

**TZV SERIES**
**105°C Low Impedance, Lead Free Reflow Soldering**
**◆FEATURES**

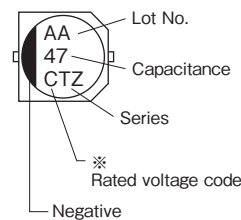
- Load Life : 105°C 2000 hours.
- Lead free reflow soldering is available.
- Available for high density mounting.
- Prescribe Impedance value at 100 kHz.
- RoHS compliance.


**◆SPECIFICATIONS**

Items	Characteristics																												
Category Temperature Range	-55~+105°C																												
Rated Voltage Range	6.3~50Vdc																												
Capacitance Tolerance	±20% (20°C, 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 border="1"> <thead> <tr> <th>Rated Voltage (Vdc)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>(20°C, 120Hz)</td> <td>0.26</td> <td>0.19</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </tbody> </table>	Rated Voltage (Vdc)	6.3	10	16	25	35	50	(20°C, 120Hz)	0.26	0.19	0.16	0.14	0.12	0.10														
Rated Voltage (Vdc)	6.3	10	16	25	35	50																							
(20°C, 120Hz)	0.26	0.19	0.16	0.14	0.12	0.10																							
Endurance	<p>After applying rated voltage with rated ripple current for 2000 hours at 105°C, the capacitors shall meet the following requirements.</p> <table border="1"> <tbody> <tr> <td>Capacitance Change</td> <td>Within ±30% of the initial 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> </tbody> </table>	Capacitance Change	Within ±30% of the initial value.	Dissipation Factor	Not more than 200% of the specified value.	Leakage Current	Not more than the specified value.																						
Capacitance Change	Within ±30% of the initial value.																												
Dissipation Factor	Not more than 200% of the specified value.																												
Leakage Current	Not more than the specified value.																												
Low Temperature Stability Impedance Ratio(MAX)	<table border="1"> <thead> <tr> <th>Rated Voltage (Vdc)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>Z(-25°C)/Z(20°C)</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z(-40°C)/Z(20°C)</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z(-55°C)/Z(20°C)</td> <td>4</td> <td>4</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </tbody> </table> <p>(120Hz)</p>	Rated Voltage (Vdc)	6.3	10	16	25	35	50	Z(-25°C)/Z(20°C)	2	2	2	2	2	2	Z(-40°C)/Z(20°C)	3	3	3	3	3	3	Z(-55°C)/Z(20°C)	4	4	4	3	3	3
Rated Voltage (Vdc)	6.3	10	16	25	35	50																							
Z(-25°C)/Z(20°C)	2	2	2	2	2	2																							
Z(-40°C)/Z(20°C)	3	3	3	3	3	3																							
Z(-55°C)/Z(20°C)	4	4	4	3	3	3																							

**◆MULTIPLIER FOR RIPPLE CURRENT**

Frequency (Hz)		120	1k	10k	100k≤
Coefficient	4.7μF	0.30	0.60	0.80	1.00
	10~47μF	0.32	0.75	0.90	1.00
	100μF	0.50	0.80	0.95	1.00
	220~1000μF	0.60	0.85	0.95	1.00

