TECHP@INT Golledge

HCD220

OCXO Sine Output

- Temperature stability down to 1ppb
- Twin RF outputs available
- Oven alarm option on D9 connector
- Custom options available

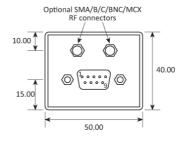


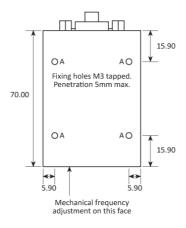
Parameter	Option Code
Frequency	
Ageing per day (at despatch)	
Any	
< ±1x10 ⁻⁹	D
< ±2x10 ⁻¹⁰	F
< ±1x10 ⁻¹⁰ (<10MHz only)	G
Temperature stability	
Any	
< ±1x10 ⁻⁸	R
< ±5x10 ⁻⁹	S
< ±3x10 ⁻⁹	T
< ±1x10 ⁻⁹	V
Operating temperature range	
Any	
0 to +50°C	А
-10 to +60°C	С
-20 to +70°C	F
-40 to +70°C	G
Output waveform	
Sine wave, 7dBm (±1dBm) into 50 Ω	
Supply voltage (V _{DD})	
Any	
+12V (±0.5V)	N
+24V (±0.5V)	T
External connectors	
Any	
D9	D
D9 + single SMA	А
D9+twin SMA, no RF output on the D9	G

