

This product has been replaced by the M623x Series.

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 SMT TCXO MtronPTI P/N M6131S024

Electrical Specifications:

Parameter	Symbol	Min.	Тур.	Max.	Units	Conditions
Frequency of Operation	Fo		100.000000		MHz	
Initial Tolerance		-0.8		+0.8	ppm	@+25°C
Overall Stability	∆F/F	-10		+10	ppm	Inclusive of initial tolerance, supply voltage, load, deviation over -40°C to +85°C range and 20 years @ +40°C.
vs. Temperature	$\Delta F/F$	-2.5		+2.5	ppm	Over -40°C to +85°C range. (Relative to frequency @+25°C)
vs. Temperature	$\Delta F/F$	-20		+6		over -55°C to -40°C range
vs. Supply				±0.4	ppm	For 5% supply variation
vs. Load				±0.3	ppm	For 10% load variation
vs. Aging 20 years		-6.0		+6.0	ppm	@ +40°C.
			Output			
Output Type			LVCMOS			
Output Load		13.5	15	16.5	pF	
Symmetry (duty cycle)	T _{DC}	45	50	55	%	@ 50% of VDD
Output Logic Levels	Vol			10	% V _{cc}	
Output Level	V _{OH}	90			% V _{CC}	
Rise/Fall Time				5	ns	Ref. 10% and 90%
Output Current				±24	mA	
		Addit	ional Specific	ations		
SSB Phase Noise (Under Static Conditions)			-73	-63	dBc/Hz	@ 10 Hz
			-102	-92		@ 100 Hz
			-132	-122		@ 1 kHz
			-150	-145		@ 10 kHz
			-158	-156		@ 100 kHz
			-160	-158		@ 1 MHz
Operating Voltage	Vdd	3.135	3.3	3.465	VDC	
Operating Current	IDD			40	mA	

Environmental & Mechanical Requirements:

Operating Temperature	TA	-55		+85	°C	
Storage Temperature	Ts	-55		+125	°C	
Mechanical Shock	Per MIL-STD-202, Method 213, Condition C (100 g's, 6msec duration, 1/2 sinewave)					
Vibration	Per MIL-STD-202, Method 201 & 204 Condition D (20 g's from 10-2000Hz)					
Solderability	Per EIAJ-STD-002					
Max. Soldering Conditions	See solder profile, Figure 1					
Package Type	4-Pad FR-4					
Pad Termination	ENIG over Cu					
FIT rate/MTBF	563 Failures/billion hours (FIT) @ 40°C in an AIC environment.					



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Mechanical, Marking and Layout Information:



Figure 1

Data Sheet Revision Table

Date	Rev.	Author	Details of Revision				
04/10/17	0	MM	Original Release.				
05/31/17	А	MM	Updated vibration profile.				
06/09/17	В	MM	Extended operating temperature range from -55°C to +85°C				
08/18/17	С	MM	Updated output and added output current specification.				
08/25/17	D	MM	Updated Height				
10/24/17	Ш	MM	Added customer part number and added FIT rate				
01/23/18	F	MM	Removed customer part number.				
05/03/18	G	MM	Added stability from -55°C to -40°C				

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