

## MODEL: CMB-6544PF | DESCRIPTION: ELECTRET CONDENSER MICROPHONE

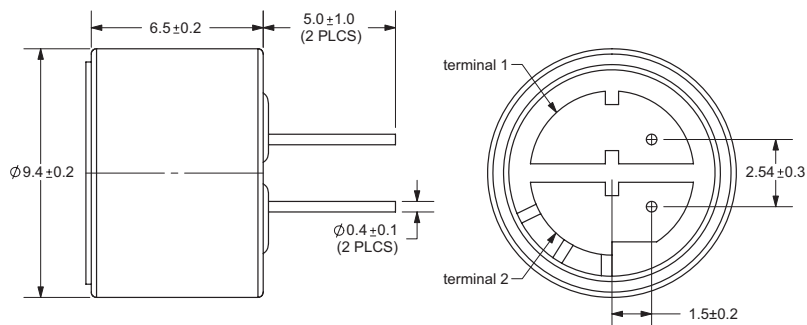
### SPECIFICATIONS

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity (S)	f = 1 kHz, 1 Pa, 0 dB = 1 V/1 Pa	-47	-44	-41	dB
operating voltage			4.5	10	Vdc
output impedance (Zout)	f = 1 kHz, 1 Pa		1		KΩ
sensitivity reduction (ΔS-Vs)	f = 1 kHz, 1 Pa, Vs = 4.5 ~ 1.5 Vdc		-3		dB
frequency (f)		20		20,000	Hz
current consumption (LDSS)	Vs = 4.5 Vdc, RL = 1 KΩ			0.5	mA
signal to noise ratio (S/N)	f = 1 kHz, 1 Pa, A-weighted		60		dBa
operating temperature		-40		70	°C
storage temperature		-40		70	°C
dimension	ø9.4 x 6.5 mm				
weight				0.7	g
material	AL				
terminal	pin type (hand soldering only)				
RoHS	yes				

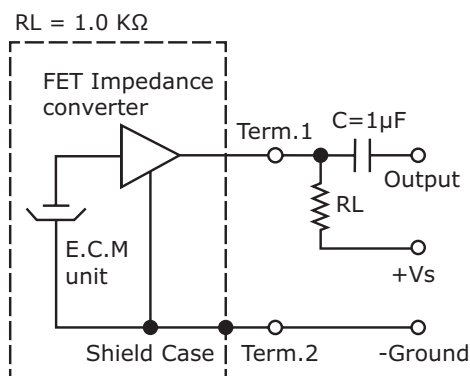
note: We use the "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C. (International Electrotechnical Commission). The sensitivity of "Pa" will increase 20dB compared to the "ubar" indication. Example: -60dB (0dB = 1V/ubar) = -40dB (1V/Pa)

### MECHANICAL DRAWING

unit: mm

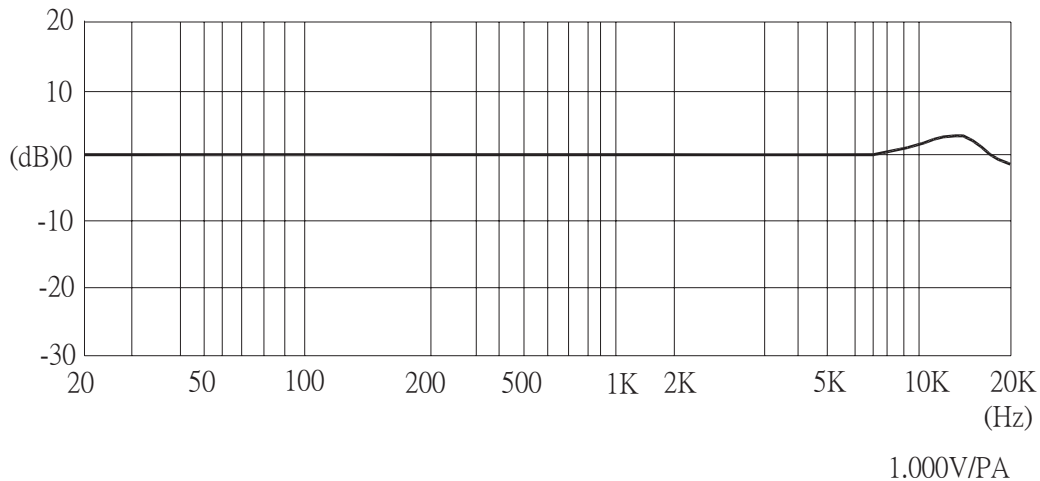


### MEASUREMENT CIRCUIT



Schematic Diagram

## FREQUENCY RESPONSE CURVE



## 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 $2 \pm 0.5$ seconds.	No interference in operation.
PCB wire pull strength	The pull force should be applied to double lead wire: Horizontal 4.9 N (0.5 kg) for 30 seconds	No damage or cutting off.
vibration test	The part should be measured after a vibration amplitude of 1.5 mm with 10~55 Hz band of vibration frequency to each of the 3 perpendicular directions for 2 hours.	After any tests, the sensitivity should be within $\pm 3$ dB of the initial sensitivity.
drop test	The part without packaging is subjected to 3 drops on each axis from the height of 1 m onto a 20 mm thick wooden board.	

