


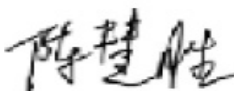

SPECIFICATION

受 控

Customer :
Applied To :
Product Name : MIC
Model Name : KPCM-MSD4737H12-26DB
Drawing No. : KI3.841.004

Signature of Appronal

Signature of KEPO

Approved by	Checkde by	Issued by	Date
			2016.02.24

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1.产品型号 Model NO.: KPCM-MSD4737H12-26DB

2.电性能 Electrical Characteristics

典型测试条件 typical test conditions:

温度 Temperature : 25°C 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			4.72×3.76×1.25(H)			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	-29	-26	-23	dB
5	操作电压 Operating Voltage	VDD		1.6		3.3	V
6	低逻辑 Logic low			-0.3		0.35xV _{dd}	V
7	高逻辑 Logic high			0.65xV _{dd}		V _{dd} +0.3	V
8	时钟频率 Clock frequency			1.5	2.4	3.5	MHz
9	时钟占空比 Clock duty cycle			40		60	%
10	信噪比 Signal to Noise Ratio	SNR	A-weighted		57		dB
11	总谐波失真 Total Harmonic Distortion	VOUT	100dB SPL, 1 kHz			1	%
			120dB SPL, 1 kHz			10	
12	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)

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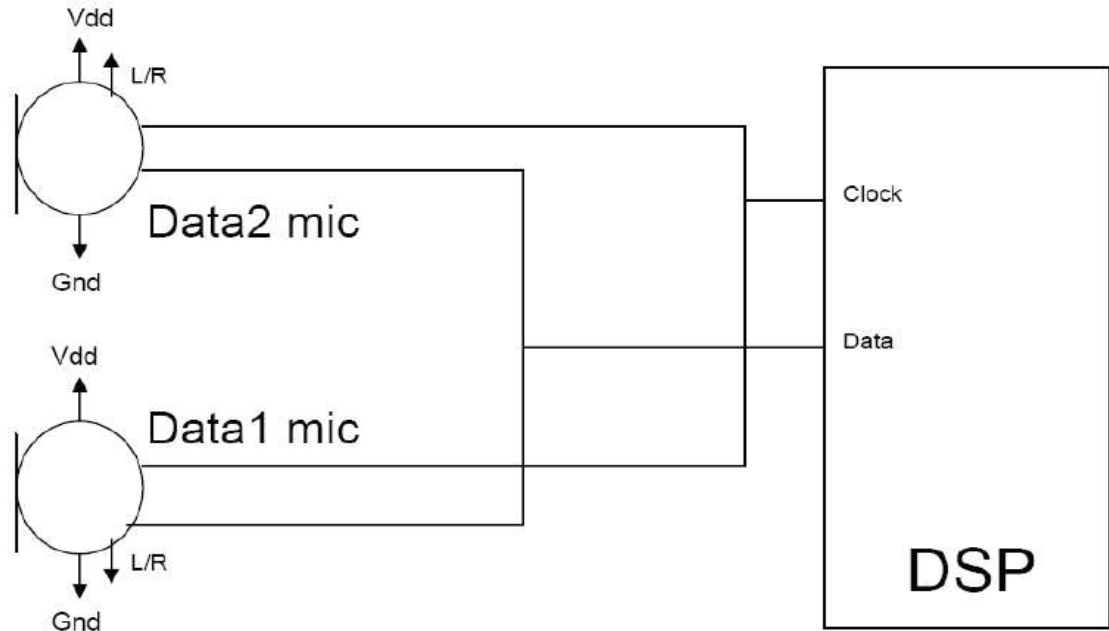
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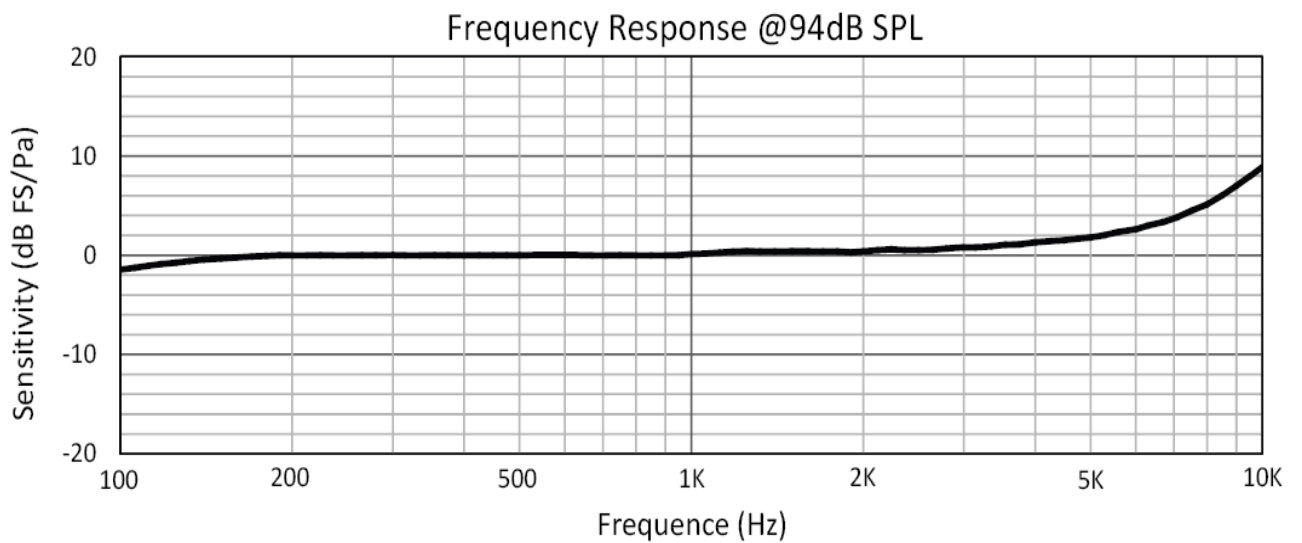
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3.测试电路图 Circuit Diagram



