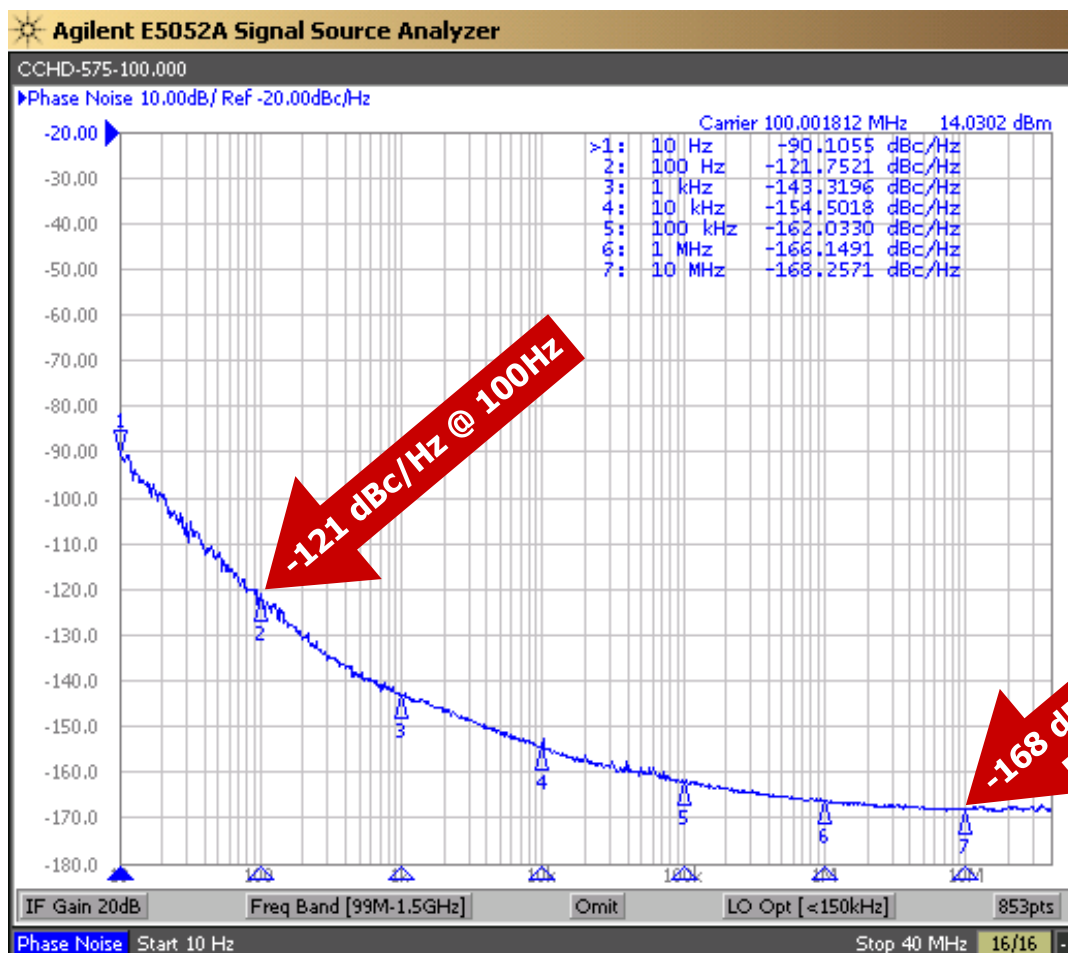
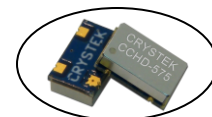


CCHD-575 Model
5×7.5 mm SMD, 3.3V, HCMOS



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 $\pm 24\text{mA}$. This translates to a rise/fall time of $\sim 600\text{ps}$ at 100 MHz with a 15pF load.

