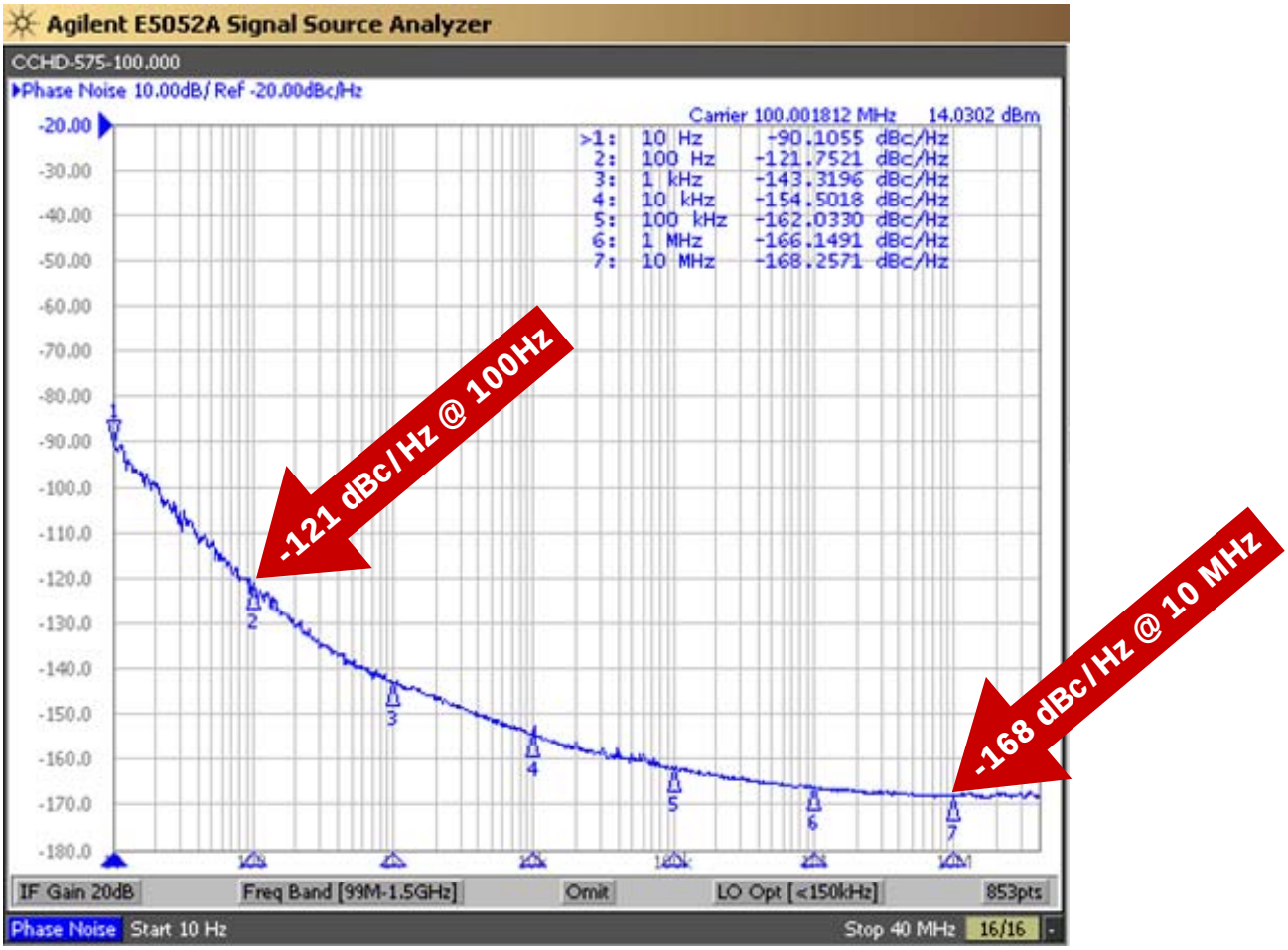
CRYSTEK CRYSTALS
A Division of Crystek Corporation

CCHD-575 Model
5×7.5 mm SMD, 3.3V, HCMOS

RoHS Compliant

CCHD-575
Ultra-Low Phase Noise Oscillator



Model CCHD-575 is the industry's lowest jitter clock oscillator in a 5×7.5 mm package. It features a typical phase jitter of 82 fSec RMS at 100 MHz. Close-in phase noise is -90 dBc/Hz @ 10 Hz while its floor is at -168 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 ~600ps at 100 MHz with a 15pF load.

