



Report No.: SUCR260700064409

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TEST REPORT

Application No.: SUCR2607000644TL
FCC ID: 2AH25T5F1AA
Applicant: Shanghai Sunmi Technology Co., Ltd.
Address of Applicant: Room 505, No. 388, Song Hu Road, Yang Pu District, Shanghai, China
Manufacturer: Shanghai Sunmi Technology Co., Ltd.
Address of Manufacturer: Room 505, No. 388, Song Hu Road, Yang Pu District, Shanghai, China
Equipment Under Test (EUT):
EUT Name: Wireless data POS System
Model No.: T5F1A
Trade Mark: SUNMI
Standard(s) : 47 CFR Part 15, Subpart C 15.247
47 CFR Part 15, Subpart E 15.407
47 CFR Part 15, Subpart C 15.225
47 CFR Part 2
47 CFR Part 22
47 CFR Part 24
47 CFR Part 27
47 CFR Part 90
47 CFR Part 2.1093
Date of Receipt: 2026-07-14
Date of Test: 2026-09-21 to 2026-10-10
Date of Issue: 2026-10-13

Test Result:

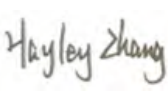
Pass*

* In the configuration tested, the EUT complied with the standards specified above.

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Revision Record			
Version	Description	Date	Remark
00	Original	2026-10-13	/

Authorized for issue by:				
Prepared By				
		Hayley_Zhang/Project Engineer		
Approved By				
		Cedar Cheng /Reviewer		

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3 General Information

3.1 Details of E.U.T.

Power supply:	Adapter(TPA-418G050200UU01): Input: 100-240V~50/60Hz 0.3A Output: 5.0V,2.0A
EUT Name:	Wireless data POS System
Model No.:	T5F1A
Trade Mark:	SUNMI

3.2 Measurement Uncertainty & Decision Rule

No.	Item	Measurement Uncertainty
Bluetooth&WIFI&NFC RF		
1	Radio Frequency	± 7.25 x 10 ⁻⁸
2	Duty cycle	± 0.37%
3	Occupied Bandwidth	± 3%
4	Conduction emission	± 3.0dB (150kHz to 30MHz)
5	RF conducted power	± 0.75dB
6	RF power density	± 2.84dB
7	Conducted Spurious emissions	± 0.75dB
8	RF Radiated power	±1.56dB (9KHz-30MHz)
		±4.80dB (30MHz-1GHz)
		±4.80dB (1GHz-18GHz)
		±4.80dB (18GHz-40GHz)
9	Temperature test	± 1°C
10	Humidity test	± 3%
11	Supply voltages	± 1%
12	Time	± 3%
WWAN RF		
1	Total RF power, conducted	±0.54dB
2	RF power density, conducted	±1.03dB
3	Spurious emissions, conducted	±0.54dB
4	Radio Frequency	±1.0 %
5	Duty Cycle	±0.37%
6	Occupied Bandwidth	±1.0 %
7	Radiated Emission	± 3.13dB (9k -30MHz)
		± 4.8dB (30M -1GHz)
		± 4.8dB (1GHz to 18 GHz)
		± 4.8dB (Above 18GHz)
Remark: The U _{lab} (lab Uncertainty) is less than U _{CISPR/ETSI} (CISPR/ETSI Uncertainty), so the test results – compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit; – non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit		

SAR

Per KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz, when the highest measured 1-g SAR within a frequency band is < 1.5 W/kg, the extensive SAR measurement uncertainty analysis described in IEEE Std 1528-2013 is not required in SAR reports submitted for equipment approval. The equivalent ratio (1.5/1.6) is applied to extremity and occupational exposure conditions.

3.3 Test Location

All tests were performed at:

SGS Tongfang Technical Services (Suzhou) Co., Ltd.

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone

No tests were sub-contracted.

Note:

1. SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).

2. SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

3. Sample source: sent by customer.

3.4 Test Facility

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

• **A2LA (Certificate No. 6336.01)**

SGS Tongfang Technical Services (Suzhou) Co., Ltd. is accredited by the American Association for Laboratory Accreditation (A2LA).

• **FCC (Designation Number: CN1312)**

This site has been recognized as an accredited testing laboratory. Test Firm Registration Number: 717327

• **ISED (CAB Identifier: CN0120)**

This site has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 27594

3.5 Deviation from Standards

None

3.6 Abnormalities from Standard Conditions

None

4 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
RF Conducted Test						
1	Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	1/14/2026	1/13/2027
2	Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-15	11/21/2025	11/20/2026
3	MXG Vector signal genitor	KEYSIGHT	N5182B	SUWI-01-38-01	1/14/2026	1/13/2027
4	Signal Generator	ROHDE&SCHWARZ	SMW200A	SUWI-01-07-08	1/14/2026	1/13/2027
5	Signal Generator	ROHDE&SCHWARZ	SMW100A	SUWI-01-08-01	1/14/2026	1/13/2027
6	MXG Vector Signal Generator	ROHDE&SCHWARZ	SMR20	SUWI-01-33-01	11/21/2025	11/20/2026
7	Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-13	4/22/2026	4/21/2027
8	Wideband Radio Communication Test Station	Anritsu	MT8000A	SUWI-01-34-02	11/21/2025	11/20/2026
9	Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	11/21/2025	11/20/2026
10	Power meter	Anritsu	ML2495A	SUWI-01-31-01	11/21/2025	11/20/2026
11	Pulse power sensor	Anritsu	MA2411B	SUWI-01-32-01	11/21/2025	11/20/2026
12	DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	1/14/2026	1/13/2027
13	Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-07	2/11/2026	2/10/2027
14	Temperature Chamber	GIANT FORCE	ICT-017-40-SP-SD	SUWI-01-13-02	5/7/2026	5/6/2027
15	Measurement Software	TST	TST 272 V2.02	SUWI-03-55-03	NCR	NCR
16	RF Control unit	TST	TSCB3023R2	SUWI-02-20-01	NCR	NCR
17	RFCables	Tonscend	NA	SUWI-01-03-01	1/15/2026	1/14/2027
RF Radiated Test						
1	Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	6/9/2026	6/8/2029
2	Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	1/14/2026	1/13/2027
3	Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-07	11/20/2025	11/19/2026
4	Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/14/2026	1/13/2027
5	Signal Generator	ROHDE&SCHWARZ	SMW100A	SUWI-01-18-01	1/14/2026	1/13/2027
6	Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	VULB 9168	SUWI-01-11-04	11/29/2025	11/28/2027
7	Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9120D	SUWI-01-11-02	5/7/2025	5/6/2027
8	Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9170	SUWI-01-11-03	5/7/2025	5/6/2027
9	Active Loop Antenna	SCHWRZBECK MESS-ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	5/7/2025	5/6/2027

10	Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	1/14/2026	1/13/2027
11	Amplifier	Tonscend	TAP01018050	SUWI-01-14-02	1/14/2026	1/13/2027
12	Amplifier	Tonscend	TAP18040048	SUWI-01-14-03	1/14/2026	1/13/2027
13	Wideband Radio Communication Tester	Anritsu	MT8820C	SUWI-01-26-01	7/29/2026	7/28/2027
14	Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	11/20/2025	11/19/2026
15	Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-09	7/29/2026	7/28/2027
16	Radio Communication Analyzer	StarPoint	SP9500E	SUWI-01-28-06	11/21/2025	11/20/2026
17	Signal Generator	ROHDE&SCHWARZ	SMB100A	SUWI-01-08-01	1/14/2026	1/13/2027
18	DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	1/14/2026	1/13/2027
19	Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2/11/2026	2/10/2027
20	Measurement Software	Tonscend	JS32-RE 4.0.0.0	SUWI-02-09-06	NCR	NCR
21	RF Control unit	Tonscend	JS0806-1	SUWI-02-20-01	NCR	NCR
22	RFCables	Tonscend	NA	SUWI-01-03-02	1/15/2026	1/14/2027

SAR

Test Platform: SPEAG DASY Professional

Software Reference: DASY52 52.10.4(1527); SEMCAD X 14.6.14(7483)

Item	Equipment	Manufacturer	Model	Serial Number	Calibration Date	Due date of calibration
1	Test Phantom	SPEAG	SAM Twin	1143	NCR	NCR
2	Test Phantom	SPEAG	SAM Twin	2155	NCR	NCR
3	DAE	SPEAG	DAE4	1374	2026-02-02	2027-02-01
4	E-Field Probe	SPEAG	EX3DV4	3793	2026-04-08	2027-04-07
5	E-Field Probe	SPEAG	EX3DV4	3982	2026-01-12	2027-01-11
6	Validation Kits	SPEAG	CLA13	1032	2026-02-18	2029-02-17
7	Validation Kits	SPEAG	D750V3	1214	2025-04-01	2028-03-31
8	Validation Kits	SPEAG	D835V2	4d105	2025-10-14	2026-10-13
9	Validation Kits	SPEAG	D1750V2	1105	2023-11-03	2026-11-02
10	Validation Kits	SPEAG	D1950V3	1138	2025-10-15	2028-10-15
11	Validation Kits	SPEAG	D2300V2	1096	2025-04-01	2028-03-31
12	Validation Kits	SPEAG	D2450V2	733	2025-10-15	2026-10-14
13	Validation Kits	SPEAG	D2600V2	1158	2025-03-31	2028-03-30
14	Validation Kits	SPEAG	D5GHzV2	1165	2023-08-23	2026-08-22
15	Dielectric parameter probes	SPEAG	DAKS-3.5	0005	2026-06-08	2027-06-07
16	Vector Network Analyzer and Vector Reflectometer	SPEAG	DAKS_VNA R140	0140913	2026-06-08	2027-06-07
17	Universal Radio	R&S	CMW500	111637	2026-01-15	2027-01-14

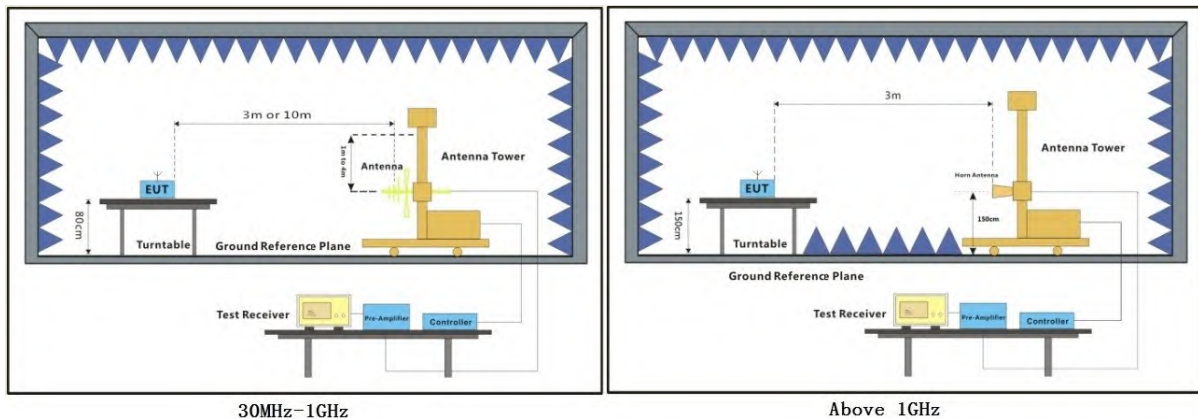
	Communication Tester					
18	RF Bi-Directional Coupler	Agilent	86205-60001	MY31400031	NCR	NCR
19	Signal Generator	R&S	SMB100A	182393	2026-01-14	2027-01-13
20	Preamplifier	Qiji	YX28980933	202104001	NCR	NCR
21	USB Average Power Sensor	Keysight	U2002H	MY5639004	2026-08-25	2027-08-24
22	USB Average Power Sensor	Agilent	U2002H	MY48200110	2025-11-20	2026-11-19
23	USB Power Sensor	KEYSIGHT	U8481A	MZ52460001	2026-06-16	2027-06-15
24	USB Power Sensor	KEYSIGHT	U8481A	MZ52460007	2026-06-16	2027-06-15
25	Attenuator	SHX	TS2-3dB	30704	NCR	NCR
26	Coaxial low pass filter	Mini-Circuits	VLF-2500(+)	NA	NCR	NCR
27	Coaxial low pass filter	Microlab Fxr	LA-F13	NA	NCR	NCR
28	DC POWER SUPPLY	SAKO	SK1730SL5A	NA	NCR	NCR
29	Speed reading thermometer	DTM SPEZLAL	DTM3000	NA	2026-09-16	2027-09-15
30	Humidity and Temperature Indicator	ASONE	THA-02L	2201-1017	2026-09-16	2027-09-15

Remark: NCR=No Calibration Requirement.

5 Description of Tests

5.1 Radiated Emissions which fall in the restricted bands

5.1.1 Test Setup Diagram



5.1.2 Measurement Procedure and Data

- 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.
- 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.
- 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.
- 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.
- 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.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- 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

Remark 2: 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.

Remark 3: The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for Peak detection (PK) and Average detection (AV) at frequency above 1GHz.

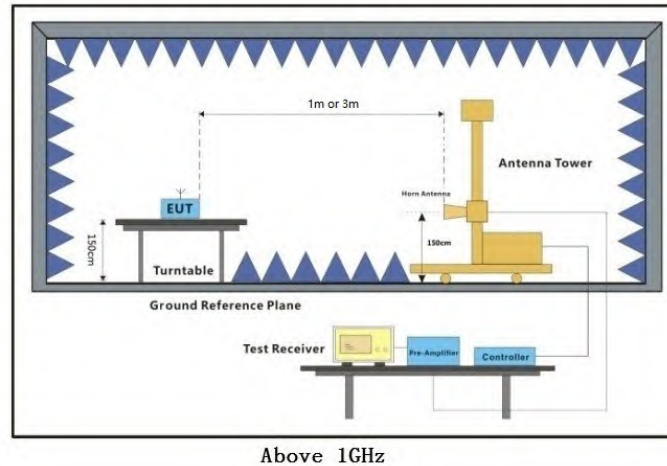
Remark 4: For fundamental and harmonic signal measurement, the resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is $\geq 1/T$ (Duty cycle $< 98\%$) or 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.

5.1.3 Measurement Procedure and Data

Please Refer to Appendix for Details

5.2 Radiated Spurious Emissions Above 1GHz

5.2.1 Test Setup Diagram



5.2.2 Measurement Procedure and Data

- a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5m above the ground at a 3m fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3m away from the interference-receiving antenna from 1GHz to 18GHz, and 1m away from the interference-receiving antenna above 18GHz.
- b. The interference-receiving antenna was mounted on the variable-height antenna tower, with its boresight facing the EUT throughout the test.
- c. The antenna height is varied from 1m to 4m 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.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. Test the EUT in the lowest channel, the middle channel, the Highest channel.
- g. 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.
- h. Repeat above procedures until all frequencies measured was complete.

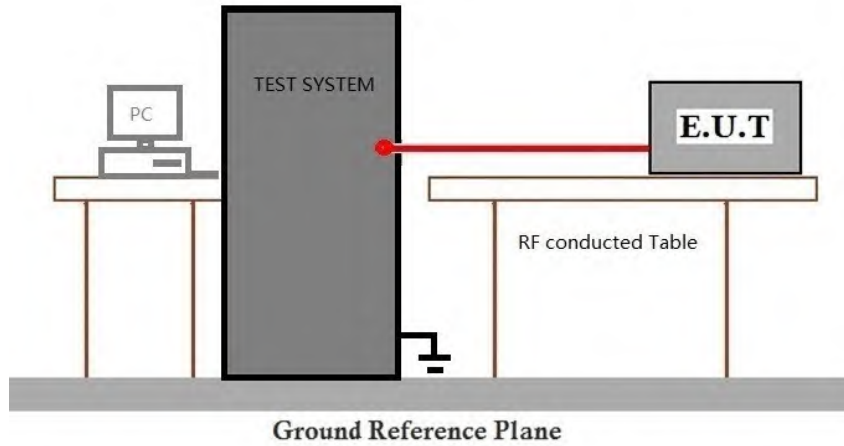
Remark: 1. Scan from 1GHz to 10th harmonic of the highest frequency or 40 GHz, whichever is lower. 2. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average 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. 3. For the frequency above 18GHz, testing had been executed under all test modes, only the worst-case test curve is displayed in the report. 4. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s).

5.2.3 Measurement Procedure and Data

Please Refer to Appendix for Details

5.3 Maximum Conducted Output Power

5.3.1 Test Setup Diagram

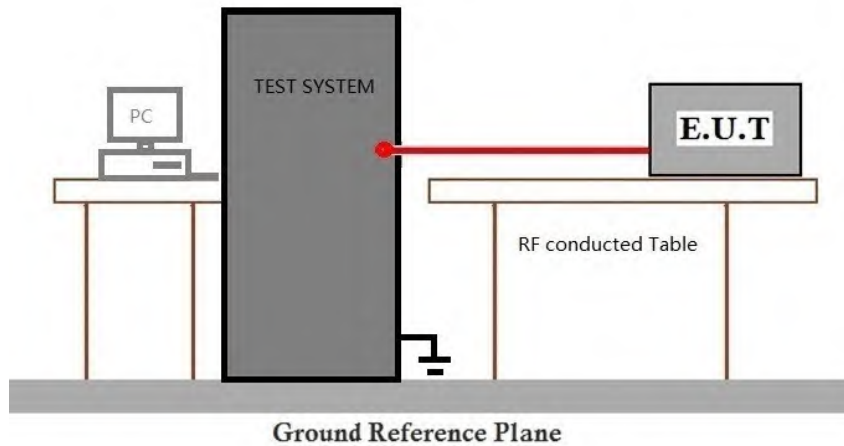


5.3.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.4 Minimum 6dB Bandwidth

5.4.1 Test Setup Diagram

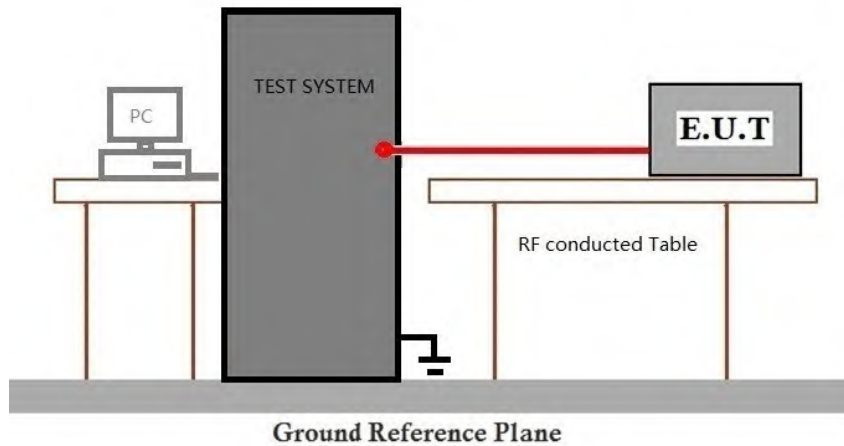


5.4.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.5 Power Spectral Density

5.5.1 Test Setup Diagram

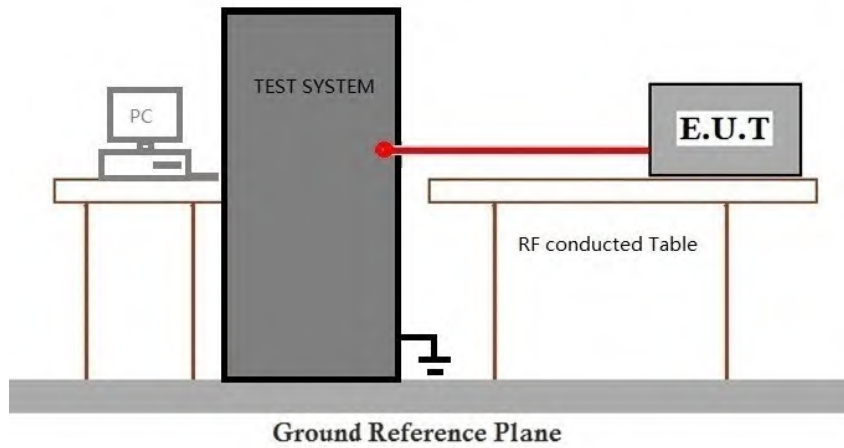


5.5.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.6 Conducted Band Edges Measurement

5.6.1 Test Setup Diagram

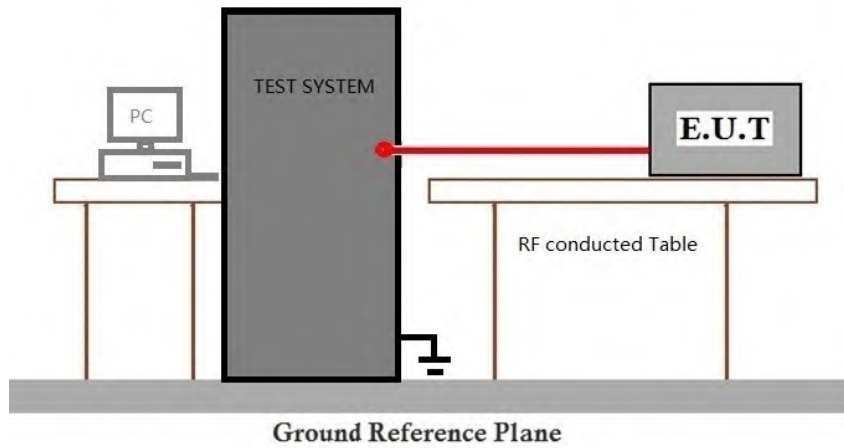


5.6.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.7 Conducted Spurious Emissions

5.7.1 Test Setup Diagram

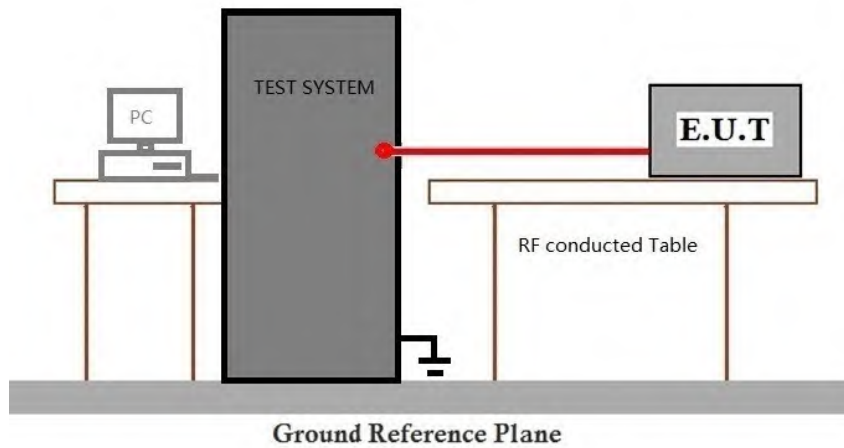


5.7.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.8 20dB Bandwidth

5.8.1 Test Setup Diagram

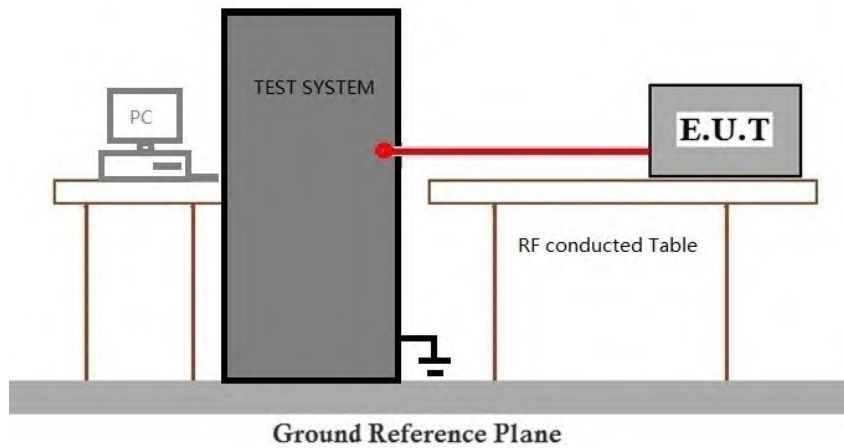


5.8.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.9 Carrier Frequencies Separation

5.9.1 Test Setup Diagram

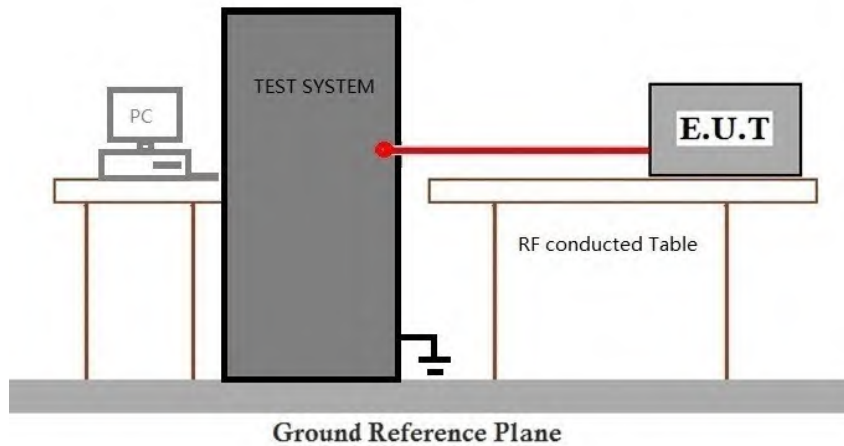


5.9.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.10 Hopping Channel Number

5.10.1 Test Setup Diagram

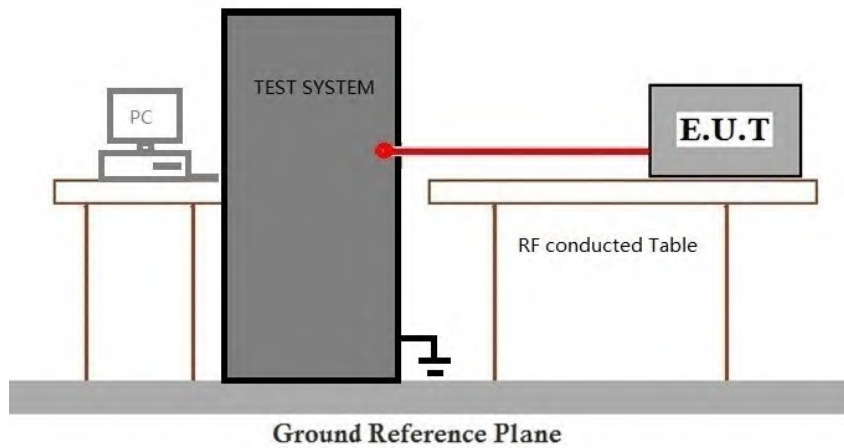


5.10.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.11 Dwell Time

5.11.1 Test Setup Diagram

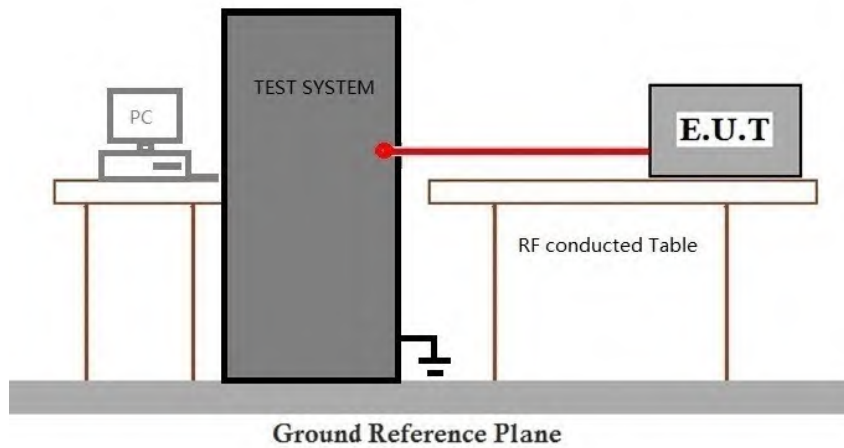


5.11.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.12 Duty Cycle

5.12.1 Test Setup Diagram

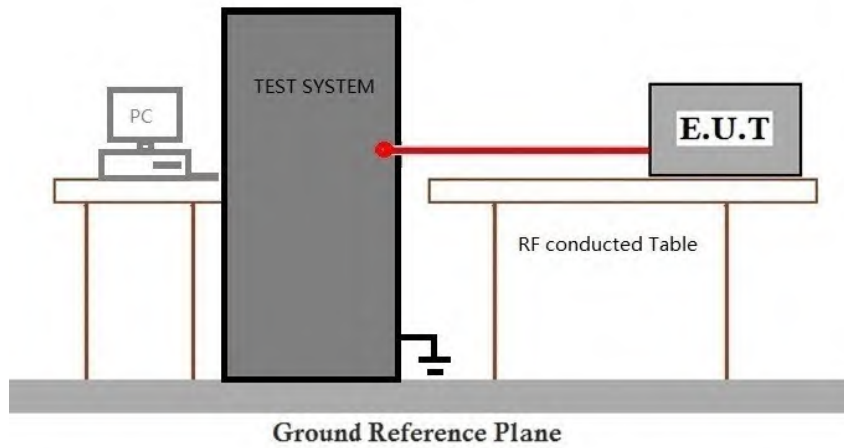


5.12.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.13 99% Bandwidth

5.13.1 Test Setup Diagram

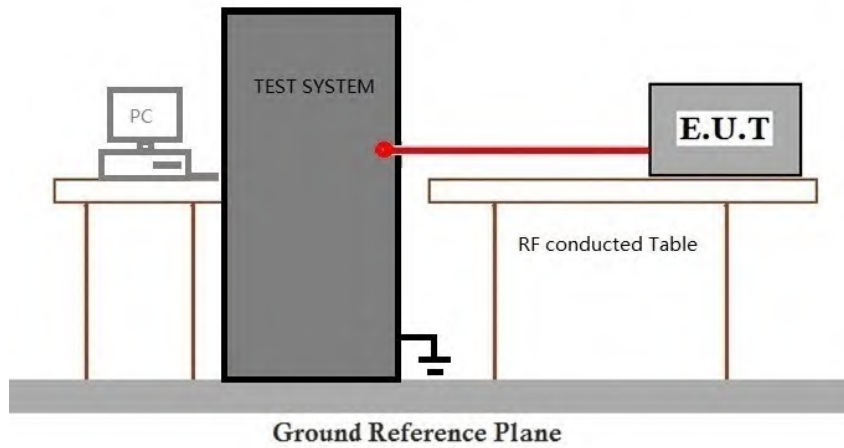


5.13.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.14 26dB Emission Bandwidth

5.14.1 Test Setup Diagram

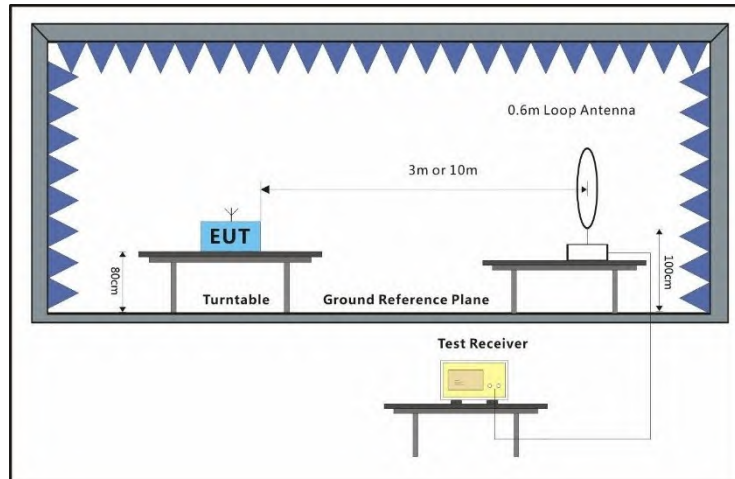


5.14.2 Measurement Procedure and Data

Please Refer to Appendix for Details

5.15 Emission Mask

5.15.1 Test Setup Diagram



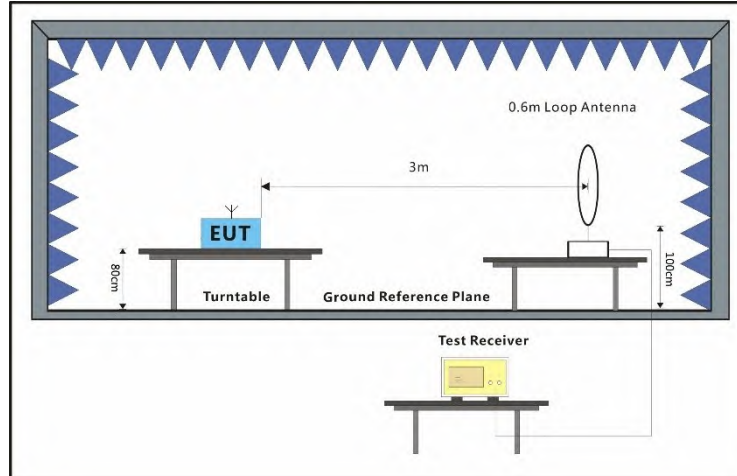
5.15.2 Measurement Procedure and Data

For testing performed with the loop antenna, the center of the loop was positioned 1 m above the ground and positioned with its plane vertical at the specified distance from the EUT. During testing the loop was rotated about its vertical axis for maximum response at each azimuth and also investigated with the loop positioned in the horizontal plane. Only the worst position of vertical was shown in the report.

Please Refer to Appendix for Details

5.16 Radiated Emissions (9kHz-30MHz)

5.16.1 Test Setup Diagram



5.16.2 Measurement Procedure and Data

- For below 30MHz, the EUT was placed on the top of a rotating table 0.8m above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3m away from the interference-receiving antenna which was mounted on the antenna tower 1m above the ground.
- For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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 quasi-peak method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- 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.
- Repeat above procedures until all frequencies measured was complete.

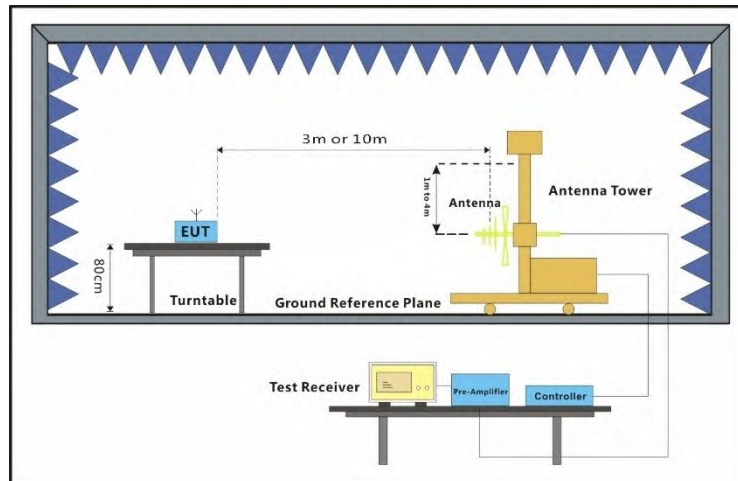
Remark:

- Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only below 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.

Please Refer to Appendix for Details

5.17 Radiated Emissions (30MHz-1GHz)

5.17.1 Test Setup Diagram



5.17.2 Measurement Procedure and Data

- For below 1GHz, the EUT was placed on the top of a rotating table 0.8m above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3m or 10m away from the interference-receiving antenna, which was mounted on the variable-height antenna tower.
- The antenna height is varied from 1m to 4m 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.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- 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 quasi-peak method as specified and then reported in a data sheet.
- Test the EUT in the lowest channel, the middle channel, the Highest channel.
- 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.
- Repeat above procedures until all frequencies measured was complete.

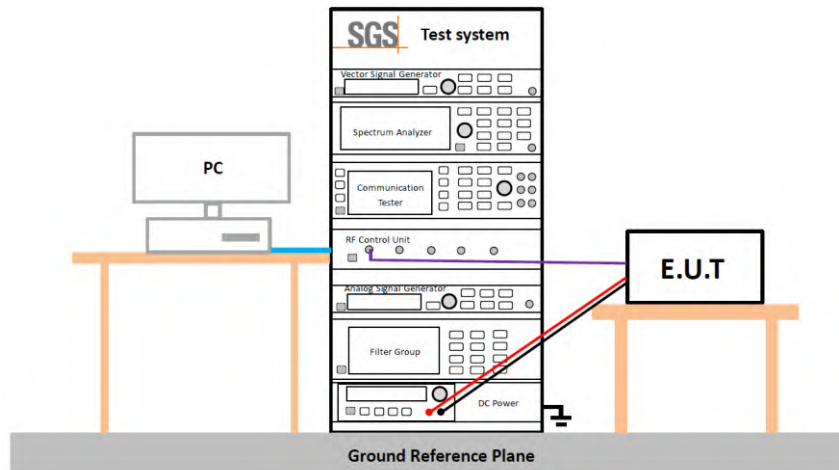
Remark:

- The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the worst-case test curve is displayed.

Please Refer to Appendix for Details

5.18 Effective (Isotropic) Radiated Power of Transmitter

5.18.1 Test Setup Diagram



5.18.2 Measurement Procedure and Data

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 5.8.4

Calculate power in dBm by the following formula:

$ERP \text{ (dBm)} = \text{Conducted Power (dBm)} + \text{antenna gain (dBd)}$

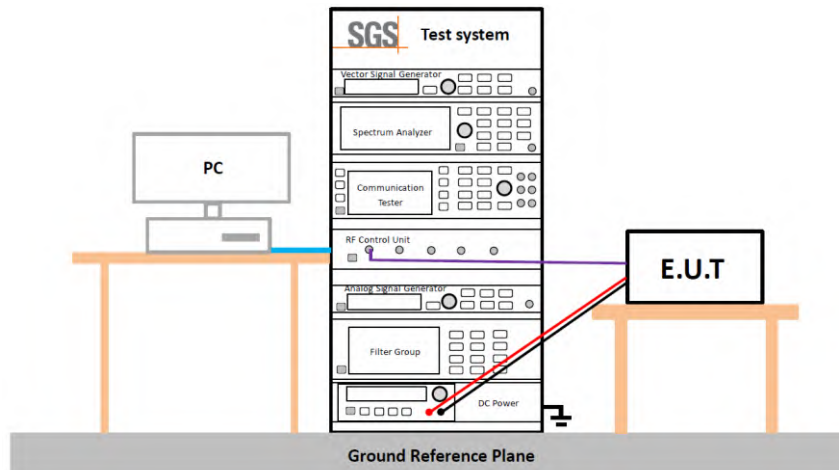
$EIRP \text{ (dBm)} = \text{Conducted Power (dBm)} + \text{antenna gain (dBi)}$

$EIRP = ERP + 2.15 \text{ dB}$

Please Refer to Appendix for Details

5.19 Occupied Bandwidth

5.19.1 Test Setup Diagram



5.19.2 Measurement Procedure and Data

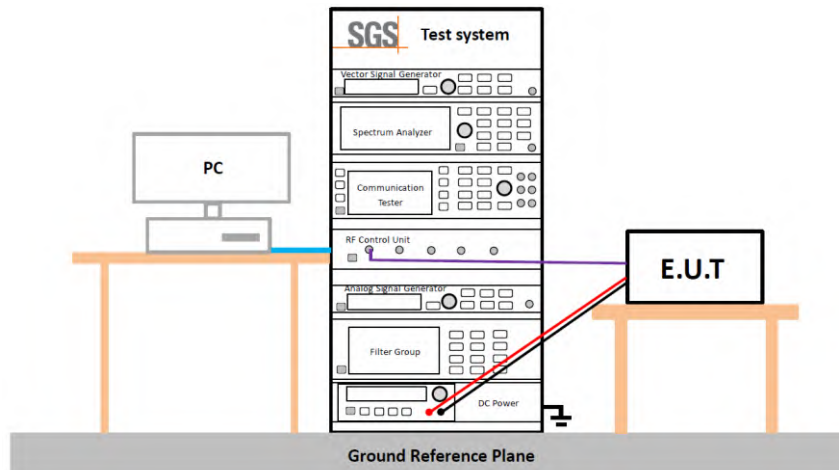
Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 4.2 & 4.3

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured. The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel, middle channel and high channel). The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts. The resolution bandwidth shall be set to as close to 1 percent of the selected span as is possible without being below 1 percent. The video bandwidth shall be set to 3 times the resolution bandwidth. Video averaging is not permitted. Where practical, a sampling detector shall be used since a peak or, peak hold, may produce a wider bandwidth than actual. The trace data points are recovered and are directly summed in linear terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 percent of the total is reached and that frequency recorded. The process is repeated for the highest frequency data points. This frequency is recorded. The span between the two recorded frequencies is the occupied bandwidth.

Please Refer to Appendix for Details

5.20 Band Edge at Antenna Terminals

5.20.1 Test Setup Diagram



5.20.2 Measurement Procedure and Data

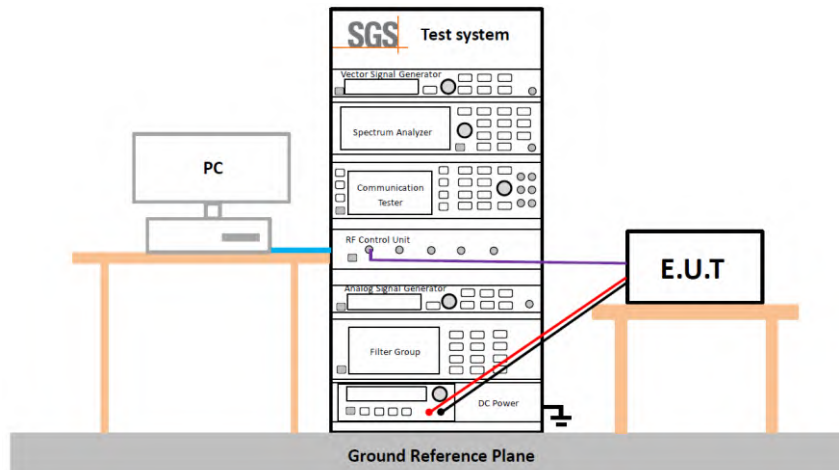
Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 6.0

The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at two frequencies (low channel and high channel).in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of 100kHz or 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed. The EUT emission bandwidth is measured as the width of the signal between two points, outside of which all emission are attenuated at least 26dB below the transmitter power. The video bandwidth of the spectrum analyzer was set at thrice the resolution bandwidth. Detector Mode was set to rms.

Please Refer to Appendix for Details

5.21 Spurious And Harmonic Emissions at Antenna Terminal

5.21.1 Test Setup Diagram



5.21.2 Measurement Procedure and Data

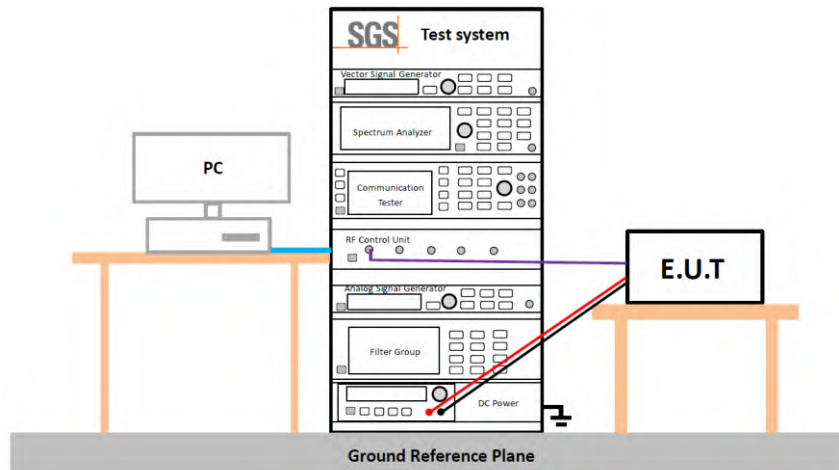
Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 6.0

The transmitter output was connected to a calibrated coaxial cable and Spectrum analyzer, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel). The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least $43 + 10 \log(P)$ dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

Please Refer to Appendix for Details

5.22 Peak-Average Ratio

5.22.1 Test Setup Diagram



5.22.2 Measurement Procedure and Data

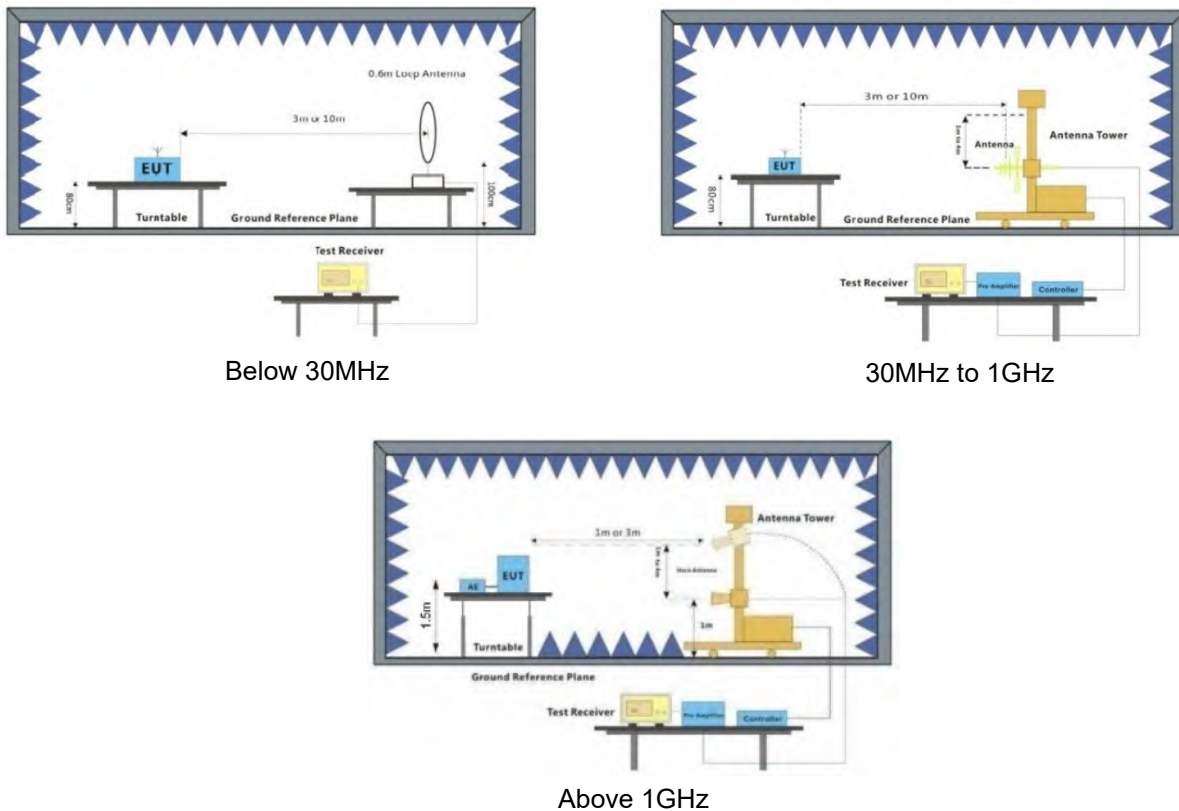
Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 5.7.2

A peak to average ratio measurement is performed at the conducted port of the EUT. For WCDMA signals, the spectrum analyzers Complementary Cumulative Distribution Function (CCDF) measurement profile is used to determine the largest deviation between the average and the peak power of the EUT in a given bandwidth. The CCDF curve shows how much time the peak waveform spends at or above a given average power level. The percent of time the signal spends at or above the level defines the probability for that particular power level. For GSM signals, an average and a peak trace are used on a spectrum analyzer to determine the largest deviation between the average and the peak power of the EUT in a bandwidth greater than the emission bandwidth. The traces are generated with the spectrum analyzer set to zero span mode.

