MOTOROLA SOLUTIONS

MS ISO/IEC 17025 TESTING

SAMM No.0826

ACCREDITED

CERTIFICATE 2518.05

DECLARATION OF COMPLIANCE: MPE ASSESSMENT

Motorola Solutions Inc.
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Date of Report: 10/15/2019
Report Revision: B

Responsible Engineer:	Saw Sun Hock (EME Engineer)
Report author:	Saw Sun Hock (EME Engineer)
Date(s) Tested:	4/23/2019 - 4/24/2019, 5/7/2019, 5/9/2019, 5/13/2019 - 5/14/2019, 5/29/2019
Manufacturer:	Motorola Solutions Inc.
Date submitted for test:	04/12/2019
DUT Description:	APX6500 7/800MHz - Multiple HW Encryption WiFi Interoperability Data Modem Tethering via WiFi or Cable
Test TX mode(s):	CW
Max. Power output:	36W (762-805 MHz), 42W (806-870 MHz); 11.22 mW (Bluetooth); 6.3 mW (Bluetooth LE); 39.8 mW (WLAN 2.4GHz 802.11b), 15.8 mW (WLAN 2.4GHz 802.11g), 12.6mW (WLAN 2.4GHz 802.11n); 15.8mW (WLAN 5GHz 802.11a/n/ac)
TX Frequency Bands:	762-806 MHz; 806-870 MHz; WLAN 2412-2462 MHz; WLAN 5180-5825 MHz; BT 2402-2480 MHz
Signaling type:	FM, TDMA, FHSS (Bluetooth), 802.11b/g/n (WLAN 2.4 GHz), 802.11 a/n/ac (WLAN 5 GHz)
Model(s) Tested:	M25URS9PW1BN (PMUF1969A)
Model(s) Certified:	M25URS9PW1BN (PMUF1969A), M22URS9PW1BN (PMUF1969A), M24URS9PW1BN (PMUF1969A), M36URS9PW1BN (PMUF1969A),
Serial Number(s):	471TVF3314
Classification:	Occupational/Controlled Environment
FCC ID:	AZ492FT7124 769-775 MHz, 799-824 MHz, 851-869 MHz, 2402-2480 MHz, 2412-2462 MHz; 5180-5825 MHz This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
IC:	109U-92FT7124 This report contains results that are immaterial for ISED Canada equipment approval, which are clearly identified.

The MPE results clearly demonstrate compliance with FCC Occupational/Controlled RF Exposure limits. FCC rules require compliance for Passengers and Bystanders to the FCC General Population/Uncontrolled limits. The test results clearly demonstrate compliance with ICNIRP Guidelines for limiting exposure in time-varying electric, magnetic, and electromagnetic fields (up to 300 GHz).

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 4.0 of this report (no deviation from standard methods)**. This report shall not be reproduced without written approval from an officially designated representative of the Motorola Solutions Inc. EME Laboratory.**
I attest to the accuracy of the data and assume full responsibility for the completeness of these measurements.
This reporting format is consistent with the suggested guidelines of the TIA TSB-159 April 2006
The results and statements contained in this report pertain only to the device(s) evaluated herein.

Tiong Nguk Ing
Digitally signed by Tiong Nguk Ing
Date: 2019.10.21 15:34:00 +08'00'

Tiong Nguk Ing
Deputy Technical Manager (Approved Signatory)
Approval Date: 10/21/2019

Document Revision History

Date	Revision	Comments
08/13/2019	A	Initial release
10/15/2019	B	Amendment on WiFi Antenna Gain

Table of Contents

Part 1 of 3

1.0 Introduction

This report details the test setup, test equipment and test results of Maximum Permissible Exposure (MPE) performed at Motorola Solutions' outside test site for product model M25URS9PW1BN (PMUF1969A).

2.0 FCC MPE Summary

Table 1

Equipment Class	Frequency band (MHz)	Trunk Mounted Antennas				Roof Mounted Antennas			
		Passenger		Bystander		Passenger		Bystander	
		Power Density (mW/cm^2)	Percentage of Limit (%)	Power Density (mW/cm^2)	Percentage of Limit (%)	Power Density (mW/cm^2)	Percentage of Limit (%)	Power Density (mW/cm^2)	Percentage of Limit (%)
TNB	769-775; 799-824; 851-869 (LMR 7/800)	0.126	23.6	0.132	23.2	0.029	5.5	0.075	14.1
DTS	2412 – 2462 (WLAN 2.4 GHz)	0.018	1.77	0.018	1.77	0.018	1.77	0.018	1.77
NII	5180 - 5825 (WLAN 5 GHz)	0.007	0.67	0.007	0.67	0.007	0.67	0.007	0.67
DSS	2402-2480 (Bluetooth)	0.005	0.50	0.005	0.50	0.005	0.50	0.005	0.50
Simultaneous (Highest Combined Percentage of Limit)			25.4		25.0		7.3		15.9

3.0 Abbreviations / Definitions

BT: Bluetooth
CNR: Calibration Not Required
CW: Continuous Wave
DUT: Device Under Test
EME: Electromagnetic Energy
FHSS: Frequency Hopping Spread Spectrum
FM: Frequency Modulation
MPE: Maximum Permissible Exposure
GPS: Global Positioning System
LMR: Land Mobile Radio
NA: Not Applicable
BS: Bystander
PB: Passenger Back seat
PF: Passenger Front seat
PTT: Push to Talk
WLAN: Wireless Local Area Network
TDMA: Time Division Multiple Access

4.0 Referenced Standards and Guidelines

This product is designed to comply with the following applicable national and international standards and guidelines.

- United States Federal Communications Commission, Code of Federal Regulations; Rule Part 47CFR § 1.1310, § 2.1091 (d) and § 2.1093 for RF Exposure, where applicable.
- Federal Communications Commission, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radio frequency Electromagnetic Fields", OET Bulletin 65 (Edition 97-01), FCC, Washington, D.C.: August 1997.
- American National Standards Institute (ANSI) / Institute of Electrical and Electronics Engineers (IEEE) C95. 1-1999
- American National Standards Institute (ANSI) / Institute of Electrical and Electronics Engineers (IEEE) C95. 1-1992. Specific to FCC rules and regulations.
- Institute of Electrical and Electronics Engineers (IEEE) C95.3-2002
- International Commission on Non-Ionizing Radiation Protection (ICNIRP) 1998
- Ministry of Health (Canada) Safety Code 6 (2015), Limits of Human Exposure to Radio frequency Electromagnetic Fields in the Frequency Range from 3 kHz to 300 GHz
- RSS-102 (Issue 5) – Radio Frequency (RF) Exposure Compliance of Radio communication Apparatus (All Frequency Bands)
- FCC KDB – 447498 D01 General RF Exposure Guidance v06
- FCC KDB – 865664 D02 RF Exposure Reporting v01r02

5.0 Power Density Limits

Table 2 – Occupational / Controlled Exposure Limits

Frequency Range (MHz)	FCC OET Bulletin 65 mW/cm^2	ICNIRP W/m^2	IEEE C95.1 1992/1999 mW/cm^2	IEEE C95.1 2005 W/m^2	RSS-102 Issue 5 2015 W/m^2
10 – 20					10.0
20 – 48					$44.72 / f^{0.5}$
30 – 300	1.0				
48 – 100					6.455
10 – 400		10.0			
100 – 300			1.0	10.0	
100 – 6,000					$0.6455 f^{0.5}$
300 – 1,500	f/300				

Table 2 – Occupational / Controlled Exposure Limits (Con't.)

Frequency Range (MHz)	FCC OET Bulletin 65	ICNIRP	IEEE C95.1 1992/1999	IEEE C95.1 2005	RSS-102 Issue 5 2015
	mW/cm^2	W/m^2	mW/cm^2	W/m^2	W/m^2
300 – 3,000			f/300	f/30	
400 – 2,000		f/40			
1,500 – 15,000					
1,500 – 100,000	5.0				
2,000 – 300,000		50.0			
3,000 – 300,000			10.0	100.0	
6,000 – 15,000					50.0
15000 – 150,000					50.0
150000 –300,000					$3.33\times10^{-4}f$

Table 3 – General Population / Uncontrolled Exposure Limits

Frequency Range (MHz)	FCC OET Bulletin 65	ICNIRP	IEEE C95.1 1992/1999	IEEE C95.1 2005	RSS-102 Issue 5 2015
	mW/cm^2	W/m^2	mW/cm^2	W/m^2	W/m^2
10 – 20					2.0
20 – 48					$8.944 / f^{0.5}$
30 – 300	0.2				
48 – 300					1.291
10 – 400		2.0			
100 – 300			0.2		
100 – 400				2.0	
300 – 1,500	f/1,500				
300 – 6000					$0.02619\,f^{0.6834}$
400 – 2,000		f/200		f/200	
300 – 15,000			f/1,500		
1,500 – 15,000					
1,500 – 100,000	1.0				
2,000 – 100,000				10.0	
2,000 – 300,000		10.0			
6,000 – 15,000					10.0
15,000 – 150,000					10.0
150,000 – 300,000					$6.67\times10^{-5}f$

6.0 N_c Test Channels

The number of test channels is determined by using Equation 1 below. This equation is available in FCC's KDB 447498. The test channels are appropriately spaced across the antenna's frequency range.

Equation 1 – Number of test channels

$N_c = \text{Round } \{[100(f_{high} - f_{low})/f_c]^{0.5} \times (f_c / 100)^{0.2}\}$

where N_c is the number of test channels, f_{high} and f_{low} are the highest and lowest frequencies within the transmission band, f_c is the mid-band frequency, and frequencies are in MHz.

7.0 Measurement Equipment

Table 4 – Equipment

Equipment Type	Model #	SN	Calibration Date	Calibration Due Date
Automobile	Volvo 240-1988	NA	NA	NA
Survey Meter Probe – E-Field	ETS Model HI-2200 ETS Model E100	00086316 00206767	07/02/2018	07/02/2019

E-field measurements are in mW/cm^2.

8.0 Measurement System Uncertainty Levels

Table 5 – Uncertainty Budget for Near Field Probe Measurements

	Tol. (± %)	Prob. Dist.	Divisor	u_i (±%)		v_i
Measurement System						
Probe Calibration	7.1	N	1.00	7.1	50.4	∞
Survey Meter Calibration	0.0	N	1.00	0.0	0.0	¥
Hemispherical Isotropy	8.0	R	1.73	4.6	21.33	∞
Linearity	5.0	R	1.73	2.9	8.33	∞
Pulse Response	1.0	R	1.73	0.6	0.33	∞
RF Ambient Noise	3.0	R	1.73	1.7	3.00	∞
RF Reflections	8.0	R	1.73	4.6	21.33	∞
Probe Positioning	10.0	R	1.73	5.8	33.333	∞
Test sample Related					0.00	
Antenna Positioning	3.0	N	1.00	3.0	9.0	∞
Power drift	5.0	R	1.73	2.9	8.33	∞
Bystander measurement uncertainty	4.8	N	1.00	4.8	23.04	∞
Passenger measurement uncertainty	8.1	N	1.00	8.1	65.61	∞
Combined Standard Uncertainty		RSS		15.6	15.6	∞
Expanded Uncertainty (95% CONFIDENCE LEVEL)		k=2		31	31	

9.0 Product and System Description

This mobile device operates in the LMR bands using either frequency modulation (FM) with 100% transmit duty cycle or TDMA signals with maximum of 50% transmit duty cycle. For conservative assessment, FM signal was tested. A duty factor of 50% applies for PTT operation mode.

This device also incorporates a Class 1 Bluetooth device which is a Frequency Hopping Spread Spectrum (FHSS) technology. The Bluetooth radio modem is used to wireless link audio accessories. The maximum actual transmission duty cycle is imposed by the Bluetooth standard. The maximum duty cycle for BT is 100%. Bluetooth Low Energy (BT LE) intended to reduce power consumption.

This device also contains WLAN technology for data capabilities over 802.11b/g/n 2.4 GHz and 802.11 a/n/ac 5 GHz wireless networks.

Table 6 below summarizes the technologies, bands, maximum duty cycles and maximum output powers. Maximum output powers are defined as upper limit of the production line final test station.

Table 6

Technologies	Bands (MHz)		Duty Cycle (%)	Max Power (W)
LMR	762-805 ; 806-870 (7/800 band)	762-805	50 (PTT)	36
		806-870	50 (PTT)	42
BT	2402-2480		100	0.0112
BT LE	2402-2480		100	0.0063
WLAN	2400 – 2462 (802.11b/g/n)		100	0.0398 (802.11b)
				0.0158 (802.11g)
				0.0126 (802.11n)
	5180-5825 (802.11 a/n/ac)		100	0.0158

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 “Bystanders” as used herein are people other than operator)

10.0 Additional Options and Accessories

Not available.

11.0 Test Set-Up Description

Assessments were performed with mobile radio installed in the test vehicle, at the specified distances and test locations indicated in sections 12.0, 13.0 and Appendix A.

All antennas described in Table 7 were considered in order to develop the test plan for this product. Antennas were installed and tested per their appropriate mount locations (Roof / Trunk) and defined test channels.

The system was tested using a low-loss 16' Teflon RG58A/U cable attaching the radio to the transmit antenna. This cable is shorter and lower attenuation than the 17' RG58A/U cables supplied in the customer kits for connecting the radio to the transmit antenna. The cable used in the test setup also has lower attenuation over the test frequency range than the cable provided in the customer kits. The use of a shorter cable with lower attenuation in the test setup ensures that the test data is more conservative with regards to the actual installation. Cable losses are reported in Appendix A.

12.0 Method of Measurement with trunk mounted antenna(s)

12.1 External/Bystander vehicle MPE measurements

Initially the antenna is located at the center of the trunk. Refer to Appendix A for antenna location and distance.

MPE measurements for bystander (BS) conditions are determined by taking the average of (10) measurements in a 2 m vertical line for each of the (3) bystander test locations indicated in Appendix A with 20 cm height increments, with the distance between the antenna and the geometric center of the probe sensor equal to 60 cm (for 7/800 band). The measurement probe is positioned orthogonal to antenna (typically parallel to ground with a vertically mounted antenna) and aimed directly at the antenna's axis. These measurements are representative of persons other than the operator standing next to the vehicle.

Each of the offered antennas mounted at the center of the trunk were assessed at the rear of the vehicle while maintaining a minimum of twenty (20) centimeter separation distance between the probe sensor and vehicle body. The worst case antenna was then tested at a 45º radial at the corner of the trunk, and 90º radial at the side of the trunk.

