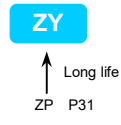


# ZY 系列 SERIES



- 高纹波，低阻抗，超长寿命品  
High Ripple Current, Low Impedance, Special Long Load Life
- 保证 105℃、4000~10000 小时寿命。(叠加纹波电流)  
Endurance with ripple current: 4000~10000hours at 105℃
- 额定工作电压范围: 6.3V~100V  
Rated voltage range: 6.3V-100V

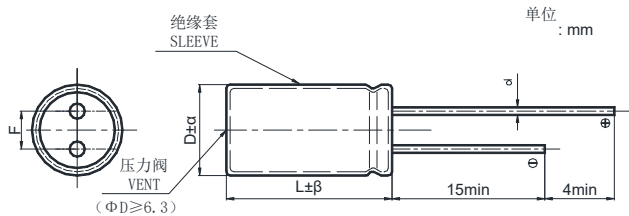


## 规格表 SPECIFICATIONS

项目 Items	特性 Characteristics																											
工作温度范围 Operating Temperature Range	-40~+105℃																											
额定工作电压范围 Rated Working Voltage Range	6.3~100V																											
静电容量允许偏差 Capacitance Tolerance	±20% (20℃, 120Hz)																											
损耗角正切值 Dissipation Factor (MAX) 20℃, 120Hz	当容量大于 1000μF 时，容量每增加 1000μF，tgδ 增加 0.02。 When nominal capacitance over 1000μF, tgδ shall be added 0.02 to below listed value for each 1000μF increase.																											
	<table border="1"> <tr> <td>U<sub>R</sub>(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> </tr> <tr> <td>tanδ</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> </tr> </table>	U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	100	tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08									
U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	100																				
tanδ	0.22	0.19	0.16	0.14	0.12	0.10	0.09	0.08																				
阻抗比 Impedance Ratio (MAX) 120Hz	<table border="1"> <tr> <td>U<sub>R</sub>(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> </tr> <tr> <td>Z<sub>25℃/Z+20℃</sub></td> <td>4</td> <td>3</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z<sub>40℃/Z+20℃</sub></td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	100	Z <sub>25℃/Z+20℃</sub>	4	3	2	2	2	2	2	2	Z <sub>40℃/Z+20℃</sub>	8	6	4	3	3	3	3	3
U <sub>R</sub> (V)	6.3	10	16	25	35	50	63	100																				
Z <sub>25℃/Z+20℃</sub>	4	3	2	2	2	2	2	2																				
Z <sub>40℃/Z+20℃</sub>	8	6	4	3	3	3	3	3																				
漏电流 Leakage Current (MAX)	I=0.01C <sub>R</sub> U <sub>R</sub> 或 3μA 取大者 (20℃, 施加额定电压 2 分钟后) I=0.01C <sub>R</sub> U <sub>R</sub> or 3μA whichever is greater. (at 20℃, After 2 minutes application of rated voltage) I=漏电流 (μA) U <sub>R</sub> =额定电压 (V) C <sub>R</sub> =静电容量 (μF) Leakage Current Rated Voltage Rated Capacitance																											

