

4 GHz Phase Locked Oscillator, 100 MHz External Ref., Phase Noise -110 dBc/Hz and SMA

FMXC7008 is a 4,000 MHz Phase-Locked Oscillator with an external 100 MHz Reference Oscillator. This design features exceptional phase noise performance of -110 dBc/Hz @ 10 kHz offset. Supply Voltage is +12V DC. The PCB solder assembly is RoHS compliant and available in a compact coaxial package that's Nickel plated and supports SMA connectors with DC bias pins and a TTL Lock Detect pin available to signal an out-of-lock condition. The reference oscillator has an output power level of +7 dBm +/- 2 dB and 2nd harmonic output of -25 dBc typical. The reference oscillator operates over a temperature range of -30°C to +70°C and is designed to meet a variety of MIL-STD-202 test conditions including Humidity, Shock, and Vibration.

Electrical Specifications

Description	Min	Typ	Max	Units
Output Frequency		4		GHz
Output Impedance		50		Ohms
Output Power	+4	+7	+10	dBm
Phase Noise @ 1kHz Offset		-105	-100	dBc/Hz
Phase Noise @ 10kHz Offset		-110	-105	dBc/Hz
Phase Noise @ 100kHz Offset		-120	-115	dBc/Hz
Phase Noise @ 1MHz Offset		-140	-135	dBc/Hz
Reference Frequency		100		MHz
Reference Impedance		50		Ohms
Ref. Input Power	+4	+7	+10	dBm
Ref. Phase Noise @ 10Hz Offset		-110		dBc/Hz
Ref. Phase Noise @ 100Hz Offset		-130		dBc/Hz
Ref. Phase Noise @ 1kHz Offset		-145		dBc/Hz
2nd Harmonics		-25	-20	dBc
Spurious		-70	-65	dBc
Lock Detect	5 VDC TTL, High=Lock			
Supply Voltage (DC) 1		12		Vdc
Supply Current (DC) 1		150	200	mA

Mechanical Specifications

Size	
Length	2 in [50.8 mm]
Width	1.5 in [38.1 mm]
Height	0.6 in [15.24 mm]
Weight	0.0985 lbs [44.68 g]
Body Material and Plating	Aluminum

Configuration

Design	Commercial
Reference Type	External
Package Style	Connectorized
Input Connector	SMA Female
Output Connector	SMA Female



Features:

- 4,000 MHz Phase-Locked Oscillator
- External 100 MHz Reference Oscillator
- -110 dBc/Hz @ 10kHz offset
- Pout +7 dBm
- Harmonics -25 dBc
- Designed to meet MIL-STD-202 Environmental Conditions

Applications:

- Phase Locked Loop
- Function Generators
- Frequency Synthesizers
- Receivers
- Electronic Jamming Equipment
- Local Oscillator
- Wireless Communications
- SATCOM
- Optical Communications
- Military Electronic Systems

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Environmental Specifications

Temperature

Operating Range

-30 to +70 deg C

Shock

IAW MIL-STD-202, Method 213, Condition A

Vibration

IAW MIL-STD-202, Method 204, Condition A

ESD Sensitivity

ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.



Compliance Certifications (see [product page](#) for current document)

