

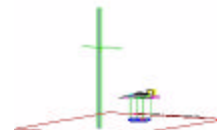


PCTEST Engineering Laboratory, Inc.

6660-B Dobbin Road • Columbia, MD 21045 • U.S.A.

TEL (410) 290-6652 • FAX (410) 290-6654

<http://www.pctestlab.com>



CERTIFICATE OF COMPLIANCE

Manufacturer:

Hyundai Autonet Co., Ltd.
San 136-1, Ami-Ri, Bubal-Eub,
Icheon-Si, Kyoungki-Do, KOREA 467-701
Attn: Mr. Ki-Soo Kim, Quality Management Dept.
System Quality Assurance Office

Date(s) of Tests: March 5-6, 2001
Test Report S/N: TX.210305116.PIN
Test Site: PCTEST Lab, MD U.S.A.

FCC ID

PINHACOE311T

APPLICANT

HYUNDAI AUTONET CO., LTD.

| | |
|-------------------|---|
| FCC Rule Part(s): | § 15.231 Subpart C – Intentional Radiator |
| Classification: | Remote Control Transmitter (DSC) |
| EUT Type: | Car Alarm RF Remote Control Transmitter |
| Freq. Range: | 311MHz ~ 311MHz |
| Oscillator(s): | 311MHz |
| Trade Name: | HYUNDAI AUTONET CO., LTD. |
| Model: | HACOE311T |

This device has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in ANSI C63.4-1992.

I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

PCTEST certifies that no party to this application has been denied the FCC benefits pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. 862.


Randy Ortanez
President & Chief Engineer



NVLAP[®]
Lab Code 100431-0

TABLE OF CONTENTS

| | | |
|---------------|---|----|
| ATTACHMENT A: | COVER LETTER(S) | |
| ATTACHMENT B: | ATTESTATION STATEMENT(S) | |
| ATTACHMENT C: | TEST REPORT | |
| | SCOPE | 1 |
| | INTRODUCTION (SITE DESCRIPTION) | 2 |
| | PRODUCTION INFORMATION | 3 |
| | DESCRIPTION OF TESTS (CONDUCTED) | 4 |
| | DESCRIPTION OF TESTS (RADIATED) | 5 |
| | ANTENNA REQUIREMENT / BANDWIDTH MEASUREMENT | 6 |
| | FREQUENCY MEASUREMENTS (SPURIOUS) | 7 |
| | LIST OF SUPPORT EQUIPMENT | 8 |
| | PLOTS OF EMISSION | 9 |
| | SAMPLE CALCULATIONS | 10 |
| | ACCURACY OF MEASUREMENT | 11 |
| | LIST OF TEST EQUIPMENT | 12 |
| | CONCLUSION | 13 |
| ATTACHMENT D: | TEST PLOTS | |
| ATTACHMENT E: | FCC ID LABEL & LOCATION | |
| ATTACHMENT F: | BLOCK DIAGRAM(S) / SCHEMATIC(S) | |
| ATTACHMENT G: | TEST SETUP PHOTOGRAPHS | |
| ATTACHMENT H: | EXTERNAL PHOTOGRAPHS | |
| ATTACHMENT I: | INTERNAL PHOTOGRAPHS | |
| ATTACHMENT J: | USER'S MANUAL | |

MEASUREMENT REPORT



Scope - Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission.

| | |
|----------------------|--|
| Company Name: | HYUNDAI AUTONET CO., LTD. |
| Address: | San 136-1, Ami-Ri, Bubal-Eub, Icheon-Si, Kyoungki-Do, KOREA 467-701 |
| Attention: | Mr. Ki-Soo Kim, Quality Management Dept. |

