This report contains sample performance data for SiT8920B-14.7456MHz.

Conditions:

- Frequency 14.7456 MHz
- Vdd 1.8V, 2.5V, 2.8V, 3.0V, 3.3V
- Temperature 25℃
- Termination:
  - No load for IDD
  - 50Ω to GND for phase noise
  - 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:

- 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	0.57	0.61	0.59	0.58	0.58
Random Phase jitter (12kHz - 5MHz)	ps, rms	1.34	1.36	1.33	1.32	1.30
Random Phase jitter (900kHz – 14.7456MHz)*	ps, rms	0.84	0.89	0.86	0.86	0.85
Random Phase jitter (12kHz – 14.7456MHz)*	ps, rms	1.47	1.51	1.47	1.46	1.44
Period jitter	ps, rms	2.69	1.99	1.88	1.85	1.80
Period jitter (10,000 cycles)	ps, pk-pk	18.4	14.5	13.9	13.8	13.2
Duty cycle	%	50.0	50.0	50.1	50.2	50.3
Rise time (20% - 80%)	ns	1.23	1.00	0.92	0.97	0.91
Fall time (80% - 20%)	ns	1.26	0.98	0.90	0.97	0.91
Amplitude	V	1.79	2.48	2.79	3.02	3.30
Current consumption (no load, output enabled)	mA	3.52	3.62	3.66	3.69	3.74
Current consumption (no load, output disabled)	mA	3.42	3.49	3.55	3.59	3.66

*Calculated by extending the noise floor of the phase noise from 5 MHz to 14.7456 MHz

The information contained in this document is confidential and proprietary to SiTime Corporation. Unauthorized reproduction or distribution is prohibited.

