

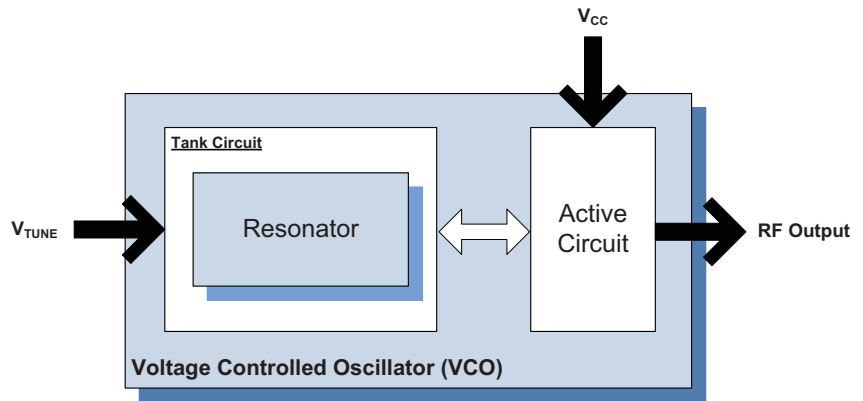


**Features**

- Octave Band Tuning
- Frequency: 25MHz to 50MHz
- 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-50-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     |

RF MICRO DEVICES®, RFMD®, Optimum Technology Matching®, Enabling Wireless Connectivity™, PowerStar®, POLARIS™ TOTAL RADIO™ and UltimateBlue™ are trademarks of RFMD, LLC. BLUETOOTH is a trademark owned by Bluetooth SIG, Inc., U.S.A. and licensed for use by RFMD. All other trade names, trademarks and registered trademarks are the property of their respective owners. ©2006, RF Micro Devices, Inc.

## Absolute Maximum Ratings

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

[1] Frequency drift: 0.2MHz 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.

The information in this publication is believed to be accurate and reliable. However, no responsibility is assumed by RF Micro Devices, Inc. ("RFMD") for its use, nor for any infringement of patents, or other rights of third parties, resulting from its use. No license is granted by implication or otherwise under any patent or patent rights of RFMD. RFMD reserves the right to change component circuitry, recommended application circuitry and specifications at any time without prior notice.

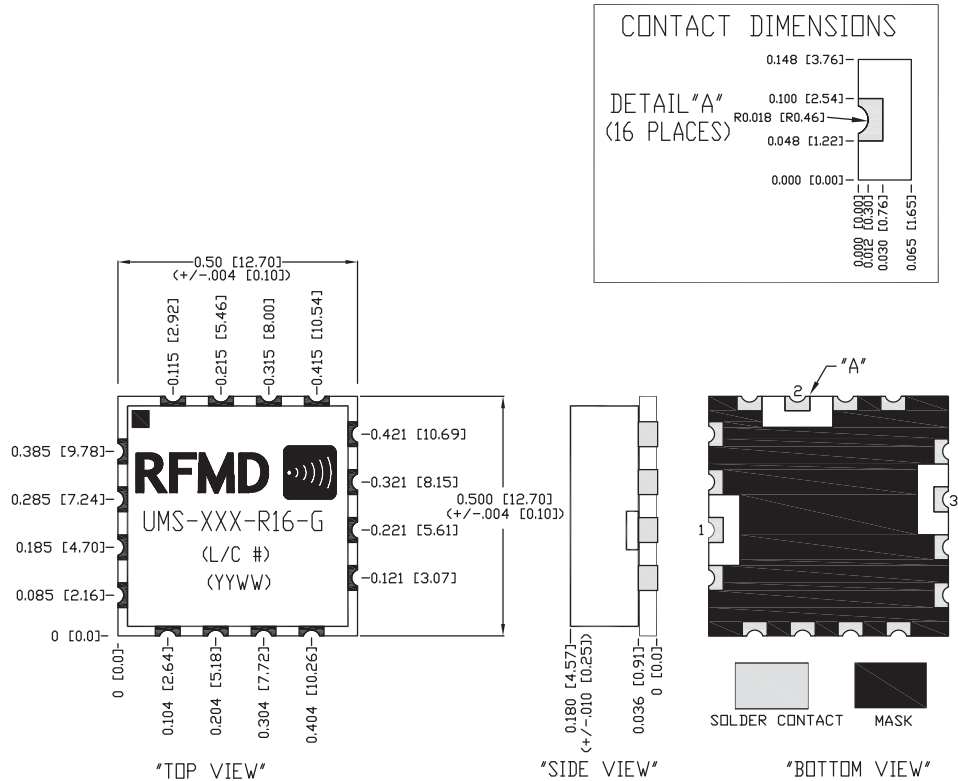


RoHS (Restriction of Hazardous Substances): Compliant per EU Directive 2002/95/EC.

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
<b>Overall</b>					
Frequency Range	25		50	MHz	
Tuning Voltage	1		15	V <sub>DC</sub>	
Tuning Sensitivity		2.4		MHz/V	
Output Power	7	9	11	dBm	
	7				At V <sub>T</sub> = 0
Output Phase Noise		-100	-94	dBc/Hz	1kHz
		-125	-119		10kHz
		-145	-139		100kHz
		-164	-155		1000kHz
		-164	-155		10000kHz
Second Harmonic		-15	-8	dBc	
Frequency Pulling		0.1	0.2	MHz p-p	At 12dB <sub>r</sub> , all phases
Tuning Port Capacitance		1000		pF	
Modulation Bandwidth		100		kHz	3dB BW
Frequency Pushing		0.05	0.1	MHz/V	
<b>Power Supply</b>					
Operating Voltage		12		V	
Supply Current		16		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	