Prüfbericht - Nr.: *Test Report No.:*	**17018568 001**	**Seite 1 von 22** *Page 1 of 22*

Auftraggeber: *Client:*	Zhongshan K-mate General Electronics Co., Ltd Fuwan Industrial Zone, Fuwan South Road, Sunwen East Road, East District, Zhongshan, Guangdong 528403, P.R. China		
Gegenstand der Prüfung: *Test item:*	FM Transmitter		
Bezeichnung: *Identification:*	AT1900-1A-MFI	**Serien-Nr.:** *Serial No.:*	n.a.
Wareneingangs-Nr.: *Receipt No.:*	163070339	**Eingangsdatum:** *Date of receipt:*	2010-11-09
Prüfort: *Testing location:*	TÜV Rheinland (Guangdong) Ltd. EMC Laboratory Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China FCC Registration No.:833845 Test site Industry Canada No.: 2932C-1		
Prüfgrundlage: *Test specification:*	FCC CFR47 Part 15: Subpart C Section 15.239 FCC CFR47 Part 15: Subpart C Section 15.109 FCC CFR47 Part 15: Subpart C Section 15.107		
Prüfergebnis: *Test Result:*	**Der Prüfgegenstand entspricht oben genannter Prüfgrundlage(n).** *The test item passed the test specification(s).*		
Prüflaboratorium: *Testing Laboratory:*	TÜV Rheinland (Shenzhen) Co., Ltd.		

geprüft/ *tested by:*			**kontrolliert/** *reviewed by:*		
2011-01-18	Winnie Hou/ Project Engineer		2011-01-19	Sam Lin/ Technical Certifier	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges/ *Other Aspects:*

Abkürzungen:				*Abbreviations:*			
P(ass)	=	*entspricht Prüfgrundlage*		*P(ass)*	=	*passed*	
F(ail)	=	*entspricht nicht Prüfgrundlage*		*F(ail)*	=	*failed*	
N/A	=	*nicht anwendbar*		*N/A*	=	*not applicable*	
N/T	=	*nicht getestet*		*N/T*	=	*not tested*	

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: Passed

5.1.2 26DB BANDWIDTH
RESULT: Passed

5.1.3 IN-BAND EMISSIONS
RESULT: Passed

5.1.4 OUT OF BAND EMISSIONS
RESULT: Passed

5.1.5 RADIATED EMISSIONS
RESULT: Passed

5.1.6 CONDUCTED EMISSIONS
RESULT: Passed

Contents

1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix 1: Test Result

2. Test Sites

2.1 Test Facilities

TÜV Rheinland (Guangdong) Ltd.
EMC Laboratory
(**FCC Registration No.: 833845 & Test Site Industry Canada No.: 2932C-1)**

Guangzhou Auto Market,
Yuan Gang Section of Guangshan Road,
Guangzhou, P.R. China

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Calibrated until
Spurious Radiated Emissions and Radiated Emissions				
EMI Test Receiver	Rohde & Schwarz	ESCI3	100216	2011-03-16
Spectrum Analyzer	Rohde & Schwarz	FSP30	100286	2011-03-16
Trilog-Broadband Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9168	209	2011-08-21
Double-Ridged Waveguide Horn Antenna	Rohde & Schwarz	HF906	100385	2011-08-24
Pre-amplifier	MITEQ	AFS42-00101800-25-S-42	1101599	2011-07-31
Horn Antenna	EMCO	3160-09	21642	2011-06-26
Pre-amplifier	MITEQ	AFS33-18002650-30-8P-44	1108282	2011-03-16
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100111	2011-11-26
3m Anechoic Chamber	Albatross Project GmbH	N/A	N/A	2011-02-10
26dB Bandwidth				
Spectrum Analyzer	Agilent	E4404B	MY41440753	2011-03-16
Conducted Emissions				
Receiver	Rohde &Schwarz	ESCI	100178	2011-03-16
LISN	Rohde &Schwarz	ESH3-Z5	100114	2011-03-16

2.3 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basics using in house standards or comparisons.

2.5 Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO/IEC 17025 are:

Table 2: Measurement Uncertainty

Items		Extended Uncertainty
CE	Disturbance Voltage (dBuV)	U=±2.1dB, k=2, σ=95%
RE (9kHz – 30MHz)	Field Strength (dBuV/m)	U=±4.46dB, k=2, σ=95%
RE (30-1000MHz)	Field strength (dBuV/m)	U=±4.94dB, k=2, σ=95%

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix1 of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Guangdong) Ltd. test facility located at Guangzhou Auto Market, Yuan Gang Section of Guangshan Road, Guangzhou, P.R. China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a FM transmitter specially designed for iPod and iPhone.
It can transmit music wirelessly form iPod or iPhone to FM radio receiver. Also charge your iPod or iPhone through it Micro USB jack.
For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 3: Rating of EUT

Kind of Equipment:	FM Transmitter
Type Designation:	AT1900-1A-MFI
FCC ID	WAD-AT1900B

Table 4: Technical Specification of EUT

Technical Specification	Value
Operating Frequency band	88.1MHz ~ 107.9MHz
Channel Bandwidth	200kHz
Operation Voltage	DC 5V via iPod or iPhone
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	0dBi

3.3 Independent Operation Modes

The basic operation modes are:

A. Transmitting
   1. Low channel
   2. Middle channel
   3. High channel

B. Charging iPod

C. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Bill of Material
- PCB Layout
- Photo Document
- Circuit Diagram
- Instruction Manual
- Rating Label

4. Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5.

4.3 Special Accessories and Auxiliary Equipment

Kind of Equipment	Manufacturer	Type	S/N
Notebook	Lenovo	X60	L3 BZ383
iPod	Apple	A1320	5U946Z4R726

