

6a.5 Land Mobile Frequency Stability -- Pursuant 47 CFR 2.1055(a)(1) & 2.1055(d)(2)

Frequency stability measurements were made as described in paragraph 7.4. Because of the transmitter's dependence on the stability of the base station oscillator, it is not possible to provide stability data for this transmitter as is commonly supplied for certification per 47 CFR 2.1055 for a radio with a locally stabilized oscillator. The following data was collected in a setup comprising of a base station simulator and it represents the absolute frequency error of the transceiver under test versus the base station frequency reference.

Frequency Stability in PPM at 813.5125 MHz, Voltage = 4V_{DC}		
TEMP	Frequency Error (Hz)	PPM
-30	19.86	0.024
-20	33.44	0.041
-10	25.89	0.032
0	18.38	0.022
10	28.48	0.035
20	17.98	0.022
30	28.58	0.035
40	40.33	0.049
50	25.18	0.031
60	28.01	0.034

Table 6a-5.1. Transmitter Frequency Stability vs. Temperature in 800 MHz Band

Frequency Stability in PPM at 900.98125 MHz, Voltage = 4V_{DC}		
TEMP	Frequency Error (Hz)	PPM
-30	28.16	0.031
-20	46.93	0.052
-10	84.39	0.093
0	52.79	0.058
10	14.98	0.016
20	36.97	0.041
30	41.91	0.046
40	44.61	0.049
50	12.28	0.013
60	39.51	0.043

Table 6a-5.2. Transmitter Frequency Stability vs. Temperature in 900 MHz Band

Frequency Stability in PPM at 813.5125 MHz, Temperature = 25°C		
Power Supply Output Voltage	Frequency Error in Hz	PPM
3.55	27.81	0.034
3.6	39.79	0.049
3.7	34.14	0.042
3.8	33.40	0.041
3.9	29.25	0.036
4.0	20.05	0.024
4.1	47.08	0.057
4.2	27.82	0.034

Table 6a-5.3. Transmitter Frequency Stability vs. Voltage in 800 MHz Band

Frequency Stability in PPM at 900.98125 MHz, Temperature = 25°C		
Power Supply Output Voltage	Frequency Error in Hz	PPM
3.55	11.59	0.013
3.6	12.35	0.014
3.7	21.84	0.024
3.8	11.64	0.013
3.9	23.21	0.025
4.0	21.08	0.023
4.1	21.38	0.024
4.2	21.31	0.023

Table 6a-5.4. Transmitter Frequency Stability vs. Voltage in 900 MHz Band