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Shenzhen Branch**

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Report No.: SZEM180600560901
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TEST REPORT

Application No.: SZEM1806005609CR
Applicant: TCL TECHNOLY ELECTRONICS (HUIZHOU) CO., LTD
Address of Applicant: Section 37, Zhongkai High-tech development Zone, Huizhou City, Guangdong Province, China
Manufacturer: TCL TECHNOLY ELECTRONICS (HUIZHOU) CO., LTD
Address of Manufacturer: Section 37, Zhongkai High-tech development Zone, Huizhou City, Guangdong Province, China
Factory: TCL TECHNOLY ELECTRONICS (HUIZHOU) CO., LTD
Address of Factory: Section 19, Zhongkai High-tech development Zone, Huizhou City, Guangdong Province, China
Section 37, Zhongkai High-tech development Zone, Huizhou City, Guangdong Province, China

Equipment Under Test (EUT):

EUT Name: Wireless Module
Model No.: TWM-IA9Q5
Trade mark: TONLY
FCC ID: ZVA13
Standard(s) : 47 CFR Part 15, Subpart E 15.407
Date of Receipt: 2018-07-02
Date of Test: 2018-07-20 to 2018-07-30
Date of Issue: 2018-08-16

Test Result:	Pass*
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* In the configuration tested, the EUT complied with the standards specified above.





Keny Xu
EMC Laboratory Manager

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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<i>Revision Record</i>				
<i>Version</i>	<i>Chapter</i>	<i>Date</i>	<i>Modifier</i>	<i>Remark</i>
01		2018-08-16		Original

Authorized for issue by:				
				
		<hr/>		
		Benson Wang /Project Engineer		
				
		<hr/>		
		Eric Fu /Reviewer		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	Standard	Method	Requirement	Result
Antenna Requirement	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.203	Pass
Transmission in the Absence of Data	47 CFR Part 15, Subpart E 15.407	N/A	47 CFR Part 15, Subpart C 15.407 (c)	Pass

N/A: Not applicable

Radio Spectrum Matter Part				
Item	Standard	Method	Requirement	Result
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart E 15.407	ANSI C63.10 (2013) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Duty Cycle	47 CFR Part 15, Subpart E 15.407	KDB 789033 II B 1	KDB 789033 D02 II B 1	Pass
99% Bandwidth	47 CFR Part 15, Subpart E 15.407	KDB 789033 II D	N/A	Pass
Minimum 6 dB bandwidth (5.725-5.85 GHz band)	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II C 2	47 CFR Part 15, Subpart C 15.407 (e)	Pass
Maximum Conducted output power	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II E	47 CFR Part 15, Subpart C 15.407 (a)	Pass
Peak Power spectrum density	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II F	47 CFR Part 15, Subpart C 15.407 (a)	Pass
Radiated Emissions	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass
Radiated Emissions which fall in the restricted bands	47 CFR Part 15, Subpart E 15.407	KDB 789033 D02 II G	47 CFR Part 15, Subpart C 15.209 & 15.407(b)	Pass

N/A: Not applicable



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4 General Information

4.1 Details of E.U.T.

Power supply:	Powered by host: Host 1: (JBL Bar2.1-T soundbar): AC 120V 60Hz Host 2 (JBL Bar2.1-T subwoofer): AC 120V 60Hz Host 3 (JBL Bar3.1-T soundbar): Powered by adapter: Model No.: TNUA2402703 INPUT: AC100-240V 50/60Hz 143-185VA 1.65A OUTPUT: DC24V 2.7A Host 4 (JBL Bar3.1-T / JBL SW10 subwoofer): AC 120V 60Hz
Operation Frequency:	5743MHz to 5840MHz
Number of Channels:	35
Modulation Type:	GFSK
Antenna Type:	Integral
Antenna Gain:	Antenna 1: 2.85dBi; Antenna 2: 2.85dBi The two antennas and match circuit are the identical and only one antenna is selected for use at any one time, through the on-board Transmit-receive/Diversity RF switch.

Using test software was control EUT work in continuous transmitter and receiver mode. And select test channel as below:

channels and frequencies list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	5743	12	5778	24	5812
1	5747	13	5779	25	5815
2	5751	14	5783	26	5818
3	5752	15	5787	27	5819
4	5755	16	5791	28	5823
5	5758	17	5792	29	5827
6	5759	18	5795	30	5831
7	5763	19	5798	31	5832
8	5767	20	5799	32	5835
9	5771	21	5803	33	5837
10	5772	22	5807	34	5840
11	5775	23	5811	/	/

Selected Test Channel	
Channel	Frequency
The lowest channel (CH0)	5743MHz
The middle channel (CH19)	5798MHz
The highest channel (CH34)	5840MHz

4.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Soundbar	Harman	JBL Bar2.1-T	N/A
Subwoofer	Harman	JBL Bar2.1-T	N/A
Soundbar	Harman	JBL Bar3.1-T	N/A
Subwoofer	Harman	JBL Bar3.1-T / JBL SW10	N/A

4.3 Measurement Uncertainty

No.	Item	Measurement Uncertainty
1	Radio Frequency	$\pm 7.25 \times 10^{-8}$
2	Duty cycle	$\pm 0.37\%$
3	Occupied Bandwidth	$\pm 3\%$
4	RF conducted power	$\pm 0.75\text{dB}$
5	RF power density	$\pm 2.84\text{dB}$
6	Conducted Spurious emissions	$\pm 0.75\text{dB}$
7	RF Radiated power	$\pm 4.5\text{dB}$ (below 1GHz)
		$\pm 4.8\text{dB}$ (above 1GHz)
8	Radiated Spurious emission test	$\pm 4.5\text{dB}$ (Below 1GHz)
		$\pm 4.8\text{dB}$ (Above 1GHz)
9	Temperature test	$\pm 1^\circ\text{C}$
10	Humidity test	$\pm 3\%$
11	Supply voltages	$\pm 1.5\%$
12	Time	$\pm 3\%$

4.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen Branch

No. 1 Workshop, M-10, Middle Section, Science & Technology Park, Shenzhen, Guangdong, China.
518057.

Tel: +86 755 2601 2053 Fax: +86 755 2671 0594

No tests were sub-contracted.

4.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L2929)**

CNAS has accredited SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Industry Canada (IC)**

Two 3m Semi-anechoic chambers and the 10m Semi-anechoic chamber of SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch EMC Lab have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 4620C-1, 4620C-2, 4620C-3.

4.6 Deviation from Standards

None

4.7 Abnormalities from Standard Conditions

None



5 Equipment List

Conducted Emissions at AC Power Line (150kHz-30MHz)					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Shielding Room	ZhongYu Electron	GB-88	SEM001-06	2017-05-10	2020-05-09
Measurement Software	AUDIX	e3 V5.4.1221d	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM024-01	2018-07-12	2019-07-11
LISN	Rohde & Schwarz	ENV216	SEM007-01	2017-09-27	2018-09-26
LISN	ETS-LINDGREN	3816/2	SEM007-02	2018-04-02	2019-04-01
EMI Test Receiver	Rohde & Schwarz	ESCI	SEM004-02	2018-04-02	2019-04-01

RF conducted test					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
DC Power Supply	ZhaoXin	RXN-305D	SEM011-02	2017-09-27	2018-09-26
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2018-04-02	2019-04-01
Measurement Software	JS Tonscend	JS1120-2 BT/WIFI V2.	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM031-01	2018-07-12	2019-07-11
Attenuator	Weinschel Associates	WA41	SEM021-09	N/A	N/A
Signal Generator	KEYSIGHT	N5173B	SEM006-05	2017-09-27	2018-09-26
Power Meter	Rohde & Schwarz	NRVS	SEM014-02	2017-09-27	2018-09-26

Radiated Emissions					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2018-07-12	2019-07-11
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2018-04-02	2019-04-01
BiConiLog Antenna (26-3000MHz)	ETS-Lindgren	3142C	SEM003-01	2017-06-27	2020-06-26
Horn Antenna (1-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12
Horn Antenna(15GHz-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017-10-17	2020-10-16
Pre-amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2017-09-27	2018-09-26
Low Noise Amplifier(100MHz-18GHz)	Black Diamond Series	BDLNA-0118-352810	SEM005-05	2017-09-27	2018-09-27
Pre-amplifier(18-26GHz)	Rohde & Schwarz	CH14-H052	SEM005-17	2018-04-02	2019-04-01
Pre-amplifier(26GHz-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2018-04-02	2019-04-01



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DC Power Supply	Zhao Xin	RXN-305D	SEM011-02	2017-09-27	2018-09-26
Active Loop Antenna	ETS-Lindgren	6502	SEM003-08	2017-08-22	2020-08-21
Band filter	N/A	N/A	SEM023-01	N/A	N/A

RE in Chamber					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	ETS-LINDGREN	N/A	SEM001-01	2017-08-05	2020-08-04
MXE EMI Receiver (20Hz-8.4GHz)	Agilent Technologies	N9038A	SEM004-05	2017-09-27	2018-09-26
BiConiLog Antenna (26-3000MHz)	ETS-LINDGREN	3142C	SEM003-01	2017-06-27	2020-06-26
Pre-amplifier (0.1-1300MHz)	Agilent Technologies	8447D	SEM005-01	2018-04-02	2019-04-01
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM025-01	2018-07-12	2019-07-11

Radiated Emissions which fall in the restricted bands					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
3m Semi-Anechoic Chamber	AUDIX	N/A	SEM001-02	2018-03-13	2021-03-12
Measurement Software	AUDIX	e3 V8.2014-6-27	N/A	N/A	N/A
Coaxial Cable	SGS	N/A	SEM026-01	2018-07-12	2019-07-11
Spectrum Analyzer	Rohde & Schwarz	FSU43	SEM004-08	2018-04-02	2019-04-01
BiConiLog Antenna (26-3000MHz)	ETS-Lindgren	3142C	SEM003-01	2017-06-27	2020-06-26
Horn Antenna (1-18GHz)	Rohde & Schwarz	HF907	SEM003-07	2018-04-13	2021-04-12
Horn Antenna(15GHz-40GHz)	Schwarzbeck	BBHA 9170	SEM003-15	2017-10-17	2020-10-16
Pre-amplifier (0.1-1300MHz)	HP	8447D	SEM005-02	2017-09-27	2018-09-26
Low Noise Amplifier(100MHz-18GHz)	Black Diamond Series	BDLNA-0118-352810	SEM005-05	2017-09-27	2018-09-27
Pre-amplifier(18-26GHz)	Rohde & Schwarz	CH14-H052	SEM005-17	2018-04-02	2019-04-01
Pre-amplifier(26GHz-40GHz)	Compliance Directions Systems Inc.	PAP-2640-50	SEM005-08	2018-04-02	2019-04-01
DC Power Supply	Zhao Xin	RXN-305D	SEM011-02	2017-09-27	2018-09-26
Active Loop Antenna	ETS-Lindgren	6502	SEM003-08	2017-08-22	2020-08-21
Band filter	N/A	N/A	SEM023-01	N/A	N/A



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General used equipment					
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-03	2017-09-29	2018-09-28
Humidity/ Temperature Indicator	Shanghai Meteorological Industry Factory	ZJ1-2B	SEM002-04	2017-09-29	2018-09-28
Humidity/ Temperature Indicator	Mingle	N/A	SEM002-08	2017-09-29	2018-09-28
Barometer	Changchun Meteorological Industry Factory	DYM3	SEM002-01	2018-04-08	2019-04-07



6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203

6.1.2 Conclusion

Standard Requirement:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit permanently attached antenna or of an so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

EUT Antenna:

The antenna is integrated on the main PCB and no consideration of replacement. The best case gain of the antenna 1/2 is 2.85dBi.

The two antennas and match circuit are the identical and only one antenna is selected for use at any one time, through the on-board Transmit-

Please refer to internal photos.



6.2 Transmission in the Absence of Data

6.2.1 Test Requirement:

47 CFR Part 15, Subpart C 15.407 (c)

6.2.2 Conclusion

Standard Requirement:

The device shall automatically discontinue transmission in case of either absence of information to transmit or operational failure. These provisions are not intended to preclude the transmission of control or signalling information or the use of repetitive codes used by certain digital technologies to complete frame or burst intervals.

Applicants shall include in their application for equipment authorization a description of how this requirement is met.

EUT Details:

5.8GHz wireless module (TWM-IA9Q5) support automatically discontinue transmission in case of either absence of information to transmit or operational failure, if the chip detect absence of information to transmit or operational failure, it will be automatically shut off.



7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)
Test Method: ANSI C63.10 (2013) Section 6.2
Limit:

Frequency of emission(MHz)	Conducted limit(dB μ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

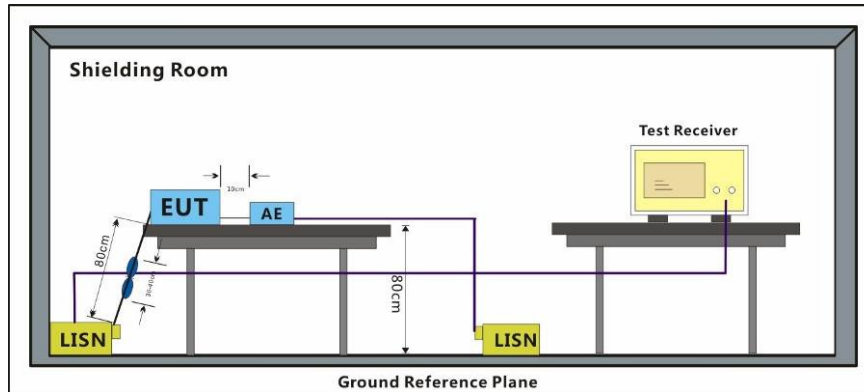
7.1.1 E.U.T. Operation

Operating Environment:

Temperature: 23.2 °C Humidity: 55.7 % RH Atmospheric Pressure: 1005 mbar

Test mode a:TX mode _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

7.1.2 Test Setup Diagram

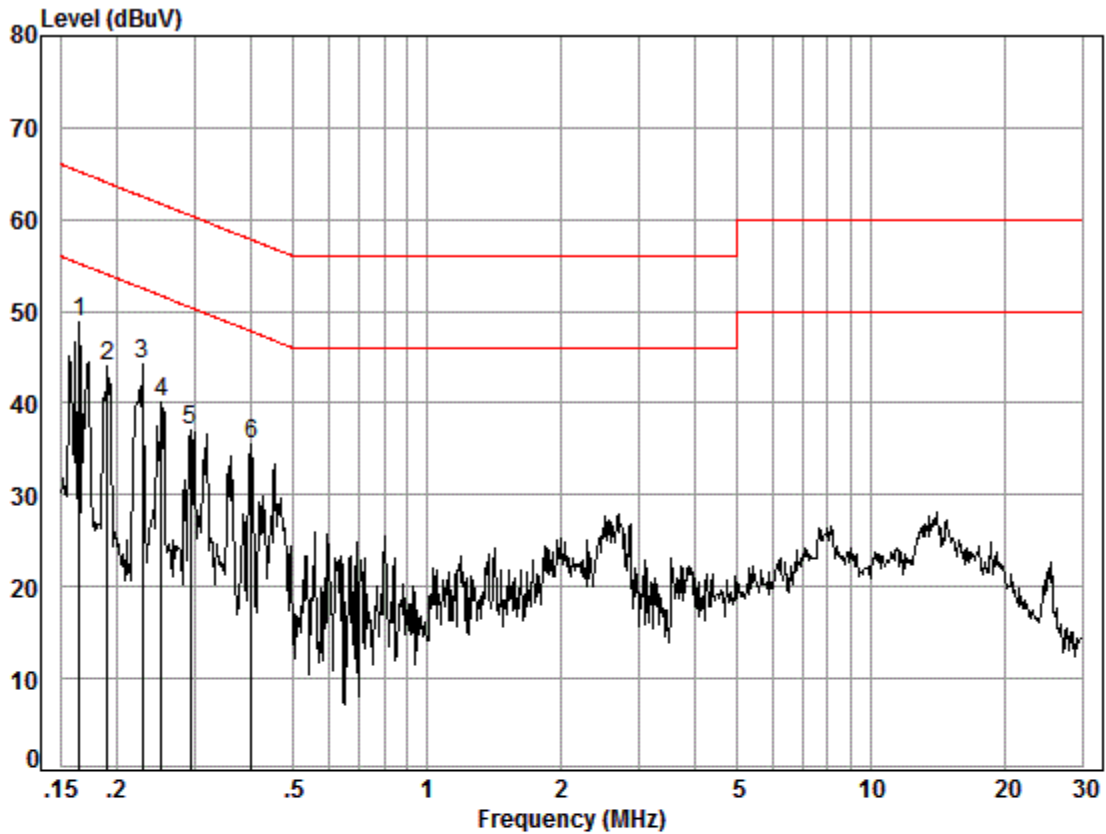


7.1.3 Measurement Procedure and Data

- 1) The mains terminal disturbance voltage test was conducted in a shielded room.
- 2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
- 3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane,
- 4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.
- 5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

Remark: LISN=Read Level+ Cable Loss+ LISN Factor

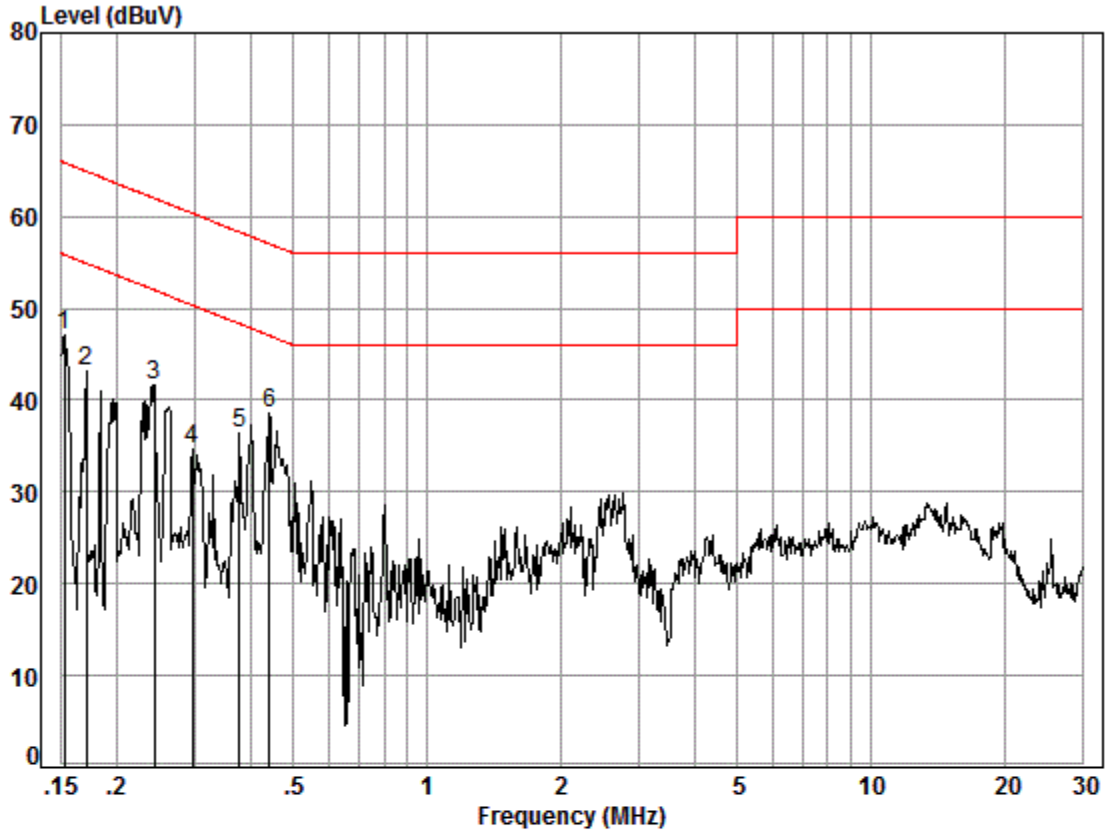
JBL Bar2.1-T soundbar
 Mode:a; Line:Live Line



Site : Shielding Room
 Condition: Line
 Job No. : 5609CR
 Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.17	0.02	9.52	39.22	48.76	55.21	-6.45	Peak
2	0.19	0.03	9.51	34.53	44.07	54.02	-9.95	Peak
3	0.23	0.03	9.51	34.62	44.16	52.52	-8.36	Peak
4	0.25	0.03	9.51	30.58	40.12	51.69	-11.57	Peak
5	0.29	0.03	9.51	27.59	37.13	50.46	-13.33	Peak
6	0.40	0.04	9.49	26.07	35.60	47.81	-12.21	Peak

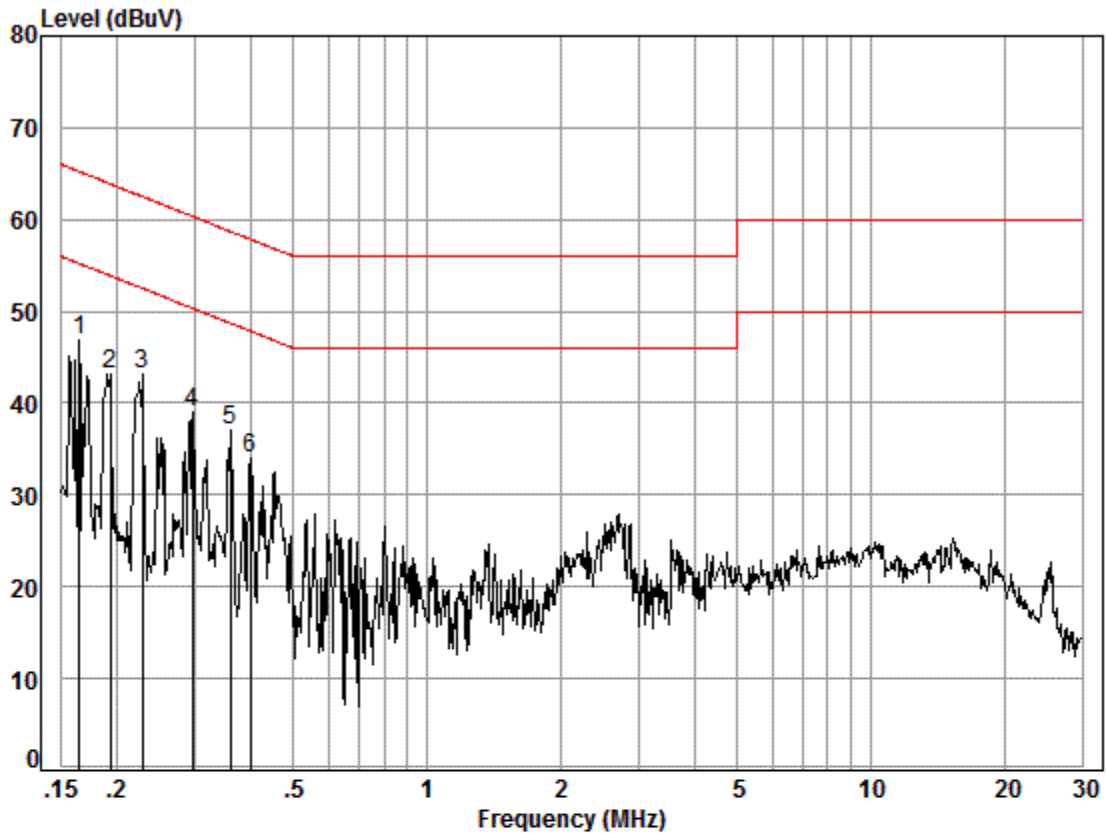
Mode:a; Line:Neutral Line



Site : Shielding Room
 Condition: Neutral
 Job No. : 5609CR
 Test mode: a

	Freq	Cable Loss	LISM Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.02	9.58	37.46	47.06	55.87	-8.81	Peak
2	0.17	0.02	9.59	33.66	43.27	54.90	-11.63	Peak
3	0.24	0.03	9.58	32.02	41.63	52.00	-10.37	Peak
4	0.30	0.03	9.58	25.15	34.76	50.37	-15.61	Peak
5	0.38	0.03	9.59	26.85	36.47	48.34	-11.87	Peak
6	0.44	0.04	9.59	28.86	38.49	47.02	-8.53	Peak

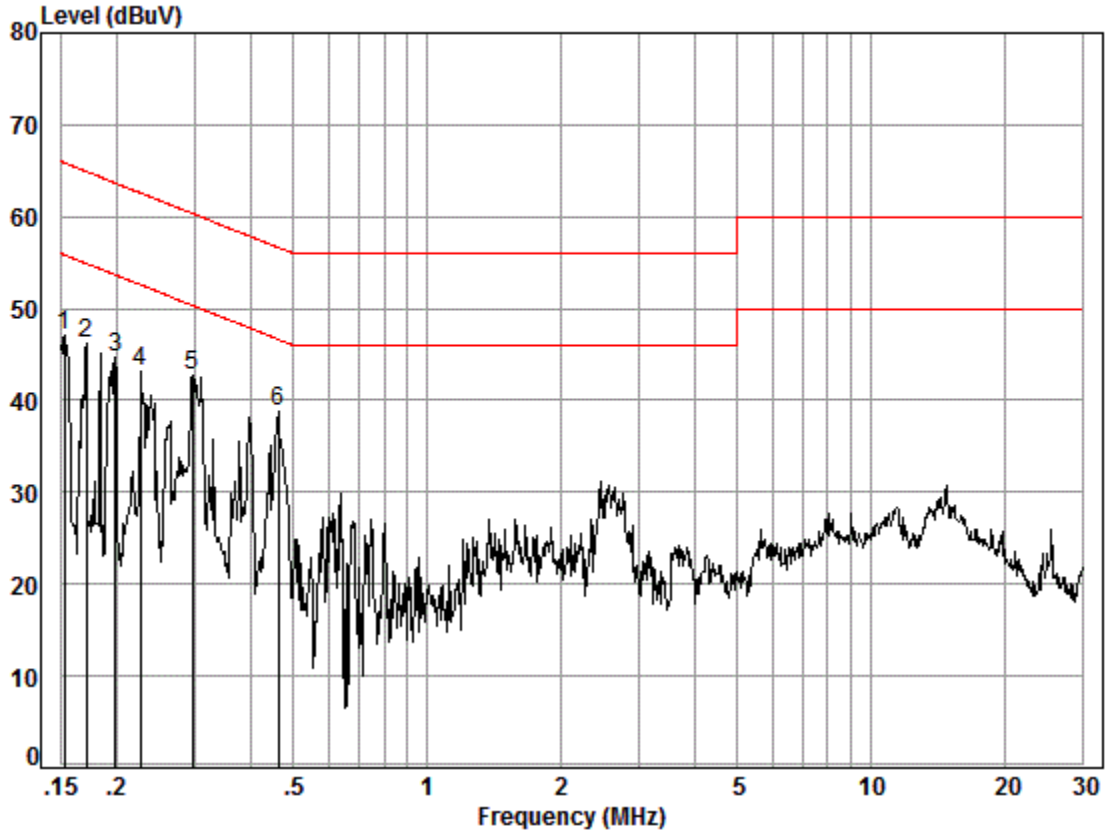
JBL Bar2.1-T subwoofer
 Mode:a; Line:Live Line



Site : Shielding Room
 Condition: Line
 Job No. : 5609CR
 Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.17	0.02	9.52	37.22	46.76	55.21	-8.45	Peak
2	0.19	0.03	9.50	33.61	43.14	53.89	-10.75	Peak
3	0.23	0.03	9.51	33.62	43.16	52.52	-9.36	Peak
4	0.30	0.03	9.51	29.45	38.99	50.37	-11.38	Peak
5	0.36	0.03	9.50	27.61	37.14	48.69	-11.55	Peak
6	0.40	0.04	9.49	24.43	33.96	47.86	-13.90	Peak

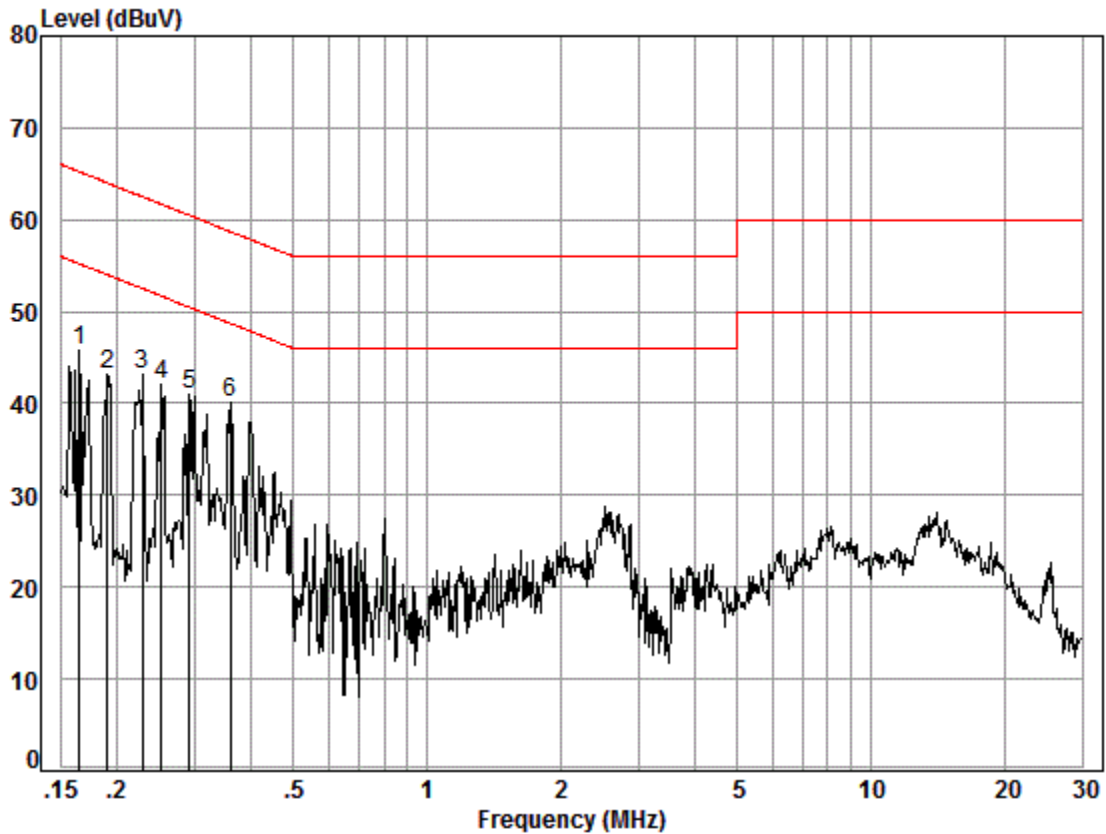
Mode:a; Line:Neutral Line



Site : Shielding Room
 Condition: Neutral
 Job No. : 5609CR
 Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.02	9.58	37.46	47.06	55.87	-8.81	Peak
2	0.17	0.02	9.59	36.66	46.27	54.90	-8.63	Peak
3	0.20	0.03	9.57	35.08	44.68	53.67	-8.99	Peak
4	0.23	0.03	9.58	33.55	43.16	52.61	-9.45	Peak
5	0.30	0.03	9.58	33.15	42.76	50.37	-7.61	Peak
6	0.46	0.04	9.60	29.16	38.80	46.63	-7.83	Peak

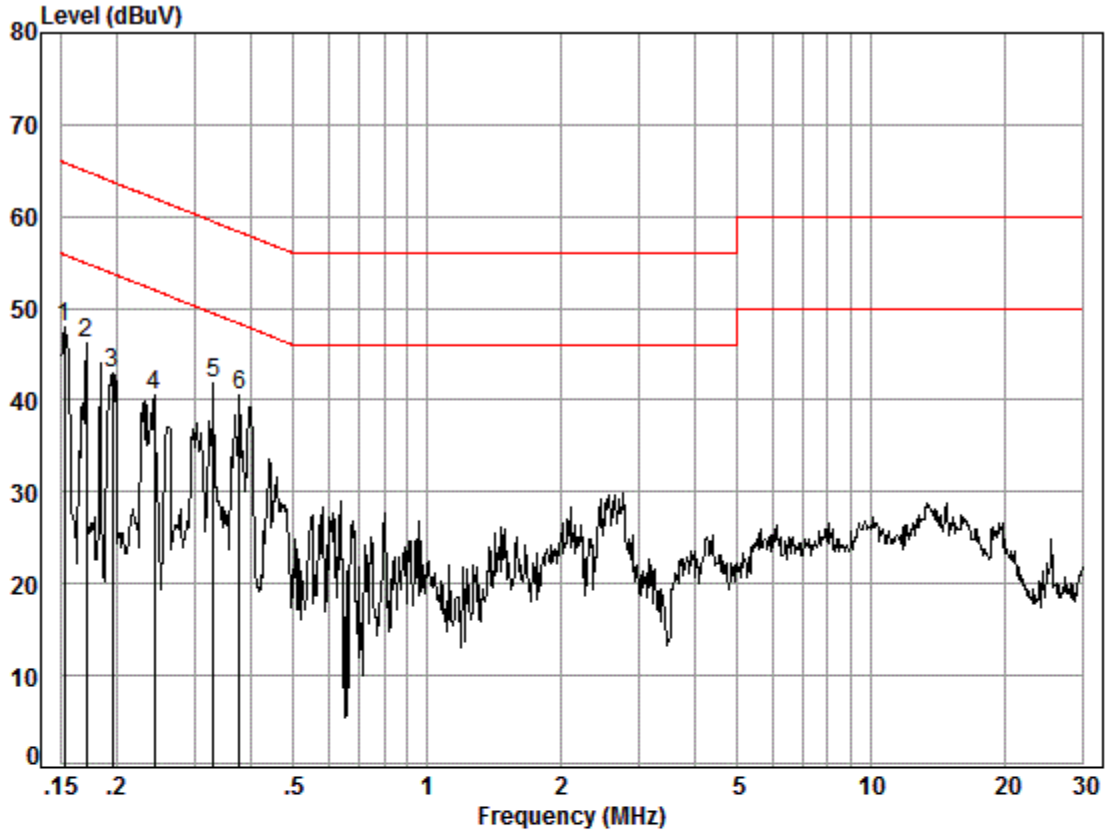
JBL Bar3.1-T soundbar
 Mode:a; Line:Live Line



