



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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

**FEATURES**

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

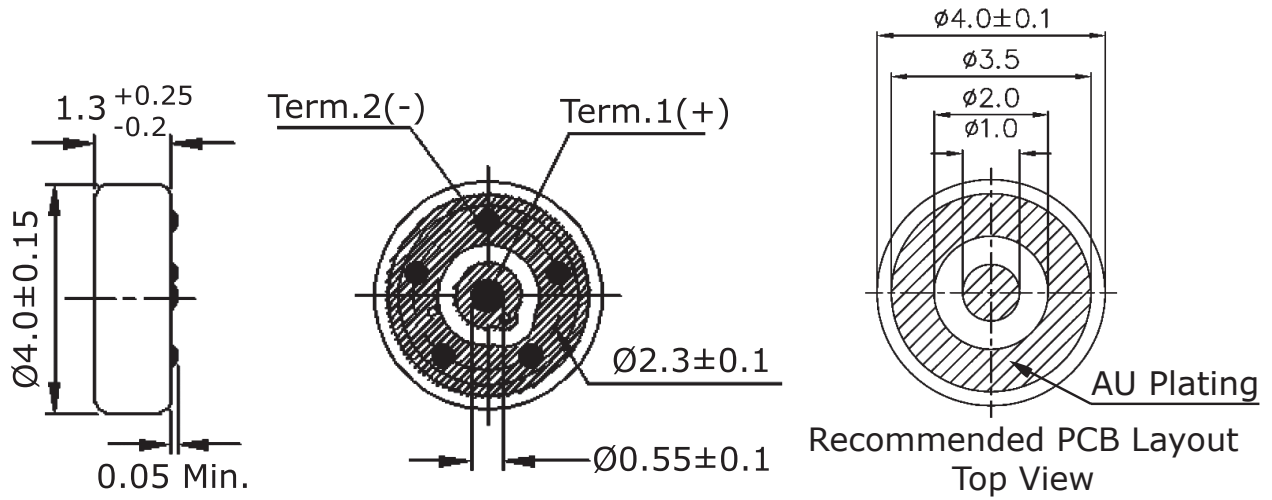

**SPECIFICATIONS**

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	2011/65/EU				

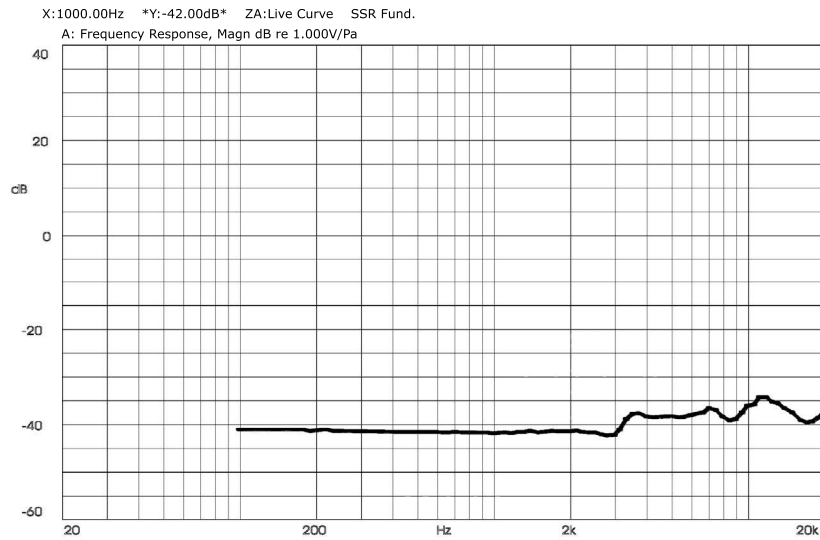
Notes: 1. We use the "Pascal (Pa)" indication of sensitivity as per the recommendation of I.E.C. (International Electrotechnical Commission). The sensitivity of "Pa" will increase 20 dB compared to the "ubar" indication. Example: -60 dB (0 dB = 1 V/ubar) = -40 dB (1 V/Pa)  
 2. All specifications measured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

