TEST REPORT

Report No.:	BCTC2206138797-2E
Applicant:	Reolink Innovation Limited
Product Name:	WiFi IP Camera
Model/Type reference:	Reolink Duo 2 WiFi
Tested Date:	2022-06-17 to 2022-06-24
Issued Date:	2022-06-27

Shenzhen BCTC Testing Co., Ltd.

FCC ID: 2AYHE-2206A

Product Name:	WiFi IP Camera
Trademark:	reolink
Model/Type Ref.:	Reolink Duo 2 WiFi B4KDUOWIFI
Prepared For:	Reolink Innovation Limited
Address:	FLAT/RM 705 7/F FA YUEN COMMERCIAL BUILDING 75-77 FA YUEN STREET MONG KOK KL HONG KONG
Manufacturer:	Reolink Innovation Limited
Address:	FLAT/RM 705 7/F FA YUEN COMMERCIAL BUILDING 75-77 FA YUEN STREET MONG KOK KL HONG KONG
Factory:	Shenzhen Reolink Technology Co., Ltd.
Address:	2-4th Floor, Building 2, YuanLing Industrial Park, ShangWu, Shiyan Street, Bao'an District, Shenzhen, China
Prepared By:	Shenzhen BCTC Testing Co., Ltd.
Address:	1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Sample Received Date:	2022-06-17
Sample tested Date:	2022-06-17 to 2022-06-24
Issue Date:	2022-06-27
Report No.:	BCTC2206138797-2E
Test Standards:	FCC Part15 15.407 ANSI C63.10-2013 KDB 662911 D01 v02r01 KDB 789033 D02 v02r01
Test Results:	PASS

Tested by:

Brave Zeng/ Project Handler

Approved by:

Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

Table Of Content

(Note: N/A Means Not Applicable)

1. Version

Report No.	Issue Date	Description	Approved
BCTC2206138797-2E	2022-06-27	Original	Valid

2. Test Summary

The Product has been tested according to the following specifications:

No.	Test Parameter	Clause No.	Results
1	Spurious Radiated Emissions	15.209(a), 15.407 (b)(1) 15.407 (b)(4) 15.407 (b)(6)	PASS
2	Conducted Emission	15.207	PASS
3	26 dB and 99% Emission Bandwidth	15.407 (a)(5) 15.1049	PASS
4	Minimum 6 dB bandwidth	15.407(e)	PASS
5	Maximum Conducted Output Power	15.407 (a)(1) 15.407 (a)(3)	PASS
6	Band Edge	2.1051, 15.407(b)(1) 15.407(b)(4)	PASS
7	Power Spectral Density	15.407 (a)(1) 15.407 (a)(3)	PASS
8	Spurious Emissions at Antenna Terminals	2.1051, 15.407(b)	PASS
9	Antenna Requirement	15.203	PASS

3. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the Product as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

No.	Item	Uncertainty
1	3m chamber Radiated spurious emission(9kHz-30MHz)	U=3.7dB
2	3m chamber Radiated spurious emission(30MHz-1GHz)	U=4.3dB
3	3m chamber Radiated spurious emission(1GHz-18GHz)	U=4.5dB
4	3m chamber Radiated spurious emission(18GHz-40GHz)	U=3.34dB
5	Conducted Emission(150kHz-30MHz)	U=3.20dB
6	Conducted Adjacent channel power	U=1.38dB
7	Conducted output power uncertainty Above 1G	U=1.576dB
8	Conducted output power uncertainty below 1G	U=1.28dB
9	humidity uncertainty	U=5.3%
10	Temperature uncertainty	U=0.59℃

4. Product Information And Test Setup

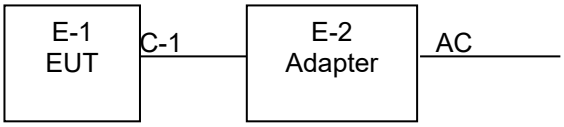
4.1 Product Information

Model/Type Ref.:	Reolink Duo 2 WiFi B4KDUOWIFI
Model differences:	All the model are the same circuit and RF module, except model names.
Hardware Version:	N29c01
Software Version:	V1.0
IEEE 802.11 WLAN Mode Supported	802.11a/n (20MHz channel bandwidth) 802.11n (40MHz channel bandwidth) 802.11ac(80MHz channel bandwidth)
Operation Frequency:	5180-5240MHz for 802.11a/n/ac(HT20); 5190-5230MHz for 802.11n/ac(HT40); 5210MHz for 802.11 ac80; 5745-5825 MHz for 802.11a/n/ac(HT20); 5755-5795 MHz for 802.11n/ac(HT40); 5775MHz for 802.11 ac80
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20): NSS1, MCS0-MCS8 802.11ac(VHT40/VHT80):NSS1, MCS0-MCS9
Type of Modulation:	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM for 802.11a/n/ac
Number Of Channel	4 channels for 802.11a/n20 in the 5180-5240MHz band ; 2 channels for 802.11 n40 in the 5190-5230MHz band ; 1 channels for 802.11 ac80 in the 5210MHz band ; 5 channels for 802.11a/n20 in the 5745-5825MHz band ; 2 channels for 802.11 n40 in the 5755-5795MHz band ; 1 channels for 802.11 ac80 in the 5775MHz band
Antenna installation:	External antenna*2
Antenna Gain:	5.1G: Antenna A & B: 3.83 dBi 5.8G: Antenna A & B: 3.83 dBi
Ratings:	AC 120V/60Hz
Adapter:	Model:DCT24W120200US-A0 Input: 100-240V~50/60Hz 0.7A max Output: 12V⎓ 2.0A

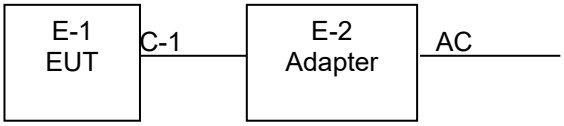
4.2 Test Setup Configuration

See test photographs attached in *EUT TEST SETUP PHOTOGRAPHS* for the actual connections between Product and support equipment.

Conducted Emission:



Radiated Spurious Emission



4.3 Support Equipment

No.	Device Type	Brand	Model	Series No.	Note
E-1	WiFi IP Camera	reolink	Reolink Duo 2 WiFi	N/A	EUT
E-2	Adapter	N/A	DCT24W120200US-A0	N/A	Auxiliary

Item	Shielded Type	Ferrite Core	Length	Note
C-1	N/A	N/A	3M	DC cable unshielded

Notes:
1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.

4.4 Channel List

Frequency and Channel list for 802.11a/n/ac(20 MHz) band IV (5180-5240MHz):

802.11a/n/ac(20MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220	-	-	-	-
40	5200	48	5240	-	-	-	-

802.11n /ac(40MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	-	-	-	-	-	-
46	5230	-	-	-	-	-	-

802.11ac (80MHz) Carrier Frequency Channel	
Channel	Frequency (MHz)
42	5210

Frequency and Channel list for 802.11a/n/ac(20 MHz) band IV (5745-5825MHz):

802.11a/n/ac(20 MHz) Carrier Frequency Channel							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	153	5765	157	5785	161	5805
165	5825	-	-	-	-	-	-

802.11n/ac 40MHz Carrier Frequency Channel					
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795	-	-

802.11ac 80MHz Carrier Frequency Channel	
Channel	Frequency (MHz)
155	5775

4.5 Test Mode

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac40 CH38/ CH 46 802.11n/ ac40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 5	Link Mode

Conducted Emission	
Final Test Mode	Description
Mode 5	Link Mode

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165
Mode 2	802.11n/ ac40 CH38/ CH 46 802.11n/ ac40 CH 151 / CH 159
Mode 3	802.11 ac80 CH 42/CH 155
Mode 4	802.11a / n/ ac 20 CH36/ CH40/ CH 48 802.11a /n/ ac 20 CH149/ CH157/ CH 165

Note:

(1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported.

4.6 Table Of Parameters Of Text Software Setting

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters

Test software Version	CMD		
Parameters	DEF	DEF	DEF

4.7 Antenna

5.1G & 5.8G

Ant.	Brand	Model Name	Antenna Type	Gain (dBi)	NOTE
A	N/A	N/A	External antenna	3.83	N/A
B	N/A	N/A	External antenna	3.83	N/A

EUT has two External antennas with Max gain GANT 3.83 dBi on every antenna, CDD device with one spatial streams, also can operat with one spatial streams according to KDB662911 D01 v02r01,
Directional gain= GANT + Array Gain, where Array Gain is as follows.

1)For power spectral density(PSD) measurements,
Array Gain=10log(NANT/NSS)dB=10log(2/1)=3.01 dBi,
So the directional gain for PSD is 6.84 dBi
2)For power measurements,
The Array gain=0 for NANT≤4,
So the directional gain for Power measurements is 3.83 dBi

5. Test Facility And Test Instrument Used

5.1 Test Facility

All measurement facilities used to collect the measurement data are located at Shenzhen BCTC Testing Co., Ltd. Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Tangwei, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China. The site and apparatus are constructed in conformance with the requirements of ANSI C63.4 and CISPR 16-1-1 other equivalent standards.
FCC Test Firm Registration Number: 712850
IC Registered No.: 23583

5.2 Test Instrument Used

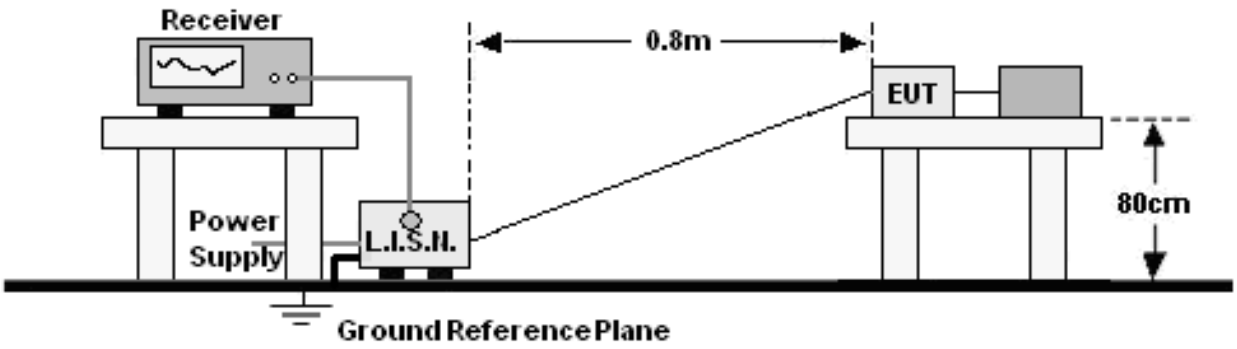
Conducted Emissions Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023
LISN	R&S	ENV216	101375	May 24, 2022	May 23, 2023
Software	Frad	EZ-EMC	EMC-CON 3A1	\	\
Attenuator	\	10dB DC-6GHz	1650	May 24, 2022	May 23, 2023

RF Conducted Test					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
Power Metter	Keysight	E4419	\	May 24, 2022	May 23, 2023
Power Sensor (AV)	Keysight	E9300A	\	May 24, 2022	May 23, 2023
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 24, 2022	May 23, 2023
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	\	May 24, 2022	May 23, 2023

Radiated Emissions Test (966 Chamber)					
Equipment	**Manufacturer**	**Model#**	**Serial#**	**Last Cal.**	**Next Cal.**
966 chamber	ChengYu	966 Room	966	Jun. 06. 2020	Jun. 05, 2023
Receiver	R&S	ESR3	102075	May 24, 2022	May 23, 2023
Receiver	R&S	ESRP	101154	May 24, 2022	May 23, 2023
Amplifier	SKET	LAPA_01G18G-45dB	\	May 24, 2022	May 23, 2023
Amplifier	Schwarzbeck	BBV9744	9744-0037	May 24, 2022	May 23, 2023
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	942	May 26, 2022	May 25, 2023
Horn Antenna	Schwarzbeck	BBHA9120D	1541	May 24, 2022	May 23, 2023
Horn Antenn(18GHz-40GHz)	Schwarzbeck	BBHA9170	00822	May 24, 2022	May 23, 2023
Amplifier(18GHz-40GHz)	MITEQ	TTA1840-35-HG	2034381	May 24, 2022	May 23, 2023
Loop Antenna(9KHz-30MHz)	Schwarzbeck	FMZB1519B	00014	May 26, 2022	May 25, 2023
RF cables1(9kHz-30MHz)	Huber+Suhnar	9kHz-30MHz	B1702988-0008	May 26, 2022	May 25, 2023
RF cables2(30MHz-1GHz)	Huber+Suhnar	30MHz-1GHz	1486150	May 26, 2022	May 25, 2023
RF cables3(1GHz-40GHz)	Huber+Suhnar	1GHz-40GHz	1607106	May 24, 2022	May 23, 2023
Power Metter	Keysight	E4419	\	May 26, 2022	May 25, 2023
Power Sensor (AV)	Keysight	E9300A	\	May 26, 2022	May 25, 2023
Signal Analyzer20kHz-26.5GHz	Keysight	N9020A	MY49100060	May 26, 2022	May 25, 2023
Spectrum Analyzer9kHz-40GHz	R&S	FSP40	\	May 26, 2022	May 25, 2023
Software	Frad	EZ-EMC	FA-03A2 RE	\	\

6. Conducted Emissions

6.1 Block Diagram Of Test Setup



6.2 Limit

Frequency (MHz)	Limit (dBuV)	
	Quas-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00
Notes: 1. *Decreasing linearly with logarithm of frequency. 2. The lower limit shall apply at the transition frequencies.		

6.3 Test Procedure

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

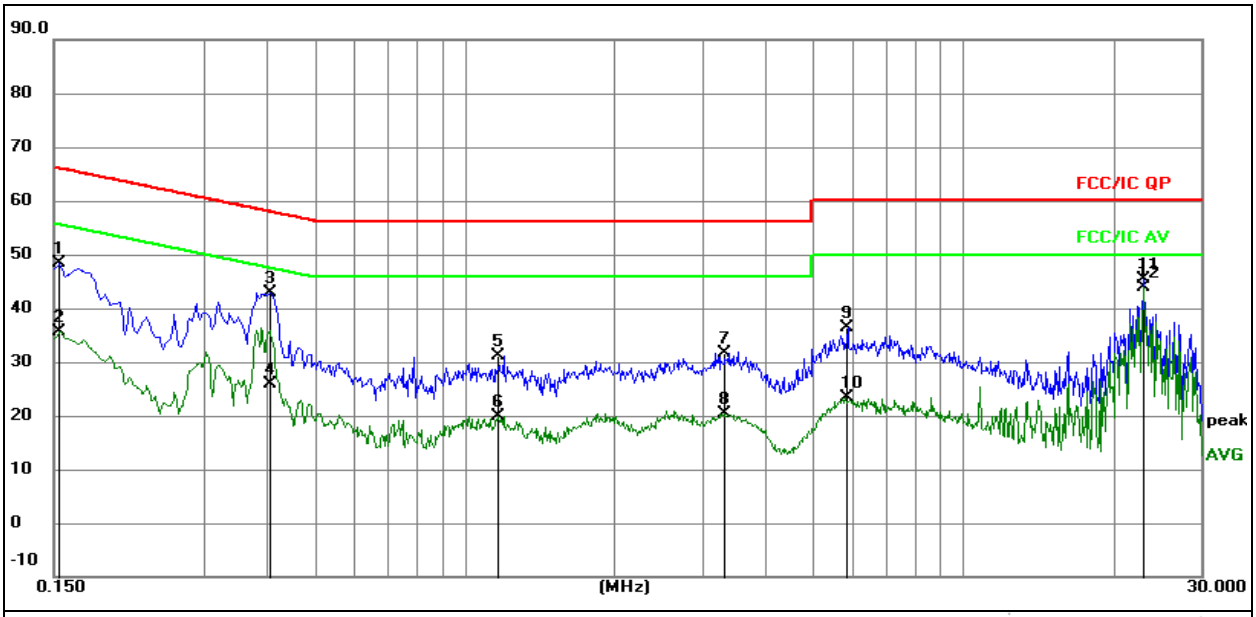
a. The Product was placed on a nonconductive table 0.8 m above the horizontal ground reference plane, and 0.4 m from the vertical ground reference plane, and connected to the main through Line Impedance Stability Network (L.I.S.N).
b. The RBW of the receiver was set at 9 kHz in 150 kHz ~ 30MHz with Peak and AVG detector in Max Hold mode. Run the receiver's pre-scan to record the maximum disturbance generated from Product in all power lines in the full band.
c. For each frequency whose maximum record was higher or close to limit, measure its QP and AVG values and record.

6.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

6.5 Test Result

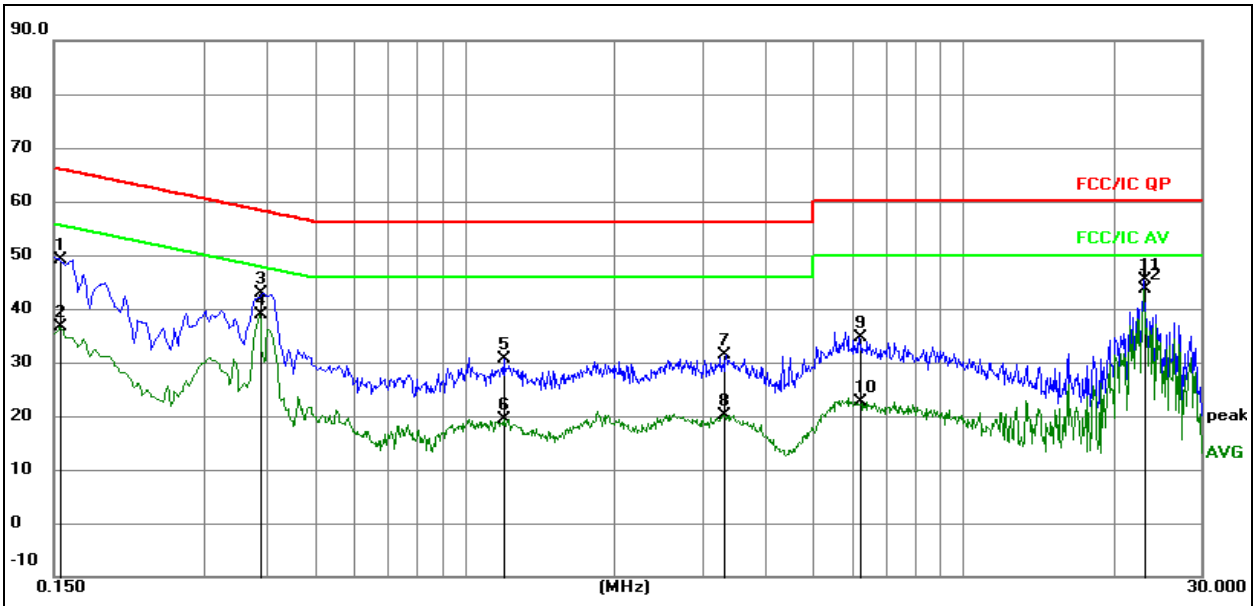
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage ：	AC120V/60Hz
Test Mode:	Mode 1	Polarization :	L



Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over= Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1539	28.88	19.60	48.48	65.79	-17.31	QP
2		0.1539	16.13	19.60	35.73	55.79	-20.06	AVG
3		0.4061	23.33	19.61	42.94	57.73	-14.79	QP
4		0.4061	6.30	19.61	25.91	47.73	-21.82	AVG
5		1.1657	11.47	19.62	31.09	56.00	-24.91	QP
6		1.1657	0.25	19.62	19.87	46.00	-26.13	AVG
7		3.3105	12.02	19.65	31.67	56.00	-24.33	QP
8		3.3105	0.73	19.65	20.38	46.00	-25.62	AVG
9		5.8050	16.71	19.71	36.42	60.00	-23.58	QP
10		5.8050	3.61	19.71	23.32	50.00	-26.68	AVG
11		23.0181	25.70	19.73	45.43	60.00	-14.57	QP
12	*	23.0181	24.07	19.73	43.80	50.00	-6.20	AVG

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage ：	AC120V/60Hz
Test Mode:	Mode 1	Polarization :	N



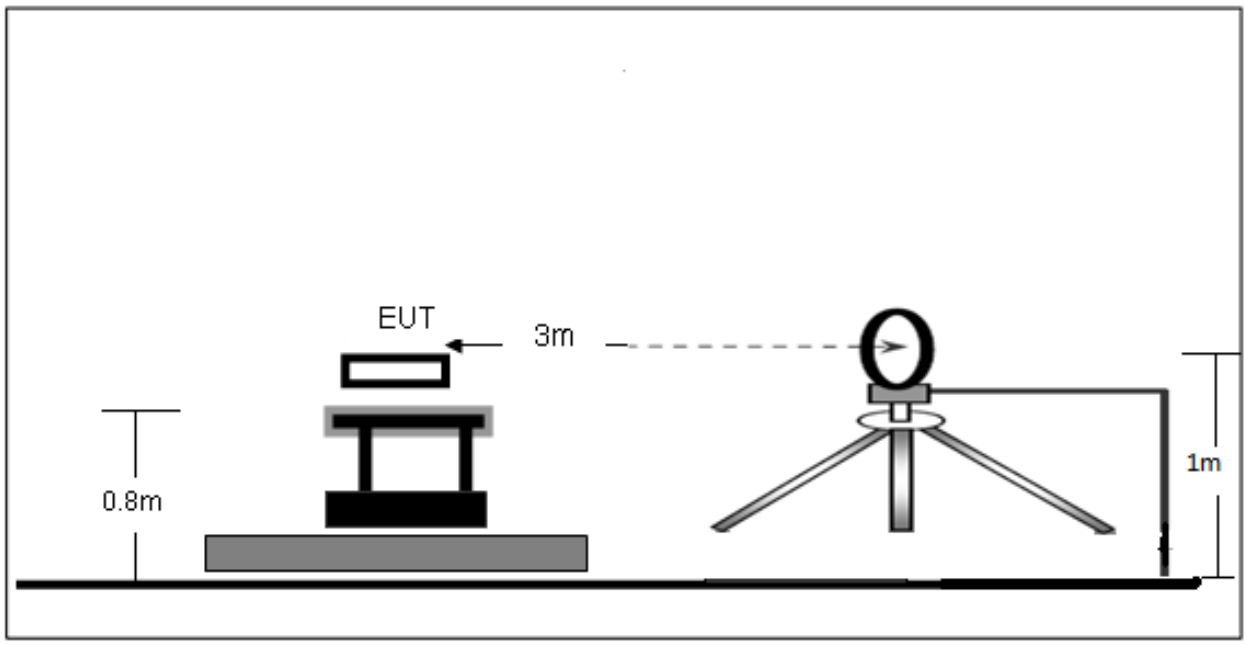
Remark:
1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.
3. Measurement=Reading Level+ Correct Factor
4. Over= Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz		dB	dBuV	dBuV	dB	Detector
1		0.1545	29.56	19.60	49.16	65.75	-16.59	QP
2		0.1545	16.99	19.60	36.59	55.75	-19.16	AVG
3		0.3885	23.23	19.61	42.84	58.10	-15.26	QP
4		0.3885	19.26	19.61	38.87	48.10	-9.23	AVG
5		1.2030	10.98	19.62	30.60	56.00	-25.40	QP
6		1.2030	-0.30	19.62	19.32	46.00	-26.68	AVG
7		3.3000	11.66	19.65	31.31	56.00	-24.69	QP
8		3.3000	0.47	19.65	20.12	46.00	-25.88	AVG
9		6.1979	14.98	19.72	34.70	60.00	-25.30	QP
10		6.1979	3.01	19.72	22.73	50.00	-27.27	AVG
11		23.1270	25.60	19.73	45.33	60.00	-14.67	QP
12	*	23.1270	24.00	19.73	43.73	50.00	-6.27	AVG

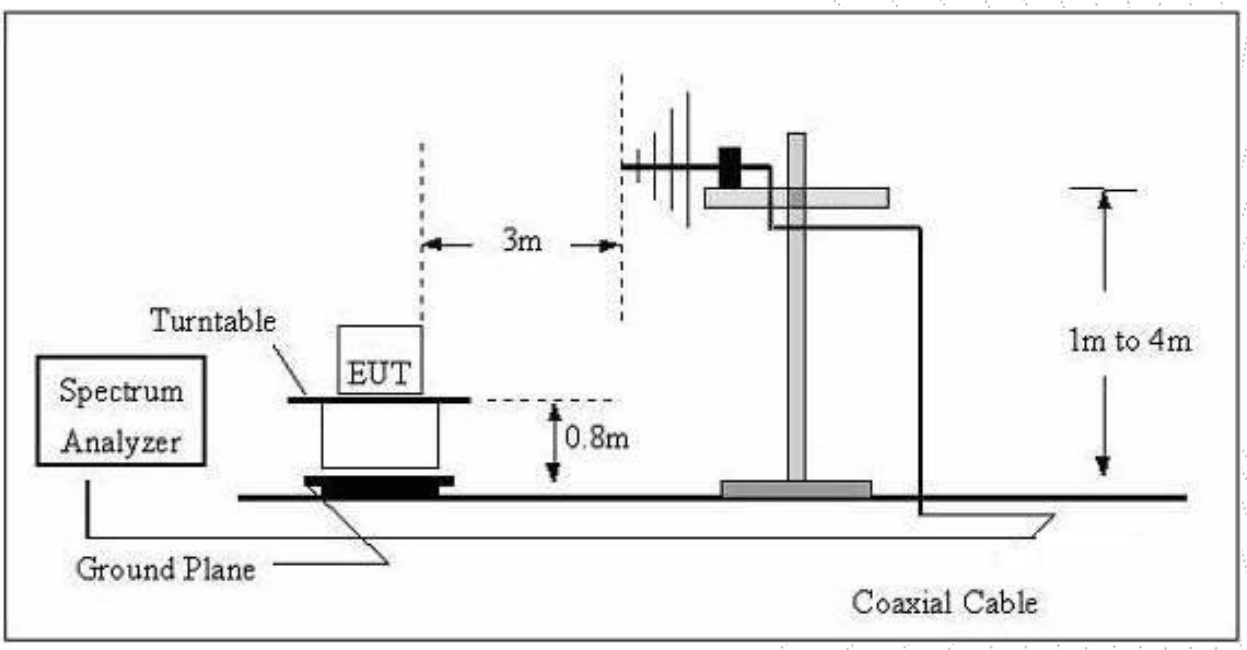
7. Radiated Emissions

7.1 Block Diagram Of Test Setup

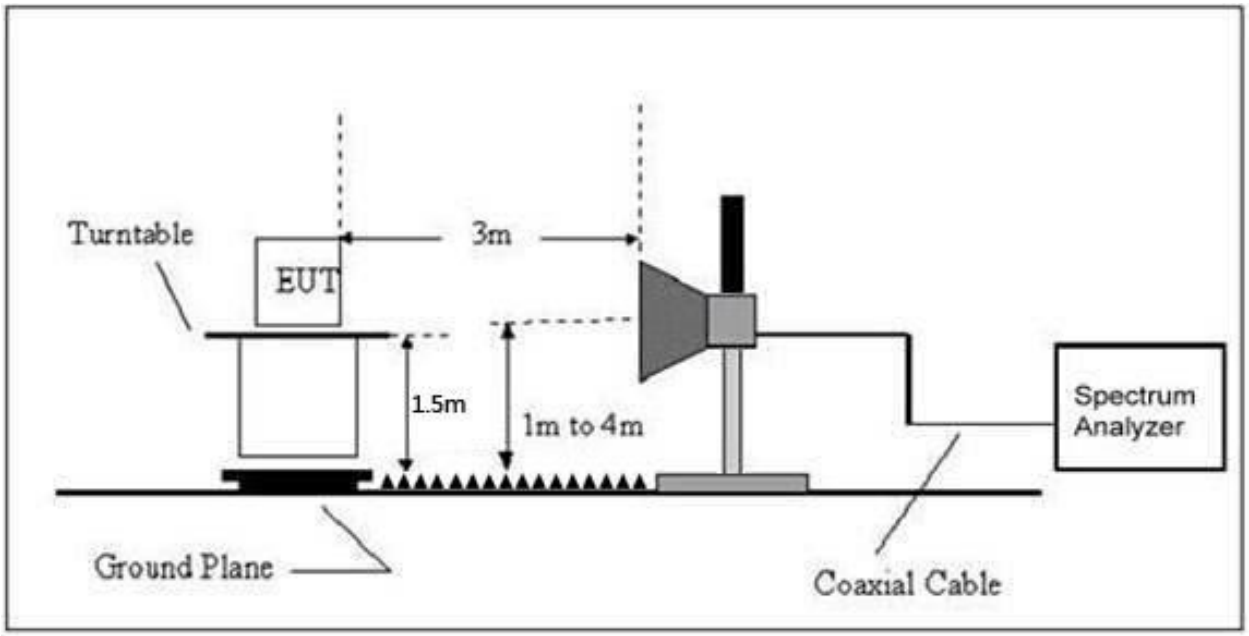
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



7.2 Limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

Frequency	Field Strength	Distance	Field Strength Limit at 3m Distance	
(MHz)	uV/m	(m)	uV/m	dBuV/m
0.009 ~ 0.490	2400/F(kHz)	300	10000 * 2400/F(kHz)	$20\log^{(2400/F(kHz))}$ + 80
0.490 ~ 1.705	24000/F(kHz)	30	100 * 24000/F(kHz)	$20\log^{(24000/F(kHz))}$ + 40
1.705 ~ 30	30	30	100 * 30	$20\log^{(30)}$ + 40
30 ~ 88	100	3	100	$20\log^{(100)}$
88 ~ 216	150	3	150	$20\log^{(150)}$
216 ~ 960	200	3	200	$20\log^{(200)}$
Above 960	500	3	500	$20\log^{(500)}$

Limits Of Radiated Emission Measurement (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	Peak	Average
Above 1000	74	54

Notes:
(1)The limit for radiated test was performed according to FCC PART 15C.
(2)The tighter limit applies at the band edges.
(3) Emission level (dBuV/m)=20log Emission level (uV/m).