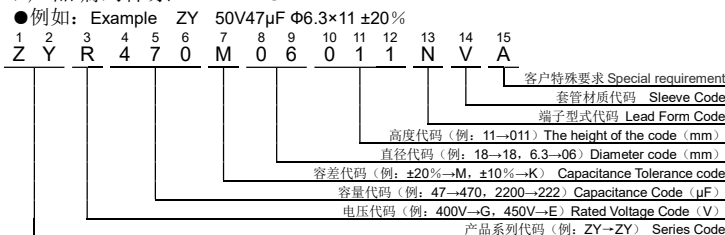
	使用寿命 Useful Life	负荷寿命 Load Life	耐久性特性 Endurance Test	高温无负荷特性 Shelf Life																																					
产品寿命 Life Time	<table border="1"> <tr> <td>ΦD</td> <td>6.3-10V</td> <td>16-100V</td> </tr> <tr> <td>5-6.3</td> <td>5000h</td> <td>6000h</td> </tr> <tr> <td>8-10</td> <td>7000h</td> <td>8000h</td> </tr> <tr> <td>&gt;10</td> <td>9000h</td> <td>11000h</td> </tr> </table>	ΦD	6.3-10V	16-100V	5-6.3	5000h	6000h	8-10	7000h	8000h	>10	9000h	11000h	>100000h	<table border="1"> <tr> <td>ΦD</td> <td>6.3-10V</td> <td>16-100V</td> </tr> <tr> <td>5-6.3</td> <td>4000h</td> <td>5000h</td> </tr> <tr> <td>8-10</td> <td>6000h</td> <td>7000h</td> </tr> <tr> <td>&gt;10</td> <td>8000h</td> <td>10000h</td> </tr> </table>	ΦD	6.3-10V	16-100V	5-6.3	4000h	5000h	8-10	6000h	7000h	>10	8000h	10000h	<table border="1"> <tr> <td>ΦD</td> <td>6.3-10V</td> <td>16-100V</td> </tr> <tr> <td>5-6.3</td> <td>4000h</td> <td>5000h</td> </tr> <tr> <td>8-10</td> <td>6000h</td> <td>7000h</td> </tr> <tr> <td>&gt;10</td> <td>8000h</td> <td>10000h</td> </tr> </table>	ΦD	6.3-10V	16-100V	5-6.3	4000h	5000h	8-10	6000h	7000h	>10	8000h	10000h	1000h
ΦD	6.3-10V	16-100V																																							
5-6.3	5000h	6000h																																							
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>10	8000h	10000h																																							
漏电流 Leakage Current	≤规定值 ≤Specified value	≤规定值 ≤Specified value	≤规定值 ≤Specified value	≤规定值 ≤Specified value																																					
损耗角正切值变化率 Tgδ Change	≤规定值的 500% ≤500% of specified value	≤规定值的 200% ≤200% of specified value	≤规定值的 200% ≤200% of specified value	≤规定值的 200% ≤200% of specified value																																					
静电容量变化率 Capacitance Change	初始值±50%以内 Within±50% of initial value	初始值±25%以内 Within±25% of initial value	初始值±25%以内 Within±25% of initial value	初始值±25%以内 Within±25% of initial value																																					
施加条件 Condition 施加电压 Applied Voltage 施加纹波电流 Applied Ripple Current 环境温度 Applied Temperature 失效等级 Failure Rate Level	U <sub>R</sub> I <sub>R</sub> 105℃ ≤1% Failure rate	U <sub>R</sub> 1.4×I <sub>R</sub> 40℃ ≤1% Failure rate	U <sub>R</sub> I <sub>R</sub> 105℃ 0%	U <sub>R</sub> I <sub>R</sub> 105℃ 0%																																					

## 尺寸图 Dimensions



D	5	6.3	8	10	13	16	18
F±0.5	2.0	2.5	3.5	5.0	5.0	7.5	7.5
d±0.05	0.5		0.6		0.8		
β	L≤16: β=1.5			L≥20: β=2.0			
α	0.5						

## 产品编码体系 PART NUMBER SYSTEM



## 纹波电流修正系数 Rated Ripple Current Multiplies

容量范围 (μF) Capacitance (μF)	频率 (Hz) Frequency				
	50 (60)	100 (120)	300	1K	≥100k
≤33	0.45	0.55	0.70	0.90	1.00
39-330	0.60	0.70	0.85	0.95	1.00
390-1000	0.65	0.75	0.90	0.98	1.00
1200-3900	0.75	0.80	0.95	1.00	1.00