- FCC ID: PINHACOE311T
- Model: **HACOE311T**
- Trade Name: **HYUNDAI AUTONET CO., LTD.**
- EUT Type: Car Alarm RF Remote Control Transmitter
- Application Type: Transmitter Certification
- Freq. Range: 311MHz ~ 311MHz
- Oscillator(s): 311 MHz
- FCC Rule Part(s): § 15.231 Subpart C – Intentional Radiator
- Dates of Tests: March 5-6, 2001
- Place of Tests: PCTEST Lab, Columbia, MD U.S.A.
- Test Report S/N: TX.210305116.PIN



1.1 INTRODUCTION

The measurement procedure described in American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9kHz to 40GHz (ANSI C63.4-1992) was used in determining radiated and conducted emissions emanating from **HYUNDAI AUTONET CO., LTD. (Model: HACOE311T) Car Alarm RF Remote Control Transmitter FCC ID: PINHACOE311T**.

These measurement tests were conducted at **PCTEST Engineering Laboratory, Inc.** facility in New Concept Business Park, Guilford Industrial Park, Columbia, Maryland. The site address is 6660-B Dobbin Road, Columbia, MD 21045. The test site is one of the highest points in the Columbia area with an elevation of 390 feet above mean sea level. The site coordinates are 39° 11'15" N latitude and 76° 49'38" W longitude. The facility is 1.5 miles North of the FCC laboratory, and the ambient signal and ambient signal strength are approximately equal to those of the FCC laboratory. There are no FM or TV transmitters within 15 miles of the site. The detailed description of the measurement facility was found to be in compliance with the requirements of § 2.948 according to ANSI C63.4 on October 19, 1992.

1.2 PCTEST Location

The map at right shows the location of the PCTEST Lab, its proximity to the FCC Lab, the Columbia vicinity area, the Baltimore-Washington International (BWI) airport, and the city of Baltimore, and the Washington, D.C. area. (see Figure1).

