

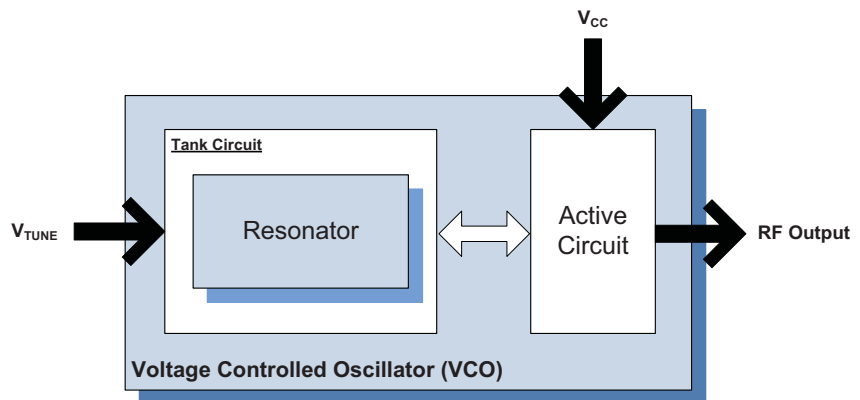


### Features

- Linear Tuning/100MHz Frequency
- Frequency: 2400MHz to 2500MHz
- Resonator: Microstrip
- PCB: Rogers
- Package Size: 12.7mm x 12.7mm x 4.57mm (0.5in x 0.5in x 0.18in)

### Applications

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



Functional Block Diagram

### Product Description

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

### Ordering Information

UMV-2450-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     |

## Absolute Maximum Ratings

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

[1] Frequency drift: 8MHz typical, 12MHz maximum (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	2400		2500	MHz	
Tuning Voltage	0.5		4.5	V <sub>DC</sub>	
Tuning Sensitivity		36		MHz/V	
Output Power	-2.5	0	2.5	dBm	
	-3				At V <sub>T</sub> = 0
Output Phase Noise		-80	-75	dBc/Hz	1kHz
		-105	-100	dBc/Hz	10kHz
		-125	-120	dBc/Hz	100kHz
		-145	-140	dBc/Hz	1000kHz
		-164	-155	dBc/Hz	10000kHz
Second Harmonic		-20	-10	dBc	
Frequency Pulling		1	2	MHz p-p	At 12dBr, all phases
Tuning Port Capacitance		47		pF	
Modulation Bandwidth		1000		kHz	3dB BW
Frequency Pushing		1	2	MHz/V	
Power Supply					
Operating Voltage		5		V	
Supply Current		26		mA	

## Package Drawing & Pin Outs

12.7mm x 12.7mm x 4.57mm (0.5in x 0.5in x 0.18in)