Tests for the 90º radial direction where conducted with the antenna displaced towards the "bystander on the side of the trunk" test location in order to attain 60 cm (42 cm antenna displacement) distances from that test location. In this way, the antenna is closer to the test location, and the MPE is higher, than it would be if the antenna was left at the center of the trunk

12.2 Internal/Passenger vehicle MPE measurements

Antenna is located toward the center of the trunk at a minimum 85 cm from backseat passenger. Users are instructed, per installation manual, to mount antennas on the roof only if a minimum 85cm cannot be achieved. Refer to Appendix A for antenna location and distance.

MPE measurements for passenger front seat (PF) and backseat (PB) conditions are determined by taking the average of the (3) measurements (Head, Chest, and Lower Trunk) inside the vehicle for both the front and back seats.

The backseat is a bench seat and therefore each position (Head, Chest & Lower Trunk) were scanned across (horizontally) the seat starting from the middle of the seat to the edge of the seat stopping 20 cm from the vehicle door. Similar process was used in the front bucket seat.

The probe handle is oriented parallel (horizontal) to the ground and pointed towards the back of the vehicle. The probe handle is not oriented normal to the seat surface. The probe head (incorporating the field sensors) is scanned continuously (using the max-hold function available in the meter) along three test axes which are parallel to the seat angle (intended as the line determined by the intersection of the plane of the seat and the plane of the backrest) and are 20 cm from the seat surface. One test axis is at the Head height, another is at the Chest height, and another is at the Lower Trunk height. The maximum field level value recorded for each test axis is logged. The MPE is determined by averaging these three maximum values regardless of the geometrical location where they were observed. For instance, the locations of the three maxima may lie on different vertical (relative to ground) lines.

This approach leads to results that are representative of the exposure of vehicle occupants since it is based on an average across the body portions closest to the antenna for both trunk and roof mount positions, and is conservatively biased because the highest results for each test axis are combined, e.g. the highest head exposure could be in the middle of the seat while the highest lower trunk exposure could be closer to the door.

13.0 Method of Measurement with roof mounted antenna(s)

13.1 External/Bystander vehicle MPE measurements

Antenna is located at the center of the roof. Refer to Appendix A for antenna location and distance.

MPE measurements for bystander (BS) conditions are determined by taking the average of (10) measurements in a 2m vertical line for the test location indicated in Appendix A with 20 cm height increments, with the distance between the antenna and the geometric center of the probe sensor equal to 60 cm (for 7/800 band). The measurement probe is positioned orthogonal to antenna (typically parallel to ground with a vertically mounted antenna) and aimed directly at the antenna's axis. These measurements are representative of persons other than the operator standing next to the vehicle.

Note: Actual test distance for 7/800 band was approximately 105cm from roof mounted antenna to the measurement probe. This is the closet distance that can be achieved to maintain minimum 20cm separation between probe sensor and vehicle body used for MPE compliance assessment herein.

13.2 Internal/Passenger vehicle MPE measurements

Antenna is located at the center of the roof. Refer to Appendix A for antenna location and distance.

MPE measurements for passenger front seat (PF) and backseat (PB) conditions are determined by taking the average of the (3) measurements (Head, Chest, and Lower Trunk) inside the vehicle for both the front and back seats.

The backseat is a bench seat and therefore each position (Head, Chest & Lower Trunk) were scanned across (horizontally) the seat starting from the middle of the seat to the edge of the seat stopping 20 cm from the vehicle door. Similar process was used in the front bucket seat.
The probe handle is oriented parallel (horizontal) to the ground and pointed towards the back of the vehicle. The probe handle is not oriented normal to the seat surface. The probe head (incorporating the field sensors) is scanned continuously (using the max-hold function available in the meter) along three test axes which are parallel to the seat angle (intended as the line determined by the intersection of the plane of the seat and the plane of the backrest) and are 20 cm from the seat surface. One test axis is at the Head height, another is at the Chest height, and another is at the Lower Trunk height. The maximum field level value recorded for each test axis is logged. The MPE is determined by averaging these three maximum values regardless of the geometrical location where they were observed. For instance, the locations of the three maxima may lie on different vertical (relative to ground) lines.

This approach leads to results that are representative of the exposure of vehicle occupants since it is based on an average across the body portions closest to the antenna for both trunk and roof mount positions, and is conservatively biased because the highest results for each test axis are combined, e.g. the highest head exposure could be in the middle of the seat while the highest lower trunk exposure could be closer to the door.

14.0 MPE Calculations

The final MPE results for this mobile radio are presented in section 16.0. These results are based on 50% duty cycle for PTT for LMR bands.

Below is an explanation of how the MPE results are calculated. Refer to Appendix D for MPE measurement results and calculations for LMR band.

External to vehicle (Bystander) - 10 measurements are averaged over the body (*Avg_over_body*).
Internal to vehicle (Passengers) - 3 measurements are averaged over the body (*Avg_over_body*).

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

Therefore;

Equation 2 – Power Density Calculation *(Calc._P.D.)*

$$Calc.\_P.D. = (Avg\_over\_body) * (probe\_frequency\_cal\_factor) * (duty\_cycle)$$

Note 1: The highest "average" cal factors from the calibration certificates were selected for the applicable frequency range. Linear interpretation was used to determine "probe_frequency_cal_factor" for the specific test frequencies.

Note 2: The E-field probe calibration certificate's frequency cal factors were determined by measuring V/m. The survey meter's results were measured in power density (mW/cm^2) and therefore the "probe_frequency_cal_factor" was squared in equation 2 to account for these results.

Note 3: The H-field probe calibration certificate's frequency cal factors were determined by measuring A/m. The survey meter's results were measured in A/m and therefore the "Avg_over_body" A/m results were converted to power density (mW/cm^2) using the equation 3. H-field measurements are only applicable to frequencies below 300MHz.

Equation 3 – Converting A/m to mW/cm^2

$$mW/cm\text{^}2 = (A/m)\text{^}2 * 37.699$$

Equation 4 – Power Density Maximum Calculation

$$Max\_Calc.\_P.D. = P.D.\_calc * \frac{\max\_output\_power}{initial\_output\_power}$$

Note 4: For initial output power> max_output_power; max_output_power / initial output power = 1

15.0 Antenna Summary

Table below summarizes the tested or evaluated antennas and their descriptions, mount location (roof/trunk), overlap of FCC bands, number of test channels per FCC KDB 447498 (FCC N_c) and actual number of tested channels (Actual N_c). This information was used to determine the test configurations presented in this report.

Table 7

Antenna No.	Antenna Model	Frequency Range (MHz)	Physical Length (cm)	Gain (dBi)	Remarks	Mount Location (Roof/ Trunk)	Overlap FCC Bands (MHz)	FCC N_c	Actual N_c
1	HAF4013A	762-870	6.1	5.15	1/4 wave	R/T	769-775; 799-824; 851-869	9	11
2	HAF4014A	762-870	57.7	5.15	1/4 wave	R/T	769-775; 799-824; 851-869	9	11
3	HAF4016A	762-870	9	2.15	1/4 wave	R/T	769-775; 799-824; 851-869	9	11
4	HAF4017A	762-870	34.5	5.15	1/4 wave	R/T	769-775; 799-824; 851-869	9	11
BT/WLAN									
5	PMAN5100A	2400-2500	5.7 (L) x 1.9 (W)	3.0		Glass mount	2412-2462	3	3
6	PMAN5101A	2400-2500 / 4900-5900	5.4 (L) x 1.32 (W)	2.7 / 0.2		Glass mount	2412-2462 ; 5180-5825	3	3
7	AN000163A01	2400-2500 / 4900-5900	7	3.5 / 3.3	Monopole	Roof/ Trunk	2412-2462 ; 5180-5825	3	3
8	AN000163A05	2400-2500 / 4900-5900	7	2.5 / 1.6	Monopole	Roof/ Trunk	2412-2462 ; 5180-5825	3	3

16.0 Test Results Summary

16.1 MPE Test Results Summary for LMR

Table 8

MPE assessment for LMR 7/800 band - trunk mounted antenna – Bystander

Notes:
Blue fonts: Frequencies not regulated by FCC.
Results highlight in yellow are configurations with highest percentage of limits

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	BS	E	0	HAF4013A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.094	0.51	18.5	0.38	24.7	0.24	38.5
						35.2	769.0125	0.093	0.51	18.1	0.38	24.2	0.25	37.8
						35.0	772.0000	0.094	0.51	18.4	0.39	24.5	0.25	38.4
						34.9	774.9875	0.101	0.52	19.5	0.39	26.0	0.25	40.7
						34.6	794.0125	0.106	0.53	20.0	0.40	26.7	0.25	42.2
						35.5	799.0125	0.100	0.53	18.7	0.40	24.9	0.25	39.5
					42.0	42.0	811.5000	0.108	0.54	19.9	0.41	26.6	0.25	42.3
						40.8	823.9875	0.114	0.55	20.8	0.41	27.7	0.26	44.3
						41.8	851.0125	0.090	0.57	15.9	0.43	21.1	0.26	34.2
						41.1	860.5000	0.099	0.57	17.3	0.43	23.0	0.27	37.4
						41.1	868.9875	0.088	0.58	15.2	0.43	20.3	0.27	33.0
				HAF4014A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.080	0.51	15.8	0.38	21.1	0.24	32.9
						35.2	769.0125	0.079	0.51	15.5	0.38	20.6	0.25	32.3
						35.0	772.0000	0.080	0.51	15.6	0.39	20.8	0.25	32.6
						34.9	774.9875	0.087	0.52	16.9	0.39	22.5	0.25	35.2
						34.6	794.0125	0.098	0.53	18.5	0.40	24.7	0.25	39.1
						35.5	799.0125	0.088	0.53	16.5	0.40	22.0	0.25	34.8
					42.0	42.0	811.5000	0.093	0.54	17.2	0.41	22.9	0.25	36.5
						40.8	823.9875	0.117	0.55	21.2	0.41	28.3	0.26	45.3
						41.8	851.0125	0.132	0.57	**23.2**	0.43	**30.9**	0.26	**50.0**
						41.1	860.5000	0.124	0.57	21.7	0.43	28.9	0.27	46.9
						41.1	868.9875	0.131	0.58	22.6	0.43	30.1	0.27	49.0
				HAF4016A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.110	0.51	21.6	0.38	28.8	0.24	44.9
						35.2	769.0125	0.109	0.51	21.3	0.38	28.4	0.25	44.4
						35.0	772.0000	0.107	0.51	20.8	0.39	27.7	0.25	43.4
						34.9	774.9875	0.111	0.52	21.4	0.39	28.5	0.25	44.8
						34.6	794.0125	0.117	0.53	22.0	0.40	29.4	0.25	46.5
						35.5	799.0125	0.111	0.53	20.8	0.40	27.8	0.25	44.0
					42.0	42.0	811.5000	0.094	0.54	17.4	0.41	23.3	0.25	37.0
						40.8	823.9875	0.093	0.55	16.9	0.41	22.5	0.26	36.0
						41.8	851.0125	0.074	0.57	13.0	0.43	17.3	0.26	28.0
						41.1	860.5000	0.083	0.57	14.5	0.43	19.3	0.27	31.3
						41.1	868.9875	0.069	0.58	12.0	0.43	16.0	0.27	26.0

Table 8 (Continued)

MPE assessment for LMR 7/800 band - trunk mounted antenna – Bystander

Notes:
Blue fonts: Frequencies not regulated by FCC.

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	BS	E	0	HAF4017A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.095	0.51	18.6	0.38	24.9	0.24	38.8
						35.2	769.0125	0.096	0.51	18.8	0.38	25.0	0.25	39.2
						35.0	772.0000	0.092	0.51	17.8	0.39	23.7	0.25	37.2
						34.9	774.9875	0.095	0.52	18.4	0.39	24.5	0.25	38.5
						34.6	794.0125	0.100	0.53	18.8	0.40	25.1	0.25	39.6
						35.5	799.0125	0.093	0.53	17.6	0.40	23.4	0.25	37.1
					42.0	42.0	811.5000	0.079	0.54	14.6	0.41	19.5	0.25	31.1
						40.8	823.9875	0.085	0.55	15.4	0.41	20.5	0.26	32.9
						41.8	851.0125	0.066	0.57	11.6	0.43	15.5	0.26	25.1
						41.1	860.5000	0.070	0.57	12.2	0.43	16.3	0.27	26.4
						41.1	868.9875	0.057	0.58	9.8	0.43	13.1	0.27	21.3
			45	HAF4014A, 1/4 Wave, (762-870MHz)	42.0	41.8	851.0125	0.045	0.57	7.9	0.43	10.6	0.26	17.1
			90	HAF4014A, 1/4 Wave, (762-870MHz)	42.0	41.8	851.0125	0.104	0.57	18.4	0.43	24.5	0.26	39.6

Table 9

MPE assessment for LMR 7/800 band - roof mounted antenna – Bystander

Notes:
Blue fonts: Frequencies not regulated by FCC.