Site : Shielding Room
 Condition: Line
 Job No. : 5609CR
 Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.17	0.02	9.52	36.22	45.76	55.21	-9.45	Peak
2	0.19	0.03	9.51	33.53	43.07	54.02	-10.95	Peak
3	0.23	0.03	9.51	33.62	43.16	52.52	-9.36	Peak
4	0.25	0.03	9.51	32.58	42.12	51.69	-9.57	Peak
5	0.29	0.03	9.51	31.42	40.96	50.50	-9.54	Peak
6	0.36	0.03	9.50	30.61	40.14	48.69	-8.55	Peak

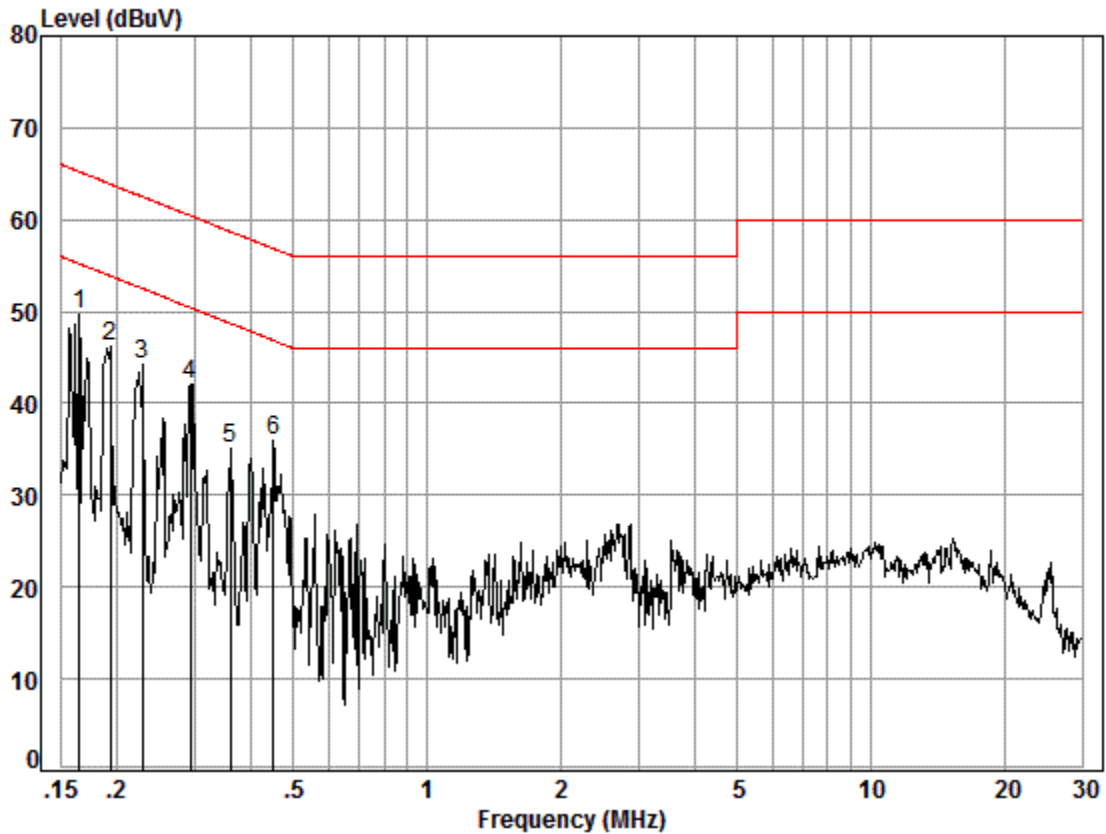
Mode:a; Line:Neutral Line



Site : Shielding Room
 Condition: Neutral
 Job No. : 5609CR
 Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dB	
1	0.15	0.02	9.58	38.46	55.87	-7.81	Peak
2	0.17	0.02	9.59	36.66	54.90	-8.63	Peak
3	0.20	0.03	9.57	33.42	53.80	-10.78	Peak
4	0.24	0.03	9.58	31.02	52.00	-11.37	Peak
5	0.33	0.03	9.58	32.14	49.44	-7.69	Peak
6	0.38	0.03	9.59	30.85	48.34	-7.87	Peak

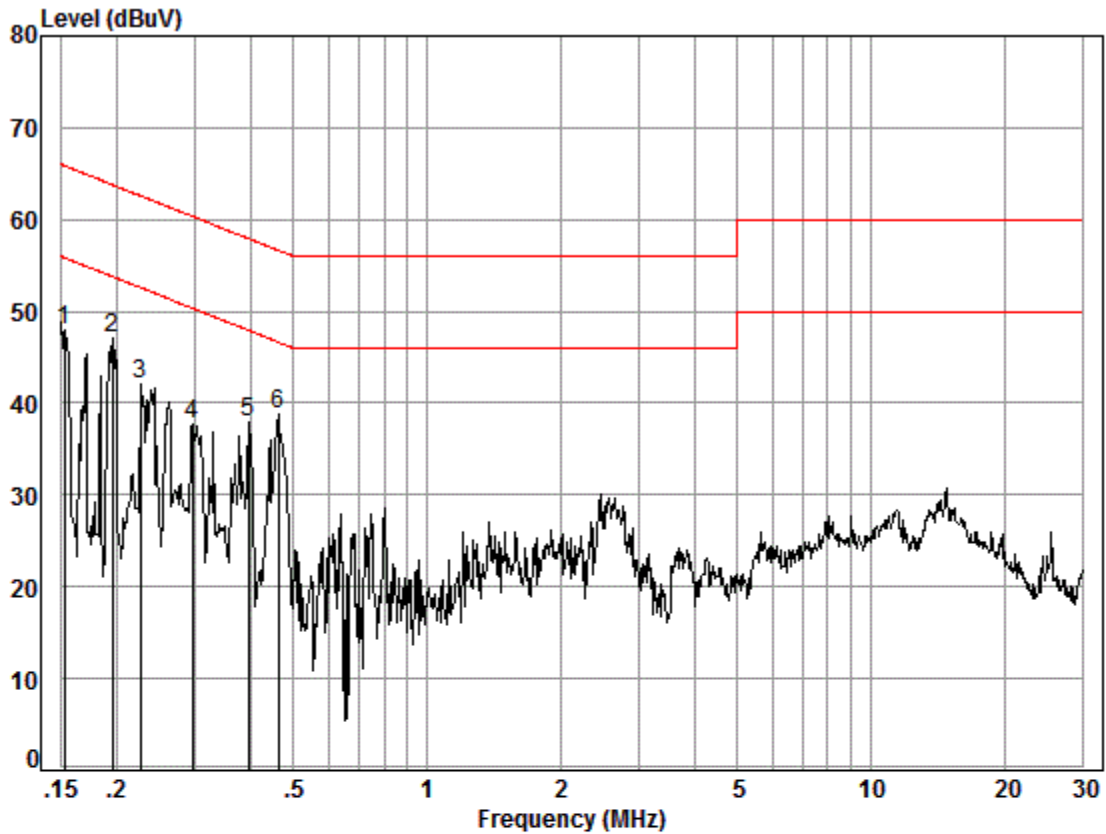
JBL Bar3.1-T subwoofer / JBL SW10
 Mode:a; Line:Live Line



Site : Shielding Room
 Condition: Line
 Job No. : 5609CR
 Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.17	0.02	9.52	40.22	49.76	55.21	-5.45	Peak
2	0.19	0.03	9.50	36.61	46.14	53.89	-7.75	Peak
3	0.23	0.03	9.51	34.62	44.16	52.52	-8.36	Peak
4	0.29	0.03	9.51	32.59	42.13	50.46	-8.33	Peak
5	0.36	0.03	9.50	25.61	35.14	48.69	-13.55	Peak
6	0.45	0.04	9.49	26.43	35.96	46.85	-10.89	Peak

Mode:a; Line:Neutral Line



Site : Shielding Room
 Condition: Neutral
 Job No. : 5609CR
 Test mode: a

	Freq	Cable Loss	LISN Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB	dBuV	dBuV	dBuV	dB	
1	0.15	0.02	9.58	38.46	48.06	55.87	-7.81	Peak
2	0.20	0.03	9.57	37.42	47.02	53.80	-6.78	Peak
3	0.23	0.03	9.58	32.55	42.16	52.61	-10.45	Peak
4	0.30	0.03	9.58	28.15	37.76	50.37	-12.61	Peak
5	0.40	0.04	9.59	28.24	37.87	47.95	-10.08	Peak
6	0.46	0.04	9.60	29.16	38.80	46.63	-7.83	Peak

7.2 Duty Cycle

Test Requirement KDB 789033 D02 II B 1
 Test Method: KDB 789033 II B 1

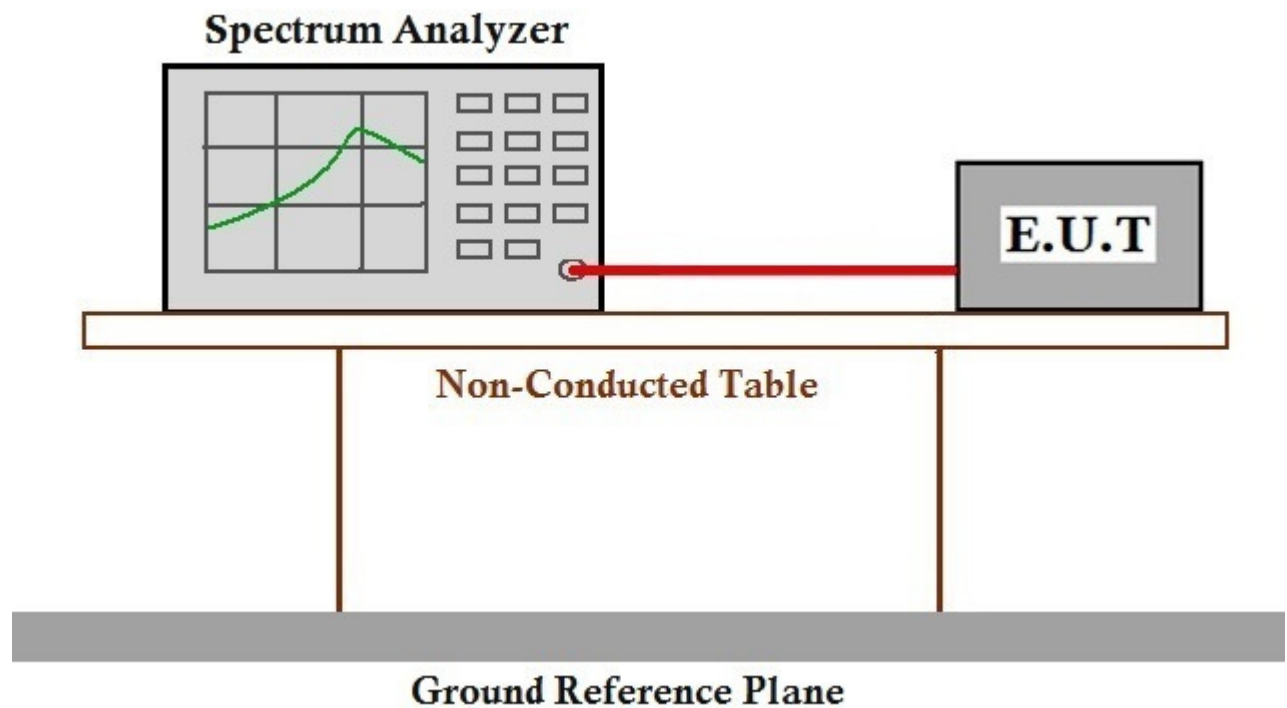
7.2.1 E.U.T. Operation

Operating Environment:

Temperature: 26.1 °C Humidity: 59.8 % RH Atmospheric Pressure: 1010 mbar

Test mode a:TX mode _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

7.2.2 Test Setup Diagram



7.2.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407

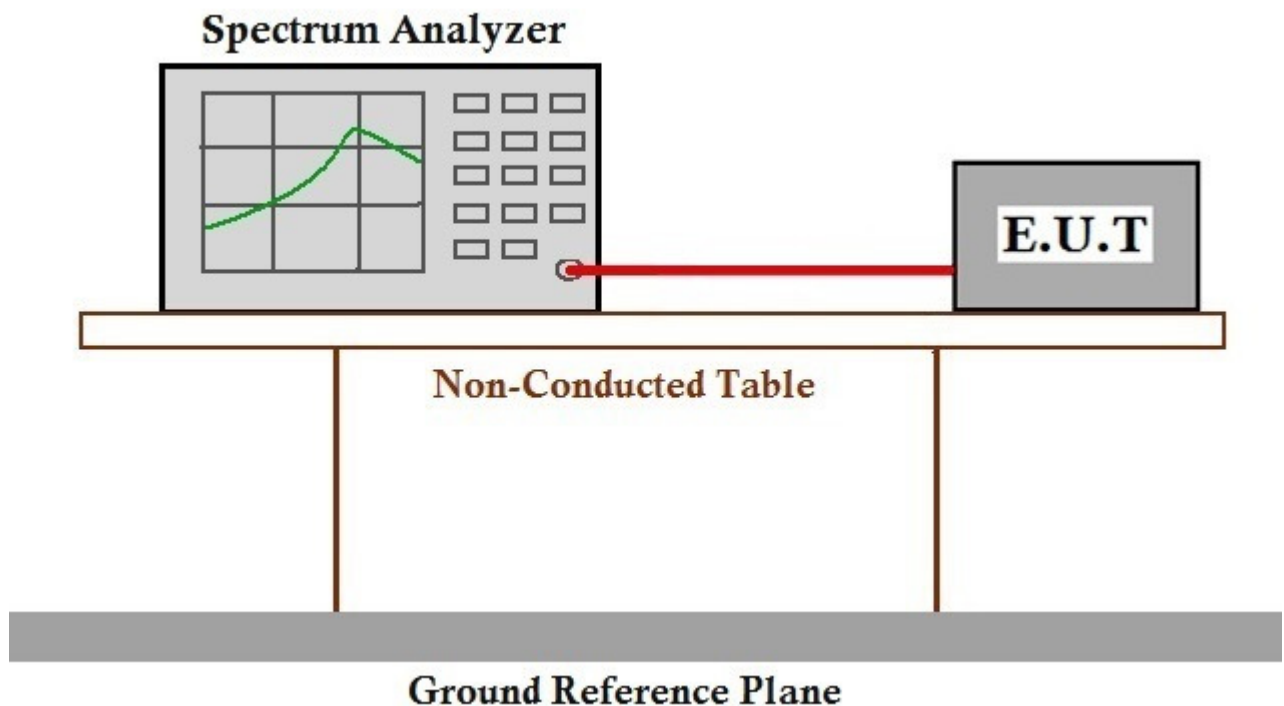
7.3 99% Bandwidth

Test Requirement N/A
 Test Method: KDB 789033 II D

7.3.1 E.U.T. Operation

Operating Environment:
 Temperature: 23.2 °C Humidity: 55.7 % RH Atmospheric Pressure: 1005 mbar
 Test mode a:TX mode _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

7.3.2 Test Setup Diagram



7.3.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407

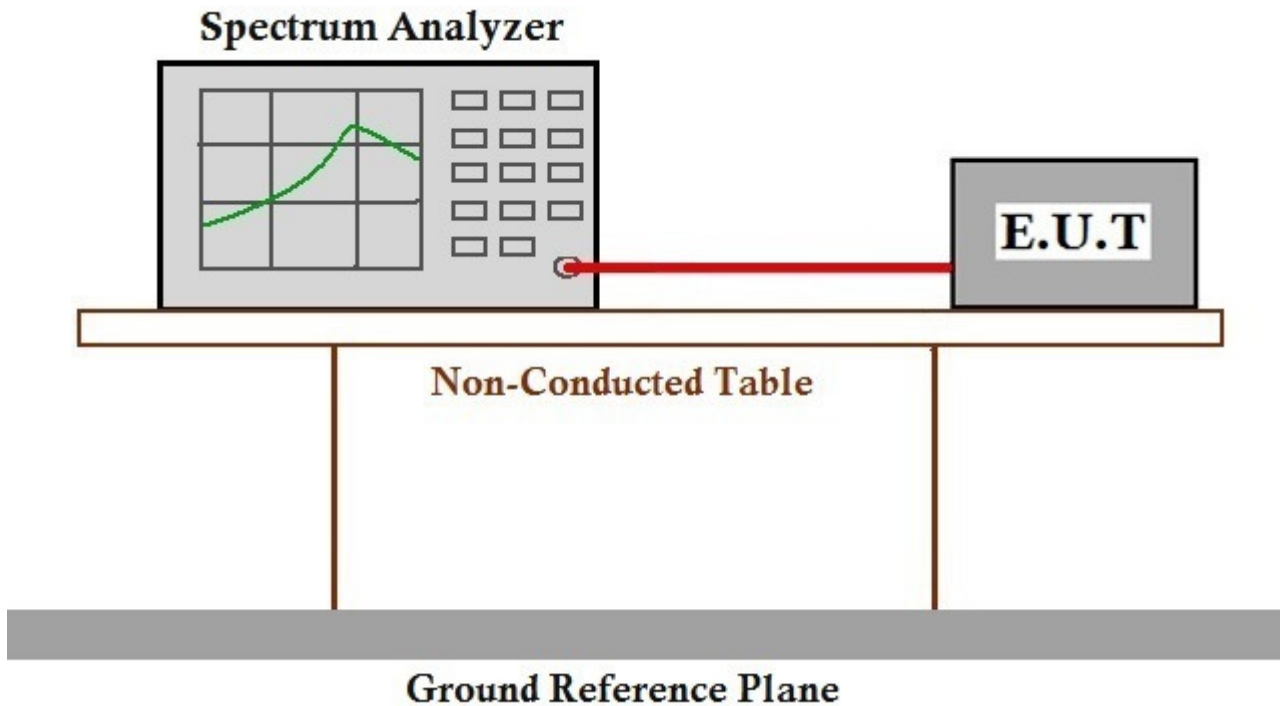
7.4 Minimum 6 dB bandwidth (5.725-5.85 GHz band)

Test Requirement 47 CFR Part 15, Subpart C 15.407 (e)
 Test Method: KDB 789033 D02 II C 2
 Limit: ≥ 500 kHz

7.4.1 E.U.T. Operation

Operating Environment:
 Temperature: 23.2 °C Humidity: 55.6 % RH Atmospheric Pressure: 1005 mbar
 Test mode a:TX mode _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

7.4.2 Test Setup Diagram



7.4.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



7.5 Maximum Conducted output power

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)

Test Method: KDB 789033 D02 II E

Limit:

Frequency band(MHz)	Limit
5150-5250	≤1W(30dBm) for master device
	≤250mW(24dBm) for client device
5250-5350	≤250mW(24dBm) for client device or 11dBm+10logB*
5470-5725	≤250mW(24dBm) for client device or 11dBm+10logB*
5725-5850	≤1W(30dBm)
Remark:	* Where B is the 26dB emission bandwidth in MHz. The maximum conducted output power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms-equivalent voltage.

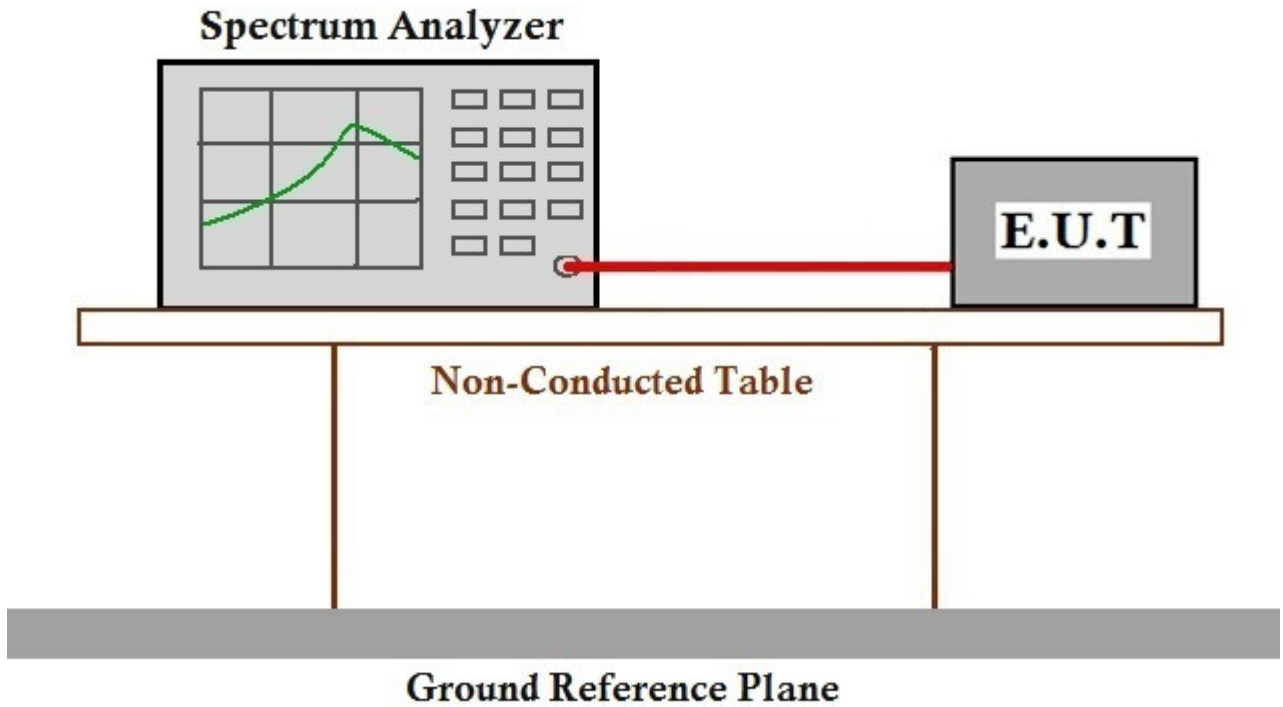
7.5.1 E.U.T. Operation

Operating Environment:

Temperature: 23.2 °C Humidity: 55.6 % RH Atmospheric Pressure: 1005 mbar

Test mode a:TX mode _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

7.5.2 Test Setup Diagram



7.5.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



7.6 Peak Power spectrum density

Test Requirement 47 CFR Part 15, Subpart C 15.407 (a)
Test Method: KDB 789033 D02 II F
Limit:

Frequency band(MHz)	Limit
5150-5250	≤17dBm in 1MHz for master device
	≤11dBm in 1MHz for client device
5250-5350	≤11dBm in 1MHz for client device
5470-5725	≤11dBm in 1MHz for client device
5725-5850	≤30dBm in 500 kHz
Remark:	The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test.

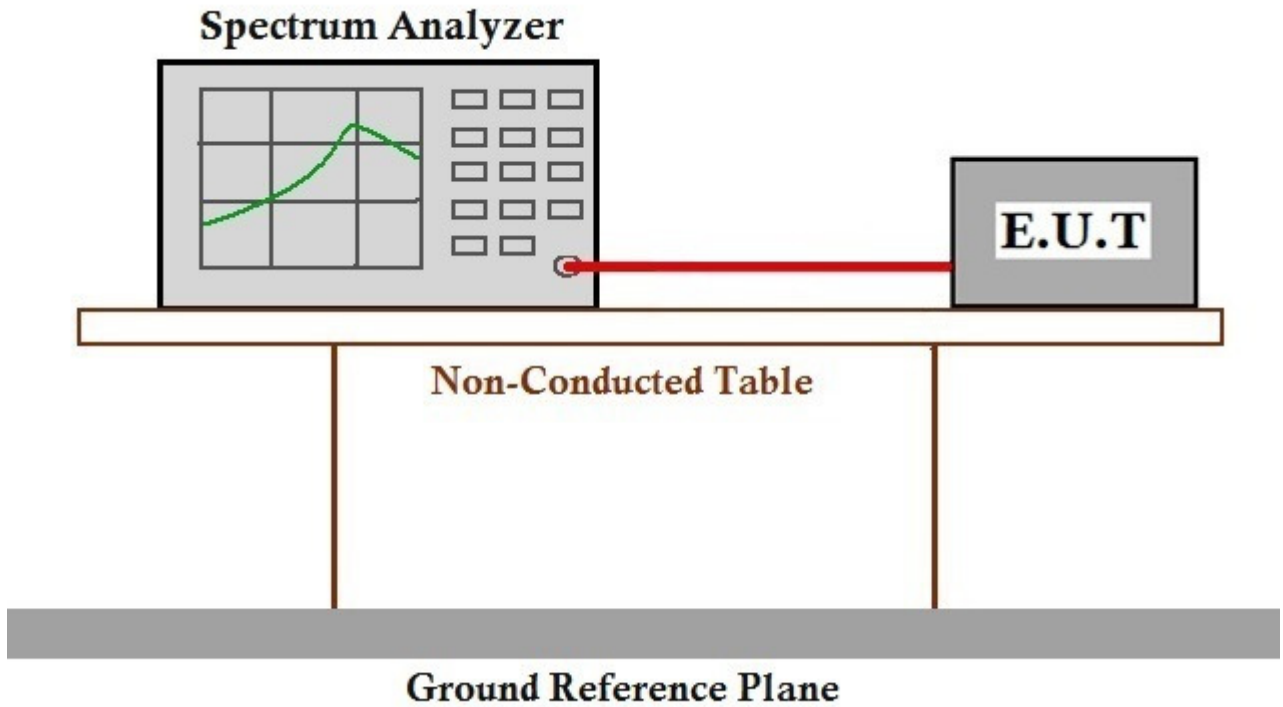
7.6.1 E.U.T. Operation

Operating Environment:

Temperature: 23.2 °C Humidity: 55.7 % RH Atmospheric Pressure: 1005 mbar

Test mode a:TX mode _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

7.6.2 Test Setup Diagram



7.6.3 Measurement Procedure and Data

The detailed test data see: Appendix 15.407



7.7 Radiated Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)
Test Method: KDB 789033 D02 II G
Measurement Distance: 3m
Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

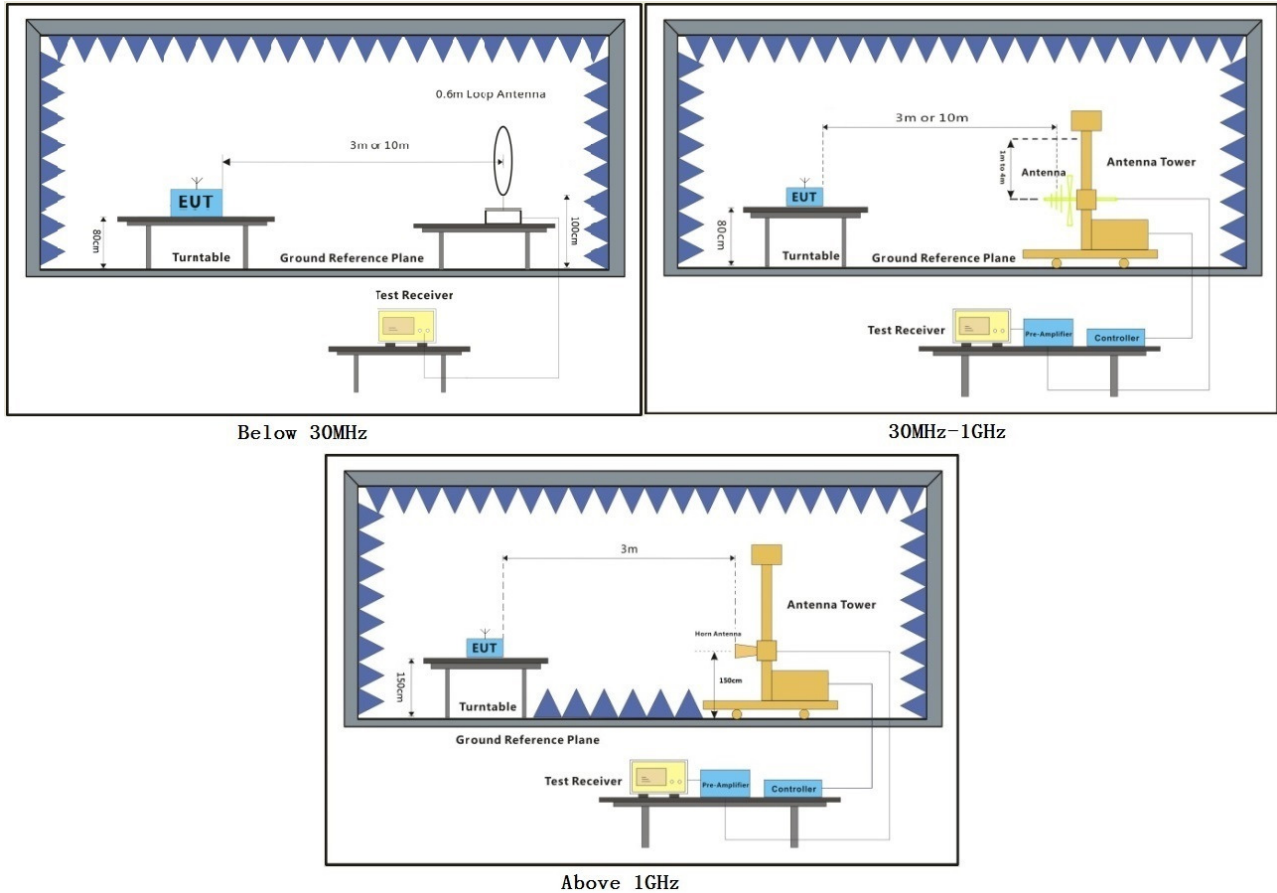
7.7.1 E.U.T. Operation

Operating Environment:

Temperature: 25.3 °C Humidity: 52.2 % RH Atmospheric Pressure: 1005 mbar

Test mode a:TX mode _Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

7.7.2 Test Setup Diagram



7.7.3 Measurement Procedure and Data

- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark:

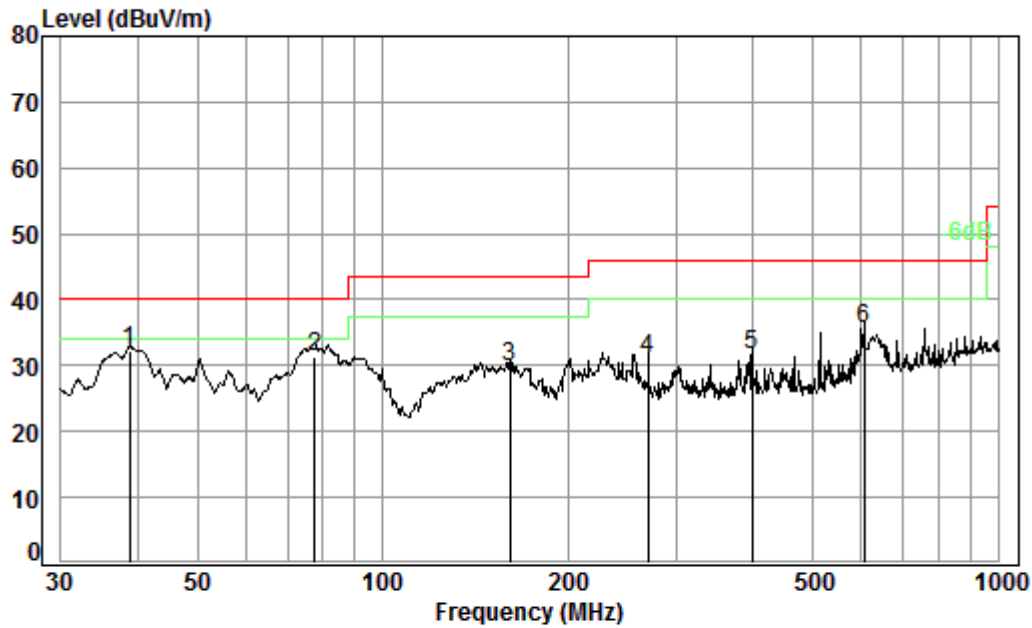
1. Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor
2. For emission below 1GHz, through the pre-scan found the worst case is the lowest channel of 802.GFSK. Only the worst case is recorded in the report.
3. Scan from 9kHz to 40GHz, the disturbance above 18GHz and below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.
4. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

Pretest the EUT at antenna 1 and antenna 2 and found the antenna 2 which is worst case, So, Only the worst test data is recorded in the report.