7.3 Test Procedure

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10-2013. The test distance is 3m.The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10-2013 and CAN/CSA-CEI/IEC CISPR 22.
This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205.
It must be performed with the highest gain of each type of antenna proposed for use with the EUT.
Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where RBWCF [dB] =10*lg(100 [kHz]/narrower RBW [kHz]). , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the
narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

7.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

7.5 Test Result

Below 30MHz

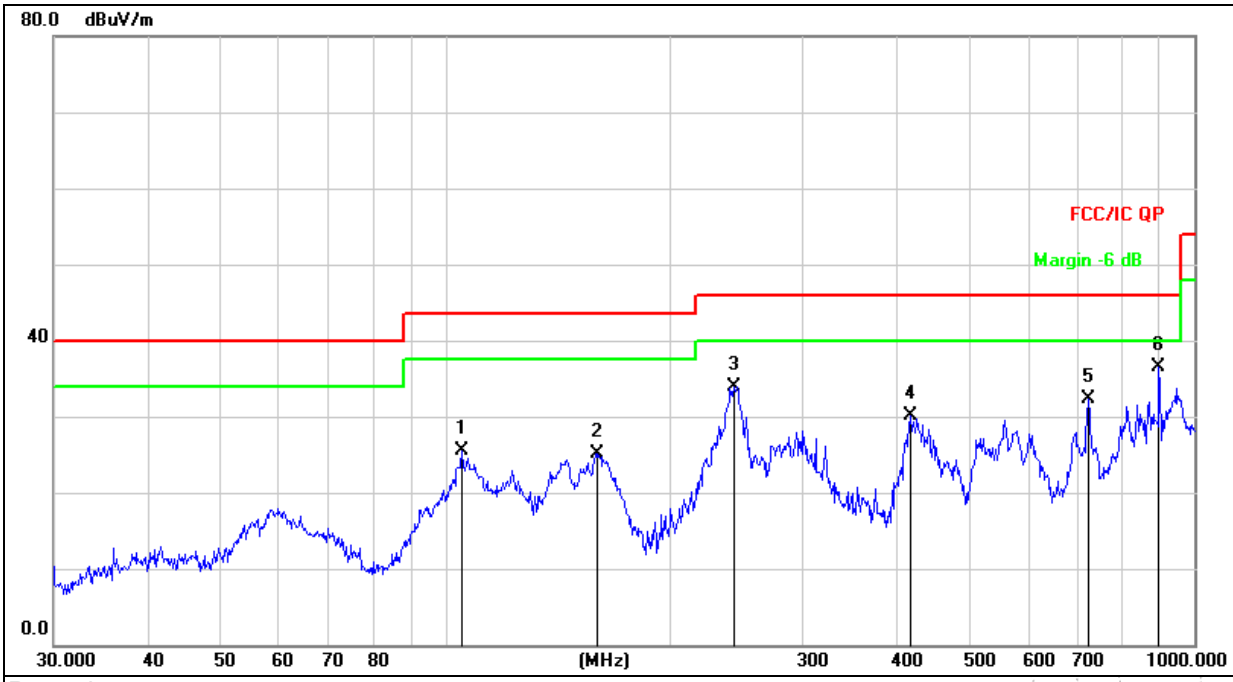
Temperature:	26℃	Relative Humidity:	24%
Pressure:	101 kPa	Test Voltage:	AC120V/60Hz
Test Mode:	Mode 1	Polarization:	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	PASS
--	--	--	--	PASS

Note:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

Between 30MHz – 1GHz

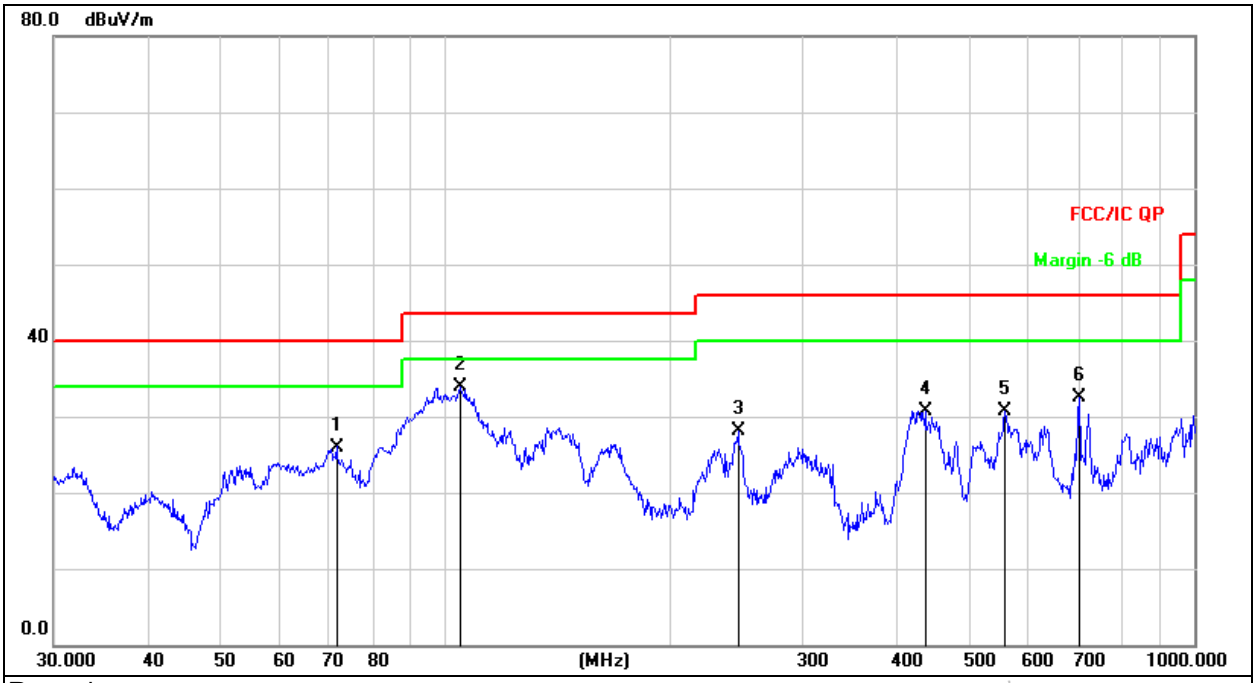
Temperature：	26℃	Relative Humidity：	54%
Pressure：	101 kPa	Test Voltage ：	AC120V/60Hz
Test Mode ：	Mode 1	Polarization :	Horizontal



Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over= Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		105.2718	42.03	-16.62	25.41	43.50	-18.09	QP
2		159.7844	44.00	-18.87	25.13	43.50	-18.37	QP
3		243.3772	49.26	-15.30	33.96	46.00	-12.04	QP
4		417.6411	40.76	-10.69	30.07	46.00	-15.93	QP
5		721.7259	37.07	-4.79	32.28	46.00	-13.72	QP
6	*	896.9965	37.97	-1.56	36.41	46.00	-9.59	QP

Temperature：	26℃	Relative Humidity：	54%
Pressure：	101 kPa	Test Voltage ：	AC120V/60Hz
Test Mode ：	Mode 1	Polarization :	Vertical



Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Measurement=Reading Level+ Correct Factor
3. Over= Measurement-Limit

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector
1		71.5806	44.54	-18.54	26.00	40.00	-14.00	QP
2	*	104.5361	50.56	-16.57	33.99	43.50	-9.51	QP
3		245.9509	43.40	-15.24	28.16	46.00	-17.84	QP
4		437.1199	40.96	-10.26	30.70	46.00	-15.30	QP
5		558.7302	38.20	-7.48	30.72	46.00	-15.28	QP
6		701.7610	37.70	-5.11	32.59	46.00	-13.41	QP

Between 1GHz – 40GHz

Test Mode :	TX(5.1G) - 802.11a

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.182	61.82	5.94	35.40	44.00	59.16	68.2	-9.04	PK
V	4434.182	43.02	5.94	35.40	44.00	40.36	54	-13.64	AV
V	10360.048	63.30	8.46	39.75	44.50	67.01	68.2	-1.19	PK
V	10360.048	43.78	8.46	39.75	44.50	47.49	54	-6.51	AV
V	15540.189	63.79	10.12	38.80	44.10	68.61	74	-5.39	PK
V	15540.189	43.65	10.12	38.80	42.70	49.87	54	-4.13	AV
H	4434.010	61.03	5.94	35.18	44.00	58.15	68.2	-10.05	PK
H	4434.010	43.06	5.94	35.18	44.00	40.18	54	-13.82	AV
H	10360.026	54.75	8.46	38.71	44.50	57.42	68.2	-10.78	PK
H	10360.026	41.46	8.46	38.71	44.50	44.13	54	-9.87	AV
H	15540.163	53.53	10.12	38.38	44.10	57.93	74	-16.07	PK
H	15540.163	44.85	10.12	38.38	44.10	49.25	54	-4.75	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.149	63.32	6.48	36.35	44.05	62.10	74	-11.90	PK
V	4592.149	43.08	6.48	36.35	44.05	41.86	54	-12.14	AV
V	10400.185	60.66	8.47	37.88	44.51	62.50	68.2	-5.70	PK
V	10400.185	43.33	8.47	37.88	44.51	45.17	54	-8.83	AV
V	15600.034	62.39	10.12	38.80	44.10	67.21	74	-6.79	PK
V	15600.034	43.17	10.12	38.80	42.70	49.39	54	-4.61	AV
H	4592.086	62.45	6.48	36.37	44.05	61.25	74	-12.75	PK
H	4592.086	43.28	6.48	36.37	44.05	42.08	54	-11.92	AV
H	10400.196	52.94	8.47	38.64	44.50	55.55	68.2	-12.65	PK
H	10400.196	40.27	8.47	38.64	44.50	42.88	54	-11.12	AV
H	15600.188	53.72	10.12	38.38	44.10	58.12	74	-15.88	PK
H	15600.188	43.32	10.12	38.38	44.10	47.72	54	-6.28	AV
High Channel (5240 MHz)-Above 1G									
V	4739.096	61.16	7.10	37.24	43.50	62.00	74	-12.00	PK
V	4739.096	43.50	7.10	37.24	43.50	44.34	54	-9.66	AV
V	10480.167	62.03	8.46	37.68	44.50	63.67	68.2	-4.53	PK
V	10480.167	43.10	8.46	37.68	44.50	44.74	54	-9.26	AV
V	15720.156	60.79	10.12	38.80	44.10	65.61	74	-8.39	PK
V	15720.156	43.53	10.12	38.80	42.70	49.75	54	-4.25	AV
H	4739.089	63.50	7.10	37.24	43.50	64.34	74	-9.66	PK
H	4739.089	43.91	7.10	37.24	43.50	44.75	54	-9.25	AV
H	10480.079	52.11	8.46	38.57	44.50	54.64	68.2	-13.56	PK
H	10480.079	43.09	8.46	38.57	44.50	45.62	54	-8.38	AV
H	15720.031	50.80	10.12	38.38	44.10	55.20	74	-18.80	PK
H	15720.031	40.27	10.12	38.38	44.10	44.67	54	-9.33	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
The worst case is Antenna A.

Test Mode :	TX(5.1G) - 802.11n-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.068	62.36	5.94	35.40	44.00	59.70	68.2	-8.50	PK
V	4434.068	43.03	5.94	35.40	44.00	40.37	54	-13.63	AV
V	10360.129	60.07	8.46	39.75	44.50	63.78	68.2	-4.42	PK
V	10360.129	43.74	8.46	39.75	44.50	47.45	54	-6.55	AV
V	15540.046	62.54	10.12	38.80	44.10	67.36	74	-6.64	PK
V	15540.046	43.94	10.12	38.80	42.70	50.16	54	-3.84	AV
H	4434.187	63.71	5.94	35.18	44.00	60.83	68.2	-7.37	PK
H	4434.187	43.85	5.94	35.18	44.00	40.97	54	-13.03	AV
H	10360.120	54.23	8.46	38.71	44.50	56.90	68.2	-11.30	PK
H	10360.120	43.25	8.46	38.71	44.50	45.92	54	-8.08	AV
H	15540.112	54.69	10.12	38.38	44.10	59.09	74	-14.91	PK
H	15540.112	42.30	10.12	38.38	44.10	46.70	54	-7.30	AV
middle Channel (5200 MHz)-Above 1G									
V	4592.183	61.08	6.48	36.35	44.05	59.86	74	-14.14	PK
V	4592.183	43.69	6.48	36.35	44.05	42.47	54	-11.53	AV
V	10400.075	61.77	8.47	37.88	44.51	63.61	68.2	-4.59	PK
V	10400.075	43.99	8.47	37.88	44.51	45.83	54	-8.17	AV
V	15600.173	63.16	10.12	38.80	44.10	67.98	74	-6.02	PK
V	15600.173	43.44	10.12	38.80	42.70	49.66	54	-4.34	AV
H	4592.001	60.25	6.48	36.37	44.05	59.05	74	-14.95	PK
H	4592.001	43.79	6.48	36.37	44.05	42.59	54	-11.41	AV
H	10400.025	54.16	8.47	38.64	44.50	56.77	68.2	-11.43	PK
H	10400.025	44.31	8.47	38.64	44.50	46.92	54	-7.08	AV
H	15600.099	51.32	10.12	38.38	44.10	55.72	74	-18.28	PK
H	15600.099	43.51	10.12	38.38	44.10	47.91	54	-6.09	AV
High Channel (5240 MHz)-Above 1G									
V	4739.191	63.98	7.10	37.24	43.50	64.82	74	-9.18	PK
V	4739.191	43.68	7.10	37.24	43.50	44.52	54	-9.48	AV
V	10480.192	64.99	8.46	37.68	44.50	66.63	68.2	-1.57	PK
V	10480.192	43.47	8.46	37.68	44.50	45.11	54	-8.89	AV
V	15720.137	61.42	10.12	38.80	44.10	66.24	74	-7.76	PK
V	15720.137	43.97	10.12	38.80	42.70	50.19	54	-3.81	AV
H	4739.113	61.06	7.10	37.24	43.50	61.90	74	-12.10	PK
H	4739.113	43.11	7.10	37.24	43.50	43.95	54	-10.05	AV
H	10480.151	53.78	8.46	38.57	44.50	56.31	68.2	-11.89	PK
H	10480.151	42.73	8.46	38.57	44.50	45.26	54	-8.74	AV
H	15720.182	53.93	10.12	38.38	44.10	58.33	74	-15.67	PK
H	15720.182	40.34	10.12	38.38	44.10	44.74	54	-9.26	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode :	TX(5.1G) - 802.11n-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.173	62.70	5.94	35.40	44.00	60.04	68.2	-8.16	PK
V	4434.173	43.11	5.94	35.40	44.00	40.45	54	-13.55	AV
V	10380.165	60.76	8.46	39.75	44.50	64.47	68.2	-3.73	PK
V	10380.165	43.87	8.46	39.75	44.50	47.58	54	-6.42	AV
V	15570.147	60.99	10.12	38.80	44.10	65.81	74	-8.19	PK
V	15570.147	43.94	10.12	38.80	42.70	50.16	54	-3.84	AV
H	4434.135	60.46	5.94	35.18	44.00	57.58	74	-16.42	PK
H	4434.135	43.54	5.94	35.18	44.00	40.66	54	-13.34	AV
H	10380.050	51.41	8.46	38.71	44.50	54.08	68.2	-14.12	PK
H	10380.050	40.33	8.46	38.71	44.50	43.00	54	-11.00	AV
H	15570.098	53.46	10.12	38.38	44.10	57.86	74	-16.14	PK
H	15570.098	42.50	10.12	38.38	44.10	46.90	54	-7.10	AV
middle Channel (5230 MHz)-Above 1G									
V	4739.187	63.18	6.48	36.35	44.05	61.96	68.2	-6.24	PK
V	4739.187	43.09	6.48	36.35	44.05	41.87	54	-12.13	AV
V	10460.138	62.26	8.47	37.88	44.51	64.10	68.2	-4.10	PK
V	10460.138	43.21	8.47	37.88	44.51	45.05	54	-8.95	AV
V	15690.200	64.48	10.12	38.80	44.10	69.30	74	-4.70	PK
V	15690.200	43.08	10.12	38.80	42.70	49.30	54	-4.70	AV
H	4739.147	64.39	6.48	36.37	44.05	63.19	68.2	-5.01	PK
H	4739.147	43.22	6.48	36.37	44.05	42.02	54	-11.98	AV
H	10460.050	51.16	8.47	38.64	44.50	53.77	68.2	-14.43	PK
H	10460.050	43.33	8.47	38.64	44.50	45.94	54	-8.06	AV
H	15690.138	54.91	10.12	38.38	44.10	59.31	74	-14.69	PK
H	15690.138	44.29	10.12	38.38	44.10	48.69	54	-5.31	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5180 MHz)-Above 1G									
V	4434.169	60.04	5.94	35.40	44.00	57.38	68.2	-10.82	PK
V	4434.169	43.98	5.94	35.40	44.00	41.32	54	-12.68	AV
V	10360.075	63.13	8.46	39.75	44.50	66.84	68.2	-1.36	PK
V	10360.075	43.48	8.46	39.75	44.50	47.19	54	-6.81	AV
V	15540.112	64.00	10.12	38.80	44.10	68.82	74	-5.18	PK
V	15540.112	43.83	10.12	38.80	42.70	50.05	54	-3.95	AV
H	4434.130	64.16	5.94	35.18	44.00	61.28	68.2	-6.92	PK
H	4434.130	43.01	5.94	35.18	44.00	40.13	54	-13.87	AV
H	10360.186	52.33	8.46	38.71	44.50	55.00	68.2	-13.20	PK
H	10360.186	40.64	8.46	38.71	44.50	43.31	54	-10.69	AV
H	15540.175	54.76	10.12	38.38	44.10	59.16	74	-14.84	PK
H	15540.175	40.06	10.12	38.38	44.10	44.46	54	-9.54	AV
Middle Channel (5200 MHz)-Above 1G									
V	4592.116	61.39	6.48	36.35	44.05	60.17	74	-13.83	PK
V	4592.116	43.02	6.48	36.35	44.05	41.80	54	-12.20	AV
V	10400.067	60.39	8.47	37.88	44.51	62.23	68.2	-5.97	PK
V	10400.067	43.50	8.47	37.88	44.51	45.34	54	-8.66	AV
V	15600.106	61.11	10.12	38.80	44.10	65.93	74	-8.07	PK
V	15600.106	43.98	10.12	38.80	42.70	50.20	54	-3.80	AV
H	4592.025	62.95	6.48	36.37	44.05	61.75	74	-12.25	PK
H	4592.025	43.07	6.48	36.37	44.05	41.87	54	-12.13	AV
H	10400.078	52.48	8.47	38.64	44.50	55.09	68.2	-13.11	PK
H	10400.078	41.95	8.47	38.64	44.50	44.56	54	-9.44	AV
H	15600.084	53.08	10.12	38.38	44.10	57.48	74	-16.52	PK
H	15600.084	42.23	10.12	38.38	44.10	46.63	54	-7.37	AV
High Channel (5240 MHz)-Above 1G									
V	4739.162	62.04	7.10	37.24	43.50	62.88	74	-11.12	PK
V	4739.162	43.78	7.10	37.24	43.50	44.62	54	-9.38	AV
V	10480.151	62.86	8.46	37.68	44.50	64.50	68.2	-3.70	PK
V	10480.151	43.13	8.46	37.68	44.50	44.77	54	-9.23	AV
V	15720.006	64.90	10.12	38.80	44.10	69.72	74	-4.28	PK
V	15720.006	43.46	10.12	38.80	42.70	49.68	54	-4.32	AV
H	4739.054	62.58	7.10	37.24	43.50	63.42	74	-10.58	PK
H	4739.054	43.51	7.10	37.24	43.50	44.35	54	-9.65	AV
H	10480.088	50.21	8.46	38.57	44.50	52.74	68.2	-15.46	PK
H	10480.088	41.37	8.46	38.57	44.50	43.90	54	-10.10	AV
H	15720.194	51.43	10.12	38.38	44.10	55.83	74	-18.17	PK
H	15720.194	42.48	10.12	38.38	44.10	46.88	54	-7.12	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5190 MHz)-Above 1G									
V	4434.166	62.66	5.94	35.40	44.00	60.00	68.2	-8.20	PK
V	4434.166	43.36	5.94	35.40	44.00	40.70	54	-13.30	AV
V	10380.088	60.62	8.46	39.75	44.50	64.33	68.2	-3.87	PK
V	10380.088	43.53	8.46	39.75	44.50	47.24	54	-6.76	AV
V	15570.128	62.67	10.12	38.80	44.10	67.49	74	-6.51	PK
V	15570.128	43.45	10.12	38.80	42.70	49.67	54	-4.33	AV
H	4434.198	63.88	5.94	35.18	44.00	61.00	74	-13.00	PK
H	4434.198	43.32	5.94	35.18	44.00	40.44	54	-13.56	AV
H	10380.039	54.50	8.46	38.71	44.50	57.17	68.2	-11.03	PK
H	10380.039	41.14	8.46	38.71	44.50	43.81	54	-10.19	AV
H	15570.179	54.89	10.12	38.38	44.10	59.29	74	-14.71	PK
H	15570.179	44.85	10.12	38.38	44.10	49.25	54	-4.75	AV
High Channel (5230 MHz)-Above 1G									
V	4739.115	60.50	6.48	36.35	44.05	59.28	68.2	-8.92	PK
V	4739.115	43.65	6.48	36.35	44.05	42.43	54	-11.57	AV
V	10460.181	60.19	8.47	37.88	44.51	62.03	68.2	-6.17	PK
V	10460.181	43.16	8.47	37.88	44.51	45.00	54	-9.00	AV
V	15690.197	64.19	10.12	38.80	44.10	69.01	74	-4.99	PK
V	15690.197	43.32	10.12	38.80	42.70	49.54	54	-4.46	AV
H	4739.164	62.12	6.48	36.37	44.05	60.92	68.2	-7.28	PK
H	4739.164	43.08	6.48	36.37	44.05	41.88	54	-12.12	AV
H	10460.045	51.24	8.47	38.64	44.50	53.85	68.2	-14.35	PK
H	10460.045	42.17	8.47	38.64	44.50	44.78	54	-9.22	AV
H	15690.133	52.42	10.12	38.38	44.10	56.82	74	-17.18	PK
H	15690.133	44.51	10.12	38.38	44.10	48.91	54	-5.09	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode:	TX(5.1G) - 802.11ac-HT80

