
5600	22×35	1.98	81	22×50	2.82	69
5600	25×30	2.06	81	25×40	2.86	69
5600	30×25	2.12	81	30×35	2.90	69
6800	22×40	2.26	65	25×50	3.28	57
6800	25×35	2.30	65	30×40	3.32	57
6800				35×30	3.36	57
8200	22×50	2.56	56	30×45	3.68	47
8200	25×40	2.60	56	35×35	3.72	47
8200	30×30	2.65	56			
8200	35×25	2.71	56			
10000	25×45	2.86	43	30×50	4.02	38
10000	30×35	2.90	43	35×40	4.08	39
12000	25×50	3.22	38	35×45	4.46	31
12000	30×40	2.28	38			
12000	35×30	2.32	38			
15000	30×45	3.66	29			
15000	35×35	3.72	29			
18000	35×40	4.12	25			
22000	35×50	4.88	20			

SW3

List of Standard Products

Operating voltage (V)	63(79)			80(100)		
	Dimensions: $\Phi D \times L$ (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, m Ω / 120Hz 20°C)	Dimensions: $\Phi D \times L$ (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, m Ω / 120Hz 20°C)
project						
Capacity (μF)						
820				22×25	1.10	323
1000				22×25	1.22	266
1200	22×25	1.22	219	22×30	1.32	220
1200				25×25	1.38	220
1500				22×35	1.58	175
1500				25×30	1.62	175
1800	22×30	1.48	144	22×40	1.76	143
1800	25×25	1.52	144	30×25	1.82	143
2200	22×35	1.72	120	22×45	2.04	120
2200	25×30	1.76	120	25×35	2.08	120
2200				30×30	2.12	120
2200				30×25	2.16	120
2700	22×40	1.92	97	25×45	2.36	96
2700	25×35	1.96	97	30×35	2.40	96
2700	30×25	2.00	97			
3300	22×50	2.22	77	25×50	2.70	76
3300	25×40	2.26	77	30×40	2.74	76
3300	30×30	2.30	77	35×30	2.78	76
3300	35×25	2.36	77			
3900	25×45	2.52	65	30×45	3.06	67
3900	30×35	2.56	65	35×35	3.12	67
4700	25×50	2.82	52	30×50	3.48	56
4700	30×40	2.86	53	35×45	3.54	56
4700	35×30	2.90	53			
5600	30×45	3.22	46	35×45	3.82	46
5600	35×35	3.26	46			
6800	30×50	3.66	36	35×50	4.16	38
6800	35×40	3.70	36			
8200	35×45	4.12	30			
10000	35×50	4.66	25			



SW3

■ List of Standard Products

Operating voltage (V)	100(125)			160(200)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
330				22×25	1.14	601
390				22×30	1.42	508
470				22×35	1.51	422
470				25×25	1.56	422
560	22×25	1.04	473	22×40	1.62	352
560				25×30	1.68	352
680				22×45	1.72	291
680				25×35	1.76	291
680				30×25	1.80	291
820	22×30	1.28	321	22×50	1.82	241
820	25×25	1.32	321	25×40	1.86	241
820				30×30	1.90	241
820				30×25	1.94	242
1000	22×35	1.48	254	25×45	2.06	197
1000	25×30	1.54	254	30×35	2.10	197
1200	22×40	1.68	220	25×50	2.18	164
1200	25×35	1.72	220	30×40	2.24	164
1200	30×25	1.76	220	35×30	2.30	164
1500	22×45	1.94	173	30×45	2.46	131
1500	25×40	2.00	173	35×35	2.50	131
1500	30×30	2.06	173			
1500	35×25	2.12	173			
1800	25×45	2.26	146	35×45	2.98	109
1800	30×35	2.30	146			
2200	25×50	2.48	120	35×50	3.00	89
2200	30×40	2.52	120			
2200	35×30	2.58	120			
2700	30×45	2.86	96			
2700	35×35	2.90	96			
3300	30×50	3.28	75			
3300	35×40	3.32	76			
3900	35×45	3.66	67			
4700	35×50	4.12	55			



SW3

■ List of Standard Products

Operating voltage (V)	180(225)			200(250)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
220				22×25	1.06	903
270	22×25	1.06	731	22×30	1.18	733
330	22×30	1.26	601	22×30	1.30	601
390	25×35	1.32	509	22×35	1.36	509
470	22×35	1.56	422	22×40	1.4	420
470	25×30	1.60	522	25×30	1.46	420
470				30×25	1.48	420
560	22×40	1.62	352	22×45	1.58	352
560	25×35	1.68	352	25×35	1.62	352
560	30×25	1.72	353			
680	22×50	1.72	291	22×50	1.72	285
680	25×40	1.74	291	25×40	1.76	285
680	30×30	1.76	291	30×30	1.8	285
680	35×25	1.78	392	35×25	1.84	285
820	25×45	1.78	242	25×50	1.86	241
820	30×35	1.82	242	30×35	1.9	241
820				35×30	1.94	241
1000	25×50	1.94	195	30×45	2.16	197
1000	30×40	1.98	196	35×35	2.2	197
1000	35×30	2.02	196			
1200	30×45	2.20	164	30×50	2.32	163
1200	35×35	2.26	164	35×40	2.36	163
1500	30×50	2.36	131	35×45	2.56	131
1500	35×40	2.40	131			
1800	35×45	2.66	109	35×50	2.68	108



SW3

■ List of Standard Products

Operating voltage (V)	250(300)			350(400)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
100				22×30	0.66	1987
100				25×25	0.70	1987
120				22×35	0.74	1653
150				22×40	0.82	1325
150				25×30	0.84	1325
150				30×25	0.86	1325
180	22×25	0.92	1103	22×45	0.88	1105
180				25×35	0.90	1105
180				30×30	0.92	1105
220	22×30	1.12	902	22×50	0.96	903
220	25×25	1.16	903	25×40	0.98	903
220				35×25	1.00	903
270	22×35	1.12	733	25×50	1.02	732
270				30×35	1.04	732
270				35×30	1.06	932
330	22×40	1.20	602	30×45	1.12	598
330	25×30	1.26	602	35×35	1.14	599
330	30×25	1.30	602			
390	22×45	1.26	607	30×50	1.20	505
390	25×35	1.30	607			
470	22×50	1.38	421	35×45	1.32	422
470	25×40	1.42	421			
470	30×30	1.46	421			
470	35×25	1.50	421			
560	25×45	1.52	352	35×50	1.50	352
560	30×35	1.56	352			
560	35×30	1.60	352			
680	25×50	1.66	291			
680	30×40	1.70	291			
820	30×45	1.78	241			
820	35×35	1.82	241			
1000	30×50	1.88	197			
1000	35×40	1.92	197			
1200	35×45	2.10	163			



SW3

List of Standard Products

Operating voltage (V)	400(450)			450(500)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
220	22×45	1.18	302	22×55	0.92	306
220	25×35	1.12	301	25×45	0.88	306
220	30×30	1.06	301	30×30	0.84	305
270	22×50	1.34	272	22×65	1.16	275
270	25×40	1.32	272	25×50	1.08	275
270	30×35	1.30	271	30×40	1.02	274
330	22×60	1.58	242	25×55	1.24	245
330	25×50	1.56	242	30×40	1.22	244
330	30×35	1.54	241	35×35	1.20	244
390	22×70	1.72	209	30×50	1.46	213
390	25×55	1.70	209	35×40	1.44	213
390	30×40	1.68	209	40×30	1.42	212
470	25×65	1.96	177	30×55	1.68	179
470	30×50	1.94	177	35×45	1.66	179
470	35×40	1.92	176	40×35	1.64	179
560	30×55	2.14	154	30×60	1.89	157
560	35×45	2.12	154	35×50	1.87	156
560	40×35	2.10	153	40×40	1.85	156
680	30×65	2.36	129	35×55	2.04	133
680	35×50	2.34	129	40×45	2.02	133
680	40×40	2.32	128	45×40	2.00	132
820	35×55	2.58	103	35×65	2.25	112
820	40×45	2.56	103	40×55	2.23	112
820	45×40	2.54	102	45×45	2.21	112
1000	35×65	2.82	85	40×60	2.51	90
1000	40×50	2.80	85	45×55	2.49	90
1000	45×45	2.78	85			
1200	40×60	3.04	73	40×70	2.72	79
1200	45×50	3.02	72	45×60	2.70	79
1500	40×70	3.22	52	40×80	2.94	56
1500	45×60	3.20	52	45×70	2.92	56



SW3

List of Standard Products

Operating voltage (V)	500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)			
68	22×25	0.52	3845
82	22×30	0.62	3215
100	22×35	0.68	2631
120	22×35	0.78	2204
120	25×30	0.82	2204
150	25×40	0.88	1759
180	25×40	1.00	1471
220	30×35	1.22	1196
270	35×30	1.30	975

SW6

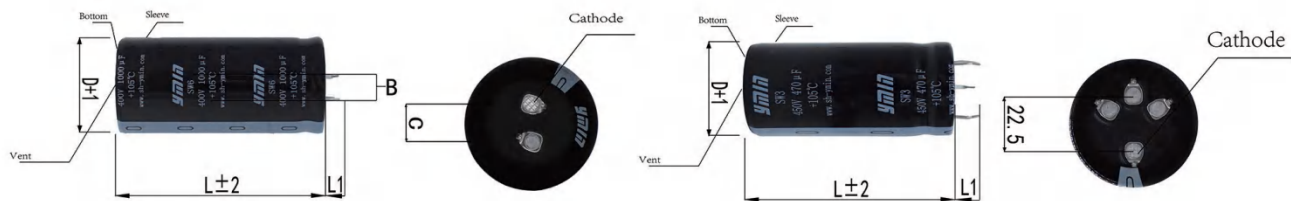
- ◆High ripple, long lifespan, high temperature resistance
- ◆105°C, 6000 hours
- ◆Suitable for frequency converters, servo drives, and power supplies
- ◆RoHS compliant



Main technical parameters

project	characteristic										
Operating Temperature Range	-25 ~ +105℃										
Rated Voltage Range	10 ~ 500V										
Rated Capacitance Range	47 ~ 56000μF (20℃ 120Hz)										
Rated Capacitance Tolerance	±20%										
Leakage Current (mA)	≦0.01√CV (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20℃.										
Maximum Loss (20° C)	Rated voltage (V)	10	16	25	35	50	63	80	100	160~400	450~500
	tg δ	0.55	0.5	0.45	0.4	0.35	0.3	0.25	0.2	0.15	0.2
Temperature Characteristics (120Hz)	C(-25℃)/C(+20℃)≧0.6										
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was ≧100MΩ.										
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.										
Durability	Under conditions of 105℃ and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20℃, the following requirements should be met.										
	Capacity change rate (ΔC)			≦ ±20% of the initial value							
	Loss value (tg δ)			≦ 200% of the initial specification value							
	Leakage current (LC)			≦ Initial specification value							
High Temperature No-Load Characteristics	After being stored at 105℃ for 1000 hours and then restored to 20℃, the following requirements should be met during the test.										
	Capacity change rate (ΔC)			≦ ±15% of the initial value							
	Loss value (tg δ)			≦ 150% of the initial specification value							
	Leakage current (LC)			≦ Initial specification value							
	Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.										

Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

Ripple current correction factor
Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	≥10kHz
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C	105°C
Coefficient	2.7	2.2	1.7	1.0



SW6

■ List of Standard Products

Operating voltage (V)	10(13)			16(20)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
5600				22×25	1.44	119
6800				22×30	1.66	98
8200	22×25	1.30	89	25×25	1.67	81
10000	22×30	1.65	73	22×35	2.08	66
	25×25	1.64	73	25×30	2.07	66
12000	22×35	1.85	61	22×40	2.36	55
	25×25	1.82	61	25×35	2.37	55
				30×25	2.33	55
15000	22×40	2.12	49	22×45	2.69	44
	25×30	2.11	49	25×40	2.72	44
	30×25	2.14	49	30×30	2.54	44
18000	22×45	2.40	41	25×45	3.06	37
	25×35	2.32	41	30×35	3.02	37
	30×30	2.37	41	35×30	3.09	37
22000	25×40	2.59	33	25×50	3.39	30
	30×30	2.73	33	30×40	3.46	30
27000	25×45	3.01	27	30×45	3.88	25
	30×35	3.13	27	35×35	3.85	25
	35×30	3.05	27			26
33000	25×50	3.43	22	30×50	4.33	20
	30×40	3.53	22	35×40	4.33	20
	35×35	3.49	22			
39000	30×45	3.78	19	35×45	4.96	17
	35×40	3.96	19			
47000	30×50	4.58	16	35×50	5.49	14
	35×45	4.60	16			
56000	35×50	5.06	13			



SW6

List of Standard Products

Operating voltage (V)	25(32)			35(44)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
2700				22×25	1.29	197
3300				22×30	1.42	161
3900	22×25	1.31	153	22×35	1.58	136
				25×25	1.58	136
4700	22×30	1.51	127	22×40	1.78	113
	25×25	1.51	127	25×30	1.77	113
5600	22×35	1.72	107	22×45	1.98	95
	25×25	1.76	107	25×35	1.98	95
				30×25	2.03	95
6800	22×40	1.87	88	22×50	2.26	78
	25×30	1.90	88	25×40	2.24	78
				30×30	2.28	78
8200	22×45	2.14	73	25×45	2.56	65
	25×35	2.18	73	30×35	2.50	65
	30×25	2.19	73	35×30	2.54	65
10000	22×50	2.45	60	30×40	2.86	53
	25×40	2.43	60	35×30	2.88	53
	30×30	2.38	60			
12000	25×45	2.79	50	30×45	3.38	44
	30×35	2.70	50	35×35	3.30	44
	35×30	2.76	50			
15000	30×40	3.13	40	35×40	3.98	35
18000	30×45	3.52	33	35×45	4.29	30
	35×35	3.50	33			
22000	30×50	3.92	27			
	35×40	3.95	27			
27000	35×50	4.72	22			