JBL Bar2.1-T soundbar

Radiated emission below 1GHz

Mode:a; Polarization:Horizontal



Condition: 3m HORIZONTAL

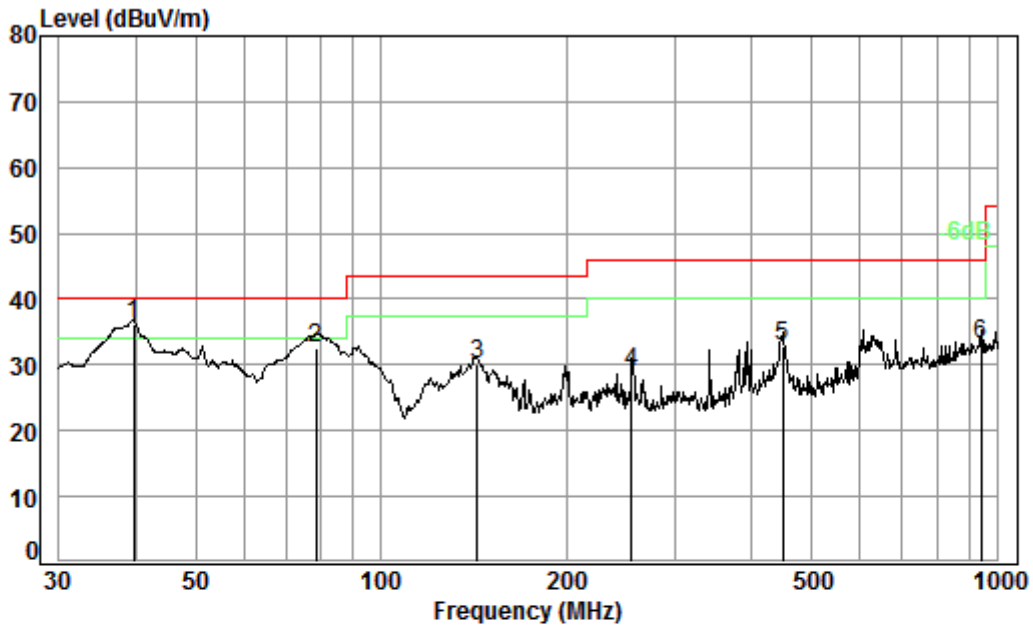
Job No. : 05609CR

Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	38.75	0.60	18.05	27.43	41.02	32.24	40.00	-7.76
2	77.59	1.03	12.18	27.37	45.59	31.43	40.00	-8.57
3	160.91	1.34	15.52	27.04	39.99	29.81	43.50	-13.69
4	270.37	1.77	18.94	26.71	36.89	30.89	46.00	-15.11
5	399.03	2.20	22.38	27.18	34.20	31.60	46.00	-14.40
6	605.66	2.71	26.68	27.94	34.03	35.48	46.00	-10.52



Mode:a; Polarization:Vertical



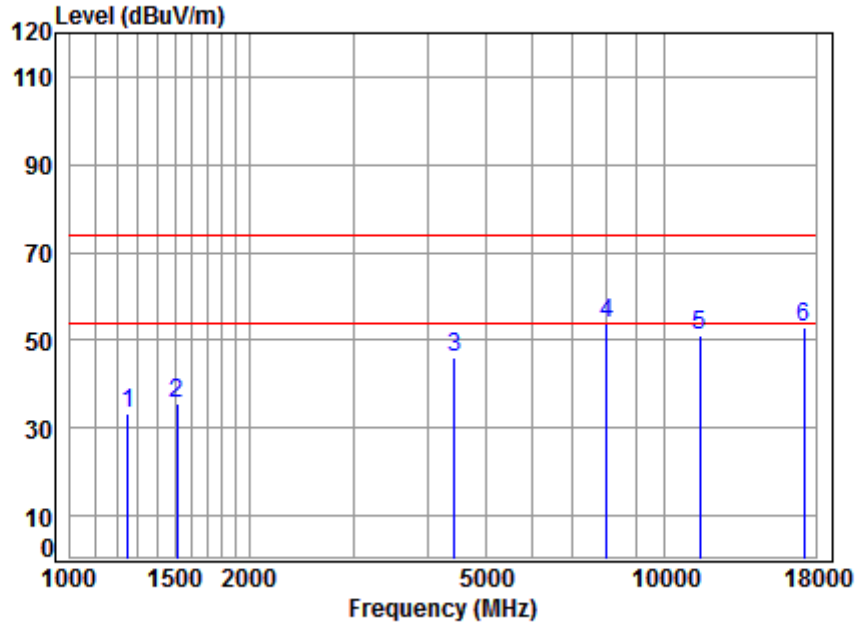
Condition: 3m VERTICAL
Job No. : 05609CR
Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	39.71	0.60	17.62	27.43	45.30	36.09	40.00	-3.91
2	78.41	1.05	12.12	27.37	46.85	32.65	40.00	-7.35
3	143.33	1.30	14.02	27.12	42.06	30.26	43.50	-13.24
4	255.62	1.70	19.04	26.74	34.88	28.88	46.00	-17.12
5	449.56	2.41	23.55	27.40	34.27	32.83	46.00	-13.17
6	942.13	3.64	30.02	26.83	26.48	33.31	46.00	-12.69



Transmitter emission above 1GHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low

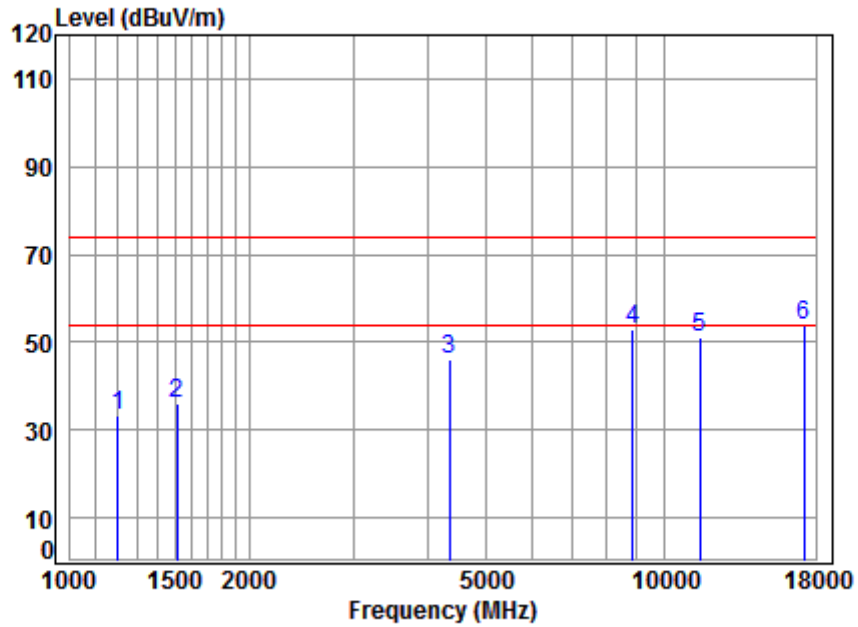


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5743 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	41.22	45.19	33.39	74.00	-40.61	peak
2	1511.833	5.46	25.85	41.41	45.62	35.52	74.00	-38.48	peak
3	4443.453	7.50	33.50	42.41	47.28	45.87	74.00	-28.13	peak
4	pp 8013.020	9.96	36.71	40.18	47.19	53.68	74.00	-20.32	peak
5	11486.000	12.13	37.90	38.19	39.44	51.28	74.00	-22.72	peak
6	17229.000	16.20	42.74	40.48	34.46	52.92	74.00	-21.08	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low

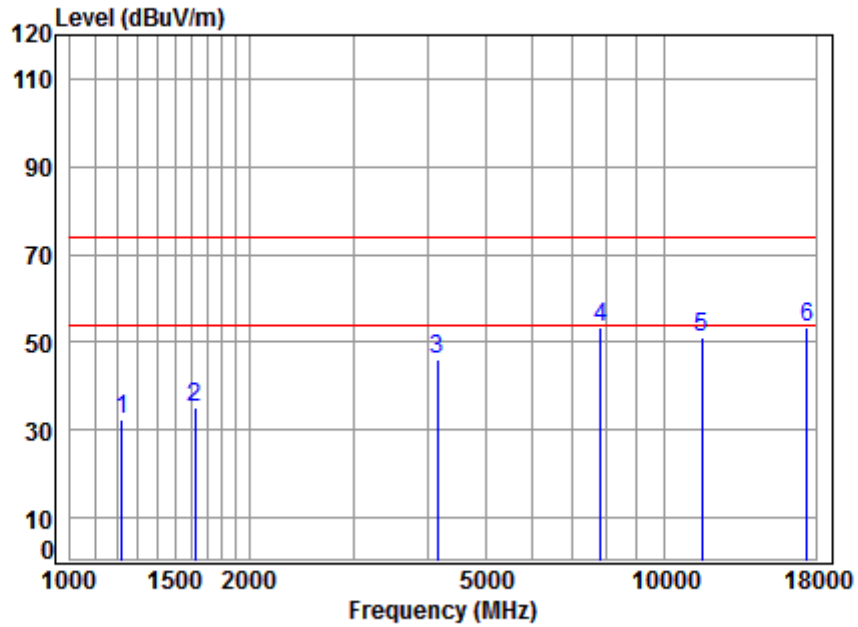


Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5743 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1203.199	4.43	24.60	41.19	45.46	33.30	74.00	-40.70	peak
2	1511.833	5.46	25.85	41.41	46.02	35.92	74.00	-38.08	peak
3	4354.454	7.40	33.35	42.39	47.69	46.05	74.00	-27.95	peak
4	8840.473	10.36	37.14	38.86	44.20	52.84	74.00	-21.16	peak
5	11486.000	12.13	37.90	38.19	39.04	50.88	74.00	-23.12	peak
6	pp17229.000	16.20	42.74	40.48	35.27	53.73	74.00	-20.27	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:middle

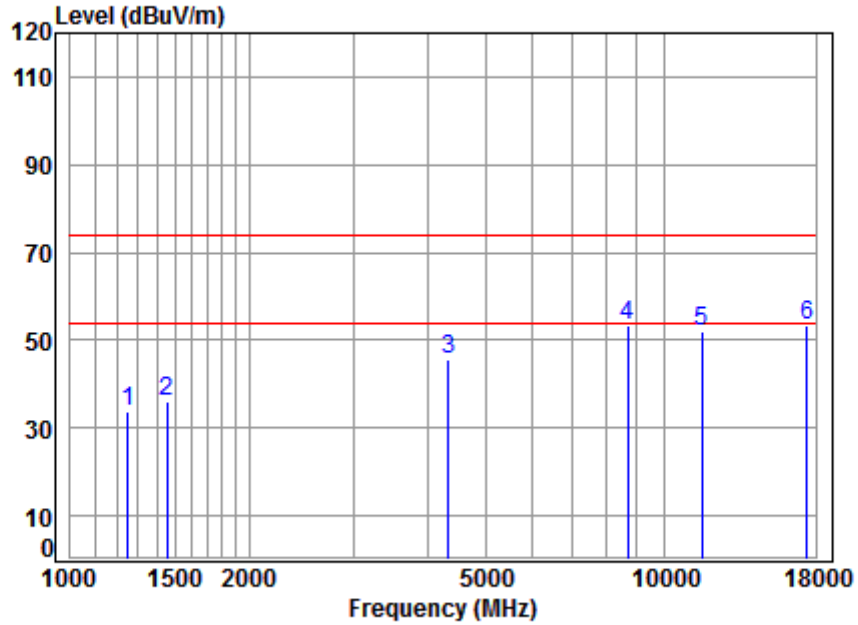


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5798 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1224.247	4.51	24.70	41.20	44.20	32.21	74.00	-41.79	peak
2	1620.431	5.32	26.34	41.48	45.11	35.29	74.00	-38.71	peak
3	4157.664	7.17	33.00	42.36	48.29	46.10	74.00	-27.90	peak
4	pp 7829.860	9.97	36.57	40.31	47.20	53.43	74.00	-20.57	peak
5	11596.000	12.18	37.86	38.26	39.49	51.27	74.00	-22.73	peak
6	17394.000	15.83	42.84	40.61	35.20	53.26	74.00	-20.74	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:middle

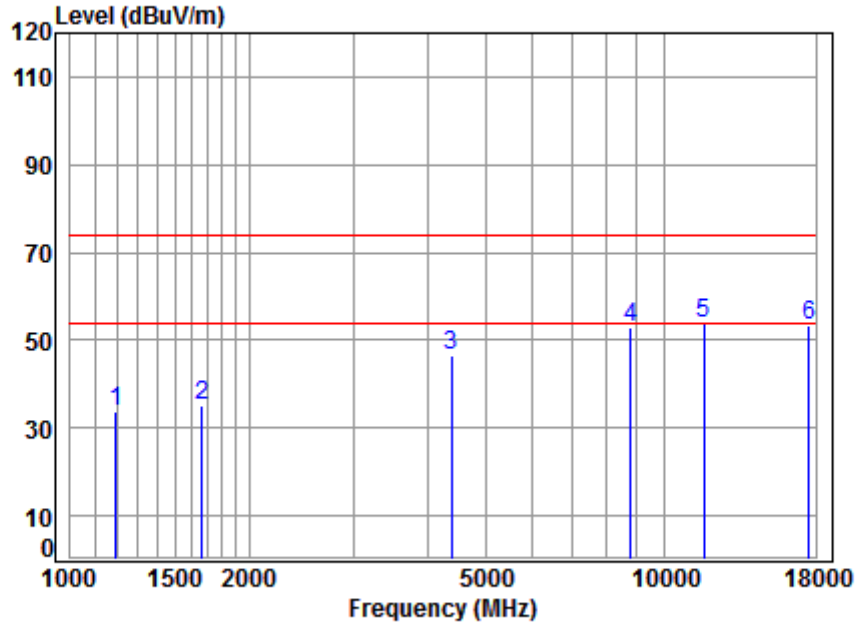


Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5798 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	
1	1249.269	4.61	24.81	41.22	45.47	33.67	74.00	-40.33 peak
2	1456.081	5.34	25.64	41.38	46.53	36.13	74.00	-37.87 peak
3	4341.886	7.38	33.33	42.39	47.53	45.85	74.00	-28.15 peak
4	pp 8688.480	10.32	37.08	39.09	45.07	53.38	74.00	-20.62 peak
5	11596.000	12.18	37.86	38.26	40.06	51.84	74.00	-22.16 peak
6	17394.000	15.83	42.84	40.61	35.22	53.28	74.00	-20.72 peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

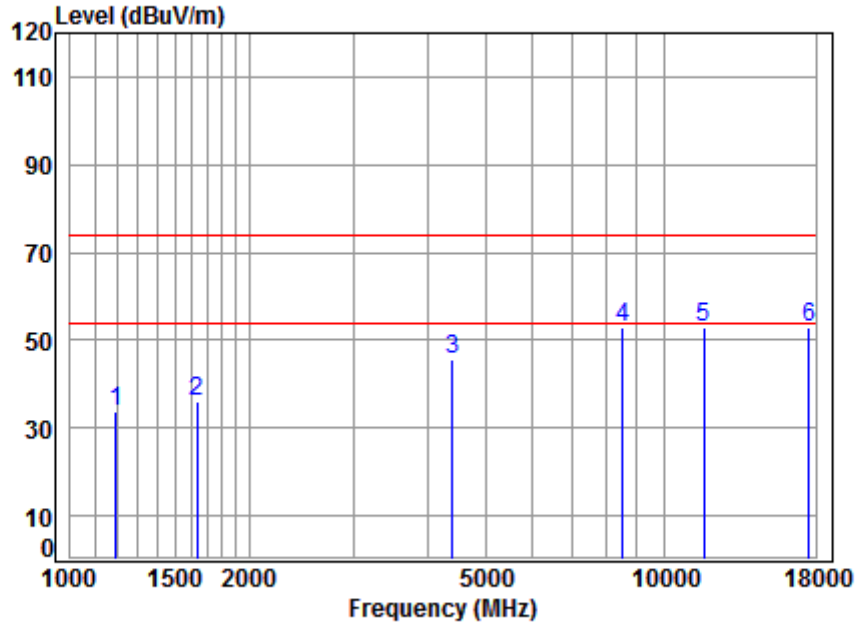


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5840 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1192.811	4.39	24.56	41.18	46.08	33.85	74.00	-40.15	peak
2	1667.951	5.27	26.54	41.51	44.97	35.27	74.00	-38.73	peak
3	4392.376	7.44	33.42	42.40	48.29	46.75	74.00	-27.25	peak
4	8789.516	10.35	37.12	38.93	44.39	52.93	74.00	-21.07	peak
5	pp11680.000	12.21	37.83	38.31	42.16	53.89	74.00	-20.11	peak
6	17520.000	15.62	42.92	40.71	35.67	53.50	74.00	-20.50	peak



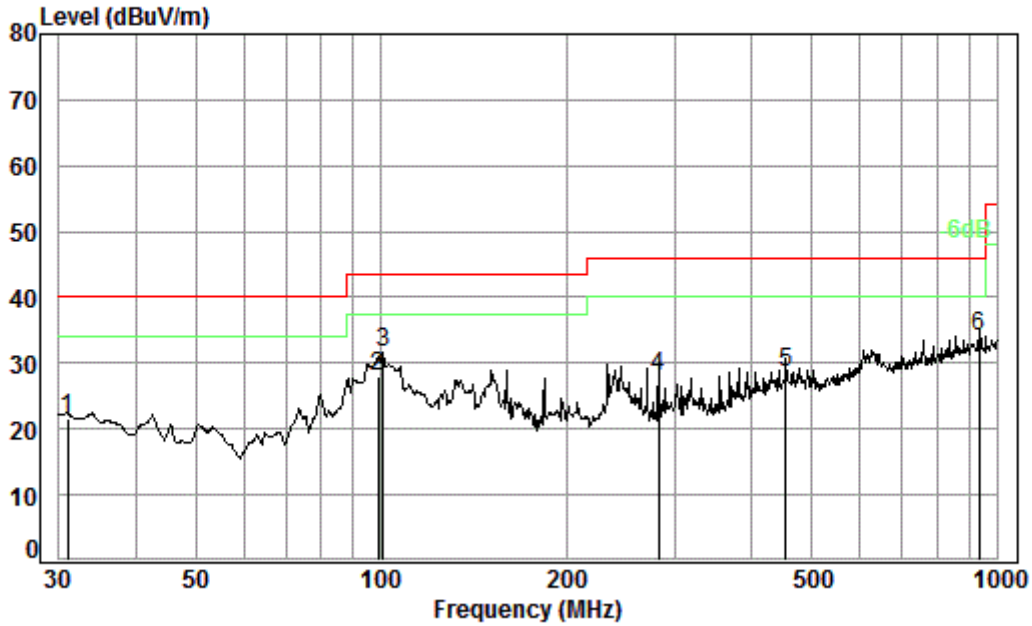
Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5840 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1192.811	4.39	24.56	41.18	45.90	33.67	74.00	-40.33	peak
2	1634.543	5.31	26.40	41.49	46.00	36.22	74.00	-37.78	peak
3	4405.090	7.46	33.44	42.40	46.93	45.43	74.00	-28.57	peak
4	8514.456	10.27	37.01	39.36	44.99	52.91	74.00	-21.09	peak
5	pp11680.000	12.21	37.83	38.31	41.38	53.11	74.00	-20.89	peak
6	17520.000	15.62	42.92	40.71	35.15	52.98	74.00	-21.02	peak

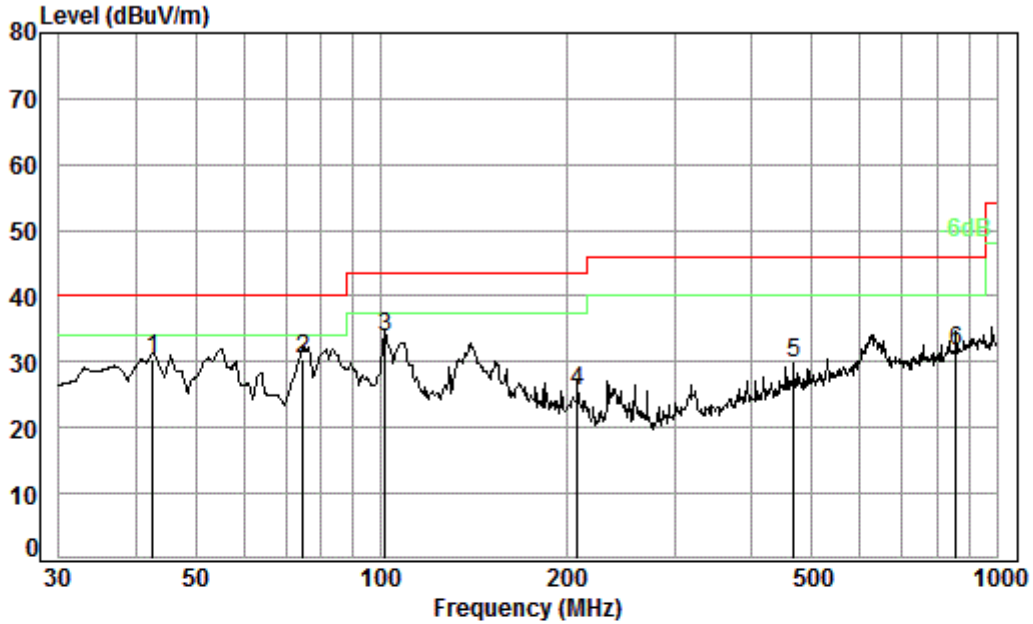
JBL Bar2.1-T subwoofer
Radiated emission below 1GHz
 Mode:a; Polarization:Horizontal



Condition: 3m HORIZONTAL
 Job No. : 05609CR
 Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	30.96	0.60	21.95	27.45	26.35	21.45	40.00	-18.55
2	98.83	1.19	13.90	27.35	40.38	28.12	43.50	-15.38
3	100.93	1.20	13.95	27.34	43.77	31.58	43.50	-11.92
4	281.99	1.82	18.88	26.68	33.99	28.01	46.00	-17.99
5	454.31	2.43	23.66	27.42	29.94	28.61	46.00	-17.39
6 pp	935.55	3.64	29.98	26.86	27.42	34.18	46.00	-11.82

Mode:a; Polarization:Vertical



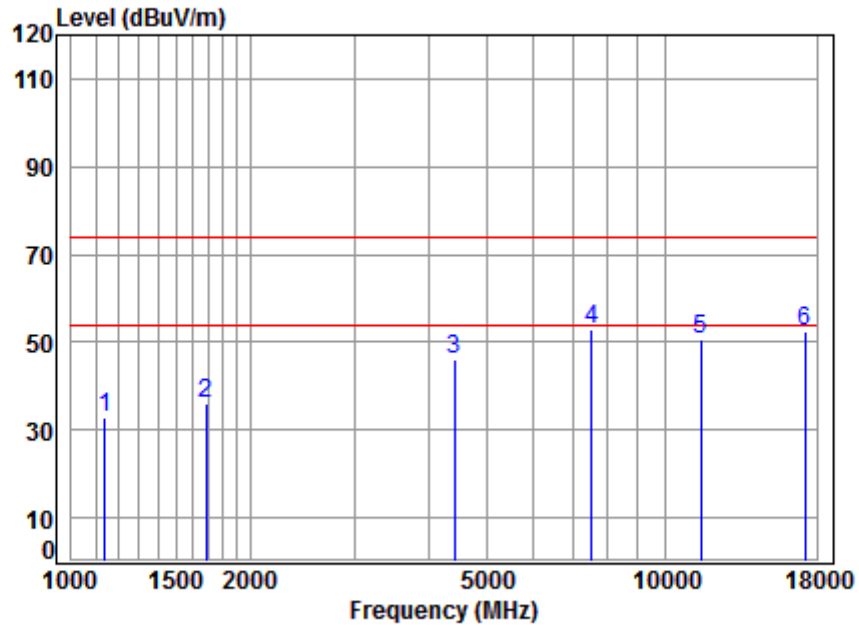
Condition: 3m VERTICAL
 Job No. : 05609CR
 Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	42.60	0.66	16.57	27.42	40.65	30.46	40.00	-9.54
2	74.66	0.94	12.41	27.38	44.38	30.35	40.00	-9.65
3	101.64	1.21	13.92	27.34	45.99	33.78	43.50	-9.72
4	208.58	1.45	16.81	26.87	34.02	25.41	43.50	-18.09
5	467.24	2.48	23.93	27.48	31.03	29.96	46.00	-16.04
6	860.04	3.45	29.30	27.28	26.11	31.58	46.00	-14.42



Transmitter emission above 1GHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low

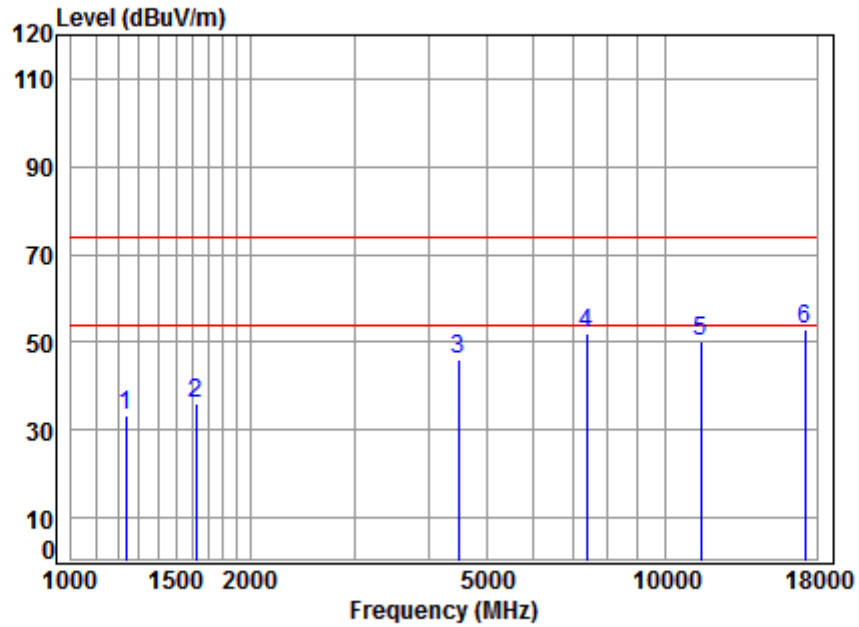


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5743 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1138.904	4.17	24.31	41.13	45.52	32.87	74.00	-41.13	peak
2	1687.347	5.24	26.62	41.52	45.77	36.11	74.00	-37.89	peak
3	4417.841	7.47	33.46	42.40	47.66	46.19	74.00	-27.81	peak
4	pp 7519.349	10.00	36.32	40.50	47.19	53.01	74.00	-20.99	peak
5	11486.000	12.13	37.90	38.19	39.03	50.87	74.00	-23.13	peak
6	17229.000	16.20	42.74	40.48	33.82	52.28	74.00	-21.72	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low

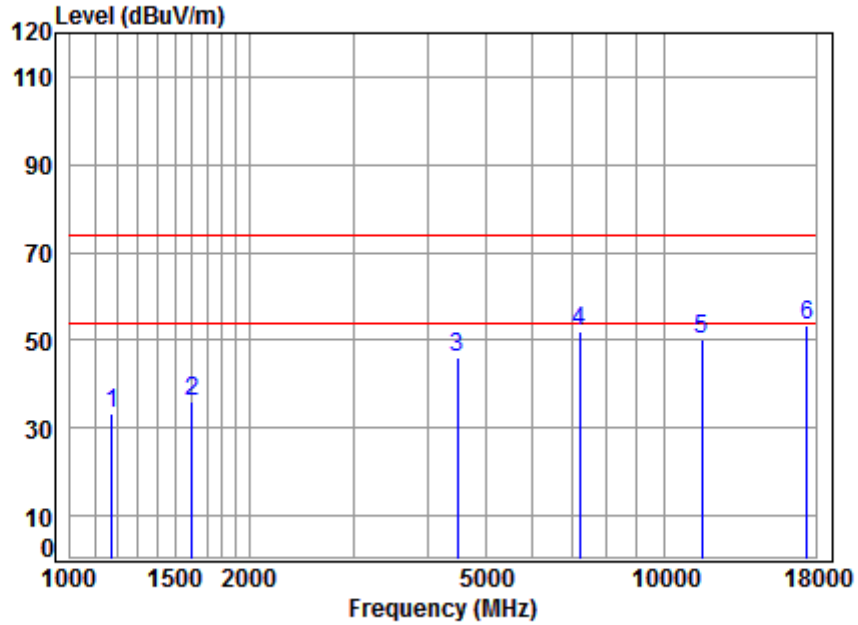


Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5743 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1238.483	4.57	24.76	41.21	45.20	33.32	74.00	-40.68	peak
2	1620.431	5.32	26.34	41.48	45.80	35.98	74.00	-38.02	peak
3	4495.125	7.55	33.59	42.42	47.39	46.11	74.00	-27.89	peak
4	7390.070	10.03	36.21	40.59	46.47	52.12	74.00	-21.88	peak
5	11486.000	12.13	37.90	38.19	38.35	50.19	74.00	-23.81	peak
6	pp17229.000	16.20	42.74	40.48	34.53	52.99	74.00	-21.01	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:middle

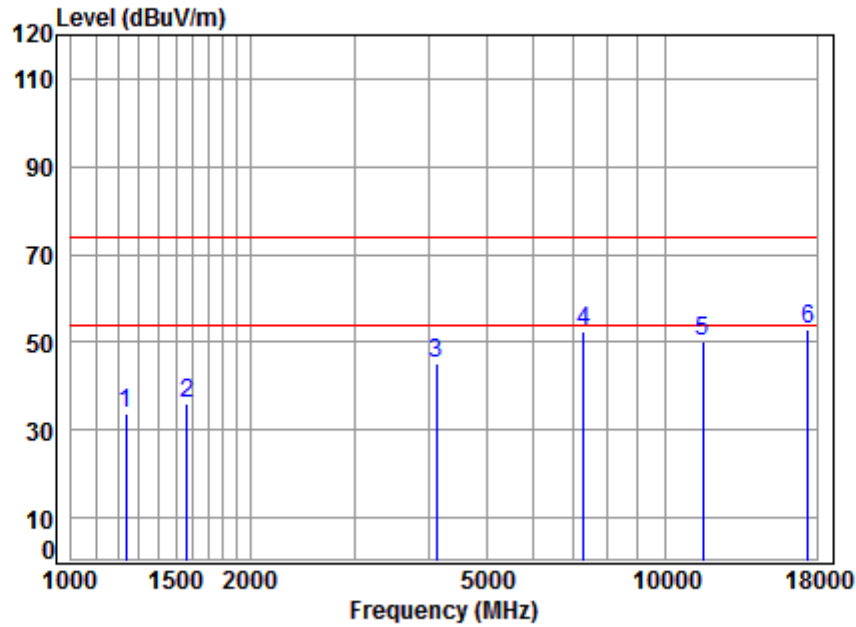


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5798 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1175.697	4.32	24.48	41.16	45.74	33.38	74.00	-40.62	peak
2	1606.441	5.34	26.28	41.47	46.06	36.21	74.00	-37.79	peak
3	4495.125	7.55	33.59	42.42	47.41	46.13	74.00	-27.87	peak
4	7221.150	10.07	36.08	40.70	46.41	51.86	74.00	-22.14	peak
5	11596.000	12.18	37.86	38.26	38.35	50.13	74.00	-23.87	peak
6	pp17394.000	15.83	42.84	40.61	35.29	53.35	74.00	-20.65	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:middle

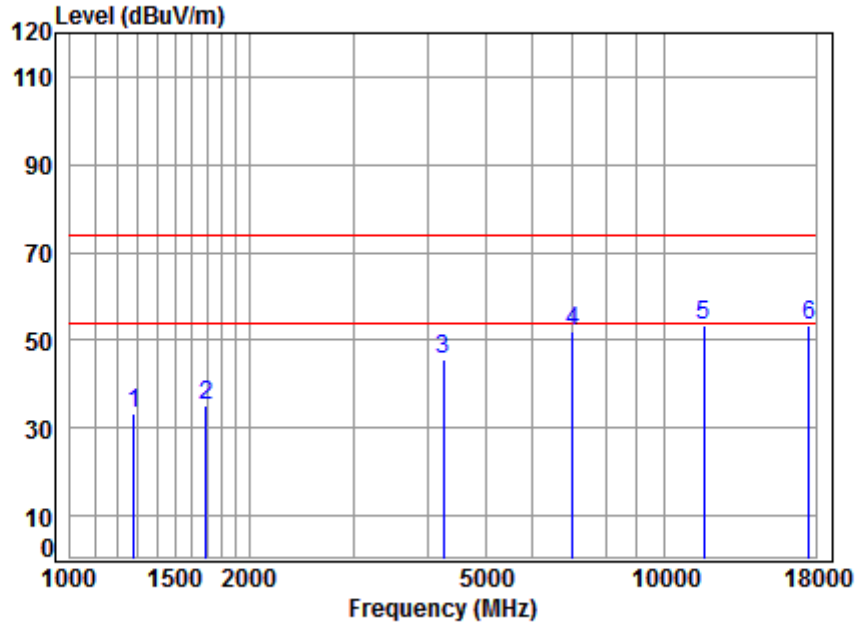


Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5798 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1238.483	4.57	24.76	41.21	45.58	33.70	74.00	-40.30	peak
2	1565.191	5.39	26.10	41.45	45.81	35.85	74.00	-38.15	peak
3	4121.768	7.13	32.93	42.35	47.43	45.14	74.00	-28.86	peak
4	7305.122	10.05	36.15	40.64	46.72	52.28	74.00	-21.72	peak
5	11596.000	12.18	37.86	38.26	38.54	50.32	74.00	-23.68	peak
6	pp17394.000	15.83	42.84	40.61	34.97	53.03	74.00	-20.97	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

