Fairview Microwave
an INFINITE brand

FMVC31013
DATA SHEET

VCO (Voltage Controlled Oscillator) Frequency of 3 GHz to 3.5 GHz, Phase Noise -81 dBc/Hz and SMA

FMVC31013 is a High Reliability Low Noise Voltage Controlled Oscillator (VCO) which covers a 3.0 to 3.5 GHz frequency band with a voltage tuning range from 0.5V to10V. This design features exceptional phase noise performance of -81 dBc/Hz @ 10 kHz offset. Supply Voltage is +11V with a generated output power level of +10 dBm and 2nd harmonic output of -16 dBc typical. The assembly is RoHS compliant and available in a compact sized rugged metal housing which supports a field replaceable SMA female connector, RFI Voltage and ground pins. The VCO operates over a temperature range of -40°C to +85°C and is designed to meet a variety of MIL-STD-202 test conditions including Humidity, Shock, and Vibration.

Features:

- 3.0 to 3.5 GHz Bandwidth
- -81 dBc/Hz typ @ 10kHz offset
- Tuning Voltage 0.5V to10V
- Pout = +10 dBm typ
- Harmonics = -16 dBc typ
- RoHS Compliant Assembly
- Compact Size Rugged Metal Coaxial package
- Field Replaceable SMA Female Connector
- 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

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	3		3.5	GHz
Tuning Voltage	0.5		10	Vdc
Supply Voltage (DC)	10	11	12	Vdc
Supply Current (DC)		20	22	mA
Phase Noise @10kHz Offset		-81	-80	dBc/Hz
Phase Noise @100kHz Offset		-103	-102	dBc/Hz
Output Power	+8	+10	+11.5	dBm
Tuning Sensitivity (Kvco)	40		135	MHz/V
Pushing		2.5	5	MHz/V
Pulling (pk-pk)		12	20	MHz
Tuning Port Capacitance		18		pF
Load Impedance		50		Ohms
2nd Harmonics		-16	-13	dBc

Electrical Specification Notes:
Pulling @ 1.5 VSWR

Mechanical Specifications

Size

Length	0.95 in [24.13 mm]
Width	0.95 in [24.13 mm]
Height	0.285 in [7.24 mm]
Weight	0.0365 lbs [16.56 g]
Body Material and Plating	Aluminum
Design	Commercial
Output Connector	SMA Female

Environmental Specifications

Temperature

Operating Range	-40 to +85 deg C
Storage Range	-55 to +125 deg C
Humidity	MIL-STD-202, Method 103, 90% RH, +65 C
Shock	MIL-STD-202, Method 213I
Vibration	MIL-STD-202, Method 204D
Temperature Cycle	MIL-STD-202, Method 107B

