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|  | Title: | Performance Report SiT2001B, 7.3728MHz | | |
| | Type: | Performance report | Rev: | 1.0 |
| | Orig: | | Date: | Apr 10, 2014 |

This report contains sample performance data for SiT2001B-7.3728MHz.

Conditions:

- Frequency 7.3728 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:

- 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 |
| Period jitter | ps, rms | 2.12 | 2.06 | 2.06 | 2.06 | 2.05 |
| Period jitter (10,000 cycles) | ps, pk-pk | 15.9 | 15.3 | 14.9 | 15.2 | 15.1 |
| Duty cycle | % | 50.0 | 50.0 | 50.0 | 50.1 | 50.1 |
| Rise time | ns | 1.25 | 1.03 | 0.95 | 1.00 | 0.93 |
| Fall time | ns | 1.26 | 0.98 | 0.91 | 0.98 | 0.93 |
| Amplitude | V | 1.79 | 2.49 | 2.79 | 3.02 | 3.30 |
| Current consumption (no load, output enabled) | mA | 3.13 | 3.18 | 3.21 | 3.23 | 3.26 |
| Current consumption (no load, output disabled) | mA | 3.12 | 3.17 | 3.22 | 3.26 | 3.32 |

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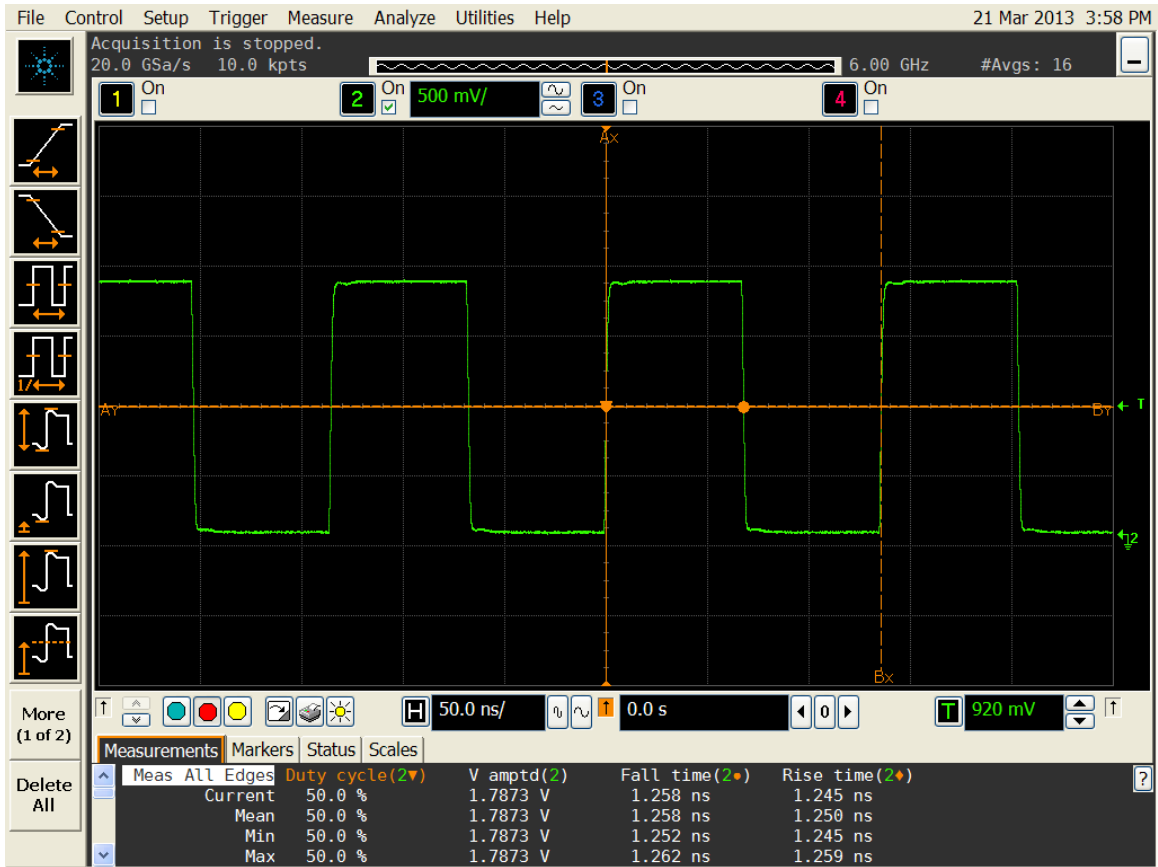



