



Specification For Approval

承認書

客 戶 (Customer)	SAMSUNG		
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-6012B-1PC423G028		
客戶承認簽章 Customer Approval Signature	In Charge	Checked	Approval

Revision History

Version	Date	Description	Author
V 001	2010.03.12	Creation	LJM

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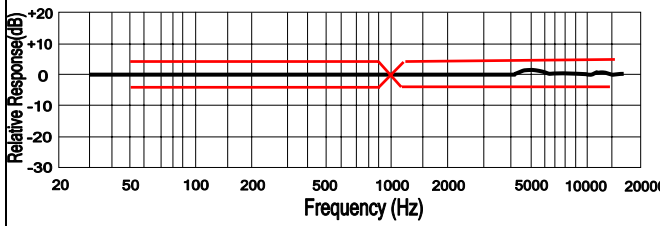
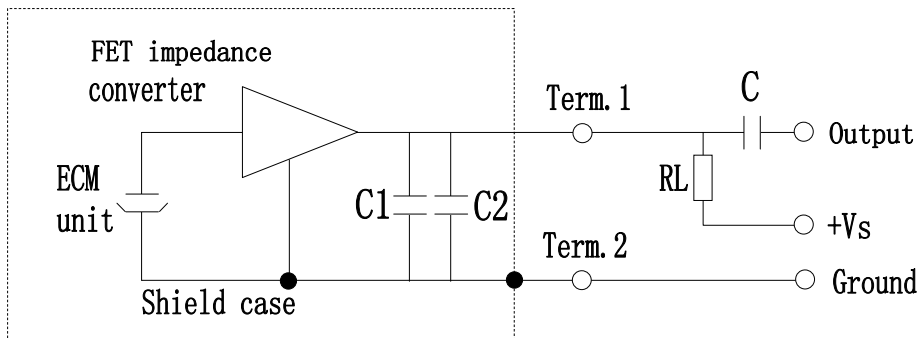
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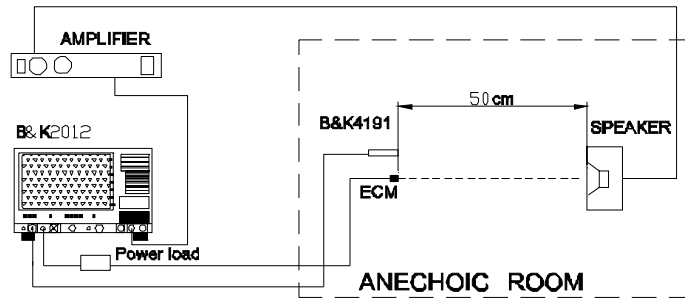
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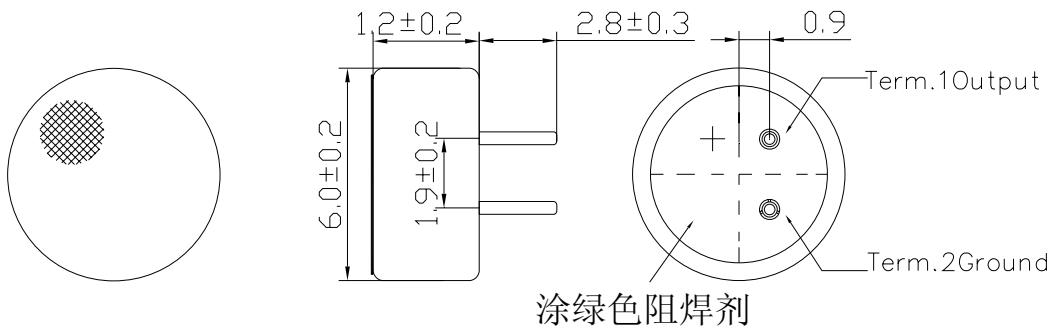
1.	Name :	Omnidirectional Back Electret Condenser Microphone																																	
2.	Model No.	PVM-6012B-1PC423G028	C1= 10 PF	C2= 33PF	PIN=2.8mm																														
3.	Scope :	This specification applies back electret condenser microphone (Temp=20±2°C Room Humidity=65±5%)																																	
	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} =2.0V to1.0V			-3	dB																											
	3.6	Operating Voltage			1.0		10	V																											
	3.7	Maximum input S.P.L					110	dB																											
	3.8	Typical Frequency Response Curve																																	
		Frequency Response			Microphone Response Tolerance Window																														
					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Frequency(Hz)</th> <th style="text-align: center;">Lower Limit(dB)</th> <th style="text-align: center;">Upper Limit(dB)</th> </tr> </thead> <tbody> <tr><td style="text-align: center;">50</td><td style="text-align: center;">-6</td><td style="text-align: center;">+3</td></tr> <tr><td style="text-align: center;">100</td><td style="text-align: center;">-3</td><td style="text-align: center;">+3</td></tr> <tr><td style="text-align: center;">800</td><td style="text-align: center;">-3</td><td style="text-align: center;">+3</td></tr> <tr><td style="text-align: center;">1000</td><td style="text-align: center;">0</td><td style="text-align: center;">0</td></tr> <tr><td style="text-align: center;">1200</td><td style="text-align: center;">-3</td><td style="text-align: center;">+3</td></tr> <tr><td style="text-align: center;">3000</td><td style="text-align: center;">-3</td><td style="text-align: center;">+8</td></tr> <tr><td style="text-align: center;">5000</td><td style="text-align: center;">-3</td><td style="text-align: center;">+8</td></tr> <tr><td style="text-align: center;">10000</td><td style="text-align: center;">-8</td><td style="text-align: center;">+8</td></tr> </tbody> </table>				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
Frequency(Hz)	Lower Limit(dB)	Upper Limit(dB)																																	
50	-6	+3																																	
100	-3	+3																																	
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1200	-3	+3																																	
3000	-3	+8																																	
5000	-3	+8																																	
10000	-8	+8																																	
3.9	Measurement Circuit																																		
							Explain																												
							R _L =2.2KΩ																												
							V _s =2.0V																												
							C1=10PF																												
							C2=33F																												
							C=1μF																												