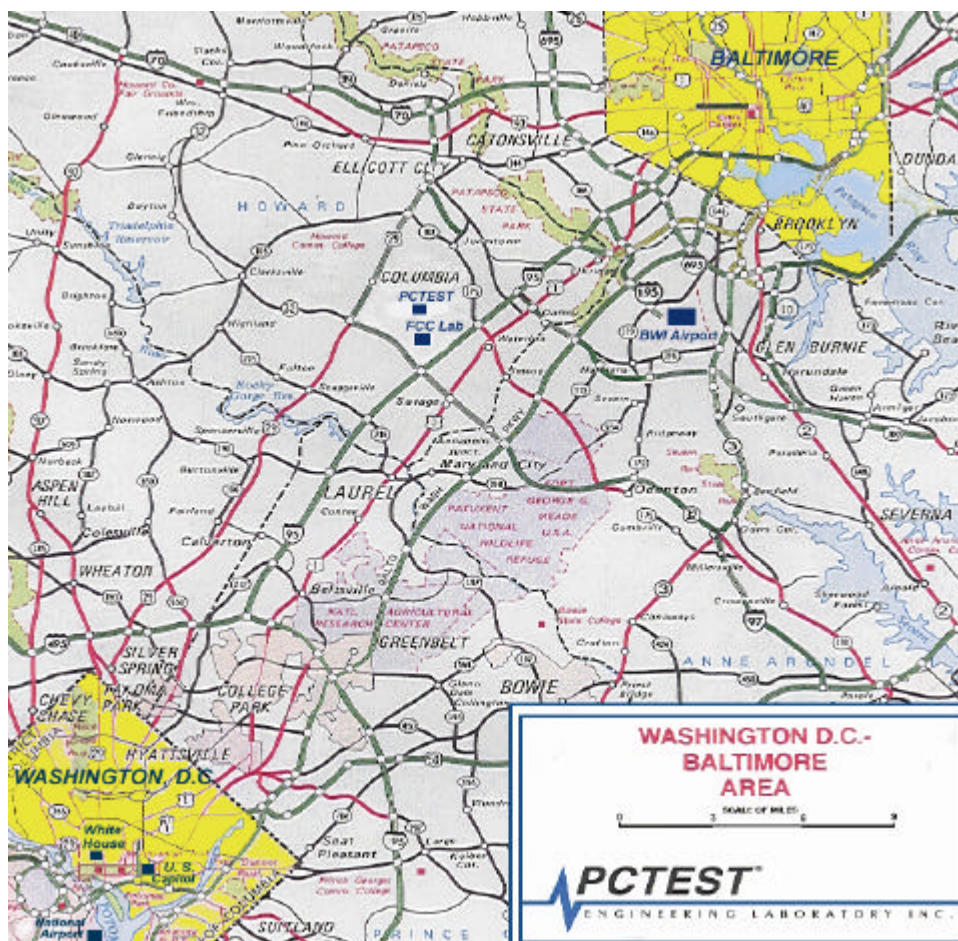


Figure 1. Map of the Greater Baltimore and Metropolitan Washington, D.C. area.

2.1 Product Information

2.2 Equipment Description

The Equipment Under Test (EUT) is the **HYUNDAI AUTONET CO., LTD. (Model: *HACOEF311T*) Car Alarm RF Remote Control Transmitter** FCC ID: PINHACOEF311T. The EUT is a one-channel wireless transmitter operating at 311MHz.

| | |
|----------------------|---|
| * Tx Freq. Range: | 311MHz ~ 311MHz |
| * Oscillator(s): | 311MHz |
| * No. of Channels: | 1 |
| * Antenna: | Built-in internal looped antenna on-board |
| * Power Consumption: | 3V DC |
| * Rx Model No.: | HACOEF311R |