Applications include
DACs
ADCs
Low Phase Signal Sources
Test and Measurement

Rev: C
Date: 11-Jan-12
Page 1 of 2

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Ultra-Low Phase Noise Oscillator

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5×7.5 mm SMD, 3.3V, HCMOS

RoHS Compliant

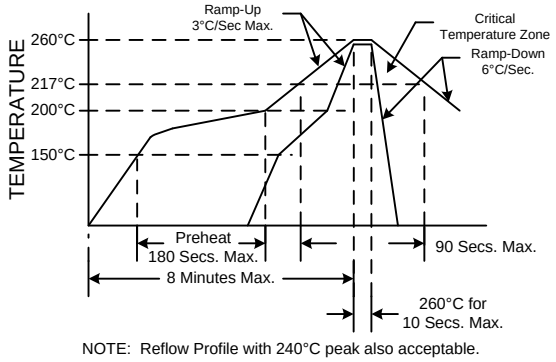
Frequency Range:	**50 MHz to 130 MHz**
Temperature Range:	**0°C to +70°C**
(Option M)	**-20°C to +70°C**
(Option X)	**-40°C to +85°C**
Storage:	**-55°C to 90°C**
Input Voltage:	**3.3V ±0.3V**
Input Current:	**15mA Typ., 25mA Max**
Output:	**HCMOS**
Symmetry:	**45/55% Max @ 50% Vdd**
Rise/Fall Time:	**2nsec Max @ 20% to 80% Vdd**
Logic:	**"0" = 10% Vdd Max**
	"1" = 90% Vdd Min.
	Load: 15pF
	Output Current: ±24mA Max
Phase Jitter: (12kHz~80MHz)	**82 fSec RMS Typ. @ 100 MHz**
Phase Noise Typical:	**See plots**
Phase Noise Floor:	**-168dBc/Hz Typ., -165dBc/Hz Max**
Sub-harmonics:	**None**
Aging:	**<3ppm 1st/yr, <1ppm thereafter**

CCHD-575 Options:

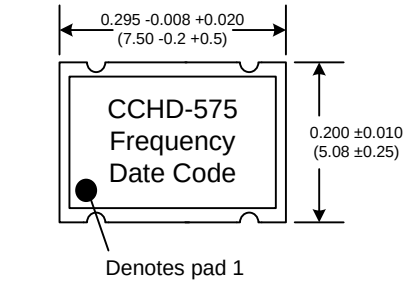
Temperature Range:	**0°C to +70°C (±20ppm, ±25ppm, ±50ppm)**
	-20°C to +70°C (±25ppm, ±50ppm)
	-40°C to +85°C (±25ppm, ±50ppm)

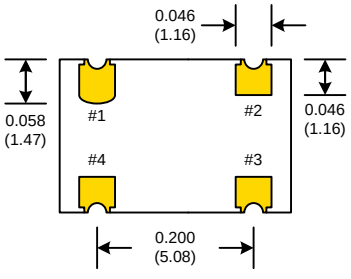
Part Number Example:
CCHD-575X-25-100.000 = 3.3V, 45/55, -40°C to +85°C (±25ppm), 100 MHz

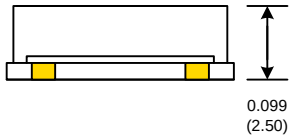
RECOMMENDED REFLOW SOLDERING PROFILE



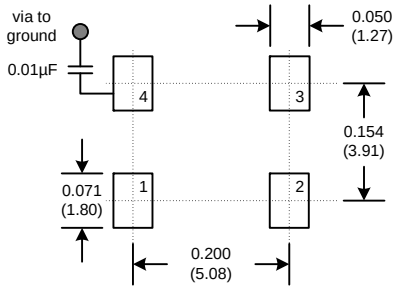
NOTE: Reflow Profile with 240°C peak also acceptable.







SUGGESTED PAD LAYOUT



Pad	Connection
1	NC
2	GND
3	Output
4	Vdd

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CRYSTEK CORPORATION
12730 Commonwealth Drive • Fort Myers, Florida 33913
Phone: 239-561-3311 • 800-237-3061
Fax: 239-561-1025 • www.crystek.com