



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

## 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 ~ 60MHz	15mA	20mA	30mA

Maximum values, no load.

## Specifications

Parameters	Product	Option Codes
	MCSO6E	
Frequency range: 10.0kHz ~ 60.0MHz	■	
Supply voltage (V <sub>DD</sub> ):	■ □ □	V W
+5.0V (±5%) +3.3V (±5%) +2.5V (±5%)		
Frequency stability (max)*:	□ □ □ □	C E D G
±100ppm over -55 to +125°C ±150ppm over -55 to +150°C ±300ppm over -55 to +175°C ±400ppm over -55 to +210°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 (15pF, 20~80% V <sub>p-p</sub> ) 150ns max @ 32.768kHz		
Enable / disable function:	■ □	E
None (pad 1 NC) Active* (control via pad 1) * not available under 500kHz		
Shock resistance:	■	
10,000G, 0.3ms, ½ sine		
Vibration resistance:	■	
40G rms 10.0 ~ 2,000Hz		
Soldering condition:	■	
260°C, 10 sec max		
Terminations:	■ □	T
Gold plated pads Tinned Ag/Cu/Zn		

■ 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 (1,000 hrs at T<sub>MAX</sub>).

## Ordering Information

Product name + option codes + frequency

eg: **MCSO6E/DE 10.0MHz** 5V ±300ppm -55 to +175°C Enable / disable

**MCSO6EW/G 32.0MHz** 2.5V ±400ppm -55 to +210°C no E/D

Option code X (eg MCSO6E/X) denotes a custom specification.

- ♦ Packed in trays (208pcs/tray), or T&R 250 ~ 1,000pcs / reel
- ♦ A 47nF ceramic capacitor must be connected between GND and V<sub>DD</sub>