SW6

■ List of Standard Products

Operating voltage (V)	50(63)			63(79)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000				22×25	1.10	398
1500	22×25	1.02	310	22×30	1.41	265
				25×25	1.38	265
1800	22×30	1.17	258	22×35	1.49	221
	25×25	1.17	258	25×30	1.45	221
2200	22×30	1.33	211	22×40	1.67	181
	25×25	1.34	211	30×25	1.65	181
2700	22×35	1.51	172	22×45	1.91	147
	25×30	1.47	172	25×35	1.9	147
	30×25	1.50	172	30×30	1.92	147
3300	22×40	1.69	141	25×40	2.20	121
	30×25	1.70	141	35×30	2.18	121
3900	22×45	1.89	119	25×45	2.58	102
	25×35	1.90	119	30×35	2.46	102
	30×30	1.90	119	35×30	2.31	102
4700	25×40	2.11	99	30×40	2.82	85
	30×35	2.13	99	35×35	2.77	85
5600	25×45	2.36	83	30×45	3.22	71
	30×35	2.39	83	35×40	3.20	71
	35×30	2.41	83			
6800	30×40	2.79	68	35×45	3.61	59
	35×35	2.78	68			
8200	30×50	3.35	57	35×50	3.94	49
	35×40	3.33	57			
10000	35×45	3.79	46			
12000	35×50	4.06	39			



SW6

■ List of Standard Products

Operating voltage (V)	80(100)			100(125)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
560				22×25	1.01	474
680	22×25	0.97	510	22×30	1.19	390
820	22×25	1.09	405	22×35	1.33	324
				25×25	1.26	324
1000	22×30	1.29	332	22×40	1.40	265
	25×25	1.23	332	25×30	1.42	265
				30×25	1.44	265
1200	22×35	1.48	277	22×45	1.58	221
	25×25	1.38	277	25×35	1.57	221
	30×25	1.41	277	30×30	1.60	221
1500	22×40	1.70	221	22×50	1.85	177
	25×30	1.72	221	25×40	1.86	177
	30×25	1.75	221	35×30	1.85	177
1800	22×45	1.82	184	25×45	2.29	147
	25×35	1.80	184	30×35	2.19	147
	30×30	1.78	184	35×30	2.15	147
2200	25×45	2.12	151	30×40	2.52	121
	30×30	2.02	151	35×35	2.48	121
2700	30×35	2.34	123	30×45	2.86	98
	35×30	2.33	123	35×40	2.87	98
3300	30×40	2.69	101	35×45	3.25	80
	35×35	2.60	101			
3900	30×45	2.94	85	35×50	3.56	68
	35×40	3.00	85			
4700	35×45	3.44	71			
5600	35×50	3.72	59			



SW6

■ List of Standard Products

Operating voltage (V)	160(200)			180(225)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
220	22×25	0.63	905	22×25	0.63	905
270	22×30	0.76	737	22×30	0.76	737
				25×25	0.76	737
330	22×35	0.90	603	22×35	0.90	603
	25×25	0.84	603	25×30	0.90	603
390	25×30	0.97	510	22×40	1.03	510
	30×25	1.00	510	25×35	1.06	510
				30×25	1.02	510
470	22×40	1.11	424	22×45	1.17	424
	25×35	1.14	424	30×30	1.17	424
	30×30	1.17	424			
560	22×45	1.26	355	22×50	1.32	355
				25×40	1.32	355
				30×35	1.33	355
680	22×50	1.44	293	25×45	1.51	293
	25×40	1.43	293	35×30	1.49	293
	30×35	1.5	293			
820	25×45	1.63	243	25×50	1.71	243
	30×40	1.66	243	30×40	1.74	243
	35×30	1.63	243	35×35	1.75	243
1000	30×45	1.89	199	30×45	2.01	199
	35×35	1.89	199	35×40	2.07	199
1200	30×50	2.16	166	30×50	2.25	166
	35×40	2.23	166	35×45	2.23	166
1500	35×45	2.61	133	35×50	2.76	133
1800	35×50	2.97	111			



SW6

■ List of Standard Products

Operating voltage (V)	200(250)			250(300)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
150				22×25	0.52	1327
180	22×25	0.57	1106	22×30	0.64	1106
				25×25	0.62	1106
220	22×30	0.70	905	22×35	0.76	905
				25×30	0.76	905
270	22×35	0.83	737	22×40	0.88	737
	25×25	0.76	737	25×35	0.90	737
				30×25	0.85	737
330	22×40	0.96	603	22×45	1.01	603
	25×30	0.90	603	30×30	1.00	603
390	25×35	1.06	510	22×50	1.13	510
	30×25	1.02	510	25×40	1.13	510
				30×35	1.15	510
470	22×45	1.17	424	25×45	1.29	424
	25×40	1.22	424	35×30	1.24	424
	30×30	1.17	424			
560	25×45	1.39	355	25×50	1.45	355
	30×35	1.38	355	30×40	1.48	355
				35×35	1.49	355
680	25×50	1.58	293	30×45	1.71	293
	30×40	1.61	293	35×40	1.74	293
	35×30	1.49	293			
820	30×45	1.85	243	30×50	1.94	243
	35×35	1.75	243			
1000	30×50	2.11	199	35×45	2.20	199
	35×40	2.07	199			
1200	35×45	2.38	166			
1500	35×50	2.76	133			



SW6

■ List of Standard Products

Operating voltage (V)	315(365)			350(400)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
68	22×25	0.32	2923	22×25	0.34	2927
82	22×30	0.38	2427	22×30	0.40	2427
100	25×25	0.41	1990	25×25	0.47	1990
120	22×35	0.48	1659	22×35	0.52	1659
	25×30	0.49	1659	25×30	0.53	1659
				30×25	0.53	1699
150	22×40	0.56	1327	22×40	0.59	1327
	30×25	0.51	1327	25×35	0.60	1327
180	22×45	0.63	1106	22×45	0.68	1106
	25×35	0.62	1106	25×40	0.70	1106
	30×30	0.63	1106	30×30	0.71	1106
220	22×50	0.72	905	22×50	0.78	905
	25×40	0.71	905	25×45	0.82	905
	30×35	0.74	905	30×35	0.82	905
270	25×45	0.81	737	25×50	0.94	406
	30×40	0.85	737	30×40	0.93	406
	35×30	0.82	737	35×30	0.90	406
330	25×50	0.92	603	30×45	1.05	603
	35×35	0.90	690	35×35	1.01	603
390	30×45	1.04	681	30×50	1.18	510
	35×40	1.05	681	35×40	1.13	510
470	30×50	1.15	565	35×45	1.26	424
	35×45	1.18	565			
560	35×50	1.34	474	35×50	1.39	355



SW6

■ List of Standard Products

Operating voltage (V)	400(450)			450(500)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
68	22×30	0.38	2927	22×30	0.38	3903
82	25×25	0.41	2427	22×35	0.44	3237
				25×30	0.45	3237
				30×25	0.46	3237
100	22×35	0.46	1990	22×40	0.50	2654
	25×30	0.48	1990	25×35	0.52	2654
	30×25	0.48	1990			
120	22×40	0.53	1659	22×50	0.58	2212
	25×35	0.55	1659	25×40	0.58	2212
	30×30	0.56	1659	30×30	0.58	2212
150	22×50	0.63	1327	25×45	0.66	1769
	25×40	0.65	1327	30×35	0.68	1769
180	25×45	0.72	1106	25×50	0.74	1474
	30×35	0.74	1106	30×40	0.77	1474
				35×30	0.77	1474
220	22×50	0.79	905	22×60	0.88	1206
	25×40	0.85	905	25×50	0.88	1206
	30×35	0.89	905	30×35	0.88	1206
270	22×55	0.99	737	22×70	0.97	983
	25×45	0.98	737	25×55	0.99	983
	30×40	0.96	737	30×45	1.01	983
330	22×65	1.12	603	25×60	1.13	804
	25×55	1.12	603	30×45	1.15	804
	30×40	1.10	603	35×40	1.15	804
390	25×60	1.29	510	30×55	1.27	681
	30×45	1.27	510	35×45	1.27	681
	35×40	1.27	510	40×35	1.28	681
470	25×70	1.35	424	30×60	1.53	565
	30×55	1.33	424	35×50	1.54	565
	35×45	1.33	424	40×40	1.54	565
560	30×60	1.59	356	30×65	1.82	474
	35×50	1.58	356	35×55	1.83	474
	40×40	1.60	356	40×45	1.83	474
680	30×70	1.95	293	35×60	2.22	391
	35×55	1.93	293	40×50	2.23	391
	40×45	1.94	293	45×45	2.23	391
820	35×60	2.36	243	35×70	2.67	324
	40×50	2.34	243	40×60	2.69	324
	45×45	2.34	243	45×50	2.69	324
1000	35×70	2.81	199	40×65	3.28	266
	40×55	2.82	199	45×60	3.28	266
	45×50	2.82	199			



SW6

■ List of Standard Products

Operating voltage (V)	500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)			
47	22×30	0.41	5647
56	22×30	0.47	4736
68	22×35	0.54	3903
	25×30	0.54	3903
82	22×40	0.62	3237
	25×35	0.62	3237
100	22×45	0.67	2654
	25×40	0.67	2654
	30×30	0.67	2654
120	22×50	0.77	2212
	25×40	0.74	2212
	30×35	0.77	2212
	35×30	0.80	2212
150	25×45	0.82	1769
	30×40	0.85	1769
	35×30	0.67	1769
	35×35	0.85	1769
180	25×50	0.98	1474
	30×45	1.01	1474
220	30×50	1.12	1206
	35×35	0.94	1206
	35×40	1.12	1206
270	30×50	1.25	983
	35×40	1.25	983
330	35×45	1.36	804
390	35×50	1.54	681
470	35×60	1.69	565

SH15

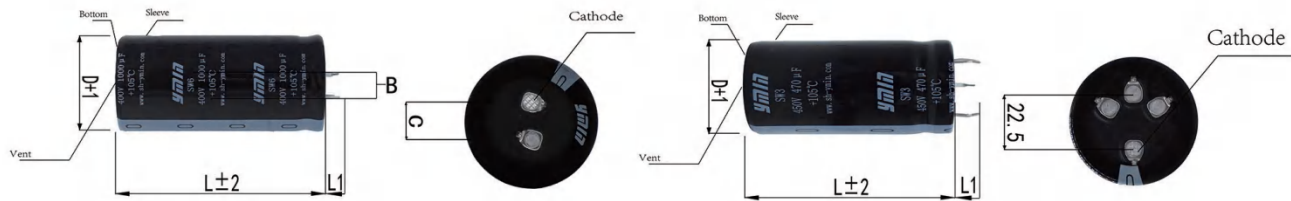
- ◆ 15mmL Reliable Product
- ◆ 105°C 3000 Hours
- ◆ Suitable for Thinner Power Supplies
- ◆ RoHS Compliant



Main technical parameters

project	characteristic						
Operating Temperature Range	(160 ~ 250V)–40 ~ +105°C ; (315 ~ 400V)–25 ~ +105°C						
Rated Voltage Range	160 ~ 400V						
Rated Capacitance Range	39 ~ 390μF						
Rated Capacitance Tolerance	±20% (20°C 120Hz)						
Leakage Current (mA)	$\leq 3\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.15 (20°C 120Hz)						
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.8$; $C(-40^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.65$						
Insulation Resistance	$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 5$; $Z(-40^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 8$						
Insulation Voltage	The insulation resistance between all terminals and the insulating sleeves on the container sleeve and the mounting straps was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 20\%$ of the initial value</td></tr><tr><td>Loss value ($\text{tg } \delta$)</td><td>$\leq 200\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value	Loss value ($\text{tg } \delta$)	$\leq 200\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value						
Loss value ($\text{tg } \delta$)	$\leq 200\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 15\%$ of the initial value</td></tr><tr><td>Loss value ($\text{tg } \delta$)</td><td>$\leq 150\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value	Loss value ($\text{tg } \delta$)	$\leq 150\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value						
Loss value ($\text{tg } \delta$)	$\leq 150\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						

Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C	105°C
Coefficient	2.7	2.2	1.7	1.0



SH15

■ List of Standard Products

Operating voltage (V)	160(200)			180(225)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
150				22×15	0.58	895
180	22×15	0.62	801	25×15	0.73	853
220	25×15	0.78	748	30×15	0.83	805
270	30×15	0.92	683	30×15	0.98	731
330	30×15	0.98	601	35×15	1.09	601
390	30×15	1.14	508	35×15	1.15	509

Operating voltage (V)	200(250)			250(300)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
100				22×15	0.49	1204
120	22×15	0.53	1032	25×15	0.58	1179
150	25×15	0.62	995	30×15	0.68	1145
180	25×15	0.73	947	30×15	0.72	1103
220	30×15	0.88	903	35×15	0.88	903
270	30×15	0.98	733	35×15	0.98	733
330	35×15	1.07	601			

Operating voltage (V)	315(365)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
39				22×15	0.29	3585
47				25×15	0.33	3386
56	22×15	0.33	2755	30×15	0.38	2842
68	25×15	0.38	2454	30×15	0.42	2341
80	30×15	0.43	1949	35×15	0.48	1941
100	30×15	0.48	1738	35×15	0.54	1592
120	35×15	0.53	1653			
150	35×15	0.58	1325			

