



东莞市勤宏 (QNR) 电子科技有限公司

DongGuan QinHong(QNR) Electronic Technology Co LTD

规格承认书

APPROVAL SHEET

客户名称

CUSTOMER

深圳华秋电子有限公司

产品名称

PART NAME

X2 安规电容器

产品规格

PART NUMBER QNR MPX X2 1.0μF K 275VAC P=15mm 体积 18*15.5*9.5mm L=25

日期

DATE

2020-7-01

确认

CONFIRM

客户承认栏

CUSTOMER APPROVAL

供应商承认栏

MANUFACTURER APPROVAL



厂商信息

厂商名称: 东莞市勤宏电子科技有限公司

厂商地址: 东莞市高埗镇下江城第三村工业区

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金属化聚丙烯膜抗干扰电容器 MPX series

■ 主要用途

适用于高频，直流，交流，耦合，跨接
脉冲电路中。

■ 特点

能承受过压冲击

优异的阻燃性能

塑料外壳(UL94 V-0),阻燃环氧树脂填充

■ 结构组合

■ Typical Applications

Widely used in high frequency, DC, AC
and pulse circuits。

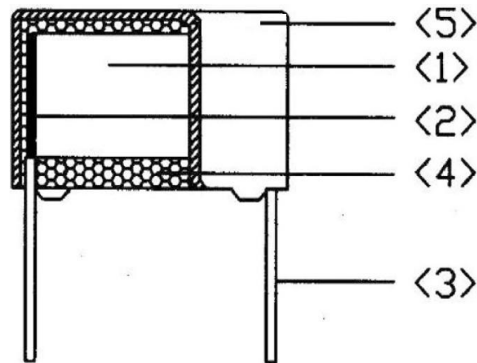
■ Features

Withstanding overvoltage stressing

Excellent passive flame resistant abilities

Plastic case (UL94 V-0), Epoxy resin sealing

■ Construction



<1>介质: 聚丙烯膜

<2>电极: 金属蒸镀层 (锌铝合成加厚型)
synthetic)

<3>外壳: 阻燃 PBT 塑壳(UL94 V-0)

<4>封装: 阻燃环氧树脂 (UL94 V-0)

<5>导线: 镀锡铜包钢线

<1>Dielectric: Polypropylene film




<2>Electrodes: Metal vapor coating (Zn-Al

<3>Case: Flame-retardant PBT (UL94 V-0)

<4>Epoxy Resin coating (UL 94 V-0)

<5>Lead: Tinned copper clad steel wire

■ 安全认证 Safety Approvals

UL, CSA UL60384-14, CSAC22.2	E488626	
ENEC(VDE), DIN EN 60384-14 : 2006-04 EN 60384-14 : 2005-08, IEC 60384-14 : (Ed 3)	40047280	
CQC GB/T6346.14-2015	CQC17001183917	

■ 技术要求 Specifications

气候类别 / 阻燃等级 Climatic Category / Passive Flammability Class	40/110/56/B	
工作温度范围 Operating Temperature Range	-40°C ~110°C	
额定电压 Rated Voltage	275/300/310Vac	
电容量范围 Capacitance Range	0.001μF(102)~4.7μF(475)	
电容偏差 Capacitance Tolerance	±10% (K)	
绝缘电阻 Insulation Resistance	C ≤ .33μF ,IR ≥ 15,000 MΩ. C > .33μF ,IR ≥ 5,000S	
损耗角 Dissipation Factor	0.1% Max, at 1KHz and 25°C	
耐电压 Voltage Proof	引线之间 Voltage between terminals	1183VDC /1min (IEC 60384-14)
	引线与外壳之间 Voltage between terminals and case	2050VAC /1min

