Prüfbericht-Nr.: *Test Report No.*:	**50050558 001**	**Auftrags-Nr.:** *Order No.*:	164065363	Seite 1 von 28 *Page 1 of 28*
Kunden-Referenz-Nr.: *Client Reference No.*:	476223	**Auftragsdatum:** *Order date*:	29.06.2016	

Auftraggeber: *Client*:	SHENZHEN FENDA TECHNOLOGY CO., LTD. Fenda Hi-Tech Park, Zhoushi Road, Shiyan Town, Baoan District, Shenzhen City, Guangdong, China
Prüfgegenstand: *Test item*:	Bluetooth Shelf Speakers
Bezeichnung / Typ-Nr.: *Identification / Type No.*:	NS-HBTSS116
Auftrags-Inhalt: *Order content*:	FCC Certification and Verification
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 FCC KDB Publication 447498 v06 CFR47 FCC Part 15: Subpart B Section 15.107 CFR47 FCC Part 15: Subpart B Section 15.109 RSS-247 Issue 1 May 2015 RSS-102 Issue 5 March 2015 RSS-Gen Issue 4 November 2014
Wareneingangsdatum: *Date of receipt*:	29.06.2016
Prüfmuster-Nr.: *Test sample No.*:	N/A
Prüfzeitraum: *Testing period*:	23.06.2016 - 30.06.2016
Ort der Prüfung: *Place of testing*:	Shenzhen Accurate Technology Co., Ltd.
Prüflaboratorium: *Testing laboratory*:	TÜV Rheinland (Shenzhen) Co., Ltd.
Prüfergebnis*: *Test result**:	Pass

geprüft von / *tested by*:

21.07.2016	Winnie Hou / Senior Project Manager	
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

kontrolliert von / *reviewed by*:

23.07.2016	Owen Tian / Technical Certifier	
Datum *Date*	**Name / Stellung** *Name / Position*	**Unterschrift** *Signature*

Sonstiges / *Other*: FCC ID: HBONSHBTSS116, IC: 10550A-NSHBTSS116

Zustand des Prüfgegenstandes bei Anlieferung: Prüfmuster vollständig und unbeschädigt
Condition of the test item at delivery: *Test item complete and undamaged*

* Legende:	1 = sehr gut	2 = gut	3 = befriedigend	4 = ausreichend	5 = mangelhaft
	P(ass) = entspricht o.g. Prüfgrundlage(n)		F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
Legend:	*1 = very good*	*2 = good*	*3 = satisfactory*	*4 = sufficient*	*5 = poor*
	P(ass) = passed a.m. test specification(s)		*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

V04

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT
RESULT: Passed

5.1.2 PEAK OUTPUT POWER
RESULT: Passed

5.1.3 99% BANDWIDTH
RESULT: Passed

5.1.4 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100KHZ BANDWIDTH
RESULT: Passed

5.1.5 SPURIOUS EMISSION
RESULT: Passed

5.1.6 20DB BANDWIDTH
RESULT: Passed

5.1.7 FREQUENCY SEPARATION
RESULT: Passed

5.1.8 NUMBER OF HOPPING FREQUENCY
RESULT: Passed

5.1.9 TIME OF OCCUPANCY
RESULT: Passed

5.1.10 CONDUCTED EMISSIONS
RESULT: Passed

5.1.11 RADIATED EMISSION
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

Error! Reference source not found.

Bldg. 69, Majialong Industry Zone, Nanshan District, Shenzhen Guangdong, China

FCC Registration No.: 406365

Test site Industry Canada No.: 4480A-2

The tests at the test site have been conducted under the supervision of a TÜV engineer.

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 emission and Radiated emission				
EMI Test Receiver	R&S	ESU	1302.6005.26	2017-05-17
Loop Antenna	Schwarzbeck	FMZB 1519	1519-012	2017-05-17
Pre-Amplifier	HP	8447F	2944A07999	2017-05-17
Bilog Antenna	Schwarzbeck	VULB9163	142	2017-05-17
Pre-Amplifier	A.H.	PAM-0126	1415261	2017-05-17
Horn Antenna	Schwarzbeck	BBHA 9120	707	2017-05-17
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170399	2017-05-17
Radio Spectrum Test				
Spectrum Analyzer	R&S	FSV40	132.1-3008K39-100967-AP	2017-05-17
Spectrum Analyzer	Agilent	E4407B	88156318	2017-05-17
Spectrum Analyzer	Agilent	N9010A	My53470879	2017-05-17
Conducted Emission				
Test Receiver	R&S	ESCI	26115-010-0027	2017-05-17
L.I.S.N.	R&S	ENV216	101161	2017-05-17
50Ω Coaxial Switch	Anritsu	MP59B	6100175589	2017-05-17
Voltage Probe	R&S	ESH2-Z3	100122	2017-05-17

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, 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

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are ±3dB.

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 Shenzhen Accurate Technology Co., Ltd. test facility located at F1, Bldg. A, Changyuan New Meterial Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, 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 Bookshelf speaker with Bluetooth function.
For details refer to the User Manual, Technical Description and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	Bluetooth Shelf Speakers
Type Designation:	NS-HBTSS116
FCC ID	HBONSHBTSS116
IC	10550A-NSHBTSS116

Table 3: Technical Specification of Bluetooth (BDR & EDR)

Technical Specification	**Value**
Operating Frequency band	2402 – 2480 MHz
Bluetooth Core Version	3.0
Channel Number	79 channels
Channel separation	1MHz
Extreme Temperature Range	-10ºC to +50ºC
Operation Voltage	AC120V 60Hz
Modulation	GFSK, 8DPSK, π/4DQPSK
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	2dBi
RF Output Power	0.00119W (0.74dBm)

Table 4: RF channel and frequency of Bluetooth (BDR & EDR mode)

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	2402.00	20	2422.00	40	2442.00	60	2462.00
1	2403.00	21	2423.00	41	2443.00	61	2463.00
2	2404.00	22	2424.00	42	2444.00	62	2464.00
3	2405.00	23	2425.00	43	2445.00	63	2465.00
4	2406.00	24	2426.00	44	2446.00	64	2466.00
5	2407.00	25	2427.00	45	2447.00	65	2467.00
6	2408.00	26	2428.00	46	2448.00	66	2468.00
7	2409.00	27	2429.00	47	2449.00	67	2469.00
8	2410.00	28	2430.00	48	2450.00	68	2470.00
9	2411.00	29	2431.00	49	2451.00	69	2471.00
10	2412.00	30	2432.00	50	2452.00	70	2472.00
11	2413.00	31	2433.00	51	2453.00	71	2473.00
12	2414.00	32	2434.00	52	2454.00	72	2474.00
13	2415.00	33	2435.00	53	2455.00	73	2475.00
14	2416.00	34	2436.00	54	2456.00	74	2476.00
15	2417.00	35	2437.00	55	2457.00	75	2477.00
16	2418.00	36	2438.00	56	2458.00	76	2478.00
17	2419.00	37	2439.00	57	2459.00	77	2479.00
18	2420.00	38	2440.00	58	2460.00	78	2480.00
19	2421.00	39	2441.00	59	2461.00		

3.3 Independent Operation Modes

The basic operation modes are:

A. On, Bluetooth mode (BDR & EDR)
    1. Transmitting on low channel
    2. Transmitting on middle channel
    3. Transmitting on high channel
B. On, Bluetooth hopping mode
C. Play with Aux
D. Play with RCA
E. 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
- Technical Description
- 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. All testing were performed according to the procedures in ANSI C63.4: 2014 and ANSI C63.10: 2013.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested with following accessories:

Description	Manufacturer	Type	S/N
Iphone5C	Apple	A1526	N/A
Adapter	SIMSUKIAN	SK22G-0500200U	N/A
Adapter	TPT	MIL050150U	N/A

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 (Below 1GHz)

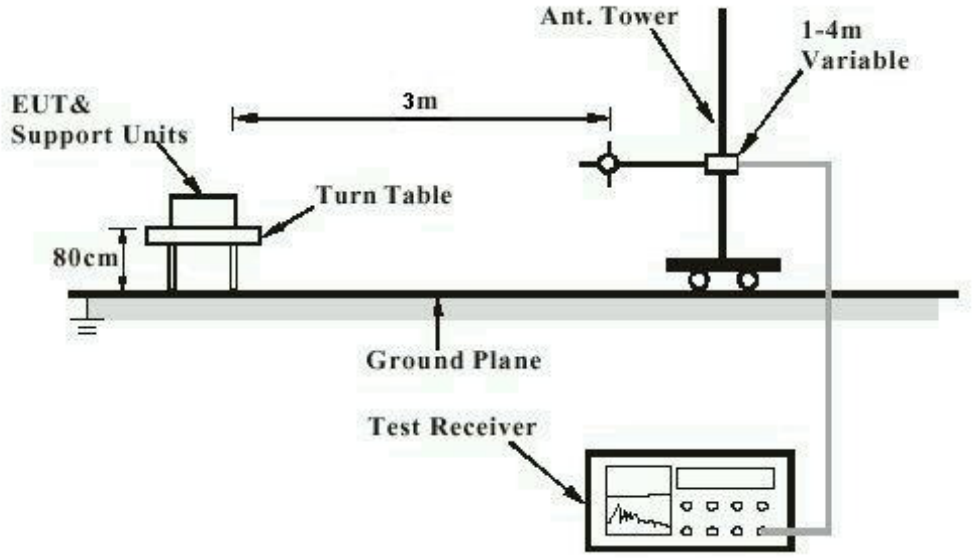


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

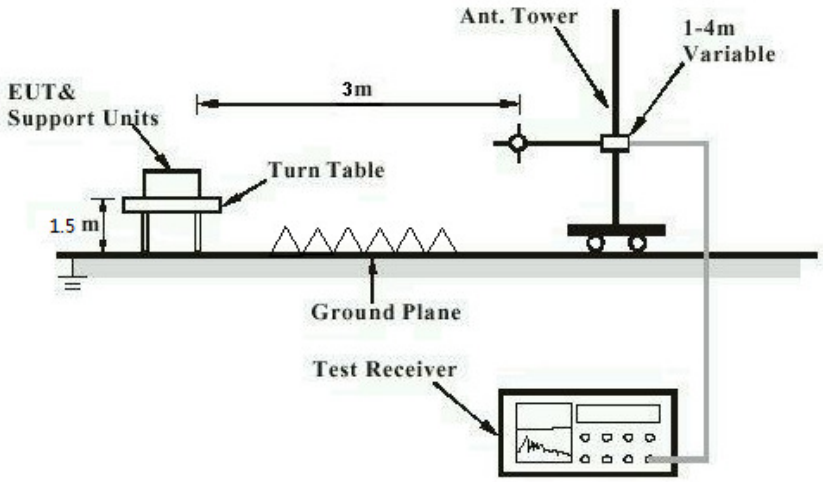


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

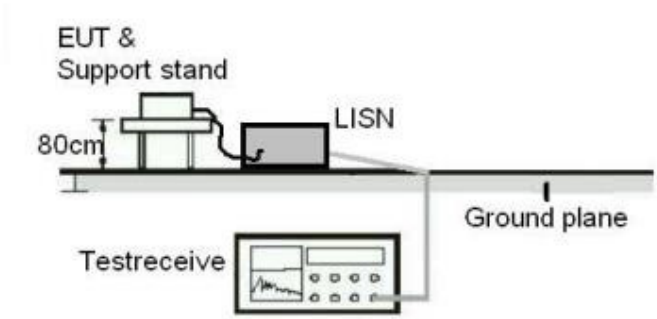
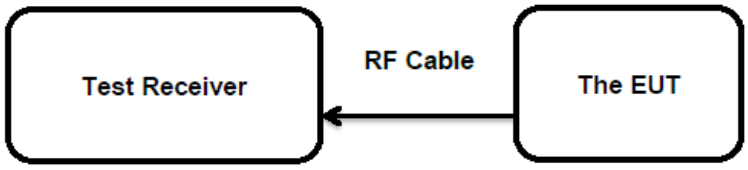


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT: **Passed**

Test standard	:	FCC Part 15.247(b)(4) and Part 15.203 RSS-Gen 6.7
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 2dBi, and the antenna connector is designed with permanent attachment and no consideration of replacement. Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT photo for details.

5.1.2 Peak Output Power

RESULT: **Passed**

Test date	:	2016-06-25
Test standard	:	FCC Part 15.247(b)(1) RSS-247 Clause 5.4(2)
Basic standard	:	ANSI C63.10: 2013
Limit	:	FHSS < 0.125 Watts
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 5: Test result of Peak Output Power

Test Mode	Channel Frequency (MHz)	Measured Peak Output Power		Limit (W)
		(dBm)	(W)	
BDR	2402	0.41	0.00110	< 0.125
	2441	0.74	0.00119	
	2480	-0.44	0.00090	
EDR	2402	-1.08	0.00078	< 0.125
	2441	-0.88	0.00082	
	2480	-2.25	0.00060	

Note: The cable loss is taken into account in results.

5.1.3 99% Bandwidth

RESULT: **Passed**

Date of testing	:	2016-06-25
Test standard	:	RSS-Gen clause 6.6
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 6: Test result of 99% Bandwidth

Test Mode	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (kHz)
BDR	2402	850.94	/
	2441	842.26	
	2480	842.26	
EDR	2402	1150.51	/
	2441	1146.16	
	2480	1146.16	

Note: The cable loss is taken into account in results.

5.1.4 Conducted spurious emissions measured in 100kHz Bandwidth

RESULT: **Passed**

Date of testing	:	2016-06-25
Test standard	:	FCC part 15.247(d) RSS-247 Clause 5.5
Basic standard	:	ANSI C63.10: 2013
Limit	:	20dB (below that in the 100kHz bandwidth within the band that contains the highest level of the desired power); In addition, radiated emissions which fall in the restricted bands, must also comply with the radiated emission limits specified in 15.209(a)
Kind of test site	:	Shield room

Test setup

Test Channel	:	Low/ High
Operation mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

All emissions are more than 20dB below fundamental, details refer to Appendix 1, and compliance is achived as well.

5.1.5 Spurious Emission

RESULT: **Passed**

Date of testing	:	2016-06-25 to 2016.06.30
Test standard	:	FCC part 15.247(d) FCC Part 15.205 RSS-247 Clause 3.3
Basic standard	:	ANSI C63.10: 2013
Limits	:	Refer to 15.209(a) of FCC part 15.247(d) RSS-Gen Table 4 & Table 5
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Test Channel	:	Low/ Middle/ High
Operation mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Remark:
During the pretest the EUT was rotated through three orthogonal axes to determine the attitude that maximizes the emissions. After that the EUT was manually handled to find the orientation that has the maximum emission, which is the orientation shown in the test setup photos.
Testing was carried out within frequency range 9kHz to the tenth harmonics.

For details refer to Appendix 1.

5.1.6 20dB Bandwidth

RESULT: **Passed**

Date of testing	:	2016-06-25
Test standard	:	FCC Part 15.247(a)(1) RSS-247 Clause 5.1(1)
Basic standard	:	ANSI C63.10: 2013
Kind of test site	:	Shielded room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 7: Test result of 20dB Bandwidth

Test Mode	Channel Frequency (MHz)	20dB Bandwidth (kHz)	2/3 of 20dB Bandwidth (kHz)	Limit (MHz)
BDR	2402	916.1	610.733	/
	2441	894.4	596.267	
	2480	890.0	593.333	
EDR	2402	1211.3	807.533	/
	2441	1211.3	807.533	
	2480	1206.9	804.600	

5.1.7 Frequency Separation

RESULT: **Passed**

Date of testing	:	2016-06-25
Test standard	:	FCC part 15.247(a)(1) RSS-210 A8.1 (b)
Basic standard	:	ANSI C63.4: 2003
Limit	:	≥ 25kHz or 2/3 of 20dB bandwidth, whichever is greater

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	B
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 8: Test result of Frequency Separation

Channel	Channel Frequency (MHz)	Measured Channel Separation (MHz)	Limit (kHz)	Result
Low Channel	2402	1	≥ 25kHz or 2/3 of 20dB bandwidth	Pass
Adjacency Channel	2403			
Mid Channel	2441	1	≥ 25kHz or 2/3 of 20dB bandwidth	Pass
Adjacency Channel	2442			
High Channel	2480	1	≥ 25kHz or 2/3 of 20dB bandwidth	Pass
Adjacency Channel	2479			

5.1.8 Number of hopping frequency

RESULT: **Passed**

Date of testing	:	2016-06-25
Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause 5.1(4)
Basic standard	:	ANSI C63.10: 2013
Limits	:	≥ 15 non-overlapping channels
Kind of test site	:	Shield room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	B
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 9: Test result of Number of hopping frequency

Frequency Range	Measured Quantity of Hopping Channel	Limit	Result
2400 to 2483.5 MHz	79	≥15	Pass

5.1.9 Time of Occupancy

RESULT: **Passed**

Date of testing	:	2016-06-25
Test standard	:	FCC part 15.247(a)(1)(iii) RSS-247 Clause5.1(4)
Basic standard	:	ANSI C63.10: 2013
Limits	:	<0.4s
Kind of test site	:	Shield room

Test setup

Test Channel	:	Low/ Middle/ High
Operation Mode	:	A
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 10: Test result of Time of Occupancy

Test Mode	Channel	Data Packet	Pulse width (ms)	Measured Dwell time(s)	Limit (s)
BDR mode	2402	DH1	0.406	0.130	< 0.4s
		DH3	1.674	0.268	
		DH5	2.920	0.311	
	2441	DH1	0.412	0.132	
		DH3	1.674	0.268	
		DH5	2.920	0.311	
	2480	DH1	0.406	0.130	
		DH3	1.674	0.268	
		DH5	2.920	0.311	
EDR mode	2402	3DH1	0.420	0.134	
		3DH3	1.678	0.268	
		3DH5	2.939	0.313	
	2441	3DH1	0.420	0.134	
		3DH3	1.678	0.268	
		3DH5	2.939	0.313	
	2480	3DH1	0.420	0.134	
		3DH3	1.678	0.268	
		3DH5	2.925	0.312	

Note:

Dwell time = Pulse width x (Hopping rate / Number of channels) x Period

Period = 0.4 (seconds/ channel) x 79 (channel) = 31.6 seconds

5.1.10 Conducted emissions

RESULT: **Passed**

Date of testing	:	2016-06-23
Test standard	:	FCC Part 15.107(a) & FCC Part 15.207(a) RSS-Gen Clause 8.8
Basic standard	:	ANSI C63.10: 2013 & ANSI C63.4: 2014
Frequency range	:	0.15 – 30MHz
Limits	:	FCC Part 15.207(a) & FCC Part 15.207(a) RSS-Gen Table 3
Kind of test site	:	Shield room

Test setup

Input Voltage	:	AC 120V, 60Hz via AC/DC Adapter
Operation Mode	:	B, C, D
Earthing	:	Not connected
Ambient temperature	:	25℃
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

For details refer to Appendix 1.

