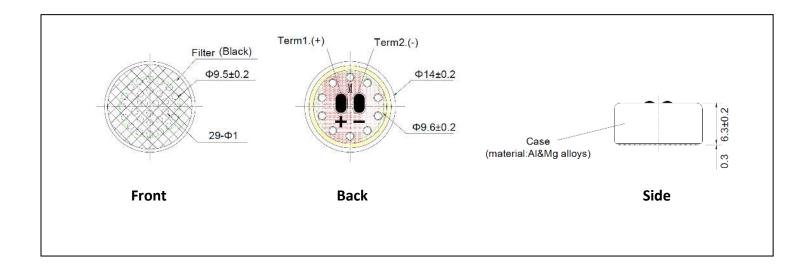


# Specification Part Number: TM141053

# <u>Description: Uni-Directional ( Supercardioid) Electret Condenser Microphone</u> (Size: 14mm x 6.3mm)

**RoHS Compliant** 



Revision	Date	Comments
A	February 28, 2023	Initial Release



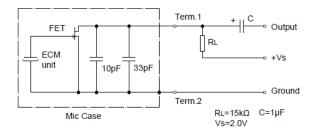
# 1. ELECTRICAL SPECIFICATIONS

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

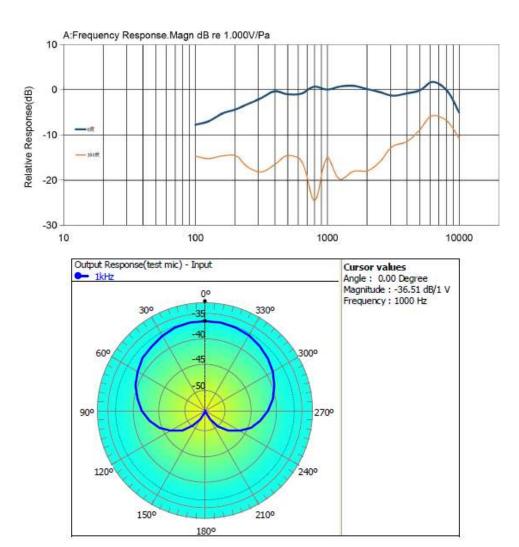
			1
	Parameter	SPEC	Unit
	Directional Characteristic	Uni-directional	dB
	Sensitivity	-35±2	dB
	Impedance	2.2(Max)	kΩ
S/	N Ratio (A weighted network)	77 (Typ)	dB
Maxir	num Input Sound Pressure Level	120 THD≤3%	dB
,	Standard Operating Voltage	2.0	Vdc
	Operating Voltage Range	1.0~10.0	Vdc
Decrease Voltage Characteristics(Vs=2.0 to 1.5V dc)		-3(Max)	dB
Current Consumption		200(Max)	μΑ
	Standard Test Circuit	See Fig. 1	_
Frequency Response Characteristic		See Fig. 2	_
Memo Standard test condition ((		RL=2.2kΩ, Vs=2 (@f=1kHz, Pin=1Pa, ( L=50cm)	



#### 2. STANDARD TEST CIRCUIT



## 3. TYPICAL FREQUENCY RESPONSE IN ANECHOIC CHAMBER





## 4. RELIABILITY

	Item	Test conditions	Evaluation standard
1	Hi-Temp.Test	The microphone unit must be subjected to +85℃ for 100 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 $^{\circ}$ C 0.5H $\rightarrow$ room temp 1H $\rightarrow$ -40 $^{\circ}$ C 0.5H $\rightarrow$ room temp 1H]at 10 cycles.	
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.	After any of the tests, the sensitivity of the microphone unit shall not change more than $\pm 3$ dB from initial value and shall keep its initial operation and appearance.
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 5 times from a 1.0-meter-height without packaging.	
7	Storage Temperature	-35℃~+60℃ R.H .less than 90%	
8	Operating Temperature	-35℃~+60℃ R.H. less than 90%	
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.