14 Pin DIP ACMOS Clock Oscillator Series

CONNOR WINFIELD

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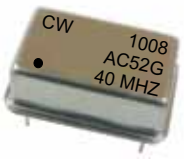
Description:

The Connor-Winfield's AC5xG series are 14 Pin DIP, 5.0V ACMOS Output logic, fixed frequency Crystal Oscillator (XO) designed for applications requiring high frequency precision clocks with ±24 mA output drive capability.



Features:

5.0 Vdc Operation
Frequency Stability:
- AC51G - ± 25 ppm
- AC52G - ± 50 ppm
- AC53G - ± 100 ppm
- AC54G - ± 20 ppm

Temperature Range: 0 to 70°C
ACMOS Output Logic
14 Pin DIP Through Hole Package
RoHS Compliant / Lead Free

Absolute Maximum Ratings

Parameter	Minimum	Nominal	Maximum	Units	Notes
Storage Temperature	-55	-	125	°C	
Supply Voltage (Vcc)	-0.5	-	7.0	Vdc	

Model Specifications

Model AC51G					Notes
Frequency Tolerance	-25	-	25	ppm	1
Model AC52G					
Frequency Tolerance	-50	-	50	ppm	1
Model AC53G					
Frequency Tolerance	-100	-	100	ppm	1
Model AC54G					
Frequency Tolerance	-20	-	20	ppm	1

Operating Specifications

Parameter	Minimum	Nominal	Maximum	Units	Notes
Frequency Range(Fo)	10.0	-	150	MHz	
Operating Temp Range	0	-	70	°C	
Supply Voltage (Vcc)	4.75	5.0	5.25	Vdc	
Supply Current (Icc)	-	-	100	mA	
Period Jitter	-	3	5	ps rms	
Integrated Phase Jitter	-	0.3	1.0	ps rms	
SSB Phase Noise at 10Hz offset	-	-40	-	dBc/Hz	
SSB Phase Noise at 100Hz offset	-	-85	-	dBc/Hz	
SSB Phase Noise at 1KHz offset	-	-120	-	dBc/Hz	
SSB Phase Noise at 10KHz offset	-	-140	-	dBc/Hz	
SSB Phase Noise at 100KHz offset	-	-145	-	dBc/Hz	
SSB Phase Noise at 1MHz offset	-	-145	-	dBc/Hz	
Start Up Time	-	-	10	ms	

ACMOS Output Characteristics

Parameter		Minimum	Nominal	Maximum	Units	Notes
Load	-	-	50	-	pF	
Voltage	High (Voh)	4.4	-	-	V	
	Low (Vol)	-	-	0.44	V	
Current	High (Ioh)	-	-	-24	mA	
	Low (Iol)	24	-	-	mA	
Duty Cycle at 50% of Vcc		45	50	55	%	
Rise / Fall Time:		-	-	1	ns	2

Package Characteristics

Package	Hermetically sealed 14 Pin DIP metal package with case ground.

Notes:

1. *Includes calibration @ 25°C, frequency stability vs. change in temperature, supply voltage and load variations, shock and vibration and 10 years aging.*
2. *Measured from 0.5 to 2.4 V.*

Warning:

Do not insert oscillator into a hot circuit. Failure to comply will damage the oscillator.

RoHS COMPLIANT

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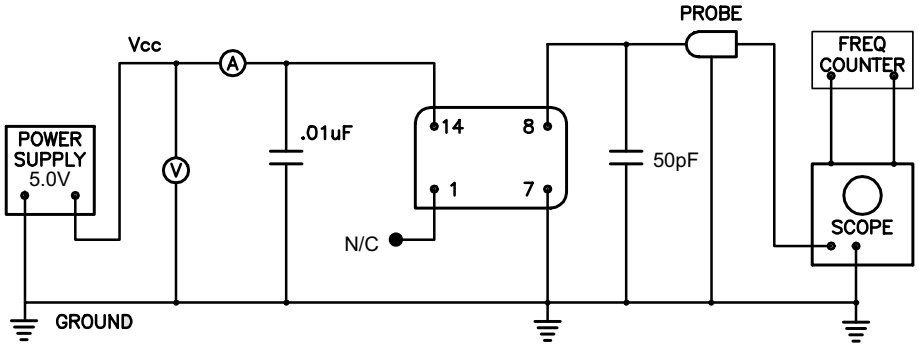
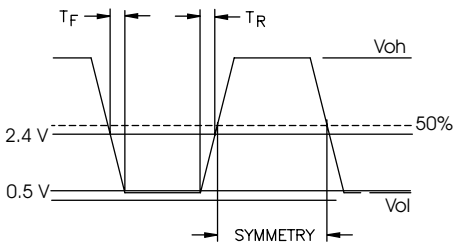
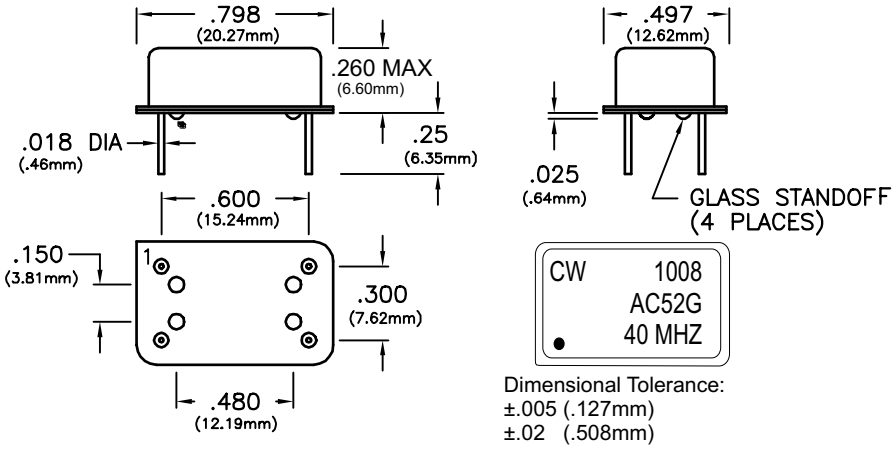
Test Circuit



Output Waveform



Package Layout

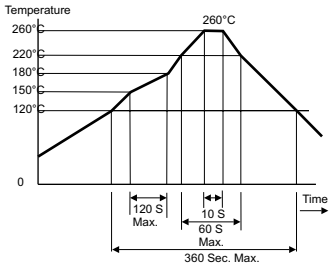


Dimensional Tolerance:
±.005 (.127mm)
±.02 (.508mm)

Pin Connections

1: N/C
7: Ground
8: Output
14: Supply Voltage (Vcc)

Solder Profile



Ordering Information

AC	5	2	G	040.0M
Type: Clock Oscillator ACMOS, 5.0 Vdc 14 Pin DIP Package	Temperature Range 5 = 0 to 70°C	Frequency Stability 1 = ±25 ppm 2 = ±50 ppm 3 = ±100 ppm 4 = ±20 ppm	RoHS Compliant	Output Frequency - Frequency Format -xxx.xM Min. * -xxx.xxxxxxM Max.* * Amount of numbers after the decimal point. M = MHz

Example:

AC52G-040.0M = 14 Pin DIP, ACMOS, Clock, 5.0Vdc, 0 to 70°C, ±50ppm, Output Frequency 40.0MHz

To order an AC52 with an output frequency of: 12.8 MHz = AC52G-012.8M
44.736 MHz = AC52G-044.736M
150. MHz = AC52G-150.0M

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