



SHANGHAI YONGMING ELECTRONICS CO., LTD.



Conductive polymer tantalum electrolytic capacitor

CONDUCTIVE POLYMER TANTALUM ELECTROLYTIC CAPACITOR

**CAPACITOR SOLUTIONS,
ASK YMIN FOR YOUR APPLICATIONS**

**RESPOND QUICKLY AND
ACCURATELY TO CUSTOMER NEEDS**



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Image retrieval

TPB19

Standard products



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TPB26

Large capacity products



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TPB14

ultra-thin products



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TQB19

Standard products



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TQD15

ultra-thin products



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TQD19

Thin product



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TQD28

Standard products



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TQD42

Large capacity products



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TQW19

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TQW42

Large capacity products

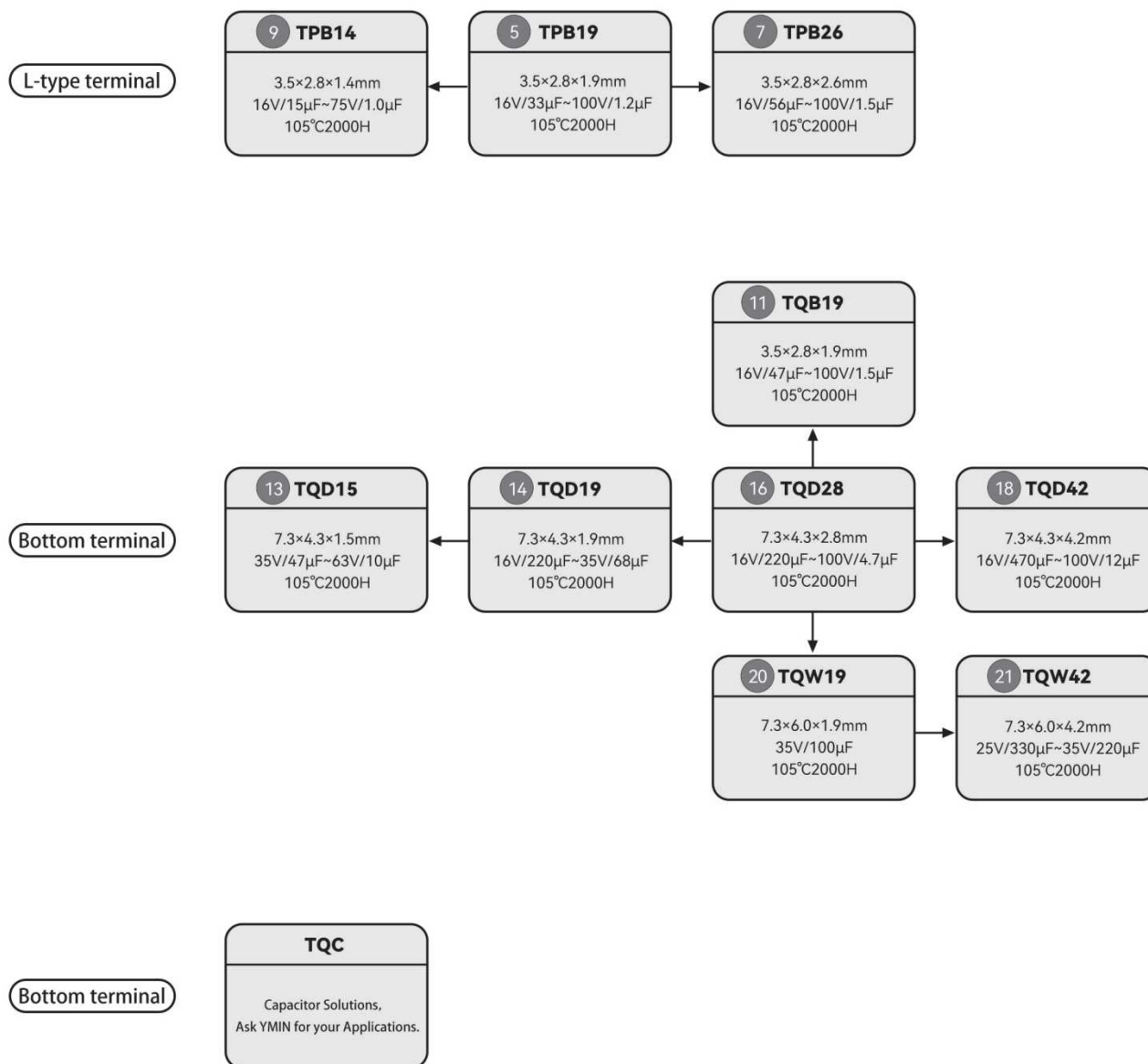


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Product List

category	series	Features	High pressure resistant products	Large capacity products	low ESR	Miniaturized products	Customized products	Rated Voltage Range (V)	Capacitance Range (μF)	ESR (mΩ)	Operating temperature range (°C)	page number
Conductive polymer Tantalum electrolytic capacitor	TPB19	Standard L-type terminals	●	●	●			16~100	1.2~33	70~300	-55~+105	5
	TPB26	Large-capacity L-type terminals	●	●	●			16~100	1.5~56	90~300	-55~+105	7
	TPB14	Ultra-thin L-type terminals	●		●	●		16~75	1~15	90~300	-55~+105	9
	TQB19	Standard bottom-side terminals	●		●			16~100	1.5~47	70~300	-55~+105	11
	TQD15	Ultra-thin bottom-side terminals			●	●		35~63	10~47	90~100	-55~+105	13
	TQD19	Thin bottom-side terminals			●	●		16~35	33~220	90~100	-55~+105	14
	TQD28	Standard bottom-side terminals	●		●			16~100	4.7~220	50~100	-55~+105	16
	TQD42	Large-capacity bottom-side terminals	●	●	●			16~100	12~470	70~100	-55~+105	18
	TQW19	Thin bottom-side terminals			●	●		35	100	100	-55~+105	20
	TQW42	Large-capacity bottom-side terminals	●	●	●			25~35	100~330	60~100	-55~+105	21
	TQC	Custom-made products					●	Voltage requirements	Capacity requirements	Customer needs	Temperature requirements	/