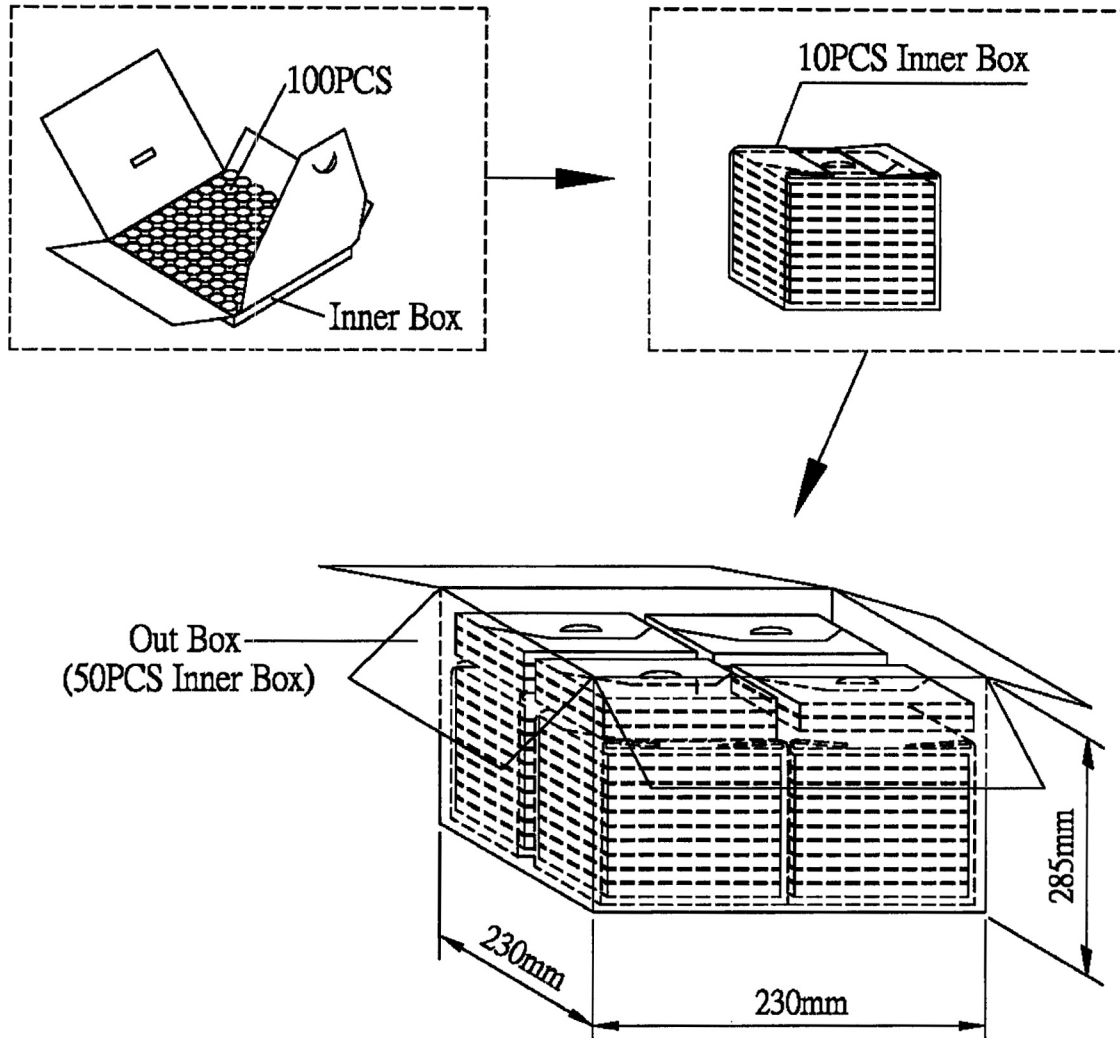
## ENVIRONMENT TEST

item	test condition	evaluation standard
high temperature test	After being placed in a chamber at $+70^\circ\text{C}$ for 72 hours.	After any tests and 6 hours of conditioning at $+25^\circ\text{C}$ , the sensitivity should be within $\pm 3$ dB of the initial sensitivity.
low temperature test	After being placed in a chamber at $-20^\circ\text{C}$ for 72 hours.	
thermal shock	After being placed in a chamber at $+40^\circ\text{C}$ and $90 \pm 5\%$ RH for 240 hours.	
temperature cycle test	The part will be subjected to 10 cycles. One cycle will consist of: $+70^\circ\text{C}$	

## TEST CONDITIONS

standard test conditions	a) Temperature: $+5 \sim +35^\circ\text{C}$	b) Humidity: 45 ~ 85%	c) Pressure: 860 ~ 1060 mbar
judgement test conditions	a) Temperature: $+25 \pm 2^\circ\text{C}$	b) Humidity: 60 ~ 70%	c) Pressure: 860 ~ 1060 mbar

## PACKAGING



Inner Box	100mmx100mmx8mm	1x100PCS=100PCS
Out Box	230mmx230mmx285mm	100PCSx50=5,000PCS

## REVISION HISTORY

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rev.	description	date
1.0	initial release	05/15/2008
1.01	new template applied	09/15/2011
1.02	updated drawing	06/26/2012
1.03	widened operating temperature and storage temperature ranges	01/22/2014
1.03	brand update	01/17/2020

The revision history provided is for informational purposes only and is believed to be accurate.

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