



MPE TEST REPORT

**Motorola Solutions Inc.
EME Test Laboratory**

Motorola Solutions Malaysia Sdn Bhd
Plot 2A, Medan Bayan Lepas,

Mukim 12 SWD 11900 Bayan Lepas Penang, Malaysia.

Date of Report: 08/23/2026
Report Revision: B

Responsible Engineer: Sathishkumar Reveendran (EME Engineer)
Report Author: Hamidi Bin Ismail (EME Technician)
Date/s Tested: 6/5/2026-8/5/2026, 12/5/2026-14/5/2026, 26/5/2026, 28/5/2026, 3/6/2026, 4/6/2026, 10/6/2026
Test Location: Penang EME Laboratory
Manufacturer: Motorola Solutions Malaysia Sdn Bhd.
Manufacturer Location: Plot 2A, Medan Bayan Lepas Mukim, 12 SWD, 11900 Bayan Lepas, Penang, Malaysia
Hardware Receive Date: 05/04/2026
DUT Description: MR7r 400-470 40W WIFI/BT/GNSS ND
Test TX mode(s): CW
Max. Power output: Refer table 6
Tx Frequency Bands: Refer table 6
Signaling type: FM, TDMA, FHSS(Bluetooth), WLAN 2.4GHz 802.11b/g/n & WLAN 5GHz 802.11a/n/ac
Model(s) Tested: AAM29QPN9YA1AN
Model(s) Certified: Refer 1.0 Introduction
(HVIN/PMN)
Serial Number(s): 008TCF1858
Classification: Occupational/Controlled Environment
Applicant Name: Motorola Solutions Inc.
Applicant Address: Plot 2A, Medan Bayan Lepas Mukim, 12 SWD, 11900 Bayan Lepas, Penang, Malaysia
Firmware Version (FVIN): D02.26.02.0175
FCC ID: AZ492FT7190
 This report contains results that are immaterial for FCC equipment approval, which are clearly identified.
FCC Test Firm Registration Number: 823256
IC: 109U-92FT7190
 This report contains results that are immaterial for ISED equipment approval, which are clearly identified.
ISED Test Site registration: 24843

The MPE results clearly demonstrate compliance with FCC/ISED Occupational/Controlled RF Exposure limits. FCC/ISED rules require compliance for Passengers and Bystanders to the FCC/ISED General Population/Uncontrolled limits.

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. The results and statements contained in this report pertain only to the device(s) evaluated.

Saw Sun Hock (Approval Signatory)
Approved Date: 08/24/2026

Document Revision History

Date	Revision	Comments
07/02/2026	A	Initial release
08/23/2026	B	Update HAE6021A specifications: change RF connector to BNC

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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 AAM29QPN9YA1AN (PMUE5983A).

Model	Hardware Version ID Number (HVIN)	Product Marketing Name (PMN)	Description
AAM29QPN9YA1AN	AAM29QPN9YA1AN	MR7r	MR7r 400-470 40W WIFI/BT/GNSS/RJ 45 CD
AAM29QPN9HA1AN	AAM29QPN9HA1AN	MR7r	MR7r 400-470 40W WIFI/BT/GNSS/RJ 45 CD
AAM29QPN9RA1AN	AAM29QPN9RA1AN	MR7b	MR7b 400-470 40W WIFI/BT/GNSS CD
AAM29QPN9GA1AN	AAM29QPN9GA1AN	MR7b	MR7b 400-470 40W WIFI/BT/GNSS CD
AAM29QPC9RA1AN	AAM29QPC9RA1AN	MR7b	MR7b 400-470 40W WIFI/BT/GNSS ND
AAM29QPC9GA1AN	AAM29QPC9GA1AN	MR7b	MR7b 400-470 40W WIFI/BT/GNSS ND

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	406.1-470 (LMR)	0.192	70.79	0.128	42.54	0.042	15.40	0.097	31.64
DTS	2402-2480 (Bluetooth)	0.005	0.48	0.005	0.48	0.004	0.43	0.004	0.43
DTS	2412-2462 (WLAN 2.4 GHz)	0.015	1.71	0.017	1.71	0.015	1.53	0.015	1.53
NII	5180-5825 (WLAN 5 GHz)	0.017	1.72	0.017	1.72	0.017	1.72	0.017	1.72
Simultaneous (highest Combined Percentage of Limit)		NA	72.51	NA	44.26	NA	17.12	NA	33.36

3.0 Abbreviations / Definitions

CNR: Calibration Not Required
CW: Continuous Wave
DUT: Device Under Test
EME: Electromagnetic Energy
FM: Frequency Modulation
MPE: Maximum Permissible Exposure
LMR: Land Mobile Radio
NA: Not Applicable
BS: Bystander
PB: Passenger Back seat
PF: Passenger Front seat
PTT: Push to Talk
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
- Institute of Electrical and Electronics Engineers (IEEE) C95.3-2021
- 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 6) – 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	IEEE C95.1 mW/cm ²	IEEE C95.1 W/m ²	RSS-102 Issue 6 W/m ²
10 – 20				10.0
20 – 48				$44.72 / f^{0.5}$
30 – 300	1.0			
48 – 100				6.455
10 – 400				
100 – 300		1.0	10.0	
100 – 6,000				$0.6455 f^{0.5}$
300 – 1,500	$f/300$			
300 – 3,000		$f/300$	$f/30$	
400 – 2,000				
1,500 – 15,000				
1,500 – 100,000	5.0			
2,000 – 300,000				
3,000 – 300,000		10.0	100.0	
6,000 – 15,000				50.0
15000 – 150,000				50.0
150000 – 300,000				$3.33 \times 10^{-4} f$

Table 3 – General Population / Uncontrolled Exposure Limits

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

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

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

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	01/23/2026	01/23/2027

E-field measurements are in mW/cm².

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	4.8	N	1.00	4.8	23.0	∞
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		14.7	14.7	
Expanded Uncertainty (95% CONFIDENCE LEVEL)		$k=2$		29	29	

9.0 Product and System Description

The model AAM29QPN9YA1AN (PMUE5983A) device operates in the LMR bands using either frequency modulation (FM) with 100% transmit duty cycle or TDMA signals with a maximum of 50% transmit duty cycle. For conservative assessment, the 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 wirelessly link audio accessories. The maximum actual transmission duty cycle is imposed by the Bluetooth standard. The maximum duty cycle for BT is 77%. Bluetooth Low Energy (BT LE) is intended to reduce power consumption.

This device also contains WLAN technology for data capabilities over 802.11b/g/n 2.4 GHz and 802.11a/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

Technology	Transmit Band (MHz)	Transmission	Duty Cycle (%)	Conducted (Average Detector) Maximum Power (W)
LMR	400-470	FM	*50	48
Bluetooth	2402 - 2480	FHSS	77	0.01
Bluetooth LE (1M)			62.47	0.01
Bluetooth LE (2M)			33.64	0.01
802.11 b			98.88	0.01413
802.11 g	2412 - 2462	DSSS, OFDM	96.88	0.02818
802.11 n			98.01	0.02818
802.11 a			97.01	0.02818
802.11 n/ac	5180 - 5825	OFDM	97.97	0.02239

Note - * includes 50% PTT operation

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

Below are additional antenna kits that are electrically identical to the tested antennas but have a BNC and Mini-U connector:

Table 7

No.	Antenna Models	Description	Selected for test	Tested	Comments
1	RAE4151A	UHF 403-430MHz, ANTENNA GAIN:2.15dBi, WAVE TYPE:1/4, BNC RF Connector	Yes	No	By similarity to HAE4002A
2	PMAE4035B	UHF 403-430MHz, ANTENNA GAIN:2.15dBi, WAVE TYPE:1/4, GPS Base & BNC RF Connector	Yes	No	By similarity to HAD4002A
3	PMAE4030B	UHF 403-430MHz, ANTENNA GAIN:2.15dBi, WAVE TYPE:1/4, GPS Base & Mini-U RF Connector	Yes	No	By similarity to HAD4002A
4	RAE4152A	UHF 450-470MHz, ANTENNA GAIN:2.15dBi, WAVE TYPE:1/4, BNC RF Connector	Yes	No	By similarity to HAE4003A
5	PMAE4037B	UHF 450-470MHz, ANTENNA GAIN:2.15dBi, WAVE TYPE:1/4, GPS Base & BNC RF Connector	Yes	No	By similarity to HAE4003A
6	PMAE4031B	UHF 450-470MHz, ANTENNA GAIN:2.15dBi, WAVE TYPE:1/4, GPS Base & Mini-U RF Connector	Yes	No	By similarity to HAE4003A
7	HAE6021A	UHF 403-527MHz, ANTENNA GAIN:4.15dBi, WAVE TYPE:5/8, BNC RF Connector	Yes	No	By similarity to HAE6022A
8	HAE6017B	UHF 403-527MHz, ANTENNA GAIN:4.15dBi, WAVE TYPE:5/8, GPS Base & BNC RF Connector	Yes	No	By similarity to HAE6022A
9	PMAE4036B	UHF 406-420MHz, ANTENNA GAIN:5.65dBi, WAVE TYPE:5/8, GPS Base & BNC RF Connector	Yes	No	By similarity to PMAE4032B
10	PMAE4038B	UHF 450-470MHz, ANTENNA GAIN:7.15dBi, WAVE TYPE:1/2, GPS Base & BNC RF Connector	Yes	No	By similarity to PMAE4034B

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 8 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 90 cm (for UHF 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 45° radial at the corner of the trunk, and 90° radial at the side of the trunk.

Tests for the 90° radial direction were conducted with the antenna displaced towards the "bystander on the side of the trunk" test location in order to attain 90 cm (12 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 90 cm (for VHF 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.

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 Variability Requirement for External/Bystander vehicle MPE measurement

If all the MPE bystander measurements for a particular antenna are below 50% of the FCC MPE limit, no variability testing for that antenna is required.

If one or more MPE bystander measurements for a particular is between 50-80% of the FCC MPE limit, with no results > 80%, variability testing shall be done on the single worst case for that antenna.

For any MPE bystander measurement above 80% of the MPE limit, variability testing shall be done for all of such configuration. When SAR simulation is performed for a particular antenna configuration to determine compliance, variability measurements are not required for that antenna configuration.

The MPE bystander measurement for all tested antennas are below 50% of the FCC MPE Specification limit, thus, no variability testing for these antennas is required.

15.0 MPE Calculations

The final MPE results for this mobile radio are presented in section 17.0. 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.)

$$\text{Calc._P.D.} = (\text{Avg_over_body}) * (\text{probe_frequency_cal_factor}) * (\text{duty_cycle})$$

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/cm²) 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/cm²) using the equation 3. H-field measurements are only applicable to frequencies below 300MHz.

