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 00	2015.11.17	Creation	VIVIAN

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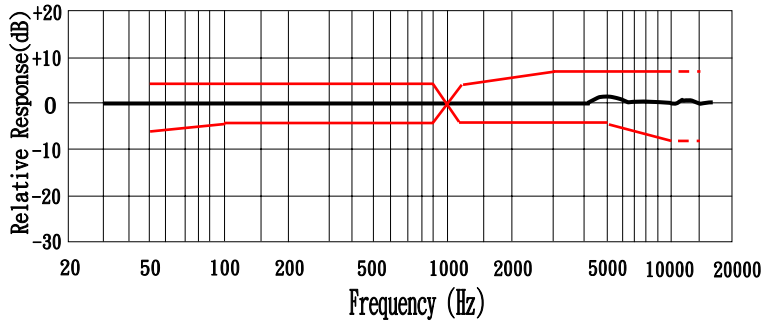
1.	**Name：**	Omnidirectional SMD Electret Condenser Microphone		
2.	**Model No.**	**PVM-4015B-2C423GT**	**C1=10PF**	**C2=33PF**
3.	**Scope：**	This specification applies SMD electret condenser microphone（Temp=20±2℃Room Humidity=65±5%）		

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			5.0	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	△S	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						

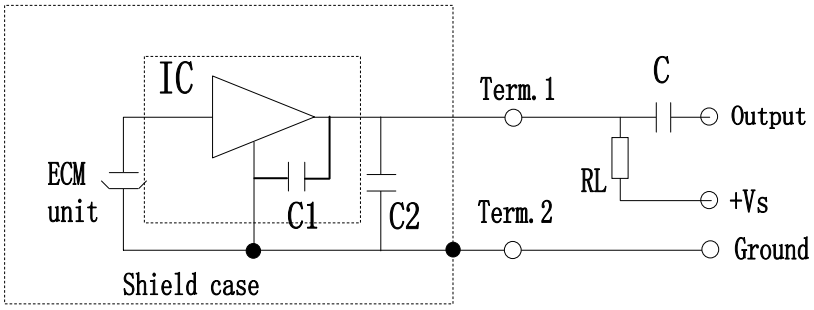
Frequency Response



Microphone Response Tolerance Window

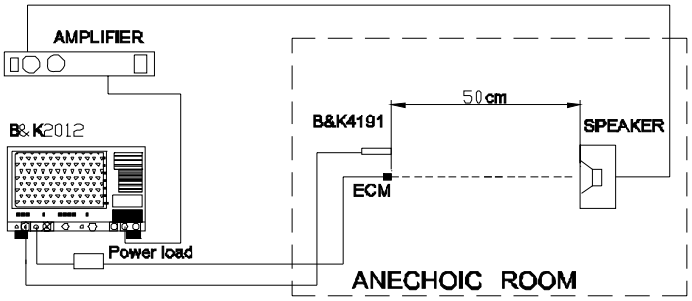
Frequency(Hz)	Lower Limit(dB)	Upper Limit(dB)
50	-6	+3
100	-3	+3
800	-3	+3
1000	0	0
1200	-3	+3
3000	-3	+8
5000	-3	+8
10000	-8	+8

3.9 Measurement Circuit



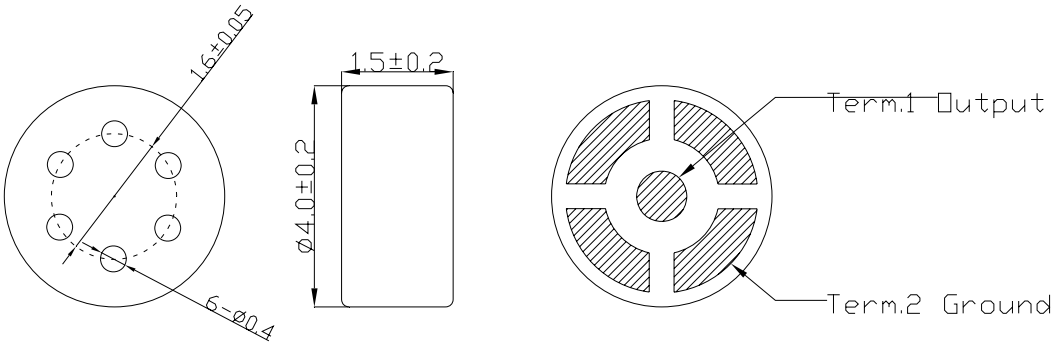
Explain
R_L=2.2KΩ
Vs =2.0V
C1=10PF
C2=33PF
C=1μF

