FCC Test Report

Application Purpose	:	Original grant
Applicant Name:	:	HUNG WAI PRODUCTS LIMITED
FCC ID	:	2AB6Z-MS-W10
Equipment Type	:	8 inch Windows OS Tablet
Model Name	:	DT080-MS-W10
Report Number	:	FCC17060478A-1
Standard(S)	:	FCC Part 15 Subpart E
Date Of Receipt	:	June 09, 2017
Date Of Issue	:	July 01, 2017

Test By : Dekun Liu

(DekunLiu)

Reviewed By : Sol Qin

(Sol Qin)

Authorized by :

(Michal Ling)

Prepared by : **QTC Certification & Testing Co., Ltd.**
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Registration Number: 588523

REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	July 01, 2017	Valid	Original Report

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1. GENERAL INFORMATION

GENERAL DESCRIPTION OF EUT

Test Model	DT080-MS-W10
Applicant	HUNG WAI PRODUCTS LIMITED
Address	Unit 11, 12/F., New Commerce Centre, 19 On Sum Street, Shatin, Hong Kong
Manufacturer	HUNG WAI ELECTRONICS (HUIZHOU) LTD
Address	3rd floor, NO. 1, Minfeng Road, Huinan High and New Technology Industry Park, Huiao Avenue, Huizhou City, Guangdong
Equipment Type	8 inch Windows OS Tablet
Brand Name	**N/A**
Hardware version:	V02
Software version:	CSR1.0.12
Extreme Temp. Tolerance	-10℃ to +55℃
Adapter Information:	Adapter:PS12F120K1000UD Input: AC100~240V 50/60Hz 0.35A Output:DC 12V⎓1000mA
Battery information:	Li-Polymer Battery : 266177YL Voltage: 3.7V Capacity: 1000mAh Limited Charge Voltage: 4.2V
Operating Frequency	see the below table
Channels	see the below table
Channel Spacing	see the below table
Modulation Type	see the below table
Antenna Type:	detachable antenna
Antenna gain:	-0.55dBi
Data of receipt	June 10, 2017
Date of test	June 20, 2017 to July 01, 2017
Deviation	None
Condition of Test Sample	Normal

EUT Specification:

Items	Description	
Modulation	IEEE 802.11a: OFDM IEEE 802.11n: see the below table IEEE 802.11ac: see the below table	
Data Modulation	IEEE 802.11n: OFDM (BPSK / QPSK / 16QAM / 64QAM) IEEE 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)	
Data Rate (Mbps)	IEEE 802.11a: OFDM 6,9,12,18,24,36,48, and 54 Mbps IEEE 802.11n: MCS 0-15 up to 150 Mbps IEEE 802.11ac: MCS 0-9 up to 866.7 Mbps	
Frequency Range	Band 1: 5150 MHz ~ 5250 MHz Band 4: 5725 MHz ~ 5850 MHz	
Channel Number	13for 20MHz bandwidth ; 6 for 40MHz bandwidth ;	
Communication Mode	☒IP Based (Load Based)	☐Frame Based
TPC Function	☐With TPC	☒Without TPC
Weather Band	☐With 5600~5650MHz	☒Without 5600~5650MHz
Beamforming Function	☐With beamforming	☒Without beamforming
Operating Mode	☐Outdoor access point	☐Indoor access point
	☐Fixed point-to-point access points	☒Mobile and portable client devices
	☐Master	☐Slave with radar detection
	☐Slave without radar detection	

Antenna	One (TX)	
Band width Mode	20 MHz	40 MHz
IEEE 802.11a	V	X
IEEE 802.11n	V	V
IEEE 802.11ac	V	V

Protocol	Number of Transmit Chains (NTX)	Data Rate / MCS
802.11n (HT20)	1	MCS 0-15
802.11n (HT40)	1	MCS 0-15
802.11ac (HT20)	1	MCS 0-9
802.11ac (HT40)	1	MCS 0-9

Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40(HT: High Throughput).
Then EUT supports HT20 and HT40.
Note 2: Modulation modes consist of below configuration:
HT20/HT40: IEEE 802.11n
HT20/HT40: IEEE 802.11ac

We hereby certify that:

All measurement facilities used to collect the measurement data are located atQTC Certification & Testing Co., Ltd.

Registration Number: 588523

The data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C 63.4:2014 and TIA/EIA 603. The sample tested as described in this report is in compliance with the FCC Rules Part15 Subpart E.
Allthe testingwas referenced KDB NO. 789033.
The test results of this report relate only to the tested sample identified in this report.