■ Product System Diagram





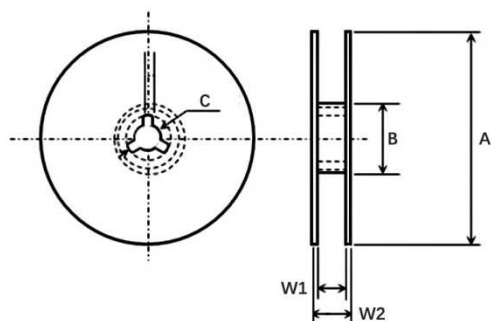
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
↓			↓			↓	↓		↓			↓				↓			
series	code	Capacity(μF)		code	Capacity range		code	Voltage(V)		code	size(mm)		code	ESR(mΩ)		code	Rated temperature (°C)		code
TPB14	TPB	1	1R0	±20%		M	16	1C	3.5*2.8*1.4	B14	9	009R	85	D					
TPB19	TPB	1.5	1R5				20	1D	3.5*2.8*1.9	B19	11	011R	105	N					
TPB26	TPB	2.2	2R2				25	1E	3.5*2.8*2.6	B26	15	015R	125	H					
TQB19	TQB	2.7	2R7				35	1V	7.3*4.3*1.5	D15	20	020R							
TQD15	TQD	3.3	3R3				50	1H	7.3*4.3*1.9	D19	21	021R							
TQD19	TQD	3.9	3R9				63	1J	7.3*4.3*2.8	D28	35	035R							
TQD28	TQD	4.7	4R7				75	1K	7.3*4.3*4.0	D40	45	045R							
TQD42	TQD	5.6	5R6				100	2A	7.3*4.3*4.2	D42	70	070R							
TQW19	TQW	6.8	6R8						7.3*6.0*1.9	W19	80	080R							
TQW42	TQW	8.2	8R2						7.3*6.0*4.2	W42	90	090R							
		10	100								100	100R							
		12	120								150	150R							
		15	150								200	200R							
		22	220								300	300R							
		27	270																
		33	330																
		39	390																
		47	470																
		56	560																
		68	680																
		82	820																
		100	101																
		120	121																
		150	151																
		180	181																
		220	221																
		270	271																
		330	331																
		390	391																
		470	471																
		560	561																
		680	681																
		820	821																
		1000	102																
		1200	122																
		1500	152																

Code rules: Add the first two digits to the number of trailing zeros, where R represents the decimal point.



■ Reel Specifications

Unit: mm



Applicable series: TPB14/TPB19/TPB26/TQB19

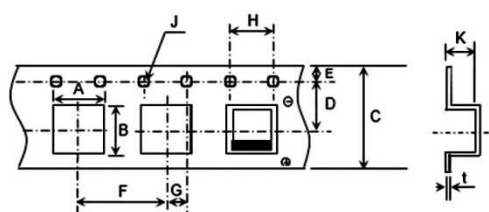
A	B	C	W1	W2
$\Phi 180 \pm 2$	$\Phi 60 \pm 2$	$\Phi 13 \pm 0.2$	9 ± 0.5	11.4 ± 1

Applicable series: TQD15/TQD19/TQD28/TQD42/TQW19/TQW28/TQW42

A	B	C	W1	W2
$\Phi 330 \pm 2$	$\Phi 80 \pm 2$	$\Phi 13 \pm 0.2$	14 ± 0.5	20 ± 1

■ braiding specifications

Unit: mm



series	A ± 0.1	B ± 0.1	C ± 0.3	D ± 0.05	E ± 0.1	F ± 0.1	G ± 0.05	H ± 0.1	J $^{+0.1}_{-0}$	K ± 0.1	t ± 0.05
TPB14	3.3	3.8	8.0	3.5	1.75	4.0	2.0	4.0	$\Phi 1.5$	1.7	0.25
TPB19/TQB19	3.3	3.8	8.0	3.5	1.75	4.0	2.0	4.0	$\Phi 1.5$	2.1	0.25
TPB26	3.3	3.8	8.0	3.5	1.75	4.0	2.0	4.0	$\Phi 1.5$	3.0	0.25
TQD15	4.5	7.5	12.0	5.5	1.75	8.0	2.0	4.0	$\Phi 1.5$	1.7	0.3
TQD19	4.5	7.5	12.0	5.5	1.75	8.0	2.0	4.0	$\Phi 1.5$	2.4	0.3
TQD28	4.5	7.5	12.0	5.5	1.75	8.0	2.0	4.0	$\Phi 1.5$	3.2	0.3
TQD42	4.5	7.5	12.0	5.5	1.75	8.0	2.0	4.0	$\Phi 1.5$	4.6	0.3
TQW19	6.4	7.5	12.0	5.5	1.75	8.0	2.0	4.0	$\Phi 1.5$	2.4	0.3
TQW42	6.4	7.5	12.0	5.5	1.75	8.0	2.0	4.0	$\Phi 1.5$	4.6	0.3

■ Packaging quantity

unit: pcs

series	size	7-inch reel	13-inch reel
TPB14	3.5*2.8*1.4	2500	N/A
TPB19	3.5*2.8*1.9	2000	N/A
TPB26	3.5*2.8*2.6	1500	N/A
TQB19	3.5*2.8*1.9	2000	N/A
TQD15	7.3*4.3*1.5	1000	4000
TQD19	7.3*4.3*1.9	1000	3000
TQD28	7.3*4.3*2.8	500	2500
TQD42	7.3*4.3*4.2	500	2000
TQW19	7.3*6.0*1.9	500	3000
TQW42	7.3*6.0*4.2	400	1000



