

**TEST REPORT**

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**Part 15 Subpart C****FCC ID** .....: **XLZ-JJ1****Report Reference No.**.....: **WE09070023**

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Date of issue.....: Jun 21, 2009

**Testing Laboratory Name** .....: **Shenzhen Huatongwei International Inspection Co., Ltd**

Address.....: Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China

**Applicant's name**.....: **Telebrands Corp.**

Address.....: 79 Two Bridges Road, Fairfield, New Jersey, USA

**Manufacturer's name** .....: **Ansen Electronics Company**Address.....: Chen Tung Industrial Zone, Ning Tau Administrative District,  
Qiao Tau Zhen, Dongguan, Guangdong**Test specification:**Test Standard .....: **FCC Part Subpart 15C 2008 – Intentional Radiators**Test Method.....: **ANSI C63.4 - 2003**

TRF Originator.....: Shenzhen Huatongwei International Inspection CO., Ltd

Master TRF.....: Dated 2006-06

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**Equipment Under Test** .....: **FM Radio Handsfree Device**

Trade Mark .....: /

Model/Type reference.....: JJ1

Listed Models .....: Q157-0

Result.....: **Positive**

# TEST REPORT

Test Report No. :	WE09070023	June 21, 2009
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Equipment under Test : FM Radio Handsfree Device

Model /Type : JJ1

Listed Models : Q157-0

**Applicant** : **Telebrands Corp.**

Address : 79 Two Bridges Road, Fairfield, New Jersey, USA

**Manufacturer** : **Ansen Electronics Company**

Address : Chen Tung Industrial Zone, Ning Tau Administrative District,  
Qiao Tau Zhen, Dongguan, Guangdong

## SUMMARY OF STANDARDS AND RUSELT

No.	Test Item	Test Standards and Procedure	Result
1	Occupied Bandwidth	FCC Subpart 15C § 15.239(a) ANSI C63.4-2003 section 13.1.7	Complied
2	Radiated Emission	FCC Subpart 15C § 15.239(b),(c) ANSI C63.4-2003 section 13.1.4	Complied
3	Antenna Requirement	FCC Subpart 15C § 15.203	Complied

NOTE: 1), The detailed test result please see section 4.

2), The test report merely corresponds to the test sample.

3), It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

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## **1. TEST STANDARDS**

The tests were performed according to following standards:

**FCC Rules Part 15 Subpart C (2008)** - Intentional Radiators

**ANSI C63.4 (2003)** – 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

## 2. SUMMARY

### 2.1. General Remarks

Date of receipt of test sample : Jul 15, 2009

Testing commenced on : Jul 17, 2009

Testing concluded on : Jul 21, 2009

### 2.2. Equipment Under Test Power Supply

Power supply voltage : ☐ 120V / 60 Hz ☐ 115V / 60Hz  
☐ 12 V DC ☐ 24 V DC  
☒ Other (specified in blank below)

DC 3V Battery

### 2.3. Short description of the Equipment under Test (EUT)

Product Name : FM Radio Handsfree Device

Model Number : JJ1

Transmit Frequency Range : 99.3MHz ~ 101.3MHz

Channel Numbers : 2

Cnannel 1 : 99.3MHz  
Channel 2 : 101.3MHz

Modulation Technology : FM

Sample Type : Prototype

For more details, refer to the user's manual.

### 2.4. EUT operation mode

The EUT has been tested under typical operating mode.

Test Item	Test Mode	Note
Occupied Bandwidth	Tx mode(99.3MHz and 101.3MHz)	X-axis
Radiated Emission	Tx mode(99.3MHz and 101.3MHz)	/

## 2.5. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

☐ - supplied by the manufacturer

☐ - supplied by the lab

☐ AC Adaptor

MODEL : /

INPUT : /

OUTPUT : /

☐ Adaptor Cable

Length : /

☐ Shield

☐ Unshield

☐ Detachable

☐ Undetachable

## 2.6. Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: XLZ-JJ1** filing to comply with the FCC Part 15 Subpart C 15.239 Rules 2008.

## 2.7. Modifications

No modifications were implemented to meet testing criteria.

### **3. TEST ENVIRONMENT**

#### **3.1. Address of the test laboratory**

Shenzhen Huatongwei International Inspection Co., Ltd  
Keji Nan No.12 Road, Hi-tech Park, Shenzhen, China  
Phone: 86-755-26715686 Fax: 86-755-26748089

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 (2003) and CISPR Publication 22.

