

# Surface Mount Oscillators

•SCO3H18, SCO3H25, SCO3H28, SCO3H33, SCO3H50  
(3.2 x 2.5 x 1.2 mm)



## Electrical Specifications

SMD Oscillators						
SCO3H18, SCO3H25, SCO3H28, SCO3H33, SCO3H50						
3.2 x 2.5 x 1.2 mm	CERAMIC, SMD	SCO3H18	SCO3H25	SCO3H28	SCO3H33	SCO3H50
INPUT VOLTAGE		+1.8 VDD	+2.5 VDD	+2.8 VDD	+3.3 VDD	+5.0 VDD
INPUT CURRENT	BELOW 10.000 MHz	6 mA MAX	7 mA MAX	8 mA MAX	10 mA MAX	20 mA MAX
	10.000 to 34.999 MHz	7 MA MAX	8 MA MAX		15 MA MAX	30 MA MAX
	35.000 TO 49.999 MHz	15 MA MAX	20 MA MAX		25 MA MAX	40 MA MAX
	50.000 MHz AND ABOVE	25 MA MAX	30 MA MAX		35 MA MAX	50 MA MAX
PACKAGE CONSTRUCTION		SEAM SEALED CERAMIC PACKAGE W/ METAL COVER. 4 SMD PADS FOR ELECTRICAL AND PHYSICAL ATTACH TO PCB.				
FREQUENCY RANGE		1.000 to 156.000 MHz*				
FREQUENCY STABILITY	ALL CONDITIONS **	+/-20 ppm, +/-25 ppm, +/-30 ppm, +/-50 ppm, and +/-100 ppm ARE MOST COMMON ***				
OPERATING TEMP. RANGE		0 °C TO +70°C IS STANDARD. -10°C to +70°C, -20°C to +70°C, AND -40°C to +85°C ARE COMMON				
OUTPUT LOAD	SELECT ONE LOAD	15 pF (HCMOS), 30 pF HIGH DRIVE AVAILABLE				
OUTPUT WAVESHAP		CMOS, SQUAREWAVE				
RISE TIME, 10% TO 90% SIGNAL LEVELS	BELOW 40 MHz	5 ns MAX	5 ns MAX	5 ns MAX	4 ns MAX	4 ns MAX
	40 MHz AND ABOVE	4 ns MAX	4 ns MAX	4 ns MAX	3ns MAX	3ns MAX
FALL TIME, 90% TO 10% SIGNAL LEVELS	BELOW 40 MHz	5 ns MAX	5 ns MAX	5 ns MAX	4 ns MAX	4 ns MAX
	40 MHz AND ABOVE	4 ns MAX	4 ns MAX	4 ns MAX	3ns MAX	3ns MAX
SYMMETRY	AT 50% VDD	50/50 +/-5%				
LOGIC 1	LOAD = 15 pF (OR 30 pF)	90% VDD MIN				
LOGIC 0	LOAD = 15 pF (OR 30 pF)	10% VDD MAX				
STORAGE TEMP. RANGE		-55°C to +105°C				
STANDBY FUNCTION		LOGIC 1: HIGH IMPEDANCE - OSCILLATOR STOPS. LOGIC 0 -OR- N/C: NORMAL OPERATION				
STANDBY CURRENT		10 uA MAX				
AGING		3 PPM FIRST YEAR, 1 PPM PER YEAR THEREAFTER				
HERMETIC SEALED	SEAM SEALED	YES				
SOLDER PADS	QTY:	4 PAD				
RoHS		FULLY COMPLIANT				
LEGACY P/N		SCO67	SCO69	SCO68	SCO66	SCO63

\* CONSULT FACTORY FOR EXTENDED RANGES

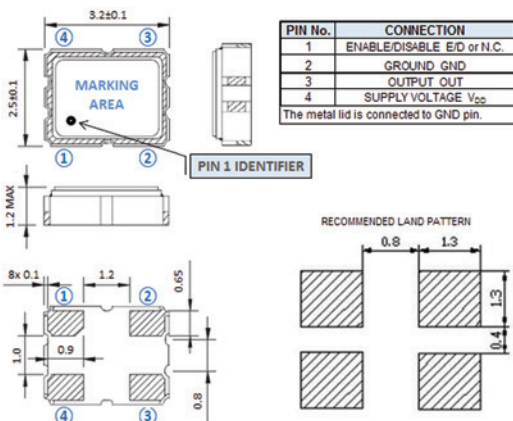
\*\* INCLUDE +25°C TOLERANCE, OPERATING TEMPERATURE RANGE, INPUT VOLTAGE CHANGE, LOAD CHANGE, SHOCK AND VIBRATION. CONSULT FACTORY FOR TIGHTER OPTIONS

\*\*\* LIMITED STABILITIES BEYOND -20°C TO +70°C. STABILITY TABLE BELOW SHOWS TWO LETTER CODE FOR TEMPERATURE RANGE TO BE SELECTED.

NOTES: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## Dimensions (Unit:mm)

## \*NKG Oscillator Part Example Key



**SCO3H-18 -20M00- A F P**

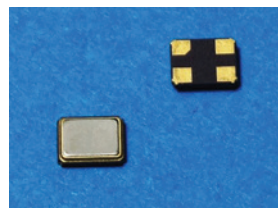
Family/  
Package

Voltage (+1.8VDD)

Frequency (20.000 MHz)

P= 70°C (3rd letter)  
 F= -30°C (2nd letter)  
 A= 100 ppm  
 Total Tolerance over Temperature +/- 100 ppm (1st letter)

1st letter	Tolerance +/-	2nd letter	3rd letter
A	100 ppm	A= -55°	L= 50°
B	50 ppm	B= -50°	M= 55°
C	25 ppm	C= -45°	N= 60°
D	20 ppm	D= -40°	P= 70°
		E= -35°	Q= 75°
		F= -30°	R= 80°
		G= -25°	T= 85°
		H= -20°	U= 90°
		J= -15°	V= 100°
		K= 0°	W= 105°
			X= 110°
			Y= 120°
			Z= 125°



\*NOT TO SCALE

**Contact**  
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