TPB19

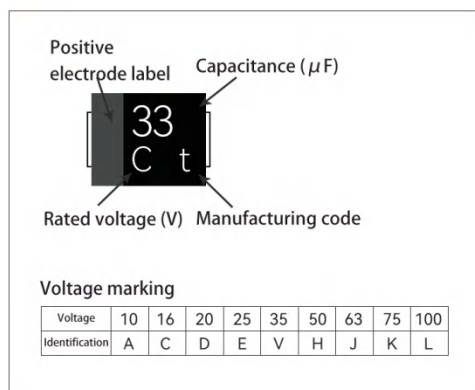
- ◆ Miniaturized (L3.5×W2.8×H1.9)
- ◆ Low ESR, high ripple current
- ◆ High voltage withstand (100V max.)
- ◆ RoHS compliant (2011/65/EU)



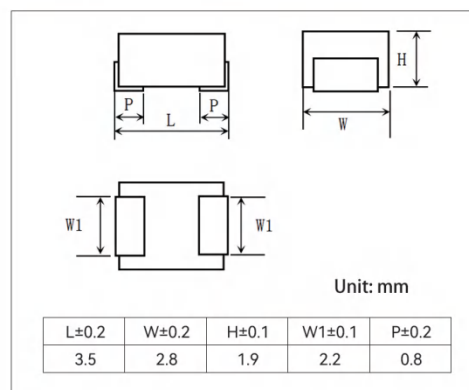
■ Main technical parameters

project	characteristic
Operating temperature range	-55~+105°C
Rated operating voltage	16~100V
Capacity range	1~33 μ F 120Hz/20°C
Capacity tolerance	±20% (120Hz/20°C)
Loss tangent	Values below the standard product list: 120Hz/20°C
Leakage current	Values below the standard product list: Charging for 5 minutes at rated voltage, 20°C
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20°C
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20°C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance ±20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ Initial specification value
High temperature and humidity	After being placed at 60°C and 90%~95%RH for 500 hours without applying voltage, and then placed at 20°C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ 300% of the initial specification value

■ logo



■ External dimensions



■ Temperature coefficient of rated ripple current

Temperature	-55°C < T ≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C
Rated 105°C Product coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

■ Rated ripple current frequency correction factor

Frequency (Hz)	120Hz	1kHz	10kHz	100~300kHz
Correction Factor	0.10	0.45	0.50	1.00



TPB19

■ List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100KHz)	Rated ripple current (mA/r.m.s) 45°C 100KHz
					L	W	H				
16	105°C	16	105°C	10	3.5	2.8	1.9	16	0.10	100	900
	105°C	16	105°C	15	3.5	2.8	1.9	24	0.10	70	1100
	105°C	16	105°C	33	3.5	2.8	1.9	53	0.10	70	1100
20	105°C	20	105°C	10	3.5	2.8	1.9	20	0.10	100	900
	105°C	20	105°C	22	3.5	2.8	1.9	44	0.10	90	950
25	105°C	25	105°C	10	3.5	2.8	1.9	25	0.10	100	900
	105°C	25	105°C	15	3.5	2.8	1.9	37.5	0.10	100	900
35	105°C	35	105°C	4.7	3.5	2.8	1.9	16.5	0.10	150	800
	105°C	35	105°C	6.8	3.5	2.8	1.9	23.8	0.10	150	800
	105°C	35	105°C	10	3.5	2.8	1.9	35	0.10	150	800
	105°C	35	105°C	12	3.5	2.8	1.9	42	0.10	150	800
50	105°C	50	105°C	2.2	3.5	2.8	1.9	11	0.10	200	750
	105°C	50	105°C	3.3	3.5	2.8	1.9	16.5	0.10	200	750
63	105°C	63	105°C	1.5	3.5	2.8	1.9	9.5	0.10	200	750
	105°C	63	105°C	2.2	3.5	2.8	1.9	13.9	0.10	200	750
75	105°C	75	105°C	1.0	3.5	2.8	1.9	7.5	0.10	300	600
	105°C	75	105°C	1.5	3.5	2.8	1.9	11.3	0.10	300	600
100	105°C	100	105°C	1.2	3.5	2.8	1.9	12	0.10	300	600



TPB26

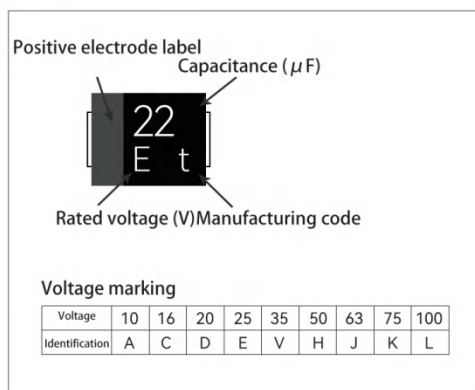
- ◆ Large capacity, miniaturized ($L3.5 \times W2.8 \times H2.6$)
- ◆ Low ESR, high ripple current
- ◆ High withstand voltage (100V max.)
- ◆ RoHS compliant (2011/65/EU)



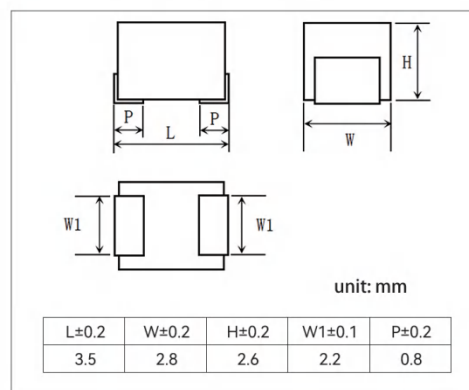
Main technical parameters

project	characteristic
Operating temperature range	$-55 \sim +105^{\circ}\text{C}$
Rated operating voltage	16~100V
Capacity range	1.5~56 μF 120Hz/20 $^{\circ}\text{C}$
Capacity tolerance	$\pm 20\%$ (120Hz/20 $^{\circ}\text{C}$)
Loss tangent	Values below the standard product list: 120Hz/20 $^{\circ}\text{C}$
Leakage current	Values below the standard product list: Charging for 5 minutes at rated voltage, 20 $^{\circ}\text{C}$
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20 $^{\circ}\text{C}$
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20 $^{\circ}\text{C}$ for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance $\pm 20\%$ of the initial value
	Loss tangent $\leq 150\%$ of the initial specification value
	Leakage current $\leq$ Initial specification value
High temperature and humidity	After being placed at 60 $^{\circ}\text{C}$ and 90%~95%RH for 500 hours without applying voltage, and then placed at 20 $^{\circ}\text{C}$ for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent $\leq 150\%$ of the initial specification value
	Leakage current $\leq 300\%$ of the initial specification value

logo



External dimensions



Temperature coefficient of rated ripple current

Temperature	$-55^{\circ}\text{C} < T \leq 45^{\circ}\text{C}$	$45^{\circ}\text{C} < T \leq 85^{\circ}\text{C}$	$85^{\circ}\text{C} < T \leq 105^{\circ}\text{C}$
Rated 105 $^{\circ}\text{C}$, coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

