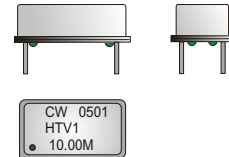


CRYSTAL CONTROLLED OSCILLATORS

5.0V HCMOS VCTCXO 14 Pin DIP Crystal Oscillator



HTV-Series

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-40	-	85	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	
Control Voltage	(Vc)	-0.5	-	7	Vdc	

MODEL SPECIFICATIONS

MODEL HTV1

TABLE 2.0

PARAMETER	(Fo)	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range		.110	-	50	MHz	
Frequency Stability vs. Change in Temperature		-0.5	-	0.5	ppm	
Operating Temperature Range		20	-	40	°C	
Total Frequency Tolerance		-8.0	-	8.0	ppm	1

MODEL HTV2

PARAMETER	(Fo)	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range		.110	-	50	MHz	
Frequency Stability vs. Change in Temperature		-1.0	-	1.0	ppm	
Operating Temperature Range		0	-	50	°C	
Total Frequency Tolerance		-8.5	-	8.5	ppm	1

MODEL SPECIFICATIONS

MODEL HTV3

PARAMETER	(Fo)	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range		.110	-	50	MHz	
Frequency Stability vs. Change in Temperature		-2.5	-	2.5	ppm	
Operating Temperature Range		0	-	70	°C	
Total Frequency Tolerance		-10.0	-	10.0	ppm	1

MODEL SPECIFICATIONS

MODEL HTV4

PARAMETER	(Fo)	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range		.110	-	50	MHz	
Frequency Stability vs. Change in Temperature		-5.0	-	5.0	ppm	
Operating Temperature Range		-30	-	70	°C	
Total Frequency Tolerance		-12.5	-	12.5	ppm	1

OPERATING SPECIFICATIONS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Aging First Year		-2.0	-	2.0	ppm	
Frequency Aging Ten Years (Including first year)		-5.0	-	5.0	ppm	
Supply Voltage	(Vcc)	4.75	5.0	5.25	Vdc	
Supply Current	(Icc)	-	15	35	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
Typical Phase Noise						
SSB Phase Noise at 10Hz offset		-	-70	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-120	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-130	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-145	-	dBc/Hz	

INPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Control Voltage	(Vc)	0.5	2.5	4.5	Vdc	
Frequency Adjust Range (0.5 to 4.5V)		±8	-	±35	ppm	2
Frequency Adjust Linearity		-15	-	15	%	
Input Impedance		10k	-	-	Ohm	

HCMOS OUTPUT CHARACTERISTICS

TABLE 5.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage (High)	(Voh)	4.5	-	-	Vdc	
(Low)	(Vol)	-	-	0.4	Vdc	
Current (High)	(Ioh)	-4	-	-	mA	
(Low)	(Iol)	-	-	4	mA	
Duty Cycle at 50% of Vcc		40	50	60	%	
Rise / Fall Time 10% to 90%		-	3	5	nS	

DESCRIPTION

The Connor-Winfield HTV-Series is a 5.0V HCMOS, hermetically sealed, Voltage Controlled, Temperature Compensated Crystal Oscillator (VCTCXO). The HTV-Series is designed for applications requiring very tight frequency stability and low jitter.

FEATURES

5.0V OPERATION

LOW JITTER <1ps RMS

FREQUENCY STABILITY:
HTV1: ±0.5ppm: 20 to 40°C
HTV2: ±1.0ppm: 0 to 50°C
HTV3: ±2.5ppm: 0 to 70°C
HTV4: ±5.0ppm: -30 to 70°C

