

Specification

Part Number: TM141051

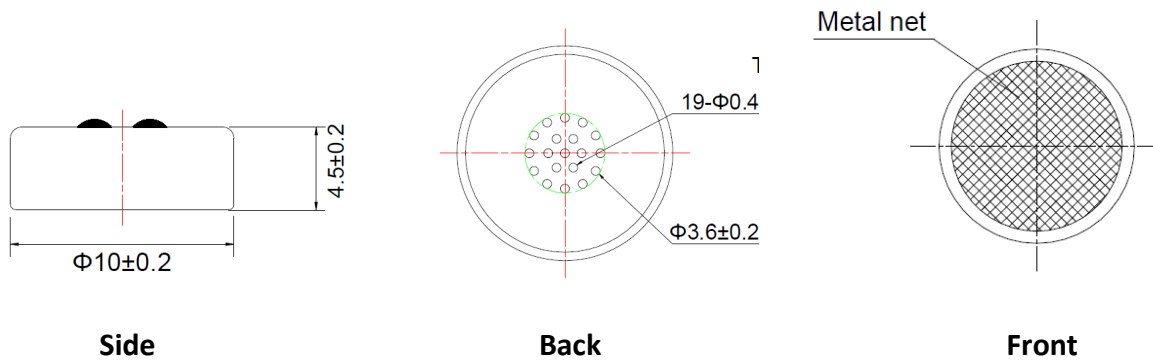
Description: RF Immune Noise Cancelling/ Bi-Directional

Electret Condenser Microphone (Size: 10mm x 4.5mm)

RoHS Compliant

Pin Material: Cu / Plating Au

Case Material: Al and Mg Alloys



Revision	Date	Comments
A	January 7, 2021	Initial Release

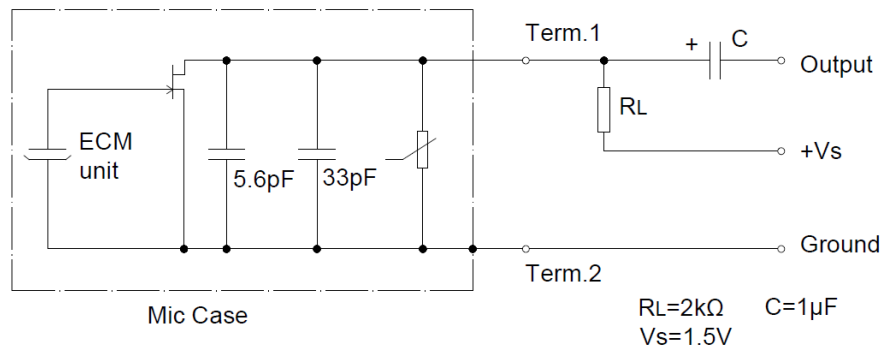
1. ELECTRICAL SPECIFICATIONS

Standard Conditions		Basic Test Conditions	
Ordinary Temperature	5 to 35°C	Temperature	20 ± 2°C
Ordinary Humidity	45 to 85%	Humidity	63 to 67%
Ordinary air pressure	86 to 106kPa	Ordinary air pressure	86 to 106kPa

Parameter	SPEC	Unit
Directional	Noise Cancelling	-
Sensitivity	-37±3	dB
Impedance	2(Max)	kΩ
S/N Ratio (A weighted network)	67(typ)	dB
Maximum Input Sound Pressure Level	110(Max)	dB
Standard Operating Voltage	1.5	Vdc
Operating Voltage Range	1.0~10	Vdc
Decrease Voltage Characteristics (Vs=2.0 to 1.5V dc)	-3(Max)	dB
Current Consumption	500(Max)	μA
Standard Test Circuit	See Fig. 1	—
Frequency Response Characteristic	See Fig. 2	—
Memo	Standard test condition	RL=2kΩ, Vs=1.5V dc (@f=1kHz, Pin=1Pa, 0dB=1V/pa, L=50cm)

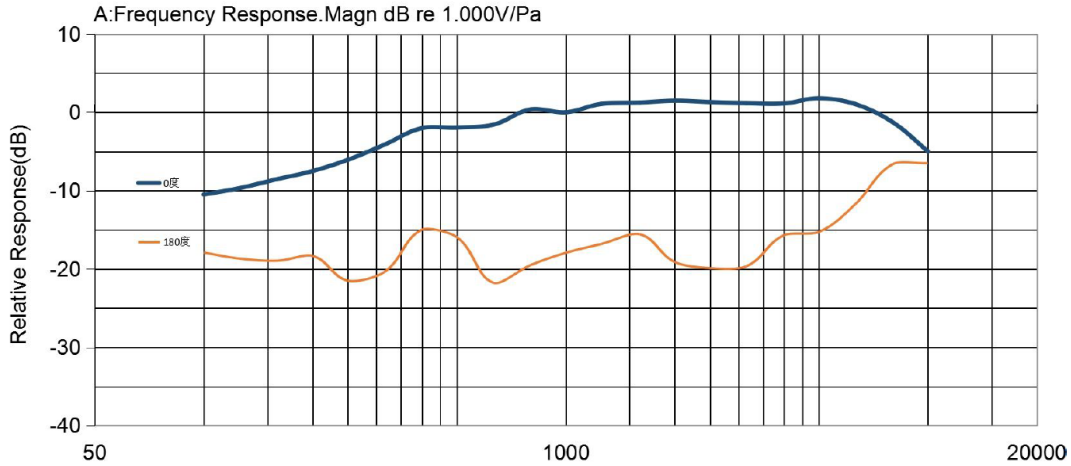
2. STANDARD TEST CIRCUIT

Fig.1



3. TYPICAL FREQUENCY RESPONSE

Fig.2



4. RELIABILITY

Item		Test conditions	Evaluation standard
1	Hi-Temp. Test	The microphone unit must be subjected to +80°C for 100 Hours and exposed to room temperature for 3 Hours.	After any of the tests, the sensitivity of the microphone unit shall not change more than ± 3 dB from initial value and shall keep its initial operation and appearance.
2	Low-Temp. Test	The microphone unit must be subjected to -40°C for 20 Hours and exposed to room temperature for 3 Hours.	
3	Humidity & Heat Test	The microphone unit must be subjected to +55°C, 85% RH-for 200 Hours and exposed to room temp for 3 Hours.	
4	Thermal Shocking Test	The microphone unit must be subjected to following condition [+80°C 0.5H → room temp 1H → -40°C 0.5H → room temp 1H] at 10cycle.	

5	Vibration Test	The microphone unit must be subjected to a procedure that it is vibrating for two hours from each of the 3 directions(x y z) with a frequency of 10-55Hz and a 1.52mm-high amplitude.
6	Drop Test	The microphone unit must be subjected to a procedure that it is dropped on a slippery marble floor for 5 times from each axis for a total of 15 times from a 1.0-meter-height without packaging.
7	Storage Temperature	-35°C~+60°C
8	Operating Temperature	-35°C~+60°C
9	ESD Protection	The test microphone must be discharged between each ESD exposure without ground(contact :±6KV,air:±8KV)

NOTES:

All the soldering procedures upon microphones must be completed in a heat sink device. The temperature of the soldering iron must be limited to 360°C±20°C and the soldering time should not exceed 3 seconds.

Operators, the soldering fixture and the soldering iron must be statically grounded under each soldering process.