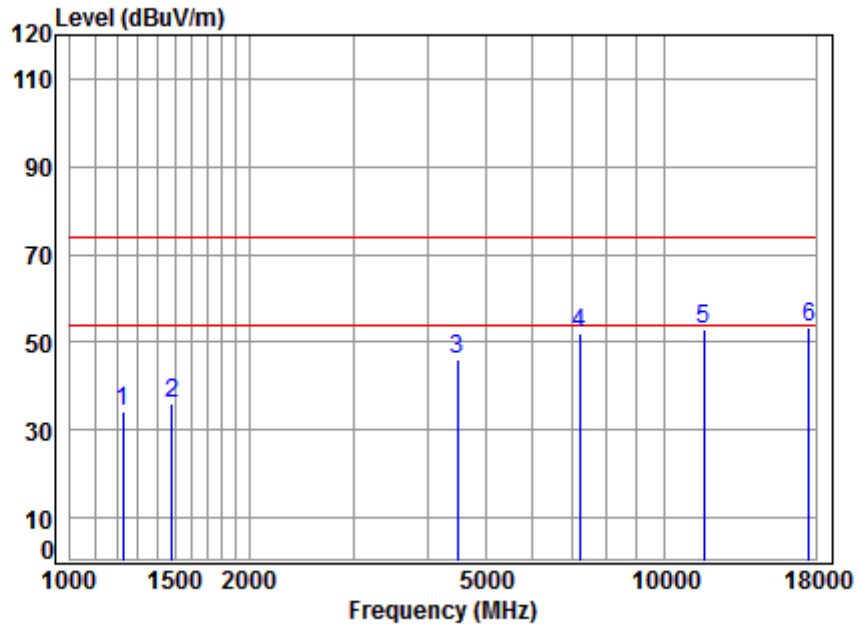


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5840 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1278.492	4.72	24.93	41.25	44.80	33.20	74.00	-40.80	peak
2	1692.231	5.24	26.64	41.53	44.96	35.31	74.00	-38.69	peak
3	4242.641	7.27	33.15	42.37	47.74	45.79	74.00	-28.21	peak
4	7015.420	10.13	35.91	40.84	46.80	52.00	74.00	-22.00	peak
5	11680.000	12.21	37.83	38.31	41.48	53.21	74.00	-20.79	peak
6	pp17520.000	15.62	42.92	40.71	35.42	53.25	74.00	-20.75	peak



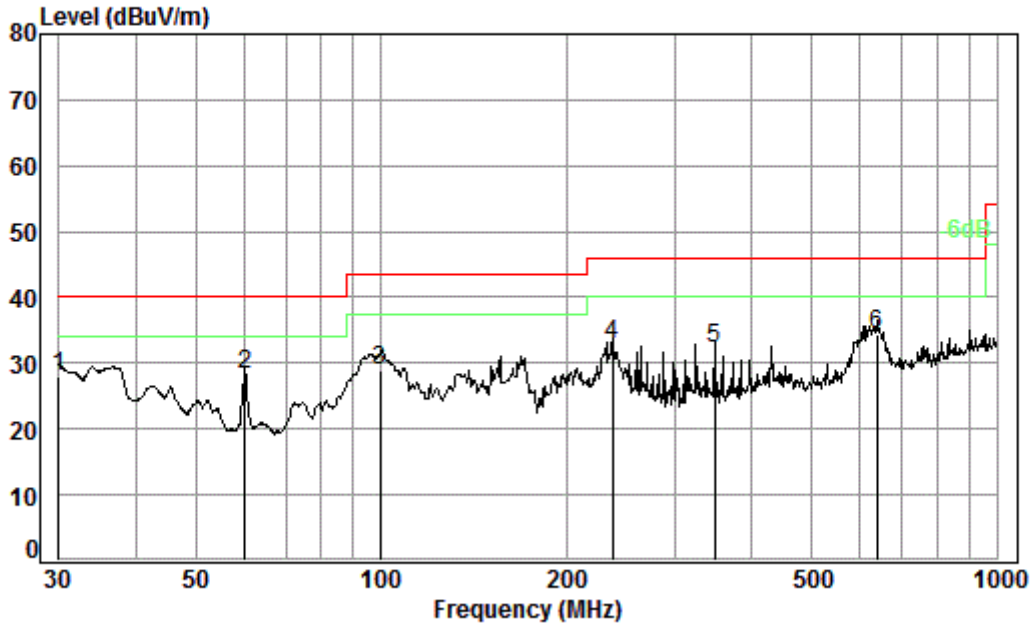
Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5840 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1227.791	4.53	24.71	41.21	46.17	34.20	74.00	-39.80	peak
2	1485.841	5.43	25.75	41.40	46.20	35.98	74.00	-38.02	peak
3	4495.125	7.55	33.59	42.42	47.14	45.86	74.00	-28.14	peak
4	7221.150	10.07	36.08	40.70	46.45	51.90	74.00	-22.10	peak
5	11680.000	12.21	37.83	38.31	41.23	52.96	74.00	-21.04	peak
6	pp17520.000	15.62	42.92	40.71	35.73	53.56	74.00	-20.44	peak

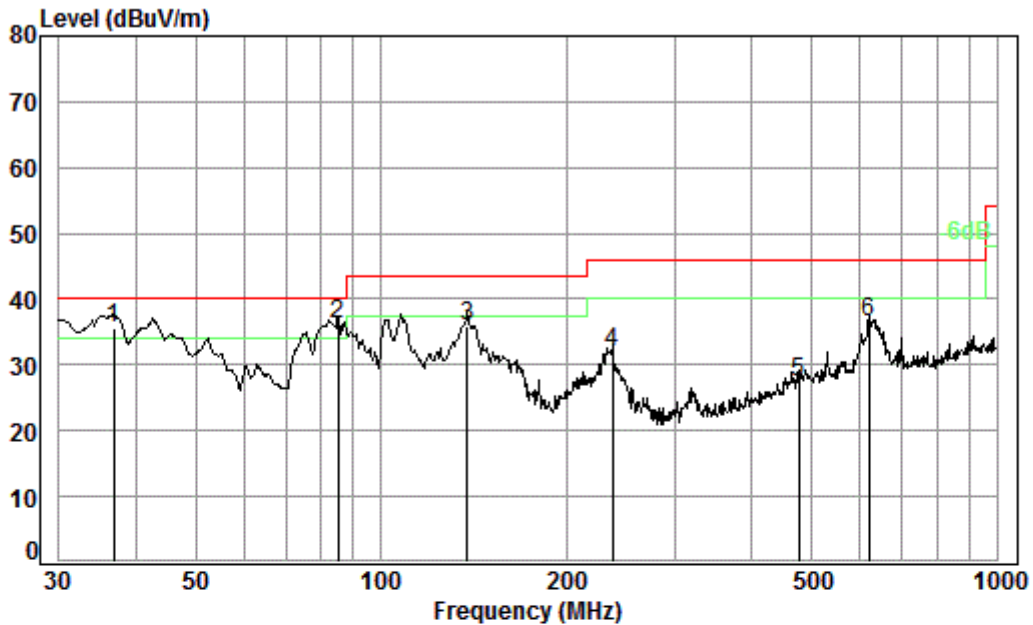
JBL Bar3.1-T soundbar
Radiated emission below 1GHz
 Mode:a; Polarization:Horizontal



Condition: 3m HORIZONTAL
 Job No. : 05609CR
 Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	30.00	0.60	22.50	27.45	32.23	27.88	40.00	-12.12
2	60.07	0.80	13.20	27.39	41.72	28.33	40.00	-11.67
3	99.88	1.20	13.99	27.35	41.08	28.92	43.50	-14.58
4	237.48	1.61	18.61	26.79	39.37	32.80	46.00	-13.20
5	348.03	2.05	21.05	26.92	36.08	32.26	46.00	-13.74
6 pp	638.37	2.78	27.12	27.88	32.35	34.37	46.00	-11.63

Mode:a; Polarization:Vertical



Condition: 3m VERTICAL

Job No. : 05609CR

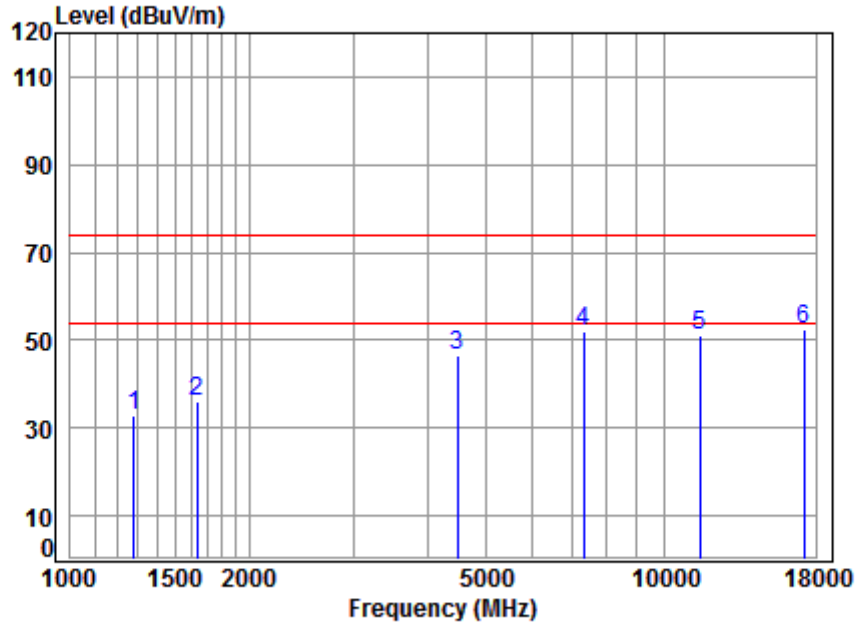
Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	36.77	0.60	18.97	27.44	43.51	35.64	40.00	-4.36
2	85.30	1.10	12.60	27.36	49.98	36.32	40.00	-3.68
3	137.90	1.29	13.64	27.14	48.13	35.92	43.50	-7.58
4	237.48	1.61	18.61	26.79	38.61	32.04	46.00	-13.96
5	477.17	2.52	24.14	27.52	28.09	27.23	46.00	-18.77
6	620.71	2.75	26.89	27.91	34.73	36.46	46.00	-9.54



Transmitter emission above 1GHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low

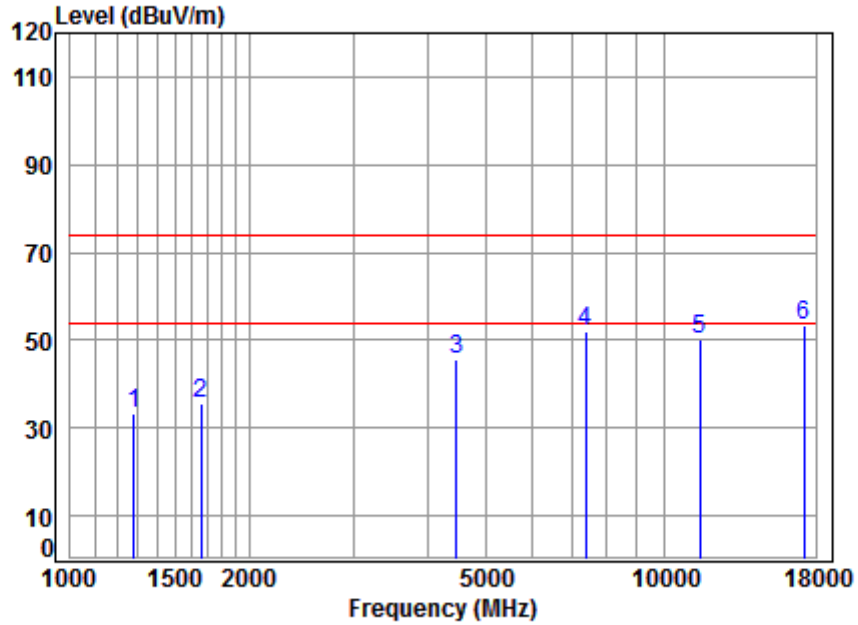


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5743 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1282.193	4.73	24.95	41.25	44.26	32.69	74.00	-41.31	peak
2	1634.543	5.31	26.40	41.49	45.70	35.92	74.00	-38.08	peak
3	4495.125	7.55	33.59	42.42	47.84	46.56	74.00	-27.44	peak
4	7326.267	10.04	36.16	40.63	46.33	51.90	74.00	-22.10	peak
5	11486.000	12.13	37.90	38.19	39.10	50.94	74.00	-23.06	peak
6	pp17229.000	16.20	42.74	40.48	33.90	52.36	74.00	-21.64	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low

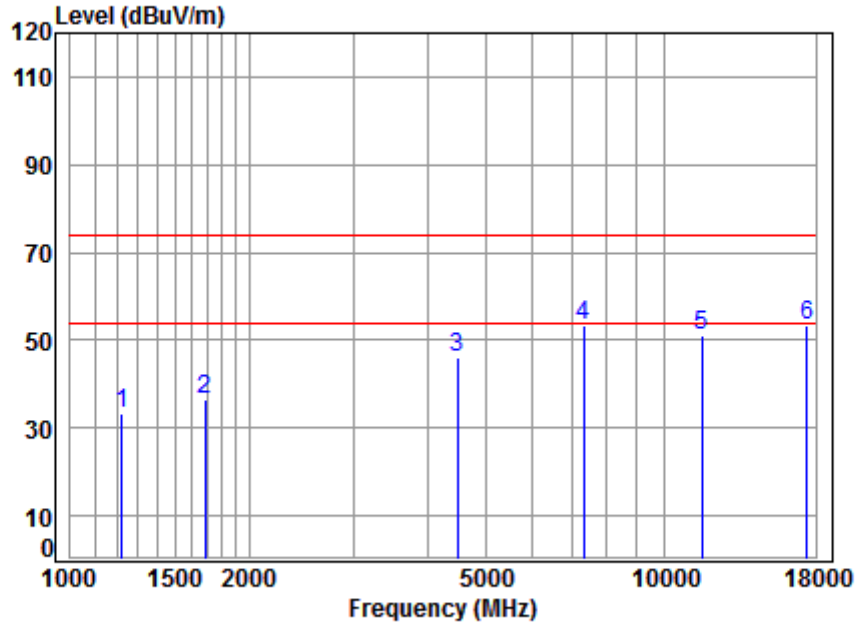


Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5743 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1282.193	4.73	24.95	41.25	44.89	33.32	74.00	-40.68	peak
2	1658.337	5.28	26.50	41.51	45.10	35.37	74.00	-38.63	peak
3	4469.214	7.53	33.55	42.41	46.83	45.50	74.00	-28.50	peak
4	7390.070	10.03	36.21	40.59	46.37	52.02	74.00	-21.98	peak
5	11486.000	12.13	37.90	38.19	38.35	50.19	74.00	-23.81	peak
6	pp17229.000	16.20	42.74	40.48	34.73	53.19	74.00	-20.81	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:middle

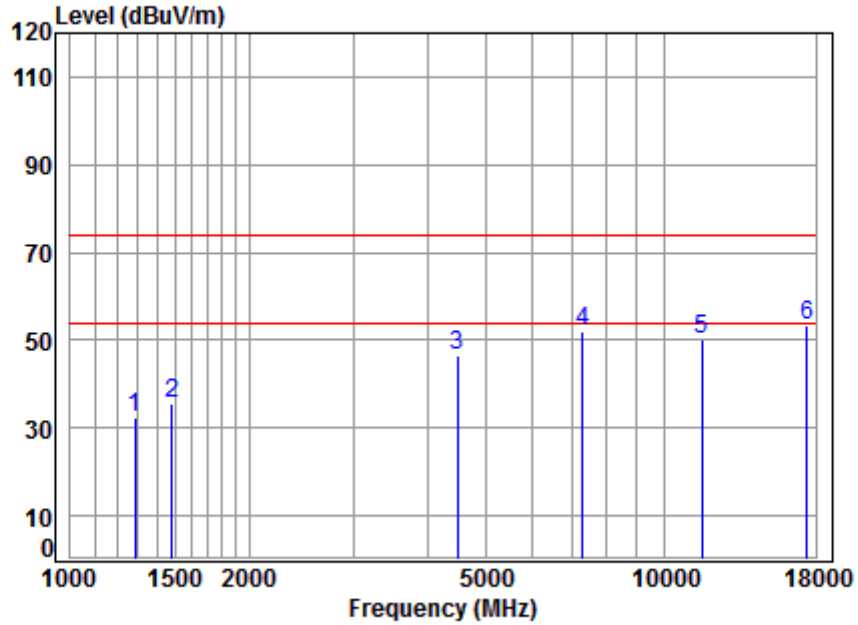


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5798 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1224.247	4.51	24.70	41.20	45.13	33.14	74.00	-40.86	peak
2	1687.347	5.24	26.62	41.52	46.30	36.64	74.00	-37.36	peak
3	4495.125	7.55	33.59	42.42	47.26	45.98	74.00	-28.02	peak
4	pp 7326.267	10.04	36.16	40.63	47.90	53.47	74.00	-20.53	peak
5	11596.000	12.18	37.86	38.26	39.21	50.99	74.00	-23.01	peak
6	17394.000	15.83	42.84	40.61	35.39	53.45	74.00	-20.55	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:middle

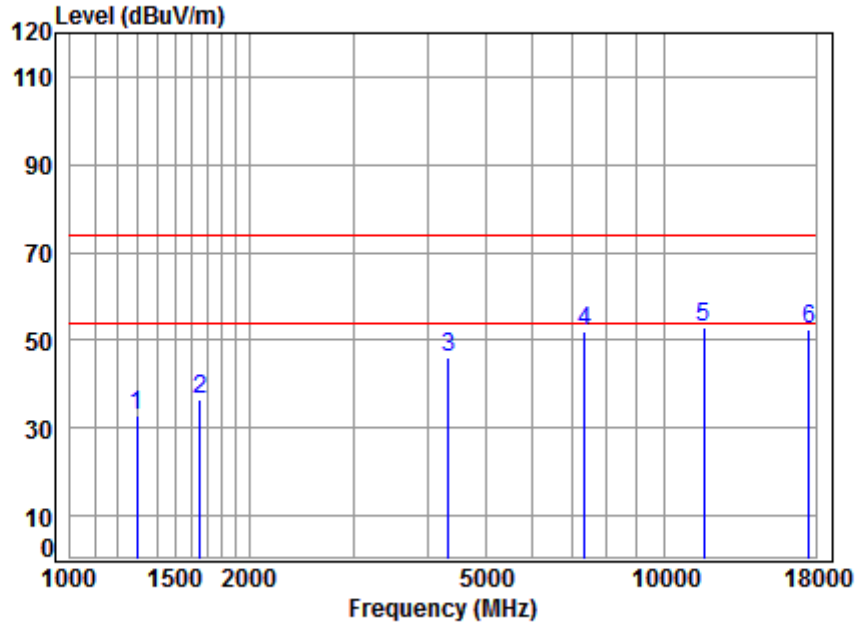


Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5798 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1285.904	4.75	24.96	41.25	44.05	32.51	74.00	-41.49	peak
2	1481.553	5.42	25.73	41.39	45.68	35.44	74.00	-38.56	peak
3	4482.150	7.54	33.57	42.41	47.92	46.62	74.00	-27.38	peak
4	7305.122	10.05	36.15	40.64	46.68	52.24	74.00	-21.76	peak
5	11596.000	12.18	37.86	38.26	38.29	50.07	74.00	-23.93	peak
6	pp17394.000	15.83	42.84	40.61	35.51	53.57	74.00	-20.43	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

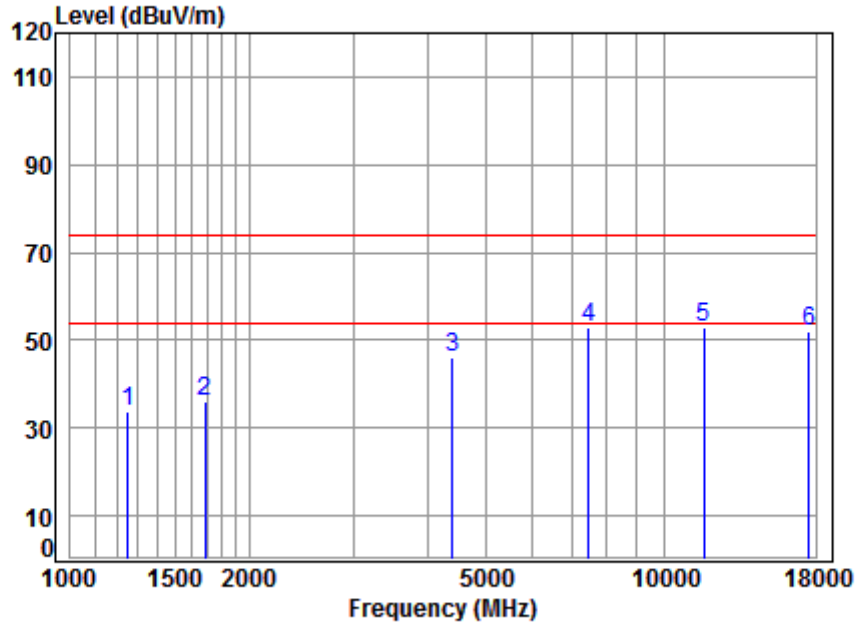


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5840 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1297.103	4.79	25.01	41.26	44.30	32.84	74.00	-41.16	peak
2	1653.550	5.28	26.48	41.50	46.17	36.43	74.00	-37.57	peak
3	4329.354	7.37	33.30	42.39	47.96	46.24	74.00	-27.76	peak
4	7347.474	10.04	36.18	40.62	46.53	52.13	74.00	-21.87	peak
5	pp11680.000	12.21	37.83	38.31	41.13	52.86	74.00	-21.14	peak
6	17520.000	15.62	42.92	40.71	34.82	52.65	74.00	-21.35	peak



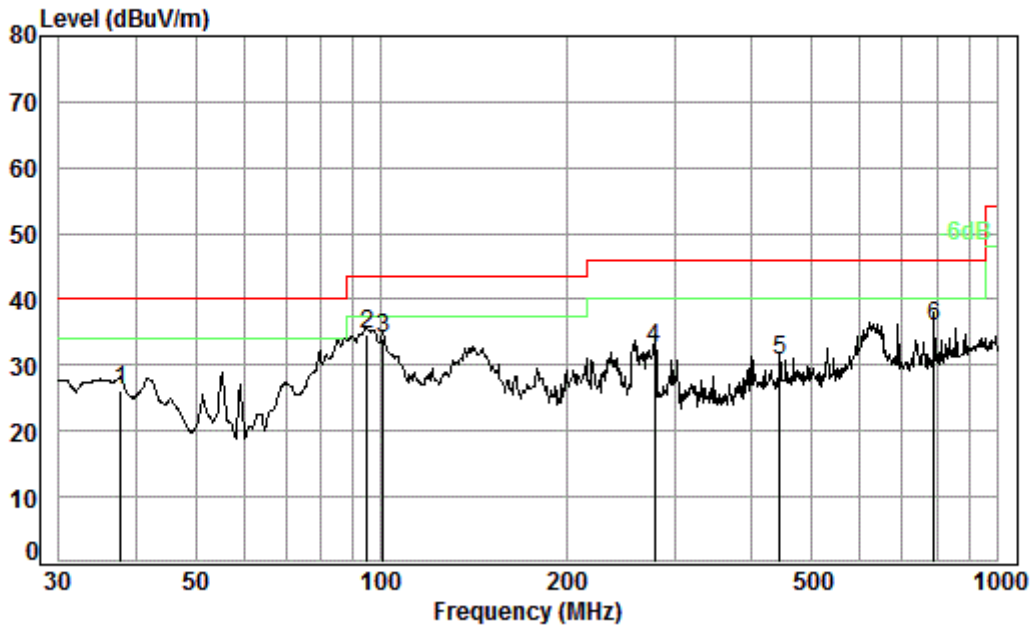
Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5840 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1249.269	4.61	24.81	41.22	45.49	33.69	74.00	-40.31	peak
2	1687.347	5.24	26.62	41.52	45.52	35.86	74.00	-38.14	peak
3	4405.090	7.46	33.44	42.40	47.78	46.28	74.00	-27.72	peak
4	pp 7476.006	10.01	36.28	40.53	47.21	52.97	74.00	-21.03	peak
5	11680.000	12.21	37.83	38.31	40.99	52.72	74.00	-21.28	peak
6	17520.000	15.62	42.92	40.71	34.38	52.21	74.00	-21.79	peak

JBL Bar3.1-T / JBL SW10 subwoofer
Radiated emission below 1GHz
 Mode:a; Polarization:Horizontal

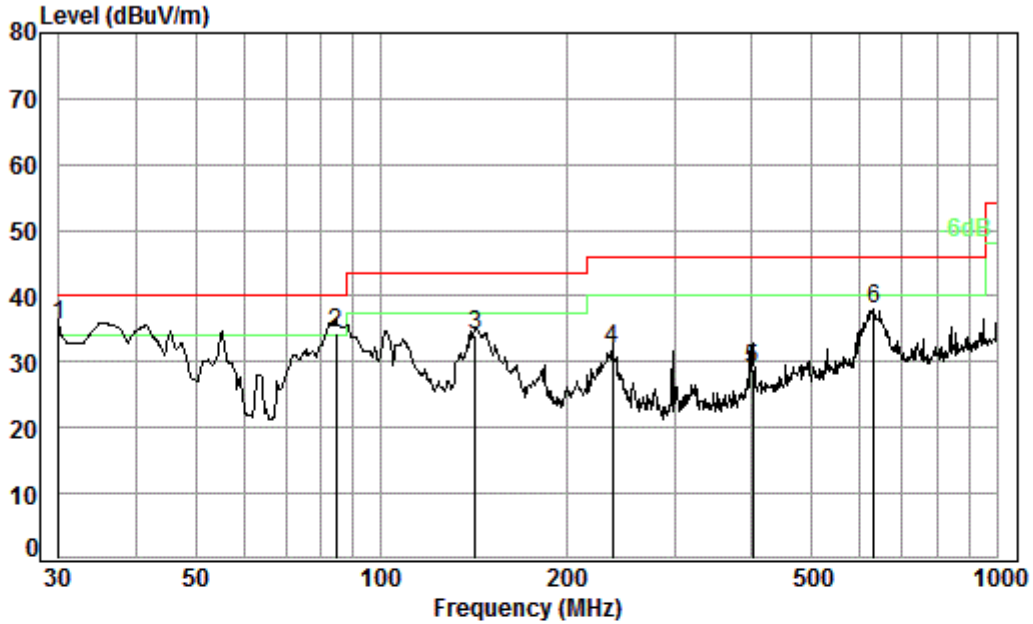


Condition: 3m HORIZONTAL
 Job No. : 05609CR
 Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	37.81	0.60	18.48	27.43	34.50	26.15	40.00	-13.85
2 pp	95.09	1.15	13.57	27.35	47.28	34.65	43.50	-8.85
3	100.93	1.20	13.95	27.34	46.31	34.12	43.50	-9.38
4	278.07	1.81	18.83	26.69	38.70	32.65	46.00	-13.35
5	444.85	2.39	23.45	27.38	32.29	30.75	46.00	-15.25
6	790.62	3.18	28.45	27.65	31.89	35.87	46.00	-10.13



Mode:a; Polarization:Vertical



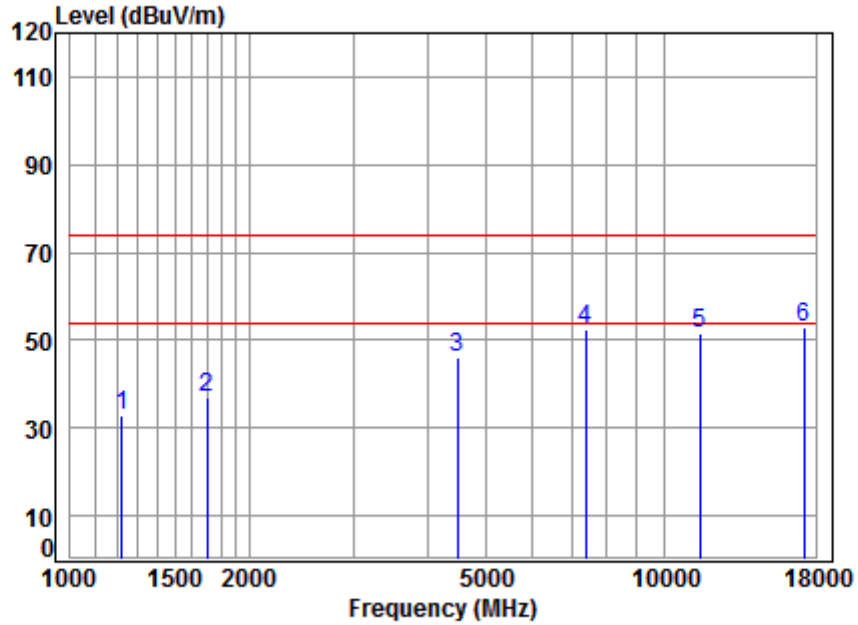
Condition: 3m VERTICAL
Job No. : 05609CR
Test mode: a

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1 pp	30.00	0.60	22.50	27.45	39.87	35.52	40.00	-4.48
2	84.41	1.10	12.50	27.36	48.12	34.36	40.00	-5.64
3	142.32	1.30	13.92	27.12	46.04	34.14	43.50	-9.36
4	237.48	1.61	18.61	26.79	38.44	31.87	46.00	-14.13
5	401.84	2.21	22.45	27.19	31.40	28.87	46.00	-17.13
6	631.69	2.77	27.03	27.89	36.24	38.15	46.00	-7.85



Transmitter emission above 1GHz

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low

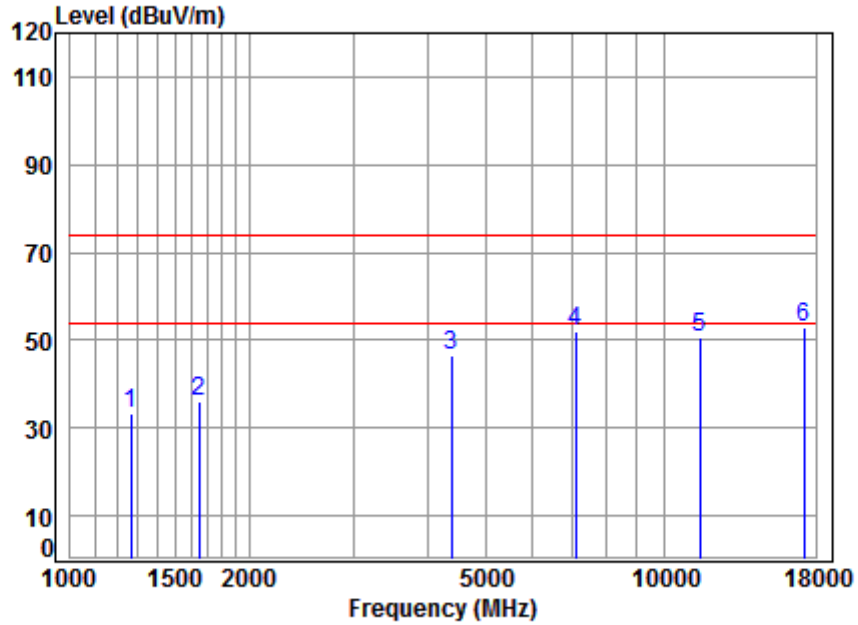


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5743 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1220.714	4.50	24.68	41.20	45.03	33.01	74.00	-40.99	peak
2	1697.129	5.23	26.66	41.53	46.66	37.02	74.00	-36.98	peak
3	4482.150	7.54	33.57	42.41	47.29	45.99	74.00	-28.01	peak
4	7390.070	10.03	36.21	40.59	46.78	52.43	74.00	-21.57	peak
5	11486.000	12.13	37.90	38.19	39.72	51.56	74.00	-22.44	peak
6	pp17229.000	16.20	42.74	40.48	34.42	52.88	74.00	-21.12	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:Low