2. TEST DESCRIPTION

2.1MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement **y ±U**，where expended uncertainty **U** is based on a standard uncertainty multiplied by a coverage factor of **k=2**，providing a level of confidence of approximately **95** %。

No.	Item	Uncertainty
1	Conducted Emission Test	±3.2dB
2	RF power,conducted	±0.16dB
3	Spurious emissions,conducted	±0.21dB
4	All emissions,radiated(<1G)	±4.7dB
5	All emissions,radiated(>1G)	±4.7dB
6	Temperature	±0.5°C
7	Humidity	±2%

2.2 DESCRIPTION OF TEST MODES

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
Mode 2	802.11n20
Mode 3	802.11n40
Mode 4	802.11ac20
Mode 5	802.11ac40

For Conducted Emission	
Final Test Mode	Description
Mode 1	802.11a

For Radiated Emission	
Final Test Mode	Description
Mode 1	802.11a
Mode 2	802.11n20
Mode 3	802.11n40
Mode 4	802.11ac20
Mode 5	802.11ac40

Note:

(1) The measurements are performed at the highest, lowest available channels.

(2) The EUT use new battery.

(3) Record the worst case of each test item in this report.

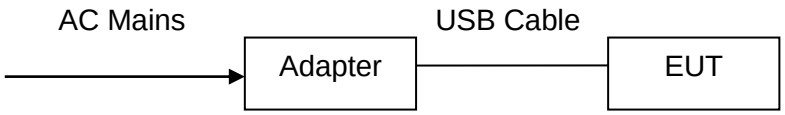
(4) When we test the equipment, duty cycle≥98%.

2.3 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 of FHSS

Test Software	N/A											
Test program	*#3646633#*											
Mode	Test Frequency (MHz)											
	NCB: 20MHz											
802.11a	5180 MHz	5240 MHz	5745 MHz	5825 MHz								
802.11n MCS0 VHT20	5180 MHz	5240 MHz	5745 MHz	5825 MHz								
802.11ac MCS9 VHT20	5180 MHz	5240 MHz	5745 MHz	5825 MHz								
Mode	NCB: 40MHz											
802.11n MCS0 VHT40	5190 MHz	5230 MHz	5755 MHz	5795 MHz								
802.11ac MCS9 VHT40	5190 MHz	5230 MHz	5755 MHz	5795 MHz								
During testing, Channel and Power Controlling Software provided by the customer was used to control theoperating channel as well as the output power level. The RF output power selection is for the setting of RFoutput power expected by the customer and is going to be fixed on the firmware of the final end product.												

2.4CONFIGURATION OF SYSTEM UNDER TEST



(EUT: 8 inch Windows OS Tablet)

I/O Port of EUT			
I/O Port Type	**Q'TY**	**Cable**	**Tested with**
USB port	1	1m USB cable, unshielded	1
Power	1	1m	1

2.5 DESCRIPTION OF SUPPORT UNITS (CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
1	Adapter	/	PS12F120K1000UD	/	/
2	Earphone	/	N/A	/	/

Note:

(1) The support equipment was authorized by Declaration of Confirmation.
(2) For detachable type I/O cable should be specified the length in cm in『Length』column.
(3) "YES" is means "shielded" "with core"; "NO" is means "unshielded" "without core".
(4) The adapter supply by the applicant.

3.SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 Subpart C&E			
Standard Section	Test Item	Judgment	Remark
2.1049 15.403(i)	26dB & 99% Bandwidth	PASS	Complies
15.407(e)	6dB Spectrum Bandwidth	PASS	Complies
15.407(a)	Maximum Conducted Output Power	PASS	Complies
15.407(a)	Power Spectral Density	PASS	Complies
15.407(b)	Unwanted Emissions	PASS	Complies
15.207	AC Conducted Emission	PASS	Complies
15.407(g)	Frequency Stability	PASS	Complies
15.407(c)	Automatically Discontinue Transmission	PASS	Complies
15.203 & 15.407(a)	Antenna Requirement	PASS	Complies
15.407(h)	Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS)	PASS	Complies

NOTE:

(1)" N/A" denotes test is not applicable in this test report.

