	Title:	Performance Report SiT2001B, 18.432MHz			
	Type:	Performance report	Rev:	1.0	
	Orig:		Date:	Mar 31, 2014	

This report contains sample performance data for SiT2001B-18.432MHz.

Conditions:

- Frequency 18.432 MHz
- Vdd 1.8V, 2.5V, 2.8V, 3.0V, 3.3V
- Temperature 25 °C
- Termination:
 - o No load for IDD
 - o 50Ω 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				
		1.8 V	2.5 V	2.8 V	3.0 V	3.3 V
Random Phase jitter (900kHz - 5MHz)	ps, rms	0.49	0.51	0.51	0.50	0.50
Random Phase jitter (12kHz - 5MHz)	ps, rms	1.27	1.27	1.27	1.27	1.27
Random Phase jitter (900kHz - 18.432MHz)*	ps, rms	0.76	0.79	0.79	0.78	0.78
Random Phase jitter (12kHz - 18.432MHz)*	ps, rms	1.40	1.41	1.41	1.40	1.40
Period jitter	ps, rms	1.89	1.76	1.72	1.72	1.70
Period jitter (10,000 cycles)	ps, pk-pk	14.2	12.7	12.5	12.5	12.5
Duty cycle	%	50.0	49.9	50.1	50.2	50.3
Rise time (20% - 80%)	ns	1.26	1.03	0.95	1.00	0.94
Fall time (80% - 20%)	ns	1.26	0.99	0.91	0.98	0.93
Amplitude	V	1.79	2.48	2.78	3.02	3.30
Current consumption (no load, output enabled)	mA	3.55	3.67	3.72	3.74	3.79
Current consumption (no load, output disabled)	mA	3.41	3.49	3.54	3.58	3.65

*Calculated by extending the noise floor of the phase noise from 5 MHz to 18.432 MHz

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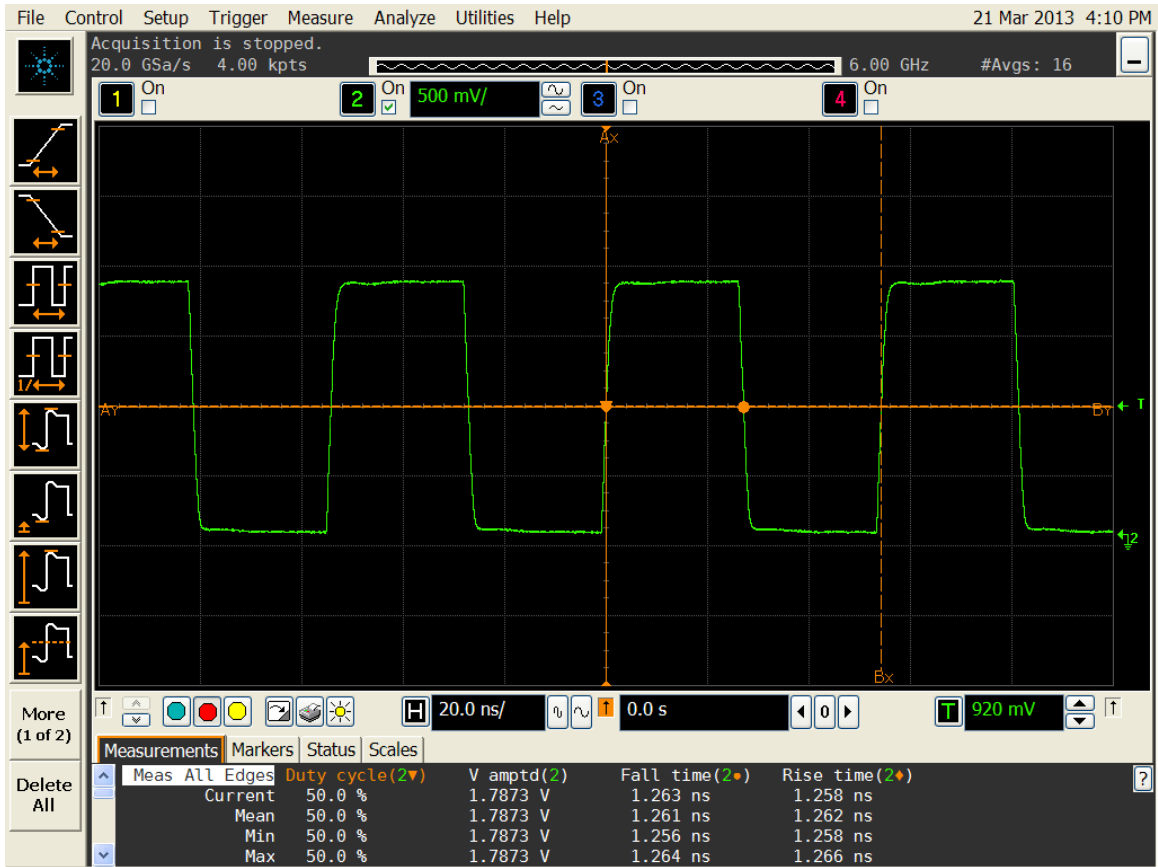



