


Prüfbericht-Nr.: <i>Test Report No.:</i>	17039136 001	Auftrags-Nr.: <i>Order No.:</i>	164012012	Seite 1 von 37 Page 1 of 37
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	26.03.2014	
Auftraggeber: <i>Client:</i>	Compupal (Group) Corporation No. 1555 Jiashan Avenue, Jiashan, Zhejiang 314113, P.R.China			
Prüfgegenstand: <i>Test item:</i>	Bluetooth Portable speaker with handle			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	NS-SPBT02-BL, NS-SPBT02-G, NS-SPBT02-P, NS-SPBT02-Y, NS-SPBT02-BL-C, NS-SPBT02-G-C, NS-SPBT02-P-C, NS-SPBT02-Y-C			
Auftrags-Inhalt: <i>Order content:</i>	FCC Certification and Verification			
Prüfgrundlage: <i>Test specification:</i>	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 CFR47 FCC Part 15: Subpart C Section 15.107 CFR47 FCC Part 15: Subpart C Section 15.109 RSS-210 Issue 8 December 2010 RSS-Gen Issue 3 December 2010 RSS-102 Issue 4 March 2010			
Wareneingangsdatum: <i>Date of receipt:</i>	27.03.2014			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000042346-001, A000042346-002			
Prüfzeitraum: <i>Testing period:</i>	28.03.2014 - 30.03.2014			
Ort der Prüfung: <i>Place of testing:</i>	Shenzhen Accurate Technology Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Bitte wählen / Please select...			
geprüft von / tested by:		kontrolliert von / reviewed by:		
14.04.2014	Owen Tian / Project Manager	15.04.2014	Winnie Hou / Technical Certifier	
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>
				Unterschrift <i>Signature</i>
Sonstiges / Other:				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende:	1 = sehr gut P(ass) = entspricht o.g. Prüfgrundlage(n)	2 = gut F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	3 = befriedigend N/A = nicht anwendbar	4 = ausreichend N/T = nicht getestet
Legend:	1 = very good P(ass) = passed a.m. test specification(s)	2 = good F(ail) = failed a.m. test specification(s)	3 = satisfactory N/A = not applicable	4 = sufficient 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>				

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT*RESULT: Passed***5.1.2 PEAK OUTPUT POWER***RESULT: Passed***5.1.3 20dB 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 FREQUENCY SEPARATION***RESULT: Passed***5.1.7 NUMBER OF HOPPING FREQUENCY***RESULT: Passed***5.1.8 TIME OF OCCUPANCY***RESULT: Passed***5.1.9 CONDUCTED EMISSIONS***RESULT: Passed***5.1.10 RADIATED EMISSION***RESULT: Passed*

Contents

1.	GENERAL REMARKS	4
1.1	COMPLEMENTARY MATERIALS	4
2.	TEST SITES	4
2.1	TEST FACILITIES.....	4
2.2	LIST OF TEST AND MEASUREMENT INSTRUMENTS.....	5
2.3	TRACEABILITY	6
2.4	CALIBRATION	6
2.5	MEASUREMENT UNCERTAINTY.....	6
2.6	LOCATION OF ORIGINAL DATA.....	6
2.7	STATUS OF FACILITY USED FOR TESTING.....	6
3.	GENERAL PRODUCT INFORMATION	7
3.1	PRODUCT FUNCTION AND INTENDED USE.....	7
3.2	RATINGS AND SYSTEM DETAILS	7
3.3	INDEPENDENT OPERATION MODES	8
3.4	NOISE GENERATING AND NOISE SUPPRESSING PARTS	9
3.5	SUBMITTED DOCUMENTS	9
4.	TEST SET-UP AND OPERATION MODES	10
4.1	PRINCIPLE OF CONFIGURATION SELECTION.....	10
4.2	TEST OPERATION AND TEST SOFTWARE	10
4.3	SPECIAL ACCESSORIES AND AUXILIARY EQUIPMENT	10
4.4	COUNTERMEASURES TO ACHIEVE EMC COMPLIANCE.....	11
4.5	TEST SETUP DIAGRAM.....	11
5.	TEST RESULTS	13
5.1	TRANSMITTER REQUIREMENT & TEST SUITES	13
5.1.1	<i>Antenna Requirement</i>	<i>13</i>
5.1.2	<i>Peak Output Power.....</i>	<i>14</i>
5.1.3	<i>20dB Bandwidth.....</i>	<i>15</i>
5.1.4	<i>Conducted spurious emissions measured in 100kHz Bandwidth</i>	<i>17</i>
5.1.5	<i>Spurious Emission</i>	<i>26</i>
5.1.6	<i>Frequency Separation.....</i>	<i>27</i>
5.1.7	<i>Number of hopping frequency.....</i>	<i>28</i>
5.1.8	<i>Time of Occupancy.....</i>	<i>29</i>
5.1.9	<i>Conducted emissions.....</i>	<i>31</i>
5.1.10	<i>Radiated Emission.....</i>	<i>32</i>
6.	PHOTOGRAPHS OF THE TEST SET-UP	33
7.	LIST OF TABLES	37
8.	LIST OF PHOTOGRAPHS	37

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

Shenzhen Accurate Technology Co., Ltd.

F1, Bldg. A, Changyuan New Material Port, Keyuan Rd., Science & Industry Park Nanshan District, Shenzhen 518057, P.R. China

FCC Registration No.: 752051

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				
Signal Generator	Rohde&Schwarz	SMT03	100059	2015-01-11
Voltage Probe	Rohde&Schwarz	URV5-Z2	100012	2015-01-11
Voltage Probe	Rohde&Schwarz	URV5-Z2	100013	2015-01-11
Field Probe	ETS	HI-6005	121578	2015-01-11
Power Amplifier	AR	250W1000A	335304	2015-01-11
Power Amplifier	MILMEGA	AS0860-75/45	1040084	2015-01-11
Power Meter	Rohde & Schwarz	NRVD	100041	2015-01-11
Broadband antenna	CHASE	CBL6111C	2576	N/A
Horn Antenna	AR	AT4002A	305754	N/A
Radio Test Suite				
Receiver	Rohde & Schwarz	ESCS30	100307	2015-01-11
Conducted Emission				
Test Receiver	Rohde & Schwarz	ESCS30	100307	2015-01-11
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	2015-01-11
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2015-01-11
50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	2015-01-11

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 basis using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are $\pm 3\text{dB}$.

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix 1 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 Material 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 EUTs are Bluetooth Portable speaker with handle.
All EUTs are identical in function, circuit design and components employed, except different color of enclosure.
For details refer to the User Manual and Circuit Diagram.

3.2 Ratings and System Details

Table 2: Rating of EUT

Kind of Equipment:	Bluetooth Portable speaker with handle
Type Designation:	NS-SPBT02-BL, NS-SPBT02-G, NS-SPBT02-P, NS-SPBT02-Y, NS-SPBT02-BL-C, NS-SPBT02-G-C, NS-SPBT02-P-C, NS-SPBT02-Y-C
FCC ID	Z5YNS-SPBT02
IC	10828A-SPBT02

Table 3: Technical Specification of EUT

Technical Specification	Value
Operating Frequency band	2402 – 2480 MHz
Channel separation	1MHz
Extreme Temperature Range	-20°C to +55°C
Operation Voltage	DC3.7V via lithium Battery
Modulation	GFSK, $\pi/4$ DQPSK, 8DPSK
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	2dBi
RF Output Power	0.00114W (0.56dBm)

Table 4: Frequency hopping information

Technical Specification	Description
Hopping Range	Hereby we declare that the maximum frequency of this device is: 2402-2480MHz. This is according the Bluetooth Core Specification V2.1+EDR for devices which will be operated in the USA. This was checked during the Bluetooth Qualification tests (Test Case: TRM/CA/04-E).
Hopping Sequence	Example of a 79 hopping sequence in data mode: 33,04,21,44,23,42,53,46,55,48,40,59,72,29,76,31,08,73,07,75,09,45,60,39,58,13,47,11,77,52,35,50,65,54,67,56,69,62,71,64, 7,25,27,66,57,70,74,61,78,63,10,41,05,43,15,44,64,68,02,70,06,01,51,03,55,05,03,66,53,49,36,47,
Receiver input bandwidth	<p>The input bandwidth of the receiver is 1MHz. In every connection one Bluetooth device is the master and the other one is the slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master.</p> <p>Additionally the type of connection is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings.</p> <p>Repeating of a packer has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case.</p> <p>That means a repeated packet will not be send on the same frequency, it is send on the next frequency of the hopping sequence.</p>

3.3 Independent Operation Modes

The basic operation modes are:

- A. BT Transmitting
 - 1. Low channel
 - 2. Middle channel
 - 3. High channel
- B. BT Receiving
- C. Audio in
- D. Charging
- 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: 2003.

Due to models' description indicated in clause 3.1, full test was applied on models NS-SPBT02-Y and NS-SPBT02-BL only.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested with following accessories

Description	Manufacturer	Type	S/N
Notebook	Lenovo	4290-RT8	R9-FW93G
Printer	HP	HP laserjet 1015	CNFG030424
iPhone	Apple	MD235ZP/A	C8PJLWZNDTC0

4.4 Countermeasures to achieve EMC Compliance

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

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

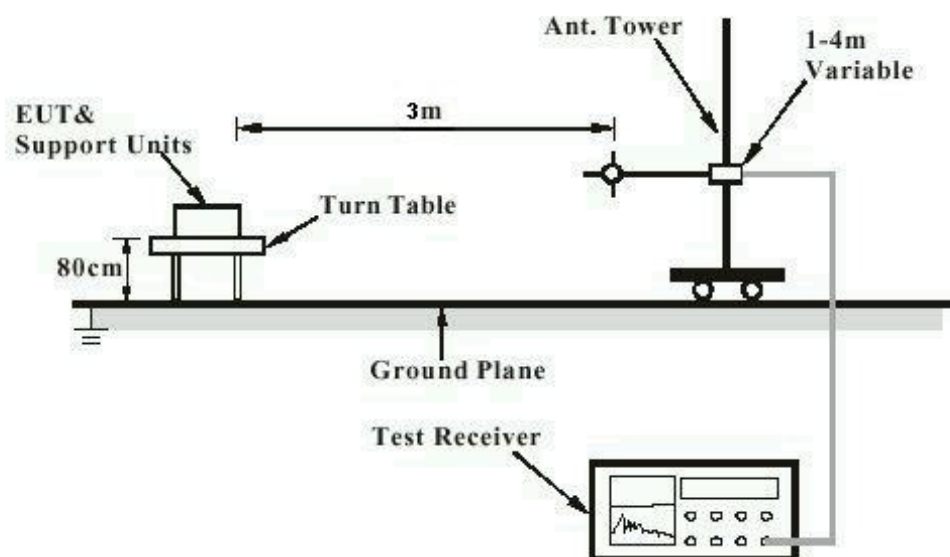


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

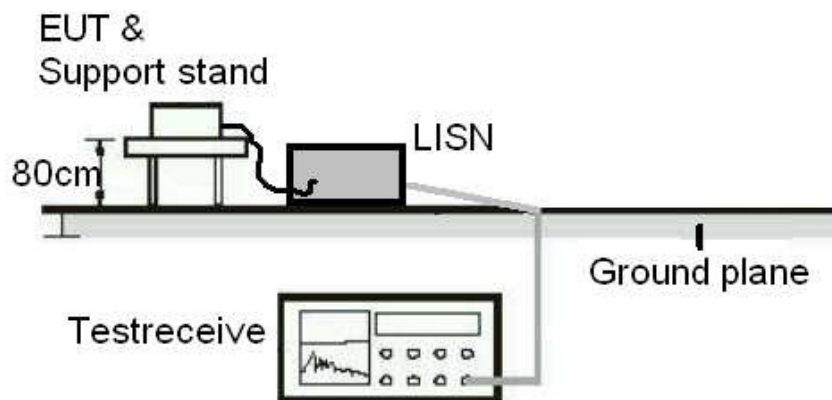
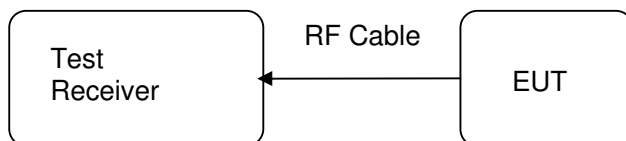


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Passed**

Test date	:	2014-03-29
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203 RSS-Gen 7.1.4
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

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

Refer to EUT photo for details.

5.1.4 99% Bandwidth

RESULT:
Passed

Date of testing : 2013-03-26
 Test standard : RSS-Gen clause 4.6.1
 Basic standard : ANSI C63.4: 2003
 Kind of test site : Shielded room

Test setup

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

Table 9: Test result of 99% Bandwidth, GFSK modulation

Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	942	/	Pass
Mid Channel	2441	948	/	Pass
High Channel	2480	936	/	Pass

Table 10: Test result of 99% Bandwidth, 8DPSK modulation

Channel	Channel Frequency (MHz)	99% Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	1206	/	Pass
Mid Channel	2441	1206	/	Pass
High Channel	2480	1206	/	Pass

5.1.5 Conducted spurious emissions measured in 100kHz Bandwidth

RESULT:**Passed**

Date of testing : 2013-03-26
Test standard : FCC part 15.247(d)
RSS-210 A8.5
Basic standard : ANSI C63.4: 2003
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

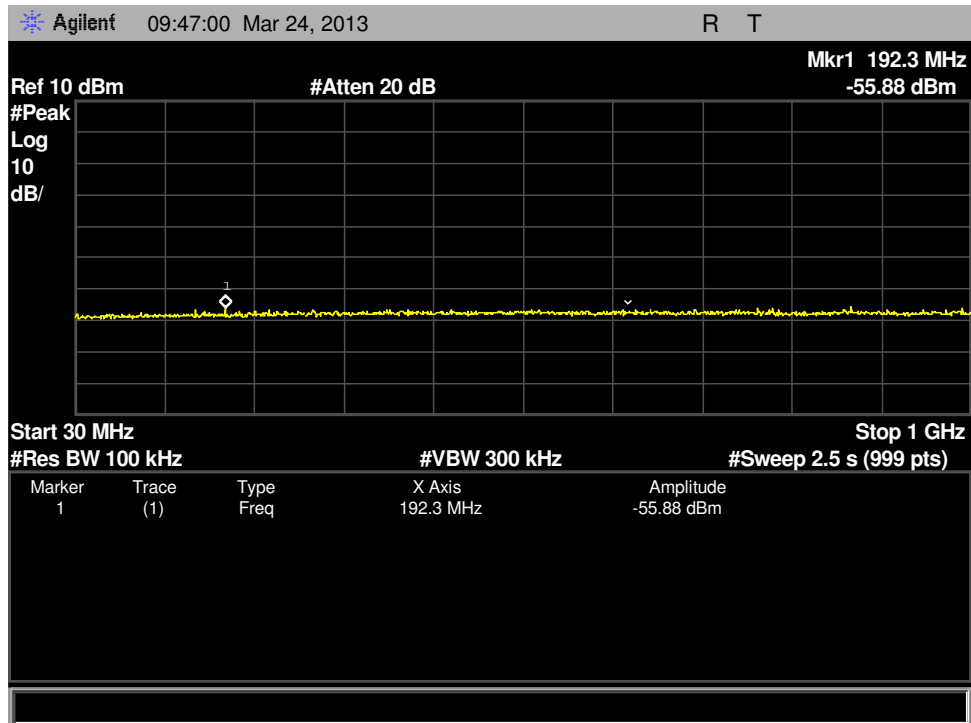
Test setup

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

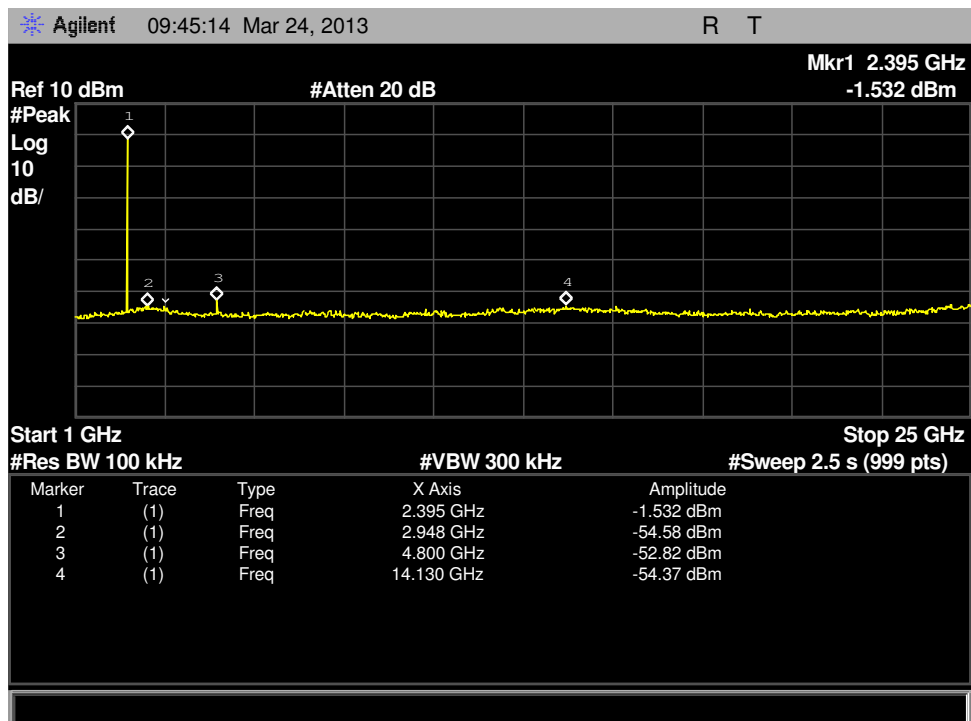
All emissions are more than 20dB below fundamental, details refer to following test plot, and compliance is achieved as well.

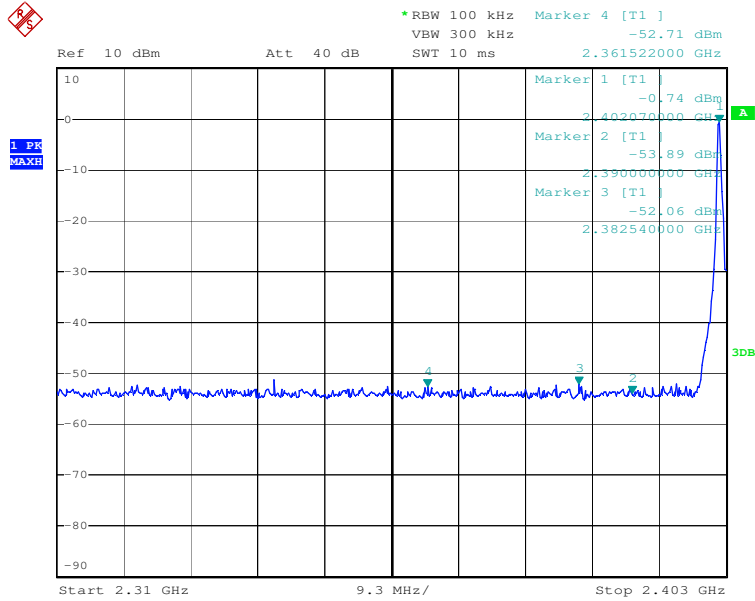
Test Plot of 100kHz Bandwidth of Frequency Band Edge, GFSK modulation

Low Channel, below 1GHz

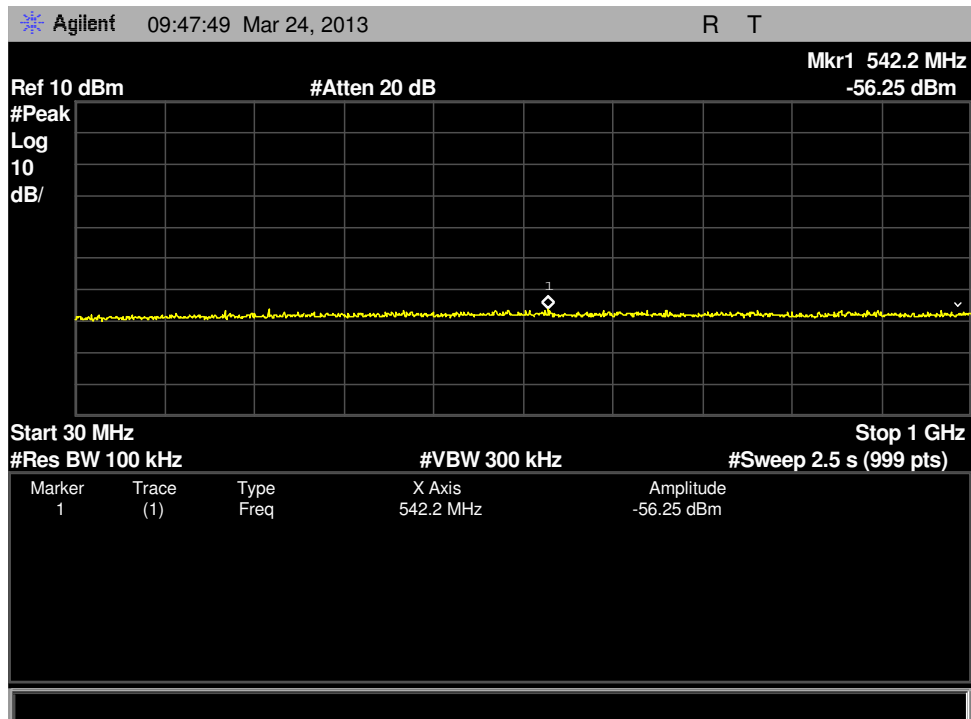


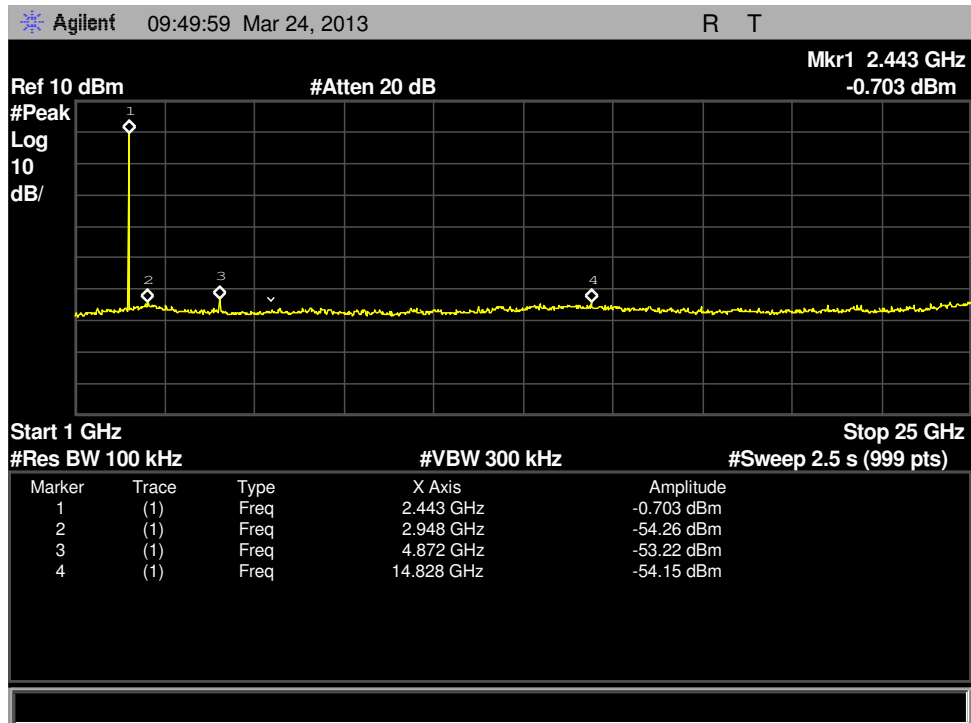
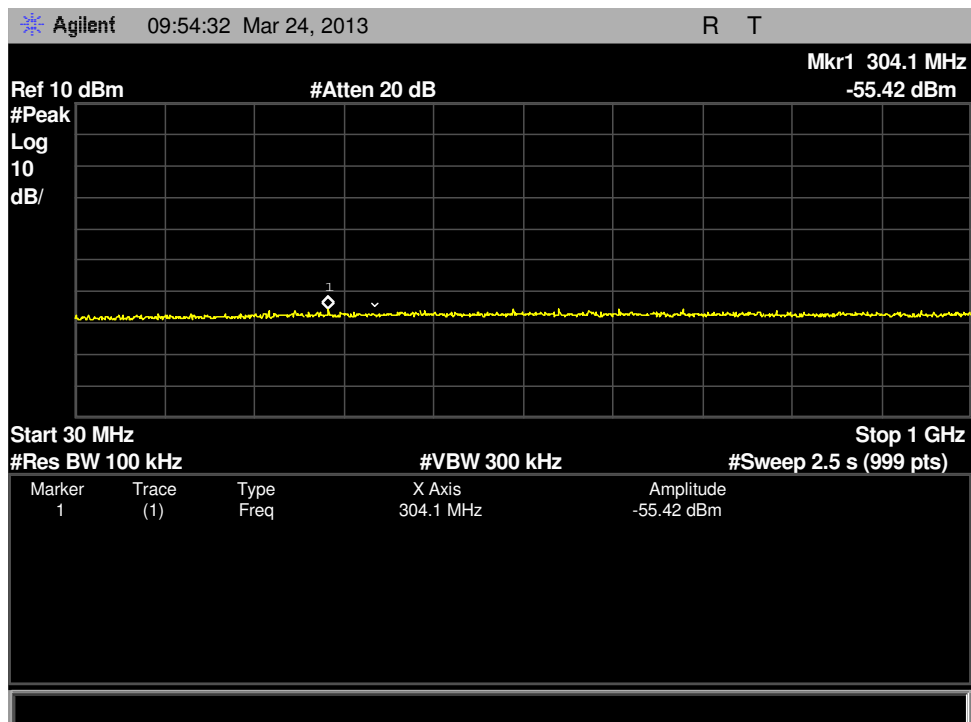
Low Channel, above 1GHz

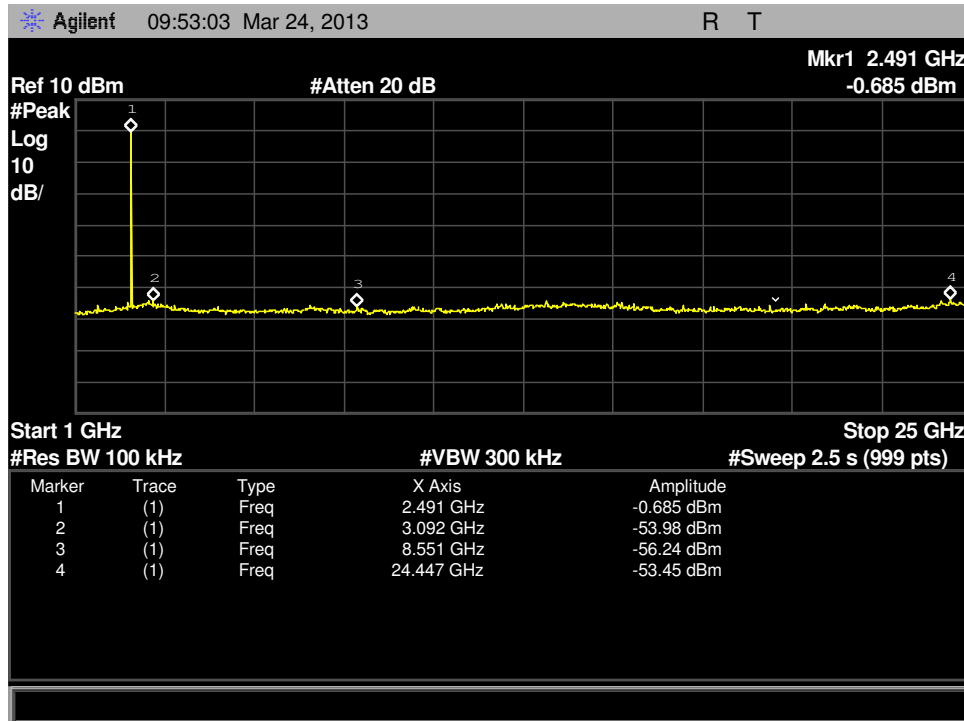
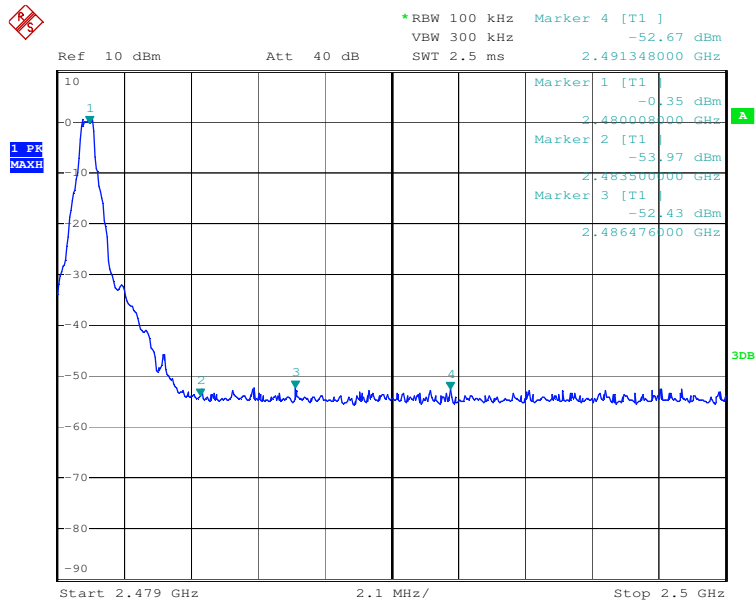


Low Channel, Band Edge


Date: 26.MAR.2013 10:27:31

Middle Channel, below 1GHz


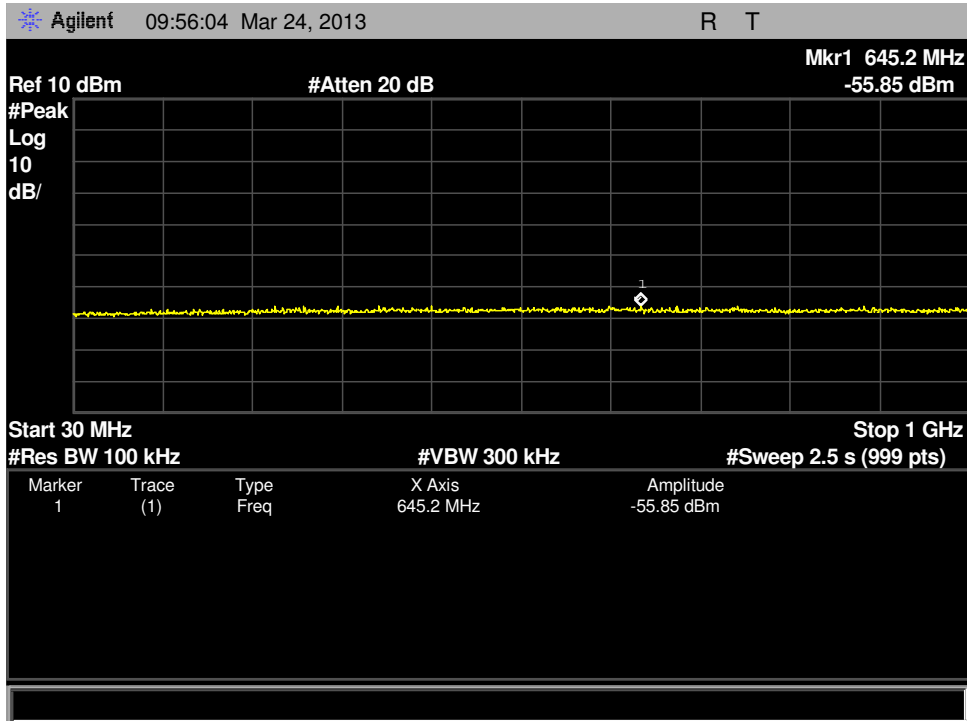
Middle Channel, above 1GHz

High Channel, below 1GHz


High Channel, above 1GHz

High Channel, Band Edge


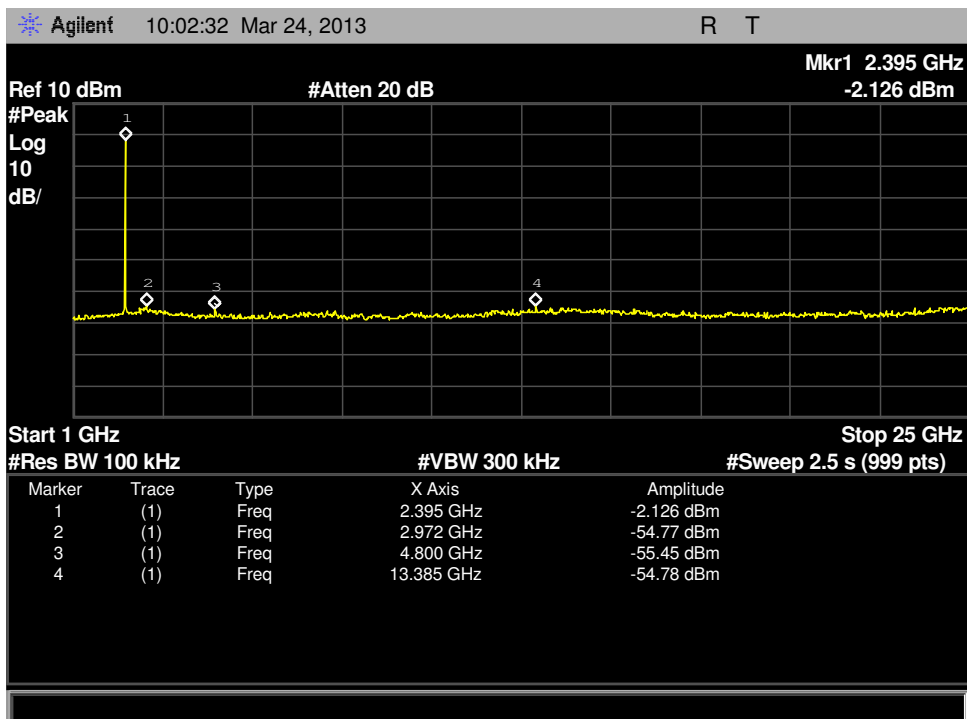
Date: 26.MAR.2013 10:31:38

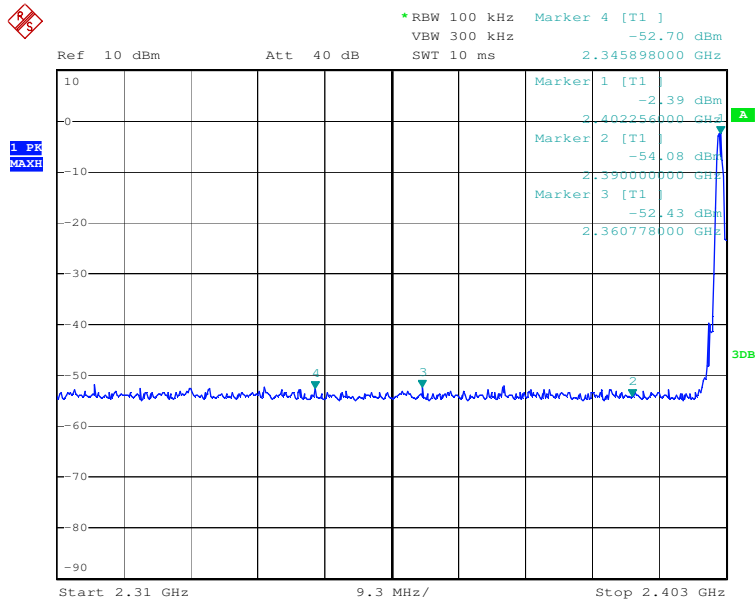
Test Plot of 100kHz Bandwidth of Frequency Band Edge, 8DPSK modulation

