



TESTING CERT: 2518.01

**FCC ID: LO6-DVRS700  
DECLARATION OF COMPLIANCE MPE ASSESSMENT**

**Networks & Enterprise**  
**EME Test Laboratory**  
 8000 West Sunrise Blvd  
 Fort Lauderdale, FL. 33322

**Date of Report:** March 01, 2007  
**Report Revision:** Rev. 0  
**Report ID:** FCC MPE rpt\_DVR 700 XTL  
 UHF R1 Rev O\_070301\_SR2966

**Responsible Engineer:** Stephen Whalen (EME Principle Staff Eng.)  
**Date/s Tested:** 10/18/05, 11/2/05, 4/19/2006 & 6/3/2006 – 6/4/2006  
**Manufacturer/Location:** Futurecom Systems Group Inc., Concord, Ontario, Canada  
**Date submitted for test:** 10/5/05 (DVR)  
**DUT Description:** 700MHz DVRS  
**Test TX mode(s):** CW  
**Max. Power output:** 5W (conducted into antenna), 100% Duty Cycle  
**TX Frequency Bands:** 764 -776MHz and 794-806MHz  
**Signaling type:** FM; APCO 25  
**Model(s) Tested:** DQPM DVR7000P  
**Model(s) Certified:** DQPM DVR7000P  
**Serial Number(s):** 05060955  
**Classification:** Occupational Controlled (Operator); General Population/Uncontrolled (Passengers/Bystanders)  
**Rule Part(s):** 2.1091 (d)



**Approved Accessories:**  
**Antenna(s):**  
 HAF4016A (764-870MHz ¼ wave trunk mount antenna; 0dBd gain)

**Companion Mobiles and Antennas:**

| FCC ID      | Mobile Description  | Antenna(s)   |
|-------------|---|--|
| AZ492FT4870 | Motorola XTL5000 Model M20QTS9PW1AN, 380-470MHz Mobile, Transmit conducted power up to 100W, 50% transmit duty cycle. | HAE6012A (380-433MHz; ¼ wave Roof mount; 0dBd gain)<br>HAE6013A (380-470MHz; ½ wave Roof mount; 2dBd gain)<br>HAE4003A (450-470MHz; ¼ wave Roof mount; 0dBd gain)<br>HAE4011A (445-470MHz; ½ wave Roof mount; 3.5dBd gain) |
| AZ492FT4862 | Motorola XTL5000 Model M20QSS9PW1AN, 380-470MHz Mobile, Transmit conducted power up to 40W, 50% transmit duty cycle.  | HAE6012A (380-433MHz; ¼ wave Roof mount; 0dBd gain)<br>HAE6013A (380-470MHz; ½ wave Roof mount; 2dBd gain)<br>HAE4003A (450-470MHz; ¼ wave Roof mount; 0dBd gain)<br>HAE4011A (445-470MHz; ½ wave Roof mount; 3.5dBd gain) |

**Final RF Exposure Results:**  
**Combined 700MHz DVR and UHF Mobile max calculated power density % of limit = 72.0%**

Based on the information and the testing results provided herein, the undersigned certifies that when used as stated in the operating instructions supplied, said product complies with the national and international reference standards and guidelines listed in section 3.0 of this report. This report shall not be reproduced without written approval from an officially designated representative of the Motorola EME Laboratory.

**Signature on file**  
 Deanna Zakharia NE EME Lab Senior Resource Manager,  
 Laboratory Director,

**Approval Date:** 3/2/07

**Certification Date:**

**Certification No.:**

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**REVISION HISTORY**

| Date     | Revision | Comments         |
|----------|----------|------------------|
| 03/01/07 | O        | Original release |

## 1.0 Product and System Description

FCC ID: LO6-DVRS700 is a MOBEXCOM Digital Vehicular Repeater (DVR) manufactured by FUTURECOM Systems Group. The DVR, in addition to standalone operation, is capable of interfacing to a companion mobile radio using serial data protocol for audio and control. The full duplex DVR provides local area coverage for portable to portable communication in the 700MHz band while the companion mobile radio provides wide-area coverage extension.

The system can operate in the following modes: Mobile mode - where the vehicular repeat function is off but receives emergency and mode change commands from portable devices; Local mode - with portable to portable repeat and network monitoring capabilities; and System mode - with portable to portable repeat functions with full network interconnect. Furthermore, the DVRS offers a busy lockout feature where a simulcast prevention algorithm is used for seamless multi-vehicle operation on the same channel. Moreover, the system supports emergency calls in the MDC1200 signaling format. Other system features include field programmability, seamless interface to a mobile radio through the control head bus, controllability via a mobile radio control head, as well as remotely by a dispatcher or portable user. The DVR supports up to 64 channels and 255 talk groups, MDC1200, DTMF, EIA, CCIR signaling as well as PL and DPL. The DVR supports programmability of leading and/or trailing tones, and audio and TX priorities per mode as well as talk group steering.

This test report covers the RF Exposure performance of the 700MHz 5 watts DVR interfaced with, and transmitting simultaneously with, either companion UHF(380-470MHz) mobile radios with maximum transmit powers up to 48 watts (M20QSS9PW1AN) and 120 watts (M20QTS9PW1AN) and with both units, installed in a typical vehicle.

The DVR transmit frequency range are 764-776MHz (talk around) and 794-806MHz (repeater) at transmit duty cycle up to 100%. The UHF mobile transmit frequency range is 380-470MHz at transmit duty cycle up to 50%. The DVR antenna is limited to  $\frac{1}{4}\lambda$  (0dBd gain) mounted at the center of the trunk, and the UHF mobile antennas are limited to  $\frac{1}{4}\lambda$  and  $\frac{1}{2}\lambda$  (0dBd, 2dBd and 3.5dBd gain) mounted at the center of the roof. The maximum conducted power delivered to the DVR antenna is 5 watts.

This device will be marketed to and used by employees solely for work-related operations, such as public safety agencies, e.g. police, fire and emergency medical. User training is the responsibility of these agencies which can be expected to employ the usage instructions, safety information and operational cautions set forth in the user's manual, instructional sessions or other means.

Accordingly this product is classified as Occupational/Controlled Exposure. However, In accordance with FCC requirements, the passengers inside the vehicle and the bystanders external to the vehicle are evaluated to the General Population/Uncontrolled Exposure Limits.

(Note that "By-standers" as used herein mean people other than operator)

**2.0 Additional Options and Accessories:**

NA

**3.0 Measurement and Limit Standards**

Measurements were performed according to the recommended guidelines in IEEE/ANSI C95.3-2002 and compared to FCC Limits Per 47 CFR 2.1091 (d) for General Population/Uncontrolled RF Exposure.

For test frequencies ranging from 764-806MHz and 380-470MHz the MPE (Maximum Permissible Exposure) limit to electromagnetic energy in equivalent plane wave free-space power density is 0.51-0.54mW/cm<sup>2</sup> and 0.25-0.31mW/cm<sup>2</sup> respectively and calculated using the formula  $f/1500$ .

**4.0 Data Collection Consideration**

Power density testing was performed with DUT installed in a 1991 Ford Taurus (4-door). Measurement data was taken with the vehicles' electrical system powered by an equivalent source equal to the car running at idle and the vehicle battery measuring 13.8-14.0 volts.

**5.0 Measurement System Uncertainty Levels**

The information below presents an estimate of the possible errors that are associated with the measurement system.

Uncertainty Budget for Near Field Probe Measurements

|                                      | Tol.<br>(± %) | Prob.<br>Dist. | Divisor | $u_i$<br>(±%) |
|--------------------------------------|---------------|----------------|---------|---------------|
| <b>Measurement System</b>            |               |                |         |               |
| Survey Meter Calibration             | 3.0           | N              | 1.00    | 3.0           |
| Repeatability Accuracy               | 7.0           | N              | 1.00    | 7.0           |
| <b>Combined Standard Uncertainty</b> |               | RSS            |         | 7.6           |
| <b>Expanded Uncertainty</b>          |               | $k=2$          |         | 15            |

**6.0 Method of Measurement**

MPE measurements were conducted for each transmitter individually per the procedures described in the following sections. Percent of Limit was calculated for each transmitter individually for each position. Final results representing the maximum combined exposure of DVR and mobile radio were obtained by summing the highest percent of limit results from each transmitter.

**6.1 DVR 700MHz EME measurements made with trunk mounted antenna(s)**  
(For reference, see Illustration of antenna location and test distances in APPENDIX A)

**6.1.1 External vehicle EME measurement**  
(Antenna mounted at trunk center)

MPE measurements for by-stander conditions are determined by taking the average of (10) measurements in a 2m vertical line for each of the (5) test locations indicated in APPENDIX A with 20cm increments at the test distance of 90cm from the test vehicle's body, as stated in the user manual. The measurement probe sensor is rotated 180° at each of the ten incremental measurements to ensure the highest result is captured. These measurements are representative of persons other than the operator standing next to the vehicle.

The DVR antenna mounted at the center of the trunk was assessed across the TX band for the (5) by-stander conditions presented in APPENDIX A.

**6.1.2 Internal vehicle EME measurement**  
(Antenna mounted at trunk center)

While rotating survey meter probe through 180 degrees to ensure that the highest level is found, scans were performed inside of the vehicle, at both front and back seating areas, across the TX band to ascertain the highest level at the head. After the highest level is found, scans were performed vertically making two (2) additional measurements within an area approximately 40cm wide (representing the width of a person) so as to have a total of three (3) measured points, indicated below, that are averaged.

- a) Head area
- b) Chest area
- c) Lower Trunk area

**6.2 Mobile UHF EME measurements made with roof mounted antenna(s)**  
(For reference, see Illustration of antenna location and test distances in APPENDIX A).

**6.2.1 External vehicle EME measurement**  
(Antenna mounted at roof center)

MPE measurements for by-stander conditions are determined by taking the average of (10) measurements in a 2m vertical line for each of the (5) test locations indicated in APPENDIX A with 20cm increments at the test distance of 90cm from the test vehicle's body, as stated in the user manual. The measurement probe sensor is rotated 180° at each of the ten incremental measurements to ensure the highest result is captured. These measurements are representative of persons other than the operator standing next to the vehicle.

The mobile antennas mounted at the center of the roof were assessed across the TX band for the (5) by-stander conditions presented in APPENDIX A.

**6.2.2 Internal vehicle EME measurement**  
 (Antenna mounted at roof center)

While rotating survey meter probe through 180 degrees to ensure that the highest level is found, scans were performed inside of the vehicle, both at the front and back seating areas, across the TX band to ascertain the highest level in each location. After the highest level is found, two (2) additional measurements were performed vertically within an area approximately 40cm wide (representing the width of a person) so as to have a total of three (3) measured points as indicated below that are averaged.

- a) Head area
- b) Chest area
- c) Lower Trunk area

**7.0 Test Site**

The test site is the Motorola open area test site located at 8000 W. Sunrise Blvd., Plantation, FL. 33322.

**8.0 Measurement System/Equipment**

| Equipment Type                      | Model #                  | SN    | Calibration Due Date |
|-------------------------------------|--------------------------|-------|----------------------|
| Automobile                          | 1991 Ford Taurus, 4-Door |       |                      |
| *Survey Meter                       | NARDA Model 8718         | 01108 | 5/17/06              |
| *Probe - E-Field (Electric Field)   | NARDA Model 8722B        | 13001 | 7/21/06              |
| **Survey Meter                      | NARDA Model 8718         | 01108 | 5/17/06              |
| **Probe - E-Field (Electric Field)  | NARDA Model 8722B        | 13001 | 2/28/07              |
| ***Survey Meter                     | NARDA Model 8718         | 01122 | 4/20/07              |
| ***Probe - E-Field (Electric Field) | NARDA Model 8722B        | 13001 | 2/28/07              |

\* Equipment used during DVR 700MHz (test dates 10/18/2005, 11/2/2005)  
 \*\* Equipment used during UHF mobile M20QSS9PW1AN (test date 4/19/2006)  
 \*\*\* Equipment used during UHF mobile M20QTS9PW1AN (test dates 6/3/2006 – 6/4/2006)

**9.0 Test Unit Description**

Power density measurements were performed on a representative sample of the DVR 700MHz 5 watt radio with serial number 05060955.

Power density measurements were performed on the following representative sample of the Motorola XTL5000 UHF M20QSS9PW1AN 48watt radio with serial number X17890085 and XTL5000 UHF M20QTS9PW1AN 120 watt with radio serial number U2A024.

Presented below is a summary of the tested frequencies and associated power outputs for each DUT.

| DVR             |        |
|-----------------|--------|
| DQPM DVR7000P   |        |
| Frequency (MHz) | Po (W) |
| 764             | 4.99   |
| 770             | 5.02   |
| 776             | 4.97   |
| 794             | 4.98   |
| 800             | 5.00   |
| 806             | 4.98   |

| Mobile UHF Radios |        |                 |        |
|-------------------|--------|-----------------|--------|
| M20QSS9PW1AN      |        | M20QTS9PW1AN    |        |
| Frequency (MHz)   | Po (W) | Frequency (MHz) | Po (W) |
| 380.012           | 47.3   | 380.012         | 117.0  |
| 425.0125          | 47.1   | 425.0125        | 119.0  |
| 460.0125          | 47.2   | 460.0125        | 119.0  |
| 469.9875          | 47.5   | 469.9875        | 120.0  |

**10.0 Test Set-Up Description**

The following are the mobile antenna test configurations used for this product. (for reference, see Illustration of antenna location and test distances in the APPENDIX A)

Mobile - The ¼ and ½ wave antennas (HAE6012A 0dBd, HAE6013A 2dBd, HAE4003A 0dBd, HAE4011A 3.5dBd) were assessed while mounted at the center of the roof of the test vehicle.

DVR - The ¼ wave antenna (HAF4016A 0dBd) was assessed while mounted at the trunk.

Assessments were made internal and external to the test vehicle at the specified distances and test locations indicated in sections 6.0, 11.0, and the APPENDIX A.

**11.0 Test Results Summary**

APPENDIX E presents detailed MPE measurement information for each test configuration; person external or internal to the vehicle, TX frequency, antenna (location, model and gain), distance from antenna to probe sensor, E field measurements, calibration factor, MPE average over body, initial power, power density calc, power density max calc, IEEE/FCC controlled and uncontrolled limits, and maximum output power.

The Average over Body test methodology is consistent with IEEE/ANSI C95.3-2002 guidelines

MPE results are based on a DVR 100% duty cycle and Mobile 50% duty cycle which is in accordance with the User Manual instructions.

Below is an explanation of how the MPE results are calculated.

External to vehicle - 10 measurements are averaged over the body (*Body\_Avg*).

Internal to vehicle - 3 measurements are averaged over the body (*Body\_Avg*).

Narda Survey Meter measures in percent of the controlled limit. Therefore the averages over the body used in the calculations below reflect percentages.

Therefore;

$$Average\_over\_Body = Body\_Avg * Controlled\_Limit$$

$$Pwr\_Density\_Calc = Average\_over\_Body * Duty\_Cycle$$

$$Pwr\_Density\_Max\_Calc = Pwr\_Density\_Calc * \frac{Max\_Output\_Power}{Initial\_Output\_Power}$$

Note; For Initial Output Power > Max\_Output\_Power, Max\_Output\_Power / Initial Output Power = 1

The tables below summarize the highest MPE results of the E field test configurations for the UHF mobiles, DVR 700MHz, and combined assessments. See APPENDICES A and E respectively for the indicated test locations and detailed MPE measurement data.