#### **3.2. Test Facility**

The test facility is recognized, certified, or accredited by the following organizations:

##### **CNAS-Lab Code: L1225**

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories, Date of Registration: August 02, 2007. Valid time is until March 29, 2012.

##### **A2LA-Lab Cert. No. 2243.01**

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing. Valid time is from Aug 24, 2005 to Sept 30, 2009.

##### **FCC-Registration No.: 662850**

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 662850, Renewal date Jul 1, 2009.

##### **IC-Registration No.: 5377**

The 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 5377 on November Feb 13, 2009.

##### **ACA**

Shenzhen Huatongwei International Inspection Co., Ltd, EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

##### **NEMKO-Aut. No.: ELA125**

Shenzhen Huatongwei International Inspection Co., Ltd has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025:2005 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10, the Authorization is valid through April 25, 2009.

##### **VCCI**

The 3m Semi-anechoic chamber (12.2m×7.95m×6.7m) and Shielded Room (8m×4m×3m) of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-2484. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

Main Ports Conducted Interference Measurement of Shenzhen Huatongwei International Inspection Co., Ltd has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-2726. Date of Registration: December 20, 2006. Valid time is until December 19, 2009.

**DNV**

Shenzhen Huatongwei International Inspection Co Ltd has been found to comply with the requirements of DNV towards subcontractor of EMC and safety testing services in conjunction with the EMC and Low voltage Directives and in the voluntary field. The acceptance is based on a formal quality Audit and follow-ups according to relevant parts of ISO/IEC Guide 17025(2005), in accordance with the requirements of the DNV Laboratory Quality Manual towards subcontractors. Valid time is until 09 July, 2010.

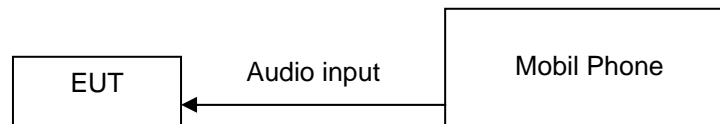
**3.3. Environmental conditions**

During the measurement the environmental conditions were within the listed ranges:

Temperature: 22 ° C

Humidity: 65 %

Atmospheric pressure: 950-1050mbar

**3.4. Configuration of Tested System**

Accessorial equipment Used in Tested System

Equipment Name	Mobil Phone
Manufacture	Noia Corporation
Model No	6300
FCC ID	PPIRM-217
IC ID	661U-RM217
Type	RM217

Note: For actual sample please see test setup photos and EUT external photos.



### 3.5. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Shenzhen Huatongwei laboratory is reported:

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	30~1000MHz	4.22dB	(1)
Radiated Emission	1GHz ~ 18GHz	4.35dB	(1)
Occupied Bandwidth	30MHz ~ 18GHz	0.25dB/0.5kHz	(1)

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

### 3.6. Equipments Used during the Test

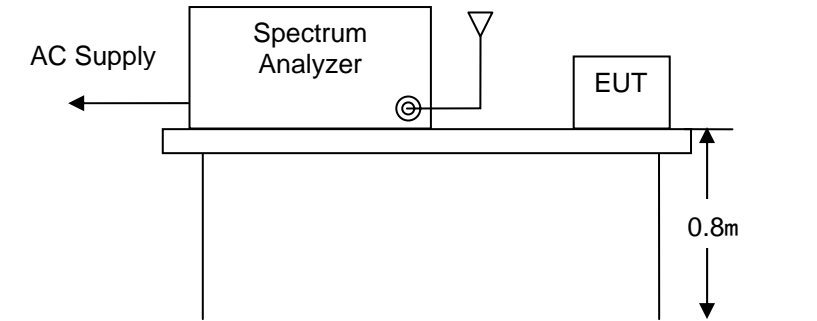
Radiated Emissions					
No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	ULTRA-BROADBAND ANTENNA	ROHDE & SCHWARZ	HL562	100015	2008/11
2	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESI 26	100009	2008/11
3	RF TEST PANEL	ROHDE & SCHWARZ	TS / RSP	335015/ 0017	2008/11
4	TURNTABLE	ETS	2088	2149	2008/11
5	ANTENNA MAST	ETS	2075	2346	2008/11
6	EMI TEST SOFTWARE	ROHDE & SCHWARZ	ESK1	N/A	2008/11
7	HORN ANTENNA	ROHDE & SCHWARZ	HF906	N/A	2008/06/

