

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 k Ω | | | 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 at 115 dB SPL, 1 kHz | | | 1 3 | % % |
| acoustic overload point (AOP) | at 1 kHz | | | 115 | dB SPL |
| output impedance (Z _{out}) | at 1 kHz | | | 2.2 | k Ω |

Notes: 1. All specifications measured at 20 \pm 2 $^{\circ}$ C, humidity at 60~70%, unless otherwise noted.

ENVIRONMENTAL

| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|--------------|
| operating temperature | | -40 | | 70 | $^{\circ}$ C |
| storage temperature | | -40 | | 85 | $^{\circ}$ C |
| operating humidity | non-condensing | 30 | | 85 | % |
| storage humidity | non-condensing | 30 | | 75 | % |
| RoHS | yes | | | | |

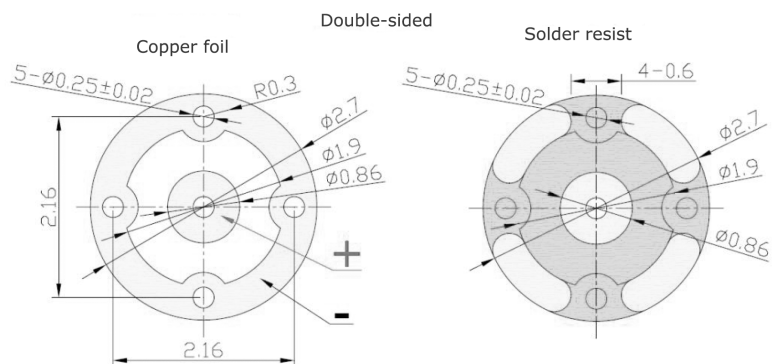
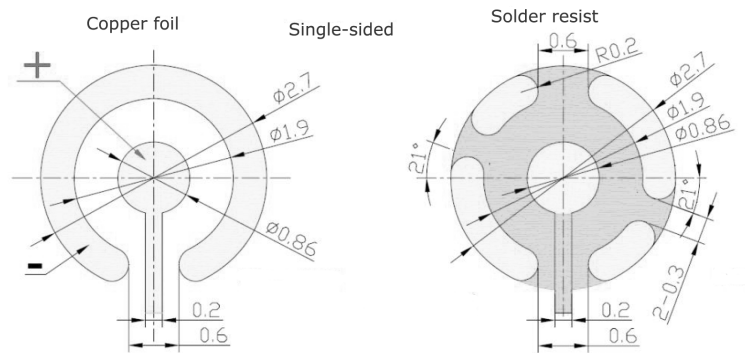
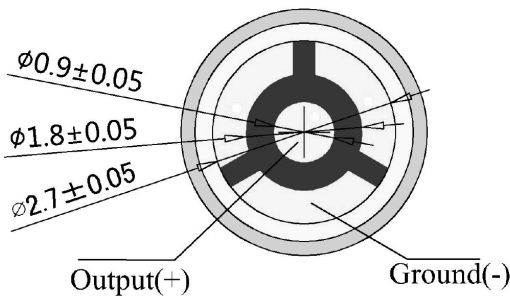
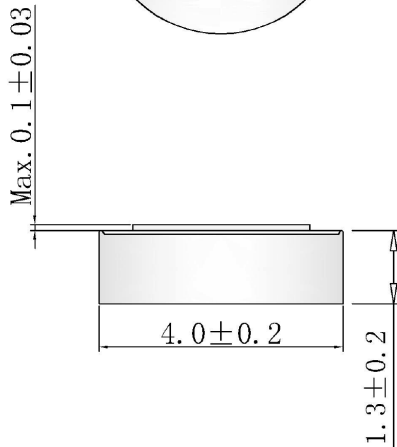
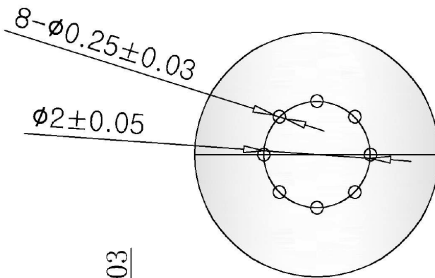
MECHANICAL

