



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-6022B-2C454G-T		
客戶承認簽章 Customer Approval Signature	In Charge	Checked	Approval

Revision History

Version	Date	Description	Author
V 001	2010.03.05	Creation	LJM

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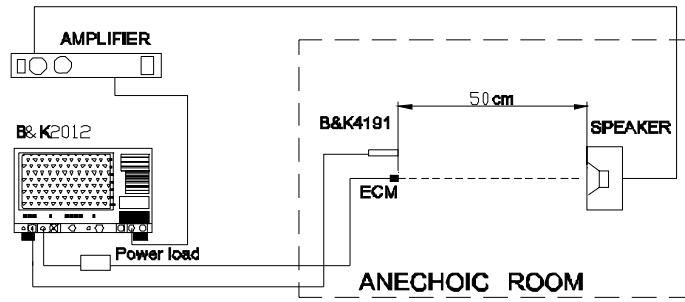
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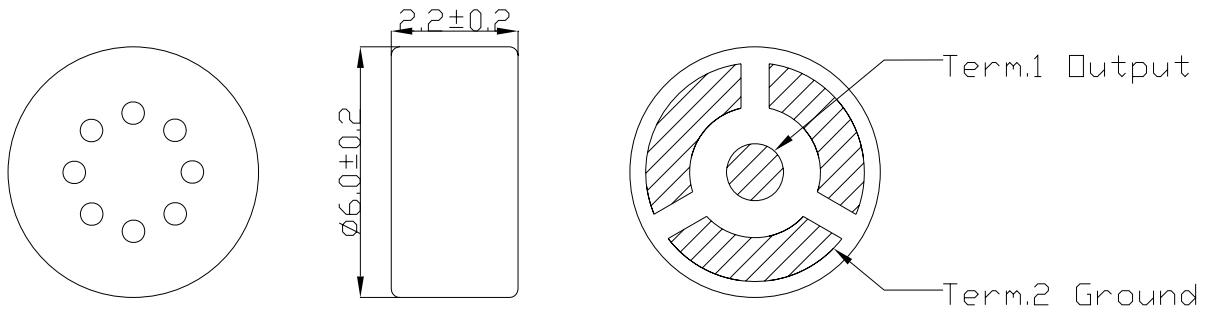
1.	Name :	Omnidirectional Back Electret Condenser Microphone																																	
2.	Model No.	PVM-6022B-2C454G-T	C1=10 PF	C2=33 PF																															
3.	Scope :	This specification applies back electret condenser microphone (Temp=20±2°C Room Humidity=65±5%)																																	
	No	Parameter	Symbol	Condition	Limits			Unit																											
					Min.	Center	Max.																												
	3.1	Sensitivity	S	0dB=1V/Pa · at 1kHz	-49	-45	-41	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 to 1.0V			-3	dB																											
	3.6	Operating Voltage			1.4		5.0	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																										
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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=33PF																											
								C=1μF																											

4. Test Setup Drawing

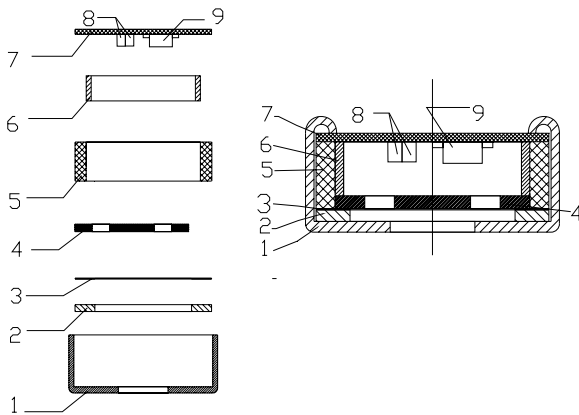


5. Appearance And Dimension

Unit : mm



6. Drawing



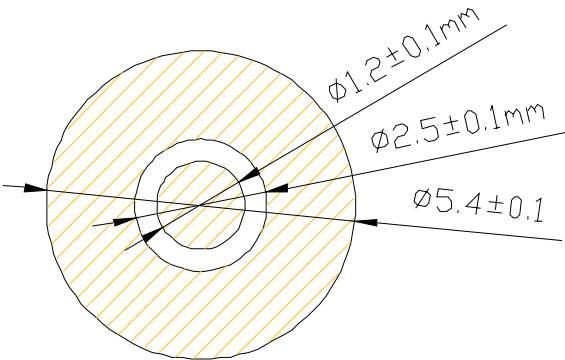
No.	Name	material	QTY	Remark
9	FET		1	
8	CHIP CAPACITOR	10+33PF	2	0402
7	P.C.B		1	FR-4
6	Copper ring	Copper tube	1	
5	CHAMBER		1	
4	ELECTRET PLATE	Copper blank	1	
3	SPACER	Mylar	1	
2	D I A P H R A G M	DUPONT	1	
1	CASE	Al-Mg alloy	1	

