

TS14

FEATURES

- Wide temperature range,
- Long life: 105°C 2000 hours
- Miniature and large capacity

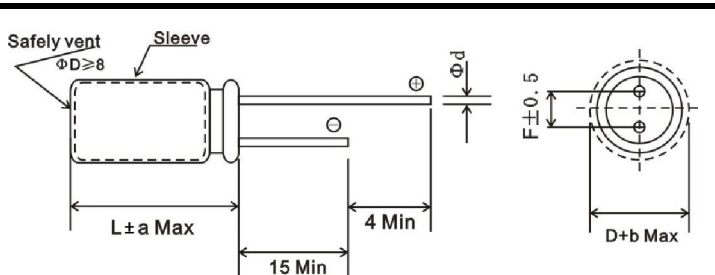


◆ Specifications

ITEMS		PERFORMANCE CHARACTERISTICS																																										
Operating Temperature Range(°C)	-40~+105	-25~+105																																										
Rated Voltage Range (V)	6.3~100	160~450																																										
Capacitance Range	0.1μF~22000μF	0.47μF~470μF																																										
Capacitance Tolerance (+20°C, 120Hz)	±20%																																											
Leakage current (+20°C, max)	I≤0.01CV or 3μA (after 2 minutes, whichever is greater)	I≤0.03CV(μA)+40μA (after 2 minutes)																																										
Dissipation Factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th>U_R(V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>160~250</th> <th>350~400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Tan δ (Max.)</td> <td>0.22</td> <td>0.17</td> <td>0.15</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.09</td> <td>0.08</td> <td>0.12</td> <td>0.15</td> <td>0.17</td> </tr> </tbody> </table>											U _R (V)	6.3	10	16	25	35	50	63	100	160~250	350~400	450	Tan δ (Max.)	0.22	0.17	0.15	0.14	0.12	0.10	0.09	0.08	0.12	0.15	0.17									
	U _R (V)	6.3	10	16	25	35	50	63	100	160~250	350~400	450																																
Tan δ (Max.)	0.22	0.17	0.15	0.14	0.12	0.10	0.09	0.08	0.12	0.15	0.17																																	
When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.																																												
Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>U_R (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25~100</th> <th>160</th> <th>200</th> <th>250</th> <th>350</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z-25°C/Z+20°C</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>3</td> <td>5</td> <td>6</td> <td>6</td> </tr> <tr> <td>Z-40°C/Z+20°C</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>3</td> <td>5</td> <td>6</td> <td>6</td> </tr> </tbody> </table>											U _R (V)	6.3	10	16	25~100	160	200	250	350	400	450	Z-25°C/Z+20°C	4	3	2	2	2	2	3	5	6	6	Z-40°C/Z+20°C	8	6	4	3	2	2	3	5	6	6
	U _R (V)	6.3	10	16	25~100	160	200	250	350	400	450																																	
	Z-25°C/Z+20°C	4	3	2	2	2	2	3	5	6	6																																	
Z-40°C/Z+20°C	8	6	4	3	2	2	3	5	6	6																																		
Load Life	After applying rated voltage with specified ripple current for 2000 hours at +105°C and then resumed 24 hours: Capacitance change: ±20% of the initial measured value Leakage current: ≤the initial specified value Dissipation factor: ≤200% of the initial specified value																																											
Shelf Life	After storage for 1000 hours at +105°C, U _R to be applied for 30 minutes and then resumed 24 hours: Capacitance change: ±20% of the initial measured value Leakage current: ≤the initial specified value Dissipation factor: ≤200% of the initial specified value																																											

◆ Dimensions

mm



ΦD	5	6.3	8	10	12.5/13	16~18	22
F	2.0	2.5	3.5	5.0		7.5	10
Φd ±0.05	0.5	L<20	L≥20	0.6		0.8	
		0.5	0.6				

a Max.	D<18	D=18		D>18
		L<35.5	L≥35.5	
		+1.5 -1.0	+2.0 -1.0	+2.0 -1.0

b Max.	(D<18)	0.5
	(D≥18)	1.0

◆ Multiplier for ripple current

Frequency coefficient		Frequency (Hz)					
		50 (60)	120	400	1K	10K	50K-100K
Cap(μF)	CAP≤10	0.8	1	1.30	1.45	1.65	1.70
	10<CAP≤100	0.8	1	1.23	1.36	1.48	1.53
	100<CAP≤1000	0.8	1	1.16	1.25	1.35	1.38
	1000<CAP	0.8	1	1.11	1.17	1.25	1.28

