

# TS14

**FEATURES**

- Wide temperature range, long life:  
105°C 2000 hours
- Miniature and low impedance

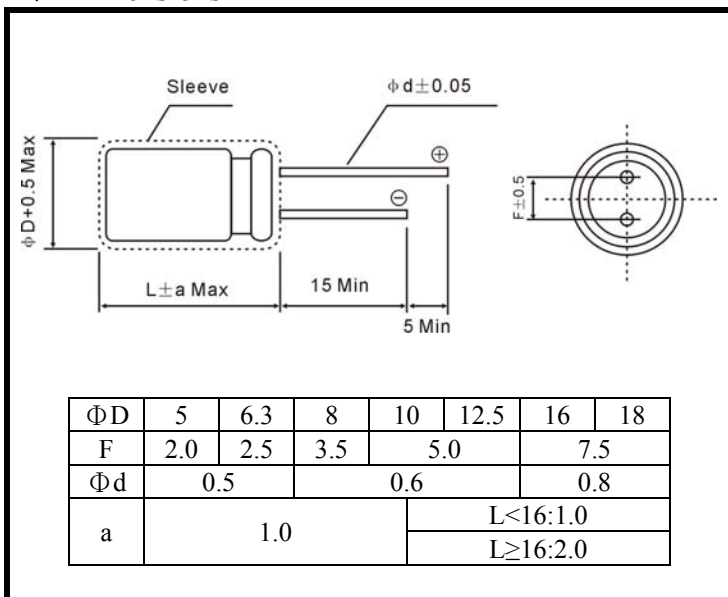


◆ Specifications

ITEMS		PERFORMANCE CHARACTERISTICS																																												
Operating Temperature Range(°C)	-40~+105	-40~+105																																												
Rated Voltage Range (V)	6.3~100	160~400																																												
Capacitance Tolerance (25°C, 120Hz)	±20%																																													
Leakage current (μA)	0.01CV or 3 whichever is greater. (at 25°C, after 2 minutes)		CV≤1000: 0.1CV+40 (at 25°C, after 1 minute)																																											
			CV>1000: 0.04CV+100 (at 25°C, after 1 minute)																																											
C: Nominal Capacitance (μF) V: Rated Voltage (V)																																														
Dissipation Factor (25°C, 120Hz)	<table border="1"> <tr> <td>Rated voltage (V)</td> <td>6.3</td><td>10</td><td>16</td><td>25</td><td>35</td><td>50</td><td>63</td><td>100</td><td>160</td><td>200</td><td>250</td><td>315</td><td>350</td><td>400</td> </tr> <tr> <td>Tan δ</td> <td>0.22</td><td>0.19</td><td>0.16</td><td>0.14</td><td>0.12</td><td>0.10</td><td>0.09</td><td>0.08</td><td>0.15</td><td>0.15</td><td>0.15</td><td>0.20</td><td>0.20</td><td>0.20</td> </tr> </table>																Rated voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	315	350	400	Tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.15	0.15	0.20	0.20	0.20
	Rated voltage (V)	6.3	10	16	25	35	50	63	100	160	200	250	315	350	400																															
Tan δ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08	0.15	0.15	0.15	0.20	0.20	0.20																																
When nominal capacitance is over 1000 μF tan δ shall be added 0.02 to the listed value with increase of every 1000 μF																																														
Temperature Stability (120Hz)	Rated voltage (V)										6.3	10	16	25	35	50	63	100																												
	Impedance Ratio	Z-25°C / Z+20°C		4		3		2																																						
		Z-40°C / Z+20°C		8		6		4		3																																				
	Rated voltage (V)										160~250			315~400																																
Impedance Ratio	Z-25°C / Z+20°C										3																																			
	Z-40°C / Z+20°C										8			6																																
Load Life (105°C)	Time		2000 hours (ØD ≤ 8, 1000 hours)																																											
	Leakage current		Not more than the specified value.																																											
	Capacitance Change		Within ±20% of the initial value.																																											
	Dissipation Factor		Not more than 200% of the specified value.																																											
Shelf Life (105°C)	1000 hours, No voltage applied. After test: U <sub>R</sub> to be applied for 30 minutes, 24 to 48 hours before measurement.																																													