Figure 1. Duty cycle, Rise/Fall time and Amplitude 1.8V

	Title:	Performance Report SiT2001B, 18.432MHz	
	Type:	Performance report	Rev: 1.0
	Orig:		Date: Mar 31, 2014

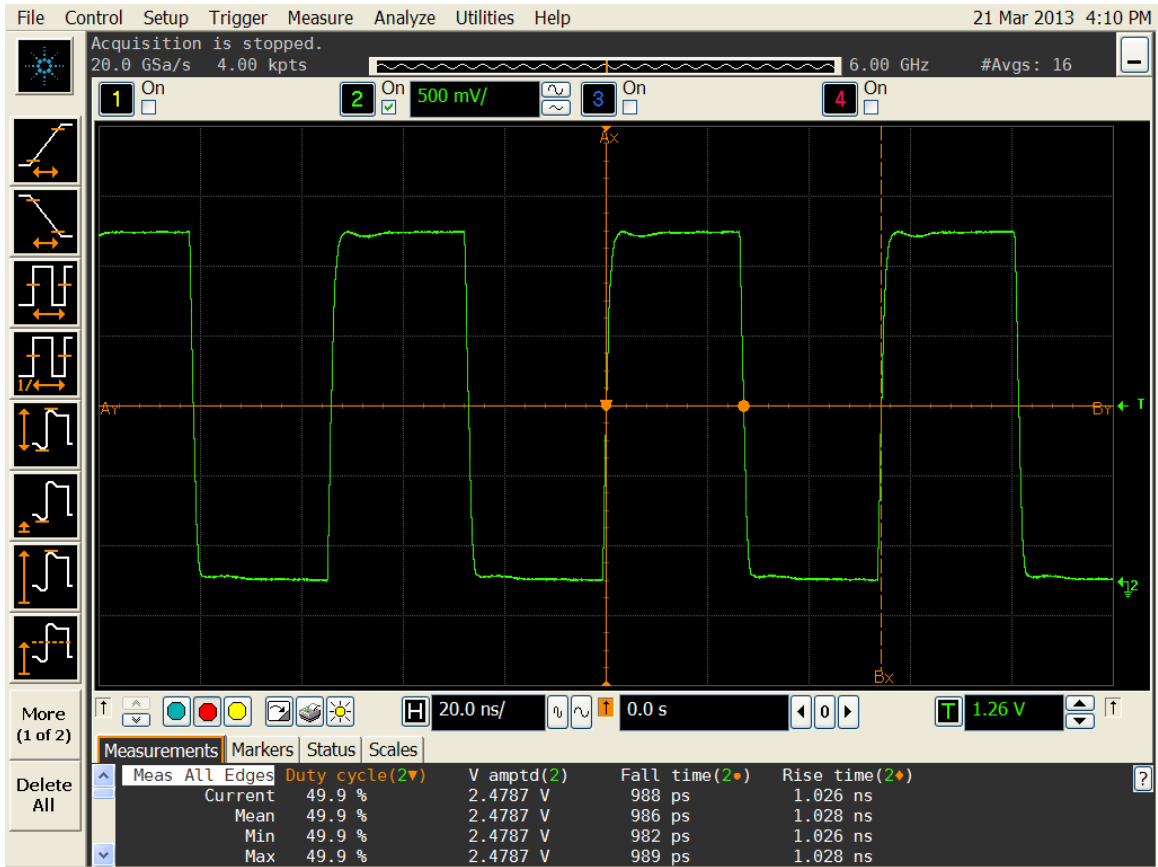



Figure 2. Duty cycle, Rise/Fall time and Amplitude 2.5V

