

Prüfbericht-Nr.: <i>Test Report No.:</i>	17048150 001	Auftrags-Nr.: <i>Order No.:</i>	164029480	Seite 1 von 28 <i>Page 1 of 28</i>	
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	16.02.2015		
Auftraggeber: <i>Client:</i>	ELECTRONICA INTEGRAL DE SONIDO S.A. Pol. Malpica c/F Oeste Grupo Quejido 87-88, Zaragoza, Spain.				
Prüfgegenstand: <i>Test item:</i>	KBSOUND BT				
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	52791				
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				
Wareneingangsdatum: <i>Date of receipt:</i>	05.03.2015				
Prüfmuster-Nr.: <i>Test sample No.:</i>	N/A				
Prüfzeitraum: <i>Testing period:</i>	07.03.2015 - 01.04.2015				
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: <i>Owen Tian</i>		kontrolliert von / reviewed by: <i>Winnie Hou</i>			
28.04.2015	Owen Tian / Senior Project Manager		30.04.2015	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 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					
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>					

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 2 von 28
Page 2 of 28

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Passed

5.1.2 PEAK OUTPUT POWER

RESULT: Passed

5.1.3 CONDUCTED SPURIOUS EMISSIONS MEASURED IN 100KHZ BANDWIDTH

RESULT: Passed

5.1.4 SPURIOUS EMISSION

RESULT: Passed

5.1.5 20dB BANDWIDTH

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

Prüfbericht - Nr.: 17048150 001
Test Report No.Seite 3 von 28
Page 3 of 28

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.....	10
4.5	TEST SETUP DIAGRAM	11
5.	TEST RESULTS	13
5.1	TRANSMITTER REQUIREMENT & TEST SUITES	13
5.1.1	Antenna Requirement	13
5.1.2	Peak Output Power.....	14
5.1.3	Conducted spurious emissions measured in 100kHz Bandwidth.....	15
5.1.4	Spurious Emission	16
5.1.5	20dB Bandwidth	17
5.1.6	Frequency Separation.....	18
5.1.7	Number of hopping frequency	19
5.1.8	Time of Occupancy	20
5.1.9	Conducted emissions.....	22
5.1.10	Radiated Emission.....	23
6.	PHOTOGRAPHS OF THE TEST SET-UP	24
7.	LIST OF TABLES	28
8.	LIST OF PHOTOGRAPHS	28

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 4 von 28
Page 4 of 28

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				
Spectrum Analyzer	Rohde&Schwarz	FSV40	101495	2016-01-09
Test Receiver	Rohde&Schwarz	ESCS30	100307	2016-01-09
Bilog Antenna	Schwarzbeck	VULB9163	9163-323	2016-01-09
Loop Antenna	Schwarzbeck	FMZB1516	1516131	2016-01-09
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-655	2016-01-09
Horn Antenna	Schwarzbeck	BBHA9170	9170-359	2016-01-09
RF Switching Unit+PreAMP	Compliance Direction	RSU-M2	38322	2016-01-09
Pre-Amplifier	Rohde&Schwarz	CBLU11835 40-01	3791	2016-01-09
Radio Test Suite				
Spectrum Analyzer	Rohde & Schwarz	FSV40	101495	2016-01-09
Conducted Emission				
Test Receiver	Rohde & Schwarz	ESCS30	100307	2016-01-09
L.I.S.N.	Schwarzbeck	NLSK8126	8126431	2016-01-09
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100815	2016-01-09
50Ω Coaxial Switch	Anritsu Corp	MP59B	6200283933	2016-01-09

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 6 von 28
Page 6 of 28

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 $\pm 3\text{dB}$.

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 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 EUT is a FM and Bluetooth audio streaming receiver controlled by an App installed in a smartphone or tablet.

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:	KBSOUND BT
Type Designation:	52791
FCC ID	2AB6X52791

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

Technical Specification	Value
Operating Frequency band	2402 – 2480 MHz
Bluetooth Core Version	3.0
Channel separation	1MHz
Extreme Temperature Range	0°C to +55°C
Operation Voltage	AC230V
Modulation	GFSK, 8DPSK, π/4DQPSK
Antenna Type	Internal Antenna, Non-User Replaceable
Antenna Gain	3.5dBi
RF Output Power	0.00031W (-5.02dBm)

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 8 von 28
Page 8 of 28

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

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, Traditional Bluetooth
 - 1. Transmitting on low channel
 - 2. Transmitting on middle channel
 - 3. Transmitting on high channel
- B. FM receiving
- C. Off

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 9 von 28
Page 9 of 28

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.

4.3 Special Accessories and Auxiliary Equipment

The EUT was tested with following accessories:

Description	Manufacturer	Type	S/N
iPad	Apple	MD513CH/A	DMTK58A5F185

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

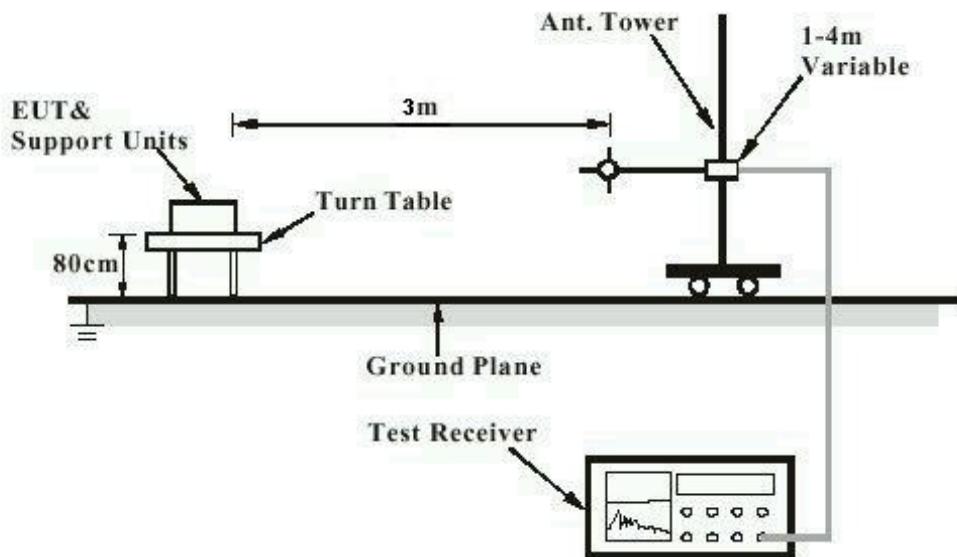
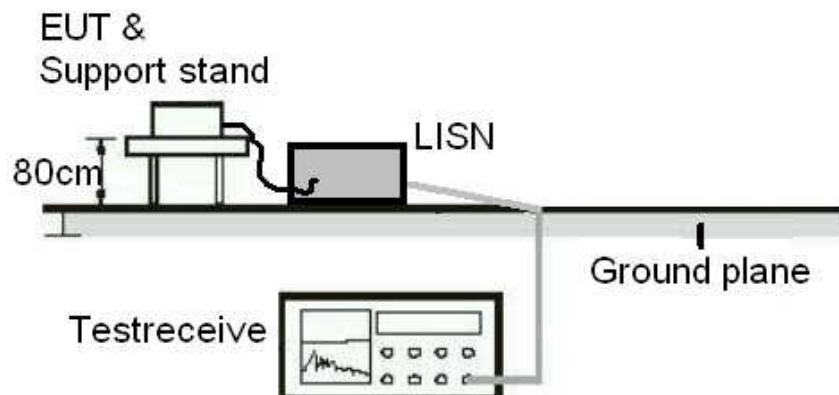


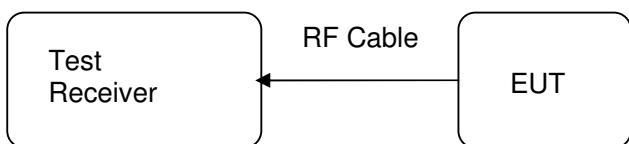
Diagram of Measurement Equipment Configuration for Mains Conduction Measurement



Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 12 von 28
Page 12 of 28

Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement



Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 13 von 28
Page 13 of 28

5. Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Passed**

Test date	:	2015-03-09
Test standard	:	FCC Part 15.247(b)(4) and Part 15.203
Limit	:	the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT has an internal antenna, the directional gain of antenna is 3.5dBi, 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.

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 14 von 28
Page 14 of 28

5.1.2 Peak Output Power

RESULT:

Passed

Test date	:	2015-03-09
Test standard	:	FCC Part 15.247(b)(3)
Basic standard	:	ANSI C63.4: 2003
Limit	:	1 Watt
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 5: Test result of Peak Output Power, BR

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	
Low Channel	2402	-5.89	0.00026	1
Middle Channel	2440	-5.49	0.00028	1
High Channel	2480	-5.02	0.00031	1

Table 6: Test result of Peak Output Power, EDR

Channel	Channel Frequency (MHz)	Peak Output Power		Limit
		(dBm)	(W)	
Low Channel	2402	-6.47	0.00022	1
Middle Channel	2440	-6.34	0.00023	1
High Channel	2480	-5.92	0.00026	1

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 15 von 28
Page 15 of 28

5.1.3 Conducted spurious emissions measured in 100kHz Bandwidth

RESULT:

Passed

Date of testing	:	2015-03-09 to 2015-04-01
Test standard	:	FCC part 15.247(d)
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 Appendix 1.

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 16 von 28
Page 16 of 28

5.1.4 Spurious Emission

RESULT:**Passed**

Date of testing	:	2015-03-10 to 2015-03-25
Test standard	:	FCC part 15.247(d) FCC Part 15.205
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
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.

Prüfbericht - Nr.: 17048150 001
Test Report No.Seite 17 von 28
Page 17 of 28

5.1.5 20dB Bandwidth

RESULT:**Passed**

Date of testing : 2015-03-09
Test standard : FCC Part 15.247(a)(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 7: Test result of 20dB Bandwidth, BDR mode

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	840	/	Pass
Mid Channel	2441	834	/	Pass
High Channel	2480	834	/	Pass

Table 8: Test result of 20dB Bandwidth, EDR mode

Channel	Channel Frequency (MHz)	20dB Bandwidth (kHz)	Limit (MHz)	Result
Low Channel	2402	1200	/	Pass
Mid Channel	2441	1194	/	Pass
High Channel	2480	1194	/	Pass

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 18 von 28
Page 18 of 28

5.1.6 Frequency Separation

RESULT:

Passed

Date of testing	:	2015-03-09
Test standard	:	FCC part 15.247(a)(1)
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	:	A
Ambient temperature	:	25°C
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

Table 9: Test result of Frequency Separation, BR&EDR mode

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			

Prüfbericht - Nr.: 17048150 001
Test Report No.Seite 19 von 28
Page 19 of 28

5.1.7 Number of hopping frequency

RESULT:**Passed**

Date of testing	:	2015-03-09
Test standard	:	FCC part 15.247(a)(1)(iii)
Basic standard	:	ANSI C63.4: 2003
Limits	:	≥ 15 non-overlapping channels
Kind of test site	:	Shield room

Test setup

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

Table 10: Test result of Number of hopping frequency, BR&EDR mode

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

5.1.8 Time of Occupancy

RESULT:

Passed

Date of testing	:	2015-03-09
Test standard	:	FCC part 15.247(a)(1)(iii)
Basic standard	:	ANSI C63.4: 2003
Limits	:	0.4s
Kind of test site	:	Shield room

Test setup

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

Table 11: Test result of Time of Occupancy, BDR mode

Channel	Data Mode	Pulse width (ms)	Measured Dwell time (s)	Limit (s)	Result
Low Channel	DH1	0.42	0.134	0.4	Pass
	DH3	1.70	0.272	0.4	Pass
	DH5	3.0	0.320	0.4	Pass
Mid Channel	DH1	0.43	0.138	0.4	Pass
	DH3	1.70	0.272	0.4	Pass
	DH5	3.0	0.320	0.4	Pass
High Channel	DH1	0.42	0.134	0.4	Pass
	DH3	1.70	0.272	0.4	Pass
	DH5	3.0	0.320	0.4	Pass

Table 12: Test result of Time of Occupancy, EDR mode

Channel	Data Mode	Pulse width (ms)	Measured Dwell time (s)	Limit (s)	Result
Low Channel	DH1	0.44	0.141	0.4	Pass
	DH3	1.72	0.275	0.4	Pass
	DH5	2.98	0.318	0.4	Pass
Mid Channel	DH1	0.44	0.141	0.4	Pass
	DH3	1.72	0.275	0.4	Pass
	DH5	3.01	0.321	0.4	Pass
High Channel	DH1	0.44	0.141	0.4	Pass
	DH3	1.72	0.275	0.4	Pass
	DH5	2.98	0.318	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

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 22 von 28
Page 22 of 28

5.1.9 Conducted emissions

RESULT:**Passed**

Date of testing	:	2015-03-07
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
Operation Mode	:	C
Earthing	:	Not connected
Ambient temperature	:	25°C
Relative humidity	:	55%
Atmospheric pressure	:	101 kPa

For details refer to Appendix 1.

Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 23 von 28
Page 23 of 28

5.1.10 Radiated Emission

RESULT:**Passed**

Date of testing	:	2015-03-09 to 2015-03-18
Test standard	:	FCC Part 15 Per Section 15.209(a)
Frequency range	:	30 - 6000MHz
Classification	:	Class B
Test procedure	:	ANSI C63.4: 2003
Kind of test site	:	3m Semi-Anechoic Chamber

Test setup

Input Voltage	:	AC 120V, 60Hz
Operation mode	:	B
Earthing	:	Not connected
Ambient temperature	:	Refer to Appendix 1
Relative humidity	:	Refer to Appendix 1
Atmospheric pressure	:	Refer to Appendix 1

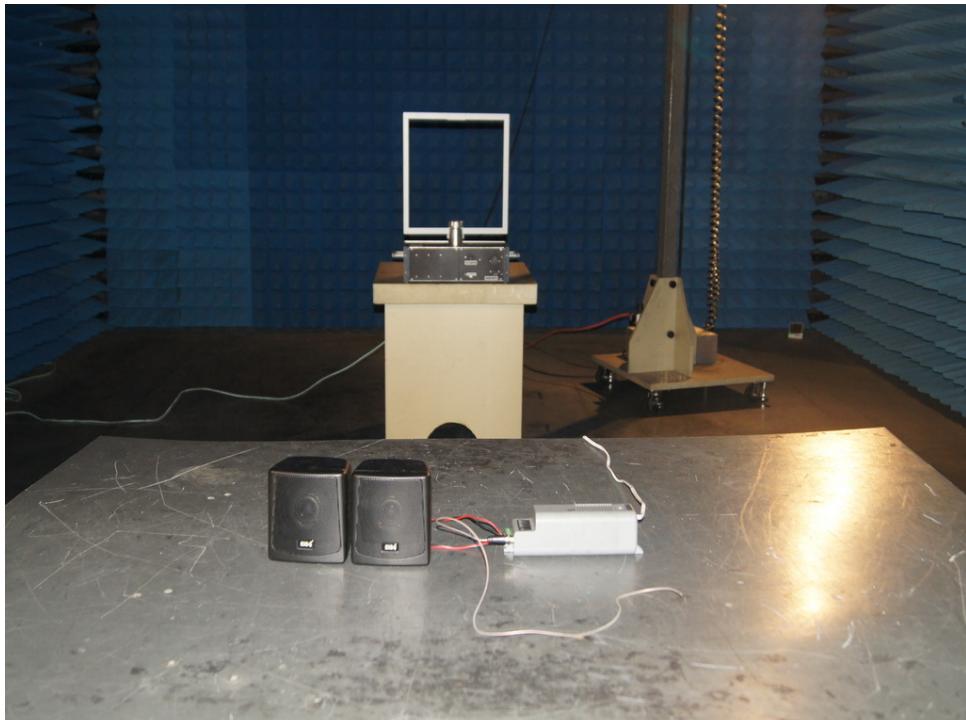
Test data refer to Appendix 1.

Prüfbericht - Nr.: 17048150 001
Test Report No.

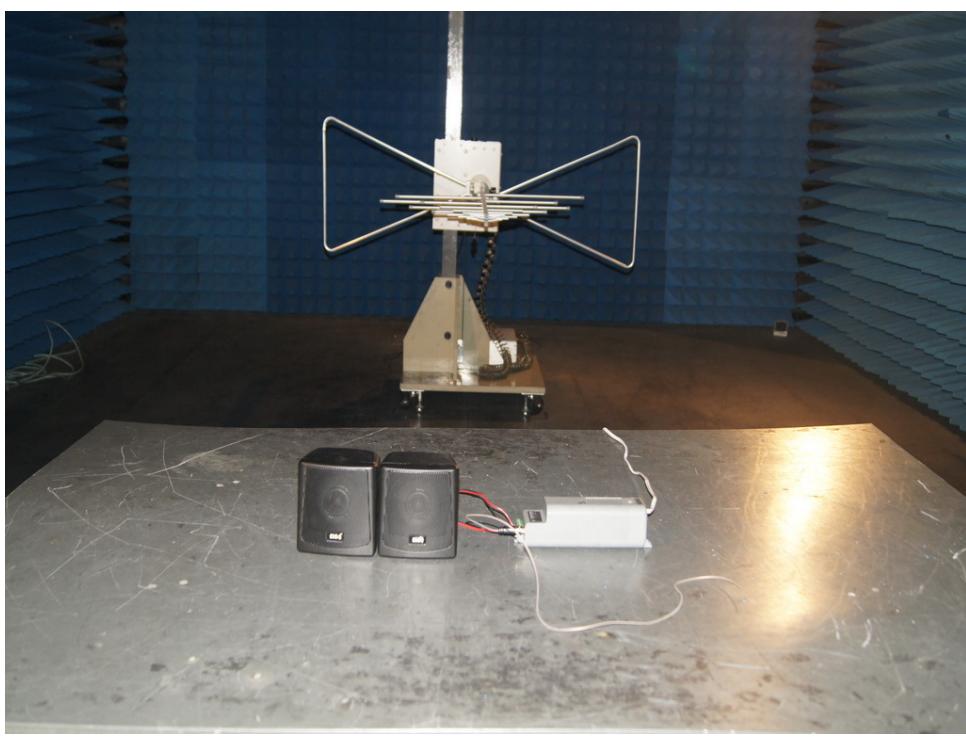
Seite 24 von 28
Page 24 of 28

6. Photographs of the Test Set-Up

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



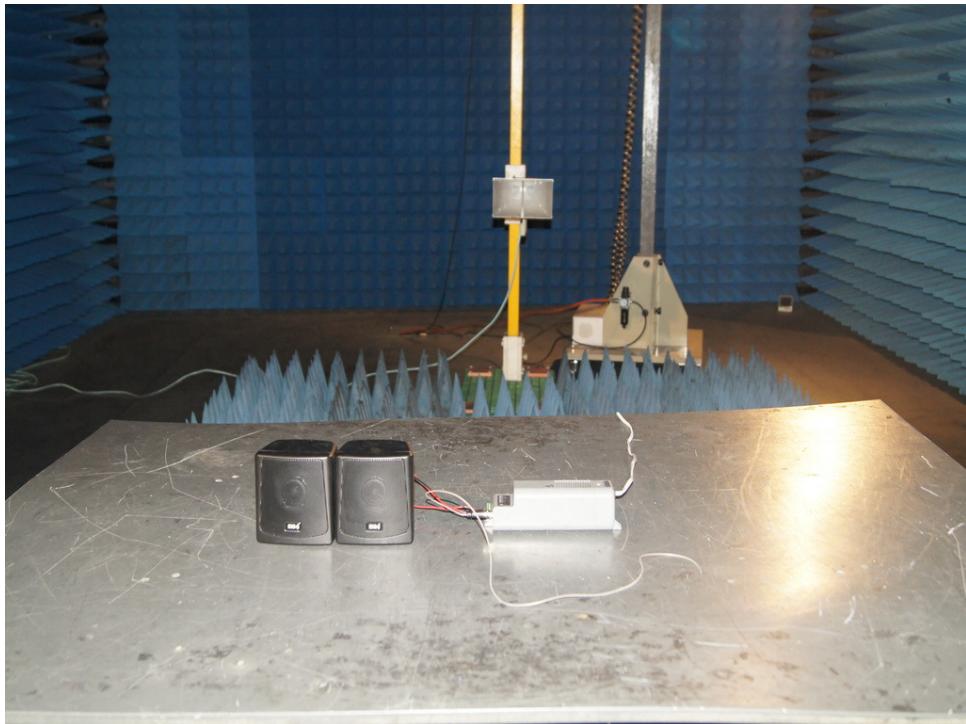
Photograph 2: Set-up for Spurious Emissions (30MHz-1GHz)



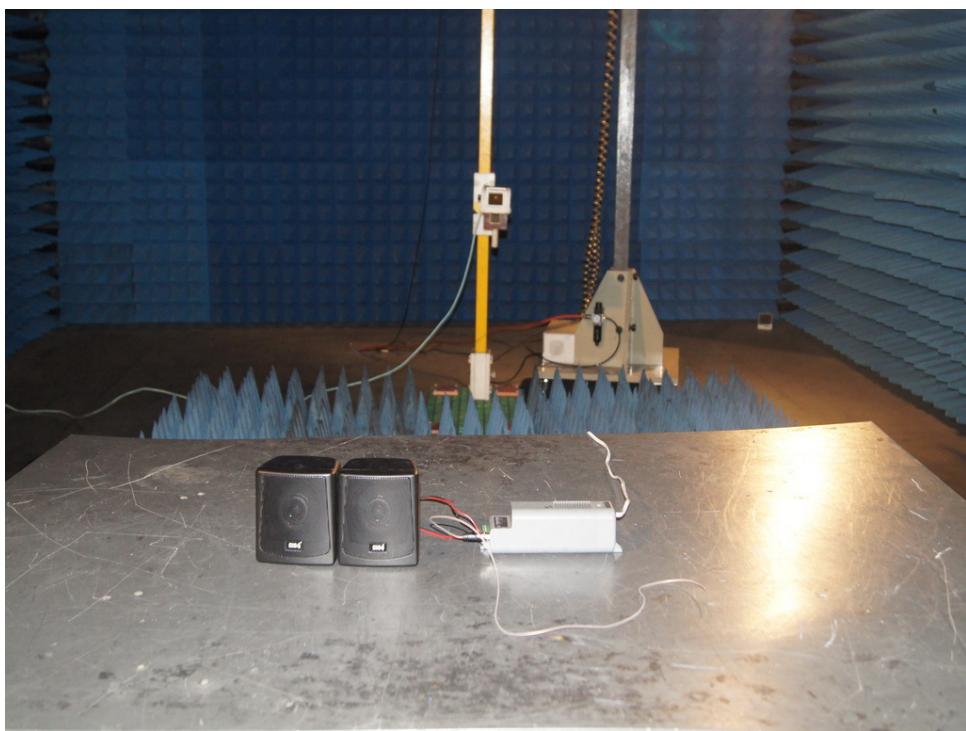
Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 25 von 28
Page 25 of 28

