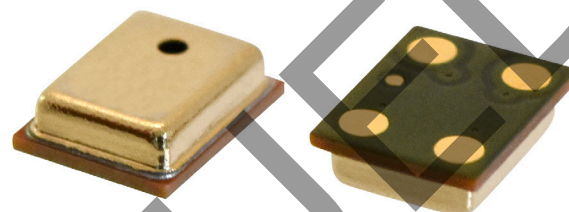


**MODEL:** CMM-3729AT-42108-TR | **DESCRIPTION:** MEMS MICROPHONE**FEATURES**

- 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              | -43 | -42  | -41    | dB     |
| supply voltage (V <sub>DD</sub> )       |                                  | 1.6 | 2.0  | 3.6    | V      |
| current consumption (I <sub>DSS</sub> ) | V <sub>DD</sub> = 2.0 V          |     | 80   |        | μA     |
| sensitivity reduction                   | V <sub>DD</sub> = 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) |     | 60   |        | dBA    |
| total harmonic distortion (THD)         | at 94 dB SPL, 1 kHz              |     | 0.2  |        | %      |
| acoustic overload point (AOP)           | at 10% THD, 1 kHz                |     | 130  |        | dB SPL |
| output impedance (Z <sub>out</sub> )    | 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 |     | 105 | °C    |
| storage temperature   | in packaging           | -40 |     | 85  | °C    |
| RoHS                  | yes                    |     |     |     |       |

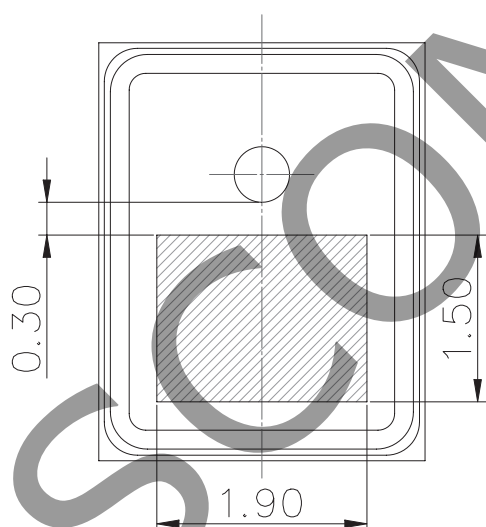
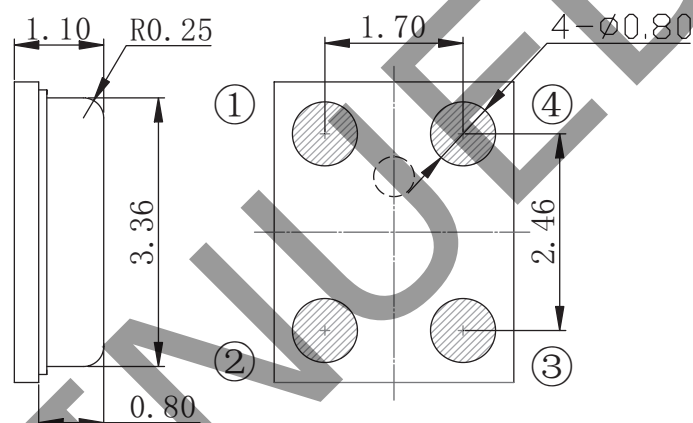
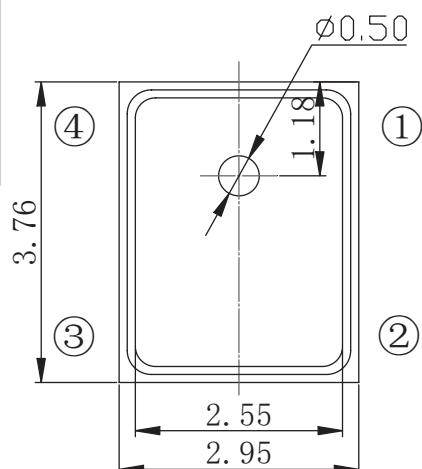
**MECHANICAL**

| parameter     | conditions/description | min | typ   | max | units |
|---------------|------------------------|-----|-------|-----|-------|
| dimensions    | 3.76 x 2.95 x 1.10     |     |       |     | mm    |
| acoustic port | top                    |     |       |     |       |
| terminals     | surface mount          |     |       |     |       |
| weight        |                        |     | 0.024 |     | g     |

