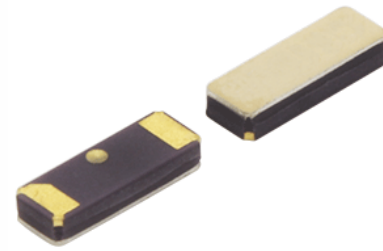




TF415 Series Tuning Fork Crystal

Features

- 32.7680kHz Frequency Reference
- Tuning Fork Crystal Design
- Hermetic Ceramic Surface Mount Package
- Ideal for High Density Circuit Boards
- Frequency Tolerance, ± 20 ppm Standard
- Parabolic Temperature Coefficient
- Tape and Reel Packaging, EIA-418



Part Dimensions:
4.1 x 1.5 x 0.9mm • 16.3059mg

Applications

- Real Time Clock Reference
- FPGAs & Microcontrollers
- Wireless Communications
- Consumer Electronics
- Computer Peripherals
- IoT Applications
- Instrumentation
- Industrial Electronics

Description

CTS TF415 Series is ideal for supporting wide range of electronic designs requiring a Real Time Clock reference. This series will support general commercial and industrial applications.

Ordering Information

Model	Frequency Tolerance	Load Capacitance	Frequency Code [kHz]	Packaging															
TF 415	2	P	32K7680	R															
<table border="1"> <thead> <tr> <th>Code</th> <th>Package</th> </tr> </thead> <tbody> <tr> <td>415</td> <td>4.1x1.5mm</td> </tr> </tbody> </table>		Code	Package	415	4.1x1.5mm	<table border="1"> <thead> <tr> <th>Code</th> <th>Capacitance</th> </tr> </thead> <tbody> <tr> <td>P</td> <td>12.5pF</td> </tr> <tr> <td>J</td> <td>9pF</td> </tr> </tbody> </table>		Code	Capacitance	P	12.5pF	J	9pF	<table border="1"> <thead> <tr> <th>Code</th> <th>Packing</th> </tr> </thead> <tbody> <tr> <td>R</td> <td>3k pcs./reel</td> </tr> </tbody> </table>		Code	Packing	R	3k pcs./reel
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Notes:

- 1] Check factory for availability.
- 2] Frequency is recorded with two leading digits before the 'K' and 4 significant digits after the 'K' [including zeros].

**Not all performance combinations and frequencies may be available.
Contact your local CTS Representative or CTS Customer Service for availability.**

This product is specified for use only in standard commercial applications. Supplier disclaims all express and implied warranties and liability in connection with any use of this product in any non-commercial applications or in any application that may expose the product to conditions that are outside of the tolerances provided in its specification.



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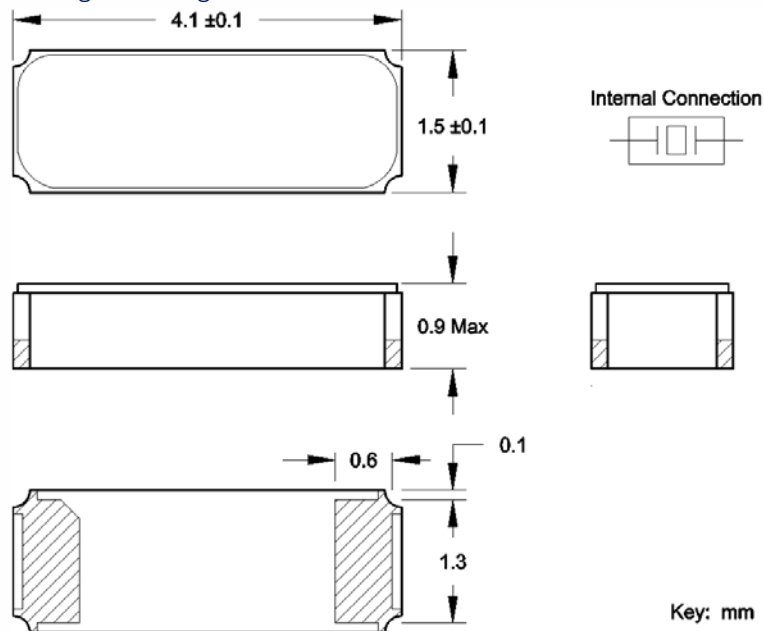
0755-27872782



<http://www.smdcrystal.com>

Mechanical Specifications

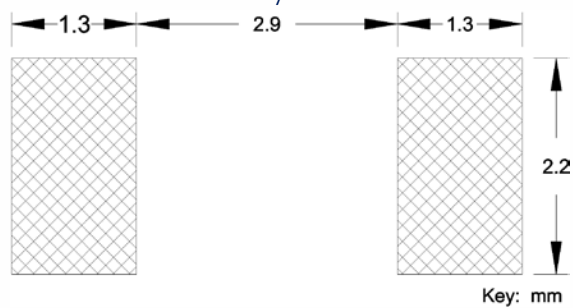
Package Drawing



Marking Information

Refer to document 016-0071-0, TF Marking Guide, for marking formats by product family.

Recommended Pad Layout



Notes

1. JEDEC termination code (e4). Barrier-plating is nickel [Ni] with gold [Au] flash plate.
2. Reflow conditions per JEDEC J-STD-020; +260°C maximum, 20 seconds.
3. MSL = 1.