

Voltage Controlled Oscillator, 500 MHz to 600 MHz, Pout -2 dBm, Phase Noise of -105 dBc/Hz, 0.5V to 4.5V Tuning Range, SMA

The FMVC31016 is highly reliable low noise Voltage Controlled Oscillator (VCO) that operates across 500 MHz to 600 MHz with a tuning voltage range from 0.5V to 4.5V. Impressive typical performance includes generated output power of -2 dBm, 2nd Harmonic Suppression of -20 dBc, phase noise of -105 dBc/Hz @ 10 KHz offset, and tuning sensitivity of 22 MHz/V. The design incorporates internal voltage regulation and reverse DC protection, with a bias voltage range from +9V to +15V. The rugged and compact coaxial package assembly supports SMA female connectors, RFI and ground pins. The VCO has an operational temperature range of -40°C to +85°C and is designed to meet a variety of MIL-STD-202 test conditions including shock, vibration, altitude, and humidity.

Electrical Specifications

Description	Min	Typ	Max	Units
Frequency Range	500		600	MHz
Tuning Voltage	0.5		4.5	Vdc
Supply Voltage (DC)	9	12	15	Vdc
Supply Current (DC)		20		mA
Phase Noise @10kHz Offset		-105		dBc/Hz
Output Power	-5	-2	+1	dBm
Tuning Sensitivity (Kvco)		45		MHz/V
Tuning Port Capacitance		50		pF
Load Impedance		50		Ohms
2nd Harmonics		-20		dBc

Mechanical Specifications

Size	
Length	1.25 in [31.75 mm]
Width	1.25 in [31.75 mm]
Height	0.563 in [14.3 mm]
Weight	0.4 lbs [181.44 g]
Design	Commercial
Connector Option	Standard
Output Connector	SMA Female

Environmental Specifications

Temperature	
Operating Range	-40 to +85 deg C
Storage Range	-55 to +100 deg C
Humidity	MIL-STD-202, Method 103B, Condition B
Shock	MIL-STD-202F, Method 213B, Condition B
Vibration	MIL-STD-202F, Method 204D, Condition B
Altitude	MIL-STD-202F, Method 105C, Condition B



Features:

- Voltage Controlled Oscillator
- 500 MHz to 600 MHz
- 0.5V to 4.5V Tuning Voltage
- Pout: -2 dBm
- Phase Noise: -105 dBc/Hz
- 2nd Harmonic Suppression: -20 dBc typ
- Tuning Sensitivity: 45 MHz/V
- +12 Volt DC Bias
- SMA Female Connectors
- -40°C to +85°C Operating Temperature
- 50 Ohm Design
- Internal Voltage Regulation
- Reverse DC Protection
- Rugged Package Design meets Mil-STD-202 Test Conditions

Applications:

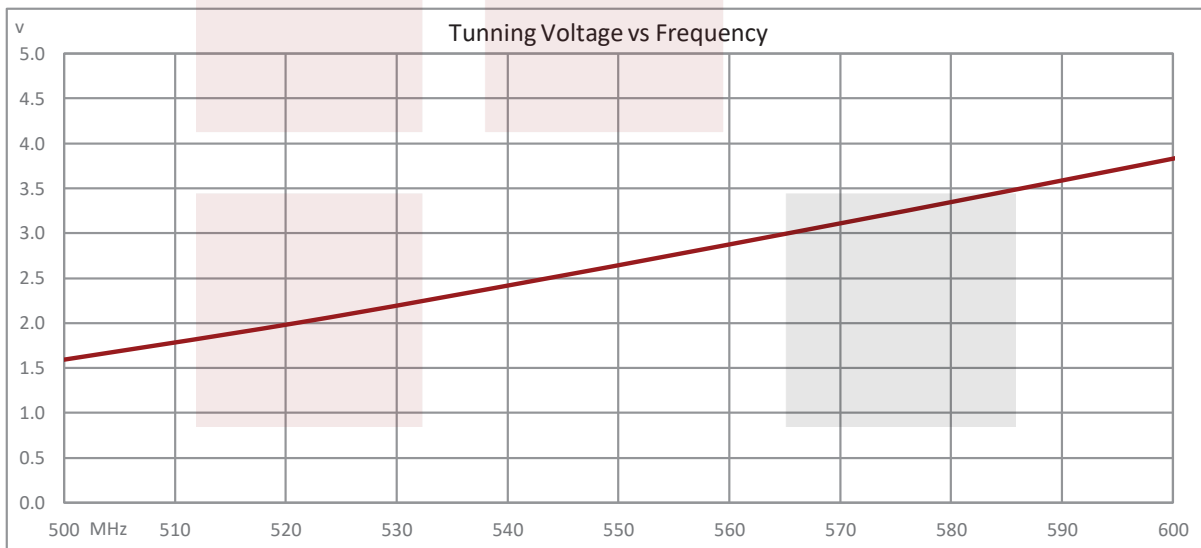
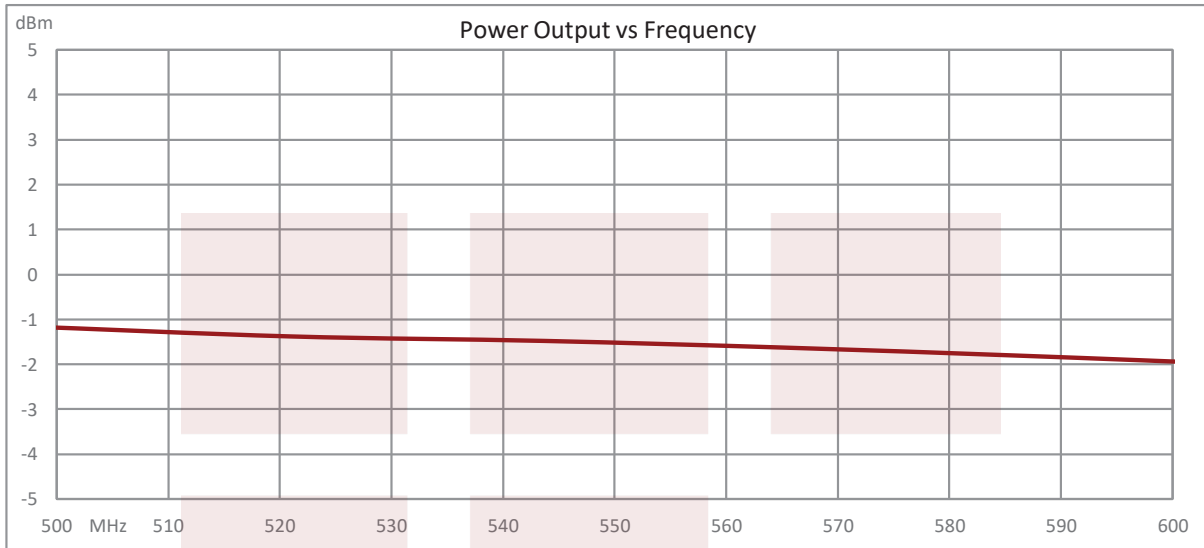
- Phase Locked Loop
- Function Generators
- Frequency Synthesizers
- Receivers
- Electronic Jamming Equipment
- Local Oscillators
- Wireless Communications
- SATCOM
- Optical Communications
- Military Electronic Systems

