Specification For Approval

承 認 書

客　　戶 （Customer）			
品　　名 （Product Name）	ECM		
機　　種 （Model No.）			
客戶料號 （Customer Parts No.）			
供應商料號（Supplier Model No.）	PVM-4015B-2C423GT		
客戶承認簽章 Customer Approval Signature	In Charge	Checked	Approval

Revision History

Version	Date	Description	Author
V 001	2011.02.24	Creation	LJM
V 002	2012.05.23	MODIFY Appearance	LJM

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Design： ***LJM*** **Checked：** ***VIVIAN*** **Approval：** ***VIVIAN***

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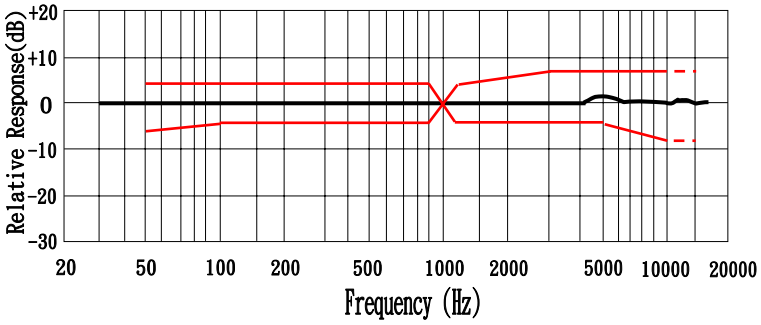
1.	**Name：**	Omnidirectional SMD Electret Condenser Microphone		
2.	**Model No.**	**PVM-4015B-2C423GT**	**C1=10PF**	**C2=33PF**
3.	**Scope：**	This specification applies SMD electret condenser microphone（Temp=20±2℃Room Humidity=65±5%）		

No	Parameter	Symbol	Condition	Limits			Unit
				Min.	Center	Max.	
3.1	Sensitivity	S	0dB=1V/Pa，at 1kHz	-45	-42	-39	dB
3.2	Output impedance	Z out	f=1kHz			2.2	KΩ
3.3	Current Consumption	I_{DSS}	V_{CC} =2.0V,R_L=2.2KΩ			500	μA
3.4	Signal to Noise Ratio	S/N	at 1kHz S.P.L=1Pa (A-Weighted Curve)	58			dB
3.5	Decreasing Voltage	ΔS	V_{CC}=3.0V to2.0V			-3	dB
3.6	Operating Voltage			1.4		5	V
3.7	Maximum input S.P.L					110	dB
3.8	Typical Frequency Response Curve						

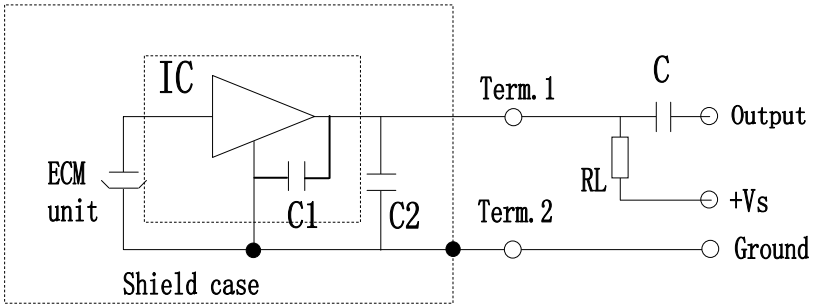
Frequency Response



Microphone Response Tolerance Window

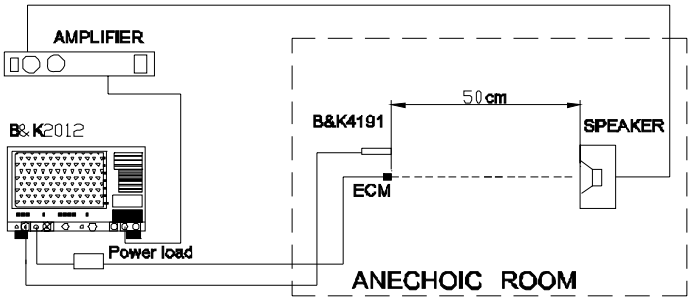
Frequency(Hz)	Lower Limit(dB)	Upper Limit(dB)
50	-6	+3
100	-3	+3
800	-3	+3
1000	0	0
1200	-3	+3
3000	-3	+8
5000	-3	+8
10000	-8	+8

