

2525 Shader Road Orlando Florida 32804 USA Phone: 407-298-2000 Fax: 407-293-2979 Website: www.mtronpti.com AMEX: LGL



# Specification for a Sinewave Output Thru-Hole OCXO MtronPTI P/N: XO5085-094R

## **Electrical Specifications:**

Vs. Temperature   ΔFT/F   -100   +100   ppb   Temperature Range   -30   +30   ppb   5% change in supply voltage   -30   +30   ppb   5% change in supply voltage   -30   +40.5   ppm   46   ppm   47   20   20   42.0   ppm   47   20   ppm	Parameter	Symbol	Min.	Тур.	Max.	Units	Conditions
Vs. Temperature   ΔFT/F   -100   +100   ppb   Over the Operating Temperature Range   Vs. Supply voltage   variation   -30   +30   ppb   S% change in supply voltage   S% change in supp	Nominal Frequency	FO		100.0000		MHz	
VS. Iemperature         ΔFT/F         -100         +100         ppb         Temperature Range           vs. Supply voltage variation         -30         +30         ppb         Voltage           Daily Aging         -5         +5         ppb         After 30-days Power On           1 Year Aging         -2.0         +0.5         ppm         After 30-days Power On           RF Output           Output Type         Sinewave         0         After 30-days Power On           Output Level         9         dBm         After 30-days Power On           Frequency Adjustment           Adjustment Method         External Voltage         10%           Adjustment Voltage         VTUNE         0         +10         VD           Adjustment Range         ±1.5         ppm         Over all conditions           Adjustment Slope         Positive           Additional Parameters           Adjustment Slope         Additional Parameters           Phase Noise         Additional Parameters           Adjustment Slope         Additional Parameters         100Hz Offset <td cols<="" td=""><td colspan="6"></td></td>	<td colspan="6"></td>						
Vs. Supply voltage	vs Temperature	ΛFT/F	-100		+100	nnh	
Voltage	•	Δι [/1	-100		1100	ррь	
Daily Aging   -5   +5   ppb   1 Year Aging   -0.5   +0.5   ppm   After 30-days Power On			-30		+30	ppb	
Output Type	Daily Aging				+5	ppb	
20-Years Aging   -2.0   +2.0   ppm	1 Year Aging					ppm	After 30-days Power On
Output Level   9   dBm   Output Level   9   dBm   Output Load   50   Ω ±10%	20-Years Aging		-2.0		+2.0	ppm	,
Output Level   9   dBm							
Solution				Sinewave			
Adjustment Method						dBm	
Adjustment Voltage	Output Load					Ω	±10%
Adjustment Voltage			F				_
Adjustment Slope				External \			
Additional Parameters    Positive		VTUNE			+10	VD	
Phase Noise   -125   dBc/Hz   10Hz Offset			±1.5			ppm	Over all conditions
Phase Noise	Adjustment Slope						
Phase Noise (Under Static Conditions)  -125 dBc/Hz -153 dBc/Hz -158 dBc/Hz -159 dBc/Hz -169 dBc/Hz -169 dBc/Hz -160 dBc/Hz -160 dBc/Hz -167 dBc/Hz -168 dBc -169 d				Additional Paran			
(Under Static Conditions)  -153					-95	dBc/Hz	10Hz Offset
(Under Static Conditions)  -153	Phase Noise				-125	dBc/Hz	100Hz Offset
Conditions)  Conditions)  Conditions)  Conditions)  Conditions)  Conditions)  Conditions)  Conditions)  Conditions)  Conditions  Condition					-153		
Harmonics -167 dBc/Hz 1MHz Offset  Harmonics -25 dBc  Spurious -75 dBc  Warm-up Time -5 minutes frequency after 1-hour of operation @ 25°C  Temperature, Supply Voltage & Power Consumption  Operating Temperature OTR -20 +75 °C Full Specification Compliance  Storage Temperature STR -55 +85 °C  Operating Voltage VCC +11.4 +12.0 +12.6 VD  Power Consumption Steady state @ 25°C, In Still Air					-163		
