Report No.: DDT-R21061703-2E02

Issued Date: Jul. 27, 2021

FCC CERTIFICATION TEST REPORT

FOR

Applicant	:	Dongguan Angwei Electronic Technology Co. , Ltd.
Address	:	Room 701, building 1,17 Tianheng Road, Changping, Dongguan City, Guangdong Province
Equipment under Test	:	Car Navigation
Model No.	:	HA5010, HA5XXX (XXX=000-999)
Trade Mark	:	N/A
FCC ID	:	2A2QH-HA5010
Manufacturer	:	Dongguan Angwei Electronic Technology Co. , Ltd.
Address	:	Room 701, building 1,17 Tianheng Road, Changping, Dongguan City, Guangdong Province

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

Tel.: +86-0769-38826678, **E-mail:** ddt@dgddt.com, http://www.dgddt.com

REPORT

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Test Report Declare

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Test Standard Used: FCC Rules and Regulations Part 15 Subpart C.

Test procedure used: ANSI C63.10:2013, 558074 D01 15.247 Meas Guidance v05r02,

We Declare:

The equipment described above is tested by Dongguan Dongdian Testing Service Co., Ltd and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these tests.

After test and evaluation, our opinion is that the equipment provided for test compliance with the requirement of the above FCC standards.

Report No:	DDT-R21061703-2E02		
Date of Receipt:	Jun. 17, 2021	**Date of Test:**	Jun. 17, 2021~ Jul. 27, 2021

Prepared By:

Johnny Wang

Johnny Wang/Engineer

Approved By:

DONGGUAN DONGDIAN TESTING SERVICE CO., LTD. APPROVED

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Jul. 27, 2021	

1. Summary of Test Results

The EUT have been tested according to the applicable standards as referenced below.		
Description of Test Item	**Standard**	**Verdict**
6dB Bandwidth and 99% Bandwidth	FCC 15.247 (a)	Pass
Conducted Output Power	FCC 15.247 (b) (3)	Pass
Power Spectral Density	FCC 15.247 (e)	Pass
Band-edge and Spurious Emissions (Conducted)	FCC 15.247 (d)	Pass
Radiated Spurious Emissions	FCC 15.247 (d) FCC 15.209 FCC 15.205	Pass
Radiated Band Edge Compliance	FCC 15.247 (d) FCC 15.209 FCC 15.205	Pass
Power Line Conducted Emission	FCC 15.207	N/A
Antenna Requirement	FCC 15.203	Pass
Note: N/A is an abbreviation for Not Applicable and means this test item is not applicable for this device according to the technology characteristic of device.		

2. General Test Information

2.1. Description of EUT

EUT* Name	:	Car Navigation
Model Number	:	HA5010, HA5XXX (XXX=000-999)
Difference of models	:	Above models are identical in schematic and structure, only the name and appearance are different for all the models, therefore the test performed on the model HA5010.
EUT Function Description	:	Please reference user manual of this device
Power Supply	:	DC 12V
Radio Technology	:	IEEE 802.11b/g/n
FCC Operation Frequency	:	IEEE 802.11b: 2412MHz-2462MHz IEEE 802.11g: 2412MHz-2462MHz IEEE 802.11n HT20: 2412MHz-2462MHz IEEE 802.11n HT40: 2422MHz-2452MHz
Modulation	:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK, BPSK)
Transmitter Rate	:	IEEE 802.11b: 1, 2, 5.5, 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n HT20: 6.5, 13, 19.5, 26, 39, 52, 58.5, 65 Mbps IEEE 802.11n HT40: 13.5, 27, 40.5, 54, 81, 108, 121.5, 135 Mbps
Antenna Gain	:	0 dBi
Serial Number	:	N/A

Note: EUT is the ab. of equipment under test.

Channel information					
CH	Frequency (MHz)	CH	Frequency (MHz)	CH	Frequency (MHz)
1	2412	5	2432	9	2452
2	2417	6	2437	10	2457
3	2422	7	2442	11	2462
4	2427	8	2447	/	/

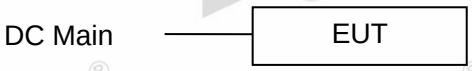
2.2. Accessories of EUT

Description of Accessories	Manufacturer	Model number	Serial No.	Other
N/A	N/A	N/A	N/A	N/A

2.3. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	EMC Compliance	SN
N/A	N/A	N/A	N/A	N/A

2.4. Block diagram of EUT configuration for test



EUT was connected to control to provide by manufacturer which has a standard USB PORT connector to connect to Notebook, and the Notebook will run a special test software “REALTEK 11n 8188EUS USB WLAN NIC Massproduction Kit” provided by manufacturer to control EUT work in Continuous Tx mode (>98% duty cycle), and select test channel, wireless mode and data rate.

Tested mode, channel, and data rate information				
Mode	Setting Tx Power Ant	data rate (Mbps) (see Note)	Channel	Frequency (MHz)
IEEE 802.11b	45	11	LCH: CH1	2412
	45	11	MCH: CH6	2437
	45	11	HCH: CH11	2462
IEEE 802.11g	45	54	LCH: CH1	2412
	45	54	MCH: CH6	2437
	45	54	HCH: CH11	2462
IEEE 802.11n HT20	45	MCS 7	LCH: CH1	2412
	45	MCS 7	MCH: CH6	2437
	45	MCS 7	HCH: CH11	2462
IEEE 802.11n HT40	45	MCS 7	LCH: CH3	2422
	45	MCS 7	MCH: CH6	2437
	45	MCS 7	HCH: CH9	2452
Note: According exploratory test, EUT will have maximum output power in those data rate, so those data rate were used for all test.				

2.5. Deviations of test standard

No Deviation

2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	21-25℃
Humidity range:	40-75%
Pressure range:	86-106kPa

2.7. Test laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808

Tel.: +86-0769-38826678, http://www.dgddt.com, Email: ddt@dgddt.com

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, G-20118

2.8. Measurement uncertainty

Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB (10 MHz ≤ f < 3.6 GHz);
	1.38 dB (3.6 GHz ≤ f < 8 GHz)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB (10 MHz ≤ f < 3.6 GHz);
	1.40 dB (3.6 GHz ≤ f < 8 GHz)
	1.66 dB (8 GHz≤ f < 22 GHz)
Uncertainty for radio frequency (RBW<20 kHz)	3×10^{-8}
Temperature	.4℃
Humidity	2%
Uncertainty for Radiation Emission test (30 MHz-1 GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz-40 GHz)	4.10 dB (1-6 GHz)
	4.40 dB (6 GHz-18 GHz)
	3.54 dB (18 GHz-26 GHz)
	4.30 dB (26 GHz-40 GHz)
Uncertainty for Power line conduction emission test	3.32 dB (150 kHz-30 MHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

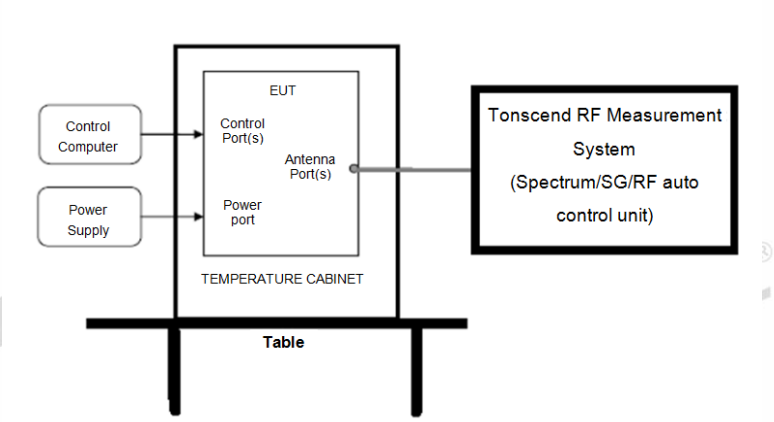
3. Equipment Used During Test

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
☐RF Connected Test (Tonscend RF Measurement System 1#)					
Spectrum analyzer	R&S	FSU26	200071	Sep. 25, 2020	1 Year
Wideband Radio Communication tester	R&S	CMW500	117491	Jun. 01, 2021	1 Year
Vector Signal Generator	Agilent	E8267D	US49060192	Sep. 24, 2020	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180737	Jun. 01, 2021	1 Year
RF Control Unit	Tonsend	JS0806-2	DDT-ZC0290	Jun. 01, 2021	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	Jun. 01, 2021	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.2.7	N/A	N/A
☒RF Connected Test (Tonscend RF Measurement System 2#)					
Spectrum analyzer	R&S	FSU26	101472	Jun. 01, 2021	1 Year
Wideband Radio Communication tester	R&S	CMW500	120259	Jan. 19, 2021	1 Year
Vector Signal Generator	Agilent	N5182A	MY19060405	Jun. 01, 2021	1 Year
Vector Signal Generator	Agilent	N5182A	MY48180912	Jun. 01, 2021	1 Year
RF Control Unit	Tonsend	JS0806-2	DDT-ZC01449	Jun. 01, 2021	1 Year
Temp&Humi Programmable	ZHIXIANG	ZXGDJS-150L	ZX170110-A	Jun. 01, 2021	1 Year
Test Software	JS Tonscend	JS1120-3	Ver.2.7	N/A	N/A
☐Radiation 1#chamber					
EMI Test Receiver	R&S	ESU8	100316	Sep. 24, 2020	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jun. 01, 2021	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB9163	9163-462	Nov. 13, 2020	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Nov. 18, 2020	1 Year
Double Ridged Horn Antenna	R&S	HF907	100276	Nov. 13, 2020	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	May 07, 2021	1 Year
Pre-amplifier	A.H.	PAM-0118	360	Sep. 28, 2020	1 Year
RF Cable	HUBSER	CP-X2+ CP-X1	W11.03+ W12.02	Sep. 24, 2020	1 Year
RF Cable	N/A	5m+6m+1m	06270619	Sep. 30, 2020	1 Year
MI Cable	HUBSER	C10-01-01-1M	1091629	Sep. 30, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
☒Radiation 2#chamber					
EMI Test Receiver	R&S	ESCI	101364	Sep. 28, 2020	1 Year
Spectrum analyzer	Agilent	E4447A	MY50180031	Jun. 01, 2021	1 Year

Trilog Broadband Antenna	Schwarzbeck	VULB 9163	9163-994	Nov. 13, 2020	1 Year
Active Loop antenna	Schwarzbeck	FMZB-1519	1519-038	Nov. 18, 2020	1 Year
Double Ridged Horn Antenna	Schwarzbeck	BBHA9120	02108	Jul. 17, 2021	1 Year
Broad Band Horn Antenna	Schwarzbeck	BBHA 9170	790	May 07, 2021	1 Year
Pre-amplifier	TERA-MW	TRLA-0040G35	1013 03	Sep. 28, 2020	1 Year
RF Cable	N/A	14+1.5m	06270619	Sep. 28, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
☐**Power Line Conducted Emissions Test 1#**					
EMI Test Receiver	R&S	ESU8	100316	Sep. 24, 2020	1 Year
LISN 1	R&S	ENV216	101109	Sep. 28, 2020	1 Year
LISN 2	R&S	ESH2-Z5	100309	Sep. 28, 2020	1 Year
Pulse Limiter	R&S	ESH3-Z2	101242	Sep. 24, 2020	1 Year
CE Cable 1	HUBSER	N/A	W10.01	Sep. 24, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A
☐**Power Line Conducted Emissions Test 2#**					
Test Receiver	R&S	ESPI	101761	Sep. 24, 2020	1 Year
LISN 1	R&S	ENV216	101170	Sep. 28, 2020	1 Year
LISN 2	R&S	ESH2-Z5	100309	Sep. 28, 2020	1 Year
Pulse Limiter	R&S	KH43101	43101180156 8-12#	Jun. 01, 2021	1 Year
CE Cable 2	HUBSER	N/A	W11.02	Sep. 24, 2020	1 Year
Test software	Audix	E3	V 6.11111b	N/A	N/A

4. 6dB Bandwidth and 99% Bandwidth

4.1. Block diagram of test setup



4.2. Limits

For direct sequence systems, the minimum 6 dB bandwidth shall be at least 500 kHz

4.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) 99% Bandwidth set the spectrum analyzer as follows:

RBW:	300 kHz/1MHz
VBW:	1 MHz/3MHz
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) 6dB Bandwidth set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(4) Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

4.4. Test result

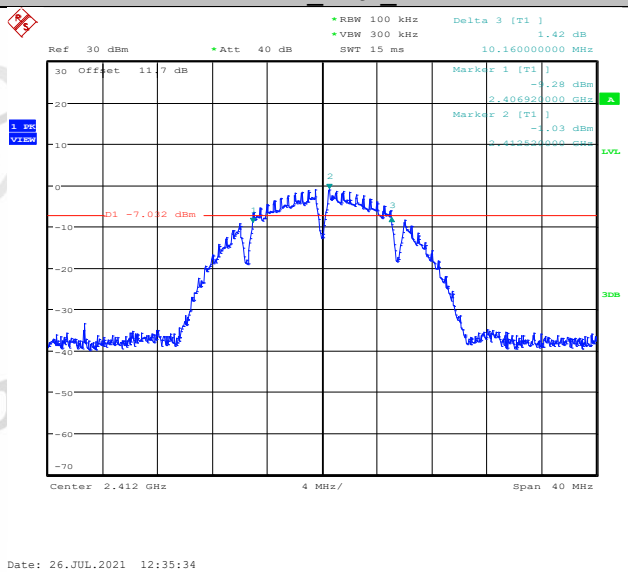
Test Mode	Test	Ant	6dB Bandwidth (MHz)	Limit (MHz)	Verdict
11B	2412	Ant1	10.160	0.5	Pass
11B	2437	Ant1	10.160	0.5	Pass
11B	2462	Ant1	9.600	0.5	Pass
11G	2412	Ant1	16.600	0.5	Pass
11G	2437	Ant1	16.640	0.5	Pass
11G	2462	Ant1	16.640	0.5	Pass
11N20	2412	Ant1	17.800	0.5	Pass
11N20	2437	Ant1	17.840	0.5	Pass
11N20	2462	Ant1	17.880	0.5	Pass
11N40	2422	Ant1	36.080	0.5	Pass
11N40	2437	Ant1	36.480	0.5	Pass
11N40	2452	Ant1	36.480	0.5	Pass

Test Mode	Test	Ant	99% OBW (MHz)	Limit (MHz)	Verdict
11B	2412	Ant1	15.64	---	Pass
11B	2437	Ant1	15.12	---	Pass
11B	2462	Ant1	14.88	---	Pass
11G	2412	Ant1	17.44	---	Pass
11G	2437	Ant1	17.52	---	Pass
11G	2462	Ant1	17.36	---	Pass
11N20	2412	Ant1	18.24	---	Pass
11N20	2437	Ant1	18.32	---	Pass
11N20	2462	Ant1	18.16	---	Pass
11N40	2422	Ant1	36.16	---	Pass
11N40	2437	Ant1	36.48	---	Pass
11N40	2452	Ant1	36.32	---	Pass

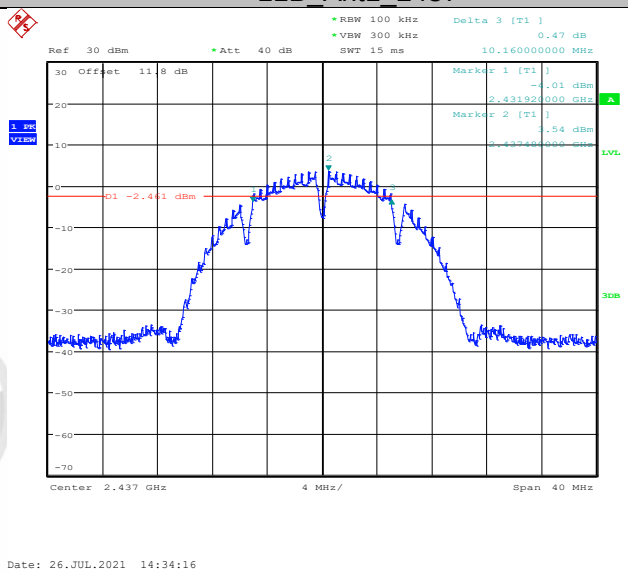
4.5. original test data

6dB Bandwidth:

11B_Ant1_2412



11B_Ant1_2437



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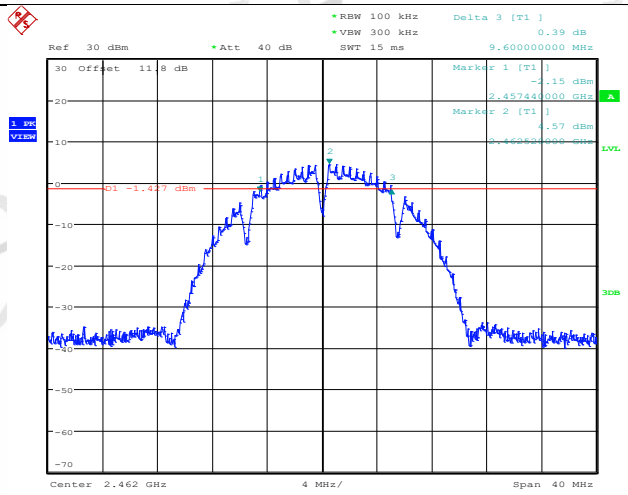

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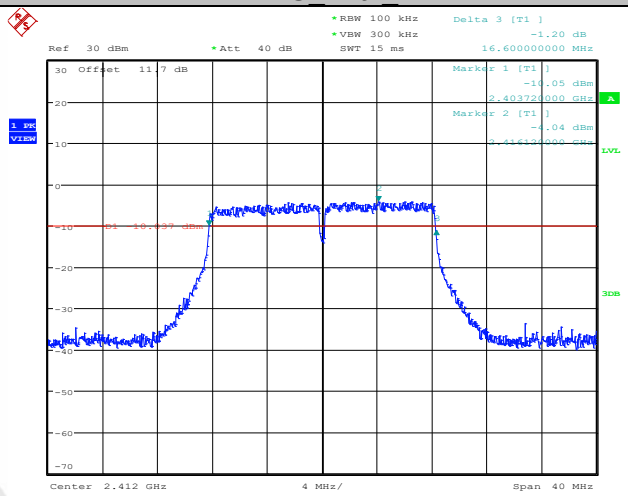