**Table 1 – UHF mobile M20QTS9PW1AN Assessments – Highest MPE result per test position**

| Tables   | Antenna Model | Antenna Location | Test Frequency (MHz) | E/H Field | Passenger/ By-Stander Pos. | Max Calc Pwr Density (mW/cm <sup>2</sup> ) | % of Uncontrolled limit |
|----------|---------------|------------------|----------------------|-----------|----------------------------|--|-------------------------|
| Table 10 | HAE6013A      | Roof             | 425.0125             | E         | Passenger                  | 0.17                                       | 60.7%                   |
| Table 7  | HAE6013A      | Roof             | 380.0125             | E         | By-Stander Pos. #1         | 0.10                                       | 40.0%                   |
| Table 18 | HAE6013A      | Roof             | 380.0125             | E         | By-Stander Pos. #2         | 0.09                                       | 36.0%                   |
| Table 26 | HAE6013A      | Roof             | 425.0125             | E         | By-Stander Pos. #3         | 0.11                                       | 39.3%                   |
| Table 33 | HAE6013A      | Roof             | 425.0125             | E         | By-Stander Pos. #4         | 0.09                                       | 32.1%                   |
| Table 36 | HAE6012A      | Roof             | 380.0125             | E         | By-Stander Pos. #5         | 0.07                                       | 25.9%                   |

**Table 2 – UHF mobile M20QSS9PW1AN Assessments – Highest MPE result per test position**

| Tables   | Antenna Model | Antenna Location | Test Frequency (MHz) | E/H Field | Passenger/ By-Stander Pos. | Max Calc Pwr Density (mW/cm <sup>2</sup> ) | % of Uncontrolled limit |
|----------|---------------|------------------|----------------------|-----------|----------------------------|--|-------------------------|
| Table 10 | HAE6013A      | Roof             | 425.0125             | E         | Passenger                  | 0.07                                       | 25.0%                   |
| Table 9  | HAE6013A      | Roof             | 425.0125             | E         | By-Stander Pos. #1         | 0.06                                       | 21.4%                   |
| Table 18 | HAE6013A      | Roof             | 380.0125             | E         | By-Stander Pos. #2         | 0.04                                       | 16.0%                   |
| Table 25 | HAE6013A      | Roof             | 380.0125             | E         | By-Stander Pos. #3         | 0.04                                       | 16.0%                   |
| Table 32 | HAE6013A      | Roof             | 380.0125             | E         | By-Stander Pos. #4         | 0.02                                       | 8.0%                    |
| Table 39 | HAE6013A      | Roof             | 380.0125             | E         | By-Stander Pos. #5         | 0.02                                       | 8.0%                    |



**Table 3 – DVR 700MHz DQPM DVR7000P Assessments - Highest MPE result per test position**

| Tables   | Antenna Model | Antenna Location | Test Frequency (MHz) | E/H Field | Passenger/By-Stander Pos. | Max Calc Pwr Density (mW/cm <sup>2</sup> ) | % of Uncontrolled limit |
|----------|---------------|------------------|----------------------|-----------|---------------------------|--|-------------------------|
| Table 10 | HAF4016A      | Trunk            | 800                  | E         | Passenger                 | 0.06                                       | 11.3%                   |
| Table 11 | HAF4016A      | Trunk            | 806                  | E         | By-Stander Pos. #1        | 0.07                                       | 13.0%                   |
| Table 15 | HAF4016A      | Trunk            | 776                  | E         | By-Stander Pos. #2        | 0.07                                       | 13.5%                   |
| Table 19 | HAF4016A      | Trunk            | 764                  | E         | By-Stander Pos. #3        | 0.06                                       | 11.8%                   |
| Table 27 | HAF4016A      | Trunk            | 776                  | E         | By-Stander Pos. #4        | 0.10                                       | 19.2%                   |
| Table 31 | HAF4016A      | Trunk            | 764                  | E         | By-Stander Pos. #5        | 0.09                                       | 17.6%                   |

**Table 4 - Combined UHF Mobile M20QTS9PW1AN and DVR 700MHz DQPM DVR7000P (Calculated % of limit performance)**

| Test Position | Percentage of Limit     |                         |                      |
|---------------|-------------------------|-------------------------|----------------------|
|               | UHF Mobile (380-470MHz) | DVR 700MHz (764-806MHz) | Combined Percentages |
| Passenger     | 60.7%                   | 11.3%                   | 72.0%                |
| By-Stander #1 | 40.0%                   | 13.0%                   | 53.0%                |
| By-Stander #2 | 36.0%                   | 13.5%                   | 49.5%                |
| By-Stander #3 | 39.3%                   | 11.8%                   | 51.1%                |
| By-Stander #4 | 32.1%                   | 19.2%                   | 51.3%                |
| By-Stander #5 | 25.9%                   | 17.6%                   | 43.5%                |

**Table 5 - Combined UHF Mobile M20QSS9PW1AN and DVR 700MHz DQPM DVR7000P (Calculated % of limit performance)**

| Test Position | Percentage of Limit     |                         |                      |
|---------------|-------------------------|-------------------------|----------------------|
|               | UHF Mobile (380-470MHz) | DVR 700MHz (764-806MHz) | Combined Percentages |
| Passenger     | 25.0%                   | 11.3%                   | 36.3%                |
| By-Stander #1 | 21.4%                   | 13.0%                   | 34.4%                |
| By-Stander #2 | 16.0%                   | 13.5%                   | 29.5%                |
| By-Stander #3 | 16.0%                   | 11.8%                   | 27.8%                |
| By-Stander #4 | 8.0%                    | 19.2%                   | 27.2%                |
| By-Stander #5 | 8.0%                    | 17.6%                   | 25.6%                |

**12.0 Conclusion**

Because the signals emitted by each individual transmitter are statistically uncorrelated, the collective compliance of the transmitters is determined by summing the individual ratios between actual (S) and maximum allowed MPE exposure. Compliance is achieved if the total exposure level (T) is less than one:

Formula:

$$T = \frac{S_1}{MPE_1} + \frac{S_2}{MPE_2} + \dots < 1$$

Depending on the test frequency, the mobile assessments were performed with an output power range of 47.1W – 47.5W (M20QSS9PW1AN) and 117.0W – 120.0W (M20QTS9PW1AN). The DVR output power range across the TX band is 4.97 – 5.02W. The highest power density results for the XTL5000 UHF mobile device scaled to the maximum allowable power output is 0.17mW/cm<sup>2</sup> internal to the vehicle and 0.10mW/cm<sup>2</sup> external to the vehicle. The highest power density results for the DVR 700MHz device scaled to the maximum allowable power output is 0.06mW/cm<sup>2</sup> internal to the vehicle and 0.10mW/cm<sup>2</sup> external to the vehicle. The highest combined passenger power density performance is 72.0% and highest combined by-stander power density performance is 53.0% (refer to table 4 test position 1) of the FCC/IEEE MPE limits using the methodology and formula below.

Therefore:

|            |  |             |
|------------|--|-------------|
| Passenger  | $T = \frac{0.17}{0.28} + \frac{0.06}{0.53} = 0.72 < 1$ | (compliant) |
| By-stander | $T = \frac{0.10}{0.25} + \frac{0.07}{0.54} = 0.53 < 1$ | (compliant) |

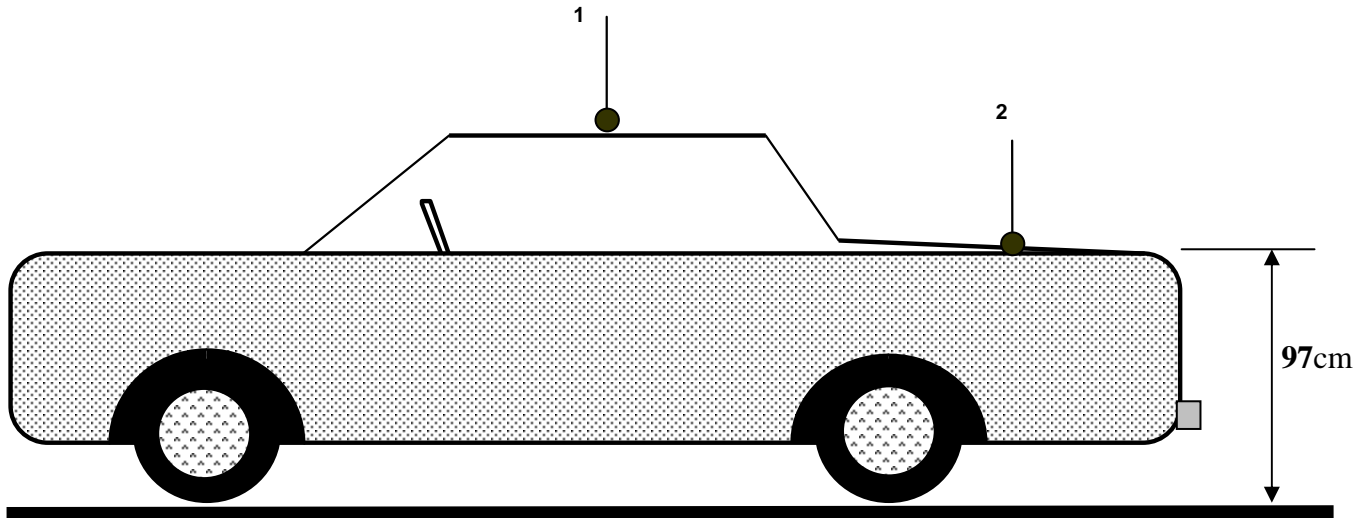
The MPE results presented herein demonstrate compliance to the applicable FCC/IEEE Occupational/Controlled exposure limit of 2.55-2.69mW/cm<sup>2</sup> for the 764-806MHz frequency range and 1.27-1.57mW/cm<sup>2</sup> for the 380-470MHz frequency range. FCC/IEEE Occupational/Controlled exposure limits are calculated by f/300 for the frequency range of 300-1500MHz.

Compliance to the FCC/IEEE General population/Uncontrolled exposure limits of 0.51-0.54mW/cm<sup>2</sup> for the frequency range of 764-806MHz and 0.25–0.31mW/cm<sup>2</sup> for frequency range of 380-470MHz, using formula f/1500, is demonstrated herein for both passengers and by-standers.

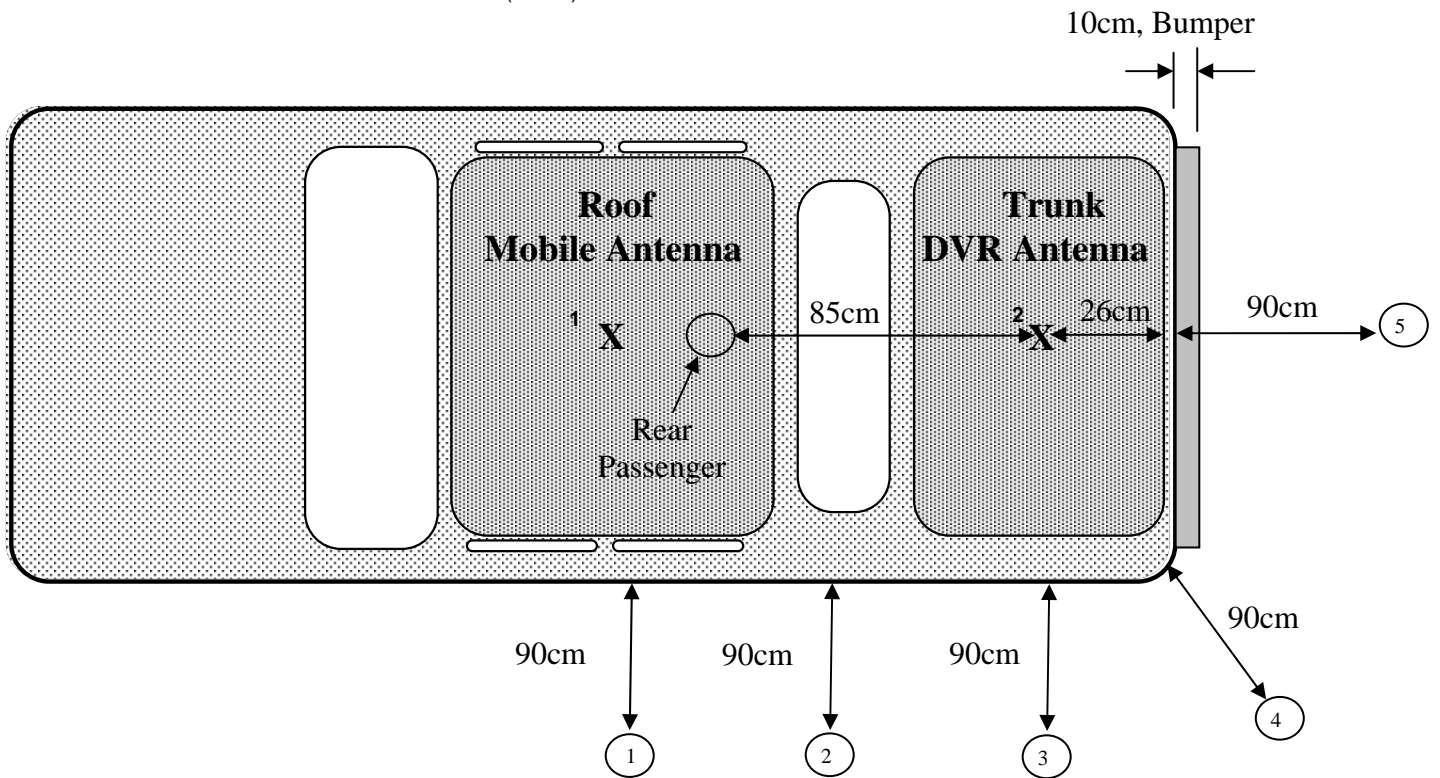
**APPENDIX A**

**Illustration of Antenna Locations and Test Distances**

### Illustration of Antenna Locations and Test Distances



1 - Roof (center)  
2 - Trunk (center)



**Notes**

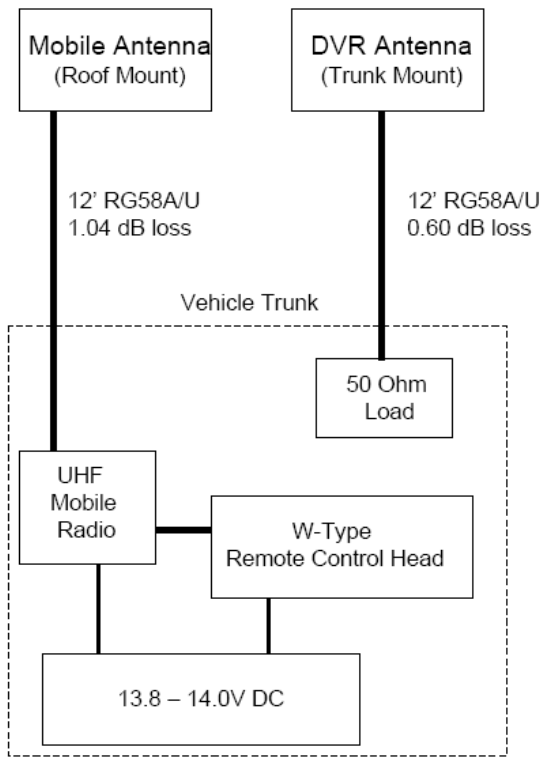
- 1) Assessments were performed at each test position for each offered antenna
- 2) By-stander positions (1-5) are 90cm from the vehicle body
- 3) By-stander position 2 is located at the mid point between the two antennas
- 4) Total distance between by-stander position 1 and roof mount antenna is 180cm
- 5) Total distance between by-stander position 5 and trunk mount antenna is 119.5cm
- 6) Total distance between trunk mount antenna and rear passenger is 85cm

**APPENDIX B**

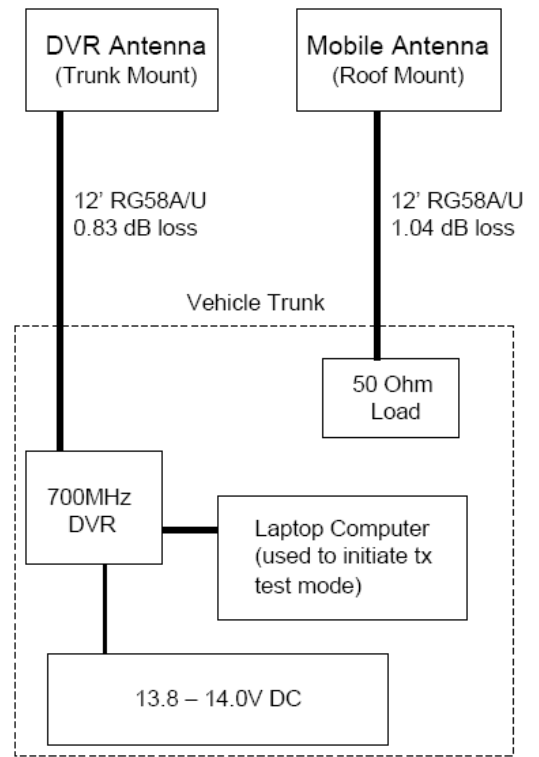
**Block Diagram of MPE Test Configuration**

MPE Test Configuration

Mobile Test Configuration



DVR Test Configuration



**APPENDIX C**

**Meter/Probe Calibration Certificates**



NARDA MICROWAVE-EAST  
 CALIBRATED IN ACCORDANCE  
 WITH ANSI Z540  
 CAL DATE 5-17-06 BY [Signature]  
 CAL DUE 5-17-06  
 MOD. 8718-10 SN. 01108

# Certificate of Calibration

L-3 Communications, Narda Microwave-East, hereby certifies that the referenced RF Radiation Hazard monitoring equipment has been calibrated in accordance with MIL-STD-45662A, ANSI Z540, ISO 10012 and ISO 9001: 2000.

The measured values were determined by comparison with our standards, which are traceable to the National Institute of Standards and Technology to the extent allowed by NIST's calibration facilities.

Customer: MOTOROLA Certificate #: 56219 1  
 SCHAUMBURG, IL 60168-0429  
 Model #: 8718-10 Serial #: 01108  
 Description: METER W/CABLE PO #: NP1819669  
 Date Calibrated: 05/17/2005 R.O. #: 56219

*Vince Donovan*  
 Vince Donovan  
 Manager of Instruments Assembly and Test

*John C. Stine*  
 John C. Stine  
 Director of Quality Assurance

This certificate shall not be reproduced, except in full, without written approval from L-3 Communications, Narda Microwave-East





# Certificate of Calibration

L-3 Communications, Narda Microwave-East, hereby certifies that the referenced RF Radiation Hazard monitoring equipment has been calibrated in accordance with MIL-STD-45662A, ANSI Z540, ISO 10012 and ISO 9001: 2000.

The measured values were determined by comparison with our standards, which are traceable to the National Institute of Standards and Technology to the extent allowed by NIST's calibration facilities.

