


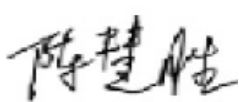

SPECIFICATION

受 控

Customer :
Applied To :
Product Name : MIC
Model Name : KPCM-MSA3722H11-42DB
Drawing No. : KI3.841.001

Signature of Appronal

Signature of KEPO

Approved by	Checkde by	Issued by	Date
			2016.02.24

宁波凯普电子有限公司



Ningbo Kepo Electronics Co.,Ltd.

宁波东钱湖镇东钱湖工业区宝源路 25 号

TEL:+86-574-88370330 FAX:+86-574-88370329

No.25 Baoyuan road Dongqian Lake, Industry Area, Dongqian town,Ningbo City,

China(Post Code:315121)

Sales@chinaacoustic.com

www.chinaacoustic.com

Specification for Microphone	Page	2/9
	Revision No.	1.0
Model No. : KPCM-MSA3722H11-42DB	Drawing No.	K13.841.001

CONTENTS

1. 产品型号 Model NO.
2. 电性能 Electrical Characteristics
3. 测试电路图 Circuit Diagram
4. 典型频率响应曲线 Typical Frequency Response Curve (far field)
5. 外形图 Outside Drawing
6. 推荐客户布线 Recommended Customer Land Pattern
7. 可靠性试验 Reliability Test
8. 回流曲线 Recommend reflow profile:
9. 包装 PACKAGING :
10. 版本 Revision

Specification for Microphone		Page	3/9
		Revision No.	1.0
Model No. : KPCM-MSA3722H11-42DB		Drawing No.	KI3.841.001

1.产品型号 Model NO.: KPCM-MSA3722H11-42DB

2.电性能 Electrical Characteristics

典型测试条件typical test conditions:

温度Temperature :25℃ 电压 Voltage : 2.0V 相对湿度Rel.Humidity : 45±5% R.H.

序号 NO.	参数 Parameter	符号 Symbol	条件 Condition	范围 Limits			单位 Unit
				最小值 Min.	标准值 standard	最大值 Max.	
1	尺寸 Dimension			3.76×2.24×1.1			mm
2	指向性 Directivity			全指向 Omni directional			
3	测试基准 test condition			2.0V			
4	灵敏度 Sensitivity	S1kHz	1kHz, 94dB SPL	-45	-42	-39	dB
5	操作电压 Operating Voltage	VDD		1.5		3.3	V
6	输出阻抗 Output Impedance	ZOUT	1kHz		7		Ω
7	源电流 Supply Current	Icc			80	140	uA
8	当量噪声级 Equivalent Noise Level	ENL	CCITT-weighted		29.5	32.5	dB(pso)
			A-weighted		35		dB(A)
9	信噪比 Signal to Noise Ratio	SNR	CCITT-weighted	61.5	64.5		dB(pso)
			A-weighted	59			dB(A)
10	总谐波失真 Total Harmonic Distortion	THD	104dB SPL, 1 kHz		0.1	0.5	%
11	电源抑制比 Power Supply Rejection Ratio	PSRR	100 mV superimposed VDD=2.1V, 1kHz		-55	-40	dBr
12	直流输出电压 DC Output Voltage	VOUT	DC Voltage at Pin 1		12		V
13	环保法规 Environmental Regulations			RoHS			

1) Psophometrically weighted noise measurement with CCITT-filter (ITU-T Rec. P.53)

2) Noise measurement with A-weighting filter (IEC 651)

