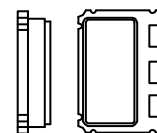


CRYSTAL CONTROLLED OSCILLATORS

3.3V 5X7mm SURFACE MOUNT TCXO



T533D5

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-40	-	85	°C	
Supply Voltage	(Vcc)	-0.3	-	6.5	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	12	-	20	MHz	
Frequency Stability		-2.5	-	2.5	ppm	
Total Frequency Tolerance		-5.0	-	5.0	ppm	1
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	3.135	3.3	3.465	Vdc	
Supply Current	(Icc)	-	-	2	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
SSB Phase Noise at 10Hz offset		-	-80	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-125	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-135	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-140	-	dBc/Hz	

CLIPPED SINEWAVE OUTPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	10kΩ/10pF	-		2
Voltage (peak to peak)		-	800	1000	mV	

PACKAGE CHARACTERISTICS

TABLE 4.0

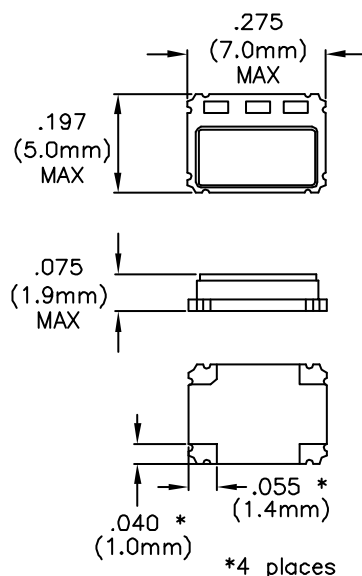
Package	Hermetically sealed ceramic package and metal cover
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Note:

- Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 10 years aging.
- 10kΩ ±10% // 10pF±10%

PAD	CONNECTION
1	GROUND
2	GROUND
3	OUTPUT
4	Vcc

Dimensional Tolerance: ±.02" (.508mm)
±.005" (.127mm)



DESCRIPTION

The Connor-Winfield T533D5 is a Miniature 5x7mm Surface Mount 3.3V, Temperature Compensated Crystal Oscillator (TCXO) with clipped Sinewave output. The T533D5 is designed for applications requiring a fixed frequency oscillator with tight frequency stability and low jitter. The surface mount package is designed for high-density mounting and is optimum for mass production.

FEATURES

FREQUENCY RANGE: 12 to 20 Mhz

SUPPLY VOLTAGE: 3.3V

SUPPLY CURRENT: 2mA

LOW JITTER <1ps RMS

FREQUENCY STABILITY: ±2.5ppm

TEMPERATURE RANGE: 0 to 70°C

CERAMIC SURFACE MOUNT PACKAGE

TAPE AND REEL PACKAGING

ORDERING INFORMATION

T533D5	-	20.00 Mhz
TCXO SERIES		CENTER FREQUENCY

Specifications subject to change without notice.

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CRYSTAL CONTROLLED OSCILLATORS

ENVIRONMENTAL CHARACTERISTICS	TEST CIRCUIT
TEMPERATURE CYCLE: The specimen shall meet electrical characteristics after tested 5 cycles of -55°C/30 min & +125°C/30 min. HERMETICAL No bubbles appear in Flourinert (FC-43) at 125°C ±5°C, for 5 minutes. SOLVENT RESISTANCE: Marking will withstand immersion in Isopropyl Alcohol or Trichloroethylene.	
MECHANICAL CHARACTERISTICS	SOLDERING
FREE DROP: The specimen shall meet electrical characteristics after tested 3 times Free Drop testing on the hard wooden board from a height of 75cm. VIBRATION: The specimen shall meet electrical characteristics after tested by the following conditions: 10-55Hz 1.5mm Amplitude, 55-2000Hz 20G's, 2 hours for each plane. THERMAL SHOCK: After applied Thermal Shock of 260°C max x 10 sec max x 2 times, or 230°C max x 180 sec max, the specimen shall meet electrical characteristics. SOLDERABILITY: (EIAJ-RGX-0102/1D1 Condition 1a) 1. Flux: MIL-F-14256 (WW Rosin=25%, Isopropyl alcohol=75%) 2. Solder: QQ-S-571 (Sn=63%, Pb=37%) 3. Solder bath temperature: 235°C ±5°C. 4. Depth of immersion: Up to electrical terminal. 5. Immersing time: Within 2 sec ±0.5 sec into solder bath. After performing the above procedures, a newly soldered coverage shall be greater than 90%.	SUGGESTED PAD LAYOUT
TAPING AND REEL DIMENSIONS	
	Dimensional Tolerance: ±.02" (.508mm) ±.005" (.127mm)

MEETS EIA-481A AND EIAJ-1009B
2,000 PCS/REEL

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