Customer: MOTOROLA  
SCHAUMBURG, IL 60168-0429

Certificate #: 57518 1

Model #: 8722B  
Description: PROBE  
Date Calibrated: 07/21/2005

Serial #: 13001  
PO #: NP1900854  
R.O. #: 57518

  
Vince Donovan  
Manager of Instruments Assembly and Test

  
John C. Stine  
Director of Quality Assurance

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DATE 21-Jul-2005  
REL HUMIDITY 40%

RELEASE # R57518  
TEMP 21 DEG. C

NARDA MICROWAVE - EAST

MODEL # 8722B  
SERIAL # 13001

Recal Probe - Date of Previous Probe Data = 06/10/2004

| FREQ<br>MHZ | PRE-CAL<br>DATA | FINAL CAL<br>DATA | ELLIPSE<br>RATIO, dB | FINAL CORR.<br>FACTOR | DEVIATION<br>DELTA DB | PREVIOUS<br>FINAL COF |
|-------------|-----------------|-------------------|----------------------|-----------------------|-----------------------|-----------------------|
| .30         | 0.78            | 0.74              | +/- 0.71             | 1.34                  | -0.29                 | 1.21                  |
| 3.00        | 1.36            | 1.30              | +/- 0.47             | 0.77                  | -0.12                 | 0.72                  |
| 10.00       | 1.01            | 0.97              | +/- 0.48             | 1.03                  | +0.43                 | 1.09                  |
| 30.00       | 0.80            | 0.77              | +/- 0.44             | 1.30                  | +0.47                 | 1.39                  |
| 100.00      | 1.30            | 1.24              | +/- 0.32             | 0.80                  | +0.18                 | 0.81                  |
| 300.00      | 0.93            | 0.89              | +/- 0.16             | 1.13                  | +0.25                 | 1.14                  |
| 750.00      | 1.15            | 1.10              | +/- 0.13             | 0.91                  | +0.95                 | 1.09                  |
| 1000.00     | 1.30            | 1.25              | +/- 0.30             | 0.80                  | +1.09                 | 0.99                  |
| 1700.00     | 0.91            | 0.87              | +/- 0.38             | 1.14                  | +1.03                 | 1.39                  |
| 2450.00     | 1.23            | 1.24              | +/- 0.34             | 0.81                  | +1.07                 | 1.04                  |
| 4000.00     | 0.87            | 0.88              | +/- 0.35             | 1.13                  | 0.00                  | 1.15                  |
| 8200.00     | 1.06            | 1.07              | +/- 0.45             | 0.93                  | 0.00                  | 0.94                  |
| 10000.00    | 1.02            | 1.03              | +/- 0.54             | 0.97                  | +0.05                 | 1.00                  |
| 18000.00    | 1.19            | 1.20              | +/- 0.76             | 0.83                  | -0.22                 | 0.80                  |
| 26500.00    | 1.04            | 1.05              | +/- 0.87             | 0.95                  | -0.17                 | 0.93                  |
| 40000.00    | 0.80            | 0.81              | +/- 0.75             | 1.24                  | -0.04                 | 1.25                  |

LOW FREQUENCY MULTIPLIER = 0.96      HIGH FREQUENCY MULTIPLIER = 1.013

FREQ. DEV. (3-40000 MHZ) = 2.288 DB

FREQ. DEV. (0.3-40000 MHZ) = 2.43 DB

MAX. ELLIPSE RATIO (0.3-40000 MHZ) = +/- 0.87 DB

PRE-CAL DATA REFLECTS THE MEAN ELLIPSE RATIO OF PROBE AS RECEIVED BY NARDA CALIBRATION DEPARTMENT, OR IS THE INITIAL, UN-ADJUSTED RATIO.

(PRE-CAL x OLD CORR. FACTOR) - 1 = DEVIATION FROM PREVIOUS (OLD)

CALIBRATION DATA. NOTE: NOT APPLICABLE FOR NEW PROBES.

FINAL CAL DATA IS THE RATIO OF THE DISPLAYED TO THE APPLIED FIELD STRENGTH.

FINAL CORR. FACTOR IS THE RECIPROCAL OF FINAL CAL DATA.

FINAL CORR. FACTOR MULTIPLIED BY THE DISPLAYED FIELD STRENGTH READING

GIVES THE ACTUAL ("CORRECTED") FIELD STRENGTH.

ELLIPSE RATIO IS EXPRESSED IN dB DEVIATION FROM THE MEAN DATA

RMS Uncertainty = +/- 0.5db. ATP # = 502120 REV 3

TESTER V. M.

Q.A. APPROVAL [Signature]







# Certificate of Calibration

L-3 Communications, Narda Microwave-East, hereby certifies that the referenced RF Radiation Hazard monitoring equipment has been calibrated in accordance with MIL-STD-45662A, ANSI Z540, ISO 10012 and ISO 9001: 2000.

The measured values were determined by comparison with our standards, which are traceable to the National Institute of Standards and Technology to the extent allowed by NIST's calibration facilities.

Customer: MOTOROLA  
SCHAUMBURG, IL 60168-0429

Certificate #: 64777 1

Model #: 8718-10

Serial #: 01122

Description: METER W/CABLE

PO #: NP2398645

Date Calibrated: 04/20/2006

R.O. #: 64777

  
Vince Donovan  
Manufacturing

  
Ken Peck  
Quality Assurance

This certificate shall not be reproduced, except in full, without written approval from L-3 Communications, Narda Microwave-East



# Certificate of Calibration

L-3 Communications, Narda Microwave-East, hereby certifies that the referenced RF Radiation Hazard monitoring equipment has been calibrated in accordance with MIL-STD-45662A, ANSI Z540, ISO 10012 and ISO 9001: 2000.

The measured values were determined by comparison with our standards, which are traceable to the National Institute of Standards and Technology to the extent allowed by NIST's calibration facilities.

Customer: MOTOROLA  
 PLANTATION, FL 33322

Model #: 8722B  
 Description: PROBE  
 Date Calibrated: 02-28-06

Certificate #: 63648 1

Serial #: 13001  
 PO #: NP2316554  
 R.O. #: 63648

  
 Vince Donovan  
 Manufacturing

  
 Ken Peck  
 Quality Assurance

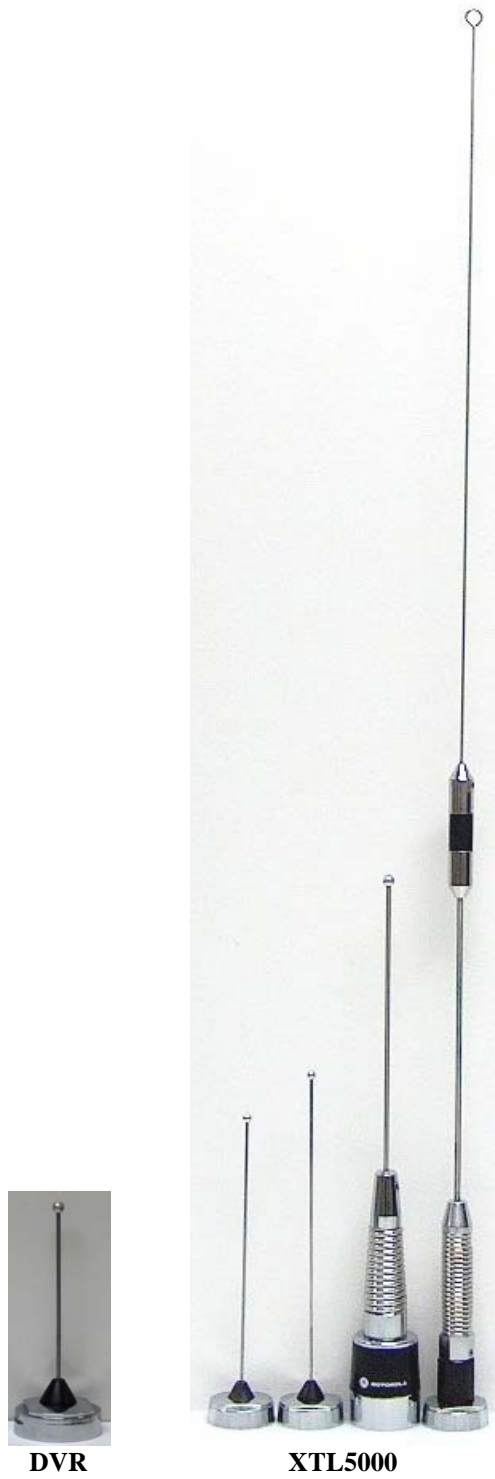
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**APPENDIX D**

**Photos of Assessed Antennas**



**DVR**

**XTL5000**

**Antenna kit numbers, from left to right;  
DVR HAF4016A, XTL5000 HAE4003A, HAE6012A, HAE6013A, HAE4011A**

**APPENDIX E**  
**Detailed MPE Measurement Data**



700MHZ DVR DQPM DVR7000P

BS-Position 1

Table 1

| External Vehicle MPE Assessment @ 764 MHz |               |                    |                     |           |                    |   |                    |  |  |                       |                         |
|---|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-----------------------|-------------------------|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                       |                         |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E         | 0.9                | 0.032                                   | 4.99               | 0.032                                    | 0.03   |                       |                         |
| Measurement Grid                          |               |                    |                     |           |                    |   |                    |  |  |                       |                         |
| Test Position                             | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  | IEEE Controlled Limit | IEEE Uncontrolled Limit |
| 1   | 20            | 0.9%               |                     |           | 6                  | 120                                     | 1.0%               |  |  | 2.55                  | 0.51                    |
| 2   | 40            | 1.2%               |                     |           | 7                  | 140                                     | 1.1%               |  |  |                       | RF Po (*Max)            |
| 3   | 60            | 1.4%               |                     |           | 8                  | 160                                     | 1.3%               |  |  |                       |                         |
| 4   | 80            | 1.6%               |                     |           | 9                  | 180                                     | 1.6%               |  |  |                       |                         |
| 5   | 100           | 1.3%               |                     |           | 10                 | 200                                     | 1.2%               |  |  |                       |                         |
|   |               |                    |                     |           |                    |   |                    |  |  |                       |                         |

P-Position 1

Table 2

| Internal Vehicle MPE Assessment @ 764 MHz |          |                         |                     |                          |                    |  |       |                          |  |  |
|---|----------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                          | Antenna  | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|   |          |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Trunk (cnt)                               | HAF4016A | 2.15                    | Highest Reading     | E                        | 0.9                | 0.042  | 0.025 | 4.99                     | 0.042                                    | 0.04   |
| Measurement Grid                          |          |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                             |          | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 2.55   |
| Back Seat                                 |          | 1.6%                    |                     | 1.7%                     |                    | 1.6%   |       | IEEE Uncontrolled Limit: |  | 0.51   |
| Front Seat                                |          | 1.0%                    |                     | 1.0%                     |                    | 1.0%   |       | RF Po (*Max):            |  | 5.00   |

BS-Position 1

Table 3

| External Vehicle MPE Assessment @ 770 MHz |               |                    |                     |           |                    |   |                    |  |  |                       |                         |
|---|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-----------------------|-------------------------|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                       |                         |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E         | 0.9                | 0.043                                   | 5.02               | 0.043                                    | 0.04   |                       |                         |
| Measurement Grid                          |               |                    |                     |           |                    |   |                    |  |  |                       |                         |
| Test Position                             | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  | IEEE Controlled Limit | IEEE Uncontrolled Limit |
| 1   | 20            | 1.6%               |                     |           | 6                  | 120                                     | 1.6%               |  |  | 2.57                  | 0.51                    |
| 2   | 40            | 1.4%               |                     |           | 7                  | 140                                     | 2.1%               |  |  |                       | RF Po (*Max)            |
| 3   | 60            | 1.7%               |                     |           | 8                  | 160                                     | 1.6%               |  |  |                       |                         |
| 4   | 80            | 2.2%               |                     |           | 9                  | 180                                     | 1.7%               |  |  |                       |                         |
| 5   | 100           | 1.5%               |                     |           | 10                 | 200                                     | 1.5%               |  |  |                       |                         |
|   |               |                    |                     |           |                    |   |                    |  |  |                       |                         |

700MHZ DVR DQPM DVR7000P

P-Position 1

Table 4

| Internal Vehicle MPE Assessment @ 770 MHz |                         |            |                          |           |                                |  |                          |                   |  |  |
|---|-------------------------|------------|--------------------------|-----------|--------------------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                          | Antenna                 | Gain (dBi) | Meas. Distance (cm)      | E/H Field | Calibration Factor             | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|   |                         |            |                          |           |                                | Back   | Front                    |                   |  |  |
| Trunk (cnt)                               | HAF4016A                | 2.15       | Highest Reading          | E         | 0.9                            | 0.040  | 0.022                    | 5.02              | 0.040                                    | 0.04   |
| Measurement Grid                          |                         |            |                          |           |                                |  |                          |                   |  |  |
| Test Position                             | % of Control Limit Head |            | % of Control Limit Chest |           | % of Control Limit Lower Trunk |  | IEEE Controlled Limit:   |                   | 2.57                                     |  |
| Back Seat                                 | 1.9%                    |            | 1.8%                     |           | 1.0%                           |  | IEEE Uncontrolled Limit: |                   | 0.51                                     |  |
| Front Seat                                | 1.1%                    |            | 0.7%                     |           | 0.8%                           |  | RF Po (*Max):            |                   | 5.00                                     |  |

BS-Position 1

Table 5

| External Vehicle MPE Assessment @ 776 MHz |               |                    |                     |               |                    |   |                   |  |  |      |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|------|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |      |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.051                                   | 4.97              | 0.051                                    | 0.05   |      |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |      |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |      |
| 1   | 20            | 1.5%               |                     | 6             | 120                | 2.4%                                    |                   | 2.59                                     | 0.52   |      |
| 2   | 40            | 2.0%               |                     | 7             | 140                | 2.3%                                    |                   |  |  |      |
| 3   | 60            | 2.1%               |                     | 8             | 160                | 1.8%                                    |                   |  |  |      |
| 4   | 80            | 2.5%               |                     | 9             | 180                | 1.5%                                    |                   |  |  |      |
| 5   | 100           | 2.1%               |                     | 10            | 200                | 1.7%                                    |                   |  |  |      |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max):                            |  | 5.00 |

P-Position 1

Table 6

| Internal Vehicle MPE Assessment @ 776 MHz |                         |            |                          |           |                                |  |                          |                   |  |  |
|---|-------------------------|------------|--------------------------|-----------|--------------------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                          | Antenna                 | Gain (dBi) | Meas. Distance (cm)      | E/H Field | Calibration Factor             | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|   |                         |            |                          |           |                                | Back   | Front                    |                   |  |  |
| Trunk (cnt)                               | HAF4016A                | 2.15       | Highest Reading          | E         | 0.9                            | 0.049  | 0.025                    | 4.97              | 0.049                                    | 0.05   |
| Measurement Grid                          |                         |            |                          |           |                                |  |                          |                   |  |  |
| Test Position                             | % of Control Limit Head |            | % of Control Limit Chest |           | % of Control Limit Lower Trunk |  | IEEE Controlled Limit:   |                   | 2.59                                     |  |
| Back Seat                                 | 2.5%                    |            | 2.3%                     |           | 0.9%                           |  | IEEE Uncontrolled Limit: |                   | 0.52                                     |  |
| Front Seat                                | 1.1%                    |            | 0.9%                     |           | 0.9%                           |  | RF Po (*Max):            |                   | 5.00                                     |  |

700MHZ DVR DQPM DVR7000P

BS-Position 1

Table 7

| External Vehicle MPE Assessment @ 794 MHz |               |                    |                     |           |                    |   |                    |  |  |                       |                         |
|---|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-----------------------|-------------------------|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                       |                         |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E         | 0.89               | 0.058                                   | 4.98               | 0.058                                    | 0.06   |                       |                         |
| Measurement Grid                          |               |                    |                     |           |                    |   |                    |  |  |                       |                         |
| Test Position                             | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  | IEEE Controlled Limit | IEEE Uncontrolled Limit |
| 1   | 20            | 1.6%               |                     |           | 6                  | 120                                     | 2.3%               |  |  | 2.65                  | 0.53                    |
| 2   | 40            | 2.3%               |                     |           | 7                  | 140                                     | 3.4%               |  |  |                       |                         |
| 3   | 60            | 2.1%               |                     |           | 8                  | 160                                     | 2.4%               |  |  |                       |                         |
| 4   | 80            | 2.4%               |                     |           | 9                  | 180                                     | 1.8%               |  |  |                       |                         |
| 5   | 100           | 2.1%               |                     |           | 10                 | 200                                     | 1.7%               |  |  |                       |                         |
|   |               |                    |                     |           |                    |   |                    |  |  | <b>RF Po (*Max)</b>   | 5.00                    |

P-Position 1

Table 8

| Internal Vehicle MPE Assessment @ 794 MHz |          |                         |                     |                          |                    |  |       |                          |  |  |
|---|----------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                          | Antenna  | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|   |          |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Trunk (cnt)                               | HAF4016A | 2.15                    | Highest Reading     | E                        | 0.89               | 0.051  | 0.021 | 4.98                     | 0.051                                    | 0.05   |
| Measurement Grid                          |          |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                             |          | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 2.65   |
| Back Seat                                 |          | 2.6%                    |                     | 1.8%                     |                    | 1.4%   |       | IEEE Uncontrolled Limit: |  | 0.53   |
| Front Seat                                |          | 0.9%                    |                     | 0.9%                     |                    | 0.6%   |       | <b>RF Po (*Max):</b>     |  | 5.00   |

