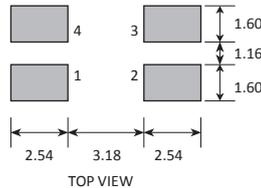


PAD	CONNECTION
1	Not connected or Enable/Disable
2	Ground
3	Output
4	Supply



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

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	High Impedance

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

MCSO1E: 32.0kHz ~ 20.0MHz

MCSO1EH: 20.0 ~ 100MHz

Parameters	Product	Option Codes
	MCSO1E	
Frequency range: 32.0kHz ~ 100MHz	■	
Supply voltage (V _{DD}): +5.0V (±5%) +3.3V (±5%) +2.5V (±5%)	■ □ □	V W
Frequency stability (max)*: ±100ppm over -55 to +125°C ±150ppm over -55 to +150°C ±300ppm over -55 to +175°C ±400ppm over -55 to +210°C	□ □ □ □	C E D G
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 _{DD} -0.5V min	■ ■	
Start up time: 5ms max	■	
Waveform symmetry: 40:60 max @ 50%V _{DD}	■	
Rise / fall times: 7ns max ≤20MHz 3ns max >20MHz 150ns max@ 32.768kHz	■ ■ ■	
Enable / disable function: None (pad 1 NC) Tristate* (control via pad 1) * not available under 500kHz	■ □	E
Shock resistance: 10,000G, 0.3ms, ½ sine	■	
Vibration resistance: 40G rms 10.0 ~ 2,000Hz	■	
Soldering condition: 260°C, 10 sec max	■	
Terminations: Gold plated pads Tinned pads* (Ag/Cu/Zn) * not available with stability option G	■ □	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_{MAX}).

Ordering Information

Product name + option codes + frequency

eg: **MCSO1E/DE 10.0MHz** 5V ±300ppm -55 to +175°C Enable / disable

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

eg: **MCSO1EHW/G 32.0MHz** 2.5V ±400ppm -55 to +210°C no E/D

Option code X (eg MCSO1E/X) denotes a custom specification.

♦ Packed in trays (91pcs/tray), or T&R 250 ~ 1,000pcs / reel