

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 _{DD}] | | 1.0 | 2.0 | 10 | V |
| current consumption | V _{DD} = 2.0 V, R _L = 2.2 kΩ | | | 0.5 | mA |
| sensitivity reduction | V _{DD} = 2.0 ~ 1.5 V | | | 3 | dB |
| frequency [f] | | 100 | | 10,000 | Hz |
| signal to noise ratio [S/N] | at 1 kHz, P _{in} = 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 _{out}] | at 1 kHz | | | 2.2 | kΩ |

Notes: 1. All specifications measured at 20±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 | | | | |

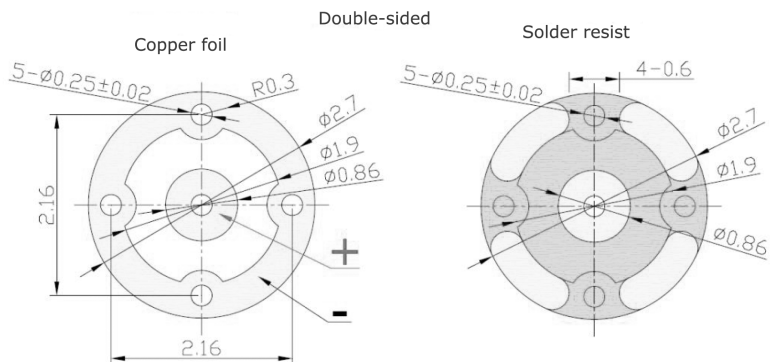
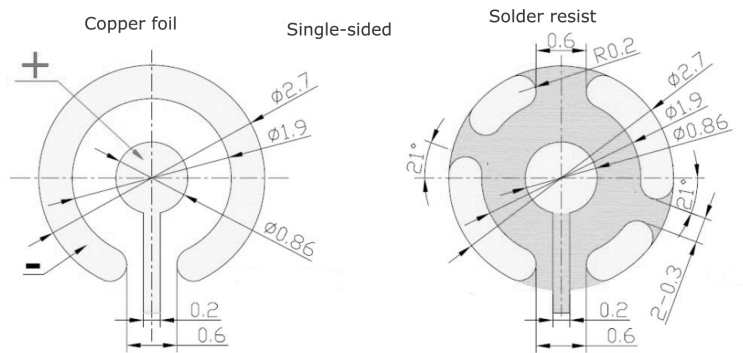
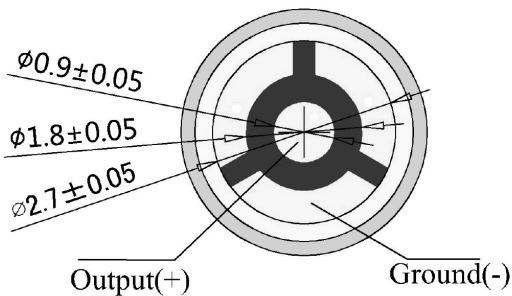
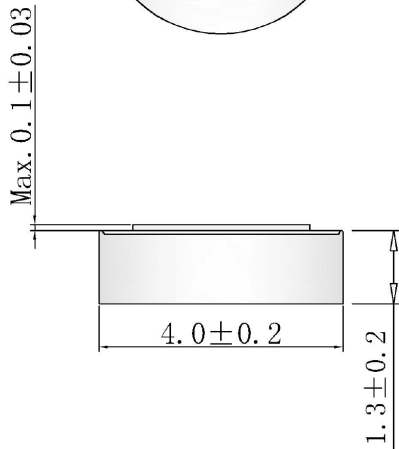
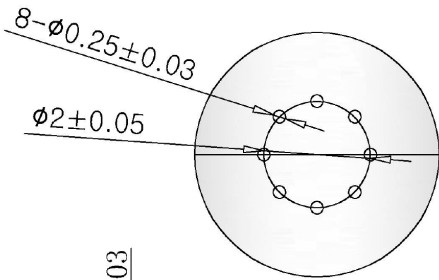
MECHANICAL