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



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



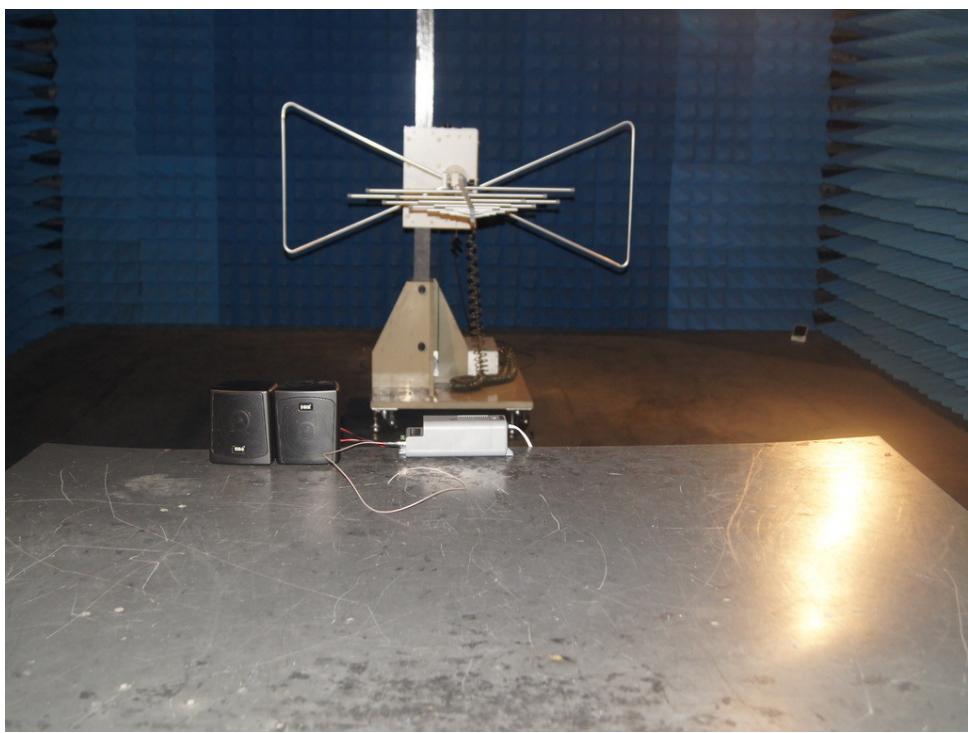
Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 26 von 28
Page 26 of 28

Photograph 5: Set-up for Conducted Emissions



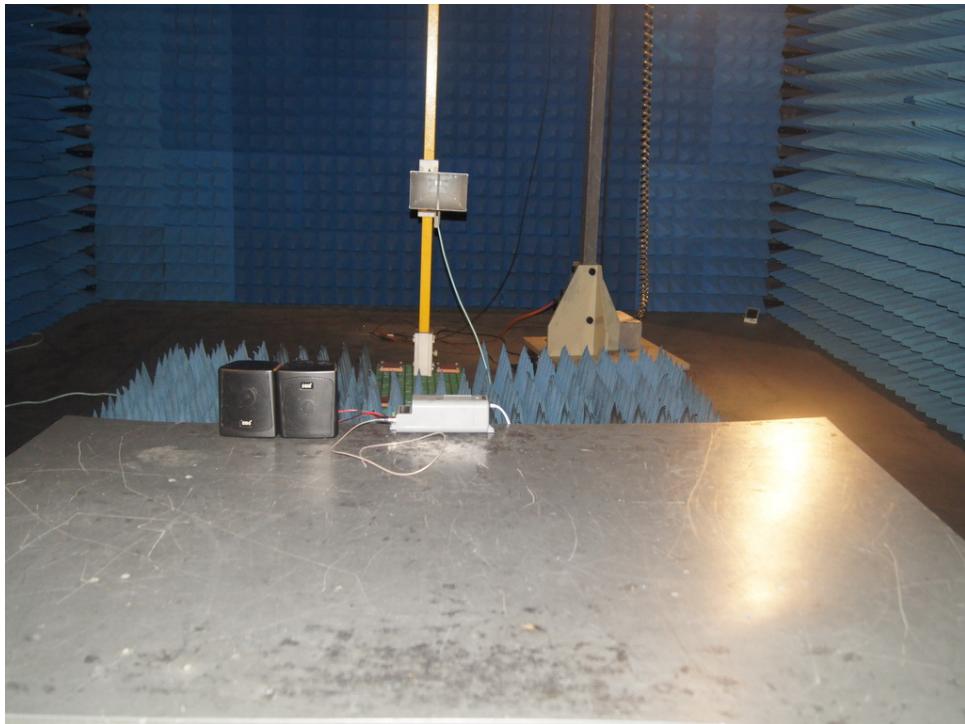
Photograph 6: Set-up for Radiated Emissions, below 1GHz



Prüfbericht - Nr.: 17048150 001
Test Report No.

Seite 27 von 28
Page 27 of 28

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 Bluetooth (BDR & EDR)	7
Table 4: RF channel and frequency of Bluetooth (BDR & EDR mode).....	8
Table 5: Test result of Peak Output Power, BR	14
Table 6: Test result of Peak Output Power, EDR.....	14
Table 7: Test result of 20dB Bandwidth, BDR mode.....	17
Table 8: Test result of 20dB Bandwidth, EDR mode.....	17
Table 9: Test result of Frequency Separation, BR&EDR mode	18
Table 10: Test result of Number of hopping frequency, BR&EDR mode.....	19
Table 11: Test result of Time of Occupancy, BDR mode.....	20
Table 12: Test result of Time of Occupancy, EDR mode.....	21

8. List of Photographs

Photograph 1: Set-up for Spurious Emissions (9kHz-30MHz)	24
Photograph 2: Set-up for Spurious Emissions (30MHz-1GHz)	24
Photograph 3: Set-up for Spurious Emissions (1GHz-18GHz)	25
Photograph 4: Set-up for Spurious Emissions (18GHz-26GHz)	25
Photograph 5: Set-up for Conducted Emissions	26
Photograph 6: Set-up for Radiated Emissions, below 1GHz	26
Photograph 7: Set-up for Radiated Emissions, above 1GHz	27

dkaList of Figures

Figure 1: Test figure of spurious emissions, mode A.1, Horizontal polarity (9kHz – 30MHz)	3
Figure 2: Test figure of spurious emissions, mode A.1, Vertical polarity (9kHz – 30MHz)	3
Figure 3: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz)	4
Figure 4: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz)	5
Figure 5: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz – 18GHz)	6
Figure 6: Test figure of spurious emissions, mode A.1, Vertical polarity (1GHz – 18GHz)	7
Figure 7: Test figure of spurious emissions, mode A.1, Horizontal polarity (18GHz – 25GHz)	8
Figure 8: Test figure of spurious emissions, mode A.1, Vertical polarity (18GHz – 25GHz)	9
Figure 9: Test figure of spurious emissions, mode A.2, Horizontal polarity (9kHz – 30MHz)	10
Figure 10: Test figure of spurious emissions, mode A.2, Vertical polarity (9kHz – 30MHz)	10
Figure 11: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz)	11
Figure 12: Test figure of spurious emissions, mode A.2, Vertical polarity (30MHz – 1GHz)	12
Figure 13: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz)	13
Figure 14: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz)	14
Figure 15: Test figure of spurious emissions, mode A.2, Horizontal polarity (18GHz – 25GHz)	15
Figure 16: Test figure of spurious emissions, mode A.2, Vertical polarity (18GHz – 25GHz)	16
Figure 17: Test figure of spurious emissions, mode A.3, Horizontal polarity (9kHz – 30MHz)	17
Figure 18: Test figure of spurious emissions, mode A.3, Vertical polarity (9kHz – 30MHz)	17
Figure 19: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz)	18
Figure 20: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz)	19
Figure 21: Test figure of spurious emissions, mode A.3, Horizontal polarity (1GHz – 18GHz)	20
Figure 22: Test figure of spurious emissions, mode A.3, Vertical polarity (1GHz – 18GHz)	21
Figure 23: Test figure of spurious emissions, mode A.3, Horizontal polarity (18GHz – 25GHz)	22
Figure 24: Test figure of spurious emissions, mode A.3, Vertical polarity (18GHz – 25GHz)	23
Figure 25: Test figure of Radiated emissions in restricted bands, Mode A.1, Horizontal	24
Figure 26: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical	25
Figure 27: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal	26
Figure 28: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical	27
Figure 29: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.1, GFSK Modulation	28
Figure 30: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.2, GFSK Modulation	30
Figure 31: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.3, GFSK Modulation	31
Figure 32: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.1, 8DPSK Modulation	33
Figure 33: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.2, 8DPSK Modulation	35
Figure 34: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.3, 8DPSK Modulation	36
Figure 35: Test figure of Conducted emissions, Mode B, line live	38
Figure 36: Test figure of Conducted emissions, Mode B, line neutral	39
Figure 37: Test figure of Radiated emissions, Mode B, lowest channel, Below 1GHz, Horizontal	40
Figure 38: Test figure of Radiated emissions, Mode B, lowest channel, Below 1GHz, Vertical	41
Figure 39: Test figure of Radiated emissions, Mode B, lowest channel, Above 1GHz, Horizontal	42
Figure 40: Test figure of Radiated emissions, Mode B, lowest channel, Above 1GHz, Vertical	43
Figure 37: Test figure of Radiated emissions, Mode B, middle channel, Below 1GHz, Horizontal	44
Figure 38: Test figure of Radiated emissions, Mode B, middle channel, Below 1GHz, Vertical	45
Figure 39: Test figure of Radiated emissions, Mode B, middle channel, Above 1GHz, Horizontal	46
Figure 40: Test figure of Radiated emissions, Mode B, middle channel, Above 1GHz, Vertical	47
Figure 37: Test figure of Radiated emissions, Mode B, highest channel, Below 1GHz, Horizontal	48
Figure 38: Test figure of Radiated emissions, Mode B, highest channel, Below 1GHz, Vertical	49

Figure 39: Test figure of Radiated emissions, Mode B, highest channel, Above 1GHz, Horizontal50
Figure 40: Test figure of Radiated emissions, Mode B, highest channel, Above 1GHz, Vertical51

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

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

EUT: KBSOUND BT M/N:52791
 Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.
 Operating Condition: TX 2402MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/60Hz
 Comment: X
 Start of Test: 2015-3-25 /

SCAN TABLE: "LFRE Fin"

Start Frequency	Stop Frequency	Step Width	Detector	Meas.	IF Time	Transducer Bandw.
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

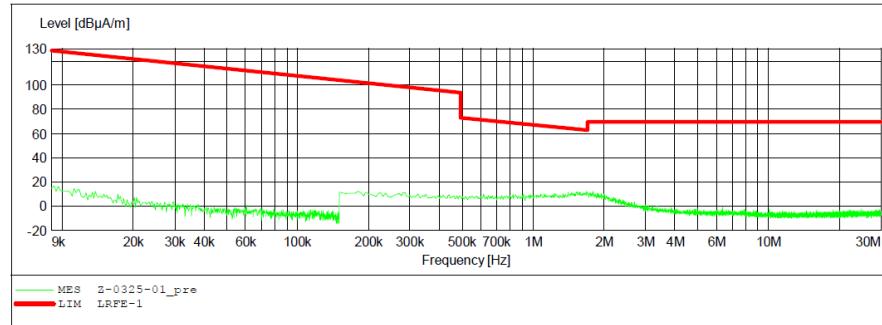


Figure 2: Test figure of spurious emissions, mode A.1, Vertical polarity (9kHz – 30MHz)

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FCC Class B 3M Radiated

EUT: KBSOUND BT M/N:52791
 Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.
 Operating Condition: TX 2402MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/60Hz
 Comment: Y
 Start of Test: 2015-3-25 /

SCAN TABLE: "LFRE Fin"

Start Frequency	Stop Frequency	Step Width	Detector	Meas.	IF Time	Transducer Bandw.
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

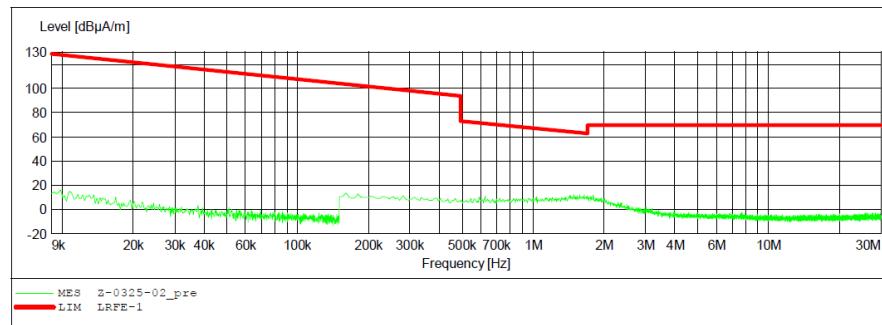


Figure 3: Test figure of spurious emissions, mode A.1, Horizontal polarity (30MHz – 1GHz)



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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

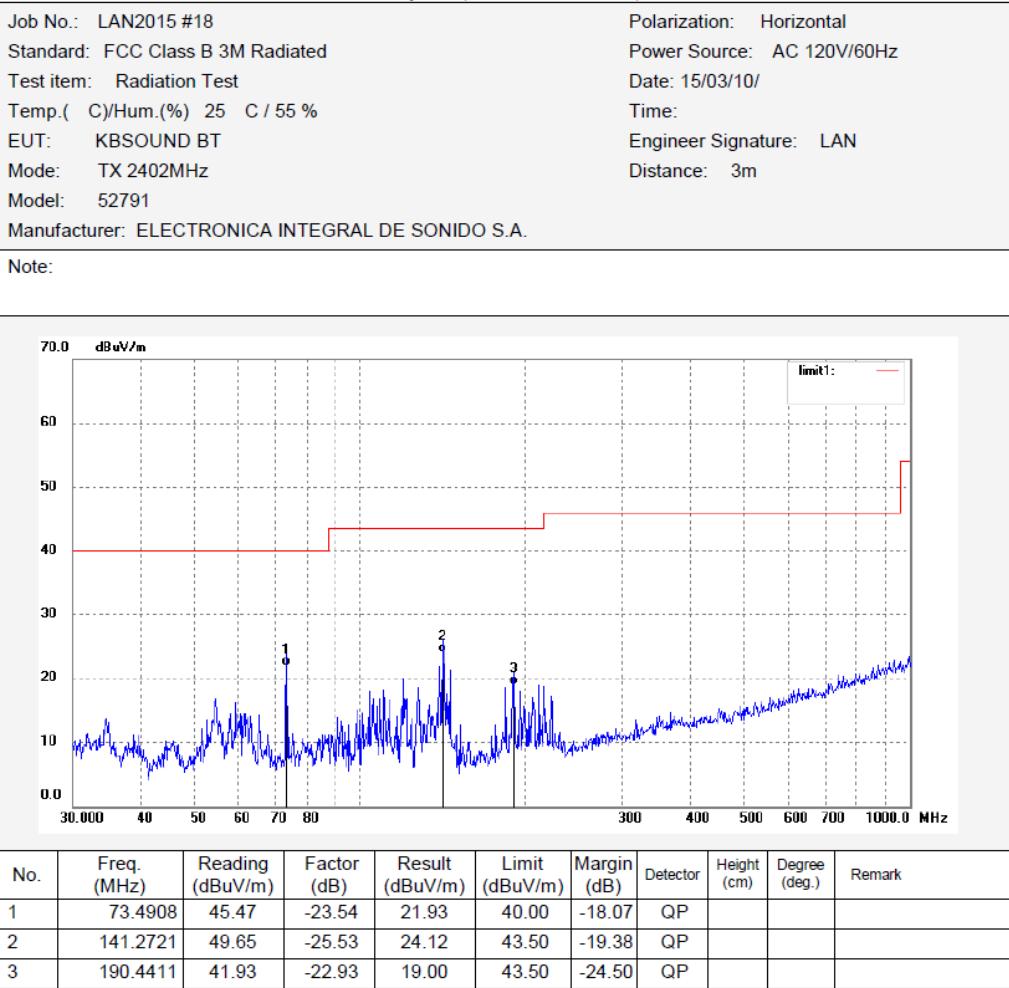


Figure 4: Test figure of spurious emissions, mode A.1, Vertical polarity (30MHz – 1GHz)

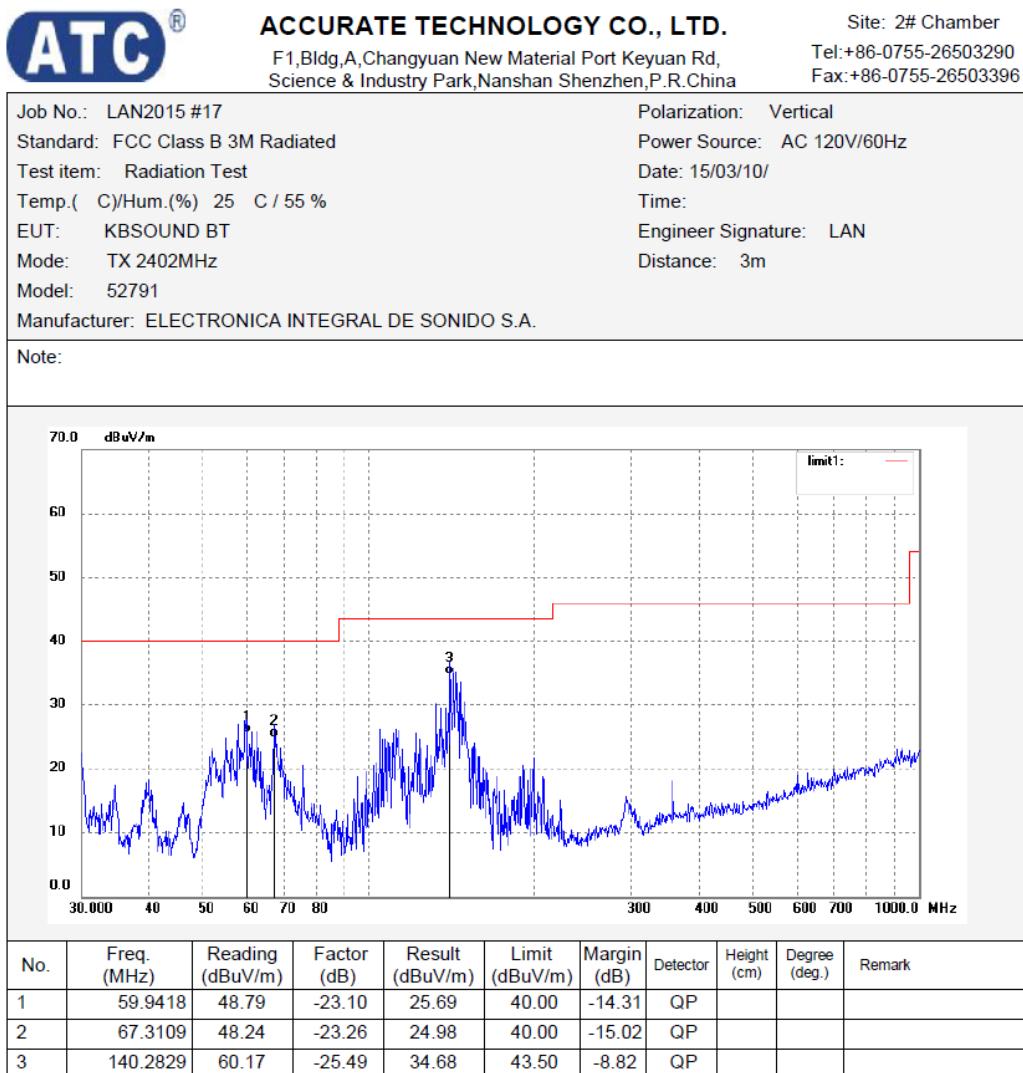


Figure 5: Test figure of spurious emissions, mode A.1, Horizontal polarity (1GHz –18GHz)



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Fax:+86-0755-26503396

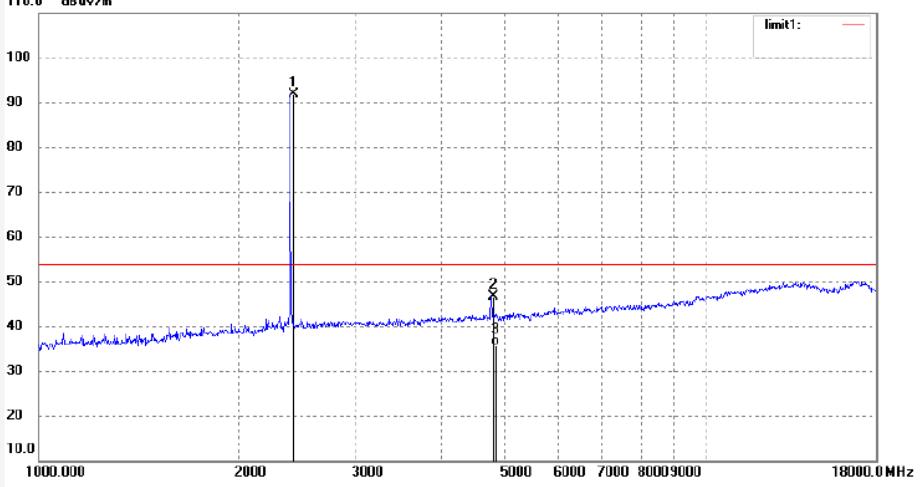
Job No.: LAN2015 #8	Polarization: Horizontal									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2402MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	90.86	0.91	91.77	/	/	peak			
2	4804.015	39.46	7.23	46.69	74.00	-27.31	peak			
3	4804.015	28.35	7.23	35.58	54.00	-18.42	AVG			

