

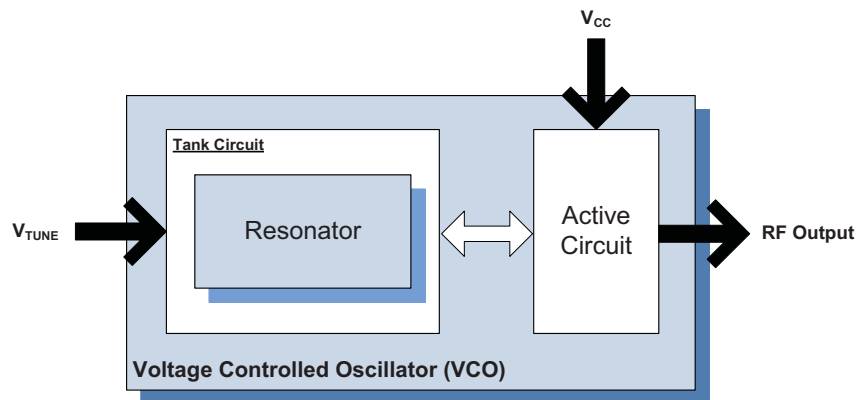


Features

- Octave Band Tuning
- Frequency: 75MHz to 150MHz
- Resonator: Microstrip
- PCB: Rogers
- Package Size: 12.7mm x 12.7mm x 4.57mm (0.5in x 0.5in x 0.18in)

Applications

- Wide Band Applications
- Built-in Test Applications
- First LO Applications
- Frequency Synthesizers



Functional Block Diagram

Product Description

This series of VCO modules features full octave bands (typical), low phase noise, low harmonics, and linear tuning.

Ordering Information

UMS-150-R16-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: 0.5MHz 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	75		150	MHz	
Tuning Voltage	1		16	V _{DC}	
Tuning Sensitivity		6		MHz/V	
Output Power	7	10	12.5	dBm	
	7				At V _T = 0
Output Phase Noise		-80	-70	dBc/Hz	1 kHz
		-105	-100	dBc/Hz	10 kHz
		-125	-120	dBc/Hz	100 kHz
		-145	-140	dBc/Hz	1000 kHz
Second Harmonic		-25	-15	dBc	
Frequency Pulling		0.5	2	MHz p-p	At 12dBr, all phases
Tuning Port Capacitance		330		pF	
Modulation Bandwidth		100		kHz	3 dB BW
Frequency Pushing		0.2	0.5	MHz/V	
Power Supply					
Operating Voltage		12		V	
Supply Current		17		mA	

Package Drawing & Pin Outs

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

