To Huawei Technologies Co., Ltd.

Electrical characteristics test data

(TG-5035CJ-12N 26MHz)

TD·CS Quality Assurance Dept.

Measurement item

1. Frequency / temperature characteristics ・・・ P.3

2. Frequency stability Slope VS. Temperature ・・・ P.4

3. Frequency / temperature gradient ・・・ P.5

4. Frequency / Load coefficient ・・・ P.6

5. Frequency / Voltage coefficient ・・・ P.7

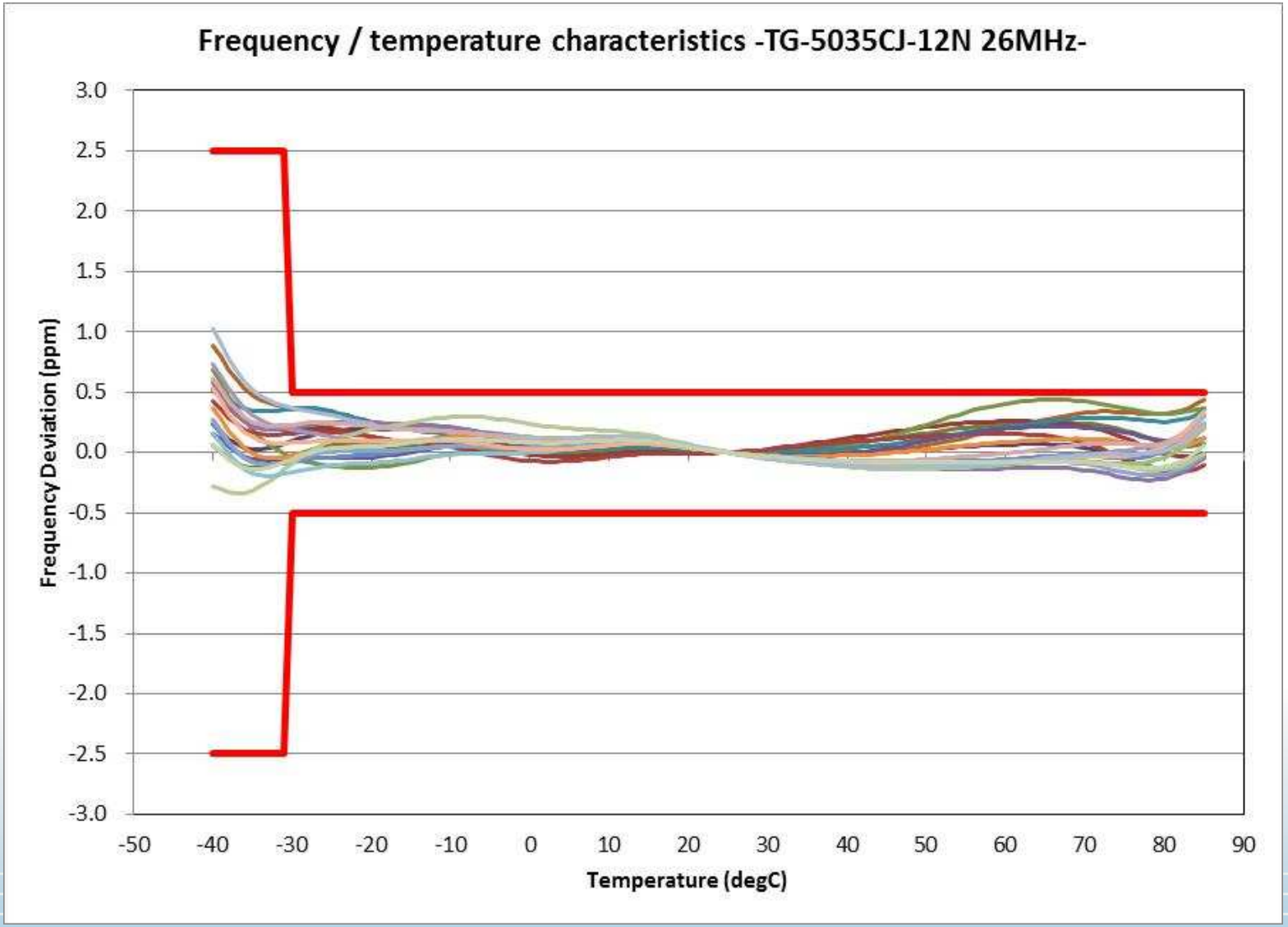
6. Frequency / aging ・・・ P.8

7. Frequency drift rate ・・・ P.9

1. Frequency / temperature characteristics

Standard :±0.5 ppm Max / -30 ~ +85 degC
±2.5 ppm Max / -40 ~ -30 degC

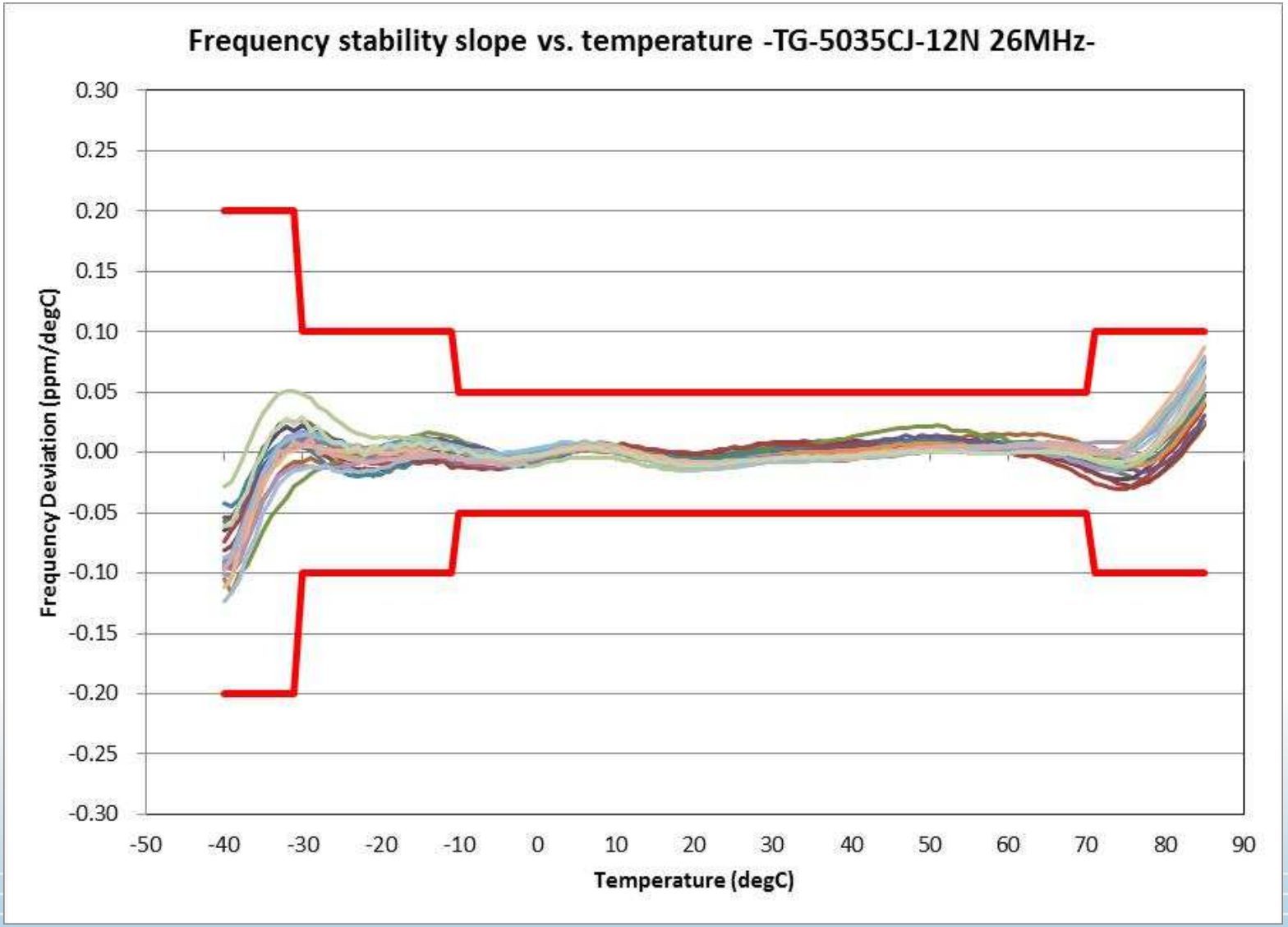
Condition :Vcc=1.8V, Temp step=1degC
Load=10kΩ // 10pF, N=20pcs



