

TLV SERIES

Load Life : 105°C 5000 hours, Low Impedance, Lead Free
Reflow Soldering

◆FEATURES

- Load Life 105°C 5000 hours.
- Lead free Reflow soldering is available.
- Large can-size SMD.
- Prescribe Impedance value at 100kHz.
- RoHS compliance.



◆SPECIFICATIONS

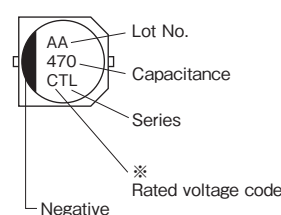
Items	Characteristics																													
Category Temperature Range	-55~+105℃																													
Rated Voltage Range	6.3~35Vdc																													
Capacitance Tolerance	±20%(20℃,120Hz)																													
Leakage Current(MAX)	I=0.01CV or 3μA whichever is greater. (After 2 minutes application of rated voltage) I=Leakage Current (μA) C=Capacitance (μF) V=Rated Voltage (Vdc)																													
(tanδ) Dissipation Factor(MAX)	<table><tr><td>Rated Voltage (Vdc)</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 1000μF.						Rated Voltage (Vdc)	6.3	10	16	25	35	tanδ	0.26	0.19	0.16	0.14	0.12												
Rated Voltage (Vdc)	6.3	10	16	25	35																									
tanδ	0.26	0.19	0.16	0.14	0.12																									
Endurance	After applying rated voltage for 5000 hours at 105℃, the capacitor shall meet the following requirements. <table><tr><td>Capacitance Change</td><td colspan="5">Within ±30% of the initially measured value.</td></tr><tr><td>Dissipation Factor</td><td colspan="5">Not more than 200% of the specified value. (φ8.φ10:300%)</td></tr><tr><td>Leakage Current</td><td colspan="5">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. (φ8.φ10:300%)					Leakage Current	Not more than the specified value.										
Capacitance Change	Within ±30% of the initially measured value.																													
Dissipation Factor	Not more than 200% of the specified value. (φ8.φ10:300%)																													
Leakage Current	Not more than the specified value.																													
Low Temperature Stability Impedance Ratio(MAX)	<table><tr><td>Rated Voltage (Vdc)</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 (Vdc)	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 (Vdc)	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

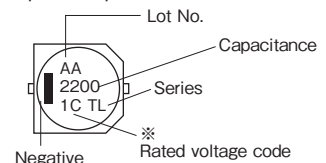
Frequency (Hz)	120	1k	10k	100k≤
Coefficient				
100~150μF	0.50	0.80	0.95	1.00
220~10000μF	0.60	0.85	0.95	1.00

◆MARKING

〈φ8,φ10〉



〈φ12.5~φ18〉



※ Voltage code

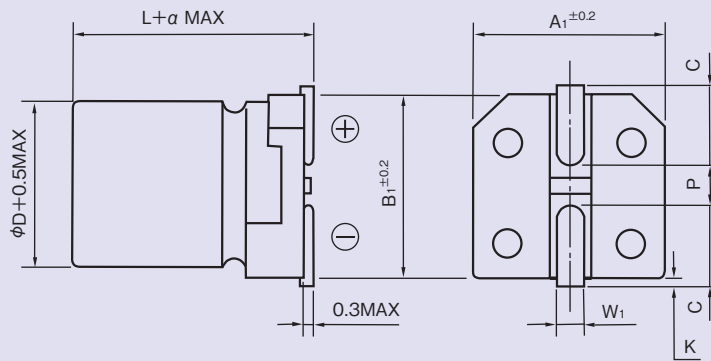
Rated Voltage (Vdc)	6.3	10	16	25	35
φD≤10	j	A	C	E	V
φD≥12.5	0J	1A	1C	1E	1V

◆PART NUMBER

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

◆ 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), Rated Ripple Current(mA r.m.s./105°C,100kHz), Impedance(Ω MAX/20°C, 100kHz)

Vdc	Cap (μF)	Size (φDXL)	Ripple	Impedance	Vdc	Cap (μF)	Size (φDXL)	Ripple	Impedance
6.3	2200	12.5×13.5	1100	0.065	25	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	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	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	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
						2200	16×21.5	2330	0.029