



7.0 FCC Rules and Regulation Part 2 §2.1055: Frequency Stability

7.1 Test Procedure

ANSI/TIA/EIA-603-1992, section 2.2.2

The carrier frequency stability is the ability of the transmitter to maintain an assigned carrier frequency.

The EUT was evaluated over the temperature range -30°C to +50°C.

Note: Com Net Ericsson has requested that the range be extended to 60°C.

The temperature was initially set to -30°C and a 2-hour period was observed for stabilization of the EUT. The frequency stability was measured within one minute after application of primary power to the transmitter. The temperature was raised at intervals of 10 degrees centigrade through the range. A ½ an hour period was observed to stabilize the EUT at each measurement step and the frequency stability was measured within one minute after application of primary power to the transmitter.

Additionally, the power supply voltage of the EUT was varied from 85% to 115% of the nominal voltage.

The worst-case test data are shown.

7.2 Test Data

7.2.1 FREQUENCY STABILITY/FREQUENCY VARIATION

Limit is 2.5 ppm for device with a 12.5 kHz channel bandwidth

Limit is 5 ppm for device with a 25 kHz channel bandwidth

4 Watt and 1 Watt radios were tested with 12.5 kHz and 25 kHz channel bandwidth. The worst-case temperature deviation is as follows.



COMPANY NAME: COM NET ERICSSON.
EUT: UHF-M SPLIT 450-488 MHz PANTHER 300P
WORK ORDER NUMBER: 2000278
FCC ID: OWDTR-0003-A

Assigned Frequency 487.975 MHz

| Temperature (C) | Frequency (MHz) | Voltage (13.8V +/- 85-115%) | ppm |
|-----------------|-----------------|-----------------------------|-------|
| -30 | 487.975363 | 6.375 | 0.74 |
| -30 | 487.975341 | 7.500 | 0.70 |
| -30 | 487.975363 | 8.625 | 0.74 |
| -20 | 487.975440 | 6.375 | 0.90 |
| -20 | 487.975451 | 7.500 | 0.92 |
| -20 | 487.975473 | 8.25 | 0.97 |
| -10 | 487.975385 | 6.375 | 0.79 |
| -10 | 487.975407 | 7.500 | 0.83 |
| -10 | 487.975418 | 8.625 | 0.86 |
| 0 | 487.975319 | 6.375 | 0.65 |
| 0 | 487.975297 | 7.500 | 0.61 |
| 0 | 487.975297 | 8.625 | 0.61 |
| 10 | 487.975253 | 6.375 | 0.52 |
| 10 | 487.975275 | 7.500 | 0.56 |
| 10 | 487.975275 | 8.625 | 0.56 |
| 20 | 487.975198 | 6.375 | 0.41 |
| 20 | 487.975198 | 7.500 | 0.41 |
| 20 | 487.975187 | 8.625 | 0.38 |
| 30 | 487.975088 | 6.375 | 0.18 |
| 30 | 487.975099 | 7.500 | 0.20 |
| 30 | 487.975099 | 8.625 | 0.20 |
| 40 | 487.975033 | 6.375 | 0.07 |
| 40 | 487.975044 | 7.500 | 0.09 |
| 40 | 487.975033 | 8.625 | 0.07 |
| 50 | 487.974956 | 6.375 | -0.09 |
| 50 | 487.974956 | 7.500 | -0.09 |
| 50 | 487.974967 | 8.625 | -0.07 |
| 60 | 487.97497 | 6.375 | -0.06 |
| 60 | 487.97497 | 7.500 | -0.06 |
| 60 | 487.97497 | 8.625 | -0.06 |

7.2.2 FREQUENCY STABILITY/VOLTAGE VARIATION

See above test data.

7.3 Test Equipment

Temperature Chamber Tenney TH65 s/n 11380

Frequency Counter HP8901A (Frequency Mode) s/n 2545A04102