

G5 CU R RF exposure exemption analysis

Product: 2,4 GHz Transceivers G5 CU R5, G5 CU R10

Company: ScanrecoIndustrielektronik AB, Box 47144/ÅrstaSkolgränd 22, S-10074, Stockholm, Sweden

According to RSS-102 exemption 2.5.2 “Exemption from Routine Evaluation Limits – SAR Evaluation”:

RF exposure evaluation is required if the separation distance between the user and the device’s radiating element is greater than 20 cm, except when the device operates as follows:

- *at or above 1.5 GHz and the maximum e.i.r.p. of the device is equal to or less than 5 W*

Prediction of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

S = power density
P = power input to the antenna
G = antenna gain
R = distance

Conducted output power:	18,27	(dBm)
Tune up tolerance	0,5	(dB)
Number of carriers	1	(N)
	75,3	(mW)
	0,0753	(W)
P Average	0,0545	(W)
Antenna gain:	3,3	(dBi)
Maximum antenna gain:	2,14	(numeric)
EIRP Average	0,117	(W)
ERP Average	0,0712	(W)
Distance:	20	(cm)
Duty Cycle:	72,38	(%)
Frequency:	2400	(MHz)
MPE Limit:	1	(mW/cm ²)
Power density:	0,0232	(mW/cm ²)
	0,232	(W/m ²)
Margin	16,3	(dB)

Conclusion: The product satisfies the OET Bulletin 65 Edition 97-1 and RSS-102 Issue 4.

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