



MODEL: EM-6022
PRODUCT: Electret Condenser Microphone

TYPE: OMNIDIRECTIONAL SMD ELECTRIC CONDENSER MICROPHONE

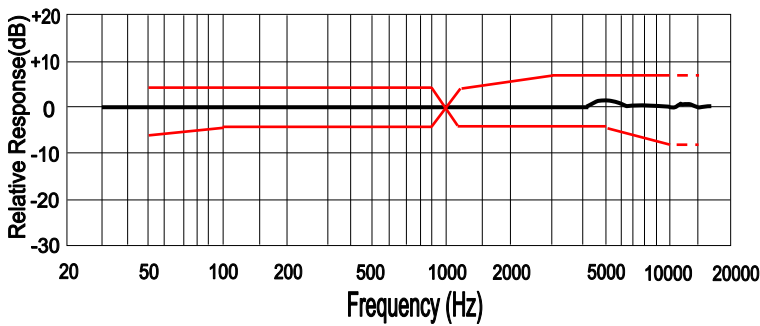
ELECTRICAL CHARACTERISTICS

Temperature = 20±2 °C Humidity=65±5%

parameter	symbol	condition	limits			unit
			min	center	max	
sensitivity	S	0dB=1V/Pa at 1kHz	-45	-42	-39	dB
output impedance	Z out	f=1kHz			2.2	KΩ
current consumption	I _{bss}	V _{cc} =2.0V, RL=2.2KΩ			300	μA
signal to noise ratio	S/N	at 1kHz S.P.L=1Pa (A-Weighted Curve)	58			dB
decreasing voltage	ΔS	V _{cc} =3.0V to 2.0V			-3	dB
operating voltage			1.4		5.0	V
maximum input S.P.L					110	dB
dimension		∅6.0 x 2.2mm				

TYPICAL FREQUENCY RESPONSE CURVE

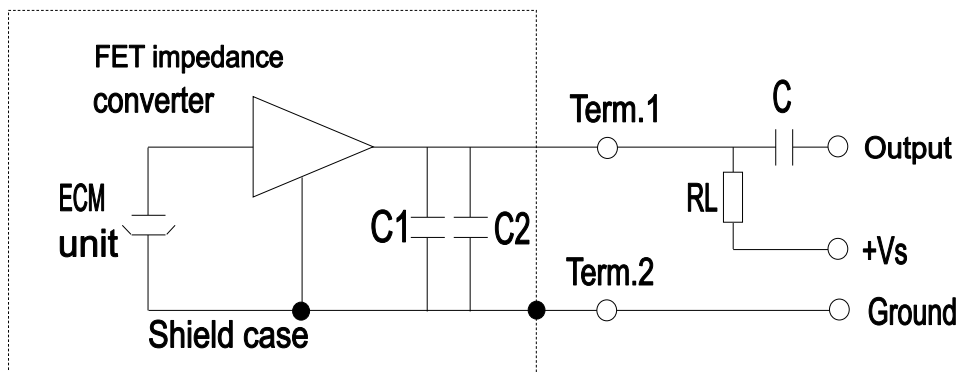
FREQUENCY RESPONSE



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

MEASUREMENT CIRCUIT



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



MODEL: EM-6022
PRODUCT: Electret Condenser Microphone

Soberton Inc.

TEMPERATURE CONDITIONS

storage temperature range -40°C ~ +75°C

operation temperature range -20°C ~ +60°C

Note: Store in electronic warehouse.

TERMINAL MECHANICAL STRENGTH

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

RELIABILITY TEST

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

vibration test

frequency 10hz ~ 55hz

amplitude 1.52mm

change of frequency 1 octave/min

2 hours in each of axis

dry heat/cold +70°C/-20°C for 72 hours

damp heat 90% ~ 95%RH,+40°C for 240 hours

temperature cycles -20°C ↔ +25°C ↔ +70°C ↔ -20°C

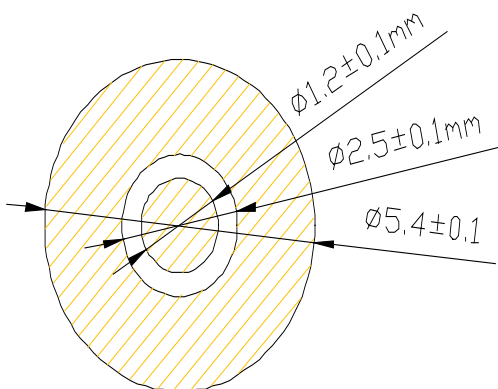
(2h) (1h) (2h) (1h) (2h) (2h) x 10 cycles