Equation 3 – Converting A/m to mW/cm²

$$mW/cm^2 = (A/m)^2 * 37.699$$

Equation 4 – Power Density Maximum Calculation

$$Max_Calc._P.D. = P.D._calc * \frac{\text{max_output_power}}{\text{initial_output_power}}$$

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

16.0 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 8

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	HAE4002A	403-430	17.5	2.15	¼ wave	R	406.1-512	1	4
2	HAE4003A	450-470	16	2.15	¼ wave	R	N/A	0	3
3	HAE6022A	403-527	27.8	4.15	5/8 Wave	R/T	406.1-512	2	8
4	PMAE4032B	406-420	35.5	5.65	5/8 Wave	R/T	N/A	0	2
5	PMAE4033B	450-470	31.0	5.65	5/8 Wave	R/T	N/A	0	3
6	PMAE4034B	450-470	76.8	7.15	½ Wave	R/T	N/A	0	3
7	RAE4154A	450-470	76.7	7.15	5/8 Wave	R/T	N/A	0	3
8	RAE4163A	410-430	8.26	3	¼ wave	R	N/A	0	3
9	RAE4164A	430-450	8.26	3	¼ wave	R	N/A	0	3
10	RAE4168A	450-470	8.26	3	¼ wave	R	N/A	0	3
11	Internal Antenna	2400-2485	N/A	5.5	N/A	N/A	2402-2480	3	3
		5150-5250		6			5180-5240	3	3
		5250-5725		3			5260-5720	3	3
		5725-5850		6			5720-5825	3	3

17.0 Test Results Summary

17.1 MPE Test Results Summary for LMR

Table 9

MPE assessment for LMR UHF - 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 No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	BS	E	0	3	HAE6022A, 5/8 Wave (403-527 MHz)	48.0	47.8	403.0125	0.10	NA	NA	NA	NA
							47.9	406.1250	0.09	0.27	34.50	0.16	58.80
							48.0	419.9875	0.10	0.28	34.90	0.16	60.20
							47.8	429.9875	0.10	0.29	34.90	0.17	60.60
							47.8	439.1000	0.11	0.29	37.80	NA	NA
							48.0	450.0125	0.13	0.30	42.20	0.17	74.30
							47.7	460.0000	0.11	0.31	35.30	0.17	62.60
							48.0	469.9875	0.12	0.31	38.30	0.18	68.40
			45	3	HAE6022A, 5/8 Wave (403-527 MHz)	48.0	48.0	450.0125	0.13	0.30	42.54	0.17	74.92
			90	3	HAE6022A, 5/8 Wave (403-527 MHz)	48.0	48.0	450.0125	0.09	0.30	29.10	0.17	51.20
			0	4	PMAE4032B, 5/8 Wave (406-420 MHz)	48.0	47.9	406.1250	0.08	0.27	29.10	0.16	49.60
							48.0	419.9875	0.08	0.28	28.60	0.16	49.30
				5	PMAE4033B, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.12	0.30	38.30	0.17	67.40
							47.7	460.0000	0.10	0.31	32.50	0.17	57.70
							48.0	469.9875	0.11	0.31	34.40	0.18	61.50
Trunk	BS	E	0	6	PMAE4034B, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.09	0.30	31.30	0.17	55.20
							47.7	460.0000	0.12	0.31	37.60	0.17	66.60
							48.0	469.9875	0.11	0.31	33.70	0.18	60.10

Table 9 (Continued)**MPE assessment for LMR UHF - trunk mounted antenna – Bystander**

Trunk/ Roof	Test Position	E/H Field	Angle (Degree)	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	BS	E	0	7	RAE4154A, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.10	0.30	31.60	0.17	55.60
							47.7	460.0000	0.07	0.31	22.60	0.17	40.10
							48.0	469.9875	0.04	0.31	11.10	0.18	19.80

Table 10**MPE assessment for LMR UHF - trunk mounted antenna – Passenger Back**

Notes:

Blue fonts: Frequencies not regulated by FCC.

Results highlight in yellow are configurations with highest percentage of limits

*Configuration required SAR simulation

Trunk/ Roof	Test Position	E/H Field	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	PB	E	3	HAE6022A, 5/8 Wave (403-527 MHz)	48.0	47.8	403.0125	0.16	NA	NA	NA	NA
						47.9	406.1250	0.16	0.27	59.50	0.16	*101.5
						48.0	419.9875	0.12	0.28	43.70	0.16	75.20
						47.8	429.9875	0.12	0.29	41.70	0.17	72.40
						47.8	439.1000	0.19	0.29	63.80	NA	NA
						48.0	450.0125	0.20	0.30	65.00	0.17	*114.4
						47.7	460.0000	0.19	0.31	62.90	0.17	*111.5
						48.0	469.9875	0.20	0.31	62.10	0.18	*110.8
			4	PMAE4032B, 5/8 Wave (406-420 MHz)	48.0	47.9	406.1250	0.19	0.27	70.79	0.16	*120.68
						48.0	419.9875	0.15	0.28	54.50	0.16	94.00
			5	PMAE4033B, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.14	0.30	45.10	0.17	79.50
						47.7	460.0000	0.15	0.31	50.40	0.17	89.30
						48.0	469.9875	0.16	0.31	51.80	0.18	92.40
			6	PMAE4034B, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.14	0.30	46.90	0.17	82.70
						47.7	460.0000	0.15	0.31	47.60	0.17	84.50
						48.0	469.9875	0.15	0.31	47.40	0.18	84.60

Table 10 (Continued)**MPE assessment for LMR UHF - trunk mounted antenna – Passenger Back**

Trunk/ Roof	Test Position	E/H Field	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	PB	E	7	RAE4154A, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.08	0.30	28.10	0.17	49.40
						47.7	460.0000	0.08	0.31	26.50	0.17	47.00
						48.0	469.9875	0.07	0.31	21.50	0.18	38.50

Table 11**MPE assessment for LMR UHF - 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	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	PF	E	3	HAE6022A, 5/8 Wave (403-527 MHz)	48.0	47.8	403.0125	0.09	NA	NA	NA	NA
						47.9	406.1250	0.08	0.27	30.00	0.16	51.10
						48.0	419.9875	0.07	0.28	23.90	0.16	41.30
						47.8	429.9875	0.06	0.29	20.00	0.17	34.80
						47.8	439.1000	0.05	0.29	18.10	NA	NA
						48.0	450.0125	0.08	0.30	26.50	0.17	46.60
						47.7	460.0000	0.12	0.31	38.43	0.17	68.15
						48.0	469.9875	0.09	0.31	28.20	0.18	50.30
			4	PMAE4032B, 5/8 Wave (406-420 MHz)	48.0	47.9	406.1250	0.05	0.27	20.00	0.16	34.00
						48.0	419.9875	0.08	0.28	29.80	0.16	51.40
			5	PMAE4033B, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.08	0.30	26.30	0.17	46.30
						47.7	460.0000	0.10	0.31	32.40	0.17	57.40
						48.0	469.9875	0.12	0.31	37.10	0.18	66.30
			6	PMAE4034B, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.10	0.30	31.90	0.17	56.30
						47.7	460.0000	0.11	0.31	35.70	0.17	63.40
						48.0	469.9875	0.11	0.31	33.80	0.18	60.40

Table 11 (Continued)
MPE assessment for LMR UHF - trunk mounted antenna – Passenger Front

Trunk/ Roof	Test Position	E/H Field	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Trunk	PF	E	7	RAE4154A, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.06	0.30	19.80	0.17	34.90
						47.7	460.0000	0.09	0.31	27.80	0.17	49.20
						48.0	469.9875	0.03	0.31	10.10	0.18	18.00
			9	RAE4164A, 1/4 Wave (430-450 MHz)	48.0	47.6	430.0125	0.02	0.29	6.00	NA	NA
						47.8	439.1000	0.02	0.29	6.00	NA	NA
						48.0	449.9875	0.01	0.30	1.70	NA	NA

Table 12**MPE assessment for LMR UHF - 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	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	BS	E	1	HAE4002A, 1/4 Wave (403-430 MHz)	48.0	47.8	403.0125	0.07	NA	NA	NA	NA
						47.9	406.1250	0.08	0.27	29.20	0.16	49.80
						48.0	419.9875	0.07	0.28	23.50	0.16	40.50
						47.8	429.9875	0.07	0.29	25.90	0.17	45.00
			10	RAE4168A, 1/4 Wave (450-470 MHz)	48.0	48.0	450.0125	0.07	0.30	24.00	0.17	42.20
						47.7	460.0000	0.07	0.31	23.60	0.17	41.90
						48.0	469.9875	0.02	0.31	7.60	0.18	13.60
			2	HAE4003A, 1/4 Wave (450-470 MHz)	48.0	48.0	450.0125	0.09	0.30	28.20	0.17	49.70
						47.7	460.0000	0.09	0.31	28.10	0.17	49.80
						48.0	469.9875	0.08	0.31	25.30	0.18	45.20
			3	HAE6022A, 5/8 Wave (403-527 MHz)	48.0	47.8	403.0125	0.08	NA	NA	NA	NA
						47.9	406.1250	0.08	0.27	30.60	0.16	52.10
						48.0	419.9875	0.07	0.28	26.10	0.16	45.00
						47.8	429.9875	0.08	0.29	26.70	0.17	46.40
						47.8	439.1000	0.07	0.29	25.00	NA	NA
						48.0	450.0125	0.08	0.30	26.10	0.17	45.90
						47.7	460.0000	0.10	0.31	31.64	0.17	56.10
						48.0	469.9875	0.07	0.31	23.00	0.18	41.10

Table 12 (Continued)**MPE assessment for LMR UHF - roof mounted antenna – Bystander**

Trunk/ Roof	Test Position	E/H Field	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	BS	E	4	PMAE4032B, 5/8 Wave (406-420 MHz)	48.0	47.9	406.1250	0.06	0.27	22.40	0.16	38.20
						48.0	419.9875	0.06	0.28	20.20	0.16	34.80
			5	PMAE4033B, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.07	0.30	23.90	0.17	42.10
						47.7	460.0000	0.09	0.31	30.10	0.17	53.50
						48.0	469.9875	0.08	0.31	26.30	0.18	46.90
			6	PMAE4034B, 1/2 Wave (450-470 MHz)	48.0	48.0	450.0125	0.08	0.30	27.40	0.17	48.30
						47.7	460.0000	0.09	0.31	30.60	0.17	54.30
						48.0	469.9875	0.08	0.31	24.70	0.18	44.10
			7	RAE4154A, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.05	0.30	16.50	0.17	29.10
						47.7	460.0000	0.05	0.31	17.60	0.17	31.30
						48.0	469.9875	0.02	0.31	5.40	0.18	9.70
			8	RAE4163A, 1/4 Wave (410-430 MHz)	48.0	47.5	413.0125	0.07	0.28	26.90	0.16	46.10
						48.0	419.9875	0.06	0.28	20.40	0.16	35.20
						47.8	429.9875	0.07	0.29	22.90	0.17	39.70
			9	RAE4164A, 1/4 Wave (430-450 MHz)	48.0	47.6	430.0125	0.07	0.29	24.10	NA	NA
						47.8	439.1000	0.06	0.29	20.90	NA	NA
						48.0	449.9875	0.02	0.30	5.90	NA	NA

Table 13**MPE assessment for LMR UHF - 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	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	PB	E	1	HAE4002A, 1/4 Wave (403-430 MHz)	48.0	47.8	403.0125	0.05	NA	NA	NA	NA
						47.9	406.1250	0.04	0.27	13.80	0.16	23.60
						48.0	419.9875	0.03	0.28	10.90	0.16	18.70
						47.8	429.9875	0.02	0.29	8.50	0.17	14.70
			10	RAE4168A, 1/4 Wave (450-470 MHz)	48.0	48.0	450.0125	0.03	0.30	8.30	0.17	14.70
						47.7	460.0000	0.04	0.31	11.40	0.17	20.20
						48.0	469.9875	0.01	0.31	3.60	0.18	6.40
			2	HAE4003A, 1/4 Wave (450-470 MHz)	48.0	48.0	450.0125	0.03	0.30	10.50	0.17	18.50
						47.7	460.0000	0.04	0.31	13.90	0.17	24.60
						48.0	469.9875	0.04	0.31	11.30	0.18	20.20
			3	HAE6022A, 5/8 Wave (403-527 MHz)	48.0	47.8	403.0125	0.04	NA	NA	NA	NA
						47.9	406.1250	0.04	0.27	15.40	0.16	26.30
						48.0	419.9875	0.03	0.28	10.60	0.16	18.20
						47.8	429.9875	0.03	0.29	9.40	0.17	16.30
						47.8	439.1000	0.03	0.29	8.50	NA	NA
						48.0	450.0125	0.03	0.30	10.80	0.17	19.00
						47.7	460.0000	0.04	0.31	12.30	0.17	21.80
						48.0	469.9875	0.03	0.31	9.30	0.18	16.60

Table 13 (Continued)**MPE assessment for LMR UHF - roof mounted antenna – Passenger Back**

Trunk/ Roof	Test Position	E/H Field	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	PB	E	4	PMAE4032B, 5/8 Wave (406-420 MHz)	48.0	47.9	406.1250	0.03	0.27	10.40	0.16	17.70
						48.0	419.9875	0.03	0.28	10.30	0.16	17.80
			5	PMAE4033B, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.04	0.30	13.40	0.17	23.60
						47.7	460.0000	0.04	0.31	12.60	0.17	22.30
						48.0	469.9875	0.03	0.31	9.40	0.18	16.70
			6	PMAE4034B, 1/2 Wave (450-470 MHz)	48.0	48.0	450.0125	0.01	0.30	4.80	0.17	8.50
						47.7	460.0000	0.02	0.31	5.80	0.17	10.40
						48.0	469.9875	0.01	0.31	4.00	0.18	7.10
			7	RAE4154A, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.00	0.30	1.40	0.17	2.40
						47.7	460.0000	0.01	0.31	1.60	0.17	2.80
						48.0	469.9875	0.00	0.31	0.80	0.18	1.40
			8	RAE4163A, 1/4 Wave (410-430 MHz)	48.0	47.5	413.0125	0.03	0.28	11.10	0.16	19.00
						48.0	419.9875	0.02	0.28	8.40	0.16	14.40
						47.8	429.9875	0.02	0.29	8.20	0.17	14.20
			9	RAE4164A, 1/4 Wave (430-450 MHz)	48.0	47.6	430.0125	0.02	0.29	7.80	NA	NA
						47.8	439.1000	0.02	0.29	6.30	NA	NA
						48.0	449.9875	0.01	0.30	1.90	NA	NA