5.1.11 Radiated Emission

RESULT: **Passed**

Date of testing	:	2016-06-23
Test standard	:	FCC Part 15.109(a) & FCC Part 15.209(a) RSS-Gen 8.9
Basic standard		ANSI C63.4: 2014
Frequency range	:	30 - 6000MHz
Classification	:	Class B
Limit	:	FCC Part 15.109(a) & FCC Part 15.209(a) RSS-Gen Table 4
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Input Voltage	:	AC 120V, 60Hz via AC/DC Adapter
Operation mode	:	C, D
Earthing	:	Not connected
Ambient temperature	:	Refer to Appendix 1
Relative humidity	:	Refer to Appendix 1
Atmospheric pressure	:	Refer to Appendix 1

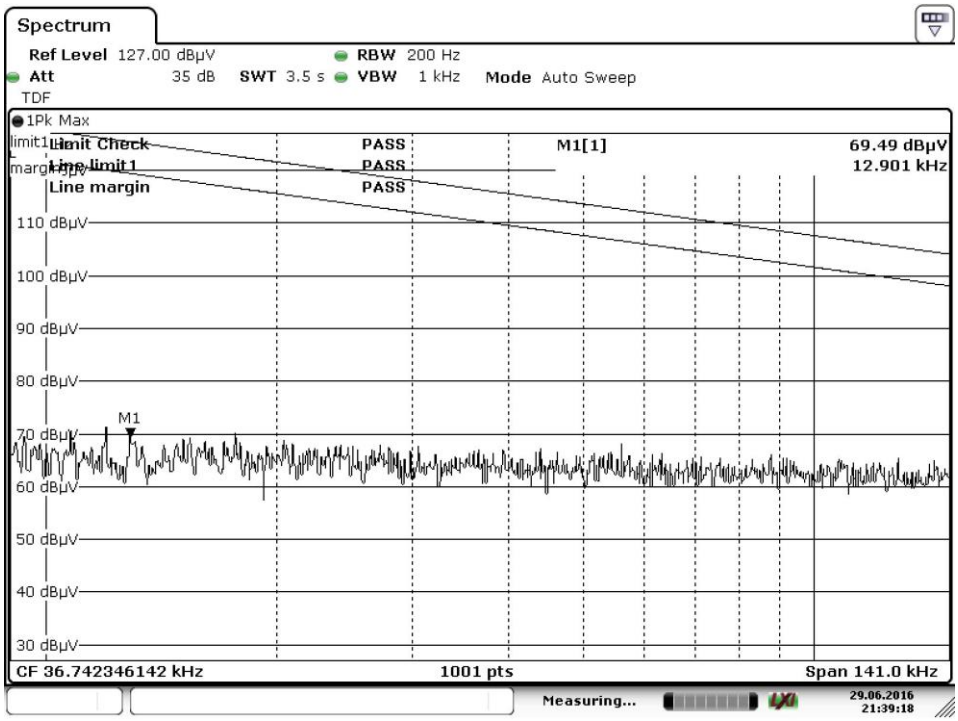
Test data refer to Appendix 1.

7. List of Tables

8. List of Photographs

List of Figures

Figure 1: Test figure of spurious emissions, mode A.1, Horizontal polarity (9kHz – 30MHz)



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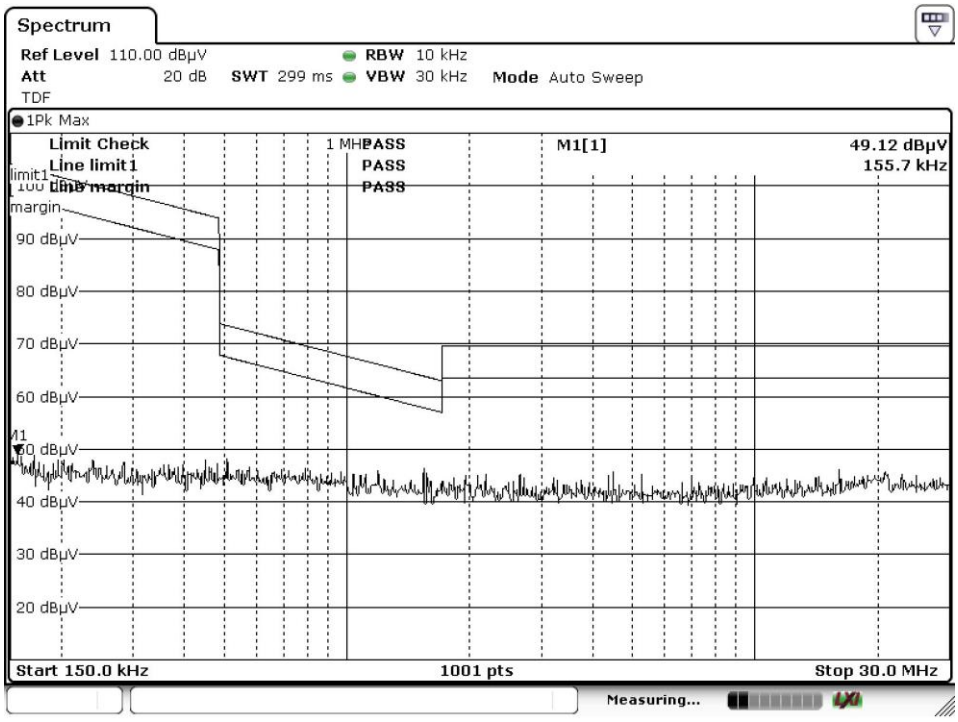

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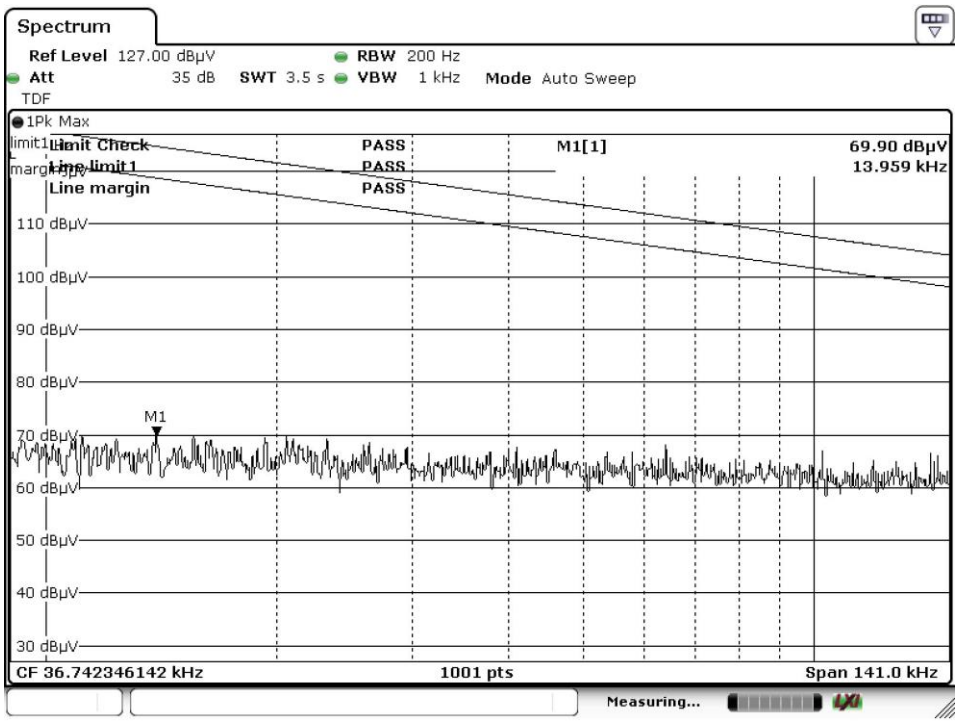
Figure 2: Test figure of spurious emissions, mode A.1, Vertical polarity (9kHz – 30MHz)



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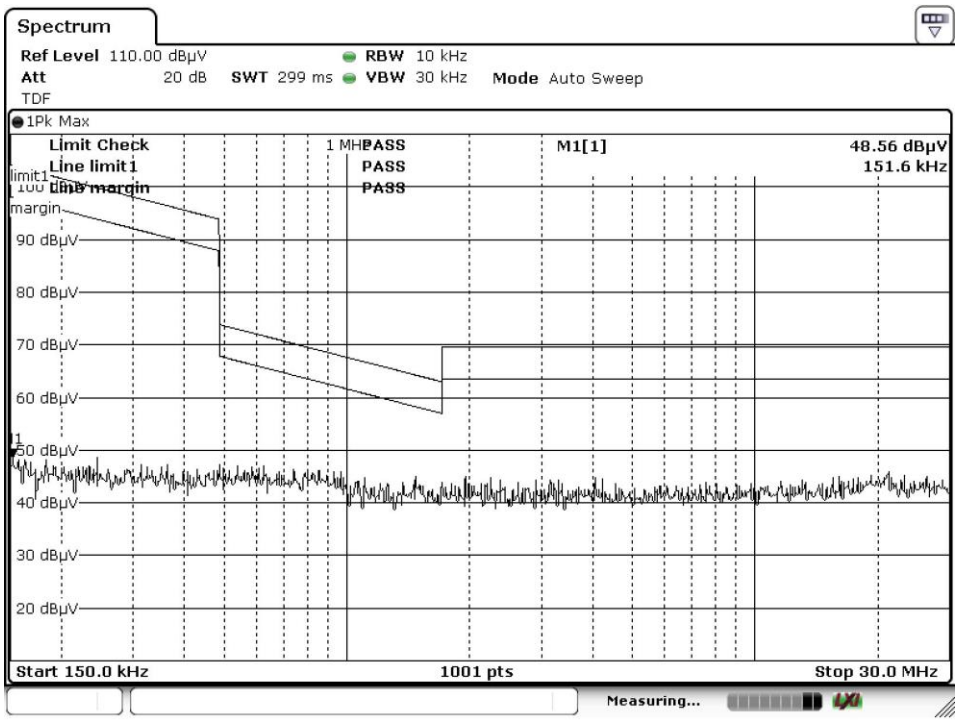

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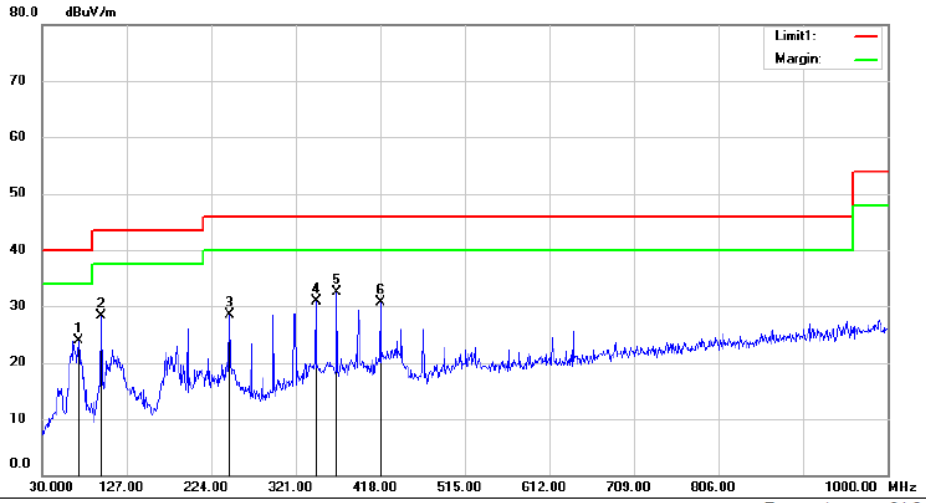
Figure 3: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz)

Shenzhen EMTEK Co., Ltd.
Bldg.69, Majialong Industry Zone, Nanshan District, Shenzhen, Guangdong, 518052 P.R. China
www.emtek.com.cn Tel:+86-755-2695 4280 Fax:+86-755-2695 4282

EMTEK
Access to the World

Radiated Emission Measurement

File :TUV Data :#1137 Date: Time:



Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2402
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		71.7100	42.13	-18.25	23.88	40.00	-16.12	QP			
2		97.9000	43.97	-15.65	28.32	43.50	-15.18	QP			
3		245.3400	42.26	-13.69	28.57	46.00	-17.43	QP			
4		344.2800	41.30	-10.37	30.93	46.00	-15.07	QP			
5	*	368.5300	42.94	-10.43	32.51	46.00	-13.49	QP			
6		418.0000	40.11	-9.38	30.73	46.00	-15.27	QP			

Figure 4: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz)

Shenzhen EMTEK Co., Ltd.
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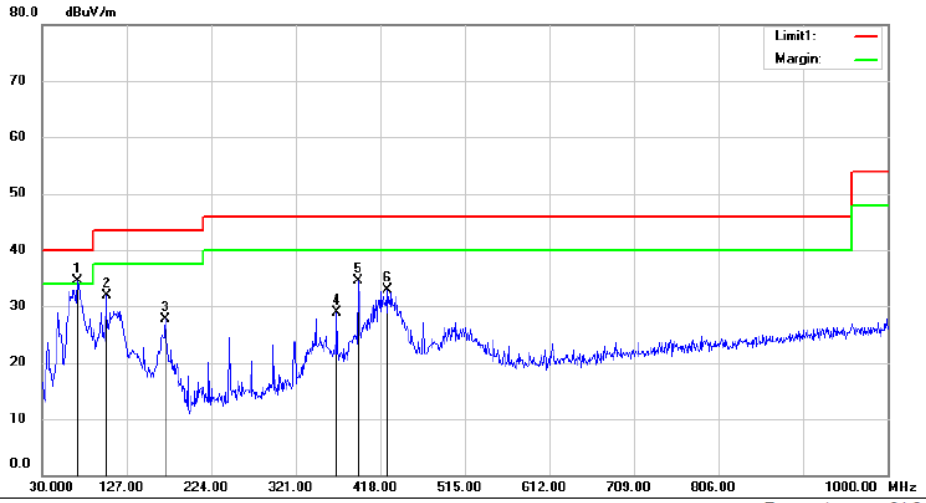
Radiated Emission Measurement

File :TUV Data :#1136 Date: Time:



Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2402
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	70.7400	52.58	-18.06	34.52	40.00	-5.48	QP			
2		103.7200	47.27	-15.30	31.97	43.50	-11.53	QP			
3		171.6200	44.82	-17.21	27.61	43.50	-15.89	QP			
4		368.5300	39.24	-10.43	28.81	46.00	-17.19	QP			
5		392.7800	44.12	-9.68	34.44	46.00	-11.56	QP			
6		426.7300	41.95	-9.13	32.82	46.00	-13.18	QP			

Figure 5: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz –18GHz)

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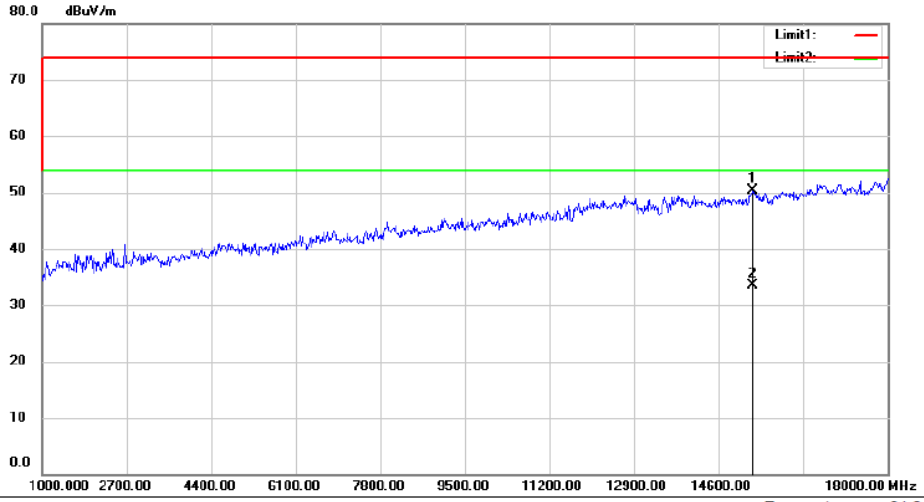
Radiated Emission Measurement