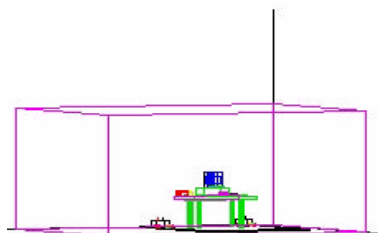


Figure 2. Shielded Enclosure
 Line-Conducted Test Facility

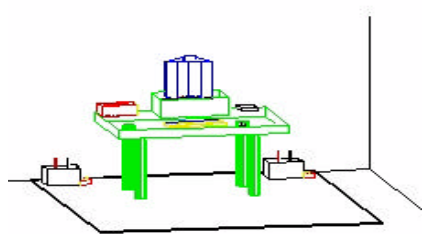


Figure 3. Line Conducted
 Emission Test Set-Up

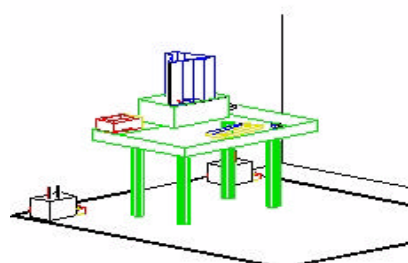


Figure 4. Wooden Table &
 Bonded LISNs

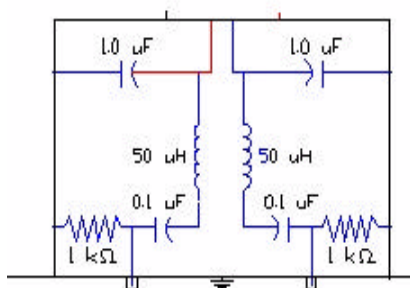


Figure 5. LISN Schematic
 Diagram

3.1 Description of Tests

3.2 Conducted Emissions (n/a - powered by one 3V battery)

The line-conducted facility is located inside a 16'x20'x10' shielded enclosure. It is manufactured by Ray Proof Series 81 (see Figure 2). The shielding effectiveness of the shielded room is in accordance with MIL-Std-285 or NSA 65-6. A 1m. x 1.5m. wooden table 80cm. high is placed 40cm. away from the vertical wall and 1.5m away from the side wall of the shielded room (see Figure 3). Solar Electronics and EMCO Model 3725/2 (10kHz-30MHz) 50Ω/50μH Line-Impedance Stabilization Networks (LISNs) are bonded to the shielded room (see Figure 4). The EUT is powered from the Solar LISN and the support equipment is powered from the EMCO LISN. Power to the LISNs are filtered by a high-current high-insertion loss Ray Proof power line filters (100dB 14kHz-10GHz). The purpose of the filter is to attenuate ambient signal interference and this filter is also bonded to the shielded enclosure. All electrical cables are shielded by braided tinned copper zipper tubing with inner diameter of 1/2". If the EUT is a DC-powered device, power will be derived from the source power supply it normally will be powered from and this supply lines will be connected to the Solar LISN. LISN schematic diagram is shown in Figure 5. All interconnecting cables more than 1 meter were shortened by non-inductive bundling (serpentine fashion) to a 1-meter length. Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. The RF output of the LISN was connected to the spectrum analyzer to determine the frequency producing the maximum EME from the EUT. The spectrum was scanned from 450kHz to 30MHz with 20 msec. sweep time. The frequency producing the maximum level was reexamined using EMI/ Field Intensity Meter and Quasi-Peak adapter. The detector function was set to CISPR quasi-peak mode. The bandwidth of the receiver was set to 10 kHz. The EUT, support equipment, and interconnecting cables were arranged and manipulated to maximize each EME emission. Each emission was maximized by: switching power lines; varying the mode of operation or resolution; clock or data exchange speed; scrolling H pattern to the EUT and/or support equipment, and powering the monitor from the floor mounted outlet box and the computer aux AC outlet, if applicable; whichever determined the worst-case emission. Photographs of the worst-case emission can be seen in Appendix C. Each EME reported was calibrated using the HP8640B signal generator.

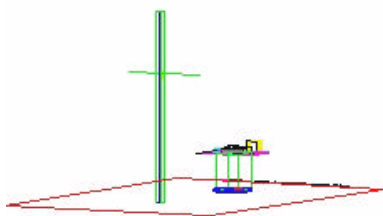


Figure 6. 3-Meter Test Site

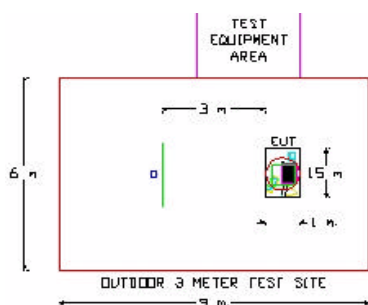


Figure 7. Dimensions of Outdoor Test Site

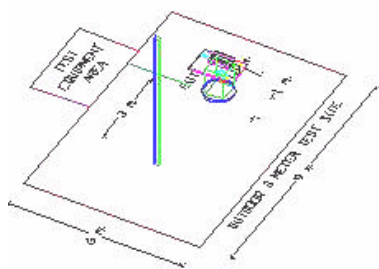


Figure 8. Turntable and System Setup

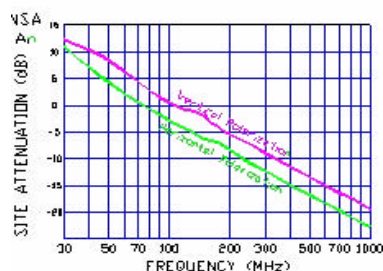


Figure 9. Normalized Site Attenuation Curves (H&V)

3.1 Description of Tests (continued)

3.3 Radiated Emissions

Preliminary measurements were made indoors at 1 meter using broadband antennas, broadband amplifier, and spectrum analyzer to determine the frequency producing the maximum EME. Appropriate precaution was taken to ensure that all EME from the EUT were maximized and investigated. The system configuration, clock speed, mode of operation or video resolution, turntable azimuth with respect to the antenna were noted for each frequency found. The spectrum was scanned from 30 to 200 MHz using biconical antenna and from 200 to 1000 MHz using log-spiral antenna. Above 1 GHz, linearly polarized double ridge horn antennas were used.

