This report contains sample performance data for SiT1602B-28.6363MHz.

Conditions:

- Frequency 28.6363 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	0.46	0.48	0.47	0.48	0.48
Random Phase jitter (12kHz - 5MHz)	ps, rms	1.21	1.20	1.19	1.21	1.21
Random Phase jitter (900kHz - 20MHz)*	ps, rms	0.73	0.76	0.76	0.76	0.76
Random Phase jitter (12kHz - 20MHz)*	ps, rms	1.34	1.34	1.33	1.35	1.35
Period jitter	ps, rms	1.94	1.66	1.66	1.61	1.60
Period jitter (10,000 cycles)	ps, pk-pk	14.1	12.4	12.0	12.1	11.9
Duty cycle	%	50.0	49.9	50.1	50.3	50.4
Rise time (20% - 80%)	ns	1.25	1.03	0.94	0.99	1.03
Fall time (80% - 20%)	ns	1.25	0.99	0.91	0.97	1.00
Amplitude	V	1.77	2.48	2.77	3.00	3.25
Current consumption (no load, output enabled)	mA	3.70	3.85	3.92	3.95	4.03
Current consumption (no load, output disabled)	mA	3.45	3.52	3.57	3.62	3.69

*Calculated by extending the noise floor of the phase noise from 5 MHz to 20 MHz

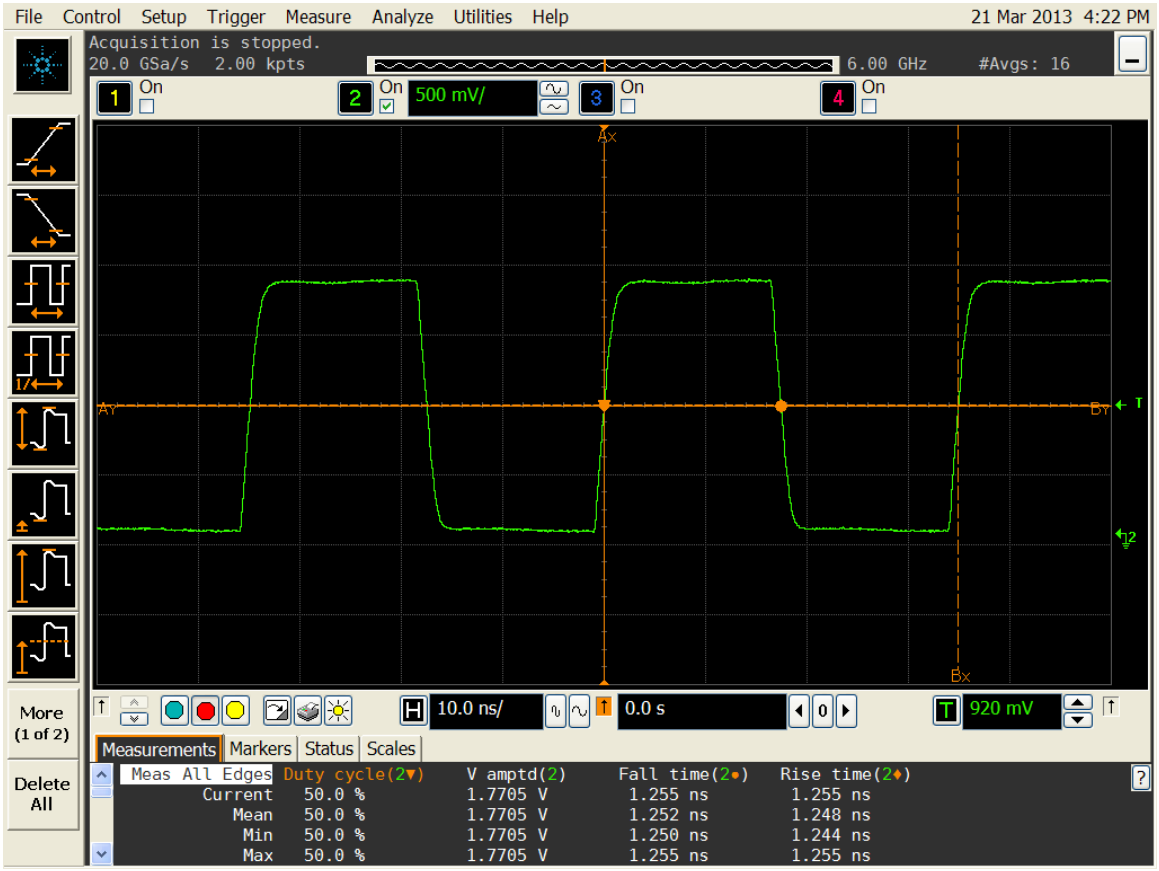

