



Features

- ▶ Temperature stability down to 20ppb
- ▶ Single 5V oven & oscillator supply
- ▶ 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	HCD351/DPFL	$\pm 1 \times 10^{-9}$	$\pm 2 \times 10^{-8}$ -20+70°C	MA05181
5.0MHz	HCD351/ERFL	$\pm 5 \times 10^{-10}$	$\pm 1 \times 10^{-8}$ -20+70°C	MA05182
10.0MHz	HCD351/DPFL	$\pm 1 \times 10^{-9}$	$\pm 2 \times 10^{-8}$ -20+70°C	MS09403
10.0MHz	HCD351/ERFL	$\pm 5 \times 10^{-10}$	$\pm 1 \times 10^{-8}$ -20+70°C	MS09404
13.0MHz	HCD351/DPFL	$\pm 1 \times 10^{-9}$	$\pm 2 \times 10^{-8}$ -20+70°C	MS08787
13.0MHz	HCD351/ERFL	$\pm 5 \times 10^{-10}$	$\pm 1 \times 10^{-8}$ -20+70°C	MS08788

Specifications

Parameters	Product	Option Codes
	HCD351	
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:	$< \pm 5 \times 10^{-8}$ per year ■ $< \pm 1 \times 10^{-9}$ per 10% change in V_{DD} ■	
Short term stability:	$< \pm 1 \times 10^{-11}$ over 1 sec	■
Temperature stability:	$< \pm 2 \times 10^{-8}$ ■ $< \pm 1 \times 10^{-8}$ ■ $< \pm 5 \times 10^{-9}$ □	P R S
Operating temperature range:	0 to +50°C □ -10 to +60°C □ -20 to +70°C ■	A C F
Storage temperature range:	-40 to +90°C	■
Output waveform:	HCMOS / TTL compatible	■
Frequency adjustment:	$\pm 5 \times 10^{-7}$ (typ) over +0.5 to +4.0V (sufficient for 10 years ageing min) Stabilised +4.0V supply provided	■
Supply voltage (V_{DD}):	+5.0V (± 0.5 V)	■
Power consumption:	5.0W max at switch on ■ 1.2W typ when stabilised at 25°C ■	
Warm up:	$< \pm 2 \times 10^{-8}$ after 8mins at +20°C	■
Phase noise (@ 10.0MHz):	< -120 dBc/Hz @ 10Hz ■ < -130 dBc/Hz @ 100Hz ■ < -150 dBc/Hz @ 1kHz ■ < -155 dBc/Hz @ 10kHz ■ < -155 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: **HCD351/ERFL 10.0MHz**
HCD351/DPFL 5.0MHz

Option code X (eg HCD351/X) denotes a custom specification.