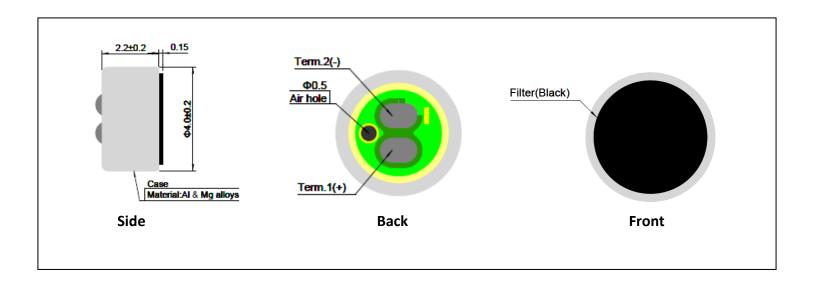


Specification Part Number: TM141047

<u>Oescription Uni-Directional / Cardioid Electret Condenser Microphone</u> (Size 4.0mm x 2.2mm) RoHS Compliant



Revision	Date	Comments
Α	March 6, 2019	Initial Release



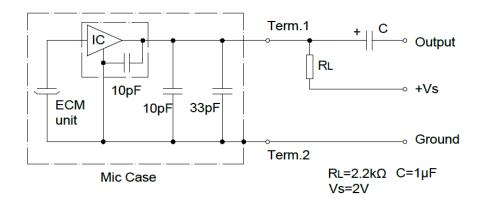
1. ELECTRICAL SPECIFICATIONS

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

	Parameter	SPEC	Unit
	Directional Characteristic	Uni-Directional	_
	Sensitivity at L=50cm	-47±3	dB V/Pa
	Impedance	2.2(Max)	kΩ
S/	N Ratio (A weighted network)	50(Typical)	dB
Maxir	num Input Sound Pressure Level	110 THD≤3%	dBSPL
	Standard Operating Voltage	2.0	Vdc
	Operating Voltage Range	1.7~5.0	Vdc
Decrease Vo	Itage Characteristics (Vs=2.0 to 1.7V dc)	-3(Max)	dB
	Current Consumption	350	μΑ
	Standard Test Circuit	See Fig. 1	_
Freq	uency Response Characteristic	See Fig. 2	_
Memo Standard test condition		RL=2.2kΩ, Vs=2.0V dc (@f=1kHz, Pin=1Pa, 0dB=1V/Pa,L=50cm)	

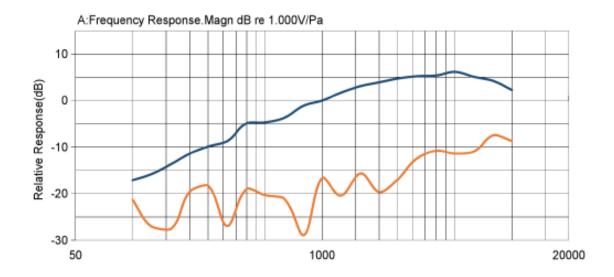
2. STANDARD TEST CIRCUIT

Fig.1



3. TYPICAL FREQUENCY RESPONSE IN ANECHOIC CHAMBER

Fig.2





4. RELIABILITY

Item		Test conditions	Evaluation standard	
1	Hi-Temp.Test	The microphone unit must be subjected to +80℃ for 90 hours and exposed to room temperature for 3 hours.		
2	Low-Temp.Test	The microphone unit must be subjected to -40℃ for 100 hours and exposed to room temperature for 3 hours.		
3	Humidity &Heat Test	The microphone unit must be subjected to +55℃, 85% RH-for 100 hours and exposed to room temp for 3 hours.		
4	Thermal Shock 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 10 cycles and exposed to room temp 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.	
5	Vibration Test	The microphone unit must be subjected to a procedure that it is vibrating for two hours from each of the three 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 a 1.0-meter-height without package.		
7	Storage Temperature	-30℃~+60℃		
8	Operating Temperature	30℃~+60℃		

Additional Notes

1) All the soldering procedures upon microphones must be completed in a heat sink device. The temperature of the soldering iron must be limited to 340°C±10°C and the soldering time should not exceed 3 seconds.



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