

XO5085 Series

Low Phase Noise OCXOs

Features	Applications
Frequency Range: 50 to 166.67MHz Low Phase Noise Low Aging Low G and Low Spurious	Radar Satcom Electronic Warfare Test Equipment

Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Nominal Frequency	F ₀		100.000000		MHz	

Frequency Stabilities

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency Stability	$\Delta F/F$	-100		+100	ppb	Over the operating temperature range
Aging (After 30-days power on)		-5.0 -0.5 -2		+5.0 +0.5 +2	ppb ppm ppm	Daily 1 year 20 years

RF Output (100MHz)

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Output Type		Sinewave				
Output Level			+12		dBm	
Output Load			50		Ω	±10%

Frequency Adjustment

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Adjustment Method		External Voltage				
Adjustment Voltage	V _{TUNE}	0		+10	V	
Adjustment Range		±1.0			ppm	
Adjustment Slope		Positive				

Phase Noise

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Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Phase Noise (Under Static Conditions)				-95	dBc/Hz	10 Hz Offset
				-125	dBc/Hz	100 Hz Offset
				-153	dBc/Hz	1 kHz Offset
				-163	dBc/Hz	10 kHz Offset
				-167	dBc/Hz	100 kHz Offset
				-167	dBc/Hz	1 MHz Offset
	Low Phase Noise					
				-97	dBc/Hz	10 Hz Offset
				-128	dBc/Hz	100 Hz Offset
				-158	dBc/Hz	1 kHz Offset
				-170	dBc/Hz	10 kHz Offset
				-170	dBc/Hz	100 kHz Offset
				-170	dBc/Hz	1 MHz Offset
	Ultra-Low Phase Noise					
				-100	dBc/Hz	10 Hz Offset
				-132	dBc/Hz	100 Hz Offset
				-162	dBc/Hz	1 kHz Offset
				-172	dBc/Hz	10 kHz Offset
				-178	dBc/Hz	100 kHz Offset
				-178	dBc/Hz	1 MHz Offset
Harmonics				-30	dBc	
Spurious				-75	dBc	
g-sensitivity				0.3	ppb/g	Worst case axis
Warm-up time				5	minutes	To be within ± 0.1 ppm of frequency after 1-hour of operation @25°C.

Temperature, Supply Voltage & Power Consumption

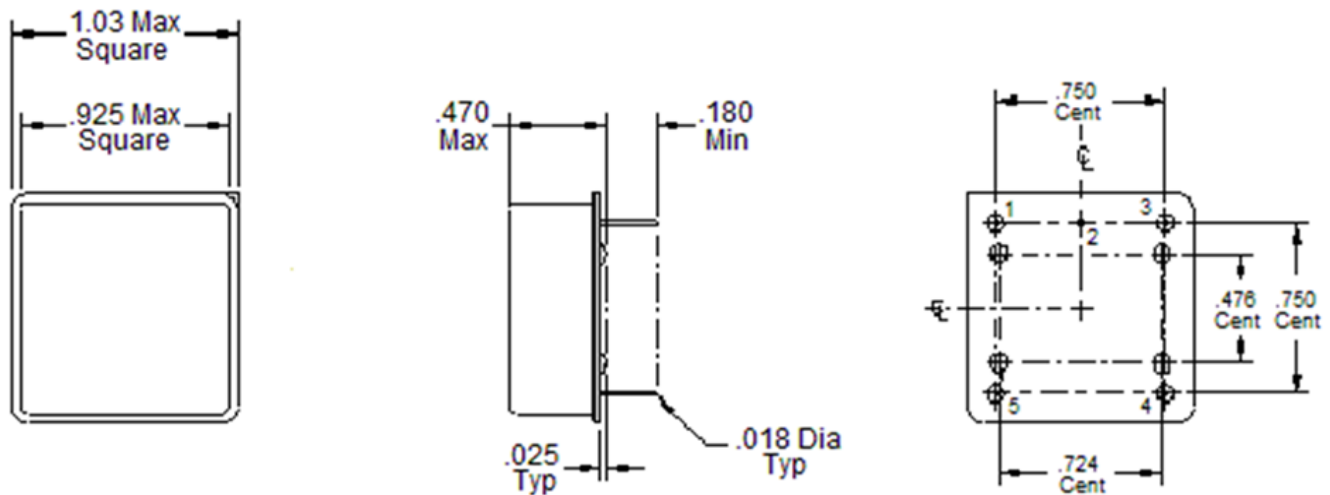
Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Operating Temperature	OTR	-20		+75	°C	Full Specification Compliance
Storage Temperature	STR	-55		+85	°C	
Operating Voltage	V _{CC}	+11.4	+12.0	+12.6	V	
Power Consumption			1.2		W	Steady state @ 25°C, In Still Air
				4.0	W	@ Start-up

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Environmental Conditions

Parameter	Conditions
Seal	Hermetic
RoHS	Full RoHS Compliance

Mechanical and pin out information



Pin Numbers Shown For Reference Only
All Dimensions are in Inches

Pad	Function
1	RF Output
2	Case Ground
3	V _{TUNE}
4	N/C
5	Supply Voltage