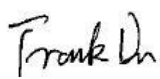


Prüfbericht-Nr.: Test Report No.:	16059704 002		Auftrags-Nr.: Order No.:	174024892	Seite 1 von 17 Page 1 of 17
Kunden-Referenz-Nr.: Client Reference No.:	440253		Auftragsdatum: Order date.:	30.Aug.2014	
Auftraggeber: Client:	Dongguan Alllike Electronics Co., Ltd. Chuanca Development Zone Mayong Town, Dongguan, Guangdong P.R. China				
Prüfgegenstand: Test item:	Tower Stereo System				
Bezeichnung / Typ-Nr.: Identification / Type No.:	ITSB-300W		FCC ID: IC ID	BUQDM95B 11059A-DM95B	
Auftrags-Inhalt: Order content:	TUV Rheinland - EMC service				
Prüfgrundlage: Test specification:	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 RSS-210 Issue 8 December 2010 RSS-Gen Issue 3 December 2010 RSS-102 Issue 4 March 2010				
Wareneingangsdatum: Date of receipt:	31.Aug.2014				
Prüfmuster-Nr.: Test sample No.:	N/A				
Prüfzeitraum: Testing period:	Refer to test report				
Ort der Prüfung: Place of testing:	Refer to section 2.1				
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Guangdong) Ltd.				
Prüfergebnis*: Test result*:	Pass				
geprüft von / tested by:			kontrolliert von / reviewed by:		
10.Sep.2014 Frank Du/ Project Manager 			11.Sep.2014 Liangdong Xie/Project Manager 		
Datum Date	Name/Stellung Name/Position	Unterschrift Signature	Datum Date	Name/Stellung Name/Position	Unterschrift Signature
Sonstiges / Other:					
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:			Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet P(ass) = passed a.m. test specifications(s) F(ail) = failed a.m. test specifications(s) N/A = not applicable N/T = not tested					
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>					

V04

Prüfbericht - Nr.: 16059704 002
Test Report No.:

Seite 2 von 17
Page 2 of 17

Test Summary

FCC Rules		Test items	Result
Paragraph	Released Date		
Part 15 Per Section 15.207(a)	October 1, 2013	Conducted Emission	Pass
Part 15 Per Section 15.209(a)	October 1, 2013	Radiated Spurious Emission	Pass
Part 15 Per Section 15.247(d)	October 1, 2013	Out-Of-Band Emission measurement	Pass

Prüfbericht - Nr.: 16059704 002
Test Report No.:

Seite 3 von 17
Page 3 of 17

Contents

1	GENERAL REMARKS	5
1.1	COMPLEMENTARY MATERIALS	5
2	TEST SITES	5
2.1	TEST FACILITIES	5
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS	6
3	Modification INFORMATION	
4	Necessary TEST	7
4.1	CONDUCTED EMISSION	9
4.2	RADIATED SPURIOUS EMISSION	11
4.3	OUT-OF-BAND EMISSION	13
5	PHOTOGRAPHS OF THE TEST SET-UP	15
6	LIST OF TABLES	17
7	LIST OF PHOTOGRAPHS	17

Prüfbericht - Nr.: 16059704 002
Test Report No.:

Seite 4 von 17
Page 4 of 17

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

No.102, 1F of Southwest Warehouse Building, No.767 TianYuan Road,
Tianhe District, Guangzhou, P.R.China, 510650

Prüfbericht - Nr.: 16059704 001
Test Report No.:

Seite 5 von 17
Page 5 of 17

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Kind of Equipment	Type	Manufacturer	S/N	Calibrated until	Calibrated Interval
EMI Test Receiver	ESCI-3	Rohde & Schwarz	100216	16.Mar.2015	1 year
Spectrum Analyzer	FSP30	Rohde & Schwarz	100286	16.Mar.2015	1 year
Trilog-Broadband Antenna	VULB9168 (30MHz-1GHz)	SCHWARZBECK MESSELEKTRONIK	209	16.Mar.2015	2 years
Double-Ridged Waveguide Horn Antenna	HF906 (1-18GHz)	Rohde & Schwarz	100385	16.Mar.2015	2 years
Pre-amplifier	AFS42-00101800-25-S-42	MITEQ	1101599	16.Mar.2015	2 years
Band Reject Filter	BRM50702	Micro-Tronics	023	16.Mar.2015	2 years
Standard Gain Horn Antenna	3160-09 (18-26.5GHz)	EMCO	21642	16.Mar.2015	5 years
Pre-amplifier	AFS33-18002650-30-8P-44	MITEQ	1108282	16.Mar.2015	2 years
3m Anechoic Chamber	N/A	Albatross Project GmbH	N/A	16.Mar.2015	1 year
Loop Antenna	HFH2-Z2 (<30MHz)	Rohde & Schwarz	100111	16.Mar.2015	2 years
EMI Test Receiver	ESCS30	Rohde & Schwarz	100316	16.Mar.2015	1 year
Two-Line V-Network	ESH3-Z5	Rohde & Schwarz	100308	16.Mar.2015	1 year
Pulse Limiter	ESH3-Z2	Rohde & Schwarz	100701	16.Mar.2015	1 year

Prüfbericht - Nr.: 16059704 002
Test Report No.:

Seite 6 von 17
Page 6 of 17

3 Modification Information

The new submitted sample ITSB-300W is revised from certified model ITSB-300 on report 16059704 001. The radio part of them is full identical, the new model ITSB-300W add an audio process channel and speaker. Therefore conducted RF tests are not necessary to performed again, 'Radiated Spurious Emission' and 'Out-Of-Band Emission measurement' were performed again.

4 Necessary Test Results

4.1 Conducted Emission

RESULT:

Pass

Date of testing	:	Aug.19.2014
Test specification	:	FCC Part 15 Per Section 15.207(a)
Limits	:	FCC Part 15 Per Section 15.207(a)
Test procedure	:	Procedure specified in ANSI C63.4 were followed
Deviations from Standard Test Procedures	:	None
Kind of test site	:	Shielded room
Operation mode	:	A. Transmitting
Power supply	:	AC120V,60Hz
Temperature	:	20°C
Humidity	:	50%

Test procedure:

For tabletop device, the EUT and its peripherals were placed on a wooden table, 0.8cm above the horizontal reference plane and 40cm away from vertical reference plane in a shielded room. For floor-standing device, the EUT shall be placed either directly on the reference ground plane or on insulating material as described in ANSI C63.4 Clause 6.3.2.1.

The EUT was connected to input power source through a line impedance stabilization network (LISN).The excess length of the power cord between the EUT and the LISN shall be folded back and forth at the center of the lead to form a bundle not exceeding 40cm in length.

The EUT was tested in a typical model of operation in accordance with ANSI C63.4:2009, Pre-test was performed in peak and average detection mode. final measurement was performed using quasi-peak and average detection on the live and neutral lines with the worst case.

The test software Rohde & Schwarz EMC32 was used during the test.

If the result of the measurement with the Quasi Peak detector is below the Average limit, the measurement with Average Detector may be omitted.

Refer to appendix 1 for detail test result.

