



PRODUCT INFORMATION

PART #:	CEM-C9745JAD442P2.54R	Revision:	3-2015
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Omni-Directional Foil Electret Condenser Microphone

DESCRIPTION:

Omni Directional Electret Microphone, 9.7 mm diameter and 4.5 mm high, Power Supply 5.0 V max, External Resistance Loading of 680 Ω , and sensitivity of -44 dB. Termination: PC Pins, 4.5 mm Long, 2.54 mm Spacing. Lead Free RoHS Compliant

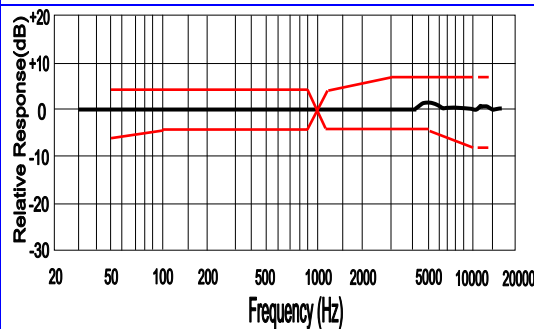
SPECIFICATIONS:

Direction:	Omni Directional Electret	Minimum Direction sensitivity:	10 dB at: 180°, 1 K Hz.
Operating Voltage Range:	Vs= 1.0 Vdc ~ 10.0 Vdc	Power Supply (Vs):	1.5 V
Frequency Range:	100 ~ 10,000 Hz.	Maximum Current:	0.5 mA
Sensitivity:	- 44 \pm 2.0, (0 dB = 1V / Pa) at 1K Hz.	Minimum Sensitivity to Noise Ratio:	58 dB
Sensitivity Reduction:	3.0 V to 2.0 V -3 dB	Maximum input S.P.L.:	110 dB at 1.0 KHz, THD <1%
Operating Temperature:	-20°C to + 60°C	Storage Temperature:	-40°C to + 75°C
Loading Resistance (RL):	External, 680 Ω at Vs = 1.5 V, Max. 2,200 Ω	Built in Capacitors:	None
Termination:	PC Pins, 4.5 mm Long, 2.54 mm Spacing	Housing Material:	Al-Mg Alloy.
Dimensions:	Length / Diameter: 9.7 mm ϕ	Width: mm	Height: 4.5 mm
Approximate Weight:	0.7 grams	Options:	Compliance: RoHS, Lead Free

Reliability: Parts should conform to original performance within ± 3 dB, after 3 hours of recovery period.

Thermal Operating Cycle Test:	250 hours continuous operation at Nominal Power Supply, each at minimum & maximum rated Operating Temperatures.
Thermal Storage Cycle Test:	250 hours, each at minimum & maximum rated Storage Temperatures. Allow 3 hours of recovery period.
Thermal Shock Test:	Put in minimum operating temperature for 1 hour than move to +20°C for 5 min. than at maximum operating temperature for 1 hour. Than back to +20°C 5 min. Repeat for 5 cycles.
Humidity Test:	240 Hours at +40°C \pm 2°C. 90-95% RH
Vibration Test:	2 Hours at 1.5mm with 10 to 50Hz. Of vibration frequency to each of 3 perpendicular direction
Drop Test:	Dropped naturally from 1.0m height onto the surface of 20mm wooden board. 2 directions— upper and side of the part are applied
Termination Strength:	Terminals should withstand a 1.0 Kg. pull test for up to 1 minute.
Life Test:	At rated voltage in room temperature continuously for 1,000 hours
Warranty:	For a period of one (1) year from date of shipping under normal operations conditions

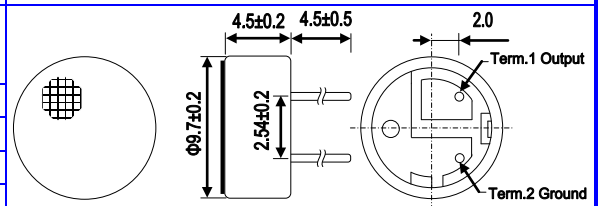
Typical Frequency Response:



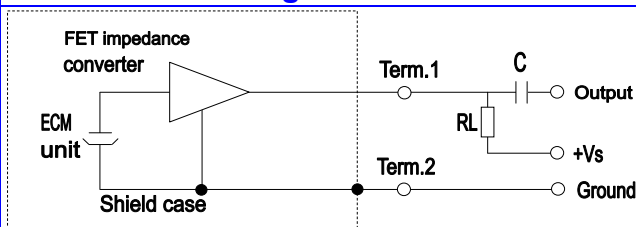
Microphone Response Toll Window

Frequency (Hz)	Lower Limit (dB)	Upper Limit (dB)
50	-6	+3
100	-3	+3
800	-3	+3
1000	0	0
1200	-3	+3
3000	-3	+8
5000	-3	+8
10000	-8	+8

Dimensions: Units in: mm Tolerance: ± 0.3 mm




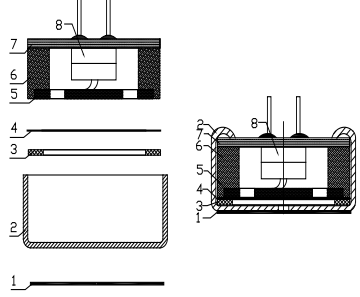

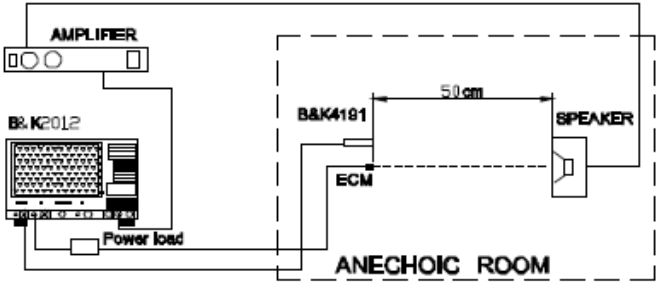



Schematic Drawing:



$R_L = 680 \Omega$
$V_S = 1.5 V$
$C = 1 \mu F$
$C1 = \text{None}$
$C2 = \text{None}$

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Packaging:				Construction Materials:																																															
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Revision	Description	By	Date
1-2014	Corrected Part Number	Walter Sargent	2/20/2014
2-2015	Updated termination	Walter Sargent	2/25/2015
3-2015	Updated height in description	Walter Sargent	6/2/2015