Harmonics  Spurious  -25 dBc  To within ±0.1ppm of the frequency after 1-hour of operation @ 25°C  Temperature, Supply Voltage & Power Consumption  Operating Temperature  OTR  OTR  -20  +75  Storage Temperature  STR  -55  Operating Voltage  VCC  Temperature  Temperature  OTR  -20  +75  C  Full Specification Compliance  Storage Temperature  STR  -55  Operating Voltage  VCC  +11.4  +12.0  +12.6  Watts  Steady state @ 25°C, In Still Air	Conditions)				-167		100kHz Offset
Spurious -75 dBc  Warm-up Time 5 minutes frequency after 1-hour of operation @ 25°C  Temperature, Supply Voltage & Power Consumption  Operating Temperature OTR -20 +75 °C Full Specification Compliance  Storage Temperature STR -55 +85 °C  Operating Voltage VCC +11.4 +12.0 +12.6 VD  Power Consumption Steady state @ 25°C, In Still Air					-167	dBc/Hz	1MHz Offset
Warm-up Time  5 minutes To within ±0.1ppm of the frequency after 1-hour of operation @ 25°C  Temperature, Supply Voltage & Power Consumption  Operating Temperature OTR -20 +75 °C Full Specification Compliance  Storage Temperature STR -55 +85 °C  Operating Voltage VCC +11.4 +12.0 +12.6 VD  Power Consumption  To within ±0.1ppm of the frequency after 1-hour of operation @ 25°C  Full Specification Compliance  Storage Temperature STR -55	Harmonics					dBc	
Warm-up Time 5 minutes frequency after 1-hour of operation @ 25°C  Temperature, Supply Voltage & Power Consumption  Operating Temperature OTR -20 +75 °C Full Specification Compliance  Storage Temperature STR -55 +85 °C  Operating Voltage VCC +11.4 +12.0 +12.6 VD  Power Consumption Steady state @ 25°C, In Still Air	Spurious				-75	dBc	
Temperature, Supply Voltage & Power Consumption  Operating Temperature OTR OTR OPERATION OPERATION OTR							
Temperature, Supply Voltage & Power Consumption  Operating Temperature OTR -20 +75 °C Full Specification Compliance  Storage Temperature STR -55 +85 °C Operating Voltage VCC +11.4 +12.0 +12.6 VD Steady state @ 25°C, In Still Air	Warm-up Time				5	minutes	frequency after 1-hour
Operating Temperature OTR -20 +75 °C Full Specification Compliance  Storage Temperature STR -55 +85 °C Operating Voltage VCC +11.4 +12.0 +12.6 VD  Power Consumption 1.5 Watts Steady state @ 25°C, In Still Air							of operation @ 25°C
Storage Temperature STR -55 +85 °C Operating Voltage VCC +11.4 +12.0 +12.6 VD  Power Consumption Steady state @ 25°C, In Still Air							
Storage Temperature STR -55 +85 °C Operating Voltage VCC +11.4 +12.0 +12.6 VD Power Consumption Steady state @ 25°C, In Still Air	Operating Temperature	OTR	-20		+75	°C	Full Specification
Storage Temperature STR -55 +85 °C Operating Voltage VCC +11.4 +12.0 +12.6 VD Power Consumption Steady state @ 25°C, In Still Air							Compliance
Power Consumption  1.5  Watts  Steady state @ 25°C, In Still Air							
Power Consumption Watts In Still Air	Operating Voltage	VCC	+11.4	+12.0	+12.6	VD	
	Power Consumption			1.5		Watts	
	1 Swel Consumption				4.0	Watts	@ Warm-up



2525 Shader Road Orlando Florida 32804 USA Phone: 407-298-2000 Fax: 407-293-2979

AMEX: LGL Website: www.mtronpti.com



#### Specification for a Sinewave Output Thru-Hole OCXO MtronPTI P/N: XO5085-094R

#### **Environmental Conditions:**

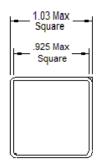
Seal	Hermetic
RoHS	Full RoHS Compliance

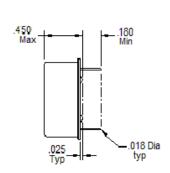
### **Mechanical, Marking and Layout Information:**

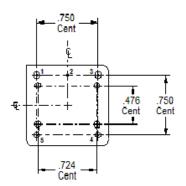
Part Marking		
Line 1	XO5085-094R	
Line 2	100.0000MHz	
Line 4	Serial Number	
Line 5	Date Code	

Legend		
уу	Year	
ww	Work Week	

Pin	Function
1	RF Output
2	Case Ground
3	V <sub>TUNE</sub>
4	N/C
5	Supply Voltage







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

#### **Data Sheet Revision Table:**

Date	Rev.	Orig.	Details of Revision
06-18-18	Α	DPD	Original release