Rated ripple current frequency correction factor

Frequency (Hz)	120Hz	1kHz	10kHz	100~300kHz
Correction Factor	0.10	0.45	0.50	1.00



TPB26

■ List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100KHz)	Rated ripple current (mA/r.m.s) 45°C 100KHz
					L	W	H				
16	105°C	16	105°C	47	3.5	2.8	2.6	75.2	0.10	90	1000
	105°C	16	105°C	56	3.5	2.8	2.6	89.6	0.10	90	1000
20	105°C	20	105°C	33	3.5	2.8	2.6	66	0.10	90	1000
25	105°C	25	105°C	22	3.5	2.8	2.6	55	0.10	100	800
35	105°C	35	105°C	10	3.5	2.8	2.6	35	0.10	200	750
50	105°C	50	105°C	4.7	3.5	2.8	2.6	23.5	0.10	200	750
63	105°C	63	105°C	2.7	3.5	2.8	2.6	17	0.10	200	750
75	105°C	75	105°C	2	3.5	2.8	2.6	15	0.10	300	600
100	105°C	100	105°C	1.5	3.5	2.8	2.6	15	0.10	300	600

TPB14

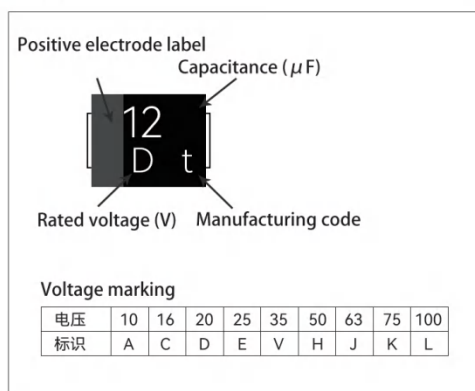
- ◆ Slim profile ($L3.5 \times W2.8 \times H1.4$)
- ◆ Low ESR, high ripple current
- ◆ High voltage withstand (75V max.)
- ◆ RoHS compliant (2011/65/EU)



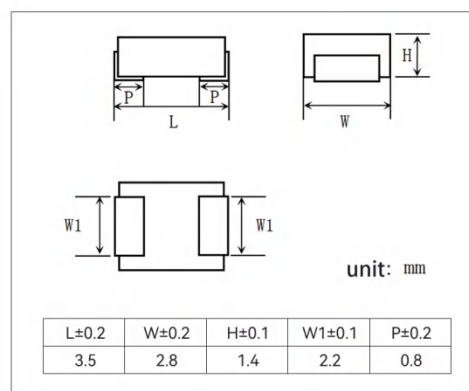
Main technical parameters

project	characteristic
Operating temperature range	$-55 \sim +105^{\circ}\text{C}$
Rated operating voltage	16~75V
Capacity range	1~15 μF 120Hz/20 $^{\circ}\text{C}$
Capacity tolerance	$\pm 20\%$ (120Hz/20 $^{\circ}\text{C}$)
Loss tangent	Values below the standard product list: 120Hz/20 $^{\circ}\text{C}$
Leakage current	Values below the standard product list: Charging for 5 minutes at rated voltage, 20 $^{\circ}\text{C}$
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20 $^{\circ}\text{C}$
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20 $^{\circ}\text{C}$ for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance $\pm 20\%$ of the initial value
	Loss tangent $\leq 150\%$ of the initial specification value
	Leakage current $\leq$ Initial specification value
High temperature and humidity	After being placed at 60 $^{\circ}\text{C}$ and 90%~95%RH for 500 hours without applying voltage, and then placed at 20 $^{\circ}\text{C}$ for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent $\leq 150\%$ of the initial specification value
	Leakage current $\leq 300\%$ of the initial specification value

logo



External dimensions



Temperature coefficient of rated ripple current

Temperature	$-55^{\circ}\text{C} < T \leq 45^{\circ}\text{C}$	$45^{\circ}\text{C} < T \leq 85^{\circ}\text{C}$	$85^{\circ}\text{C} < T \leq 105^{\circ}\text{C}$
Rated 105 $^{\circ}\text{C}$, coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

Rated ripple current frequency correction factor

Frequency (Hz)	120Hz	1kHz	10kHz	100~300kHz
Correction Factor	0.10	0.45	0.50	1.00



TPB14

■ List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100KHz)	Rated ripple current (mA/r.m.s) 45°C 100KHz
					L	W	H				
16	105°C	16	105°C	10	3.5	2.8	1.4	16	0.10	100	800
	105°C	16	105°C	15	3.5	2.8	1.4	24	0.10	90	1000
20	105°C	20	105°C	5.6	3.5	2.8	1.4	11.2	0.10	100	800
	105°C	20	105°C	12	3.5	2.8	1.4	24	0.10	100	800
25	105°C	25	105°C	5.6	3.5	2.8	1.4	14	0.10	100	800
	105°C	25	105°C	10	3.5	2.8	1.4	25	0.10	100	800
35	105°C	35	105°C	3.9	3.5	2.8	1.4	13.7	0.10	200	750
50	105°C	50	105°C	2.2	3.5	2.8	1.4	11	0.10	200	750
63	105°C	63	105°C	1.5	3.5	2.8	1.4	10	0.10	200	750
75	105°C	75	105°C	1	3.5	2.8	1.4	7.5	0.10	300	600