Low Channel, below 1GHz

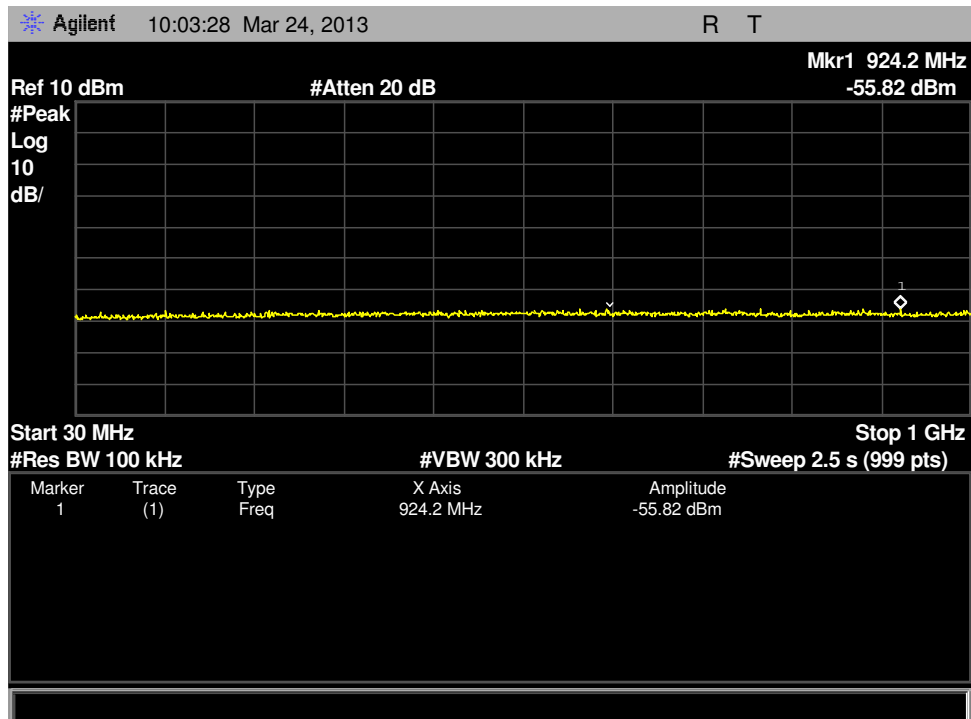


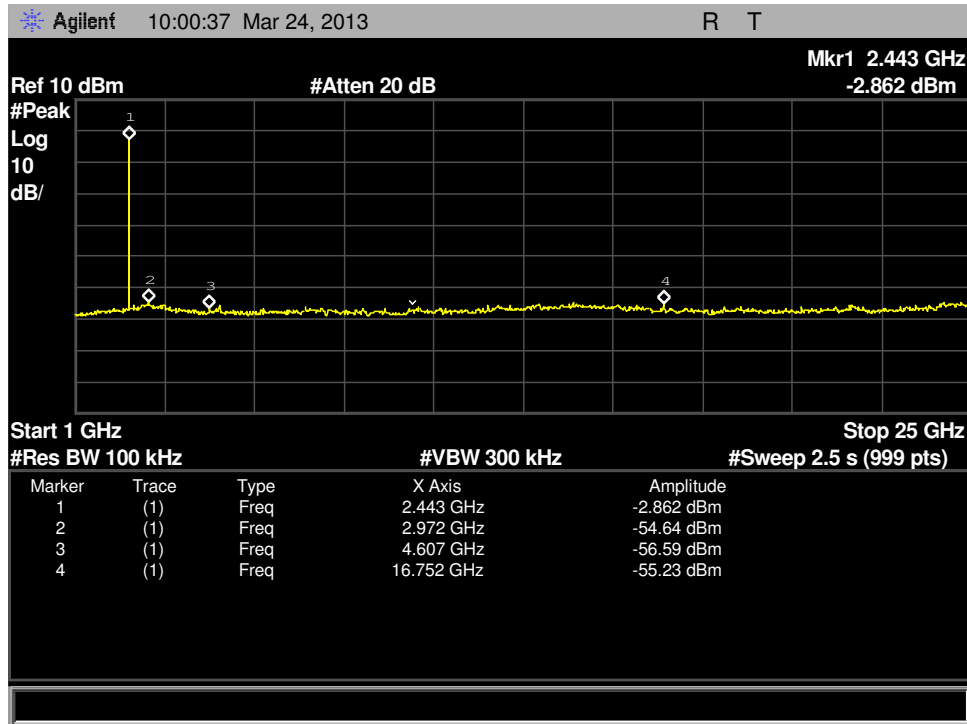
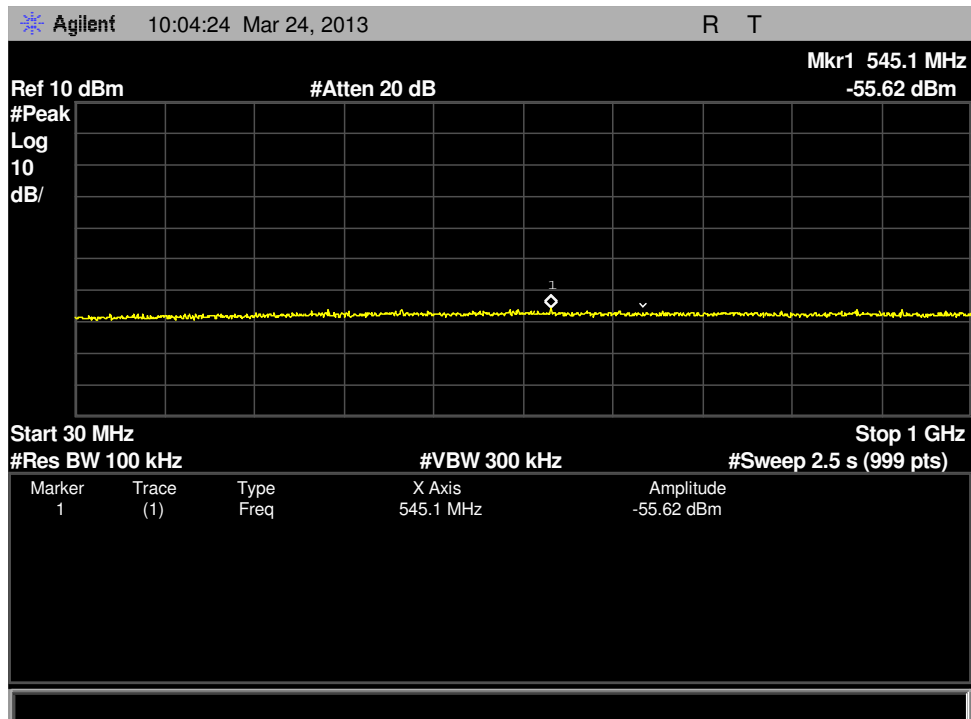
Low Channel, above 1GHz

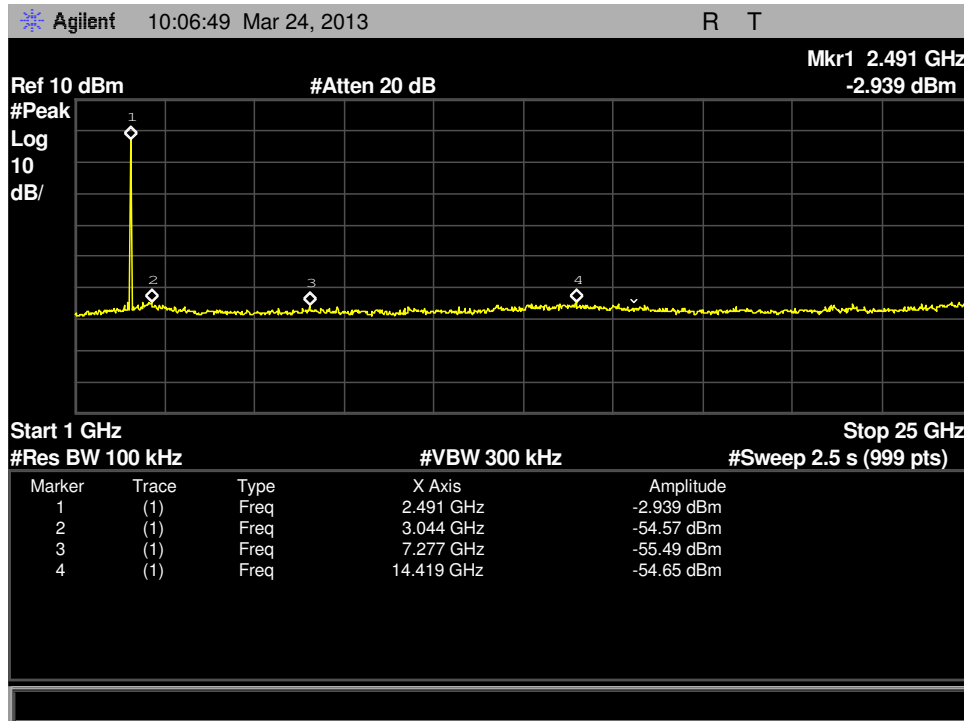
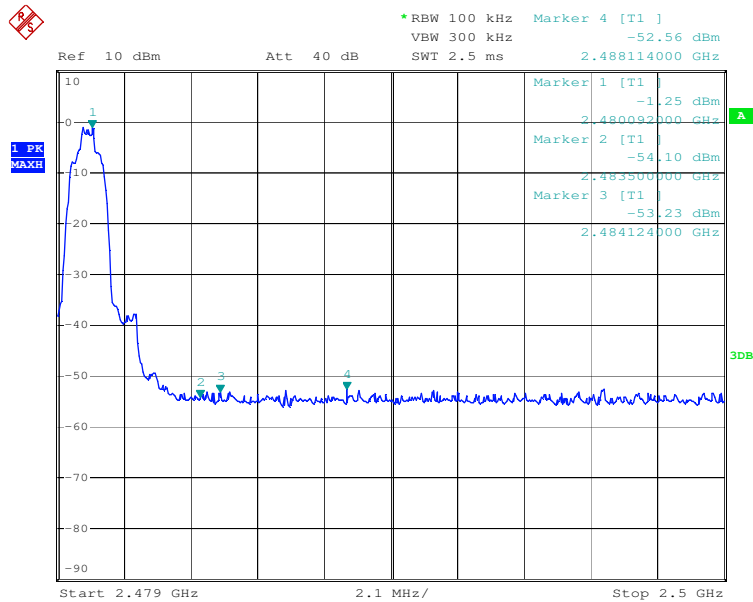


Low Channel, Band Edge


Date: 26.MAR.2013 10:28:53

Middle Channel, below 1GHz


Middle Channel, above 1GHz

High Channel, below 1GHz


High Channel, above 1GHz

High Channel, Band Edge


Date: 26.MAR.2013 10:30:14

5.1.6 Spurious Emission

RESULT:**Passed**

Date of testing : 2013-03-16 to 2013-03-22
Test standard : FCC part 15.247(d)
FCC Part 15.205
RSS-210 Clause 2.2
Basic standard : ANSI C63.4: 2003
Limits : Refer to 15.209(a) of FCC part 15.247(d)
Kind of test site : 3m Semi-Anechoic Chamber

Test setup

Test Channel : Low/ Middle/ High
Operation mode : A, C
Ambient temperature : 25°C
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.

Table 14: Test result of Time of Occupancy, 8DPSK modulation

Channel	Data Mode	Pulse width (ms)	Measured Dwell time (s)	Limit (s)	Result
Low Channel	DH1	0.44	0.14	0.4	Pass
	DH3	1.72	0.28	0.4	Pass
	DH5	3.00	0.32	0.4	Pass
Mid Channel	DH1	0.45	0.14	0.4	Pass
	DH3	1.72	0.28	0.4	Pass
	DH5	3.00	0.32	0.4	Pass
High Channel	DH1	0.44	0.14	0.4	Pass
	DH3	1.72	0.28	0.4	Pass
	DH5	3.00	0.32	0.4	Pass

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 : 2013-03-18
Test standard : FCC Part 15.207(a)
Basic standard : ANSI C63.4: 2003
Frequency range : 0.15 – 30MHz
Limits : FCC Part 15.207(a)
Kind of test site : Shield room

Test setup

Input Voltage : AC 120V, 60Hz via AC input of Notebook
Operation Mode : D
Earthing : Not connected
Ambient temperature : 25°C
Relative humidity : 55%
Atmospheric pressure : 101 kPa

For details refer to Appendix 1.

5.1.11 Radiated Emission

RESULT:**Passed**

Date of testing : 2013-03-26
Test standard : FCC Part 15 Per Section 15.209(a)
Clause 5.5 of ICES-003
RSS-Gen 7.1.4
Frequency range : 30 - 6000MHz
Classification : Class B
Test procedure : ANSI C63.4: 2003
CAN/CSA-CEI/IEC CISPR 22-02
RSS-Gen Table 5
Kind of test site : 3m Semi-Anechoic Chamber

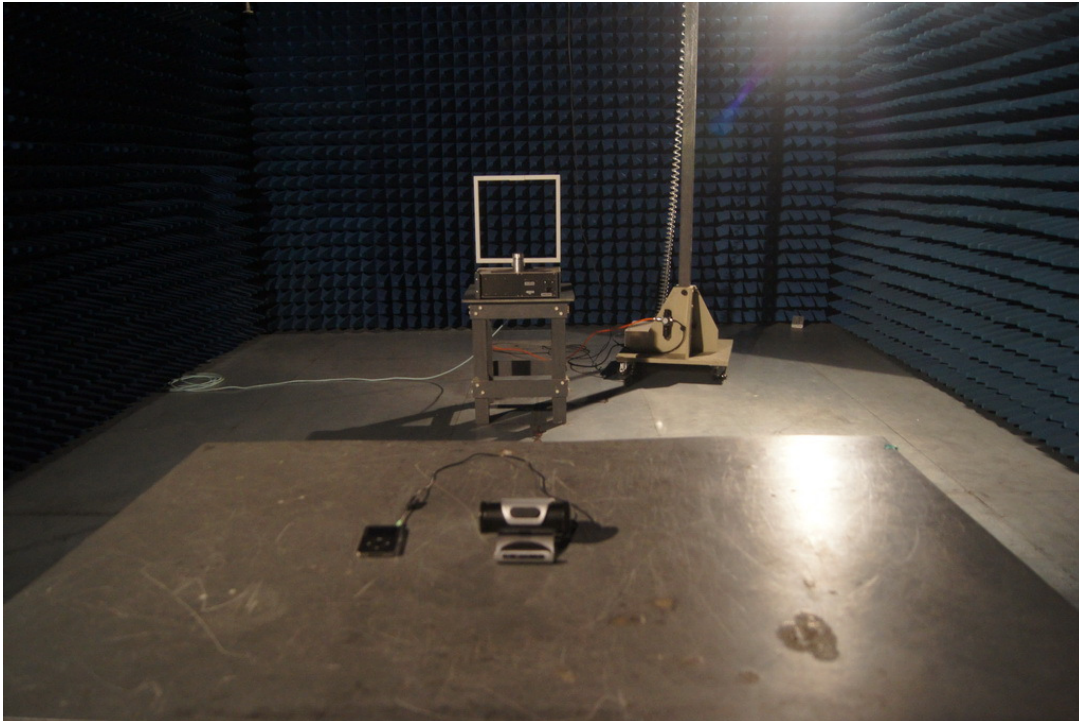
Test setup

Input Voltage : DC 3.7V
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

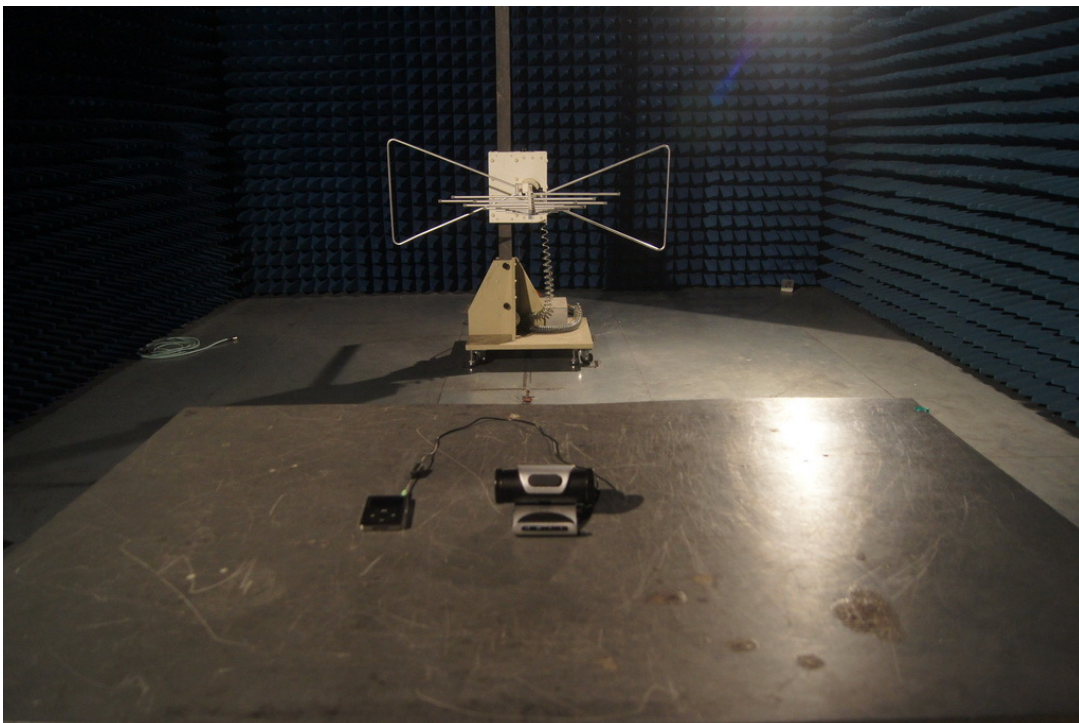
Test data refer to Appendix 1.

6. Photographs of the Test Set-Up

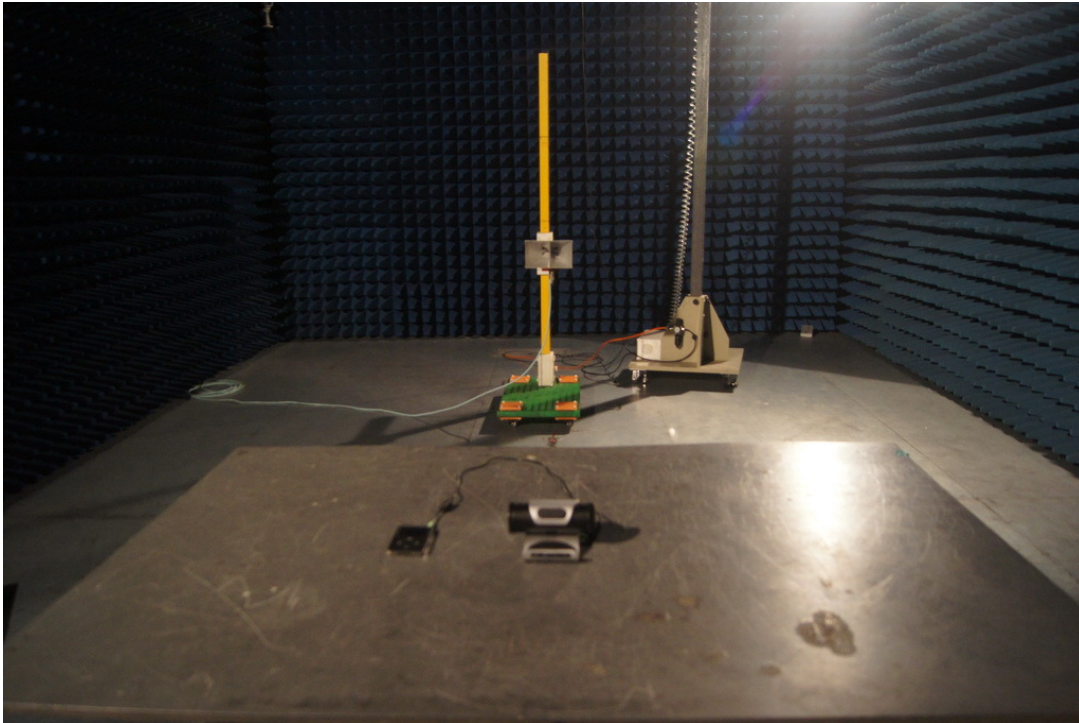
Photograph 1: Set-up for Spurious Emissions (9kHz-30MHz)



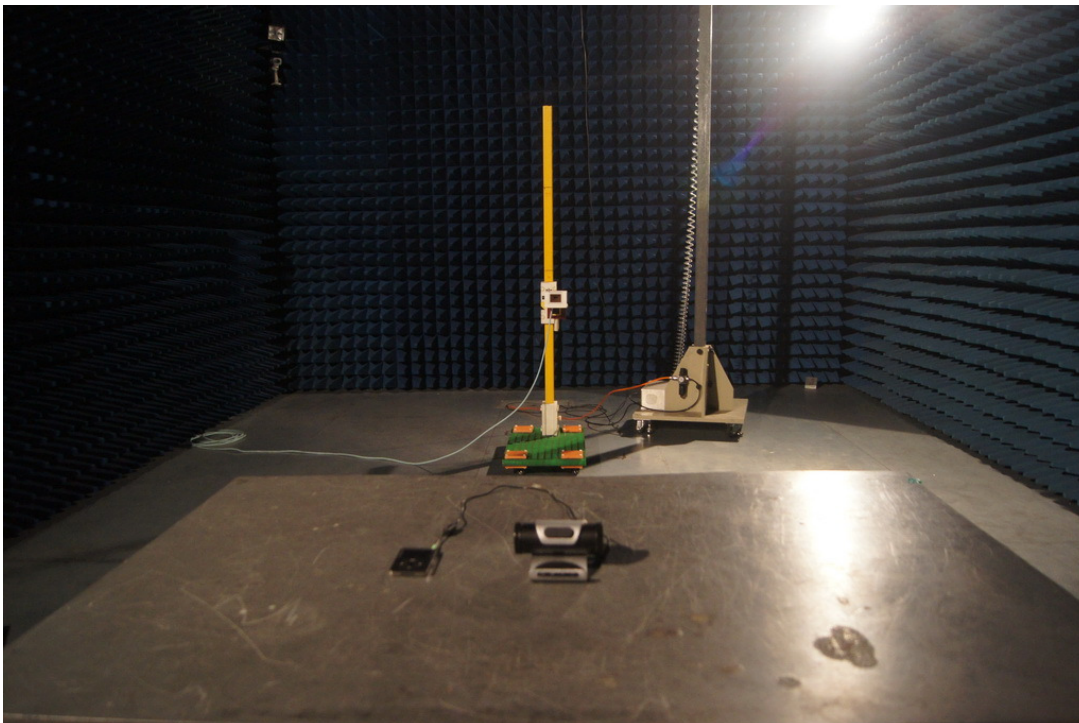
Photograph 2: Set-up for Spurious Emissions (30MHz-1GHz)



Photograph 3: Set-up for Spurious Emissions (1GHz-18GHz)



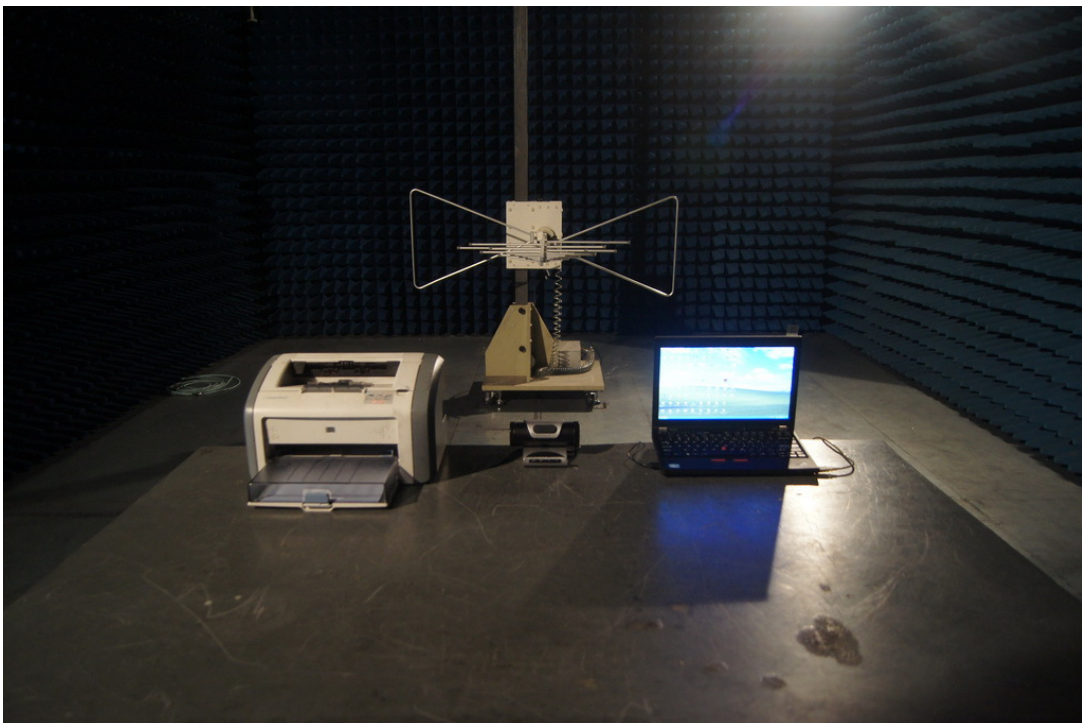
Photograph 4: Set-up for Spurious Emissions (18GHz-26GHz)



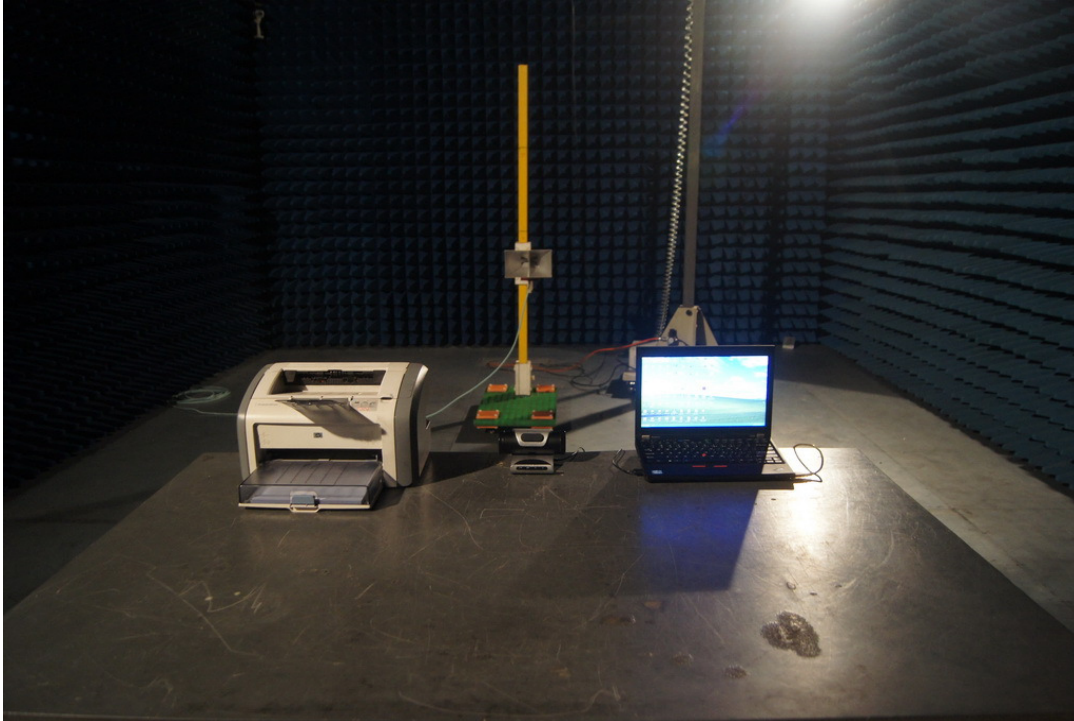
Photograph 5: Set-up for Conducted Emissions



Photograph 6: Set-up for Radiated Emissions, below 1GHz



Photograph 7: Set-up for Radiated Emissions, above 1GHz



7. List of Tables

Table 1: List of Test and Measurement Equipment	5
Table 2: Rating of EUT	7
Table 3: Technical Specification of EUT	7
Table 4: Frequency hopping information	8
Table 5: Test result of Peak Output Power, GFSK modulation	14
Table 6: Test result of Peak Output Power, 8DPSK modulation	14
Table 7: Test result of 20dB Bandwidth, GFSK modulation	15
Table 8: Test result of 20dB Bandwidth, 8DPSK modulation	15
Table 9: Test result of Frequency Separation	27
Table 10: Test result of Number of hopping frequency	28
Table 11: Test result of Time of Occupancy, GFSK modulation	29
Table 12: Test result of Time of Occupancy, 8DPSK modulation	30

8. List of Photographs

Photograph 1: Set-up for Spurious Emissions (9kHz-30MHz)	33
Photograph 2: Set-up for Spurious Emissions (30MHz-1GHz)	33
Photograph 3: Set-up for Spurious Emissions (1GHz-18GHz)	34
Photograph 4: Set-up for Spurious Emissions (18GHz-26GHz)	34
Photograph 5: Set-up for Conducted Emissions	35
Photograph 6: Set-up for Radiated Emissions, below 1GHz	35
Photograph 7: Set-up for Radiated Emissions, above 1GHz	36

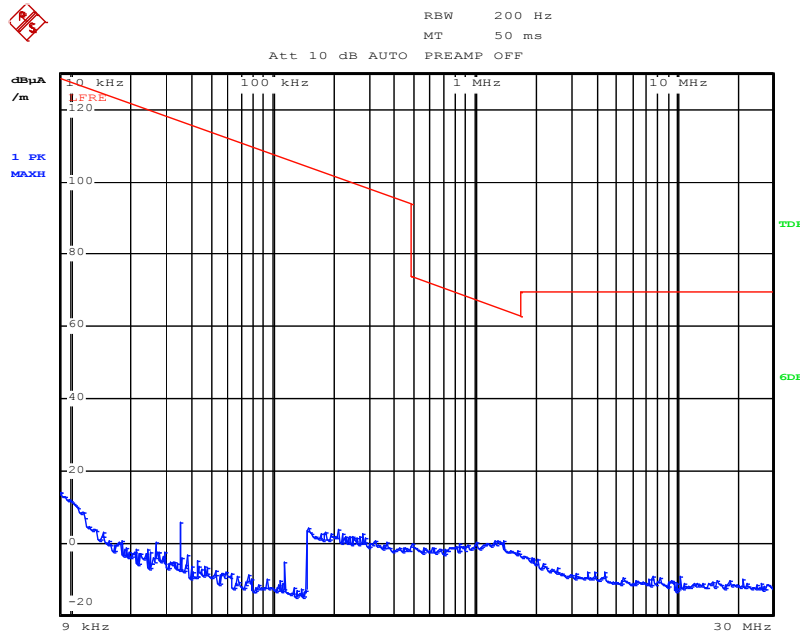
List of Figures

Figure 1: Test figure of spurious emissions, mode A.1, Horizontal polarity (9kHz – 30MHz), GFSK Modulation	4
Figure 2: Test figure of spurious emissions, mode A.1, Vertical polarity (9kHz – 30MHz), GFSK Modulation	4
Figure 3: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz), GFSK Modulation	5
Figure 4: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz), GFSK Modulation	6
Figure 5: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz – 18GHz), GFSK Modulation	7
Figure 6: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz), GFSK Modulation	8
Figure 7: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz – 25GHz), GFSK Modulation	9
Figure 8: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz), GFSK Modulation	10
Figure 9: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz), GFSK Modulation	11
Figure 10: Test figure of spurious emissions, mode A.2, Vertical polarity (9kHz – 30MHz), GFSK Modulation	11
Figure 11: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz), GFSK Modulation	12
Figure 12: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GHz), GFSK Modulation	13
Figure 13: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz), GFSK Modulation	14
Figure 14: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz), GFSK Modulation	15
Figure 15: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz), GFSK Modulation	16
Figure 16: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz), GFSK Modulation	17
Figure 17: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz), GFSK Modulation	18
Figure 18: Test figure of spurious emissions, mode A.3, Vertical polarity (9kHz – 30MHz), GFSK Modulation	18
Figure 19: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz), GFSK Modulation	19
Figure 20: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz), GFSK Modulation	20
Figure 21: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz – 18GHz), GFSK Modulation	21
Figure 22: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz), GFSK Modulation	22
Figure 23: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz – 25GHz), GFSK Modulation	23
Figure 24: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz), GFSK Modulation	24
Figure 25: Test figure of spurious emissions, mode A.1, Horizontal polarity (9kHz – 30MHz), 8DPSK Modulation	25
Figure 26: Test figure of spurious emissions, mode A.1, Vertical polarity (9kHz – 30MHz), 8DPSK Modulation	25

Figure 27: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz), 8DPSK Modulation	26
Figure 28: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz), 8DPSK Modulation	27
Figure 29: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz – 18GHz), 8DPSK Modulation	28
Figure 30: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz), 8DPSK Modulation	29
Figure 31: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz – 25GHz), 8DPSK Modulation	30
Figure 32: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz), 8DPSK Modulation	31
Figure 33: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz), 8DPSK Modulation	32
Figure 34: Test figure of spurious emissions, mode A.2, Vertical polarity (9kHz – 30MHz), 8DPSK Modulation	32
Figure 35: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz), 8DPSK Modulation	33
Figure 36: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GHz), 8DPSK Modulation	34
Figure 37: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz), 8DPSK Modulation	35
Figure 38: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz), 8DPSK Modulation	36
Figure 39: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz), 8DPSK Modulation	37
Figure 40: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz), 8DPSK Modulation	38
Figure 41: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz), 8DPSK Modulation	39
Figure 42: Test figure of spurious emissions, mode A.3, Vertical polarity (9kHz – 30MHz), 8DPSK Modulation	39
Figure 43: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz), 8DPSK Modulation	40
Figure 44: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz), 8DPSK Modulation	41
Figure 45: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz – 18GHz), 8DPSK Modulation	42
Figure 46: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz), 8DPSK Modulation	43
Figure 47: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz – 25GHz), 8DPSK Modulation	44
Figure 48: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz), 8DPSK Modulation	45
Figure 49: Test figure of spurious emissions, mode B, Horizontal polarity (9kHz – 30MHz), GFSK Modulation	46
Figure 50: Test figure of spurious emissions, mode B, Vertical polarity (9kHz – 30MHz), GFSK Modulation	46
Figure 51: Test figure of spurious emissions, mode B, Horizontal polarity (30MHz – 1GHz), GFSK Modulation	47
Figure 52: Test figure of spurious emissions, mode B, Vertical polarity (30MHz – 1GHz), GFSK Modulation	48
Figure 53: Test figure of spurious emissions, mode B, Horizontal polarity (1GHz – 18GHz), GFSK Modulation	49
Figure 54: Test figure of spurious emissions, mode B, Vertical polarity (1GHz – 18GHz), GFSK Modulation	50
Figure 55: Test figure of spurious emissions, mode B, Horizontal polarity (18GHz – 25GHz), GFSK Modulation	51

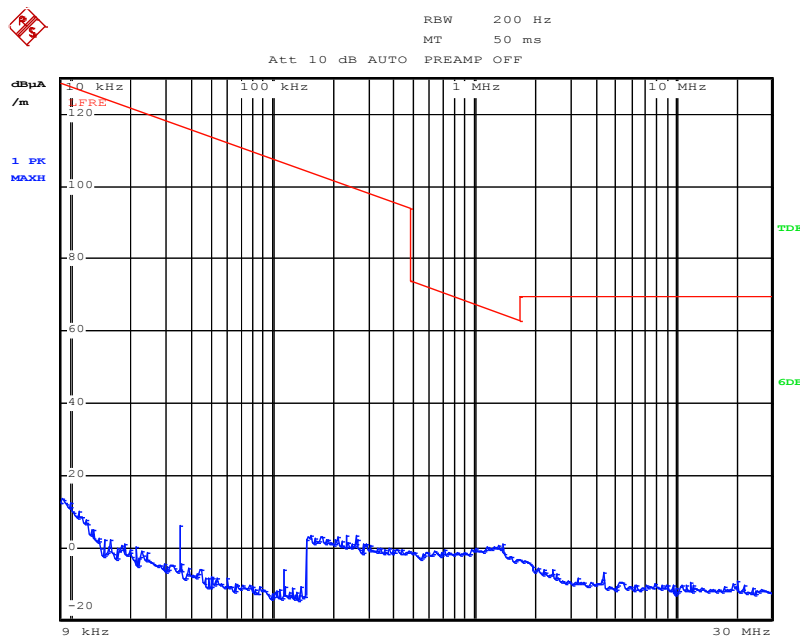
Figure 56: Test figure of spurious emissions, mode B, Vertical polarity (18GHz – 25GHz), GFSK Modulation	52
Figure 57: Test figure of spurious emissions, mode B, Horizontal polarity (9kHz – 30MHz), 8DPSK Modulation	53
Figure 58: Test figure of spurious emissions, mode B, Vertical polarity (9kHz – 30MHz), 8DPSK Modulation	53
Figure 59: Test figure of spurious emissions, mode B, Horizontal polarity (30MHz – 1GHz), 8DPSK Modulation	54
Figure 60: Test figure of spurious emissions, mode B, Vertical polarity (30MHz – 1GHz), 8DPSK Modulation	55
Figure 61: Test figure of spurious emissions, mode B, Horizontal polarity (1GHz – 18GHz), 8DPSK Modulation	56
Figure 62: Test figure of spurious emissions, mode B, Vertical polarity (1GHz – 18GHz), 8DPSK Modulation	57
Figure 63: Test figure of spurious emissions, mode B, Horizontal polarity (18GHz – 25GHz), 8DPSK Modulation	58
Figure 64: Test figure of spurious emissions, mode B, Vertical polarity (18GHz – 25GHz), 8DPSK Modulation	59
Figure 65: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal, GFSK Modulation	60
Figure 66: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical, GFSK Modulation	61
Figure 67: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal, GFSK Modulation	62
Figure 68: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical, GFSK Modulation	63
Figure 69: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal, 8DPSK Modulation	64
Figure 70: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical, 8DPSK Modulation	65
Figure 71: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal, 8DPSK Modulation	66
Figure 72: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical, 8DPSK Modulation	67
Figure 73: Test figure of Conducted emissions, Mode C, line live	68
Figure 74: Test figure of Conducted emissions, Mode C, line neutral	69
Figure 75: Test figure of Radiated emissions, Mode C, Below 1GHz, Horizontal	70
Figure 76: Test figure of Radiated emissions, Mode C, Below 1GHz, Vertical	71
Figure 77: Test figure of Radiated emissions, Mode C, Above 1GHz, Horizontal	72
Figure 78: Test figure of Radiated emissions, Mode C, Above 1GHz, Vertical	73
Figure 79: Test figure of Radiated emissions, Mode D, Below 1GHz, Horizontal	74
Figure 80: Test figure of Radiated emissions, Mode D, Below 1GHz, Vertical	75
Figure 81: Test figure of Radiated emissions, Mode D, Above 1GHz, Horizontal	76
Figure 82: Test figure of Radiated emissions, Mode D, Above 1GHz, Vertical	77