Label:	L/R:	Drives data after:	High-Z after:
Data2	High	Rising clock edge	Falling clock edge
Data1	Low	Falling clock edge	Rising clock edge

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



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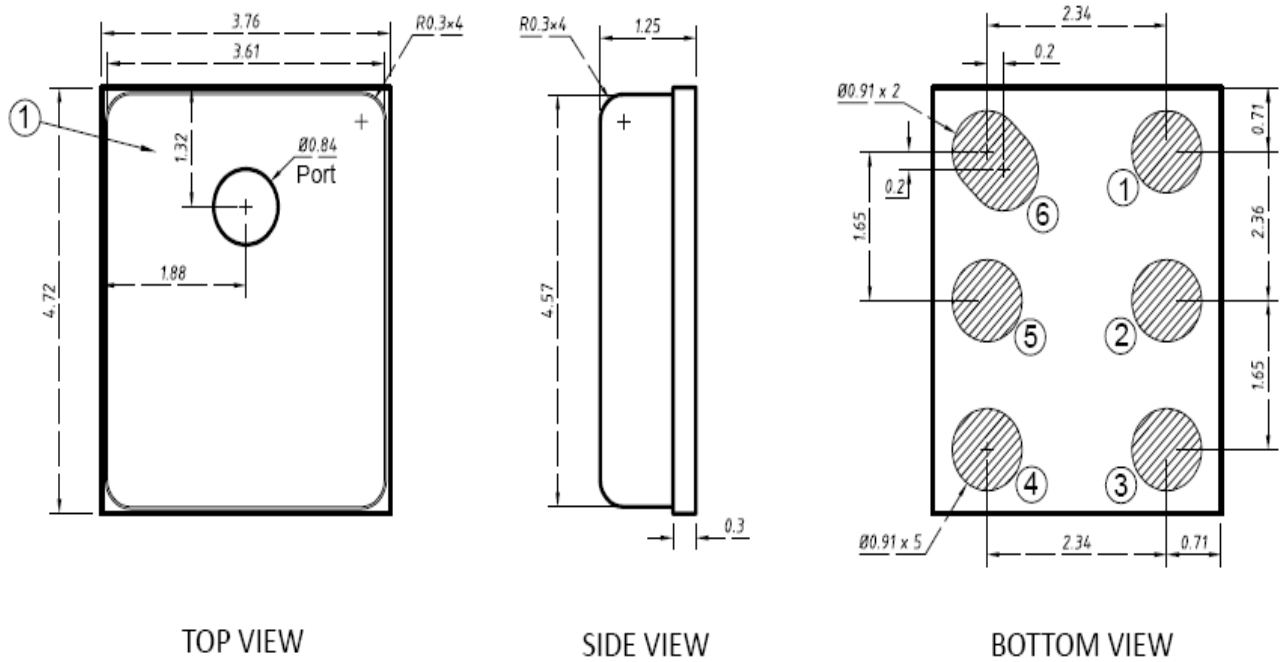
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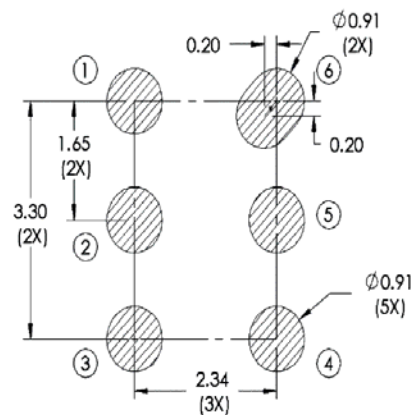
5. 外形图 Outside Drawing



