

This specification applies to the electret condenser microphone outlined within this document.

Model Number: **MD9745APZ-F**

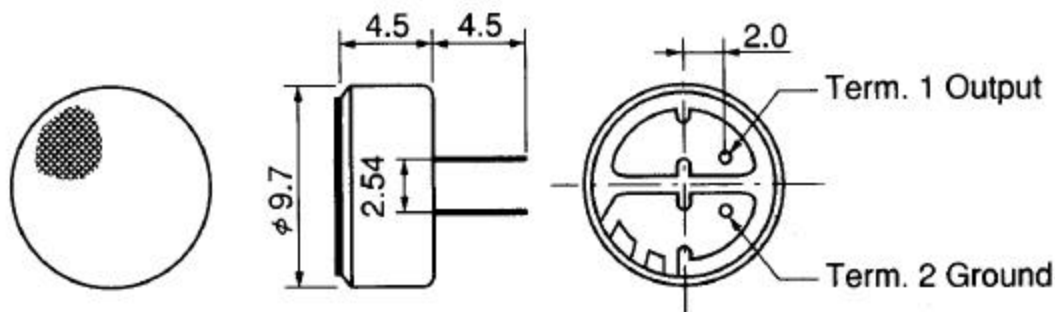
Size: Ø 9.7 x 4.5

Directivity: OMNI-DIRECTIONAL

Board Type: PIN

Capacitor(s) None

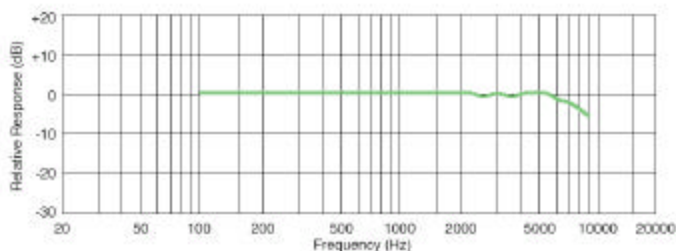
Dimensions: (All dimensions are in mm)



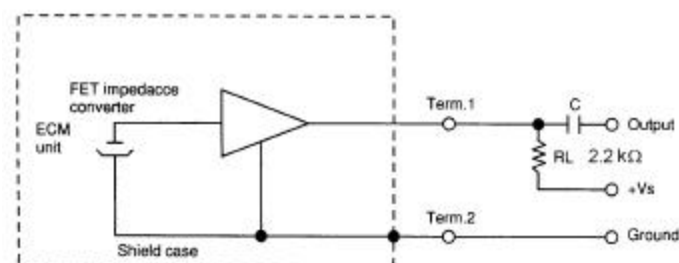
Electrical Specifications

CHARACTERISTIC	SPECIFICATION VALUES	NOTES
Directional Characteristic	OMNI-DIRECTIONAL	
Electret Type	CHRG DIA/FOIL	
Sensitivity	-44 dB $\pm$ 2.0	(0dB=1 V/Pa, 1kHz)
Impedance	2,200 k Ω	Less than
Frequency Range	100-10,000 Hz	Hz
Max input Sound Level	120dB	S.P.L.
Standard Operating Voltage	2.0 V	V
Maximum operating Voltage	10 V	V
Current Consumption	0.500 mA	Max
Sensitivity Reduction	Within -3dB at 1.5V	
S/N Ratio	More than 55 dB	
Capacitor(s)	None	

Frequency Response Curve

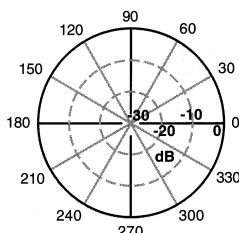


Schematic Diagram



Polar Pattern:

Polar plot shows response of unit at 1000 Hz.



Environmental Specifications

Note: After any of the following tests performed, the sensitivity of the microphone unit shall not deviate more than $\pm 3\text{dB}$ from its initial value. The microphone shall maintain its initial operation and appearance.

Operating Temperature:	-25°C to +55°C
Storage Temperature:	-25°C to +60°C
Humidity:	+40°C at 95%RH for 240 hrs
Temperature Cycles:	After exposure at -25°C for 30 minutes, at +20°C for 10 minutes, at +60°C for 30 minutes, at +20°C for 10 minutes, 5 cycles. (The measurement to be done after 2 hrs of conditioning at +20°C.)
Low Temperature:	The microphone unit must operate within its sensitivity specifications after subjected to the following conditions: -25°C for 240 hrs, and exposed to room temperature for 2 hrs.
High Temperature:	The microphone unit must operate within its sensitivity specifications after subjected to the following conditions: +60°C for 240 hrs, and exposed to room temperature for 2 hrs.
ESD:	10kV
Vibration:	The microphone to have no interference in operation after vibrations, 10Hz to 55Hz for 1 minute full amplitude 1.52mm, for 2 hours at three axes.
Impact:	The microphone unit must operate when dropped three times once on each axis from a height of 1m onto a metal plate.
Solder Pull:	Not Applicable

The information contained in this literature is based on our experience to date and is believed to be reliable and subject to change without notice. It is intended as a guide for use by persons having technical skill at their own discretion and risk. We do not guarantee favorable results or assume any liability in connection with its use. Dimensions contained herein are for reference purposes only. For specific dimensional requirements consult the factory. This publication is not to be taken as a license to operate under, or a recommendation to infringe any existing patents. This supersedes and voids all previous literature, etc.