Please Refer to Appendix for Details

5.23 Field Strength of Spurious Radiation

5.23.1 Test Setup Diagram



5.23.2 Measurement Procedure and Data

Measurement Procedure: FCC KDB 971168 D01 V03r01 Section 5.8

Below 1GHz test procedure as below:

- 1). The EUT was powered ON and placed on a 80cm high table in the chamber. The antenna of the transmitter was extended to its maximum length.
- 2). The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.
- 3). Steps 1) and 2) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
- 4). Test the EUT in the lowest channel, the middle channel ,the Highest channel.
- 5). The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, Only the test worst case mode is recorded in the report.

6). Repeat above procedures until all frequencies measured was complete.

$E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + (\text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)} - \text{AMP(dB)})$

$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \log D - 104.8$; where D is the measurement distance in meters

Above 1GHz test procedure as below:

1) Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber

2) Calculate power in dBm by the following formula:

$E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + (\text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)} - \text{AMP(dB)})$

$\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20 \log D - 104.8$; where D is the measurement distance in meters

3). Test the EUT in the lowest channel, the middle channel the Highest channel

4). The radiation measurements are performed in X, Y, Z axis positioning. And found the X axis positioning which it is worse case, Only the test worst case mode is recorded in the report.

5). Repeat above procedures until all frequencies measured was complete

Remark1: Reference test setup 2

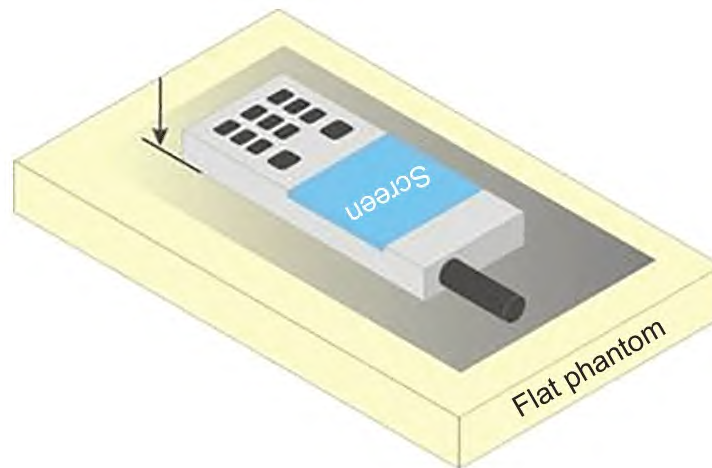
Remark2: The emission below 18G were measured at a 3m test distance, while emissions above 18GHz were measured at a 1m test distance. At a measurement distance of 1 meter the limit line was increased by $20 \cdot \text{LOG}(3/1) = 9.54 \text{ dB}$

Please Refer to Appendix for Details

5.24 SAR

5.24.1 Description of Test Position

When SAR measurement is necessary for hand-held devices that do not transmit while at the head or torso, a flat phantom may be used. To assess this type of device, the device shall be placed directly against the flat phantom as shown in the below Figure, for the sides of the device that are in contact with the hand for the intended use.



5.24.2 Measurement Procedure and Data

5.24.2.1 Scanning procedure

Step 1: Power reference measurement

The “reference” and “drift” measurements are located at the beginning and end of the batch process. They measure the field drift at one single point in the liquid over the complete procedure.

Step 2: Area scan

The SAR distribution at the exposed side of the head was measured at a distance of 4mm from the inner surface of the shell. The area covered the entire dimension of the head and the horizontal grid spacing was 15mm*15mm or 12mm*12mm or 10mm*10mm. Based on the area scan data, the area of the maximum absorption was determined by spline interpolation.

Step 3: Zoom scan

Around this point, a volume of 32mm*32mm*30mm ($f \leq 2\text{GHz}$), 30mm*30mm*30mm (f for 2-3GHz) and 24mm*24mm*22mm (f for 5-6GHz) was assessed by measuring 5x5x7 points ($f \leq 2\text{GHz}$), 7x7x7 points (f for 2-3GHz) and 7x7x12 points (f for 5-6GHz). On this basis of this data set, the spatial peak SAR value was evaluated with the following procedure:

The data at the surface was extrapolated, since the centre of the dipoles is 2.0mm away from the tip of the probe and the distance between the surface and the lowest measuring point is 1.2mm. (This can be variable. Refer to the probe specification). The extrapolation was based on a least square algorithm. A polynomial of the fourth order was calculated through the points in z-axes. This polynomial was then used to evaluate the points between the surface and the probe tip. The maximum interpolated value was searched with a straight-forward algorithm. Around this maximum the SAR values averaged over the spatial volumes (1g or 10g) were computed using the 3D-Spline interpolation algorithm. The volume was integrated with the trapezoidal algorithm. One thousand points were interpolated to calculate the average. All neighbouring volumes were evaluated until no neighboring volume with a higher average value was found.

If the zoom scan measured as specified in the preceding paragraphs complies with both i) and ii), or if the psSAR is below 0,1 W/kg, no additional measurements are needed.

i) The smallest horizontal distance from the local SAR peaks to all points 3 dB below the SAR peak shall be larger than the horizontal grid steps in both x- and y-directions (Δx , Δy). This shall be checked for the measured zoom scan plane conformal to the phantom at the distance zM1. The minimum distance shall be recorded in the SAR test report.

ii) The ratio of the SAR at the second measured point (M2) to the SAR at the closest measured point (M1) at the x-y location of the measured maximum SAR value shall be at least 30 %. This ratio (in %) shall be recorded in the SAR test report.

			$\leq 3 \text{ GHz}$	$> 3 \text{ GHz}$
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface			$5 \pm 1 \text{ mm}$	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5 \text{ mm}$
Maximum probe angle from probe axis to phantom surface normal at the measurement location			$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}			$\leq 2 \text{ GHz: } \leq 15 \text{ mm}$ $2 - 3 \text{ GHz: } \leq 12 \text{ mm}$	$3 - 4 \text{ GHz: } \leq 12 \text{ mm}$ $4 - 6 \text{ GHz: } \leq 10 \text{ mm}$
			When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	
Maximum zoom scan spatial resolution: Δx_{Zoom} , Δy_{Zoom}			$\leq 2 \text{ GHz: } \leq 8 \text{ mm}$ $2 - 3 \text{ GHz: } \leq 5 \text{ mm}^*$	$3 - 4 \text{ GHz: } \leq 5 \text{ mm}^*$ $4 - 6 \text{ GHz: } \leq 4 \text{ mm}^*$
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		$\leq 5 \text{ mm}$	$3 - 4 \text{ GHz: } \leq 4 \text{ mm}$ $4 - 5 \text{ GHz: } \leq 3 \text{ mm}$ $5 - 6 \text{ GHz: } \leq 2 \text{ mm}$
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	$\leq 4 \text{ mm}$	$3 - 4 \text{ GHz: } \leq 3 \text{ mm}$ $4 - 5 \text{ GHz: } \leq 2.5 \text{ mm}$ $5 - 6 \text{ GHz: } \leq 2 \text{ mm}$
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		$\geq 30 \text{ mm}$	$3 - 4 \text{ GHz: } \geq 28 \text{ mm}$ $4 - 5 \text{ GHz: } \geq 25 \text{ mm}$ $5 - 6 \text{ GHz: } \geq 22 \text{ mm}$

Step 4: Power reference measurement (drift)

The Power Drift Measurement job measures the field at the same location as the most recent power reference measurement job within the same procedure, and with the same settings. The indicated drift is mainly the variation of the DUT's output power and should vary max $\pm 5 \%$.

5.24.2.2 Data storage

The DASY software stores the acquired data from the data acquisition electronics as raw data (in microvolt readings from the probe sensors), together with all necessary software parameters for the data evaluation (probe calibration data, liquid parameters and device frequency and modulation data) in measurement files with the extension "DAE". The software evaluates the desired unit and format for output each time the data is visualized or exported. This allows verification of the complete software setup even after the measurement and allows correction of incorrect parameter settings. For example, if a measurement has been performed with a wrong crest factor parameter in the device setup, the parameter can be corrected afterwards and the data can be re-evaluated. The measured data can be visualized or exported in different units or formats, depending on the selected probe type ([V/m], [A/m], [°C], [m W/g], [m W/cm²], [dBrel], etc.). Some of these units are not available in certain situations or show meaningless results, e.g., a SAR output in a lossless media will always be zero. Raw data can also be exported to perform the evaluation with other software packages.

5.24.2.3 Data Evaluation by SEMCAD

The SEMCAD software automatically executes the following procedures to calculate the field units from the microvolt readings at the probe connector. The parameters used in the evaluation are stored in the configuration modules of the software:

Probe parameters:	- Sensitivity	Normi, ai0, ai1, ai2
- Conversion factor	ConvFi	
- Diode compression point	Dcpi	
Device parameters:	- Frequency	f
- Crest factor	cf	
Media parameters:	- Conductivity	ε
- Density	ρ	

These parameters must be set correctly in the software. They can be found in the component documents, or they can be imported into the software from the configuration files issued for the DASY components. In the direct measuring mode of the multimeter option, the parameters of the actual system setup are used. In the scan visualization and export modes, the parameters stored in the corresponding document files are used.

The first step of the evaluation is a linearization of the filtered input signal to account for the compression characteristics of the detector diode. The compensation depends on the input signal, the diode type and the DC-transmission factor from the diode to the evaluation electronics.

If the exciting field is pulsed, the crest factor of the signal must be known to correctly compensate for peak power. The formula for each channel can be given as:

$$V_i = U_i + U_i^2 \cdot cf / dcp_i$$

With V_i = compensated signal of channel I (I = x, y, z)

U_i = input signal of channel I (I = x, y, z)

cf = crest factor of exciting field (DASY parameter)

dcp I = diode compression point (DASY parameter)

From the compensated input signals the primary field data for each channel can be evaluated:

E-field probes:

$$E_i = (V_i / \text{Norm}_i \cdot \text{ConvF})^{1/2}$$

H-field probes:

$$H_i = (V_i)^{1/2} \cdot (a_{i0} + a_{i1}f + a_{i2}f^2) / f$$

With V_i = compensated signal of channel i ($i = x, y, z$)

Norm_i = sensor sensitivity of channel i ($i = x, y, z$)

[mV/(V/m)²] for E-field Probes

ConvF = sensitivity enhancement in solution

a_{ij} = sensor sensitivity factors for H-field probes

f = carrier frequency [GHz]

E_i = electric field strength of channel i in V/m

H_i = magnetic field strength of channel i in A/m

The RSS value of the field components gives the total field strength (Hermitian magnitude):

$$E_{\text{tot}} = (E_x^2 + E_y^2 + E_z^2)^{1/2}$$

The primary field data are used to calculate the derived field units.

$$\text{SAR} = (E_{\text{tot}}^2 \cdot \sigma) / (\epsilon \cdot 1000)$$

with SAR = local specific absorption rate in mW/g

E_{tot} = total field strength in V/m

σ = conductivity in [mho/m] or [Siemens/m]

ϵ = equivalent tissue density in g/cm³

Note that the density is normally set to 1 (or 1.06), to account for actual brain density rather than the density of the simulation liquid. The power flow density is calculated assuming the excitation field to be a free space field.

$$P_{\text{pwe}} = E_{\text{tot}}^2 / 3770 \quad \text{or} \quad P_{\text{pwe}} = H_{\text{tot}}^2 \cdot 37.7$$

with P_{pwe} = equivalent power density of a plane wave in mW/cm²

E_{tot} = total electric field strength in V/m

H_{tot} = total magnetic field strength in A/m

Please Refer to Appendix for Details



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6 Test Setup Photo

Refer to Appendix C.3 - Test Setup Photo for SUCR2607000644TL

7 EUT Constructional Details (EUT Photos)

Refer to Appendix C.1_External Photos for SUCR2607000644TL and Appendix C.2_Internal Photos for SUCR2607000644TL

8 Introduction of Test Data Reuse

8.1 Description of EUT

The EUT is a Wireless data POS System with WWAN2/3/4G, 2.4G WIFI, 5G WIFI, NFC and Bluetooth technologies.

Testing was performed on the parent model and is used to support the application for the parent and variants identified in this report based on the test plan submitted.

This application for certification is leveraging the data reuse procedures from KDB 484596 D01 based on parent FCC ID: 2AH25T5F1AC to cover variant model FCC ID: 2AH25T5F1AA.

8.2 Reference Detail

Band	Rule Part	Test item	Parent model		Variant model	
			FCC ID 2AH25T5F1AC		FCC ID 2AH25T5F1AA	
			Data	Reference Report No.	Data Referencing	Remark
GSM850/UMTS Band 5/LTE Band 5/26(824~849 MHz)	Part 22.913(a)(5)	Effective (Isotropic) Radiated Power Output Data	Full Test	SUCR260700064209	Y	Check Worse
	Part 22.913(d)	Peak-Average Ratio	Full Test		Y	Check Worse
	Part 2.1049	Bandwidth	Full Test		Y	Check Worse
	Part 22.917(a)	Band Edges Compliance	Full Test		Y	Check Worse
	Part 22.917(a)	Spurious Emission at Antenna Terminals	Full Test		Y	Check Worse
	Part 22.917(a)	Field Strength of Spurious Radiation	Full Test		Y	Check Worse
	Part 22.355	Frequency Stability	Full Test		Y	reuse parent data
GSM 1900/UMTS Band 2 /LTE Band 2/25	Part 24.232(c)	Effective (Isotropic) Radiated Power Output Data	Full Test		Y	Check Worse
	Part 24.232(d)	Peak-Average Ratio	Full Test		Y	Check Worse
	Part 2.1049	Bandwidth	Full Test		Y	Check Worse
	Part 24.238(a)	Band Edges Compliance	Full Test		Y	Check Worse
	Part 24.238(a)	Spurious Emission at Antenna Terminals	Full Test		Y	Check Worse
	Part 24.238(a)	Field Strength of Spurious Radiation	Full Test		Y	Check Worse
	Part 24.235	Frequency Stability	Full Test		Y	reuse parent data
UMTS Band 4 /LTE Band 4 /66	Part 27.50(d)(4)	Effective (Isotropic) Radiated Power Output Data	Full Test		Y	Check Worse
	Part 27.50(d)(5)	Peak-Average Ratio	Full Test		Y	Check Worse
	Part 2.1049	Bandwidth	Full Test		Y	Check Worse
	Part 27.53(h)	Band Edges Compliance	Full Test		Y	Check Worse
	Part 27.53(h)	Spurious Emission at Antenna Terminals	Full Test		Y	Check Worse
	Part 27.53(h)	Field Strength of Spurious Radiation	Full Test		Y	Check Worse
	Part 27.54	Frequency Stability	Full Test		Y	reuse parent data
LTE Band 12/17	Part 27.50(c)(10)	Effective (Isotropic) Radiated Power Output Data	Full Test		Y	Check Worse
	N/A	Peak-Average Ratio	Full Test		Y	Check Worse

	Part 2.1049	Bandwidth	Full Test	Y	Check Worse
	Part 27.53(g)	Band Edges Compliance	Full Test	Y	Check Worse
	Part 27.53(g)	Spurious Emission at Antenna Terminals	Full Test	Y	Check Worse
	Part 27.53(g)	Field Strength of Spurious Radiation	Full Test	Y	Check Worse
	Part 27.54	Frequency Stability	Full Test	Y	reuse patrent data
LTE Band 13	Part 27.50(b)(10)	Effective (Isotropic) Radiated Power Output Data	Full Test	Y	Check Worse
	N/A	Peak-Average Ratio	Full Test	Y	Check Worse
	Part 2.1049	Bandwidth	Full Test	Y	Check Worse
	Part 27.53(c)	Band Edges Compliance	Full Test	Y	Check Worse
	Part 27.53(c)(f)	Spurious Emission at Antenna Terminals	Full Test	Y	Check Worse
	Part 27.53(c)(f)	Field Strength of Spurious Radiation	Full Test	Y	Check Worse
	Part 27.54	Frequency Stability	Full Test	Y	reuse patrent data
LTE Band 7/38/41	Part 27.50(h)(2)	Effective (Isotropic) Radiated Power Output Data	Full Test	Y	Check Worse
	N/A	Peak-Average Ratio	Full Test	Y	Check Worse
	Part 2.1049	Bandwidth	Full Test	Y	Check Worse
	Part 27.53(m)(4)	Band Edges Compliance	Full Test	Y	Check Worse
	Part 27.53(m)	Spurious Emission at Antenna Terminals	Full Test	Y	Check Worse
	Part 27.53(m)	Field Strength of Spurious Radiation	Full Test	Y	Check Worse
	Part 27.54	Frequency Stability	Full Test	Y	reuse patrent data
LTE Band 26(814~824 MHz)	Part 90.635(b)	Transmitter Conducted Power Output	Full Test	Y	Check Worse
	N/A	Peak-Average Ratio	Full Test	Y	Check Worse
	Part 2.1049	Bandwidth	Full Test	Y	Check Worse
	Part 90.691(a)	Emission Mask	Full Test	Y	Check Worse
	Part 90.691	Spurious Emission at Antenna Terminals	Full Test	Y	Check Worse
	Part 90.691	Field Strength of Spurious Radiation	Full Test	Y	Check Worse
	Part 90.213	Frequency Stability	Full Test	Y	reuse patrent data
LTE Band 30	27.50(a)(3)	Effective (Isotropic) Radiated Power Output Data	Full Test	Y	Check Worse
	N/A	Peak-Average Ratio	Full Test	Y	Check Worse
	Part 2.1049	Bandwidth	Full Test	Y	Check Worse
	Part 27.53(a)(4)	Band Edges Compliance	Full Test	Y	Check Worse
	Part 27.53(a)(4)	Spurious Emission at Antenna Terminals	Full Test	Y	Check Worse
	Part 27.53(a)(4)	Field Strength of Spurious Radiation	Full Test	Y	Check Worse
	Part 27.54	Frequency Stability	Full Test	Y	reuse patrent data
LTE Band 71	Part 27.50(c)(10)	Effective (Isotropic) Radiated Power Output Data	Full Test	Y	Check Worse
	N/A	Peak-Average Ratio	Full Test	Y	Check Worse
	Part 2.1049	Bandwidth	Full Test	Y	Check Worse
	Part 27.53(g)	Band Edges Compliance	Full Test	Y	Check Worse
	Part 27.53(g)	Spurious Emission at Antenna Terminals	Full	Y	Check Worse

	Part 27.53(g)	Field Strength of Spurious Radiation	Full Test		Y	Check Worse
	Part 27.54	Frequency Stability	Full Test		Y	reuse patrent data
BLE	15.207	Conducted Emissions at AC Power Line (150kHz-30MHz)	Full Test	SUCR260700064203	Y	reuse patrent data
	15.205 & 15.209	Radiated Emissions which fall in the restricted bands	Full Test		Y	Check Worse
	15.205 & 15.209	Radiated Spurious Emissions Below 1GHz	Full Test		Y	reuse patrent data
	15.205 & 15.209	Radiated Spurious Emissions Above 1GHz	Full Test		Y	Check Worse
	15.247(b)(3)	Maximum Conducted Output Power	Full Test		Y	Check Worse
	15.247a(2)	Minimum 6dB Bandwidth	Full Test		Y	Check Worse
	15.247(e)	Power Spectral Density	Full Test		Y	Check Worse
	15.247(d)	Conducted Band Edges Measurement	Full Test			Check Worse
	15.247(d)	Conducted Spurious Emissions	Full Test		Y	Check Worse
BT	15.207	Conducted Emissions at AC Power Line (150kHz-30MHz)	Full Test	SUCR260700064204	Y	reuse patrent data
	15.205 & 15.209	Radiated Emissions which fall in the restricted bands	Full Test		Y	Check Worse
	15.205 & 15.209	Radiated Spurious Emissions Below 1GHz	Full Test		Y	reuse patrent data
	15.205 & 15.209	Radiated Spurious Emissions Above 1GHz	Full Test		Y	Check Worse
	15.247(b)(1)	Maximum Conducted Output Power	Full Test		Y	Check Worse
	15.247(a)(1)	20dB Bandwidth	Full Test		Y	Check Worse
	15.247(a)(1)	Carrier Frequencies Separation	Full Test		Y	Check Worse
	15.247a(1)(iii)	Hopping Channel Number	Full Test		Y	Check Worse
	15.247a(1)(iii)	Dwell Time	Full Test		Y	Check Worse
	15.247(d)	Conducted Band Edges Measurement	Full Test		Y	Check Worse
	15.247(d)	Conducted Spurious Emissions	Full Test		Y	Check Worse
2.4G WIFI	15.207	Conducted Emissions at AC Power Line (150kHz-30MHz)	Full Test	SUCR260700064205	Y	reuse patrent data
	15.205 & 15.209	Radiated Emissions which fall in the restricted bands	Full Test		Y	Check Worse
	15.205 & 15.209	Radiated Spurious Emissions Below 1GHz	Full Test		Y	reuse patrent data
	15.205 & 15.209	Radiated Spurious Emissions Above 1GHz	Full Test		Y	Check Worse
	15.247(b)(3)	Maximum Conducted Output Power	Full Test		Y	Check Worse
	15.247a(2)	Minimum 6dB Bandwidth	Full Test		Y	Check Worse
	15.247(e)	Power Spectral Density	Full Test		Y	Check Worse
	15.247(d)	Conducted Band Edges Measurement	Full Test		Y	Check Worse
	15.247(d)	Conducted Spurious Emissions	Full Test		Y	Check Worse
5G WIFI	15.407 b(9)	Conducted Emissions at AC Power Line (150kHz-30MHz)	Full Test	SUCR260700064206	Y	reuse patrent data
	15.407(b)	Radiated Emissions (Below 1GHz)	Full Test			reuse patrent data
	15.407(b)	Radiated Emissions (Above 1GHz)	Full Test			Check Worse per frequency band
	15.407(b)	Radiated Emissions which fall in the restricted bands	Full Test			Check Worse per frequency band
	C63.10	Duty Cycle	Full Test		Y	Check Worse per frequency

						band
	C63.10	99% Bandwidth	Full Test			Check Worse per frequency band
	15.407 (a)	26dB Emission Bandwidth	Full Test			Check Worse per frequency band
	15.407(e)	Minimum 6 dB Bandwidth (5.725-5.85 GHz band)	Full Test			Check Worse per frequency band
	15.407 (a)	Maximum Conducted Output Power	Full Test		Y	Check Worse per frequency band
	15.407 (a)	Power Spectral Density	Full Test			Check Worse per frequency band
	KDB 905462 D02	DFS	Full Test		Y	reuse patrent data
NFC	15.207	Conducted Emissions at Mains Terminals (150kHz-30MHz)	Full Test	SUCR260700064208	Y	reuse patrent data
	15.225(a)&(b)&(C)	Emission Mask	Full Test		Y	Check Worse
	15.225(d) & 15.209	Radiated Emissions (9kHz-30MHz)	Full Test		Y	Check Worse
	15.225(d) & 15.209	Radiated Emissions (30MHz-1GHz)	Full Test		Y	Check Worse
	15.215	20dB Bandwidth	Full Test		Y	Check Worse
	15.225(e)	Frequency tolerance	Full Test		Y	reuse patrent data
EMI	Part 15B	AC Conducted Emission	Full Test	SUCR260700064202	N	Full Test
		Radiated Emission	Full Test		N	Full Test
SAR	2.1093	SAR Testing	Full Test	SUCR260700064201	Y	Check Worse

8.3 Spot Check Verification Data

Conducted power test and radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

All test procedures follow the related section of parent report.

a) EMC Test Data Spot-Checks

These exhibits for the variant certification shall meet the following criteria:

- Spot-check measurements must correspond to the worst-case scenario reported in the parent device filing, i.e., for conditions closest to non-compliance.
- Spot-check measurements must always show compliance with the rule part(s) applicable to the test under consideration.
- Spot-check measurements may show deviations from the reference data, as specified in sub-sections 3.2.1 and 3.2.2. These specifications differ between EMC data and RF exposure test data.

For EMC compliance test data (e.g., spurious emissions limits), the deviation between the variant and the parent model, for both field and power quantities, is expressed as:

$$d_{dB} = | V_{dB} - R_{dB} | (1) ,$$

where V_{dB} is the variant spot-check level in dB, and R_{dB} is the corresponding reference measurement level in dB for the parent model.

The spot-check will be deemed acceptable when:

$$d_{dB} \leq d_{dBmax} (2) ,$$

where d_{dBmax} is the maximum deviation d_{dB} allowed for the EMC data for the spot-check to be considered acceptable. The definition of d_{dBmax} is based on “how far” the reference data R_{dB} is from the compliance threshold C_{dB} (also expressed in dB), for the test under consideration. More specifically, if M_{dB} is the margin in dB from the compliance limit, expressed as

$$M_{dB} = |C_{dB} - R_{dB}| \quad (3),$$

then d_{dBmax} is defined as a function of M_{dB} , which increases linearly from 3 dB to 6 dB (Fig. 2), according to:

$$d_{dBmax}(M_{dB}) = \begin{cases} (3 + M_{dB}/20) \text{ dB} & , \text{ for } 0 \leq M_{dB} \leq 60 \text{ dB} \\ 6 \text{ dB} & , \text{ for } M_{dB} > 60 \text{ dB} \end{cases} \quad (4).$$

b) The Spot-Check Plan for RF Exposure Test Data

By expressing all the quantities in linear units, an RF exposure spot-check must be accepted based on the maximum relative difference between the variant and the parent model test results.

The spot-check acceptance criterion is formulated in terms of the total exposure ratio (TER) to easily include RF exposure evaluations based on MPE and evaluations for simultaneous transmissions, (that may include a mix of MPE and SAR evaluations but not for incident power density related to frequencies above 6 GHz).

Accordingly, proceeding in a similar way to the previous section but operating in linear units, the relative difference (expressed as a percentage) between the TER of the variant (TER_V) and that of the parent model used as a reference (TER_R) is defined as

$$d_{TER} = |TER_V - TER_R| / TER_R \quad (5),$$

and the acceptance criterion for the spot-check on the variant will be:

$$d_{TER} \leq d_{TERmax} \quad (6),$$

where d_{TERmax} , to be defined further below, is the maximum acceptable d_{TER} , and all the quantities are expressed in linear units.

It is also important to note that if the MPE is considered to refer to a field quantity and not power, the corresponding TER is to be computed as the square of the field ratio, consistent with the other terms that refer to power levels.

The value of d_{TERmax} , the maximum d_{TER} allowed for the spot-check to be deemed acceptable, is established based on the compliance margin M corresponding to the worst-case test scenario (i.e., the most challenging from the compliance perspective) for the parent model.

The margin M is defined as

$$M = TER_T - TER_R = 1 - TER_R \quad (7),$$

where TER_T is the TER corresponding to the compliance threshold, which is always $TER_T = 1$.

For instance, for a general population evaluation, $SAR \leq 1.6 \text{ W/kg}$, as required for any compliant measurement. Thus, since $TER = SAR/1.6$, and $0 \leq TER \leq 1$, then M in eq. (7) will always be a positive number because TER_R cannot be larger than 1 for the parent model to be compliant.

The threshold d_{TERmax} is defined as function of the margin M to provide values between 25% and 50%, linearly increasing between $M = 0.5$ (50% of the compliance limit) and $M = 0.75$ (75% of the compliance limit), in accordance with the following expression:

$$d_{TERmax}(M) = \begin{cases} 0.25 & , \text{ for } 0 \leq M < 0.5 \\ M - 0.25 & , \text{ for } 0.5 \leq M < 0.75 \\ 0.5 & , \text{ for } 0.75 \leq M \end{cases} \quad (8).$$

8.4 Spot Check Results

Test Item	Mode	2AH25T5F1AC Parent Worst mode Test Result (Average)	2AH25T5F1AA Variant Check Test Result (Average)	Tune up (Average)	Deviation (dB)	Limit (dB)
Maximum Conducted Output Power (dBm)	GSM850	33.39	33.50	34.00	0.11	3 + MdB /20 (0 ≤ MdB ≤ 60 dB)
	GSM1900	30.04	30.11	31.00	0.07	
	WCDMA W2	23.96	23.95	24.00	0.01	
	WCDMA W4	23.95	23.87	24.00	0.08	
	WCDMA W5	23.87	23.89	24.00	0.02	
	LTE B2	23.81	23.78	24.00	0.03	
	LTE B4	23.41	23.66	24.00	0.25	
	LTE B5	23.82	23.66	24.00	0.16	
	LTE B7	23.97	23.81	24.00	0.16	
	LTE B12	23.05	23.24	24.00	0.19	
	LTE B13	23.40	23.11	24.00	0.29	
	LTE B17	23.14	23.22	24.00	0.08	
	LTE B25	23.86	23.75	24.00	0.11	
	LTE B26A	23.68	23.74	24.00	0.06	
	LTE B26B	23.58	23.63	24.00	0.05	
	LTE B30	23.24	23.25	24.00	0.01	
	LTE B38	23.97	23.75	24.00	0.22	
	LTE B41	23.75	23.75	24.50	0.00	
	LTE B66	23.70	23.81	24.00	0.11	
	LTE B71	23.48	23.62	24.00	0.14	
	BT EDR	9.39	9.30	10.00	0.09	
	BLE 1M	7.23	7.18	8.00	0.05	
	11B	18.02	18.00	19.00	0.02	
	11G	19.20	19.15	20.00	0.05	
	11N20	18.29	18.21	19.00	0.08	
	11N40	18.36	18.25	19.00	0.11	
	11A Band I	18.06	18.16	19.00	0.10	
	11A Band II-A	18.39	18.30	19.00	0.09	
	11A Band II-C	18.52	18.49	19.00	0.03	
	11A Band III	10.20	10.30	11.00	0.10	
	11N20 Band I	18.11	18.18	19.00	0.07	
	11N20 Band II-A	18.10	18.02	19.00	0.08	
	11N20 Band II-C	18.35	18.26	19.00	0.09	
	11N20 Band III	10.14	10.03	11.00	0.11	
	11N40 Band I	18.28	18.17	19.00	0.11	
	11N40 Band II-A	18.23	18.27	19.00	0.04	
	11N40 Band II-C	18.41	18.49	19.00	0.08	
	11N40 Band III	10.40	10.51	11.00	0.11	
	11AC20 Band I	18.12	18.00	19.00	0.12	

	11AC20 Band II-A	18.44	18.36	19.00	0.08
	11AC20 Band II-C	18.54	18.44	19.00	0.10
	11AC20 Band III	10.31	10.36	11.00	0.05
	11AC40 Band I	18.23	18.34	19.00	0.11
	11AC40 Band II-A	18.55	18.47	19.00	0.08
	11AC40 Band II-C	18.39	18.35	19.00	0.04
	11AC40 Band III	10.12	10.24	11.00	0.12
	11AC80 Band I	18.13	18.07	19.00	0.06
	11AC80 Band II-A	17.96	17.91	19.00	0.05
	11AC80 Band II-C	18.20	18.32	19.00	0.12
	11AC80 Band III	10.02	10.08	11.00	0.06

Test Item	Mode	2AH25T5F1AC Parent Worst mode Test Result	2AH25T5F1AA Variant Check Test Result		Deviation (dB)	Limit (dB)
Peak-Average Ratio	GSM850	9.620	9.620	0 ≤ MdB ≤ 60 Db	0.000	3.17
Bandwidth		0.243	0.248		0.005	3.00
Band Edges Compliance		-17.460	-15.010		2.450	3.22
Spurious Emission at Antenna Terminals		-29.210	-26.270		2.940	3.81
Field Strength of Spurious Radiation		-50.490	-49.130		1.360	4.87
Peak-Average Ratio	WCDMA W2	3.120	2.990		0.130	3.49
Bandwidth		4.149	4.114		0.035	3.00
Band Edges Compliance		-22.320	-23.100		0.780	3.47
Spurious Emission at Antenna Terminals		-45.520	-45.780		0.260	4.63
Field Strength of Spurious Radiation		-36.860	-39.420		2.560	4.19
Peak-Average Ratio	LTE B4	5.640	5.670		0.030	3.37
Bandwidth		17.892	17.892		0.000	3.00
Spurious Emission at Antenna Terminals		-49.480	-49.530		0.050	4.82
Field Strength of Spurious Radiation		-53.340	-49.020		4.320	5.02
Peak-Average Ratio	LTE B12	6.020	5.860		0.160	3.35
Bandwidth		8.927	8.929		0.002	3.00
Spurious Emission at Antenna Terminals		-36.480	-33.540		2.940	4.17
Field Strength of Spurious Radiation		-50.930	-55.460		4.530	4.90
Peak-Average Ratio	LTE B13	4.660	5.730		1.070	3.42
Bandwidth		8.942	8.950		0.008	3.00
Band Edges Compliance		-36.640	-39.650		3.010	4.18
Spurious Emission at Antenna Terminals		-39.490	-42.080		2.590	4.32
Field Strength of Spurious Radiation		-45.660	-49.220		3.560	4.63
Peak-Average Ratio	LTE B7	5.660	5.470		0.190	3.37
Bandwidth		8.956	8.939		0.017	3.00
Spurious Emission at Antenna Terminals		-37.980	-40.930		2.950	3.65
Field Strength of Spurious Radiation		-37.500	-38.920		1.420	3.63
Peak-Average Ratio	LTE B30	5.840	5.370		0.470	3.36

Bandwidth		8.963	8.939		0.024	3.00
Band Edges Compliance		-33.670	-34.430		0.760	3.43
Spurious Emission at Antenna Terminals		-46.870	-44.610		2.260	3.34
Field Strength of Spurious Radiation		-43.620	-45.520		1.900	3.18
Peak-Average Ratio		6.000	5.960		0.040	3.35
Bandwidth		17.847	17.806		0.041	3.00
Spurious Emission at Antenna Terminals		-50.290	-47.670		2.620	4.86
Field Strength of Spurious Radiation		-51.240	-48.050		3.190	4.91
Duty Cycle		1.790	2.010		0.220	3.00
Radiated Emissions which fall in the restricted bands		37.280	41.100		3.820	3.84
Radiated Spurious Emissions Above 1GHz		44.270	45.610		1.340	3.49
Minimum 6dB Bandwidth		0.679	0.684		0.005	3.01
Power Spectral Density		-8.800	-8.350		0.450	3.84
Conducted Band Edges Measurement		-48.410	-48.020		0.390	4.73
Conducted Spurious Emissions		-55.990	-59.500		3.510	5.11
Duty Cycle		1.100	1.110		0.010	3.00
Radiated Emissions which fall in the restricted bands		48.570	52.570		4.000	4.27
Radiated Spurious Emissions Above 1GHz		51.600	54.260		2.660	4.12
20dB Bandwidth		0.922	0.921		0.001	3.00
Carrier Frequencies Separation		1.010	1.000		0.010	3.00
Hopping Channel Number		79.000	79.000		0.000	6.20
Conducted Spurious Emissions		-49.990	-50.830		0.840	4.86
Duty Cycle		0.070	0.070		0.000	3.00
Radiated Emissions which fall in the restricted bands		50.500	48.130		2.370	3.18
Radiated Spurious Emissions Above 1GHz		44.490	45.350		0.860	3.48
Minimum 6dB Bandwidth		16.046	16.019		0.027	3.78
Power Spectral Density		-7.950	-10.770		2.820	3.80
Conducted Band Edges Measurement		-21.930	-24.820		2.890	3.08
Conducted Spurious Emissions		-35.090	-34.110		0.980	3.74
Duty Cycle		0.070	0.070		0.000	3.00
Radiated Emissions (Above 1GHz)		42.310	45.360		3.050	3.58
Radiated Emissions which fall in the restricted bands		43.810	45.760		1.950	3.51
99% Bandwidth		16.647	16.601		0.046	3.00
26dB Emission Bandwidth		23.974	24.355		0.381	3.00
Power Spectral Density		7.980	7.800		0.180	3.15
Radiated Emissions which fall in the restricted bands		46.950	45.860		1.090	3.35
99% Bandwidth		16.558	16.622		0.064	3.00

26dB Emission Bandwidth		23.466	24.798		1.332	3.00
Power Spectral Density		8.440	8.230		0.210	3.13
Radiated Emissions (Above 1GHz)		42.330	45.020		2.690	3.58
Radiated Emissions which fall in the restricted bands		61.720	59.830		1.890	3.33
99% Bandwidth	WIFI5G B3 11a	16.547	16.649		0.102	3.00
26dB Emission Bandwidth		22.090	24.829		2.739	3.00
Power Spectral Density		8.480	8.420		0.060	3.13
Radiated Emissions (Above 1GHz)		42.090	45.010		2.920	3.60
Radiated Emissions which fall in the restricted bands		54.220	55.950		1.730	3.70
99% Bandwidth	WIFI5G B4 11a	16.548	16.536		0.012	3.00
Minimum 6 dB Bandwidth (5.725-5.85 GHz band)		16.063	15.372		0.691	3.00
Power Spectral Density		-2.580	-2.290		0.290	4.63
Emission Mask		57.370	56.340	MdB > 60	1.030	6.00
Radiated Emissions (9kHz-30MHz)		52.770	55.800		3.030	3.84
Radiated Emissions (30MHz-1GHz)		28.700	27.200		1.500	3.57
20dB Bandwidth FCC		1.239	2.488	0 ≤ MdB ≤ 60 Db	1.249	3.00
99% Bandwidth IC		2.101	2.109		0.008	3.00
Test Item	Mode	2AH25T5F1AC Parent Worst mode Test Result	2AH25T5F1AA Variant Check Test Result	0 ≤ M < 0.5	dTER	Limit (dB)
SAR	LTE Band 41 Right side	2.872	2.794		0.0195	0.25

9 Appendix

一、 GSM850

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 GSM850_ERP

Band: GSM850								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	GSM	GSM	848.8	33.50	-1.74	29.61	<=38.45	Pass

Note1: ERP=Conducted Power+Antenna Gain-2.15

2. 99% & 26dB Bandwidth

2.1 Test Result

2.1.1 GSM850_OBW

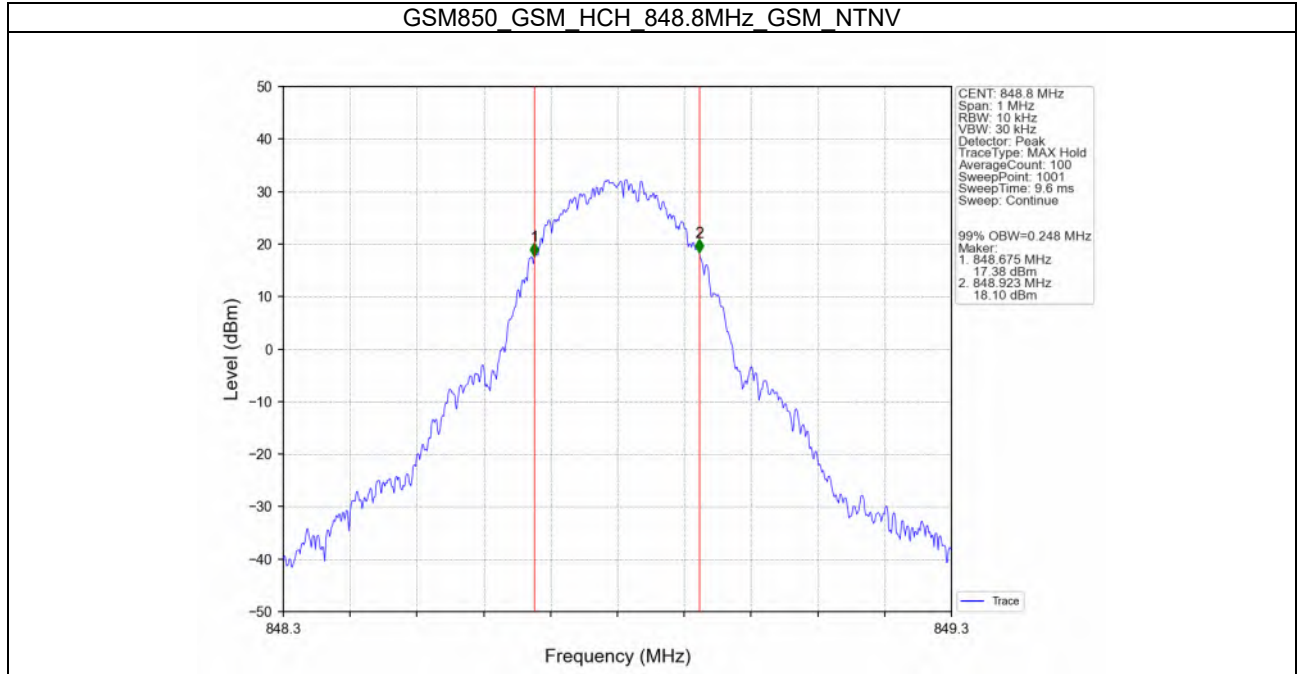
Band: GSM850						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	848.8	0.248	/	Pass

2.1.2 GSM850_XDB

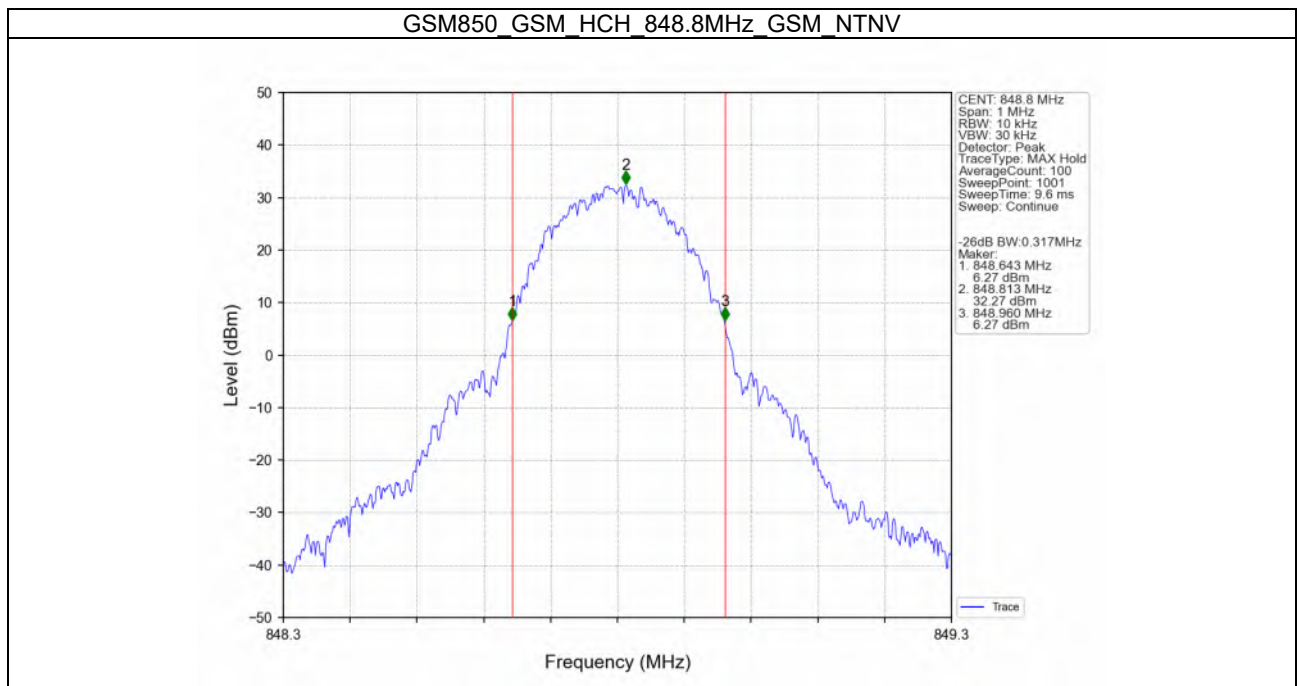
Band: GSM850						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	848.8	0.317	/	Pass