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

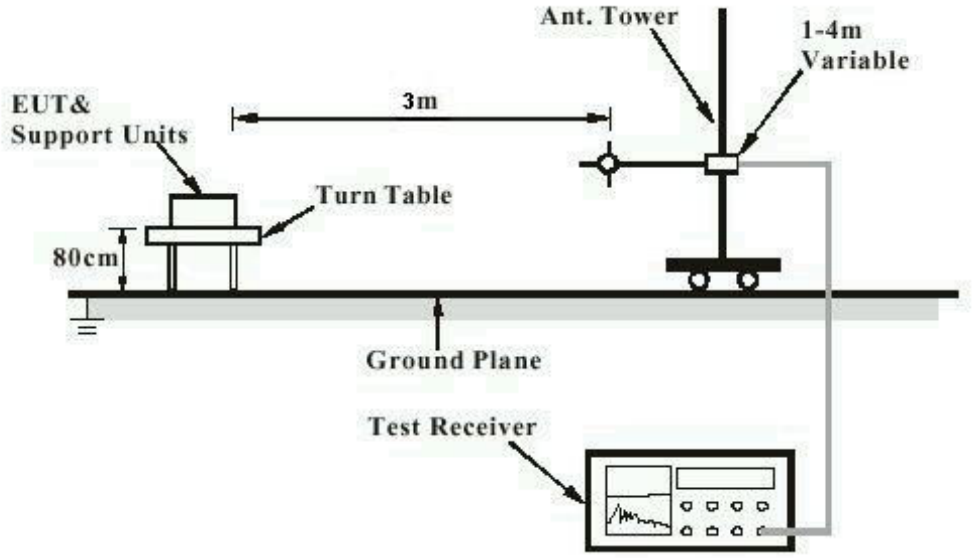


Diagram of Measurement Equipment Configuration for Conduction Measurement

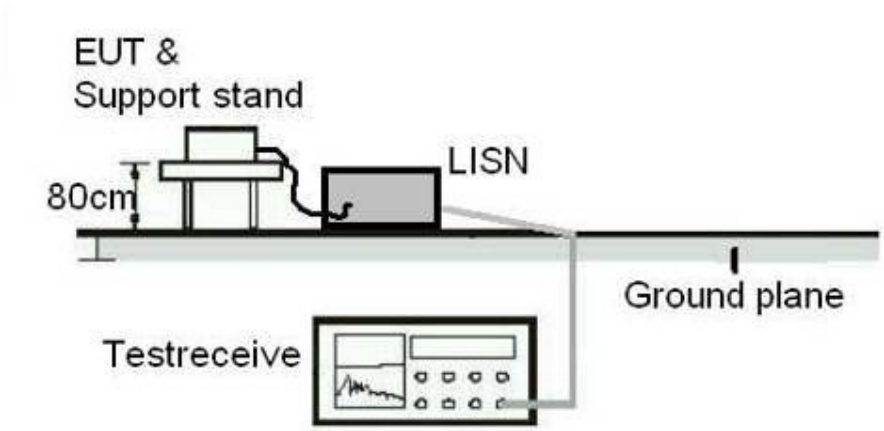
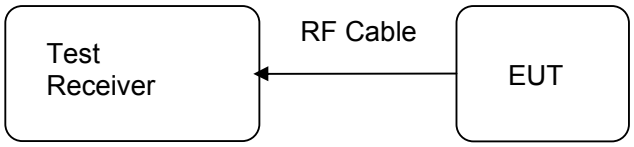


Diagram of Measurement Equipment Configuration for Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Passed**

Test date	:	2010-11-23 to 2011-01-06
Test standard	:	Part 15.203
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 0dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to compliance the provision.

Refer to EUT photo for details.

5.1.2 26dB Bandwidth

RESULT: **Passed**

Date of testing	:	2010-11-23 to 2011-01-06
Test standard	:	FCC Part 15.239(a)
Basic standard	:	ANSI C63.4: 2003
Limits	:	200kHz
Kind of test site	:	Shielded room

Test setup

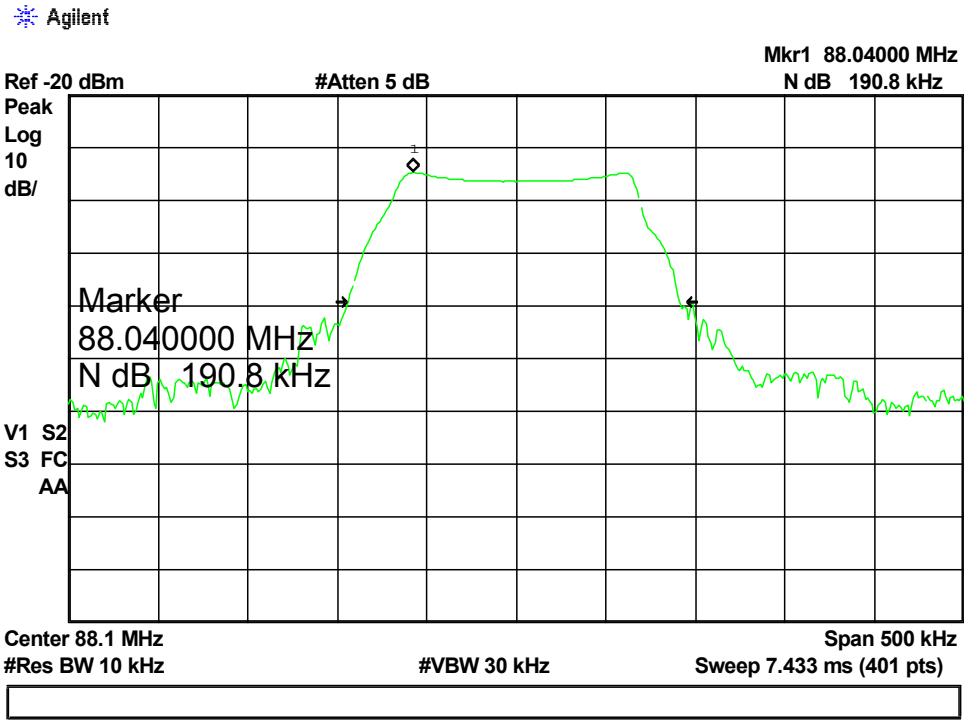
Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	23℃
Relative humidity	:	54%
Atmospheric pressure	:	101.0 kPa

Table 5: Test result of 26dB Bandwidth

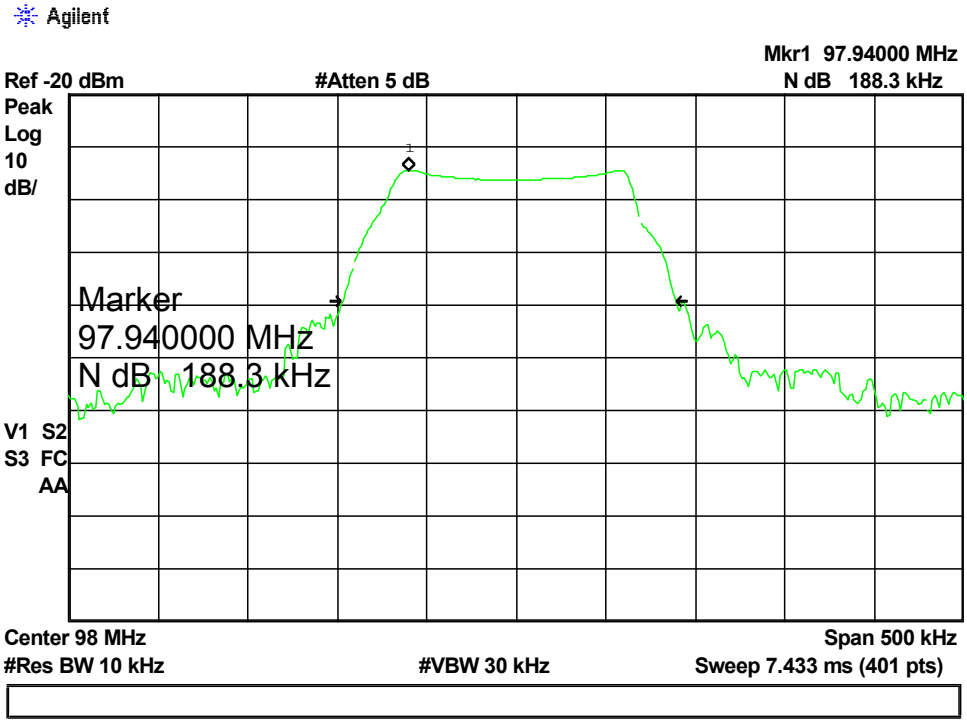
Channel	Channel Frequency (MHz)	26dB Bandwidth (kHz)	Limit (kHz)	Result
Low Channel	88.1	190.8	200	Pass
Mid Channel	98.1	188.3	200	Pass
High Channel	107.9	194.5	200	Pass

