

FREQUENCY STABILITY

CFR Part 2.1055, 24.235

Measurement Procedure

The equipment under test is placed in an environmental chamber. The antenna port of the Equipment Under Test is directly coupled to the input of the measurement equipment through a specialized RF connector. A power supply is attached as the primary voltage supply.

Frequency measurements are made at the extremes of the temperature range -30°C to $+60^{\circ}\text{C}$ and at intervals of 10°C with the primary supply voltage set to the nominal battery operating voltage. A period of time sufficient to stabilize all components of the equipment is allowed at each frequency measurement. The maximum variation of frequency is measured.

At room temperature, the primary supply voltage is reduced to the battery operating endpoint of the equipment under test. The maximum variation of frequency is measured.

Measurement Results

Attached

Measurement Results
Modulation: GSM 1900

Frequency Stability

Mode: GSM 1900 Operating Frequency: 1880.0 MHz
 Channel: 661 Deviation Limit (PPM): 0.1ppm

Temperature C	Frequency Error HZ	Frequency Error (PPM)	Voltage (%)	Voltage (VDC)
-30 C	-43.00	-0.023	100%	3.80
-20 C	-38.00	-0.020	100%	3.80
-10 C	-48.00	-0.026	100%	3.80
0 C	-34.50	-0.018	100%	3.80
10 C	-47.10	-0.025	100%	3.80
20 C	-74.30	-0.040	100%	3.80
30 C	-69.80	-0.037	100%	3.80
40 C	-64.70	-0.034	100%	3.80
50 C	-56.10	-0.030	100%	3.80
60 C	-47.10	-0.025	100%	3.80
20 C	-55.40	-0.029	Battery Endpoint	3.25