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5210 MHz)-Above 1G									
V	4434.100	64.84	5.94	35.40	44.00	62.18	68.2	-6.02	PK
V	4434.100	43.47	5.94	35.40	44.00	40.81	54	-13.19	AV
V	10420.148	62.62	8.46	39.75	44.50	66.33	68.2	-1.87	PK
V	10420.148	43.58	8.46	39.75	44.50	47.29	54	-6.71	AV
V	15630.172	64.61	10.12	38.80	44.10	69.43	74	-4.57	PK
V	15630.172	43.34	10.12	38.80	42.70	49.56	54	-4.44	AV
H	4434.127	63.16	5.94	35.18	44.00	60.28	68.2	-7.92	PK
H	4434.127	43.13	5.94	35.18	44.00	40.25	54	-13.75	AV
H	10420.151	51.96	8.46	38.71	44.50	54.63	68.2	-13.57	PK
H	10420.151	43.64	8.46	38.71	44.50	46.31	54	-7.69	AV
H	15630.058	53.74	10.12	38.38	44.10	58.14	74	-15.86	PK
H	15630.058	42.71	10.12	38.38	44.10	47.11	54	-6.89	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11a

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.168	59.47	5.94	35.40	44.00	56.81	74	-17.19	PK
V	4679.168	43.17	5.94	35.40	44.00	40.51	54	-13.49	AV
V	11490.183	55.07	8.46	39.75	44.50	58.78	68.2	-9.42	PK
V	11490.183	43.78	8.46	39.75	44.50	47.49	54	-6.51	AV
V	17235.003	60.31	10.12	38.80	44.10	65.13	68.2	-3.07	PK
V	17235.003	43.51	10.12	38.80	42.70	49.73	54	-4.27	AV
H	4679.054	55.41	5.94	35.18	44.00	52.53	74	-21.47	PK
H	4679.054	43.22	5.94	35.18	44.00	40.34	54	-13.66	AV
H	11490.086	54.30	8.46	38.71	44.50	56.97	68.2	-11.23	PK
H	11490.086	43.92	8.46	38.71	44.50	46.59	54	-7.41	AV
H	17235.002	50.28	10.12	38.38	44.10	54.68	68.2	-13.52	PK
H	17235.002	41.21	10.12	38.38	44.10	45.61	54	-8.39	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.187	56.49	6.48	36.35	44.05	55.27	74	-18.73	PK
V	4592.187	43.57	6.48	36.35	44.05	42.35	54	-11.65	AV
V	11570.052	56.67	8.47	37.88	44.51	58.51	68.2	-9.69	PK
V	11570.052	43.23	8.47	37.88	44.51	45.07	54	-8.93	AV
V	17355.176	58.24	10.12	38.80	44.10	63.06	68.2	-5.14	PK
V	17355.176	39.11	10.12	38.80	42.70	45.33	54	-8.67	AV
H	4592.164	55.49	6.48	36.37	44.05	54.29	74	-19.71	PK
H	4592.164	43.60	6.48	36.37	44.05	42.40	54	-11.60	AV
H	11570.174	53.95	8.47	38.64	44.50	56.56	68.2	-11.64	PK
H	11570.174	43.07	8.47	38.64	44.50	45.68	54	-8.32	AV
H	17355.182	53.57	10.12	38.38	44.10	57.97	68.2	-10.23	PK
H	17355.182	41.17	10.12	38.38	44.10	45.57	54	-8.43	AV
High Channel (5825 MHz)-Above 1G									
V	6039.123	58.91	7.10	37.24	43.50	59.75	68.2	-8.45	PK
V	6039.123	43.40	7.10	37.24	43.50	44.24	54	-9.76	AV
V	11650.121	62.77	8.46	37.68	44.50	64.41	74	-9.59	PK
V	11650.121	43.08	8.46	37.68	44.50	44.72	54	-9.28	AV
V	17475.153	56.28	10.12	38.80	44.10	61.10	68.2	-7.10	PK
V	17475.153	43.83	10.12	38.80	42.70	50.05	54	-3.95	AV
H	6039.124	54.15	7.10	37.24	43.50	54.99	68.2	-13.21	PK
H	6039.124	43.78	7.10	37.24	43.50	44.62	54	-9.38	AV
H	11650.057	54.73	8.46	38.57	44.50	57.26	74	-16.74	PK
H	11650.057	43.40	8.46	38.57	44.50	45.93	54	-8.07	AV
H	17475.086	53.70	10.12	38.38	44.10	58.10	68.2	-10.10	PK
H	17475.086	43.85	10.12	38.38	44.10	48.25	54	-5.75	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
The worst case is Antenna A.

Test Mode:	TX(5.8G) - 802.11n-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.137	56.88	5.94	35.40	44.00	54.22	74	-19.78	PK
V	4679.137	43.81	5.94	35.40	44.00	41.15	54	-12.85	AV
V	11490.196	56.93	8.46	39.75	44.50	60.64	68.2	-7.56	PK
V	11490.196	43.14	8.46	39.75	44.50	46.85	54	-7.15	AV
V	17235.112	60.22	10.12	38.80	44.10	65.04	68.2	-3.16	PK
V	17235.112	43.03	10.12	38.80	42.70	49.25	54	-4.75	AV
H	4679.101	59.93	5.94	35.18	44.00	57.05	74	-16.95	PK
H	4679.101	43.66	5.94	35.18	44.00	40.78	54	-13.22	AV
H	11490.150	48.43	8.46	38.71	44.50	51.10	68.2	-17.10	PK
H	11490.150	41.10	8.46	38.71	44.50	43.77	54	-10.23	AV
H	17235.037	52.30	10.12	38.38	44.10	56.70	68.2	-11.50	PK
H	17235.037	41.45	10.12	38.38	44.10	45.85	54	-8.15	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.183	60.89	6.48	36.35	44.05	59.67	74	-14.33	PK
V	4592.183	43.16	6.48	36.35	44.05	41.94	54	-12.06	AV
V	11570.165	57.20	8.47	37.88	44.51	59.04	68.2	-9.16	PK
V	11570.165	43.02	8.47	37.88	44.51	44.86	54	-9.14	AV
V	17355.195	61.74	10.12	38.80	44.10	66.56	68.2	-1.64	PK
V	17355.195	43.44	10.12	38.80	42.70	49.66	54	-4.34	AV
H	4592.056	58.39	6.48	36.37	44.05	57.19	74	-16.81	PK
H	4592.056	43.82	6.48	36.37	44.05	42.62	54	-11.38	AV
H	11570.110	51.93	8.47	38.64	44.50	54.54	68.2	-13.66	PK
H	11570.110	42.96	8.47	38.64	44.50	45.57	54	-8.43	AV
H	17355.058	51.18	10.12	38.38	44.10	55.58	68.2	-12.62	PK
H	17355.058	43.75	10.12	38.38	44.10	48.15	54	-5.85	AV
High Channel (5825 MHz)-Above 1G									
V	6039.157	57.87	7.10	37.24	43.50	58.71	68.2	-9.49	PK
V	6039.157	43.98	7.10	37.24	43.50	44.82	54	-9.18	AV
V	11650.079	60.76	8.46	37.68	44.50	62.40	74	-11.60	PK
V	11650.079	43.31	8.46	37.68	44.50	44.95	54	-9.05	AV
V	17475.174	56.38	10.12	38.80	44.10	61.20	68.2	-7.00	PK
V	17475.174	43.43	10.12	38.80	42.70	49.65	54	-4.35	AV
H	6039.013	58.56	7.10	37.24	43.50	59.40	68.2	-8.80	PK
H	6039.013	43.87	7.10	37.24	43.50	44.71	54	-9.29	AV
H	11650.193	50.80	8.46	38.57	44.50	53.33	74	-20.67	PK
H	11650.193	40.98	8.46	38.57	44.50	43.51	54	-10.49	AV
H	17475.076	50.67	10.12	38.38	44.10	55.07	68.2	-13.13	PK
H	17475.076	40.63	10.12	38.38	44.10	45.03	54	-8.97	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11n-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.071	58.99	5.94	35.40	44.00	56.33	74	-17.67	PK
V	4679.071	43.48	5.94	35.40	44.00	40.82	54	-13.18	AV
V	11510.080	56.13	8.46	39.75	44.50	59.84	74	-14.16	PK
V	11510.080	43.24	8.46	39.75	44.50	46.95	54	-7.05	AV
V	17265.150	58.51	10.12	38.80	44.10	63.33	68.2	-4.87	PK
V	17265.150	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.016	56.15	5.94	35.18	44.00	53.27	74	-20.73	PK
H	4679.016	43.34	5.94	35.18	44.00	40.46	54	-13.54	AV
H	11510.151	53.16	8.46	38.71	44.50	55.83	74	-18.17	PK
H	11510.151	43.60	8.46	38.71	44.50	46.27	54	-7.73	AV
H	17265.072	50.56	10.12	38.38	44.10	54.96	68.2	-13.24	PK
H	17265.072	42.38	10.12	38.38	44.10	46.78	54	-7.22	AV
High Channel (5795 MHz)-Above 1G									
V	6039.001	59.36	6.48	36.35	44.05	58.14	68.2	-10.06	PK
V	6039.001	43.89	6.48	36.35	44.05	42.67	54	-11.33	AV
V	11590.000	58.82	8.47	37.88	44.51	60.66	74	-13.34	PK
V	11590.000	43.94	8.47	37.88	44.51	45.78	54	-8.22	AV
V	17385.121	55.09	10.12	38.80	44.10	59.91	68.2	-8.29	PK
V	17385.121	41.45	10.12	38.80	42.70	47.67	54	-6.33	AV
H	6039.167	57.62	6.48	36.37	44.05	56.42	68.2	-11.78	PK
H	6039.167	43.47	6.48	36.37	44.05	42.27	54	-11.73	AV
H	11590.159	53.16	8.47	38.64	44.50	55.77	74	-18.23	PK
H	11590.159	42.26	8.47	38.64	44.50	44.87	54	-9.13	AV
H	17385.073	50.97	10.12	38.38	44.10	55.37	68.2	-12.83	PK
H	17385.073	42.24	10.12	38.38	44.10	46.64	54	-7.36	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT20

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5745 MHz)-Above 1G									
V	4679.157	60.18	5.94	35.40	44.00	57.52	74	-16.48	PK
V	4679.157	43.62	5.94	35.40	44.00	40.96	54	-13.04	AV
V	11490.147	55.56	8.46	39.75	44.50	59.27	68.2	-8.93	PK
V	11490.147	43.88	8.46	39.75	44.50	47.59	54	-6.41	AV
V	17235.001	60.77	10.12	38.80	44.10	65.59	68.2	-2.61	PK
V	17235.001	43.99	10.12	38.80	42.70	50.21	54	-3.79	AV
H	4679.125	60.64	5.94	35.18	44.00	57.76	74	-16.24	PK
H	4679.125	43.85	5.94	35.18	44.00	40.97	54	-13.03	AV
H	11490.165	47.32	8.46	38.71	44.50	49.99	68.2	-18.21	PK
H	11490.165	41.68	8.46	38.71	44.50	44.35	54	-9.65	AV
H	17235.142	52.52	10.12	38.38	44.10	56.92	68.2	-11.28	PK
H	17235.142	42.25	10.12	38.38	44.10	46.65	54	-7.35	AV
Middle Channel (5785 MHz)-Above 1G									
V	4592.128	61.15	6.48	36.35	44.05	59.93	74	-14.07	PK
V	4592.128	43.84	6.48	36.35	44.05	42.62	54	-11.38	AV
V	11570.035	58.51	8.47	37.88	44.51	60.35	68.2	-7.85	PK
V	11570.035	43.20	8.47	37.88	44.51	45.04	54	-8.96	AV
V	17355.016	60.70	10.12	38.80	44.10	65.52	68.2	-2.68	PK
V	17355.016	43.88	10.12	38.80	42.70	50.10	54	-3.90	AV
H	4592.108	58.94	6.48	36.37	44.05	57.74	74	-16.26	PK
H	4592.108	43.84	6.48	36.37	44.05	42.64	54	-11.36	AV
H	11570.156	52.73	8.47	38.64	44.50	55.34	68.2	-12.86	PK
H	11570.156	41.12	8.47	38.64	44.50	43.73	54	-10.27	AV
H	17355.081	53.90	10.12	38.38	44.10	58.30	68.2	-9.90	PK
H	17355.081	42.07	10.12	38.38	44.10	46.47	54	-7.53	AV
High Channel (5825 MHz)-Above 1G									
V	6039.016	58.02	7.10	37.24	43.50	58.86	68.2	-9.34	PK
V	6039.016	43.92	7.10	37.24	43.50	44.76	54	-9.24	AV
V	11650.169	59.24	8.46	37.68	44.50	60.88	74	-13.12	PK
V	11650.169	43.07	8.46	37.68	44.50	44.71	54	-9.29	AV
V	17475.174	55.69	10.12	38.80	44.10	60.51	68.2	-7.69	PK
V	17475.174	43.79	10.12	38.80	42.70	50.01	54	-3.99	AV
H	6039.035	58.20	7.10	37.24	43.50	59.04	68.2	-9.16	PK
H	6039.035	43.77	7.10	37.24	43.50	44.61	54	-9.39	AV
H	11650.159	50.06	8.46	38.57	44.50	52.59	74	-21.41	PK
H	11650.159	43.60	8.46	38.57	44.50	46.13	54	-7.87	AV
H	17475.098	50.32	10.12	38.38	44.10	54.72	68.2	-13.48	PK
H	17475.098	44.74	10.12	38.38	44.10	49.14	54	-4.86	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

Test Mode:	TX(5.8G) - 802.11ac-HT40

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
Low Channel (5755 MHz)-Above 1G									
V	4679.112	58.74	5.94	35.40	44.00	56.08	74	-17.92	PK
V	4679.112	43.40	5.94	35.40	44.00	40.74	54	-13.26	AV
V	11510.062	55.77	8.46	39.75	44.50	59.48	74	-14.52	PK
V	11510.062	43.60	8.46	39.75	44.50	47.31	54	-6.69	AV
V	17265.112	56.10	10.12	38.80	44.10	60.92	68.2	-7.28	PK
V	17265.112	2.00	10.12	38.80	42.70	8.22	54	-45.78	AV
H	4679.047	59.93	5.94	35.18	44.00	57.05	74	-16.95	PK
H	4679.047	43.62	5.94	35.18	44.00	40.74	54	-13.26	AV
H	11510.071	52.18	8.46	38.71	44.50	54.85	74	-19.15	PK
H	11510.071	42.75	8.46	38.71	44.50	45.42	54	-8.58	AV
H	17265.120	50.06	10.12	38.38	44.10	54.46	68.2	-13.74	PK
H	17265.120	44.05	10.12	38.38	44.10	48.45	54	-5.55	AV
High Channel (5795 MHz)-Above 1G									
V	6039.132	60.16	6.48	36.35	44.05	58.94	68.2	-9.26	PK
V	6039.132	43.30	6.48	36.35	44.05	42.08	54	-11.92	AV
V	11590.052	57.69	8.47	37.88	44.51	59.53	74	-14.47	PK
V	11590.052	43.30	8.47	37.88	44.51	45.14	54	-8.86	AV
V	17385.009	55.18	10.12	38.80	44.10	60.00	68.2	-8.20	PK
V	17385.009	41.01	10.12	38.80	42.70	47.23	54	-6.77	AV
H	6039.067	59.35	6.48	36.37	44.05	58.15	68.2	-10.05	PK
H	6039.067	43.69	6.48	36.37	44.05	42.49	54	-11.51	AV
H	11590.072	52.32	8.47	38.64	44.50	54.93	74	-19.07	PK
H	11590.072	42.58	8.47	38.64	44.50	45.19	54	-8.81	AV
H	17385.124	52.88	10.12	38.38	44.10	57.28	68.2	-10.92	PK
H	17385.124	41.78	10.12	38.38	44.10	46.18	54	-7.82	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

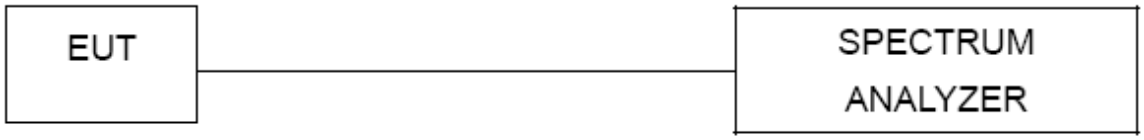
Test Mode:	TX(5.8G) - 802.11ac-HT80

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Cable loss (dB)	Antenna Factor dB/m	Preamp Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Detector Type
(5775 MHz)-Above 1G									
V	4679.180	55.53	5.94	35.40	44.00	52.87	74	-21.13	PK
V	4679.180	43.48	5.94	35.40	44.00	40.82	54	-13.18	AV
V	11550.082	58.98	8.46	39.75	44.50	62.69	74	-11.31	PK
V	11550.082	43.62	8.46	39.75	44.50	47.33	54	-6.67	AV
V	17325.009	60.99	10.12	38.80	44.10	65.81	68.2	-2.39	PK
V	17325.009	41.49	10.12	38.80	42.70	47.71	54	-6.29	AV
H	4679.198	55.39	5.94	35.18	44.00	52.51	74	-21.49	PK
H	4679.198	43.00	5.94	35.18	44.00	40.12	54	-13.88	AV
H	11550.099	53.53	8.46	38.71	44.50	56.20	74	-17.80	PK
H	11550.099	44.34	8.46	38.71	44.50	47.01	54	-6.99	AV
H	17325.061	51.61	10.12	38.38	44.10	56.01	68.2	-12.19	PK
H	17325.061	40.24	10.12	38.38	44.10	44.64	54	-9.36	AV

Note: PK value is lower than the Average value limit, So average didn't record.
The 26.5-40G amplitude of spurious emissions that are attenuated by more than 20dB below the permissible value has no need to be reported.
Emission level (dBuV/m) = 20 log Emission level (uV/m).
Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor = Level.
Test Mode is MIMO Mode.

8. Power Spectral Density Test

8.1 Block Diagram Of Test Setup



8.2 Limit

For the band 5.15-5.25 GHz,
(i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
(ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

(iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple collocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
For the band 5.725-5.85 GHz

(3)For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

8.3 Test Procedure

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:
a) Set RBW ≥ 1/T, where T is defined in section II.B.I.a).
b) Set VBW ≥ 3 RBW.
c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) to the measured result, whereas RBW (< 500 KHz) is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add 10log(1MHz/RBW) to the measured result, whereas RBW (< 1 MHz) is the reduced resolution bandwidth of spectrum analyzer set during measurement.
e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since RBW=100 KHZ is available on nearly all spectrum analyzers.

8.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

8.5 Test Result

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	(5180-5240MHz)		

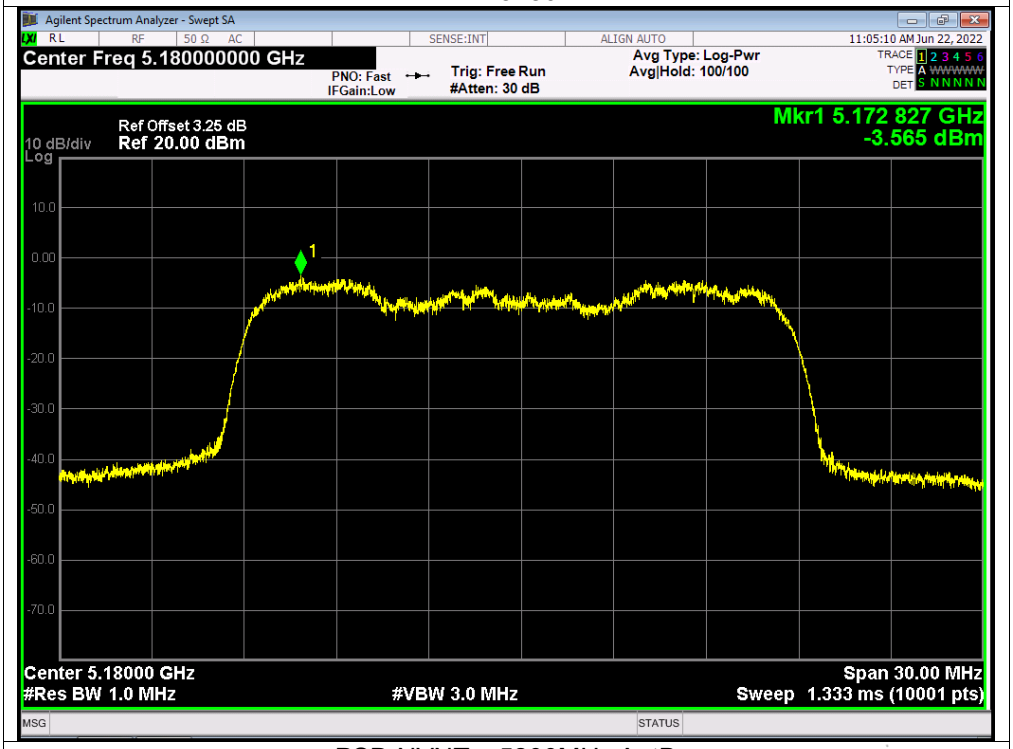
Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/MHz)		Total (dBm/MHz)	Limit (dBm/MHz)	Verdict
			Ant A	Ant B			
NVNT	a	5180	-3.04	-3.57	/	11	Pass
NVNT	a	5200	-2.91	-1.94	/	11	Pass
NVNT	a	5240	-2.56	**-1.41**	/	11	Pass
NVNT	n20	5180	-4.96	-2.59	-0.60	10.16	Pass
NVNT	n20	5200	-4.36	-4.32	-1.33	10.16	Pass
NVNT	n20	5240	-4.1	-3.69	-0.88	10.16	Pass
NVNT	n40	5190	-9.8	-10.37	-7.07	10.16	Pass
NVNT	n40	5230	-10.12	-10.55	-7.32	10.16	Pass
NVNT	ac20	5180	**-2.44**	-4.46	-0.32	10.16	Pass
NVNT	ac20	5200	-6.56	-6.23	-3.38	10.16	Pass
NVNT	ac20	5240	-3.95	-3.77	-0.85	10.16	Pass
NVNT	ac40	5190	-11.18	-11.23	-8.19	10.16	Pass
NVNT	ac40	5230	-12.42	-9.47	-7.69	10.16	Pass
NVNT	ac80	5210	-20.54	-19.63	-17.05	10.16	Pass

Note;
Antenna A gain:3.83 dBi, Antenna B gain: 3.83 dBi, Directional gain=[GainANT + 10 log(NANT) dBi] =6.84 dbi>6dbi
so limit=11-(6.84-6.0)=10.16 dBm

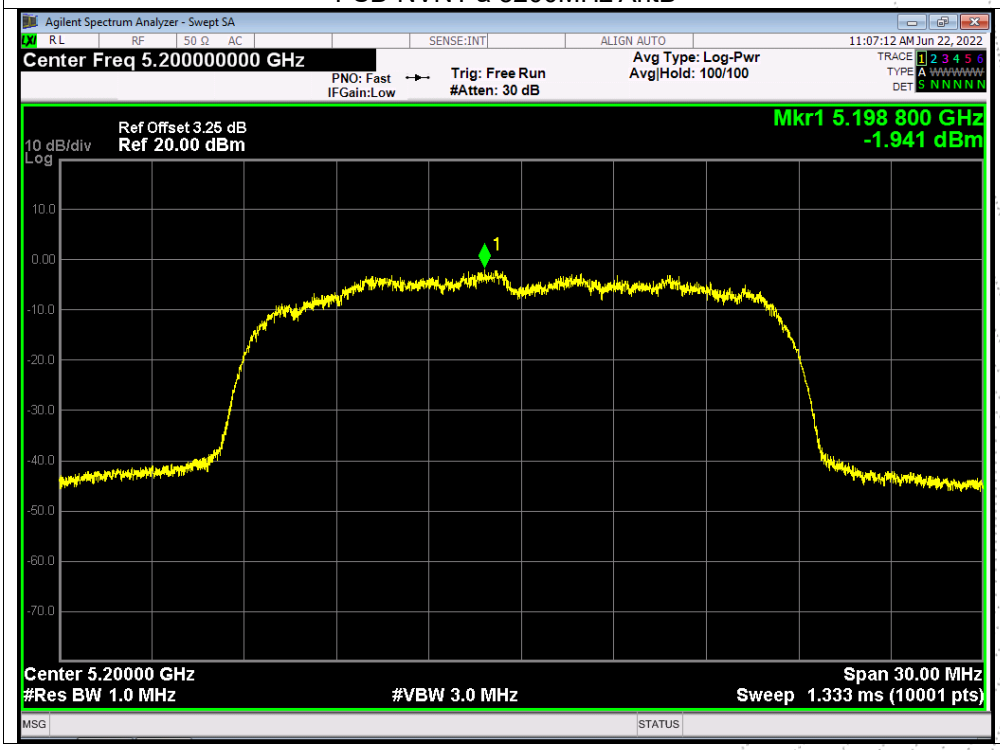
Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

