# 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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# VC0793-1500TY

#### 12V WIDEBAND VOLTAGE CONTROLLED OSCILLATOR

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

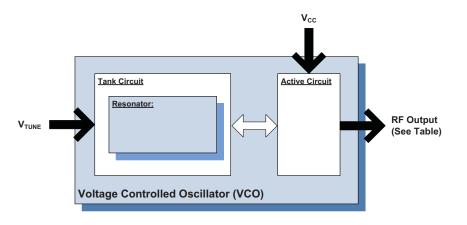


### **Features**

- Linear Tuning/Low Phase Noise
- Multiple Supply Voltage and Package Options Available
- Low-Cost/High-Volume Series
- Frequency: 1000MHz to 2000MHz
- 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**

VC0793-1500TY 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

AAS pHEMT GAN HEMT CMOS BIFET HBT BJT LDMOS

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# VC0793-1500TY



#### **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.

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

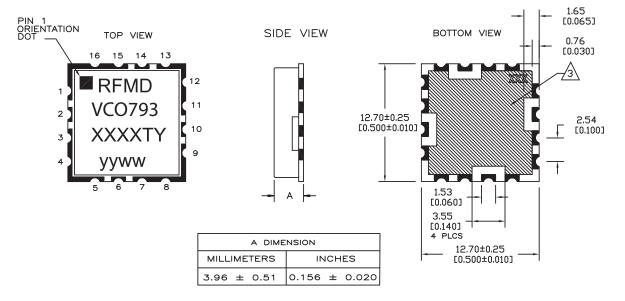
Parameter		Specification			Ocu dition
	Min.	Тур.	Max.	Unit	Condition
Overall					
Frequency Range	1000	1500	2000	MHz	
Tuning Voltage	0.5	2.2		V <sub>DC</sub>	1000MHz
		18	20	V <sub>DC</sub>	2000MHz
Tuning Sensitivity	50	70	90	MHz/V	1000MHz
	50	70	90	MHz/V	1250MHz
	55	75	95	MHz/V	1500MHz
	55	75	95	MHz/V	1750MHz
	44	59	74	MHz/V	2000MHz
Output Power	4	7	10	dBm	
Output Phase Noise		-100	-95	dBc/Hz	10kHz
		-120	-115	dBc/Hz	100kHz
Harmonic Suppression		-9	-5	dBc	2nd harmonic
		-18	-10	dBc	3rd harmonic
Spurious (Non-Harmonic)			-80	dBc	
Frequency Pushing		2.5	5	MHz p-p	11.5V to 12.5V
Frequency Pulling		7	10	MHz p-p	12dB RL
Tuning Port Capacitance		100		pF	
Output Impedance		50		Ω	
Power Supply					
Operating Voltage	11.5	12	12.5	V	
Supply Current		25	30	mA	



# VC0793-1500TY

### Package Drawing & Pin Outs

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



ŀ	PIN OUT FOR VCO
PIN	APPLICATION
2	∨t
6	MODULATION (OPT)
10	RF OUT
14	VCC

ALL OTHER 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  $_{\Lambda}$  BOTTOM SIDE OF THE BOARD.
- 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.
- 7. Y AT THE END OF THE MODEL NUMBER DESIGNATES RoHS COMPLIANCE.
- 8. DIMENSIONS ARE IN MILLIMETERS AND [INCHES].