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



Date: 29.MAR.2014 20:29:22

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



Date: 29.MAR.2014 20:31:19

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

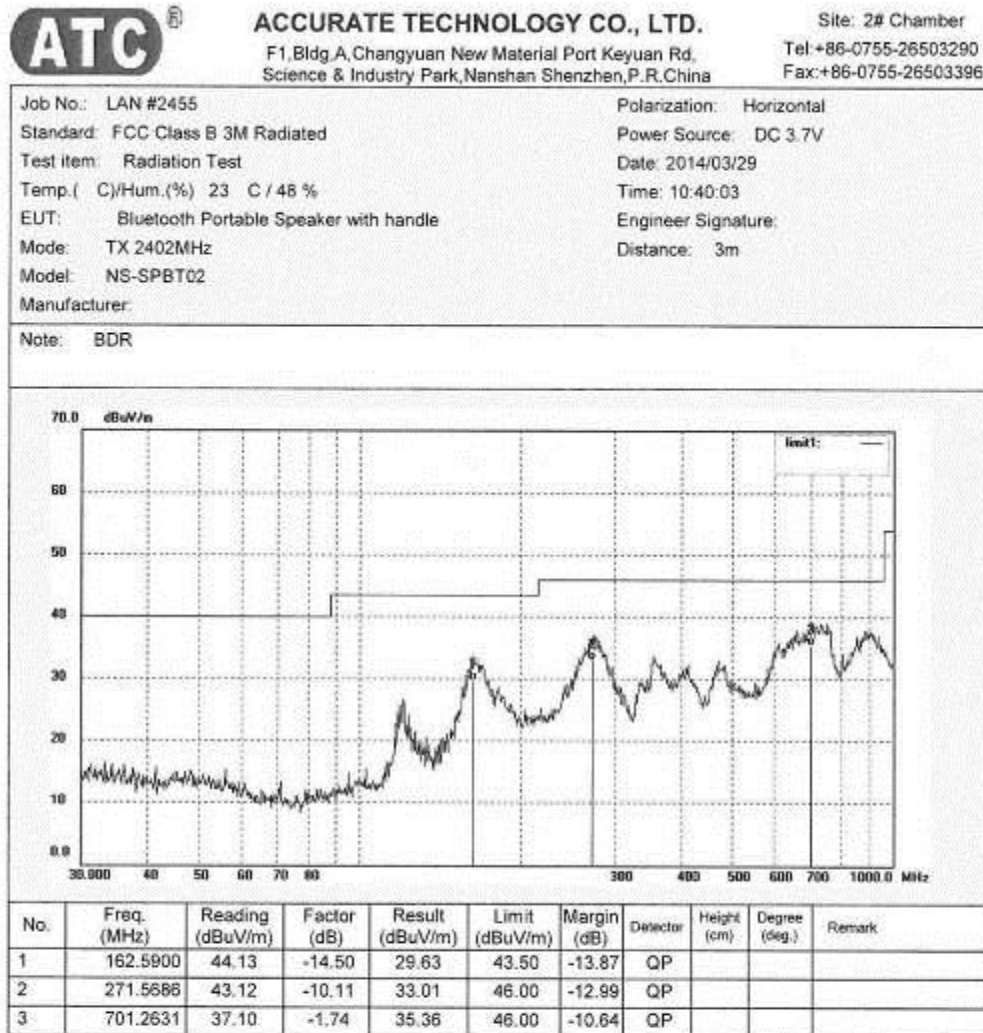


Figure 4: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz), GFSK Modulation

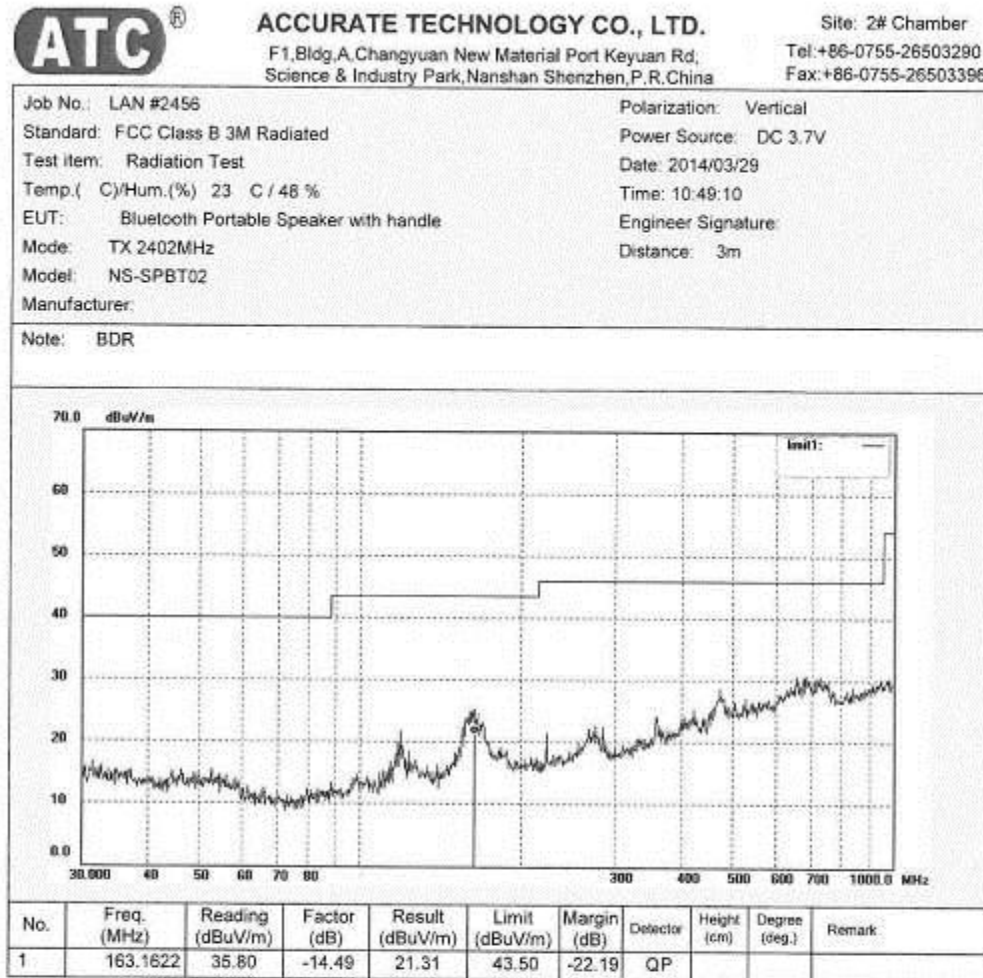


Figure 5: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz –18GHz), GFSK Modulation

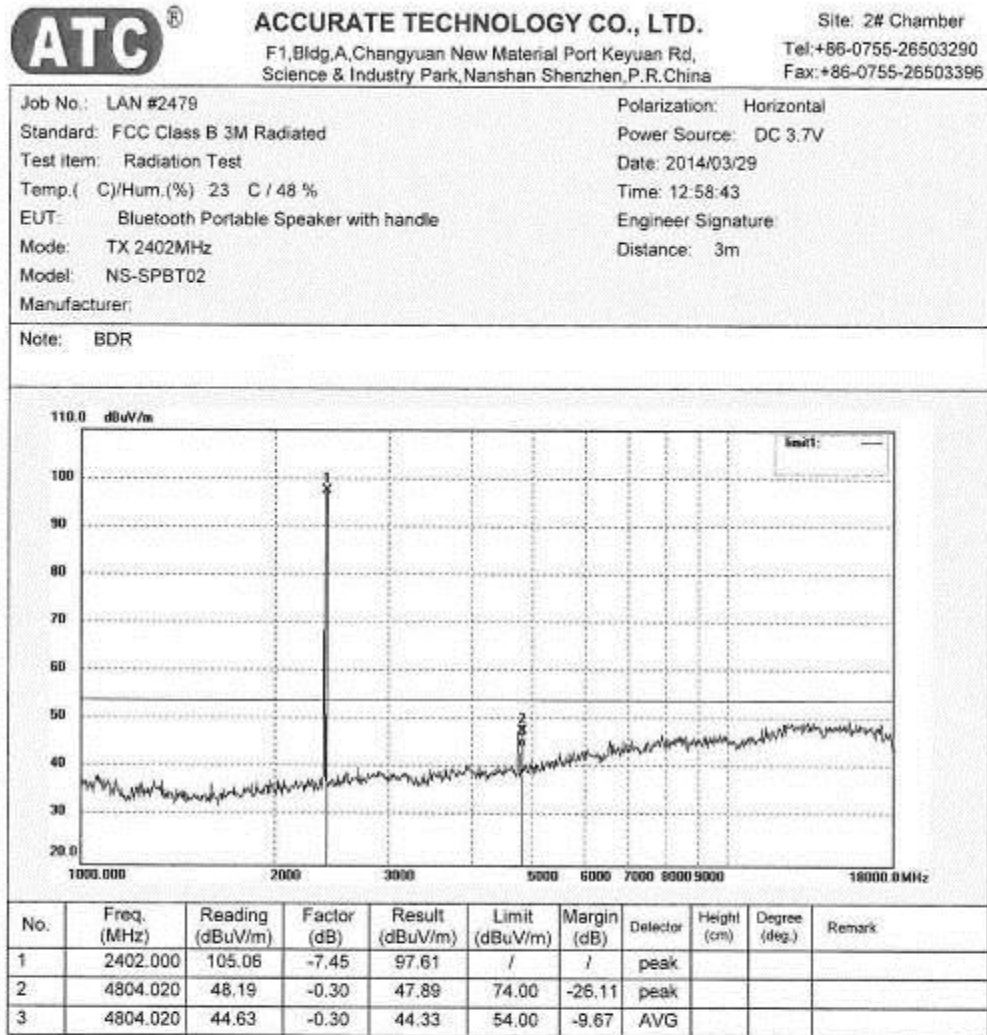


Figure 6: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz), GFSK Modulation

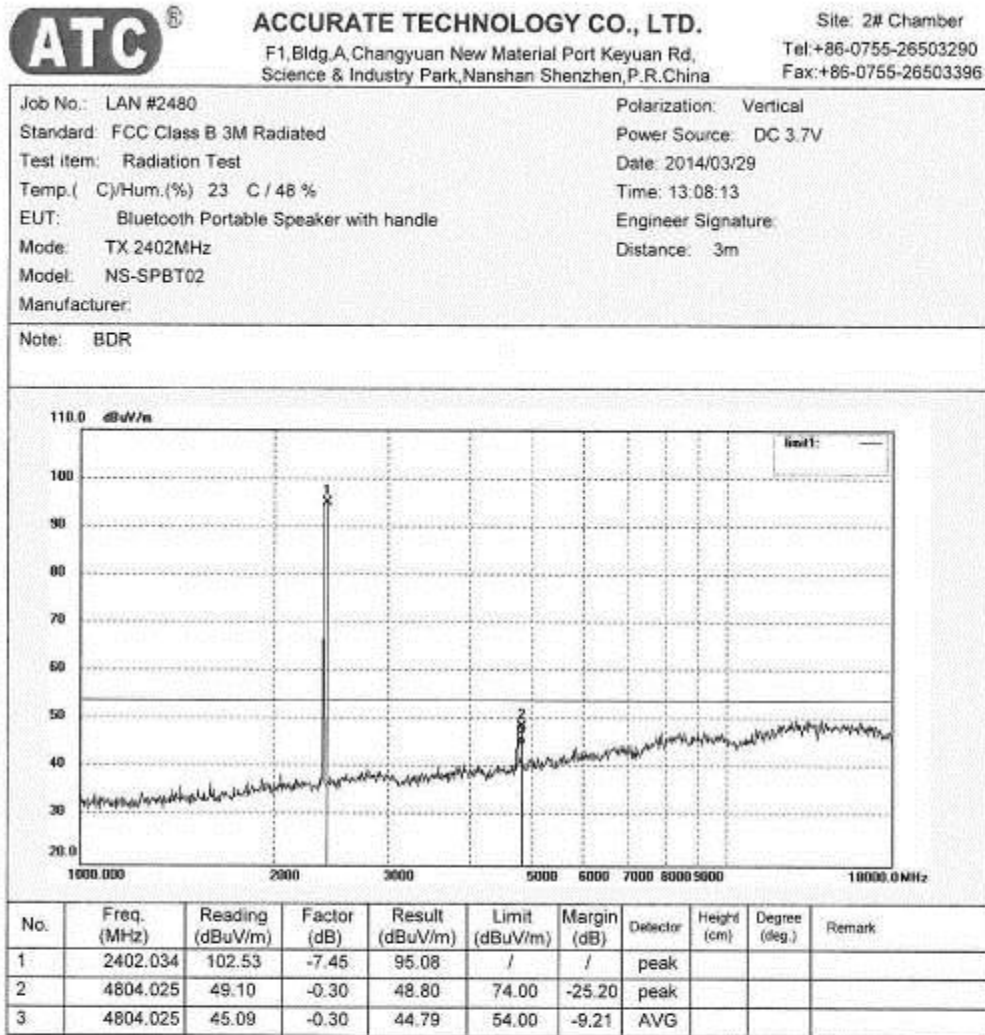


Figure 7: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz –25GHz), GFSK Modulation

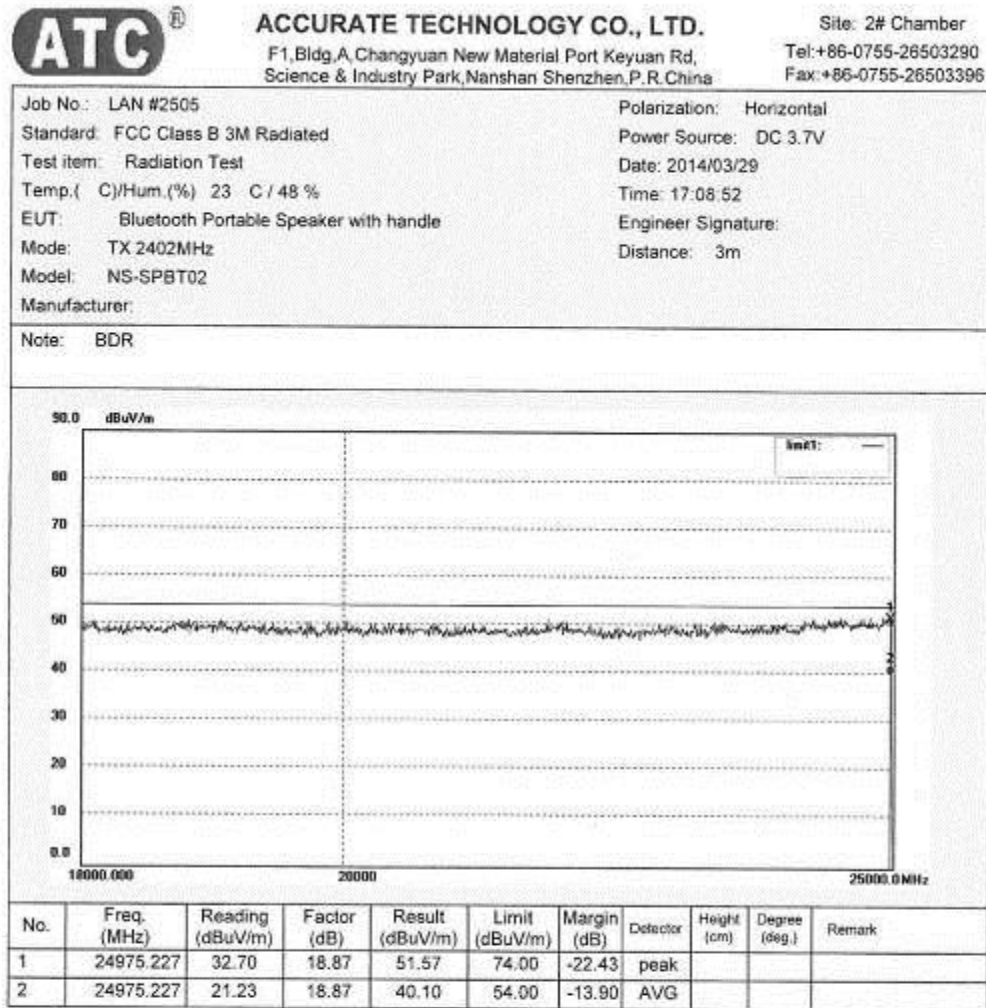


Figure 8: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz), GFSK Modulation

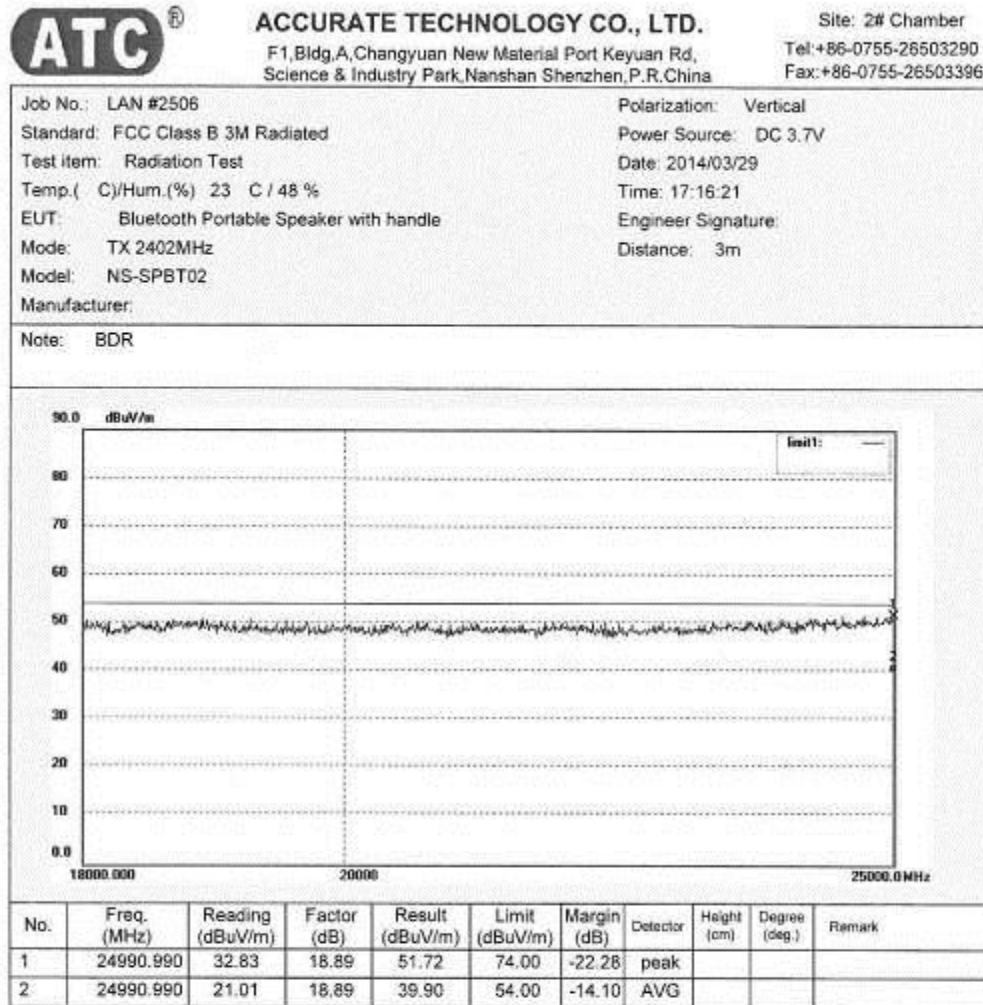
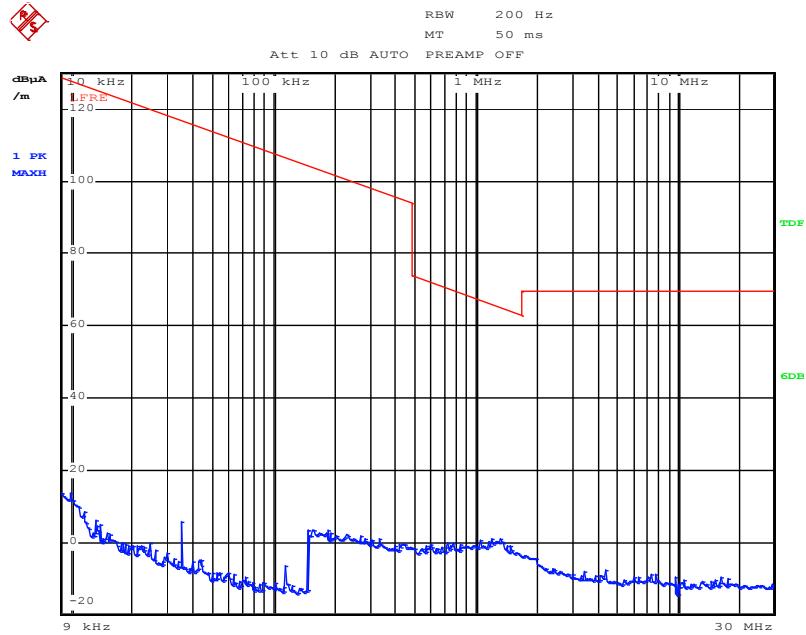
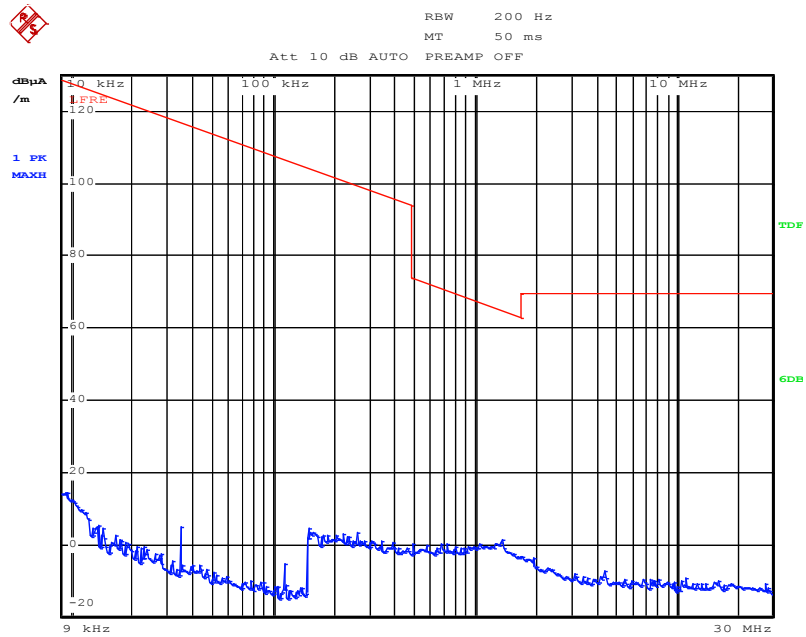


Figure 9: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz), GFSK Modulation



Date: 29.MAR.2014 20:35:20

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



Date: 29.MAR.2014 20:37:17

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

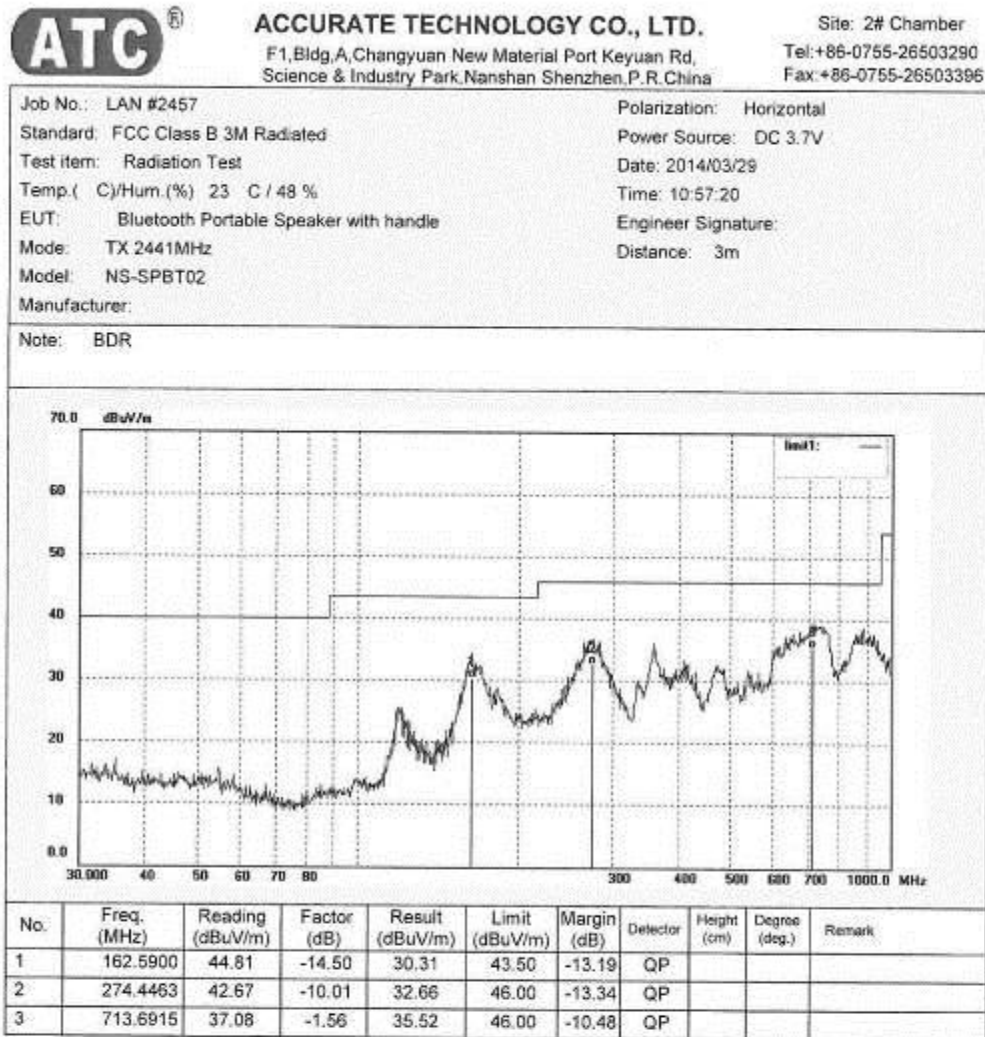


Figure 12: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GHz), GFSK Modulation

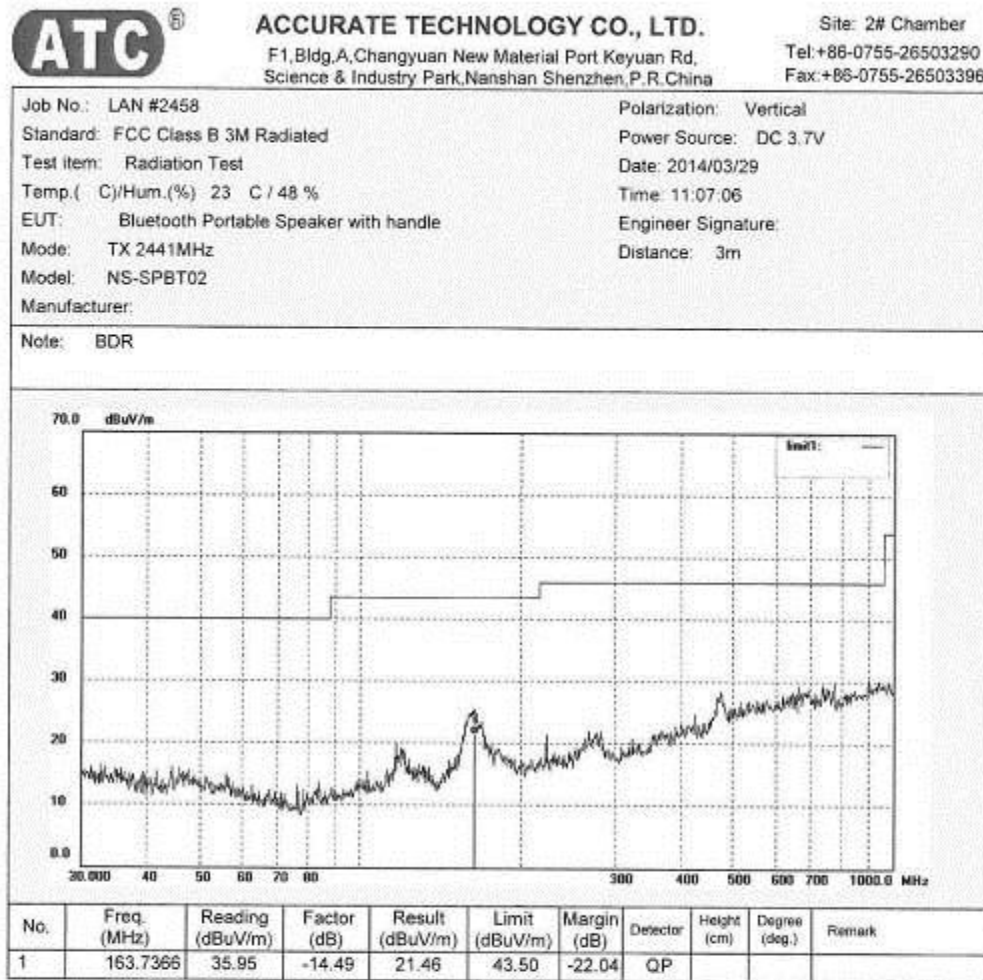


Figure 13: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz), GFSK Modulation

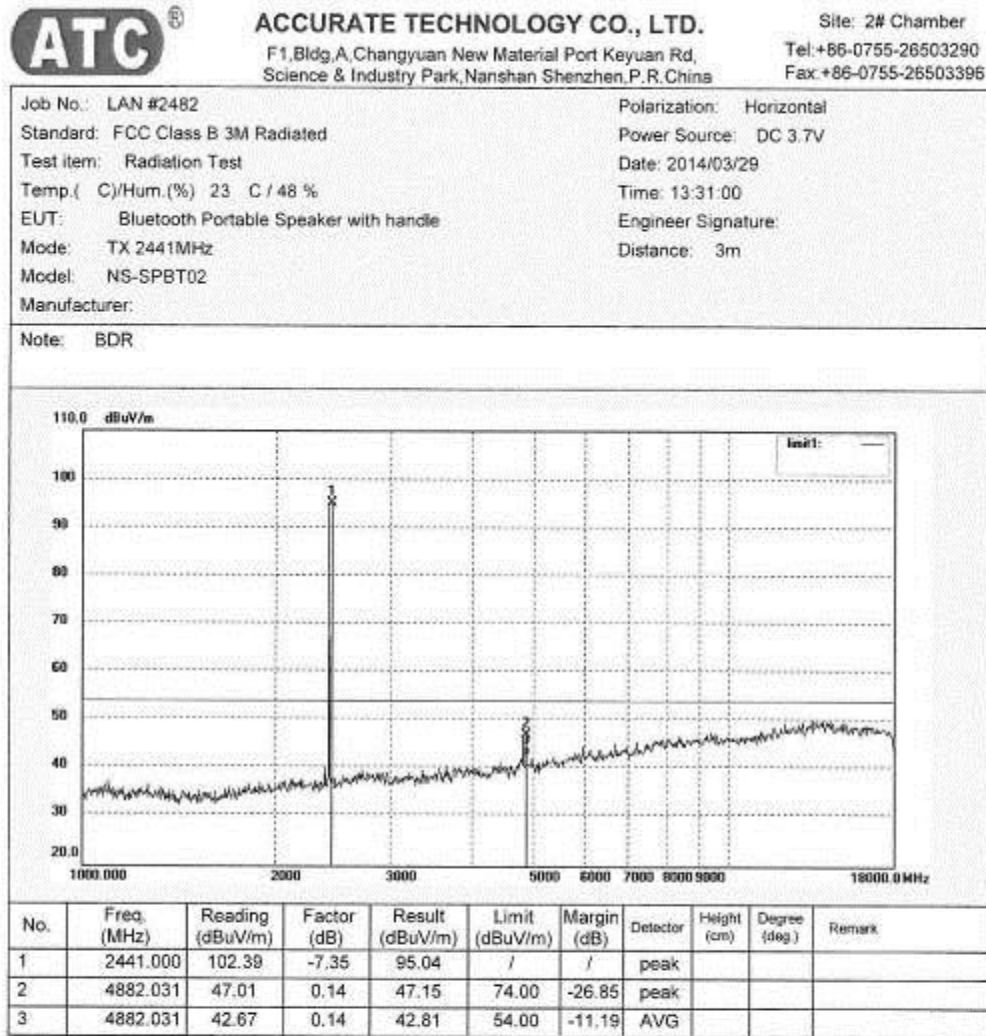


Figure 14: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz), GFSK Modulation

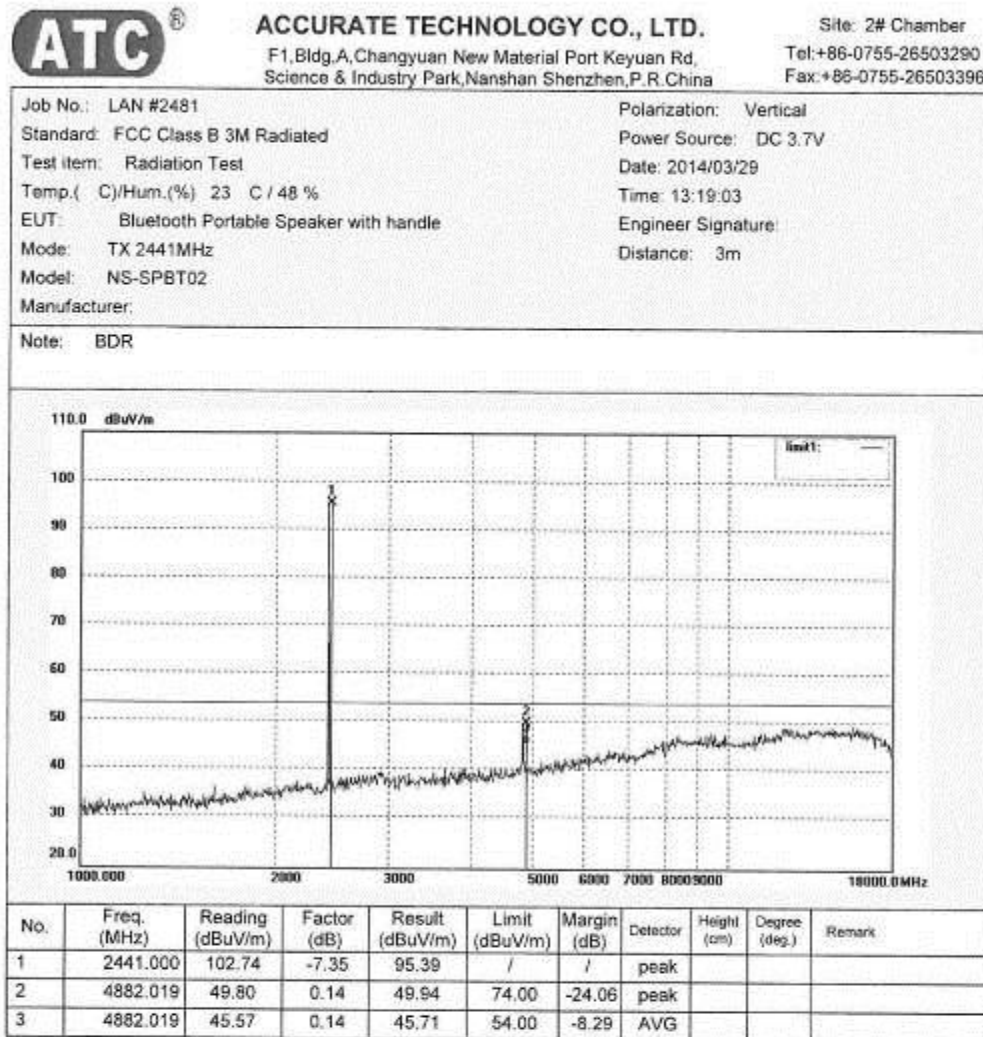


Figure 15: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz), GFSK Modulation

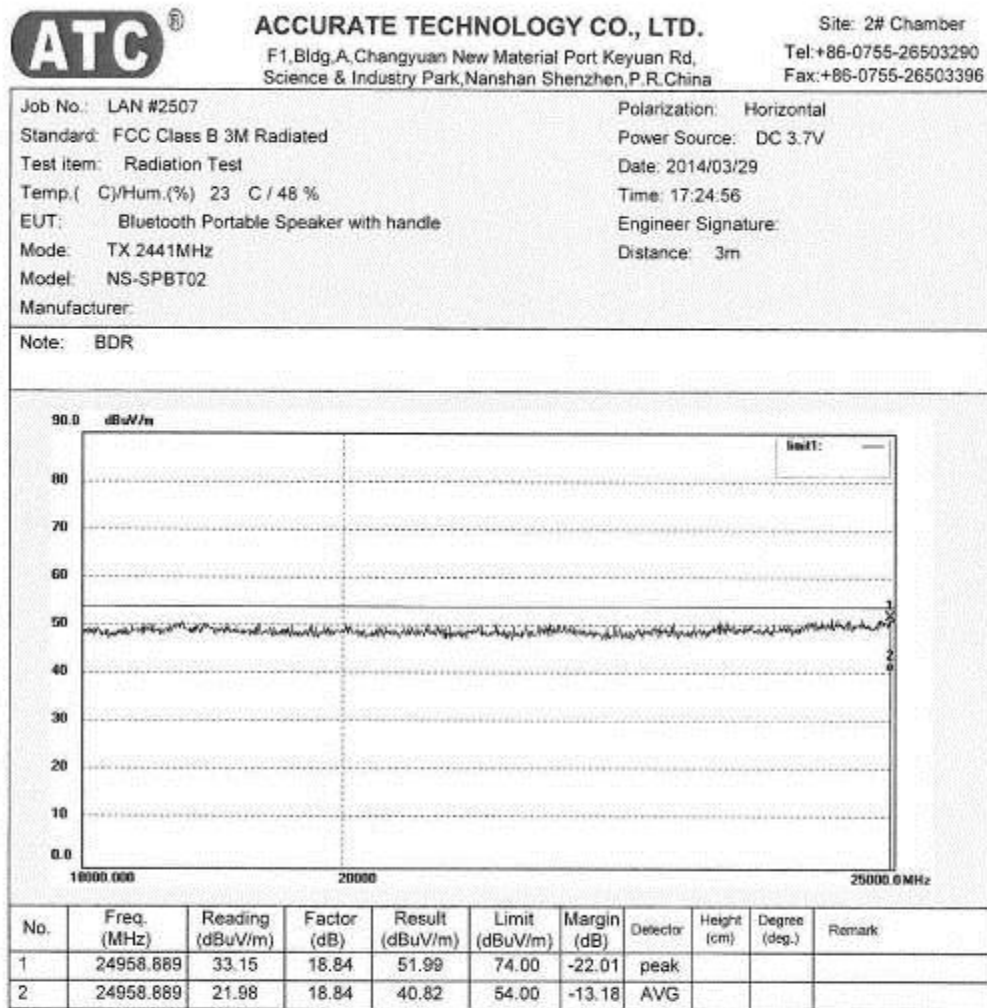


Figure 16: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz), GFSK Modulation