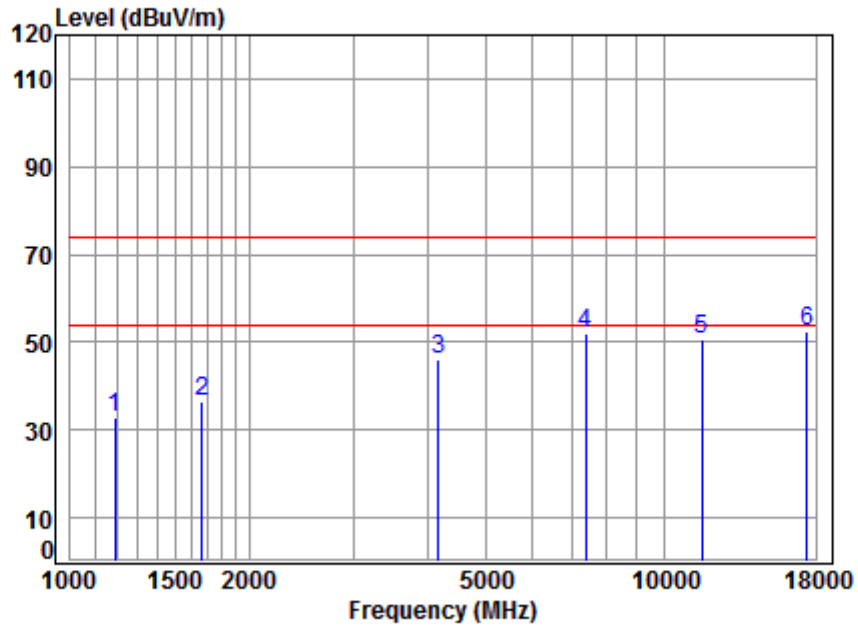


Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5743 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1267.454	4.68	24.89	41.24	45.10	33.43	74.00	-40.57	peak
2	1648.778	5.29	26.46	41.50	45.75	36.00	74.00	-38.00	peak
3	4392.376	7.44	33.42	42.40	48.25	46.71	74.00	-27.29	peak
4	7096.999	10.10	35.98	40.79	46.94	52.23	74.00	-21.77	peak
5	11486.000	12.13	37.90	38.19	38.88	50.72	74.00	-23.28	peak
6	pp17229.000	16.20	42.74	40.48	34.45	52.91	74.00	-21.09	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:middle

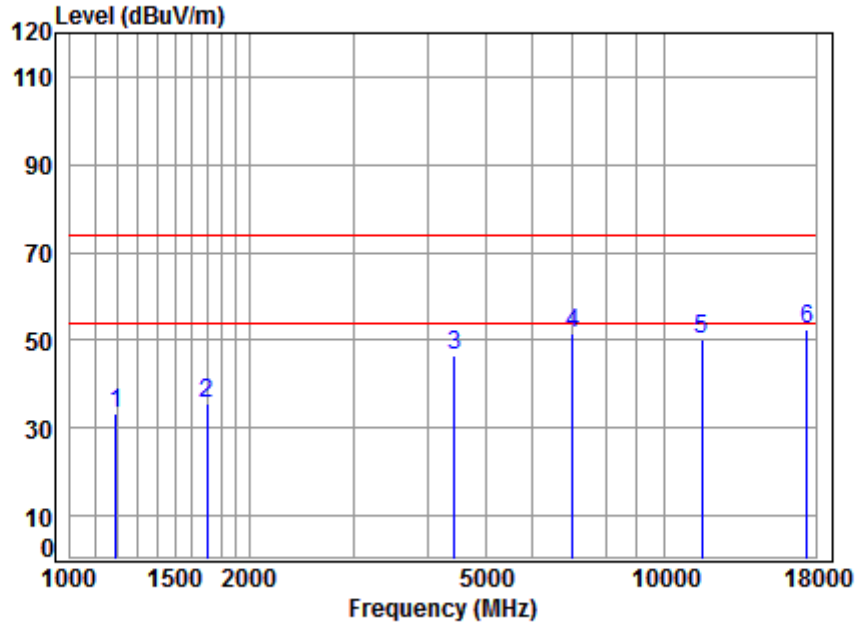


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5798 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1189.368	4.38	24.54	41.17	45.29	33.04	74.00	-40.96	peak
2	1667.951	5.27	26.54	41.51	46.32	36.62	74.00	-37.38	peak
3	4169.698	7.18	33.02	42.36	48.16	46.00	74.00	-28.00	peak
4	7390.070	10.03	36.21	40.59	46.32	51.97	74.00	-22.03	peak
5	11596.000	12.18	37.86	38.26	39.05	50.83	74.00	-23.17	peak
6	pp17394.000	15.83	42.84	40.61	34.57	52.63	74.00	-21.37	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:middle

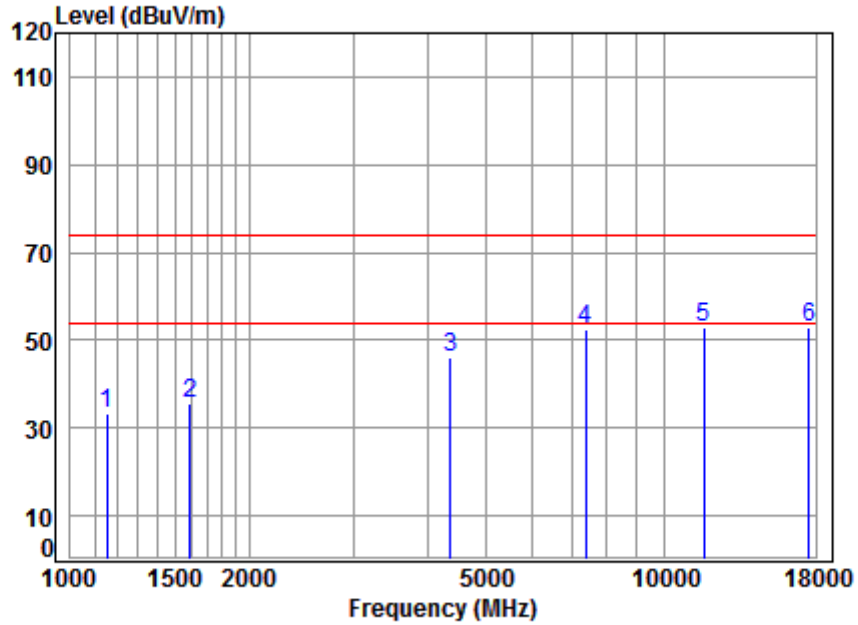


Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5798 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1192.811	4.39	24.56	41.18	45.53	33.30	74.00	-40.70	peak
2	1702.042	5.23	26.68	41.53	45.19	35.57	74.00	-38.43	peak
3	4430.628	7.48	33.48	42.41	47.79	46.34	74.00	-27.66	peak
4	7015.420	10.13	35.91	40.84	46.19	51.39	74.00	-22.61	peak
5	11596.000	12.18	37.86	38.26	38.41	50.19	74.00	-23.81	peak
6	pp17394.000	15.83	42.84	40.61	34.19	52.25	74.00	-21.75	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

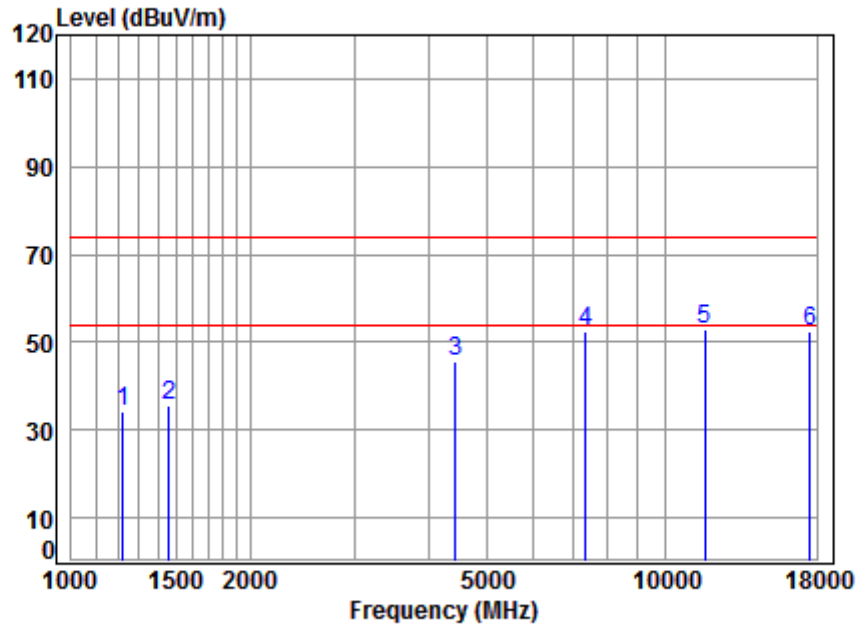


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5840 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1152.148	4.22	24.37	41.14	45.78	33.23	74.00	-40.77	peak
2	1592.571	5.36	26.22	41.47	45.66	35.77	74.00	-38.23	peak
3	4367.058	7.41	33.37	42.39	47.50	45.89	74.00	-28.11	peak
4	7390.070	10.03	36.21	40.59	46.75	52.40	74.00	-21.60	peak
5	pp11680.000	12.21	37.83	38.31	41.35	53.08	74.00	-20.92	peak
6	17520.000	15.62	42.92	40.71	35.09	52.92	74.00	-21.08	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Condition: 3m VERTICAL
Job No : 05609CR/05610CR
Mode : 5840 TX RSE
Note :

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	1224.247	4.51	24.70	41.20	46.23	34.24	74.00	-39.76	peak
2	1460.295	5.35	25.65	41.38	46.00	35.62	74.00	-38.38	peak
3	4443.453	7.50	33.50	42.41	47.20	45.79	74.00	-28.21	peak
4	7347.474	10.04	36.18	40.62	46.73	52.33	74.00	-21.67	peak
5	11680.000	12.21	37.83	38.31	41.09	52.82	74.00	-21.18	peak
6	17520.000	15.62	42.92	40.71	34.48	52.31	74.00	-21.69	peak



7.8 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.209 & 15.407(b)
Test Method: KDB 789033 D02 II G
Measurement Distance: 3m
Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

*(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

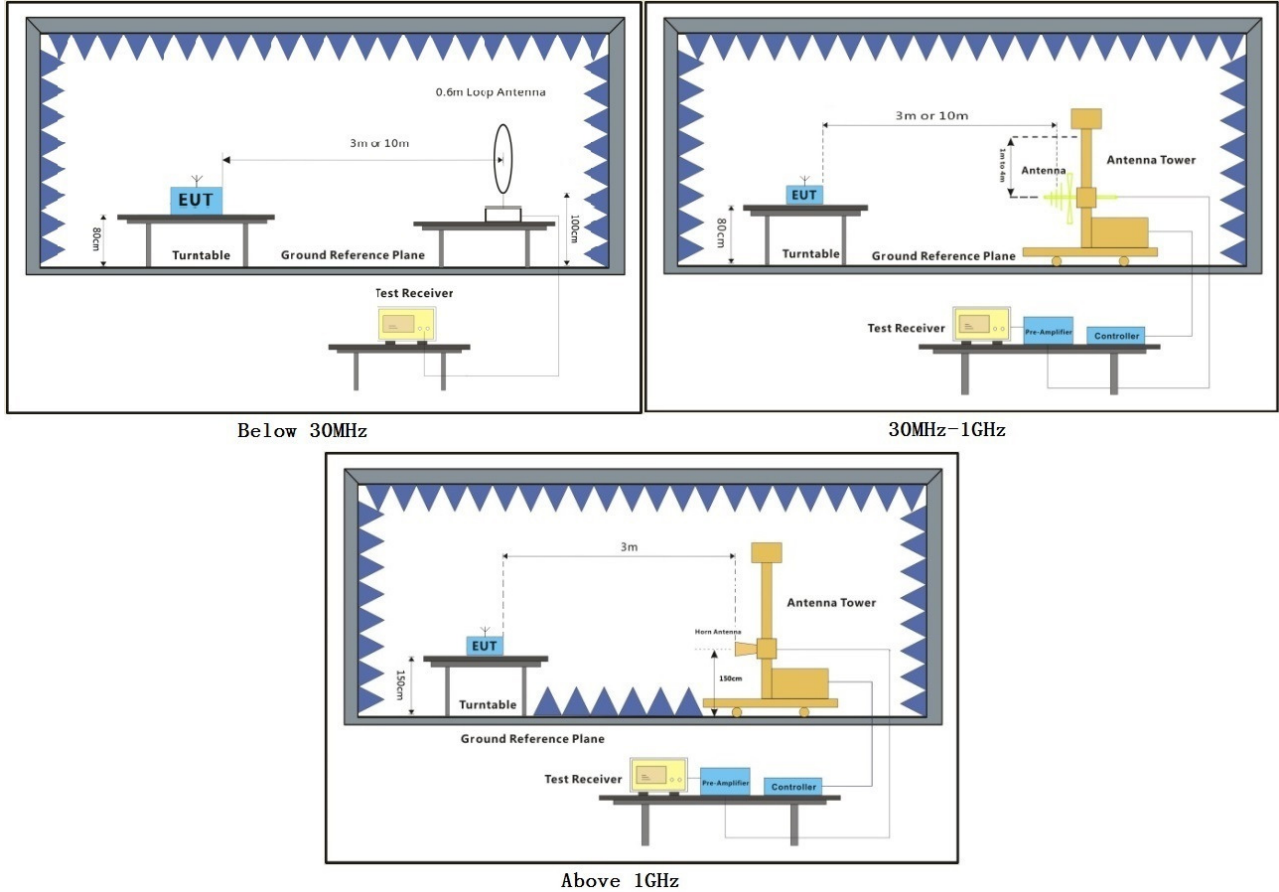
7.8.1 E.U.T. Operation

Operating Environment:

Temperature: 25.3 °C Humidity: 52.2 % RH Atmospheric Pressure: 1005 mbar

Test mode a:TX mode_Keep the EUT in continuously transmitting mode with all modulation types. Only the data of worst case is recorded in the report.

7.8.2 Test Setup Diagram



7.8.3 Measurement Procedure and Data

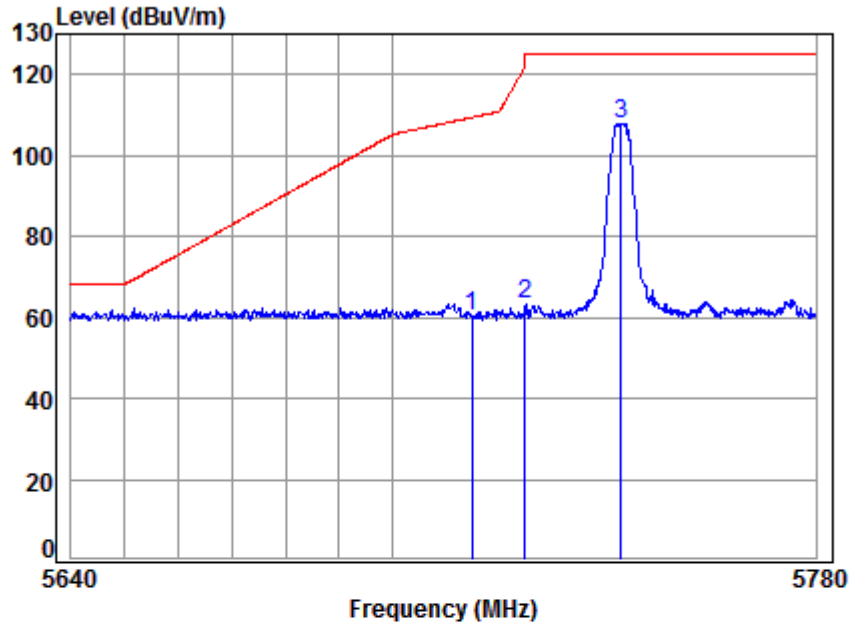
- a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.
- h. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.
- j. Repeat above procedures until all frequencies measured was complete.

Remark: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

Pretest the EUT at antenna 1 and antenna 2 and found the antenna 2 which is worst case, So, Only the worst test data is recorded in the report.

JBL Bar2.1-T soundbar

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low



Condition: 3m HORIZONTAL

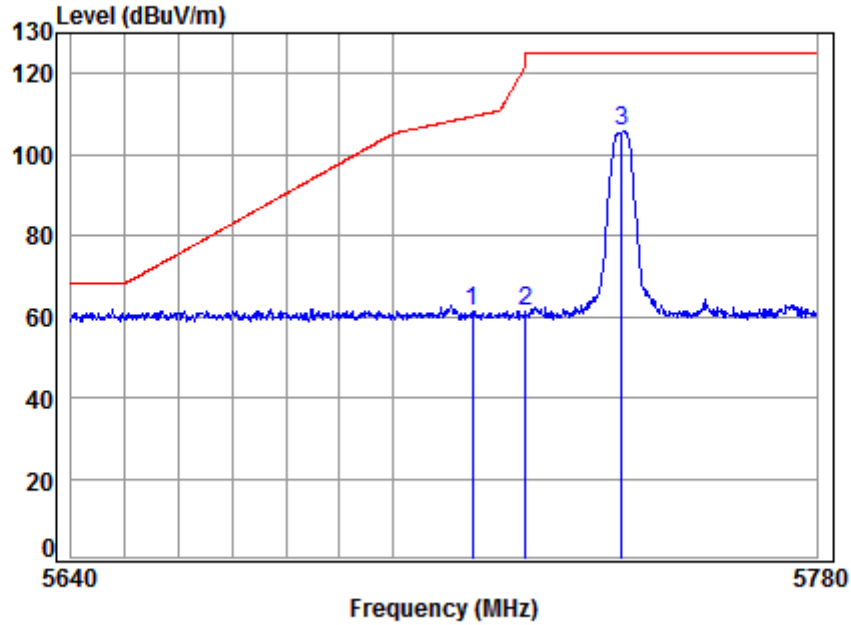
Job No : 05609CR/05610CR

Mode : 5743 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Over Line	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dB	
1	5715.000	9.61	34.82	41.85	57.89	60.47	109.40	-48.93 peak
2	5725.000	9.64	34.83	41.84	60.45	63.08	122.20	-59.12 peak
3 pp	5743.000	9.71	34.85	41.82	105.15	107.89	125.20	-17.31 peak



Mode:a; Polarization: Vertical; Modulation:GFSK; ; Channel:Low



Condition: 3m VERTICAL

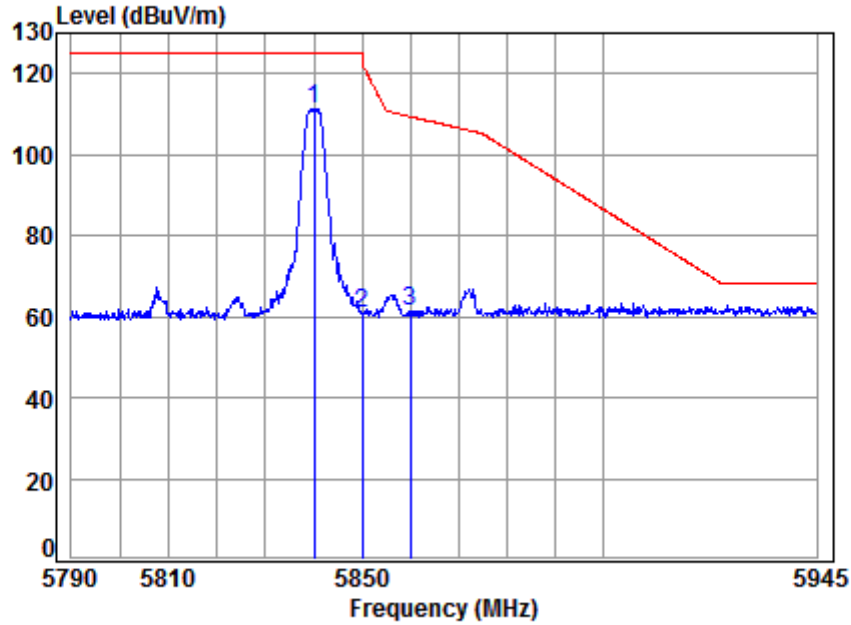
Job No : 05609CR/05610CR

Mode : 5743 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	41.85	58.57	61.15	109.40	-48.25	peak
2	5725.000	9.64	34.83	41.84	58.59	61.22	122.20	-60.98	peak
3 pp	5743.000	9.71	34.85	41.82	102.81	105.55	125.20	-19.65	Peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

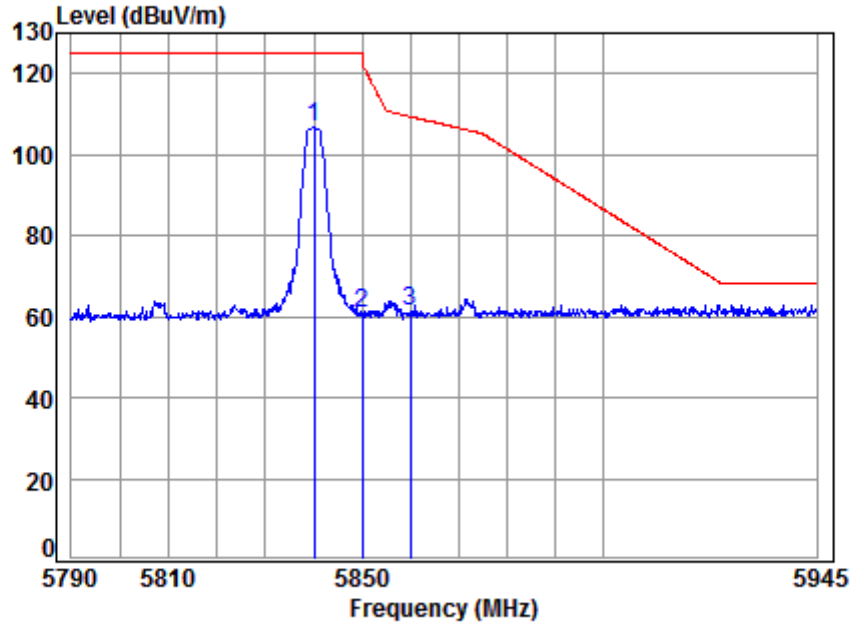


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5840 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5840.000	9.98	34.93	41.75	108.23	111.39	125.20	-13.81	peak
2	5850.000	10.07	34.95	41.73	57.70	60.99	122.20	-61.21	peak
3	5860.000	10.10	34.96	41.72	57.90	61.24	109.40	-48.16	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Condition: 3m VERTICAL

Job No : 05609CR/05610CR

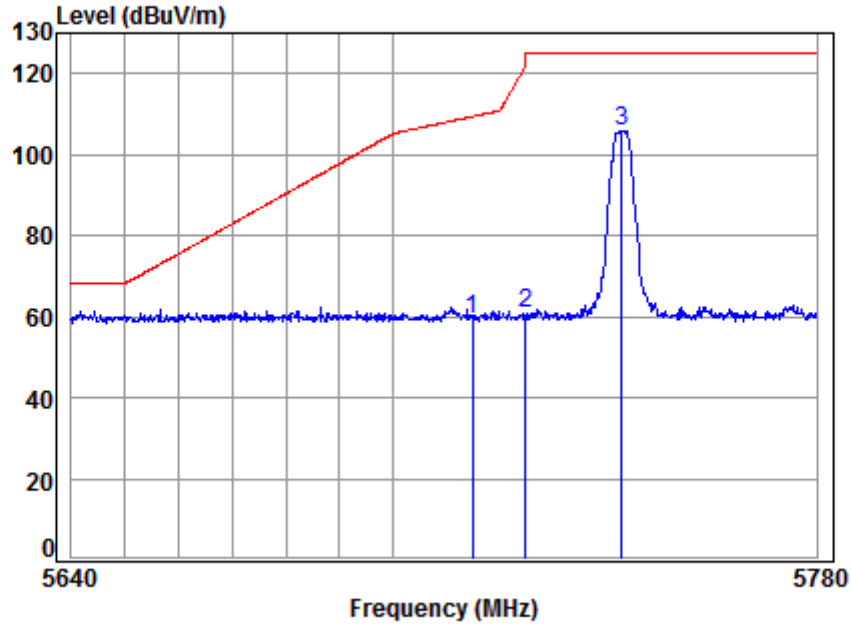
Mode : 5840 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5840.000	9.98	34.93	41.75	103.59	106.75	125.20	-18.45	peak
2	5850.000	10.07	34.95	41.73	57.48	60.77	122.20	-61.43	peak
3	5860.000	10.10	34.96	41.72	57.79	61.13	109.40	-48.27	peak



JBL Bar2.1-T subwoofer

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low



Condition: 3m HORIZONTAL

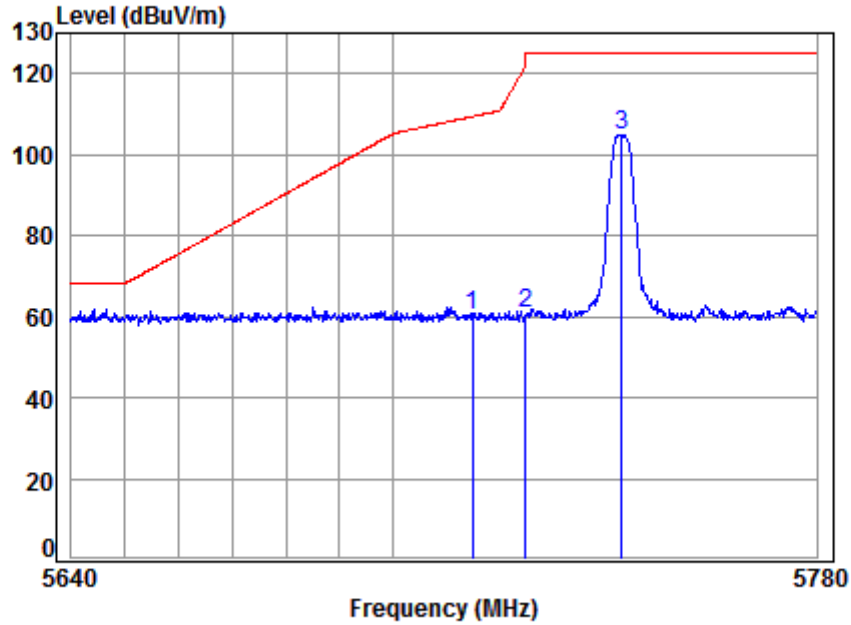
Job No : 05609CR/05610CR

Mode : 5743 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	41.85	56.66	59.24	109.40	-50.16	peak
2	5725.000	9.64	34.83	41.84	58.00	60.63	122.20	-61.57	peak
3 pp	5743.000	9.71	34.85	41.82	103.02	105.76	125.20	-19.44	peak



Mode:a; Polarization: Vertical; Modulation:GFSK; ; Channel:Low



Condition: 3m VERTICAL

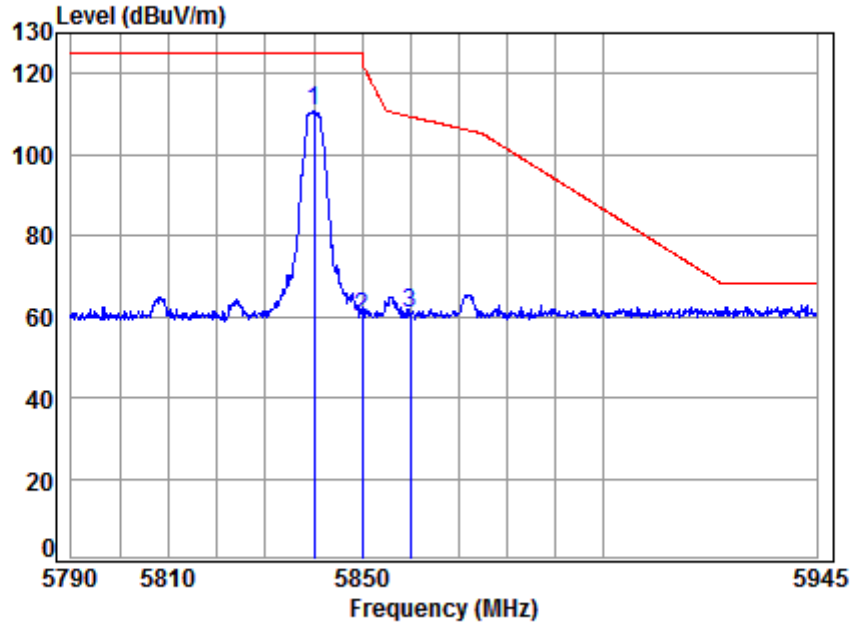
Job No : 05609CR/05610CR

Mode : 5743 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	41.85	57.59	60.17	109.40	-49.23	peak
2	5725.000	9.64	34.83	41.84	58.13	60.76	122.20	-61.44	peak
3 pp	5743.000	9.71	34.85	41.82	101.96	104.70	125.20	-20.50	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

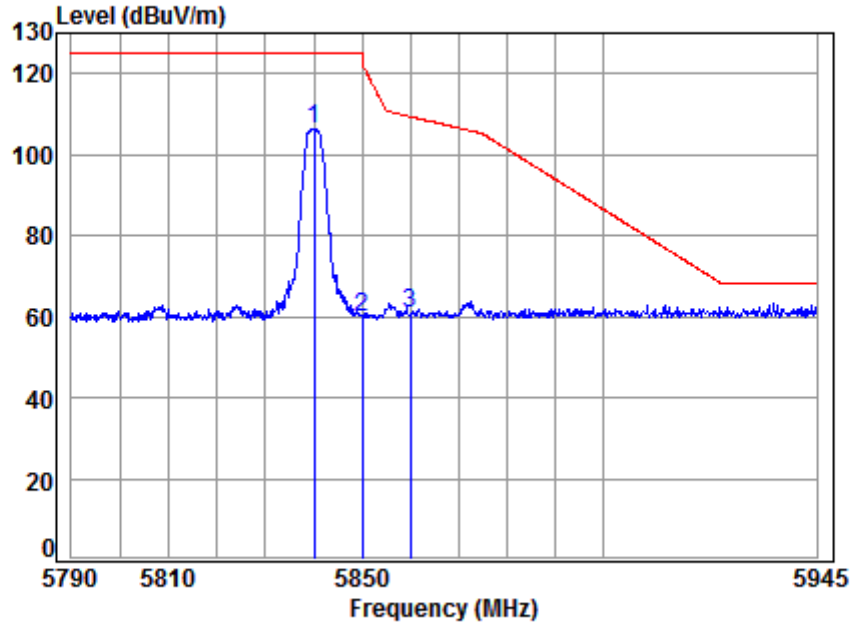


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5840 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5840.000	9.98	34.93	41.75	107.49	110.65	125.20	-14.55	peak
2	5850.000	10.07	34.95	41.73	56.62	59.91	122.20	-62.29	peak
3	5860.000	10.10	34.96	41.72	57.62	60.96	109.40	-48.44	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Condition: 3m VERTICAL

Job No : 05609CR/05610CR

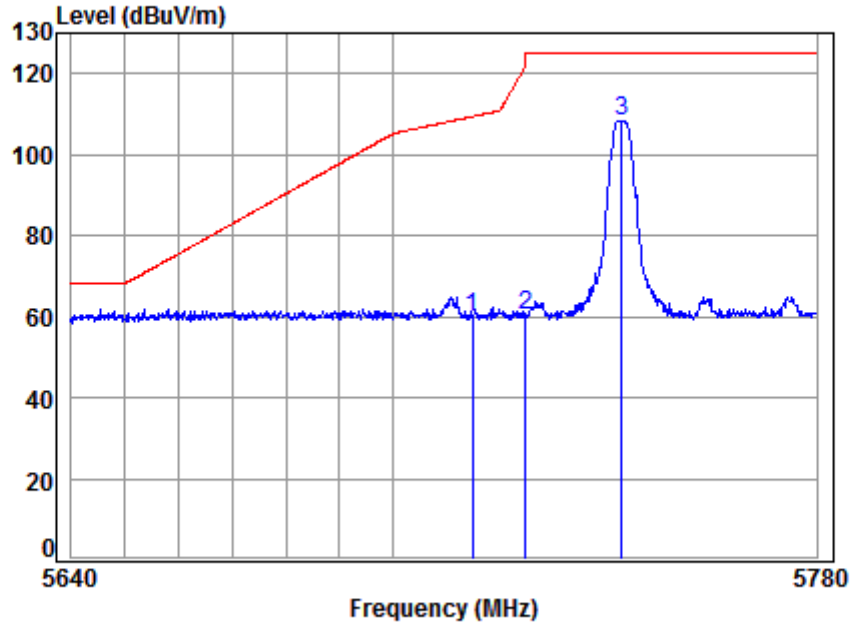
Mode : 5840 Band edge

		Cable	Ant	Preamp	Read	Limit	Over	
	Freq	Loss	Factor	Factor	Level	Level	Line	Limit
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB
1	pp 5840.000	9.98	34.93	41.75	103.18	106.34	125.20	-18.86 peak
2	5850.000	10.07	34.95	41.73	56.62	59.91	122.20	-62.29 peak
3	5860.000	10.10	34.96	41.72	57.61	60.95	109.40	-48.45 peak



