

date 11/28/2016

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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)	$f = 1 \text{ kHz}, 1 \text{ Pa, Vs} = 2.0 \sim 1.5 \text{ Vdc}$		-3		dB
frequency (f)		100		20,000	Hz
current consumption (IDSS)	Vs = 2.0 Vdc, RL = 2.2 k Ω			0.5	mA
signal to noise ratio (S/N)	f = 1 kHz, 1 Pa, A-weighted		58		dBA
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				

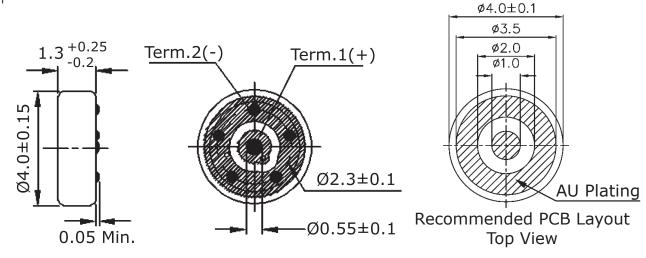
Notes:

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

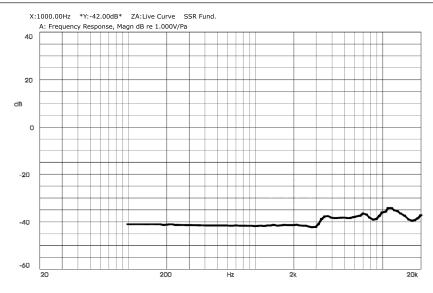
²⁰ dB compared to the "ubar" indication. Example: -60 dB (0 dB = 1 V/ubar) = -40 dB (1 V/Pa) 2. All specifications measured at $5\sim35^{\circ}$ C, humidity at $45\sim85^{\circ}$, under $86\sim106$ kPa pressure, unless otherwise noted.

MECHANICAL DRAWING

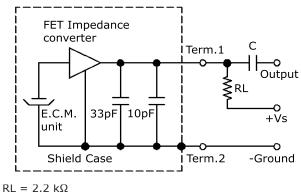




FREQUENCY RESPONSE CURVE



MEASUREMENT CIRCUIT

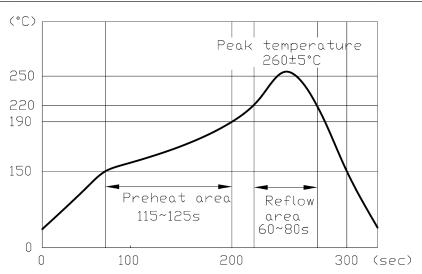


 $C = 1 \mu F$

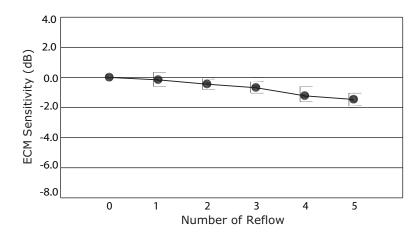
CUI Inc | MODEL: CMC-4013-SMT-TR | DESCRIPTION: ELECTRET CONDENSER MICROPHONE

SOLDERABILITY

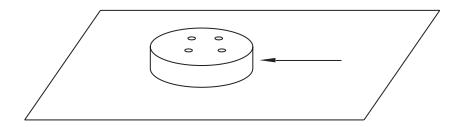
parameter	conditions/description	min	typ	max	units
reflow soldering	see reflow soldering profile	255	260	265	°C



Number of Reflow vs. ECM Sensitivity



Horizontal Loading



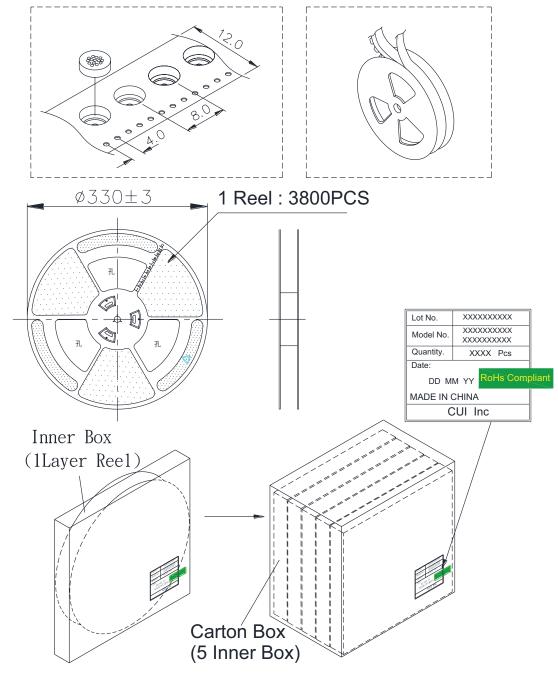
1. When soldered to PCB, must have >10 N resistance to horizontal loading.

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

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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CUI offers a one (1) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.