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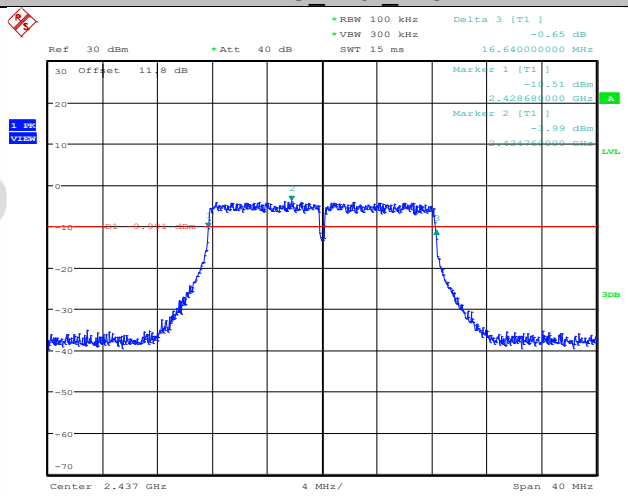

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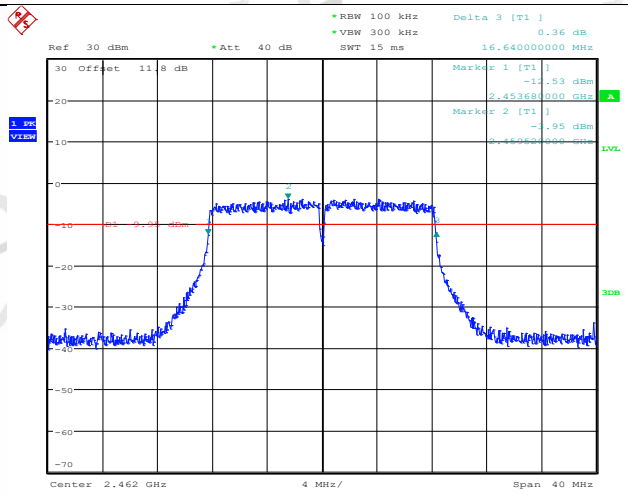

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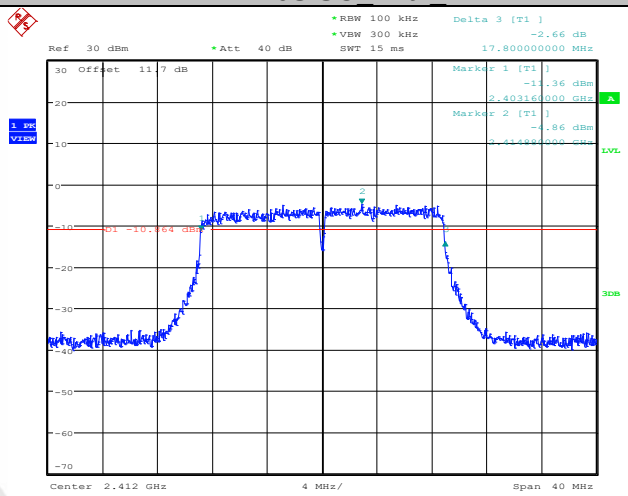

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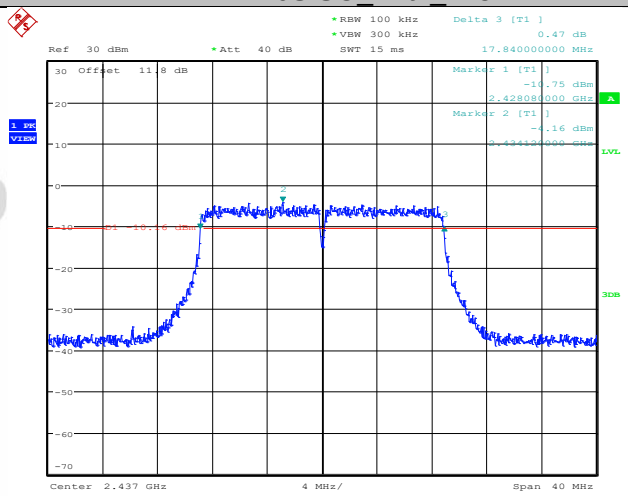

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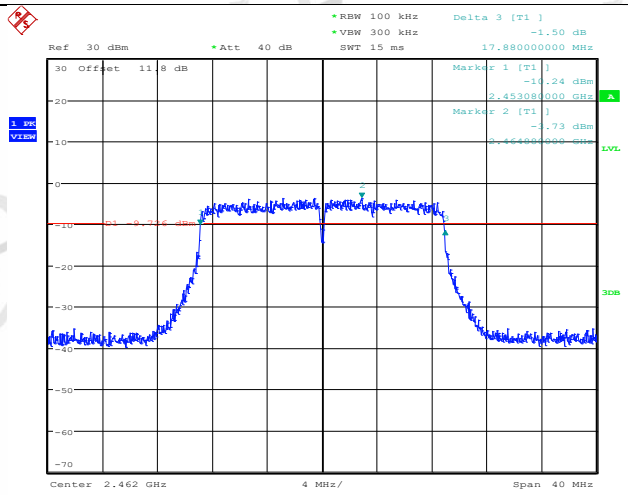

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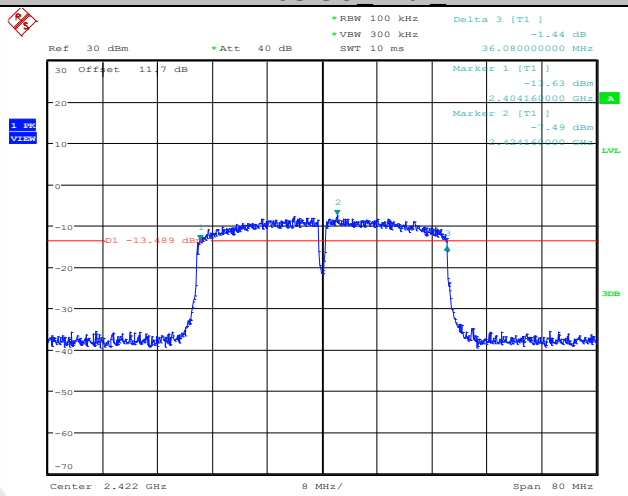

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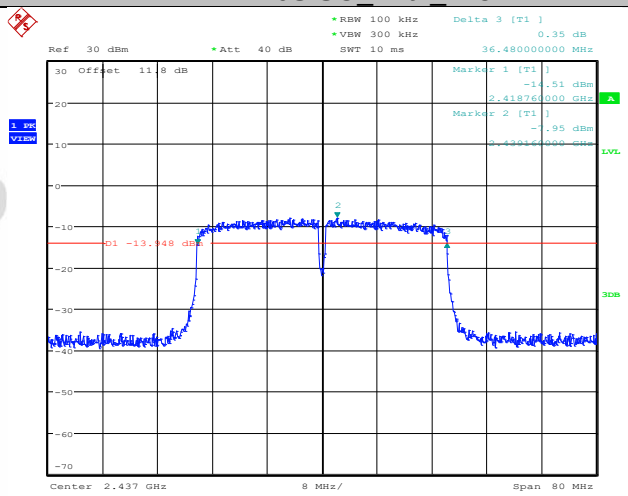

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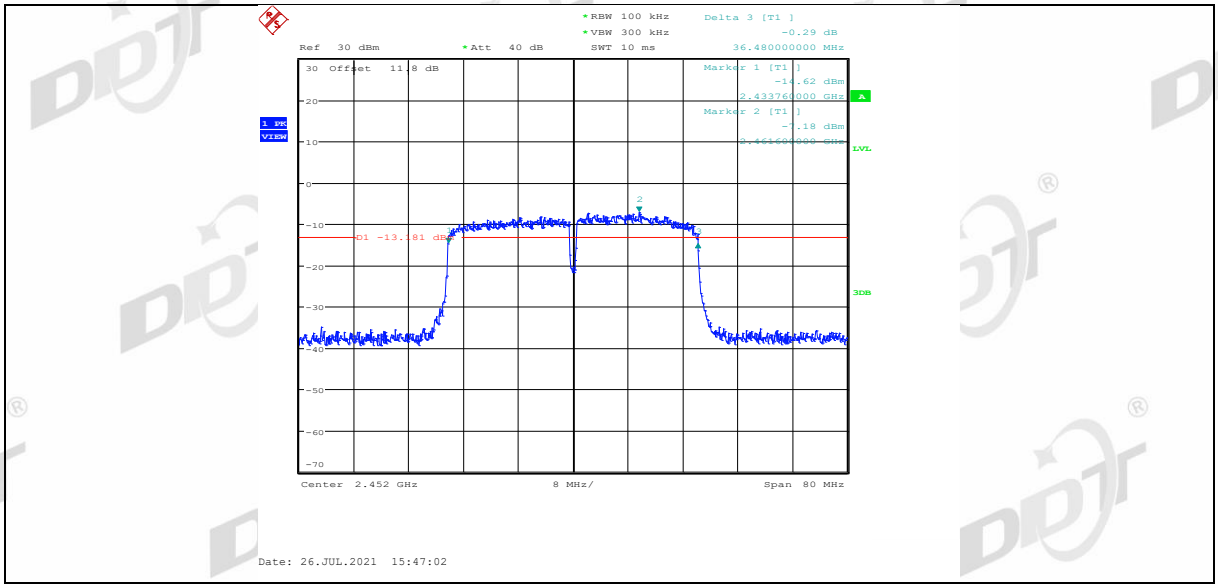
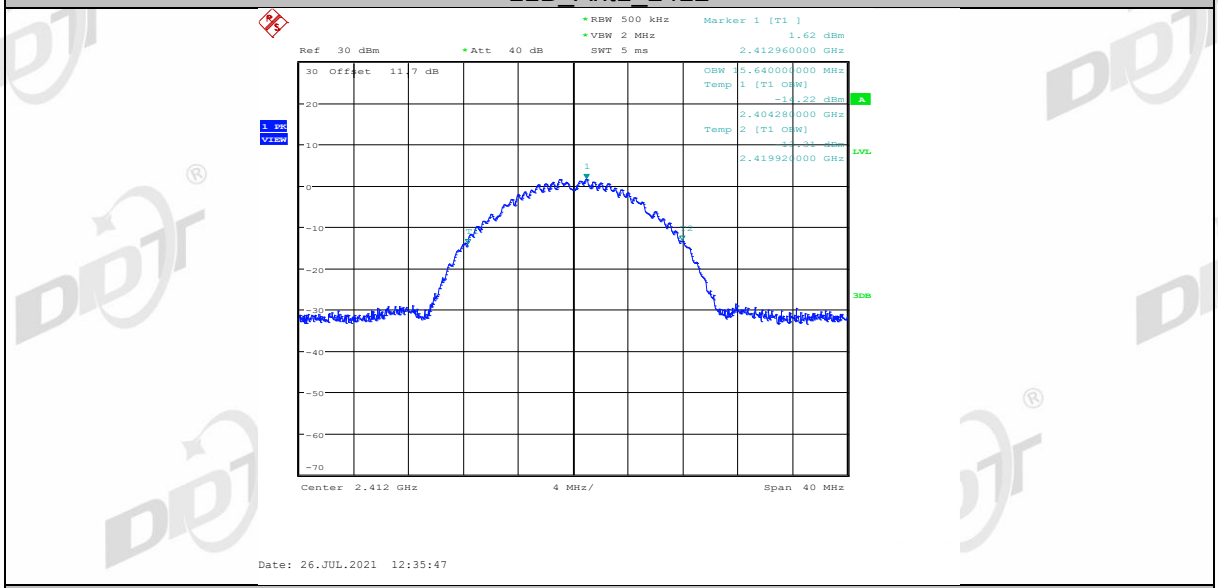
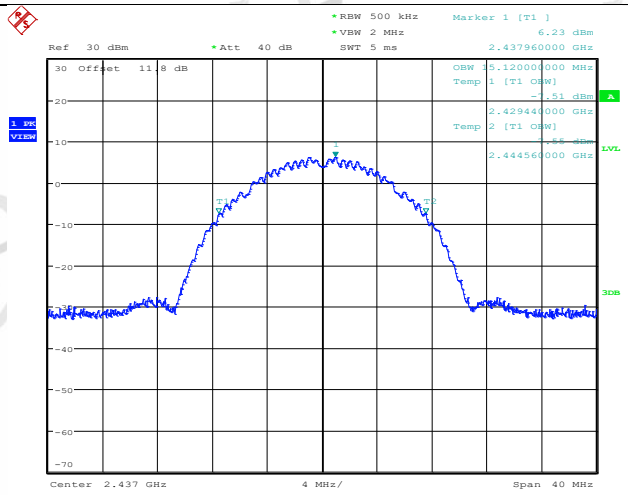


99% Bandwidth

11B_Ant1_2412



11B_Ant1_2437



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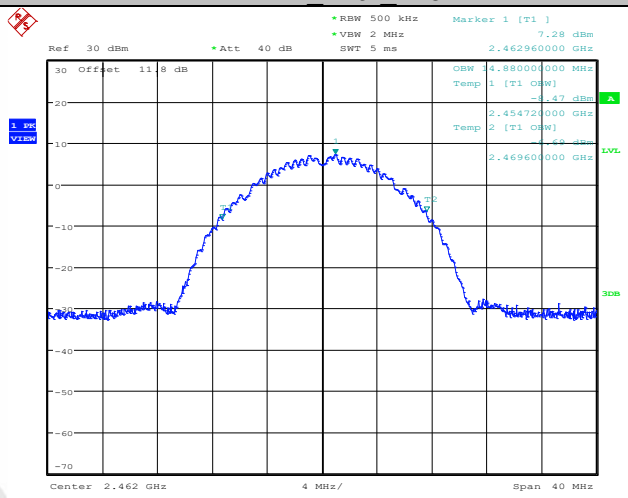

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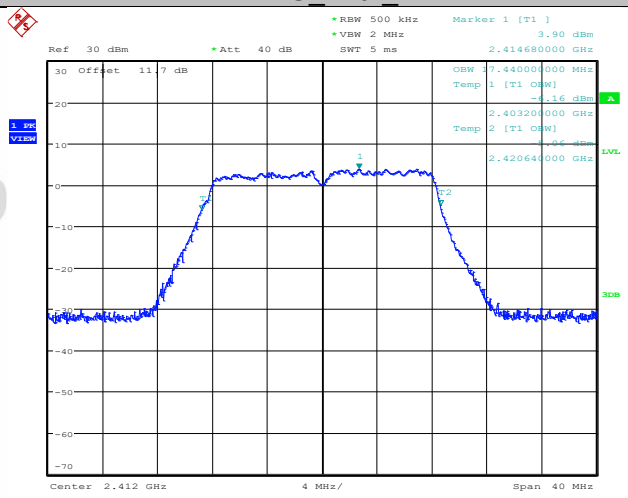

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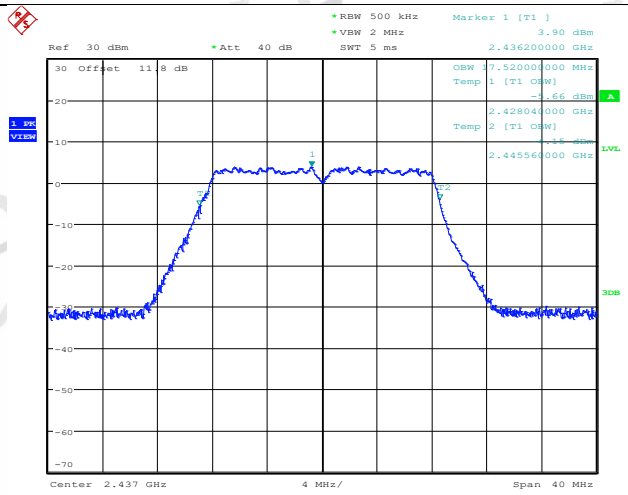

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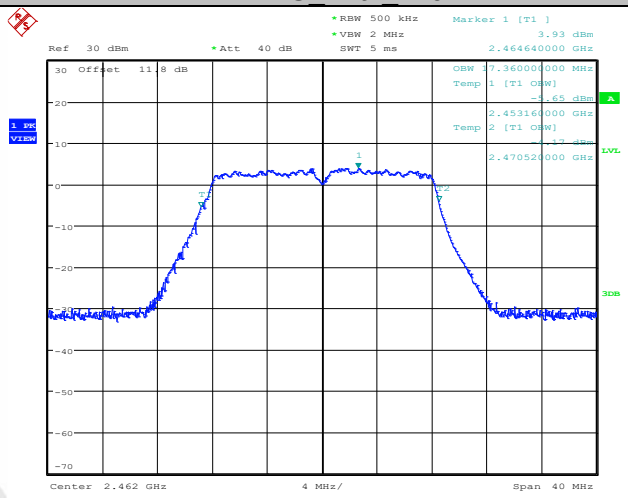

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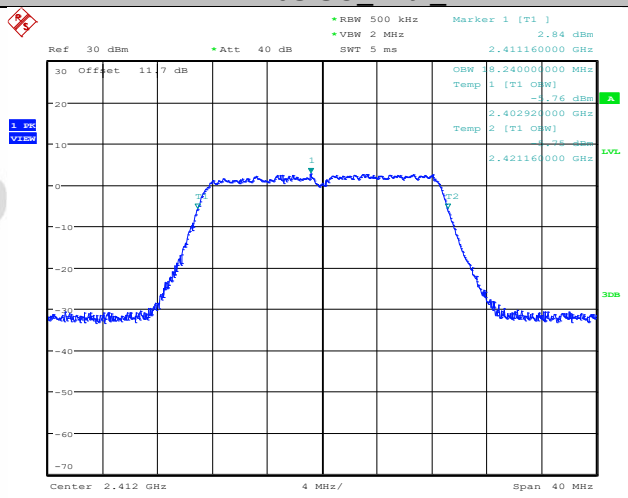

