

MODEL: CMM-3312AT-44308-TR | **DESCRIPTION:** MEMS MICROPHONE**FEATURES**

- round
- analog
- small package
- reflow solder compatible
- omnidirectional

**ELECTRICAL**

| parameter | conditions/description | min | typ | max | units |
|---|----------------------------------|-----|------|--------|--------|
| directivity | omnidirectional | | | | |
| sensitivity (S) | at 94 dB SPL, 1 kHz | -47 | -44 | -41 | dB |
| supply voltage (V _{DD}) | | 1.6 | 2.0 | 3.6 | V |
| current consumption (I _{DSS}) | V _{DD} = 2.0 V | | 80 | | μA |
| sensitivity reduction | V _{DD} = 3.6 ~ 1.6 V | | -0.5 | | dB |
| frequency (f) | | 100 | | 10,000 | Hz |
| signal to noise ratio (S/N) | at 94 dB SPL, 1 kHz (A-weighted) | | 58 | | dBA |
| total harmonic distortion (THD) | at 94 dB SPL, 1 kHz | | 0.2 | | % |
| acoustic overload point (AOP) | at 10% THD, 1 kHz | | 105 | | dB SPL |
| output impedance (Z _{out}) | at 1 kHz | | | 300 | Ω |

Notes: 1. All specifications measured at 23±2°C, humidity at 55±20%, unless otherwise noted.

ENVIRONMENTAL

| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | -40 | | 100 | °C |
| storage temperature | in packaging | -40 | | 70 | °C |
| RoHS | yes | | | | |

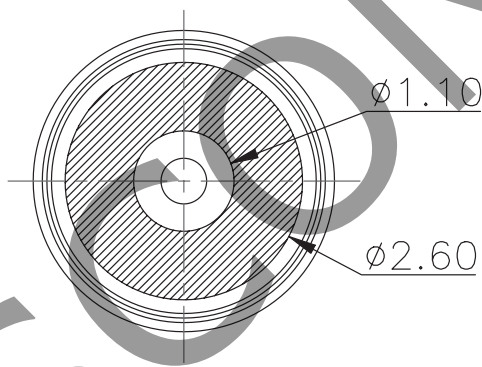
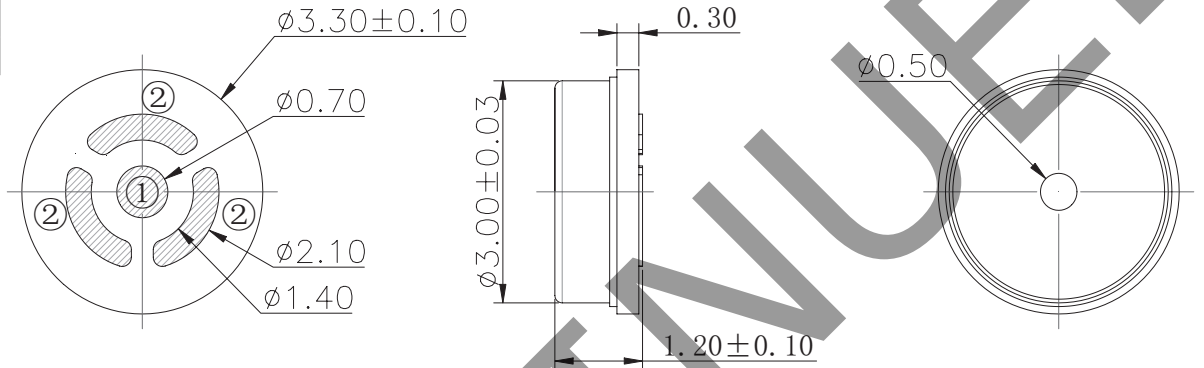
MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|---------------|------------------------|-----|-------|-----|-------|
| dimensions | Ø3.30 x 1.20 | | | | mm |
| acoustic port | top | | | | |
| terminals | surface mount | | | | |
| weight | | | 0.023 | | g |