Final measurements were made outdoors at 3-meter test range using Roberts™ Dipole antennas or horn antenna (see Figure 6). The test equipment was placed on a wooden and plastic bench situated on a 1.5 x 2 meter area adjacent to the measurement area (see Figure 7). Sufficient time for the EUT, support equipment, and test equipment was allowed in order for them to warm up to their normal operating condition. Each frequency found during pre-scan measurements was re-examined and investigated using EMI/Field Intensity Meter and Quasi-Peak Adapter. The detector function was set to CISPR quasi-peak mode and the bandwidth of the receiver was set to 100kHz or 1 MHz depending on the frequency or type of signal.

The half-wave dipole antenna was tuned to the frequency found during preliminary radiated measurements. The EUT, support equipment and interconnecting cables were re-configured to the set-up producing the maximum emission for the frequency and were placed on top of a 0.8-meter high non-metallic 1 x 1.5 meter table (see Figure 8). The EUT, support equipment, and interconnecting cables were re-arranged and manipulated to maximize each EME emission. The turntable containing the system was rotated; the antenna height was varied 1 to 4 meters and stopped at the azimuth or height producing the maximum emission. Each emission was maximized by: varying the mode of operation or resolution; clock or data exchange speed; scrolling H pattern to the EUT and/or support equipment; powering the monitor from the floor mounted outlet box and the computer aux AC outlet if applicable, and changing the polarity of the antenna; whichever determined the worst-case emission. Photographs of the worst-case emission can be seen in Attachment H. Each EME reported was calibrated using the HP8640B signal generator. The Theoretical Normalized Site Attenuation Curves for both horizontal and vertical polarization are shown in Figure 9 according to ANSI C63.4.

4.1 §15.203 Antenna Requirement

An intentional radiator antenna shall be designed to ensure that no antenna other than that furnished by the applicant can be used with the device. The use of permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with this requirement.

CONCLUSION

The HYUNDAI AUTONET CO., LTD. wireless transmitter complies with the requirement of §15.203 with a built-in looped antenna permanently attached to the transmitter.

5.1 Occupied Bandwidth Measurement

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70MHz and below 900MHz. The bandwidth is determined at the points 20 dB down from the modulated carrier.

@ 311 MHz

$$311 \text{ MHz} \times 0.0025 = 0.7775 \text{ MHz}$$

A sample transmitter output was fed into the R&S Spectrum Analyzer and was plotted.

| | |
|-------------------|----------|
| Span: | 2 MHz |
| Vertical Scale: | 5 dB/div |
| Center Frequency: | 300 MHz |

The bandwidth at 20 dB is **470 kHz** which is within the allowable limit of **.7775 MHz** at 311 MHz.

6.1 Frequency Measurements (Spurious)

Operating Frequencies: 311 MHz
 Distance of Measurements: 3 meters

| FREQ. (MHz) | Level* (dBm) | AFCL (dB) | POL (H/V) | FS (PEAK) | F/S (AVG) | (dBμV/m) (AVG) | MARGIN (dB) |
|----------------|-----------------|--------------|--------------|--------------|--------------|-------------------|----------------|
| 311.0 | - 53.0 | 21.1 | H | 5688.53 | 2275.41 | 67.1 | 8.2 |
| 622.0 | - 83.0 | 28.7 | H | 431.02 | 172.41 | 44.7 | 9.3 |
| 933.0 | - 96.0 | 33.2 | H | 162.18 | 64.87 | 36.2 | 17.8 |
| 1244.0 | - 85.0 | 27.0 | H | 281.84 | 112.74 | 41.0 | 13.0 |
| 1555.0 | - 97.0 | 30.6 | H | 107.15 | 42.86 | 32.6 | 21.4 |
| 1866.0 | - 95.0 | 34.0 | H | 199.53 | 79.81 | 38.0 | 16.0 |
| 2177.0 | - 100.0 | 34.8 | H | 123.03 | 49.21 | 33.8 | 20.2 |
| 2488.0 | - 102.0 | 35.0 | H | 100.00 | 40.00 | 32.0 | 22.0 |
| 2799.0 | - 99.8 | 36.5 | H | 153.11 | 61.24 | 35.7 | 18.3 |
| 3110.0 | - 96.0 | 37.0 | H | 251.19 | 100.48 | 40.0 | 14.0 |

Table 1. Radiated Measurements at 3-meters.