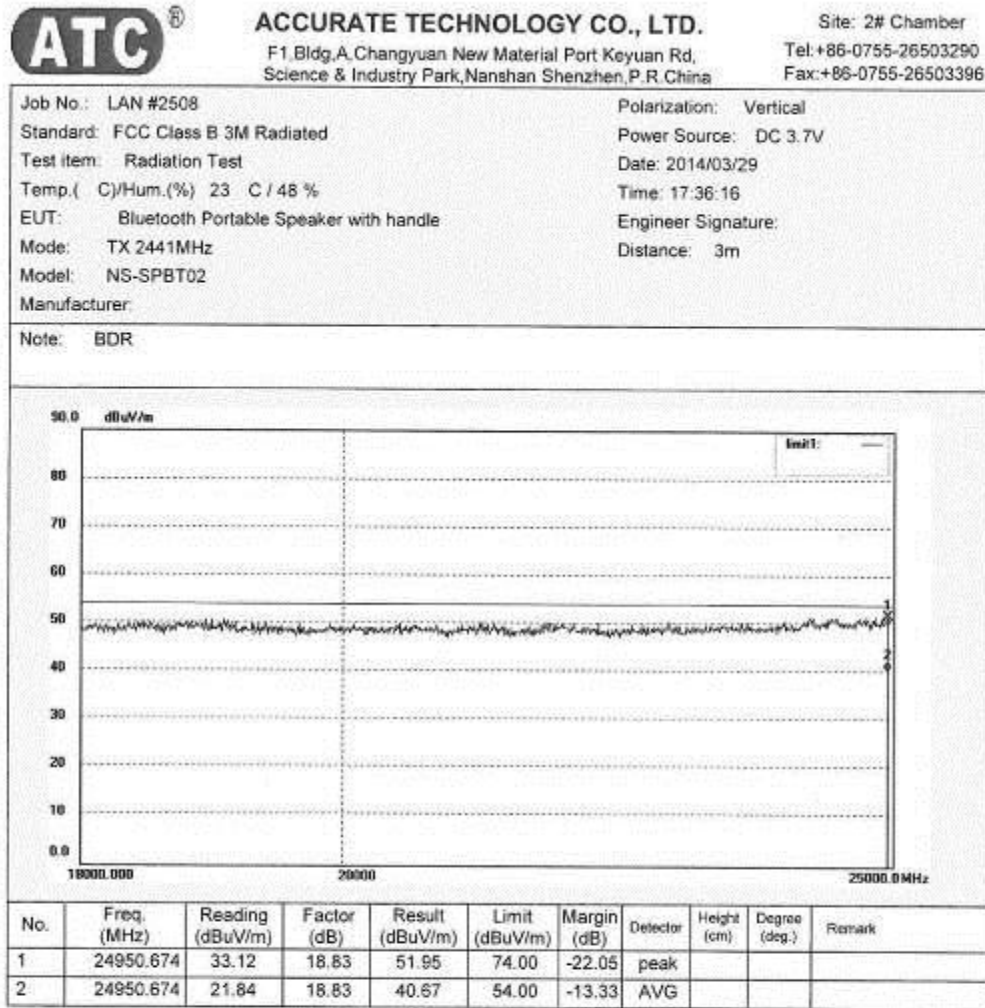
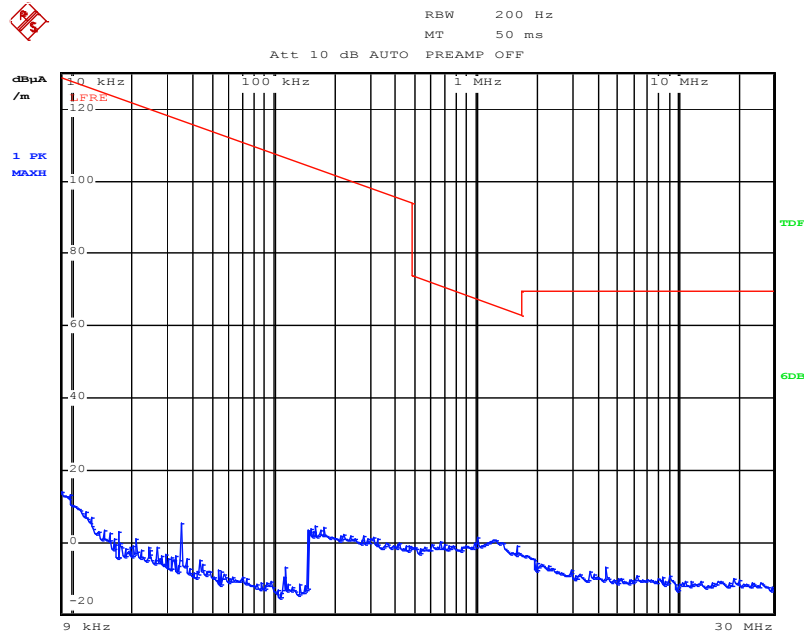
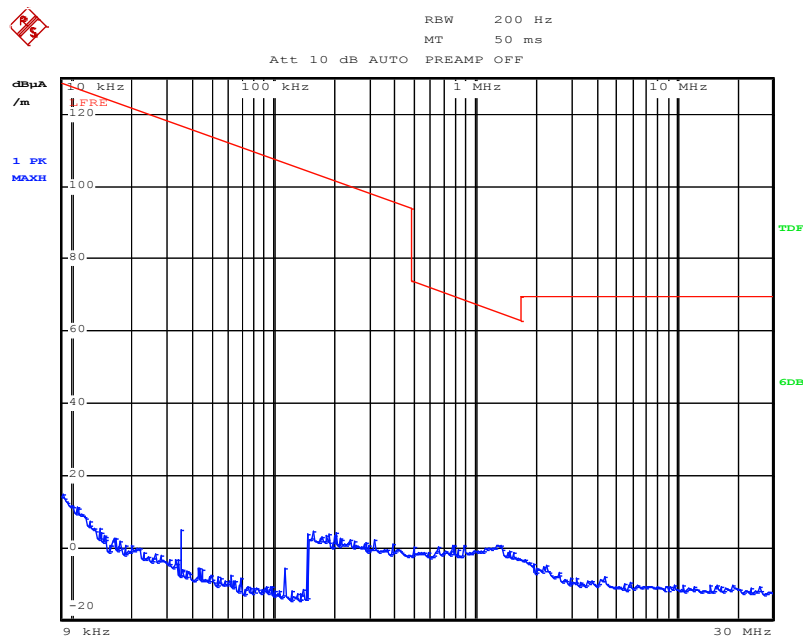


Figure 17: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz), GFSK Modulation



Date: 29.MAR.2014 20:41:24

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



Date: 29.MAR.2014 20:43:32

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

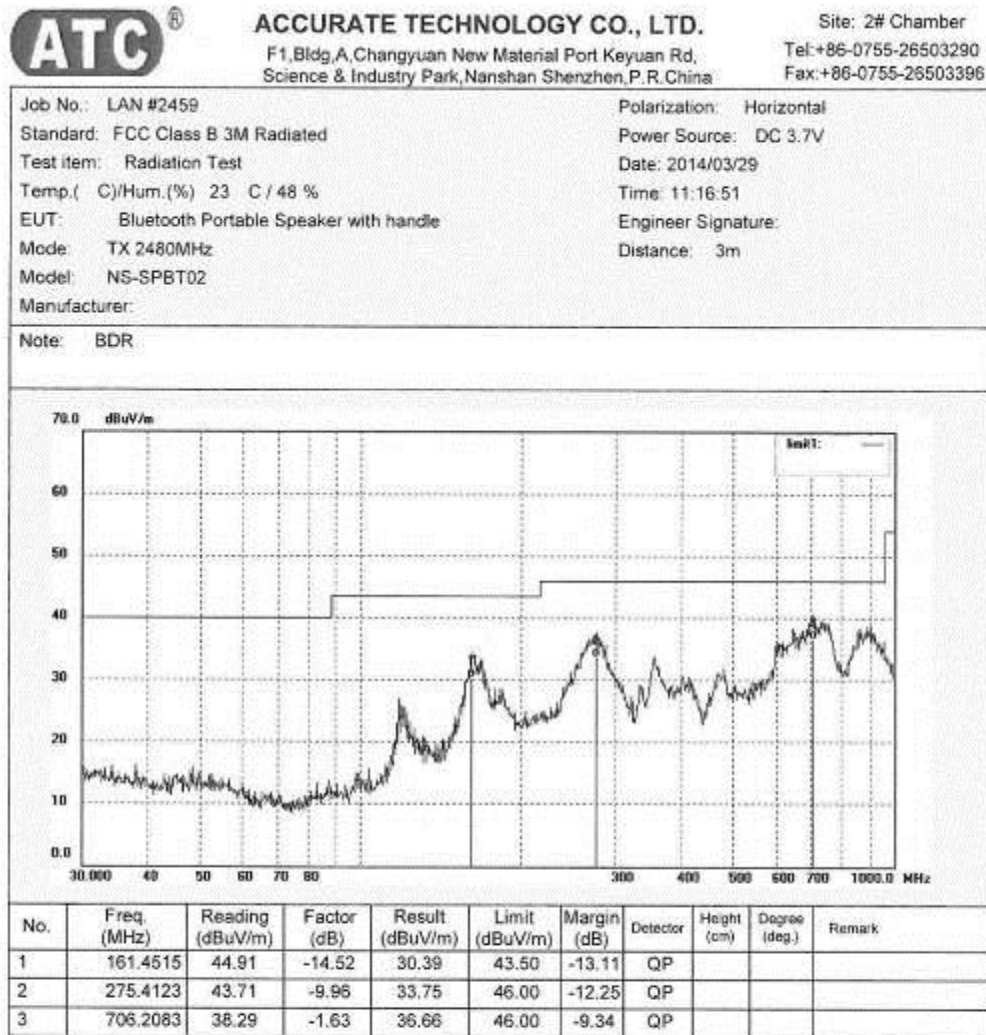


Figure 20: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz), GFSK Modulation

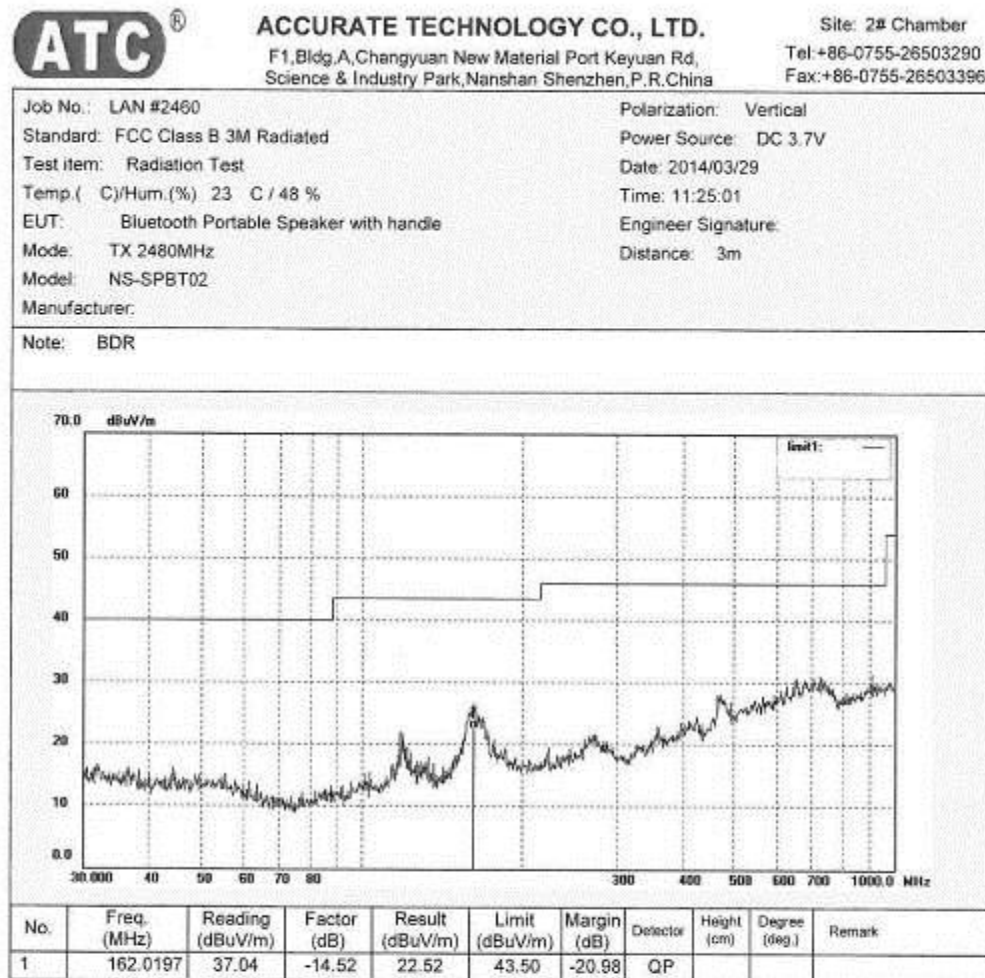


Figure 21: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz –18GHz), GFSK Modulation

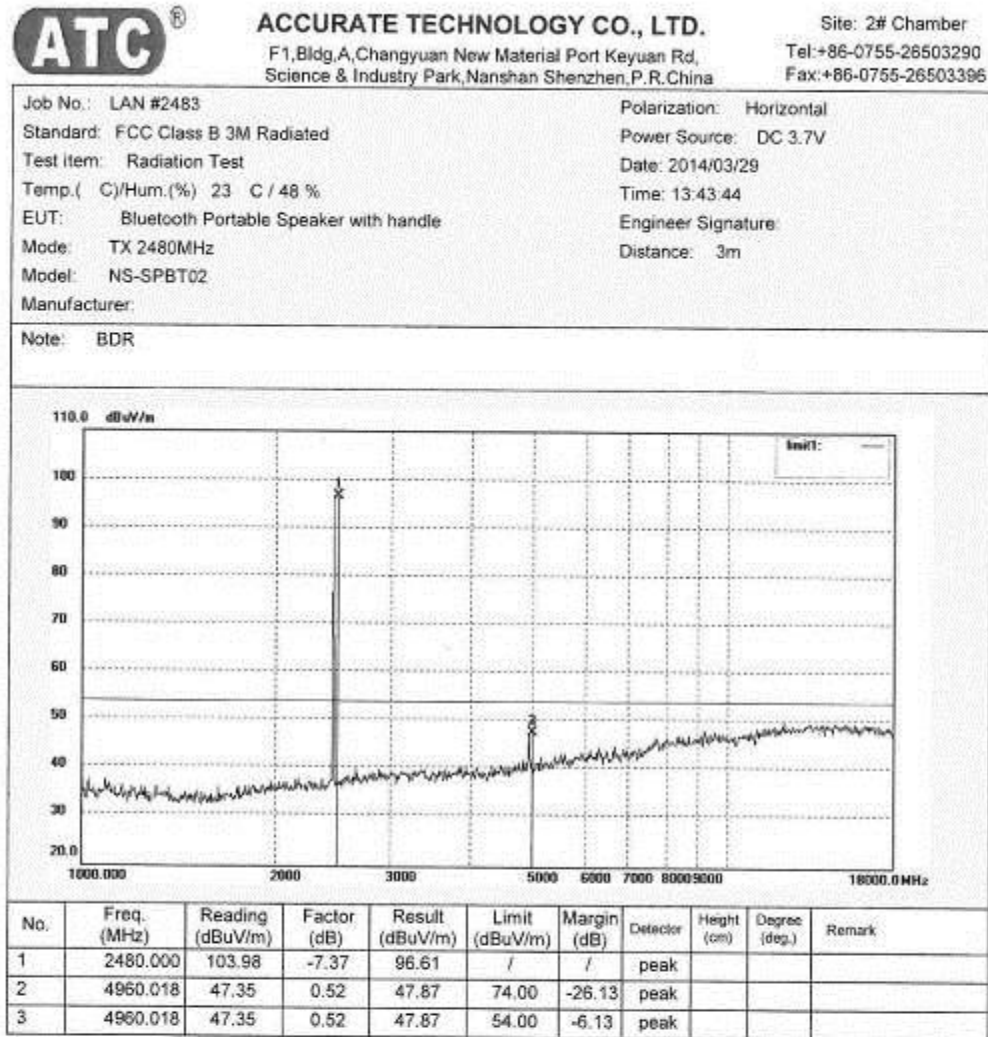


Figure 22: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz), GFSK Modulation

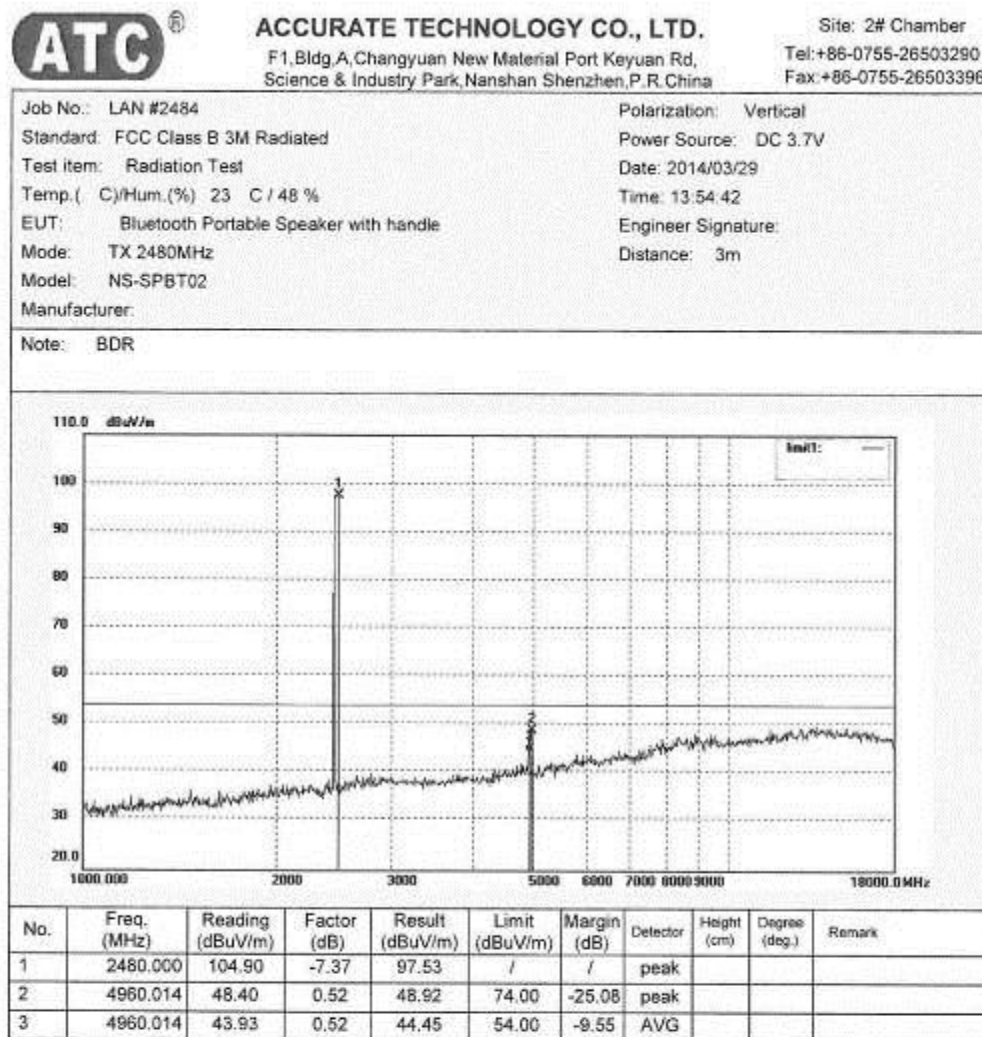


Figure 23: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz –25GHz), GFSK Modulation

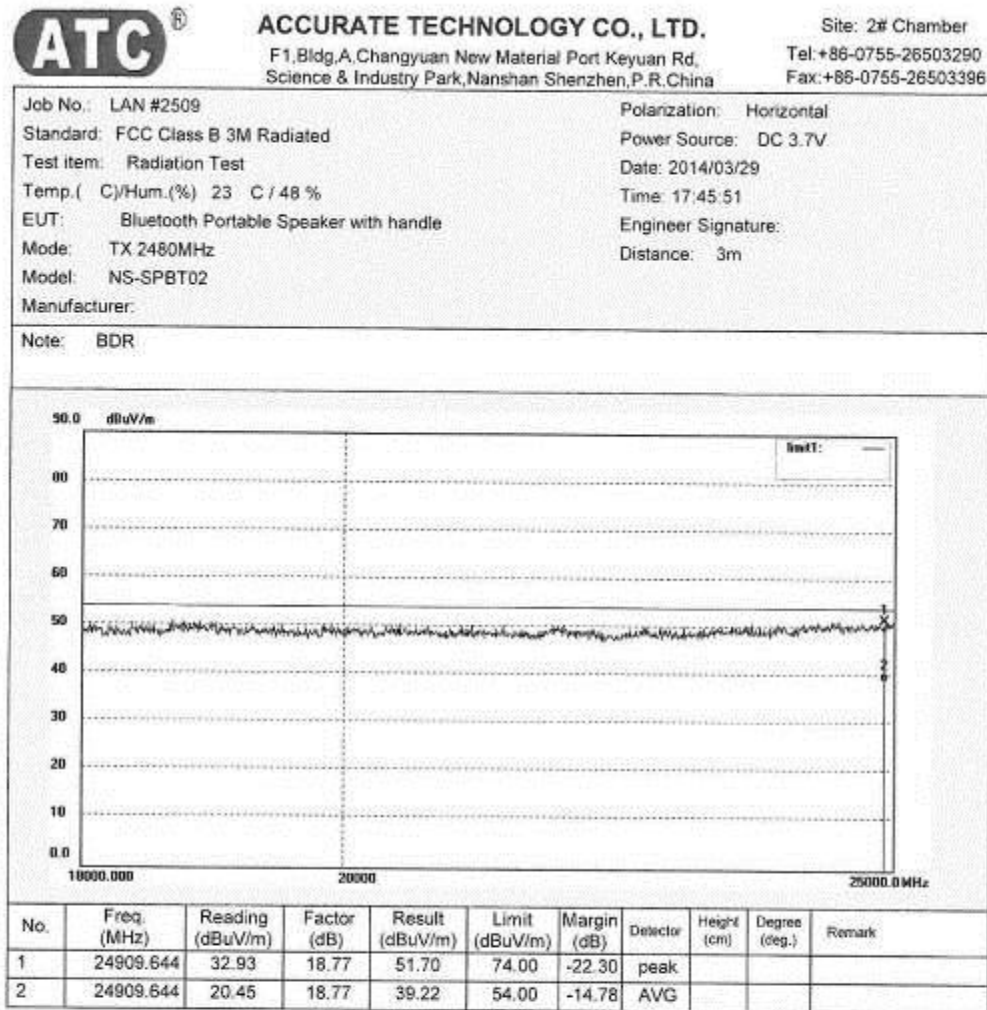


Figure 24: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz), GFSK Modulation

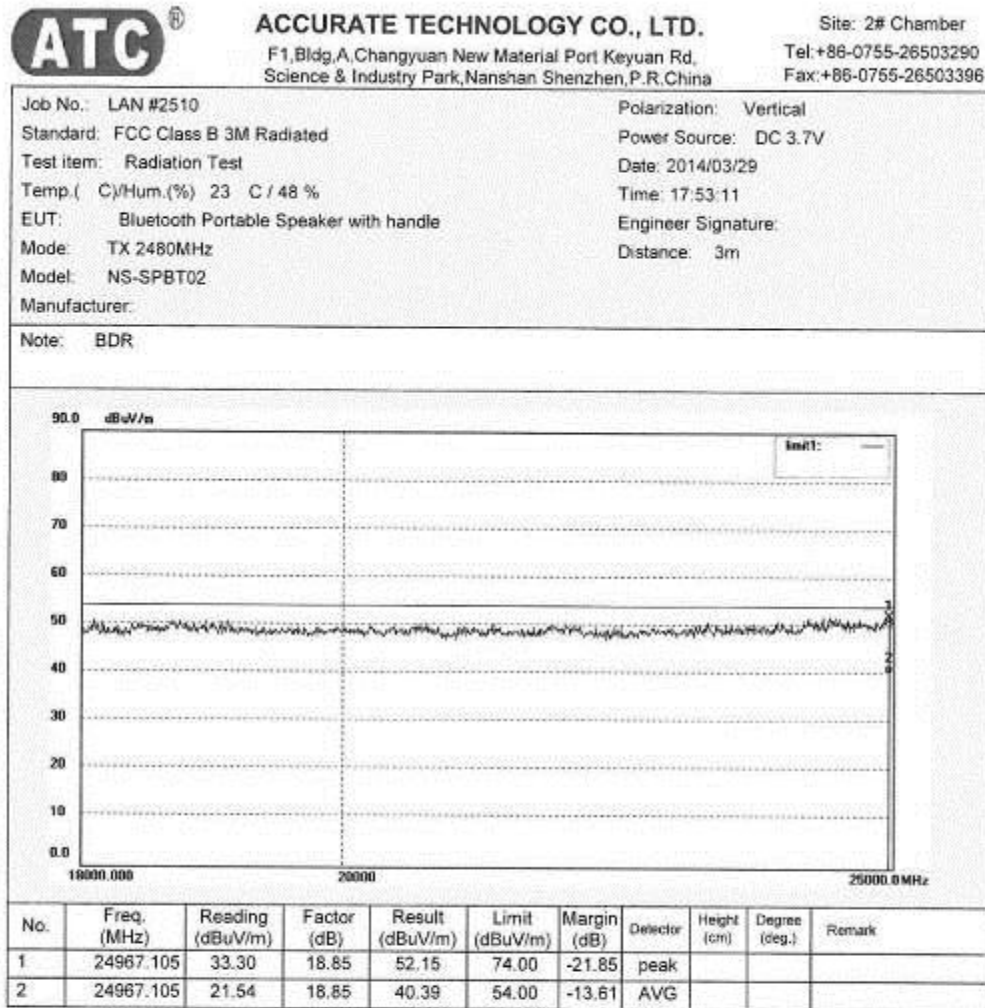
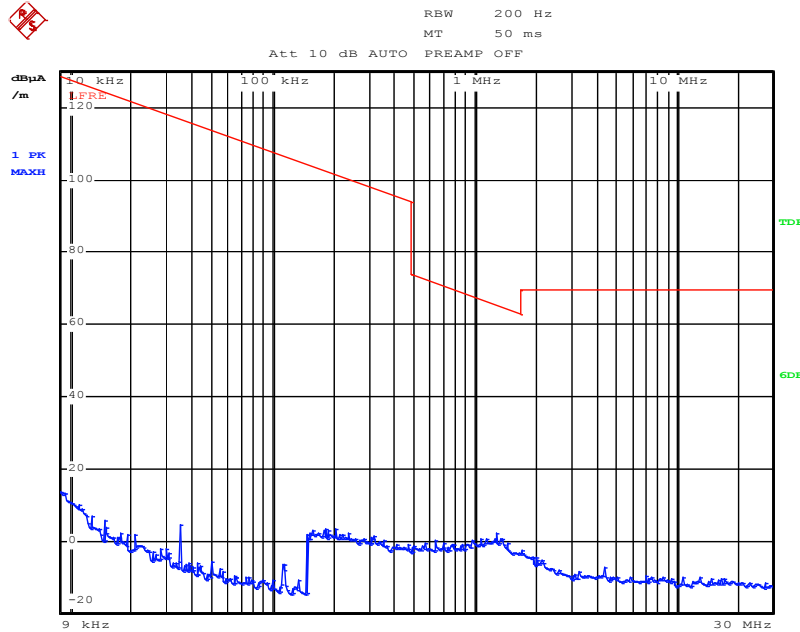
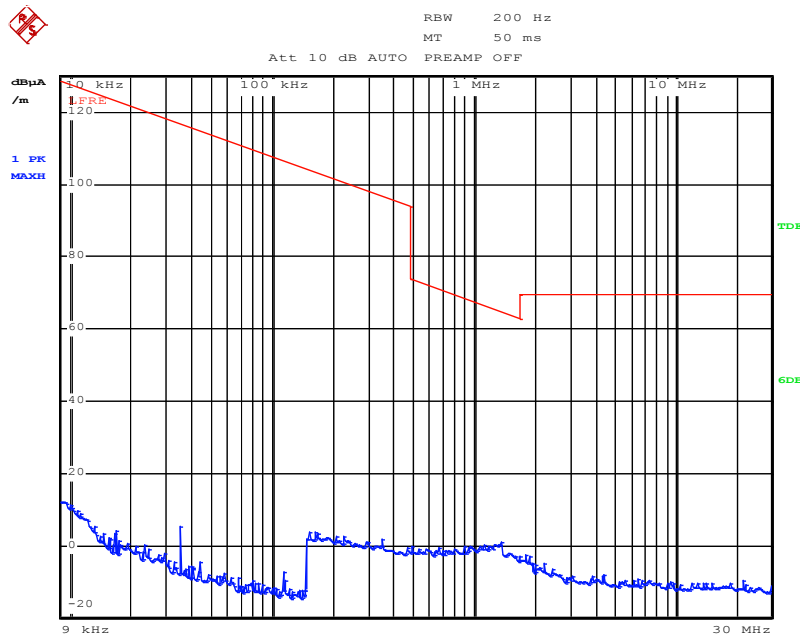


Figure 25: Test figure of spurious emissions, mode A.1, Horizontal polarity (9kHz – 30MHz), 8DPSK Modulation



Date: 29.MAR.2014 20:54:19

Figure 26: Test figure of spurious emissions, mode A.1, Vertical polarity (9kHz – 30MHz), 8DPSK Modulation



Date: 29.MAR.2014 20:56:20

Figure 27: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz), 8DPSK Modulation

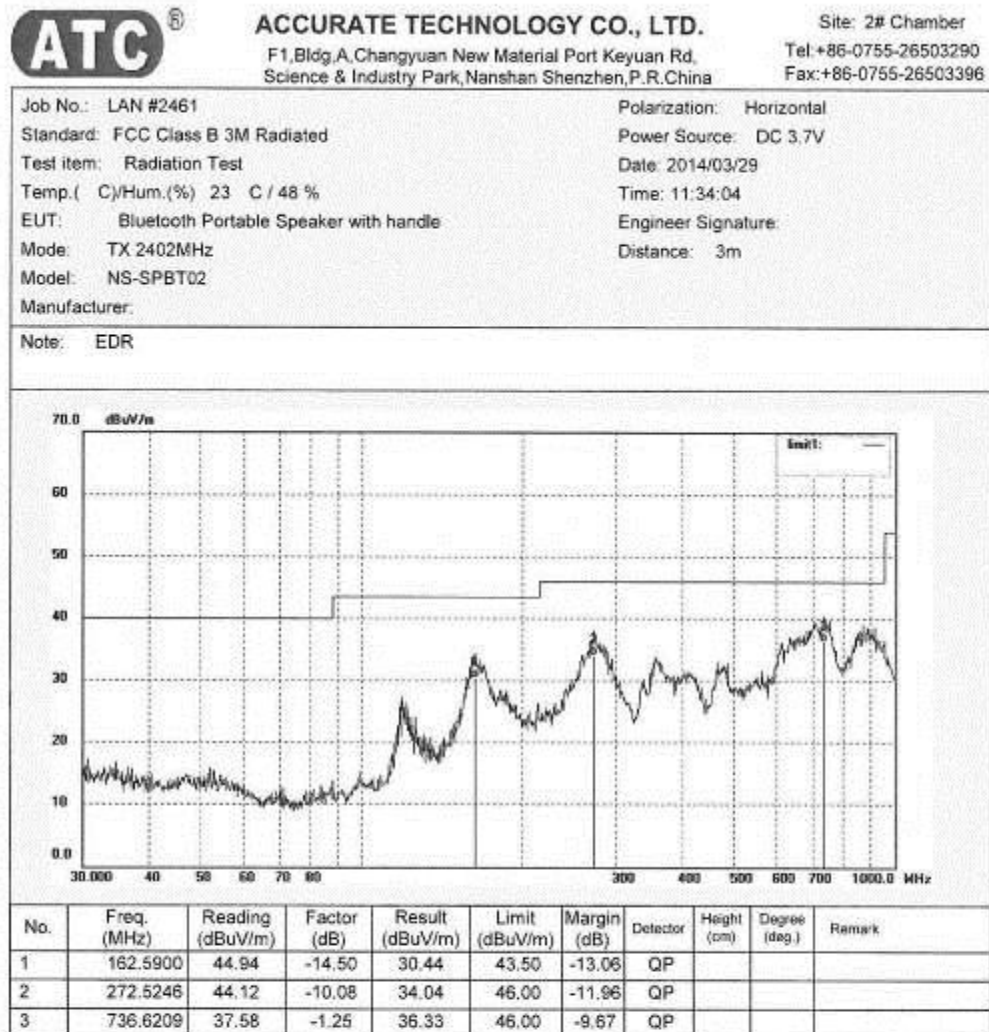


Figure 28: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz), 8DPSK Modulation

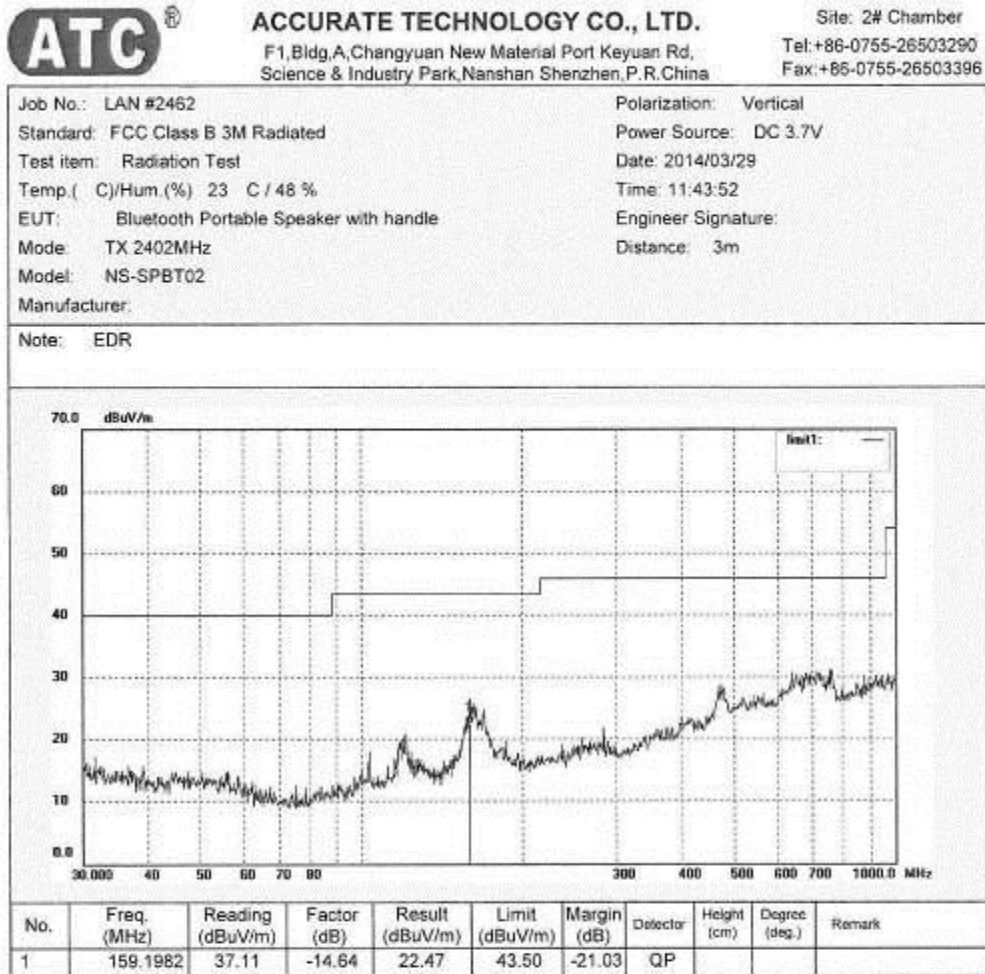


Figure 29: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz –18GHz), 8DPSK Modulation