2. Frequency stability Slope VS. Temperature

Standard :±0.05 ppm/degC Max / -10 ~ +70 degC
±0.10 ppm/degC Max / -30 ~ +85 degC
±0.20 ppm/degC Max / -40 ~ -30 degC

Condition :Vcc=1.8V, Temp step=1degC
Load=10kΩ // 10pF, N=20pcs

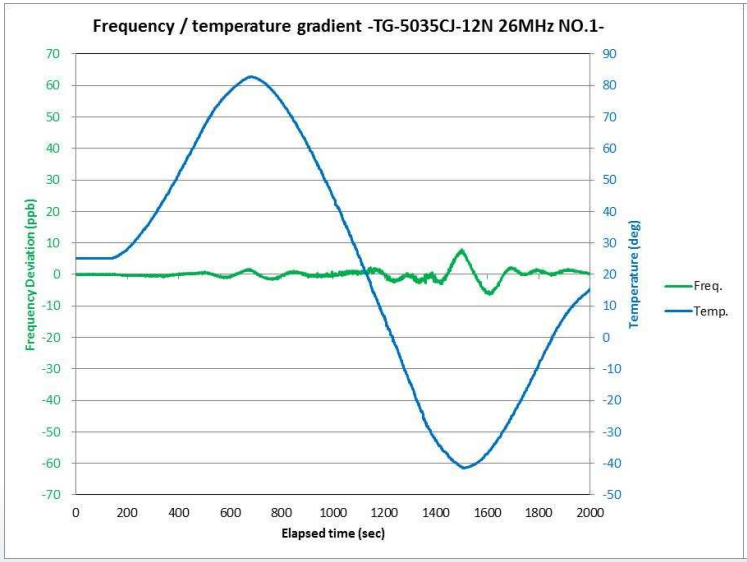


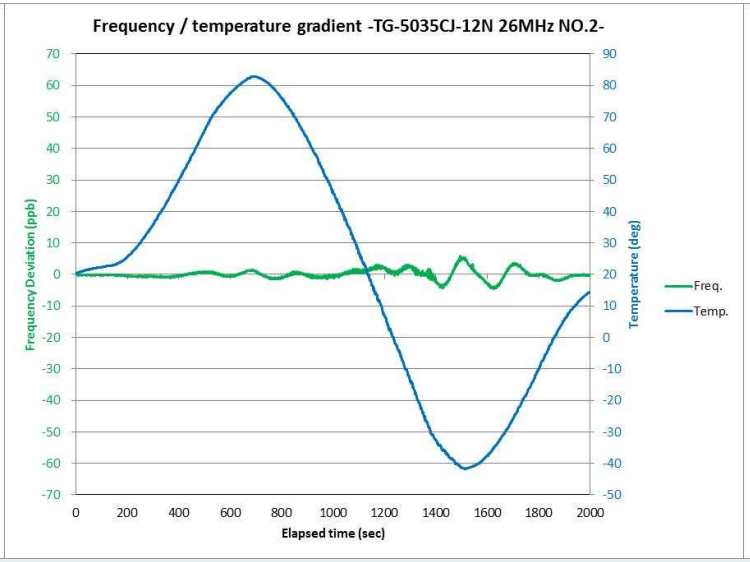
3. Frequency / temperature gradient

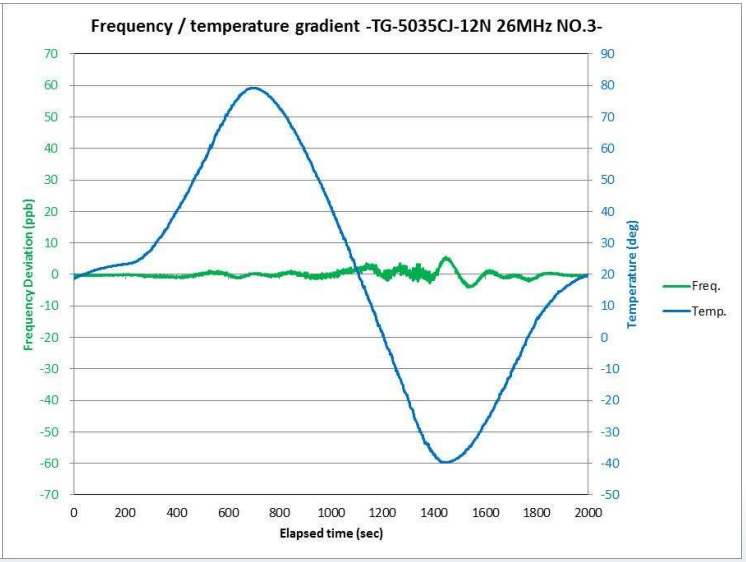
Standard :±14 ppb /s Max / -10 ~ +70 degC
±28 ppb /s Max / -30 ~ +85 degC
±56 ppb /s Max / -40 ~ -30 degC

Condition :Vcc=1.8V, Temp step=1degC
Load=10kΩ // 10pF

This characteristic is calculated by a result of “2. Frequency stability Slope VS. Temperature”.
0.05 ppm / degC x 0.28 degC / sec = 0.014 ppm/sec
0.10 ppm / degC x 0.28 degC / sec = 0.028 ppm/sec
0.20 ppm / degC x 0.28 degC / sec = 0.056 ppm/sec
Show reference data as follows.