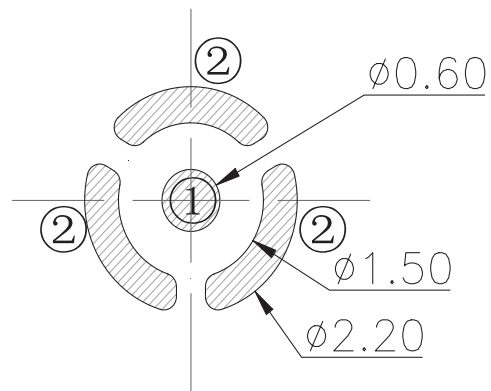
MECHANICAL DRAWING

units: mm
tolerance: ± 0.1 mm

| TERMINAL CONNECTIONS | |
|----------------------|------------|
| TERM. | FUNCTION |
| 1 | VDD output |
| 2 | GND |

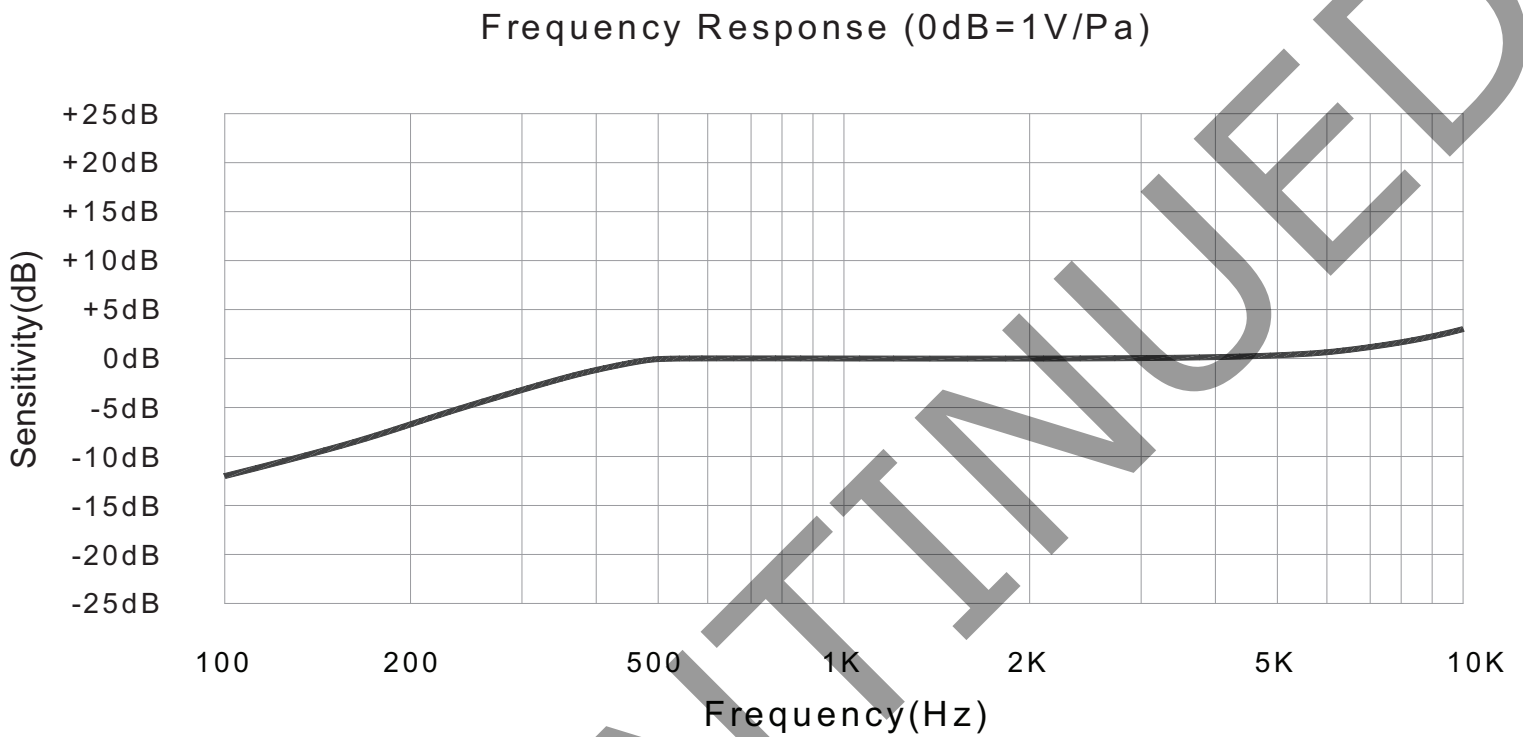


Recommended Vacuum Nozzle Pickup
Top View

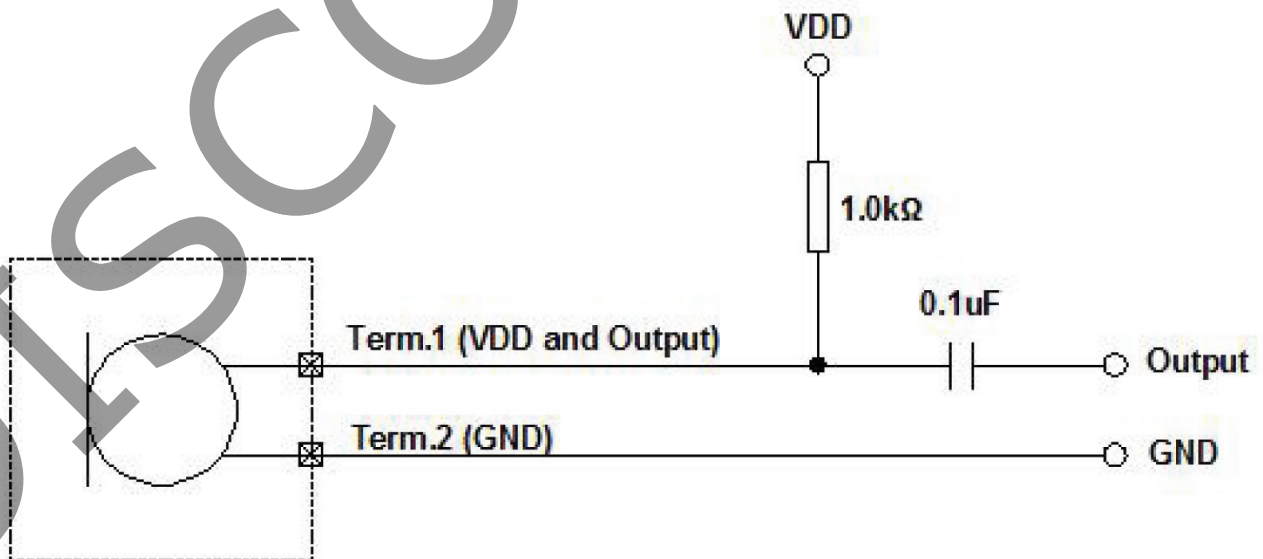


Recommended PCB Layout
Top View

FREQUENCY RESPONSE CURVE



APPLICATION CIRCUIT

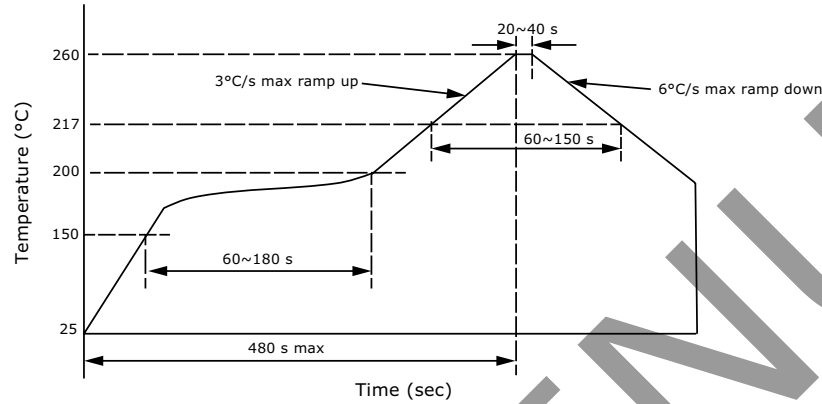


Dashed Section
Represents