4.2 Radiated Spurious Emission

RESULT:

Pass

Date of testing	:	Aug.28.2014
Test specification	:	FCC Part 15 Per Section 15.209(a)
Limits	:	FCC Part 15 Per Section 15.209(a) Clause 5.5 of ICES-003 RSS-Gen 7.1.4
Test procedure	:	Procedure specified in ANSI C63.4 CAN/CSA-CEI/IEC CISPR 22-02 RSS-Gen Table 5
Deviations from Standard Test procedures	:	None
Kind of test site	:	3m Semi-anechoic chamber
Operation mode	:	Bluetooth RF transmitting at fix channel with max power (High, Low, Mid)
Power supply	:	AC120V,60Hz
Temperature	:	23°C
Humidity	:	50%

Test procedure:

For tabletop device, the and its peripherals were placed on a wooden table,80cm above ground plane in semi-anechoic chamber. For floor-standing equipment, the EUT and all cables shall be insulated, if required, from the ground plane by up to 12mm of insulating material in semi-anechoic chamber.

The EUT was set 3 meters away from the receiving antenna, which was mounted on a variable-height antenna tower. Test shall be made with the antenna positioned in both the horizontal and vertical planes of polarization. The antenna height shall be varied from 1m to 4m. The table was rotated 360 degrees to detect the suspected emission frequency points. The position of the worst radiation case with both horizontal and vertical receiving antenna polarization was recorded together with the suspected emission frequency points above-mentioned.

The EUT was tested in a typical model of operation in accordance with ANSI C63.4:2009, Pre-test was performed in peak detection mode. Final measurement was performed using quasi-peak detection with the worst case.

The test software Rohde & Schwarz EMC32 was used during the test.

Note:

While testing, the EUT is connected with a serial port bridge board for test mode setup. The length of the communication cable between the EUT and the bridge board, which including Tx, Rx, GND serial pins, is minimized to reduce the unwanted influence to test result. The bridge board can be connected to a host computer with standard DB9 com port cable for running of the test setup software. After setup successfully, the EUT can keep the test mode with the host computer and the cable removed.

Refer to appendix 1 for detail test result.

4.3 Out-of-Band Emission

RESULT:

Pass

Date of testing : 01.09.2014
Test specification : FCC Part 15 Per Section 15.247(d)
Limits : FCC Part 15 Per Section 15.247(d)
RSS-210 A8.5

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

In addition:

FCC Part 15 - radiated emission which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a).

Deviations from Standard Test procedures : None
Test Procedure : Procedure specified in ANSI C63.4
Kind of test site : Shielded room
Operation mode : Bluetooth transmitting at the highest and lowest channel (band edge)
Power supply : AC120V,60Hz
Temperature : 22°C
Humidity : 55%

Test procedure:

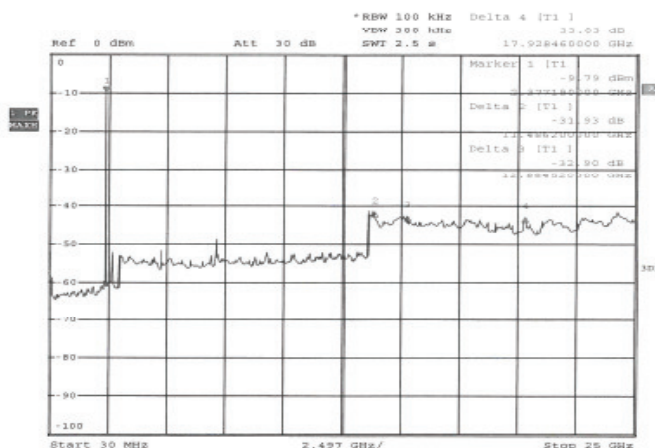
1. Connect the antenna port of the EUT to the spectrum analyzer by a low loss cable.
2. Set the EUT to proper test mode with relative test software and hardware.
3. Spectrum analyzer setting: RBW =100kHz, VBW=300kHz.
4. Set proper frequency span respectively for out-of-band emission measurement of the band edge and the whole range (up to 10 times of the carrier frequency.)
5. Set the trace mode to Max Hold and mark the peak reading of any spurious emission recorded.

Prüfbericht - Nr.: 16059704 002
Test Report No.:

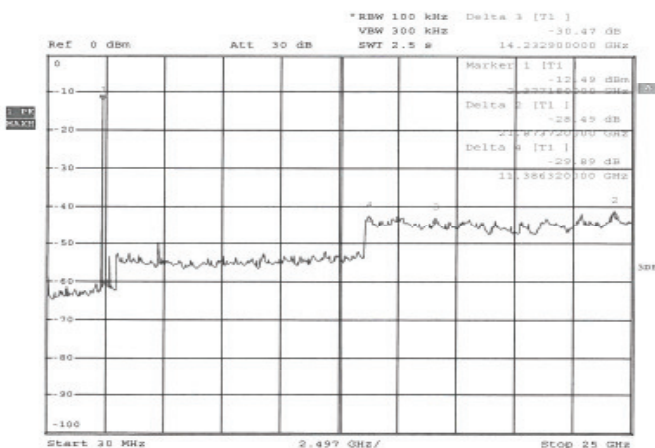
Seite 10 von 17
Page 10 of 17

Table 2: Out-Of-Band Emission measurement (conducted)

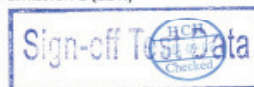
Emission (Carrier operating at Channel low, mid and high)	Attenuation	Limit (dB)
30MHz to 25GHz	All emission in this 100kHz bandwidth are attenuated more than 20dB from the carrier	$\Delta \geq 20$