Test Graph of 26dB Bandwidth

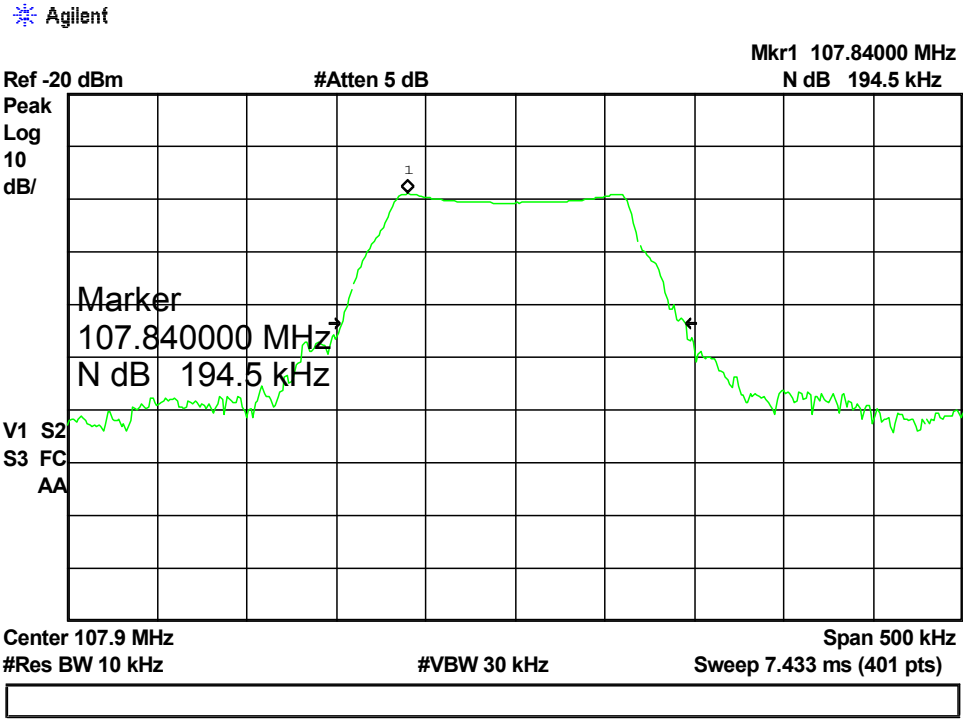
Low Channel



Middle Channel



High Channel



5.1.3 In-band Emissions

RESULT: **Passed**

Date of testing	:	2010-11-23 to 2011-01-17
Test standard	:	FCC part 15.239(b)
Basic standard	:	ANSI C63.4: 2003
Limits	:	Refer to FCC part 15.239(b)
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A
Ambient temperature	:	23℃
Relative humidity	:	54%
Atmospheric pressure	:	101.0 kPa

Table 6: Test result of In-band Emissions

Channel	Average Value (dBµV/m)	Peak Value (dBµV/m)	Polarity	Limit (dBµV/m)	
				Average	Peak
Low Channel	40.3	43.4	Horizontal	48	68
Mid Channel	41.2	45.4	Horizontal	48	68
High Channel	44.5	48.4	Horizontal	48	68

Refer to attached Appendix 1 for details.

5.1.4 Out of Band Emissions

RESULT: **Passed**

Date of testing	:	2010-11-23 to 2011-01-17
Test standard	:	FCC part 15.239(b)
Basic standard	:	ANSI C63.4: 2003
Limits	:	Refer to FCC part 15.239(b)
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A
Ambient temperature	:	23℃
Relative humidity	:	54%
Atmospheric pressure	:	101.0 kPa

Refer to attached appendix 1 for details.

5.1.5 Radiated Emissions

RESULT: **Passed**

Date of testing	:	2010-11-23 to 2011-01-06
Test standard	:	FCC Part 15.109
Basic standard	:	ANSI C63.4: 2003
Limits	:	FCC Part 15.109(a)
Kind of test site	:	3m Semi-Anechoic Chamber

Test Setup

Input Voltage	:	DC 5V
Operation Mode	:	B
Earthing	:	Not Connected
Ambient temperature	:	23℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

Refer to attached Appendix 1 for details.

5.1.6 Conducted Emissions

RESULT: **Passed**

Date of testing	:	2010-11-23 to 2011-01-06
Test standard	:	FCC Part 15.107
Basic standard	:	ANSI C63.4: 2003
Limits	:	FCC Part 15.107(a)
Kind of test site	:	Shield Room

Test Setup

Input Voltage	:	DC 5V
Operation Mode	:	B
Earthing	:	Not Connected
Ambient temperature	:	23℃
Relative humidity	:	50%
Atmospheric pressure	:	101 kPa