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



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Fax:+86-0755-26503396

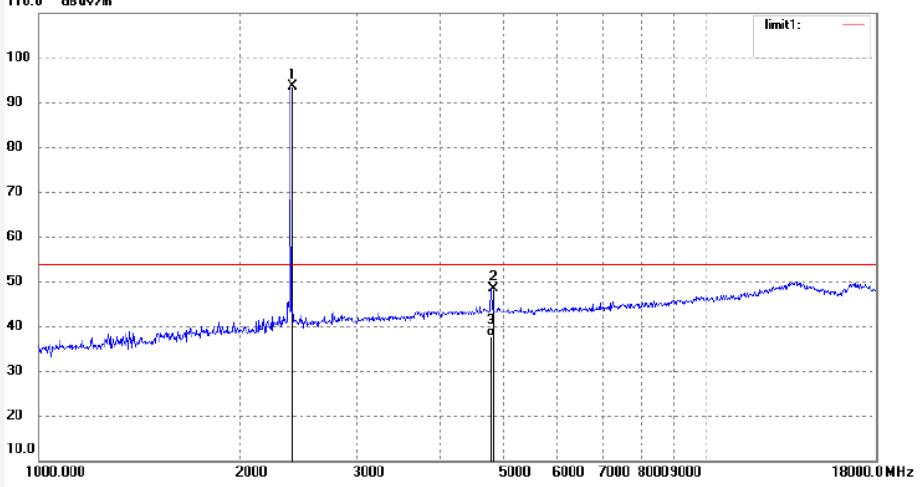
Job No.: LAN2015 #7	Polarization: Vertical									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2402MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2402.000	92.73	0.91	93.64	/	/	peak			
2	4804.021	41.20	7.23	48.43	74.00	-25.57	peak			
3	4804.021	30.42	7.23	37.65	54.00	-16.35	AVG			

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



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Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: LAN2015 #25

Polarization: Horizontal

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 15/03/10/

Temp.(C)/Hum.(%) 25 C / 55 %

Time:

EUT: KBSOUND BT

Engineer Signature: LAN

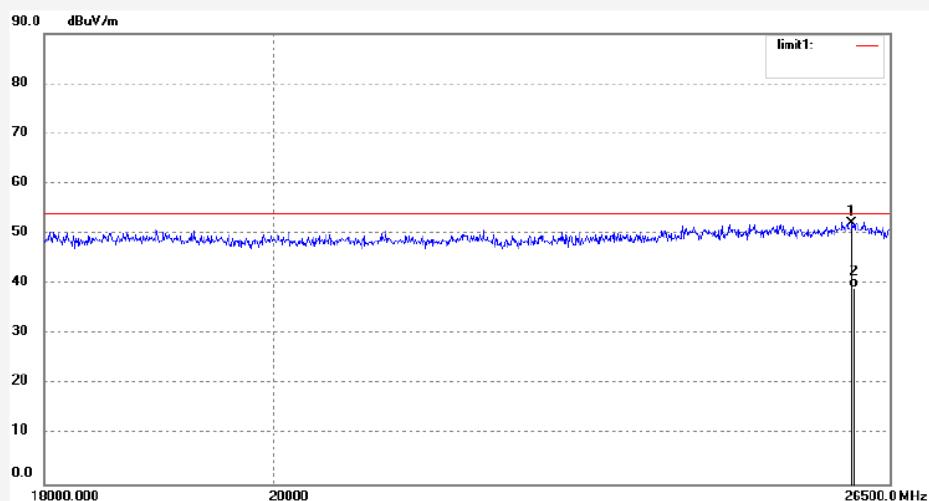
Mode: TX 2402MHz

Distance: 3m

Model: 52791

Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	26052.395	33.36	18.74	52.10	74.00	-21.90	peak			
2	26052.395	20.44	18.74	39.18	54.00	-14.82	AVG			

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



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Site: 2# Chamber

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Fax:+86-0755-26503396

Job No.: LAN2015 #26

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 15/03/10/

Temp.(C)/Hum.(%) 25 C / 55 %

Time:

EUT: KBSOUND BT

Engineer Signature: LAN

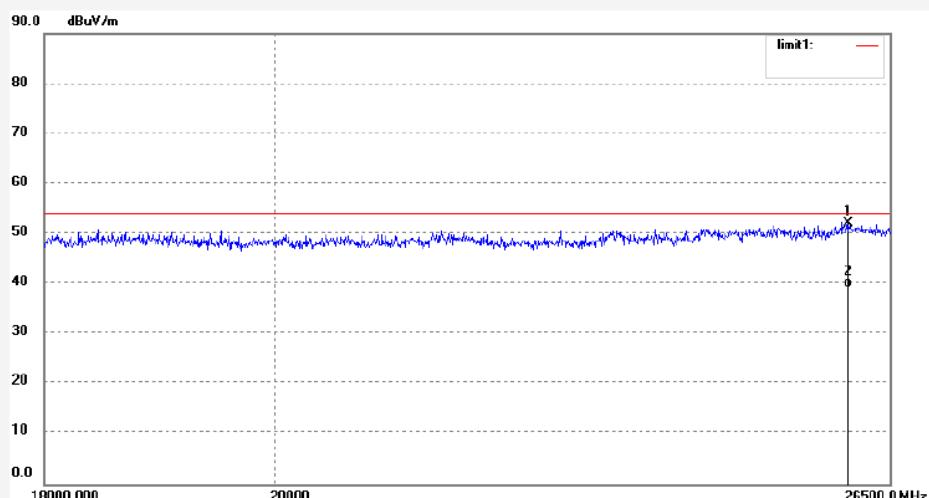
Mode: TX 2402MHz

Distance: 3m

Model: 52791

Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	26011.596	33.41	18.73	52.14	74.00	-21.86	peak			
2	26011.596	20.64	18.73	39.37	54.00	-14.63	AVG			

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

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

EUT: KBSOUND BT M/N:52791
 Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.
 Operating Condition: TX 2441MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/60Hz
 Comment: X
 Start of Test: 2015-3-25 /

SCAN TABLE: "LFRE_Fin"

Short Description:		SUB_STD_VTERM2 1.70				
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

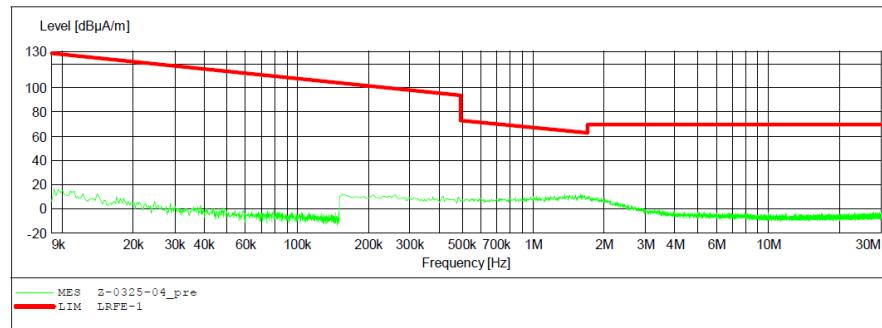


Figure 10: Test figure of spurious emissions, mode A.2, Vertical polarity (9kHz – 30MHz)

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

EUT: KBSOUND BT M/N:52791
 Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.
 Operating Condition: TX 2441MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/60Hz
 Comment: Y
 Start of Test: 2015-3-25 /

SCAN TABLE: "LFRE_Fin"

Short Description:		SUB_STD_VTERM2 1.70				
Start	Stop	Step	Detector	Meas.	IF	Transducer
Frequency	Frequency	Width		Time	Bandw.	
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

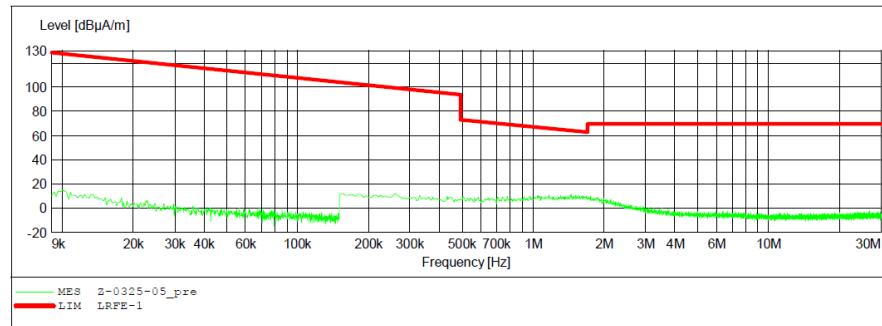


Figure 11: Test figure of spurious emissions, mode A.2, Horizontal polarity (30MHz – 1GHz)



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Fax:+86-0755-26503396

Job No.: LAN2015 #19	Polarization: Horizontal									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2441MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	73.4908	45.12	-23.54	21.58	40.00	-18.42	QP			
2	137.3565	44.99	-25.37	19.62	43.50	-23.88	QP			
3	222.2806	38.44	-21.92	16.52	46.00	-29.48	QP			

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



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Tel:+86-0755-26503290
Fax:+86-0755-26503396

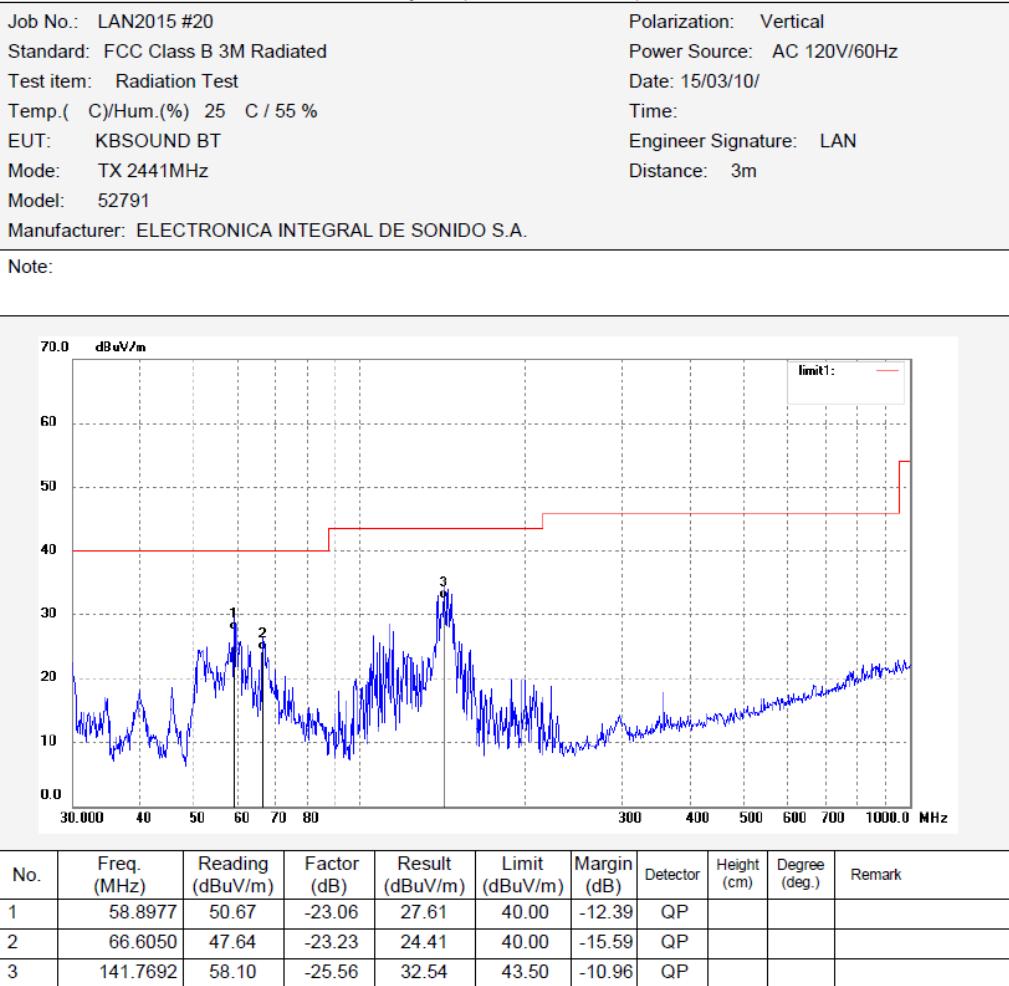


Figure 13: Test figure of spurious emissions, mode A.2, Horizontal polarity (1GHz – 18GHz)



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Fax:+86-0755-26503396

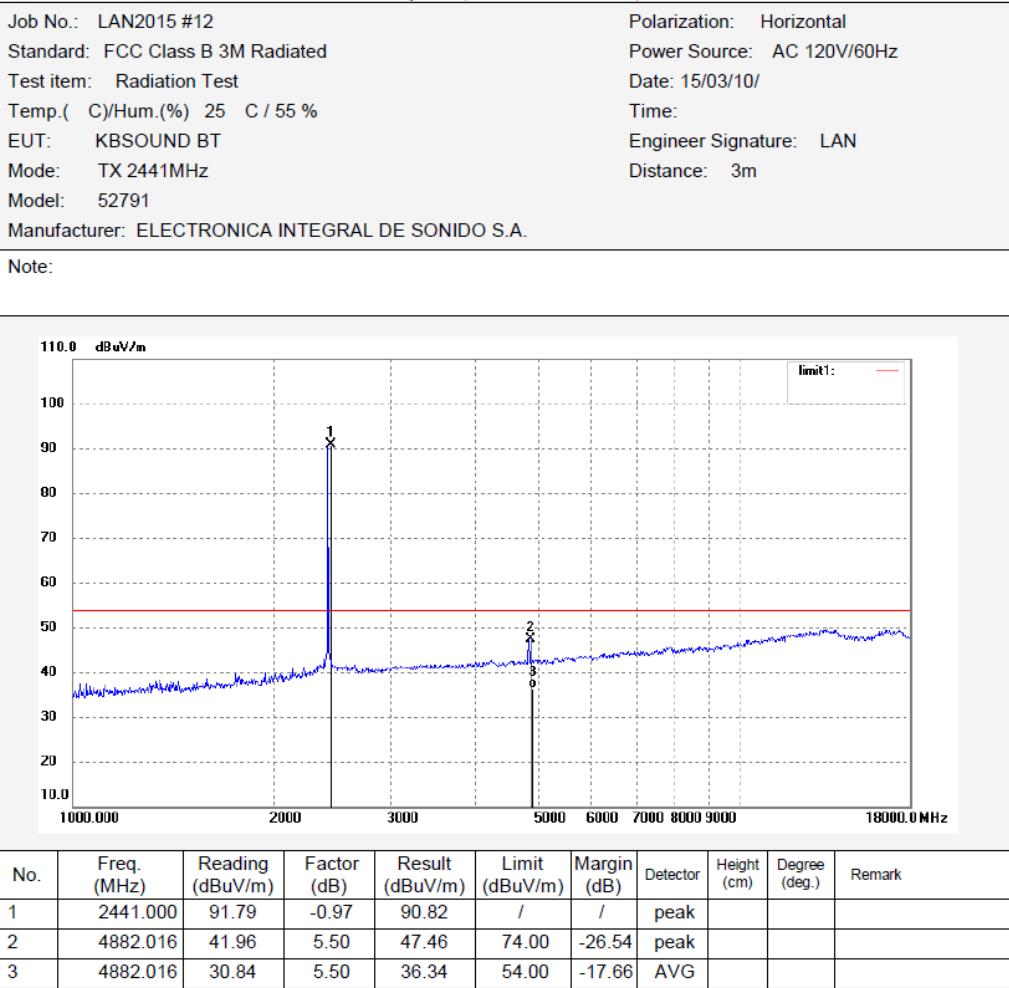


Figure 14: Test figure of spurious emissions, mode A.2, Vertical polarity (1GHz – 18GHz)



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Fax:+86-0755-26503396

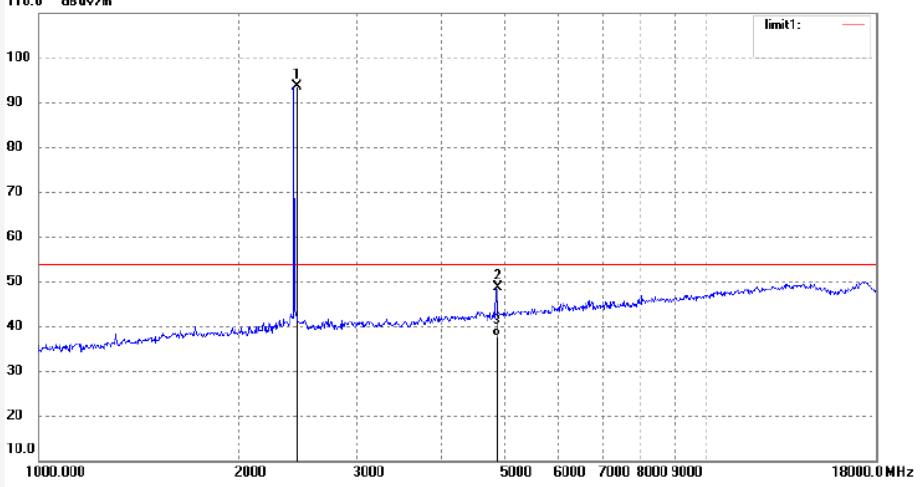
Job No.: LAN2015 #11	Polarization: Vertical									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2441MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2441.000	94.63	-0.97	93.66	/	/	peak			
2	4882.023	43.21	5.50	48.71	74.00	-25.29	peak			
3	4882.023	32.07	5.50	37.57	54.00	-16.43	AVG			

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



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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

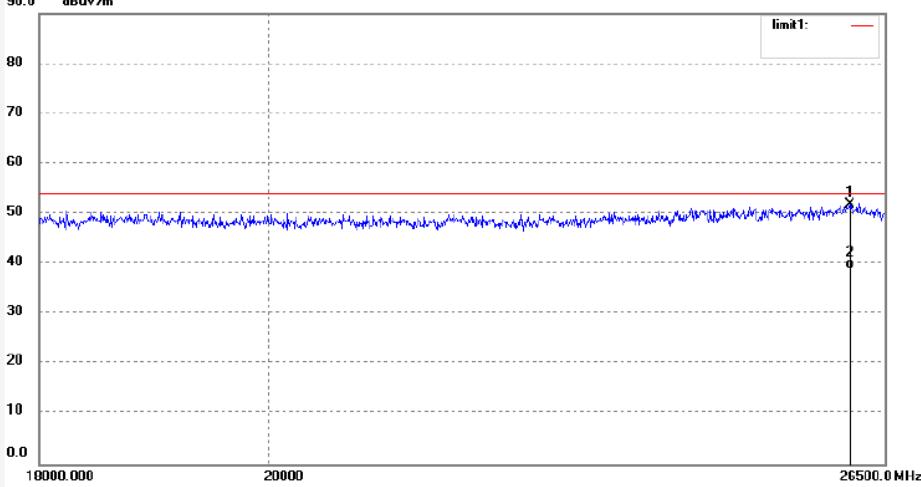
Job No.: LAN2015 #28	Polarization: Horizontal									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2441MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	26082.257	33.11	18.75	51.86	74.00	-22.14	peak			
2	26082.257	20.36	18.75	39.11	54.00	-14.89	AVG			

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



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Fax:+86-0755-26503396

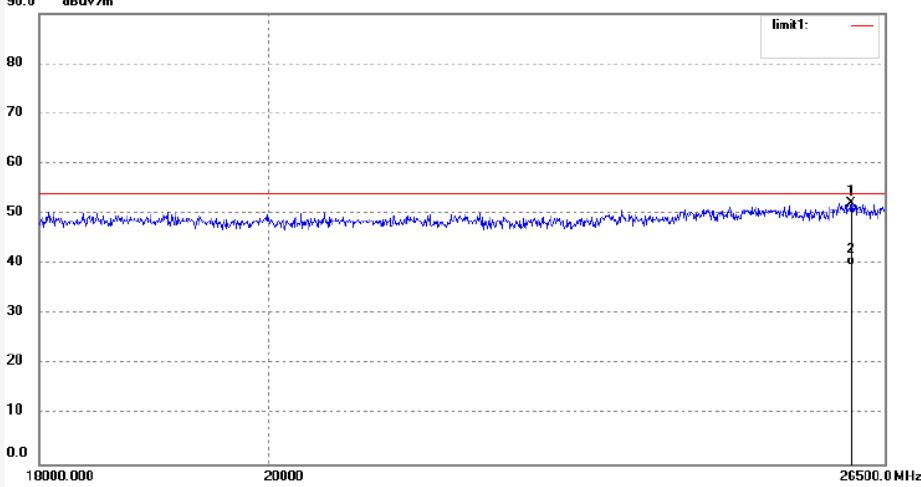
Job No.: LAN2015 #27	Polarization: Vertical									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2441MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	26102.481	33.39	18.76	52.15	74.00	-21.85	peak			
2	26102.481	20.85	18.76	39.61	54.00	-14.39	AVG			

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

ACCURATE TECHNOLOGY CO., LTD

FCC Class B 3M Radiated

EUT: KBSOUND BT M/N:52791
 Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.
 Operating Condition: TX 2480MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/60Hz
 Comment: X
 Start of Test: 2015-3-25 /

SCAN TABLE: "LFRE Fin"

Start Frequency	Stop Frequency	Step Width	Detector	Meas.	IF Time	Transducer Bandw.
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

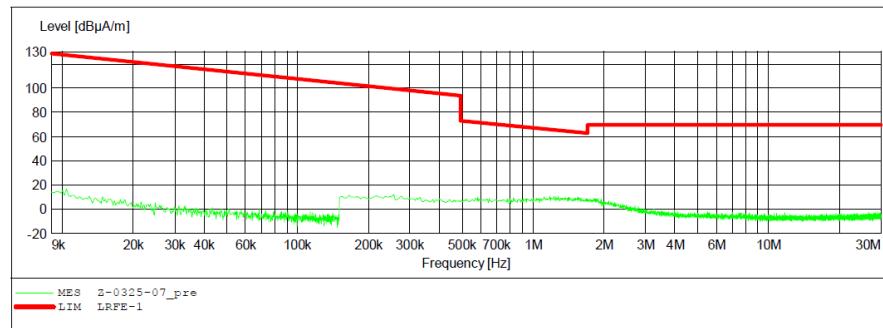


Figure 18: Test figure of spurious emissions, mode A.3, Vertical polarity (9kHz – 30MHz)