CW3H

NEW

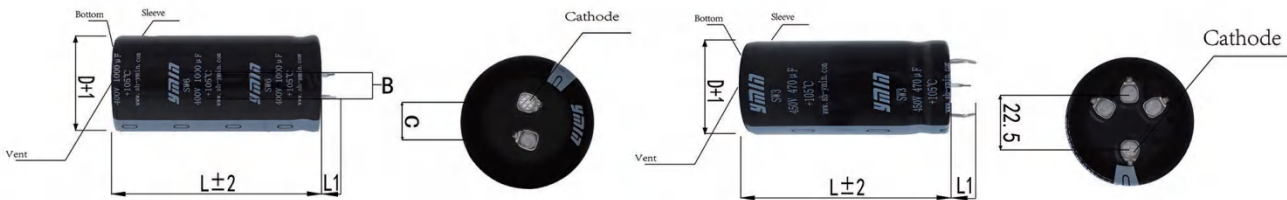
- ◆ High reliability, low ESR
- ◆ 105°C, 3000 hours
- ◆ Suitable for new energy photovoltaics and automotive electronics
- ◆ RoHS compliant



Main technical parameters

project	characteristic						
Operating Temperature Range	-40 ~ +105°C						
Rated Voltage Range	350 ~ 600V						
Rated Capacitance Range	120 ~ 1000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 3\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.20 (20°C 120Hz)						
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.8$; $C(-40^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.65$						
Impedance Characteristics (120Hz)	$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 5$; $Z(-40^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 8$						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 20\%$ of the initial value</td></tr><tr><td>Loss value ($\text{tg } \delta$)</td><td>$\leq 200\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value	Loss value ($\text{tg } \delta$)	$\leq 200\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value						
Loss value ($\text{tg } \delta$)	$\leq 200\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 15\%$ of the initial value</td></tr><tr><td>Loss value ($\text{tg } \delta$)</td><td>$\leq 150\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value	Loss value ($\text{tg } \delta$)	$\leq 150\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value						
Loss value ($\text{tg } \delta$)	$\leq 150\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						

Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

Ripple current correction factor
Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C	105°C
Coefficient	2.7	2.2	1.7	1.0



CW3H

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max,mΩ)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max,mΩ)
Capacity (μF)						
120	22×30	0.70	1380	22×30	0.65	1517
	25×25	0.70	1380	25×25	0.65	1517
	30×20	0.71	1380	30×20	0.68	1517
				35×20	0.68	1517
150	22×35	0.82	1104	22×35	0.76	1213
	25×30	0.82	1104	25×30	0.76	1213
	30×25	0.83	1104	30×25	0.77	1213
	35×20	0.83	1104	35×20	0.79	1213
180	22×40	0.94	919	22×40	0.87	1010
	25×30	0.94	919	25×30	0.87	1010
	30×25	0.94	919	30×25	0.87	1010
				35×25	0.87	1010
220	22×45	1.08	751	22×45	1.00	826
	25×35	1.08	751	25×40	1.00	826
	30×25	1.10	751	30×30	1.02	826
	35×25	1.10	751	35×25	1.02	826
270	22×50	1.23	617	25×45	1.17	673
	25×40	1.23	617	30×30	1.17	673
	30×30	1.23	617	35×25	1.17	673
	35×25	1.25	617			
330	25×45	1.37	504	25×50	1.34	550
	30×35	1.37	504	30×35	1.31	550
	35×30	1.37	504	35×30	1.31	550
390	25×50	1.53	426	25×55	1.51	465
	30×35	1.55	426	30×40	1.51	465
	35×30	1.55	426	35×35	1.51	465
470	25×60	1.81	353	30×45	1.66	385
	30×45	1.81	353	35×40	1.68	385
	35×35	1.81	353			
560	30×50	1.98	290	30×50	1.87	323
	35×40	1.98	290	35×45	1.87	323
680	30×60	2.37	239	35×50	2.23	265
	35×45	2.37	239			
820	35×50	2.56	198	35×55	2.49	219
1000	35×55	2.81	163	35×70	2.94	180



CW3H

List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max,mΩ)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max,mΩ)
Capacity (μF)						
120	22×40	0.69	1880	22×50	0.66	1415
	25×25	0.69	1880	25×40	0.66	1415
	30×25	0.71	1880	30×30	0.65	1415
	35×20	0.71	1880	35×25	0.63	1415
150	22×45	0.77	987	22×50	0.73	1132
	25×30	0.77	987	25×40	0.70	1132
	30×25	0.79	987	30×30	0.70	1132
	35×25	0.79	987	35×25	0.71	1132
180				22×60	0.86	943
	22×40	0.81	822	25×50	0.85	943
	25×35	0.81	822	30×35	0.82	943
	30×30	0.83	822	35×30	0.82	943
220				22×65	0.97	771
	25×40	0.96	673	25×55	0.93	771
	30×30	0.94	673	30×40	0.93	771
	35×25	0.97	673	35×25	0.90	771
270	25×45	1.11	549	25×60	1.11	628
	30×35	1.10	549	30×45	1.08	628
	35×30	1.14	549	35×35	1.06	628
330				25×70	1.31	513
	30×40	1.29	449	30×50	1.27	513
	35×35	1.29	449	35×40	1.25	513
390	30×45	1.47	379	30×60	1.45	435
	35×35	1.45	379	35×45	1.45	435
470	30×50	1.68	314	30×65	1.64	360
	35×40	1.65	314	35×50	1.59	360
560	30×60	1.97	263	30×65	1.90	302
	35×45	1.94	263	35×50	1.87	302
680	35×55	2.25	216	35×65	2.25	248
820	35×60	2.52	179	35×70	2.67	205
1000	35×70	2.85	147	35×85	3.05	169



CW3H

■ List of Standard Products

Operating voltage (V)	550(600)			600(650)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max,mΩ)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max,mΩ)
Capacity (μF)						
120	30×30	0.95	1646	30×40	1.00	2016
				35×30	0.96	2016
150	30×35	1.06	1317	30×45	1.15	1612
				35×35	1.12	1612
180	30×40	1.13	1097	30×50	1.28	1343
	35×30	1.11	1097	35×40	1.25	1343
220	30×50	1.26	898	30×60	1.47	1098
	35×40	1.24	898	35×45	1.46	1098
270	35×45	1.39	731	35×50	1.63	894
330	35×50	1.59	598	35×55	1.87	731
390	35×60	1.76	505	35×60	2.92	618
470	35×65	2.05	419	40×60	3.06	512
560	35×75	2.33	351	40×80	3.22	429
	35×80	2.20	351			

CW6H

NEW

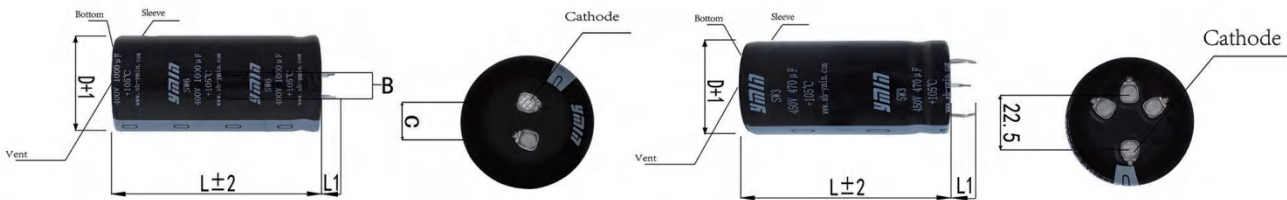
- ◆High reliability, low ESR, long lifespan
- ◆105°C, 6000 hours
- ◆Suitable for new energy photovoltaics and automotive electronics
- ◆RoHS compliant



Main technical parameters

project	characteristic						
Operating Temperature Range	−40 ~ +105°C						
Rated Voltage Range	350 ~ 600V						
Rated Capacitance Range	120 ~ 1000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 3\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.20 (20°C 120Hz)						
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.8$; $C(-40^{\circ}\text{C})/C(+20^{\circ}\text{C})\geq 0.65$						
Impedance Characteristics (120Hz)	$Z(-25^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 5$; $Z(-40^{\circ}\text{C})/Z(+20^{\circ}\text{C})\leq 8$						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 20\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 200\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value	Loss value (tg δ)	$\leq 200\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 20\%$ of the initial value						
Loss value (tg δ)	$\leq 200\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 105°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>$\leq \pm 15\%$ of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>$\leq 150\%$ of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>$\leq$ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value	Loss value (tg δ)	$\leq 150\%$ of the initial specification value	Leakage current (LC)	$\leq$ Initial specification value
Capacity change rate (ΔC)	$\leq \pm 15\%$ of the initial value						
Loss value (tg δ)	$\leq 150\%$ of the initial specification value						
Leakage current (LC)	$\leq$ Initial specification value						

Product dimension drawing (unit: mm)



ΦD	Φ22	Φ25	Φ30	Φ35	Φ40
B	11.6	11.8	11.8	11.8	12.25
C	8.4	10	10	10	10
L1	6.5	6.5	6.5	6.5	6.5

Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C	105°C
Coefficient	2.7	2.2	1.7	1.0



CW6H

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max,mΩ)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max,mΩ)
Capacity (μF)						
120	22×25	0.67	1497	22×30	0.66	1634
150	22×30	0.80	1197	22×35	0.79	972
				25×30	0.77	972
180	25×30	0.91	997	22×40	0.91	810
				25×30	0.92	810
				30×25	0.92	810
220	22×40	1.05	815	22×45	1.05	663
	25×30	1.03	815	25×35	1.01	663
	30×25	1.03	815	35×25	1.06	663
270	22×45	1.19	664	22×50	1.20	540
	25×35	1.19	664	25×45	1.23	540
	30×30	1.18	664	30×30	1.16	540
	35×25	1.16	664			
330	22×50	1.32	543	25×50	1.41	441
	25×40	1.31	543	30×35	1.37	441
	30×35	1.29	543	35×30	1.43	441
390	25×45	1.47	459	30×40	1.53	365
	30×40	1.47	459	35×35	1.54	365
	35×30	1.45	459			
470	25×55	1.89	380	30×45	1.75	302
	30×45	1.89	380	35×40	1.81	302
	35×35	1.87	380			
560	30×50	1.93	320	35×45	2.05	253
	35×40	1.94	320			
680	35×45	2.30	263	35×50	2.34	209
820	35×50	2.50	218	35×55	2.60	173
1000	35×55	2.67	179	35×65	2.97	141



CW6H

List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (105℃ 120Hz) Arms	ESR (Max,mΩ)	Dimensions: ΦD×L (mm)	Ripple current (105℃ 120Hz) Arms	ESR (Max,mΩ)
Capacity (μF)						
120	22×35	0.66	1380	25×40	0.65	1543
150	22×40	0.77	1104	25×50	0.79	1235
	25×30	0.76	1104	30×35	0.76	1235
	30×25	0.76	1104	35×30	0.78	1235
	22×45	0.89	920	30×35	0.82	1029
180	25×35	0.89	920	35×30	0.85	1029
	30×30	0.86	920			
	35×25	0.85	920			
	25×40	0.98	752	30×40	0.96	841
220	30×35	1.03	752	35×35	0.99	841
	35×30	1.07	752			
	25×45	1.14	612	30×50	1.16	685
270	30×40	1.18	612	35×40	1.15	685
	35×35	1.23	612			
330	30×45	1.39	501	30×55	1.33	560
390	30×50	1.57	501	30×65	1.55	473
	35×40	1.56	501	35×50	1.51	473
470	35×40	1.70	415	35×55	1.72	392
560	35×50	2.02	348	35×65	2.00	328
680	35×55	2.28	286	35×75	2.33	270
820	35×60	2.57	237	35×90	2.74	223
1000	35×70	2.91	195			



CW6H

■ List of Standard Products

Operating voltage (V)	550(600)			600(650)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
120	30×30	0.95	1776	30×40	1.00	2673
				35×30	0.99	2673
150	30×35	1.09	1420	30×45	1.15	2137
				35×35	1.12	2137
180	30×40	1.22	1183	30×50	1.28	1780
	35×30	1.15	1183	35×40	1.28	1780
220	30×50	1.41	967	30×60	1.47	1456
	35×40	1.34	967	35×45	1.44	1456
270	35×45	1.52	787	35×50	1.63	1187
330	35×50	1.72	643	35×60	1.87	971
390	35×60	1.94	545	35×70	2.20	823
470	35×65	2.33	452	40×60	2.25	683



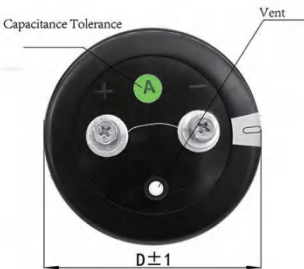
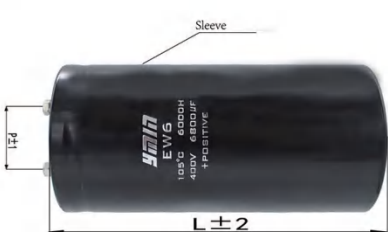
ES3

- ◆85°C, 3000-hour long lifespan
- ◆Suitable for UPS power supplies and industrial controllers
- ◆RoHS compliant

■ Main technical parameters

project	characteristic						
Operating Temperature Range	-40 ~ +85°C(10~100V) ; -25 ~ +85°C(160~500V)						
Rated Voltage Range	200 ~ 500V						
Rated Capacitance Range	1000 ~ 22000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 0.01 \sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.18 (20°C 120Hz)						
Temperature Characteristics (120Hz)	200~450 C(-25°C)/C(+20°C)≥0.7 ; 500 C(-40°C)/C(+20°C)≥0.6						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was ≥100MΩ.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>≅ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≅ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≅ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	≅ ±20% of the initial value	Loss value (tg δ)	≅ 200% of the initial specification value	Leakage current (LC)	≅ Initial specification value
Capacity change rate (ΔC)	≅ ±20% of the initial value						
Loss value (tg δ)	≅ 200% of the initial specification value						
Leakage current (LC)	≅ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 85°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>≅ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≅ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≅ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	≅ ±20% of the initial value	Loss value (tg δ)	≅ 200% of the initial specification value	Leakage current (LC)	≅ Initial specification value
Capacity change rate (ΔC)	≅ ±20% of the initial value						
Loss value (tg δ)	≅ 200% of the initial specification value						
Leakage current (LC)	≅ Initial specification value						