TQB19

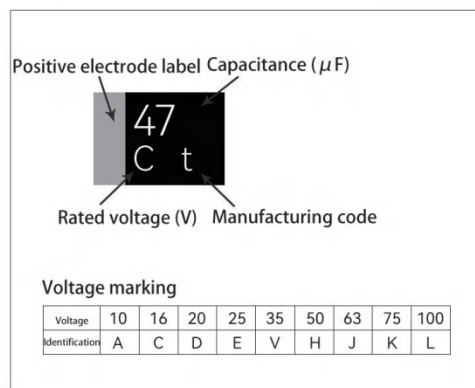
- ◆ Miniaturized (L3.5×W2.8×H1.9)
- ◆ Bottom-side terminals, low ESL
- ◆ Low ESR, high ripple current
- ◆ RoHS compliant (2011/65/EU)



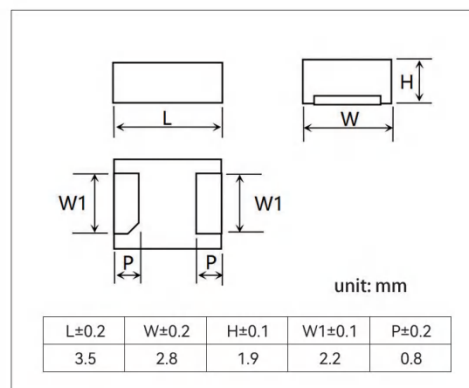
Main technical parameters

project	characteristic
Operating temperature range	- 55~+105°C
Rated operating voltage	16~100V
Capacity range	1.5~56 μ F 120Hz/20°C
Capacity tolerance	±20% (120Hz/20°C)
Loss tangent	Values below the standard product list: 120Hz/20°C
Leakage current	Values below the standard product list: Charged for 5 minutes at rated voltage, 20°C
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20°C
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20° C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance ±20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ Initial specification value
High temperature and humidity	After being placed at 60°C and 90%~95%RH for 500 hours without applying voltage, and then placed at 20°C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ 300% of the initial specification value

logo



External dimensions



Temperature coefficient of rated ripple current

Temperature	-55°C < T ≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C
Rated 105°C, coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

Rated ripple current frequency correction factor

Frequency (Hz)	120Hz	1kHz	10kHz	100~300kHz
Correction Factor	0.10	0.45	0.50	1.00



TQB19

■ List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100KHz)	Rated ripple current (mA/r.m.s) 45°C 100KHz
					L	W	H				
16	105°C	16	105°C	47	3.5	2.8	1.9	75.2	0.10	70	1100
20	105°C	20	105°C	27	3.5	2.8	1.9	54	0.10	90	950
25	105°C	25	105°C	27	3.5	2.8	1.9	67.5	0.10	100	900
35	105°C	35	105°C	15	3.5	2.8	1.9	52.5	0.10	150	800
50	105°C	50	105°C	3.9	3.5	2.8	1.9	19.5	0.10	200	750
63	105°C	63	105°C	2.7	3.5	2.8	1.9	17	0.10	200	750
75	105°C	75	105°C	1.8	3.5	2.8	1.9	13.5	0.10	300	600
100	105°C	100	105°C	1.5	3.5	2.8	1.9	15	0.10	300	600



TQD15

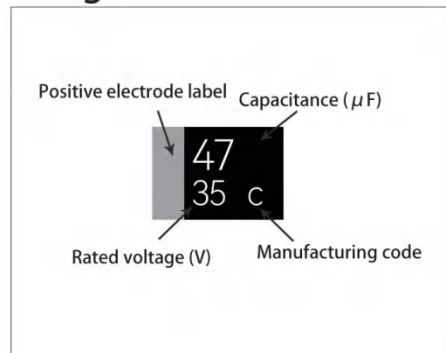
- ◆ Slim profile (L7.3×W4.3×H1.5)
- ◆ Bottom-side terminals, low ESL
- ◆ Low ESR, high ripple current
- ◆ RoHS compliant (2011/65/EU)



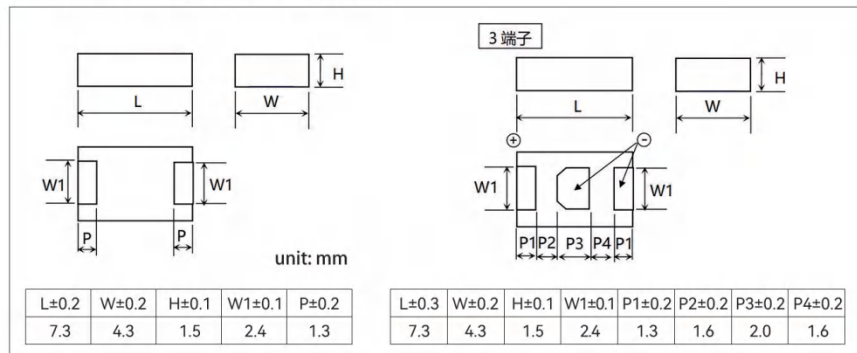
■ Main technical parameters

project	characteristic
Operating temperature range	-55~+105℃
Rated operating voltage	35~63V
Capacity range	10~47 μF 120Hz/20℃
Capacity tolerance	±20% (120Hz/20℃)
Loss tangent	Values below the standard product list: 120Hz/20℃
Leakage current	Values below the standard product list: Charged for 5 minutes at rated voltage, 20℃
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20℃
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20℃ for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance ±20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ Initial specification value
High temperature and humidity	After being placed at 60℃ and 90%~95%RH for 500 hours without applying voltage, and then placed at 20℃ for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ 300% of the initial specification value

■ logo



■ External dimensions



■ Temperature coefficient of rated ripple current

Temperature	-55℃ < T ≤ 45℃	45℃ < T ≤ 85℃	85℃ < T ≤ 105℃
Rated 105℃, coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

■ Rated ripple current frequency correction factor

Frequency (Hz)	120Hz	1kHz	10kHz	100~300kHz
Correction Factor	0.10	0.45	0.50	1.00

■ List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100KHz)	Rated ripple current (mA/r.m.s) 45℃ 100KHz
					L	W	H				
35	105℃	35	105℃	47	7.3	4.3	1.5	164.5	0.10	100	1400
	105℃	35	105℃	47	7.3	4.3	1.5	164.5	0.10	120	1200
63	105℃	63	105℃	10	7.3	4.3	1.5	63	0.10	100	1400

