

Title:	Performance Report SiT2001B, 4.096MHz			
Type:	Performance report	Rev:	1.0	
Orig:		Date:	Apr 10, 2014	

## This report contains sample performance data for SiT2001B-4.096MHz.

## **Conditions:**

- Frequency 4.096 MHz
- Vdd 1.8V, 2.5V, 2.8V, 3.0V, 3.3V
- Temperature 25°C
- Termination:
  - No load for IDD
  - $\circ$  50 $\Omega$  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:

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

Table 1. Performance data

Parameter	Units	Voltage				
i arameter	Office	1.8 V	2.5 V	2.8 V	3.0 V	3.3 V
Period jitter	ps, rms	2.20	2.06	2.03	2.04	2.01
Period jitter (10,000 cycles)	ps, pk-pk	16.6	15.9	15.3	15.5	15.6
Duty cycle	%	50.0	50.0	50.0	50.0	50.1
Rise time	ns	1.26	1.03	0.94	0.99	0.93
Fall time	ns	1.26	0.99	0.90	0.97	0.92
Amplitude	V	1.80	2.50	2.79	3.02	3.30
Current consumption (no load, output enabled)	mA	3.09	3.13	3.15	3.17	3.19
Current consumption (no load, output disabled)	mA	3.11	3.16	3.21	3.25	3.32



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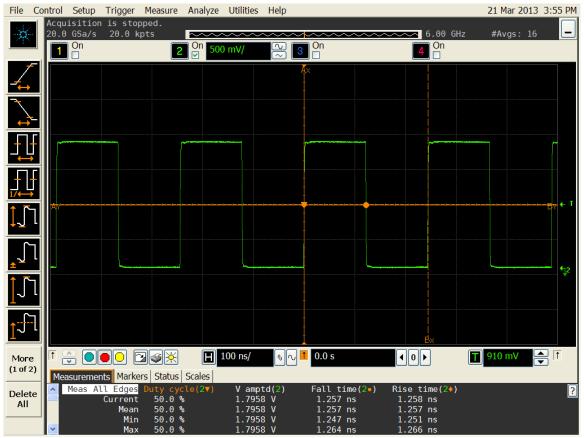


Figure 1. Duty cycle, Rise/Fall time and Amplitude 1.8V



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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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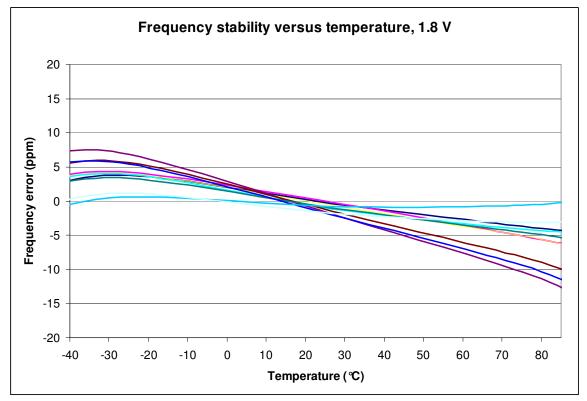


Figure 6. Frequency stability\* versus temperature, 1.8 V

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



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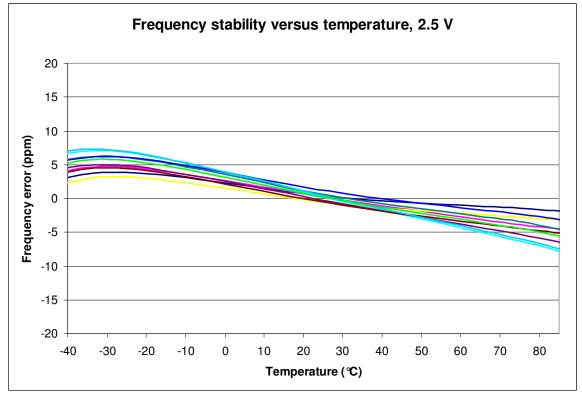


Figure 7. Frequency stability versus temperature, 2.5 V



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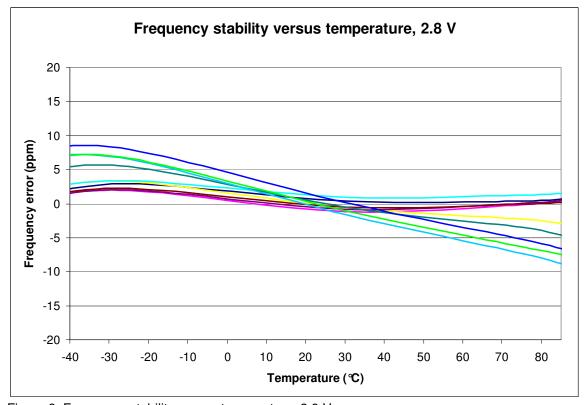


Figure 8. Frequency stability versus temperature, 2.8 V



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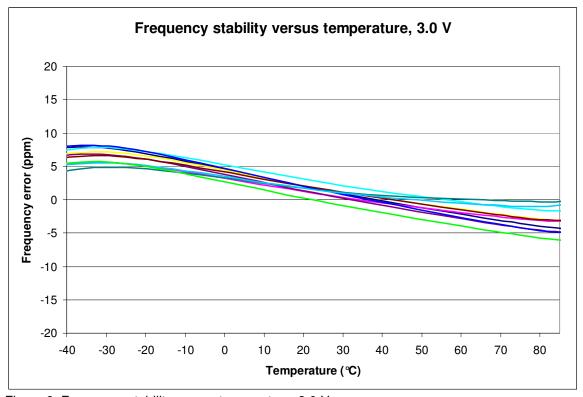


Figure 9. Frequency stability versus temperature, 3.0 V



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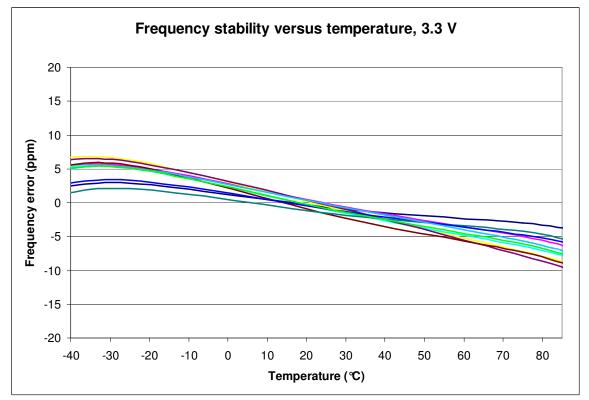


Figure 10. Frequency stability versus temperature, 3.3 V