Occupied Bandwidth					
No.	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI TEST RECEIVER	ROHDE & SCHWARZ	ESCI	100106	2008/11
2	RECEIVER ANTENNA	/	/	/	/

## 4. TEST CONDITIONS AND RESULTS

### 4.1. Occupied Bandwidth

#### TEST CONFIGURATION



#### TEST PROCEDURE

- 1 The EUT was placed on a wooded table which is 0.8m height and close to receiver antenna of spectrum analyzer.
- 2 The EUT was performed while mobil phone(Nokia 6300) playing MP3 Jazz music with volume control set to maximum level.
- 3 The spectrum analyzer resolution bandwidth was set to 10kHz and video bandwidth was set to 30kHz to encompass all significant spectral components during the test. The detector was set to peak and hold mode to clearly observe the components.
- 4 Use spectrum analyzer mark function measured the 26dB bandwidth at the points.

#### Limit

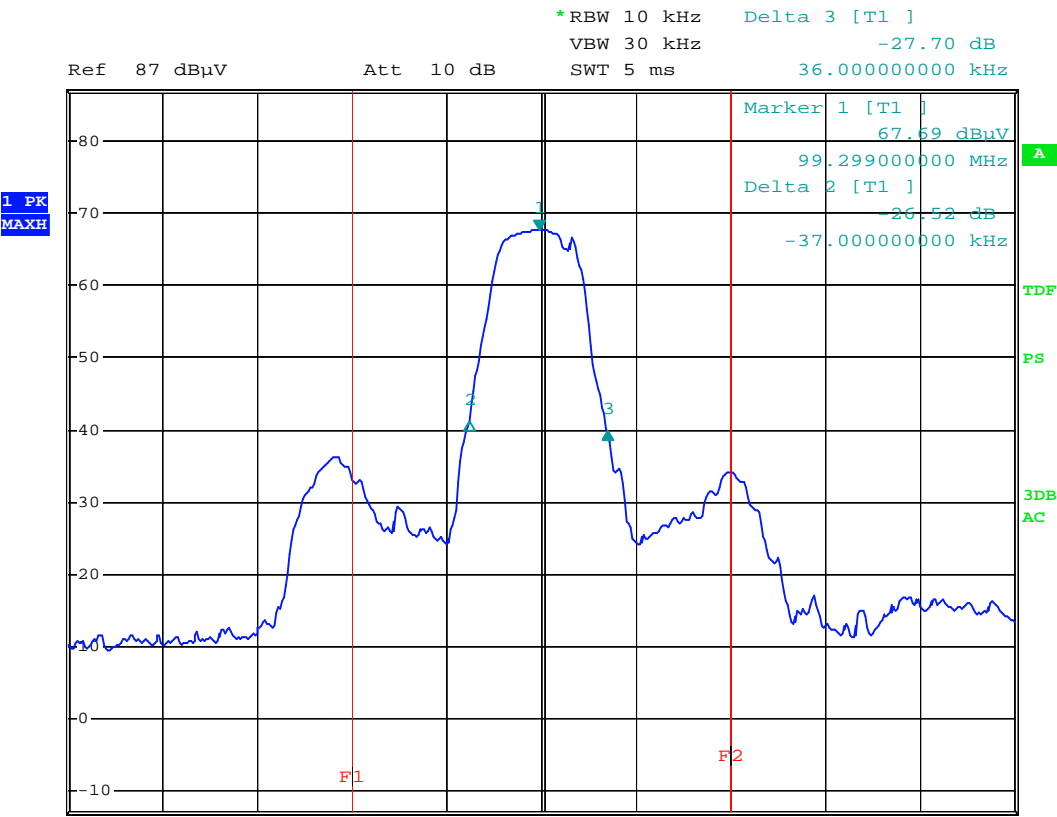
According to FCC Subpart 15C § 15.239(a).

