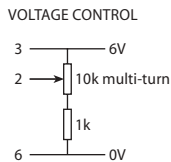


| PIN | CONNECTION |
|-----|-----------------|
| 1 | Case |
| 2 | Freq Adjustment |
| 3 | +6V output |
| 4 | RF output |
| 5 | Supply |
| 6 | Ground |



Scale 1:1

Features

- ▶ HCMOS / TTL compatible output
- ▶ Low profile package
- ▶ Cost effective
- ▶ Single supply version of HCD180 / 1
- ▶ Custom options available

Standard Models

| Freq | Specification | Ageing per day | Temperature stability | Part No |
|---------|---------------|------------------------|---------------------------------|---------|
| 5.0MHz | HCD190/BNDN | $\pm 5 \times 10^{-9}$ | $\pm 5 \times 10^{-8}$ -20+60°C | MS08425 |
| 10.0MHz | HCD190/BNDN | $\pm 5 \times 10^{-9}$ | $\pm 5 \times 10^{-8}$ -20+60°C | MA05204 |

Specifications

HCD190: 5.0 ~ 16.0MHz

HCD191: 30.0kHz ~ 5.0MHz

| Parameters | Product | | Option Codes |
|---|--|--|--------------|
| | HCD190 | HCD191 | |
| Frequency range: 30.0kHz ~ 5.0MHz 5.0 ~ 16.0MHz | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Ageing per day (at despatch): $< \pm 1 \times 10^{-8}$ $< \pm 5 \times 10^{-9}$ | <input type="checkbox"/> <input checked="" type="checkbox"/> | <input type="checkbox"/> <input checked="" type="checkbox"/> | A B |
| Frequency stability: $\pm 5 \times 10^{-7}$ / year max $\pm 1 \times 10^{-7}$ per 5% change in V_{DD} | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | |
| Temperature stability: $< \pm 1 \times 10^{-7}$ $< \pm 5 \times 10^{-8}$ | <input type="checkbox"/> <input checked="" type="checkbox"/> | <input type="checkbox"/> <input checked="" type="checkbox"/> | M N |
| Operating temperature range: 0 to +50°C -20 to +60°C -20 to +70°C | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> | A D F |
| Storage temperature range: -40 to +90°C | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Output waveform: HCMOS / TTL compatible | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Frequency adjustment: $\pm 2 \times 10^{-5}$ typ, +0.5 to +6.0V (sufficient for 10 years ageing min) Stabilised +6.0V supply provided | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Supply voltage (V_{DD}): +12.0V (± 0.5 V) Other options from 10~30V | <input checked="" type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> <input type="checkbox"/> | N specify |
| Power consumption: 4.5W max at switch on 1.0W typ when stabilised at 25°C | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | |
| Warm up: $\pm 5 \times 10^{-8}$ after 10mins at +25°C | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Phase noise (@ 10.0MHz): < -110 dBc/Hz @ 10Hz < -130 dBc/Hz @ 100Hz < -145 dBc/Hz @ 1kHz < -150 dBc/Hz @ 10kHz | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> | |
| Shock: IEC 68-2-27 Test Ea 50G for 11ms | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Vibration: IEC 68-2-06 Test Fc 10-55Hz, 1.5mm. 55-500Hz, 10G | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |

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

Ordering Information

Part No, or Product name + frequency

eg: **HCD190/BNDN 10.0MHz**

HCD191/AMFN 10.0MHz

Option code X (eg HCD190/X) denotes a custom specification.