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FCC Class B 3M Radiated

EUT: KBSOUND BT M/N:52791
 Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.
 Operating Condition: TX 2480MHz
 Test Site: 2# Chamber
 Operator: LAN
 Test Specification: AC 120V/60Hz
 Comment: Y
 Start of Test: 2015-3-25 /

SCAN TABLE: "LFRE Fin"

Start Frequency	Stop Frequency	Step Width	Detector	Meas.	IF Time	Transducer Bandw.
9.0 kHz	150.0 kHz	100.0 Hz	QuasiPeak	1.0 s	200 Hz	1516M
150.0 kHz	30.0 MHz	5.0 kHz	QuasiPeak	1.0 s	9 kHz	1516M

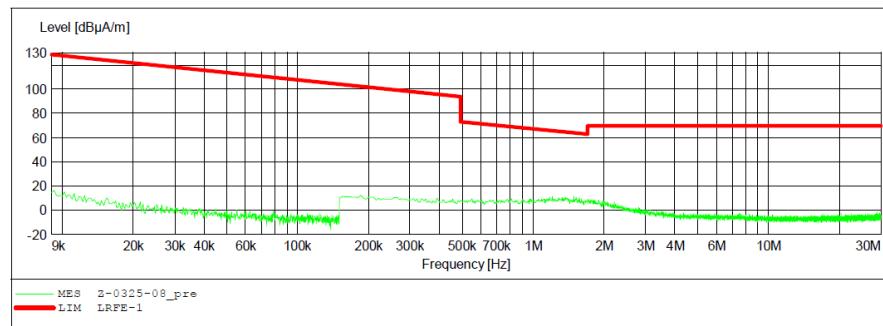


Figure 19: Test figure of spurious emissions, mode A.3, Horizontal polarity (30MHz – 1GHz)

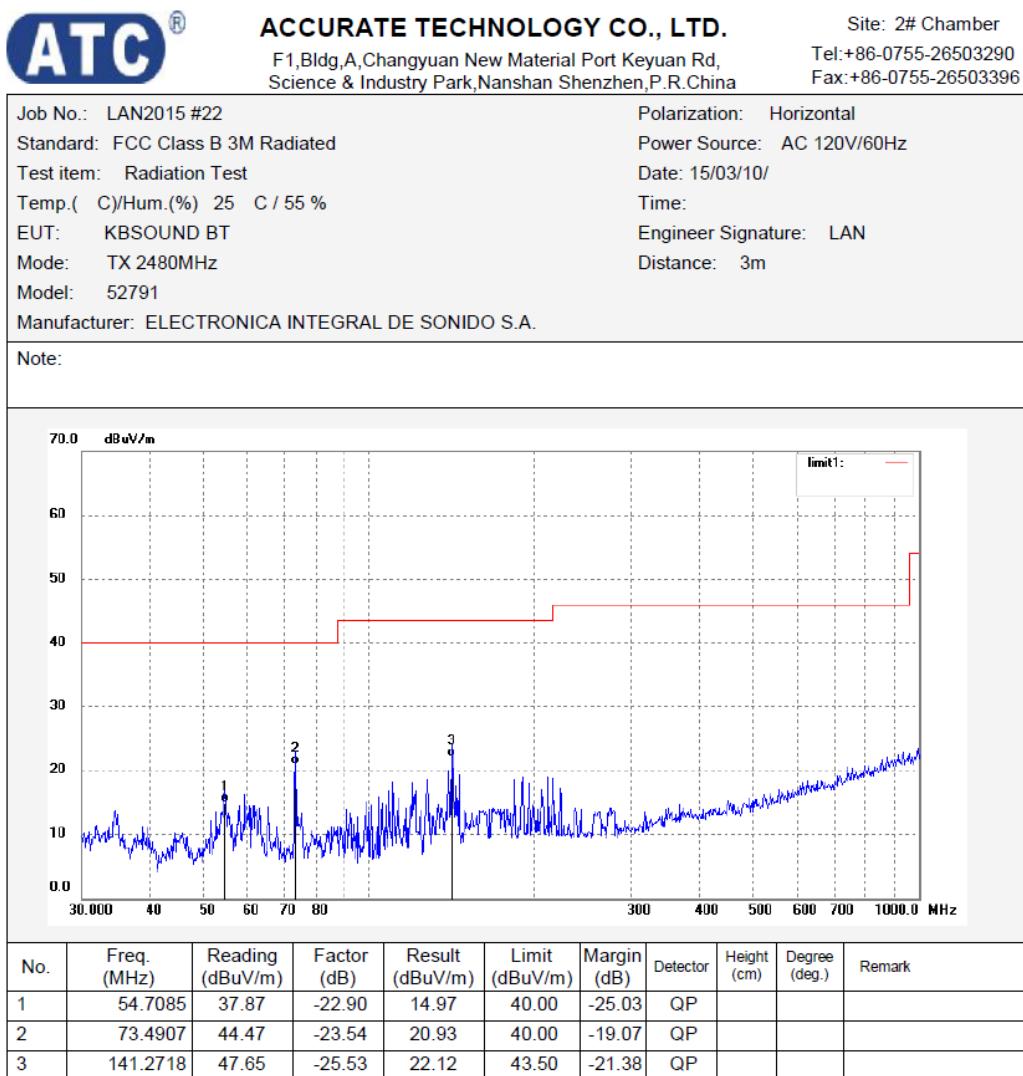


Figure 20: Test figure of spurious emissions, mode A.3, Vertical polarity (30MHz – 1GHz)



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

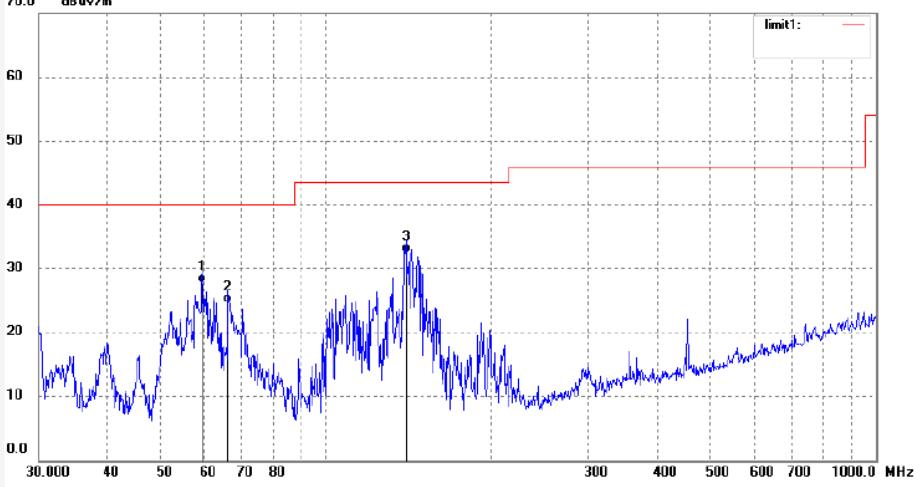
Job No.: LAN2015 #21	Polarization: Vertical									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2480MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	59.5219	50.77	-23.08	27.69	40.00	-12.31	QP			
2	66.3714	47.82	-23.23	24.59	40.00	-15.41	QP			
3	139.7908	57.98	-25.47	32.51	43.50	-10.99	QP			

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



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

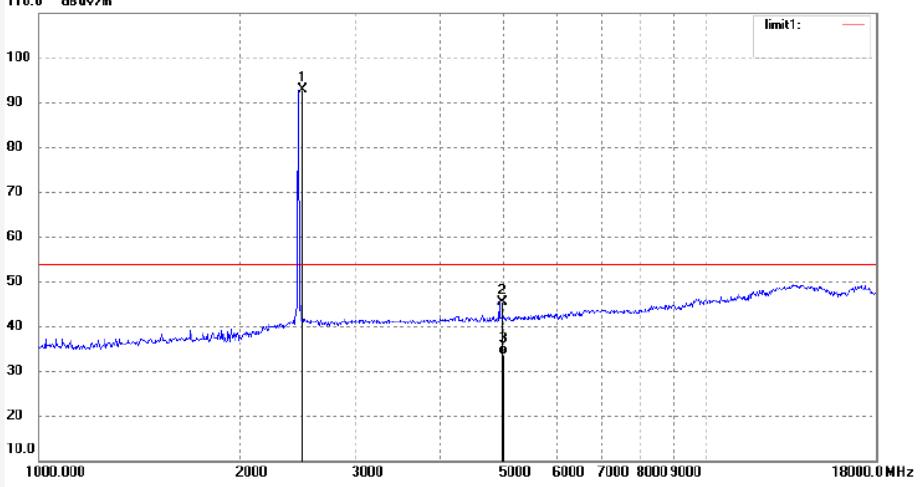
Job No.: LAN2015 #13	Polarization: Horizontal									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2480MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	93.76	-0.86	92.90	/	/	peak			
2	4960.027	39.71	5.77	45.48	74.00	-28.52	peak			
3	4960.027	27.96	5.77	33.73	54.00	-20.27	AVG			

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



ACCURATE TECHNOLOGY CO., LTD.

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Science & Industry Park,Nanshan Shenzhen,P.R.China

Site: 2# Chamber

Tel:+86-0755-26503290

Fax:+86-0755-26503396

Job No.: LAN2015 #14

Polarization: Vertical

Standard: FCC Class B 3M Radiated

Power Source: AC 120V/60Hz

Test item: Radiation Test

Date: 15/03/10/

Temp.(C)/Hum.(%) 25 C / 55 %

Time:

EUT: KBSOUND BT

Engineer Signature: LAN

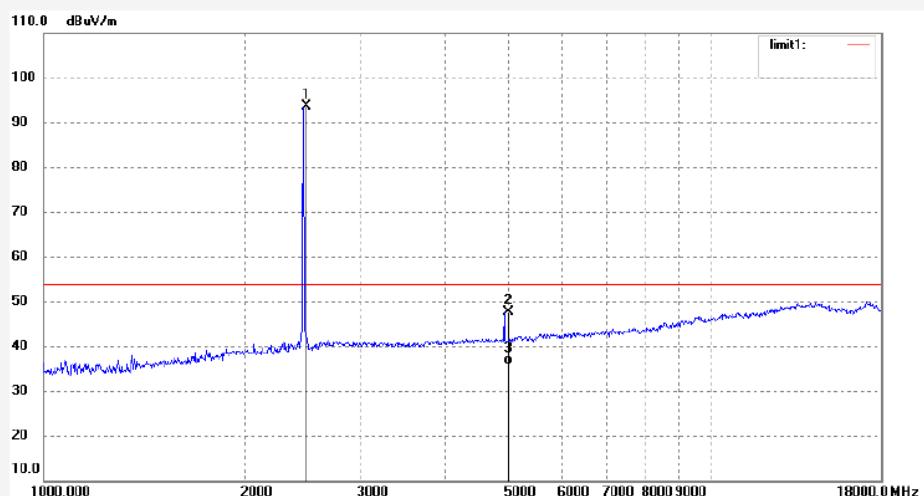
Mode: TX 2480MHz

Distance: 3m

Model: 52791

Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.

Note:



No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	2480.000	94.48	-0.86	93.62	/	/	peak			
2	4960.019	41.79	5.77	47.56	74.00	-26.44	peak			
3	4960.019	30.23	5.77	36.00	54.00	-18.00	AVG			

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



ACCURATE TECHNOLOGY CO., LTD.

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Science & Industry Park,Nanshan Shenzhen,P.R.China

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

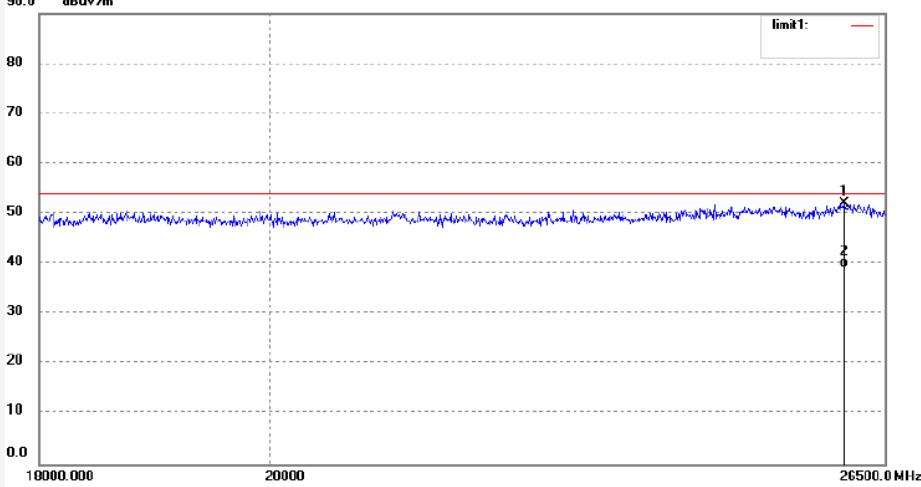
Job No.: LAN2015 #29	Polarization: Horizontal									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2480MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	26021.678	33.25	18.73	51.98	74.00	-22.02	peak			
2	26021.678	20.53	18.73	39.26	54.00	-14.74	AVG			

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



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

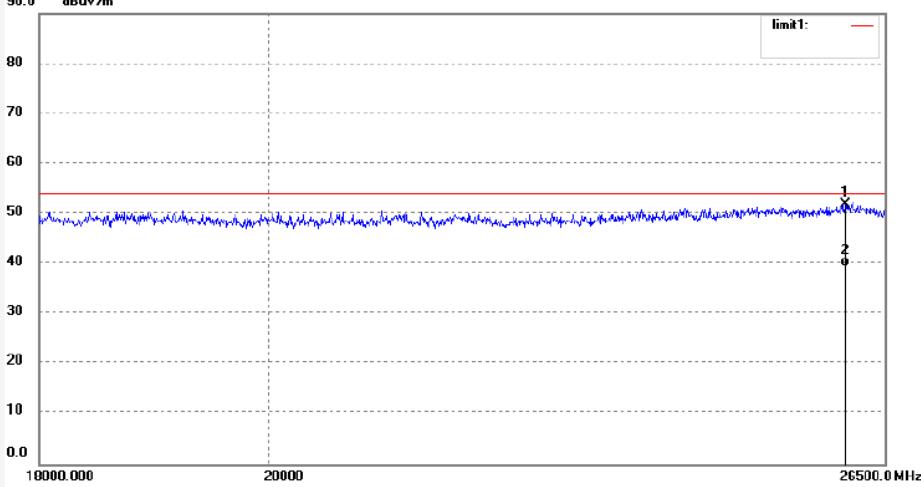
Job No.: LAN2015 #30	Polarization: Vertical									
Standard: FCC Class B 3M Radiated	Power Source: AC 120V/60Hz									
Test item: Radiation Test	Date: 15/03/10/									
Temp.(C)/Hum.(%) 25 C / 55 %	Time:									
EUT: KBSOUND BT	Engineer Signature: LAN									
Mode: TX 2480MHz	Distance: 3m									
Model: 52791										
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.										
Note:										
										
No.	Freq. (MHz)	Reading (dBuV/m)	Factor (dB)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Degree (deg.)	Remark
1	26031.765	33.08	18.74	51.82	74.00	-22.18	peak			
2	26031.765	20.71	18.74	39.45	54.00	-14.55	AVG			

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

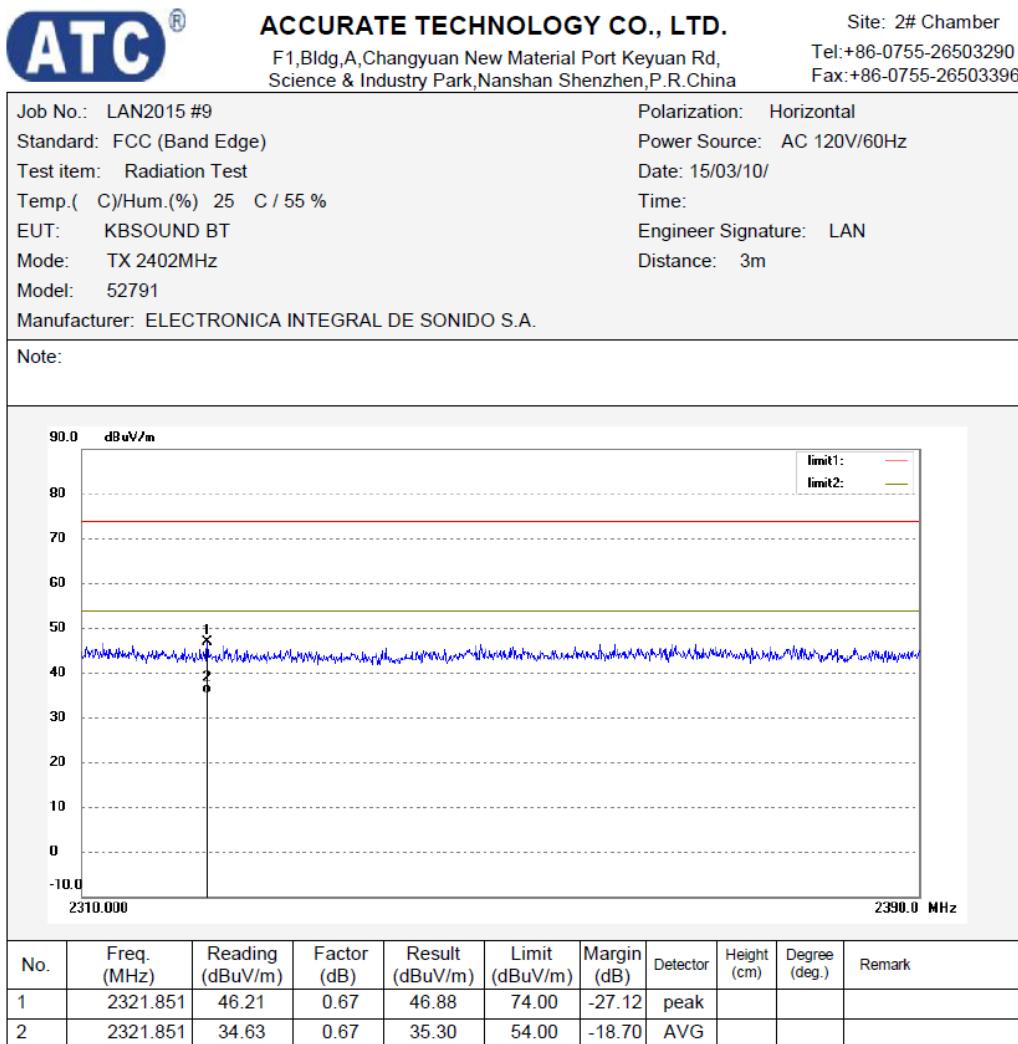


Figure 26: Test figure of Radiated emissions in restricted bands, Mode A.1, Vertical

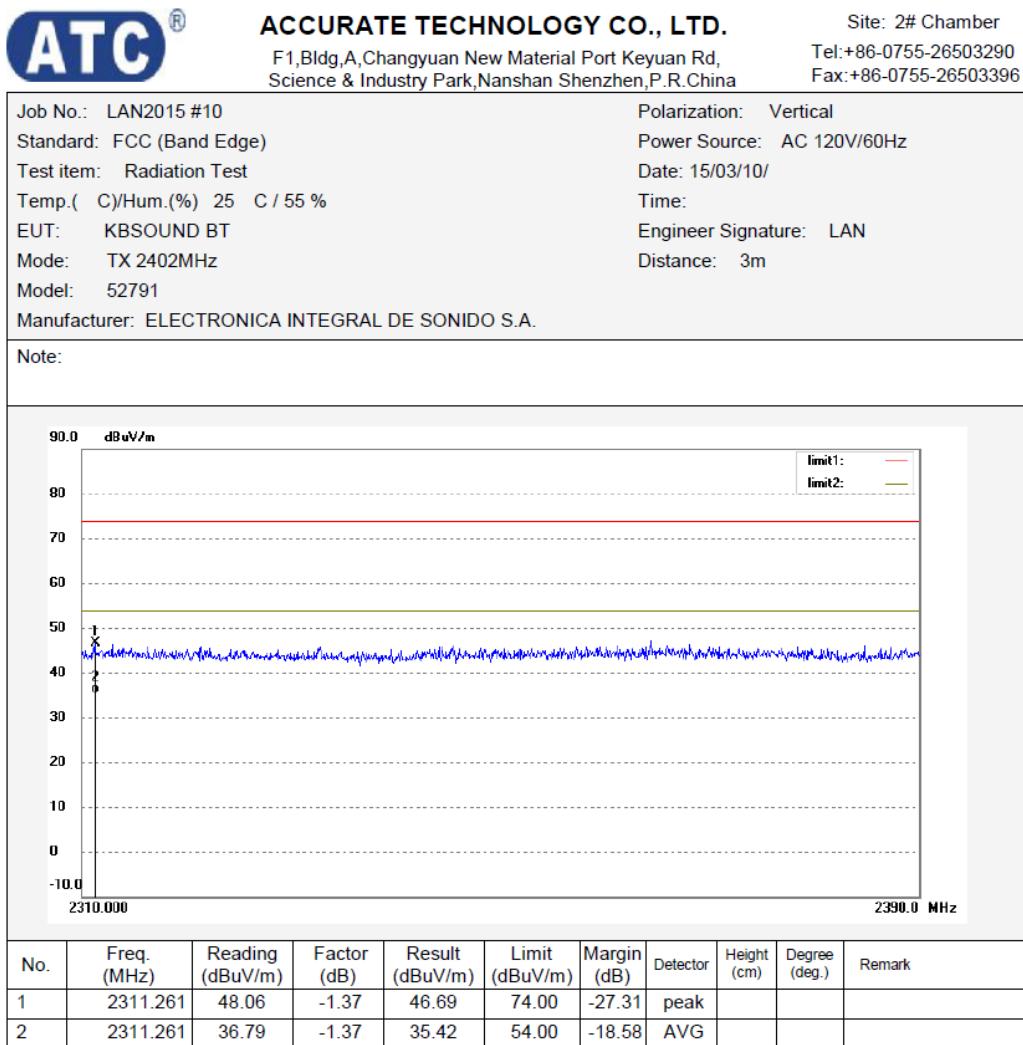


Figure 27: Test figure of Radiated emissions in restricted bands, Mode A.3, Horizontal

