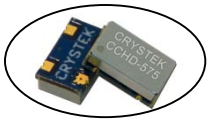
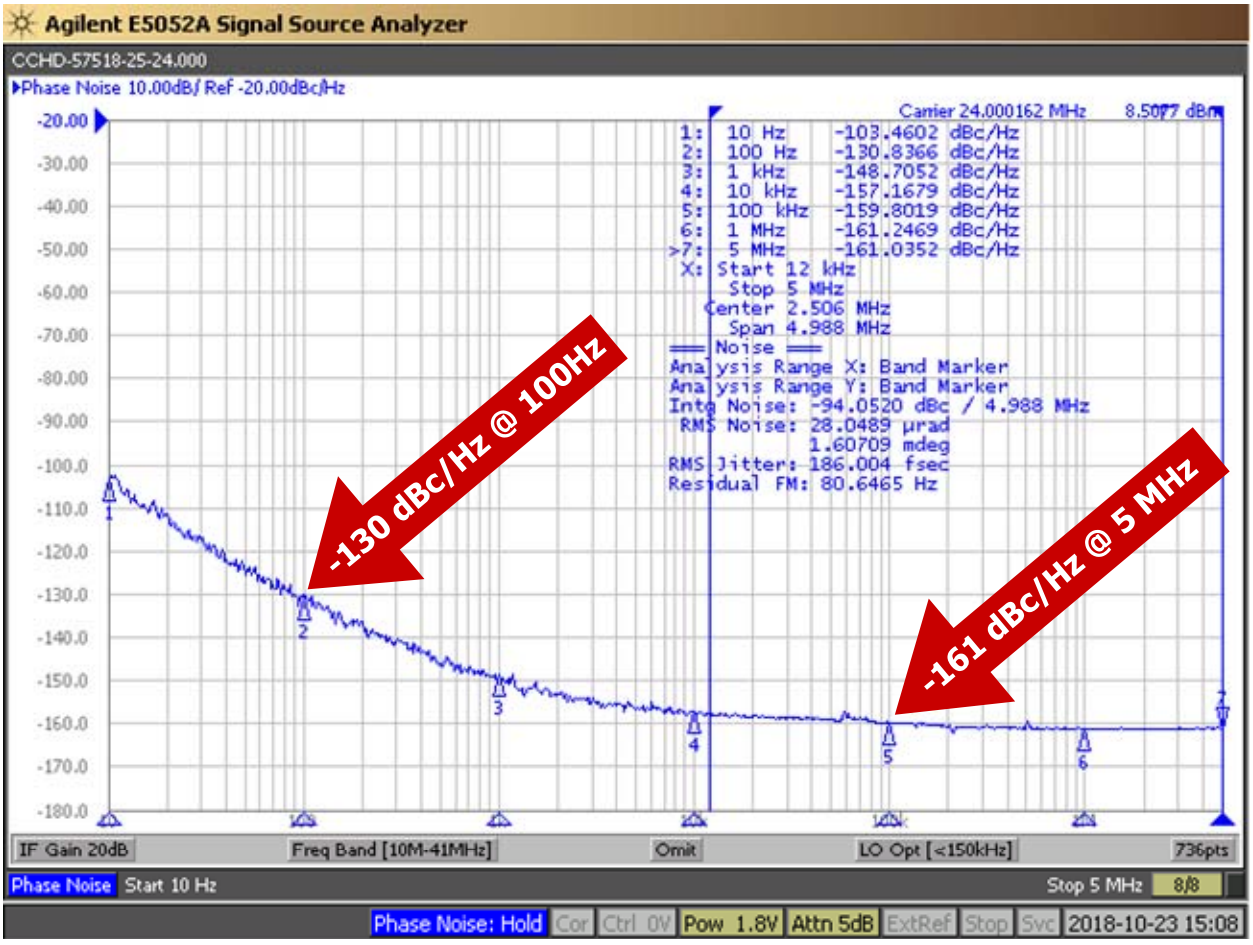
CRYSTEK CRYSTALS
A Division of Crystek Corporation

CCHD-57518 Model
5×7.5 mm SMD, 1.8V, HCMOS

CCHD-57518
Ultra-Low Phase Noise Oscillator

RoHS Compliant





Model CCHD-57518 is the industry's lowest jitter clock oscillator in a 5×7.5 mm package at 1.8V. It features a typical phase jitter of 186 fSec RMS at 24 MHz. Close-in phase noise is -100 dBc/Hz @ 10 Hz while its floor is at -161 dBc/Hz. This oscillator may be small in size but it packs a punch inside. Its output driver is capable of driving ±24mA. This translates to a rise/fall time of ~1ns at 24 MHz with a 15pF load.

