2525 Shader Road, Orlando Florida 32804 USA
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...when timing matters

Specification for a Sinewave Output SMD OCXO
MtronPTI P/N: XO5083-078sR

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F_O		10.000000		MHz	
Initial Accuracy		-0.1		+0.1	ppm	@ 25˚C with V_{TUNE} = +2V. At the time of shipment
Frequency Stabilities						
vs. Temperature	$\Delta F_T/F$	-20		+20	ppb	Over the Operating Temperature Range (OTR)
vs. Supply Voltage		-2		+2	ppb	100mV change in V_{CC}
vs. Load		-2		+2	ppb	±5% change in Load
Aging After (30-days Power On)		-1		+1	ppb	Per Day
		-70		+70	ppb	Per Year
		-0.7		+0.7	ppm	10-years
Short Term Stability (ADEV)			1x10-11			Tau = 1-second
RF Output						
Output Type			Sinewave			
Output Level		+5		+9	dBm	
Output Load			50		Ω	±10%
Frequency Adjustment						
Adjustment Method			External Voltage			
Adjustment Voltage	V_{TUNE}	0	+2	+4	V_{DC}	
Adjustment Range			±1.0		ppm	Sufficient for 10-years correction for all causes
Adjustment Slope			Positive			
Additional Parameters						
Phase Noise (Under Static Conditions)				-95	dBc/Hz	1Hz Offset
				-125	dBc/Hz	10Hz Offset
				-145	dBc/Hz	100Hz Offset
				-155	dBc/Hz	1kHz Offset
				-165	dBc/Hz	10kHz Offset
				-165	dBc/Hz	100kHz Offset
Harmonics				-35	dBc	
Spurious				-70	dBc	
Warm-up Time				5	Minutes	To within ±0.1ppm of the frequency after 1-hour of operation @ +25°C
				20	Minutes	To Full Specification Compliance
Temperature, Supply Voltage & Power Consumption						
Operating Temperature	OTR	-20		+70	°C	
Storage Temperature	STR	-45		+85	°C	
Operating Voltage	V_{CC}	+4.75	5.0	+5.25	V_{DC}	
Power Consumption (in still air)				1.5	Watts	Steady state @ +25°C
				3.6	Watts	@ Warm-up
Seal	Hermetic					
Solderability	Per EIAJ-STD-002					
Soldering Conditions	See Figure 1					
RoHS	Full RoHS Compliance					

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Mechanical, Marking and Layout Information:

Part Marking	
Line 1	MtronPTI
Line 2	XO5083-078sR
Line 3	10.0000MHz
Line 4	Serial Number
Line 5	Date Code

Legend	
yy	Year
ww	Work Week

Pin	Function
1	RF Output
2	N/C
4	Case Ground
6	N/C
7	V_{TUNE}
13	N/C
15	N/C
17	N/C
19	Supply Voltage

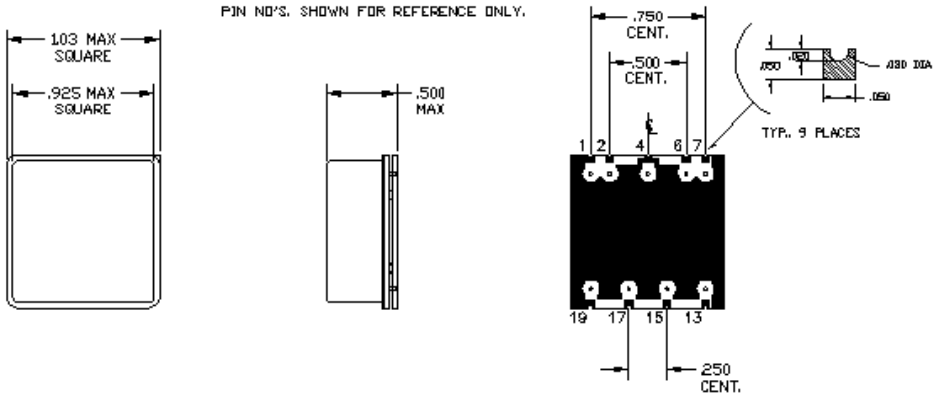

Figure 1: XO5083-078sR Outline Drawing

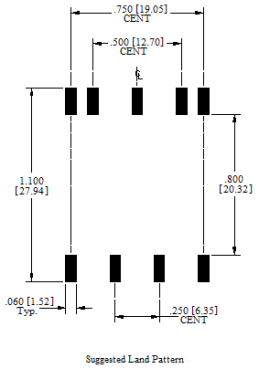

Figure 2: Suggested Pad Layout

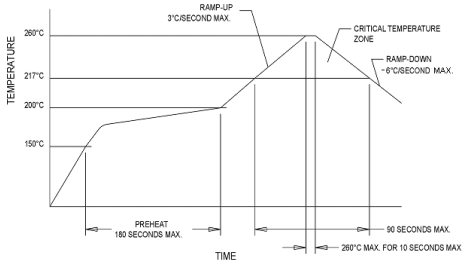

Figure 3: Reflow Solder Profile

Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
09/03/14	E	BRM	Updated the Output Level specification to reflect +5dBm minimum and +9dBm maximum
06/23/14	D	BRM	Corrected a typographical error in the marking specification.
05/19/14	C	BRM	Updated the Conditions or the Initial Accuracy, Added a Daily Aging specification point and adjusted the yearly and 10-year Aging specifications points..
04/28/14	B	BRM	Updated the Warm-up Specification point.
04/03/14	A	BRM	Original Draft.