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	BS	E	0	HAF4013A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.045	0.51	8.8	0.38	11.7	0.24	18.3
						35.2	769.0125	0.045	0.51	8.8	0.38	11.7	0.25	18.3
						35.0	772.0000	0.049	0.51	9.5	0.39	12.6	0.25	19.8
						34.9	774.9875	0.048	0.52	9.3	0.39	12.4	0.25	19.5
						34.6	794.0125	0.054	0.53	10.1	0.40	13.5	0.25	21.3
						35.5	799.0125	0.055	0.53	10.3	0.40	13.8	0.25	21.8
					42.0	42.0	811.5000	0.047	0.54	8.7	0.41	11.6	0.25	18.4
						40.8	823.9875	0.056	0.55	10.2	0.41	13.5	0.26	21.7
						41.8	851.0125	0.044	0.57	7.7	0.43	10.2	0.26	16.5
						41.1	860.5000	0.052	0.57	9.0	0.43	12.0	0.27	19.5
						41.1	868.9875	0.046	0.58	8.0	0.43	10.6	0.27	17.3
				HAF4014A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.040	0.51	7.9	0.38	10.6	0.24	16.5
						35.2	769.0125	0.040	0.51	7.8	0.38	10.4	0.25	16.2
						35.0	772.0000	0.049	0.51	9.5	0.39	12.7	0.25	19.8
						34.9	774.9875	0.052	0.52	10.2	0.39	13.5	0.25	21.3
						34.6	794.0125	0.058	0.53	10.9	0.40	14.6	0.25	23.0
						35.5	799.0125	0.072	0.53	13.6	0.40	18.1	0.25	28.7
					42.0	42.0	811.5000	0.058	0.54	10.7	0.41	14.2	0.25	22.6
						40.8	823.9875	0.058	0.55	10.6	0.41	14.1	0.26	22.6
						41.8	851.0125	0.046	0.57	8.2	0.43	10.9	0.26	17.6
						41.1	860.5000	0.044	0.57	7.7	0.43	10.3	0.27	16.8
						41.1	868.9875	0.040	0.58	6.9	0.43	9.2	0.27	15.0
				HAF4016A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.054	0.51	10.5	0.38	14.1	0.24	21.9
						35.2	769.0125	0.054	0.51	10.5	0.38	13.9	0.25	21.8
						35.0	772.0000	0.057	0.51	11.2	0.39	14.9	0.25	23.3
						34.9	774.9875	0.057	0.52	11.1	0.39	14.8	0.25	23.2
						34.6	794.0125	0.062	0.53	11.7	0.40	15.6	0.25	24.7
						35.5	799.0125	0.065	0.53	12.1	0.40	16.2	0.25	25.6
					42.0	42.0	811.5000	0.053	0.54	9.9	0.41	13.1	0.25	20.9
						40.8	823.9875	0.056	0.55	10.2	0.41	13.6	0.26	21.8
						41.8	851.0125	0.045	0.57	7.9	0.43	10.5	0.26	17.0
						41.1	860.5000	0.049	0.57	8.6	0.43	11.5	0.27	18.6
						41.1	868.9875	0.046	0.58	7.9	0.43	10.6	0.27	17.2

Table 9 (Continued)

MPE assessment for LMR 7/800 band - roof mounted antenna – Bystander

Notes:
Blue fonts: Frequencies not regulated by FCC.
Results highlight in yellow are configurations with highest percentage of limits

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	BS	E	0	HAF4017A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.052	0.51	10.3	0.38	13.8	0.24	21.5
						35.2	769.0125	0.053	0.51	10.3	0.38	13.8	0.25	21.5
						35.0	772.0000	0.058	0.51	11.3	0.39	15.0	0.25	23.5
						34.9	774.9875	0.058	0.52	11.1	0.39	14.9	0.25	23.3
						34.6	794.0125	0.065	0.53	12.3	0.40	16.4	0.25	25.9
						35.5	799.0125	0.075	0.53	**14.1**	0.40	**18.8**	0.25	**29.8**
					42.0	42.0	811.5000	0.053	0.54	9.7	0.41	12.9	0.25	20.6
						40.8	823.9875	0.060	0.55	10.9	0.41	14.5	0.26	23.2
						41.8	851.0125	0.039	0.57	6.8	0.43	9.1	0.26	14.7
						41.1	860.5000	0.041	0.57	7.1	0.43	9.5	0.27	15.5
						41.1	868.9875	0.036	0.58	6.2	0.43	8.3	0.27	13.4

Table 10

MPE assessment for LMR 7/800 band - trunk mounted antenna – Passenger Back

Notes:
Blue fonts: Frequencies not regulated by FCC.

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	PB	E	0	HAF4013A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.044	0.51	8.6	0.38	11.5	0.24	17.9
						35.2	769.0125	0.042	0.51	8.3	0.38	11.0	0.25	17.3
						35.0	772.0000	0.050	0.51	9.7	0.39	13.0	0.25	20.4
						34.9	774.9875	0.042	0.52	8.1	0.39	10.8	0.25	17.0
						34.6	794.0125	0.054	0.53	10.2	0.40	13.6	0.25	21.5
						35.5	799.0125	0.058	0.53	10.9	0.40	14.6	0.25	23.1
					42.0	42.0	811.5000	0.065	0.54	12.1	0.41	16.1	0.25	25.6
						40.8	823.9875	0.053	0.55	9.6	0.41	12.8	0.26	20.4
						41.8	851.0125	0.057	0.57	10.0	0.43	13.4	0.26	21.6
						41.1	860.5000	0.058	0.57	10.1	0.43	13.5	0.27	21.9
						41.1	868.9875	0.055	0.58	9.4	0.43	12.6	0.27	20.5
				HAF4014A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.018	0.51	3.6	0.38	4.8	0.24	7.6
						35.2	769.0125	0.023	0.51	4.5	0.38	6.0	0.25	9.4
						35.0	772.0000	0.019	0.51	3.7	0.39	4.9	0.25	7.6
						34.9	774.9875	0.021	0.52	4.1	0.39	5.4	0.25	8.5
						34.6	794.0125	0.051	0.53	9.6	0.40	12.8	0.25	20.2
						35.5	799.0125	0.061	0.53	11.5	0.40	15.3	0.25	24.2
					42.0	42.0	811.5000	0.090	0.54	16.6	0.41	22.1	0.25	35.2
						40.8	823.9875	0.081	0.55	14.7	0.41	19.6	0.26	31.4
						41.8	851.0125	0.098	0.57	17.3	0.43	23.1	0.26	37.4
						41.1	860.5000	0.080	0.57	13.9	0.43	18.5	0.27	30.0
						41.1	868.9875	0.074	0.58	12.8	0.43	17.0	0.27	27.7
				HAF4016A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.046	0.51	9.1	0.38	12.1	0.24	18.9
						35.2	769.0125	0.042	0.51	8.1	0.38	10.8	0.25	16.9
						35.0	772.0000	0.047	0.51	9.2	0.39	12.3	0.25	19.3
						34.9	774.9875	0.041	0.52	7.8	0.39	10.5	0.25	16.4
						34.6	794.0125	0.062	0.53	11.8	0.40	15.7	0.25	24.9
						35.5	799.0125	0.076	0.53	14.2	0.40	19.0	0.25	30.1
					42.0	42.0	811.5000	0.064	0.54	11.8	0.41	15.8	0.25	25.1
						40.8	823.9875	0.052	0.55	9.4	0.41	12.5	0.26	20.0
						41.8	851.0125	0.065	0.57	11.5	0.43	15.4	0.26	24.8
						41.1	860.5000	0.078	0.57	13.5	0.43	18.0	0.27	29.2
						41.1	868.9875	0.064	0.58	11.1	0.43	14.8	0.27	24.0

Table 10 (Continued)

MPE assessment for LMR 7/800 band - trunk mounted antenna – Passenger Back

Notes:
Blue fonts: Frequencies not regulated by FCC.
Results highlight in yellow are configurations with highest percentage of limits

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	PB	E	0	HAF4017A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.067	0.51	13.1	0.38	17.5	0.24	27.3
						35.2	769.0125	0.073	0.51	14.3	0.38	19.0	0.25	29.8
						35.0	772.0000	0.065	0.51	12.6	0.39	16.9	0.25	26.4
						34.9	774.9875	0.061	0.52	11.8	0.39	15.8	0.25	24.7
						34.6	794.0125	0.095	0.53	18.0	0.40	24.0	0.25	37.9
						35.5	799.0125	0.126	0.53	**23.6**	0.40	**31.5**	0.25	**49.8**
					42.0	42.0	811.5000	0.119	0.54	22.0	0.41	29.3	0.25	46.6
						40.8	823.9875	0.116	0.55	21.1	0.41	28.1	0.26	45.0
						41.8	851.0125	0.083	0.57	14.5	0.43	19.4	0.26	31.3
						41.1	860.5000	0.096	0.57	16.7	0.43	22.3	0.27	36.1
						41.1	868.9875	0.081	0.58	13.9	0.43	18.5	0.27	30.2

Table 11

MPE assessment for LMR 7/800 band - roof mounted antenna – Passenger Back

Notes:
Blue fonts: Frequencies not regulated by FCC.

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	PB	E	0	HAF4013A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.016	0.51	3.2	0.38	4.3	0.24	6.7
						35.2	769.0125	0.016	0.51	3.2	0.38	4.2	0.25	6.6
						35.0	772.0000	0.018	0.51	3.5	0.39	4.7	0.25	7.4
						34.9	774.9875	0.018	0.52	3.6	0.39	4.7	0.25	7.4
						34.6	794.0125	0.018	0.53	3.3	0.40	4.4	0.25	7.0
						35.5	799.0125	0.016	0.53	2.9	0.40	3.9	0.25	6.2
					42.0	42.0	811.5000	0.013	0.54	2.5	0.41	3.3	0.25	5.2
						40.8	823.9875	0.016	0.55	2.9	0.41	3.8	0.26	6.1
						41.8	851.0125	0.007	0.57	1.2	0.43	1.7	0.26	2.7
						41.1	860.5000	0.010	0.57	1.8	0.43	2.4	0.27	3.9
						41.1	868.9875	0.008	0.58	1.4	0.43	1.9	0.27	3.1
				HAF4014A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.001	0.51	0.3	0.38	0.4	0.24	0.6
						35.2	769.0125	0.002	0.51	0.3	0.38	0.4	0.25	0.6
						35.0	772.0000	0.001	0.51	0.3	0.39	0.4	0.25	0.6
						34.9	774.9875	0.001	0.52	0.2	0.39	0.3	0.25	0.5
						34.6	794.0125	0.004	0.53	0.8	0.40	1.0	0.25	1.6
						35.5	799.0125	0.006	0.53	1.0	0.40	1.4	0.25	2.2
					42.0	42.0	811.5000	0.010	0.54	1.9	0.41	2.6	0.25	4.1
						40.8	823.9875	0.013	0.55	2.3	0.41	3.1	0.26	5.0
						41.8	851.0125	0.011	0.57	1.9	0.43	2.5	0.26	4.0
						41.1	860.5000	0.007	0.57	1.3	0.43	1.7	0.27	2.8
						41.1	868.9875	0.011	0.58	1.8	0.43	2.5	0.27	4.0
				HAF4016A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.016	0.51	3.1	0.38	4.2	0.24	6.5
						35.2	769.0125	0.018	0.51	3.5	0.38	4.7	0.25	7.3
						35.0	772.0000	0.017	0.51	3.3	0.39	4.3	0.25	6.8
						34.9	774.9875	0.017	0.52	3.3	0.39	4.3	0.25	6.8
						34.6	794.0125	0.019	0.53	3.6	0.40	4.8	0.25	7.6
						35.5	799.0125	0.016	0.53	2.9	0.40	3.9	0.25	6.2
					42.0	42.0	811.5000	0.012	0.54	2.2	0.41	2.9	0.25	4.6
						40.8	823.9875	0.018	0.55	3.4	0.41	4.5	0.26	7.2
						41.8	851.0125	0.009	0.57	1.6	0.43	2.2	0.26	3.5
						41.1	860.5000	0.009	0.57	1.5	0.43	2.0	0.27	3.3
						41.1	868.9875	0.009	0.58	1.6	0.43	2.1	0.27	3.4

Table 11 (Continued)

MPE assessment for LMR 7/800 band - roof mounted antenna – Passenger Back

Notes:
Blue fonts: Frequencies not regulated by FCC.
Results highlight in yellow are configurations with highest percentage of limits

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	PB	E	0	HAF4017A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.030	0.51	5.8	0.38	7.8	0.24	12.1
						35.2	769.0125	0.027	0.51	5.2	0.38	7.0	0.25	10.9
						35.0	772.0000	0.028	0.51	5.5	0.39	7.3	0.25	11.5
						34.9	774.9875	0.029	0.52	5.5	0.39	7.4	0.25	11.6
						34.6	794.0125	0.028	0.53	5.4	0.40	7.1	0.25	11.3
						35.5	799.0125	0.027	0.53	5.0	0.40	6.7	0.25	10.6
					42.0	42.0	811.5000	0.021	0.54	3.8	0.41	5.1	0.25	8.1
						40.8	823.9875	0.022	0.55	3.9	0.41	5.2	0.26	8.4
						41.8	851.0125	0.012	0.57	2.1	0.43	2.8	0.26	4.6
						41.1	860.5000	0.019	0.57	3.3	0.43	4.4	0.27	7.2
						41.1	868.9875	0.012	0.58	2.0	0.43	2.7	0.27	4.4

Table 12

MPE assessment for LMR 7/800 band - trunk mounted antenna – Passenger Front

Notes:
Blue fonts: Frequencies not regulated by FCC.

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	PF	E	0	HAF4013A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.039	0.51	7.8	0.38	10.4	0.24	16.2
						35.2	769.0125	0.042	0.51	8.1	0.38	10.9	0.25	17.0
						35.0	772.0000	0.055	0.51	10.6	0.39	14.2	0.25	22.2
						34.9	774.9875	0.045	0.52	8.7	0.39	11.6	0.25	18.3
						34.6	794.0125	0.049	0.53	9.2	0.40	12.3	0.25	19.5
						35.5	799.0125	0.039	0.53	7.3	0.40	9.7	0.25	15.3
					42.0	42.0	811.5000	0.049	0.54	9.0	0.41	12.0	0.25	19.2
						40.8	823.9875	0.047	0.55	8.5	0.41	11.4	0.26	18.2
						41.8	851.0125	0.020	0.57	3.5	0.43	4.7	0.26	7.5
						41.1	860.5000	0.031	0.57	5.4	0.43	7.2	0.27	11.7
						41.1	868.9875	0.024	0.58	4.2	0.43	5.6	0.27	9.1
				HAF4014A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.022	0.51	4.3	0.38	5.7	0.24	8.9
						35.2	769.0125	0.022	0.51	4.2	0.38	5.6	0.25	8.8
						35.0	772.0000	0.031	0.51	6.0	0.39	7.9	0.25	12.5
						34.9	774.9875	0.035	0.52	6.7	0.39	9.0	0.25	14.1
						34.6	794.0125	0.046	0.53	8.7	0.40	11.6	0.25	18.3
						35.5	799.0125	0.040	0.53	7.5	0.40	9.9	0.25	15.7
					42.0	42.0	811.5000	0.062	0.54	11.4	0.41	15.2	0.25	24.2
						40.8	823.9875	0.070	0.55	12.8	0.41	17.0	0.26	27.2
						41.8	851.0125	0.050	0.57	8.8	0.43	11.8	0.26	19.0
						41.1	860.5000	0.040	0.57	7.0	0.43	9.3	0.27	15.0
						41.1	868.9875	0.037	0.58	6.3	0.43	8.5	0.27	13.8
				HAF4016A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.046	0.51	9.0	0.38	12.0	0.24	18.8
						35.2	769.0125	0.045	0.51	8.9	0.38	11.8	0.25	18.5
						35.0	772.0000	0.057	0.51	11.1	0.39	14.8	0.25	23.2
						34.9	774.9875	0.043	0.52	8.3	0.39	11.1	0.25	17.4
						34.6	794.0125	0.051	0.53	9.7	0.40	12.9	0.25	20.4
						35.5	799.0125	0.045	0.53	8.5	0.40	11.3	0.25	17.9
					42.0	42.0	811.5000	0.052	0.54	9.6	0.41	12.8	0.25	20.4
						40.8	823.9875	0.049	0.55	8.8	0.41	11.8	0.26	18.9
						41.8	851.0125	0.022	0.57	3.9	0.43	5.2	0.26	8.5
						41.1	860.5000	0.030	0.57	5.2	0.43	6.9	0.27	11.2
						41.1	868.9875	0.023	0.58	4.0	0.43	5.3	0.27	8.6

Table 12 (Continued)

MPE assessment for LMR 7/800 band - trunk mounted antenna – Passenger Front

Notes:
Blue fonts: Frequencies not regulated by FCC.
Results highlight in yellow are configurations with highest percentage of limits

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	PF	E	0	HAF4017A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.070	0.51	13.7	0.38	18.3	0.24	28.6
						35.2	769.0125	0.074	0.51	14.4	0.38	19.2	0.25	30.0
						35.0	772.0000	0.097	0.51	**18.9**	0.39	**25.2**	0.25	39.5
						34.9	774.9875	0.096	0.52	18.5	0.39	24.7	0.25	38.7
						34.6	794.0125	0.081	0.53	15.3	0.40	20.4	0.25	32.3
						35.5	799.0125	0.075	0.53	14.1	0.40	18.8	0.25	29.8
					42.0	42.0	811.5000	0.101	0.54	18.7	0.41	25.0	0.25	**39.8**
						40.8	823.9875	0.077	0.55	14.1	0.41	18.8	0.26	30.1
						41.8	851.0125	0.029	0.57	5.2	0.43	6.9	0.26	11.1
						41.1	860.5000	0.043	0.57	7.6	0.43	10.1	0.27	16.4
						41.1	868.9875	0.030	0.58	5.2	0.43	6.9	0.27	11.3

Table 13

MPE assessment for LMR 7/800 band - roof mounted antenna – Passenger Front

Notes:
Blue fonts: Frequencies not regulated by FCC.