Table 14**MPE assessment for LMR UHF - 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	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	PF	E	1	HAE4002A, 1/4 Wave (403-430 MHz)	48.0	47.8	403.0125	0.02	NA	NA	NA	NA
						47.9	406.1250	0.02	0.27	5.40	0.16	9.10
						48.0	419.9875	0.02	0.28	7.10	0.16	12.30
						47.8	429.9875	0.02	0.29	5.30	0.17	9.20
			10	RAE4168A, 1/4 Wave (450-470 MHz)	48.0	48.0	450.0125	0.02	0.30	6.00	0.17	10.60
						47.7	460.0000	0.02	0.31	7.30	0.17	13.00
						48.0	469.9875	0.01	0.31	2.20	0.18	4.00
			2	HAE4003A, 1/4 Wave (450-470 MHz)	48.0	48.0	450.0125	0.02	0.30	7.90	0.17	14.00
						47.7	460.0000	0.03	0.31	9.50	0.17	16.90
						48.0	469.9875	0.02	0.31	7.10	0.18	12.70
			3	HAE6022A, 5/8 Wave (403-527 MHz)	48.0	47.8	403.0125	0.01	NA	NA	NA	NA
						47.9	406.1250	0.02	0.27	6.40	0.16	10.90
						48.0	419.9875	0.02	0.28	6.20	0.16	10.70
						47.8	429.9875	0.01	0.29	5.00	0.17	8.70
						47.8	439.1000	0.02	0.29	6.80	NA	NA
						48.0	450.0125	0.02	0.30	7.40	0.17	13.10
						47.7	460.0000	0.03	0.31	10.30	0.17	18.30
						48.0	469.9875	0.02	0.31	7.70	0.18	13.70

Table 14 (Continued)**MPE assessment for LMR VHF - roof mounted antenna – Passenger Front**

Trunk/ Roof	Test Position	E/H Field	Antenna No.	Antenna Model	Max Pwr (W)	Initial Pwr (W)	Tx Freq (MHz)	Max Calc. P.D. (mW/cm ²)	FCC Limit	% To FCC Spec Limit	ISED Limit	% To ISED Spec Limit
Roof	PF	E	4	PMAE4032B, 5/8 Wave (406-420 MHz)	48.0	47.9	406.1250	0.01	0.27	4.80	0.16	8.20
						48.0	419.9875	0.02	0.28	5.80	0.16	10.00
			5	PMAE4033B, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.02	0.30	6.20	0.17	11.00
						47.7	460.0000	0.03	0.31	8.60	0.17	15.20
						48.0	469.9875	0.03	0.31	8.60	0.18	15.40
			6	PMAE4034B, 1/2 Wave (450-470 MHz)	48.0	48.0	450.0125	0.01	0.30	1.90	0.17	3.40
						47.7	460.0000	0.01	0.31	4.00	0.17	7.10
						48.0	469.9875	0.01	0.31	4.10	0.18	7.30
			7	RAE4154A, 5/8 Wave (450-470 MHz)	48.0	48.0	450.0125	0.00	0.30	0.40	0.17	0.80
						47.7	460.0000	0.00	0.31	1.10	0.17	2.00
						48.0	469.9875	0.00	0.31	0.50	0.18	0.90
			8	RAE4163A, 1/4 Wave (410-430 MHz)	48.0	47.5	413.0125	0.02	0.28	7.10	0.16	12.10
						48.0	419.9875	0.02	0.28	6.90	0.16	11.90
						47.8	429.9875	0.02	0.29	5.70	0.17	10.00

17.2 MPE Test Results for Bluetooth and WLAN

MPE calculation was used 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 15(a) and (b) summarized the MPE calculation for each standalone transmitter bands, Bluetooth and WLAN.

Table 15

Antenna #	Max Power (W)	Duty Cycle (%)	Tx Frequency (MHz)	Antenna Gain (dBi)	Cable Loss, L (dB)	Dist., d (cm)	Enhancement Factor, F ⁽¹⁾	Max Calc. MPE (mW/cm ²)	MPE Spec Limit (mW/cm ²)							
									FCC	% of FCC Spec Limit	ISED limit	% of ISED Spec Limit	ICNIRP 1998	% of ICNIRP 1998 Limit	ICNIRP 2020	% of ICNIRP 2020 Limit
Bluetooth (2402-2480MHz)																
Internal Antenna	0.010	77.00%	2402.000	5.50	0.56	20	1.00	0.005	1.00	0.48	0.54	0.89	1.00	0.48	1.00	0.48
Internal Antenna	0.010	77.00%	2441.000	5.50	0.56	20	1.00	0.005	1.00	0.48	0.54	0.88	1.00	0.48	1.00	0.48
Internal Antenna	0.010	77.00%	2480.000	5.50	0.56	20	1.00	0.005	1.00	0.48	0.55	0.87	1.00	0.48	1.00	0.48
WiFi 2.4																
WiFi 2.4 (2412-2462MHz) 802.11b																
Internal Antenna	0.014	98.88%	2412.000	5.50	0.56	20	1.00	0.009	1.00	0.87	0.54	1.62	1.00	0.87	1.00	0.87
Internal Antenna	0.014	98.88%	2437.000	5.50	0.56	20	1.00	0.009	1.00	0.87	0.54	1.60	1.00	0.87	1.00	0.87
Internal Antenna	0.014	98.88%	2462.000	5.50	0.56	20	1.00	0.009	1.00	0.87	0.54	1.59	1.00	0.87	1.00	0.87
WiFi 2.4 (2412-2462MHz) 802.11g																
Internal Antenna	0.028	96.88%	2412.000	5.50	0.56	20	1.00	0.017	1.00	1.69	0.54	3.16	1.00	1.69	1.00	1.69
Internal Antenna	0.028	96.88%	2437.000	5.50	0.56	20	1.00	0.017	1.00	1.69	0.54	3.13	1.00	1.69	1.00	1.69
Internal Antenna	0.028	96.88%	2462.000	5.50	0.56	20	1.00	0.017	1.00	1.69	0.54	3.11	1.00	1.69	1.00	1.69
WiFi 2.4 (2412-2462MHz) 802.11n																
Internal Antenna	0.028	98.01%	2412.000	5.50	0.56	20	1.00	0.017	1.00	1.71	0.54	3.19	1.00	1.71	1.00	1.71
Internal Antenna	0.028	98.01%	2437.000	5.50	0.56	20	1.00	0.017	1.00	1.71	0.54	3.17	1.00	1.71	1.00	1.71
Internal Antenna	0.028	98.01%	2462.000	5.50	0.56	20	1.00	0.017	1.00	1.71	0.54	3.15	1.00	1.71	1.00	1.71

Table 15 (continued)

Antenna #	Max Power (W)	Duty Cycle (%)	Tx Frequency (MHz)	Antenna Gain (dBi)	Cable Loss, L (dB)	Dist., d (cm)	Enhancement Factor, F ⁽¹⁾	Max Calc. MPE (mW/cm ²)	MPE Spec Limit (mW/cm ²)							
									FCC	% of FCC Spec Limit	ISED limit	% of ISED Spec Limit	ICNIRP 1998	% of ICNIRP 1998 Limit	ICNIRP 2020	% of ICNIRP 2020 Limit
WiFi 5GHz																
WiFi 5GHz UNII-1 (5.15-5.25GHz)																
802.11a																
Internal Antenna	0.028	97.01%	5180.000	6.00	1.00	20	1.00	0.017	1.00	1.72	0.90	1.90	1.00	1.72	1.00	1.72
Internal Antenna	0.028	97.01%	5200.000	6.00	1.00	20	1.00	0.017	1.00	1.72	0.91	1.90	1.00	1.72	1.00	1.72
Internal Antenna	0.028	97.01%	5240.000	6.00	1.00	20	1.00	0.017	1.00	1.72	0.91	1.89	1.00	1.72	1.00	1.72
802.11a20																
Internal Antenna	0.022	97.97%	5180.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.90	1.53	1.00	1.38	1.00	1.38
Internal Antenna	0.022	97.97%	5200.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.91	1.52	1.00	1.38	1.00	1.38
Internal Antenna	0.022	97.97%	5240.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.91	1.51	1.00	1.38	1.00	1.38
802.11a20																
Internal Antenna	0.022	97.97%	5180.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.90	1.53	1.00	1.38	1.00	1.38
Internal Antenna	0.022	97.97%	5200.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.91	1.52	1.00	1.38	1.00	1.38
Internal Antenna	0.022	97.97%	5240.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.91	1.51	1.00	1.38	1.00	1.38
WiFi 5GHz UNII-2A (5.25-5.35GHz)																
802.11a																
Internal Antenna	0.028	97.01%	5260.000	3.00	1.00	20	1.00	0.009	1.00	0.86	0.91	0.94	1.00	0.86	1.00	0.86
Internal Antenna	0.028	97.01%	5280.000	3.00	1.00	20	1.00	0.009	1.00	0.86	0.92	0.94	1.00	0.86	1.00	0.86
Internal Antenna	0.028	97.01%	5320.000	3.00	1.00	20	1.00	0.009	1.00	0.86	0.92	0.94	1.00	0.86	1.00	0.86
802.11a20																
Internal Antenna	0.022	97.97%	5260.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.91	0.76	1.00	0.69	1.00	0.69
Internal Antenna	0.022	97.97%	5280.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.92	0.75	1.00	0.69	1.00	0.69
Internal Antenna	0.022	97.97%	5320.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.92	0.75	1.00	0.69	1.00	0.69
802.11a20																
Internal Antenna	0.022	97.97%	5260.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.91	0.76	1.00	0.69	1.00	0.69
Internal Antenna	0.022	97.97%	5280.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.92	0.75	1.00	0.69	1.00	0.69
Internal Antenna	0.022	97.97%	5320.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.92	0.75	1.00	0.69	1.00	0.69
WiFi 5GHz UNII-2C (5.47-5.725GHz)																
802.11a																
Internal Antenna	0.028	97.01%	5500.000	3.00	1.00	20	1.00	0.009	1.00	0.86	0.94	0.91	1.00	0.86	1.00	0.86
Internal Antenna	0.028	97.01%	5600.000	3.00	1.00	20	1.00	0.009	1.00	0.86	0.95	0.90	1.00	0.86	1.00	0.86
Internal Antenna	0.028	97.01%	5720.000	3.00	1.00	20	1.00	0.009	1.00	0.86	0.97	0.89	1.00	0.86	1.00	0.86
802.11a20																
Internal Antenna	0.022	97.97%	5500.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.94	0.73	1.00	0.69	1.00	0.69
Internal Antenna	0.022	97.97%	5600.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.95	0.72	1.00	0.69	1.00	0.69
Internal Antenna	0.022	97.97%	5720.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.97	0.71	1.00	0.69	1.00	0.69
802.11a20																
Internal Antenna	0.022	97.97%	5500.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.94	0.73	1.00	0.69	1.00	0.69
Internal Antenna	0.022	97.97%	5600.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.95	0.72	1.00	0.69	1.00	0.69
Internal Antenna	0.022	97.97%	5720.000	3.00	1.00	20	1.00	0.007	1.00	0.69	0.97	0.71	1.00	0.69	1.00	0.69
WiFi 5GHz UNII-3 (5.725-5.825GHz)																
802.11a																
Internal Antenna	0.028	97.01%	5745.000	6.00	1.00	20	1.00	0.017	1.00	1.72	0.97	1.77	1.00	1.72	1.00	1.72
Internal Antenna	0.028	97.01%	5785.000	6.00	1.00	20	1.00	0.017	1.00	1.72	0.98	1.76	1.00	1.72	1.00	1.72
Internal Antenna	0.028	97.01%	5825.000	6.00	1.00	20	1.00	0.017	1.00	1.72	0.98	1.75	1.00	1.72	1.00	1.72
802.11a20																
Internal Antenna	0.022	97.97%	5745.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.97	1.42	1.00	1.38	1.00	1.38
Internal Antenna	0.022	97.97%	5785.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.98	1.41	1.00	1.38	1.00	1.38
Internal Antenna	0.022	97.97%	5825.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.98	1.41	1.00	1.38	1.00	1.38
802.11a20																
Internal Antenna	0.022	97.97%	5745.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.97	1.42	1.00	1.38	1.00	1.38
Internal Antenna	0.022	97.97%	5785.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.98	1.41	1.00	1.38	1.00	1.38
Internal Antenna	0.022	97.97%	5825.000	6.00	1.00	20	1.00	0.014	1.00	1.38	0.98	1.41	1.00	1.38	1.00	1.38

Notes:

- Distance from antenna (d), 20cm for more conservative estimation.
- Enhancement Factor (F), 1 (Ground reflection already factor in during antenna characterization)

17.3 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 16.