20140828 ITSB-300W Conducted Spurious Emission L (BR)

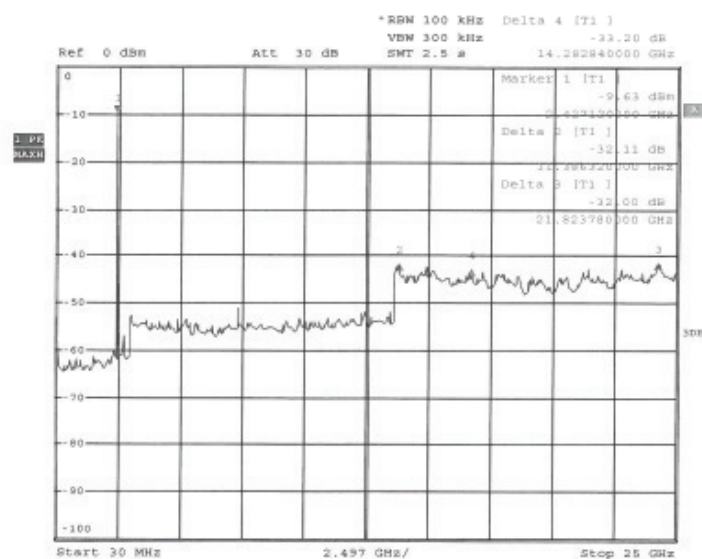


20140828 ITSB-300W Conducted Spurious Emission L (EDR)

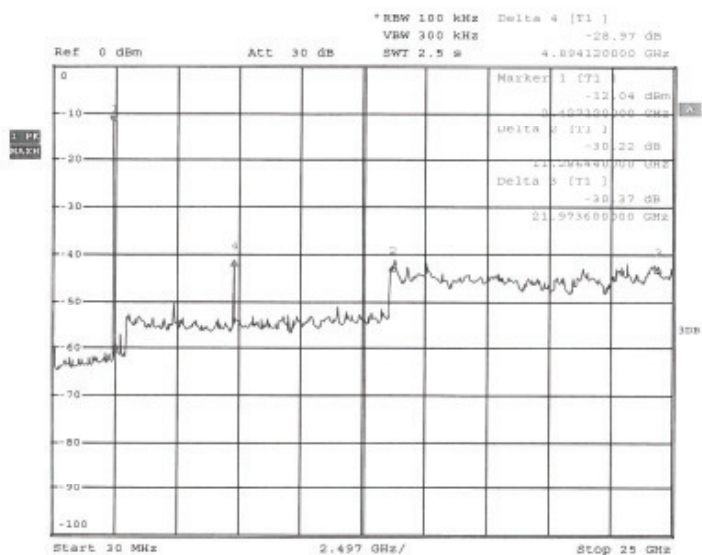


Prüfbericht - Nr.: 16059704 002
Test Report No.:

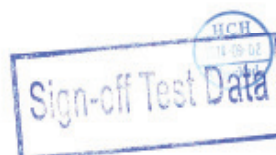
Seite 11 von 17
Page 11 of 17



20140828 ITS8-300W Conducted Spurious Emission M (BR)

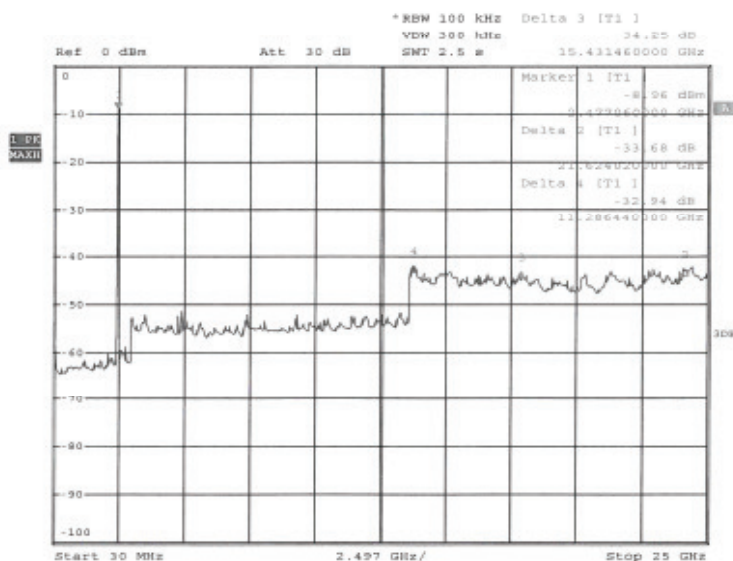


20140828 ITS8-300W Conducted Spurious Emission M (EDR)

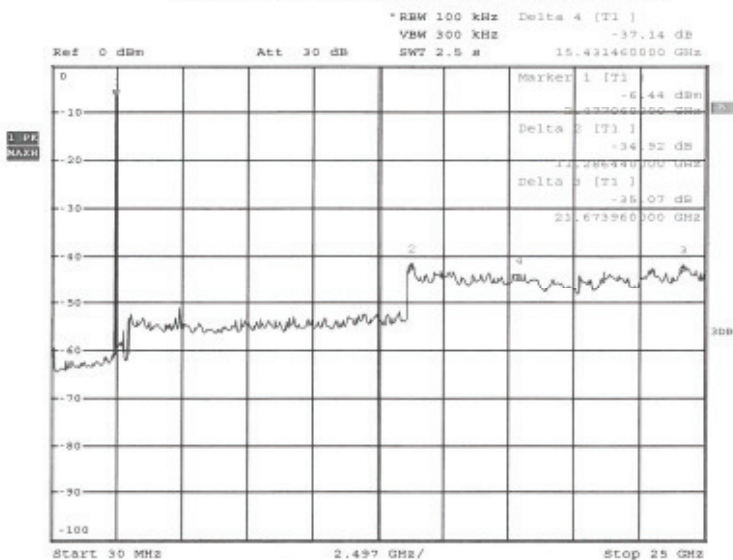


Prüfbericht - Nr.: 16059704 002
Test Report No.:

Seite 11 von 17
Page 11 of 17



20140828 ITSB-300W Conducted Spurious Emission H (BR)



20140828 ITSB-300W Conducted Spurious Emission H (EDR)



Prüfbericht - Nr.: 16059704 002

Test Report No.:

Seite 11 von 17

Page 11 of 17

Table 3: Band Edges Emission in the Restricted Bands

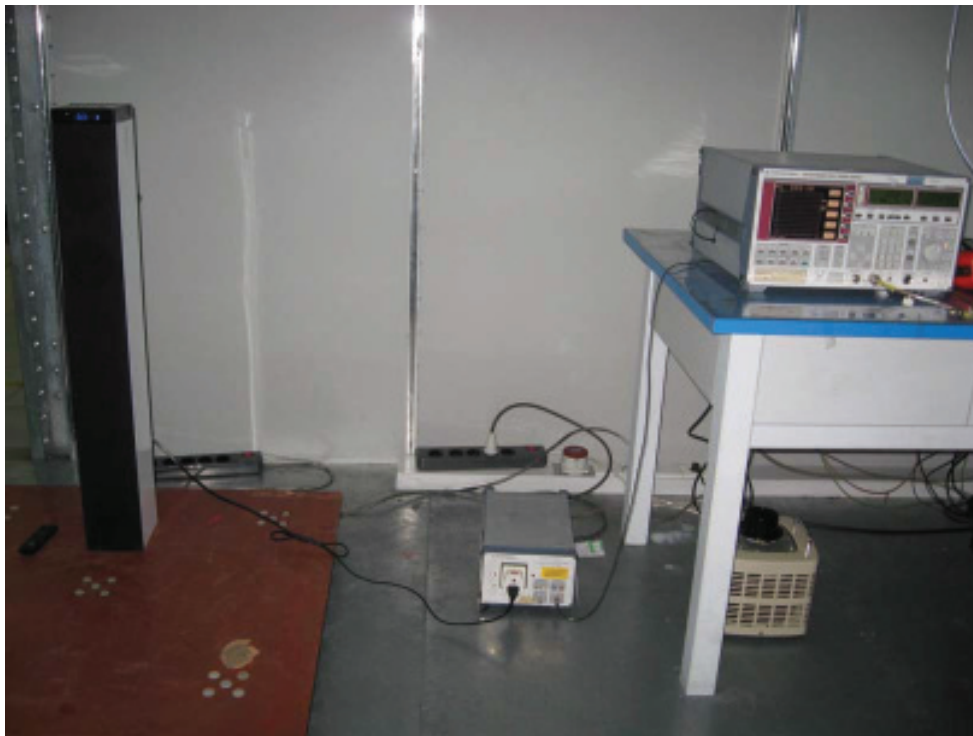
Frequency [MHz]	PK [dB μ V/m]	AV [dB μ V/m]	Polarity (H/V)	PK limit [dB μ V/m]	AV limit [dB μ V/m]
2496.6	56.14	48.59	H	74	54
2323.7	56.44	49.99	H	74	54

