

# SURFACE MOUNT MINIATURE PRECISION OSCILLATOR

## DFN S2-LE (LVPECL) & DFN S2-LL (LVDS)

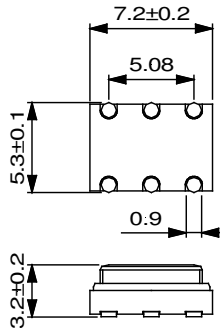
### KEY FEATURES

**16 to 213 MHz**

**± 20 ppm/10 years stability available**

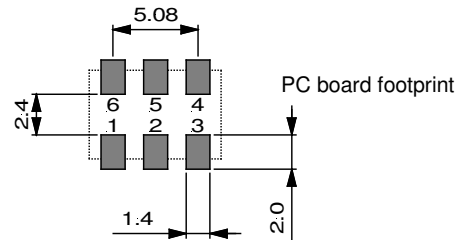
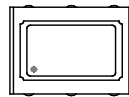
**1 ps RMS jitter over 50 kHz to 80 MHz B.W.**

**For Sonet/SDH/datacomms applications**



Marking:

DFN S2-LEC/LL  
Frequency  
Code yrwk



Pin	DFN S2-LE/LL
1	E / D
2	NC
3	GND
4	Output 1
5	Output 2
6	Vcc

TYPE	DFN S2-LECPI	DFN S2-LLPI
Frequency Range	16 to 213 MHz	

ELECTRICAL SPECIFICATIONS	DFN S2-LECPI	DFN S2-LLPI
supply voltage	3.3 V ± 5 %	3.3 V ± 5 %
supply current (no load)	≤ 60 mA	≤ 60 mA
output load	LVPECL 100 K ( 50 Ω to 1.3 V )	100 Ω between outputs
duty cycle @ 50% level	45/55...55/45 %	45/55...55/45 %
rise/fall times ( 20 to 80% )	≤ 0.5 ns	≤ 0.3 ns
high/low levels	≥ 2.22 V / ≤ 1.7 V	≤ 1.6 V / ≥ 0.9 V
differential output		≤ 454 mV
differential output error		≤ 50 mV
offset voltage		≤ 1.375 V
offset voltage error		≤ 50 mV
output leakage current		≤ 10 µA
jitter RMS ( 12 kHz to 5 MHz )	≤ 0.5 ps	≤ 0.5 ps
jitter RMS ( 50 kHz to 80 MHz )	≤ 1 ps ( f = 155.52 MHz )	≤ 1 ps ( f = 155.52 MHz )
enable / disable on pin 1	low or open = enable, high = disable	low or open = enable, high = disable
complementary output on pin 5	180° phase shifted	180° phase shifted
start up	≤ 10 ms @ 3.15 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	± 20	XB20	± 25	XB25	± 50	XB50	± 100	XB100
	-40 to 85°C	± 25	XE25	± 50	XE50	± 75	XE75	± 100	XE100
remark	includes calibration at 25°C, temperature, ageing, Vcc and load changes 1 <sup>st</sup> year								

OPTIONS	Stability over long life time		
	A = 5 years	B = 10 years	C = 15 years

ORDERING CODE	type + option code + frequency + stability / temperature code
Example	DFN S2-LECPI 155.52 MHz XB20

**REMARK** Please consult factory for frequencies/life time/stabilities combinations