



**Features**

- Octave Band Tuning
- Frequency: 150MHz to 300MHz
- 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-300-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: 2.0MHz typical, 4.0MHz maximum at -40 °C and 2.0MHz typical, 3.0MHz maximum at +85 °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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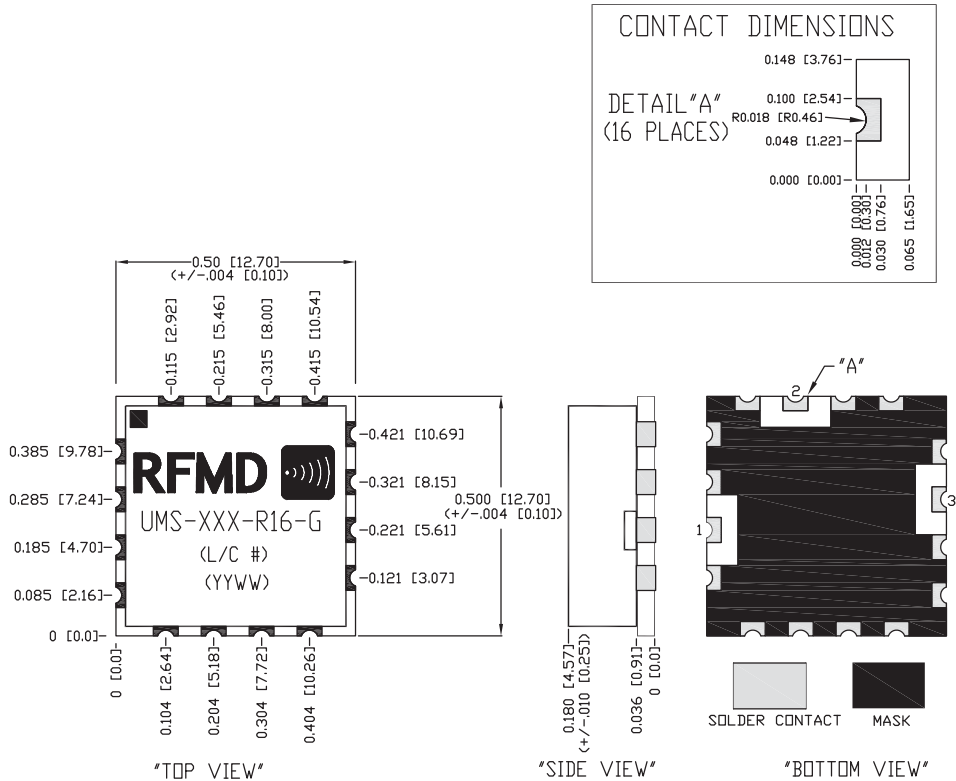


RoHS (Restriction of Hazardous Substances): Compliant per EU Directive 2002/95/EC.

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
<b>Overall</b>					
Frequency Range	150		300	MHz	
Tuning Voltage	1		16	V <sub>DC</sub>	
Tuning Sensitivity		12		MHz/V	
Output Power	7	10	12	dBm	
	5				At V <sub>T</sub> = 0
Output Phase Noise		-78	-73	dBc/Hz	1 kHz
		-103	-96		10 kHz
		-123	-116		100 kHz
		-143	-136		1000 kHz
		-155	-150		10000 kHz
Second Harmonic		-28	-20	dBc	
Frequency Pulling		1	3	MHz p-p	At 12dB, all phases
Tuning Port Capacitance		330		pF	
Modulation Bandwidth		100		kHz	3 dB BW
Frequency Pushing		0.2	0.5	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	