Applications include
DACs
ADCs
Low Phase Signal Sources
Test and Measurement

Rev: N
Date: 21-Jun-2016
Page 1 of 3



CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

CCHD-575

Ultra-Low Phase Noise Oscillator



CCHD-575 Model
5x7.5 mm SMD, 3.3V, HCMOS

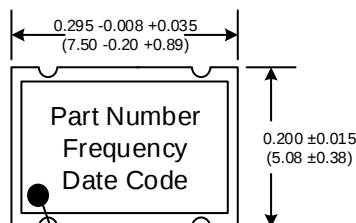
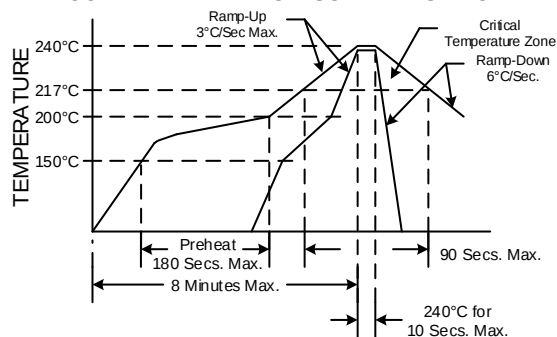
Frequency Range: 12 MHz to 130 MHz*
Temperature Range: 0°C to +70°C
 (Option M)
 -20°C to +70°C
 (Option X)
 -40°C to +85°C
Storage: -45°C to 90°C
Input Voltage: 3.3V ±0.3V
Input Current: 15mA Typical, 25mA Max
Output: HCMOS
 45/55% Max @ 50% Vdd
 2nsec Max @ 20% to 80% Vdd
 Symmetry:
 Rise/Fall Time: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



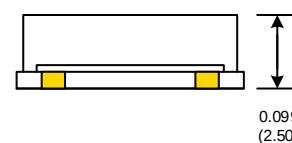
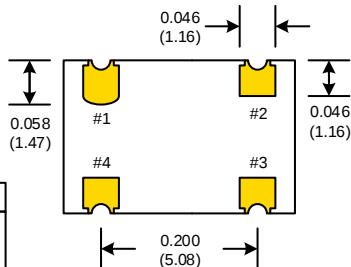
Phase Jitter: (12kHz~80MHz)
Phase Noise Typical:
Phase Noise Floor:
Sub-harmonics:
Aging:
CCHD-575 Options:
Temperature Range: 0°C to +70°C (±20ppm, ±25ppm, ±50ppm)
 -20°C to +70°C (±25ppm, ±50ppm)
 -40°C to +85°C (±25ppm, ±50ppm)

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

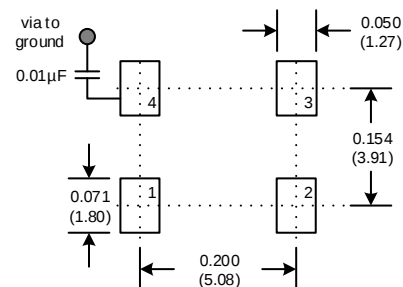
RECOMMENDED REFLOW SOLDERING PROFILE



Denotes pad 1



SUGGESTED PAD LAYOUT



*Standard Frequencies (MHz)

12.000	49.152
22.579200	50.000
24.000	54.000
24.576	80.000
27.000	100.000
40.000	125.000
45.158400	