Test Graphs

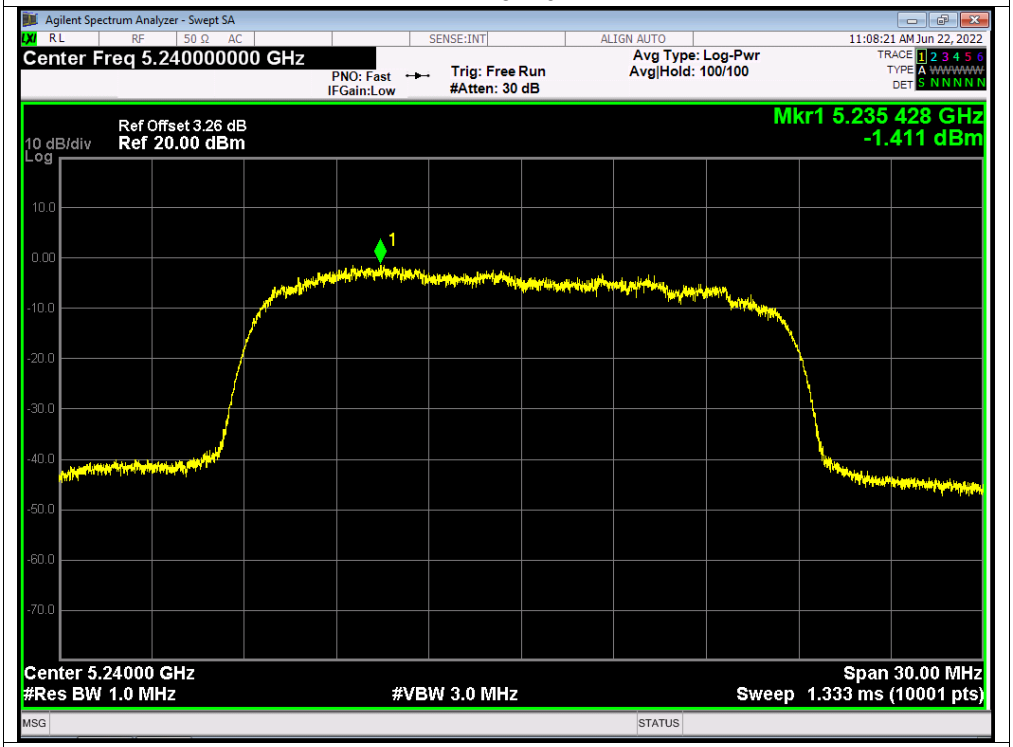
PSD NVNT a 5180MHz AntB



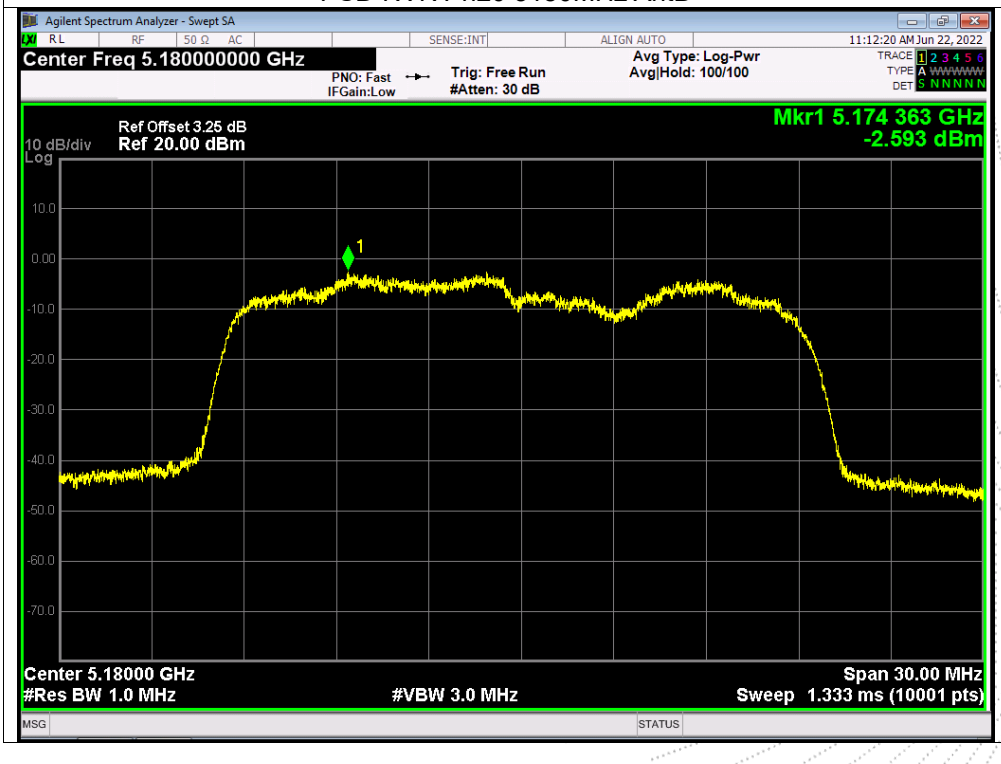
PSD NVNT a 5200MHz AntB



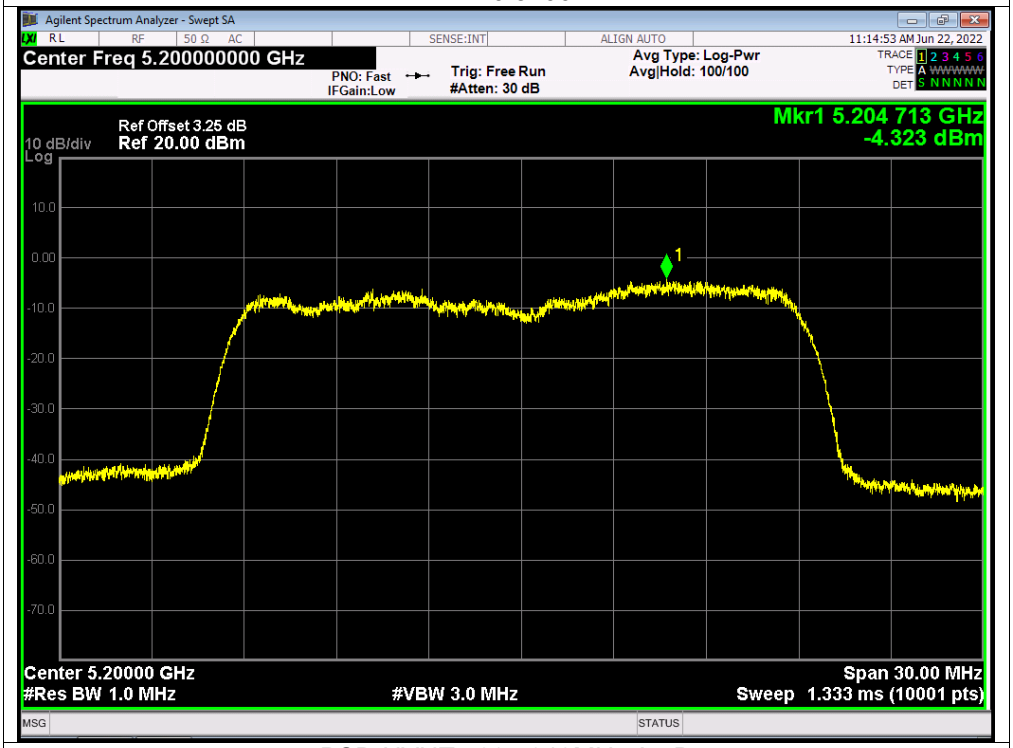
PSD NVNT a 5240MHz AntB



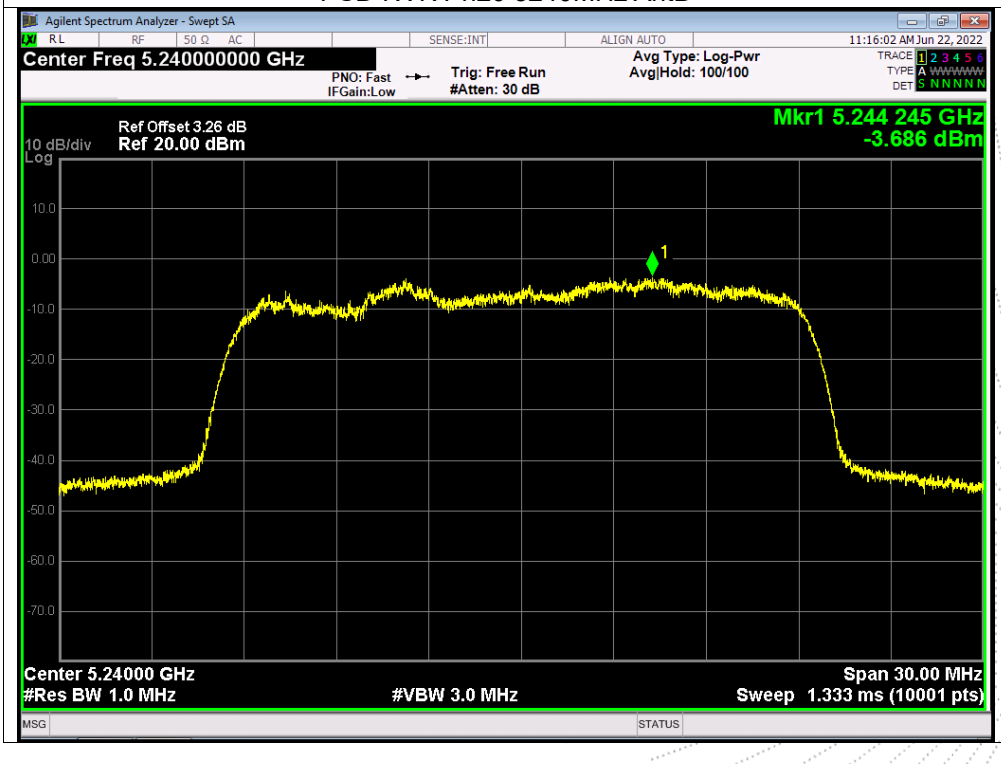
PSD NVNT n20 5180MHz AntB



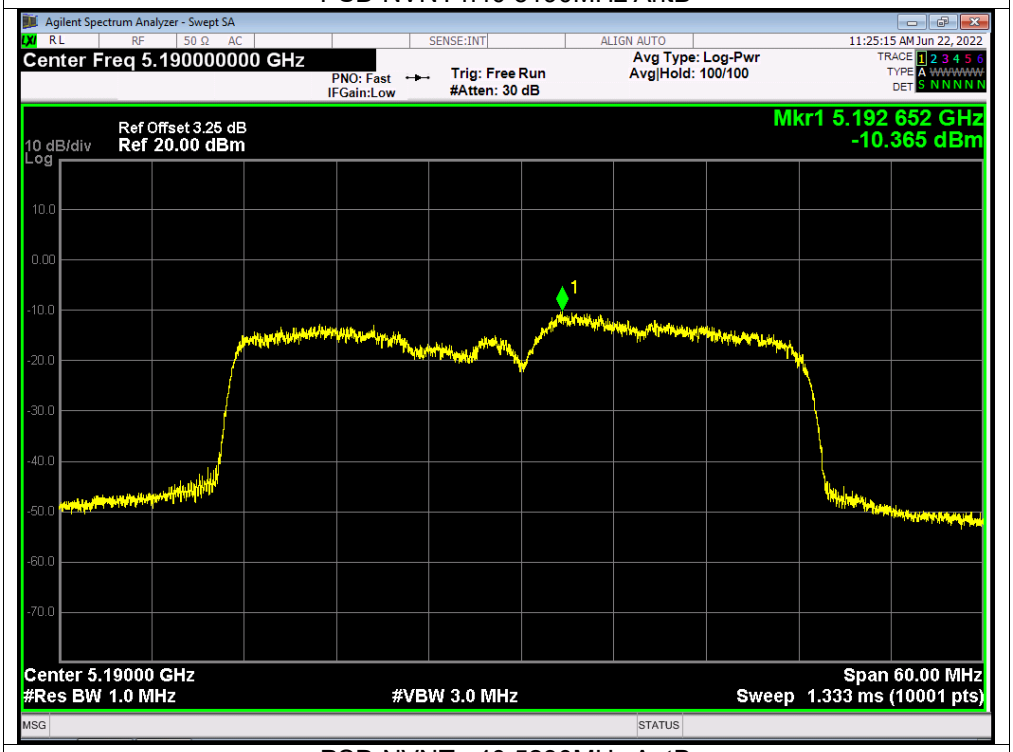
PSD NVNT n20 5200MHz AntB



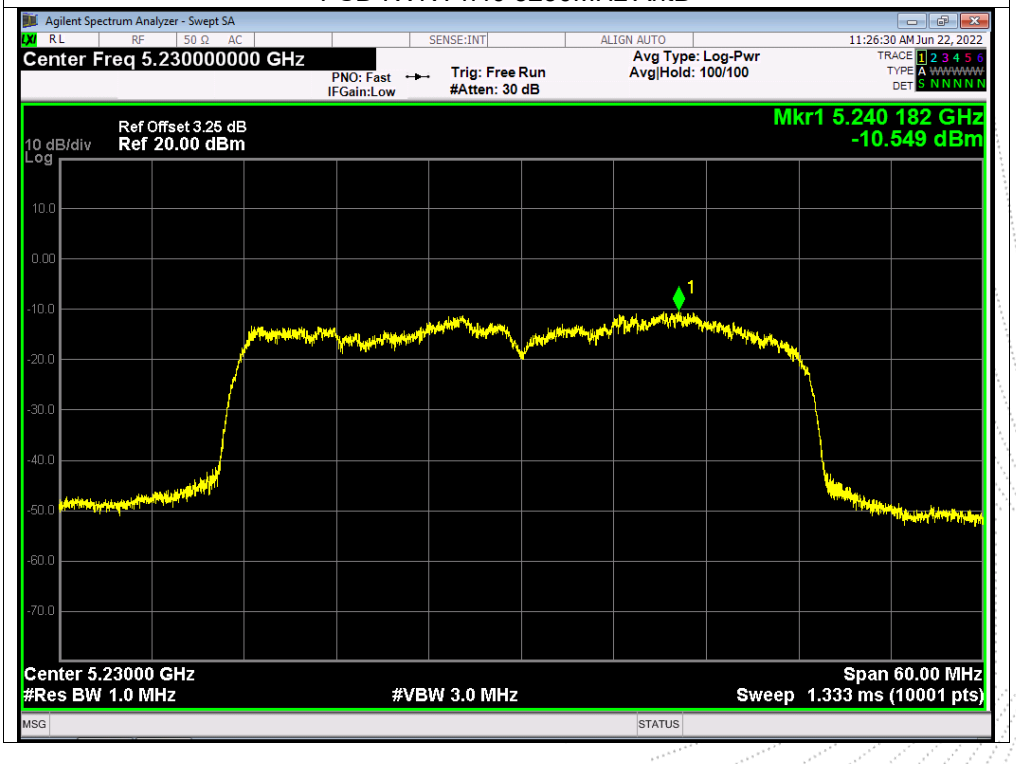
PSD NVNT n20 5240MHz AntB



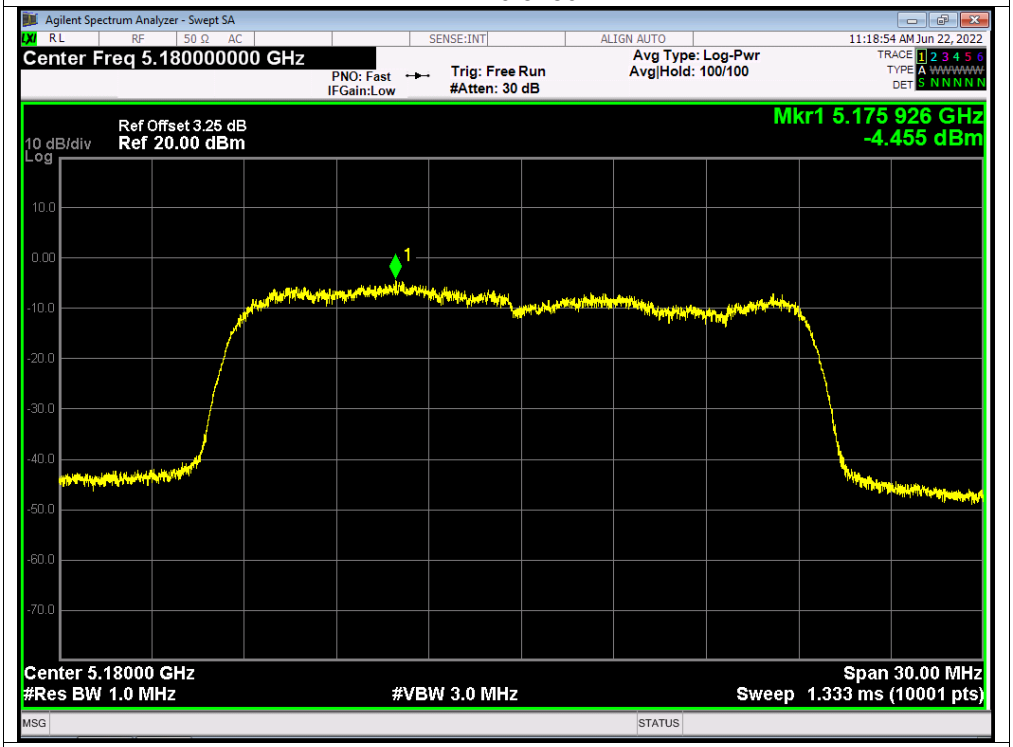
PSD NVNT n40 5190MHz AntB



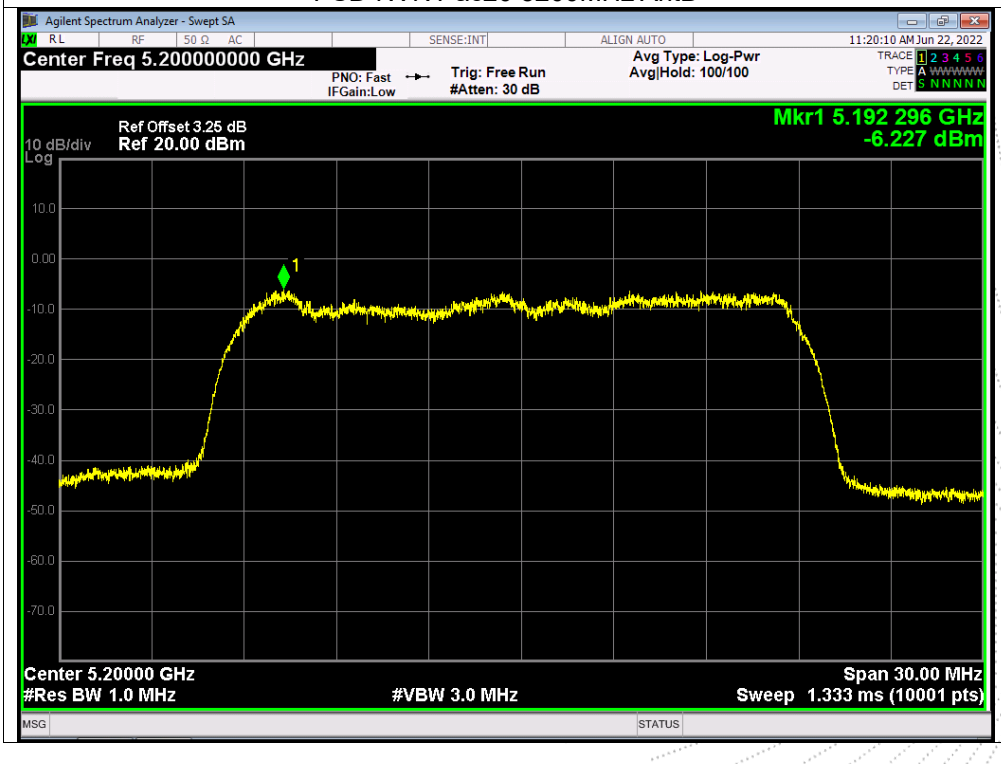
PSD NVNT n40 5230MHz AntB



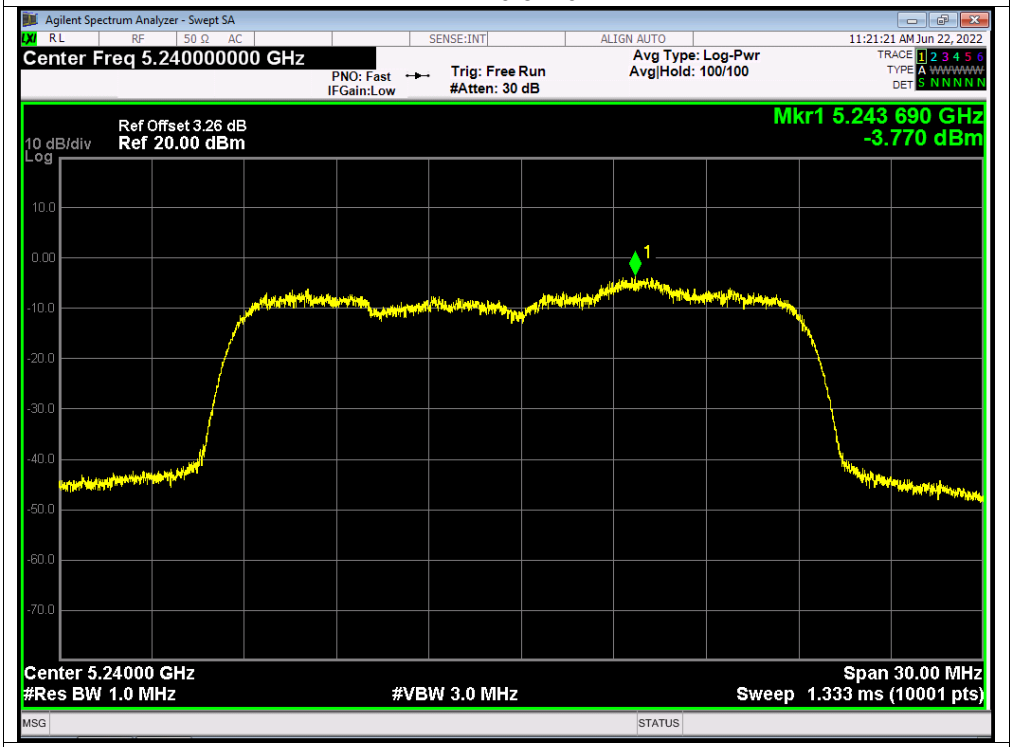
PSD NVNT ac20 5180MHz AntB



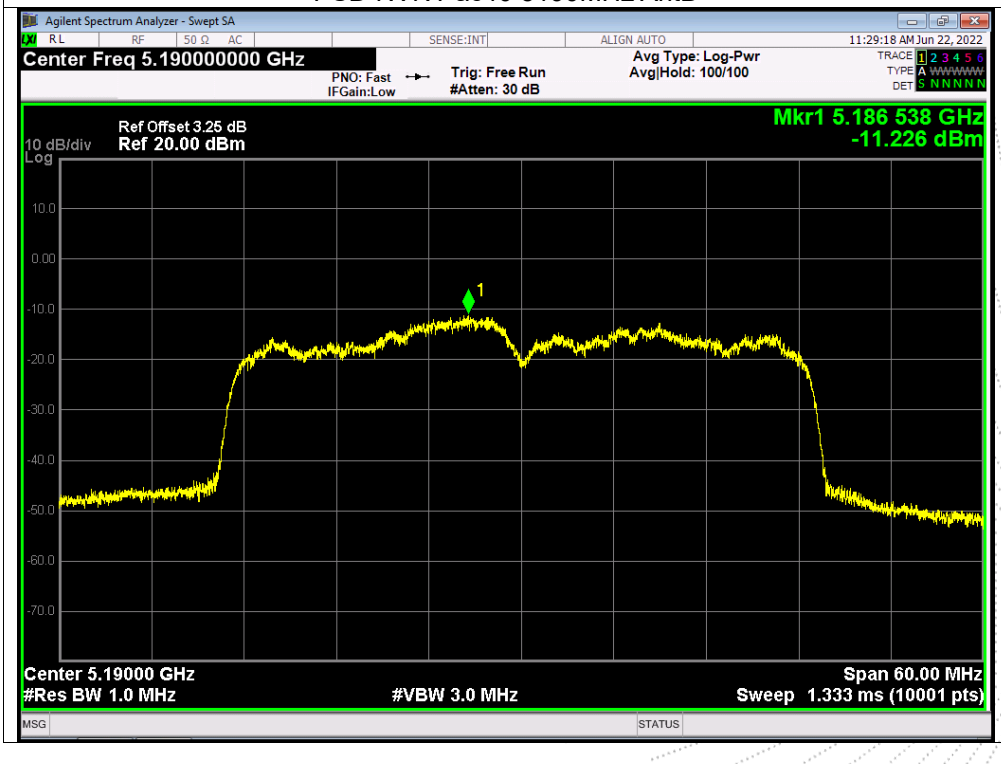
PSD NVNT ac20 5200MHz AntB



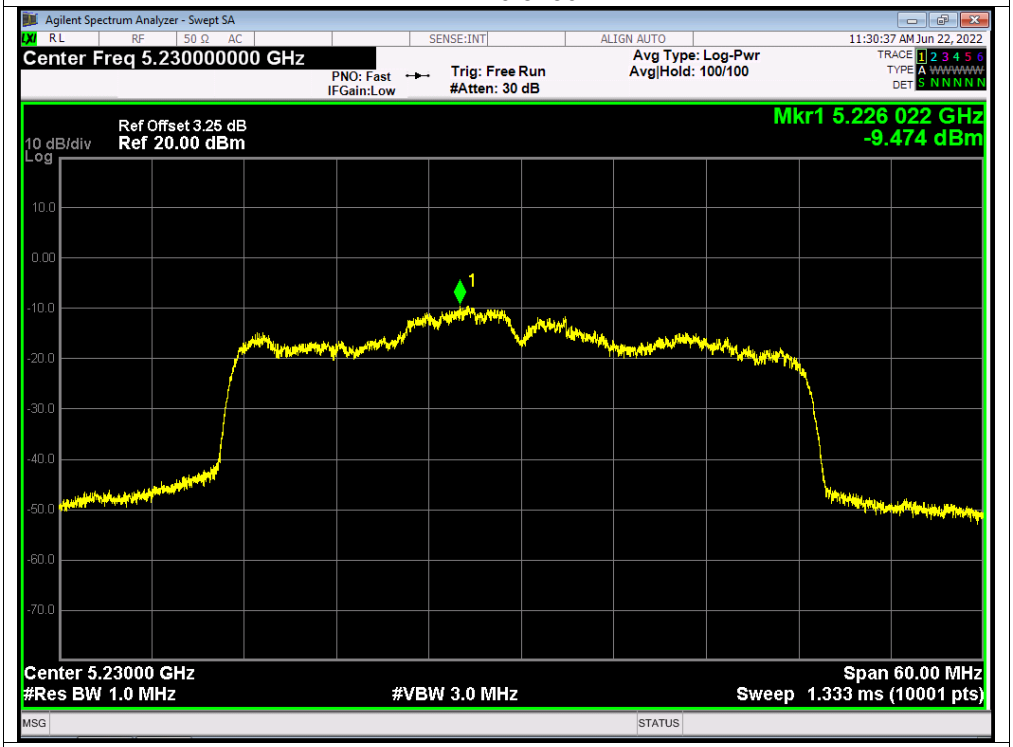
PSD NVNT ac20 5240MHz AntB



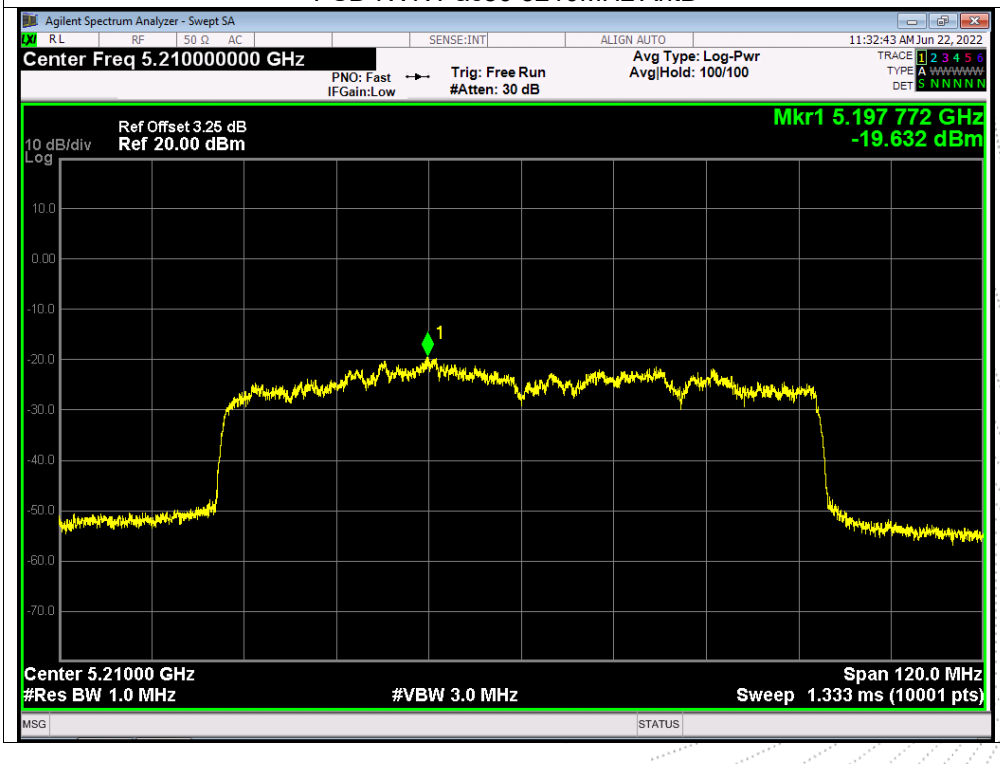
PSD NVNT ac40 5190MHz AntB



PSD NVNT ac40 5230MHz AntB



PSD NVNT ac80 5210MHz AntB



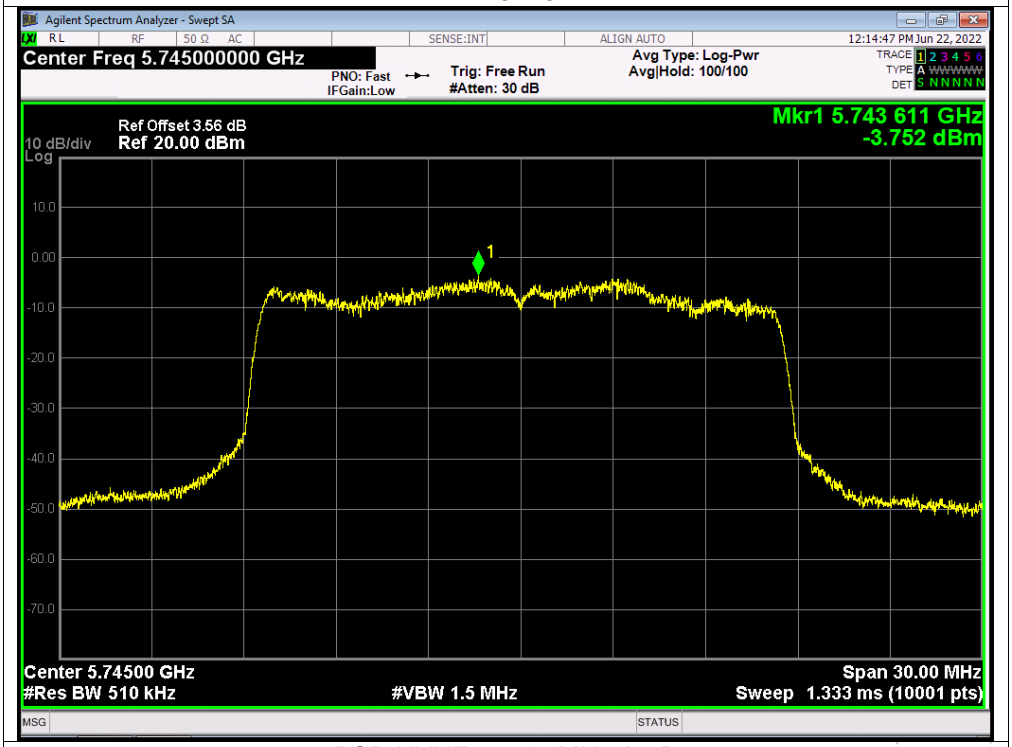
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	(5745-5825MHz)		

Condition	Mode	Frequency (MHz)	Conducted PSD (dBm/500KHz)		Total (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
			Ant A	Ant B			
NVNT	a	5745	-5.81	**-3.75**	/	30	Pass
NVNT	a	5785	-5.09	-5.09	/	30	Pass
NVNT	a	5825	-5.27	-6.5	/	30	Pass
NVNT	n20	5745	-7.67	-5.15	-3.22	29.16	Pass
NVNT	n20	5785	-7.52	-5.58	-3.43	29.16	Pass
NVNT	n20	5825	-6.15	-7.99	-3.96	29.16	Pass
NVNT	n40	5755	-13.71	-13.75	-10.72	29.16	Pass
NVNT	n40	5795	-14.12	-13.97	-11.03	29.16	Pass
NVNT	ac20	5745	-6.25	-6.32	-3.27	29.16	Pass
NVNT	ac20	5785	-8.16	-7.57	-4.84	29.16	Pass
NVNT	ac20	5825	-7.54	-7.54	-4.53	29.16	Pass
NVNT	ac40	5755	-13.76	-14.89	-11.28	29.16	Pass
NVNT	ac40	5795	-15.31	-15.95	-12.61	29.16	Pass
NVNT	ac80	5775	-22.63	-23.15	-19.87	29.16	Pass

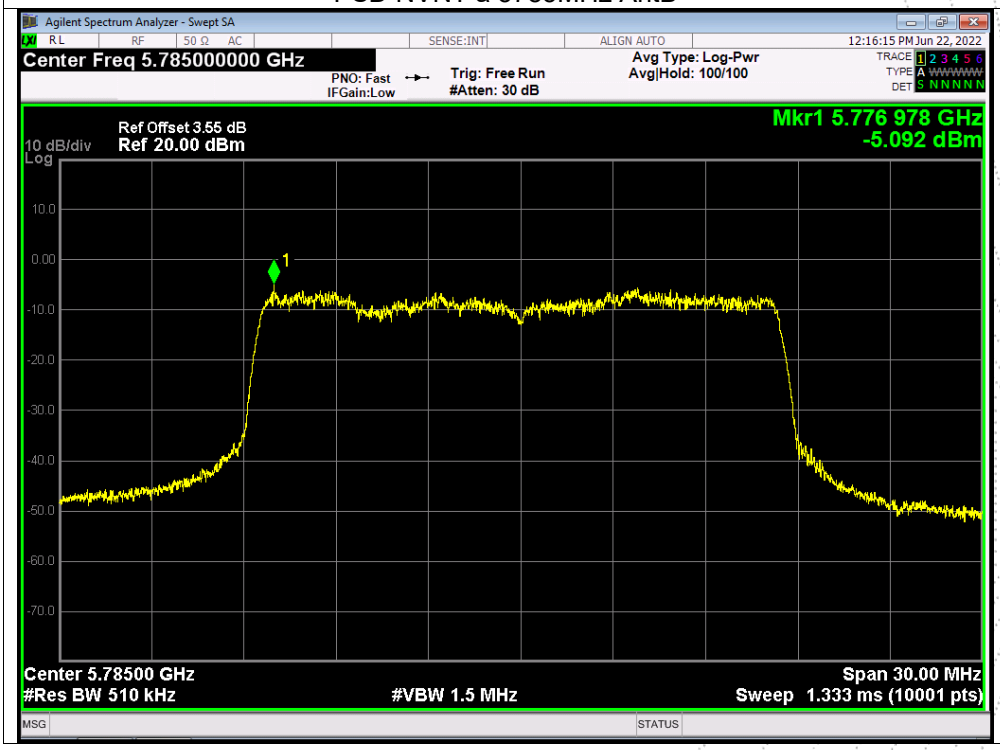
Note;
Antenna A gain:3.83 dBi, Antenna B gain: 3.83 dBi, Directional gain=[GainANT + 10 log(NANT) dBi] =6.84 dbi>6dbi
so limit=30-(6.84-6.0)=29.16 dBm

Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot.

