

SPECIFICATION


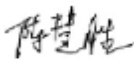
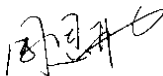
受 控

Customer : QUARTZ
Applied To :
Product Name : MIC
Model Name : KPCM-SMD40H15C43-64DB-1700
Drawing No. : KIC1700

Signature of Appronal

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Signature of KEPO

Approved by	Checkde by	Issued by	Date
			2012.10.12



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Revision No.

1.0

Model No. : KPCM-SMD40H15C43-64DB-1700

Drawing No.

KIC1700

1. Scope 范围

This specification applies electret condenser microphone.
此规格书适用于电容式麦克风.

2. General 概要

- 2.1 Out-Diameter : 4 mm
- 2.1. 外径 : 4 mm
- 2.2 Height : 1.5 mm
- 2.2. 高度 : 1.5 mm
- 2.3 Weight : ≤0.1 g
- 2.3 重量 : ≤0.1 g
- 2.4 Operating Temperature range: '-30~+85°C without loss of function
- 2.4 工作温度: -30~+85°C
- 2.5 Store Temperature range: '-40~+85°C without loss of function
- 2.5 储存温度: -40~+85°C

3. Electrical and Acoustic Characteristics. 电声参数

Test condition : 15 ~ 35 °C, 45% ~ 85% RH, 860~1060 mbar
测试条件 : 15~35 °C, 45%~85%RH , 860 ~ 1060mbar

No	Items	Symbol	Unit	Specification	Condition
1	Directivity 指向性			Omni-directional 全指向性	
2	Sensitivity 灵敏度	S	dB	-64dB±3	0dB=1V/1ubar, 1KHz
3	Standard Operation Voltage 标准操作电压	Vs	V.D.C	2.0	
4	Output impedance 输出阻抗	Zout	KΩ	2.2	f=1KHz, 1ubar
5	Max operating voltage 最大操作电压		V.D.C	1.0-10	
6	Sensitivity reduction 减压灵敏度	ΔS-Vs	dB	-3	f=1KHz, 1ubar Vs=2-1.5V.D.C
7	Frequency 频率	f	Hz	20-20,000	
8	Max. Current Consumption 最大耗电	IDss	mA	0.5	Vs=2V, RL=2.2KΩ
9	Signal to noise ration 讯号对比杂音	S/N	dBA	60	f=1KHz, 1ubar A weighted
10	Max. Sound Pressure Level 最大声压	SPL	dB	115	
11	Material 材质			CU铜	
12	Terminal 端子				See appearance drawing 请参照外观尺寸图
13	Environmental Protection Regulations 环保法规			RoHS	

We use "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C (International Electro technical Commission). The Sensitivity of "Pa" will increase 20dB comparing with "ubar" indication. Example : -60dB(0dB=1v/ubar)=-40dB(1v/Pa) 依

I.E.C.(国际电子协会) 建议, 以"Pa"为灵敏度标示单位比"ubar"灵敏度标示单位增加20dB
|例如:-60dB(0dB=1V/ubar)=-40dB(1V/Pa)

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Revision No.

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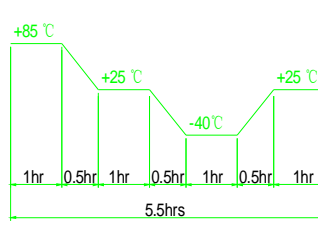
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KIC1700

4.1 Mechanical Characteristics 机械特性

No.	Item	Test Condition	Evaluation standard
1	Solderability 焊锡附着性 (Connector excepted) 端子类 不适合此项	Strippd wires of lead wires are immersed in rosin for 5 seconds and then immersed in solder both of +270±5°C for 3±0.5 seconds. 裸线部分侵入松香溶液5秒后, 再侵入+270±5°C 熔融焊锡槽3±0.5	90% minstripped wires shall be wet with solder .(Exceptet the edge of terminal). 裸线部分附着焊锡90%以上.(末端断面不算)
2	Vibration 振动试验	Sounder shall be measured after being applied vibration of amplitude of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 perpendicular directions for2 hour. 振幅为1.5mm, 频率为10-50Hz, 三个不同轴方向各振动2小时, 试验后进行测量.	After any tests,the sensitivity to be within ±3dB 测试其灵敏度须与原测试值的差异不超过±3dB
3	Drop test 跌落试验	The microphone unit without packaged mst be subjected to each 3 drops a three axis from the heigh of 1 meter to 20mm thick wodden board.未包装麦克风单体从1公尺高处, X.Y.X 3个方向, 各3回, 落于20mm厚木板上。	

