RFMD
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UMX-870-D16-G

ULTRA-LOW NOISE COAXIAL RESONATOR OSCILLATOR

Package: D16, 12.7mm x 12.7mm x 5.59mm

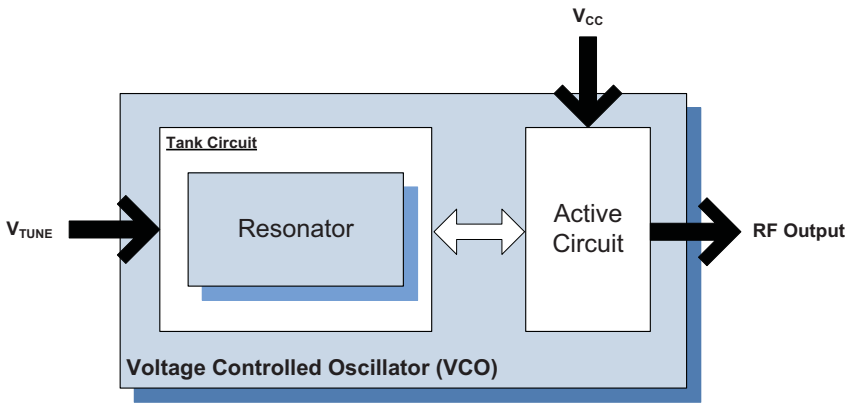
RoHS

Features

- Ultra-linear Tuning/Ultra-low Phase Noise
- Frequency: 818MHz to 847MHz
- 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-870-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

7628 Thorndike Road, Greensboro, NC 27409-9421 · For sales or technical support, contact RFMD at **(+1) 336-678-5570** or **customerservice@rfmd.com**.

Absolute Maximum Ratings

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

[1] Frequency drift: 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.

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

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Overall					
Frequency Range	818		847	MHz	
Tuning Voltage	3		12	V_{DC}	
Tuning Sensitivity	4	5.5	7	MHz/V	
Output Power	3.5	6	8.5	dBm	
	3				At V_T = 0
Output Phase Noise		-95	-90	dBc/Hz	1kHz
		-120	-115	dBc/Hz	10kHz
		-140	-135	dBc/Hz	100kHz
		-160	-155	dBc/Hz	1000kHz
		-164	-155	dBc/Hz	10000kHz
Second Harmonic		-15	-10	dBc	
Frequency Pulling		0.3	0.5	MHz p-p	At 12dBr, all phases
Tuning Port Capacitance		47		pF	
Modulation Bandwidth		1000		kHz	3dB BW
Frequency Pushing		0.1	0.3	MHz/V	
Power Supply					
Operating Voltage		7		V	
Supply Current		30		mA	

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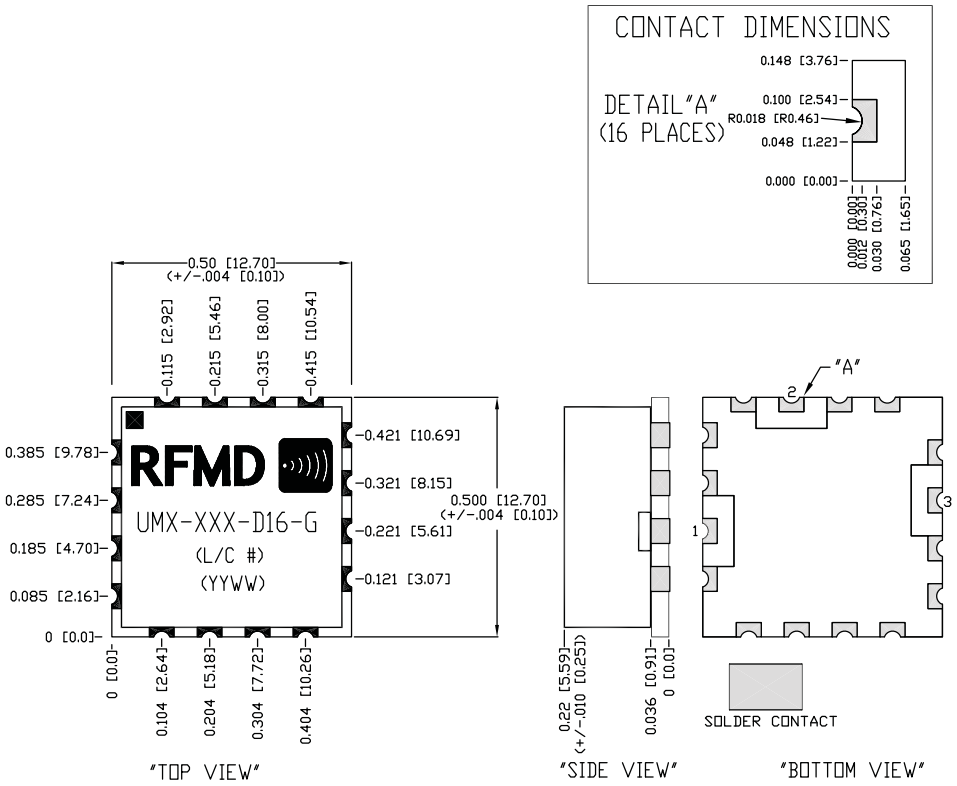
Package Drawing & Pin Outs

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	