



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

11.0 FCC Rules and Regulations Part 2.202: NECESSARY BANDWIDTH AND EMISSION BANDWIDTH

Type of Emission: F3E

Necessary Bandwidth and Emission Bandwidth:

12.5kHz (NB channel) : Bn = 11K0F3E

25kHz (WB channel): Bn = 16K0F3E

Calculation:

Max modulation(M) in kHz : 3

Max deviation (D) in kHz: 2.5 (NB) and 5 (BB)

Constant factor (K) : 1

Bn = 2xM+2xDK

12.0 FCC Rules and Regulations Part 1.1307, 1.1310, 2.1091, 2.1093: RF EXPOSURES COMPLIANCE

The manufacturer does not specify or sale any antenna with the radio identified in this report.

The maximum distance, from the antenna at which MPE is met or exceeded, is calculated from the equation relating field strength E in V/m, transmit power P in Watts, transmit antenna numeric gain G , and separation distance in meters:

$$E(V / m) = \frac{\sqrt{30 \times P \times G}}{d}$$

$$\text{Power density : } P_d (mW / cm^2) = \frac{E^2}{3770}$$

Limit for occupational/controlled exposures (at 450 MHz) = f(MHz)/300 mW / cm^2

MPE Calculation:

Antennae: Typical land mobile antenna available on the market and commonly chosen by end-users for vehicle application.

MPE Radii for UHF Band (450 - 512 MHz¹)

Power ²	dBd Antenna Gain ³													
(Watts)	0		1		2		3		4		5		6	
↓	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in	cm	in
20	42	16	47	18	53	21	59	23	66	26	74	29	83	33
30	51	20	57	23	64	25	72	28	81	32	91	36	102	40
40	59	23	66	26	74	29	83	33	93	37	105	41	118	46

- Numbers are calculated for 450 MHz, giving the largest (worst-case) MPE radii.
- Power delivered to antenna: radio output less cable and mismatch losses.
- Gains are compared to an ideal, 1/4-wave monopole (1/2-wave dipole). Add 2.15 dB for comparison with an ideal isotropic source. (0 dBd = 2.15 dBi)



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Instructions will be placed in the user manual instructing installers and users to maintain the MPE distances during operation of the EUT.

It is the responsibility of the licensee, when applying for a license, to demonstrate compliance with the FCC RF exposures requirements (MPE) using an antenna different from those specified by the manufacturer and reported on file at the FCC.