

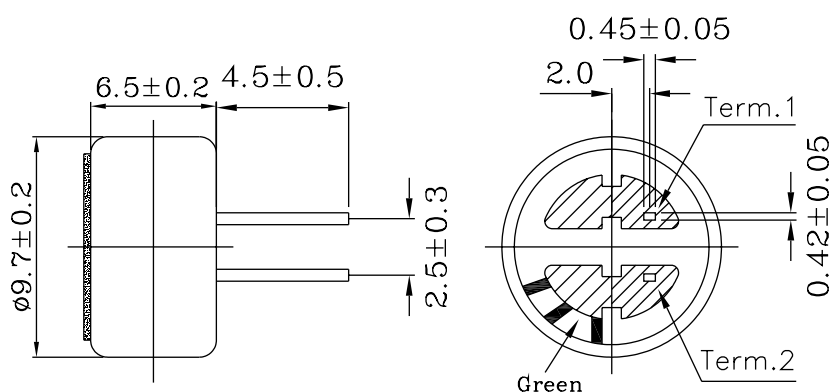
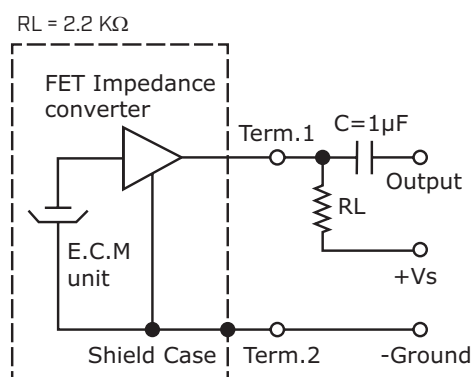
MODEL: CMA-6542PF | **DESCRIPTION:** ELECTRET CONDENSER MICROPHONE**SPECIFICATIONS**

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity [S]	f = 1 kHz, 1 Pa, 0 dB = 1 V/1 Pa	-45	-42	-39	dB
operating voltage			4.5	10	Vdc
output impedance [Zout]	f = 1 kHz, 1 Pa		2.2		K Ω
sensitivity reduction [ΔS -Vs]	f = 1 kHz, 1 Pa, Vs = 4.5 to 1.5 Vdc		-3		dB
frequency [f]		50		20,000	Hz
current consumption [I _{OSS}]	Vs = 4.5 Vdc, RL = 2.2 K Ω			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	$\varnothing 9.7 \times 6.5$ 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)

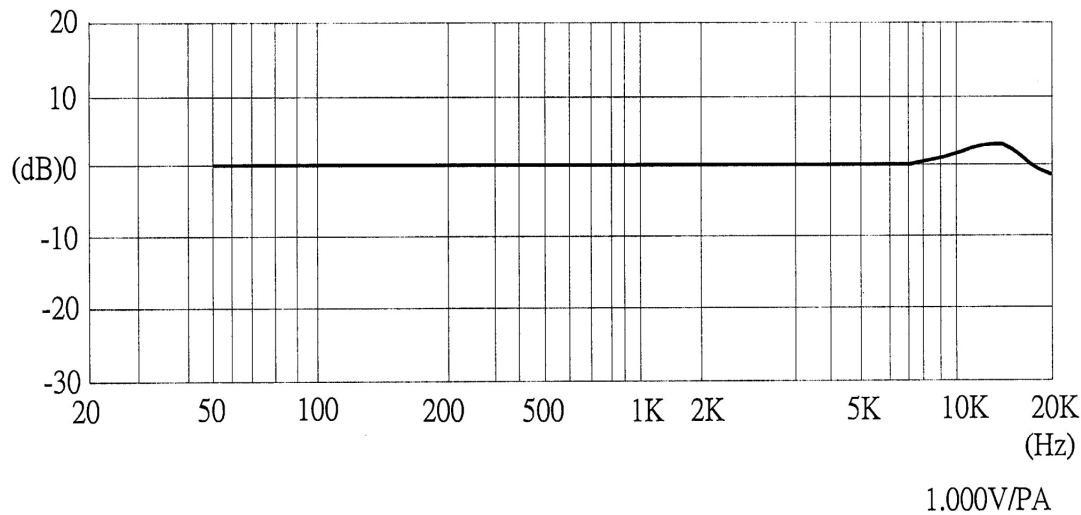
MECHANICAL DRAWING

unit: mm

**MEASUREMENT CIRCUIT**

Schematic Diagram

FREQUENCY RESPONSE CURVE



MECHANICAL CHARACTERISTICS

item	test condition	evaluation standard
soldering heat resistance	Soldering iron of $+260 \pm 5^{\circ}\text{C}$ 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 1 minute	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.	