## MECHANICAL DRAWING

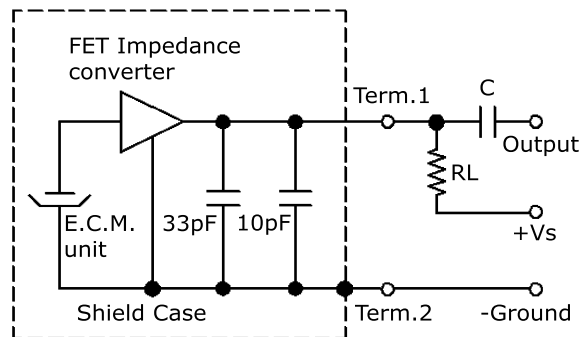
units: mm



## FREQUENCY RESPONSE CURVE



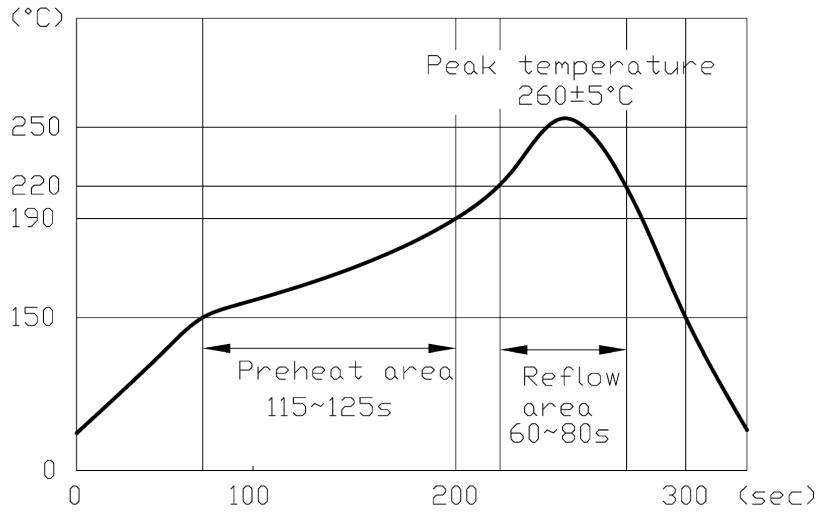
## MEASUREMENT CIRCUIT



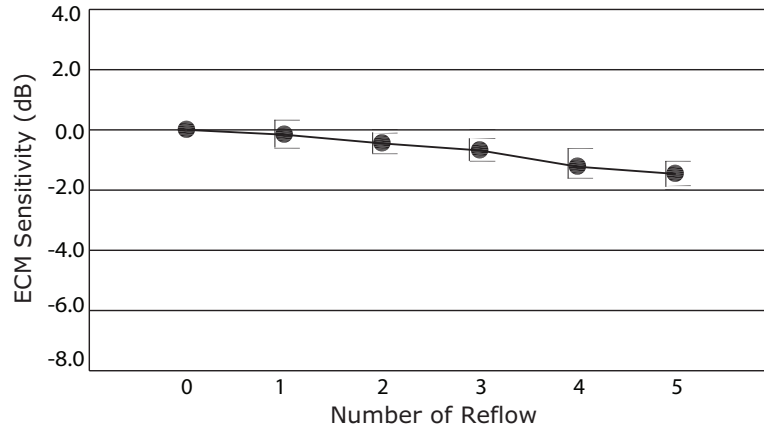
RL = 2.2 kΩ  
C = 1 μF

## SOLDERABILITY

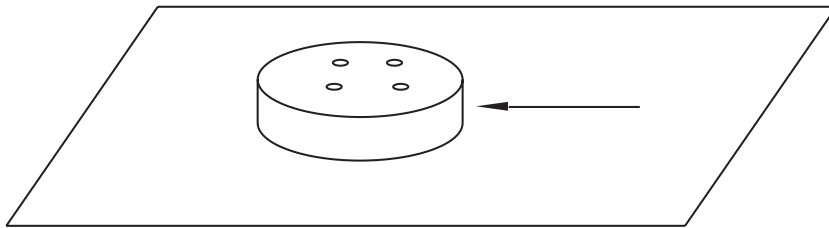
parameter	conditions/description	min	typ	max	units
reflow soldering	see reflow soldering profile	255	260	265	°C



