RALTRON

A Rami Technology Company

General Description

Ø4.0mm x 1.5mm, Omni-Directional Microphone

RoHS Compliant

REACH COMPLIANCE

ELECTRICAL SPECIFICATIONS

Parameters		Value			Unit
		min	center	max	
Sensitivity	@ 0dB=1V/Pa, @ 1kHz	-45	-42	-39	dB
Current Consumption	@ V_{CC} =2.0V,RL=2.2KΩ			500	µA
Output Impedance	@ f=1kHz			2.2	kΩ
Decreasing Voltage	@ V_{CC}=3.0V ~ 2.0V			-3	dB
Signal to Noise Ratio	@ 1kHz S.P.L=1Pa (A-Weighted Curve)	58			dB
Operating Voltage		1.0		10	V
Input S.P.L, max				110	dB
Operating Temperature Range		-40		+85	˚C
Storage Temperature Range		-40		+85	˚C

FREQUENCY CHARACTERISTICS

Frequency Response

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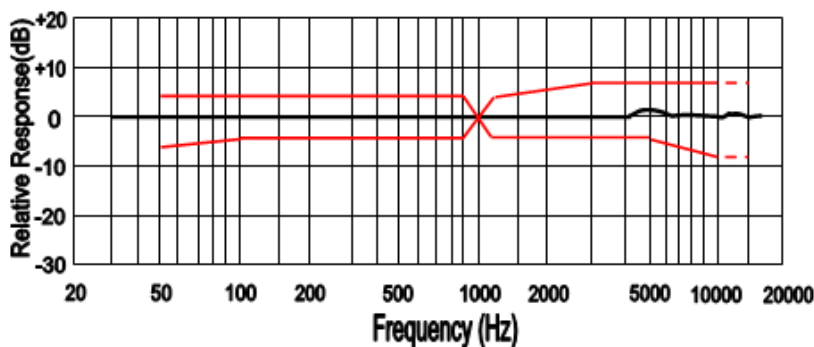
Frequency (Hz)	Lower Limit(dB)	Upper Limit(dB)
50	-6	+3
100	-3	+3
800	-3	+3
1000	0	0
1200	-3	+3
3000	-3	+8
5000	-3	+8
10000	-8	+8

DIMENSIONS AND MATERIAL/STRUCTURE
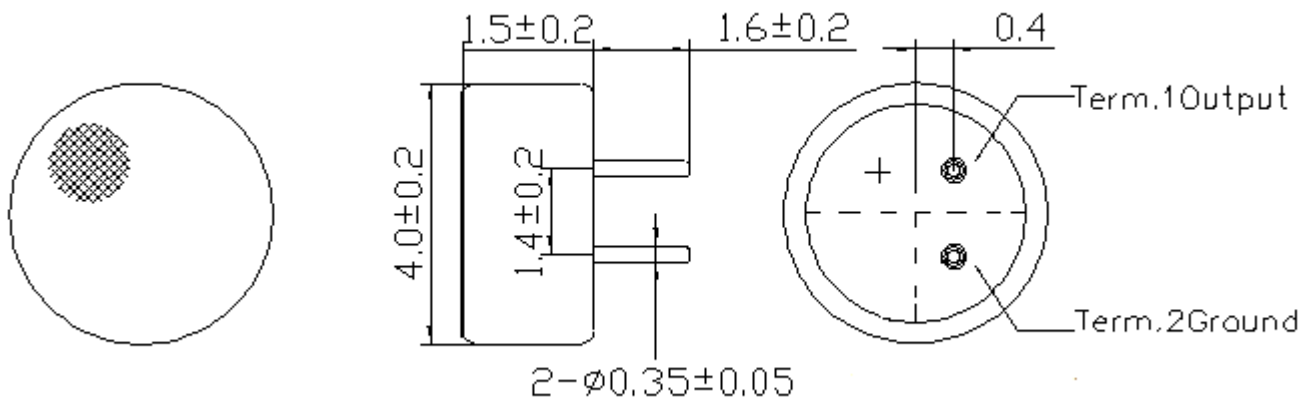
Unit: mm
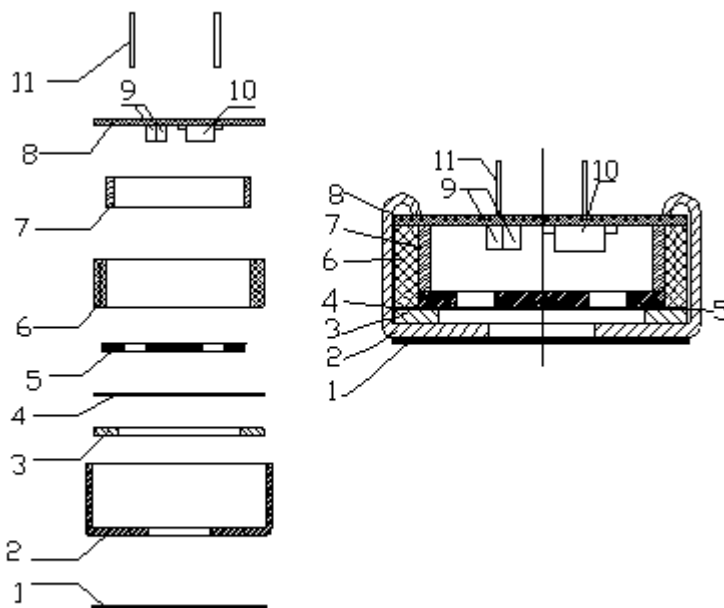
11	PIN	Copper	2
10	FET		1
9	Chip Capacitor		2
8	P.C.B	FR-4	1
7	Copper Ring		1
6	Chamber		1
5	Electret Plate		1
4	Spacer		1
3	Diaphragm		1
2	Case		1
1	Dustproof gauze	Non-weave cloth	1
No.	Name	Material	QTY