3.9 Measurement Circuit



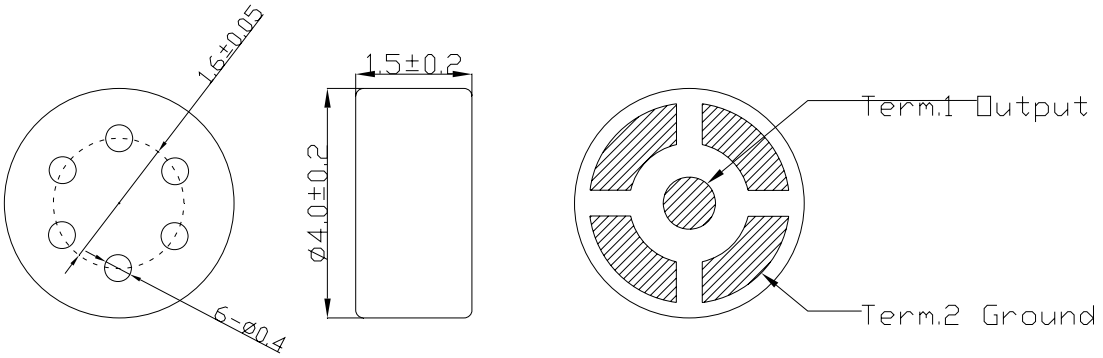
Explain
R_L=2.2KΩ
Vs =2.0V
C1=10PF
C2=33PF
C=1μF

4. **Test Setup Drawing**

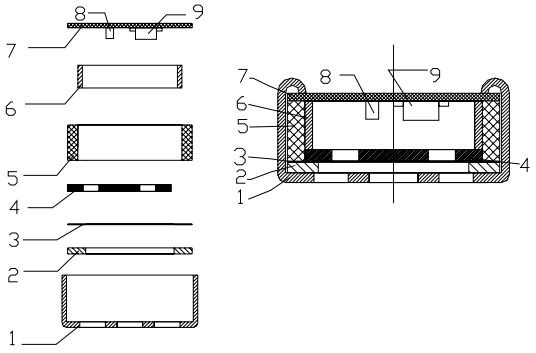


5. **Appearance And Dimension**

Unit：mm



6. **Drawing**



No.	Name	Material	QTY	Remark
9	FET		1	Building in 10pF
8	Chip Capacitor		1	33pF
7	PCB		1	
6	Copper ring		1	
5	Chamber		1	
4	Electret Plate		1	
3	Spacer		1	
2	Diaphragm		1	
1	Case	Copper	1	

7. **Temperature Conditions**

Storage Temperature Range	Operation Temperature Range
-40℃ ~ +85℃	-40℃ ~ +85℃

8. **Terminal Mechanical Strength**

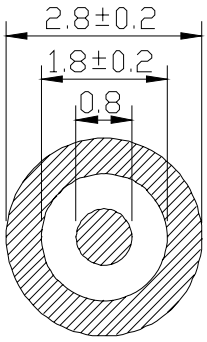
Terminal should be no interference in operation after pulled the terminal with 1kg for 1 minute.

9. Reliability Test

After each of following test, the sensitivity of the microphone should be within ±3dB of initial sensitivity after 3hours of conditioning at 20℃.

1. Vibration Test Frequency : 10Hz~55Hz
   Amplitude : 1.52mm
   Change of Frequency : 1 octave/min
   2 hours in each of axes
2. High Temperature Test +70℃ for 72 hours.
3. Low Temperature Test -30℃ for 72 hours.
4. Humidity Test
   90%～95%RH,+40℃ for 240 hours.
5. Temperature Cycles
   -40℃ ⟷ 25℃ ⟷ 85℃ ⟷ -40℃
   (2h) (1h) (2h) (1h) (2h) (2h) for 10 cycles.
6. Packing Drop Test
   Height：1m
   Procedure: 5 times from each of axes