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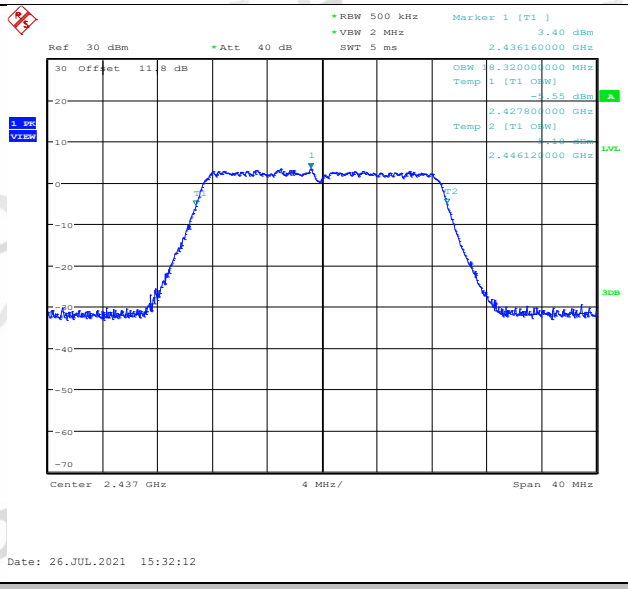
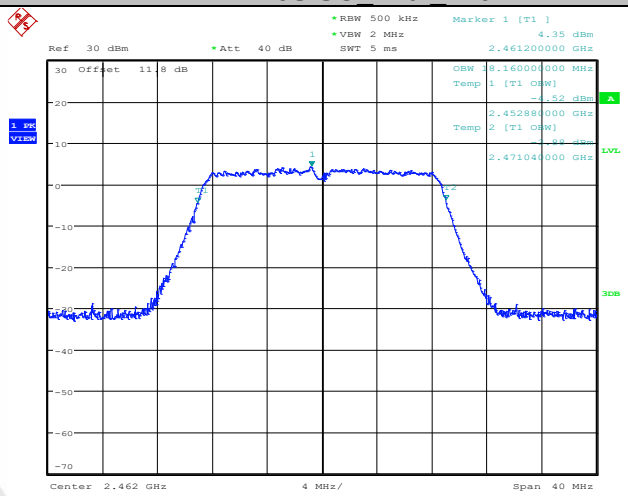
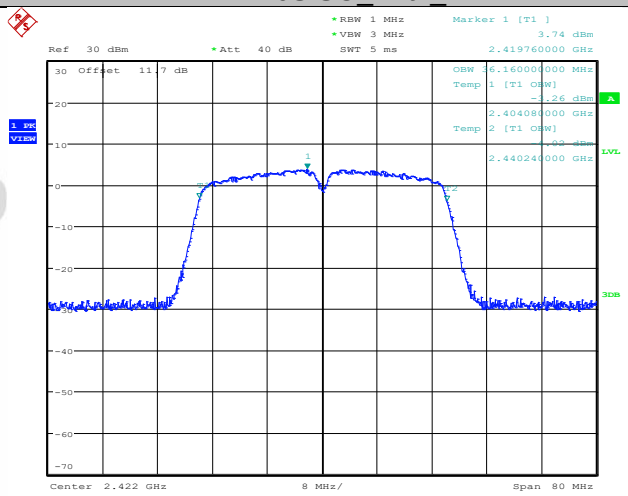


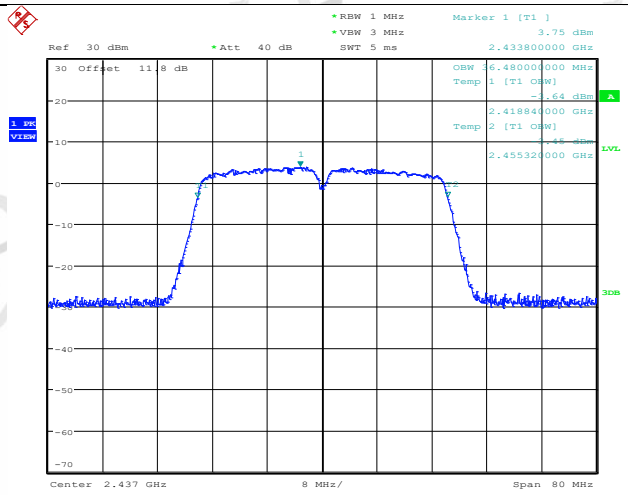
11N20SISO_Ant1_2462



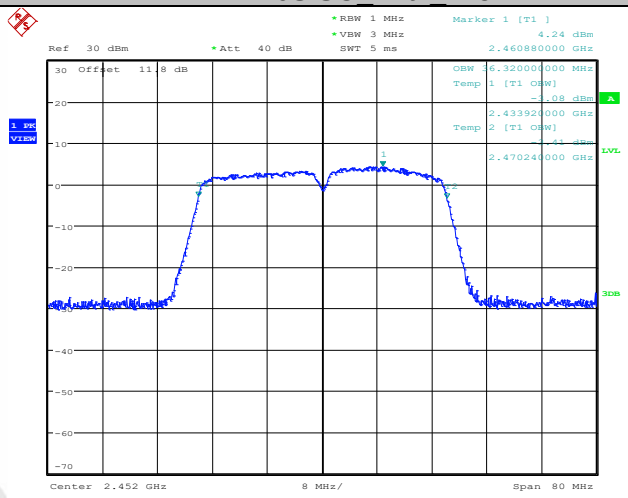
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452



5. Conducted peak Output Power

5.1. Block diagram of test setup

Same as section 4.1

5.2. Limits

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. If transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

5.3. Test procedure

Connect each EUT's antenna output to power sensor by RF cable and attenuator

Measure the PK output power of each antenna port by power meter.

5.4. Test result

Test Mode	Test Channel	Ant	Power (dBm)	Limit (dBm)	Verdict
11B	2412	ANT1	12.71	30	Pass
11B	2437	ANT1	**13.80**	30	Pass
11B	2462	ANT1	13.02	30	Pass
11G	2412	ANT1	10.04	30	Pass
11G	2437	ANT1	10.71	30	Pass
11G	2462	ANT1	10.69	30	Pass
11N20	2412	ANT1	10.00	30	Pass
11N20	2437	ANT1	10.90	30	Pass
11N20	2462	ANT1	10.73	30	Pass
11N40	2422	ANT1	9.21	30	Pass
11N40	2437	ANT1	9.75	30	Pass
11N40	2452	ANT1	9.40	30	Pass

6. Power Spectral Density

6.1. Block diagram of test setup

Same as section 4.1

6.2. Limits

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

6.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Set the spectrum analyzer as follows:

Center frequency	DTS Channel center frequency
RBW:	3 kHz ≤ RBW ≤ 100 kHz
VBW:	≥ 3RBW
Span	1.5 times the DTS bandwidth
Detector Mode:	RMS
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude level within the RBW.

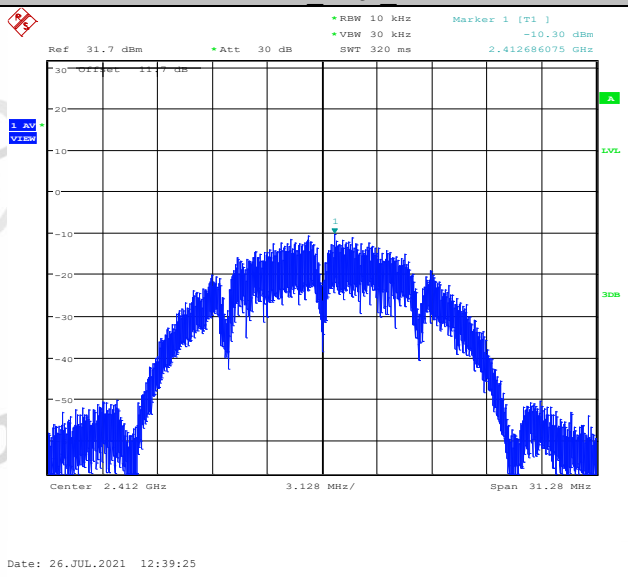
(4) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.4. Test result

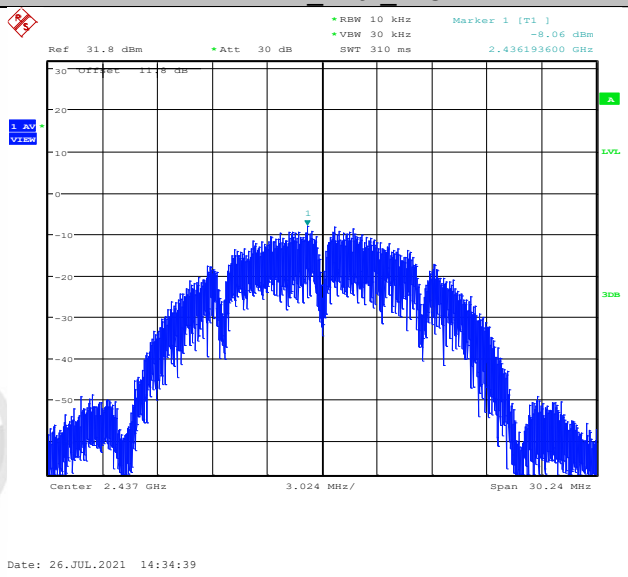
Test Mode	Test Channel	Ant	PSD (dBm/3KHz)	Limit (dBm/3kHz)	Verdict
11B	2412	ANT1	-10.30	8.00	Pass
11B	2437	ANT1	-8.06	8.00	Pass
11B	2462	ANT1	-7.83	8.00	Pass
11G	2412	ANT1	-13.17	8.00	Pass
11G	2437	ANT1	-12.99	8.00	Pass
11G	2462	ANT1	-13.94	8.00	Pass
11N20	2412	ANT1	-14.45	8.00	Pass
11N20	2437	ANT1	-14.01	8.00	Pass
11N20	2462	ANT1	-12.98	8.00	Pass
11N40	2422	ANT1	-16.16	8.00	Pass
11N40	2437	ANT1	-15.53	8.00	Pass
11N40	2452	ANT1	-16.66	8.00	Pass