NOTES:

1. All channels were investigated and the worst-case is reported.
2. The EUT was tested with a new battery.
3. Radiated Limits per §15.231:

| Fund. Freq. (MHz) | F/S (μV/m) | F/S Spurious (μV/m) |
|-------------------|--------------|---------------------|
| 40.66 ~ 40.70 | 2250 | 225 |
| 70 ~ 130 | 1250 | 125 |
| 130 ~ 174 | 1250 ~ 3750 | 125 ~ 375 |
| 174 ~ 260 | 3750 | 375 |
| 260 ~ 470 | 3750 ~ 12500 | 375 ~ 1250 |
| 470 & above | 12500 | 1250 |

4. Limit = 602.55 μV/m

5. * Note: These frequencies fall under restricted bands according to §15.205. The field strength of emissions at these frequencies does not exceed the limits specified in §15.205.

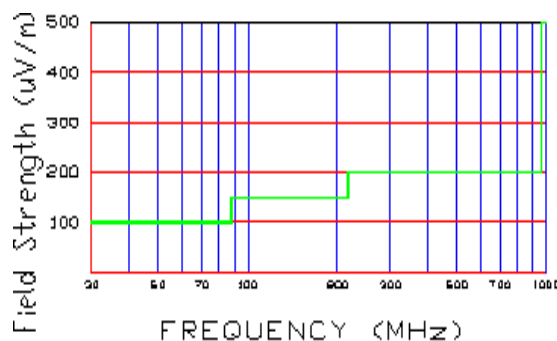


Figure 10. Spurious Radiated Limits at 3 meters

7.1 Support Equipment Used

| | | |
|--------------------------------|---|-----------------|
| 1. HYUNDAI AUTONET Transmitter | FCC ID: PINHACOE311T Wireless (1) 3V DC Battery | (EUT) |
| 2. HYUNDAI AUTONET Receiver | Model: HACOE311R | |
| 3. HP Power Supply | Model: E3611A 1.8 m. unshielded power cord | S/N: LR 85750 C |

8.1 Plot(s) of Emissions

See Attachment D

9.1 Sample Calculations

$$\begin{aligned} \text{dB}\mu\text{V} &= 20 \log_{10} (\mu\text{V}/\text{m}) \\ \text{dB}\mu\text{V} &= \text{dBm} + 107 \end{aligned}$$

9.2 Example 1:

Calculation of Limit @ 311MHz per Section 15.231

260 MHz Limit = 3750 μ V/m @ 3m

470 MHz Limit = 12500 μ V/m @ 3m

$$\frac{12500-3750}{470-260} = \frac{8750}{210}$$

$$\frac{(311-260)(8750)}{(210)} = 2125.0\mu\text{V}/\text{m}$$

$$2125+3750 = 5875\mu\text{V}/\text{m} \text{ (75.38dB}\mu\text{V}/\text{m) Limit @ 311MHz}$$

Duty Cycle = 40%

In a 100 ms period there are:

44 Wide Pulses @ .8 ms

12 Narrow Pulses @ .4 ms

10.1 Accuracy of Measurement

10.2 Measurement Uncertainty Calculations:

The measurement uncertainties stated were calculated in accordance with the requirements of NIST Technical Note 1297 and NIS 81 (1994).