Emissions from the intentional radiator shall be confined within a band 200 kHz wide centered on the operating frequency. The 200 kHz band shall lie wholly within the frequency range of 88-108 MHz

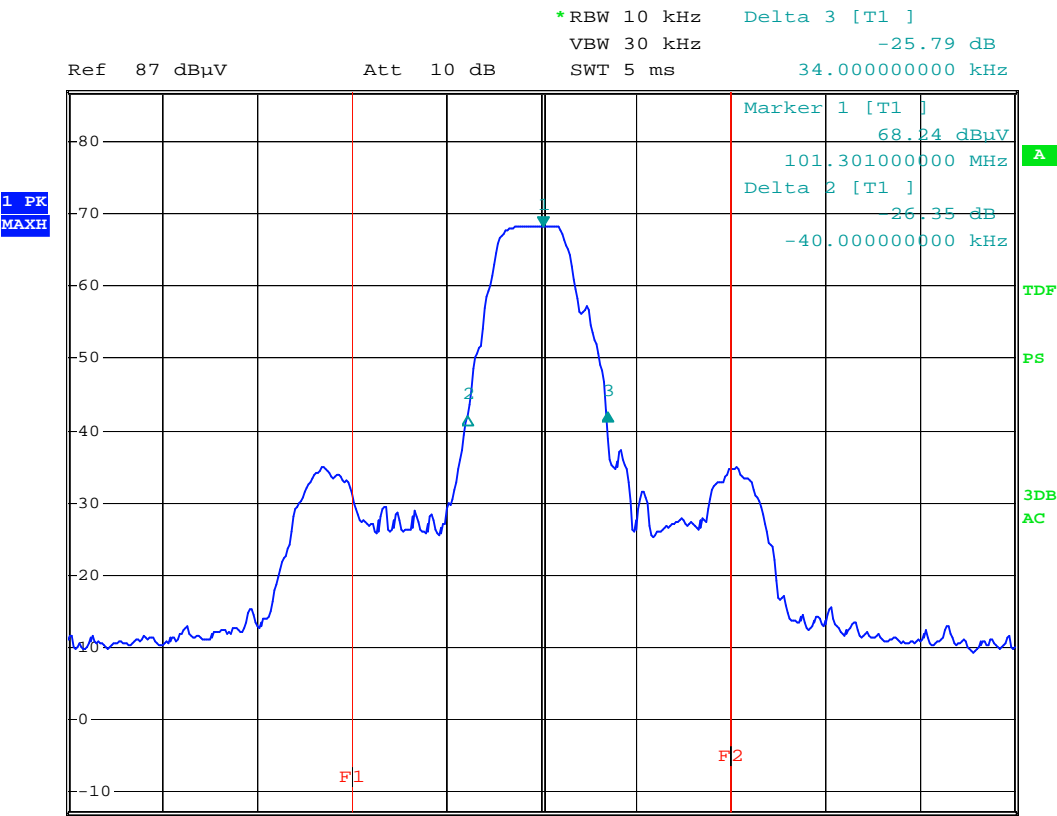
#### TEST RESULTS

Frequency (MHz)	Measurement Bandwidth (KHz)	Limit (kHz)	Result
99.3	72.0	200.0	Pass
101.3	74.0	200.0	Pass

Low channel(99.3MHz)



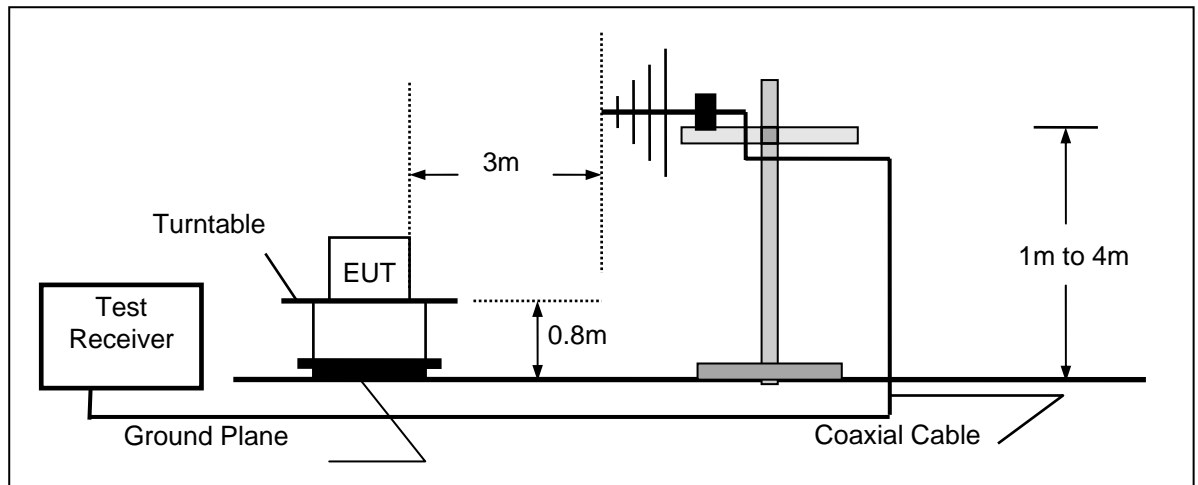
High channel(101.3MHz)