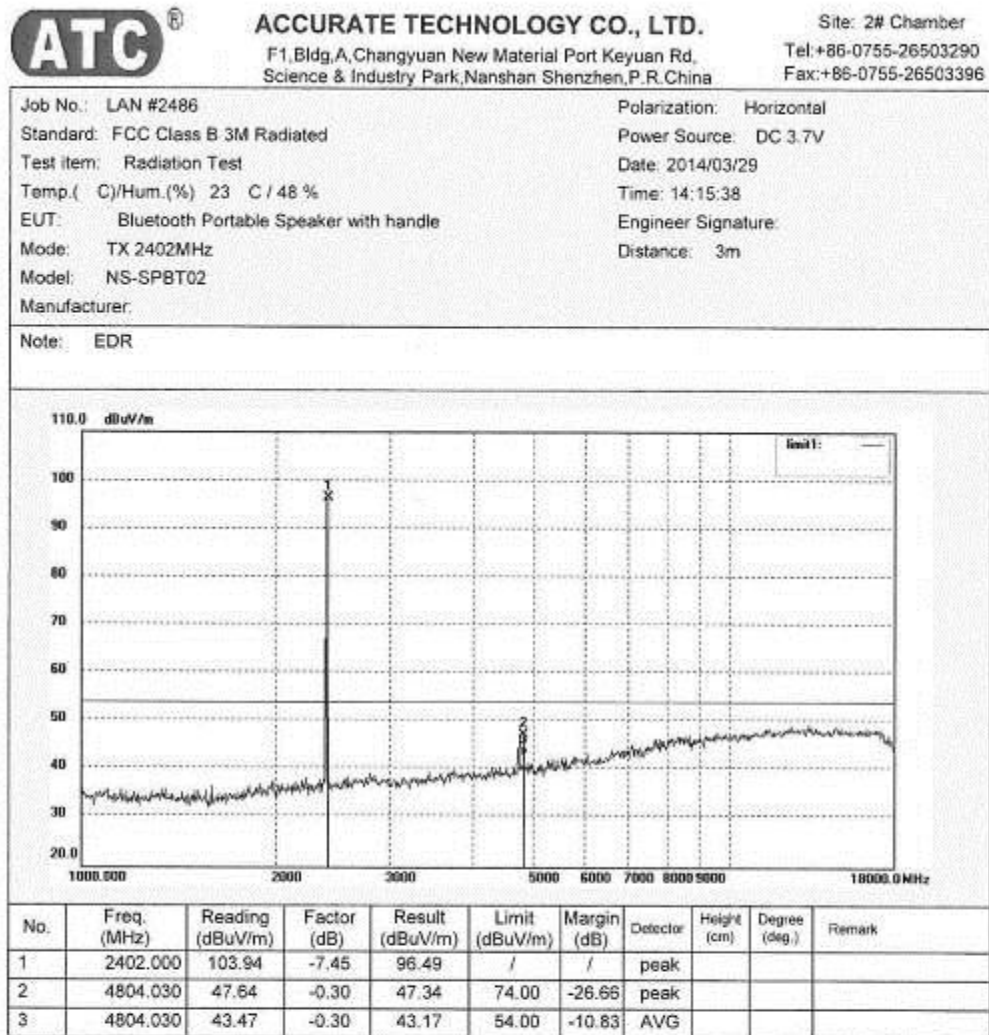


Figure 30: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz), 8DPSK Modulation

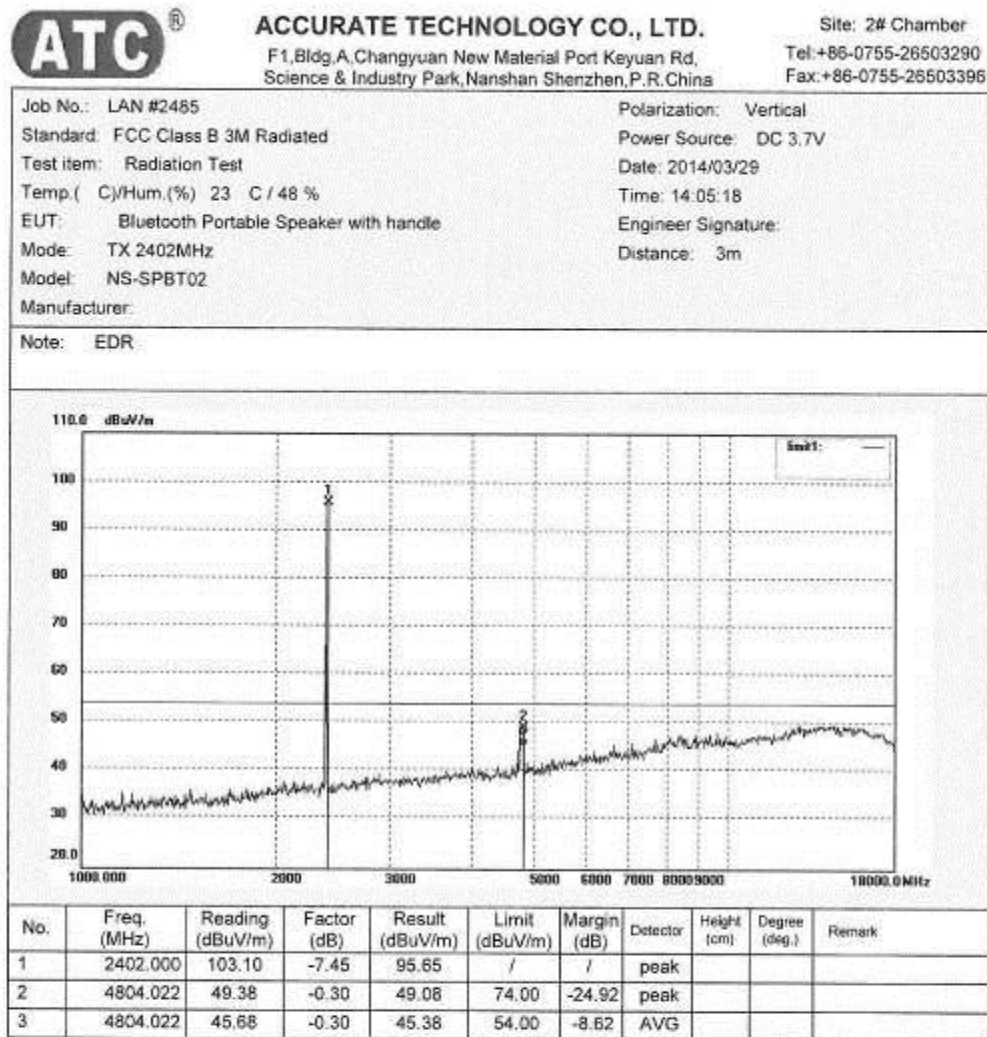


Figure 31: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz –25GHz), 8DPSK Modulation

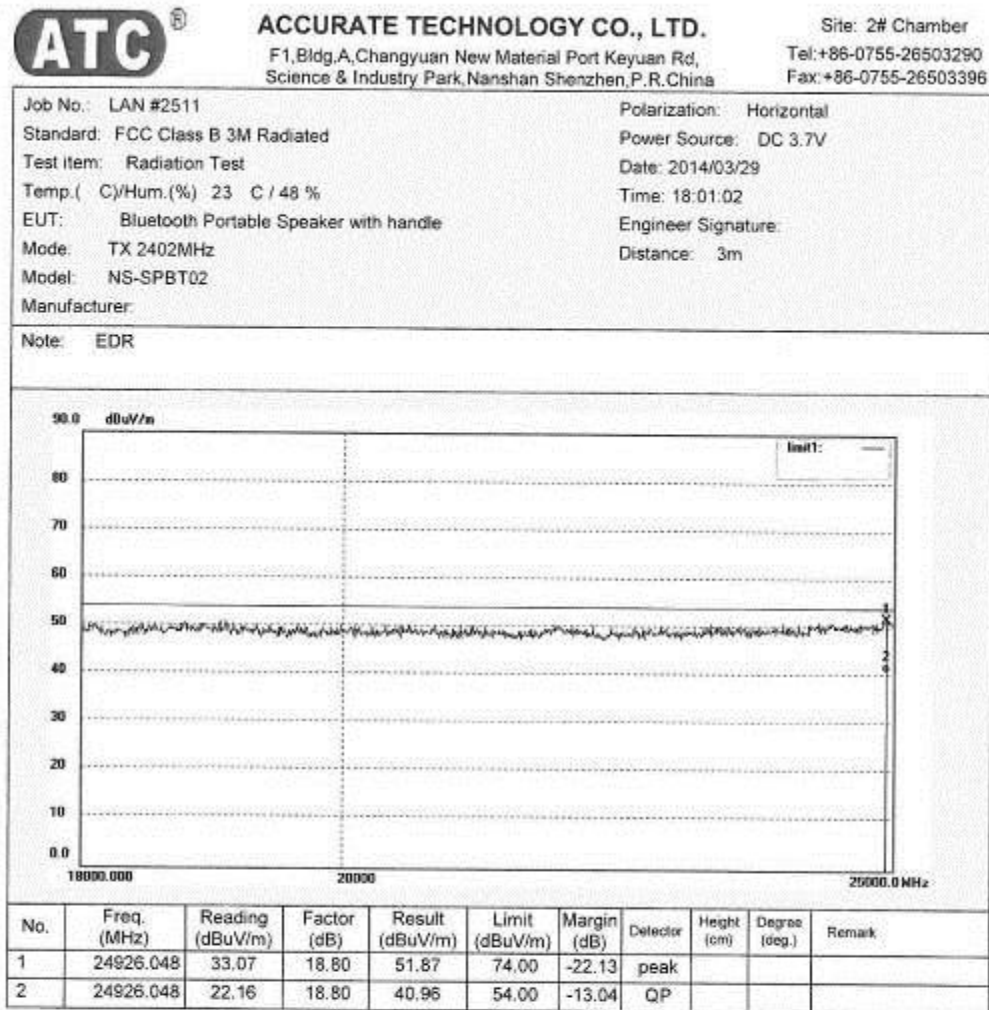


Figure 32: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz), 8DPSK Modulation

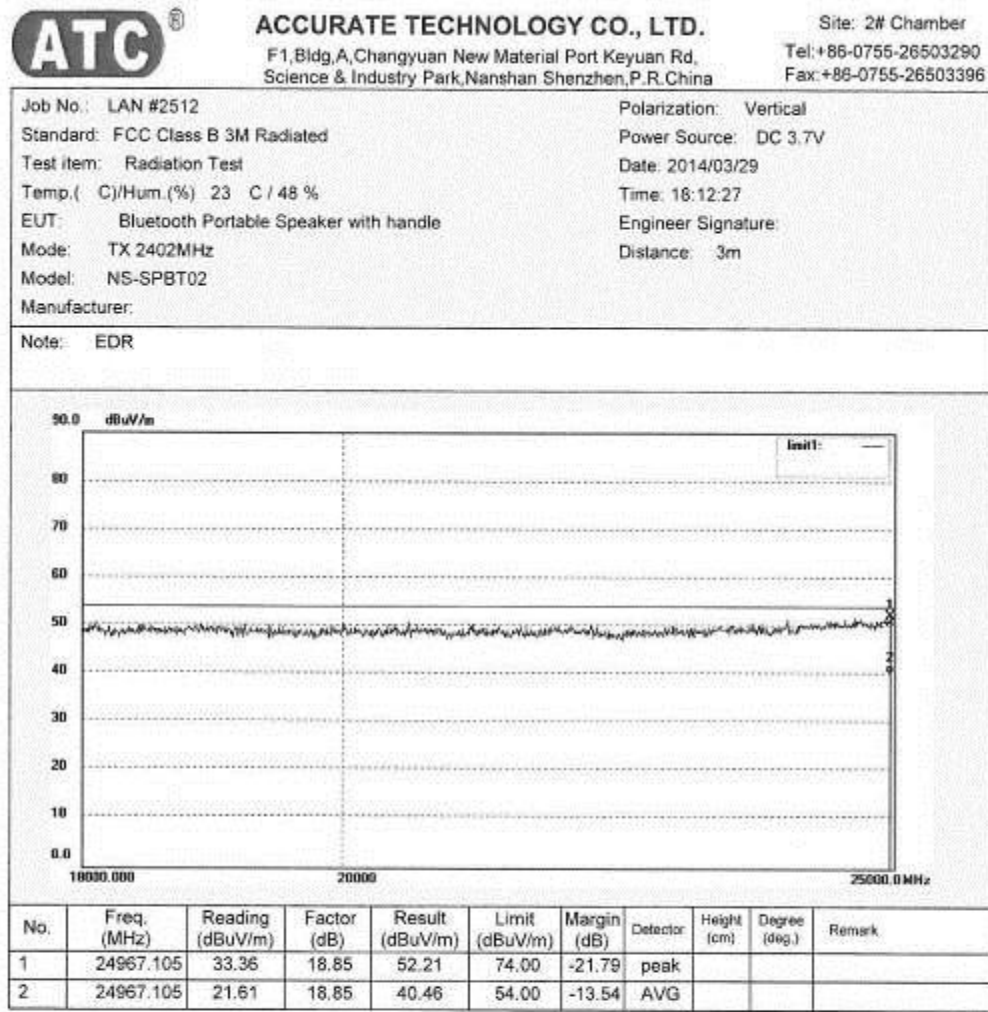
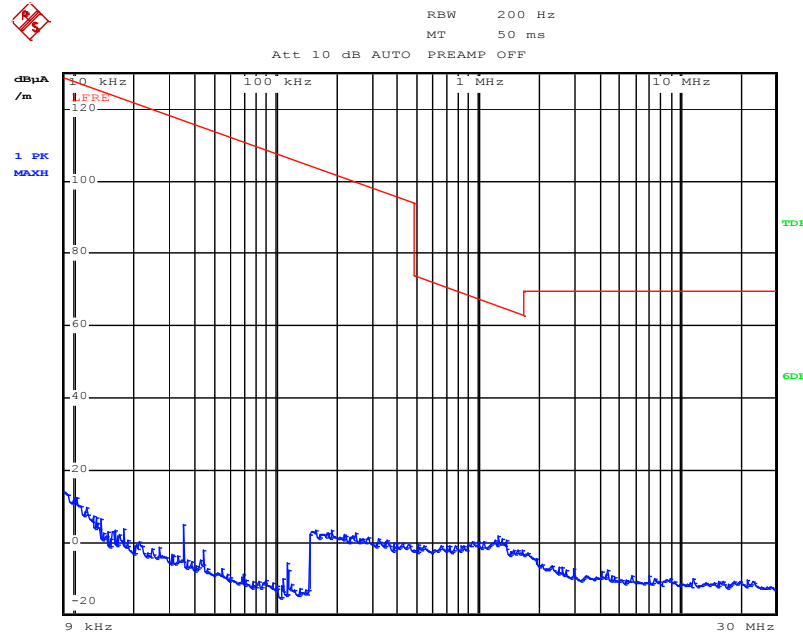
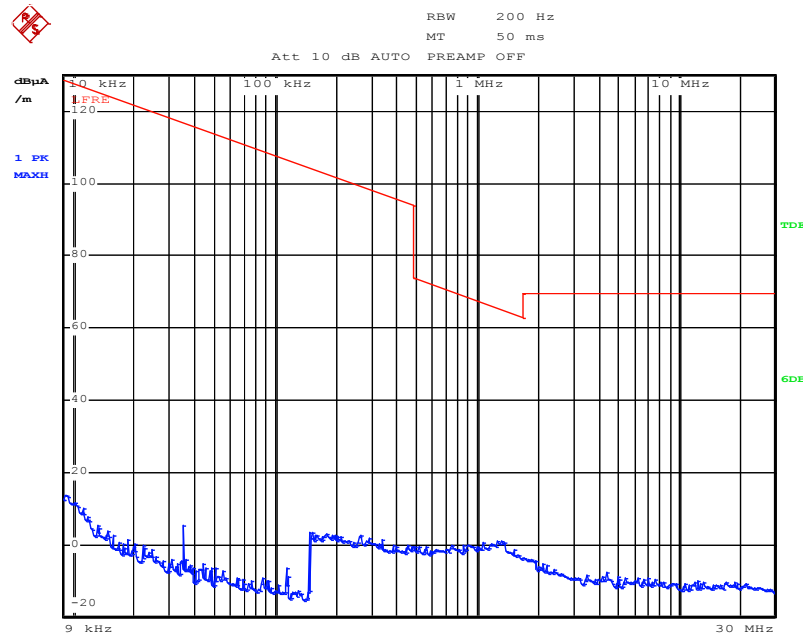


Figure 33: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz), 8DPSK Modulation



Date: 29.MAR.2014 21:00:29

Figure 34: Test figure of spurious emissions, mode A.2, Vertical polarity (9kHz – 30MHz), 8DPSK Modulation



Date: 29.MAR.2014 21:02:31

Figure 35: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz), 8DPSK Modulation

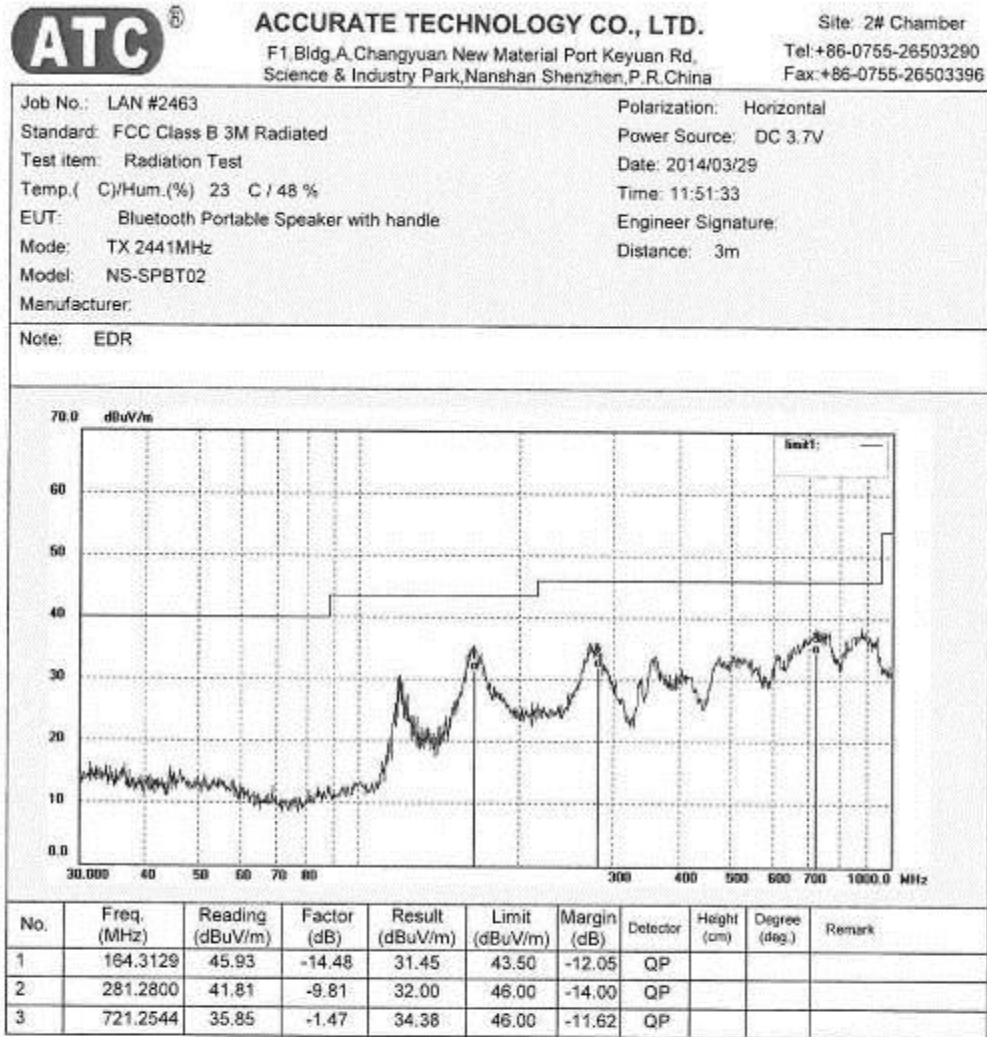


Figure 36: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GMHz), 8DPSK Modulation

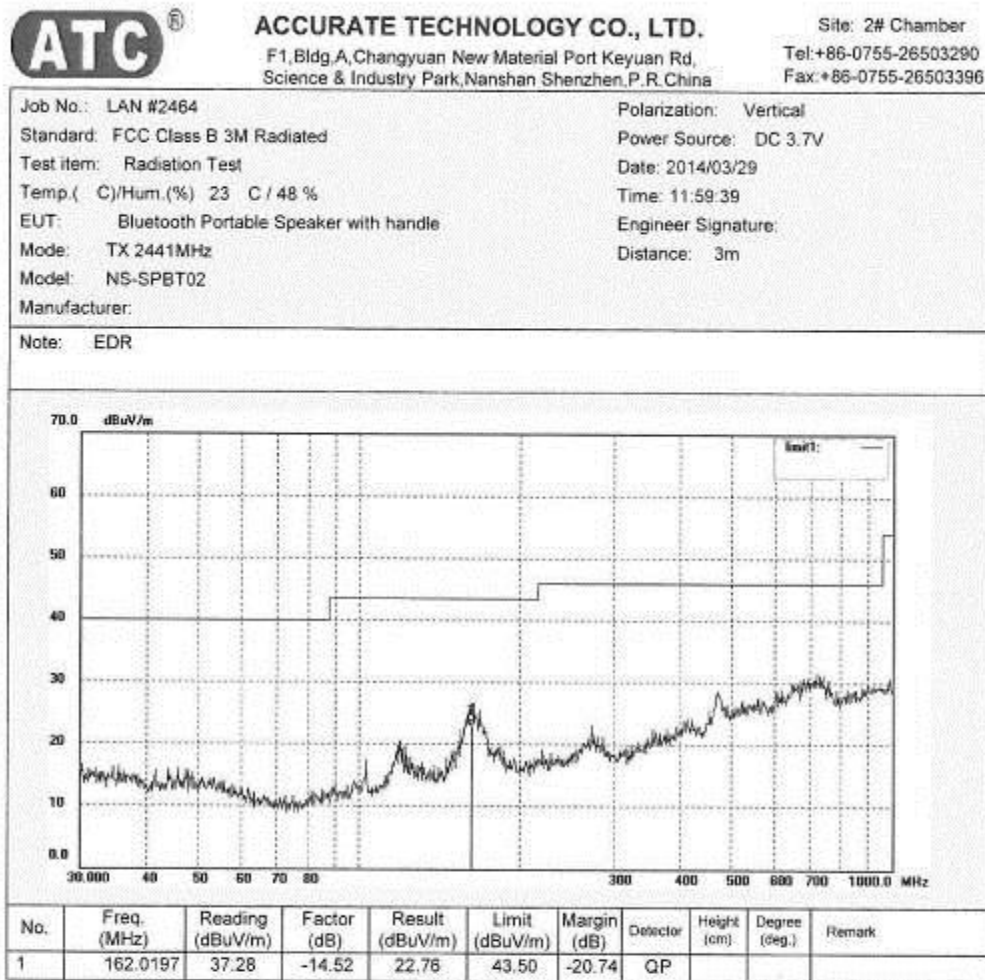


Figure 37: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz), 8DPSK Modulation

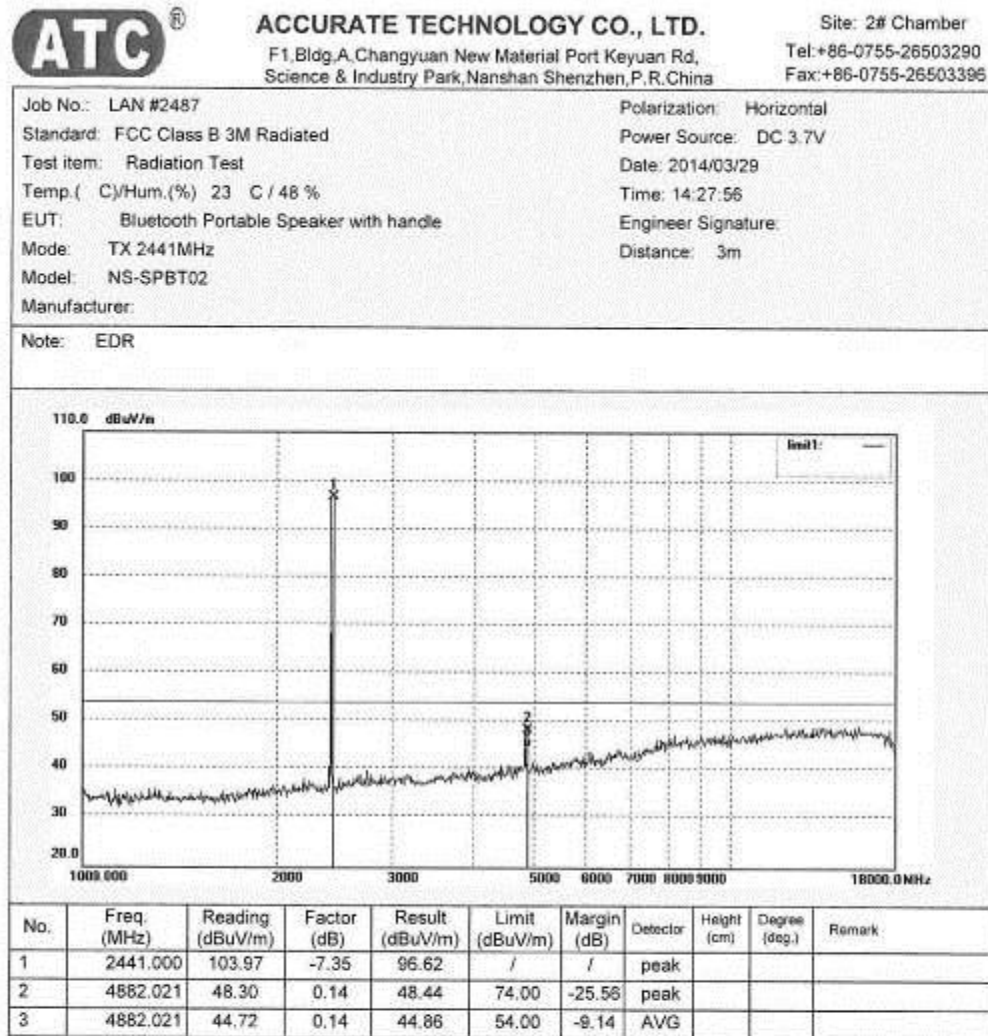


Figure 38: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz), 8DPSK Modulation

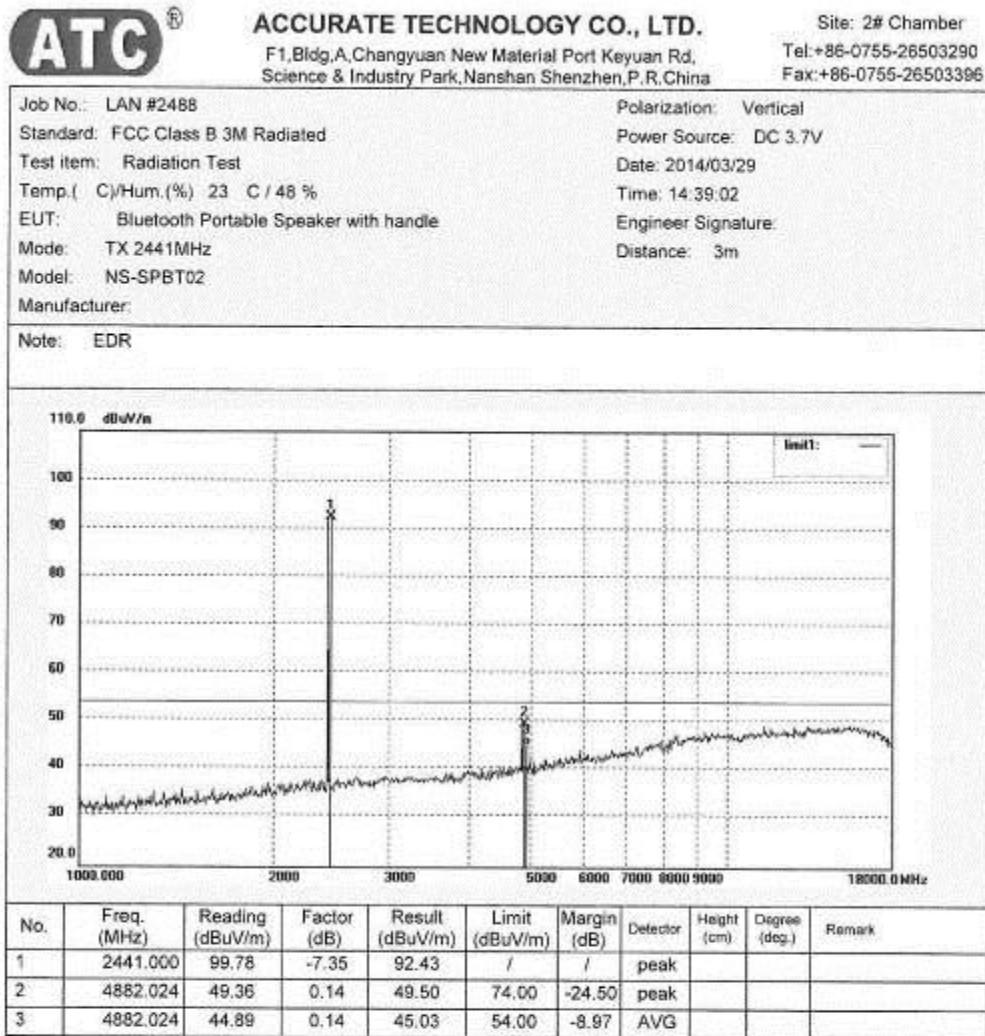


Figure 39: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz), 8DPSK Modulation

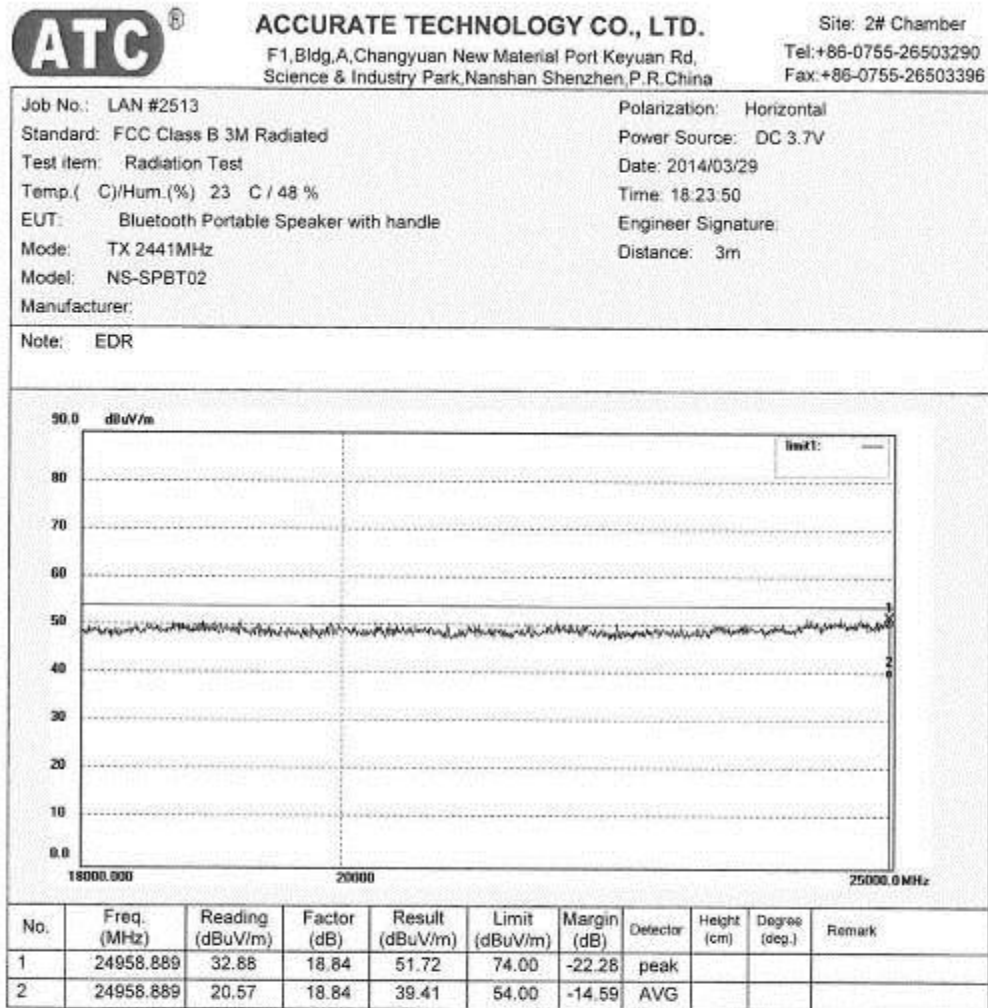


Figure 40: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz), 8DPSK Modulation

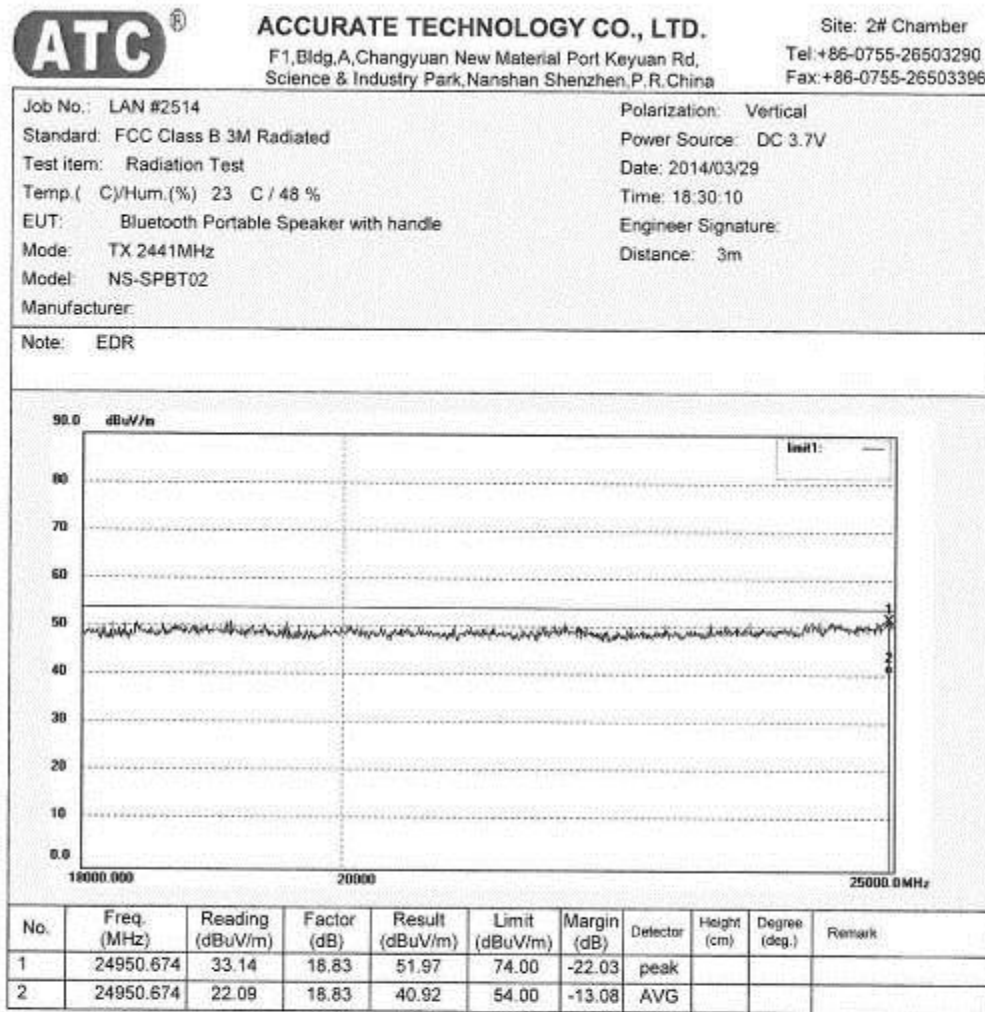
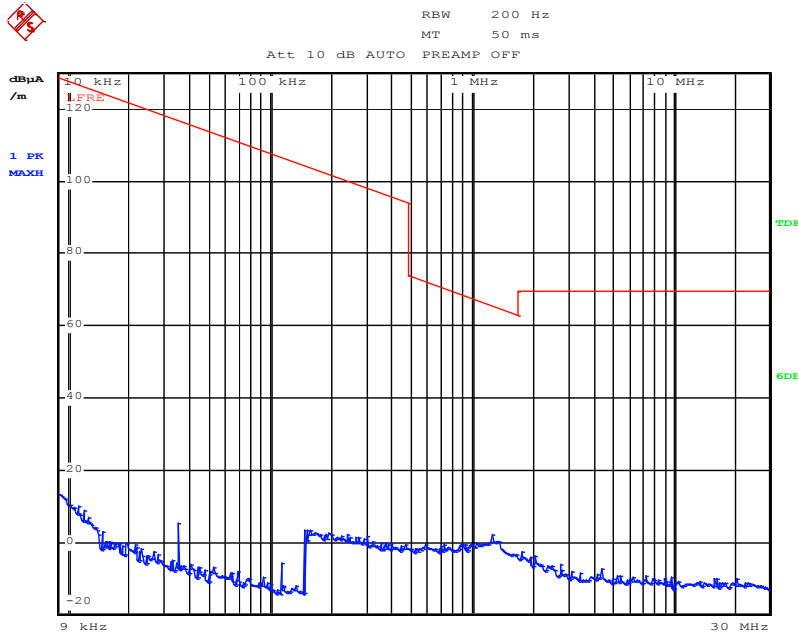
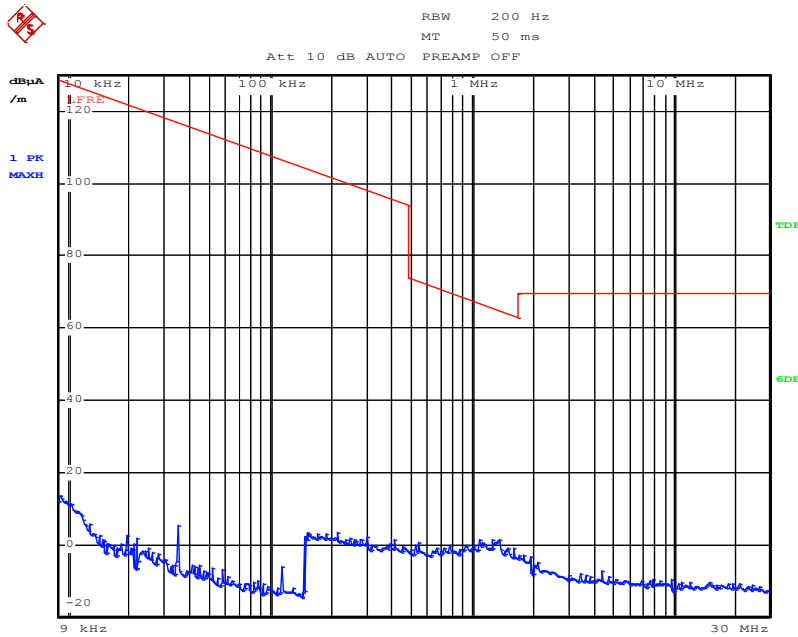


