

P/N:

VT1A470M0405

## PRODUCT DATA SHEET

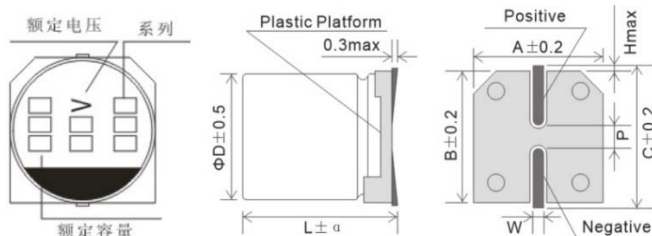
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VT, 10v, 47uF, 4x5.4

■ Description 产品描述:

Al-Ecap, 47uF, 10v, ±20%, D4H5.4mm, 2000Hrs@105°C, -55~+105°C, SMD.

■ Dimension & Marking 印刷及尺寸:



■ Features 特长/用途:

- 105°C, 2,000 hours assured 宽温长寿命
- Designed for surface mounting on high density PC board 适合高密度表面安装

Items Case	A	B	C	D	P	L	α	W	H
Φ4x5.4	4.3	4.3	5	4.0	1.0	5.4	±0.5	0.5~0.8	0.5max.

Items 项目	Performance 性能				
Rated Voltage 额定电压(V <sub>R</sub> )	10 V				
Capacitance 额定容量(C <sub>R</sub> )	47 uF (120Hz, 20°C)				
Category Temperature Range 类别温度范围	-55°C ~ +105°C				
Capacitance Tolerance 容量误差	-20% ~ +20% (120Hz, 20°C)				
Surge Voltage 浪涌电压(V <sub>S</sub> )	11.5 V <sub>DC</sub>				
Leakage Current 泄漏电流(I <sub>LC</sub> )	I <sub>LC</sub> ≤ 4.7 uA After 2 minutes				
Dissipation Factor (Tanδ) 损失角正切值	≤ 0.24 (120Hz, 20°C)				
Ripple Current 纹波电流(I <sub>RC, rms</sub> )	25 mA (120Hz, 105°C)				
Low Temperature Characteristics 温度特性(120Hz)	Impedance ratio 阻抗比(Max.)	Z <sub>(-25°C)</sub> / Z <sub>(+20°C)</sub>	4		
		Z <sub>(-55°C)</sub> / Z <sub>(+20°C)</sub>	8		
Endurance and Shelf Life 耐久性 & 高温无负荷特性	Items 项目	Endurance 耐久性		Shelf Life Test 高温无负荷	
	Test Time 测试时长	2,000 Hrs at 105°C; V <sub>R</sub>		1,000 Hrs at 105°C	
	Cap. Change 容量变化率	Within ±30% of initial Value ≤ 初始值的±30%		Within ±30% of initial Value ≤ 初始值的±30%	
	Tanδ 损失角正切值	Less than 300% of specified Value ≤ 初始规格值的±300%		Less than 200% of specified Value ≤ 初始规格值的±300%	
	Leakage Current 漏电流	Whitin specified Value ≤ 初始规格值		Whitin specified Value ≤ 初始规格值	
Ripple Current and Frequency Multipliers 纹波电流频率系数	Frequency (Hz)	50, 60	120	1k	10k up
	Multiplier	0.70	1.00	1.35	1.50
Standards 参考标准	JIS C 5101-1, -18, IEC 60384-4				
Remarks 附注	RoHS Compliance, Halogen-free				

\* Please refer to "Precautions and Guidelines for Aluminum Electrolytic Capacitors" section in catalog for further details 详细信息请参阅目录中的“铝电解电容器注意事项和指南”