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	PF	E	0	HAF4013A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.008	0.51	1.7	0.38	2.2	0.24	3.4
						35.2	769.0125	0.010	0.51	2.0	0.38	2.6	0.25	4.1
						35.0	772.0000	0.009	0.51	1.8	0.39	2.5	0.25	3.9
						34.9	774.9875	0.010	0.52	1.9	0.39	2.6	0.25	4.1
						34.6	794.0125	0.008	0.53	1.4	0.40	1.9	0.25	3.0
						35.5	799.0125	0.007	0.53	1.3	0.40	1.7	0.25	2.7
					42.0	42.0	811.5000	0.008	0.54	1.4	0.41	1.9	0.25	3.0
						40.8	823.9875	0.010	0.55	1.8	0.41	2.5	0.26	3.9
						41.8	851.0125	0.008	0.57	1.5	0.43	2.0	0.26	3.2
						41.1	860.5000	0.009	0.57	1.6	0.43	2.1	0.27	3.4
						41.1	868.9875	0.007	0.58	1.3	0.43	1.7	0.27	2.8
				HAF4014A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.002	0.51	0.3	0.38	0.4	0.24	0.6
						35.2	769.0125	0.002	0.51	0.3	0.38	0.4	0.25	0.7
						35.0	772.0000	0.002	0.51	0.4	0.39	0.5	0.25	0.8
						34.9	774.9875	0.002	0.52	0.3	0.39	0.4	0.25	0.6
						34.6	794.0125	0.003	0.53	0.6	0.40	0.8	0.25	1.2
						35.5	799.0125	0.004	0.53	0.7	0.40	0.9	0.25	1.4
					42.0	42.0	811.5000	0.006	0.54	1.1	0.41	1.5	0.25	2.4
						40.8	823.9875	0.008	0.55	1.5	0.41	2.0	0.26	3.2
						41.8	851.0125	0.012	0.57	2.0	0.43	2.7	0.26	4.4
						41.1	860.5000	0.011	0.57	1.8	0.43	2.5	0.27	4.0
						41.1	868.9875	0.008	0.58	1.4	0.43	1.9	0.27	3.1
				HAF4016A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.009	0.51	1.8	0.38	2.4	0.24	3.7
						35.2	769.0125	0.010	0.51	1.9	0.38	2.6	0.25	4.0
						35.0	772.0000	0.007	0.51	1.4	0.39	1.9	0.25	3.0
						34.9	774.9875	0.008	0.52	1.6	0.39	2.2	0.25	3.4
						34.6	794.0125	0.007	0.53	1.3	0.40	1.8	0.25	2.8
						35.5	799.0125	0.007	0.53	1.3	0.40	1.8	0.25	2.8
					42.0	42.0	811.5000	0.008	0.54	1.4	0.41	1.9	0.25	3.0
						40.8	823.9875	0.010	0.55	1.9	0.41	2.5	0.26	4.1
						41.8	851.0125	0.008	0.57	1.4	0.43	1.9	0.26	3.1
						41.1	860.5000	0.008	0.57	1.4	0.43	1.9	0.27	3.1
						41.1	868.9875	0.007	0.58	1.2	0.43	1.6	0.27	2.5

Table 13 (Continued)

MPE assessment for LMR 7/800 band - roof mounted antenna – Passenger Front

Notes:
Blue fonts: Frequencies not regulated by FCC.
Results highlight in yellow are configurations with highest percentage of limits

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/ cm^2)	FCC Limit	% To FCC Spec Limit	ICNIRP Limit	% To ICNIRP Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	PF	E	0	HAF4017A, 1/4 Wave, (762-870MHz)	36.0	35.2	762.0125	0.018	0.51	3.5	0.38	4.7	0.24	7.4
						35.2	769.0125	0.018	0.51	3.4	0.38	4.6	0.25	7.2
						35.0	772.0000	0.017	0.51	3.3	0.39	4.4	0.25	6.9
						34.9	774.9875	0.015	0.52	2.8	0.39	3.8	0.25	5.9
						34.6	794.0125	0.015	0.53	2.8	0.40	3.7	0.25	5.9
						35.5	799.0125	0.012	0.53	2.3	0.40	3.0	0.25	4.8
					42.0	42.0	811.5000	0.011	0.54	2.1	0.41	2.8	0.25	4.4
						40.8	823.9875	0.017	0.55	3.0	0.41	4.0	0.26	6.4
						41.8	851.0125	0.012	0.57	2.1	0.43	2.8	0.26	4.5
						41.1	860.5000	0.011	0.57	2.0	0.43	2.6	0.27	4.3
						41.1	868.9875	0.009	0.58	1.5	0.43	2.0	0.27	3.3

16.2 MPE Test Results for Bluetooth and WLAN

Antenna PMAN5100A and PMAN5101A was intended for mounting on the windshield of the vehicle. These antennas should be installed close to the top, and on the front windshield only. Antennas AN000163A01 and AN000163A05 support WLAN 2.4 GHz / 5 GHz should be installed at roof or trunk of the vehicle. WLAN 2.4 GHz and 5 GHz will not transmit simultaneously.

MPE calculation was use to determine power density for these transmitters due to lower power. According to FCC's OET Bulletin 65 Edition 97-01 Section 2, calculations can be made to predict RF field strength and power density levels around typical RF sources. Equation (5) is generally accurate in far-field of an antenna.

Equation 5 – Power Density Calculation

$$S = \frac{P_t G}{4\Pi d^2} F$$

Equation (5) accounts for the maximum duty cycle of the signal, and the factor, F, to provide a worst-case prediction of power density per FCC OET Bulletin 65, Edition 97-01 1997.

Where: S = power density
P_t = maximum output power scaled by the maximum duty cycle of the signal
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
d = distance from antenna
F = Enhancement factor [1 or 2.56 for predicting ground-level field strength]

Table 14 summarized the MPE calculation for each standalone transmitter bands, Bluetooth and WLAN.

Table 14

Antenna #	Max Power (W)	Duty Cycle (%)	Tx Frequency (MHz)	Antenna Gain (dBi)	Cable Loss, L (dB)	Dist., d (cm)	Enhance Factor, F	Max Calc. MPE (mW/cm^2)	MPE Spec Limit (mW/cm^2)					
									FCC	% To FCC Spec Limit	ICNIRP	% To ICNIRP Spec Limit	ISED limit	% To ISED Spec Limit
WLAN 2.4 GHz														
AN000163A01	0.040	100%	2412.0	3.50	0.00	20	1.00	0.018	1.00	1.77	1.00	1.77	0.54	3.30
AN000163A01	0.040	100%	2437.0	3.50	0.00	20	1.00	0.018	1.00	1.77	1.00	1.77	0.54	3.28
AN000163A01	0.040	100%	2462.0	3.50	0.00	20	1.00	0.018	1.00	1.77	1.00	1.77	0.54	3.26
AN000163A05	0.040	100%	2412.0	2.50	0.00	20	1.00	0.014	1.00	1.41	1.00	1.41	0.54	2.62
AN000163A05	0.040	100%	2437.0	2.50	0.00	20	1.00	0.014	1.00	1.41	1.00	1.41	0.54	2.61
AN000163A05	0.040	100%	2462.0	2.50	0.00	20	1.00	0.014	1.00	1.41	1.00	1.41	0.54	2.59
PMAN5100A	0.040	100%	2412.0	3.00	0.00	20	1.00	0.016	1.00	1.58	1.00	1.58	0.54	2.94
PMAN5100A	0.040	100%	2437.0	3.00	0.00	20	1.00	0.016	1.00	1.58	1.00	1.58	0.54	2.92
PMAN5100A	0.040	100%	2462.0	3.00	0.00	20	1.00	0.016	1.00	1.58	1.00	1.58	0.54	2.90
PMAN5101A	0.040	100%	2412.0	2.70	0.00	20	1.00	0.015	1.00	1.47	1.00	1.47	0.54	2.75
PMAN5101A	0.040	100%	2437.0	2.70	0.00	20	1.00	0.015	1.00	1.47	1.00	1.47	0.54	2.73
PMAN5101A	0.040	100%	2462.0	2.70	0.00	20	1.00	0.015	1.00	1.47	1.00	1.47	0.54	2.71
WLAN 5 GHz														
AN000163A01	0.016	100%	5180.0	3.30	0.00	20	1.00	0.007	1.00	0.67	1.00	0.67	0.90	0.75
AN000163A01	0.016	100%	5502.5	3.30	0.00	20	1.00	0.007	1.00	0.67	1.00	0.67	0.94	0.71
AN000163A01	0.016	100%	5825.0	3.30	0.00	20	1.00	0.007	1.00	0.67	1.00	0.67	0.98	0.69
AN000163A05	0.016	100%	5180.0	1.60	0.00	20	1.00	0.005	1.00	0.46	1.00	0.46	0.90	0.50
AN000163A05	0.016	100%	5502.5	1.60	0.00	20	1.00	0.005	1.00	0.46	1.00	0.46	0.94	0.48
AN000163A05	0.016	100%	5825.0	1.60	0.00	20	1.00	0.005	1.00	0.46	1.00	0.46	0.98	0.46
PMAN5101A	0.016	100%	5180.0	0.20	0.00	20	1.00	0.003	1.00	0.33	1.00	0.33	0.90	0.36
PMAN5101A	0.016	100%	5502.5	0.20	0.00	20	1.00	0.003	1.00	0.33	1.00	0.33	0.94	0.35
PMAN5101A	0.016	100%	5825.0	0.20	0.00	20	1.00	0.003	1.00	0.33	1.00	0.33	0.98	0.34
Bluetooth 2.4 GHz														
AN000163A01	0.011	100%	2402.0	3.50	0.00	20	1.00	0.005	1.00	0.50	1.00	0.50	0.54	0.93
AN000163A01	0.011	100%	2441.0	3.50	0.00	20	1.00	0.005	1.00	0.50	1.00	0.50	0.54	0.92
AN000163A01	0.011	100%	2480.0	3.50	0.00	20	1.00	0.005	1.00	0.50	1.00	0.50	0.55	0.91
AN000163A05	0.011	100%	2402.0	2.50	0.00	20	1.00	0.004	1.00	0.40	1.00	0.40	0.54	0.74
AN000163A05	0.011	100%	2441.0	2.50	0.00	20	1.00	0.004	1.00	0.40	1.00	0.40	0.54	0.73
AN000163A05	0.011	100%	2480.0	2.50	0.00	20	1.00	0.004	1.00	0.40	1.00	0.40	0.55	0.73
PMAN5100A	0.011	100%	2402.0	3.00	0.00	20	1.00	0.004	1.00	0.45	1.00	0.45	0.54	0.83
PMAN5100A	0.011	100%	2441.0	3.00	0.00	20	1.00	0.004	1.00	0.45	1.00	0.45	0.54	0.82
PMAN5100A	0.011	100%	2480.0	3.00	0.00	20	1.00	0.004	1.00	0.45	1.00	0.45	0.55	0.81
PMAN5101A	0.011	100%	2402.0	2.70	0.00	20	1.00	0.004	1.00	0.42	1.00	0.42	0.54	0.78
PMAN5101A	0.011	100%	2441.0	2.70	0.00	20	1.00	0.004	1.00	0.42	1.00	0.42	0.54	0.77
PMAN5101A	0.011	100%	2480.0	2.70	0.00	20	1.00	0.004	1.00	0.42	1.00	0.42	0.55	0.76

Notes:
1) Distance from antenna (d), 20cm for more conservative estimation.
2) Cable loss (L), all cable loss include in antenna gain, so should be 0 dB.
3) Enhancement Factor (F), 1 (Ground reflection already factor in during antenna characterization)

16.3 Simultaneous Transmission

LMR bands can transmit simultaneously with Bluetooth or WLAN 2.4 GHz or WLAN 5 GHz. Bluetooth and WLAN 2.4 GHz or WLAN 5 GHz transmitters cannot transmit at the same time.

The highest percentage of limit for each standalone transmitters indicated in Table 15.