Figure 1. Duty cycle, Rise/Fall time and Amplitude 1.8V

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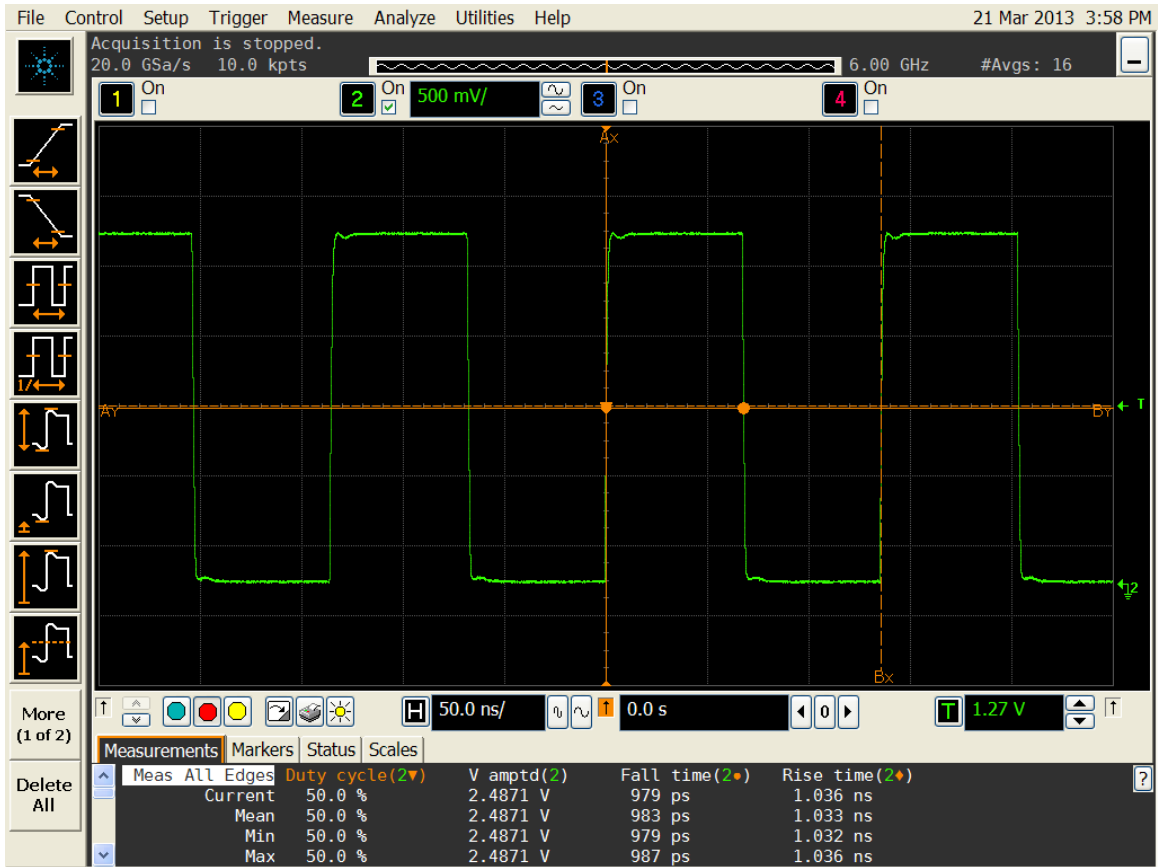



Figure 2. Duty cycle, Rise/Fall time and Amplitude 2.5V

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| | Orig: | | Date: | Apr 10, 2014 |

