

**MODEL:** CMC-4013-SMT-TR | **DESCRIPTION:** ELECTRET CONDENSER MICROPHONE**FEATURES**

- omnidirectional
- low profile
- surface mount
- tape and reel packaging

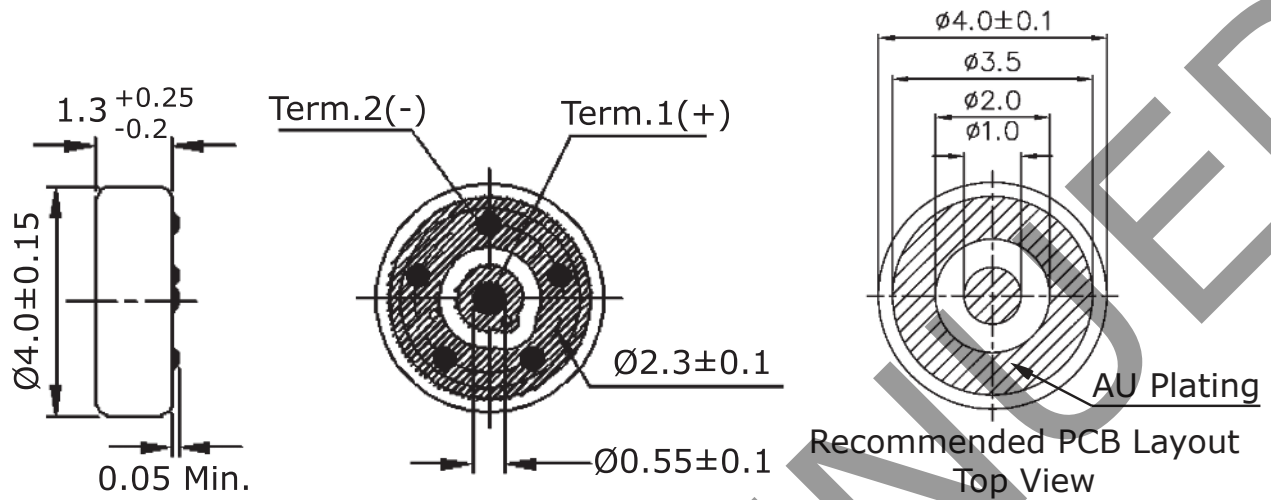
**SPECIFICATIONS**

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity (S)	f = 1 kHz, 1 Pa, 0 dB = 1 V/Pa	-45	-42	-39	dB
standard operating voltage (Vs)			2		Vdc
max operating voltage				10	Vdc
output impedance (Zout)	f = 1 kHz, 1 Pa		2.2		kΩ
sensitivity reduction (ΔS-Vs)	f = 1 kHz, 1 Pa, Vs = 2.0 ~ 1.5 Vdc		-3		dB
frequency (f)		100		20,000	Hz
current consumption (IDSS)	Vs = 2.0 Vdc, RL = 2.2 kΩ			0.5	mA
signal to noise ratio (S/N)	f = 1 kHz, 1 Pa, A-weighted		58		dB
dimensions	Ø4.0 x 1.3				mm
material	Al				
terminal	SMT type				
weight				0.04	g
operating temperature		-20		70	°C
storage temperature		-20		70	°C
RoHS	yes				

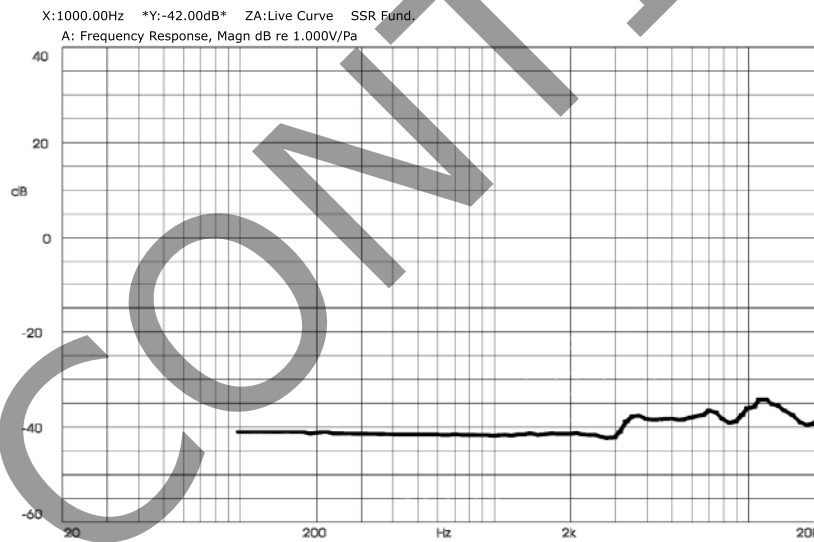
Notes: 1. We use the "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C. (International Electrotechnical Commission). The sensitivity of "Pa" will increase 20 dB compared to the "ubar" indication. Example: -60 dB (0 dB = 1 V/ubar) = -40 dB (1V/Pa)  
 2. All specifications measured at 5~35°C, humidity at 45~85%, under 86~106 kPa pressure, unless otherwise noted.

