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## ECM APPROVAL SHEET

NO: JM200507

<b>ITEM</b>	<b>PDMIC35 Cartridge</b>	
<b>SPECIFICATIONS</b>	<b>TSB-160A</b>	
<b>DIMENSIONAL</b>	<b>Ø16.1×6.2</b>	
<b>SENSITIVITY</b>	<b>-45±2dB(0dB=1V/Pa,at 1KHz)</b> <b>1.5V 2.2KΩ</b>	
<b>VENDOR</b>		<b>CUSTOMER</b>
<b>CHECKED BY</b>	<b>ISSUED BY</b>	<b>APPROVED BY</b>

- PLEASE SEND US A COPY,IF YOU APPROVE.

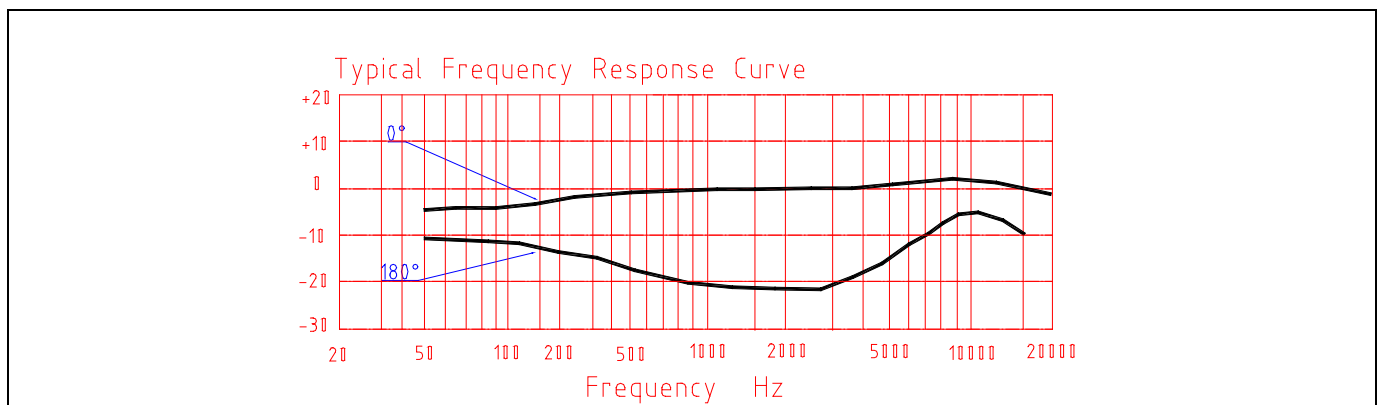
PRODUCT SPECIFICATIONS

TYPE:TSB-160A

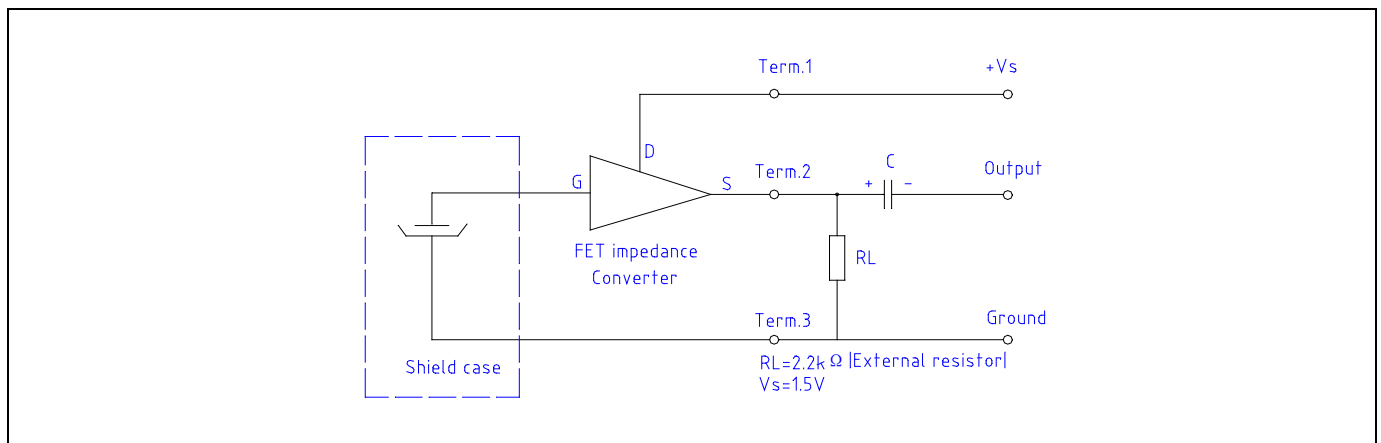
**BACK ELECTRICAL CHARACTERISTICS** ( $V_s=1.5V$   $R_L=2.2K\ \Omega$   $T_e=20^\circ C$   $R.H.=60\%$ )

