



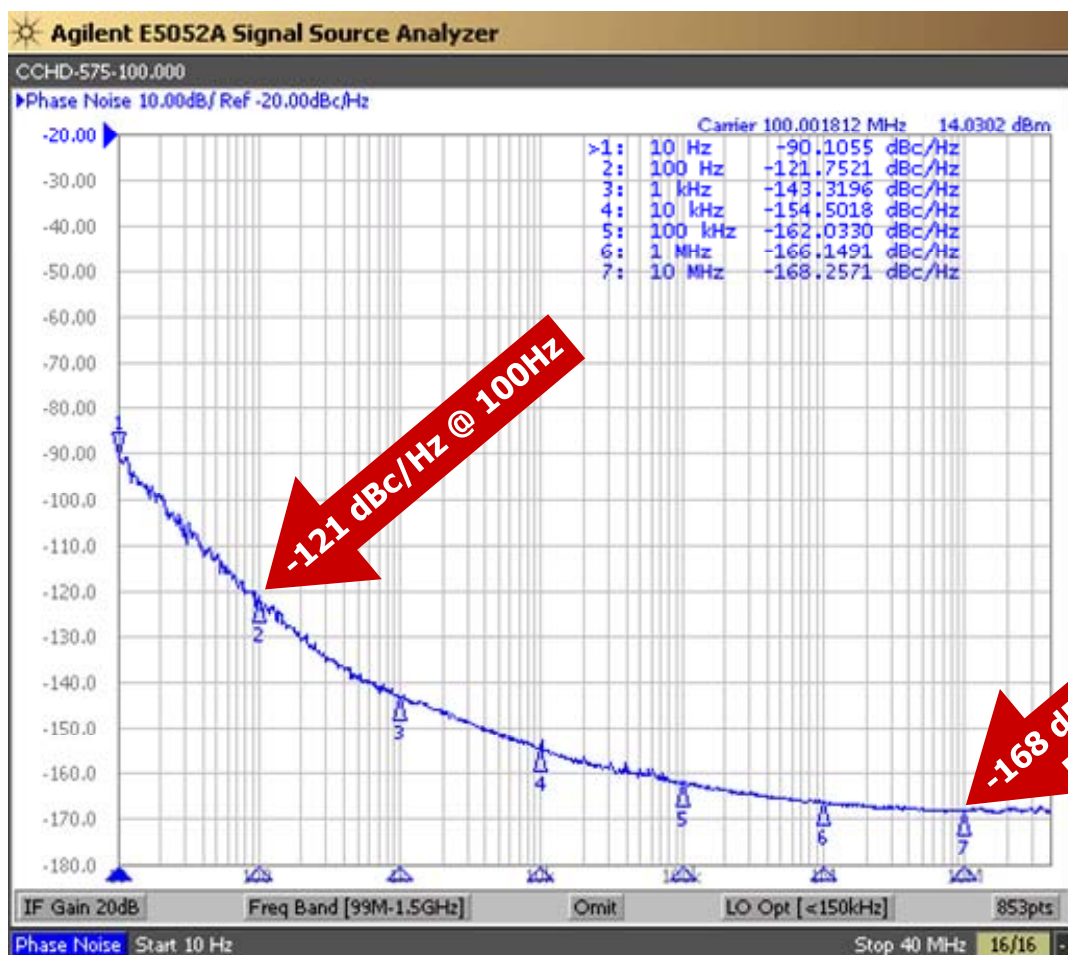
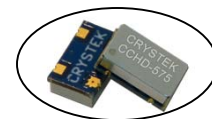
CRYSTEK
CRYSTALS
A DIVISION OF CRYSTEK CORPORATION