Applications include
DACs
ADCs
Low Phase Signal Sources
Test and Measurement

Rev: A
Date: 15-Nov-2018
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RoHS Compliant

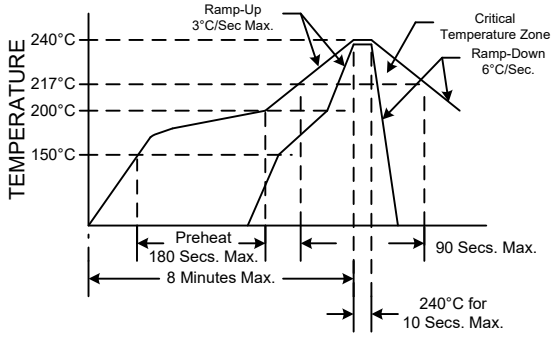
Frequency Range:	**20 MHz to 50 MHz**
Temperature Range:	**0°C to +70°C**
(Option M)	**-20°C to +70°C**
(Option X)	**-40°C to +85°C**
Storage:	**-45°C to 90°C**
Input Voltage:	**1.8V ±5%**
Input Current:	**10mA Typical, 15mA Max**
Output:	**HCMOS**
Symmetry:	**45/55% Max @ 50% Vdd**
Rise/Fall Time:	**2ns Max @ 20% to 80% Vdd**
Logic:	**"0" = 10% Vdd Max**
	"1" = 90% Vdd Min
Load:	**15pF**
	Output Current: ±24mA Max
Phase Jitter: (12 kHz~5 MHz)	**186 fs RMS Typical @ 24 MHz**
Phase Noise Typical:	**See plot**
Phase Noise Floor:	**-161 dBc/Hz Typical**
Sub-harmonics:	**None**
Aging:	**<3ppm 1st year, <1ppm thereafter**

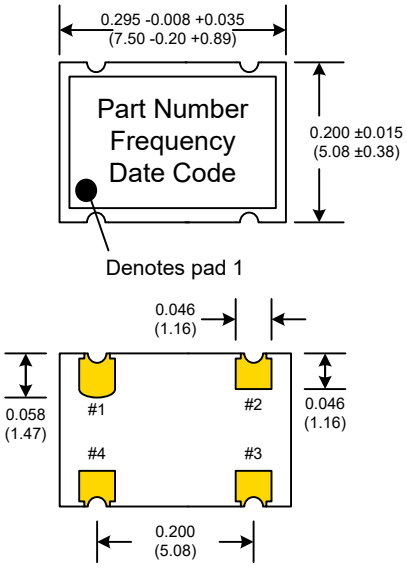
CCHD-57518 Options:

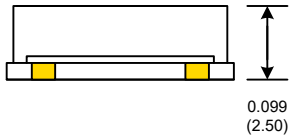
Temperature Range:	**0°C to +70°C (±20ppm, ±25ppm, ±50ppm)**
	-20°C to +70°C (±25ppm, ±50ppm)
	-40°C to +85°C (±25ppm, ±50ppm)

Part Number Example:
CCHD-57518X-25-24.000 = 1.8V, 45/55, -40°C to +85°C (±25ppm), 24 MHz

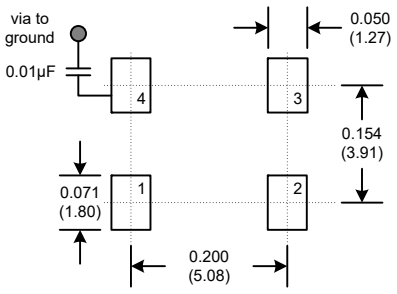
RECOMMENDED REFLOW SOLDERING PROFILE







SUGGESTED PAD LAYOUT



Pad	Connection
1	NC
2	GND
3	Output
4	Vdd

PAD FINISH: Immersion Gold (ENIG); 5 micro inches maximum

Rev: A
Date: 15-Nov-2018

Specifications subject to change without notice.

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