SaRonix

Crystal Clock Oscillator 5V, CMOS, TTL, Low Current

Technical Data NCC Series

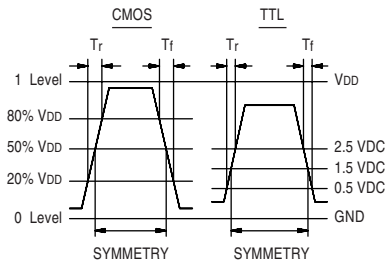
Description

A crystal controlled, low current hybrid oscillator providing precise rise and fall times to drive CMOS and NMOS microprocessors. Compatible with both CMOS and TTL. Can drive up to 2 LSTTL loads. Device is packaged in 14-pin or an 8-pin DIP compatible full size or half size, resistance welded, all metal case. Pin 7 (pin 4 for ½ size) is grounded to the case to reduce RFI.

Applications & Features

- Low power
- CMOS and TTL compatible output
- Grounded, all metal full size and half size case
- See NTH Series for Tri-State on pin 1
- Gull Wing packages compatible with standard reflow processes

Output Waveform



Frequency Range:	500 kHz to 24 MHz
Frequency Stability:	±25, ±50 or ±100 ppm over all conditions: calibration tolerance, operating temperature, input voltage change, load change, *aging, shock and vibration.
***Aging**	30 days
Temperature Range:	
Operating:	0°C to +70°C
Storage:	-55°C to +125°C
Supply Voltage:	
Recommended Operating:	5V ±10%
Supply Current:	(See Input Current vs. Frequency Graph, page 2)
Output Drive:	
CMOS Symmetry	see part numbering guide
Rise & Fall Times:	12ns max, 20% to 80% V_{DD}
Logic 0:	10% V_{DD} max
Logic 1:	90% V_{DD} min
Output Load:	2 CMOS
TTL Symmetry	see part numbering guide
Rise & Fall Times:	12ns max, 0.5V to 2.5V
Logic 0:	0.5V max
Logic 1:	2.5V min (V_{CC} -0.6 typ)
Output Load:	2 LSTTL
Mechanical:	
Shock:	MIL-STD-883, Method 2002, Condition B
Solderability:	MIL-STD-883, Method 2003
Terminal Strength:	MIL-STD-883, Method 2004, Condition 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 A, B or C
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

Part Numbering Guide

NCC 0 6 0 C - 4.0000

Series

Symmetry & Temperature Range
0 = 40/60% max, 0 to 70°C
2 = 40/60% max, -40 to 85°C
4 = 45/55% max, -40 to 85°C, TTL to 7.1590MHz
6 = 45/55% max, 0 to 70°C, TTL to 7.1590MHz
A = 45/55% max, 0 to 70°C, CMOS to 7.1590MHz
C = 45/55% max, -40 to 85°C, CMOS to 7.1590MHz

Frequency Range
3 = 500 kHz ~ 3.9999 MHz
6 = 4 MHz to 24 MHz

Package Type
0 = Full Size
9 = Half Size
K = Full Size, Gull Wing
J = Half Size, Gull Wing

Stability Tolerance
A = ±25 ppm, 0 to +70°C only
B = ±50 ppm
C = ±100 ppm

Blank = No Enable/Disable

Frequency (MHz)

DS-133 REV D

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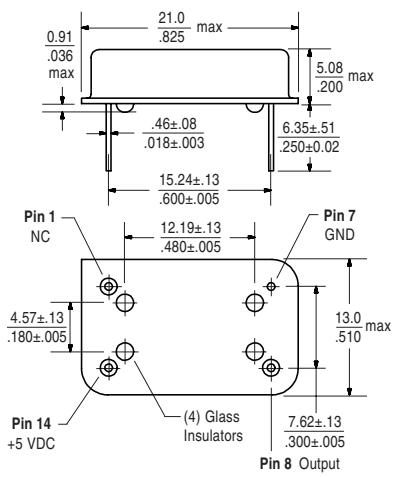
Technical Data