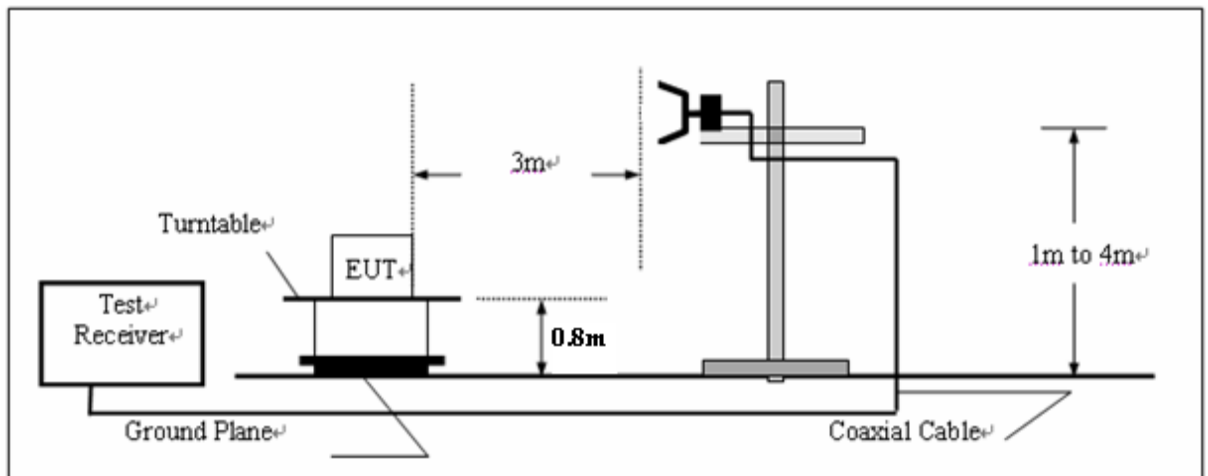
## 4.2. Radiated Emission

### TEST CONFIGURATION

Radiated Emission Test Set-Up, Frequency range 30 - 1000MHz



Radiated Emission Test Set-Up, Frequency range 1GHz - 5GHz



### TEST PROCEDURE

- 1 The EUT was placed on a turn table which is 0.8m above ground plane.
- 2 The EUT was performed while mobil phone(Nokia 6300) playing MP3 Jazz music with volume control set to maximum level.
- 3 The test was beforehand scan carried out with EUT placement X-axis and Y-axis. X-axis was the worst status. So finally test was be carried out under this X-axis.
- 4 Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0°C to 360°C to acquire the highest emissions from EUT.
- 5 And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- 6 Repeat above procedures until all frequency measurements have been completed.

## **RADIATION LIMIT**

For periodic transmitter, according FCC Subpart 15C § 15.239(b), the field strength of fundamental from device at a distance of 3 meters shall not exceed the following values:

Fundamental frequency (MHz)	Distance (Meters)	Field strength of fundamental (dBµV/m)	
		AV	Peak
88 ~ 108	3	48	68
Note: The limit in the band 88 ~ 108MHz is based on measurements employing an average detector, the peak field strength limit above the AV limit more than 20dB.			

For periodic transmitter, according FCC Subpart 15C § 15.239(c), the field of any emissions radiated from device at a distance of 3 meters shall not exceed the following values:

Fundamental frequency (MHz)	Distance (Meters)	Field strength of spurious emission	
		(microvolts/meter)	(dBµV/m)
30 ~ 88	3	100	40
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46
Above 960	3	500	54
Note: 1, For other bands limit please refer 15.209 2, The limit below 1GHz based CISPR quasi-peak detector, the limit above 1GHz based average detector and peak limit is 74dBµV/m.			

## **TEST RESULTS**

The emissions radiated from 30MHz to 1GHz are comply the QP limit and fundamental frequencies are comply AV/Peak limit, detailed test data please see the following pages.

### Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor(if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

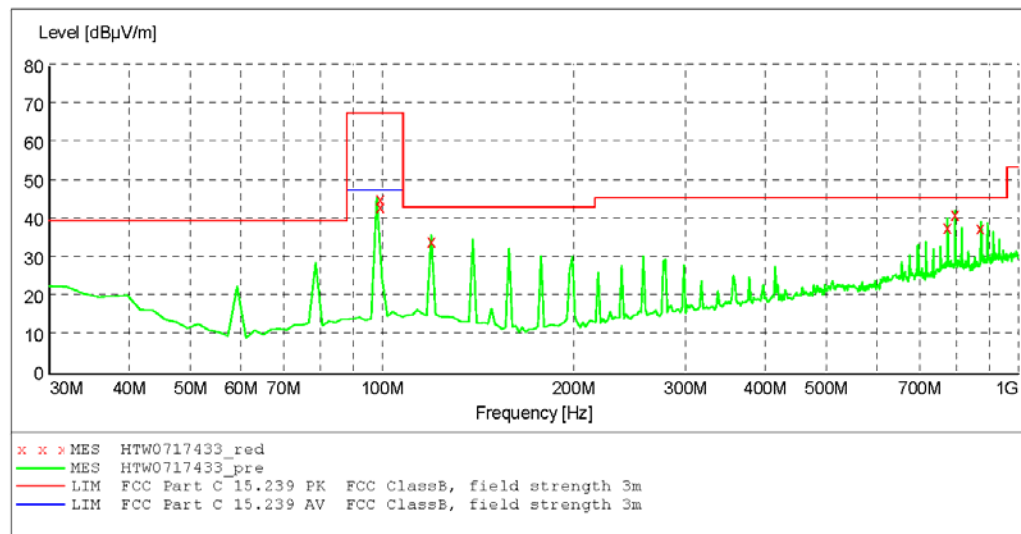
Where FS = Field Strength	CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude	AG = Amplifier Gain
AF = Antenna Factor	

Low channel (99.3MHz)

EUT: FM Radio Handsfree Device  
Manufacturer: Ansen  
Operating Condition: TX Mode(99.3MHz)  
Test Site: 3M CHAMBER  
Operator: GENE  
Test Specification: DC 3V  
Comment: M/N:JJ1  
Start of Test: 7/17/2009 / 9:17:30AM

***SWEEP TABLE: "test (30M-1G)"***

Short Description:	Field Strength
Start Stop Detector Meas. IF Transducer	
Frequency Frequency Time Bandw.	
30.0 MHz 1.0 GHz MaxPeak Coupled 120 kHz HL562 09	

***MEASUREMENT RESULT: "HTW0717433\_red"***

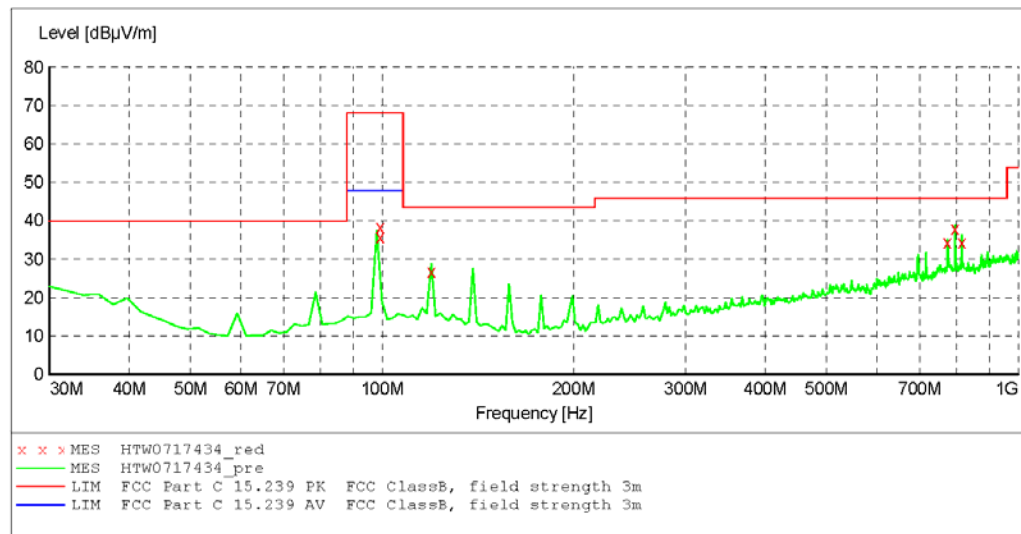
7/17/2009 9:35AM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
99.230100	46.10	24.1	68.0	21.9	Peak	100.0	172.00	HORIZONTAL
99.230100	44.20	25.4	48.0	3.8	AV	100.0	360.00	HORIZONTAL
119.418838	35.20	12.8	43.5	8.3	QP	300.0	130.00	HORIZONTAL
774.509018	38.90	24.2	46.0	7.1	QP	100.0	3.00	HORIZONTAL
795.891784	42.10	24.2	46.0	3.9	QP	100.0	137.00	HORIZONTAL
873.647295	38.60	24.7	46.0	7.4	QP	100.0	3.00	HORIZONTAL