File :TUV Data :#1112 Date: Time:



Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2402
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		15297.00	47.57	2.70	50.27	74.00	-23.73	peak			
2	*	15297.00	30.80	2.70	33.50	54.00	-20.50	AVG			

Figure 6: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz)

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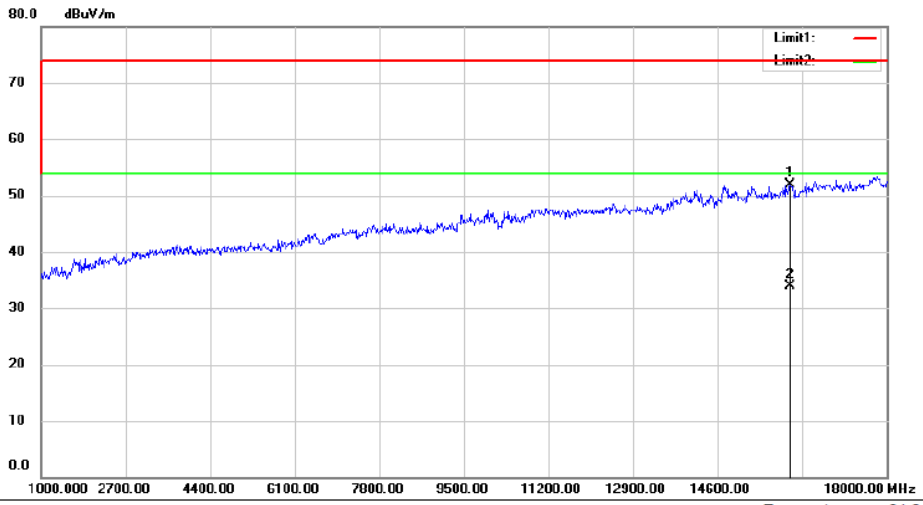

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2402
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		16062.00	51.52	0.41	51.93	74.00	-22.07	peak			
2	*	16062.00	33.49	0.41	33.90	54.00	-20.10	AVG			

Figure 7: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz –25GHz)

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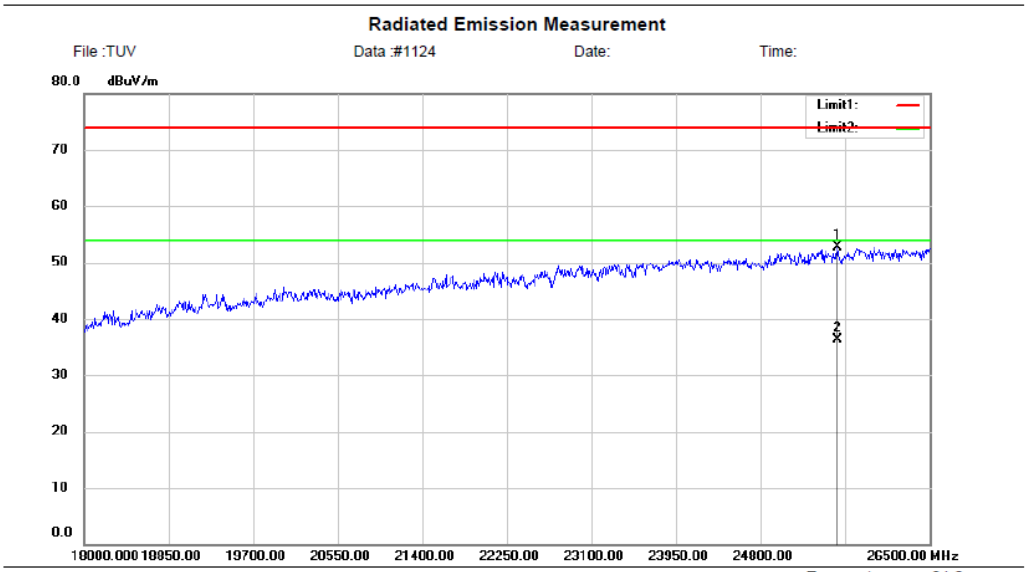

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode: GFSK 2402
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		25573.50	88.94	-36.31	52.63	74.00	-21.37	peak		0	
2	*	25573.50	72.61	-36.31	36.30	54.00	-17.70	AVG		0	

Figure 8: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz)

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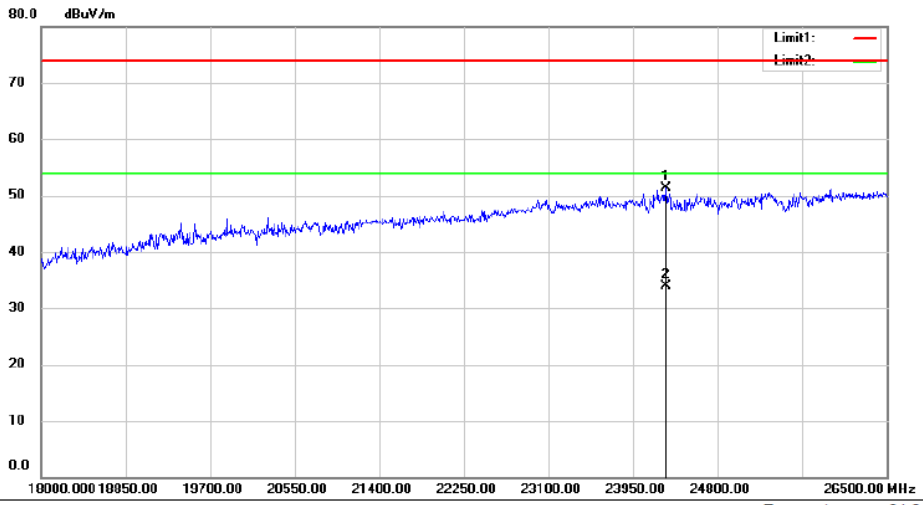


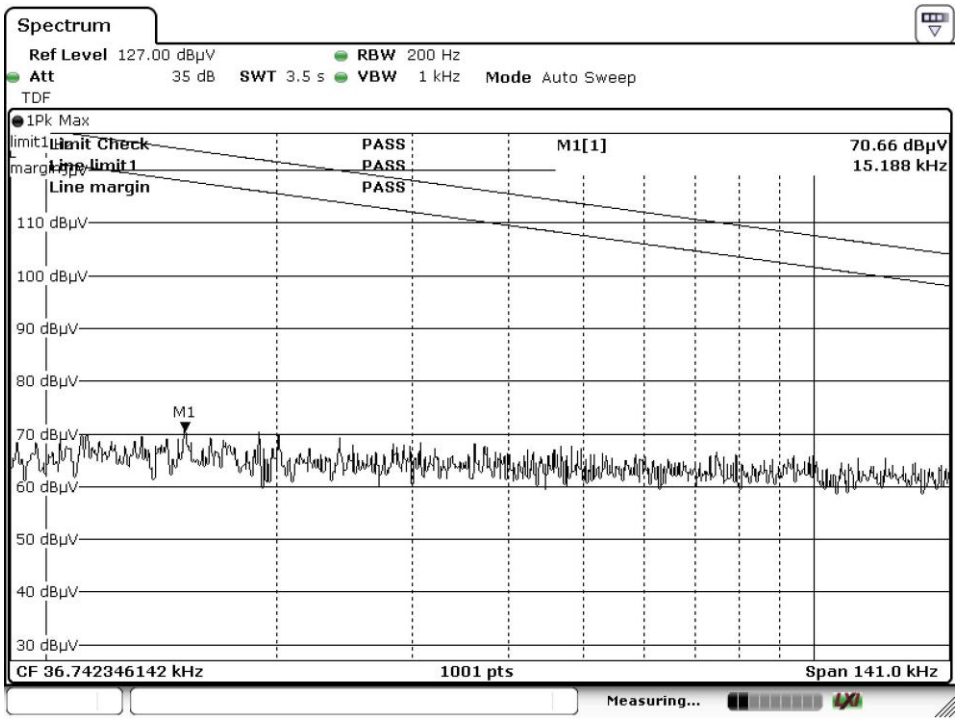
Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode: GFSK 2402
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		24281.50	88.32	-37.10	51.22	74.00	-22.78	peak			
2	*	24281.50	71.00	-37.10	33.90	54.00	-20.10	AVG			

Figure 9: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz)



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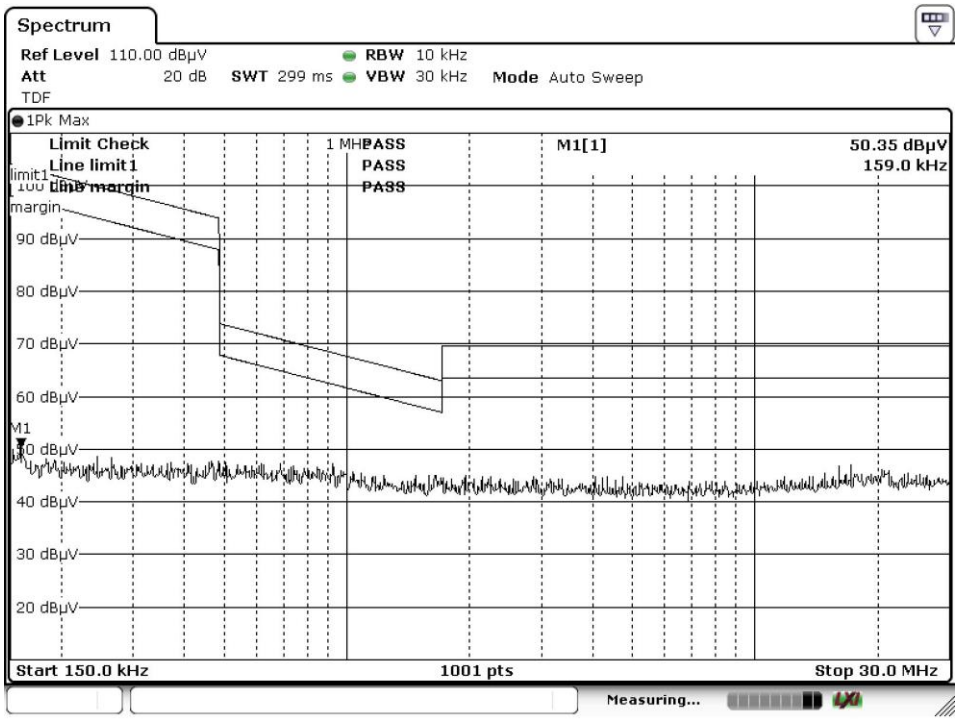

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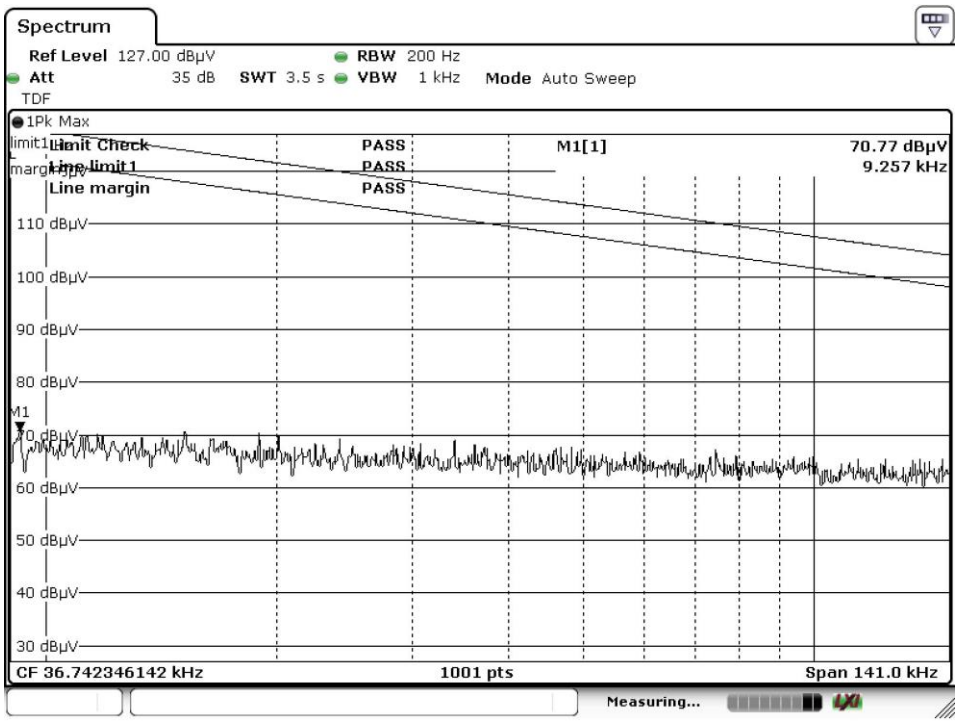
Figure 10: Test figure of spurious emissions, mode A.2, Vertical polarity (9kHz – 30MHz)



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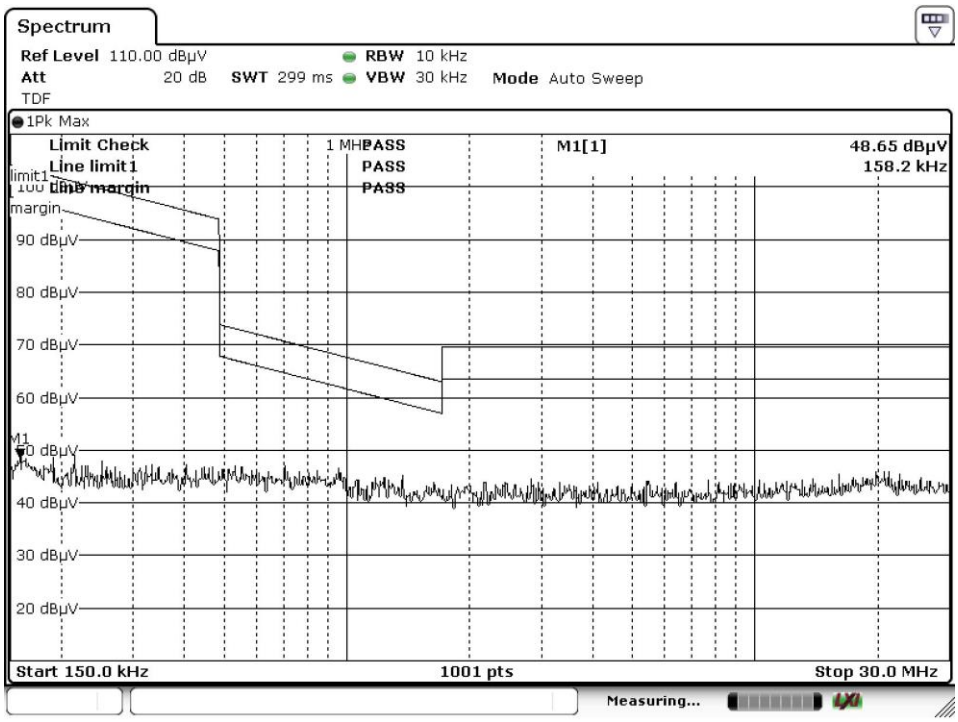

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Figure 11: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz)

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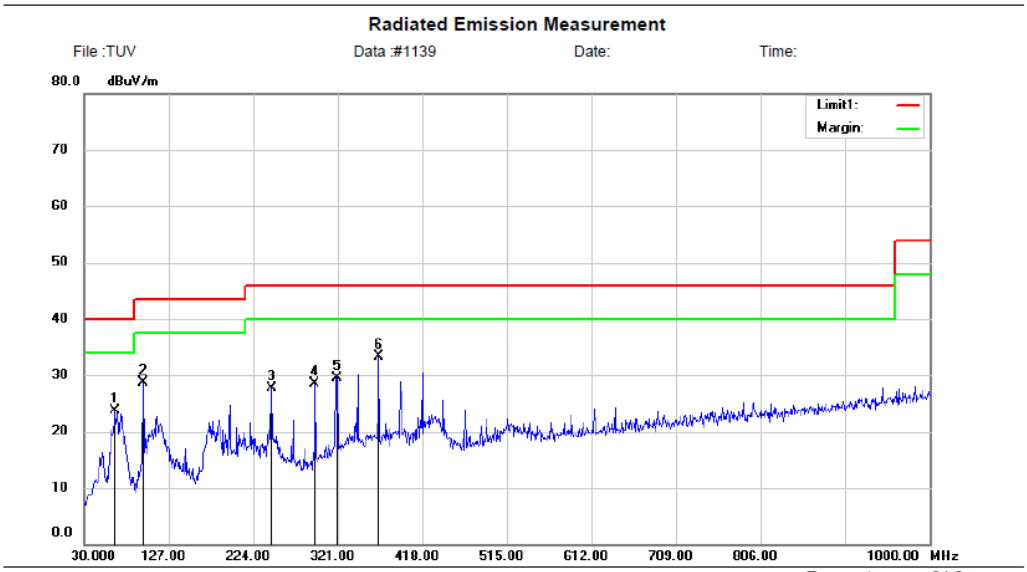

