



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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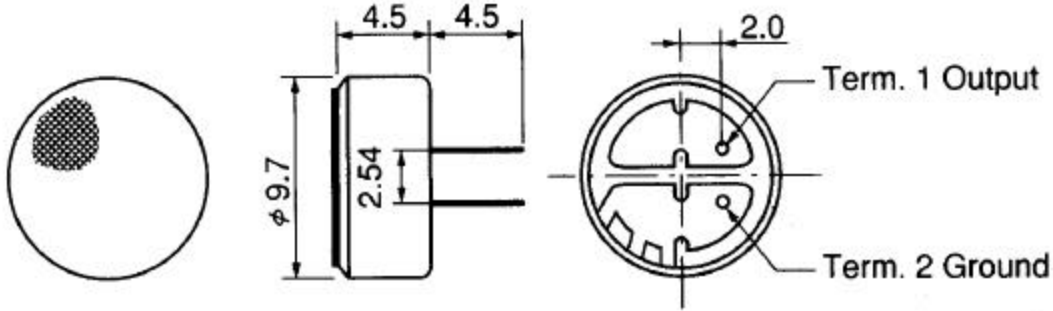


This specification applies to the electret condenser microphone outlined within this document.

Model Number: **MD9745APZ-F**

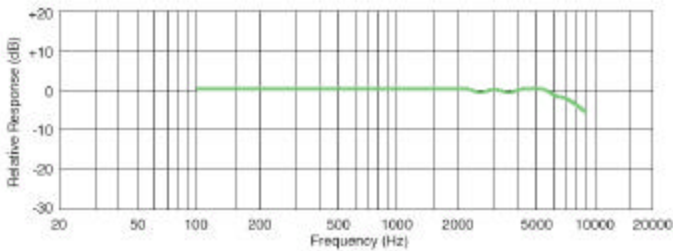
Size: Ø 9.7 x 4.5  
 Directivity: OMNI-DIRECTIONAL  
 Board Type: PIN  
 Capacitor(s) None

Dimensions: (All dimensions are in mm)

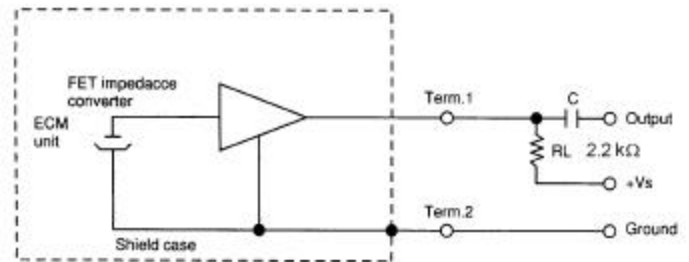


Electrical Specifications		
CHARACTERISTIC	SPECIFICATION VALUES	NOTES
Directional Characteristic	OMNI-DIRECTIONAL	
Electret Type	CHRG DIA/FOIL	
Sensitivity	-44 dB ± 2.0	(0dB=1 V/Pa, 1kHz)
Impedance	2,200 kΩ	Less than
Frequency Range	100-10,000 Hz	Hz
Max input Sound Level	120dB	S.P.L.
Standard Operating 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

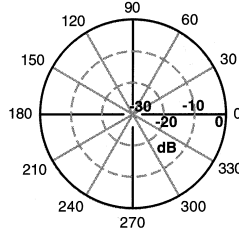


Schematic Diagram



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

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