Table 16

Transmitters	Frequency Band (MHz)	Highest Percentage of Limit (%)		
		Passenger, Front Seat (PF)	Passenger, Back Seat (PB)	Bystander (BS)
FCC				
LMR UHF	406.1-470	38.43	70.79	42.54
Bluetooth	2402 - 2480	0.48	0.48	0.48
WLAN 2.4 GHz	2412 - 2462	1.71	1.71	1.71
WLAN 5 GHz	5180 - 5825	1.72	1.72	1.72
ISED Canada				
LMR UHF	406.1-430, 450-470	68.15	**120.68	74.92
Bluetooth	2402 - 2480	0.89	0.89	0.89
WLAN 2.4 GHz	2412 - 2462	3.19	3.19	3.19
WLAN 5 GHz	5180 - 5825	1.90	1.90	1.90

Note:** Required SAR simulation.

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.

The calculated maximum power density for WLAN 2.4 GHz exceeds both WLAN 5 GHz and Bluetooth, or conversely, with WLAN 5 GHz exceeding WLAN 2.4 GHz and Bluetooth. These transmitters cannot operate simultaneously, so the highest power density configuration from each case (WLAN 2.4 GHz or WLAN 5 GHz) was selected to evaluate simultaneous transmission test exclusion, as detailed in Table 17.

Table 17

Designator	Simultaneous Transmission Scenario	Highest Combined Percentage of Limit (%)		
		Passenger, Front Seat (PF)	Passenger, Back Seat (PB)	Bystander (BS)
FCC	LMR UHF and WLAN 5GHz	40.15	72.51	44.26
ISED Canada	LMR UHF and WLAN 2.4GHz	71.34	123.87	78.11

18.0 Conclusion

The assessments for this device were performed with an output power range as indicated in section 17.1 (for LMR) and 17.2 (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 transmitter scaled to maximum allowable power output are indicated in Table 18 and 19 for internal/passenger to the vehicle, and external/bystander to the vehicle.

Table 18: Maximum MPE RF Exposure Summary (LMR)

Designator	Transmitters	Frequency Band (MHz)	Passenger	Bystander
			Power Density (mW/cm ²)	Power Density (mW/cm ²)
FCC	LMR UHF	406.1-470	0.192	0.129
ISED Canada	LMR UHF	406.1-430, 450-470	0.192	0.129

Table 19: Maximum MPE RF Exposure Summary (BT/WLAN)

Designator	Transmitters	Frequency Band (MHz)	Passenger	Bystander
			Power Density (mW/cm ²)	Power Density (mW/cm ²)
FCC / ISED Canada	Bluetooth	2402 - 2480	0.005	0.005
	WLAN 2.4GHz	2412 - 2462	0.017	0.017
	WLAN 5GHz	5180 - 5825	0.017	0.017

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

Although MPE is a convenient method of demonstrating RF Exposure requirements, SAR is recognized as the “basic restriction”. For those configurations in Table 9-14 with ‘*’, compliance to the General Population / Uncontrolled SAR 1g limit of 1.6 W/kg is demonstrated through SAR computational analysis.

The computational results show that this device, when used with the offered antennas in accordance with the user manual instructions, exhibits the maximum peak average SAR values for ISED only indicated in the Table below for the configurations requiring SAR analysis.

Table 16

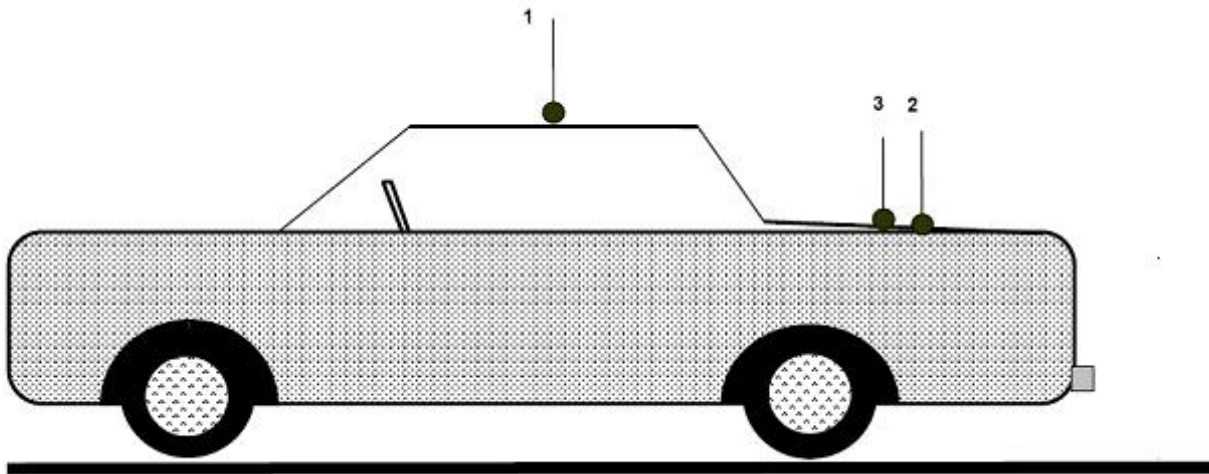
Exposure Conditions	Maximum peak average SAR (1g)
Passenger	1.08

19.0 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 3 ft (90 cm) from the vehicle Body.

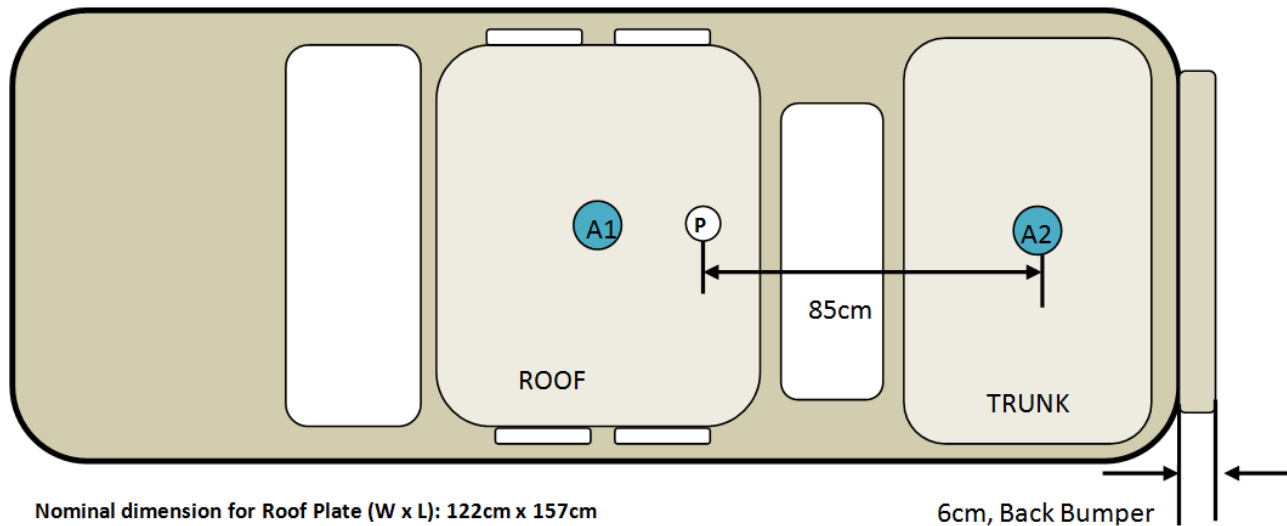
Appendix A - Antenna Locations, Test Distances, and Cable Losses

Antenna locations



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

Passenger Antenna mounting (UHF)



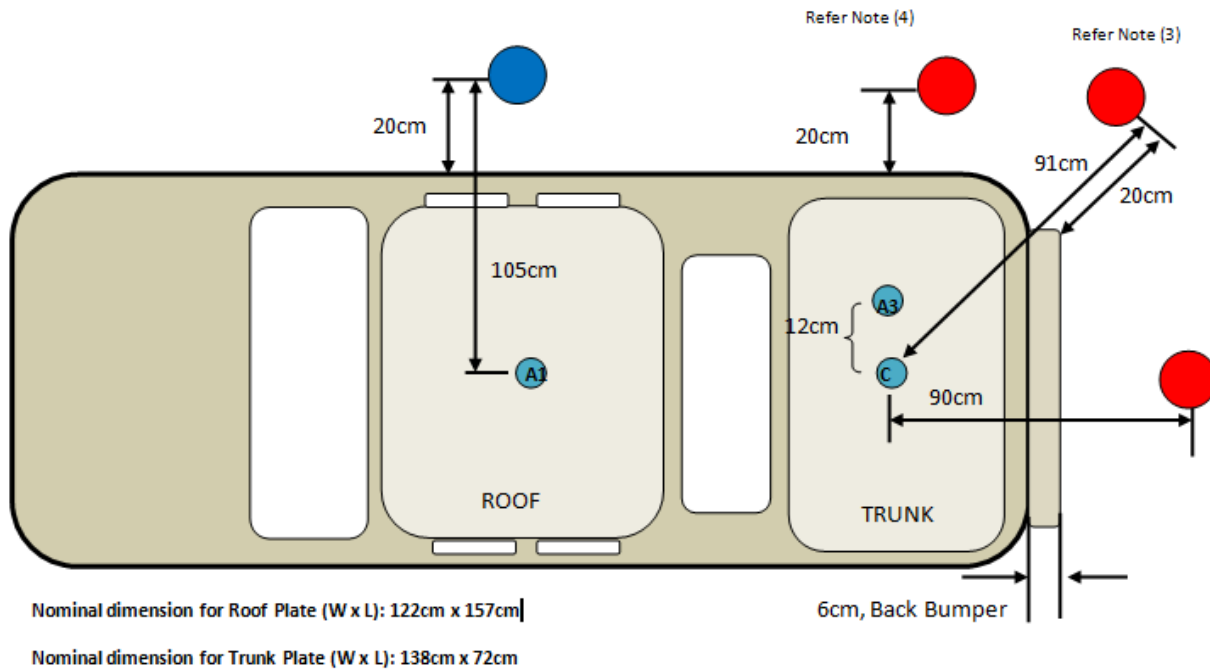
Nominal dimension for Roof Plate (W x L): 122cm x 157cm

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

Notes:

- 1.) Antenna location A1: Mobile radio roof antenna mounting locations for passenger back and front testing (UHF)
- 2.) Antenna location A2: Mobile trunk antenna mounting locations for passenger back and front testing (UHF)
- 3.) Total distance between trunk mount antenna and rear passenger is 85cm

Bystander Antenna mounting (UHF)



By-Stander (BS) Test Locations:

- Roof Mount
- Trunk Mount

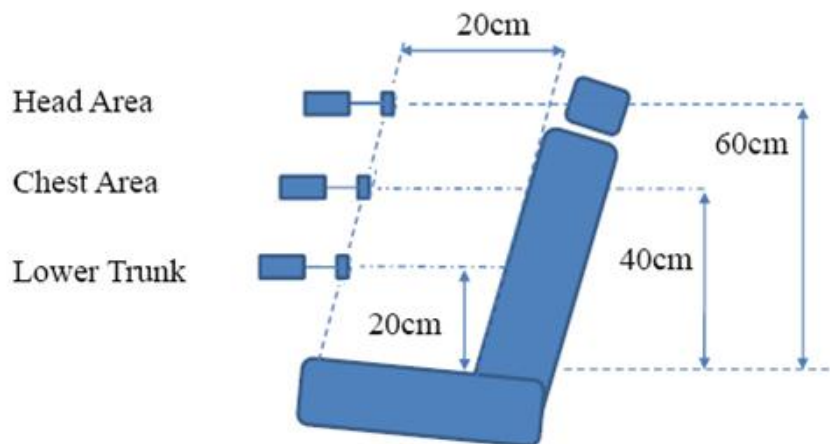
Notes:

- 1) Antenna location A1: LMR antennas roof mount
- 2) Antenna location A3: LMR antennas trunk mount for bystander testing.
- 3) Total distance between Bystander 45 degree angles from the centered-trunk mount antenna is 91cm to maintain a minimum 20cm separation between probe sensor and vehicle body.
- 4) Total distance between Bystander 90 degree angle from the centered-trunk mount antenna is 90cm (by moving antenna location A3 12cm from center of the trunk).

