THE DATASHEET OF

FY1000014

Quartz Crystal Ceramic SMD

FY

5.0 x 3.2mm Ceramic SMD

Product Features

- Rugged AT-cut Crystal Construction
- Miniature 5.0 x 3.2mm Ceramic Package
- Available on Tape & Reel; 12mm Tape, 1000 Units per Reel
- Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)
- Halogen and Antimony Free. "Green" Device (Note 3)
- An automotive-compliant part is available under separate datasheet (The DIODES™ FYQ)

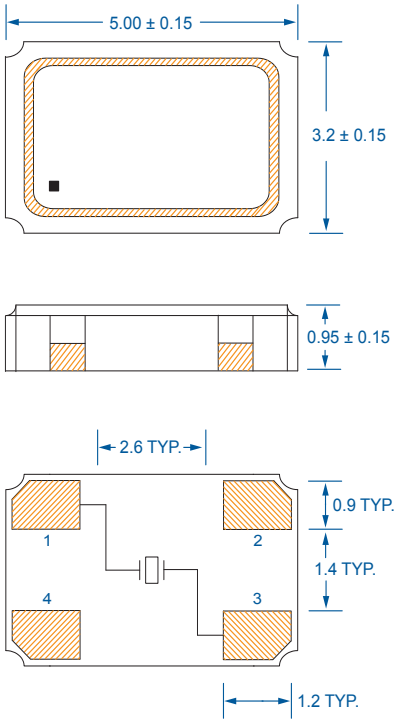
Product Description

The DIODES™ 4-pad FY Series seam seal devices incorporate a sub-miniature AT-cut crystal resonator housed in a standard 5.0 x 3.2mm ceramic package. These compact crystal are ideal for surface mounting in densely populated PCB applications.

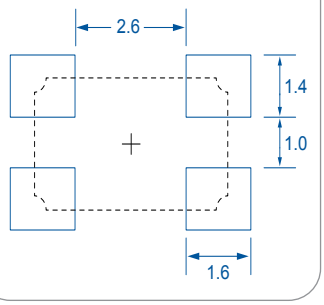
Application(s)

- PCMCIA Cards
- Portable / hand-held PCs
- Notebook PC
- Wireless LAN
- Portable Multimedia Devices
- GPS
- HDD
- Bluetooth
- USB Dongle

Package: (Dimensions are in mm)



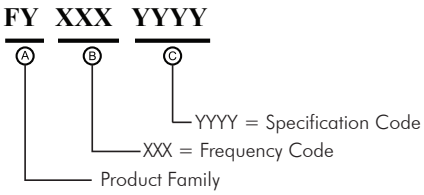
Recommended Land Pattern:



Pin Functions:

Pin	Function
1	Crystal
2	GND
3	Crystal
4	GND

Part Ordering Information:



Notes:

1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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Frequency Range:

- 8.0000 MHz to 59.9999 MHz (Fundamental)
- 60.0000 MHz to 125.0000 MHz (3rd Overtone)

Characteristics at 25°C ±3°C:

- Frequency Calibration Tolerance: ±10ppm to ±50ppm
- Load Capacitance: 8 to 32pF or Series Resonance
- Effective Series Resistance (ESR):

  Fundamental:

  8.0000MHz to 11.9999MHz: 100Ω max
  12.0000MHz to 15.9999MHz: 60Ω max
  16.0000MHz to 31.9999MHz: 50Ω max
  32.0000MHz to 59.9999MHz: 40Ω max

  3 Overtone:

  60.0000MHz to 79.9999MHz: 100Ω max
  80.0000MHz to 99.9999MHz: 80Ω max
  100.0000MHz to 125.0000MHz: 60Ω max
- Drive Level: 10μW typ. 100μW max
- Shunt Capacitance: 5pF Max.

Temperature Range:

- Operating: –20 to +70°C; –40 to +85°C
- Storage: –55 to +125°C

Temperature Stability:

- ±10ppm to ±50ppm (–20 to +70°C)
- ±15ppm to ±50ppm (–40 to +85°C)

Aging at 25°C, First Year:

- ±3ppm Max

Reflow Temperature:

- 260°C Max, 10 seconds max

For the latest product information visit: https://www.diodes.com/part/FY/

For soldering reflow profile and reliability test ratings go to: https://www.diodes.com/assets/sre/reflow.pdf

For tape and reel information go to: https://www.diodes.com/assets/sre/tr_5032.pdf

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