4. Test Setup Drawing

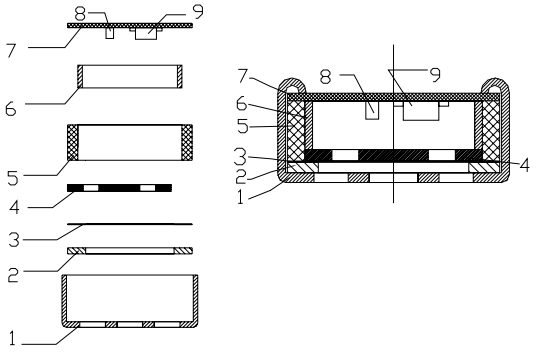


5. Appearance And Dimension

Unit：mm



6. Drawing



No.	Name	Material	QTY	Remark
9	FET		1	Building in 10pF capacitor
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℃

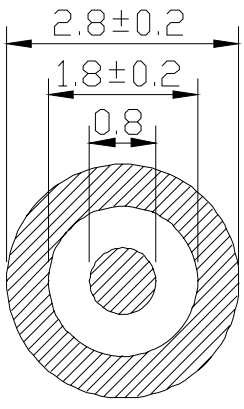
Note: Store in electronic warehouse.

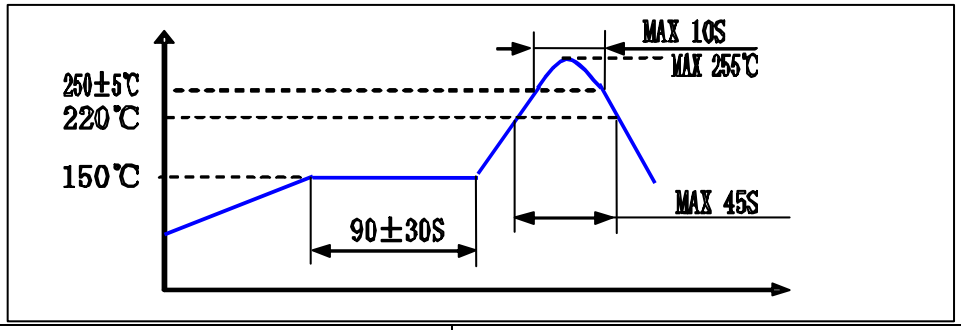
8. Terminal Mechanical Strength

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

9. Reliability Test

After any following tests, the sensitivity of the microphone to be within ±3dB of initial sensitivity after 3 hours of conditioning at 20℃.

9.	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 +85℃ for 240 hours. 3. Low Temperature Test –40℃ for 240 hours. 4. Humidity Test 90%～95%RH,+60℃ for 240 hours. 5. Thermal shocking test –40°C, 30 minutes ↔ +80°C, 30 minutes, repeated 32 cycles → room temperature, 3 hours. 6.Temperature Cycles -40℃ ←→ +20℃ ←→ +85℃ ←→ +20℃ ←→ -40℃ (2h) (0.5h) (2h) (0.1h) (2h) (0.5h) (2h) (0.5h) (2h) for 5 cycles. 7. Packing Drop Test Height：1.5m Procedure: 5 times from each of axes 8. Electrostatic discharge Tested to IEC61000-4-2 level 3： a) Contact discharge The microphone shall operate normally after 10 discharges to is 6KV DC and the discharge network is 150pF and 330Ω. b) Air discharge The microphone shall operate normally after 10 discharges to is 8KV DC and the discharge network is 150pF and 330Ω
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.

11.	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=0.07g NET WEIGHT：1.7kg GROSS WEIGHT： 4.7kg **LABEL STIPULATION** LABELEDEVERY BOXES (SEE THE CHART) DIMENSIONS SHOULD BE SEEN EASILY.