4.2 Environmental test 环境试验

No.	Item	Test Condition	Evaluation standard
1	High temperature test 高温测试	After being placed in a chamber at +85°C for240 hours.置于+85 °C 环境中240小时.	After any tests,the sensitivity to be within ±3dB of initial sensitivity after6 hours of conditioning at +25°C 经测试后麦克风, 须静置于+25°C (室温) 环境中6小时后, 测试其灵敏度须与原测试值的差异不超过±3dB
2	Low temperature test 低温试验	After being placed in a chamber at -40°C for240 hours. 置于-40 °C 环境中240小时.	
3	Humidity Test 相对湿度试验	After being placed in a chamber at +40°C and 90±5% relative humidity for 240 hours. 置于+40°C , 相对湿度90±5%环境中240小时.	
4	Temperature cycle test 温度循环测试	The part shall be subjected to 10 cycles.One cycle shall be consist of : 单体承受温度循环测试10次, 其循环内容如图示 	

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Revision No. 1.0

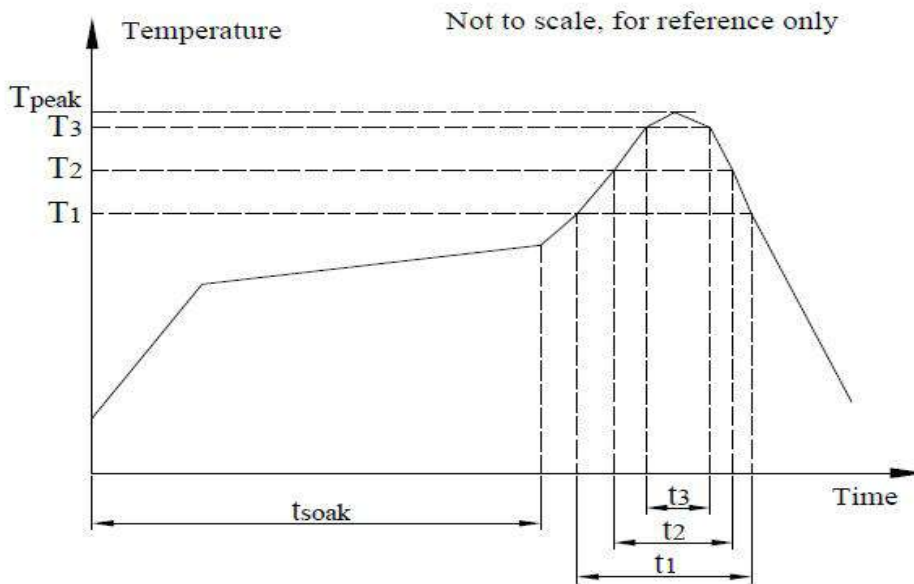
Model No. : KPCM-SMD40H15C43-64DB-1700

Drawing No. KIC1700

No.	Item	Test Condition	Evaluation standard
5	Temperature Change Test 温度聚变试验	低温 (Low temperature) -40°C 高温 (Low temperature) +85°C 转化时间 (Changeover time) 30min 放置时间 (Duration) 60min 次数 (Cycle) 32	After any tests, the sensitivity to be within $\pm 3\text{dB}$ of initial sensitivity after 6 hours of conditioning at +25°C 经测试后麦克风, 须静置于 +25°C (室温) 环境中 6 小时后, 测试其灵敏度须与原测试值的差异不超过 $\pm 3\text{dB}$
6	ESD Test 静电试验	在两次无杂质的静电释放暴露中放电。(接触: $\pm 8\text{Kv}$, 空气: $\pm 15\text{Kv}$) 麦克风在 10 次暴露后无干扰。 The microphone under test be discharged between each ESD exposure without ground. (contact: $\pm 8\text{Kv}$, air: $\pm 15\text{Kv}$) There is no interference in operation after 10 times exposure.	

