

**MODEL:** CMEJ-0413-42-SMT-TR | **DESCRIPTION:** ELECTRET CONDENSER MICROPHONE

**FEATURES**

- omnidirectional
- low profile
- surface mount


**ELECTRICAL**

parameter	conditions/description	min	typ	max	units
directivity	omnidirectional				
sensitivity [S]	at 1 kHz [0 dB = 1 V/Pa]	-45	-42	-39	dB
supply voltage [V <sub>DD</sub> ]		1.0	2.0	10	V
current consumption	V <sub>DD</sub> = 2.0 V, R <sub>L</sub> = 2.2 k $\Omega$			0.5	mA
sensitivity reduction	V <sub>DD</sub> = 2.0 ~ 1.5 V			3	dB
frequency [f]		100		10,000	Hz
signal to noise ratio [S/N]	at 1 kHz, P <sub>in</sub> = 1 Pa [A-weighted]		60		dBa
total harmonic distortion [THD]	at 94 dB SPL, 1 kHz			1	%
	at 115 dB SPL, 1 kHz			3	%
acoustic overload point [ADP]	at 1 kHz			115	dB SPL
output impedance [Z <sub>out</sub> ]	at 1 kHz			2.2	k $\Omega$

Notes: 1. All specifications measured at 20 $\pm$ 2°C, humidity at 60-70%, unless otherwise noted.

**ENVIRONMENTAL**

parameter	conditions/description	min	typ	max	units
operating temperature		-40		70	°C
storage temperature		-40		85	°C
operating humidity	non-condensing	30		85	%
storage humidity	non-condensing	30		75	%
RoHS	yes				

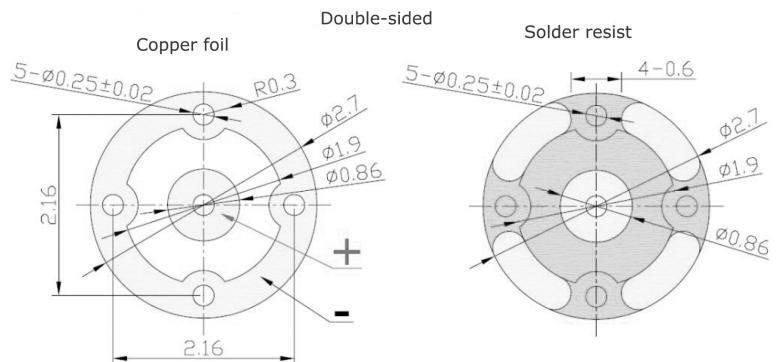
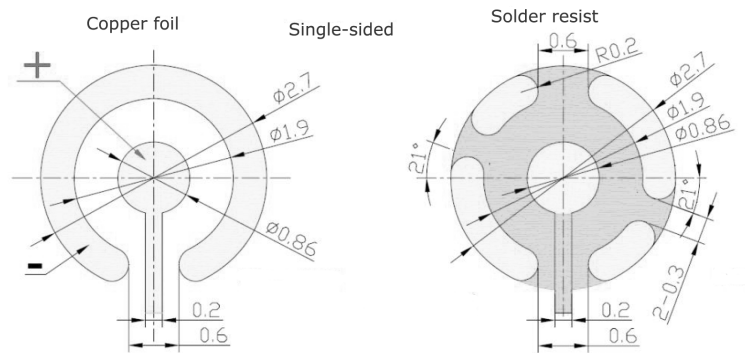
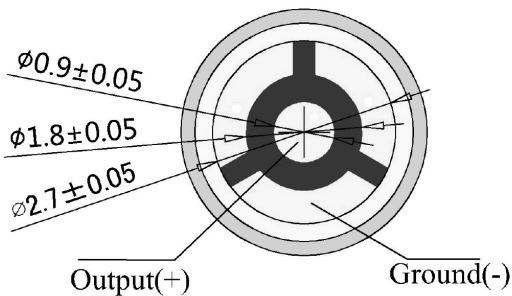
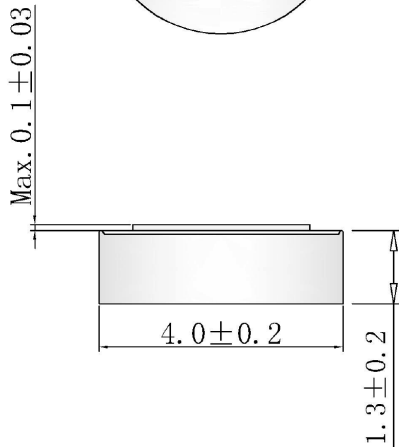
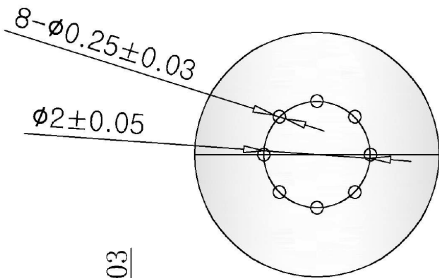
## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	Ø4.0 x 1.3				mm
acoustic port	top				
terminals	surface mount				
weight			0.07		g