■特性要求 Characteristics

序号 NO.	项目 Item		特性要求 Characteristics	试验方法 Test method
1	工作温度 Operating Temperature		-40℃~110℃	IEC60384-14
2	额定电压 Rated Voltage		275/300/310Vac 50/60HZ	UL1414/UL1283 IEC60384-14
3	耐电压 Withstand Voltage	引线之间 Between Terminals	无击穿或飞弧 No permanent breakdown or Flash-over	1183VDC for 1 min (IEC 60384-14 C4.2.1; IEC60384-1 C4.6), 升压时间 5~10 秒 (Voltage increasing time 5~10sec, 关闭飞弧电流 Cut off current 10mA,ARC=OFF).
4	绝缘电阻 Insulation Resistance		$\geq 15000\text{M}\Omega$ for $C \leq 0.33\mu\text{F}$ $\geq 5000\text{M}\Omega * \mu\text{F}$ for $C > 0.33\mu\text{F}$	充电时间: 60 ±5 秒 Charge time: 60 ±5sec 充电电压: 100±10VDC Charge Voltage: 100±10VDC 测试温度: 20~25℃ Test temp: 20~25℃ (IEC60384-14 C4.2.5 IEC60384-1-4.5)
5	电容量公差 Capacitance Tolerance		公差范围: K:±10%,M:±20% Within specified tolerance : K:±10%,M:±20%	频率: 1KHz At 1KHz 测试温度: 20~25℃ Test temp: 20~25℃ (IEC60384-14 C4.2.2 IEC60384-1 C4.7)
6	损耗 Dissipation Factor		$\leq 0.1\%$	频率: 1KHz (20℃~25℃) Measure at 1KHz (20℃~25℃) IEC60384-14 C4.2.3 (IEC 60384-1 C4.8)
7	引线强度 Terminal Strength	抗拉强度 Pull Strength	引线不松脱或折断 No cutting or slack of terminals	引线直径: 0.6&0.8mm Wire diameter:0.6 & 0.8mm 负重: 10N, 持续时间: 10 秒 Load: 10N, time:10sec IEC60384-14 C4.3 (IEC60384-1 C4.13) IEC 60068 2-21 Test Ua1
		折弯强度 Bending Strength		引线直径: 0.6&0.8mm Wire diameter:0.6 & 0.8mm 负重: 5N, 90° 折返 2~5 次

				Load: 5N, 90° x2~5times 引线直径: 1.0mm Wire diameter: 1.0mm 负重: 10N, 90° 折返 2~5 次 Load: 10N, 90° x2~5times IEC60384-14 C4.3 (IEC 60384-1 C4.13) IEC60068 2-21 Test Ua1
8	可焊性 Solderability	浸入部分引线至少 95%面积 镀上新的焊料层 At least 95% of the Circumference of the lead wire. Around load surface dipped Into with new solder.	焊锡温度: 245 ±5℃ Solder temp: 245 ±5℃ 浸锡时间: 2.5 ±0.5 秒 Immersion time: 2.5 ±0.5sec IEC60384-14-4.5 (IEC 60384-1-4.15) IEC 60068 2-20 Test Ta	
9	冷冲击 Cold Resistance	外观 Appearance	外观无异常 No abnormality	温度: -40+8/-0℃ Temp:-40+8/-0℃ 持续时间: 2+1/-0hours Duration: 2+1/-0hours 室温恢复 1~2 小时 Then recovery at ordinary Condition 1~2 hours IEC60384-14 C4.11.4 IEC 60068 2-1 Test Ta
		电容量变化 Capacitance Variation	试验前后测试相对变化率: ±2.0% Within $\Delta C/C \pm 2.0\%$ of the value Before test	
10	耐焊接热 Resistance to Soldering heat	外观 Appearance	外观无异常 No abnormality	焊锡温度: 260±5℃ Solder temp:260±5℃ 浸锡时间: 10±1 秒 Immersion time:10±1sec 室温恢复 1~2 小时 Then recovery at ordinary Condition 1~2 hours IEC60384-14 C4.5 (IEC 60384-1 C4.15) IEC 60068-2-20 Test Ta
		耐电压 Withstand Voltage	无击穿或飞弧 no permanent Breakdown or flash-over	
		电容量变化 Capacitance Variation	试验前后变化率±5.0%以内 Within ±5.0% of the value Before test	
11	稳态湿热 Dampheat, Steady state	外观 Appearance	外观无异常 No abnormality	相对湿度: 90~95% Humidity of 90~95% RH 温度: 40 ±2℃ Temp: 40 ±2℃ 持续时间: 56 天 Duration: 56 day 室温恢复 1~2 小时 Then recovery at ordinary Condition 1~2hrs IEC60384-14 C4.12 (IEC60384-1 C4.22) IEC60068 2-3 Test Ca
		电容量变化 Capacitance Variation	试验前后相对变化率: ≤±5% Within $\Delta C/C \leq \pm 5\%$ of the value Before test	
		损耗 Dissipation Factor	DF≤0.2% (1KHz 20~25℃)	
		耐电压 Withstand Voltage	无击穿或飞弧 no permanent Breakdown or flash-over	

