

**PART NUMBER:** CMR-5054TB-A**DESCRIPTION:** electret condenser microphone

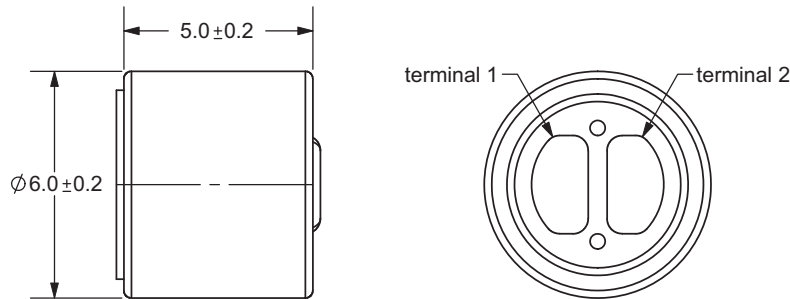
SPECIFICATIONS

directivity	noise-canceling	
sensitivity (S)	-54 \pm 3 dB	f = 1KHz, 1Pa 0dB = 1V/Pa
sensitivity reduction (Δ S-Vs)	-3 dB	f = 1KHz, 1Pa Vs = 2 ~ 1.5 V dc
operating voltage	2 V dc (standard), 10 V dc (max.)	
output impedance (Zout)	2.2 K Ω	f = 1KHz, 1Pa
operating frequency (f)	100 ~ 10,000 Hz	
current consumption (IDSS)	0.5 mA max.	Vs = 2 V dc RL = 2.2K Ω
signal to noise ratio (S/N)	56 dBA	f = 1KHz, 1Pa A-weighted
operating temperature	-20 ~ +70° C	
storage temperature	-20 ~ +70° C	
dimensions	ϕ 6.0 x 5.0 mm	
weight	0.30 g max.	
material	Al	
terminal	terminal type (hand soldering only)	
RoHS	yes	

note:

We use the "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C. (International Electrotechnical Commission). The sensitivity of "Pa" will increase 20dB compared to the "ubar" indication. Example: -60dB (0dB = 1V/ubar) = -40dB (1V/Pa)