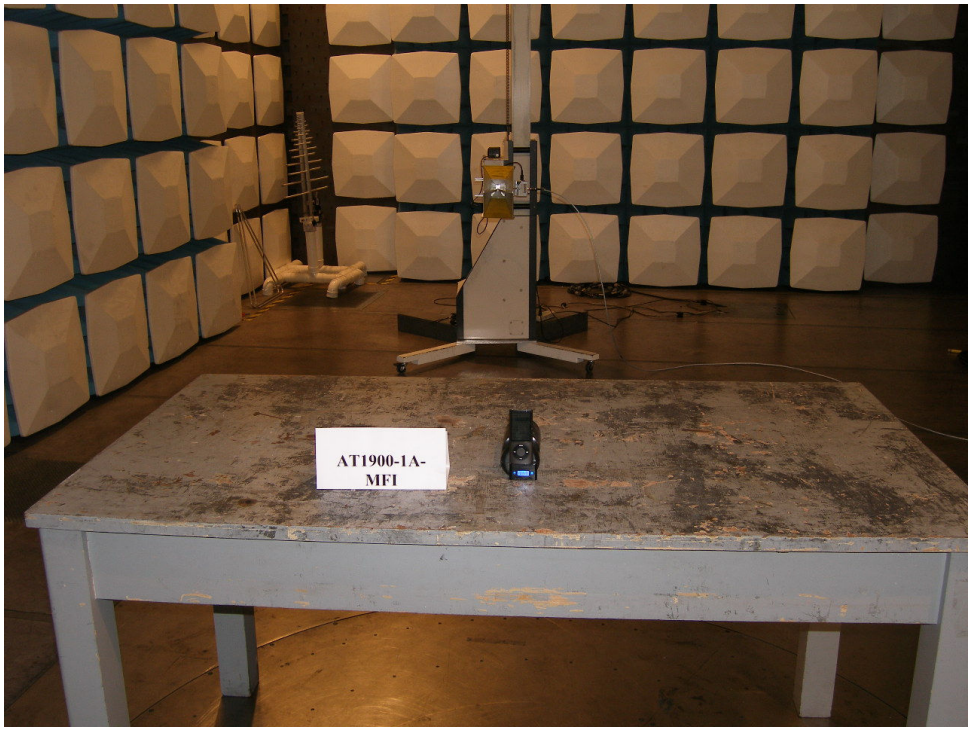
Refer to attached Appendix 1 for details.

6. Photographs of the Test Set-Up

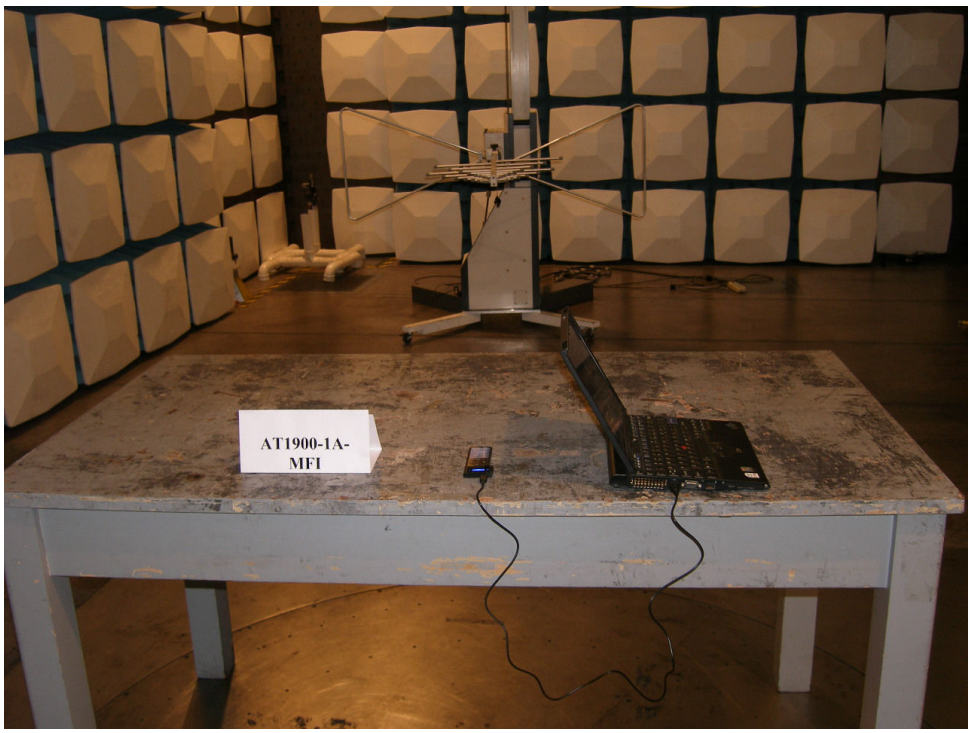
Photograph 1: Set-up for Out of band emissions (9kHz-30MHz)

Photograph 2: Set-up for Out of band emissions (30MHz-1GHz)

Photograph 3: Set-up for Out of band emissions (1GHz-2GHz)



Photograph 4: Set-up for Radiated emissions



Photograph 5: Set-up for Conducted emissions

7. List of Tables

8. List of Photographs

Test Graphs of Out of band emissions

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

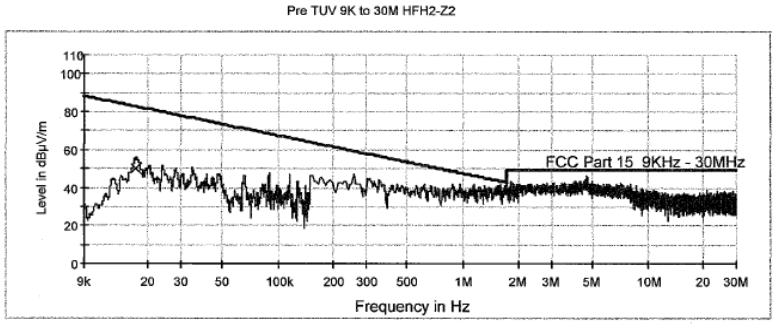
EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 88.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1

Frequency Range:	9kHz - 30MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV SAC Active Loop Antenna ZN30900A



Result Table_Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Corr. (dB)	Polarization
4.646000	41.6	---	25.3	V
1.590000	36.4	---	25.4	V
0.017320	---	50.2	26.3	V

Date: 23/11/2010 - Time: 12:00:37 Tested by: WDZ 2010 11 23 Checked Reviewed by: WLC 2010.11.24 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

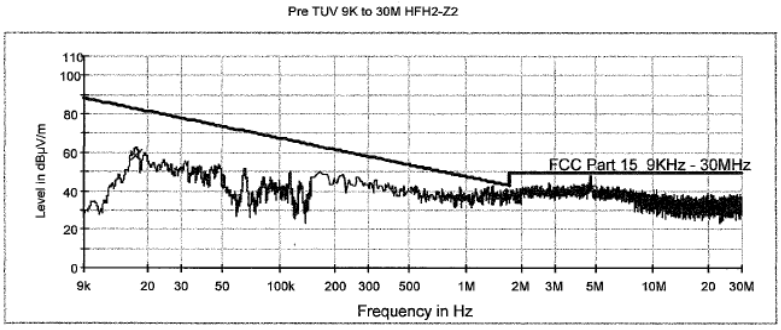
EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 88.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1

Frequency Range:	9kHz - 30MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV SAC Active Loop Antenna ZN30900A



Result Table_Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Corr. (dB)	Polarization
4.658000	42.4	---	25.3	H
1.398000	36.3	---	25.4	H
0.017320	---	58.7	26.3	H