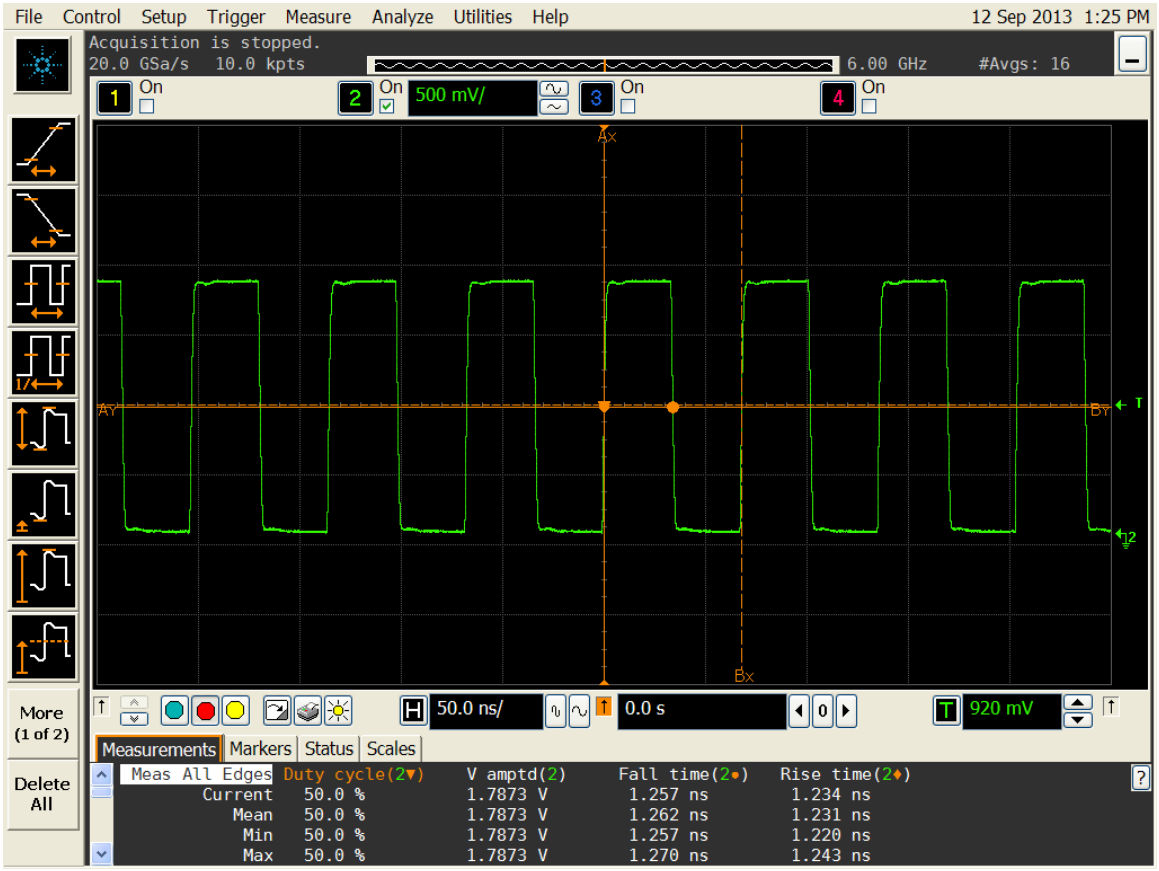

Figure 1. Duty cycle, Rise/Fall time and Amplitude 1.8V

The information contained in this document is confidential and proprietary to SiTime Corporation. Unauthorized reproduction or distribution is prohibited.

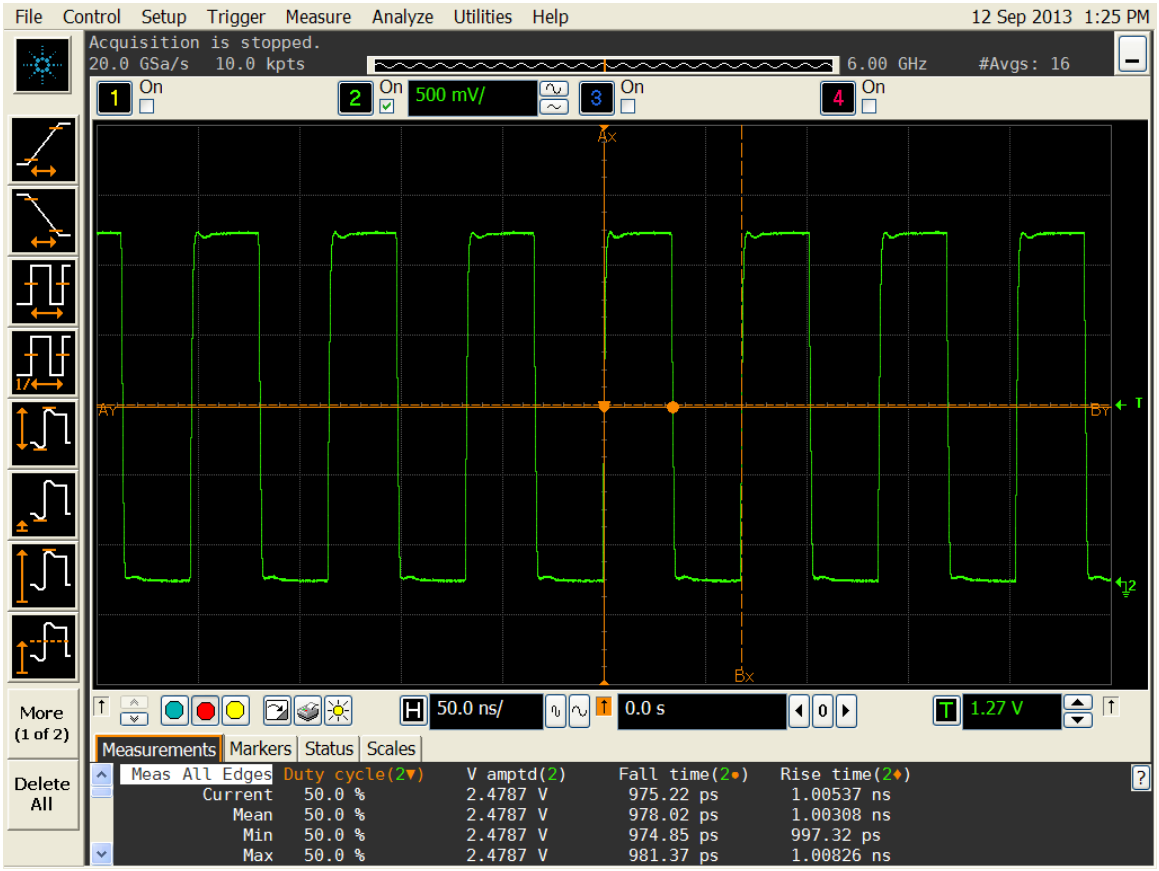

Figure 2. Duty cycle, Rise/Fall time and Amplitude 2.5V

The information contained in this document is confidential and proprietary to SiTime Corporation. Unauthorized reproduction or distribution is prohibited.