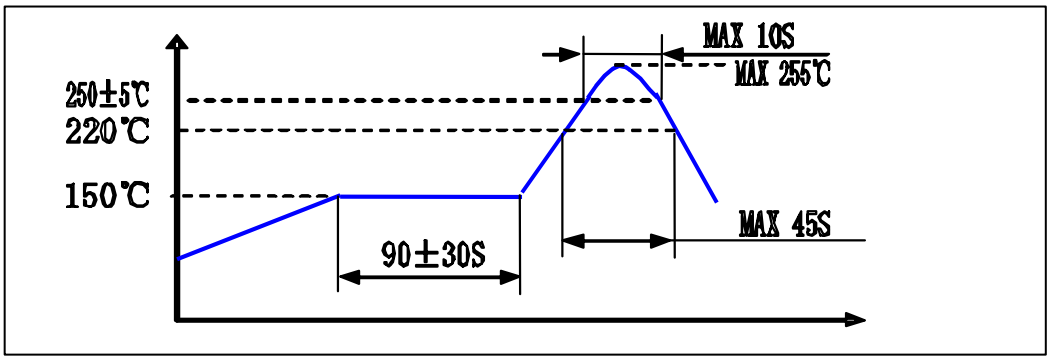
10. Recommend assembly weld plate



11. Reflow Process Condition

The soldering profile depends on various parameters necessitating a set up for each application.The data here is given only for guidance on solder re-flow. There are four zones:

1. Preheat Zone: This zone brings the temperature at a controlled rate, typically 1~2.5℃/s.
2. Equilibrium Zone: This zone brings the board to be a uniform temperature and also activates the flux. The duration in this zone (typically 2~3 minutes) will need to be adjusted to optimize the out gassing of the flux.
3. Re-flow Zone: The peak temperature should be high enough to achieve good wetting but not so high as to cause component discoloration or damage (255℃ for maximum 10 seconds). Excessive soldering time can lead to inter-metallic growth which can result in a brittle joint.
4. Cooling Zone: The cooling rate should be fast, to keep the solder grains small which will give a longer lasting joint. Typically will be 2~5℃/s.
5. Sensitivity change should within ±3dB after re-flow process and at room temperature for 30 minutes at least.



14.	Packing Introduction	Packing chart

EQUIPMENT

ADHENSIVE TAPE MACHINE

AUTO PACKER

PACKING INTRODUCTION

1000PCS/ DELIVERY PLATE

3000PCS/ MID PACKET

24000PCS/ PAPER CASE

QUANTITY INTRODUCTION

1PC=0.07 g

NET WEIGHT：1.7kg

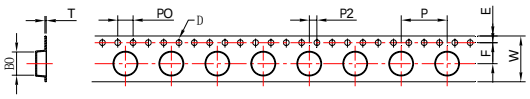
GROSS WEIGHT：4.7kg

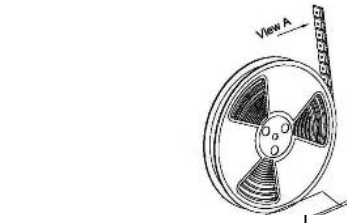
LABEL STIPULATION

LABELEDEVERY BOXES

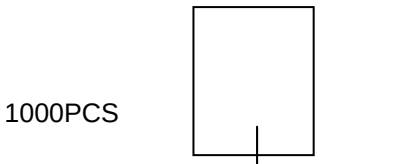
(SEE THE CHART)

DIMENSIONS SHOULD BE SEEN EASILY.



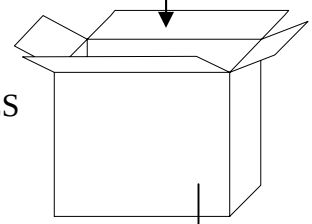


X1



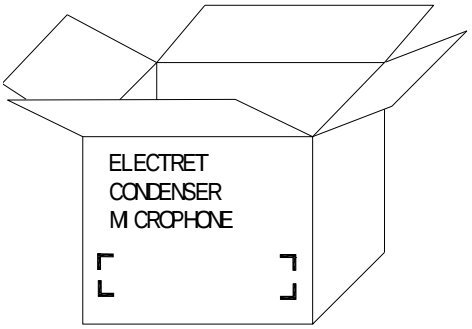
1000PCS

X3



3000PCS

X8



24000PC