| Contribution (Line Conducted) | Probability Distribution | Uncertainty (± dB) | |
|--|-----------------------------|--------------------|-----------|
| | | 9kHz-150MHz | 150-30MHz |
| Receiver specification | Rectangular | 1.5 | 1.5 |
| LISN coupling specification | Rectangular | 1.5 | 1.5 |
| Cable and input attenuator calibration | Normal (k=2) | 0.3 | 0.5 |
| Mismatch: Receiver VRC $\Gamma_1 = 0.03$ LISN VRC $\Gamma_R = 0.8$ (9kHz) 0.2 (30MHz) Uncertainty limits $20\log(1 \pm \Gamma_1 \Gamma_R)$ | U-Shaped | 0.2 | 0.35 |
| System repeatability | Std. deviation | 0.2 | 0.05 |
| Repeatability of EUT | | - | - |
| Combined standard uncertainty | Normal | 1.26 | 1.30 |
| Expanded uncertainty | Normal (k=2) | 2.5 | 2.6 |

Calculations for 150kHz to 30MHz:

$$u_c(y) = \sqrt{\sum_{i=1}^m u_i^2(y)} = \pm \sqrt{\frac{1.5^2 + 1.5^2}{3} + \left(\frac{0.5}{2}\right)^2 + 0.35} = \pm 1.298\text{dB}$$

$$U = 2U_c(y) = \pm 2.6\text{dB}$$

| Contribution (Radiated Emissions) | Probability Distribution | Uncertainties (± dB) | |
|--|-----------------------------|----------------------|-----------------|
| | | 3 m | 10 m |
| Ambient Signals | | - | - |
| Antenna factor calibration | Normal (k=2) | ± 1.0 | ± 1.0 |
| Cable loss calibration | Normal (k=2) | ± 0.5 | ± 0.5 |
| Receiver specification | Rectangular | ± 1.5 | ± 1.5 |
| Antenna directivity | Rectangular | + 0.5 / - 0 | + 0.5 |
| Antenna factor variation with height | Rectangular | ± 2.0 | ± 0.5 |
| Antenna phase centre variation | Rectangular | 0.0 | ± 0.2 |
| Antenna factor frequency interpolation | Rectangular | ± 0.25 | ± 0.25 |
| Measurement distance variation | Rectangular | ± 0.6 | ± 0.4 |
| Site imperfections | Rectangular | ± 2.0 | ± 2.0 |
| Mismatch: Receiver VRC $\Gamma_1 = 0.2$ Antenna VRC $\Gamma_R = 0.67$ (Bi) 0.3 (Lp) Uncertainty limits $20\log(1 \pm \Gamma_1 \Gamma_R)$ | U-Shaped | + 1.1 - 1.25 | ± 0.5 |
| System repeatability | Std. Deviation | ± 0.5 | ± 0.5 |
| Repeatability of EUT | | - | - |
| Combined standard uncertainty | Normal | + 2.19 / - 2.21 | + 1.74 / - 1.72 |
| Expanded uncertainty U | Normal (k=2) | + 4.38 / - 4.42 | + 3.48 / - 3.44 |

Calculations for 3m biconical antenna. Coverage factor of k=2 will ensure that the level of confidence will be approximately 95%, therefore: $U=2u_c(y) = 2 \times \pm 2.19 = \pm 4.38\text{dB}$