MEASUREMENT CIRCUIT

FET impedance converter

ECM unit

Shield case

C1   C2

Term.1   C   Output

RL

Term.2   +Vs

Ground
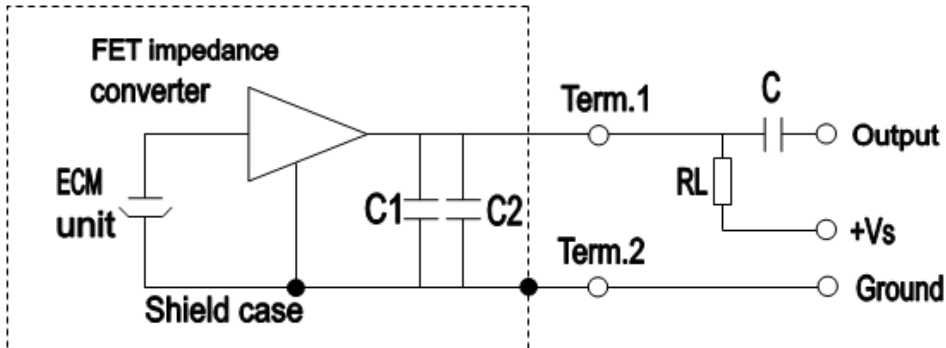
$R_L = 2.2K\,\Omega$	
$V_S = 2.0V$	
$C1 = 10PF$	
$C2 = 33PF$	
$C = 1\mu F$	

MEASUREMENT SETUP DRAWING

AMPLIFIER

B&K2012

Power load

B&K4191

50 cm

SPEAKER

ECM

ANECHOIC ROOM
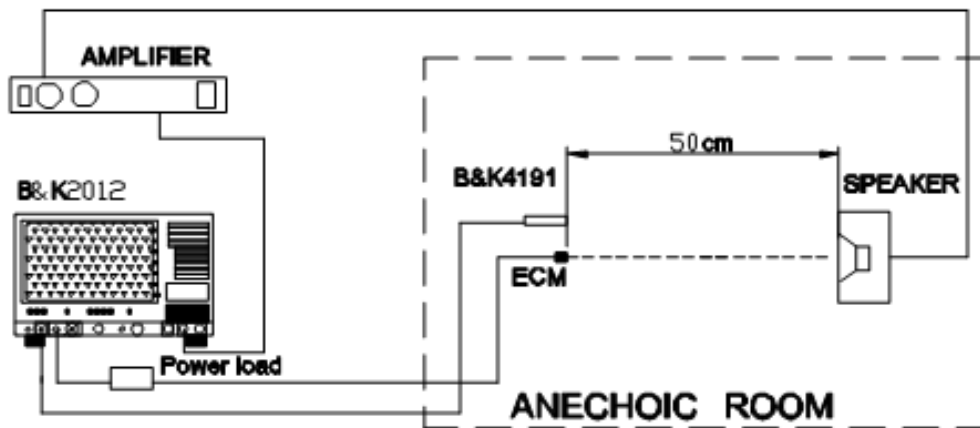
APPROVAL

DRAWN BY	AR, July 31, 2024
APPROVED BY	CP, July 31, 2024
REVISION	A, Initial Release

RoHS Compliant

REACH COMPLIANCE