This report contains sample performance data for SiT2020B-13.225625MHz.

Conditions:

- Frequency 13.225625 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	0.58	0.62	0.62	0.61	0.61
Random Phase jitter (12kHz - 5MHz)	ps, rms	1.39	1.42	1.41	1.41	1.40
Random Phase jitter (900kHz – 13.225625MHz)*	ps, rms	0.82	0.87	0.87	0.86	0.87
Random Phase jitter (12kHz – 13. 225625MHz)*	ps, rms	1.51	1.54	1.54	1.53	1.53
Period jitter	ps, rms	2.20	1.90	1.80	1.79	1.77
Period jitter (10,000 cycles)	ps, pk-pk	16.5	13.7	13.1	13.2	13.0
Duty cycle	%	50.0	50.0	50.1	50.1	50.2
Rise time (20% - 80%)	ns	1.24	1.00	0.91	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	2.78	3.02	3.30
Current consumption (no load, output enabled)	mA	3.42	3.51	3.55	3.58	3.62
Current consumption (no load, output disabled)	mA	3.34	3.41	3.46	3.51	3.58

*Calculated by extending the noise floor of the phase noise from 5 MHz to 13.225625 MHz

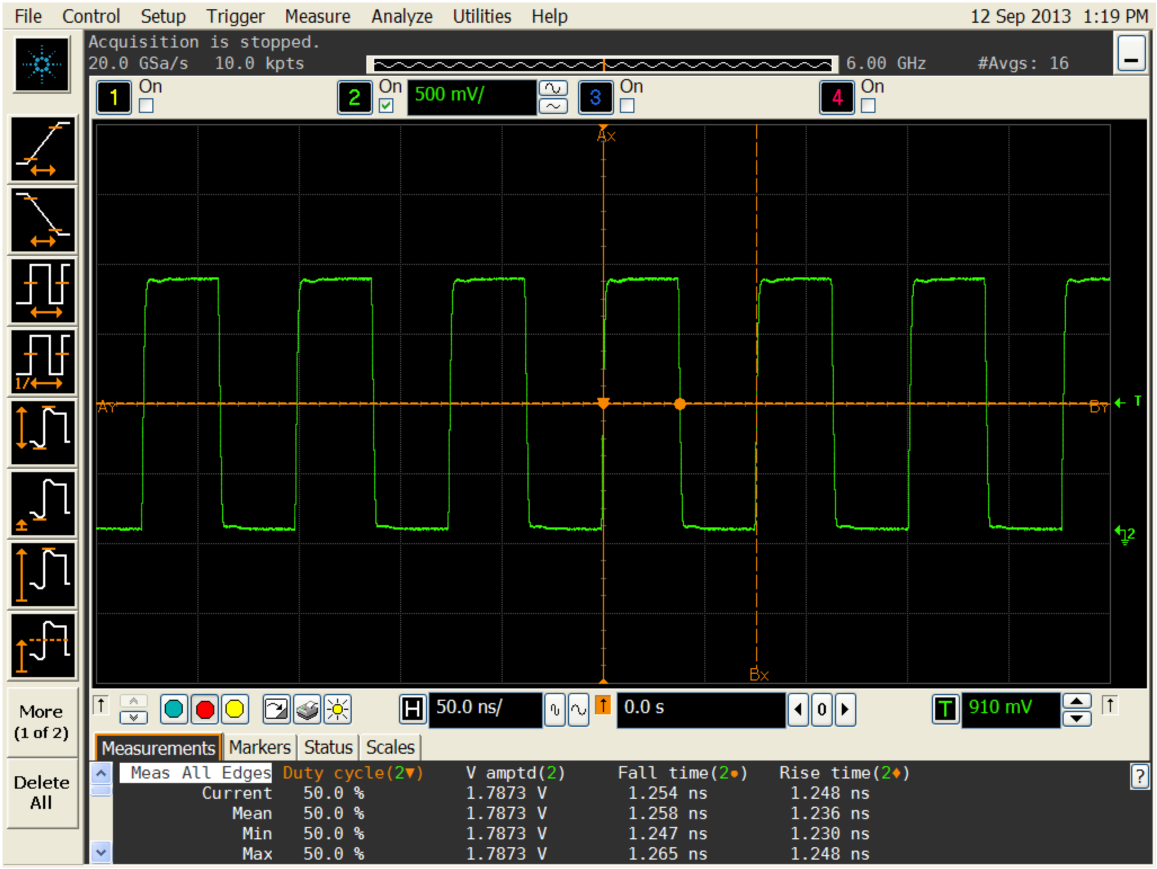

Figure 1. Duty cycle, Rise/Fall time and Amplitude 1.8V

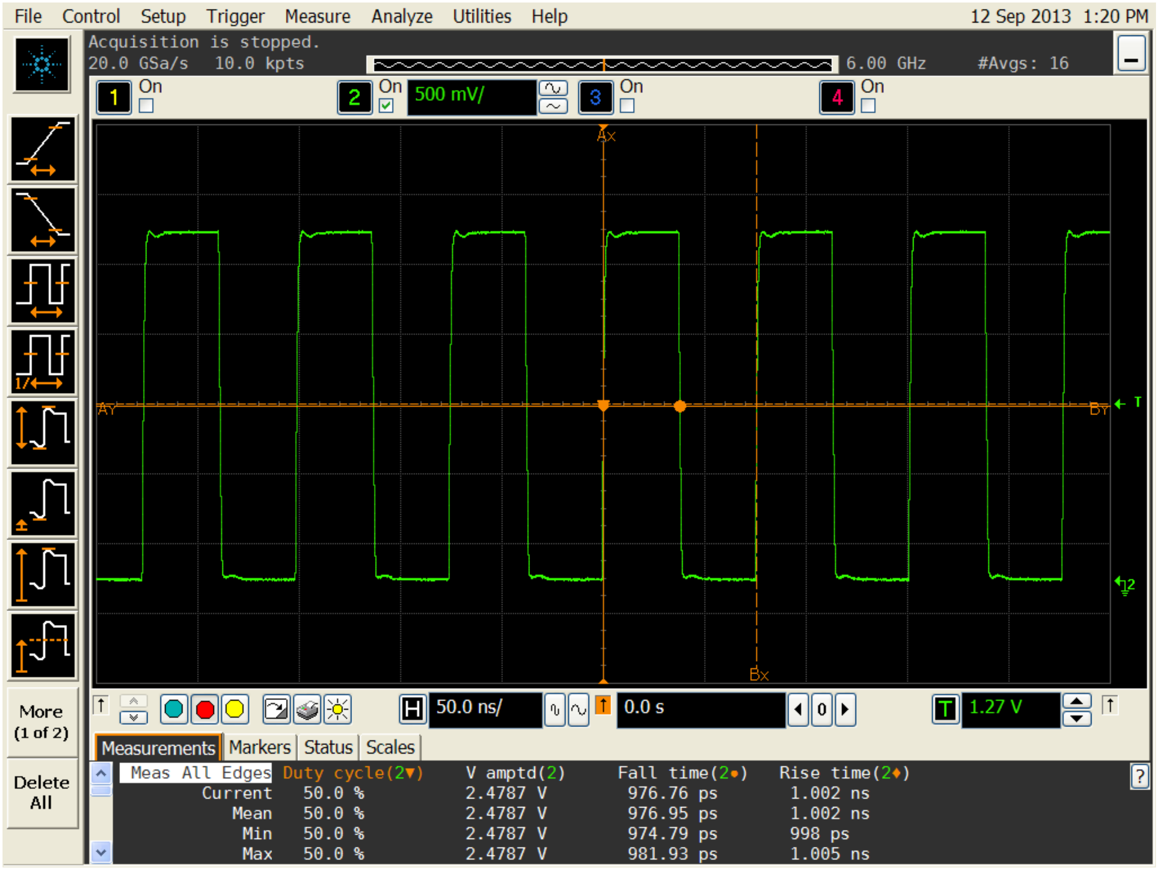

Figure 2. Duty cycle, Rise/Fall time and Amplitude 2.5V

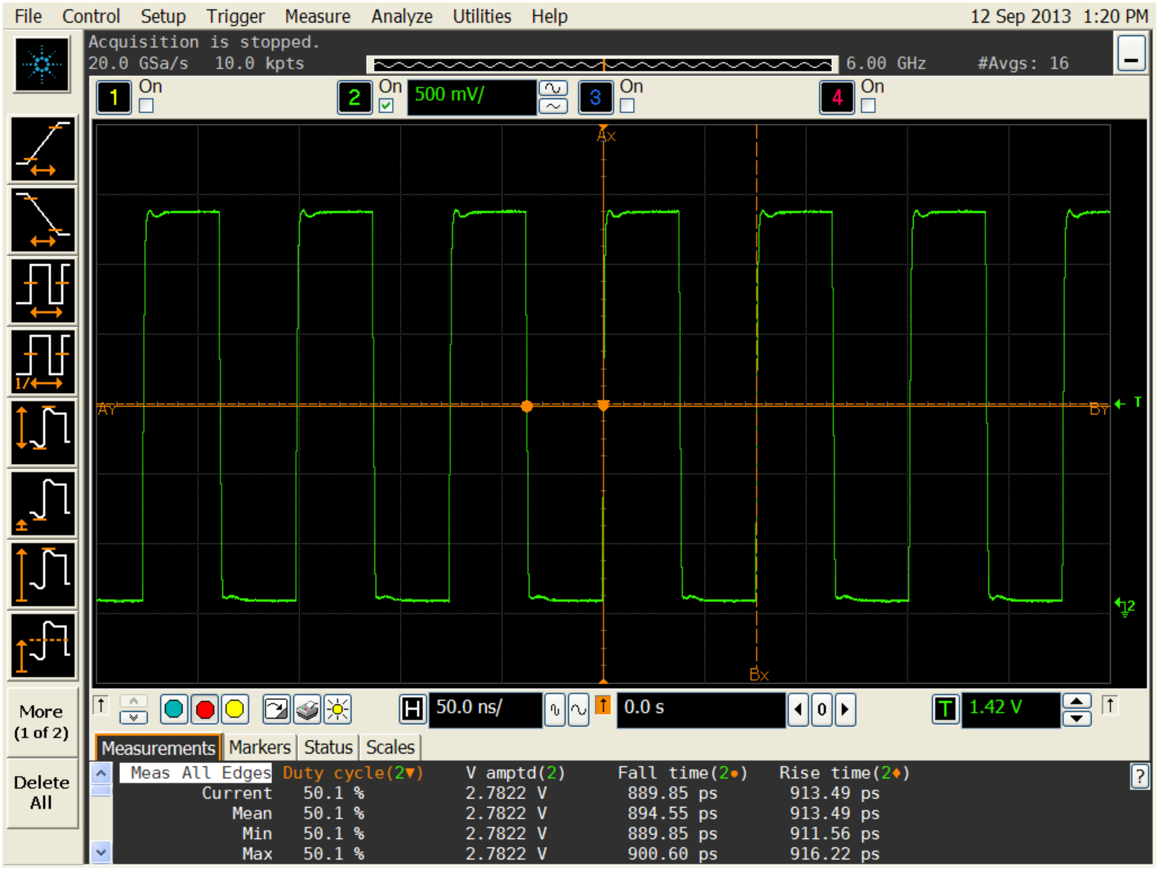

Figure 3. Duty cycle, Rise/Fall time and Amplitude 2.8V

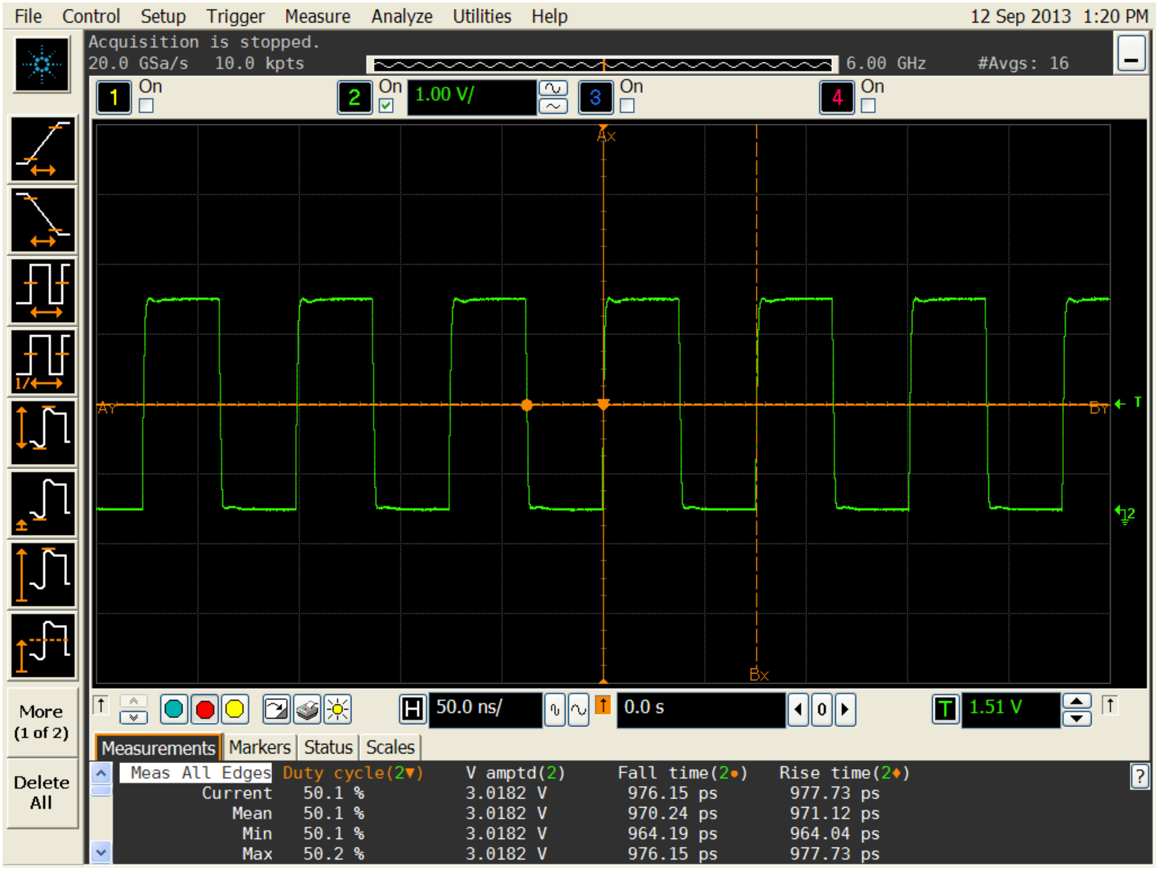