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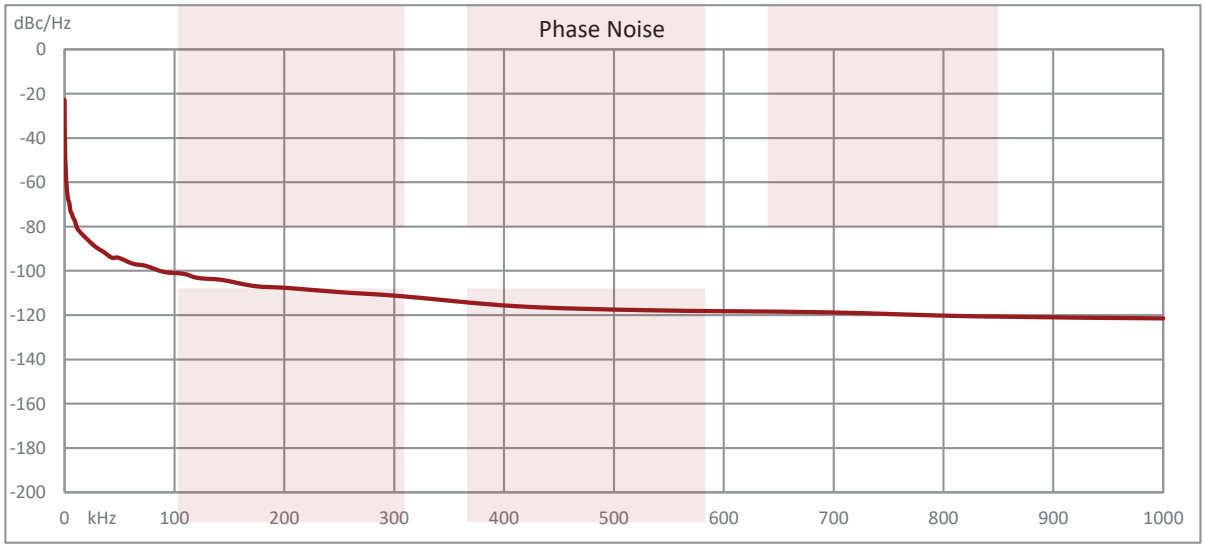
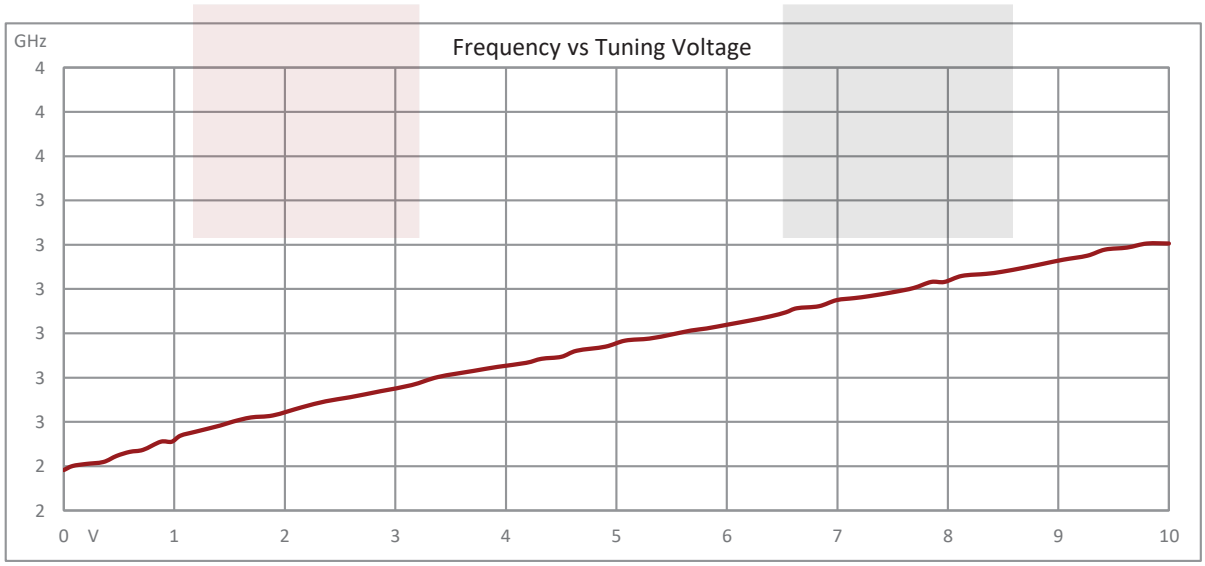
ESD Sensitivity	ESD Sensitive Material, Transport material in Approved ESD bags. Handle only in ESD Workstation.