◆ Dimensions

mm



◆ Multiplier for ripple current

Frequency coefficient

Rated Voltage(V)	Freq(Hz) Cap (μF)	50	120	1K	10K	100K
		6.3~100	0.1~4.7	--	0.4	0.7
10~47	--		0.5	0.8	0.9	1.0
100~220	--		0.7	0.9	0.9	1.0
330~1000	--		0.8	0.9	1.0	1.0
2200~15000	--		0.9	1.0	1.0	1.0
160~400	0.47~220	0.8	1.0	1.3	1.4	1.6

Temperature coefficient

Temperature (°C)	+70	+85	+105
Rated Voltage (V)			
6.3~100	2.0	1.7	1.0
160~400	1.8	1.4	1.0

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

WV Cap(µF)	10		16		25		35		50		63	
	Size (mm)	Ripple Current	Size (mm)	Ripple Current	Size (mm)	Ripple Current	Size (mm)	Ripple Current	Size (mm)	Ripple Current	Size (mm)	Ripple Current
	ØDxL	mArms	ØDxL	mArms	ØDxL	mArms	ØDxL	mArms	ØDxL	mArms	ØDxL	mArms
2.2	--	--	--	--	--	--	--	--	5x11	35	--	--
10	--	--	--	--	--	--	5x11	105	5x11	82	--	--
15	--	--	--	--	--	--	--	--	5x11	100	--	--
22	--	--	--	--	--	--	5x11	120	5x11	125	6x12	130
33	--	--	--	--	--	--	5x11 6x11	130 150	6x11	195	6x12	160
47	--	--	5x11	130	5x11	130	6x11	220	6x11	245	8x12	305
100	5x11	180	5x11 6x11	200 220	6x11	220	6x11	214	8x12	385	8x14 10x12	370 385
220	5x11 6x11	200 220	6x11	260	8x12	315	8x12	440	10x12	500	10x16	500
330	6x12	240	8x12	315	8x12	480	8x16	542	10x16	670	10x20 12x20	610 660
470	6x12 8x12	280 315	8x12	450	8x16 8x14	535 520	10x15	664	10x20 12.5x20	875 895	12.5x25	850
680	--	--	--	--	10x12	780	10x20	900	13x21	1100	16x25	1210
1000	8x16 8x14 8x12	515 500 495	10x17	790	10x20	996	13x20 12x20	1210 1210	13x26 16x25	1350 1495	16x30	1430
1500	--	--	10x20	980	--	--	16x20	1685	--	--	--	--
1800	--	--	--	--	13x20	1350	--	--	--	--	--	--
2200	10x20	980	10x20 12x20	1020 1200	12x25 16x26	1660 1740	16x26	1950	16x35	2190	18x40	1900
2700	--	--	--	--	16x26	1880	--	--	--	--	--	--
3300	12x20	1250	12x25 16x25	1600 1740	16x26	2030	16x35	2460	18x40 18x35	2810 2650	--	--
4700	12x26	1600	16x26	2050	18x30	2580	18x40	2990	--	--	--	--

WV Cap(µF)	100		160		200		250		400		450	
	Size (mm)	Ripple Current	Size (mm)	Ripple Current	Size (mm)	Ripple Current	Size (mm)	Ripple Current	Size (mm)	Ripple Current	Size (mm)	Ripple Current
	ØDxL	mArms	ØDxL	mArms	ØDxL	mArms	ØDxL	mArms	ØDxL	mArms	ØDxL	mArms
2.2	--	--	5x12	26	5x12	22	6x12	30	10x20 10x13 10x15	40 35 36	--	--
3.3	--	--	--	--	--	--	8x12	43	--	--	--	--
4.7	5x11	75	6x12	48	8x12	50	8x12	50	10x20	71	--	--
10	6x11	110	8x12	81	10x12	80	10x16	90	12.5x20	123	10x12	123
22	6x11	130	10x12	135	10x20	135	12x20	155	12x25	175	16x25	226
33	8x12	180	10x16	170	12x20	180	12x25	190	--	--	--	--
47	10x12	230	10x20	215	12x20	220	12x25	225	19x35	361	16x25	304
100	10x20	370	12x25	295	16x25	350	16x30	340	--	--	--	--
220	12.5x25	620	16x30	500	18x35	525	18x40	2120	--	--	--	--
330	16x25	750	18x35	980	--	--	--	--	--	--	--	--
470	16x25	1000	--	--	--	--	--	--	--	--	--	--
680	16x35	1350	22x45	1800	--	--	--	--	--	--	--	--
1000	18x40	1850	--	--	--	--	--	--	--	--	--	--

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