

# VM

## 特点 Features

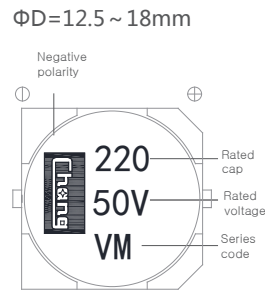
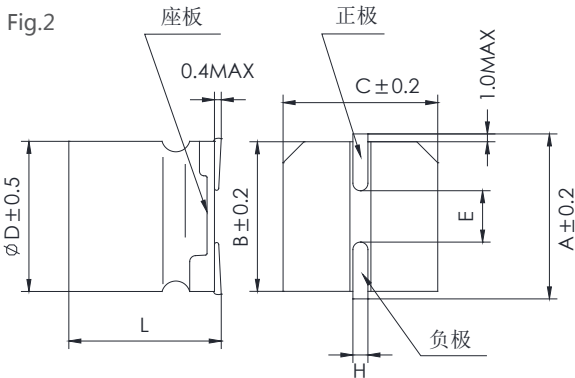
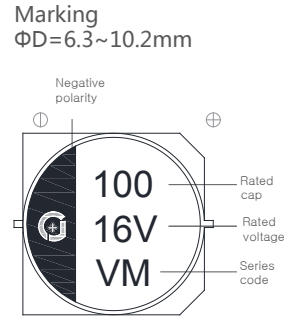
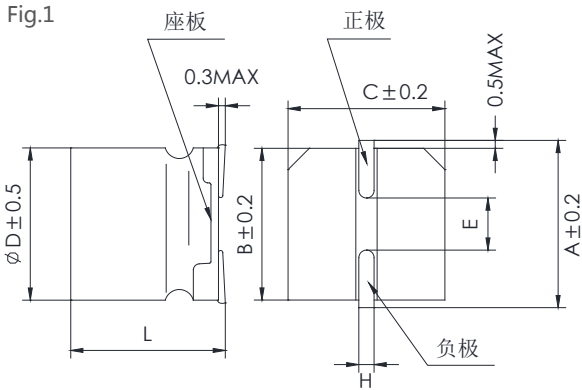
- 保证125°C 2000~3000小时。Endurance 2000~3000h at 125°C.
- 额定电压范围：10~50V。Rated Voltage Range:10~50V.
- 低阻抗，高温长寿命。Low ESR, High temperature, Long life Type.
- 满足RoHS。RoHS Compliant.



## 主要技术性能 Specifications

项目 Items	特性 Performance Characteristics																			
类别温度范围 Category Temperature Range	-40°C ~ +125°C																			
额定电压范围 Rated Voltage(U <sub>R</sub> )	10 ~ 50V																			
标称电容范围 Nominal Capacitance Range(C <sub>R</sub> )	10 ~ 3300μF	120Hz, +20°C																		
标称电容允许偏差 Allowed Capacitance Tolerance(C <sub>T</sub> )	±20%(M)	120Hz, +20°C																		
漏电流 Leakage Current(I <sub>L</sub> )	Φ6.3-10.2 : I <sub>L</sub> ≤ 0.01C <sub>R</sub> U <sub>R</sub> 或者3μA 取较大值 ( Whichever is greater ) Φ12.5-18 : I <sub>L</sub> ≤ 0.03C <sub>R</sub> U <sub>R</sub> 或者4μA 取较大值 ( Whichever is greater )																			
损耗角正切值 Tangent of loss angle(Tanδ)	<table border="1"> <tr> <td>U<sub>R</sub> (V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Tanδ</td> <td>0.24</td> <td>0.20</td> <td>0.16</td> <td>0.14</td> <td>0.14</td> </tr> </table>	U <sub>R</sub> (V)	10	16	25	35	50	Tanδ	0.24	0.20	0.16	0.14	0.14	Max. 120Hz, +20°C						
U <sub>R</sub> (V)	10	16	25	35	50															
Tanδ	0.24	0.20	0.16	0.14	0.14															
低温特性 Characteristics at Low Temperature	<table border="1"> <tr> <td>U<sub>R</sub> (V)</td> <td>10</td> <td>16</td> <td>25</td> <td>35</td> <td>50</td> </tr> <tr> <td>Z<sub>-25°C</sub> / Z<sub>+20°C</sub></td> <td>6</td> <td>5</td> <td>4</td> <td>3</td> <td>3</td> </tr> <tr> <td>Z<sub>-40°C</sub> / Z<sub>+20°C</sub></td> <td>12</td> <td>8</td> <td>6</td> <td>4</td> <td>4</td> </tr> </table>	U <sub>R</sub> (V)	10	16	25	35	50	Z <sub>-25°C</sub> / Z <sub>+20°C</sub>	6	5	4	3	3	Z <sub>-40°C</sub> / Z <sub>+20°C</sub>	12	8	6	4	4	Max. 120Hz
U <sub>R</sub> (V)	10	16	25	35	50															
Z <sub>-25°C</sub> / Z <sub>+20°C</sub>	6	5	4	3	3															
Z <sub>-40°C</sub> / Z <sub>+20°C</sub>	12	8	6	4	4															
耐久性 Load Life	+125°C, 连续施加额定电压2000~3000小时, 恢复16小时后: After applying rated voltage for 2000~3000 hours at 125°C and then recovery 16 hours:																			
	规定时间 Specified time	Φ6.3:2000小时 Φ8~Φ18:3000小时																		
	电容变化率 Capacitance change	±30%初始值以内 Within ±30% of initial value																		
	损耗角正切值 Tanδ	≤ 300%初始规定值 Not more than 300% of specified value																		
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value																		
高温贮存 Shelf Life	+125°C, 1000小时贮存后, 恢复16小时后: After storage for 1000 hours at +125°C and then recovery 16 hours:																			
	电容变化率 Capacitance change	±30%初始值以内 Within ±30% of initial value																		
	损耗角正切值 Tanδ	≤ 300%初始规定值 Not more than 300% of specified value																		
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value																		
耐焊接热 Resistance to Soldering Heat	在250°C的条件下, 电容器在热板上保持30秒, 然后从热板上取出电容器, 让其在室温下恢复, 电容器应满足以下要求: The capacitors shall be kept on the hot plate maintained at 250°C for 30 seconds. After removing from the hot plate and restored at room temperature, they meet the following requirement.																			
	电容变化率 Capacitance change	±10%初始值以内 Within ±10% of initial value																		
	损耗角正切值 Tanδ	≤ 初始规定值 Not more than specified value																		
	漏电流 Leakage current	≤ 初始规定值 Not more than specified value																		