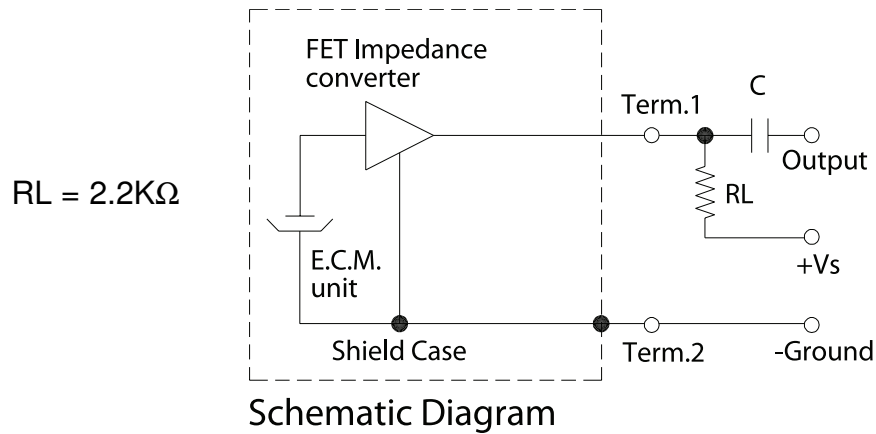
APPEARANCE DRAWING

tolerances not shown: \pm 0.3mm

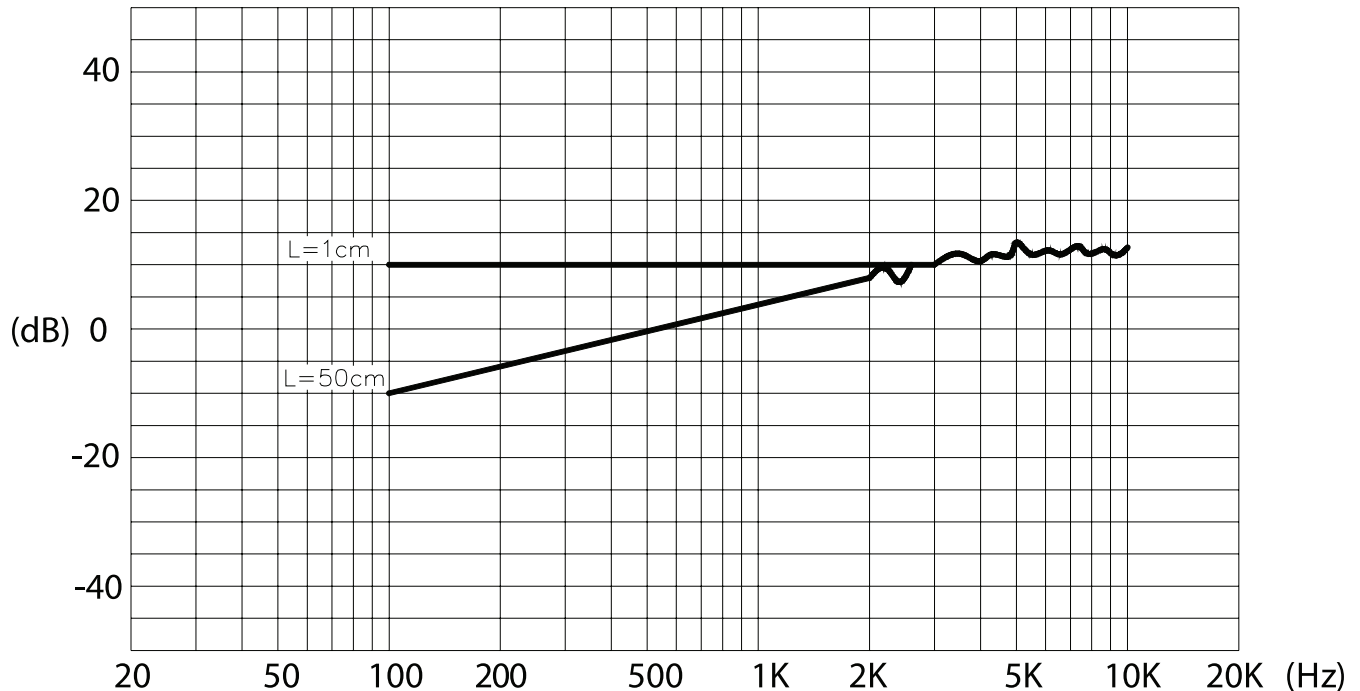
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MEASUREMENT CIRCUIT



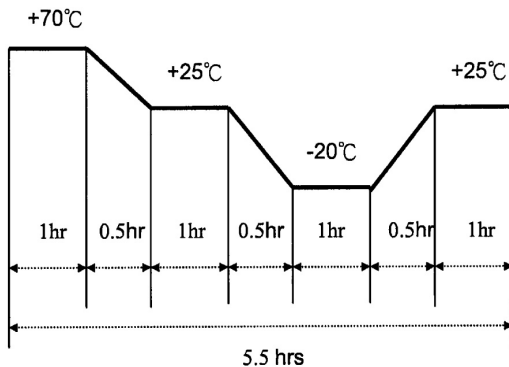
FREQUENCY RESPONSE CURVE



PART NUMBER: CMR-5054TB-A**DESCRIPTION:** electret condenser microphone**MECHANICAL CHARACTERISTICS**

item	test condition	evaluation standard
soldering heat resistance	Soldering iron of $270 \pm 5^{\circ}\text{C}$ should be placed on the terminal for 2 ± 0.5 seconds.	No interference in operation.
PCB wire pull strength	The pull force will be applied to double lead wire: Horizontal 4.9N (0.5kg) for 30 seconds	No damage or cutting off.
vibration	The part will be measured after applying a vibration amplitude of 1.5 mm with 10 to 55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours.	After any tests, the sensitivity should be within $\pm 3\text{dB}$ compared to the initial measurement.
drop test	The part will be dropped from a height of 1 m onto a 20 mm thick wooden board 3 times in 3 axes (X, Y, Z) for a total of 9 drops.	

ENVIRONMENT TEST

item	test condition	evaluation standard
high temp. test	After being placed in a chamber at $+70^{\circ}\text{C}$ for 72 hours.	The part will be measured after being placed at $+25^{\circ}\text{C}$ for 6 hours. After any tests, the sensitivity should be within $\pm 3\text{dB}$ compared to the initial measurement.
low temp. test	After being placed in a chamber at -20°C for 72 hours.	
humidity test	After being placed in a chamber at $+40^{\circ}\text{C}$ and $90 \pm 5\%$ relative humidity for 240 hours.	
temp. cycle test	<p>The part shall be subjected to 10 cycles. One cycle will consist of:</p>  <p>The diagram illustrates a temperature cycle test profile. It starts at $+70^{\circ}\text{C}$ for 1 hour, then ramps down to $+25^{\circ}\text{C}$ in 0.5 hours. It remains at $+25^{\circ}\text{C}$ for 1 hour, then ramps down to -20°C in 0.5 hours. It remains at -20°C for 1 hour, then ramps up to $+25^{\circ}\text{C}$ in 0.5 hours. Finally, it remains at $+25^{\circ}\text{C}$ for 1 hour. The total duration of one cycle is 5.5 hours.</p>	

