<b>Si</b> Time <sup>**</sup>	Title:	Performance Report SiT1602B, 60MHz		
	Туре:	Performance report	Rev:	1.0
	Orig:		Date:	Mar 31, 2014

# This report contains sample performance data for SiT1602B-60MHz.

## Conditions:

- Frequency 60 MHz
- Vdd 1.8V, 2.5V, 2.8V, 3.0V, 3.3V
- Temperature 25℃
- 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
  - 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

Parameter	Units	Voltage					
	Onits	1.8 V	2.5 V	2.8 V	3.0 V	3.3 V	
Random Phase jitter (900kHz - 20MHz)	ps, rms	0.60	0.64	0.65	0.65	0.65	
Random Phase jitter (12kHz - 20MHz)	ps, rms	1.40	1.43	1.43	1.43	1.43	
Period jitter	ps, rms	1.80	1.57	1.55	1.51	1.53	
Period jitter (10,000 cycles)	ps, pk-pk	13.3	12.2	11.7	11.6	11.5	
Duty cycle	%	49.9	49.8	50.2	50.6	51.0	
Rise time (20% - 80%)	ns	1.25	1.01	0.93	0.99	0.91	
Fall time (80% - 20%)	ns	1.26	0.98	0.90	0.98	0.91	
Amplitude	V	1.76	2.45	2.73	2.95	3.24	
Current consumption (no load, output enabled)	mA	4.08	4.33	4.46	4.52	4.65	
Current consumption (no load, output disabled)	mA	3.47	3.54	3.59	3.63	3.71	

#### Table 1. Performance data

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

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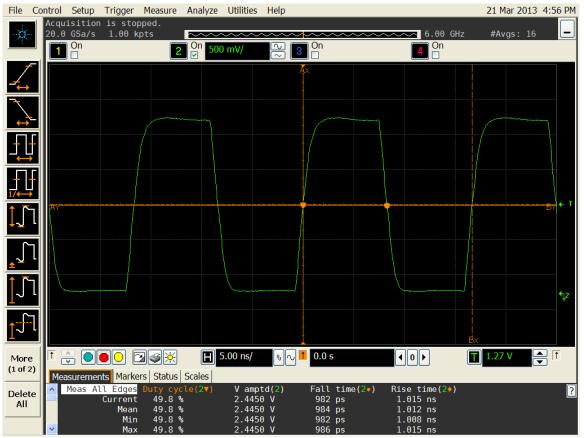


Figure 2. Duty cycle, Rise/Fall time and Amplitude 2.5V

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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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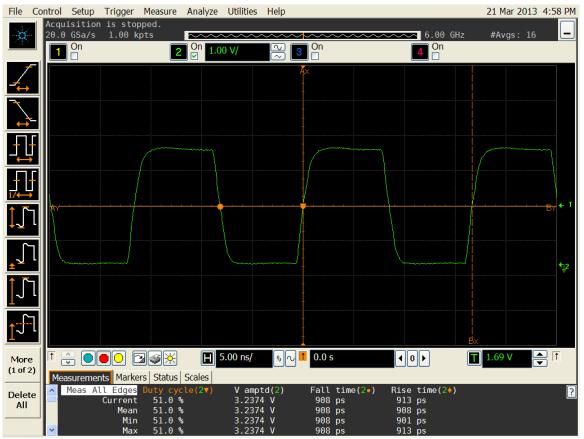


Figure 5. Duty cycle, Rise/Fall time and Amplitude 3.3V

	Title:	Performance Report SiT1602B, 60MHz		
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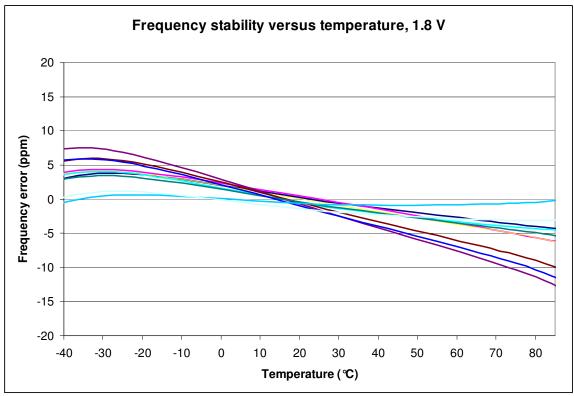