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2441
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		65.8900	40.47	-16.73	23.74	40.00	-16.26	QP			
2		97.9000	44.39	-15.65	28.74	43.50	-14.76	QP			
3		245.3400	41.39	-13.69	27.70	46.00	-18.30	QP			
4		294.8100	40.25	-11.82	28.43	46.00	-17.57	QP			
5		320.0300	40.92	-11.34	29.58	46.00	-16.42	QP			
6	*	368.5300	43.69	-10.43	33.26	46.00	-12.74	QP			

Figure 12: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GHz)

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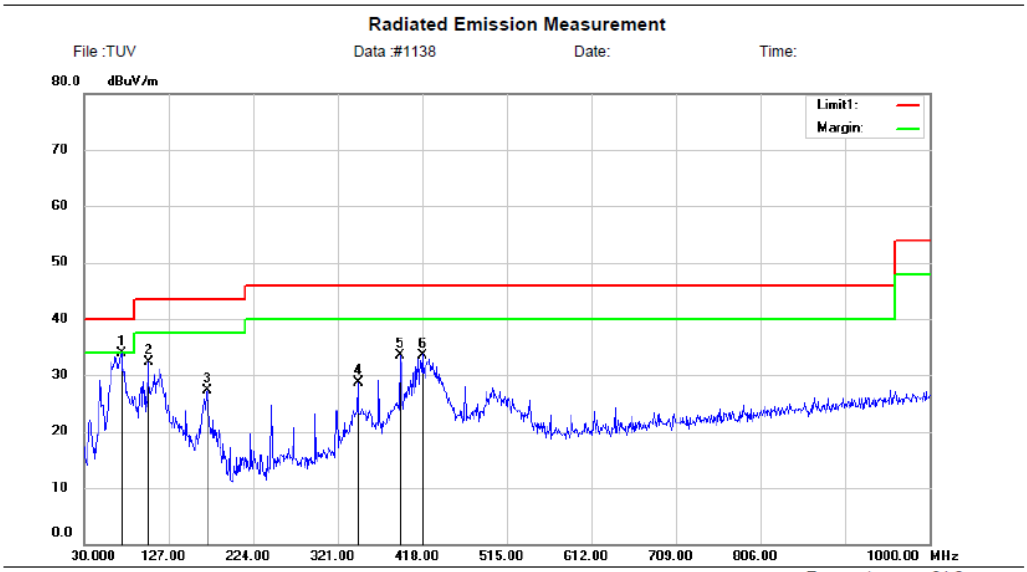

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2441
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	72.6800	52.30	-18.44	33.86	40.00	-6.14	QP			
2		103.7200	47.70	-15.30	32.40	43.50	-11.10	QP			
3		171.6200	44.55	-17.21	27.34	43.50	-16.16	QP			
4		344.2800	39.16	-10.37	28.79	46.00	-17.21	QP			
5		392.7800	43.26	-9.68	33.58	46.00	-12.42	QP			
6		418.0000	42.98	-9.38	33.60	46.00	-12.40	QP			

Figure 13: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz)

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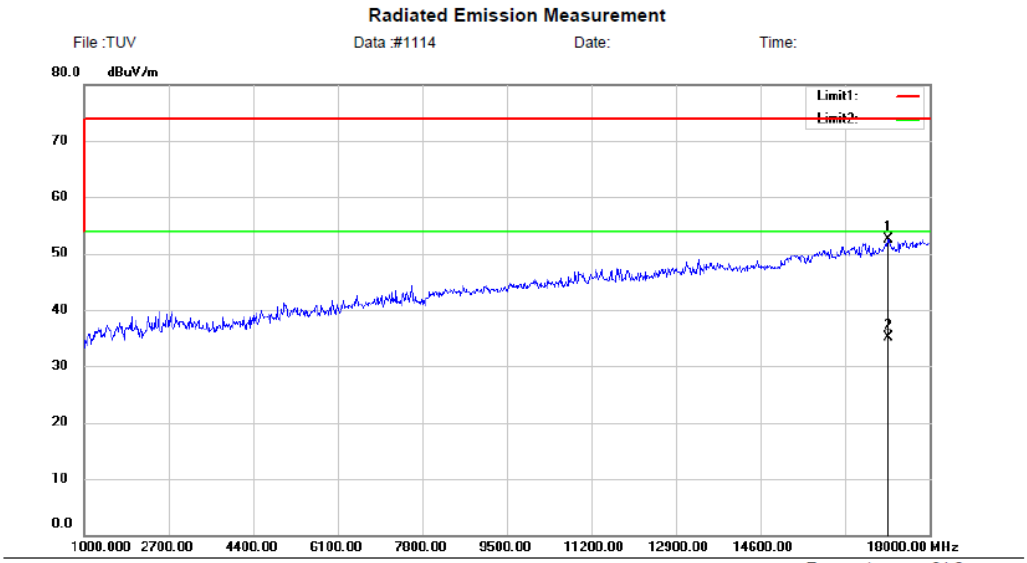

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2441
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		17167.00	46.05	6.43	52.48	74.00	-21.52	peak			
2	*	17167.00	28.77	6.43	35.20	54.00	-18.80	AVG			

Figure 14: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz)

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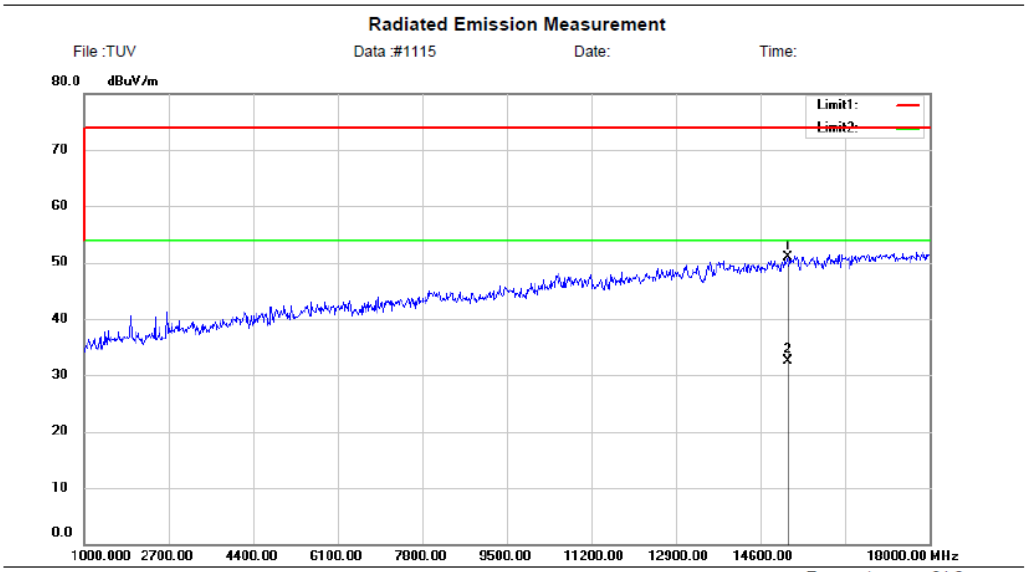

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2441
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		15144.00	47.61	3.25	50.86	74.00	-23.14	peak			
2	*	15144.00	29.35	3.25	32.60	54.00	-21.40	AVG			

Figure 15: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz)

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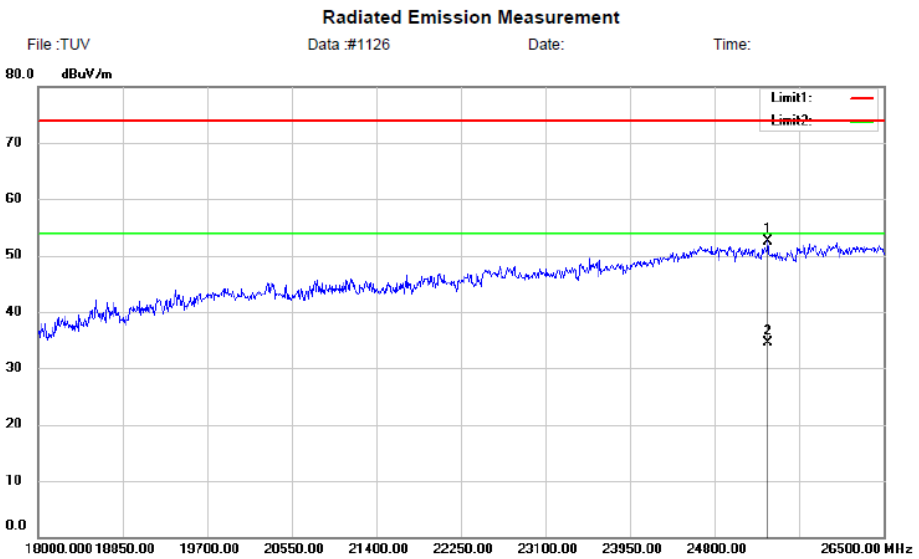

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2441
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		25335.50	89.20	-36.60	52.60	74.00	-21.40	peak			
2	*	25335.50	71.20	-36.60	34.60	54.00	-19.40	AVG			

Figure 16: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz)

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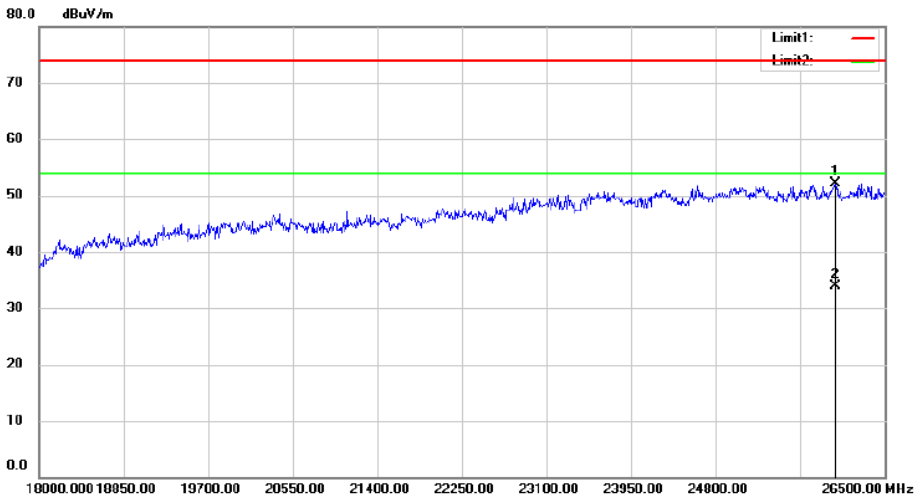
Radiated Emission Measurement

File :TUV Data :#1127 Date: Time:



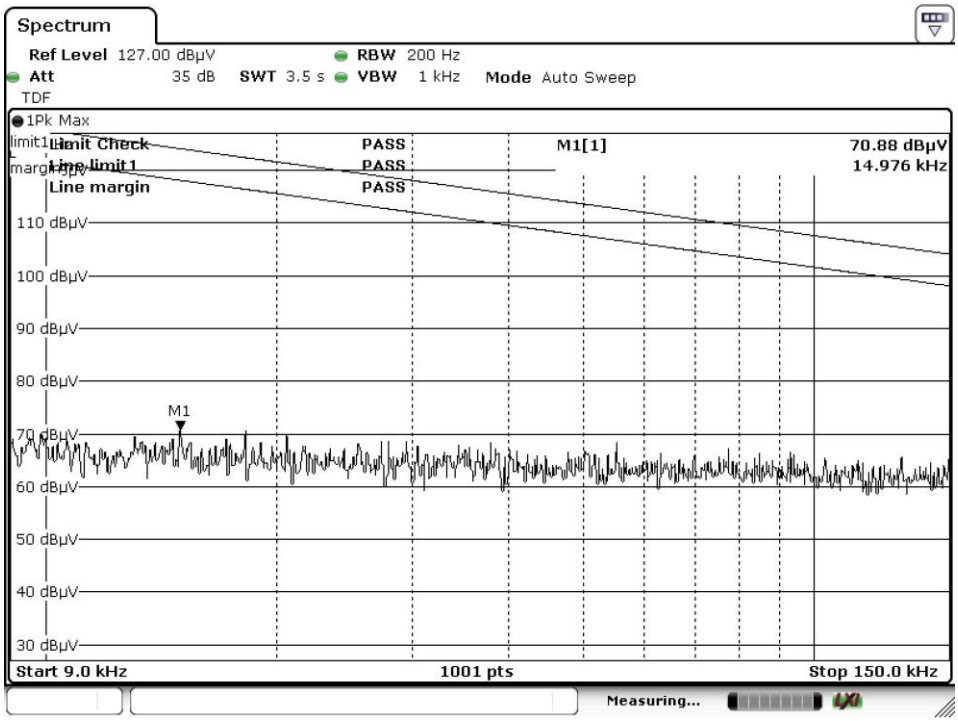
Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2441
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		26007.00	87.93	-35.78	52.15	74.00	-21.85	peak			
2	*	26007.00	69.68	-35.78	33.90	54.00	-20.10	AVG			

Figure 17: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz)



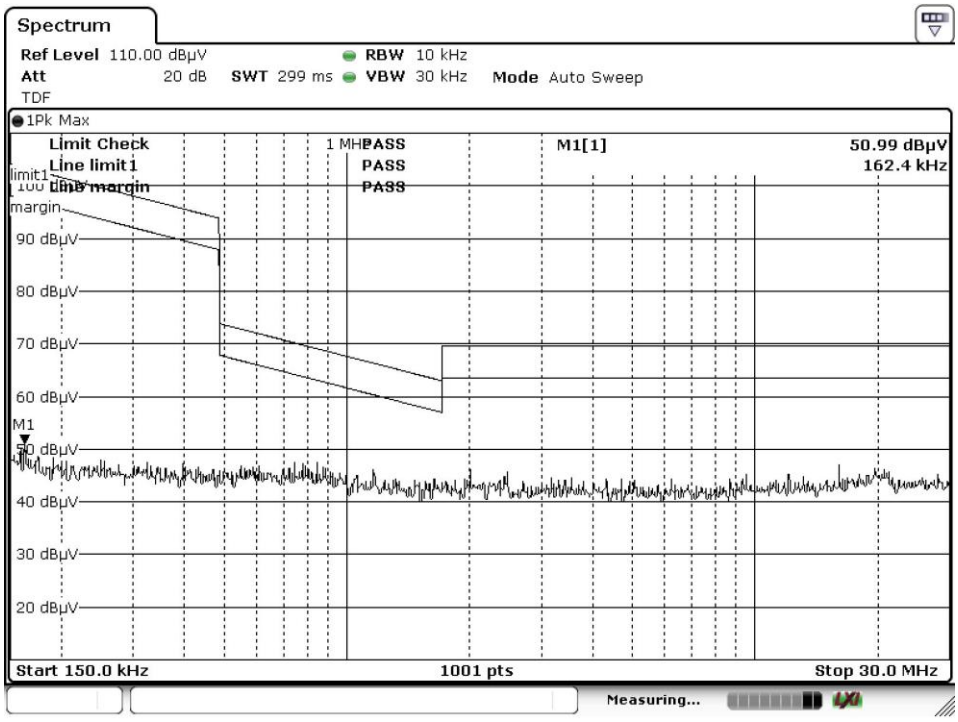
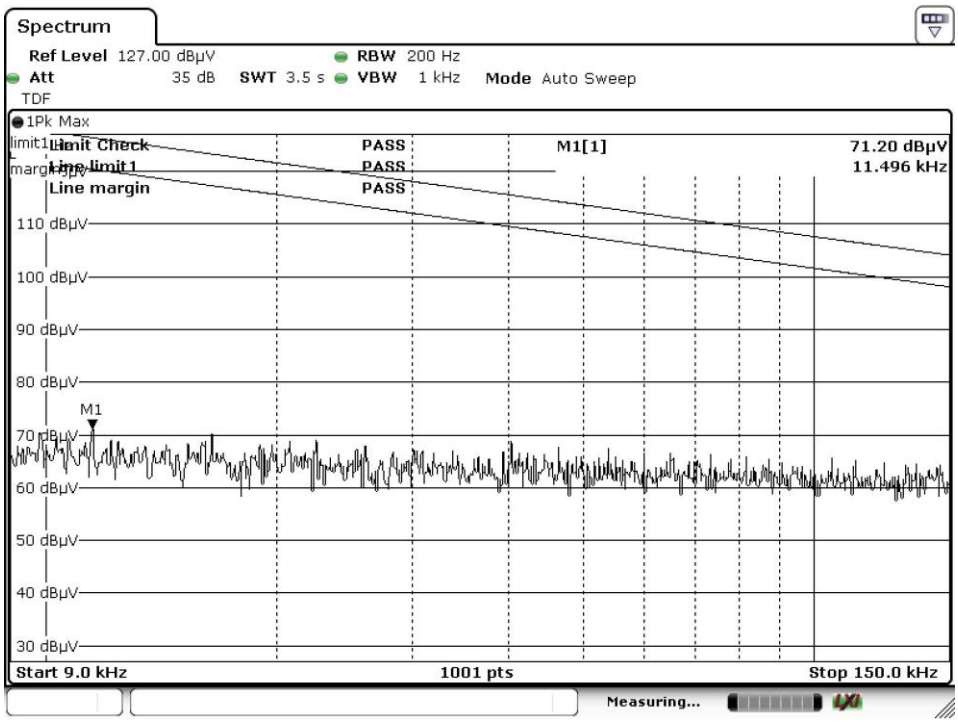


