

# CRYSTAL CONTROLLED OSCILLATORS

## 8 Pin DIP Tri-State ACMOS Clock Oscillators



### ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	

### MODEL SPECIFICATIONS:

TABLE 2.0

MODEL	Fo	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
<b>MODEL A54RG</b>						
Frequency Range	(Fo)	10	-	135	MHz	
Frequency Tolerance:		-20	-	20	ppm	1
<b>MODEL A51RG</b>						
Frequency Range	(Fo)	10	-	135	MHz	
Frequency Tolerance:		-25	-	25	ppm	1
<b>MODEL A52RG</b>						
Frequency Range	(Fo)	10	-	135	MHz	
Frequency Tolerance:		-50	-	50	ppm	1
<b>MODEL A53RG</b>						
Frequency Range	(Fo)	10	-	135	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	(Vcc)	4.75	5.00	5.25	Vdc	
Supply Current	(Icc)	-	-	70	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
SSB Phase Noise at 10Hz offset		-	-60	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-125	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-135	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-140	-	dBc/Hz	

### INPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Enable Voltage	(Vih)	2.0	-	-	Vdc	2
Disable Voltage	(Vil)	-	-	0.8	Vdc	
Enable / Disable Time		-	-	100	nS	

### ACMOS OUTPUT CHARACTERISTICS

TABLE 5.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	50	pF	
Voltage (High)	(Voh)	4.40	-	-	Vdc	
(Low)	(Vol)	-	-	0.44	Vdc	
Current (High)	(Ioh)	-24	-	-	mA	
(Low)	(Ioh)	-	-	24	mA	
Duty Cycle measured at 50% of Vcc		45	50	55	%	
Rise / Fall Time measured from 0.5 to 2.5V		-	-	1	nS	
Start Up Time		-	-	10	mS	3

### PACKAGE CHARACTERISTICS

TABLE 6.0

Package	Hermetically sealed, metal package.
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A54RG, A51RG,  
A52RG, A53RG

### DESCRIPTION

The Connor-Winfield A54RG, A51RG, A52RG and A53RG are 5.0V Tri-State CMOS/TTL Compatible Crystal Controlled Oscillators (XO). The A54RG, A51RG, A52RG and A53RG are RoHS Compliant, designed for applications requiring precision clocks.

### FEATURES

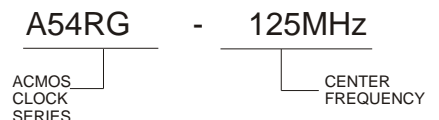
- 5.0V OPERATION
- FREQUENCY RANGE: 10.0 to 135MHz
- TEMPERATURE RANGE: 0 to 70°C
- OVERALL FREQUENCY TOLERANCE:
  - A54RG: ±20ppm
  - A51RG: ±25ppm
  - A52RG: ±50ppm
  - A53RG: ±100ppm

TRI-STATE ENABLE / DISABLE FUNCTION

HERMETICALLY SEALED PACKAGE

RoHS COMPLIANT / LEAD FREE

### ORDERING INFORMATION



Specifications subject to change without notice.

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**Note:**

- 1) Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 15 years aging.
- 2) Oscillator output is enabled with no connection on pin1.
- 3) **WARNING!** Do not insert oscillator into a hot circuit. Failure to comply will result in damage to oscillator.

Enable / Disable Function

**TABLE 7.0**

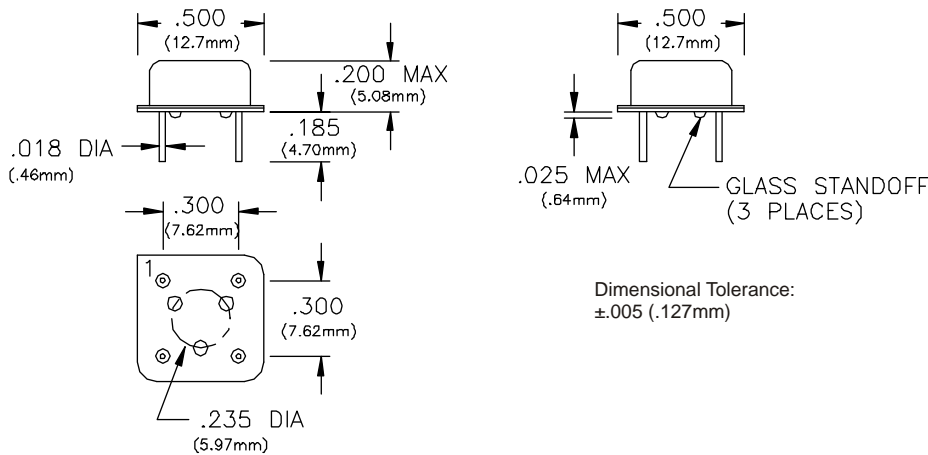
Tri-State Enable / Disable Function (Pin 1)	Output
High or Open	Enable
Low	Disable (High Impedance)

Pin Connections

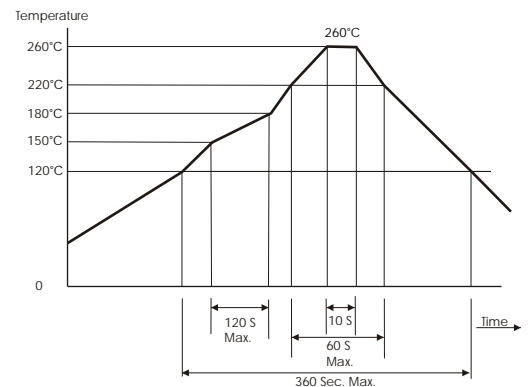
**TABLE 8.0**

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

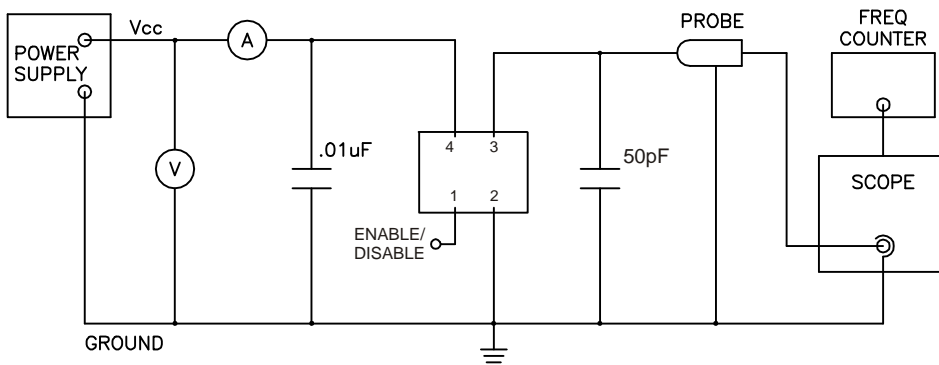
Package Outline and Dimensions



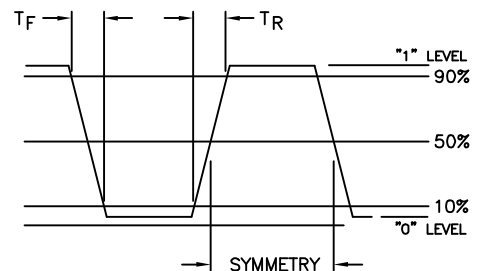
Solder Profile



Test Circuit



Output Waveform



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