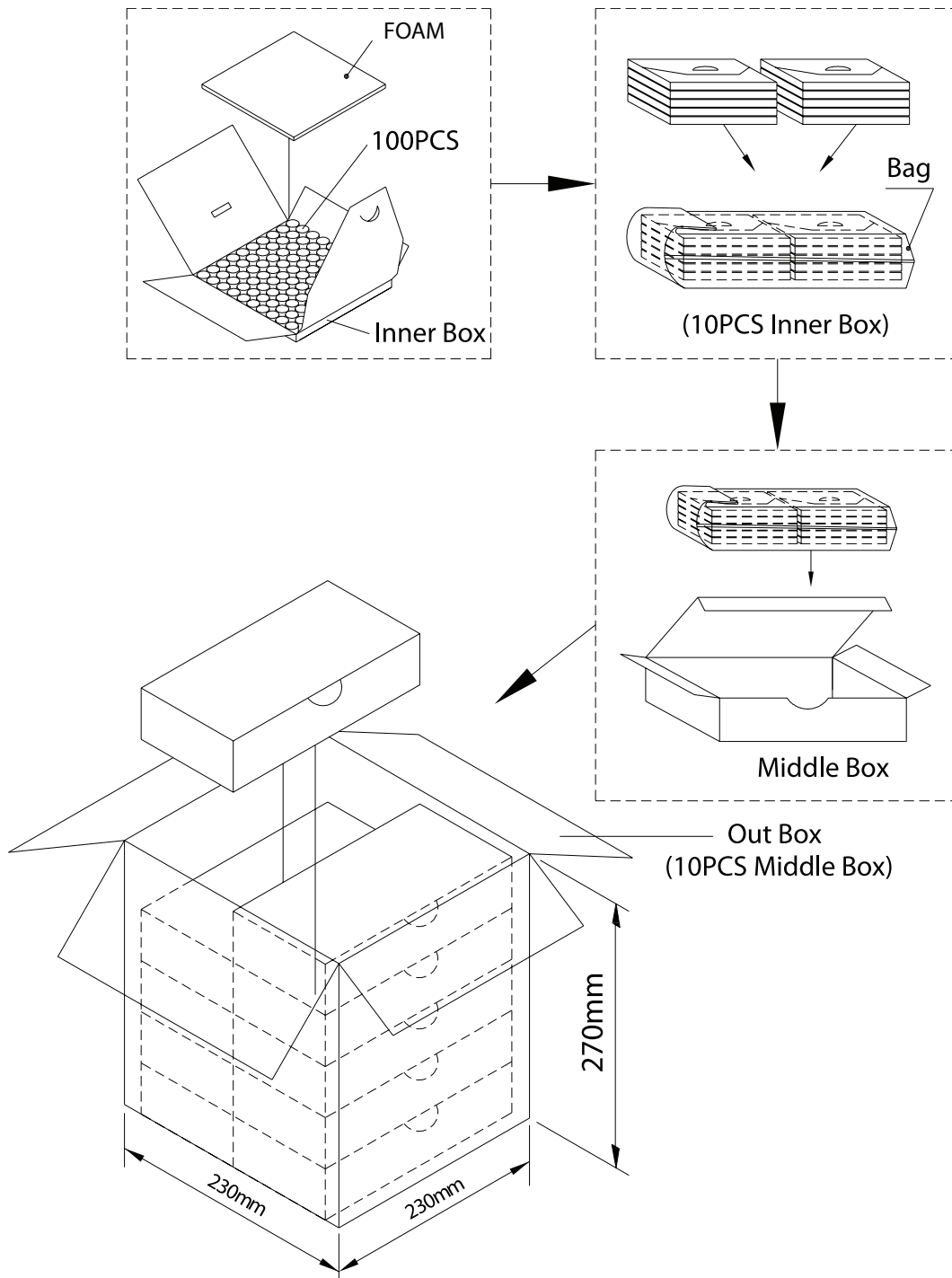
TEST CONDITIONS

standard test condition	a) temperature: $+5 \sim +35^{\circ}\text{C}$	b) humidity: 45 - 85%	c) pressure: 860-1060 mbar
judgement test condition	a) temperature: $+25 \pm 2^{\circ}\text{C}$	b) humidity: 60 - 70%	c) pressure: 860-1060 mbar

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PACKAGING



Inner Box	100mmx100mmx8mm	1x100PCS=100PCS
Middle Box	205mmx106mmx52mm	100PCSx10=1,000PCS
Out Box	230mmx230mmx270mm	1,000PCSx10=10,000PCS

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