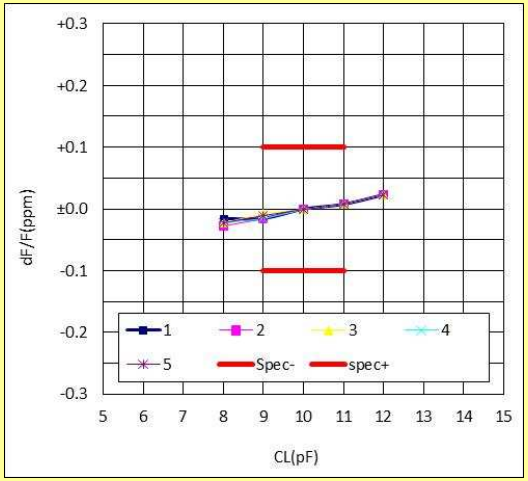
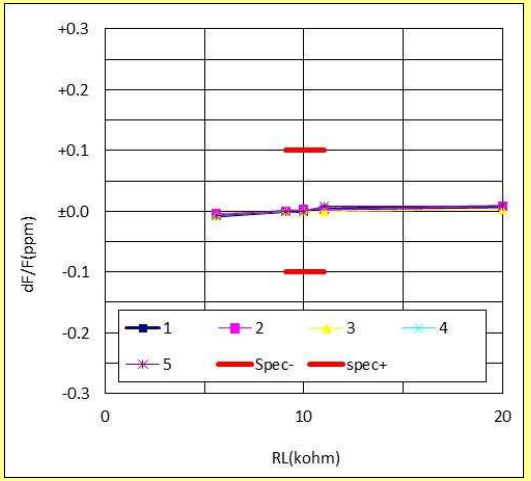
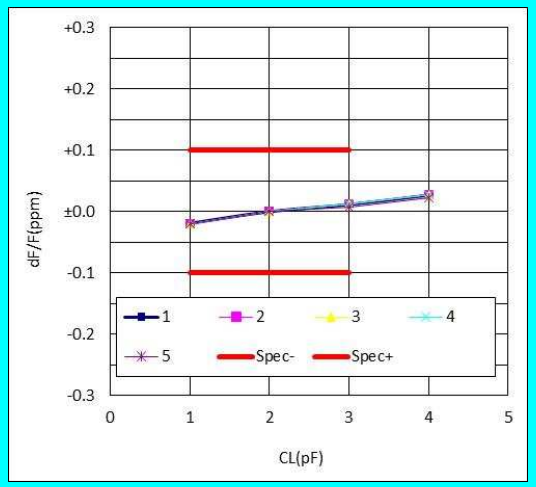
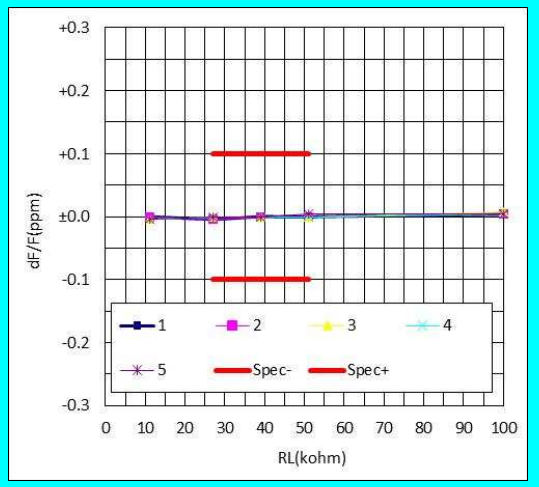




4. Frequency / Load coefficient

Standard : :±0.1 ppm Max / 10kΩ±1kΩ // 10pF±1pF
:±0.1 ppm Max / 39kΩ(+61kΩ-12kΩ) // 1.5pF±0.5pF

