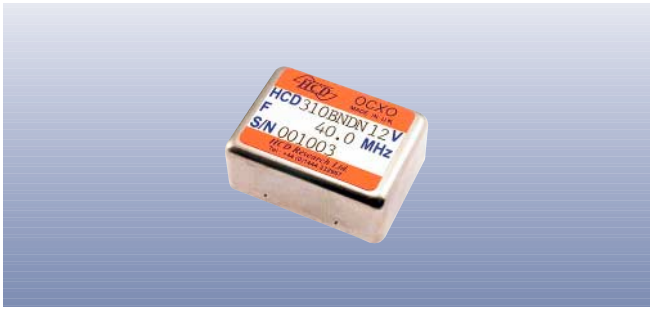
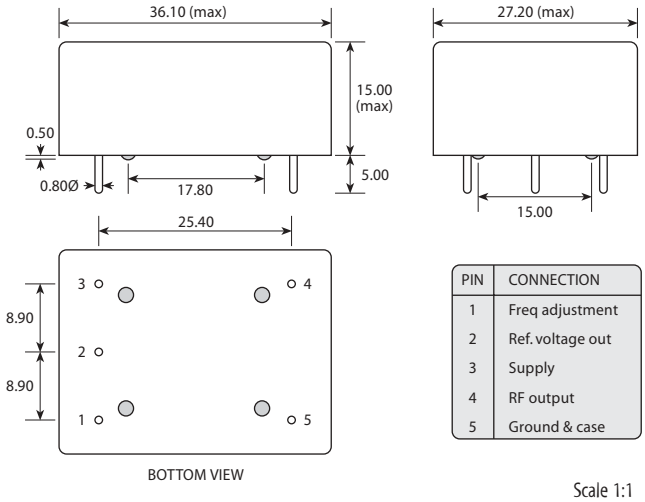
12V OCXO Low Profile

HCD310 & HCD311





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

Scale 1:1

Features

- **Temperature stability down to 50ppb**
- **Single 12V supply (15V or 18V optional)**
- **Low profile compact package**
- **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	HCD310/BNDN	$\pm5x10^{-9}$	$\pm5x10^{-8}$ -20+60°C	MS08441
10.0MHz	HCD310/BNDN	$\pm5x10^{-9}$	$\pm5x10^{-8}$ -20+60°C	MS06244
13.0MHz	HCD310/BNDN	$\pm5x10^{-9}$	$\pm5x10^{-8}$ -20+60°C	MS08799
50.0MHz	HCD310/BNDN	$\pm5x10^{-9}$	$\pm5x10^{-8}$ -20+60°C	MA02777
5.0MHz	HCD311/BNDN	$\pm5x10^{-9}$	$\pm5x10^{-8}$ -20+60°C	MA05180
10.0MHz	HCD311/BNDN	$\pm5x10^{-9}$	$\pm5x10^{-8}$ -20+60°C	MA01432
50.0MHz	HCD311/BNDN	$\pm5x10^{-9}$	$\pm5x10^{-8}$ -20+60°C	MA05478

Specifications

HCD310: Sine wave output

HCD311: HCMOS / TTL compatible output

Parameters	Product		Option Codes
	HCD310	HCD311	
Frequency range: 5.0 ~ 60.0MHz	■		
5.0 ~ 50.0MHz		■	
Ageing per day (at despatch):			
< $\pm1x10^{-8}$	□	□	A
< $\pm5x10^{-9}$	■	■	B
Frequency stability:			
$\pm5x10^{-7}$ per year	■	■	
$\pm1x10^{-7}$ per 5% change in V_{DD}	■	■	
Temperature stability: < $\pm1x10^{-7}$	□	□	M
< $\pm5x10^{-8}$	■	■	N
Operating temperature range:			
-20 to +60°C	■	■	D
0 to +70°C	□	□	E
-20 to +70°C	□	□	F
Storage temperature range:			
-40 to +90°C	■	■	
Output waveform:			
Sine wave, 1.5V p-p ±0.5V into 50Ω	■		
HCMOS / TTL compatible		■	
Frequency adjustment:			
$\pm1x10^{-5}$ typ (10MHz), +0.5 to +6.0V (sufficient for 10 years ageing min) Stabilised +6.0V supply provided	■	■	
Supply voltage (V_{DD}):			
+12V (±0.5V)	■	■	N
+15V (±0.5V)	□	□	P
+18V (±0.5V)	□	□	R
Power consumption:			
4.5W max at switch on	■	■	
1.0W typ when stabilised at 25°C	■	■	
Warm up:			
$\pm5x10^{-8}$ after 10mins at +25°C	■	■	
Phase noise (@ 10.0MHz):			
< -110dBc/Hz @ 10Hz	■	■	
< -130dBc/Hz @ 100Hz	■	■	
< -145dBc/Hz @ 1kHz	■	■	
< -150dBc/Hz @ 10kHz	■	■	
< -150dBc/Hz @ 50kHz	■	■	
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: **HCD310/BNDN 10.0MHz**
HCD311/AMFP 20.0MHz
Option code X (eg HCD310/X) denotes a custom specification.

◆ See HCD210 for chassis-mounted version of HCD310

Tel: **+44 1460 256 100** Fax: **+44 1460 256 101** E-mail: **sales@golledge.com** Web: **www.golledge.com**