Date: 23/11/2010 - Time: 12:05:39 Tested by: WDZ 2010 11 23 Checked Reviewed by: _____ WLC 2010.11.24 Checked

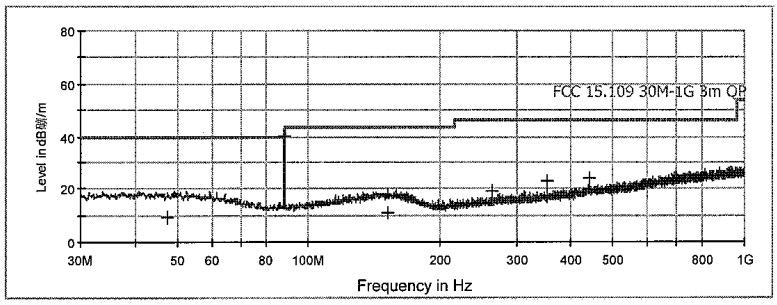
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 88.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168

FCC 15.109 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
47.450000	9.3	13.6	30.7	40.0	H
88.100000	40.2	9.4	-	-	H
152.350000	11.1	14.2	32.4	43.5	H
264.300000	19.1	11.9	26.9	46.0	H
352.400000	23.1	13.8	22.9	46.0	H
440.500000	23.7	15.8	22.3	46.0	H

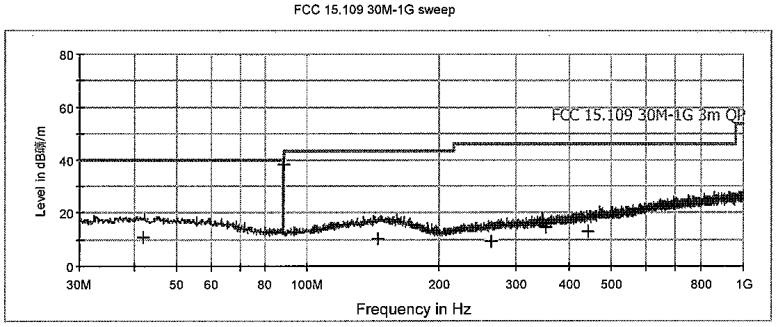
Date: 17/01/2011 - Time: 20:48:00 Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 88.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
41.900000	10.9	13.9	29.1	40.0	V
88.100000	38.3	9.4	-	-	V
145.300000	10.2	13.9	33.3	43.5	V
264.300000	9.4	11.9	36.6	46.0	V
352.400000	14.6	13.8	31.4	46.0	V
440.500000	12.8	15.8	33.2	46.0	V

Date: 17/01/2011 - Time: 20:53:10 Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

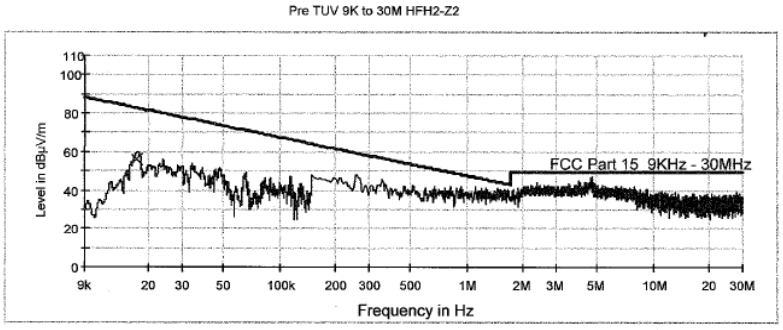
EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 98.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1

Frequency Range:	9kHz - 30MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV SAC Active Loop Antenna ZN30900A



Result Table_Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Corr. (dB)	Polarization
4.678000	41.7	---	25.3	V
1.274000	36.2	---	25.4	V
0.017320	---	56.1	26.3	V

Date: 23/11/2010 - Time: 12:11:50

Tested by: WDZ 2010 11 23 Checked

Reviewed by: WLC 2010.11.24 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

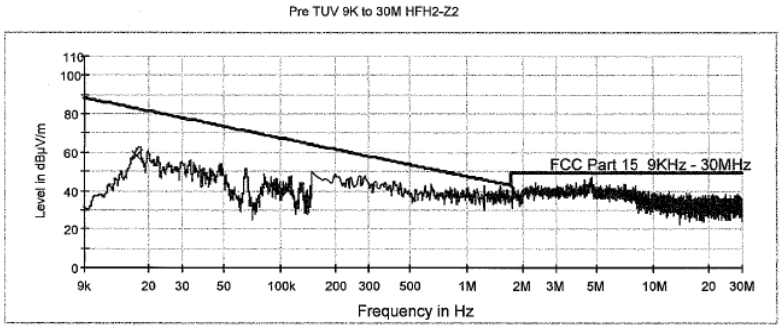
EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 98.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1

Frequency Range:	9kHz - 30MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV SAC Active Loop Antenna ZN30900A



Result Table_Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Corr. (dB)	Polarization
4.674000	41.9	---	25.3	H
1.506000	36.5	---	25.4	H
0.017320	---	58.0	26.3	H

Date: 23/11/2010 - Time: 12:08:37 Tested by WDZ 2010 11 23 Checked Reviewed by: WLC 2010.11.24

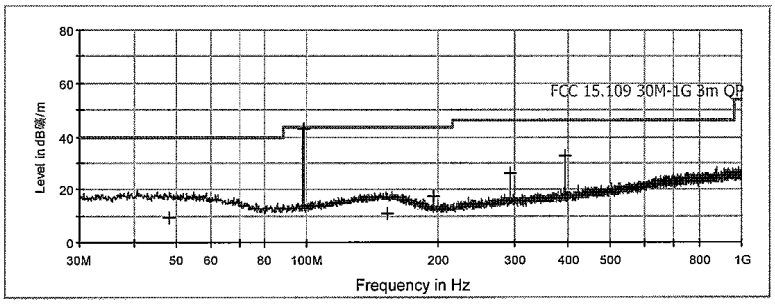
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 98.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168

FCC 15.109 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
48.200000	9.4	13.6	30.6	40.0	H
98.100000	43.1	10.0	-	-	H
153.200000	11.0	14.2	32.5	43.5	H
196.200000	17.2	10.1	26.3	43.5	H
294.300000	26.2	12.7	19.8	46.0	H
392.400000	32.6	14.6	13.4	46.0	H