PIN function description

PIN#	Function
1	GND
2	L/R
3	GND
4	CLK
5	DATA
6	VDD

6. 推荐客户布线 Recommended Customer Land Pattern

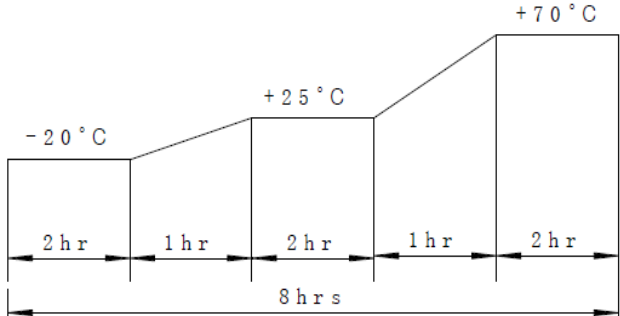


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7.可靠性试验 Reliability Test

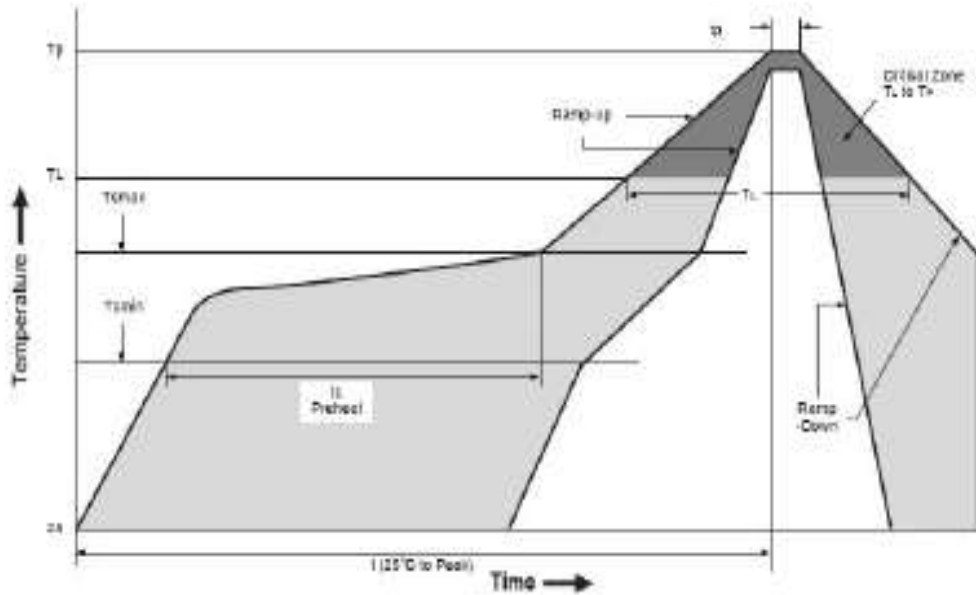
经过以下所有试验在温度 15~35℃和湿度45~75% 的条件下放置 3 小时后,要求麦克风的灵敏度试验前后变化在 3dB 以内
 After any following tests, the sensitivity of the microphone to be within ±3dB of initial sensitivity after 3 hours of conditioning at 15~35℃ and 45~75% RH

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 ($t_{25\text{ °C}}$) to peak temperature	t	8 minutes max

