

## CRYSTAL OSCILLATORS

### DIP TYPE SCO-02



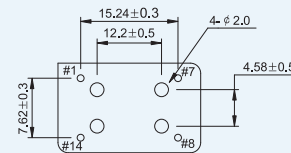
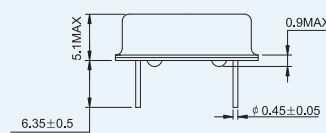
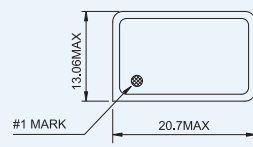
- HCMOS / TTL output
- 3.3 / 5.0 supply voltage
- 14 pin DIP package
- Custom lead length options available
- Wide Frequency
- All-metal welded package

### ELECTRICAL SPECIFICATIONS

Frequency Range	1.000 to 200.000MHz		
Operating Temperature Range	0 to +70 °C or -40 to +85 °C		
Storage Temperature Range	-55 to +125 °C		
Supply Voltage(V <sub>DD</sub> )	5.0V <sub>dc</sub> ± 10%	3.3V <sub>dc</sub> ± 10%	
Frequency Tolerance / Stability	± 100, ± 50, ± 25ppm max.		
Input Current	1.000 to 20.000MHz	26mA max.	17mA max.
	20.001 to 40.000MHz	40mA max.	25mA max.
	40.001 to 80.000MHz	60mA max.	35mA max.
	80.001 to 125.000MHz	70mA max.	45mA max.
	125.000 to 200.000MHz	80mA max.	65mA max.
Load Drive Capability	10 TTL Load or 15pF HCMOS Load		
Output Voltage Logic High(V <sub>OH</sub> )	w/TTL Load	2.4V <sub>dc</sub> min.	
	w/HCMOS Load	90% of V <sub>DD</sub> min.	
Output Voltage Logic Low(V <sub>OL</sub> )	w/TTL Load	0.4V <sub>dc</sub> max.	
	w/HCMOS Load	10% of V <sub>DD</sub> max.	
Duty Cycle	at 50% of Waveform w/HCMOS Load or 1.4V <sub>dc</sub> w/TTL Load	50 ± 10% (STD) 50 ± 5% (Optional)	
Rise / Fall Time	1.000 to 20.000MHz	10ns max.	
	20.001 to 70.000MHz	6ns max.	
	70.001 to 125.000MHz	4ns max.	
	125.000 to 200.000MHz	2ns max.	
Aging (at 25 °C)	± 5ppm/year max.		
Start-up Time	10ms max.		
Pin 1 Tri-state Input Voltage	No Connection V <sub>IH</sub> : ≥ 2.0V <sub>dc</sub> V <sub>IL</sub> : ≤ 0.8V <sub>dc</sub>	Enable Output Enable Output Disable Output : High Impedance	
Period Jitter : pk-pk	100ps max.		
Period Jitter : One Sigma	25ps max.		

### MECHANICAL DIMENSIONS

(mm)



PIN CONNECTION  
#1 N.C or Tri-State  
#7 GND  
#8 OUTPUT  
#14 VDD