Compliance Certifications (see product page for current document)

Plotted and Other Data

Typical Performance Data





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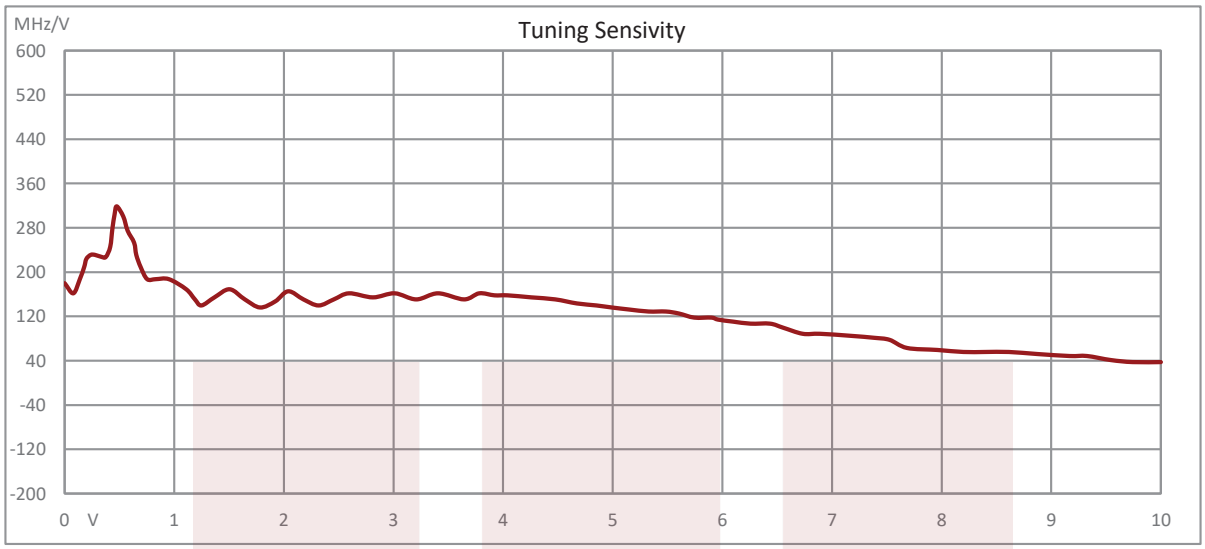