Table 15

Transmitters	Frequency Band (MHz)	Highest Percentage of Limit (%)		
		Passenger, Front Seat (PF)	Passenger, Back Seat (PB)	Bystander (BS)
FCC US				
LMR 7/800	769-775; 799-824; 851-869	18.9 %	23.6 %	23.2 %
Bluetooth	2402 - 2480	0.50 %	0.50 %	0.50 %
WLAN 2.4 GHz	2412 - 2462	1.77 %	1.77 %	1.77 %
WLAN 5 GHz	5180 - 5825	0.67 %	0.67 %	0.67 %
ISED Canada				
LMR 7/800	769-775; 799-824; 851-869	39.8 %	49.8 %	50.0 %
Bluetooth	2402 - 2480	0.93 %	0.93 %	0.93 %
WLAN 2.4 GHz	2412 - 2462	3.30 %	3.30 %	3.30 %
WLAN 5 GHz	5180 - 5825	0.75 %	0.75 %	0.75 %
ICNIRP				
LMR 7/800	762 – 805; 806 -870	25.2 %	31.5 %	30.9 %
Bluetooth	2402 - 2480	0.50 %	0.50 %	0.50 %
WLAN 2.4 GHz	2412 - 2462	1.77 %	1.77 %	1.77 %
WLAN 5 GHz	5180 - 5825	0.67 %	0.67 %	0.67 %

Per KDB 447498 D01, simultaneous transmission MPE test exclusion applies when the sum of MPE ratios for all simultaneous transmitting antennas incorporated in a host device is ≤ 1.0, according to calculated/estimated, numerically modeled, or measured field strengths or power density.

Calculated Maximum Power density for WLAN 2.4 GHz is greater than WLAN 5 GHz and Bluetooth. WLAN 2.4 GHz, WLAN 5 GHz and Bluetooth transmitters cannot transmit at the same time. Thus, WLAN 2.4 GHz will be used to evaluate simultaneous transmission test exclusion. The highest combined power density percentage for simultaneous transmission indicated in Table 16.

Table 16

Designator	Simultaneous Transmission Scenario	Highest Combined Percentage of Limit (%)		
		Passenger, Front Seat (PF)	Passenger, Back Seat (PB)	Bystander (BS)
FCC	LMR 7/800 and WLAN	20.7 %	25.4 %	25.0 %
ISED Canada	LMR 7/800 and WLAN	43.1 %	53.1 %	53.3 %
ICNIRP	LMR 7/800 and WLAN	27.0 %	33.3 %	32.7 %

17.0 Conclusion

The assessments for this device were performed with an output power range as indicated in section 16.1 (for LMR) and 16.2 (for BT/WLAN). The maximum allowable output power is equal to the upper limit of the final test factory transmit power specification listed in Table 6. The highest power density results for LMR and BT/WLAN transmitters scaled to maximum allowable power output are indicated in Table 17 and 18 for internal/passenger to the vehicle, and external/bystander to the vehicle.

Table 17: Maximum MPE RF Exposure Summary (LMR)

Designator	Transmitters	Frequency Band (MHz)	Passenger (mW/cm²)	Bystander (mW/cm²)
FCC	LMR 7/800	769-775; 799-824; 851-869	0.126	0.132
ISED Canada	LMR 7/800	769-775; 799-824; 851-869	0.126	0.132
ICNIRP	LMR 7/800	762 – 805; 806 -870	0.126	0.132

Table 18: Maximum MPE RF Exposure Summary (BT/WLAN)

Designator	Transmitters	Frequency Band (MHz)	Passenger (mW/cm²)	Bystander (mW/cm²)
FCC / ISED Canada / ICNIRP	Bluetooth	2402 – 2480	0.005	0.005
	WLAN	2412-2462	0.018	0.018
	WLAN	5180-5825	0.007	0.007

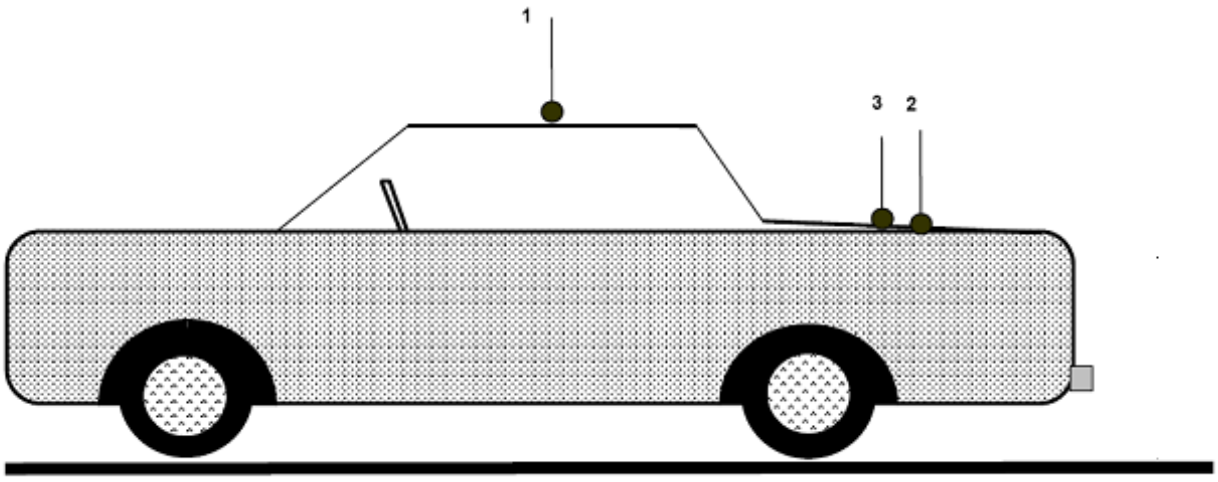
These MPE results herein demonstrate compliance to the FCC, ISED Canada and ICNIRP Occupational/Controlled Exposure limit. FCC rules require compliance for Passengers and Bystanders to the FCC General Population/Uncontrolled limits.

18.0 User Instructions Considerations

In order to facilitate the task of professional users, the Safety Manual for this radio requires that bystanders be kept at least 2 ft (60 cm) from the vehicle Body.

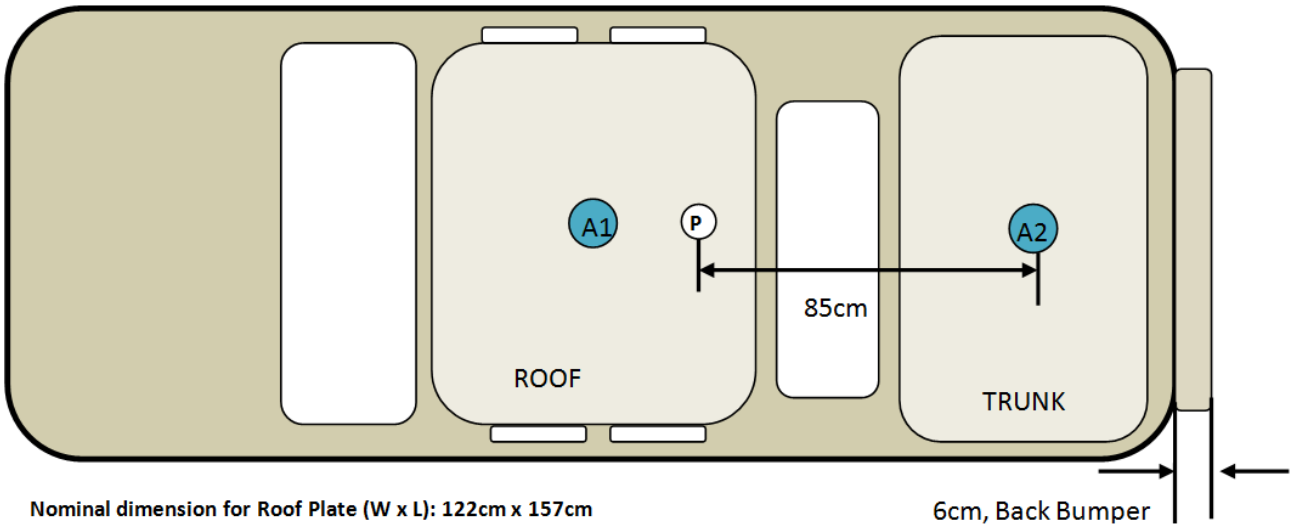
Appendix A - Antenna Locations, Test Distances, and Cable Losses

Antenna locations



1. Roof (20cm from center)
2. Trunk (85cm from back of the back seat)
3. Trunk (center)

Passenger Antenna mounting (7/800 band)



Nominal dimension for Roof Plate (W x L): 122cm x 157cm

Nominal dimension for Trunk Plate (W x L): 138cm x 72cm

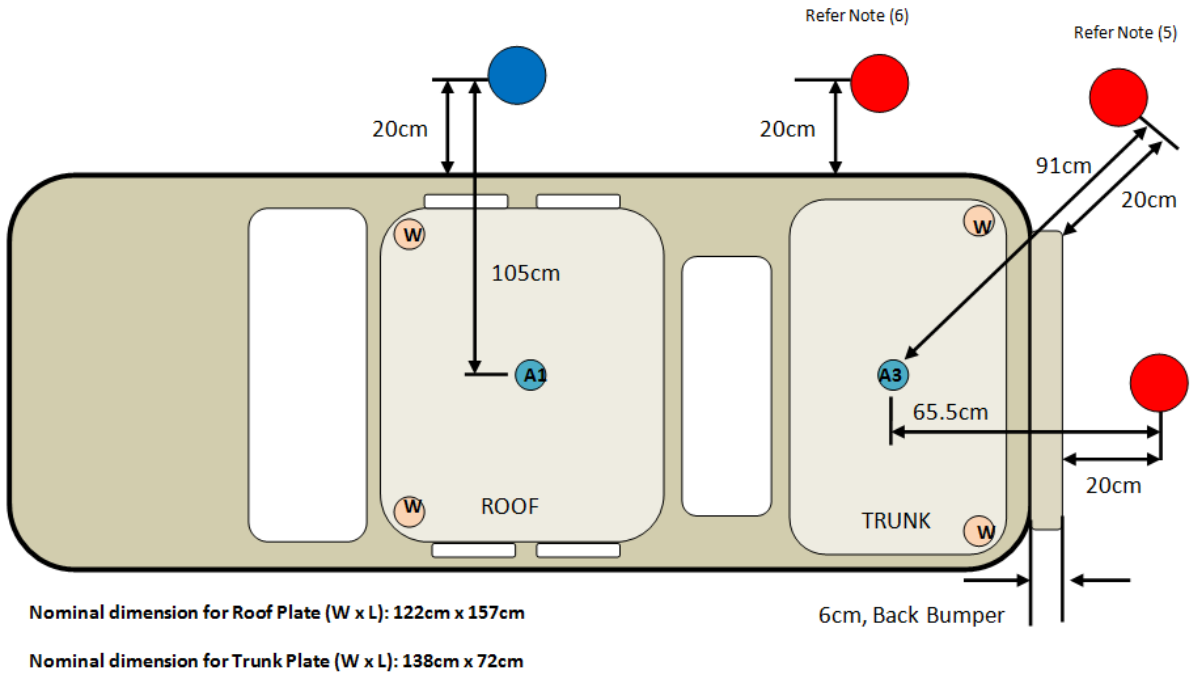
Notes:

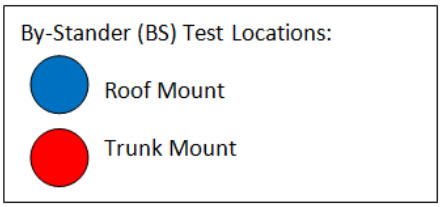
1.) Antenna location A1: APX mobile radio roof antenna mounting locations for passenger back and front testing (7/800 band)

2.) Antenna location A2: APX mobile trunk antenna mounting locations for passenger back and front testing (7/800 band)

3.) Total distance between trunk mount antenna and rear passenger is 85cm

Bystander Antenna mounting (7/800 band)

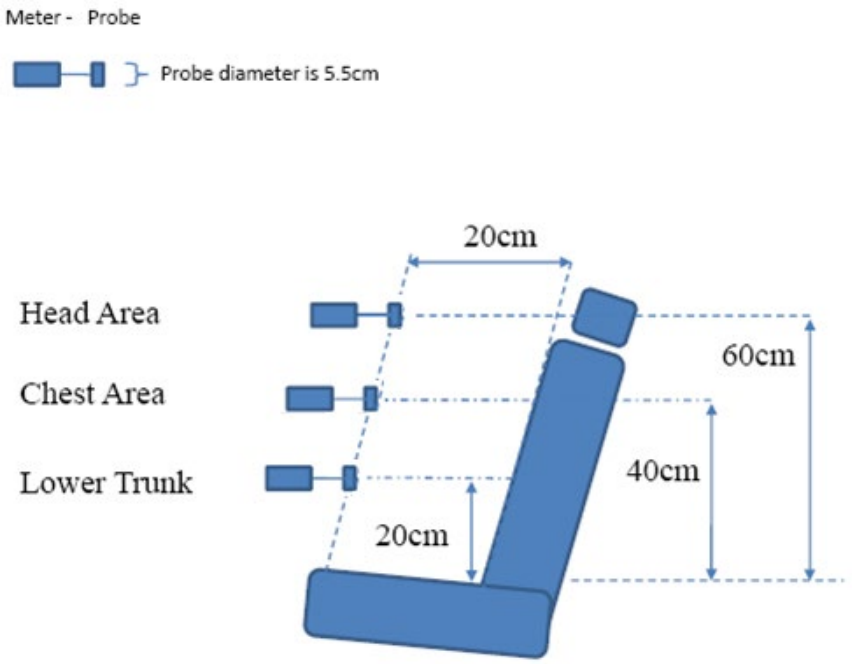




Notes:

1.) Antenna location A1: LMR antennas roof mount for bystander testing
2.) Antenna location A3: LMR antennas trunk mount for bystander testing
3.) Antenna location W: Total 4 locations identified for WLAN antenna roof/trunk mounting.
4.) Total distance between Bystanders from the centered-trunk mount antenna is 60cm and 65.5cm at bumper to maintain a minimum 20cm separation between probe sensor to the vehicle body.
5.) Total distance between Bystander 45 degree angle from the centered-trunk mount antenna is 91cm to maintain a minimum 20cm separation between probe sensor to the vehicle body.
6.) Total distance between Bystander 90 degree angle from the centered-trunk mount antenna is 60cm (by moving antenna location A3 42cm from center of the trunk)

Seat scan areas
(Applicable to both front and back seats)



Cable Losses

Test Cable

Teflon RG58A/U Loss Per 100 Feet

160 MHz - 5 dB

450 MHz - 9 dB

1 GHz - 13.8 dB

Customer Cable

RG-58A/U Loss Per 100 Feet (For LMR)

136 MHz – 5.5 dB

450 MHz – 9.6 dB

900 MHz – 13.9 dB

PFP 240 Loss Per 100 Feet (For BT/WLAN)

2500 MHz - 12.9 dB

5800 MHz -20.4 dB

Appendix B - Probe Calibration Certificates

Service Test Report
QAF 1126, 03/11
Report ID: 125391

ETS·LINDGREN™
An ESCO Technologies Company
1301 Arrow Point Drive
Cedar Park, Texas 78613
(512) 531-6400

ETS·LINDGREN
An ESCO Technologies Company
Tracking # S000043311
Equipment Check
Attested by QC Date: 02-Jul-18
www.ets-lindgren.com

Certificate of Test Conformance

Page 1 of 1

Reference: S 000043311

Customer: Motorola Solutions Malaysia Sdn. Bhd. - 2A, Medan Bayan Lepas, Baymen Lepas Technoplex, 11900 Bayan Lupas, Pulau Pinang, Malaysia

The instrument listed below has been tested and verified to Internal Quality Standards. Test data is Attached. Equipment used during instrument testing is controlled by laboratory compliance with ISO/IEC 17025-2005 and ANSI/NCSL Z540-1-1994 using ETS-Lindgren Quality Management System internal procedures.