## MECHANICAL DRAWING

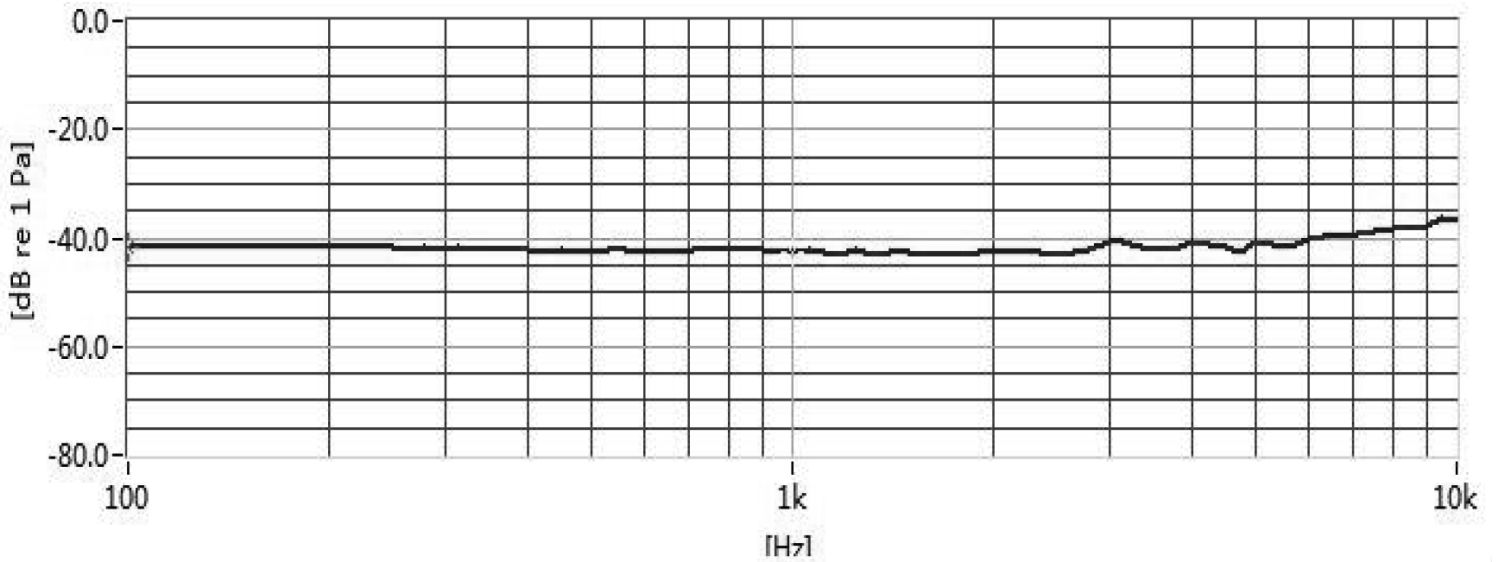
units: mm  
tolerance: ±0.2 mm

TERMINAL CONNECTIONS	
TERM.	FUNCTION
1	Output (+)
2	GND (-)