4. MEASUREMENT INSTRUMENTS

NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	**Calibration Date**	**Calibration Due.**
EMI Test Receiver	R&S	ESCI	100005	08/19/2016	08/18/2017
LISN	AFJ	LS16	16010222119	08/19/2016	08/18/2017
LISN(EUT)	Mestec	AN3016	04/10040	08/19/2016	08/18/2017
Universal Radio Communication Tester	R&S	CMU 200	1100.0008.02	08/19/2016	08/18/2017
Coaxial cable	Megalon	LMR400	N/A	08/12/2016	08/11/2017
GPIB cable	Megalon	GPIB	N/A	08/12/2016	08/11/2017
Spectrum Analyzer	R&S	FSU	100114	08/19/2016	08/18/2017
Pre Amplifier	H.P.	HP8447E	2945A02715	10/13/2016	10/12/2017
Pre-Amplifier	CDSI	PAP-1G18-38	--	10/13/2016	10/12/2017
Bi-log Antenna	SUNOL Sciences	JB3	A021907	09/13/2016	09/12/2017
9*6*6 Anechoic	--	--	--	08/21/2016	08/20/2017
Horn Antenna	COMPLIANCE ENGINEERING	CE18000	--	09/13/2016	09/12/2017
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-631	08/23/2016	08/22/2017
Cable	TIME MICROWAVE	LMR-400	N-TYPE04	04/25/2017	04/24/2018
System-Controller	CCS	N/A	N/A	N.C.R	N.C.R
Turn Table	CCS	N/A	N/A	N.C.R	N.C.R
Antenna Tower	CCS	N/A	N/A	N.C.R	N.C.R
RF cable	Murata	MXHQ87WA3000	-	08/21/2016	08/20/2017
Loop Antenna	EMCO	6502	00042960	08/22/2016	08/21/2017
Horn Antenna	SCHWARZBECK	BBHA 9170	1123	08/19/2016	08/18/2017
Power meter	Anritsu	ML2487A	6K00003613	08/23/2016	08/22/2017
Power sensor	Anritsu	MX248XD	--	08/19/2016	08/18/2017

5. EMC EMISSION TEST

5.1 CONDUCTED EMISSION MEASUREMENT

5.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

FREQUENCY (MHz)	Conducted limit (dBμV)		Conducted limit (dBμV)
	Quasi-peak	Quasi-peak	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

