

Specification for a 1.28GHz Sine wave Output OCXO
MtronPTI P/N: XO9095-004

Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency (RF Output)	F _O		1.28		GHz	
Initial Tolerance		-0.5		+0.5	ppm	after warmup @25°C
Frequency Stabilities						
vs. Temperature	$\Delta F_T/F$	-100		+100	ppb	Over the Operating Temperature Range
vs. Supply voltage variation		-50		+50	ppb	5% change in supply voltage
Daily Aging		-5.0		+5.0	ppb	After 30-days Power On
1 Year Aging		-0.5		+0.5	ppm	
20-Years Aging		-2.0		+2.0	ppm	
Retrace			+/-100		ppb	24 hours OFF and after 30 minutes ON
Allan Deviation			1E-10			0.1 sec to 10 sec
RF Output						
Output Type		Sinewave				
Output Level		+10	+12	+14	dBm	
Output Load			50		Ω	±10%
Additional Parameters						
Control Voltage(V _c)		0	2.25	4.5	V	
Tuning			-1.5/+2.6		ppm	
Modulation Sensitivity			1.2		kHz/V	
Tuning slope		Positive				
Input Impedance		10			kohm	At V _c pin
Modulation Bandwidth		150			Hz	
V _{ref}			4.5		V	
Phase-Noise (Under Static Conditions)				-76	dBc/Hz	10Hz Offset
				-110	dBc/Hz	100Hz Offset
				-135	dBc/Hz	1kHz Offset
				-151	dBc/Hz	10kHz Offset
				-154	dBc/Hz	100kHz Offset
Harmonics				-45	dBc	
Sub-Harmonics				-45	dBc	
Spurious				-80	dBc	
g-sensitivity				0.5	ppb/g	Worst case axis
Warm-up time			3	5	minutes	Test Condition(@ 25°C): Oscillator turned ON after 24hrs OFF. Frequency change 5 minutes after turn ON will be within ±0.1ppm of Long-term stable nominal frequency.

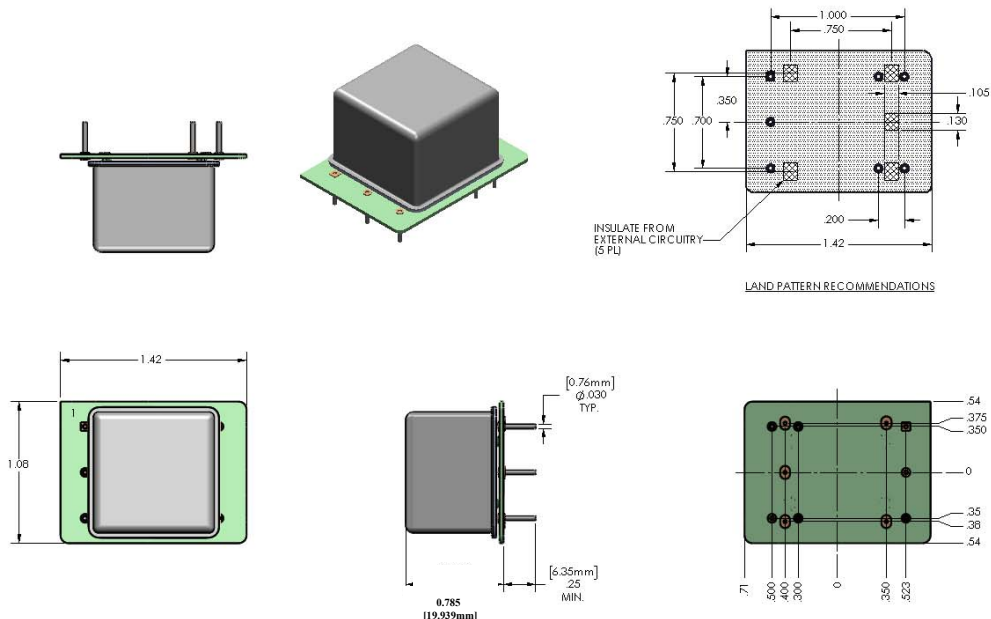
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Start-up time				1	sec	Output level to be 90% of max output level
Temperature, Supply Voltage & Power Consumption						
Operating Temperature	OTR	-54		+71	°C	Full Specification Compliance
Operating Voltage	VCC	+4.75	+5.0	+5.25	V _D	
Power Consumption				1.6	Watts	Steady state @ 25°C, In Still Air
			3.0		Watts	@ Start-up @ -30C
Absolute Maximum Ratings (operable only)						
Supply voltage				+5.5	V _D	
Operable Temperature Range		-55		+90	°C	
Storage Temperature	STR	-55		+100	°C	
Output Load		45	50	55	Ω	

Environmental Conditions:

Seal	Hermetic, Gross Leak
Mechanical Shock	30G, 11ms, MIL-STD-202 test method and Half-sine or Saw tooth waveform
Vibration	5G 50Hz to 2KHz, MIL-STD-202 Sine vibration

Mechanical, Marking and Layout Information:





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Pin	Function
1	V _C
2	V _{REF}
3	V _{CC}
4	GND
5	RF Output
6	GND
7	N/C or not present

Part Marking
XO9095-004
Serial Number
Date Code

Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
07-31-20	G	DPD	Supply sensitivity updated from +/-10ppb to +/-50ppb. Modulation sensitivity spec 1.2kHz/V added. Tuning spec updated from +/-2.5ppm to -1.5/+2.6ppm
02-17-20	F	DPD	Initial tolerance specification added and height updated to 0.785"
10-23-19	E	DPD	Part would be non-ROHS compliant part. Part# changed from XO9095-004R to XO9095-004
08-30-19	D	DPD	Outline updated with details.
08-27-19	C	DPD	Outline updated
07-01-19	B	BRR	Output level 10dBm minimum & 14dBm maximum added.
06-20-19	A	BRR	Preliminary Release

UNLESS OTHERWISE SPECIFIED:
 DIMENSIONS ARE IN INCHES
 TOLERANCES
 DECIMALS
 .XX ± .01
 .XXX ± .005