Figure 41: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz), 8DPSK Modulation



Date: 29.MAR.2014 21:06:29

Figure 42: Test figure of spurious emissions, mode A.3, Vertical polarity (9kHz – 30MHz), 8DPSK Modulation



Date: 29.MAR.2014 21:08:23

Figure 43: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz), 8DPSK Modulation

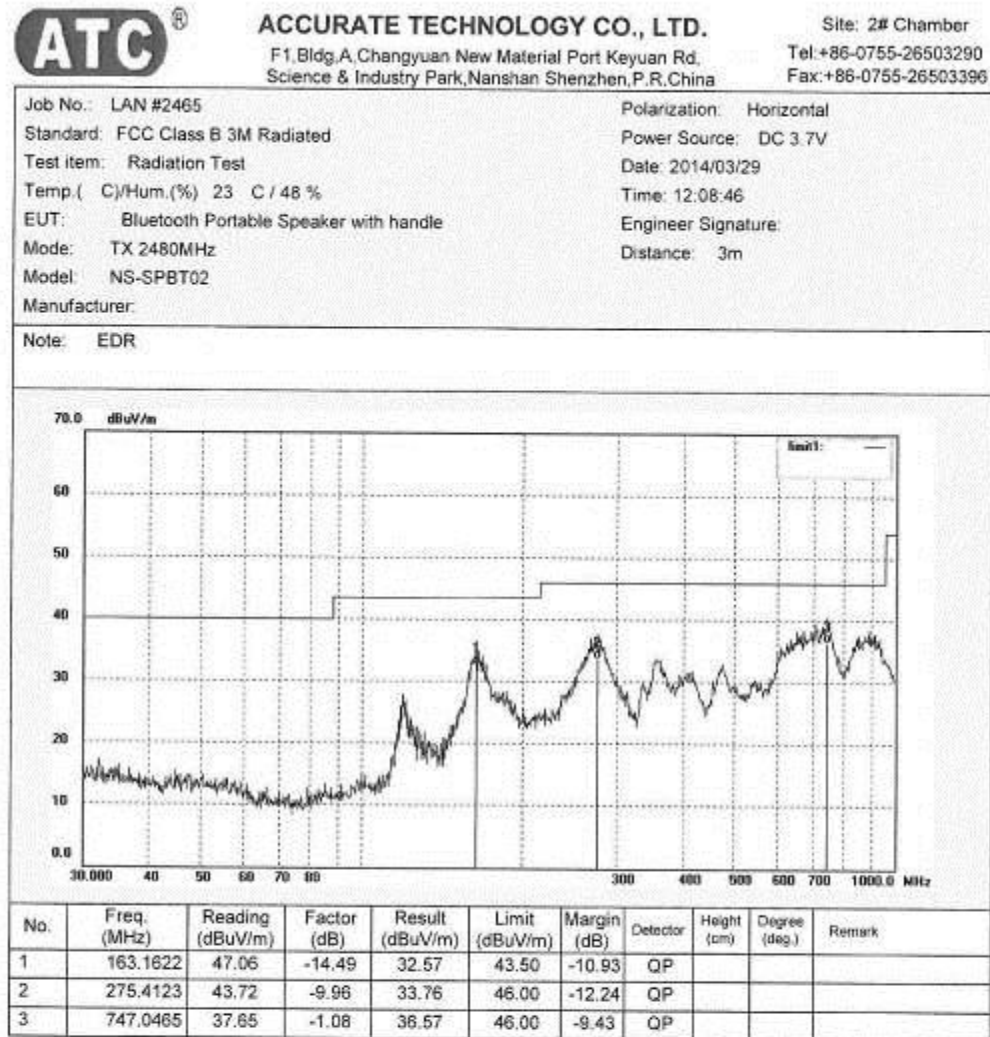


Figure 44: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz), 8DPSK Modulation

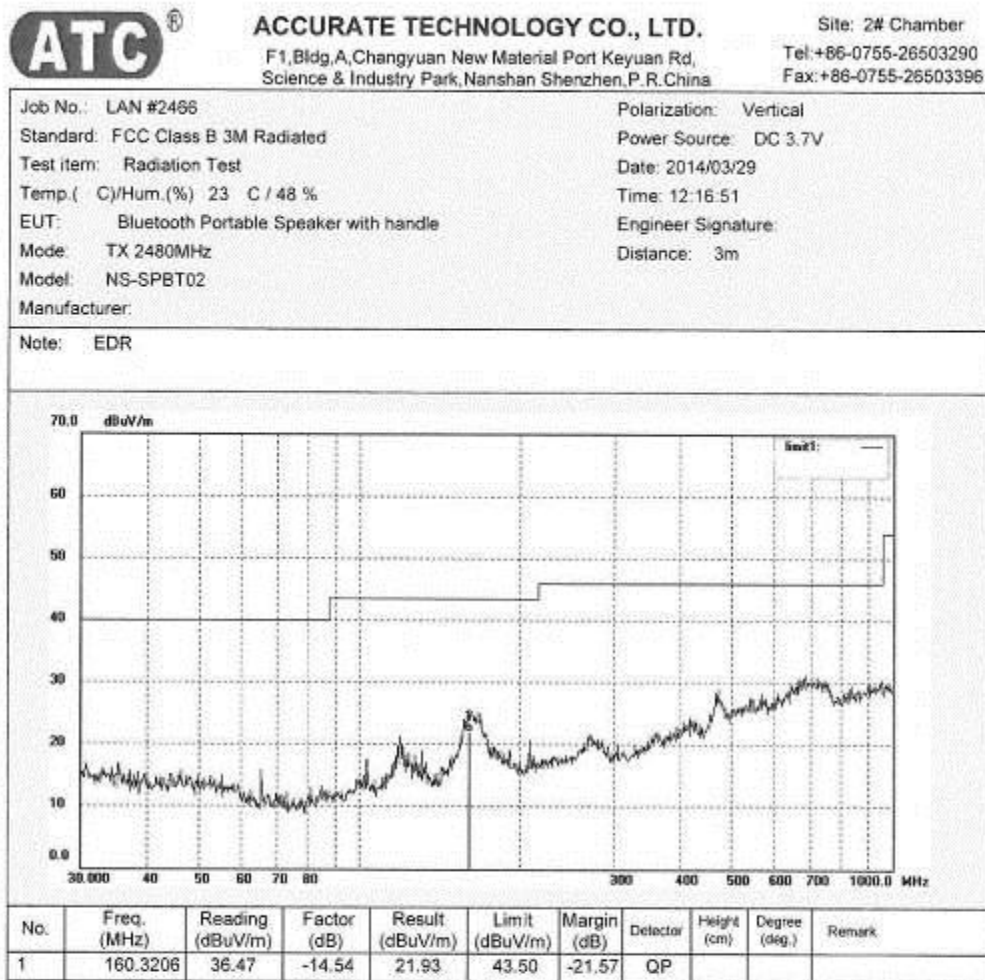


Figure 45: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz –18GHz), 8DPSK Modulation

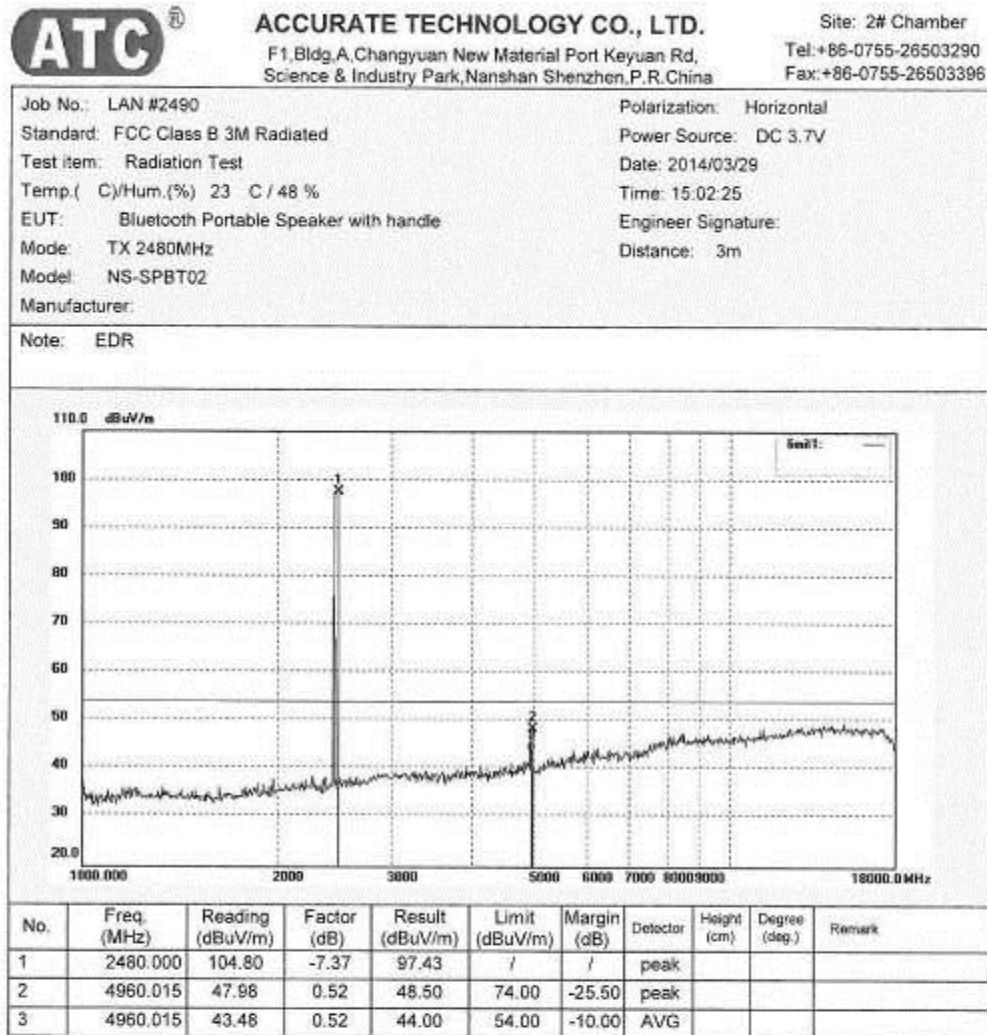


Figure 46: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz), 8DPSK Modulation

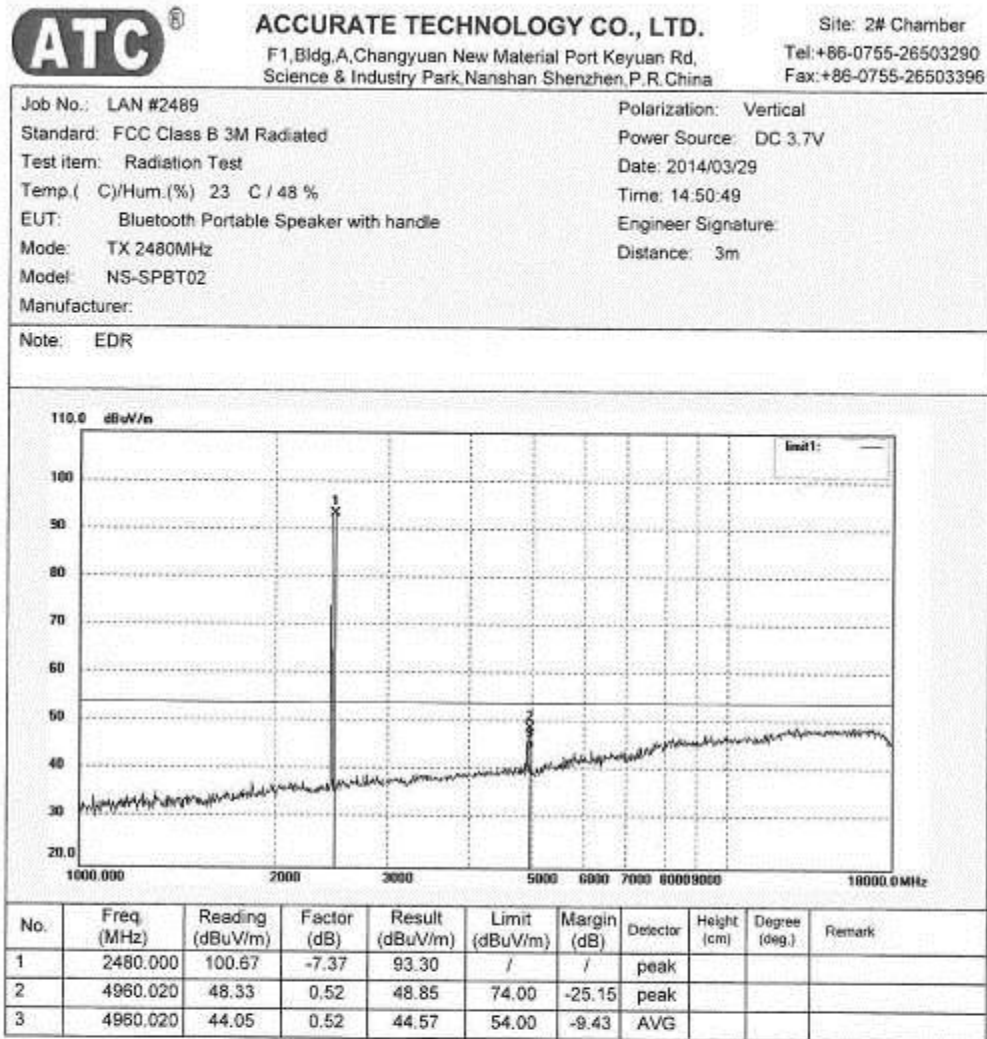


Figure 47: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz –25GHz), 8DPSK Modulation

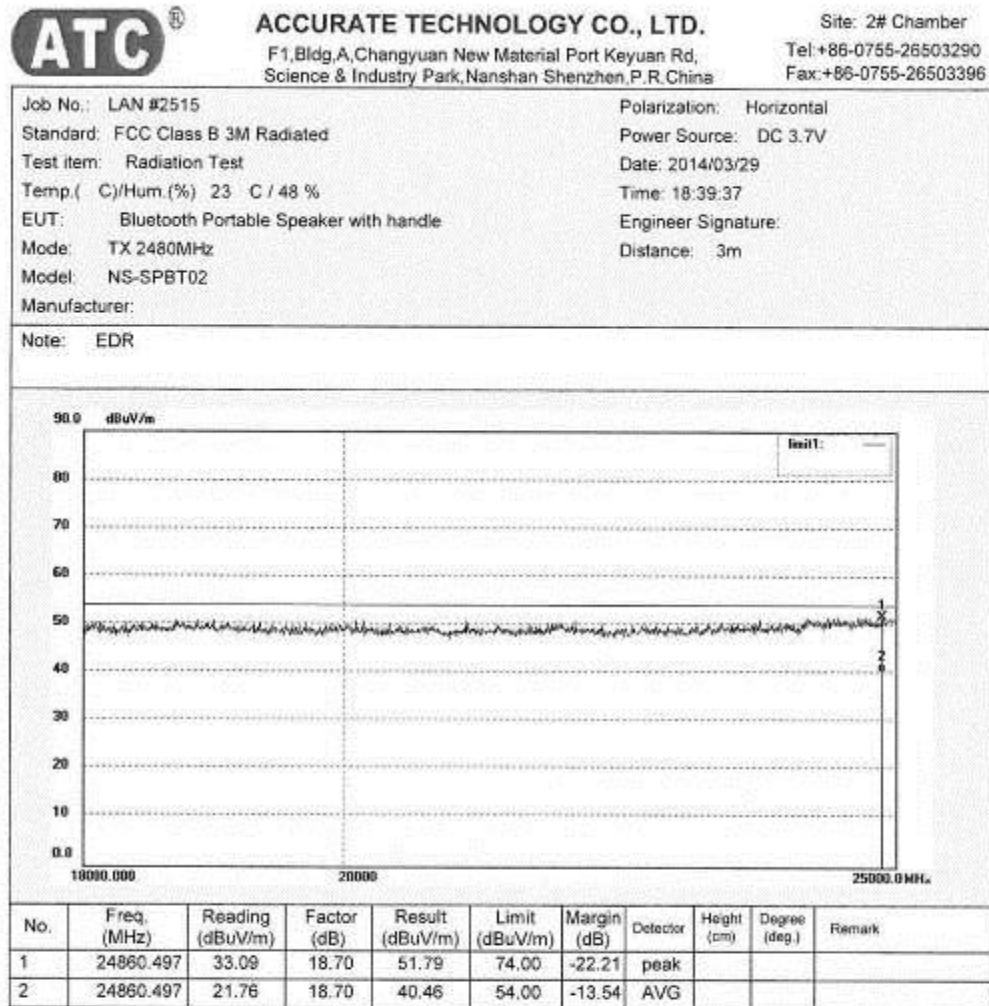


Figure 48: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz), 8DPSK Modulation

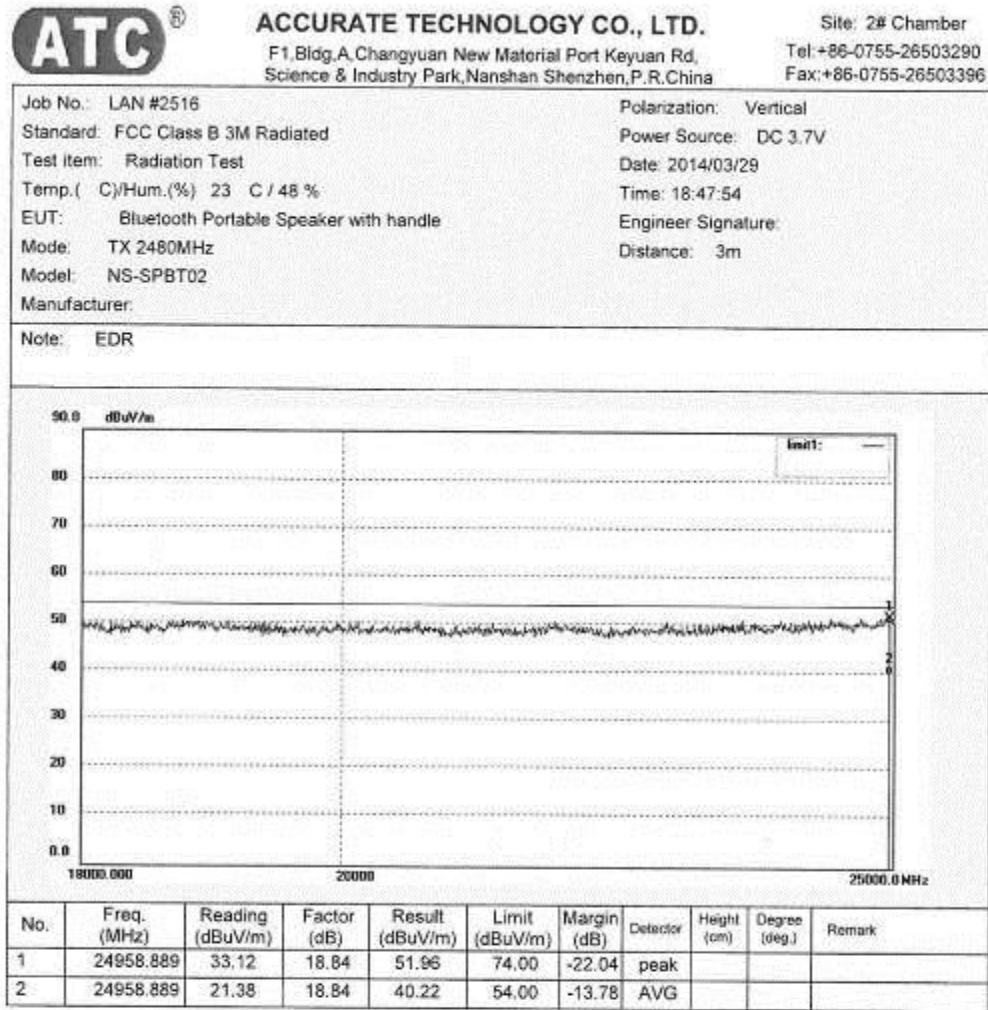
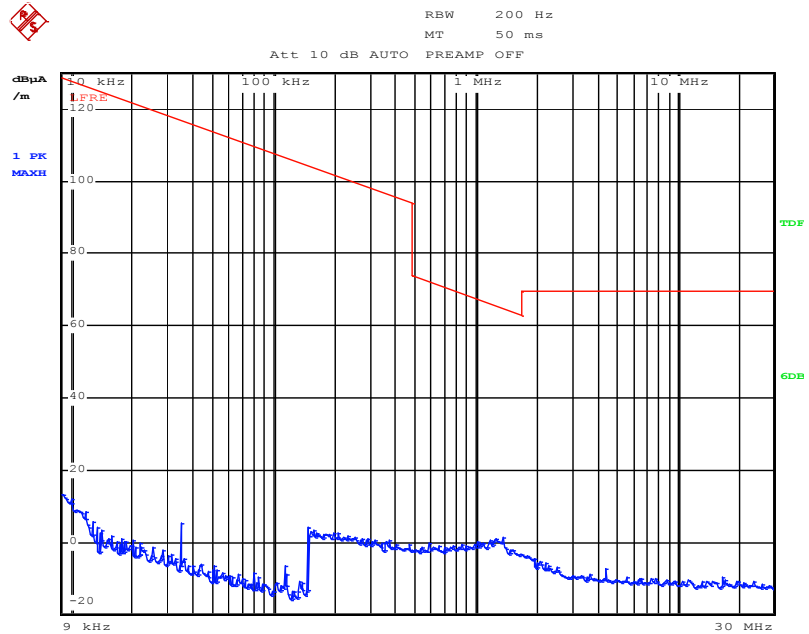
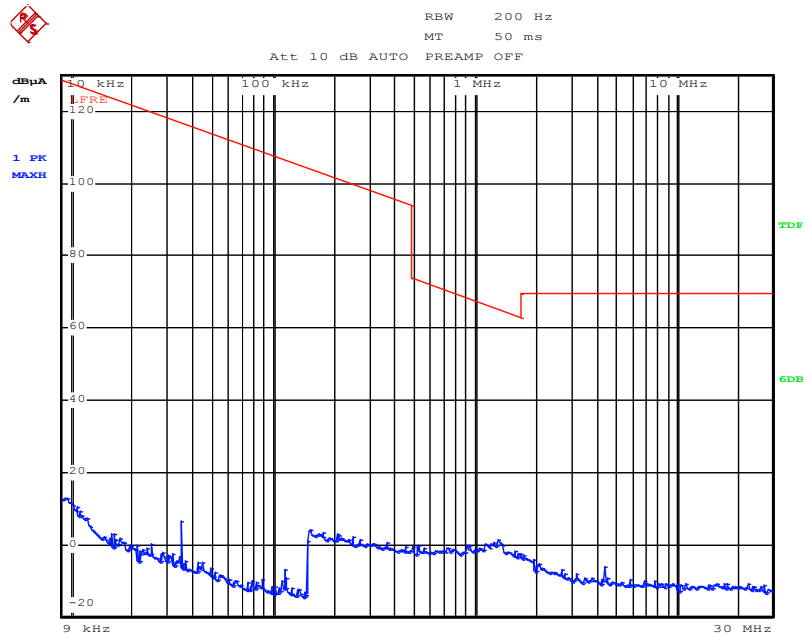


Figure 49: Test figure of spurious emissions, mode B, Horizontal polarity (9kHz – 30MHz), GFSK Modulation



Date: 29.MAR.2014 20:52:20

Figure 50: Test figure of spurious emissions, mode B, Vertical polarity (9kHz – 30MHz), GFSK Modulation



Date: 29.MAR.2014 20:48:30

Figure 51: Test figure of spurious emissions, mode B, Horizontal polarity (30MHz – 1GHz), GFSK Modulation

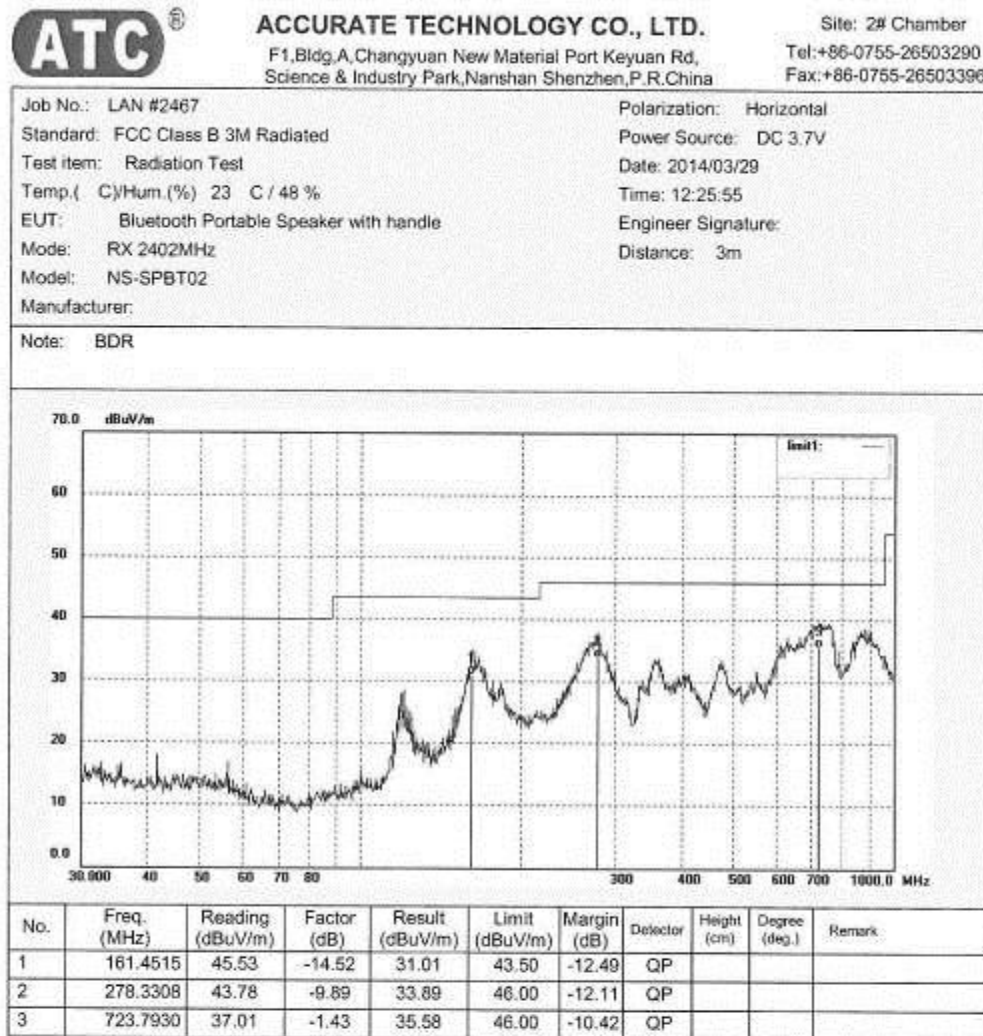


Figure 52: Test figure of spurious emissions, mode B, Vertical polarity (30MHz – 1GHz), GFSK Modulation

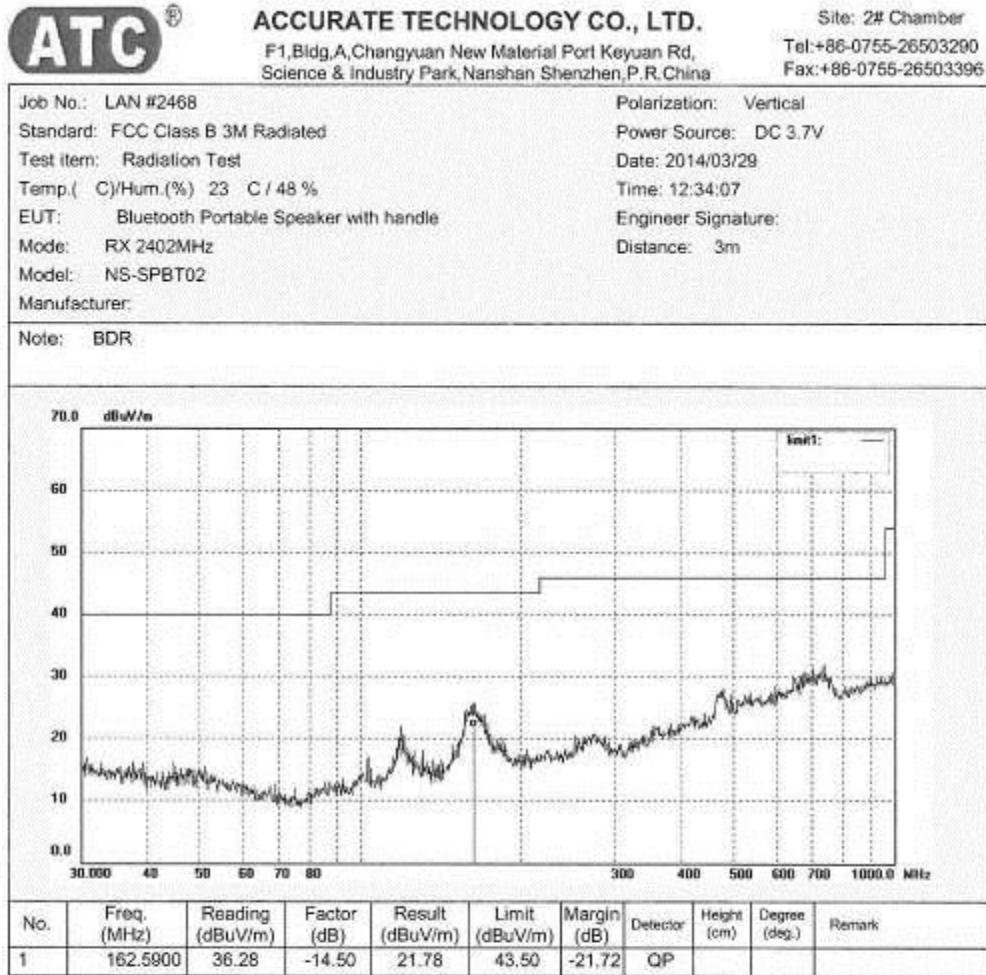


Figure 53: Test figure of spurious emissions, mode B, Horizontal polarity (1GHz –18GHz), GFSK Modulation

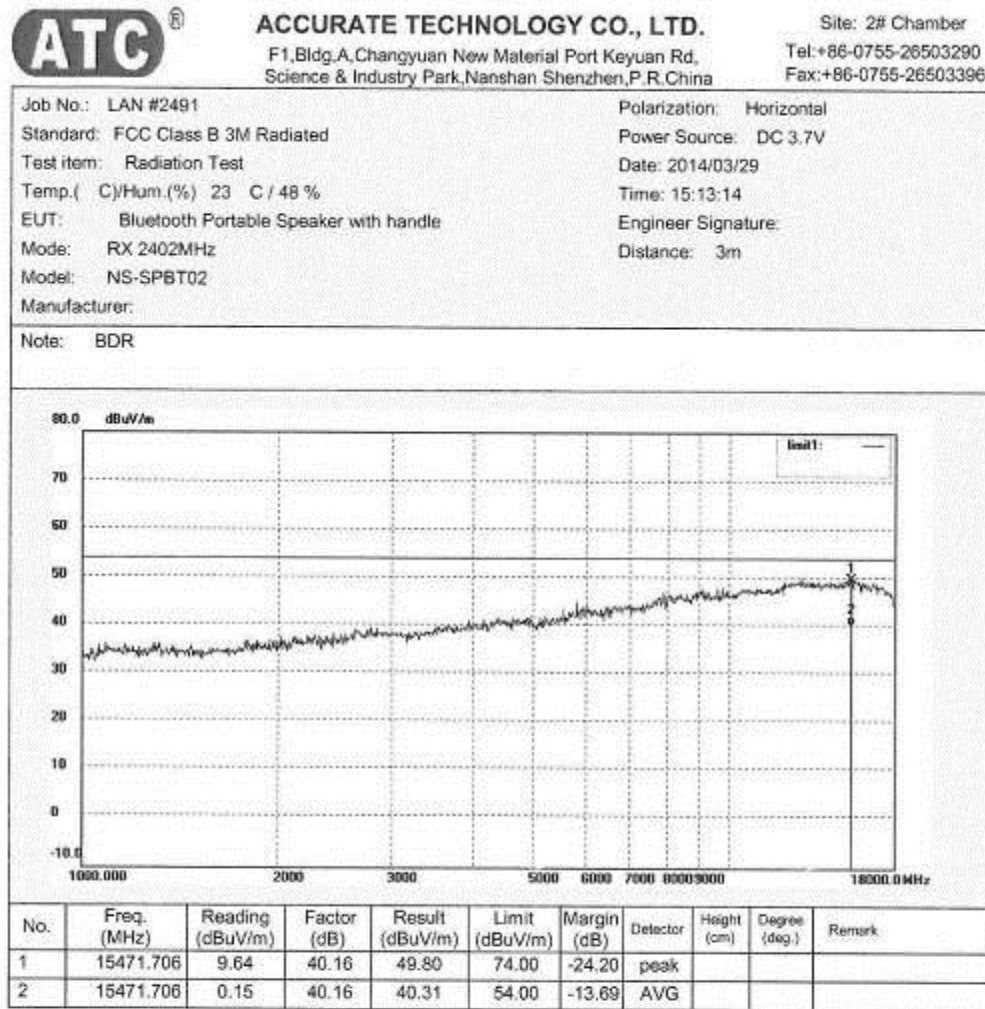


Figure 54: Test figure of spurious emissions, mode B, Vertical polarity (1GHz – 18GHz), GFSK Modulation

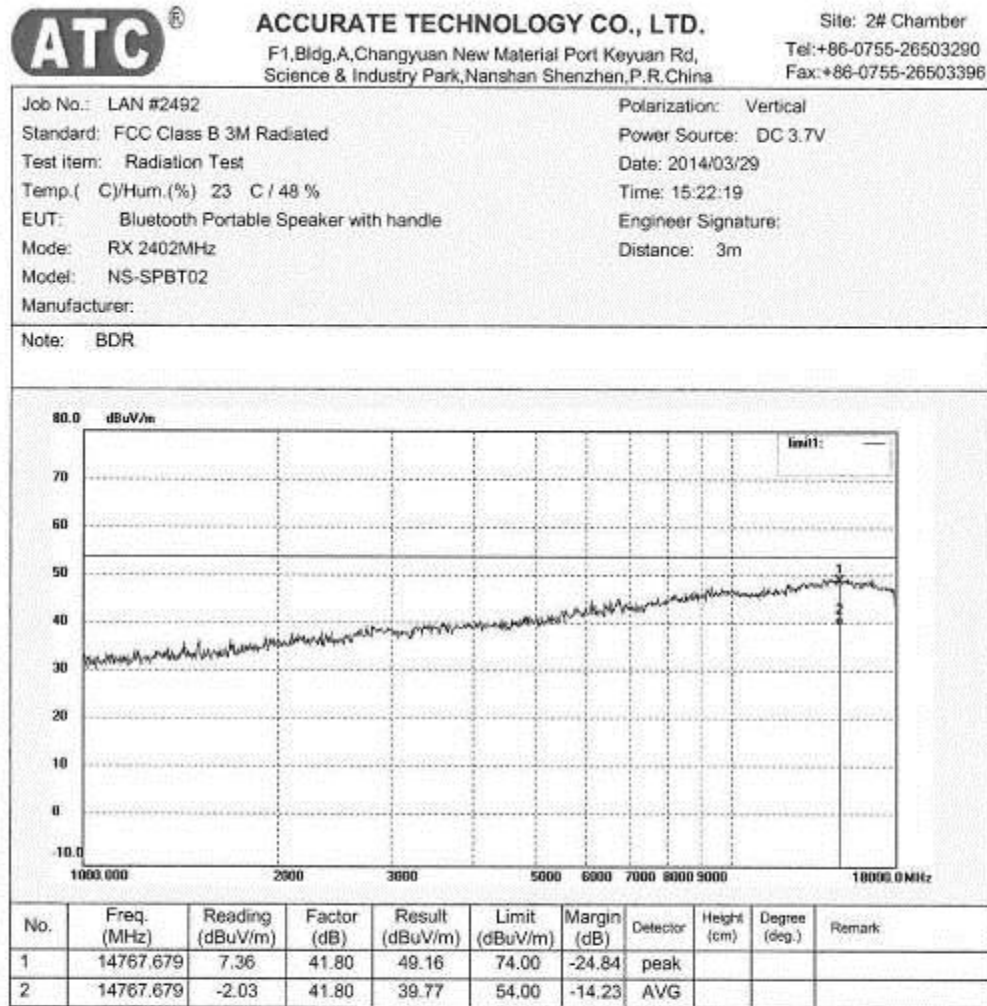


Figure 55: Test figure of spurious emissions, mode B, Horizontal polarity (18GHz –25GHz), GFSK Modulation