FREQUENCY ADJUST

HERMETICALLY SEALED DIP PACKAGE

ORDERING INFORMATION

HTV1 - 10.00MHz
TCXO SERIES CENTER FREQUENCY

Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

PACKAGE CHARACTERISTICS

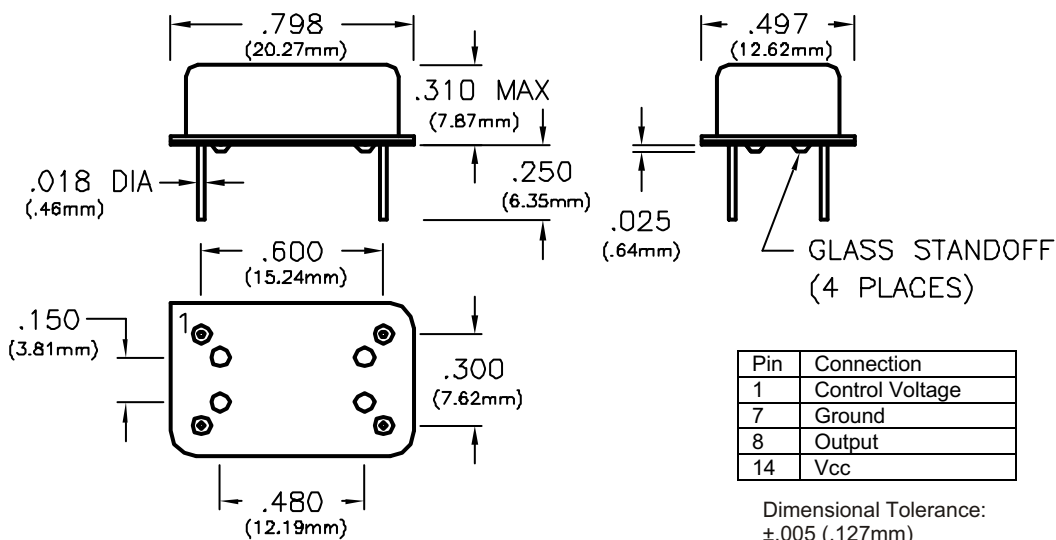
TABLE 6.0

Package	Hermetically sealed, metal package.
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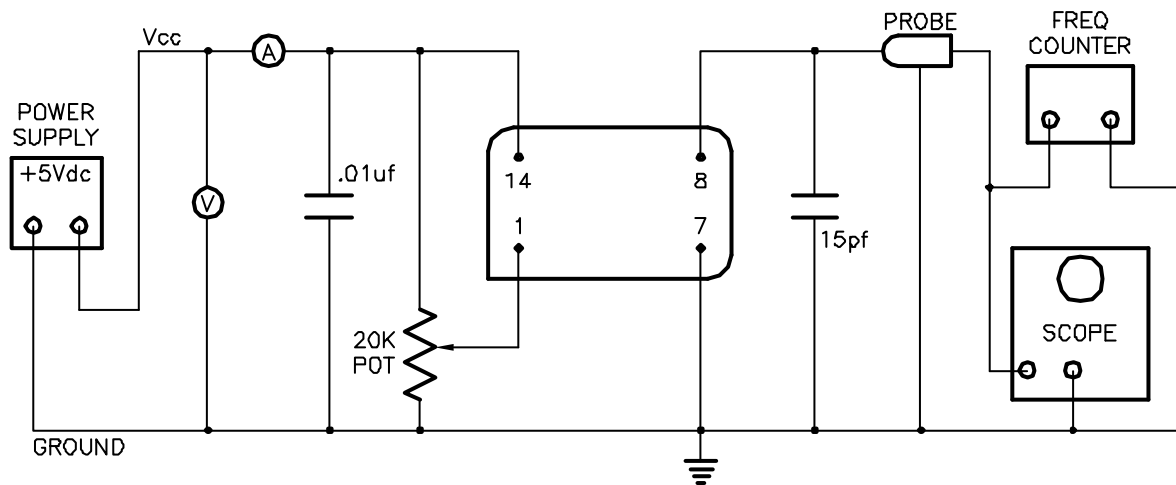
Note:

- 1) Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 10 years aging.
- 2) Positive Slope.

PACKAGE OUTLINE



TEST DIAGRAM



Specifications subject to change without notice.