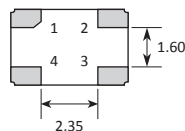
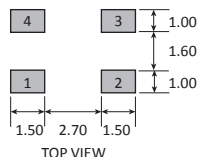


PAD	CONNECTION
1	Not connected or Enable/Disable
2	Ground
3	Output
4	Supply



SOLDER PAD LAYOUT



TOP VIEW

A 47nF ceramic capacitor must be connected between GND and V<sub>DD</sub>

## Features

- ▶ 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/Zn)

## Enable / Disable Function

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

Reaction time <1μs

## Supply current

Freq / Supply	2.5V	3.3V	5.0V
32kHz	300μA	1mA	2mA
≤10MHz	2mA	4mA	6mA
>10 ~ 20MHz	3mA	5mA	7mA
>20 ~ 100MHz	15mA	20mA	30mA

Maximum values, no load.

## Specifications

MCSO2E: 10.0kHz ~ 20.0MHz

MCSO2EH: 20.0 ~ 100MHz

Parameters	Product	Option Codes
	MCSO2E	
Frequency range: 10.0kHz ~ 100MHz	■	
Supply voltage (V <sub>DD</sub> ):	■ □ □	V W
Frequency stability (max)*:	□ □ □ □	C E D G
Storage temperature range:	■	
Supply current:	See table	
Driving ability:	CMOS ■	
Load:	3pF min, 47pF max ■	
Logic levels:	'0' level = +0.4V max '1' level = V <sub>DD</sub> -0.5V min ■ ■	
Start up time:	5ms max ■	
Waveform symmetry:	40:60 max @ 50%V <sub>DD</sub> ■	
Rise / fall times:	7ns max (≤20MHz, 15pF, 20~80%V <sub>p-p</sub> ) 3ns max (>20MHz, 15pF, 10~90%V <sub>p-p</sub> ) 150ns max@ 32.768kHz ■ ■ ■	
Enable / disable function:	None (pad 1 NC) ■ Active* (control via pad 1) □ * not available under 500kHz	E
Shock resistance:	10,000G, 0.3ms, ½ sine ■	
Vibration resistance:	80G rms 10.0 ~ 2,000Hz ■	
Soldering condition:	260°C, 10 sec max ■	
Terminations:	Gold plated pads ■ Tinned Ag/Cu/Zn □	T

■ Standard. □ Optional - Please specify required code(s) when ordering

\* Frequency stability is inclusive of calibration @ 25°C, operating temperature range, supply voltage change, load change and long term ageing (1,000hrs at T<sub>MAX</sub>).

## Ordering Information

Product name + option codes + frequency

eg: **MCSO2E/DE 10.0MHz** 5V ±300ppm -55 to +175°C Enable / disable

For frequencies >20.0MHz add an 'H' to the product name

eg: **MCSO2EHW/G 32.0MHz** 2.5V ±400ppm -55 to +210°C no E/D

Option code X (eg MCSO2E/X) denotes a custom specification.

♦ Packed in trays (128pcs/tray), or T&R 250 ~ 1,000pcs / reel