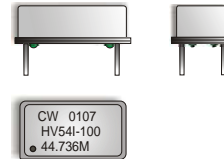


CRYSTAL CONTROLLED OSCILLATORS

14 PIN 5.0V HCMOS VCXO



HV541-100
HV541-150
HV541-200

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 HV541-100

TABLE 2.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	20	-	100	MHz	
Frequency Tolerance:		-20	-	20	ppm	1
Frequency Pullability		±50	-	-	ppm	2

MODEL HV541-150

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	20	-	100	MHz	
Frequency Tolerance:		-20	-	20	ppm	1
Frequency Pullability		±75	-	-	ppm	2

MODEL HV541-200

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	20	-	60	MHz	
Frequency Tolerance:		-20	-	20	ppm	1
Frequency Pullability		±100	-	-	ppm	2

OPERATING SPECIFICATIONS

TABLE 3.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	4.75	5.0	5.25	Vdc	
Supply Current	(Icc)	-	-	35	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
SSB Phase Noise at 100Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-125	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-135	-	dBc/Hz	

FREQUENCY CONTROL

TABLE 4.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Control Voltage Range	(Vc)	0.5	2.5	4.5	Vdc	
Monotonic Linearity		-10	-	10	%	
Input Impedance		-	50K	-	Ohm	
Modulation Bandwidth (3dB)		15	-	-	KHz	

HCMOS OUTPUT CHARACTERISTICS

TABLE 5.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	50	pF	
Voltage (High)	(Voh)	4.5	-	-	Vdc	
(Low)	(Vol)	-	-	0.5	Vdc	
Current (High)	(Ioh)	-16	-	-	mA	
(Low)	(Iol)	-	-	16	mA	
Duty Cycle at 50% of Vcc		40	50	60	%	
Rise / Fall Time 10% to 90%		-	-	3	nS	

PACKAGE CHARACTERISTICS

TABLE 6.0

PARAMETER	DESCRIPTION
Package	Hermetically sealed, metal package.

Note:

- 1) Referenced to (Fo) measured with control voltage @ 2.50 Vdc, Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 15 years aging.
- 2) Referenced to Fo at T=25°C Positive Slope.

DESCRIPTION

The Connor-Winfield HV541-Series is a 5.0V HCMOS, hermetically sealed, Voltage Controlled Crystal Oscillator (VCXO). Based on a fundamental crystal design the HV541-Series is designed for PLL applications requiring low jitter and tight frequency stability.

FEATURES

- 5.0V OPERATION
- LOW JITTER <1ps RMS
- FREQUENCY STABILITY ±20ppm
- TEMPERATURE RANGE: 0 to 70°C
- HERMETICALLY SEALED PACKAGE

ORDERING INFORMATION

HV541-100 - 44.736 MHz

VCXO
SERIES

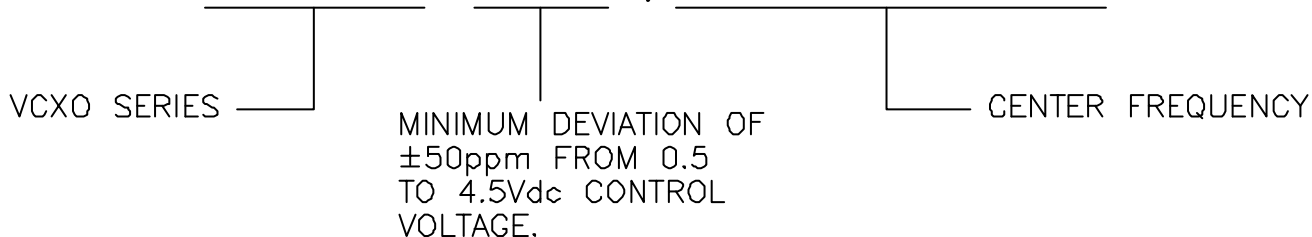
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FREQUENCY

Specifications subject to change without notice.

