This report contains sample performance data for SiT2025B-125MHz.

Conditions:

- Frequency 125 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 - 20MHz)	ps, rms	0.59	0.71	0.74	0.74	0.75
Random Phase jitter (12kHz - 20MHz)	ps, rms	1.45	1.62	1.69	1.69	1.68
Period jitter	ps, rms	1.77	1.64	1.58	1.54	1.49
Period jitter (10,000 cycles)	ps, pk-pk	13.1	11.5	11.1	11.1	10.5
Duty cycle	%	49.5	49.4	50.4	51.4	52.2
Rise time (20% - 80%)	ns	1.22	0.91	0.84	0.98	0.91
Fall time (80% - 20%)	ns	1.23	0.88	0.82	0.97	0.92
Amplitude	V	1.79	2.50	2.82	3.04	3.34
Current consumption (no load, output enabled)	mA	4.99	5.53	5.79	5.82	6.08
Current consumption (no load, output disabled)	mA	3.65	3.72	3.77	3.81	3.88

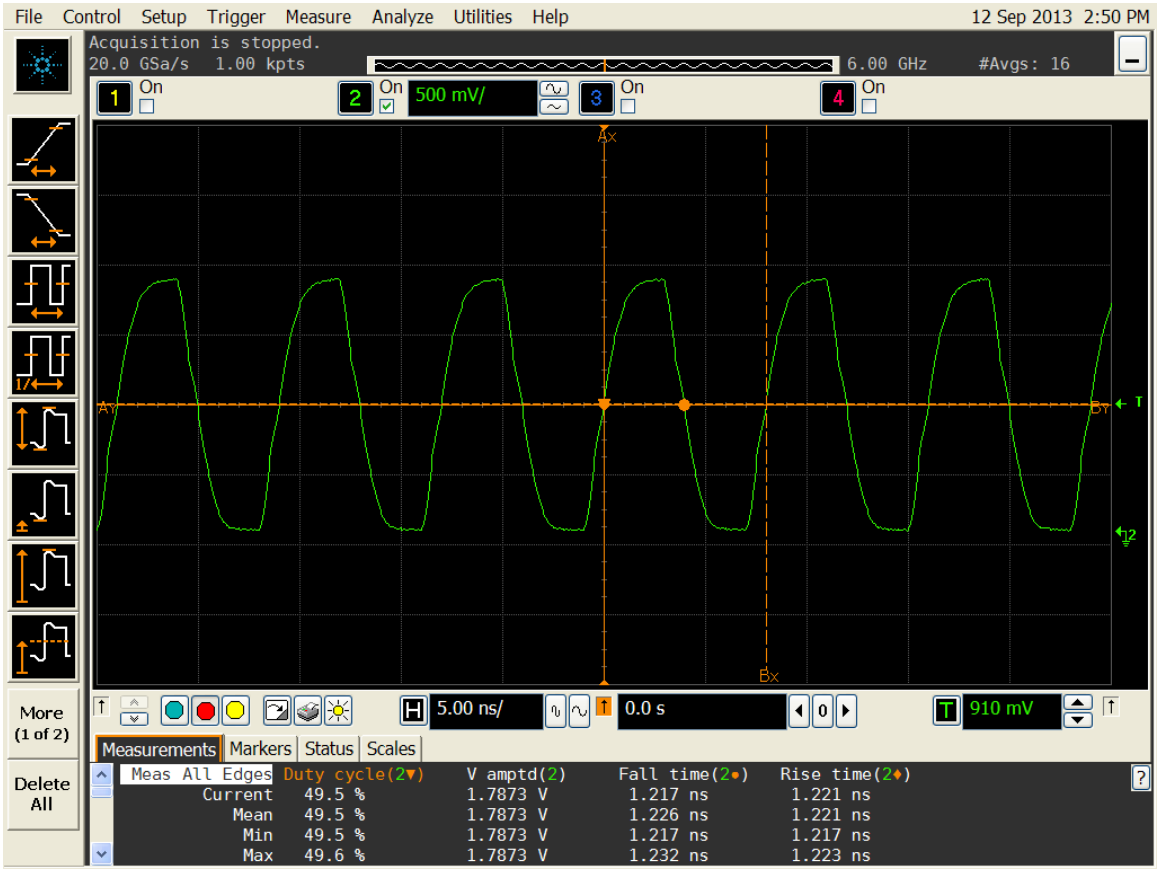

Figure 1. Duty cycle, Rise/Fall time and Amplitude 1.8V