EUT: FM Radio Handsfree Device  
Manufacturer: Ansen  
Operating Condition: TX Mode(99.3MHz)  
Test Site: 3M CHAMBER  
Operator: GENE  
Test Specification: DC 3V  
Comment: M/N:JJ1  
Start of Test: 7/17/2009 / 9:20:03AM

**SWEEP TABLE: "test (30M-1G)"**

Short Description:	Field Strength
Start Stop Detector Meas. IF Transducer	
Frequency Frequency Time Bandw.	
30.0 MHz 1.0 GHz MaxPeak Coupled 120 kHz HL562 09	

**MEASUREMENT RESULT: "HTW0717434\_red"**

7/20/2009 8:44AM

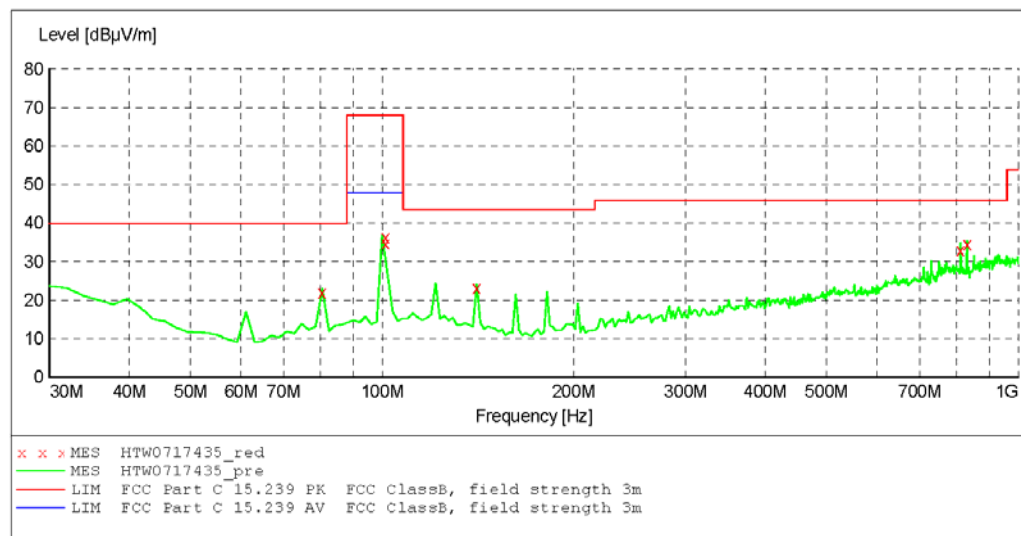
Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
99.297000	38.20	22.2	68.0	29.2	Peak	100.0	39.00	VERTICAL
99.297000	35.60	22.1	48.0	12.4	AV	100.0	39.00	VERTICAL
119.418838	26.80	12.8	43.5	16.7	QP	100.0	73.00	VERTICAL
774.509018	34.20	24.2	46.0	11.8	QP	100.0	73.00	VERTICAL
795.891784	37.90	24.2	46.0	8.1	QP	100.0	106.00	VERTICAL
815.330661	34.30	24.1	46.0	11.7	QP	100.0	106.00	VERTICAL

**High channel (101.3MHz)**

EUT: FM Radio Handsfree Device  
Manufacturer: Ansen  
Operating Condition: TX Mode(101.3MHz)  
Test Site: 3M CHAMBER  
Operator: GENE  
Test Specification: DC 3V  
Comment: M/N:JJ1  
Start of Test: 7/17/2009 / 9:22:20AM

***SWEEP TABLE: "test (30M-1G)"***

Short Description:	Field Strength
Start Stop Detector Meas. IF Transducer	
Frequency Frequency Time Bandw.	
30.0 MHz 1.0 GHz MaxPeak Coupled 120 kHz HL562 09	