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	Type:	Performance report	Rev:	1.0
	Orig:		Date:	Mar 31, 2014

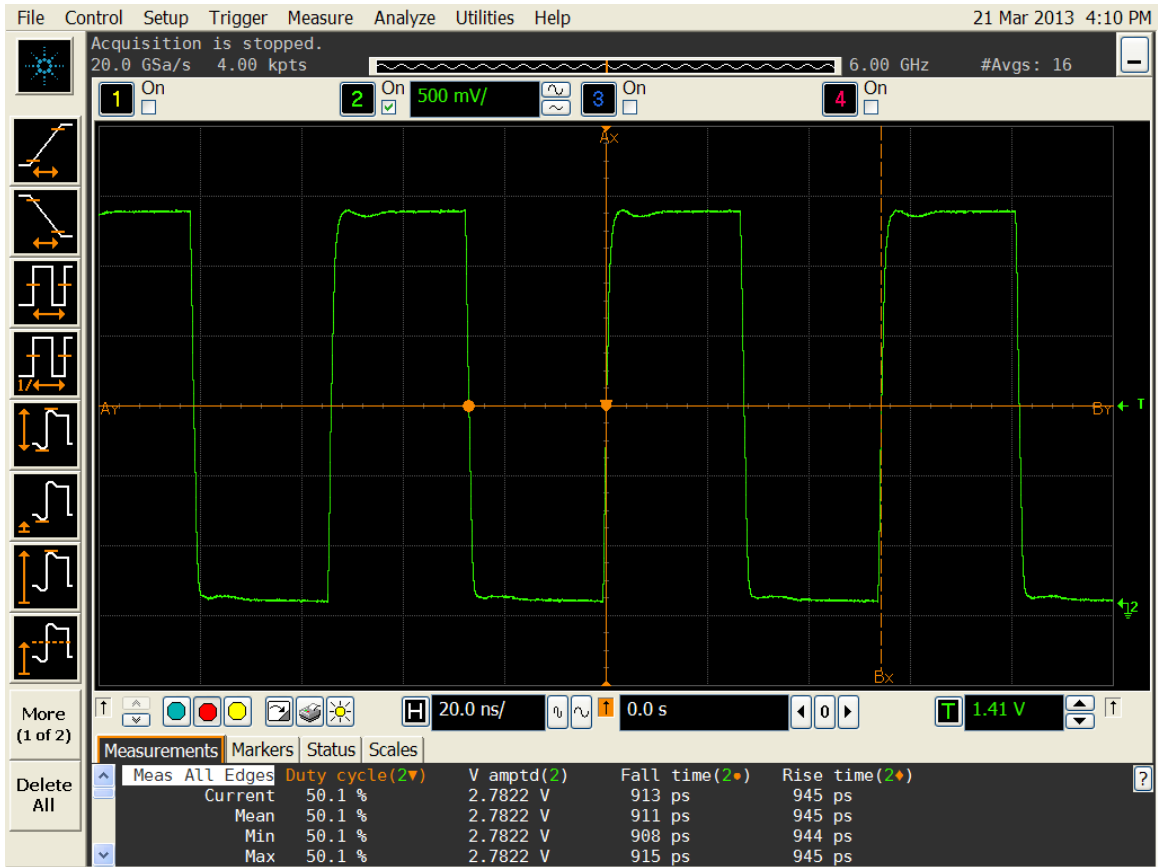



Figure 3. Duty cycle, Rise/Fall time and Amplitude 2.8V

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	Type:	Performance report	Rev: 1.0
	Orig:		Date: Mar 31, 2014

