

# PRODUKT-INFO

## SCO-25 SMD CRYSTAL OSCILLATOR

### FEATURES

1. Compact & lightweight design: 2.5 x 2.0 x 0.9 mm max.  
Weight: 13 mg
2. Wide range of operating supply voltage: 1.8V, 2.5V, 3.3V
3. Ceramic package and metal lid sealed by electron beam ensure high reliability.
4. Lead-free reflow soldering is available.



### APPLICATION

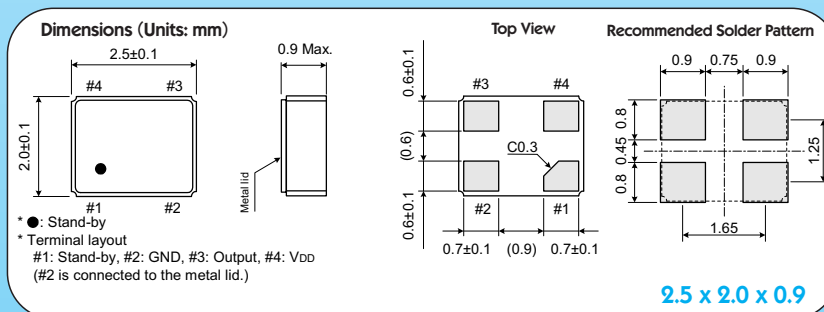
Mobile communication, wireless modules.

ELECTRICAL SPECIFICATIONS			
Model		SCO-25	
Frequency Range		1.0 MHz ~ 80.0 MHz	
Frequency Stability		$\pm 7$ ppm / $\pm 10$ ppm / $\pm 15$ ppm / $\pm 20$ ppm / $\pm 30$ ppm / $\pm 50$ ppm	
Operating Temperature Range		-20°C to +70°C, -30°C to +85°C, -40°C to +85°C option	
Storage Temperature Range		-40°C to +85°C, -40°C to +105°C option	
Supply Voltage (V <sub>DD</sub> )		1.8V DC $\pm 10\%$	2.5V DC $\pm 10\%$ 3.3V DC $\pm 10\%$
Current Consumption during Operation		3.0 mA max.; F = 40MHz, V <sub>DD</sub> = 3.0V, no load 10 $\mu$ A max.; Stand-by = „L“	
Output Load		15 pF, max., CMOS	
Output Voltage		V <sub>OH</sub> - 0.4 V min.; I <sub>OH</sub> = -4 mA V <sub>OL</sub> 0.4 V max.; I <sub>OL</sub> = +4 mA	
Rise Time		10% V <sub>DD</sub> ~ 90% V <sub>DD</sub>	5.0 ns max.
Fall Time		90% V <sub>DD</sub> ~ 10% V <sub>DD</sub>	5.0 ns max.
Duty Cycle		50% $\pm 5\%$	
Startup Time		2.0 ms max.; V <sub>DD</sub> = 3.3V 5.0 ms max.; V <sub>DD</sub> = 1.8V	
Random Jitter* (RJ)		3.7 ps; V <sub>DD</sub> = 3.3V	
Total Jitter* (TJ)		51 ps; V <sub>DD</sub> = 3.3V, TJ = n x RJ (n $\approx$ 14.1, BER = 10 <sup>-15</sup> )	
Phase Jitter		1.0 ps; V <sub>DD</sub> = 3.3 V Offset Frequency 12kHz ~ 5MHz	
Stand-by Terminal Function (V)	High	0.7 V <sub>DD</sub> min.; Output enable	
	Low	0.3 V <sub>DD</sub> max.; Oscillation stop and high impedance output	

OPTIONS: \* Measured by wave crest 3100C.

OPTIONS: For operational stability, the bypass capacitor (0.01  $\mu$ F ~ 0.1  $\mu$ F) between V<sub>DD</sub> and GND should be placed as close to the product as possible.

Other specifications can be available.



Crystals...  
and more

Now available

RoHS  
COMPLIANT  
2002/95/EC

digital electronic  
siegfried lehrer gmbh  
Rudolf-Wanzl-Str. 3+5  
D-89340 Leipzig / Germany  
www.digitallehrer.de  
digital@digitallehrer.de

Telefon +49 (0) 82 21 / 7 08 - 0 · Telefax +49 (0) 82 21 / 7 08 - 80

All specifications subject to change without notice.