2.2 Test Graph

2.2.1 GSM850_OBW



2.2.2 GSM850_XDB



3. Peak-Average Ratio

3.1 Test Result

3.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	848.8	9.62	<=13	Pass

3.2 Test Graph

3.2.1 GSM850



4. Spurious Emission

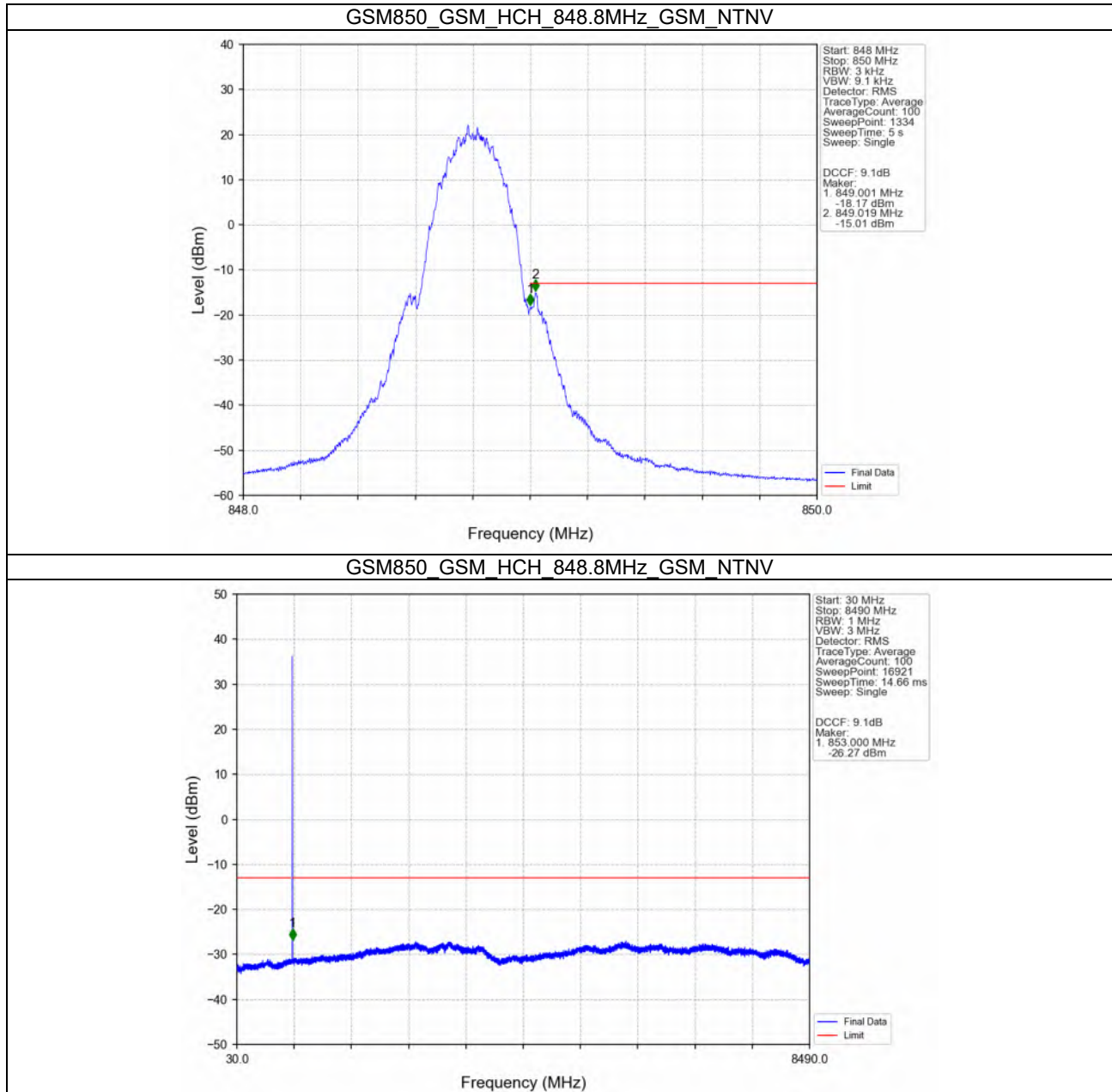
4.1 Test Result

4.1.1 GSM850

Band: GSM850						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	GSM	GSM	848.8	Refer To Test Graph		Pass

4.2 Test Graph

4.2.1 GSM850



**Test Band = GSM850****Test Channel = Low**

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1446.8	56.85	-49.08	23.84	-63.66	-13.00	50.66	Horizontal
2	2695.6	55.36	-47.08	27.24	-59.73	-13.00	46.73	Horizontal
3	4325.6	52.17	-45.42	30.10	-58.41	-13.00	45.41	Horizontal
4	6325.6	50.03	-43.73	33.75	-55.21	-13.00	42.21	Horizontal
5	7840.8	48.44	-41.13	36.68	-51.27	-13.00	38.27	Horizontal
6	8918.4	46.82	-39.75	37.74	-50.46	-13.00	37.46	Horizontal

Test Band = GSM850**Test Channel = Low**

Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF [dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1498.4	65.76	-49.09	24.10	-54.49	-13.00	41.49	Vertical
2	2160.4	64.44	-48.19	25.91	-53.10	-13.00	40.10	Vertical
3	3328.4	54.16	-45.71	28.07	-58.74	-13.00	45.74	Vertical
4	4700	50.95	-44.97	31.30	-57.98	-13.00	44.98	Vertical
5	6446.4	50.54	-43.58	34.18	-54.12	-13.00	41.12	Vertical
6	8744.8	48.30	-39.76	37.59	-49.13	-13.00	36.13	Vertical

二、 WCDMA W2

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 Band2_EIRP

Band: 2								
ENV	Mode		Frequency (MHz)	Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
	Network	Subset				Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	23.95	-0.85	23.10	<=33.01	Pass
Note1: EIRP=Conducted Power+Antenna Gain								

2. 99% & 26dB Bandwidth

2.1 Test Result

2.1.1 Band2_OBW

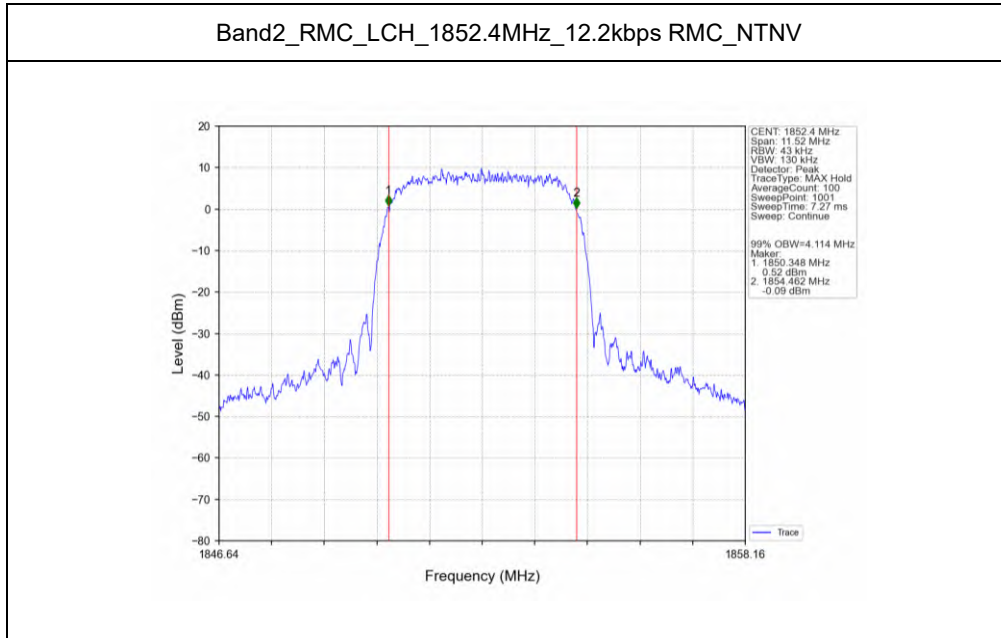
Band: 2						
ENV	Mode		Frequency (MHz)	99% Occupied Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	4.114	/	Pass

2.1.2 Band2_XDB

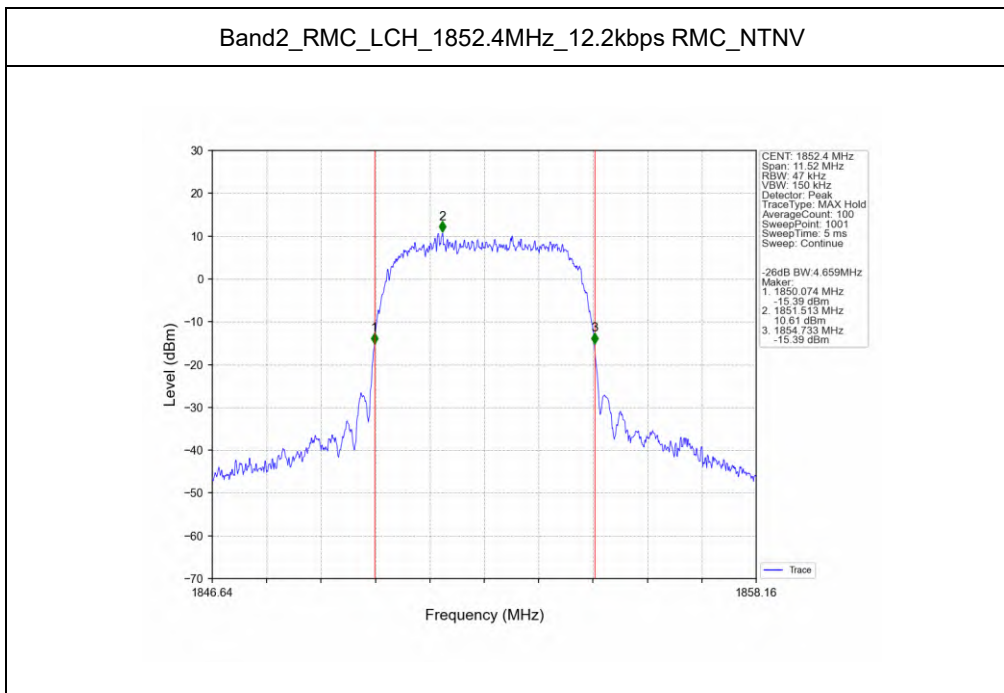
Band: 2						
ENV	Mode		Frequency (MHz)	26dB Bandwidth (MHz)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	4.659	/	Pass

2.2 Test Graph

2.2.1 Band2_OBW



2.2.2 Band2_XDB



3. Peak-Average Ratio

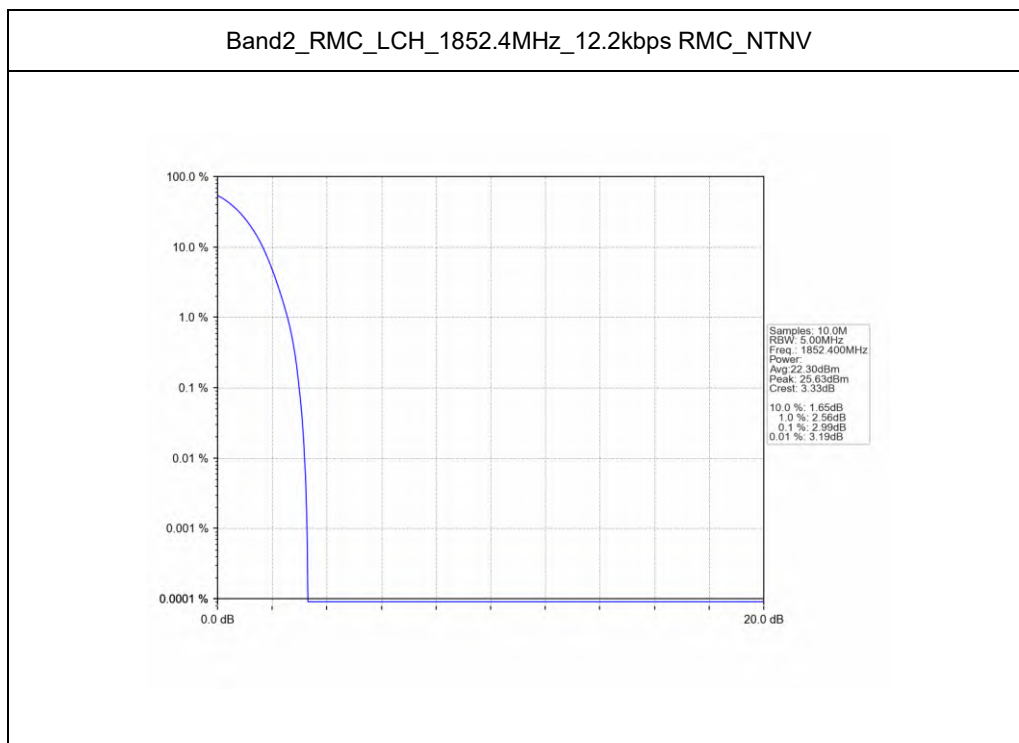
3.1 Test Result

3.1.1 Band2

Band: 2						
ENV	Mode		Frequency (MHz)	Peak-Average Ratio (dB)		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	2.99	<=13	Pass

3.2 Test Graph

3.2.1 Band2



4. Spurious Emission

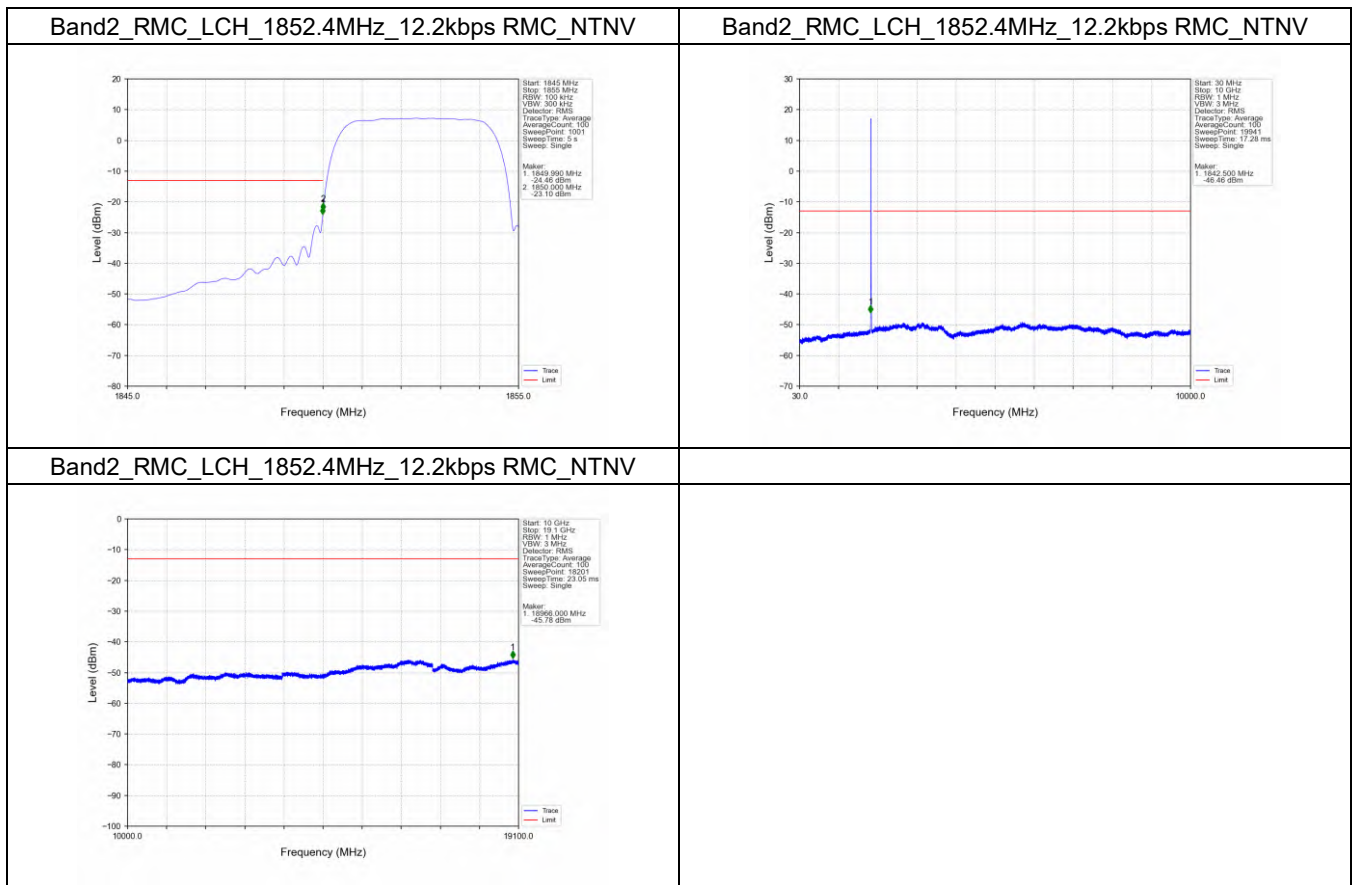
4.1 Test Result

4.1.1 Band2

Band: 2						
ENV	Mode		Frequency (MHz)	Spurious Emission		Verdict
	Network	Subset		Result	Limit	
NTNV	RMC	12.2kbps RMC	1852.4	Refer To Test Graph		Pass

4.2 Test Graph

4.2.1 Band2



**Test Band = WCDMA Band2_ TM1****Test Channel = Mid**

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3532.5	46.89	-45.20	28.60	-64.98	-13.00	51.98	Horizontal
2	5097	43.67	-44.95	31.90	-64.64	-13.00	51.64	Horizontal
3	7194.75	41.85	-42.59	36.17	-59.83	-13.00	46.83	Horizontal
4	9660	38.57	-38.14	38.72	-56.11	-13.00	43.11	Horizontal
5	12904.5	36.43	-35.34	39.96	-54.21	-13.00	41.21	Horizontal
6	17027.25	44.94	-30.93	40.70	-40.55	-13.00	27.55	Horizontal

Test Band = WCDMA Band2_ TM1**Test Channel = Mid**

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	4375.5	47.46	-45.40	30.25	-62.94	-13.00	49.94	Vertical
2	6333	42.65	-43.70	33.80	-62.51	-13.00	49.51	Vertical
3	8613	39.55	-40.01	37.40	-58.32	-13.00	45.32	Vertical
4	10710.75	37.34	-36.31	39.39	-54.84	-13.00	41.84	Vertical
5	14337.75	36.28	-34.65	40.28	-53.35	-13.00	40.35	Vertical
6	17985	43.67	-31.03	43.20	-39.42	-13.00	26.42	Vertical

三、 LTE B4

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B4_20MHz_EIRP

Band: 4 / Bandwidth: 20MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	1732.5	1	50	23.66	-0.33	23.33	<=30	Pass
Note1: EIRP=Conducted Power+Antenna Gain								

2. 99% & 26dB Bandwidth

2.1 Test Result

2.1.1 Band4_OBW

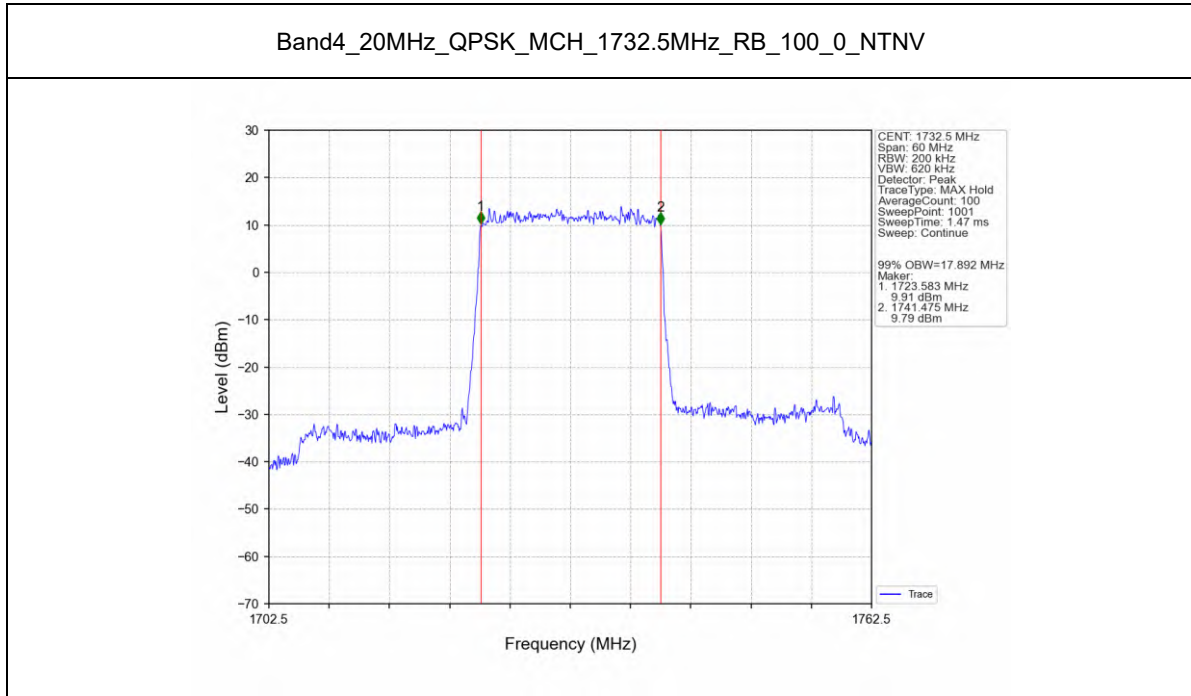
Band: 4 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
20	QPSK	1732.5	100	0	17.892	/	Pass

2.1.2 Band4_XDB

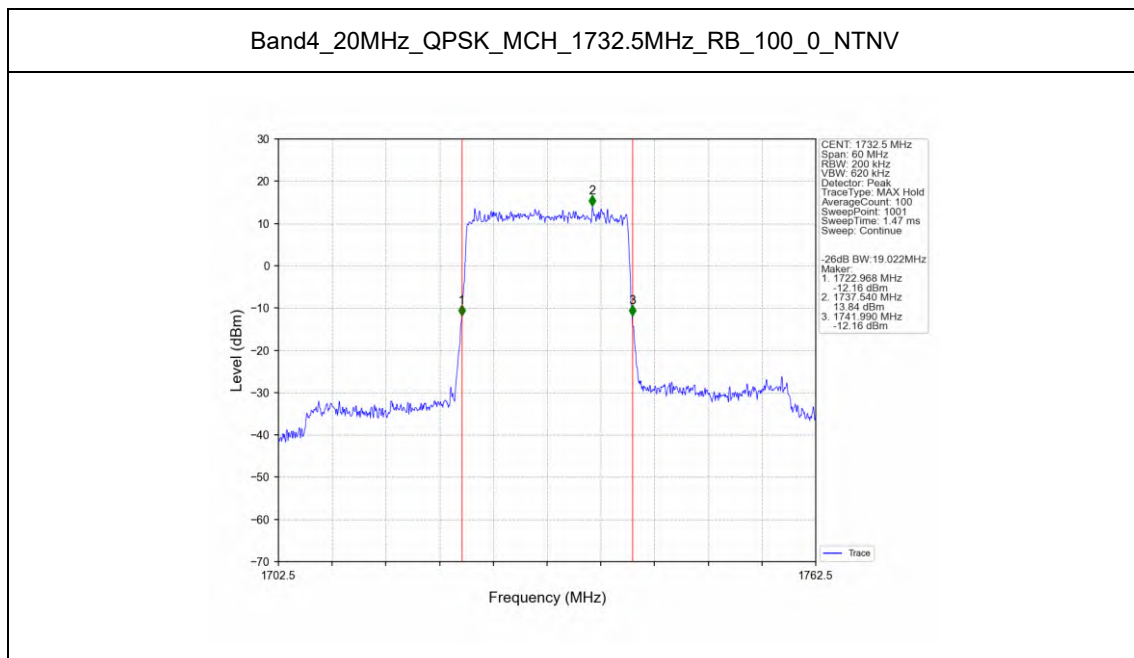
Band: 4 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
20	QPSK	1732.5	100	0	19.022	/	Pass

2.2 Test Graph

2.2.1 Band4_OBW



2.2.2 Band4_XDB



3. Peak-Average Ratio

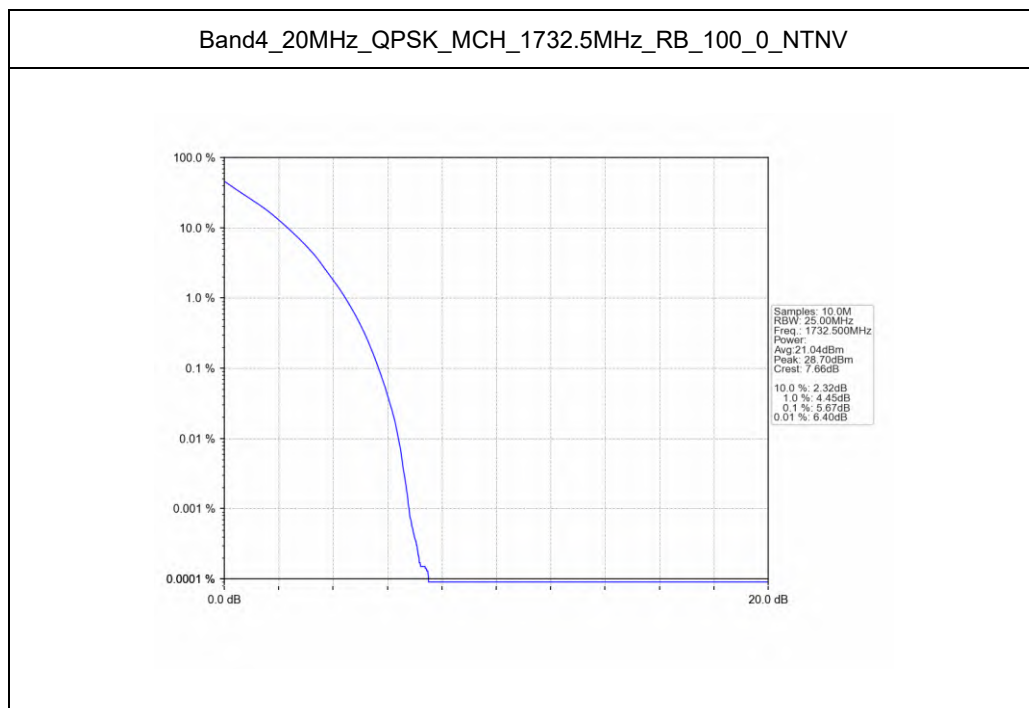
3.1 Test Result

3.1.1 B4_20MHz

Band: 4 / Bandwidth: 20MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	1732.5	100	0	5.67	<=13	Pass

3.2 Test Graph

3.2.1 B4_20MHz



4. Spurious Emission

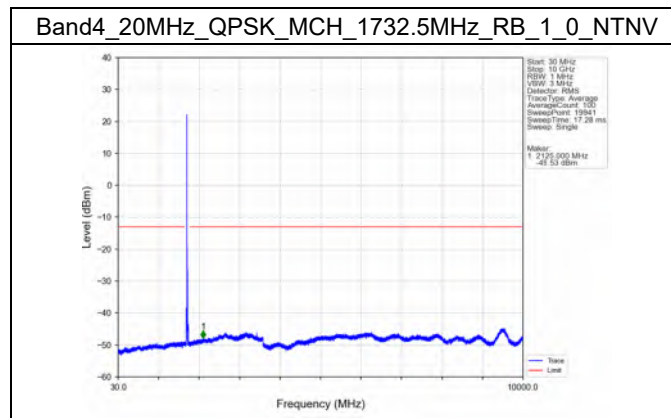
4.1 Test Result

4.1.1 B4_20MHz

Band: 4 / Bandwidth: 20MHz / NTN						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	1732.5	1	0	Refer To Test Graph		Pass

4.2 Test Graph

4.2.1 B4_20MHz



**Test Band = LTE Band4_ TM1****Test Channel = High**

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3594.75	46.98	-44.73	28.43	-64.58	-13.00	51.58	Horizontal
2	5642.25	42.70	-44.41	32.44	-64.53	-13.00	51.53	Horizontal
3	7631.25	41.10	-41.84	36.35	-59.65	-13.00	46.65	Horizontal
4	10711.5	37.10	-36.31	39.39	-55.08	-13.00	42.08	Horizontal
5	13896.75	35.48	-34.48	40.49	-53.77	-13.00	40.77	Horizontal
6	17876.25	34.46	-30.96	42.75	-49.02	-13.00	36.02	Horizontal

Test Band = LTE Band4_ TM1**Test Channel = High**

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	4380.75	46.33	-45.40	30.28	-64.04	-13.00	51.04	Vertical
2	6790.5	41.59	-43.16	34.84	-61.99	-13.00	48.99	Vertical
3	9572.25	39.78	-38.37	38.61	-55.24	-13.00	42.24	Vertical
4	11348.25	36.95	-36.08	39.50	-54.89	-13.00	41.89	Vertical
5	14451	36.31	-34.83	40.30	-53.48	-13.00	40.48	Vertical
6	17989.5	33.70	-31.03	43.20	-49.39	-13.00	36.39	Vertical

四、 LTE B12

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B12_10MHz_ERP

Band: 12 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	707.5	1	25	23.24	-1.26	19.83	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

2. 99% & 26dB Bandwidth

2.1 Test Result

2.1.1 Band12_OBW

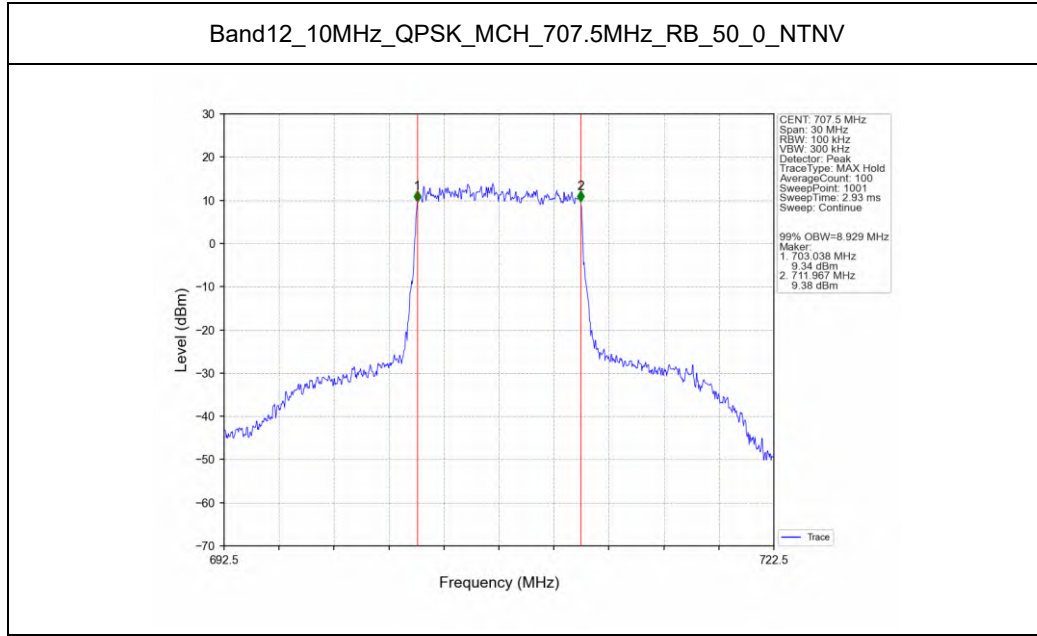
Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
10	QPSK	707.5	50	0	8.929	/	Pass

2.1.2 Band12_XDB

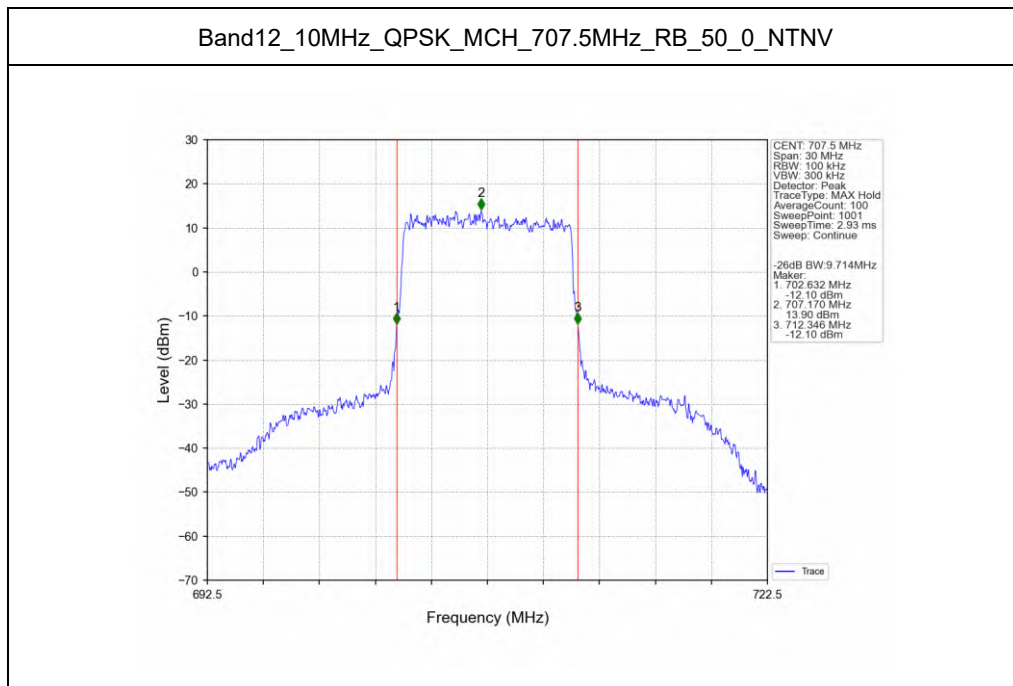
Band: 12 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
10	QPSK	707.5	50	0	9.714	/	Pass

2.2 Test Graph

2.2.1 Band12_OBW



2.2.2 Band12_XDB



3. Peak-Average Ratio

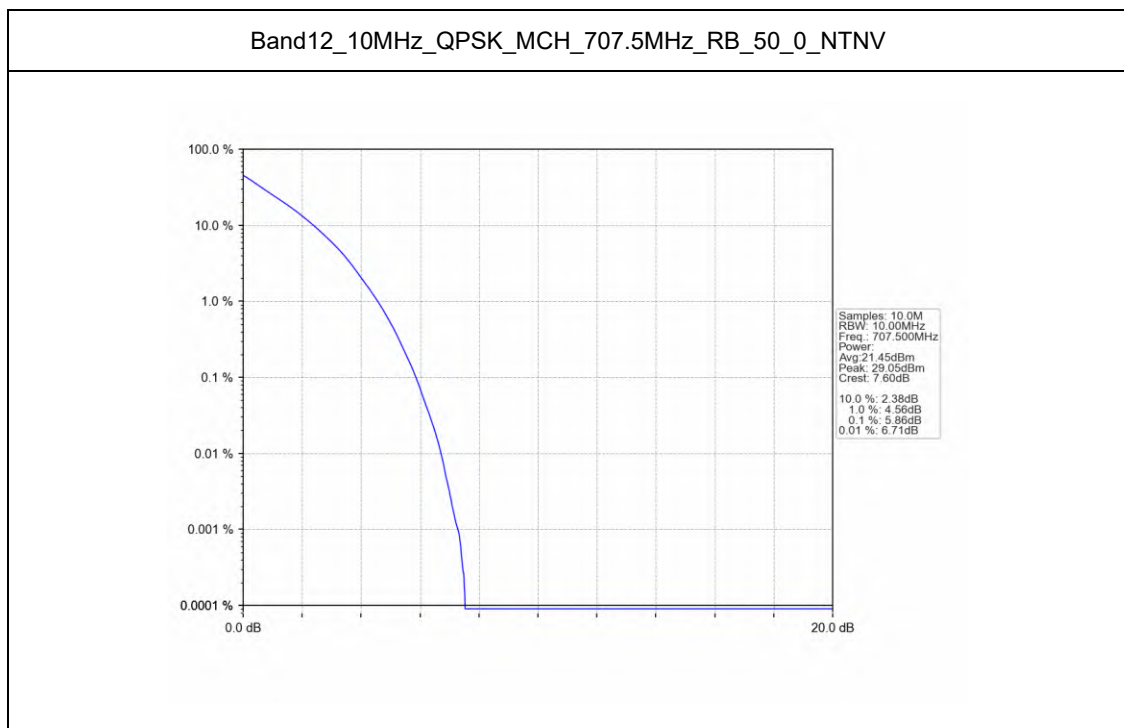
3.1 Test Result

3.1.1 B12_10MHz

Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	50	0	5.86	<=13	Pass

3.2 Test Graph

3.2.1 B12_10MHz



4. Spurious Emission

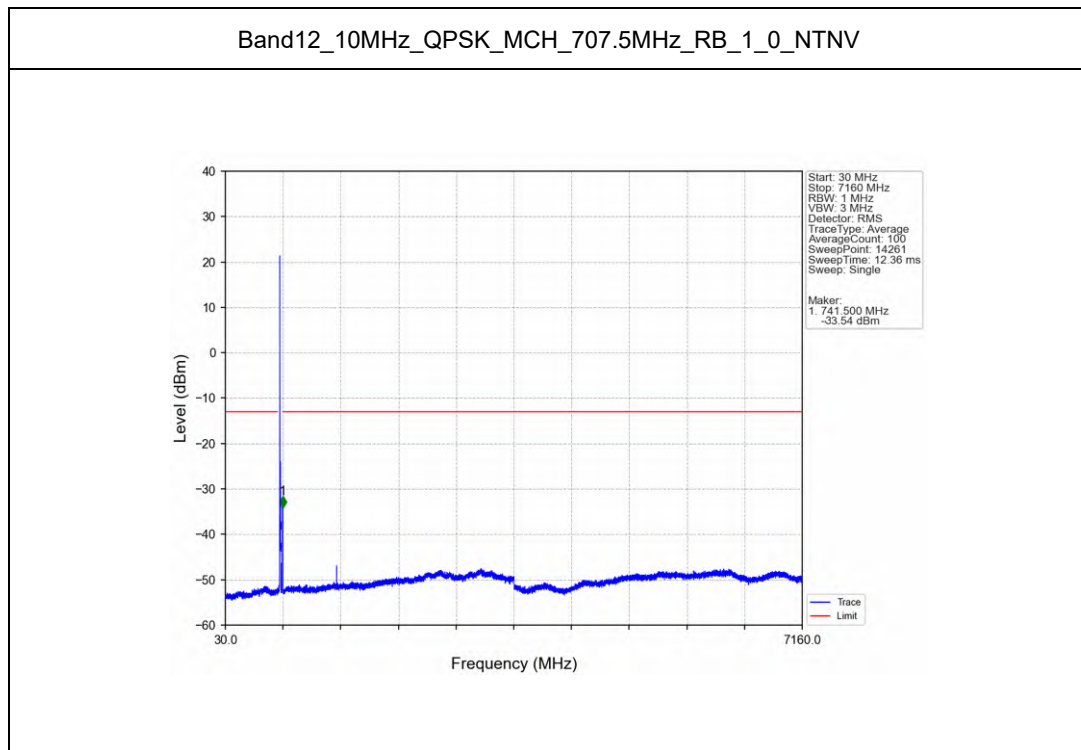
4.1 Test Result

4.1.1 B12_10MHz

Band: 12 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	707.5	1	0	Refer To Test Graph		Pass

4.2 Test Graph

4.2.1 B12_10MHz





Test Band = LTE Band12_ TM1
Test Channel = Low

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1565.5	49.68	-48.89	23.80	-70.67	-13.00	57.67	Horizontal
2	2496.5	48.77	-47.07	26.97	-66.59	-13.00	53.59	Horizontal
3	3409	48.47	-45.75	27.99	-64.55	-13.00	51.55	Horizontal
4	4832	45.13	-45.17	31.44	-63.87	-13.00	50.87	Horizontal
5	6343.5	44.57	-43.65	33.86	-60.47	-13.00	47.47	Horizontal
6	7635.5	43.30	-41.91	36.38	-57.49	-13.00	44.49	Horizontal

Test Band = LTE Band12_ TM1
Test Channel = Low

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1565	50.47	-48.90	23.80	-69.89	-13.00	56.89	Vertical
2	2474	60.07	-47.23	26.96	-55.46	-13.00	42.46	Vertical
3	3554	48.93	-45.23	28.68	-62.89	-13.00	49.89	Vertical
4	4622	46.14	-45.10	30.80	-63.42	-13.00	50.42	Vertical
5	6546.5	43.84	-43.69	34.67	-60.45	-13.00	47.45	Vertical
6	8579.5	41.81	-40.10	37.28	-56.27	-13.00	43.27	Vertical

五、 LTE B13

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B13_10MHz_ERP

Band: 13 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	782	1	25	23.11	-3.38	17.58	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band13_OBW

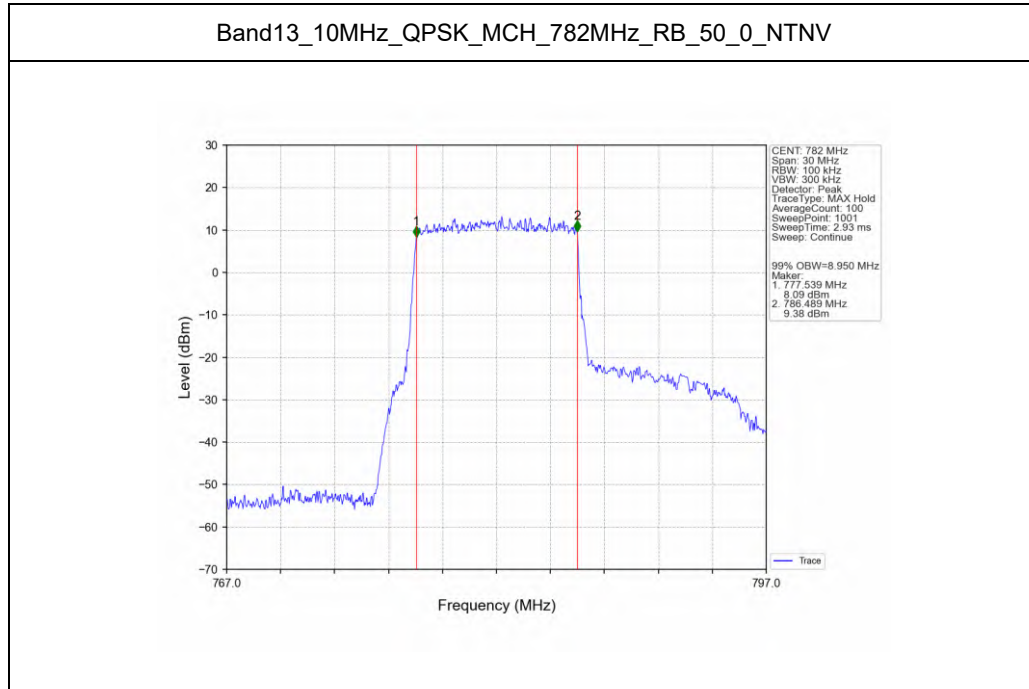
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
10	QPSK	782	50	0	8.950	/	Pass

3.1.2 Band13_XDB

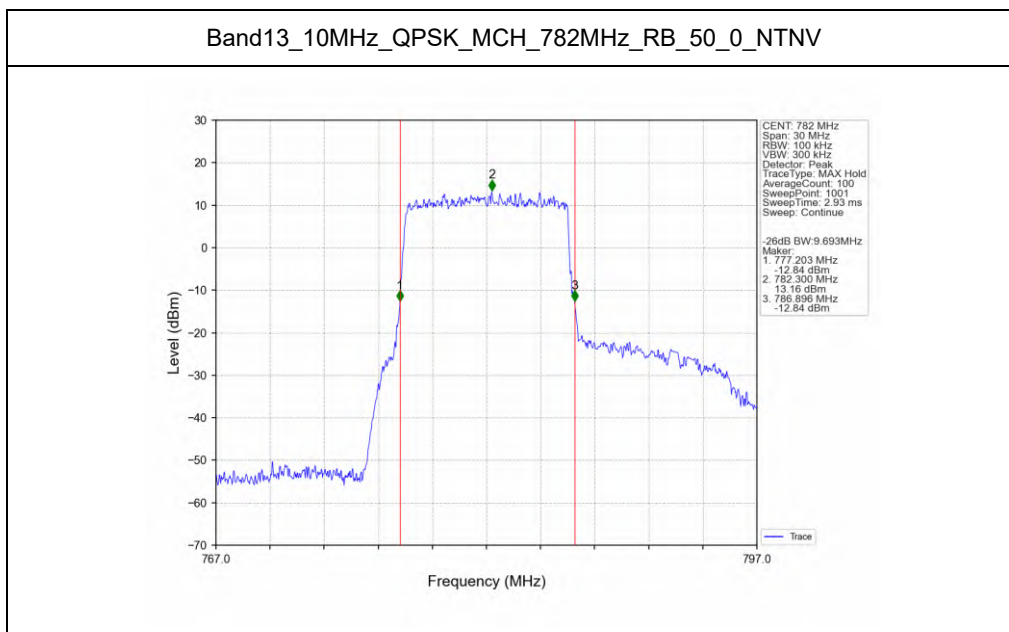
Band: 13 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
10	QPSK	782	50	0	9.693	/	Pass