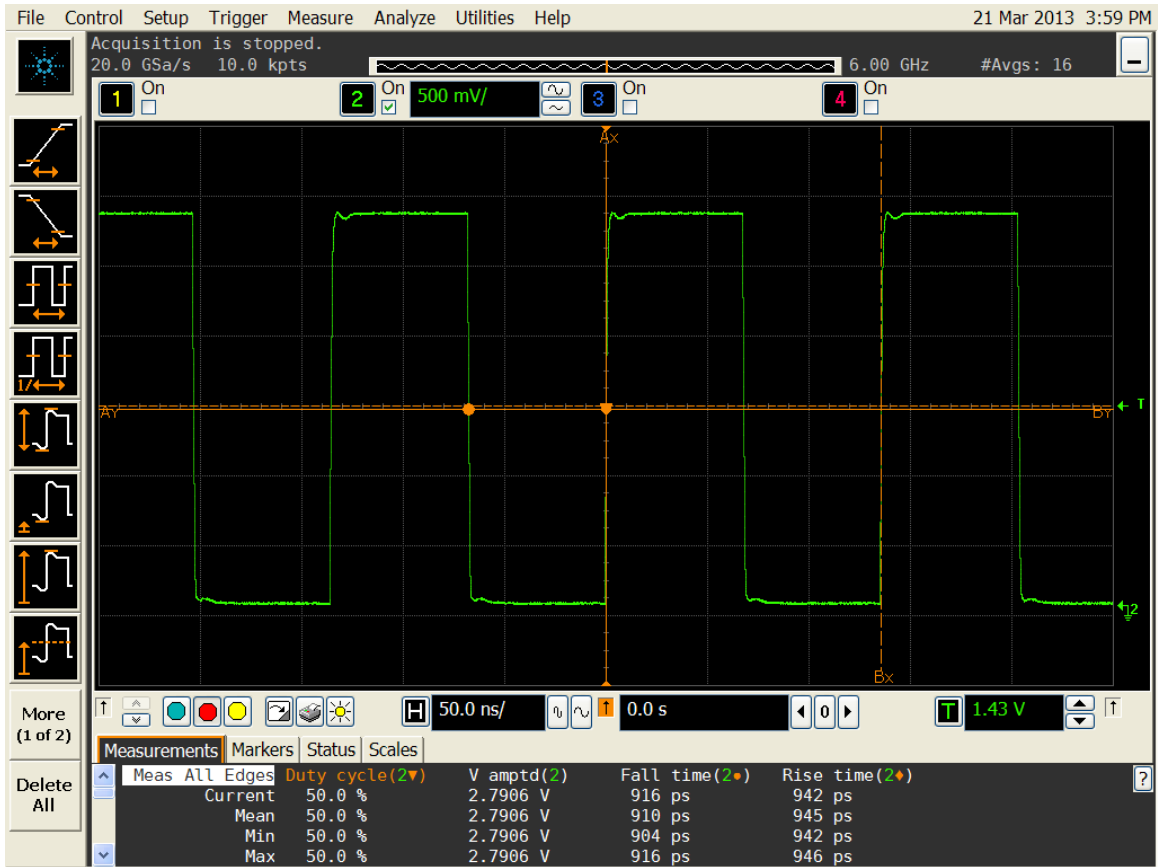



Figure 3. Duty cycle, Rise/Fall time and Amplitude 2.8V

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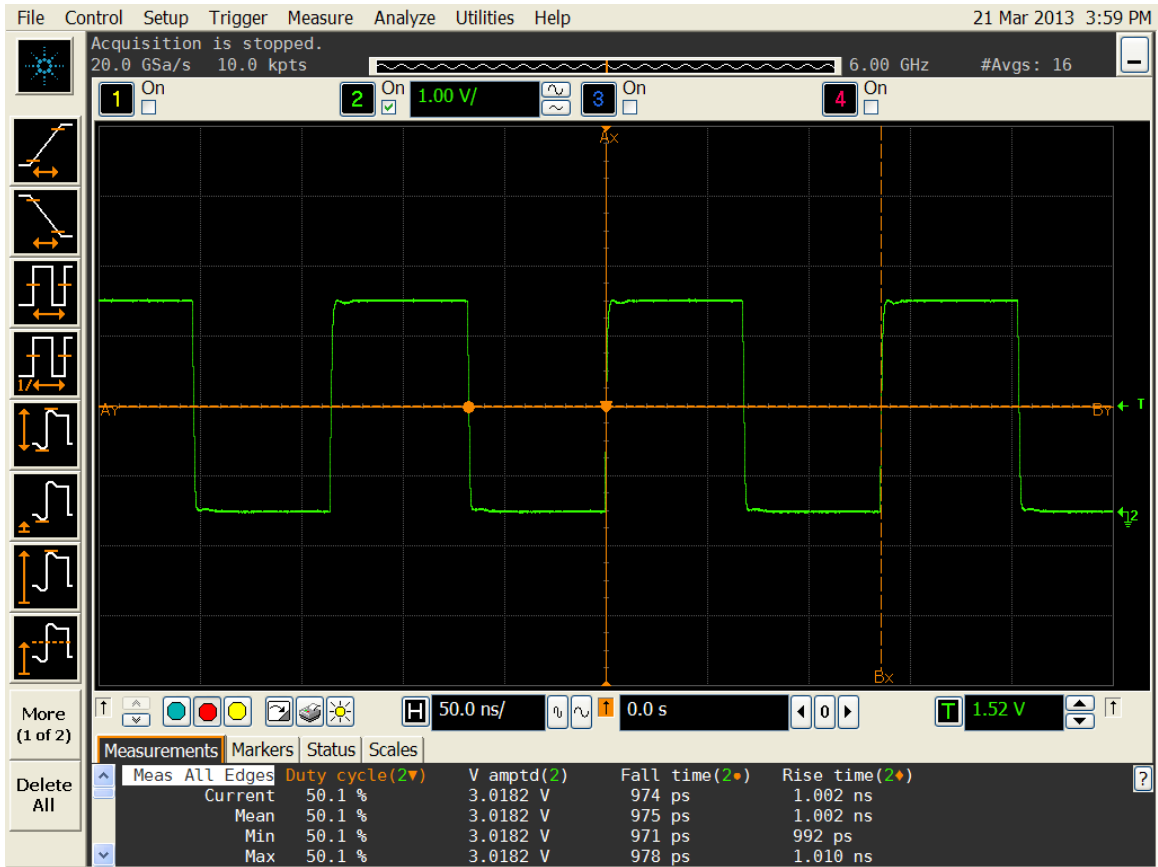



Figure 4. Duty cycle, Rise/Fall time and Amplitude 3.0V

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| | Orig: | | Date: | Apr 10, 2014 |

