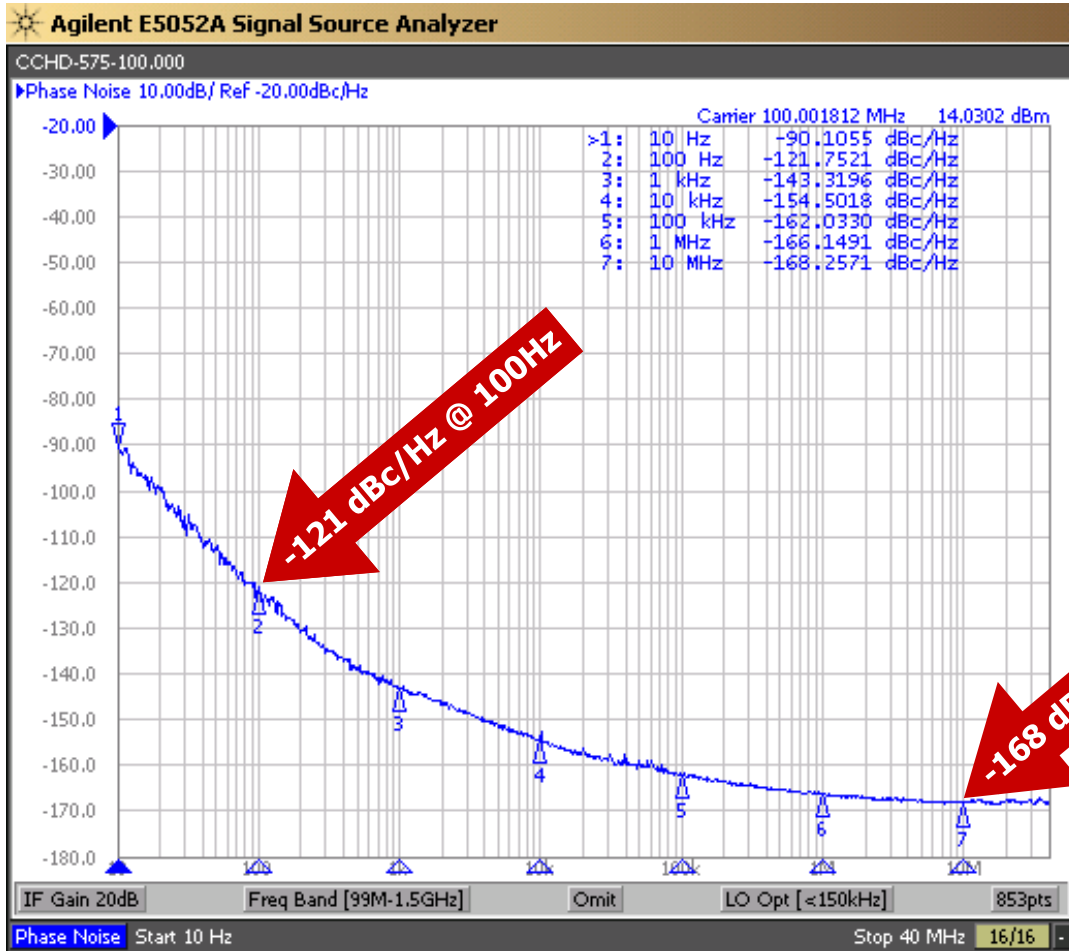
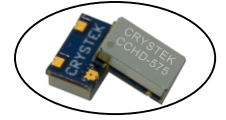


# CCHD-575

## Ultra-Low Phase Noise Oscillator

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



Model CCHD-575 is the industry's lowest jitter clock oscillator in a 5x7.5 mm package. It features a typical phase jitter of 82fs 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  $\pm 24$ mA. 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



