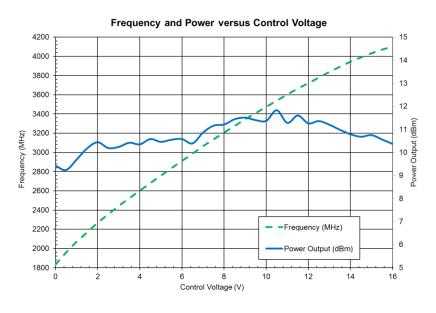
RFVC6405



RFVC6405

Octave Bandwidth Voltage Controlled Oscillator 2000MHz to 4000MHz

The RFVC6405 is an octave bandwidth Voltage Controlled Oscillator (VCO) designed for high performance transceiver applications.



Functional Block Diagram



Package: 16-pin, 12.7mm x 12.7mm x 4.57mm

Features

- Octave Bandwidth 2000MHz to 4000MHz
- -112dBc/Hz Typical at 100kHz Offset
- P_{OUT} 0dBm Typical
- 5V Supply
- 23mA Current Consumption

Applications

- Test and Measurement Instrumentation
- Wideband Radios for Military and Commercial Applications

Ordering Information

RFVC6405

Call us at 1.480.756.6070





Absolute Maximum Ratings

Parameter	Rating	Unit
Supply Voltage (V _{cc})	5.0	V
Control Voltage	0 to 16	V
DC Voltage on RFOUT	25	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range	-55 to +125	°C
ESD Rating - Human Body Model (HBM)	TBD	
Moisture Sensitivity Level	MSL1	



RoHS

RFMD RoHS (Restriction of Hazardous Substances): Compliant per EU Directive 2011/65/EU.

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.

Nominal Operating Parameters

Parameter	Specification		Unit	Condition	
	Min	Тур	Max	Unit	Condition
General Performance					Specifications: -40°C to 85°C
Frequency	2000		4000	MHz	
Tuning Voltage	0.5		16	V	
Tuning Sensitivity		150		MHz/V	
Output Power	-3	0	3	dBm	
2 nd Harmonic		-15		dBc	
SBB Phase Noise at 1kHz Offset		-60	-55	dBc/Hz	
SBB Phase Noise at 10kHz Offset		-90	-85	dBc/Hz	
SBB Phase Noise at 100kHz Offset		-112	-105	dBc/Hz	
SBB Phase Noise at 1MHz Offset		-132	-120	dBc/Hz	
Power Supply		5		V	
Supply Current		23	30	mA	
Frequency Pushing (3.15V to 3.45V)		4		MHz/V	
Frequency Pushing (12dB RL)		4		MHz, p-p	
Tuning Port Capacitance		18		pF	
Output Impedance		50		Ω	
Modulation BW		1000		kHz	

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50

0 + 2000

2250

2500

2750

3000

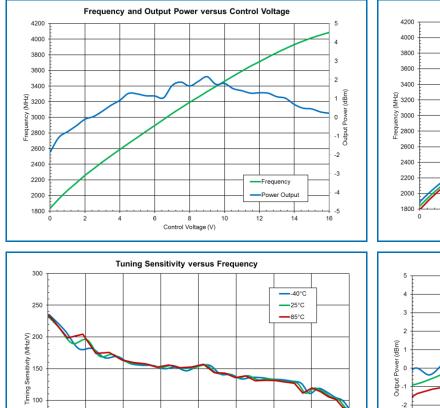
Frequency (MHz)

3250



Typical Performance Board Performance: $V_{CC} = 5V$ unless otherwise noted

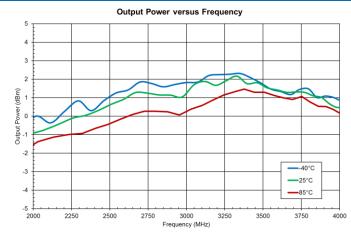
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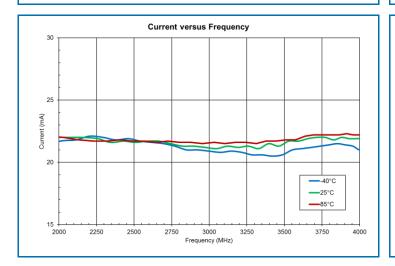


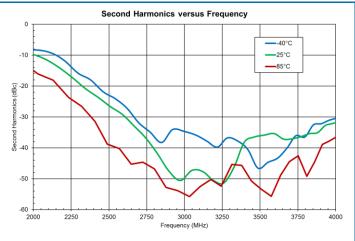
3500

3750

4000







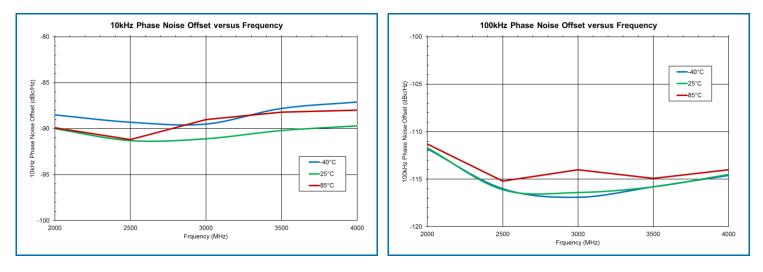
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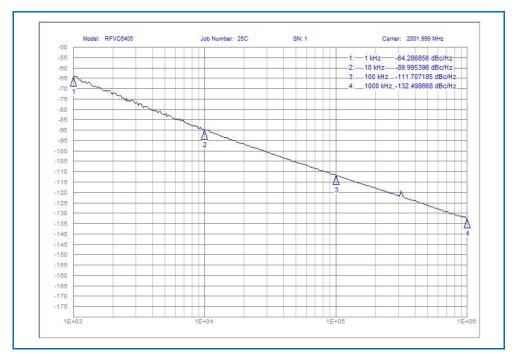


