



CMOS SJ-370 Series

Rev. K

Description

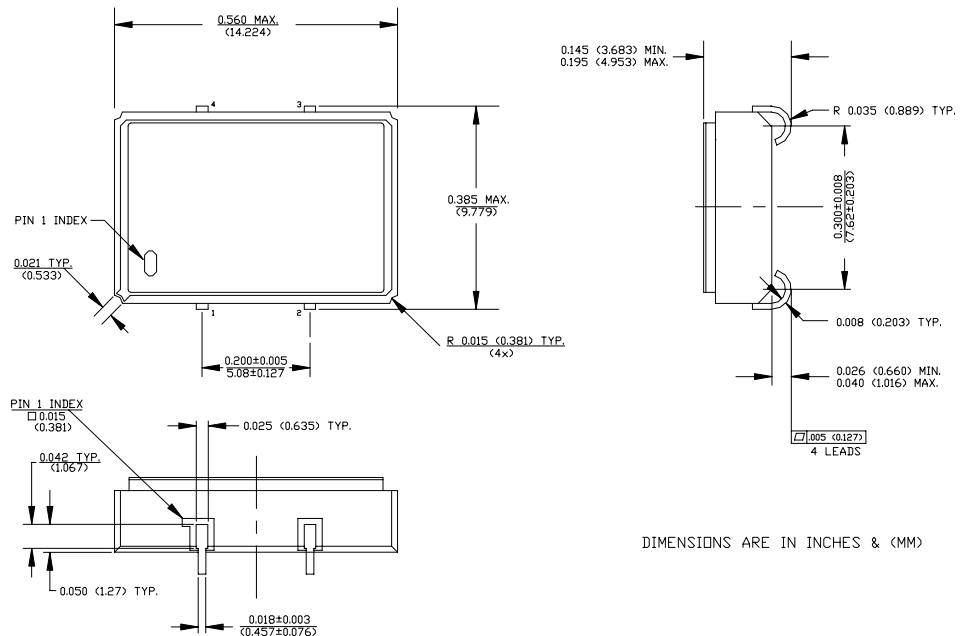
The **SJ-370 Series** of quartz crystal oscillators are designed to survive standard wave soldering operations without damage.

Features

- Wide frequency range—2.25MHz to 80.0MHz
- User specified tolerance available
- Space-saving alternative to discrete component oscillators
- High shock resistance, to 3000g
- Metal lid electrically connected to ground to reduce EMI
- COTS/Dual use
- Low Jitter
- TTL compatible (HCT) at specified supply voltage
- High Q Crystal actively tuned oscillator circuit
- Low power consumption
- Power supply decoupling internal
- No internal PLL avoids cascading PLL problems
- High frequencies due to proprietary design
- Gold plated leads
- RoHS Compliant, Lead Free Construction

Electrical Connection

Pin	Connection
1	N.C.
2	Ground
3	Output
4	V _{DD}



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Operating Conditions and Output Characteristics

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max
Frequency	-----	-----	2.25MHz	-----	80.0MHz
Duty Cycle	-----	@ $V_{DD}/2$	45/55%	-----	55/45%
Logic 0	V_{OL}	@ 600 μ A	-----	-----	0.2V
Logic 1	V_{OH}	@ 600 μ A	$V_{DD}-0.2V$	-----	-----
Rise & Fall Time	tr,tf	10-90% V_O	-----	-----	8 ns
Jitter, RMS ⁽²⁾	-----	<40MHz Fund	-----	-----	8.0 psec
		<40MHz OT & >40MHz	-----	-----	5.0 psec
Frequency Stability ⁽¹⁾	dF/F	Overall conditions including: voltage, calibration, temp., 10 yr aging, shock, vibration	-100ppm	-----	+100ppm

General Characteristics

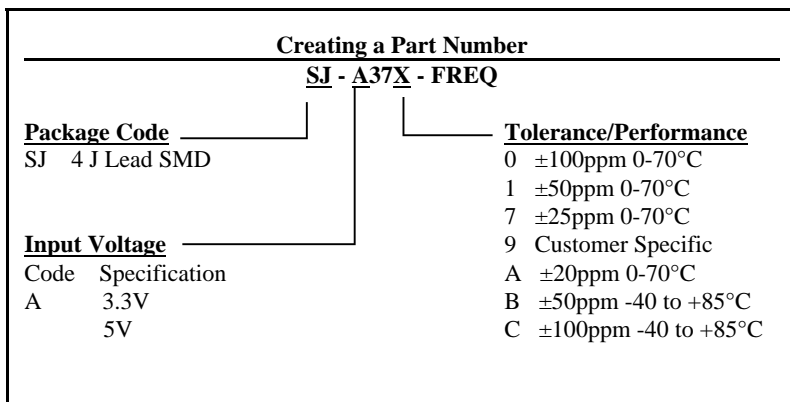
Parameter	Symbol	Conditions	Min	Typical	Max
Supply Voltage	V_{DD}	5.0V \pm 5%	4.75V	5.0V	5.25V
Supply Current	I_{DD}	No Load	0.0 mA	-----	40 mA
Output current	I_O	-----	0.0 mA	-----	\pm 16.0 mA
Operating temperature	T_A	-----	0°C	-----	70°C
Storage temperature	T_S	-----	-55°C	-----	125°C
Power Dissipation	P_D	-----	-----	-----	210 mW
Load	-----	-----	-----	-----	15pf
Start-up Time	t_s	<20MHz	-----	-----	2 ms
		20MHz or greater	-----	-----	10 ms

Environmental and Mechanical Characteristics

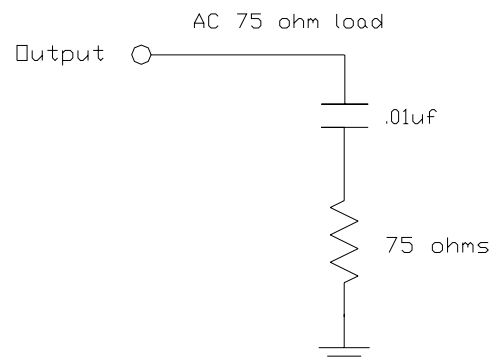
Mechanical Shock	Per MIL-STD-202, Method 213, Condition E
Thermal Shock	Per MIL-STD-883, Method 1011, Condition A
Vibration	0.060" double amplitude 10 Hz to 55 Hz, 35g's 55Hz to 2000 Hz
Hermetic Seal	Leak rate less than 1×10^{-8} atm.cc/sec of helium

Footnotes:

- Standard frequency stability (\pm 20, \pm 25, \pm 50ppm & others available)
- Jitter performance is frequency dependent. Please contact factory for full characterization.
RMS jitter bandwidth of 12kHz to 20MHz.



Test Load:



SJ-370 Series Continued

Max Reflow Profile

