

# CRYSTAL CONTROLLED OSCILLATORS

## 5.0V 8 PIN DIP TRI-STATE CLOCK OSCILLATOR



S51RG5  
S52RG5  
S53RG5

**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 S51RG5						
Frequency Range	(Fo)	1.8432	-	100	MHz	
Frequency Tolerance:		-25	-	25	ppm	1
MODEL S52RG5						
Frequency Range	(Fo)	1.8432	-	100	MHz	
Frequency Tolerance:		-50	-	50	ppm	1
MODEL S53RG5						
Frequency Range	(Fo)	1.8432	-	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)	4.5	5.0	5.5	Vdc	
Supply Current	(Icc)	-	-	70	mA	

**INPUT CHARACTERISTICS**

TABLE 4.0

Enable Voltage	(Vih)	2.2	-	-	Vdc	2
Disable Voltage	(Vil)	-	-	0.8	Vdc	
Enable Time		-	-	10	ms	
Disable Time		-	-	100	ns	

**HCMOS OUTPUT CHARACTERISTICS**

TABLE 5.0

PARAMETER		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		45	50	55	%	
Rise / Fall Time 10% to 90%		-	3	7	ns	
Start-Up Time		-	-	10	ms	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	

**PACKAGE CHARACTERISTICS**

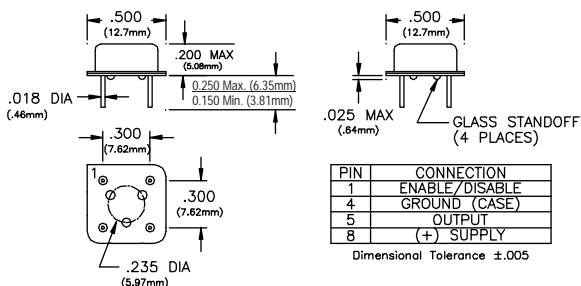
TABLE 6.0

Package	Hermetically sealed metal package
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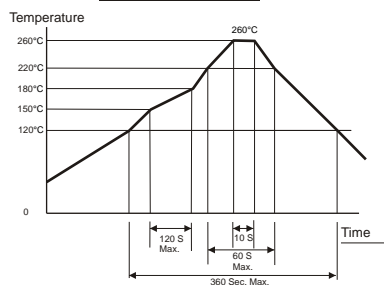
Note:

- 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

**Package Outline**



**Solder Profile**



**DESCRIPTION**

Description:  
Connor Winfield models S541G5, S52RG5 and S53RG5 are 5.0V HCMOS, Surface Mount, Fixed Frequency Crystal Oscillator (XO) designed for use in all applications requiring precision clocks. The surface mount package is designed for high-density mounting and is optimum for mass production.

**FEATURES**

- 1.8432 to 100 MHz
- 3.3V OPERATION
- TRI-STATE ENABLE/DISABLE
- OVERALL FREQUENCY TOLERANCE:  
S51RG5 ±25ppm  
S52RG5±50ppm  
S53RG5100ppm

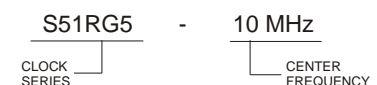
TEMPERATURE RANGE: 0 to 70°C

LOW JITTER: < 1ps

HERMETICALLY SEALED PACKAGE

RoHS 5/6 COMPLIANT

**ORDERING INFORMATION**



Specifications subject to change without notice.