Manufacturer	ETS-Lindgren	**Status In**	In Tolerance
Instrument Type	RF Survey Meter	**Date Completed**	02-Jul-18
Model	HI-2200	**Status Out**	Compliant with Internal Quality Standards
Serial Number/ID	00086316		

Remarks
Tested with customer E100 00206767 and customer H200 00206937.

I would like to take this opportunity to express our appreciation for using ETS-Lindgren for your EMI test equipment services and I am looking forward to continued business with your organization. Please feel free to contact our offices at (512) 531-6400, if you have any questions regarding this report.

Sincerely,

George Cisneros
Calibration Supervisor

Date Attested: 02-Jul-18

ETS-LINDGREN
An ESCO Technologies Company
1301 Arrow Point Drive
Cedar Park, Texas 78613
(512) 531-6400

ETS-LINDGREN
Track# S000043311 Ltd Cal ☐
By SS Dat 02-Jul-18
Next Cal Due
www.ets-lindgren.com

Cert I.D.: 125390

Certificate of Calibration Conformance

The instrument identified below has been individually calibrated in compliance with the following standard(s):

IEEE 1309 - 2013, Institute of Electrical and Electronics Engineers, Standard for Calibration of Electromagnetic Field Sensors and Probes, Excluding Antennas from 9 kHz to 40 GHz

Environment: Laboratory MTE is maintained in a temperature controlled environment with ambient conditions from 18 to 28 C, relative humidity less than 90%. The instrument under test has been calibrated in a suitable environment using an EMCO TEM Cell 5101C, GTEM 5305/5402 and an RF Shielded EMC Chamber which is conducive to maintaining accurate and reliable measurement quality.

Manufacturer:	ETS-Lindgren	**Operating Range:**	100kHz - 5GHz
Model Number:	E100	**Instrument Type:**	Isotropic Probe > 1 GHz
Serial Number/ ID:	*00206767*	**Date Code:**	
Tracking Number:	**S 000043311**	**Alternate ID:**	
Date Completed:	02-Jul-18	**Customer:**	Motorola Solutions Malaysia Sdn. Bhd. - 2A, Medan Bayan Lepas, Baymen Lepas Technoplex, 11900 Bayan Lupas, Pulau Pinang, Malaysia
Test Type:	Standard Field, Field Strength		

Calibration Uncertainty: Std Field Method 100kHz - 6 GHz, +/-0.64 dB, Linearity +/- 0.95 dB, Isotropicity +/- 0.86

k=2, (95% Confidence Level)

Test Remarks: Probe received in tolerance thus before and after data are the same. Additional data points included as per customer request. Tested with customer HI-2200 00086316.

Calibration Traceability: All Measuring and Test Equipment (M/TE) identified below are traceable to the SI units through the National Institute for Standards and Technology (NIST) or other recognized National Metrology Institute. Calibration Laboratory and Quality System controls are compliant with ISO/IEC 17025-2005 and ANSI/NCSL Z540-1-1994.

Standards and Equipment Used:

Make / Model / Name / S/N / Recall Date				
HP	8648C	Signal Generator	3836U02236	16-Mar-19
Keysight	E9304A	Power Sensor	MY56100039	16-Mar-19
Hewlett Packard	E4422B	Signal Generator	US40050591	09-Aug-18
Agilent	E4419B	Power Meter	MY45104171	27-Jan-19
Rohde & Schwarz	SMB 100A	Signal Generator	101558	13-Sep-18
Agilent	E9304A	Power Sensor	MY41499013	16-Mar-19
Agilent	E9304A	Power Sensor	MY41499012	16-Mar-19
Rohde & Schwarz	NRP-Z91	Power Sensor	100733	28-Jan-19
Agilent	E4419B	Power Meter	MY40510693	27-Jan-19
Rohde & Schwarz	NRP-Z21	Power Sensor	100525	06-Sep-18
Rohde & Schwarz	NRV-Z55	Thermal Power Sensor	100354	14-Nov-18
Rohde & Schwarz	NRP-Z11	Power Sensor	108043	24-Jan-19
Marconi	2024	Signal Generator	112343/043	06-Apr-19
Rohde & Schwarz	NRVD	Power Meter	100451	06-Sep-18
Hewlett Packard	83650L	Synthesized Sweep Gen	3844A00422	20-Dec-18
Hewlett Packard	E4419B	Power Meter	US39250717	10-Aug-18
Keysight	E9304A	Power Sensor	MY56100005	16-Mar-19
Rohde & Schwarz	NRV-Z55	Thermal Power Sensor	100037	06-Sep-18
Rohde & Schwarz	NRV-Z55	Thermal Power Sensor	100363	14-Nov-18

Condition of Instrument
Upon Receipt:
In Tolerance to Internal Quality Standards

On Release:
In Tolerance to Internal Quality Standards

Calibration Completed By
Shawn Schmitt, Calibration Technician

Attested and Issued on 02-Jul-18
George Cisneros, Calibration Supervisor

CALIBRATION REPORT

Electric Field Sensor

Model	*S/N*
E100	00206767
HI-2200	00086316

Date: 02 Jul 2018

New Instrument
_ Other
_ Out of Tolerance
X Within Tolerance

Frequency Response

Frequency Response		*Nominal Field*	*Cal Factor**	*Deviation*
	MHz	*V/m*	(Eapplied/Eindicated)	*dB*
1	1	20	1.05	-0.42
2	15	20	0.98	0.15
3	30	20	0.99	0.13
4	75	20	0.99	0.10
5	100	20	0.99	0.05
6	150	20	0.99	0.07
7	200	20	0.98	0.15
8	250	20	0.98	0.15
9	300	20	0.97	0.25
10	400	20	1.04	-0.33
11	500	20	0.93	0.65
12	600	20	0.93	0.67
13	700	20	0.98	0.21
14	800	20	1.00	0.03
15	900	20	1.03	-0.22
16	1000	20	1.01	-0.10
17	2000	20	1.05	-0.41
18	2450	20	1.04	-0.37
19	3000	20	1.07	-0.61
20	3500	20	1.02	-0.20
21	4000	20	1.03	-0.23
22	4500	20	1.10	-0.81
23	5000	20	1.34	-2.57
24	5500	20	1.49	-3.45
25	6000	20	1.49	-3.48

* Corrected electric field values (V/m) can be obtained by multiplying the Cal Factor with the indicated E field readings.

Linearity

maximum linearity deviation is 0.58 dB

(measurements taken from 0.3 V/m to 800 V/m at 27.12 MHz)

Test Conditions

Calibration performed at ambient room temperature: 23 ±3°C

Page 2 of 3

ETS·LINDGREN
An ESCO Technologies Company

PROBE ROTATIONAL RESPONSE

Model	E100
S/N	00206767
Report	S000043311
Date	Date of Calibration 02 July 2018
Time	03:24:41 PM
Isotropy *	+ 0.177 dB/ -0.177 dB

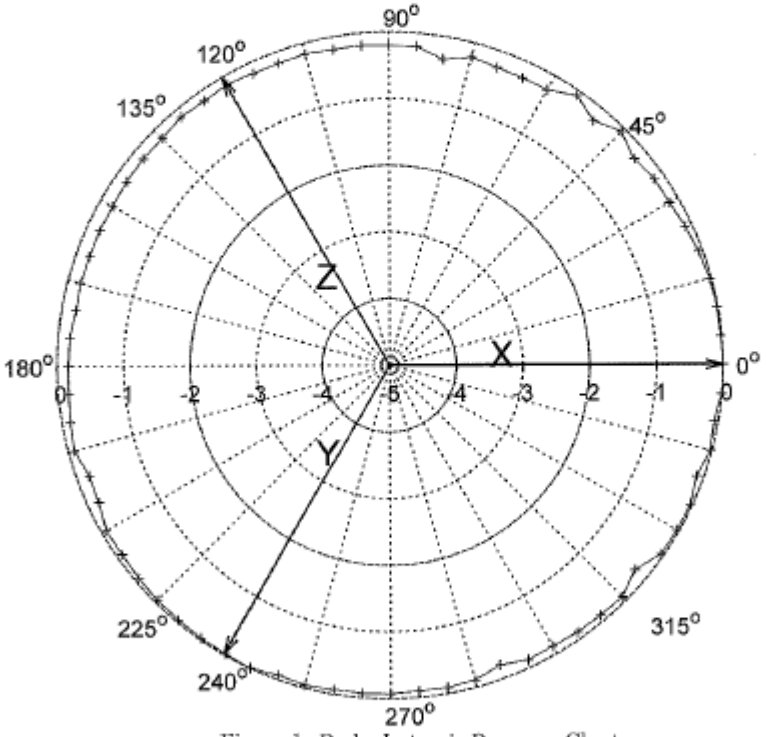


Figure 1: Probe Isotropic Response Chart.

Isotropic response is measured in a 20 V/m field at 400 MHz
*Isotropy is the maximum deviation from the geometric mean as defined by IEEE 1309-2013.

Page 3 of 3

Appendix C - Photos of Assessed Antennas

(Refer to Exhibit 7B)

Appendix D - MPE Measurement Results

Table D.1

MPE measurement data for Bystander

D.U.T. Info.							Probe Info.			MPE Measurements													
										Bystander (BS) Positions													
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	BS	0.018	0.045	0.029	0.134	0.314	0.552	0.37	0.206	0.125	0.073	0.5	0.184	0.092	0.094
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	BS	0.017	0.047	0.031	0.124	0.309	0.56	0.354	0.202	0.124	0.071	0.5	0.182	0.091	0.093
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	BS	0.014	0.046	0.032	0.107	0.3	0.551	0.382	0.23	0.107	0.089	0.5	0.184	0.092	0.094
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	BS	0.02	0.05	0.034	0.118	0.355	0.604	0.389	0.213	0.109	0.079	0.5	0.195	0.098	0.101
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	BS	0.015	0.048	0.024	0.096	0.312	0.59	0.492	0.247	0.133	0.087	0.5	0.204	0.102	0.106
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	BS	0.018	0.04	0.019	0.096	0.304	0.504	0.492	0.274	0.142	0.078	0.5	0.197	0.098	0.100
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	BS	0.021	0.031	0.011	0.136	0.322	0.514	0.54	0.318	0.155	0.092	0.5	0.215	0.108	0.108
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	BS	0.025	0.027	0.026	0.167	0.385	0.524	0.483	0.259	0.169	0.122	0.5	0.222	0.111	0.114
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.012	0.008	0.038	0.184	0.249	0.473	0.47	0.174	0.076	0.053	0.5	0.179	0.090	0.090
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	BS	0.015	0.013	0.048	0.163	0.242	0.609	0.447	0.197	0.082	0.055	0.5	0.194	0.097	0.099
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	BS	0.013	0.015	0.04	0.132	0.282	0.556	0.363	0.164	0.064	0.029	0.5	0.173	0.086	0.088

MPE calculations are defined in section 14.0.

Table D.1 (Continued)

MPE measurement data for Bystander

D.U.T. Info.							Probe Info.			MPE Measurements													
										Bystander (BS) Positions													
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	BS	0.001	0.008	0.009	0.015	0.047	0.497	0.693	0.165	0.061	0.098	0.5	0.157	0.078	0.080
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	BS	0.002	0.008	0.009	0.014	0.044	0.495	0.684	0.159	0.061	0.093	0.5	0.155	0.077	0.079
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	BS	0.002	0.007	0.009	0.005	0.036	0.498	0.709	0.16	0.05	0.101	0.5	0.156	0.078	0.080
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	BS	0.002	0.009	0.006	0.01	0.053	0.578	0.777	0.142	0.044	0.084	0.5	0.169	0.084	0.087
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	BS	0.001	0.003	0.002	0.003	0.081	0.652	0.87	0.225	0.013	0.043	0.5	0.189	0.094	0.098
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	BS	0.001	0.005	0.001	0.004	0.084	0.58	0.802	0.223	0.01	0.024	0.5	0.173	0.087	0.088
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	BS	0.002	0.01	0.008	0.01	0.139	0.592	0.826	0.219	0.014	0.028	0.5	0.186	0.093	0.093
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	BS	0.01	0.019	0.007	0.065	0.215	0.691	0.83	0.285	0.055	0.058	0.5	0.227	0.113	0.117
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.01	0.01	0.02	0.164	0.299	0.454	0.662	0.495	0.262	0.164	0.5	0.262	0.131	0.132
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	BS	0.006	0.009	0.032	0.139	0.272	0.334	0.658	0.473	0.255	0.169	0.5	0.243	0.122	0.124
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	BS	0.008	0.009	0.044	0.134	0.306	0.368	0.695	0.446	0.231	0.216	0.5	0.256	0.128	0.131

MPE calculations are defined in section 14.0.