Figure 4. Duty cycle, Rise/Fall time and Amplitude 3.0V

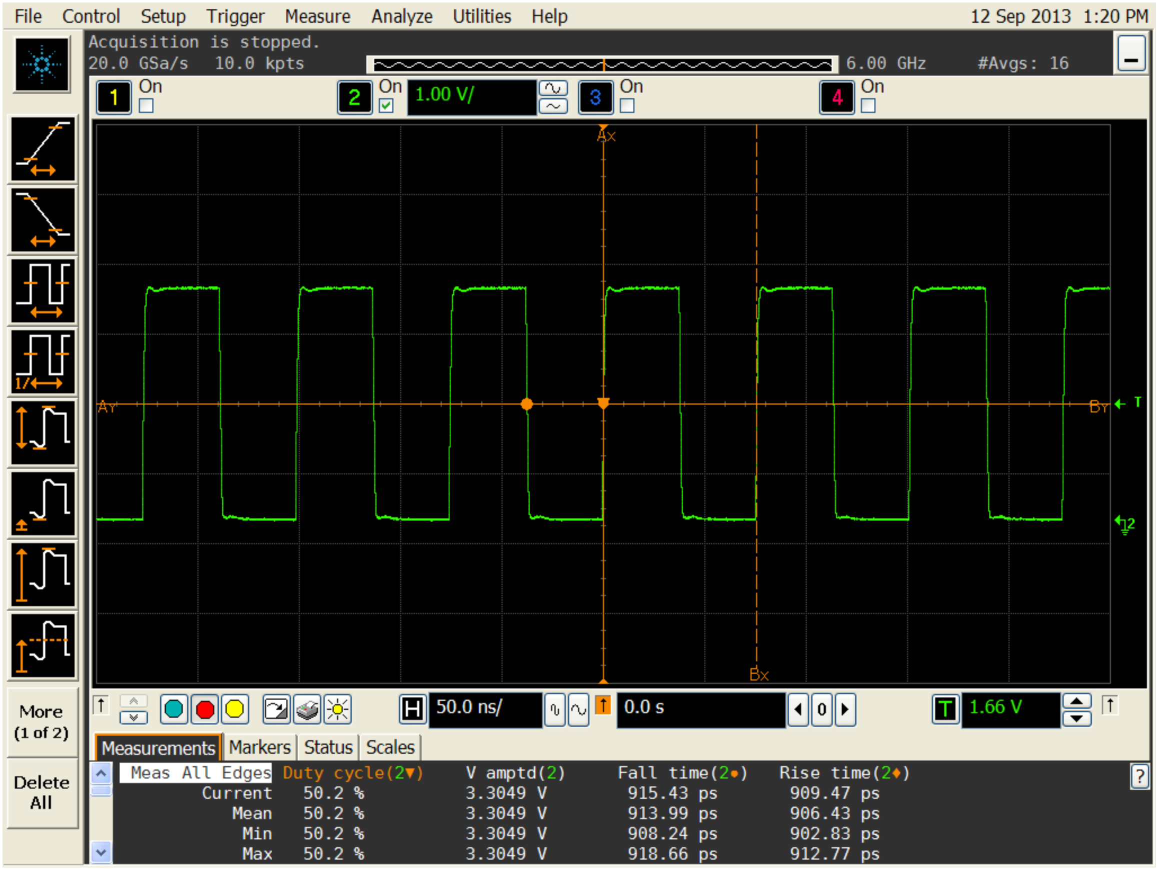

Figure 5. Duty cycle, Rise/Fall time and Amplitude 3.3V

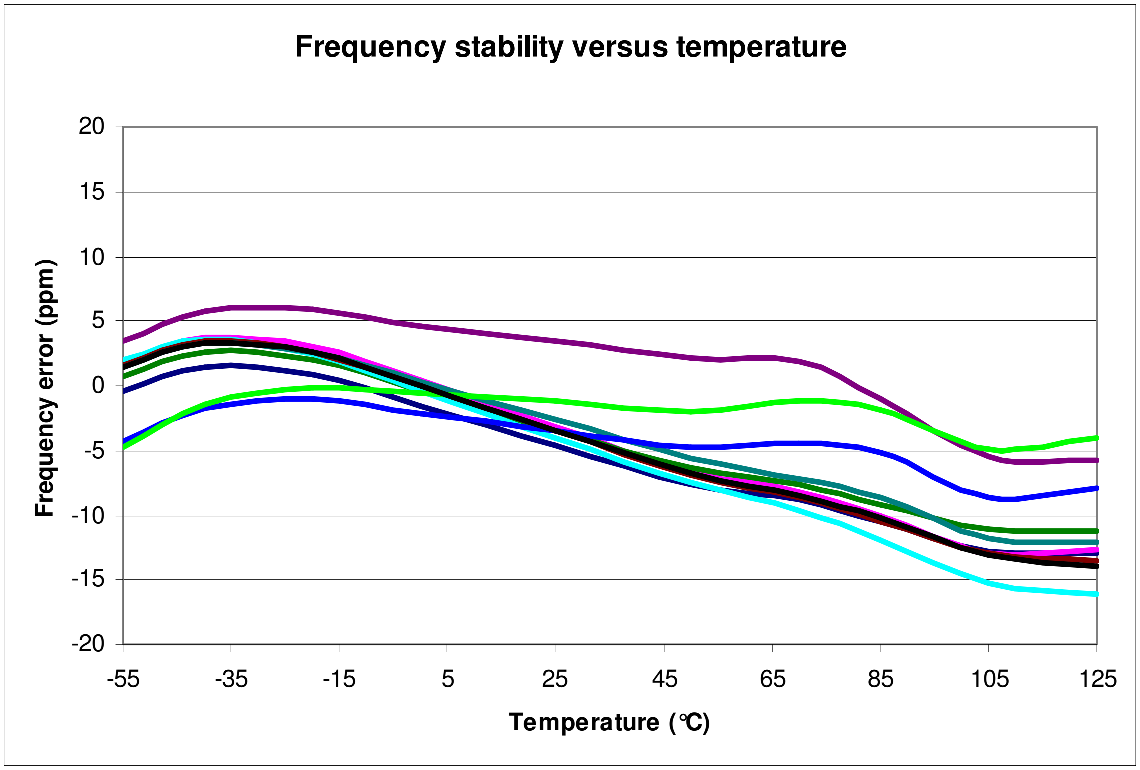

Figure 6. Frequency stability* versus temperature

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