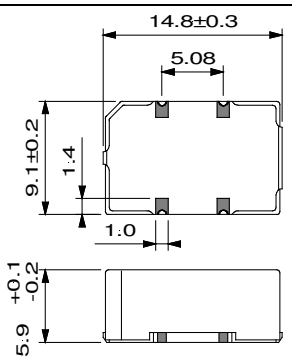
fordahl
FREQUENCY CONTROL PRODUCTS

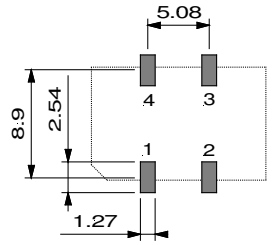
SURFACE MOUNT PRECISION OSCILLATOR

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



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



PC board footprint

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)	≤ 25 MHz	≤ 20 mA	≤ 10 mA
	≤ 50 MHz	≤ 50 mA	≤ 15 mA
	> 50 MHz	≤ 70 mA	≤ 40 mA
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 1st 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