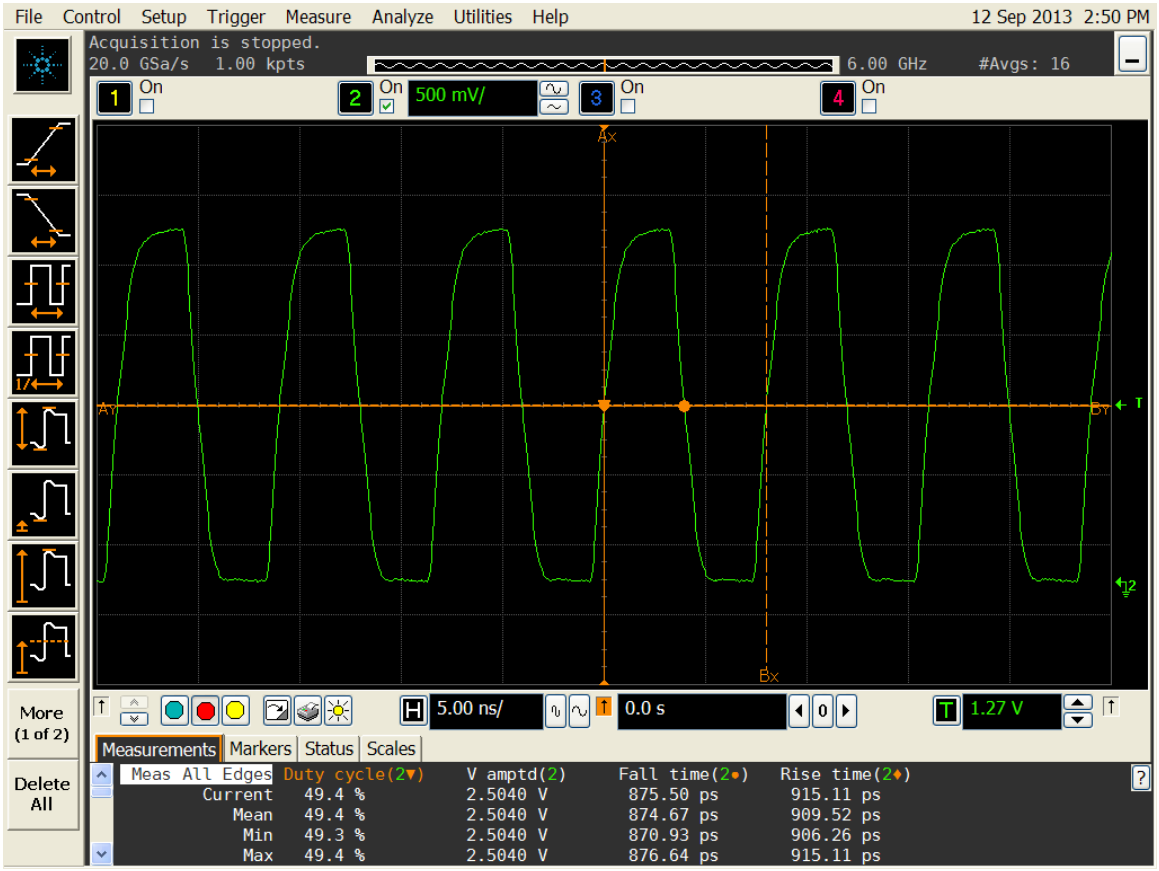

Figure 2. Duty cycle, Rise/Fall time and Amplitude 2.5V

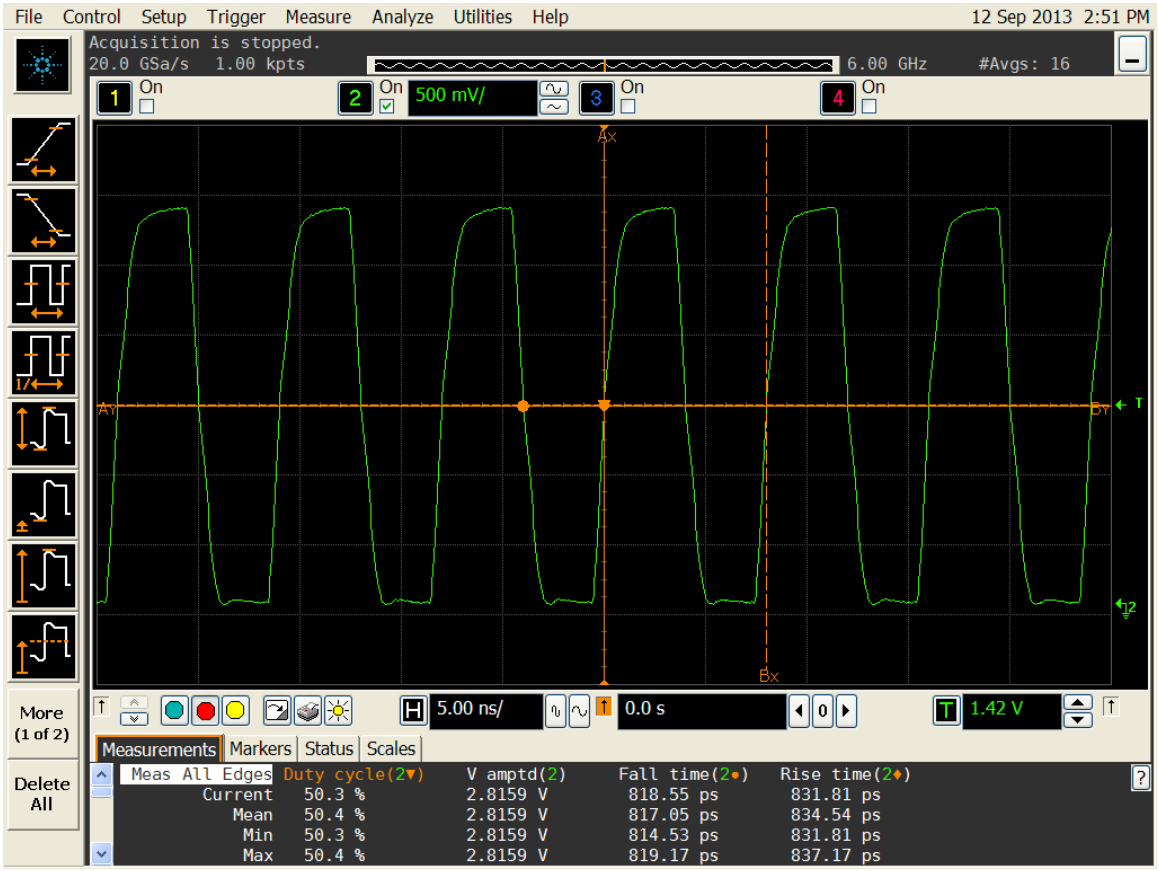

Figure 3. Duty cycle, Rise/Fall time and Amplitude 2.8V

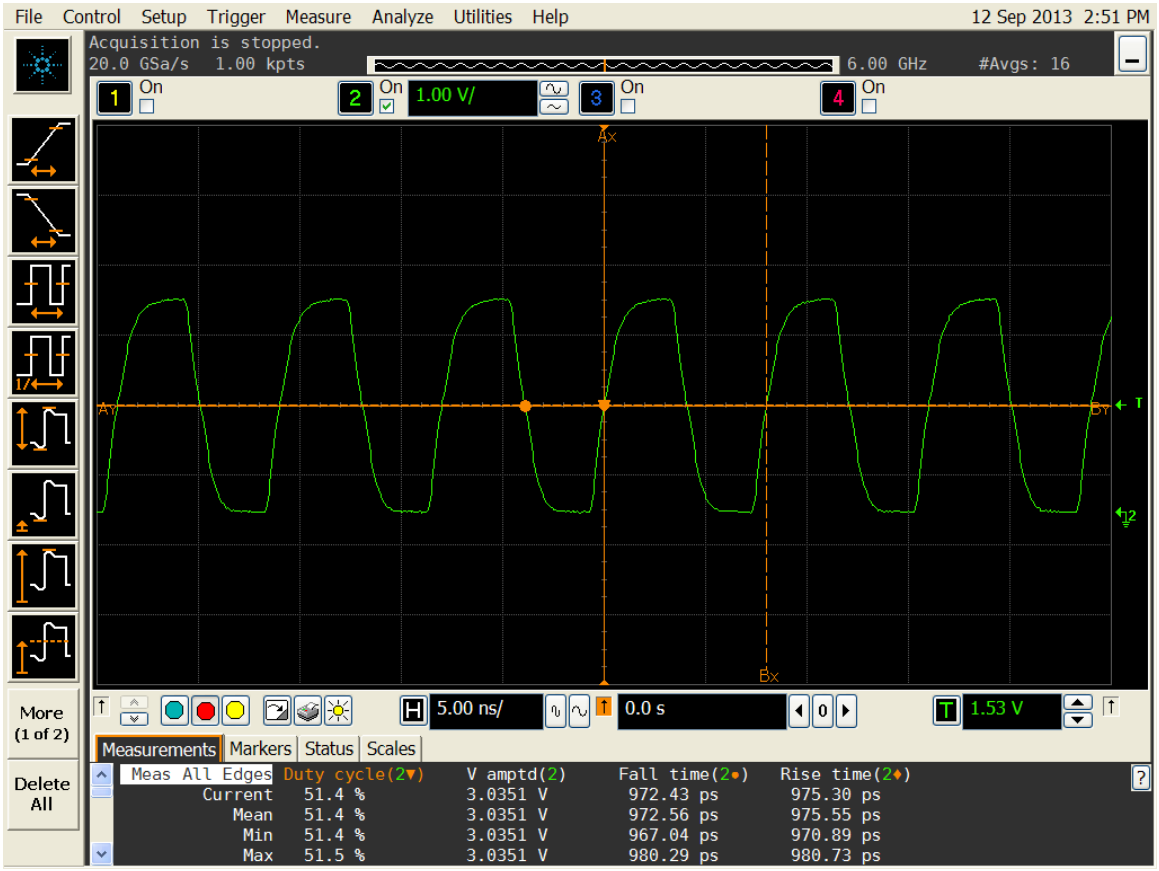

Figure 4. Duty cycle, Rise/Fall time and Amplitude 3.0V

