



10 MHz Free Running Reference Oscillator, Internal Ref., Phase Noise -150 dBc/Hz, SMA

Reference Oscillators Technical Data Sheet

PE19XR1003

Features

- 10 MHz Reference Oscillator
- -130 dBc/Hz @ 10kHz offset
- Pout +7 dBm
- Harmonics -25 dBc
- Designed to meet MIL-STD-202 Environmental Conditions
- SMT version available see PE19XR1000

Applications

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

Description

The PE19XR1003 is a 10 MHz Reference Oscillator. The Oscillator has a stability of +/-5 ppm over a temperature range of -30° C to +70° C and an aging of <1ppm 1st year @ +40° C. This design features exceptional phase noise performance of -150 dBc/Hz @ 10 kHz offset. Supply Voltage is +12V DC +/-0.15V DC @ 75 mA typ. 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 MIL-STD-202 test conditions for Vibration and Shock.

Electrical Specifications

Description	Minimum	Typical	Maximum	Units
Output Frequency		10		MHz
Output Impedance		50		Ohms
Output Power	+4	+7	+10	dBm
Phase Noise @ 10Hz Offset		-100		dBc/Hz
Phase Noise @ 100Hz Offset		-110		dBc/Hz
Phase Noise @ 1kHz Offset		-135		dBc/Hz
Phase Noise @ 10kHz Offset		-150		dBc/Hz
2nd Harmonics		-25	-20	dBc
Spurious		-70	-65	dBc
Frequency Stability			±5	ppm
Supply Voltage (DC)		12		Vdc
Supply Current (DC)		75		mA

Click the following link (or enter part number in "SEARCH" on website) to obtain additional part information including price, inventory and certifications: [10 MHz Free Running Reference Oscillator, Internal Ref., Phase Noise -150 dBc/Hz, SMA PE19XR1003](#)



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Mechanical Specifications

Size

Length	2 in [50.8 mm]
Width	1.5 in [38.1 mm]
Height	0.6 in [15.24 mm]
Weight	0.092 lbs [41.73 g]
Body Material and Plating	Aluminum

Configuration

Design	Commercial
Reference Type	Internal
Package Style	Connectorized
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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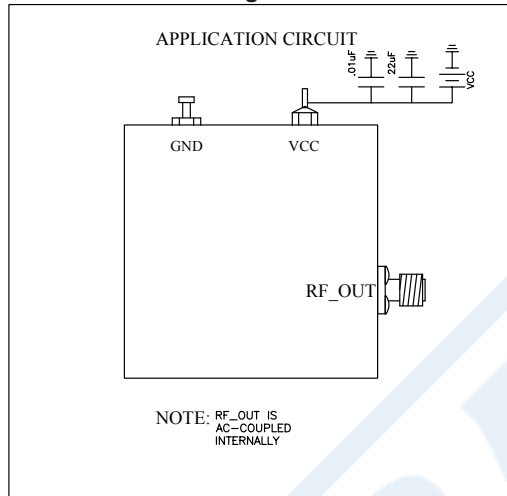


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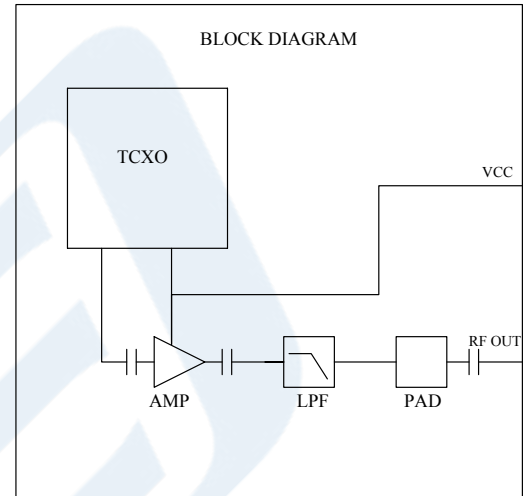
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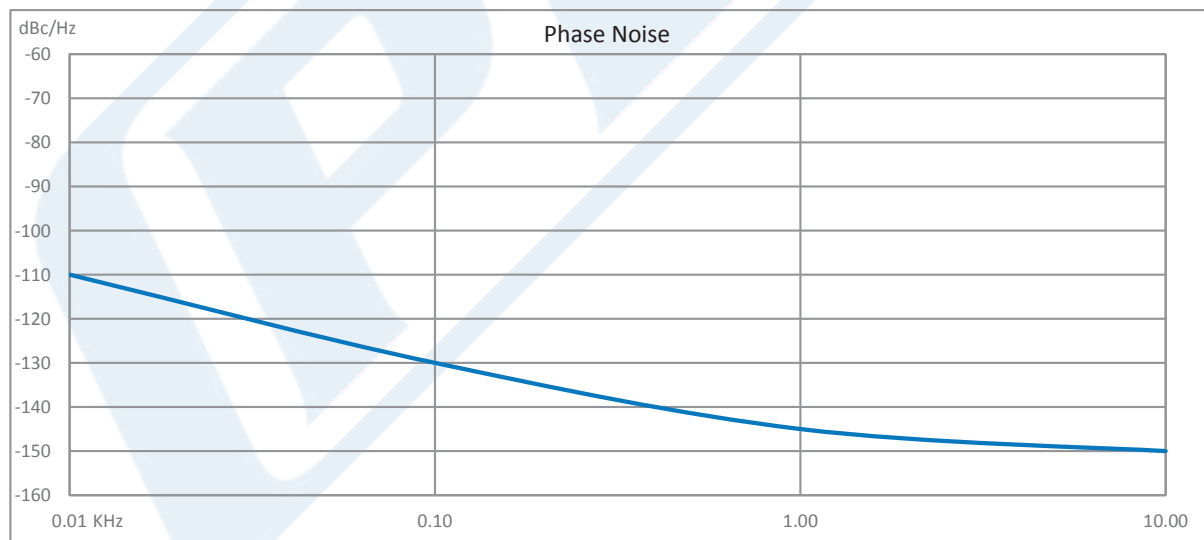
Functional Block Diagram