JBL Bar3.1-T soundbar

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low

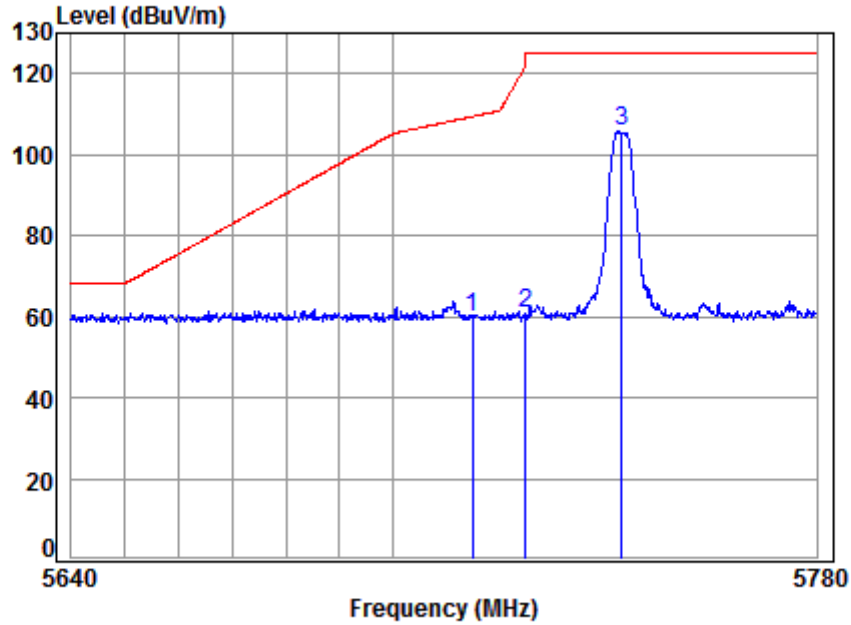


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5743 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	41.85	57.35	59.93	109.41	-49.48	Peak
2	5725.000	9.64	34.83	41.84	57.84	60.47	122.18	-61.71	Peak
3 pp	5743.000	9.71	34.85	41.82	105.62	108.36	125.20	-16.84	peak



Mode:a; Polarization: Vertical; Modulation:GFSK; ; Channel:Low



Condition: 3m VERTICAL

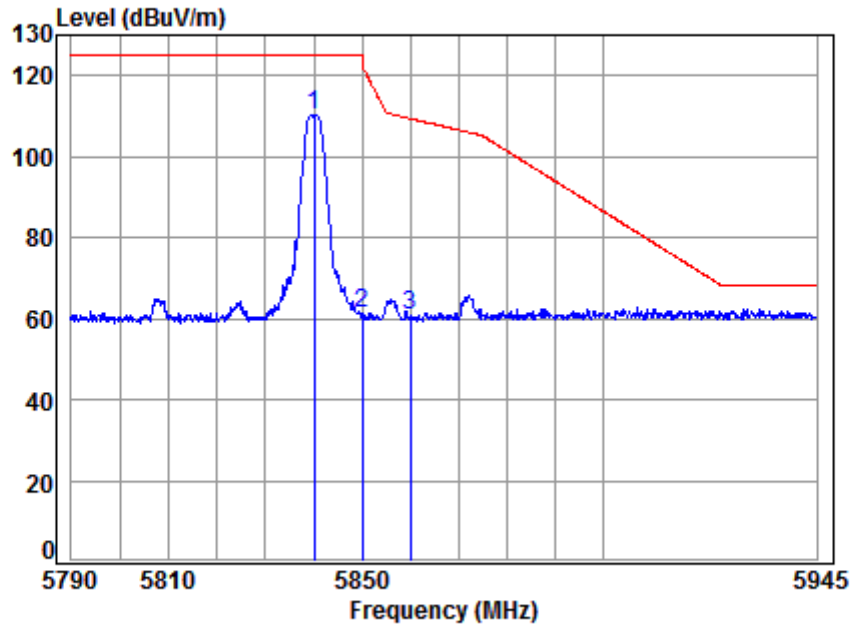
Job No : 05609CR/05610CR

Mode : 5743 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	41.85	57.17	59.75	109.40	-49.65	peak
2	5725.000	9.64	34.83	41.84	58.05	60.68	122.20	-61.52	peak
3 pp	5743.000	9.71	34.85	41.82	102.83	105.57	125.20	-19.63	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

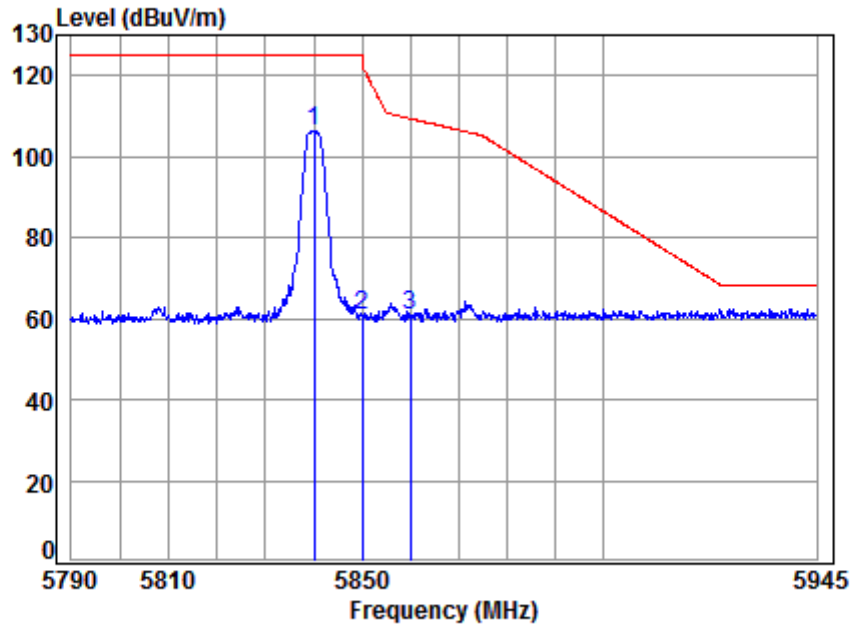


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5840 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5840.000	9.98	34.93	41.75	107.27	110.43	125.20	-14.77	peak
2	5850.000	10.07	34.95	41.73	57.98	61.27	122.20	-60.93	peak
3	5860.000	10.10	34.96	41.72	57.62	60.96	109.40	-48.44	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Condition: 3m VERTICAL

Job No : 05609CR/05610CR

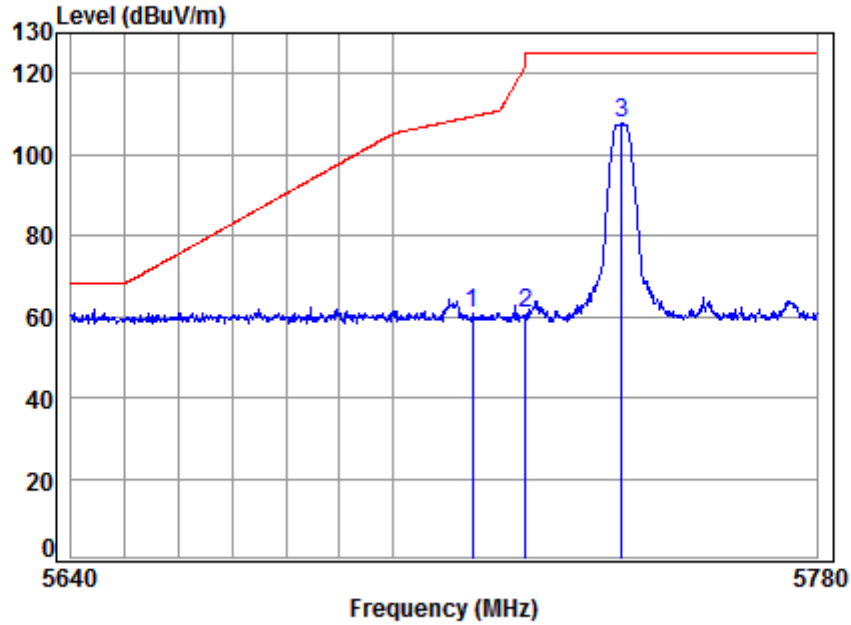
Mode : 5840 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5840.000	9.98	34.93	41.75	103.15	106.31	125.20	-18.89	peak
2	5850.000	10.07	34.95	41.73	57.66	60.95	122.20	-61.25	peak
3	5860.000	10.10	34.96	41.72	57.55	60.89	109.40	-48.51	peak



JBL Bar3.1-T / JBL SW10 subwoofer

Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:Low

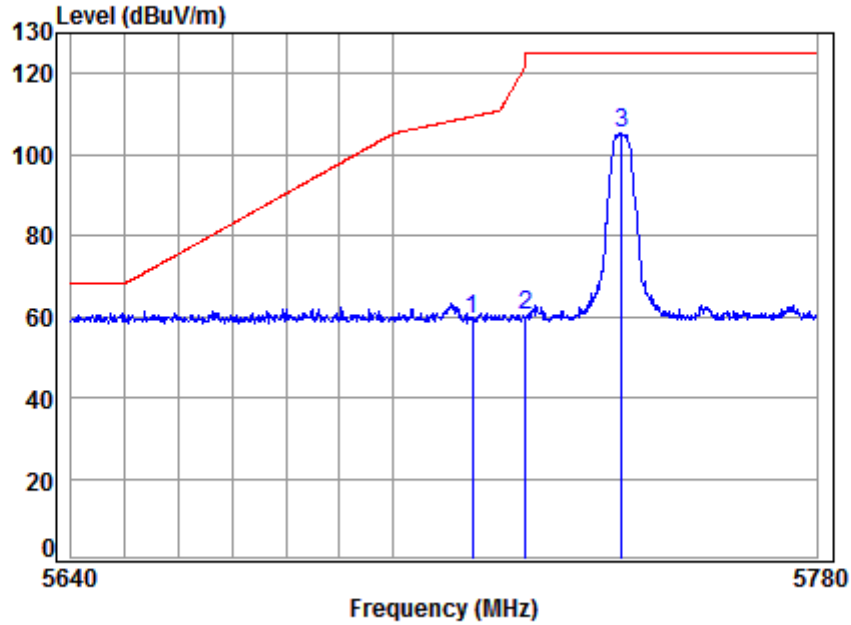


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5743 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBUV/m	dBUV/m	dB	
1	5715.000	9.61	34.82	41.85	58.17	60.75	109.40	-48.65	peak
2	5725.000	9.64	34.83	41.84	57.95	60.58	122.20	-61.62	peak
3 pp	5743.000	9.71	34.85	41.82	104.84	107.58	125.20	-17.62	peak



Mode:a; Polarization: Vertical; Modulation:GFSK; ; Channel:Low



Condition: 3m VERTICAL

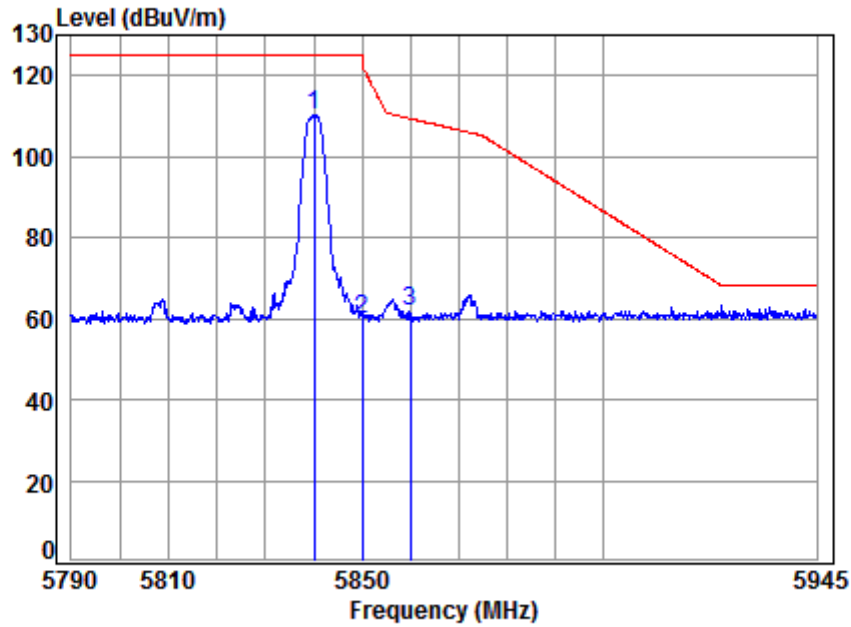
Job No : 05609CR/05610CR

Mode : 5743 Band edge

	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	5715.000	9.61	34.82	41.85	56.86	59.44	109.40	-49.96	peak
2	5725.000	9.64	34.83	41.84	57.87	60.50	122.20	-61.70	peak
3 pp	5743.000	9.71	34.85	41.82	102.50	105.24	125.20	-19.96	peak



Mode:a; Polarization:Horizontal; Modulation:GFSK; ; Channel:High

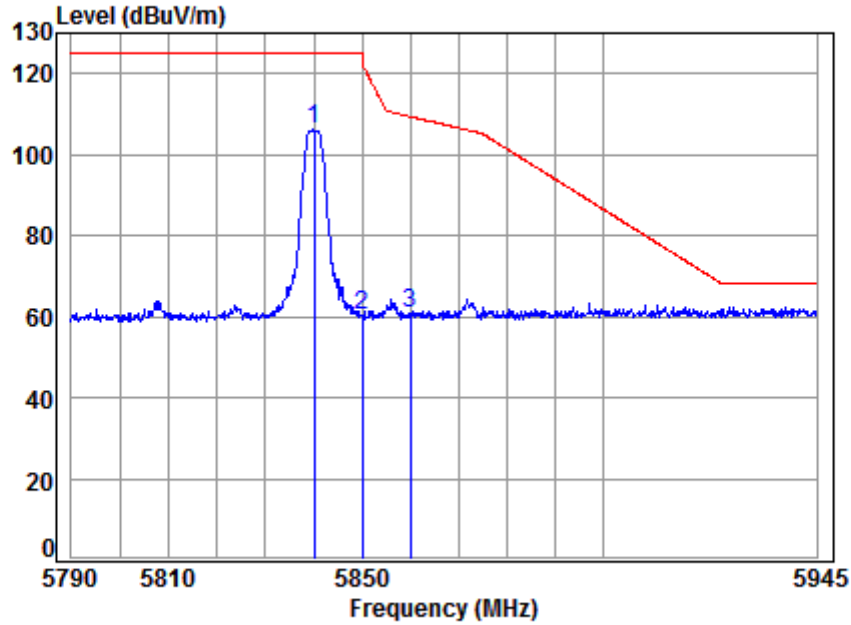


Condition: 3m HORIZONTAL
Job No : 05609CR/05610CR
Mode : 5840 Band edge

	Freq	Cable Loss	Ant Factor	Preamplifier	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5840.000	9.98	34.93	41.75	107.21	110.37	125.20	-14.83	peak
2	5850.000	10.07	34.95	41.73	56.66	59.95	122.20	-62.25	peak
3	5860.000	10.10	34.96	41.72	58.32	61.66	109.40	-47.74	peak



Mode:a; Polarization:Vertical; Modulation:GFSK; ; Channel:High



Condition: 3m VERTICAL

Job No : 05609CR/05610CR

Mode : 5840 Band edge

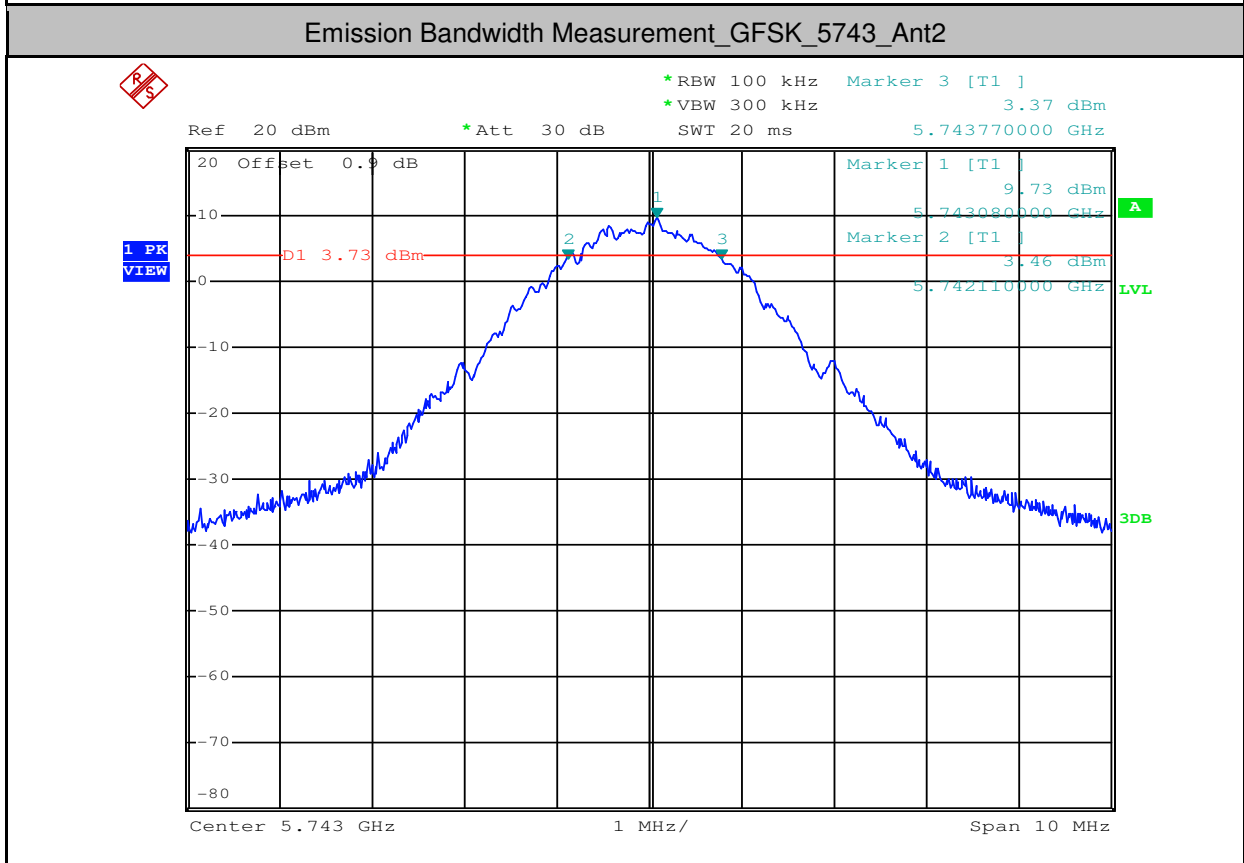
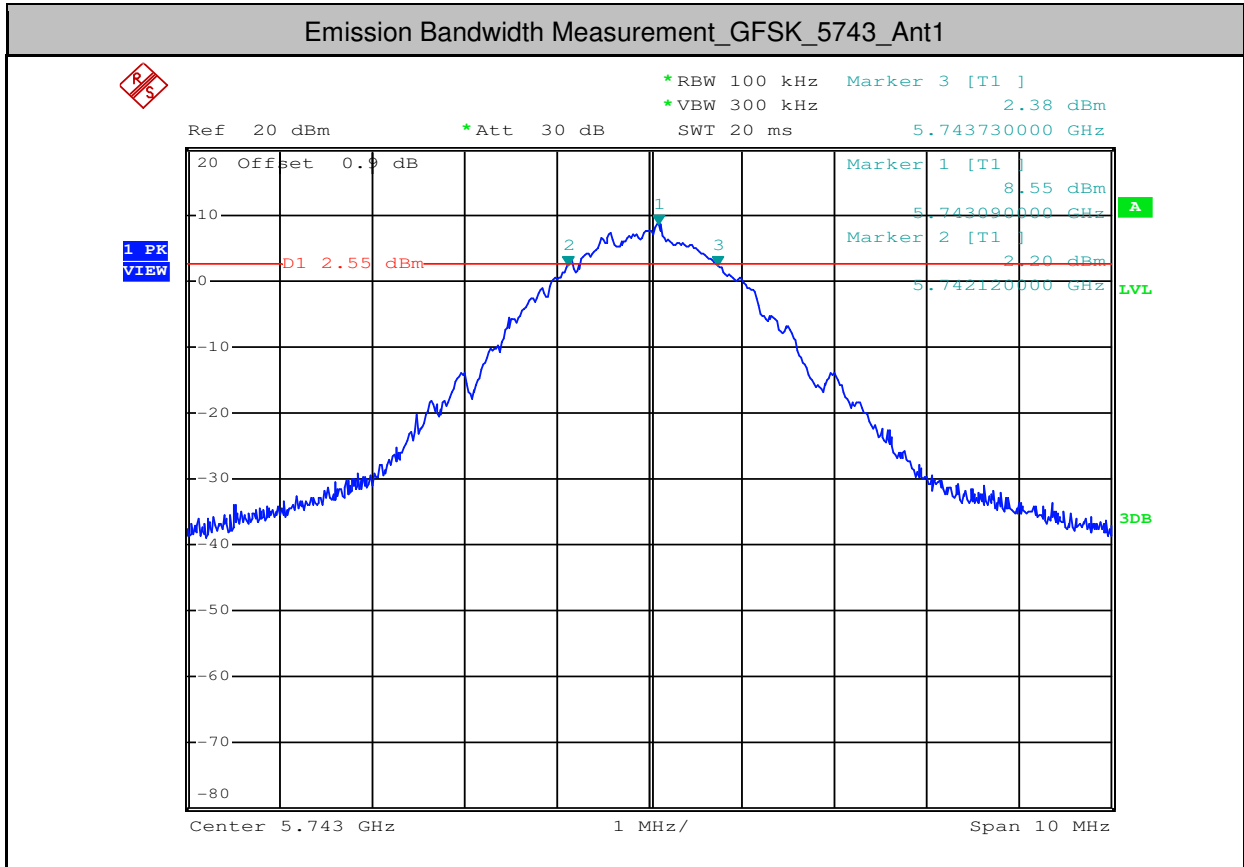
	Freq	Cable Loss	Ant Factor	Preamp Factor	Read Level	Limit Level	Limit Line	Over Limit	Remark
	MHz	dB	dB/m	dB	dBuV	dBuV/m	dBuV/m	dB	
1	pp 5840.000	9.98	34.93	41.75	103.07	106.23	125.20	-18.97	peak
2	5850.000	10.07	34.95	41.73	57.24	60.53	122.20	-61.67	peak
3	5860.000	10.10	34.96	41.72	57.41	60.75	109.40	-48.65	peak

8 Appendix

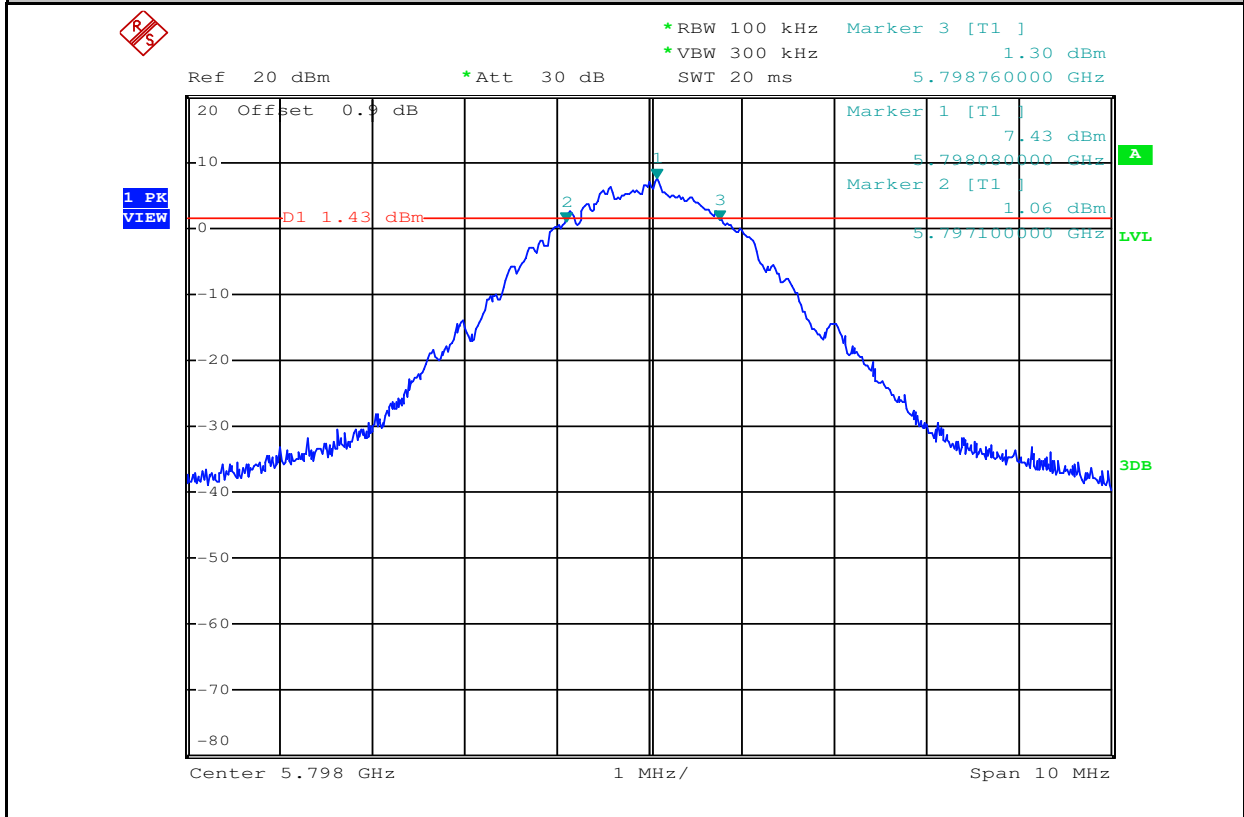
8.1 Appendix 15.407

1.Emission Bandwidth Measurement

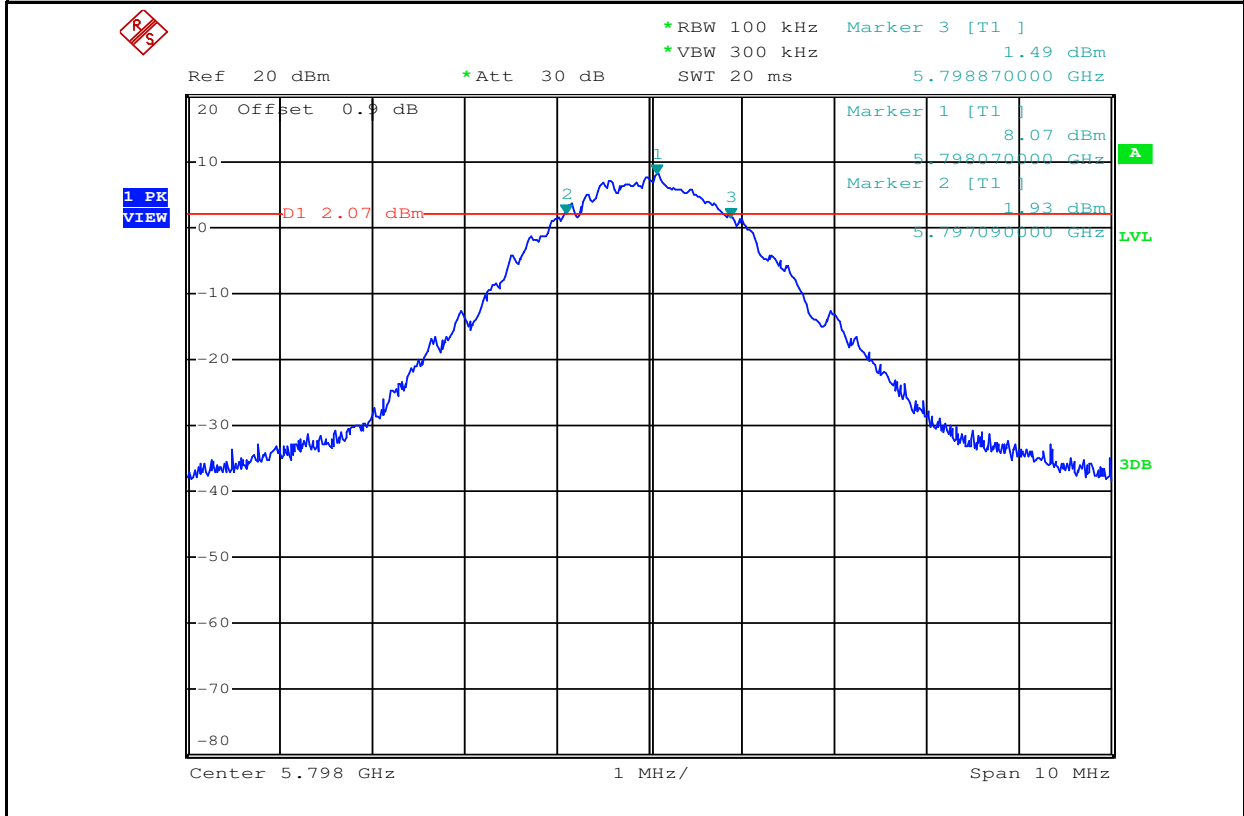
Test Mode	Test Channel	Ant	EBW[MHz]	Limit[MHz]	Verdict
GFSK	5743	Ant1	1.610	≥ 0.5	PASS
GFSK	5743	Ant2	1.660	≥ 0.5	PASS
GFSK	5798	Ant1	1.660	≥ 0.5	PASS
GFSK	5798	Ant2	1.780	≥ 0.5	PASS
GFSK	5840	Ant1	1.710	≥ 0.5	PASS
GFSK	5840	Ant2	1.730	≥ 0.5	PASS