11.1 Test Equipment

| Type | Model | Cal. Due Date | S/N |
|----------------------------------|---|---------------|------------------------|
| Microwave Spectrum Analyzer | HP 8566B (100Hz-22GHz) | 12/05/01 | 3638A08713 |
| Microwave Spectrum Analyzer | HP 8566B (100Hz-22GHz) | 04/17/01 | 2542A11898 |
| Spectrum Analyzer/Tracking Gen. | HP 8591A (9kHz-1.8GHz) | 06/02/01 | 3144A02458 |
| Spectrum Analyzer | HP 8591A (9kHz-1.8GHz) | 10/15/01 | 3108A02053 |
| Spectrum Analyzer | HP 8594A (9kHz-2.9GHz) | 11/02/01 | 3051A00187 |
| Signal Generator* | HP 8640B (500Hz-1GHz) | 06/02/01 | 2232A19558 |
| Signal Generator* | HP 8640B (500Hz-1GHz) | 06/02/01 | 1851A09816 |
| Signal Generator* | Rohde & Schwarz (0.1-1000MHz) | 09/11/01 | 894215/012 |
| Ailtech/Eaton Receiver | NM 37/57A-SL (30-1000MHz) | 04/12/01 | 0792-03271 |
| Ailtech/Eaton Receiver | NM 37/57A (30-1000MHz) | 03/11/02 | 0805-03334 |
| Ailtech/Eaton Receiver | NM 17/27A (0.1-32MHz) | 09/17/01 | 0608-03241 |
| Quasi-Peak Adapter | HP 85650A | 08/09/01 | 2043A00301 |
| Ailtech/Eaton Adapter | CCA-7 CISPR/ANSI QP Adapter | 03/11/02 | 0194-04082 |
| RG58 Coax Test Cable | No. 167 | | n/a |
| Harmonic/Flicker Test System | HP 6841A (IEC 555-2/3) | | 3531A00115 |
| Broadband Amplifier (2) | HP 8447D | | 1145A00470, 1937A03348 |
| Broadband Amplifier | HP 8447F | | 2443A03784 |
| Transient Limiter | HP 11947A (9kHz-200MHz) | | 2820A00300 |
| Horn Antenna | EMCO Model 3115 (1-18GHz) | | 9704-5182 |
| Horn Antenna | EMCO Model 3115 (1-18GHz) | | 9205-3874 |
| Horn Antenna | EMCO Model 3116 (18-40GHz) | | 9203-2178 |
| Biconical Antenna (4) | Eaton 94455/Eaton 94455-1/Singer 94455-1/Compliance Design 1295, 1332, 0355 | | |
| Log-Spiral Antenna (3) | Ailtech/Eaton 93490-1 | | 0608, 1103, 1104 |
| Roberts Dipoles | Compliance Design (1 set) A100 | 08/25/01 | 5118 |
| Ailtech Dipoles | DM-105A (1 set) | | 33448-111 |
| EMCO LISN (2) | 3816/2 | | 1077, 1079 |
| EMCO LISN | 3725/2 | | 2009 |
| Microwave Preamplifier 40dB Gain | HP 83017A (0.5-26.5GHz) | | 3123A00181 |
| Microwave Cables | MicroCoax (1.0-26.5GHz) | | |
| Ailtech/Eaton Receiver | NM37/57A-SL | | 0792-03271 |
| Spectrum Analyzer | HP 8591A | | 3034A01395 |
| Modulation Analyzer | HP 8901A | | 2432A03467 |
| NTSC Pattern Generator | Leader 408 | | 0377433 |
| Noise Figure Meter | HP 8970B | | 3106A02189 |
| Noise Figure Meter | Ailtech 7510 | | TE31700 |
| Noise Generator | Ailtech 7010 | | 1473 |
| Microwave Survey Meter | Holaday Model 1501 (2.450GHz) | | 80931 |
| Digital Thermometer | Extech Instruments 421305 | | 426966 |
| Attenuator | HP 8495A (0-70dB) DC-4GHz | | |
| Bi-Directional Coax Coupler | Narda 3020A (50-1000MHz) | | |
| Shielded Screen Room | RF Lindgren Model 26-2/2-O | | 6710 (PCT270) |
| Shielded Semi-Anechoic Chamber | Ray Proof Model S81 | | R2437 (PCT278) |
| Environmental Chamber | Associated Systems Model 1025 (Temperature/Humidity) | | PCT285 |

* Calibration traceable to the National Institute of Standards and Technology (NIST).

12.1 Conclusion

The data collected shows that the **HYUNDAI AUTONET CO., LTD. (Model: *HACOEF311T*)** Car Alarm RF Remote Control Transmitter **FCC ID: PINHACOEF311T** complies with §15.231 Subpart C of the FCC Rules.