

Address:
Block 9, Shuiwei Ind Zone, Shuiwei New
Village, Dalang, Longhua, Shenzhen,
Guangdong, China 518109

Tel: (86)755-28121370 / 28121371 / 28109416 / 28109419
Fax: (86)755-28109417
E-mail: rd@horn.com.cn
Website: www.horn.com.cn

CUSTOMER : Digi-Key Corporation

APPROVAL SHEET

PRODUCT NAME	PART NUMBER	DIMENSION	REMARK
Electret Condenser Microphone	EM9765P-42	$\phi 9.7 \times 6.5$ (mm)	Pin Type

APPROVED BY	CHECKED BY	ISSUED BY

APPROVED BY

DATE:

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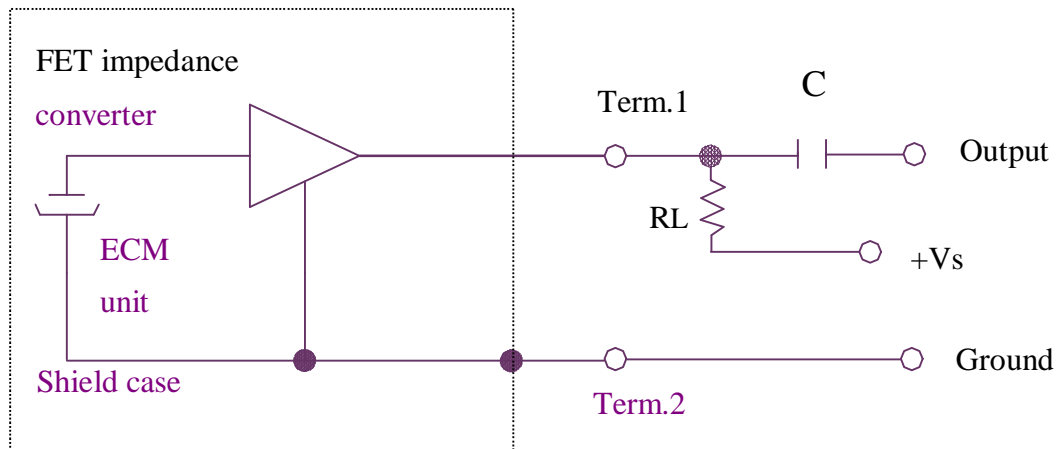
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SPECIFICATION

Item	Symbol	Test conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1KHz. P _{in} =1Pa	-44	-42	-40	dB 0dB=1V/Pa
Directivity	Omnidirectional					
Impedance	Z _{out}				2.2	K Ω
Input sound Pressure level	S.P.L				100	dB
Operation voltage	V _s	-	1.0	4.5	10	V
Current consumption	I	f=1KHz. P _{in} =1Pa			500	uA
Sensitivity reduction	△S	f=1KHz. P _{in} =1Pa V _s =4.5→1.5V			-3	dB
S/N ratio	S/N(A)	f=1KHz. P _{in} =1Pa A=curve	60			dB

Measurement Circuit (Test Condition V_s=4.5V R_L=2.2K Ω

T_a=20°C R.H=65%)

