Rev. X01

Preliminary Specification

CTS
FREQUENCY PRODUCTS

- ♦Sealed Fundamental AT Cut Crystal
- ♦Low Phase Jitter: < 1 pSec
- ♦+3.3Vdc or +5.0Vdc Operation
- ♦CMOS Compatible Output Stage
- ♦Output Enable Function
- ♦Guaranteed Minimum Pull Range

Model 325
"FR4" Series
Low Cost CMOS VCXO

Electrical Characteristics

Parameter	Sym	Conditions	Min	Typical	Max	Unit
Power Requirements						
Power Supply	Vcc	± 5% 325L ±5% 325S	3.135 4.75	3.30 5.0	3.465 5.25	Vdc Vdc
Supply Current	Icc	Vcc=Max. No Load		15 (3.3Vdc) 20 (5.0Vdc)		mA mA
Frequency Stabilities						
Center Frequency	f_{nom}		1.5	19.44 20.0 44.736	125	MHz
Freq. vs. Temp.	Δf/ΔTemp			± 25		ppm
Freq. vs. Voltage	Δf/ΔVcc	Vcc ±5%		± 1		ppm
Freq. vs. Load	Δf/ΔRL	± 10% Variation		± 1		ppm
Freq. vs Time (Aging)	Δf/ΔTime	10 years		±10		ppm
Deviation Characteristics						
Control Voltage	VC	3.3V "L" Version 5.0V "S" Version	0.0 0.5		3.3 4.5	V V
Frequency Deviation	Δf	+25°C at time of Shipment		± 100		ppm
Linearity	Lin	Best Straight Line Fit	-10	2	10	%
Absolute Pull Range	APR	Under all conditions for the life of the part (Ref. to f_{nom})	±50			ppm
Input Impedance	Zin		10			KΩ
Bandwidth		-3db Point	10			KHz
Waveform Parameters						
Symmetry	Sym	@ 50% Level	45	50	55	%
Amplitude	Vo	Nominal Load	Vcc-0.2		0.2	V
Rise/Fall Times	tr, tf	10% to 90%			5	nSec
Load	RL	Output to Ground		10KΩ || 15pF		Ω
Phase Jitter		12KHz to 20MHz Bandwidth			<1	pSec RMS

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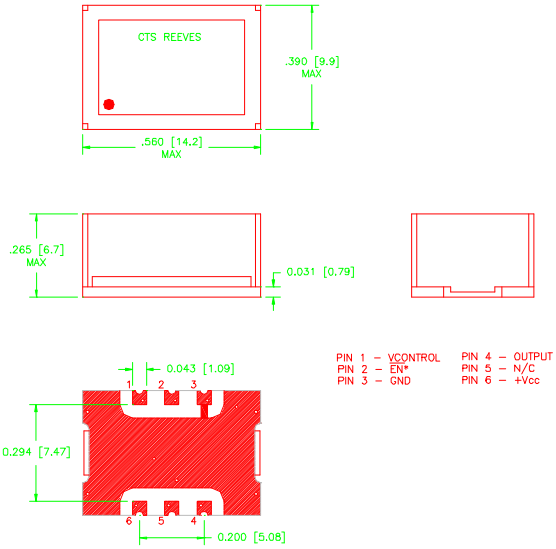

Environmental / Mechanical Specifications

Storage Temperature:	-55° to +125°C
Reflow Soldering:	will withstand 240°C for 20 Seconds
Shock:	1000 G's, 5 mSec. Pulse (3 Shocks/Axis)
Vibration:	20 G's RMS, 20 to 2000 Hz
Case:	High Temp FR-4 Base
Seal:	Non-Hermetic

Enable Truth Table

Pin 2	Pin 4
"1"	Output
"0"	High Imp.
Open	Output

Ordering Information

Model 325 ☐ ☐ -- ____.____ Example: 325SB-19.440

Supply Voltage
L = +3.3Vdc
S = +5.0Vdc

Operating Temp. Range
A = 0° to +70°C
B = -40° to +85°C

Frequency in MHz

♦♦♦ CTS Frequency Products ♦ 400 W. North Street ♦ Carlisle, PA 17013 ♦ 717-243-5929 ♦♦♦