PARAMETER	SYMBOL	CONDITION	LIMITS			UNIT
			Min	Center	Max	
Sensitivity	S	f=1KHZ, S.P.L=1Pa 0dB=1V/Pa	-47	-45	-43	dB
Output impedance	Zout	f=1KHZ			2.2	K $\Omega$
Current Consumption	IDss	VS=1.5V RL=2.2K $\Omega$			500	$\mu$ A
Directivity	Unidirectional					
Signal to Noise Ratio	S/N	S:(f=1KHz, S.P.L=1Pa) N:(A-Weighted curve)	66			dB
Decreasing Voltage	$\Delta$ S-VS	VS=1.5V to 1.0V			-3	dB
Sensitivity $\Delta 0^\circ$ $\sim 180^\circ$			15			dB
Operating voltage			1.0		10	V
Maximum input S.P.L			120			dB
Frequency response	50 ~ 20,000					HZ

**TYPICAL FREQUENCY RESPONSE CURVE**

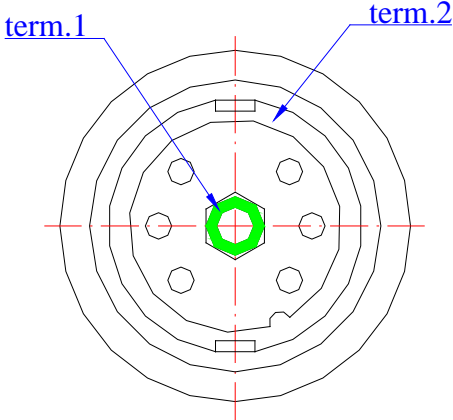
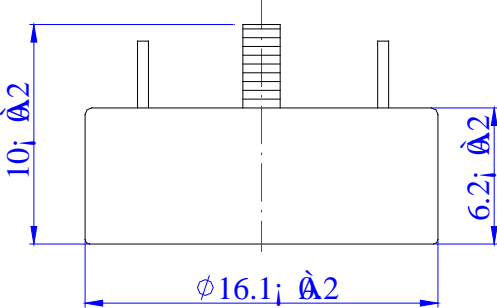
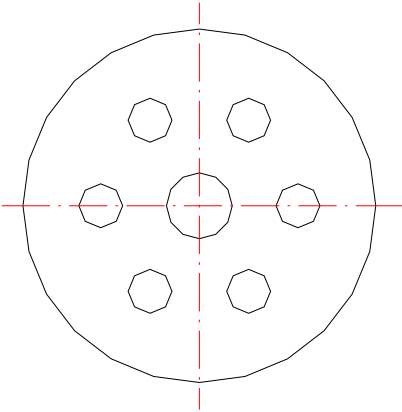


**MEASUREMENT CIRCUIT**



**APPEARANCE & DIMENSIONS**

Unit:mm



DIMENSIONS: 16.1X6.2mm  
ECM: TSB-160A

**MECHANICAL CHARACTERISTICS**

Soldering Heat Shock	To be no interference in operation after soldering Heat shock, temperature 300°C ±5°C for 3 ± seconds.
Terminal Mechanical Strength	To be no interference in operation after pulled the terminal with 0.5 kg strength for 3 seconds.

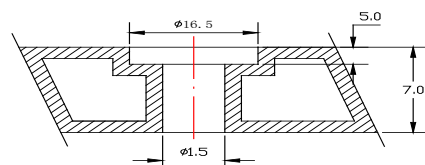
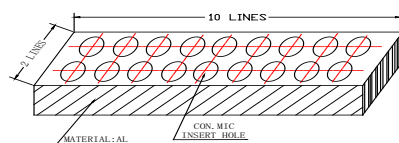
## RELIABILITY TEST

Vibration Test	To be no interference in operation after vibrations, 10HZ to 50 HZ for 1 minute full amplitude 1.52mm, for 2 hours at 3 axes.
Drop Test	To be no interference in operation after dropped to concrete floor each 1 time from 1 meter height at three directions in state of packing
Temperature Test	After exposure at 60°C for 200 hours, the sensitivity to be within ±3dB from the initial value (The measurement to be done after 2 hours of conditioning at 20 °C)
	After exposure at -25°C for 200 hours, the sensitivity to be within ±3dB from the initial value (The measurement to be done after 2 hours of conditioning at 20 °C)
Humidity Test	After exposure at 40 and 90~95% relative humidity for 200 hours, the sensitivity to be within ±3 dB from the initial sensitivity (The measurement to be done after 2 hours of conditioning at 20°C)
Temperature Cycle Test	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 sensitivity to be within ±3 dB from the initial sensitivity. (The measurement to be done after 2 hours of conditioning at 20°C)

## REGARDING THE SOLDERING OPERATION

Every Mic. has installed FET., The FET. is easy broken by strong heat and static electricity, so when you working on, pls be attention that :

1. Recommend using constant branding iron in 15 ~ 30W, and in temperature range 240 ~ 270°C.
2. Soldering time not over 3 seconds.
3. Don't stay any hole or dust when soldering.
4. To avoid the Mic. be broken by static electricity, the people and working station should install prevent static electricity equipment.
5. Pls using the easy dissipate heat material (Such as Aluminum...) to be the soldering plate. The appearance as follow :



A good package will help Mic. on using normal transportation. Pls pay more attention to prevent humid, shake, sunlight and heavy press.

ESC End

# D A A S Frequency Response

i 07.08.00 17 04

Input sel.: Line  $\pm 2.00$  V

M0: TSB-160A02C NoName