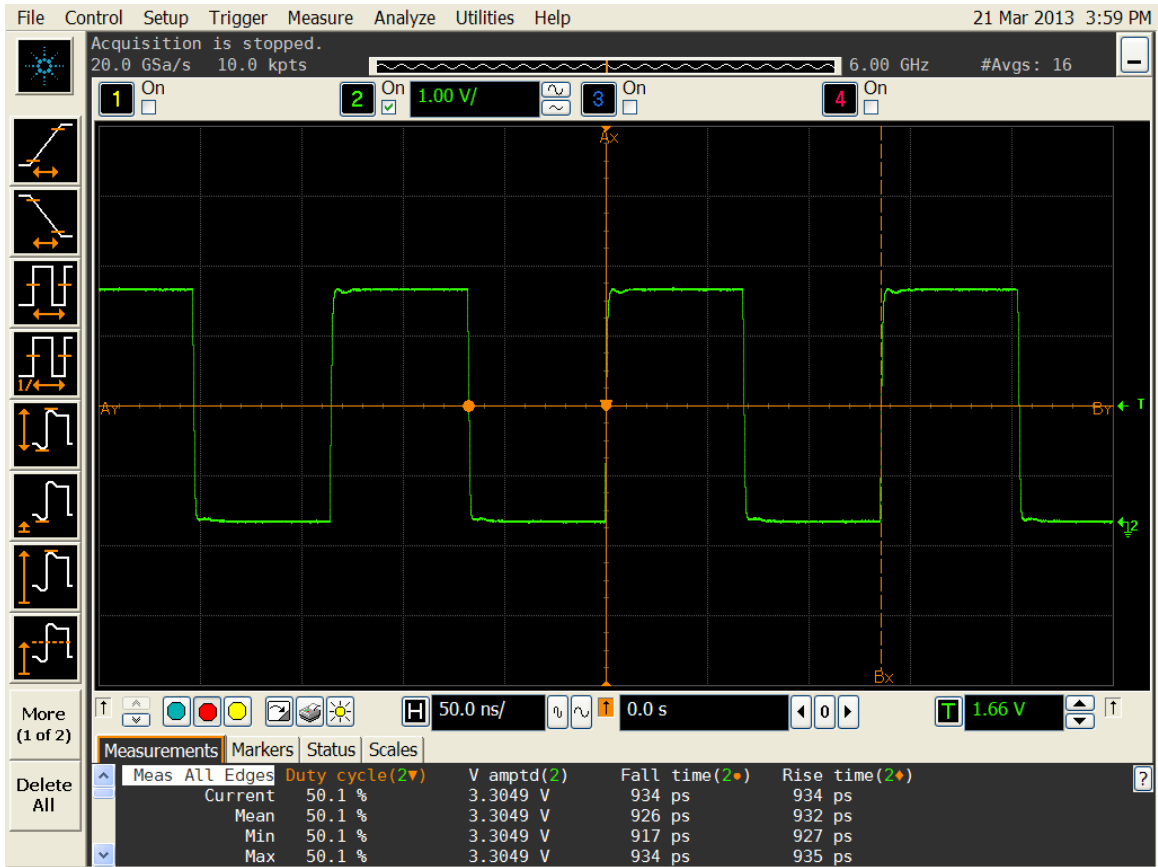


Figure 5. Duty cycle, Rise/Fall time and Amplitude 3.3V

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| | Type: | Performance report | Rev: | 1.0 |
| | Orig: | | Date: | Apr 10, 2014 |



Figure 6. Frequency stability versus temperature, 1.8 V

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|----------------|---------------|---|---------------------------|
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| | Type: | Performance report | Rev: 1.0 |
| | Orig: | | Date: Apr 10, 2014 |

