

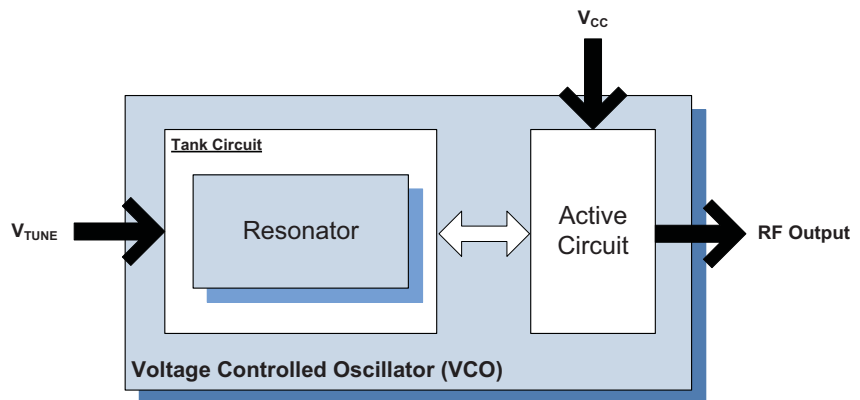


Features

- Linear Tuning/100MHz Frequency
- Frequency: 1800MHz to 1900MHz
- 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-1850-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: 6MHz typical, 10MHz 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	1800		1900	MHz	
Tuning Voltage	0.5		4.5	V _{DC}	
Tuning Sensitivity		36		MHz/V	
Output Power	-2.5	0	2.5	dBm	
	-3				At V _T = 0
Output Phase Noise		-81	-76	dBc/Hz	1 kHz
		-107	-102	dBc/Hz	10 kHz
		-127	-122	dBc/Hz	100 kHz
		-147	-142	dBc/Hz	1000 kHz
		-164	-159	dBc/Hz	10000 kHz
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	3 dB 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)