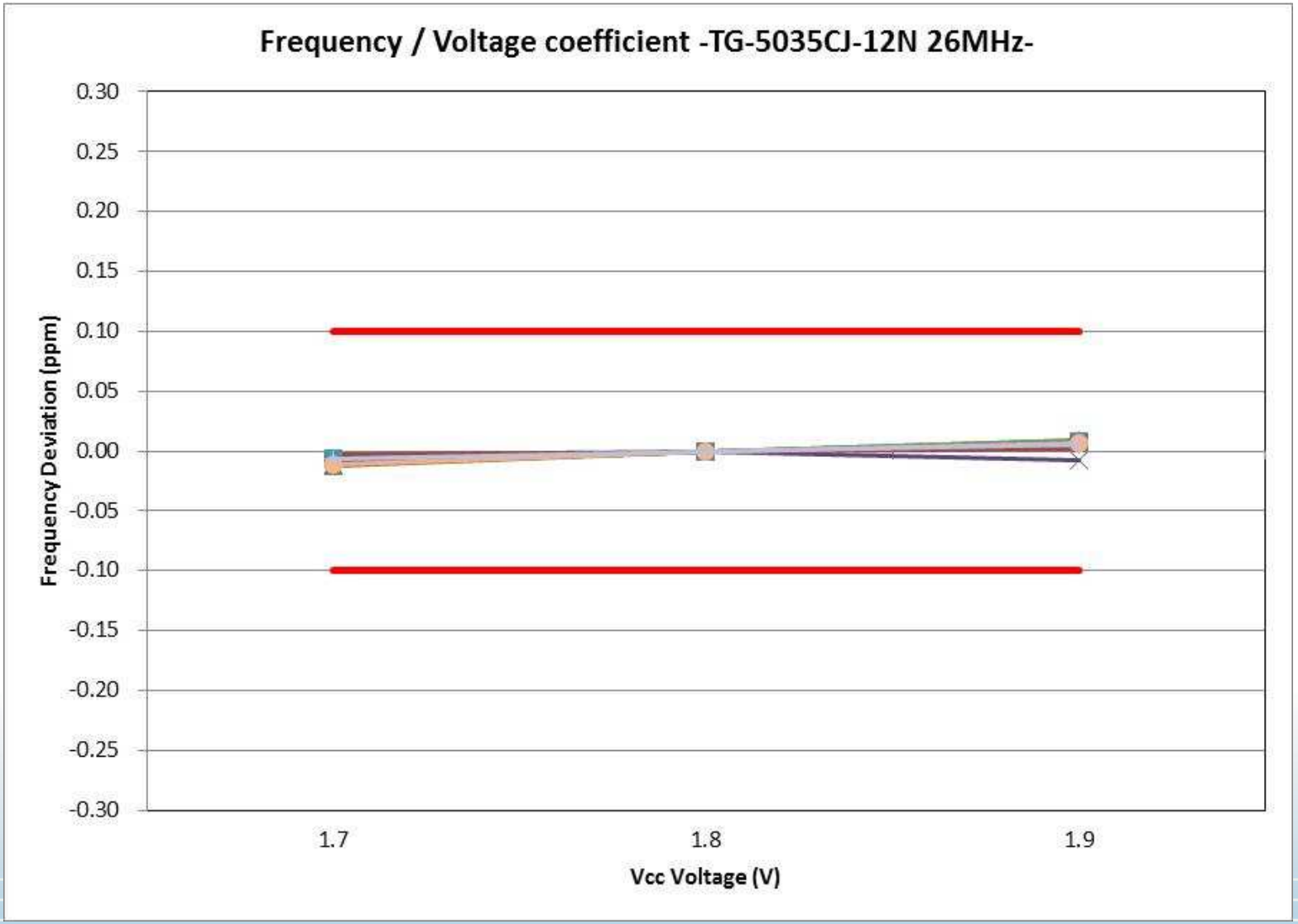
Condition :Vcc=1.8V, Temp=25degC
N=5pcs

	Capacity change (Resistance is 10kΩ constant.)	Resistance change (Capacity is 10pF constant.)
Load1: 10kΩ±1kΩ // 10pF±1pF		
Load2: 39kΩ(+61kΩ-12kΩ) // 1.5pF±0.5pF		