6.5. original test data

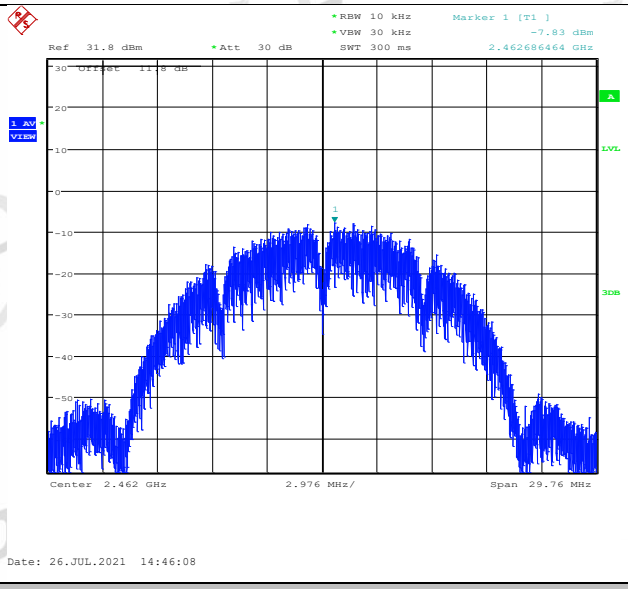
11B_Ant1_2412



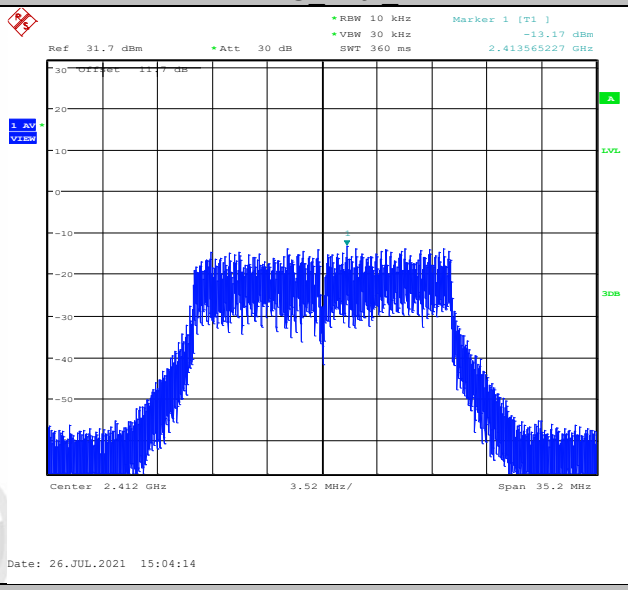
11B_Ant1_2437



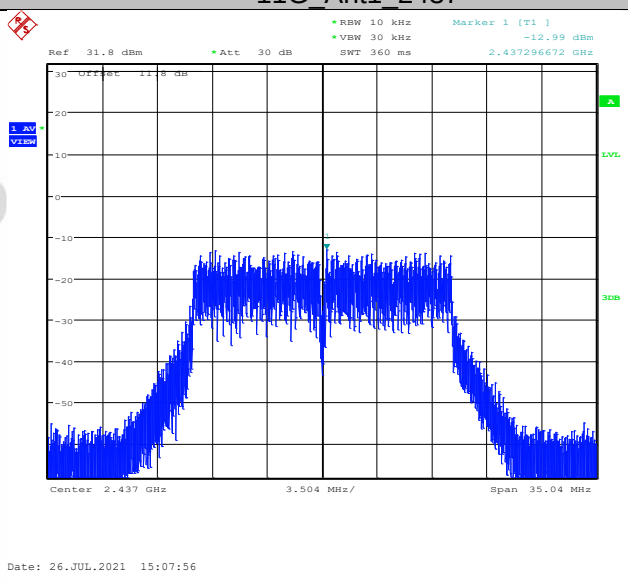
11B_Ant1_2462



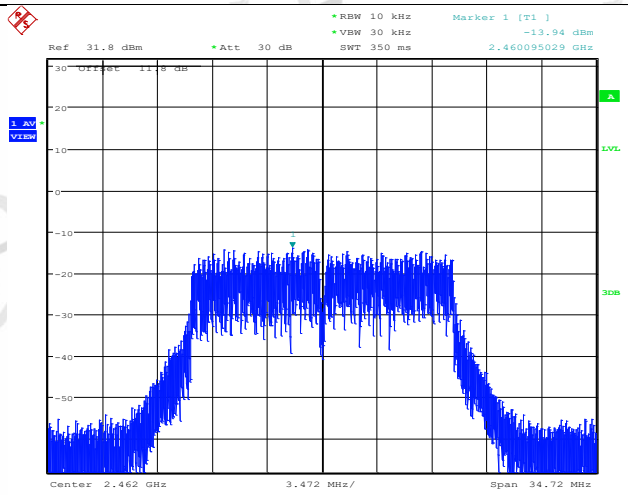
11G_Ant1_2412



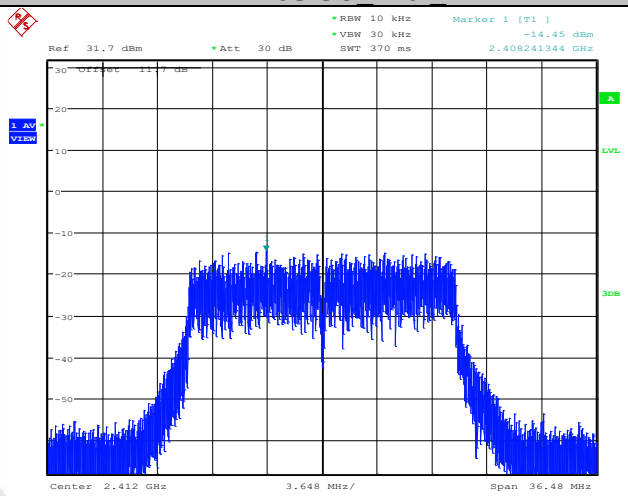
11G_Ant1_2437



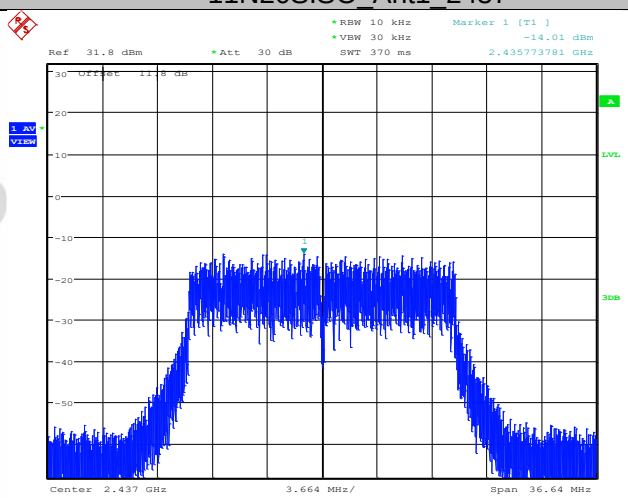
11G_Ant1_2462



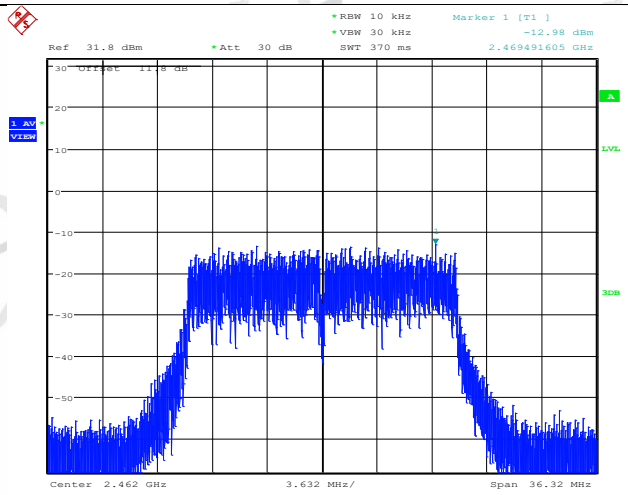
11N20SISO_Ant1_2412



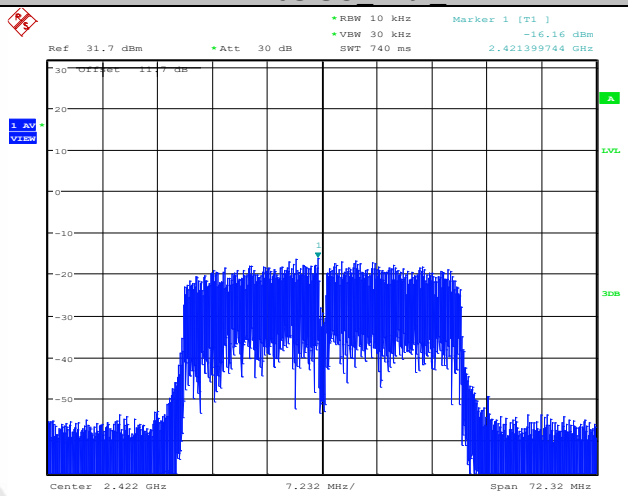
11N20SISO_Ant1_2437



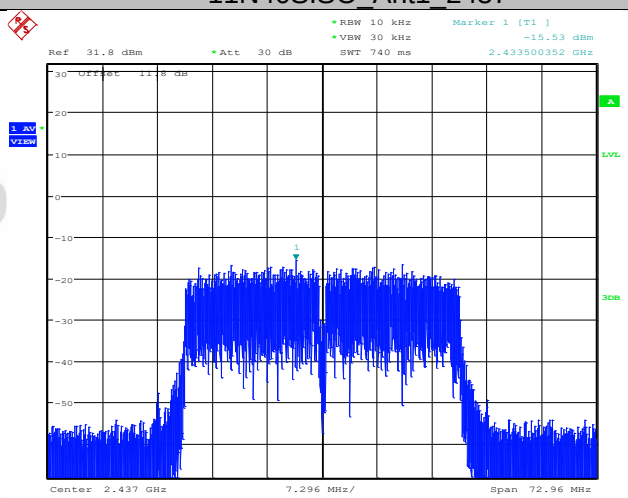
11N20SISO_Ant1_2462



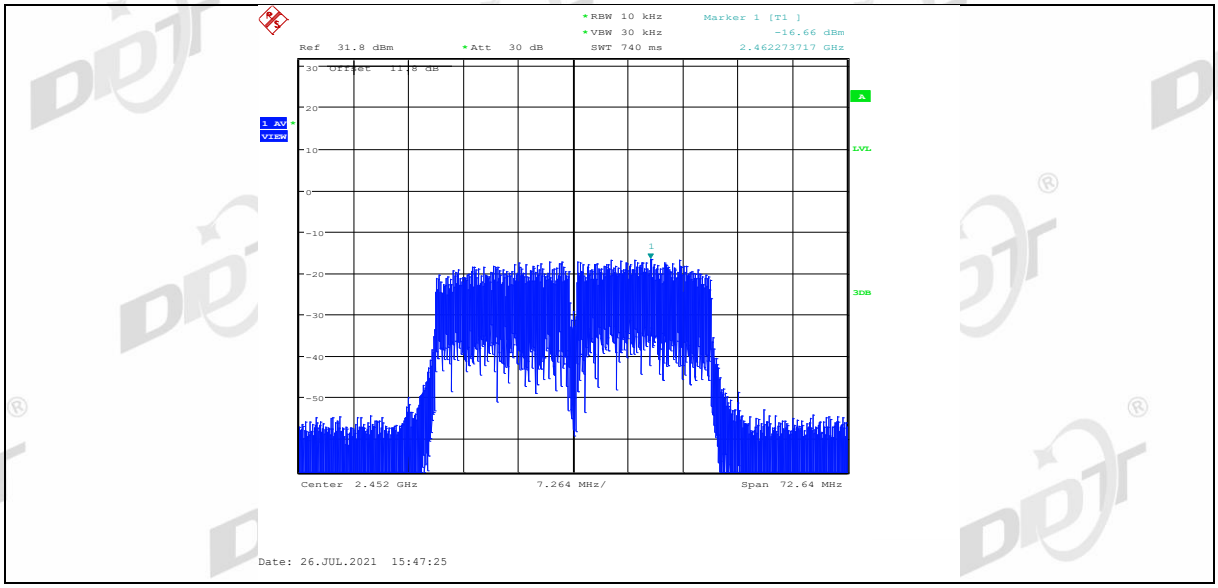
11N40SISO_Ant1_2422



11N40SISO_Ant1_2437



11N40SISO_Ant1_2452


RBW 10 kHz
VBW 30 kHz
SWT 740 ms
Marker 1 [T1]
-16.66 dBm
2.462273717 GHz
Ref 31.8 dBm
Att 30 dB
Offset 11.8 dB
1 AV
VIEW
A
LVL
3DB
Center 2.452 GHz
7.264 MHz/
Span 72.64 MHz
Date: 26.JUL.2021 15:47:25

7. Band Edge and Spurious Emissions (Conducted)

7.1. Block diagram of test setup

Same as section 4.1

7.2. Limits

In any 100 kHz bandwidth outside the frequency bands in which the spread spectrum intentional radiator in operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

7.3. Test procedure

(1) Connect EUT's antenna output to spectrum analyzer by RF cable.

(2) Establish a reference level by using the following procedure:

Center frequency	DTS Channel center frequency
RBW:	100 kHz
VBW:	300 kHz
Span	1.5 times the DTS bandwidth
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(3) Allow the trace to stabilize, use the peak marker function to determine the maximum peak power level to establish the reference level.

(4) Set the spectrum analyzer as follows:

RBW:	100 kHz
VBW:	300 kHz
Span	Encompass frequency range to be measured
Number of measurement points	≥span/RBW
Detector Mode:	Peak
Sweep time:	auto
Trace mode	Max hold

(5) Allow the trace to stabilize, use the peak marker function to determine the maximum amplitude of all unwanted emissions outside of the authorized frequency band

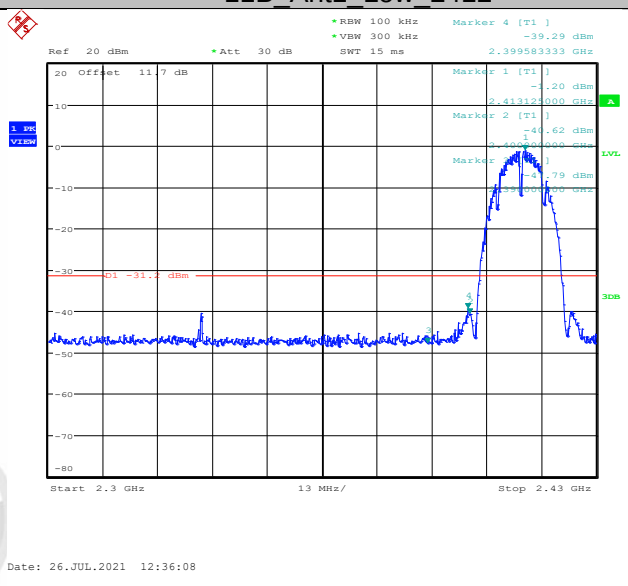
7.4. Test result

EUT Set Mode	CH or Frequency	Result (dBm)	EUT Set Mode	CH or Frequency	Result Result (dBm)
11b	CH1	Pass	11n HT 20	CH1	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH11	Pass
11g	CH1	Pass	11n HT 40	CH3	Pass
	CH6	Pass		CH6	Pass
	CH11	Pass		CH9	Pass

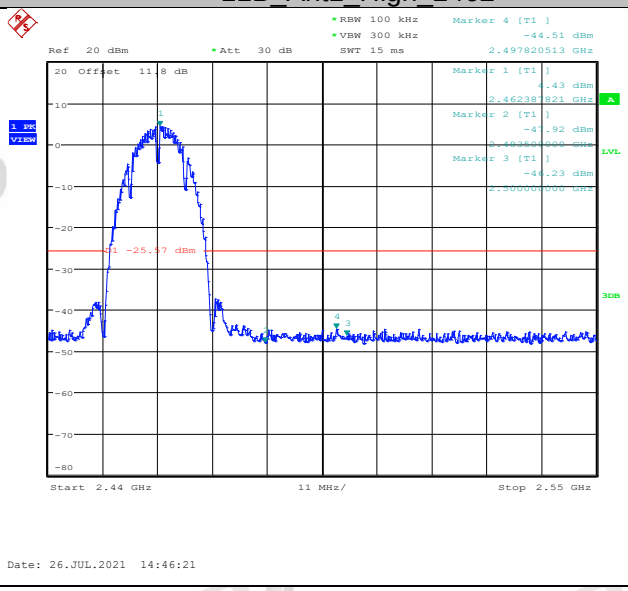
7.5. original test data

Band Edge

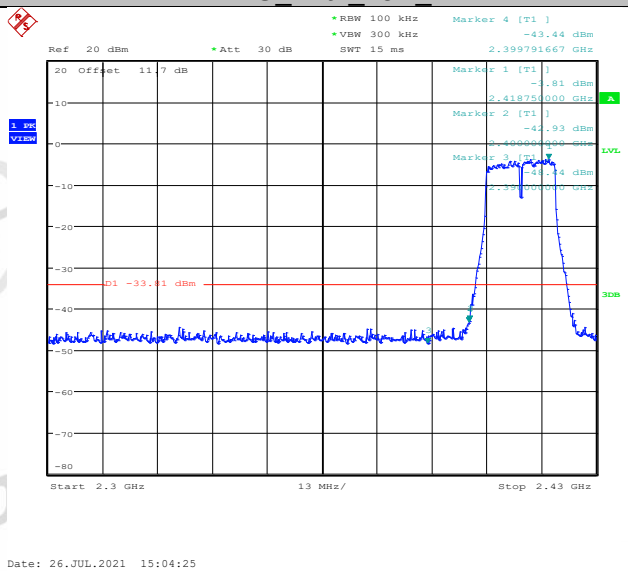
11B_Ant1_Low_2412



11B_Ant1_High_2462

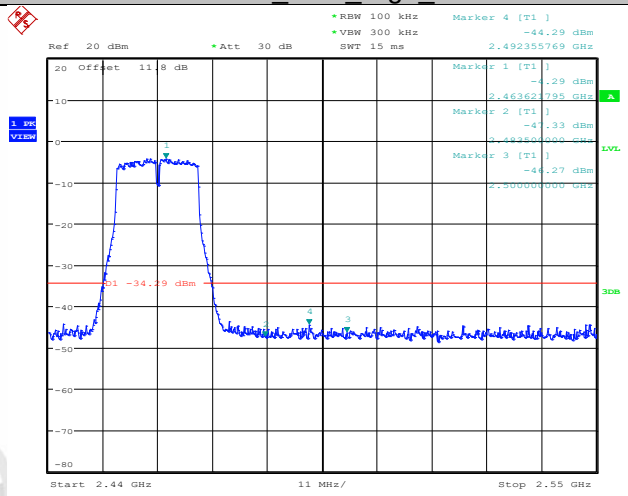


11G_Ant1_Low_2412



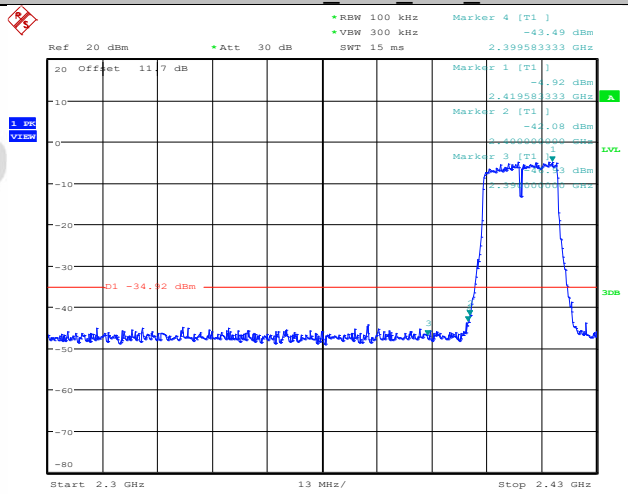
Date: 26.JUL.2021 15:04:25

11G_Ant1_High_2462



Date: 26.JUL.2021 15:21:25

11N20SISO_Ant1_Low_2412



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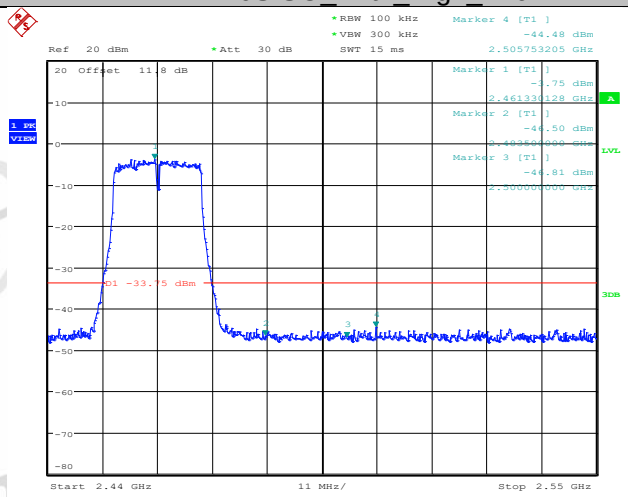
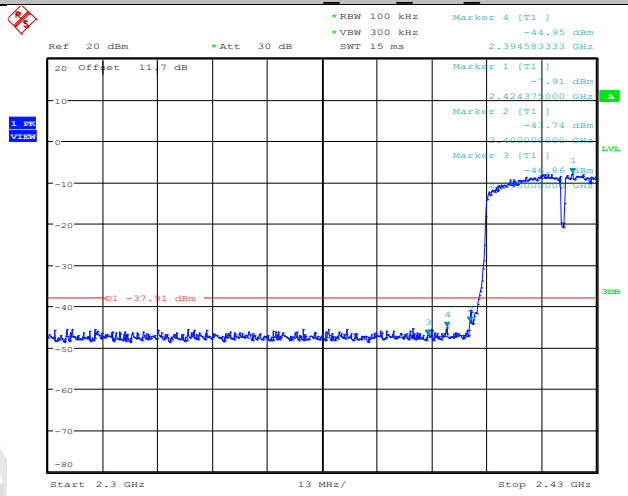
11N20SISO_Ant1_High_2462



