

Title:	Performance Report SiT2020B, 11.0592MHz			
Type:	Performance report Rev: 1.0			
Orig:		Date:	Nov 21, 2014	

This report contains sample performance data for SiT2020B-11.0592MHz.

Conditions:

- Frequency 11.0592 MHz
- Vdd 1.8V, 2.5V, 2.8V, 3.0V, 3.3V
- Temperature 25°C
- Termination:
 - No load for IDD
 - \circ 50 Ω to GND for phase noise
 - o 15pF for other tests

Equipment:

- Agilent DSA90604 oscilloscope (6GHz, 20Gsps)
 - o Period jitter, waveform, rise/fall time, duty cycle, amplitude
- Agilent E5052B Signal Source Analyzer
 - o Phase noise, integrated phase jitter
- Power supply current
 - o Agilent 34401A DMM

Data:

- Random Phase jitter, Period Jitter, Duty cycle, Rise/Fall time, Amplitude, Idd
- Output waveforms
- Frequency stability versus temperature

Table 1. Performance data

Parameter	Units	Voltage			_	
raidilletei	Ullits	1.8 V	2.5 V	2.8 V	3.0 V	3.3 V
Random Phase jitter (900kHz - 5MHz)	ps, rms	0.58	0.60	0.59	0.59	0.59
Random Phase jitter (12kHz - 5MHz)	ps, rms	1.35	1.34	1.34	1.32	1.31
Random Phase jitter (900kHz - 11.0592MHz)*	ps, rms	0.79	0.81	0.80	0.80	0.80
Random Phase jitter (12kHz - 11.0592MHz)*	ps, rms	1.45	1.45	1.44	1.43	1.42
Period jitter	ps, rms	2.11	1.86	1.79	1.77	1.78
Period jitter (10,000 cycles)	ps, pk-pk	15.7	13.6	13.6	13.2	13.0
Duty cycle	%	50.0	50.0	50.0	50.1	50.2
Rise time (20% - 80%)	ns	1.24	1.00	0.91	0.98	0.91
Fall time (80% - 20%)	ns	1.26	0.98	0.90	0.97	0.91
Amplitude	V	1.79	2.48	2.78	3.02	3.30
Current consumption (no load, output enabled)	mA	3.39	3.48	3.52	3.54	3.58
Current consumption (no load, output disabled)	mA	3.33	3.41	3.46	3.50	3.58

^{*}Calculated by extending the noise floor of the phase noise from 5 MHz to 11.0592 MHz

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Figure 1. Duty cycle, Rise/Fall time and Amplitude 1.8V



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Figure 2. Duty cycle, Rise/Fall time and Amplitude 2.5V



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Figure 3. Duty cycle, Rise/Fall time and Amplitude 2.8V



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Figure 4. Duty cycle, Rise/Fall time and Amplitude 3.0V



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Figure 5. Duty cycle, Rise/Fall time and Amplitude 3.3V



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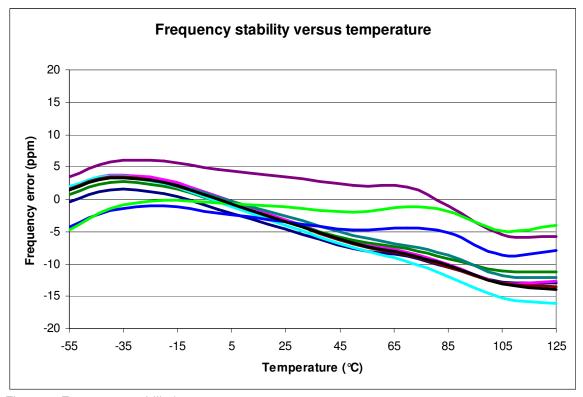


Figure 6. Frequency stability* versus temperature

*Please note that frequency stability in SiTime devices is not depended on output frequency.