NCC Series

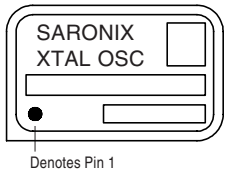
Package Details

FULL SIZE PACKAGE

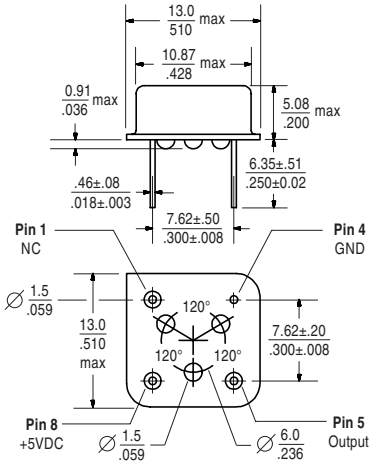


Marking Format *

Includes Date Code, Frequency & Model



HALF SIZE PACKAGE



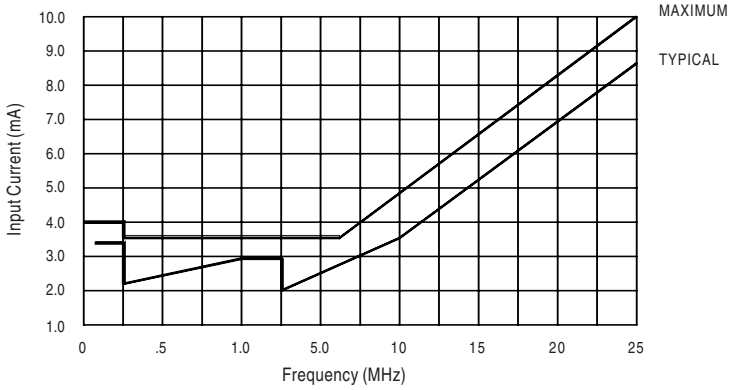
Marking Format *

Includes Date Code, Frequency & Model

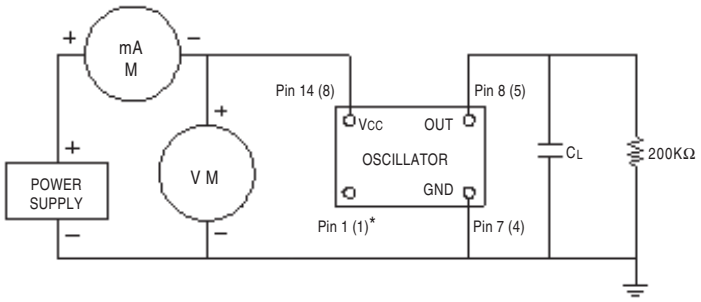
* Exact location of items may vary

Scale: None (Dimensions in mm / inches)

Input Current vs. Frequency at +5.0V

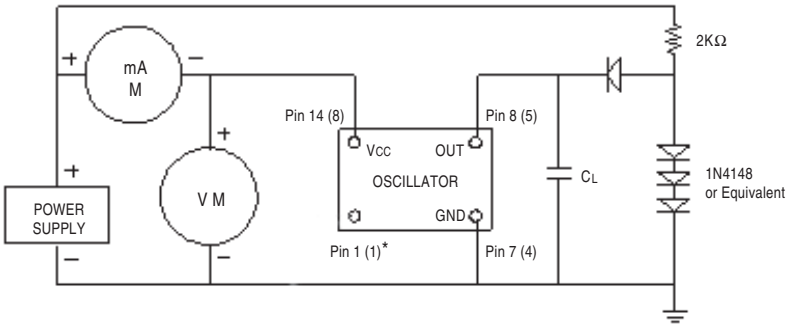


Test Circuits



NOTE:
C_L = 15 pF max (Includes probe and fixture capacitance)
Pin 1 = No connection.
*( ) Indicates pin numbers for half-size package

CMOS TEST CIRCUIT



NOTE:
C_L = 15 pF max (Includes probe and fixture capacitance)
Pin 1 = No connection.
*( ) Indicates pin numbers for half-size package

TTL TEST CIRCUIT

All specifications are subject to change without notice.

DS-133 REV D