

6 GHz Phase Locked Oscillator, 100 MHz External Ref., Phase Noise -90 dBc/Hz and SMA

The FMXC7009 is a 6,000 MHz Phase-Locked Oscillator with an external 100 MHz Reference Oscillator. This design features exceptional phase noise performance of -90 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 +/- 3 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		6		GHz
Output Impedance		50		Ohms
Output Power	+4	+7	+10	dBm
Phase Noise @ 1kHz Offset		-90	-85	dBc/Hz
Phase Noise @ 10kHz Offset		-90	-85	dBc/Hz
Phase Noise @ 100kHz Offset		-105	-100	dBc/Hz
Phase Noise @ 1MHz Offset		-130	-125	dBc/Hz
Reference Frequency		100		MHz
Reference Impedance		50		Ohms
Ref. Input Power	+4	+7	+10	dBm
Ref. Phase Noise @ 10Hz Offset		-95		dBc/Hz
Ref. Phase Noise @ 100Hz Offset		-105		dBc/Hz
Ref. Phase Noise @ 1kHz Offset		-135		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	0.1025 lbs [46.49 g]
Body Material and Plating	Aluminum

Configuration

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



Features:

- 6,000 MHz Phase-Locked Oscillator
- External 100 MHz Reference Oscillator
- -90 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

Fairview Microwave
 301 Leora Ln., Suite 100
 Lewisville, TX 75056
 Tel: 1-800-715-4396 / (972) 649-6678
 Fax: (972) 649-6689
www.fairviewmicrowave.com
sales@fairviewmicrowave.com

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

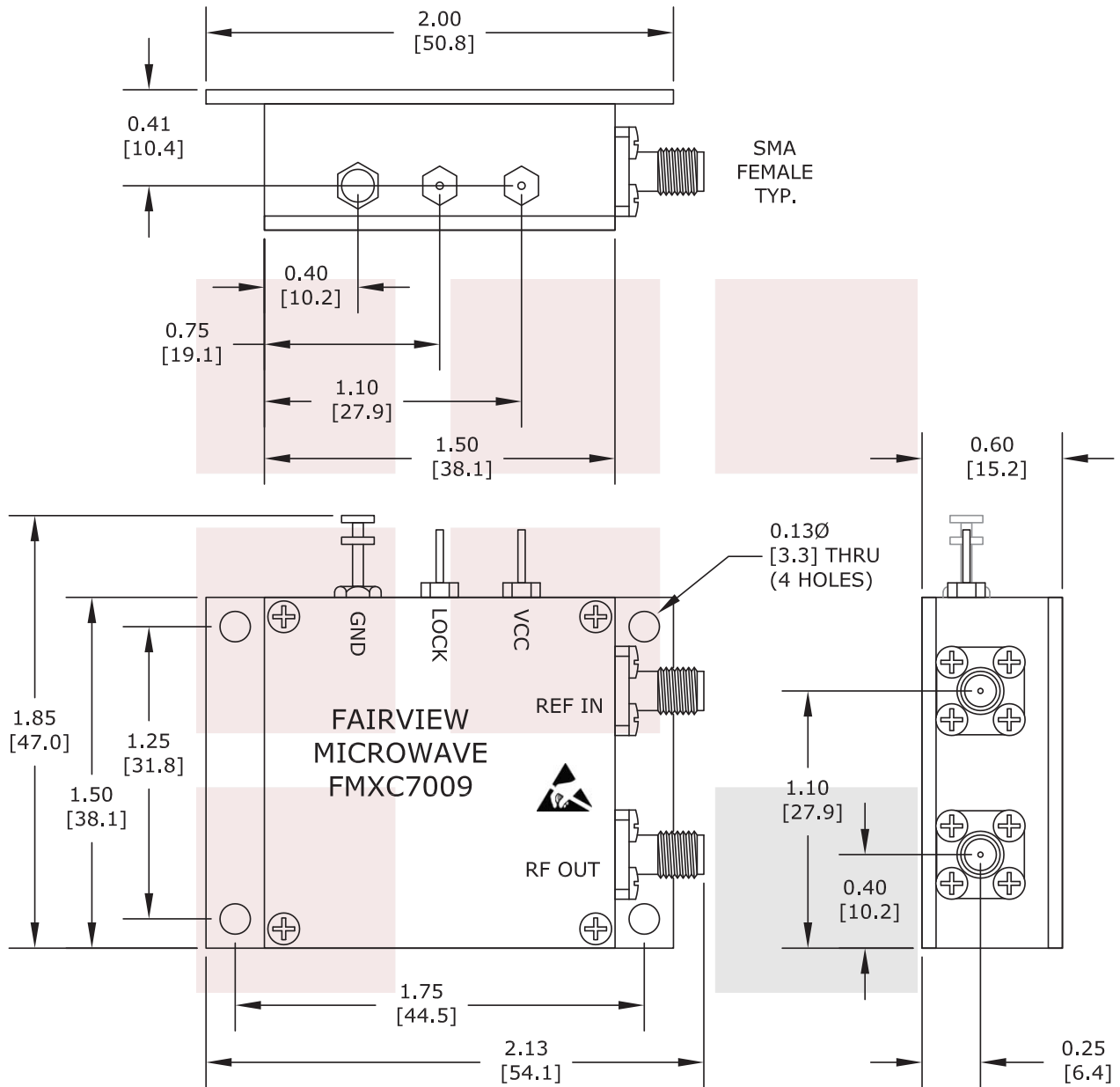
Notes:

6 GHz Phase Locked Oscillator, 100 MHz External Ref., Phase Noise -90 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: [6 GHz Phase Locked Oscillator, 100 MHz External Ref., Phase Noise -90 dBc/Hz and SMA FMXC7009](#)

URL: <https://www.fairviewmicrowave.com/6-ghz-phase-locked-oscillator-external-fmxc7009-p.aspx>

The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements. Fairview Microwave reserves the right to make such changes as required. Unless otherwise stated, all specifications are nominal. Fairview Microwave does not make any representation or warranty regarding the suitability of the part described herein for any particular purpose, and Fairview Microwave does not assume any liability arising out of the use of any part or documentation.



NOTE: HOUSING IS GROUND.

FAIRVIEW MICROWAVE INC. ALLEN, TX 75013 WWW.FAIRVIEWMICROWAVE.COM		NOTES: 1. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE NOMINAL. 2. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE AT ANY TIME. 3. DIMENSIONS ARE IN INCHES [mm].			
TITLE 6 GHz Phase Locked Oscillator, 100 MHz External Ref., Phase Noise -90 dBc/Hz and SMA		DWG NO FMXC7009		CAGE CODE 3FKR5	
CAD FILE	011316	SHEET	SCALE	N/A	SIZE A 2233