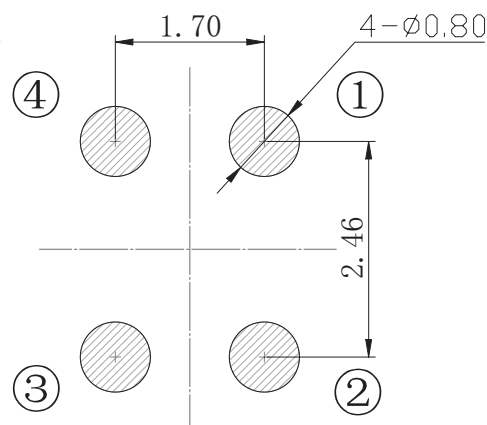
## MECHANICAL DRAWING

units: mm  
tolerance:  $\pm 0.1$  mm

| TERMINAL CONNECTIONS |          |
|----------------------|----------|
| TERM.                | FUNCTION |
| 1                    | VDD      |
| 2                    | GND      |
| 3                    | GND      |
| 4                    | output   |

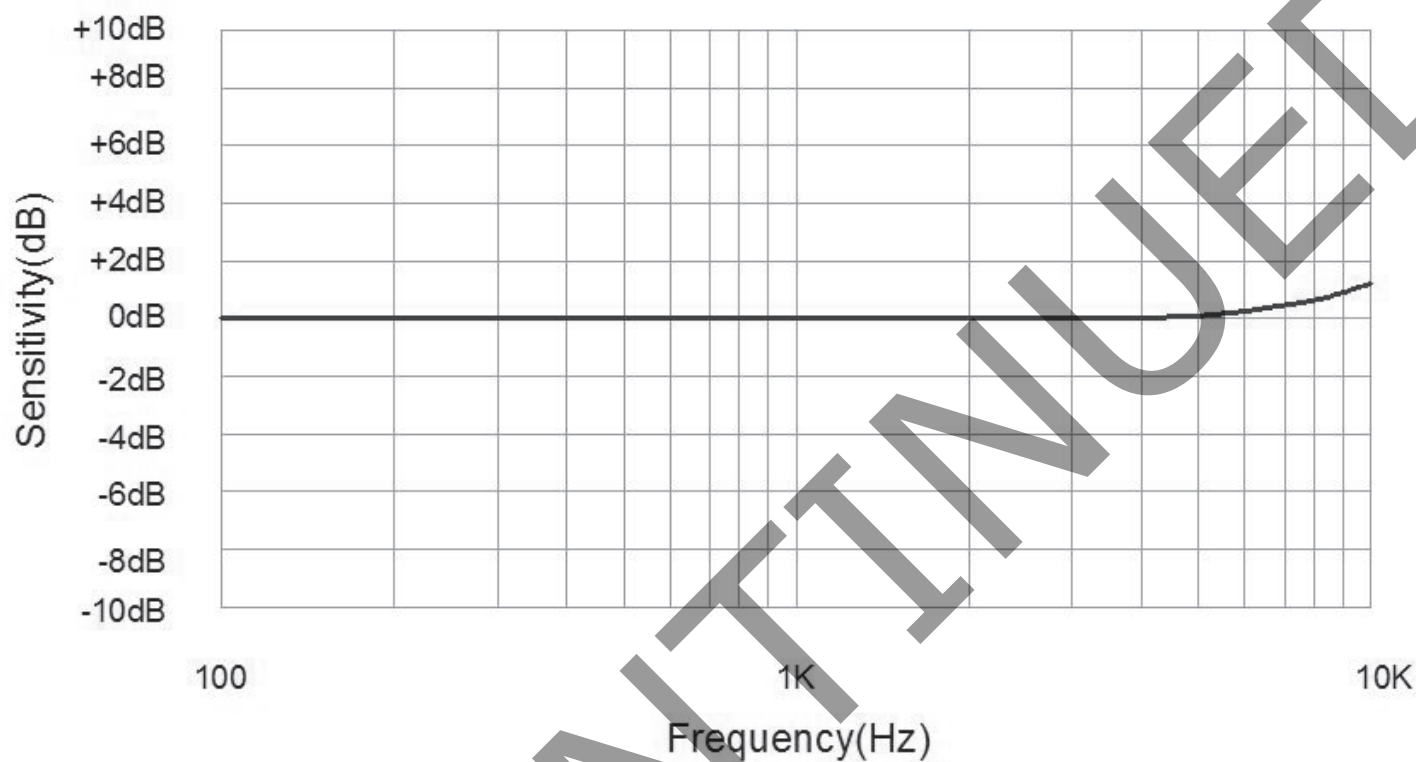


Recommended Vacuum Nozzle Pickup  
Top View

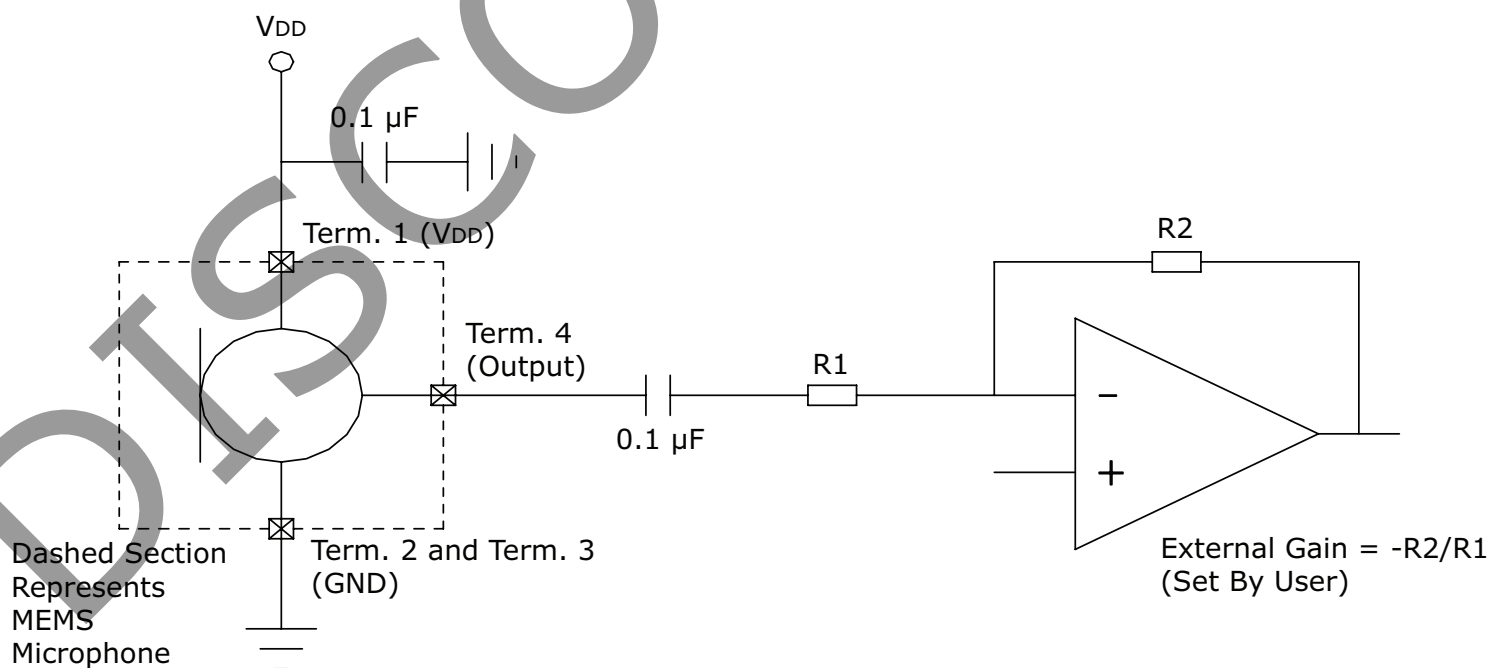


Recommended PCB Layout  
Top View

## FREQUENCY RESPONSE CURVE



## APPLICATION CIRCUIT

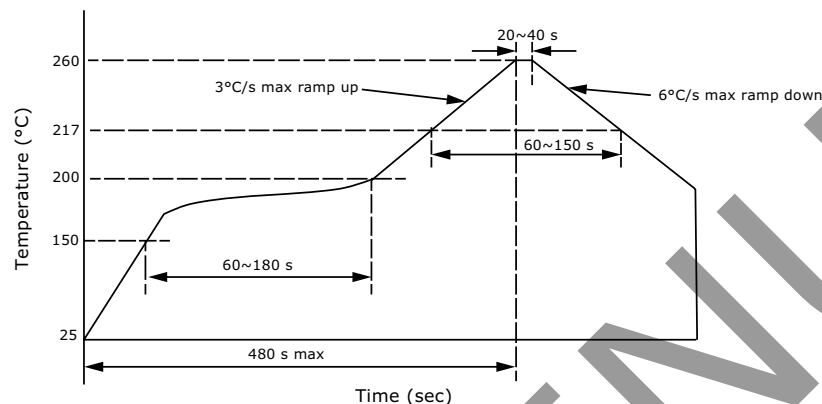


**SOLDERABILITY**

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