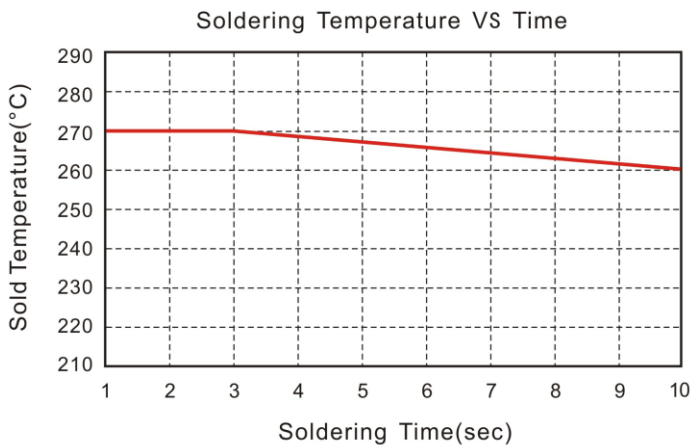
		绝缘电阻 Insulation Resistance	$\geq 7500\text{M}\Omega$ for $C \leq 0.33\mu\text{F}$ $\geq 2500\text{M}\Omega \cdot \mu\text{F}$ for $C > 0.33\mu\text{F}$	
12	耐久性 Endurance test	外观 Appearance	外观无异常 No abnormality	温度: $100 \pm 2^\circ\text{C}$ Temp: $100 \pm 2^\circ\text{C}$ 持续时间: 1000+48/-0 小时 Duration: 1000+48/-0Hrs 施加 1.25 倍额定电压, 每隔 1 小时 升压至 1000V, 持续时间 0.1 秒 Applied Voltage: 125% of R.V (50/60Hz) except that the Voltage shall be increased to 1000Vrms for 0.1s Once every hour 室温恢复 16 小时以上测试 Then recovery at ordinary Condition at least 16 hours IEC60384-14 C4.14
		电容量 Capacitance Variation	试验前后相对变化率: $\leq \pm 10\%$ Within $\Delta C/C \leq \pm 10\%$ of the value before test	
		损耗 Dissipation Factor	$DF \leq 0.5\%$ (1KHz 20~25°C)	
		耐电压 Withstand Voltage	无击穿或飞弧 no permanent Breakdown or flash-over	
		绝缘电阻 Insulation Resistance	$\geq 7500\text{M}\Omega$ for $C \leq 0.33\mu\text{F}$ $\geq 2500\text{M}\Omega \cdot \mu\text{F}$ for $C > 0.33\mu\text{F}$	

■焊接 Soldering

在焊接电容器时, 预热时间长会导致特性或击穿性能下降; 焊接时间长会导致电容器特性劣化, 请参照下图焊接温度和时间。

When soldering a capacitor, heat in soldering is conducted to the element of the capacitor Temperature and a long period may cause deterioration of characteristic or breakdown Temperature and a long period may cause deterioration of characteristic or breakdown Of capacitors. Be sure to solder within the following temperature condition range.

(1)



(2) 烙铁焊接

When using soldering iron

烙铁尖温度小于 350°C

Iron tip temperature less than 350°C

焊接时间小于 5 秒

Soldering time (sec.) within 5 sec

■ 产品符合RoHS2.0指令

Products comply with RoHS2.0 instructions

产品名称 Product name	有毒有害物质或元素 Toxic or harmful substances or elements									
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr6+)	多溴 联苯 (PBB)	多溴二 苯醚 (PBDE)	邻苯二甲 酸二正丁 酯 (DBP)	邻苯二甲 酸正丁基 苯酯 (BBP)	邻苯二甲 酸(2-己 基)己酯 (DEHP)	六溴环十二 烷 (HBCDD)
X2 电容器	<100ppm	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.	N. D.
详见SGS检测报告。 See SGS test report for details.										