Specification for Microphone

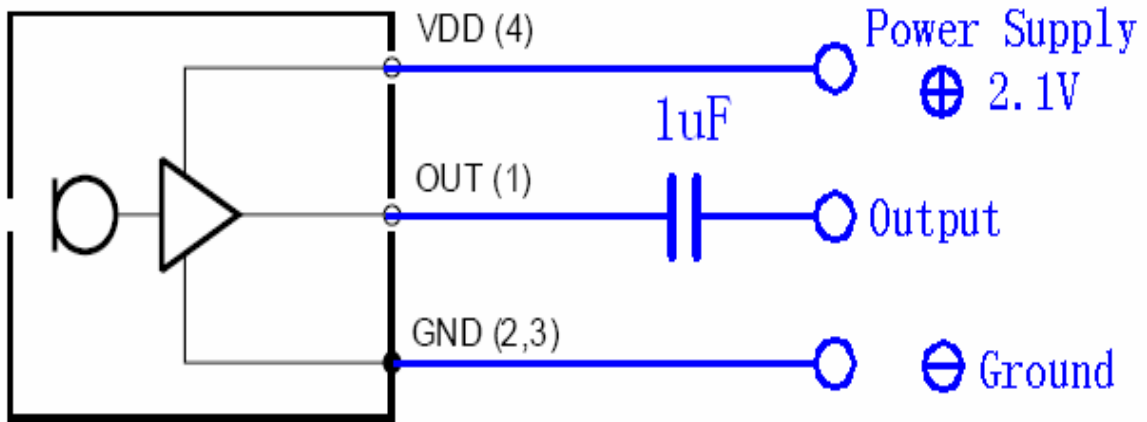
Page 4/9

Revision No. 1.0

Model No. : KPCM-MSA3722H11-42DB

Drawing No. KI3.841.001

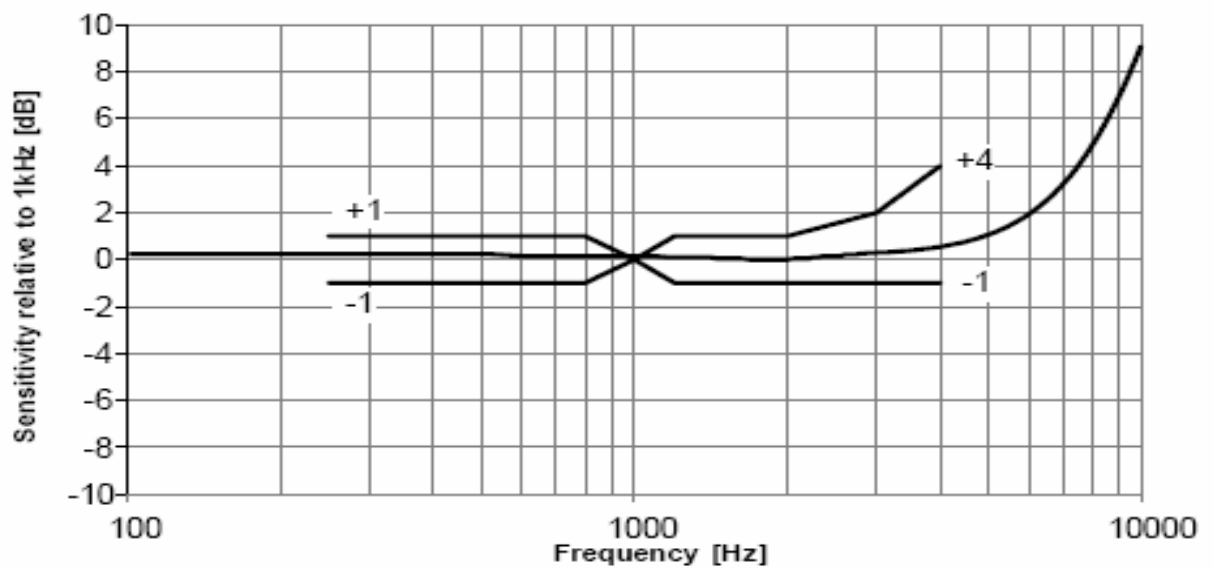
3.测试电路图 Circuit Diagram



Pin Definition and Function

Pin No.	Symbol	Function
1	OUT	Output
2	GND	Ground
3	GND	Ground
4	VDD	Power

4. 典型频率响应曲线 Typical Frequency Response Curve (far field)