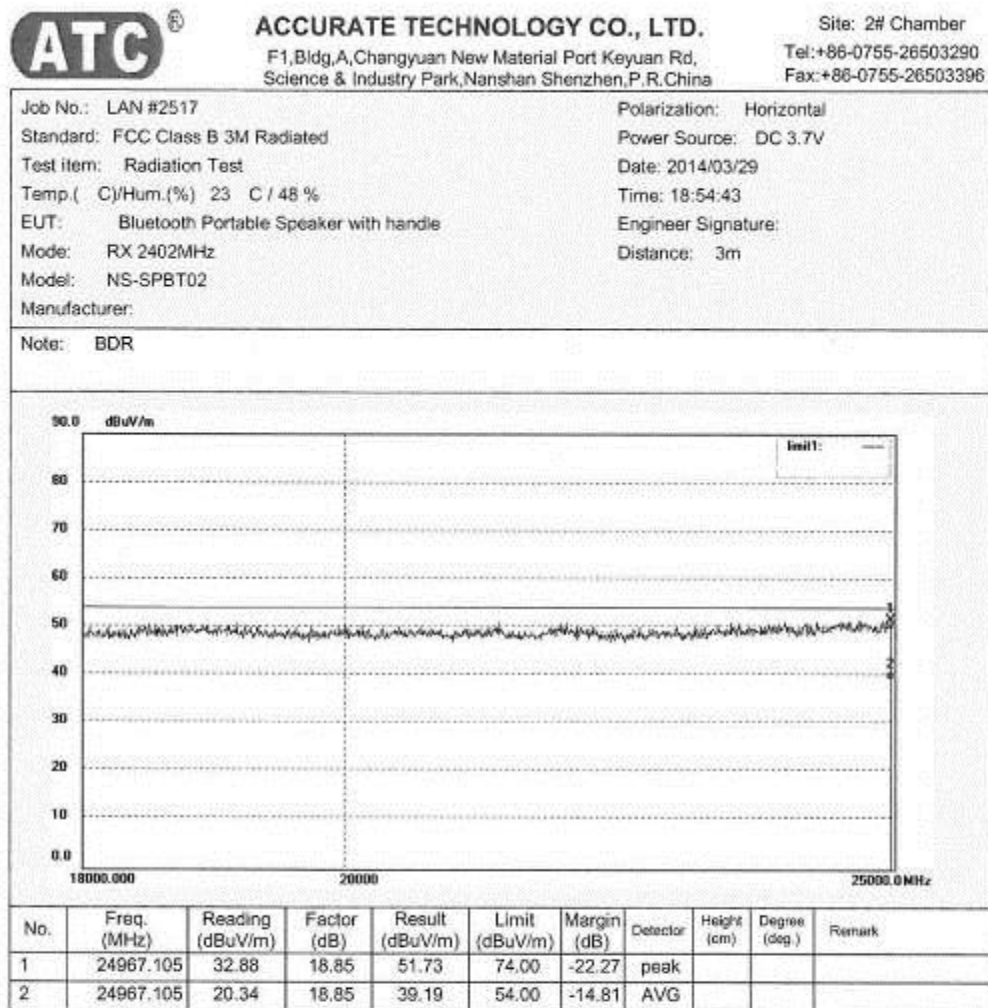


Figure 56: Test figure of spurious emissions, mode B, Vertical polarity (18GHz – 25GHz), GFSK Modulation

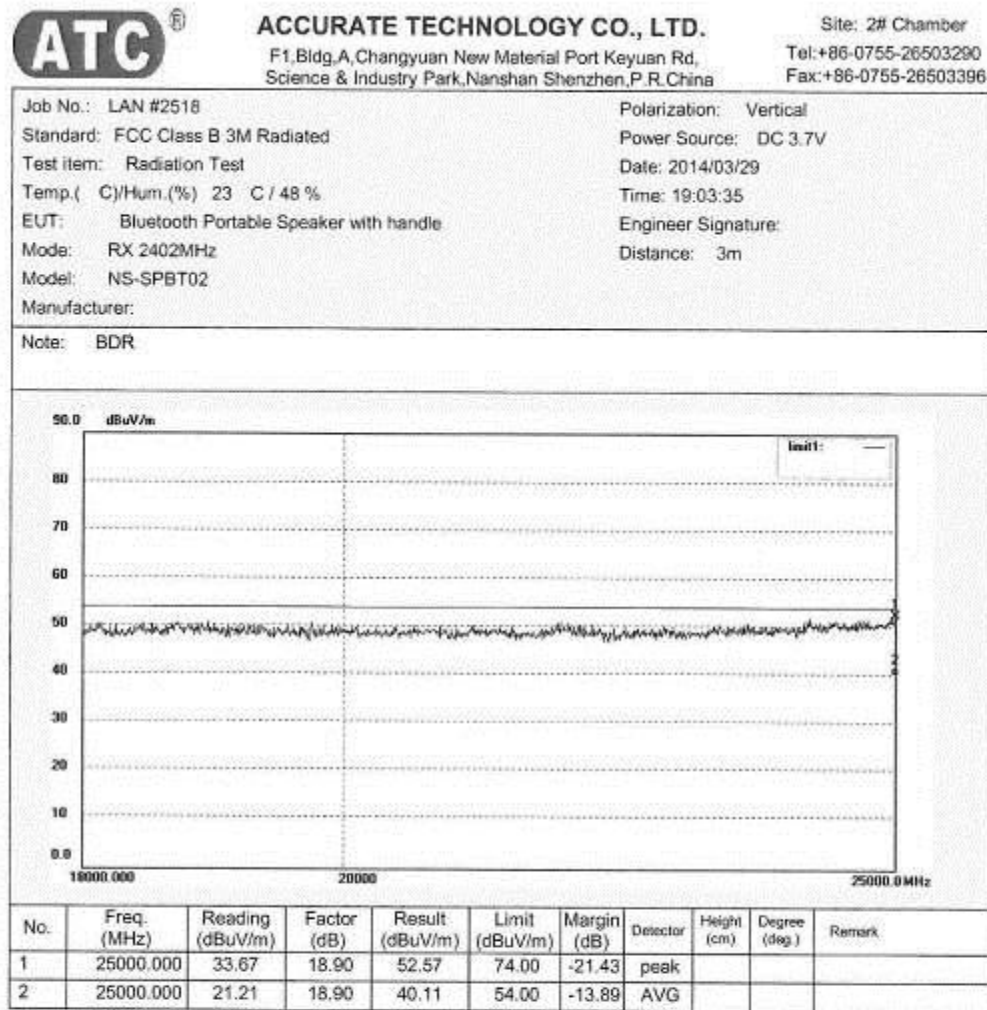
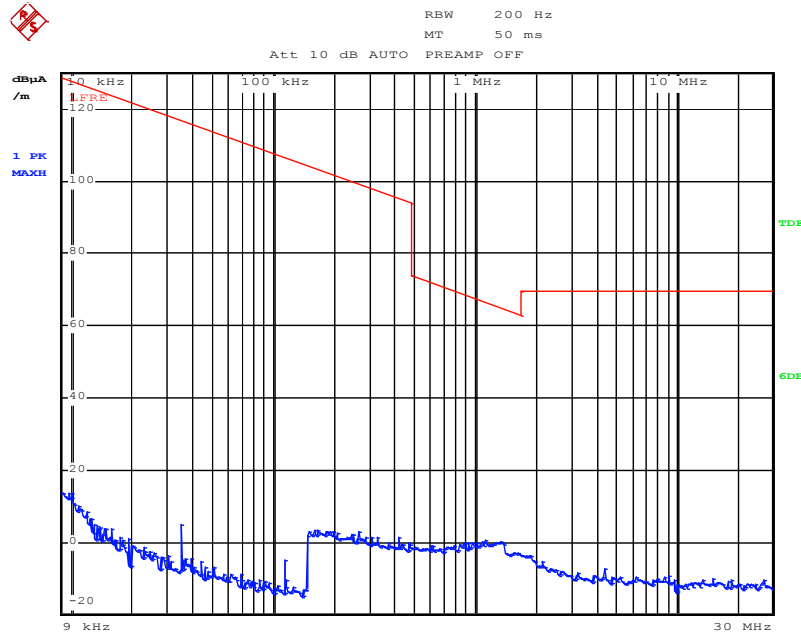
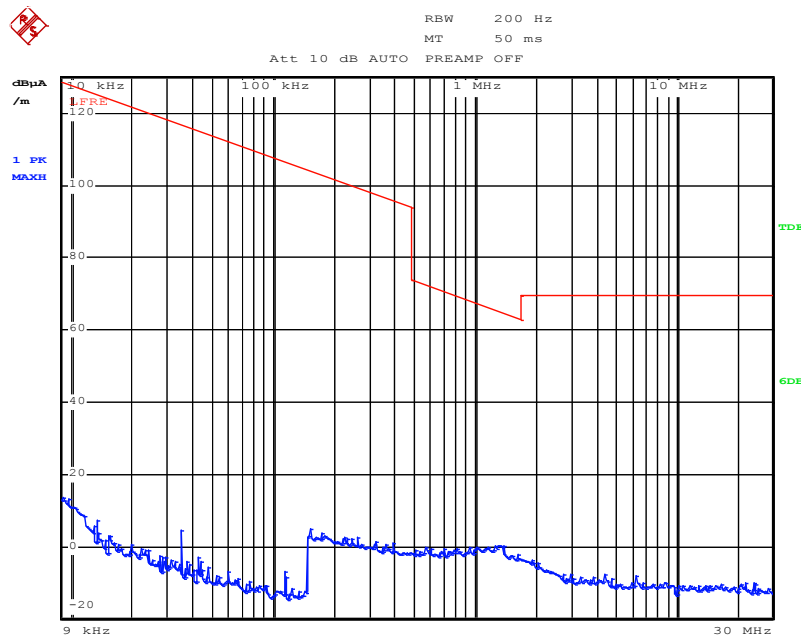


Figure 57: Test figure of spurious emissions, mode B, Horizontal polarity (9kHz – 30MHz), 8DPSK Modulation



Date: 29.MAR.2014 21:12:24

Figure 58: Test figure of spurious emissions, mode B, Vertical polarity (9kHz – 30MHz), 8DPSK Modulation



Date: 29.MAR.2014 21:14:18

Figure 59: Test figure of spurious emissions, mode B, Horizontal polarity (30MHz – 1GHz), 8DPSK Modulation

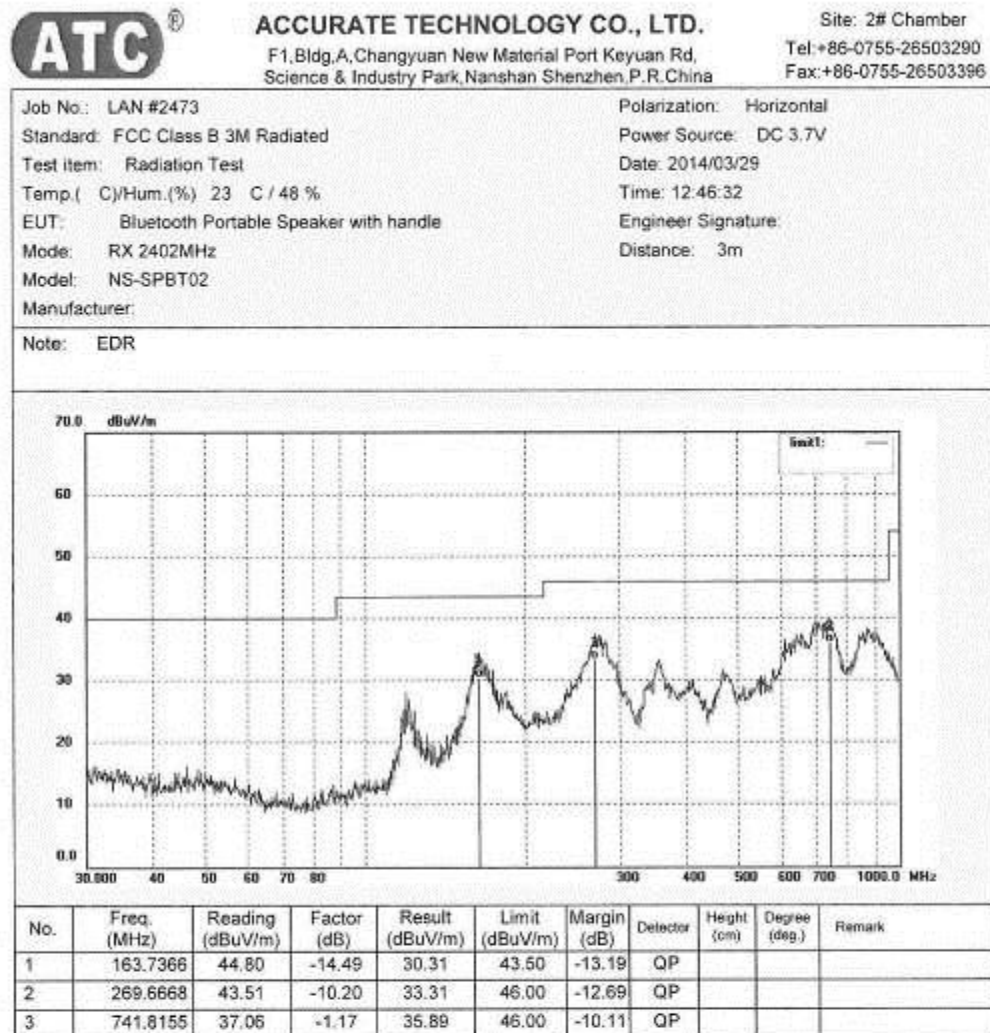


Figure 60: Test figure of spurious emissions, mode B, Vertical polarity (30MHz – 1GHz), 8DPSK Modulation

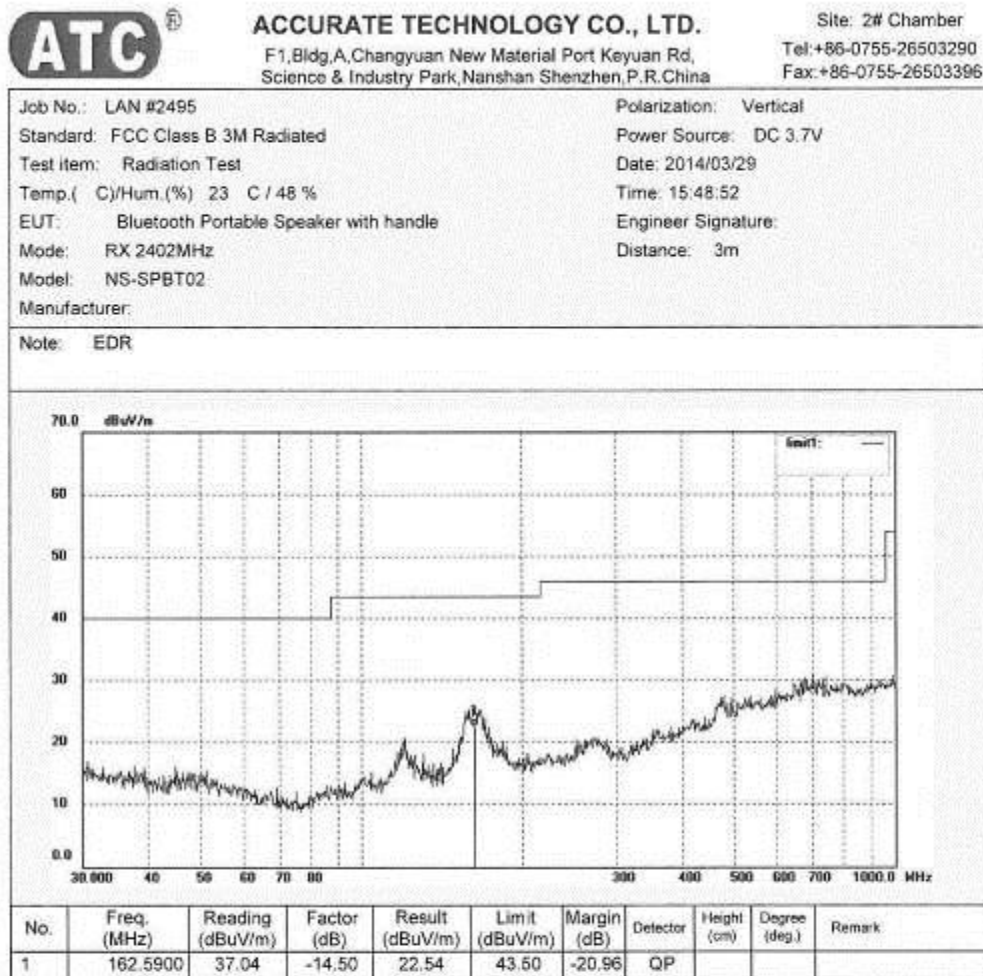


Figure 61: Test figure of spurious emissions, mode B, Horizontal polarity (1GHz –18GHz), 8DPSK Modulation

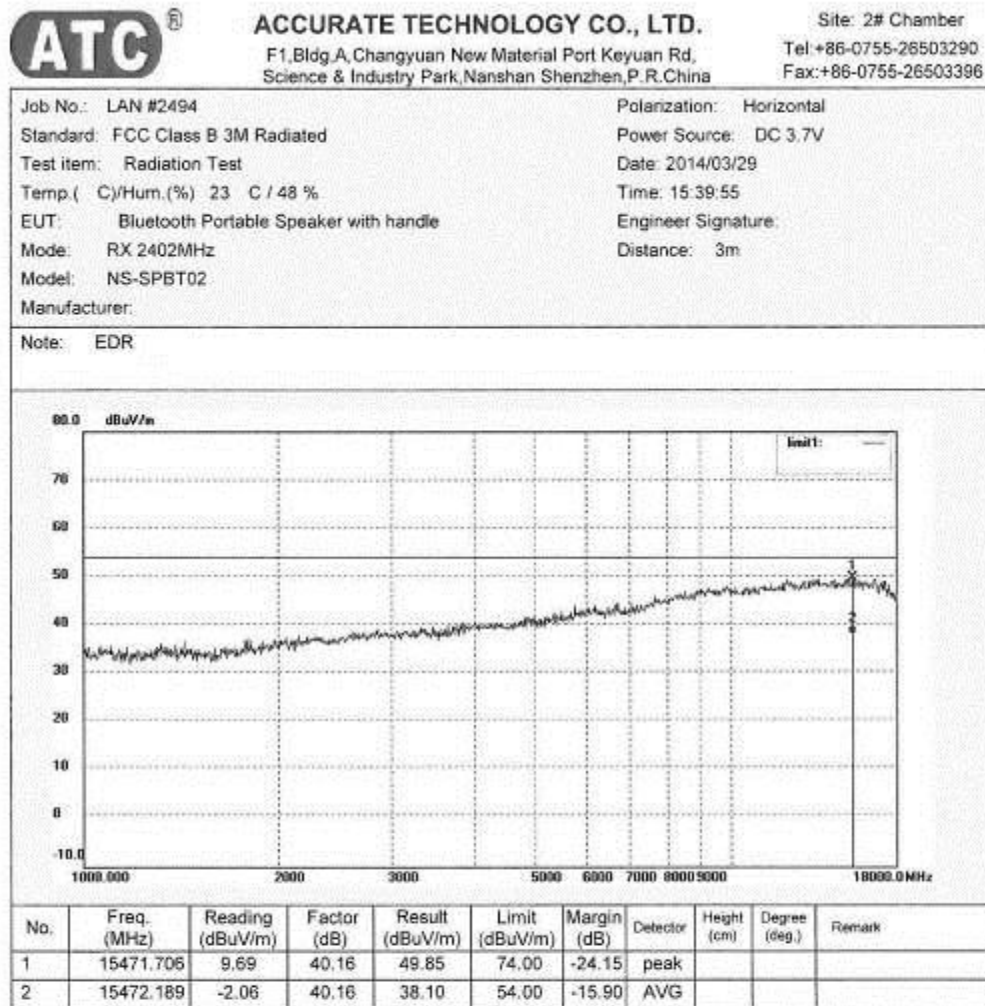


Figure 62: Test figure of spurious emissions, mode B, Vertical polarity (1GHz – 18GHz), 8DPSK Modulation

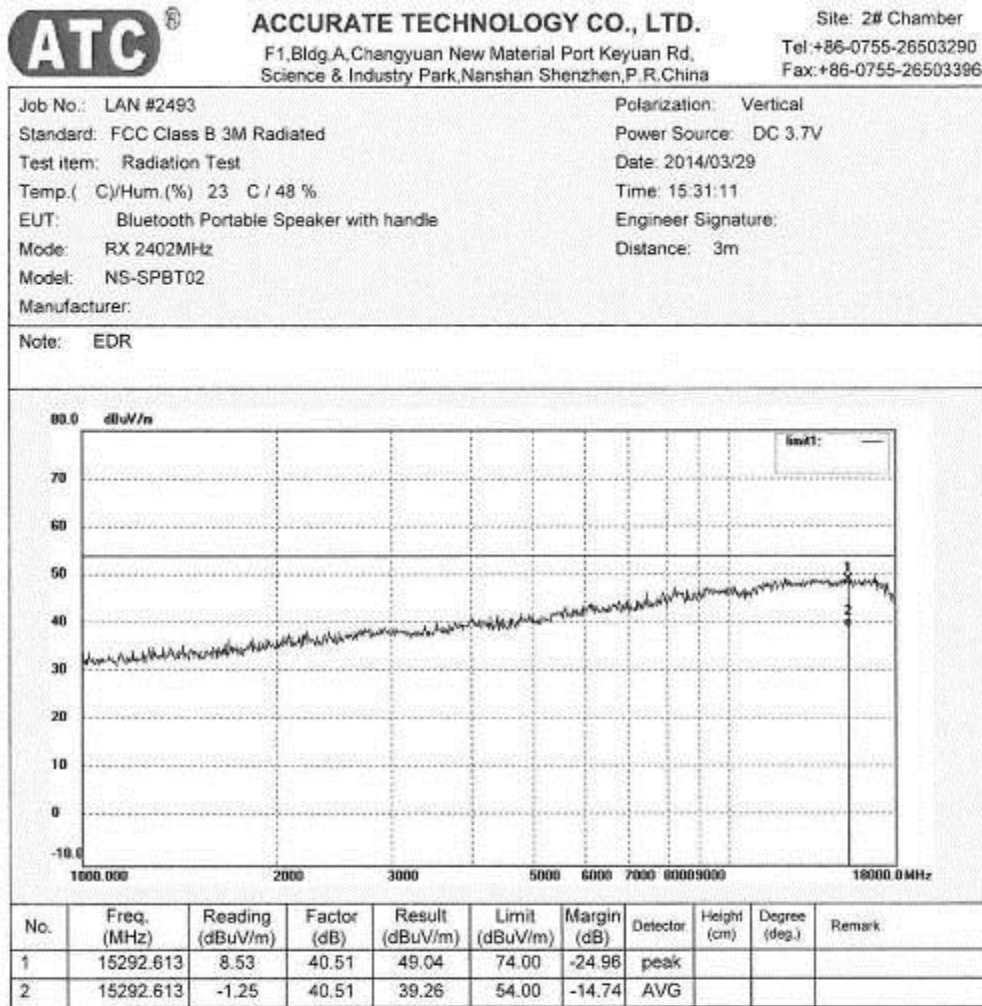


Figure 63: Test figure of spurious emissions, mode B, Horizontal polarity (18GHz –25GHz), 8DPSK Modulation

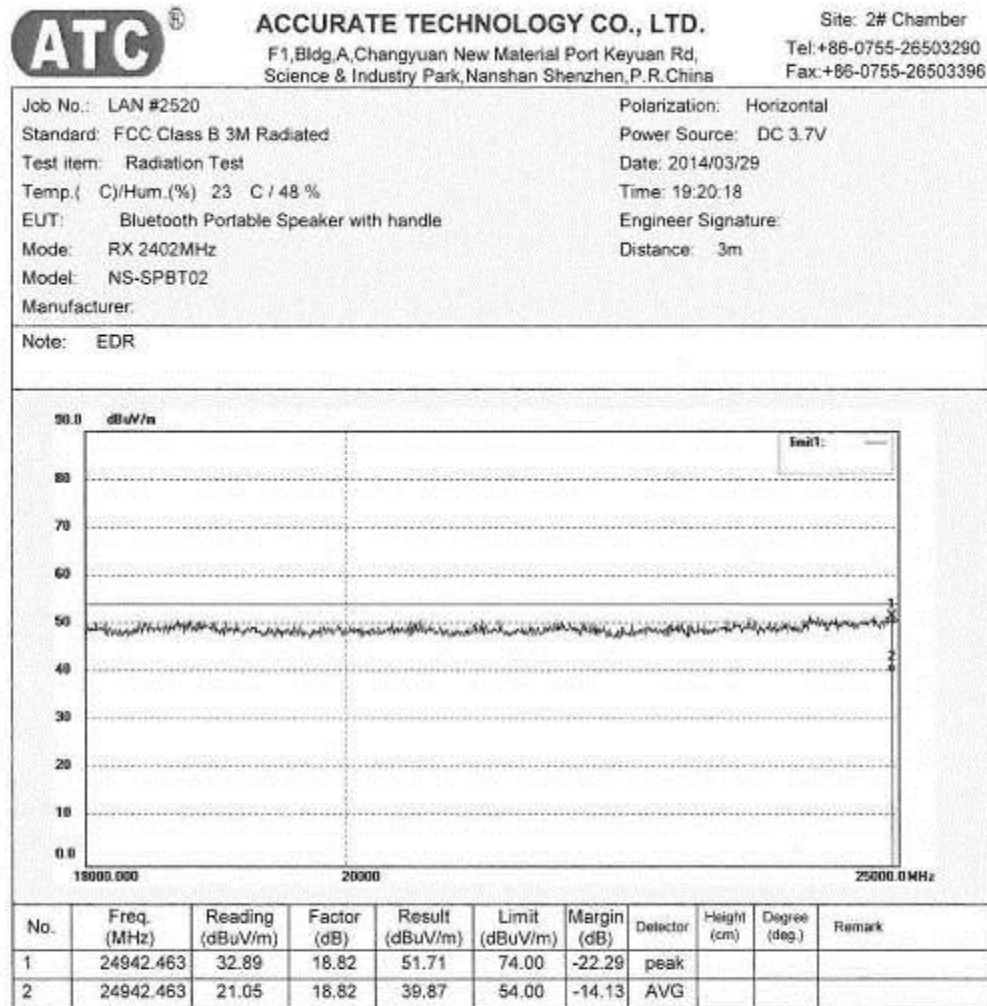


Figure 64: Test figure of spurious emissions, mode B, Vertical polarity (18GHz – 25GHz), 8DPSK Modulation

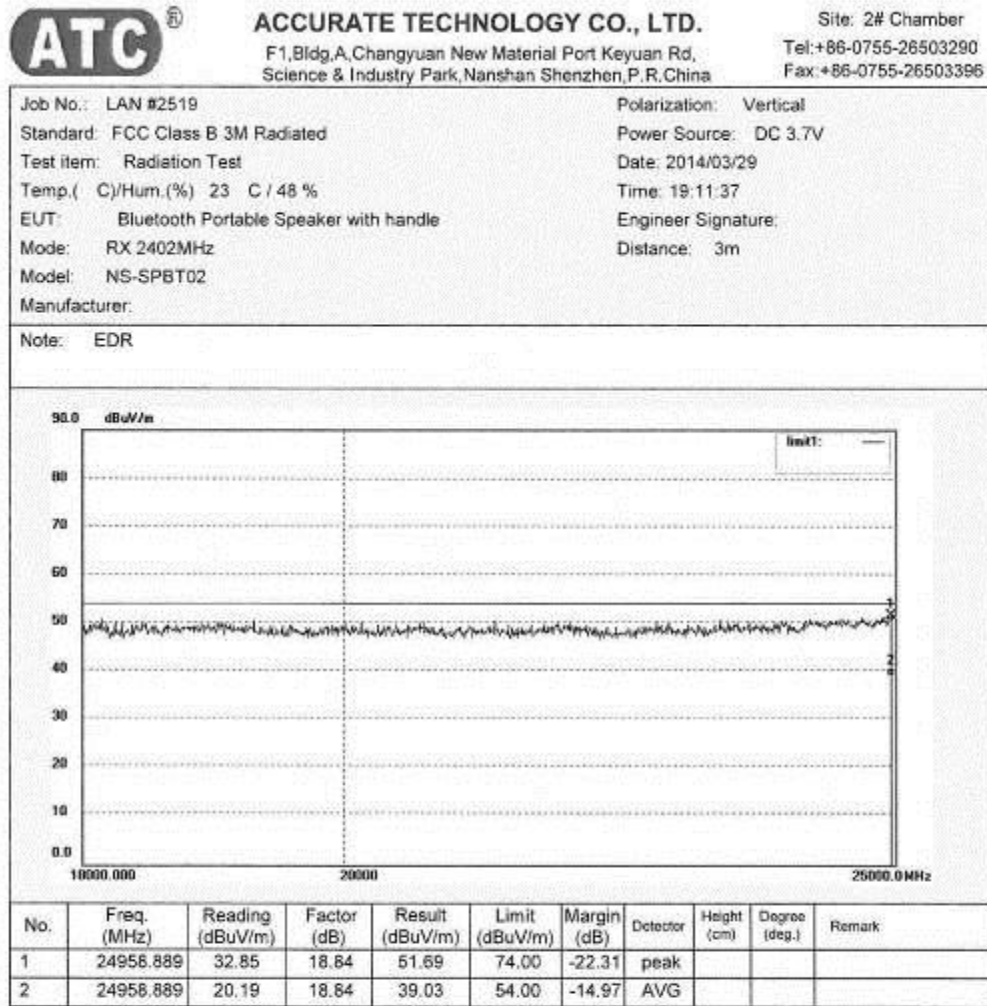


Figure 65: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal, GFSK Modulation

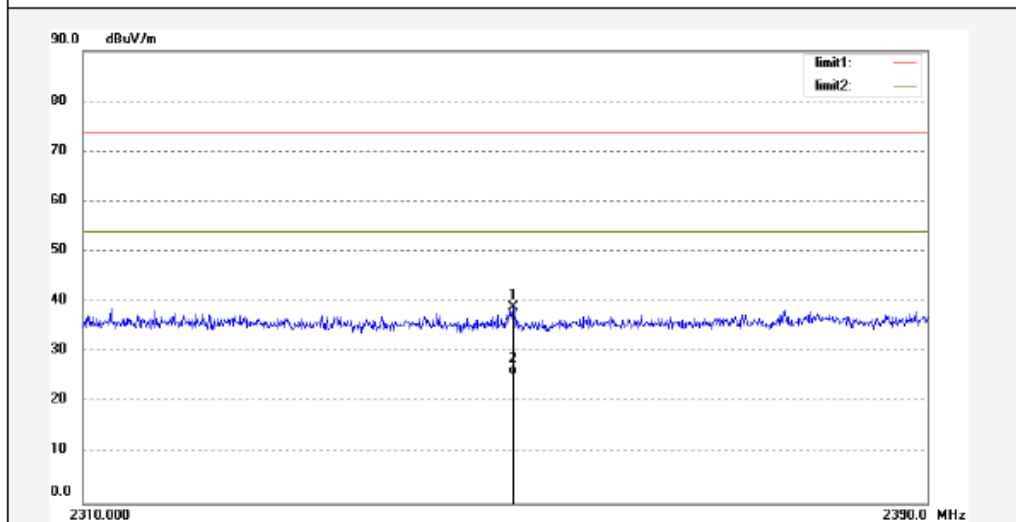


ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LAN #2496	Polarization: Horizontal
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2014/03/29
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 16:00:59
EUT: Bluetooth Portable Speaker with handle	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: NS-SPBT02	
Manufacturer:	

Note: BDR



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2350.461	46.80	-7.79	39.01	74.00	-34.99	peak			
2	2350.461	33.25	-7.79	25.46	54.00	-28.54	AVG			

Figure 66: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical, GFSK Modulation

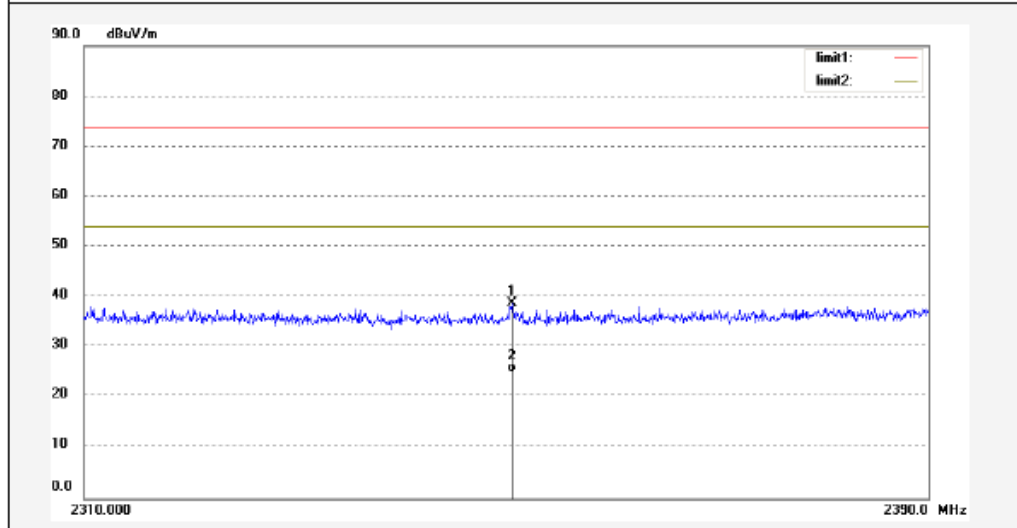


ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LAN #2497	Polarization: Vertical
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2014/03/29
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 16:08:43
EUT: Bluetooth Portable Speaker with handle	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: NS-SPBT02	
Manufacturer:	

Note: BDR



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2350.221	46.63	-7.79	38.84	74.00	-35.16	peak			
2	2350.221	32.96	-7.79	25.17	54.00	-28.83	AVG			

Figure 67: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal, GFSK Modulation

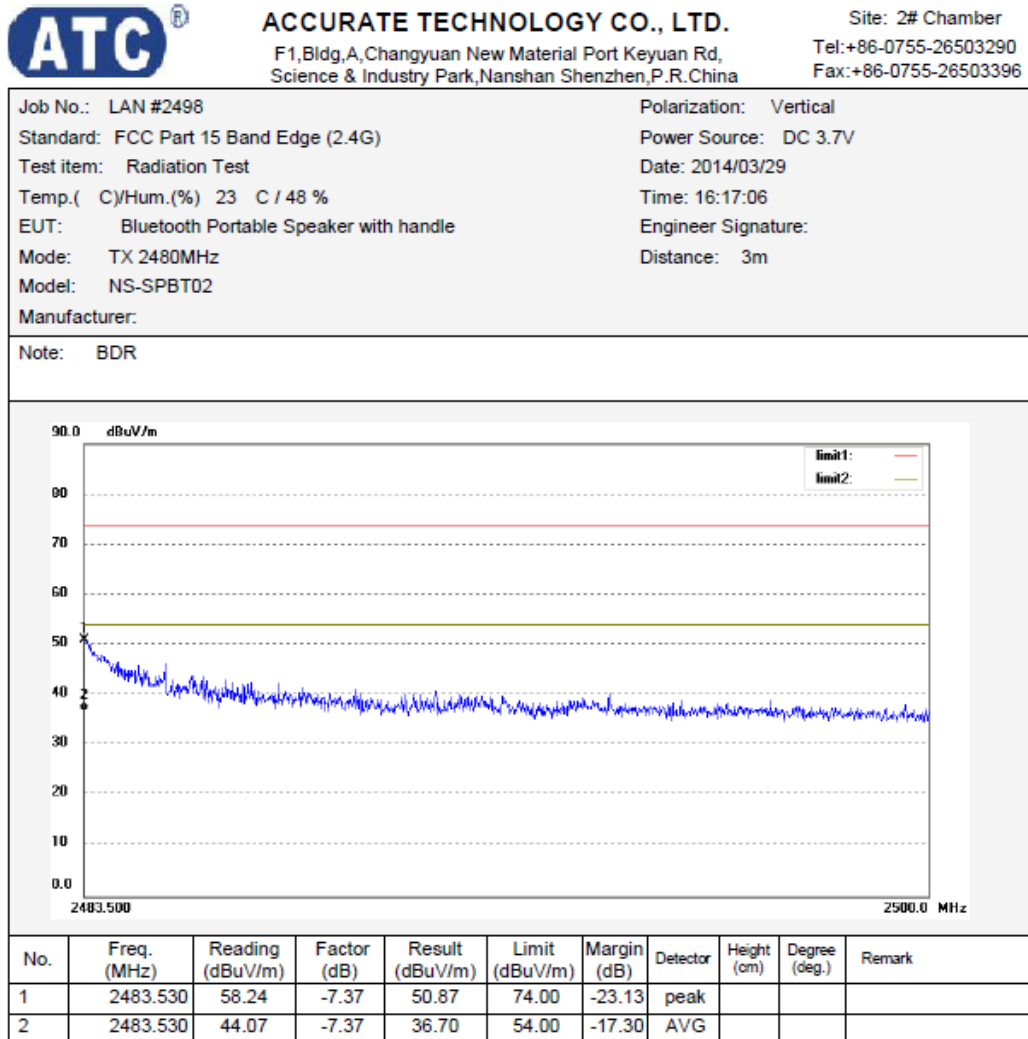


Figure 68: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical, GFSK Modulation