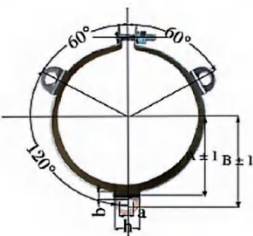
■ Product dimension drawing (unit: mm)



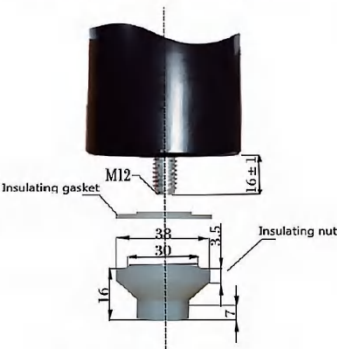
D(mm)	51	64	77	90	101
P(mm)	22	28.3	32	32	41
screw	M5	M5	M5	M6	M8
Terminal diameter (mm)	13	13	13	17	17
Torque (Nm)	2.2	2.2	2.2	3.5	7.5

■ Y-shaped clasp

Y type snap ring(Code:Y)



■ Tail column assembly and dimensions



Screw end pin is M12,max torque is 10N.m

diameter(mm)	A(mm)	B(mm)	a(mm)	b(mm)	h(mm)
51	31.8	36.5	7	4.5	14
64	38.1	42.5	7	4.5	14
77	44.5	49.2	7	4.5	14
90	50.8	55.6	7	4.5	14
101	56.5	63.4	7	4.5	14

■ Ripple current correction factor

Frequency compensation coefficient

Frequency	50Hz	120Hz	300Hz	1kHz	≥10kHz
Correction Factor	0.70	1.00	1.10	1.30	1.40

Temperature compensation coefficient

Temperature (°C)	40°C	60°C	85°C
Coefficient	1.89	1.67	1.00



ES3

■ List of Standard Products

Operating voltage (V)	400(450)			450(500)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000	51×75	3.64	83	51×75	3.95	82
1200	51×75	3.96	79	51×96	4.12	79
1500	51×96	4.32	57	51×115	4.45	57
1800	51×96	5.34	46	51×130	5.46	49
2200	51×115	7.45	38	51×130	7.36	37
2200	51×105	6.74	40	64×96	7.69	35
2700	51×130	8.56	34	64×115	8.48	32
2700	64×96	8.94	33	64×96	8.51	31
3300	64×115	10.40	32	64×130	10.17	30
3300	64×96	11.04	30	64×115	10.77	29
3900	64×130	12.24	27	77×115	11.84	27
3900	64×115	12.96	26	64×130	11.63	28
4700	77×115	14.44	3	77×115	14.21	23
4700	64×130	14.18	24	77×130	13.87	24
5600	77×130	16.33	21	77×155	15.68	17
5600	77×115	16.83	20	77×130	15.50	17
6800	77×130	17.34	16	90×157	17.78	15
6800	77×155	17.84	16	77×155	18.46	14
8200	90×157	21.60	14	90×157	19.08	13
8200	77×155	21.62	14	77×175	19.58	12
10000	90×157	21.55	12	90×160	22.15	12
10000	77×190	22.44	12	90×195	24.00	10
12000	90×196	26.62	11	90×196	27.80	10
12000	90×155	26.52	11	90×235	28.32	9
15000	90×236	21.41	10	90×236	31.56	9
15000	90×196	32.00	10			
18000	90×236	39.36	8	101×234	41.06	8
22000	101×234	45.56	7			



ES3

■ List of Standard Products

Operating voltage (V)	500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)			
1200	51×115	4.30	101
1200	51×130	4.05	107
1500	51×130	5.30	90
1500	64×115	5.24	93
1800	64×115	6.23	76
1800	64×130	6.42	74
2200	64×130	7.24	59
2700	77×115	8.69	41
2700	77×120	8.48	44
3300	77×115	10.35	36
3300	77×130	9.84	38
3900	77×130	11.32	33
3900	77×155	11.44	32
4700	77×171	13.02	30
4700	90×130	13.36	29
5600	77×196	15.74	26
5600	90×155	16.22	24
6800	90×170	17.20	23
6800	90×190	17.52	23
8200	90×196	19.56	20
8200	90×220	19.40	21
10000	90×236	23.05	16
10000	90×245	23.00	16
12000	101×234	29.35	14

ES3M

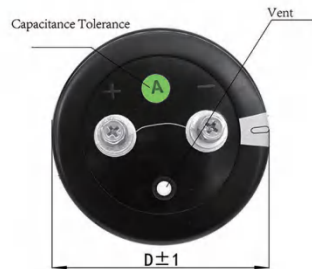
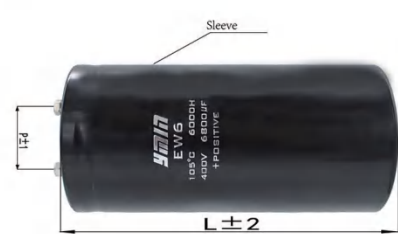
- ◆Suitable for DC welding machines and inverter welding machines
- ◆85°C, 3000-hour warranty, high ripple, miniaturized
- ◆RoHS compliant



■ Main technical parameters

project	characteristic						
Operating Temperature Range	-25 ~ +85°C						
Rated Voltage Range	200 ~ 500V						
Rated Capacitance Range	1000 ~ 39000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 0.01\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.18 (20°C 120Hz)						
Temperature Characteristics (120Hz)	200~450 C(-25°C)/C(+20°C)≥0.7 ; 500 C(-40°C)/C(+20°C)≥0.6						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was ≥100MΩ.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 85°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (Δ C)</td><td>≡ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≡ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≡ Initial specification value</td></tr></table>	Capacity change rate (Δ C)	≡ ±20% of the initial value	Loss value (tg δ)	≡ 200% of the initial specification value	Leakage current (LC)	≡ Initial specification value
Capacity change rate (Δ C)	≡ ±20% of the initial value						
Loss value (tg δ)	≡ 200% of the initial specification value						
Leakage current (LC)	≡ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 85°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (Δ C)</td><td>≡ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≡ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≡ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (Δ C)	≡ ±20% of the initial value	Loss value (tg δ)	≡ 200% of the initial specification value	Leakage current (LC)	≡ Initial specification value
Capacity change rate (Δ C)	≡ ±20% of the initial value						
Loss value (tg δ)	≡ 200% of the initial specification value						
Leakage current (LC)	≡ Initial specification value						

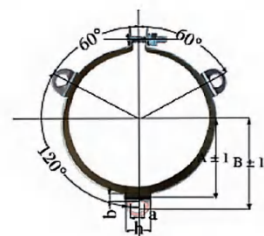
■ Product dimension drawing (unit: mm)



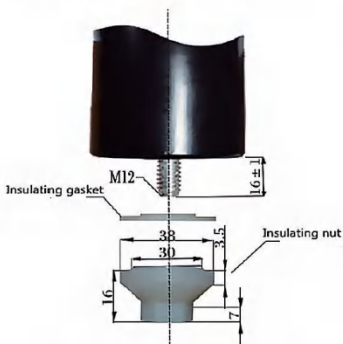
D(mm)	51	64	77	90	101
P(mm)	22	28.3	32	32	41
screw	M5	M5	M5	M6	M8
Terminal diameter (mm)	13	13	13	17	17
Torque (N.m)	2.2	2.2	2.2	3.5	7.5

■ Y-shaped clasp

Y type snap ring(Code:Y)



■ Tail column assembly and dimensions



Screw end pin is M12,max torque is 10N.m

diameter(mm)	A(mm)	B(mm)	a(mm)	b(mm)	h(mm)
51	31.8	36.5	7	4.5	14
64	38.1	42.5	7	4.5	14
77	44.5	49.2	7	4.5	14
90	50.8	55.6	7	4.5	14
101	56.5	63.4	7	4.5	14

■ Ripple current correction factor Frequency compensation coefficient

Frequency	50Hz	120Hz	300Hz	1kHz	≥10kHz
Correction Factor	0.70	1.00	1.10	1.30	1.40

Temperature compensation coefficient

Temperature (° C)	40°C	60°C	85°C
Coefficient	1.89	1.67	1.00



ES3M

■ List of Standard Products

Operating voltage (V)	200(250)			250(300)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
3300				51×80	6.84	28
3300				35×100	6.23	30
3900				51×80	7.56	23
3900				35×115(105)	6.84	26
4700	51×75	7.68	24	51×90	8.52	22
4700	35×100	5.83	28	35×115	7.64	25
5600	51×80	9.12	21	64×75	9.09	19
5600	35×115	8.18	23	51×115	9.36	19
6800	64×65(70)	10.68	18	64×85	10.92	16
6800	51×90(95)	10.56	19	51×150(140)	11.70	15
8200	64×75	10.38	16	77×80	11.92	14
8200	51×130	11.28	16	64×96(105)	12.00	14
10000	64×85	12.48	14	77×90	14.04	13
10000	51×150(140)	11.64	14	64×110	14.04	13
12000	77×80	14.42	13	77×100	15.66	12
12000	64×115(105)	14.52	13	64×125	15.48	12
15000	77×90	16.99	12	77×115	18.12	11
15000	64×120	17.28	12	64×145	18.37	11
18000	77×105(115)	19.57	11	90×100	22.04	10
18000	64×125	19.80	11	77×130	21.24	10
22000	90×90	22.66	10	90×115	24.67	9
22000	77×120	23.52	9	77×155	25.08	9
27000	90×105	26.77	8	90×135	26.16	8
27000	77×140	25.80	8	77×180	26.40	8
33000	90×120	29.86	7	101×160	28.49	7
33000	77×160	30.36	7	90×190	28.80	7
39000	90×140	34.16	6	101×180	35.83	6
39000	77×185	34.80	6	90×210	36.00	6



ES3M

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
2200	51×75	7.45	42	51×90	7.45	38
2200	35×105	6.74	45	35×110	6.74	40
2700	51×90	8.94	36	64×75	8.56	34
2700	35×115	7.71	39	51×100	8.94	33
3300	64×75	9.36	33	64×85	10.40	32
3300	51×110	9.90	33	51×115	11.04	30
3900	64×75	11.32	28	64×96	12.24	27
3900	51×115	10.87	29	51×130	12.97	26
4700	77×75	13.37	26	77×80	14.44	23
4700	64×90	13.46	26	64×105	14.18	24
4700	51×130	13.54	26			
5600	77×80	15.55	23	77×90	16.33	21
5600	64×105	15.50	23	64×125	16.83	20
6800	77×96	17.34	18	77×105	17.34	16
6800	64×120	17.14	19	64×140	17.84	16
8200	77×105	19.99	16	90×95	21.60	14
8200	64×135	19.76	17	77×120	21.62	14
10000	90×95	23.26	14	90×105	21.55	12
10000	77×120	23.87	13	77×140	22.44	12
12000	90×110	24.58	12	90×125	26.62	11
12000	77×140	25.33	11	77×160	26.52	11



ES3M

List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000	51×65	3.95	82	51×75	3.74	118
1000	36×100	3.70	83	36×110	3.56	121
1200				51×85	4.30	101
1200				36×120	4.05	107
1500	51×80	4.45	57	64×70	5.30	90
1500	36×110	4.23	59	51×95	5.24	93
2200	64×70	7.36	37	64×85	7.24	59
2200	51×100	7.69	35	51×120	7.32	55
2700	64×80	8.48	32	77×80	8.69	41
2700	51×115	8.51	31	64×96	8.48	44
3300	64×96	10.17	30	77×90	10.35	36
3300	51×135	10.77	29	64×110	9.84	38
3900	77×85	11.84	27	77×100	11.32	33
3900	64×105	11.63	28	64×125	11.44	32
4700	77×90	14.21	23	64×145	13.02	30
4700	64×120	13.87	24	77×115	13.36	29
5600	77×105	15.68	17	90×105	15.74	26
5600	64×135	15.50	17	77×130	16.22	25
6800	90×100	17.78	15	90×120	17.20	24
6800	77×120	18.46	14	77×155	17.52	23
8200	90×110	19.08	13	101×120	19.56	20
8200	77×135	19.58	12	90×155	19.40	21
10000	90×125	22.15	12	101×145	23.05	16
10000	77×160	24.00	10	90×190	23.00	16



ES6

- ◆85°C for 6000 hours
- ◆Suitable for UPS power supplies and industrial frequency converters
- ◆RoHS compliant

■ Main technical parameters

project	characteristic						
Operating Temperature Range	-25 ~ +85°C						
Rated Voltage Range	200 ~ 500V						
Rated Capacitance Range	1000 ~ 47000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 0.01\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.18 (20°C 120Hz)						
Temperature Characteristics (120Hz)	200~450 C(-25°C)/C(+20°C)≥0.7 ; 500 C(-25°C)/C(+20°C)≥0.6						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was ≥100MΩ.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 85°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>≡ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≡ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≡ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	≡ ±20% of the initial value	Loss value (tg δ)	≡ 200% of the initial specification value	Leakage current (LC)	≡ Initial specification value
Capacity change rate (ΔC)	≡ ±20% of the initial value						
Loss value (tg δ)	≡ 200% of the initial specification value						
Leakage current (LC)	≡ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 85°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>≡ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≡ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≡ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	≡ ±20% of the initial value	Loss value (tg δ)	≡ 200% of the initial specification value	Leakage current (LC)	≡ Initial specification value
Capacity change rate (ΔC)	≡ ±20% of the initial value						
Loss value (tg δ)	≡ 200% of the initial specification value						
Leakage current (LC)	≡ Initial specification value						

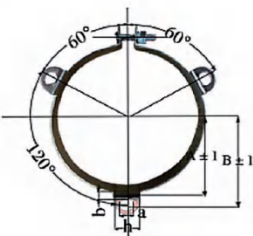
■ Product dimension drawing (unit: mm)