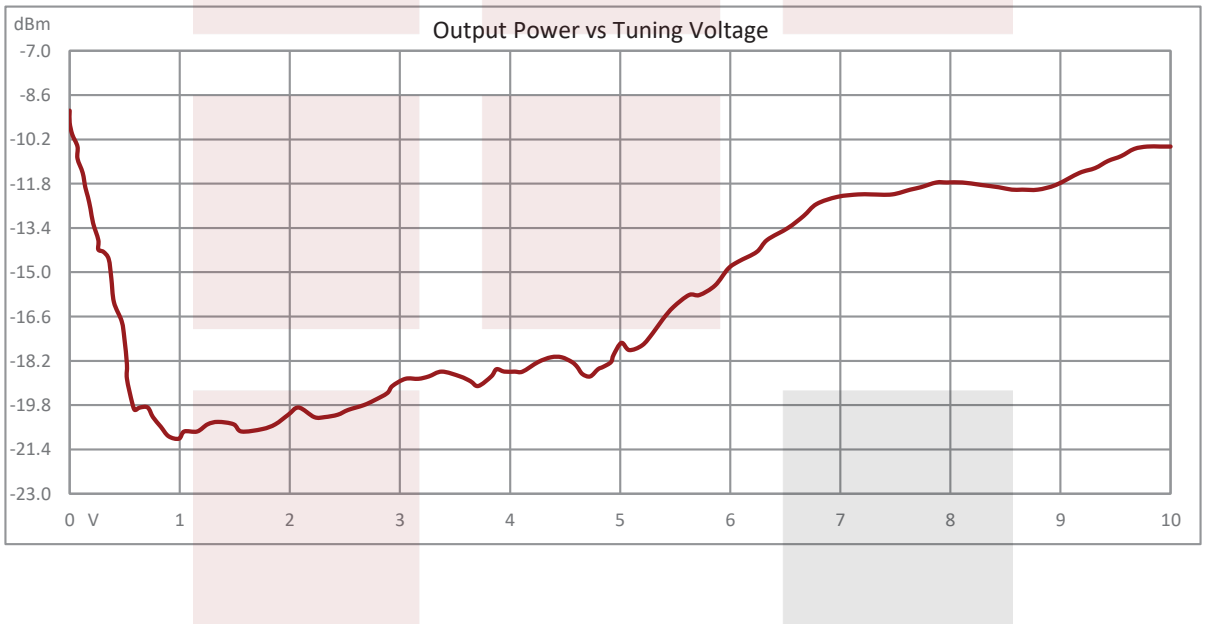

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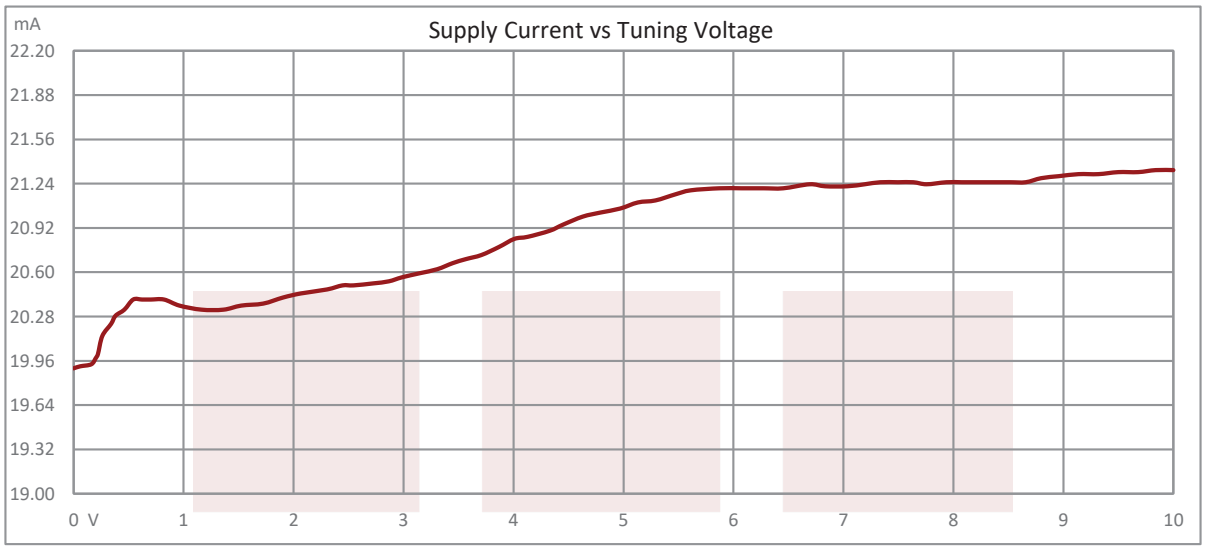

VCO (Voltage Controlled Oscillator) Frequency of 3 GHz to 3.5 GHz, Phase Noise -81 dBc/Hz and SMA

VCO (Voltage Controlled Oscillator) Frequency of 3 GHz to 3.5 GHz, Phase Noise -81 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 Allen, Texas. Fairview Microwave is RF on-demand.

For additional information on this product, please click the following link: VCO (Voltage Controlled Oscillator) Frequency of 3 GHz to 3.5 GHz, Phase Noise -81 dBc/Hz and SMA FMVC31013

URL: https://www.fairviewmicrowave.com/vco-voltage-controlled-oscillator-3.5-ghz-fmvc31013-p.aspx