Figure 1. Duty cycle, Rise/Fall time and Amplitude 1.8V

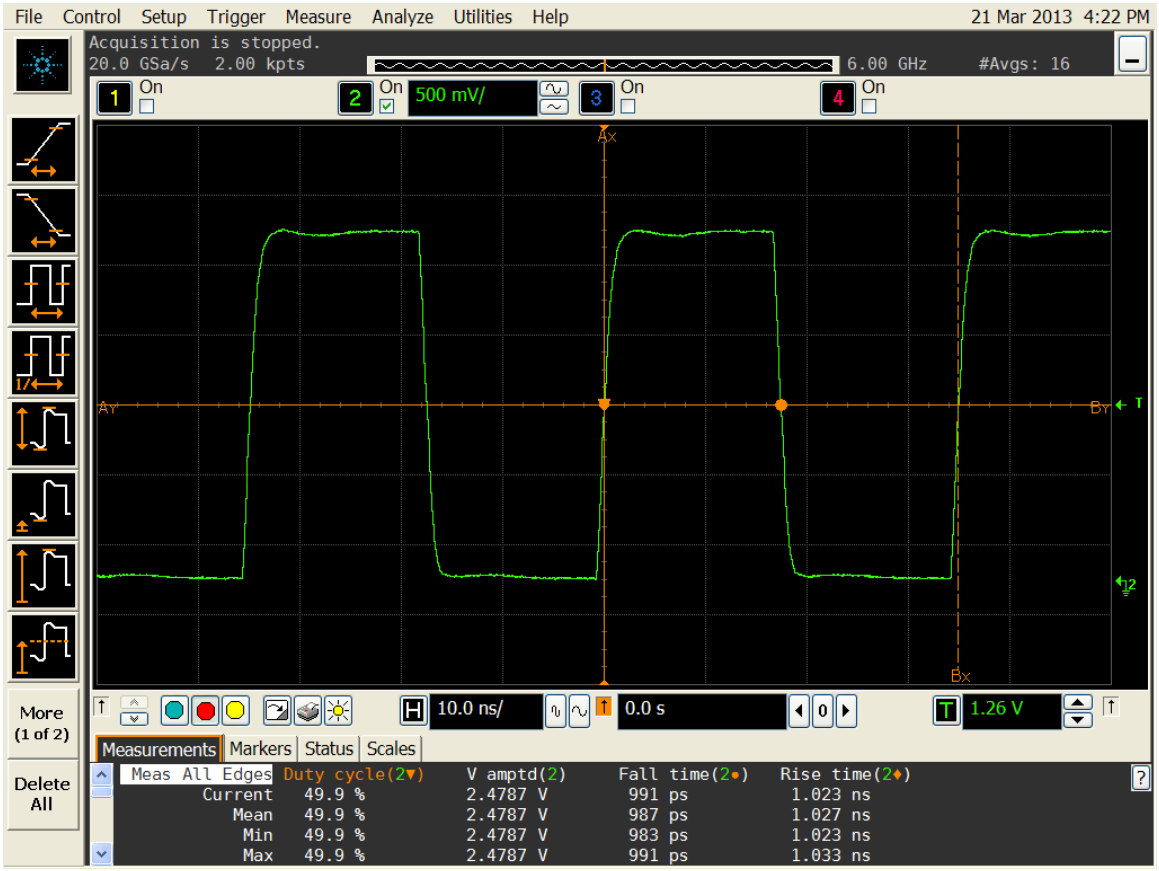

Figure 2. Duty cycle, Rise/Fall time and Amplitude 2.5V

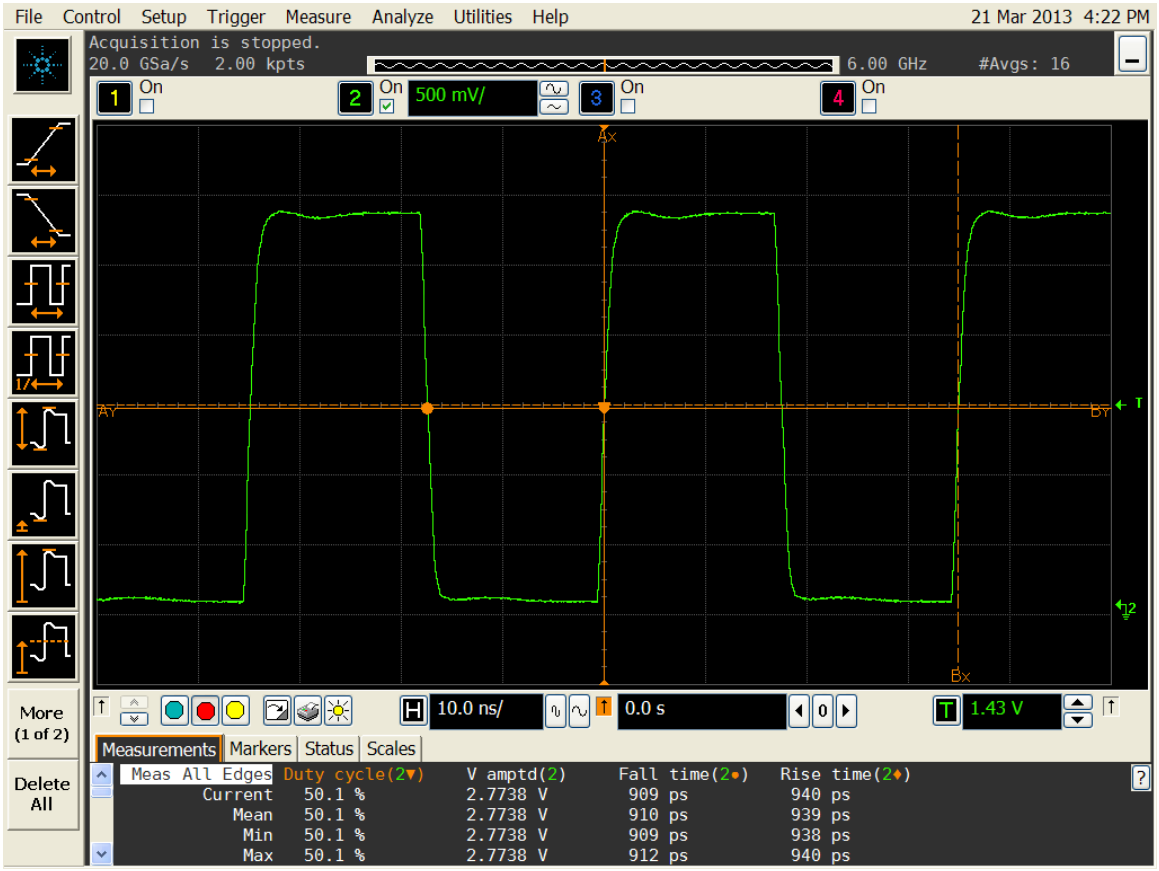

Figure 3. Duty cycle, Rise/Fall time and Amplitude 2.8V