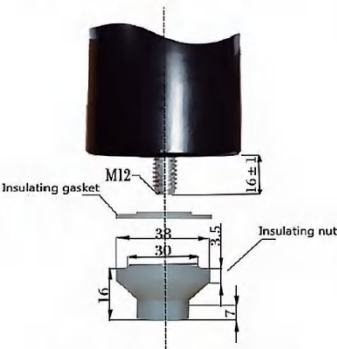
D(mm)	51	64	77	90	101
P(mm)	22	28.3	32	32	41
screw	M5	M5	M5	M6	M8
Terminal diameter (mm)	13	13	13	17	17
Torque (Nm)	2.2	2.2	2.2	3.5	7.5

■ Y-shaped clasp

Y type snap ring(Code:Y)



■ Tail column assembly and dimensions



Screw end pin is M12,max torque is 10N.m

diameter(mm)	A(mm)	B(mm)	a(mm)	b(mm)	h(mm)
51	31.8	36.5	7	4.5	14
64	38.1	42.5	7	4.5	14
77	44.5	49.2	7	4.5	14
90	50.8	55.6	7	4.5	14
101	56.5	63.4	7	4.5	14

■ Ripple current correction factor Frequency compensation coefficient

Frequency	50Hz	120Hz	300Hz	1kHz	≥10kHz
Correction Factor	0.70	1.00	1.10	1.30	1.40

Temperature compensation coefficient

Temperature (°C)	40°C	60°C	85°C
Coefficient	1.89	1.67	1.00



ES6

■ List of Standard Products

Operating voltage (V)	200(250)			250(300)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
3300				51×90	7.50	25
3300				35×110	6.78	27
3900				51×96	8.80	22
3900				35×115	7.89	25
4700	51×90	8.90	23	64×80(70)	10.00	19
4700	35×110	8.05	25	51×115(105)	10.44	19
5600	51×96	10.60	19	64×90(85)	10.27	16
5600	35×115	9.51	21	51×130	10.90	16
6800	64×80	11.94	16	64×96	12.80	15
6800	51×115	12.30	15	51×150(145)	13.56	14
8200	64×90	12.74	14	77×90	14.32	13
8200	51×130	13.20	14	64×115	14.30	13
10000	64×96	14.50	13	77×96	15.91	12
10000	51×150(145)	15.36	13	64×130	16.40	12
12000	77×90	17.03	12	77×115	17.59	12
12000	64×115	17.00	12	64×155	18.10	11
15000	77×96	19.69	11	90×96	20.33	10
15000	64×130	20.20	11	77×130	21.10	9
18000	77×115	23.10	10	90×115	24.17	9
18000	64×155	23.77	10	77×150	24.80	8
22000	90×96	26.40	8	90×130	28.45	7
22000	77×130	27.40	8	77×170	29.20	7
27000	90×130	29.61	7	90×150	30.24	7
27000	77×165	30.10	7	77×190	30.80	7
33000	90×150	34.85	6	101×180	31.85	5
33000	77×190	35.50	6	90×210	32.00	5
39000	101×140	39.31	4			
39000	90×160	39.00	4			
47000	101×170	46.71	3			
47000	90×190	46.00	3			



ES6

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
2200	51×90	8.00	37	51×96	9.30	34
2200	35×110	7.23	38	35×120	8.51	37
2700	64×80	9.71	35	64×80	9.52	32
2700	51×115	10.00	34	51×115	9.80	31
3300	64×90	10.70	32	64×90	12.00	30
3300	51×130	11.10	31	51×150(140)	12.86	29
3900	64×90	12.60	28	77×90(85)	13.54	25
3900	51×150(145)	13.72	26	64×115(105)	13.30	26
4700	77×90	14.42	25	77×96	15.64	23
4700	64×115	14.40	25	64×115	15.20	24
5600	77×115(105)	16.19	23	77×115(105)	17.20	18
5600	64×130	16.00	23	64×130	17.00	19
6800	77×115	17.78	17	77×130(120)	20.50	16
6800	64×155	18.30	17	64×155(150)	20.41	16
8200	90×115(105)	21.48	15	90×115	23.19	14
8200	77×130	21.50	15	77×150	23.80	13
10000	90×115	24.30	12	90×130	25.42	11
10000	77×155	25.30	11	77×170	26.20	10
12000	90×150	27.49	11	90×150	31.00	10
12000	77×190	28.00	11	77×190	31.58	9
15000	101×150(140)	33.67	9	101×150(140)	36.71	8
15000	90×170	34.30	9	90×170	37.40	8
18000	101×170	40.90	8	101×180	38.72	7
18000	90×190	40.30	8	90×210	38.90	7
22000	101×200	42.88	7	101×210	49.21	7
22000	90×220	42.00	7	90×250	50.00	6
25000	101×210	46.26	7			
25000	90×250	47.00	7			



ES6

■ List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000	51×80(75)	4.90	80	51×90	4.90	115
1000	35×100	4.59	85	35×120	4.61	118
1200				51×96	6.00	102
1200				35×130	5.70	106
1500	51×96	7.10	56	64×80	7.09	86
1500	35×120	6.50	64	51×115	7.30	84
1800				64×96	8.33	58
1800				51×130	8.40	57
2200	64×80	8.84	34	77×96	11.00	48
2200	51×115	9.10	32	64×115	10.70	49
2700	64×96	10.50	31	77×115(105)	11.64	39
2700	51×150(145)	11.12	30	64×130	11.50	41
3300	77×90	12.22	29	77×115	13.80	35
3300	64×115	12.20	29	64×155(150)	14.20	34
3900	77×96	13.16	27	90×100(96)	15.90	31
3900	64×130	13.50	27	77×130	16.50	30
4700	77×115	15.35	23	90×115	17.77	26
4700	64×155(150)	15.80	22	77×155	18.50	25
5600	90×115(105)	18.19	16	90×130	19.38	24
5600	77×130	18.20	16	77×190	21.00	22
6800	90×115	20.47	14	101×130(120)	23.09	23
6800	77×150	21.00	13	90×155	24.10	22
8200	90×130	22.80	12	101×150(140)	26.70	19
8200	77×170	23.50	11	90×170	27.20	21
10000	90×155	28.00	11	101×180	32.05	16
10000	77×190	28.12	10	90×210	32.20	15
12000	101×140	32.39	10			
12000	90×170	33.00	9			
15000	101×180	39.32	8			
15000	90×210	39.50	8			
18000	101×210	46.26	8			
18000	90×250	47.00	7			



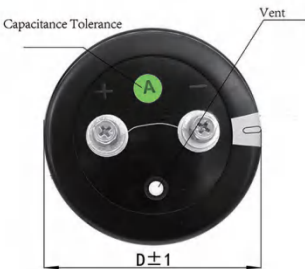
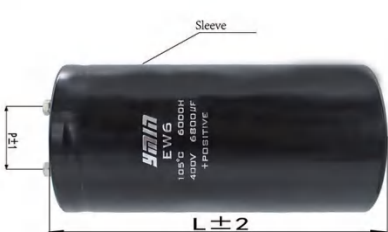
EW3

- ◆105°C for 3000 hours
- ◆Suitable for UPS power supplies and industrial control systems
- ◆RoHS compliant

■ Main technical parameters

project	characteristic						
Operating Temperature Range	-25 ~ +105°C						
Rated Voltage Range	200 ~ 500V						
Rated Capacitance Range	1000 ~ 33000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 0.01 \sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.15 (20°C 120Hz)						
Temperature Characteristics (120Hz)	200~450 C(-25°C)/C(+20°C)≥0.7 ; 500 C(-25°C)/C(+20°C)≥0.6						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was ≥100MΩ.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>≅ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≅ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≅ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	≅ ±20% of the initial value	Loss value (tg δ)	≅ 200% of the initial specification value	Leakage current (LC)	≅ Initial specification value
Capacity change rate (ΔC)	≅ ±20% of the initial value						
Loss value (tg δ)	≅ 200% of the initial specification value						
Leakage current (LC)	≅ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 85°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>≅ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≅ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≅ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	≅ ±20% of the initial value	Loss value (tg δ)	≅ 200% of the initial specification value	Leakage current (LC)	≅ Initial specification value
Capacity change rate (ΔC)	≅ ±20% of the initial value						
Loss value (tg δ)	≅ 200% of the initial specification value						
Leakage current (LC)	≅ Initial specification value						

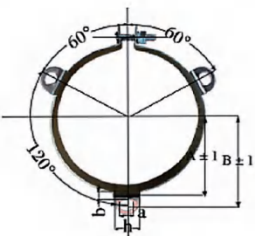
■ Product dimension drawing (unit: mm)



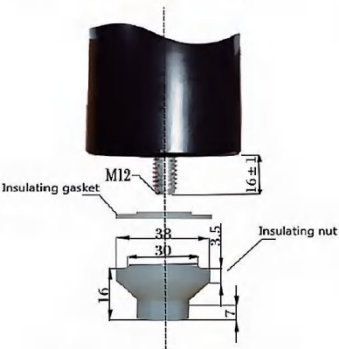
D(mm)	51	64	77	90	101
P(mm)	22	28.3	32	32	41
screw	M5	M5	M5	M6	M8
Terminal diameter (mm)	13	13	13	17	17
Torque (Nm)	2.2	2.2	2.2	3.5	7.5

■ Y-shaped clasp

Y type snap ring(Code:Y)



■ Tail column assembly and dimensions



Screw end pin is M12,max torque is 10N.m

diameter(mm)	A(mm)	B(mm)	a(mm)	b(mm)	h(mm)
51	31.8	36.5	7	4.5	14
64	38.1	42.5	7	4.5	14
77	44.5	49.2	7	4.5	14
90	50.8	55.6	7	4.5	14
101	56.5	63.4	7	4.5	14

■ Ripple current correction factor Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	≥10kHz
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (°C)	40°C	60°C	85°C	105°C
Coefficient	2.70	2.20	1.70	1.00



EW3

List of Standard Products

Operating voltage (V)	200(250)			250(300)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
2200				51×75	3.10	40
3300	51×75	3.50	36	51×96	4.00	32
4700	51×96	4.50	24	51×115	5.00	20
6800	51×130	6.00	16	64×96	6.90	13
8200	64×96	7.10	14	64×115	7.60	12
10000	64×115	8.00	12	64×130	8.50	11
12000	64×130	9.20	9	77×120	9.50	9
15000	77×115	11.00	7	77×150	12.00	7
18000	77×130	13.20	6	77×170	13.30	6
22000	77×155	14.00	5	90×130	12.91	6
22000	90×130	14.16	5	90×150	14.00	5
27000	90×150	15.00	4	90×170	15.00	4
33000	90×155	16.20	4	90×210	17.20	3

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000				51×75	2.50	82
1200				51×75	3.00	70
1500				51×90	3.60	50
1800				51×96	4.10	42
2200	51×105	3.30	40	51×115	4.50	32
2700	51×130	4.00	38	51×130	5.30	26
3300	64×96	4.50	32	64×115	6.20	23
3900	64×115	5.00	27	64×130	7.20	20
4700	64×130	5.50	24	77×115	8.70	17
5600	77×115	6.10	20	77×130	9.60	15
6800	77×130	7.20	14	77×155	10.80	13
8200	77×150	8.00	12	77×170	12.00	11
10000	90×130	9.00	11	90×150	14.00	10
12000	90×150	10.00	10	90×160	16.10	9
15000	90×170	12.60	8	90×190	17.50	7
18000	90×210	14.10	6			
22000	90×235	15.30	4			
22000	101×210	15.49	4			
25000	90×250	16.00	4			
25000	101×230	16.40	4			



EW3

■ List of Standard Products

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (85°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000	51×80	2.50	82	51×105	4.00	95
1200	51×80	3.00	72			
1500	51×96	3.60	53	51×130	5.50	61
1800	51×105	4.10	43			
2200	51×130	4.50	33	64×115	6.50	40
2700	64×115	5.00	27			
3300	64×130	6.00	24	77×130	8.50	28
3900	77×115	7.00	20	77×155	10.50	25
4700	77×130	8.40	18	77×170	12.00	22
4700				90×130	11.64	23
5600	77×150	9.50	16	90×150	13.10	20
6800	77×170	10.20	13	90×170	14.20	16
6800	90×130	9.90	14			
8200	90×150	11.50	11	90×190	16.00	15
10000	90×170	13.50	10	90×210	16.80	12
12000	90×190	16.00	9			



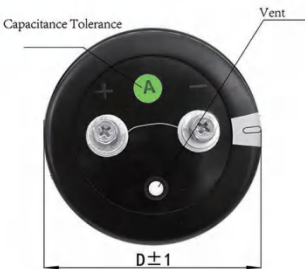
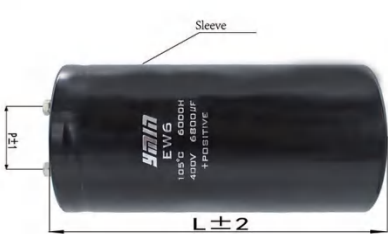
EW6

- ◆105°C, 6000 hours
- ◆Suitable for UPS power supplies, industrial control systems, and industrial servos
- ◆RoHS compliant

■ Main technical parameters

project	characteristic						
Operating Temperature Range	-25 ~ +105°C						
Rated Voltage Range	350 ~ 500V						
Rated Capacitance Range	1000 ~ 22000μF (20°C 120Hz)						
Rated Capacitance Tolerance	±20%						
Leakage Current (mA)	$\leq 0.01 \sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.						
Maximum Loss (20° C)	0.15 (20°C 120Hz)						
Temperature Characteristics (120Hz)	350~450 C(-25°C)/C(+20°C)≥0.7 ; 500 C(-25°C)/C(+20°C)≥0.6						
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was ≥100MΩ.						
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.						
Durability	Under conditions of 105°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met. <table><tr><td>Capacity change rate (ΔC)</td><td>≅ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≅ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≅ Initial specification value</td></tr></table>	Capacity change rate (ΔC)	≅ ±20% of the initial value	Loss value (tg δ)	≅ 200% of the initial specification value	Leakage current (LC)	≅ Initial specification value
Capacity change rate (ΔC)	≅ ±20% of the initial value						
Loss value (tg δ)	≅ 200% of the initial specification value						
Leakage current (LC)	≅ Initial specification value						
High Temperature No-Load Characteristics	After being stored at 85°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test. <table><tr><td>Capacity change rate (ΔC)</td><td>≅ ±20% of the initial value</td></tr><tr><td>Loss value (tg δ)</td><td>≅ 200% of the initial specification value</td></tr><tr><td>Leakage current (LC)</td><td>≅ Initial specification value</td></tr></table> Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.	Capacity change rate (ΔC)	≅ ±20% of the initial value	Loss value (tg δ)	≅ 200% of the initial specification value	Leakage current (LC)	≅ Initial specification value
Capacity change rate (ΔC)	≅ ±20% of the initial value						
Loss value (tg δ)	≅ 200% of the initial specification value						
Leakage current (LC)	≅ Initial specification value						