packing drop test

height 1 m

procedure 5 times from each of axis

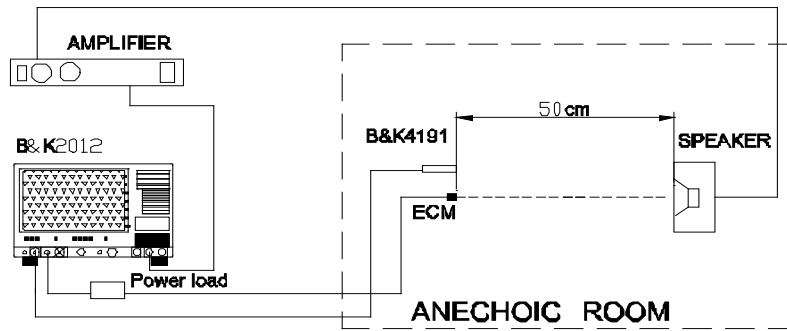
RECOMMEND ASSEMBLY WELD PLATE





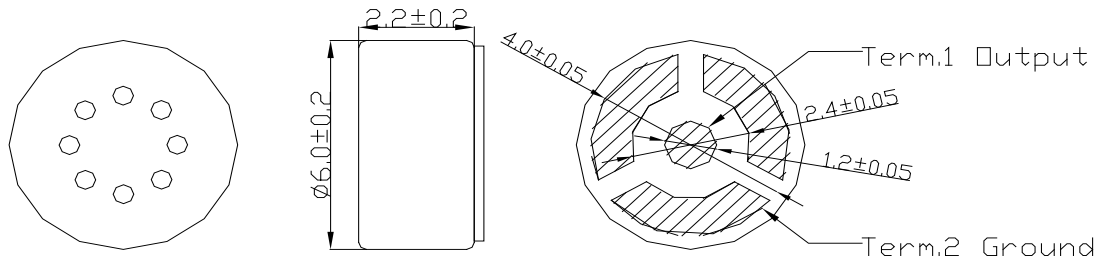
MODEL: EM-6022
PRODUCT: Electret Condenser Microphone

TEST SETUP DRAWING

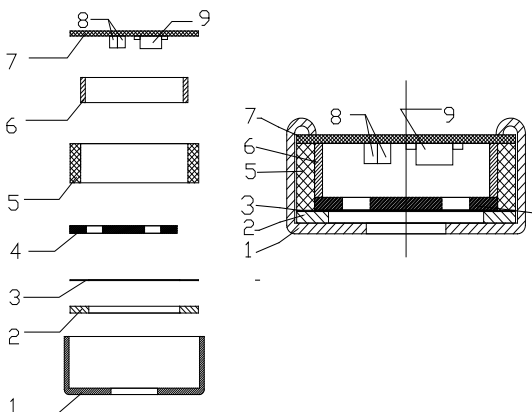


PRODUCT EXTERNAL VIEW AND DIMENSION

Unit : mm



EXPLODED DRAWING AND MATERIAL TABLE



	Name	Material	Quantity	Remark
1	Case	Copper	1	
2	Polarized diaphragm		1	
3	Spacer		1	
4	Electret back		1	
5	Housing chamber		1	
6	Copper ring		1	
7	P.C.B		1	FR-4
8	Chip capacitor	10+33PF	1	0402
9	FET		2	



MODEL: EM-6022
PRODUCT: Electret Condenser Microphone

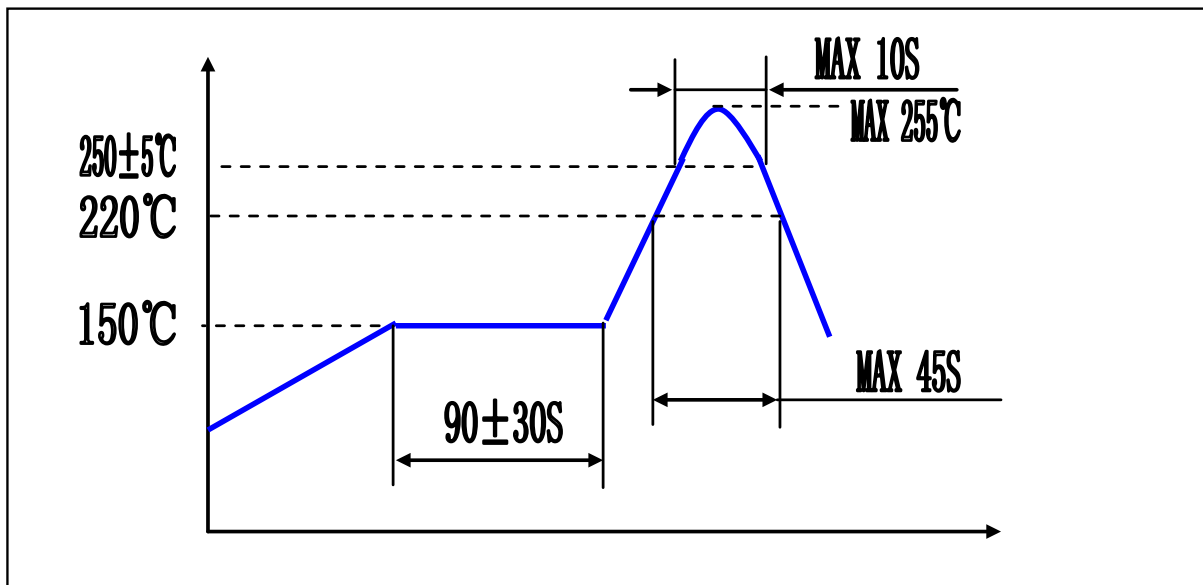
Soberton Inc.

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:

preheat zone	This zone brings the temperature at a controlled rate, typically 1~2.5°C/s.
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.
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.
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. Sensitivity change should be within $\pm 3\text{dB}$ after re-flow process and at room temperature for 30 minutes at least.





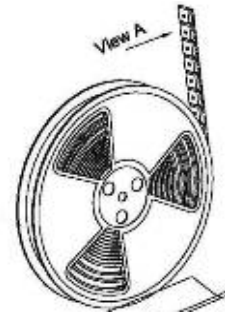
MODEL: EM-6022
PRODUCT: Electret Condenser Microphone

PACKING

PACKING DIMENSION
DELIVERY PLATE: 600PCS
MID PACKET : 1800PCS
PAPER CASE : 14400PCS

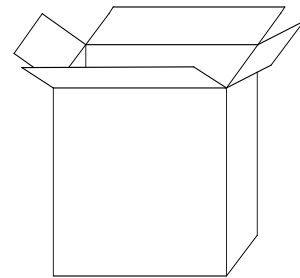
WEIGHT & QUANTITY
1 PC=0.25g
NET WEIGHT: 6.6kg
GROSS WEIGHT: 7.5kg

600PCS



X3

1800PCS



X8

14400PCS

