HORN 深圳市豪恩实业有限公司
SHENZHEN HORN INDUSTRIAL CO。, LTD。

SPEC. SHEET NO：00011237

Address:
BLOCK 1, DEHUINA INDUSTRIAL DISTRICT,
MINGZHI RD LONGHUA, SHENZHEN,
GUANGDONG, CHINA 518131

TEL：（86）755-8192552 8190943
FAX：（86）755-8192557
E-mail: szwwiner @ public.szptt.net.cn
HOME PAGE:www.globalsources. com/hornmic.co

CUSTOMER: Digi-Key Corporation

APPROVE SHEET

PRODUCT NAME	TYPE	DIMENSION	
Electret Condenser Microphone	EM4530-44	Ø4.5×3.0(mm)	

APPROVED： 李華 DATE: 2000.11.25

CHECKED BY: 陳小陳 DATE: 2000.11.25

ISSUED BY: 陳為波 DATE: 2000/11/25

深圳市豪恩实业有限公司 SHENZHEN HORN

APPROVED BY:

DATE:

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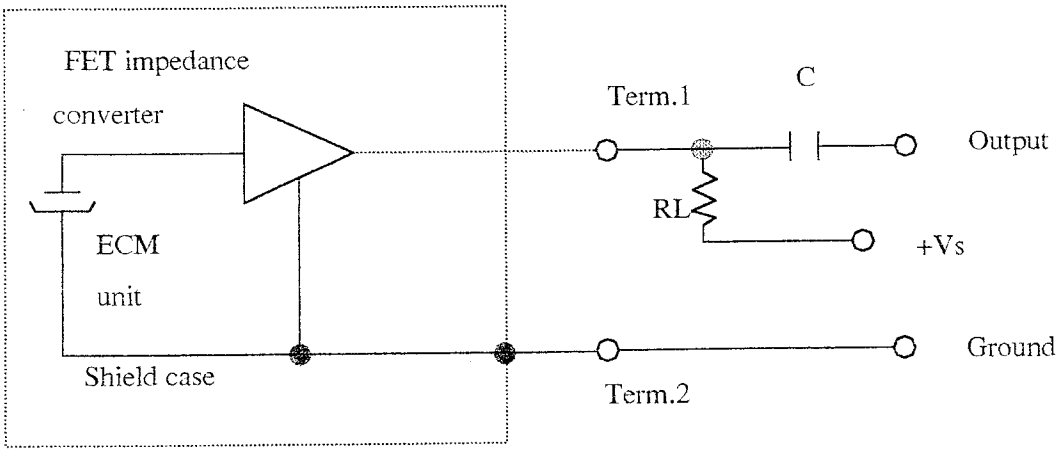
SPECIFICATION

Item	Symbol	Test conditions	Min	Standard	Max	Unit
Sensitivity	S	f=1KHz. Pin=1ubar	-47	-44	-41	dB (0dB=1V/Pa)
Directivity	Omnidirectional					
Impedance	Zout				2.2	KΩ
Current consumption	I	f=1KHz. Pin=1ubar			500	uA
Sensitivity reduction	ΔS	f=1KHz. Pin=1ubar. Vs=4.5→1.5V			-3	dB
S/N ratio	S/N(A)	f=1KHz. Pin=1ubar. A=curve	40			dB

Measurement Circuit (Test Condition Vs=4.5V RL=2.2KΩ

Ta=20℃ R.H=65%)



Dimensional Drawing unit: m

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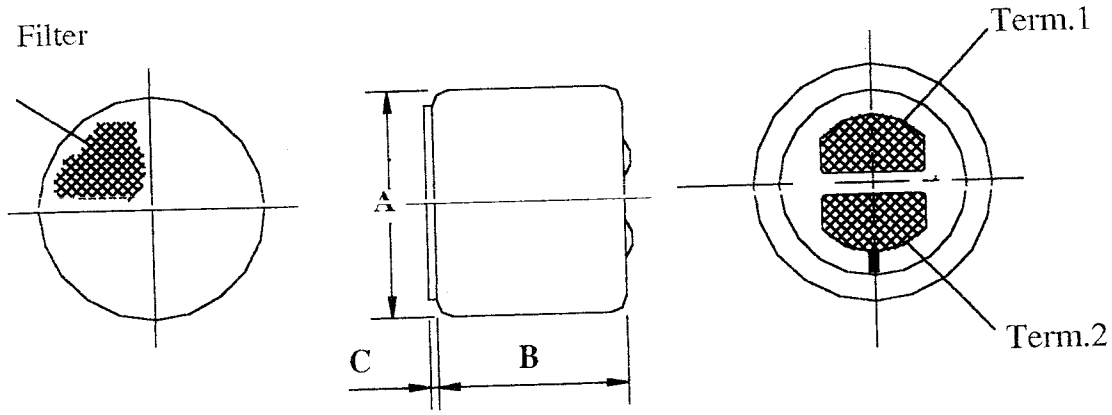


