



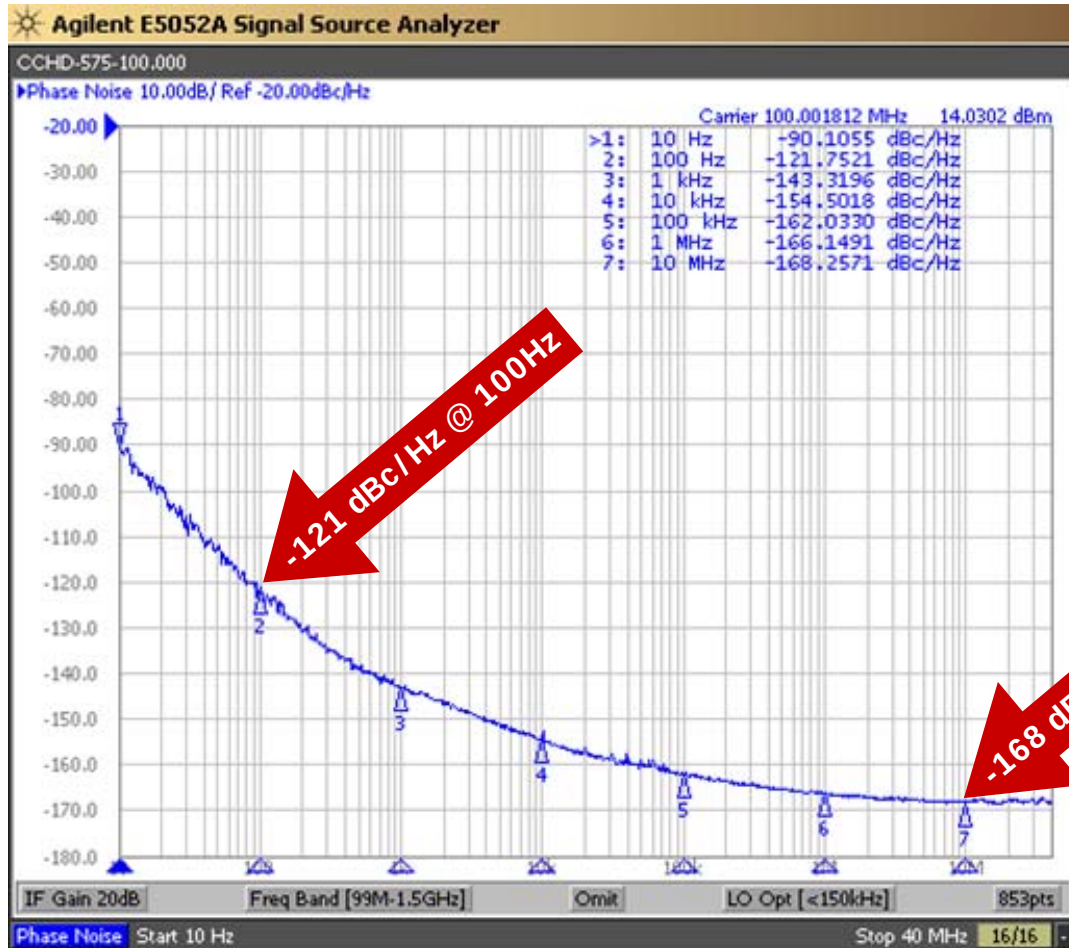
**CRYSTEK**  
CRYSTALS  
A DIVISION OF CRYSTEK CORPORATION

**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  $\pm 24\text{mA}$ . 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: C  
Date: 11-Jan-12  
Page 1 of 2



**CRYSTEK**  
CORPORATION

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

# CCHD-575

## Ultra-Low Phase Noise Oscillator



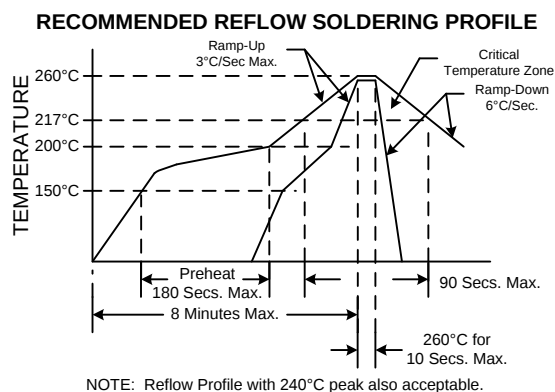
**CCHD-575 Model**  
5×7.5 mm SMD, 3.3V, HCMOS

**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  
 82 fSec RMS Typ. @ 100 MHz  
 See plots  
 -168dBc/Hz Typ., -165dBc/Hz Max  
 None  
 <3ppm 1st/yr, <1ppm thereafter

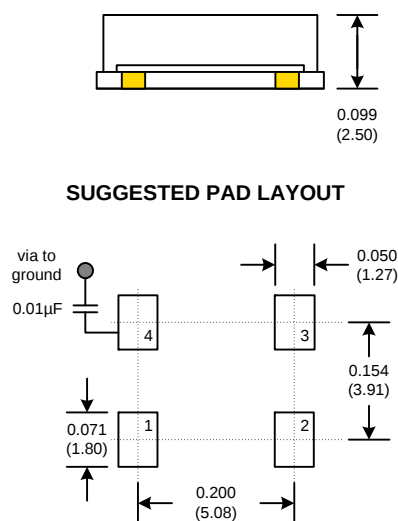
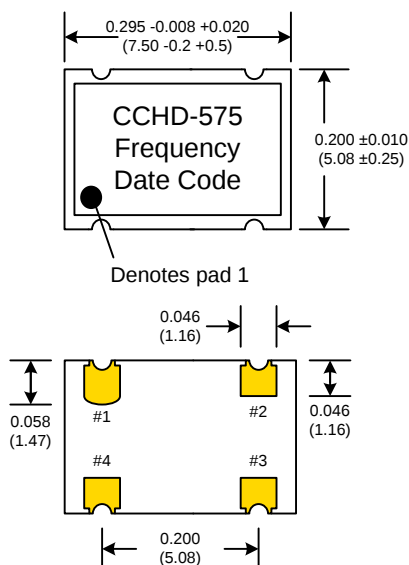
**Phase Jitter:** (12kHz~80MHz)  
**Phase Noise Typical:**  
**Phase Noise Floor:**  
**Sub-harmonics:**  
**Aging:**

**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



| Pad | Connection |
|-----|------------|
| 1   | NC         |
| 2   | GND        |
| 3   | Output     |
| 4   | Vdd        |



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 Page 2 of 2