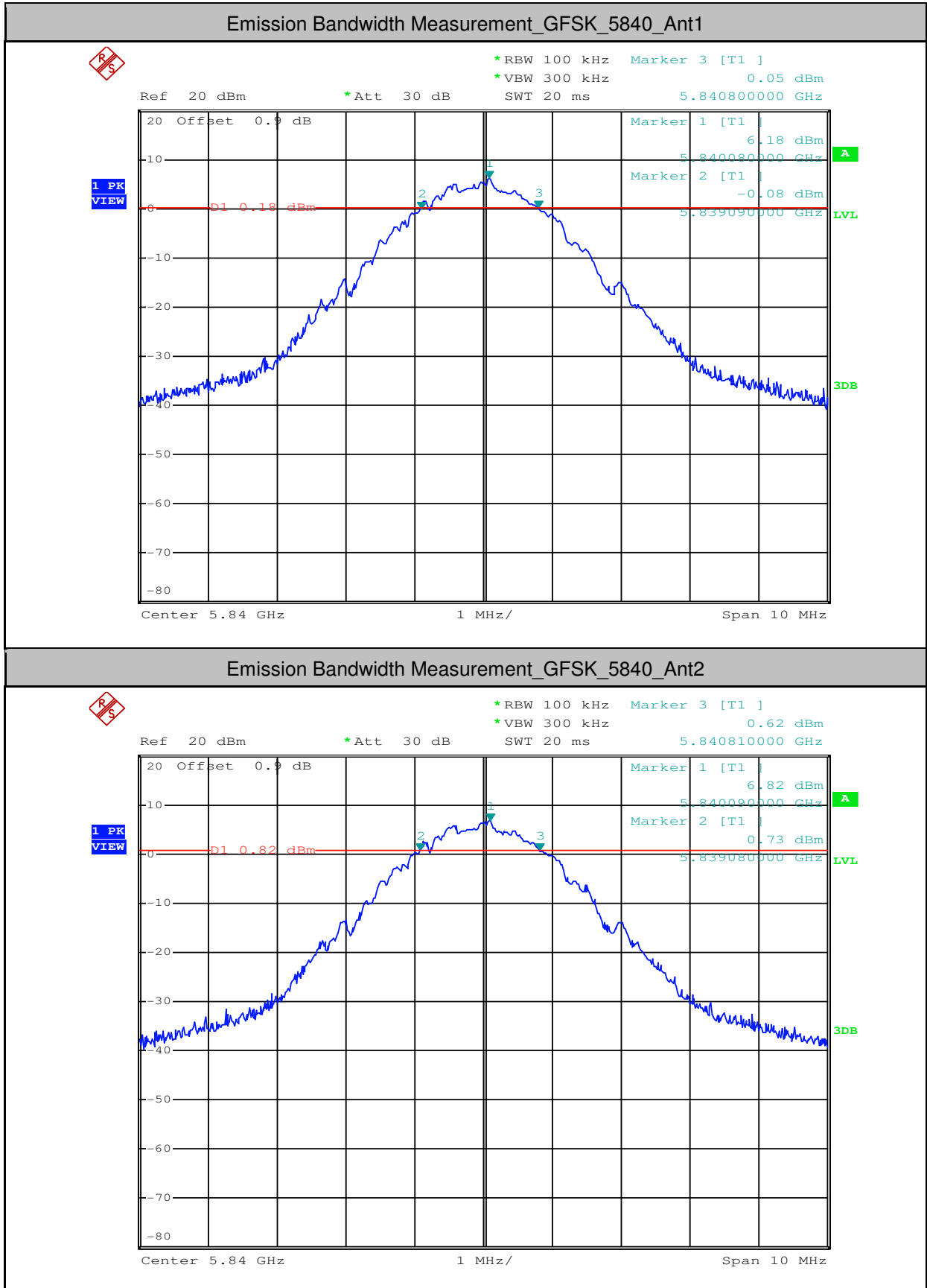


Emission Bandwidth Measurement_GFSK_5798_Ant1



Emission Bandwidth Measurement_GFSK_5798_Ant2

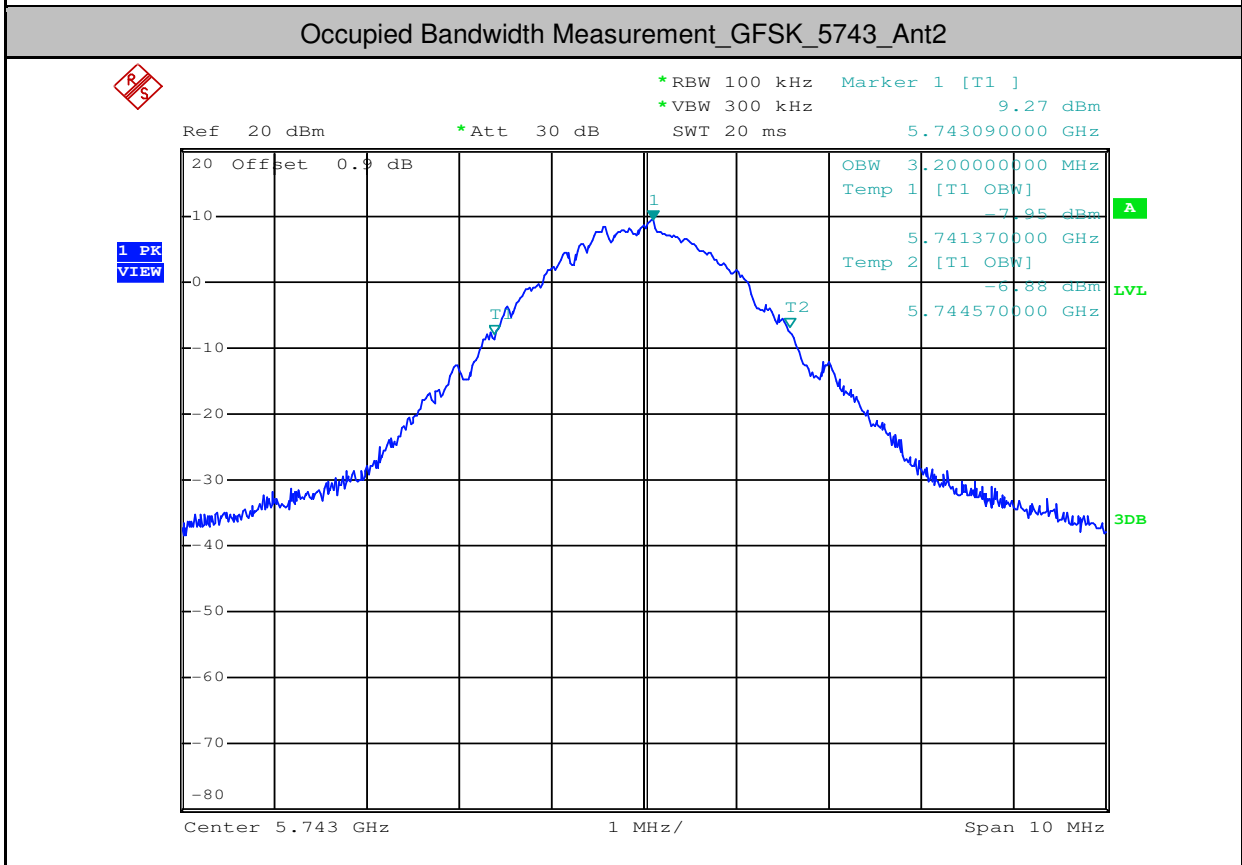
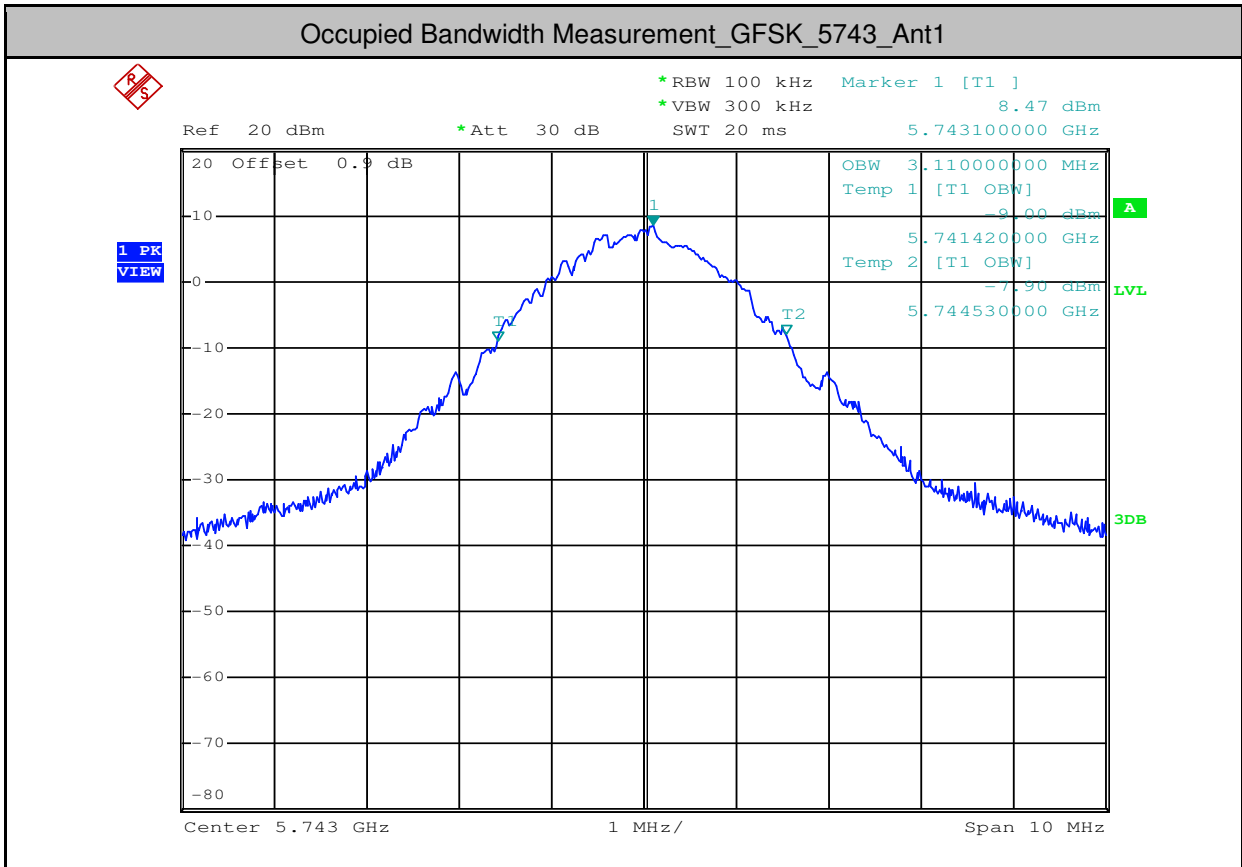




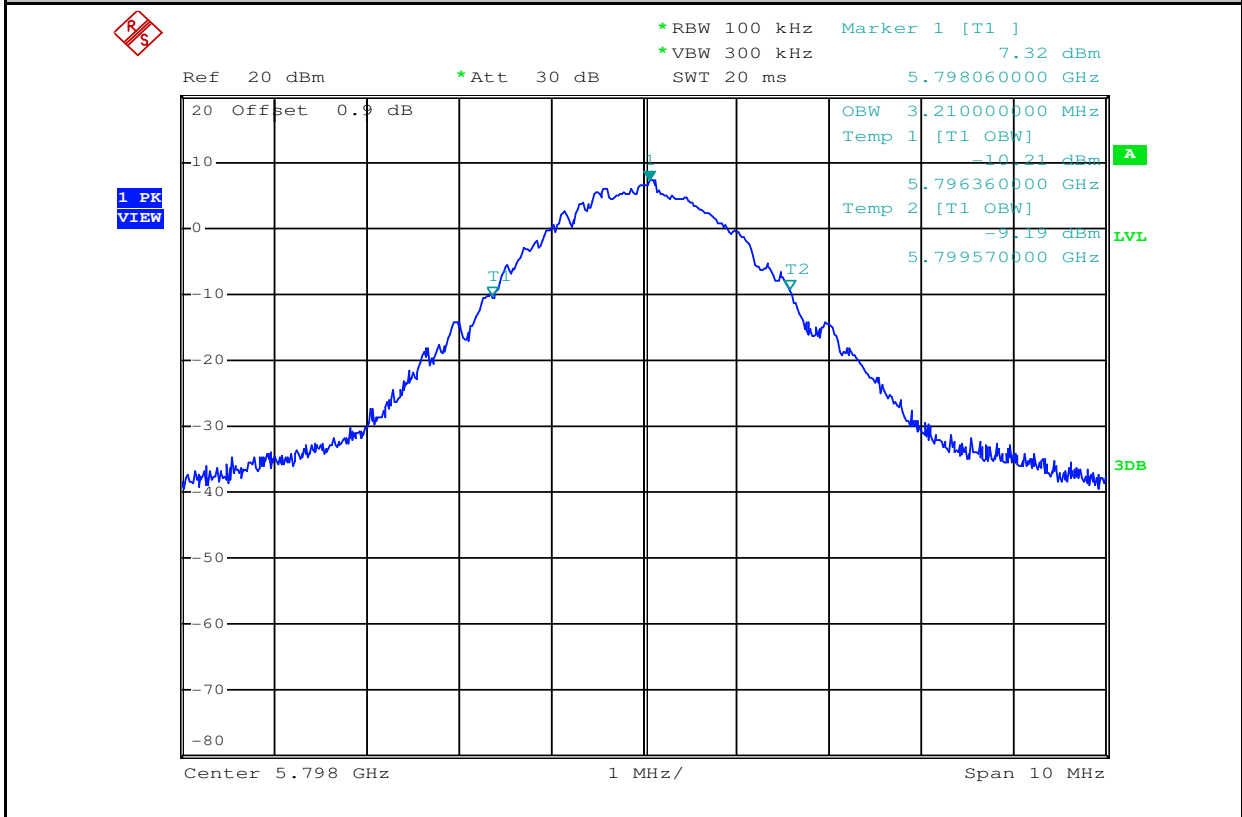


2.Occupied Bandwidth Measurement

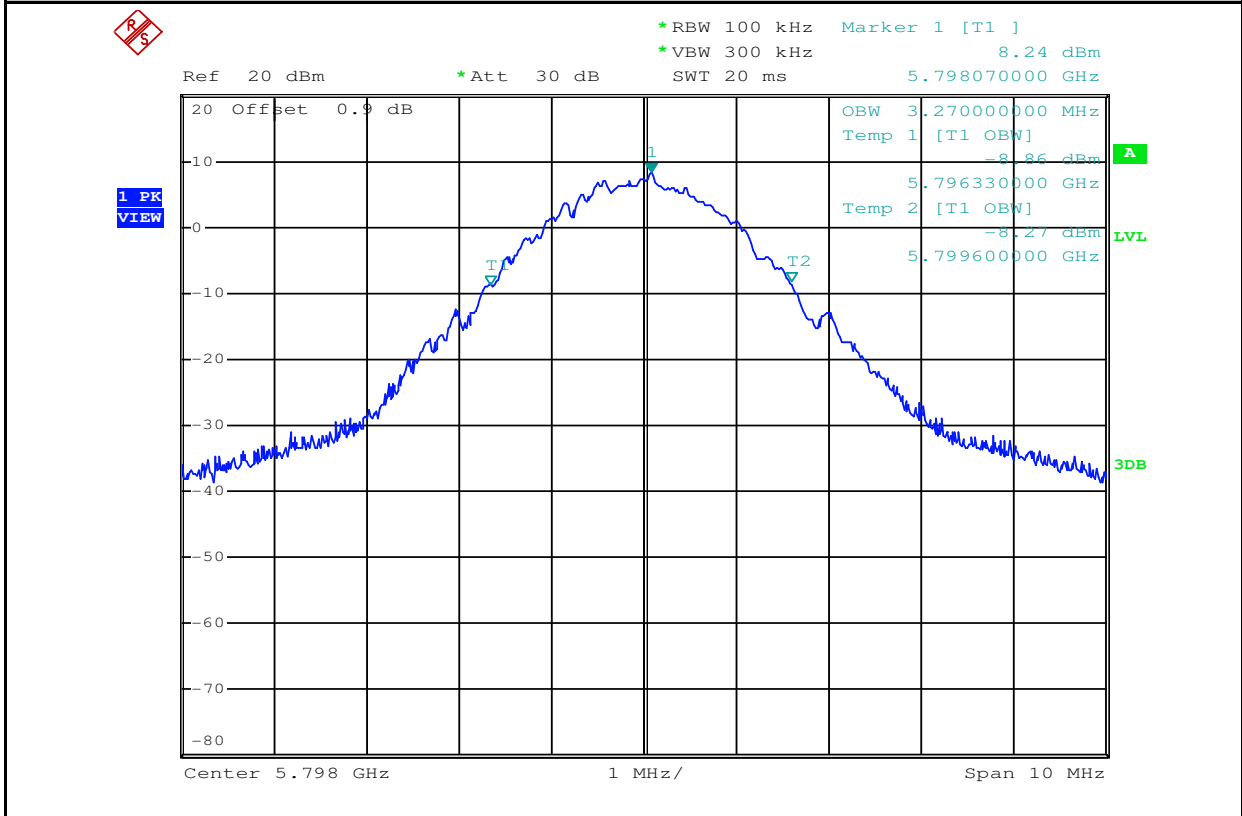
Test Mode	Test Channel	Ant	OBW[MHz]	Limit[MHz]	Verdict
GFSK	5743	Ant1	3.110	---	PASS
GFSK	5743	Ant2	3.200	---	PASS
GFSK	5798	Ant1	3.210	---	PASS
GFSK	5798	Ant2	3.270	---	PASS
GFSK	5840	Ant1	3.260	---	PASS
GFSK	5840	Ant2	3.300	---	PASS



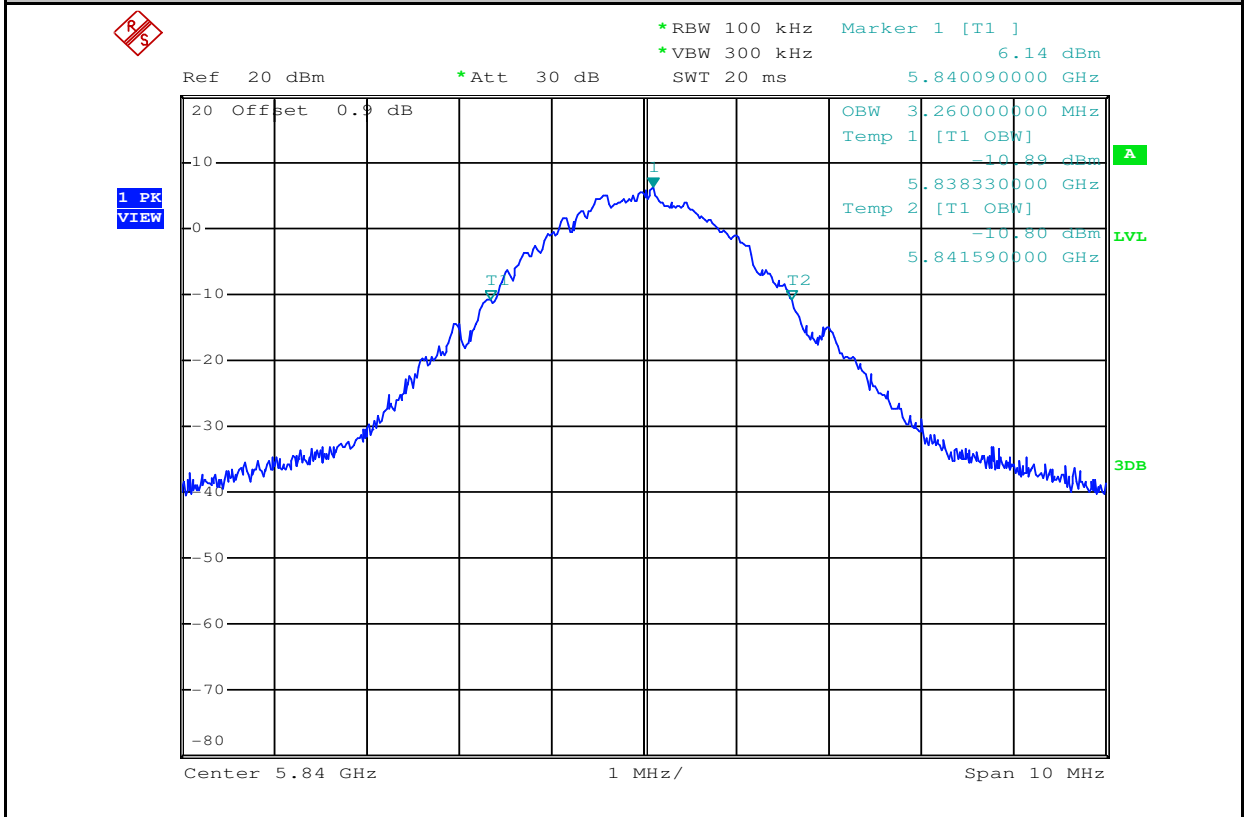
Occupied Bandwidth Measurement_GFSK_5798_Ant1



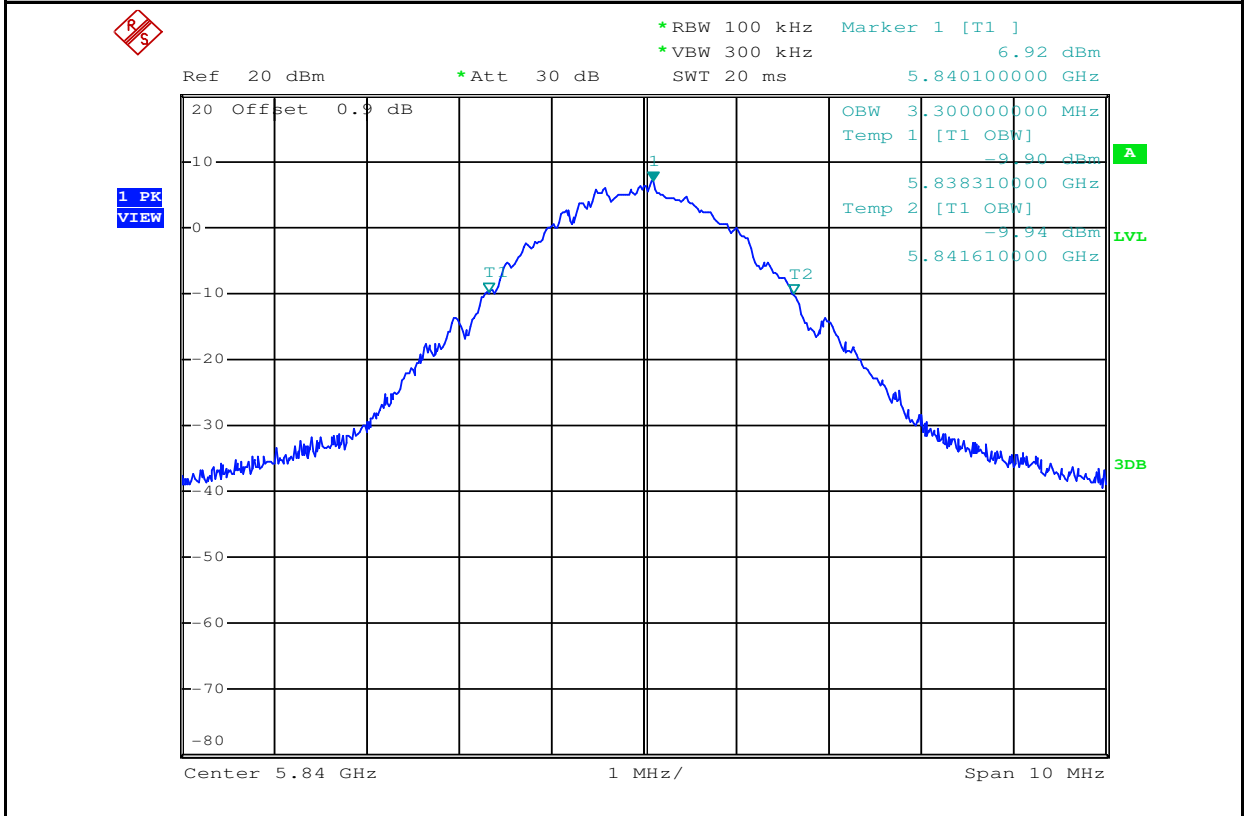
Occupied Bandwidth Measurement_GFSK_5798_Ant2



Occupied Bandwidth Measurement_GFSK_5840_Ant1



Occupied Bandwidth Measurement_GFSK_5840_Ant2

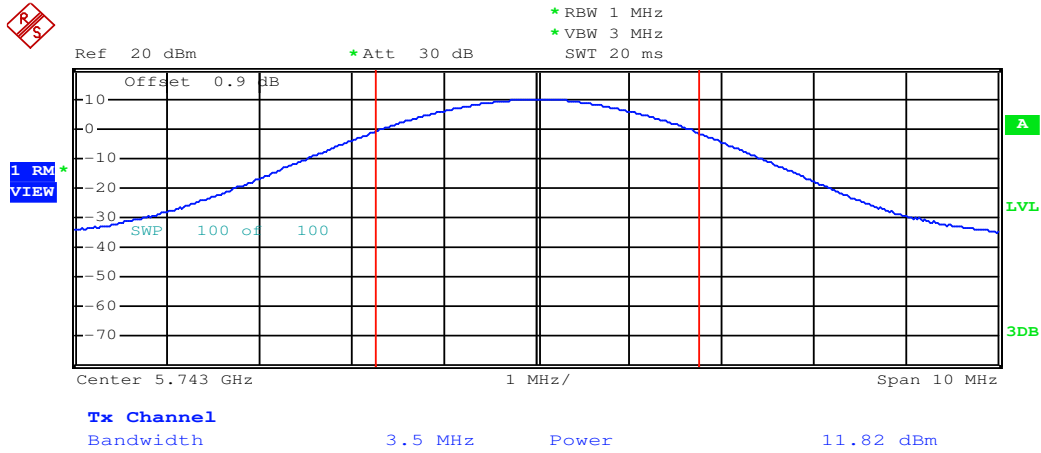




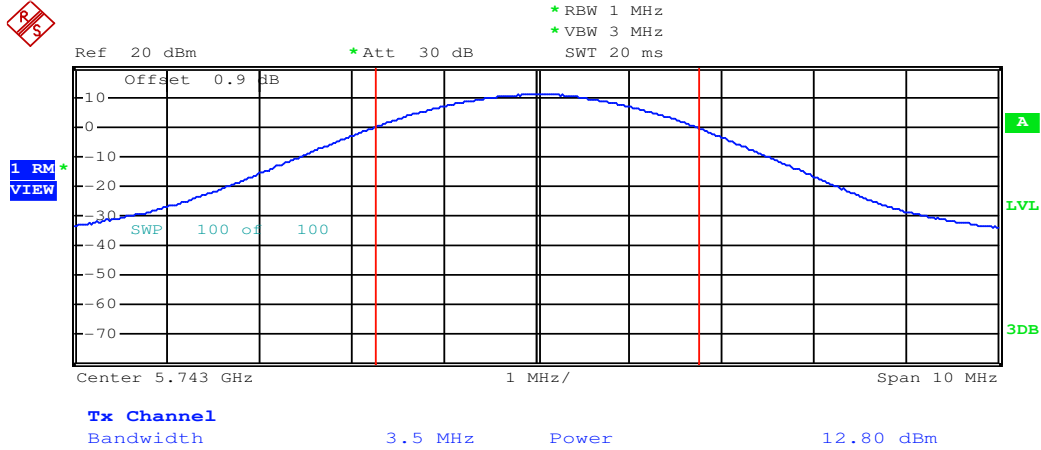
3. Maximum Conduct Output Power

Test Mode	Test Channel	Ant	Level [dBm]	10log(1/x) Factor [dB]	Power [dBm]	Limit [dBm]	Verdict
GFSK	5743	Ant1	11.82	0	11.82	<30.00	PASS
GFSK	5743	Ant2	12.8	0	12.80	<30.00	PASS
GFSK	5798	Ant1	10.84	0	10.84	<30.00	PASS
GFSK	5798	Ant2	11.7	0	11.70	<30.00	PASS
GFSK	5840	Ant1	9.87	0	9.87	<30.00	PASS
GFSK	5840	Ant2	10.5	0	10.50	<30.00	PASS

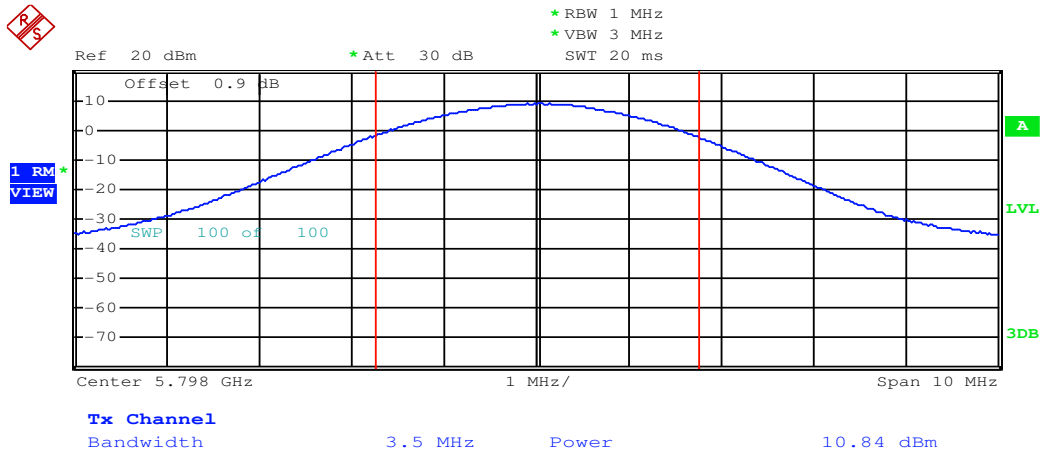
Maximum Conduct Output Power_GFSK_5743_Ant1



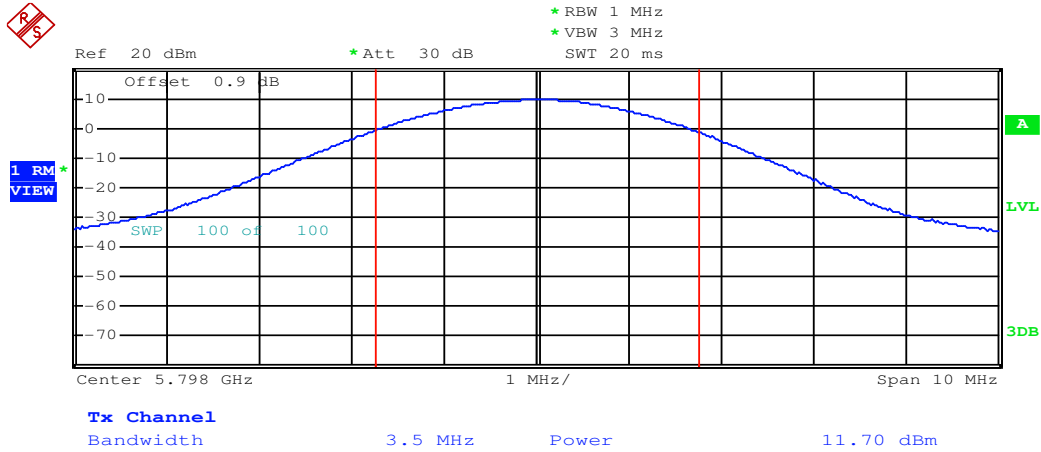
Maximum Conduct Output Power_GFSK_5743_Ant2



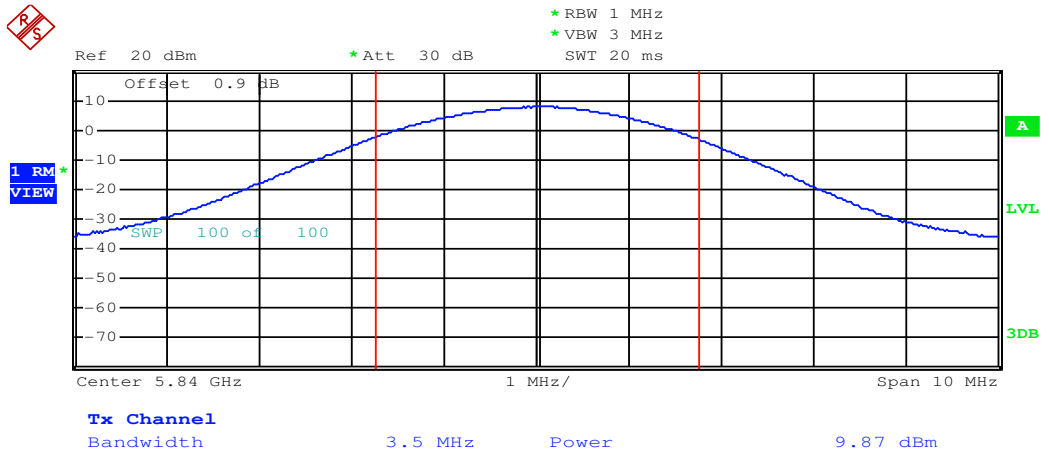
Maximum Conduct Output Power_GFSK_5798_Ant1



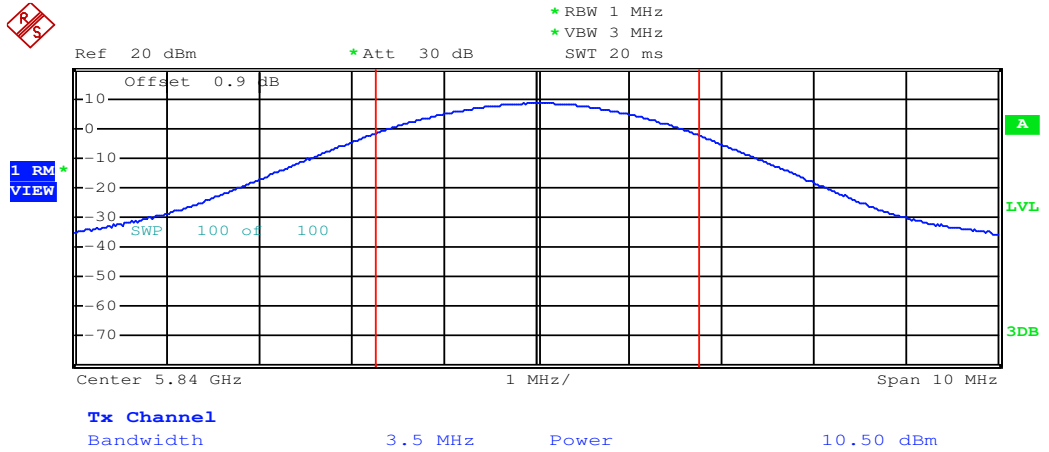
Maximum Conduct Output Power_GFSK_5798_Ant2