4. Test Setup Drawing

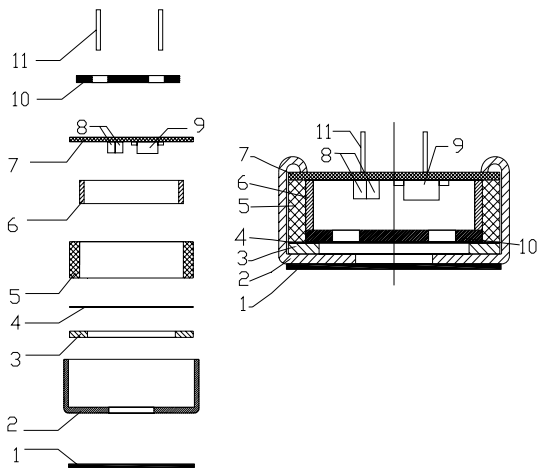


5. Appearance And Dimension

Unit : mm



6. Drawing



11	PIN	Copper	1	
10	ELECTRET BACK	Copper blank	1	
9	FET		1	
8	Chip Capacitors		2	10+33PF
7	P.C.B	FR4	1	
6	Copper ring	Copper tube	1	
5	CHAMBER	Gather formaldehyde	1	
4	SPACER	Mylar	1	
3	D I A P H R A G M	Dupont	1	
2	CASE	Copper	1	
1	FELT	Fabric cloth	1	
No.	Name	material	QTY	Remark

7. Temperature Conditions

Storage Temperature Range	Operation Temperature Range
-40°C ~ +75°C	-20°C ~ +60°C

8. Terminal Mechanical Strength

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

9. Reliability Test

After any following tests, the sensitivity of the microphone to be within $\pm 3\text{dB}$ of initial sensitivity after 3 hours of conditioning at 20°C .

9-1 Vibration

Frequency1 : 10Hz~55Hz
Amplitude : 1.52mm
Change of Frequency : 1 octave/min
2 hours in each of 3 axes

9-2 High Temperature Test

$+70^\circ\text{C}$ for 72 hours.

9-3 Low Temperature Test

-20°C for 72 hours.