## MECHANICAL DRAWING

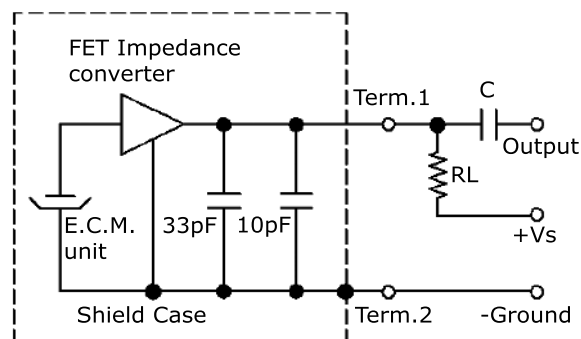
units: mm



## FREQUENCY RESPONSE CURVE



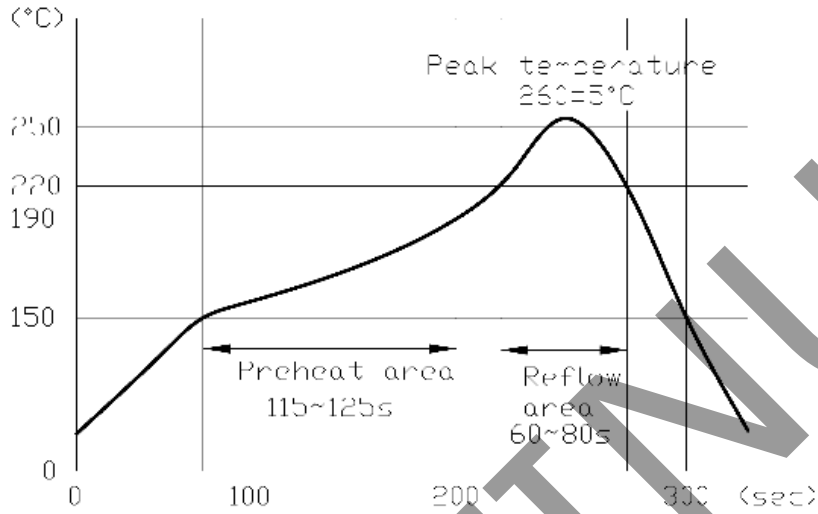
## MEASUREMENT CIRCUIT



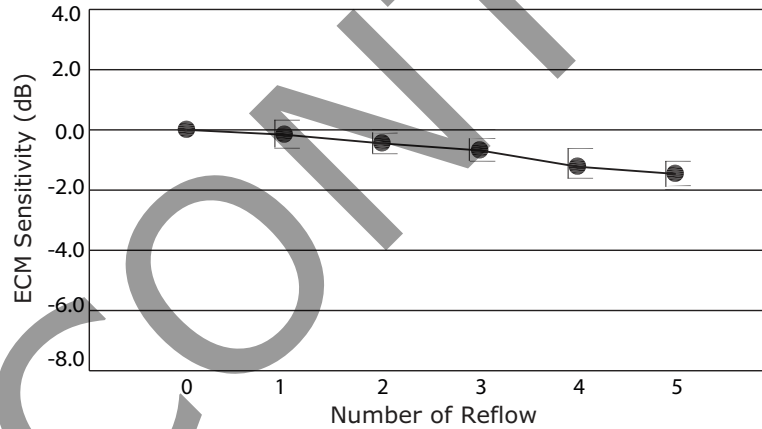
RL = 2.2 kΩ  
C = 1 μF

## SOLDERABILITY

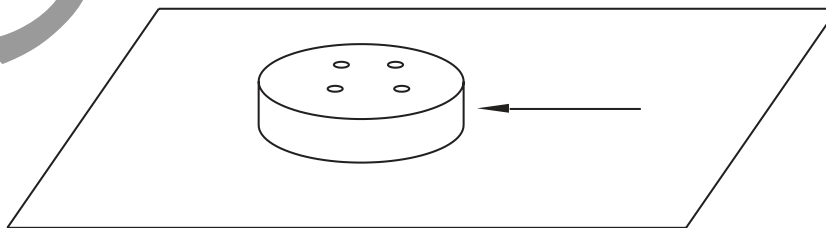
parameter	conditions/description	min	typ	max	units
reflow soldering	see reflow soldering profile	255	260	265	°C



Number of Reflow vs. ECM Sensitivity



Horizontal Loading



Note: 1. When soldered to PCB, must have >10 N resistance to horizontal loading.