## ◆ 产品一览表 Standard Ratings

WV <sub>dc</sub> (Surge Voltage) (V)	Cap (μF)	Size D×L (mm)	Impedance 20°C/100KHz	Ripple Current 105°C/100KHz (mA <sub>rms</sub> )	Catalog Part Number
6.3 (7.2)	100	5×11	0.58	210	ZYX101M05011□VA
	220	6.3×11	0.22	340	ZYX221M06011□VA
	330	6.3×11	0.22	340	ZYX331M06011□VA
	470	8×12	0.13	640	ZYX471M08012□VA
	680	8×12	0.10	760	ZYX681M08012□VA
	1000	8×12	0.08	810	ZYX102M08012□VA
	1000	10×13	0.08	865	ZYX102M10013□VA
	1500	8×20	0.044	1050	ZYX152M08020□VA
	1500	10×16	0.046	1240	ZYX152M10016□VA
	2200	10×20	0.042	1460	ZYX222M10020□VA
	3300	10×25	0.032	2050	ZYX332M10025□VA
	3300	13×21	0.035	1900	ZYX332M13021□VA
	4700	10×30	0.026	2250	ZYX472M10030□VA
	4700	13×21	0.035	2040	ZYX472M13021□VA
5600	13×25	0.022	2450	ZYX562M13025□VA	
6800	13×25	0.020	2720	ZYX682M13025□VA	
10 (13)	100	5×11	0.58	210	ZYW101M05011□VA
	220	6.3×11	0.22	340	ZYW221M06011□VA
	330	6.3×11	0.22	390	ZYW331M06011□VA
	470	6.3×11	0.18	450	ZYW471M06011□VA
	470	8×12	0.13	640	ZYW471M08012□VA
	680	8×14	0.087	820	ZYW681M08014□VA
	1000	8×20	0.069	1050	ZYW102M08020□VA
	1000	10×16	0.06	1210	ZYW102M10016□VA
	1500	10×16	0.055	1380	ZYW152M10016□VA
	1500	10×20	0.042	1560	ZYW152M10020□VA
	2200	10×20	0.038	1650	ZYW222M10020□VA
	2200	10×25	0.035	1840	ZYW222M10025□VA
	3300	10×30	0.026	2140	ZYW332M10030□VA
	3300	13×21	0.035	2060	ZYW332M13021□VA
4700	13×25	0.028	2355	ZYW472M13025□VA	
5600	16×25	0.028	2552	ZYW562M16025□VA	
6800	16×25	0.024	2640	ZYW682M16025□VA	
16 (20)	47	5×11	0.58	210	ZYV470M05011□VA
	100	5×11	0.58	210	ZYV101M05011□VA
	220	6.3×11	0.22	340	ZYV221M06011□VA
	330	8×12	0.13	640	ZYV331M08012□VA
	470	8×12	0.10	705	ZYV471M08012□VA
	470	8×14	0.087	780	ZYV471M08014□VA
	680	8×16	0.069	1020	ZYV681M08016□VA
	680	10×13	0.070	1050	ZYV681M10013□VA
	1000	8×20	0.058	1230	ZYV102M08020□VA
	1000	10×16	0.052	1305	ZYV102M10016□VA
	1000	10×20	0.046	1400	ZYV102M10020□VA
	1500	10×20	0.040	1780	ZYV152M10020□VA
	1500	13×21	0.035	1900	ZYV152M13021□VA
	2200	10×25	0.035	1980	ZYV222M10025□VA
	2200	13×21	0.030	2095	ZYV222M13021□VA
	3300	10×32	0.030	2372	ZYV332M10032□VA
3300	13×25	0.022	2510	ZYV332M13025□VA	
4700	16×30	0.022	3029	ZYV472M16030□VA	
4700	18×25	0.024	2771	ZYV472M18025□VA	
5600	16×30	0.019	2875	ZYV562M16030□VA	
6800	16×35	0.017	3720	ZYV682M16035□VA	
25 (32)	47	5×11	0.58	210	ZYU470M05011□VA
	100	6.3×11	0.22	340	ZYU101M06011□VA

WV <sub>dc</sub> (Surge Voltage) (V)	Cap (μF)	Size D×L (mm)	Impedance 20°C/100KHz	Ripple Current 105°C/100KHz (mA <sub>rms</sub> )	Catalog Part Number
25 (32)	220	8×12	0.13	640	ZYU221M08012□VA
	330	8×14	0.087	795	ZYU331M08014□VA
	330	8×16	0.087	840	ZYU331M08016□VA
	470	8×14	0.069	905	ZYU471M08014□VA
	470	10×13	0.060	1120	ZYU471M10013□VA
	680	10×20	0.046	1400	ZYU681M10020□VA
	1000	10×20	0.035	1720	ZYU102M10020□VA
	1000	13×21	0.035	1900	ZYU102M13021□VA
	1500	13×21	0.030	2052	ZYU152M13021□VA
	2200	13×25	0.022	2560	ZYU222M13025□VA
	2200	16×20	0.034	2320	ZYU222M16020□VA
	3300	16×30	0.022	3029	ZYU332M16030□VA
	3300	18×25	0.022	2771	ZYU332M18025□VA
	4700	16×35	0.019	3260	ZYU472M16035□VA
5600	16×35	0.017	3482	ZYU562M16035□VA	
6800	18×35	0.015	3960	ZYU682M18035□VA	
35 (44)	22	5×11	0.58	210	ZYT220M05011□VA
	33	5×11	0.58	210	ZYT330M05011□VA
	47	6.3×11	0.22	340	ZYT470M06011□VA
	100	8×12	0.13	640	ZYT101M08012□VA
	220	8×12	0.10	680	ZYT221M08012□VA
	220	8×14	0.09	820	ZYT221M08014□VA
	330	8×20	0.069	1050	ZYT331M08020□VA
	330	10×13	0.072	980	ZYT331M10013□VA
	470	10×16	0.046	1326	ZYT471M10016□VA
	470	10×20	0.046	1400	ZYT471M10020□VA
	680	10×20	0.040	1595	ZYT681M10020□VA
	680	13×21	0.035	1780	ZYT681M13021□VA
	1000	10×25	0.030	2190	ZYT102M10025□VA
	1000	13×21	0.030	2235	ZYT102M13021□VA
	1500	13×25	0.022	2650	ZYT152M13025□VA
	2200	16×30	0.022	3498	ZYT222M16030□VA
2200	18×25	0.024	3201	ZYT222M18025□VA	
3300	18×30	0.018	4090	ZYT332M18030□VA	
4700	18×35	0.015	4367	ZYT472M18035□VA	
50 (63)	1	5×11	2.4	180	ZYR010M05011□VA
	2.2	5×11	1.3	180	ZYR2R2M05011□VA
	3.3	5×11	1.3	180	ZYR3R3M05011□VA
	4.7	5×11	1.3	180	ZYR4R7M05011□VA
	10	5×11	1.3	180	ZYR100M05011□VA
	22	5×11	1.3	180	ZYR220M05011□VA
	33	6.3×11	0.30	295	ZYR330M06011□VA
	47	6.3×11	0.30	295	ZYR470M06011□VA
	100	8×12	0.12	680	ZYR101M08012□VA
	220	10×16	0.060	1050	ZYR221M10016□VA
	330	10×16	0.055	1290	ZYR331M10016□VA
	330	10×20	0.050	1460	ZYR331M10020□VA
	470	10×20	0.043	1560	ZYR471M10020□VA
	470	13×21	0.034	1720	ZYR471M13021□VA
	680	13×21	0.030	2180	ZYR681M13021□VA
	1000	13×25	0.021	2640	ZYR102M13025□VA
1000	16×25	0.025	2555	ZYR102M16025□VA	
1500	16×30	0.019	3040	ZYR152M16030□VA	
2200	18×30	0.017	3410	ZYR222M18030□VA	
2200	18×35	0.017	3680	ZYR222M18035□VA	
3300	18×35	0.015	4200	ZYR332M18035□VA	