Table D.1 (Continued)

MPE measurement data for Bystander

D.U.T. Info.							Probe Info.			MPE Measurements													
										Bystander (BS) Positions													
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	762.0125	36.0	35.2	CW	E	0.98	BS	0.015	0.047	0.043	0.151	0.374	0.683	0.445	0.229	0.117	0.075	0.5	0.215	0.107	0.110
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	769.0125	36.0	35.2	CW	E	0.99	BS	0.017	0.045	0.044	0.144	0.375	0.684	0.436	0.225	0.118	0.073	0.5	0.213	0.107	0.109
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	772.0000	36.0	35.0	CW	E	0.99	BS	0.015	0.048	0.047	0.112	0.343	0.655	0.456	0.241	0.103	0.08	0.5	0.208	0.104	0.107
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	774.9875	36.0	34.9	CW	E	0.99	BS	0.018	0.05	0.04	0.134	0.386	0.664	0.469	0.219	0.112	0.074	0.5	0.214	0.107	0.111
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	794.0125	36.0	34.6	CW	E	1.00	BS	0.015	0.044	0.026	0.098	0.364	0.671	0.555	0.271	0.12	0.086	0.5	0.224	0.112	0.117
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	799.0125	36.0	35.5	CW	E	1.00	BS	0.016	0.041	0.025	0.101	0.355	0.599	0.571	0.295	0.122	0.064	0.5	0.219	0.109	0.111
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	811.5000	42.0	42.0	CW	E	1.01	BS	0.012	0.03	0.009	0.103	0.299	0.482	0.48	0.265	0.128	0.067	0.5	0.189	0.094	0.094
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	823.9875	42.0	40.8	CW	E	1.01	BS	0.014	0.023	0.01	0.118	0.302	0.44	0.441	0.212	0.136	0.08	0.5	0.180	0.090	0.093
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.008	0.003	0.021	0.129	0.204	0.399	0.405	0.155	0.06	0.038	0.5	0.147	0.073	0.074
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	860.5000	42.0	41.1	CW	E	1.04	BS	0.009	0.008	0.027	0.112	0.211	0.503	0.405	0.187	0.063	0.045	0.5	0.163	0.081	0.083
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	868.9875	42.0	41.1	CW	E	1.04	BS	0.004	0.006	0.026	0.099	0.198	0.444	0.321	0.143	0.045	0.019	0.5	0.136	0.068	0.069

MPE calculations are defined in section 14.0.

Table D.1 (Continued)

MPE measurement data for Bystander

D.U.T. Info.							Probe Info.			MPE Measurements													
										Bystander (BS) Positions													
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	BS	0.021	0.058	0.058	0.204	0.546	0.734	0.146	0.021	0.054	0.038	0.5	0.185	0.093	0.095
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	BS	0.02	0.06	0.058	0.202	0.551	0.744	0.153	0.023	0.057	0.037	0.5	0.188	0.094	0.096
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	BS	0.02	0.063	0.061	0.171	0.521	0.708	0.147	0.015	0.051	0.045	0.5	0.178	0.089	0.092
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	BS	0.019	0.055	0.049	0.169	0.568	0.743	0.156	0.016	0.046	0.041	0.5	0.184	0.092	0.095
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	BS	0.02	0.056	0.037	0.138	0.549	0.766	0.204	0.022	0.059	0.068	0.5	0.191	0.096	0.100
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	BS	0.018	0.057	0.035	0.126	0.536	0.706	0.225	0.027	0.053	0.062	0.5	0.184	0.092	0.093
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	BS	0.017	0.043	0.019	0.122	0.468	0.578	0.183	0.034	0.058	0.052	0.5	0.158	0.079	0.079
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	BS	0.017	0.037	0.011	0.153	0.454	0.579	0.199	0.031	0.072	0.068	0.5	0.164	0.082	0.085
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.01	0.007	0.017	0.16	0.311	0.493	0.197	0.011	0.025	0.044	0.5	0.131	0.066	0.066
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	BS	0.007	0.008	0.023	0.146	0.321	0.56	0.184	0.009	0.025	0.041	0.5	0.137	0.069	0.070
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	BS	0.005	0.005	0.02	0.11	0.265	0.479	0.136	0.009	0.015	0.024	0.5	0.111	0.056	0.057
	45 Degree																						
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.003	0.01	0.036	0.102	0.148	0.156	0.105	0.103	0.121	0.086	0.5	0.090	0.045	0.045
	90 Degree																						
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.004	0.018	0.027	0.157	0.242	0.376	0.612	0.313	0.16	0.104	0.5	0.208	0.104	0.104

MPE calculations are defined in section 14.0.

Table D.1 (Continued)

MPE measurement data for Bystander

D.U.T. Info.							Probe Info.			MPE Measurements														
										Bystander (BS) Positions														
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	BS	0.003	0.012	0.011	0.015	0.028	0.066	0.094	0.221	0.251	0.186	0.5	0.087	0.044	0.045
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	BS	0.003	0.012	0.011	0.014	0.027	0.066	0.095	0.225	0.25	0.186	0.5	0.088	0.044	0.045
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	BS	0.005	0.015	0.012	0.015	0.033	0.067	0.097	0.262	0.27	0.183	0.5	0.095	0.047	0.049
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	BS	0.004	0.012	0.012	0.011	0.032	0.059	0.078	0.248	0.281	0.207	0.5	0.093	0.047	0.048
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	BS	0.009	0.011	0.011	0.012	0.031	0.051	0.105	0.301	0.277	0.225	0.5	0.103	0.051	0.054
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	BS	0.007	0.013	0.012	0.014	0.021	0.049	0.135	0.325	0.314	0.196	0.5	0.109	0.054	0.055
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	BS	0.005	0.007	0.007	0.013	0.026	0.056	0.109	0.233	0.263	0.215	0.5	0.094	0.047	0.047
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	BS	0.005	0.005	0.007	0.015	0.018	0.054	0.116	0.227	0.356	0.266	0.5	0.108	0.054	0.056
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.005	0.004	0.005	0.019	0.021	0.048	0.083	0.206	0.238	0.212	0.5	0.087	0.043	0.044
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	BS	0.003	0.004	0.008	0.022	0.023	0.039	0.1	0.231	0.307	0.241	0.5	0.101	0.051	0.052
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	BS	0.003	0.003	0.007	0.017	0.02	0.041	0.088	0.218	0.255	0.214	0.5	0.090	0.045	0.046

MPE calculations are defined in section 14.0.

Table D.1 (Continued)

MPE measurement data for Bystander

D.U.T. Info.							Probe Info.			MPE Measurements													
										Bystander (BS) Positions													
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	BS	0.001	0.001	0.002	0.005	0.004	0.006	0.012	0.156	0.379	0.235	0.5	0.079	0.039	0.040
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	BS	0.001	0.001	0.002	0.005	0.004	0.006	0.012	0.148	0.373	0.238	0.5	0.078	0.039	0.040
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	BS	0.002	0.001	0.003	0.004	0.006	0.005	0.021	0.204	0.455	0.26	0.5	0.095	0.048	0.049
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	BS	0.001	0.001	0.003	0.002	0.004	0.002	0.017	0.212	0.474	0.312	0.5	0.102	0.051	0.052
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	BS	0.001	0.001	0.002	0.001	0.008	0.011	0.044	0.32	0.451	0.276	0.5	0.111	0.056	0.058
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	BS	0.001	0.001	0.003	0.002	0.006	0.005	0.081	0.442	0.577	0.308	0.5	0.143	0.071	0.072
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	BS	0.003	0.001	0.003	0.001	0.011	0.022	0.087	0.329	0.409	0.28	0.5	0.115	0.058	0.058
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	BS	0.003	0.003	0.002	0.006	0.01	0.034	0.127	0.306	0.346	0.278	0.5	0.113	0.057	0.058
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.002	0.004	0.008	0.028	0.018	0.061	0.105	0.202	0.219	0.25	0.5	0.092	0.046	0.046
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	BS	0.003	0.002	0.007	0.021	0.027	0.046	0.09	0.204	0.209	0.23	0.5	0.087	0.043	0.044
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	BS	0.003	0.003	0.007	0.018	0.02	0.047	0.098	0.159	0.151	0.249	0.5	0.079	0.039	0.040

MPE calculations are defined in section 14.0.

Table D.1 (Continued)

MPE measurement data for Bystander

D.U.T. Info.							Probe Info.			MPE Measurements													
										Bystander (BS) Positions													
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	762.0125	36.0	35.2	CW	E	0.98	BS	0.005	0.014	0.014	0.017	0.035	0.083	0.115	0.271	0.296	0.213	0.5	0.105	0.052	0.054
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	769.0125	36.0	35.2	CW	E	0.99	BS	0.004	0.014	0.014	0.018	0.034	0.082	0.116	0.271	0.294	0.214	0.5	0.105	0.052	0.054
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	772.0000	36.0	35.0	CW	E	0.99	BS	0.007	0.017	0.014	0.018	0.041	0.081	0.117	0.314	0.316	0.204	0.5	0.112	0.056	0.057
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	774.9875	36.0	34.9	CW	E	0.99	BS	0.006	0.014	0.014	0.014	0.04	0.072	0.095	0.302	0.332	0.234	0.5	0.111	0.056	0.057
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	794.0125	36.0	34.6	CW	E	1.00	BS	0.011	0.014	0.013	0.014	0.038	0.063	0.125	0.351	0.32	0.246	0.5	0.119	0.060	0.062
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	799.0125	36.0	35.5	CW	E	1.00	BS	0.009	0.014	0.014	0.017	0.026	0.062	0.147	0.398	0.375	0.213	0.5	0.127	0.064	0.065
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	811.5000	42.0	42.0	CW	E	1.01	BS	0.007	0.009	0.008	0.018	0.031	0.064	0.128	0.267	0.289	0.238	0.5	0.107	0.053	0.053
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	823.9875	42.0	40.8	CW	E	1.01	BS	0.005	0.006	0.008	0.016	0.02	0.062	0.134	0.254	0.332	0.238	0.5	0.109	0.055	0.056
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.005	0.004	0.006	0.021	0.023	0.052	0.089	0.216	0.243	0.206	0.5	0.089	0.045	0.045
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	860.5000	42.0	41.1	CW	E	1.04	BS	0.003	0.004	0.008	0.022	0.023	0.041	0.102	0.226	0.287	0.217	0.5	0.097	0.048	0.049
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	868.9875	42.0	41.1	CW	E	1.04	BS	0.003	0.003	0.007	0.018	0.022	0.041	0.089	0.222	0.258	0.201	0.5	0.090	0.045	0.046

MPE calculations are defined in section 14.0.

Table D.1 (Continued)

MPE measurement data for Bystander

D.U.T. Info.							Probe Info.			MPE Measurements													
										Bystander (BS) Positions													
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	BS	0.005	0.02	0.018	0.019	0.053	0.124	0.198	0.367	0.204	0.034	0.5	0.103	0.051	0.052
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	BS	0.005	0.02	0.019	0.019	0.054	0.125	0.2	0.371	0.2	0.034	0.5	0.103	0.052	0.053
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	BS	0.006	0.02	0.015	0.02	0.054	0.128	0.206	0.419	0.235	0.037	0.5	0.113	0.056	0.058
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	BS	0.007	0.019	0.018	0.019	0.058	0.129	0.183	0.392	0.251	0.052	0.5	0.112	0.056	0.058
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	BS	0.013	0.017	0.018	0.017	0.062	0.109	0.214	0.489	0.26	0.056	0.5	0.125	0.063	0.065
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	BS	0.011	0.018	0.019	0.021	0.046	0.093	0.278	0.588	0.353	0.055	0.5	0.148	0.074	0.075
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	BS	0.009	0.012	0.01	0.015	0.041	0.083	0.2	0.378	0.228	0.067	0.5	0.105	0.053	0.053
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	BS	0.008	0.009	0.009	0.017	0.025	0.089	0.234	0.383	0.286	0.085	0.5	0.116	0.058	0.060
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	BS	0.004	0.004	0.006	0.024	0.024	0.069	0.129	0.255	0.176	0.054	0.5	0.077	0.038	0.039
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	BS	0.003	0.002	0.007	0.023	0.026	0.049	0.13	0.281	0.199	0.054	0.5	0.080	0.040	0.041
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	BS	0.003	0.002	0.005	0.014	0.018	0.049	0.121	0.253	0.163	0.046	0.5	0.070	0.035	0.036

MPE calculations are defined in section 14.0.

Table D.2

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PB	0.142	0.060	0.058	0.5	0.085	0.043	0.044
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PB	0.158	0.048	0.046	0.5	0.083	0.041	0.042
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PB	0.163	0.065	0.068	0.5	0.098	0.049	0.050
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PB	0.128	0.075	0.043	0.5	0.081	0.041	0.042
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PB	0.112	0.089	0.111	0.5	0.104	0.052	0.054
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PB	0.139	0.107	0.099	0.5	0.115	0.057	0.058
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PB	0.183	0.093	0.113	0.5	0.131	0.065	0.065
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PB	0.146	0.074	0.082	0.5	0.102	0.051	0.053
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PB	0.163	0.088	0.079	0.5	0.113	0.057	0.057
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PB	0.128	0.103	0.098	0.5	0.114	0.057	0.058
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PB	0.165	0.010	0.133	0.5	0.107	0.053	0.055

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PB	0.059	0.024	0.027	0.5	0.036	0.018	0.018
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PB	0.086	0.024	0.027	0.5	0.045	0.023	0.023
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PB	0.071	0.017	0.023	0.5	0.037	0.018	0.019
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PB	0.08	0.015	0.028	0.5	0.041	0.020	0.021
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PB	0.086	0.135	0.073	0.5	0.098	0.049	0.051
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PB	0.132	0.125	0.105	0.5	0.121	0.060	0.061
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PB	0.284	0.127	0.124	0.5	0.180	0.090	0.090
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PB	0.217	0.156	0.092	0.5	0.157	0.079	0.081
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PB	0.318	0.136	0.116	0.5	0.196	0.098	0.098
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PB	0.171	0.144	0.136	0.5	0.156	0.078	0.080
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PB	0.17	0.152	0.095	0.5	0.145	0.072	0.074

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	762.0125	36.0	35.2	CW	E	0.98	PB	0.152	0.063	0.060	0.5	0.090	0.045	0.046
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	769.0125	36.0	35.2	CW	E	0.99	PB	0.11	0.084	0.053	0.5	0.081	0.041	0.042
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	772.0000	36.0	35.0	CW	E	0.99	PB	0.174	0.056	0.050	0.5	0.092	0.046	0.047
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	774.9875	36.0	34.9	CW	E	0.99	PB	0.123	0.055	0.060	0.5	0.079	0.039	0.041
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	794.0125	36.0	34.6	CW	E	1.00	PB	0.123	0.112	0.126	0.5	0.120	0.060	0.062
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	799.0125	36.0	35.5	CW	E	1.00	PB	0.185	0.120	0.144	0.5	0.150	0.075	0.076
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	811.5000	42.0	42.0	CW	E	1.01	PB	0.175	0.125	0.081	0.5	0.128	0.064	0.064
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	823.9875	42.0	40.8	CW	E	1.01	PB	0.146	0.094	0.056	0.5	0.100	0.050	0.052
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	851.0125	42.0	41.8	CW	E	1.03	PB	0.181	0.097	0.101	0.5	0.130	0.065	0.065
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	860.5000	42.0	41.1	CW	E	1.04	PB	0.153	0.115	0.171	0.5	0.152	0.076	0.078
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	868.9875	42.0	41.1	CW	E	1.04	PB	0.123	0.107	0.132	0.5	0.126	0.063	0.064