BS-Position 1

Table 9

| External Vehicle MPE Assessment @ 800 MHz |               |                    |                     |           |                    |   |                    |  |  |                       |                         |
|---|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-----------------------|-------------------------|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                       |                         |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E         | 0.89               | 0.062                                   | 5.00               | 0.062                                    | 0.06   |                       |                         |
| Measurement Grid                          |               |                    |                     |           |                    |   |                    |  |  |                       |                         |
| Test Position                             | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  | IEEE Controlled Limit | IEEE Uncontrolled Limit |
| 1   | 20            | 1.7%               |                     |           | 6                  | 120                                     | 2.8%               |  |  | 2.67                  | 0.53                    |
| 2   | 40            | 1.7%               |                     |           | 7                  | 140                                     | 3.0%               |  |  |                       |                         |
| 3   | 60            | 2.5%               |                     |           | 8                  | 160                                     | 2.2%               |  |  |                       |                         |
| 4   | 80            | 2.7%               |                     |           | 9                  | 180                                     | 2.0%               |  |  |                       |                         |
| 5   | 100           | 2.7%               |                     |           | 10                 | 200                                     | 1.8%               |  |  |                       |                         |
|   |               |                    |                     |           |                    |   |                    |  |  | <b>RF Po (*Max)</b>   | 5.00                    |

700MHZ DVR DQPM DVR7000P

P-Position 1

Table 10

| Internal Vehicle MPE Assessment @ 800 MHz |                         |            |                          |           |                                |  |                          |                   |  |  |
|---|-------------------------|------------|--------------------------|-----------|--------------------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                          | Antenna                 | Gain (dBi) | Meas. Distance (cm)      | E/H Field | Calibration Factor             | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|   |                         |            |                          |           |                                | Back   | Front                    |                   |  |  |
| Trunk (cnt)                               | HAF4016A                | 2.15       | Highest Reading          | E         | 0.89                           | 0.060  | 0.024                    | 5.00              | 0.060                                    | 0.06   |
| Measurement Grid                          |                         |            |                          |           |                                |  |                          |                   |  |  |
| Test Position                             | % of Control Limit Head |            | % of Control Limit Chest |           | % of Control Limit Lower Trunk |  | IEEE Controlled Limit:   |                   | 2.67                                     |  |
| Back Seat                                 | 3.2%                    |            | 1.9%                     |           | 1.6%                           |  | IEEE Uncontrolled Limit: |                   | 0.53                                     |  |
| Front Seat                                | 0.9%                    |            | 1.1%                     |           | 0.7%                           |  | RF Po (*Max):            |                   | 5.00                                     |  |

BS-Position 1

Table 11

| External Vehicle MPE Assessment @ 806 MHz |               |                    |                     |               |                    |   |                   |  |  |      |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|------|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |      |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.069                                   | 4.98              | 0.069                                    | 0.07   |      |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |      |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |      |
| 1   | 20            | 1.7%               |                     | 6             | 120                | 3.0%                                    |                   | 2.69                                     | 0.54   |      |
| 2   | 40            | 2.6%               |                     | 7             | 140                | 3.8%                                    |                   |  |  |      |
| 3   | 60            | 2.1%               |                     | 8             | 160                | 3.1%                                    |                   |  |  |      |
| 4   | 80            | 2.7%               |                     | 9             | 180                | 2.0%                                    |                   |  |  |      |
| 5   | 100           | 2.9%               |                     | 10            | 200                | 1.9%                                    |                   |  |  |      |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max):                            |  | 5.00 |

P-Position 1

Table 12

| Internal Vehicle MPE Assessment @ 806 MHz |                         |            |                          |           |                                |  |                          |                   |  |  |
|---|-------------------------|------------|--------------------------|-----------|--------------------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                          | Antenna                 | Gain (dBi) | Meas. Distance (cm)      | E/H Field | Calibration Factor             | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|   |                         |            |                          |           |                                | Back   | Front                    |                   |  |  |
| Trunk (cnt)                               | HAF4016A                | 2.15       | Highest Reading          | E         | 0.89                           | 0.061  | 0.025                    | 4.98              | 0.061                                    | 0.06   |
| Measurement Grid                          |                         |            |                          |           |                                |  |                          |                   |  |  |
| Test Position                             | % of Control Limit Head |            | % of Control Limit Chest |           | % of Control Limit Lower Trunk |  | IEEE Controlled Limit:   |                   | 2.69                                     |  |
| Back Seat                                 | 2.9%                    |            | 2.2%                     |           | 1.7%                           |  | IEEE Uncontrolled Limit: |                   | 0.54                                     |  |
| Front Seat                                | 1.0%                    |            | 1.0%                     |           | 0.8%                           |  | RF Po (*Max):            |                   | 5.00                                     |  |

700MHZ DVR DQPM DVR7000P

BS-Position 2

Table 13

| External Vehicle MPE Assessment @ 764 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.059                                   | 4.99              | 0.059                                    | 0.06   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.3%               |                     | 6             | 120                | 2.1%                                    |                   | 2.55                                     | 0.51   |
| 2   | 40            | 2.0%               |                     | 7             | 140                | 2.9%                                    |                   |  |  |
| 3   | 60            | 2.1%               |                     | 8             | 160                | 1.9%                                    |                   |  |  |
| 4   | 80            | 3.5%               |                     | 9             | 180                | 1.7%                                    |                   |  |  |
| 5   | 100           | 2.6%               |                     | 10            | 200                | 2.1%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 5.00   |

BS-Position 2

Table 14

| External Vehicle MPE Assessment @ 770 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.062                                   | 5.02              | 0.062                                    | 0.06   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.1%               |                     | 6             | 120                | 3.2%                                    |                   | 2.57                                     | 0.51   |
| 2   | 40            | 2.2%               |                     | 7             | 140                | 3.0%                                    |                   |  |  |
| 3   | 60            | 2.4%               |                     | 8             | 160                | 2.2%                                    |                   |  |  |
| 4   | 80            | 2.8%               |                     | 9             | 180                | 2.0%                                    |                   |  |  |
| 5   | 100           | 2.4%               |                     | 10            | 200                | 1.8%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 5.00   |

BS-Position 2

Table 15

| External Vehicle MPE Assessment @ 776 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.069                                   | 4.97              | 0.069                                    | 0.07   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.2%               |                     | 6             | 120                | 3.1%                                    |                   | 2.59                                     | 0.52   |
| 2   | 40            | 2.3%               |                     | 7             | 140                | 3.9%                                    |                   |  |  |
| 3   | 60            | 2.6%               |                     | 8             | 160                | 2.4%                                    |                   |  |  |
| 4   | 80            | 3.4%               |                     | 9             | 180                | 1.9%                                    |                   |  |  |
| 5   | 100           | 2.8%               |                     | 10            | 200                | 2.0%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 5.00   |

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BS-Position 2

**Table 16**

| External Vehicle MPE Assessment @ 794 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.066                                   | 4.98              | 0.066                                    | 0.07   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.2%               |                     | 6             | 120                | 2.7%                                    |                   | 2.65                                     | 0.53   |
| 2   | 40            | 2.1%               |                     | 7             | 140                | 3.5%                                    |                   |  |  |
| 3   | 60            | 2.9%               |                     | 8             | 160                | 2.5%                                    |                   |  |  |
| 4   | 80            | 3.3%               |                     | 9             | 180                | 1.7%                                    |                   |  |  |
| 5   | 100           | 2.6%               |                     | 10            | 200                | 1.5%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  |
|   |               |                    |                     |               |                    |   |                   | 5.00                                     |  |

BS-Position 2

**Table 17**

| External Vehicle MPE Assessment @ 800 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.074                                   | 5.00              | 0.074                                    | 0.07   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.3%               |                     | 6             | 120                | 3.3%                                    |                   | 2.67                                     | 0.53   |
| 2   | 40            | 2.3%               |                     | 7             | 140                | 3.1%                                    |                   |  |  |
| 3   | 60            | 2.7%               |                     | 8             | 160                | 2.8%                                    |                   |  |  |
| 4   | 80            | 3.0%               |                     | 9             | 180                | 2.6%                                    |                   |  |  |
| 5   | 100           | 3.2%               |                     | 10            | 200                | 2.3%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  |
|   |               |                    |                     |               |                    |   |                   | 5.00                                     |  |

BS-Position 2

**Table 18**

| External Vehicle MPE Assessment @ 806 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.075                                   | 4.98              | 0.075                                    | 0.07   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 1.9%               |                     | 6             | 120                | 3.1%                                    |                   | 2.69                                     | 0.54   |
| 2   | 40            | 2.5%               |                     | 7             | 140                | 3.3%                                    |                   |  |  |
| 3   | 60            | 2.9%               |                     | 8             | 160                | 2.9%                                    |                   |  |  |
| 4   | 80            | 3.1%               |                     | 9             | 180                | 2.0%                                    |                   |  |  |
| 5   | 100           | 3.5%               |                     | 10            | 200                | 2.6%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  |
|   |               |                    |                     |               |                    |   |                   | 5.00                                     |  |

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BS-Position 3

**Table 19**

| External Vehicle MPE Assessment @ 764 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.063                                   | 4.99              | 0.063                                    | 0.06   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.0%               |                     | 6             | 120                | 3.1%                                    |                   | 2.55                                     | 0.51   |
| 2   | 40            | 2.3%               |                     | 7             | 140                | 2.8%                                    |                   |  |  |
| 3   | 60            | 2.3%               |                     | 8             | 160                | 2.7%                                    |                   |  |  |
| 4   | 80            | 2.9%               |                     | 9             | 180                | 1.8%                                    |                   |  |  |
| 5   | 100           | 2.9%               |                     | 10            | 200                | 2.0%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 5.00   |

BS-Position 3

**Table 20**

| External Vehicle MPE Assessment @ 770 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.061                                   | 5.02              | 0.061                                    | 0.06   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.4%               |                     | 6             | 120                | 3.2%                                    |                   | 2.57                                     | 0.51   |
| 2   | 40            | 2.2%               |                     | 7             | 140                | 3.0%                                    |                   |  |  |
| 3   | 60            | 2.2%               |                     | 8             | 160                | 2.5%                                    |                   |  |  |
| 4   | 80            | 2.1%               |                     | 9             | 180                | 1.8%                                    |                   |  |  |
| 5   | 100           | 2.8%               |                     | 10            | 200                | 1.7%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 5.00   |

BS-Position 3

**Table 21**

| External Vehicle MPE Assessment @ 776 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.063                                   | 4.97              | 0.063                                    | 0.06   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.3%               |                     | 6             | 120                | 3.0%                                    |                   | 2.59                                     | 0.52   |
| 2   | 40            | 2.0%               |                     | 7             | 140                | 3.2%                                    |                   |  |  |
| 3   | 60            | 2.1%               |                     | 8             | 160                | 2.3%                                    |                   |  |  |
| 4   | 80            | 3.0%               |                     | 9             | 180                | 1.9%                                    |                   |  |  |
| 5   | 100           | 2.8%               |                     | 10            | 200                | 1.8%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 5.00   |

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BS-Position 3

**Table 22**

| External Vehicle MPE Assessment @ 794 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.061                                   | 4.98              | 0.061                                    | 0.06   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 1.9%               |                     | 6             | 120                | 2.9%                                    |                   | 2.65                                     | 0.53   |
| 2   | 40            | 2.1%               |                     | 7             | 140                | 2.7%                                    |                   |  |  |
| 3   | 60            | 2.4%               |                     | 8             | 160                | 2.0%                                    |                   |  |  |
| 4   | 80            | 3.0%               |                     | 9             | 180                | 1.7%                                    |                   |  |  |
| 5   | 100           | 2.3%               |                     | 10            | 200                | 1.9%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 5.00   |

BS-Position 3

**Table 23**

| External Vehicle MPE Assessment @ 800 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.061                                   | 5.00              | 0.061                                    | 0.06   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.0%               |                     | 6             | 120                | 2.5%                                    |                   | 2.67                                     | 0.53   |
| 2   | 40            | 2.2%               |                     | 7             | 140                | 3.2%                                    |                   |  |  |
| 3   | 60            | 2.0%               |                     | 8             | 160                | 2.4%                                    |                   |  |  |
| 4   | 80            | 2.5%               |                     | 9             | 180                | 1.8%                                    |                   |  |  |
| 5   | 100           | 2.4%               |                     | 10            | 200                | 1.8%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 5.00   |

BS-Position 3

**Table 24**

| External Vehicle MPE Assessment @ 806 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.057                                   | 4.98              | 0.057                                    | 0.06   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.0%               |                     | 6             | 120                | 2.0%                                    |                   | 2.69                                     | 0.54   |
| 2   | 40            | 1.9%               |                     | 7             | 140                | 2.5%                                    |                   |  |  |
| 3   | 60            | 2.0%               |                     | 8             | 160                | 1.9%                                    |                   |  |  |
| 4   | 80            | 2.5%               |                     | 9             | 180                | 1.8%                                    |                   |  |  |
| 5   | 100           | 2.6%               |                     | 10            | 200                | 2.1%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 5.00   |



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Table 25

| External Vehicle MPE Assessment @ 764 MHz |               |                    |                     |               |                    |   |                   |  |  |      |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|------|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |      |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.074                                   | 4.99              | 0.074                                    | 0.07   |      |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |      |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |      |
| 1   | 20            | 2.1%               |                     | 6             | 120                | 4.7%                                    |                   | 2.55                                     | 0.51   |      |
| 2   | 40            | 3.2%               |                     | 7             | 140                | 3.2%                                    |                   |  |  |      |
| 3   | 60            | 2.5%               |                     | 8             | 160                | 2.2%                                    |                   |  |  |      |
| 4   | 80            | 3.5%               |                     | 9             | 180                | 2.5%                                    |                   |  |  |      |
| 5   | 100           | 3.3%               |                     | 10            | 200                | 2.0%                                    |                   |  |  |      |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             |  | 5.00 |

BS-Position 4

Table 26

| External Vehicle MPE Assessment @ 770 MHz |               |                    |                     |               |                    |   |                   |  |  |      |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|------|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |      |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.090                                   | 5.02              | 0.090                                    | 0.09   |      |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |      |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |      |
| 1   | 20            | 2.5%               |                     | 6             | 120                | 4.4%                                    |                   | 2.57                                     | 0.51   |      |
| 2   | 40            | 2.9%               |                     | 7             | 140                | 5.7%                                    |                   |  |  |      |
| 3   | 60            | 3.0%               |                     | 8             | 160                | 3.6%                                    |                   |  |  |      |
| 4   | 80            | 4.4%               |                     | 9             | 180                | 2.2%                                    |                   |  |  |      |
| 5   | 100           | 4.3%               |                     | 10            | 200                | 2.1%                                    |                   |  |  |      |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             |  | 5.00 |

BS-Position 4

Table 27

| External Vehicle MPE Assessment @ 776 MHz |               |                    |                     |               |                    |   |                   |  |  |      |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|------|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |      |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.095                                   | 4.97              | 0.095                                    | 0.10   |      |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |      |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |      |
| 1   | 20            | 2.6%               |                     | 6             | 120                | 4.8%                                    |                   | 2.59                                     | 0.52   |      |
| 2   | 40            | 3.2%               |                     | 7             | 140                | 5.6%                                    |                   |  |  |      |
| 3   | 60            | 3.8%               |                     | 8             | 160                | 3.3%                                    |                   |  |  |      |
| 4   | 80            | 4.8%               |                     | 9             | 180                | 2.5%                                    |                   |  |  |      |
| 5   | 100           | 4.2%               |                     | 10            | 200                | 2.0%                                    |                   |  |  |      |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             |  | 5.00 |

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Table 28

| External Vehicle MPE Assessment @ 794 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.086                                   | 4.98              | 0.086                                    | 0.09   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.7%               |                     | 6             | 120                | 4.1%                                    |                   | 2.65                                     | 0.53   |
| 2   | 40            | 2.9%               |                     | 7             | 140                | 4.2%                                    |                   |  |  |
| 3   | 60            | 2.6%               |                     | 8             | 160                | 3.0%                                    |                   |  |  |
| 4   | 80            | 4.1%               |                     | 9             | 180                | 2.3%                                    |                   |  |  |
| 5   | 100           | 4.3%               |                     | 10            | 200                | 2.2%                                    |                   |  |  |

BS-Position 4

Table 29

| External Vehicle MPE Assessment @ 800 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.086                                   | 5.00              | 0.086                                    | 0.09   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.7%               |                     | 6             | 120                | 3.7%                                    |                   | 2.67                                     | 0.53   |
| 2   | 40            | 3.5%               |                     | 7             | 140                | 4.0%                                    |                   |  |  |
| 3   | 60            | 3.3%               |                     | 8             | 160                | 3.1%                                    |                   |  |  |
| 4   | 80            | 3.9%               |                     | 9             | 180                | 2.3%                                    |                   |  |  |
| 5   | 100           | 3.8%               |                     | 10            | 200                | 2.1%                                    |                   |  |  |

BS-Position 4

Table 30

| External Vehicle MPE Assessment @ 806 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.092                                   | 4.98              | 0.092                                    | 0.09   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.6%               |                     | 6             | 120                | 3.8%                                    |                   | 2.69                                     | 0.54   |
| 2   | 40            | 2.9%               |                     | 7             | 140                | 5.3%                                    |                   |  |  |
| 3   | 60            | 3.5%               |                     | 8             | 160                | 3.7%                                    |                   |  |  |
| 4   | 80            | 4.2%               |                     | 9             | 180                | 2.5%                                    |                   |  |  |
| 5   | 100           | 3.8%               |                     | 10            | 200                | 2.1%                                    |                   |  |  |