### CCHD-575 Model

5x7.5 mm SMD, 3.3V, HCMOS

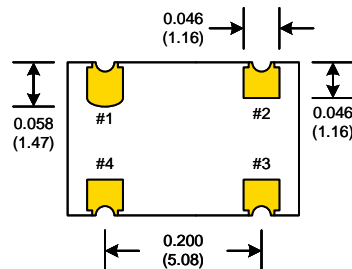
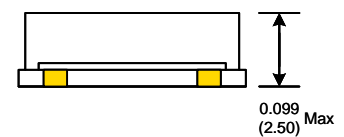
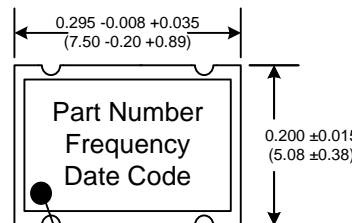
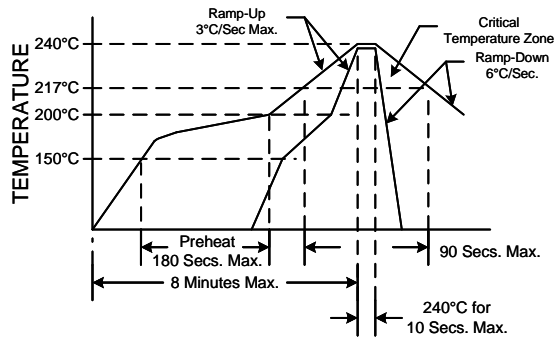
<b>Frequency Range:</b>	12 MHz to 125 MHz*
<b>Temperature Range:</b>	0°C to +70°C
(Option M)	-20°C to +70°C
(Option X)	-40°C to +85°C
<b>Storage:</b>	-45°C to 90°C
<b>Input Voltage:</b>	3.3V ±0.3V
<b>Input Current:</b>	15mA Typical, 25mA Max
<b>Output:</b>	HCMOS
<b>Symmetry:</b>	45/55% Max @ 50% Vdd
<b>Rise/Fall Time:</b>	2ns Max @ 20% to 80% Vdd
<b>Logic:</b>	"0" = 10% Vdd Max "1" = 90% Vdd Min
<b>Load:</b>	15pF
<b>Output Current:</b>	±24mA Max
<b>Phase Jitter: (12kHz~80MHz)</b>	82fs RMS Typical @ 100 MHz
<b>Phase Noise Typical:</b>	See plot
<b>Phase Noise Floor:</b>	-165 dBc/Hz Typical, -161 dBc/Hz Max
<b>Sub-harmonics:</b>	None
<b>Aging:</b>	<3ppm 1 <sup>st</sup> year, <1ppm thereafter



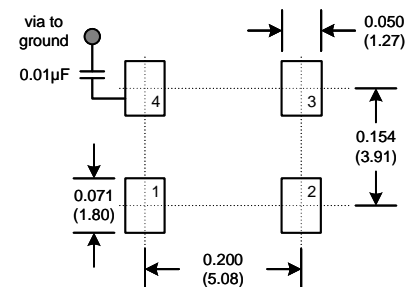
<b>CCHD-575 Options:</b>	
<b>Temperature Range:</b>	0°C to +70°C (±20ppm, ±25ppm, ±50ppm) -20°C to +70°C (±25ppm, ±50ppm) -40°C to +85°C (±25ppm, ±50ppm)