### Number of Reflow vs. ECM Sensitivity



### Horizontal Loading

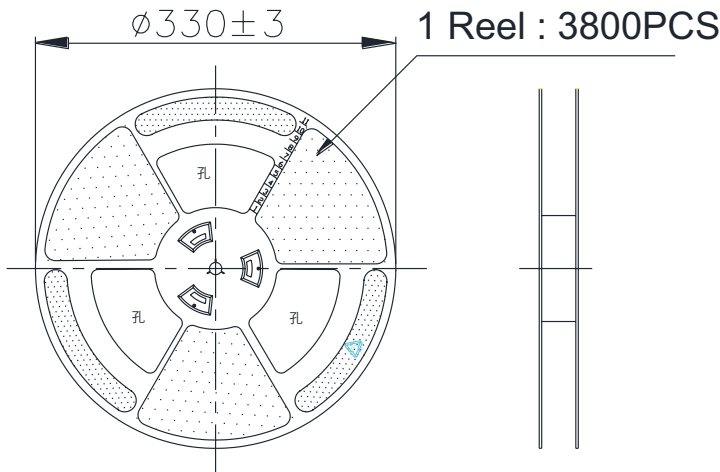
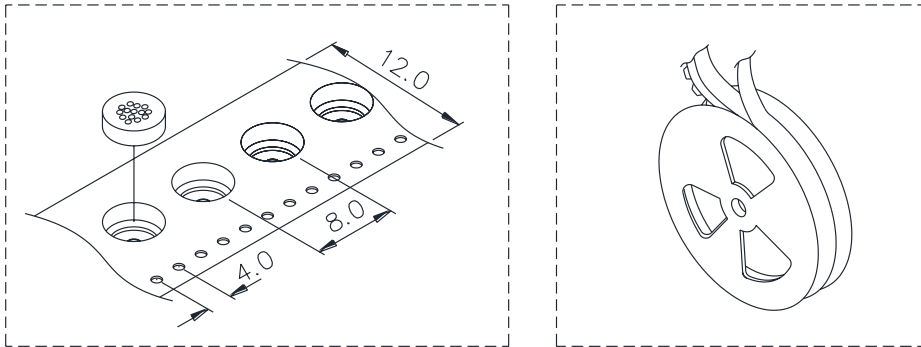


Note: 1. When soldered to PCB, must have >10 N resistance to horizontal loading.

## PACKAGING

units: mm

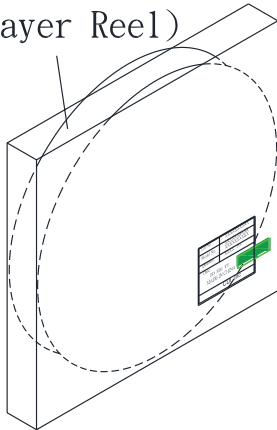
Reel Size: Ø330 mm  
 Inner Box Size: 340 x 340 x 30 mm  
 Carton Box Size: 340 x 170 x 340 mm  
 Reel QTY: 3,800 pcs per reel  
 Inner Box QTY: 3,800 pcs per box  
 Carton Box QTY: 19,000 pcs per carton



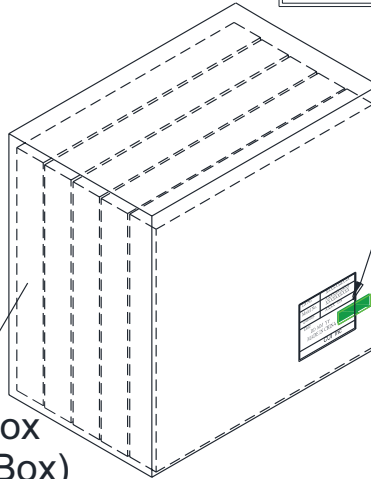
Lot No.	XXXXXXXXXX
Model No.	XXXXXXXXXX XXXXXXXXXX
Quantity.	XXXX Pcs
Date:	DD MM YY
	MADE IN CHINA
	CUI Inc

RoHs Compliant

Inner Box  
(1 Layer Reel)



Carton Box  
(5 Inner Box)



## REVISION HISTORY

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rev.	description	date
1.0	initial release	11/28/2016

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



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