| 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

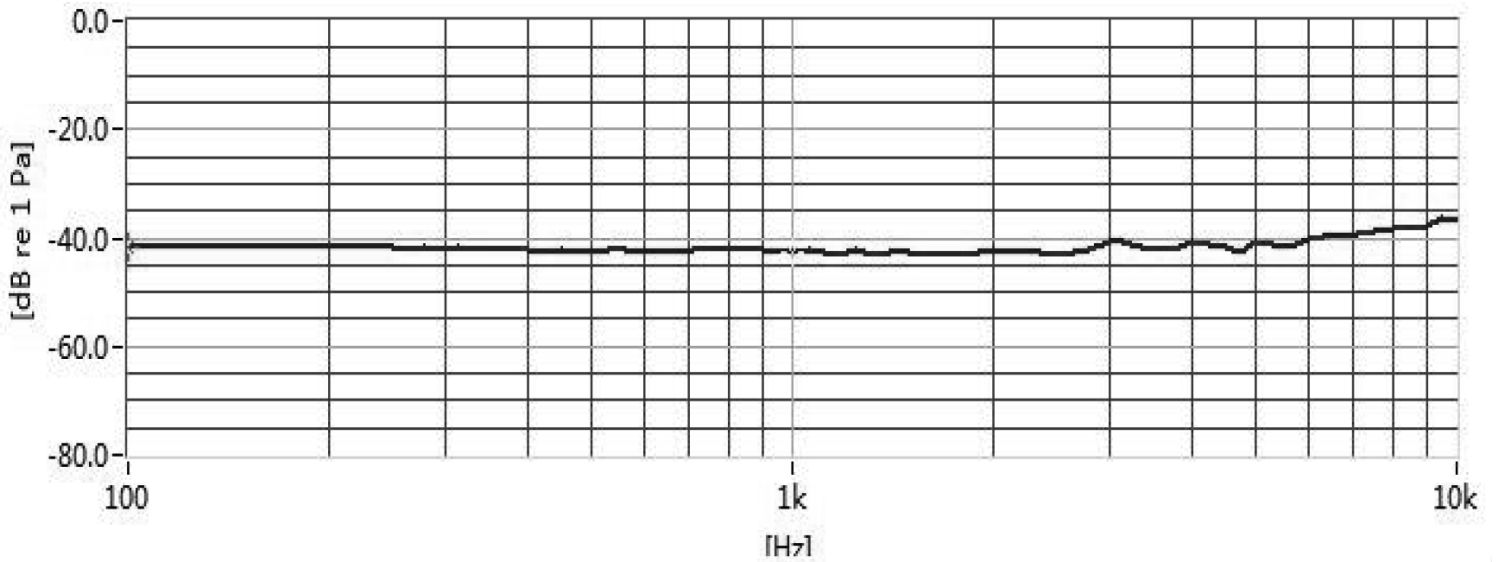
units: mm
tolerance: ±0.2 mm

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

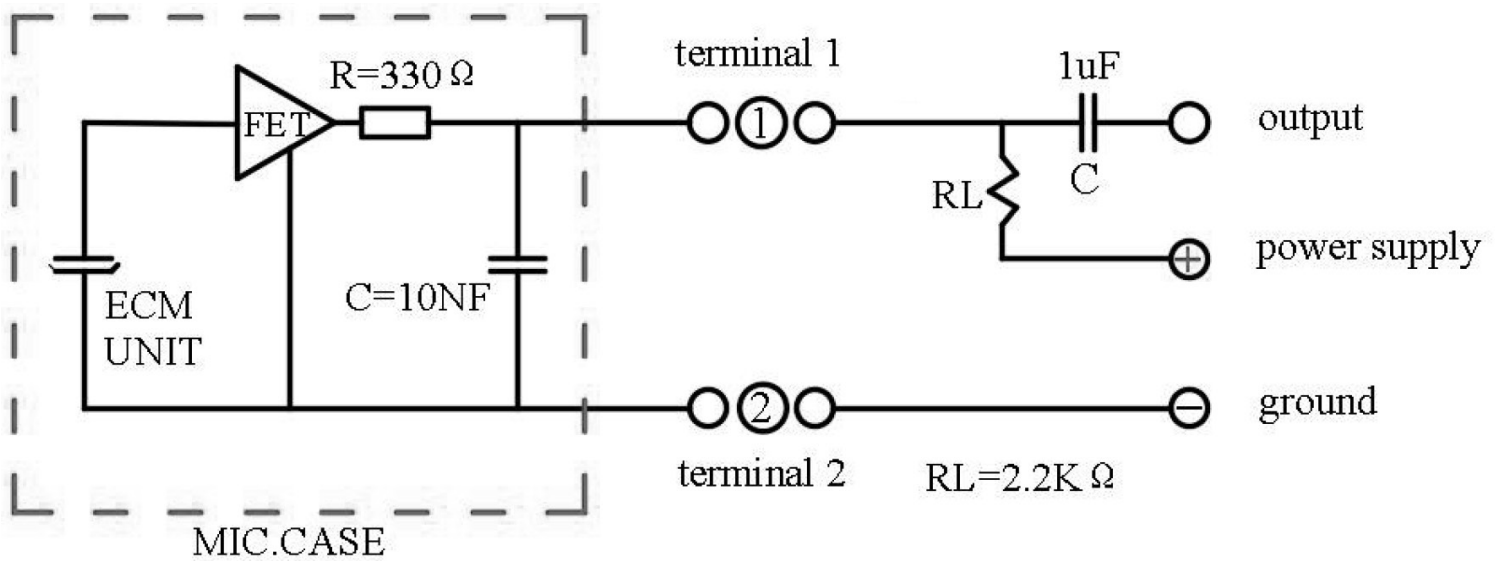


Recommended PCB Layout
Top View

FREQUENCY RESPONSE CURVE



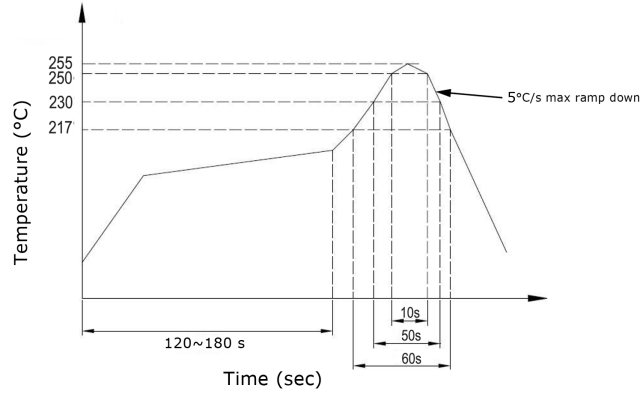
APPLICATION CIRCUIT