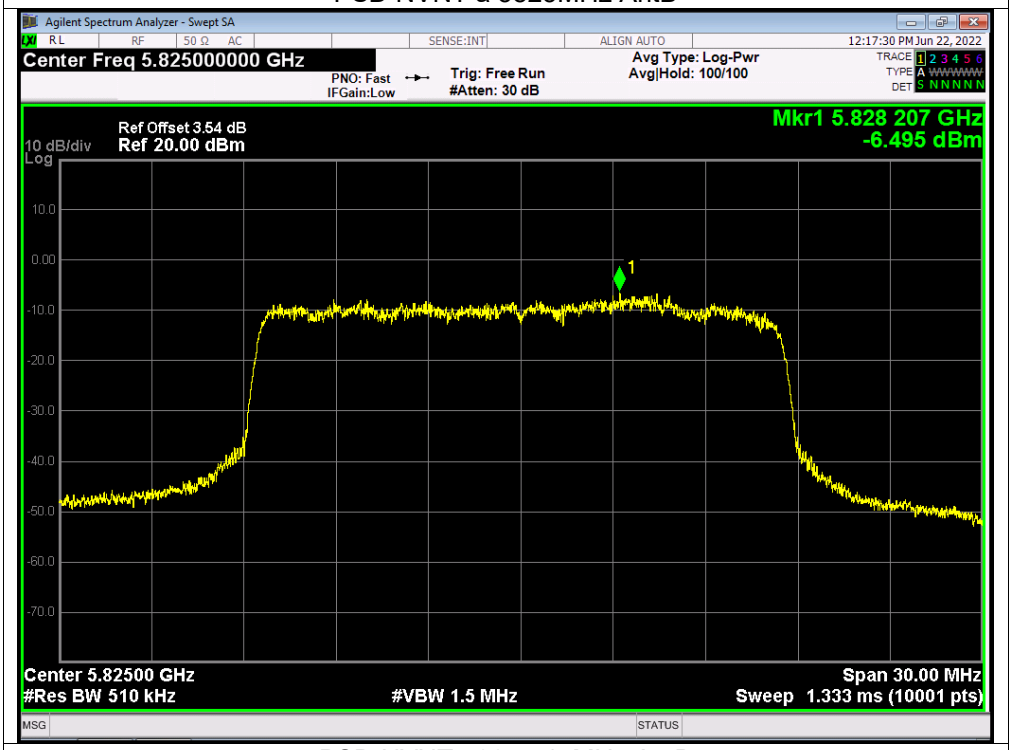
Test Graphs
PSD NVNT a 5745MHz AntB



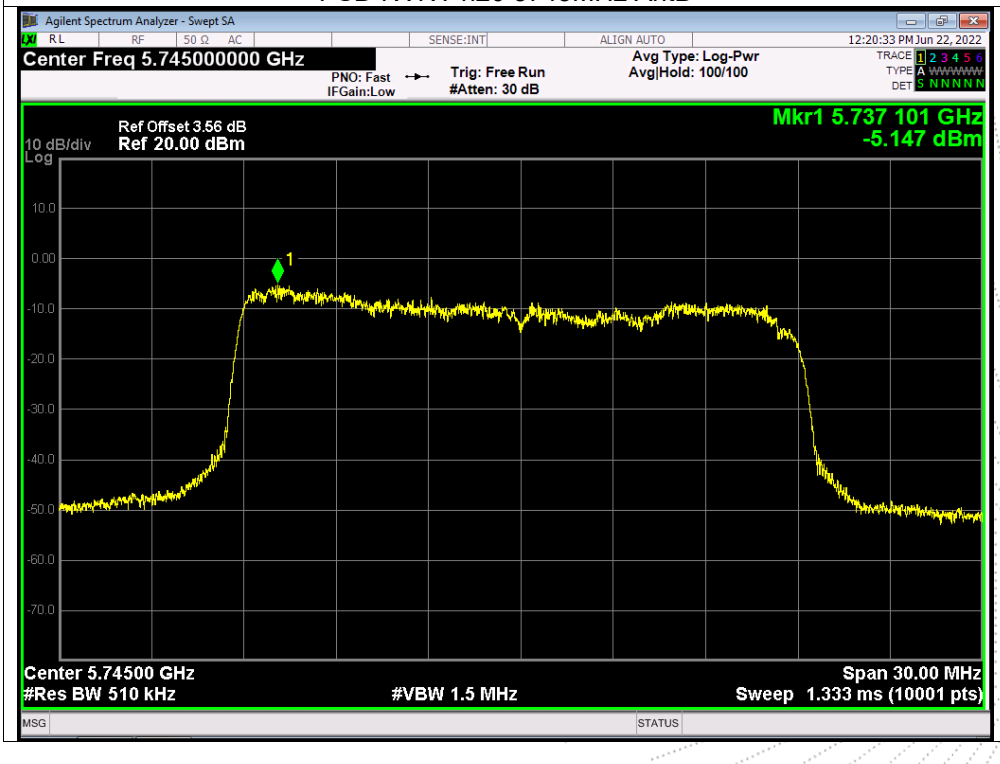
PSD NVNT a 5785MHz AntB



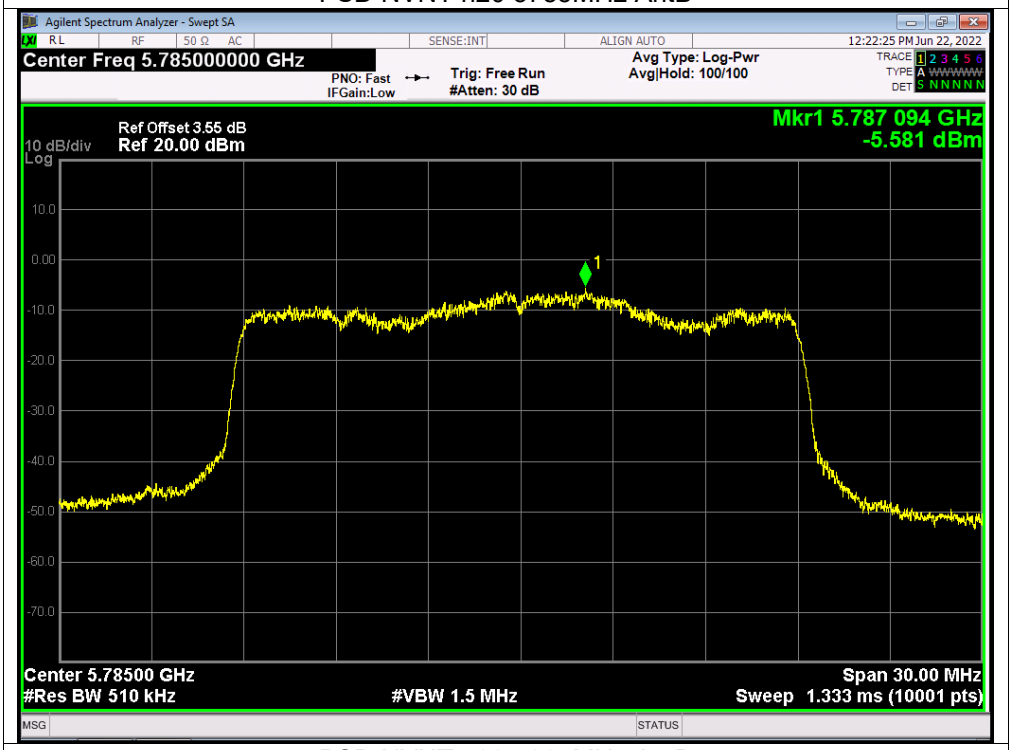
PSD NVNT a 5825MHz AntB



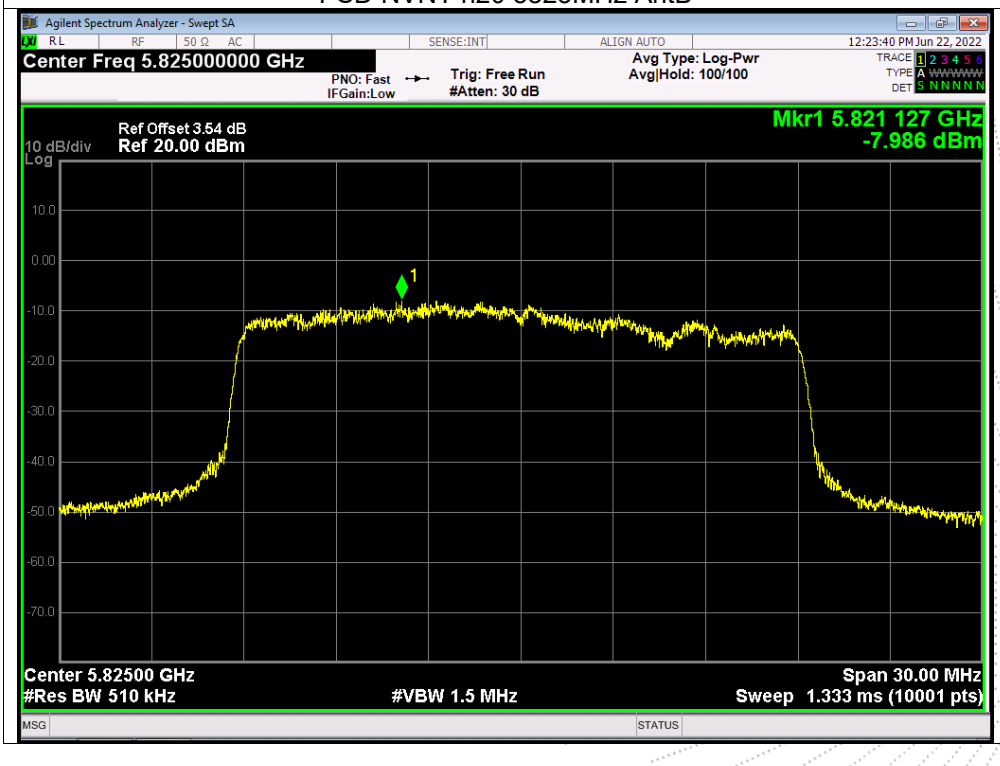
PSD NVNT n20 5745MHz AntB



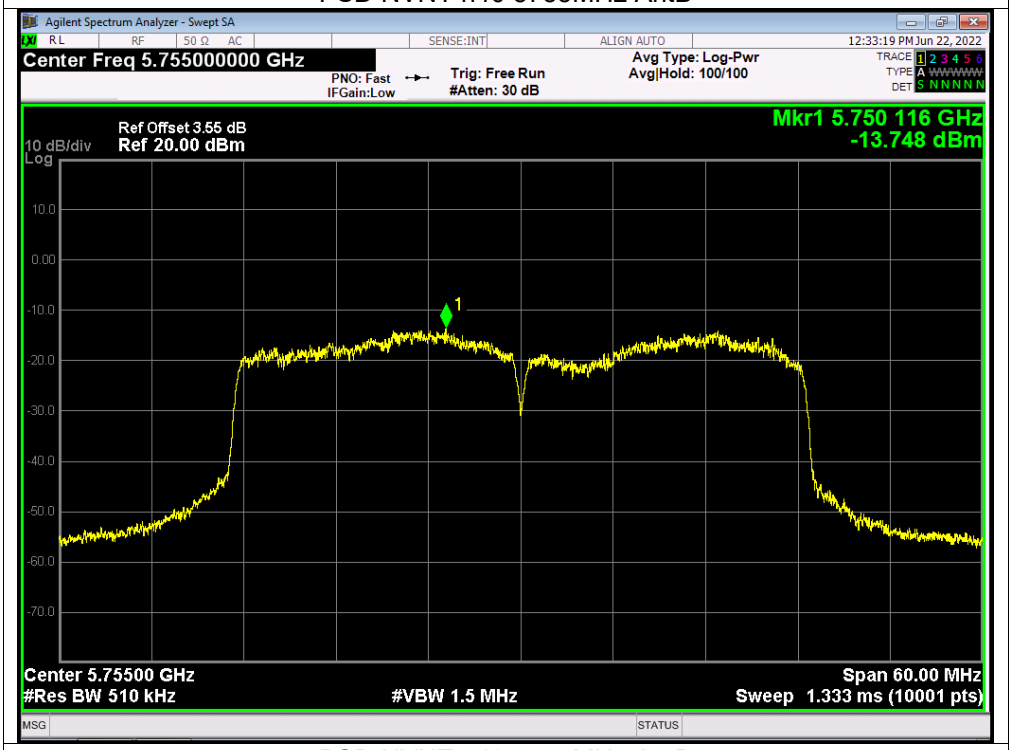
PSD NVNT n20 5785MHz AntB



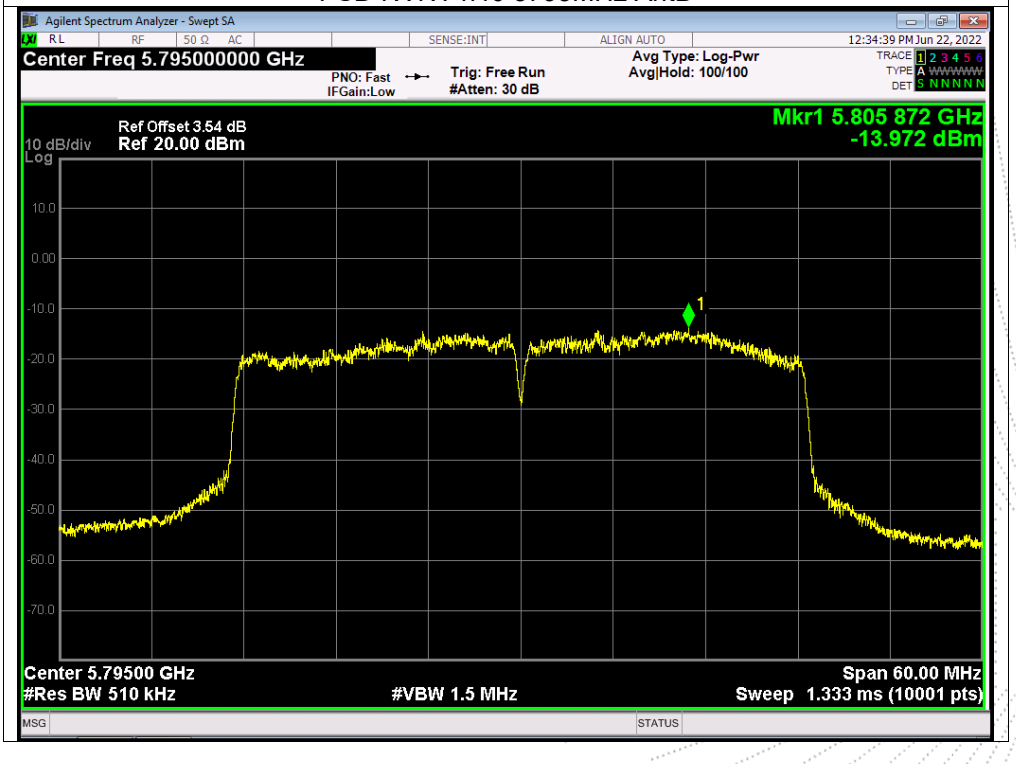
PSD NVNT n20 5825MHz AntB



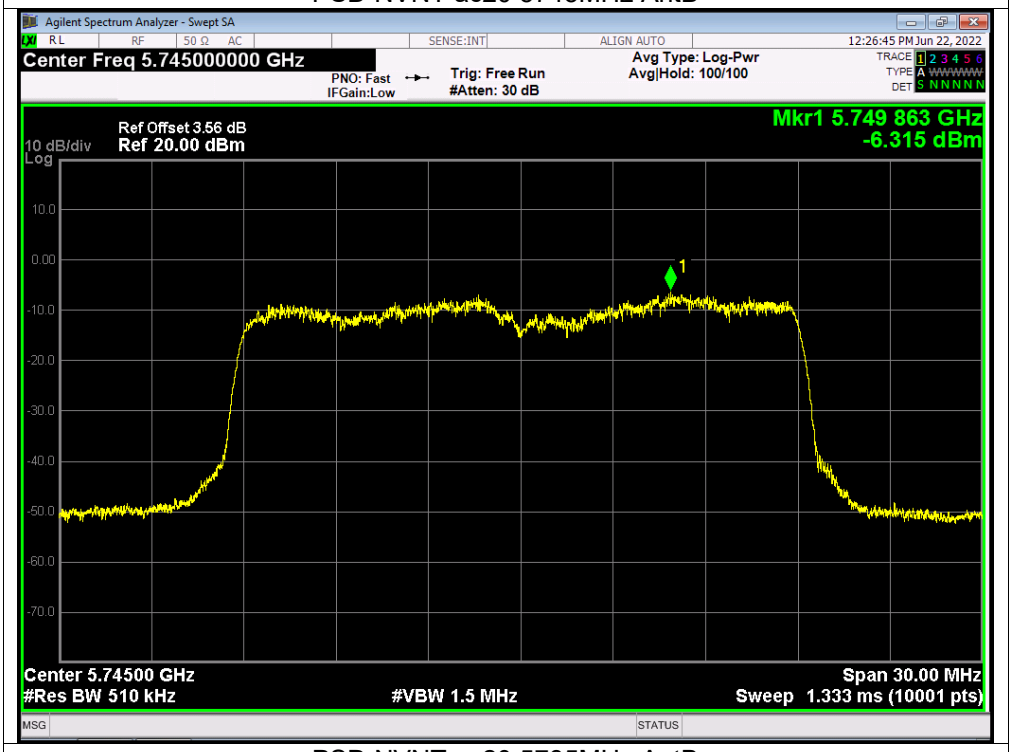
PSD NVNT n40 5755MHz AntB



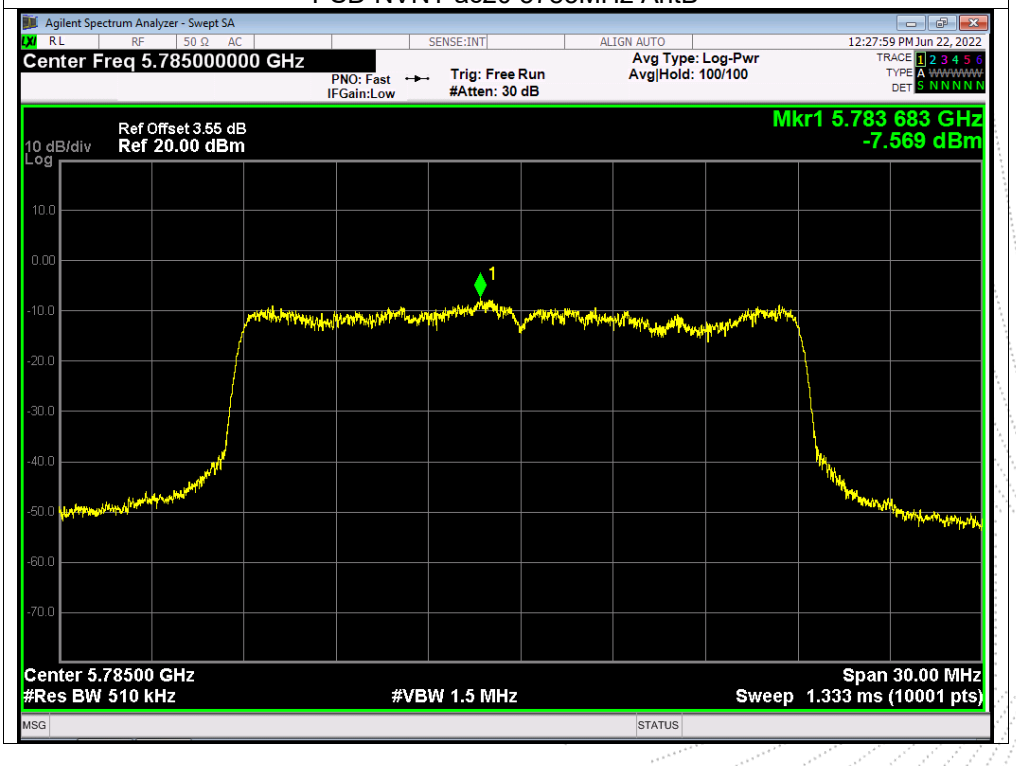
PSD NVNT n40 5795MHz AntB



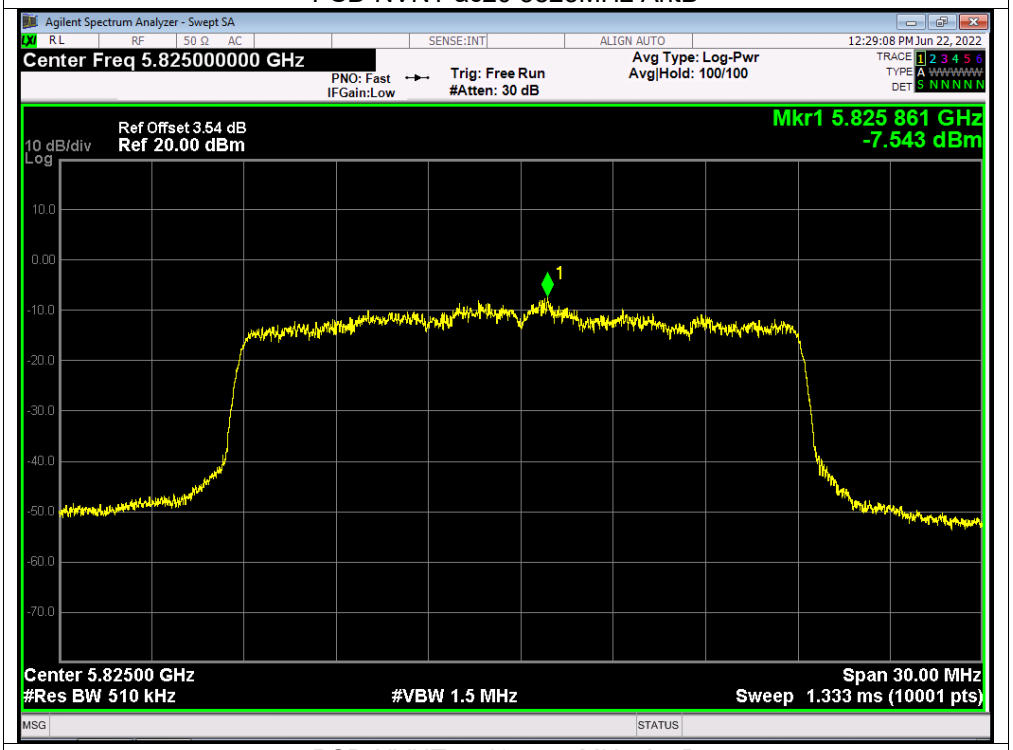
PSD NVNT ac20 5745MHz AntB



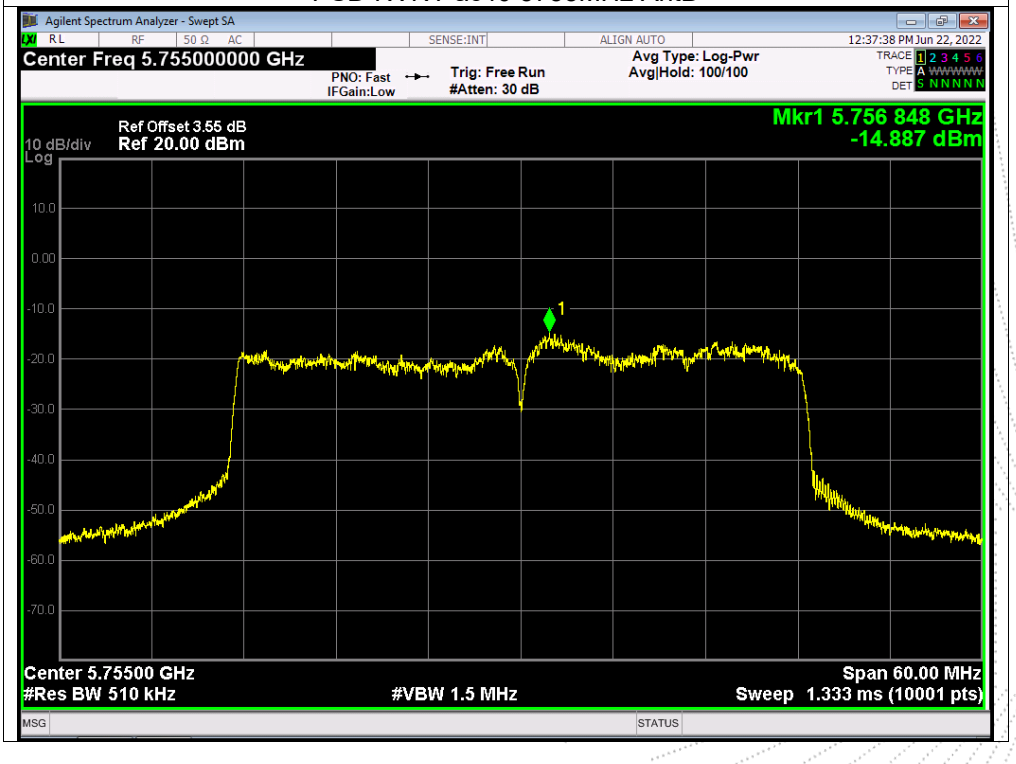
PSD NVNT ac20 5785MHz AntB



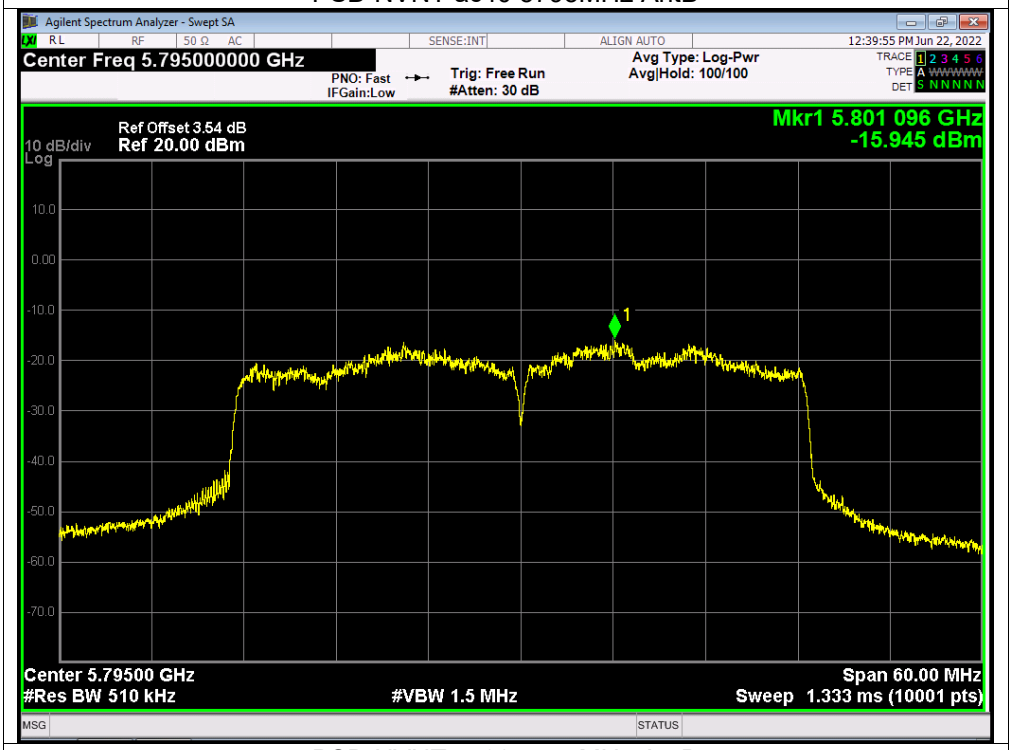
PSD NVNT ac20 5825MHz AntB



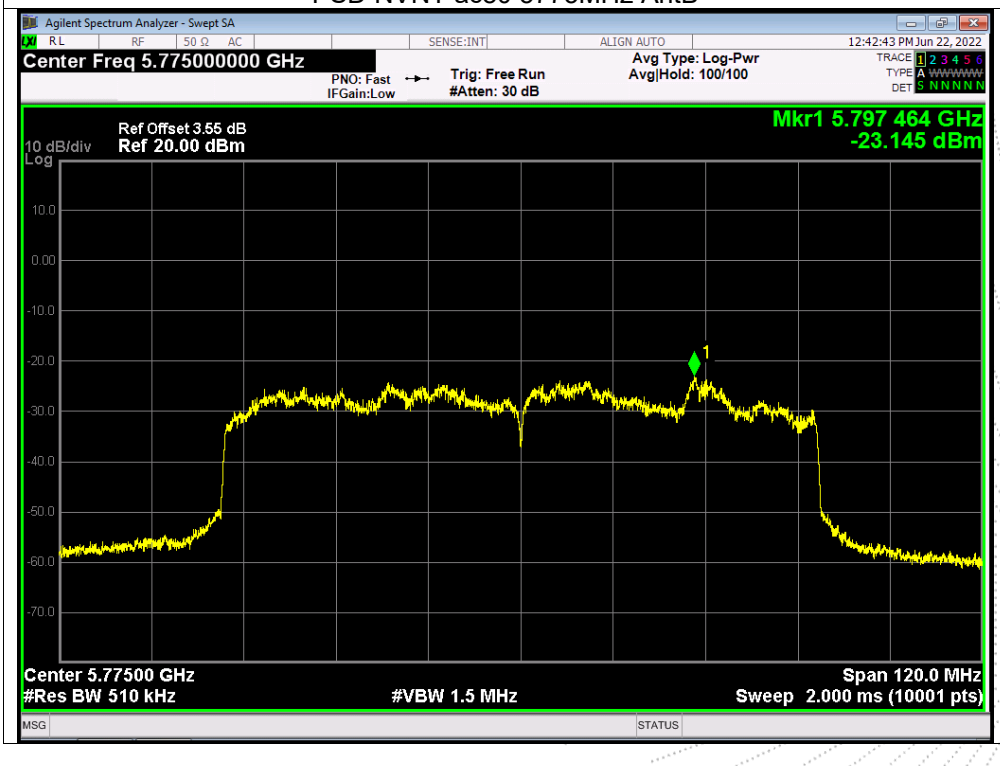
PSD NVNT ac40 5755MHz AntB



PSD NVNT ac40 5795MHz AntB

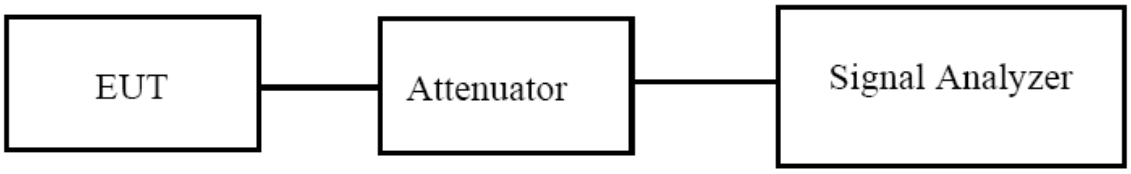


PSD NVNT ac80 5775MHz AntB



9. 26dB & 6dB & 99% Emission Bandwidth

9.1 Block Diagram Of Test Setup



9.2 Limit

The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power
is integrated over the full reference bandwidth.

9.3 Test Procedure

a) Set RBW = approximately 1% of the emission bandwidth.
b) Set the VBW > RBW.
c) Detector = Peak.
d) Trace mode = max hold.
e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.
The following procedure shall be used for measuring (99 %) power bandwidth:
1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW ≥ 3 · RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

