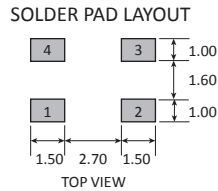
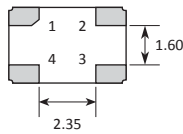


PAD	CONNECTION
1	Not connected or Enable/Disable
2	Ground
3	Output
4	Supply



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

## Features

- ▶ Military temperature range -55+125°C option
- ▶ Excellent shock & vibration resistance
- ▶ Enable / disable tristate option (>500kHz)
- ▶ Wide frequency range available
- ▶ 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	1.8/2.5V	3.3V	5.0V
32kHz	300μA	1mA	2mA
≤10MHz	2mA	4mA	6mA
>10 ~ 20MHz	3mA	5mA	7mA
>20 ~ 160MHz	25mA	30mA	40mA

Maximum values, no load.

## Specifications

**MCSO2: 10.0kHz ~ 20.0MHz**

**MCSO2H: 20.0 ~ 225MHz**

Parameters	Product	Option Codes
	MCSO2	
Frequency range: 10.0kHz ~ 225MHz	■	
Supply voltage (V <sub>DD</sub> ): +5.0V (±5%) +3.3V (±5%) +2.5V (±5%) +1.8V (±5%)	■ □ □ □	V W Z
Frequency stability*: ±100ppm ±50ppm tighter stabilities on request	■ □ □	T specify
Operating temperature range: 0 to +70°C -40 to +85°C -55 to +125°C	□ □ ■	A B C
Storage temperature range: -65 to +125°C	■	
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: 5,000G, 0.3ms, ½ sine	■	
Vibration resistance: 50G 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 ageing over 10 years (1 year for stability option T).

## Ordering Information

Product name + option codes + frequency

eg: **MCSO2/CE 10.0MHz** 5V ±100ppm -55 to +125°C Enable / disable

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

eg: **MCSO2HW/TB 32.0MHz** 2.5V ±50ppm -40 to +85°C no E/D

Option code X (eg MCSO2/X) denotes a custom specification.

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