

# Preliminary Specification

**CTS**  
FREQUENCY PRODUCTS

- ◆ 9x14mm Surface Mount Pkg.
- ◆ Differential PECL Outputs
- ◆ Guaranteed Minimum Pull Range
- ◆ +3.3Vdc or +5.0Vdc Operation
- ◆ Sealed AT Strip Crystal
- ◆ Output Enable Function
- ◆ Low Phase Jitter: < 1.0 pSec RMS
- ◆ Excellent Solder Reflow Performance

**Model 350**  
**9x14mm Differential PECL**  
**High Frequency VCXO**  
**(416MHz to 832MHz)**

## Electrical Characteristics

Parameter	Sym	Conditions	Min	Typical	Max	Unit
<b>Power Requirements</b>						
Power Supply	Vcc	± 5% 350L ±5% 350S	3.135 4.75	3.30 5.0	3.465 5.25	Vdc Vdc
Supply Current	Icc	Vcc=Max. (3.3Vdc) 50Ω. Load (5.0Vdc)		55 80		mA mA
<b>Frequency Stabilities</b>						
Center Frequency	f <sub>nom</sub>		416	622.08	832	MHz
Initial Tolerance	f <sub>cal</sub>	Ta=+25°C EFC=Center(0.5Vcc)	-10		+10	ppm
Freq. vs. Temp.	Δf/ΔTemp	Oper. Temp. Range			± 15	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	20 years			±10	ppm
<b>Deviation Characteristics</b>						
Control Voltage	VC	3.3V "L" Version 5.0V "S" Version	0.15 0.5		3.15 4.5	V V
Frequency Deviation	Δf	+25°C at time of Shipment		± 125		ppm
Linearity	Lin	Best Staight Line Fit	-10	5	10	%
Absolute Pull Range	APR	Under all conditions for the life of the part (Ref. to f <sub>nom</sub> )	±85			ppm
Input Impedance	Zin		100			KΩ
<b>Waveform Parameters</b>						
Symmetry	Sym	@ 50% Level	45	50	55	%
Amplitude	Vo	50Ω Load	Vcc-1.62V		Vcc-1.025V	V
Rise/Fall Times	tr, tf	20% to 80%		225	350	pSec
Load	RL	Output to Vcc-2.0V or Equivalent		50		Ω
Phase Jitter		12KHz to 20MHz or 50KHz to 80MHz Bandwidth			<1	pSec RMS

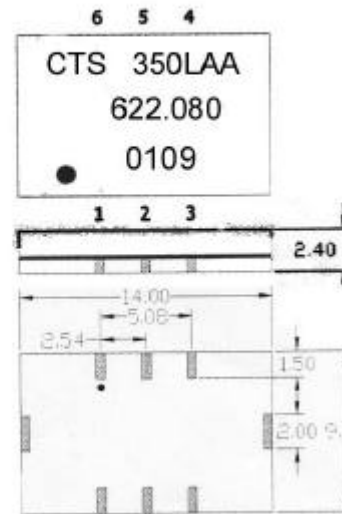
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## Mechanical Dimensions (mm):

- Pin Location:
- 1] Vc, tuning voltage
  - 2] Enable/Disable
  - 3] GND
  - 4] output
  - 5] Complementary output
  - 6] Vcc, supply voltage



### Option "A" Enable Truth Table

Pin 2	Pins 4&5
PECL "0"	Disabled
PECL "1"	Enabled
Open	Disabled

### Option "B" Enable Truth Table

Pin 2	Pins 4&5
PECL "0"	Enabled
PECL "1"	Disabled
Open	Enabled

### Environmental / Mechanical Specifications

Storage Temperature:	-55° to +125°C
Reflow Soldering:	will withstand 240°C for 20 Seconds
Shock:	1500 G's, 0.5 mSec. Pulse (3 Shocks/Axis)
Vibration:	10 G's peak, 20 to 2000 Hz
Case:	High Temp. FR-4 Base

### Ordering Information