Date: 17/01/2011 - Time: 21:04:47 Tested by: _____ Reviewed by: _____

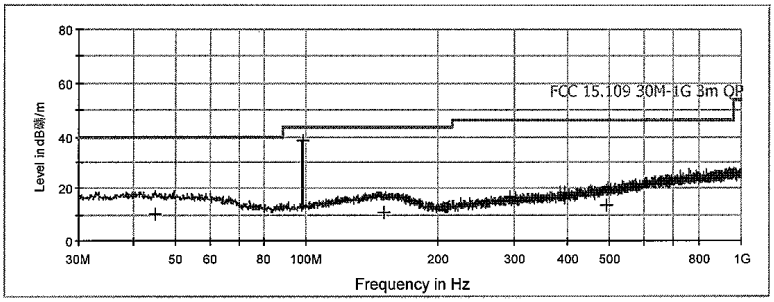
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 98.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168

FCC 15.109 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
44.900000	10.3	13.7	29.7	40.0	V
98.100000	38.7	10.0	-	-	V
150.650000	10.6	14.2	32.9	43.5	V
294.300000	16.7	12.7	29.3	46.0	V
392.400000	16.5	14.6	29.5	46.0	V
490.500000	13.6	16.4	32.4	46.0	V

Date: 17/01/2011 - Time: 20:59:21 Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

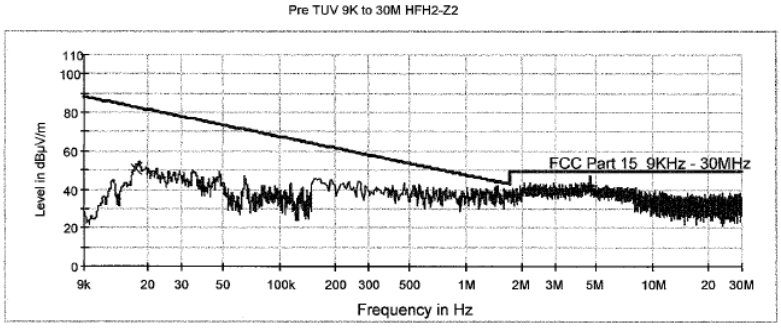
EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 107.9MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical

Subrange 1

Frequency Range:	9kHz - 30MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV SAC Active Loop Antenna ZN30900A



Result Table_Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Corr. (dB)	Polarization
4.678000	41.6	---	25.3	V
1.454000	36.4	---	25.4	V
0.017320	---	50.7	26.3	V

Date: 23/11/2010 - Time: 11:56:26 Tested by: WDZ 2010 11 23 Checked Reviewed by: WLC 2010 11.24 Checked

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

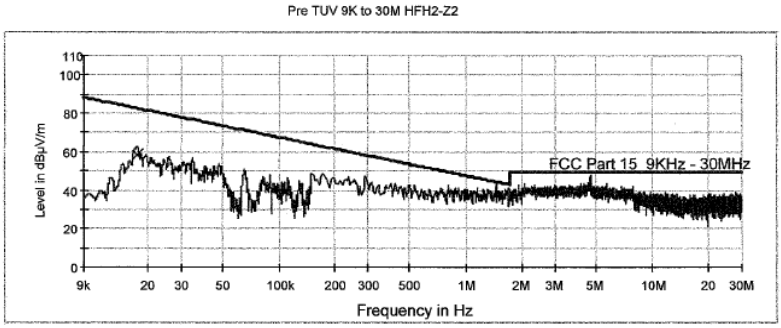
EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 107.9MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1

Frequency Range:	9kHz - 30MHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC Active Loop Antenna ZN30900A / TUV ESCI3 -TUV SAC Active Loop Antenna ZN30900A



Result Table_Single

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Corr. (dB)	Polarization
4.686000	40.4	---	25.3	H
1.450000	36.4	---	25.4	H
0.017480	---	58.3	26.3	H

Date: 23/11/2010 - Time: 11:51:49 Tested by: WDZ 2010 11 23 Checked Reviewed by: WLC 2010.11.24 Checked

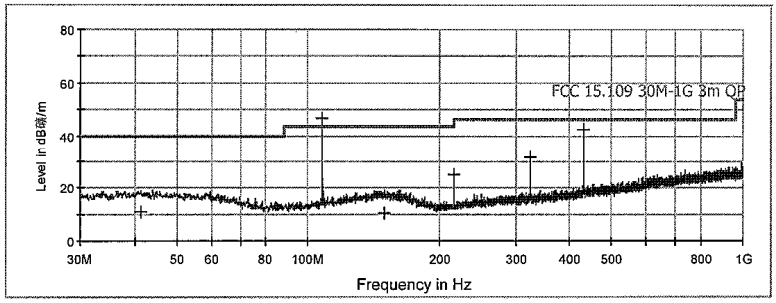
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 107.9MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168

FCC 15.109 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
41.400000	11.0	14.0	29.0	40.0	H
107.900000	46.6	10.9	-	-	H
149.200000	10.4	14.1	33.1	43.5	H
215.800000	24.8	10.4	18.7	43.5	H
323.700000	31.5	13.4	14.5	46.0	H
431.600000	42.6	15.6	3.4	46.0	H

Date: 17/01/2011 - Time: 20:40:13 Tested by: _____ Reviewed by: _____

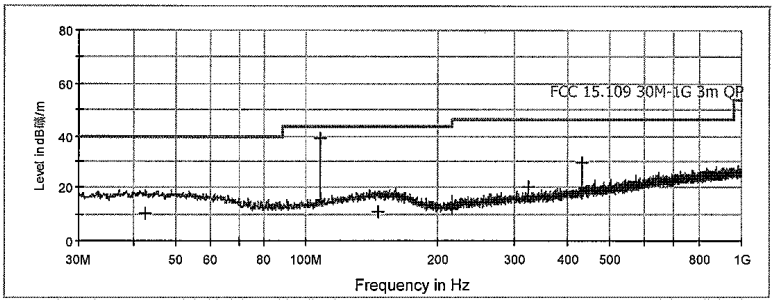
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	FM @ 107.9MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168

FCC 15.109 30M-1G sweep



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
42.750000	10.1	13.9	29.9	40.0	V
107.900000	38.9	10.9	-	-	V
146.900000	11.0	14.0	32.5	43.5	V
215.800000	12.0	10.4	31.5	43.5	V
323.700000	19.9	13.4	26.1	46.0	V
431.600000	29.6	15.6	16.4	46.0	V