Figure 18: Test figure of spurious emissions, mode A.3, Vertical polarity (9kHz – 30MHz)



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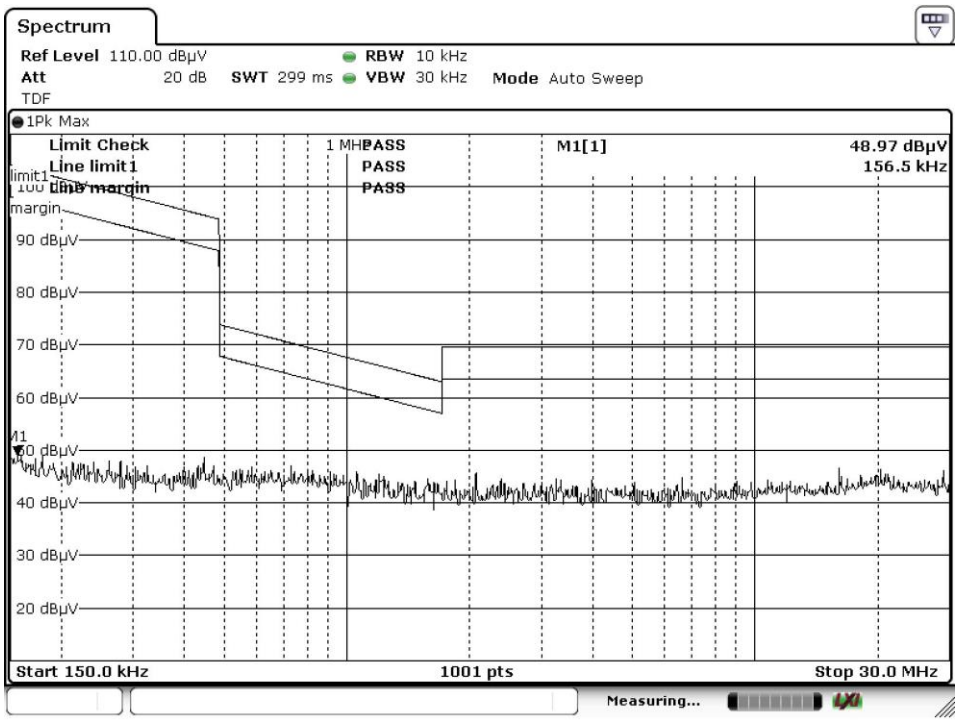

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Figure 19: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz)

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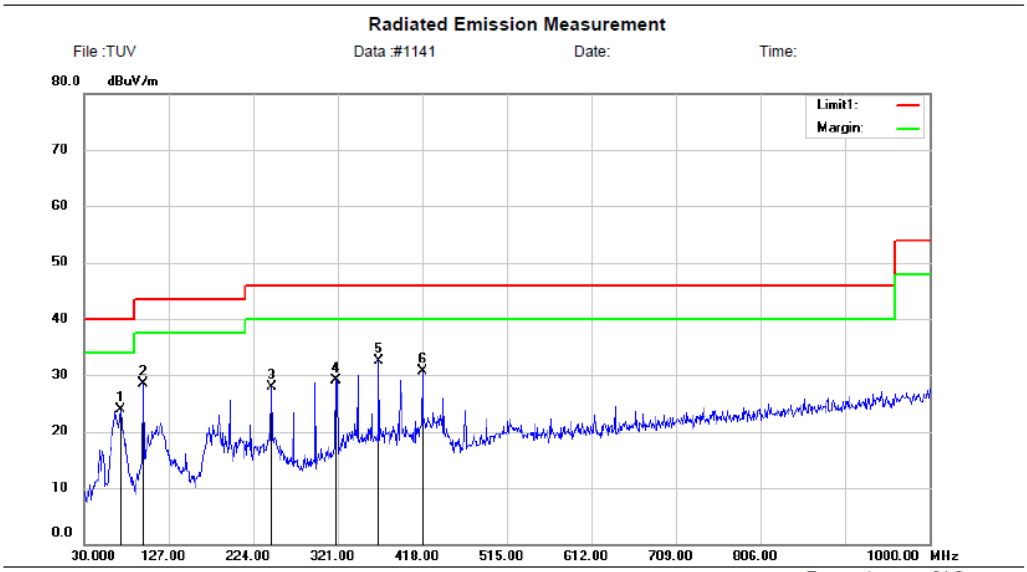

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2480
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		71.7100	42.14	-18.25	23.89	40.00	-16.11	QP			
2		97.9000	44.25	-15.65	28.60	43.50	-14.90	QP			
3		245.3400	41.62	-13.69	27.93	46.00	-18.07	QP			
4		319.0600	40.45	-11.35	29.10	46.00	-16.90	QP			
5	*	368.5300	43.03	-10.43	32.60	46.00	-13.40	QP			
6		418.0000	40.06	-9.38	30.68	46.00	-15.32	QP			

Figure 20: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz)

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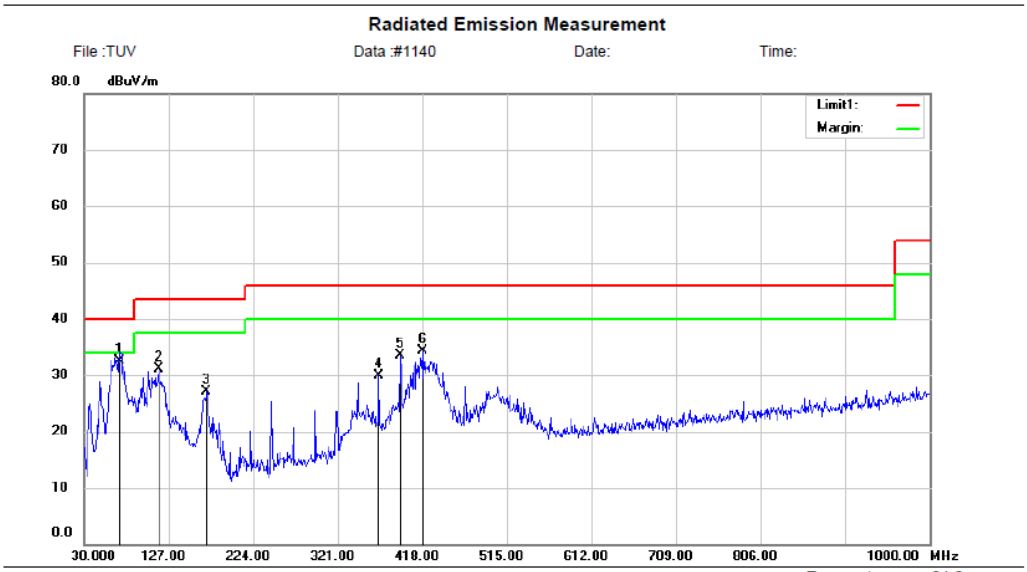

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2480
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	70.7400	50.66	-18.06	32.60	40.00	-7.40	QP			
2		115.3600	47.37	-16.26	31.11	43.50	-12.39	QP			
3		170.6500	44.29	-17.22	27.07	43.50	-16.43	QP			
4		368.5300	40.34	-10.43	29.91	46.00	-16.09	QP			
5		392.7800	43.14	-9.68	33.46	46.00	-12.54	QP			
6		418.0000	43.71	-9.38	34.33	46.00	-11.67	QP			

Figure 21: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz –18GHz)

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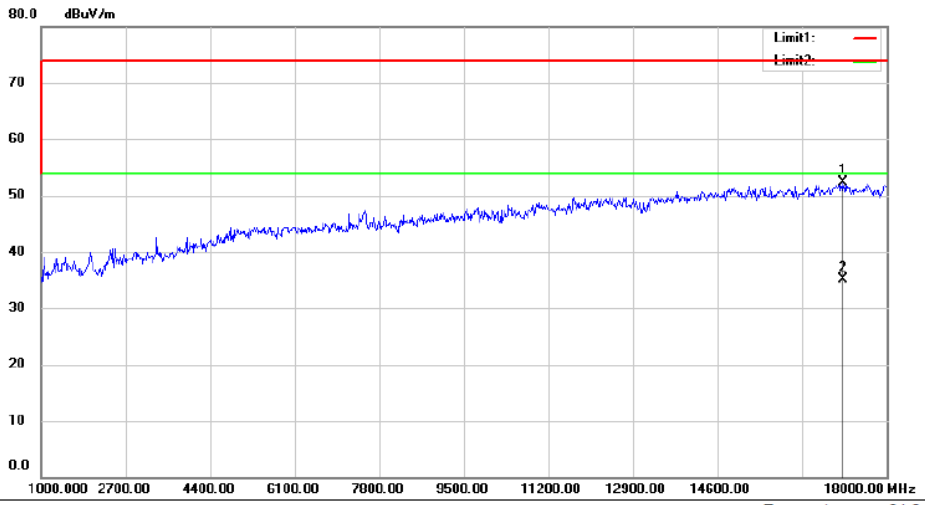

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2480
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		17116.00	48.00	4.27	52.27	74.00	-21.73	peak			
2	*	17116.00	30.93	4.27	35.20	54.00	-18.80	AVG			

Figure 22: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz)

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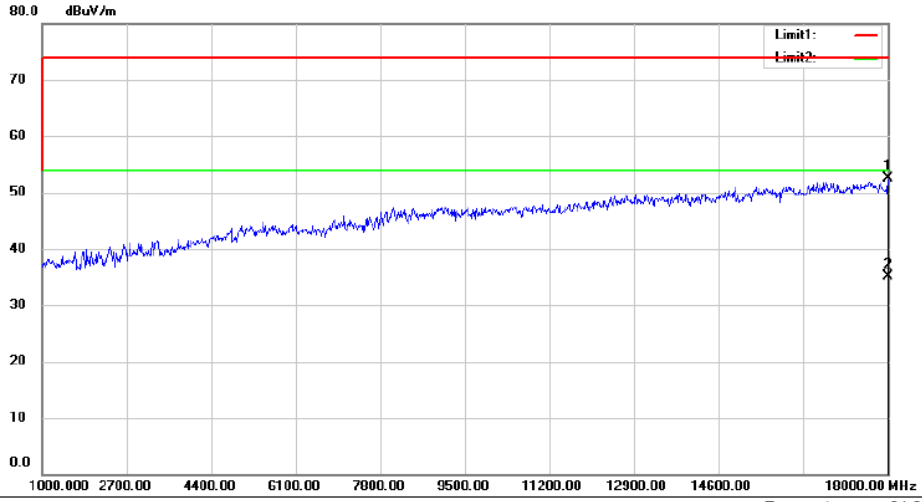
Radiated Emission Measurement

File :TUV Data :#1116 Date: Time:



Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:GFSK 2480
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		18000.00	37.33	15.12	52.45	74.00	-21.55	peak			
2	*	18000.00	20.08	15.12	35.20	54.00	-18.80	AVG			

Figure 23: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz –25GHz)

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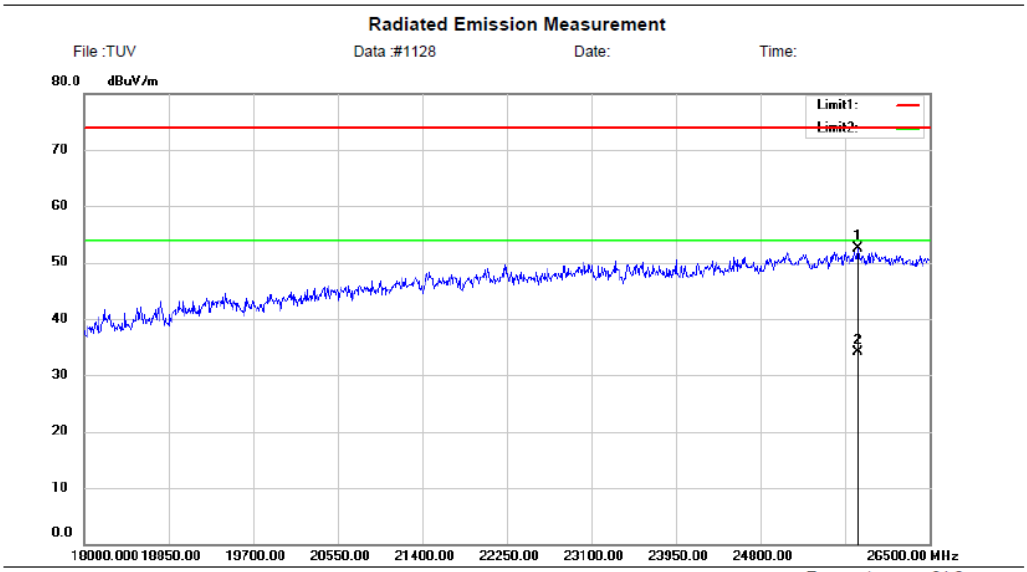

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode: GFSK 2480
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		25777.50	88.47	-36.06	52.41	74.00	-21.59	peak			
2	*	25777.50	70.16	-36.06	34.10	54.00	-19.90	AVG			

Figure 24: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz)

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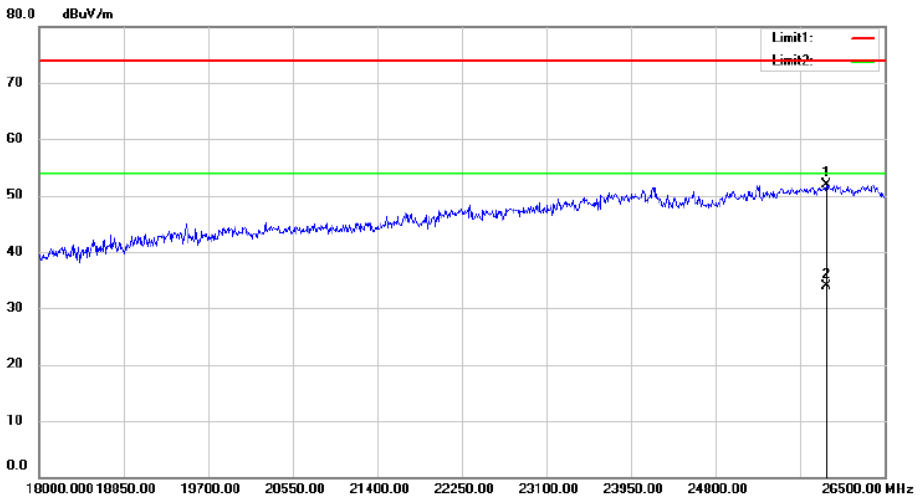
Radiated Emission Measurement

File :TUV Data :#1129 Date: Time:



Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode: GFSK 2480
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		25913.50	87.79	-35.90	51.89	74.00	-22.11	peak			
2	*	25913.50	69.90	-35.90	34.00	54.00	-20.00	AVG			

Figure 25: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal

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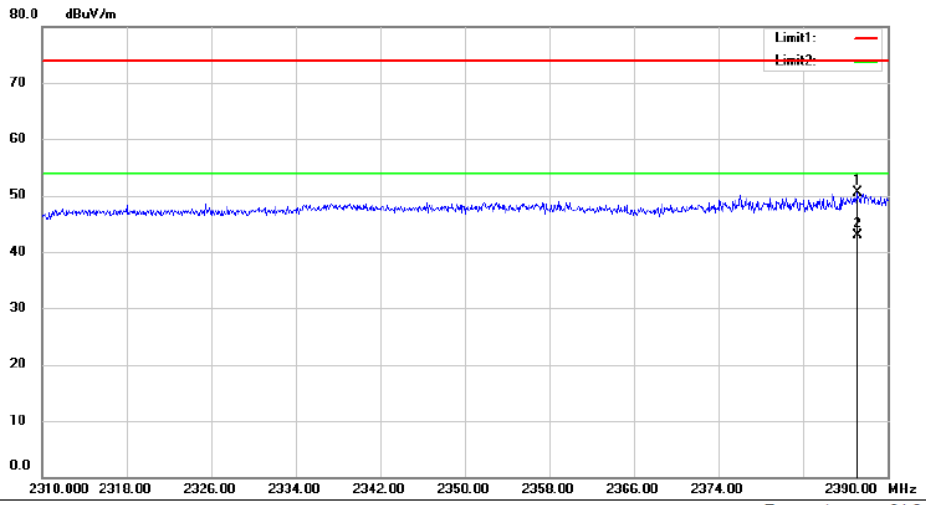
Radiated Emission Measurement

File :TUV Data :#1104 Date: Time:



Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:8DPSK 2402
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2387.120	35.44	15.01	50.45	74.00	-23.55	peak			
2	*	2387.120	27.89	15.01	42.90	54.00	-11.10	AVG			