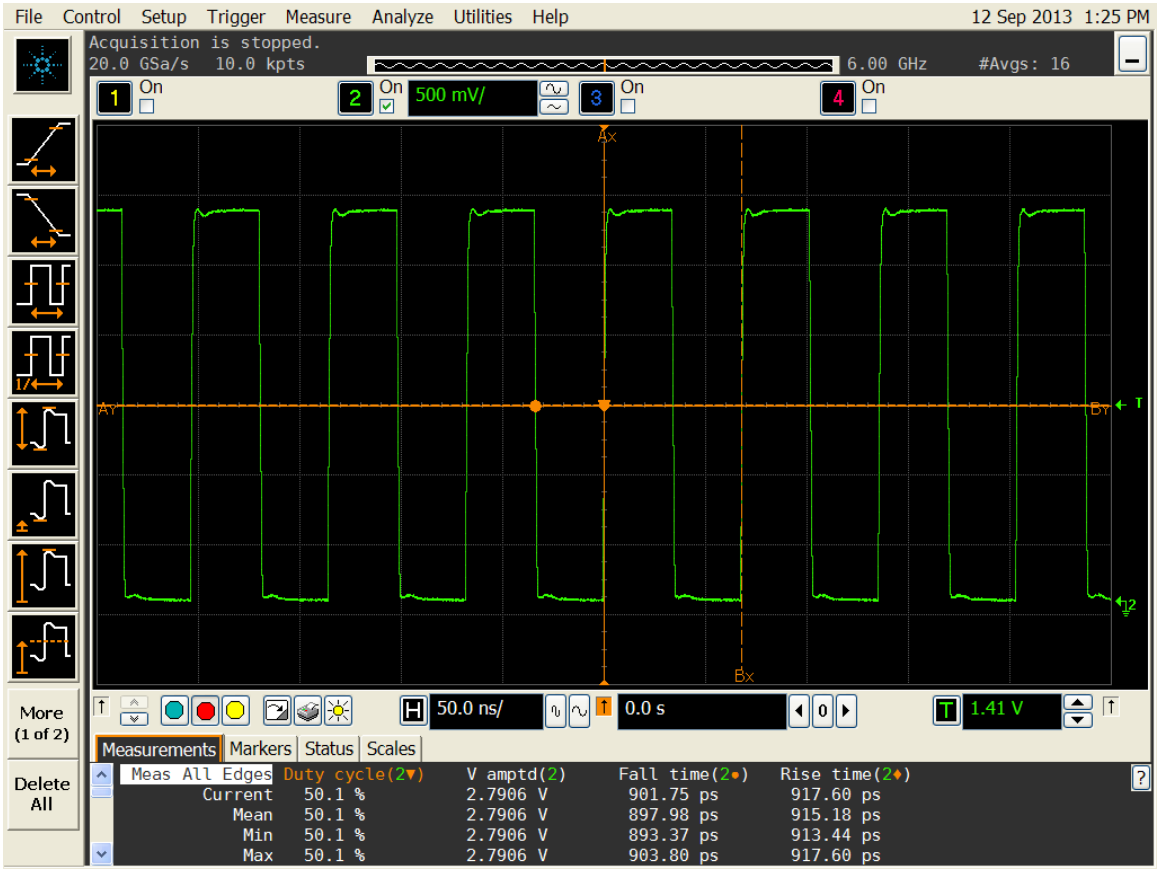

Figure 3. Duty cycle, Rise/Fall time and Amplitude 2.8V

The information contained in this document is confidential and proprietary to SiTime Corporation. Unauthorized reproduction or distribution is prohibited.

