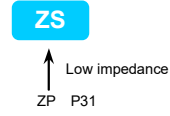


ZS 系列 SERIES



- 高纹波, 长寿命, 超低阻抗品
High Ripple Current, Long Load Life, Special Low Impedance
- 保证 105°C、3000~7000 小时寿命。(叠加纹波电流)
Endurance with ripple current: 3000~7000hours at 105°C
- 额定工作电压范围: 6.3V~50V
Rated voltage range: 6.3V-50V

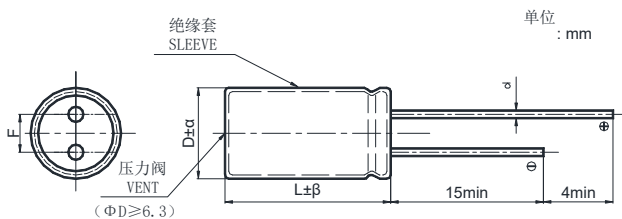


规格表 SPECIFICATIONS

项目 Items	特性 Characteristics																					
工作温度范围 Operating Temperature Range	-40~+105°C																					
额定工作电压范围 Rated Working Voltage Range	6.3~50V																					
静电容量允许偏差 Capacitance Tolerance	±20% (20°C, 120Hz)																					
损耗角正切值 Dissipation Factor (MAX) 20°C, 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_R(V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</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> </tr> </table>	U _R (V)	6.3	10	16	25	35	50	tanδ	0.22	0.19	0.16	0.14	0.12	0.10							
U _R (V)	6.3	10	16	25	35	50																
tanδ	0.22	0.19	0.16	0.14	0.12	0.10																
阻抗比 Impedance Ratio (MAX) 120Hz	<table border="1"> <tr> <td>U_R(V)</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <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> </tr> <tr> <td>Z_{40°C}/Z_{+20°C}</td> <td>8</td> <td>6</td> <td>4</td> <td>3</td> <td>3</td> <td>3</td> </tr> </table>	U _R (V)	6.3	10	16	25	35	50	Z _{25°C} /Z _{+20°C}	4	3	2	2	2	2	Z _{40°C} /Z _{+20°C}	8	6	4	3	3	3
U _R (V)	6.3	10	16	25	35	50																
Z _{25°C} /Z _{+20°C}	4	3	2	2	2	2																
Z _{40°C} /Z _{+20°C}	8	6	4	3	3	3																
漏电流 Leakage Current (MAX)	I=0.01C _R U _R 或 3μA 取大者 (20°C, 施加额定电压 2 分钟后) I=0.01C _R U _R or 3μA whichever is greater. (at 20°C, After 2 minutes application of rated voltage) I=漏电流 (μA) U _R =额定电压 (V) C _R =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	ΦD5~6.3: 4000h ΦD8: 5000h ΦD10: 6000h ΦD>10: 8000h	>100000h	ΦD5~6.3: 3000h ΦD8: 4000h ΦD10: 5000h ΦD>10: 7000h	ΦD5~6.3: 3000h ΦD8: 4000h ΦD10: 5000h ΦD>10: 7000h
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±20% of initial value	初始值±25%以内 Within±20% of initial value	初始值±25%以内 Within±20% 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 _R I _R 105°C ≤1% Failure rate	U _R 1.4×I _R 40°C ≤1% Failure rate	U _R I _R 105°C 0%	U _R I _R 105°C 0%

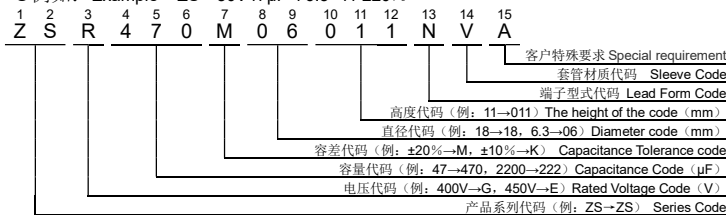
尺寸图 Dimensions



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

● 例如: Example ZS 50V47μF Φ6.3×11 ±20%



纹波电流修正系数 Rated Ripple Current Multiplies

容量范围 (μF) Capacitance (μF)	频率 (Hz) Frequency			
	100 (120)	1K	10K	≥100k
≤180	0.40	0.75	0.90	1.00
220~560	0.50	0.85	0.94	1.00
680~1800	0.60	0.87	0.95	1.00
2200~3900	0.75	0.90	0.95	1.00
≥4700	0.85	0.95	0.98	1.00

