



4 GHz Phase Locked Oscillator, 10 MHz External Ref., Phase Noise -90 dBc/Hz, SMA

Phase Locked Oscillators Technical Data Sheet

PE19XC7003

Features

- 4,000 MHz Phase-Locked Oscillator
- External 10 MHz Reference Oscillator
- -90 dBc/Hz @ 10kHz offset
- Pout +7 dBm
- Harmonics -35 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

Description

The PE19XC7003 is a 4,000 MHz Phase-Locked Oscillator with an external 10 MHz Reference Oscillator. This design features exceptional phase noise performance of -90 dBc/Hz @ 10 kHz offset. Supply Voltage is +12V DC @ 150 mA typ. 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 -35 dBc typical. The Reference Oscillator operates over a temperature range of -30°C to +70°C and is designed to meet MIL-STD-202 test conditions for Vibration and Shock.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Output Frequency		4		GHz
Output Impedance		50		Ohms
Output Power	+5	+7	+9	dBm
Phase Noise @ 1kHz Offset		-80	-75	dBc/Hz
Phase Noise @ 10kHz Offset		-90	-85	dBc/Hz
Phase Noise @ 100kHz Offset		-115	-110	dBc/Hz
Phase Noise @ 1MHz Offset		-135	-130	dBc/Hz
Reference Frequency		10		MHz
Reference Impedance		50		Ohms
Reference Input Power	+4	+7	+10	dBm
Reference Phase Noise @ 10Hz Offset		-110		dBc/Hz
Reference Phase Noise @ 100Hz Offset		-130		dBc/Hz
Reference Phase Noise @ 1kHz Offset		-145		dBc/Hz
2nd Harmonics		-35	-30	dBc
Spurious		-70	-65	dBc
Lock Detect		5 VDC TTL, High=Lock		
Supply Voltage (DC) 1		12		Vdc

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [4 GHz Phase Locked Oscillator, 10 MHz External Ref., Phase Noise -90 dBc/Hz, SMA PE19XC7003](#)



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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 0.107 lbs [48.53 g]

Body Material and Plating Aluminum

Configuration

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

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:

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