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

Meter - Probe

Probe diameter is 5.5cm



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



KEYSIGHT
TECHNOLOGIES

Certificate of Calibration
ISO/IEC 17025:2017 and ANSI/NCSL Z540.1-1994
Certificate Number 260113-125735-35f7da



Model Number E100; HI-2200 Manufacturer ETS - Lindgren Description Field Probe Serial Number 00206767; 00086316 Customer Asset No. N/A; MS10206	Customer Motorola Solutions Malaysia Sdn Bhd Innoplex Plot 2A, Medan Bayan Lepas Central Test & Equip Mgt Mukim 12, S.W.D., Bayan Lepas Bayan Lepas, PENANG 11900 Malaysia	
Date of Calibration 01/23/2026 Temperature 22°C Humidity 41% RH	Location of Calibration Keysight Technologies Inc. 1346 Yellowwood Road Kimballton, IA 51543 United States	

This certifies that the equipment has been calibrated using applicable Keysight Technologies procedures and in compliance with ISO/IEC 17025:2017 and ANSI/NCSL Z540.1-1994 (R2002). The quality management system is registered to ISO 9001:2015.

Calibration Standard(s) IEEE Std 1309-2013 Section 4.1 IEEE Std 1309-2013 Section 5 IEEE Std 1309-2013 Section 8.2 IEEE Std 1309-2013 Section Annex A IEEE Std 1309-2013 Section A.3 IEEE Std 1309-2013 Section 7.3 IEEE Std 1309-2013 Section 8.3.3.3	Calibration Method(s) Calculated, Substitution	Calibration Procedure(s) 287330
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Calibration Software
 Probe Comparison 1.5.3

As Received Conditions
 The measured values of the equipment were observed in specification at the points tested.

Action Taken
 No action was taken.

As Completed Conditions
 The measured values of the equipment were observed in specification at the points tested.

Calibration Due
 Based on the customer's request, the next calibration is due on 23 Jan 2027

Remarks or Special Requirements
 A probe position document is included with this certificate. This calibration is valid only for the alignment/mounting position specified in this report.

This calibration report shall not be reproduced, except in full. The documented results relate to the equipment calibrated only.

The test limits stated in the report correspond to the published specifications of the equipment, at the points tested.

Keysight Technologies, Inc.
 1346 Yellowwood Road
 Kimballton, IA 51543
 United States


 Nate Potts Iowa Service Center Manager

Issue Date 23 Jan 2026

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Certificate of Calibration

ISO/IEC 17025:2017 and ANSI/NCSL Z540.1-1994
Certificate Number 260113-125735-35f7da



Traceability Information

Technician Name Dennis Bissen

Measurements are traceable to the International System of Units (SI) via national metrology institutes (www.keysight.com/find/NMI) that are signatories to the CIPM Mutual Recognition Arrangement.

Calibration Equipment Used

Manufacturer	Model Number	Model Description	Equipment ID	Cal Due Date	Certificate Number
AR	100W1000B	Amp	11546	NA	
AR	15T4G18	Amp	10888	NA	NA
EMCO	5101	TEM Cell	10420	NA	2003121920
EMCO	5302	G-TEM	10223	NA	2003121915
AR	75A250	Amp	10560	NA	N/A
AR	8061G4	Amp	11728	NA	
Agilent Technologies, Inc.	83650B	Synthesized Swept Signal Generator	1354	01/31/2026	250129-082200-6d9f0c
Agilent Technologies, Inc.	8648D	Signal Generator	10307	04/30/2026	250401-151556-4e64f8
Agilent Technologies, Inc.	8648D	Signal Generator	11028	02/28/2026	250225-110237-453fed
Schwarzbeck Mess-Elektronik	BBHA 9120D	Horn	10194	10/31/2026	251023-103452-59bb69
Narda	EF6092	Electric Field Probe	666444	03/10/2026	2025010156-1
AR	FL7006	Isotropic Probe	10946	05/20/2027	2025090150-1
Holaday	HI-4422	Isotropic Probe	10022	04/19/2027	2025010151-1

Compliance with Specification

Unless otherwise noted, the calibration results are reported without factoring in the effect of uncertainty on the assessment of compliance/specification.

In Specification/Out of Specification Explanation

The standard criteria to determine the "In Specification/Out of Specification" status is based on one or more of the following conditions, as requested by the client:

1. If the manufacturer has a specified specification for the item being calibrated, then the calibration values are compared to this specification, and the values must fall within the manufacturer's specification. The specification may be obtained from the manufacturer's web site, data sheets, equipment manuals, etc.
2. Where specifications are called out in a published standard, the calibration results are compared to this specification, and the measured values must fall within the standard's specification.
3. In cases where the manufacturer, standard, or client does not identify any relevant specifications, applicable calibration results are compared to historical data with a ± 3 dB specification.

Uncertainty of Measurement

The uncertainty evaluation has been performed in accordance with ISO/IEC Guide 98-3:2008(GUM). The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor k such that the coverage probability corresponds to approximately 95%. This probability corresponds to a coverage factor of $k=2$ for a normal distribution.

**Certificate of Calibration**

ISO/IEC 17025:2017 and ANSI/NCSL Z540.1-1994

Certificate Number 260113-125735-3577da



Parameter	Range	MU (+/-)
RF Isotropic E-Field Probes - GTEM Cell - Isotropic	10 kHz to 1000 MHz	0.97 dB
RF Isotropic E-Field Probes - TEM Cell - Linearity	5 kHz to 800 MHz	0.91 dB
RF Isotropic E-Field Probes - Anechoic Chamber - Frequency Response	(450 to 18,000) MHz	1.1 dB
RF Isotropic E-Field Probes - GTEM Cell - Frequency Response	10 kHz to 1000 MHz	0.79 dB

2026_Frequency Response.txt

Customer Name: Motorola Solutions Malaysia Sdn Bhd
Probe Manufacturer: ETS - Lindgren
Probe Model: E100; HI-2200
Probe Serial No.: 00206767; 00086316
Notes:
CAL CERT #: 260113-125735-35f7da

Freq MHz	Mult	20V/m dB
0.1	1.07	0.61
0.5	0.96	-0.34
1	0.89	-1.02
3	0.91	-0.80
15	0.92	-0.68
27.12	0.94	-0.58
30	0.93	-0.63
75	0.96	-0.32
100	1.00	-0.03
150	1.01	0.04
200	1.02	0.21
250	1.05	0.46
300	1.11	0.88
400	0.86	-1.34
500	1.06	0.48
600	1.08	0.66
700	1.19	1.48
800	0.82	-1.70
900	0.99	-0.11
1000	1.14	1.11
2000	1.19	1.53
2450	1.19	1.52
3000	0.98	-0.19
3500	0.87	-1.25
4000	1.08	0.64
5000	1.03	0.29
5500	0.98	-0.19
6000	1.08	0.63

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2026_Isotropic Response.txt

Customer Name: Motorola Solutions Malaysia Sdn Bhd
Probe Manufacturer: ETS - Lindgren
Probe Model: E100; HI-2200
Probe Serial No.: 00206767; 00086316
Notes:
CAL CERT # 260113-125735-35f7da

Isotropic Response at 400 MHz at 20V/m

Deg	Response dB
0	0.00
45	-0.03
90	-0.10
135	-0.23
180	-0.21
225	-0.06
270	-0.01
315	-0.16
360	-0.05

Max Dev. 0.23

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2026_Linearity.txt

Customer Name: Motorola Solutions Malaysia Sdn Bhd

Probe Manufacturer: ETS - Lindgren

Probe Model: E100; HI-2200

Probe Serial No.: 00206767; 00086316

Notes:

CAL CERT #: 260113-125735-35f7da

Linearity

Freq MHz	Applied Field V/m	Indicated Field V/m	Max Dev dB
27.12	0.50	0.79	-3.97
27.12	1.00	1.06	-0.51
27.12	2.01	1.87	0.63
27.12	4.03	3.70	0.74
27.12	8.04	7.50	0.60
27.12	15.09	14.00	0.65
27.12	20.17	18.90	0.56
27.12	30.10	28.40	0.50
27.12	50.01	46.80	0.58
27.12	65.11	61.40	0.51
27.12	100.70	94.60	0.54
27.12	125.30	117.50	0.56
27.12	200.50	188.30	0.55
27.12	252.80	237.50	0.54
27.12	300.20	282.60	0.52
27.12	350.90	330.80	0.51
27.12	403.40	378.00	0.56
27.12	452.30	424.30	0.56
27.12	502.10	473.10	0.52
27.12	553.90	525.40	0.46
27.12	604.30	577.90	0.39

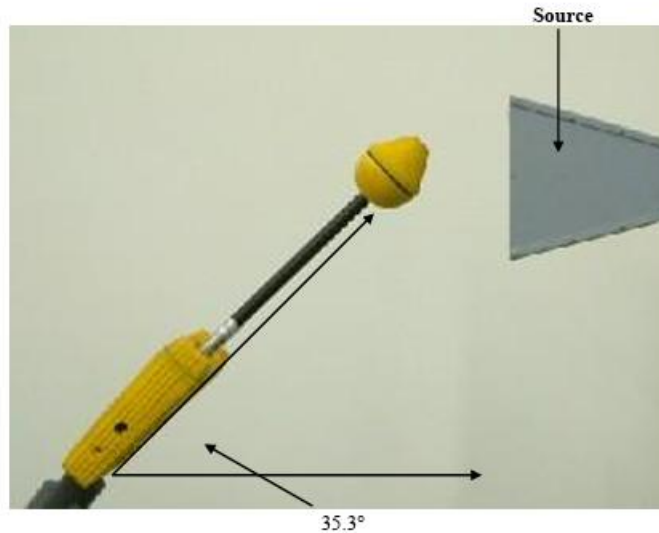
W&G_critical_angle.doc

Probe Alignment/Mounting Position

The alignment/mounting position of the probe is critical. The correction factors given with calibration are valid only for the indicated alignment/mounting position. Deviation from indicated alignment/mounting position of calibration can produce errors in excess of 6 dB.

The probe was positioned with the probe wand at a 35.3° angle position with the probe head centered in front of the field source. The picture below is for probe positioning reference only. The equipment shown does not necessarily indicate the equipment used for calibration.

Side View



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17025

A2LA Calibration

E-Field	
EME LAB	E100
<i>Freqs to be calibrated</i>	
QTY	MHz
1	1
2	15
3	30
4	75
5	100
6	150
7	200
8	250
9	300
10	400
11	500
12	600
13	700
14	800
15	900
16	1000
17	2000
18	2450
19	3000
20	3500
21	4000
22	5000
23	5500
24	6000

H-Field	
EME LAB	H200
<i>Freqs to be calibrated</i>	
QTY	MHz
1	10
2	15
3	30
4	50
5	75
6	100
7	150
8	175
9	200
10	250
11	300

** Range of probe is (5-300) MHz

Electromagnetic Survey Meter	
EME LAB	HI-2200
The above meter is to be used when calibrating the E-Field and H-Field probes.	

