



VCXO Series (PECL) PJ-A3670 Series

PRELIMINARY

Description

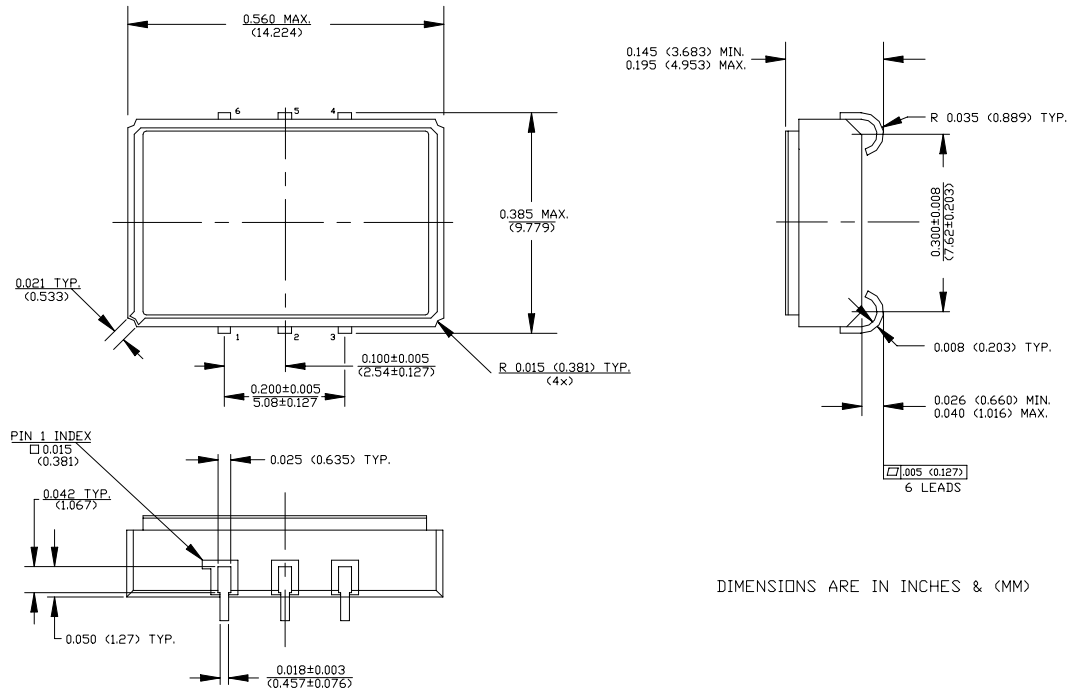
The **PJ-A3670 Series** of voltage controlled quartz crystal oscillators provide frequency control by applying a voltage to Pin 1. This unit supplies ECLiPS compatible outputs which are enabled when Pin 2 is set to a logic high or left open.

Features

- Frequency range—70.0MHz to 200.0MHz
- Wide Absolute Pull Range
- Space-saving alternative to discrete component oscillators
- High shock resistance, to 3000g
- 3.3 volt operation
- Metal lid electrically connected to ground to reduce EMI
- Low Jitter - Wavecrest jitter characterization available
- High Reliability - NEL HALT/HASS qualified for crystal oscillator start-up conditions
- High Q Crystal actively tuned oscillator circuit
- Power supply decoupling internal
- No internal PLL avoids cascading PLL problems
- High frequencies due to proprietary design
- Gold plated leads - Solder dipped leads available upon request
- RoHS Compliant, Lead Free Construction (unless solder dipped leads are supplied)

Electrical Connection

Pin	Connection
1	V _{CO}
2	Output Enable
3	V _{EE}
4	Output
5	Output Complement
6	V _{CC}



PJ-A3670 Series Continued
VCXO (PECL)

Rev. K

Operating Conditions and Output Characteristics

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max
Frequency	-----	-----	70.0MHz	-----	200.0MHz
Duty Cycle	-----	@ $V_o / 2$	45/55%	-----	55/45%
Logic 0	V_{OL}	-----	$V_{cc}-1.810V_{dc}$	-----	$V_{cc}-1.620V_{dc}$
Logic 1	V_{OH}	-----	$V_{cc}-1.200V_{dc}$	-----	$V_{cc}-0.880V_{dc}$
Rise & Fall Time	tr,tf	$20-80\%V_o$	-----	-----	600 ps
Jitter, RMS ⁽¹⁾	-----	-----	-----	3 psec	-----
Absolute Pul Range	APR	$V_{co}=0.3$ to $3.0V$	$\pm 100ppm$	-----	-----
Vco input impedance	-----	50na dc current max	100K ohm	-----	-----
Vco linearity	-----	$V_{co}=0.3$ to $3.0V$	-----	-----	10%
Transfer Function ⁽²⁾	-----	$V_{co}=0.3$ to $3.0V$	-----	Positive	-----

General Characteristics

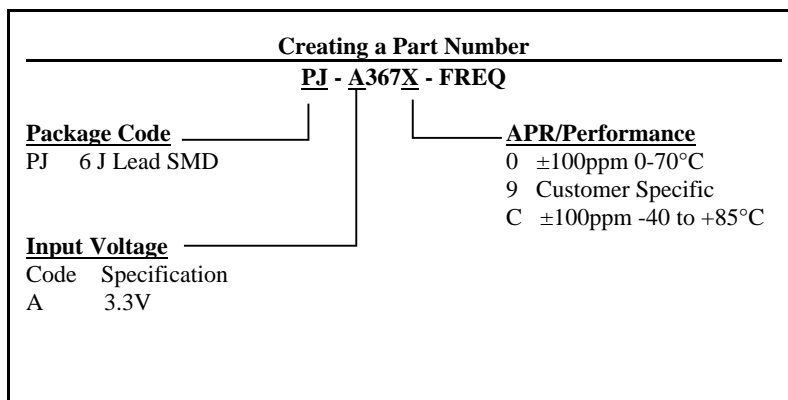
Parameter	Symbol	Conditions	Min	Typical	Max
Supply Voltage	$V_{CC}-V_{EE}$	Nominal	3.135V	3.3V	3.465V
Supply Current	I_{CC}	-----	-----	-----	60 mA
Output current	I_o	-----	0.0 mA	-----	± 50.0 mA
Operating temperature	T_A	-----	0°C	-----	70°C
Storage temperature	T_S	-----	-55°C	-----	125°C
Power Dissipation	P_D	-----	-----	-----	208 mW
Solder temperature	T_L	4 minutes	-----	-----	253°C
Load	50 Ohm to $V_{CC}-2V$ or Thevenin Equivalent, Bias Required				

Environmental and Mechanical Characteristics

Mechanical Shock	Per MIL-STD-202, Method 213, Condition E
Thermal Shock	Per MIL-STD-883, Method 1011, Condition A
Vibration	0.060" double amplitude 10 Hz to 55 Hz, 35g's 55Hz to 2000 Hz
Hermetic Seal	Leak rate less than 1×10^{-8} atm.cc/sec of helium

Footnotes:

- Jitter performance is frequency dependent. Please contact factory for full Wavecrest characterization. RMS jitter bandwidth of 12kHz to 20MHz.
- Frequency increase with increase in control voltage and is monotonic.



PJ-A3670 Series Continued

Max Reflow Profile

