

Voltage Controlled Oscillator, 1435 MHz to 1650 MHz, Pout +7 dBm, Phase Noise of -90 dBc/Hz, 0.5V to 5.0V Tuning Range, SMA

The FMVC31021 is highly reliable low noise Voltage Controlled Oscillator (VCO) that operates across 1435 MHz to 1650 MHz with a tuning voltage range from 0.5V to 5.0V. Impressive typical performance includes generated output power of +7 dBm, 2nd Harmonic Suppression of -7 dBc, phase noise of -90 dBc/Hz @ 10 KHz offset, and tuning sensitivity of 80 MHz/V. The design incorporates internal voltage regulation and reverse DC protection, with a bias voltage range from +7V 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 +70°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 | 1.435 | | 1.65 | GHz |
| Tuning Voltage | 0.5 | | 5 | Vdc |
| Supply Voltage (DC) | 7 | 12 | 15 | Vdc |
| Supply Current (DC) | | 15 | | mA |
| Phase Noise @10kHz Offset | | -90 | | dBc/Hz |
| Output Power | +5 | +7 | +9 | dBm |
| Tuning Sensitivity (Kvco) | | 80 | | MHz/V |
| Pulling (pk-pk) | | 35 | | MHz |
| Tuning Port Capacitance | | 50 | | pF |
| Load Impedance | | 50 | | Ohms |
| 2nd Harmonics | | -7 | | 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 +70 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
- 1435 MHz to 1650 MHz
- 0.5V to 5.0V Tuning Voltage
- Pout: +7 dBm
- Phase Noise: -90 dBc/Hz
- 2nd Harmonic Suppression: -7 dBc typ
- Tuning Sensitivity: 80 MHz/V
- +12 Volt DC Bias
- SMA Female Connectors
- -40°C to +70°C Operating Temperature
- 50 Ohm Design
- Internal Voltage Regulation
- Reverse DC Protection
- Rugged Package Design meets Mil-STD-202 Test Conditions

Applications:

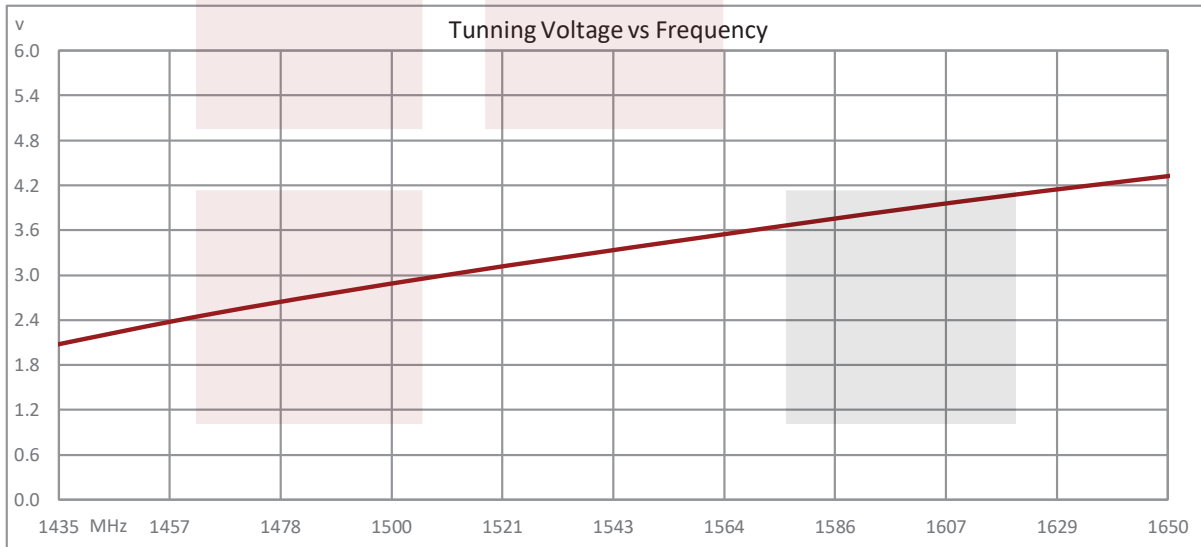
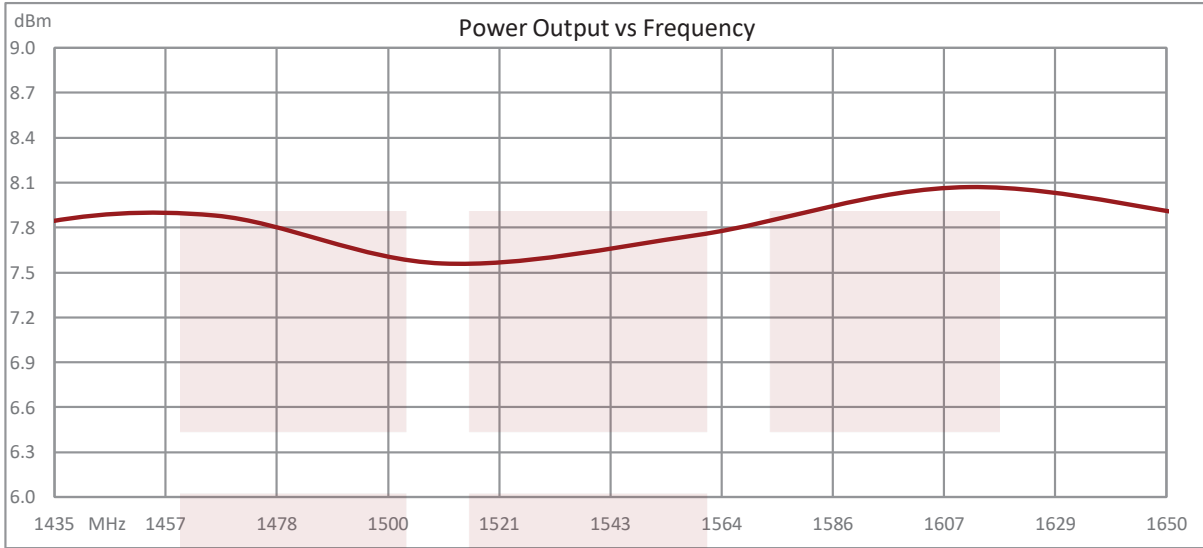
- Phase Locked Loop
- Function Generators
- Frequency Synthesizers
- Receivers
- Electronic Jamming Equipment
- Local Oscillators
- Wireless Communications
- SATCOM
- Optical Communications
- Military Electronic Systems