5. Frequency / Voltage coefficient

Standard :±0.1 ppm Max / Vcc=1.8V ± 0.1V

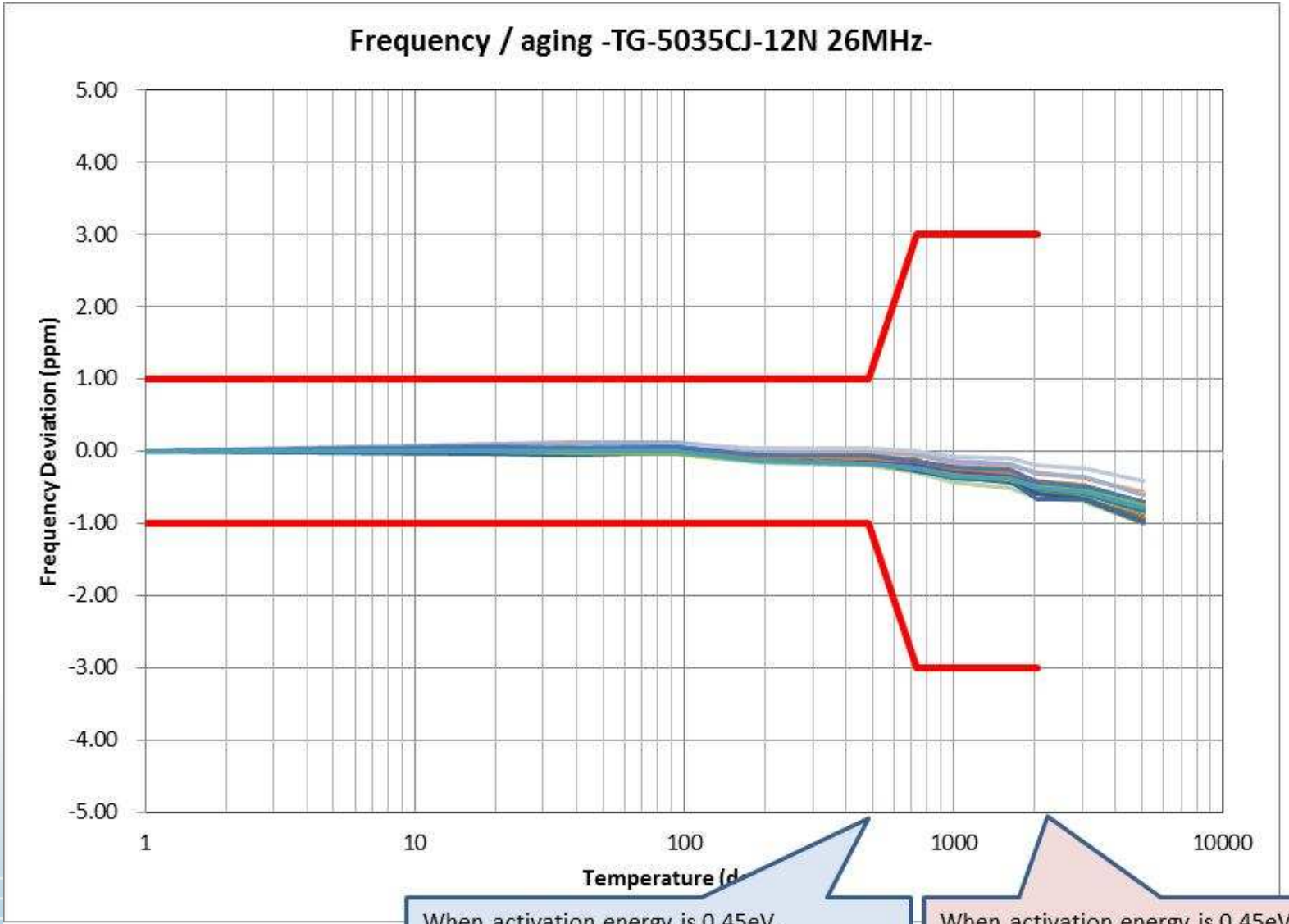
Condition :Load=10kΩ // 10pF, Temp=25degC
N=10pcs



