MXO5164 Series
14 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

MXO5164 A R1 00.0000 MHz

- **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)
- **Frequency (Customer Specified)**

Figure 1

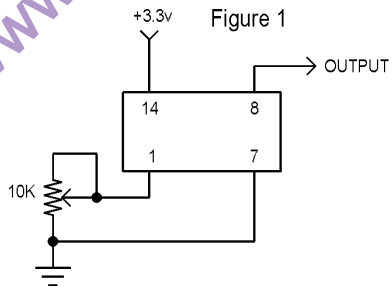
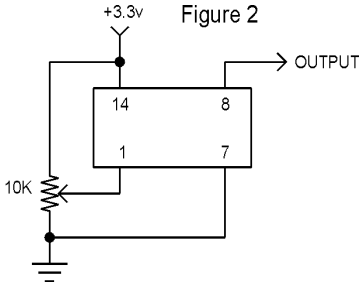
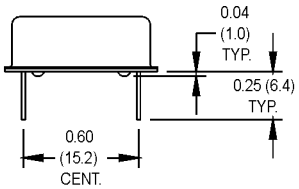
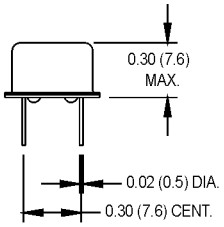
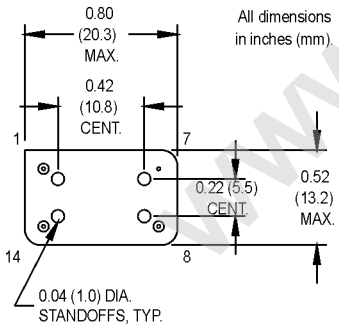


Figure 2









Pin Connections

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

	PARAMETER	Symbol	Min.	Max.	Units	Condition
Electrical Specifications	Frequency Range	F	10	20	MHz	
	Operating Temperature	TA	(See Ordering Information)		°C	
	Stability Over Temperature	ΔF/F	(See Ordering Information)		ppm	
	Short Term Stability			5 x 10^{-10}		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	Vcc	+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	Icc		100	mA	+30°C
				160	mA	-20°C
	Output Signal		HCMOS Compatible			
	Rise/Fall Time	Tr/Tf		7	ns	Ref. 10% and 90%
	Logic "0" Level	Vol		0.4	Volts	
	Logic "1" Level	Voh	Vcc -0.5		Volts	
	Symmetry			40/60	%	Ref. To 1/2 Vcc
	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)
	1 Hz			-80	dBc/Hz	Offset from carrier
	10 Hz			-110	dBc/Hz	
	100 Hz			-135	dBc/Hz	
	1 kHz			-145	dBc/Hz	
Environmental	Mechanical Shock	2000 g, 0.3 mS, 1/2 sine				
	Vibration	2000 Hz, 10 g				
	Storage Temperature	-55°C to +125°C				
	Hermeticity	Per MIL-STD-202, Method 112				
	Solderability	EIAJ-STD-002				

OCXO

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