DEKRA Testing and Certification S.A.U.

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Report: 55472

RF exposure analysis for the equipment

Model: MGU RSE **FCC ID:** T8G-MGURSE **IC:** 6434A-MGURSE

The device under evaluation consists of a infotainment system with 2 chip kleer..

For the Kleer technologies, as stated into DEKRA test report 55472RRF005A1s the maximum output power and antenna gain values are (The worst case for simultaneous transmission was taken in consideration):

Frequency band (MHz)	Mode	Frequency Range (MHz)	CONDUCTED OUTPUT POWER (mW)	Antenna gain (dBi)	Antenna gain (numerical)	Duty cycle (%)	Evaluation distance (cm)	Power density (mW/cm^2)	FCC MPE limit (mW/cm^2)	IC MPE limit (mW/cm^2)	MPE RATIO
2400-2483,5	**Kleer (chip1)**	2403 -2478	1,972	4,4	2,75	100%	20	0,0011	1,0000	0,5469	0,0020
	Kleer (chip2)	2403 -2478	1,845	4,4	2,75	100%	20	0,0010	1,0000	0,5469	0,0018

Σ of MPE ratios : 0,0038
Σ of Power density (mW/cm2): 0,0021
Σ of Power density (W/m2): 0,0210

MPE exposure limits

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure:

Frequency Range (MHz)	Power density (mW/cm^2)	Averaging time (minutes)
300 – 1500	f (MHz) /1500	30
1500 – 100.000	1,0	30

The table below is excerpted from RSS-102, Issue 5, 4, titled “Table 4: RF Field Strength Limits for Devices Used by the General Public”:

Frequency Range (MHz)	Power density (W/m^2)	Averaging time (minutes)
300 – 6000	$0.02619 \cdot f^{0.6834}$	6

Using the equation $S = \frac{PG}{4\pi R^2}$ to calculate the exposure to electromagnetic fields

where: S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW)
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 (appropriate units, e.g., cm)

Assessment summary

The addition of MPE ratios is less than the limits ISED, and the addition of Power densities is less then limit for FCC, then the MGU RSE complies with the regulation for mobile exposure conditions.

Yours sincerely,

P.A.

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