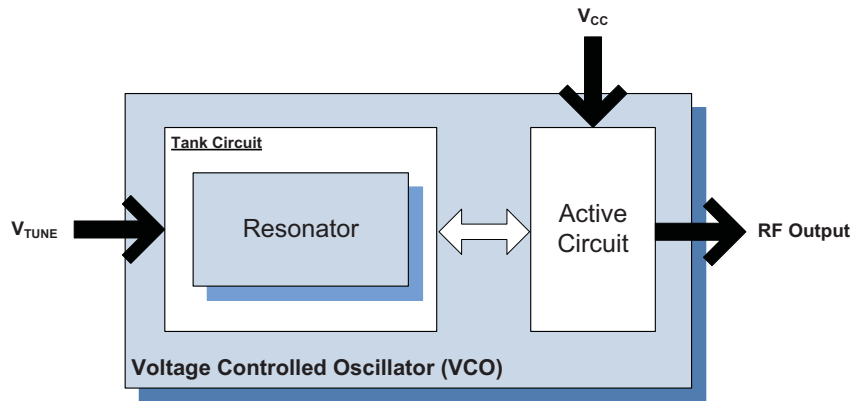




### Features

- Linear Tuning/100MHz Frequency
- Frequency: 3900MHz to 4000MHz
- Resonator: Microstrip
- PCB: Rogers
- Package Size: 12.7mm x 12.7mm x 4.57mm (0.5in x 0.5in x 0.18in)



Functional Block Diagram

### Applications

- Frequency Synthesizers
- Upconverters and Downconverters
- Narrow  $V_{TUNE}$  and  $V_{CC}$  Applications

### Product Description

This series of VCO modules offers ultra-linear tuning across their specified frequency band.

### Ordering Information

UMV-3950-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: 10MHz 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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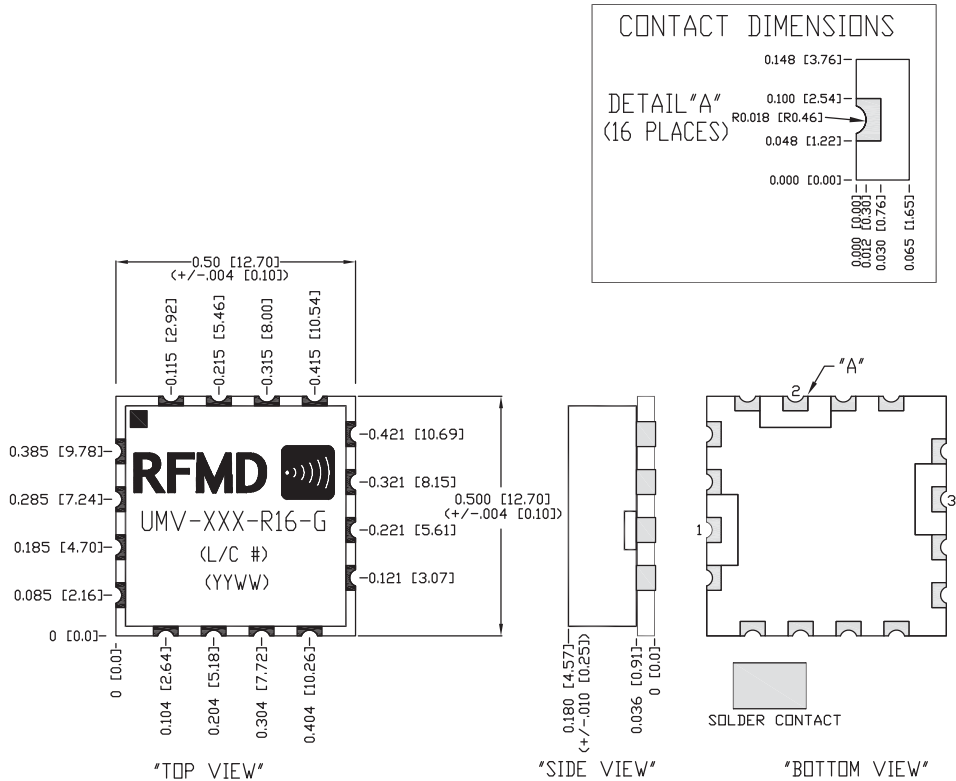


RoHS (Restriction of Hazardous Substances): Compliant per EU Directive 2002/95/EC.

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
<b>Overall</b>					
Frequency Range	3900		4000	MHz	
Tuning Voltage	0.5		4.5	V <sub>DC</sub>	
Tuning Sensitivity		45		MHz/V	
Output Power	-2.5	0	2.5	dBm	
	-2.5				At V <sub>T</sub> = 0
Output Phase Noise		-77	-72	dBc/Hz	1 kHz
		-102	-97	dBc/Hz	10 kHz
		-122	-117	dBc/Hz	100 kHz
		-142	-137	dBc/Hz	1000 kHz
Second Harmonic		-15	-8	dBc	
Frequency Pulling		1	5	MHz p-p	At 12dB <sub>r</sub> , all phases
Tuning Port Capacitance		20		pF	
Modulation Bandwidth		1000		kHz	3dB BW
Frequency Pushing		1.5	3	MHz/V	
<b>Power Supply</b>					
Operating Voltage		5		V	
Supply Current		27		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	