

ISSUE 2; May 2023

Description

- Replacement for the 3SMX
Standard 6 x 3.5mm crystal
Available in a 2 or 4 pad package
Ceramic package with a seam sealed metal lid, hermetically sealed
- -A A 2 pad
- Variant A is a 2 pad version
- -B B 4 pad
- Variant B is a 4 pad version

Frequency Parameters

- Frequency 8.0MHz to 133.0MHz
- Frequency Tolerance $\pm 10.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Frequency Stability $\pm 15.00\text{ppm}$ to $\pm 100.00\text{ppm}$
- Ageing $\pm 3\text{ppm}$ max per year @ 25°C

Electrical Parameters

- Load Capacitance (CL) 10.0pF to 30.0pF
- Shunt Capacitance (C0) 7pF max
- Drive Level 100µW max

Operating Temperature Ranges

- 0 to 50°C
- -10 to 60°C
- -20 to 70°C
- -40 to 85°C

Environmental Parameters

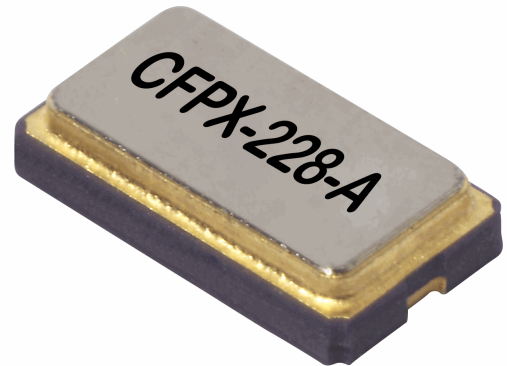
- Storage Temperature Range: -55 to 125°C
- Drop Test: Unit dropped from height of 100cm onto hard wooden plate (>30mm thickness), three times. JIS-C-0044
- Vibration: MIL-STD-883F: 2007.3 Frequency range 20 to 2000Hz, peak amplitude 1.52mm, peak acceleration 20G, 20min/axis X, Y & Z, total test time 4 hrs

Manufacturing Details

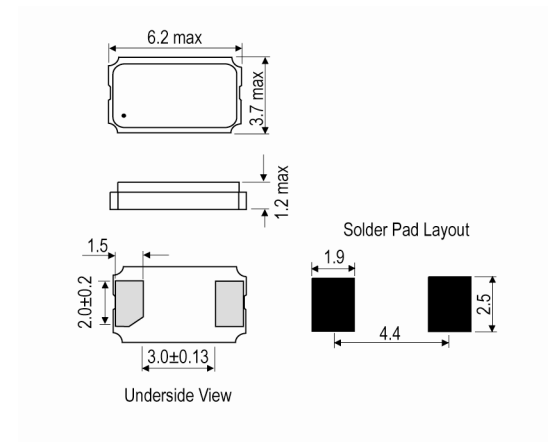
- RoHS Terminations NiAu
- RoHS Reflow 260degC 10s

Ordering Information

- Frequency*
- Model*
- Variant*
- Frequency Tolerance (@25°C)*
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Load Capacitance*
- Overtone*
- Example
10.0MHz CFPX-228-B
50/50/-40 to 85C/10 FUND



Outline (mm) -A = A 2 pad



Sales Office Contact Details:

UK: +44 (0)1460 270200

USA: +1.760 668 8935

Email: info@iqdfrequencyproducts.com

Web: www.iqdfrequencyproducts.com

Compliance

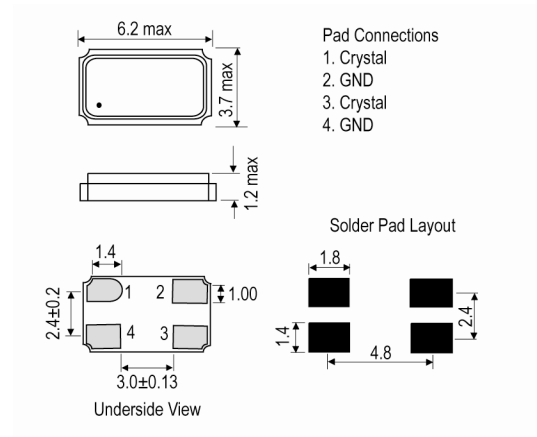
- RoHS Status (2015/863/EU) Compliant
- REACH Status Compliant
- MSL Rating (JDEC-STD-033): Not Applicable

Packaging Details

- Pack Style: Bulk Loose in bulk pack
Pack Size: 100
- Pack Style: Reel Tape & reel in accordance with EIA-481-D
Pack Size: 1,000
- Pack Style: Cutt In tape, cut from a reel
Pack Size: 100



Outline (mm) -B = B 4 pad



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Electrical Specification - maximum limiting values

Frequency Min	Frequency Max	Temperature Range	Stability (Min)	Over Tone Order	ESR
		°C	ppm		Ω
8.0MHz	10.0MHz	0 to 50	±15	Fundamental	150
		-10 to 60	±20		150
		-20 to 70	±20		150
		-40 to 85	±30		150
10.000001MHz	12.0MHz	0 to 50	±15	Fundamental	80
		-10 to 60	±20		80
		-20 to 70	±20		80
		-40 to 85	±30		80
12.000001MHz	15.0MHz	0 to 50	±15	Fundamental	60
		-10 to 60	±20		60
		-20 to 70	±20		60
		-40 to 85	±30		60
15.000001MHz	20.0MHz	0 to 50	±15	Fundamental	50
		-10 to 60	±20		50
		-20 to 70	±20		50
		-40 to 85	±30		50
20.000001MHz	30.0MHz	0 to 50	±15	Fundamental	40
		-10 to 60	±20		40
		-20 to 70	±20		40
		-40 to 85	±30		40
30.000001MHz	40.0MHz	0 to 50	±15	Fundamental	30
		-10 to 60	±20		30
		-20 to 70	±20		30
		-40 to 85	±30		30
40.0MHz	52.0MHz	0 to 50	±15	3rd Overtone	100
		-10 to 60	±20		100
		-20 to 70	±20		100
		-40 to 85	±30		100
40.000001MHz	52.0MHz	0 to 50	±15	Fundamental	20
		-10 to 60	±20		20
		-20 to 70	±20		20
		-40 to 85	±30		20
52.000001MHz	80.0MHz	0 to 50	±15	3rd Overtone	80
		-10 to 60	±20		80
		-20 to 70	±20		80
		-40 to 85	±30		80
80.000001MHz	133.0MHz	0 to 50	±15	3rd Overtone	70
		-10 to 60	±20		70
		-20 to 70	±20		70
		-40 to 85	±30		70

*Stability Maximum values ±100ppm

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