CUDEVICES

MODEL: CMA-4544PF-W | **DESCRIPTION:** ELECTRET CONDENSER MICROPHONE

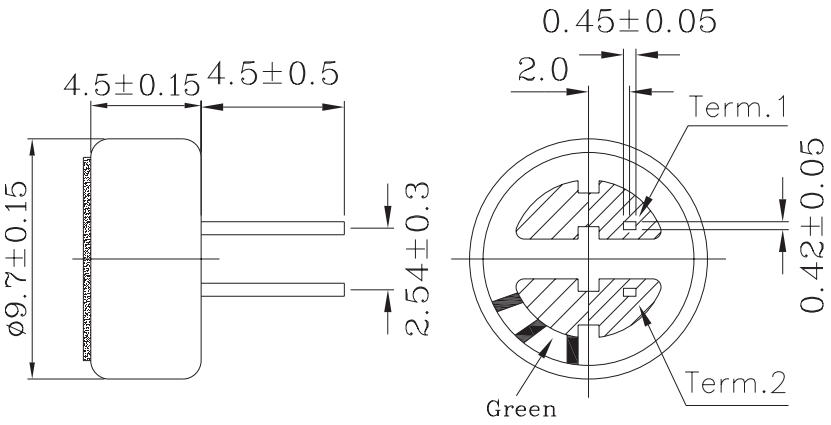
SPECIFICATIONS

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity (S)	f = 1 kHz, 1 Pa, 0 dB = 1 V/1 Pa	-46	-44	-42	dB
operating voltage			3	10	Vdc
output impedance (Zout)	f = 1 kHz, 1 Pa		2.2		KΩ
sensitivity reduction (ΔS-Vs)	f = 1 kHz, 1 Pa, Vs = 3.0 to 2.0 Vdc		-3		dB
frequency (f)		20		20,000	Hz
current consumption (IDSS)	Vs = 3.0 Vdc, RL = 2.2 KΩ			0.5	mA
signal to noise ratio (S/N)	f = 1 kHz, 1 Pa, A-weighted		60		dBA
operating temperature		-20		70	°C
storage temperature		-20		70	°C
dimension	ø9.7 x 4.5 mm				
weight				0.8	g
material	Al				
terminal	pin type (hand soldering only)				
RoHS	yes				

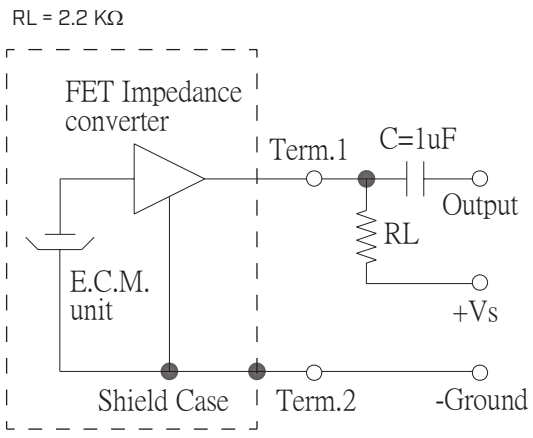
Note: We use the "Pascal (Pa)" indication of sensitivity as per the recomendation of I.E.C. (International Electrotechnical Commission). The sensitivity of "Pa" will increase 20dB compared to the "ubar" indication. Example: -60dB (0dB = 1V/ubar) = -40dB (1V/Pa)

MECHANICAL DRAWING

unit: mm

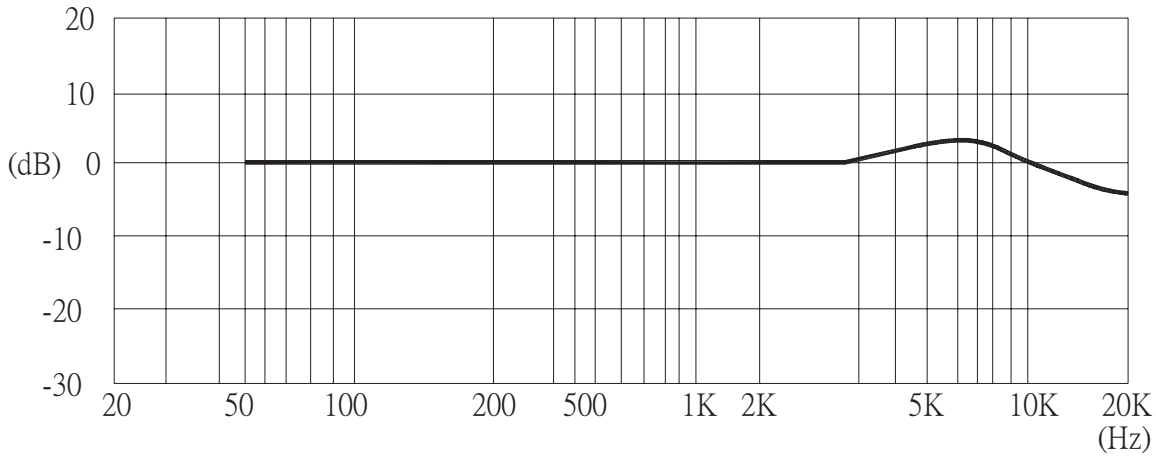


MEASUREMENT CIRCUIT



Schematic Diagram

FREQUENCY RESPONSE CURVE

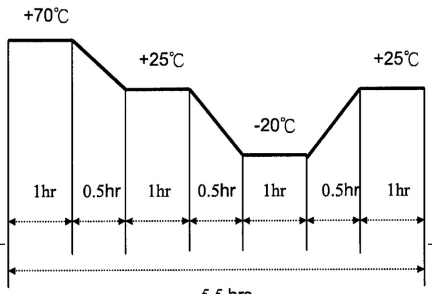


1.000V/PA

MECHANICAL CHARACTERISTICS

item	test condition	evaluation standard
soldering heat resistance	Soldering iron of +270 ±5°C should be placed on the terminal for 2 ±0.5 seconds.	No interference in operation.
terminal mechanical strength	Apply to the terminal 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 ±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.	