Figure 26: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical

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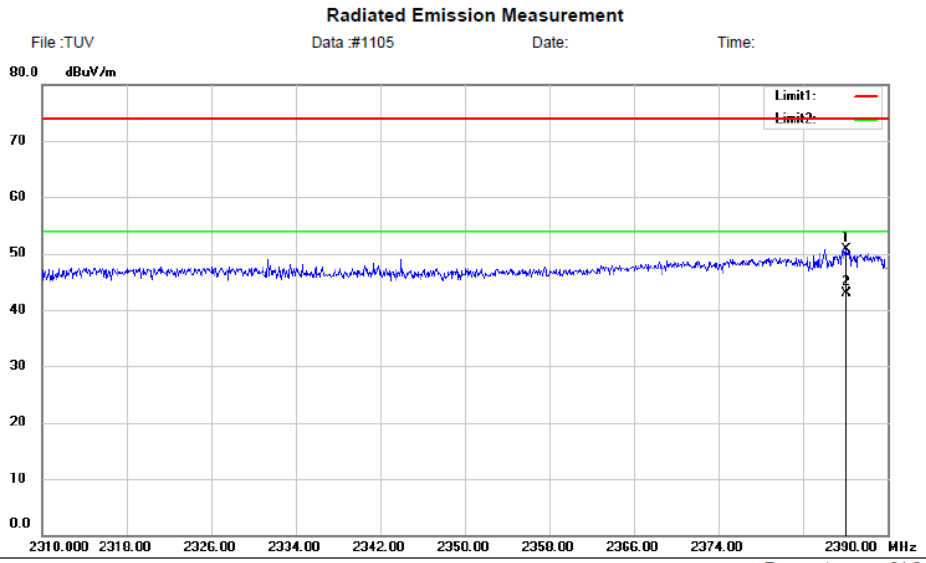

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:8DPSK 2402
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2386.080	35.78	15.00	50.78	74.00	-23.22	peak			
2	*	2386.080	27.90	15.00	42.90	54.00	-11.10	AVG			

Figure 27: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal

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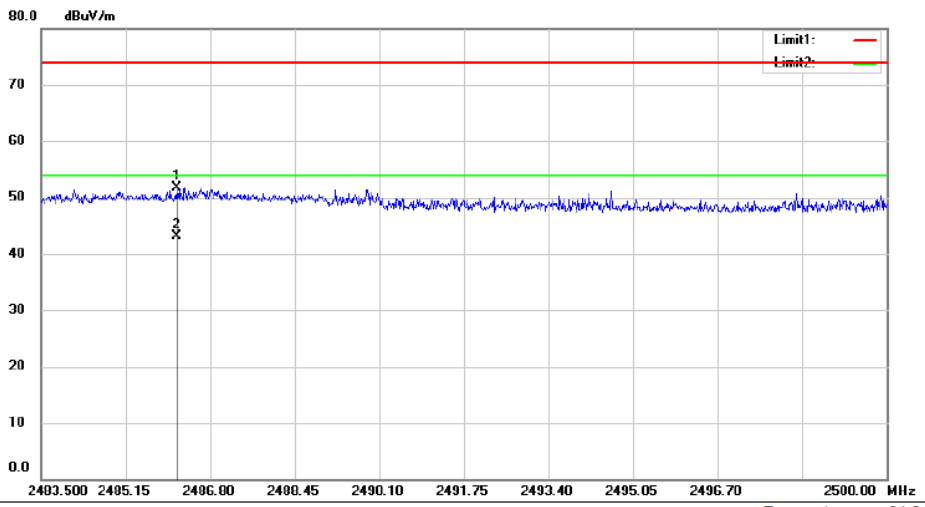

Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:8DPSK 2480
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2486.157	35.83	15.82	51.65	74.00	-22.35	peak			
2	*	2486.157	27.38	15.82	43.20	54.00	-10.80	AVG			

Figure 28: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical

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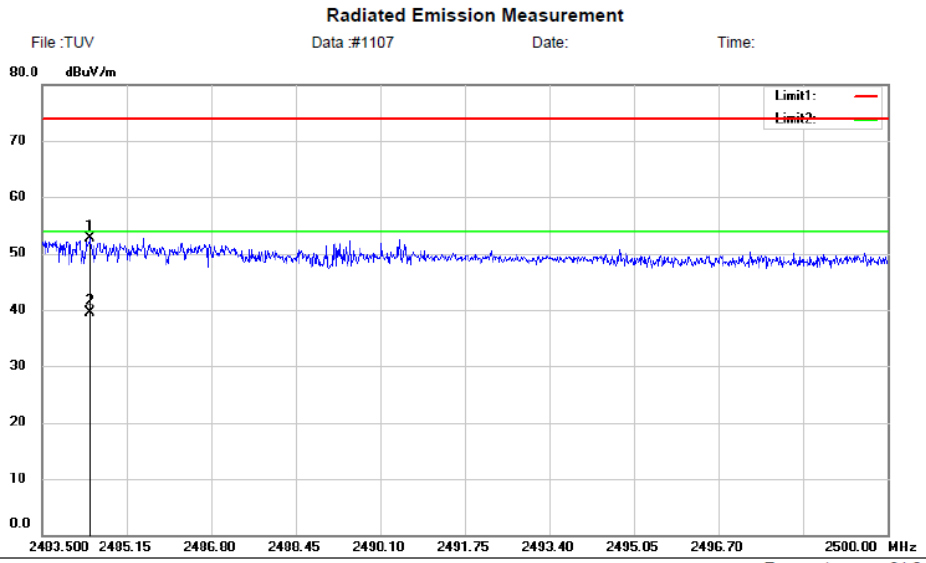


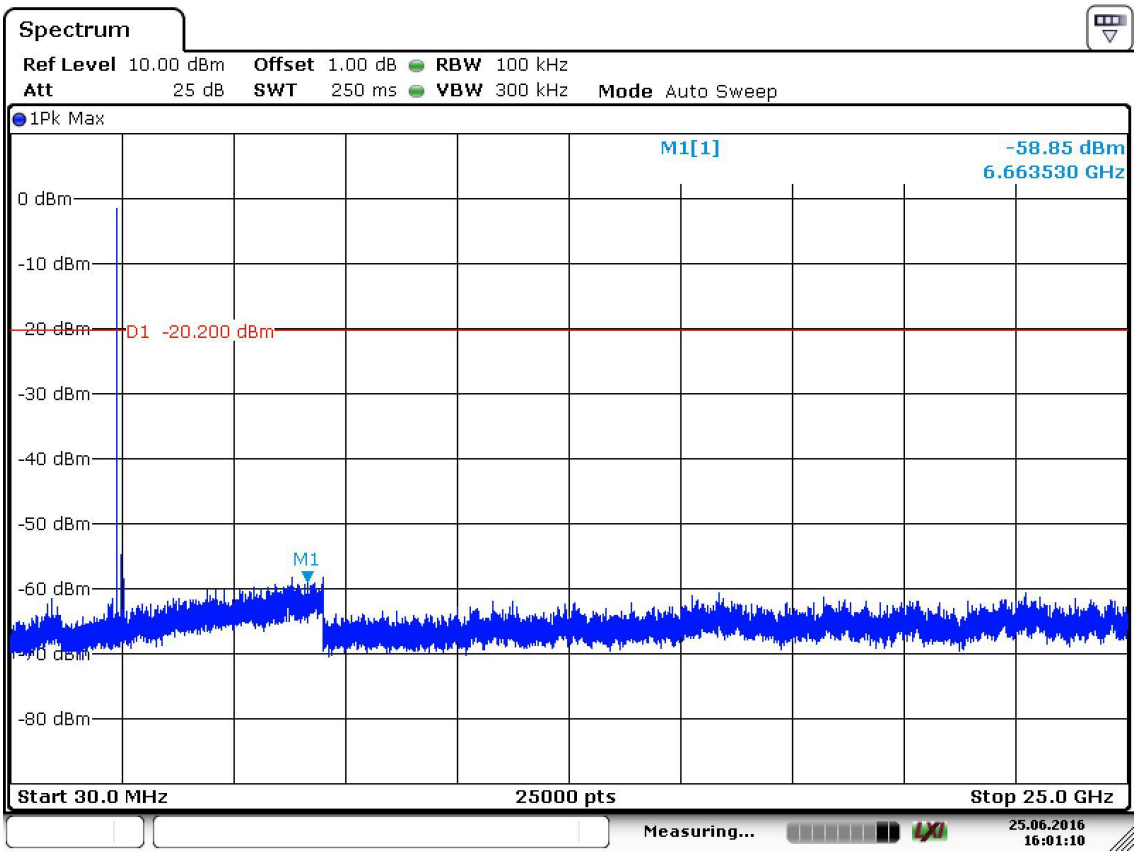
Site 3m Chamber #3
Limit: (RE)FCC PART 15 C
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:8DPSK 2480
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 24 C
Humidity: 53 %

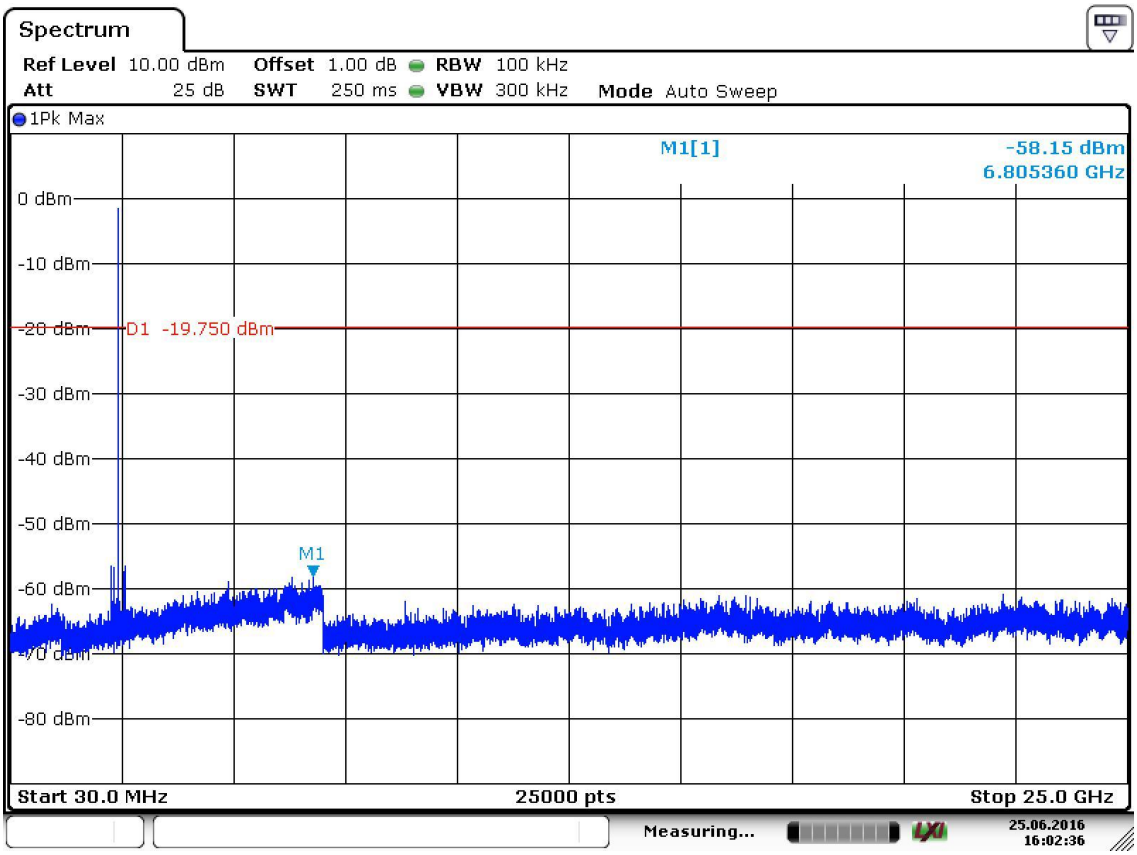
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2484.424	36.99	15.81	52.80	74.00	-21.20	peak			
2	*	2484.424	23.79	15.81	39.60	54.00	-14.40	AVG			

