

RF Exposure Information Pursuant to Section 15.253(f):

Maximum radiation occurs whether the vehicle is in motion or not. When the vehicle is not in motion, the appropriate category for RF Exposure is general population/uncontrolled exposure. At 76-77 GHz the specification limits exposure to 1 mW/cm^2 . Stationary is the only operational configuration that must be evaluated for RF exposure.

The operation and installation manual specifies a mounting location for the antenna installation to be typically behind the radiator of the vehicle it is installed in. Measurement data taken from the European test report on an identical transmitter head shows the radar unit produces a level of 3.8 nW/cm^2 measured at a distance of 1 meter using a standard gain horn and a Tektronix spectrum analyzer. The calculation is based on the received power level at that distance divided by the planar surface area of the standard gain horn antenna.

With a mounting location behind the radiator of a vehicle, the expected closest distance an individual could come to the radiating antenna would vary between at least 20 cm up to distances approaching 1 meter.

Due to the margin of compliance, $> 50 \text{ dB}$, further calculations are not considered necessary.

A copy of the test data sheet from the European test report is attached.

Phillip Inglis

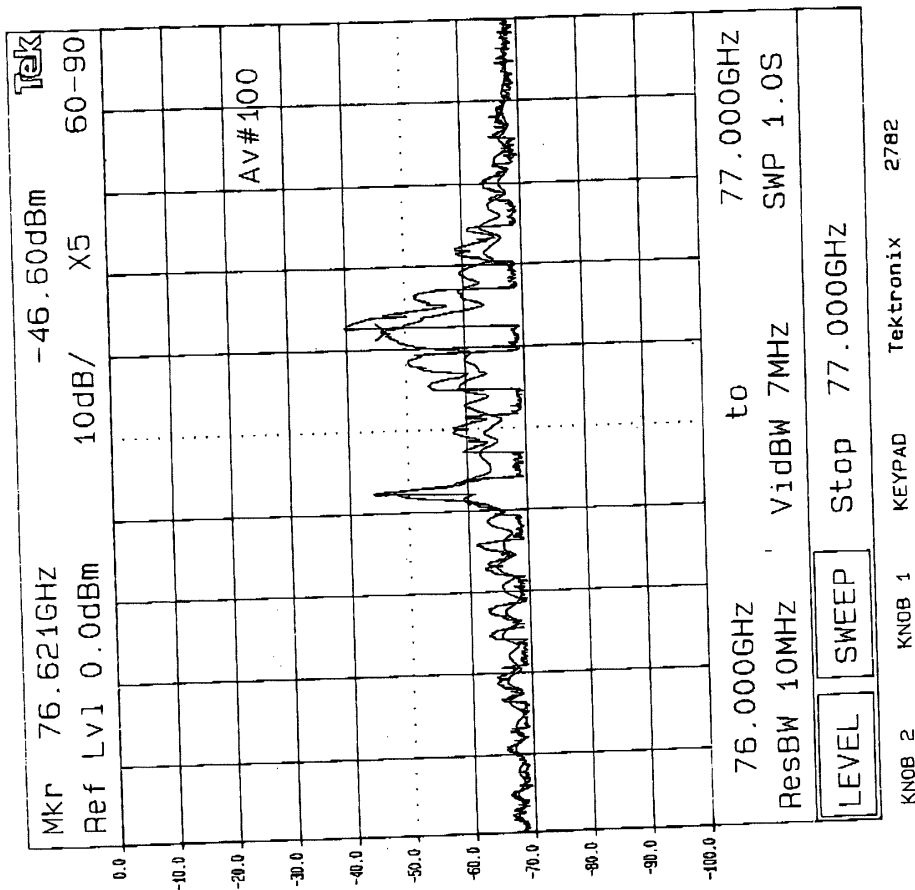


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Prüfbericht Nr.: 5-1598-3/99

Anlage 3

Plot Nr. 9



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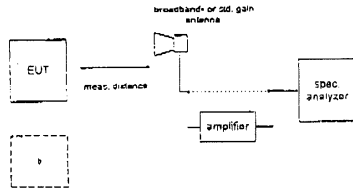


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EN 7.3 Maximum safe level for radiated power density

Measurement conditions:	Frequency	f =	76.000 - 77.000 GHz
	normal power supply	U =	13.2 VDC
	extreme power supply	U =	10.8-15.6 VDC
	Temperature	t =	+23 /-25 / +55 °C

Test set - up:



Limit: (acc. VDE 0848 part 2) 10 W/m³

Calculation:

Aperture of antenna: 2.8 cm x 2.0 cm = 5.6 cm²

received power at 1.0 m distance -46.6 dBm = 21.8 nW
 See Plot No.: 9

power density 3.8 nW/cm²
 0.038 mW/m²

Handwritten notes:
 0.038
 10⁻⁴
 10⁻⁴
 10⁻⁴ = 10 x 10⁻³
 10⁻⁴
 10⁻⁴

Test standards passed: Yes

No