PRODUCT: Electret Condenser Microphone

Soberton Inc.

TYPE: OMNIDIRECTIONAL SMD ELECTRIC CONDENSER MICROPHONE

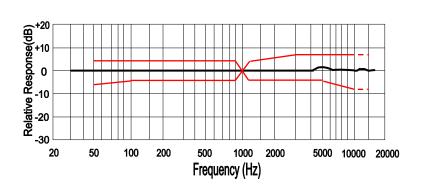
ELECTRICAL CHARACTERISTICS

Temperature =20±2 °C Humidity=65±5%

parameter	symbol	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	ΚΩ
current consumption	loss	Vcc =2.0V, RL=2.2KΩ			300	μΑ
signal to noise ratio	S/N	at 1kHz S.P.L=1Pa	58			dB
		(A-Weighted Curve)				
decreasing voltage	ΔS	Vcc=3.0V to 2.0V			-3	dB
operating voltage			1.4		5.0	V
maximum input S.P.L					110	dB
dimension		Ø6.0 x 2.2mm				

TYPICAL FREQUENCY RESPONSE CURVE

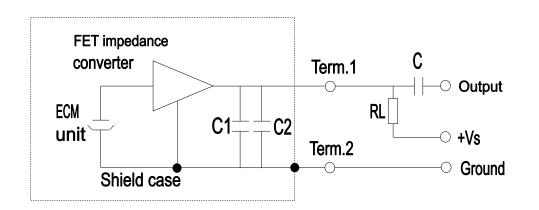
FREQUENCY RESPONSE



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



$RL = 2.2K\Omega$
Vs = 2.0V
$C = 1\mu F$
C1 = 10PF
C2 = 33PF



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TEMPERATURE CONDITIONS

storage temperature range	40°C ~ +75°C	
operation temperature range		
Note: Store in electronic warehouse.		

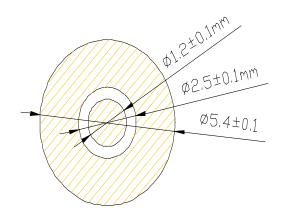
TERMINAL MECHANICAL STRENGTH

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

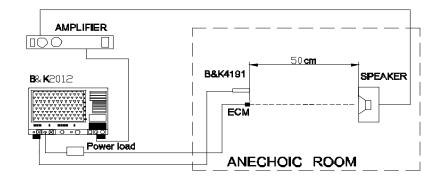
RELIABILITY TEST

After each of following tests, th	After each of following tests, the sensitivity of the microphone should be within ± 3 dB of initial sensitivity after 3 hours of conditioning at 20°C.		
tioning 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) (2h) x 10 cycles		
packing drop test			
height	1 m		
procedure	5 times from each of axis		

RECOMMEND ASSEMBLY WELD PLATE

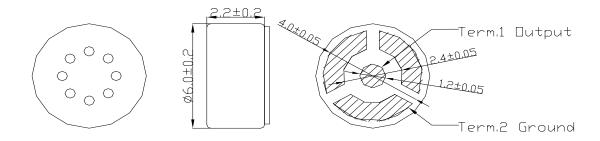


TEST SETUP DRAWING

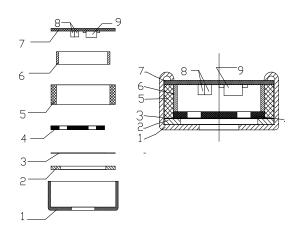


PRODUCT EXTERNAL VIEW AND DIMENSION

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	Housping chamber		1	
6	Copper ring		1	
7	P.C.B		1	FR-4
8	Chip capacitor	10+33PF	1	0402
9	FET		2	



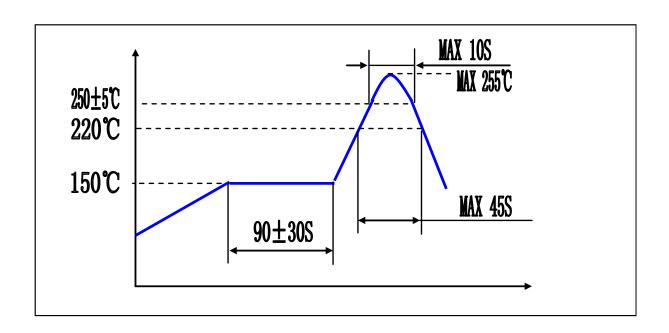
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REFLOW PROCESS CONDITION

The soldering profile depends on a	various parameters necessitating a set up for each application.
3.	
The data here is given only for gui	dance on solder re-flow. There are four zones:
preheat zone	This zone brings the temperature at a controlled rate, typically $1\sim2.5$ °C/s.
equilibrium zone	This zone brings the board to be a uniform temperature and also activates the flux. The dura-
	tion 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°Cfor maximum 10 seconds). Excessive solder-
	ing 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 ±3dB after re-flow process and at room temperature for
	30 minutes at least.





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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