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



CCHD-575

Ultra-Low Phase Noise Oscillator



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

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CCHD-575

Ultra-Low Phase Noise Oscillator



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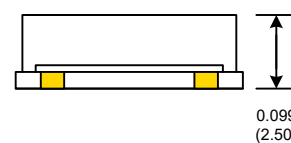
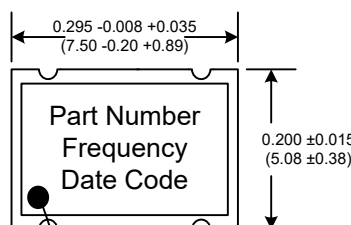
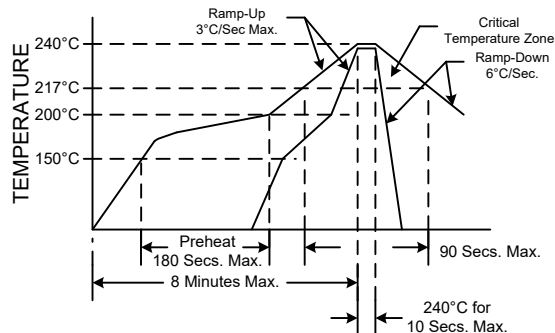
Frequency Range: 12 MHz to 125 MHz*
Temperature Range: 0°C to +70°C
 (Option M) -20°C to +70°C
 (Option X) -40°C to +85°C
Storage: -45°C to 90°C
Input Voltage: 3.3V ±0.3V
Input Current: 15mA Typical, 25mA Max
Output: HCMOS
 Symmetry: 45/55% Max @ 50% Vdd
 Rise/Fall Time: 2ns Max @ 20% to 80% Vdd
 Logic: "0" = 10% Vdd Max
 "1" = 90% Vdd Min
 Load: 15pF
 Output Current: ±24mA Max
Phase Jitter: (12kHz~80MHz) 82 fs RMS Typical @ 100 MHz
Phase Noise Typical: See plot
Phase Noise Floor: -168 dBc/Hz Typical, -165 dBc/Hz Max
Sub-harmonics: None
Aging: <3ppm 1st year, <1ppm thereafter



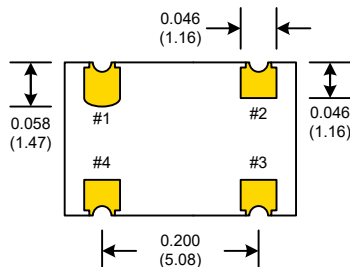
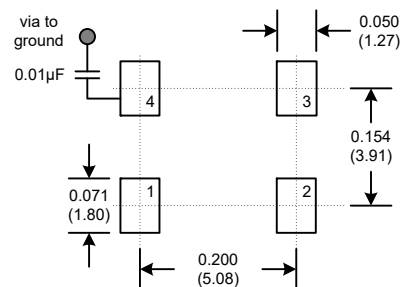
CCHD-575 Options:
Temperature Range: 0°C to +70°C (±20ppm, ±25ppm, ±50ppm)
 -20°C to +70°C (±25ppm, ±50ppm)
 -40°C to +85°C (±25ppm, ±50ppm)

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

RECOMMENDED REFLOW SOLDERING PROFILE



SUGGESTED PAD LAYOUT



*Standard Frequencies (MHz)

12.000	48.000
16.924400	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

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

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Specifications subject to change without notice.