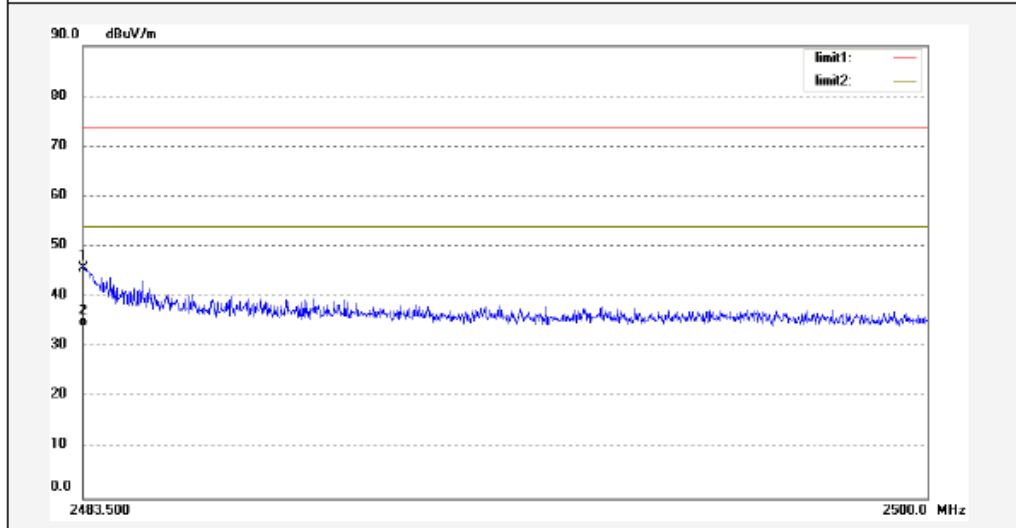


ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LAN #2499	Polarization: Horizontal
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2014/03/29
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 16:25:22
EUT: Bluetooth Portable Speaker with handle	Engineer Signature:
Mode: TX 2480MHz	Distance: 3m
Model: NS-SPBT02	
Manufacturer:	

Note: BDR



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	53.08	-7.37	45.71	74.00	-28.29	peak			
2	2483.500	41.47	-7.37	34.10	54.00	-19.90	AVG			

Figure 69: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal, 8DPSK Modulation

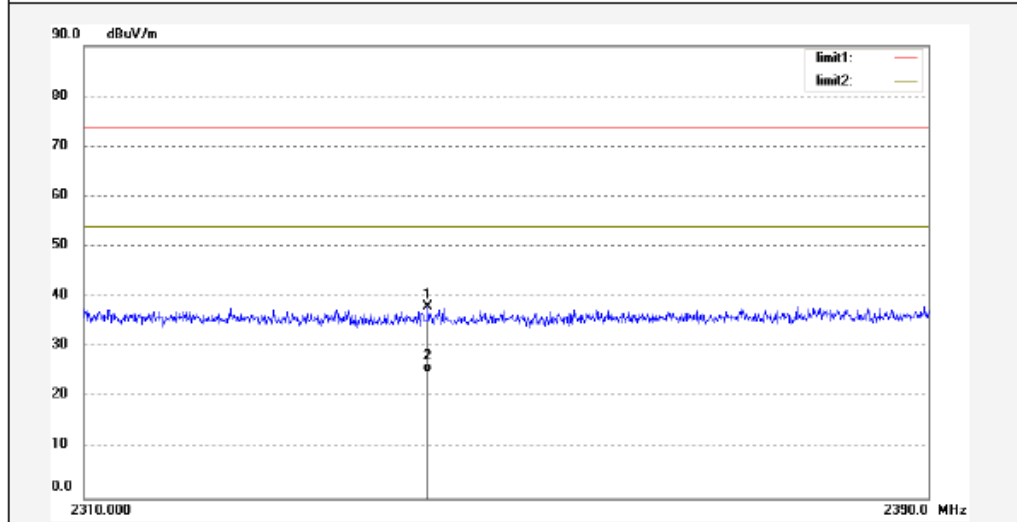


ACCURATE TECHNOLOGY CO., LTD.
 F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
 Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
 Tel:+86-0755-26503290
 Fax:+86-0755-26503396

Job No.: LAN #2500	Polarization: Horizontal
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2014/03/29
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 16:34:50
EUT: Bluetooth Portable Speaker with handle	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: NS-SPBT02	
Manufacturer:	

Note: EDR



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2342.297	45.85	-7.80	38.05	74.00	-35.95	peak			
2	2342.297	32.99	-7.80	25.19	54.00	-28.81	AVG			

Figure 70: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical, 8DP SK Modulation

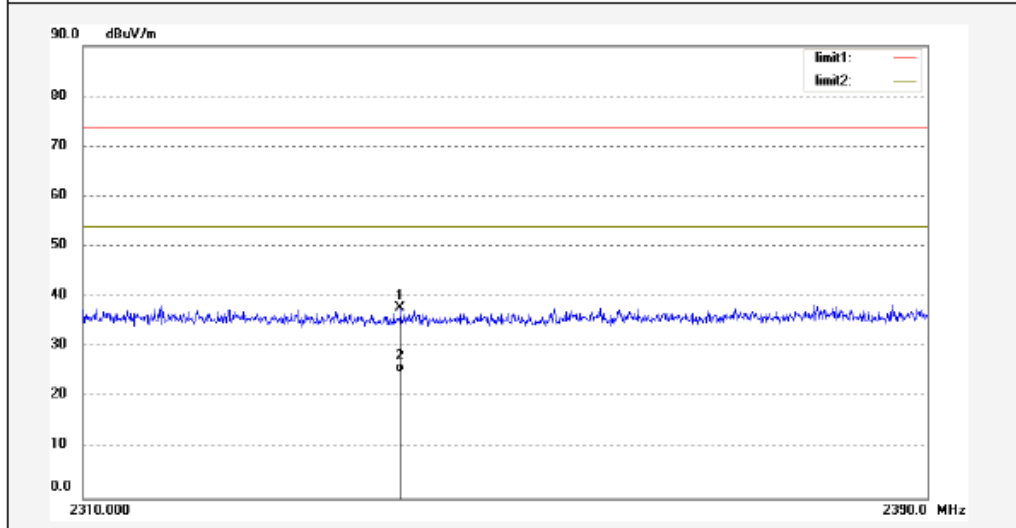


ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LAN #2501	Polarization: Vertical
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2014/03/29
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 16:42:44
EUT: Bluetooth Portable Speaker with handle	Engineer Signature:
Mode: TX 2402MHz	Distance: 3m
Model: NS-SPBT02	
Manufacturer:	

Note: EDR



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2339.741	45.63	-7.80	37.83	74.00	-36.17	peak			
2	2339.741	32.87	-7.80	25.07	54.00	-28.93	AVG			

Figure 71: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal, 8DPSK Modulation

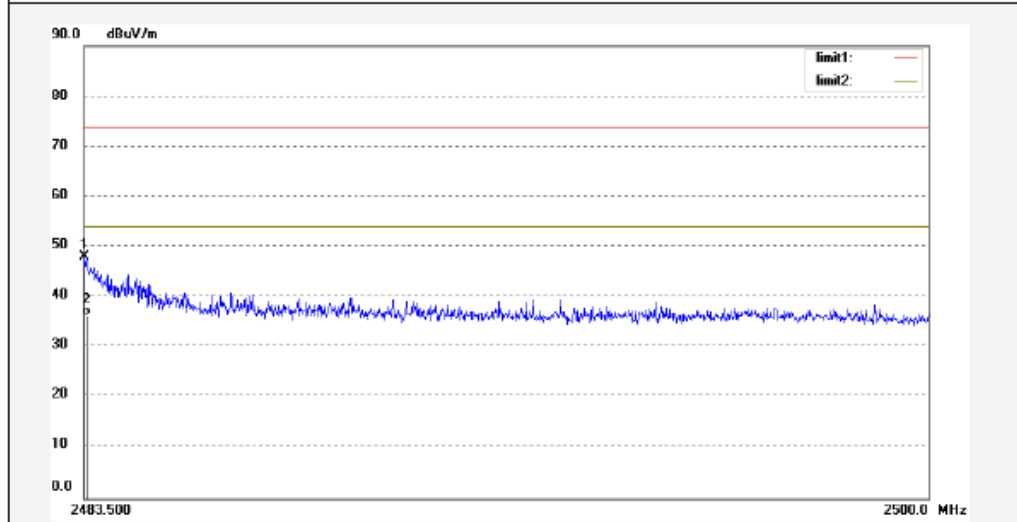


ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LAN #2502	Polarization: Vertical
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2014/03/29
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 16:50:16
EUT: Bluetooth Portable Speaker with handle	Engineer Signature:
Mode: TX 2480MHz	Distance: 3m
Model: NS-SPBT02	
Manufacturer:	

Note: EDR



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	55.48	-7.37	48.11	74.00	-25.89	peak			
2	2483.500	43.69	-7.37	36.32	54.00	-17.68	AVG			

Figure 72: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical, 8DPSK Modulation

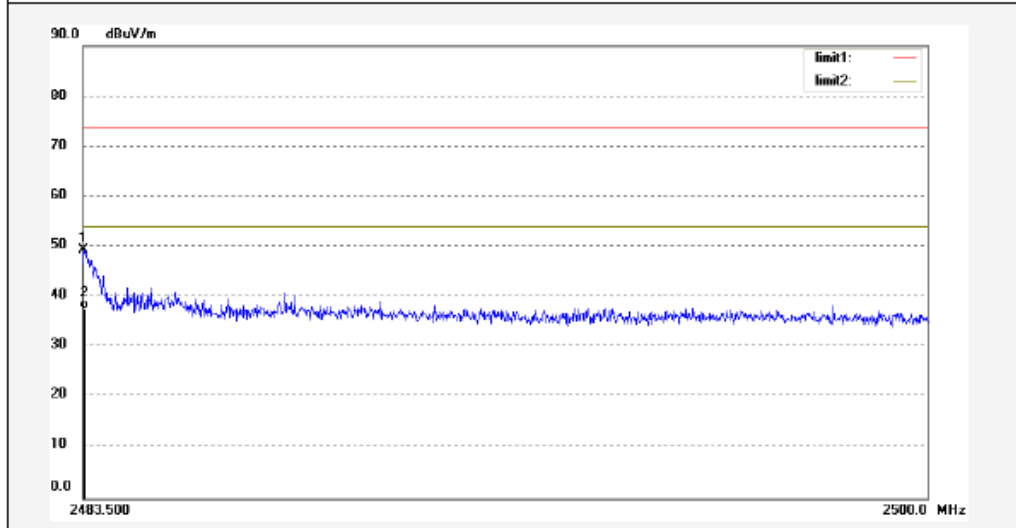


ACCURATE TECHNOLOGY CO., LTD.
F1,Bldg,A,Changyuan New Material Port Keyuan Rd,
Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber
Tel:+86-0755-26503290
Fax:+86-0755-26503396

Job No.: LAN #2503	Polarization: Horizontal
Standard: FCC Part 15 Band Edge (2.4G)	Power Source: DC 3.7V
Test item: Radiation Test	Date: 2014/03/29
Temp.(C)/Hum.(%) 23 C / 48 %	Time: 16:59:42
EUT: Bluetooth Portable Speaker with handle	Engineer Signature:
Mode: TX 2480MHz	Distance: 3m
Model: NS-SPBT02	
Manufacturer:	

Note: EDR



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2483.500	56.86	-7.37	49.49	74.00	-24.51	peak			
2	2483.500	44.97	-7.37	37.60	54.00	-16.40	AVG			

Figure 73: Test figure of Conducted emissions, Mode C, line live

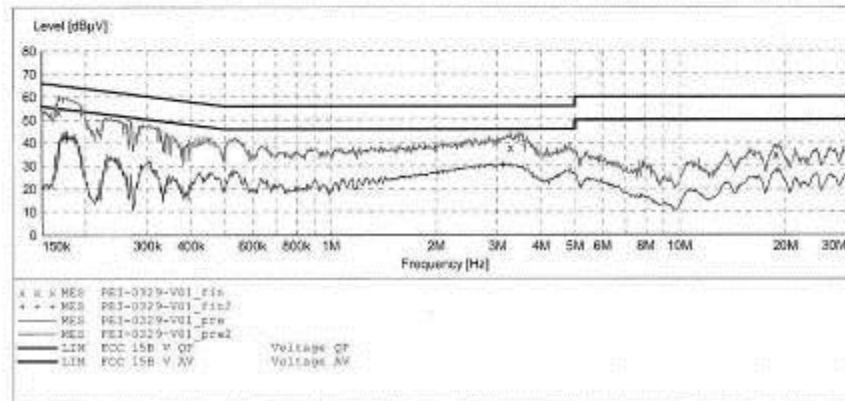
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Portable Speaker with handle M/N:NS-SPBT02
 Manufacturer:
 Operating Condition: Charging
 Test Site: 1#Shielding Room
 Operator: PEI
 Test Specification: L 120V/60Hz
 Comment:
 Start of Test: 3/29/2014 / 9:17:20PM

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "PEI-0329-V01_fin"

3/29/2014 9:25PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	FE
0.167071	53.50	10.5	65	11.6	QP	L1	GND
3.269773	37.90	11.1	56	18.1	QP	L1	GND
18.788135	34.60	11.4	60	25.4	QP	L1	GND

MEASUREMENT RESULT: "PEI-0329-V01_fin2"

3/29/2014 9:25PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	FE
0.176674	41.70	10.5	55	12.9	AV	L1	GND
3.104411	30.30	11.1	46	15.7	AV	L1	GND
19.014499	27.80	11.4	50	22.2	AV	L1	GND

Figure 74: Test figure of Conducted emissions, Mode C, line neutral

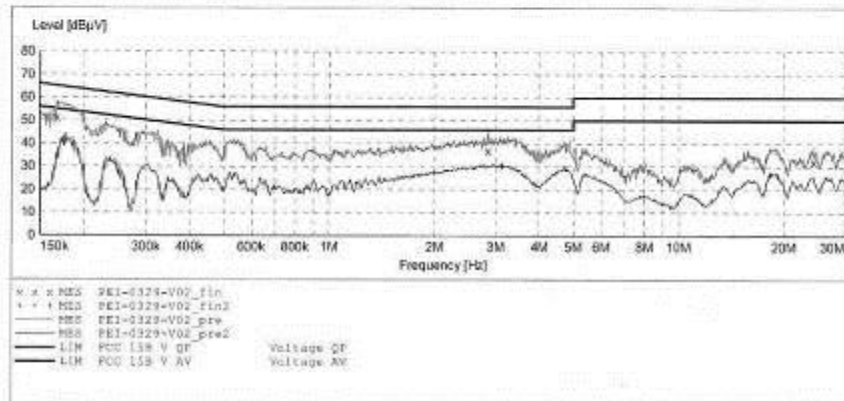
ACCURATE TECHNOLOGY CO.,LTD

CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: Bluetooth Portable Speaker with handle M/N:NS-SPBT02
 Manufacturer: BNE
 Operating Condition: Charging
 Test Site: 1#Shielding Room
 Operator: PEI
 Test Specification: N 120V/60Hz
 Comment:
 Start of Test: 3/29/2014 / 9:26:20PM

SCAN TABLE: "V 150K-30MHz fin"

Short Description: SUB STD VTERM2 1.70
 Start Stop Step Detector Meas. IF Transducer
 Frequency Frequency Width Time Bandw.
 150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz NSLK8126 2008
 Average



MEASUREMENT RESULT: "PEI-0329-V02_fin"

3/29/2014 9:35PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.167071	51.30	10.5	65	13.8	QP	N	GND
2.843398	36.90	11.0	56	19.1	QP	N	GND
24.257240	32.20	11.5	60	27.8	QP	N	GND

MEASUREMENT RESULT: "PEI-0329-V02_fin2"

3/29/2014 9:35PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.175970	41.00	10.5	55	13.7	AV	N	GND
3.116829	30.30	11.1	46	15.7	AV	N	GND
18.270388	26.40	11.4	50	23.6	AV	N	GND

Figure 75: Test figure of Radiated emissions, Mode C, Below 1GHz, Horizontal

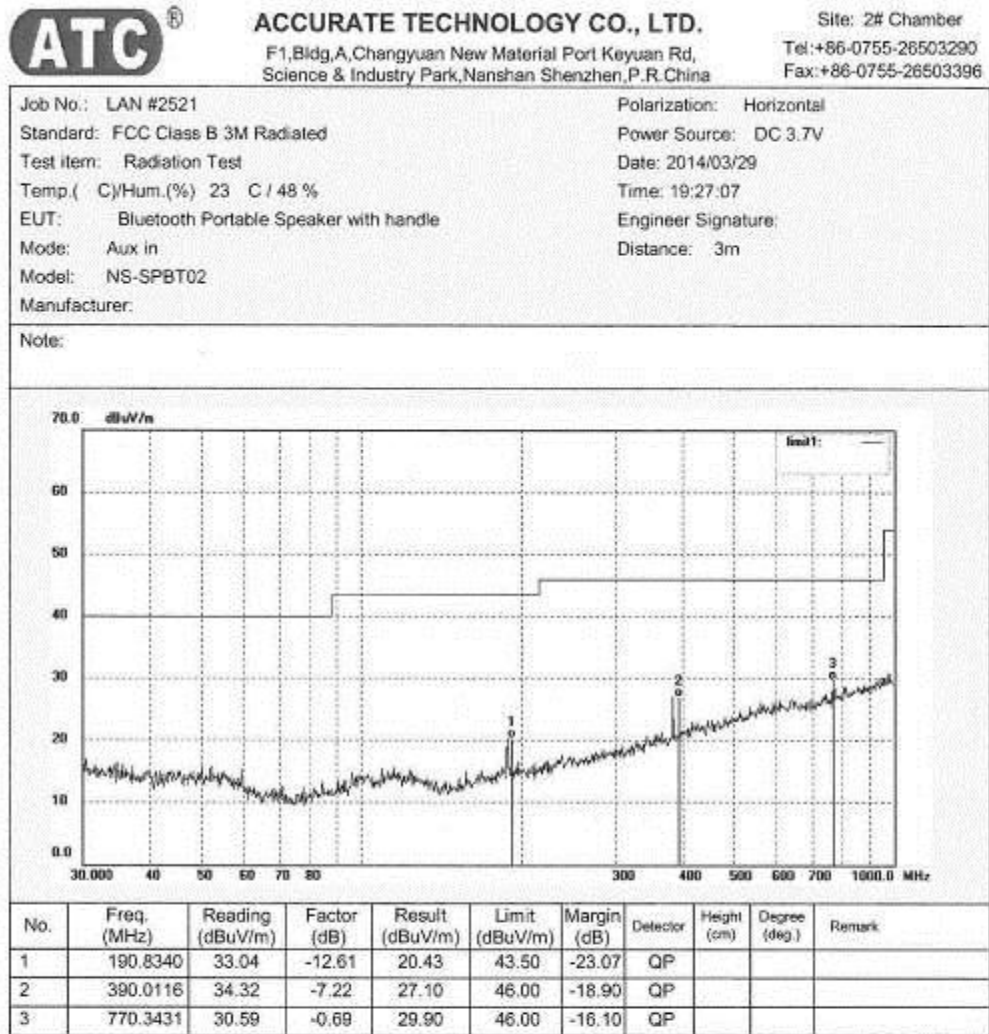


Figure 76: Test figure of Radiated emissions, Mode C, Below 1GHz, Vertical

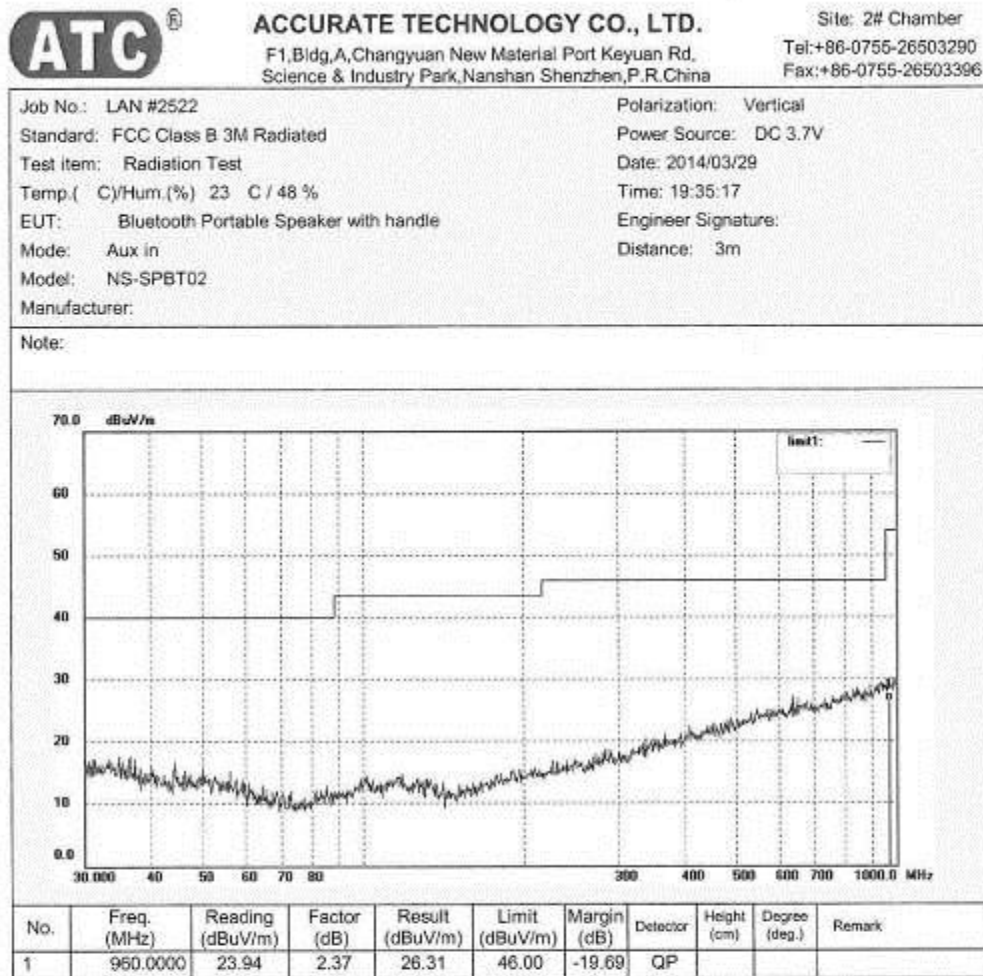


Figure 77: Test figure of Radiated emissions, Mode C, Above 1GHz, Horizontal

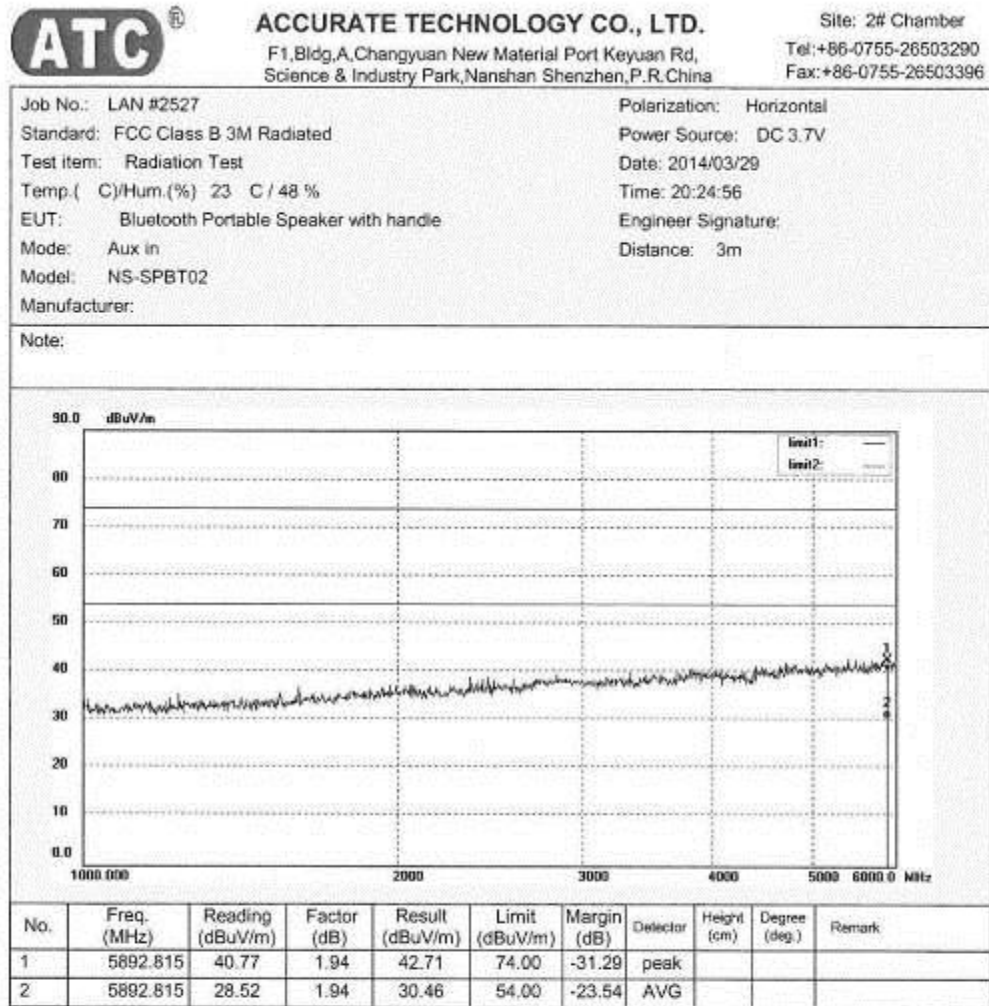


Figure 78: Test figure of Radiated emissions, Mode C, Above 1GHz, Vertical

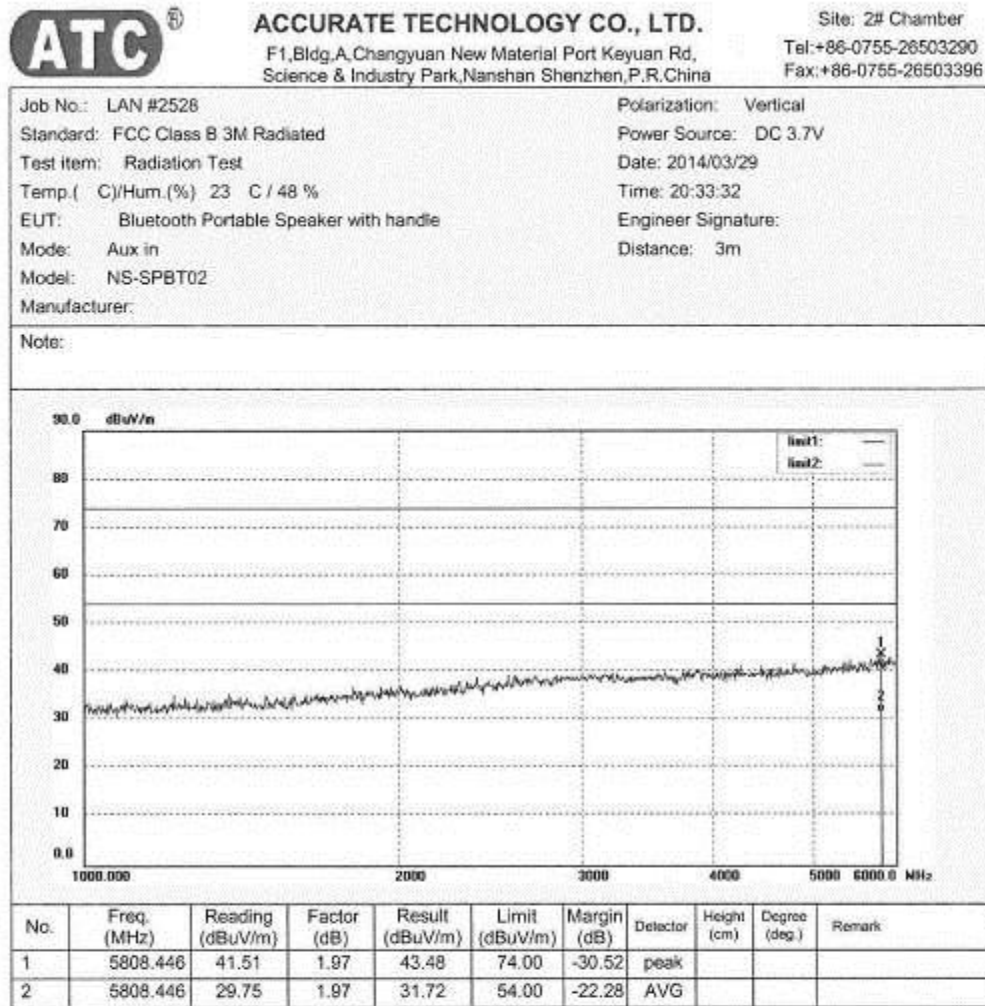


Figure 79: Test figure of Radiated emissions, Mode D, Below 1GHz, Horizontal

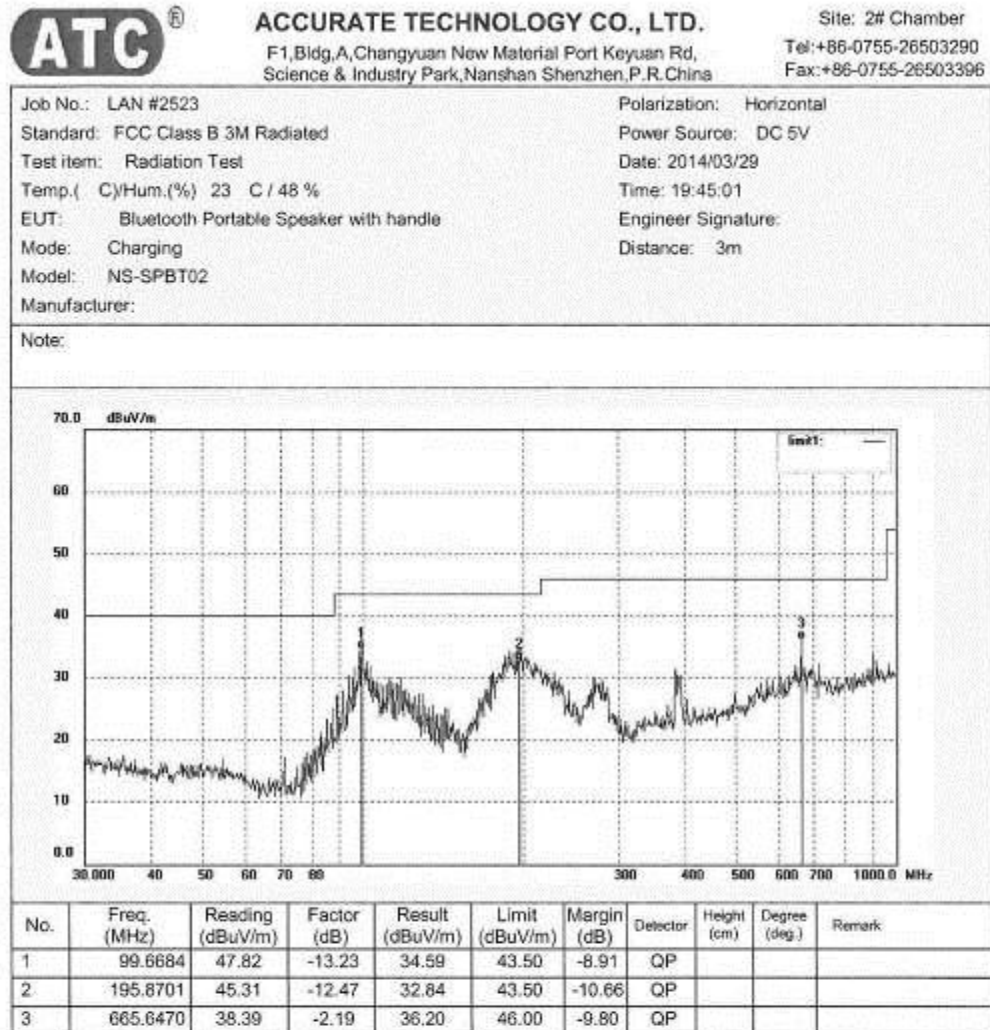


Figure 80: Test figure of Radiated emissions, Mode D, Below 1GHz, Vertical

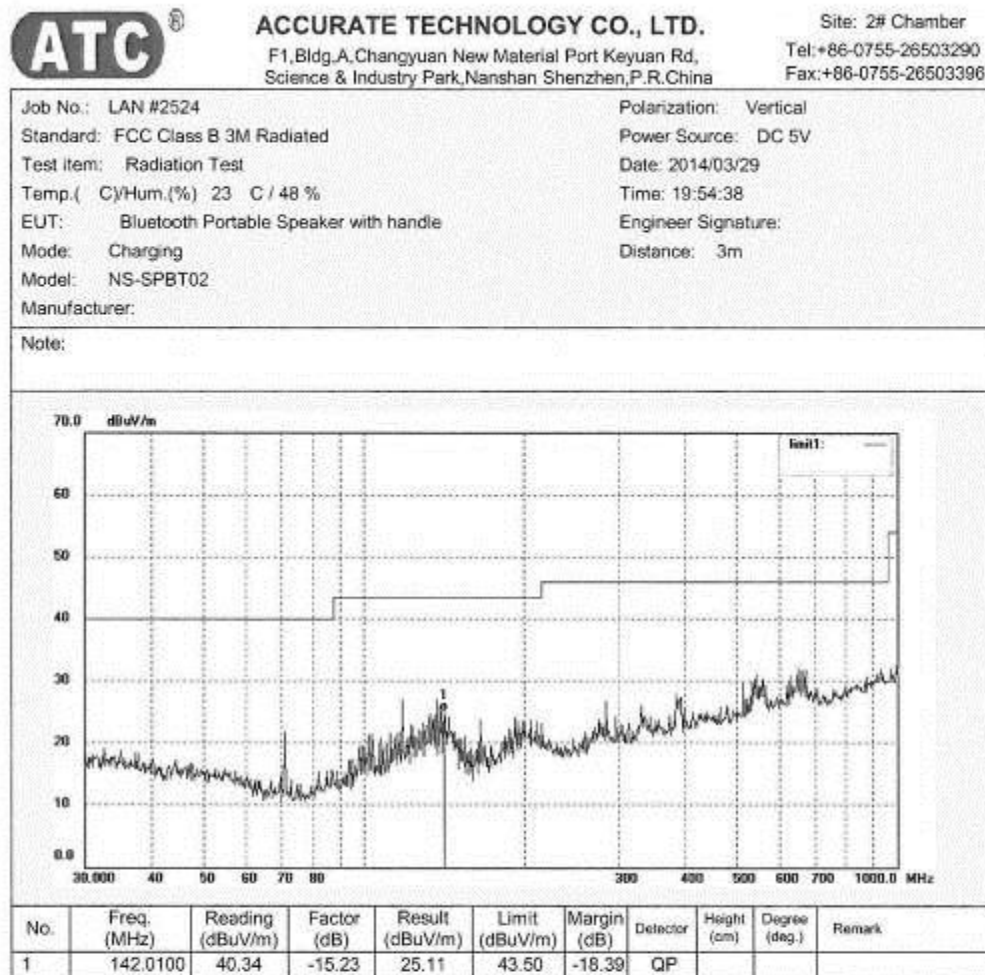


Figure 81: Test figure of Radiated emissions, Mode D, Above 1GHz, Horizontal

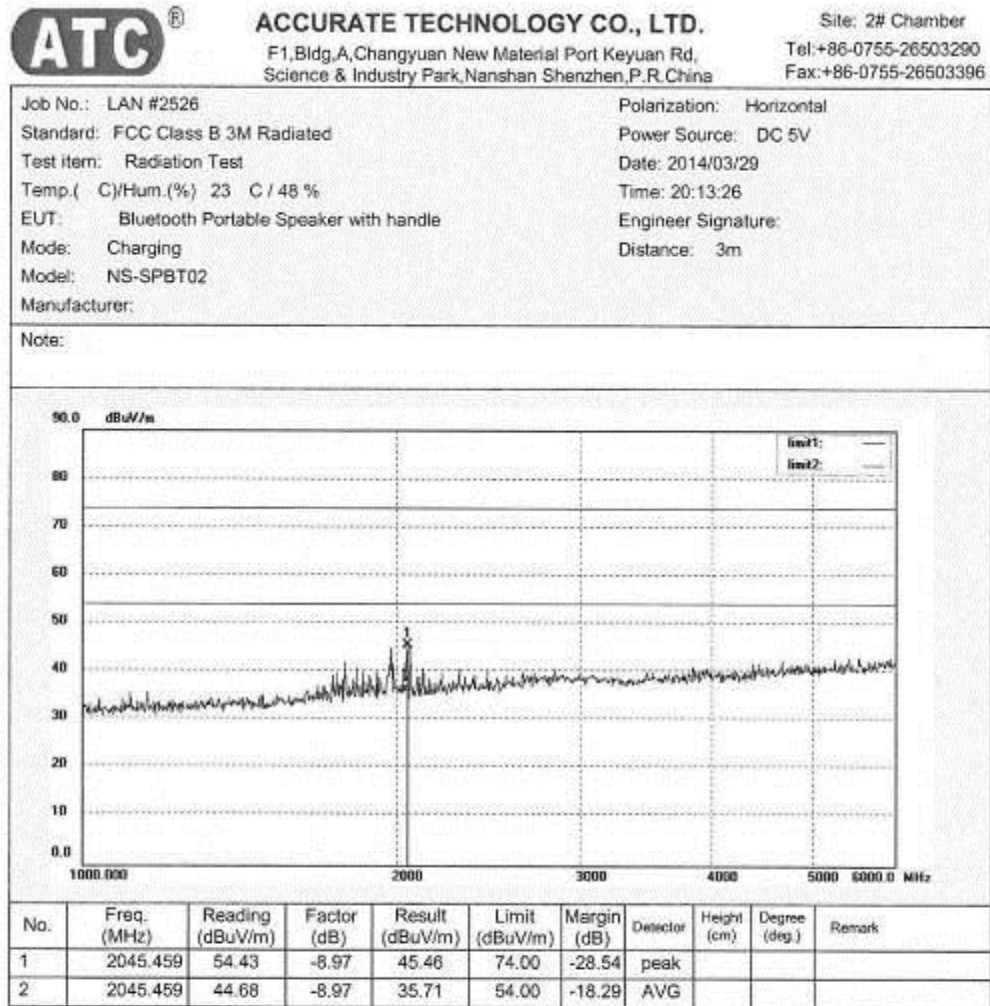


Figure 82: Test figure of Radiated emissions, Mode D, Above 1GHz, Vertical

