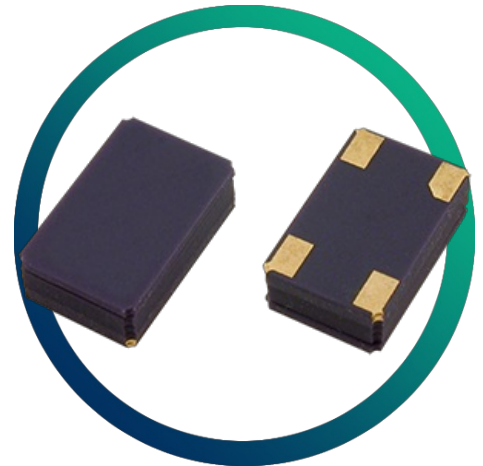


MCSO2ELW

2.5V Low Frequency CMOS Oscillator for Extreme Environments



- Extreme temperature ranges up to 200°C
- High stability & low ageing under extremes
- Low current consumption
- High shock & vibration resistance
- Optional tinned pads (Ag/Cu/Zn)

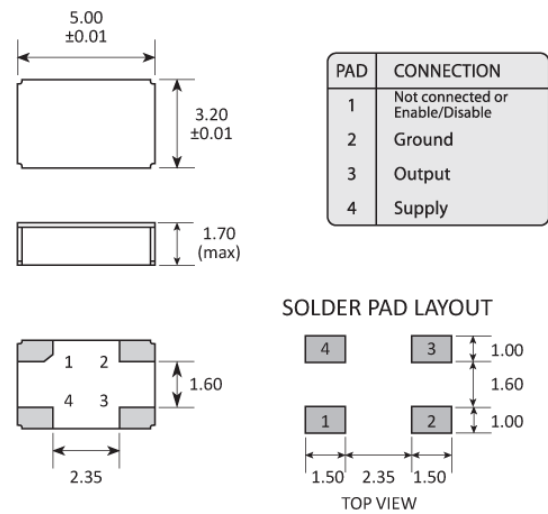
CONFIGURABLE OPTIONS

| Parameter | Option Code |
|----------------------------------|-------------|
| Frequency | |
| 32.768kHz | |
| 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 +200°C | G |
| Enable / disable function | |
| Any | |
| None (pad 1 NC) | |
| Active (control via pad 1) | E |
| Terminations | |
| Any | |
| Gold plated pads | |
| Tinned Ag/Cu/Zn | T |

SPECIFICATIONS

| | |
|-----------------------------|---|
| Frequency (std) | 32.768kHz |
| Frequency range | 10.0 ~ 50.0kHz |
| Dimensions | 5.0 x 3.2 x 1.7mm |
| Supply voltage (V_{DD}) | +2.5V ($\pm 5\%$) |
| Storage temperature range | -65 to +125 °C |
| Supply current (32.768kHz) | 100 μ A |
| Driving ability | CMOS |
| Load | 3pF min, 27pF 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 | 25ns max @ 32.768kHz (load 15pF 20%~80%) |
| 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



A 47nF ceramic capacitor must be connected between GND and V_{DD}

Dimensions in mm

ORDERING INFORMATION

To request a quotation for the MCSO2EL 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 |

HANDLING & STORAGE



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



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

CONSTRUCTION

Ceramic base and lid

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](#)