

- ▶ Low Profile
- ▶ 4.9 x 1.8 mm Footprint
- ▶ Extended Temp. Range
- ▶ RoHS Compliant



ECX-39

SMD TUNING FORK CRYSTAL

The miniature ECX-39 is a very compact SMD Tuning Fork Crystal. The 4.9 x 1.8 x 1.0 mm ceramic package is ideal for today's SMD manufacturing environment.

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | ECX-39 | | | UNITS |
|------------------------------|----------------|--------|--------|--------|---------|
| | | MIN | TYP | MAX | |
| Frequency | Fo | | 32.768 | | KHz |
| Frequency Tolerance, @ +25°C | Standard | | | ± 20 | ppm |
| Load Capacitance | Specify in P/N | | 12.5 | | pF |
| Drive Level | DL | | 0.1 | 1.0 | μW |
| Equivalent Series Resistance | R1 | | | 70K | Ω |
| Turnover Temperature | | +20 | +25 | +30 | °C |
| Temperature Coefficient | | -0.028 | -0.034 | -0.040 | ppm/°C² |
| Shunt Capacitance | Co | | 1.33 | | pF |
| First Year Aging | +25°C ±3°C | | | ± 3 | ppm |
| Operating Temperature | Topr | -40 | | +85 | °C |
| Storage Temperature | Tstg | -55 | | +125 | °C |
| Insulation Resistance | @ 100V DC | 500M | | | Ω |

TOP, BOTTOM, SIDE VIEWS & LAND PATTERN

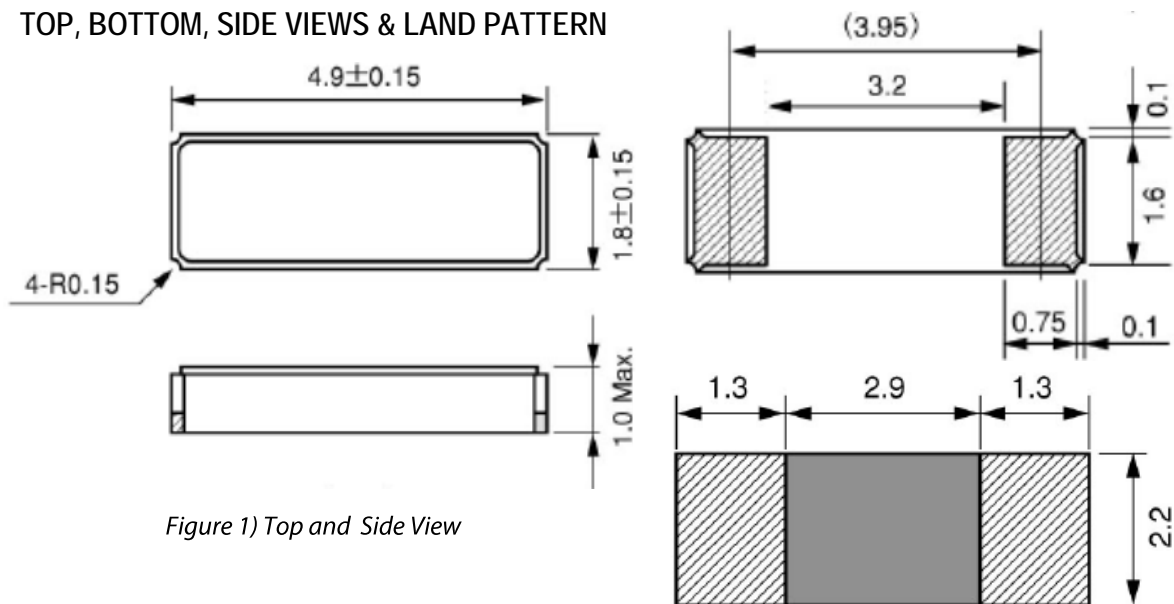


Figure 1) Top and Side View

Figure 2) Bottom View and Suggested Land

PART NUMBERING GUIDE: Example ECS-.327-12.5-39-TR

| ECS | - Frequency Abbreviation | - Load Capacitance | - Package Type | - Tolerance | Packaging |
|-----|--------------------------|--|----------------|-----------------------------|------------------------------|
| | .327 = 32.768 KHz | 12.5 = 12.5 pF 9 = 9 pF 7 = 7 pF | -39 = ECX-39 | Blank = Std C = ± 10 ppm | -TR = Tape & Reel 3K/Reel |