



## Specification for a Sine wave Output SMD 100MHz Output with 10MHz Reference Input OCXO MtronPTI P/N: XO8085-023sR

### **Electrical Specifications:**

Parameter	Symbol	Min.	Тур.	Max.	Units	Conditions
Nominal Frequency	FO		100.0000		MHz	
(RF Output)						
			Frequency Stab	ilities	÷	<u>.</u>
vs. Temperature <sup>1</sup>	ΔF <sub>T</sub> /F	-100		+100	ppb	Over the Operating Temperature Range
vs. Supply voltage <sup>1</sup> variation		-30		+30	ppb	5% change in supply voltage
Daily Aging <sup>1</sup>		-5.0		+5.0	ppb	
1 Year Aging <sup>1</sup>		-0.5		+0.5	ppm	After 30-days Power On
20-Years Aging <sup>1</sup>		-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
			RF Output(100M	Hz)	•	
Output Type			Sinewave			
Output Level			10		dBm	
Output Load			50		Ω	±10%
			Additional Parar	neters		
				-97	dBc/Hz	10Hz Offset
				-130	dBc/Hz	100Hz Offset
Phase Noise				-157	dBc/Hz	1kHz Offset
(Under Static				-170	dBc/Hz	10kHz Offset
Conditions)				-172	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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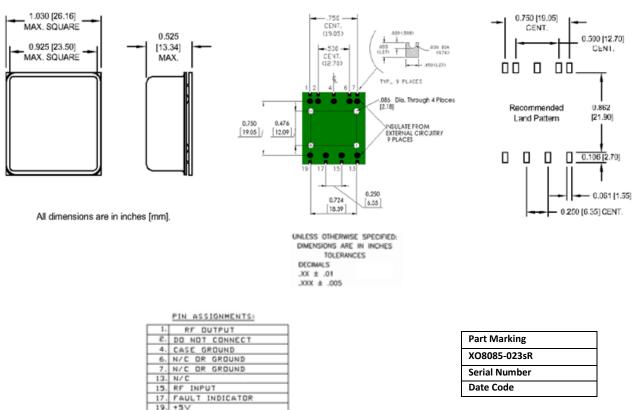
	Temp	erature, Supply	Voltage & Power	Consumption		
OperatingTemperature	OTR	-40		+70	°C	Full Specification Compliance
Operating Voltage	VCC	+4.75	+5.0	+5.25	VD	
Power Consumption			1.5		Watts	Steady state @ 25°C, In Still Air
				4.0	Watts	@ Warm-up
		Absolute N	Maximum Rating	s (operable only)	)	
Supply 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:



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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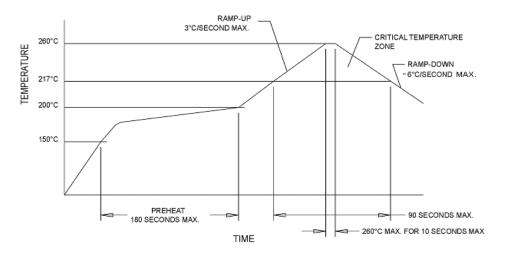


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# **Recommended Reflow Profile:**



# **Data Sheet Revision Table:**

Date	Rev.	Orig.	Details of Revision
09-13-21	А	DPD	Preliminary Release