

# SD 7mmL, Low Impedance.

## 7mm 高频低阻抗品

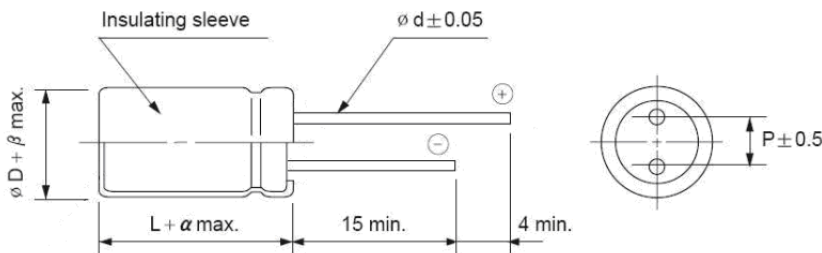
- 7mm High, 105°C, 1000 hours assured.  
7mm, 105°C, 1000 小时品
- Low Impedance, High Ripple Current.  
低阻抗, 高纹波电流
- Suitable for pocket electronic equipments  
适用于小型设备



### Specifications 特性表

Items 项目	Characteristics 主要特性																					
Rated Voltage Range 额定工作电压范围	6.3~50V <sub>dc</sub>																					
Category Temperature Range 使用温度范围	-40 ~ +105°C																					
Capacitance Tolerance 静电容量允许偏差	±20% (M), at 20°C, 120Hz																					
Leakage Current 漏电流, 20°C 环境下施加工作电压 2 分钟后. (at 20°C, After 2 minutes)	I ≤ 0.01CV or 3uA, whichever is greater 漏电流 ≤ 0.01CV or 3uA, 取较大值 Where, I : Max. leakage current (漏电流, μA), C : Nominal capacitance (静电容量, μF), V : Rated voltage (额定电压 V)																					
Dissipation Factor (Tanδ, at 20°C, 120Hz) 损耗角正切值 (测试条件为 20°C, 120Hz)	<table border="1"> <tr> <td>Rated voltage (V) 额定工作电压</td> <td>6.3</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Tanδ (Max.) 最大损耗角正切</td> <td>0.22</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.12</td> <td>0.10</td> </tr> </table> <p>When nominal capacitance exceeds 1,000μF, add 0.02 to the value above for each 1,000μF increase. 静电容量大于 1000uF, 每增加 1000uF, 损耗角正切增加 0.02</p>	Rated voltage (V) 额定工作电压	6.3	10	16	25	35	50	Tanδ (Max.) 最大损耗角正切	0.22	0.20	0.16	0.14	0.12	0.10							
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Low Temperature Characteristics (Max. Impedance Ratio, 120Hz) 低温特性最大阻抗比	<table border="1"> <tr> <td>Rated voltage (V) 额定工作电压</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>3</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>6</td> <td>4</td> <td>4</td> <td>4</td> </tr> </table>	Rated voltage (V) 额定工作电压	6.3	10	16	25	35	50	Z(-25°C)/Z(20°C)	4	3	3	2	2	2	Z(-40°C)/Z(20°C)	10	8	6	4	4	4
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Endurance 耐久性	<p>The following specification shall be satisfied when the capacitors are restored to 20°C after subjected to DC voltage with the ripple current is applied for the specified period of time at 105°C. 在 105°C 环境中, 不超过额定电压的范围内叠加额定纹波电流, 连续加载规定时间的额定电压后, 待温度恢复到 20°C 进行测量时, 应满足以下要求。</p> <table border="1"> <tr> <td>Test Time 测试时间</td> <td>1,000Hrs</td> </tr> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±20% initial value 初始值的±20%以内</td> </tr> <tr> <td>Dissipation Factor 损耗角正切</td> <td>≤200% of specified value 不大于规范值的 200%</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>≤The initial specified value 不大于规范值</td> </tr> </table>	Test Time 测试时间	1,000Hrs	Capacitance Change 静电容量变化率	Within ±20% initial value 初始值的±20%以内	Dissipation Factor 损耗角正切	≤200% of specified value 不大于规范值的 200%	Leakage Current 漏电流	≤The initial specified value 不大于规范值													
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Shelf Life 高温贮存	<p>The above specifications shall be satisfied when the capacitors are restored to 20°C after exposing them for 1,000 hours at 105°C without voltage applied. Before the measurement, the capacitor shall be preconditioned by applying voltage according to Item 4.1 of IEC 60384-4. 在 105°C 环境中, 无负荷放置 1,000 小时后待温度恢复到 20°C, 进行试验前处理(IEC 60384-4 4.1 项)后进行测量时, 应满足以下要求。</p> <table border="1"> <tr> <td>Capacitance Change 静电容量变化率</td> <td>Within ±20% initial value 初始值的±20%以内</td> </tr> <tr> <td>Dissipation Factor 损耗角正切</td> <td>≤200% of specified value 不大于规范值的 200%</td> </tr> <tr> <td>Leakage Current 漏电流</td> <td>≤The initial specified value 不大于规范值</td> </tr> </table>	Capacitance Change 静电容量变化率	Within ±20% initial value 初始值的±20%以内	Dissipation Factor 损耗角正切	≤200% of specified value 不大于规范值的 200%	Leakage Current 漏电流	≤The initial specified value 不大于规范值															
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### Drawing(Unit: mm) 外形图



