

## CRYSTAL OSCILLATORS

### CERAMIC SMD TYPE SCO-53

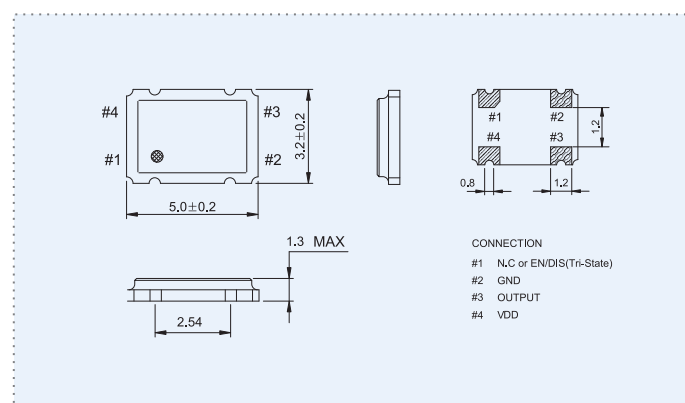


- Ceramic SMD package
- 1.8 / 2.5 / 3.3 / 5.0 supply voltage
- HCMOS/TTL output
- Stability to  $\pm 20$ ppm
- Tri-state function available
- Reflow soldering is possible
- Available on tape and reel

### 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 35.000 to 60.000MHz 60.001 to 99.999MHz 100.000 to 106.250MHz 106.251 to 160.000MHz	25(5V), 16(3.3V), 10(2.5V), 8mA(1.8V) max. 50(5V), 25(3.3V), 20(2.5V), 15mA(1.8V) max. 60(5V), 40(3.3V), 30(2.5V), 25mA(1.8V) max. 80(5V), 50(3.3V), 40(2.5V), 35mA(1.8V) max. 50(3.3V), 40(2.5V), 35mA(1.8V) max.
Output Voltage Logic High(V <sub>OH</sub> )	w/TTL Load w/HCMOS Load	2.4V min. 90% of V <sub>DD</sub> min.
Output Voltage Logic Low(V <sub>OL</sub> )	w/TTL Load w/HCMOS Load	0.4V max. 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) 50 $\pm$ 5% (Optional)
Load Drive Capability		10 TTL Load or 15pF HCMOS Load(STD)
Pin 1 Tri-state Input Voltage	No Connection V <sub>IH</sub> : $\geq 0.7V_{DD}$ V <sub>IL</sub> : $\leq 0.3V_{DD}$	Enable Output Enable Output 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)

