

# XO5164 Series

## 14 pin DIP, 3.3 Volt, HCMOS, OCXO



- Standard DIP/DIL package offering tight stabilities, fast warm-up, and low current
- Ideal for PCS base stations, cellular base stations, phase locking, and SAR/SAT applications
- 3.3V Operation

**Ordering Information**

00.0000  
MHz

XO5164 A R1 -R

**Product Series** \_\_\_\_\_

**Stability/Temperature** \_\_\_\_\_

A: ±0.075 ppm, 0°C to +60°C

B: ±0.15 ppm, -20°C to +70°C

**Frequency Adjustment Method** \_\_\_\_\_

R1: External Resistor Adjust (See Figure 1)

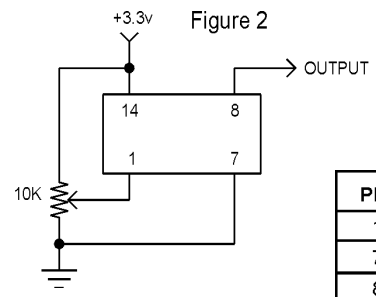
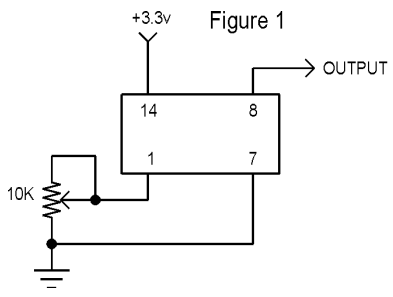
V5: Voltage Adjust (See Figure 2)

**RoHS Compliance** \_\_\_\_\_

Blank: non-RoHS compliant part

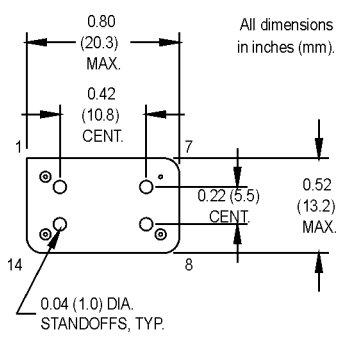
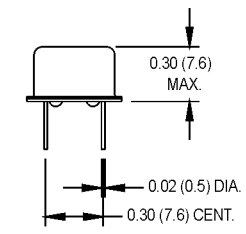
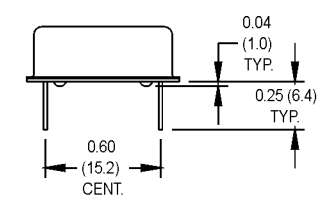
-R: RoHS compliant part

**Frequency (Customer Specified)** \_\_\_\_\_



### Pin Connections

PIN	FUNCTION
1	Frequency Adjust
7	Case ground & supply return
8	R.F. Output
14	Supply (+)



PARAMETER	Symbol	Min.	Max.	Units	Condition
Frequency Range	F	10	20	MHz	
Operating Temperature	T <sub>A</sub>	(See Ordering Information)		°C	
Stability Over Temperature	ΔF/F	(See Ordering Information)		ppm	
Short Term Stability			5 x 10 <sup>-10</sup>		0.1 to 30 secs.
Aging (First Year)			±0.7	ppm	
Aging (10 Years)			±4.0	ppm	
Frequency Vs. Supply			±0.1	ppm	
Frequency Vs. Load			±0.01	ppm	
Supply Voltage	V <sub>cc</sub>	+3.15	+3.45	Volts	
Warm-Up Time		To spec after 60 secs.			0°C
Warm-Up Current			250	mA	After 10 secs.
Supply Current	I <sub>cc</sub>		100	mA	+30°C
			160	mA	-20°C
Output Signal		HCMOS Compatible			
Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>		7	ns	Ref. 10% and 90%
Logic "0" Level	V <sub>ol</sub>		0.4	Volts	
Logic "1" Level	V <sub>oh</sub>	V <sub>cc</sub> - 0.5		Volts	
Symmetry			40/60	%	Ref. To 1/2 V <sub>cc</sub>
Output Load			15 pf HCMOS 10 LS TTL		
Frequency Adjustment (Pin 1)		±4		ppm	See Figure 1 or 2
Tuning Slope		Positive			
Input Impedance (Pin 1)		4.7K		ohms	
Phase Noise					(BW = 1 Hz) Offset from carrier
1 Hz			-80	dBc/Hz	
10 Hz			-110	dBc/Hz	
100 Hz			-135	dBc/Hz	
1 kHz			-145	dBc/Hz	
<b>Environmental</b>	<b>Mechanical Shock</b>	2000 g, 0.3 mS, 1/2 sine			
	<b>Vibration</b>	2000 Hz, 10 g			
	<b>Storage Temperature</b>	-55°C to +125°C			
	<b>Hermeticity</b>	Per MIL-STD-202, Method 112			
	<b>Solderability</b>	EIAJ-STD-002			

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