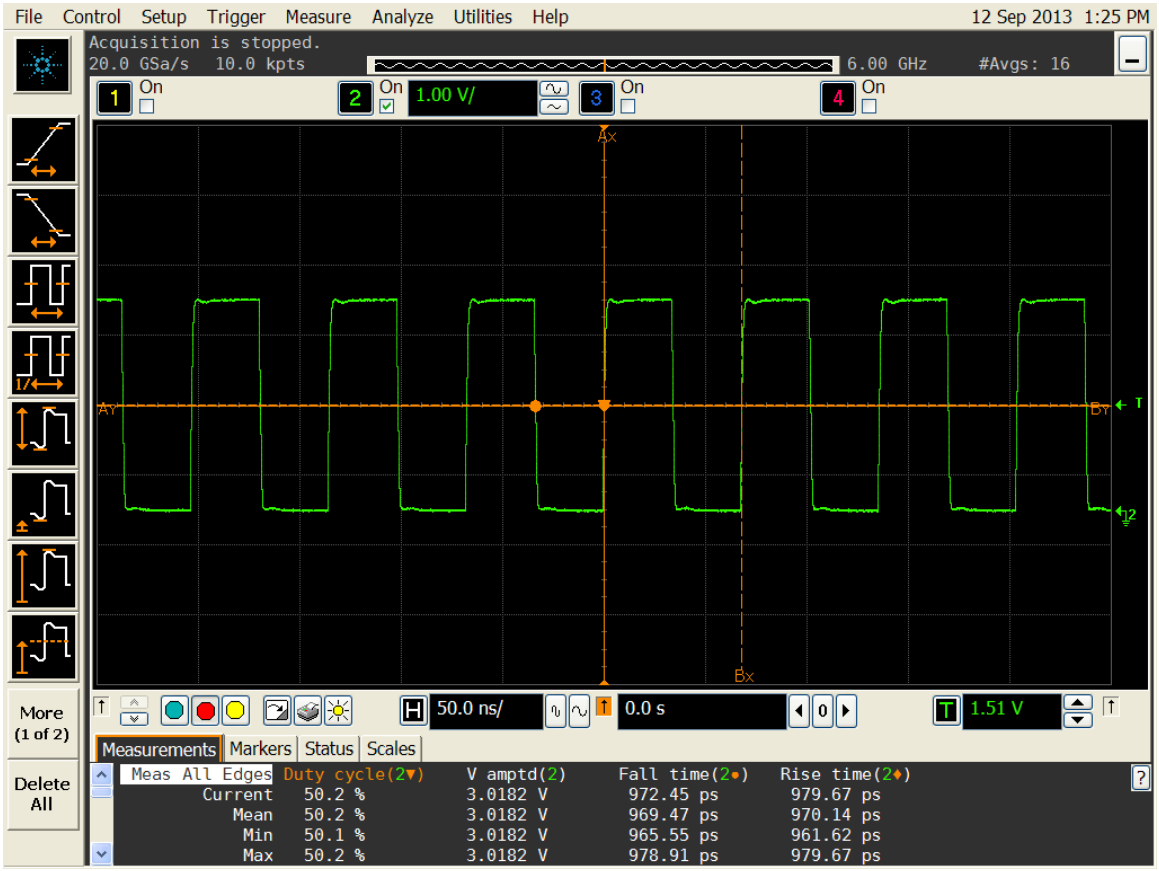

Figure 4. Duty cycle, Rise/Fall time and Amplitude 3.0V

The information contained in this document is confidential and proprietary to SiTime Corporation. Unauthorized reproduction or distribution is prohibited.