Publication Date  
发行日期

2023-07-27

Approved  
批准

Checked  
复核

Designed  
设计

Revision Date  
修订日期

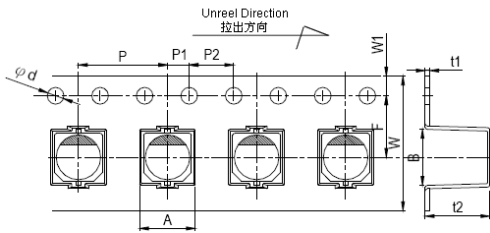
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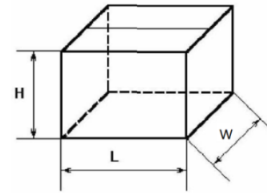
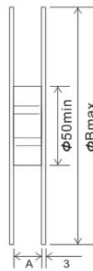
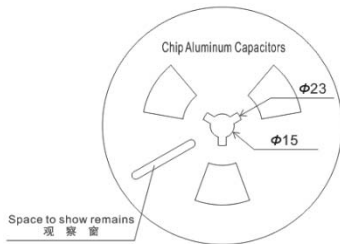
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■ Taping Specifications 编带规格:



Case 尺寸	W (mm)	W1 (mm)	F (mm)	P (mm)	P1 (mm)	P2 (mm)	A (mm)	B (mm)	t1 (mm)	t2 (mm)
Tolerance 误差	±0.3	±0.15	±0.1	±0.1	±0.1	±0.1	±0.2	±0.2	±0.1	±0.2
Φ4x5.4	12	1.75	5.5	8	2	4	4.7	4.7	0.4	6.3

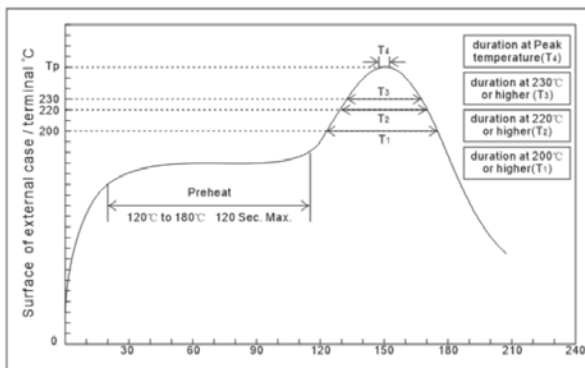
■ Park 包装:



Case 产品尺寸	Reel 卷装数量	Box 盒装数量	A±0.3(mm)	B±2(mm)	Box size 外箱尺寸(L*W*H)
Φ4x5.4	2000	20000	14	382	395x190x395

■ Soldering Conditions 焊接条件:

- The following conditions are recommended for air convection and infrared reflow soldering on the SMD products onto a glass epoxy circuit boards by cream solder. The temperatures shown are the surface temperature values on the top of the can and on the capacitor terminals. 当使用回流焊，在玻璃环氧树脂基板上进行焊接的时候，产品顶部及端子部分温度，时间的推荐范围如下表所示。
- Reflow should be performed twice or less 推荐回流次数不超过 2 次。
- Please ensure that the capacitor became cold enough to the room temperature (5 to 35°C) before the second reflow. 请在第 1 次回流之后，必须确保电容器的温度已经完全冷却到室温(5~35°C)后方可进行第 2 次回流。



Note 备注:

- Average ramp-up rate is 5°C/second max 温度上升平均每秒钟最多 5°C；
- Ramp-down rate is 6°C/second max 温度下降平均每秒钟最多 6°C；
- Time from 25°C to peak temperature is 6 minutes max. 从 25°C 上升到峰值温度的时间最多 6 分钟；

Category 类别	Time maintained above 200°C(T1) 200°C以上时间	Time maintained above 217°C(T2) 217°C以上时间 (T2)	Time maintained above 230°C(T3) 230°C以上时间(T3)	Range of Peak 峰值范围		Reflow number 回流焊次数
				Temp 温度	Times 时间	
Φ4	90 sec.	70 sec.	50 sec.	260°C Max.	5sec Max.	2 times or less

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