Prüfbericht - Nr.: 16059704 002
Test Report No.:

Seite 14 von 17
Page 14 of 17

6 Photographs of the Test Set-Up

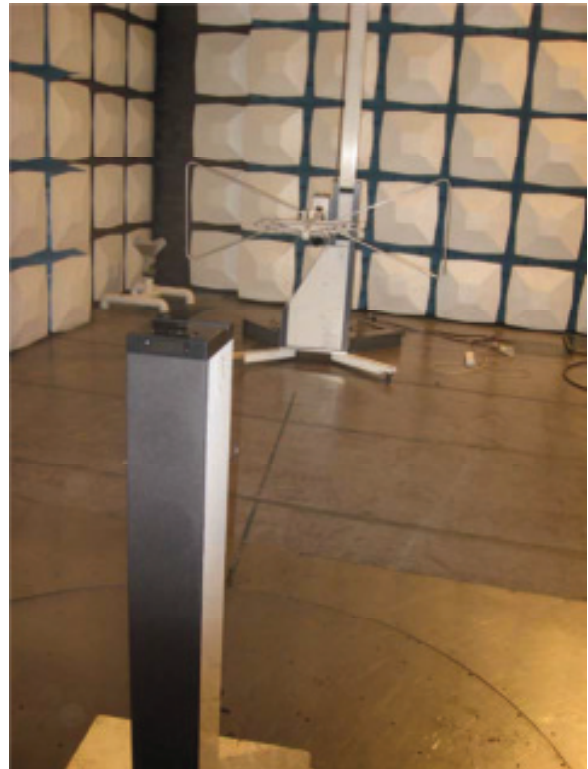
Photograph 1: Set-up for Conducted Emission



Prüfbericht - Nr.: 16059704 002
Test Report No.:

Seite 15 von 17
Page 15 of 17

Photograph 2: Set-up for Radiation Measurement below 1GHz



Prüfbericht - Nr.: 16059704 002
Test Report No.:

Seite 16 von 17
Page 16 of 17

Photograph 3: Set-up for Radiation Measurement above 1GHz



7 List of Tables

Table 1: List of Test and Measurement Equipment6
Table 2: Out-Of-Band Emission measurement (conducted)25
Table 3: Band Edges Emission in the Restricted Bands by Marker Delta Method26

8 List of Photographs

Photograph 1: Set-up for Conducted Emission.....30
Photograph 2: Set-up for Radiation Measurement below 1GHz31
Photograph 3: Set-up for Radiation Measurement above 1GHz.....32

Prüfbericht - Nr.:

16059704 002

Seite 1 von 76

Test Report No.

Page 1 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (EMISSION)

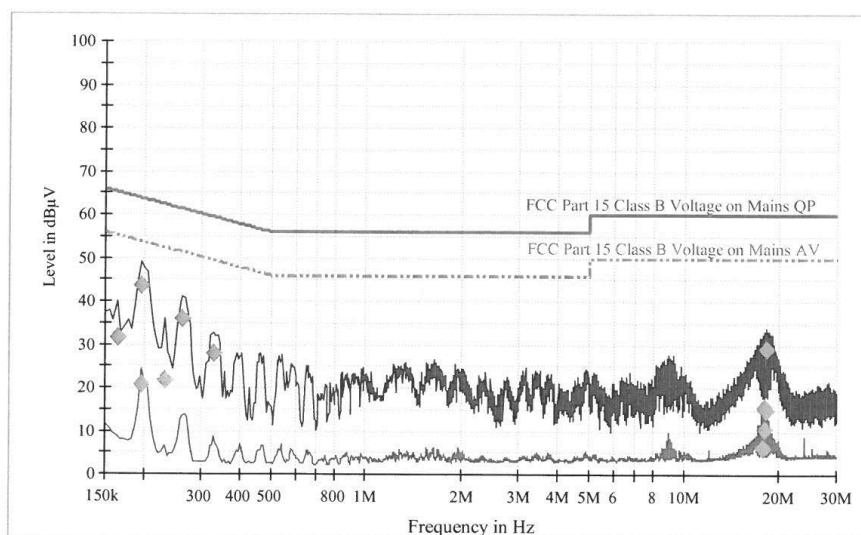
Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC 15.207
Test Detail: Conducted Emission
Operation Mode: A
Climate Condition: 20°C; 50%RH; 101kPa.
Test Voltage/ Freq.: AC 120 V/ 60 Hz
Port / Line: AC Mains(L1+N)
Receipt No.: 174024892
Report No.: 16059704 001
Result: Pass 092



Hardware Setup: 1phase LISN ESH3-Z5 to ESCS 30
Level Unit: dBμV

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



Sign-off Test Data



8/19/2014, 5:05:51

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:

16059704 002

Test Report No.

Seite 2 von 76

Page 2 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

Final Result 1

Frequency (MHz)	QuasiPeak (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.163500	31.7	1000.0	9.000	GN	N	10.1	33.6	65.3	
0.195000	43.7	1000.0	9.000	GN	L1	10.0	20.1	63.8	
0.231000	21.8	1000.0	9.000	GN	N	9.9	40.6	62.4	
0.262500	35.9	1000.0	9.000	GN	L1	9.9	25.5	61.4	
0.330000	28.1	1000.0	9.000	GN	N	10.1	31.4	59.5	
18.087000	29.2	1000.0	9.000	GN	N	11.6	30.8	60.0	

Final Result 2

Frequency (MHz)	Average (dBμV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)	Comment
0.195000	20.6	1000.0	9.000	GN	L1	10.0	33.2	53.8	
17.749500	6.2	1000.0	9.000	GN	N	11.6	43.8	50.0	
17.889000	15.7	1000.0	9.000	GN	N	11.6	34.3	50.0	
17.952000	10.4	1000.0	9.000	GN	N	11.6	39.6	50.0	
18.019500	15.3	1000.0	9.000	GN	N	11.6	34.7	50.0	
18.087000	14.9	1000.0	9.000	GN	N	11.6	35.1	50.0	

Sign-off Test Data



8/19/2014, 5:05:51

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:

16059704 002

Seite 3 von 76

Test Report No.