Specification for Microphone

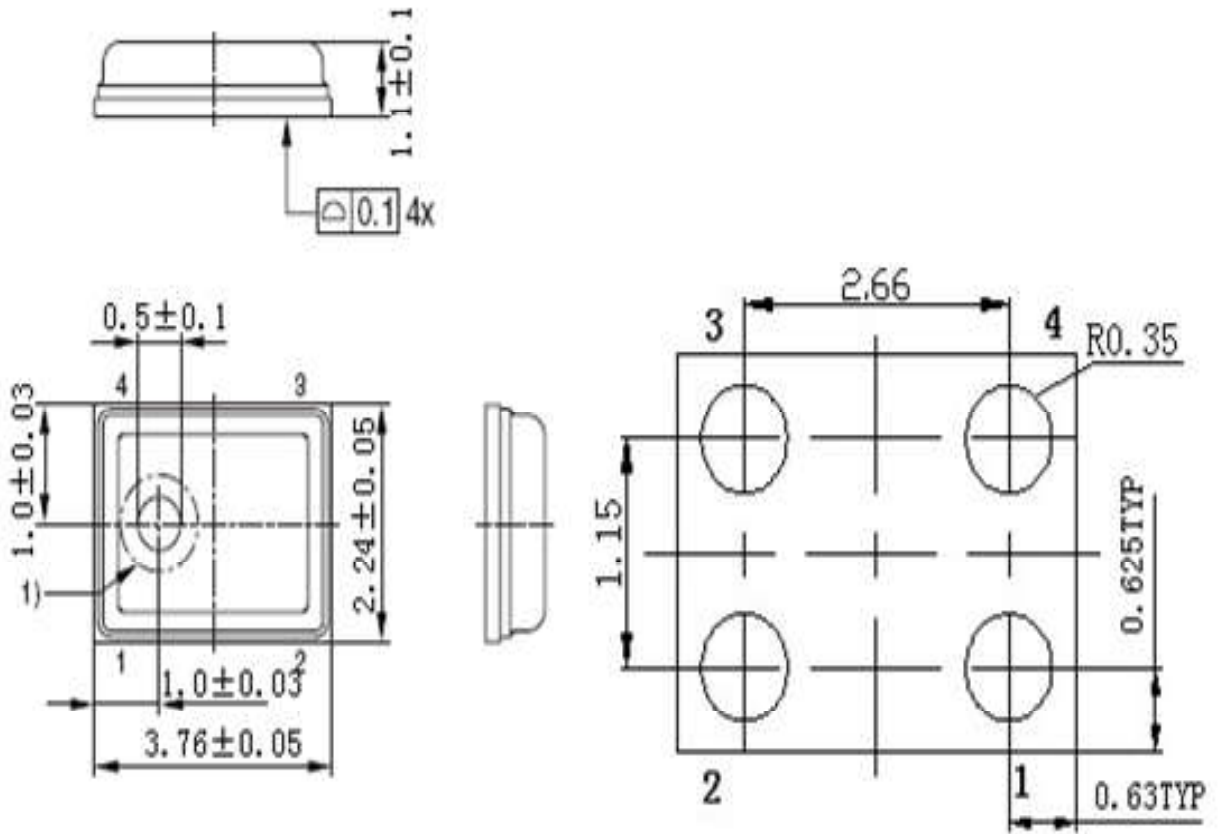
Page 5/9

Revision No. 1.0

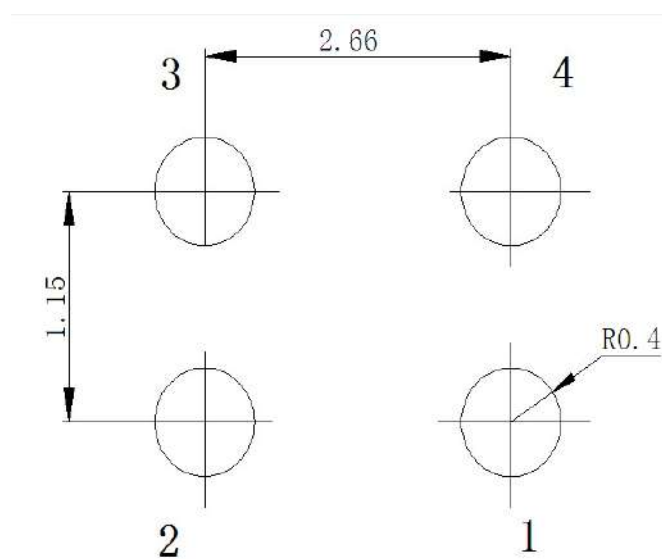
Model No. : KPCM-MSA3722H11-42DB

Drawing No. KI3.841.001

5. 外形图 Outside Drawing



6. 推荐客户布线 Recommended Customer Land Pattern

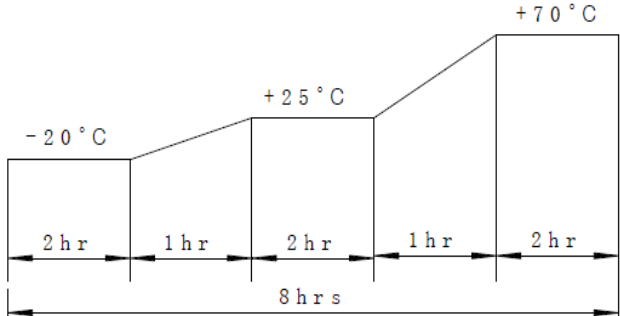


Specification for Microphone	Page	6/9
	Revision No.	1.0
	Drawing No.	KI3.841.001

Model No. : KPCM-MSA3722H11-42DB

7. 可靠性试验 Reliability Test

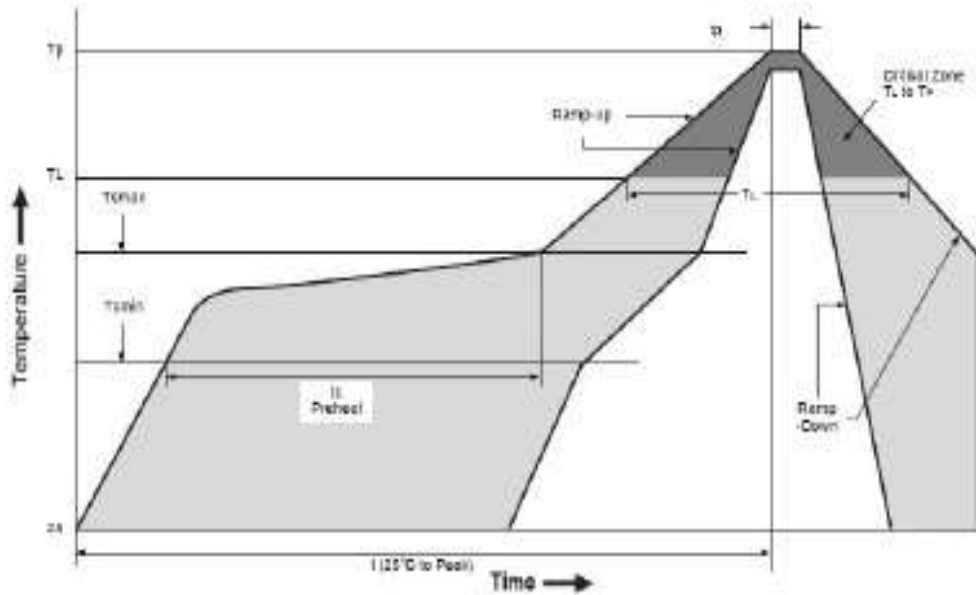
经过以下所有试验在温度 15~35℃和湿度45~75% 的条件下放置 3 小时后,要求麦克风的灵敏度试验前后变化在 3dB 以内
 After any following tests, the sensitivity of the microphone to be within ±3dB of initial sensitivity after 3 hours of conditioning at 15~35℃ and 45~75% RH

7.1 振动试验 Vibration Test	1分钟频率变化从10Hz到55Hz, 振幅1.52mm, 在三个方向各振动2小时 1 minute frequency from 10Hz to 55Hz, amplitude 1.52mm, the vibration in three directions 2 hours