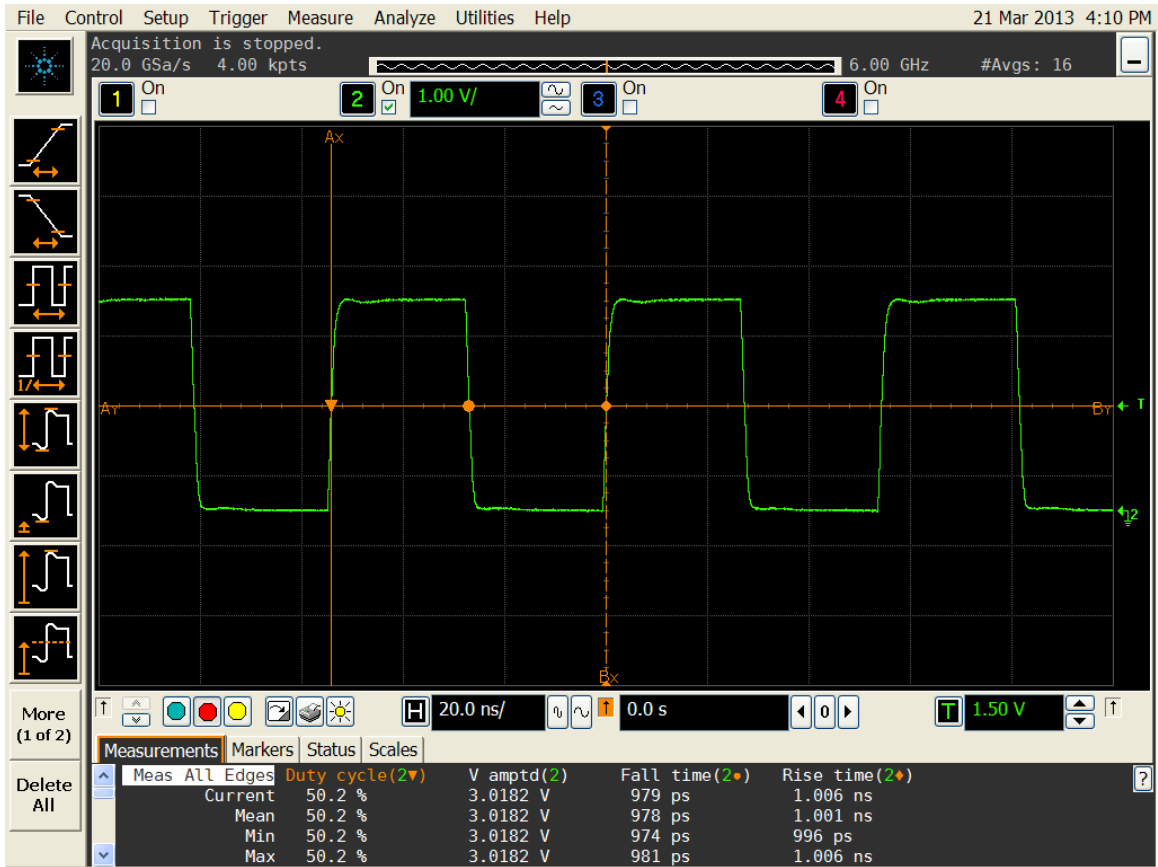



Figure 4. Duty cycle, Rise/Fall time and Amplitude 3.0V

	Title:	Performance Report SiT2001B, 18.432MHz		
	Type:	Performance report	Rev:	1.0
	Orig:		Date:	Mar 31, 2014

