

TQ-Systems GmbH  
Attn. Mr. Bernd Wein  
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28.12.2015  
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**Maximum Permissible Exposure**  
**Q1049**

Dear Mr. Wein,

please find our Maximum Permissible Exposure calculations for the Q1025.

Best Regards

i.V.

A handwritten signature in blue ink, appearing to be 'C. Steinröder', written over a light blue grid background.

Carsten Steinröder

### **Maximum Permissible Exposure**

(as specified in Table 1B of 47 CFR 1.1310 – Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure)

<i>Frequency range (MHz)</i>	<i>Power density (mW/cm<sup>2</sup>)</i>
300 – 1500	f/1500
1,500 – 100000	1.0

### **Calculations 5 GHz band**

**SAR Limit: 1 mW/cm<sup>2</sup>**

Equation OET bulletin 65, page 18, edition 97-01:  $S = P \cdot G / (4\pi R^2)$

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the centre of radiation of the antenna

Operational Bands	Frequency (MHz)	Antenna Gain (dBi)	G		P		S		Margin to Limit (mW/cm <sup>2</sup> )
			Antenna Gain -numeric- (mW/cm <sup>2</sup> )	Output Power -conducted- (dBm)	Output Power -conducted- (mW)	Output Power (EIRP) (mW)	Limit (mW/cm <sup>2</sup> )	Power Density value (mW/cm <sup>2</sup> )	
UNII Subband 1 (20 MHz)	5220	2	1.5849	9.40	8.71	13.80	1.0000	0.0027	0.9973
UNII Subband 1 (40 MHz)	5190	2	1.5849	13.20	20.89	33.11	1.0000	0.0066	0.9934
UNII Subband 2A (20 MHz)	5320	2	1.5849	na	NA	NA	1.0000	NA	NA
UNII Subband 2A (40 MHz)	5270	2	1.5849	NA	NA	NA	1.0000	NA	NA
UNII Subband 2C (20 MHz)	5500	2	1.5849	NA	NA	NA	1.0000	NA	NA
UNII Subband 2C (40 MHz)	5510	2	1.5849	NA	NA	NA	1.0000	NA	NA
UNII Subband 3 (20 MHz)	5745	2	1.5849	10.30	10.72	16.98	1.0000	0.0034	0.9966
UNII Subband 3 (40 MHz)	5755	2	1.5849	13.60	22.91	36.31	1.0000	0.0072	0.9928

<b>Distance to Antenna (R) in cm:</b>	<b>20</b>
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