HCD280

High stability OCXO with low phase noise available up to 100MHz

- Sine or CMOS output
- Excellent short term stability
- Fast warm-up time
- Enhanced phase noise performance
- Extended operating temperature range, +125°C option

CONFIGURABLE OPTIONS

Parameter	Option Code
Frequency	
Ageing per day (at despatch)	
Any	
<±5x10^{-9}	D
<±3x10^{-9}	E
<±1x10^{-9}	G
Temperature stability	
Any	
±100ppb	O
±50ppb	P
±20ppb	R
±10ppb	S
Operating temperature range	
Any	
0 to +50°C	IS
-10 to +60°C	GU
-20 to +70°C	EW
-30 to +80°C	CY
-40 to +85°C	AZ
Output waveform	
Any	
Sine wave, +9dBm (±1dBm) into 50Ω AC coupled	N
CMOS (10kΩ//15pF) 45:55 Max	Q
Phase noise (@ 100MHz)	
Any	

Profile A:

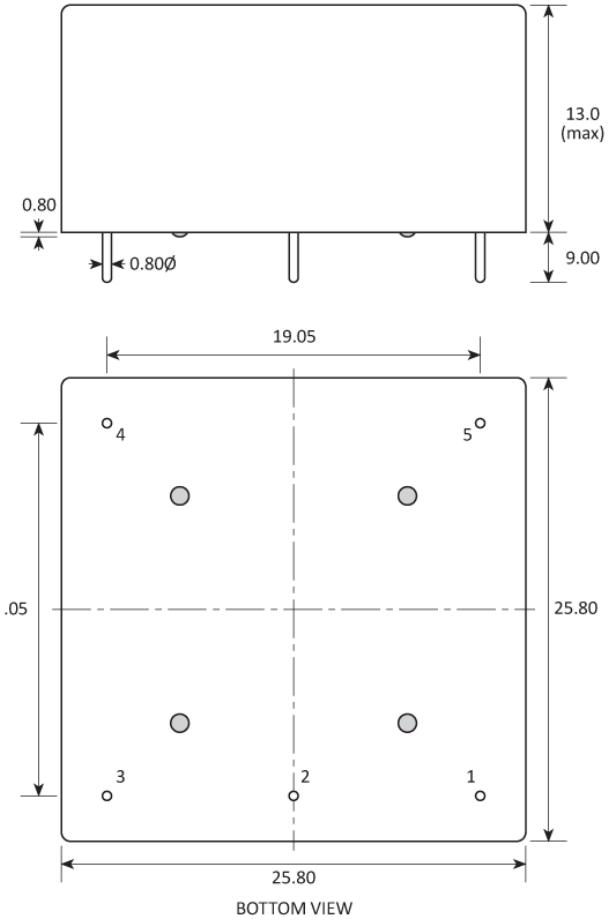
< -90 dBc/Hz @ 10Hz < -125 dBc/Hz @ 100Hz < -150 dBc/Hz @ 1kHz < -160 dBc/Hz @ 10kHz < -160 dBc/Hz @ 100kHz	
Profile B: < -100 dBc/Hz @ 10Hz < -130 dBc/Hz @ 100Hz < -150 dBc/Hz @ 1kHz < -165 dBc/Hz @ 10kHz < -165 dBc/Hz @ 100kHz	
Profile C: < -105 dBc/Hz @ 10Hz < -130 dBc/Hz @ 100Hz < -155 dBc/Hz @ 1kHz < -170 dBc/Hz @ 10kHz < -170 dBc/Hz @ 100kHz	
Supply voltage (V_{DD})	
Any	
+3.3V (±5%)	03
+5.0V (±5%)	05
+12V (±5%)	12

Phase noise options may not be available at certain frequencies with a 3.3V supply or over extended operating temperature range of -40 to +125°C. Check with our sales office before ordering.

SPECIFICATIONS

Frequency range	30.0 ~ 100MHz
Dimensions	25.8 x 25.8 x 13.0mm
Frequency stability	<100ppb per month <500ppb per year <1ppb per 10% change in V_{DD}
Storage temperature range	-55 to +150°C
Frequency adjustment	±0.5ppm over 0 to +8V for +12V supply ±0.5ppm over 0 to +5V for +5V supply ±0.5ppm over 0 to +3.3V for +3.3V supply (sufficient for 10 years ageing min)
Power consumption	4.0W max at warm-up 1.2W steady state @ +25°C
Warm up	<1ppm after 3 mins @ +20°C
Allan deviation (ADEV), 1 sec	< $1x10^{-11}$
Harmonic distortion	<-30dBc
Spurious	-80dBc max
Shock MIL-STD-202, IEC 68-2-27 Test Ea	50g for 11ms
Vibration MIL-STD-202, IEC 68-2-06 Test Fc	10-55Hz, 1.5mm. 55-500Hz, 10g
Humidity MIL-STD-202	100% rh
Seal MIL-STD-202	Hermetic, washable

PACKAGE DRAWING



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

Dimensions in mm

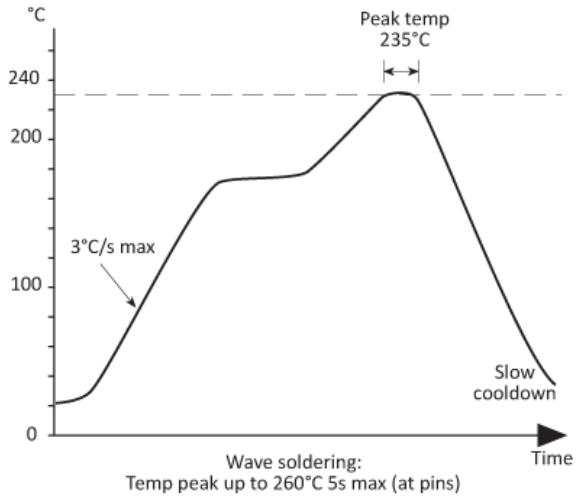
ORDERING INFORMATION

To request a quotation for the HCD280 please use the configurable options form to choose the options you require and then submit your configured product to our team. Our expert advisers are always happy to help with your requirements and can be contacted on +44 1460 256 100 or at sales@golledge.com.

Following product selection you will be issued with a seven character Golledge part number. Your Golledge part number is the internationally accepted Golledge manufacturing part number (MPN) that should be used for all project documentation, including bills of materials (BoMs) and purchase orders.

If you have any queries regarding any of our documentation our dedicated sales team will be happy to help.

SOLDERING PROFILE



HANDLING & STORAGE

Human Body Model (HBM) 1A (250V to <500V)

Moisture Sensitivity Level (MSL): 1 (or not applicable)

COMPLIANCE

Lead-free (< 0.1% by weight)

RoHS compliant with no exemptions. See our declaration

REACH compliant. See our statement

Free of conflict minerals. See our declaration

Free of Halogens. See our declaration

Free of Ozone-depleting substances. See our declaration