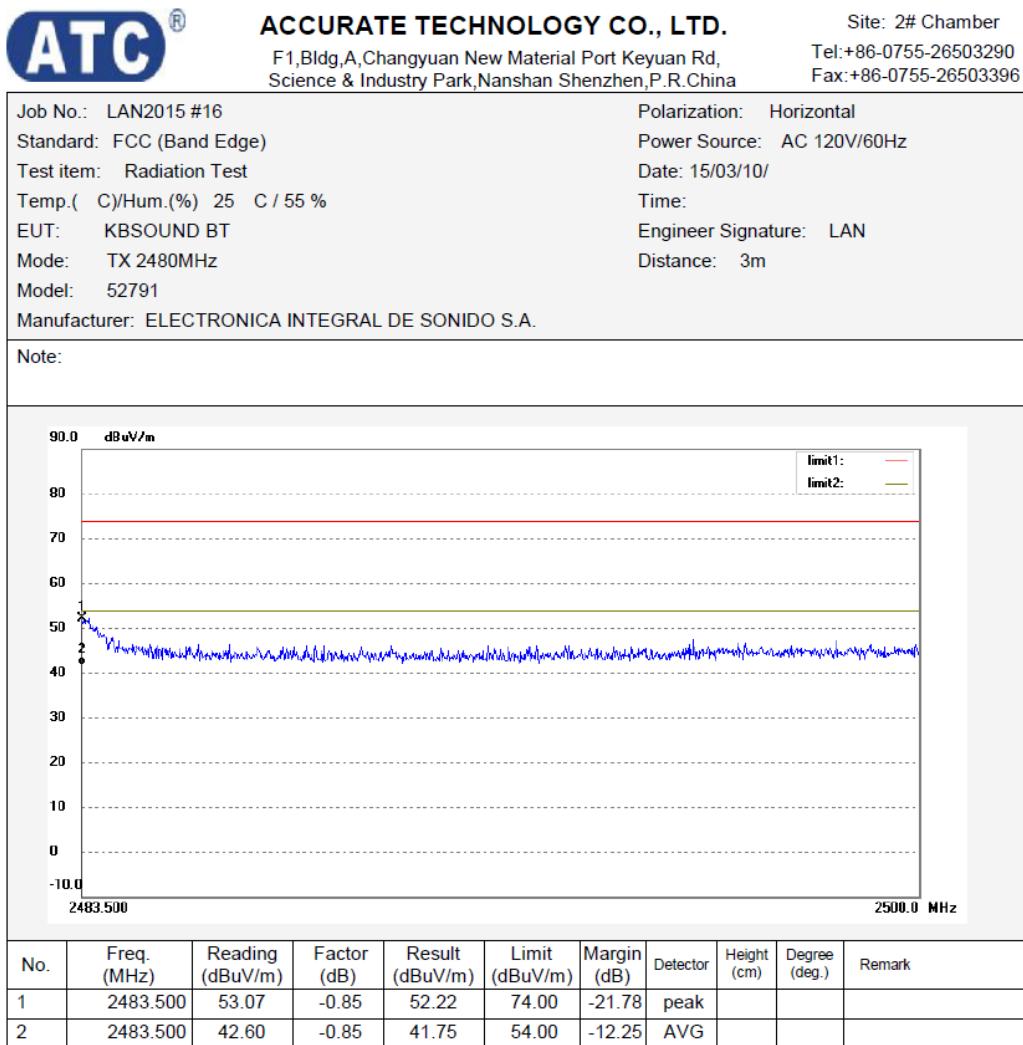


Figure 28: Test figure of Radiated emissions in restricted bands, Mode A.3, Vertical

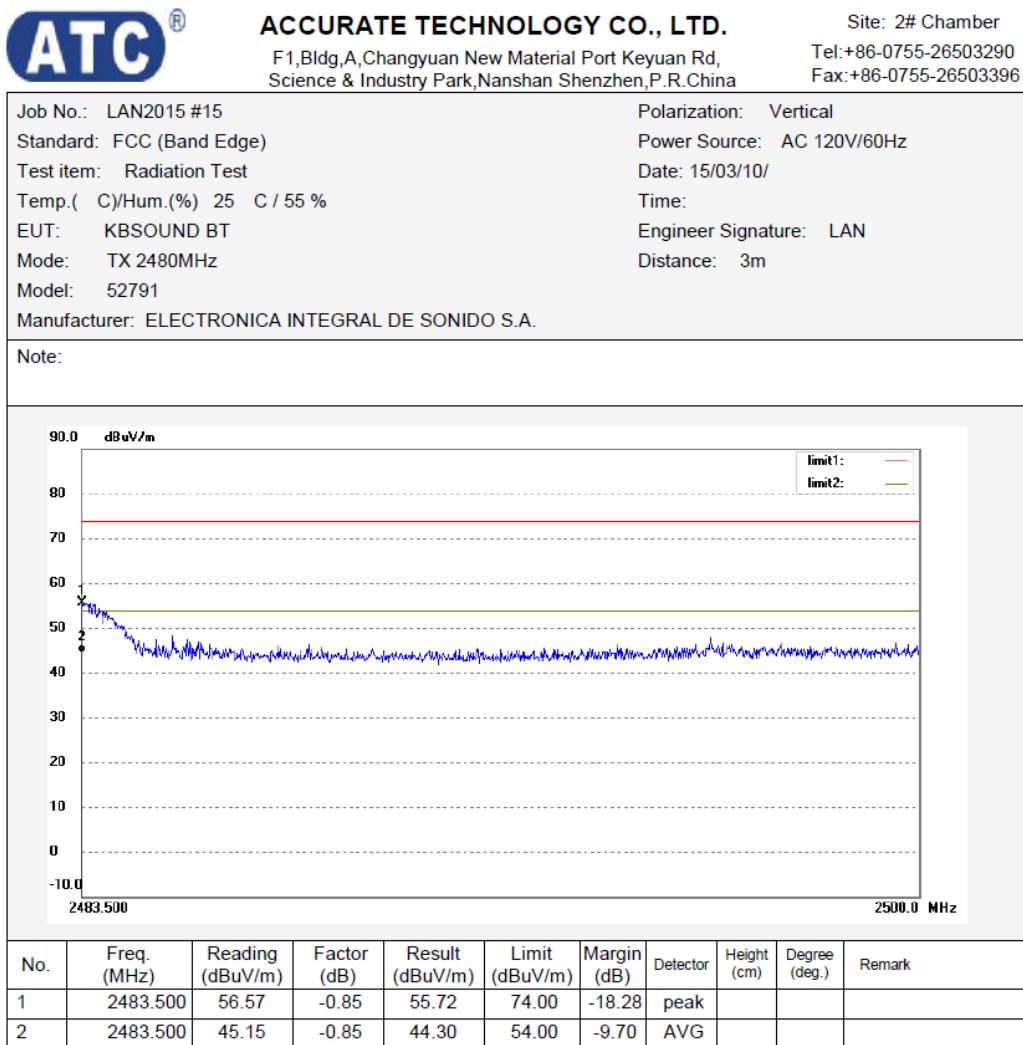
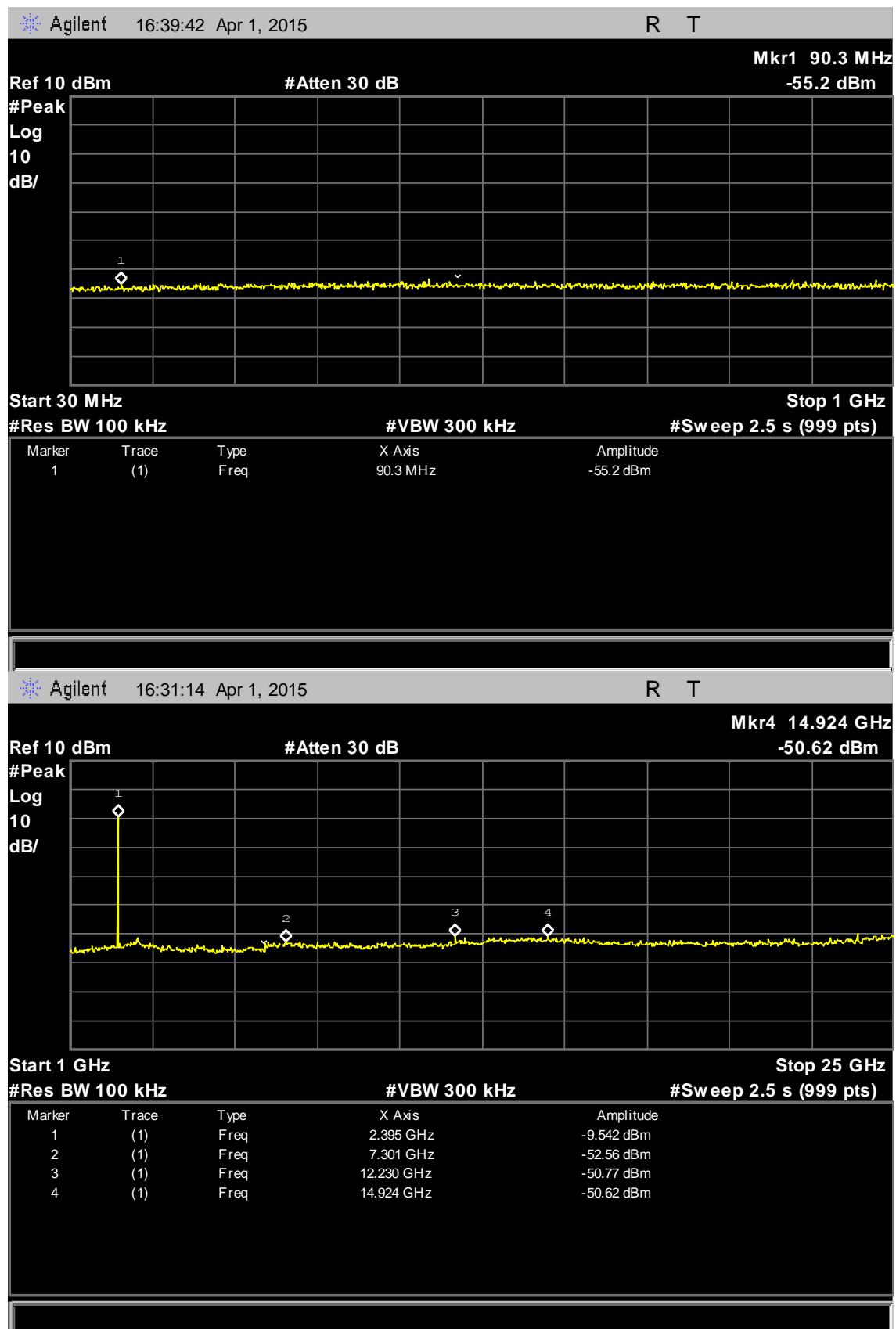
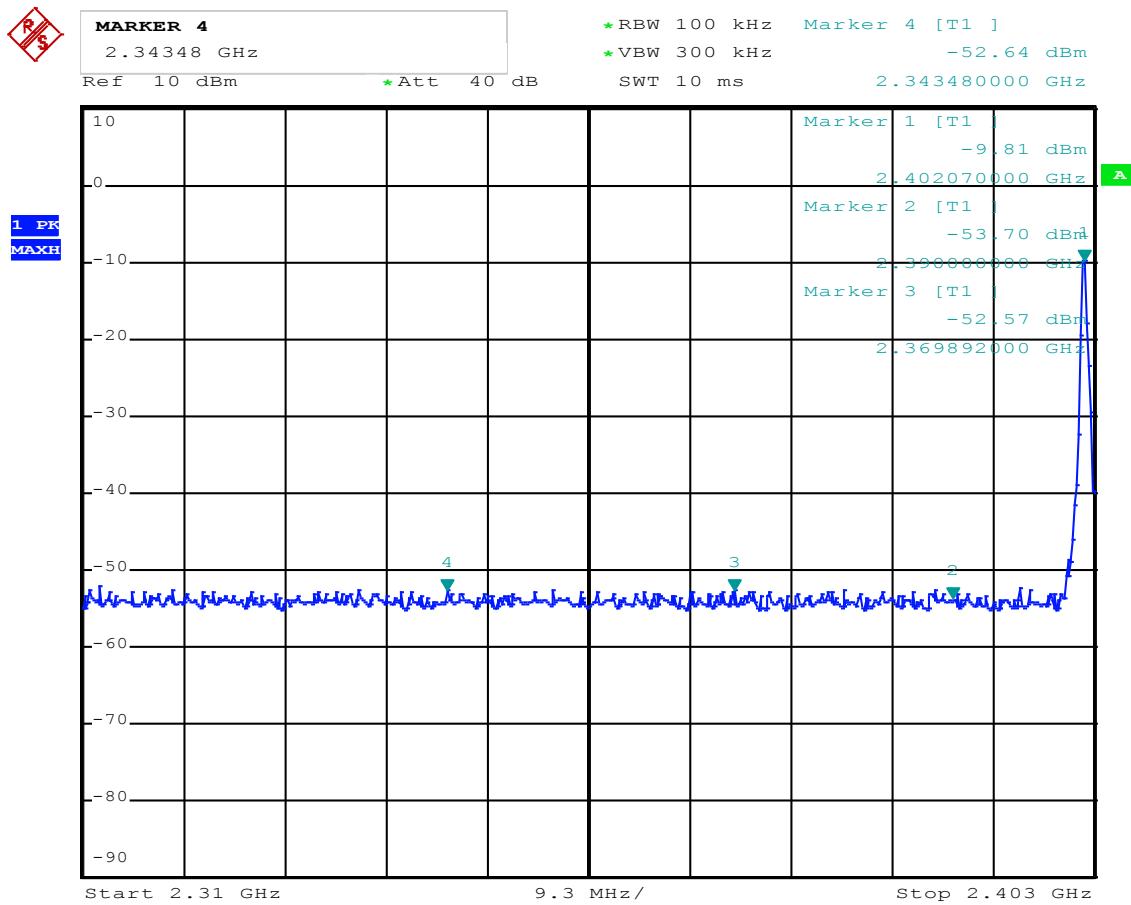


Figure 29: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.1, GFSK Modulation





Date: 9.MAR.2015 14:25:30

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

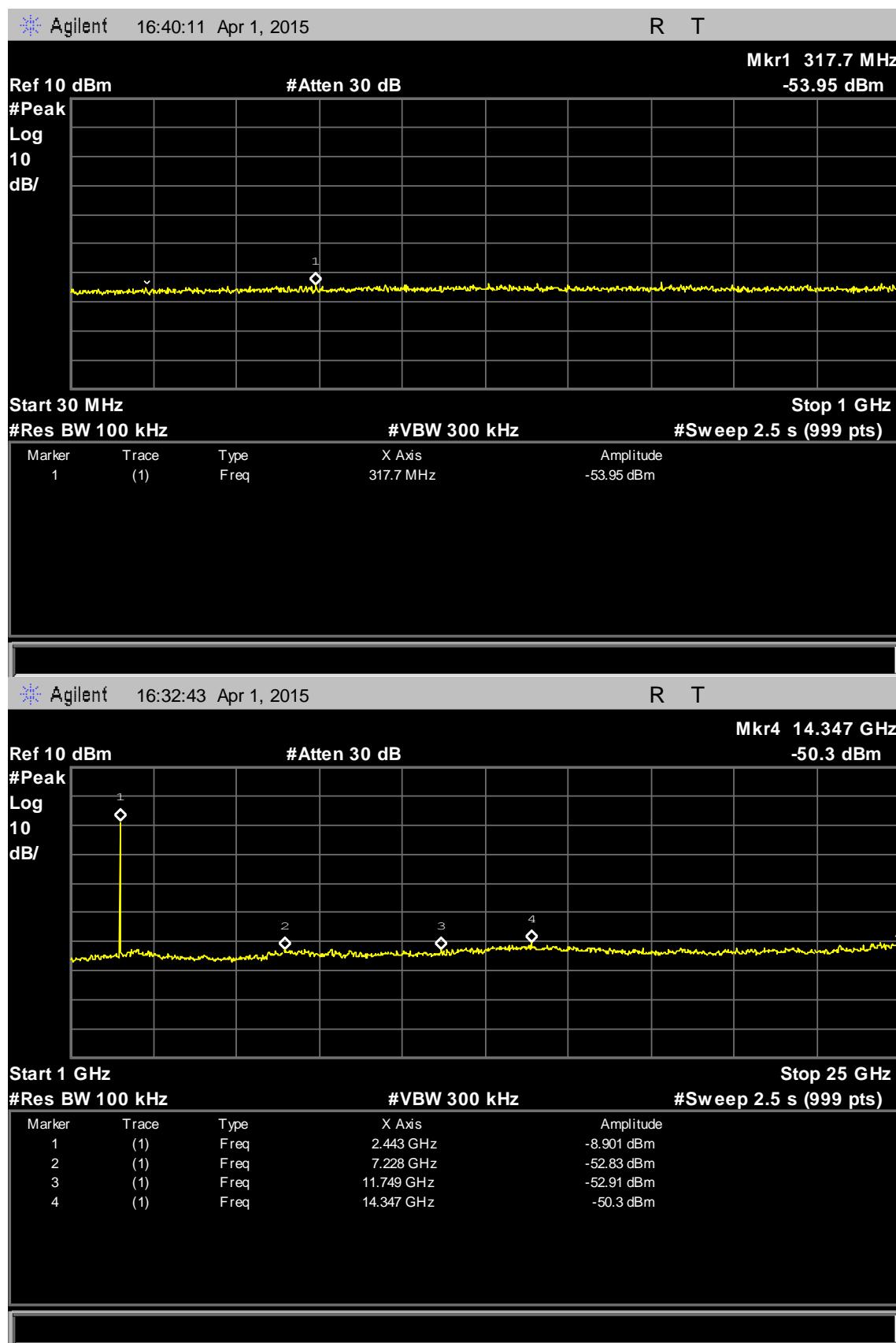
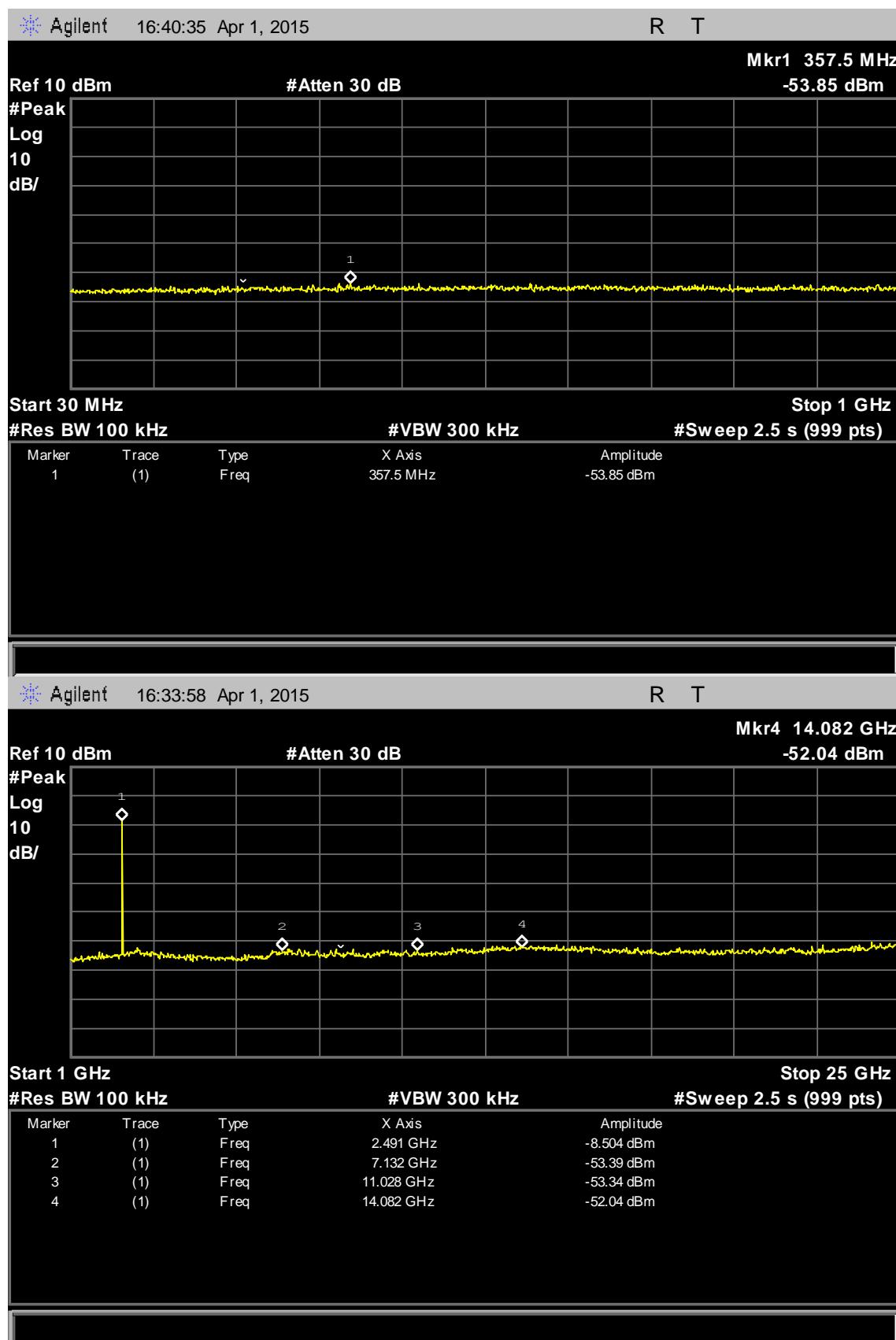
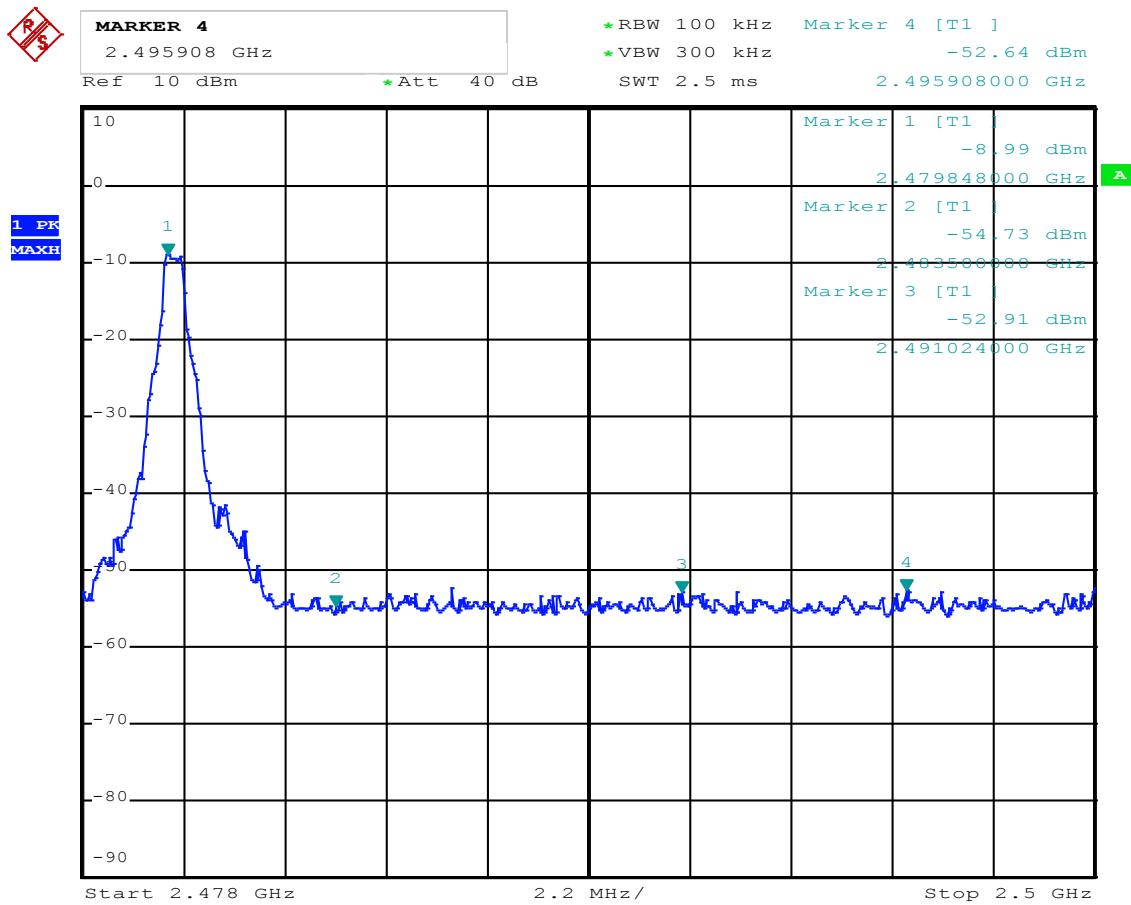