**◆MARKING**


※ Voltage Code

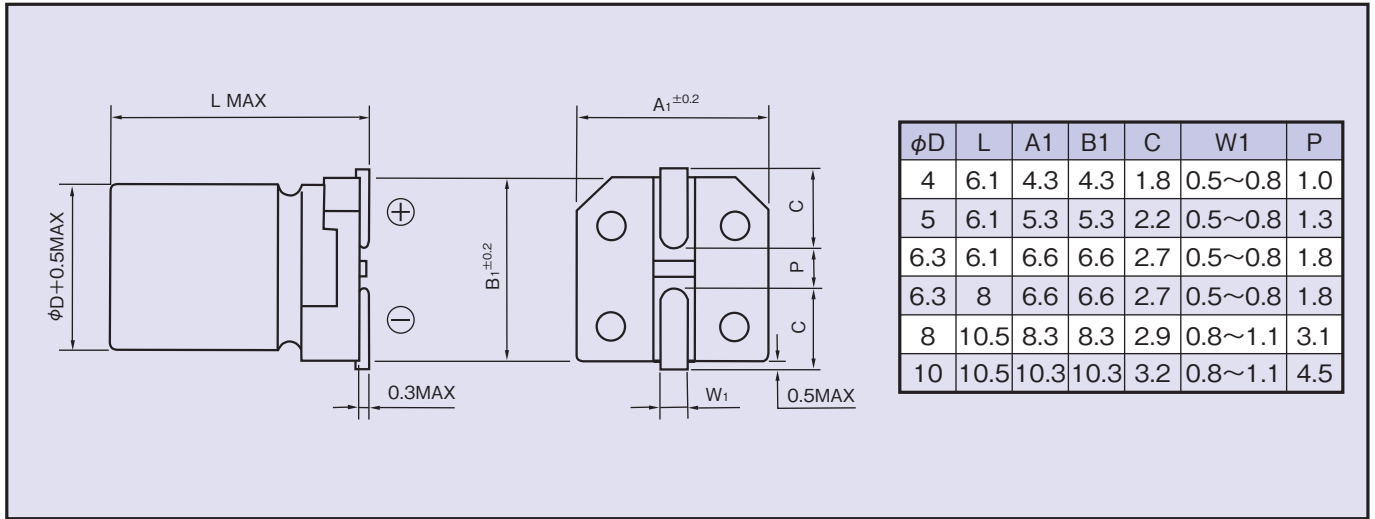
Rated Voltage (Vdc)	6.3	10	16	25	35	50
Rated Voltage code	j	A	C	E	V	H

**◆PART NUMBER**

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

◆ DIMENSIONS

(mm)



◆ STANDARD SIZE

Size φD×L(mm), Rated Ripple Current (mA r.m.s./105°C, 100kHz), Impedance(Ω MAX/20°C, 100kHz)

Vdc	Cap (μF)	Size (φD×L)	Ripple	Impedance	Vdc	Cap (μF)	Size (φD×L)	Ripple	Impedance
6.3	22	4×6.1	90	1.35	25	33	5×6.1	170	0.70
	47	4×6.1	90	1.35			6.3×6.1	250	0.36
		5×6.1	170	0.70		47	6.3×6.1	250	0.36
	100	5×6.1	170	0.70			100	6.3×8	300
		6.3×6.1	250	0.36		220	8×10.5	600	0.16
	220	6.3×6.1	250	0.36		330	8×10.5	600	0.16
		6.3×8	300	0.34		470	10×10.5	850	0.09
	330	6.3×8	300	0.34			35	4.7	4×6.1
1000	8×10.5	600	0.16	10	4×6.1	90		1.45	
10	33	4×6.1	90		1.35	5×6.1		170	0.70
	220	6.3×8	300	0.34	22	5×6.1		170	0.70
		8×10.5	600	0.16		6.3×6.1		250	0.36
	470	8×10.5	600	0.16	33	6.3×6.1		250	0.36
	680	8×10.5	600	0.16		47		6.3×6.1	250
1000	10×10.5	850	0.08	6.3×8	300			0.34	
16	10	4×6.1	90	1.35	100	6.3×8	300	0.34	
	22	4×6.1	90	1.35		8×10.5	600	0.16	
		5×6.1	170	0.70	220	8×10.5	600	0.16	
	33	5×6.1	170	0.70		330	10×10.5	850	0.09
	47	5×6.1	170	0.70	50		4.7	4×6.1	60
		6.3×6.1	250	0.36		10	5×6.1	85	1.52
	100	6.3×6.1	250	0.36			6.3×6.1	165	0.88
		6.3×8	300	0.34		22	6.3×6.1	165	0.88
	220	6.3×8	300	0.34			33	6.3×8	195
	330	8×10.5	600	0.16		47		6.3×8	195
470	8×10.5	600	0.16	100			8×10.5	350	0.34
680	10×10.5	850	0.08			220	10×10.5	670	0.18