3.2 Test Graph

3.2.1 Band13_OBW



3.2.2 Band13_XDB



4. Peak-Average Ratio

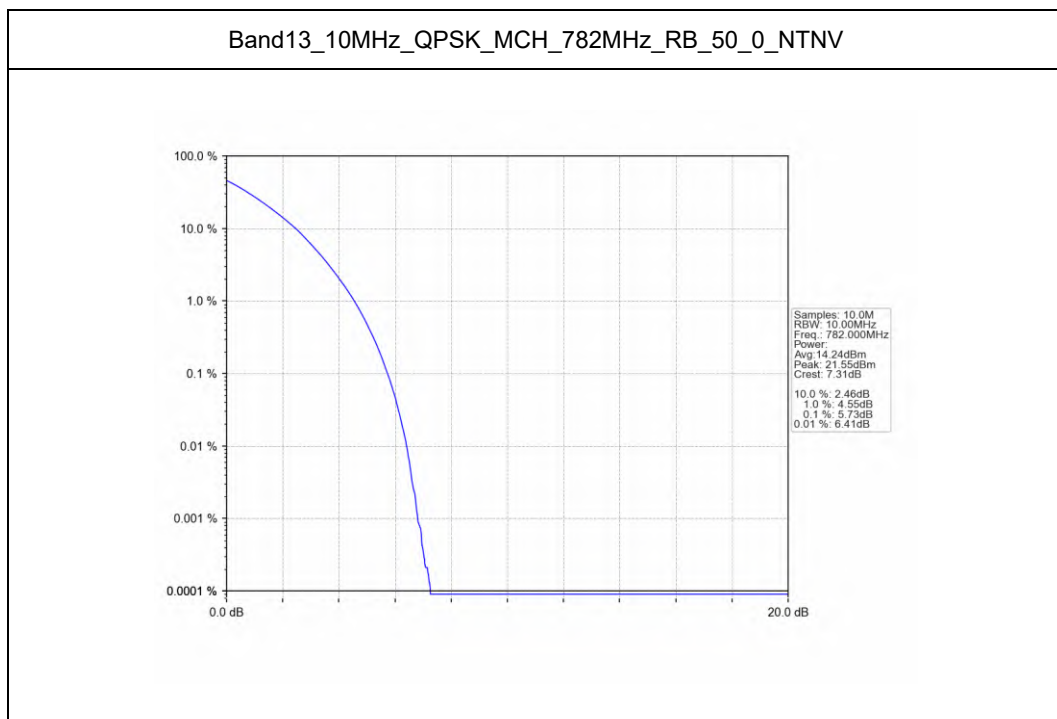
4.1 Test Result

4.1.1 B13_10MHz

Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	782	50	0	5.73	<=13	Pass

4.2 Test Graph

4.2.1 B13_10MHz



5. Spurious Emission

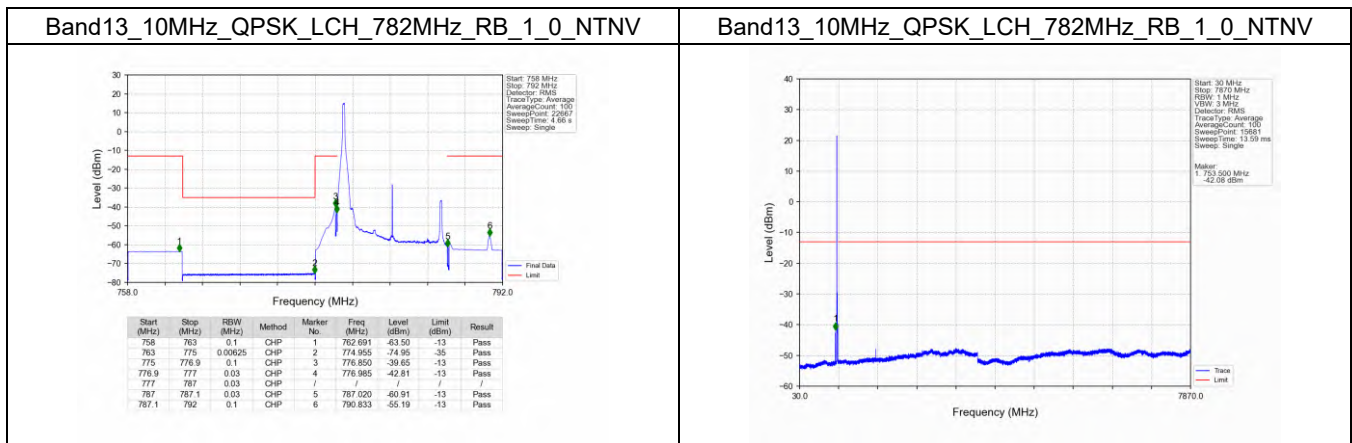
5.1 Test Result

5.1.1 B13_10MHz

Band: 13 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	782	1	0	Refer To Test Graph		Pass

5.2 Test Graph

5.2.1 B13_10MHz





Test Band = LTE Band13_ TM1
Test Channel = Mid-10M

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1567	49.67	-48.89	23.80	-70.68	-13.00	57.68	Horizontal
2	2323.5	49.13	-47.96	26.61	-67.49	-13.00	54.49	Horizontal
3	3206	47.74	-46.10	28.10	-65.52	-13.00	52.52	Horizontal
4	3950.5	44.90	-45.23	29.20	-66.39	-13.00	53.39	Horizontal
5	5118	44.76	-44.96	31.86	-63.59	-13.00	50.59	Horizontal
6	6602	43.54	-43.55	34.79	-60.48	-13.00	47.48	Horizontal

Test Band = LTE Band13_ TM1
Test Channel = Mid-10M

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1603.5	49.22	-48.78	23.70	-71.12	-13.00	58.12	Vertical
2	2488	48.38	-47.13	27.12	-66.89	-13.00	53.89	Vertical
3	3348	47.93	-45.73	28.19	-64.87	-13.00	51.87	Vertical
4	4377.5	46.75	-45.32	30.27	-63.57	-13.00	50.57	Vertical
5	5439.5	44.60	-44.41	31.86	-63.21	-13.00	50.21	Vertical
6	7018.5	53.75	-43.17	35.46	-49.22	-13.00	36.22	Vertical

六、 LTE B7

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B7_10MHz_EIRP

Band: 7 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	2535	1	25	23.81	-2.02	21.79	<=33.01	Pass
Note1: EIRP=Conducted Power+Antenna Gain								

3. 99% & 26dB Bandwidth

3.1 Test Result

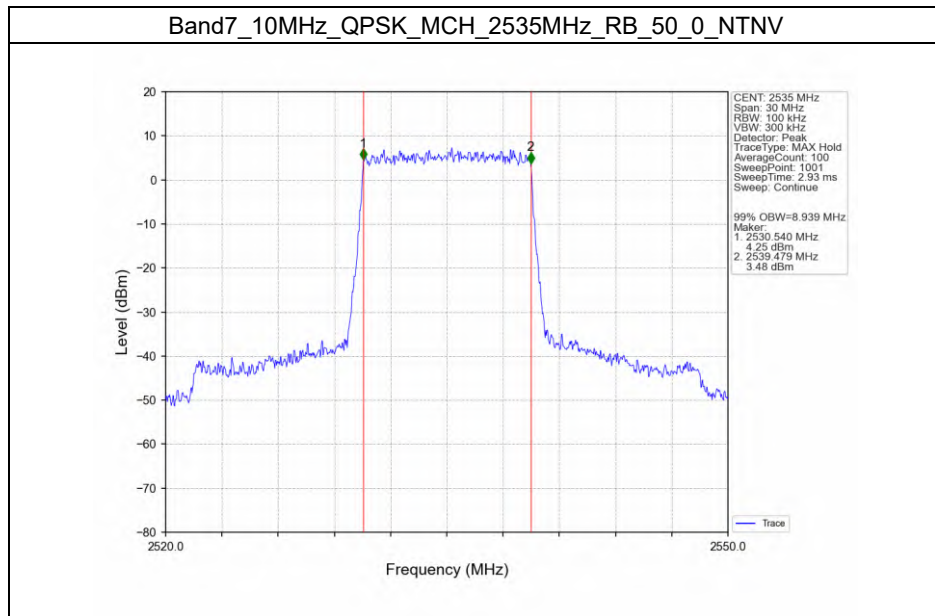
3.1.1 Band7_OBW

Band: 7 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
10	QPSK	2535	50	0	8.939	/	Pass

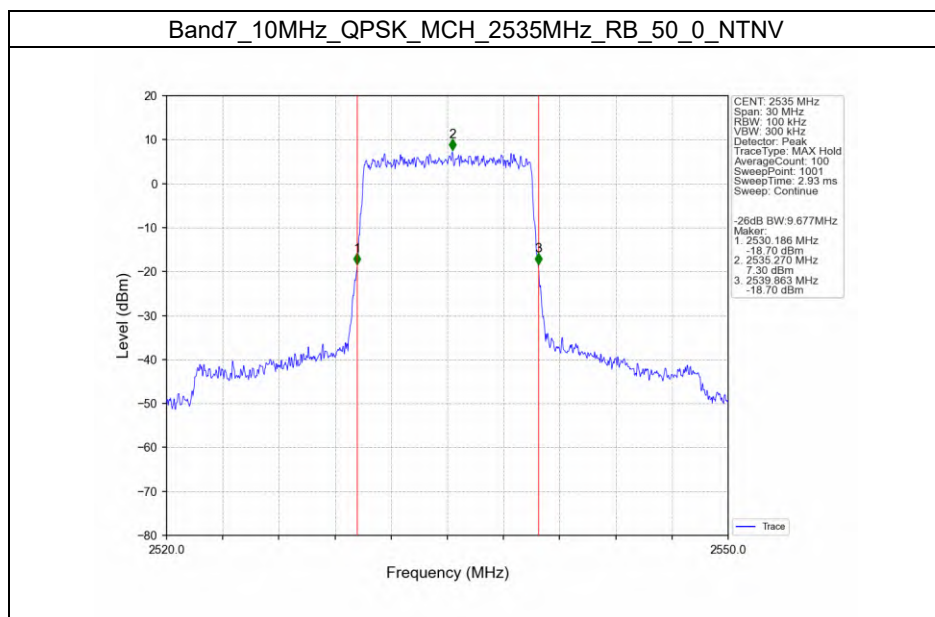
Band: 7 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
10	QPSK	2535	50	0	9.677	/	Pass

3.2 Test Graph

3.2.1 Band7_OBW



3.2.2 Band7_XDB



4. Peak-Average Ratio

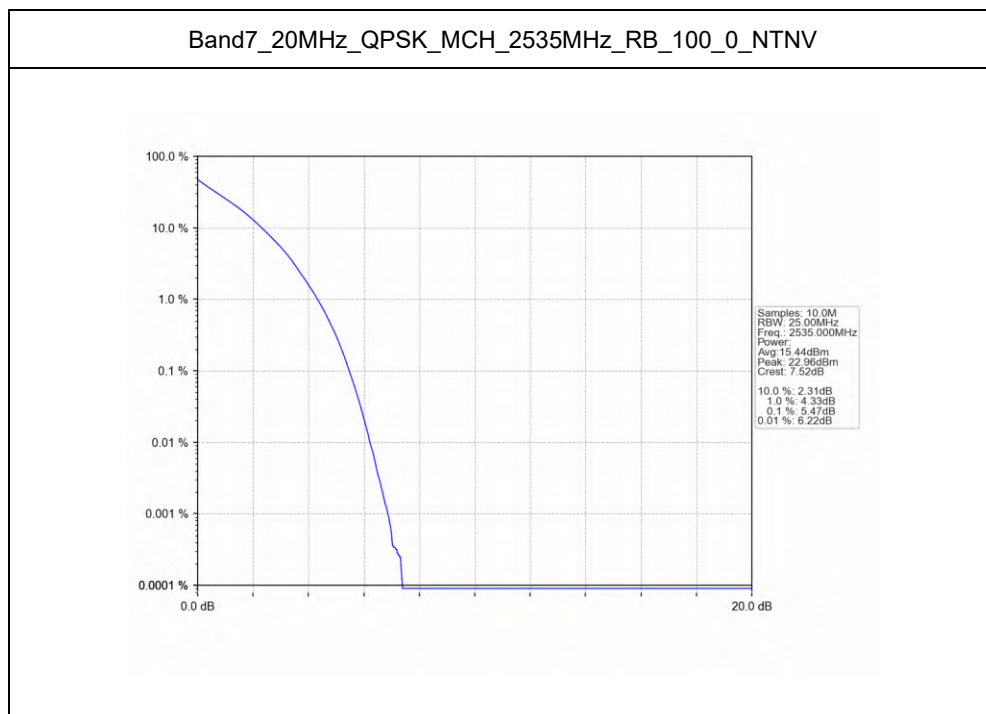
4.1 Test Result

4.1.1 B7_20MHz

Band: 7 / Bandwidth: 20MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	2535	100	0	5.47	<=13	Pass

4.2 Test Graph

4.2.1 B7_20MHz



5. Spurious Emission

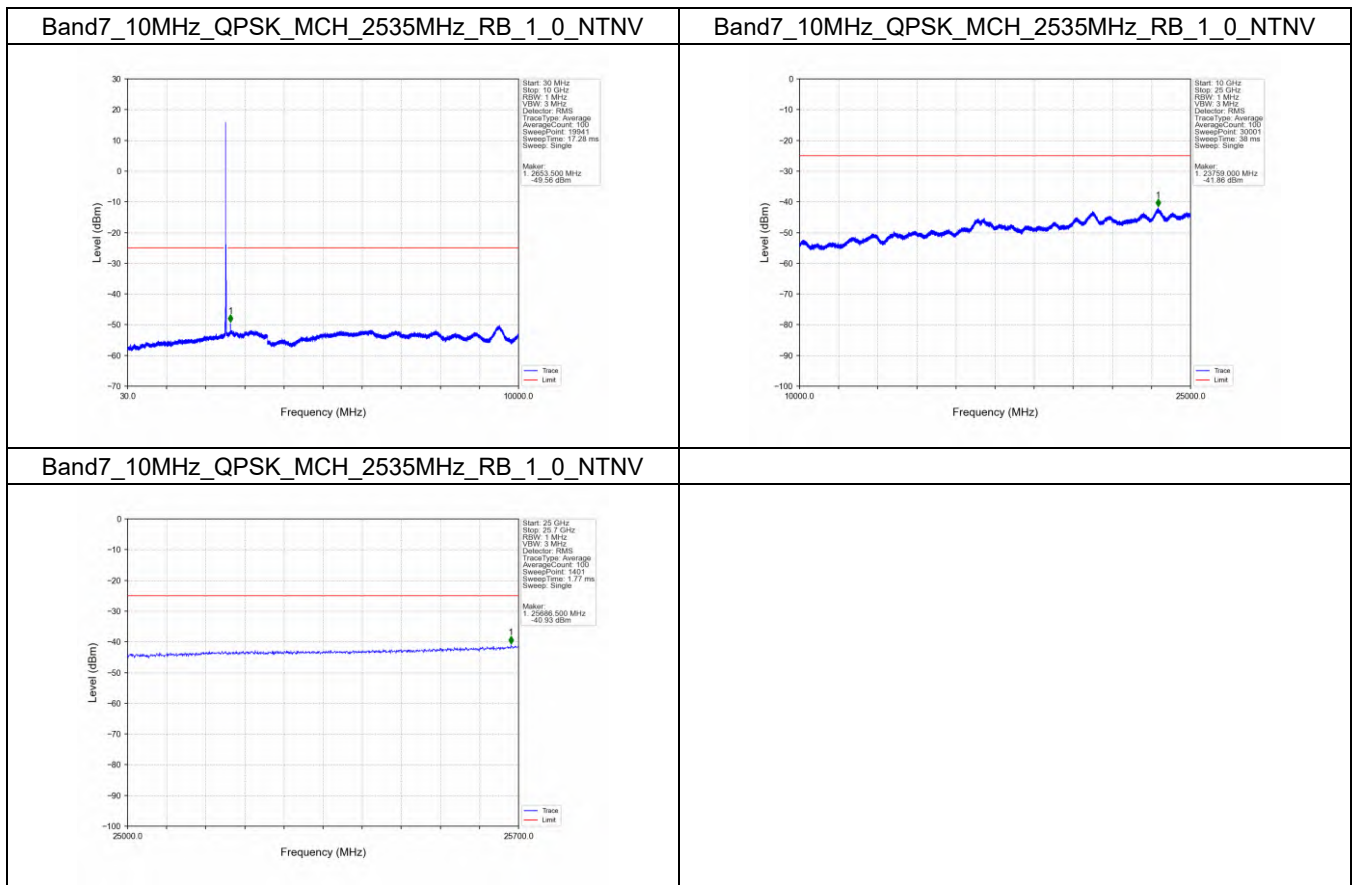
5.1 Test Result

3.1.1 B7_10MHz

Band: 7 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	2535	1	0	Refer To Test Graph		Pass

5.2 Test Graph

3.2.1 B7_10MHz





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Test Band = LTE Band7_ TM1

Test Channel = Low

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3756.5	46.11	-45.16	28.85	-65.46	-25.00	40.46	Horizontal
2	5722.5	43.68	-44.03	32.50	-63.11	-25.00	38.11	Horizontal
3	7998.5	41.26	-41.22	36.89	-58.33	-25.00	33.33	Horizontal
4	10764	37.56	-36.66	39.64	-54.71	-25.00	29.71	Horizontal
5	13847.5	36.84	-34.95	40.40	-52.97	-25.00	27.97	Horizontal
6	17991	44.17	-31.03	43.20	-38.92	-25.00	13.92	Horizontal

Test Band = LTE Band7_ TM1

Test Channel = Low

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	4377	46.76	-45.40	30.26	-63.63	-25.00	38.63	Vertical
2	6594.5	43.00	-43.23	34.79	-60.70	-25.00	35.70	Vertical
3	9203.5	40.12	-39.29	38.11	-56.32	-25.00	31.32	Vertical
4	11322	36.89	-35.96	39.44	-54.89	-25.00	29.89	Vertical
5	13780	37.39	-35.37	40.38	-52.86	-25.00	27.86	Vertical
6	17482.5	44.91	-32.41	42.60	-40.16	-25.00	15.16	Vertical

七、 LTE B30

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B30_10MHz_EIRP

Band: 30 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	EIRP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	2310	1	0	23.25	1.23	24.48	/	Pass
Note1: EIRP=Conducted Power+Antenna Gain								

1.1.2 B30_10MHz_EIRP/5MHz

Band: 30 / Bandwidth: 10MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm/5MHz)	Gain (dBi)	EIRP/5MHz (dBm/5MHz)		Verdict
		Size	Offset			Result	Limit	
QPSK	2310	1	0	16.95	1.23	18.18	<=23.98	Pass
Note1: EIRP/5MHz=Conducted Power+Antenna Gain								

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band30_OBW

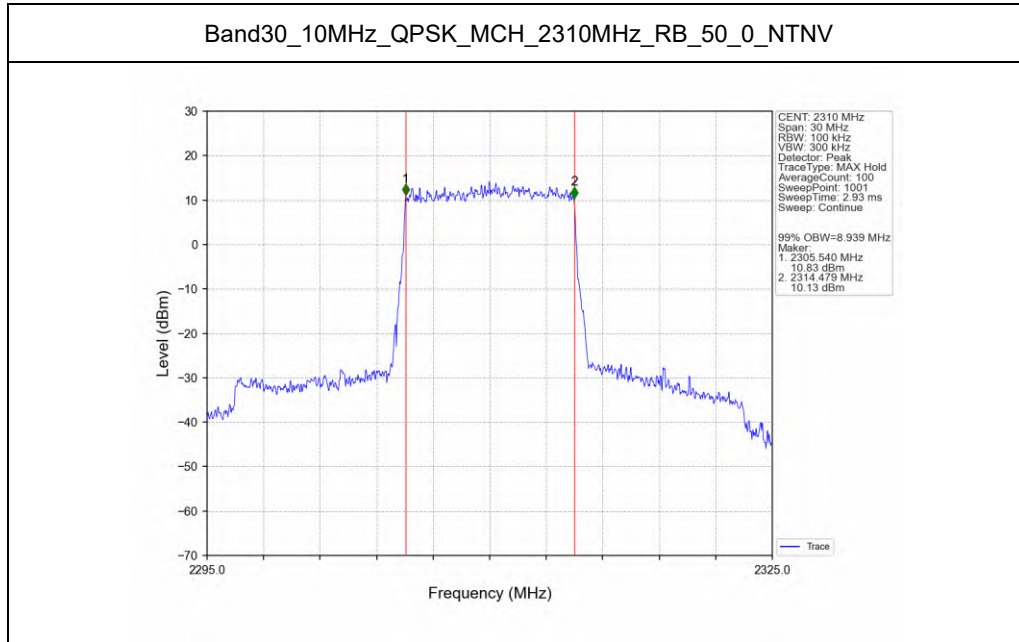
Band: 30 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
10	QPSK	2310	50	0	8.939	/	Pass

3.1.2 Band30_XDB

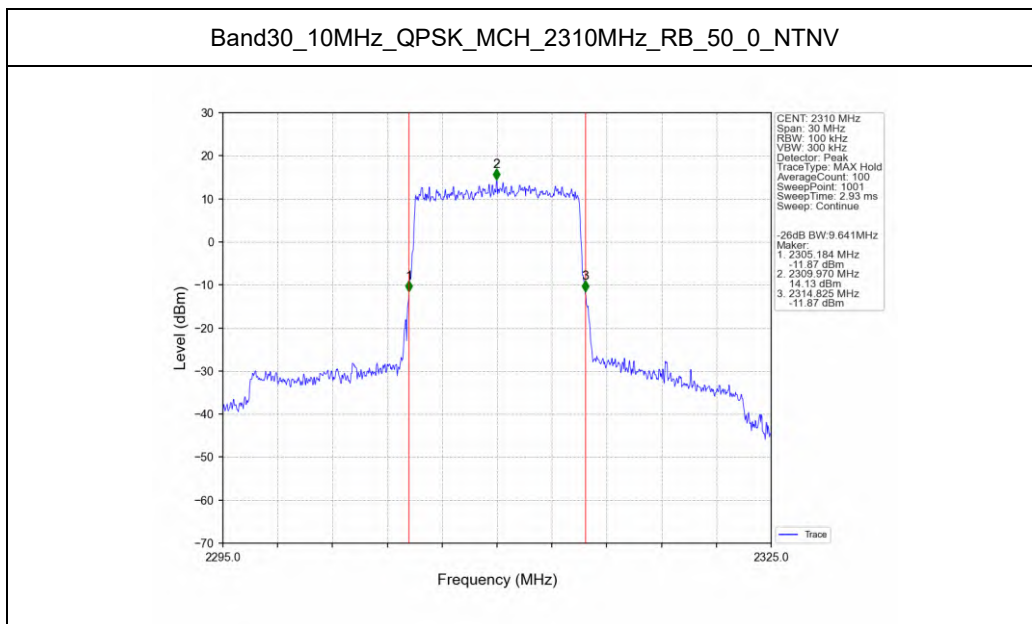
Band: 30 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
10	QPSK	2310	50	0	9.641	/	Pass

3.2 Test Graph

3.2.1 Band30_OBW



3.2.2 Band30_XDB



4. Peak-Average Ratio

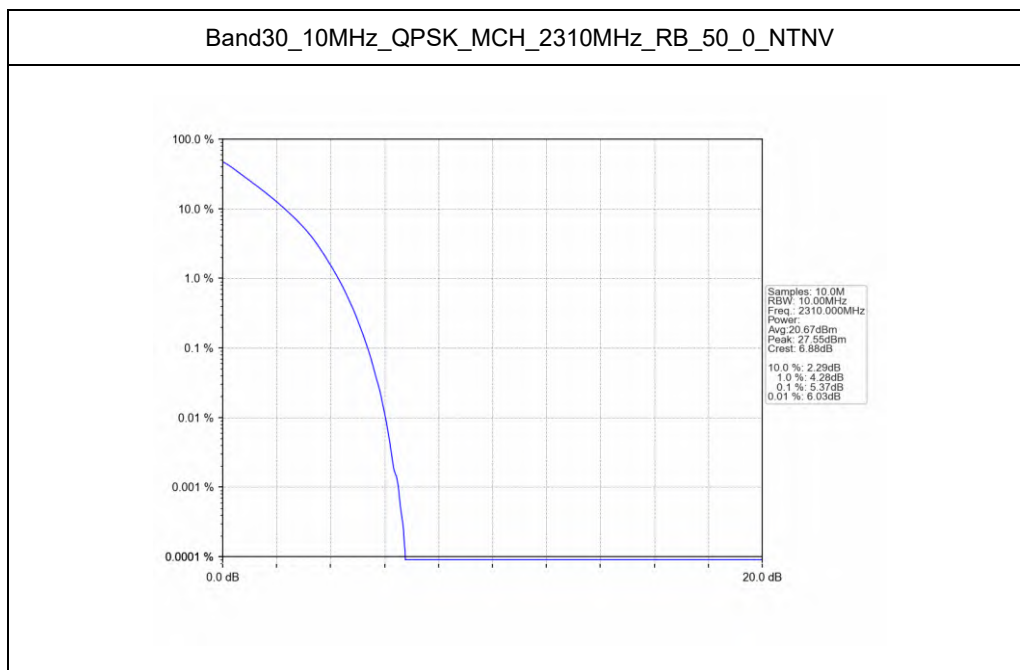
4.1 Test Result

4.1.1 B30_10MHz

Band: 30 / Bandwidth: 10MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	2310	50	0	5.37	<=13	Pass

4.2 Test Graph

4.2.1 B30_10MHz



5. Spurious Emission

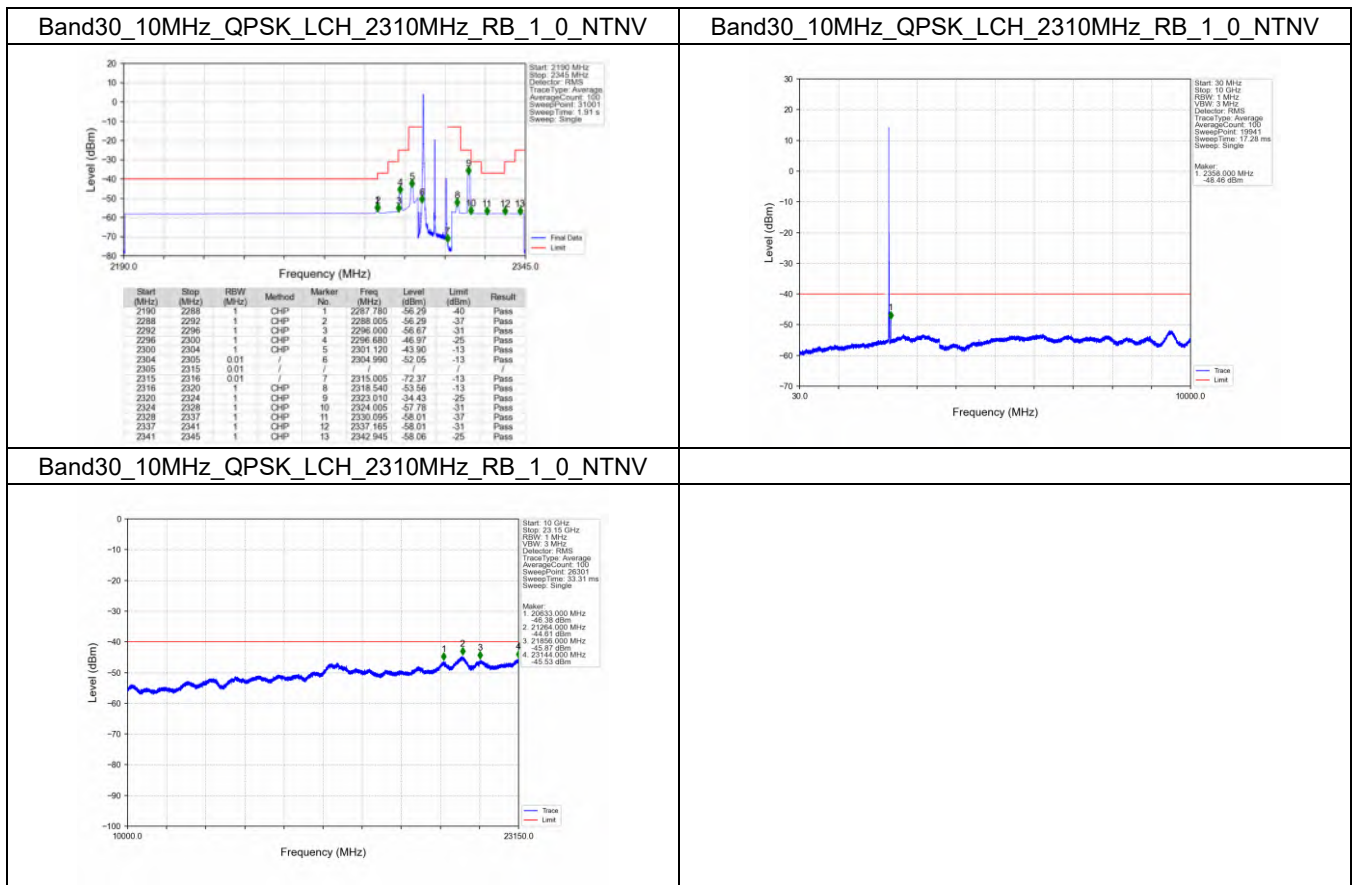
5.1 Test Result

5.1.1 B30_10MHz

Band: 30 / Bandwidth: 10MHz / NTV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	2310	1	0	Refer To Test Graph		Pass

5.2 Test Graph

5.2.1 B30_10MHz





Test Band = LTE Band30_ TM1
Test Channel = Mid-5M

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3557.5	47.54	-45.01	28.66	-64.08	-40.00	24.08	Horizontal
2	5237	44.23	-44.74	31.77	-63.99	-40.00	23.99	Horizontal
3	7624	41.44	-41.83	36.29	-59.36	-40.00	19.36	Horizontal
4	10715.5	37.48	-36.34	39.42	-54.70	-40.00	14.70	Horizontal
5	13604.5	37.45	-35.14	40.41	-52.54	-40.00	12.54	Horizontal
6	17979	37.58	-31.04	43.20	-45.52	-40.00	5.52	Horizontal

Test Band = LTE Band30_ TM1
Test Channel = Mid-5M

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	3808	45.63	-44.96	29.18	-65.40	-40.00	25.40	Vertical
2	5138	44.28	-44.85	31.82	-64.01	-40.00	24.01	Vertical
3	7165.5	41.99	-42.59	35.99	-59.87	-40.00	19.87	Vertical
4	9542.5	39.41	-38.50	38.64	-55.71	-40.00	15.71	Vertical
5	12899	36.62	-35.33	40.00	-53.98	-40.00	13.98	Vertical
6	17989.5	34.38	-31.03	43.20	-48.71	-40.00	8.71	Vertical

八、 LTE B71

1. Effective (Isotropic) Radiated Power Output Data

1.1 Test Result

1.1.1 B71_20MHz_ERP

Band: 71 / Bandwidth: 20MHz / NTNV								
Modulation	Frequency (MHz)	RB Allocation		Conducted Power (dBm)	Gain (dBi)	ERP (dBm)		Verdict
		Size	Offset			Result	Limit	
QPSK	683	1	50	23.62	-0.66	20.81	<=34.77	Pass
Note1: ERP=Conducted Power+Antenna Gain-2.15								

3. 99% & 26dB Bandwidth

3.1 Test Result

3.1.1 Band71_OBW

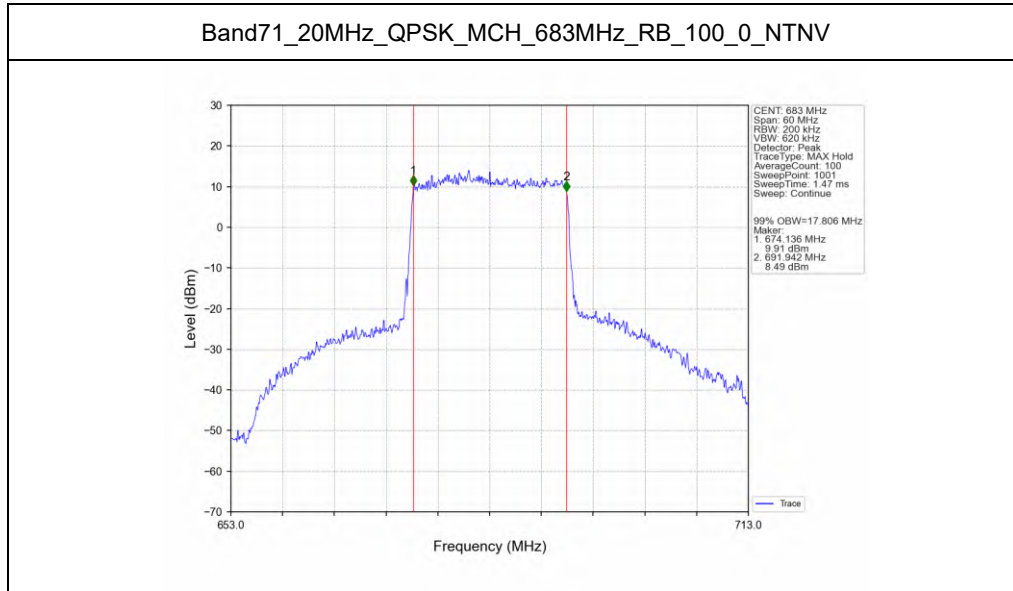
Band: 71 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		99% Occupied Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
20	QPSK	683	100	0	17.806	/	Pass

3.1.2 Band71_XDB

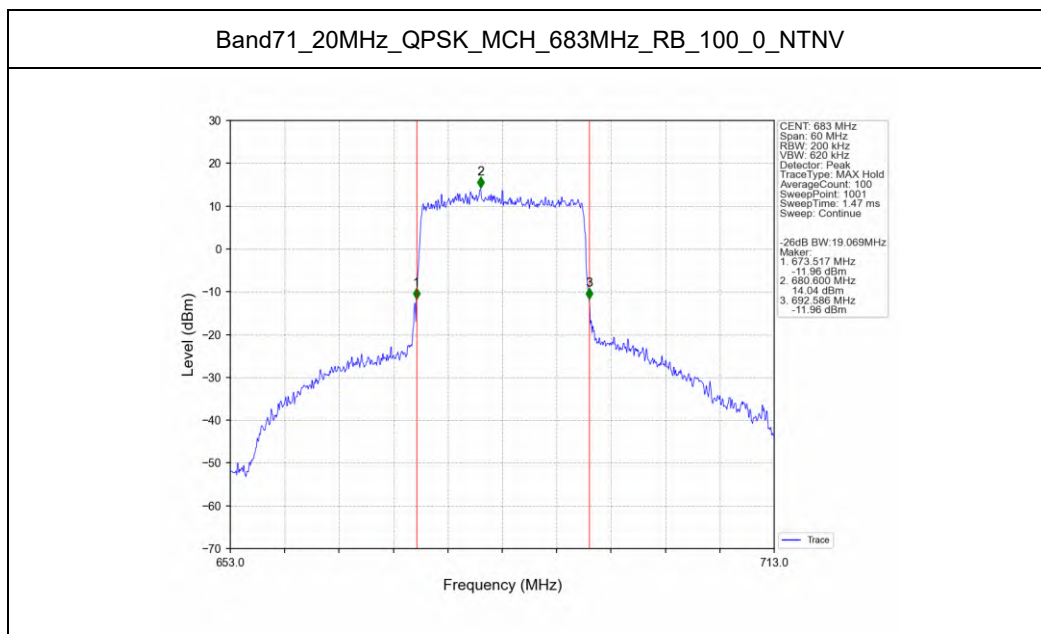
Band: 71 / NTNV							
Bandwidth (MHz)	Modulation	Frequency (MHz)	RB Allocation		26dB Bandwidth (MHz)		Verdict
			Size	Offset	Result	Limit	
20	QPSK	683	100	0	19.069	/	Pass

3.2 Test Graph

3.2.1 Band71_OBW



3.2.2 Band71_XDB



4. Peak-Average Ratio

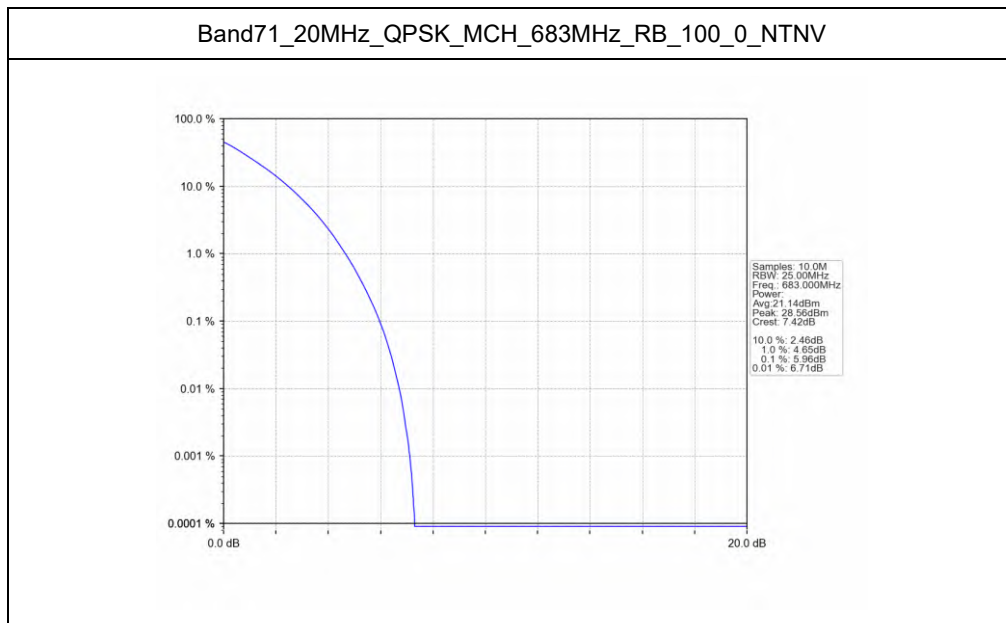
4.1 Test Result

4.1.1 B71_20MHz

Band: 71 / Bandwidth: 20MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Peak-Average Ratio (dB)		Verdict
		Size	Offset	Result	Limit	
QPSK	683	100	0	5.96	<=13	Pass

4.2 Test Graph

4.2.1 B71_20MHz



5. Spurious Emission

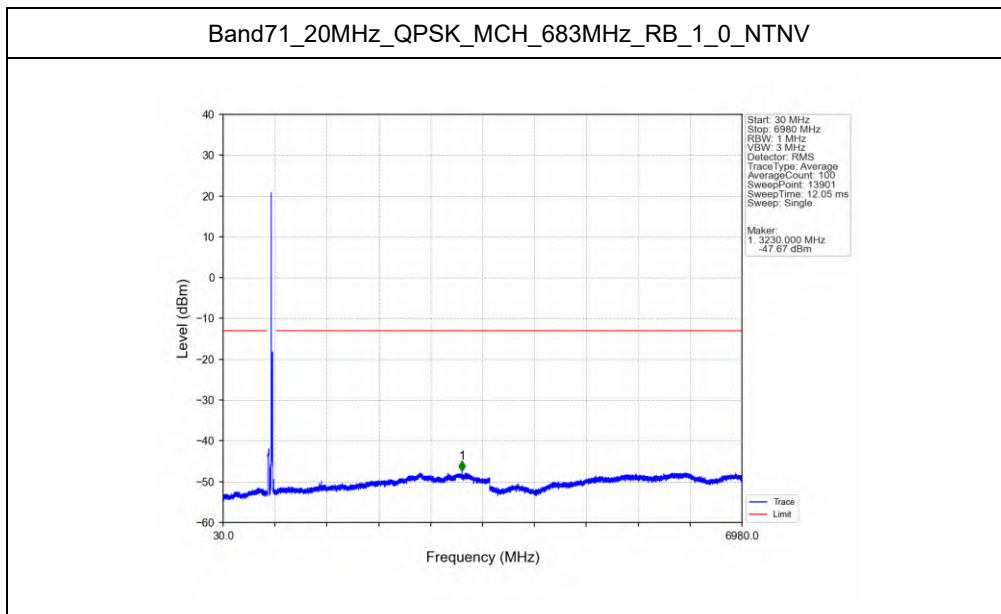
5.1 Test Result

5.1.1 B71_20MHz

Band: 71 / Bandwidth: 20MHz / NTNV						
Modulation	Frequency (MHz)	RB Allocation		Spurious Emission		Verdict
		Size	Offset	Result	Limit	
QPSK	683	1	0	Refer To Test Graph		Pass

5.2 Test Graph

5.2.1 B71_20MHz





Test Band = LTE Band71_ TM1
Test Channel = High

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1565	49.74	-48.90	23.80	-70.62	-13.00	57.62	Horizontal
2	2475	49.52	-47.23	27.00	-65.97	-13.00	52.97	Horizontal
3	3556	46.41	-45.22	28.66	-65.41	-13.00	52.41	Horizontal
4	5297.5	43.29	-44.87	31.90	-64.95	-13.00	51.95	Horizontal
5	7152	41.51	-42.46	35.91	-60.30	-13.00	47.30	Horizontal
6	9000	48.05	-38.74	37.90	-48.05	-13.00	35.05	Horizontal

Test Band = LTE Band71_ TM1
Test Channel = High

Final Data List								
NO.	Frequency [MHz]	Reading [dBμV]	Factor [dB]	AF[dB/m]	Level [dBm]	Limit [dBm]	Margin [dB]	Polarity
1	1565.5	49.79	-48.89	23.80	-70.56	-13.00	57.56	Vertical
2	2473.5	51.03	-47.24	26.94	-64.53	-13.00	51.53	Vertical
3	3534.5	47.51	-45.32	28.61	-64.46	-13.00	51.46	Vertical
4	4377	46.82	-45.32	30.26	-63.50	-13.00	50.50	Vertical
5	5840.5	43.02	-43.87	32.80	-63.31	-13.00	50.31	Vertical
6	7900.5	40.48	-41.62	36.90	-59.50	-13.00	46.50	Vertical

九、 BLE

1. Duty Cycle

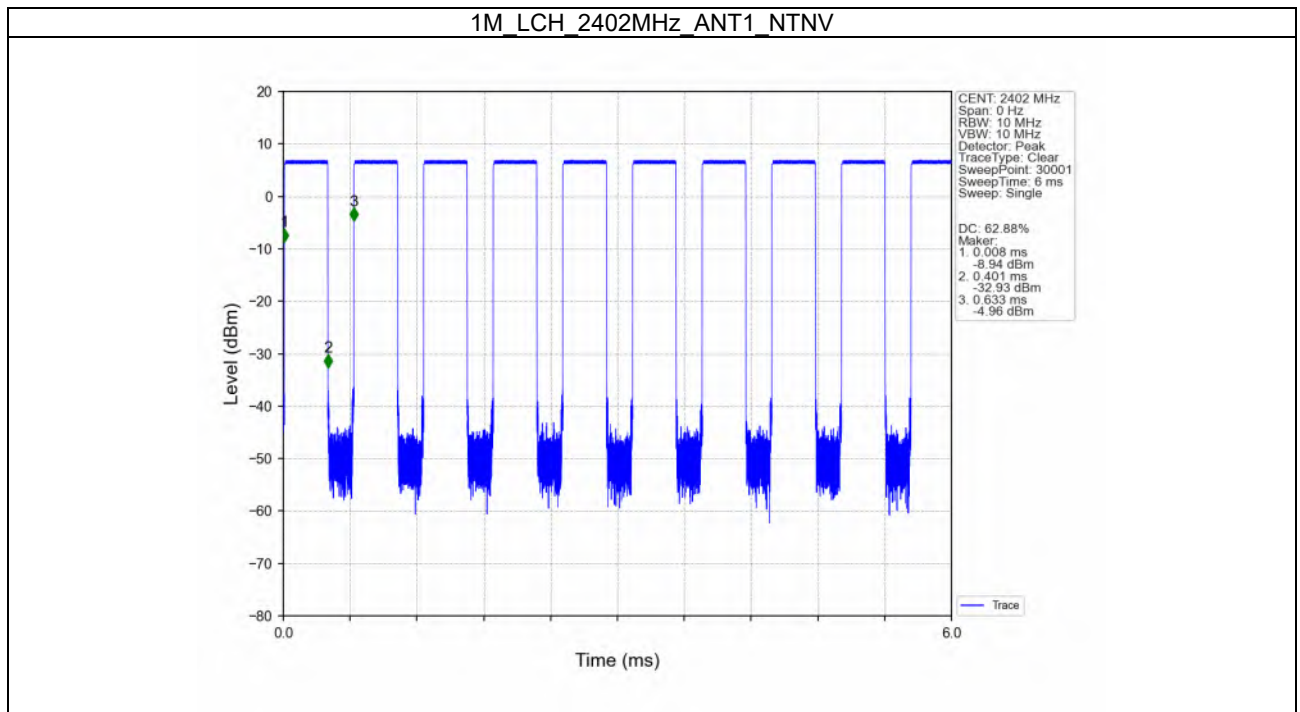
1.1 Test Result

1.1.1 ANT1

ANT1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	0.393	0.625	62.88	2.01	0.03

