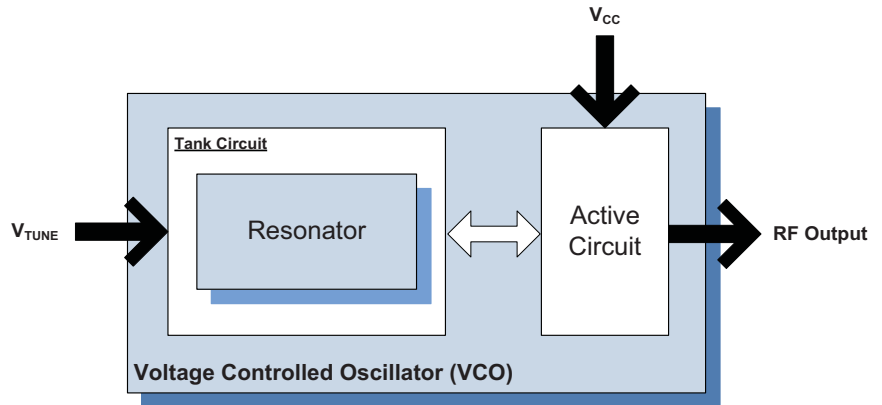




Features

- Ultra-Linear Tuning / Ultra-Low Phase Noise
- Frequency: 3740MHz to 3840MHz
- Resonator: Ceramic
- PCB: Rogers
- Package Size: 12.7mm x 12.7mm x 5.6mm (0.5in x 0.5in x 0.22in)



Functional Block Diagram

Applications

- Point-to-Point Radio
- DRO/YIG Multiplied Replacements
- Low Phase Noise Applications
- SAW VCO Replacement

Product Description

This VCO series features ultra-low phase noise, lower phase transients, lower harmonics, and lower pushing and pulling without any performance penalties typically associated with high technology designs.

Ordering Information

UMX-903-D16-G Contact us at 1-480-756-6070

Optimum Technology Matching® Applied

- | | | | |
|--------------------------------------|--------------------------------------|--|------------------------------------|
| <input type="checkbox"/> GaAs HBT | <input type="checkbox"/> SiGe BiCMOS | <input type="checkbox"/> GaAs pHEMT | <input type="checkbox"/> GaN HEMT |
| <input type="checkbox"/> GaAs MESFET | <input type="checkbox"/> Si BiCMOS | <input type="checkbox"/> Si CMOS | <input type="checkbox"/> BiFET HBT |
| <input type="checkbox"/> InGaP HBT | <input type="checkbox"/> SiGe HBT | <input checked="" type="checkbox"/> Si BJT | <input type="checkbox"/> LDMOS |

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Absolute Maximum Ratings

| Parameter | Rating | Unit |
|----------------------------------|-------------|------|
| Operating Ambient Temperature[1] | -40 to +85 | °C |
| Storage Temperature | -55 to +125 | °C |

[1] Frequency drift: 8.2MHz typical (+85 °C), 5.8MHz typical (-40 °C).



Caution! ESD sensitive device.

Exceeding any one or a combination of the Absolute Maximum Rating conditions may cause permanent damage to the device. Extended application of Absolute Maximum Rating conditions to the device may reduce device reliability. Specified typical performance or functional operation of the device under Absolute Maximum Rating conditions is not implied.

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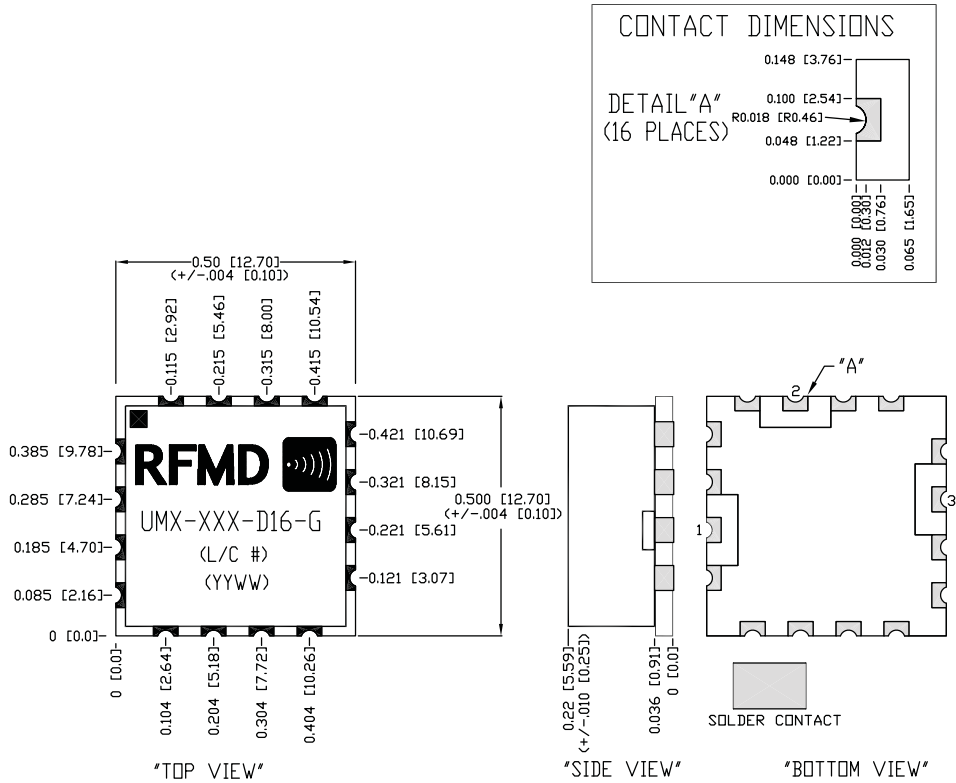


RoHS (Restriction of Hazardous Substances): Compliant per EU Directive 2002/95/EC.

| Parameter | Specification | | | Unit | Condition |
|-------------------------|---------------|------|------|-----------------|------------------------------------|
| | Min. | Typ. | Max. | | |
| Overall | | | | | |
| Frequency Range | 3740 | | 3840 | MHz | |
| Tuning Voltage | 1 | | 15 | V _{DC} | |
| Tuning Sensitivity | | 10 | | MHz/V | |
| Output Power | 0 | 2 | 4 | dBm | |
| | -1 | | | dBm | At V _T = 0 |
| Output Phase Noise | | -82 | -77 | dBc/Hz | 1 kHz |
| | | -110 | -105 | dBc/Hz | 10 kHz |
| | | -130 | -125 | dBc/Hz | 100 kHz |
| | | -150 | -145 | dBc/Hz | 1000 kHz |
| | | -164 | -155 | dBc/Hz | 10000 kHz |
| Second Harmonic | | -15 | -10 | dBc | |
| Frequency Pulling | | 0.5 | | MHz p-p | At 12 dB _r , all phases |
| Tuning Port Capacitance | | 10 | | pF | |
| Modulation Bandwidth | | 1000 | | kHz | 3dB BW |
| Frequency Pushing | | 0.3 | | MHz/V | |
| Power Supply | | | | | |
| Operating Voltage | | 6 | | V | |
| Supply Current | | 28 | | mA | |

Package Drawing & Pin Outs

12.7mm x 12.7mm x 5.6mm (0.5in x 0.5in x 0.22in)



| CONTACT ASSIGNMENTS: | |
|-------------------------------|----------------------|
| 1: | RF OUT |
| 2: | SUPPLY INPUT |
| 3: | TUNING VOLTAGE INPUT |
| ALL OTHER CONTACTS ARE GROUND | |