MEMS
Microphone

SOLDERABILITY

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

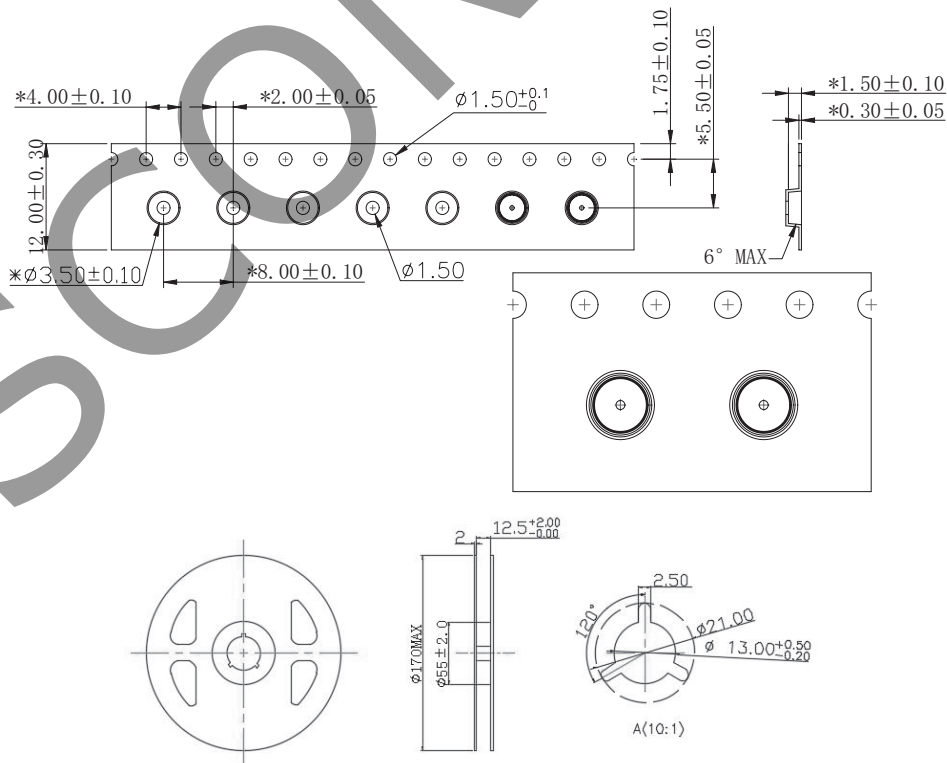
- Note:
1. Vacuuming over acoustical hole is not allowed.
 2. Not suitable for wash process.
 3. Not recommended to exceed 5 reflow cycles.



PACKAGING

| parameter | conditions/description | min | typ | max | units |
|---------------------------|---------------------------|-----|-----|-----|-------|
| reel storage ⁴ | at relative humidity <75% | -40 | | 70 | °C |
| MSL | Class 1 | | | | |
| reel size | Ø170 mm max | | | | |
| reel QTY | 1,000 pcs per reel | | | | |

- Note:
4. Recommended storage period no more than 1 year. Floor life (out of bag) no more than 4 weeks.



REVISION HISTORY

| rev. | description | date |
|------|-----------------|------------|
| 1.0 | initial release | 11/07/2018 |
| 1.01 | brand update | 01/15/2020 |

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

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