TQD19

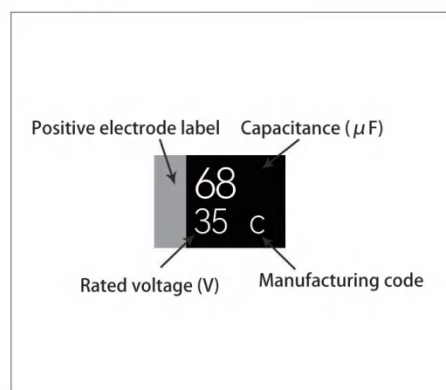
- ◆ Ultra-thin design (L7.3×W4.3×H1.9)
- ◆ Bottom-mounted terminals, low ESL
- ◆ Low ESR, high ripple current
- ◆ RoHS compliant (2011/65/EU)



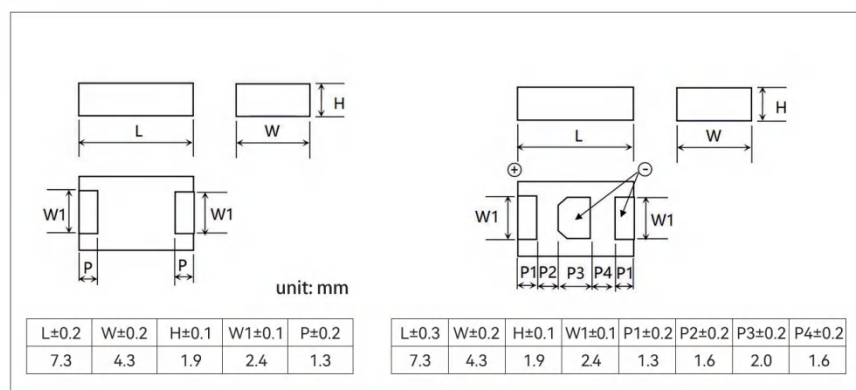
Main technical parameters

project	characteristic
Operating temperature range	-55~+105°C
Rated operating voltage	16~35V
Capacity range	33~220 μ F 120Hz/20°C
Capacity tolerance	±20% (120Hz/20°C)
Loss tangent	Values below the standard product list: 120Hz/20°C
Leakage current	Values below the standard product list: Charged for 5 minutes at rated voltage, 20°C
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20°C
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20° C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance ±20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ Initial specification value
High temperature and humidity	After being placed at 60°C and 90%~95%RH for 500 hours without applying voltage, and then placed at 20°C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ 300% of the initial specification value

logo



External dimensions



Temperature coefficient of rated ripple current

Temperature	-55°C < T ≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C
Rated 105°C, coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

Rated ripple current frequency correction factor

Frequency (Hz)	120Hz	1kHz	10kHz	100~300kHz
Correction Factor	0.10	0.45	0.50	1.00



TQD19

■ List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100KHz)	Rated ripple current (mA/r.m.s) 45°C 100KHz
					L	W	H				
16	105°C	16	105°C	100	7.3	4.3	1.9	160	0.10	50	2200
	105°C	16	105°C	220	7.3	4.3	1.9	352	0.10	50	2200
25	105°C	25	105°C	33	7.3	4.3	1.9	82.5	0.10	60	1900
	105°C	25	105°C	100	7.3	4.3	1.9	250	0.10	60	1900
35	105°C	35	105°C	68	7.3	4.3	1.9	238	0.10	100	1400
	105°C	35	105°C	68	7.3	4.3	1.9	238	0.10	120	1200

TQD28

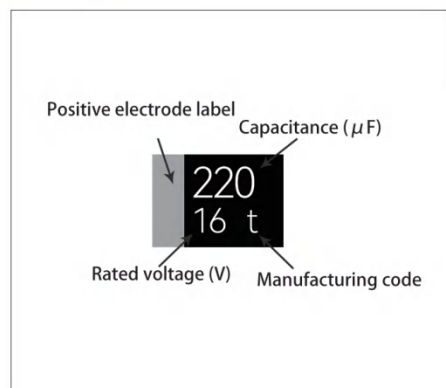
- ◆ Slim profile (L7.3×W4.3×H2.8)
- ◆ Bottom-side terminals, low ESL
- ◆ Low ESR, high ripple current
- ◆ RoHS compliant (2011/65/EU)



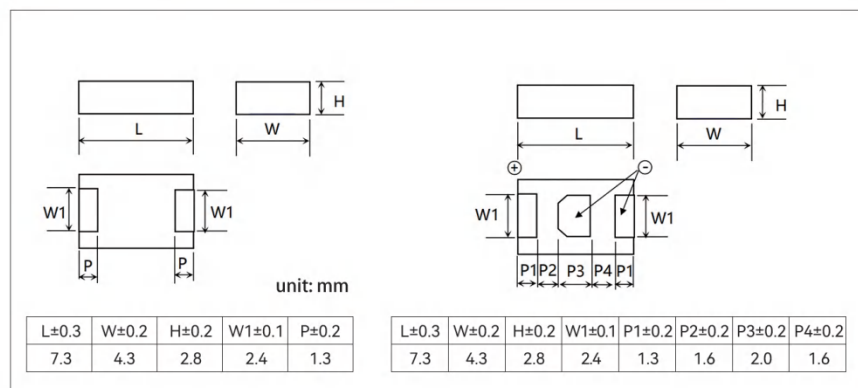
Main technical parameters

project	characteristic
Operating temperature range	-55~+105°C
Rated operating voltage	16~100V
Capacity range	4.7~220 μF 120Hz/20°C
Capacity tolerance	±20% (120Hz/20°C)
Loss tangent	Values below the standard product list: 120Hz/20°C
Leakage current	Values below the standard product list: Charging for 5 minutes at rated voltage, 20°C
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20°C
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20°C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance ±20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ Initial specification value
High temperature and humidity	After being placed at 60°C and 90%~95%RH for 500 hours without applying voltage, and then placed at 20°C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ 300% of the initial specification value

logo



External dimensions



Temperature coefficient of rated ripple current

Temperature	-55°C < T ≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C
Rated 105°C, coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