4.3 Reflow Process Condition Curve 过回流焊曲线图

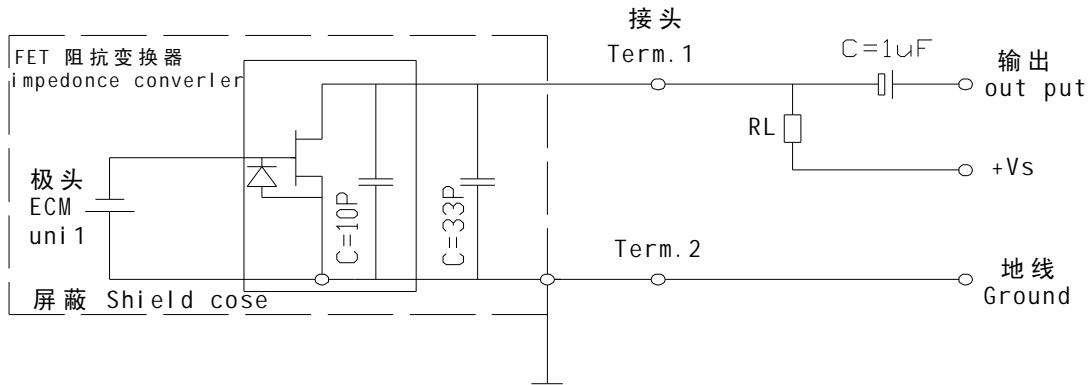
Parameter	Reference	Specification
Average temperature gradient in preheating		2.5°C/s
Soak time	tsoak	2-3 minutes
Time above 217°C	t1	Max 60s
Time above 230°C	t2	Max 50s
Time above 250°C	t3	Max 10s
Peak temperature in reflow	Tpeak	255°C (-0/+5°C)
Temperature gradient in cooling		Max -5°C/s



5. Measurement Block Diagram & Response curve 测试图和曲线图

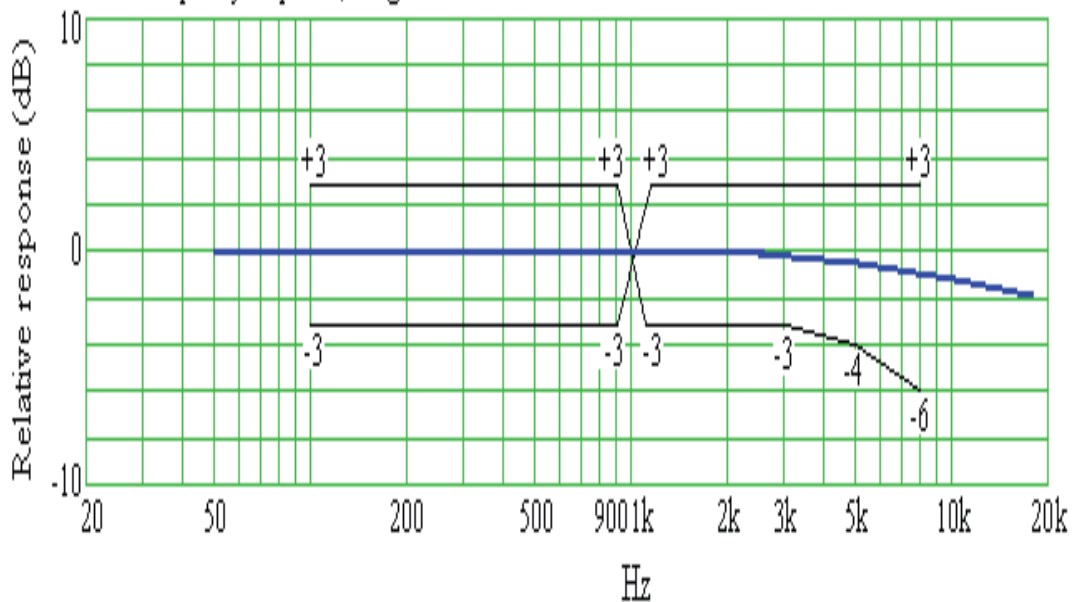
5.1 Measurement Block Diagram 测试图

Schematic Diagram $V_s = 2V$; $R_1 = 2.2K\Omega$



5.2 Response curve 曲线图

A: Frequency response, Magn dB re 1.0V/Pa



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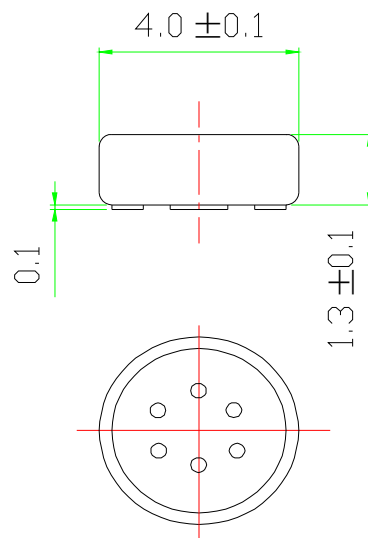
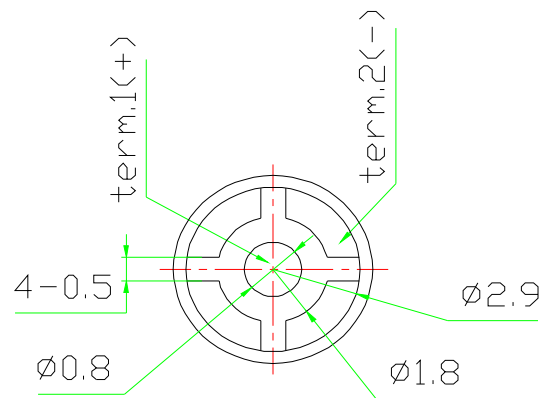
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Model No. : KPCM-SMD40H15C43-64DB-1700