6. Frequency / aging

Standard :±1.0 ppm Max / First year @+25degC
±3.0 ppm Max / 3 years @+25degC

Condition :Vcc=1.8V, Load=10kΩ // 10pF,
Temp=25degC, N=22pcs



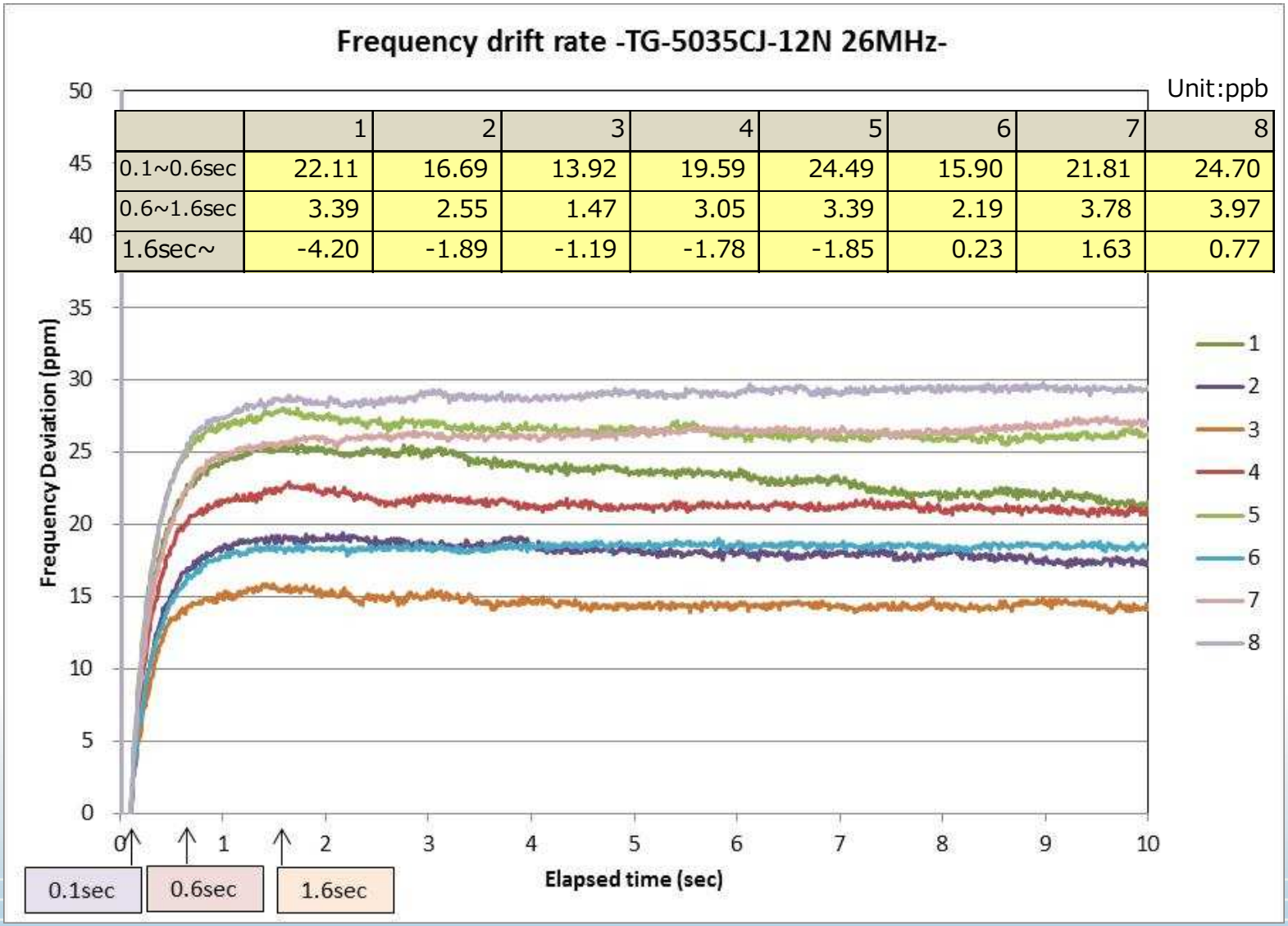
7. Frequency drift rate

Standard :±50 ppb Max / 0.1 ~ 0.6sec
±14 ppb Max / 0.6 ~ 1.6sec
±5 ppb Max / 1.6 ~

Condition :Vcc=1.8V, Load=10kΩ // 10pF,
Temp=25deg, N=8pcs

Unit:ppb

	1	2	3	4	5	6	7	8
0.1~0.6sec	22.11	16.69	13.92	19.59	24.49	15.90	21.81	24.70
0.6~1.6sec	3.39	2.55	1.47	3.05	3.39	2.19	3.78	3.97
1.6sec~	-4.20	-1.89	-1.19	-1.78	-1.85	0.23	1.63	0.77



END