9-4 Humidity Test

90%~95%RH, $+40^\circ\text{C}$ for 240 hours

9-5 Temperature Cycles

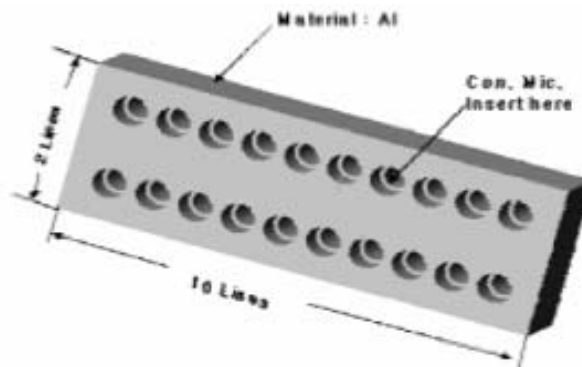
-20°C \longleftrightarrow 25°C \longleftrightarrow 70°C \longleftrightarrow -20°C
(2h) (1h) (2h) (1h) (2h) (2h) \times 10 cycles

9-6 Packing Drop Test

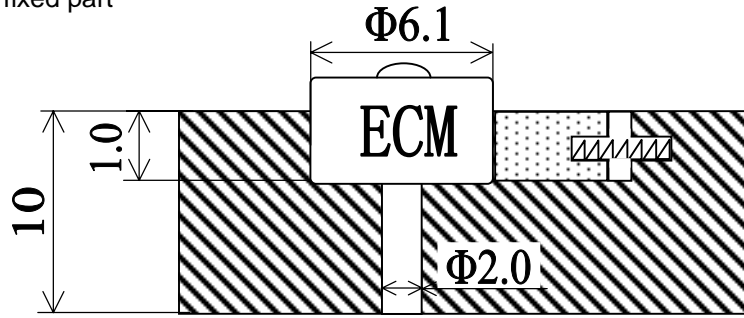
Height : 1m
Procedure: 5 times from each of axes

10. Soldering Condition

- 10.1 We use anti-static welding machine which can control soldering temperature automatically.
- 10.2 Soldering temperature should be controlled under 320°C .
- 10.3 MIC shall be fixed on the metal block (heat sink), which has high radiation effects , and heat sink shall contact with MIC tightly.
- 10.4 Soldering time for each terminal shall be 1~2 sec.
- 10.5 Soldering pinhole shall be avoided.
- 10.6 MIC may easily be destroyed by the static electricity and the countermeasure for eliminating the static electricity shall be executed (worktable and human body shall be ground connection).
- 10.7 Heat Sink
Shape of heat sink



Shape of hole at fixed part



11.

Packing Introduction

DIMENSION:(LENGTH*WIDTH *HEIGHT)

- a) SMALL PACKET
100mm*100mm*5mm
- b) MID PACKET:
205mm*105mm*50mm
- c) PAPER CASE:
550mm*230mm*235mm

EQUIPMENT

- d) ADHENSIVE TAPE MACHINE
- e) AUTO PACKER

PACKING INTRODUCTION

- f) 100PCS/ INHALE PLASTIC BOX
- g) 1200PCS/MID PACKET
- h) 24000PCS/PAPER CASE

QUANTITY INTRODUCTION

- i) 1PC=0.2g
- j) NET WEIGHT : 5.6kg
GROSS WEIGHT : 8.6kg

LABEL STIPULATION

LABEL EVERY BOXES

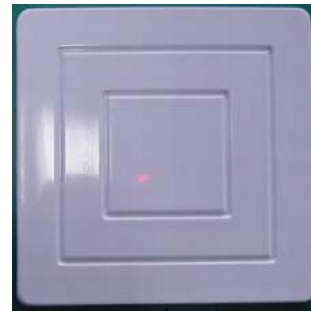
(SEE THE CHART)

DIMENSIONS SHOULD BE SEEN EASILY

LABEL STIPULATION

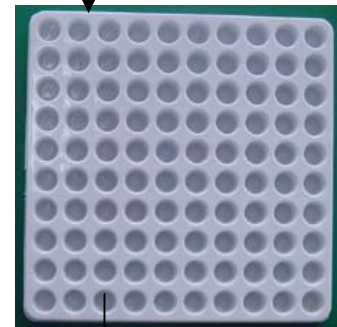
CONTENTS SHOULD BE SEEN CLEAR.

Packing chart



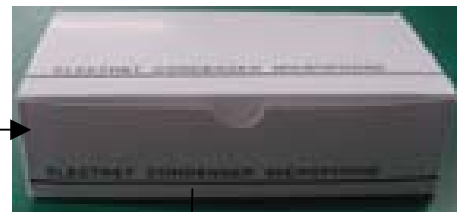
X1

100PCS



X14

1400PCS



X20

28000PCS