700MHZ DVR DQPM DVR7000P

BS-Position 5

Table 31

| External Vehicle MPE Assessment @ 764 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.095                                   | 4.99              | 0.095                                    | 0.09   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.3%               |                     | 6             | 120                | 4.6%                                    |                   | 2.55                                     | 0.51   |
| 2   | 40            | 3.7%               |                     | 7             | 140                | 4.6%                                    |                   |  |  |
| 3   | 60            | 4.6%               |                     | 8             | 160                | 3.4%                                    |                   |  |  |
| 4   | 80            | 4.3%               |                     | 9             | 180                | 2.6%                                    |                   |  |  |
| 5   | 100           | 5.2%               |                     | 10            | 200                | 1.9%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 5.00   |

BS-Position 5

Table 32

| External Vehicle MPE Assessment @ 770 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.090                                   | 5.02              | 0.090                                    | 0.09   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.1%               |                     | 6             | 120                | 4.1%                                    |                   | 2.57                                     | 0.51   |
| 2   | 40            | 2.9%               |                     | 7             | 140                | 4.4%                                    |                   |  |  |
| 3   | 60            | 3.6%               |                     | 8             | 160                | 3.1%                                    |                   |  |  |
| 4   | 80            | 5.7%               |                     | 9             | 180                | 2.2%                                    |                   |  |  |
| 5   | 100           | 5.1%               |                     | 10            | 200                | 2.0%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 5.00   |

BS-Position 5

Table 33

| External Vehicle MPE Assessment @ 776 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.9                | 0.085                                   | 4.97              | 0.085                                    | 0.09   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 2.1%               |                     | 6             | 120                | 3.7%                                    |                   | 2.59                                     | 0.52   |
| 2   | 40            | 2.9%               |                     | 7             | 140                | 4.5%                                    |                   |  |  |
| 3   | 60            | 2.7%               |                     | 8             | 160                | 3.0%                                    |                   |  |  |
| 4   | 80            | 3.4%               |                     | 9             | 180                | 3.9%                                    |                   |  |  |
| 5   | 100           | 4.4%               |                     | 10            | 200                | 2.2%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 5.00   |

**700MHZ DVR DQPM DVR7000P**

BS-Position 5

**Table 34**

| External Vehicle MPE Assessment @ 794 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.081                                   | 4.98              | 0.081                                    | 0.08   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 1.9%               |                     | 6             | 120                | 4.1%                                    |                   | 2.65                                     | 0.53   |
| 2   | 40            | 2.6%               |                     | 7             | 140                | 4.4%                                    |                   |  |  |
| 3   | 60            | 2.9%               |                     | 8             | 160                | 2.9%                                    |                   |  |  |
| 4   | 80            | 2.7%               |                     | 9             | 180                | 3.0%                                    |                   |  |  |
| 5   | 100           | 4.2%               |                     | 10            | 200                | 2.0%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  |
|   |               |                    |                     |               |                    |   |                   | 5.00                                     |  |

BS-Position 5

**Table 35**

| External Vehicle MPE Assessment @ 800 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.082                                   | 5.00              | 0.082                                    | 0.08   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 1.8%               |                     | 6             | 120                | 3.8%                                    |                   | 2.67                                     | 0.53   |
| 2   | 40            | 3.0%               |                     | 7             | 140                | 4.1%                                    |                   |  |  |
| 3   | 60            | 2.5%               |                     | 8             | 160                | 2.8%                                    |                   |  |  |
| 4   | 80            | 3.8%               |                     | 9             | 180                | 2.5%                                    |                   |  |  |
| 5   | 100           | 4.2%               |                     | 10            | 200                | 2.1%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  |
|   |               |                    |                     |               |                    |   |                   | 5.00                                     |  |

BS-Position 5

**Table 36**

| External Vehicle MPE Assessment @ 806 MHz |               |                    |                     |               |                    |   |                   |  |  |
|---|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                          | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Trunk (cnt)                               | HAF4016A      | 2.15               | 90                  | E             | 0.89               | 0.069                                   | 4.98              | 0.069                                    | 0.07   |
| Measurement Grid                          |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                             | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1   | 20            | 1.9%               |                     | 6             | 120                | 2.9%                                    |                   | 2.69                                     | 0.54   |
| 2   | 40            | 2.5%               |                     | 7             | 140                | 3.3%                                    |                   |  |  |
| 3   | 60            | 2.1%               |                     | 8             | 160                | 2.0%                                    |                   |  |  |
| 4   | 80            | 3.0%               |                     | 9             | 180                | 1.8%                                    |                   |  |  |
| 5   | 100           | 4.0%               |                     | 10            | 200                | 2.0%                                    |                   |  |  |
|   |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  |
|   |               |                    |                     |               |                    |   |                   | 5.00                                     |  |

**UHF Mobile M20QSS9PW1AN**

BS-Position 1

**Table 1**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.40               | 0.083                                   | 47.3              | 0.041                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.7%               |                     | 6             | 120                | 7.5%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 2.2%               |                     | 7             | 140                | 9.4%                                    |                   |  |  |
| 3  | 60            | 2.5%               |                     | 8             | 160                | 9.4%                                    |                   |  |  |
| 4  | 80            | 4.9%               |                     | 9             | 180                | 10.5%                                   |                   |  |  |
| 5  | 100           | 7.1%               |                     | 10            | 200                | 10.1%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

P-Position 1

**Table 2**

| Internal Vehicle MPE Assessment @ 380.0125 MHz |               |                         |                     |                          |                    |  |       |                          |  |  |
|--|---------------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |               |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Roof (cnt)                                     | HAE6012A      | 2.15                    | Highest Reading     | E                        | 1.40               | 0.065  | 0.078 | 47.3                     | 0.039                                    | 0.04   |
| Measurement Grid                               |               |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                                  |               | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 1.27   |
| Back Seat                                      |               | 8.1%                    |                     | 4.0%                     |                    | 3.4%   |       | IEEE Uncontrolled Limit: |  | 0.25   |
| Front Seat                                     |               | 8.3%                    |                     | 5.7%                     |                    | 4.5%   |       | <b>RF Po (*Max):</b>     |  | 48.0   |

BS-Position 1

**Table 3**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.33               | 0.090                                   | 47.1              | 0.045                                    | 0.05   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.9%               |                     | 6             | 120                | 6.5%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 2.0%               |                     | 7             | 140                | 10.4%                                   |                   |  |  |
| 3  | 60            | 2.0%               |                     | 8             | 160                | 11.9%                                   |                   |  |  |
| 4  | 80            | 2.0%               |                     | 9             | 180                | 11.6%                                   |                   |  |  |
| 5  | 100           | 4.0%               |                     | 10            | 200                | 12.5%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

**UHF Mobile M20QSS9PW1AN**

P-Position 1

**Table 4**

| Internal Vehicle MPE Assessment @ 425.0125 MHz |                         |            |                          |           |                                |  |                          |                   |  |  |
|--|-------------------------|------------|--------------------------|-----------|--------------------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                               | Antenna                 | Gain (dBi) | Meas. Distance (cm)      | E/H Field | Calibration Factor             | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |                         |            |                          |           |                                | Back   | Front                    |                   |  |  |
| Roof (cnt)                                     | HAE6012A                | 2.15       | Highest Reading          | E         | 1.33                           | 0.120  | 0.080                    | 47.1              | 0.060                                    | 0.06   |
| Measurement Grid                               |                         |            |                          |           |                                |  |                          |                   |  |  |
| Test Position                                  | % of Control Limit Head |            | % of Control Limit Chest |           | % of Control Limit Lower Trunk |  | IEEE Controlled Limit:   |                   | 1.42                                     |  |
| Back Seat                                      | 13.2%                   |            | 5.5%                     |           | 6.8%                           |  | IEEE Uncontrolled Limit: |                   | 0.28                                     |  |
| Front Seat                                     | 4.2%                    |            | 4.5%                     |           | 8.2%                           |  | RF Po (*Max):            |                   | 48.0                                     |  |

BS-Position 1

**Table 5**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |      |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |      |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E             | 1.26               | 0.100                                   | 47.5              | 0.050                                    | 0.05   |      |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |      |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |      |
| 1  | 20            | 0.9%               |                     | 6             | 120                | 5.1%                                    |                   | 1.57                                     | 0.31   |      |
| 2  | 40            | 1.4%               |                     | 7             | 140                | 8.8%                                    |                   |  |  |      |
| 3  | 60            | 2.3%               |                     | 8             | 160                | 11.1%                                   |                   |  |  |      |
| 4  | 80            | 3.5%               |                     | 9             | 180                | 13.0%                                   |                   |  |  |      |
| 5  | 100           | 5.0%               |                     | 10            | 200                | 12.5%                                   |                   |  |  |      |
|  |               |                    |                     |               |                    |   |                   | RF Po (*Max):                            |  | 48.0 |

P-Position 1

**Table 6**

| Internal Vehicle MPE Assessment @ 469.9875 MHz |                         |            |                          |           |                                |  |                          |                   |  |  |
|--|-------------------------|------------|--------------------------|-----------|--------------------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                               | Antenna                 | Gain (dBi) | Meas. Distance (cm)      | E/H Field | Calibration Factor             | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |                         |            |                          |           |                                | Back   | Front                    |                   |  |  |
| Roof (cnt)                                     | HAE4003A                | 2.15       | Highest Reading          | E         | 1.26                           | 0.083  | 0.074                    | 47.5              | 0.041                                    | 0.04   |
| Measurement Grid                               |                         |            |                          |           |                                |  |                          |                   |  |  |
| Test Position                                  | % of Control Limit Head |            | % of Control Limit Chest |           | % of Control Limit Lower Trunk |  | IEEE Controlled Limit:   |                   | 1.57                                     |  |
| Back Seat                                      | 5.8%                    |            | 5.8%                     |           | 4.2%                           |  | IEEE Uncontrolled Limit: |                   | 0.31                                     |  |
| Front Seat                                     | 3.0%                    |            | 3.1%                     |           | 8.1%                           |  | RF Po (*Max):            |                   | 48.0                                     |  |

**UHF Mobile M20QSS9PW1AN**

BS-Position 1

**Table 7**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.40               | 0.097                                   | 47.3              | 0.048                                    | 0.05   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.1%               |                     | 6             | 120                | 8.1%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 3.3%               |                     | 7             | 140                | 9.9%                                    |                   |  |  |
| 3  | 60            | 4.5%               |                     | 8             | 160                | 10.4%                                   |                   |  |  |
| 4  | 80            | 5.7%               |                     | 9             | 180                | 11.6%                                   |                   |  |  |
| 5  | 100           | 8.1%               |                     | 10            | 200                | 12.8%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

P-Position 1

**Table 8**

| Internal Vehicle MPE Assessment @ 380.0125 MHz |               |                         |                     |                          |                    |  |       |                          |  |  |
|--|---------------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |               |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Roof (cnt)                                     | HAE6013A      | 4.15                    | Highest Reading     | E                        | 1.40               | 0.088  | 0.076 | 47.3                     | 0.044                                    | 0.04   |
| Measurement Grid                               |               |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                                  |               | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 1.27   |
| Back Seat                                      |               | 7.7%                    |                     | 7.9%                     |                    | 5.2%   |       | IEEE Uncontrolled Limit: |  | 0.25   |
| Front Seat                                     |               | 6.7%                    |                     | 5.6%                     |                    | 5.6%   |       | <b>RF Po (*Max):</b>     |  | 48.0   |

BS-Position 1

**Table 9**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.33               | 0.113                                   | 47.1              | 0.057                                    | 0.06   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.6%               |                     | 6             | 120                | 8.0%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 1.7%               |                     | 7             | 140                | 12.1%                                   |                   |  |  |
| 3  | 60            | 2.3%               |                     | 8             | 160                | 13.7%                                   |                   |  |  |
| 4  | 80            | 4.7%               |                     | 9             | 180                | 14.3%                                   |                   |  |  |
| 5  | 100           | 7.3%               |                     | 10            | 200                | 14.2%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

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P-Position 1

**Table 10**

| Internal Vehicle MPE Assessment @ 425.0125 MHz |          |                         |                          |                                |                    |  |                          |                   |  |  |
|--|----------|-------------------------|--------------------------|--------------------------------|--------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                               | Antenna  | Gain (dBi)              | Meas. Distance (cm)      | E/H Field                      | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |          |                         |                          |                                |                    | Back   | Front                    |                   |  |  |
| Roof (cnt)                                     | HAE6013A | 4.15                    | Highest Reading          | E                              | 1.33               | 0.142  | 0.089                    | 47.1              | 0.071                                    | 0.07   |
| Measurement Grid                               |          |                         |                          |                                |                    |  |                          |                   |  |  |
| Test Position                                  |          | % of Control Limit Head | % of Control Limit Chest | % of Control Limit Lower Trunk |                    |  | IEEE Controlled Limit:   |                   | 1.42                                     |  |
| Back Seat                                      |          | 13.3%                   | 6.8%                     | 10.0%                          |                    |  | IEEE Uncontrolled Limit: |                   | 0.28                                     |  |
| Front Seat                                     |          | 6.6%                    | 5.1%                     | 7.2%                           |                    |  | <b>RF Po (*Max):</b>     |                   | 48.0                                     |  |

BS-Position 1

**Table 11**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |      |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |      |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.26               | 0.107                                   | 47.5              | 0.054                                    | 0.05   |      |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |      |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |      |
| 1  | 20            | 1.0%               |                     | 6             | 120                | 6.0%                                    |                   | 1.57                                     | 0.31   |      |
| 2  | 40            | 1.1%               |                     | 7             | 140                | 9.4%                                    |                   |  |  |      |
| 3  | 60            | 2.9%               |                     | 8             | 160                | 11.5%                                   |                   |  |  |      |
| 4  | 80            | 4.6%               |                     | 9             | 180                | 13.0%                                   |                   |  |  |      |
| 5  | 100           | 5.8%               |                     | 10            | 200                | 13.1%                                   |                   |  |  |      |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  | 48.0 |

P-Position 1

**Table 12**

| Internal Vehicle MPE Assessment @ 469.9875 MHz |          |                         |                          |                                |                    |  |                          |                   |  |  |
|--|----------|-------------------------|--------------------------|--------------------------------|--------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                               | Antenna  | Gain (dBi)              | Meas. Distance (cm)      | E/H Field                      | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |          |                         |                          |                                |                    | Back   | Front                    |                   |  |  |
| Roof (cnt)                                     | HAE6013A | 4.15                    | Highest Reading          | E                              | 1.26               | 0.073  | 0.079                    | 47.5              | 0.040                                    | 0.04   |
| Measurement Grid                               |          |                         |                          |                                |                    |  |                          |                   |  |  |
| Test Position                                  |          | % of Control Limit Head | % of Control Limit Chest | % of Control Limit Lower Trunk |                    |  | IEEE Controlled Limit:   |                   | 1.57                                     |  |
| Back Seat                                      |          | 5.6%                    | 5.8%                     | 2.6%                           |                    |  | IEEE Uncontrolled Limit: |                   | 0.31                                     |  |
| Front Seat                                     |          | 2.4%                    | 3.7%                     | 9.1%                           |                    |  | <b>RF Po (*Max):</b>     |                   | 48.0                                     |  |



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BS-Position 1

**Table 13**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E             | 1.28               | 0.092                                   | 47.2              | 0.046                                    | 0.05   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.7%               |                     | 6             | 120                | 4.8%                                    |                   | 1.53                                     | 0.31   |
| 2  | 40            | 0.9%               |                     | 7             | 140                | 8.4%                                    |                   |  |  |
| 3  | 60            | 1.0%               |                     | 8             | 160                | 11.6%                                   |                   |  |  |
| 4  | 80            | 1.9%               |                     | 9             | 180                | 14.2%                                   |                   |  |  |
| 5  | 100           | 3.5%               |                     | 10            | 200                | 13.3%                                   |                   |  |  |

P-Position 1

**Table 14**

| Internal Vehicle MPE Assessment @ 460.0125 MHz |               |                         |                     |                          |                    |  |       |                          |  |  |
|--|---------------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |               |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Roof (cnt)                                     | HAE4011A      | 5.65                    | Highest Reading     | E                        | 1.28               | 0.022  | 0.027 | 47.2                     | 0.014                                    | 0.01   |
| Measurement Grid                               |               |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                                  |               | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 1.53   |
| Back Seat                                      |               | 1.1%                    |                     | 1.4%                     |                    | 1.8%   |       | IEEE Uncontrolled Limit: |  | 0.31   |
| Front Seat                                     |               | 1.1%                    |                     | 1.7%                     |                    | 2.5%   |       | <b>RF Po (*Max):</b>     |  | 48.0   |

BS-Position 2

**Table 15**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.40               | 0.073                                   | 47.3              | 0.036                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.0%               |                     | 6             | 120                | 6.6%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 3.2%               |                     | 7             | 140                | 7.0%                                    |                   |  |  |
| 3  | 60            | 3.4%               |                     | 8             | 160                | 8.0%                                    |                   |  |  |
| 4  | 80            | 5.5%               |                     | 9             | 180                | 8.2%                                    |                   |  |  |
| 5  | 100           | 6.4%               |                     | 10            | 200                | 7.2%                                    |                   |  |  |

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BS-Position 2

**Table 16**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.33               | 0.069                                   | 47.1              | 0.035                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.0%               |                     | 6             | 120                | 5.4%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 2.1%               |                     | 7             | 140                | 6.5%                                    |                   |  |  |
| 3  | 60            | 2.5%               |                     | 8             | 160                | 6.9%                                    |                   |  |  |
| 4  | 80            | 4.0%               |                     | 9             | 180                | 8.2%                                    |                   |  |  |
| 5  | 100           | 5.3%               |                     | 10            | 200                | 6.0%                                    |                   |  |  |

