

## CRYSTAL OSCILLATORS

### CERAMIC SMD TYPE SCO-53

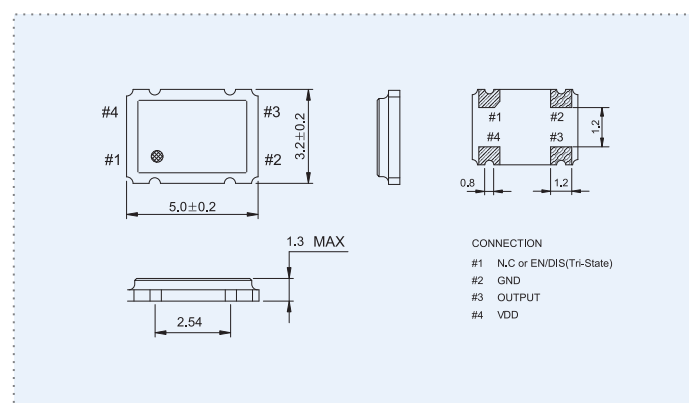


- Ceramic SMD package
- 1.8 / 2.5 / 3.3 / 5.0 supply voltage
- HCMOS/TTL output
- Stability to  $\pm 20$ ppm
- Tri-state function available
- Reflow soldering is possible
- Available on tape and reel

### ELECTRICAL SPECIFICATIONS

|   |  |  |
|---|--|--|
| Frequency Range                             | 1,000 to 106.250MHz(5V), 1,000 to 160MHz(3.3, 2.5, 1.8V) and 32.768kHz(2.5,3.3V)                                   |  |
| Operating Temperature Range                 | 0 to +70 °C or -40 to +85 °C   |  |
| Storage Temperature Range                   | -55 to +125 °C   |  |
| Frequency Tolerance / Stability             | Inclusive of Operating Temperature Range, Supply Voltage, and Load   | $\pm 100$ , $\pm 50$ ppm or $\pm 25$ , $\pm 20$ ppm  |
| Supply Voltage(V <sub>DD</sub> )            | 5.0, 3.3, 2.5, 1.8V <sub>DC</sub> $\pm 10\%$   |  |
| Input Current                               | 1,000 to 34.999MHz<br>35,000 to 60,000MHz<br>60,001 to 99,999MHz<br>100,000 to 106,250MHz<br>106,251 to 160,000MHz | 25(5V), 16(3.3V), 10(2.5V), 8mA(1.8V) max.<br>50(5V), 25(3.3V), 20(2.5V), 15mA(1.8V) max.<br>60(5V), 40(3.3V), 30(2.5V), 25mA(1.8V) max.<br>80(5V), 50(3.3V), 40(2.5V), 35mA(1.8V) max.<br>50(3.3V), 40(2.5V), 35mA(1.8V) max. |
| Output Voltage Logic High(V <sub>OH</sub> ) | w/TTL Load<br>w/HCMOS Load   | 2.4V min.<br>90% of V <sub>DD</sub> min.   |
| Output Voltage Logic Low(V <sub>OL</sub> )  | w/TTL Load<br>w/HCMOS Load   | 0.4V max.<br>10% of V <sub>DD</sub> max.   |
| Rise / Fall Time                            | 1,000 to 160,000MHz  | 10ns max.  |
| Duty Cycle                                  | at 50% of Waveform w/HCMOS Load or 1.4V <sub>DC</sub> w/TTL Load   | 50 $\pm$ 10% (STD)<br>50 $\pm$ 5% (Optional)   |
| Load Drive Capability                       |  | 10 TTL Load or<br>15pF HCMOS Load(STD)   |
| Pin 1 Tri-state Input Voltage               | No Connection<br>V <sub>IH</sub> : $\geq 0.7V_{DD}$<br>V <sub>IL</sub> : $\leq 0.3V_{DD}$                          | Enable Output<br>Enable Output<br>Disable Output : High Impedance  |
| Aging (at 25 °C)                            |  | $\pm 3$ ppm, $\pm 5$ ppm/year max.   |
| Start-up Time                               |  | 10ms max.  |
| Period Jitter : pk-pk                       |  | $\pm 100$ ps max.  |
| Period Jitter : One Sigma                   |  | $\pm 25$ ps max.   |
| Phase Jitter(12kHz to 20MHz)                |  | 1 ps max.  |

### MECHANICAL DIMENSIONS (mm)



### LAND PATTERN (mm)