Date: 17/01/2011 - Time: 20:31:31 Tested by: _____ Reviewed by: _____

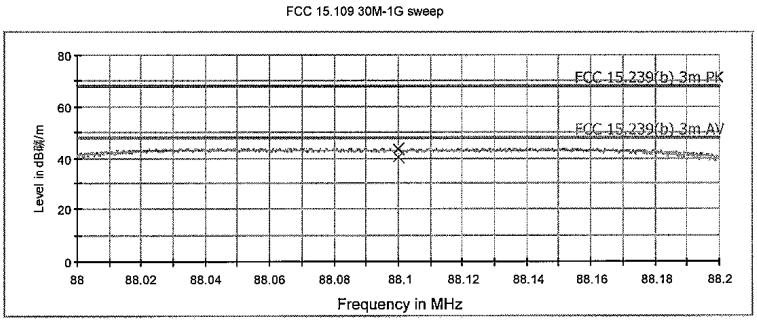
Test Graphs of In- band emissions

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	200kHz Range
Operation Mode:	FM @ 88.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
88.100000	43.4	9.4	24.6	68.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
88.100000	40.3	9.4	7.7	48.0	H

Date: 17/01/2011 - Time: 21:31:57 Tested by: _____ Reviewed by: _____

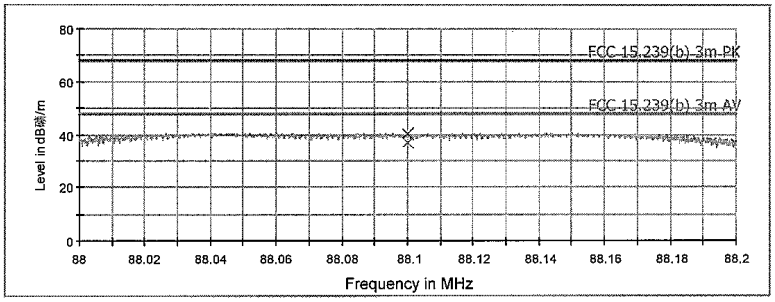
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	200kHz Range
Operation Mode:	FM @ 88.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168

FCC 15.109 30M-1G sweep



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
88.100000	40.1	9.4	27.9	68.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
88.100000	36.8	9.4	11.2	48.0	V

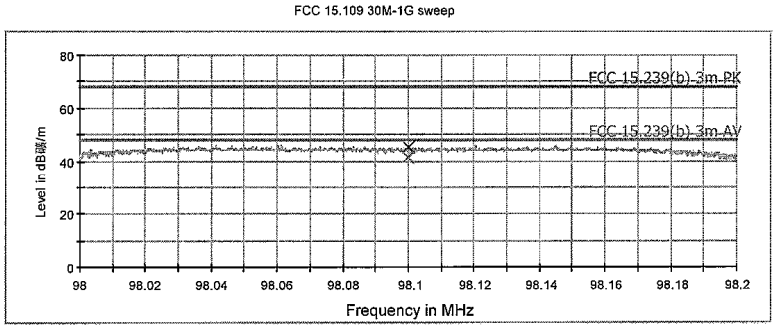
Date: 17/01/2011 - Time: 21:36:14 Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	200kHz Range
Operation Mode:	FM @ 98.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
98.100000	45.4	10.0	22.6	68.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
98.100000	41.2	10.0	6.8	48.0	H

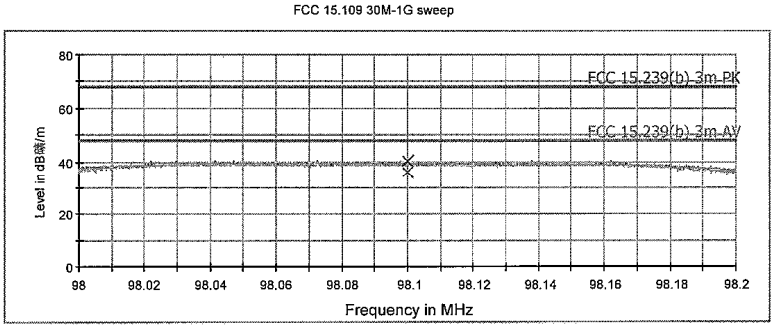
Date: 17/01/2011 - Time: 21:13:36 Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	200kHz Range
Operation Mode:	FM @ 98.1MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
98.100000	40.4	10.0	27.6	68.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
98.100000	36.0	10.0	12.0	48.0	V

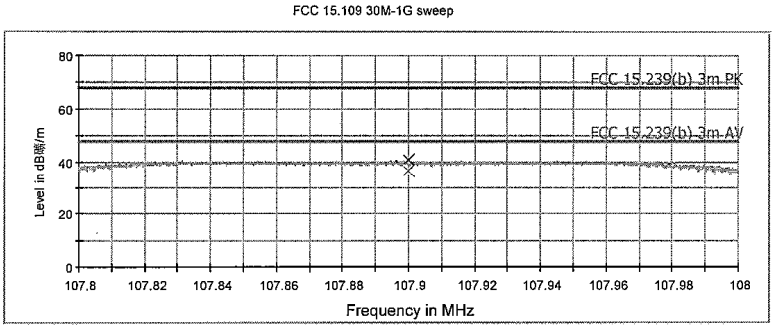
Date: 17/01/2011 - Time: 21:19:37 Tested by: _____ Reviewed by: _____

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	200kHz Range
Operation Mode:	FM @ 107.9MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
107.900000	40.8	10.9	27.2	68.0	V

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
107.900000	36.4	10.9	11.6	48.0	V

Date: 17/01/2011 - Time: 21:23:59 Tested by: _____ Reviewed by: _____

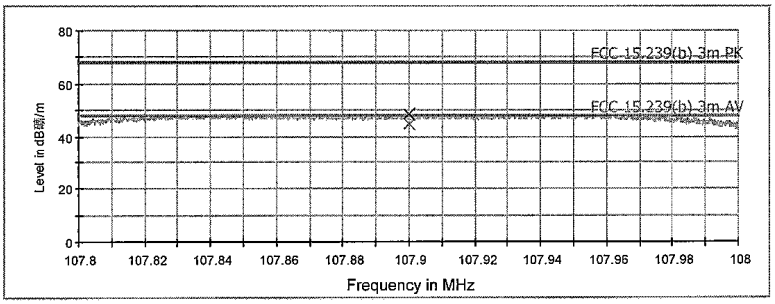
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	200kHz Range
Operation Mode:	FM @ 107.9MHz
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168

FCC 15.109 30M-1G sweep



Limit and Margin PK

Frequency (MHz)	MaxPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
107.900000	48.4	10.9	19.6	68.0	H

Limit and Margin AV

Frequency (MHz)	Average (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
107.900000	44.5	10.9	3.5	48.0	H