9.4 EUT Operating Conditions

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

9.5 Test Result

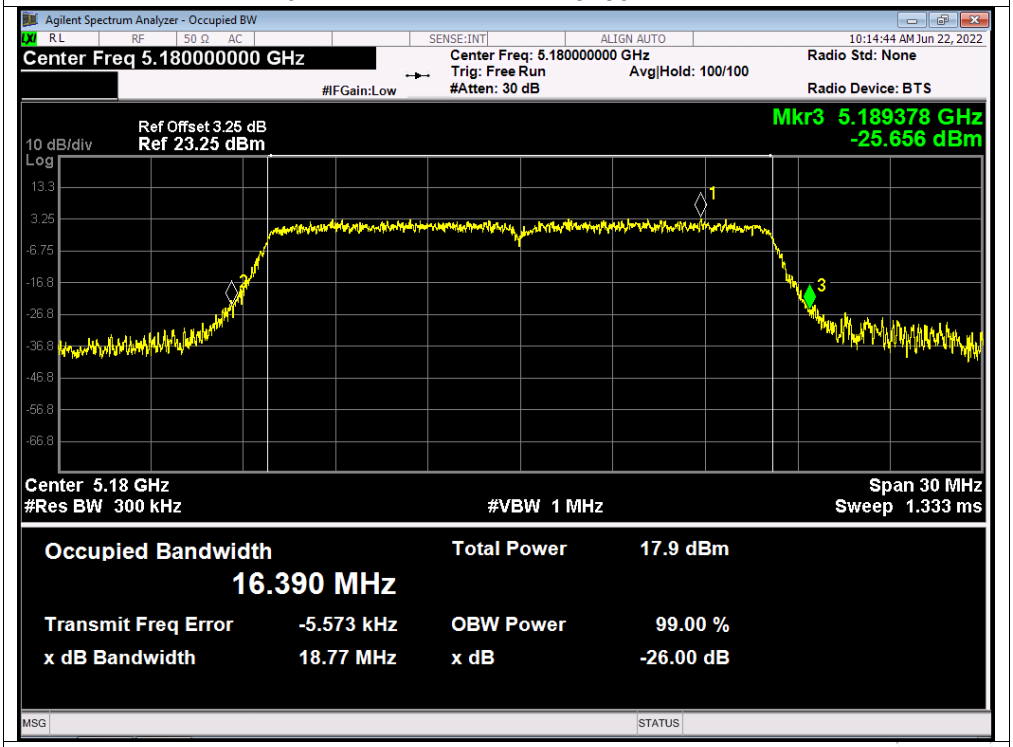
Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	101KPa	Test Voltage:	AC120V/60Hz
Test Mode:	(5180-5240MHz)		

Condition	Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)		Verdict
			Ant A	Ant B	
NVNT	a	5180	18.766	18.711	Pass
NVNT	a	5200	18.684	18.822	Pass
NVNT	a	5240	18.758	18.936	Pass
NVNT	n20	5180	19.404	19.456	Pass
NVNT	n20	5200	19.471	19.558	Pass
NVNT	n20	5240	19.364	19.613	Pass
NVNT	n40	5190	41.995	42.123	Pass
NVNT	n40	5230	41.995	42.495	Pass
NVNT	ac20	5180	19.686	19.44	Pass
NVNT	ac20	5200	19.68	19.455	Pass
NVNT	ac20	5240	19.596	19.661	Pass
NVNT	ac40	5190	42.341	42.092	Pass
NVNT	ac40	5230	42.067	41.566	Pass
NVNT	ac80	5210	**81.295**	81.104	Pass

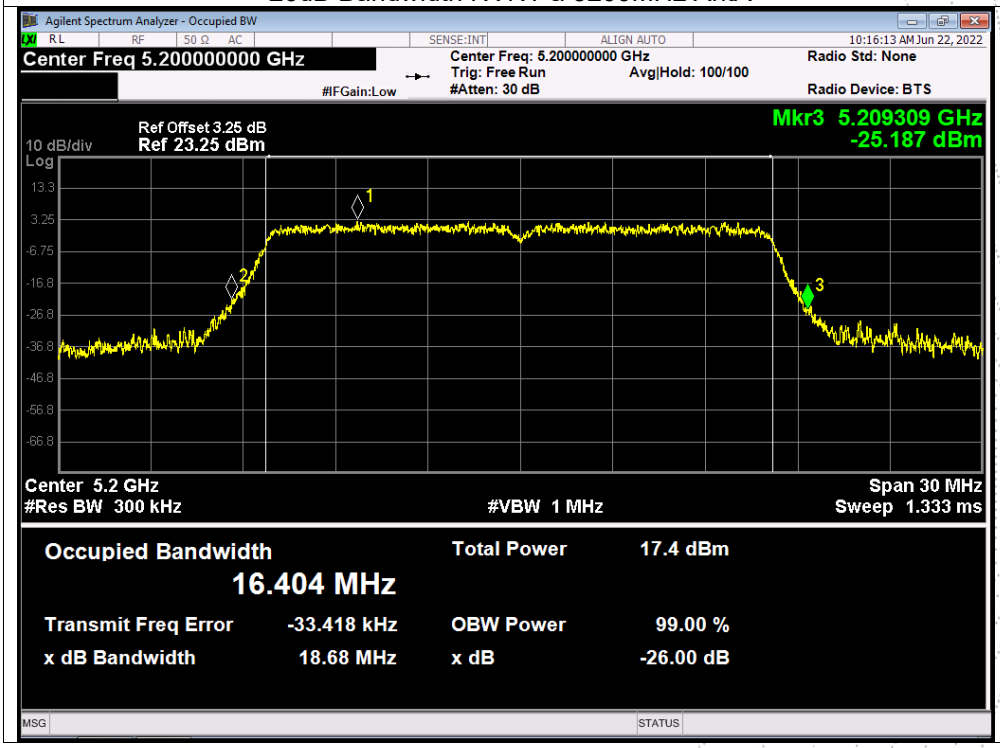
Condition	Mode	Frequency (MHz)	99% OBW (MHz)	
			Ant A	Ant B
NVNT	a	5180	16.342	16.336
NVNT	a	5200	16.342	16.354
NVNT	a	5240	16.345	16.363
NVNT	n20	5180	17.52	17.519
NVNT	n20	5200	17.561	17.543
NVNT	n20	5240	17.517	17.539
NVNT	n40	5190	36.089	36.051
NVNT	n40	5230	35.987	36.033
NVNT	ac20	5180	17.513	17.526
NVNT	ac20	5200	17.537	17.538
NVNT	ac20	5240	17.522	17.528
NVNT	ac40	5190	36.012	36.044
NVNT	ac40	5230	36.004	36.01
NVNT	ac80	5210	74.633	**74.652**

Note: A(B) Represent the value of antenna A and B, The worst data is Antenna A, only shown Antenna A Plot.

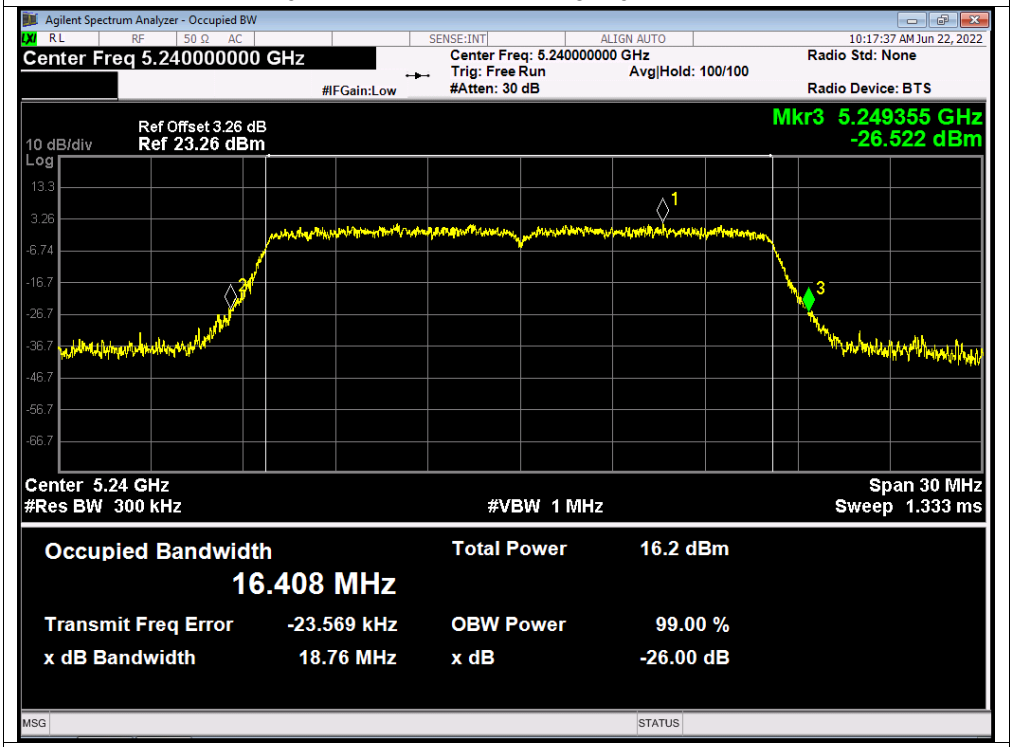
Test Graphs
-26dB Bandwidth NVNT a 5180MHz AntA