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PB	0.191	0.086	0.120	0.5	0.130	0.065	0.067
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PB	0.244	0.082	0.109	0.5	0.143	0.072	0.073
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PB	0.193	0.078	0.113	0.5	0.127	0.063	0.065
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PB	0.201	0.078	0.080	0.5	0.118	0.059	0.061
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PB	0.177	0.180	0.193	0.5	0.183	0.091	0.095
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PB	0.284	0.266	0.194	0.5	0.248	0.124	0.126
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PB	0.286	0.219	0.203	0.5	0.238	0.119	0.119
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PB	0.296	0.233	0.137	0.5	0.225	0.113	0.116
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PB	0.219	0.148	0.111	0.5	0.164	0.082	0.083
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PB	0.221	0.141	0.181	0.5	0.188	0.094	0.096
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PB	0.198	0.107	0.149	0.5	0.158	0.079	0.081

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PF	0.083	0.108	0.044	0.5	0.077	0.039	0.039
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PF	0.078	0.13	0.04	0.5	0.082	0.041	0.042
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PF	0.101	0.172	0.05	0.5	0.106	0.053	0.055
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PF	0.095	0.132	0.038	0.5	0.087	0.044	0.045
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PF	0.107	0.144	0.032	0.5	0.094	0.047	0.049
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PF	0.092	0.11	0.027	0.5	0.076	0.038	0.039
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PF	0.118	0.123	0.05	0.5	0.098	0.049	0.049
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PF	0.117	0.096	0.056	0.5	0.091	0.045	0.047
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PF	0.052	0.037	0.026	0.5	0.040	0.020	0.020
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PF	0.09	0.052	0.034	0.5	0.061	0.030	0.031
Trunk	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PF	0.075	0.035	0.027	0.5	0.048	0.024	0.024

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PF	0.045	0.062	0.023	0.5	0.043	0.021	0.022
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PF	0.035	0.067	0.026	0.5	0.042	0.021	0.022
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PF	0.059	0.095	0.027	0.5	0.060	0.030	0.031
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PF	0.071	0.107	0.026	0.5	0.067	0.034	0.035
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PF	0.109	0.144	0.013	0.5	0.088	0.044	0.046
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PF	0.121	0.097	0.017	0.5	0.078	0.039	0.040
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PF	0.15	0.18	0.037	0.5	0.123	0.062	0.062
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PF	0.156	0.159	0.088	0.5	0.136	0.068	0.070
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PF	0.077	0.141	0.072	0.5	0.100	0.050	0.050
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PF	0.105	0.077	0.044	0.5	0.078	0.039	0.040
Trunk	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PF	0.1	0.057	0.05	0.5	0.072	0.036	0.037

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	762.0125	36.0	35.2	CW	E	0.98	PF	0.068	0.163	0.042	0.5	0.090	0.045	0.046
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	769.0125	36.0	35.2	CW	E	0.99	PF	0.064	0.163	0.043	0.5	0.089	0.044	0.045
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	772.0000	36.0	35.0	CW	E	0.99	PF	0.089	0.205	0.043	0.5	0.111	0.056	0.057
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	774.9875	36.0	34.9	CW	E	0.99	PF	0.088	0.123	0.041	0.5	0.083	0.042	0.043
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	794.0125	36.0	34.6	CW	E	1.00	PF	0.112	0.141	0.043	0.5	0.098	0.049	0.051
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	799.0125	36.0	35.5	CW	E	1.00	PF	0.106	0.122	0.04	0.5	0.089	0.045	0.045
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	811.5000	42.0	42.0	CW	E	1.01	PF	0.148	0.116	0.046	0.5	0.104	0.052	0.052
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	823.9875	42.0	40.8	CW	E	1.01	PF	0.12	0.105	0.054	0.5	0.094	0.047	0.049
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	851.0125	42.0	41.8	CW	E	1.03	PF	0.058	0.048	0.023	0.5	0.044	0.022	0.022
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	860.5000	42.0	41.1	CW	E	1.04	PF	0.081	0.06	0.027	0.5	0.058	0.029	0.030
Trunk	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	868.9875	42.0	41.1	CW	E	1.04	PF	0.055	0.045	0.029	0.5	0.045	0.022	0.023

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PF	0.121	0.234	0.061	0.5	0.137	0.068	0.070
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PF	0.122	0.248	0.068	0.5	0.144	0.072	0.074
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PF	0.163	0.335	0.076	0.5	0.189	0.095	0.097
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PF	0.196	0.302	0.064	0.5	0.185	0.093	0.096
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PF	0.167	0.243	0.059	0.5	0.156	0.078	0.081
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PF	0.209	0.177	0.059	0.5	0.148	0.074	0.075
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PF	0.325	0.190	0.089	0.5	0.203	0.101	0.101
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PF	0.176	0.157	0.112	0.5	0.150	0.075	0.077
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PF	0.061	0.067	0.042	0.5	0.058	0.029	0.029
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PF	0.128	0.081	0.037	0.5	0.085	0.043	0.043
Trunk	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PF	0.086	0.044	0.040	0.5	0.059	0.030	0.030

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PB	0.036	0.024	0.038	0.5	0.032	0.016	0.016
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PB	0.033	0.026	0.038	0.5	0.032	0.016	0.016
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PB	0.035	0.031	0.041	0.5	0.035	0.018	0.018
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PB	0.036	0.035	0.037	0.5	0.036	0.018	0.018
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PB	0.042	0.036	0.024	0.5	0.034	0.017	0.018
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PB	0.034	0.033	0.025	0.5	0.031	0.015	0.016
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PB	0.024	0.031	0.024	0.5	0.027	0.013	0.013
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PB	0.024	0.015	0.052	0.5	0.031	0.015	0.016
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PB	0.016	0.012	0.013	0.5	0.014	0.007	0.007
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PB	0.021	0.022	0.016	0.5	0.020	0.010	0.010
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PB	0.016	0.018	0.013	0.5	0.016	0.008	0.008

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PB	0.002	0.004	0.002	0.5	0.003	0.001	0.001
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PB	0.002	0.004	0.003	0.5	0.003	0.001	0.002
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PB	0.002	0.003	0.003	0.5	0.003	0.001	0.001
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PB	0.002	0.003	0.002	0.5	0.002	0.001	0.001
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PB	0.013	0.005	0.005	0.5	0.008	0.004	0.004
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PB	0.01	0.013	0.01	0.5	0.011	0.005	0.006
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PB	0.018	0.027	0.017	0.5	0.021	0.010	0.010
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PB	0.018	0.013	0.043	0.5	0.025	0.013	0.013
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PB	0.024	0.015	0.022	0.5	0.021	0.010	0.011
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PB	0.012	0.016	0.014	0.5	0.015	0.007	0.007
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PB	0.028	0.017	0.015	0.5	0.021	0.010	0.011

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	762.0125	36.0	35.2	CW	E	0.98	PB	0.037	0.031	0.027	0.5	0.031	0.016	0.016
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	769.0125	36.0	35.2	CW	E	0.99	PB	0.04	0.027	0.04	0.5	0.035	0.018	0.018
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	772.0000	36.0	35.0	CW	E	0.99	PB	0.033	0.027	0.039	0.5	0.033	0.016	0.017
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	774.9875	36.0	34.9	CW	E	0.99	PB	0.035	0.022	0.042	0.5	0.033	0.016	0.017
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	794.0125	36.0	34.6	CW	E	1.00	PB	0.046	0.034	0.031	0.5	0.037	0.018	0.019
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	799.0125	36.0	35.5	CW	E	1.00	PB	0.035	0.03	0.028	0.5	0.031	0.015	0.016
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	811.5000	42.0	42.0	CW	E	1.01	PB	0.02	0.026	0.024	0.5	0.023	0.012	0.012
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	823.9875	42.0	40.8	CW	E	1.01	PB	0.022	0.017	0.067	0.5	0.036	0.018	0.018
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	851.0125	42.0	41.8	CW	E	1.03	PB	0.022	0.015	0.016	0.5	0.018	0.009	0.009
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	860.5000	42.0	41.1	CW	E	1.04	PB	0.02	0.019	0.01	0.5	0.017	0.008	0.009
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	868.9875	42.0	41.1	CW	E	1.04	PB	0.025	0.014	0.012	0.5	0.018	0.009	0.009

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PB	0.066	0.04	0.07	0.5	0.058	0.029	0.030
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PB	0.066	0.041	0.052	0.5	0.052	0.026	0.027
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PB	0.054	0.04	0.073	0.5	0.055	0.028	0.028
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PB	0.055	0.041	0.072	0.5	0.055	0.028	0.029
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PB	0.053	0.058	0.053	0.5	0.055	0.027	0.028
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PB	0.06	0.053	0.045	0.5	0.053	0.026	0.027
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PB	0.039	0.043	0.041	0.5	0.041	0.021	0.021
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PB	0.055	0.029	0.040	0.5	0.042	0.021	0.022
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PB	0.035	0.019	0.016	0.5	0.024	0.012	0.012
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PB	0.040	0.043	0.025	0.5	0.037	0.019	0.019
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PB	0.03	0.018	0.018	0.5	0.023	0.011	0.012

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PF	0.014	0.019	0.017	0.5	0.016	0.008	0.008
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PF	0.016	0.025	0.019	0.5	0.020	0.010	0.010
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PF	0.011	0.028	0.017	0.5	0.018	0.009	0.009
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PF	0.018	0.029	0.012	0.5	0.019	0.010	0.010
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PF	0.011	0.025	0.008	0.5	0.015	0.007	0.008
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PF	0.018	0.012	0.01	0.5	0.013	0.007	0.007
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PF	0.013	0.018	0.015	0.5	0.015	0.008	0.008
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PF	0.024	0.017	0.017	0.5	0.020	0.010	0.010
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PF	0.02	0.016	0.013	0.5	0.017	0.008	0.008
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PF	0.014	0.018	0.019	0.5	0.018	0.009	0.009
Roof	HAF4013A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PF	0.018	0.014	0.01	0.5	0.015	0.007	0.007

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PF	0.002	0.004	0.003	0.5	0.003	0.001	0.002
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PF	0.003	0.004	0.003	0.5	0.003	0.002	0.002
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PF	0.004	0.004	0.003	0.5	0.004	0.002	0.002
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PF	0.004	0.003	0.002	0.5	0.003	0.001	0.002
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PF	0.006	0.008	0.004	0.5	0.006	0.003	0.003
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PF	0.004	0.010	0.007	0.5	0.007	0.003	0.004
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PF	0.009	0.019	0.009	0.5	0.012	0.006	0.006
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PF	0.023	0.010	0.014	0.5	0.016	0.008	0.008
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PF	0.029	0.030	0.008	0.5	0.023	0.012	0.012
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PF	0.020	0.025	0.015	0.5	0.021	0.010	0.011
Roof	HAF4014A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PF	0.021	0.014	0.011	0.5	0.016	0.008	0.008

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	762.0125	36.0	35.2	CW	E	0.98	PF	0.015	0.022	0.017	0.5	0.018	0.009	0.009
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	769.0125	36.0	35.2	CW	E	0.99	PF	0.017	0.024	0.018	0.5	0.019	0.010	0.010
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	772.0000	36.0	35.0	CW	E	0.99	PF	0.013	0.016	0.014	0.5	0.014	0.007	0.007
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	774.9875	36.0	34.9	CW	E	0.99	PF	0.01	0.026	0.013	0.5	0.016	0.008	0.008
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	794.0125	36.0	34.6	CW	E	1.00	PF	0.013	0.021	0.007	0.5	0.014	0.007	0.007
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	799.0125	36.0	35.5	CW	E	1.00	PF	0.016	0.016	0.01	0.5	0.014	0.007	0.007
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	811.5000	42.0	42.0	CW	E	1.01	PF	0.01	0.025	0.011	0.5	0.015	0.008	0.008
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	823.9875	42.0	40.8	CW	E	1.01	PF	0.023	0.018	0.019	0.5	0.020	0.010	0.010
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	851.0125	42.0	41.8	CW	E	1.03	PF	0.021	0.016	0.01	0.5	0.016	0.008	0.008
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	860.5000	42.0	41.1	CW	E	1.04	PF	0.017	0.016	0.014	0.5	0.016	0.008	0.008
Roof	HAF4016A, 1/4 Wave, (762-870MHz)	2.15	868.9875	42.0	41.1	CW	E	1.04	PF	0.016	0.014	0.008	0.5	0.013	0.007	0.007

MPE calculations are defined in section 14.0.

Table D.2 (Continued)

MPE measurement data for Passenger

D.U.T. Info.							Probe Info.			MPE Measurements						
										Passenger/Operator (MC) Positions						
Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Tx Freq (MHz)	Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor	Test Pos.	Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3	DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	762.0125	36.0	35.2	CW	E	0.98	PF	0.032	0.042	0.033	0.5	0.035	0.018	0.018
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	769.0125	36.0	35.2	CW	E	0.99	PF	0.033	0.038	0.034	0.5	0.035	0.017	0.018
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	772.0000	36.0	35.0	CW	E	0.99	PF	0.029	0.038	0.033	0.5	0.033	0.016	0.017
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	774.9875	36.0	34.9	CW	E	0.99	PF	0.016	0.049	0.021	0.5	0.028	0.014	0.015
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	794.0125	36.0	34.6	CW	E	1.00	PF	0.026	0.044	0.015	0.5	0.028	0.014	0.015
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	799.0125	36.0	35.5	CW	E	1.00	PF	0.026	0.027	0.019	0.5	0.024	0.012	0.012
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	811.5000	42.0	42.0	CW	E	1.01	PF	0.014	0.035	0.018	0.5	0.022	0.011	0.011
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	823.9875	42.0	40.8	CW	E	1.01	PF	0.046	0.028	0.021	0.5	0.032	0.016	0.017
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	851.0125	42.0	41.8	CW	E	1.03	PF	0.034	0.024	0.011	0.5	0.024	0.012	0.012
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	860.5000	42.0	41.1	CW	E	1.04	PF	0.022	0.026	0.016	0.5	0.022	0.011	0.011
Roof	HAF4017A, 1/4 Wave, (762-870MHz)	5.15	868.9875	42.0	41.1	CW	E	1.04	PF	0.021	0.017	0.011	0.5	0.017	0.009	0.009

MPE calculations are defined in section 14.0.