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

Plotted and Other Data

Typical Performance Data



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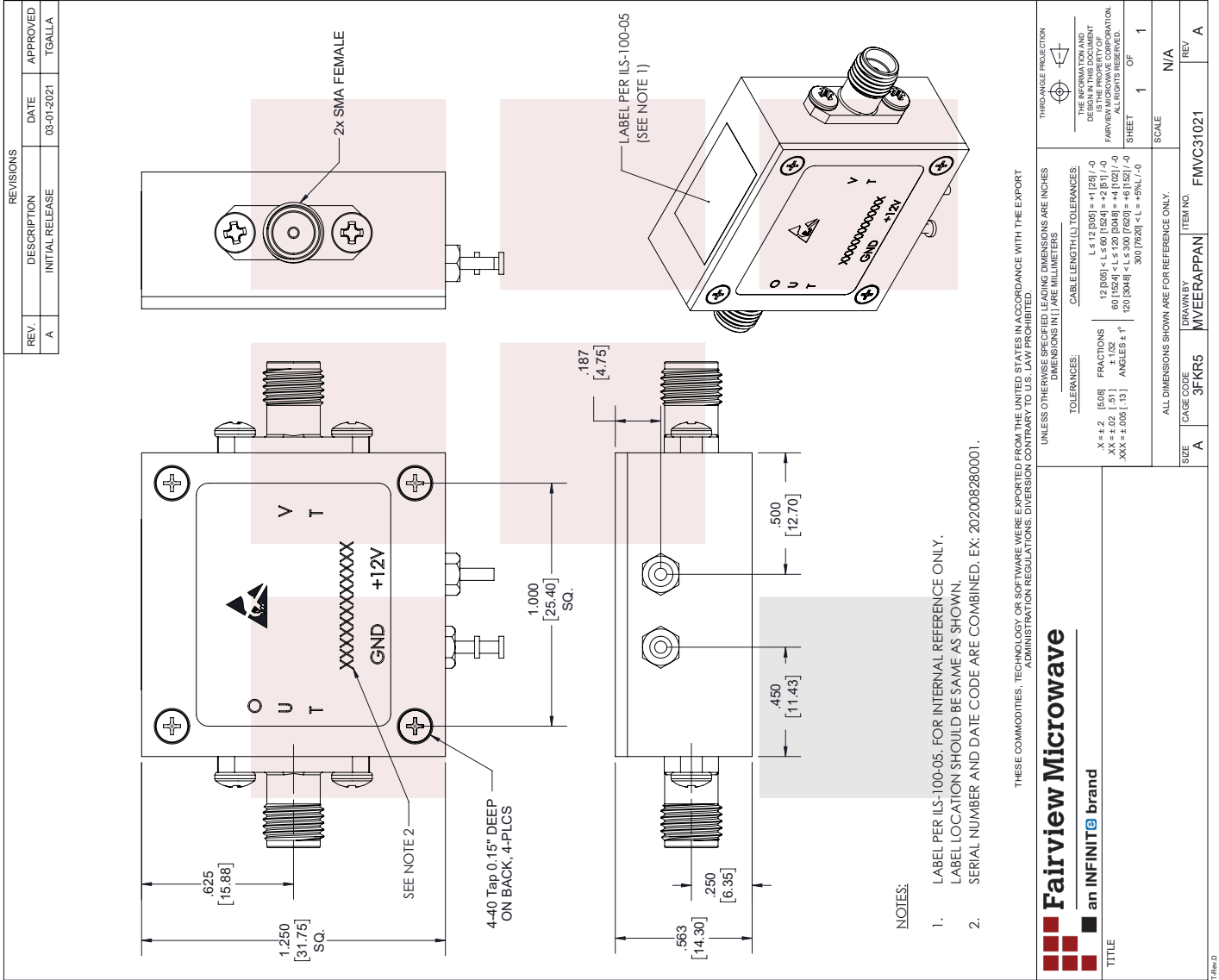
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Voltage Controlled Oscillator, 1435 MHz to 1650 MHz, Pout +7 dBm, Phase Noise of -90 dBc/Hz, 0.5V to 5.0V Tuning Range, SMA from Fairview Microwave is in-stock and available to ship same-day. All of our RF/microwave products are available off-the-shelf 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, 1435 MHz to 1650 MHz, Pout +7 dBm, Phase Noise of -90 dBc/Hz, 0.5V to 5.0V Tuning Range, SMA FMVC31021](#)

URL: <https://www.fairviewmicrowave.com/vco-voltage-controlled-oscillator-1.65-ghz-fmvc31021-p.aspx>

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