MCSO6EW

2.5V Miniature CMOS Oscillator for Extreme Environments -55+210°C

- Suitable for Avionics, Down-hole, Geothermal etc
- Extreme temperature ranges up to 210°C
- High stability & low ageing under extremes
- High shock & vibration resistance
- Optional tinned pads (Ag/Cu/Sn)

CONFIGURABLE OPTIONS

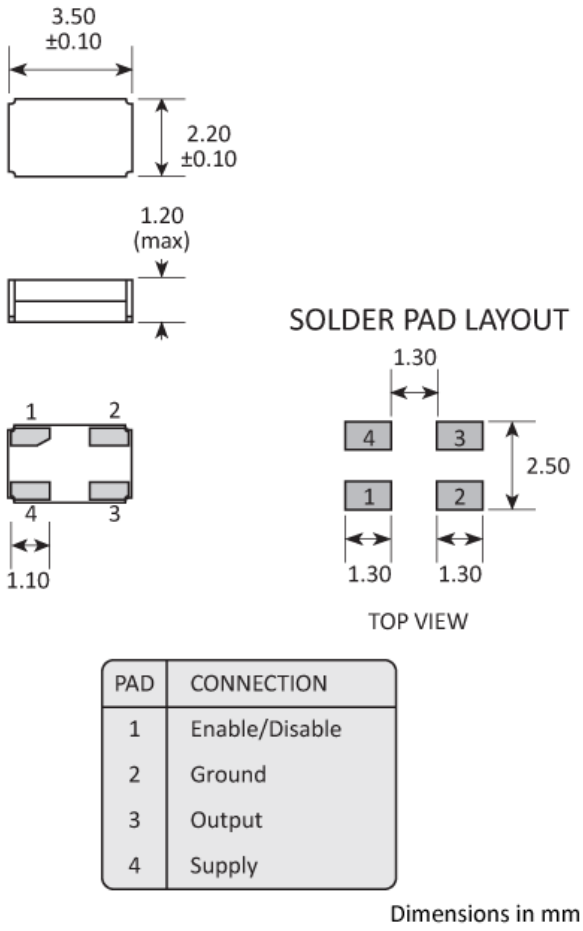
Parameter	Option Code
Frequency	
Frequency stability * see note below	
Any	
±100ppm max over -55 to +125°C	C
±150ppm max over -55 to +150°C	E
±300ppm max over -55 to +175°C	D
±400ppm max over -55 to +210°C	G
Enable / disable function	
Any	
None (pad 1 NC)	
Active* (control via pad 1)	E
* not available under 500kHz	
Terminations	
Any	
Gold plated pads	
Tinned pads* (Ag/Cu/Sn)	T
* not available with stability option G	

*** Frequency stability is inclusive of calibration @ 25°C, operating temperature range, supply voltage change, load change and long term ageing (1,000hrs at T_{MAX}).**

SPECIFICATIONS

Frequency range	10.0kHz ~ 60.0MHz
Dimensions	3.5 x 2.2 x 1.2mm
Supply voltage (V_{DD})	+2.5V (±5%)
Storage temperature range	-65 to +125°C
Supply current	300µA max (@32.768kHz) 2mA max (≤10MHz) 3mA max (>10.0 ~ 20.0MHz) 15mA max (>20.0MHz)
Driving ability	CMOS
Load	3pF min, 47pF max
Logic levels	'0' level = +0.4V max '1' level = V_{DD}-0.5V min
Start up time	5ms max
Waveform symmetry	40:60 max @ 50%V_{DD}
Rise / fall time	7ns max (15pF, 20~80% V_{P-P}) 150ns max @ 32.768kHz
Shock resistance	10,000g, 0.3ms, ½ sine
Vibration resistance	80g rms 10.0 ~ 2,000Hz
Soldering condition	260°C, 10 sec max

PACKAGE DRAWING



PAD	CONNECTION
1	Enable/Disable
2	Ground
3	Output
4	Supply

Dimensions in mm

ORDERING INFORMATION

To request a quotation for the MCSO6EW 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.

ENABLE / DISABLE FUNCTION

Input (pad 1)	Output (pad 3)
Open	Enabled
'1' level	Enabled
'0' level	No clock

Reaction time <1µs

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 7(c)-1 exemption. 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

CONSTRUCTION

Ceramic base and lid (kovar lid for option code G)