1.2 Test Graph

1.2.1 ANT1



2. Bandwidth

2.1 Test Result

2.1.1 OBW

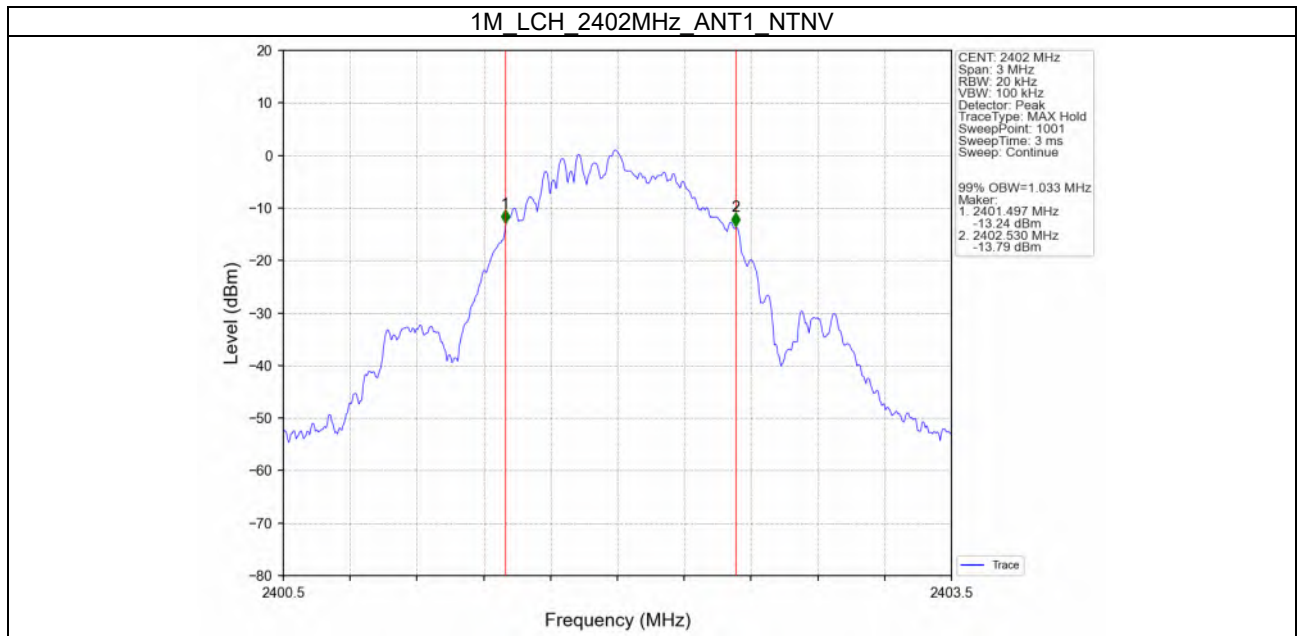
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	1.033	/	Pass

2.1.2 6dB BW

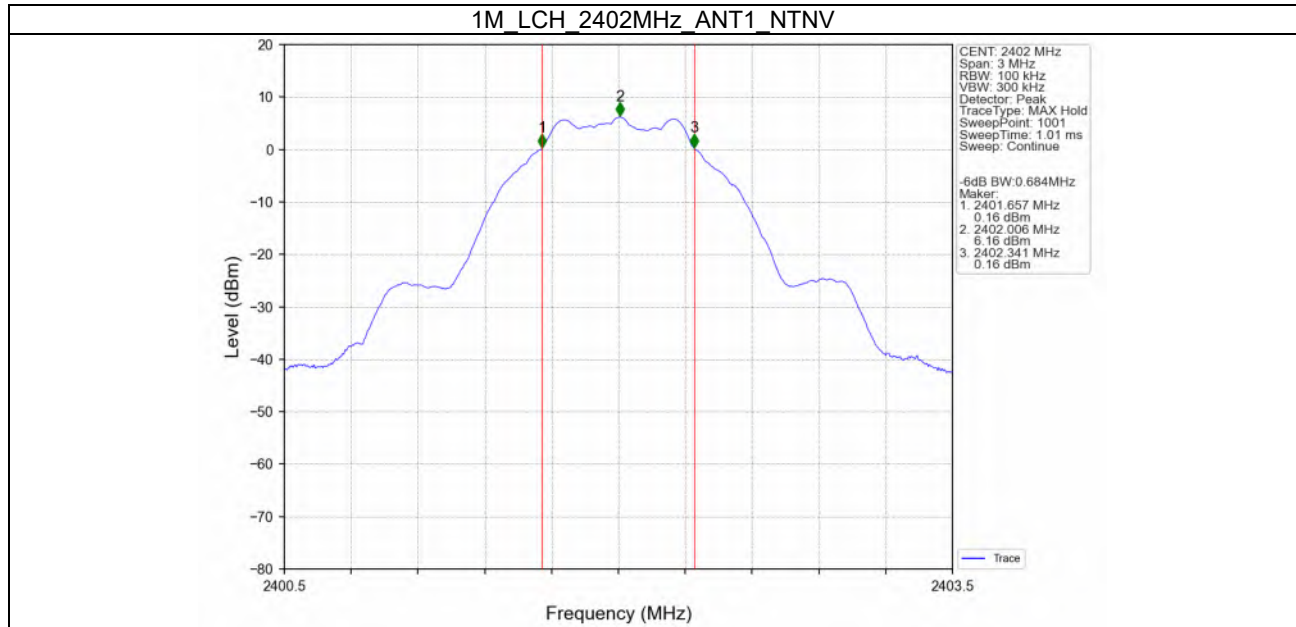
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.684	≥ 0.5	Pass

2.2 Test Graph

2.2.1 OBW



2.2.2 6dB BW



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	7.79	<=30	Pass

Note1: Antenna Gain: ANT1: 1.87dBi;

4. Maximum Power Spectral Density

4.1 Test Result

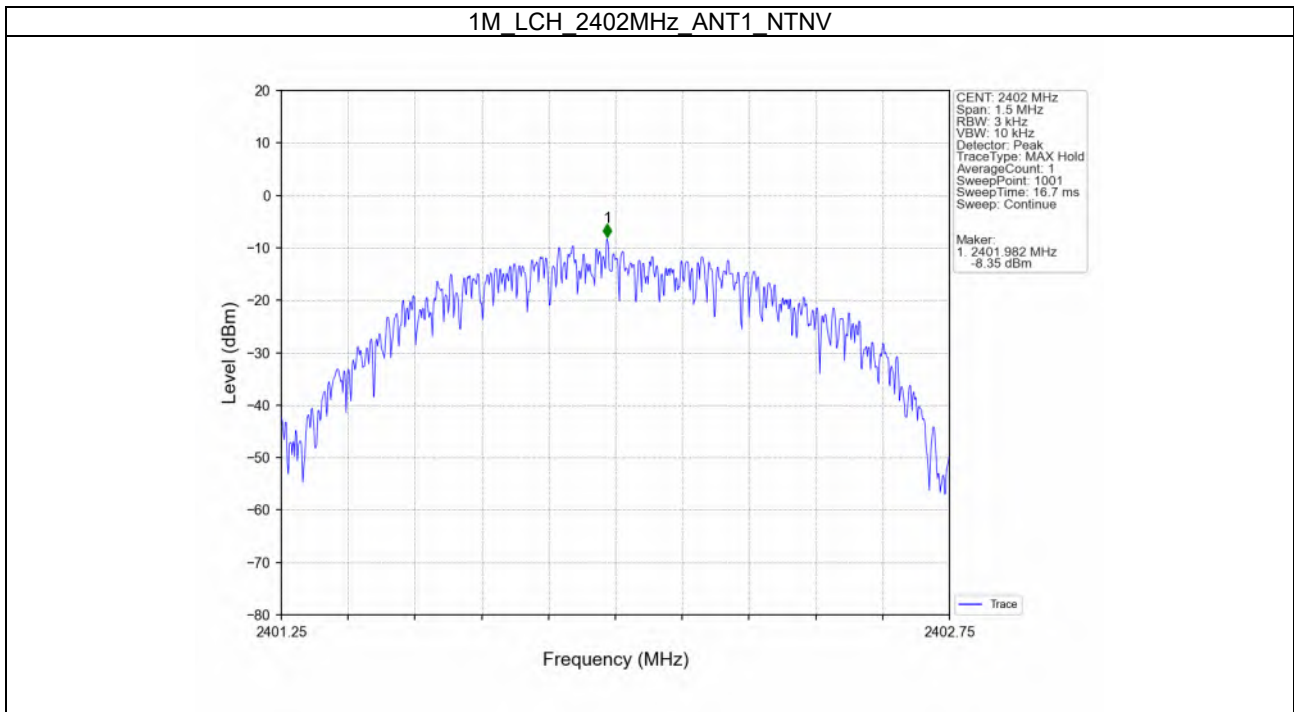
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit(dBm/3kHz)	
1M	SISO	2402	-8.35dBm/3kHz	<=8	Pass

Note1: Antenna Gain: ANT1: 1.87dBi;

4.2 Test Graph

4.2.1 PSD



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

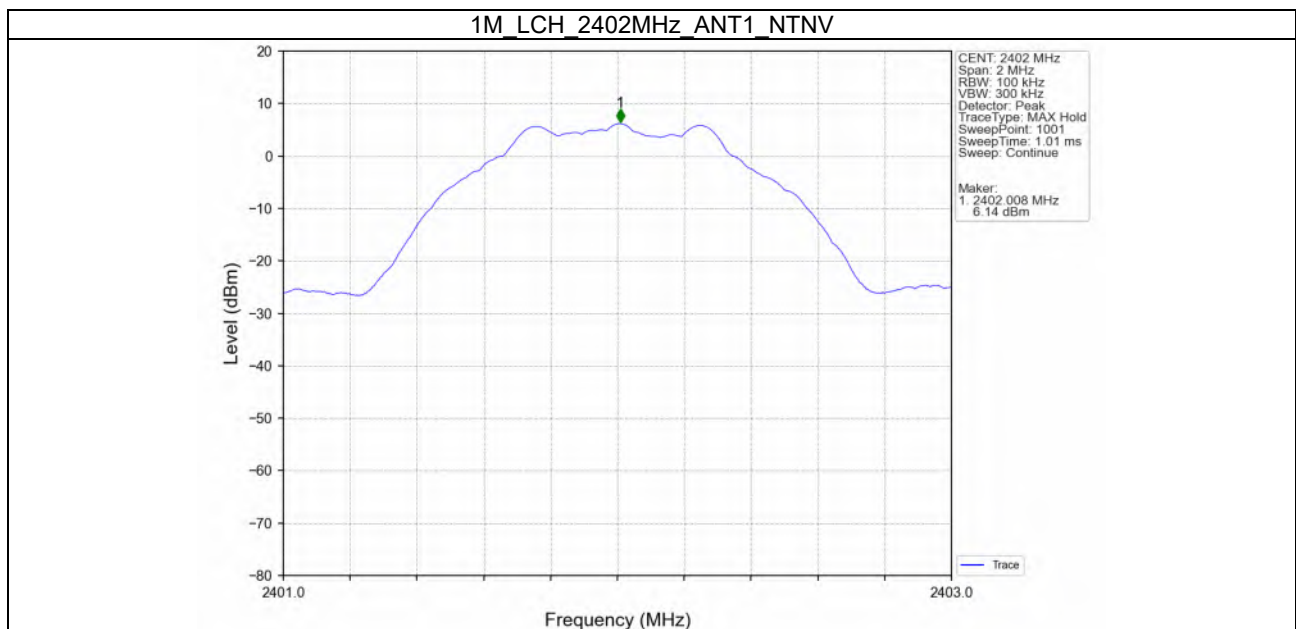
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	6.14

5.1.2 CSE

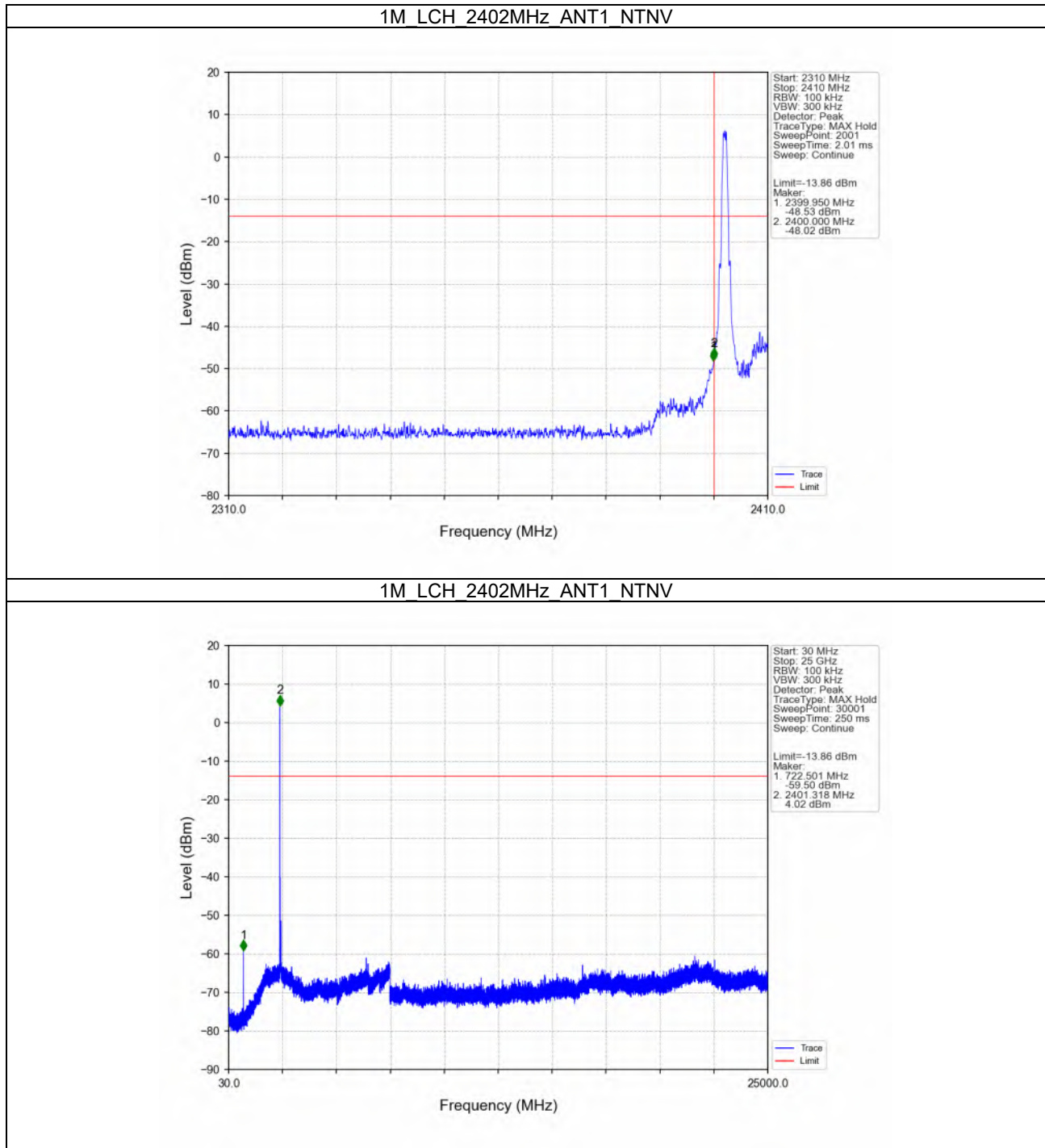
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	6.14	-13.86	Pass

5.2 Test Graph

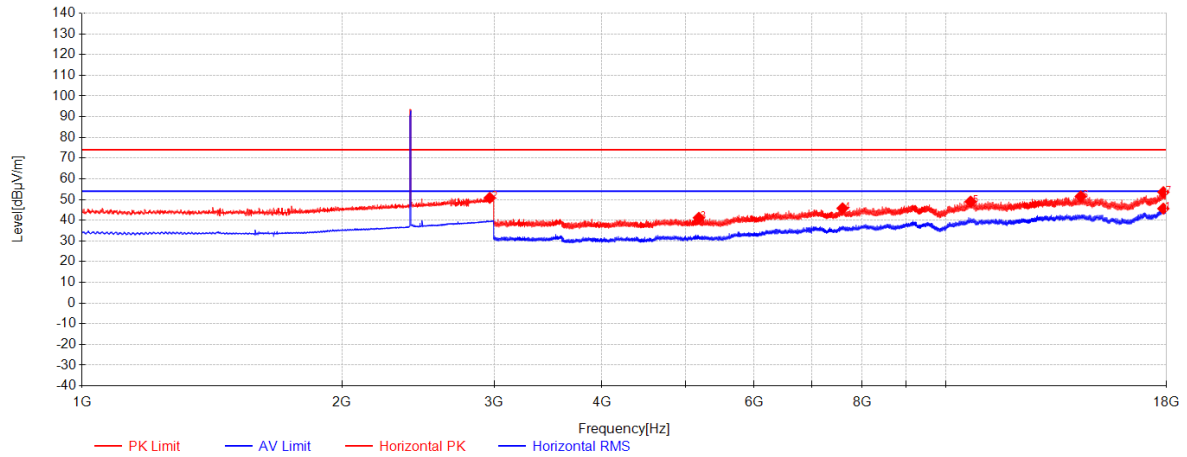
5.2.1 Ref



5.2.2 CSE

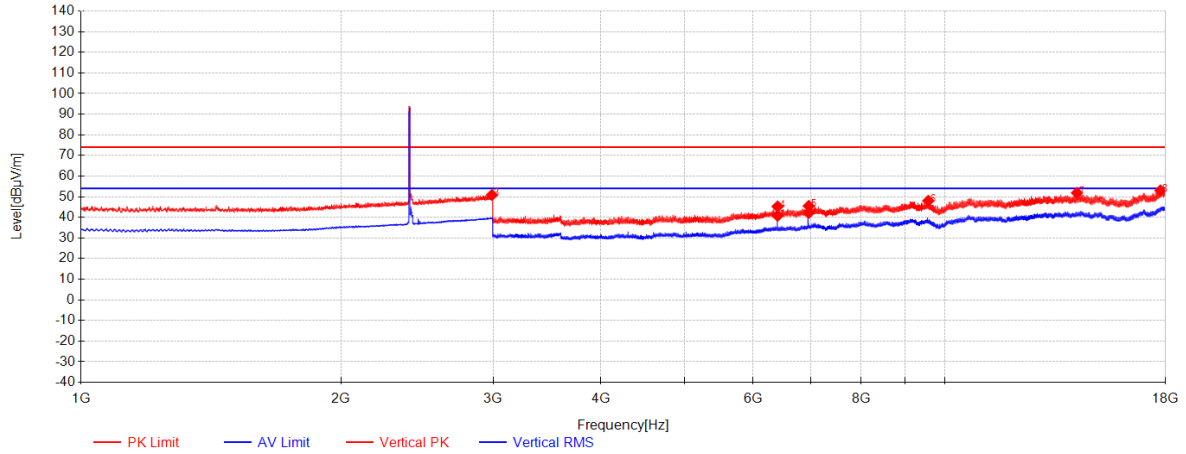


BLE_1M_TX_CH_00_Horizontal



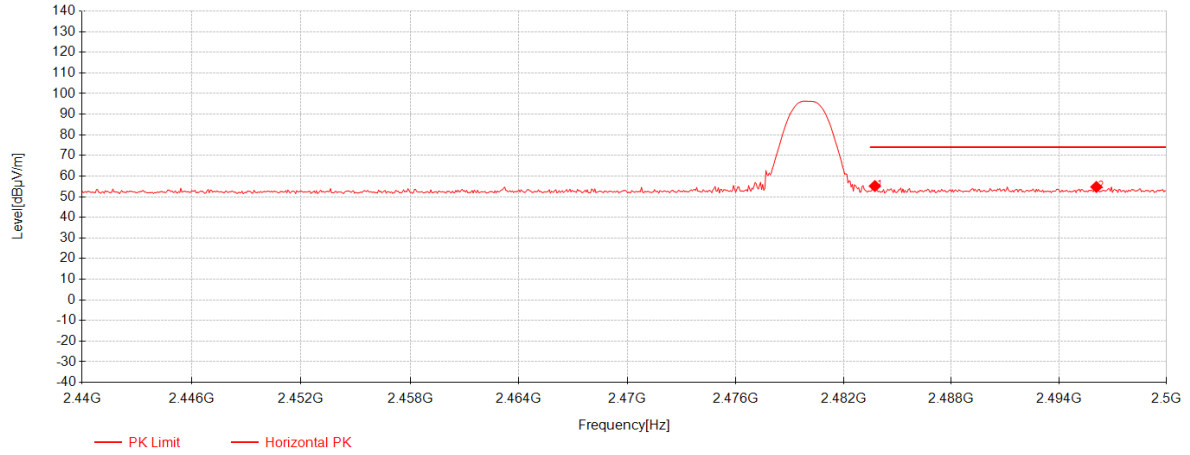
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	17870.25	35.21	41.32	-30.93	45.61	54.00	8.39	Horizontal
2	2965	44.83	29.46	-23.48	50.81	74.00	23.19	Horizontal
3	5178.75	52.88	33.06	-44.75	41.20	74.00	32.80	Horizontal
4	7596.375	51.09	36.49	-41.81	45.77	74.00	28.23	Horizontal
5	10689.75	46.38	38.93	-36.32	48.99	74.00	25.01	Horizontal
6	14338.5	45.96	40.20	-34.64	51.51	74.00	22.49	Horizontal
7	17874.375	43.19	41.34	-30.95	53.57	74.00	20.43	Horizontal

BLE_1M_TX_CH_00_Vertical



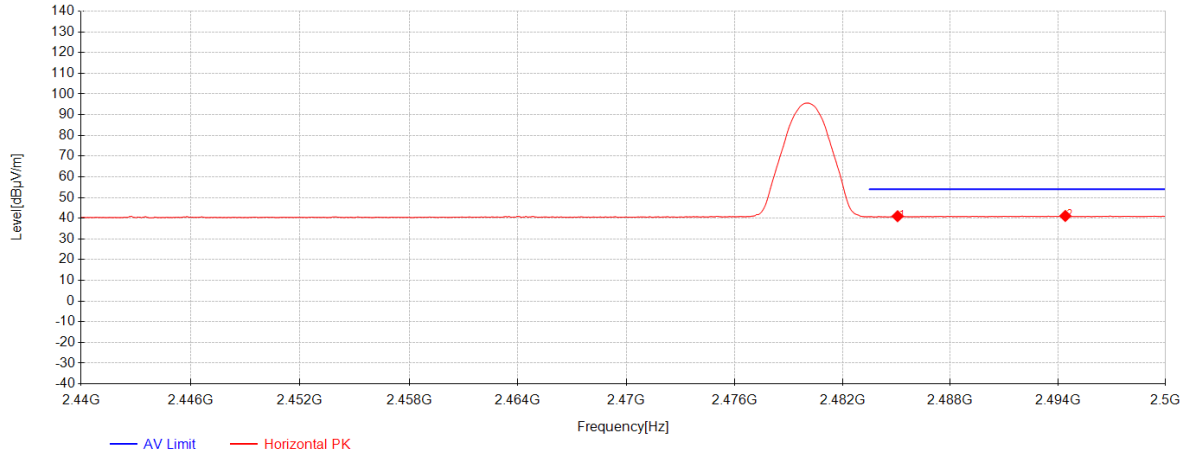
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	6405.75	48.88	35.31	-43.43	40.76	54.00	13.24	Vertical
2	6960.375	48.90	36.24	-43.02	42.11	54.00	11.89	Vertical
3	2990.5	44.72	29.56	-23.47	50.82	74.00	23.18	Vertical
4	6405.375	53.39	35.31	-43.43	45.27	74.00	28.73	Vertical
5	6960.75	52.32	36.24	-43.03	45.53	74.00	28.47	Vertical
6	9574.125	48.31	38.06	-38.37	48.00	74.00	26.00	Vertical
7	14231.625	46.95	40.26	-35.33	51.88	74.00	22.12	Vertical
8	17780.625	42.69	41.06	-30.68	53.08	74.00	20.92	Vertical

BLE_1M_TX_CH_39_Horizontal_Peak



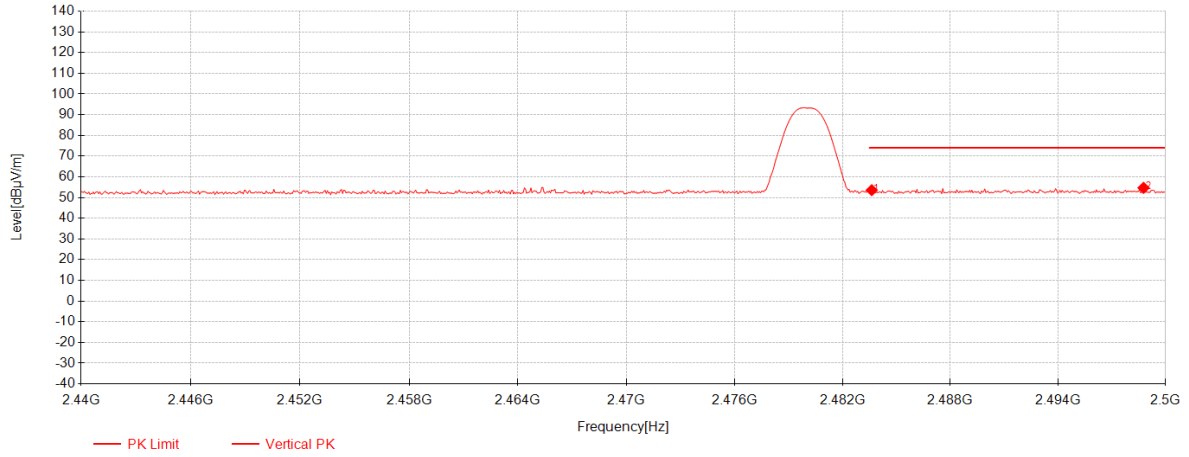
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2483.74	52.26	27.55	-24.63	55.18	74.00	18.82	Horizontal
2	2496.1	51.76	27.59	-24.61	54.74	74.00	19.26	Horizontal

BLE_1M_TX_CH_39_Horizontal_Average



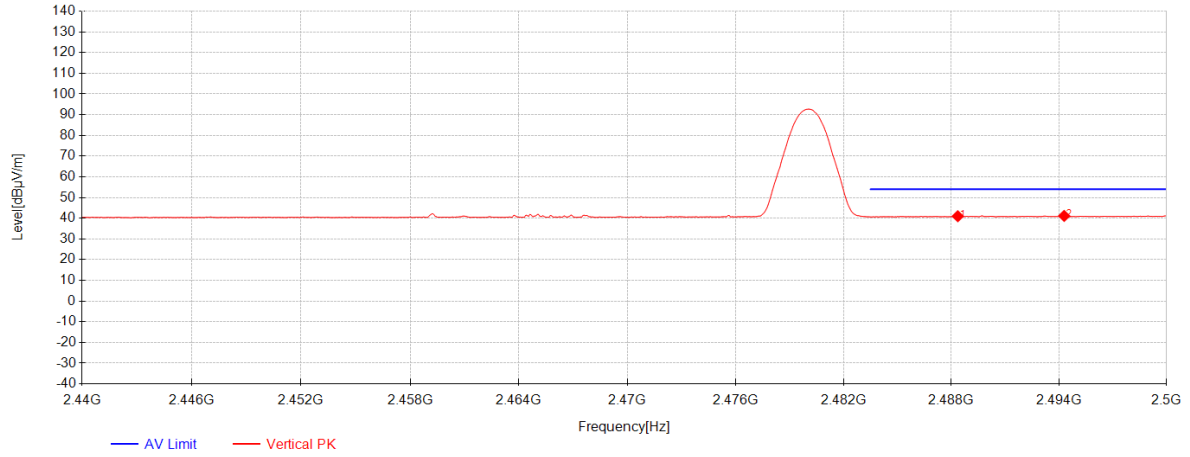
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2485.06	38.05	27.56	-24.63	40.98	54.00	13.02	Horizontal
2	2494.42	38.13	27.58	-24.61	41.10	54.00	12.90	Horizontal

BLE_1M_TX_CH_39_Vertical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2483.62	50.65	27.55	-24.63	53.57	74.00	20.43	Vertical
2	2498.8	51.69	27.60	-24.60	54.68	74.00	19.32	Vertical

BLE_1M_TX_CH_39_Verical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2488.36	38.04	27.57	-24.62	40.98	54.00	13.02	Vertical
2	2494.3	37.16	27.58	-24.61	40.13	54.00	13.87	Vertical

十、 BT

1. Duty Cycle

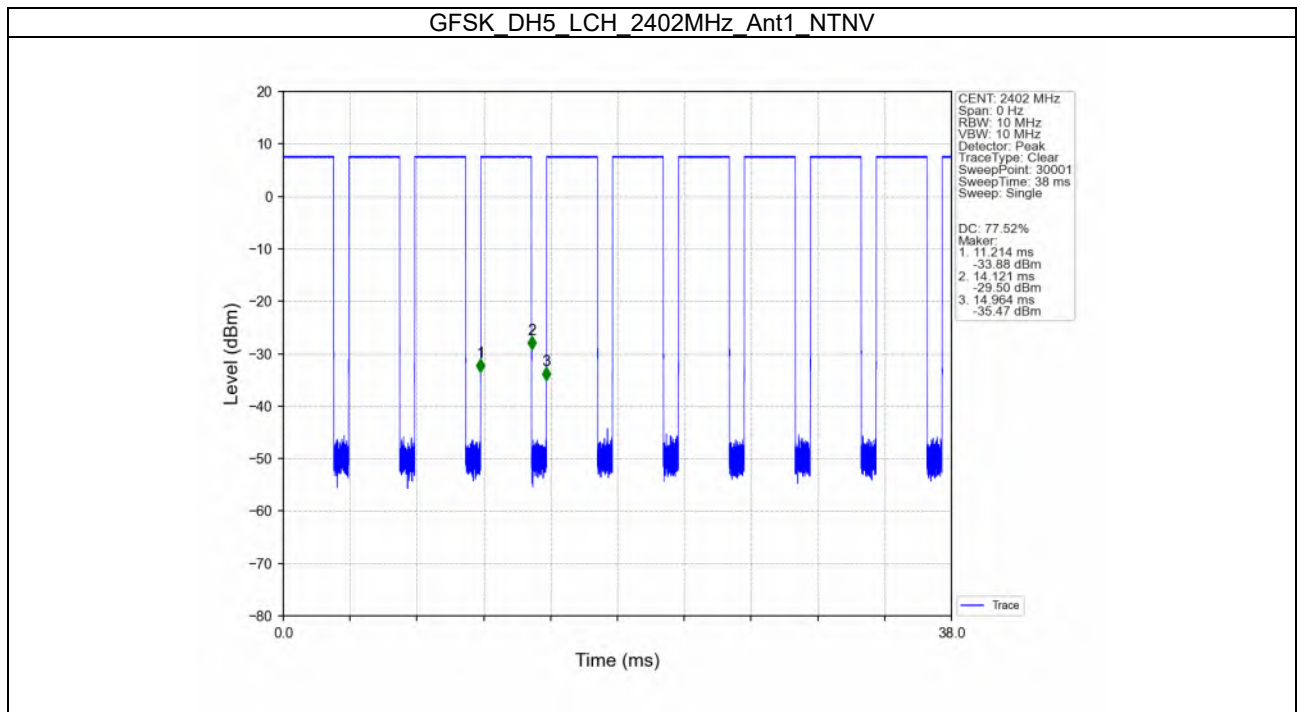
1.1 Test Result

1.1.1 Ant1

Ant1								
Mode	TX Type	Frequency (MHz)	Packet Type	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
GFSK	SISO	2402	DH5	2.907	3.750	77.52	1.11	0.06

1.2 Test Graph

1.2.1 Ant1



2. Bandwidth

2.1 Test Result

2.1.1 OBW

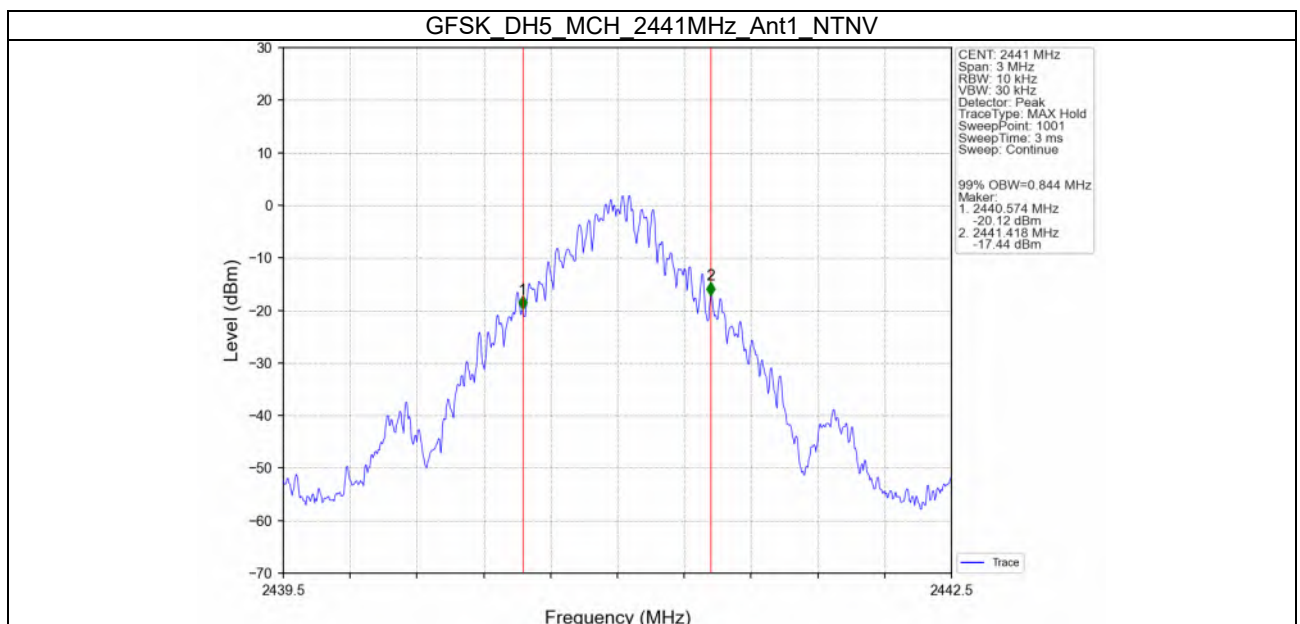
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	99% Occupied Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2441	DH5	1	0.844	/	Pass

2.1.2 20dB BW

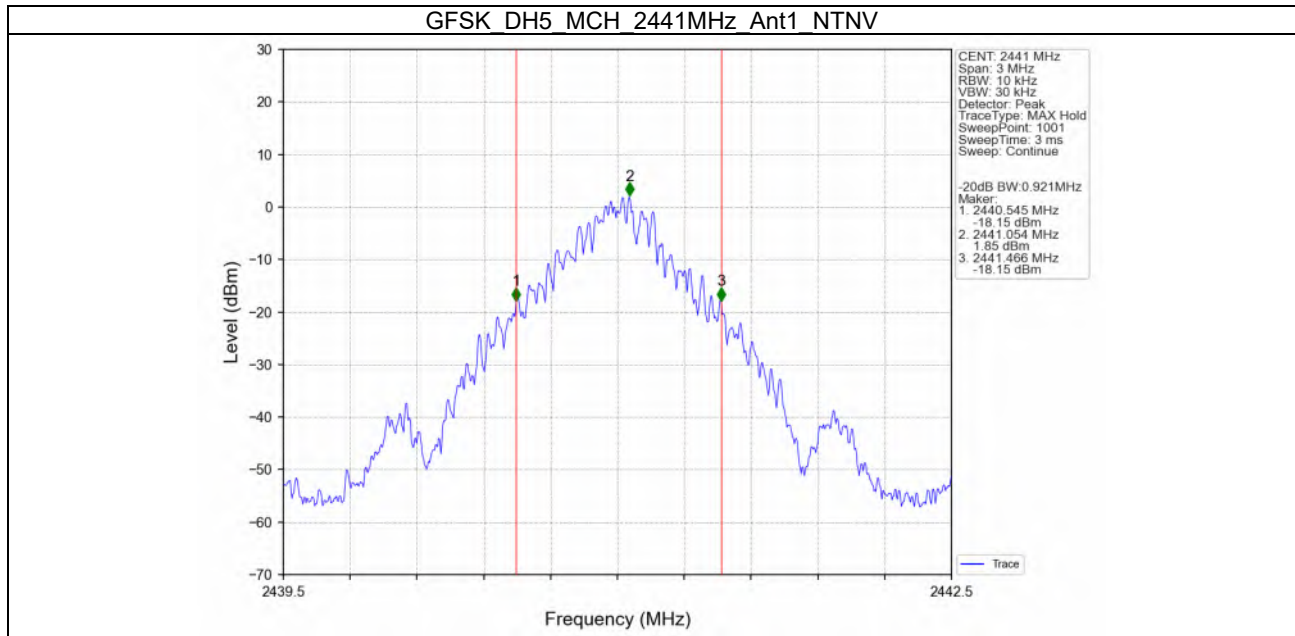
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2441	DH5	1	0.921	/	Pass

2.2 Test Graph

2.2.1 OBW



2.2.2 20dB BW



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2441	DH5	9.69	<=30	Pass

Note1: Antenna Gain: Ant1: 1.87dBi;

4. Carrier Frequency Separation

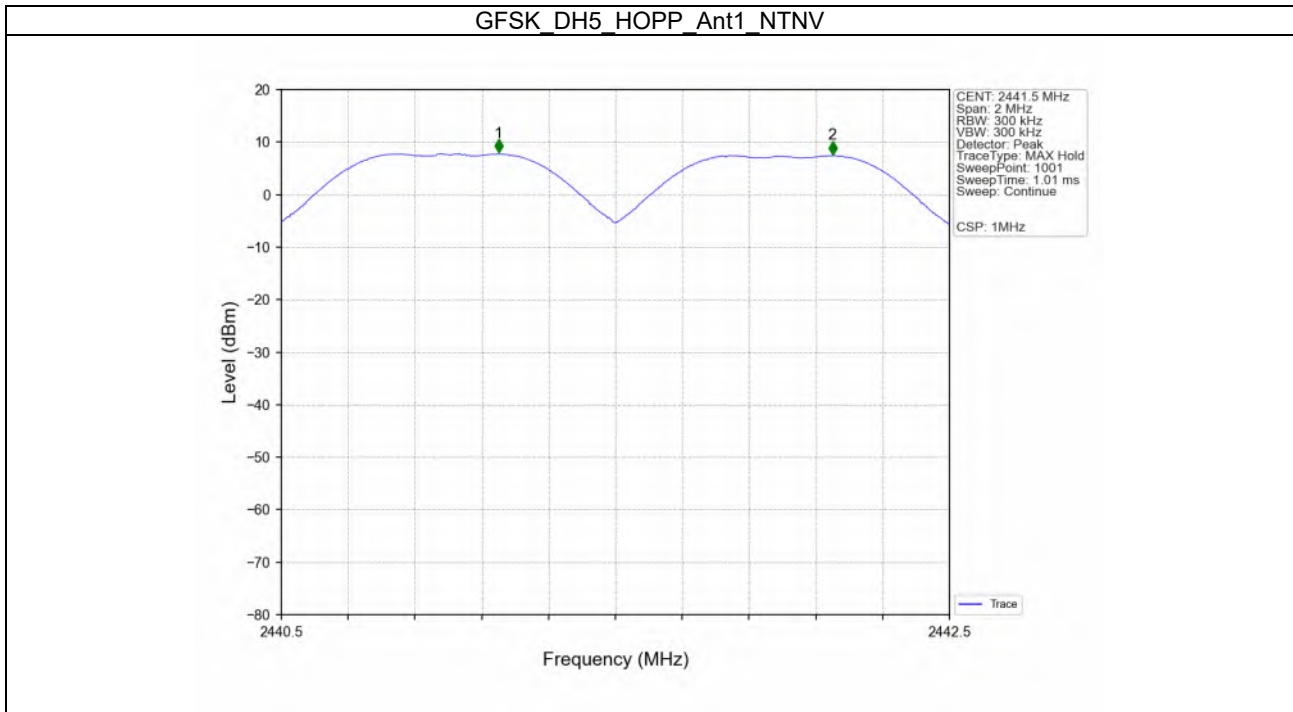
4.1 Test Result

4.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	1.000	0.921	>=0.921	Pass

4.2 Test Graph

4.2.1 Ant1



5. Number of Hopping Frequencies

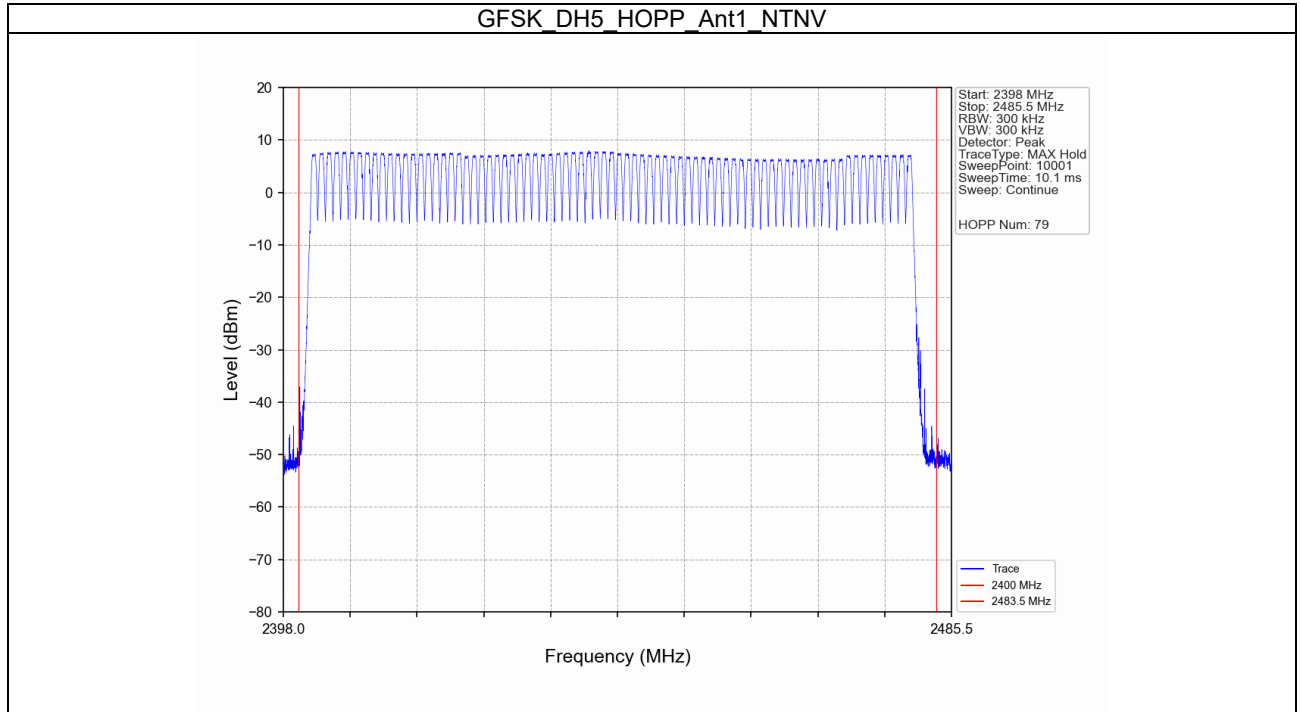
5.1 Test Result

5.1.1 HoppNum

Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				ANT1	Limit	
GFSK	SISO	HOPP	DH5	79	≥ 15	Pass

