

CRYSTAL CONTROLLED OSCILLATORS

3.3V 8 PIN DIP TRI-STATE CLOCK OSCILLATOR



H54RA, H51RA,
H52RA, H53RA

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	

MODEL SPECIFICATIONS:

TABLE 2.0

MODEL H54RA						
PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	1.0	-	100	MHz	
Frequency Tolerance:		-20	-	20	ppm	1

MODEL H51RA

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	1.0	-	100	MHz	
Frequency Tolerance:		-25	-	25	ppm	1

MODEL H52RA

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	1.0	-	100	MHz	
Frequency Tolerance:		-50	-	50	ppm	1

MODEL H53RA

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	1.0	-	100	MHz	
Frequency Tolerance:		-100	-	100	ppm	1

OPERATING SPECIFICATIONS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vdd)	3.0	3.3	3.6	Vdc	
Supply Current	1.544 to 31.999 MHz	(Icc)	-	15	mA	
	32 to 49.999 MHz	(Icc)	-	20	mA	
	50 to 66.999 MHz	(Icc)	-	25	mA	
	67 to 100 MHz	(Icc)	-	40	mA	

INPUT CHARACTERISTICS

TABLE 4.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Enable Voltage	(Vih)	≥ 70% Vdd	-	-	Vdc	2
Disable Voltage	(Vil)	-	-	≤ 30% Vdd	Vdc	
Enable Time		-	-	10	mS	
Disable Time		-	-	100	nS	

HCMOS OUTPUT CHARACTERISTICS

TABLE 5.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage	(Voh)	Vcc-0.5V	-	-	Vdc	
	(Vol)	-	-	0.4	Vdc	
Current	(Ioh)	-8	-	-	mA	
	(Iol)	-	-	8	mA	
Duty Cycle at 50% of Vcc		45	50	55	%	
Rise / Fall Time 10% to 90%		-	3	6	nS	
Start-Up Time		-	-	10	mS	
Jitter (BW=10kHz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	

PACKAGE CHARACTERISTICS

TABLE 6.0

Package	Hermetically sealed metal package
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Note:

- Inclusive of calibration @ 25°C, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 10 years aging.
- Oscillator output is enabled with no connection on pin 1

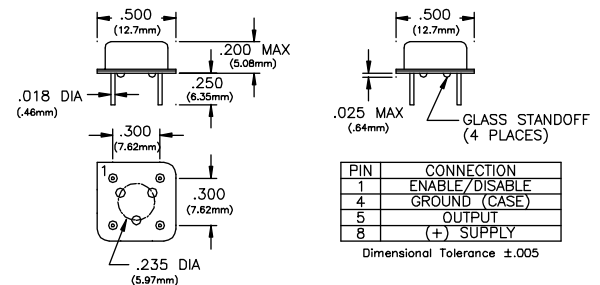
DESCRIPTION

The Connor-Winfield H54RA, H51RA, H52RA, and H53RA are 3.3V HCMOS, Surface Mount, Fixed Frequency Crystal Oscillators (XO) designed for use in all applications requiring precision clocks.

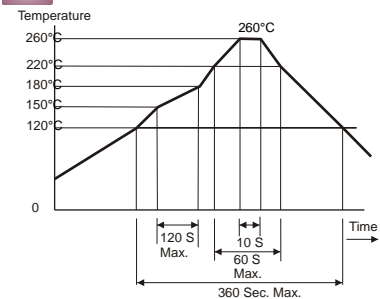
FEATURES

1.0 to 100 MHz
3.3V OPERATION
TRI-STATE ENABLE/DISABLE
OVERALL FREQUENCY TOLERANCE:
H54RA ±20ppm
H51RA ±25ppm
H52RA ±50ppm
H53RA ±100ppm
TEMPERATURE RANGE: 0 to 70°C
HERMETICALLY SEALED PACKAGE
RoHS 5/6 COMPLIANT

PACKAGE



SOLDER PROFILE



ORDERING INFORMATION

H54RA - 80.00MHz
CLOCK SERIES - CENTER FREQUENCY

Specifications subject to change without notice.