BLOCK DIAGRAM



Typical Performance Data



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10 MHz Free Running Reference Oscillator, Internal Ref., Phase Noise -150 dBc/Hz, SMA from Pasternack Enterprises has same day shipment for domestic and International orders. Our RF, microwave and millimeter wave products maintain a 99.4% availability and are part of the broadest selection in the industry.

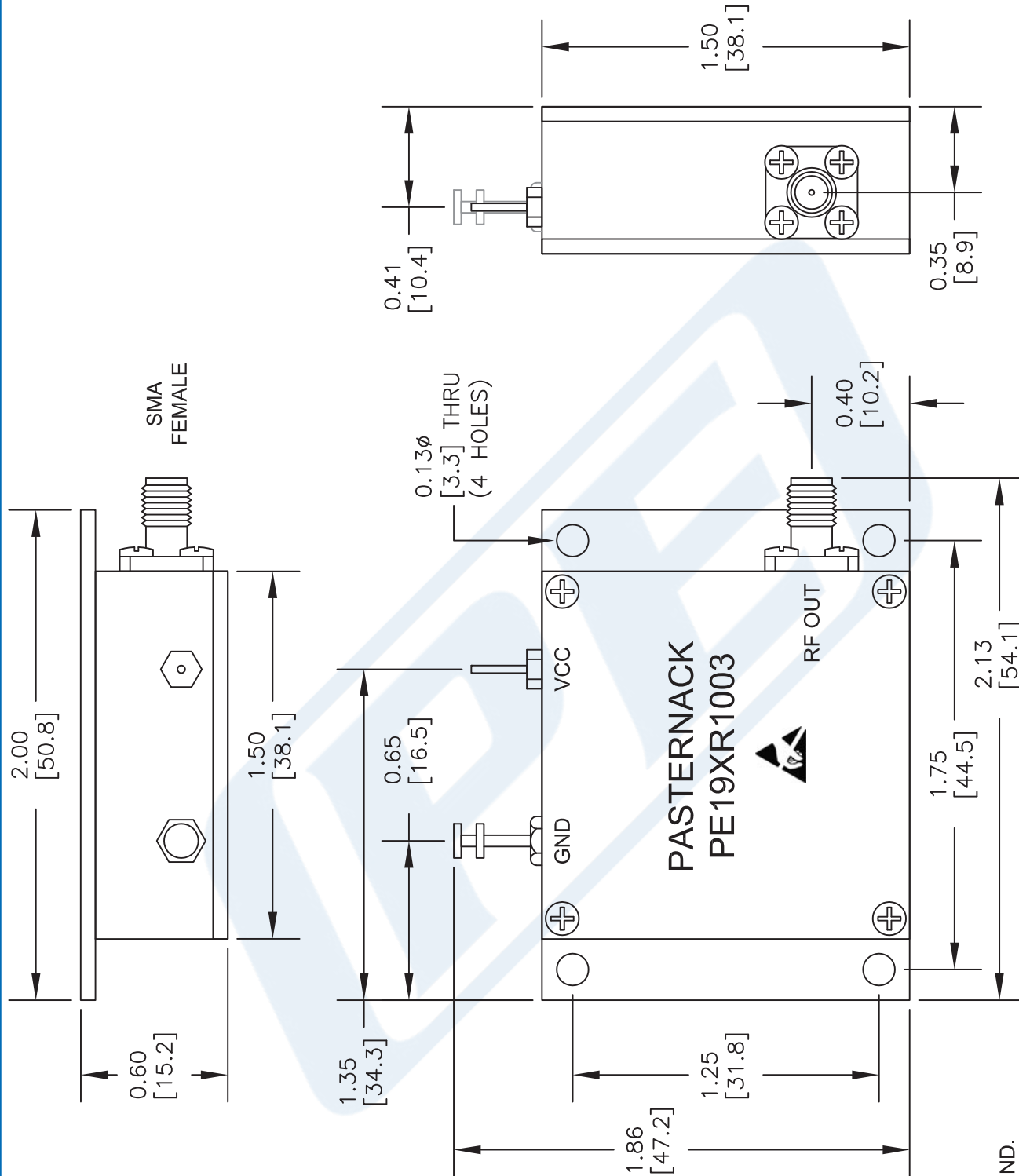
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The information contained in this document is accurate to the best of our knowledge and representative of the part described herein. It may be necessary to make modifications to the part and/or the documentation of the part, in order to implement improvements.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

PE19XR1003 CAD Drawing

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NOTE: HOUSING IS GROUND.

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].

DWG TITLE
PE19XR1003

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SCALE N/A

SIZE A

2233