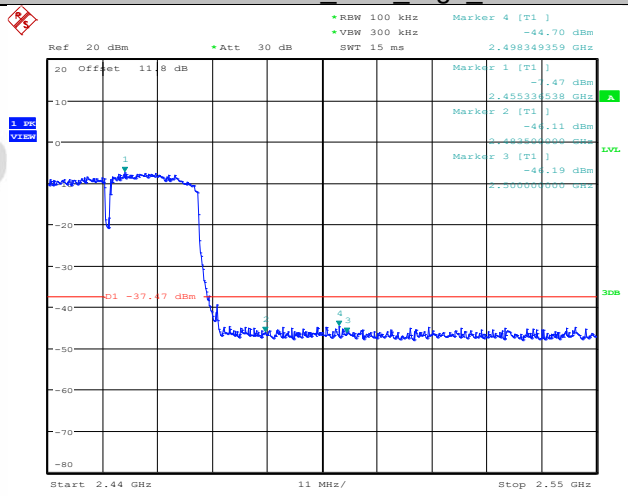
Date: 26.JUL.2021 15:35:24

11N40SISO_Ant1_Low_2422



Date: 26.JUL.2021 15:40:36

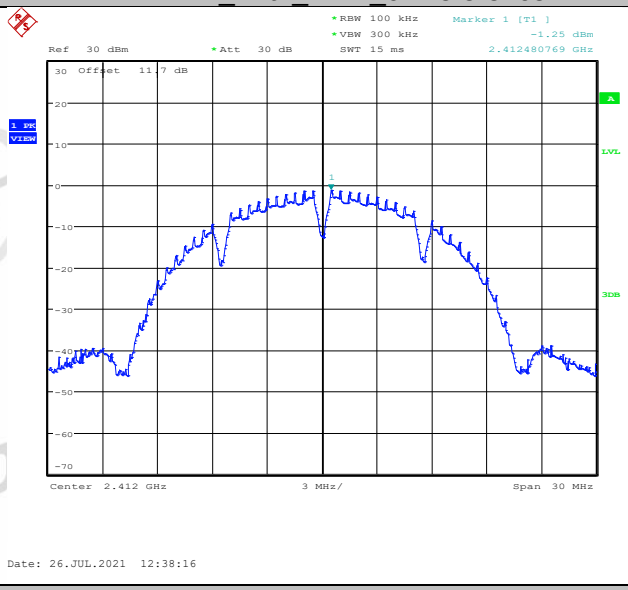
11N40SISO_Ant1_High_2452



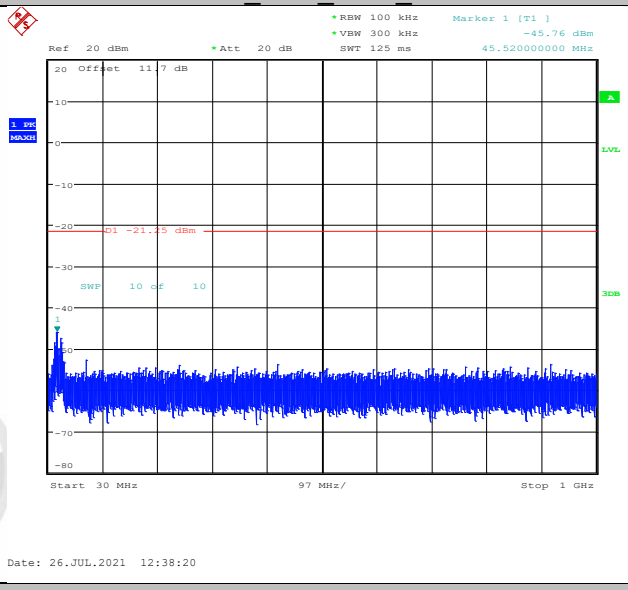
Date: 26.JUL.2021 15:47:36

Spurious Emissions

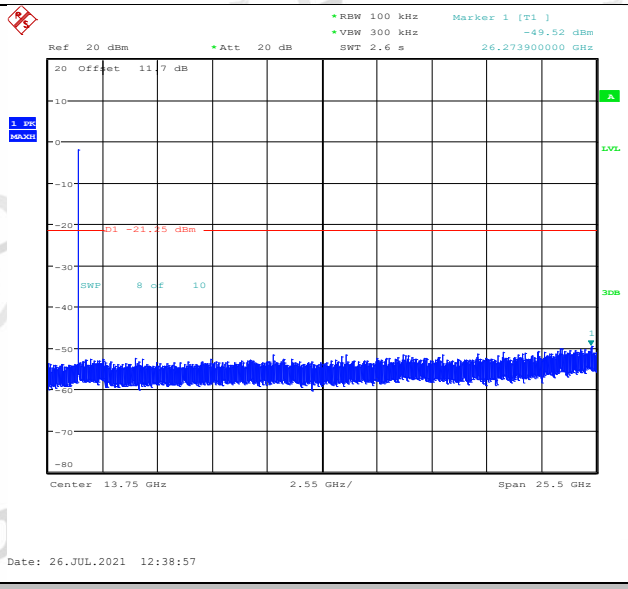
11B_Ant1_2412_0~Reference



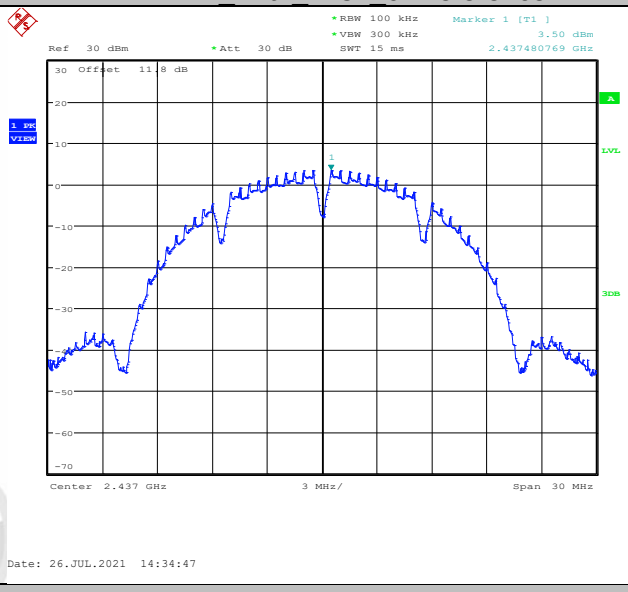
11B_Ant1_2412_30~1000



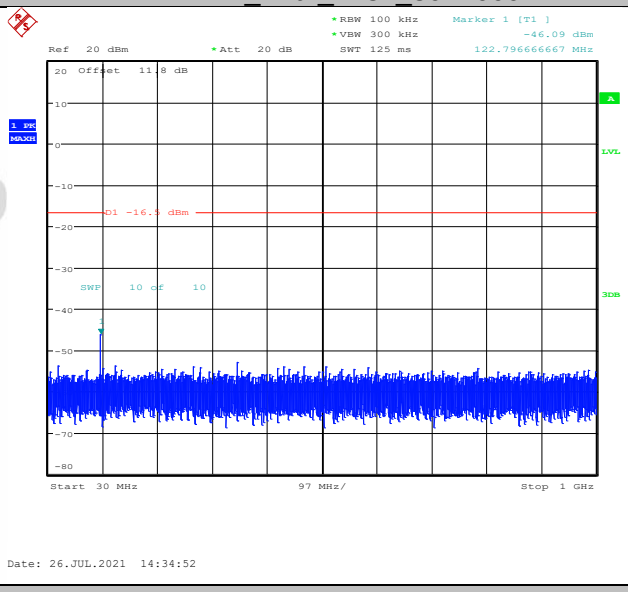
11B_Ant1_2412_1000~26500



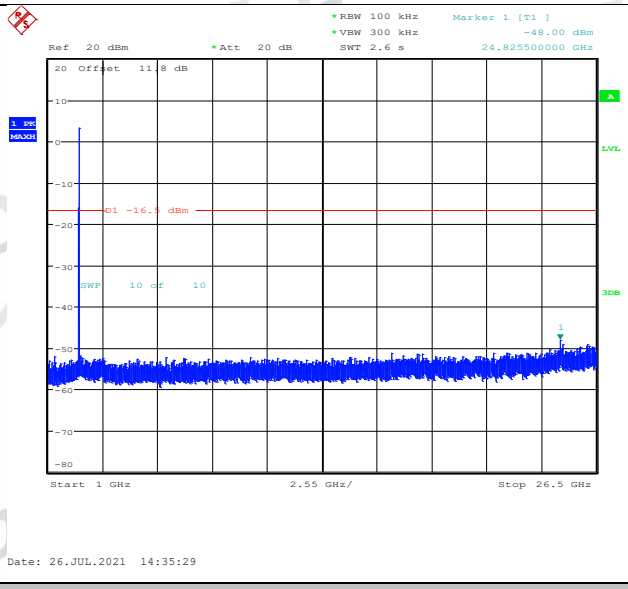
11B_Ant1_2437_0~Reference



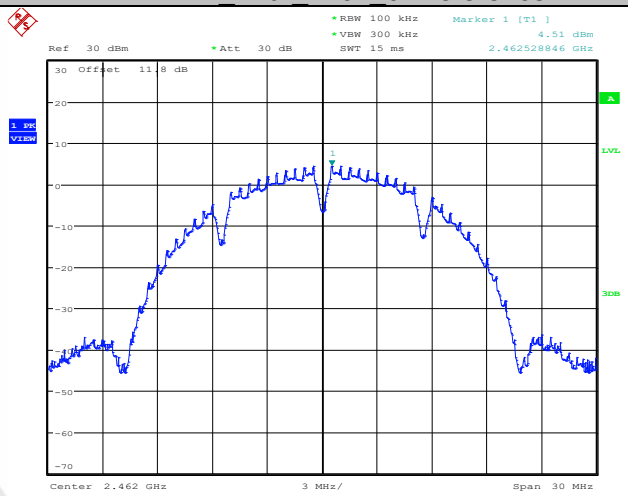
11B_Ant1_2437_30~1000



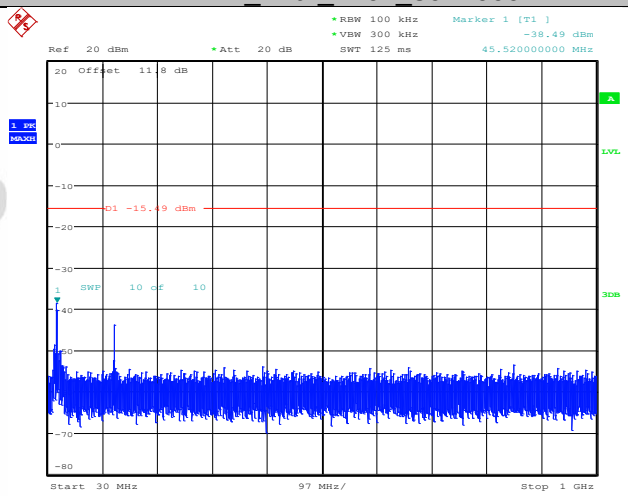
11B_Ant1_2437_1000~26500



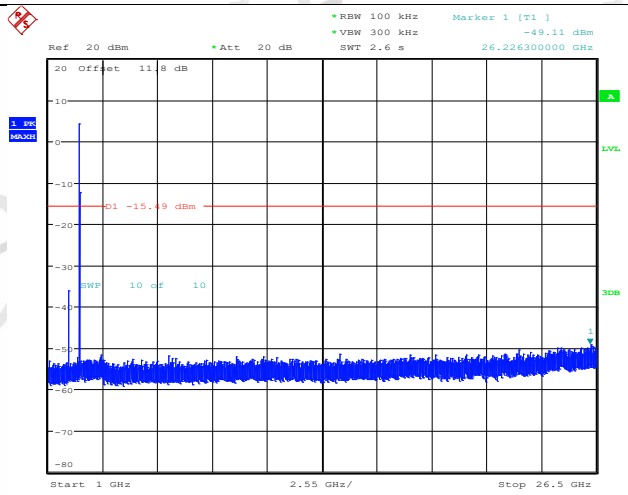
11B_Ant1_2462_0~Reference



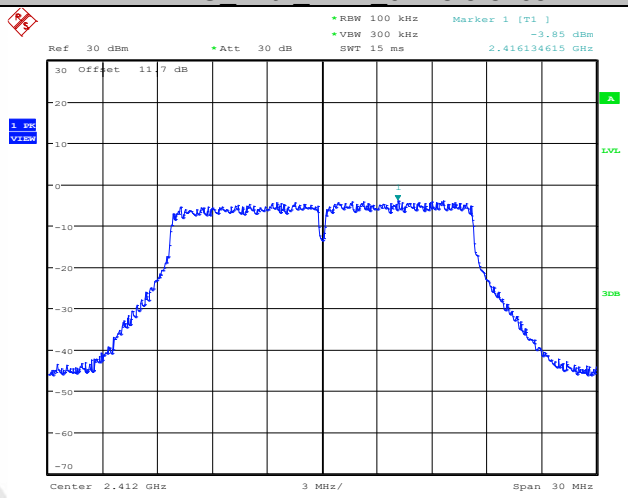
11B_Ant1_2462_30~1000



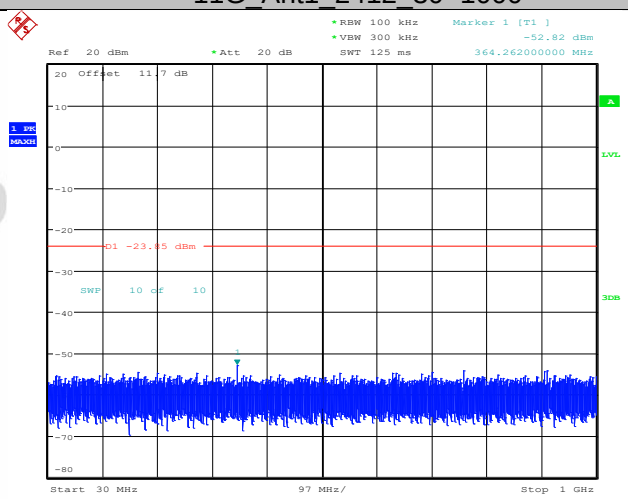
11B_Ant1_2462_1000~26500



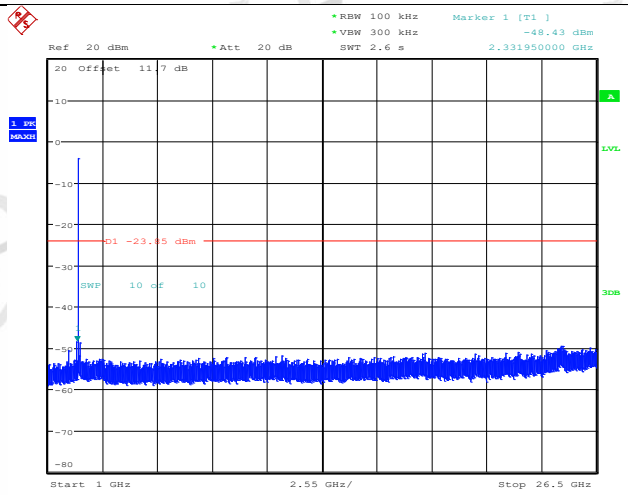
11G_Ant1_2412_0~Reference



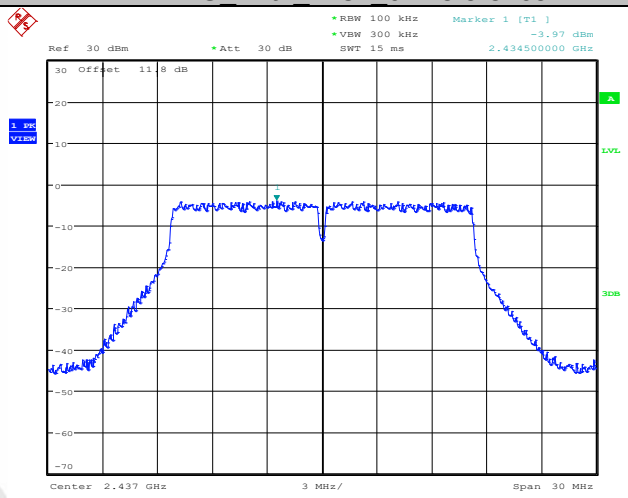
11G_Ant1_2412_30~1000



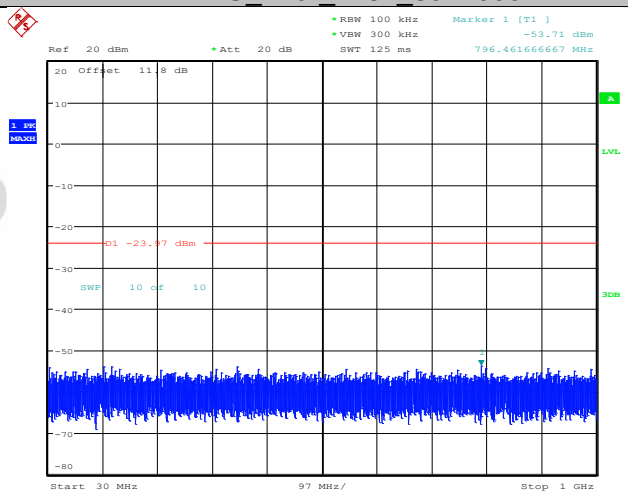
11G_Ant1_2412_1000~26500



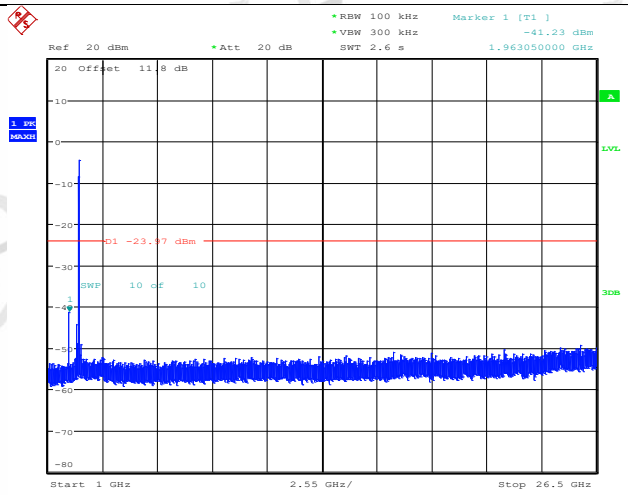
11G_Ant1_2437_0~Reference



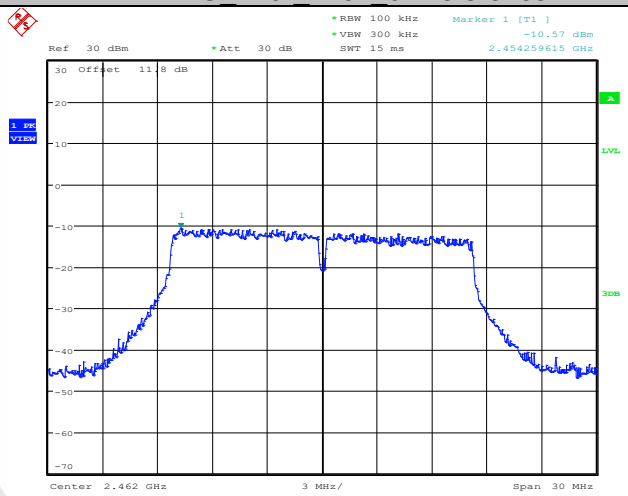
11G_Ant1_2437_30~1000



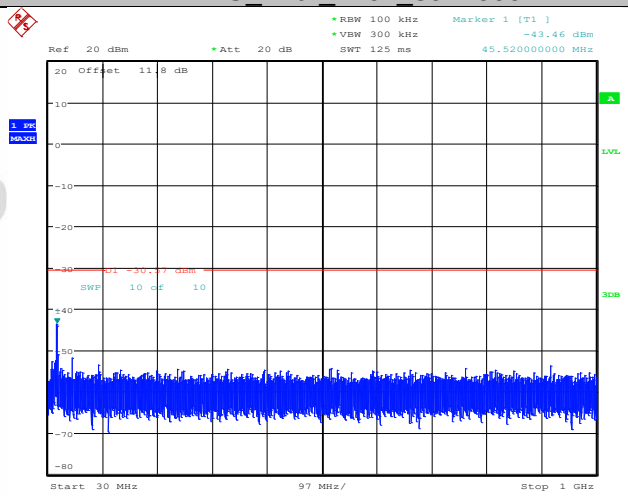
11G_Ant1_2437_1000~26500



11G_Ant1_2462_0~Reference



11G_Ant1_2462_30~1000



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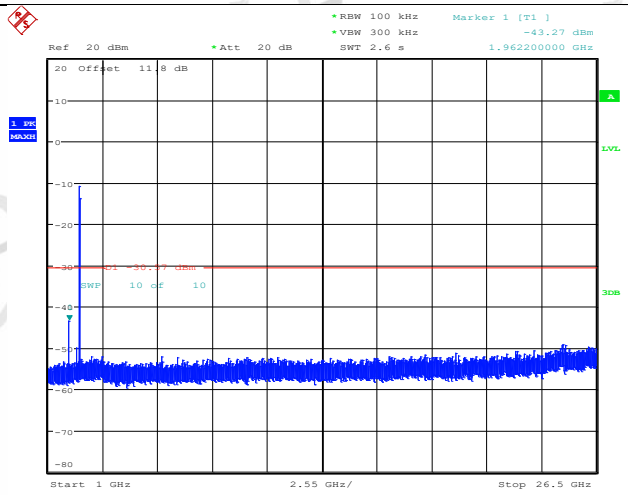

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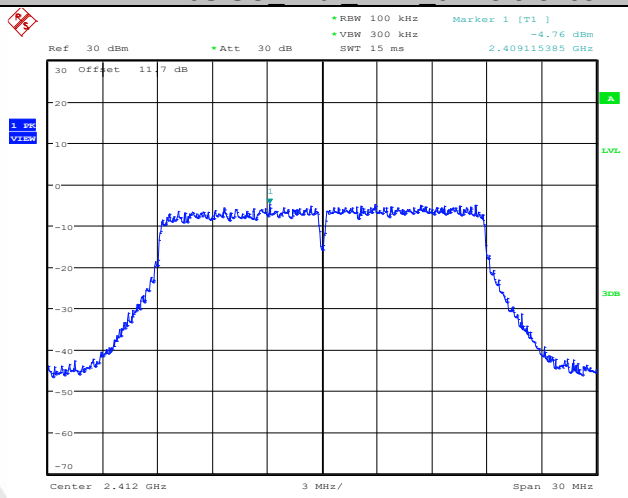