Pad	Connection
1	NC
2	GND
3	Output
4	Vdd

Rev: N
 Date: 21-Jun-2016
 Page 2 of 3



CRYSTEK
CORPORATION

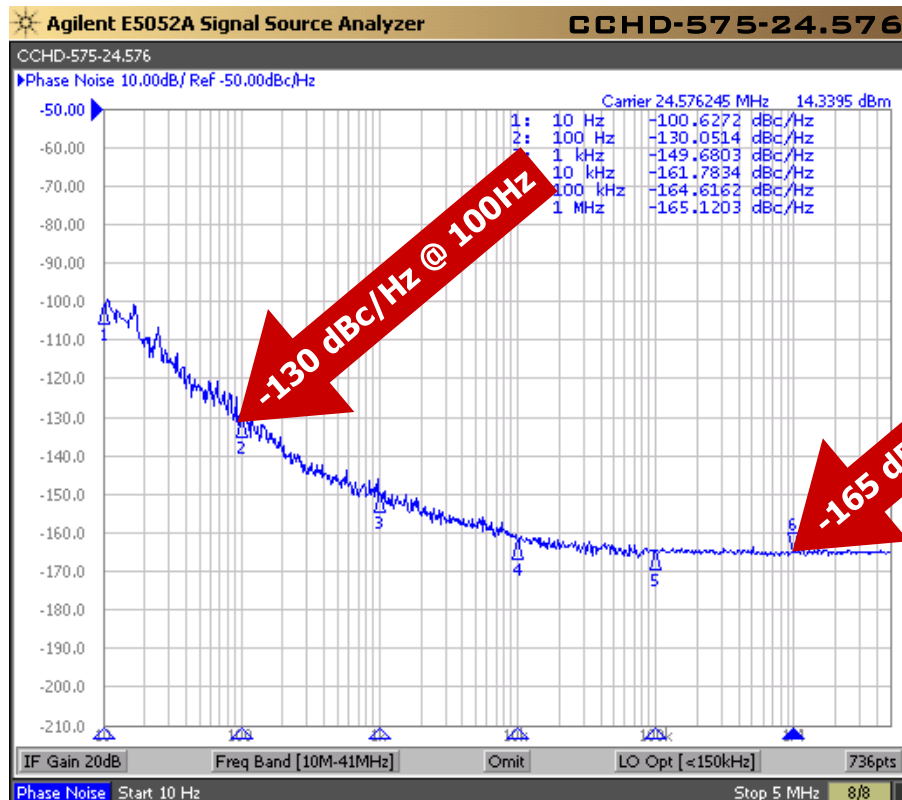
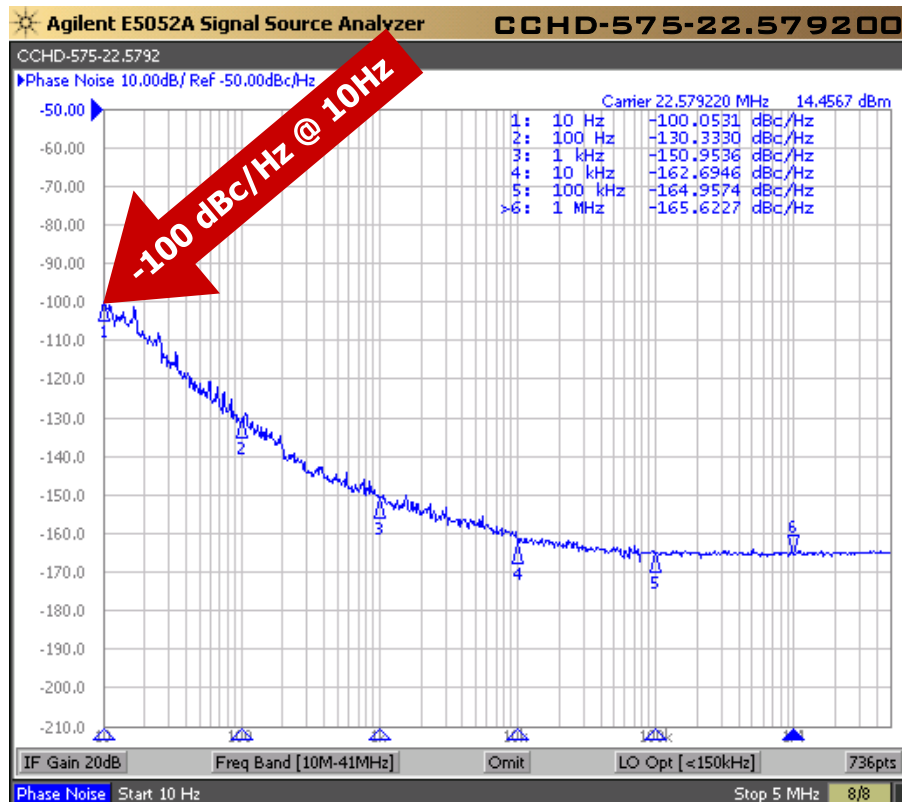
12730 COMMONWEALTH DRIVE • FORT MYERS, FLORIDA 33913
 PHONE: 239-561-3311 • 800-237-3061
 FAX: 239-561-1025 • WWW.CRYSTEK.COM



CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

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

CCHD-575 Ultra-Low Phase Noise Oscillator



Rev: N
Date: 21-Jun-2016
Page 3 of 3



CRYSTEK
CORPORATION

12730 COMMONWEALTH DRIVE • FORT MYERS, FLORIDA 33913
PHONE: 239-561-3311 • 800-237-3061
FAX: 239-561-1025 • WWW.CRYSTEK.COM