CONNOR WINFIELD

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PRODUCT DATA SHEET

RoHS-5/6 COMPLIANT

CRYSTAL CONTROLLED OSCILLATORS

5.0V 8 PIN DIP TRI-STATE CLOCK OSCILLATOR

ABSOLUTE MAXIMUM RATINGS TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	7.0	Vdc	
Input Voltage	(Vin)	-0.5	-	Vcc+0.5	Vdc	

MODEL SPECIFICATIONS: TABLE 2.0

MODEL H51RL						
Frequency Range	(Fo)	5	-	30	MHz	
Frequency Tolerance:		-25	-	25	ppm	1
MODEL H52RL						
Frequency Range	(Fo)	5	-	30	MHz	
Frequency Tolerance:		-50	-	50	ppm	1
MODEL H53RL						
Frequency Range	(Fo)	5	-	30	MHz	
Frequency Tolerance:		-100	-	100	ppm	1

OPERATING SPECIFICATIONS TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Operating Temperature Range		-5	-	70	°C	
Supply Voltage	(Vdd)	4.5	5.0	5.5	Vdc	
Supply Current	(Icc)	-	1.5	3.0	mA	
Supply Current	(IST)	-	6	15	uA	2

INPUT CHARACTERISTICS TABLE 4.0

Enable Voltage (High)	(Vih)	70% Vdd	-	-	Vdc	3
Disable Voltage (Low)	(Vil)	-	-	30% Vdd	Vdc	
Enable Time		-	-	100	ns	
Disable Time		-	3	10	ms	

HCMOS OUTPUT CHARACTERISTICS TABLE 5.0

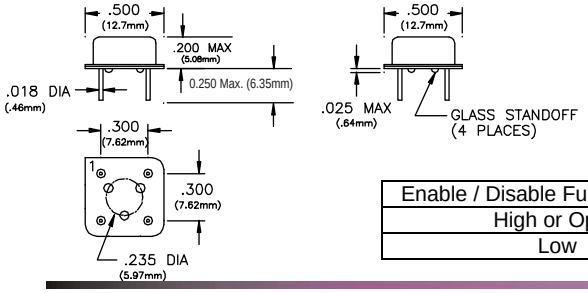
PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage (High)	(Voh)	4.0	-	-	Vdc	
(Low)	(Vol)	-	-	0.4	Vdc	
Current (High)	(Ioh)	-3.2	-	-	mA	
(Low)	(Ioh)	-	-	3.2	mA	
Duty Cycle at 50% of Vcc		45	50	55	%	
Rise / Fall Time 10% to 90%		-	3	9	ns	
Start-Up Time		-	-	10	ms	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	

PACKAGE CHARACTERISTICS TABLE 6.0

Package	Hermetically sealed metal package

Notes:
1) Inclusive of calibration @ 25°c, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 10 years aging.
2) Standby current when oscillator is disabled.
3) Oscillator output is enabled with no connection on pin 1

Package Outline



Pin Connections

Pin	Connection
1	Enable/Disable
2	Ground
3	Output
4	Vcc

Enable / Disable Function (Pin 1)	Output
High or Open	Enable
Low	Disable (High Impedance)



H51RL
H52RL
H53RL

DESCRIPTION

Description:
Connor Winfield models H5xRL are 5.0V HCMOS, Surface Mount, Fixed Frequency Crystal Oscillator (XO) designed for use in all applications requiring precision clocks with low power consumption.

FEATURES

5 to 30 MHz

5.0V OPERATION

LOW CURRENT CONSUMPTION

TRI-STATE ENABLE/DISABLE

OVERALL FREQUENCY TOLERANCE:

H51RL ±25ppm
H52RL ±50ppm
H53RL ±100ppm

TEMPERATURE RANGE: -5 to 70°C

LOW JITTER: < 1ps

HERMETICALLY SEALED PACKAGE

RoHS 5/6 COMPLIANT

ORDERING INFORMATION

H51RL - 8 MHz
CLOCK SERIES
CENTER FREQUENCY

Specifications subject to change without notice.

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