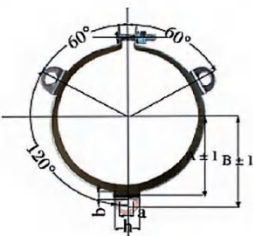
■ Product dimension drawing (unit: mm)



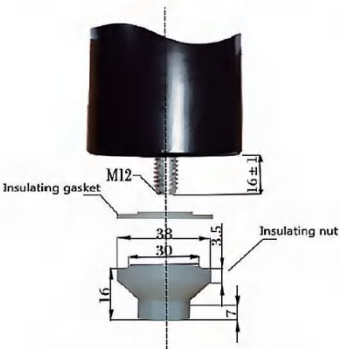
D(mm)	51	64	77	90	101
P(mm)	22	28.3	32	32	41
screw	M5	M5	M5	M6	M8
Terminal diameter (mm)	13	13	13	17	17
Torque (Nm)	2.2	2.2	2.2	3.5	7.5

■ Y-shaped clasp

Y type snap ring(Code:Y)



■ Tail column assembly and dimensions



Screw end pin is M12,max torque is 10N.m

diameter(mm)	A(mm)	B(mm)	a(mm)	b(mm)	h(mm)
51	31.8	36.5	7	4.5	14
64	38.1	42.5	7	4.5	14
77	44.5	49.2	7	4.5	14
90	50.8	55.6	7	4.5	14
101	56.5	63.4	7	4.5	14

■ Ripple current correction factor Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	≥10kHz
Correction Factor	0.80	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (°C)	40°C	60°C	85°C	105°C
Coefficient	2.70	2.20	1.70	1.00



EW6

■ List of Standard Products

Operating voltage (V)	350(400)			400(450)		
project	Dimensions: $\Phi D \times L$ (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, m Ω / 120Hz 20°C)	Dimensions: $\Phi D \times L$ (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, m Ω / 120Hz 20°C)
Capacity (μF)						
1000				51×75	4.00	80
1200				51×80	4.70	75
1500				51×90	5.30	45
1800				51×96	6.50	40
2200	51×105	7.00	36	51×115	7.70	36
2700	51×130	8.40	34	64×96	9.00	34
3300	64×96	9.80	27	64×115	11.00	27
3900	64×115	11.50	24	64×130	12.40	24
4700	64×130	13.00	20	77×115	14.50	20
5600	77×115	14.70	17	77×130	16.20	17
6800	77×130	16.80	11	77×155	18.30	11
8200	77×155	19.60	9	77×170	21.00	9
10000	90×130	23.00	8	90×155	24.50	8
12000	90×155	25.00	6	90×170	27.60	6
15000	90×190	30.80	5	90×210	32.00	5
18000	90×235	38.00	4			
22000	101×235	44.00	4			

Operating voltage (V)	450(500)			500(550)		
project	Dimensions: $\Phi D \times L$ (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, m Ω / 120Hz 20°C)	Dimensions: $\Phi D \times L$ (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, m Ω / 120Hz 20°C)
Capacity (μF)						
1000	51×80	4.00	80	51×105	4.50	90
1200	51×96	4.80	75			
1500	51×105	5.30	45	51×130	6.40	50
1800	51×130	6.50	40			
2200	64×96	7.60	36	64×130	8.00	40
2700	64×115	8.90	34			
3300	64×130	11.00	27	77×130	12.00	31
3900	77×115	12.50	24	77×155	13.00	27
4700	77×130	14.50	20	77×170	15.50	22
5600	77×150	16.20	17	77×190	17.00	19
6800	90×155	18.00	11	90×170	19.00	12
8200	90×170	21.00	9	90×210	22.00	9
10000	90×190	24.50	8	90×235	27.00	9
12000	90×235	27.50	6			



EH3

- ◆ Suitable for high voltage and large power supplies below 630V, medium and high voltage frequency converters (For 1200V DC bus, selecting two in series can replace three in series for 400V)
- ◆ 85°C 3000-hour warranty, high ripple reduction
- ◆ Suitable for photovoltaics and industrial control
- ◆ RoHS compliant

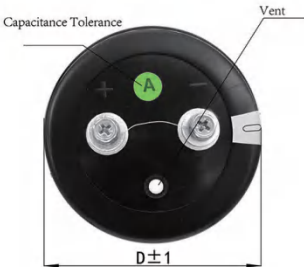
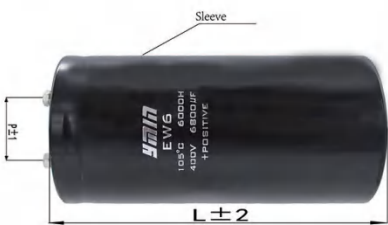


■ Main technical parameters

project	characteristic
Operating Temperature Range	-25 ~ +85°C
Rated Voltage Range	550 ~ 630V
Rated Capacitance Range	1000 ~ 10000 μF (20°C 120Hz)
Rated Capacitance Tolerance	±20%
Leakage Current (mA)	$\leq 0.01 \sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.
Maximum Loss (20° C)	0.3 (20°C 120Hz)
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C}) \geq 0.5$
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.
Durability	Under conditions of 85°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met.
	Capacity change rate (ΔC) $\leq \pm 20\%$ of the initial value
	Loss value (tg δ) $\leq 200\%$ of the initial specification value
	Leakage current (LC) $\leq$ Initial specification value
High Temperature No-Load Characteristics	After being stored at 85°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test.
	Capacity change rate (ΔC) $\leq \pm 20\%$ of the initial value
	Loss value (tg δ) $\leq 200\%$ of the initial specification value
	Leakage current (LC) $\leq$ Initial specification value

Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.

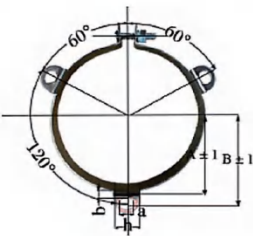
■ Product dimension drawing (unit: mm)



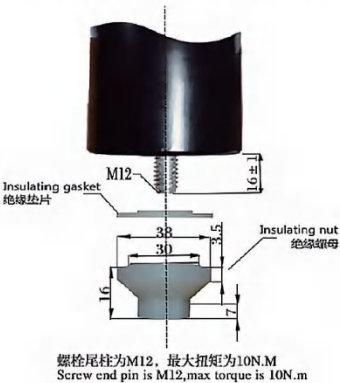
D(mm)	51	64	77	90	101
P(mm)	22	28.3	32	32	41
screw	M5	M5	M5	M6	M8
Terminal diameter (mm)	13	13	13	17	17
Torque (Nm)	2.2	2.2	2.2	3.5	7.5

■ Y-shaped clasp

Y type snap ring(Code:Y)



■ Tail column assembly and dimensions



螺栓尾柱为M12，最大扭矩为10N.M
Screw end pin is M12,max torque is 10N.m

diameter(mm)	A(mm)	B(mm)	a(mm)	b(mm)	h(mm)
51	31.8	36.5	7	4.5	14
64	38.1	42.5	7	4.5	14
77	44.5	49.2	7	4.5	14
90	50.8	55.6	7	4.5	14
101	56.5	63.4	7	4.5	14

■ Ripple current correction factor Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.70	1.00	1.20	1.25	1.40

Temperature compensation coefficient

Temperature (°C)	40°C	60°C	85°C
Coefficient	1.89	1.67	1.00



EH3

■ List of Standard Products

Operating voltage (V)	550(600)			600(650)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000	51×96	4.95	230	51×110	5.65	250
1200	51×105	5.75	210	51×130	7.08	235
1500	51×115	6.90	195	51×150	8.57	218
1800	51×130	7.71	168	64×115	10.28	190
2200	64×110	9.20	151	77×90	12.70	160
2700	77×100	10.81	110	77×105	14.92	131
3300	77×120	12.65	90	77×120	16.61	96
3900	77×130	14.38	67	77×140	19.35	70
3900	90×110	13.95	68			
4700	90×120	16.68	57	77×155	20.52	66
5600	90×150	19.09	43	90×155	24.84	46
6800	90×170	22.43	36	90×180	25.81	41
8200	90×190	24.84	31			
10000	101×190	28.98	29			

Operating voltage (V)	630(680)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)			
1000	64×100	4.37	270
1200	64×115	4.72	250
1500	77×100	5.87	231
1800	77×115	6.56	205
2200	77×130	7.48	165
2200	90×115	7.26	171
2700	90×130	9.20	143
3300	90×150	10.58	110
3900	90×160	12.08	85
4700	90×170	13.11	70
4700	101×150	13.27	68
5600	101×190	15.30	56



EH6

- ◆Suitable for high voltage and large power supplies below 630V, medium and high voltage frequency converters (For 1200V DC busbars, two units in series can replace three units in series for 400V)
- ◆85°C, 6000-hour warranty, high ripple resistance, long lifespan
- ◆Suitable for photovoltaics and industrial control
- ◆RoHS compliant

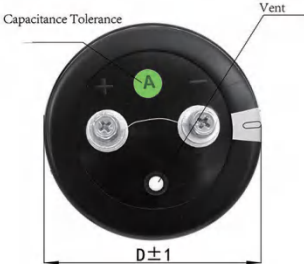
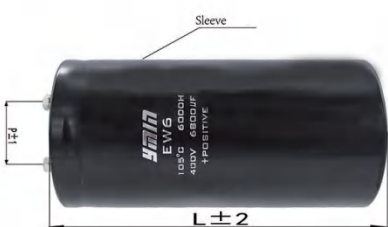


■ Main technical parameters

project	characteristic
Operating Temperature Range	-25 ~ +85°C
Rated Voltage Range	550 ~ 630V
Rated Capacitance Range	1000 ~ 10000 μF (20°C 120Hz)
Rated Capacitance Tolerance	±20%
Leakage Current (mA)	$\leq 0.01\sqrt{CV}$ (C: Nominal capacity; V: Rated voltage) or 0.94mA, whichever is smaller, test for 5 minutes at 20°C.
Maximum Loss (20° C)	0.3 (20°C 120Hz)
Temperature Characteristics (120Hz)	$C(-25^{\circ}\text{C})/C(+20^{\circ}\text{C}) \geq 0.5$
Insulation Resistance	The insulation resistance between all terminals and the insulating sleeves and mounting straps on the container sleeve was measured with a DC 500V insulation resistance meter and was $\geq 100\text{M}\Omega$.
Insulation Voltage	An AC 2000V voltage was applied to all terminals and the insulating sleeves and mounting straps on the container sleeve for 1 minute, and no abnormalities were observed.
Durability	Under conditions of 85°C and above the rated voltage with superimposed rated ripple current, after continuous loading of the rated voltage for 3000 hours and then returning to 20°C, the following requirements should be met.
	Capacity change rate (ΔC) $\leq \pm 20\%$ of the initial value
	Loss value (tg δ) $\leq 200\%$ of the initial specification value
	Leakage current (LC) $\leq$ Initial specification value
High Temperature No-Load Characteristics	After being stored at 85°C for 1000 hours and then restored to 20°C, the following requirements should be met during the test.
	Capacity change rate (ΔC) $\leq \pm 20\%$ of the initial value
	Loss value (tg δ) $\leq 200\%$ of the initial specification value
	Leakage current (LC) $\leq$ Initial specification value

Voltage pretreatment is required before the test: Apply the rated voltage across the capacitor through a resistor of approximately 1000Ω and maintain it for 1 hour. After pretreatment, discharge the capacitor through a resistor of approximately 1Ω/V. After complete discharge, place the capacitor at room temperature for 24 hours before starting the test.