Plotted and Other Data

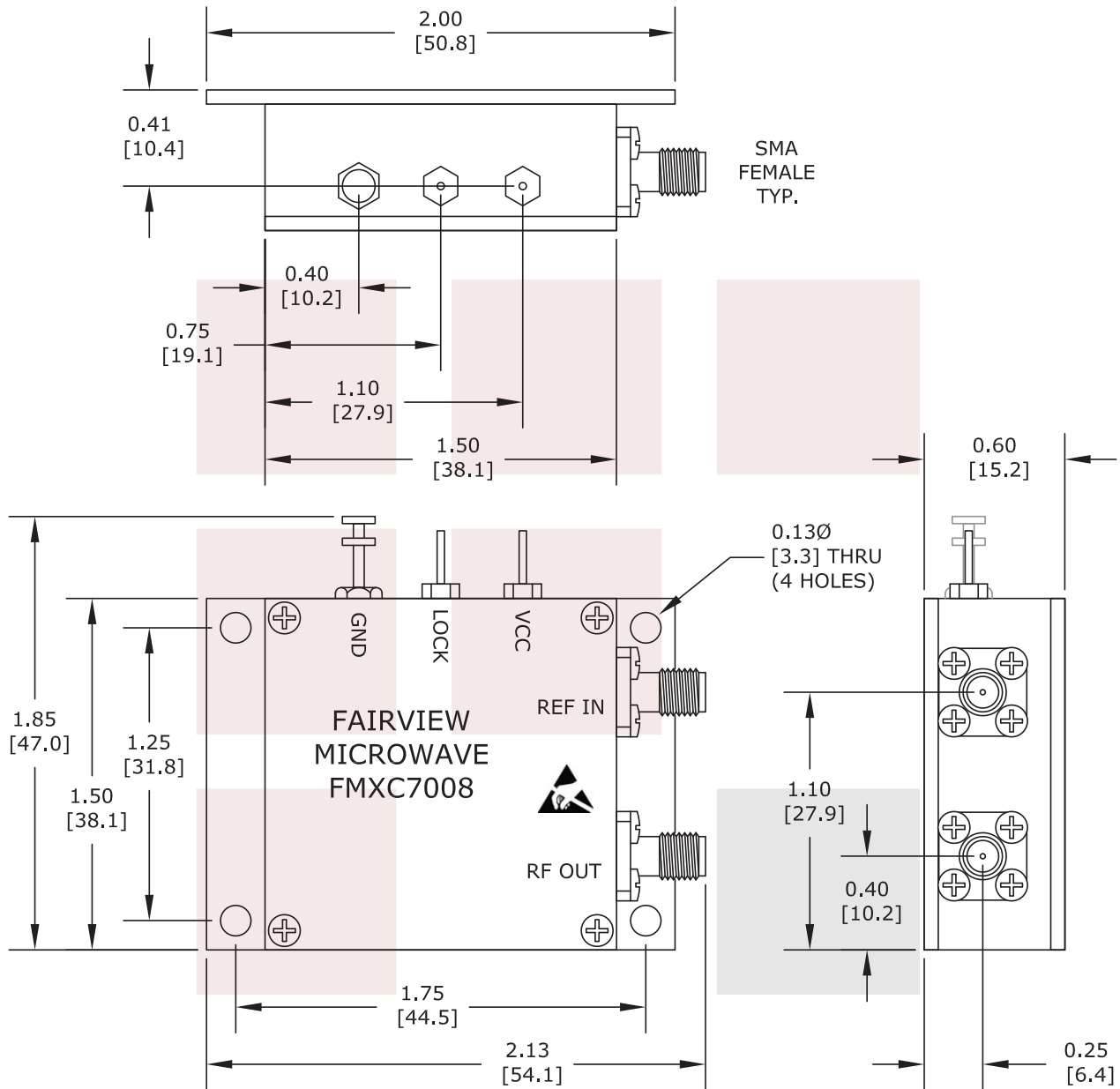
Notes:

4 GHz Phase Locked Oscillator, 100 MHz External Ref., Phase Noise -110 dBc/Hz and SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf from our ISO 9001:2008 certified facilities in Lewisville, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: [4 GHz Phase Locked Oscillator, 100 MHz External Ref., Phase Noise -110 dBc/Hz and SMA FMXC7008](#)

URL: <https://www.fairviewmicrowave.com/4-ghz-phase-locked-oscillator-external-fmxc7008-p.aspx>

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NOTE: HOUSING IS GROUND.

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TITLE 4 GHz Phase Locked Oscillator, 100 MHz External Ref., Phase Noise -110 dBc/Hz and SMA		DWG NO FMXC7008		CAGE CODE 3FKR5	
CAD FILE	011316	SHEET	SCALE	N/A	SIZE A 2233