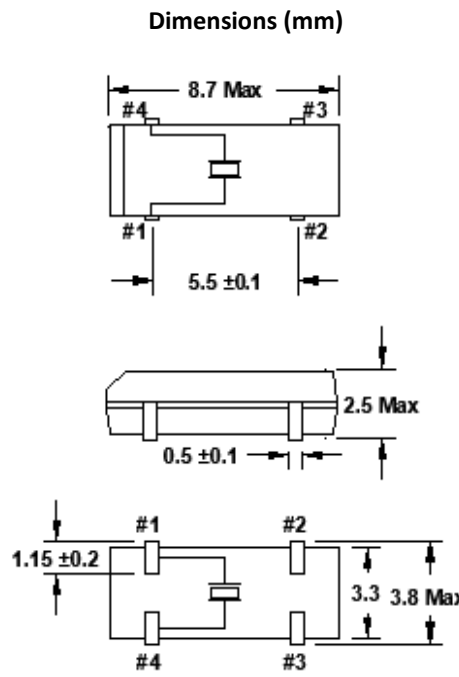


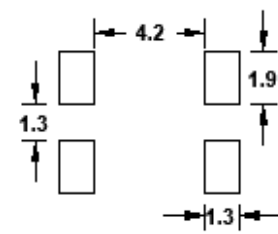
| STANDARD SPECIFICATIONS                                    |   |
|--|---|
| PARAMETERS   | MAX (Unless otherwise noted)            |
| Frequency Range  | 32.768 kHz                              |
| Frequency Tolerance @ 25°C                                 | (See options below)                     |
| Frequency Stability, ref 25°C<br>(Temperature Coefficient) | -0.04 PPM / (Δ°C) <sup>2</sup>          |
| Temperature Range  |   |
| Turnover (T <sub>0</sub> )                                 | +20°C ~ +30°C                           |
| Operating (T <sub>OPR</sub> )                              | -40°C ~ +85°C                           |
| Storage (T <sub>STG</sub> )                                | -55°C ~ +125°C                          |
| Equivalent Series Resistance (R <sub>S</sub> )             | 50 kΩ                                   |
| Load Capacitance (C <sub>L</sub> )                         | (See options below)                     |
| Insulation Resistance @ 100V <sub>DC</sub>                 | 500MΩ Min                               |
| Drive Level  | 1.0μW                                   |
| Aging per year (@ 25°C)                                    | ±3 PPM                                  |
| Maximum Soldering Temp / Time                              | 260°C / 10 Seconds                      |
| Moisture Sensitivity Level (MSL) per J-STD-033             | 1                                       |
| Termination Finish   | Matte Sn                                |
| Lead (Pb) Free   | Exemption 7a                            |
| RoHS Compliant   | Yes                                     |
| REACH Compliance   | Notification of Lead (Pb)<br>>0.1%(w/w) |