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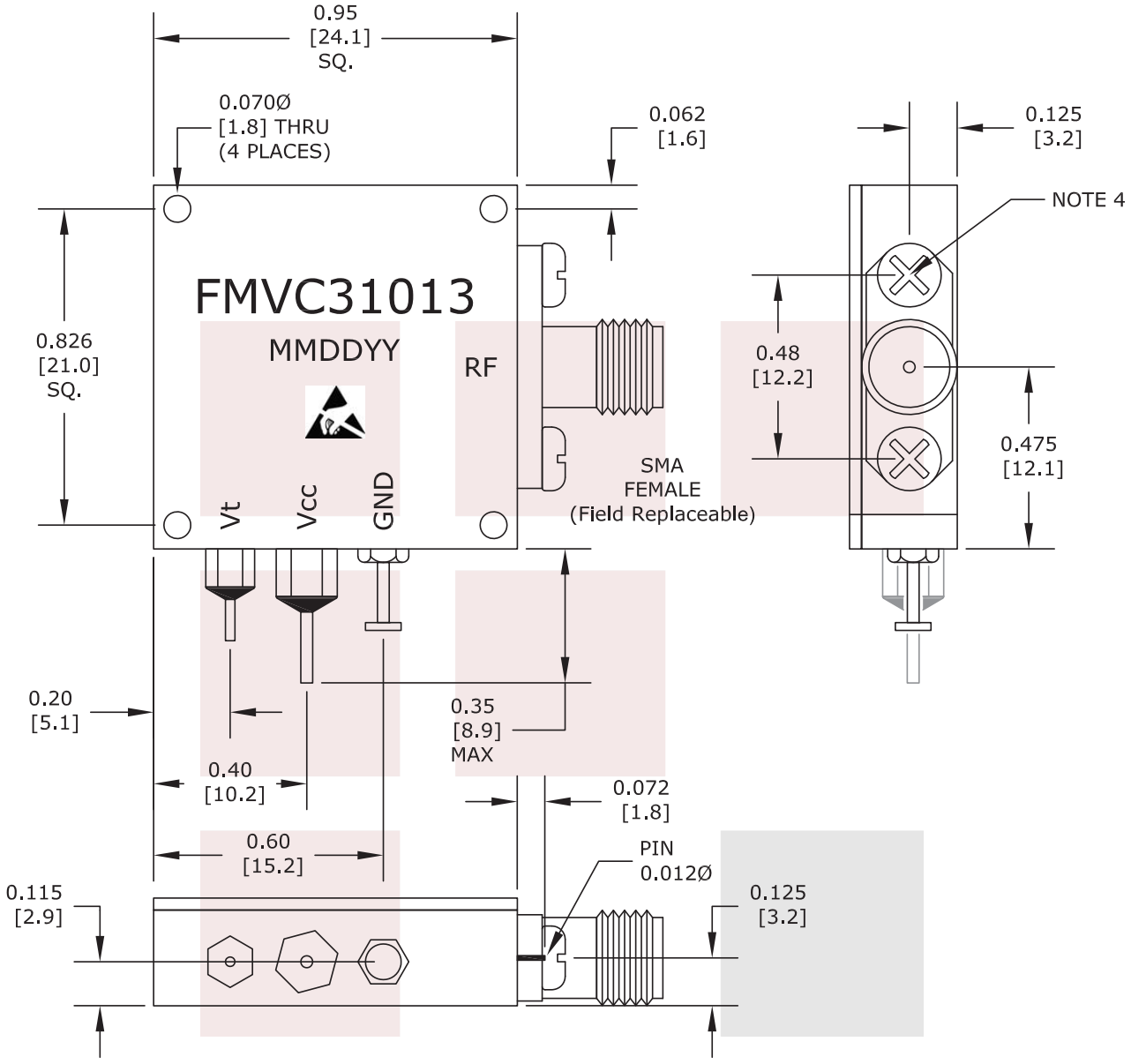

NOTES:
1. THE CASE IS GROUND.
2. UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES [mm].
3. ENCLOSURE FINISH IS ALODINE 1200 OR EQUIVALENT.
4. UNC 2-56 TYP 2 PLCS. MOUNTING SCREWS NOT EXCEED 0.062" INTRUSION INTO CAVITY (HOUSING WALL THICKNESS 0.125").

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 VCO (Voltage Controlled Oscillator) Frequency of 3 GHz to 3.5 GHz, Phase Noise -81 dBc/Hz and SMA	DWG NO FMVC31013		CAGE CODE 3FKR5		
CAD FILE 040716	SHEET	SCALE N/A	SIZE A	2233	

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