Date: 17/01/2011 - Time: 21:27:38 Tested by: _____ Reviewed by: _____

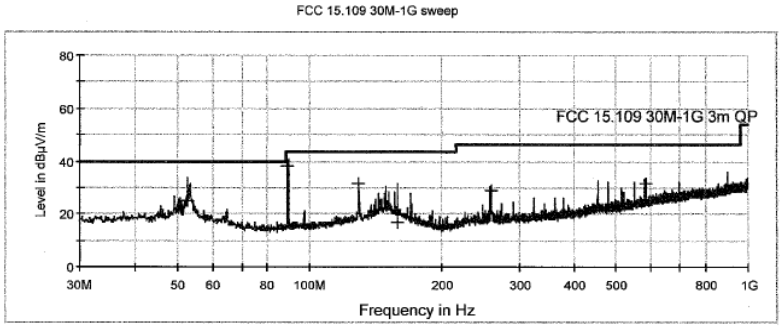
Test Graphs of Radiated emissions

TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	B
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Vertical
Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
52.900000	25.1	14.1	14.9	40.0	V
89.300000	38.1	10.6	---	---	V
129.450000	31.7	14.2	11.8	43.5	V
159.400000	16.8	15.6	26.7	43.5	V
258.900000	28.9	13.7	17.1	46.0	V
584.700000	31.5	21.2	14.5	46.0	V

Date: 22/11/2010 - Time: 15:37:14 Tested by: WDZ 2010 11 22 Checked Reviewed by: WLC 2010.11.24 Checked

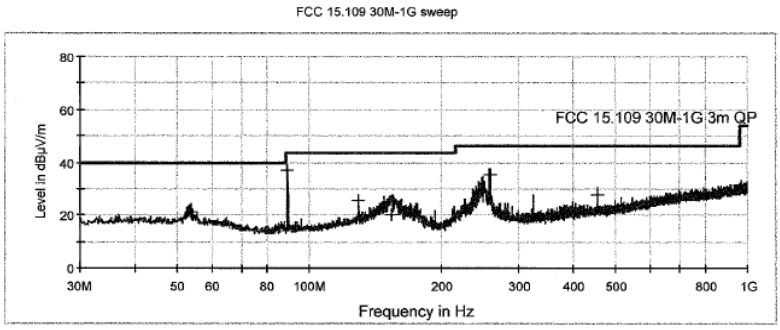
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	RE
Operation Mode:	B
Climate Condition:	23 ℃; 50 %RH; 101 kPa.
Test Voltage / Freq. :	DC 5V
Receipt No.:	163070339 300
Report No.	17018568 001
Result:	Pass
Comment:	Test distance is 3m, Horizontal

Subrange 1	
Frequency Range:	30M-1GHz
Receiver:	TUV ESCI 3
Transducer:	TUV SAC UVLB 9168/ TUV ESCI 3-TUV SAC UVLB 9168



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)	Polarization
54.000000	21.0	14.1	19.0	40.0	H
89.300000	36.8	10.6	---	---	H
129.450000	25.6	14.2	17.9	43.5	H
155.000000	20.3	15.7	23.2	43.5	H
258.900000	35.4	13.7	10.6	46.0	H
454.700000	27.8	18.8	18.2	46.0	H

Date: 22/11/2010 - Time: 15:27:14 Tested by: WDZ 2010 11 22 Checked Reviewed by: WLC 2010.11.24 Checked

Test Graphs of Conducted emissions

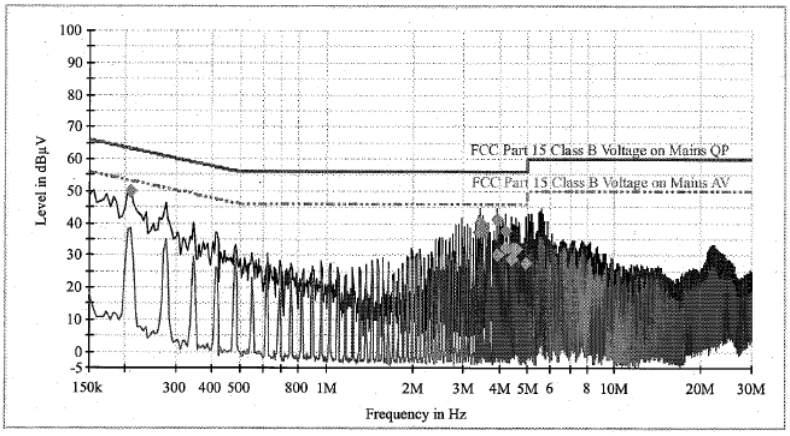
TUV Rheinland (Guangdong) Ltd. EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

Test Information

Manufacturer:	K-mate
Test Item:	FM Transmitter
Identification:	AT1900-1A-MFI
Test Standard:	FCC Part 15
Test Detail:	Conducted Emission
Operation Mode:	B
Climate Condition:	22 ℃; 50 %RH; 101 kPa.
Test Voltage/ Freq.:	AC 120 V/ 60 Hz(DC 5V via PC)
Port / Line:	AC Mains
Receipt No.:	163070339 300
Report No.:	17018568 001
Result:	Pass
Comment:	/
Hardware Setup:	1phase LISN ESH3-Z5 to ESCI
Level Unit:	dBµV

Subrange	Detectors	IF Bandwidth	Step Size	Meas. Time	Receiver
150kHz - 30MHz	Peak; Average	9kHz	4.5kHz	10ms	ESCI 3



11/22/2010, 8:20:19 PM

Tested by: ESCI 2010.11.24 Checked

Reviewed by: WLC 2010.11.24 Checked

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Final Measurement Detector 1

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line
0.208500	50.0	1000.000	9.000	GND	L1
3.363000	37.1	1000.000	9.000	GND	L1
3.435000	40.4	1000.000	9.000	GND	N
3.507000	37.6	1000.000	9.000	GND	N
3.916500	41.0	1000.000	9.000	GND	L1
4.191000	37.5	1000.000	9.000	GND	L1

(continuation of the "Final Measurement Detector 1" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
0.208500	10.1	13.3	63.3	
3.363000	10.1	18.9	56.0	
3.435000	10.2	15.6	56.0	
3.507000	10.2	18.4	56.0	
3.916500	10.1	15.0	56.0	
4.191000	10.1	18.5	56.0	

Final Measurement Detector 2

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line
3.916500	30.0	1000.000	9.000	GND	L1
4.191000	32.2	1000.000	9.000	GND	L1
4.398000	28.9	1000.000	9.000	GND	L1
4.465500	31.7	1000.000	9.000	GND	N
4.537500	31.8	1000.000	9.000	GND	L1
4.947000	27.5	1000.000	9.000	GND	N

(continuation of the "Final Measurement Detector 2" table from column 6 ...)

Frequency (MHz)	Corr. (dB)	Margin (dB)	Limit (dBµV)	Comment
3.916500	10.1	16.0	46.0	
4.191000	10.1	13.8	46.0	
4.398000	10.2	17.1	46.0	
4.465500	10.2	14.3	46.0	
4.537500	10.2	14.2	46.0	
4.947000	10.1	18.5	46.0	

11/22/2010, 8:20:19 PM Tested by: _____ Reviewed by: _____