

# HZS 系列 Series

## 特点 Features

- 低阻抗, 7(9) mm高度, 宽工作温度。  
Low impedance, with 7(9)mm height, wide operating temperature range.
- RoHS指令(2002/95/EC)已对应完毕。  
Adapted to the RoHS directive(2002/95/EC) .



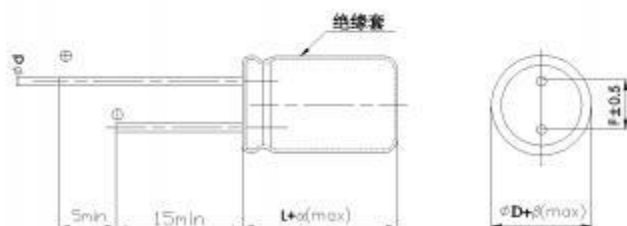
## 主要技术性能 Specifications

项目 Item	特性 Performance Characteristics																					
使用温度范围 Operating Temperature Range	-40~+105°C																					
额定电压范围 Rated Voltage Range	6.3~50V																					
标称电容容量范围 Nominal Capacitance Range	2.2~560μF																					
标称电容容量允许偏差 Capacitance Tolerance	±20% (120Hz, +20°C)																					
漏电流 Leakage Current	$I \leq 0.01CV$ or $3(\mu A)$ 2分钟(at 20°C, after 2 minutes) 取较大者(whichever is greater)																					
损耗角正切值 (tgδ) Dissipation Factor (+20°C, 120Hz)	<table border="1"> <thead> <tr> <th><math>U_r</math> (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>tgδ</td> <td>0.18</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> <td>0.10</td> </tr> </tbody> </table>	$U_r$ (V)	6.3	10	16	25	35	50	tgδ	0.18	0.16	0.14	0.12	0.10	0.10							
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温度特性 Temperature Characteristics (Impedance ratio at 120Hz)	<table border="1"> <thead> <tr> <th><math>U_r</math> (V)</th> <th>6.3</th> <th>10</th> <th>16</th> <th>25</th> <th>35</th> <th>50</th> </tr> </thead> <tbody> <tr> <td>Z-25°C / Z+20°C</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td> </tr> <tr> <td>Z-40°C / Z+20°C</td> <td>10</td> <td>8</td> <td>8</td> <td>6</td> <td>5</td> <td>3</td> </tr> </tbody> </table>	$U_r$ (V)	6.3	10	16	25	35	50	Z-25°C / Z+20°C	2	2	2	2	2	2	Z-40°C / Z+20°C	10	8	8	6	5	3
$U_r$ (V)	6.3	10	16	25	35	50																
Z-25°C / Z+20°C	2	2	2	2	2	2																
Z-40°C / Z+20°C	10	8	8	6	5	3																
耐久性 Load Life	+105°C加额定电压1000小时, 恢复16小时后: After applying rated voltage for 1000 hours at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±25%初始测量值以内 ±25% of the initial measured value 漏 电 流 Leakage current : ≤初始规定值 ≤the initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤ 2times of the initial specified value																					
高温贮存 Shelf Life	+105°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +105°C and then resumed for 16 hours: 电容量变化率 Capacitance change : ±25%初始测量值以内 ±25% of the initial measured value 漏 电 流 Leakage current : ≤2倍初始规定值 ≤ 2times of the initial specified value 损耗角正切值 Dissipation factor : ≤2倍初始规定值 ≤ 2times of the initial specified value																					

## 频率修正系数 Frequency Coefficient

F(Hz)	120	1K	10K	100K
~180	0.4	0.75	0.90	1
220~560	0.5	0.85	0.94	1

## 外形图及尺寸表 Case Size Table



单位 Unit: mm

D	4	5	6.3	8
F	1.5	2.0	2.5	3.5
d	0.45		0.5	
α(max)	L < 9, α=1; L=9, α=1.5			
β(max)	0.5			

尺寸 Dimensions

CAP(μF)		WV		6.3V(0J)			10V(1A)			16V(1C)		
				Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
15	150								4×7	3.3	70	
22	220				4×7	3.3	70		5×7	1.7	120	
33	330	5×7	1.7	120	5×7	1.7	120		6.3×7	0.8	220	
47	470	5×7	1.7	120	5×7	0.8	165		6.3×7	0.8	220	
68	680	6.3×7	0.8	210	6.3×7	0.8	210		6.3×7	0.5	220	
100	101	6.3×7	0.8	220	6.3×7	0.5	220		6.3×7	0.5	235	
									8×7	0.5	345	
150	151	6.3×7	0.5	220	6.3×7	0.5	220		6.3×7	0.5	235	
220	221	8×7	0.5	345	6.3×7	0.5	240		8×7	0.45	360	
					8×7	0.5	345		6.3×7	0.45	260	
330	331	8×7	0.4	360	8×7	0.4	360		8×9	0.38	380	
470	471	8×7	0.4	380	8×7	0.35	380		8×9	0.35	420	
560	561	8×9	0.35	380	8×9	0.30	380					

CAP(μF)		WV		25V(1E)			35V(1V)			50V(1H)		
				Size	ESR	Ripple	Size	ESR	Ripple	Size	ESR	Ripple
2.2	2R2								5×7	1.0	120	
6.8	6R8				4×7	3.3	70					
10	100	4×7	3.3	70	4×7	1.8	70		5×7	1.0	120	
		5×7	2.8	90	5×7	1.7	120					
15	150	5×7	1.7	120	6.3×7	0.8	220		6.3×7	0.8	220	
22	220	5×7	1.7	120	6.3×7	0.8	220		6.3×7	0.75	220	
33	330	6.3×7	0.8	210	6.3×7	0.5	220		8×7	0.70	320	
47	470	6.3×7	0.5	220	6.3×7	0.48	220		8×7	0.68	345	
68	680	6.3×7	0.5	220	8×7	0.45	310		8×7	0.65	345	
100	101	6.3×7	0.5	300	8×7	0.40	345					
150	151	8×7	0.38	360								
220	221	8×9	0.40	380								

Size φD×L(mm)

Maximum Allowable Ripple Current (mA rms) at 105°C 100KHz

Maximum ESR (Ω) at 20°C 100KHz