Page 3 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

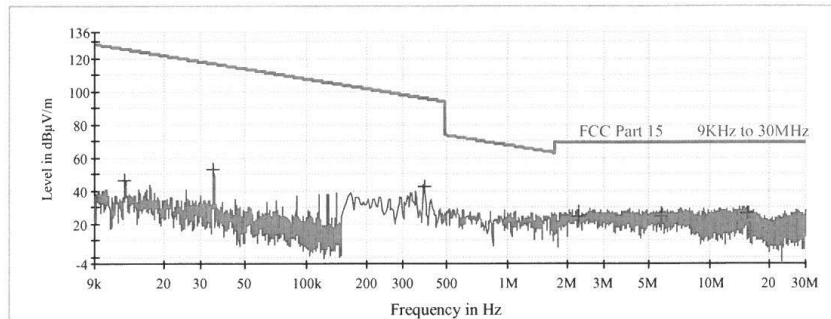
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ High channel (BR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704 002
Result: Pass
Comment: Test distance is 3m, Horizontal



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI
Transducer: TUV SAC HFH2-Z2/ TUV ESCI -TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.012760	/	46.4	1000.0	0.200	H	20.9	79.1	125.6
0.034840	/	53.3	1000.0	0.200	H	20.5	63.5	116.8
0.386000	/	42.8	1000.0	9.000	H	20.8	53.0	95.9
2.266000	24.8	/	1000.0	9.000	H	20.6	44.7	69.5
5.730000	24.3	/	1000.0	9.000	H	20.6	45.2	69.5
15.406000	26.8	/	1000.0	9.000	H	22.3	42.7	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 9:36:32

Tested by: Reviewed by:

Prüfbericht - Nr.:

16059704 002

Seite 4 von 76

Test Report No.

Page 4 of 76

TUV Rheinland (Guangdong) Ltd.

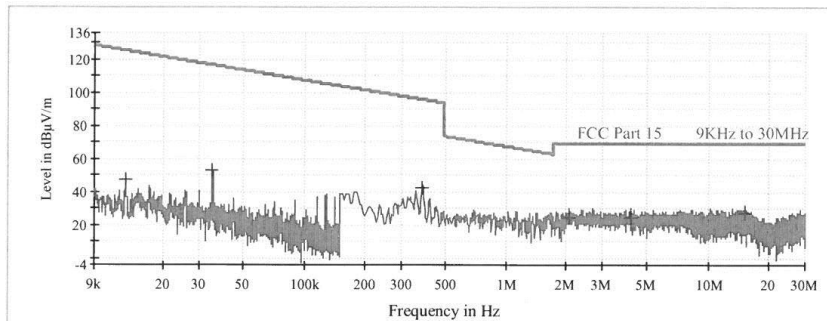
EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ High channel (BR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704 001
Result: Pass 
Comment: Test distance is 3m, Vertical

Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI
Transducer: TUV SAC HFH2-Z2/ TUV ESCI -TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV/m)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
0.012840	/	47.5	1000.0	0.200	V	20.9	78.1	125.5
0.034840	/	53.1	1000.0	0.200	V	20.5	63.7	116.8
0.382000	/	42.4	1000.0	9.000	V	20.8	53.6	96.0
2.046000	25.0	/	1000.0	9.000	V	20.7	44.5	69.5
4.126000	24.5	/	1000.0	9.000	V	20.8	45.0	69.5
15.150000	27.1	/	1000.0	9.000	V	22.8	42.4	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 9:40:20

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:

16059704 002

Seite 5 von 76

Test Report No.

Page 5 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

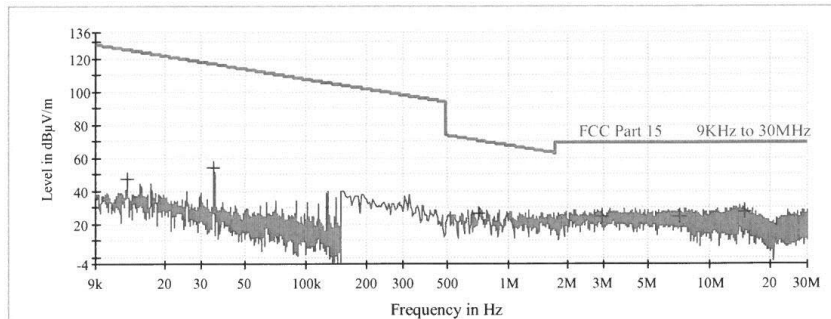
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ High channel (EDR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704 001
Result: Pass
Comment: Test distance is 3m, Horizontal



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI
Transducer: TUV SAC HFH2-Z2/ TUV ESCI -TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	Average (dBµV/m)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.012840	47.5		1000.0	0.200	H	20.9	78.0	125.5
0.034920	54.5		1000.0	0.200	H	20.5	62.3	116.8
0.718000	/	26.2	1000.0	9.000	H	20.6	44.3	70.5
2.950000	/	24.5	1000.0	9.000	H	20.4	45.0	69.5
7.126000	/	24.7	1000.0	9.000	H	20.7	44.8	69.5
14.970000	/	27.2	1000.0	9.000	H	23.1	42.3	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 10:12:04

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:

16059704 002

Seite 6 von 76

Test Report No.

Page 6 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

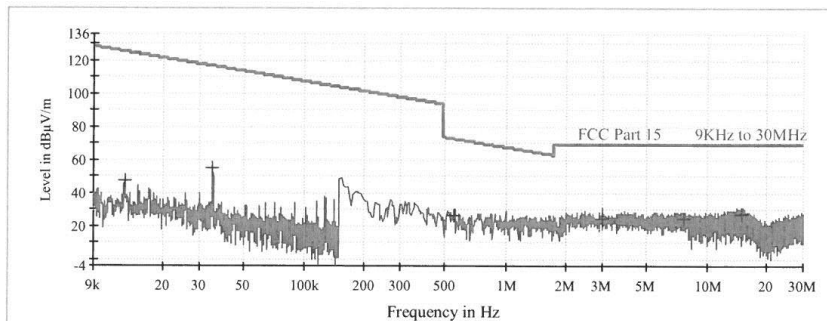
EMC Test Record (Emission)

Common Information

Manufacturer: Alike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ High channel (EDR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704 001
Result: Pass 
Comment: Test distance is 3m, Vertical



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI
Transducer: TUV SAC HFH2-Z2/ TUV ESCI -TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	Average (dBμV/m)	QuasiPeak (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
0.012840	47.6	/	1000.0	0.200	V	20.9	77.9	125.5
0.034920	54.7	/	1000.0	0.200	V	20.5	62.1	116.8
0.558000	/	26.9	1000.0	9.000	V	20.7	45.8	72.7
2.978000	/	24.5	1000.0	9.000	V	20.4	45.0	69.5
7.710000	/	24.7	1000.0	9.000	V	20.7	44.8	69.5
14.862000	/	27.3	1000.0	9.000	V	23.0	42.2	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 10:09:43

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:
Test Report No.