Figure 29: Test figure of conducted emissions in 100kHz Bandwidth, Mode A.1



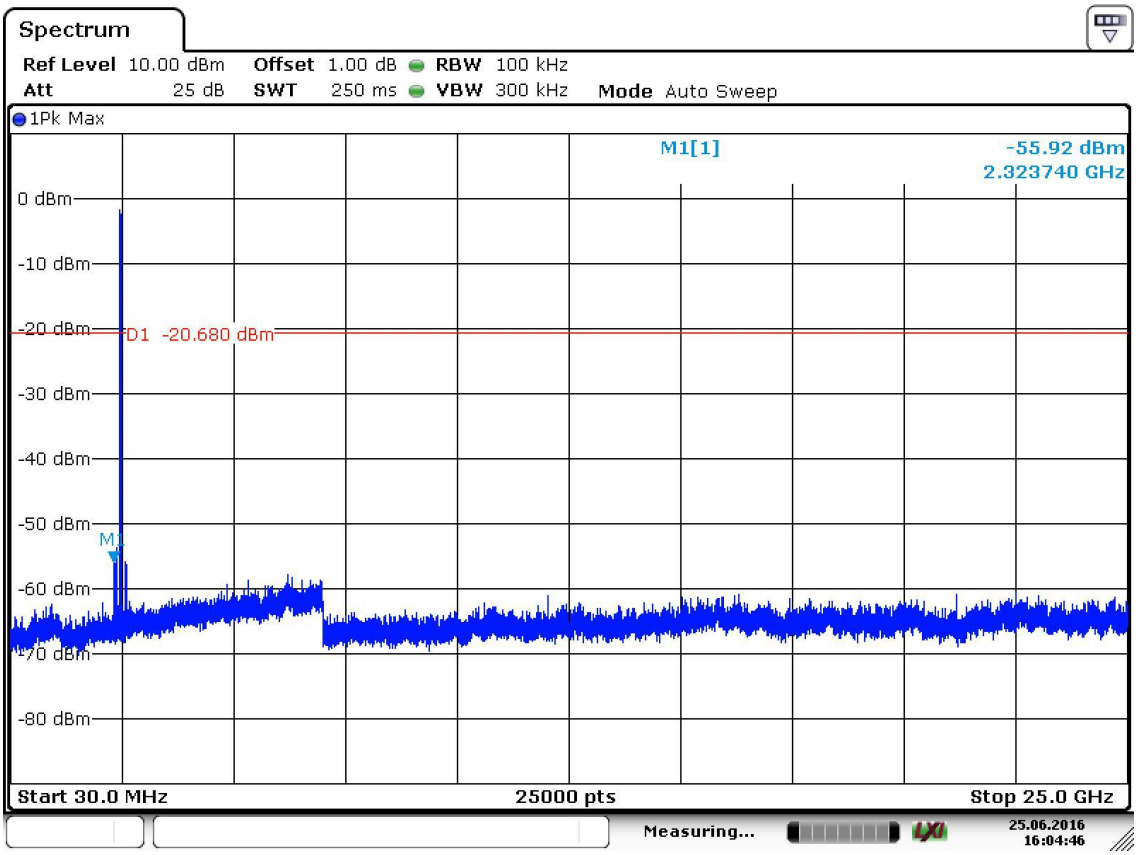
Date: 25.JUN.2016 16:01:10

Figure 30: Test figure of conducted emissions in 100kHz Bandwidth, Mode A.2



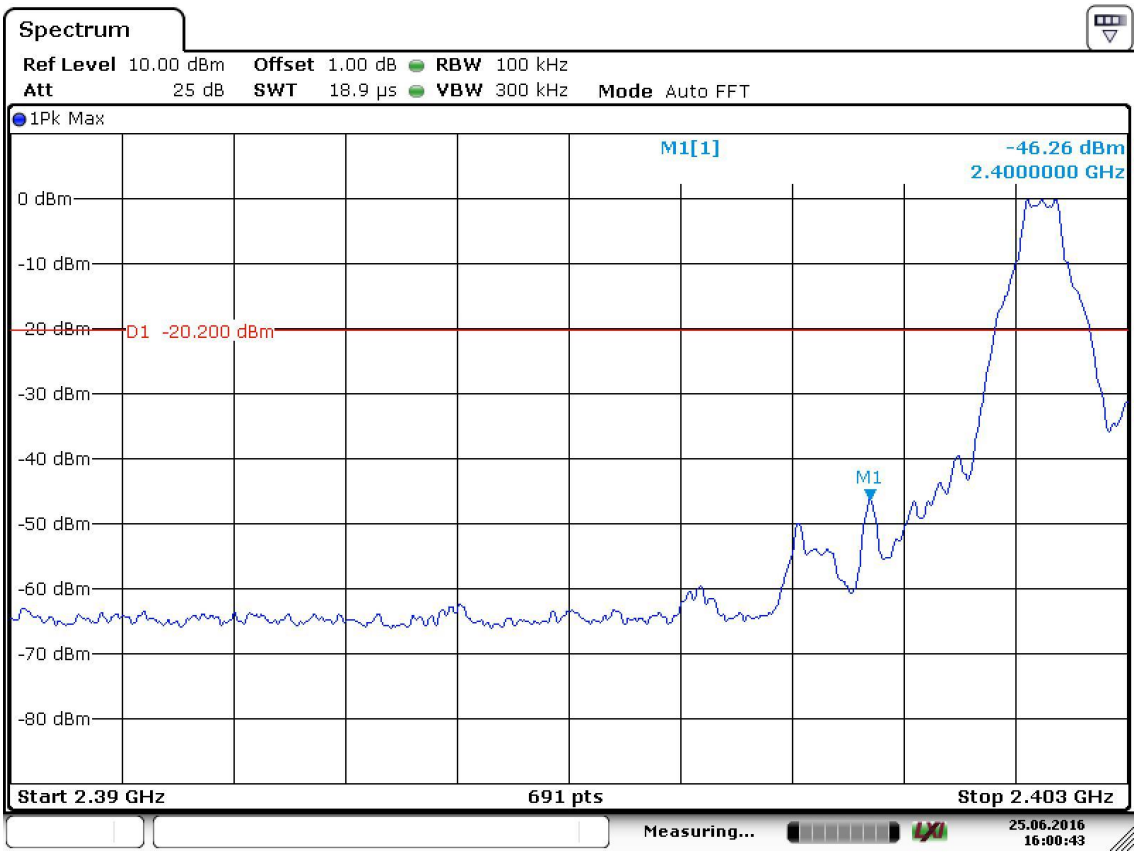
Date: 25.JUN.2016 16:02:36

Figure 31: Test figure of conducted emissions in 100kHz Bandwidth, Mode A.3



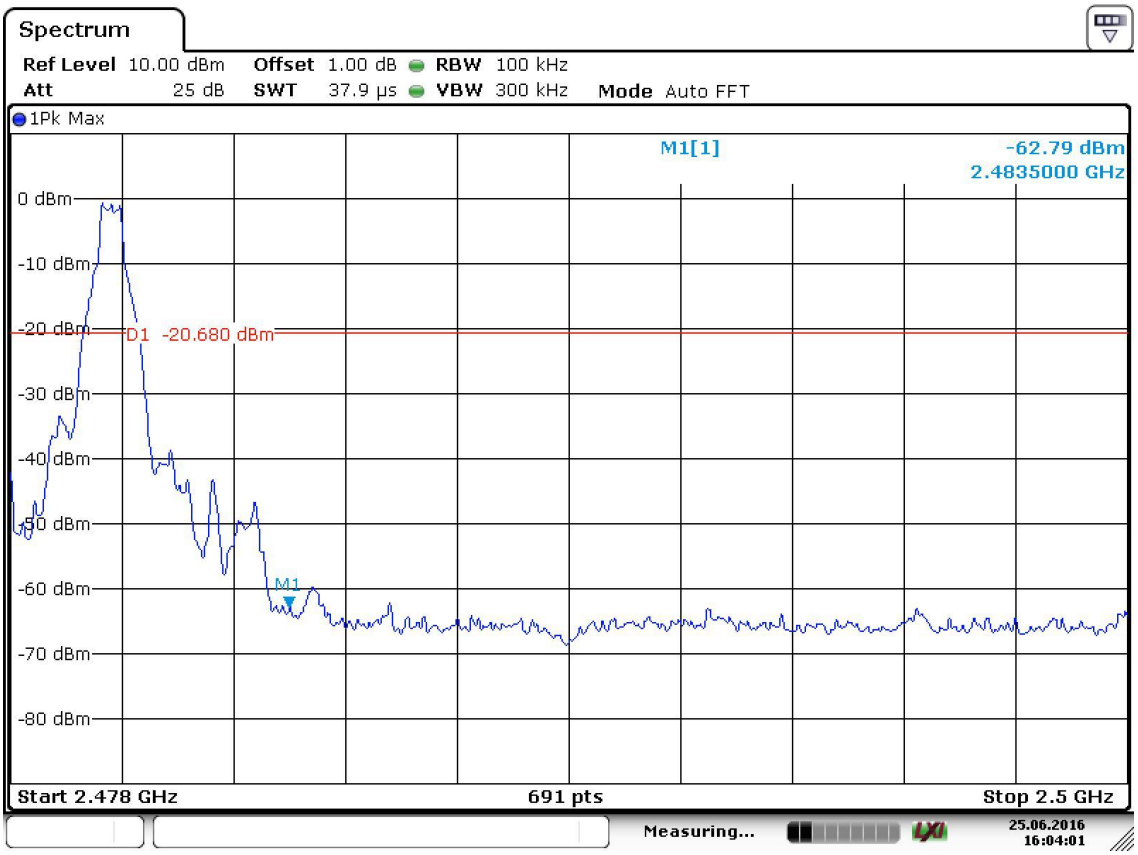
Date: 25.JUN.2016 16:04:46

Figure 32: Test figure of Frequency Band Edge in 100kHz Bandwidth, Mode A.1



Date: 25.JUN.2016 16:00:44

Figure 33: Test figure of Frequency Band Edge in 100kHz Bandwidth, Mode A.3



Date: 25.JUN.2016 16:04:02

Figure 34: Test figure of Conducted emissions, Mode C, line live

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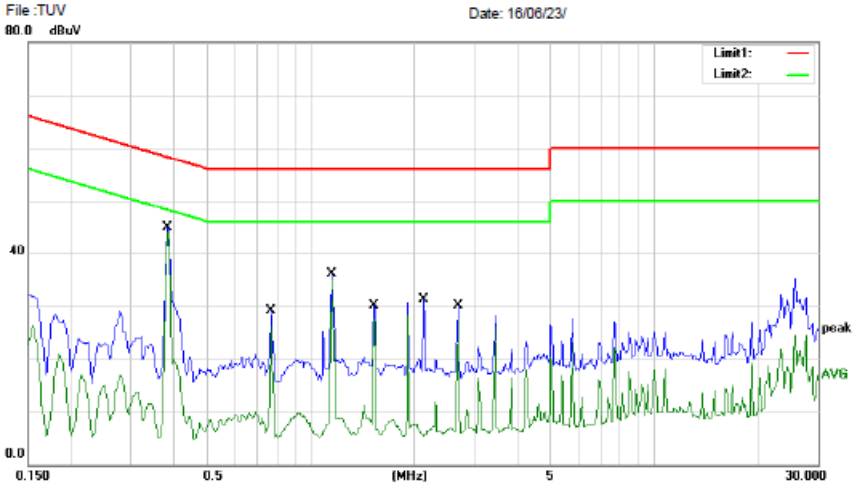
File :TUV
Date: 16/06/23/



Site Conduction #1
Limit: (CE)FCC PART 15 class B_QP
EUT: BT SPEAKER
M/N: NS-HBTSS116
Mode: AUX IN
Note:

Phase: *L1*
Power: AC 120V/60Hz

Temperature: 22
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3850	44.86	0.00	44.86	58.17	-13.31	QP	
2	*	0.3850	44.05	0.00	44.05	48.17	-4.12	AVG	
3		0.7650	29.05	0.00	29.05	56.00	-26.95	QP	
4		0.7650	26.36	0.00	26.36	46.00	-19.64	AVG	
5		1.1500	36.13	0.00	36.13	56.00	-19.87	QP	
6		1.1500	34.86	0.00	34.86	46.00	-11.14	AVG	
7		1.5350	30.17	0.00	30.17	56.00	-25.83	QP	
8		1.5350	27.50	0.00	27.50	46.00	-18.50	AVG	
9		2.1350	31.36	0.00	31.36	56.00	-24.64	QP	
10		2.1350	11.94	0.00	11.94	46.00	-34.06	AVG	
11		2.6900	30.06	0.00	30.06	56.00	-25.94	QP	
12		2.6900	27.57	0.00	27.57	46.00	-18.43	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: CSL

Figure 35: Test figure of Conducted emissions, Mode C, line neutral

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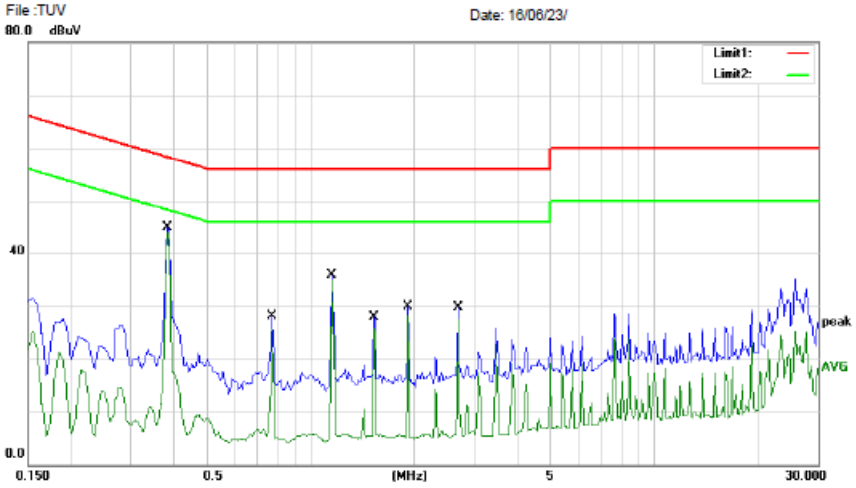
Conducted Emission Measurement

File :TUV
Date: 16/06/23/



Site Conduction #1
Limit: (CE)FCC PART 15 class B_QP
EUT: BT SPEAKER
M/N: NS-HBTSS116
Mode: AUX IN
Note:

Phase: *N*
Power: AC 120V/60Hz

Temperature: 22
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3850	45.00	0.00	45.00	58.17	-13.17	QP	
2	*	0.3850	44.05	0.00	44.05	48.17	-4.12	AVG	
3		0.7700	28.20	0.00	28.20	56.00	-27.80	QP	
4		0.7700	25.60	0.00	25.60	46.00	-20.40	AVG	
5		1.1500	35.93	0.00	35.93	56.00	-20.07	QP	
6		1.1500	35.00	0.00	35.00	46.00	-11.00	AVG	
7		1.5350	27.93	0.00	27.93	56.00	-28.07	QP	
8		1.5350	25.80	0.00	25.80	46.00	-20.20	AVG	
9		1.9200	29.95	0.00	29.95	56.00	-26.05	QP	
10		1.9200	28.34	0.00	28.34	46.00	-17.66	AVG	
11		2.6900	29.72	0.00	29.72	56.00	-26.28	QP	
12		2.6900	27.57	0.00	27.57	46.00	-18.43	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: CSL

Figure 36: Test figure of Conducted emissions, Mode D, line live

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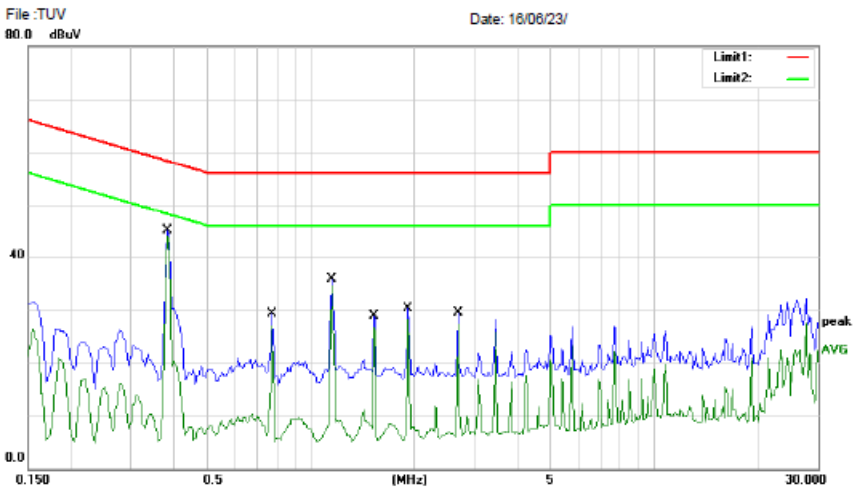

Site Conduction #1
Limit: (CE)FCC PART 15 class B_QP
EUT: BT SPEAKER
M/N: NS-HBTSS116
Mode: RCA
Note:

Phase: *L1*
Power: AC 120V/60Hz

Temperature: 22
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3850	45.10	0.00	45.10	58.17	-13.07	QP	
2	*	0.3850	44.10	0.00	44.10	48.17	-4.07	AVG	
3		0.7700	29.27	0.00	29.27	56.00	-26.73	QP	
4		0.7700	27.01	0.00	27.01	46.00	-18.99	AVG	
5		1.1500	35.95	0.00	35.95	56.00	-20.05	QP	
6		1.1500	34.71	0.00	34.71	46.00	-11.29	AVG	
7		1.5350	28.92	0.00	28.92	56.00	-27.08	QP	
8		1.5350	26.79	0.00	26.79	46.00	-19.21	AVG	
9		1.9200	30.31	0.00	30.31	56.00	-25.69	QP	
10		1.9200	28.26	0.00	28.26	46.00	-17.74	AVG	
11		2.6900	29.58	0.00	29.58	56.00	-26.42	QP	
12		2.6900	27.22	0.00	27.22	46.00	-18.78	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: CSL

Figure 37: Test figure of Conducted emissions, Mode D, line neutral

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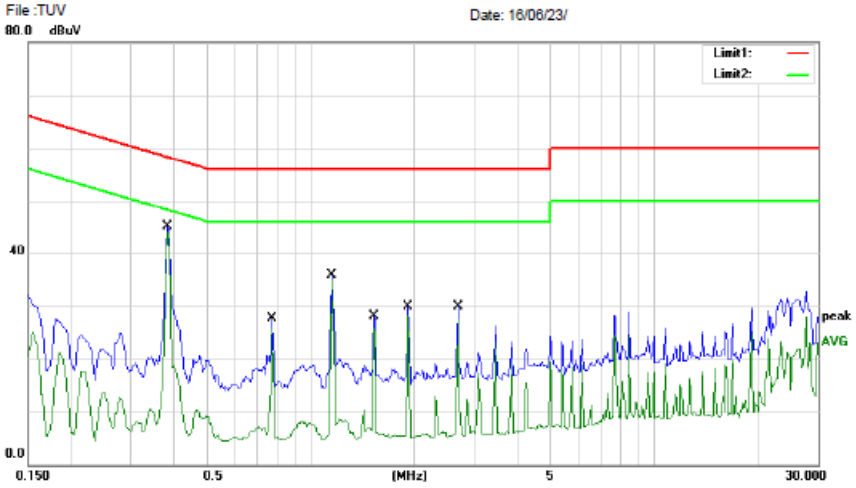
Conducted Emission Measurement

File :TUV
Date: 16/06/23/



Site Conduction #1
Limit: (CE)FCC PART 15 class B_QP
EUT: BT SPEAKER
M/N: NS-HBTSS116
Mode: RCA
Note:

Phase: N
Power: AC 120V/60Hz

Temperature: 22
Humidity: 55 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.3850	45.06	0.00	45.06	58.17	-13.11	QP	
2	*	0.3850	44.05	0.00	44.05	48.17	-4.12	AVG	
3		0.7700	27.62	0.00	27.62	56.00	-28.38	QP	
4		0.7700	25.65	0.00	25.65	46.00	-20.35	AVG	
5		1.1500	35.85	0.00	35.85	56.00	-20.15	QP	
6		1.1500	35.00	0.00	35.00	46.00	-11.00	AVG	
7		1.5350	28.03	0.00	28.03	56.00	-27.97	QP	
8		1.5350	25.80	0.00	25.80	46.00	-20.20	AVG	
9		1.9200	29.87	0.00	29.87	56.00	-26.13	QP	
10		1.9200	28.26	0.00	28.26	46.00	-17.74	AVG	
11		2.6900	29.88	0.00	29.88	56.00	-26.12	QP	
12		2.6900	27.57	0.00	27.57	46.00	-18.43	AVG	

*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator: CSL

Figure 38: Test figure of Radiated emissions, Mode C, Below 1GHz, Horizontal

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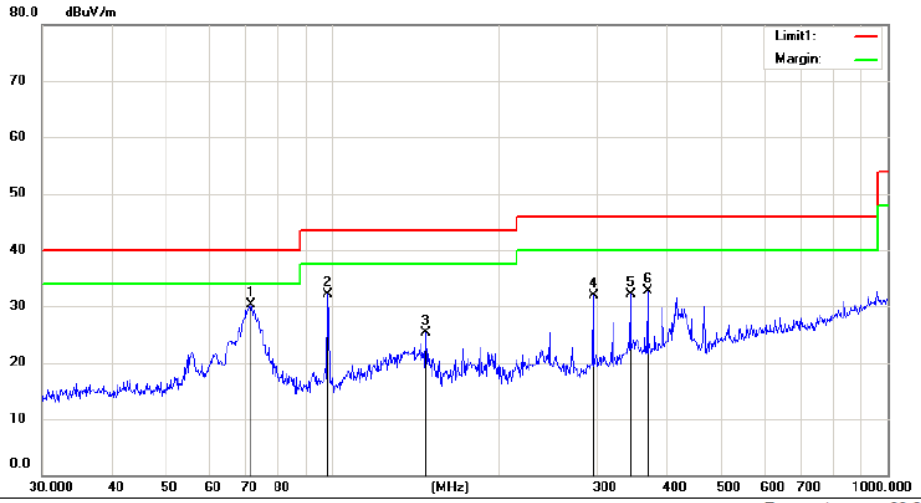
Radiated Emission Measurement

File :TUV
Date: 2016/06/23



Site 3m Chamber #1
Limit: (RE)FCC PART 15 CLASS B
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:AUX IN
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 50 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	71.3300	47.55	-17.21	30.34	40.00	-9.66	QP			
2		98.1420	44.35	-12.33	32.02	43.50	-11.48	QP			
3		147.4036	41.60	-16.34	25.26	43.50	-18.24	QP			
4		295.1468	41.10	-9.15	31.95	46.00	-14.05	QP			
5		344.3855	39.98	-7.90	32.08	46.00	-13.92	QP			
6		369.4047	40.22	-7.46	32.76	46.00	-13.24	QP			