◆ 产品一览表 Standard Ratings

WV _{DC} (Surge Voltage) (V)	Cap (μ F)	Size D×L (mm)	Impedance 20°C100KHz	Ripple Current 105°C100KHz (mA _{rms})	Catalog Part Number
6.3 (7.2)	100	5×11	0.50	200	ZSX101M05011□VA
	220	6.3×11	0.30	345	ZSX221M06011□VA
	330	6.3×11	0.13	405	ZSX331M06011□VA
	470	8×12	0.10	635	ZSX471M08012□VA
	680	8×14	0.076	740	ZSX681M08014□VA
	1000	10×13	0.053	1030	ZSX102M10013□VA
	1200	10×16	0.038	1430	ZSX122M10016□VA
	1500	10×20	0.023	1820	ZSX152M10020□VA
	2200	10×25	0.022	2150	ZSX222M10025□VA
	3300	13×21	0.021	2360	ZSX332M13021□VA
	4700	13×30	0.016	3290	ZSX472M13030□VA
10 (13)	6800	16×25	0.016	3460	ZSX682M16025□VA
	100	5×11	0.30	250	ZSW101M05011□VA
	220	6.3×11	0.13	405	ZSW221M06011□VA
	330	8×12	0.105	640	ZSW331M08012□VA
	470	8×12	0.072	760	ZSW471M08012□VA
	680	8×16	0.056	995	ZSW681M08016□VA
	1000	10×16	0.038	1430	ZSW102M10016□VA
	1200	10×20	0.023	1820	ZSW122M10020□VA
	1500	10×25	0.022	2150	ZSW152M10025□VA
	2200	13×21	0.021	2360	ZSW222M13021□VA
	3300	13×25	0.018	2770	ZSW332M13025□VA
16 (20)	4700	13×35	0.015	3400	ZSW472M13035□VA
	100	6.3×11	0.20	360	ZSV101M06011□VA
	220	8×12	0.10	570	ZSV221M08012□VA
	330	8×12	0.072	760	ZSV331M08012□VA
	470	10×13	0.053	1030	ZSV471M08016□VA
	680	10×16	0.038	1430	ZSV681M10016□VA
	1000	10×20	0.023	1820	ZSV102M10020□VA
	1200	10×25	0.022	2150	ZSV122M10025□VA
	1500	13×21	0.021	2360	ZSV152M13021□VA
	2200	13×25	0.018	2770	ZSV222M13025□VA
	3300	13×35	0.015	3400	ZSV332M13035□VA

WV _{DC} (Surge Voltage) (V)	Cap (μ F)	Size D×L (mm)	Impedance 20°C100KHz	Ripple Current 105°C100KHz (mA _{rms})	Catalog Part Number	
25 (32)	47	5×11	0.30	250	ZSU470M05011□VA	
	100	6.3×11	0.13	405	ZSU101M06011□VA	
	220	8×12	0.072	760	ZSU221M08012□VA	
	330	10×13	0.053	1030	ZSU331M10013□VA	
	470	10×16	0.038	1430	ZSU471M10016□VA	
	680	10×20	0.023	1820	ZSU681M10020□VA	
	1000	13×21	0.021	2360	ZSU102M13021□VA	
	1200	13×21	0.020	2490	ZSU122M13021□VA	
	1500	13×25	0.018	2770	ZSU152M13025□VA	
	2200	13×35	0.015	3400	ZSU222M13035□VA	
	3300	16×25	0.014	3960	ZSU332M16025□VA	
	35 (44)	33	5×11	0.30	250	ZST330M05011□VA
		47	6.3×11	0.25	460	ZST470M06011□VA
100		8×12	0.10	590	ZST101M08012□VA	
220		10×13	0.053	1030	ZST221M10013□VA	
330		10×16	0.038	1430	ZST331M10016□VA	
470		10×20	0.023	1820	ZST471M10020□VA	
680		13×21	0.021	2360	ZST681M13021□VA	
1000		13×25	0.018	2770	ZST102M13025□VA	
1200		13×30	0.018	3290	ZST122M13030□VA	
1500		13×35	0.015	3400	ZST152M13035□VA	
50 (63)		22	5×11	238	0.34	ZSR220M05011□VA
	33	6.3×11	465	0.26	ZSR330M06011□VA	
	47	6.3×11	0.23	540	ZSR470M06011□VA	
	100	8×12	0.074	724	ZSR101M08012□VA	
	220	10×16	0.042	1370	ZSR221M10016□VA	
	330	10×25	0.028	1870	ZSR331M10025□VA	
	470	13×21	0.027	2050	ZSR471M13021□VA	
	680	13×30	0.021	2860	ZSR681M13030□VA	
	1000	16×25	0.021	3010	ZSR102M16025□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.