Rated ripple current frequency correction factor

Frequency (Hz)	120Hz	1kHz	10kHz	100~300kHz
Correction Factor	0.10	0.45	0.50	1.00



TQD28

■ List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100KHz)	Rated ripple current (mA/r.m.s) 45°C 100KHz
					L	W	H				
16	105°C	16	105°C	150	7.3	4.3	2.8	240	0.10	50	2300
	105°C	16	105°C	220	7.3	4.3	2.8	352	0.10	50	2300
20	105°C	20	105°C	100	7.3	4.3	2.8	200	0.10	55	2200
25	105°C	25	105°C	68	7.3	4.3	2.8	170	0.10	60	2000
	105°C	25	105°C	100	7.3	4.3	2.8	250	0.10	60	2000
100	105°C	100	105°C	4.7	7.3	4.3	2.8	47	0.10	100	1900

TQD42

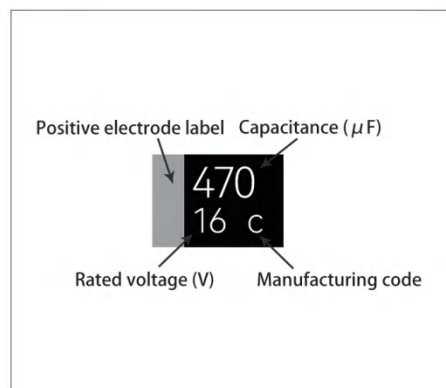
- ◆ Slim profile (L7.3×W4.3×H4.2)
- ◆ Bottom terminals, low ESL
- ◆ High voltage withstand (100V max.)
- ◆ RoHS compliant (2011/65/EU)



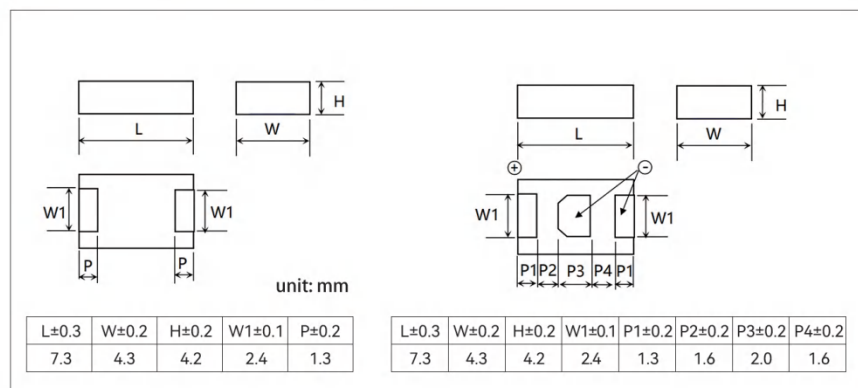
Main technical parameters

project	characteristic
Operating temperature range	- 55~+105°C
Rated operating voltage	16~100V
Capacity range	12~470 μ F 120Hz/20°C
Capacity tolerance	$\pm 20\%$ (120Hz/20°C)
Loss tangent	Values below the standard product list: 120Hz/20°C
Leakage current	Values below the standard product list: Charged for 5 minutes at rated voltage, 20°C
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20°C
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20° C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance $\pm 20\%$ of the initial value
	Loss tangent $\leq 150\%$ of the initial specification value
	Leakage current $\leq$ Initial specification value
High temperature and humidity	After being placed at 60°C and 90%~95%RH for 500 hours without applying voltage, and then placed at 20°C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent $\leq 150\%$ of the initial specification value
	Leakage current $\leq 300\%$ of the initial specification value

logo



External dimensions



Temperature coefficient of rated ripple current

Temperature	-55°C < T ≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C
Rated 105°C, coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

Rated ripple current frequency correction factor

Frequency (Hz)	120Hz	1kHz	10kHz	100~300kHz
Correction Factor	0.10	0.45	0.50	1.00



TQD42

■ List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100KHz)	Rated ripple current (mA/r.m.s) 45°C 100KHz
					L	W	H				
16	105°C	16	105°C	470	7.3	4.3	4.2	752	0.10	70	2400
35	105°C	35	105°C	100	7.3	4.3	4.2	350	0.10	100	2000
50	105°C	50	105°C	47	7.3	4.3	4.2	235	0.10	100	2000
	105°C	50	105°C	68	7.3	4.3	4.2	340	0.10	100	2000
63	105°C	63	105°C	22	7.3	4.3	4.2	138.6	0.10	100	2000
	105°C	63	105°C	33	7.3	4.3	4.2	208	0.10	100	2000
100	105°C	100	105°C	12	7.3	4.3	4.2	12	0.10	100	2000

TQW19

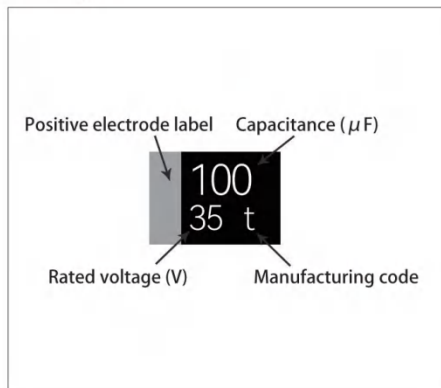
- ◆ Slim profile (L7.3×W6.0×H1.9)
- ◆ Bottom-side terminals, low ESL
- ◆ Low ESR, high ripple current
- ◆ RoHS compliant (2011/65/EU)



