



## Features

- ▶ Temperature stability down to 50ppb
- ▶ Single 5V oven & oscillator supply
- ▶ 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  | HCD300/BNDL   | $\pm 5 \times 10^{-9}$ | $\pm 5 \times 10^{-8}$ -20+60°C | MA05178 |
| 10.0MHz | HCD300/BNDL   | $\pm 5 \times 10^{-9}$ | $\pm 5 \times 10^{-8}$ -20+60°C | MS09525 |
| 5.0MHz  | HCD301/BNDL   | $\pm 5 \times 10^{-9}$ | $\pm 5 \times 10^{-8}$ -20+60°C | MA05179 |
| 10.0MHz | HCD301/BNDL   | $\pm 5 \times 10^{-9}$ | $\pm 5 \times 10^{-8}$ -20+60°C | MS08568 |
| 13.0MHz | HCD301/BNDL   | $\pm 5 \times 10^{-9}$ | $\pm 5 \times 10^{-8}$ -20+60°C | MS07546 |

## Specifications

**HCD300: Sine output**

**HCD301: HCMOS / TTL compatible output**

| Parameters   | Product               |                       | Option Codes |
|--|-----------------------|-----------------------|--------------|
|  | HCD300                | HCD301                |              |
| Frequency range: 5.0 ~ 20.0MHz   | ■                     | ■                     |              |
| Ageing per day (at despatch):<br>< $\pm 1 \times 10^{-8}$<br>< $\pm 5 \times 10^{-9}$  | □<br>■                | □<br>■                | A<br>B       |
| Frequency stability:<br>$\pm 5 \times 10^{-7}$ per year max<br>$\pm 5 \times 10^{-8}$ per 5% change in $V_{DD}$  | ■<br>■                | ■<br>■                |              |
| Temperature stability:<br>< $\pm 1 \times 10^{-7}$<br>< $\pm 5 \times 10^{-8}$   | □<br>■                | □<br>■                | M<br>N       |
| Operating temperature range:<br>0 to +50°C<br>-20 to +60°C<br>-20 to +70°C   | □<br>■<br>□           | □<br>■<br>□           | A<br>D<br>F  |
| Storage temperature range:<br>-40 to +90°C   | ■                     | ■                     |              |
| Output waveform:<br>Sine wave, 1.5V p-p $\pm 0.5V$ into 50Ω<br>HCMOS / TTL compatible  | ■                     | ■                     |              |
| Frequency adjustment:<br>$\pm 5 \times 10^{-6}$ typ (10MHz), +0.5 to +4.0V<br>(sufficient for 10 years ageing min)<br>Stabilised +4.0V supply provided | ■                     | ■                     |              |
| Supply voltage ( $V_{DD}$ ):<br>+5.0V ( $\pm 0.25V$ )  | ■                     | ■                     | L            |
| Power consumption:<br>4.5W max at switch on<br>< 1.0W typ when stabilised at 25°C  | ■<br>■                | ■<br>■                |              |
| Warm up:<br>$\pm 5 \times 10^{-8}$ after 10mins at +25°C   | ■                     | ■                     |              |
| Phase noise (@ 10.0MHz):<br>< -105dBc/Hz @ 10Hz<br>< -125dBc/Hz @ 100Hz<br>< -145dBc/Hz @ 1kHz<br>< -150dBc/Hz @ 10kHz<br>< -150dBc/Hz @ 50kHz         | ■<br>■<br>■<br>■<br>■ | ■<br>■<br>■<br>■<br>■ |              |
| Shock: IEC 68-2-27 Test Ea<br>50G for 11ms   | ■                     | ■                     |              |
| Vibration: IEC 68-2-06 Test Fc<br>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: **HCD300/BNDL 10.0MHz**

**HCD301/BMFL 5.0MHz**

Option code X (eg HCD301/X) denotes a custom specification.