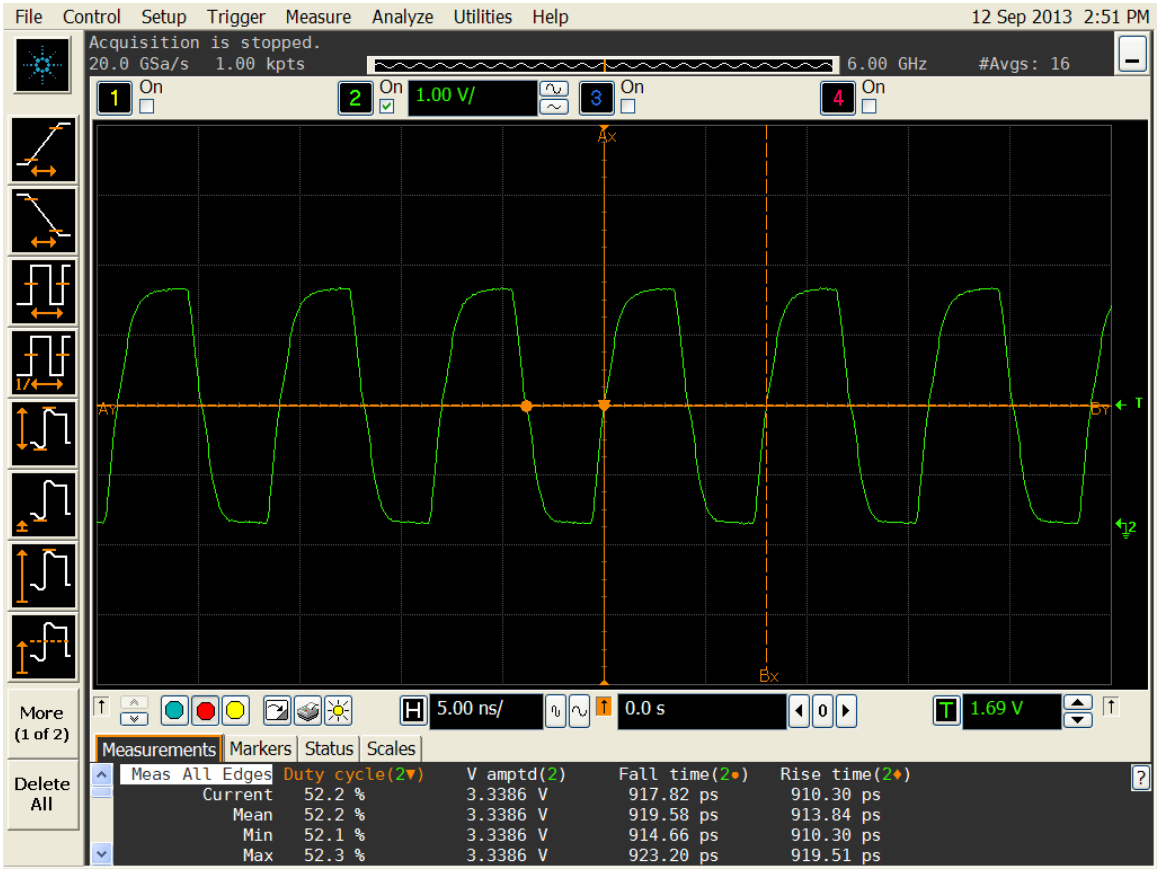

Figure 5. Duty cycle, Rise/Fall time and Amplitude 3.3V

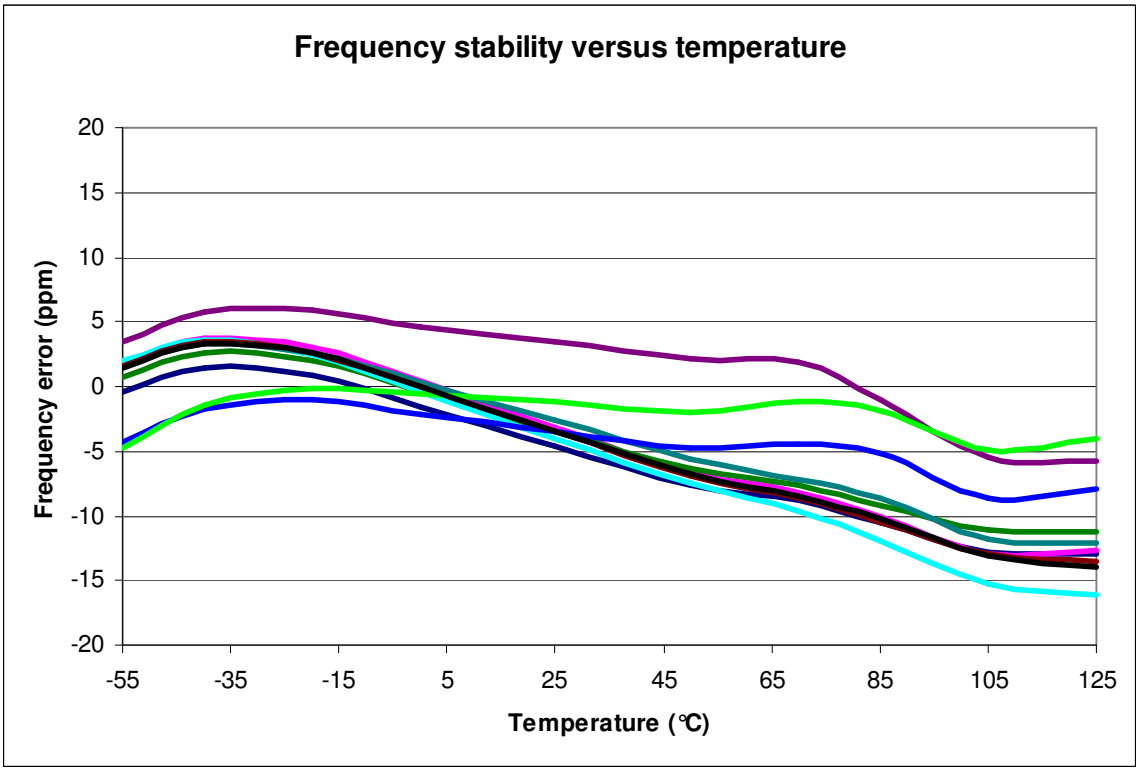

Figure 6. Frequency stability* versus temperature

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