

TLV SERIES

105°C Long Life, Low Impedance, Lead Free Reflow Soldering.

◆FEATURES

- Load Life 105°C 5000 hours.
- Reflow soldering is available.
- Large can-size SMD.
- RoHS compliance.



◆SPECIFICATIONS

Items	Characteristics																								
Category Temperature Range	-55~+105℃																								
Rated Voltage Range	6.3~35V.DC																								
Capacitance Tolerance	±20%(20℃,120Hz)																								
Leakage Current(MAX)	I=0.01CV or 3μA whichever is greater. (After 2 minutes) I=(μA) Leakage Current C=(μF) Rated Capacitance V=(V) Rated Voltage																								
(tanδ) Dissipation Factor(MAX)	<table><tr><td>Rated Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td></tr><tr><td>tanδ</td><td>0.26</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td></tr></table> (20℃,120Hz) When rated capacitance is over 1000μF, tanδ shall be added 0.02 to the listed value with Increase of every 1000 μF.	Rated Voltage	6.3	10	16	25	35	tanδ	0.26	0.19	0.16	0.14	0.12												
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Endurance	After applying rated voltage with rated ripple current for 5000 hours at 105℃, the capacitors shall meet the following requirements. <table><tr><td>Capacitance Change</td><td>Within ±30% of the initially measured value.</td></tr><tr><td>Dissipation Factor</td><td>Not more than 200% of the specified value.</td></tr><tr><td>Leakage Current</td><td>Not more than the specified value.</td></tr></table>	Capacitance Change	Within ±30% of the initially measured value.	Dissipation Factor	Not more than 200% of the specified value.	Leakage Current	Not more than the specified value.																		
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Low Temperature Stability Impedance Ratio(MAX)	<table><tr><td>Rated Voltage</td><td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td></tr><tr><td>Z(-25℃)/Z(20℃)</td><td>2</td><td>2</td><td>2</td><td>2</td><td>2</td></tr><tr><td>Z(-40℃)/Z(20℃)</td><td>3</td><td>3</td><td>3</td><td>3</td><td>3</td></tr><tr><td>Z(-55℃)/Z(20℃)</td><td>4</td><td>4</td><td>4</td><td>3</td><td>3</td></tr></table> (120Hz)	Rated Voltage	6.3	10	16	25	35	Z(-25℃)/Z(20℃)	2	2	2	2	2	Z(-40℃)/Z(20℃)	3	3	3	3	3	Z(-55℃)/Z(20℃)	4	4	4	3	3
Rated Voltage	6.3	10	16	25	35																				
Z(-25℃)/Z(20℃)	2	2	2	2	2																				
Z(-40℃)/Z(20℃)	3	3	3	3	3																				
Z(-55℃)/Z(20℃)	4	4	4	3	3																				

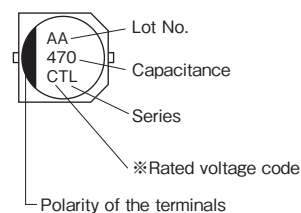
◆MULTIPLIER FOR RIPPLE CURRENT

Frequency Coefficient

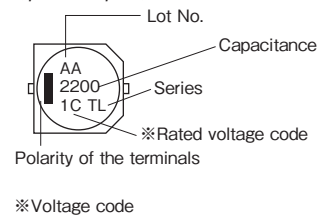
(Hz) Frequency	120	1K	10K	100K≤
100~150μF	0.50	0.80	0.95	1.00
220~10000μF	0.60	0.85	0.95	1.00

◆MARKING

〈φ8, φ10〉



〈φ12.5~φ18〉



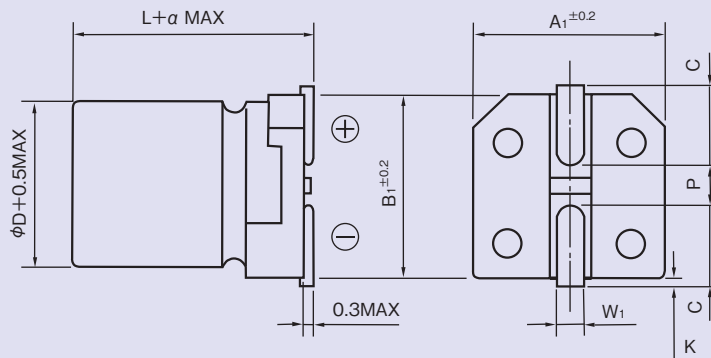
◆PART NUMBER

□□□ Rated Voltage TLV Series □□□□□ Rated Capacitance M Capacitance Tolerance □□□ Option D×L Case Size

Rated Voltage	6.3	10	16	25	35
φD≤10	j	A	C	E	V
φD≥12.5	0J	1A	1C	1E	1V

◆ DIMENSIONS

(mm)



φD	L	A1	B1	C	W1	P	K	α
8	10.5	8.3	8.3	2.9	0.8~1.1	3.1	0.5Max	0
10	10.5	10.3	10.3	3.2	0.8~1.1	4.5	0.5Max	0
12.5	13.5	13	13	4.9	0.8~1.1	4.5	0.7±0.4	0.5
12.5	16	13	13	4.9	0.8~1.1	4.5	0.7±0.4	0.5
16	16.5	17	17	6	1.0~1.6	6.8	0.7±0.4	0.5
16	21.5	17	17	6	1.0~1.6	6.8	0.7±0.4	0.5
18	16.5	19	19	7	1.0~1.6	6.8	0.7±0.4	0.5
18	21.5	19	19	7	1.0~1.6	6.8	0.7±0.4	0.5

◆ STANDARD SIZE

Size φDXL(mm), Ripple current(mA r.m.s./105°C,100kHz), Impedance(Ω Max/20°C, 100kHz)

WV (V.DC)	Cap (μF)	Size (φDXL)	Ripple	Impedance	WV (V.DC)	Cap (μF)	Size (φDXL)	Ripple	Impedance
6.3 (0J)	2200	12.5×13.5	1100	0.065	25 (1E)	220	8×10.5	600	0.16
	3300	12.5×16	1400	0.055		330	8×10.5	600	0.16
	4700	16×16.5	1800	0.045		470	10×10.5	850	0.08
	6800	16×21.5	2330	0.029		1000	12.5×13.5	1100	0.065
	10000	18×21.5	2640	0.028		1500	16×16.5	1800	0.045
10 (1A)	1000	10×10.5	850	0.08		2200	18×16.5	2060	0.044
	2200	12.5×16	1400	0.055		3300	18×21.5	2640	0.028
	3300	16×16.5	1800	0.045	35 (1V)	100	8×10.5	600	0.16
	4700	18×16.5	2060	0.044		100	10×10.5	850	0.08
	6800	18×21.5	2640	0.028		150	8×10.5	600	0.16
16 (1C)	470	8×10.5	600	0.16		220	8×10.5	600	0.16
	680	10×10.5	850	0.08		330	10×10.5	850	0.08
	1500	12.5×13.5	1100	0.065		470	12.5×13.5	1100	0.065
	2200	16×16.5	1800	0.045		680	12.5×13.5	1100	0.065
	3300	18×16.5	2060	0.044		1000	16×16.5	1800	0.045
	4700	16×21.5	2330	0.029		1500	18×16.5	2060	0.044
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