



ISSUE 8; August 2014 - RoHS 2011/65/EU

Description

- Surface mount temperature compensated voltage controlled crystal oscillator (TCVCXO) providing a high degree of frequency stability over a wide temperature range in a hermetically sealed ceramic package and is particularly suited to applications where space is at a premium.



Frequency Parameters

- Frequency 10.0MHz to 30.0MHz
- Frequency Tolerance $\pm 0.50\text{ppm}$
- Frequency Stability $\pm 1.50\text{ppm}$ to $\pm 5.00\text{ppm}$
- Ageing $\pm 1\text{ppm typ}$ in 1st year @ 25°C

Electrical Parameters

- Supply Voltage 3.0V $\pm 0.15\text{V}$
- Supply Voltage Variation: $\pm 0.2\text{ppm}$ (5% change)
- Load Variation: $\pm 0.2\text{ppm max}$ (10% change)

Frequency Adjustment

- Pulling $\pm 3\text{ppm min}$ to $\pm 7\text{ppm max}$
- Control Voltage 1.5V $\pm 1.0\text{V}$
- Input Impedance (Pad1): 1.0M Ω min

Operating Temperature Ranges

- 0 to 50°C
- -10 to 60°C
- -20 to 70°C
- -30 to 85°C
- -40 to 85°C

Output Details

- Output Compatibility Clipped Sine
- Drive Capability 10k Ω // 10pF $\pm 10\%$
- Output: 0.8Vpk-pk min

Noise Parameters

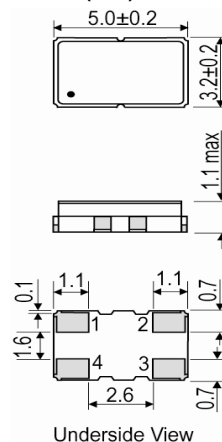
- Phase Noise (typical @ 13MHz)
 - 80dBc/Hz @ 10Hz
 - 105dBc/Hz @ 100Hz
 - 130dBc/Hz @ 1kHz
 - 140dBc/Hz @ 10kHz

Environmental Parameters

- Shock: MIL-STD-883D, Method 2002.3, Test Condition B: 1500G, 0.5ms, 1/2 sine wave, 3 shocks in each of 3 mutually perpendicular planes
- Vibration: MIL-STD-883D, Method 2005.2, Test Condition B: 20G (20Hz-2000Hz), 1.5mm amplitude, in 3 mutually perpendicular planes, 4hrs in each plane
- Storage Temperature Range: -55 to 125°C

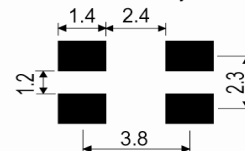


Outline (mm)

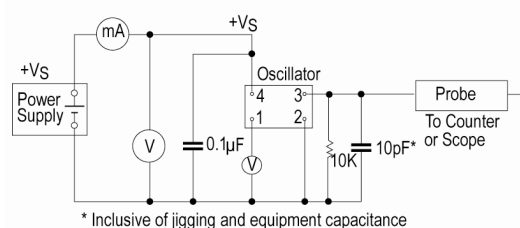


Pad Connections
1. Voltage Control
2. GND
3. Output
4. +Vs

Solder Pad Layout



Test Circuit



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Ordering Information

- Frequency*
- Model*
- Output
- Frequency Stability (over operating temperature range)*
- Operating Temperature Range*
- Supply Voltage
- Example
- 13.0MHz CFPT-141
- Clipped Sine $\pm 2.5\text{ppm}$ -30 to 85C 3V

Compliance

- RoHS Status 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: 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

Electrical Specification - maximum limiting values 3.0V $\pm 0.15\text{V}$

Frequency Min	Frequency Max	Temperature Range	Stability (min)	Current Draw	Rise and Fall Time	Duty Cycle
		°C	ppm	mA	ns	%
10.0MHz	30.0MHz	-40 to 85	± 2.5	2	-	-
		-30 to 85	± 2.5	2	-	-
		-20 to 70	± 2.0	2	-	-
		-10 to 60	± 1.5	2	-	-
		0 to 50	± 1.5	2	-	-

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