

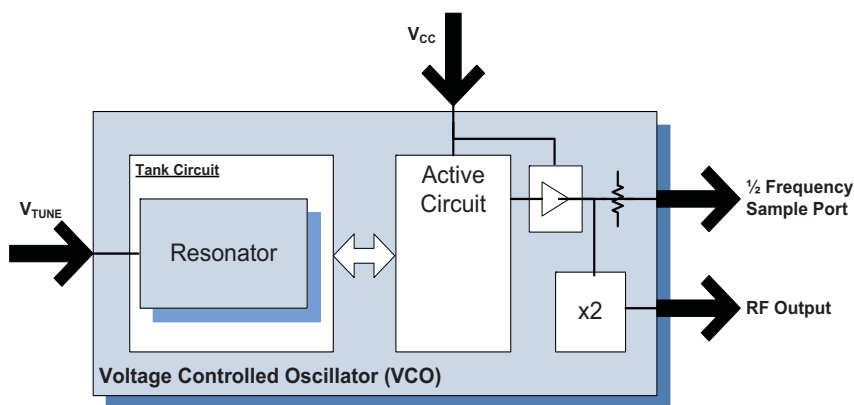


### Features

- Internal Frequency Doubler and Buffer AMP
- 1/2 Frequency Output Provided
- Frequency: 4460MHz to 4615MHz
- Resonator: Microstrip
- PCB: Rogers
- Package Size: 12.7mm x 12.7mm x 5.59mm (0.5in x 0.5in x 0.22in)

### Applications

- DRO Replacements
- Higher Frequency Applications
- Wide Bandwidth Applications
- Test Instrumentation



Functional Block Diagram

### Product Description

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

### Ordering Information

UMZ-T2-1045-016-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     |

## Absolute Maximum Ratings

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

[1] Frequency drift: 18MHz 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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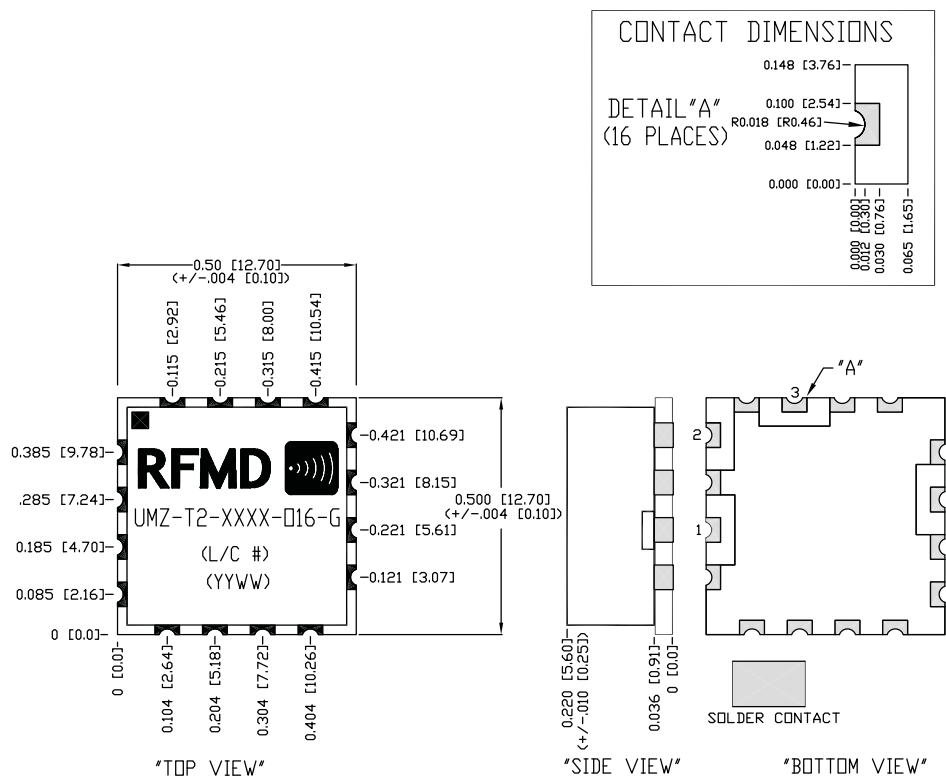


RoHS (Restriction of Hazardous Substances): Compliant per EU Directive 2002/95/EC.

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Overall					
Frequency Range	4460		4615	MHz	
Tuning Voltage	0.5		4.5	V <sub>DC</sub>	
Tuning Sensitivity		60		MHz/V	
Output Power	-3	0	3	dBm	
	-10	-5	0	dBm	1/2 frequency output
	-4			dBm	At V <sub>T</sub> =0
Output Phase Noise		-73	-68	dBc/Hz	1kHz
		-98	-93	dBc/Hz	10kHz
		-118	-113	dBc/Hz	100kHz
		-138	-133	dBc/Hz	1000kHz
		-158	-153	dBc/Hz	10000kHz
Second Harmonic		-18	-10	dBc	
Frequency Pulling		0.1	0.3	MHz p-p	At 12dBr, all phases
Tuning Port Capacitance		20		pF	
Modulation Bandwidth		5000		kHz	3dB BW
Frequency Pushing		1	2	MHz/V	
Power Supply					
Operating Voltage		5		V	
Supply Current		55		mA	

## Package Drawing & Pin Outs

12.7mm x 12.7mm x 5.59mm (0.5in x 0.5in x 0.22in)



1: RF OUT	
2: 1/2 FREQUENCY SAMPLE	
3: SUPPLY VOLTAGE INPUT	
4: TUNING VOLTAGE INPUT	
ALL OTHER CONTACTS ARE GROUND	