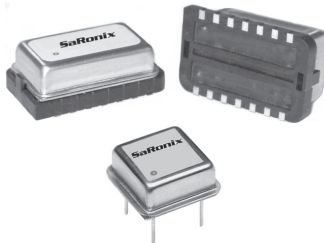


Technical Data

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	ACMOS	TTL	TTL
		32 to 60 MHz	60+ to 125 MHz	32 to 60 MHz	60+ to 125 MHz
	0 to +70°C:	45/55%	45/55%	45/55%	45/55%
	-40 to +85°C:	45/55%	40/60%	45/55%	40/60%
		(45/55% @ 3.3V)			
	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 AC MOS or 95Ω AC MOS @ 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

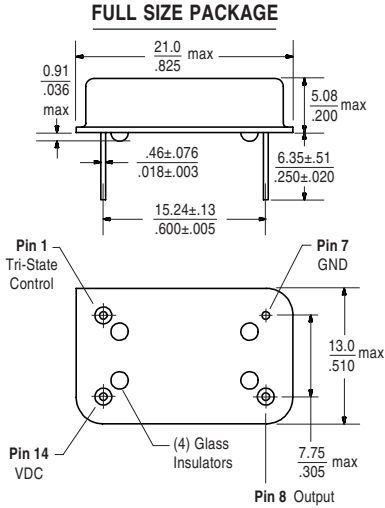
Series		ST41		3		0		A		-		106.2500		(T)	
Type															
	3 = 3.3V LVCMOS														
	5 = 5V TTL														
	6 = 5V AC MOS														
Package Style															
	0 = Full Size, Metal														
	9 = Half Size, Metal														
	J = Half Size, Metal, Gull Wing														
	K = Full 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															

DS-183 REV C

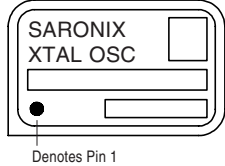
Technical Data

ST41xx Series

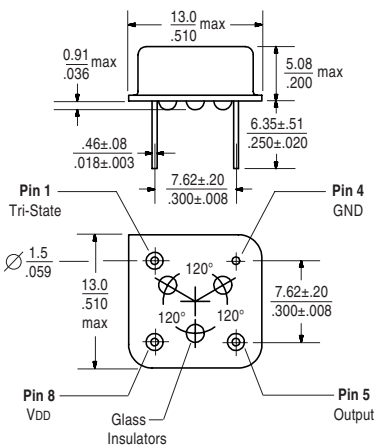
Package Details



Standard Marking Format **
Includes Date Code, Frequency, Part Number



HALF SIZE PACKAGE



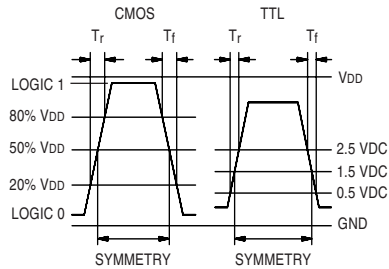
Standard Marking Format **
Includes Date Code, Frequency, Part Number



** Exact location of items may vary

Scale: None (Dimensions in $\frac{\text{mm}}{\text{inches}}$)

Output Waveform

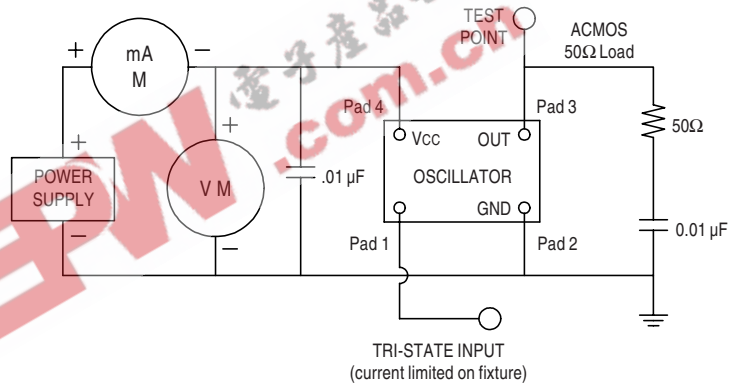


Tri-State Logic Table

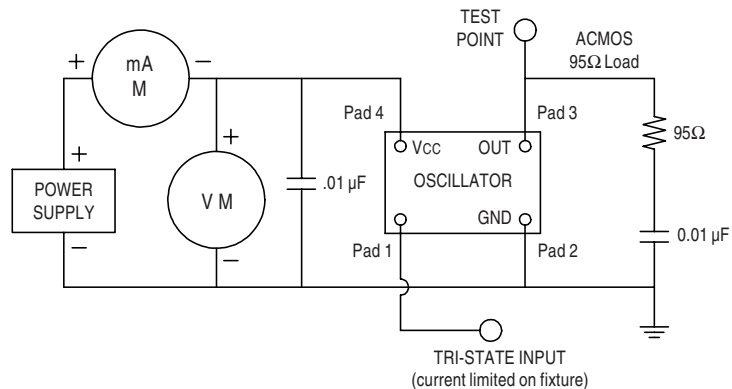
Pin 1 Input	Pin 8 (5) Output
Logic 1 or NC	Oscillation
Logic 0 or GND	High Impedance

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

Test Circuits



50Ω AC MOS TEST CIRCUIT



95Ω AC MOS TEST CIRCUIT

All specifications are subject to change without notice.

DS-183 REV C

True SMD Adaptor - 7.57mm High

Technical Data

