

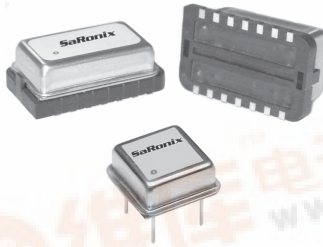
SaRonix

Crystal Clock Oscillator

3.3 & 5V, AC MOS, LVCMOS

Technical Data

ST41xx Series



Description

A crystal controlled, low-current oscillator providing precise rise and fall times to drive AC MOS/LVCMOS loads. The tri-state function enables the output to go high impedance. Available in either a 14 or an 8 pin DIP compatible, resistance welded, all metal case. Pin 7 (or Pin 4) is grounded to case to reduce EMI. True SMD DIL 14 version also available, utilizing new adaptor technology (see separate data sheet for package dimensions).

Applications & Features

- Fiber Channel
- Gigabit Ethernet
- HCMOS/ACMOS/LVCMOS MPU's
- 3.3 or 5V operation
- High Drive capability
- Tri-State output standard
- Short circuit protected output
- Plastic SMD available, see ST41xH Series data sheet.
- Ceramic SMD available, see S19xx Series data sheet.
- True SMD version available, select option S in part number builder (see separate data sheet for package dimensions).

Frequency Range:	32 MHz to 125 MHz				
Frequency Stability:	±20, ±25, ±50 or ±100 ppm over all conditions: calibration tolerance, operating temperature, input voltage change, load change, aging*, shock and vibration. *1 year @ +40°C average ambient operating temperature				
Temperature Range:	Operating: 0 to +70°C or -40 to +85°C Storage: -55 to +125°C				
Supply Voltage:	Recommended Operating: +5V ±5% or 3.3V ±10%				
Supply Current:	50mA typ, 65mA, 35mA max @ 3.3V				
Output Drive:	Symmetry:	ACMOS 32 to 60 MHz 0 to +70°C: 45/55% -40 to +85°C: 45/55%	ACMOS 60+ to 125 MHz 45/55% 40/60% (45/55% @ 3.3V)	TTL 32 to 60 MHz 45/55% 45/55%	TTL 60+ to 125 MHz 45/55% 40/60%
	Rise & Fall Times:	2ns max 20% to 80% VDD 1.5ns max 0.5 to 2.5V			
	Logic 0:	10% VDD max or 20% VDD max @ 3.3V			
	Logic 1:	80% VDD min or 80% VDD min @ 3.3V			
	Load:	50Ω CMOS or 95Ω CMOS @ 3.3V			
	Period Jitter RMS:	13ps max 32 to 72 MHz 20ps max 72+ to 125 MHz, 0 to +70°C 25ps max 72+ to 125 MHz, -40 to +85°C			
Mechanical:	Shock:	MIL-STD-883, Method 2002, Condition B			
	Solderability:	MIL-STD-883, Method 2003			
	Terminal Strength:	MIL-STD-883, Method 2004, Condition B2			
	Vibration:	MIL-STD-883, Method 2007, Condition A			
	Solvent Resistance:	MIL-STD-202, Method 215			
	Resistance to Soldering Heat:	MIL-STD-202, Method 210, Condition A, B or C (I or J for Gull Wing or SMD)			
Environmental:	Gross Leak Test:	MIL-STD-883, Method 1014, Condition C			
	Fine Leak Test:	MIL-STD-883, Method 1014, Condition A2			
	Thermal Shock:	MIL-STD-883, Method 1011, Condition A			
	Moisture Resistance:	MIL-STD-883, Method 1004			

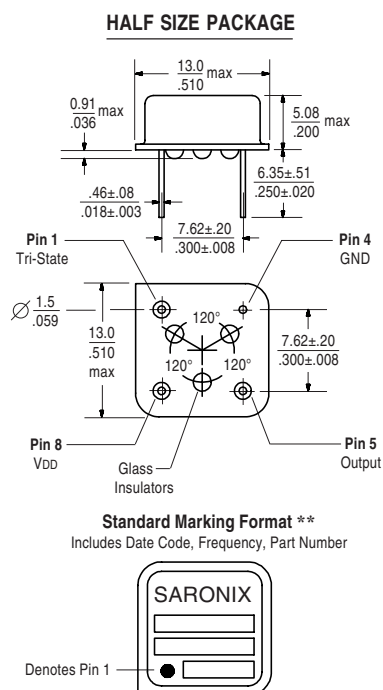
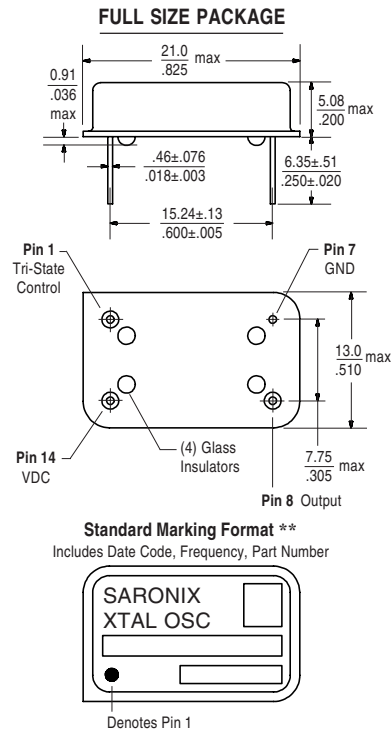
Part Numbering Guide