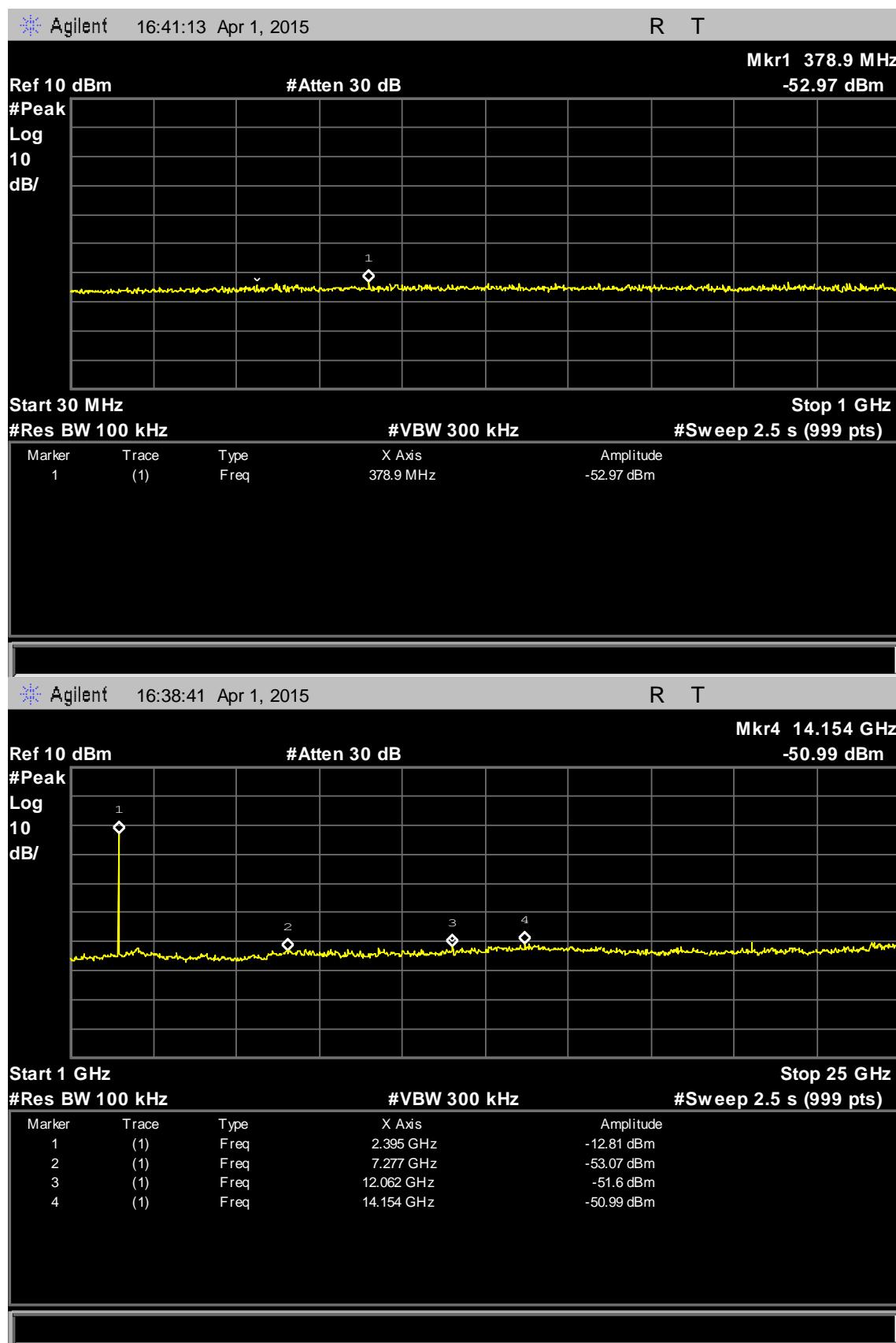
Figure 31: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.3, GFSK Modulation

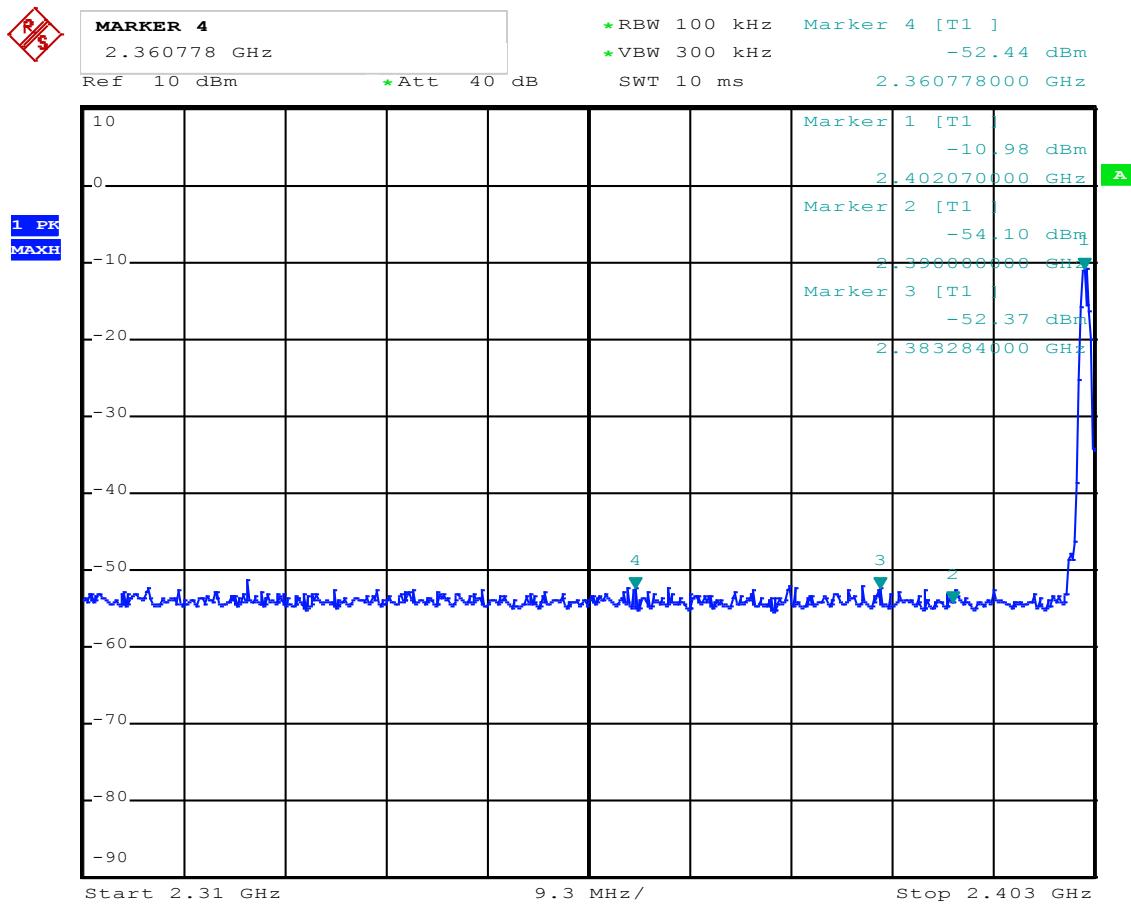




Date: 9.MAR.2015 14:27:46

Figure 32: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.1, 8DPSK Modulation





Date: 9.MAR.2015 14:26:37

Figure 33: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.2, 8DPSK Modulation

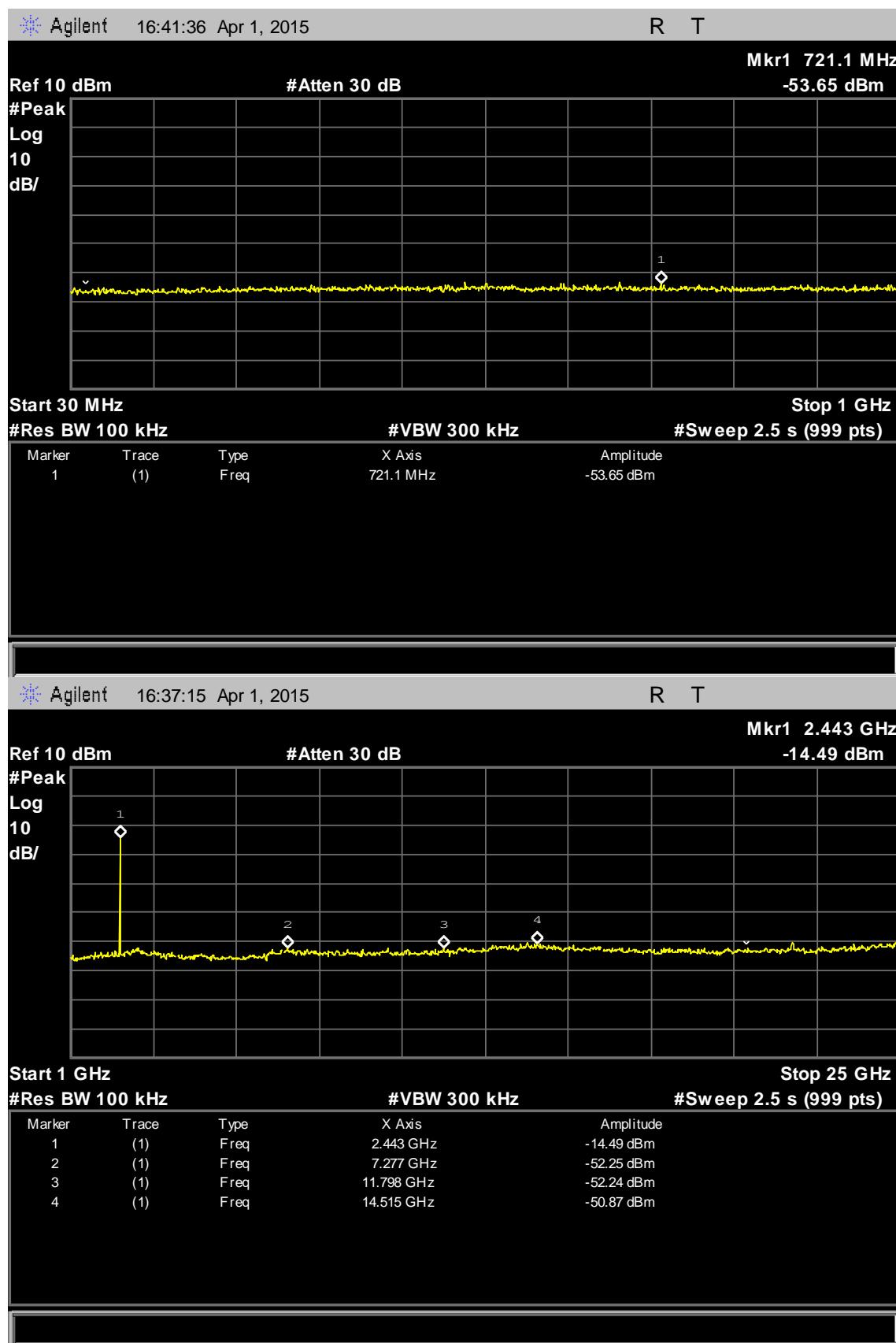
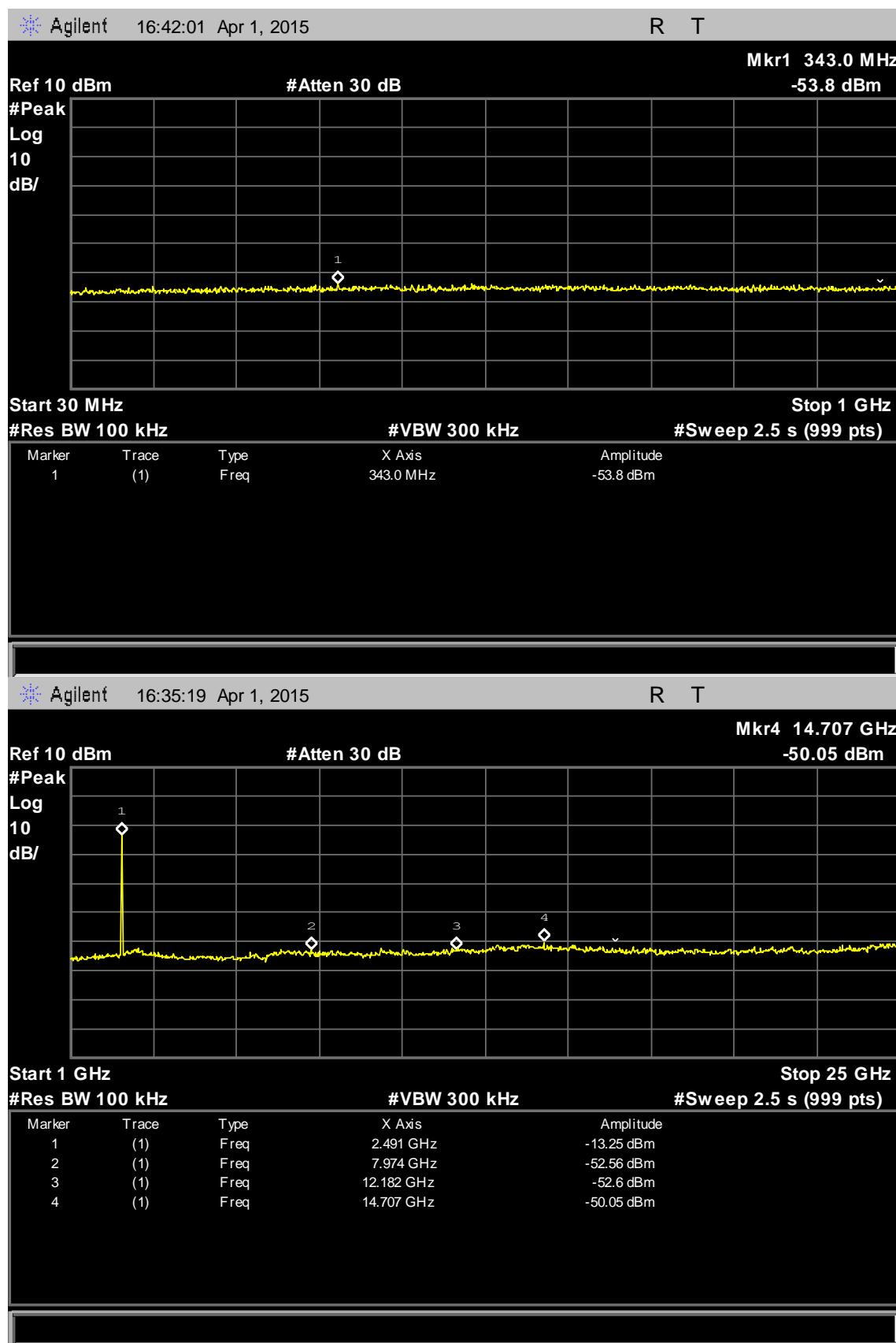
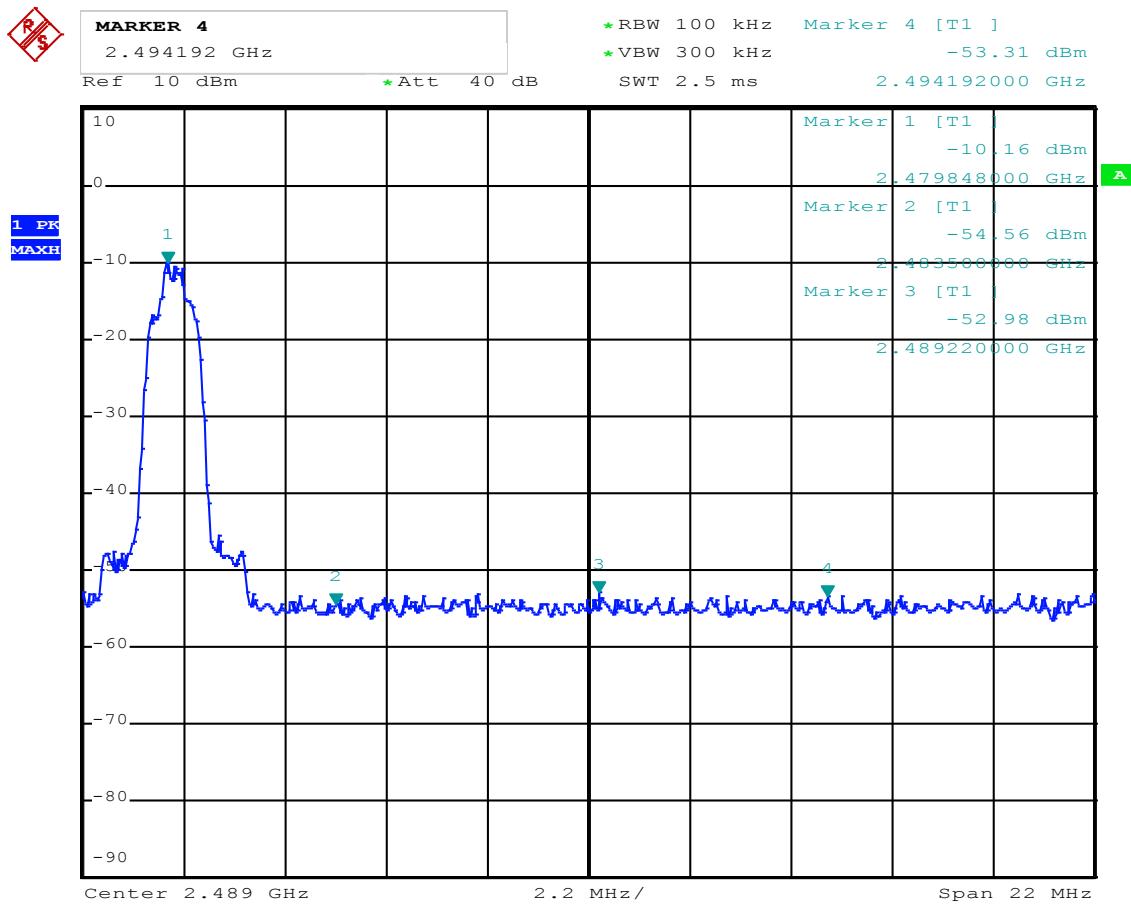


Figure 34: Test figure of conducted spurious emissions measured in 100kHz Bandwidth, Mode A.3, 8DPSK Modulation