16059704 002

Seite 7 von 76
Page 7 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

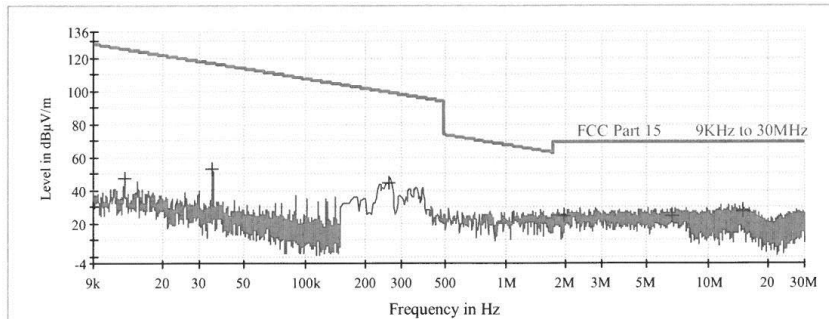
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ Mid channel (BR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704-001
Result: Pass *092*
Comment: Test distance is 3m, Horizontal



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI 3
Transducer: TUV SAC HFH2-Z2/ TUV ESCI 3-TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.012840	/	47.6	1000.0	0.200	H	20.9	77.9	125.5
0.034840	/	53.2	1000.0	0.200	H	20.5	63.7	116.8
0.262000	/	44.9	1000.0	9.000	H	21.0	54.3	99.3
1.950000	24.8	/	1000.0	9.000	H	20.7	44.7	69.5
6.582000	24.7	/	1000.0	9.000	H	20.7	44.8	69.5
14.770000	27.1	/	1000.0	9.000	H	23.0	42.4	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 9:46:41

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:

16059704 002

Seite 8 von 76

Test Report No.

Page 8 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

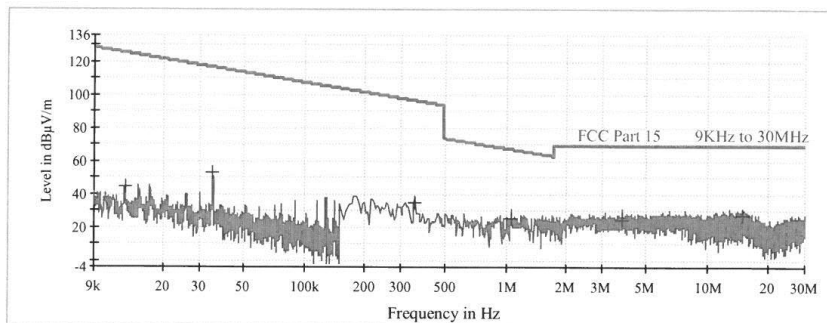
EMC Test Record (Emission)

Common Information

Manufacturer: Alike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ Mid channel (BR)
Climate Condition: 23°C ; 50 %RH;
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704 001
Result: Pass
Comment: Test distance is 3m, Vertical



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI 3
Transducer: TUV SAC HFH2-Z2/ TUV ESCI 3-TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.012920	/	44.3	1000.0	0.200	V	20.9	81.1	125.5
0.034840	/	53.2	1000.0	0.200	V	20.5	63.6	116.8
0.350000	/	35.3	1000.0	9.000	V	20.9	61.5	96.7
1.054000	25.3	/	1000.0	9.000	V	20.4	41.9	67.2
3.786000	24.6	/	1000.0	9.000	V	20.7	44.9	69.5
15.006000	27.2	/	1000.0	9.000	V	23.1	42.3	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 9:44:05

Tested by: Reviewed by:

Prüfbericht - Nr.:

16059704 002

Seite 9 von 76

Test Report No.

Page 9 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

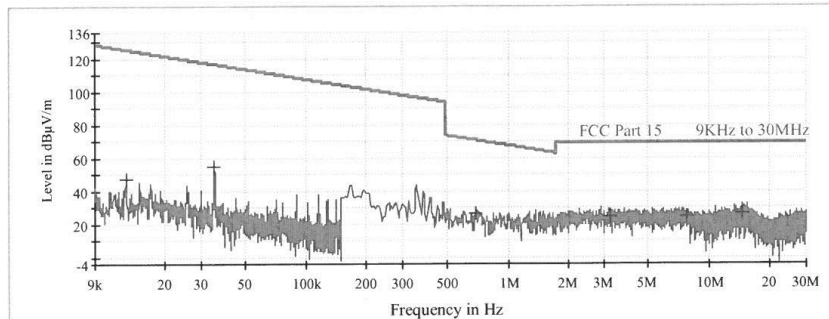
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ Mid channel (EDR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704-001
Result: Pass
Comment: Test distance is 3m, Horizontal



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI 3
Transducer: TUV SAC HFH2-Z2/ TUV ESCI 3-TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.012840	/	47.6	1000.0	0.200	H	20.9	77.9	125.5
0.034920	/	54.6	1000.0	0.200	H	20.5	62.2	116.8
0.690000	26.6	/	1000.0	9.000	H	20.6	44.2	70.8
3.214000	24.4	/	1000.0	9.000	H	20.5	45.1	69.5
7.778000	24.7	/	1000.0	9.000	H	20.8	44.8	69.5
14.702000	26.9	/	1000.0	9.000	H	23.0	42.6	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 10:04:38

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:
Test Report No.

16059704 002

Seite 10 von 76
Page 10 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

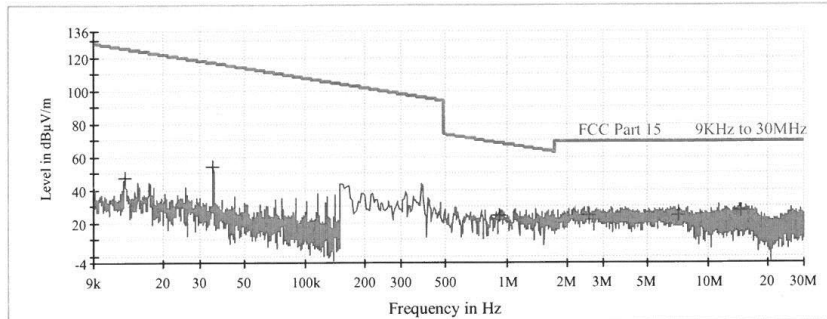
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ Mid channel (EDR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704 002
Result: Pass
Comment: Test distance is 3m, Vertical



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI 3
Transducer: TUV SAC HFH2-Z2/ TUV ESCI 3-TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV/m)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
0.012840	/	47.3	1000.0	0.200	V	20.9	78.2	125.5
0.034920	/	54.5	1000.0	0.200	V	20.5	62.3	116.8
0.914000	25.0	/	1000.0	9.000	V	20.5	43.4	68.4
2.538000	24.7	/	1000.0	9.000	V	20.5	44.8	69.5
7.118000	24.6	/	1000.0	9.000	V	20.7	44.9	69.5
14.534000	27.1	/	1000.0	9.000	V	22.9	42.4	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 10:07:10

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:
Test Report No.

16059704 002

Seite 11 von 76
Page 11 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

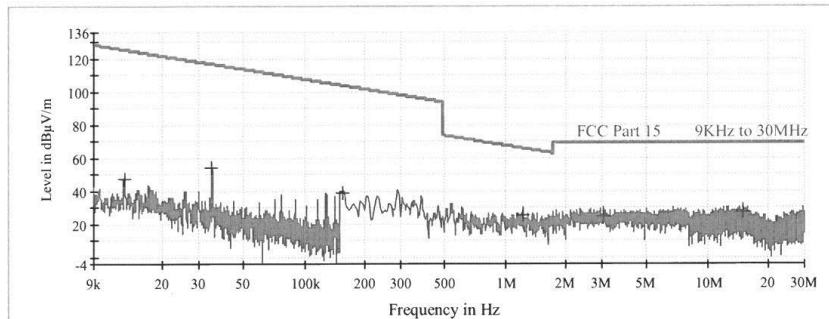
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ Low channel (BR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704 002
Result: Pass
Comment: Test distance is 3m, Horizontal



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI 3
Transducer: TUV SAC HFH2-Z2/ TUV ESCI 3-TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.012840	/	47.5	1000.0	0.200	H	20.9	78.0	125.5
0.034920	/	54.5	1000.0	0.200	H	20.5	62.3	116.8
0.154000	/	38.4	1000.0	9.000	H	20.5	65.5	103.9
1.218000	25.3	/	1000.0	9.000	H	20.5	40.6	65.9
3.042000	24.4	/	1000.0	9.000	H	20.4	45.1	69.5
14.914000	27.2	/	1000.0	9.000	H	23.1	42.3	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 9:49:56

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:
Test Report No.