Temperature coefficient

Temperature (°C)	+70	+85	+105
Coefficient	1.96	1.68	1.0

TS14

◆ STANDARD RATINGS Ripple Current: 105°C, 120Hz

WV µF	6.3		10		16		25		35		50		63		100	
	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms
0.1~0.47	--	--	--	--	--	--	--	--	--	--	5x11	3	5x11	3	5x11	3
1	--	--	--	--	--	--	--	--	--	--	5x11	9	5x11	9	5x11	9
2.2	--	--	--	--	--	--	5x11	11	--	--	5x11	11	5x11	11	5x11	15
3.3	--	--	--	--	--	--	5x11	15	--	--	5x11	15	5x11	15	5x11	18
4.7	--	--	--	--	--	--	5x11	18	--	--	5x11	18	5x11	20	5x11	20
6.8	--	--	--	--	--	--	--	--	--	--	5x11	20	5x11	25	5x11	25
10	--	--	5x11	20	5x11	20	5x11	25	5x11	25	5x11	25	5x11	30	6.3x12	35
22	--	--	5x11	20	5x11	30	5x11	35	5x11	35	5x11	40	6.3x11	50	6.3x12	65
33	--	--	5x11	20	5x11	40	5x11	40	5x11	50	5x12	50	6.3x11	60	8x12	85
47	--	--	5x11	45	5x11	50	5x11	50	6.3x11	65	6.3x11	70	6.3x12	90	10x12.5	120
68	--	--	5x11	60	--	--	--	--	--	--	--	--	--	--	10x16	180
100	--	--	5x11	180	5x11 6x11	70 80	6.3x11	90	6.3x12	102	8x12	120	10x12	150	10x20	220
120	--	--	--	--	--	--	6.3x11	100	8x12	120	8x16	140	10x16	180	10x20	250
150	--	--	--	--	--	--	6.3x11	110	8x12	140	10x12	160	10x16	210	13x20	280
180	--	--	--	--	--	--	8x12	135	8x12	165	10x12	190	10x16	230	13x20	310
220	5x11	75	5x11 6.3x11	110 130	6.3x11	95	8x12	150	8x12	180	10x16	240	10x17	270	13x26	380
330	6.3x12	100	6.3x11	110	8x12	180	8x12	170	8x16	200	10x16	320	13x20	380	16x25	510
470	6.3x12	130	6.3x12 8x12	120 190	8x12	210	8x16 10x12	190 250	10x17	310	13x20	430	13x26	500	16x25	680
560	--	--	8x12 10x12	200 220	--	--	--	--	10x20	400	13x20	600	13x26	600	16x35	750
680	--	--	8x16	320	--	--	10x16	380	10x20	450	13x26	720	16x25	700	16x35	850
820	--	--	10x12	350	--	--	--	--	13x20	500	13x26	750	16x25	800	18x35	1000
1000	8x14	300	8x14	400	10x17	440	10x21	500	13x20	580	13x26	790	16x30	900	18x40	1200
1200	--	--	--	--	--	--	--	--	13x20	700	16x25	850	16x35	1100	--	--
1500	--	--	10x16	520	--	--	13x20	600	13x26	860	16x30	980	18x35	1210	--	--
1800	--	--	--	--	--	--	--	--	16x25	900	16x35	1150	--	--	--	--
2200	10x20	540	10x20	600	10x20 13x20	600 700	13x26	800	16x25	937	16x35	1230	18x35	1310	--	--
2700	--	--	--	--	--	--	16x25	900	--	--	18x35	1320	--	--	--	--
3300	13x20	670	13x20	800	13x26	920	16x25	1000	16x30	1080	18x40	1400	--	--	--	--
3900	--	--	13x20	900	--	--	--	--	--	--	--	--	--	--	--	--
4700	13x20	900	13x26	1000	16x25	1050	--	--	18x40	1540	--	--	--	--	--	--
6800	13x26	1020	16x25	1200	16x35	1430	18x35	1630	--	--	--	--	--	--	--	--
8200	--	--	16x30	1450	--	--	18x35	2000	--	--	--	--	--	--	--	--
10000	16x25	1220	16x35	1600	18x35	1700	--	--	--	--	--	--	--	--	--	--
12000	--	--	16x35	1650	--	--	--	--	--	--	--	--	--	--	--	--
15000	16x35	1300	18x35	1700	--	--	--	--	--	--	--	--	--	--	--	--
22000	18x40	1400	--	--	--	--	--	--	--	--	--	--	--	--	--	--

WV µF	160		200		250		350		400		450		500	
	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms	Size (mm) ØDxL	Ripple Current mArms
1	6.3x11	14	--	--	6.3x12	9	6.3x11	15	8x12	19	6.3x11	12	--	--
2.2	6.3x11	15	6.3x11	15	6.3x11	15	6.3x11	20	8x12	30	8x12	24	--	--
3.3	6.3x11	20	8x11	20	8x11	35	8x11	30	8x12	35	8x12	38	--	--
4.7	6.3x11	45	8x12	40	8x12	40	8x12	35	8x12	42	10x12	42	--	--
6.8	--	--	--	--	8x12	50	10x12	45	10x13	58	10x20	58	--	--
10	8x12	65	10x12	70	10x17	70	10x20	75	10x16	78	10x20	80	--	--
22	10x12	110	10x16	110	10x17	120	13x20	130	13x20	140	13x20	150	--	--
33	10x16	150	10x16	135	13x20	170	13x26	190	13x20	210	13x26 16x20	230	--	--
47	10x20	190	13x20	190	13x26	225	16x25	300	16x20	390	16x25	400	18x25	420
56	--	--	--	--	13x26	270	16x25	340	--	--	16x30	320	--	--
68	13x20	260	13x26	250	13x26	295	16x30	370	16x25	420	18x26	366	--	--
82	--	--	--	--	16x25	310	16x35	410	18x30	450	18x30	440	--	--
100	13x26	350	13x26	310	16x25	340	18x30	450	18x30	490	18x40	490	--	--
120	--	--	--	--	--	--	--	--	18x32	530	18x40	540	--	--

Note: Specification are subject to change without notice. For more detail and update, please visit our website.