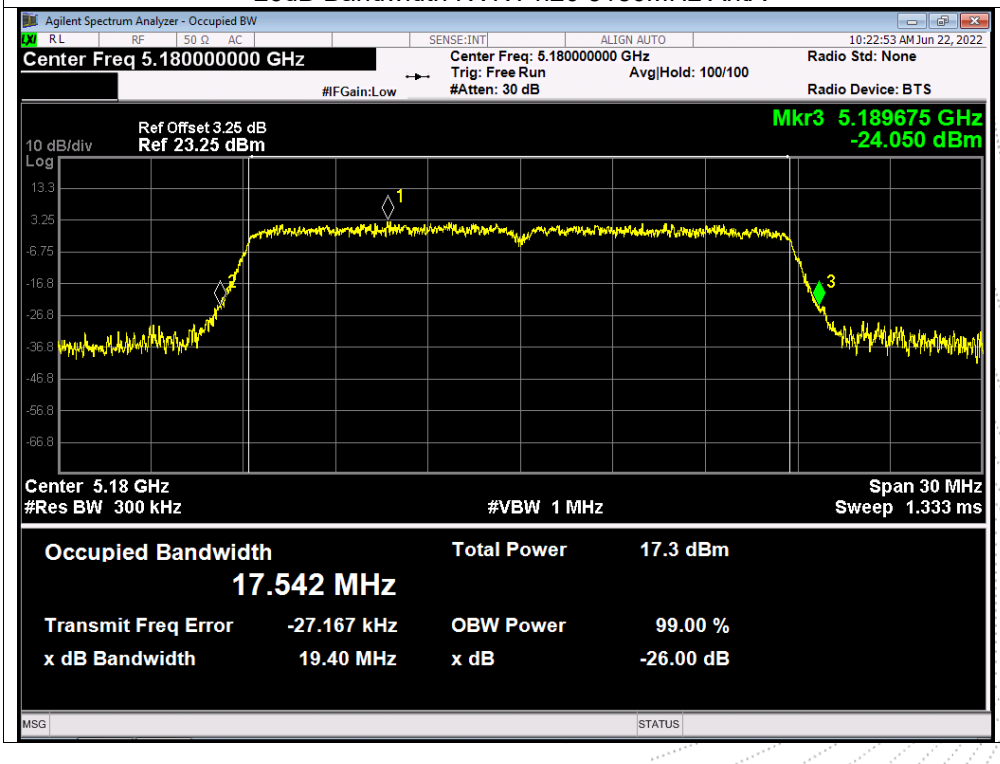
-26dB Bandwidth NVNT a 5200MHz AntA



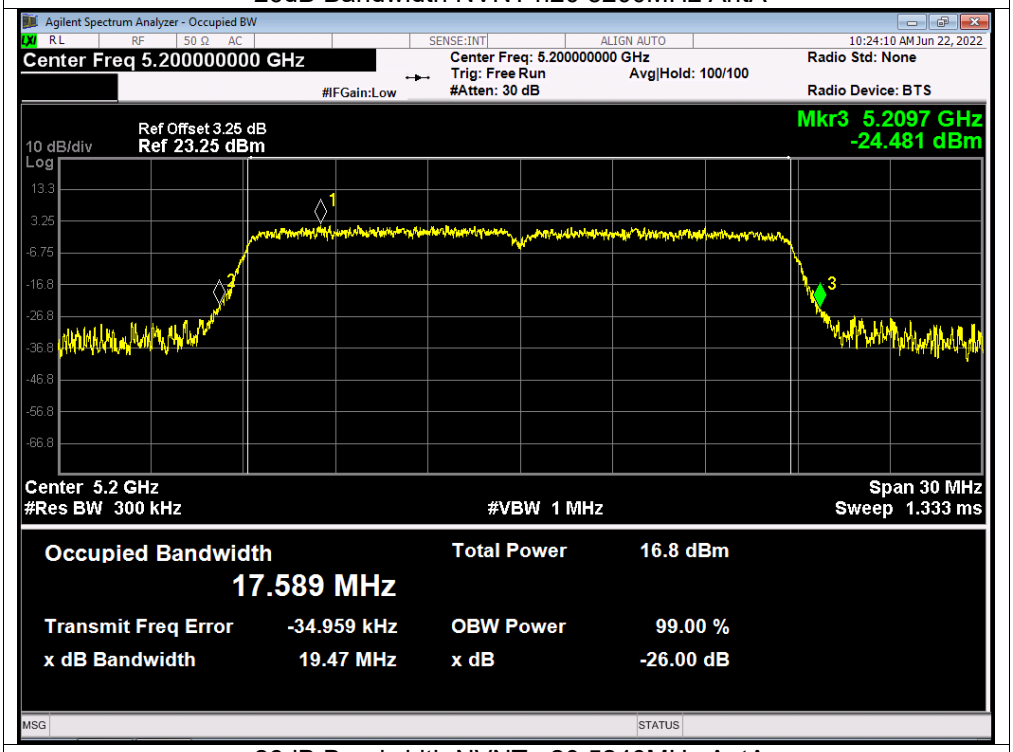
-26dB Bandwidth NVNT a 5240MHz AntA



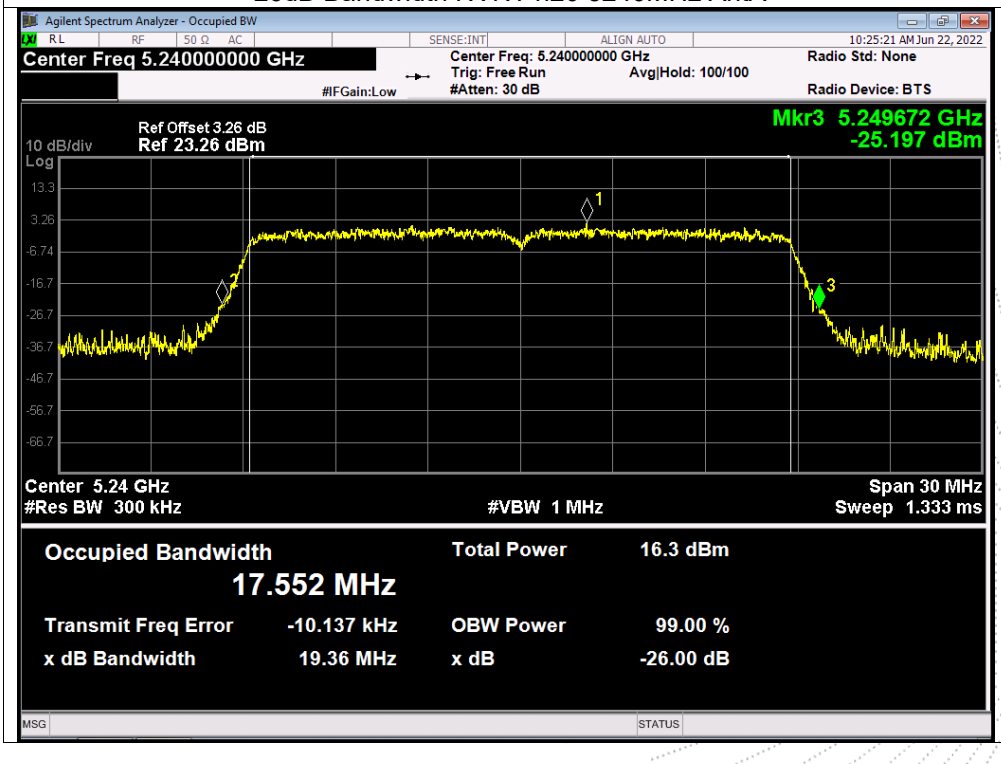
-26dB Bandwidth NVNT n20 5180MHz AntA



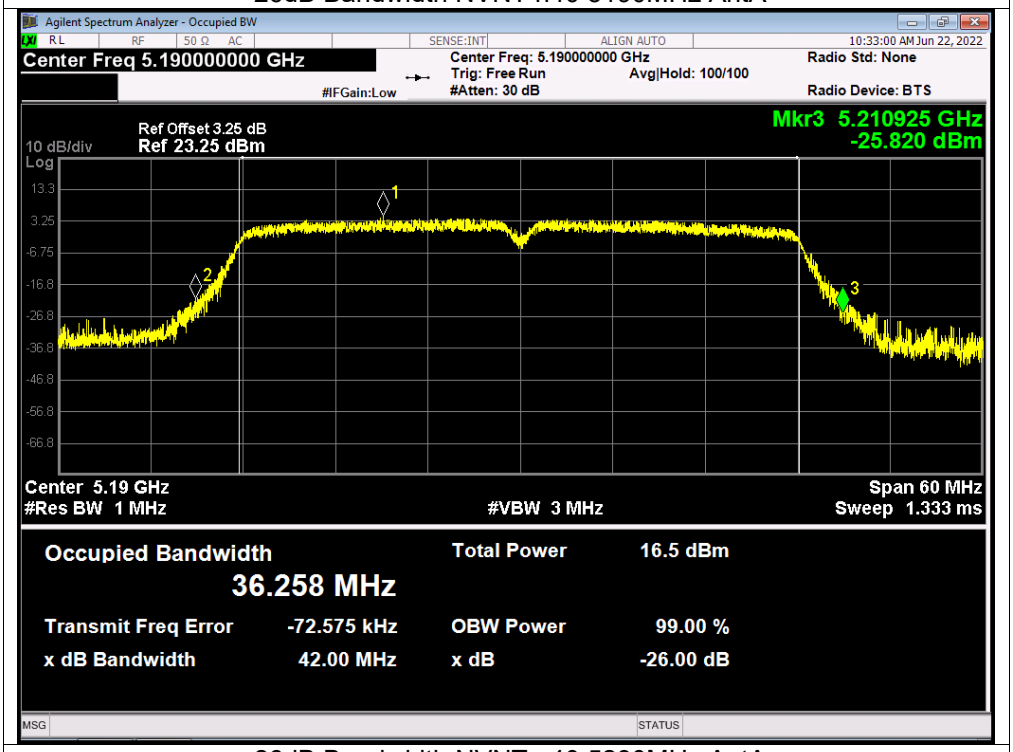
-26dB Bandwidth NVNT n20 5200MHz AntA



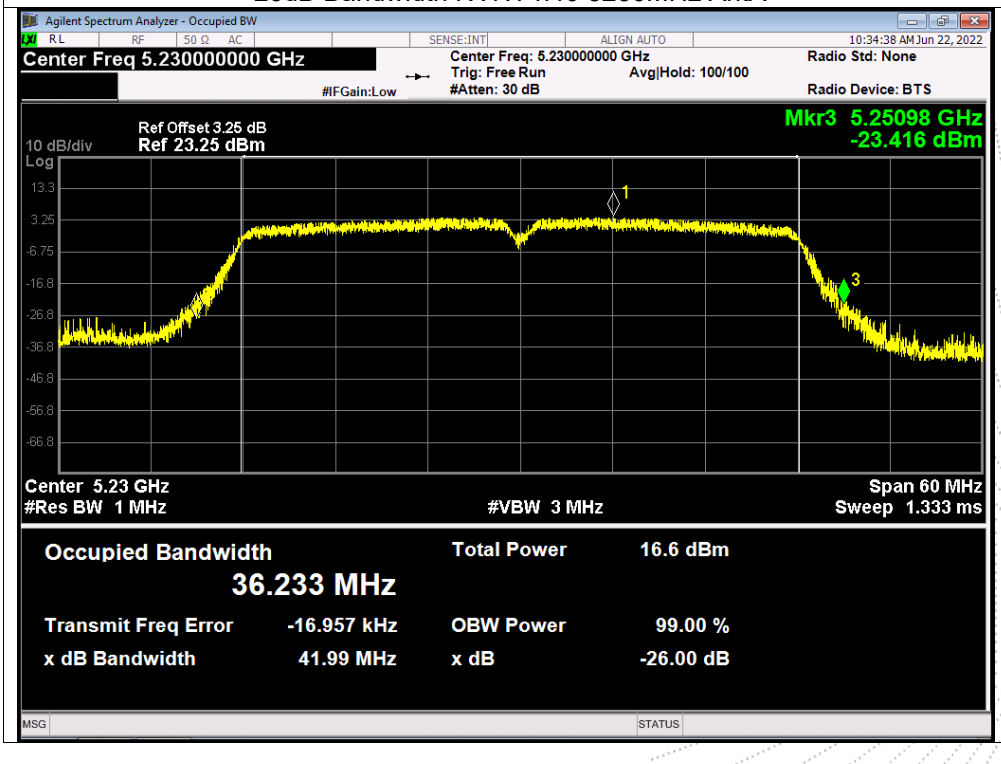
-26dB Bandwidth NVNT n20 5240MHz AntA



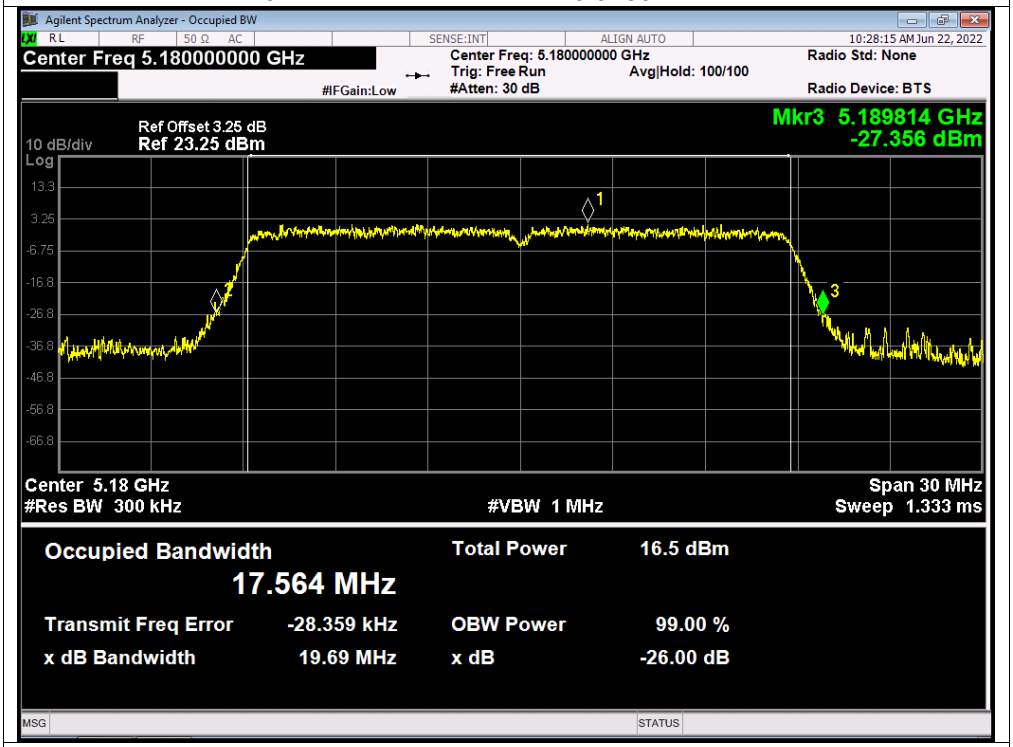
-26dB Bandwidth NVNT n40 5190MHz AntA



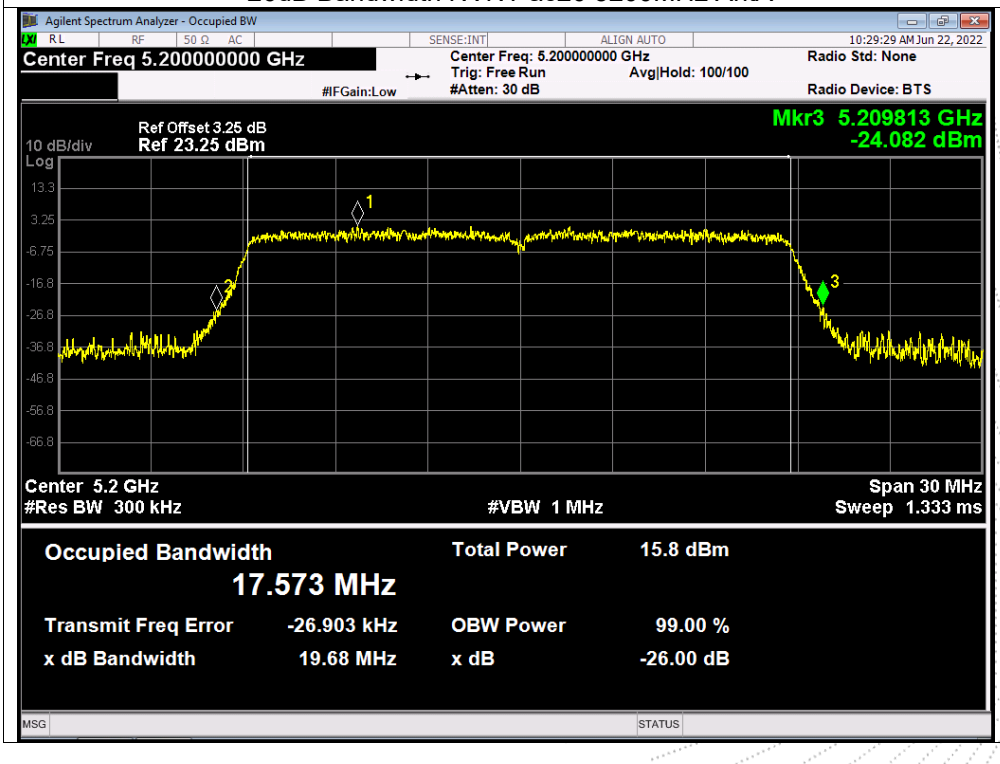
-26dB Bandwidth NVNT n40 5230MHz AntA



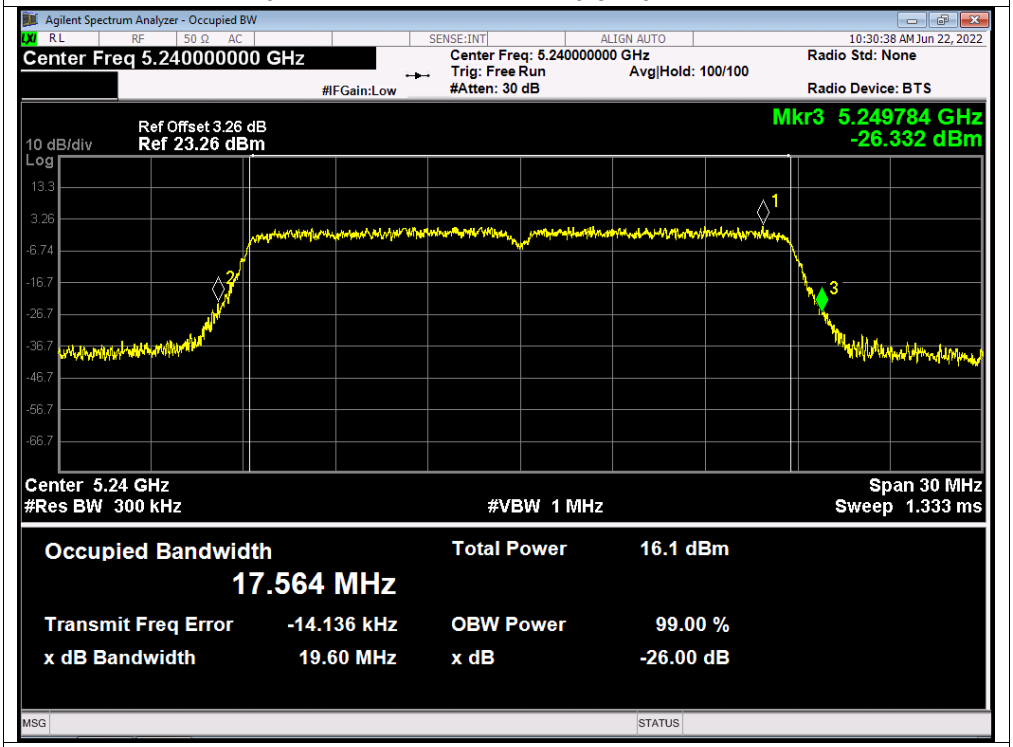
-26dB Bandwidth NVNT ac20 5180MHz AntA



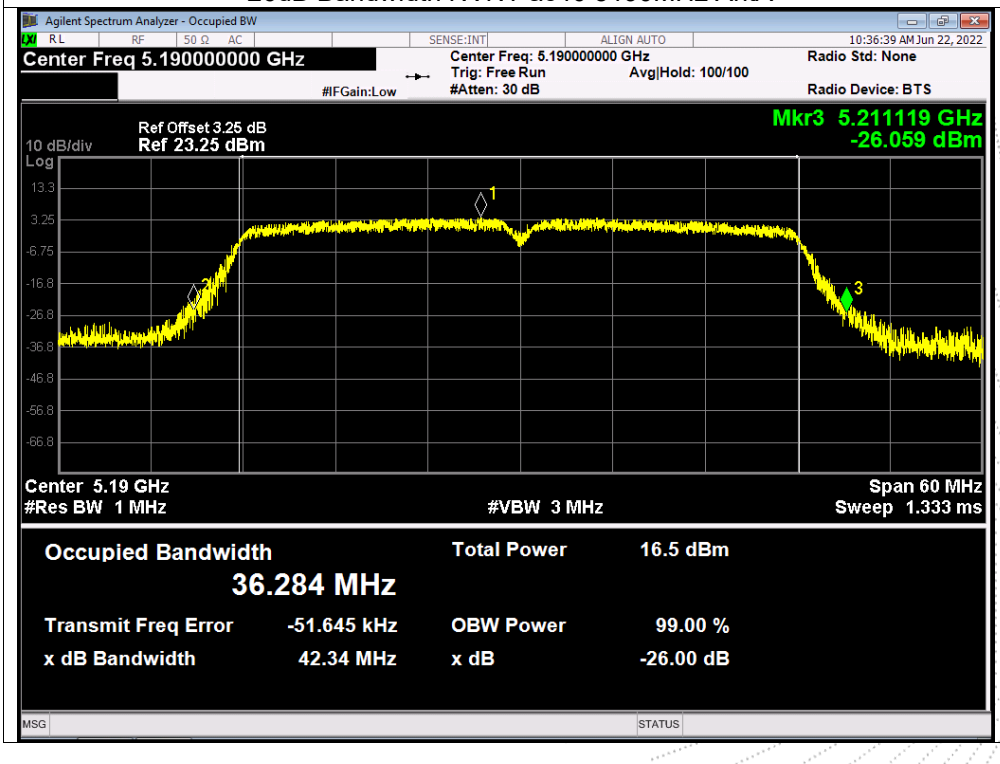
-26dB Bandwidth NVNT ac20 5200MHz AntA



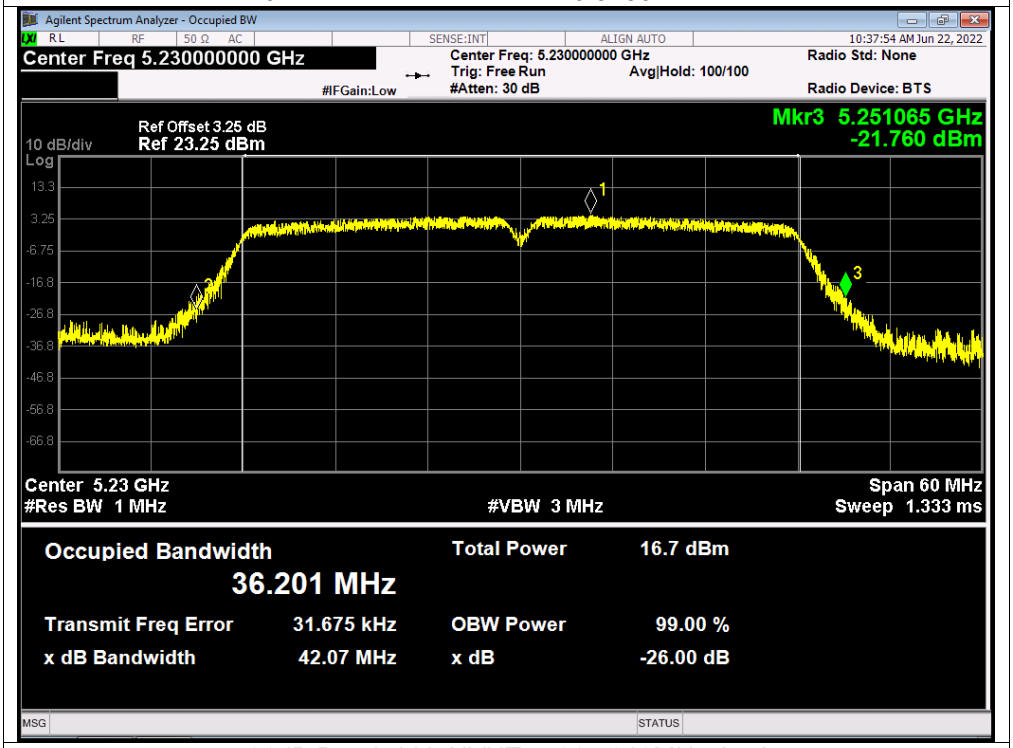
-26dB Bandwidth NVNT ac20 5240MHz AntA



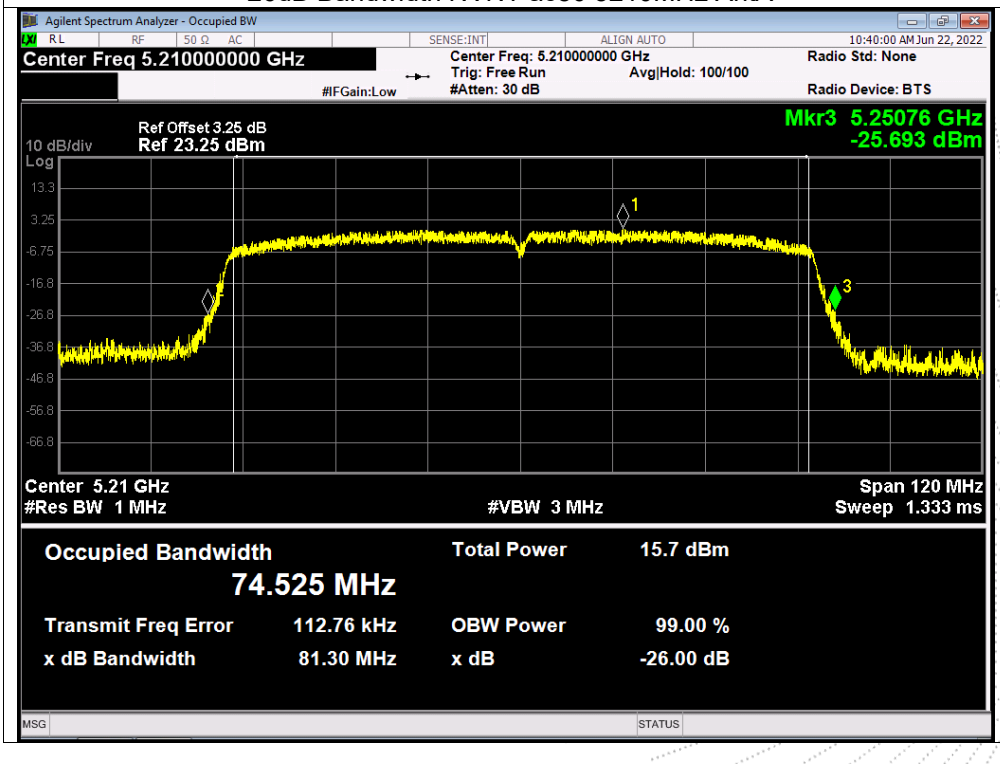
-26dB Bandwidth NVNT ac40 5190MHz AntA



-26dB Bandwidth NVNT ac40 5230MHz AntA

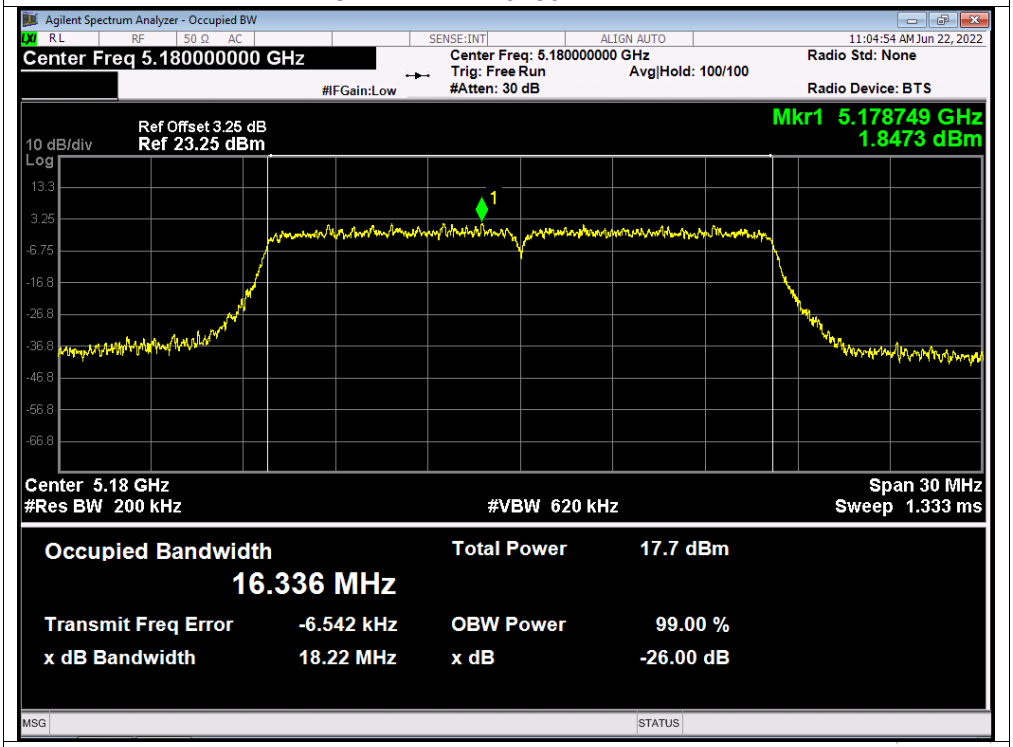


-26dB Bandwidth NVNT ac80 5210MHz AntA

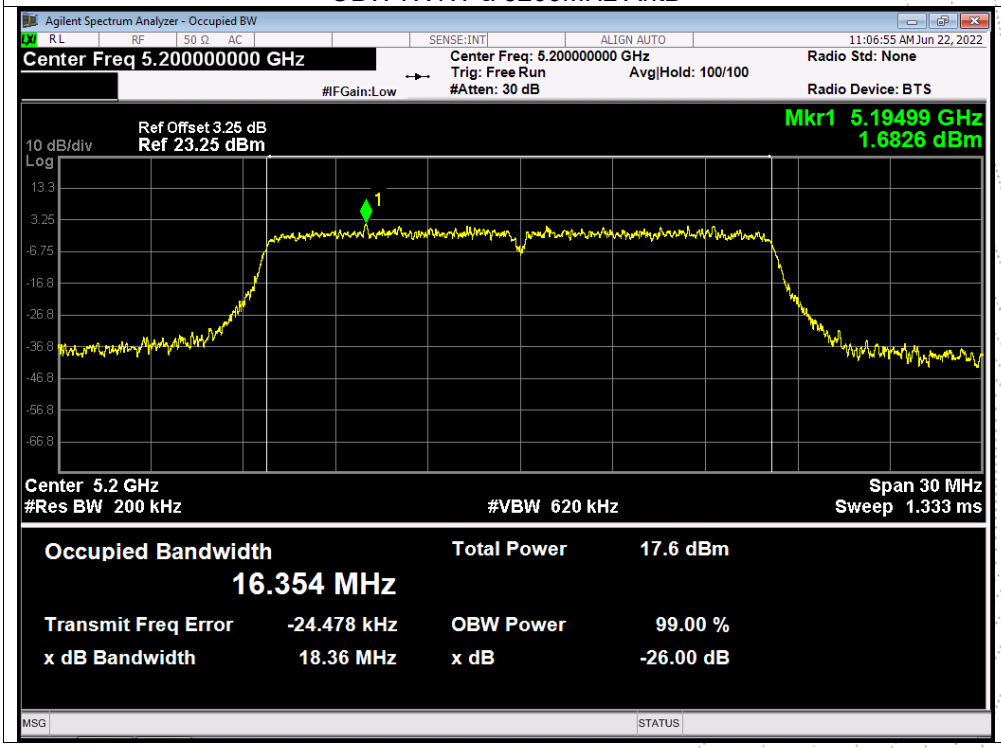


Note: A(B) Represent the value of antenna A and B, The worst data is Antenna B, only shown Antenna B Plot

