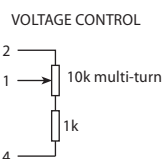


PIN	CONNECTION
1	Freq adjustment
2	Ref voltage out
3	RF output
4	Ground
5	Supply



Features

- ▶ Temperature stability down to 1ppb
- ▶ Single 12V supply (12V ~ 30V optional)
- ▶ Standard US footprint & pin-out
- ▶ "Best in class" close-in phase noise option

Standard Models

Freq	Specification	Ageing per day	Temperature stability	Part No
10.0MHz	HCD680/DRFN	< 1x10 ⁻⁹	< 1x10 ⁻⁸ -20+70°C	MP02424
10.0MHz	HCD680/FTFN	< 2x10 ⁻¹⁰	< 3x10 ⁻⁹ -20+70°C	MP02425

Specifications

Parameters	Product	Option Codes
	HCD680	
Frequency range: 5.0 ~ 20.0MHz	■	
Ageing per day (at despatch): < 1x10 ⁻⁹ < 5x10 ⁻¹⁰ < 2x10 ⁻¹⁰	■ □ ■	D E F
Frequency stability: < 1x10 ⁻⁷ per year (option D) < 2x10 ⁻⁸ per year (option F) < 1x10 ⁻⁹ per 10% change in V _{DD} < 5x10 ⁻¹⁰ per 10% change in load	□ □ ■ ■	
Temperature stability: < 1x10 ⁻⁸ < 5x10 ⁻⁹ < 3x10 ⁻⁹ < 1x10 ⁻⁹	■ □ ■ □	R S T V
Operating temperature range: -10 to +60°C -20 to +70°C -40 to +70°C	□ ■ □	C F G
Storage temperature range: -40 to +90°C	■	
Output waveform: Sine wave, 7dBm (±1dBm) into 50Ω Other options to +13dBm max	■ □	specify
Frequency adjustment: ±5x10 ⁻⁷ (typ) over +0.5 to +7.0V (sufficient for 10 years ageing min) Stabilised +7.0V supply provided	■	
Supply voltage (V_{DD}): +12V (±0.5V) Other options from 12~30V	■ □	N specify
Power consumption: 5.0W max at switch on 1.2W typ when stabilised at 25°C	■ ■	
Warm up: < 1x10 ⁻⁸ after 8mins at +20°C	■	
Allan deviation (ADEV), 1 sec: < 5x10 ⁻¹³ (5.0MHz) < 1x10 ⁻¹² (10.0MHz)	■ ■	
Close-in phase noise (@ 5.0MHz): < -110 dBc/Hz @ 1Hz, < -135 @ 10Hz < -123 dBc/Hz @ 1Hz, < -140 @ 10Hz < -150 dBc/Hz @ 100Hz	■ □ ■	Z
Close-in phase noise (@ 10.0MHz): < -95 dBc/Hz @ 1Hz, < -130 @ 10Hz < -108 dBc/Hz @ 1Hz, < -135 @ 10Hz < -145 dBc/Hz @ 100Hz	■ □ ■	Z
Far-out phase noise (all freqs): < -155 dBc/Hz @ 1kHz < -157 dBc/Hz @ 10kHz < -157 dBc/Hz @ 100kHz	■ ■ ■	
Harmonics: < -30dB wrt carrier	■	

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

Ordering Information

Part No, or product name + option codes + frequency
eg: **HCD680/FTFN 10.0MHz**
Option code X (eg HCD680/X) denotes a custom specification.