

The miniature ECX-31B is the most cost effective SMD Tuning Fork Crystal today. The 3.2 x 1.5 x 0.9 mm ceramic package is ideal high density circuit boards. Offerings in extended temperature and frequency tolerance as low at ± 10 ppm.

Request a Sample



- Low Profile
- 3.2 x 1.5 mm Footprint
- Extended Temp. Range
- RoHS Compliant
- Low Power RTC Applications such as STM32 [AN2867](#)

OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS

| PARAMETERS | CONDITIONS | ECX-31B | | | UNITS |
|------------------------------|--------------------|---------|--------|------------|---------------------|
| | | MIN | TYP | MAX | |
| Frequency | | | 32.768 | | KHz |
| Frequency Tolerance | @ +25°C | | | ± 20 * | ppm |
| Temperature Coefficient | | -0.028 | -0.034 | -0.040 | ppm/°C ² |
| Shunt Capacitance | Co | | 1.05 | | pF |
| Load Capacitance | Specify in P/N | | 12.5 | | pF |
| Drive Level | DL | | 0.1 | 1.0 | μ W |
| Equivalent Series Resistance | R1 | | | 70K | Ω |
| Insulation Resistance | @ 100V DC | 500M | | | Ω |
| Turnover Temperature | | +20 | +25 | +30 | °C |
| Operating Temperature | Topr | -40 | | +85 | °C |
| Storage Temperature | Tstg | -55 | | +125 | °C |
| Aging (First Year) | @ +25°C ± 3 °C | | | ± 3 | ppm |

DIMENSIONS (mm)