\*产品编码中□内为产品端子引出型式代码  
\*□Enter the appropriate terminal code

# ZY 系列 SERIES

## ◆ 产品一览表 Standard Ratings

WV <sub>bc</sub> (Surge Voltage) (V)	Cap ( $\mu$ F)	Size D×L (mm)	Impedance 20℃100KHz	Ripple Current 105℃100KHz (mA <sub>rms</sub> )	Catalog Part Number
63 (72)	10	5×11	2.5	95	ZYQ100M05011□VA
	22	6.3×11	1.2	115	ZYQ220M06011□VA
	33	6.3×11	1.2	115	ZYQ330M06011□VA
	47	8×12	0.63	232	ZYQ470M08012□VA
	100	8×16	0.45	300	ZYQ101M08016□VA
	100	10×13	0.43	288	ZYQ101M10013□VA
	220	10×20	0.21	466	ZYQ221M10020□VA
	220	10×25	0.20	531	ZYQ221M10025□VA
	220	13×21	0.16	690	ZYQ221M13021□VA
	330	10×20	0.15	580	ZYQ331M10020□VA
	470	13×21	0.10	860	ZYQ471M13021□VA
	680	13×25	0.083	980	ZYQ681M13025□VA
	1000	16×25	0.054	1380	ZYQ102M16025□VA
	1500	18×30	0.040	1620	ZYQ152M18030□VA
	2200	18×35	0.035	1890	ZYQ222M18035□VA

WV <sub>bc</sub> (Surge Voltage) (V)	Cap ( $\mu$ F)	Size D×L (mm)	Impedance 20℃100KHz	Ripple Current 105℃100KHz (mA <sub>rms</sub> )	Catalog Part Number
100 (125)	6.8	5×11	2.3	55	ZYO6R8M05011□VA
	10	6.3×11	2.0	105	ZYO100M06011□VA
	22	8×12	1.0	165	ZYO220M08012□VA
	33	8×14	0.8	210	ZYO330M08014□VA
	47	8×16	0.43	288	ZYO470M08016□VA
	47	10×13	0.43	288	ZYO470M10013□VA
	68	10×16	0.31	357	ZYO681M10016□VA
	100	10×20	0.20	490	ZYO101M10020□VA
	220	13×25	0.12	810	ZYO221M13025□VA
	330	16×25	0.080	1380	ZYO331M16025□VA
	470	16×30	0.045	1740	ZYO471M16030□VA
	680	18×30	0.040	1890	ZYO681M18030□VA
	1000	18×40	0.035	1920	ZYO102M18040□VA

\*产品编码中□内为产品端子引出型式代码

\*□Enter the appropriate terminal code

\*记载之外的体积，请另行咨询。

\* Please ask for advice for other sizes.

\*铝电解电容器由于承受纹波电流而发热，随着温升而发生性能劣化。请在使用中降低产品承受的纹波电流。

\*Aluminum electrolytic capacitor will emit heat when ripple current is applied, the performance will deteriorate when temp. rises. Please reduce the ripple current when using capacitor.