



## Features

- ▶ Military temperature range option
- ▶ Excellent shock & vibration resistance
- ▶ Enable / disable tristate option (>500kHz)
- ▶ Wide frequency range available

## Standard Frequencies

| Frequencies in MHz |           |          |           |           |
|--------------------|-----------|----------|-----------|-----------|
| 10.0000*           | 19.2000*  | 52.00000 | 76.80000  | 108.00000 |
| 10.1500*           | 19.66080* | 55.29600 | 78.00000  | 110.59200 |
| 10.2300*           | 20.00000* | 58.98240 | 80.00000  | 117.96400 |
| 10.2400*           | 40.00000  | 60.00000 | 81.20000  | 120.00000 |
| 11.05920*          | 40.60000  | 60.90000 | 81.84000  | 125.00000 |
| 12.0000*           | 40.96000  | 61.38000 | 81.92000  | 128.00000 |
| 12.2880*           | 44.23680  | 61.44000 | 88.47360  | 131.07200 |
| 12.8000*           | 48.00000  | 64.00000 | 90.00000  | 132.71040 |
| 13.0000*           | 49.15200  | 65.00000 | 96.00000  | 144.00000 |
| 14.74560*          | 50.00000  | 65.53600 | 98.30400  | 150.00000 |
| 16.0000*           | 50.75000  | 66.35520 | 100.00000 | 160.00000 |
| 16.3840*           | 51.15000  | 72.00000 | 102.40000 |           |
| 18.4320*           | 51.20000  | 73.72800 | 104.00000 |           |

\* Binary divisions of the above frequencies also available.

## Enable / Disable Function

| Input (pad 1) | Output (pad 3) |
|---------------|----------------|
| Open          | Enabled        |
| '1' level     | Enabled        |
| '0' level     | High Impedance |

## Specifications

**MCSO1: 400kHz ~ 20.0MHz**

**MCSO1H: 20.0 ~ 160MHz**

| Parameters  | Product     |             | Option Codes |
|---|-------------|-------------|--------------|
|   | MCSO1       | MCSO1H      |              |
| <b>Frequency range:</b><br>400kHz ~ 20.0MHz<br>20.0 ~ 160MHz  | ■           | ■           |              |
| <b>Frequency stability*:</b> ±100ppm<br>±50ppm<br>tighter stabilities on request                                      | ■<br>□<br>□ | ■<br>□<br>□ | T<br>specify |
| <b>Operating temperature range:</b><br>0 to +70°C<br>-40 to +85°C<br>-55 to +125°C                                    | ■<br>□<br>□ | ■<br>□<br>□ | A<br>B<br>C  |
| <b>Operable temperature range:</b><br>-55 to +125°C   | ■           | ■           |              |
| <b>Storage temperature range:</b><br>-65 to +125°C  | ■           | ■           |              |
| <b>Supply voltage (V<sub>DD</sub>):</b><br>+5.0V (±10%)   | ■           | ■           |              |
| <b>Supply current (max):</b> 15mA<br>50mA   | ■           | ■           |              |
| <b>Driving ability:</b> CMOS / 10 LSTTL   | ■           | ■           |              |
| <b>Logic levels:</b> '0' level = +0.4V max<br>'1' level = 90%V <sub>DD</sub> min                                      | ■<br>■      | ■<br>■      |              |
| <b>Start up time:</b> 5ms max   | ■           | ■           |              |
| <b>Waveform symmetry:</b><br>40:60 max @ 50%V <sub>DD</sub>   | ■           | ■           |              |
| <b>Rise / fall times:</b> 7ns max<br>3ns max  | ■           | ■           |              |
| <b>Enable / disable function:</b><br>None (pad 1 NC)<br>Tristate* (control via pad 1)<br>* not available under 500kHz | ■<br>□      | ■<br>□      | E            |
| <b>Shock resistance:</b><br>5,000G, 0.3ms, ½ sine   | ■           | ■           |              |
| <b>Vibration resistance:</b><br>10G rms 10.0 ~ 2,000Hz  | ■           | ■           |              |
| <b>Soldering condition:</b><br>260°C, 10 sec max  | ■           | ■           |              |

■ 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.

## Ordering Information

Product name + option codes (if any) + frequency  
eg: **MCSO1/TBE 16.0MHz** ±50ppm -40 to +85°C Enable / disable  
**MCSO1H/C 90.0MHz** ±100ppm -55 to +125°C

Option code X (eg MCSO1/X) denotes a custom specification.

♦ Packed in trays (50pcs/tray).