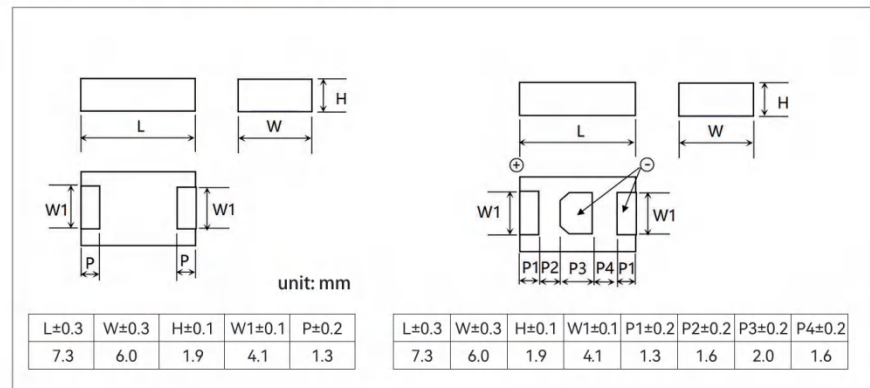
Main technical parameters

project	characteristic
Operating temperature range	-55~+105°C
Rated operating voltage	35V
Capacity range	100μF 120Hz/20°C
Capacity tolerance	±20% (120Hz/20°C)
Loss tangent	Values below the standard product list: 120Hz/20°C
Leakage current	Values below the standard product list: Charged for 5 minutes at rated voltage, 20°C
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20°C
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20°C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance ±20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ Initial specification value
High temperature and humidity	After being placed at 60°C and 90%~95%RH for 500 hours without applying voltage, and then placed at 20°C for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ 300% of the initial specification value

logo



External dimensions



Temperature coefficient of rated ripple current

Temperature	-55°C < T ≤ 45°C	45°C < T ≤ 85°C	85°C < T ≤ 105°C
Rated 105°C, coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

Temperature coefficient of rated ripple current

Temperature	120Hz	1kHz	10kHz	100~300kHz
Rated 105°C, coefficient	0.10	0.45	0.50	1.00

List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100KHz)	Rated ripple current (mA/r.m.s) 45°C 100KHz
					L	W	H				
35	105°C	35	105°C	100	7.3	6.0	1.9	164.5	0.10	100	2000

TQW42

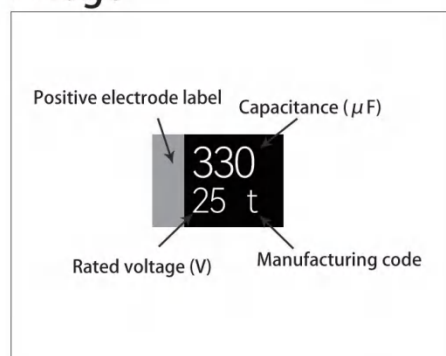
- ◆ Slim profile (L7.3×W6.0×H1.9)
- ◆ Bottom-side terminals, low ESL
- ◆ Low ESR, high ripple current
- ◆ RoHS compliant (2011/65/EU)



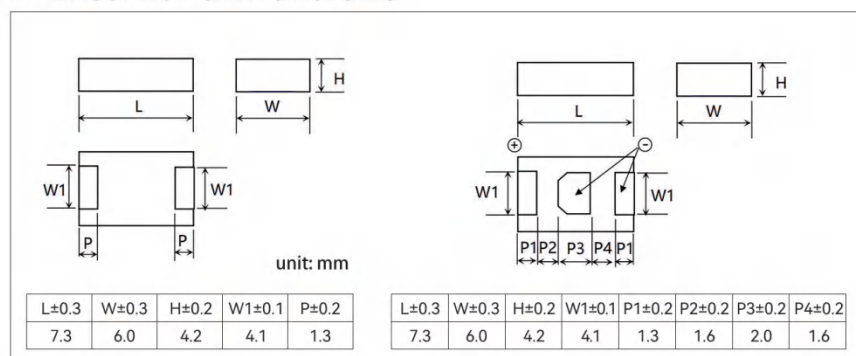
■ Main technical parameters

project	characteristic
Operating temperature range	- 55~+105℃
Rated operating voltage	25~35V
Capacity range	100~330 μF 120Hz/20℃
Capacity tolerance	±20% (120Hz/20℃)
Loss tangent	Values below the standard product list: 120Hz/20℃
Leakage current	Values below the standard product list: Charged for 5 minutes at rated voltage, 20℃
Equivalent series resistance (ESR)	Values below the standard product list: 100kHz/20℃
Surge voltage (V)	1.15 times the rated voltage
Durability	Under rated temperature, after applying the rated operating voltage for 2000 hours and being placed at 20℃ for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance ±20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ Initial specification value
高温高湿	After being placed at 60℃ and 90%~95%RH for 500 hours without applying voltage, and then placed at 20℃ for 16 hours, the product should meet the following requirements:
	Rate of change of capacitance +40% -20% of the initial value
	Loss tangent ≤ 150% of the initial specification value
	Leakage current ≤ 300% of the initial specification value

■ logo



■ External dimensions



■ Temperature coefficient of rated ripple current

Temperature	-55℃ < T ≤ 45℃	45℃ < T ≤ 85℃	85℃ < T ≤ 105℃
Rated 105℃, coefficient	1.0	0.7	0.25

Note: The capacitor surface temperature should not exceed the product's maximum operating temperature.

■ Temperature coefficient of rated ripple current

Temperature	120Hz	1kHz	10kHz	100~300kHz
Rated 105℃, coefficient	0.10	0.45	0.50	1.00

■ List of Standard Products

Rated voltage (V)	Rated temperature (°C)	Category Voltage (V)	Category Temperature (°C)	Nominal Capacity (μF)	Product dimensions (mm)			L.C. (μA, 5min)	Tan δ 120Hz	ESR (mΩ 100kHz)	Rated ripple current (mA/r.m.s) 45℃ 100kHz
					L	W	H				
25	105℃	25	105℃	330	7.3	6.0	4.2	825	0.10	60	2500
35	105℃	35	105℃	100	7.3	6.0	4.2	350	0.10	100	2050
	105℃	35	105℃	150	7.3	6.0	4.2	525	0.10	100	2050
	105℃	35	105℃	220	7.3	6.0	4.2	770	0.10	100	2050
	105℃	35	105℃	220	7.3	6.0	4.2	770	0.10	100	2050