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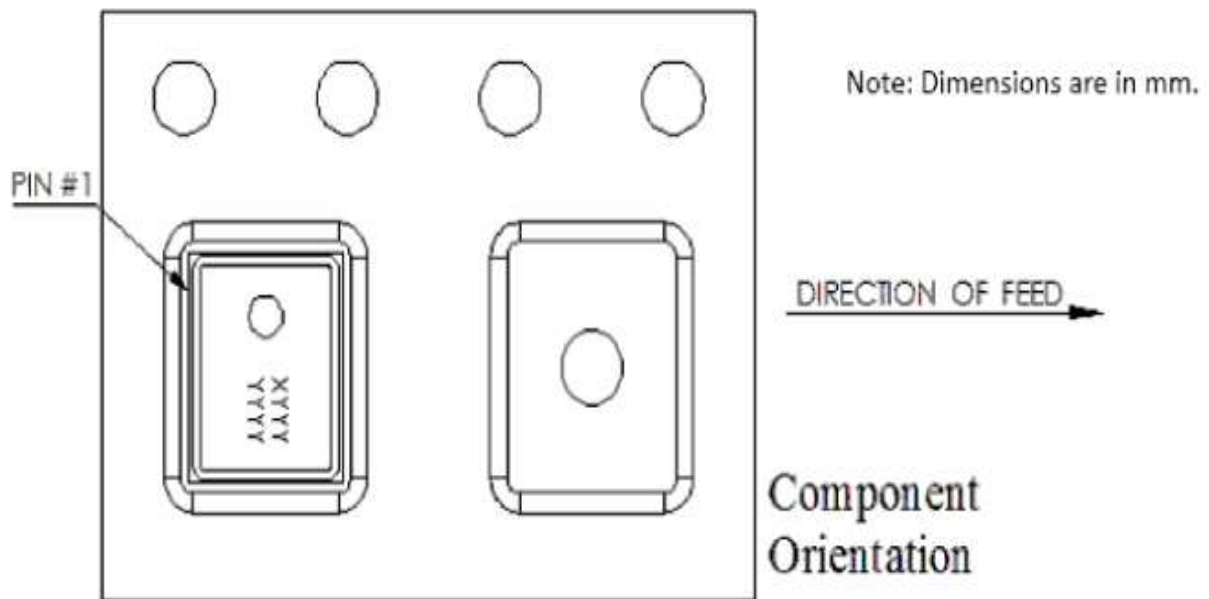
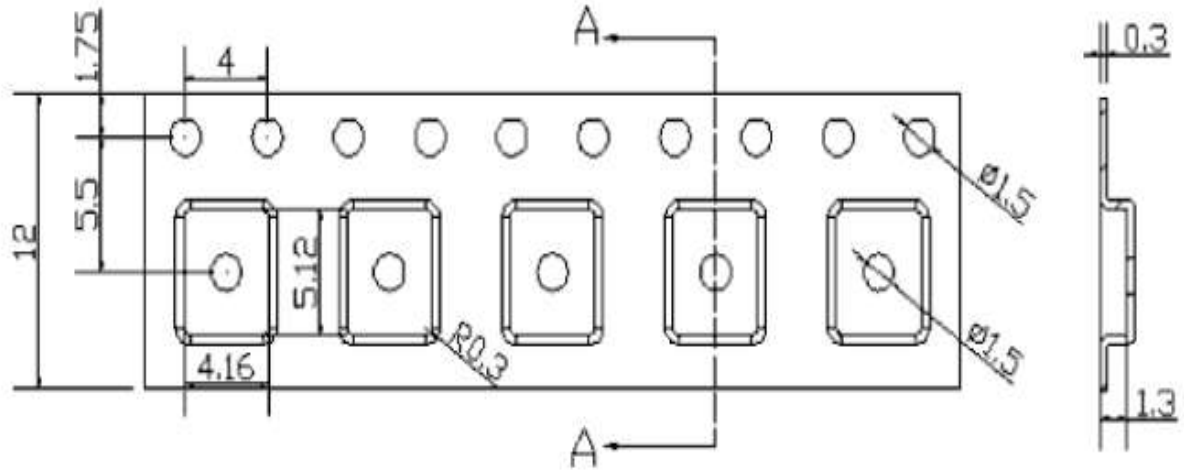
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9. 包装 PACKAGING :



Reel Diameter	Quantity Per Reel
13 inch	5000