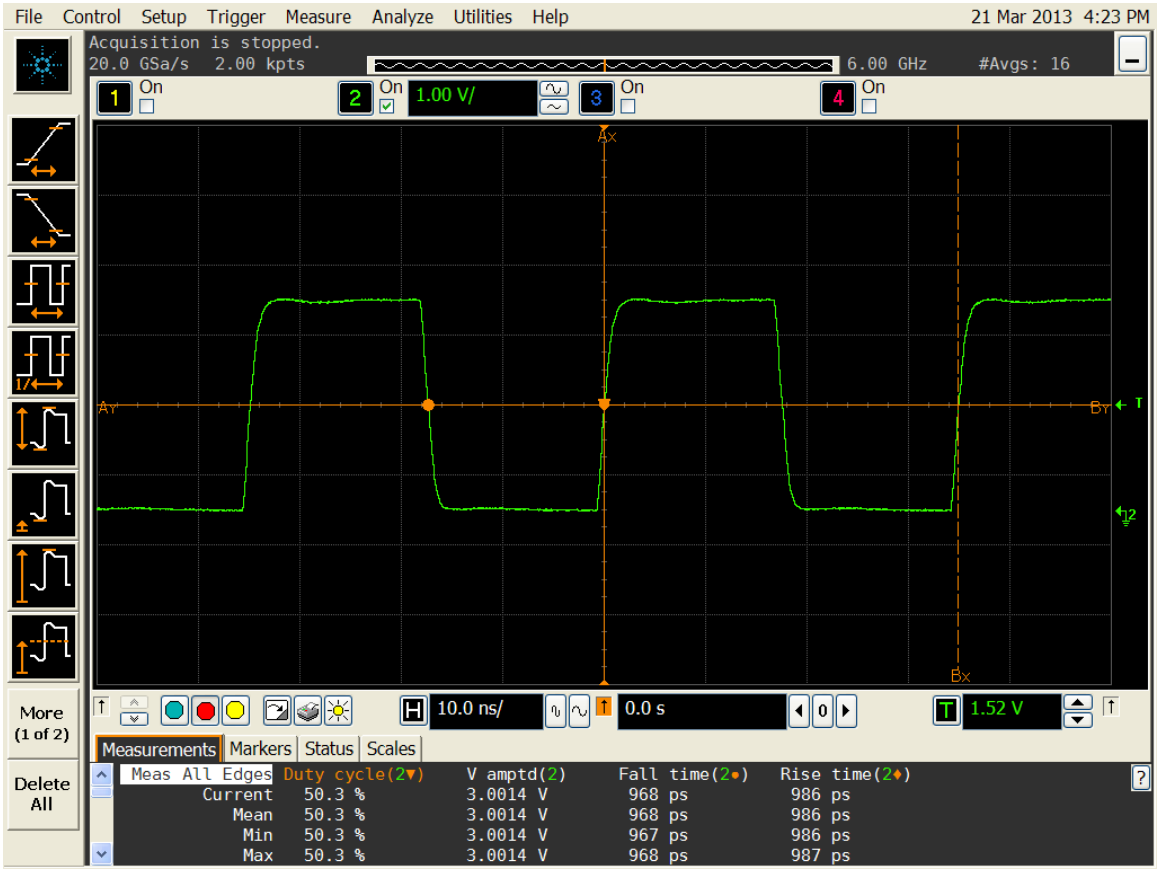

Figure 4. Duty cycle, Rise/Fall time and Amplitude 3.0V

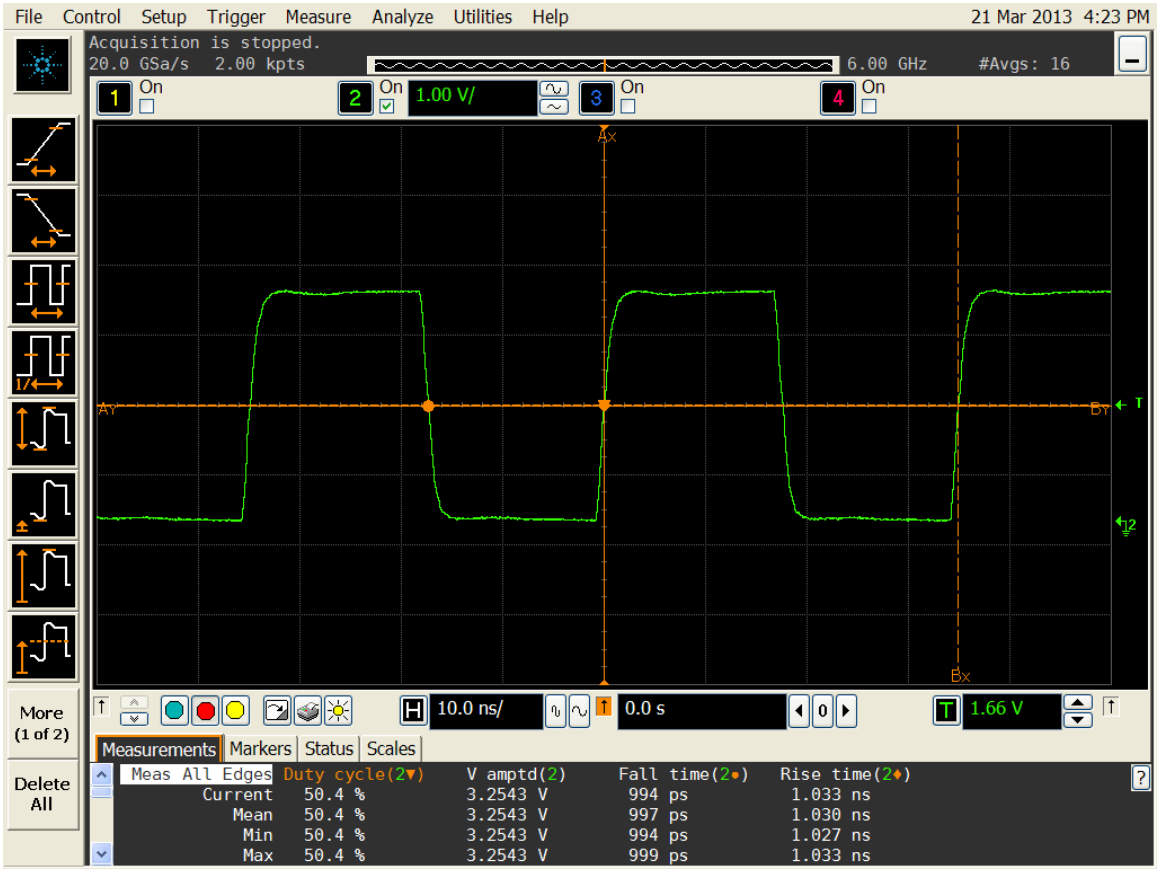

Figure 5. Duty cycle, Rise/Fall time and Amplitude 3.3V

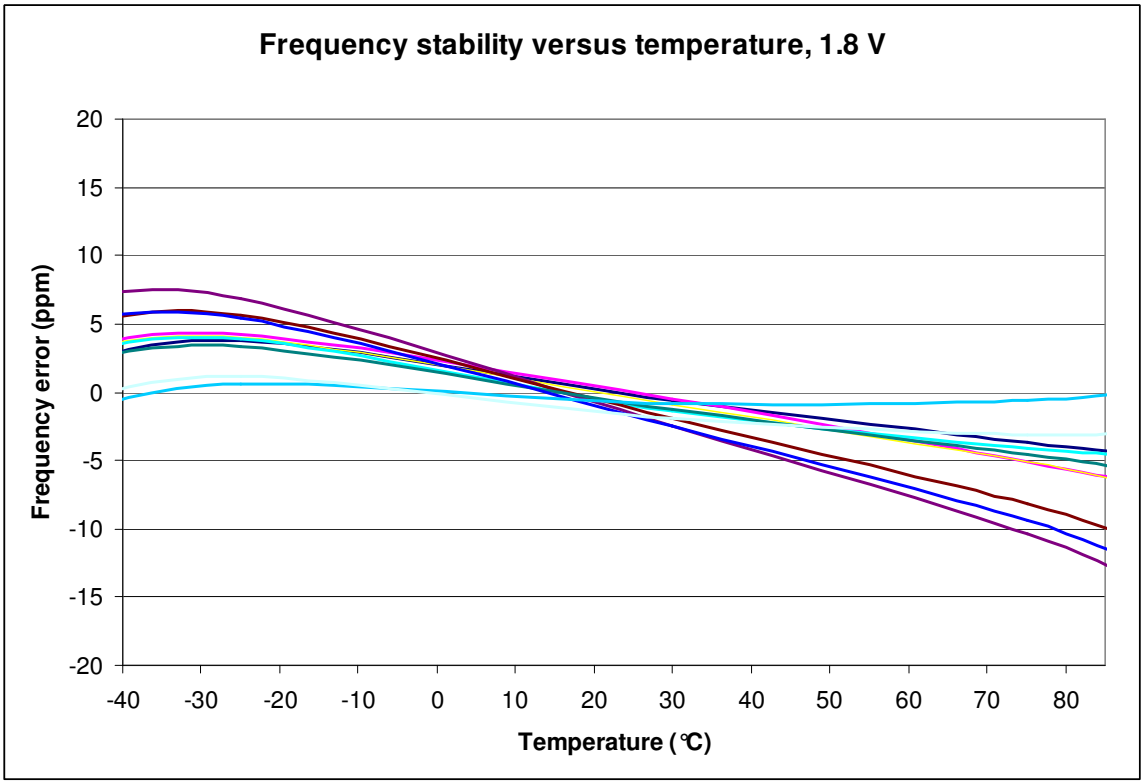

