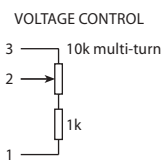


PIN	CONNECTION
1	Ground
2	Freq adjustment
3	Ref voltage out
4	Supply
5	RF output



Scale 1:1

Features

- ▀ Temperature stability down to 3ppb
- ▀ Single oven & oscillator supply
- ▀ AT cut or SC cut overtone crystal
- ▀ Standard European pin-out
- ▀ Custom options available

Specifications

HCD661AT: AT cut overtone crystal

HCD661SC: SC cut overtone crystal

Parameters	Variant		Option Codes
	AT	SC	
Frequency range: 5.0 ~ 20.0MHz (5.0 & 10.0MHz are standard)	■	■	
Frequency stability: Per day at despatch Per year max Per 10% change in V _{DD}	±1x10 ⁻⁹ ±1x10 ⁻⁷ ±3x10 ⁻⁹	±2x10 ⁻¹⁰ ±2x10 ⁻⁸ ±1x10 ⁻⁹	
Short term stability: Over 1 sec Over 1 sec (5.0MHz) Over 1 sec (10.0MHz)	±5x10 ⁻¹¹	±5x10 ⁻¹² ±1x10 ⁻¹¹	
Temperature stability: Over -20 to +70°C	±1x10 ⁻⁸	±3x10 ⁻⁹	
Operating temperature range: -20 to +70°C Other options from -40°C	■	□	specify
Storage temperature range: -40 to +90°C	■	■	
Output waveform: HCMOS / TTL compatible	■	■	
Frequency adjustment: Electrical, over +0.5 to +7.0V (sufficient for 10 years ageing min) Stabilised +7.0V supply provided	±1x10 ⁻⁶	±5x10 ⁻⁷	
Supply voltage (V_{DD}): +12.0V (±0.5V) Other options from 12~30V	■ □	■ □	specify
Power consumption: 5.0W max at switch on 1.3W typ when stabilised at 25°C	■ ■	■ ■	
Warm up: After 12mins at +25°C After 8mins at +25°C	±2x10 ⁻⁸	±1x10 ⁻⁸	
Phase noise (@ 10.0MHz): dBc/Hz @ 10Hz dBc/Hz @ 100Hz dBc/Hz @ 1kHz dBc/Hz @ 10kHz dBc/Hz @ 50kHz	< -120 < -130 < -150 < -155 < -155	< -130 < -145 < -155 < -158 < -160	
Harmonics: < -30dB wrt carrier	■	■	
Shock: IEC 68-2-27 Test Ea 50G for 11ms	■	■	
Vibration: IEC 68-2-06 Test Fc 10-55Hz, 1.5mm. 55-500Hz, 10G	■	■	

■ Standard. □ Optional - Please specify required code(s) when ordering

Ordering Information

Product name + frequency

eg: **HCD661AT 10.0MHz**

HCD661SC 5.0MHz

Option code X (eg HCD661SC/X) denotes a custom spec.