Figure 6. Frequency stability\* versus temperature, 1.8 V

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

	Title:	Performance Report SiT1602B, 60MHz		
<b>Si</b> Time <sup>®</sup>	Type:	Performance report	Rev:	1.0
	Orig:		Date:	Mar 31, 2014

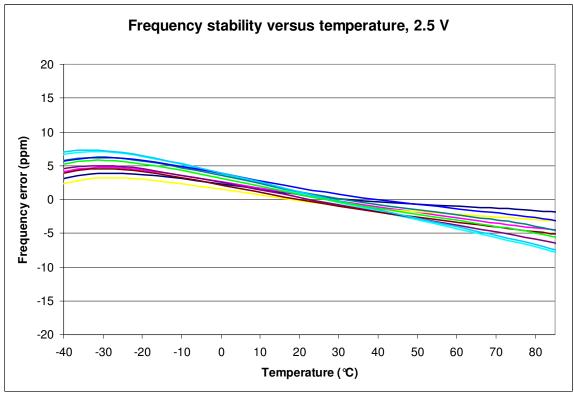


Figure 7. Frequency stability versus temperature, 2.5 V

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	Title:	Performance Report SiT1602B, 60MHz		
<b>Si</b> Time <sup>®</sup>	Type:	Performance report	Rev:	1.0
	Orig:		Date:	Mar 31, 2014

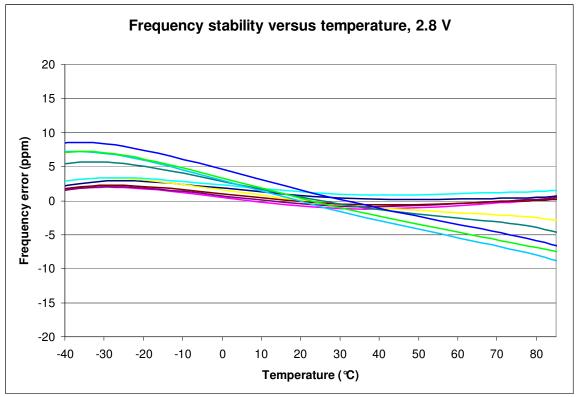


Figure 8. Frequency stability versus temperature, 2.8 V

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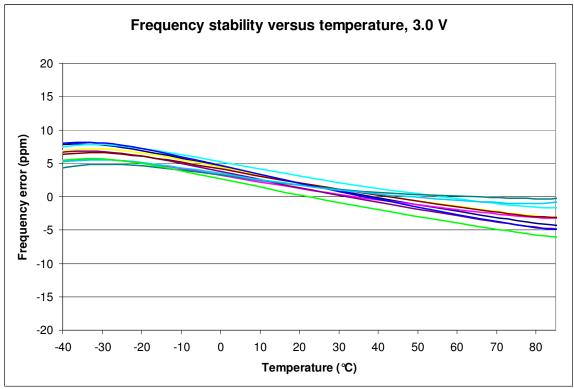


Figure 9. Frequency stability versus temperature, 3.0 V

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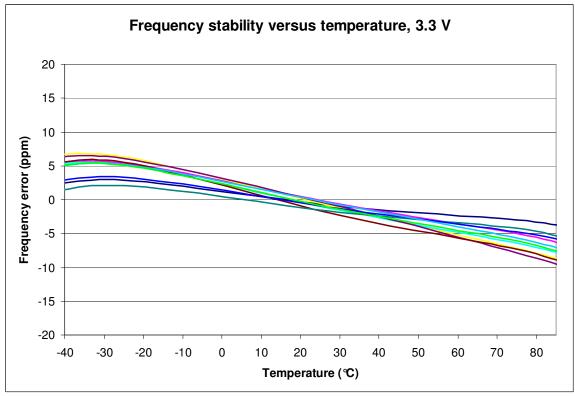


Figure 10. Frequency stability versus temperature, 3.3 V