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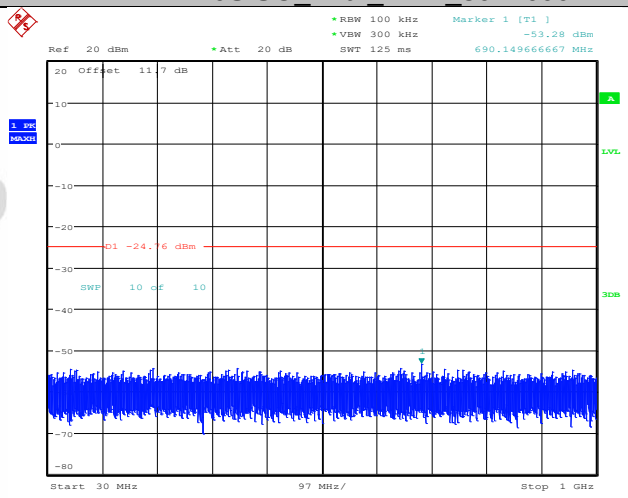
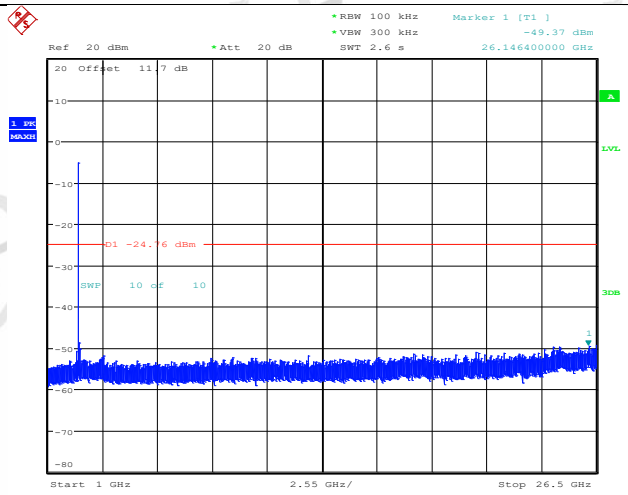
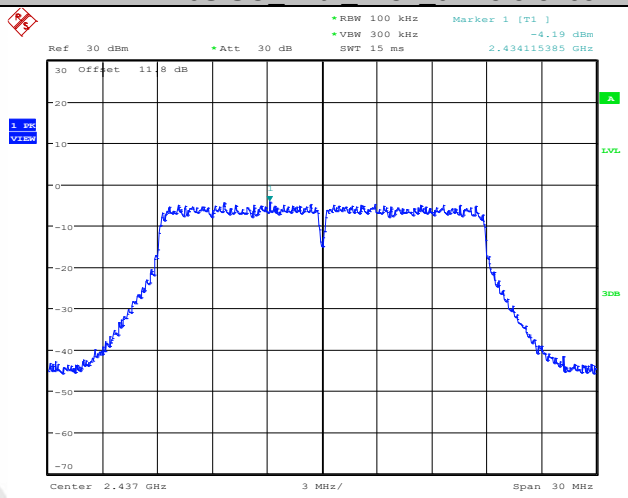


