



# HCD 351

## Features

- Temperature stability down to 20ppb
- Single 5V oven and oscillator supply
- Standard European IEC CO-08 pin-out
- Custom options available

## Standard Models

The table below shows the most common models; in most cases selecting one of these will ensure best combination of price, performance and availability.

Product Code	Freq	Ageing per day	Temp stability
HCD351/DPFL	5.0MHz	$\pm 1 \times 10^{-9}$	$\pm 2 \times 10^{-8}$ -20+70°C
HCD351/ERFL	5.0MHz	$\pm 5 \times 10^{-10}$	$\pm 1 \times 10^{-8}$ -20+70°C
HCD351/DPFL	10.0MHz	$\pm 1 \times 10^{-9}$	$\pm 2 \times 10^{-8}$ -20+70°C
HCD351/ERFL	10.0MHz	$\pm 5 \times 10^{-10}$	$\pm 1 \times 10^{-8}$ -20+70°C
HCD351/DPFL	13.0MHz	$\pm 1 \times 10^{-9}$	$\pm 2 \times 10^{-8}$ -20+70°C
HCD351/ERFL	13.0MHz	$\pm 5 \times 10^{-10}$	$\pm 1 \times 10^{-8}$ -20+70°C



Parameters HCD351		Standard / Optional	Code
Frequency range:	5.0 ~ 20.0MHz	Standard	
Ageing per day (at dispatch):	$< 1 \times 10^{-9}$	Standard	D
	$< 5 \times 10^{-10}$	Standard	E
	$< 2 \times 10^{-10}$	Optional	F
Frequency stability:	$< 5 \times 10^{-8}$ per year max	Standard	
	$< 5 \times 10^{-9}$ per 5% change $V_{DD}$	Standard	
Temperature stability:	$< 2 \times 10^{-8}$	Standard	P
	$< 1 \times 10^{-8}$	Standard	R
	$< 5 \times 10^{-9}$	Optional	S
Operating temperature range:	0 to +50°C	Optional	A
	-10 to +60°C	Optional	C
	-20 to +70°C	Standard	F
Storage temp:	-40 to +90°C	Standard	
Output waveform:	HCMOS / TTL compatible	Standard	
Frequency adjustment:	$\pm 1 \times 10^{-7}$ typ (10MHz), +0.5 to +4.0V (sufficient for 10 years ageing min) Stabilised +4.0V supply provided	Standard	
Supply Voltage ( $V_{DD}$ ):	+5.0V ( $\pm 0.5$ V)	Standard	L
Power consumption:	5W max at switch on	Standard	
	1.2W typ (stabilised at 25°C)	Standard	
Warm up:	$< \pm 2 \times 10^{-8}$ after 8mins at +20°C	Standard	
Phase noise (@10MHz):	$< -120$ dBc/Hz @ 10Hz	Standard	
	$< -130$ dBc/Hz @ 100Hz	Standard	
	$< -150$ dBc/Hz @ 1kHz	Standard	
	$< -155$ dBc/Hz @ 10kHz	Standard	
	$< -155$ dBc/Hz @ 55kHz	Standard	
Harmonics:	$< -30$ dB wrt carrier	Standard	
Shock:	IEC68-2-27 Test Ea 50G for 11ms	Standard	
Vibration:	IEC68-2-06 Test Fc 10-55Hz, 1.5mm, 55-500Hz, 10G	Standard	