**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

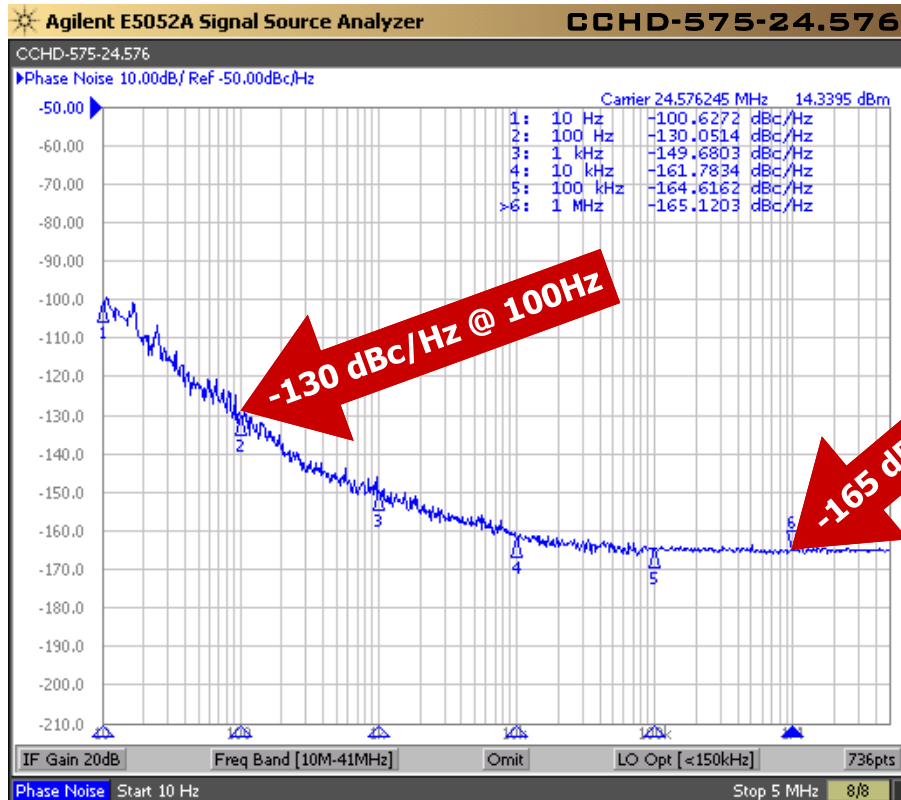
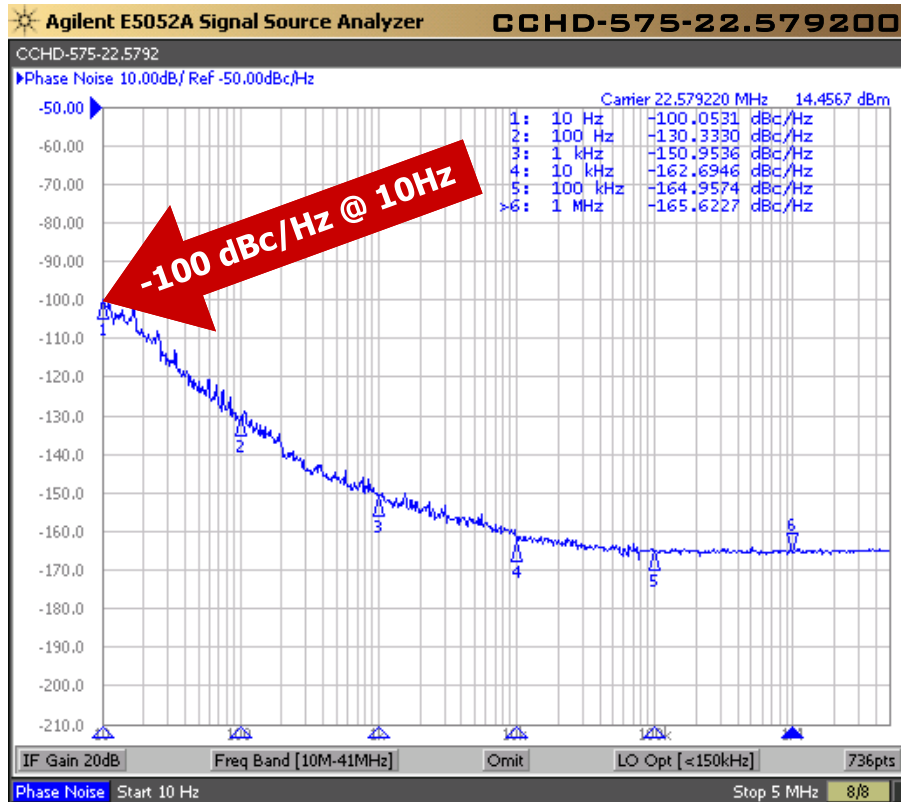
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# CCHD-575