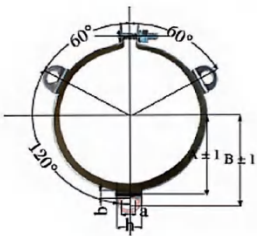
■ Product dimension drawing (unit: mm)



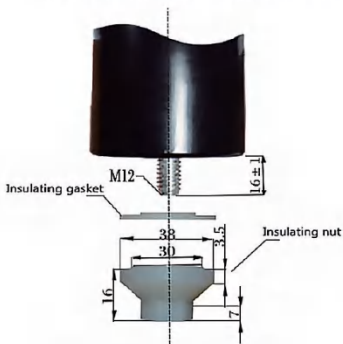
D(mm)	51	64	77	90	101
P(mm)	22	28.3	32	32	41
screw	M5	M5	M5	M6	M8
Terminal diameter(mm)	13	13	13	17	17
Torque (N.m)	2.2	2.2	2.2	3.5	7.5

■ Y-shaped clasp

Y type snap ring(Code:Y)



■ Tail column assembly and dimensions



Screw end pin is M12,max torque is 10N.m

diameter(mm)	A(mm)	B(mm)	a(mm)	b(mm)	h(mm)
51	31.8	36.5	7	4.5	14
64	38.1	42.5	7	4.5	14
77	44.5	49.2	7	4.5	14
90	50.8	55.6	7	4.5	14
101	56.5	63.4	7	4.5	14

■ Ripple current correction factor Frequency compensation coefficient

Frequency	50Hz	120Hz	500Hz	1kHz	$\geq 10\text{kHz}$
Correction Factor	0.70	1.00	1.10	1.30	1.40

Temperature compensation coefficient

Temperature (°C)	40°C	60°C	85°C
Coefficient	1.89	1.67	1.00



EH6

■ List of Standard Products

Operating voltage (V)	550(600)			600(650)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)						
1000	51×96	4.95	230	51×110	5.65	250
1200	51×105	5.75	210	51×130	7.08	235
1500	51×115	6.90	195	51×150	8.57	218
1800	51×130	7.71	168	64×115	10.28	190
2200	64×110	9.20	151	77×90	12.70	160
2700	77×100	10.81	110	77×105	14.92	131
3300	77×120	12.65	90	77×120	16.61	96
3900	77×130	14.38	67	77×140	19.35	70
3900	90×110	13.95	68			
4700	90×120	16.68	57	77×155	20.52	66
5600	90×150	19.09	43	90×155	24.84	46
6800	90×170	22.43	36	90×180	25.81	41
8200	90×190	24.84	31			
10000	101×190	28.98	29			

Operating voltage (V)	630(680)		
project	Dimensions: ΦD×L (mm)	Ripple current (105°C 120Hz) Arms	ESR (Max, mΩ / 120Hz 20°C)
Capacity (μF)			
1000	64×100	4.37	270
1200	64×115	4.72	250
1500	77×100	5.87	231
1800	77×115	6.56	205
2200	77×130	7.48	165
2200	90×115	7.26	171
2700	90×130	9.20	143
3300	90×150	10.58	110
3900	90×160	12.08	85
4700	90×170	13.11	70
4700	101×150	13.27	68
5600	101×190	15.30	46



Application areas



Photovoltaics



obc



charging pile



UPS power supply



Energy storage



5G base station power supply



Industrial servo



Industrial Drive



Active power filter



Industrial frequency converter



Partner Brands



BYD AUTO



FengTian Electronic



Dong Shengyuan Technology



Boao Electric



Taian Technology



Suzhou Huichuan



Aiswei New Energy



Wheatfield Energy Technology



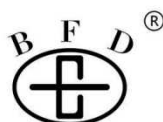
Shenzhen KSTAR



Growatt New Energy



Yuxin Pingrui Electronics



Nanjing Bifudi



Chint Electric



Precautions:

1) Confirmation of Operating Environment, Installation Environment, and Rated Performance

* Please confirm that the operating environment and installation environment comply with the capacitor's product catalog and specifications.

2) Operating Temperature, Ripple Current, and Lifespan

* Please use the capacitor within the operating temperature range and ripple current range specified in the product catalog and specifications.

* Do not use at high temperatures (above the upper limit of operating temperature).

* Do not allow overcurrent (above the rated ripple current) to pass through the capacitor.

Based on the results of accelerated testing, the capacitor's lifespan can be calculated using a lifespan estimation formula. However, the estimated lifespan has errors and cannot be used as a guarantee. Please use the estimated result as a reference and select a capacitor with a sufficient lifespan. For information on lifespan estimation methods, please consult our company. Please contact us if the ripple voltage variation exceeds 70Vp-p.

3) Circuit Usage

* Capacitors must be used with polarity specified. Do not apply reverse voltage or AC voltage. In circuits with reversed polarity, please use bipolar capacitors. However, bipolar capacitors cannot be used in AC circuits.

* Do not use capacitors in circuits with repeated rapid charging and discharging. For capacitors used in rechargeable/discharge circuits, please consult us.

For products stored for extended periods (over 12 months), recharging is required before use.

4) Applied Voltage

Do not apply overvoltage (voltage exceeding the rated operating voltage) to the capacitor.

5) Capacitor Insulation

Completely isolate the capacitor from the circuit in the following situations:

1. Between the aluminum case and cathode terminals, anode terminals, and circuit wiring.
2. Between self-standing, unconnected terminals (for strength enhancement) and other anode terminals, cathode terminals, and circuit wiring.

The capacitor's outer sheath does not guarantee insulation. Do not use it in applications requiring insulation.

6) Environmental Restrictions

Do not use the capacitor in the following environments:

1. Direct splashes of water, salt water, oil, or environments with condensation.
2. Environments filled with harmful gases (hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, bromine, etc.).
3. Environments with ozone, ultraviolet radiation, or radiation exposure.
4. Excessive vibration or shock conditions exceeding the range specified in the product catalog or specifications.
5. Do not reuse capacitors that have been assembled into equipment and already energized, except for capacitors removed during routine maintenance to test electrical characteristics.

7) Installation Environment Design When installing capacitors onto a printed circuit board, the following should be confirmed beforehand in the design:

1. Ensure that the capacitor terminal gap matches the PCB hole gap.
2. Do not extend wiring or the circuit board above the capacitor pressure valve in the design.



3. Please leave a certain gap at the pressure valve of the capacitor as specified in the product catalog or specification sheet.

Product diameter	interval
Φ 18~Φ 35mm	3mm up
Φ 40mm ↑	5mm up

4. When the pressure valve of the aluminum electrolytic capacitor contacts the printed circuit board, please install a vent hole in the opposite position on the printed circuit board.

5. Do not place heat-generating components around the capacitor or on the other side of the printed circuit board (below the capacitor).

8) Pre-installation Preparations

Do not reuse capacitors that have been assembled into the equipment and have already been energized. Except for capacitors removed for periodic maintenance to test electrical characteristics, they should not be reused.

- Capacitors may experience voltage re-emergence. In this case, please use a resistor with a power rating of approximately 1KΩ to discharge them.
- The leakage current of capacitors stored for a long time may increase. In this case, please use a resistor with a power rating of 1KΩ to voltage-treat them.

8-1) Installation-1

- Please confirm the capacitor's ratings (capacitance and voltage) before installation.
- Please confirm the capacitor's polarity before installation.
- Do not drop the capacitor on the ground. Do not use capacitors that have been dropped on the ground. • Do not deform the capacitor during installation.

8-2) Installation -2

- Ensure the capacitor terminal gap matches the PCB hole gap before installation.
- If concerned about vibration or impact during assembly, use auxiliary tools and adhesives to enhance the capacitor's stability when installing it onto the PCB.

9) Storage Conditions

- Do not store capacitors in high temperature and high humidity environments. Store indoors at a temperature of 5° C to 35° C and a relative humidity below 75%.
- Do not store capacitors in environments where they may come into direct contact with water, salt water, or oil.
- Do not store capacitors in environments filled with harmful gases (hydrogen sulfide, sulfurous acid, nitrous acid, chlorine, ammonia, bromine, etc.).
- Do not store capacitors in environments with ozone, ultraviolet radiation, or radiation exposure.

10) Cleaning the PCB

- Do not use halogen-containing solvents to clean capacitors. However, if cleaning is necessary, use a cleanable capacitor and use it within the limits specified in the product catalog or specifications. • When cleaning cleaner-resistant capacitors, please ensure proper contamination management of the cleaning agent (conductivity, pH value, specific gravity, water content, etc.).
- After cleaning cleaner-resistant capacitors, do not store them in an environment containing cleaning solution or in a sealed container.

Furthermore, after cleaning, thoroughly dry the printed circuit board and capacitors with hot air. Keep the hot air temperature below the upper operating temperature limit.



11) Fixatives and Coating Agents

- * Do not use fixatives or coating agents containing halogenated solvents.
- * Before using fixatives and coating agents, thoroughly clean the area between the substrate and the capacitor's sealing surface, ensuring no flux residue or dirt remains.
- * Before using fixatives and coating agents, dry any cleaning agents or other contaminants adhering to the capacitor.
- * When using fixatives and coating agents, do not completely block the capacitor's sealing surface.

12) Soldering

- * Soldering conditions (temperature, time) must not exceed the range specified in the product catalog or specifications.
- * If the terminal gaps do not match the PCB hole gaps, and processing is performed before soldering, the capacitor body must not be subjected to stress.
- * When manually trimming with a soldering iron, ensure the solder is fully melted before removing it to avoid putting pressure on the capacitor terminals.
- * Do not allow the tip of the soldering iron to touch the capacitor body.

13) Wave Soldering

- * When soldering, do not immerse the capacitor body in molten solder. Insert a printed circuit board as a barrier, and solder only the surface of the circuit board on the reverse side of the capacitor.
- * Soldering conditions (preheating, soldering temperature, terminal immersion time) must not exceed the range specified in the product catalog or specifications.
- * Do not apply flux to any part other than the terminals.
- * During soldering, take care to prevent other components from tipping over and coming into contact with the capacitor.

14) Reflow Soldering

- * Soldering conditions (preheating, soldering temperature, time, number of reflow soldering cycles) must not exceed the range specified in the product catalog or specifications.
- * When using an infrared heater, the absorption rate of infrared radiation varies depending on the color and material of the capacitor; please pay attention to the heating temperature.
- * If reflow soldering beyond the specified range is required, please contact us.

15) Disposal

- * If the capacitor comes into contact with water, salt water, oil (or other conductive liquids), it will cause condensation and may lead to malfunction. If oil comes into contact with sealing rubber, pressure valves, etc., it will result in poor airtightness. Please keep the capacitor's operating environment dry and clean. Do not use capacitors if they have been immersed in rainwater or other contaminated water.
 - Do not place or use capacitors in environments containing hydrogen sulfide, nitrous acid, sulfurous acid, chlorine, bromine, or harmful gases such as ammonia. The intrusion of these gases will cause corrosion.
 - Do not place capacitors in areas exposed to ozone, ultraviolet radiation, or other forms of radiation.
 - Dust or other powder buildup at the capacitor terminals can cause rusting as this dust absorbs moisture. If dust is noticeable at the terminals, stop the capacitor from being powered on and gently wipe it with a paper or cloth dampened with water or ethanol while the capacitor is fully discharged. Do not use detergents or other chemicals.
 - Do not use capacitors in environments subject to excessive vibration or impact.

16) Key Points: Aluminum electrolytic capacitors will experience a sharp deterioration in their characteristics when subjected to the following loads.



- Reverse voltage

Voltage exceeding rated value

- Ripple current exceeding rated value
- Rapid charging and discharging

At this time, the capacitor may generate a large amount of heat, the internal pressure will rise, causing the pressure valve to open, internal gas to be ejected, and leakage to occur. In some cases, flammable materials may enter along with the capacitor damage, potentially leading to explosion and fire. 17) Bolt products must meet the following requirements (failure to use according to the specified conditions may result in major accidents such as explosion and fire):

- Operating temperature and ripple current
- Operating environment and storage environment: Please use the capacitor according to the operating range specified in the product manual.
- For the specified range of operating temperature and ripple current, please select the capacitor based on the maximum load conditions. If excessive current passes through the capacitor, abnormal heating, short circuit, fire, and other major accidents may occur.
- The capacitor itself is a heat-generating component. Please note that it will cause the temperature inside the machine to rise. To ensure the machine operates in a normal state, please check the temperature of the environment around the capacitor.

The permissible ripple current decreases as the ambient temperature (the temperature around the capacitor) rises. Select the permissible ripple current based on the predicted highest ambient temperature.

- Frequency changes will cause capacitor characteristics to change. Please determine the frequency of the change before selecting a capacitor. Especially at low frequencies, the impedance of capacitors of equivalent value will increase, and be aware that this will generate a significant amount of heat.
- Regarding applied voltage and other operating conditions:

Capacitors are generally polarized. Reverse voltage and AC voltage input can cause serious accidents such as short circuits and fires. For AC applications, please select specially designated capacitors.

- Use bipolar capacitors in circuits with reversed polarity. However, do not use them in AC circuits in this case.
- Do not input voltage exceeding the rated voltage. In cases where AC components overlap in DC voltage, do not exceed the maximum rated current. Excessive voltage can cause short circuits, fires, and other serious accidents.

Surge voltage regulations also exist, but these are conditional and cannot guarantee long-term use. Even for short periods, do not input voltage exceeding the rated voltage; select capacitors according to requirements.

- When connecting multiple capacitors in parallel, fully consider the impedance of the wires. The wire impedance and capacitor polarity must be connected in the same direction. When directly connecting multiple capacitors, use capacitors of the same specification. Voltage divider resistors must be connected in parallel. When using them, design the circuit so that all capacitors receive the same input voltage. Ensure that the voltage across each capacitor does not exceed its rated voltage.
- Select capacitors whose lifespan matches that of the machine. Aluminum electrolytic capacitors may short-circuit or fail if used beyond their service life.

Please inspect regularly and replace capacitors as needed.

- Do not subject to rapid, repeated charging and discharging. For welding equipment or similar applications where charging and discharging is the primary purpose, use dedicated capacitors. Control circuits for rotating equipment such as servo motors involve repeated charging and discharging; please consult with relevant parties before selecting capacitors.



Even without rapid discharge, continuous and significant voltage fluctuations, especially in harsh environments like those experienced by commercial power supplies, and the continuous voltage fluctuations in the filtering of voltage doubler rectifier circuits, can lead to deterioration of lifespan characteristics and short-term failures. In practical operation, it is crucial to confirm the operating conditions and select specialized capacitors.

* Pre-installation knowledge: * First, determine the capacitor specifications and install it according to the specified range. * Always connect according to polarity. Do not use capacitors with reverse voltage input, even if they appear undamaged, as this will cause serious malfunctions. * After being dropped or impacted, capacitors will have weakened electrical properties. Do not impact them; carefully check the packaging for damage before use.

* During installation, avoid deforming the capacitors. Deformation can lead to leakage, short circuits, and other serious accidents. * Do not use capacitors that have been grouped and energized. Capacitors used for periodic electrical performance testing should not be used again.

* Installation method: * Do not place any wiring or wiring patterns near pressure valves. When the pressure valve operates, it can cause a double hazard: electrolyte spraying, short circuits, and fires due to shelf displacement.