| 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

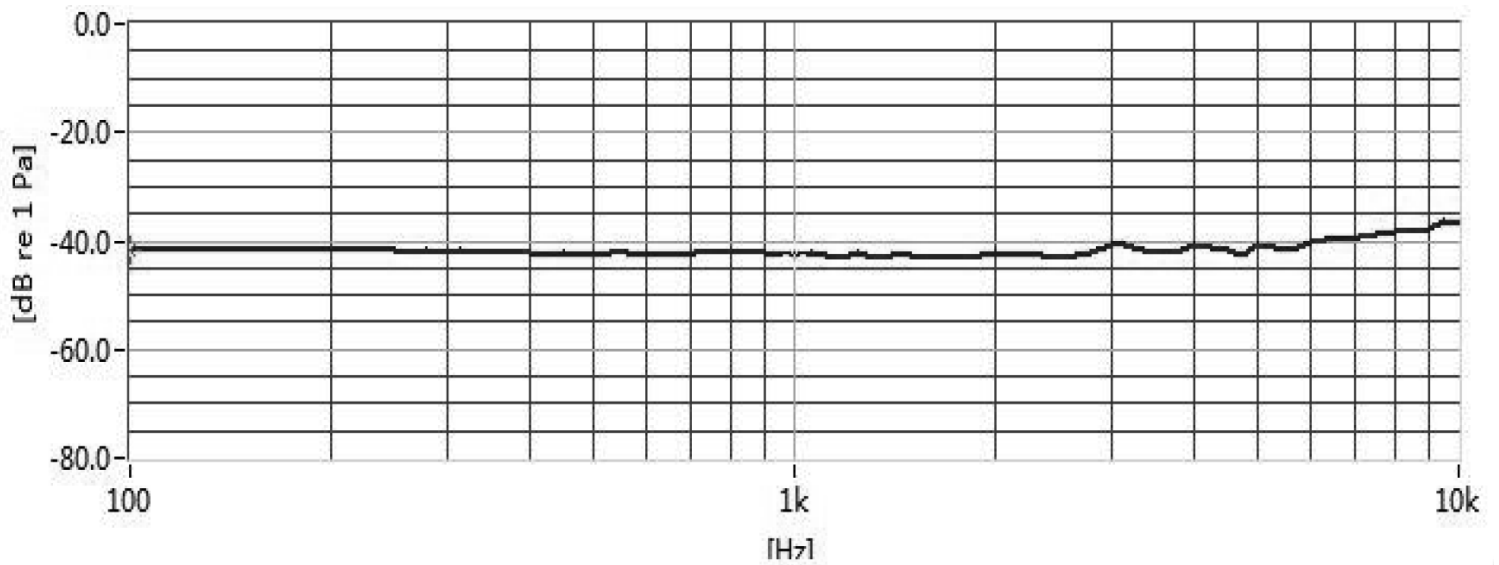
units: mm
tolerance: ±0.2 mm

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

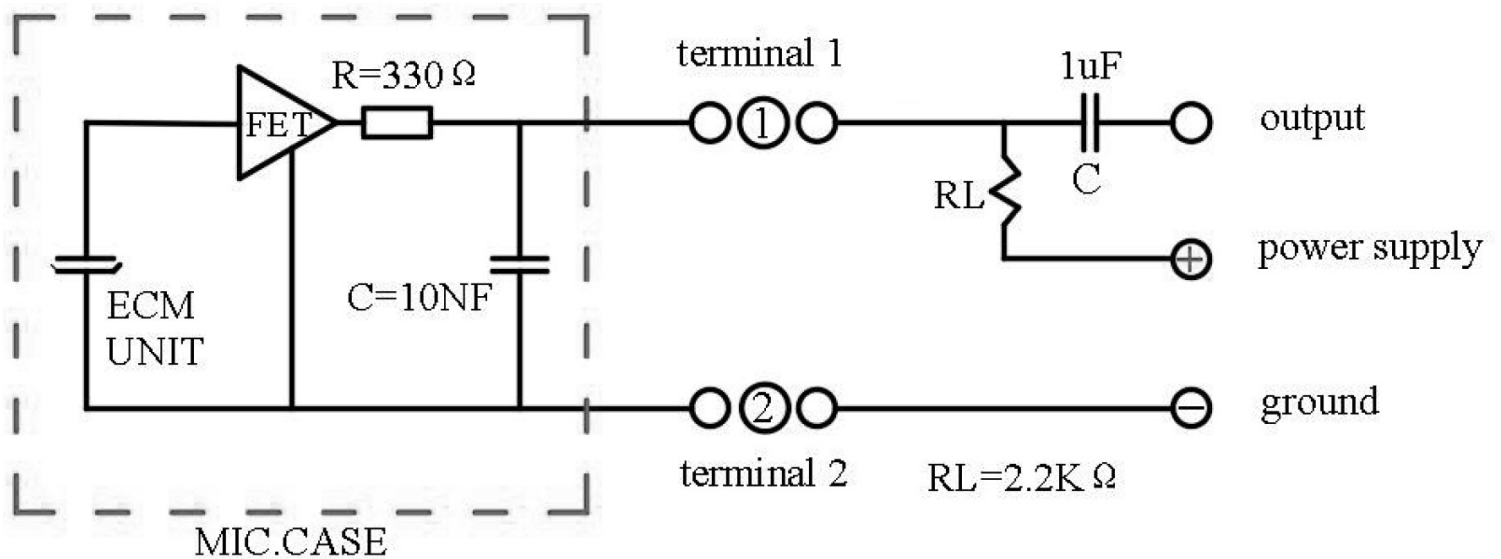


Recommended PCB Layout
Top View

FREQUENCY RESPONSE CURVE



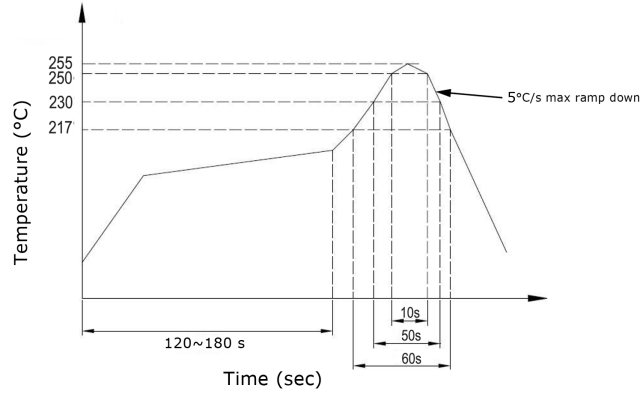
APPLICATION CIRCUIT



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 | | | | |