Figure 39: Test figure of Radiated emissions, Mode C, Below 1GHz, Vertical

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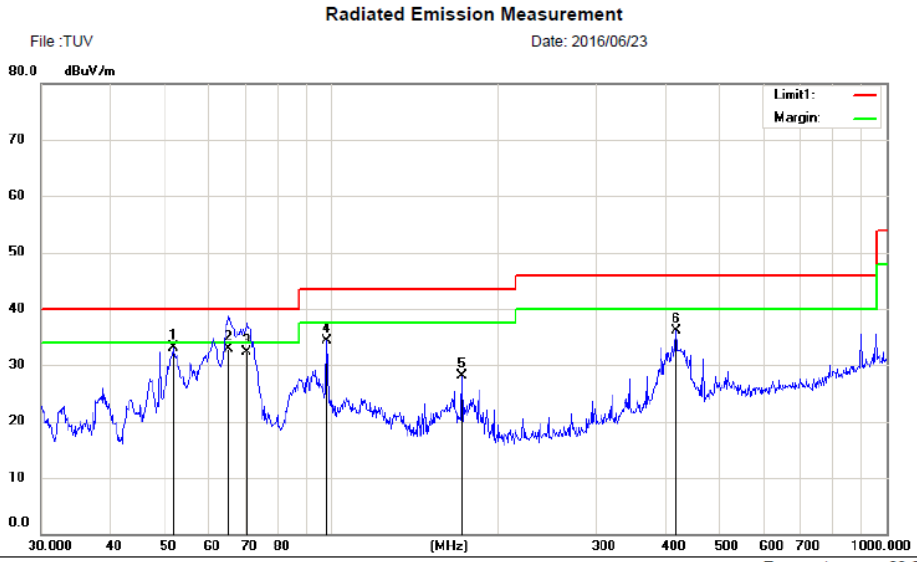

Site 3m Chamber #1
Limit: (RE)FCC PART 15 CLASS B
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:AUX IN
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 50 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	51.8430	45.93	-12.90	33.03	40.00	-6.97	QP			
2		65.3432	48.14	-15.14	33.00	40.00	-7.00	QP			
3		70.3365	49.42	-17.02	32.40	40.00	-7.60	QP			
4		98.1418	46.59	-12.33	34.26	43.50	-9.24	QP			
5		171.9946	43.01	-14.92	28.09	43.50	-15.41	QP			
6		417.6410	42.57	-6.55	36.02	46.00	-9.98	QP			

Figure 40: Test figure of Radiated emissions, Mode C, Above 1GHz, Horizontal

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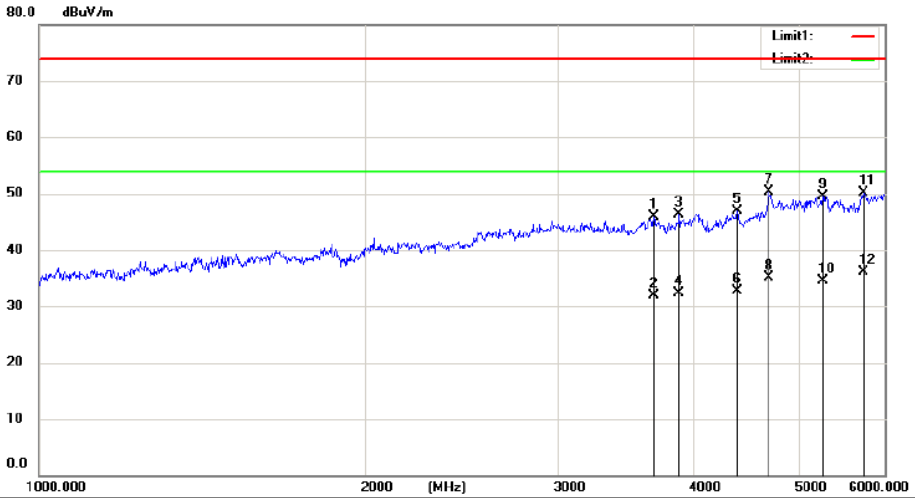
Radiated Emission Measurement

File :TUV Date: 2016/06/23



Site 3m Chamber #1 Polarization: *Horizontal* Temperature: 22 C
Limit: (RE)FCC PART 15 CLASS B PEAK Power: AC 120V/60Hz Humidity: 50 %
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:RCA
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		3678.883	50.14	-4.17	45.97	74.00	-28.03	peak			
2		3678.883	36.07	-4.17	31.90	54.00	-22.10	AVG			
3		3882.044	49.77	-3.39	46.38	74.00	-27.62	peak			
4		3882.044	35.69	-3.39	32.30	54.00	-21.70	AVG			
5		4392.916	48.44	-1.58	46.86	74.00	-27.14	peak			
6		4392.916	34.38	-1.58	32.80	54.00	-21.20	AVG			

Figure 41: Test figure of Radiated emissions, Mode C, Above 1GHz, Vertical

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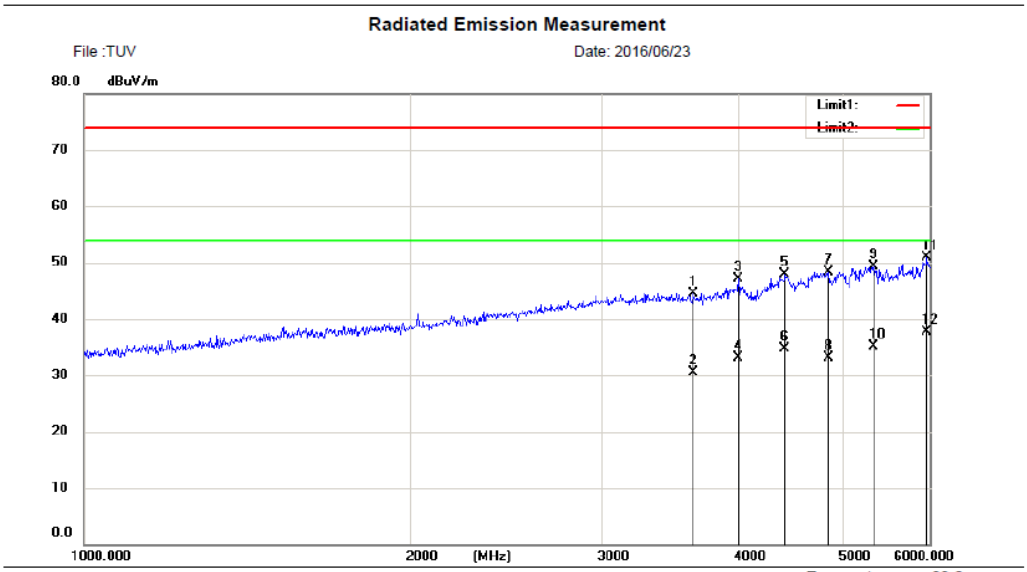

Site 3m Chamber #1
Limit: (RE)FCC PART 15 CLASS B PEAK
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:AUX IN
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 50 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		3633.029	48.90	-4.35	44.55	74.00	-29.45	peak			
2		3633.029	34.85	-4.35	30.50	54.00	-23.50	AVG			
3		4002.110	50.09	-2.93	47.16	74.00	-26.84	peak			
4		4002.110	36.03	-2.93	33.10	54.00	-20.90	AVG			
5		4416.593	49.34	-1.50	47.84	74.00	-26.16	peak			
6		4416.593	36.30	-1.50	34.80	54.00	-19.20	AVG			

Figure 42: Test figure of Radiated emissions, Mode D, Below 1GHz, Horizontal

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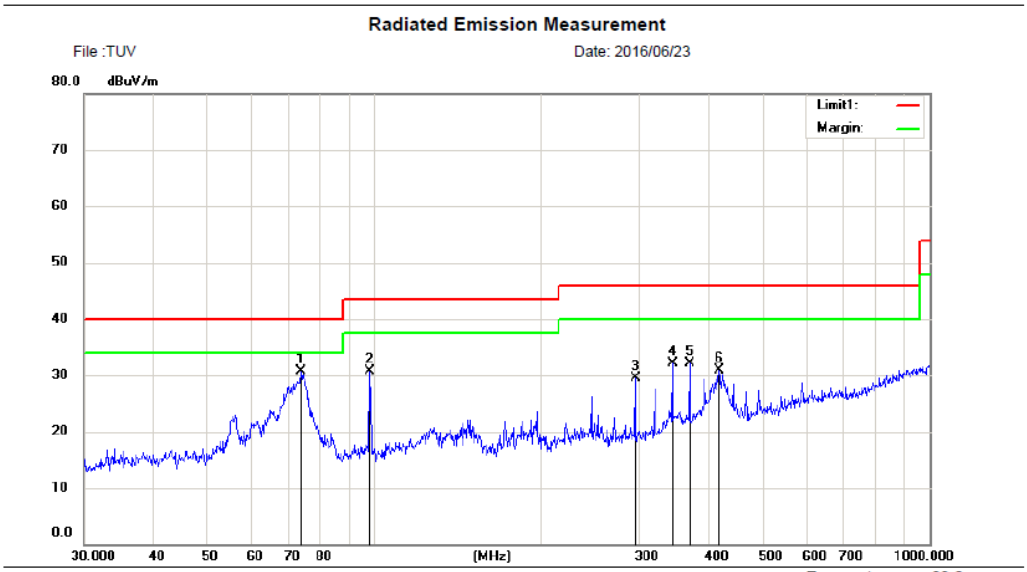

Site 3m Chamber #1
Limit: (RE)FCC PART 15 CLASS B
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:RCA
Note:

Polarization: *Horizontal*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 50 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	73.8756	48.31	-17.69	30.62	40.00	-9.38	QP			
2		98.1420	42.94	-12.33	30.61	43.50	-12.89	QP			
3		295.1470	38.65	-9.15	29.50	46.00	-16.50	QP			
4		344.3855	39.93	-7.90	32.03	46.00	-13.97	QP			
5		369.4047	39.53	-7.46	32.07	46.00	-13.93	QP			
6		417.6411	37.41	-6.55	30.86	46.00	-15.14	QP			

Figure 43: Test figure of Radiated emissions, Mode D, Below 1GHz, Vertical

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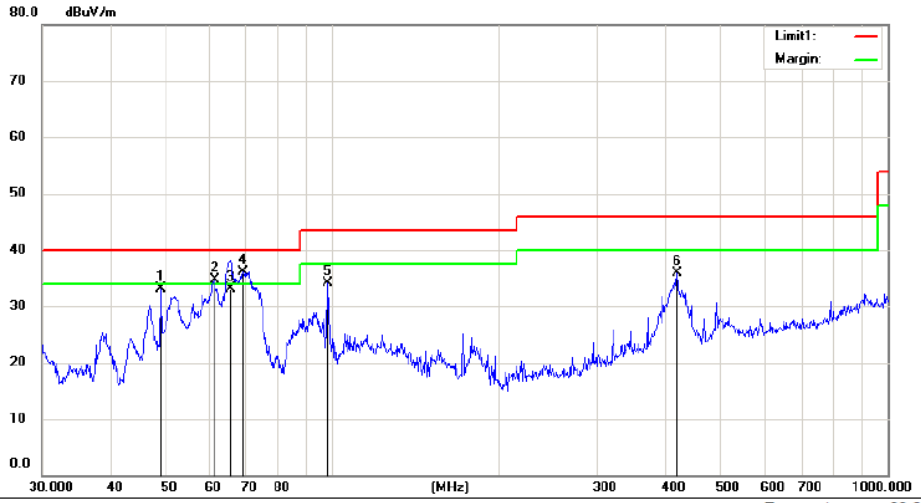

Site 3m Chamber #1
Limit: (RE)FCC PART 15 CLASS B
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:RCA
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 50 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		49.0144	45.55	-12.51	33.04	40.00	-6.96	QP			
2	!	61.3463	48.03	-13.42	34.61	40.00	-5.39	QP			
3		65.5727	48.33	-15.23	33.10	40.00	-6.90	QP			
4	*	69.1140	52.77	-16.61	36.16	40.00	-3.84	QP			
5		98.1418	46.45	-12.33	34.12	43.50	-9.38	QP			
6		417.6410	42.41	-6.55	35.86	46.00	-10.14	QP			

Figure 44: Test figure of Radiated emissions, Mode D, Above 1GHz, Horizontal

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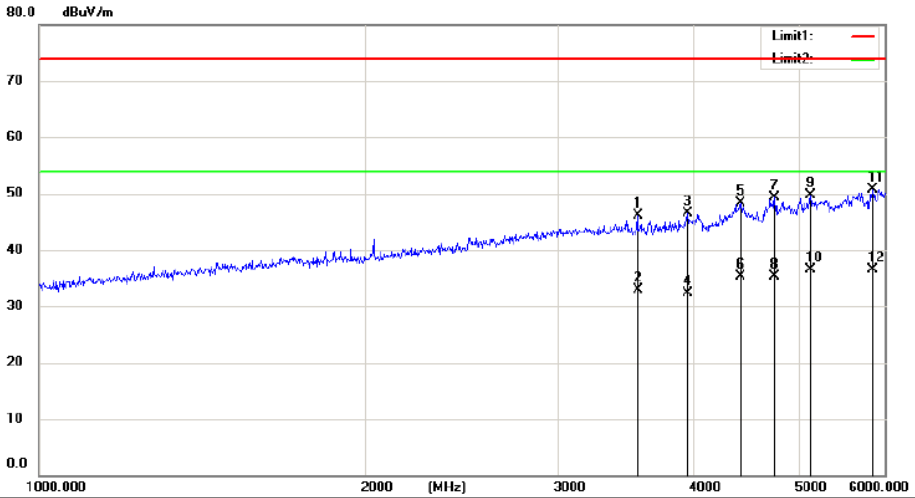
Radiated Emission Measurement

File :TUV Date: 2016/06/23



Site 3m Chamber #1 Polarization: *Horizontal* Temperature: 22 C
Limit: (RE)FCC PART 15 CLASS B PEAK Power: AC 120V/60Hz Humidity: 50 %
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:AUX IN
Note:

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		3555.749	50.70	-4.65	46.05	74.00	-27.95	peak			
2		3555.749	37.65	-4.65	33.00	54.00	-21.00	AVG			
3		3952.228	49.55	-3.12	46.43	74.00	-27.57	peak			
4		3952.228	35.52	-3.12	32.40	54.00	-21.60	AVG			
5		4424.514	49.79	-1.47	48.32	74.00	-25.68	peak			
6		4424.514	36.77	-1.47	35.30	54.00	-18.70	AVG			

Figure 45: Test figure of Radiated emissions, Mode D, Above 1GHz, Vertical

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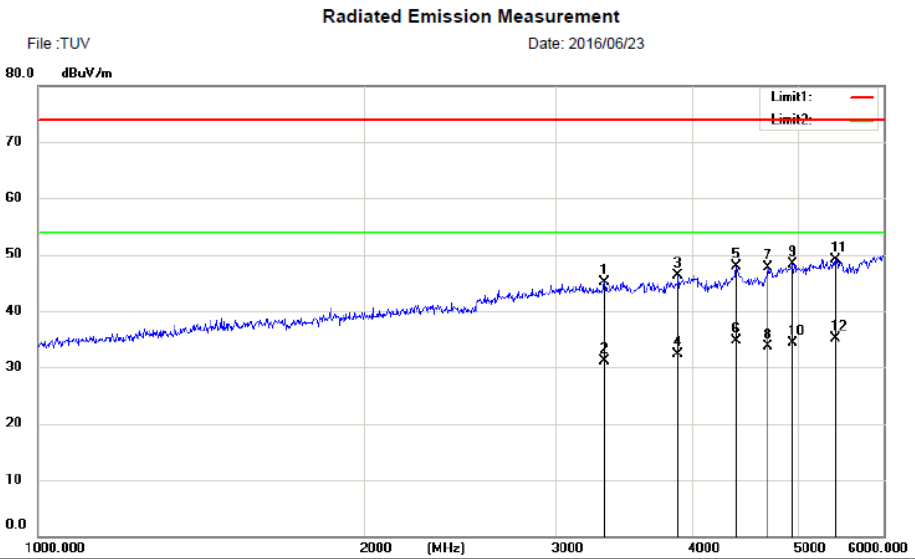

Site 3m Chamber #1
Limit: (RE)FCC PART 15 CLASS B PEAK
EUT: BT Speaker
M/N: NS-HBTSS116
Mode:RCA
Note:

Polarization: *Vertical*
Power: AC 120V/60Hz

Temperature: 22 C
Humidity: 50 %

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		3321.707	50.19	-5.01	45.18	74.00	-28.82	peak			
2		3321.707	36.11	-5.01	31.10	54.00	-22.90	AVG			
3		3882.044	49.77	-3.39	46.38	74.00	-27.62	peak			
4		3882.044	35.69	-3.39	32.30	54.00	-21.70	AVG			
5		4392.916	49.44	-1.58	47.86	74.00	-26.14	peak			
6		4392.916	36.38	-1.58	34.80	54.00	-19.20	AVG			