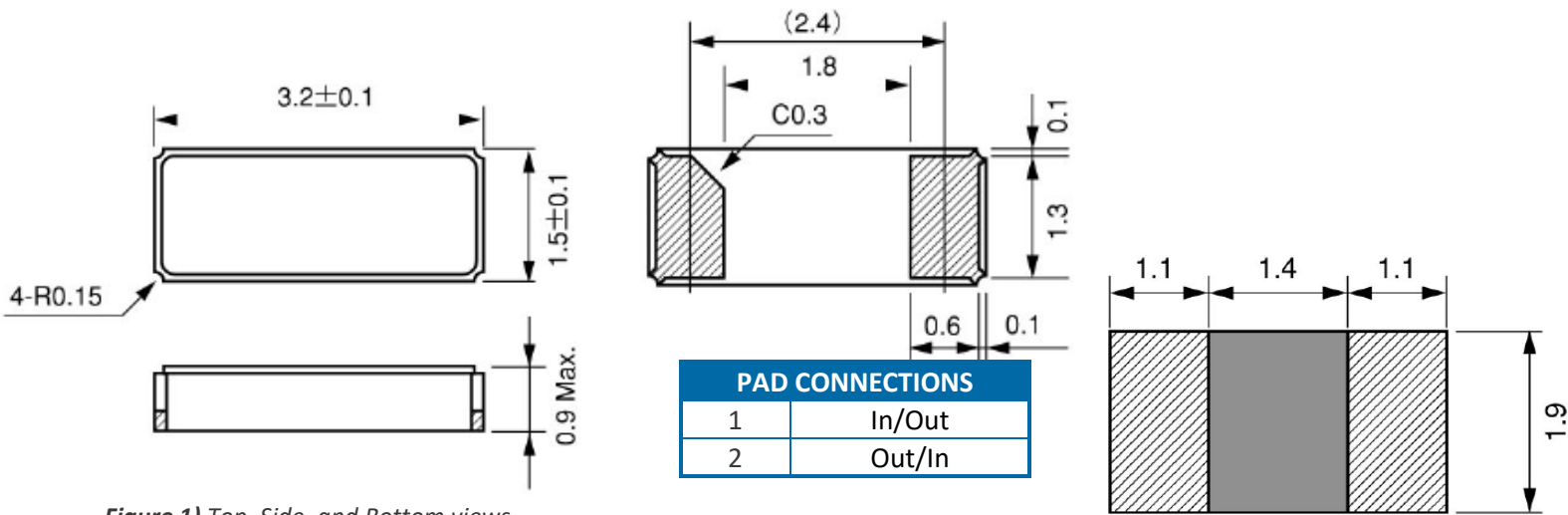


Figure 1) Top, Side, and Bottom views

Figure 2) Suggested Land Pattern

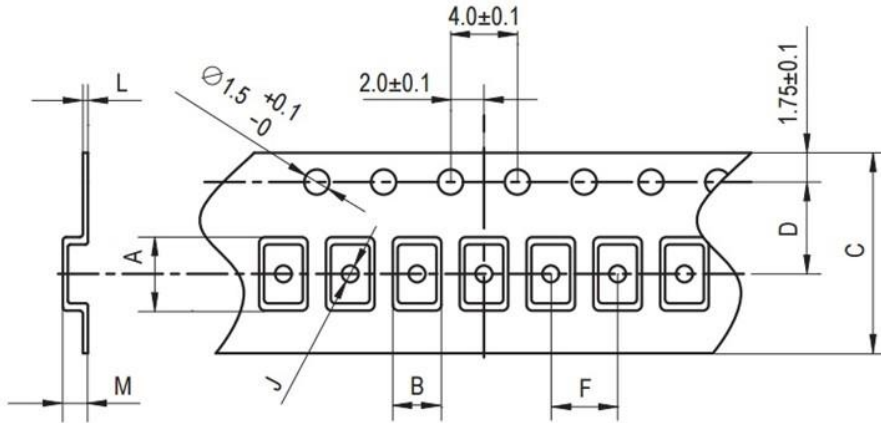
PART NUMBERING GUIDE: Example ECS-.327-12.5-34B-TR

| ECS - FREQUENCY ABBREVIATION | LOAD CAPACITANCE | PACKAGE | CUSTOM OPTIONS Tolerance | PACKAGING |
|------------------------------|--|----------------|--|-------------------------------|
| ECS | 12.5 = 12.5 pF 9 = 9 pF 7 = 7 pF 6 = 6 pF | -34B = ECX-31B | Blank = ± 20 ppm * C = ± 10 ppm | TR = 3K/Reel TR9 = 9K/Reel |
| .327 = 32.768 KHz | | | | |

*Contact ECS for availability

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POCKET TAPE DIMENSIONS (mm)



| A | B | C | D | F | J | L | M |
|-----|-----|------|-----|-----|-----|-----|-----|
| 3.4 | 1.7 | 12.0 | 5.5 | 4.0 | 1.0 | 0.3 | 1.2 |

SOLDER PROFILE

Peak solder Temp +260°C Max 10 sec Max.

2 Cycles Max.

MSL 1, Lead Finish Au

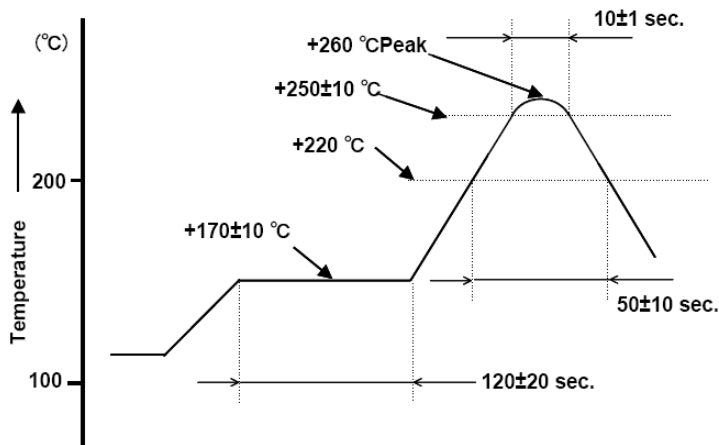


Figure 1) Suggested Reflow Profile

Mouser Electronics

Authorized Distributor

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[ECS:](#)

[ECS-.327-7-34B-TR](#) [ECS-.327-12.5-34B-TR](#) [ECS-.327-12.5-34B-C-TR](#) [ECS-.327-7-34B-C-TR](#) [ECS-.327-9-34B-TR](#)
[ECS-.327-9-34B-C-TR](#) [ECS-.327-6-34B-TR](#) [ECS-.327-6-34B-C-TR](#)