***MEASUREMENT RESULT: "HTW0717435\_red"***

7/20/2009 8:49AM

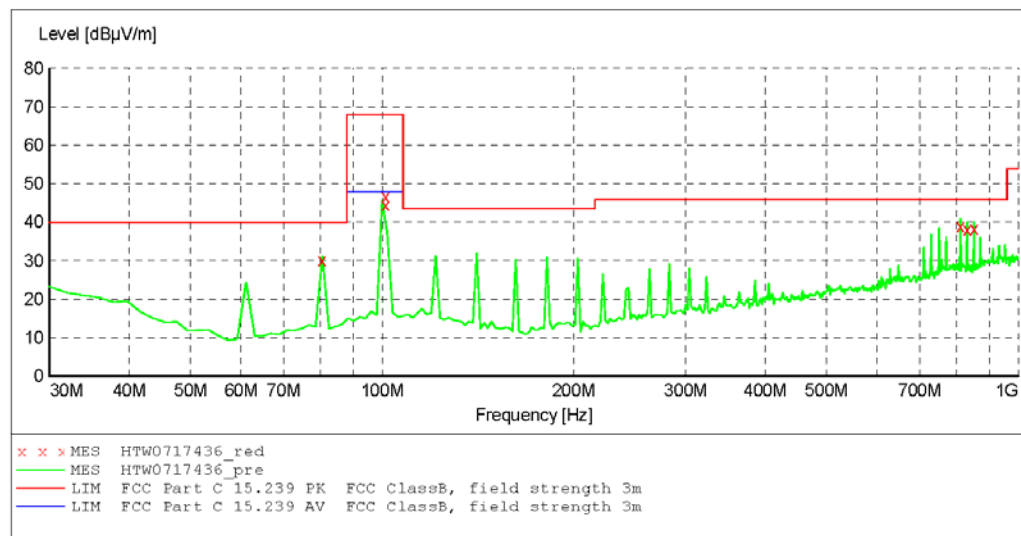
Frequency MHz	Level dBμV/m	Transd dB	Limit dBμV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
80.540000	21.90	21.1	40.0	18.1	QP	100.0	106.00	VERTICAL
101.280000	36.30	10.4	68.0	31.7	Peak	100.0	106.00	VERTICAL
101.280000	34.70	12.6	48.0	13.3	AV	100.0	73.00	VERTICAL
140.801603	23.10	10.3	43.5	20.4	QP	100.0	73.00	VERTICAL
811.442886	32.90	24.1	46.0	13.1	QP	100.0	73.00	VERTICAL
830.881764	34.40	24.0	46.0	11.6	QP	100.0	73.00	VERTICAL



EUT: FM Radio Handsfree Device  
Manufacturer: Ansen  
Operating Condition: TX Mode(101.3MHz)  
Test Site: 3M CHAMBER  
Operator: GENE  
Test Specification: DC 3V  
Comment: M/N:JJ1  
Start of Test: 7/17/2009 / 9:24:18AM

***SWEEP TABLE: "test (30M-1G)"***

Short Description:	Field Strength
Start Stop Detector Meas. IF Transducer	
Frequency Frequency Time Bandw.	
30.0 MHz 1.0 GHz MaxPeak Coupled 120 kHz HL562 09	

***MEASUREMENT RESULT: "HTW0717436\_red"***

7/20/2009 8:52AM

Frequency MHz	Level dBuV/m	Transd dB	Limit dBuV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
80.541082	30.20	10.4	40.0	9.8	QP	300.0	166.00	HORIZONTAL
101.280000	46.70	22.3	68.0	21.3	Peak	100.0	360.00	HORIZONTAL
101.280000	44.50	23.4	48.0	3.5	AV	100.0	360.00	HORIZONTAL
811.442886	38.90	24.1	46.0	7.1	QP	100.0	140.00	HORIZONTAL
830.881764	38.10	24.0	46.0	7.9	QP	100.0	140.00	HORIZONTAL
852.264529	38.30	24.0	46.0	7.3	QP	100.0	3.00	HORIZONTAL

### 4.3. Antenna Requirement

#### Evaluation Criteria

According to section 15.203 of the rules states that the subject device must meet at least one of the following criteria:

- (a) Antenna must be permanently attached to the unit.
- (b) Antenna must use a unique type of connector to attach to the EUT.
- (c) Unit must be professionally installed. Installer shall be responsible for verifying that the correct antenna is employed with the unit.

#### Evaluation Result

The antenna is permanently attached on the PCB and no consideration of replacement.  
The EUT complied the antenna requirement.