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

Plotted and Other Data

Typical Performance Data



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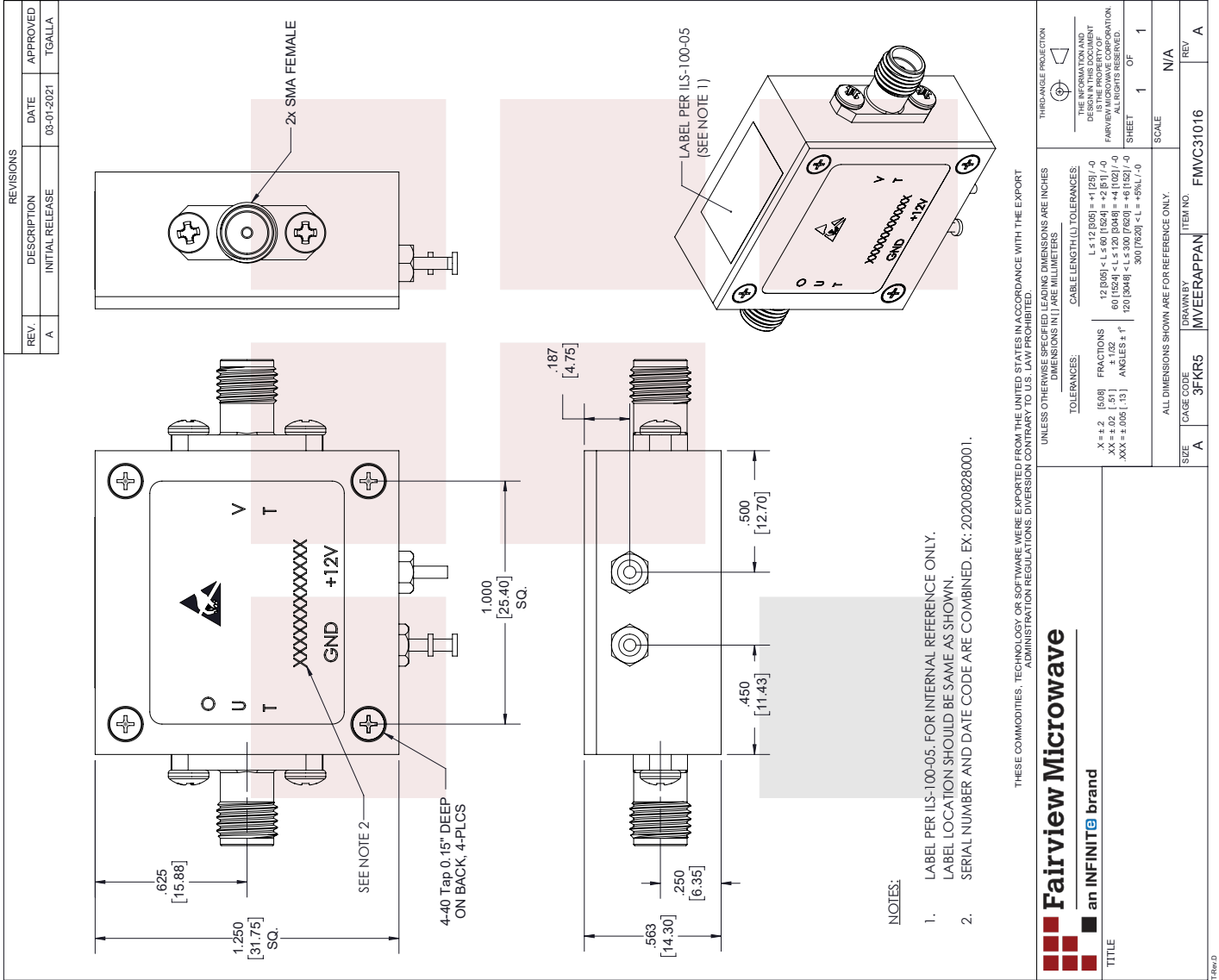
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Voltage Controlled Oscillator, 500 MHz to 600 MHz, Pout -2 dBm, Phase Noise of -105 dBc/Hz, 0.5V to 4.5V Tuning Range, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf 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: [Voltage Controlled Oscillator, 500 MHz to 600 MHz, Pout -2 dBm, Phase Noise of -105 dBc/Hz, 0.5V to 4.5V Tuning Range, SMA FMVC31016](#)

URL: <https://www.fairviewmicrowave.com/vco-voltage-controlled-oscillator-600-mhz-fmvc31016-p.aspx>

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