

ISSUE 7; June 2016

Description

- 2.5 x 2mm SMD quartz crystal hermetically sealed in a ceramic package with a seam sealed metal lid
Please see our CFPX-218 for our standard 2.5 x 2mm crystal, however the CFPX-181 offers lower ageing than the CFPX-218 package

Frequency Parameters

- Frequency 12.0MHz to 66.0MHz
- Frequency Tolerance $\pm 10.00\text{ppm}$ to $\pm 50.00\text{ppm}$
- Tolerance Condition @ 25°C
- Frequency Stability $\pm 10.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 1\text{ppm}$ max per year @ 25°C

Electrical Parameters

- Load Capacitance (CL) 10.0pF to 30.0pF
- Shunt Capacitance (C0) 5pF max
- Drive Level 100µW max

Operating Temperature Ranges

- 10 to 60°C
- 10 to 70°C
- 40 to 85°C
- 30 to 85°C

Environmental Parameters

- Drop: 75cm drop (3 times) onto hard wooden board
- Vibration: 1.5mm amplitude, 10Hz-55Hz, 1min in 3 mutually perpendicular planes, duration 2hrs each plane
- Storage Temperature Range: -40 to 90°C

Ordering Information

- Frequency*
- Model*
- Frequency Tolerance (@ 25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Load Capacitance*
- Overtone
- (*minimum required)
- Example
20.0MHz CFPX-181
50/50/-10 to 60C/16 FUND

Compliance

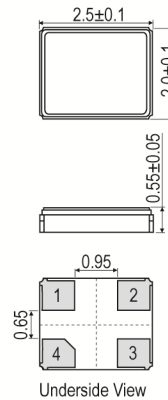
- RoHS Status (2011/65/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Cutt In tape, cut from a reel
Pack Size: 1
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000



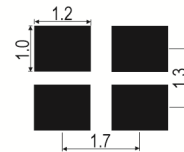
Outline (mm)



Pad Connections

- Crystal
 - GND
 - Crystal
 - GND
- Note: pads 2 and 4 must be connected to GND for proper operation.

Solder Pad Layout



Sales Office Contact Details:

UK: +44 (0)1460 270200
Germany: 0800 1808 443

France: 0800 901 383
USA: +1.760.318.2824

Email: info@iqdfrequencyproducts.com
Web: www.iqdfrequencyproducts.com

Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
12.0MHz	12.999999MHz	-10 to 60 -30 to 85 -40 to 85	±10 ±15 ±25	Fundamental	200
13.0MHz	15.999999MHz	-10 to 60 -30 to 85 -40 to 85	±10 ±15 ±25	Fundamental	150
16.0MHz	19.999999MHz	-10 to 60 -30 to 85 -40 to 85	±10 ±15 ±25	Fundamental	80
20.0MHz	29.999999MHz	-10 to 70 -30 to 85 -40 to 85	±10 ±15 ±25	Fundamental	60
30.0MHz	34.999999MHz	-10 to 70 -30 to 85 -40 to 85	±10 ±15 ±25	Fundamental	50
35.0MHz	66.0MHz	-10 to 70 -30 to 85 -40 to 85	±10 ±15 ±25	Fundamental	40

*Stability Maximum values ±100ppm

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