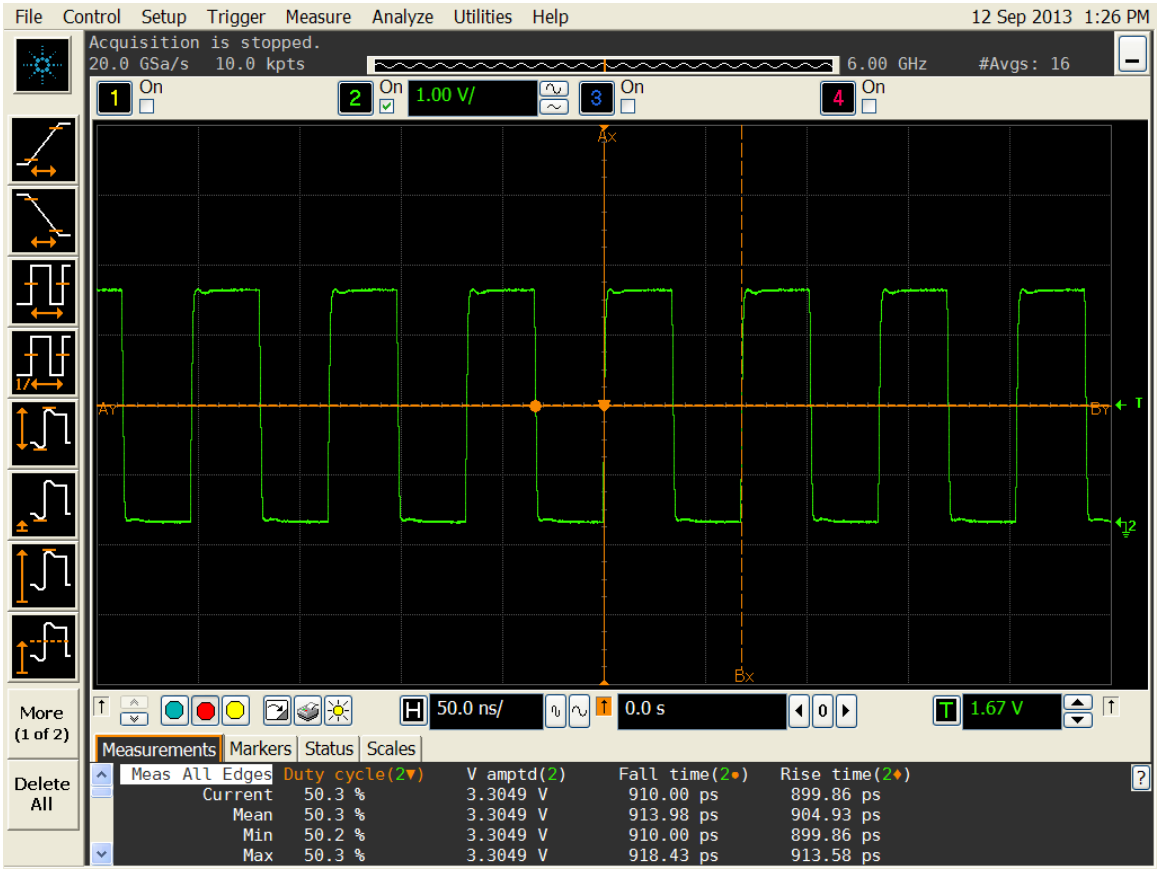

Figure 5. Duty cycle, Rise/Fall time and Amplitude 3.3V

The information contained in this document is confidential and proprietary to SiTime Corporation. Unauthorized reproduction or distribution is prohibited.

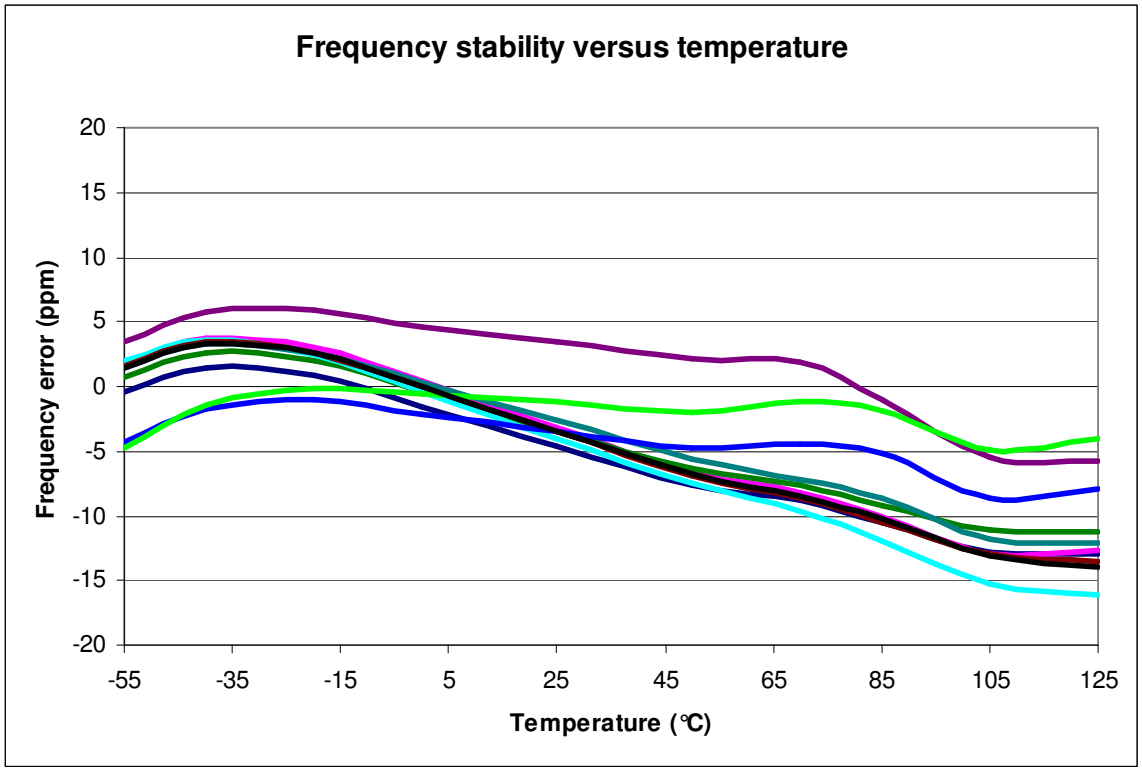

Figure 6. Frequency stability* versus temperature

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

The information contained in this document is confidential and proprietary to SiTime Corporation. Unauthorized reproduction or distribution is prohibited.