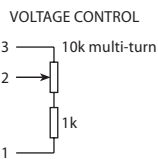


PIN	CONNECTION
1	Ground
2	Freq adjustment
3	Ref voltage out
4	Supply
5	RF output



Scale 1:1

Features

- ▶ **Temperature stability down to 3ppb**
- ▶ **Single 12V supply (12V ~ 30V optional)**
- ▶ **Standard European pin-out**
- ▶ **Custom options available**

Standard Models

Freq	Specification	Ageing per day	Temperature stability	Part No
5.0MHz	HCD660/DRFN	$\pm 1 \times 10^{-9}$	$\pm 1 \times 10^{-8}$ -20+70°C	MS06938
5.0MHz	HCD660/FTFN	$\pm 2 \times 10^{-10}$	$\pm 3 \times 10^{-9}$ -20+70°C	MS06940
10.0MHz	HCD660/DRFN	$\pm 1 \times 10^{-9}$	$\pm 1 \times 10^{-8}$ -20+70°C	MS06937
10.0MHz	HCD660/FTFN	$\pm 2 \times 10^{-10}$	$\pm 3 \times 10^{-9}$ -20+70°C	MS06939

Specifications

Parameters	Product	Option Codes
	HCD660	
Frequency range: 5.0 ~ 20.0MHz	■	
Ageing per day (at despatch): $< \pm 1 \times 10^{-9}$ $< \pm 5 \times 10^{-10}$ $< \pm 2 \times 10^{-10}$	■ □ ■	D E F
Frequency stability: $< \pm 1 \times 10^{-7}$ per year (option D) $< \pm 2 \times 10^{-8}$ per year (option F) $< \pm 1 \times 10^{-9}$ per 10% change in V_{DD} $< \pm 5 \times 10^{-10}$ per 10% change in load	□ □ ■ ■	
Short term stability: $< \pm 1 \times 10^{-12}$ over 1 sec (5.0MHz)	■	
Temperature stability: $< \pm 1 \times 10^{-8}$ $< \pm 5 \times 10^{-9}$ $< \pm 3 \times 10^{-9}$	■ □ ■	R S T
Operating temperature range: 0 to +50°C -10 to +60°C -20 to +70°C -40 to +70°C	□ □ ■ □	A C F G
Storage temperature range: -40 to +90°C	■	
Output waveform: Sine wave, 7dBm (± 1 dBm) into 50Ω Other options to +13dBm max	■ □	specify
Frequency adjustment: $\pm 5 \times 10^{-7}$ (typ) over +0.5 to +7.0V (sufficient for 10 years ageing min) Stabilised +7.0V supply provided	■	
Supply voltage (V_{DD}): +12V (± 0.5 V) +15V (± 0.5 V) Other options from 12~30V	■ □ □	N P specify
Power consumption: 5.0W max at switch on 1.2W typ when stabilised at 25°C	■ ■	
Warm up: $< \pm 1 \times 10^{-8}$ after 8mins at +20°C	■	
Phase noise (@ 10.0MHz): < -130 dBc/Hz @ 10Hz < -140 dBc/Hz @ 100Hz < -155 dBc/Hz @ 1kHz < -158 dBc/Hz @ 10kHz < -160 dBc/Hz @ 50kHz	■ ■ ■ ■ ■	
Harmonics: < -30 dB wrt carrier	■	
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: **HCD660/FTFN 10.0MHz**

HCD660/DRFN 5.0MHz

Option code X (eg HCD660/X) denotes a custom specification.