

The ultra-miniature ECX-34R is a very compact SMD Tuning Fork Crystal with a Max. **Low ESR of 50K  $\Omega$** . The 3.2 x 1.5 x 0.9 mm ceramic package is ideal for mobile devices, real time clocks, and wireless applications.

## ECX-34R SMD CRYSTAL

[Request a Sample](#)

### ECX-34R SMD CRYSTAL

### OPERATING CONDITIONS / ELECTRICAL CHARACTERISTICS



| PARAMETERS                   | CONDITIONS     | ECX-34R |        |        | UNITS               |
|------------------------------|----------------|---------|--------|--------|---------------------|
|                              |                | MIN     | TYP    | MAX    |                     |
| Frequency                    | Fo             |         | 32.768 |        | KHz                 |
| Frequency Tolerance          | @ +25°C        |         |        | ± 20 * | ppm                 |
| Temperature Coefficient      |                | -0.028  | -0.034 | -0.040 | ppm/°C <sup>2</sup> |
| Shunt Capacitance            | Co             |         | 1.3    |        | pF                  |
| Load Capacitance             | Specify in P/N |         | 12.5   |        | pF                  |
| Drive Level                  | DL             |         |        | 0.5    | μW                  |
| Equivalent Series Resistance | R1             |         |        | 50K    | 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                 |

- Low Profile
- 50K Max. ESR
- 3.2 x 1.5 mm Footprint
- Extended Temp. Range
- RoHS Compliant
- Low Power RTC Applications such as STM32 [AN2867](#)

### DIMENSIONS (mm)

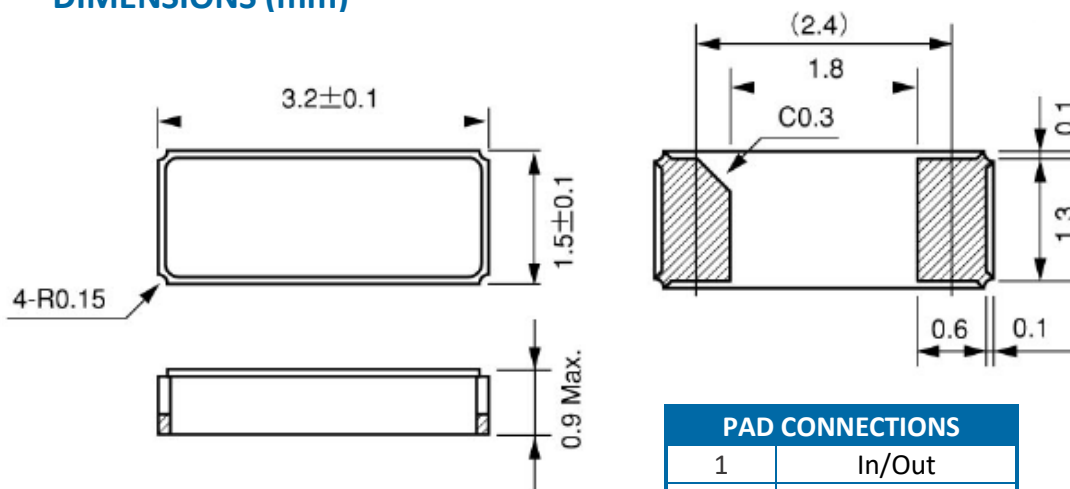


Figure 1) Top, Side, and Bottom views

| PAD CONNECTIONS |        |
|-----------------|--------|
| 1               | In/Out |
| 2               | Out/In |

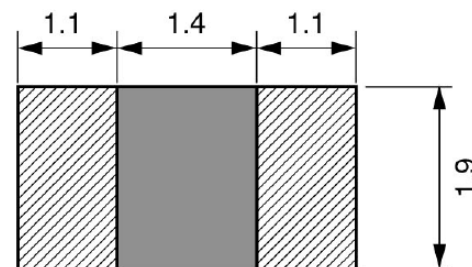


Figure 2) Suggested Land Pattern

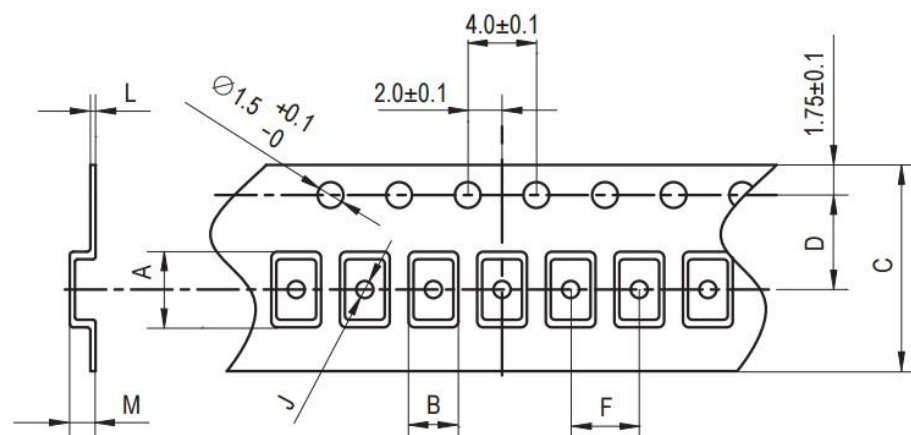
### PART NUMBERING GUIDE: Example ECS-.327-12.5-34R-TR

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

\*Contact ECS for availability

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## POCKET TAPE DIMENSIONS (mm)



| A   | B   | C    | D   | F   | J   | L   | M   | Reel Dia. | Qty/Reel |
|-----|-----|------|-----|-----|-----|-----|-----|-----------|----------|
| 3.4 | 1.7 | 12.0 | 5.5 | 4.0 | 1.0 | 0.3 | 1.2 | 180       | 3000pcs  |

### SOLDER PROFILE

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

2 Cycles Max.

MSL 1, Lead Finish Au



Figure 1) Suggested Reflow Profile