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SPECIFICATION FOR SMT TCXO MtronPTI P/N M6131S016

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency of Operation	F _o		23.100000		MHz	
Frequency Tolerance		-1		+1	ppm	@ +25°C at time of shipping.
Frequency Stabilities						
vs. Temperature	ΔF/F	-2.0		+2.0	ppm	Relative to Frequency @ +25°C. Transition at 2°C/minute. +25°C to -55°C then to +85°C, then back to +25°C.
vs. Aging		-5.0		+5.0	ppm	For 10 years at +25°C.
vs. Supply Voltage	F _{VDD}			± 0.2	ppm	For 5% voltage change
Supply Ripple & Noise				50	mV pk-pk	Sine wave at any frequency between 100 Hz to 12 MHz.
Output						
Output Type			Sine Wave			
Output Load			10 K 5 pF			± 10%
Output Signal Level		0.7			V _{pk-pk}	Sine wave. AC coupled.
Harmonics (2 nd)				-15	dBc	
Spurious Output				-60	dBc	Static conditions.
Spurious Output				-50	dBc	During vibration.
Response to Power Supply Ripple				-57	dBc	The total power of spurious outputs at frequencies removed from F _o by 100 Hz to 12 MHz. Supply ripple defined as 50 mV pk-pk sine wave at any frequency from 100 Hz to 12 MHz.
Load Voltage Standing Wave Ratio	VSWR	RF output must be able to withstand continuous application of loads of any VSWR including short and open circuit conditions				
RF Output Enable Time				500	ms	Signal present after application of V _s .
Output Stability Time				20	sec	Part to be within stability limits.
Additional Specifications						
SSB Phase Noise (Under Static Conditions)			-47		dBc/Hz	@ 1 Hz
			-82			@ 10 Hz
			-112			@ 100 Hz
			-132			@ 1 kHz
			-142			@ 10 kHz
			-147			@ 100 kHz
Acceleration Sensitivity				0.001	ppm/G	In direction of any axis.
Supply Voltage & Power Consumption						
Operating Voltage	V _s	3.13	3.3	3.470	V	
Operating Current	I _s			4.0	mA	

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Environmental & Mechanical Requirements:

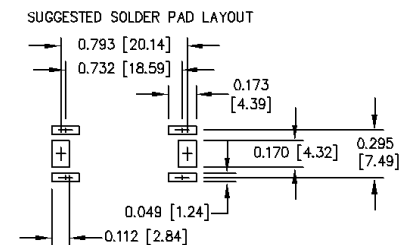
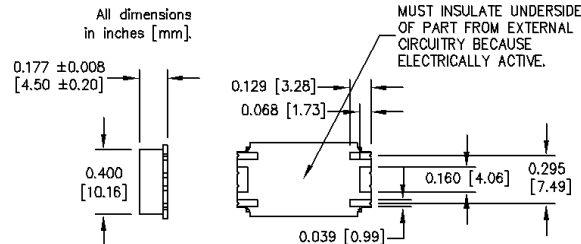
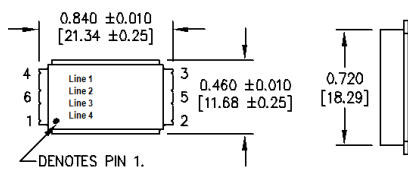
Operating Temperature	T _A	-55	+85	°C	
Storage Temperature	T _S	-65	+85	°C	
Mechanical Shock	IAW MIL-STD-202, Method 213, Condition I.				
Vibration	IAW MIL-STD-202, Method 204, Condition A				
Thermal Shock	IAW MIL-STD-202, Method 107, Test Condition A-1				
Cold Temperature Start	After an extended cold soak at -55°C with no power applied, the part shall start up and run with the application of power.				
Moisture Resistance	IAW MIL-STD-202, Method 103, Condition A (Non-operating)				
Fungus Resistance	IAW MIL-PRF-55310.				
Altitude	-400 meters to +15,000 meters mean sea level (MSL) (Non-operating)				
Resistance to Soldering Heat	IAW MIL-PRF-55310.				
Solderability	IAW MIL-STD-202, Method 208 except for steam aging.				
Terminal Strength	IAW MIL-PRF-55310, and MIL-STD-202, Method 211, Condition A (0.5 lbs)				
Package Type	4- Pad FR-4 SMT				

Mechanical, Marking and Layout Information:

Pad	Function
1	No Connect
2	Ground
3	Output
4	+V _{DD}
5	Ground
6	Ground

Part Marking	
Line 1	MtronPTI
Line 2	M6131S016
Line 3	23.100000 MHz
Line 4	yy ww

Legend	
yy	Year
ww	Week





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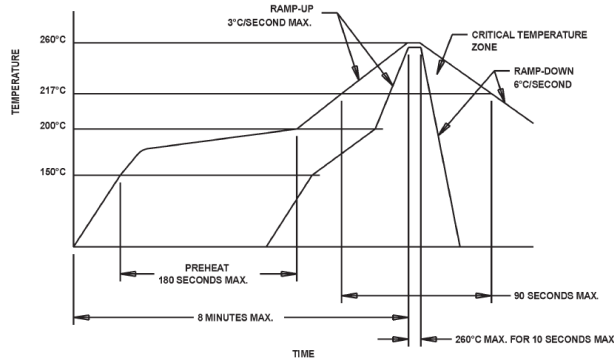


Figure 1

Data Sheet Revision Table:

Date	Rev.	Author	Details of Revision
08/26/14	0	MM	Replacement for M6131S002.
07/31/17	A	MM	Updated stability specification to absolute.