BS-Position 2

**Table 17**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E             | 1.26               | 0.065                                   | 47.5              | 0.033                                    | 0.03   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.0%               |                     | 6             | 120                | 4.6%                                    |                   | 1.57                                     | 0.31   |
| 2  | 40            | 2.3%               |                     | 7             | 140                | 5.3%                                    |                   |  |  |
| 3  | 60            | 2.6%               |                     | 8             | 160                | 5.9%                                    |                   |  |  |
| 4  | 80            | 2.9%               |                     | 9             | 180                | 6.2%                                    |                   |  |  |
| 5  | 100           | 3.0%               |                     | 10            | 200                | 7.0%                                    |                   |  |  |

BS-Position 2

**Table 18**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.40               | 0.078                                   | 47.3              | 0.039                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.2%               |                     | 6             | 120                | 7.1%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 3.4%               |                     | 7             | 140                | 9.2%                                    |                   |  |  |
| 3  | 60            | 3.7%               |                     | 8             | 160                | 8.4%                                    |                   |  |  |
| 4  | 80            | 4.1%               |                     | 9             | 180                | 8.7%                                    |                   |  |  |
| 5  | 100           | 6.8%               |                     | 10            | 200                | 7.7%                                    |                   |  |  |

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**Table 19**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.33               | 0.077                                   | 47.1              | 0.039                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.4%               |                     | 6             | 120                | 6.5%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 3.5%               |                     | 7             | 140                | 7.4%                                    |                   |  |  |
| 3  | 60            | 3.7%               |                     | 8             | 160                | 7.9%                                    |                   |  |  |
| 4  | 80            | 3.8%               |                     | 9             | 180                | 7.8%                                    |                   |  |  |
| 5  | 100           | 4.9%               |                     | 10            | 200                | 6.8%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

BS-Position 2

**Table 20**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.26               | 0.076                                   | 47.5              | 0.038                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.2%               |                     | 6             | 120                | 5.7%                                    |                   | 1.57                                     | 0.31   |
| 2  | 40            | 2.5%               |                     | 7             | 140                | 6.3%                                    |                   |  |  |
| 3  | 60            | 2.7%               |                     | 8             | 160                | 6.6%                                    |                   |  |  |
| 4  | 80            | 3.6%               |                     | 9             | 180                | 7.2%                                    |                   |  |  |
| 5  | 100           | 3.7%               |                     | 10            | 200                | 7.7%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

BS-Position 2

**Table 21**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E             | 1.28               | 0.073                                   | 47.2              | 0.036                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.3%               |                     | 6             | 120                | 3.5%                                    |                   | 1.53                                     | 0.31   |
| 2  | 40            | 1.4%               |                     | 7             | 140                | 6.7%                                    |                   |  |  |
| 3  | 60            | 1.8%               |                     | 8             | 160                | 8.8%                                    |                   |  |  |
| 4  | 80            | 2.5%               |                     | 9             | 180                | 9.5%                                    |                   |  |  |
| 5  | 100           | 2.8%               |                     | 10            | 200                | 9.2%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

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BS-Position 3

**Table 22**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.40               | 0.059                                   | 47.3              | 0.029                                    | 0.03   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.7%               |                     | 6             | 120                | 4.5%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 2.7%               |                     | 7             | 140                | 5.1%                                    |                   |  |  |
| 3  | 60            | 3.2%               |                     | 8             | 160                | 6.6%                                    |                   |  |  |
| 4  | 80            | 3.3%               |                     | 9             | 180                | 6.9%                                    |                   |  |  |
| 5  | 100           | 4.3%               |                     | 10            | 200                | 7.1%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   |  |  |

BS-Position 3

**Table 23**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.33               | 0.067                                   | 47.1              | 0.034                                    | 0.03   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.9%               |                     | 6             | 120                | 6.0%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 2.8%               |                     | 7             | 140                | 6.4%                                    |                   |  |  |
| 3  | 60            | 3.4%               |                     | 8             | 160                | 5.8%                                    |                   |  |  |
| 4  | 80            | 4.8%               |                     | 9             | 180                | 5.8%                                    |                   |  |  |
| 5  | 100           | 5.4%               |                     | 10            | 200                | 5.3%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   |  |  |

BS-Position 3

**Table 24**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E             | 1.26               | 0.072                                   | 47.5              | 0.036                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.2%               |                     | 6             | 120                | 4.6%                                    |                   | 1.57                                     | 0.31   |
| 2  | 40            | 2.4%               |                     | 7             | 140                | 5.3%                                    |                   |  |  |
| 3  | 60            | 3.6%               |                     | 8             | 160                | 6.3%                                    |                   |  |  |
| 4  | 80            | 4.5%               |                     | 9             | 180                | 6.9%                                    |                   |  |  |
| 5  | 100           | 4.5%               |                     | 10            | 200                | 5.9%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   |  |  |

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**Table 25**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.40               | 0.071                                   | 47.3              | 0.035                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.5%               |                     | 6             | 120                | 6.4%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 3.2%               |                     | 7             | 140                | 6.8%                                    |                   |  |  |
| 3  | 60            | 4.1%               |                     | 8             | 160                | 7.1%                                    |                   |  |  |
| 4  | 80            | 4.2%               |                     | 9             | 180                | 8.1%                                    |                   |  |  |
| 5  | 100           | 5.4%               |                     | 10            | 200                | 8.0%                                    |                   |  |  |

BS-Position 3

**Table 26**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.33               | 0.083                                   | 47.1              | 0.041                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 3.0%               |                     | 6             | 120                | 6.4%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 3.0%               |                     | 7             | 140                | 7.1%                                    |                   |  |  |
| 3  | 60            | 4.4%               |                     | 8             | 160                | 7.5%                                    |                   |  |  |
| 4  | 80            | 5.5%               |                     | 9             | 180                | 7.1%                                    |                   |  |  |
| 5  | 100           | 7.7%               |                     | 10            | 200                | 6.8%                                    |                   |  |  |

BS-Position 3

**Table 27**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.26               | 0.060                                   | 47.5              | 0.030                                    | 0.03   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.5%               |                     | 6             | 120                | 3.9%                                    |                   | 1.57                                     | 0.31   |
| 2  | 40            | 2.6%               |                     | 7             | 140                | 4.1%                                    |                   |  |  |
| 3  | 60            | 2.6%               |                     | 8             | 160                | 4.4%                                    |                   |  |  |
| 4  | 80            | 3.8%               |                     | 9             | 180                | 5.4%                                    |                   |  |  |
| 5  | 100           | 4.4%               |                     | 10            | 200                | 5.4%                                    |                   |  |  |

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BS-Position 3

**Table 28**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E             | 1.28               | 0.054                                   | 47.2              | 0.027                                    | 0.03   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.9%               |                     | 6             | 120                | 3.6%                                    |                   | 1.53                                     | 0.31   |
| 2  | 40            | 1.1%               |                     | 7             | 140                | 4.2%                                    |                   |  |  |
| 3  | 60            | 1.4%               |                     | 8             | 160                | 5.7%                                    |                   |  |  |
| 4  | 80            | 2.9%               |                     | 9             | 180                | 6.0%                                    |                   |  |  |
| 5  | 100           | 3.1%               |                     | 10            | 200                | 6.0%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

BS-Position 4

**Table 29**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.40               | 0.033                                   | 47.3              | 0.017                                    | 0.02   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.3%               |                     | 6             | 120                | 3.5%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 1.6%               |                     | 7             | 140                | 3.2%                                    |                   |  |  |
| 3  | 60            | 1.8%               |                     | 8             | 160                | 2.5%                                    |                   |  |  |
| 4  | 80            | 2.6%               |                     | 9             | 180                | 2.7%                                    |                   |  |  |
| 5  | 100           | 4.0%               |                     | 10            | 200                | 3.2%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

BS-Position 4

**Table 30**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.33               | 0.038                                   | 47.1              | 0.019                                    | 0.02   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.8%               |                     | 6             | 120                | 2.8%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 1.7%               |                     | 7             | 140                | 2.6%                                    |                   |  |  |
| 3  | 60            | 2.3%               |                     | 8             | 160                | 3.1%                                    |                   |  |  |
| 4  | 80            | 2.5%               |                     | 9             | 180                | 2.8%                                    |                   |  |  |
| 5  | 100           | 3.5%               |                     | 10            | 200                | 3.9%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

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BS-Position 4

**Table 31**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E             | 1.26               | 0.036                                   | 47.5              | 0.018                                    | 0.02   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.3%               |                     | 6             | 120                | 3.2%                                    |                   | 1.57                                     | 0.31   |
| 2  | 40            | 1.2%               |                     | 7             | 140                | 2.1%                                    |                   |  |  |
| 3  | 60            | 1.6%               |                     | 8             | 160                | 2.4%                                    |                   |  |  |
| 4  | 80            | 2.6%               |                     | 9             | 180                | 2.6%                                    |                   |  |  |
| 5  | 100           | 2.5%               |                     | 10            | 200                | 3.3%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  |
|  |               |                    |                     |               |                    |   |                   | 48.0                                     |  |

BS-Position 4

**Table 32**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.40               | 0.037                                   | 47.3              | 0.018                                    | 0.02   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.3%               |                     | 6             | 120                | 3.5%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 2.1%               |                     | 7             | 140                | 3.4%                                    |                   |  |  |
| 3  | 60            | 2.9%               |                     | 8             | 160                | 3.0%                                    |                   |  |  |
| 4  | 80            | 3.6%               |                     | 9             | 180                | 2.3%                                    |                   |  |  |
| 5  | 100           | 4.2%               |                     | 10            | 200                | 2.7%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  |
|  |               |                    |                     |               |                    |   |                   | 48.0                                     |  |

BS-Position 4

**Table 33**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.33               | 0.048                                   | 47.1              | 0.024                                    | 0.02   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.7%               |                     | 6             | 120                | 3.3%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 2.2%               |                     | 7             | 140                | 3.9%                                    |                   |  |  |
| 3  | 60            | 2.4%               |                     | 8             | 160                | 4.0%                                    |                   |  |  |
| 4  | 80            | 2.8%               |                     | 9             | 180                | 3.8%                                    |                   |  |  |
| 5  | 100           | 4.9%               |                     | 10            | 200                | 4.6%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  |
|  |               |                    |                     |               |                    |   |                   | 48.0                                     |  |

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**Table 34**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |           |                    |   |                    |  |  |                         |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-------------------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                         |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E         | 1.26               | 0.040                                   | 47.5               | 0.020                                    | 0.02   |                         |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |                         |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  | IEEE Controlled Limit                        | IEEE Uncontrolled Limit |
| 1  | 20            | 1.1%               |                     |           | 6                  | 120                                     | 2.7%               |  | 1.57   | 0.31                    |
| 2  | 40            | 1.4%               |                     |           | 7                  | 140                                     | 3.3%               |  |  |                         |
| 3  | 60            | 1.8%               |                     |           | 8                  | 160                                     | 3.1%               |  |  |                         |
| 4  | 80            | 2.4%               |                     |           | 9                  | 180                                     | 3.4%               |  |  |                         |
| 5  | 100           | 2.2%               |                     |           | 10                 | 200                                     | 4.1%               |  |  |                         |
|  |               |                    |                     |           |                    |   |                    |  | <b>RF Po (*Max)</b>                          | 48.0                    |

BS-Position 4

**Table 35**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |                         |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-------------------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                         |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E         | 1.28               | 0.042                                   | 47.2               | 0.021                                    | 0.02   |                         |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |                         |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  | IEEE Controlled Limit                        | IEEE Uncontrolled Limit |
| 1  | 20            | 1.0%               |                     |           | 6                  | 120                                     | 3.2%               |  | 1.53   | 0.31                    |
| 2  | 40            | 1.2%               |                     |           | 7                  | 140                                     | 3.0%               |  |  |                         |
| 3  | 60            | 1.3%               |                     |           | 8                  | 160                                     | 3.4%               |  |  |                         |
| 4  | 80            | 1.9%               |                     |           | 9                  | 180                                     | 4.0%               |  |  |                         |
| 5  | 100           | 3.2%               |                     |           | 10                 | 200                                     | 5.5%               |  |  |                         |
|  |               |                    |                     |           |                    |   |                    |  | <b>RF Po (*Max)</b>                          | 48.0                    |

BS-Position 5

**Table 36**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |                         |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-------------------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                         |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E         | 1.40               | 0.023                                   | 47.3               | 0.011                                    | 0.01   |                         |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |                         |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  | IEEE Controlled Limit                        | IEEE Uncontrolled Limit |
| 1  | 20            | 0.4%               |                     |           | 6                  | 120                                     | 1.3%               |  | 1.27   | 0.25                    |
| 2  | 40            | 0.4%               |                     |           | 7                  | 140                                     | 2.6%               |  |  |                         |
| 3  | 60            | 0.6%               |                     |           | 8                  | 160                                     | 3.3%               |  |  |                         |
| 4  | 80            | 0.8%               |                     |           | 9                  | 180                                     | 4.0%               |  |  |                         |
| 5  | 100           | 1.2%               |                     |           | 10                 | 200                                     | 3.4%               |  |  |                         |
|  |               |                    |                     |           |                    |   |                    |  | <b>RF Po (*Max)</b>                          | 48.0                    |



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BS-Position 5

**Table 37**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.33               | 0.021                                   | 47.1              | 0.011                                    | 0.01   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.0%               |                     | 6             | 120                | 2.0%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 0.6%               |                     | 7             | 140                | 1.4%                                    |                   |  |  |
| 3  | 60            | 0.9%               |                     | 8             | 160                | 1.6%                                    |                   |  |  |
| 4  | 80            | 1.0%               |                     | 9             | 180                | 1.9%                                    |                   |  |  |
| 5  | 100           | 2.1%               |                     | 10            | 200                | 2.5%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

BS-Position 5

**Table 38**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E             | 1.26               | 0.023                                   | 47.5              | 0.012                                    | 0.01   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.9%               |                     | 6             | 120                | 1.5%                                    |                   | 1.57                                     | 0.31   |
| 2  | 40            | 0.6%               |                     | 7             | 140                | 2.0%                                    |                   |  |  |
| 3  | 60            | 0.8%               |                     | 8             | 160                | 2.2%                                    |                   |  |  |
| 4  | 80            | 0.8%               |                     | 9             | 180                | 2.1%                                    |                   |  |  |
| 5  | 100           | 1.3%               |                     | 10            | 200                | 2.8%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

BS-Position 5

**Table 39**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.40               | 0.030                                   | 47.3              | 0.015                                    | 0.02   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.2%               |                     | 6             | 120                | 2.4%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 0.7%               |                     | 7             | 140                | 2.9%                                    |                   |  |  |
| 3  | 60            | 1.3%               |                     | 8             | 160                | 3.7%                                    |                   |  |  |
| 4  | 80            | 1.7%               |                     | 9             | 180                | 3.7%                                    |                   |  |  |
| 5  | 100           | 2.1%               |                     | 10            | 200                | 4.3%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 48.0   |

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BS-Position 5

**Table 40**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.33               | 0.024                                   | 47.1              | 0.012                                    | 0.01   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.8%               |                     | 6             | 120                | 1.9%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 0.8%               |                     | 7             | 140                | 1.9%                                    |                   |  |  |
| 3  | 60            | 1.0%               |                     | 8             | 160                | 2.1%                                    |                   |  |  |
| 4  | 80            | 0.9%               |                     | 9             | 180                | 2.1%                                    |                   |  |  |
| 5  | 100           | 2.1%               |                     | 10            | 200                | 3.2%                                    |                   |  |  |

BS-Position 5

**Table 41**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.26               | 0.027                                   | 47.5              | 0.014                                    | 0.01   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.7%               |                     | 6             | 120                | 1.9%                                    |                   | 1.57                                     | 0.31   |
| 2  | 40            | 0.6%               |                     | 7             | 140                | 2.5%                                    |                   |  |  |
| 3  | 60            | 0.8%               |                     | 8             | 160                | 2.6%                                    |                   |  |  |
| 4  | 80            | 1.3%               |                     | 9             | 180                | 2.2%                                    |                   |  |  |
| 5  | 100           | 1.4%               |                     | 10            | 200                | 3.3%                                    |                   |  |  |

BS-Position 5

**Table 42**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E             | 1.28               | 0.029                                   | 47.2              | 0.015                                    | 0.01   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.7%               |                     | 6             | 120                | 2.4%                                    |                   | 1.53                                     | 0.31   |
| 2  | 40            | 0.6%               |                     | 7             | 140                | 2.8%                                    |                   |  |  |
| 3  | 60            | 0.7%               |                     | 8             | 160                | 2.7%                                    |                   |  |  |
| 4  | 80            | 0.8%               |                     | 9             | 180                | 3.3%                                    |                   |  |  |
| 5  | 100           | 1.2%               |                     | 10            | 200                | 3.9%                                    |                   |  |  |

