

Technical Data

S1562 / S1564 Series



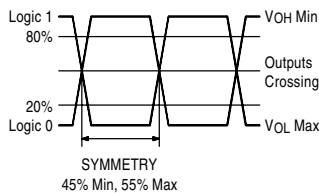
Description

A voltage controlled crystal oscillator designed primarily for use in phase locked loops, Sonet, ATM, SDH and network/switch applications. Output is LVPECL and Motorola 10KE compatible. Device is packaged in a 14-pin DIP compatible, resistance welded package. Case is grounded to Pin 7 to reduce EMI.

Applications & Features

- Enable/Disable standard
- Positive supply voltage 3.3V ECL (PECL), LVDS compatible
- Complementary outputs on S1564
- Single output on S1562
- Wide frequency range from 65 MHz to 155.52 MHz using SaRonix fundamental crystals for exceptional jitter performance
- ± 50 ppm minimum APR**
- Covers a wide range of telecommunication applications

Output Waveforms



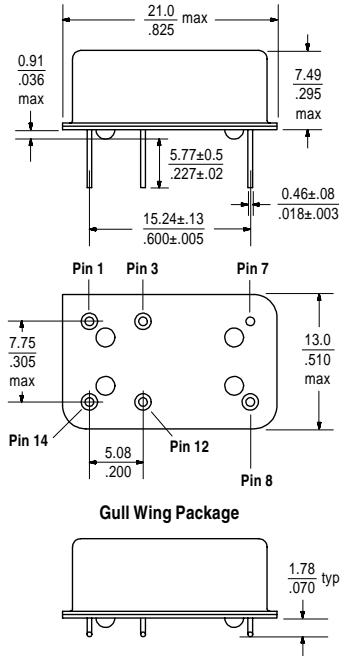
Frequency Range:	65.00 MHz to 155.52 MHz (S1564) 77.76 MHz to 155.52 MHz (S1562)
Frequency Stability:	± 20 , ± 25 , or ± 50 ppm over all conditions: operating temperature, supply voltage change, load change, calibration tolerance, aging* shock and vibration.
* Aging:	5 years @ 40°C average ambient operating temperature
Temperature Range:	Operating: 0 to +70°C, 0 to +85°C, -40 to +85°C Storage: -55°C to +105°C
Supply Voltage (VCC):	3.3V $\pm 10\%$
Supply Current:	65mA typ, 100mA max (70mA max for S1562)
Output Drive:	Symmetry: 45/55% max @ 50% waveform Rise & Fall Times: 550 ps max, 20% to 80% of output waveform Logic 0: VCC -1.620 max Logic 1: VCC -1.025 min Load: 50Ω to VCC -2V (all outputs require termination) Jitter: 3.5ps max RMS period jitter
Pull Characteristics:	Input Impedence (Pin 1): 50KΩ min Frequency Response (-3dB): 10 kHz min Pullability: ± 50 ppm min APR** Control Voltage: 0.3V min to 3.0V max Center Control Voltage: 1.65V Transfer Function: Frequency increases when control voltage increases Linearity: 10% max Output Enable Voltage (Pin 3): \leq VCC - 1.475V or Open Disable Voltage: \geq -1.165V (Q Output Disabled to a fixed level of Logic 0)
Mechanical:	Shock: MIL-STD-883, Method 213, Condition F Solderability: MIL-STD-883, Method 2003 Terminal Strength: MIL-STD-883, Method 2004, Conditions 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 B (I or J for Gull-wing)
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

** APR = (VCXO Pull relative to specified Output Frequency) – (VCXO Frequency Stability)

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Package Details



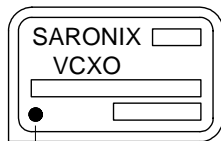
Gull Wing Package

Pin Functions:

S1562	
Pin 1: Control Voltage	Pin 8: Q Output
Pin 3: Enable	Pin 12: N/C
Pin 7: GND / Case	Pin 14: Supply Voltage
S1564	
Pin 1: Control Voltage	Pin 8: Q Output
Pin 3: Enable	Pin 12: \bar{Q} Output
Pin 7: GND / Case	Pin 14: Supply Voltage

Marking Format **

Includes Date Code, Frequency & Part Number

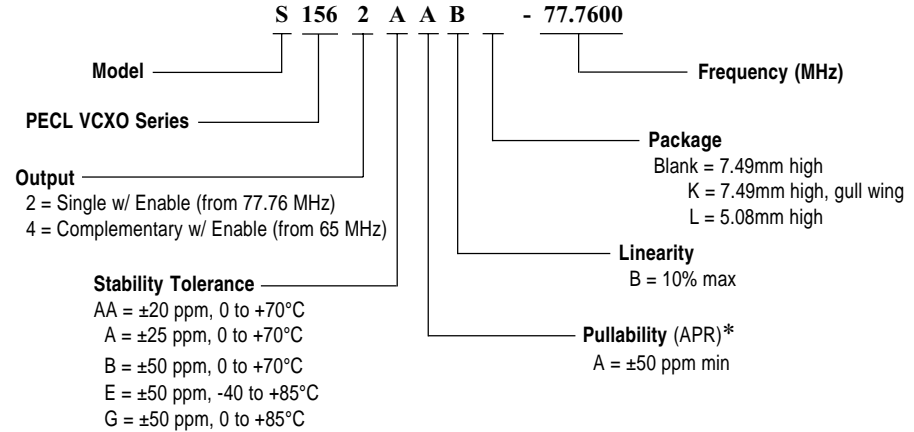


Denotes Pin 1

**Exact location of items may vary

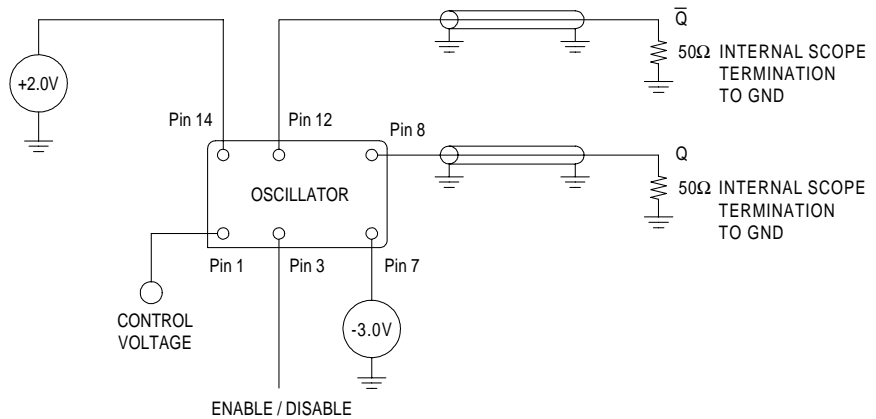
Scale: None (Dimensions in $\frac{mm}{inches}$)

Part Numbering Guide



*APR = (VCXO Pull relative to specified Output Frequency) – (VCXO Frequency Stability)

Test Circuit



All specifications are subject to change without notice.