SPECIFICATIONS

Frequency range Dimensions 70 x 50 x 40mm Frequency stability < ±2x10-8 per year < ±1x10-9 per 10% change in V DD < ±5x10-10 per 10% change in load Short term stability < ±5x10-12 over 1 sec (5.0MHz) < ±1x10-11 over 1 sec (10.0MHz) Storage temperature range Frequency adjustment (sufficient for 10 years ageing min) Stabilised +8V supply provided Mechanical ±5x10-7 Power consumption 5.0W max at switch on 2.0W typ when stabilised at 25°C Warm up < ±1x10-8 after 12mins at +25°C Phase noise (@ < -130 dBc/Hz @ 10Hz < -155 dBc/Hz @ 10Hz < -156 dBc/Hz @ 10kHz < -160 dBc/Hz @ 50kHz Harmonics Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g 06 Test Fc)		
Frequency stability <pre></pre>	Frequency range	5.0 ~ 16.0MHz
<pre></pre>	Dimensions	70 x 50 x 40mm
Short term stability \$\pmu \begin{align*} \pmu \begin{align*} \pm \	Frequency stability	< ±2x10 ⁻⁸ per year
Short term stability		$< \pm 1$ x10 ⁻⁹ per 10% change in V _{DD}
Storage temperature range Frequency		< ±5x10 ⁻¹⁰ per 10% change in load
Storage temperature range Frequency adjustment Stabilised +8V supply provided Mechanical ±5x10-7 Power consumption Stabilised +8V supply provided Mechanical ±5x10-7 Fower consumption 5.0W max at switch on 2.0W typ when stabilised at 25°C Varm up < ±1x10-8 after 12mins at +25°C Phase noise (@ < -130 dBc/Hz @ 10Hz < -140 dBc/Hz @ 10OHz < -155 dBc/Hz @ 10kHz < -158 dBc/Hz @ 10kHz < -158 dBc/Hz @ 10kHz < -160 dBc/Hz @ 50kHz Harmonics Shock (IEC 68-2-27 Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g	Short term stability	< ±5x10 ⁻¹² over 1 sec (5.0MHz)
range Frequency adjustment (sufficient for 10 years ageing min) Stabilised +8V supply provided Mechanical ±5x10 ⁻⁷ Power consumption 5.0W max at switch on 2.0W typ when stabilised at 25°C Warm up < ±1x10 ⁻⁸ after 12mins at +25°C Phase noise (@ <-130 dBc/Hz @ 10Hz <-140 dBc/Hz @ 100Hz <-155 dBc/Hz @ 1kHz <-158 dBc/Hz @ 10kHz <-158 dBc/Hz @ 10kHz <-160 dBc/Hz @ 50kHz Harmonics Shock (IEC 68-2-27 Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g		$< \pm 1x10^{-11}$ over 1 sec (10.0MHz)
#5x10 ⁻⁷ (typ) over +0.5 to +8V adjustment (sufficient for 10 years ageing min) Stabilised +8V supply provided Mechanical ±5x10 ⁻⁷ Power consumption 5.0W max at switch on 2.0W typ when stabilised at 25°C Warm up < ±1x10 ⁻⁸ after 12mins at +25°C Phase noise (@ < -130 dBc/Hz @ 10Hz 10.0MHz) < -140 dBc/Hz @ 100Hz < -155 dBc/Hz @ 1kHz < -158 dBc/Hz @ 10kHz < -158 dBc/Hz @ 50kHz Harmonics < -30dB wrt carrier Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g	Storage temperature	-40 to +90°C
adjustment (sufficient for 10 years ageing min) Stabilised +8V supply provided Mechanical ±5x10 ⁻⁷ Power consumption 5.0W max at switch on 2.0W typ when stabilised at 25°C Warm up < ±1x10 ⁻⁸ after 12mins at +25°C Phase noise (@ <-130 dBc/Hz @ 10Hz <-140 dBc/Hz @ 100Hz <-155 dBc/Hz @ 1kHz <-158 dBc/Hz @ 10kHz <-158 dBc/Hz @ 10kHz <-160 dBc/Hz @ 50kHz Harmonics <-30dB wrt carrier Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g	range	
Stabilised +8V supply provided	Frequency	±5x10 ⁻⁷ (typ) over +0.5 to +8V
Mechanical ±5x10 ⁻⁷ Power consumption 5.0W max at switch on 2.0W typ when stabilised at 25°C Varm up < ±1x10 ⁻⁸ after 12mins at +25°C Phase noise (@ < -130 dBc/Hz @ 10Hz < -140 dBc/Hz @ 100Hz < -155 dBc/Hz @ 1kHz < -158 dBc/Hz @ 10kHz < -160 dBc/Hz @ 50kHz Harmonics < -30dB wrt carrier Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g	adjustment	(sufficient for 10 years ageing min)
Power consumption 5.0W max at switch on 2.0W typ when stabilised at 25°C Warm up < ±1x10 ⁻⁸ after 12mins at +25°C Phase noise (@ < -130 dBc/Hz @ 10Hz		Stabilised +8V supply provided
2.0W typ when stabilised at 25°C Warm up		Mechanical ±5x10 ⁻⁷
Warm up < ±1x10 ⁻⁸ after 12mins at +25°C Phase noise (@ < -130 dBc/Hz @ 10Hz 10.0MHz) < -140 dBc/Hz @ 100Hz < -155 dBc/Hz @ 1kHz < -158 dBc/Hz @ 10kHz < -160 dBc/Hz @ 50kHz Harmonics < -30dB wrt carrier Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g	Power consumption	5.0W max at switch on
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10.0MHz) < -140 dBc/Hz @ 100Hz < -155 dBc/Hz @ 1kHz < -158 dBc/Hz @ 10kHz < -158 dBc/Hz @ 50kHz < -160 dBc/Hz @ 50kHz < -30dB wrt carrier Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g	Warm up	< ±1x10 ⁻⁸ after 12mins at +25°C
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< -158 dBc/Hz @ 10kHz < -160 dBc/Hz @ 50kHz Harmonics < -30dB wrt carrier Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g	10.0MHz)	< -140 dBc/Hz @ 100Hz
<-160 dBc/Hz @ 50kHz Harmonics <-30dB wrt carrier Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g		< -155 dBc/Hz @ 1kHz
Harmonics < -30dB wrt carrier Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g		< -158 dBc/Hz @ 10kHz
Shock (IEC 68-2-27 50g for 11ms Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g		< -160 dBc/Hz @ 50kHz
Test Ea) Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g	Harmonics	< -30dB wrt carrier
Vibration (IEC 68-2- 10-55Hz, 1.5mm. 55-500Hz, 10g	Shock (IEC 68-2-27	50g for 11ms
, , ,	Test Ea)	
06 Test Fc)	Vibration (IEC 68-2-	10-55Hz, 1.5mm. 55-500Hz, 10g
·	06 Test Fc)	

PACKAGE DRAWING





PIN	CONNECTION
1	Freq adjust (+ve)
2	Fine adjust
3	Freq adjust (-ve)
4	NC or isolated RF output
5	NC or isolated RF output
6	+ Supply
7	NC or alarm output
8	- Supply
9	Case

Dimensions in mm

ORDERING INFORMATION

To request a quotation for the HCD220 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.

HANDLING & STORAGE



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



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

CONSTRUCTION

Shielded metal enclosure

COMPLIANCE



Lead-free (< 0.1% by weight)



RoHS compliant with no exemptions.

See our

declaration



REACH compliant. See our statement



Free of conflict minerals. <u>See our declaration</u>



Free of Halogens. <u>See our declaration</u>



Free of Ozone-depleting substances. <u>See our</u>

declaration