

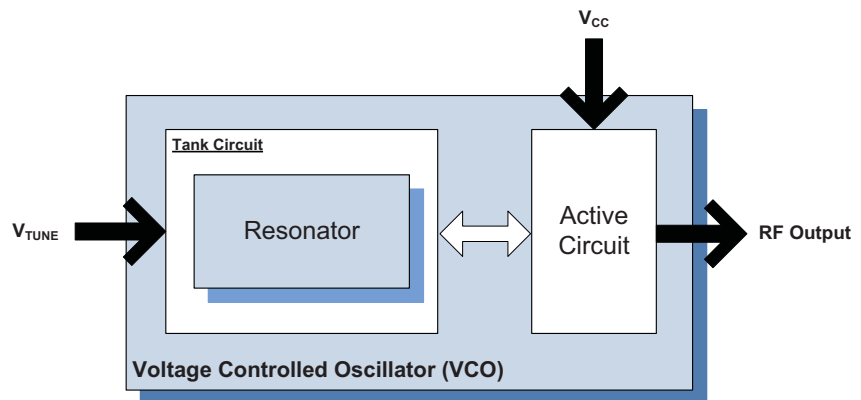


Features

- Ultra-linear Tuning/Ultra-low Phase Noise
- Frequency: 1550MHz to 1675MHz
- Resonator: Ceramic
- PCB: Rogers
- Package Size: 12.7mm x 12.7mm x 5.59mm (0.5in x 0.5in x 0.22in)

Applications

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



Functional Block Diagram

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-471-D16-G Contact us at 1-480-756-6070

Optimum Technology Matching® Applied

- | | | | |
|--------------------------------------|--------------------------------------|--|------------------------------------|
| ☐ GaAs HBT | ☐ SiGe BiCMOS | ☐ GaAs pHEMT | ☐ GaN HEMT |
| ☐ GaAs MESFET | ☐ Si BiCMOS | ☐ Si CMOS | ☐ BiFET HBT |
| ☐ InGaP HBT | ☐ SiGe HBT | ☒ Si BJT | ☐ LDMOS |

Absolute Maximum Ratings

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

[1] Frequency drift: 6MHz 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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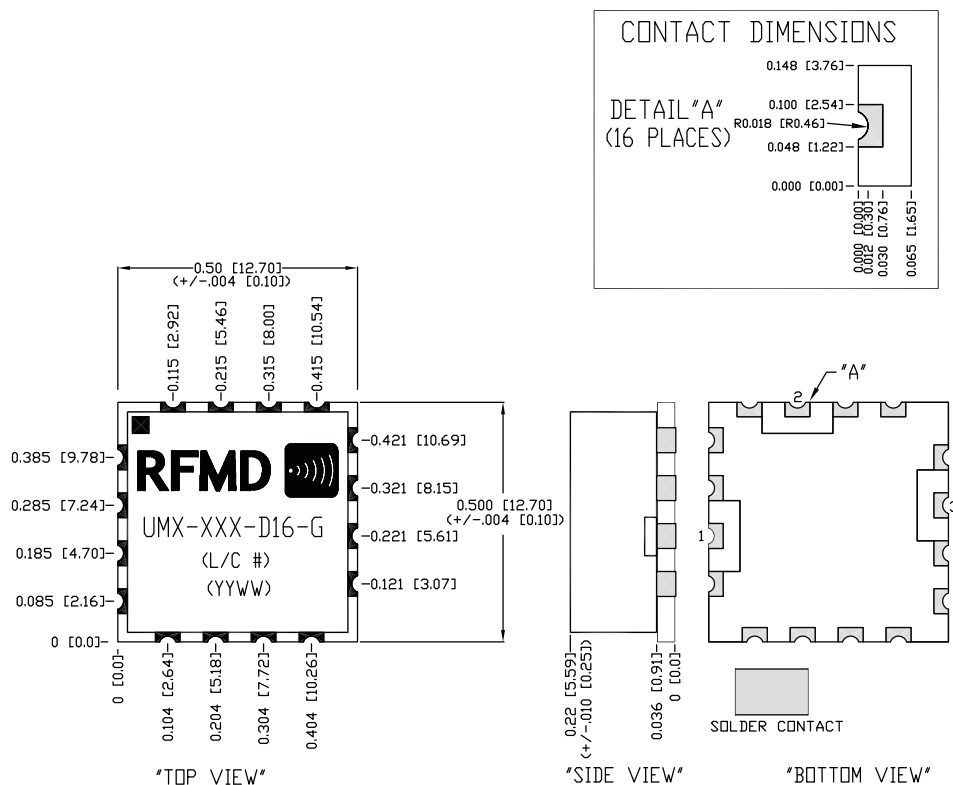


RoHS (Restriction of Hazardous Substances): Compliant per EU Directive 2002/95/EC.

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Overall					
Frequency Range	1550		1675	MHz	
Tuning Voltage	0.5		4.5	V _{DC}	
Tuning Sensitivity		50		MHz/V	
Output Power	5	7	9	dBm	
	0				At V _T = 0
Output Phase Noise		-85	-80	dBc/Hz	1 kHz
		-112	-108	dBc/Hz	10 kHz
		-132	-128	dBc/Hz	100 kHz
		-152	-148	dBc/Hz	1000 kHz
		-164	-155	dBc/Hz	10000 kHz
Second Harmonic		-15	-10	dBc	
Frequency Pulling		1.2	2.5	MHz p-p	At 12dBr, all phases
Tuning Port Capacitance		47		pF	
Modulation Bandwidth		1000		kHz	3 dB BW
Frequency Pushing		0.5	2	MHz/V	
Power Supply					
Operating Voltage		6		V	
Supply Current		26		mA	

Package Drawing & Pin Outs

12.7mm x 12.7mm x 5.59mm (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	