7. Temperature Conditions

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

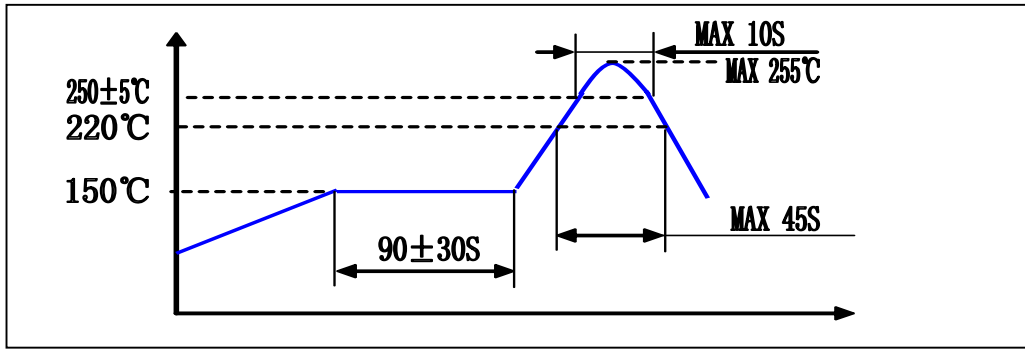
8. Terminal Mechanical Strength

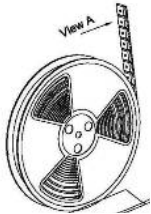
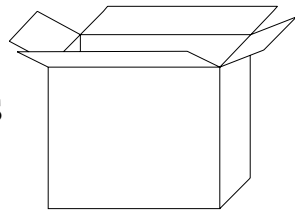
Terminal mechanical strength to be no interference in operation after pulled the terminal with 1kg strength for 1 minute.

<p>9.</p>	<p>Reliability Test</p> <p>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.</p> <p>9-1 Vibration</p> <p style="margin-left: 40px;">Frequency1 : 10Hz~55Hz Amplitude : 1.52mm Change of Frequency : 1 octave/min 2 hours in each of 3 axes</p> <p>9-2 High Temperature Test</p> <p style="margin-left: 40px;">$+70^{\circ}\text{C}$ for 72 hours.</p> <p>9-3 Low Temperature Test</p> <p style="margin-left: 40px;">-20°C for 72 hours.</p> <p>9-4 Humidity Test</p> <p style="margin-left: 40px;">$90\% \sim 95\% \text{RH}, +40^{\circ}\text{C}$ for 240 hours</p> <p>9-5 Temperature Cycles</p> <p style="margin-left: 40px;">-20°C \longleftrightarrow 25°C \longleftrightarrow 70°C \longleftrightarrow -20°C (2h) (1h) (2h) (1h) (2h) (2h) x 10 cycles</p> <p>9-6 Packing Drop Test</p> <p style="margin-left: 40px;">Height : 1m Procedure: 5 times from each of 3 axes</p>
<p>10.</p>	<p>Recommend assembly weld plate</p> 
<p>11.</p>	<p>Reflow Process Condition</p> <p>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:</p> <ol style="list-style-type: none"> 1. Preheat Zone: This zone brings the temperature at a controlled rate, typically $1 \sim 2.5^{\circ}\text{C}/\text{s}$. 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°C 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°C/s.

5. Sensitivity change should within ±3dB after re-flow process and at room temperature for 30 minutes at least.



12.	Packing Introduction	Packing chart
	<p>EQUIPMENT</p> <p>ADHENSIVE TAPE MACHINE AUTO PACKER</p> <p>PACKING INTRODUCTION</p> <p>500PCS/ DELIVERY PLATE 1500PCS/ MID PACKET 12000PCS/ PAPER CASE</p> <p>QUANTITY INTRODUCTION</p> <p>1PC=0.25g NET WEIGHT : 6.0kg GROSS WEIGHT : 6.7kg</p> <p>LABEL STIPULATION</p> <p>LABELEDEVERY BOXES (SEE THE CHART) DIMENSIONS SHOULD BE SEEN EASILY.</p>	<p>500PCS</p>  <p>X 3</p> <p>1500PCS</p>  <p>X 8</p> <p>12000PC</p> 