

XO9085 Series Sinewave Rack Mount OCXO

Features	Applications
Ultra-low phase noise synthesizer Single or multiple fixed frequency output Phase lock to external 10MHz reference Standard 19-inch rack mount assembly 5V DC, 12V DC or 120/240C AC supply options Supports standard and custom frequencies up to 6GHz	System Frequency Source Test Lab Instrumentation

Electrical Specifications

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency Range	F ₀		100.0000000		MHz	

Frequency Stabilities

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Frequency Stability	$\Delta F/F$	-100		+100	ppb	Over the operating temperature range
vs. Supply Voltage		-30		+30	ppb	5% voltage variation
Aging (After 30-days power on)		-5.0		+5.0	ppb	Daily
		-0.5		+0.5	ppm	1 year
		-1.5		+1.5	ppm	20 years

RF Output

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Output Type		Sinewave				On Port-1, Port-2, Port-3 and Port-4 simultaneously.
Output Level			7		dBm	On Port-1, Port-2, Port-3 and Port-4 simultaneously.
Output Load			50		Ω	$\pm 10\%$
Port Isolation			27		dB	
Output VSWR				1:5:1		
Harmonics				-25	dBc	
Spurious				-75	dBc	

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Additional Parameters

Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Tuning Voltage		0	±2.25	+4.5	V	
Tuning Range		±2			ppm	
RF Input Level		-3	+2	+7		Customer to choose the signal level between 2+/-5dB

Phase Noise

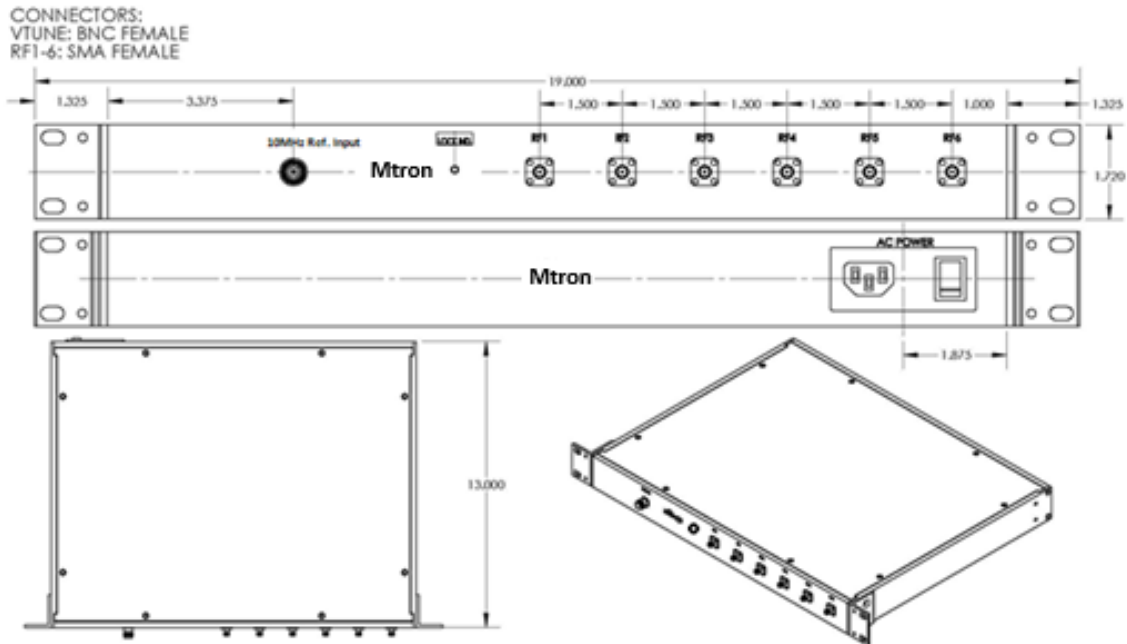
Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Phase Noise (Under Static Conditions)				-100	dBc/Hz	10 Hz Offset
				-130	dBc/Hz	100 Hz Offset
				-158	dBc/Hz	1 kHz Offset
				-167	dBc/Hz	10 kHz Offset
				-170	dBc/Hz	100 kHz Offset
				-170	dBc/Hz	1MHz Offset
Warm-up time			3	5	minutes	To within ±0.01ppm of the frequency after 1-hour of operation @25°C

Temperature, Supply Voltage & Power Consumption

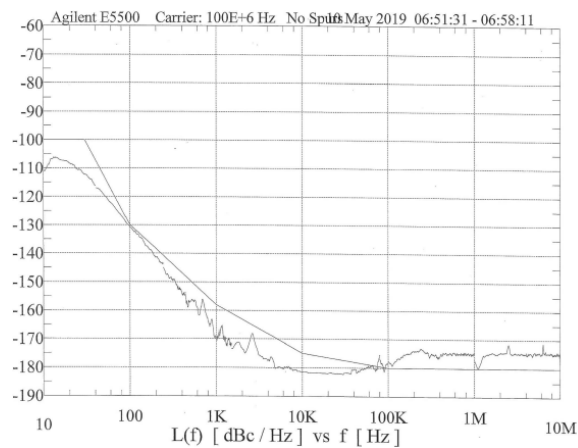
Parameter	Symbol	Min.	Typ.	Max.	Units	Conditions
Operating Temperature	OTR	-40		+85	°C	Full Specification Compliance
Storage Temperature	STR	-55		+85	°C	
Operating Voltage	V _{CC}	+4.75	+5.0	+5.25	V	
Power Consumption			1.5		W	Steady state @ 25°C, In Still Air
				4.0	W	@ Warm-up

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Package Dimensions, and Layout Information



Simulation Plot



Revision History

Date	Rev	Author	Details of Revision
04-22-26	A	HF	Initial Version