16059704 002

Seite 12 von 76
Page 12 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

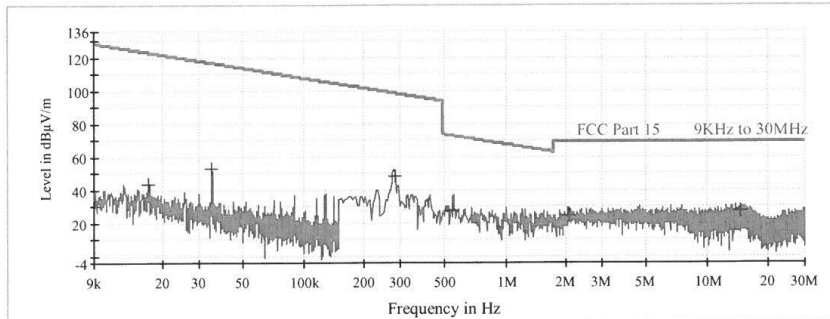
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ Low channel (BR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704 002
Result: Pass 
Comment: Test distance is 3m, Vertical



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI
Transducer: TUV SAC HFH2-Z2/ TUV ESCI -TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV/m)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
0.017000	/	43.6	1000.0	0.200	V	20.7	79.4	123.1
0.034840	/	53.1	1000.0	0.200	V	20.5	63.7	116.8
0.282000	/	48.5	1000.0	9.000	V	20.9	50.1	98.6
0.546000	27.1	/	1000.0	9.000	V	20.7	45.8	72.9
2.062000	24.9	/	1000.0	9.000	V	20.7	44.6	69.5
14.594000	27.0	/	1000.0	9.000	V	23.0	42.5	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 9:52:55

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:

16059704 002

Seite 13 von 76

Test Report No.

Page 13 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ Low channel (EDR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704 001
Result: Pass 
Comment: Test distance is 3m, Horizontal



Subrange 1

Frequency Range:

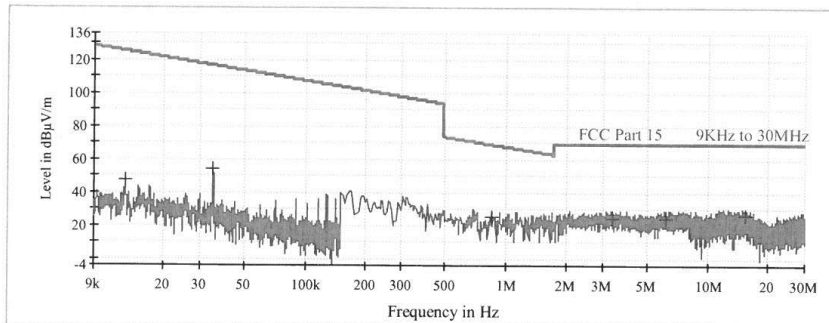
9K-30MHz

Receiver:

TUV ESCI 3

Transducer:

TUV SAC HFH2-Z2/ TUV ESCI 3-TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	Average (dBµV/m)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.012840	47.4	/	1000.0	0.200	H	20.9	78.1	125.5
0.034920	54.5	/	1000.0	0.200	H	20.5	62.3	116.8
0.846000	/	25.5	1000.0	9.000	H	20.5	43.6	69.1
3.338000	/	24.6	1000.0	9.000	H	20.5	45.0	69.5
6.126000	/	24.6	1000.0	9.000	H	20.6	44.9	69.5
15.362000	/	26.7	1000.0	9.000	H	22.4	42.8	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 10:01:58

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:

16059704 002

Seite 14 von 76

Test Report No.

Page 14 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

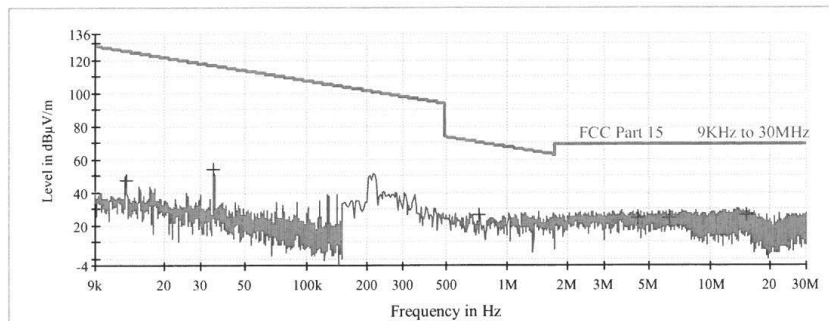
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Tx @ Low channel (EDR)
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704-001
Result: Pass 
Comment: Test distance is 3m, Vertical



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI 3
Transducer: TUV SAC HFH2-Z2/ TUV ESCI 3-TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	Average (dBµV/m)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.012840	47.5	/	1000.0	0.200	V	20.9	78.0	125.5
0.034920	54.5	/	1000.0	0.200	V	20.5	62.3	116.8
0.726000	/	26.7	1000.0	9.000	V	20.6	43.7	70.4
4.394000	/	24.4	1000.0	9.000	V	20.7	45.1	69.5
6.230000	/	24.6	1000.0	9.000	V	20.6	44.9	69.5
15.266000	/	26.9	1000.0	9.000	V	22.6	42.6	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 9:58:51

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:

16059704 002

Seite 15 von 76

Test Report No.

Page 15 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

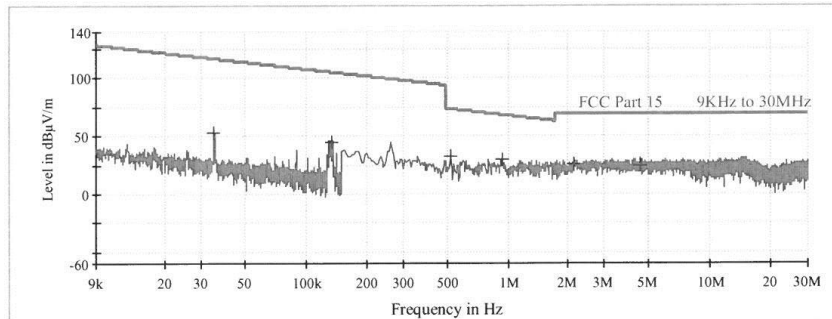
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Rx @ High channel
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V/ 60 Hz
Receipt No: 174024892
Report No: 16059704 002
Result: Pass
Comment: Test distance is 3m, Horizontal



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI
Transducer: TUV SAC HFH2-Z2/ TUV ESCI -TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.034920	/	53.5	1000.0	0.200	H	20.5	63.3	116.8
0.134360	/	45.1	1000.0	0.200	H	20.5	59.9	105.1
0.514000	32.0	/	1000.0	9.000	H	20.7	41.3	73.4
0.930000	30.1	/	1000.0	9.000	H	20.5	38.2	68.2
2.142000	25.5	/	1000.0	9.000	H	20.6	44.0	69.5
4.522000	24.5	/	1000.0	9.000	H	20.6	45.0	69.5



Date: 7/28/2014 - Time: 9:46:27

8/28/2014

Sign-off Test Data



Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:

16059704 002

Seite 16 von 76

Test Report No.