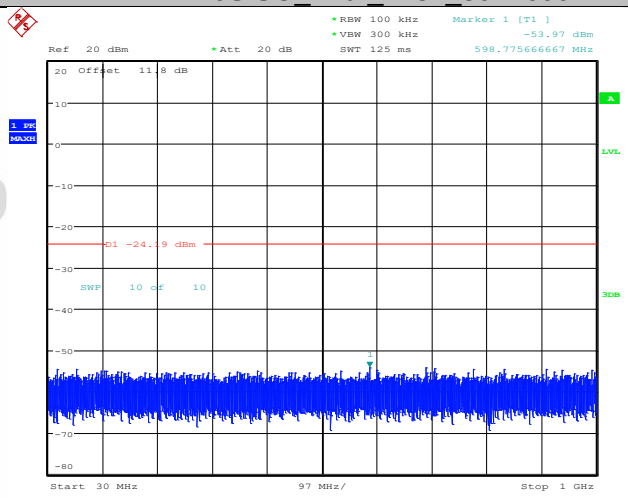
11N20SISO_Ant1_2412_1000~26500



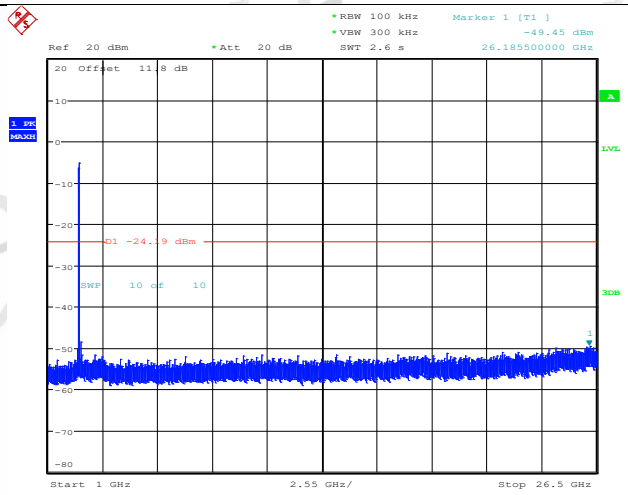
11N20SISO_Ant1_2437_0~Reference



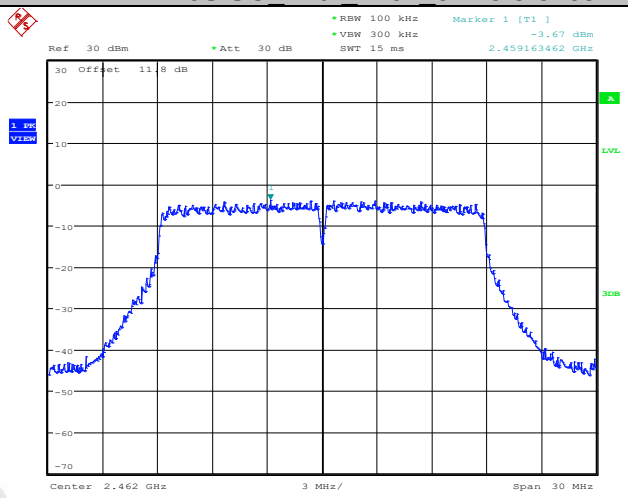
11N20SISO_Ant1_2437_30~1000



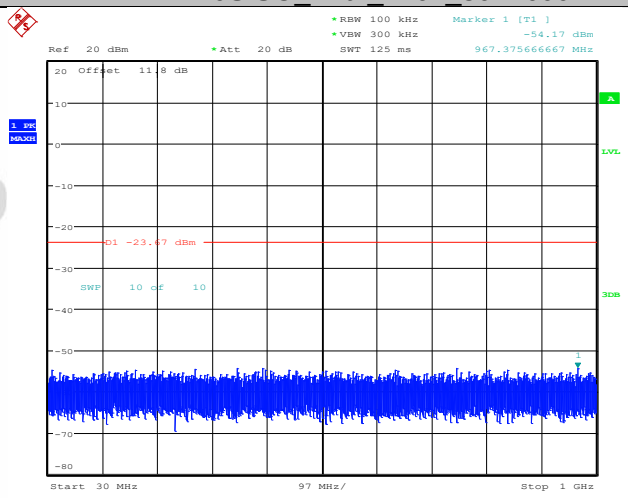
11N20SISO_Ant1_2437_1000~26500



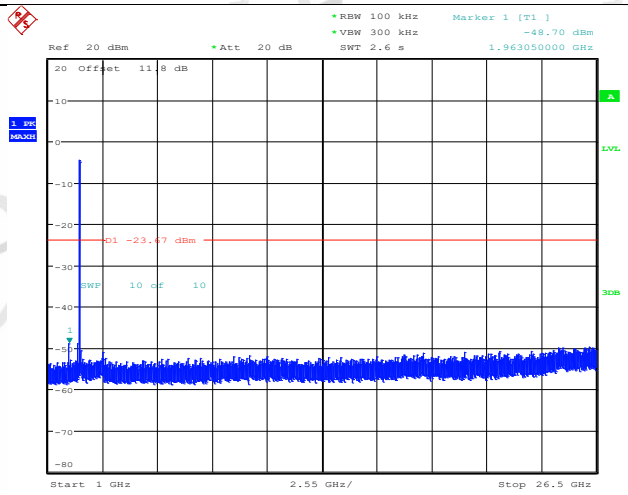
11N20SISO_Ant1_2462_0~Reference



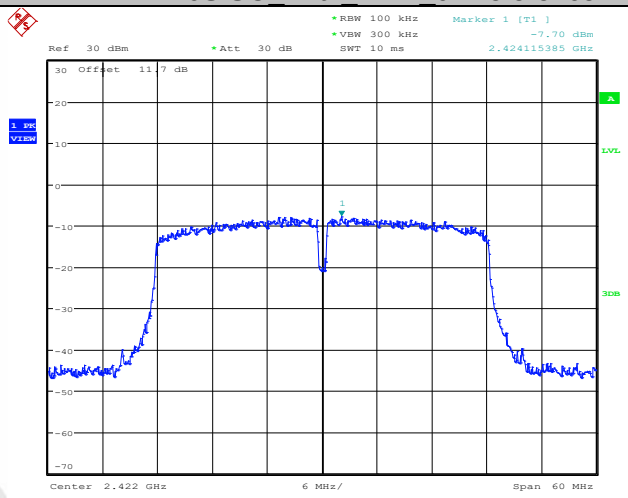
11N20SISO_Ant1_2462_30~1000



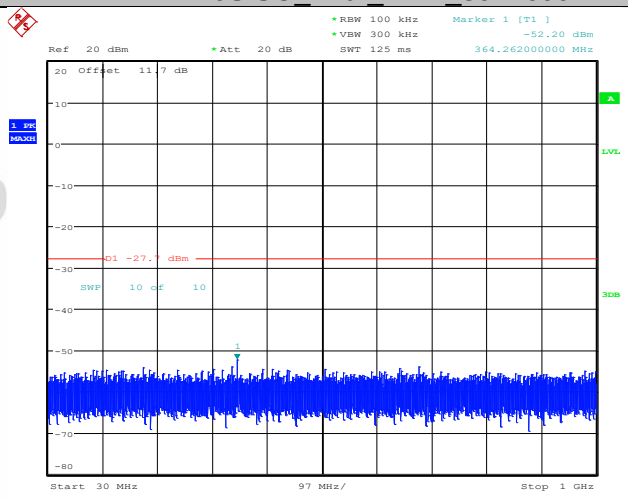
11N20SISO_Ant1_2462_1000~26500



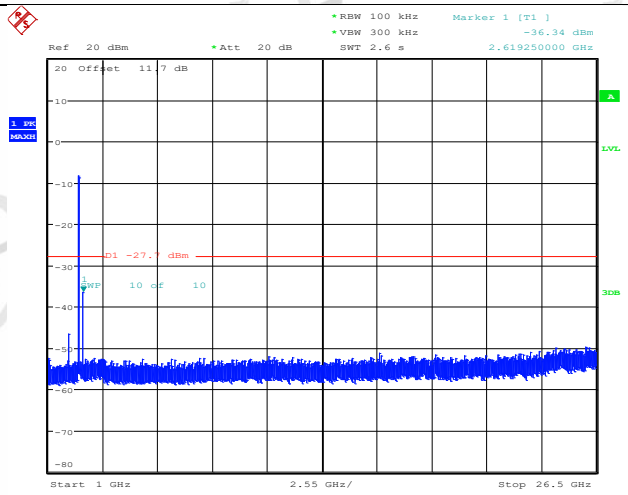
11N40SISO_Ant1_2422_0~Reference



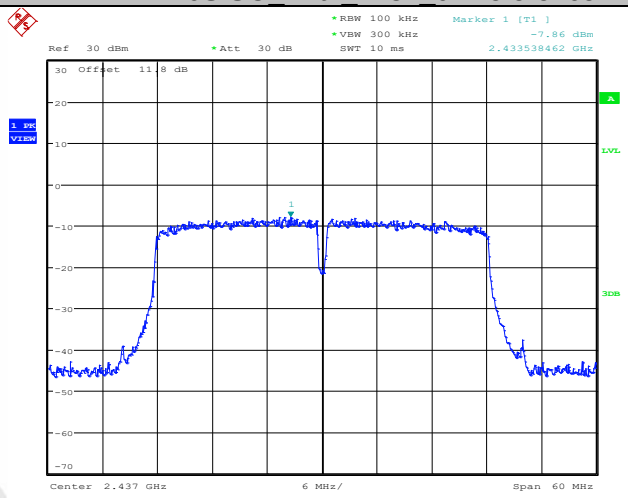
11N40SISO_Ant1_2422_30~1000



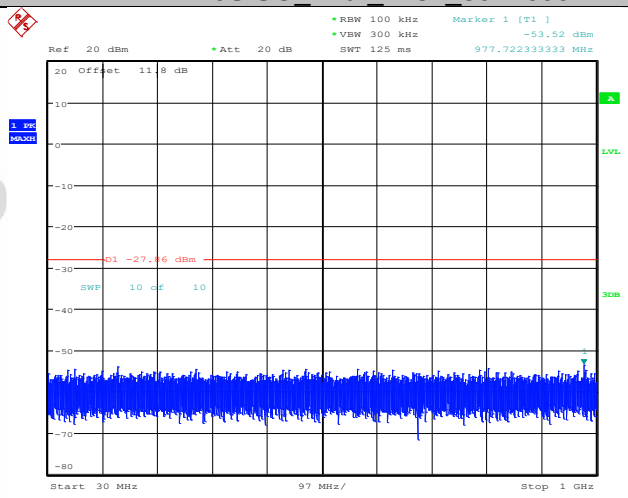
11N40SISO_Ant1_2422_1000~26500



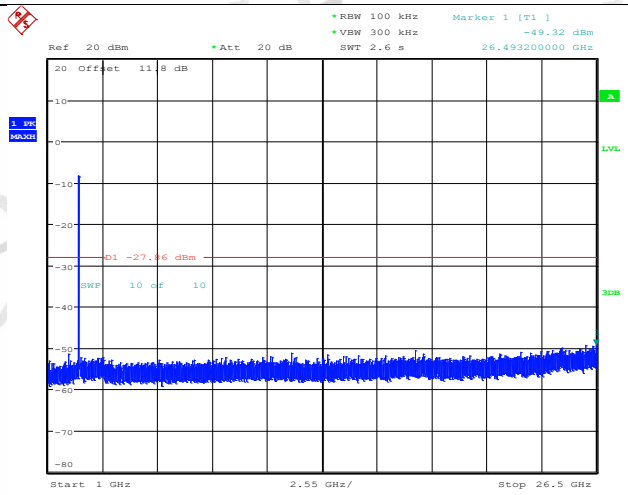
11N40SISO_Ant1_2437_0~Reference



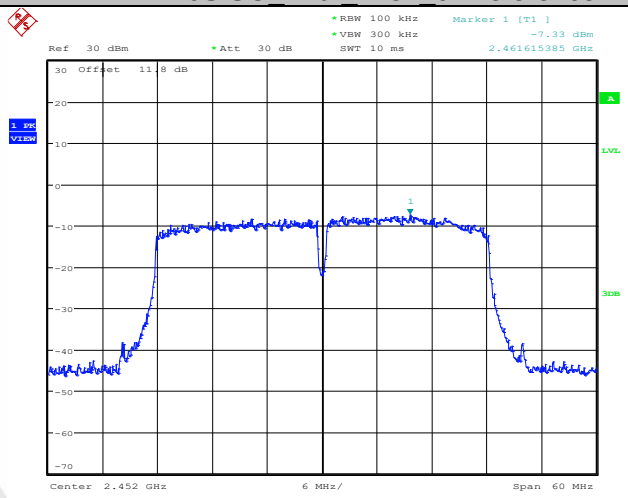
11N40SISO_Ant1_2437_30~1000



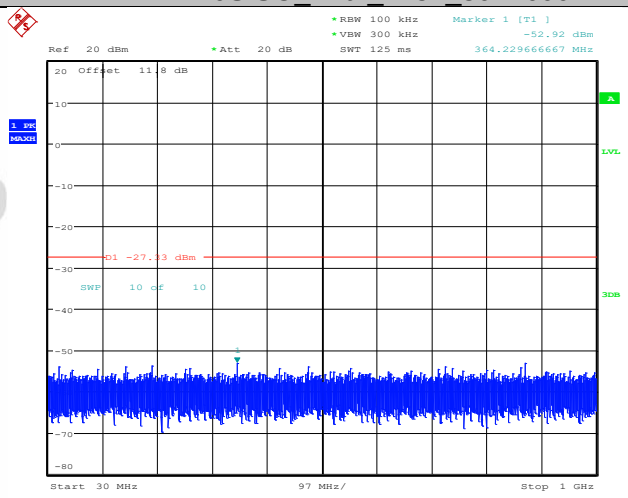
11N40SISO_Ant1_2437_1000~26500



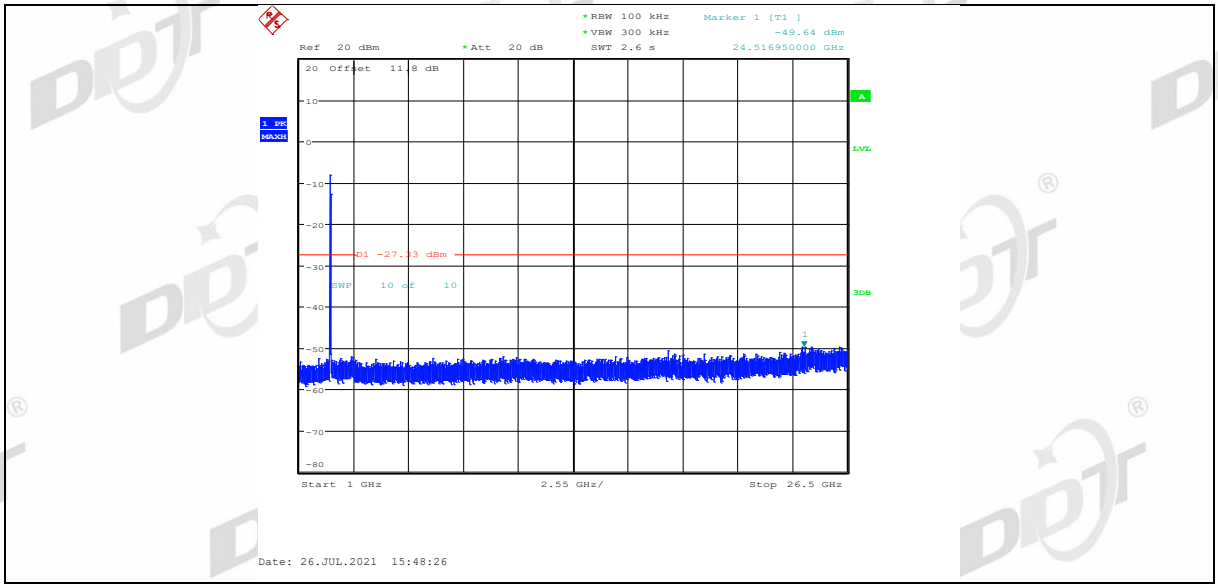
11N40SISO_Ant1_2452_0~Reference



11N40SISO_Ant1_2452_30~1000



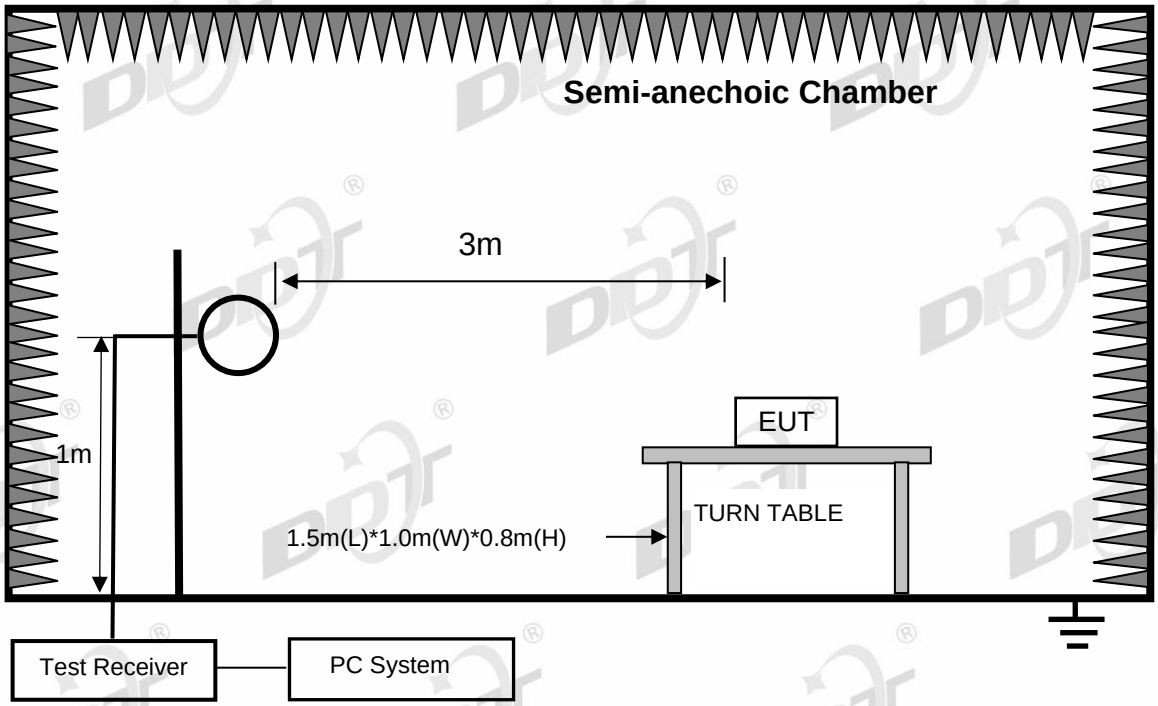
11N40SISO_Ant1_2452_1000~26500


RBW 100 kHz
VBW 300 kHz
SWT 2.6 s
Marker 1 [T1]
-49.64 dBm
24.516950000 GHz
Ref 20 dBm
Att 20 dB
20 Offset 11.8 dB
D1 -27.13 dBm
SWP 10 dB 10
Start 1 GHz
2.55 GHz/
Stop 26.5 GHz
Date: 26.JUL.2021 15:48:26

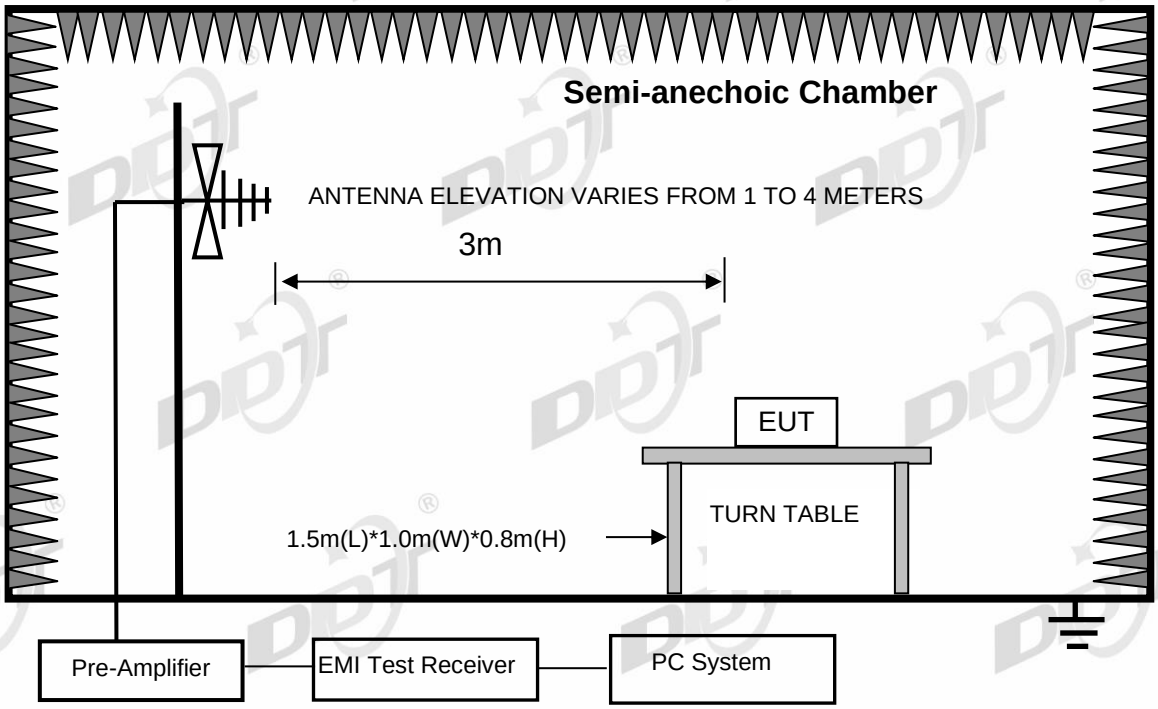
8. Radiated Spurious Emissions

8.1. Block diagram of test setup

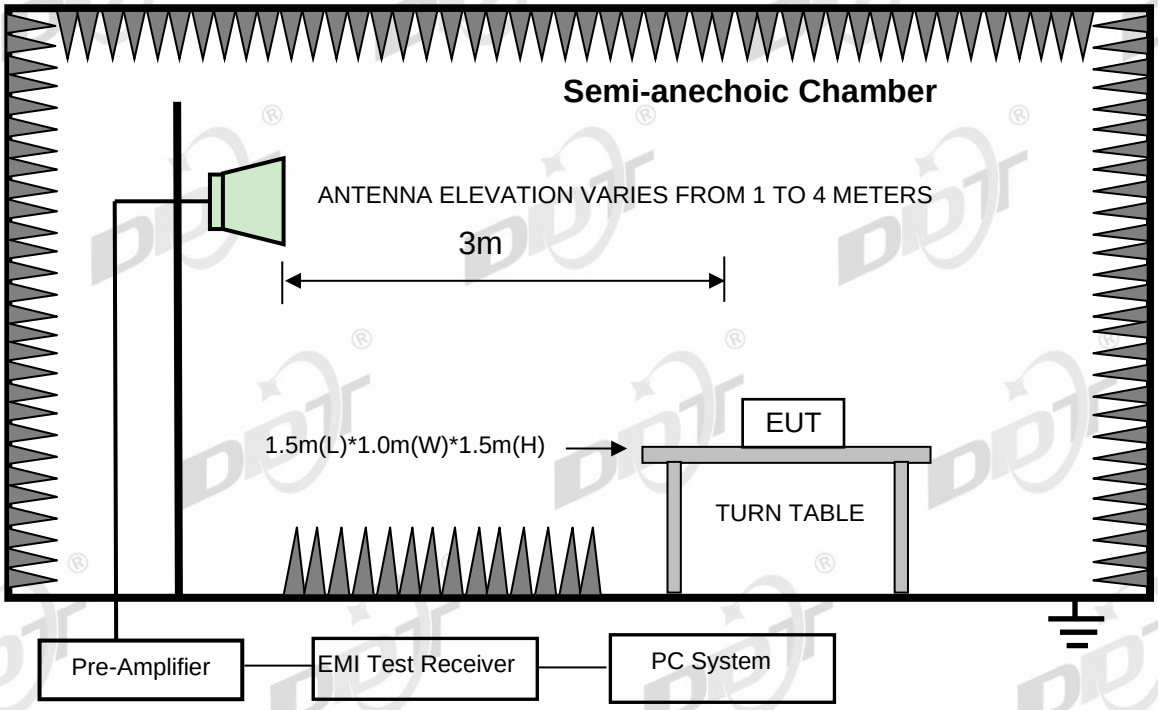
In 3 m Anechoic Chamber, test setup diagram for 9 kHz - 30 MHz:



In 3 m Anechoic Chamber, test setup diagram for 30 MHz - 1 GHz:



In 3 m Anechoic Chamber, test setup diagram for frequency above 1 GHz:



Note: For harmonic emissions test an appropriate high pass filter was inserted in the input port of AMP.

8.2. Limit

8.2.1 FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

[1]Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz.

[2]Above 38.6

8.2.2 FCC 15.209 Limit.

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		μV/m	dB(μV)/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
960 ~ 1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Note: (1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000MHz. Radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$Limit_{3m}(dBuV/m) = Limit_{30m}(dBuV/m) + 40Log(30m/3m)$$

8.2.3 Limit for this EUT

All the emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20dB below the fundamental emissions or comply with 15.209 limits.

8.3. Test procedure

(1) EUT height should be 0.8 m for below 1 GHz at a semi-anechoic chamber while EUT height should be 1.5 m for above 1 GHz at full chamber or semi-anechoic chamber ground with absorbers.

(2) The antenna used as below table.

Test frequency range	Test antenna used	Measuring distance
9 kHz-30 MHz	Active Loop antenna	3 m
30 MHz-1 GHz	Trilog Broadband Antenna	3 m
1 GHz-18 GHz	Double Ridged Horn Antenna(1GHz-18GHz)	3 m
18 GHz-40 GHz	Horn Antenna(18GHz-40GHz)	1 m

According ANSI C63.10:2013 clause 6.4.4.2 and 6,5.3, for measurements below 30 MHz, the loop antenna was positioned with its plane vertical from the EUT and rotated about its vertical axis for maximum response at each azimuth position around the EUT. And the loop antenna also be positioned with its plane horizontal at the specified distance from the EUT. The center of the

loop is 1 m above the ground. for measurement above 30 MHz, the Trilog Broadband Antenna or Horn Antenna was located 3 m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18GHz to 25GHz, so below final test was performed with frequency range from 9kHz to 18GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipments and all of the interface cables were changed according to ANSI C63.10 2013 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9-90 kHz, 110-490 kHz, for emissions from 9 kHz-90 kHz,110 kHz-490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW

Frequency band	RBW
9 kHz-150 kHz	200 Hz
150 kHz-30 MHz	9 kHz
30 MHz-1 GHz	120 kHz

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; RMS detector RBW 1 MHz VBW 10 Hz for Average measure (according ANSI C63.10:2013 clause 4.2.3.2.3 procedure for average measure).

8.4. Test result

Pass. (See below detailed test result)

All the emissions except fundamental emission from 9 kHz to 25 GHz were comply with 15.209 limit.

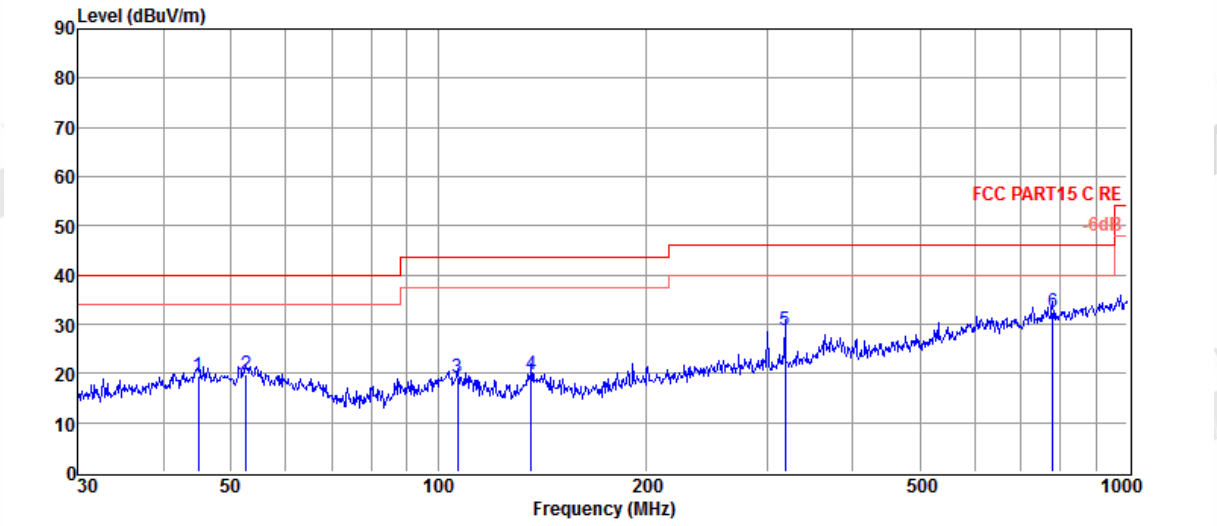
Note1: According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 25 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

Note2: For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with EUT working in the worst case.

Radiated Emission test (below 1GHz)

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21061703-2E\FCC BELOW1G 4E.EM6		
Test Date	:	2021-07-19	**Tested By**	:	Bairong
EUT	:	Car Navigation	**Model Number**	:	HA5010
Power Supply	:	DC 12V	**Test Mode**	:	Tx mode
Condition	:	Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	:	2020 VULB 9163 2#/3m/HORIZONTAL
Memo	:	WIFI			

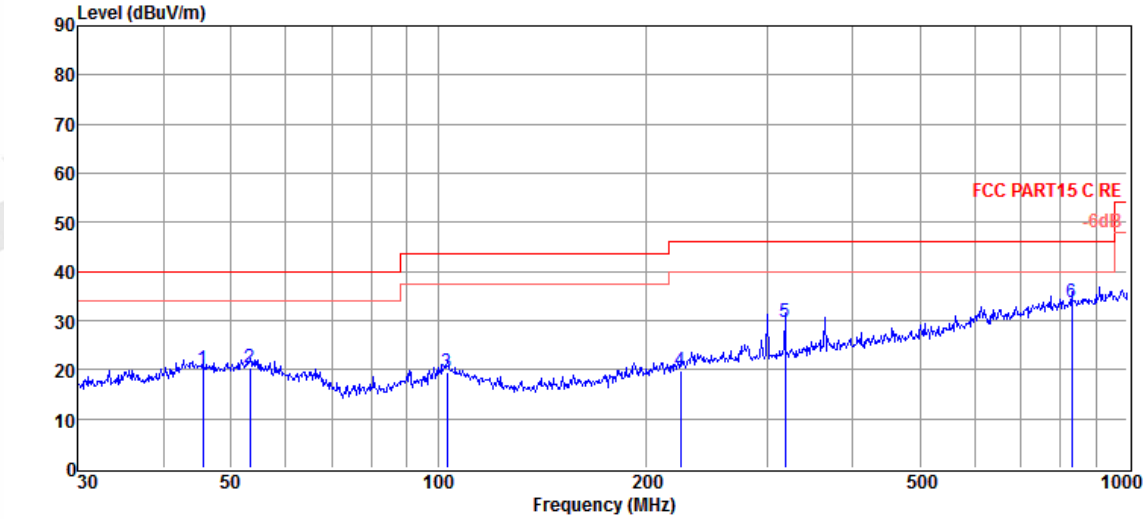


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	44.90	2.74	12.99	3.81	19.54	40.00	-20.46	QP	HORIZONTAL
2	52.58	2.21	13.59	3.88	19.68	40.00	-20.32	QP	HORIZONTAL
3	106.76	3.43	11.28	4.46	19.17	43.50	-24.33	QP	HORIZONTAL
4	136.46	7.66	7.60	4.67	19.93	43.50	-23.57	QP	HORIZONTAL
5	318.82	9.28	13.97	5.57	28.82	46.00	-17.18	QP	HORIZONTAL
6	779.61	4.34	20.86	7.30	32.50	46.00	-13.50	QP	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	: DDT 3m Chamber 2#	D:\2021 RE2# Report Data\Q21061703-2E\FCC BELOW1G 4E.EM6	
Test Date	: 2021-07-19	**Tested By**	: Bairong
EUT	: Car Navigation	**Model Number**	: HA5010
Power Supply	: DC 12V	**Test Mode**	: Tx mode
Condition	: Temp:24.5°C,Humi:55%,Press:100.1kPa	**Antenna/Distance**	: 2020 VULB 9163 2#/3m/VERTICAL
Memo	: WIFI		



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	45.54	3.23	12.95	3.81	19.99	40.00	-20.01	QP	VERTICAL
2	53.32	2.84	13.64	3.89	20.37	40.00	-19.63	QP	VERTICAL
3	103.08	3.10	12.08	4.43	19.61	43.50	-23.89	QP	VERTICAL
4	224.52	3.33	11.46	5.16	19.95	46.00	-26.05	QP	VERTICAL
5	318.82	10.12	13.97	5.57	29.66	46.00	-16.34	QP	VERTICAL
6	830.40	5.20	21.15	7.46	33.81	46.00	-12.19	QP	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss.
2. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit.
3. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

Radiated Emission test (above 1GHz)

