

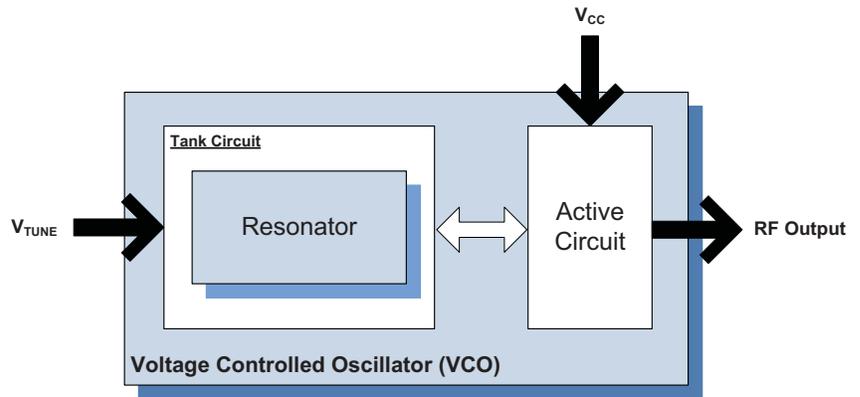


**Features**

- Octave Band Tuning
- Frequency: 950MHz to 2150MHz
- Resonator: Microstrip
- PCB: Rogers
- Package Size: 12.7mm x 12.7mm x 4.57mm (0.5in x 0.5in x 0.18in)

**Applications**

- Wide Band Applications
- Built-in Test Applications
- First LO Applications
- Frequency Synthesizers



Functional Block Diagram

**Product Description**

This series of VCO modules features full octave bands (typical), low phase noise, low harmonics, and linear tuning.

**Ordering Information**

UMS-2150-R16-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: 13.0MHz typical (either extreme)



**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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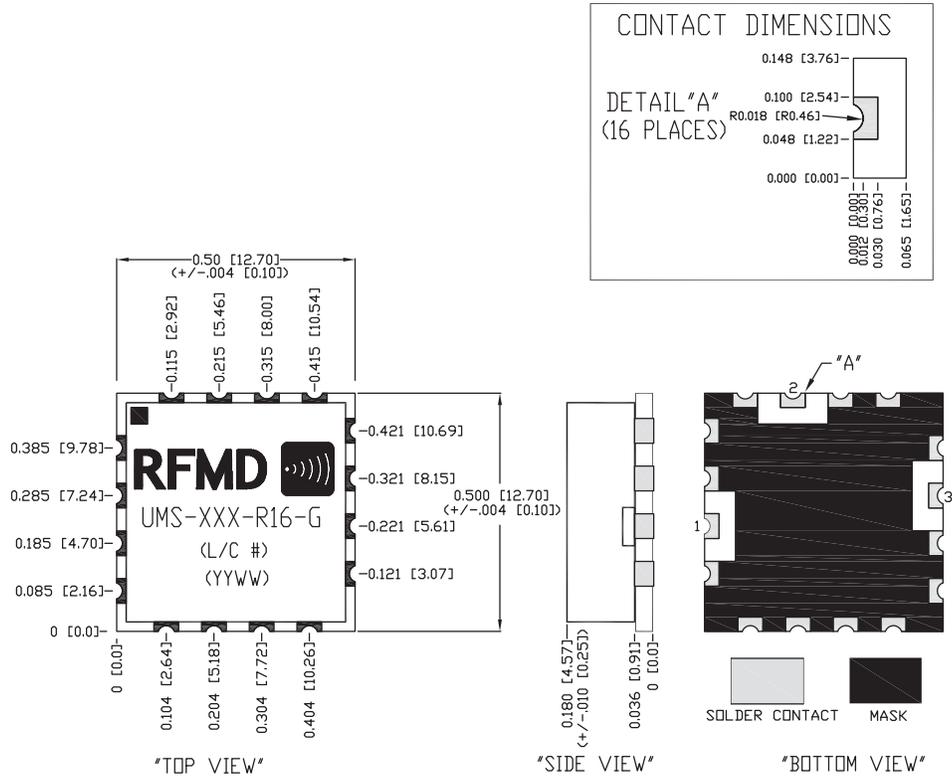


RoHS (Restriction of Hazardous Substances): Compliant per EU Directive 2002/95/EC.

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
<b>Overall</b>					
Frequency Range	950		2150	MHz	
Tuning Voltage	0.5		16	V <sub>DC</sub>	
Tuning Sensitivity		85		MHz/V	
Output Power	8.5	11	13.5	dBm	
	8.5				At V <sub>T</sub> = 0
Output Phase Noise		-75	-70	dBc/Hz	1 kHz
		-102	-97	dBc/Hz	10 kHz
		-122	-115	dBc/Hz	100 kHz
		-142	-135	dBc/Hz	1000 kHz
Second Harmonic		-20	-10	dBc	
Frequency Pulling		15	20	MHz p-p	At 12dB <sub>r</sub> , all phases
Tuning Port Capacitance		47		pF	
Modulation Bandwidth		1000		kHz	3dB BW
Frequency Pushing		1	1.5	MHz/V	
<b>Power Supply</b>					
Operating Voltage		12		V	
Supply Current		28		mA	

## Package Drawing & Pin Outs

12.7mm x 12.7mm x 4.57mm (0.5in x 0.5in x 0.18in)



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