

## Clock Oscillator (CMOS)

## SCO-7050

**General Description**

Ceramic packaged oscillator with good mechanical resistance and compact size. It is available with many voltage supply options and wide frequency range

**Features**

High precision characteristic covering up to wide frequency range.  
Designed for automatic mounting and reflow soldering.  
Stand-by function for output: Tri-state output.  
Supply voltage range : 1.5V to 5 V.  
High stability, low jitter, low power consumption.

**Main applications**

Wireless communication, PC, HDTV, ISDN, Gb Ethernet

## Electrical characteristics

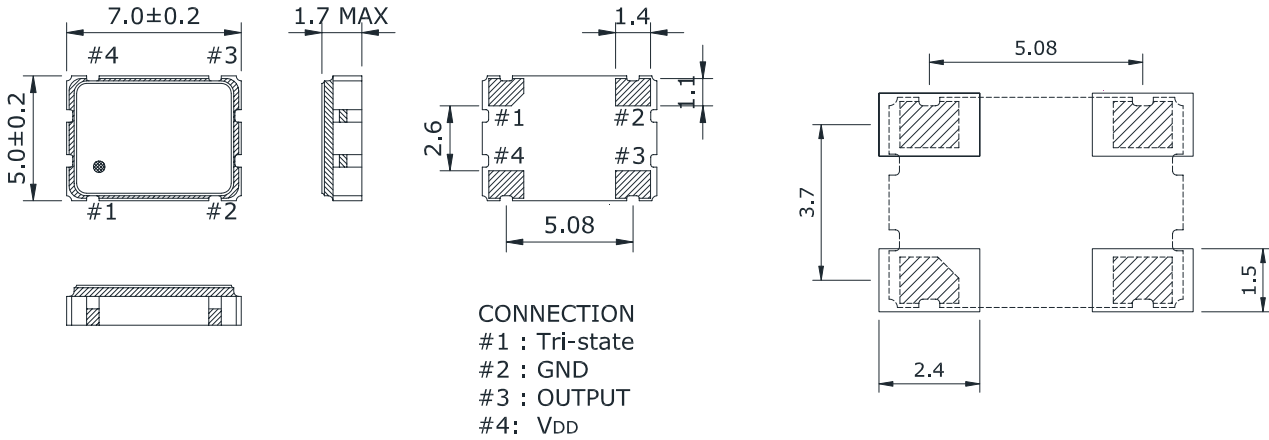
| Item                            | Values   |  |
|---------------------------------|--|--|
| Part number                     | SCO-7050   |  |
| Output Waveform                 | SQUARED  |  |
| Supply voltage                  | +1.5V , +1.8V , +2.5V , +3.3V , +5.0V (1)  |  |
| Frequency range                 | 32.768KHz , 0.75 - 250MHz  |  |
| Current consumption             | 0.7mA (1.5V), 1.5mA (2.5V , 3.3V)<br>3mA(1.8V), 4mA(2.5V), 5mA(3.3V),<br>7mA(5V) 4mA(1.8V), 5mA(2.5V),<br>7mA(3.3V), 10mA(5V) 3mA(1.8V),<br>17mA(2.5V), 20mA(3.3V),25mA(5V)<br>7mA(1.8V), 20mA(2.5V), 25mA(3.3V)<br>20mA(1.8V), 30mA(2.5V), 40mA(3.3V)<br>37mA(1.8V), 50mA(2.5V), 70mA(3.3V)<br>58mA(2.5V), 75mA(3.3V) | 32.768KHz<br>0.75 MHz to 25.000 MHz<br>25.001 MHz to 40.000 MHz<br>40.001 MHz to 80.000 MHz<br>80.001 MHz to 100.000 MHz<br>100.001 MHz to 125.000 MHz<br>125.001 MHz to 160.000 MHz<br>160.001 MHz to 250.000 MHz |
| Operating temperature range     | -20°C / +70°C or -40 / +85°C or user spec  |  |
| Storage temperature range       | -55°C / +125°C   |  |
| Frequency stability             | <±20 , <±25 , <±50ppm overall or user spec   |  |
| Output load                     | TTL, CMOS (15pF), option 50pF  |  |
| Duty cycle                      | 40% ... 60%, option 45%...55%  |  |
| VOH / VOL                       | 90% Vcc / 10% Vcc  |  |
| Tr / Tf                         | 10ns max (except 32.768KHz) or user spec   |  |
| Option Enable-Disable/Tri-state | available (Enable @ >70% Vcc , Disable at <30% Vcc)  |  |
| Start up time                   | 5ms max  |  |
| Phase jitter (12KHz - 20MHz)    | 1ps RMS max  |  |
| Period jitter (pk-pk)           | 25ps max   |  |
| Aging                           | <±3ppm / year  |  |

(1) 1.5V only for 32.768KHz. +5.0V only for >=0.75MHz

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## SCO-7050

### Dimensions



### Part Number Generator

**SCO-7050**    **0**    **D**    **S**    **A**    **50**    **A**    **A**    -    **010.000000**  
 0            1            2            3            4            5            6            7                       8

**0** : Type  
SCO-7050

**1** : Vcc  
 0 = +1.5V  
 1 = +1.8V  
 2 = +2.5V  
 3 = +3.3V  
 5 = +5.0V

**2** : Duty cycle  
 blank = 40% - 60%  
 D = 45% - 55%

**3** : Pin #1 Option  
 blank = not connected  
 S = En/Disable - TriState

**4** : Op. temp. range  
 blank = -20/+70  
 A=-40/+85

**5** : Stability overall  
 blank < ±100ppm  
 50 < ±50ppm  
 25 < ±25ppm  
 20 < ±20ppm

**6** : Tolerance  
 blank = not specified  
 D < ±15ppm  
 E < ±10ppm

**7** : Stability in temperature  
 blank = not specified  
 H < ±35ppm  
 L < ±25ppm  
 M < ±20ppm  
 N < ±15ppm  
 P < ±10ppm

**8** : Frequency (MHz)  
 □□□.□□□□□□  
 max 10 digits including comma

Remark : specifications subject to change without prior notice. Please confirm with our sales