

SURFACE MOUNT PRECISION OSCILLATOR

DFN S1-KH(5 V) & DFN S1-LH(3.3 V)

KEY FEATURES

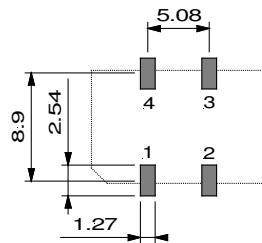
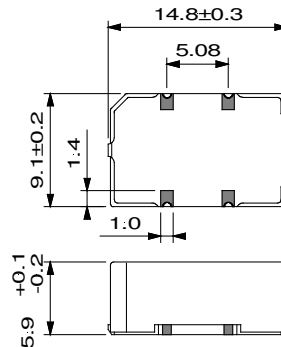
1 to 130 MHz

± 20 ppm/15 years stability available

Encapsulated crystal

APPLICATIONS

Sonet/SDH



PC board footprint

Function	DFN S1
NC/ Enable	1
GND	2
Output	3
Vcc	4

TYPE	DFN S1-KH	DFN S1-LH
Frequency Range	1 to 130 MHz	1 to 130 MHz

ELECTRICAL SPECIFICATIONS		
supply voltage	5 V ± 10 %	3.3 V ± 5 %
supply current (no load)	≤ 20 mA	≤ 10 mA
≤ 25 MHz	≤ 50 mA	≤ 15 mA
≤ 50 MHz	≤ 70 mA	≤ 40 mA
> 50 MHz		
output load	HCMOS 50 pF up to 25 MHz 15 pF > 25MHz	HCMOS 50 pF up to 25 MHz 15 pF > 25MHz
duty cycle	40/60...60/40 % @ 50% level	40/60...60/40 % @ 50% level
rise/fall times (HCMOS @ 15 pF load)	10 to 90 % ≤ 7 ns up to 25 MHz ≤ 3 ns > 25 MHz	10 to 90 % ≤ 7 ns up to 25 MHz ≤ 3 ns > 25 MHz
high/low levels	≥ 4.5 V / ≤ 0.5 V	≥ 2.8 V / ≤ 0.3 V
Phase jitter (fj > 1 kHz) @ 100 MHz	≤ 1 ps RMS	≤ 1 ps RMS
start up	≤ 10 ms @ 4.5 V	≤ 10 ms @ 3.15 V

FREQUENCY STABILITY		stability [ppm] and temperature code							
types	temperature range	stability	code	stability	code	stability	code	stability	code
all types	0 to 70 °C	≤ ± 15	XB15	≤ ± 20	XB20	≤ ± 25	XB25	≤ ± 50	XB50
	-40 to 85 °C	≤ ± 25	XE25	≤ ± 50	XE50	≤ ± 75	XE75	≤ ± 100	XE100
remarks		includes calibration at 25 °C, temperature, ageing, Vcc and load changes 1 st year							

OPTIONS	CODE	
tight symmetry (f ≤ 50 MHz)	R	45/55...55/45 %
tri-state output on pin 1	Z	high or open = enable, low = high Z
TTL output	KT/LT	TTL output levels, 10 TTL load
stability over long life time		A = 5 years B = 10 years C = 15 years

ORDERING CODE	type + option code + frequency + temperature code
Example	DFN S1-KHZ 49.152 MHz XE25

REMARK	Please consult factory for life time/stabilities possible combinations
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