* Do not place heat-generating items around the capacitor. Localized high temperatures, such as radiant heat, will significantly shorten the capacitor's lifespan. Additionally, if the temperature of the connector is higher than the capacitor's internal temperature, it will hinder heat dissipation, also significantly shortening the capacitor's lifespan. Please ensure proper temperature distribution during device design.

* Prevent pressure valve actuation. A clearance of at least 5mm should be maintained above the pressure valve. If the diffused gas is obstructed when the pressure valve actuates, it can lead to explosions, fires, and other serious accidents caused by increased internal pressure.

* For bolt-type capacitors:

* When placing the capacitor horizontally, it should be tilted towards the positive terminal. If the positive terminal is lower than the negative terminal, internal corrosion may occur over time. Otherwise, the mixture (core fixing material) inside the pressure valve will overflow.

* For terminal bolt-type capacitors, the pressure (cap end) should face downwards. • Recommended torque for terminal bolt type, and allowable current for the terminal (maximum allowable current for the terminal) are as follows: (Note: If using a machine with high vibration, prior consultation is required.)

Terminal	Recommended Torque (Allowable Value) N · m	Terminal Allowable Current (A)
M5	2.2 (1.5~3.0)	60
M6	3.5 (3.0~4.0)	100
M8	7.5 (7.0~8.0)	120

For terminal bolt type wiring (M5 terminal diameter 13mm/10mm, M6 terminal diameter 17mm), a wire thickness of less than 2mm is suitable. If it exceeds 2mm, the screw length should be increased to compensate. The size of the screw's tightening area will cause malfunctions due to overheating. If the screw is not fully tightened or inserted at an angle, it may cause serious malfunctions such as localized overheating and fire. Ensure that the screw is inserted straight and properly tightened.



- The recommended washer bore diameter for M5 terminals is 6mm. An excessively large bore diameter can lead to poor contact between the terminal and the washer, causing localized overheating, fire, and other serious malfunctions.
- Do not apply pressure (or other physical pressure) to the lead area (the area between the aluminum casing and the cap).
- Operating Environment
- Storage
- Store indoors at a temperature of 5-35° C and humidity below 75%RH (25° C), avoiding direct sunlight. Storage time should be within 3 years. After 3 years, the risk of capacitor leakage will increase. Voltage treatment should be used. If the storage period exceeds 5 years, replace with a new capacitor.
- If the temperature and humidity exceed the above operating conditions, store under the above conditions.
- Use in its original packaging whenever possible.
- After a capacitor has been discharged once, a charge may be generated due to recharge. Do not touch the terminal connections with your hands. Otherwise, there is a risk of electric shock. Completely discharge the capacitor with a resistor (approximately 1kΩ) or a discharge plate before use.
- Trial Operation
- Due to the risk of electric shock, please do not directly touch the terminals.
- Avoid placing conductive materials between the capacitor terminals to prevent short circuits.
- Do not allow conductive solutions such as acids and alkalis to come into contact with the capacitor.
- The operating environment should be confirmed in the operating environment section of the design.
- Maintenance and Inspection
- Capacitors used in industrial machinery should be inspected regularly.

Inspection Items:

(1) Appearance: The condition of the pressure valve (obvious expansion when the valve is open), obvious abnormalities such as leakage.

(2) Electrical Performance: Capacitance, tangent of the loss angle, leakage current, and items specified in the catalog. Electrical performance testing is based on 20° C. Place the capacitor in a 20° C environment until the internal temperature reaches a certain level before testing. Discuss whether it can be used. Maintenance and inspection should be carried out with the power off and fully discharged.

• All capacitors that have exceeded their shelf life should be replaced. Using new and old capacitors simultaneously will cause uneven current and voltage distribution, leading to valve operation, short circuits, etc. In case of an emergency during installation, if a gas leak occurs, immediately turn off the main switch or unplug the power cord. When the capacitor's pressure valve actuates, it will release high-temperature gas exceeding 100° C. Avoid bringing your face close to the high-temperature gas or any such area. If the gas gets into your eyes, immediately rinse with clean water. If you inhale the gas, rinse your mouth immediately. The gas components can vaporize in hydrogen or organic solvents.

If the electrolyte comes into contact with skin, wash immediately with soap and water. Never allow it to enter your mouth.

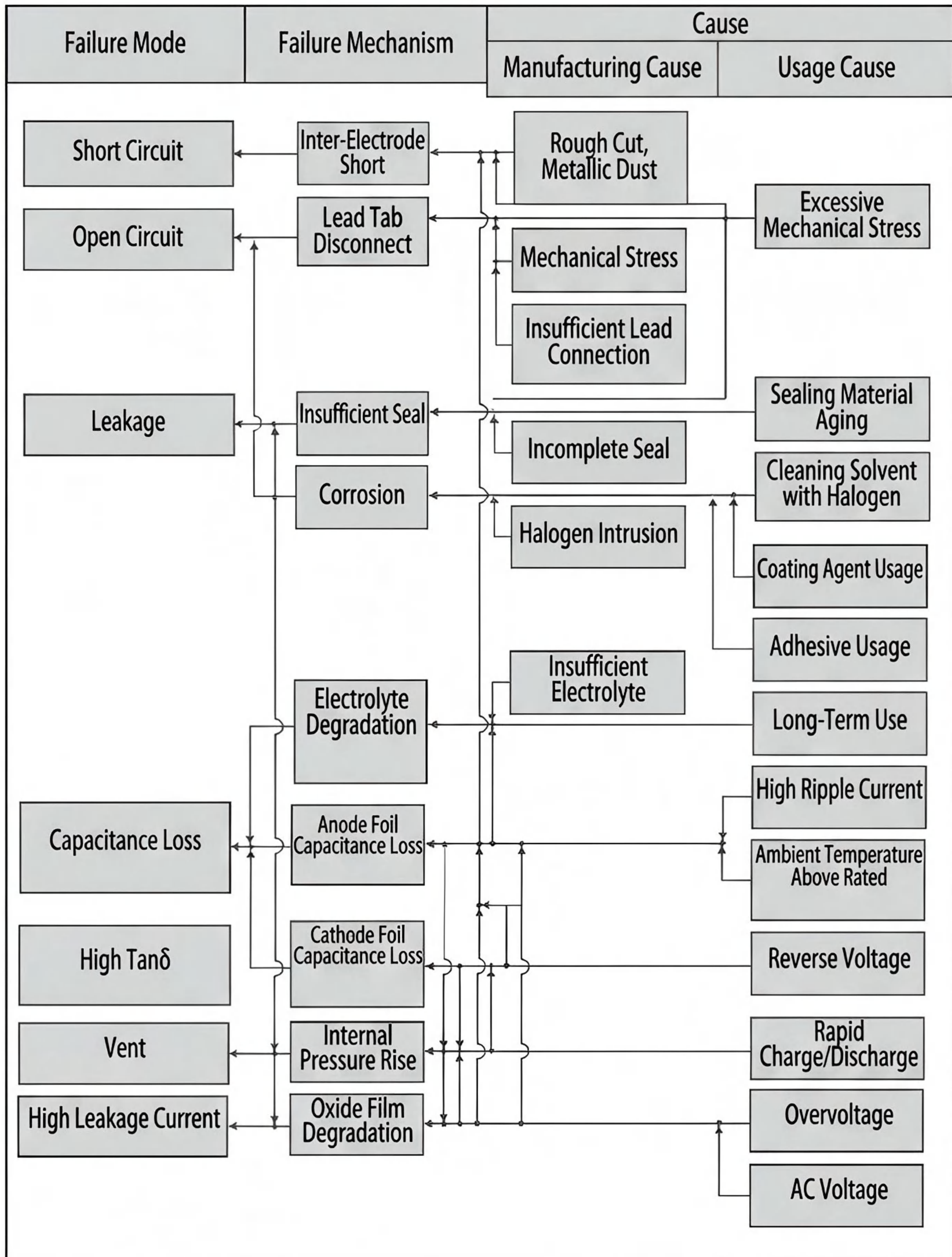


18) Lifespan estimation of large liquid aluminum electrolytic capacitors:

$$L_x = L_r \times 2^A \times 2^B \times 2^C$$

$$A = \frac{T_0 - T_x}{10} \quad B = 1 - \frac{I_x^2}{I_{rc}^2} \quad C = 1 - \frac{V_x}{V_w}$$

project	Project significance
L_x	Estimated service life under actual use conditions, H
L_r	Guaranteed life with maximum allowable ripple current superimposed at maximum rated temperature, H
T_0	Maximum allowable operating temperature, °C
T_x	Ambient temperature during capacitor operation, °C
I_x	Actual ripple current (mA)
I_{rc}	Equivalent ripple current of actual ripple current (mA) $I_{rc} = I \times FF$
I	Rated maximum ripple current (mA) (refer to the rated value specified in the catalog or approval document)
FF	Frequency compensation factor (refer to the catalog or approval document)
V_x	Actual DC voltage applied to the electrolytic capacitor (V)
V_w	Rated operating voltage of the electrolytic capacitor (V)





Liquid miniature product line



The Liquid Crystal Miniature Capacitor Division has been engaged in R&D and manufacturing since 2001, boasting an industry-leading R&D and manufacturing team. The division has repeatedly launched miniaturized capacitors, meeting customers' specific capacitor requirements. Currently, the division offers two packages: liquid surface mount aluminum electrolytic capacitors and liquid leaded aluminum electrolytic capacitors. These products feature advantages such as miniaturization, high stability, high capacitance, high voltage, high temperature resistance, low impedance, high ripple, and long lifespan. They are widely used in various industries including new energy vehicle electronics, high-power power supplies, smart lighting, gallium nitride fast charging, home appliances, and photovoltaics.

Solid and solid-liquid hybrid product lines



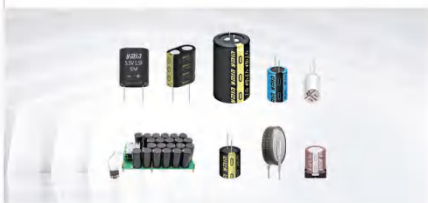
Established in 2017, the Solid-State and Hybrid Solid-Liquid Electrolytic Capacitors Division now offers two main product lines: solid-state aluminum electrolytic capacitors and hybrid solid-liquid aluminum electrolytic capacitors. These products meet multiple certifications, including AEC-Q200 and IATF16949. Solid-state aluminum electrolytic capacitors offer advantages such as miniaturization, large capacitance, ultra-low ESR, low leakage current, and resistance to high current surges. Hybrid solid-liquid aluminum electrolytic capacitors offer advantages such as high reliability, wide temperature stability, wide frequency stability, ultra-low ESR, excellent shock resistance, and resistance to high current surges. Solid-state aluminum electrolytic capacitors are mainly used in gallium nitride PD fast charging, industrial control, artificial intelligence, IDC servers, and military industries, while hybrid solid-liquid aluminum electrolytic capacitors are primarily used in the new energy vehicle electronics industry.

Solid-state multilayer product line



The Solid State Multilayer (SMS) Business Unit began R&D in 2018 and started mass production in March 2020, currently boasting a monthly capacity of 6 million units. SMS polymer solid aluminum electrolytic capacitors offer advantages such as high voltage and large capacity, thin profile, ultra-low impedance, and high ripple current tolerance. Currently a leading form of aluminum electrolytic capacitor, they feature ultra-low ESR and powerful filtering capabilities, and are used in communications, military, IoT, IDC servers, artificial intelligence, and other terminals.

Supercapacitor Product Line



The Supercapacitor Division was established in 2017 and now boasts a comprehensive range of domestic and international double-layer supercapacitors (cylindrical lead type, horn type, modular type, SMD surface mount type) and hybrid supercapacitors. Products meet multiple certifications from State Grid AEC-Q200 and IATF16949. They are widely used in advanced industries such as smart meters (electricity meters, water meters, gas meters), automotive electronics (ETC, dashcams), new energy (wind turbine pitch control, photovoltaic), and military (tank emergency jump starters).

Large liquid product line



Established in 2009, the Liquid Large-Scale Business Unit specializes in horn-shaped and bolt-type aluminum electrolytic capacitors. These liquid large-scale aluminum electrolytic capacitors offer advantages such as ultra-high voltage (16V~630V), ultra-low temperature operation, high stability, low leakage current, high ripple current tolerance, and long lifespan. They are widely used in photovoltaic inverters, charging pile on-board computer (OBC) systems, outdoor energy storage power supplies, and industrial frequency converters.

Ceramic Capacitor (MLCC) Product Line



Established in 2019, the MLCC Business Unit is dedicated to the R&D, manufacturing, and application promotion of high-voltage MLCCs. It offers product series such as X7R and NPO, with voltages ranging from 1KV to 3KV, all being large-size high-voltage products of 1206 and above. These products are widely used in adapters, switching power supplies, high-voltage power supplies, lighting devices, and other products, fully benchmarking against high-end products from Taiwanese and Japanese manufacturers!

Polymer tantalum capacitor product line



The Polymer Tantalum Capacitor Division was established in 2022. Compared to its peers, Yongming's polymer tantalum capacitors offer higher capacitance, lower ESR, and higher voltage withstand. These products are widely used in digital servers, PCs, ultra-thin chargers, automotive electronics, communications, base stations, switches, industrial power modules, and military power supplies, among other fields. Yongming's polymer tantalum capacitors have a promising future as a replacement for imported tantalum capacitors and are worth pursuing.

Metallized film capacitor product line



Established in 2023, the Film Capacitor Division possesses advanced technology and manufacturing equipment. Through leading technology and unique structural optimization, its performance is comparable to that of top international counterparts. It currently offers product series such as MDP, MDA, and MDR, which are widely used in industries such as new energy charging piles, automotive electronics, photovoltaic inverters, and wind power converters. Yongming Film Capacitors is committed to becoming a competitive, top-tier film capacitor manufacturer in the international import market, providing technical services to meet customer needs.



Capacitor Solutions, Ask YMIN for your Applications

Respond quickly and accurately to customer needs