## Ultra-Low Phase Noise Oscillator

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

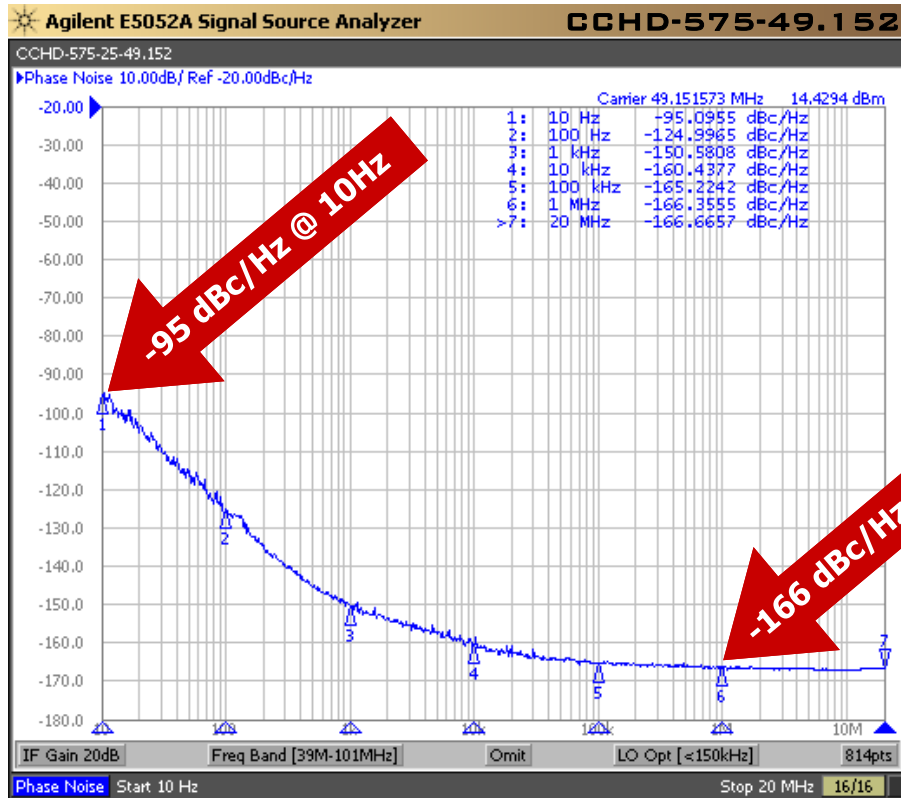
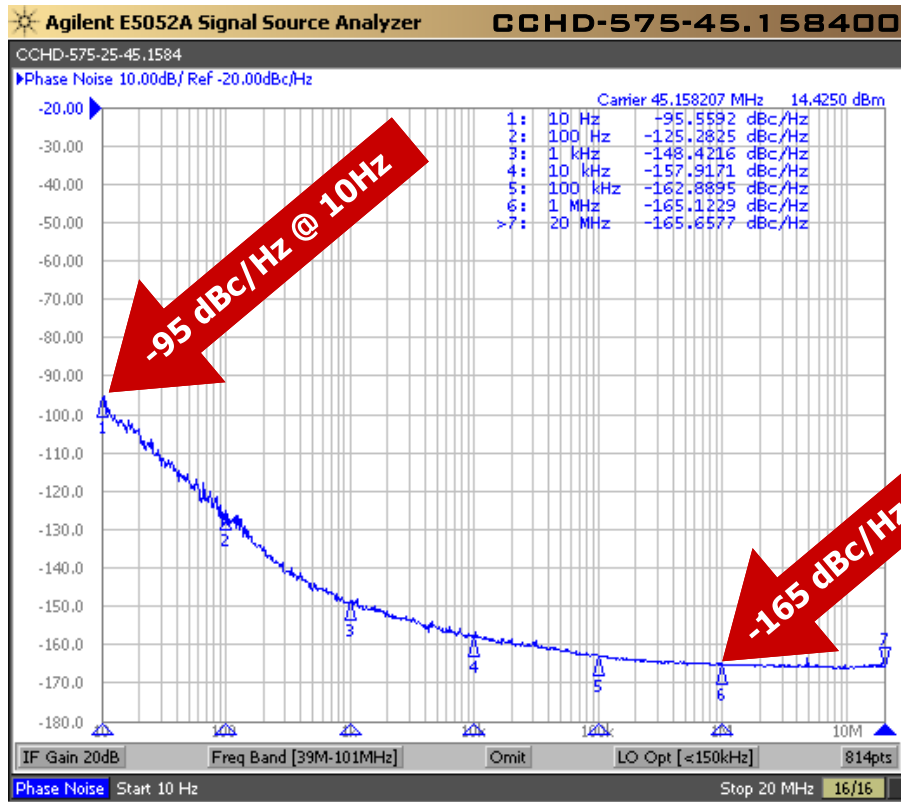


