



Features

- ▶ Temperature stability down to 50ppb
- ▶ Single 12V supply (15V or 18V optional)
- ▶ Low profile compact package
- ▶ Standard European IEC CO-08 pin-out
- ▶ Custom options available

Standard Models

The table shows the most common models. In most cases selecting one of these models will ensure the best combination of price / performance and availability.

Freq	Specification	Ageing per day	Temperature stability	Part No
5.0MHz	HCD310/BNDN	±5x10 ⁻⁹	±5x10 ⁻⁸ -20+60°C	MS08441
10.0MHz	HCD310/BNDN	±5x10 ⁻⁹	±5x10 ⁻⁸ -20+60°C	MS06244
13.0MHz	HCD310/BNDN	±5x10 ⁻⁹	±5x10 ⁻⁸ -20+60°C	MS08799
50.0MHz	HCD310/BNDN	±5x10 ⁻⁹	±5x10 ⁻⁸ -20+60°C	MA02777
5.0MHz	HCD311/BNDN	±5x10 ⁻⁹	±5x10 ⁻⁸ -20+60°C	MA05180
10.0MHz	HCD311/BNDN	±5x10 ⁻⁹	±5x10 ⁻⁸ -20+60°C	MA01432
50.0MHz	HCD311/BNDN	±5x10 ⁻⁹	±5x10 ⁻⁸ -20+60°C	MA05478

Specifications

HCD310: Sine wave output

HCD311: HCMOS / TTL compatible output

Parameters	Product		Option Codes
	HCD310	HCD311	
Frequency range: 5.0 ~ 60.0MHz 5.0 ~ 50.0MHz	■	■	
Ageing per day (at despatch): < ±1x10 ⁻⁸ < ±5x10 ⁻⁹	□ ■	□ ■	A B
Frequency stability: ±5x10 ⁻⁷ per year ±1x10 ⁻⁷ per 5% change in V _{DD}	■ ■	■ ■	
Temperature stability: < ±1x10 ⁻⁷ < ±5x10 ⁻⁸	□ ■	□ ■	M N
Operating temperature range: -20 to +60°C 0 to +70°C -20 to +70°C	■ □ □	■ □ □	D E F
Storage temperature range: -40 to +90°C	■	■	
Output waveform: Sine wave, 1.5V p-p ±0.5V into 50Ω HCMOS / TTL compatible	■	■	
Frequency adjustment: ±1x10 ⁻⁵ typ (10MHz), +0.5 to +6.0V (sufficient for 10 years ageing min) Stabilised +6.0V supply provided	■	■	
Supply voltage (V _{DD}): +12V (±0.5V) +15V (±0.5V) +18V (±0.5V)	■ □ □	■ □ □	N P R
Power consumption: 4.5W max at switch on 1.0W typ when stabilised at 25°C	■ ■	■ ■	
Warm up: ±5x10 ⁻⁸ after 10mins at +25°C	■	■	
Phase noise (@ 10.0MHz): < -110dBc/Hz @ 10Hz < -130dBc/Hz @ 100Hz < -145dBc/Hz @ 1kHz < -150dBc/Hz @ 10kHz < -150dBc/Hz @ 50kHz	■ ■ ■ ■ ■	■ ■ ■ ■ ■	
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

Part No, or product name + option codes + frequency
eg: **HCD310/BNDN 10.0MHz**

HCD311/AMFP 20.0MHz

Option code X (eg HCD310/X) denotes a custom specification.

♦ See HCD210 for chassis-mounted version of HCD310