Maximum Conduct Output Power_GFSK_5840_Ant1



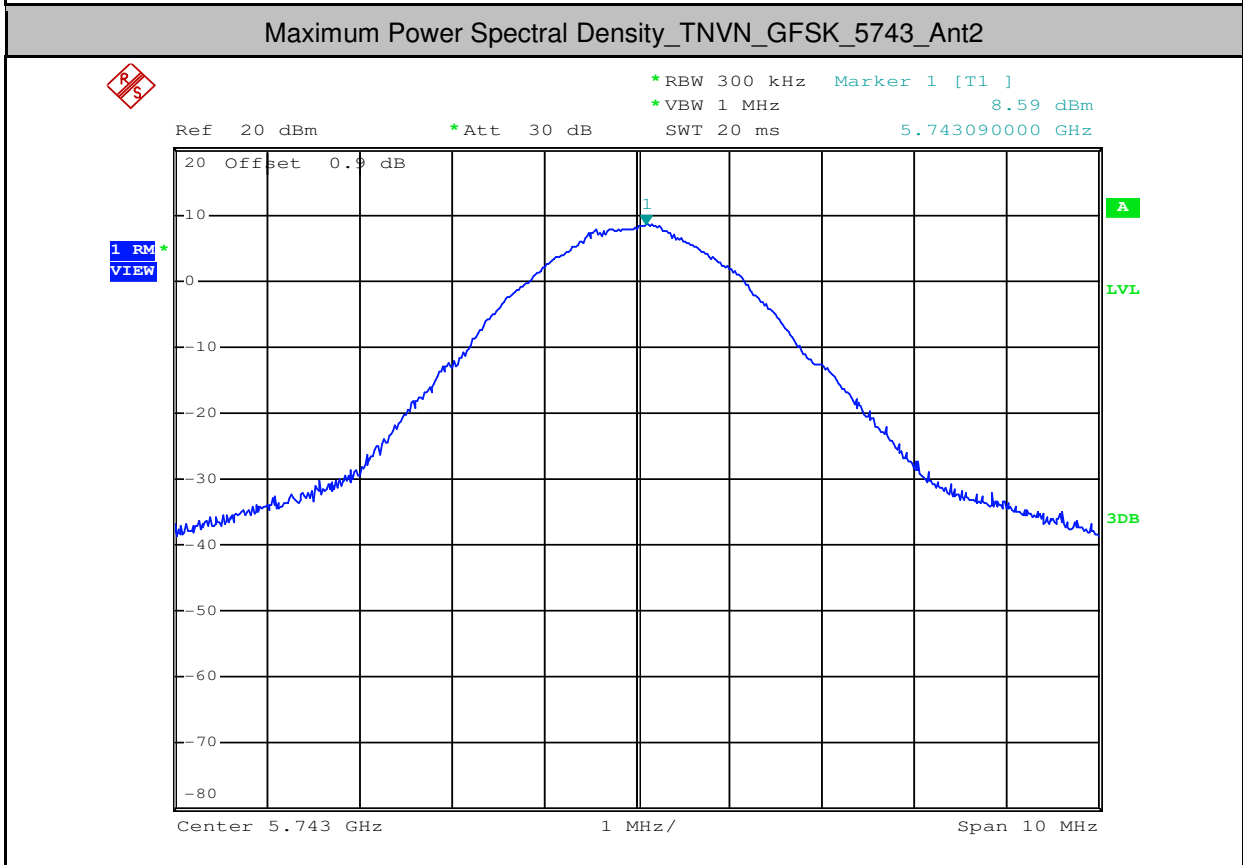
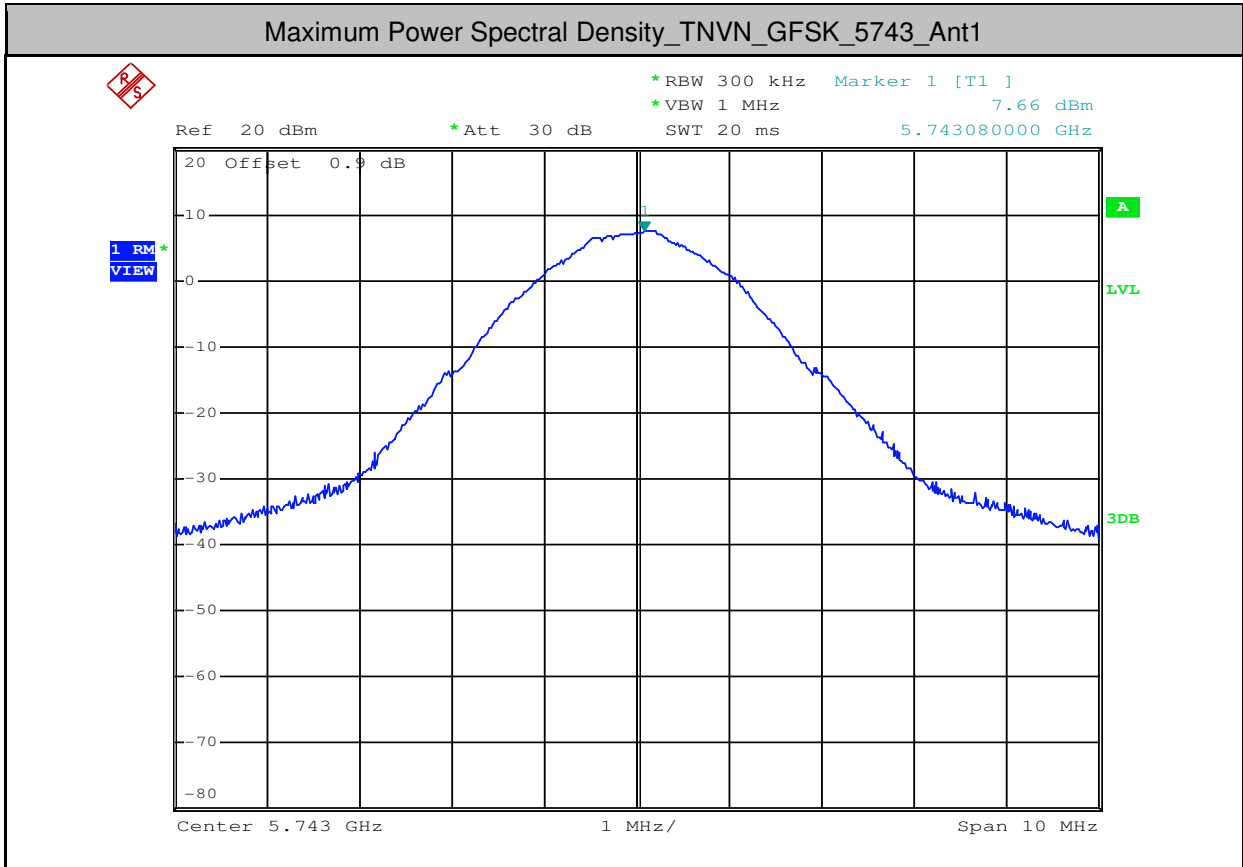
Maximum Conduct Output Power_GFSK_5840_Ant2

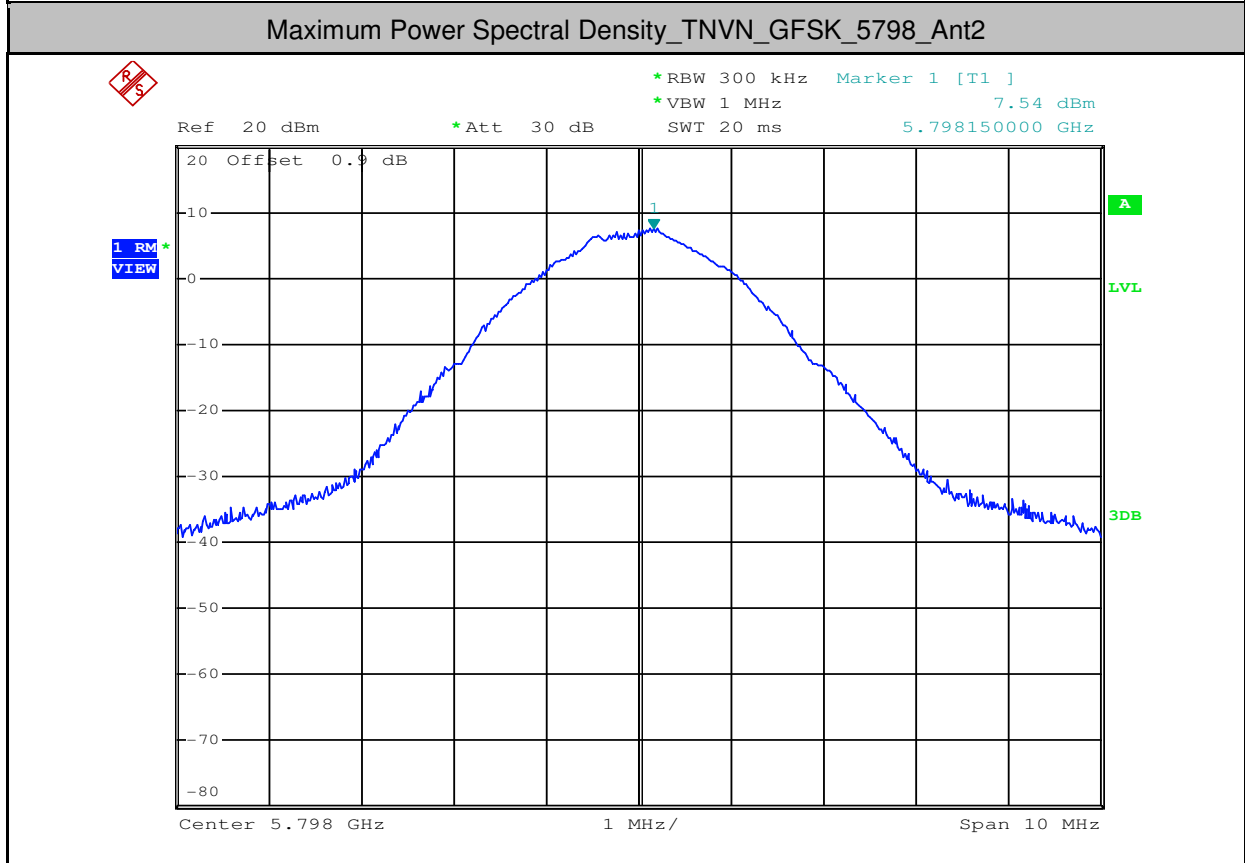
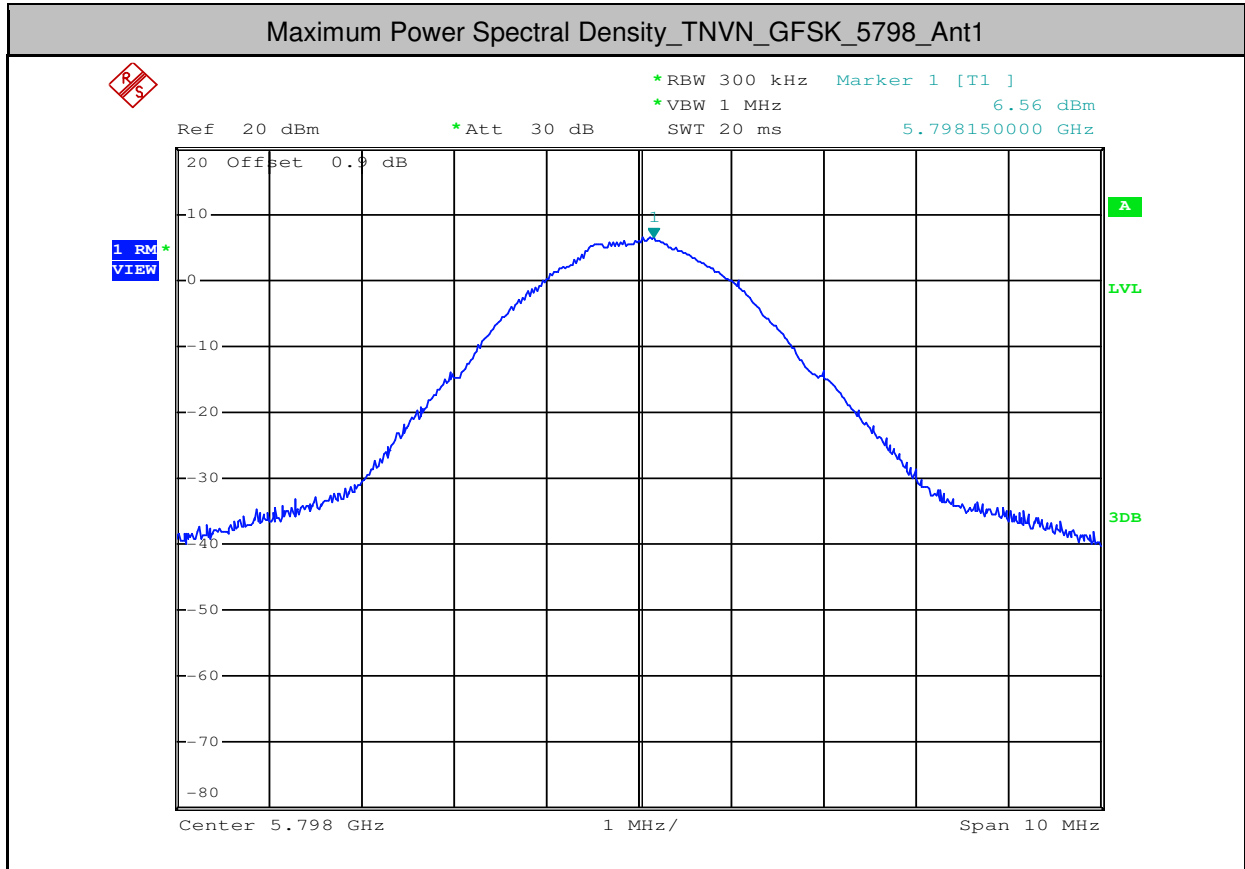


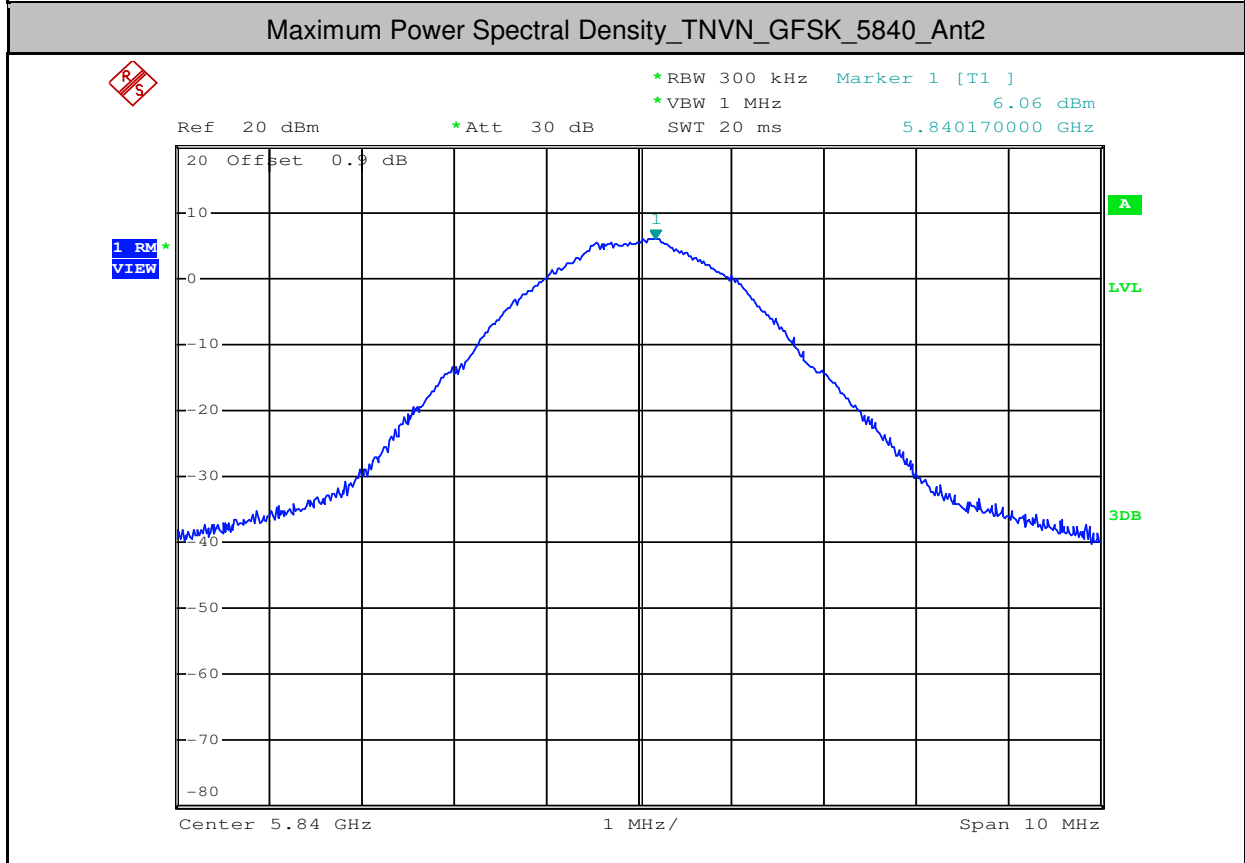
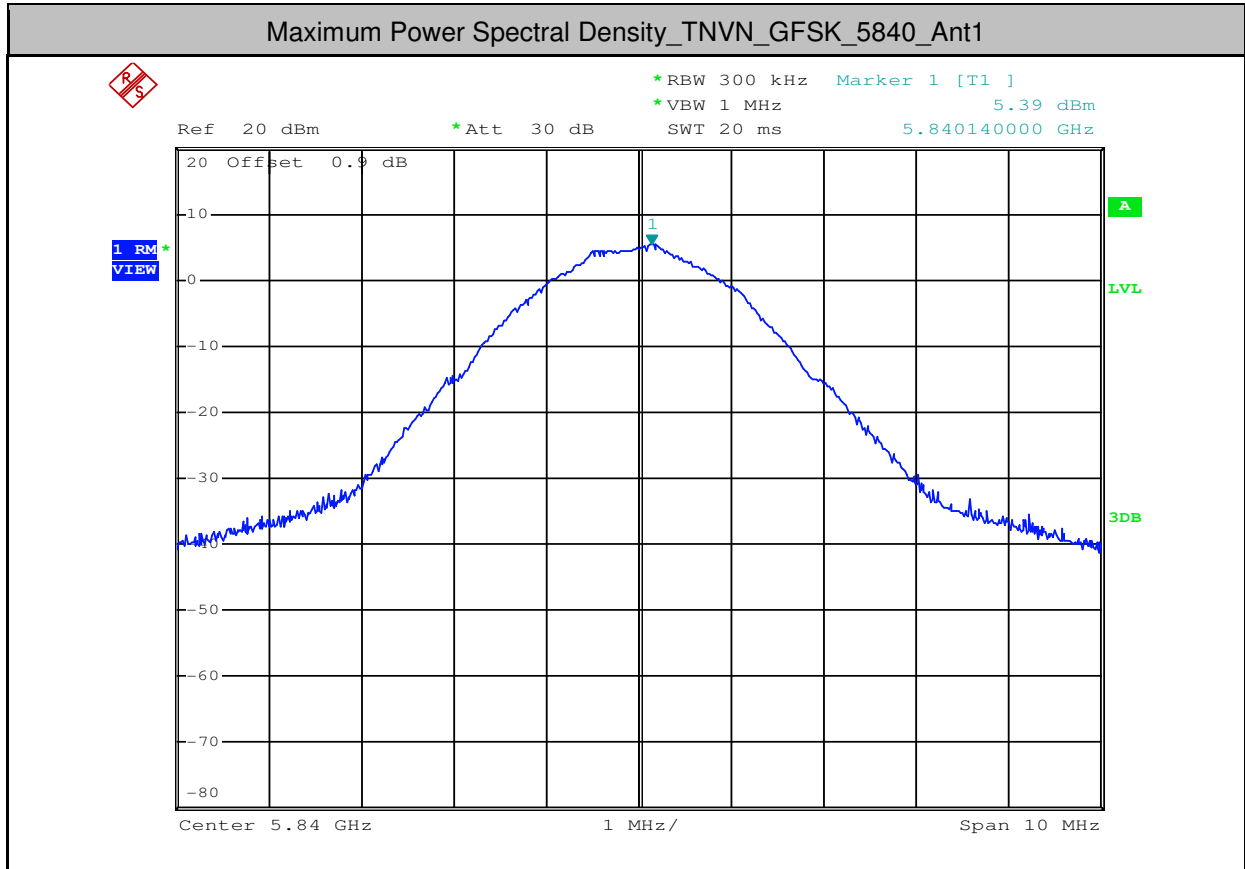


4. Maximum Power Spectral Density

Test Mode	Test Channel	Ant	Level [dBm/500kHz]	10log(1/x) Factor[dB]	10log(500kHz/RBW) Factor [dB]	PSD [dBm/500kHz]	Limit [dBm/500kHz]	Verdict
GFSK	5743	Ant1	7.66	0	2.21848749616356	9.878	<30.00	PASS
GFSK	5743	Ant2	8.59	0	2.21848749616356	10.808	<30.00	PASS
GFSK	5798	Ant1	6.56	0	2.21848749616356	8.778	<30.00	PASS
GFSK	5798	Ant2	7.54	0	2.21848749616356	9.758	<30.00	PASS
GFSK	5840	Ant1	5.39	0	2.21848749616356	7.608	<30.00	PASS
GFSK	5840	Ant2	6.06	0	2.21848749616356	8.278	<30.00	PASS

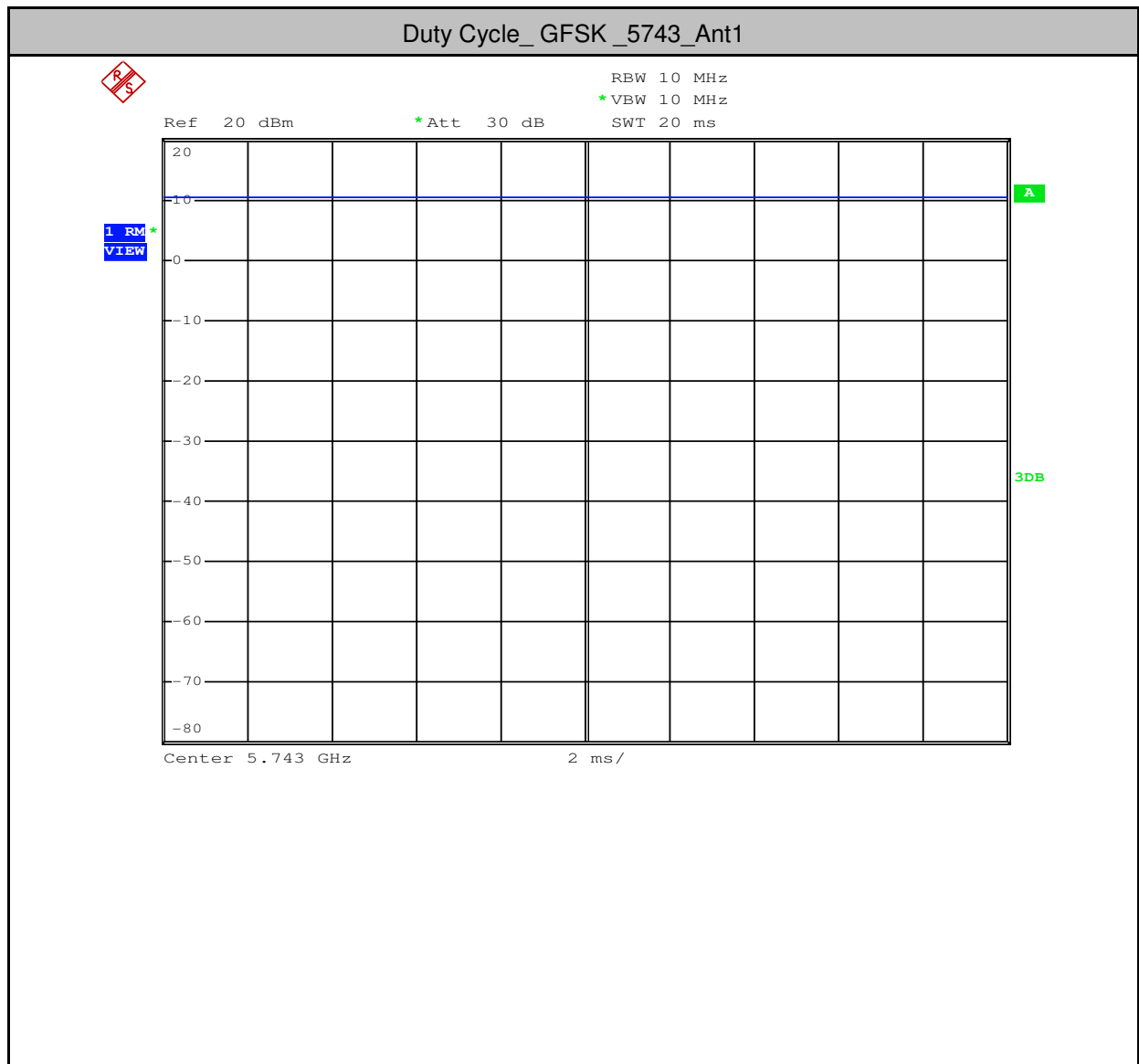


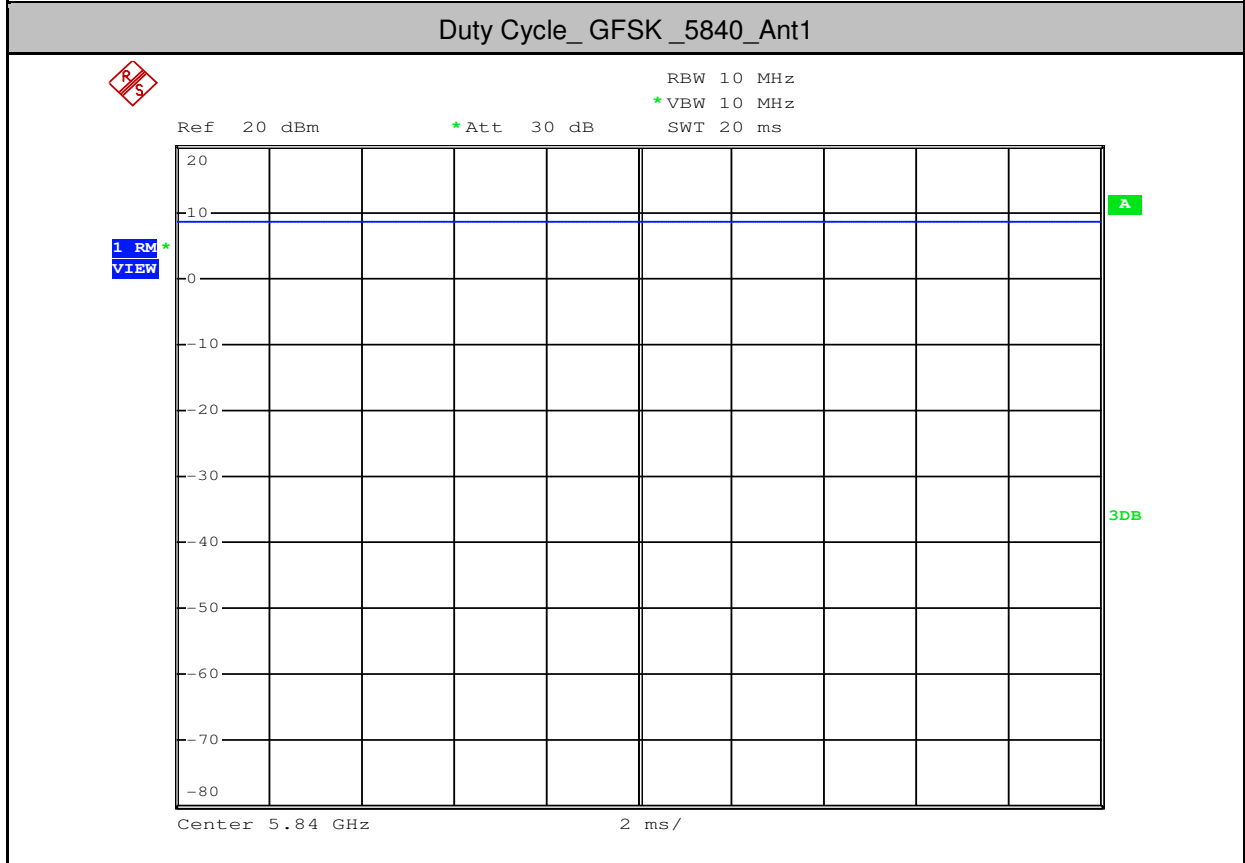
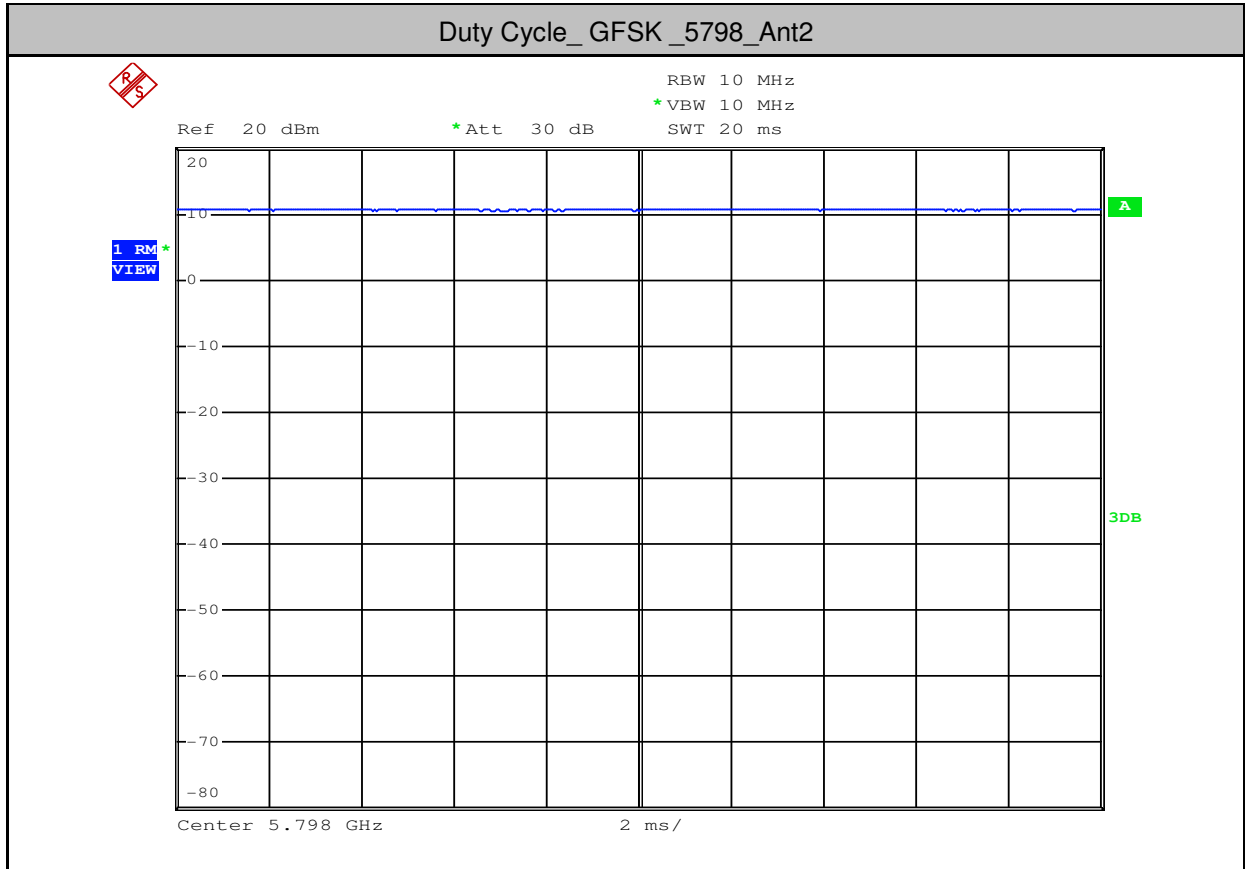


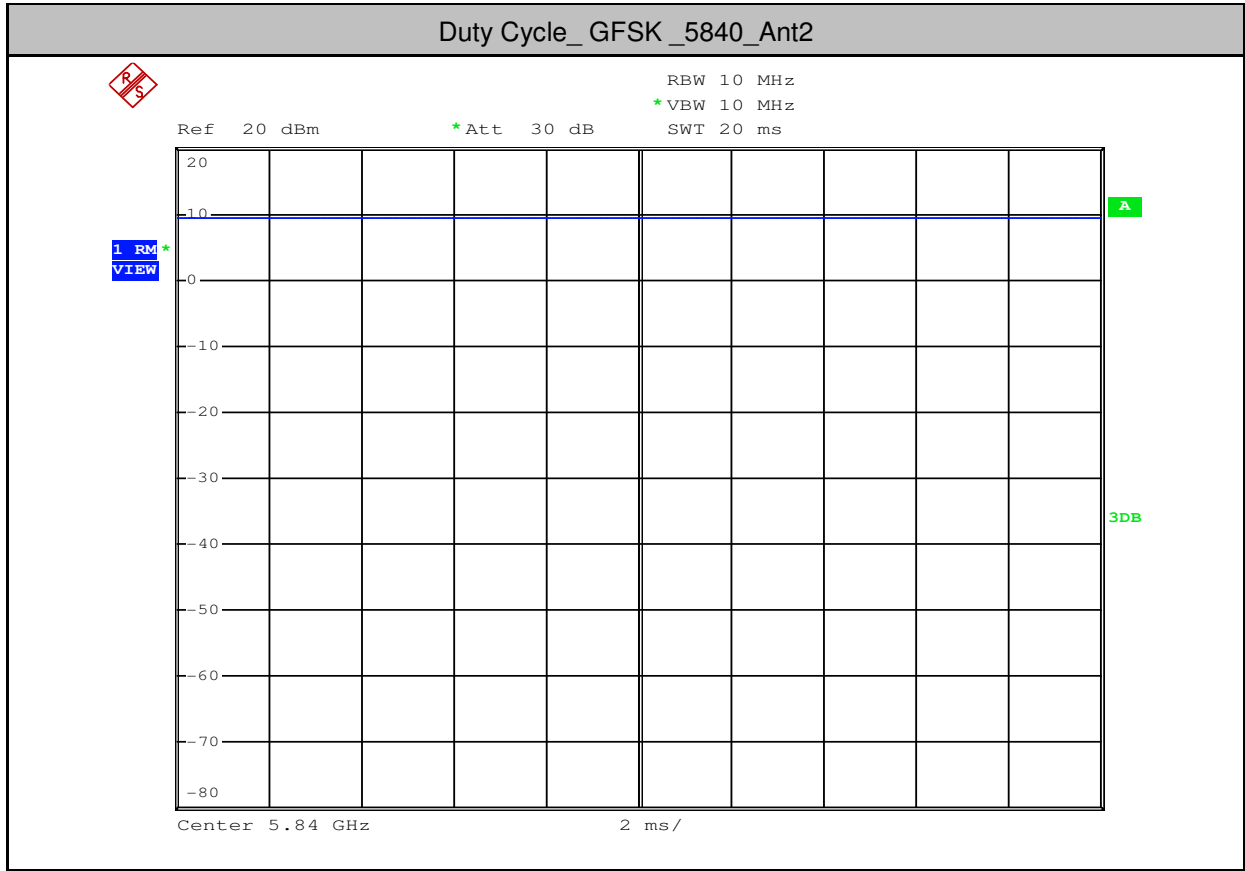


5.Duty Cycle (x)

Test Mode	Test Channel	Ant	Duty Cycle[%]	10log(1/x) Factor[dB]
GFSK	5743	Ant1	100	0
GFSK	5743	Ant2	100	0
GFSK	5798	Ant1	100	0
GFSK	5798	Ant2	100	0
GFSK	5840	Ant1	100	0
GFSK	5840	Ant2	100	0







End of the Report -