Statement for RF Exposure

Statement No.	:	**13273483S-D**
Applicant	:	**Panasonic Corporation**
Type of Equipment	:	**Seat Back ECU**
Model No.	:	**AT2002 *1)**
Test standard	:	**Exposure limit 1999/519/EC** **EN 62311:2008**
Test result	:	**Complied**

1. Compliance criteria

The electronic and electrotechnical apparatus shall comply with the basic restriction as specified in Annex III of Council Recommendation 1999/519/EC.

Exposure limit of Power density, S : 10 W/m^2

Reference levels for electric, magnetic and electromagnetic fields (0Hz to 300GHz, unperturbed)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density Seq (W/m^2)
0-1 Hz	-	$3.2 * 10^4$	$4 * 10^4$	-
1-8 Hz	10 000	$3.2 * 10^4/f^2$	$4 * 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0.025-0.8 kHz	250/f	4/f	5/f	-
0.8 kHz –3 kHz	250/f	5	6.25	-
3-150 kHz	87	5	6.25	-
0.15 –1 MHz	87	0.73/f	0.92/f	-
1-10 MHz	$87/f^{1/2}$	0.73/f	0.92/f	-
10-400 MHz	28	0.073	0.092	2
400-2000MHz	$1.375\ f^{1/2}$	$0.0037\ f^{1/2}$	$0.0046\ f^{1/2}$	f/200
2-300 GHz	61	0.16	0.20	10

For frequencies between 100 kHz and 10 GHz, Seq, E^2, H^2, and B^2 are to be averaged over any six-minute period.

2. Assessment methods

The test was performed by the field calculation according to the EN 62311 Annex A.
The field calculation does not take into account the antenna size, which is assumed to be a point source. An ideal isotropic antenna is used as a reference to compare the performance of practical antennas: *P* watts is radiated, from a point, uniformly over the surface of sphere of radius *r*.

$$S = E \times H = \frac{E^2}{\eta} = \frac{P}{4\pi r^2}$$

P Maximum Effective radiated power (Average output power [dBm]+ Antenna gain [dBi])
r Distance from observation point to the antenna;

P / Maximum output power : 11.54 dBm (Refer to EIRP* test result of EN 300 328 Report: 13273483S-B.)
r / Distance : 20.0 cm
*As for EIRP Power, antenna gain of EUT is included.

RF Exposure Calculations:

Where

P = 14.26 mW = 0.01426 W
r = 20.0 cm = 0.2 m

S = 0.02836 W/m^2

Exposure limit of Power density, S : 10 W/m^2

Even taking into account the tolerance, this device can be satisfied with the limits.

*1) Model: AT2002 includes the following models:
CR-ET3BX0AJ (Tested model), CR-ET3BX1AJ, CR-ET3BX0BJ, CR-ET3BX1BJ
Difference of these models: Vehicle type, Destination

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