



COMPANY NAME: COM NET ERICSSON.  
EUT: UHF-M SPLIT 450-488 MHz PANTHER 300M  
CLIENT REFERENCE NUMBER: QRTL00-257  
WORK ORDER NUMBER: 2000279  
FCC ID: OWDTR-0005-A

#### 4.0 FCC Rules and Regulations Part 2 §2.1053 (a): Field strength of spurious radiation

##### 4.1 Test Procedure

ANSI/TIA/EIA-603-1992, section 2.2.12

The transmitter is terminated with a 50  $\Omega$  load and is modulated with a 2,500 Hz sine wave at an input level 16 dB greater than that required to produce 50% of the rated system deviation at 1000 Hz.

Refer to section “Radiated Measurement” in this report for further information.

##### 4.2 Test Data

###### 4.2.1 CFR 47 Part 90.210 Requirements

The worst-case emissions test data are shown. The magnitude of emissions attenuated more than 20 dB below the FCC limit need not be recorded.

| 40 W 25 kHz                                                         |                 |             |                                              |                      |                    |        |
|---------------------------------------------------------------------|-----------------|-------------|----------------------------------------------|----------------------|--------------------|--------|
| Radiated Emissions (Channel 3 at 487.975MHz)<br>Substitution Method |                 |             |                                              |                      |                    |        |
| Frequency                                                           | S/G level (dBm) | Cable Loss* | Difference in gain (ref. To 1/2 wave dipole) | Emission level (dBm) | Limit (dBm) Mask B | Margin |
| 975.95                                                              | -30.7           | 0.84        | 1.35                                         | -32.9                | -13                | -19.9  |
| 1463.925                                                            | -39.6           | 1.16        | -6.45                                        | -34.3                | -13                | -21.3  |
| 1951.9                                                              | -41.1           | 1.16        | -4.8                                         | -37.5                | -13                | -24.5  |
| 2439.875                                                            | -35.2           | 1.33        | -5.1                                         | -31.4                | -13                | -18.4  |
| 2927.85                                                             | -43.7           | 1.83        | -6.1                                         | -39.4                | -13                | -26.4  |
| 3415.825                                                            | -41.4           | 2.5         | -6.1                                         | -37.8                | -13                | -24.8  |
| 3903.8                                                              | -31.3           | 3.34        | -5.9                                         | -28.7                | -13                | -15.7  |
| 4391.775                                                            | -36.7           | 3.84        | -6.8                                         | -33.7                | -13                | -20.7  |
| 4879.75                                                             | -38.5           | 4           | -7                                           | -35.5                | -13                | -22.5  |



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| 20W 12.5kHz                                  |                           |                |                                                    |                         |                       |        |
|----------------------------------------------|---------------------------|----------------|----------------------------------------------------|-------------------------|-----------------------|--------|
| Radiated Emissions (Channel 6 at 487.975MHz) |                           |                |                                                    |                         |                       |        |
| Substitution Method                          |                           |                |                                                    |                         |                       |        |
| Frequency                                    | ERP<br>S/G level<br>(dBm) | Cable<br>Loss* | Difference in gain<br>(ref. to 1/2 wave<br>dipole) | Emission<br>level (dBm) | Limit (dBm)<br>Mask D | Margin |
| 975.95                                       | -36.2                     | 0.84           | 1.35                                               | -38.4                   | -20                   | -18.4  |
| 1463.925                                     | -44.3                     | 1.16           | -6.45                                              | -39.0                   | -20                   | -19.0  |
| 1951.9                                       | -38.2                     | 1.16           | -4.8                                               | -34.6                   | -20                   | -14.6  |
| 2439.875                                     | -38.9                     | 1.33           | -5.1                                               | -35.1                   | -20                   | -15.1  |
| 2927.85                                      | -46.5                     | 1.83           | -6.1                                               | -42.2                   | -20                   | -22.2  |
| 3415.825                                     | -43.1                     | 2.5            | -6.1                                               | -39.5                   | -20                   | -19.5  |
| 3903.8                                       | -36                       | 3.34           | -5.9                                               | -33.4                   | -20                   | -13.4  |
| 4391.775                                     | -39.9                     | 3.84           | -6.8                                               | -36.9                   | -20                   | -16.9  |
| 4879.75                                      | -45.9                     | 4              | -7                                                 | -42.9                   | -20                   | -22.9  |

\*This insertion loss corresponds to the cable connecting the RF Signal Generator to the ½ wave dipole antenna.

