MtronPTI ...when timing matters
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
50MHz Output with 10MHz Reference Input
OCXO MtronPTI P/N: XO8085-012sR

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency (RF Output)	F_O		50.0000		MHz	
Frequency Stabilities						
vs. Temperature[1]	$\Delta F_T/F$	-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	After 30-days Power On
1 Year Aging[1]		-0.5		+0.5	ppm	
20-Years Aging[1]		-1.0		+1.0	ppm	
RF External 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(50MHz)						
Output Type			Sinewave			
Output Level		+10		+16	dBm	
Output Load			50		Ω	±10%
Additional Parameters						
Phase Noise (Under Static Conditions)				-100	dBc/Hz	10Hz Offset
				-130	dBc/Hz	100Hz Offset
				-155	dBc/Hz	1kHz Offset
				-160	dBc/Hz	10kHz Offset
				-165	dBc/Hz	100kHz Offset
Harmonics				-30	dBc	
Sub-Harmonics				-50	dBc	
Spurious				-80	dBc	
g-sensitivity			1		ppb/g	Worst case axis
Warm-up Time				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.
				3	minutes	Test Condition(@ 0°C): Oscillator will be in tunable range
Temperature, Supply Voltage & Power Consumption						

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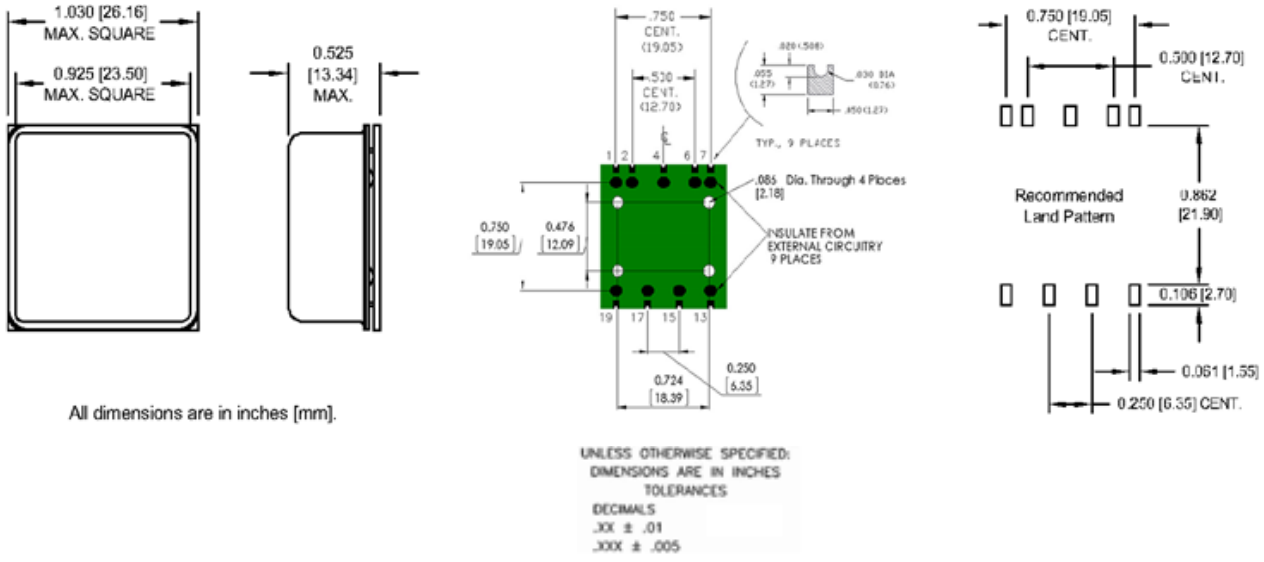
Operating Temperature	OTR	-40		+70	°C	Full Specification Compliance
Operating Voltage	V_{CC}	+4.75	+5.0	+5.25	V_D	
Power Consumption			1.5		Watts	Steady state @ 25°C, In Still Air
				4.0	Watts	@ Warm-up
	Absolute Maximum Ratings (operable only)					
Supply voltage				+5.5	V_D	
Operable Temperature Range		-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 OUTPUT
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
19.	+5V

Part Marking
XO8085-012sR
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

Recommended Reflow Profile:

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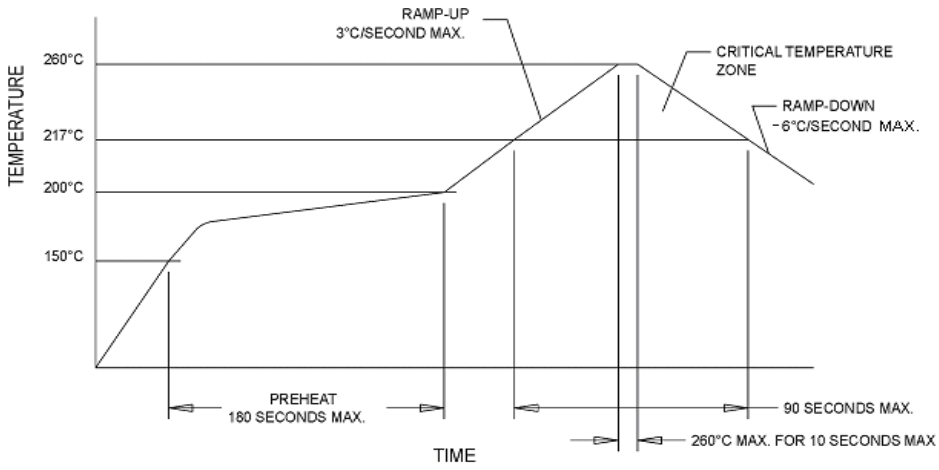

Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
04-29-19	B	BRR	RF Output Typo corrected to (50MHz), Part marking guide updated
02-18-19	A	DPD	Preliminary Release