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											DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)	
(2)Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	(3) Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	(4) Probe Cal. Factor	(5) Test Pos.		(6) Meas. Unit	Bystander (BS) Positions														
													20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm					
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	403.0125	48.0	47.8	CW	E	0.870	BS	2	0.003	0.005	0.009	0.026	0.074	0.113	0.190	0.320	0.483	0.457	0.5	0.146	0.073	0.073		
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	406.1250	48.0	47.9	CW	E	0.870	BS	2	0.002	0.003	0.016	0.032	0.069	0.115	0.209	0.363	0.495	0.512	0.5	0.158	0.079	0.079		
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	419.9875	48.0	48.0	CW	E	0.900	BS	2	0.004	0.005	0.014	0.043	0.086	0.123	0.161	0.277	0.357	0.391	0.5	0.131	0.066	0.066		
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	429.9875	48.0	47.8	CW	E	0.920	BS	2	0.004	0.003	0.032	0.061	0.092	0.106	0.176	0.338	0.401	0.394	0.5	0.148	0.074	0.074		
Roof	HAE4003A, 1/4 Wave (450-470 MHz)	2.15	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.006	0.015	0.022	0.044	0.062	0.091	0.217	0.384	0.491	0.432	0.5	0.169	0.085	0.085		
Roof	HAE4003A, 1/4 Wave (450-470 MHz)	2.15	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.003	0.004	0.014	0.040	0.060	0.101	0.238	0.404	0.442	0.439	0.5	0.171	0.086	0.086		
Roof	HAE4003A, 1/4 Wave (450-470 MHz)	2.15	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.005	0.009	0.016	0.034	0.055	0.106	0.216	0.318	0.415	0.412	0.5	0.159	0.079	0.079		
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	403.0125	48.0	47.8	CW	E	0.870	BS	2	0.009	0.005	0.020	0.028	0.066	0.113	0.211	0.374	0.543	0.489	0.5	0.162	0.081	0.081		
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	406.1250	48.0	47.9	CW	E	0.870	BS	2	0.009	0.005	0.013	0.029	0.083	0.122	0.253	0.395	0.501	0.489	0.5	0.165	0.083	0.083		
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	419.9875	48.0	48.0	CW	E	0.900	BS	2	0.011	0.013	0.019	0.032	0.082	0.131	0.190	0.314	0.415	0.417	0.5	0.146	0.073	0.073		
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	429.9875	48.0	47.8	CW	E	0.920	BS	2	0.004	0.007	0.024	0.049	0.089	0.117	0.196	0.363	0.425	0.383	0.5	0.152	0.076	0.077		
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	439.1000	48.0	47.8	CW	E	0.940	BS	2	0.003	0.004	0.024	0.037	0.061	0.082	0.185	0.369	0.416	0.369	0.5	0.146	0.073	0.073		
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.009	0.006	0.020	0.040	0.069	0.105	0.193	0.351	0.473	0.364	0.5	0.156	0.078	0.078		
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.003	0.003	0.016	0.081	0.069	0.139	0.285	0.482	0.521	0.369	0.5	0.193	0.096	0.097		
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.009	0.014	0.016	0.040	0.070	0.131	0.225	0.310	0.352	0.275	0.5	0.144	0.072	0.072		

MPE calculations are defined in section 15.0.

Table D.1 (Continued)
MPE measurement data for Bystander

D.U.T. Info.								Probe Info.				MPE Measurements										DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)		
(2)Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	(3) Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	(4) Probe Cal. Factor			(5) Test Pos.	(6) Meas. Unit	Bystander (BS) Positions													
														20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm					180 cm	200 cm
Roof	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	406.1250	48.0	47.9	CW	E	0.870	BS	2	0.008	0.005	0.011	0.024	0.077	0.117	0.213	0.374	0.458	0.106	0.5	0.121	0.061	0.061		
Roof	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	419.9875	48.0	48.0	CW	E	0.900	BS	2	0.007	0.006	0.015	0.035	0.084	0.155	0.184	0.295	0.368	0.108	0.5	0.113	0.057	0.057		
Roof	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.007	0.006	0.019	0.037	0.071	0.104	0.180	0.351	0.401	0.319	0.5	0.144	0.072	0.072		
Roof	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.007	0.004	0.014	0.034	0.062	0.226	0.299	0.452	0.428	0.349	0.5	0.184	0.092	0.092		
Roof	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.006	0.005	0.023	0.045	0.062	0.164	0.271	0.397	0.408	0.264	0.5	0.165	0.082	0.082		
Roof	PMAE4034B, 1/2 Wave (450-470 MHz)	7.15	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.001	0.002	0.006	0.016	0.031	0.079	0.196	0.397	0.521	0.466	0.5	0.165	0.082	0.082		
Roof	PMAE4034B, 1/2 Wave (450-470 MHz)	7.15	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.003	0.004	0.005	0.017	0.023	0.062	0.207	0.448	0.645	0.492	0.5	0.187	0.093	0.094		
Roof	PMAE4034B, 1/2 Wave (450-470 MHz)	7.15	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.002	0.004	0.006	0.012	0.027	0.055	0.170	0.352	0.499	0.420	0.5	0.155	0.077	0.077		

MPE calculations are defined in section 15.0.

Table D.1 (Continued)
MPE measurement data for Bystander

D.U.T. Info.								Probe Info.				MPE Measurements										DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
(2)Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	(3)Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	Probe Cal. Factor (4)			(5)Test Pos.	(6)Meas. Unit	Bystander (BS) Positions											
														20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm		
Roof	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.001	0.002	0.003	0.003	0.004	0.009	0.053	0.193	0.367	0.397	0.5	0.099	0.050	0.050
Roof	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.002	0.002	0.003	0.004	0.003	0.008	0.060	0.207	0.407	0.401	0.5	0.108	0.054	0.054
Roof	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.001	0.001	0.002	0.002	0.002	0.004	0.025	0.067	0.114	0.121	0.5	0.034	0.017	0.017
Roof	RAE4163A, 1/4 Wave (410-430 MHz)	3.00	90	413.0125	48.0	47.5	CW	E	0.890	BS	2	0.004	0.004	0.014	0.021	0.062	0.124	0.235	0.382	0.428	0.372	0.5	0.146	0.073	0.074
Roof	RAE4163A, 1/4 Wave (410-430 MHz)	3.00	90	419.9875	48.0	48.0	CW	E	0.900	BS	2	0.003	0.006	0.014	0.028	0.073	0.106	0.137	0.219	0.329	0.355	0.5	0.114	0.057	0.057
Roof	RAE4163A, 1/4 Wave (410-430 MHz)	3.00	90	429.9875	48.0	47.8	CW	E	0.920	BS	2	0.004	0.005	0.011	0.056	0.084	0.093	0.144	0.296	0.375	0.352	0.5	0.131	0.065	0.066
Roof	RAE4164A, 1/4 Wave (430-450 MHz)	3.00	90	430.0125	48.0	47.6	CW	E	0.920	BS	2	0.005	0.007	0.020	0.055	0.076	0.087	0.168	0.305	0.376	0.389	0.5	0.137	0.068	0.069
Roof	RAE4164A, 1/4 Wave (430-450 MHz)	3.00	90	439.1000	48.0	47.8	CW	E	0.940	BS	2	0.003	0.005	0.020	0.030	0.053	0.059	0.138	0.270	0.360	0.359	0.5	0.122	0.061	0.061
Roof	RAE4164A, 1/4 Wave (430-450 MHz)	3.00	90	449.9875	48.0	48.0	CW	E	0.960	BS	2	0.003	0.003	0.004	0.007	0.012	0.021	0.043	0.079	0.100	0.097	0.5	0.035	0.018	0.018
Roof	RAE4168A, 1/4 Wave (450-470 MHz)	3.00	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.005	0.006	0.013	0.031	0.048	0.070	0.190	0.321	0.416	0.397	0.5	0.144	0.072	0.072
Roof	RAE4168A, 1/4 Wave (450-470 MHz)	3.00	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.005	0.007	0.010	0.031	0.039	0.093	0.191	0.335	0.410	0.349	0.5	0.144	0.072	0.072
Roof	RAE4168A, 1/4 Wave (450-470 MHz)	3.00	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.003	0.003	0.004	0.012	0.017	0.033	0.065	0.101	0.124	0.115	0.5	0.048	0.024	0.024

MPE calculations are defined in section 15.0.

Table D.1 (Continued)
MPE measurement data for Bystander

D.U.T. Info.									Probe Info.			MPE Measurements										DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
(2)/Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	(3) Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	(4) Probe Cal. Factor	(5) Test Pos.		(6) Meas. Unit	Bystander (BS) Positions												
													20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm				
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	403.0125	48.0	47.8	CW	E	0.870	BS	2	0.116	0.124	0.148	0.187	0.201	0.296	0.384	0.338	0.259	0.229	0.5	0.199	0.099	0.100
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	406.1250	48.0	47.9	CW	E	0.870	BS	2	0.098	0.124	0.154	0.168	0.195	0.273	0.374	0.344	0.246	0.165	0.5	0.186	0.093	0.093
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	419.9875	48.0	48.0	CW	E	0.900	BS	2	0.094	0.098	0.101	0.152	0.221	0.381	0.411	0.335	0.232	0.149	0.5	0.196	0.098	0.098
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	429.9875	48.0	47.8	CW	E	0.920	BS	2	0.095	0.076	0.105	0.143	0.296	0.479	0.372	0.318	0.178	0.105	0.5	0.199	0.100	0.100
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	439.1000	48.0	47.8	CW	E	0.940	BS	2	0.114	0.093	0.121	0.144	0.275	0.439	0.477	0.349	0.213	0.121	0.5	0.221	0.110	0.111
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.096	0.051	0.091	0.158	0.329	0.583	0.579	0.420	0.221	0.108	0.5	0.253	0.127	0.127
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.078	0.050	0.089	0.120	0.292	0.455	0.433	0.339	0.221	0.118	0.5	0.215	0.108	0.108
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.050	0.038	0.084	0.147	0.369	0.538	0.469	0.368	0.221	0.118	0.5	0.240	0.120	0.120
Trunk	PM4E4032B, 5/8 Wave (406-420 MHz)	5.65	90	406.1250	48.0	47.9	CW	E	0.870	BS	2	0.092	0.106	0.126	0.151	0.164	0.297	0.345	0.289	0.160	0.076	0.5	0.157	0.079	0.079
Trunk	PM4E4032B, 5/8 Wave (406-420 MHz)	5.65	90	419.9875	48.0	48.0	CW	E	0.900	BS	2	0.092	0.076	0.101	0.138	0.218	0.333	0.335	0.250	0.158	0.078	0.5	0.160	0.080	0.080

MPE calculations are defined in section 15.0.

Table D.1 (Continued)
MPE measurement data for Bystander

D.U.T. Info.										Probe Info.			MPE Measurements										DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
(2)/Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	(3) Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	(4) Probe Cal. Factor	(5) Test Pos.	(6) Meas. Unit		Bystander (BS) Positions													
													20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm	180 cm	200 cm				
Trunk	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.089	0.050	0.095	0.171	0.334	0.489	0.518	0.365	0.199	0.082	0.5	0.230	0.115	0.115	
Trunk	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.074	0.049	0.093	0.134	0.290	0.434	0.426	0.294	0.152	0.078	0.5	0.198	0.099	0.100	
Trunk	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.056	0.032	0.089	0.150	0.318	0.426	0.460	0.331	0.196	0.099	0.5	0.216	0.108	0.108	
Trunk	PMAE4034B, 5/8 Wave (450-470 MHz)	7.15	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.024	0.016	0.028	0.081	0.155	0.416	0.637	0.399	0.159	0.043	0.5	0.188	0.094	0.094	
Trunk	PMAE4034B, 5/8 Wave (450-470 MHz)	7.15	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.030	0.016	0.045	0.083	0.223	0.518	0.681	0.482	0.221	0.038	0.5	0.229	0.115	0.115	
Trunk	PMAE4034B, 5/8 Wave (450-470 MHz)	7.15	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.023	0.010	0.025	0.061	0.168	0.495	0.600	0.495	0.188	0.045	0.5	0.211	0.106	0.106	
Trunk	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.023	0.011	0.015	0.026	0.116	0.414	0.629	0.457	0.186	0.096	0.5	0.189	0.095	0.095	
Trunk	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	460.0000	48.0	47.7	CW	E	0.980	BS	2	0.023	0.009	0.009	0.013	0.085	0.327	0.457	0.223	0.165	0.097	0.5	0.138	0.069	0.069	
Trunk	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	469.9875	48.0	48.0	CW	E	1.000	BS	2	0.005	0.003	0.007	0.008	0.061	0.138	0.207	0.154	0.064	0.049	0.5	0.070	0.035	0.035	

MPE calculations are defined in section 15.0.