#### 4.2.2 IC RSS-119 Requirements

30W Panther 300M Spurious Radiated measurements

##### Channel 2

| Frequency<br>(MHz) | Spectrum<br>Analyzer<br>Level<br>(dBuV) | Signal<br>Generator<br>level<br>(dBm) | TX<br>Antenna<br>Gain<br>(dBi) | Corrected<br>to ½<br>wave<br>dipole | Cable<br>Loss*<br>(dB) | Corrected<br>S/G level<br>(dBm) | Limit<br>(dBm) | Margin<br>(dB) |
|--------------------|-----------------------------------------|---------------------------------------|--------------------------------|-------------------------------------|------------------------|---------------------------------|----------------|----------------|
| 939.94             | 58.9                                    | -30.4                                 | -0.02                          | -2.17                               | 1.4                    | -35.0                           | -13            | -22.0          |
| 1409.925           | 101.5                                   | -42                                   | 6.98                           | 4.83                                | 0.2                    | -37.4                           | -13            | -24.4          |
| 1879.94            | 112.33                                  | -27.9                                 | 6.38                           | 4.23                                | 0.3                    | -24.0                           | -13            | -11.0          |
| 2349.925           | 101.17                                  | -45.3                                 | 7.91                           | 5.76                                | 0.4                    | -39.9                           | -13            | -26.9          |
| 2819.91            | 110.33                                  | -36.9                                 | 8.81                           | 6.66                                | 0.3                    | -30.5                           | -13            | -17.5          |
| 3289.895           | 102.33                                  | -39                                   | 9.18                           | 7.03                                | 0.2                    | -32.2                           | -13            | -19.2          |
| 3759.88            | 105.5                                   | -33.6                                 | 9.21                           | 7.06                                | 0.4                    | -26.9                           | -13            | -13.9          |
| 4229.865           | 86.5                                    | -45.2                                 | 9.69                           | 7.54                                | 0.4                    | -38.1                           | -13            | -25.1          |
| 4699.85            | 95                                      | -38.8                                 | 10.35                          | 8.2                                 | 0.7                    | -31.3                           | -13            | -18.3          |



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#### Channel 5

| Frequency (MHz) | Spectrum Analyzer Level (dBuV) | Signal Generator level (dBm) | TX Antenna Gain (dBi) | Corrected to ½ wave dipole | Cable Loss* (dB) | Corrected S/G level (dBm) | Limit (dBm) | Margin (dB) |
|-----------------|--------------------------------|------------------------------|-----------------------|----------------------------|------------------|---------------------------|-------------|-------------|
| 939.943         | 58.7                           | -30.7                        | -0.02                 | -2.17                      | 1.4              | -34.3                     | -20         | -14.3       |
| 1409.925        | 102.67                         | -40.8                        | 6.98                  | 4.83                       | 0.2              | -36.2                     | -20         | -16.2       |
| 1879.94         | 110.17                         | -29.9                        | 6.38                  | 4.23                       | 0.3              | -26.0                     | -20         | -6.0        |
| 2349.925        | 105.17                         | -41.3                        | 7.91                  | 5.76                       | 0.4              | -35.9                     | -20         | -15.9       |
| 2819.91         | 108.33                         | -35.7                        | 8.81                  | 6.66                       | 0.3              | -29.3                     | -20         | -9.3        |
| 3289.895        | 104                            | -37.4                        | 9.18                  | 7.03                       | 0.2              | -30.6                     | -20         | -10.6       |
| 3759.88         | 106.677                        | -32.5                        | 9.21                  | 7.06                       | 0.4              | -25.8                     | -20         | -5.8        |
| 4229.865        | 83                             | -49.3                        | 9.69                  | 7.54                       | 0.4              | -42.2                     | -20         | -22.2       |
| 4699.85         | 93.67                          | -40.2                        | 10.35                 | 8.2                        | 0.7              | -32.7                     | -20         | -12.7       |

\*This insertion loss corresponds to the cable connecting the RF Signal Generator to the ½ wave dipole antenna.

#### 4.3 Test Equipment

Antenna: CHASE CBL6112 s/n 2099  
 Amplifier: HP8449B s/n 3008A00505  
 Spectrum analyzer: HP8564E s/n 3943A01719  
 RF Signal Generator HP8648C s/n 3537A01741  
 Synthesized Sweeper HP83752A s/n 3610A00846