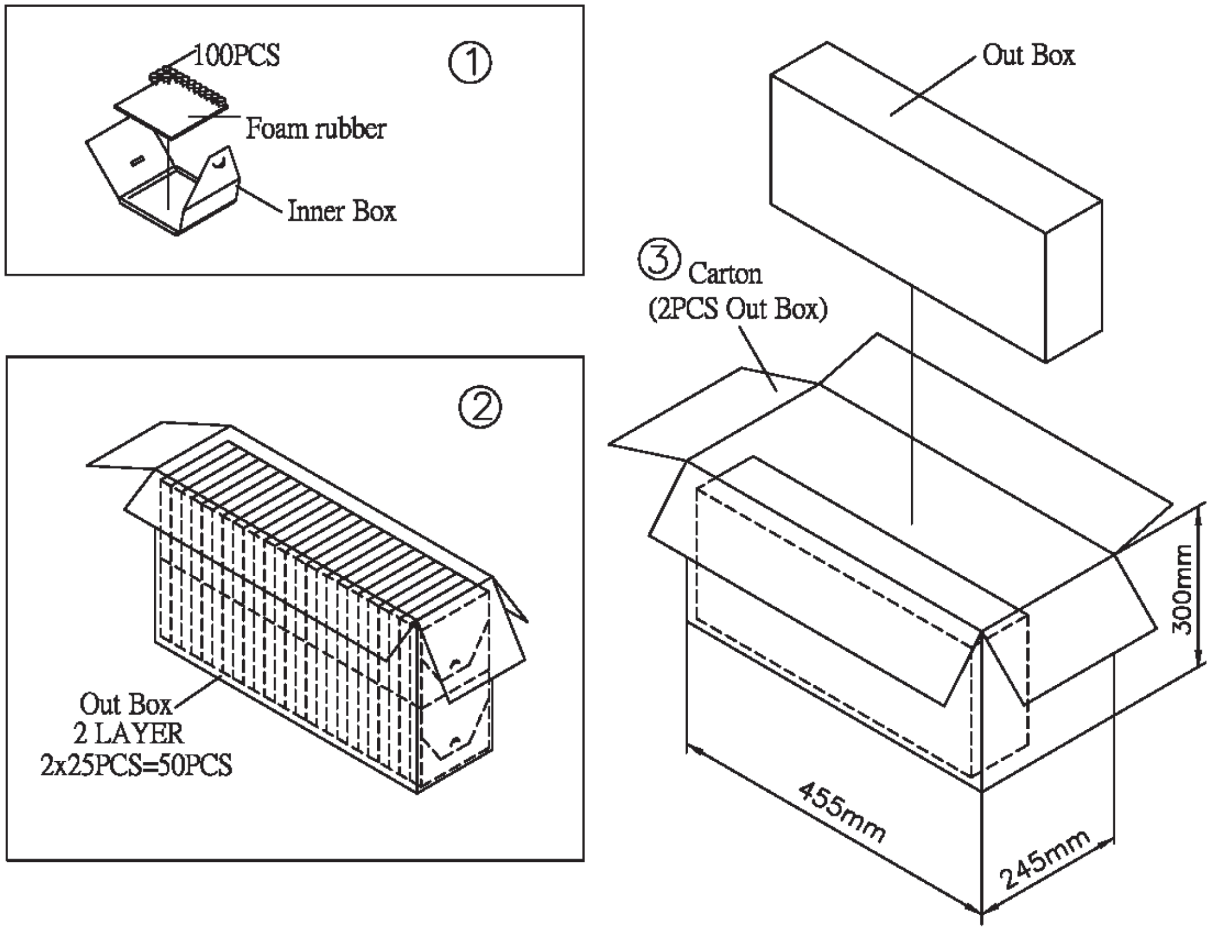
ENVIRONMENT TEST

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

TEST CONDITIONS

standard test conditions	a) Temperature: +5 ~ +35°C	b) Humidity: 45 ~ 85%	c) Pressure: 860 ~ 1060 mbar
judgement test conditions	a) Temperature: +25 ±2°C	b) Humidity: 60 ~ 70%	c) Pressure: 860 ~ 1060 mbar

PACKAGING



Inner Box	100mmx100mmx15mm	100PCSx1=100PCS
Out Box	435mmx120mmx280mm	100PCSx50=5,000PCS
Carton Box	455mmx245mmx300mm	5,000PCSx2=10,000PCS

REVISION HISTORY

rev.	description	date
1.0	initial release	06/01/2008
1.01	new template applied, updated drawing	09/24/2013
1.02	brand update	01/17/2020
1.03	logo, datasheet style update	08/05/2022

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