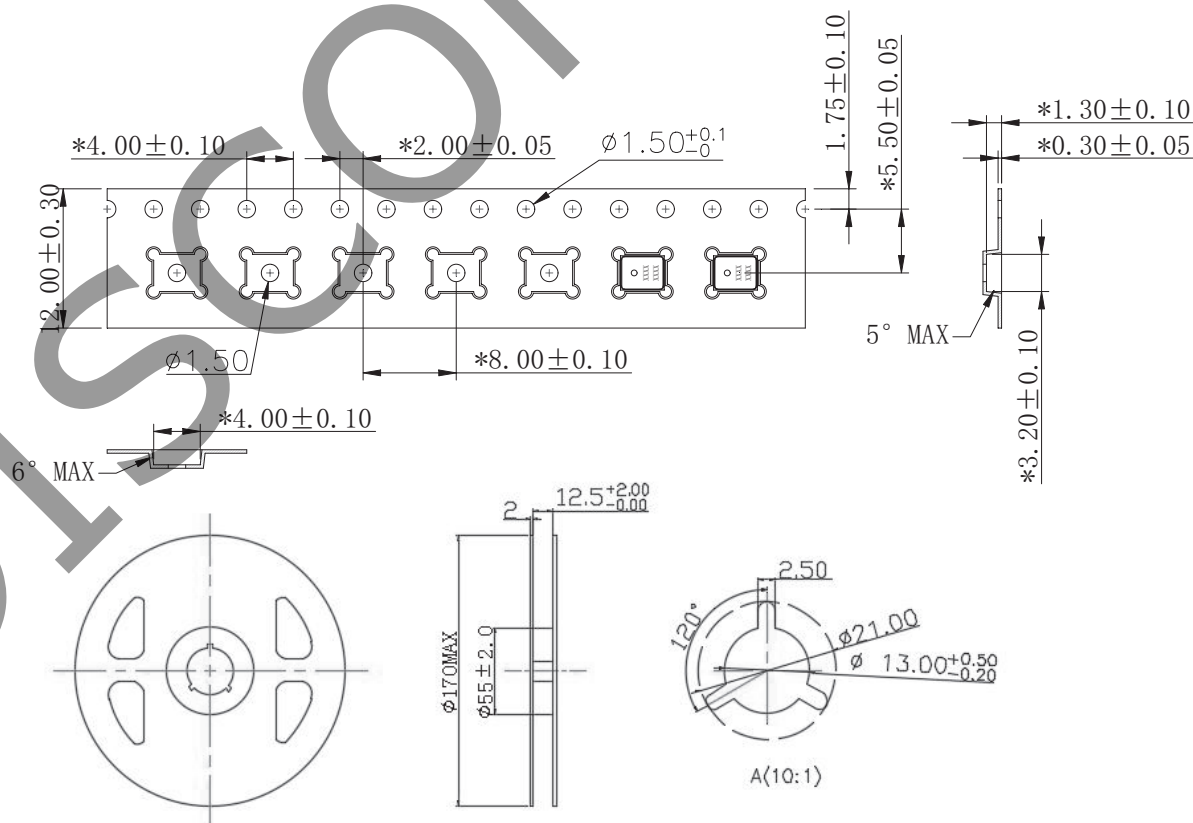
Note:

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 <sup>4</sup> | at relative humidity <75% | -40 |     | 85  | °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    | 01/16/2020 |

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

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