VCO790-915KY

5V WIDEBAND VOLTAGE CONTROLLED OSCILLATOR

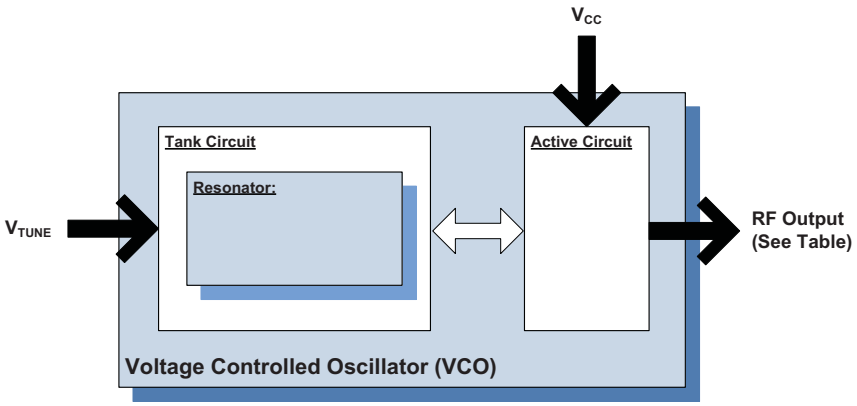
Package: K-Package, 7.62mm x 7.62mm x 1.90mm

Features

- Linear Tuning/Low Phase Noise
- Multiple Supply Voltage and Package Options Available
- Low-Cost/High-Volume Series
- Frequency: 800MHz to 1030MHz
- Resonator: Aircoil or Microstrip
- PCB: FR-4 and S1170
- Package Size: 7.62mm x 7.62mm x 1.90mm (0.3in x 0.3in x 0.075in)

Applications

- Wireless Infrastructure
- RFID
- General Wireless



Functional Block Diagram

Product Description

This series of wideband, low-cost VCO modules offers linear tuning across their specified frequency band.

Ordering Information

VCO790-915KY 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

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Absolute Maximum Ratings

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

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.

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

Parameter	Specification			Unit	Condition
	Min.	Typ.	Max.		
Overall					
Frequency Range	800		1030	MHz	
Tuning Voltage	0.4	0.9		V_{DC}	800MHz
		3	3.5	V_{DC}	1030MHz
Tuning Sensitivity	75	90	140	MHz/V	
Output Power	3	6	9	dBm	
Output Phase Noise		-93	-82	dBc/Hz	10kHz
		-113	-103	dBc/Hz	100kHz
Harmonic Suppression		-18	-10	dBc	2nd harmonic
Spurious (Non-Harmonic)			-50	dBc	
Frequency Pushing		1	10	MHz p-p	3.9V to 4.3V
Frequency Pulling		15	34	MHz p-p	
Tuning Port Capacitance		10		pF	
Output Impedance		50		Ω	
Power Supply					
Operating Voltage	3.9	4.1	4.3	V	
Supply Current		25	32	mA	V_{CC} - 4.1V

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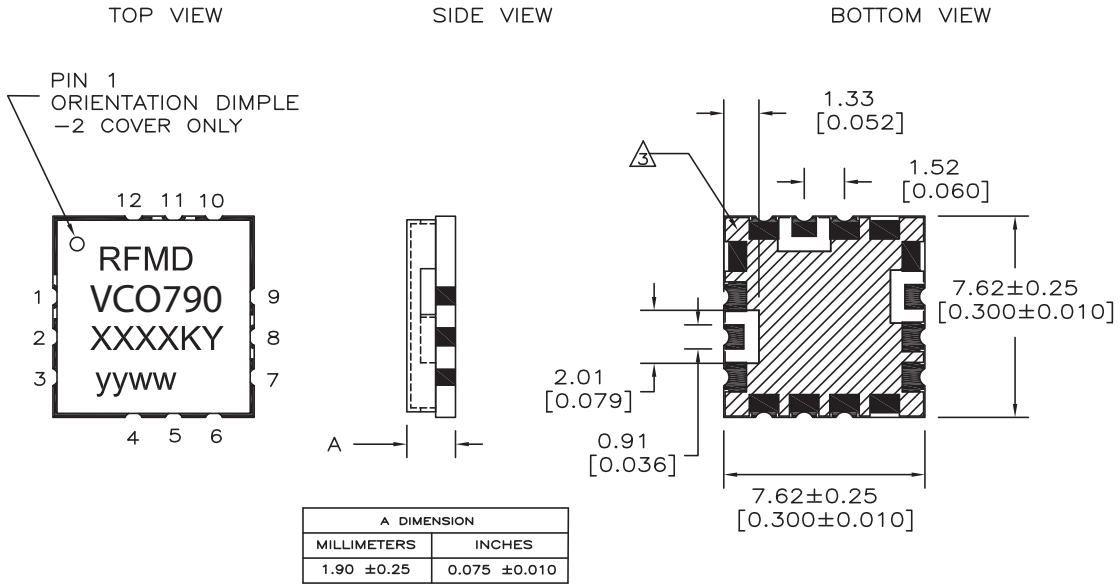
Package Drawing & Pin Outs

7.62mm x 7.62mm x 1.90mm (0.3in x 0.3in x 0.075in)



A DIMENSION	
MILLIMETERS	INCHES
1.90 ±0.25	0.075 ±0.010

PIN OUT FOR VCO	
PIN	APPLICATION
1	Vt
8	RF OUTPUT
11	VCC

ALL REMAINING PINS ARE GROUND

NOTE, UNLESS OTHERWISE SPECIFIED:

1. THE METAL CASE IS GROUND.
2. ALL HALF VIA CONTACTS ARE PLATED THRU FROM THE PAD ON THE TOP SIDE TO THE PAD ON THE BOTTOM SIDE OF THE BOARD.
3. HATCHED AREAS ARE GROUND AND ARE COVERED WITH LPI SOLDER MASK OVER BARE COPPER. ALL CONTACT AREAS ARE PLATED. SIGNAL VIAS MAY BE LOCATED WITHIN GROUND PLANE.
4. CROSS HATCHED AREA INDICATES AREA WHERE SOLDER MASK SHOULD BE APPLIED TO MOUNTING BOARD.
5. SUBSTRATE MATERIAL: FR–4.
6. XXXX REPRESENTS THE MODEL NUMBER.
7. yyww IS THE DATE CODE.
8. Y AT END OF MODEL NUMBER DESIGNATES RoHS COMPLIANCE.
9. DIMENSIONS ARE IN MILLIMETERS AND [INCHES].

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