5.2 Test Graph

5.2.1 HoppNum



6. Unwanted Emissions In Non-restricted Frequency Bands

6.1 Test Result

6.1.1 Ref

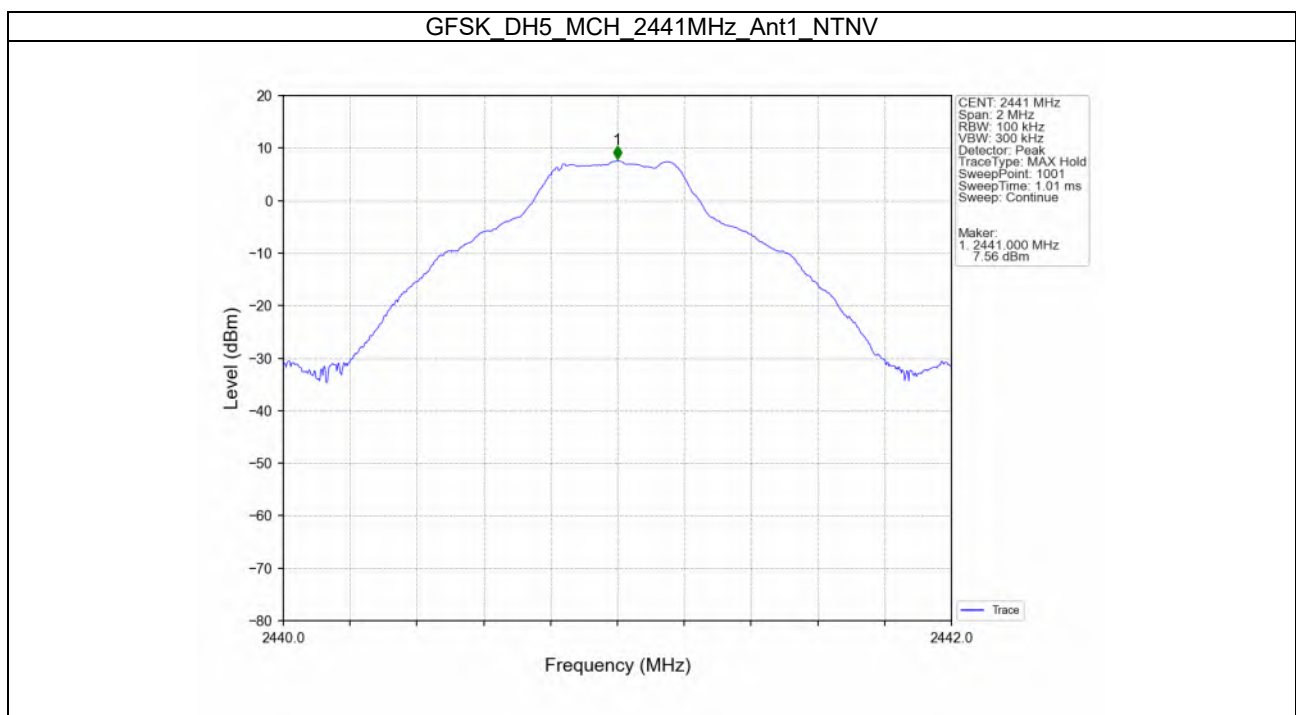
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2441	DH5	1	7.56

6.1.2 CSE

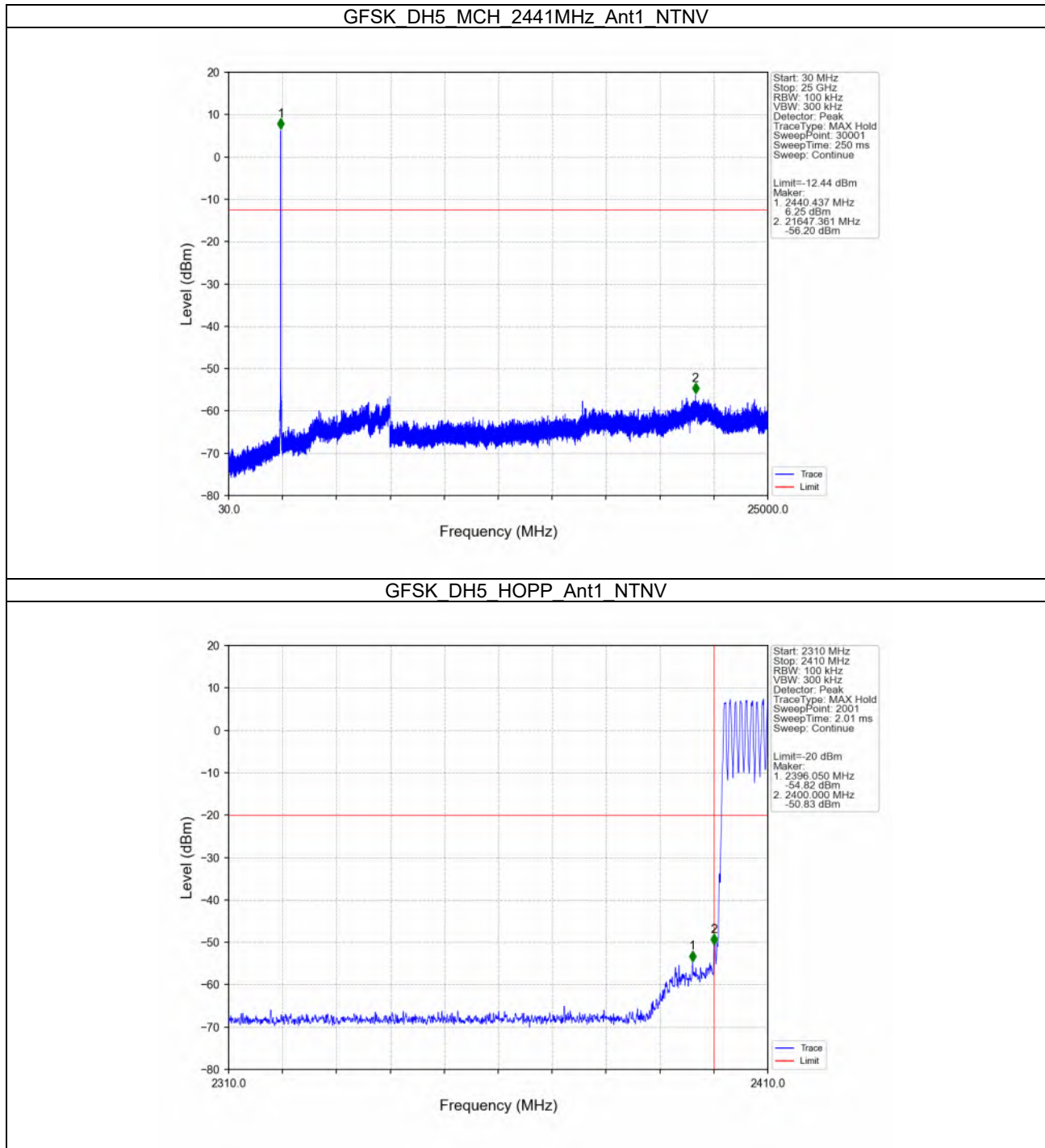
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2441	DH5	1	7.56	-12.44	Pass
		HOPP	DH5	1	0.00	-20.00	Pass
					0.00	-20.00	Pass

6.2 Test Graph

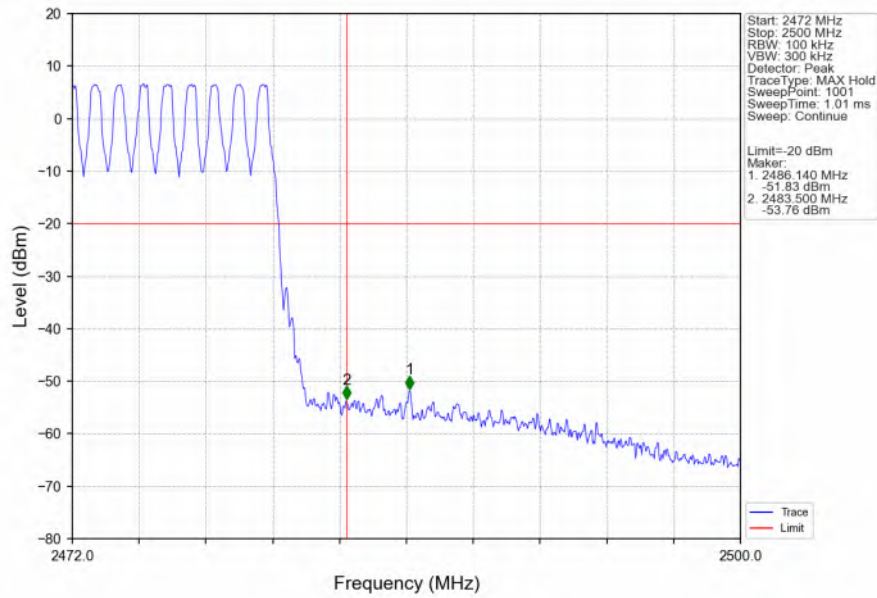
6.2.1 Ref



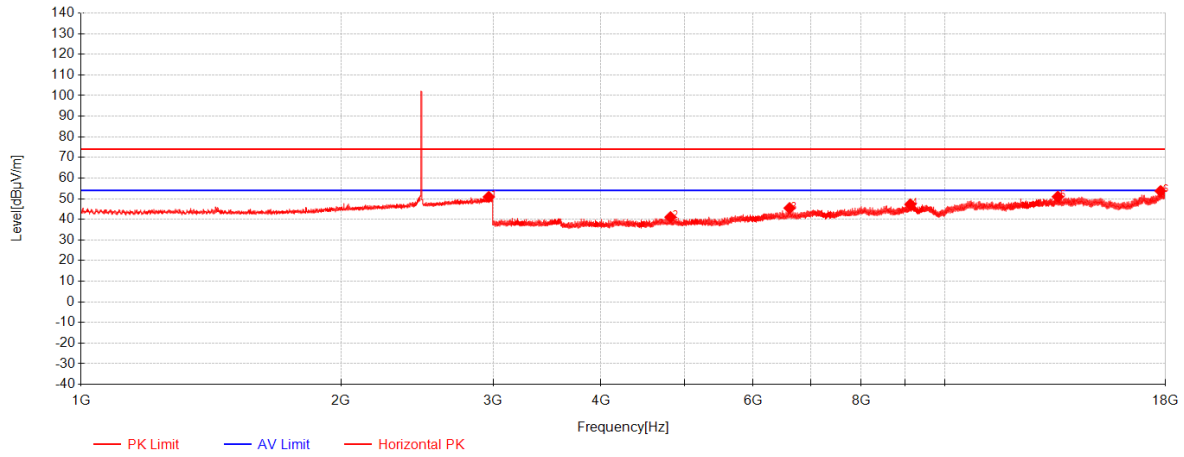
6.2.2 CSE



GFSK DH5_HOPP_Ant1_NTNV

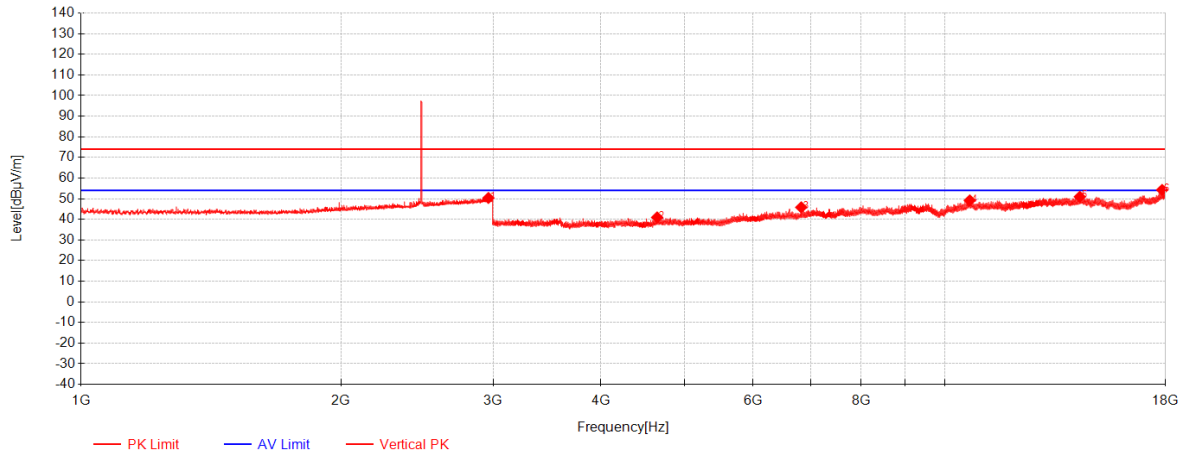


BT_DH5_TX_CH_78_Horizontal



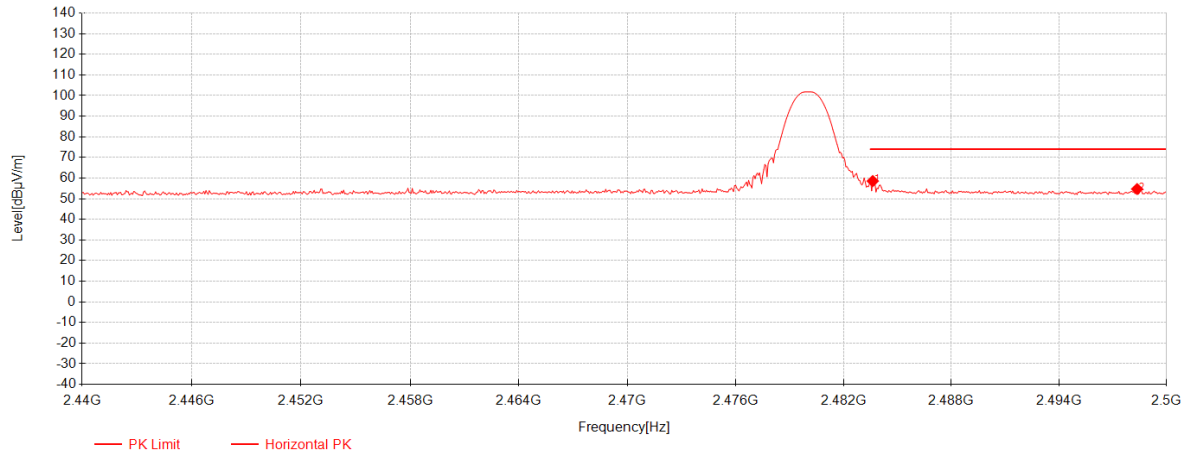
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2965.50	44.91	29.46	-23.48	50.89	74.00	23.11	Horizontal
-	-	-	-	-	26.11	54.00	27.89	-
2	4814.25	53.53	32.65	-45.12	41.06	74.00	32.94	Horizontal
-	-	-	-	-	16.28	54.00	37.72	-
3	6613.50	52.95	35.68	-43.17	45.47	74.00	28.53	Horizontal
-	-	-	-	-	20.69	54.00	33.31	-
4	9126.38	48.90	38.01	-39.64	47.27	74.00	26.73	Horizontal
-	-	-	-	-	22.49	54.00	31.51	-
5	13525.50	45.46	40.16	-34.65	50.97	74.00	23.03	Horizontal
-	-	-	-	-	26.19	54.00	27.81	-
6	17789.63	43.23	41.09	-30.59	53.73	74.00	20.27	Horizontal
-	-	-	-	-	28.95	54.00	25.05	-

BT_DH5_TX_CH_78_Vertical



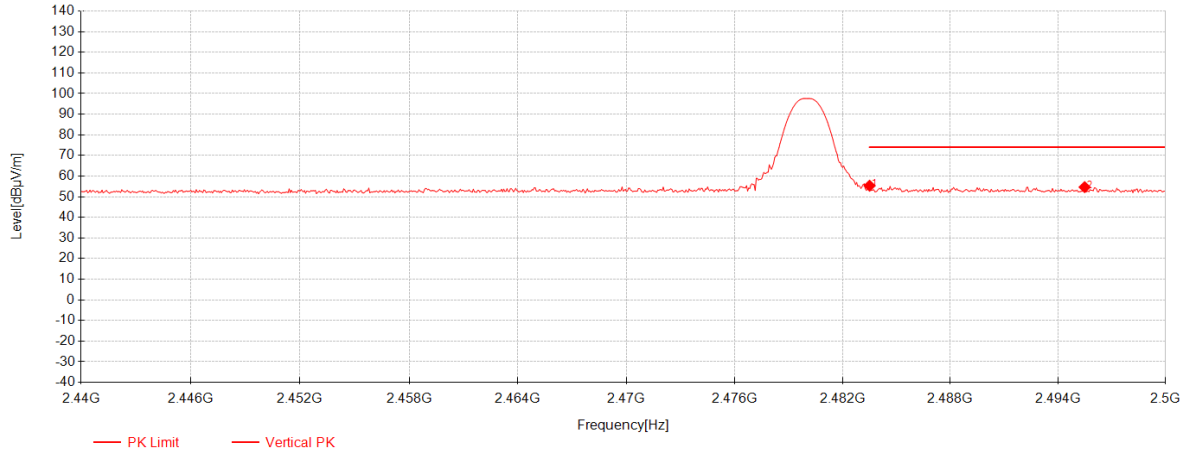
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2962.50	44.41	29.45	-23.48	50.38	74.00	23.62	Vertical
-	-	-	-	-	25.60	54.00	28.40	-
2	4645.50	53.66	32.25	-44.96	40.95	74.00	33.05	Vertical
-	-	-	-	-	16.17	54.00	37.83	-
3	6822.75	52.89	36.02	-43.07	45.83	74.00	28.17	Vertical
-	-	-	-	-	21.05	54.00	32.95	-
4	10693.50	46.54	38.93	-36.29	49.18	74.00	24.82	Vertical
-	-	-	-	-	24.40	54.00	29.60	-
5	14340.00	45.38	40.20	-34.64	50.94	74.00	23.06	Vertical
-	-	-	-	-	26.16	54.00	27.84	-
6	17861.25	43.83	41.30	-30.87	54.26	74.00	19.74	Vertical
-	-	-	-	-	29.48	54.00	24.52	-

BT_DH5_TX_CH_78_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2483.62	49.65	27.55	-24.63	52.57	74.00	21.43	Horizontal
-	-	-	-	-	27.79	54.00	26.21	-
2	2498.38	48.72	27.60	-24.60	51.71	74.00	22.29	Horizontal
-	-	-	-	-	26.93	54.00	27.07	-

BT_DH5_TX_CH_78_Vertical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2483.50	49.42	27.55	-24.63	52.34	74.00	21.66	Vertical
-	-	-	-	-	27.56	54.00	26.44	-
2	2495.50	48.68	27.59	-24.61	51.66	74.00	22.34	Vertical
-	-	-	-	-	26.88	54.00	27.12	-

十一、WIFI2.4G

1. Duty Cycle

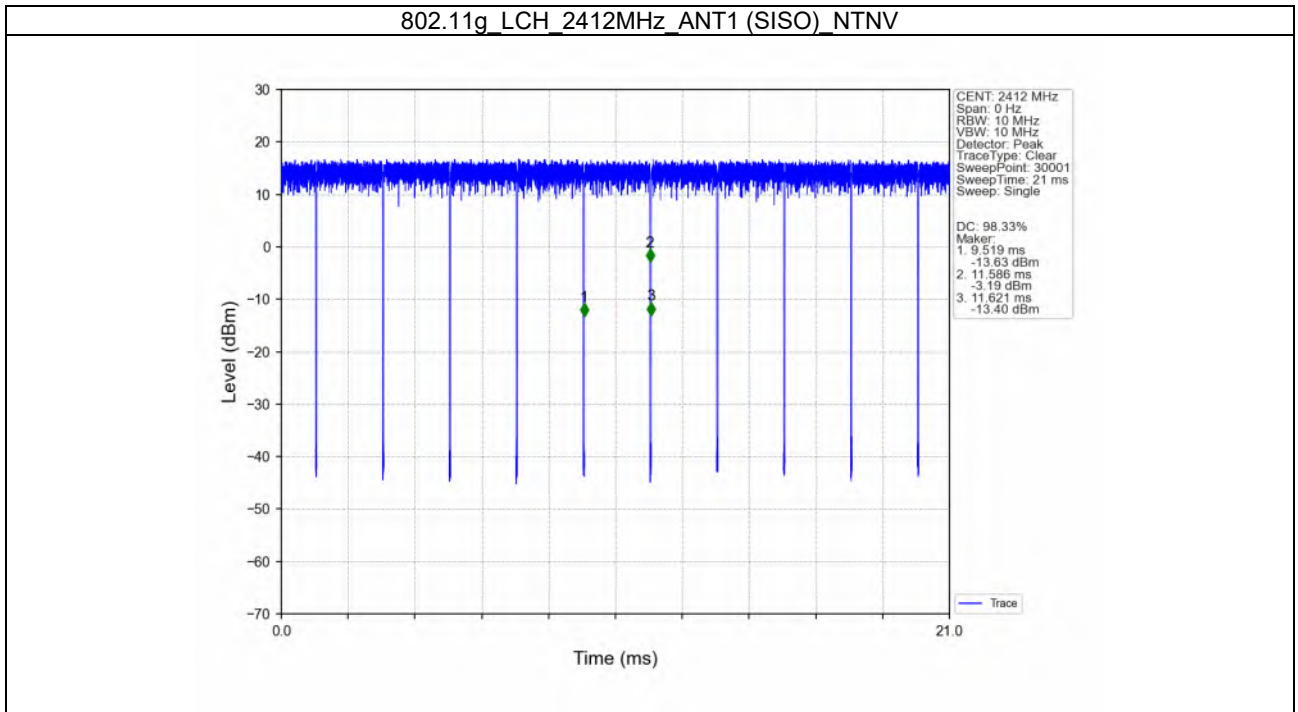
1.1 Test Result

1.1.1 ANT1

ANT1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11g	SISO	2412	2.067	2.102	98.33	0.07	0.03

1.2 Test Graph

1.2.1 ANT1



2. Bandwidth

2.1 Test Result

2.1.1 OBW

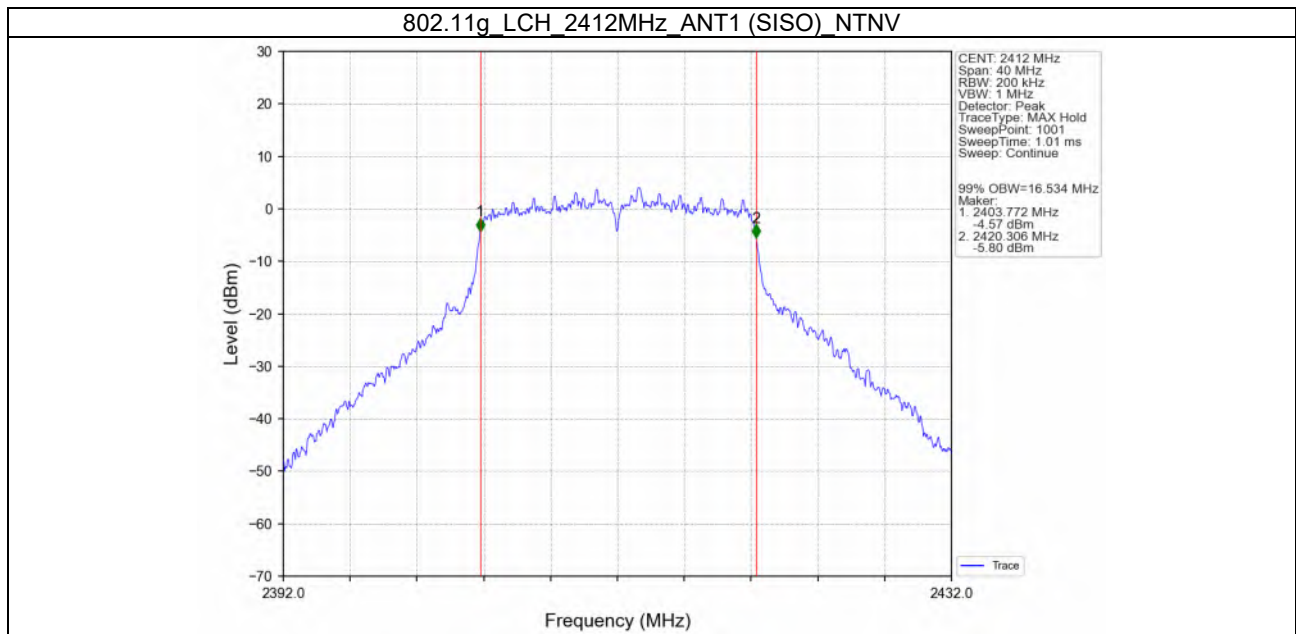
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11g	SISO	2412	11	16.534	/	Pass

2.1.2 6dB BW

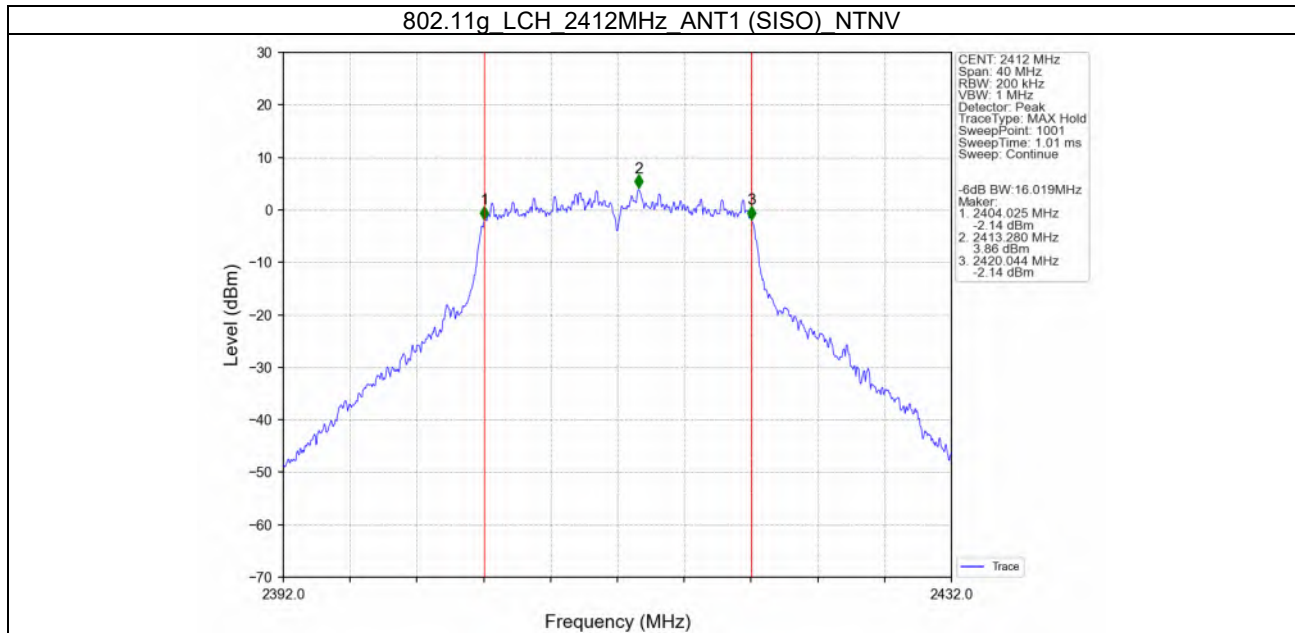
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11g	SISO	2412	11	16.019	>=0.5	Pass

2.2 Test Graph

2.2.1 OBW



2.2.2 6dB BW



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11g	SISO	2412	19.72	<=30	Pass

Note1: Antenna Gain: ANT1: 1.87dBi;

4. Maximum Power Spectral Density

4.1 Test Result

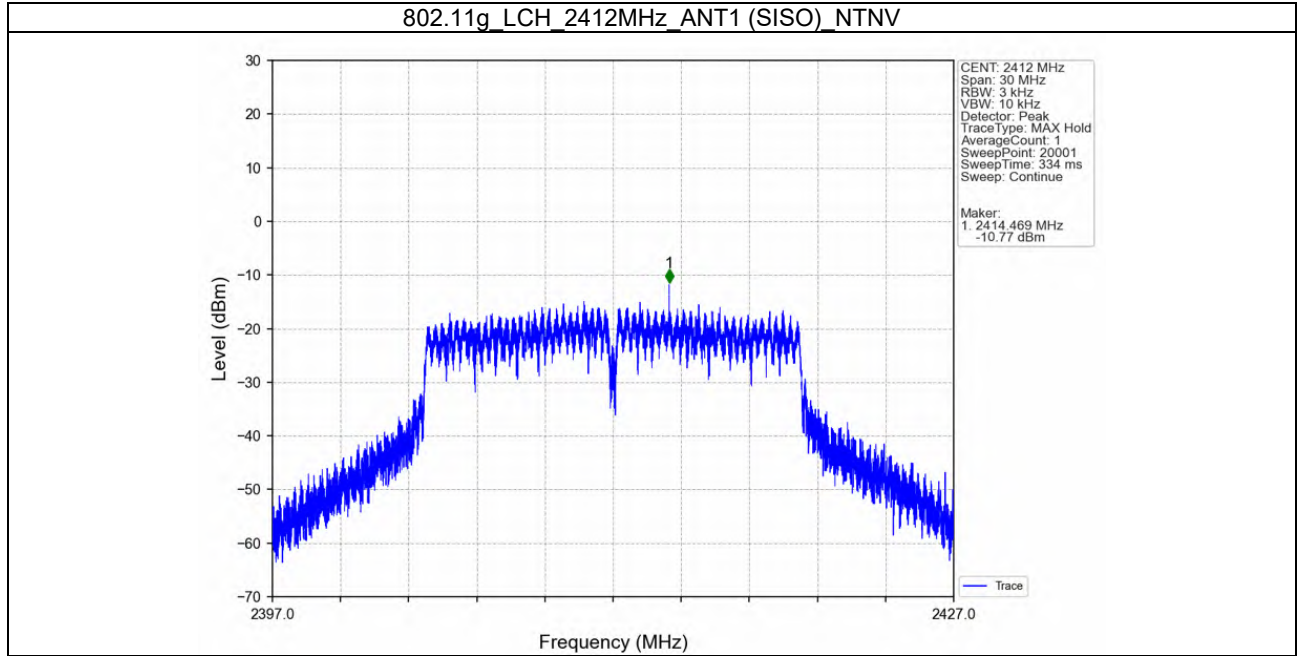
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit(dBm/3kHz)	
802.11g	SISO	2412	-10.77dBm/3kHz	<=8	Pass

Note1: Antenna Gain: ANT1: 1.87dBi;

4.2 Test Graph

4.2.1 PSD



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

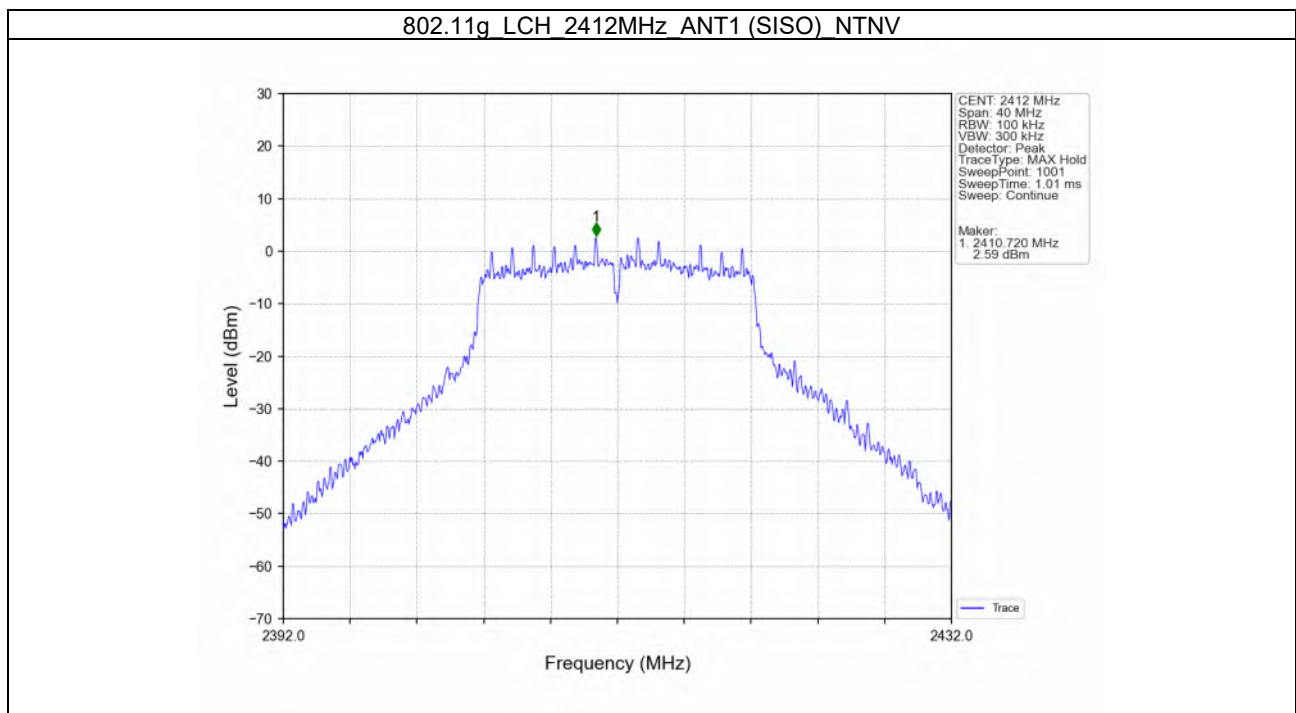
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
802.11g	SISO	2412	1	2.59

5.1.2 CSE

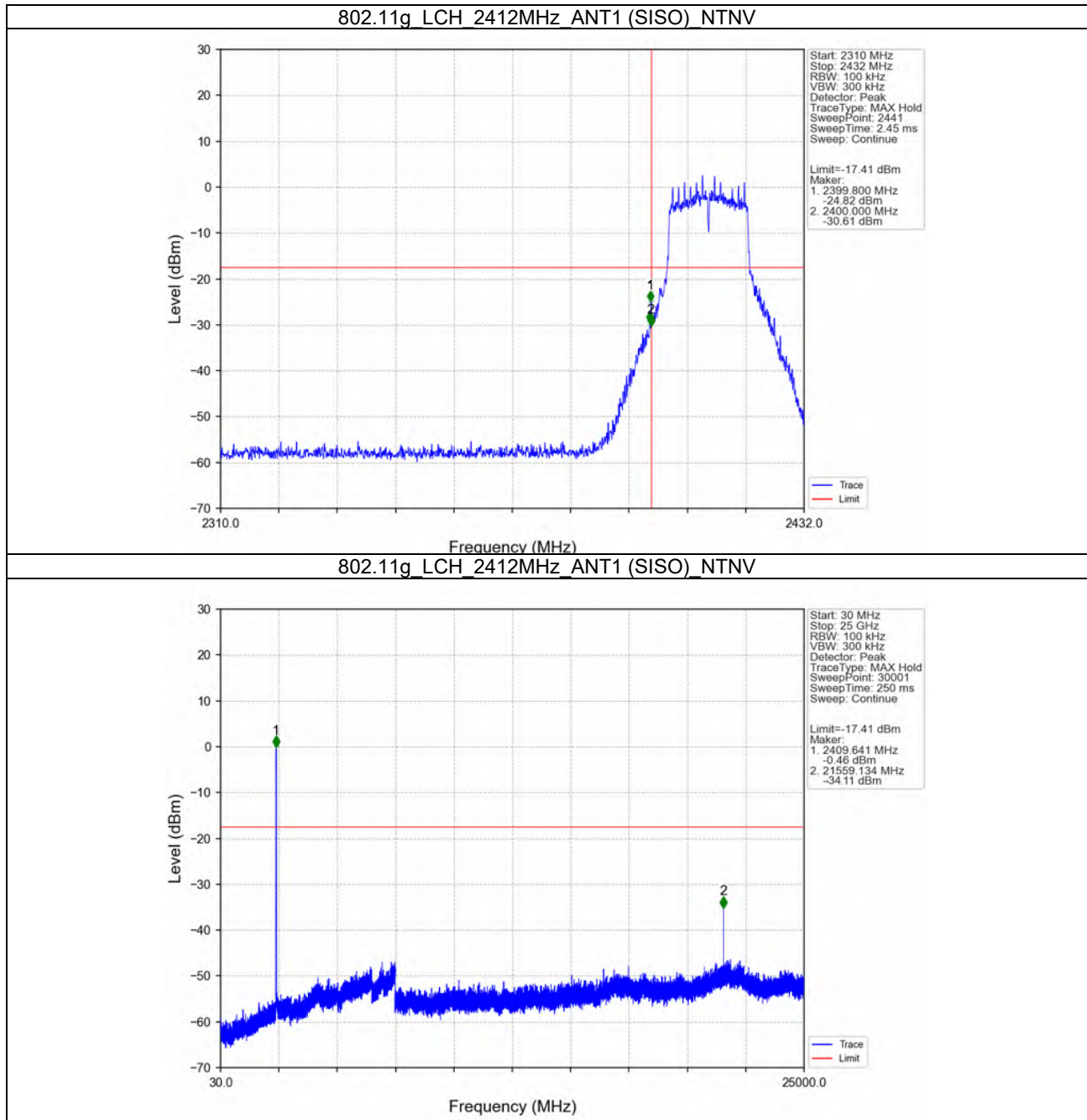
Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
802.11g	SISO	2412	1	2.59	-17.41	Pass

5.2 Test Graph

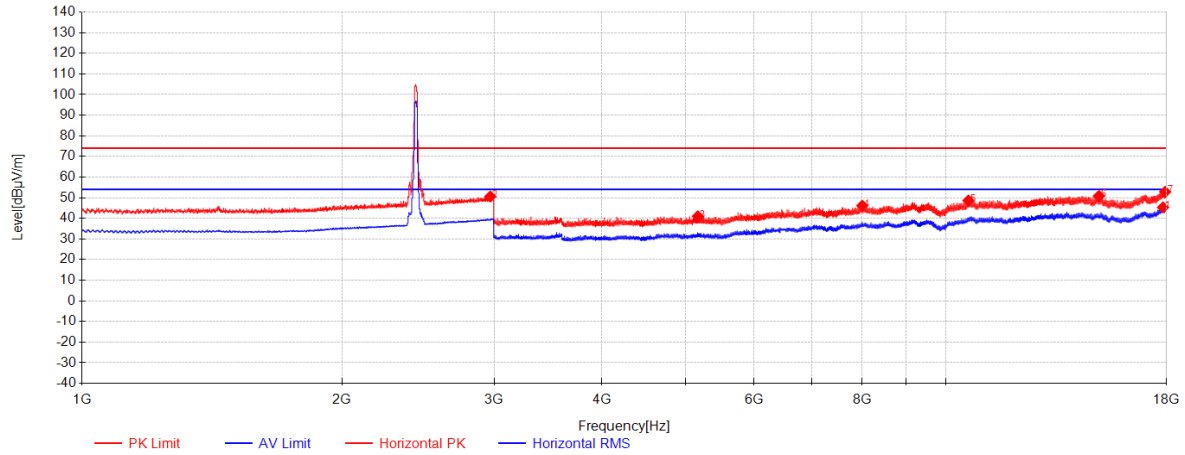
5.2.1 Ref



5.2.2 CSE

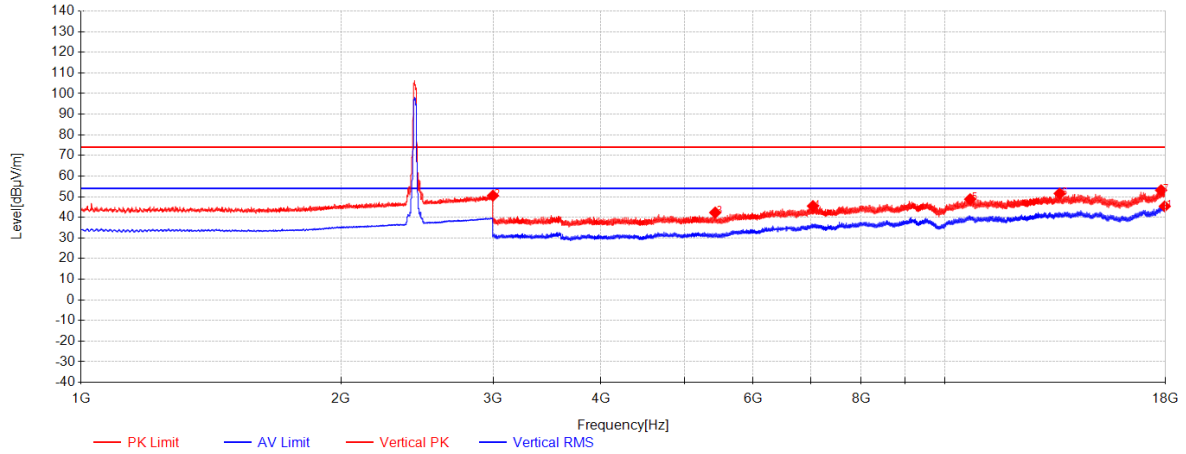


11n(HT20)_TX_CH_06_Horizontal



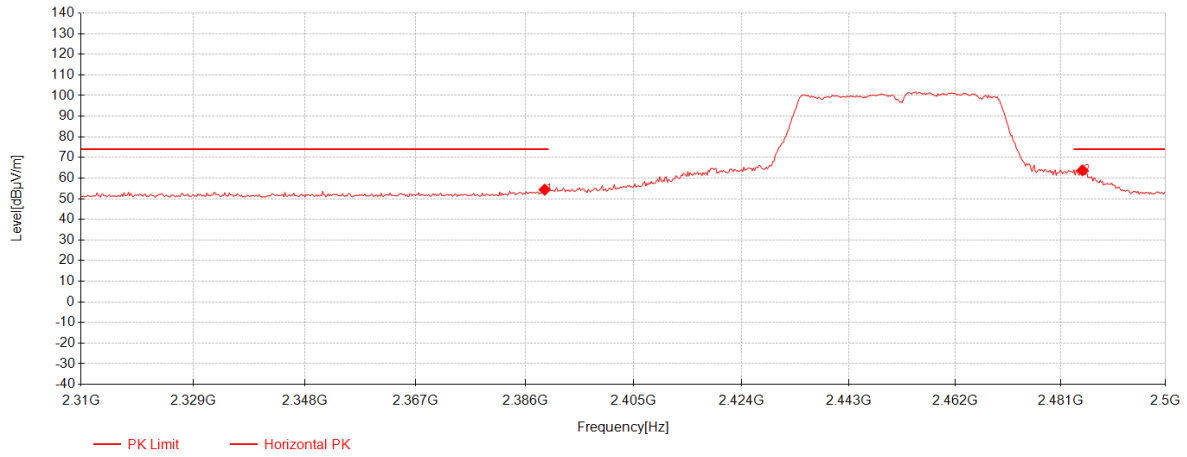
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	17857.5	34.87	41.29	-30.85	45.31	54.00	8.69	Horizontal
2	2969.5	44.58	29.48	-23.48	50.58	74.00	23.42	Horizontal
3	5164.875	52.71	33.07	-44.78	41.00	74.00	33.00	Horizontal
4	8007	50.06	37.30	-41.21	46.15	74.00	27.85	Horizontal
5	10628.25	46.58	38.85	-36.79	48.64	74.00	25.36	Horizontal
6	15050.25	45.24	39.71	-34.10	50.85	74.00	23.15	Horizontal
7	17956.875	42.35	41.57	-31.06	52.87	74.00	21.13	Horizontal

11n(HT20)_TX_CH_06_Vertical



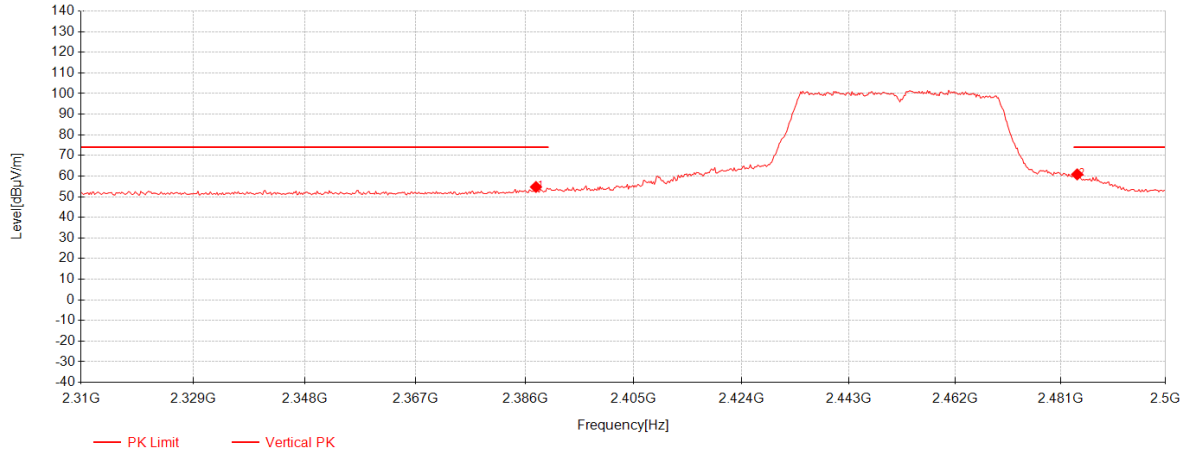
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	17986.875	34.72	41.66	-31.03	45.35	54.00	8.65	Vertical
2	2998.5	44.38	29.59	-23.46	50.51	74.00	23.49	Vertical
3	5424	53.91	33.02	-44.61	42.31	74.00	31.69	Vertical
4	7038.75	52.16	36.30	-42.98	45.48	74.00	28.52	Vertical
5	10704.75	46.11	38.95	-36.27	48.78	74.00	25.22	Vertical
6	13592.625	46.43	40.20	-35.08	51.54	74.00	22.46	Vertical
7	17812.5	42.55	41.16	-30.57	53.14	74.00	20.86	Vertical