7.2 跌落试验 Drop Test	分别把包装的三个面从1米高处自由落到地面上, 各10次 Three faces of package from 1 meters high free fall to the ground, each 10 times
7.3 高温试验 Dry Heat Test	在80±3℃环境中维持96小时 80±3℃ for 96 hours
7.4 低温试验 Dry Cold	在-40±3℃环境中维持96小时 -40±3℃ for 96 hours
7.5 高温高湿试验 Damp Heat Test	在温度45±3℃和相对湿度90~95%的环境下维持96小时 45±3℃ and 90~95% RH for 96 hours
7.6 温度循环试验 Temperature Cycles Test	按如图温度和时间循环10次 According to the figure of temperature and time cycle, each 10 times 
7.7 温度冲击试验 Temperature Impact Test	在-40±3℃环境中放置30分钟, 然后在125±3℃环境中放置30分钟, 这样循环100次。 -40±3℃ for 30 minutes, and then 125±3℃ for 30 minutes, each 100 times

储存环境 Storage environment

贮存温度/湿度 Storage Temperature/ Humidity	-40 ~ +80℃ / 35~85% RH
工作温度/湿度 Operating Temperature/ Humidity	-30 ~ +70℃ / 35~85% RH

8. 回流曲线 Recommend reflow profile:



Description	Parameter	Pb free
Average ramp rate	T_L to T_P	3 °C/sec max
Preheat		
Minimum temperature	T_{SMIN}	150 °C
Maximum temperature	T_{SMAX}	200 °C
Time(T_{SMIN} to T_{SMAX})	t_S	60 sec to 120 sec
Ramp-up rate	T_{SMAX} to T_L	1.25 °C/sec max
Time maintained above liquidous temperature	t_L	60 sec to 150 sec
Liquidous temperature	T_L	217 °C
Peak temperature	T_P	260 °C max
Time within 5°C of actual peak temperature	t_P	20 sec to 40 sec
Ramp-down rate	T_L to T_P	6 °C/sec max
Time 25 °C ($t_{25 °C}$) to peak temperature	t	8 minutes max

Specification for Microphone

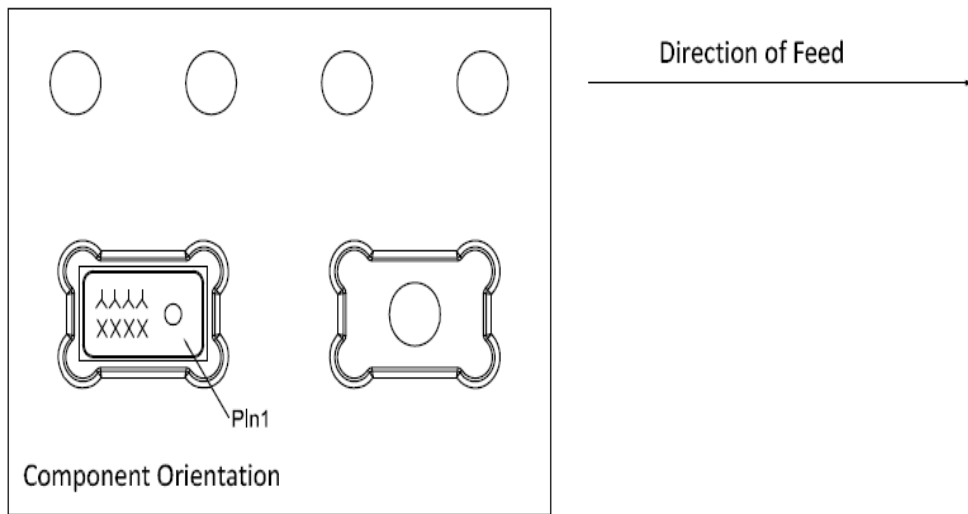
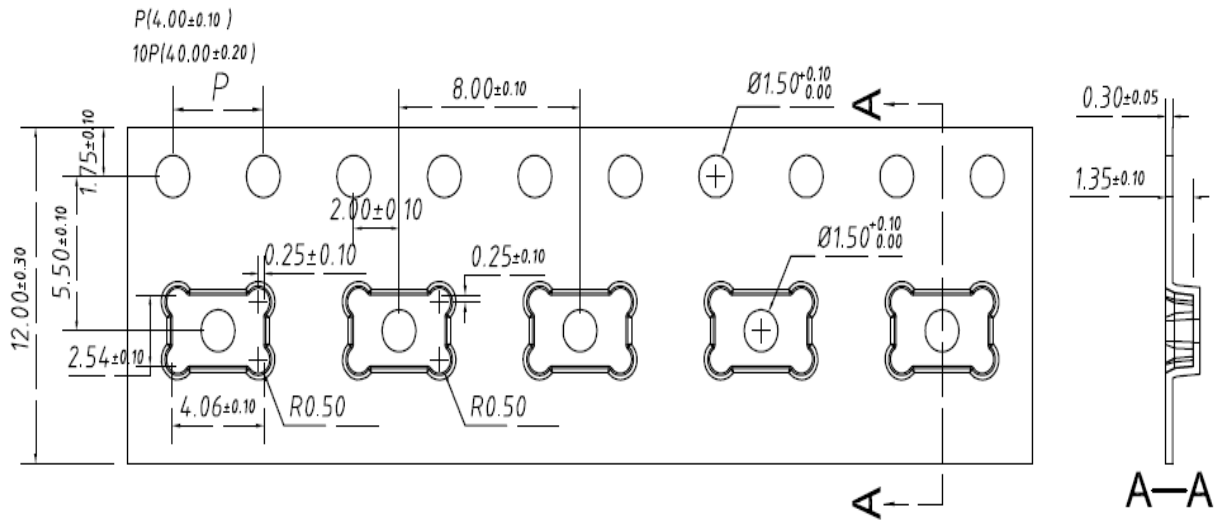
Page 8/9

Revision No. 1.0

Model No. : KPCM-MSA3722H11-42DB

Drawing No. KI3.841.001

9. 包装 PACKAGING :



Reel Diameter	Quantity Per Reel
13 inch	5000

