

2525 Shader Road Orlando Florida 32804 USA Phone: 407-298-2000 Fax: 407-293-2979 Website: www.mtronpti.com AMEX: LGL



Specification for a Sine wave Output SMD 100MHz Output with 10MHz Reference Input OCXO MtronPTI P/N: XO8085-010sR

Electrical Specifications:

Parameter	Symbol	Min.	Тур.	Max.	Units	Conditions
Nominal Frequency	FO		100.0000		MHz	
(RF Output)						
			Frequency Stab	oilities		·
vs. Temperature ¹	ΔF _T /F	-100		+100	ppb	Over the Operating Temperature Range
vs. Supply voltage ¹ variation		-30		+30	ppb	5% change in supply voltage
Daily Aging ¹		-5.0		+5.0	ppb	
1 Year Aging ¹		-0.5		+0.5	ppm	After 30-days Power On
20-Years Aging ¹		-1.0		+1.0	ppm	
		RF E	xternal Reference	(10MHz)	•	•
RF Input Level		-3.0	0	+3.0	dBm	Customer to choose the signal Level between 0+/-3dB
RF Input Lock Range				+/- 1	ppm	10MHz External would need to be within +/- 1ppm from Nominal 10MHz to lock
	1		RF Output(100M	Hz)	· I	
Output Type			Sinewave	•		
Output Level		+13		+16	dBm	
Output Load			50		Ω	±10%
			Additional Parar	meters		
				-100	dBc/Hz	10Hz Offset
				-130	dBc/Hz	100Hz Offset
Phase Noise				-155	dBc/Hz	1kHz Offset
(Under Static				-160	dBc/Hz	10kHz Offset
Conditions)				-165	dBc/Hz	100kHz Offset
				-172	dBc/Hz	1MHz Offset
				-172	dBc/Hz	10MHz Offset
Harmonics				-30	dBc	
Sub-Harmonics				-50	dBc	
Spurious				-80	dBc	
g-sensitivity			1		ppb/g	Worst case axis
				5	minutes	Test Condition(@ 25°C): Oscillator turned ON after 24hrs OFF. Frequency change 5 minutes after turn ON will be within ±0.05ppm of Long-term stable nominal frequency.
Warm-up Time				3	minutes	Test Condition(@ 0°C): Oscillator will be in tunable range



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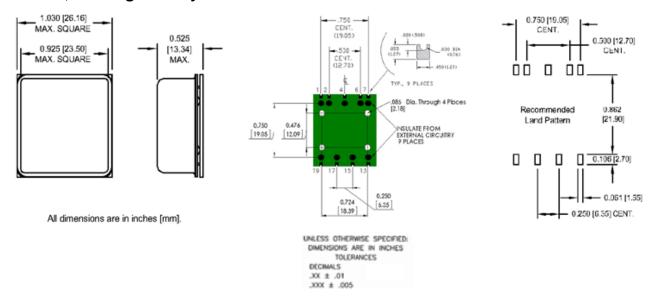
Temperature, Supply Voltage & Power Consumption						
Operating Temperature	OTR	-40		+70	°C	Full Specification Compliance
Operating Voltage	VCC	+4.75	+5.0	+5.25	V _D	
Power Consumption			1.5		Watts	Steady state @ 25°C, In Still Air
				4.0	Watts	@ Warm-up
	Absolute Maximum Ratings (operable only)					
Supply voltage				+5.5	VD	
Operable Temperature Range		-50		+85	°C	
Storage Temperature	STR	-55		+100	°C	
Output Load		45		55	Ω	

Note 1: Typical frequency stability parameters, performance will be representative of the 10MHz ref. that customer will feed on pin-15

Environmental Conditions:

Seal	Hermetic
RoHS	Full RoHS Compliance

Mechanical, Marking and Layout Information:



PIN ASSIGNMENTS: 1. RF DUTPUT 2. DO NOT CONNECT 4. CASE GROUND 6. N/C OR GROUND 7. N/C OR GROUND 13. N/C 15. RF INPUT 17. FAULT INDICATOR

Part Marking	
XO8085-005sR	
Serial Number	
Date Code	

Additional Notes:

RF Input: 10MHz (External reference)

 $Fault\ Indicator{:}\ 2.9V\ in\ Lock; < 0.05V\ Out\ of\ Lock$

PIN 13 is a NO CONNECT. It should not be grounded; customer has an option to use it as 4.5V Vref that could source 2mA.

With no external 10MHz input present, RF output would ~13dBm, with frequency ~1.5 to 3.0ppm off from 100MHz

Maximum noise and ripple allowable on the +5V supply for spec. compliance: 200mV P-P



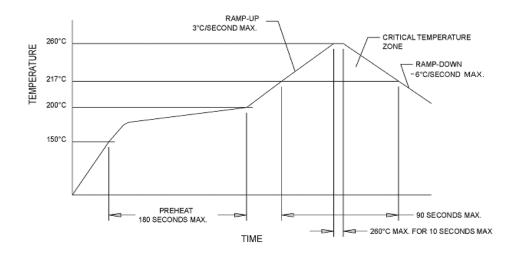
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Recommended Reflow Profile:



Data Sheet Revision Table:

ı	Date	Rev.	Oria.	Details of Revision
	11-06-18	Α	DPD	Preliminary Release