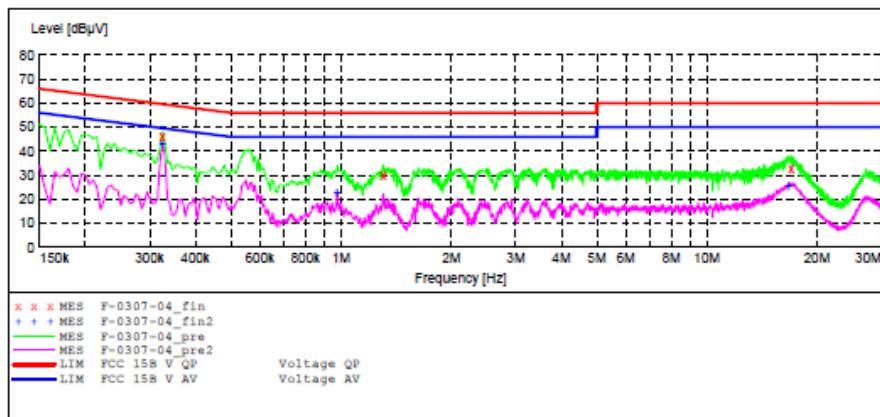
Date: 9.MAR.2015 14:28:28

Figure 35: Test figure of Conducted emissions, Mode B, line live

ACCURATE TECHNOLOGY CO., LTD
CONDUCTED EMISSION STANDARD FCC PART 15 B

EUT: KBSOUND BT M/N:52791
Manufacturer: ELECTRONICA INTEGRAL DE SONIDO S.A.
Operating Condition: Radio FM(Transmitting)
Test Site: 1#Shielding Room
Operator: LAN
Test Specification: L 120V/60Hz
Comment: Mains Port
Start of Test: 3/7/2015 /

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. NSLK8126 2008
150.0 kHz 30.0 MHz 4.5 kHz QuasiPeak 1.0 s 9 kHz Average



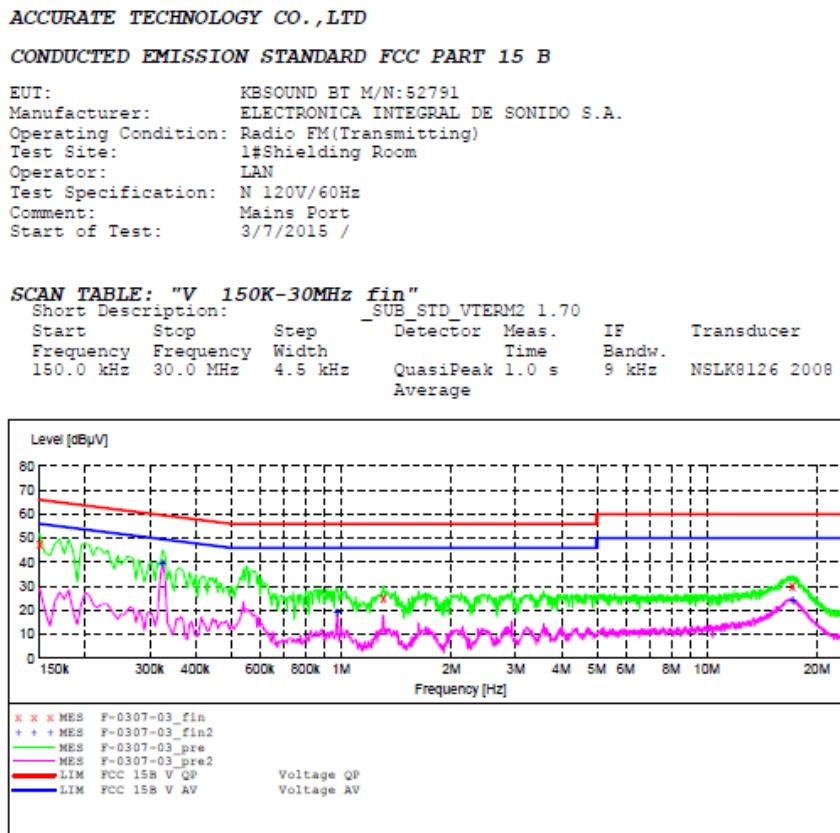
MEASUREMENT RESULT: "F-0307-04_fin"

3/7/2015	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.325000	45.80	10.6	60	13.8	QP	L1	GND
	1.305000	30.00	10.9	56	26.0	QP	L1	GND
	17.000000	32.60	11.4	60	27.4	QP	L1	GND

MEASUREMENT RESULT: "F-0307-04_fin2"

3/7/2015	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.325000	43.40	10.6	50	6.2	AV	L1	GND
	0.975000	23.10	10.8	46	22.9	AV	L1	GND
	16.725000	25.90	11.4	50	24.1	AV	L1	GND

Figure 36: Test figure of Conducted emissions, Mode B, line neutral



MEASUREMENT RESULT: "F-0307-03_fin"

3/7/2015	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.150000	47.30	10.5	66	18.7	QP	N	GND
	1.305000	24.60	10.9	56	31.4	QP	N	GND
	17.125000	30.10	11.4	60	29.9	QP	N	GND

MEASUREMENT RESULT: "F-0307-03_fin2"

3/7/2015	Frequency	Level	Transd	Limit	Margin	Detector	Line	PE
	MHz	dB μ V	dB	dB μ V	dB			
	0.325000	40.00	10.6	50	9.6	AV	N	GND
	0.975000	19.00	10.8	46	27.0	AV	N	GND
	17.125000	24.20	11.4	50	25.8	AV	N	GND

Figure 37: Test figure of Radiated emissions, Mode B, lowest channel, Below 1GHz, Horizontal

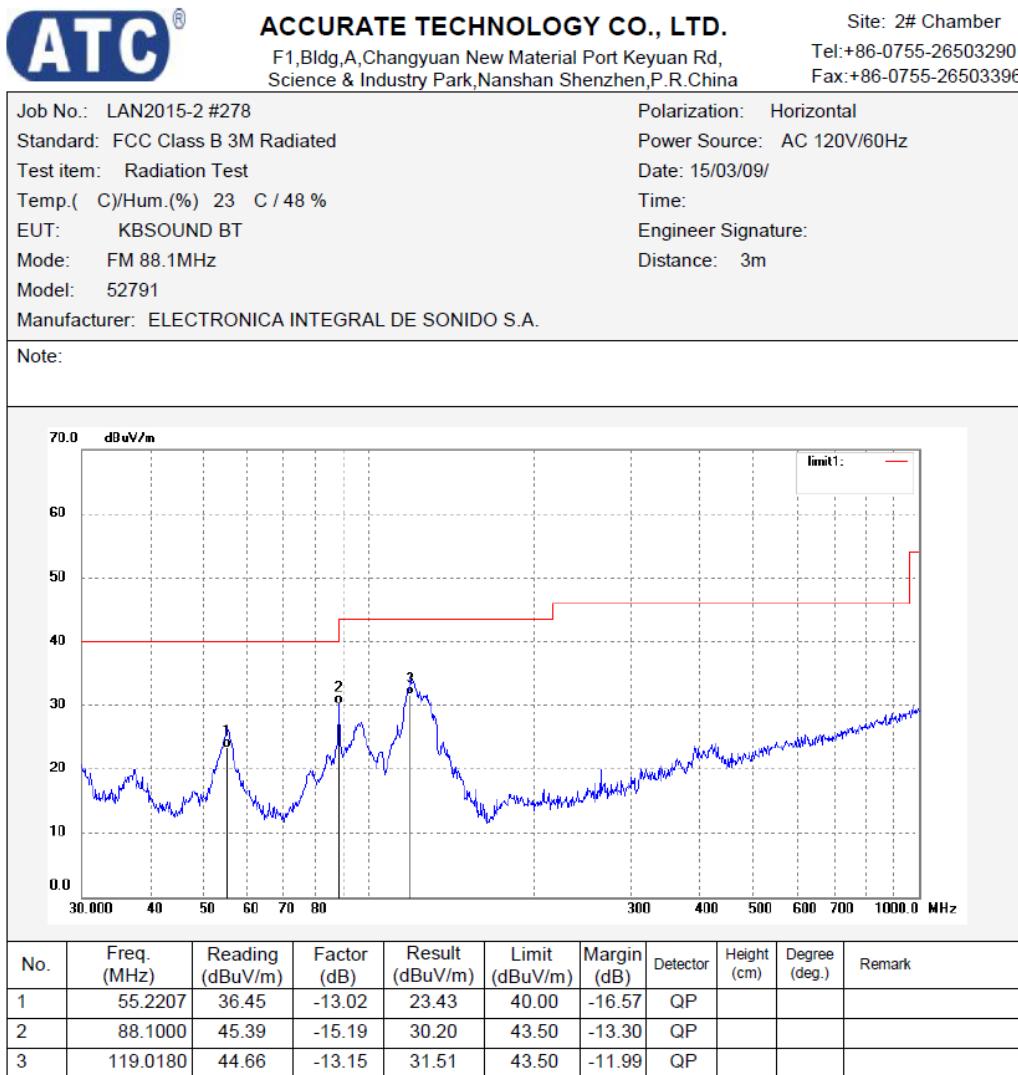
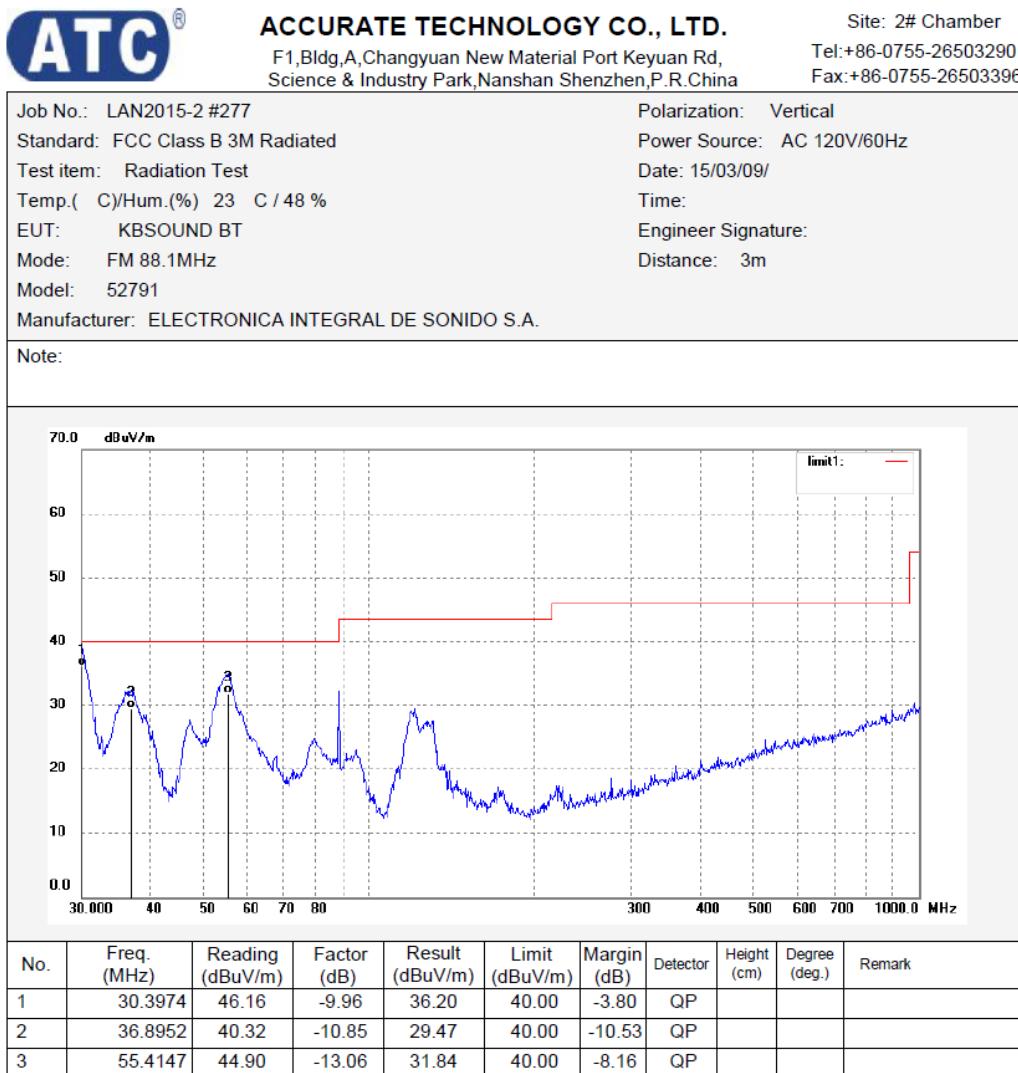
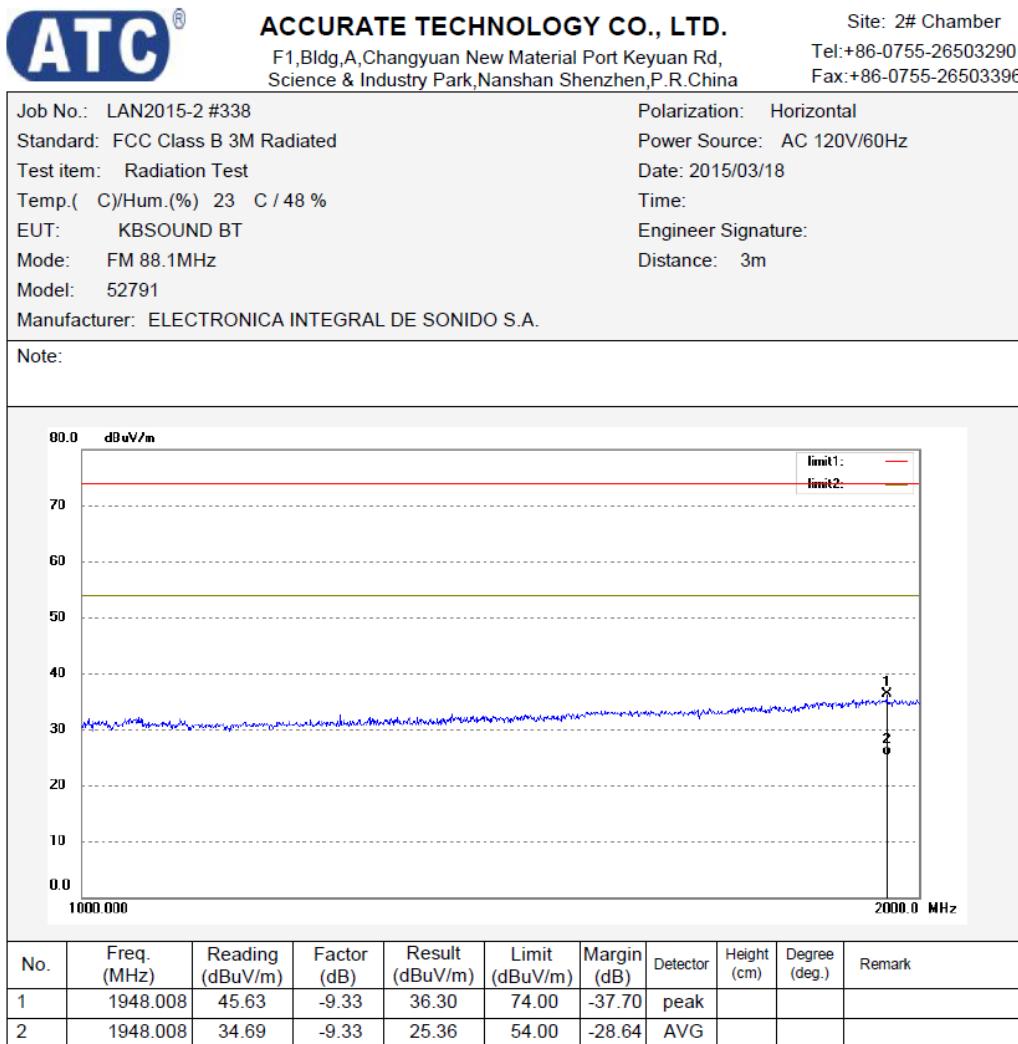


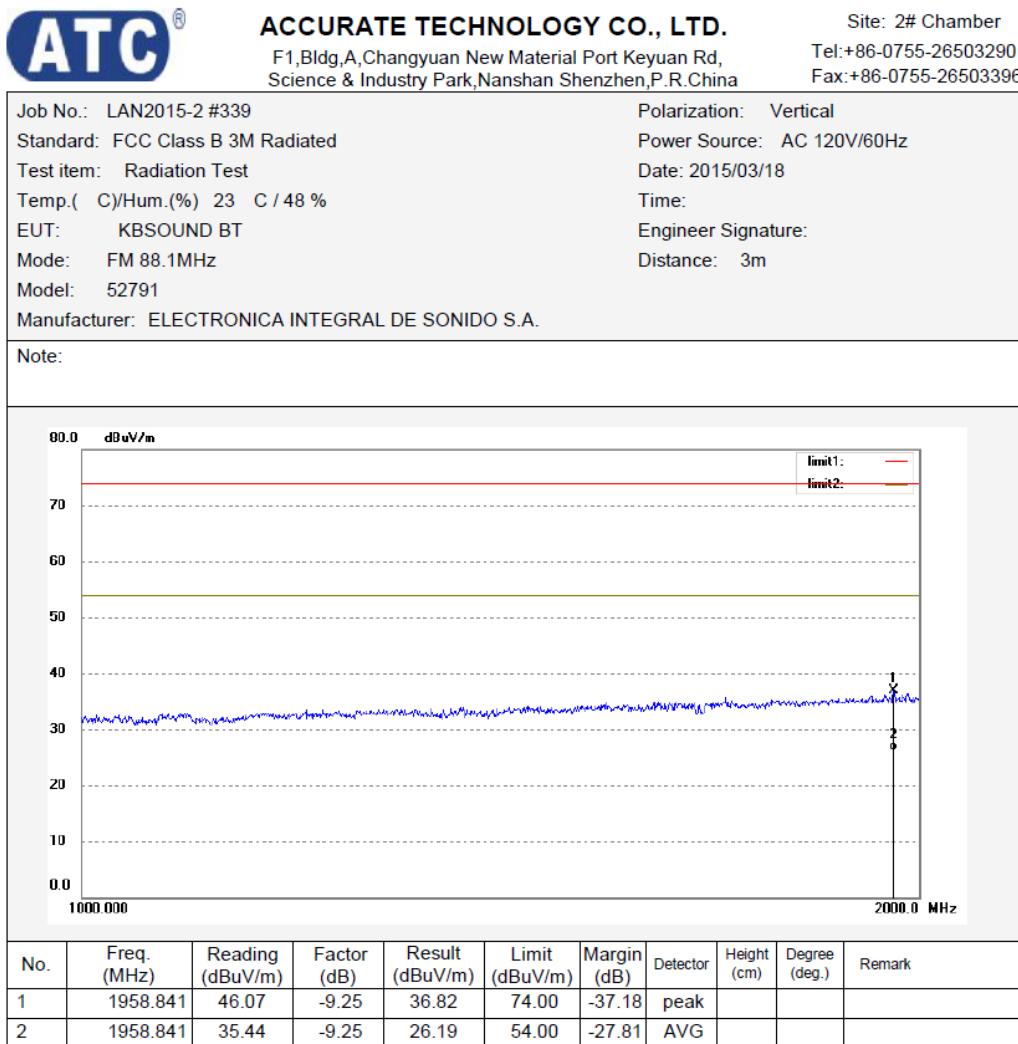
Figure 38: Test figure of Radiated emissions, Mode B, lowest channel, Below 1GHz, Vertical



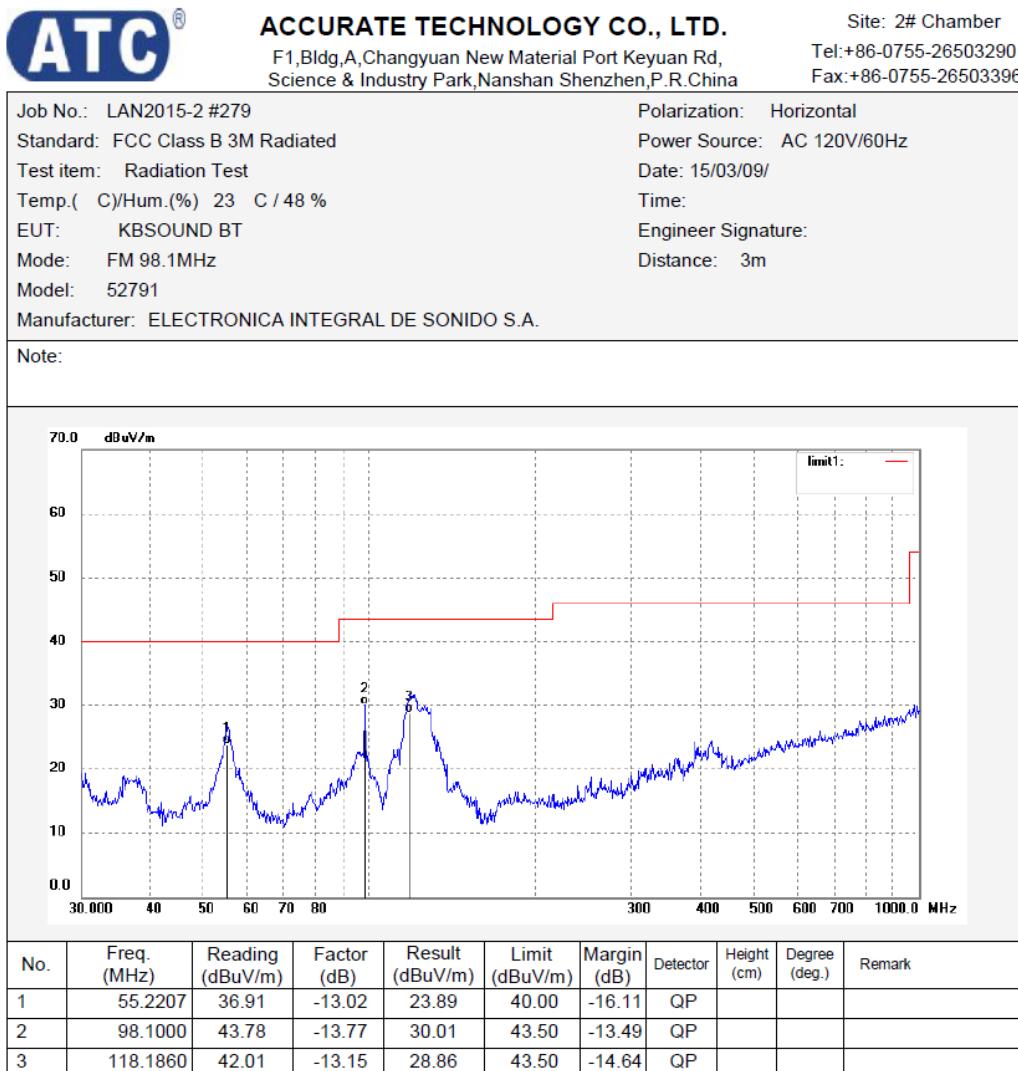
**Figure 39: Test figure of Radiated emissions, Mode B, lowest channel,
Above 1GHz, Horizontal**