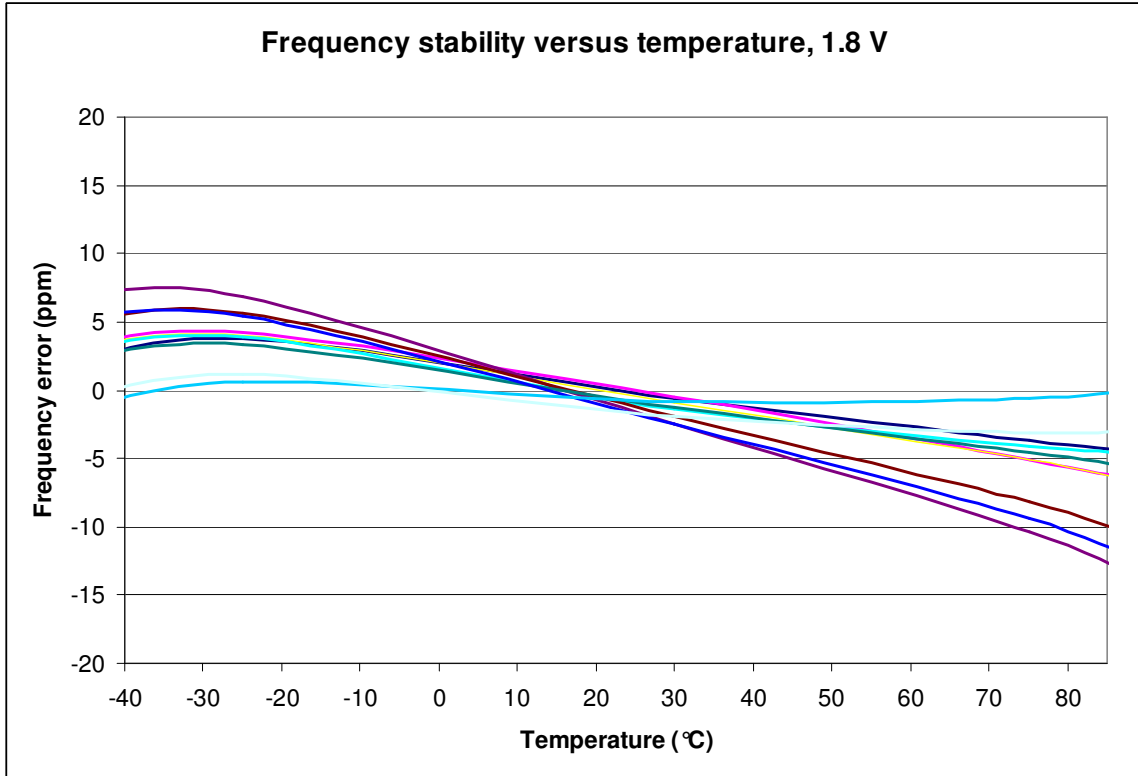


Figure 6. Frequency stability* versus temperature, 1.8 V

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

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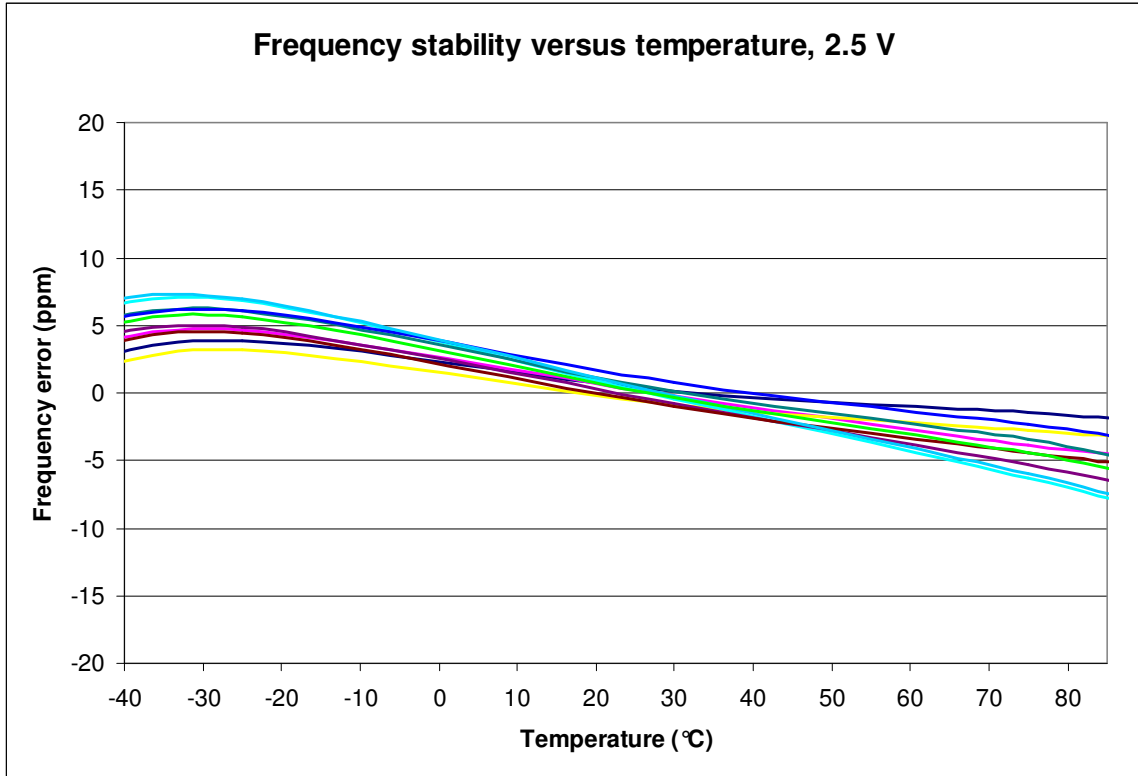



