



TC 系列 Series

特点 Features

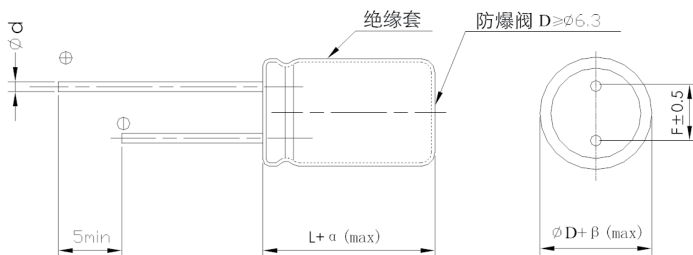
- 抗雷击, 小尺寸, 115°C, 2000小时。
Resistance to lightning, miniaturized, Load life of 2000 hours at 115°C.
- 适用于各种快充电源。Suitable for fast charging power supply.
- RoHS指令已对应完毕。Adapted to the RoHS directive.



主要技术性能 Specifications

项目 Items	特性 Characteristics																					
使用温度范围 Operating Temperature Range	-40~+115°C	-25~+115°C																				
额定电压范围 Rated Voltage Range	10~100V	250~450V																				
标称电容容量范围 Nominal Capacitance Range	4.7~680μF																					
标称电容容量允许偏差 Capacitance Tolerance	±20% (+20°C, +20Hz)																					
漏电流 Leakage Current	I ≤ 0.01CV (μA) or 3uA 2分钟(2 minute)	I ≤ 0.03CV (μA) + 40μA 2分钟(2 minute)																				
损耗角正切值 (tgδ) Dissipation Factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th>U_R (V)</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> <th>63</th> <th>100</th> <th>250</th> <th>400~450</th> </tr> </thead> <tbody> <tr> <td>tgδ</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> <td>0.08</td> <td>0.15</td> <td>0.20</td> </tr> </tbody> </table> <p>容量大于1000μF者, 每增加1000μF, 其损耗角正切值增加0.02 When nominal capacitance exceeds 1000μF, add 0.02 to the value above for each 1000μF increase.</p>		U _R (V)	10	16	25	35	50	63	100	250	400~450	tgδ	0.20	0.16	0.14	0.12	0.10	0.10	0.08	0.15	0.20
U _R (V)	10	16	25	35	50	63	100	250	400~450													
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温度特性 Temperature Characteristic (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th>U_R (V)</th> <th>10~100</th> <th>160</th> <th>250</th> <th>400</th> <th>450</th> </tr> </thead> <tbody> <tr> <td>Z-25°C / Z+20°C</td> <td>3</td> <td>4</td> <td>4</td> <td>6</td> <td>7</td> </tr> </tbody> </table>		U _R (V)	10~100	160	250	400	450	Z-25°C / Z+20°C	3	4	4	6	7								
U _R (V)	10~100	160	250	400	450																	
Z-25°C / Z+20°C	3	4	4	6	7																	
耐久性 Load Life	+115°C加额定电压2000小时, 恢复16小时后: After applying rated voltage for Load life of 2000h, at +115°C and then resumed for 16 hours: 电容容量变化率 Capacitance change : ±30%初始测量值以内 ±30% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤Initial specified value 损耗角正切值 Dissipation factor : ≤3倍初始规定值 ≤3times of the initial specified value																					
高温贮存 Shelf Life	+115°C, 1000小时贮存后, 加额定工作电压处理60分钟, 恢复16小时后: After storage for 1000 hours at +115°C, U _R to be applied for 60 minutes and then resumed 16 hours: 电容容量变化率 Capacitance change : ±20%初始测量值以内 ±20% of the initial measured value 漏电流 Leakage current : ≤初始规定值 ≤Initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤2times of the initial specified value																					

外形图及尺寸表 Case Size Table



单位 Unit: mm

D	6.3	8	10~12.5	16~18
F	2.5	3.5	5.0	7.5
d	0.5	0.5, 0.6	0.6	0.8

αMAX	α L < 20 > 1.5	βMAX	β D < 20 > 0.5
	α L ≥ 20 > 2.0		β D ≥ 20 > 1.0

频率修正系数 Frequency Coefficient

10~100V

Frequency (Hz) \ CAP(μF)	50/60	120	1K	10K	100K
≤10	0.35	0.42	0.60	0.80	1.00
10~47	0.45	0.55	0.75	0.90	1.00
56~470	0.60	0.70	0.85	0.95	1.00
560~1500	0.65	0.75	0.90	0.98	1.00

250~450V

Frequency (Hz) \ CAP(μF)	50	120	1K	10K	≥50K
4.7~100	0.77	1.00	1.30	1.41	2.50

尺寸 Dimensions

WV \ CAP(μF)		10V(1A)		16V(1C)		25V(1E)	
		Size	Ripple	Size	Ripple	Size	Ripple
47	470					5×11	250
100	101	6.3×11	405	6.3×11	405	6.3×11	405
220	221	8×11.5	760	8×11.5	760	10×12.5	1030
330	331	8×11.5	760	10×12.5	1030	10×16	1430
470	471	10×12.5	1030	10×16	1430	10×20	1500
680	681	10×16	1430	10×20	1500	12.5×20	1720
1000	102	8×20	1450	12.5×20	1720	12.5×25	1900
		10×20	1500				
1500	152	12.5×20	1720	12.5×25	1900		

WV \ CAP(μF)		35V(1V)		50V(1H)		63V(1J)		100V(2A)	
		Size	Ripple	Size	Ripple	Size	Ripple	Size	Ripple
22	220	5×11	250					10×12.5	480
33	330	6.3×11	405	8×11.5	300	8×11.5	150	10×12.5	480
47	470	6.3×11	405	8×11.5	440	10×12.5	530	10×16	630
68	680	8×11.5	760						
100	101	8×11.5	760	10×12.5	555	10×16	690	12.5×20	990
150	151	10×12.5	1030						
220	221					12.5×20	1050	16×25	1500
		10×16	1430	10×20	930				
330	331	10×25	1620	12.5×20	1330	12.5×25	1290	16×30	1790
470	471	12.5×20	1720	12.5×25	1650	12.5×35	1460		
680	681	12.5×25	1900	16×30	2430				

Size φD×L(mm)

Maximum Allowable Ripple Current (mA rms) at 115°C 100KHz

WV \ CAP(μF)		250V(2E)		400V(2G)		450V(2W)	
		Size	Ripple	Size	Ripple	Size	Ripple
4.7	4R7	6.3×11	45	8×11	52	8×12	54
6.8	6R8	8×11	63	8.2×11.5	65	8.2×13	70
8.2	8R2	8.2×11.5	71	8.2×11.5	72	8.2×13	75
10	100	8.2×11.5	80	8.2×13	84	8.2×16	91
12	120	8.2×13	91	8.2×16	100	8.2×18	105
15	150	8.2×16	112	8.2×18	118	10×17	122
18	180	8.2×18	130	10×17	135	10×20	145
22	220	10×17	145	10×18	150	12.5×17	160
27	270	10×18	165	10×20	175	12.5×20	190
33	330	10×20	195	12.5×20	210	16×17	225
47	470	12.5×20	250	16×17	270	18×20	305
68	680	16×17	325	18×20	365	18×22	380
82	820	18×20	400	18×22	420	18×25	440
100	101	18×20	440	18×25	480	18×30	520

Size φD×L(mm)

Maximum Allowable Ripple Current (mA rms) at 115°C 120Hz

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