Table D.1 (Continued)
MPE measurement data for Bystander

D.U.T. Info.								Probe Info.			MPE Measurements										DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)		
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor		⁽⁵⁾ Test Pos.	⁽⁶⁾ Meas. Unit	Bystander (BS) Positions													
													20 cm	40 cm	60 cm	80 cm	100 cm	120 cm	140 cm	160 cm					180 cm	200 cm
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.096	0.051	0.091	0.158	0.329	0.583	0.579	0.420	0.221	0.108	0.5	0.253	0.127	0.127	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.019	0.038	0.081	0.182	0.484	0.580	0.537	0.357	0.234	0.147	0.5	0.255	0.128	0.128	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.096	0.051	0.091	0.158	0.329	0.583	0.579	0.420	0.221	0.108	0.5	0.253	0.127	0.127	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	BS	2	0.059	0.040	0.097	0.094	0.213	0.402	0.416	0.282	0.141	0.072	0.5	0.174	0.087	0.087	

MPE calculations are defined in section 15.0.

Table D.2
MPE measurement data for Passenger

D.U.T. Info.								Probe Info.			⁽⁶⁾ Meas. Unit				DUT Max. TX Factor	Avg. over Body (mW/cm2)	Calc. P.D. (mW/cm2)	Max Calc. P.D. (mW/cm2)	
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor		⁽⁵⁾ Test Pos.	MPE Measurements							
													Head/ Top 1/3	Chest/ Middle 1/3					Lower Trunk/ Bottom 1/3
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	403.0125	48.0	47.8	CW	E	0.870	PB	2	0.099	0.129	0.083	0.5	0.090	0.045	0.045	
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	406.1250	48.0	47.9	CW	E	0.870	PB	2	0.050	0.113	0.095	0.5	0.075	0.037	0.037	
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	419.9875	48.0	48.0	CW	E	0.900	PB	2	0.044	0.078	0.081	0.5	0.061	0.030	0.030	
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	429.9875	48.0	47.8	CW	E	0.920	PB	2	0.030	0.063	0.065	0.5	0.048	0.024	0.024	
Roof	HAE4003A, 1/4 Wave (450-470 MHz)	2.15	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.051	0.072	0.074	0.5	0.063	0.032	0.032	
Roof	HAE4003A, 1/4 Wave (450-470 MHz)	2.15	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.056	0.090	0.113	0.5	0.085	0.042	0.043	
Roof	HAE4003A, 1/4 Wave (450-470 MHz)	2.15	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.048	0.076	0.089	0.5	0.071	0.036	0.036	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	403.0125	48.0	47.8	CW	E	0.870	PB	2	0.080	0.121	0.089	0.5	0.084	0.042	0.042	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	406.1250	48.0	47.9	CW	E	0.870	PB	2	0.066	0.120	0.101	0.5	0.083	0.042	0.040	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	419.9875	48.0	48.0	CW	E	0.900	PB	2	0.038	0.069	0.090	0.5	0.059	0.030	0.030	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	429.9875	48.0	47.8	CW	E	0.920	PB	2	0.024	0.081	0.070	0.5	0.054	0.027	0.027	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	439.1000	48.0	47.8	CW	E	0.940	PB	2	0.040	0.065	0.053	0.5	0.050	0.025	0.025	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.060	0.059	0.083	0.5	0.065	0.032	0.032	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.054	0.077	0.098	0.5	0.075	0.037	0.038	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.038	0.055	0.082	0.5	0.058	0.029	0.029	

MPE calculations are defined in section 15.0.

Table D.2 (Continued)
MPE measurement data for Passenger

D.U.T. Info.								Probe Info.			⁽⁶⁾ Meas. Unit				DUT Max. TX Factor	Avg. over Body (mW/cm2)	Calc. P.D. (mW/cm2)	Max Calc. P.D. (mW/cm2)	
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor		⁽⁵⁾ Test Pos.	MPE Measurements	⁽⁶⁾ Meas. Unit						
													Head/ Top 1/3	Chest/ Middle 1/3					Lower Trunk/ Bottom 1/3
Roof	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	406.1250	48.0	47.9	CW	E	0.870	PB	2	0.064	0.037	0.093	0.5	0.056	0.028	0.028	
Roof	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	419.9875	48.0	48.0	CW	E	0.900	PB	2	0.021	0.089	0.083	0.5	0.058	0.029	0.029	
Roof	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.084	0.080	0.087	0.5	0.080	0.040	0.040	
Roof	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.049	0.095	0.091	0.5	0.077	0.038	0.039	
Roof	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.046	0.050	0.080	0.5	0.059	0.029	0.029	
Roof	PMAE4034B, 1/2 Wave (450-470 MHz)	7.15	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.034	0.022	0.034	0.5	0.029	0.014	0.014	
Roof	PMAE4034B, 1/2 Wave (450-470 MHz)	7.15	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.030	0.036	0.043	0.5	0.036	0.018	0.018	
Roof	PMAE4034B, 1/2 Wave (450-470 MHz)	7.15	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.016	0.027	0.032	0.5	0.025	0.013	0.013	

MPE calculations are defined in section 15.0.

Table D.2 (Continued)
MPE measurement data for Passenger

D.U.T. Info.								Probe Info.			⁽⁶⁾ Meas. Unit				DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)	
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor		⁽⁵⁾ Test Pos.	MPE Measur ements							
													Head/ Top 1/3	Chest/ Middle 1/3					Lower Trunk/ Bottom 1/3
Roof	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.008	0.010	0.008	0.5	0.008	0.004	0.004	
Roof	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.006	0.013	0.010	0.5	0.009	0.005	0.005	
Roof	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.002	0.004	0.009	0.5	0.005	0.003	0.003	
Roof	RAE4163A, 1/4 Wave (410-430 MHz)	3.00	90	413.0125	48.0	47.5	CW	E	0.890	PB	2	0.030	0.093	0.081	0.5	0.061	0.030	0.031	
Roof	RAE4163A, 1/4 Wave (410-430 MHz)	3.00	90	419.9875	48.0	48.0	CW	E	0.900	PB	2	0.023	0.061	0.072	0.5	0.047	0.023	0.023	
Roof	RAE4163A, 1/4 Wave (410-430 MHz)	3.00	90	429.9875	48.0	47.8	CW	E	0.920	PB	2	0.023	0.056	0.073	0.5	0.047	0.023	0.023	
Roof	RAE4164A, 1/4 Wave (430-450 MHz)	3.00	90	430.0125	48.0	47.6	CW	E	0.920	PB	2	0.025	0.054	0.066	0.5	0.044	0.022	0.022	
Roof	RAE4164A, 1/4 Wave (430-450 MHz)	3.00	90	439.1000	48.0	47.8	CW	E	0.940	PB	2	0.039	0.043	0.035	0.5	0.037	0.018	0.018	
Roof	RAE4164A, 1/4 Wave (430-450 MHz)	3.00	90	449.9875	48.0	48.0	CW	E	0.960	PB	2	0.011	0.012	0.013	0.5	0.012	0.006	0.006	
Roof	RAE4168A, 1/4 Wave (450-470 MHz)	3.00	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.053	0.050	0.053	0.5	0.050	0.025	0.025	
Roof	RAE4168A, 1/4 Wave (450-470 MHz)	3.00	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.042	0.076	0.095	0.5	0.070	0.035	0.035	
Roof	RAE4168A, 1/4 Wave (450-470 MHz)	3.00	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.016	0.023	0.028	0.5	0.022	0.011	0.011	

MPE calculations are defined in section 15.0.

Table D.2 (Continued)
MPE measurement data for Passenger

D.U.T. Info.								Probe Info.			⁽⁶⁾ Meas. Unit			DUT Max. TX Factor	Avg. over Body (mW/cm2)	Calc. P.D. (mW/cm2)	Max Calc. P.D. (mW/cm2)		
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor		⁽⁵⁾ Test Pos.	MPE Measurements							
													Head/ Top 1/3					Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	403.0125	48.0	47.8	CW	E	0.870	PB	2	0.481	0.288	0.328	0.5	0.318	0.159	0.160	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	406.1250	48.0	47.9	CW	E	0.870	PB	2	0.493	0.280	0.336	0.5	0.322	0.161	0.161	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	419.9875	48.0	48.0	CW	E	0.900	PB	2	0.377	0.190	0.248	0.5	0.245	0.122	0.122	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	429.9875	48.0	47.8	CW	E	0.920	PB	2	0.322	0.242	0.213	0.5	0.238	0.119	0.120	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	439.1000	48.0	47.8	CW	E	0.940	PB	2	0.683	0.254	0.250	0.5	0.372	0.186	0.187	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.604	0.212	0.402	0.5	0.390	0.195	0.195	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.584	0.277	0.312	0.5	0.383	0.192	0.193	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.446	0.298	0.423	0.5	0.389	0.195	0.195	
Trunk	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	406.1250	48.0	47.9	CW	E	0.870	PB	2	0.472	0.486	0.361	0.5	0.383	0.191	0.192	
Trunk	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	419.9875	48.0	48.0	CW	E	0.900	PB	2	0.361	0.401	0.256	0.5	0.305	0.153	0.153	

MPE calculations are defined in section 15.0.

Table D.2 (Continued)
MPE measurement data for Passenger

D.U.T. Info.								Probe Info.			⁽⁶⁾ Meas. Unit								
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor		⁽⁵⁾ Test Pos.	MPE Measur ements							
													Head/ Top 1/3	Chest/ Middle 1/3					Lower Trunk/ Bottom 1/3
Trunk	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.375	0.243	0.228	0.5	0.271	0.135	0.135	
Trunk	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.353	0.305	0.282	0.5	0.307	0.154	0.154	
Trunk	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.448	0.284	0.241	0.5	0.324	0.162	0.162	
Trunk	PMAE4034B, 5/8 Wave (450-470 MHz)	7.15	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.463	0.176	0.241	0.5	0.282	0.141	0.141	
Trunk	PMAE4034B, 5/8 Wave (450-470 MHz)	7.15	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.381	0.269	0.239	0.5	0.290	0.145	0.146	
Trunk	PMAE4034B, 5/8 Wave (450-470 MHz)	7.15	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.480	0.202	0.209	0.5	0.297	0.149	0.149	
Trunk	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	450.0125	48.0	48.0	CW	E	0.960	PB	2	0.285	0.109	0.132	0.5	0.168	0.084	0.084	
Trunk	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	460.0000	48.0	47.7	CW	E	0.980	PB	2	0.253	0.111	0.130	0.5	0.161	0.081	0.081	
Trunk	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	469.9875	48.0	48.0	CW	E	1.000	PB	2	0.203	0.105	0.097	0.5	0.135	0.068	0.068	

MPE calculations are defined in section 15.0.

Table D.2 (Continued)
MPE measurement data for Passenger

D.U.T. Info.										Probe Info.			(6) Meas. Unit						
(2)Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	(3)Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	(4) Probe Cal. Factor	(5)Test Pos.	MPE Measurements								
													Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3				
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	403.0125	48.0	47.8	CW	E	0.870	PF	2	0.047	0.028	0.044	0.5	0.035	0.017	0.017	
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	406.1250	48.0	47.9	CW	E	0.870	PF	2	0.050	0.017	0.033	0.5	0.029	0.015	0.015	
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	419.9875	48.0	48.0	CW	E	0.900	PF	2	0.039	0.061	0.033	0.5	0.040	0.020	0.020	
Roof	HAE4002A, 1/4 Wave (403-430 MHz)	2.15	90	429.9875	48.0	47.8	CW	E	0.920	PF	2	0.065	0.021	0.013	0.5	0.030	0.015	0.015	
Roof	HAE4003A, 1/4 Wave (450-470 MHz)	2.15	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.052	0.070	0.027	0.5	0.048	0.024	0.024	
Roof	HAE4003A, 1/4 Wave (450-470 MHz)	2.15	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.068	0.065	0.045	0.5	0.058	0.029	0.029	
Roof	HAE4003A, 1/4 Wave (450-470 MHz)	2.15	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.064	0.029	0.041	0.5	0.045	0.022	0.022	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	403.0125	48.0	47.8	CW	E	0.870	PF	2	0.026	0.027	0.018	0.5	0.021	0.010	0.010	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	406.1250	48.0	47.9	CW	E	0.870	PF	2	0.054	0.026	0.039	0.5	0.035	0.017	0.017	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	419.9875	48.0	48.0	CW	E	0.900	PF	2	0.049	0.041	0.026	0.5	0.035	0.017	0.017	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	429.9875	48.0	47.8	CW	E	0.920	PF	2	0.039	0.026	0.028	0.5	0.029	0.014	0.014	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	439.1000	48.0	47.8	CW	E	0.940	PF	2	0.081	0.025	0.020	0.5	0.039	0.020	0.020	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.062	0.051	0.026	0.5	0.044	0.022	0.022	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.073	0.070	0.050	0.5	0.063	0.032	0.032	
Roof	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.058	0.027	0.059	0.5	0.048	0.024	0.024	

MPE calculations are defined in section 15.0.