Freq (MHz)	Read level (dBμV)	Antenna Factor (dB/m)	PRM Factor(dB)	Cable Loss (dB)	Result Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector type	Polarization
11b CH1									
4825.00	51.19	34.16	42.78	5.55	48.12	74.00	-25.88	Peak	HORIZONTAL
6525.00	46.10	35.52	42.83	6.65	45.44	74.00	-28.56	Peak	HORIZONTAL
9534.00	44.76	38.16	41.38	7.79	49.33	74.00	-24.67	Peak	HORIZONTAL
12050.00	45.48	38.00	41.06	9.58	52.00	74.00	-22.00	Peak	HORIZONTAL
13376.00	45.09	38.83	41.85	10.71	52.78	74.00	-21.22	Peak	HORIZONTAL
17405.00	41.60	43.17	39.87	10.51	55.41	74.00	-18.59	Peak	HORIZONTAL
17405.00	35.63	43.17	39.87	10.51	49.44	54.00	-4.56	Average	HORIZONTAL
4825.00	52.99	34.16	42.78	5.55	49.92	74.00	-24.08	Peak	VERTICAL
5981.00	46.81	34.99	43.09	6.66	45.37	74.00	-28.63	Peak	VERTICAL
9500.00	44.82	38.10	41.36	7.79	49.35	74.00	-24.65	Peak	VERTICAL
11999.00	45.02	38.00	41.00	9.54	51.56	74.00	-22.44	Peak	VERTICAL
14294.00	43.58	39.94	41.36	11.04	53.20	74.00	-20.80	Peak	VERTICAL
17541.00	41.83	43.39	39.76	10.55	56.01	74.00	-17.99	Peak	VERTICAL
17541.00	36.26	43.39	39.76	10.55	50.44	54.00	-3.56	Average	VERTICAL
11b CH6									
4876.00	58.78	34.26	42.76	5.58	55.86	74.00	-18.14	Peak	HORIZONTAL
4876.00	53.13	34.26	42.76	5.58	50.21	54.00	-3.79	Average	HORIZONTAL
7834.00	44.91	36.34	42.26	7.05	46.04	74.00	-27.96	Peak	HORIZONTAL
10146.00	45.19	38.60	41.82	7.98	49.95	74.00	-24.05	Peak	HORIZONTAL
12084.00	45.37	38.00	41.10	9.62	51.89	74.00	-22.11	Peak	HORIZONTAL
13376.00	45.08	38.83	41.85	10.71	52.77	74.00	-21.23	Peak	HORIZONTAL
16606.00	43.32	42.36	40.63	10.31	55.36	74.00	-18.64	Peak	HORIZONTAL
16606.00	38.21	42.36	40.63	10.31	50.25	54.00	-3.75	Average	HORIZONTAL
4876.00	56.76	34.26	42.76	5.58	53.84	74.00	-20.16	Peak	VERTICAL
5981.00	47.50	34.99	43.09	6.66	46.06	74.00	-27.94	Peak	VERTICAL
9364.00	44.66	37.81	41.26	7.78	48.99	74.00	-25.01	Peak	VERTICAL
12016.00	45.50	38.00	41.02	9.55	52.03	74.00	-21.97	Peak	VERTICAL
13614.00	44.77	39.08	41.64	10.90	53.11	74.00	-20.89	Peak	VERTICAL
14685.00	43.96	40.25	41.44	10.82	53.59	74.00	-20.41	Peak	VERTICAL
11b CH11									
4910.00	53.86	34.33	42.74	5.60	51.05	74.00	-22.95	Peak	HORIZONTAL
7919.00	44.42	36.37	42.23	7.09	45.65	74.00	-28.35	Peak	HORIZONTAL
10316.00	45.22	38.26	41.96	8.13	49.65	74.00	-24.35	Peak	HORIZONTAL
12050.00	45.44	38.00	41.06	9.58	51.96	74.00	-22.04	Peak	HORIZONTAL
13444.00	45.17	38.87	41.79	10.76	53.01	74.00	-20.99	Peak	HORIZONTAL
14311.00	43.91	39.95	41.36	11.03	53.53	74.00	-20.47	Peak	HORIZONTAL
4910.00	56.53	34.33	42.74	5.60	53.72	74.00	-20.28	Peak	VERTICAL
5981.00	48.17	34.99	43.09	6.66	46.73	74.00	-27.27	Peak	VERTICAL
9534.00	44.69	38.16	41.38	7.79	49.26	74.00	-24.74	Peak	VERTICAL
11761.00	46.00	37.91	41.35	9.35	51.91	74.00	-22.09	Peak	VERTICAL
13971.00	43.87	39.65	41.33	11.18	53.37	74.00	-20.63	Peak	VERTICAL
16385.00	43.92	42.12	40.87	10.25	55.42	74.00	-18.58	Peak	VERTICAL
16385.00	36.23	42.12	40.87	10.25	47.73	54.00	-6.27	Average	VERTICAL

Note: 1.30MHz~25GHz: (Scan with 11b mode , 11g mode and 11n HT20 mode, 11n HT40 mode, the worst case is 11b mode)

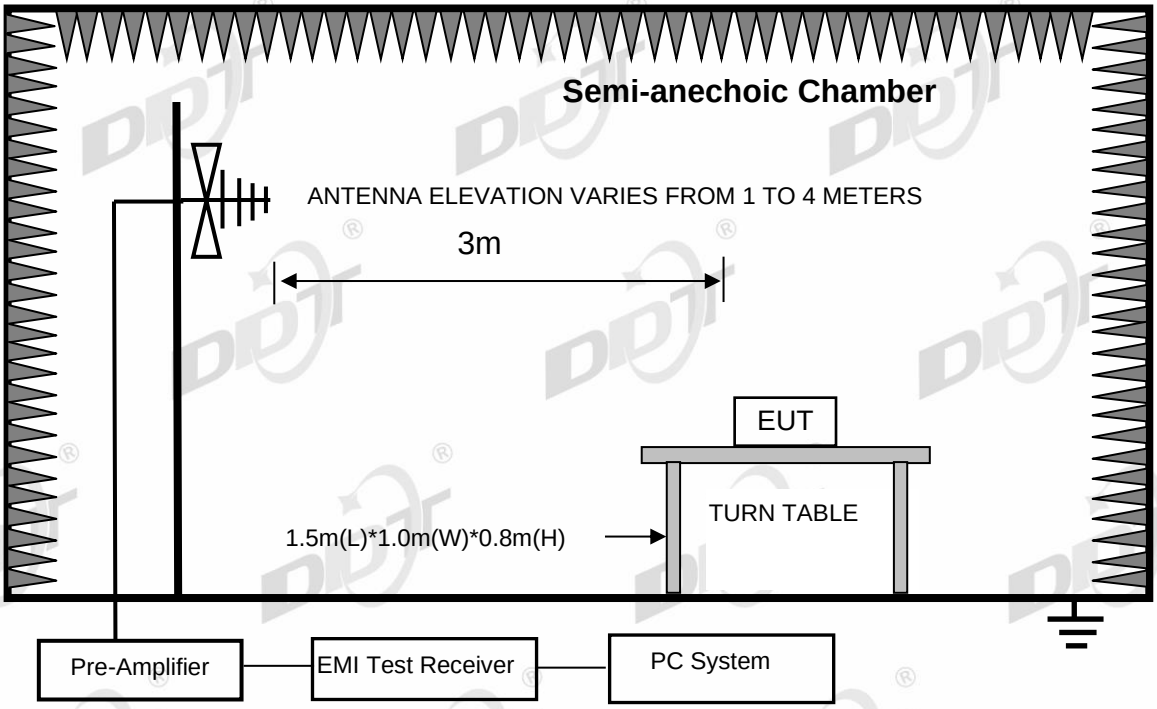
2. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. For emissions above 1GHz. If peak results comply with AV limit, AV Result is deemed to comply with AV limit.

9. Radiated Band Edge Compliance

9.1. Block diagram of test setup



9.2. Limit

All restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400 MHz to 2483.5 MHz shall be at least 20dB below the fundamental emissions or comply with FCC 15.209 limits.

9.3. Test procedure

Same with clause 8.3 except change investigated frequency range from 2310 MHz to 2430 MHz and 2450 MHz to 2500 MHz, 2310 MHz to 2450 MHz and 2430 MHz to 2500MHz.

Remark: All restriction band have been tested, and shown in report.

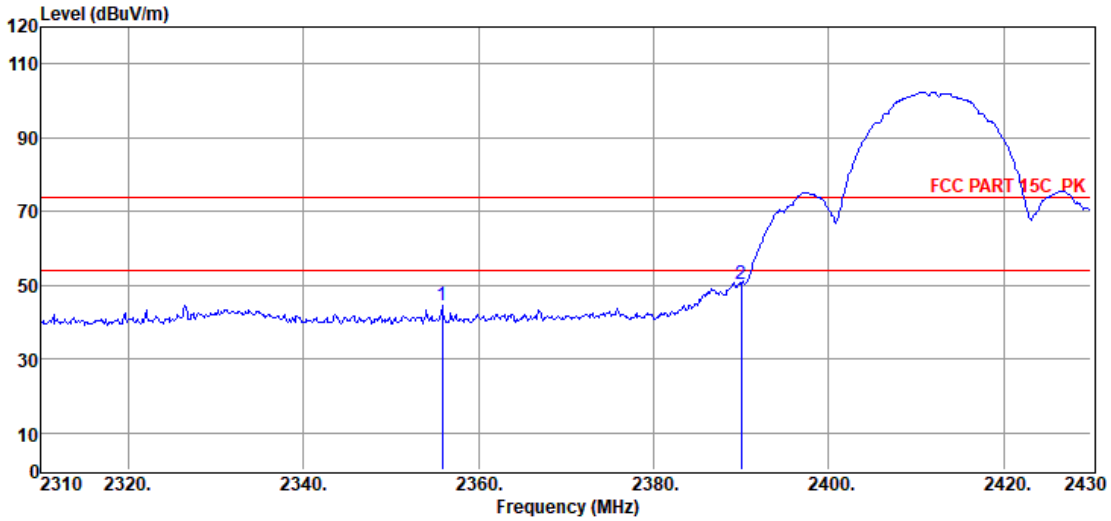
9.4. Test result

Pass. (See below detailed test result)

Note: All mode was test and record this report.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2021 RE 1# Report data\Q21061703-2E HA5010\FCC ABOVE1G 2.4gwifi.EM6		
Test Date	:	2021-07-18	**Tested By**	:	Bairong
EUT	:	Car Navigation	**Model Number**	:	HA5010
Power Supply	:	DC 12V	**Test Mode**	:	Tx mode
Condition	:	Temp:24.1'C,Humi:56%,Press:100.1kPa	**Antenna/Distance**	:	2020 HF907/3m/HORIZONTAL
Memo	:	11b 2412			

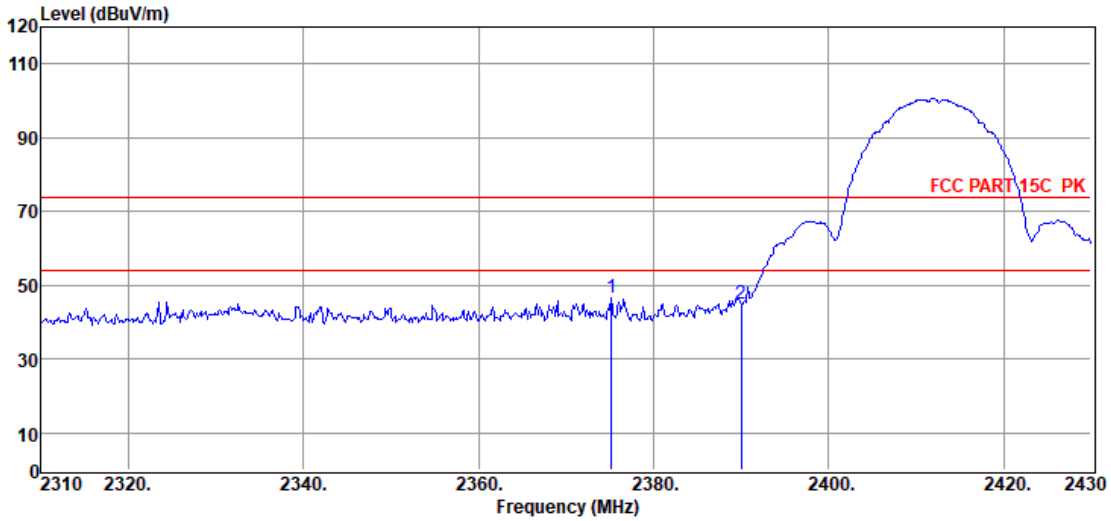


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2355.84	54.11	28.91	42.38	3.83	44.47	74.00	-29.53	Peak	HORIZONTAL
2	2390.00	59.79	28.98	42.43	3.86	50.20	74.00	-23.80	Peak	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2021 RE 1# Report data\Q21061703-2E HA5010\FCC ABOVE1G 2.4gwifi.EM6		
Test Date	:	2021-07-18	**Tested By**	:	Bairong
EUT	:	Car Navigation	**Model Number**	:	HA5010
Power Supply	:	DC 12V	**Test Mode**	:	Tx mode
Condition	:	Temp:24.1'C,Humi:56%,Press:100.1kPa	**Antenna/Distance**	:	2020 HF907/3m/VERTICAL
Memo	:	11b 2412			

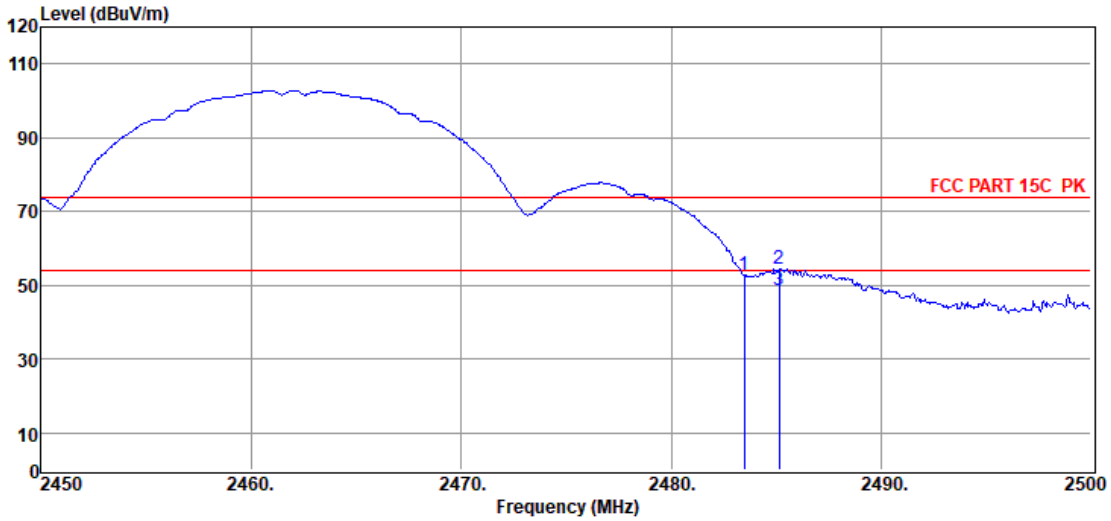


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2375.16	56.06	28.95	42.41	3.85	46.45	74.00	-27.55	Peak	VERTICAL
2	2390.00	54.59	28.98	42.43	3.86	45.00	74.00	-29.00	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2021 RE 1# Report data\Q21061703-2E HA5010\FCC ABOVE1G 2.4gwifi.EM6		
Test Date	:	2021-07-18	**Tested By**	:	Bairong
EUT	:	Car Navigation	**Model Number**	:	HA5010
Power Supply	:	DC 12V	**Test Mode**	:	Tx mode
Condition	:	Temp:24.1'C,Humi:56%,Press:100.1kPa	**Antenna/Distance**	:	2020 HF907/3m/HORIZONTAL
Memo	:	11b 2462			

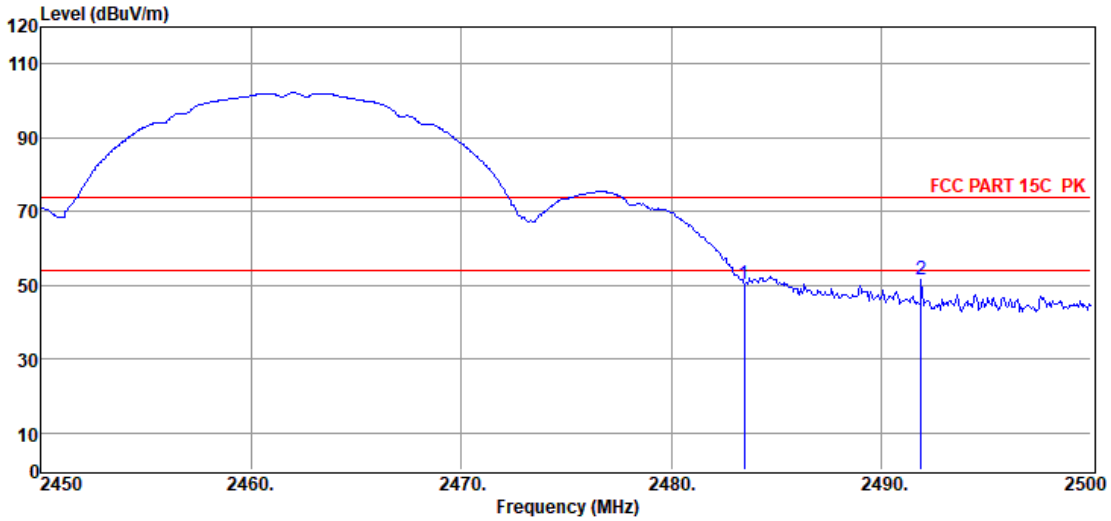


Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	62.34	29.17	42.54	3.93	52.90	74.00	-21.10	Peak	HORIZONTAL
2	2485.15	63.85	29.17	42.54	3.93	54.41	74.00	-19.59	Peak	HORIZONTAL
3	2485.15	58.14	29.17	42.54	3.93	48.70	54.00	-5.30	Average	HORIZONTAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Site	:	DDT 3m Chamber 1#	D:\2021 RE 1# Report data\Q21061703-2E HA5010\FCC ABOVE1G 2.4gwifi.EM6		
Test Date	:	2021-07-18	**Tested By**	:	Bairong
EUT	:	Car Navigation	**Model Number**	:	HA5010
Power Supply	:	DC 12V	**Test Mode**	:	Tx mode
Condition	:	Temp:24.1'C,Humi:56%,Press:100.1kPa	**Antenna/Distance**	:	2020 HF907/3m/VERTICAL
Memo	:	11b 2462			



Item (Mark)	Freq. (MHz)	Read Level (dBµV)	Antenna Factor (dB/m)	PRM Factor dB	Cable Loss dB	Result Level (dBµV/m)	Limit Line (dBµV/m)	Over Limit (dB)	Detector	Polarization
1	2483.50	59.73	29.17	42.54	3.93	50.29	74.00	-23.71	Peak	VERTICAL
2	2491.90	61.16	29.18	42.55	3.94	51.73	74.00	-22.27	Peak	VERTICAL

Note: 1. Result Level = Read Level + Antenna Factor + Cable loss - PRM Factor.
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.