尺寸图 Dimensional drawings



尺寸表 Size table

单位 Unit: mm

$\phi D$	L	A	B	C	$E \pm 0.2$	H	Fig.No.
6.3	$5.8 \pm 0.3$	7.3	6.6	6.6	2.2	0.5~0.8	1
6.3	$7.7 \pm 0.3$	7.3	6.6	6.6	2.2		
8	$10.5 \pm 0.5$	9.0	8.3	8.3	3.1	0.8~1.1	
10	$10.5 \pm 0.5$	11.0	10.3	10.3	4.5		
10	$12.5 \pm 0.5$	11.0	10.3	10.3	4.5		
12.5	$13.5 \pm 0.5$	13.6	13	13	4.5	1.1~1.4	
12.5	$16 \pm 0.5$	13.6	13	13	4.5		
16	$16.5 \pm 0.5$	18.0	17	17	6.4		
16	$21.5 \pm 0.5$	18.0	17	17	6.4		
18	$16.5 \pm 0.5$	20.0	19	19	6.4		
18	$21.5 \pm 0.5$	20.0	19	19	6.4		

**规格特性表**  
Table of specifications and characteristics

U <sub>R</sub> (V) C <sub>R</sub> (μF)	10V			16V			25V			35V			50V		
	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 125°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 125°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 125°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 125°C mA	ESR <sub>max</sub> 100KHz 25°C Ω	ΦDxL mm*mm	I <sub>ACR</sub> 100KHz 125°C mA	ESR <sub>max</sub> 100KHz 25°C Ω
10										6.3*5.8	110	0.7	6.3*5.8	51	0.8
22							6.3*5.8	110	0.7	6.3*5.8	110	0.7	6.3*7.7	83	0.7
33				6.3*5.8	110	0.7	6.3*5.8	110	0.7	6.3*7.7	220	0.45	8*10.5	160	0.36
47				6.3*5.8	110	0.7	6.3*7.7	220	0.45	6.3*7.7	220	0.45	8*10.5	160	0.36
100	6.3*7.7	220	0.45	6.3*7.7	220	0.45	8*10.5	296	0.20	8*10.5	296	0.20	10*10.5	247	0.23
220	8*10.5	296	0.20	8*10.5	296	0.20	10*10.5	440	0.16	10*10.5	440	0.16	12.5*13.5	600	0.23
330	8*10.5	296	0.20	10*10.5	440	0.16	10*10.5	440	0.16	12.5*13.5	850	0.092	12.5*16	700	0.15
470	10*10.5	440	0.16	10*10.5	440	0.16	12.5*13.5	850	0.092	16*16.5	820	0.10	16*16.5	730	0.15
680	12.5*13.5	750	0.12	12.5*13.5	750	0.12	16*16.5	820	0.10	18*21.5	1500	0.065	18*16.5	800	0.13
1000	12.5*16	820	0.10	12.5*16	820	0.10	18*21.5	1500	0.065				18*21.5	980	0.11
1500	16*16.5	1000	0.08	16*16.5	1000	0.08									
2200	18*16.5	1300	0.075	18*21.5	1500	0.065									
3300	18*21.5	1500	0.065												

**额定纹波电流频率修正系数**  
Frequency correction factor for ripple current

Frequency ( Hz )	50	120	300	1K	≥10K
Coefficient ( kf )	0.35	0.50	0.64	0.83	1.00