11n(HT40)_TX_CH_09_Horizontal_Peak



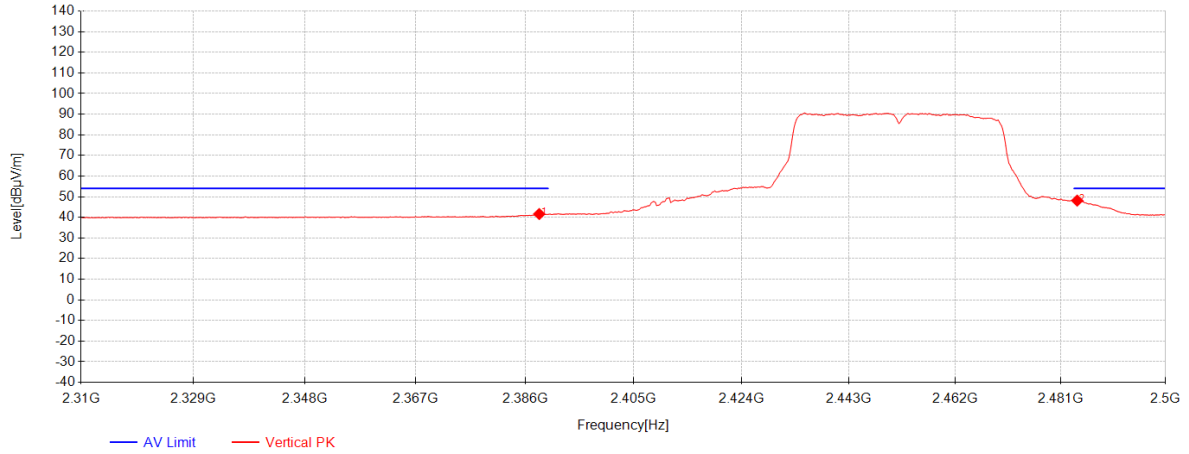
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2389.42	51.92	27.29	-24.82	54.39	74.00	19.61	Horizontal
2	2484.99	60.85	27.56	-24.63	63.78	74.00	10.22	Horizontal

11n(HT40)_TX_CH_09_Verical_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2387.9	52.27	27.29	-24.82	54.74	74.00	19.26	Vertical
2	2484.04	57.90	27.56	-24.63	60.82	74.00	13.18	Vertical

11n(HT40)_TX_CH_09_Veritical_Average



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	2388.47	39.15	27.29	-24.82	41.62	54.00	12.38	Vertical
2	2484.04	45.21	27.56	-24.63	48.13	54.00	5.87	Vertical

十二、 WIFI5G

1. Duty Cycle

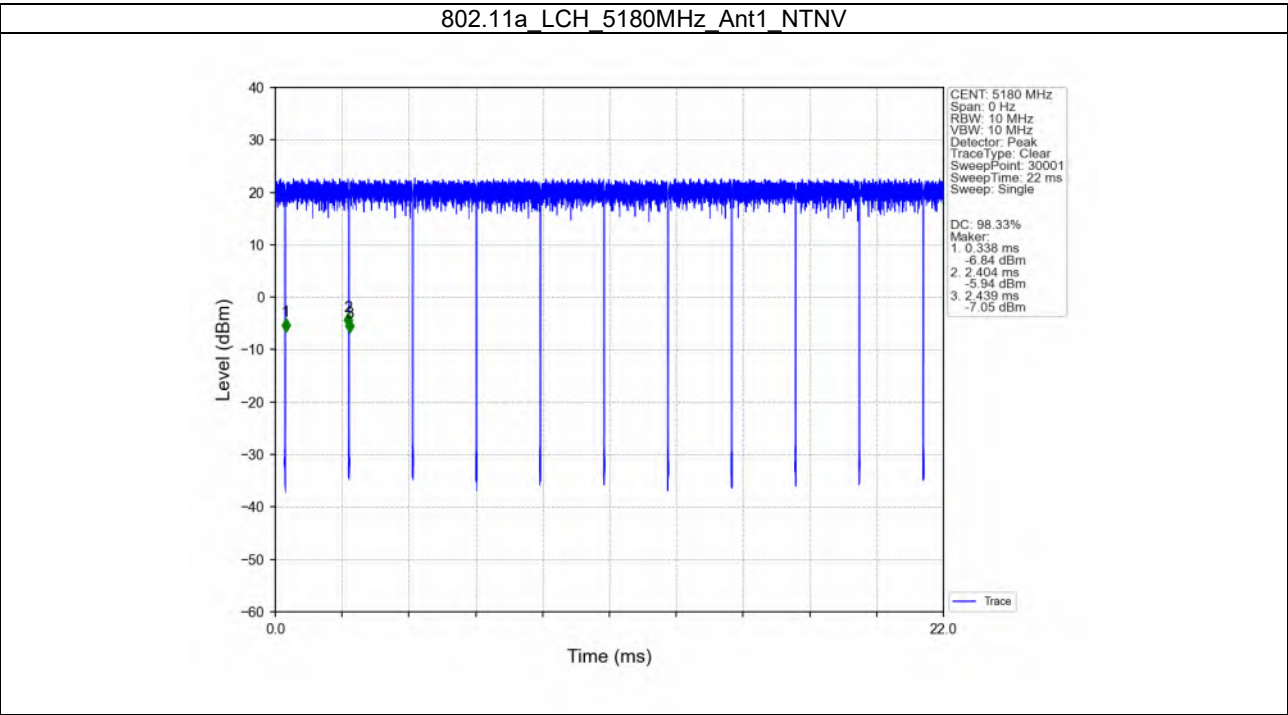
1.1 Test Result

1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
802.11a	SISO	5180	2.066	2.101	98.33	0.07	0.00

1.2 Test Graph

1.2.1 Ant1



2. Bandwidth

2.1 Test Result

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	16.601	/	Pass
		5260	1	16.622	/	Pass
		5500	1	16.649	/	Pass
		5825	1	16.536	/	Pass

2.1.2 26dB BW

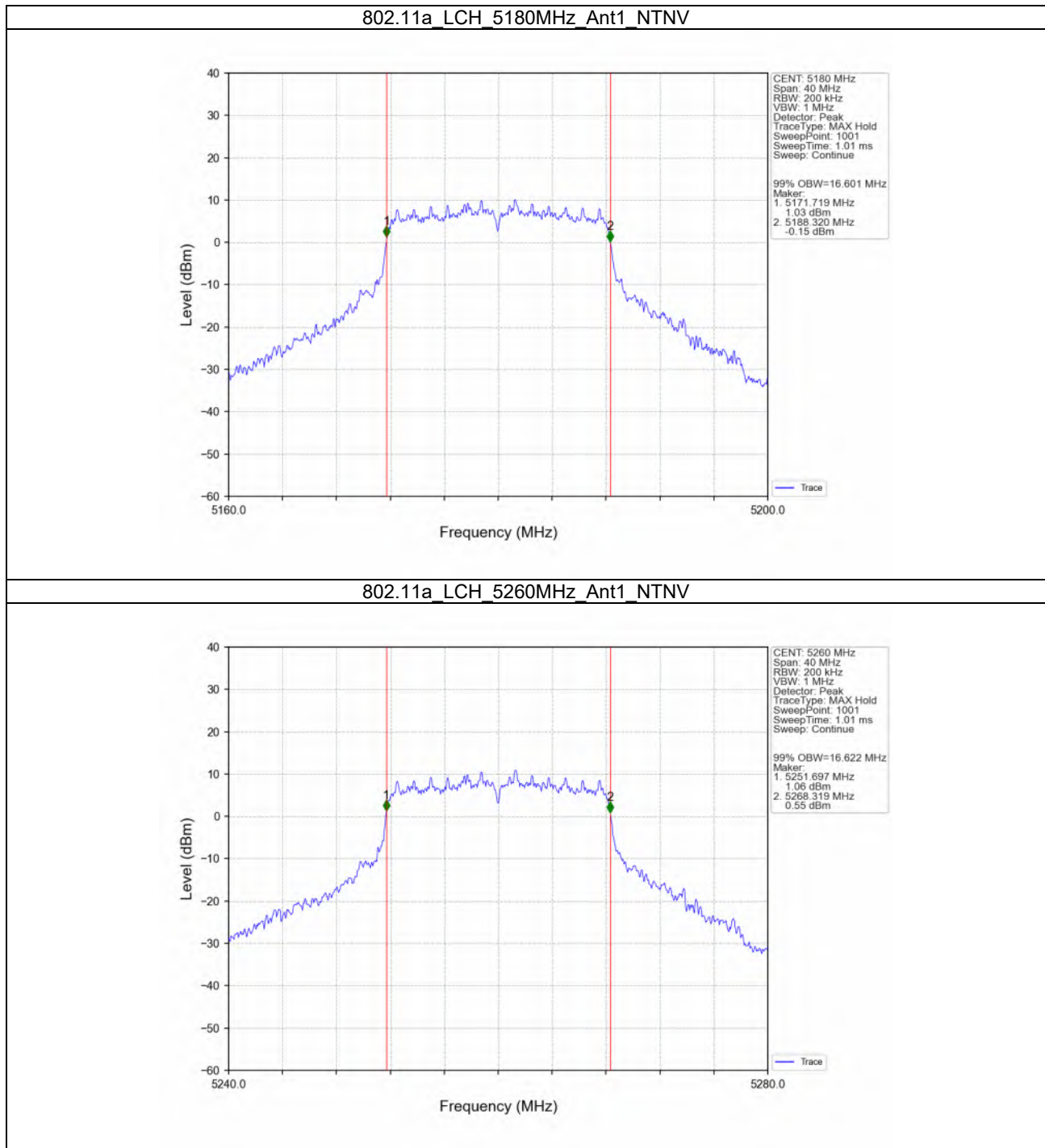
Mode	TX Type	Frequency (MHz)	ANT	26dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5180	1	24.355	/	Pass
		5260	1	24.798	/	Pass
		5500	1	24.829	/	Pass

2.1.3 6dB BW

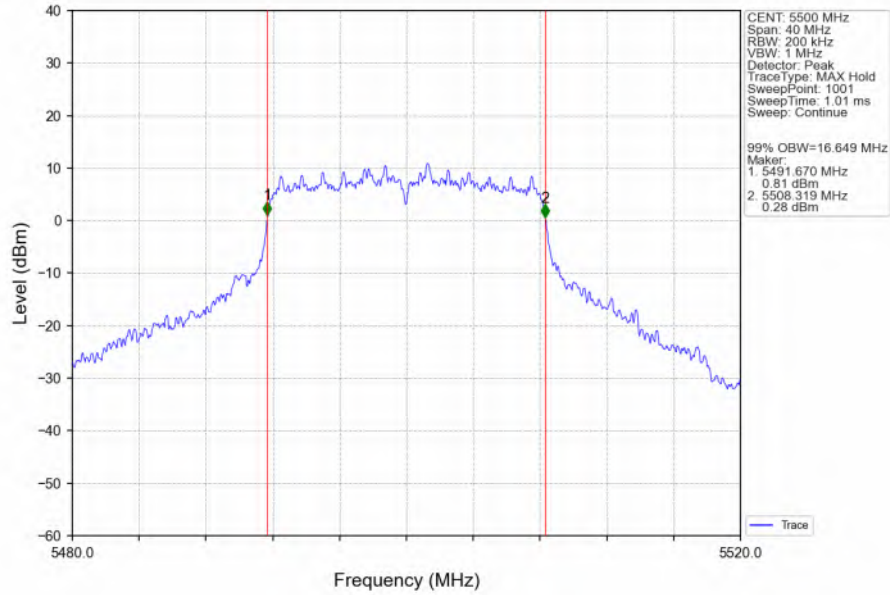
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
802.11a	SISO	5825	1	15.372	≥ 0.5	Pass

2.2 Test Graph

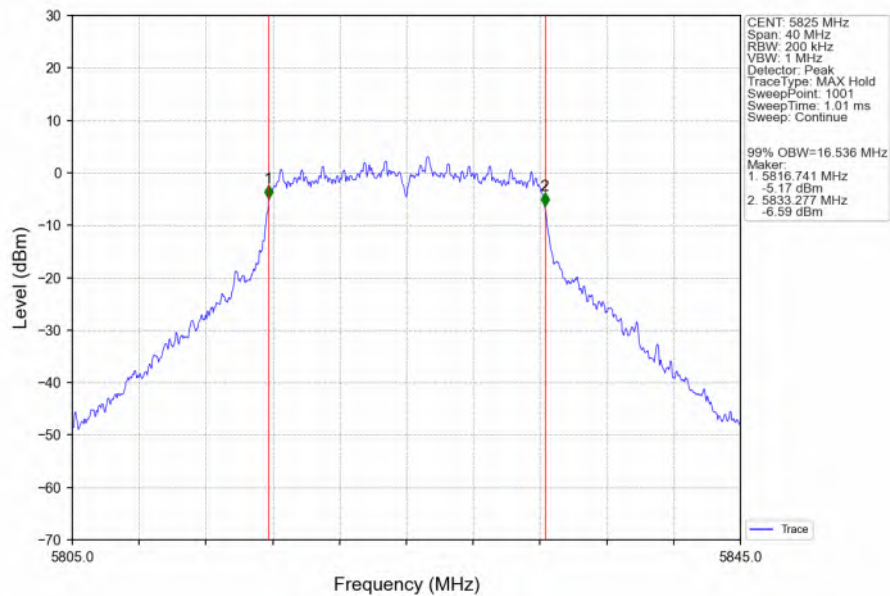
2.2.1 OBW



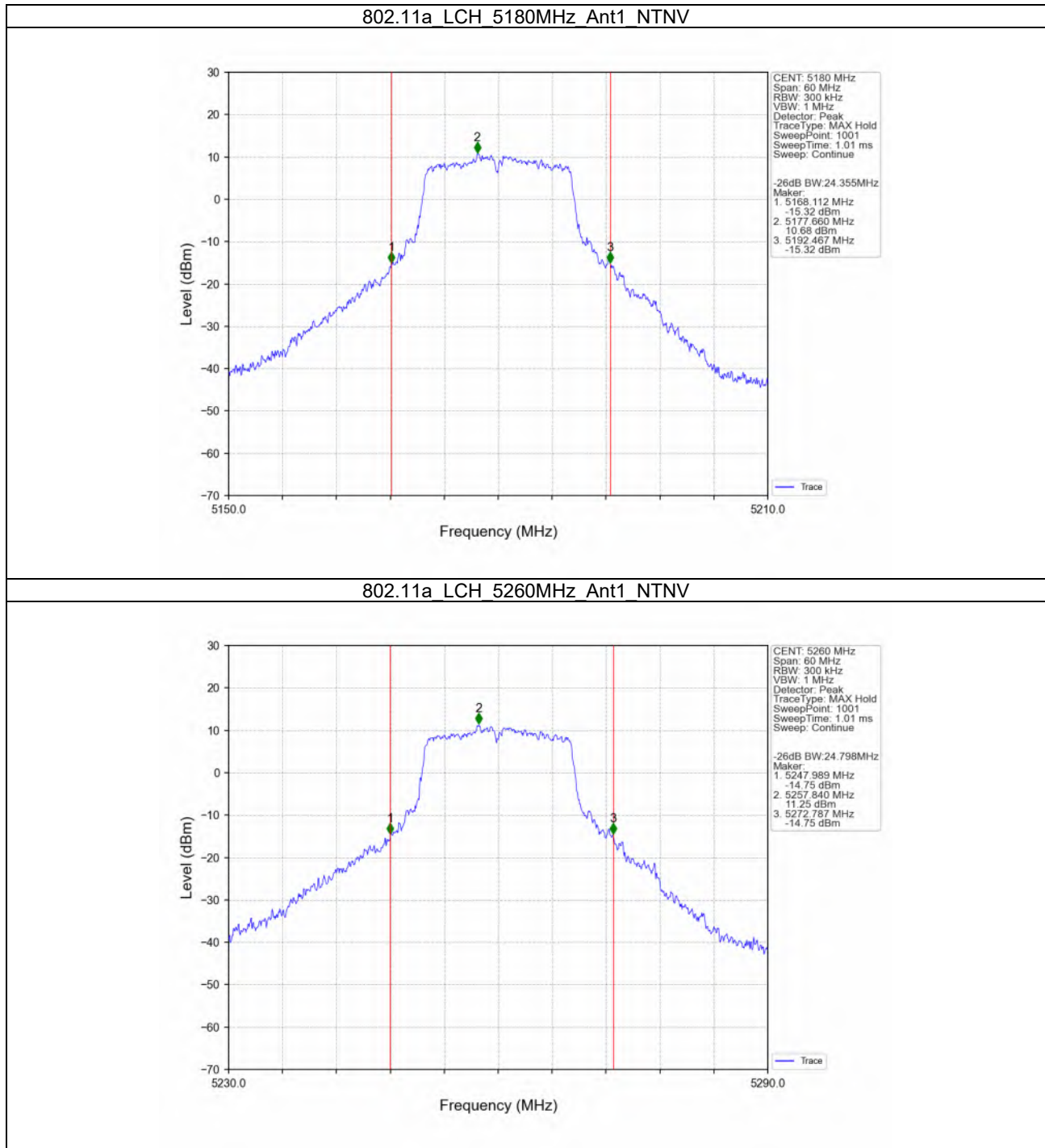
802.11a_LCH_5500MHz_Ant1_NTNV



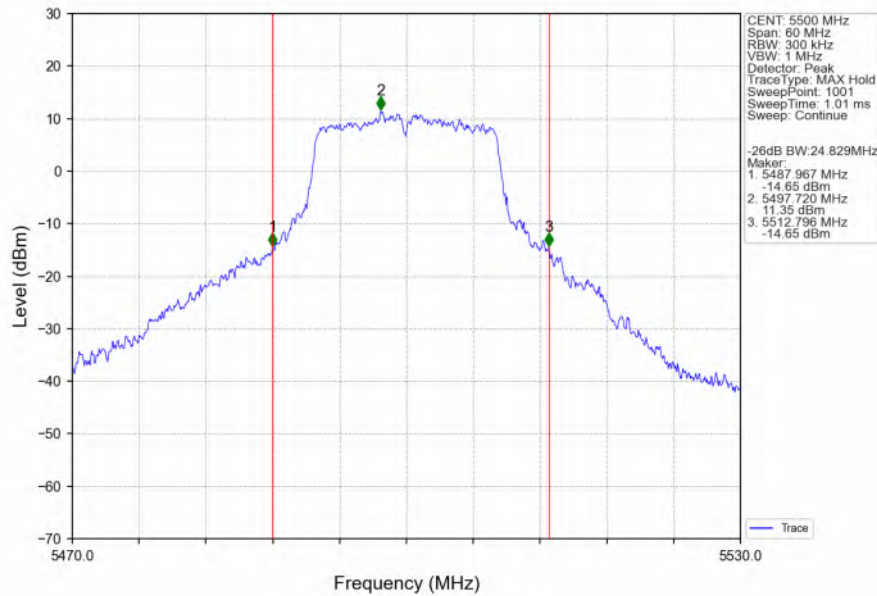
802.11a_HCH_5825MHz_Ant1_NTNV



2.2.2 26dB BW

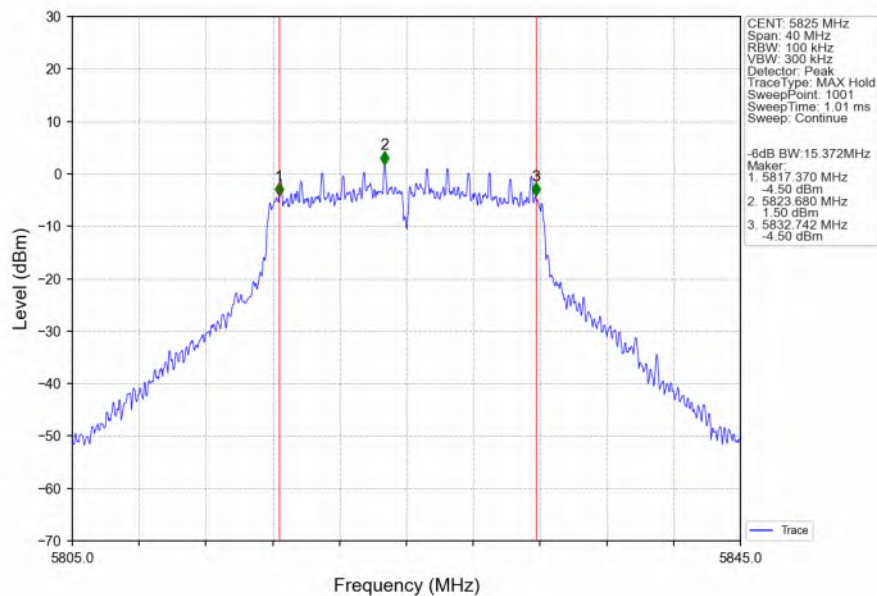


802.11a_LCH_5500MHz_Ant1_NTNV



2.2.3 6dB BW

802.11a_HCH_5825MHz_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power

Mode	TX Type	Frequency (MHz)	Maximum Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	18.16	<=23.98	Pass
		5260	18.30	<=23.98	Pass
		5500	18.49	<=23.98	Pass
		5825	10.30	<=30	Pass
Note1: Antenna Gain: - Band: 2A Ant1: 1.96dBi; - Band: 2C Ant1: -0.11dBi; - Band: 1 Ant1: -0.11dBi; - Band: 3 Ant1: 1.96dBi;					

4. Maximum Power Spectral Density

4.1 Test Result

4.1.1 PSD

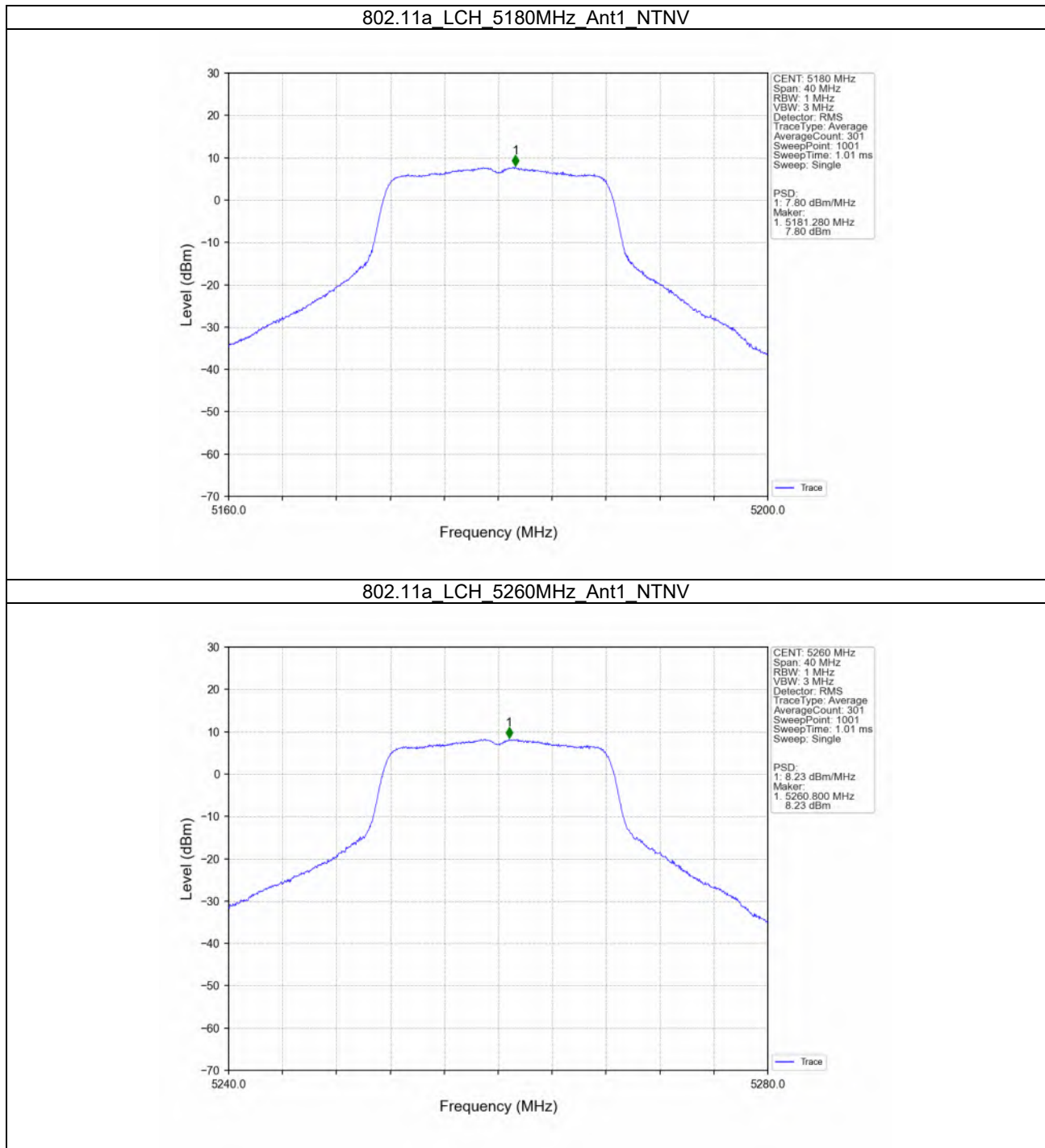
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/MHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5180	7.80	<=11	Pass
		5260	8.23	<=11	Pass
		5500	8.42	<=11	Pass
Note1: Antenna Gain: - Band: 3 Ant1: 1.96dBi; - Band: 2A Ant1: 1.96dBi; - Band: 2C Ant1: -0.11dBi; - Band: 1 Ant1: -0.11dBi;					

4.1.2 PSD-Band3

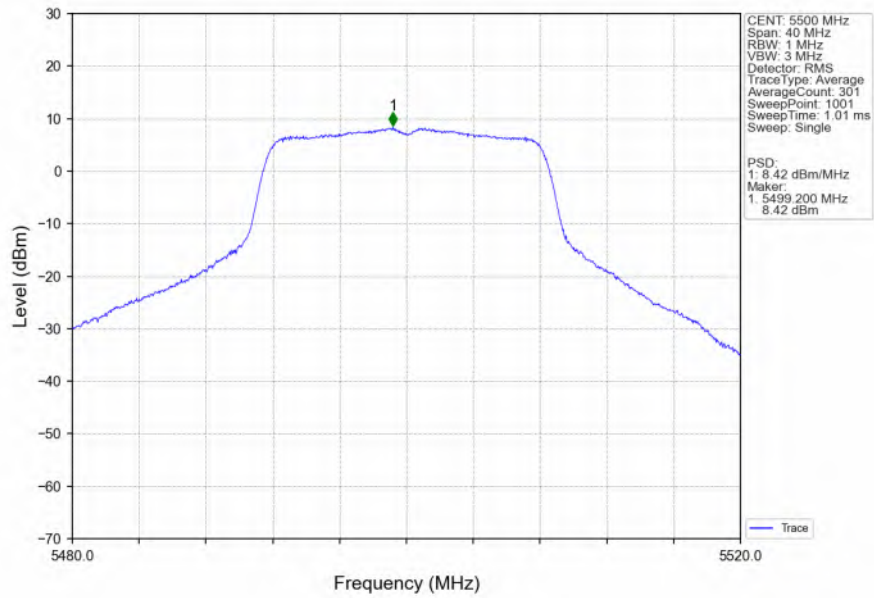
Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm/500kHz)		Verdict
			ANT1	Limit	
802.11a	SISO	5825	-2.29	<=30	Pass
Note1: Antenna Gain: - Band: 1 Ant1: -0.11dBi; - Band: 3 Ant1: 1.96dBi; - Band: 2A Ant1: 1.96dBi; - Band: 2C Ant1: -0.11dBi;					

4.2 Test Graph

4.2.1 PSD

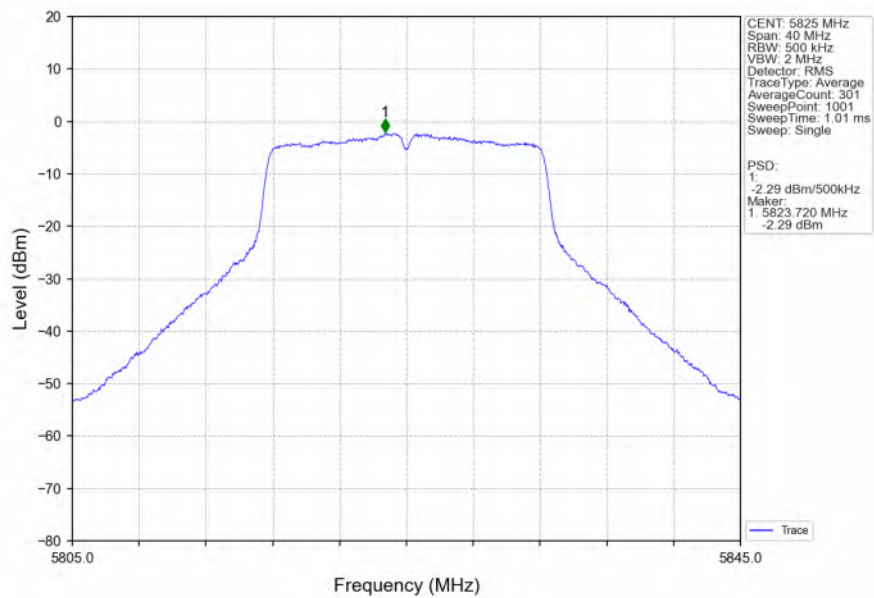


802.11a_LCH_5500MHz_Ant1_NTNV

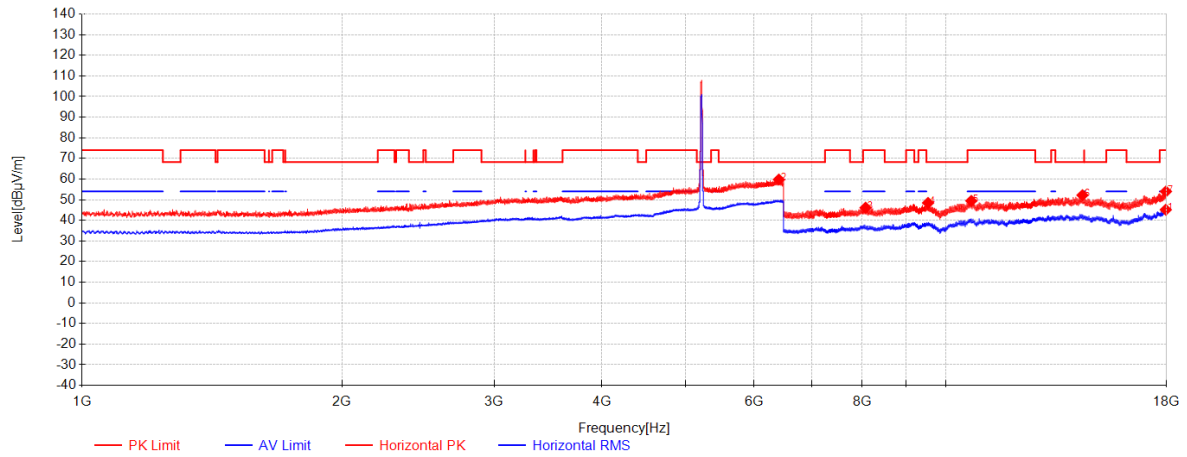


4.2.2 PSD-Band3

802.11a_HCH_5825MHz_Ant1_NTNV

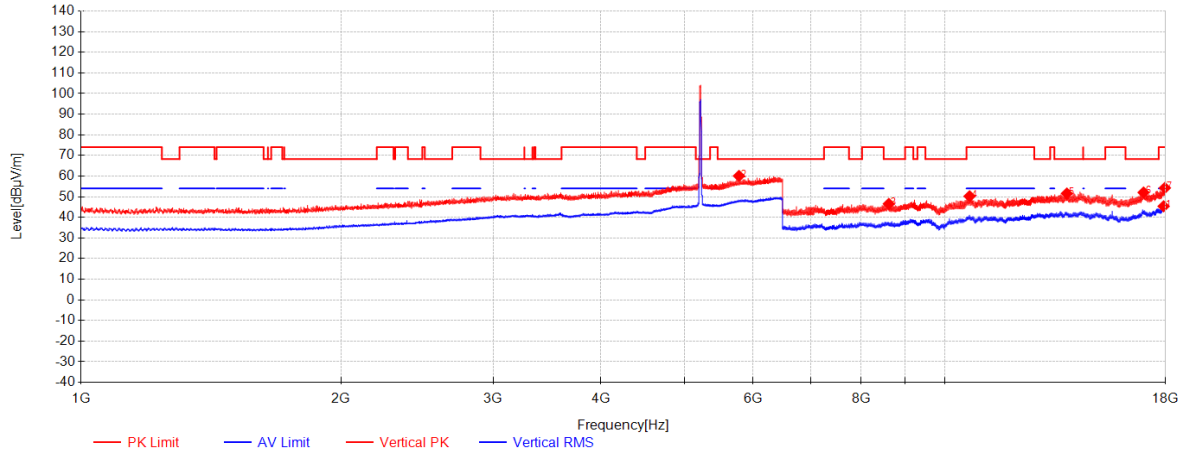


11a_TX_CH_44_Horizontal



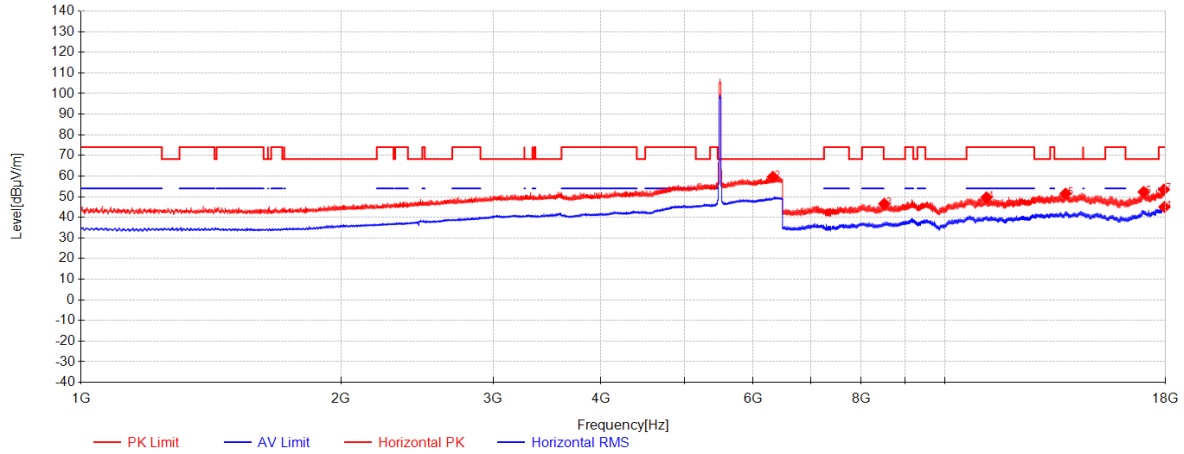
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	17988.1167	34.44	41.67	-30.95	45.15	54.00	8.85	Horizontal
2	6410.1667	41.05	35.32	-16.60	59.77	68.20	8.43	Horizontal
3	8077.8	49.83	37.35	-41.06	46.12	74.00	27.88	Horizontal
4	9542.9	48.76	38.05	-38.37	48.44	68.20	19.76	Horizontal
5	10709.7667	46.48	38.95	-35.98	49.45	74.00	24.55	Horizontal
6	14404.7167	45.83	40.16	-33.81	52.18	68.20	16.02	Horizontal
7	17995.0167	43.25	41.69	-30.94	54.00	74.00	20.00	Horizontal

11a_TX_CH_44_Vertical



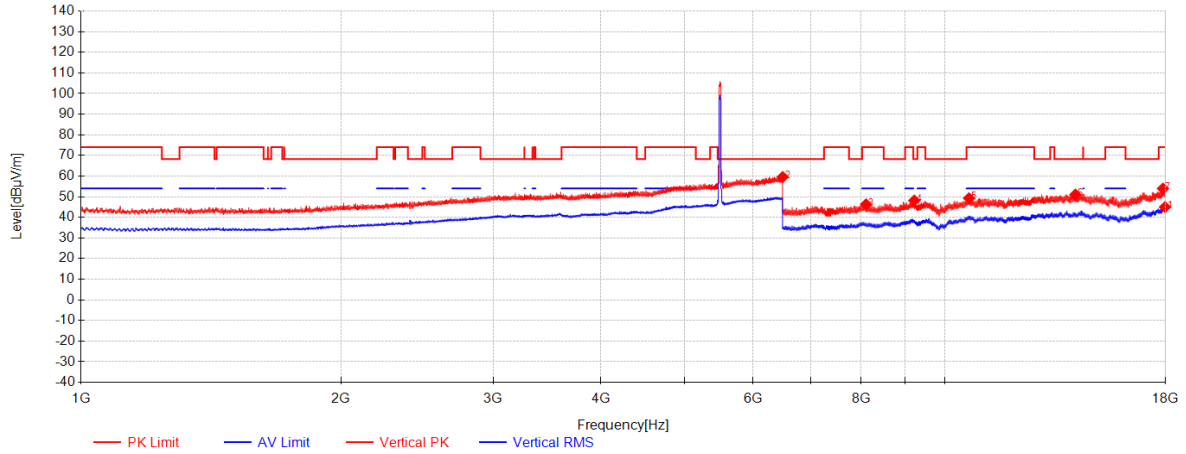
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	17932.15	34.92	41.50	-31.07	45.36	54.00	8.64	Vertical
2	5779.0417	43.33	33.84	-17.08	60.08	68.20	8.12	Vertical
3	8618.3	48.91	37.73	-40.10	46.54	68.20	21.66	Vertical
4	10688.3	47.29	38.93	-35.98	50.23	74.00	23.77	Vertical
5	13854.6333	45.66	40.33	-34.41	51.57	68.20	16.63	Vertical
6	16998.7333	43.54	38.80	-30.27	52.07	68.20	16.13	Vertical
7	17991.95	43.55	41.68	-30.95	54.28	74.00	19.72	Vertical

11a_TX_CH_100_Horizontal



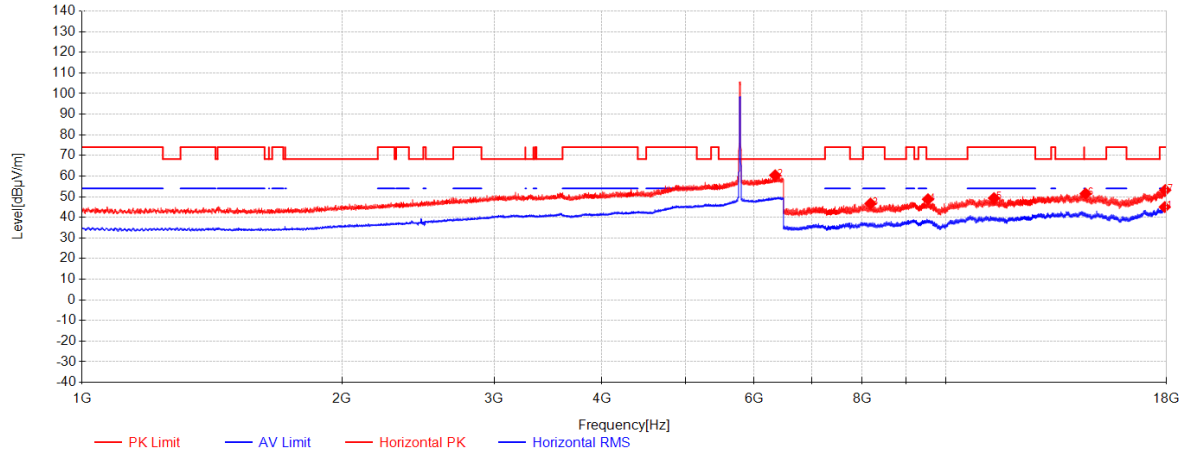
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	17971.25	34.39	41.62	-30.99	45.02	54.00	8.98	Horizontal
2	6326.2917	41.41	35.15	-16.92	59.64	68.20	8.56	Horizontal
3	8512.5	49.21	37.66	-40.28	46.59	68.20	21.61	Horizontal
4	11181.65	45.66	39.19	-35.19	49.66	74.00	24.34	Horizontal
5	13807.4833	46.27	40.30	-35.05	51.52	68.20	16.68	Horizontal
6	17001.0333	43.77	38.80	-30.25	52.32	68.20	15.88	Horizontal
7	17947.8667	42.96	41.55	-31.03	53.47	74.00	20.53	Horizontal

11a_TX_CH_100_Veritical



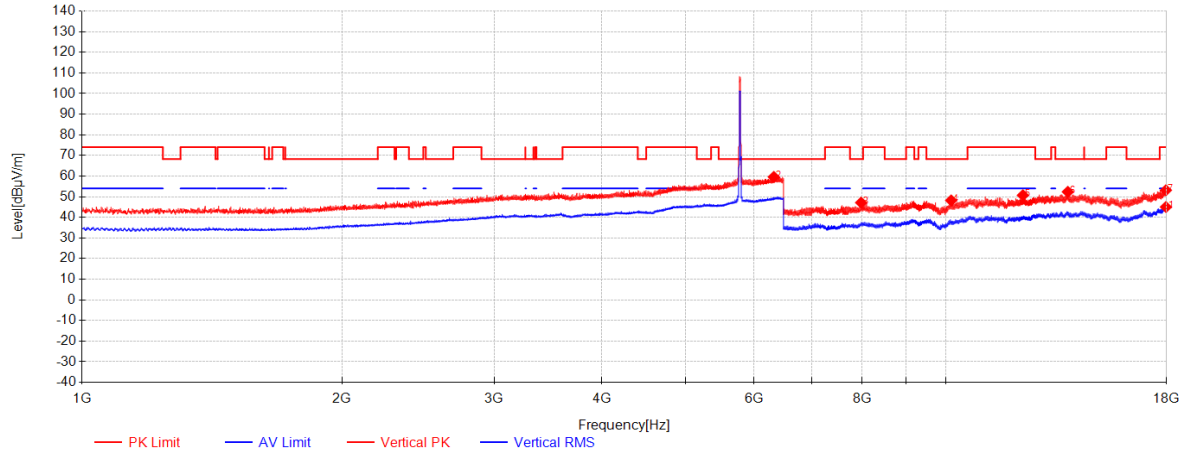
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	17996.55	34.24	41.69	-30.94	44.99	54.00	9.01	Vertical
2	6494.0417	40.80	35.49	-16.74	59.55	68.20	8.65	Vertical
3	8108.85	49.91	37.38	-40.99	46.29	74.00	27.71	Vertical
4	9222.05	49.20	38.02	-39.09	48.13	68.20	20.07	Vertical
5	10671.8167	46.45	38.91	-36.11	49.25	74.00	24.75	Vertical
6	14171.2667	45.92	40.30	-35.17	51.04	68.20	17.16	Vertical
7	17900.3333	43.67	41.41	-31.13	53.95	74.00	20.05	Vertical

11a_TX_CH_157_Horizontal



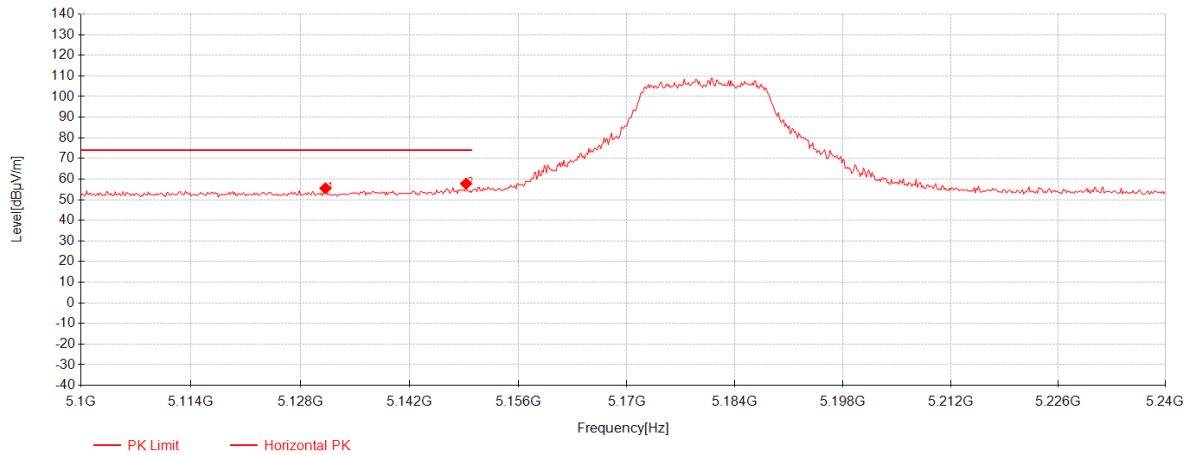
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	17939.05	34.52	41.52	-31.05	44.99	54.00	9.01	Horizontal
2	6346.9167	42.00	35.19	-16.82	60.37	68.20	7.83	Horizontal
3	8183.9833	49.93	37.43	-40.67	46.69	74.00	27.31	Horizontal
4	9540.9833	49.08	38.05	-38.38	48.75	68.20	19.45	Horizontal
5	11376	45.94	39.07	-35.71	49.31	74.00	24.69	Horizontal
6	14524.7	46.12	40.09	-34.75	51.45	68.20	16.75	Horizontal
7	17961.6667	42.62	41.59	-31.01	53.20	74.00	20.80	Horizontal

