# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

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# VC0793-750TY

#### 12V WIDEBAND VOLTAGE CONTROLLED OSCILLATOR

Package: T-Package, 12.7mm x 12.7mm x 3.96mm

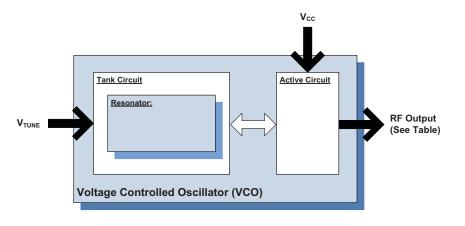


### Features

- Linear Tuning/Low Phase Noise
- Multiple Supply Voltage and Package Options Available
- Low-Cost/High-Volume Series
- Frequency: 500MHz to 1000MHz
- Resonator: Aircoil or Microstrip
- PCB: FR-4 and S1170
- Package Size: 12.7mm x 12.7mm x 3.96mm (0.5in x 0.5in x 0.156in)

### **Applications**

- Wireless Infrastructure
- RFID
- General Wireless



Functional Block Diagram

### **Product Description**

This series of wideband, low-cost, 12V VCO modules offers linear tuning across their specified frequency band.

#### **Ordering Information**

VC0793-750TY Contact us at 1-480-756-6070

#### **Optimum Technology Matching® Applied**

🗆 GaAs HBT	SiGe BiCMOS	🗌 GaAs pHEMT
GaAs MESFET	🗌 Si BiCMOS	□_Si CMOS
InGaP HBT	SiGe HBT	🗹 Si BJT

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GaN HEMT BIFET HBT

# VC0793-750TY



#### **Absolute Maximum Ratings**

0		
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.

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

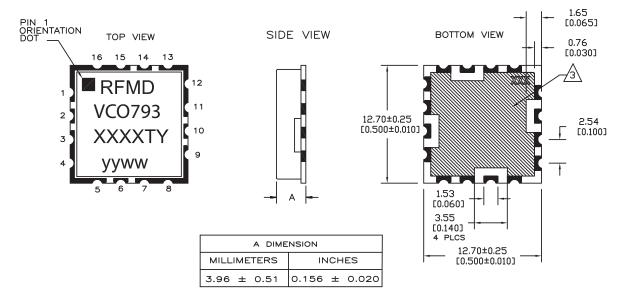
Parameter		Specification		11	Oct dition
	Min.	Тур.	Max.	Unit	Condition
Overall					
Frequency Range	500		1000	MHz	
Tuning Voltage	0	2.2		V <sub>DC</sub>	500MHz
		18	20	V <sub>DC</sub>	1000MHz
Tuning Sensitivity	33	38	43	MHz/V	500MHz
	33	38	43	MHz/V	625MHz
	35	40	45	MHz/V	750MHz
	30	39	44	MHz/V	875MHz
	24	29	34	MHz/V	1000MHz
Output Power	1	6	10	dBm	
Output Phase Noise		-79	-74	dBc/Hz	1kHz
		-104	-99	dBc/Hz	10kHz
		-124	-119	dBc/Hz	100kHz
		-144	-139	dBc/Hz	1000kHz
Harmonic Suppression		-6		dBc	2nd harmonic
		-18		dBc	3rd harmonic
Spurious (Non-Harmonic)			-80	dBc	
Frequency Pushing		1.5	3	MHz p-p	11.5V to 12.5V
Frequency Pulling		2	5	MHz p-p	12dB RL
Tuning Port Capacitance		220		pF	
Output Impedance		50		Ω	
Power Supply					
Operating Voltage	11.5	12	12.5	V	
Supply Current		25	30	mA	





## **Package Drawing & Pin Outs**

12.7mm x 12.7mm x 3.96mm (0.5 in x 0.5 in x 0.156 in)



PIN OUT FOR VCO		
PIN	APPLICATION	
2	Vt	
6	MODULATION (OPT)	
10	RF OUT	
14	VCC	

ALL OTHER PINS ARE GROUND

NOTE, UNLESS OTHERWISE SPECIFIED:

- 1. THE METAL CASE IS GROUND.
- ALL HALF VIA CONTACTS ARE PLATED THRU FROM THE PAD ON THE TOP SIDE TO THE PAD ON THE BOTTOM SIDE OF THE BOARD. 2.
- A 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.
- (A), CROSS HATCHED AREA INDICATES AREA WHERE SOLDER
- MASK SHOULD BE APPLIED TO MOUNTING BOARD.
- 5. XXXX REPRESENTS THE MODEL NUMBER.
- 6. yyww IS THE DATE CODE.
- Y AT THE END OF THE MODEL NUMBER DESIGNATES RoHS COMPLIANCE. 7.
- 8. DIMENSIONS ARE IN MILLIMETERS AND [INCHES].