



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): < $\pm 1 \times 10^{-8}$ < $\pm 5 \times 10^{-9}$ | □ ■ | □ ■ | A B |
| Frequency stability: $\pm 5 \times 10^{-7}$ per year max $\pm 5 \times 10^{-8}$ per 5% change in V_{DD} | ■ ■ | ■ ■ | |
| Temperature stability: < $\pm 1 \times 10^{-7}$ < $\pm 5 \times 10^{-8}$ | □ ■ | □ ■ | M N |
| Operating temperature range: 0 to +50°C -20 to +60°C -20 to +70°C | □ ■ □ | □ ■ □ | A D F |
| Storage temperature range: -40 to +90°C | ■ | ■ | |
| Output waveform: Sine wave, 1.5V p-p $\pm 0.5V$ into 50Ω HCMOS / TTL compatible | ■ | ■ | |
| Frequency adjustment: $\pm 5 \times 10^{-6}$ typ (10MHz), +0.5 to +4.0V (sufficient for 10 years ageing min) Stabilised +4.0V supply provided | ■ | ■ | |
| Supply voltage (V_{DD}): +5.0V ($\pm 0.25V$) | ■ | ■ | L |
| Power consumption: 4.5W max at switch on < 1.0W typ when stabilised at 25°C | ■ ■ | ■ ■ | |
| Warm up: $\pm 5 \times 10^{-8}$ after 10mins at +25°C | ■ | ■ | |
| Phase noise (@ 10.0MHz): < -105dBc/Hz @ 10Hz < -125dBc/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: **HCD300/BNDL 10.0MHz**

HCD301/BMFL 5.0MHz

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