PART	MIN	TYPE	MAX	REMARK
A	Ø4.3	Ø4.5	Ø4.7	
B	2.8	3.0	3.2	
C	-	-	0.2	

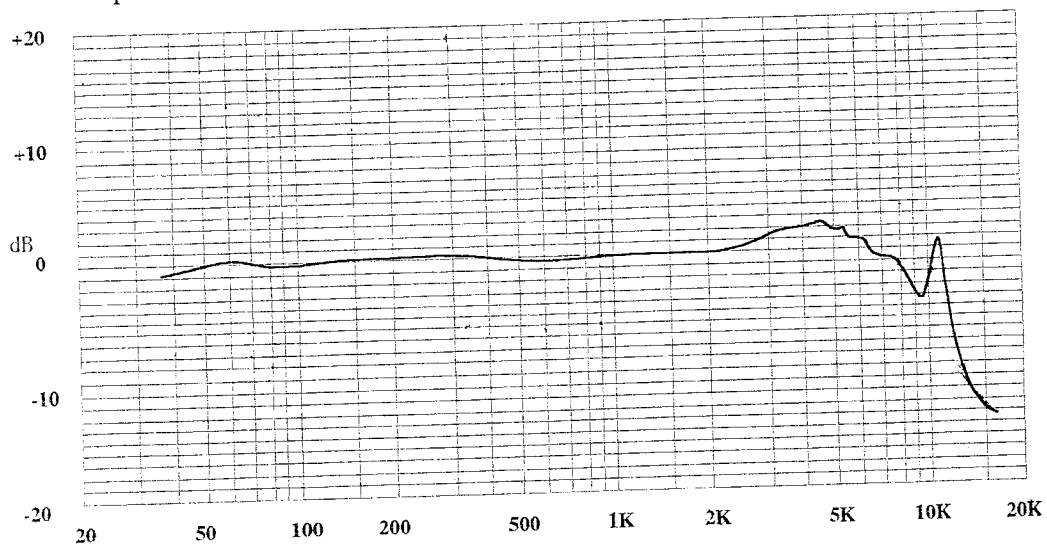
Typical Frequency Response Curve

Ambient condition

(1) Operating condition

Relative humidity: ≤ 85%

Ambient temperature: -10℃～+45℃



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(2) Storage condition Relative humidity: 45%

Ambient temperature: -20℃ ~+60℃

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 +/-3dB 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 +/-3 dB from initial sensitivity.

3) High Temperature Storage:

To be no interference in operation after high temperaturetest 70℃+/-3℃ for 48 hours. The sensitivity to be within+/-3dB from initial sensitivity.

4) Isotherm & Iso-humidity Storage

To be no interference in operation after storage test at temperature 40℃+/-2℃ and relative humidity(93%+/-2~3%) for 48 hours, the sensitivity to be within +/-3dB from initial sensitivity, the test is performed at temperature20℃fter operation for 2 hours.

5) Low Temperature Storage

To be no interference in operation after test at temperature -20℃+/-3℃ for 48 hours, the sensitivity to be within +/_3dB from initial sensitivity

6) Temperature Cycle Test

After exposure at 55+/-2℃for 1 hour, at 20+/-2℃ for 1 hour. at -10+/-2℃ for 1 hour, at 20+/-2℃for 1 hour, with 5 cycles. Change of sensitivity within +/-3dB from initial measuring should be done after 2 hours exposed to 20℃±2℃).

7) Collision Test

After collided with the acceleration 100+/-10m/s, at the vertical & horizontal directions for 1000+/-10 times. at the state of packing. Change of sensitivity within +/-3dB form initial.