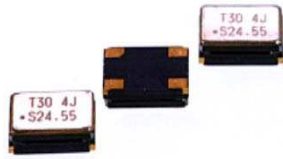


Simple Packaged Crystal Oscillator (SPXO)

Ultra Miniature
Low Current
Ceramic Package

Pb-free : RoHs compliance



SP-2016C1 / 2 / 3

■ Typical applications

- PC board, VGA card, DVD, DVC, DSC, Printer Scanner.

■ Features

- 1.5 to 50 MHz.
- C-MOS out / 15pF Load.
- Ultra miniature type essential in the high density PCB.
- Package : Metal lid + Ceramic package.
- 2.0×1.6×0.65mm

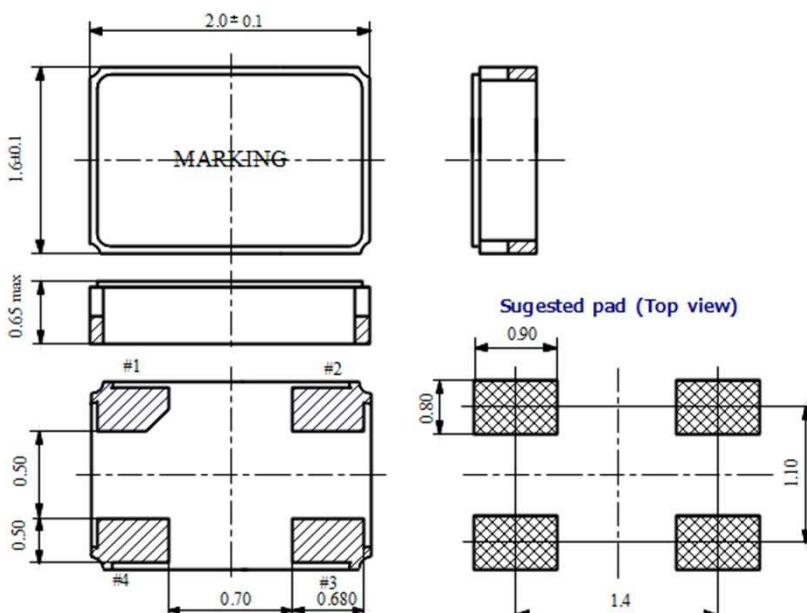
■ Specifications

Model		SP-2016C1	SP-2016C2	SP-2016C3
Available Frequency Range		1.5 to 50.000 MHz		
Frequency Stability		±25 ppm , ±30 ppm , ±50 ppm, ±100 ppm		
Operating Temperature		-10 to +70° C		
Storage Temperature		-40 to +85° C		
Power Supply Voltage		1.8 V±5%	2.5 V±5%	3.3 V±5%
Power Supply Current Consumption		2.5mA max: ~24MHz	3.0mA max: ~24MHz	2.5mA max: ~24MHz
		3.5mA max: ~40MHz	4.5mA max: ~40MHz	3.5mA max: ~40MHz
		4.5mA max: ~50MHz	5.0mA max: ~50MHz	4.5mA max: ~50MHz
Output	Level	C-MOS		
	Load	15 pF max.		
	Output Voltage	Vol : 0.1Vdd max. , Voh : 0.9Vdd min.		
	Rise & Fall Time	10ns max. at 10% to 90% Vdd		
	Duty Cycle	45 to 55% at 50% Vdd		
Tri state Function		#1 : N.C. or "H"→Output enable / #1 : "L"→Hi-Z(Output disable)		

■ Environmental Characteristics

Description	Specification
Fall Shock	Test : 3 time free drop onto concrete board from 150cm high Result: ±5.0 ppm max.
Vibration Shock	Test : Freq. 5-500Hz, Amplitude 1.5mm, Test time 4cycles/XYZ axis Result: ±5.0 ppm max.
Solderability	Test : Immersed into solder bath at 235±° C for 3 sec. Result: More than 95%
Humidity	Test : 90 to 95%RH at 60±3° C±500 hours Result: ±5.0 ppm max.
Reflow Heat	Test : 2 times of IR reflow soldering in accordance with reflow temperature profile as per the document No.:TR-0531 Result: ±1.0 ppm max.

■ Outline Drawing & Suggested Pad



TERMINAL	CONNECTION
#1	CE
#2	GND
#3	OUTPUT
#4	Vdd