

**MODEL:** CEB-27FD44 | **DESCRIPTION:** PIEZOELECTRIC DIAPHRAGM**FEATURES**

- piezo element with feedback wire
- 30 Vp-p max operating voltage
- 4,500 Hz rated frequency

**SPECIFICATIONS**

| parameter              | conditions/description              | min    | typ    | max    | units              |
|------------------------|-------------------------------------|--------|--------|--------|--------------------|
| operating voltage      |                                     |        |        | 30     | Vp-p               |
| resonant frequency     | only for piezo element without wire | 4,000  | 4,500  | 5,000  | Hz                 |
| resonant impedance     | only for piezo element without wire |        |        | 500    | $\Omega$           |
| electrostatic capacity | at 1000 Hz/1 V                      | 11,200 | 16,000 | 20,800 | pF                 |
| dimensions             | $\varnothing 27 \times 0.51$        |        |        |        | mm                 |
| weight                 |                                     |        |        | 2.0    | g                  |
| material               | brass                               |        |        |        |                    |
| terminal               | wire leads                          |        |        |        |                    |
| operating temperature  |                                     | -20    |        | 70     | $^{\circ}\text{C}$ |
| storage temperature    |                                     | -30    |        | 80     | $^{\circ}\text{C}$ |
| RoHS                   | yes                                 |        |        |        |                    |

Notes: 1. All specifications measured at 5-35 $^{\circ}\text{C}$ , humidity at 45-85%, under 86-106kPa pressure, unless otherwise noted.

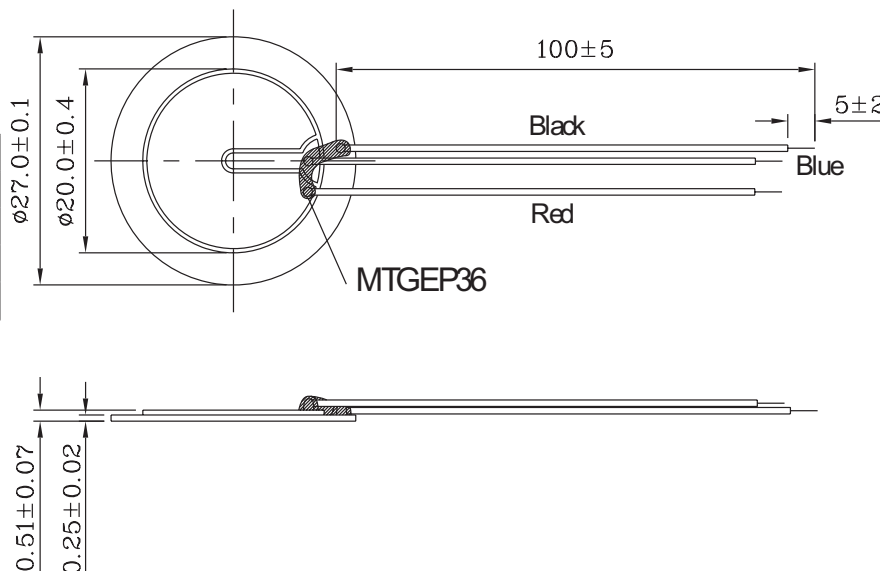
**MECHANICAL DRAWING**

units: mm

tolerance:  $\pm 0.5$  mm

wire: UL1571 32 AWG

| WIRE CONNECTIONS |               |
|------------------|---------------|
| Color            | Function      |
| Red              | +terminal (M) |
| Black            | -terminal (G) |
| Blue             | feedback (F)  |

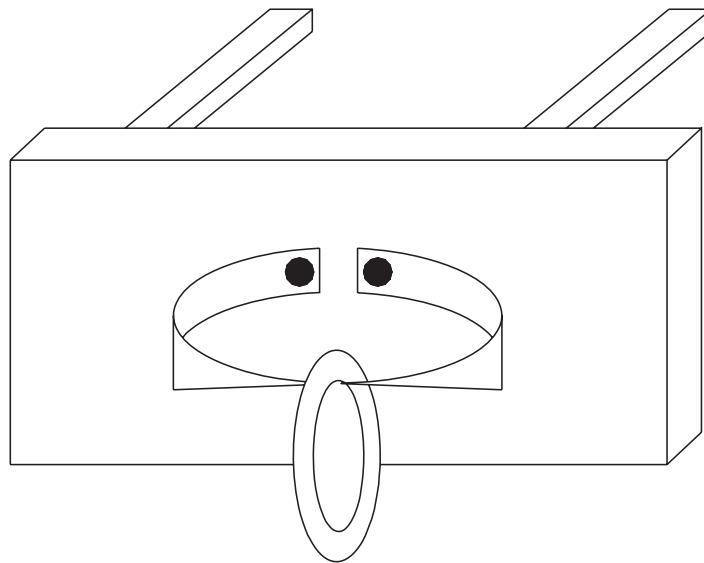


## MEASURING METHOD

### Resonant Frequency / Resonant Impedance

The piezo electric diaphragm shall be clamped at a node point as shown in the following figure to be free from any mechanical stress, and measured its resonant frequency and resonant impedance by using vector impedance analyzer or equivalent.

When the input frequency is swept within 100 Hz to 5 kHz, the resonant frequency is defined as the frequency where the impedance shows the minimum value, and this impedance shall be the resonant impedance.



### Static Capacitance

The electrostatic capacitance shall be measured at 120 Hz by using LCR meter HP4194A[H.P.] or equivalent. This part shall be clamped in the same way as the measurement of resonant frequency and resonant impedance as mentioned above.

## REVISION HISTORY

| rev. | description                  | date       |
|------|------------------------------|------------|
| 1.0  | initial release              | 06/25/2007 |
| 1.01 | brand update                 | 05/13/2020 |
| 1.02 | 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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