Figure 7. Frequency stability versus temperature, 2.5 V

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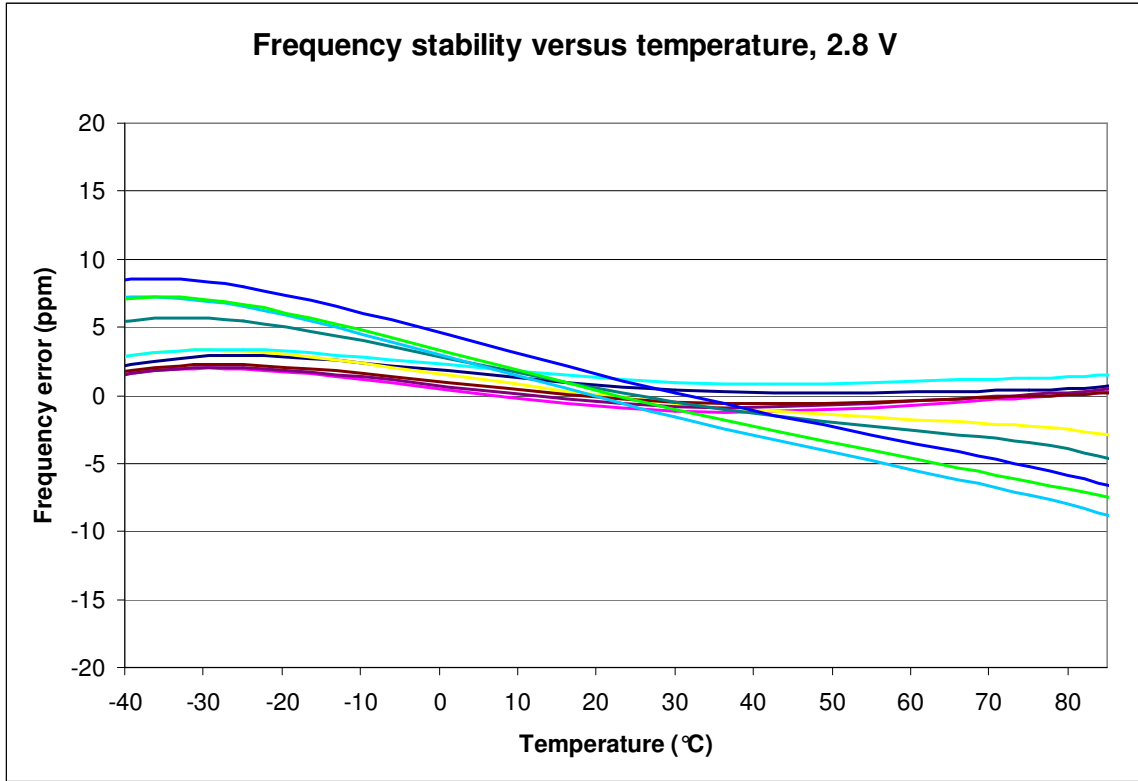



Figure 8. Frequency stability versus temperature, 2.8 V

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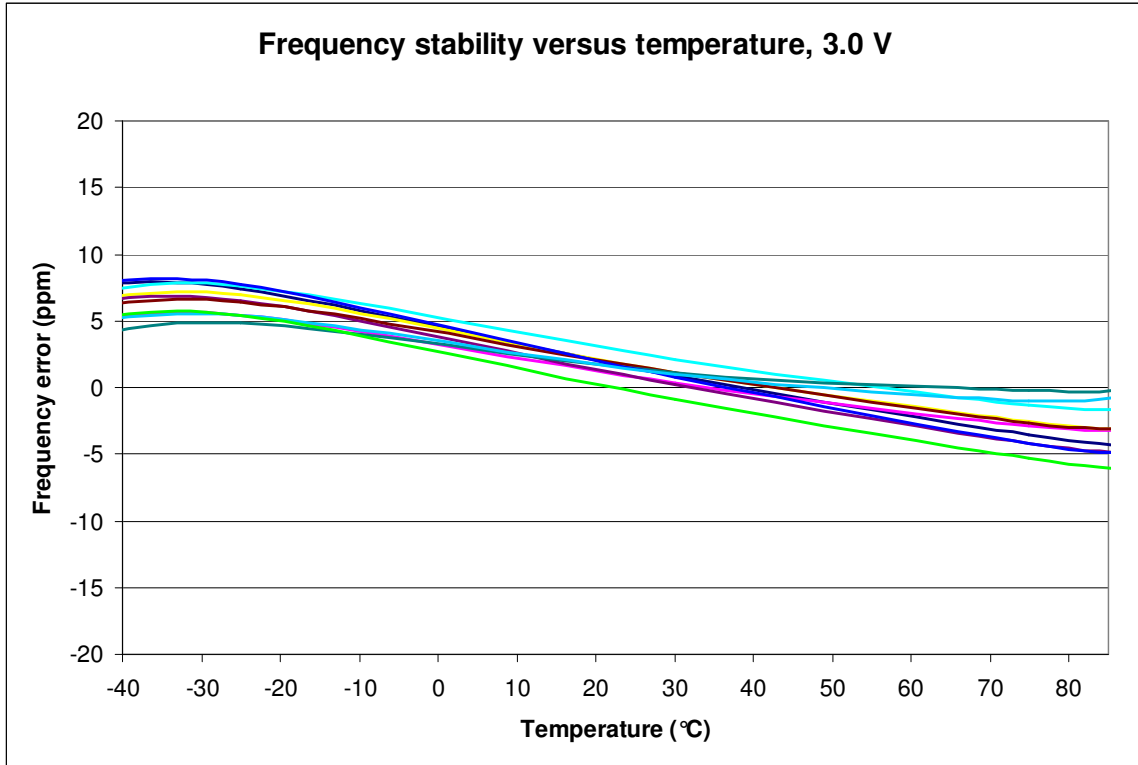