Table D.2 (Continued)
MPE measurement data for Passenger

D.U.T. Info.								Probe Info.			⁽⁶⁾ Meas. Unit				DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)	
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor		⁽⁵⁾ Test Pos.	MPE Measur ements							
													Head/ Top 1/3	Chest/ Middle 1/3					Lower Trunk/ Bottom 1/3
Roof	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	406.1250	48.0	47.9	CW	E	0.870	PF	2	0.044	0.023	0.023	0.5	0.026	0.013	0.013	
Roof	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	419.9875	48.0	48.0	CW	E	0.900	PF	2	0.047	0.033	0.028	0.5	0.032	0.016	0.016	
Roof	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.050	0.041	0.026	0.5	0.037	0.019	0.019	
Roof	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.073	0.054	0.033	0.5	0.052	0.026	0.026	
Roof	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.078	0.033	0.051	0.5	0.054	0.027	0.027	
Roof	PMAE4034B, 1/2 Wave (450-470 MHz)	7.15	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.010	0.016	0.010	0.5	0.012	0.006	0.006	
Roof	PMAE4034B, 1/2 Wave (450-470 MHz)	7.15	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.025	0.024	0.026	0.5	0.025	0.012	0.012	
Roof	PMAE4034B, 1/2 Wave (450-470 MHz)	7.15	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.025	0.017	0.035	0.5	0.026	0.013	0.013	

MPE calculations are defined in section 15.0.

Table D.2 (Continued)
MPE measurement data for Passenger

D.U.T. Info.									Probe Info.			⁽⁶⁾ Meas. Unit				DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor	⁽⁵⁾ Test Pos.		MPE Measur ements							
													Head/ Top 1/3	Chest/ Middle 1/3	Lower Trunk/ Bottom 1/3				
Roof	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.004	0.002	0.002	0.5	0.003	0.001	0.001	
Roof	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.005	0.010	0.006	0.5	0.007	0.003	0.003	
Roof	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.003	0.004	0.003	0.5	0.003	0.002	0.002	
Roof	RAE4163A, 1/4 Wave (410-430 MHz)	3.00	90	413.0125	48.0	47.5	CW	E	0.890	PF	2	0.051	0.050	0.029	0.5	0.039	0.019	0.019	
Roof	RAE4163A, 1/4 Wave (410-430 MHz)	3.00	90	419.9875	48.0	48.0	CW	E	0.900	PF	2	0.053	0.052	0.024	0.5	0.039	0.019	0.019	
Roof	RAE4163A, 1/4 Wave (410-430 MHz)	3.00	90	429.9875	48.0	47.8	CW	E	0.920	PF	2	0.072	0.022	0.013	0.5	0.033	0.016	0.016	
Roof	RAE4168A, 1/4 Wave (450-470 MHz)	3.00	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.045	0.053	0.015	0.5	0.036	0.018	0.018	
Roof	RAE4168A, 1/4 Wave (450-470 MHz)	3.00	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.056	0.048	0.033	0.5	0.045	0.022	0.023	
Roof	RAE4168A, 1/4 Wave (450-470 MHz)	3.00	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.017	0.011	0.014	0.5	0.014	0.007	0.007	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	403.0125	48.0	47.8	CW	E	0.870	PF	2	0.249	0.130	0.222	0.5	0.174	0.087	0.088	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	406.1250	48.0	47.9	CW	E	0.870	PF	2	0.373	0.096	0.090	0.5	0.162	0.081	0.081	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	419.9875	48.0	48.0	CW	E	0.900	PF	2	0.269	0.076	0.102	0.5	0.134	0.067	0.067	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	429.9875	48.0	47.8	CW	E	0.920	PF	2	0.230	0.041	0.102	0.5	0.114	0.057	0.057	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	439.1000	48.0	47.8	CW	E	0.940	PF	2	0.230	0.038	0.069	0.5	0.106	0.053	0.053	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.249	0.087	0.160	0.5	0.159	0.079	0.079	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.397	0.145	0.175	0.5	0.234	0.117	0.120	
Trunk	HAE6022A, 5/8 Wave (403-527 MHz)	4.15	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.258	0.159	0.113	0.5	0.177	0.088	0.088	

MPE calculations are defined in section 15.0.

Table D.2 (Continued)
MPE measurement data for Passenger

D.U.T. Info.								Probe Info.			⁽⁶⁾ Meas. Unit				DUT Max. TX Factor	Avg. over Body (mW/cm2)	Calc. P.D. (mW/cm2)	Max Calc. P.D. (mW/cm2)	
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor		⁽⁵⁾ Test Pos.	MPE Measurements							
													Head/ Top 1/3	Chest/ Middle 1/3					Lower Trunk/ Bottom 1/3
Trunk	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	406.1250	48.0	47.9	CW	E	0.870	PF	2	0.207	0.075	0.090	0.5	0.108	0.054	0.054	
Trunk	PMAE4032B, 5/8 Wave (406-420 MHz)	5.65	90	419.9875	48.0	48.0	CW	E	0.900	PF	2	0.370	0.081	0.106	0.5	0.167	0.084	0.084	
Trunk	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.268	0.072	0.153	0.5	0.158	0.079	0.079	
Trunk	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.392	0.089	0.123	0.5	0.197	0.099	0.099	
Trunk	PMAE4033B, 5/8 Wave (450-470 MHz)	5.65	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.469	0.151	0.078	0.5	0.233	0.116	0.116	
Trunk	PMAE4034B, 5/8 Wave (450-470 MHz)	7.15	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.370	0.092	0.137	0.5	0.192	0.096	0.096	
Trunk	PMAE4034B, 5/8 Wave (450-470 MHz)	7.15	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.376	0.097	0.194	0.5	0.218	0.109	0.110	
Trunk	PMAE4034B, 5/8 Wave (450-470 MHz)	7.15	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.464	0.101	0.071	0.5	0.212	0.106	0.106	

MPE calculations are defined in section 15.0.

Table D.2 (Continued)
MPE measurement data for Passenger

D.U.T. Info.								Probe Info.			⁽⁶⁾ Meas. Unit				DUT Max. TX Factor	Avg. over Body (mW/ cm2)	Calc. P.D. (mW/ cm2)	Max Calc. P.D. (mW/ cm2)	
⁽²⁾ Ant Loc.	Ant. Model/ Desc.	Ant. Gain (dBi)	Ant. Meas. Dist. (cm)	Tx Freq (MHz)	⁽³⁾ Max Pwr (W)	Initial Pwr (W)	Test Mode	E/H Field	⁽⁴⁾ Probe Cal. Factor		⁽⁵⁾ Test Pos.	MPE Measur ements							
													Head/ Top 1/3	Chest/ Middle 1/3					Lower Trunk/ Bottom 1/3
Trunk	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	450.0125	48.0	48.0	CW	E	0.960	PF	2	0.202	0.094	0.076	0.5	0.119	0.060	0.060	
Trunk	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	460.0000	48.0	47.7	CW	E	0.980	PF	2	0.308	0.126	0.084	0.5	0.169	0.085	0.085	
Trunk	RAE4154A, 5/8 Wave (450-470 MHz)	5.95	90	469.9875	48.0	48.0	CW	E	1.000	PF	2	0.118	0.043	0.028	0.5	0.063	0.032	0.032	
Trunk	RAE4164A, 1/4 Wave (430-450 MHz)	3.00	90	430.0125	48.0	47.6	CW	E	0.920	PF	2	0.085	0.022	0.005	0.5	0.034	0.017	0.017	
Trunk	RAE4164A, 1/4 Wave (430-450 MHz)	3.00	90	439.1000	48.0	47.8	CW	E	0.940	PF	2	0.055	0.039	0.018	0.5	0.035	0.018	0.018	
Trunk	RAE4164A, 1/4 Wave (430-450 MHz)	3.00	90	449.9875	48.0	48.0	CW	E	0.960	PF	2	0.008	0.021	0.002	0.5	0.010	0.005	0.005	

Table D.3

LMR VHF MPE Results for FCC

Note:

Blue fonts: Frequencies not regulated by FCC.

Pmax (W)		48		P initial (W)		47.8	47.9	47.5	48	47.8	47.6	47.8	48	48	47.7	48
				FCC Limit (mW/cm^2)		NA	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Test Pos	Angle	Trunk/ Roof	E/H Field	Antenna no.	f1	f2	f3	f4	f5	f6	f7	f8	f9	f10	f11	
					403.0125	406.1250	413.0125	419.9875	429.9875	430.0125	439.1000	449.9875	450.0125	460.0000	469.9875	
BS	0	Roof	E	1	0.073	0.079		0.066	0.074							
BS	0	Roof	E	2									0.085	0.086	0.079	
BS	0	Roof	E	3	0.081	0.083		0.073	0.077		0.073		0.078	0.097	0.072	
BS	0	Roof	E	4		0.061		0.057								
BS	0	Roof	E	5									0.072	0.092	0.082	
BS	0	Roof	E	6									0.082	0.094	0.077	
BS	0	Roof	E	7									0.05	0.054	0.017	
BS	0	Roof	E	8			0.074	0.057	0.066							
BS	0	Roof	E	9						0.069	0.061	0.018				
BS	0	Roof	E	10									0.072	0.072	0.024	
BS	0	Trunk	E	3	0.1	0.093		0.098	0.1		0.111		0.087	0.108	0.12	
BS	0	Trunk	E	4		0.079		0.08								
BS	0	Trunk	E	5									0.115	0.1	0.108	
BS	0	Trunk	E	6									0.094	0.115	0.106	
BS	0	Trunk	E	7									0.095	0.069	0.035	
PB	0	Roof	E	1	0.045	0.037		0.03	0.024							
PB	0	Roof	E	2									0.032	0.043	0.036	
PB	0	Roof	E	3	0.042	0.04		0.03	0.027		0.025		0.032	0.038	0.029	
PB	0	Roof	E	4		0.028		0.029								
PB	0	Roof	E	5									0.04	0.039	0.029	
PB	0	Roof	E	6									0.014	0.018	0.013	
PB	0	Roof	E	7									0.004	0.005	0.003	
PB	0	Roof	E	8			0.031	0.023	0.023							
PB	0	Roof	E	9						0.022	0.018	0.006				
PB	0	Roof	E	10									0.025	0.035	0.011	
PB	0	Trunk	E	3	0.16	0.161		0.122	0.12		0.187		0.195	0.193	0.195	
PB	0	Trunk	E	4		0.192		0.153								
PB	0	Trunk	E	5									0.135	0.154	0.162	
PB	0	Trunk	E	6									0.141	0.146	0.149	
PB	0	Trunk	E	7									0.084	0.081	0.068	
PF	0	Roof	E	1	0.017	0.015		0.02	0.015							
PF	0	Roof	E	2									0.024	0.029	0.022	
PF	0	Roof	E	3	0.01	0.017		0.017	0.014		0.02		0.022	0.032	0.024	
PF	0	Roof	E	4		0.013		0.016								
PF	0	Roof	E	5									0.019	0.026	0.027	
PF	0	Roof	E	6									0.006	0.012	0.013	
PF	0	Roof	E	7									0.001	0.003	0.002	
PF	0	Roof	E	8			0.019	0.019	0.016							
PF	0	Roof	E	10									0.018	0.023	0.007	
PF	0	Trunk	E	3	0.088	0.081		0.067	0.057		0.053		0.079	0.12	0.088	
PF	0	Trunk	E	4		0.054		0.084								
PF	0	Trunk	E	5									0.079	0.099	0.116	
PF	0	Trunk	E	6									0.096	0.11	0.106	
PF	0	Trunk	E	7									0.06	0.085	0.032	
PF	0	Trunk	E	9						0.017	0.018	0.005				