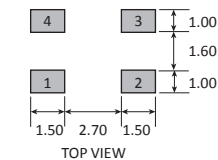


PAD	CONNECTION
1	Not connected or Enable/Disable
2	Ground
3	Output
4	Supply

SOLDER PAD LAYOUT



Features

- ▶ **Low jitter**
- ▶ **Military temperature range -55+125°C option**
- ▶ **Excellent shock & vibration resistance**
- ▶ **Enable / disable tristate option (>500kHz)**
- ▶ **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
32kHz	300μA	1mA
<10MHz	2mA	4mA
10 ~ 20MHz	3mA	5mA
>20 ~ 225MHz	25mA	30mA

Maximum values, no load.

- ◆ Packed in trays (128pcs/tray) or T&R 250 ~ 1,000pcs/reel
- ◆ A 47nF ceramic capacitor must be connected between GND and V_{DD}

Specifications

MCSO2F: 10.0kHz ~ 20.0MHz

MCSO2FH: 20.0 ~ 225MHz

Parameters	Product	Option Codes
	MCSO2F	
Frequency range: 10.0kHz ~ 225MHz	■	
Supply voltage (V _{DD}): +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 _{DD} -0.5V min	■ ■	
Start up time: 5ms max	■	
Waveform symmetry: 40:60 max @ 50%V _{DD}	■	
Jitter RMS (1σ): < 2ps (≤20.0MHz) < 10ps (>20.0MHz)	■ ■	
Rise / fall times: 7ns max (≤20MHz, 15pF, 20~80%V _{p-p}) 3ns max (>20MHz, 15pF, 10~90%V _{p-p}) 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: 20G 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: **MCSO2FV/CE 10.0MHz** 3.3V ±100ppm -55 to +125°C Enable / disable

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

eg: **MCSO2FHW/TB 32.0MHz** 2.5V ±50ppm -40 to +85°C no E/D

Option code X (eg MCSO2F/X) denotes a custom specification.