1703 E. Highway 50 Yankton, SD 57078 USA
Phone: 800-762-8800 or 605-665-9321 Fax: 605-665-1709
Website: www.mtronpti.com

Specification for an TCXO
MtronPTI P/N: M6300S050

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F_O		100.000000		MHz	
Frequency Stability						
Frequency Tolerance		-1.0		+1.0	ppm	@ + 25°C
Frequency Stability	ΔF/F	-0.5		+0.5	ppm	(Max-Min)/2
Frequency vs. Aging		-3.0 -1.0		+3.0 +1.0	ppm	First year. Per year thereafter
Frequency vs. Supply			± 0.4		ppm	5% supply variation
Frequency vs. Load			± 0.2		ppm	5% load variation
Output						
Output Type		HCMOS Compatible				
Output Load			15		*pF*	
Symmetry (duty cycle)	T_{DC}	45		55	%	½ V_{DD}
Logic "1" Level	V_{OH}	2.97			V	HCMOS load
Logic "0" Level	V_{OL}			0.33	V	HCMOS load
Rise/Fall Time	T_R/T_F			6	nS	From 20% to 80% V_{DD}
SSB Phase Noise						
Typical Under Static Conditions			-70		dBc/Hz	@ 10Hz Offset
			-95		dBc/Hz	@ 100Hz Offset
			-120		dBc/Hz	@ 1000Hz Offset
			-128		dBc/Hz	@ 10kHz Offset
			-134		dBc/Hz	@ 100kHz Offset
Supply						
Operating Voltage	V_{DD}	3.135	3.3	3.465	V	
Operating Current	I_{DD}			90	mA	
Temperature Range						
Operating Temperature	TA	-20		+75	°C	
Storage Temperature	TS	-45		+85	°C	

Environmental, Mechanical & Test Report Requirements:

Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6 ms duration, ½ sinewave)
Vibration	Per MIL-STD-202, Method 201 & 204 (10 g's from 10-2000 Hz)
Thermal Cycle	Per MIL-STD-883, Method 1010, B (-55°C to 125°C, 15 min. dwell, 10 cycles)
Thermal Shock	Per MIL-STD-883, Method 1011, Condition A
Hermeticity	Per MIL-STD-202, Method 112 (1 x 10^{-8} atm cc/s of Helium)
Solderability	Per EIAJ-STD-002
Max. Soldering Conditions	See solder profile, Figure 1
Package Type	6-pad 5 X 7 X 1.9 mm leadless ceramic. RoHS compliant.
Test Report	A test report shall be included for each lot shipped. The report shall include Frequency and Frequency Stability Over Temperature measured data for each unit within the lot but the units will not be serialized.

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Dimensions, Pin Out, & Marking Information:

Pad	Function
1	N/C
2	N/C
3	Ground
4	Output
5	N/C
6	$+V_{DD}$

Part Marking	
Line 1	M6300S050
Line 2	100M000000
Line 3	M yyww

Legend	
yy	Year
ww	Work week

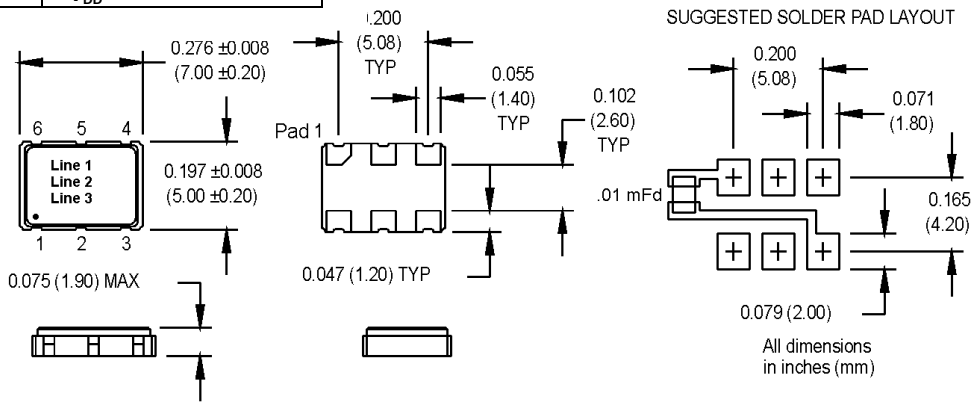

Figure 1