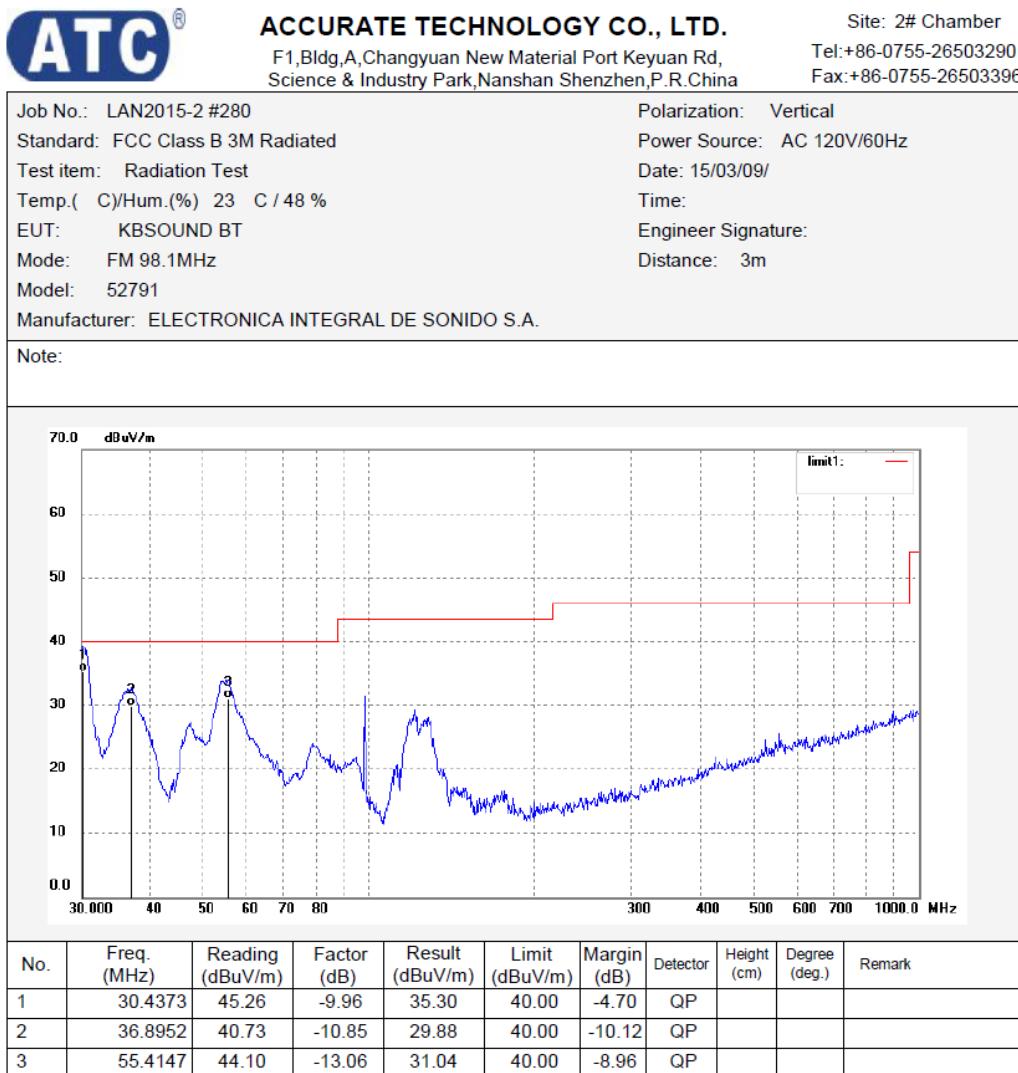
**Figure 40: Test figure of Radiated emissions, Mode B, lowest channel,
Above 1GHz, Vertical**



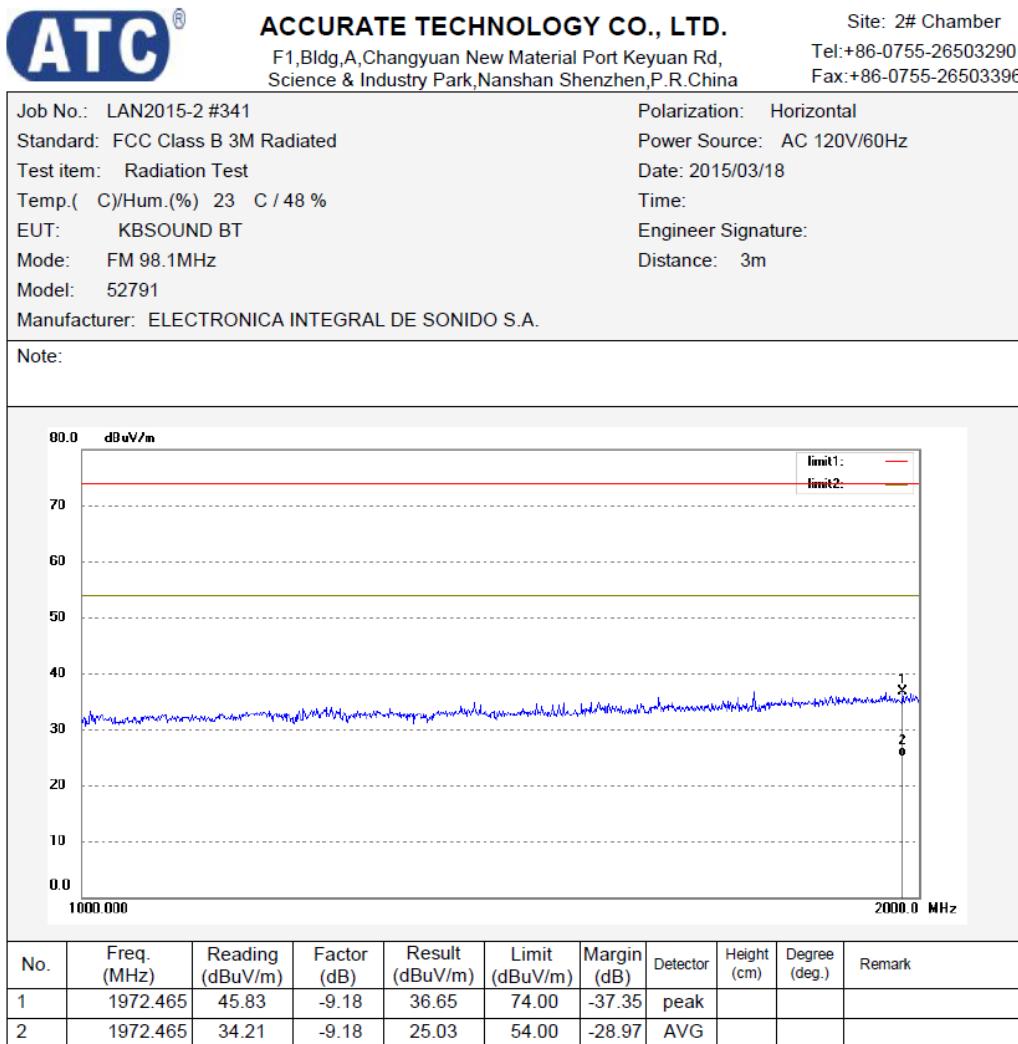
**Figure 41: Test figure of Radiated emissions, Mode B, middle channel,
Below 1GHz, Horizontal**



**Figure 42: Test figure of Radiated emissions, Mode B, middle channel,
Below 1GHz, Vertical**



**Figure 43: Test figure of Radiated emissions, Mode B, middle channel,
Above 1GHz, Horizontal**



**Figure 44: Test figure of Radiated emissions, Mode B, middle channel,
Above 1GHz, Vertical**

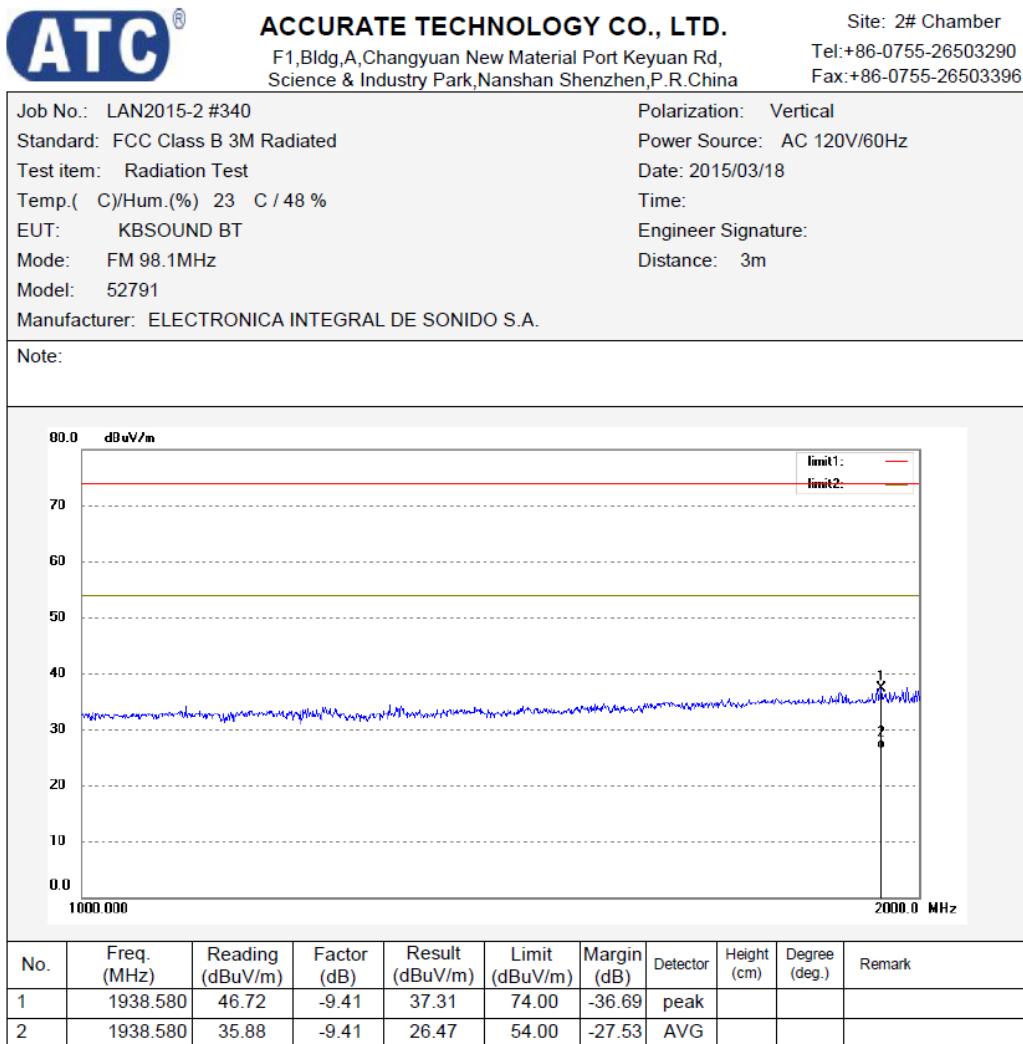
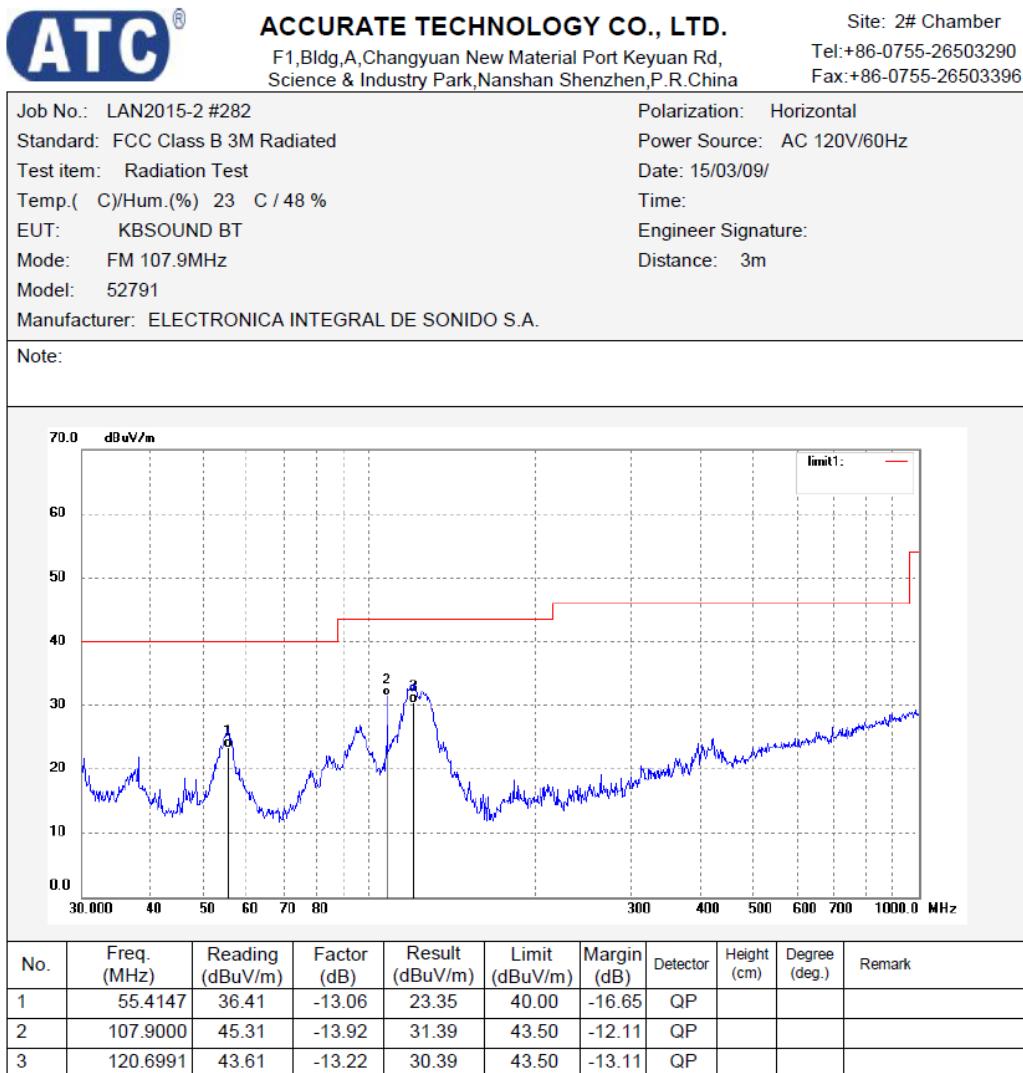
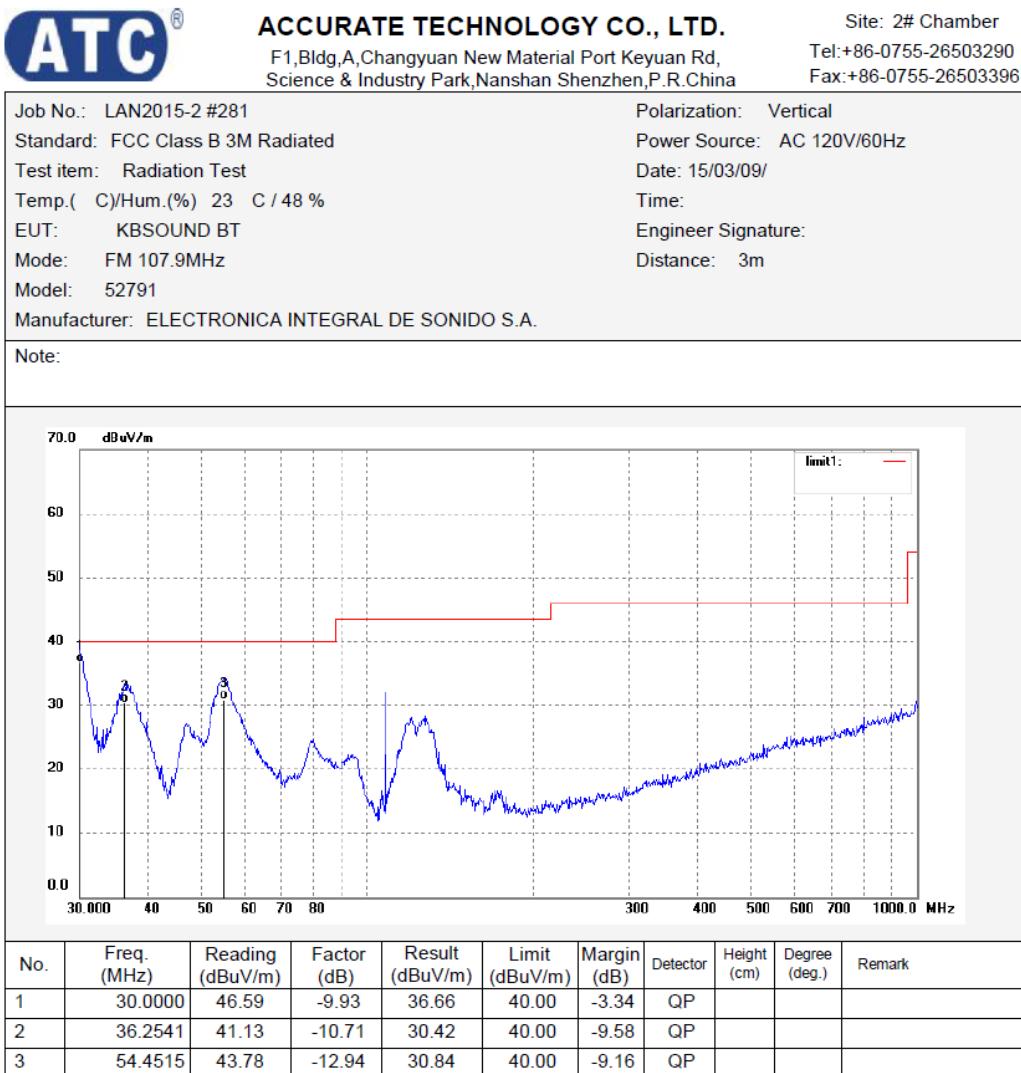


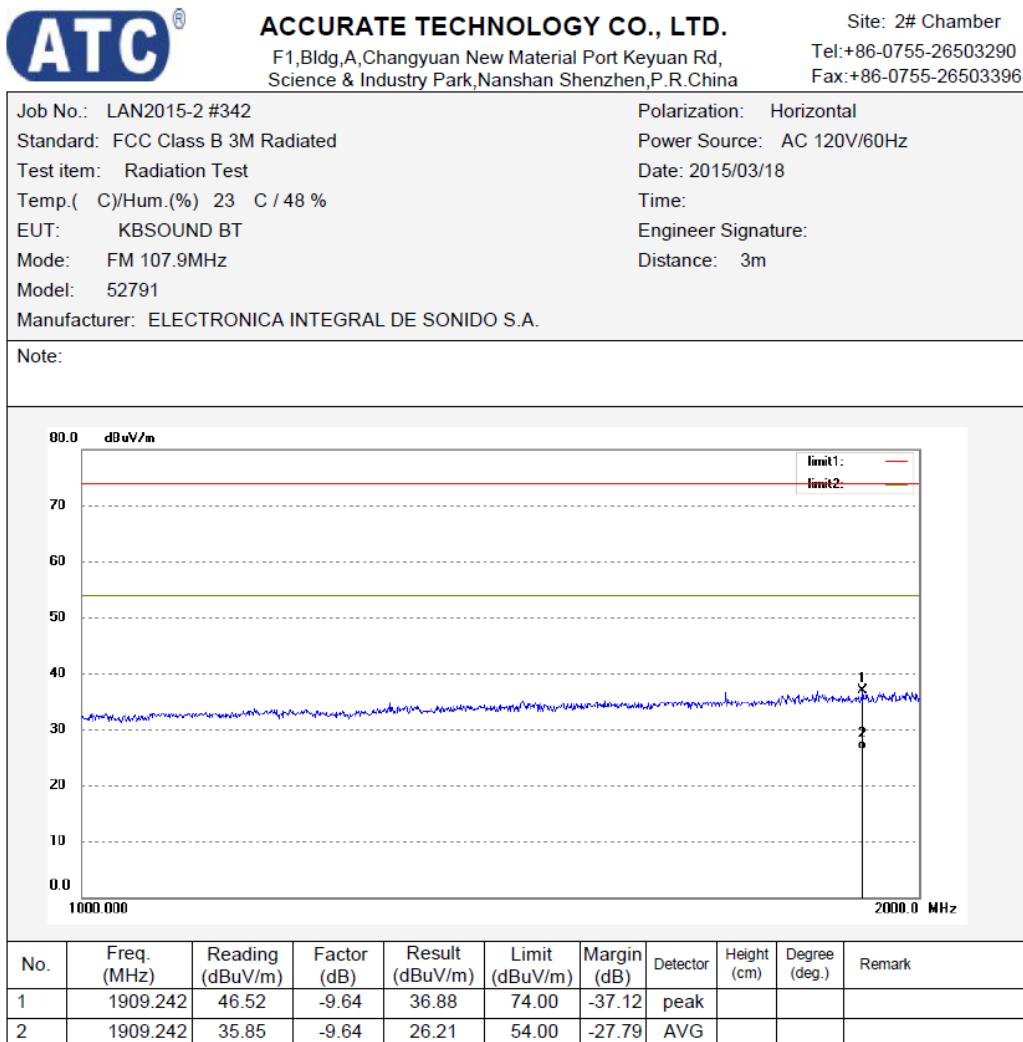
Figure 45: Test figure of Radiated emissions, Mode B, highest channel, Below 1GHz, Horizontal



**Figure 46: Test figure of Radiated emissions, Mode B, highest channel,
Below 1GHz, Vertical**



**Figure 47: Test figure of Radiated emissions, Mode B, highest channel,
Above 1GHz, Horizontal**



**Figure 48: Test figure of Radiated emissions, Mode B, highest channel,
Above 1GHz, Vertical**