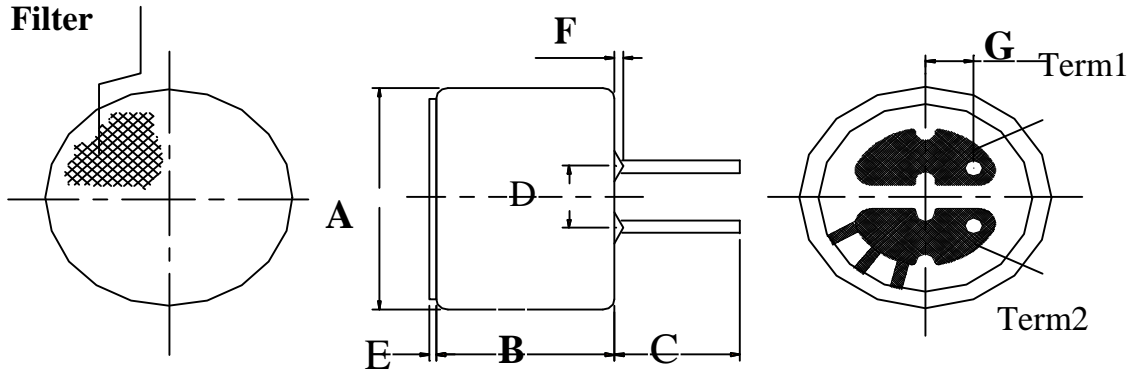


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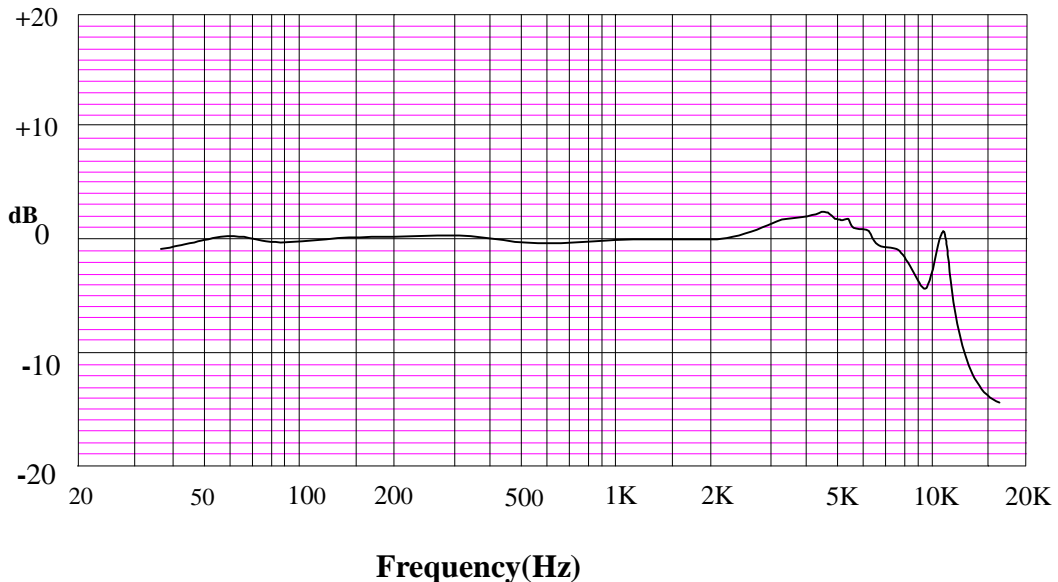
Dimensional Drawing

unit: mm



PART	MIN	STANDARD	MAX	REMARK
A	φ 9.5	φ 9.7	φ 9.9	
B	6.3	6.5	6.7	
C	9.5	11	12.5	
D	-	2.54	-	
E	-	-	0.2	
F	-	-	0.8	
G	1.8	2.0	2.2	

Typical Frequency Response Curve



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Ambient condition

(1) Operating condition

Ambient temperature: $-10^{\circ}\text{C} \sim +45^{\circ}\text{C}$
Relative humidity: $\leq 85\%$

(2) Storage condition

Ambient temperature: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$
Relative humidity: 45%

Reliability Test

1) Vibration Test

To be no interference in operation after vibration of full amplitude 2mm for 30 minutes at three axis, the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity.

2) Drop Test

To be no interference in operation after dropped to concrete floor each time from 1 meter height of three directions in state of packing, the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity.

3) High Temperature Test

To be no interference in operation after high temperature test $70 \pm 3^{\circ}\text{C}$ for 48 hours. the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity.

4) Isotherm & Iso-humidity Test

To be no interference in operation after storage test at temperature $40 \pm 2^{\circ}\text{C}$ and relative humidity ($93\% \pm 2 \sim 3\%$) for 48 hours. the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity. the test is performed at temperature 20°C after operation for 2 hours.

5) Low Temperature Test

To be no interference in operation after high temperature test $-20 \pm 3^{\circ}\text{C}$ for 48 hours, the sensitivity to be within $\pm 3\text{dB}$ from initial sensitivity.

6) Temperature Cycle Test

After exposure at $+55 \pm 2^{\circ}\text{C}$ for 1 hour, at $20 \pm 2^{\circ}\text{C}$ for 1 hour, at $-10 \pm 2^{\circ}\text{C}$ for 1 hour, at $20 \pm 2^{\circ}\text{C}$ for 1 hour, with 5 cycles. Change of sensitivity within $\pm 3\text{dB}$ from initial measuring should be done after 2 hours exposed to $20 \pm 2^{\circ}\text{C}$.

7) Collision Test

After collided with the acceleration $100 \pm 10\text{m/s}$, at the vertical & horizontal directions for 1000 ± 10 times, at the state of packing. Change of sensitivity within $\pm 3\text{dB}$ from initial.