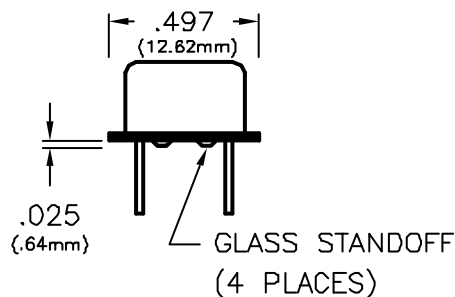
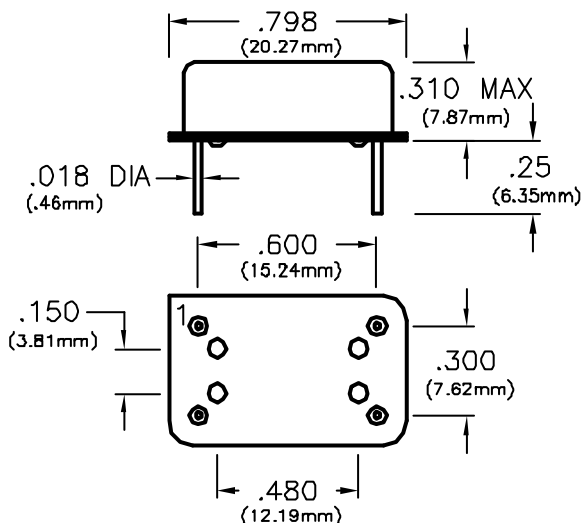
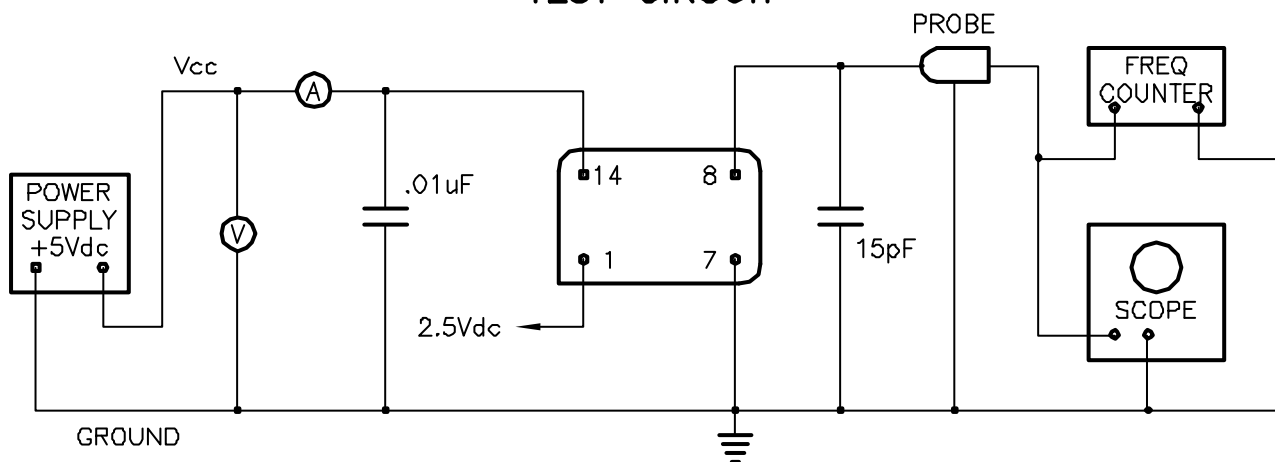
CRYSTAL CONTROLLED OSCILLATORS

EXAMPLE MODEL NUMBER:

H V 5 4 1 - 1 0 0 / 4 4 . 7 3 6 M H z



TEST CIRCUIT



PIN	CONNECTION
1	CONTROL VOLTAGE
7	GROUND (CASE)
8	OUTPUT
14	(+) SUPPLY