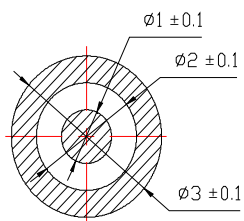
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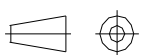
6. Dimensions 尺寸图



建议贴片基板尺寸



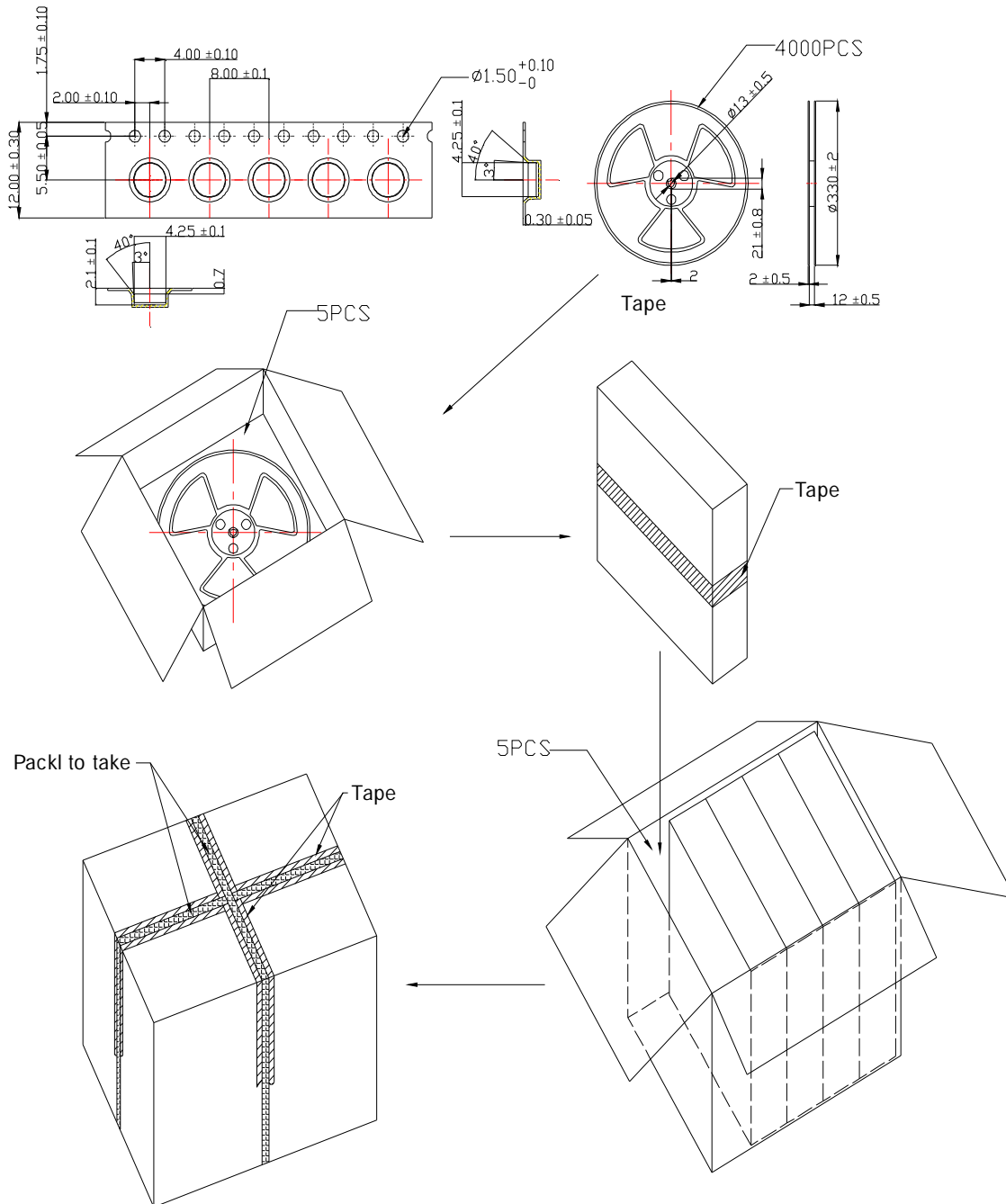
FIRST ANGLE PROJECTION



UNIT : mm

Tolerance : ± 0.2

7. Packing 包装



中包装盒	350mmx350mmx90mm	4000PCSX5=20000PCS
大包装盒	510mmx360mmx370mm	20000PCSX5=100000PCS