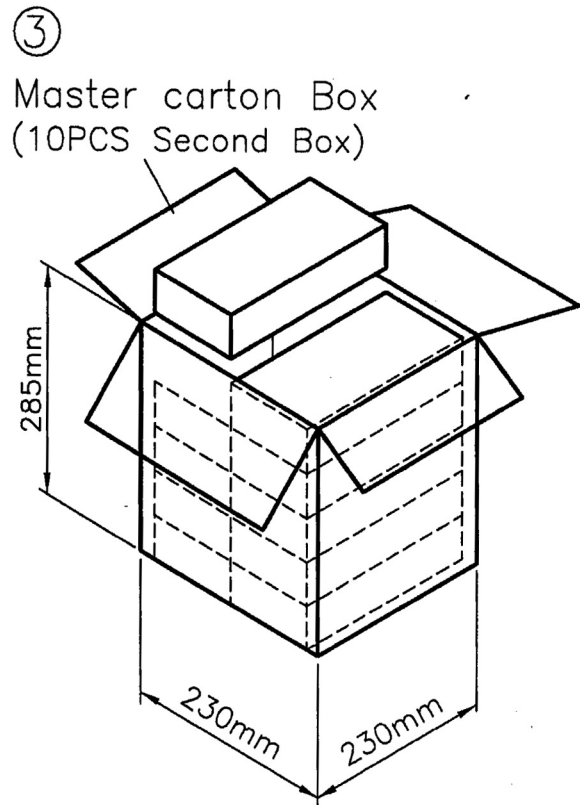
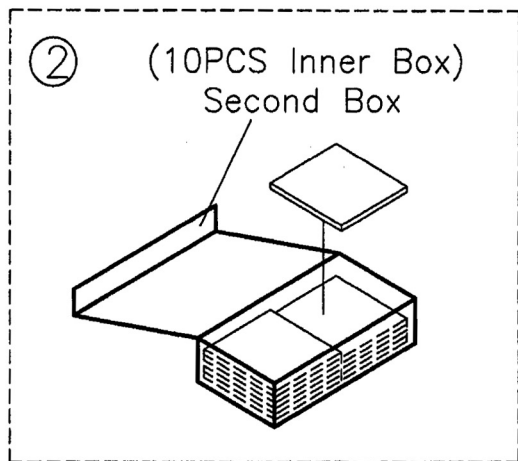
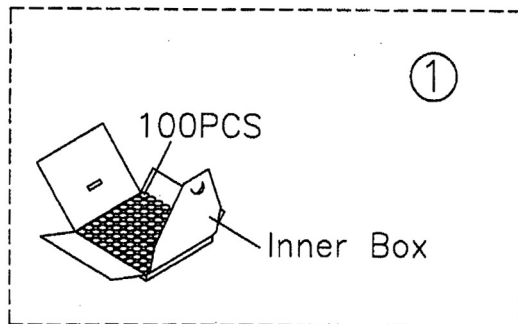
ENVIRONMENT TEST

item	test condition	evaluation standard
high temperature test	After being placed in a chamber at $+70^{\circ}\text{C}$ for 72 hours.	After any tests and 6 hours of conditioning at $+25^{\circ}\text{C}$, 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 $+40^{\circ}\text{C}$ and 90 $\pm 5\%$ RH for 240 hours.	
temperature cycle test	<p>The part will be subjected to 10 cycles. One cycle will consist of:</p>	

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		1x100PCS
Second Box	202mmx103mmx50mm	100PCSx10
Master carton Box	230mmx230mmx285mm	1000PCSx10

REVISION HISTORY

rev.	description	date
1.0	initial release	06/06/2008
1.01	new template applied, updated drawing	06/26/2012
1.02	updated drawing	09/23/2013
1.03	brand update	01/29/2020
1.04	logo, datasheet style update	08/05/2022

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



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