Figure 6. Frequency stability* versus temperature, 1.8 V

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

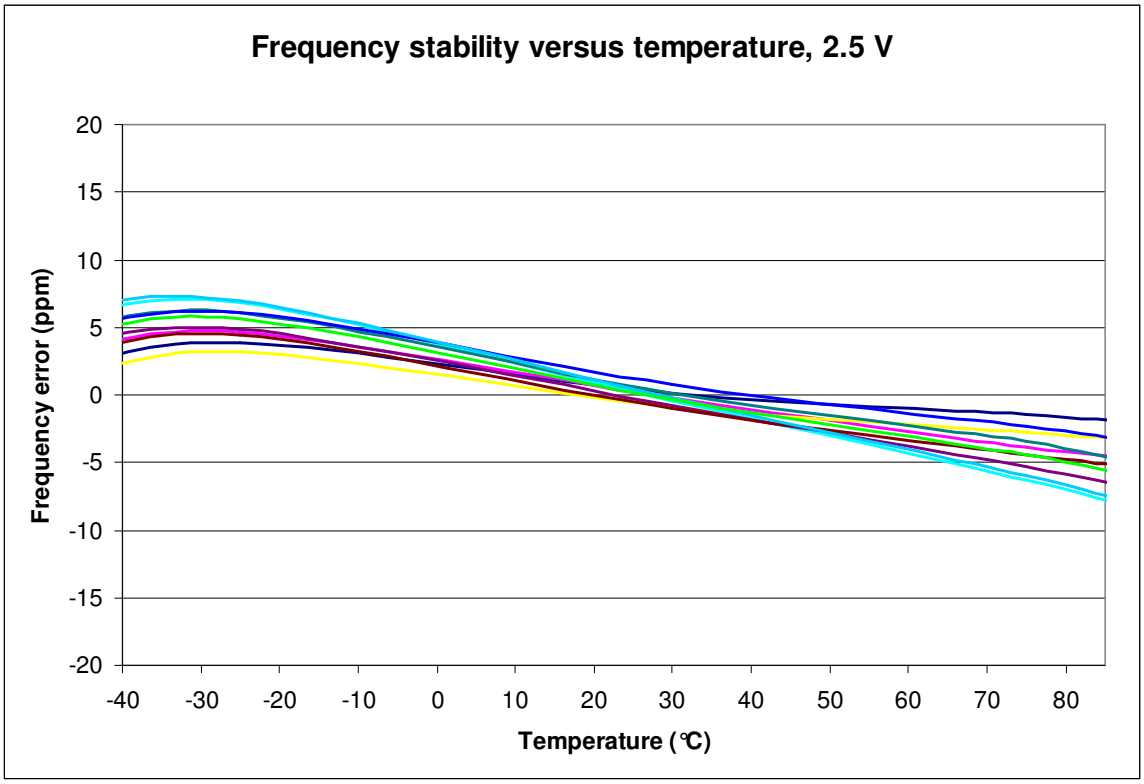

Figure 7. Frequency stability versus temperature, 2.5 V

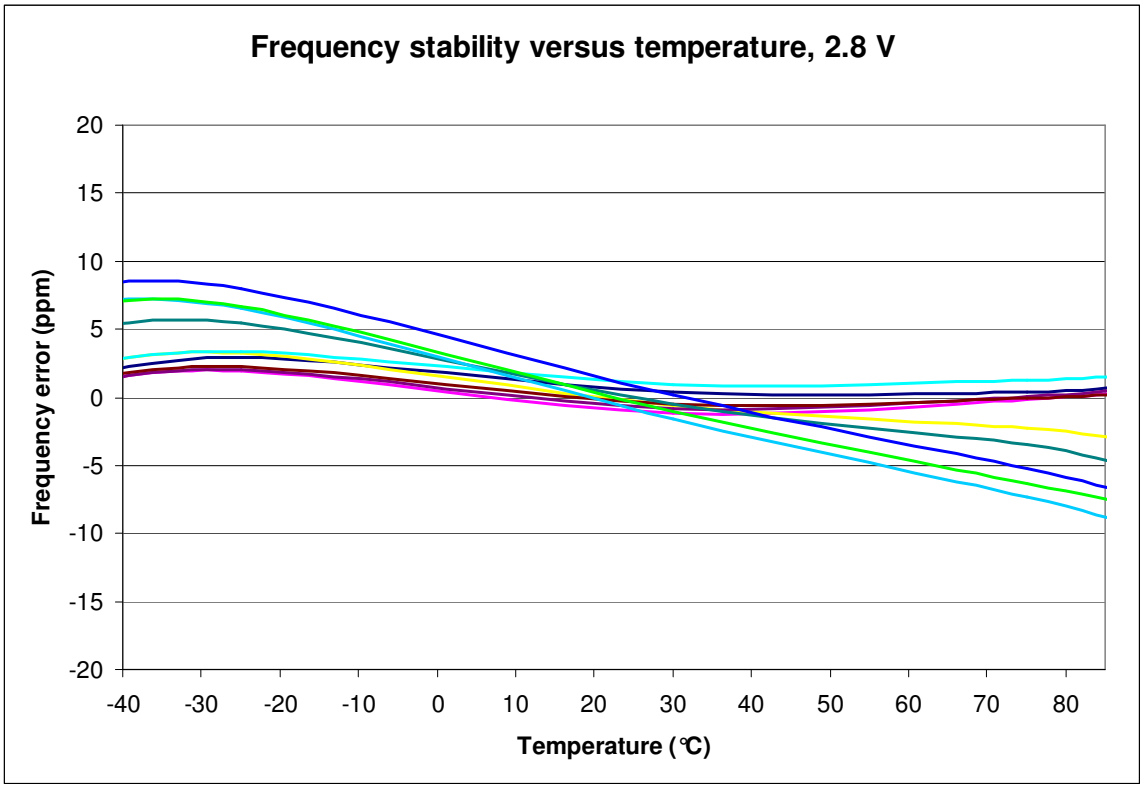