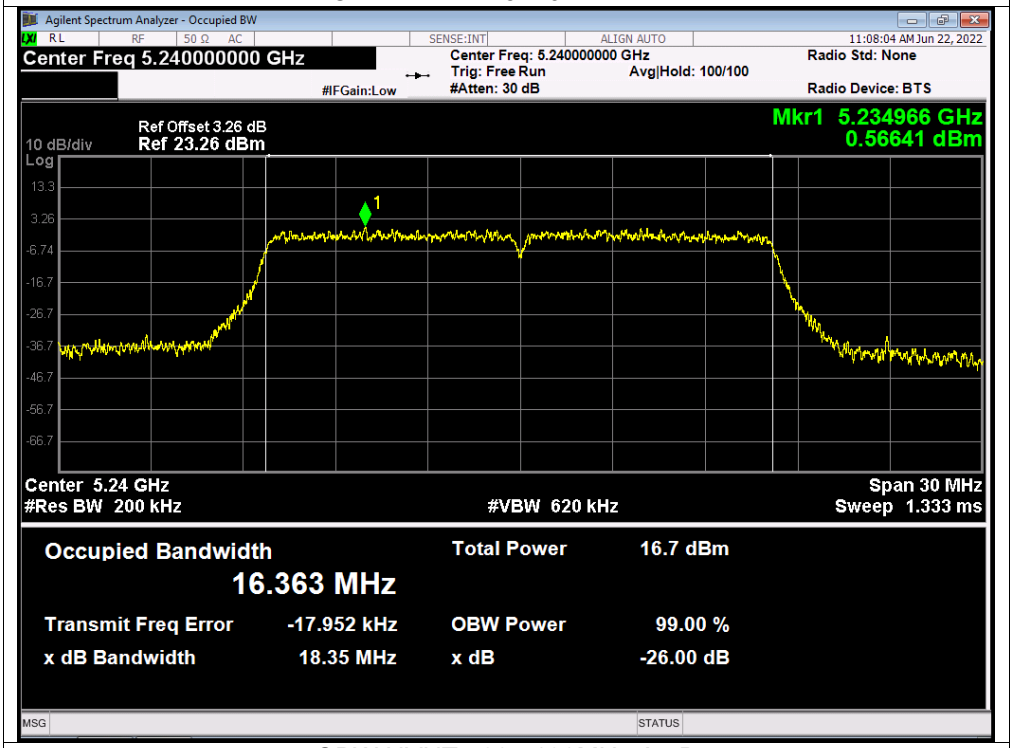
Test Graphs
OBW NVNT a 5180MHz AntB



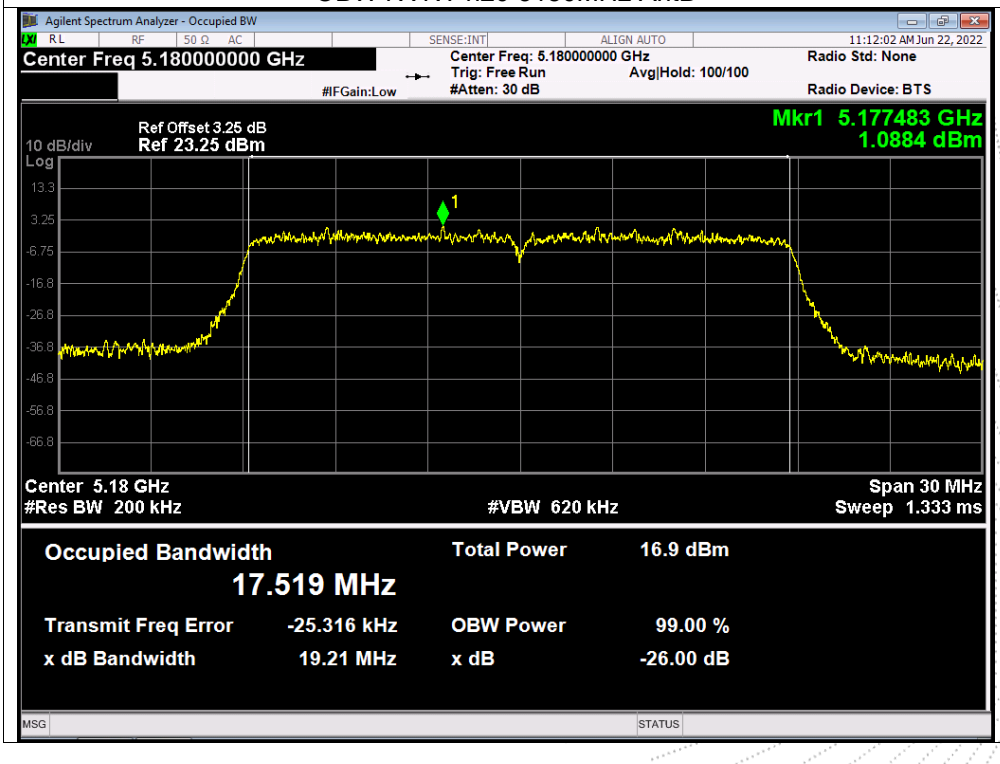
OBW NVNT a 5200MHz AntB



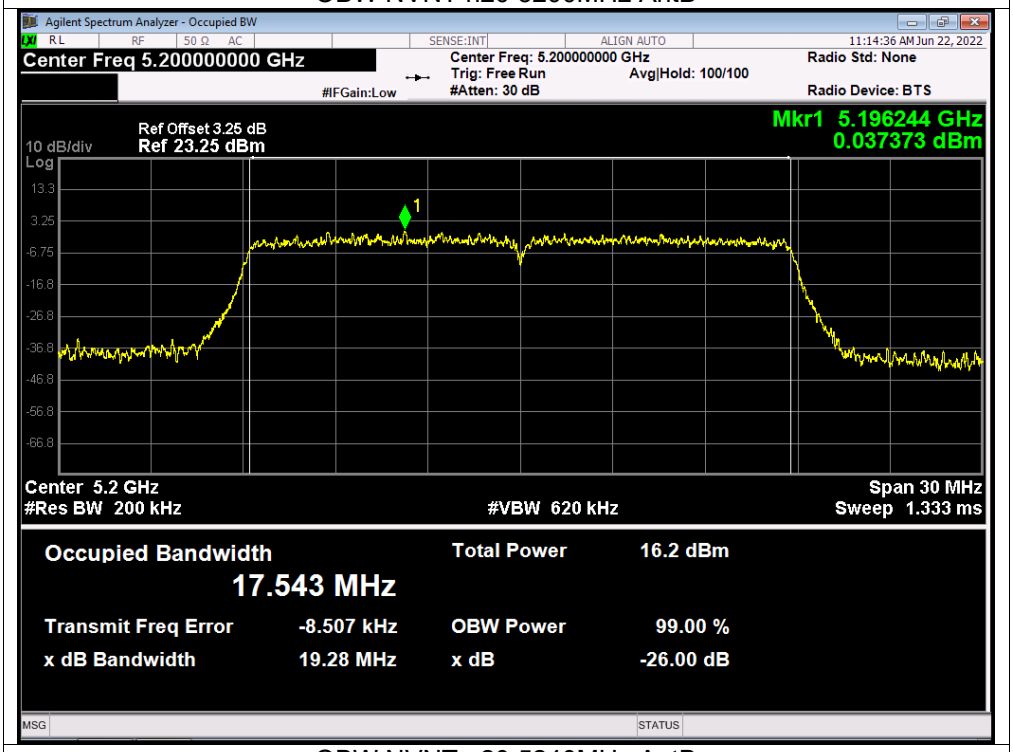
OBW NVNT a 5240MHz AntB



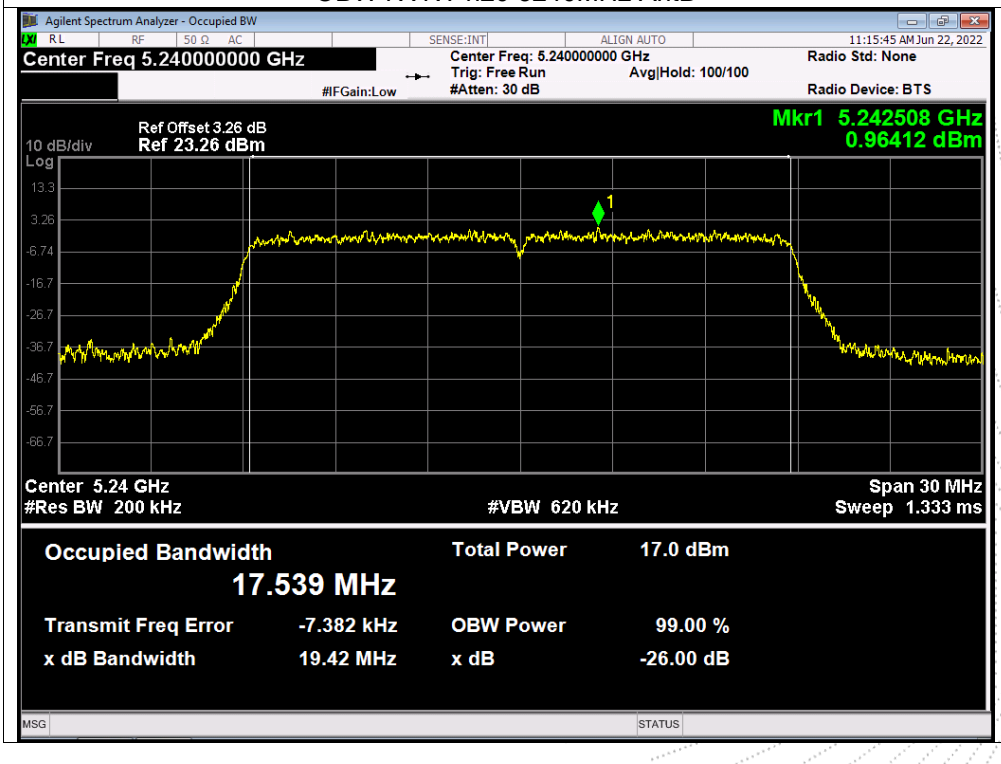
OBW NVNT n20 5180MHz AntB



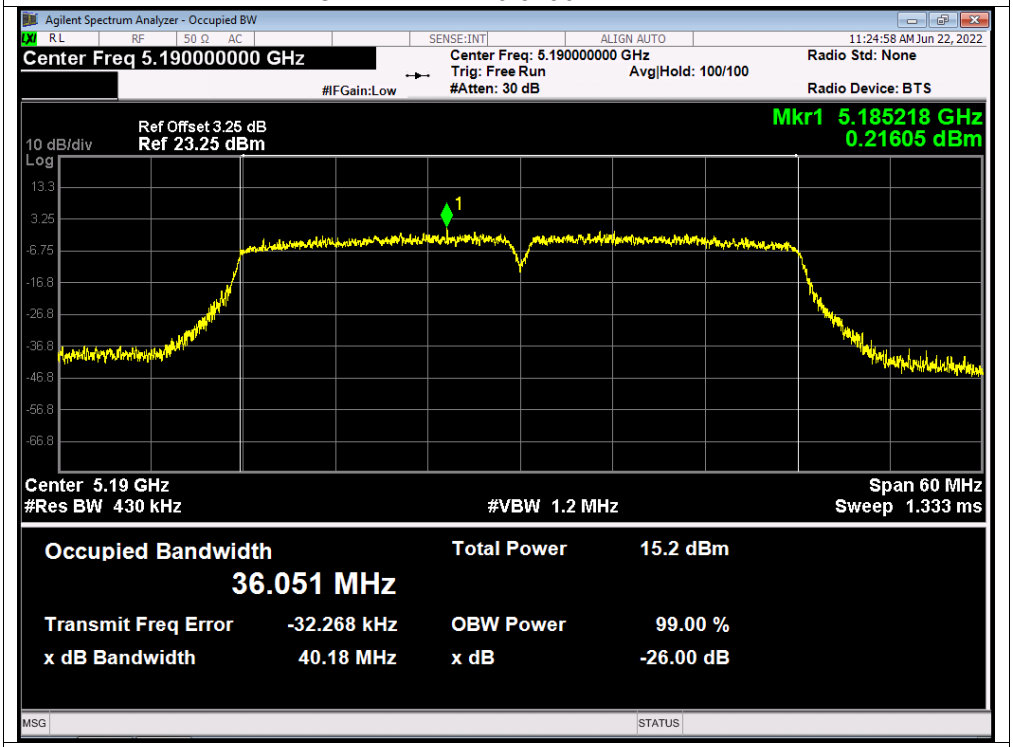
OBW NVNT n20 5200MHz AntB



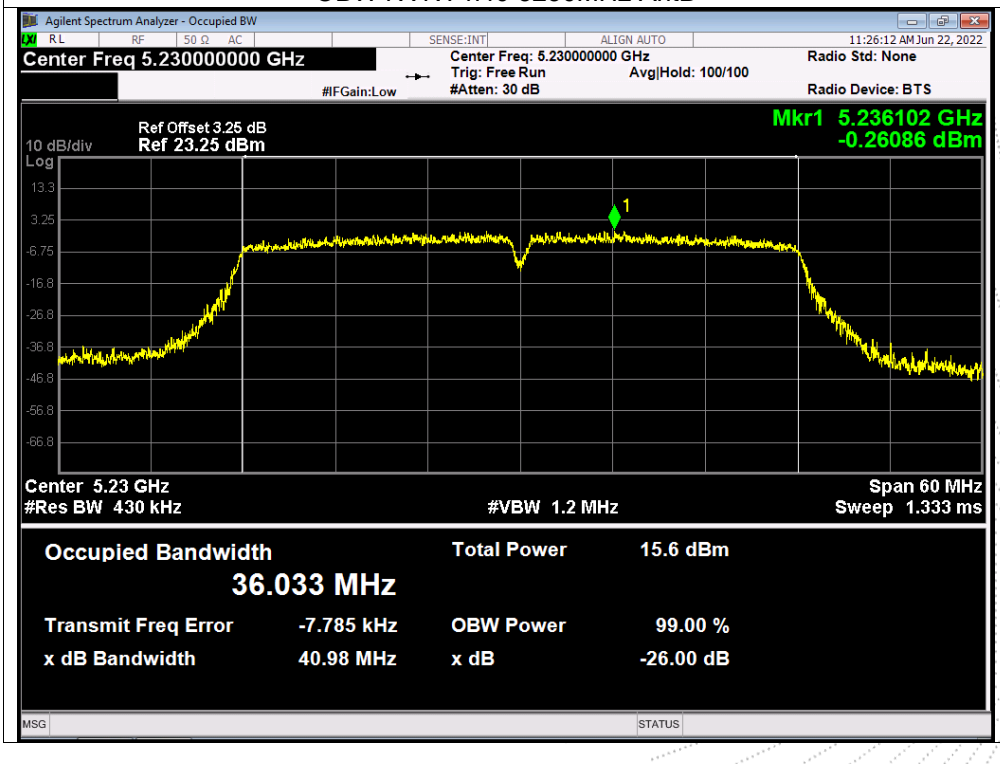
OBW NVNT n20 5240MHz AntB



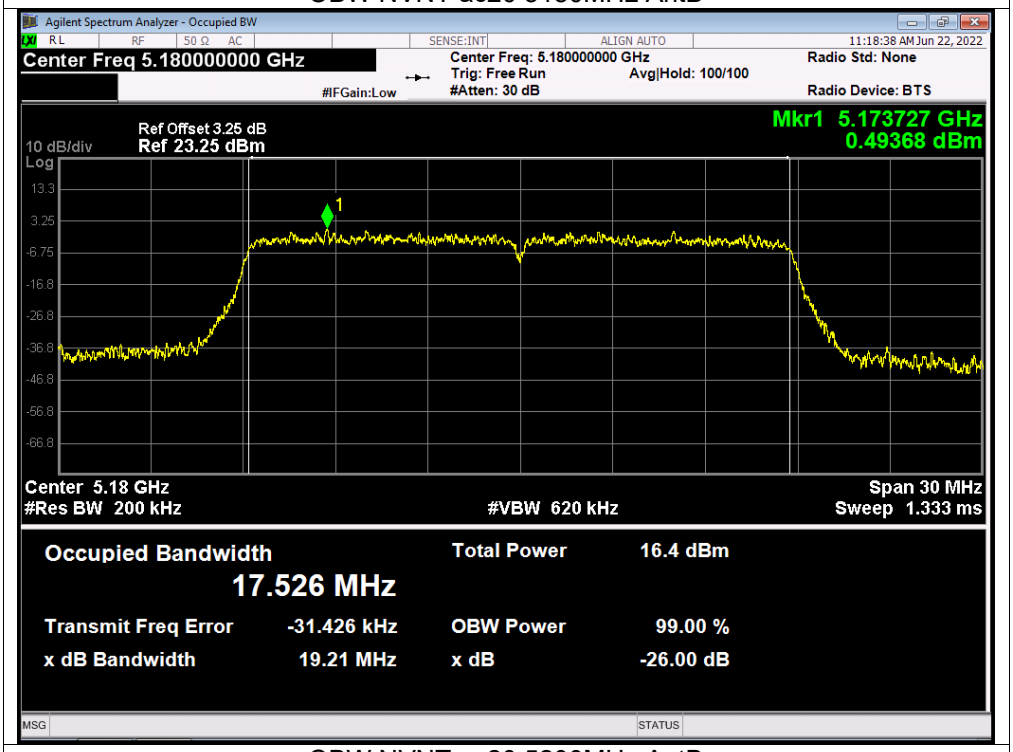
OBW NVNT n40 5190MHz AntB



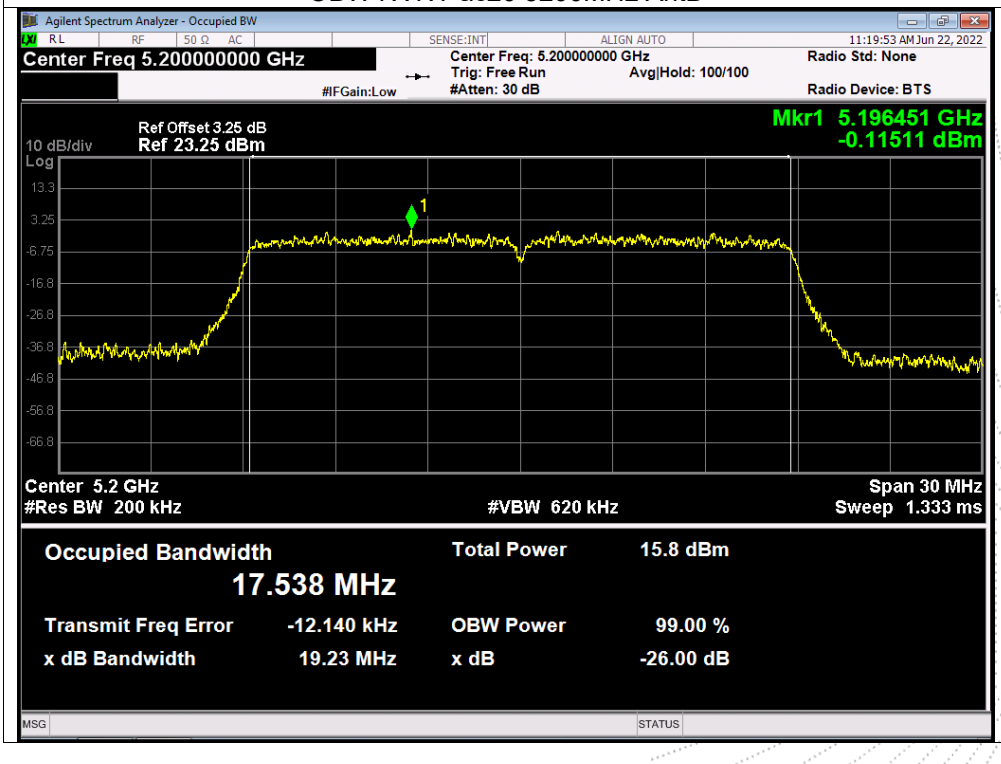
OBW NVNT n40 5230MHz AntB



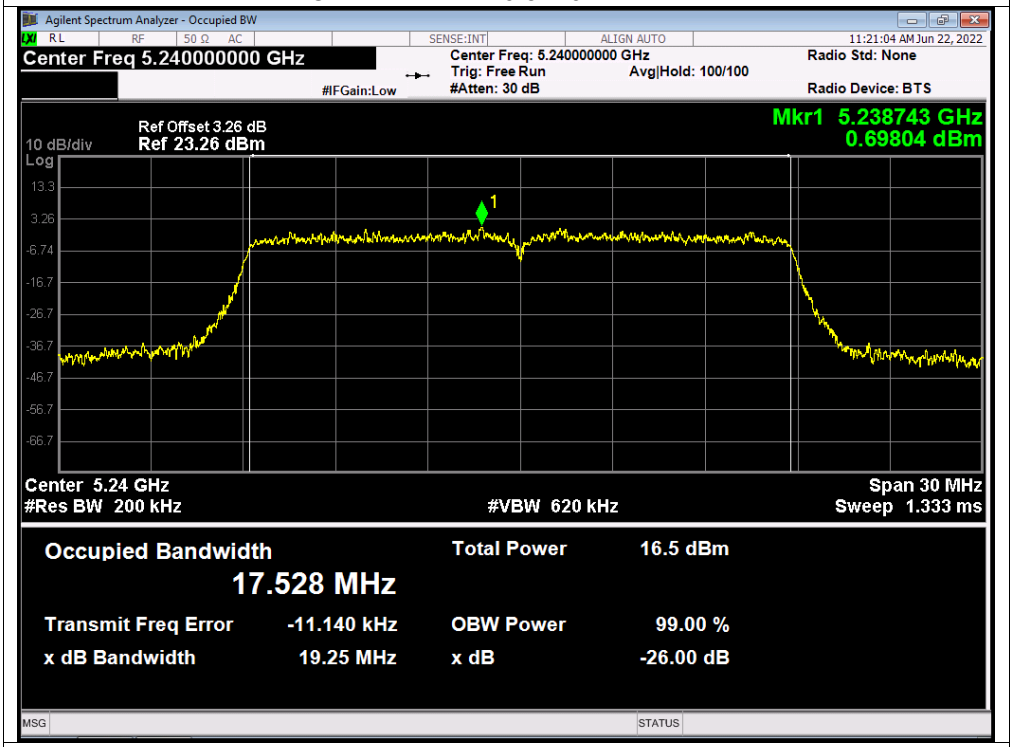
OBW NVNT ac20 5180MHz AntB



OBW NVNT ac20 5200MHz AntB



OBW NVNT ac20 5240MHz AntB



OBW NVNT ac40 5190MHz AntB