



ZL 系列 Series

特点 Features

- 低阻抗, 7(9) mm高度, 105°C 2000小时。
Low impedance, with 7(9)mm height, 105°C 2000hours.
- 符合RoHS标准。
RoHS compliant.



主要技术性能 Specifications

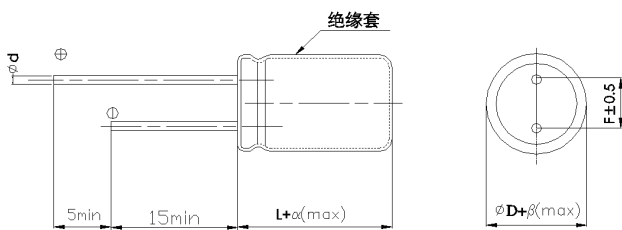
项目 Item	特性 Performance Characteristics																					
使用温度范围 Operating Temperature Range	-40~+105°C																					
额定电压范围 Rated Voltage Range	6.3~50 V																					
标称容量范围 Nominal Capacitance Range	1~560μF																					
标称容量允许偏差 Capacitance Tolerance	±20% (120Hz, +20°C)																					
漏电流 Leakage Current	I ≤ 0.01CV 或 3(μA) 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"> <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>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> </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"> <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>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> </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2000小时, 恢复16小时后: After applying rated voltage for 2000 hours at +105°C and then resumed 16 hours: 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倍初始规定值数 ≤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 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倍初始规定值数 ≤2times of the initial specified value																					

频率修正系数 Frequency Coefficient

F(Hz)	120	1K	10K	100K
CAP(μF)				
~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
		5×7	0.8	165	5×7	0.8	180	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	0.38	380
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
1	010							4×7	3.0	65
								6.3×7	2.5	90
2.2	2R2							5×7	1.0	120
4.7	4R7							6.3×7	1.2	160
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	5×7	1.7	120	5×7	1.0	120
22	220	5×7	1.7	120	6.3×7	0.8	200	6.3×7	0.75	200
33	330	5×7	1.7	140	6.3×7	0.5	220	6.3×7	0.70	220
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	240	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