Figure 8. Frequency stability versus temperature, 2.8 V

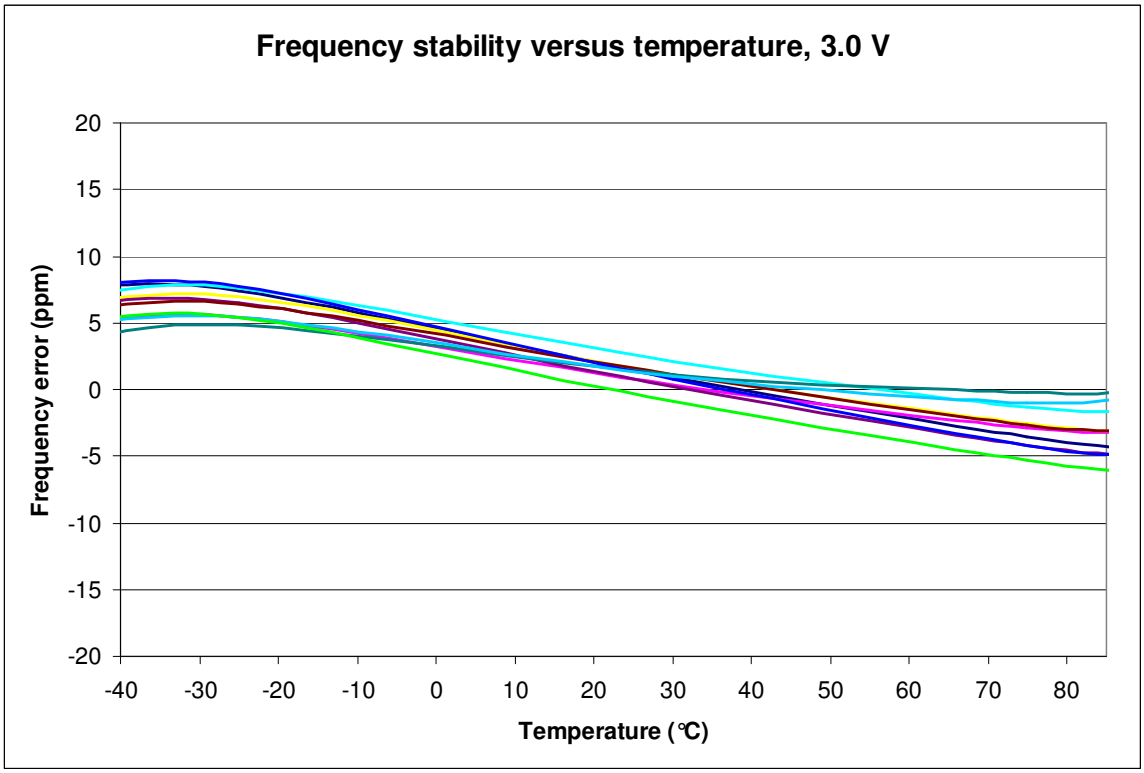

Figure 9. Frequency stability versus temperature, 3.0 V

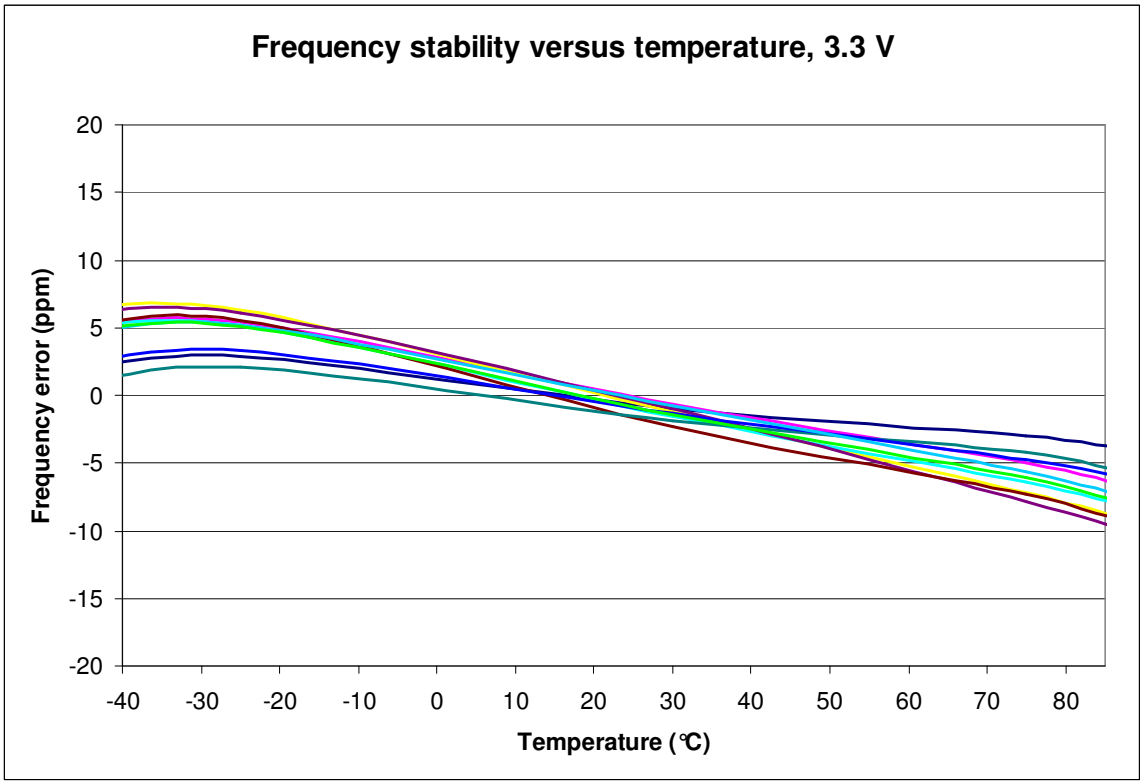

Figure 10. Frequency stability versus temperature, 3.3 V