<b>Si</b> Time <sup>®</sup>	Title:	Performance Report SiT2001B, 8.192MHz				
	Туре:	Performance report	Rev:	1.0		
	Orig:		Date:	Apr 10, 2014		

# This report contains sample performance data for SiT2001B-8.192MHz.

### **Conditions:**

- Frequency 8.192 MHz
- Vdd 1.8V, 2.5V, 2.8V, 3.0V, 3.3V
- Temperature 25℃
- Termination:
  - No load for IDD
  - $\circ~~50\Omega$  to GND for phase noise
  - o 15pF for other tests

# **Equipment:**

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

## Data:

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

#### Table 1. Performance data

Parameter	Units	Voltage					
	01113	1.8 V	2.5 V	2.8 V	3.0 V	3.3 V	
Period jitter	ps, rms	1.86	1.67	1.62	1.59	1.59	
Period jitter (10,000 cycles)	ps, pk-pk	14.2	12.9	12.5	12.4	12.6	
Duty cycle	%	50.0	50.0	50.0	50.1	50.1	
Rise time	ns	1.26	1.03	0.95	1.00	0.94	
Fall time	ns	1.26	0.99	0.91	0.97	0.93	
Amplitude	V	1.80	2.49	2.79	3.02	3.30	
Current consumption (no load, output enabled)	mA	3.14	3.19	3.21	3.23	3.27	
Current consumption (no load, output disabled)	mA	3.12	3.16	3.20	3.25	3.32	

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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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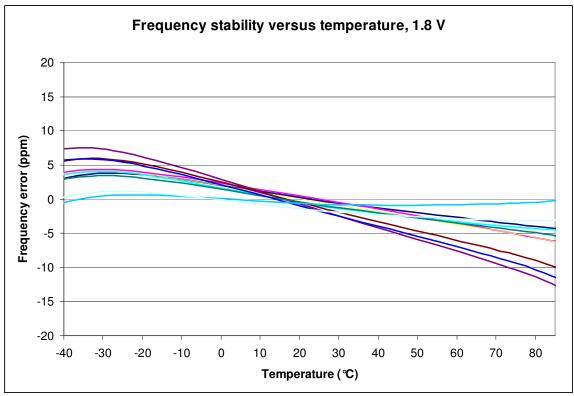


Figure 6. Frequency stability\* versus temperature, 1.8 V

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

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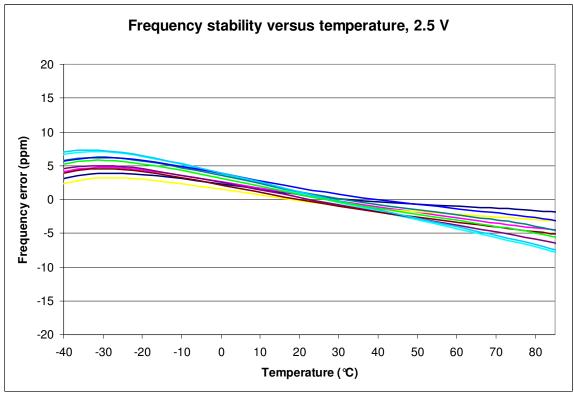


Figure 7. Frequency stability versus temperature, 2.5 V

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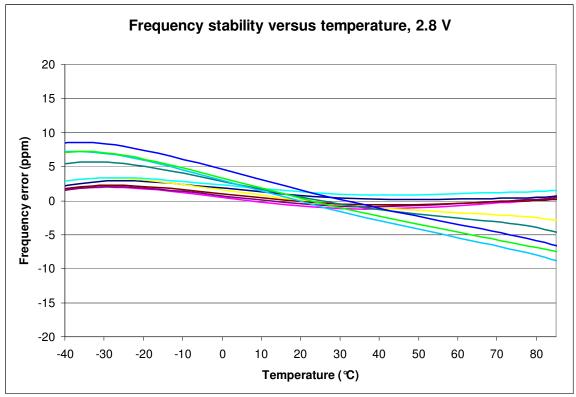


Figure 8. Frequency stability versus temperature, 2.8 V

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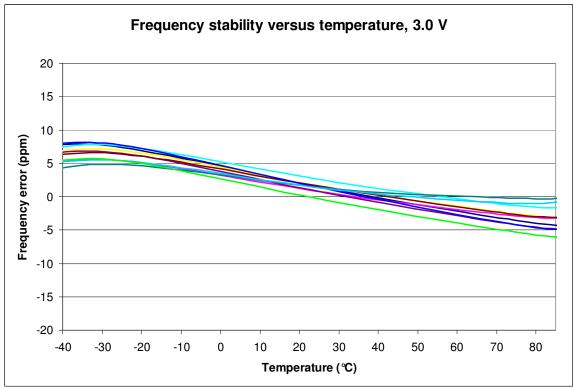


Figure 9. Frequency stability versus temperature, 3.0 V

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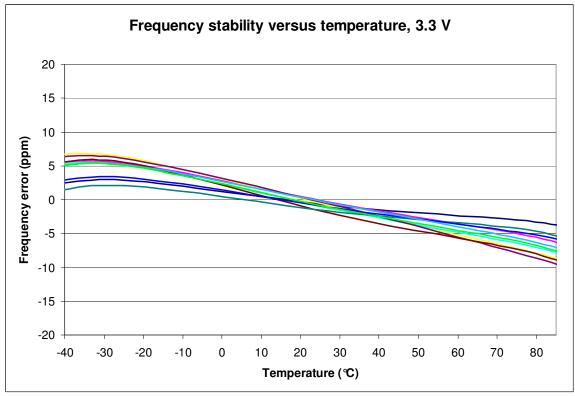


Figure 10. Frequency stability versus temperature, 3.3 V

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