Page 16 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

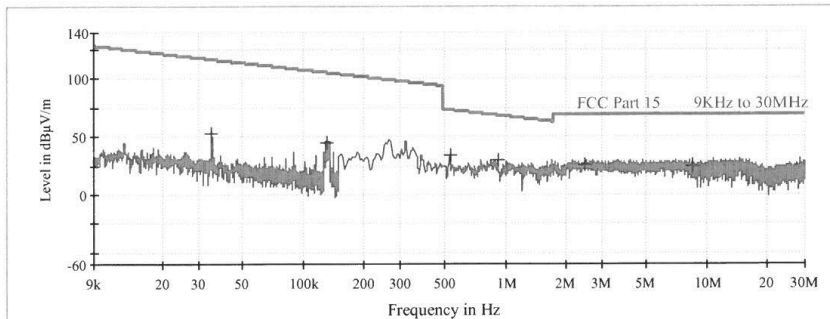
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Rx @ High channel
Climate Condition: 23 °C; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V/ 60 Hz
Receipt No: 174024892
Report No: 16059704 002
Result: Pass
Comment: Test distance is 3m, Vertical



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI
Transducer: TUV SAC HFH2-Z2/ TUV ESCI -TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.034920	/	53.5	1000.0	0.200	V	20.5	63.3	116.8
0.132200	/	44.3	1000.0	0.200	V	20.5	60.9	105.2
0.530000	34.5	/	1000.0	9.000	V	20.7	38.6	73.1
0.914000	30.3	/	1000.0	9.000	V	20.5	38.1	68.4
2.450000	25.4	/	1000.0	9.000	V	20.5	44.1	69.5
8.462000	24.9	/	1000.0	9.000	V	20.8	44.6	69.5

Sign-off Test Data



Date: 7/28/2014 - Time: 9:50:28

8/28/2014

Tested by: _____ Reviewed by: _____



Prüfbericht - Nr.:

16059704 002

Test Report No.

Seite 17 von 76

Page 17 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

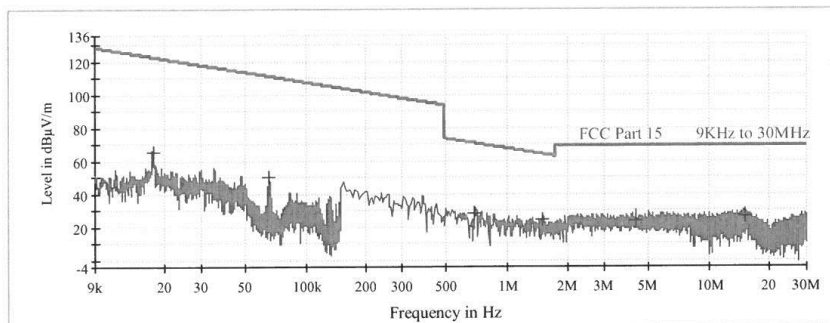
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Rx @ Mid channel
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704-001
Result: Pass
Comment: Test distance is 3m, Horizontal



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI
Transducer: TUV SAC HFH2-Z2/ TUV ESCI -TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBµV/m)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
0.017400	/	66.0	1000.0	0.200	H	20.7	56.9	122.9
0.065560	/	50.4	1000.0	0.200	H	20.5	60.9	111.3
0.690000	28.4	/	1000.0	9.000	H	20.6	42.4	70.8
1.494000	24.4	/	1000.0	9.000	H	20.6	39.8	64.1
4.286000	23.8	/	1000.0	9.000	H	20.7	45.7	69.5
15.062000	26.5	/	1000.0	9.000	H	23.0	43.0	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 9:11:17

Tested by: _____ Reviewed by: _____

Prüfbericht - Nr.:
Test Report No.

16059704 002

Seite 18 von 76
Page 18 of 76

TUV Rheinland (Guangdong) Ltd.

EMC Test Service Hotline: +86-20-28391188

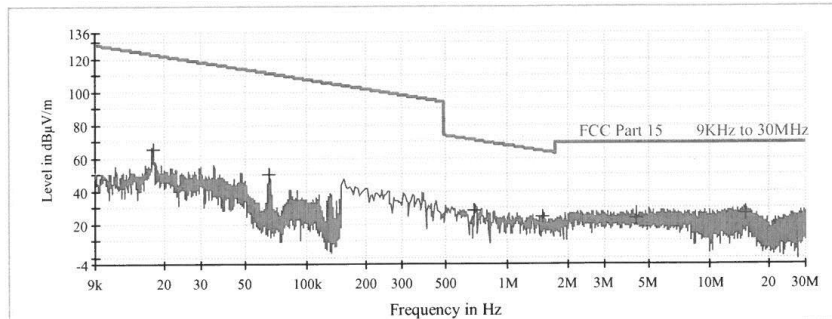
EMC Test Record (Emission)

Common Information

Manufacturer: Allike
Test Item: Tower Stereo System
Identification: ITSB-300W
Test Standard: FCC Part 15.209
Test Detail: RE
Operation Mode: Rx @ Mid channel
Climate Condition: 23°C ; 50 %RH; 101 kPa.
Test Voltage/ Freq: AC 120 V / 60 Hz
Receipt No: 174024892
Report No: 16059704-001
Result: Pass *002*
Comment: Test distance is 3m, Vertical



Subrange 1
Frequency Range: 9K-30MHz
Receiver: TUV ESCI
Transducer: TUV SAC HFH2-Z2/ TUV ESCI -TUV SAC HFH2-Z2



Limit and Margin QP

Frequency (MHz)	QuasiPeak (dBμV/m)	Average (dBμV/m)	Meas. Time (ms)	Bandwidth (kHz)	Polarization	Corr. (dB)	Margin (dB)	Limit (dBμV/m)
0.017400	/	65.6	1000.0	0.200	V	20.7	57.3	122.9
0.065560	/	50.5	1000.0	0.200	V	20.5	60.8	111.3
0.526000	31.6	/	1000.0	9.000	V	20.7	41.5	73.2
0.990000	24.4	/	1000.0	9.000	V	20.4	43.3	67.7
7.190000	24.2	/	1000.0	9.000	V	20.7	45.3	69.5
15.514000	25.8	/	1000.0	9.000	V	22.1	43.7	69.5

Sign-off Test Data



Date: 8/28/2014 - Time: 9:14:19

Tested by: _____ Reviewed by: _____