**UHF Mobile M20QTS9PW1AN**

BS-Position 1

**Table 1**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.40               | 0.198                                   | 117.0             | 0.099                                    | 0.10   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 3.4%               |                     | 6             | 120                | 17.2%                                   |                   | 1.27                                     | 0.25   |
| 2  | 40            | 4.6%               |                     | 7             | 140                | 21.5%                                   |                   |  |  |
| 3  | 60            | 7.8%               |                     | 8             | 160                | 23.5%                                   |                   |  |  |
| 4  | 80            | 11.7%              |                     | 9             | 180                | 25.3%                                   |                   |  |  |
| 5  | 100           | 14.5%              |                     | 10            | 200                | 27.0%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

P-Position 1

**Table 2**

| Internal Vehicle MPE Assessment @ 380.0125 MHz |               |                         |                     |                          |                    |  |       |                          |  |  |
|--|---------------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |               |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Roof (cnt)                                     | HAE6012A      | 2.15                    | Highest Reading     | E                        | 1.40               | 0.201  | 0.175 | 117.0                    | 0.101                                    | 0.10   |
| Measurement Grid                               |               |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                                  |               | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 1.27   |
| Back Seat                                      |               | 19.7%                   |                     | 15.9%                    |                    | 12.1%  |       | IEEE Uncontrolled Limit: |  | 0.25   |
| Front Seat                                     |               | 15.2%                   |                     | 11.4%                    |                    | 14.9%  |       | <b>RF Po (*Max):</b>     |  | 120.0  |

BS-Position 1

**Table 3**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.33               | 0.177                                   | 119.0             | 0.089                                    | 0.09   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.8%               |                     | 6             | 120                | 14.5%                                   |                   | 1.42                                     | 0.28   |
| 2  | 40            | 3.2%               |                     | 7             | 140                | 17.8%                                   |                   |  |  |
| 3  | 60            | 4.3%               |                     | 8             | 160                | 20.3%                                   |                   |  |  |
| 4  | 80            | 5.2%               |                     | 9             | 180                | 24.7%                                   |                   |  |  |
| 5  | 100           | 7.6%               |                     | 10            | 200                | 25.7%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

**UHF Mobile M20QTS9PW1AN**

P-Position 1

**Table 4**

| Internal Vehicle MPE Assessment @ 425.0125 MHz |                         |            |                          |           |                                |  |                          |                   |  |  |
|--|-------------------------|------------|--------------------------|-----------|--------------------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                               | Antenna                 | Gain (dBi) | Meas. Distance (cm)      | E/H Field | Calibration Factor             | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |                         |            |                          |           |                                | Back   | Front                    |                   |  |  |
| Roof (cnt)                                     | HAE6012A                | 2.15       | Highest Reading          | E         | 1.33                           | 0.263  | 0.147                    | 119.0             | 0.132                                    | 0.13   |
| Measurement Grid                               |                         |            |                          |           |                                |  |                          |                   |  |  |
| Test Position                                  | % of Control Limit Head |            | % of Control Limit Chest |           | % of Control Limit Lower Trunk |  | IEEE Controlled Limit:   |                   | 1.42                                     |  |
| Back Seat                                      | 30.1%                   |            | 13.8%                    |           | 11.8%                          |  | IEEE Uncontrolled Limit: |                   | 0.28                                     |  |
| Front Seat                                     | 7.9%                    |            | 8.2%                     |           | 15.0%                          |  | RF Po (*Max):            |                   | 120.0                                    |  |

BS-Position 1

**Table 5**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |       |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|-------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |       |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E             | 1.26               | 0.218                                   | 120.0             | 0.109                                    | 0.11   |       |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |       |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |       |
| 1  | 20            | 2.1%               |                     | 6             | 120                | 13.8%                                   |                   | 1.57                                     | 0.31   |       |
| 2  | 40            | 2.5%               |                     | 7             | 140                | 20.3%                                   |                   |  |  |       |
| 3  | 60            | 3.6%               |                     | 8             | 160                | 23.9%                                   |                   |  |  |       |
| 4  | 80            | 5.9%               |                     | 9             | 180                | 29.3%                                   |                   |  |  |       |
| 5  | 100           | 8.3%               |                     | 10            | 200                | 29.2%                                   |                   |  |  |       |
|  |               |                    |                     |               |                    |   |                   | RF Po (*Max):                            |  | 120.0 |

P-Position 1

**Table 6**

| Internal Vehicle MPE Assessment @ 469.9875 MHz |                         |            |                          |           |                                |  |                          |                   |  |  |
|--|-------------------------|------------|--------------------------|-----------|--------------------------------|--|--------------------------|-------------------|--|--|
| Antenna Location                               | Antenna                 | Gain (dBi) | Meas. Distance (cm)      | E/H Field | Calibration Factor             | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |                          | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |                         |            |                          |           |                                | Back   | Front                    |                   |  |  |
| Roof (cnt)                                     | HAE4003A                | 2.15       | Highest Reading          | E         | 1.26                           | 0.174  | 0.260                    | 120.0             | 0.130                                    | 0.13   |
| Measurement Grid                               |                         |            |                          |           |                                |  |                          |                   |  |  |
| Test Position                                  | % of Control Limit Head |            | % of Control Limit Chest |           | % of Control Limit Lower Trunk |  | IEEE Controlled Limit:   |                   | 1.57                                     |  |
| Back Seat                                      | 8.6%                    |            | 15.7%                    |           | 9.0%                           |  | IEEE Uncontrolled Limit: |                   | 0.31                                     |  |
| Front Seat                                     | 10.6%                   |            | 10.6%                    |           | 28.5%                          |  | RF Po (*Max):            |                   | 120.0                                    |  |

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BS-Position 1

**Table 7**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.40               | 0.191                                   | 117.0             | 0.095                                    | 0.10   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 3.3%               |                     | 6             | 120                | 15.7%                                   |                   | 1.27                                     | 0.25   |
| 2  | 40            | 4.3%               |                     | 7             | 140                | 19.2%                                   |                   |  |  |
| 3  | 60            | 6.5%               |                     | 8             | 160                | 22.4%                                   |                   |  |  |
| 4  | 80            | 10.8%              |                     | 9             | 180                | 26.3%                                   |                   |  |  |
| 5  | 100           | 15.6%              |                     | 10            | 200                | 26.6%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

P-Position 1

**Table 8**

| Internal Vehicle MPE Assessment @ 380.0125 MHz |               |                         |                     |                          |                    |  |       |                          |  |  |
|--|---------------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |               |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Roof (cnt)                                     | HAE6013A      | 4.15                    | Highest Reading     | E                        | 1.40               | 0.176  | 0.149 | 117.0                    | 0.088                                    | 0.09   |
| Measurement Grid                               |               |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                                  |               | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 1.27   |
| Back Seat                                      |               | 16.5%                   |                     | 17.7%                    |                    | 7.4%   |       | IEEE Uncontrolled Limit: |  | 0.25   |
| Front Seat                                     |               | 11.1%                   |                     | 11.4%                    |                    | 12.7%  |       | <b>RF Po (*Max):</b>     |  | 120.0  |

BS-Position 1

**Table 9**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.33               | 0.216                                   | 119.0             | 0.108                                    | 0.11   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.5%               |                     | 6             | 120                | 13.8%                                   |                   | 1.42                                     | 0.28   |
| 2  | 40            | 3.6%               |                     | 7             | 140                | 21.3%                                   |                   |  |  |
| 3  | 60            | 4.4%               |                     | 8             | 160                | 27.8%                                   |                   |  |  |
| 4  | 80            | 6.5%               |                     | 9             | 180                | 31.9%                                   |                   |  |  |
| 5  | 100           | 9.5%               |                     | 10            | 200                | 31.1%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

**UHF Mobile M20QTS9PW1AN**

P-Position 1

**Table 10**

| Internal Vehicle MPE Assessment @ 425.0125 MHz |          |                         |                     |                          |                    |  |       |                          |  |  |
|--|----------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                               | Antenna  | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |          |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Roof (cnt)                                     | HAE6013A | 4.15                    | Highest Reading     | E                        | 1.33               | 0.338  | 0.261 | 119.0                    | 0.169                                    | 0.17   |
| Measurement Grid                               |          |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                                  |          | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 1.42   |
| Back Seat                                      |          | 42.2%                   |                     | 18.4%                    |                    | 11.0%  |       | IEEE Uncontrolled Limit: |  | 0.28   |
| Front Seat                                     |          | 13.0%                   |                     | 15.8%                    |                    | 26.4%  |       | <b>RF Po (*Max):</b>     |  | 120.0  |

BS-Position 1

**Table 11**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |            |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |            |
|  |               |                    |                     |               |                    |   |                   |  |  | Roof (cnt) |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |            |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |            |
| 1  | 20            | 1.9%               |                     | 6             | 120                | 14.1%                                   |                   | 1.57                                     | 0.31   |            |
| 2  | 40            | 2.7%               |                     | 7             | 140                | 19.3%                                   |                   |  |  |            |
| 3  | 60            | 4.0%               |                     | 8             | 160                | 23.5%                                   |                   |  |  |            |
| 4  | 80            | 5.3%               |                     | 9             | 180                | 26.3%                                   |                   |  |  |            |
| 5  | 100           | 8.5%               |                     | 10            | 200                | 25.4%                                   |                   |  |  |            |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      |  | 120.0      |

P-Position 1

**Table 12**

| Internal Vehicle MPE Assessment @ 469.9875 MHz |          |                         |                     |                          |                    |  |       |                          |  |  |
|--|----------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                               | Antenna  | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |          |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Roof (cnt)                                     | HAE6013A | 4.15                    | Highest Reading     | E                        | 1.26               | 0.184  | 0.242 | 120.0                    | 0.121                                    | 0.12   |
| Measurement Grid                               |          |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                                  |          | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 1.57   |
| Back Seat                                      |          | 9.4%                    |                     | 17.4%                    |                    | 8.5%   |       | IEEE Uncontrolled Limit: |  | 0.31   |
| Front Seat                                     |          | 12.4%                   |                     | 10.1%                    |                    | 23.8%  |       | <b>RF Po (*Max):</b>     |  | 120.0  |

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BS-Position 1

**Table 13**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E             | 1.28               | 0.203                                   | 119.0             | 0.102                                    | 0.10   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.0%               |                     | 6             | 120                | 12.1%                                   |                   | 1.53                                     | 0.31   |
| 2  | 40            | 1.5%               |                     | 7             | 140                | 18.6%                                   |                   |  |  |
| 3  | 60            | 1.8%               |                     | 8             | 160                | 28.2%                                   |                   |  |  |
| 4  | 80            | 2.5%               |                     | 9             | 180                | 31.3%                                   |                   |  |  |
| 5  | 100           | 5.4%               |                     | 10            | 200                | 30.3%                                   |                   |  |  |

P-Position 1

**Table 14**

| Internal Vehicle MPE Assessment @ 460.0125 MHz |               |                         |                     |                          |                    |  |       |                          |  |  |
|--|---------------|-------------------------|---------------------|--------------------------|--------------------|--|-------|--------------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)              | Meas. Distance (cm) | E/H Field                | Calibration Factor | Average over Head, Chest, Lower Trunk Back/Front seats (mW/cm <sup>2</sup> ) |       | Initial Power (W)        | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
|  |               |                         |                     |                          |                    | Back   | Front |                          |  |  |
| Roof (cnt)                                     | HAE4011A      | 5.65                    | Highest Reading     | E                        | 1.28               | 0.038  | 0.063 | 119.0                    | 0.031                                    | 0.03   |
| Measurement Grid                               |               |                         |                     |                          |                    |  |       |                          |  |  |
| Test Position                                  |               | % of Control Limit Head |                     | % of Control Limit Chest |                    | % of Control Limit Lower Trunk   |       | IEEE Controlled Limit:   |  | 1.53   |
| Back Seat                                      |               | 2.0%                    |                     | 2.3%                     |                    | 3.2%   |       | IEEE Uncontrolled Limit: |  | 0.31   |
| Front Seat                                     |               | 2.2%                    |                     | 3.2%                     |                    | 6.9%   |       | <b>RF Po (*Max):</b>     |  | 120.0  |

BS-Position 2

**Table 15**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.40               | 0.162                                   | 117.0             | 0.081                                    | 0.08   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 5.6%               |                     | 6             | 120                | 13.3%                                   |                   | 1.27                                     | 0.25   |
| 2  | 40            | 7.1%               |                     | 7             | 140                | 15.0%                                   |                   |  |  |
| 3  | 60            | 7.6%               |                     | 8             | 160                | 18.9%                                   |                   |  |  |
| 4  | 80            | 7.7%               |                     | 9             | 180                | 20.5%                                   |                   |  |  |
| 5  | 100           | 11.7%              |                     | 10            | 200                | 20.6%                                   |                   |  |  |

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BS-Position 2

**Table 16**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.33               | 0.117                                   | 119.0             | 0.059                                    | 0.06   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 3.1%               |                     | 6             | 120                | 7.5%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 3.7%               |                     | 7             | 140                | 13.1%                                   |                   |  |  |
| 3  | 60            | 3.3%               |                     | 8             | 160                | 13.5%                                   |                   |  |  |
| 4  | 80            | 4.6%               |                     | 9             | 180                | 14.7%                                   |                   |  |  |
| 5  | 100           | 7.0%               |                     | 10            | 200                | 12.4%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 120.0  |

BS-Position 2

**Table 17**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E             | 1.26               | 0.159                                   | 120.0             | 0.079                                    | 0.08   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 3.9%               |                     | 6             | 120                | 10.2%                                   |                   | 1.57                                     | 0.31   |
| 2  | 40            | 4.8%               |                     | 7             | 140                | 11.9%                                   |                   |  |  |
| 3  | 60            | 5.4%               |                     | 8             | 160                | 16.4%                                   |                   |  |  |
| 4  | 80            | 5.7%               |                     | 9             | 180                | 16.4%                                   |                   |  |  |
| 5  | 100           | 7.4%               |                     | 10            | 200                | 19.2%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 120.0  |

BS-Position 2

**Table 18**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.40               | 0.176                                   | 117.0             | 0.088                                    | 0.09   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 6.9%               |                     | 6             | 120                | 14.7%                                   |                   | 1.27                                     | 0.25   |
| 2  | 40            | 8.6%               |                     | 7             | 140                | 17.7%                                   |                   |  |  |
| 3  | 60            | 8.9%               |                     | 8             | 160                | 20.1%                                   |                   |  |  |
| 4  | 80            | 9.5%               |                     | 9             | 180                | 20.7%                                   |                   |  |  |
| 5  | 100           | 11.8%              |                     | 10            | 200                | 19.7%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 120.0  |



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BS-Position 2

**Table 19**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.33               | 0.184                                   | 119.0             | 0.092                                    | 0.09   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 7.8%               |                     | 6             | 120                | 16.4%                                   |                   | 1.42                                     | 0.28   |
| 2  | 40            | 6.5%               |                     | 7             | 140                | 18.9%                                   |                   |  |  |
| 3  | 60            | 5.8%               |                     | 8             | 160                | 18.7%                                   |                   |  |  |
| 4  | 80            | 7.8%               |                     | 9             | 180                | 21.0%                                   |                   |  |  |
| 5  | 100           | 10.1%              |                     | 10            | 200                | 16.8%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

BS-Position 2

**Table 20**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.26               | 0.192                                   | 120.0             | 0.096                                    | 0.10   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 4.6%               |                     | 6             | 120                | 12.9%                                   |                   | 1.57                                     | 0.31   |
| 2  | 40            | 6.2%               |                     | 7             | 140                | 16.9%                                   |                   |  |  |
| 3  | 60            | 6.3%               |                     | 8             | 160                | 18.0%                                   |                   |  |  |
| 4  | 80            | 7.0%               |                     | 9             | 180                | 18.9%                                   |                   |  |  |
| 5  | 100           | 11.8%              |                     | 10            | 200                | 19.7%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

BS-Position 2

**Table 21**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E             | 1.28               | 0.184                                   | 119.0             | 0.092                                    | 0.09   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 2.6%               |                     | 6             | 120                | 12.4%                                   |                   | 1.53                                     | 0.31   |
| 2  | 40            | 4.1%               |                     | 7             | 140                | 17.1%                                   |                   |  |  |
| 3  | 60            | 4.4%               |                     | 8             | 160                | 20.7%                                   |                   |  |  |
| 4  | 80            | 5.7%               |                     | 9             | 180                | 21.9%                                   |                   |  |  |
| 5  | 100           | 7.3%               |                     | 10            | 200                | 23.7%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

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BS-Position 3

**Table 22**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E         | 1.40               | 0.112                                   | 117.0              | 0.056                                    | 0.06   |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  |
| 1  | 20            | 3.6%               |                     |           | 6                  | 120                                     | 8.4%               |  |  |
| 2  | 40            | 4.7%               |                     |           | 7                  | 140                                     | 10.9%              |  |  |
| 3  | 60            | 4.9%               |                     |           | 8                  | 160                                     | 12.1%              |  |  |
| 4  | 80            | 6.5%               |                     |           | 9                  | 180                                     | 13.3%              |  |  |
| 5  | 100           | 9.1%               |                     |           | 10                 | 200                                     | 14.7%              |  |  |
|  |               |                    |                     |           |                    |   |                    | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
|  |               |                    |                     |           |                    |   |                    | 1.27                                     | 0.25   |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      |  |
|  |               |                    |                     |           |                    |   |                    | 120.0                                    |  |