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# CCHD-575 Ultra-Low Phase Noise Oscillator

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



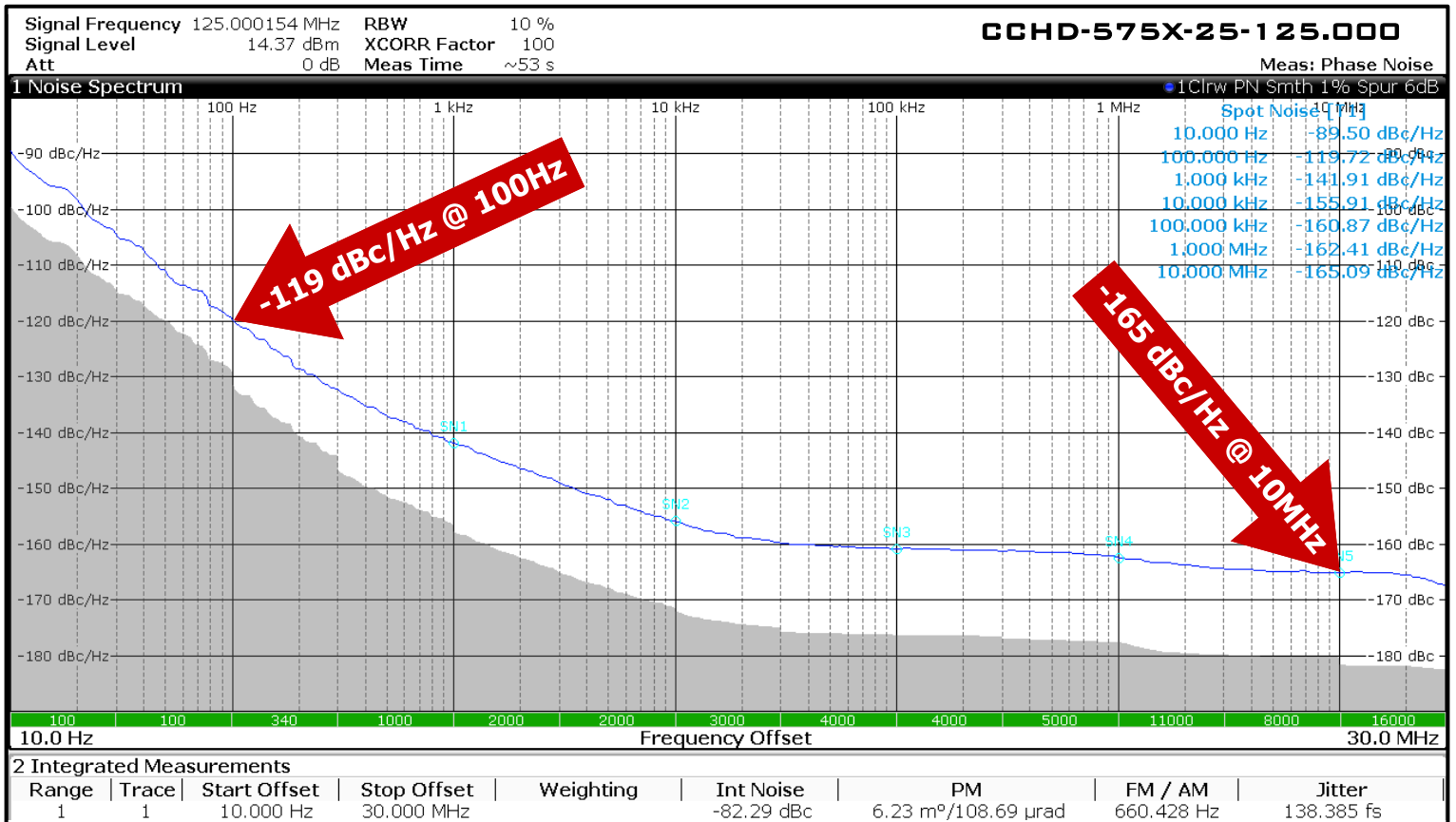
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# CCHD-575

## Ultra-Low Phase Noise Oscillator

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



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