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

DVR DQPMDVR4000P	
Frequency (MHz)	**Po (W)**
380	10.0
405	9.9
430	10.0

Mobile M20URS9PW1AN	
Frequency (MHz)	**Po (W)**
764.0875	36.0
773.0125	36.0
775.9125	36.1
794.0875	37.0
809.0125	41.3
823.9875	41.6
851.0125	41.9
859.0125	41.7
868.9875	41.9

10.0 Test Set-Up Description

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

Mobile - The ¼ wave antennas (HAF4013A 3dBd, HAF4014A 3dBd, HAF4016A 0dBd and HAF4017A 3dBd) were assessed while mounted at the center of the roof of the test vehicle.

DVR - The ¼ wave antenna (HAE6012A 0dBd) was assessed while mounted at the trunk.

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

11.0 Test Results Summary

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

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

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

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

External to vehicle - 10 measurements are averaged over the body (*Body_Avg*).
Internal to vehicle - 3 measurements are averaged over the body (*Body_Avg*).
Narda Survey Meter measures in percent of the controlled limit. Therefore the averages over the body used in the calculations below reflect percentages.

Therefore;

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

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

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

Note; For *Initial Output Power*> *Max_Output_Power*, *Max_Output_Power* / *Initial Output Power* = 1

The tables below summarize the highest MPE results of the E field test configurations for the 7/800MHz mobile, DVR UHF, and combined assessments. See APPENDICES A and E respectively for the indicated test locations and detailed MPE measurement data.

Table 1 – 7/800MHz mobile M20URS9PW1AN Assessments – Highest MPE result per test position

Tables	Antenna Model	Antenna Location	Test Frequency (MHz)	E/H Field	Passenger/ By-Stander Pos.	Max Calc Pwr Density (mW/cm^2)	% of Uncontrolled limit
Table 22	HAF4014A	Roof	773.0125	E	Passenger	0.05	9.6%
Table 21	HAF4014A	Roof	773.0125	E	By-Stander Pos. #1	0.06	11.5%
Table 86	HAF4014A	Roof	809.0125	E	By-Stander Pos. #2	0.06	11.1%
Table 140	HAF4017A	Roof	809.0125	E	By-Stander Pos. #3	0.03	5.6%
Table 154	HAF4014A	Roof	764.0875	E	By-Stander Pos. #4	0.03	5.9%
Table 191	HAF4014A	Roof	773.0125	E	By-Stander Pos. #5	0.03	5.8%

Table 2 – DVR UHF DQPMDVR4000P Assessments - Highest MPE result per test position

Tables	Antenna Model	Antenna Location	Test Frequency (MHz)	E/H Field	Passenger/ By-Stander Pos.	Max Calc Pwr Density (mW/cm^2)	% of Uncontrolled limit
Table 4	HAE6012A	Trunk	405.0	E	Passenger	0.18	66.7%
Table 5	HAE6012A	Trunk	430.0	E	By-Stander Pos. #1	0.05	17.2%
Table 8	HAE6012A	Trunk	405.0	E	By-Stander Pos. #2	0.06	22.2%
Table 10	HAE6012A	Trunk	380.0	E	By-Stander Pos. #3	0.10	40.0%
Table 13	HAE6012A	Trunk	380.0	E	By-Stander Pos. #4	0.08	32.0%
Table 16	HAE6012A	Trunk	380.0	E	By-Stander Pos. #5	0.15	60.0%

Table 3 - Combined 7/800MHz Mobile M20URS9PW1AN and DVR UHF DQPMDVR4000P (Calculated % of limit performance)

	Percentage of Limit		
Test Position	7/800MHz Mobile (764-870MHz)	DVR UHF (380-430MHz)	Combined Percentages
Passenger	9.6%	66.7%	76.3%
By-Stander #1	11.5%	17.2%	28.7%
By-Stander #2	11.1%	22.2%	33.3%
By-Stander #3	5.6%	40.0%	45.6%
By-Stander #4	5.9%	32.0%	37.9%
By-Stander #5	5.8%	60.0%	65.8%

12.0 Conclusion

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

Formula:

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

Depending on the test frequency, the mobile assessments were performed with an output power range of 36.0W – 41.9W. The DVR output power across the TX band is 9.9W - 10.0W. The highest power density results for the XTL5000 7/800MHz mobile device scaled to the maximum allowable power output is 0.05mW/cm^2 internal to the vehicle and 0.06mW/cm^2 external to the vehicle. The highest power density results for the DVR UHF device scaled to the maximum allowable power output is 0.18mW/cm^2 internal to the vehicle and 0.15mW/cm^2 external to the vehicle. The highest combined power density performance is 76.3% of the FCC/IEEE MPE limits using the methodology and formula below.

Therefore:

Passenger $T = \frac{0.18}{0.27} + \frac{0.05}{0.52} = 0.763 < 1$ (compliant)

By-stander $T = \frac{0.15}{0.25} + \frac{0.03}{0.52} = 0.658 < 1$ (compliant)

The MPE results presented herein demonstrate compliance to the applicable FCC/IEEE Occupational/Controlled exposure limit of 1.27-1.43mW/cm^2 for the 380-430MHz frequency range and 2.55-2.90mW/cm^2 for the 764-870MHz frequency range. FCC/IEEE Occupational/Controlled exposure limits are calculated by f/300 for the frequency range of 300-1500MHz.

Compliance to the FCC/IEEE General population/Uncontrolled exposure limits of 0.25-0.29mW/cm^2 for the frequency range of 380-430MHz and 0.51-0.58mW/cm^2 for frequency range of 764-870MHz, using formula f/1500, is demonstrated herein for both passengers and by-standers.