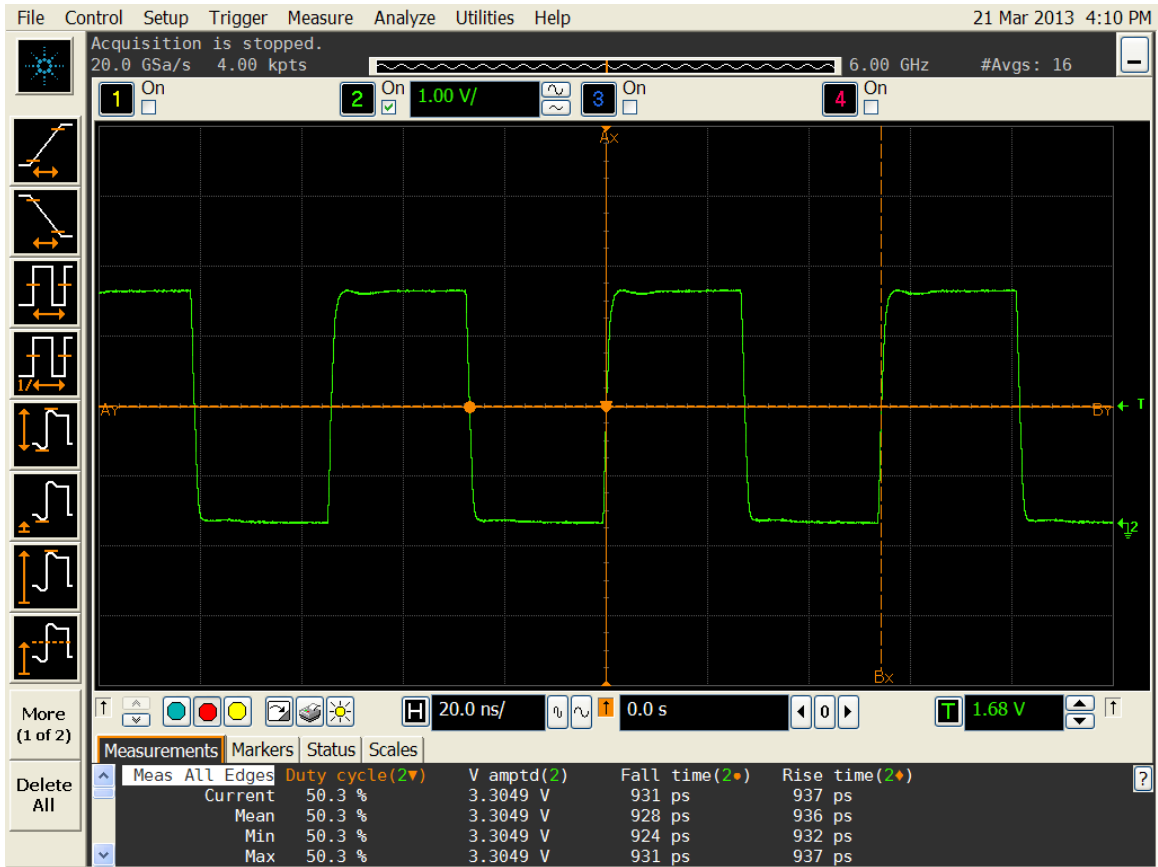


Figure 5. Duty cycle, Rise/Fall time and Amplitude 3.3V

SiTime™	Title:	Performance Report SiT2001B, 18.432MHz	
	Type:	Performance report	Rev: 1.0
	Orig:		Date: Mar 31, 2014



Figure 6. Frequency stability* versus temperature, 1.8 V

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

SiTime™	Title:	Performance Report SiT2001B, 18.432MHz	
	Type:	Performance report	Rev: 1.0
	Orig:		Date: Mar 31, 2014



Figure 7. Frequency stability versus temperature, 2.5 V

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SiTime™	Title:	Performance Report SiT2001B, 18.432MHz	
	Type:	Performance report	Rev: 1.0
	Orig:		Date: Mar 31, 2014



Figure 8. Frequency stability versus temperature, 2.8 V

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	Orig:		Date: Mar 31, 2014



Figure 9. Frequency stability versus temperature, 3.0 V

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	Orig:		Date: Mar 31, 2014



Figure 10. Frequency stability versus temperature, 3.3 V

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