## PACKAGING

units: mm

Reel Size: Ø330 mm

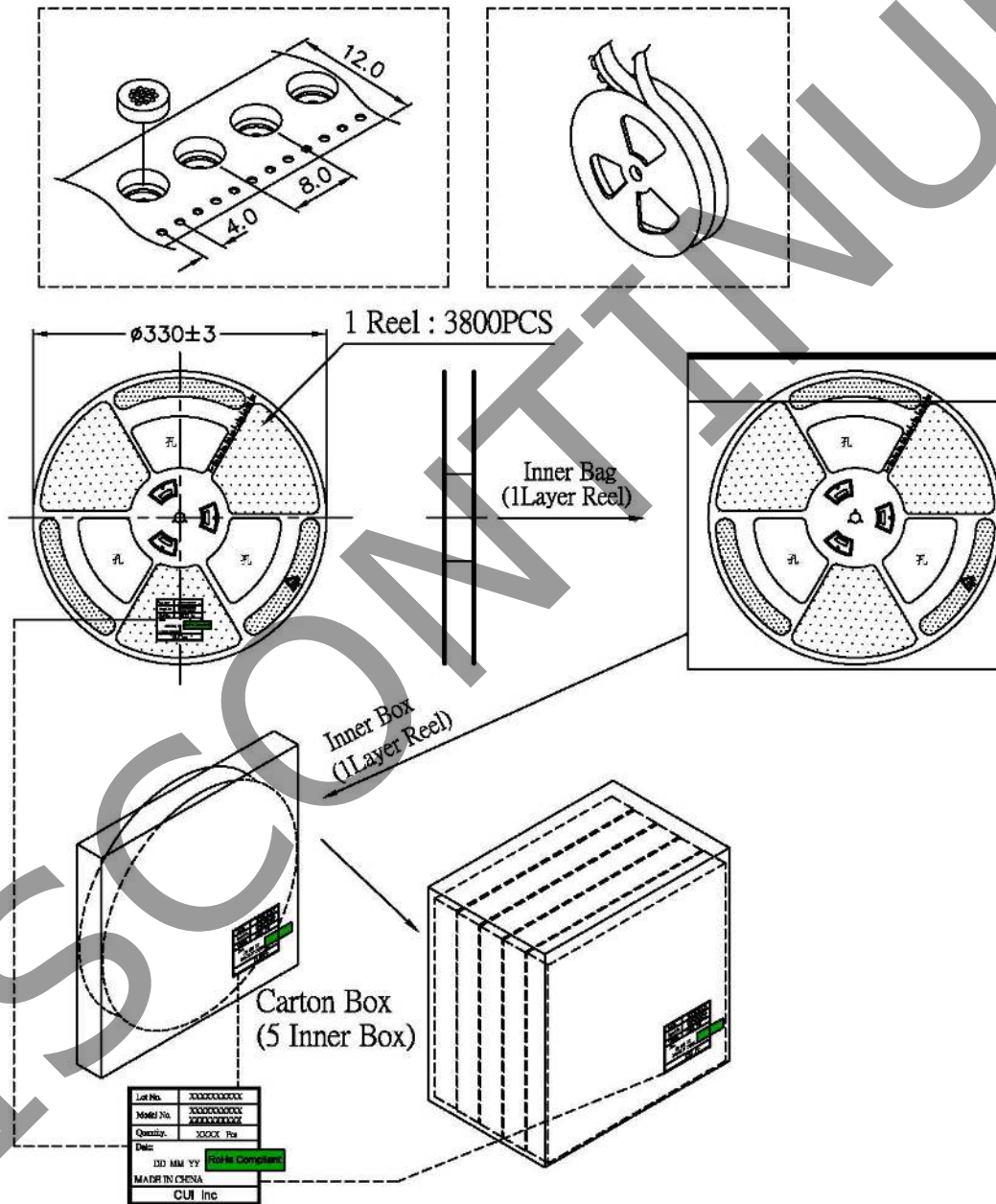
Inner Box Size: 340 x 340 x 30 mm

Carton Box Size: 340 x 170 x 340 mm

Reel QTY: 3,800 pcs per reel

Inner Box QTY: 3,800 pcs per box

Carton Box QTY: 19,000 pcs per carton



## REVISION HISTORY

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rev.	description	date
1.0	initial release	11/28/2016
1.01	added packaging label to reel	06/28/2019
1.02	brand update	01/09/2020

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

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