SOLDERABILITY

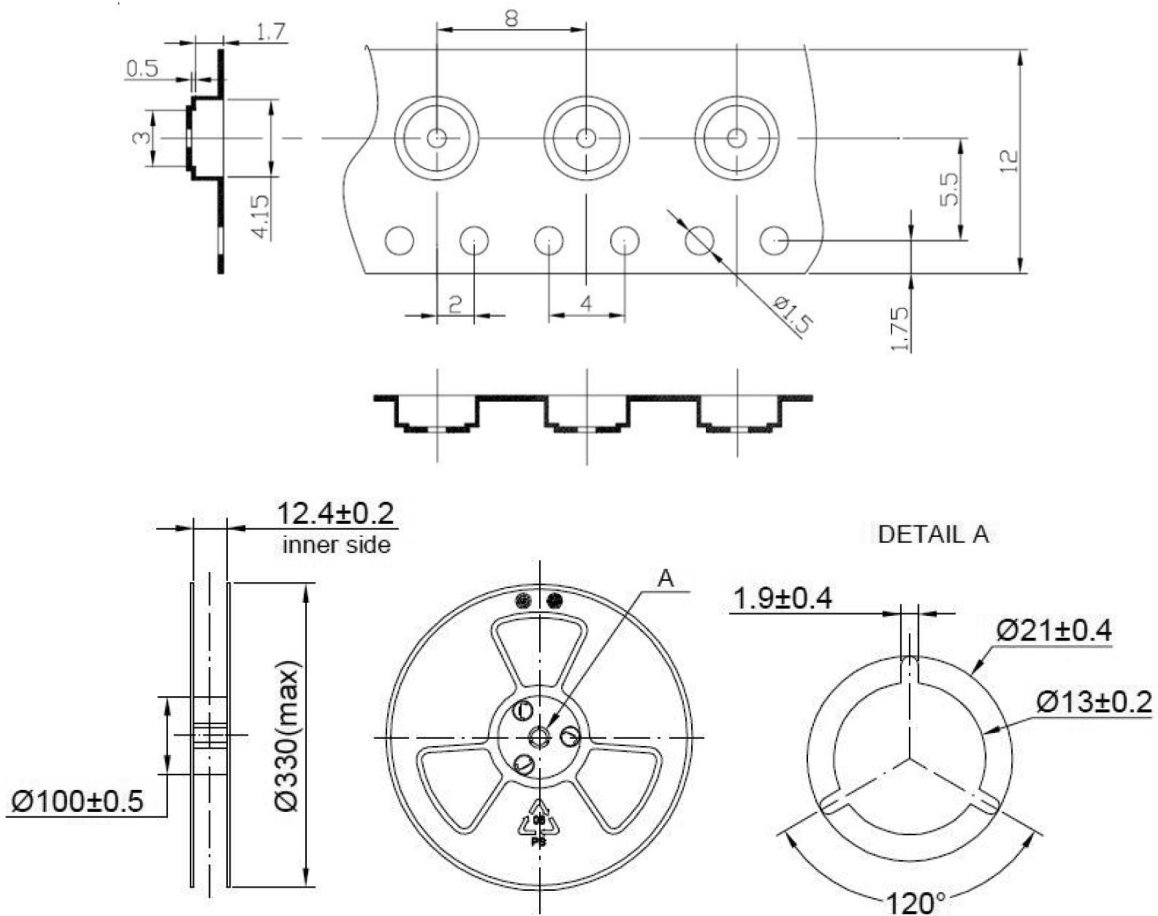
| parameter | conditions/description | min | typ | max | units |
|------------------|------------------------|-----|-----|-----|-------|
| reflow soldering | see reflow profile | | 255 | 260 | °C |

- 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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