Series	ST41	3	0	A	-	106.2500	(T)
Type							
3 = 3.3V LVCMOS							
5 = 5V TTL							
6 = 5V AC MOS							
Package Style							
0 = Full Size, Metal							
9 = Half Size, Metal							
J = Half Size, Metal, Gull Wing							
K = Full Size, Metal, Gull Wing							
S = True SMD Adaptor (see product photo)							
Stability Tolerance							
AA = ±20 ppm, 0 to +70°C							
A = ±25 ppm, 0 to +70°C							
B = ±50 ppm, 0 to +70°C							
C = ±100 ppm, 0 to +70°C							
E = ±50 ppm, -40 to +85°C							
F = ±100 ppm, -40 to +85°C							
Packing Method							
(T) = Tape & Reel for SMD versions full reel increments only (200pcs)							
Blank = Bulk							
Frequency							

Technical Data

ST41xx Series

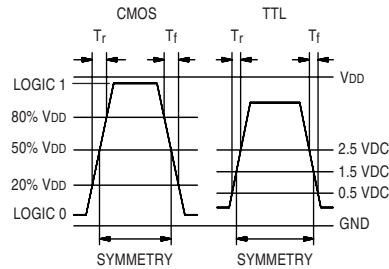
Package Details



** Exact location of items may vary

Scale: None (Dimensions in mm inches)

Output Waveform

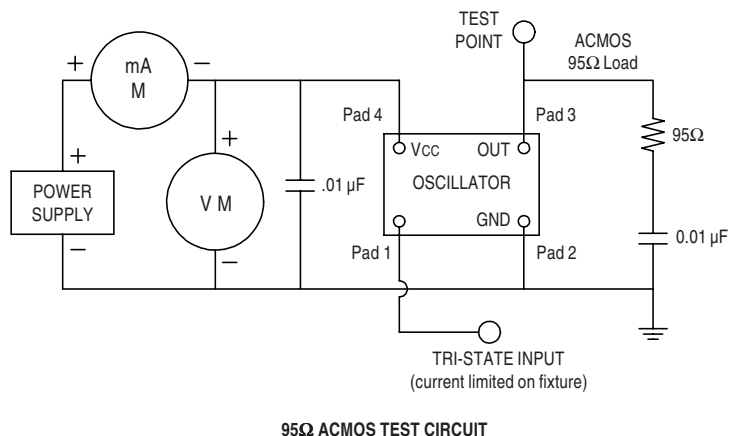
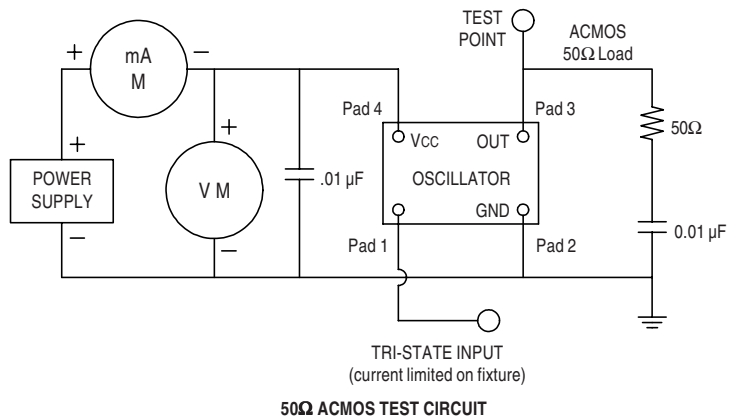


Tri-State Logic Table

Pin 1 Input	Pin 8 (5) Output
Logic 1 or NC	Oscillation
Logic 0 or GND	High Impedance

Required Input Levels on Pin 1:
Logic 1 = 2.2V min
Logic 0 = 0.8V max

Test Circuits



All specifications are subject to change without notice.

True SMD Adaptor - 7.57mm High

Technical Data