Figure 9. Frequency stability versus temperature, 3.0 V

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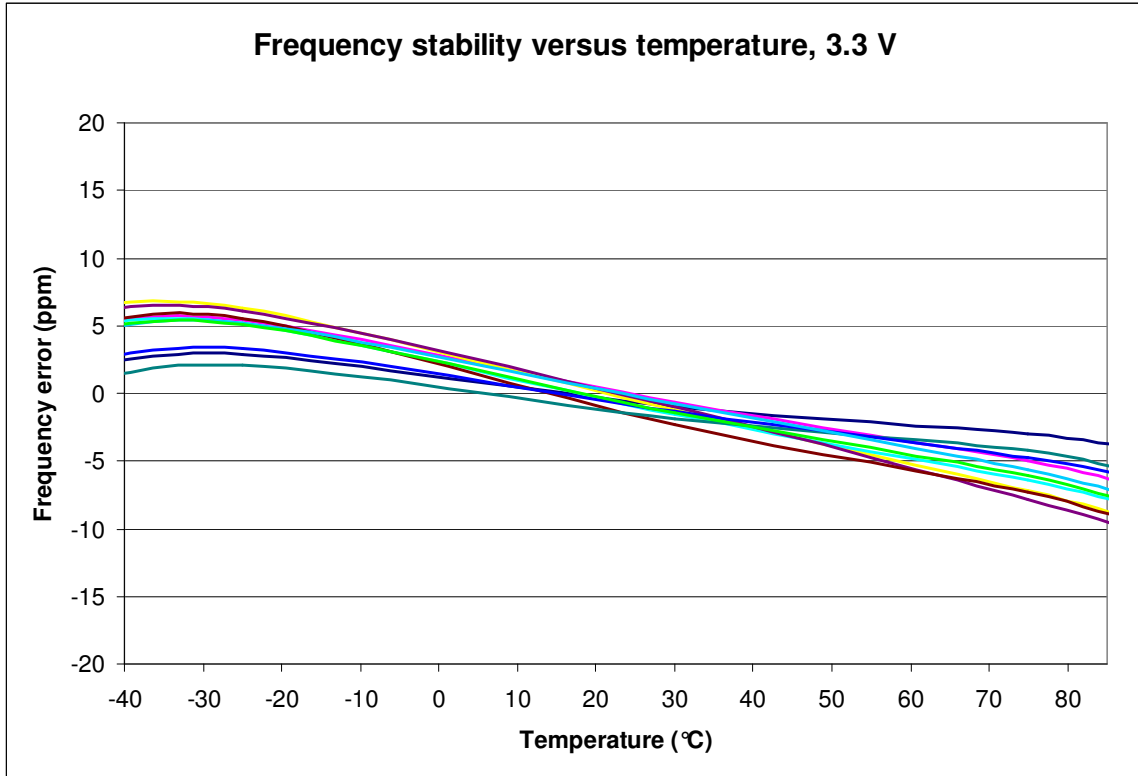


Figure 10. Frequency stability versus temperature, 3.3 V

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