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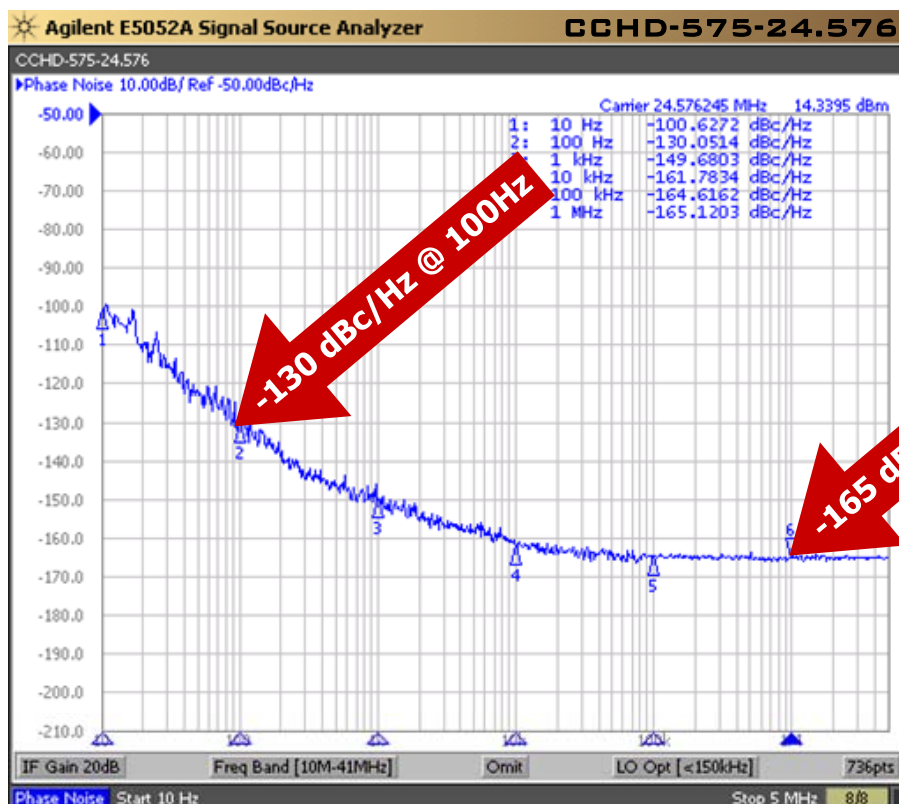
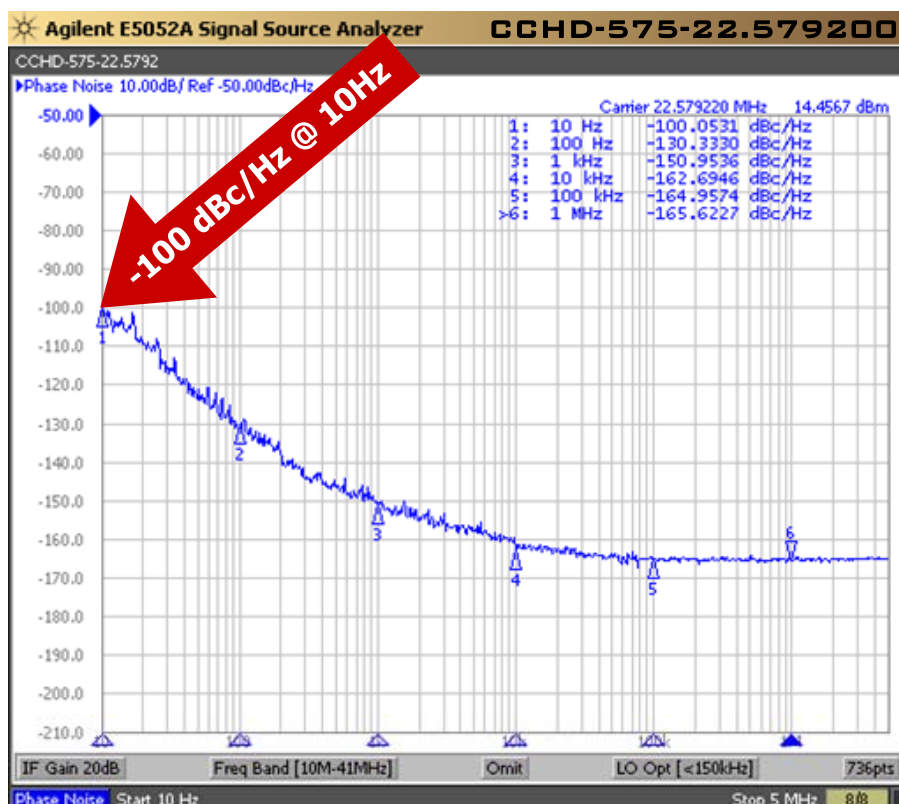
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