BS-Position 3

**Table 23**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E         | 1.33               | 0.137                                   | 119.0              | 0.069                                    | 0.07   |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  |
| 1  | 20            | 5.0%               |                     |           | 6                  | 120                                     | 9.5%               |  |  |
| 2  | 40            | 6.3%               |                     |           | 7                  | 140                                     | 11.3%              |  |  |
| 3  | 60            | 8.4%               |                     |           | 8                  | 160                                     | 13.6%              |  |  |
| 4  | 80            | 9.0%               |                     |           | 9                  | 180                                     | 13.4%              |  |  |
| 5  | 100           | 9.3%               |                     |           | 10                 | 200                                     | 11.2%              |  |  |
|  |               |                    |                     |           |                    |   |                    | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
|  |               |                    |                     |           |                    |   |                    | 1.42                                     | 0.28   |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      |  |
|  |               |                    |                     |           |                    |   |                    | 120.0                                    |  |

BS-Position 3

**Table 24**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |           |                    |   |                    |  |  |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E         | 1.26               | 0.141                                   | 120.0              | 0.070                                    | 0.07   |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  |
| 1  | 20            | 4.8%               |                     |           | 6                  | 120                                     | 10.3%              |  |  |
| 2  | 40            | 5.5%               |                     |           | 7                  | 140                                     | 10.8%              |  |  |
| 3  | 60            | 7.4%               |                     |           | 8                  | 160                                     | 10.9%              |  |  |
| 4  | 80            | 9.5%               |                     |           | 9                  | 180                                     | 11.0%              |  |  |
| 5  | 100           | 9.6%               |                     |           | 10                 | 200                                     | 10.0%              |  |  |
|  |               |                    |                     |           |                    |   |                    | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
|  |               |                    |                     |           |                    |   |                    | 1.57                                     | 0.31   |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      |  |
|  |               |                    |                     |           |                    |   |                    | 120.0                                    |  |

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BS-Position 3

**Table 25**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |                         |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-------------------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                         |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E         | 1.40               | 0.153                                   | 117.0              | 0.077                                    | 0.08   |                         |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |                         |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  | IEEE Controlled Limit                        | IEEE Uncontrolled Limit |
| 1  | 20            | 3.2%               |                     |           | 6                  | 120                                     | 13.8%              |  | 1.27   | 0.25                    |
| 2  | 40            | 4.1%               |                     |           | 7                  | 140                                     | 15.4%              |  |  |                         |
| 3  | 60            | 5.2%               |                     |           | 8                  | 160                                     | 17.4%              |  |  |                         |
| 4  | 80            | 7.0%               |                     |           | 9                  | 180                                     | 18.8%              |  |  |                         |
| 5  | 100           | 12.3%              |                     |           | 10                 | 200                                     | 23.6%              |  |  |                         |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      | 120.0  |                         |

BS-Position 3

**Table 26**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |                         |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-------------------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                         |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E         | 1.33               | 0.211                                   | 119.0              | 0.105                                    | 0.11   |                         |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |                         |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  | IEEE Controlled Limit                        | IEEE Uncontrolled Limit |
| 1  | 20            | 6.1%               |                     |           | 6                  | 120                                     | 15.6%              |  | 1.42   | 0.28                    |
| 2  | 40            | 8.1%               |                     |           | 7                  | 140                                     | 19.0%              |  |  |                         |
| 3  | 60            | 10.2%              |                     |           | 8                  | 160                                     | 19.1%              |  |  |                         |
| 4  | 80            | 14.5%              |                     |           | 9                  | 180                                     | 20.5%              |  |  |                         |
| 5  | 100           | 15.1%              |                     |           | 10                 | 200                                     | 20.4%              |  |  |                         |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      | 120.0  |                         |

BS-Position 3

**Table 27**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |           |                    |   |                    |  |  |                         |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-------------------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                         |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E         | 1.26               | 0.161                                   | 120.0              | 0.081                                    | 0.08   |                         |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |                         |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  | IEEE Controlled Limit                        | IEEE Uncontrolled Limit |
| 1  | 20            | 6.3%               |                     |           | 6                  | 120                                     | 10.7%              |  | 1.57   | 0.31                    |
| 2  | 40            | 7.6%               |                     |           | 7                  | 140                                     | 10.5%              |  |  |                         |
| 3  | 60            | 10.8%              |                     |           | 8                  | 160                                     | 10.3%              |  |  |                         |
| 4  | 80            | 11.5%              |                     |           | 9                  | 180                                     | 11.9%              |  |  |                         |
| 5  | 100           | 10.0%              |                     |           | 10                 | 200                                     | 13.4%              |  |  |                         |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      | 120.0  |                         |

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BS-Position 3

**Table 28**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E             | 1.28               | 0.166                                   | 119.0             | 0.083                                    | 0.08   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 3.7%               |                     | 6             | 120                | 10.2%                                   |                   | 1.53                                     | 0.31   |
| 2  | 40            | 5.3%               |                     | 7             | 140                | 12.3%                                   |                   |  |  |
| 3  | 60            | 6.2%               |                     | 8             | 160                | 14.3%                                   |                   |  |  |
| 4  | 80            | 8.0%               |                     | 9             | 180                | 21.0%                                   |                   |  |  |
| 5  | 100           | 8.2%               |                     | 10            | 200                | 19.0%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

BS-Position 4

**Table 29**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.40               | 0.106                                   | 117.0             | 0.053                                    | 0.05   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 4.9%               |                     | 6             | 120                | 11.1%                                   |                   | 1.27                                     | 0.25   |
| 2  | 40            | 5.6%               |                     | 7             | 140                | 10.1%                                   |                   |  |  |
| 3  | 60            | 6.2%               |                     | 8             | 160                | 8.8%                                    |                   |  |  |
| 4  | 80            | 7.3%               |                     | 9             | 180                | 9.8%                                    |                   |  |  |
| 5  | 100           | 10.3%              |                     | 10            | 200                | 9.9%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

BS-Position 4

**Table 30**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.33               | 0.113                                   | 119.0             | 0.057                                    | 0.06   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 4.7%               |                     | 6             | 120                | 9.7%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 5.7%               |                     | 7             | 140                | 7.5%                                    |                   |  |  |
| 3  | 60            | 5.8%               |                     | 8             | 160                | 7.7%                                    |                   |  |  |
| 4  | 80            | 8.9%               |                     | 9             | 180                | 9.7%                                    |                   |  |  |
| 5  | 100           | 10.5%              |                     | 10            | 200                | 9.8%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | <b>RF Po (*Max)</b>                      | 120.0  |

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BS-Position 4

**Table 31**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |           |                    |   |                    |  |  |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E         | 1.26               | 0.141                                   | 120.0              | 0.070                                    | 0.07   |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  |
| 1  | 20            | 3.3%               |                     |           | 6                  | 120                                     | 12.4%              |  |  |
| 2  | 40            | 4.1%               |                     |           | 7                  | 140                                     | 11.1%              |  |  |
| 3  | 60            | 4.3%               |                     |           | 8                  | 160                                     | 12.3%              |  |  |
| 4  | 80            | 8.3%               |                     |           | 9                  | 180                                     | 12.8%              |  |  |
| 5  | 100           | 9.2%               |                     |           | 10                 | 200                                     | 12.0%              |  |  |
|  |               |                    |                     |           |                    |   |                    | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
|  |               |                    |                     |           |                    |   |                    | 1.57                                     | 0.31   |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      |  |
|  |               |                    |                     |           |                    |   |                    | 120.0                                    |  |

BS-Position 4

**Table 32**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E         | 1.40               | 0.163                                   | 117.0              | 0.082                                    | 0.08   |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  |
| 1  | 20            | 2.9%               |                     |           | 6                  | 120                                     | 16.1%              |  |  |
| 2  | 40            | 11.3%              |                     |           | 7                  | 140                                     | 15.8%              |  |  |
| 3  | 60            | 10.3%              |                     |           | 8                  | 160                                     | 14.4%              |  |  |
| 4  | 80            | 11.6%              |                     |           | 9                  | 180                                     | 13.6%              |  |  |
| 5  | 100           | 15.9%              |                     |           | 10                 | 200                                     | 16.8%              |  |  |
|  |               |                    |                     |           |                    |   |                    | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
|  |               |                    |                     |           |                    |   |                    | 1.27                                     | 0.25   |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      |  |
|  |               |                    |                     |           |                    |   |                    | 120.0                                    |  |

BS-Position 4

**Table 33**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E         | 1.33               | 0.172                                   | 119.0              | 0.086                                    | 0.09   |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  |  |
| 1  | 20            | 3.3%               |                     |           | 6                  | 120                                     | 14.2%              |  |  |
| 2  | 40            | 11.8%              |                     |           | 7                  | 140                                     | 9.9%               |  |  |
| 3  | 60            | 12.0%              |                     |           | 8                  | 160                                     | 13.3%              |  |  |
| 4  | 80            | 12.8%              |                     |           | 9                  | 180                                     | 13.2%              |  |  |
| 5  | 100           | 14.0%              |                     |           | 10                 | 200                                     | 16.8%              |  |  |
|  |               |                    |                     |           |                    |   |                    | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
|  |               |                    |                     |           |                    |   |                    | 1.42                                     | 0.28   |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      |  |
|  |               |                    |                     |           |                    |   |                    | 120.0                                    |  |

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**Table 34**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |           |                    |   |                    |  |  |                         |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-------------------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                         |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E         | 1.26               | 0.180                                   | 120.0              | 0.090                                    | 0.09   |                         |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |                         |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  | IEEE Controlled Limit                        | IEEE Uncontrolled Limit |
| 1  | 20            | 8.0%               |                     |           | 6                  | 120                                     | 12.2%              |  | 1.57   | 0.31                    |
| 2  | 40            | 10.2%              |                     |           | 7                  | 140                                     | 11.5%              |  |  |                         |
| 3  | 60            | 8.7%               |                     |           | 8                  | 160                                     | 11.2%              |  |  |                         |
| 4  | 80            | 12.9%              |                     |           | 9                  | 180                                     | 12.6%              |  |  |                         |
| 5  | 100           | 12.4%              |                     |           | 10                 | 200                                     | 15.2%              |  |  |                         |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      |  | 120.0                   |

BS-Position 4

**Table 35**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |                         |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-------------------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                         |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E         | 1.28               | 0.184                                   | 119.0              | 0.092                                    | 0.09   |                         |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |                         |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  | IEEE Controlled Limit                        | IEEE Uncontrolled Limit |
| 1  | 20            | 4.7%               |                     |           | 6                  | 120                                     | 12.0%              |  | 1.53   | 0.31                    |
| 2  | 40            | 7.0%               |                     |           | 7                  | 140                                     | 11.3%              |  |  |                         |
| 3  | 60            | 9.0%               |                     |           | 8                  | 160                                     | 14.2%              |  |  |                         |
| 4  | 80            | 11.5%              |                     |           | 9                  | 180                                     | 18.3%              |  |  |                         |
| 5  | 100           | 12.6%              |                     |           | 10                 | 200                                     | 19.6%              |  |  |                         |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      |  | 120.0                   |

BS-Position 5

**Table 36**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |           |                    |   |                    |  |  |                         |
|--|---------------|--------------------|---------------------|-----------|--------------------|---|--------------------|--|--|-------------------------|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W)  | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |                         |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E         | 1.40               | 0.131                                   | 117.0              | 0.066                                    | 0.07   |                         |
| Measurement Grid                               |               |                    |                     |           |                    |   |                    |  |  |                         |
| Test Position                                  | Height (cm)   | % of Control Limit |                     |           | Test Position      | Height (cm)                             | % of Control Limit |  | IEEE Controlled Limit                        | IEEE Uncontrolled Limit |
| 1  | 20            | 1.0%               |                     |           | 6                  | 120                                     | 12.3%              |  | 1.27   | 0.25                    |
| 2  | 40            | 0.5%               |                     |           | 7                  | 140                                     | 14.4%              |  |  |                         |
| 3  | 60            | 1.9%               |                     |           | 8                  | 160                                     | 17.0%              |  |  |                         |
| 4  | 80            | 10.3%              |                     |           | 9                  | 180                                     | 18.0%              |  |  |                         |
| 5  | 100           | 11.1%              |                     |           | 10                 | 200                                     | 17.3%              |  |  |                         |
|  |               |                    |                     |           |                    |   |                    | <b>RF Po (*Max)</b>                      |  | 120.0                   |

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BS-Position 5

**Table 37**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6012A      | 2.15               | 90                  | E             | 1.33               | 0.050                                   | 119.0             | 0.025                                    | 0.03   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.2%               |                     | 6             | 120                | 2.1%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 1.1%               |                     | 7             | 140                | 2.4%                                    |                   |  |  |
| 3  | 60            | 1.1%               |                     | 8             | 160                | 2.6%                                    |                   |  |  |
| 4  | 80            | 1.2%               |                     | 9             | 180                | 11.4%                                   |                   |  |  |
| 5  | 100           | 1.2%               |                     | 10            | 200                | 12.1%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 120.0  |

BS-Position 5

**Table 38**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4003A      | 2.15               | 90                  | E             | 1.26               | 0.092                                   | 120.0             | 0.046                                    | 0.05   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 1.0%               |                     | 6             | 120                | 3.4%                                    |                   | 1.57                                     | 0.31   |
| 2  | 40            | 1.0%               |                     | 7             | 140                | 9.5%                                    |                   |  |  |
| 3  | 60            | 1.0%               |                     | 8             | 160                | 12.6%                                   |                   |  |  |
| 4  | 80            | 1.6%               |                     | 9             | 180                | 11.9%                                   |                   |  |  |
| 5  | 100           | 2.7%               |                     | 10            | 200                | 13.8%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 120.0  |

BS-Position 5

**Table 39**

| External Vehicle MPE Assessment @ 380.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.40               | 0.057                                   | 117.0             | 0.028                                    | 0.03   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.3%               |                     | 6             | 120                | 4.3%                                    |                   | 1.27                                     | 0.25   |
| 2  | 40            | 1.0%               |                     | 7             | 140                | 6.8%                                    |                   |  |  |
| 3  | 60            | 1.2%               |                     | 8             | 160                | 7.4%                                    |                   |  |  |
| 4  | 80            | 1.5%               |                     | 9             | 180                | 8.7%                                    |                   |  |  |
| 5  | 100           | 4.0%               |                     | 10            | 200                | 9.5%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   | RF Po (*Max)                             | 120.0  |

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BS-Position 5

**Table 40**

| External Vehicle MPE Assessment @ 425.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.33               | 0.048                                   | 119.0             | 0.024                                    | 0.02   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.8%               |                     | 6             | 120                | 3.2%                                    |                   | 1.42                                     | 0.28   |
| 2  | 40            | 0.8%               |                     | 7             | 140                | 4.4%                                    |                   |  | RF Po (*Max)                                 |
| 3  | 60            | 1.2%               |                     | 8             | 160                | 4.9%                                    |                   |  |  |
| 4  | 80            | 2.9%               |                     | 9             | 180                | 6.1%                                    |                   |  |  |
| 5  | 100           | 3.6%               |                     | 10            | 200                | 5.9%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   |  |  |

BS-Position 5

**Table 41**

| External Vehicle MPE Assessment @ 469.9875 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE6013A      | 4.15               | 90                  | E             | 1.26               | 0.053                                   | 120.0             | 0.027                                    | 0.03   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.1%               |                     | 6             | 120                | 3.1%                                    |                   | 1.57                                     | 0.31   |
| 2  | 40            | 0.8%               |                     | 7             | 140                | 4.8%                                    |                   |  | RF Po (*Max)                                 |
| 3  | 60            | 1.0%               |                     | 8             | 160                | 5.8%                                    |                   |  |  |
| 4  | 80            | 1.7%               |                     | 9             | 180                | 6.9%                                    |                   |  |  |
| 5  | 100           | 2.1%               |                     | 10            | 200                | 7.7%                                    |                   |  |  |
|  |               |                    |                     |               |                    |   |                   |  |  |

BS-Position 5

**Table 42**

| External Vehicle MPE Assessment @ 460.0125 MHz |               |                    |                     |               |                    |   |                   |  |  |
|--|---------------|--------------------|---------------------|---------------|--------------------|---|-------------------|--|--|
| Antenna Location                               | Antenna Model | Gain (dBi)         | Meas. Distance (cm) | E/H Field     | Calibration Factor | Average over Body (mW/cm <sup>2</sup> ) | Initial Power (W) | Pwr. Density Calc. (mW/cm <sup>2</sup> ) | Pwr. Density Max Calc. (mW/cm <sup>2</sup> ) |
| Roof (cnt)                                     | HAE4011A      | 5.65               | 90                  | E             | 1.28               | 0.076                                   | 119.0             | 0.038                                    | 0.04   |
| Measurement Grid                               |               |                    |                     |               |                    |   |                   |  |  |
| Test Position                                  | Height (cm)   | % of Control Limit |                     | Test Position | Height (cm)        | % of Control Limit                      |                   | IEEE Controlled Limit                    | IEEE Uncontrolled Limit                      |
| 1  | 20            | 0.2%               |                     | 6             | 120                | 4.8%                                    |                   | 1.53                                     | 0.31   |
| 2  | 40            | 0.4%               |                     | 7             | 140                | 7.5%                                    |                   |  | RF Po (*Max)                                 |
| 3  | 60            | 1.1%               |                     | 8             | 160                | 8.8%                                    |                   |  |  |
| 4  | 80            | 1.8%               |                     | 9             | 180                | 10.2%                                   |                   |  |  |
| 5  | 100           | 2.7%               |                     | 10            | 200                | 12.3%                                   |                   |  |  |
|  |               |                    |                     |               |                    |   |                   |  |  |