Typical Performance Board Performance: $V_{CC} = 5V$ unless otherwise noted

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Typical Performance Board Performance V_{CC} = 5V, Frequency 2000MHz



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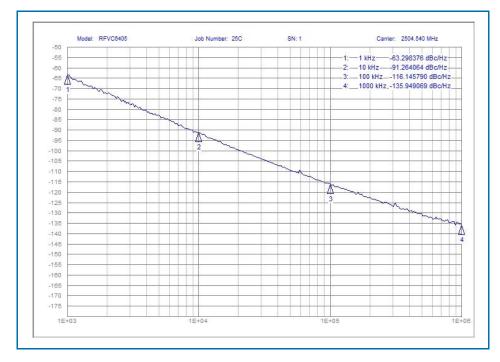
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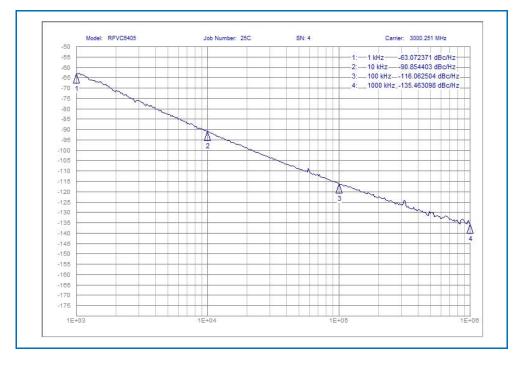


Typical Performance Board Performance V_{CC} = 5V, Frequency 2500MHz

PROPOSED



Typical Performance Board Performance $V_{CC} = 5V$, Frequency 3000MHz



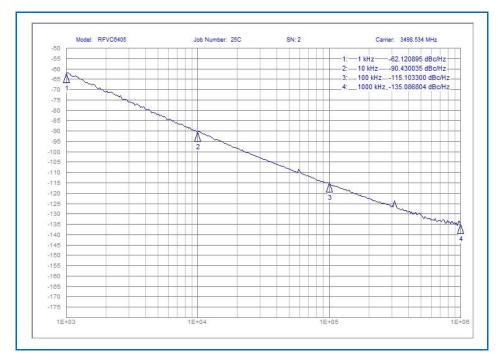
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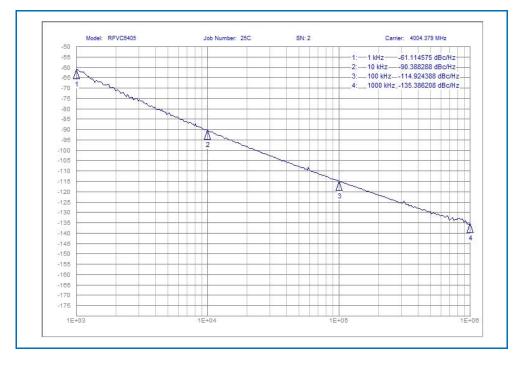


Typical Performance Board Performance $V_{CC} = 5V$, Frequency 3500MHz

PROPOSED



Typical Performance Board Performance V_{CC} = 5V, Frequency 4000MHz



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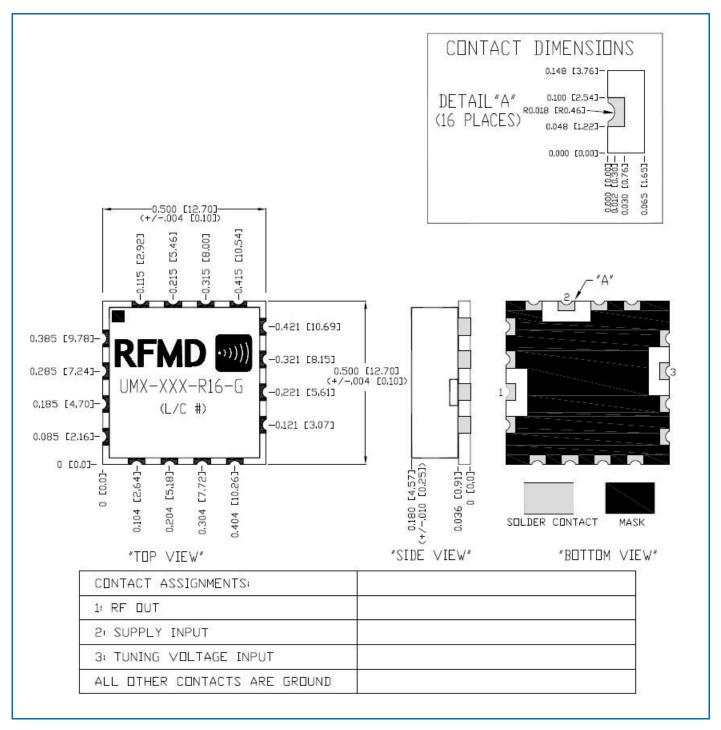
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Package Outline Drawing 12.7mm x 12.7mm Laminate Module

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Recommended Land Pattern Dimensions in millimeters