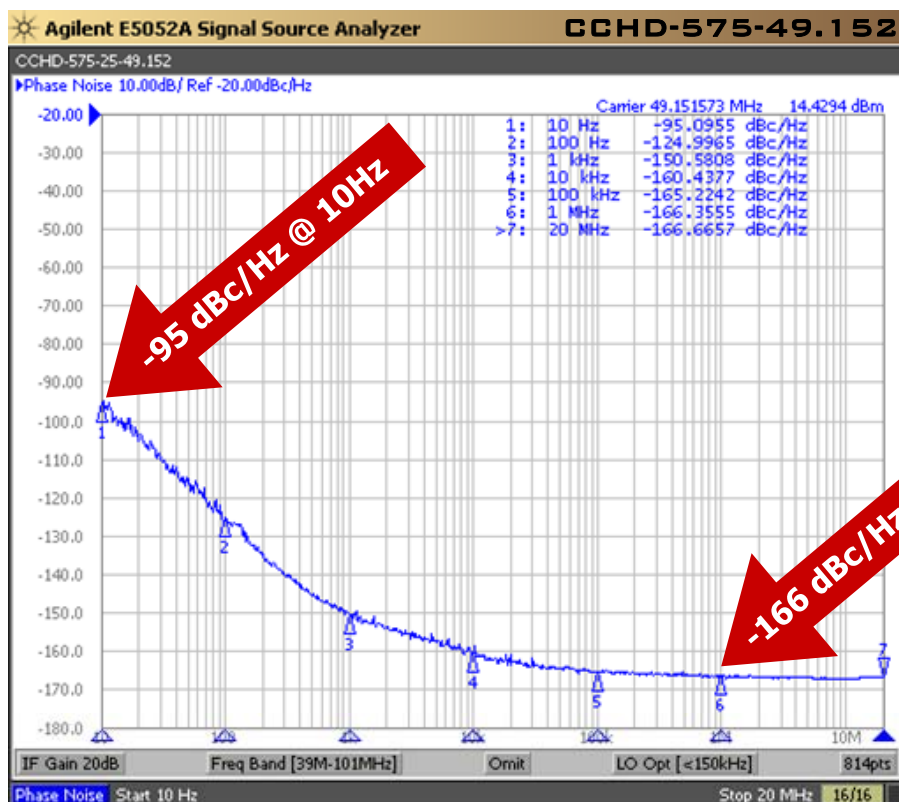
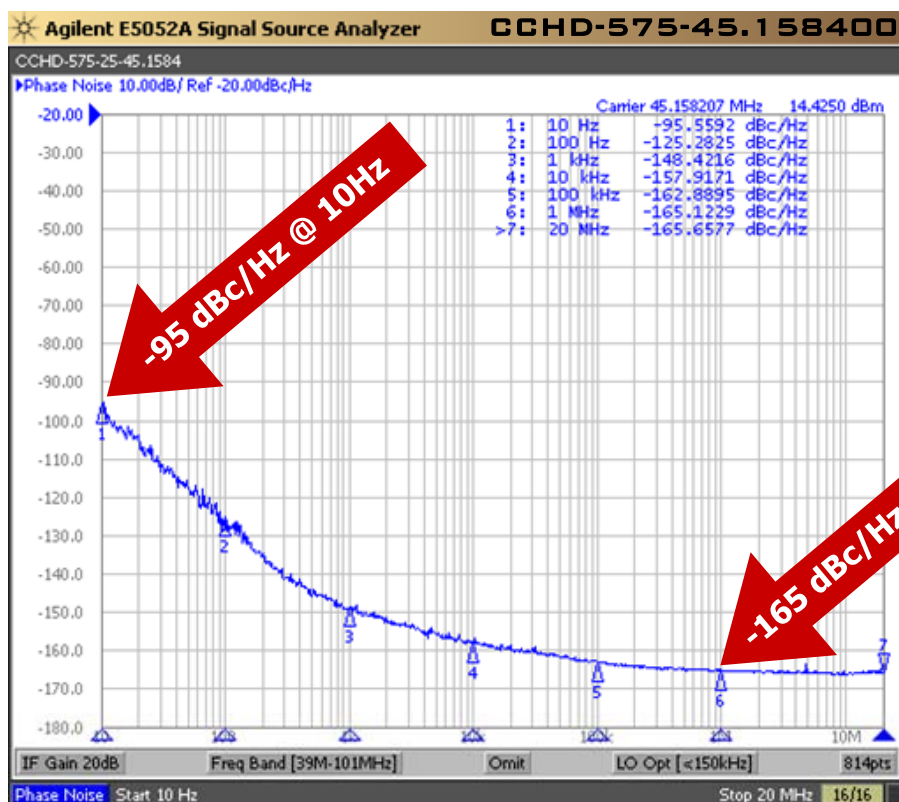


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