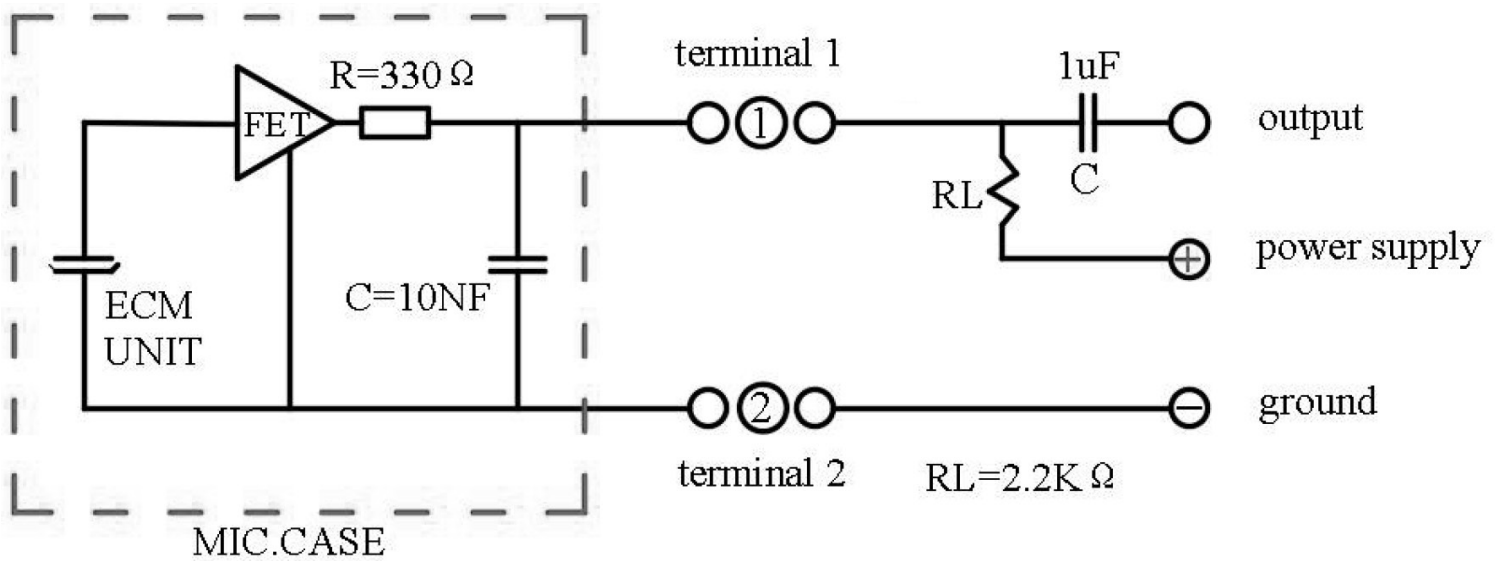


Recommended PCB Layout  
Top View

## FREQUENCY RESPONSE CURVE



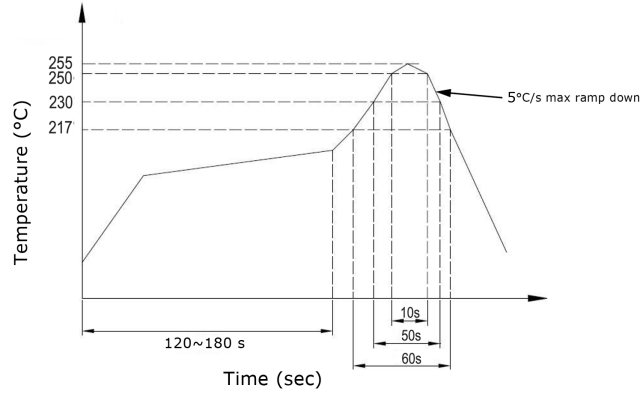
## APPLICATION CIRCUIT



## SOLDERABILITY

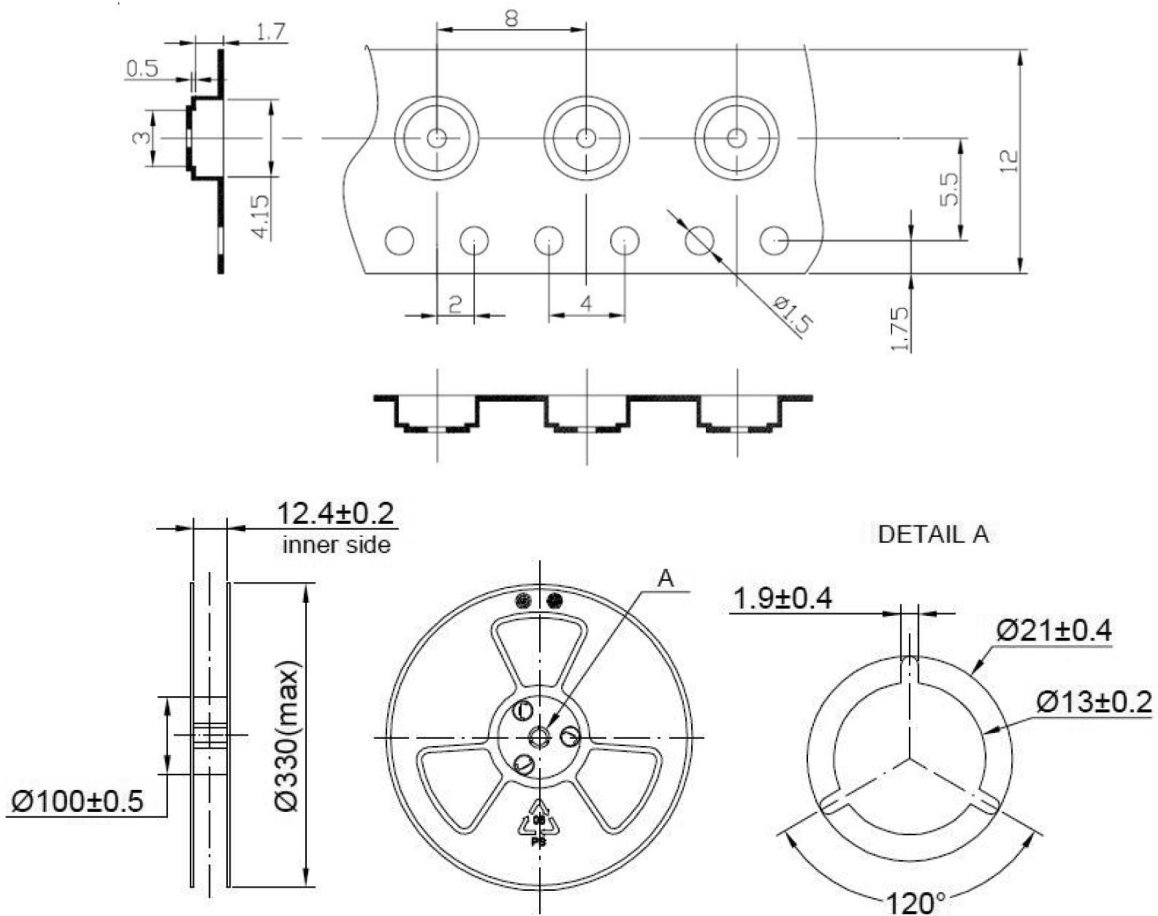
parameter	conditions/description	min	typ	max	units
reflow soldering	see reflow profile		255	260	°C

- Note:
1. Vacuuming over acoustical hole is not allowed.
  2. Not suitable for wash process.
  3. Not recommended to exceed 2 reflow cycles.



## PACKAGING

parameter	conditions/description	min	typ	max	units
reel size	Ø330 mm max				
reel QTY	4,000 pcs per reel				



## REVISION HISTORY

rev.	description	date
1.0	initial release	06/07/2019
1.01	brand update	01/16/2020
1.02	updated packaging	06/29/2021
1.03	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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