



## Specification for an Sine Wave Thru-Hole OCXO

### MtronPTI P/N: XO2011-005R

#### Electrical Specifications:

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F <sub>0</sub>		100.00000		MHz	
<b>Frequency Stabilities</b>						
Initial Tolerance		-350		+350	ppb	At nominal 2.25V EFC at the time of shipment
vs Temperature	ΔF <sub>T</sub> /F	-40		+40	ppb	Over operating temp
Frequency vs Supply		-50		+50	ppb	Per 5% of supply change
Frequency vs Load		-150		+150	ppb	Per 10% of load change
Allen deviation				5X10 <sup>-11</sup>		At 1sec
Aging/1 <sup>st</sup> year		-500		+500	ppb	After 30 days continuous operation
Aging 10years		-1.6		+1.6	ppm	
<b>Frequency Tuning (EFC)</b>						
Tuning Voltage	V <sub>TUNE</sub>	0	2.25	4.5	V	
Range	V <sub>TUNE</sub>	+/- 2.0			ppm	
Linearity				10	%	
Slope		Positive				
<b>RF Output</b>						
Output Type		Sine Wave				
Output Load		45	50	55	ohm	
Output Level			7		dBm	
<b>Temperature and Supply Voltage</b>						
Operating Temperature	T <sub>A</sub>	-20		+85	°C	
Storage Temperature	T <sub>S</sub>	-40		+85	°C	
Operating Voltage	V <sub>DD</sub>	4.75	5.0	5.25	V	
Operating Current				500	mA	During warmup
				180	mA	Steady State @ 25°C; no airflow
Warm-up Time				120	Seconds	Time for frequency to be within ±200 ppb of the frequency after 1 hour of operation @ 25°C following 24-hour off time
Harmonics				-20	dBc	
Spurious				-80	dBc	
<b>Additional Parameters</b>						
Phase Noise (static)			-92		dBc/Hz	10Hz offset
			-127		dBc/Hz	100Hz offset
			-152		dBc/Hz	1kHz offset
			-165		dBc/Hz	10kHz offset
			-168		dBc/Hz	100kHz offset

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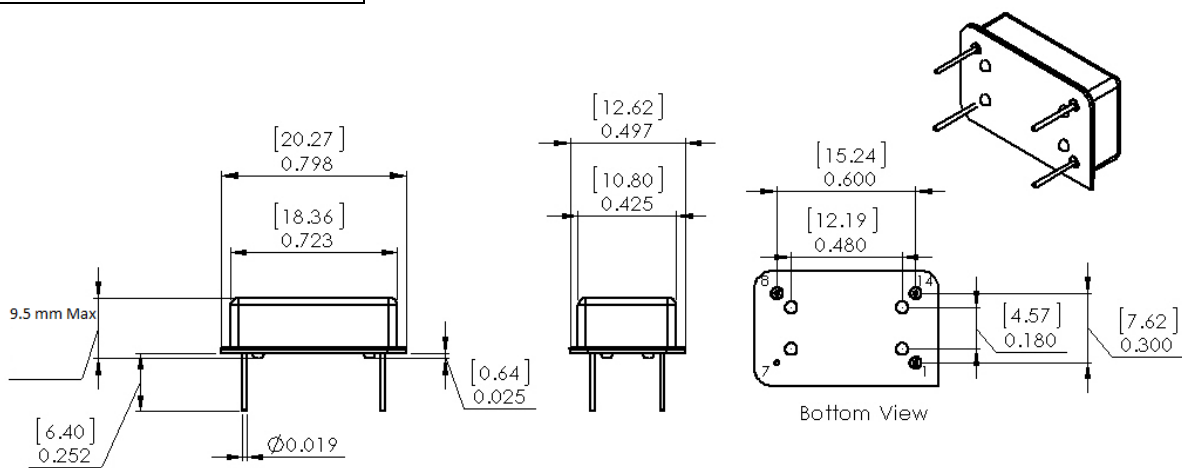
### Environmental Conditions:

Sine Vibration	MIL-STD-202, Method 201 and 204, Condition A, except 5g to 2000Hz, 1 sweep each axis
Random Vibration	MIL-STD-202, Method 241, Condition I-D
Humidity	MIL-STD-202, Method 103, Condition B, 100%rh
Seal	MIL-STD-202, Method 112, Condition D
Moisture Sensivity Level	1
RoHS	YES

### Mechanical and Marking Information:

Part Marking
XO2011-005R
100.000000MHz
MtronPTI
Yyww SN

Legend	
yy	Year
ww	Work Week



Pin Number	Function
1	Frequency Adjust
14	+5V
8	Signal Out
7	Ground

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

Figure 1 – Outline Drawing

### Data Sheet Revision Table:

Date	Rev.	Orig.	Details of Revision
02-08-19	B	DPD	OT on high side changed to +85C
02-6-19	A	DPD	Original Release