11a_TX_CH_157_Vertical



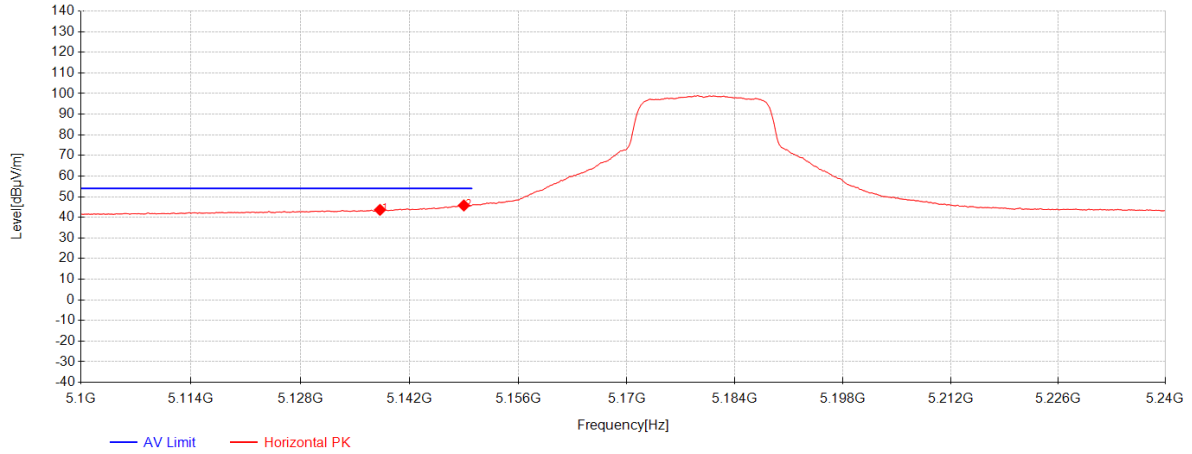
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	17995.7833	34.26	41.69	-30.94	45.01	54.00	8.99	Vertical
2	6324.9167	41.37	35.15	-16.93	59.59	68.20	8.61	Vertical
3	7983.5	51.09	37.27	-41.23	47.12	68.20	21.08	Vertical
4	10150.1	46.77	38.28	-36.85	48.20	68.20	20.00	Vertical
5	12289.1	46.39	39.05	-34.76	50.68	74.00	23.32	Vertical
6	13853.8667	46.45	40.33	-34.42	52.35	68.20	15.85	Vertical
7	17994.25	42.41	41.68	-30.94	53.15	74.00	20.85	Vertical

11a_TX_CH_36_Horizontal_Peak



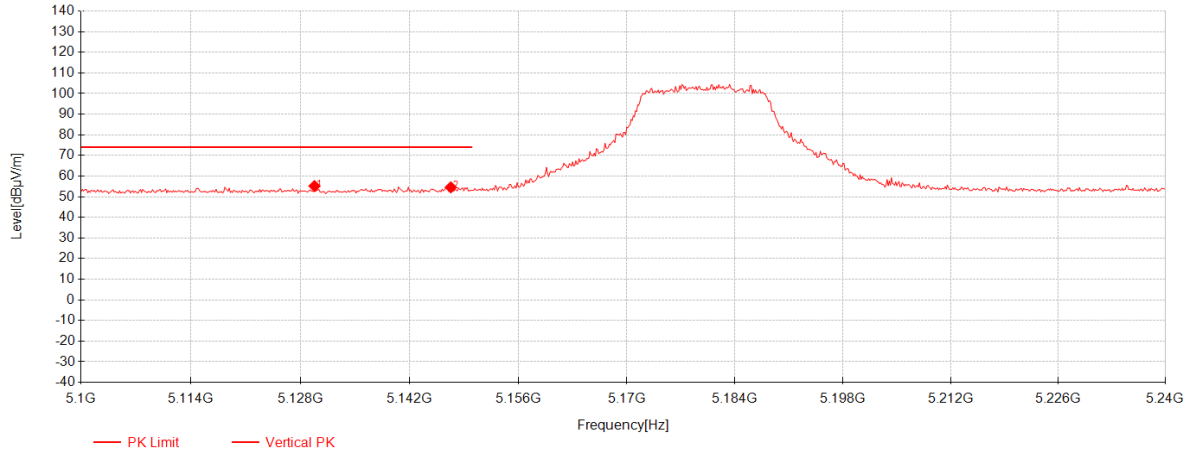
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5131.22	40.70	33.07	-18.24	55.54	74.00	18.46	Horizontal
2	5149.28	42.89	33.07	-18.18	57.78	74.00	16.22	Horizontal

11a_TX_CH_36_Horizontal_Average



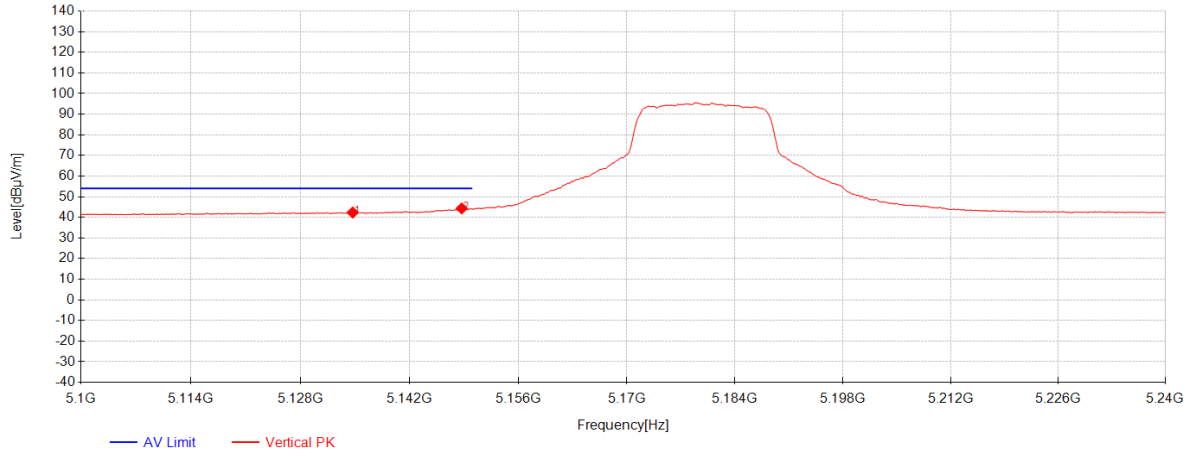
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5138.22	28.77	33.07	-18.22	43.63	54.00	10.37	Horizontal
2	5149	30.87	33.07	-18.18	45.76	54.00	8.24	Horizontal

11a_TX_CH_36_Veritical_Peak



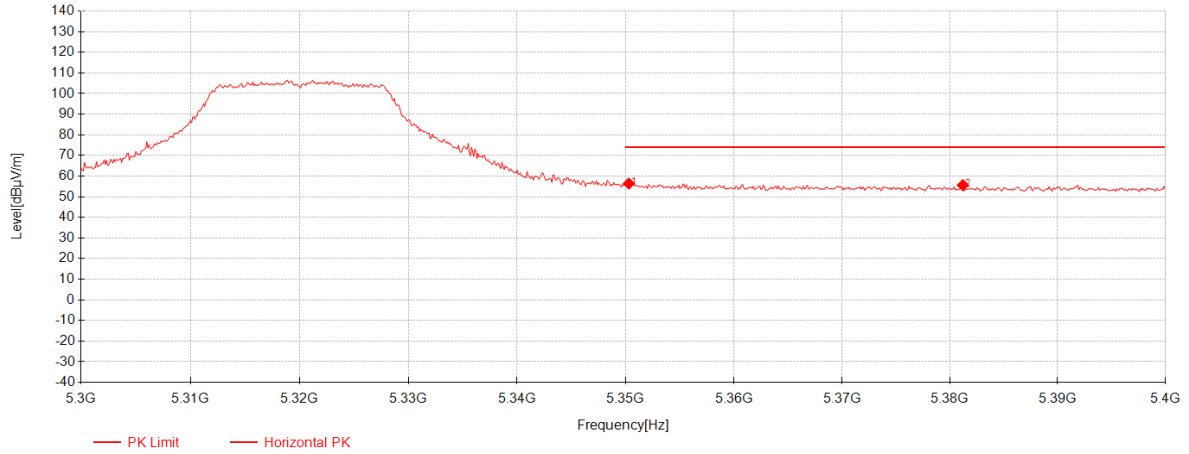
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5129.82	40.34	33.07	-18.24	55.17	74.00	18.83	Vertical
2	5147.32	39.67	33.07	-18.19	54.55	74.00	19.45	Vertical

11a_TX_CH_36_Veritical_Average



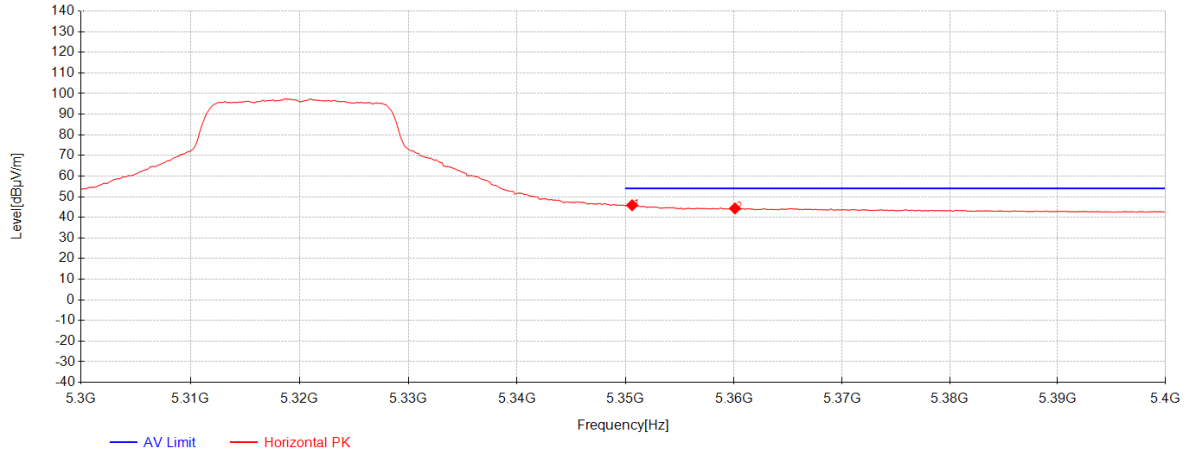
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5134.72	27.49	33.07	-18.23	42.34	54.00	11.66	Vertical
2	5148.72	29.42	33.07	-18.18	44.31	54.00	9.69	Vertical

11a_TX_CH_64_Horizontal_Peak



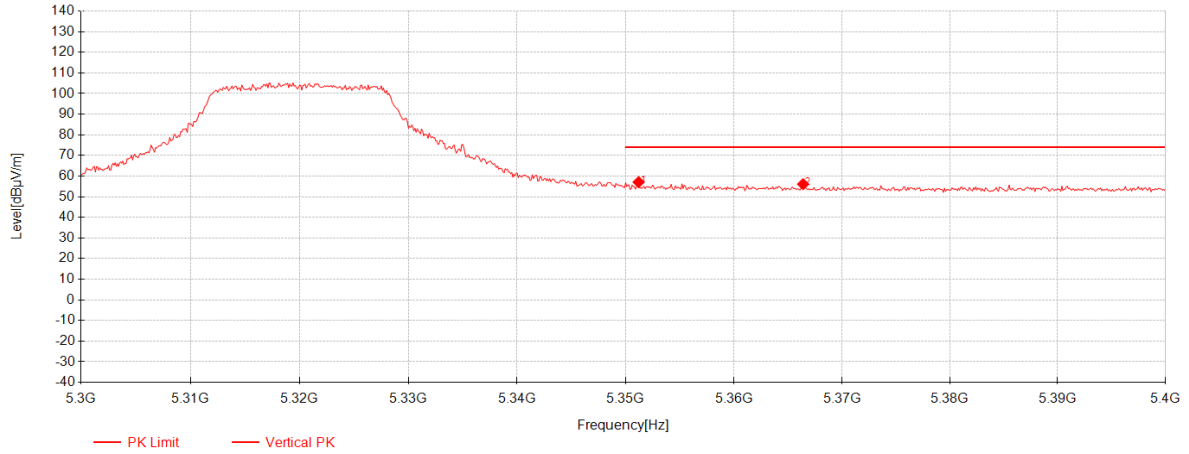
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5350.3	41.10	33.03	-17.75	56.38	74.00	17.62	Horizontal
2	5381.2	40.37	33.02	-17.79	55.60	74.00	18.40	Horizontal

11a_TX_CH_64_Horizontal_Average



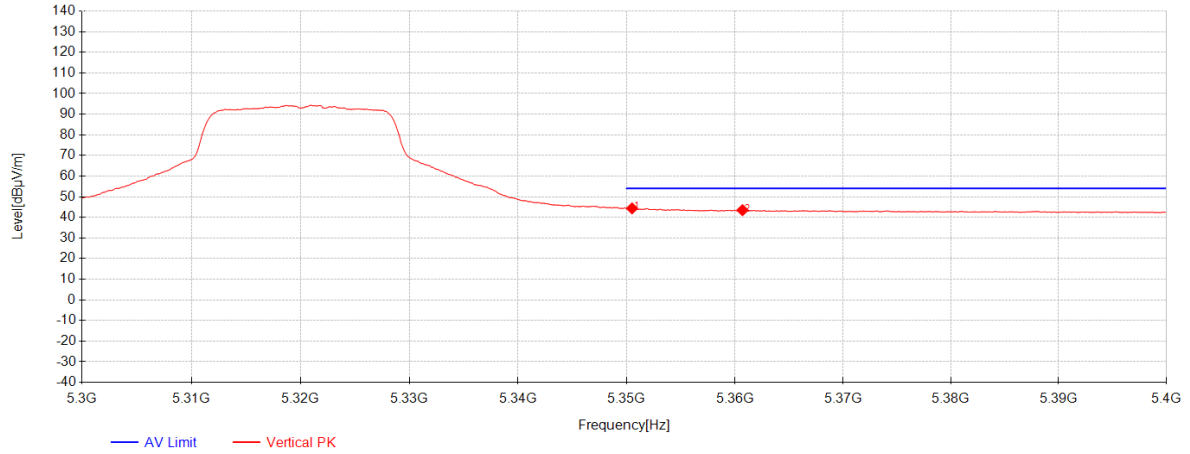
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5350.6	30.58	33.03	-17.75	45.86	54.00	8.14	Horizontal
2	5360.1	29.05	33.03	-17.76	44.31	54.00	9.69	Horizontal

11a_TX_CH_64_Vertical_Peak



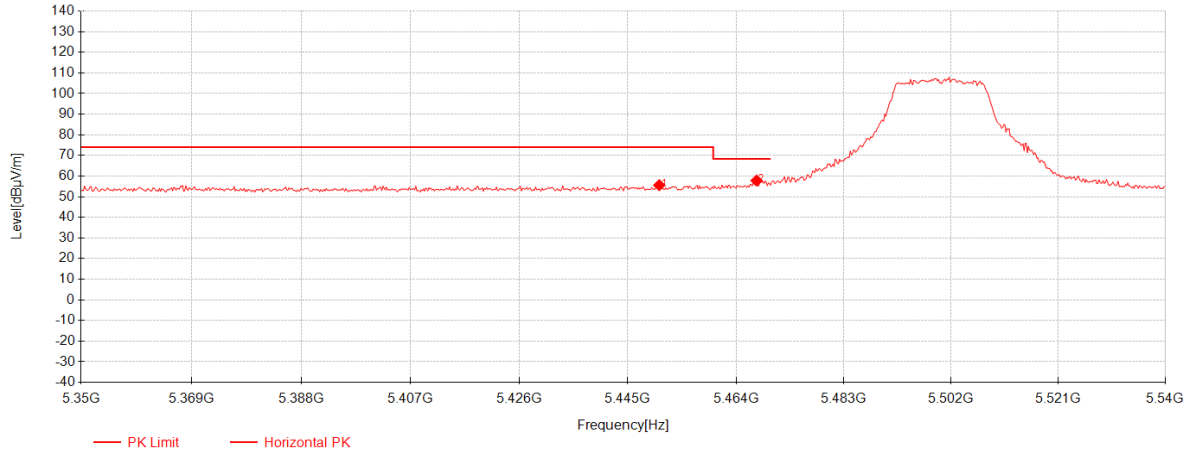
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5351.2	41.82	33.03	-17.75	57.10	74.00	16.90	Vertical
2	5366.4	40.84	33.03	-17.77	56.09	74.00	17.91	Vertical

11a_TX_CH_64_Vertical_Average



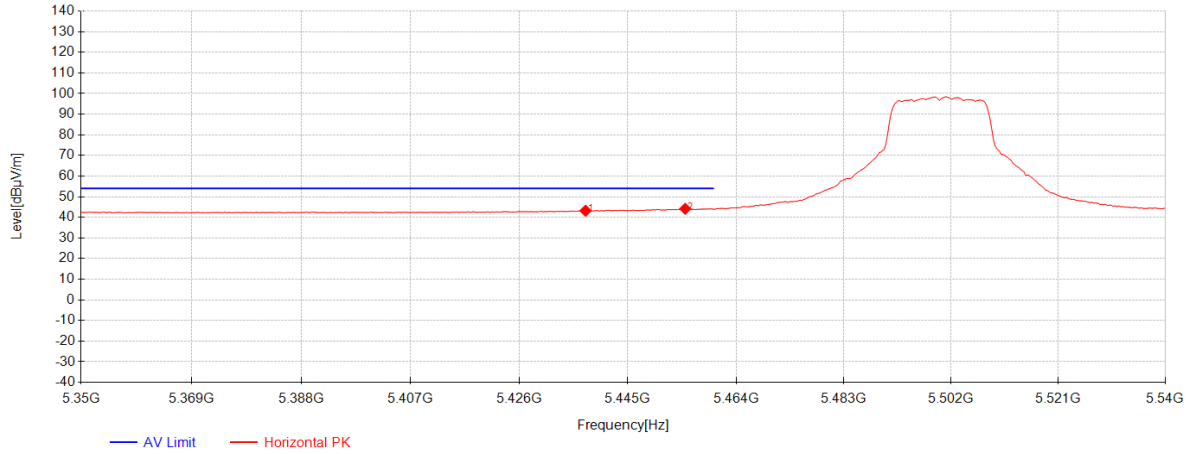
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5350.5	29.07	33.03	-17.75	44.35	54.00	9.65	Vertical
2	5360.7	28.23	33.03	-17.76	43.49	54.00	10.51	Vertical

11a_TX_CH_100_Horizontal_Peak



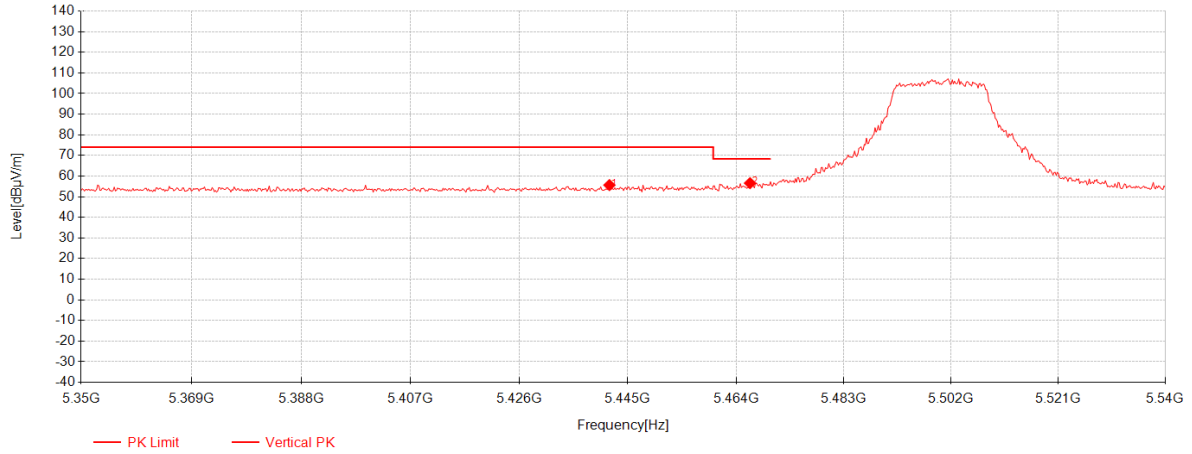
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5450.51	40.26	33.01	-17.67	55.60	74.00	18.40	Horizontal
2	5467.61	44.44	33.01	-17.62	59.83	68.30	8.47	Horizontal

11a_TX_CH_100_Horizontal_Average



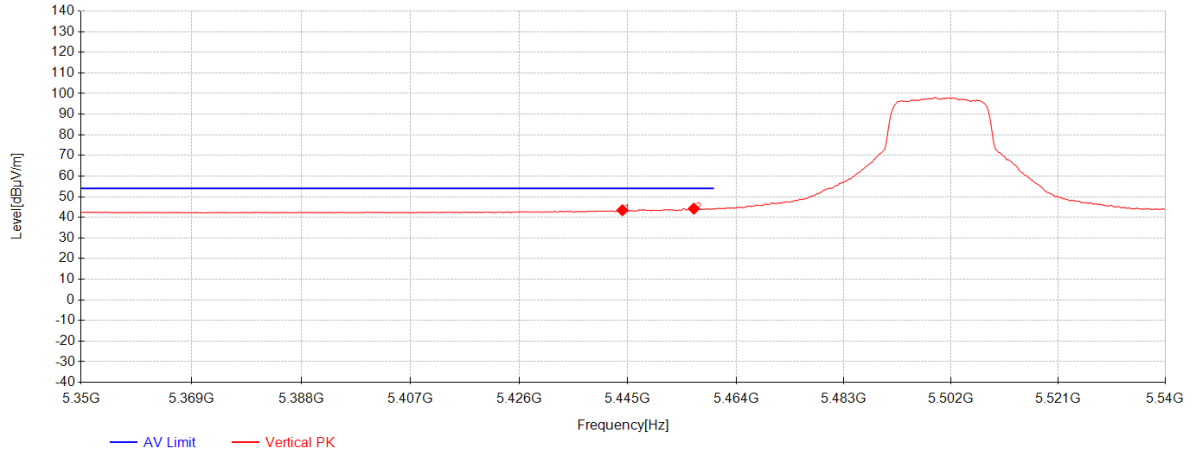
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5437.59	27.88	33.01	-17.71	43.19	54.00	10.81	Horizontal
2	5455.07	28.79	33.01	-17.65	44.14	54.00	9.86	Horizontal

11a_TX_CH_100_Vertical_Peak



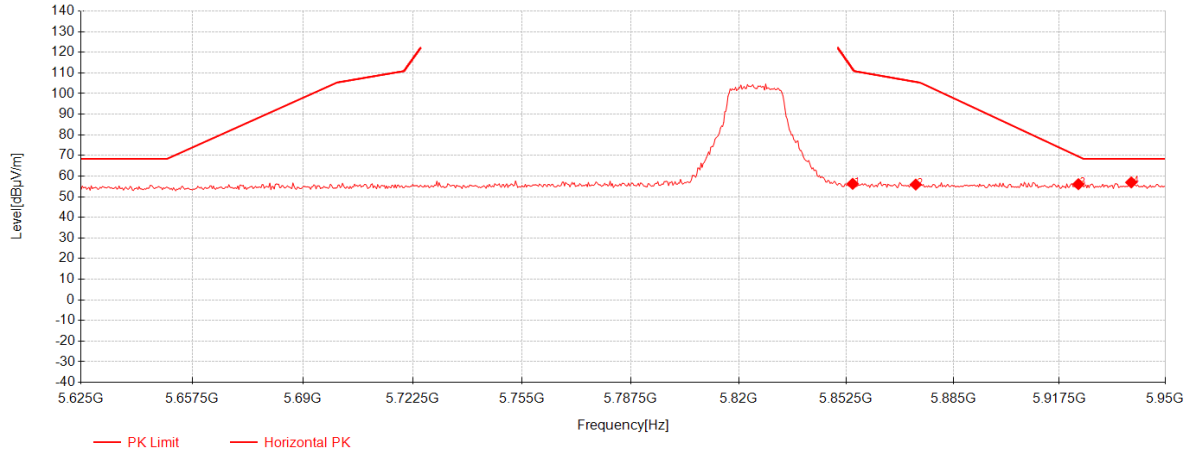
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5441.77	40.32	33.01	-17.69	55.64	74.00	18.36	Vertical
2	5466.47	41.19	33.01	-17.62	56.58	68.30	11.72	Vertical

11a_TX_CH_100_Veritical_Average



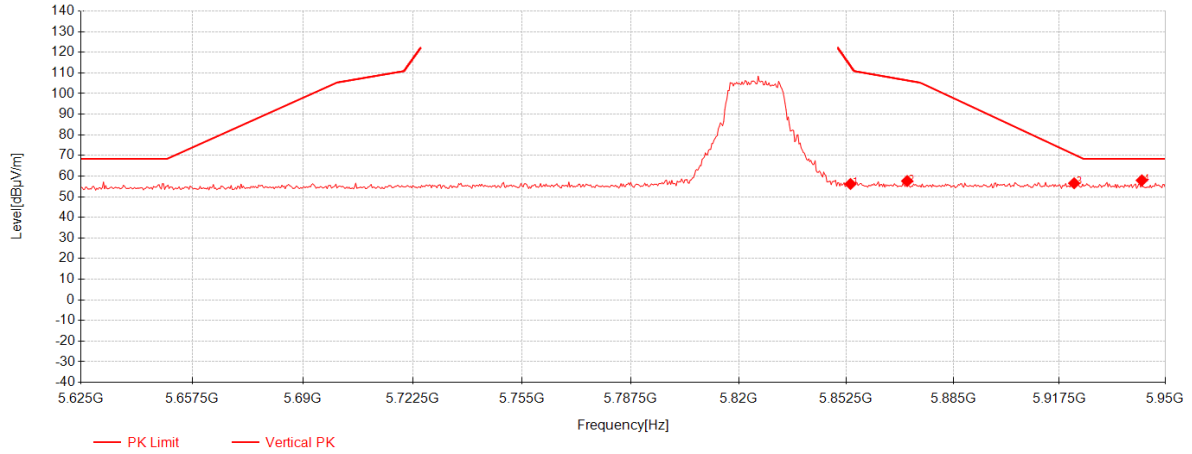
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5444.05	28.14	33.01	-17.69	43.46	54.00	10.54	Vertical
2	5456.59	28.86	33.01	-17.65	44.22	54.00	9.78	Vertical

11a_TX_CH_165_Horizontal_Peak



Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5854.45	39.08	34.06	-16.91	56.24	112.15	55.91	Horizontal
2	5873.625	38.63	34.12	-16.87	55.89	105.68	49.79	Horizontal
3	5923.35	38.70	34.27	-16.88	56.09	69.52	13.43	Horizontal
4	5939.6	39.56	34.32	-16.93	56.95	68.30	11.35	Horizontal

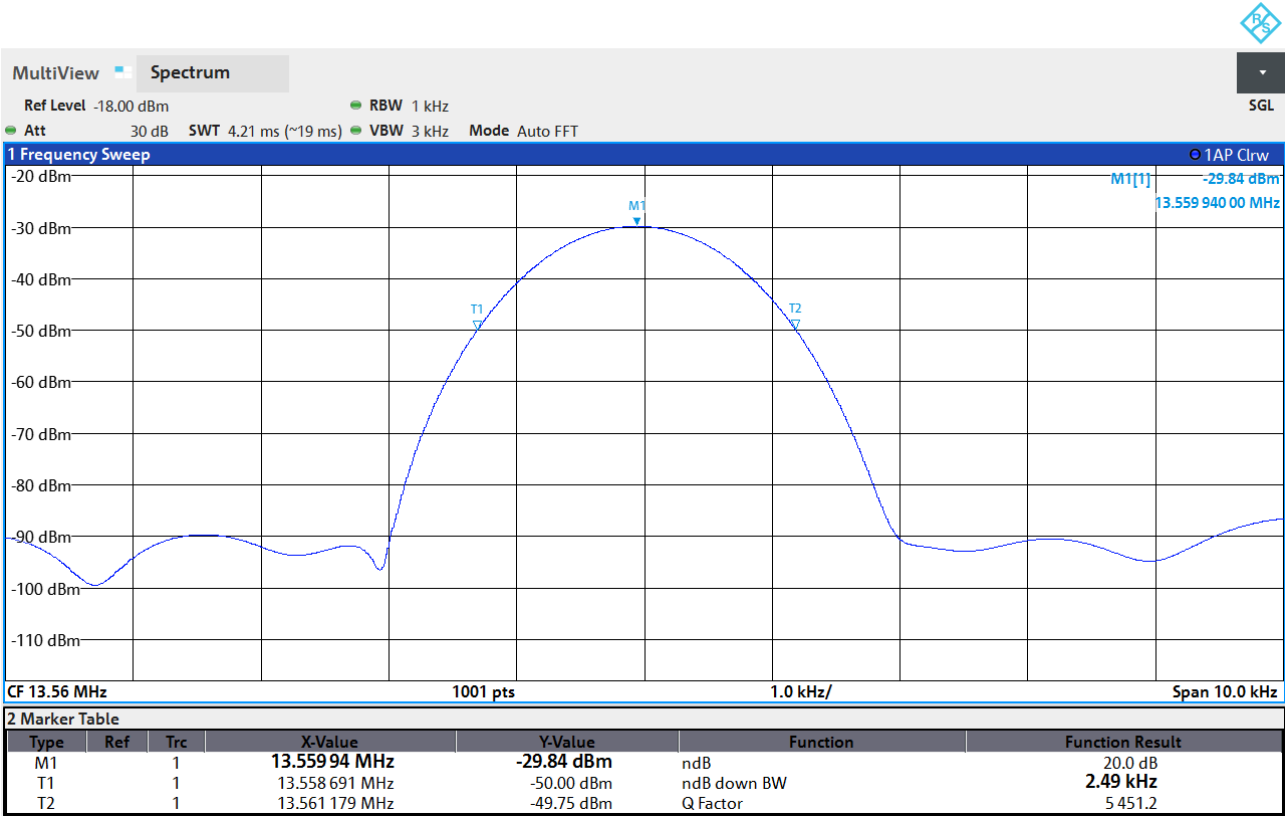
11a_TX_CH_165_Vertical_Peak



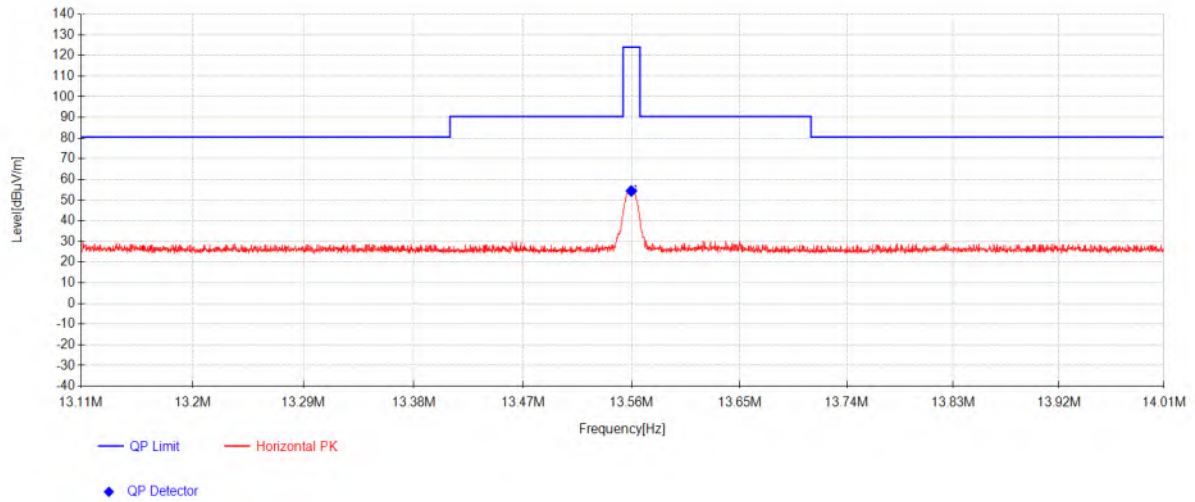
Data List								
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity
1	5853.8	39.02	34.06	-16.91	56.17	113.64	57.47	Vertical
2	5871.025	40.36	34.11	-16.87	57.60	106.41	48.81	Vertical
3	5922.05	39.15	34.27	-16.88	56.54	70.47	13.93	Vertical
4	5942.85	38.56	34.33	-16.94	55.95	68.30	12.35	Vertical

十三、 NFC

20dB Bandwidth



NFC_Emission Mask

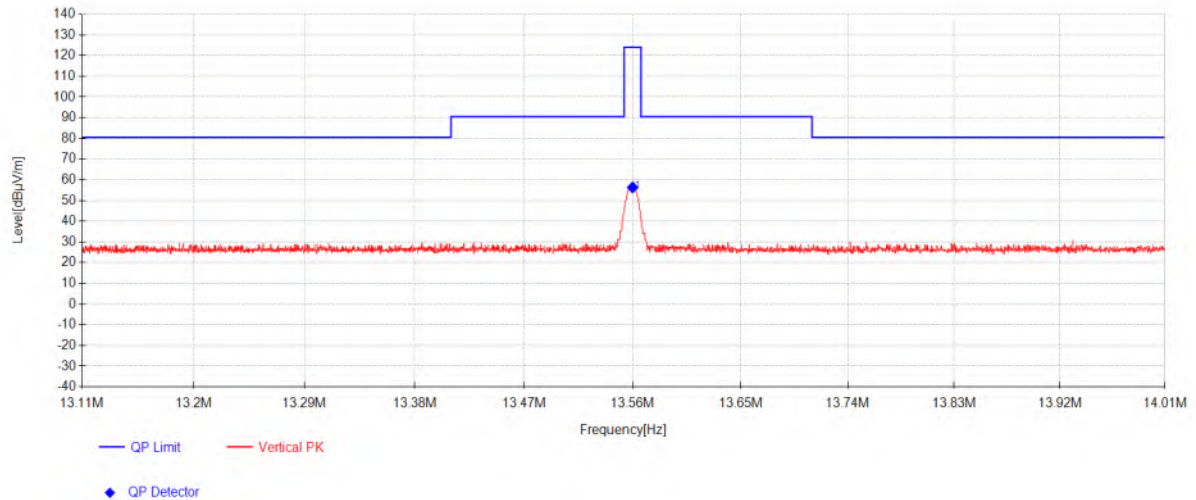


Final Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Polarity
1	13.5598	33.75	19.97	0.69	54.41	124.00	69.59	Coaxial

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.



Final Data List

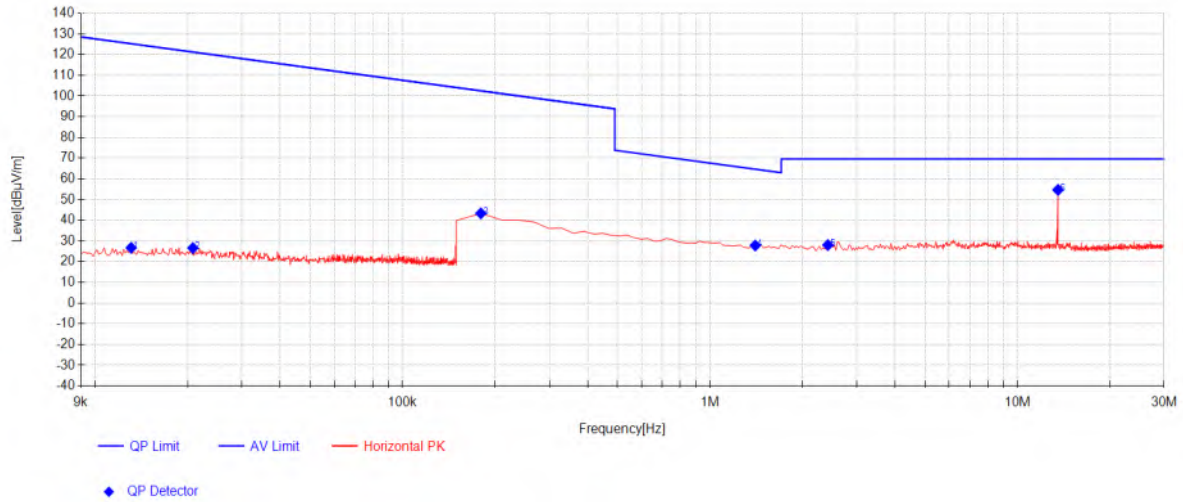
NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Polarity
1	13.56	35.68	19.97	0.69	56.34	124.00	67.66	Coplanar

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

Radiated Spurious Emissions

NFC_RSE below 30M

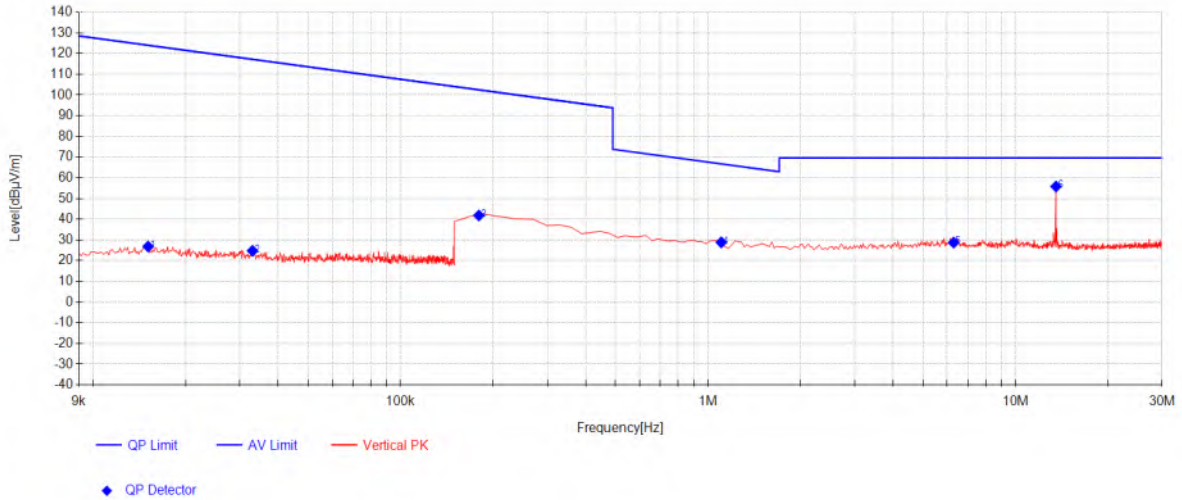


Final Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Polarity
4	1.4037	7.23	20.12	0.46	27.81	64.66	36.85	Coaxial
5	2.4186	7.62	19.92	0.48	28.01	69.54	41.53	Coaxial
6	13.5526	33.98	19.97	0.69	54.64	69.54	14.90	Coaxial
NO.	Frequency [MHz]	AV Reading [dBμV]	AF [dB/m]	Factor [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Polarity
1	0.0131	6.65	19.63	0.43	26.71	125.25	98.54	Coaxial
2	0.0208	6.45	19.71	0.43	26.59	121.24	94.65	Coaxial
3	0.1798	23.08	19.82	0.43	43.33	102.51	59.18	Coaxial

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.



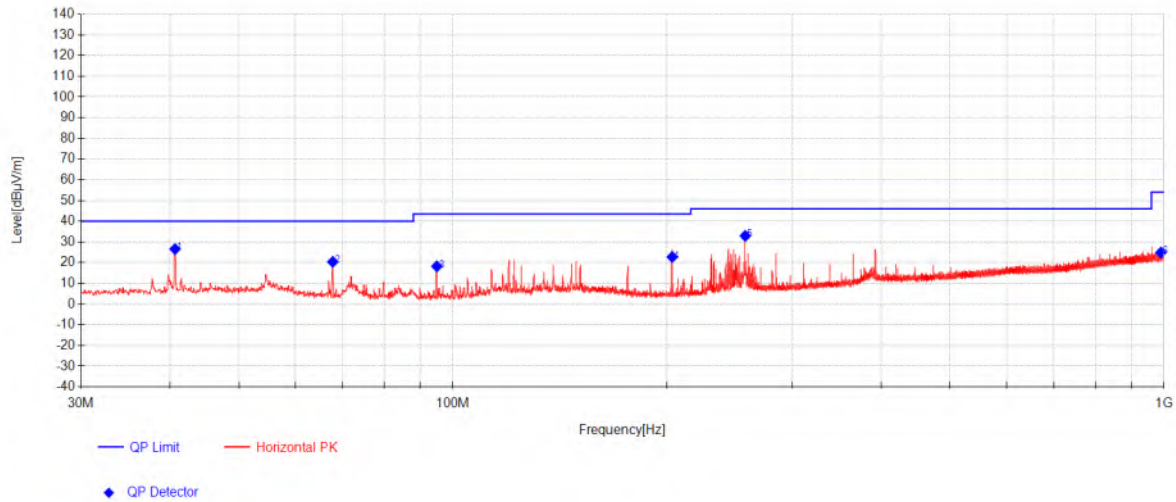
Final Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Polarity
4	1.1052	8.20	20.18	0.45	28.83	66.74	37.91	Coplanar
5	6.2991	7.87	20.30	0.55	28.72	69.54	40.82	Coplanar
6	13.5526	35.14	19.97	0.69	55.80	69.54	13.74	Coplanar
NO.	Frequency [MHz]	AV Reading [dBμV]	AF [dB/m]	Factor [dB]	AV Value [dBμV/m]	AV Limit [dBμV/m]	AV Margin [dB]	Polarity
1	0.0151	6.75	19.65	0.43	26.83	124.02	97.19	Coplanar
2	0.033	4.50	19.81	0.43	24.75	117.23	92.48	Coplanar
3	0.1798	21.59	19.82	0.43	41.84	102.51	60.67	Coplanar

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Value = Reading + Antenna Factor + Factor.
3. Factor=Cable loss.

NFC_RSE above 30M

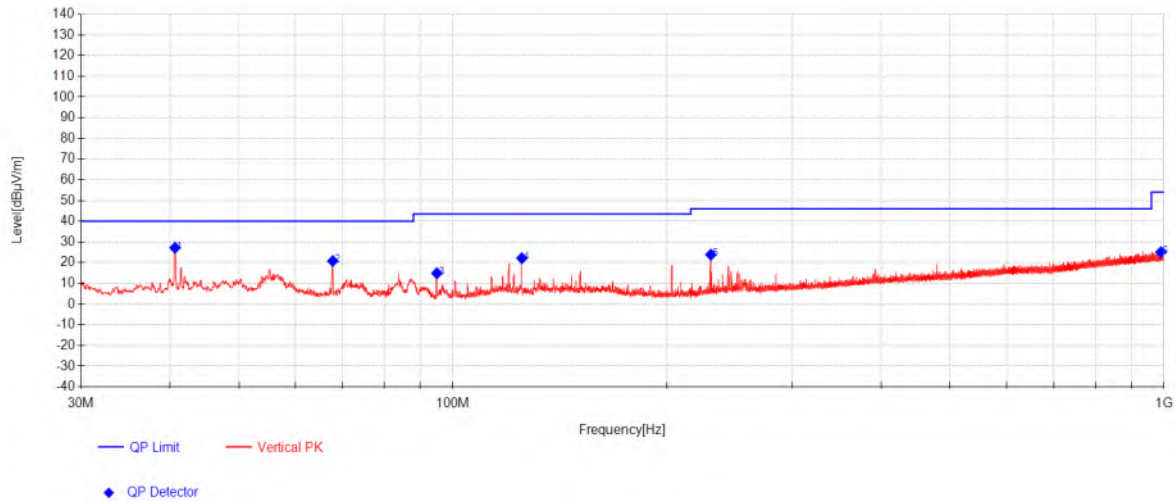


Final Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Polarity
1	40.67	47.22	13.22	-33.85	26.59	40.00	13.41	Horizontal
2	67.7761	43.16	10.67	-33.45	20.38	40.00	19.62	Horizontal
3	94.9361	42.38	9.05	-33.19	18.23	43.50	25.27	Horizontal
4	203.4144	45.07	9.90	-32.22	22.75	43.50	20.75	Horizontal
5	257.6806	53.12	11.72	-31.90	32.94	46.00	13.06	Horizontal
6	989.9228	28.39	24.42	-27.91	24.90	54.00	29.10	Horizontal

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Final Value Level = Reading + Antenna Factor + Factor.
3. Factor=Cable loss – Preamplifier Factor.



Final Data List

NO.	Frequency [MHz]	Reading [dBμV]	AF [dB/m]	Factor [dB]	QP Value [dBμV/m]	QP Limit [dBμV/m]	QP Margin [dB]	Polarity
1	40.67	47.83	13.22	-33.85	27.20	40.00	12.80	Vertical
2	67.7761	43.57	10.67	-33.45	20.79	40.00	19.21	Vertical
3	94.9361	39.05	9.05	-33.19	14.90	43.50	28.60	Vertical
4	125.0061	43.24	11.80	-32.88	22.16	43.50	21.34	Vertical
5	230.5206	44.77	11.19	-32.10	23.86	46.00	22.14	Vertical
6	989.9228	28.53	24.42	-27.91	25.04	54.00	28.96	Vertical

Remark:

1. The Quasi-Peak measurements were performed on the EUT.
2. Final Value Level = Reading + Antenna Factor + Factor.
3. Factor=Cable loss – Preamplifier Factor.

十四、 SAR

LTE Band 41 SAR Test Record											
Ant1											
Test position	BW.	Test mode	Test ch./Freq.	Duty Cycle	SAR (W/kg) 10-g	Power drift (dB)	Conducted Power(dBm)	Tune up Limit(dBm)	Scaled factor	Scaled SAR 10-g (W/kg)	Liquid Temp.(°C)
Extremity Test data (Separate 0mm 1RB)											
Right side	20	QPSK 1_0	40620/2593	1:1.58	2.462	0.08	23.95	24.50	1.135	2.794	22.3

- End of the Report -