ΦD	4	5	6.3	8
P	1.5	2.0	2.5	3.5
Φd	0.45	0.50		
α	1.0			
β	0.5			

### Rated ripple current multipliers(Unit: mm) 额定纹波修正系数

Frequency 频率 (Hz)	60Hz	120Hz	300Hz	1KHz	10KHz~	
Coefficient 系数	Under 100μF	0.52	0.65	0.72	0.80	1.00
	100 to 470μF	0.85	0.72	0.78	0.85	1.00

The endurance of capacitors is reduced with internal heating produced by ripple current at the rate of halving the lifetime with every 5°C rise.

铝电解电容器由于在纹波电流叠加时自我发热、温度上升而老化, 每升温 5°C 寿命减少一半。

When long life performance is required in actual use, the rms ripple current has to be reduced.

要想保持长寿命请在使用过程中降低纹波电流。

# SD Series

Standard ratings 标准品一览表

WV μF	6.3			10			16		
	ΦD x L	Impedance	R.C.	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L
10							4x7	3.50	60
15							4x7	3.00	75
22				4x7	3.60	63	4x7	2.00	90
33	5x7	2.00	85	5x7	1.90	95	5x7	1.40	120
47	5x7	1.70	90	5x7	1.30	120	5x7	0.90	140
68	5x7	1.20	105	5x7	0.90	125	6.3x7	0.70	150
100	5x7	1.00	115	5x7	0.75	135	6.3x7	0.65	180
	6.3x7	0.85	140	6.3x7	0.55	165			
120	6.3x7	0.77	150	6.3x7	0.52	180	6.3x7	0.60	185
							8x7	0.50	220
150	6.3x7	0.70	160	6.3x7	0.50	200	8x7	0.40	240
180	6.3x7	0.68	165	6.3x7	0.50	205	8x7	0.35	265
	8x7	0.64	180	8x7	0.49	225			
220	8x7	0.55	195	8x7	0.40	250	8x7	0.30	280
330	8x7	0.40	245	8x9	0.34	295	8x9	0.26	335
470	8x9	0.36	285						

WV μF	25			35			50		
	ΦD x L	Impedance	R.C.	R.C.	ΦD x L	R.C.	ΦD x L	R.C.	ΦD x L
10	4x7	3.5	60	5x7	1.85	100	6.3x7	1.50	110
15	5x7	2.8	75	5x7	1.20	110	6.3x7	1.20	130
22	5x7	1.85	100	5x7	1.00	110	6.3x7	0.70	160
				6.3x7	0.90	140	8x7	0.60	190
33	5x7	1.20	110	6.3x7	0.75	150	6.3x7	0.55	180
	6.3x7	0.88	145	8x7	0.55	180	8x7	0.45	220
47	6.3x7	0.80	150	6.3x7	0.55	180	8x7	0.40	245
				8x7	0.50	220	8x9	0.35	290
68	6.3x7	0.70	160	8x7	0.48	230	8x9	0.30	310
	8x7	0.55	180						
100	8x7	0.39	225	8x7	0.42	275			
				8x9	0.32	300			
220	8x9	0.28	265						

Note1: Case size ΦD x L(mm), ripple current (mA, rms) at 105°C, 100KHz. 尺寸 ΦD x L(mm), 纹波电流於 105°C, 100KHz  
 Note2: Produce custom product too, which are not found in these tables. 客户定制品不在标准品一览表内