**DIMENSIONS / MECHANICAL SPECIFICATIONS**

**Dimensions (mm)**



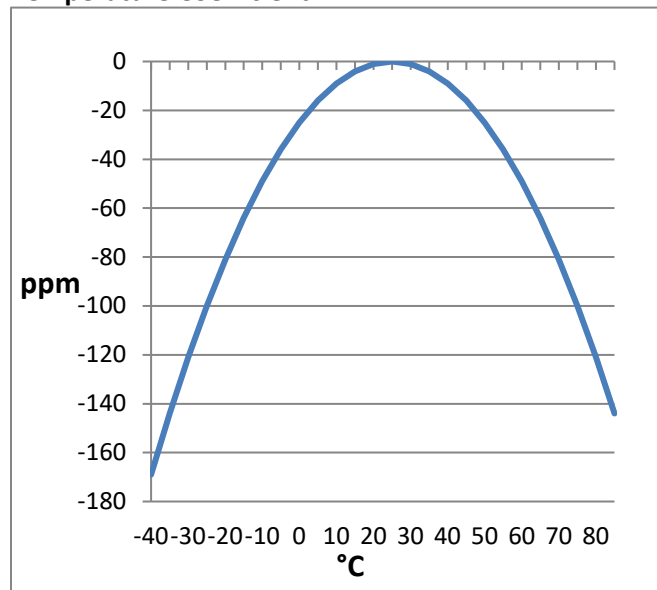
**Recommended Solder Pad Layout**



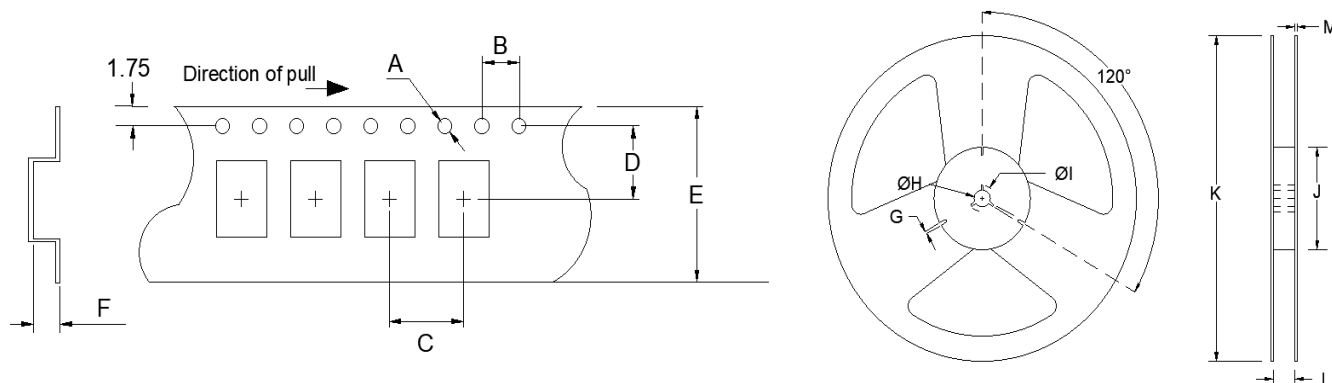
**RoHS EXEMPTION 7a: High Temperature solder (>85% Pb) in crystal seal**

Note: Dimensional drawing is for reference to critical specifications defined by size measurements. Certain non-critical visual attributes, such as side castellations, etc. may vary.

**Temperature Coefficient**



| TAPE SPECIFICATIONS (mm) |     |     |     |      |     |             | REEL SPECIFICATIONS (mm) |     |     |     |      |      |     |
|--------------------------|-----|-----|-----|------|-----|-------------|--------------------------|-----|-----|-----|------|------|-----|
| A                        | B   | C   | D   | E    | F   | REEL QTY    | G                        | H   | I   | J   | K    | L    | M   |
| Ø1.55                    | 4.0 | 8.0 | 7.5 | 16.0 | 2.7 | -T3 = 3,000 | 2.0                      | Ø13 | Ø21 | Ø50 | Ø330 | 16.4 | 2.0 |



### Available Options & Part Identification for SMD Tuning Fork Crystal KFSR

Sample PN: FKFSREIHM0.032768-T3

| F          | KFSR                | E                              | I  | H  | M   | 0.032768               | -T3   |
|------------|---------------------|--------------------------------|--|--|---|------------------------|---|
| <b>Fox</b> | <b>Model Number</b> | <b>Tolerance</b><br>E = ±20ppm | <b>Stability</b><br>I = -0.04 PPM/<br>(Δ°C) <sup>2</sup> | <b>Load Capacitance</b><br>B = 6pF<br>H = 12.5pF | <b>Operating Temperature</b><br>M = -40 ~ +85°C | <b>Frequency (MHz)</b> | <b>Values Added Options</b><br>Blank = Bulk<br>T3 = 3,000 pcs |

### Reliability Test Conditions

Please contact Abracon Quality Assurance department

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