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

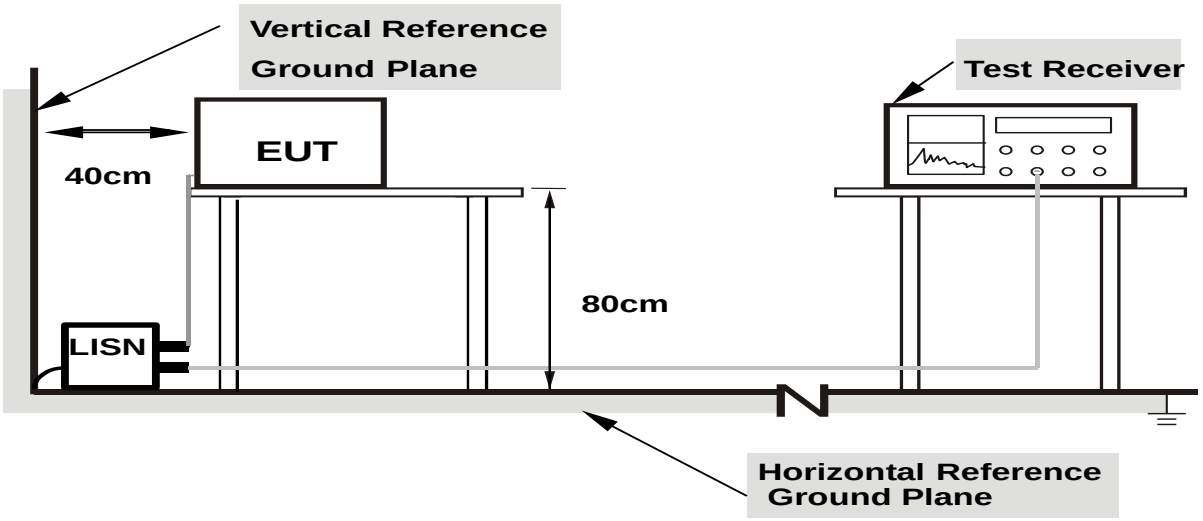
5.1.2 TEST PROCEDURE

a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

5.1.3 DEVIATION FROM TEST STANDARD

No deviation

5.1.4 TEST SETUP



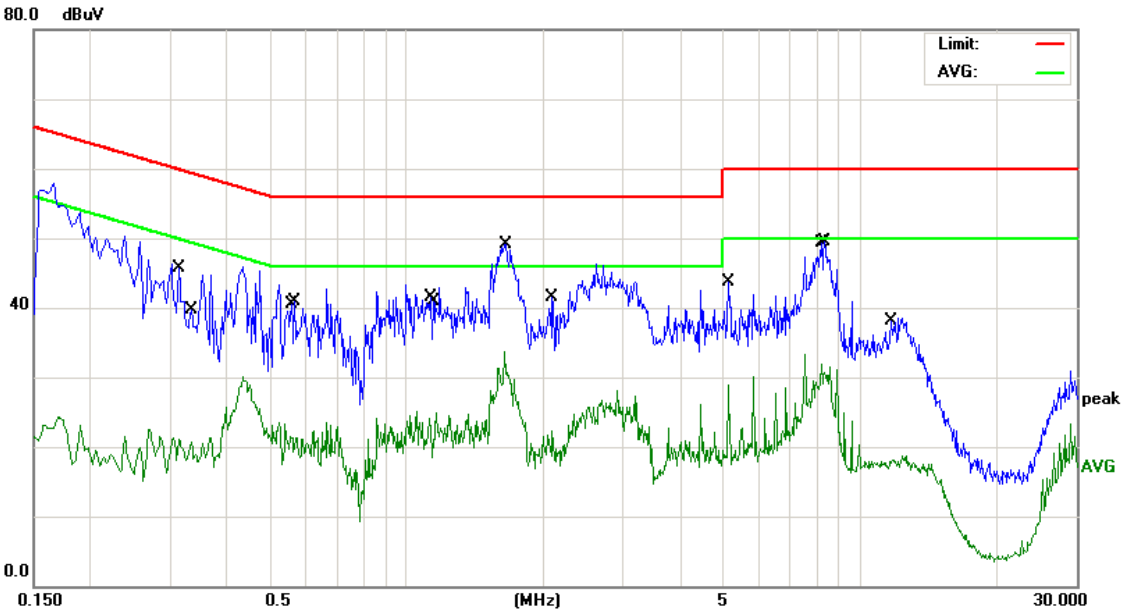
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

5.1.5EUT 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.

5.1.6TEST RESULTS

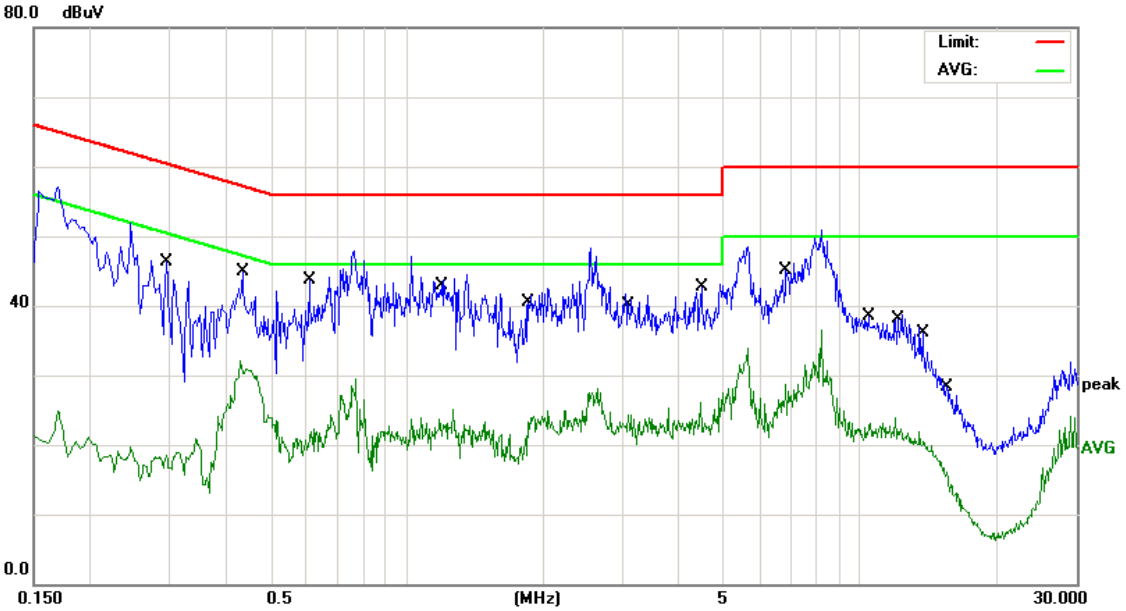
EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	26 ℃	RelativeHumidity	54%
Pressure	1010hPa	Phase	L
Test Date	June 26, 2017	Test Mode	Mode 1



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.3140	34.68	11.05	45.73	59.86	-14.13	QP
2		0.3339	9.70	11.03	20.73	49.35	-28.62	AVG
3		0.5540	10.63	10.79	21.42	46.00	-24.58	AVG
4		0.5658	30.04	10.79	40.83	56.00	-15.17	QP
5		1.1339	30.98	10.62	41.60	56.00	-14.40	QP
6		1.1619	14.23	10.62	24.85	46.00	-21.15	AVG
7		1.6419	23.00	10.60	33.60	46.00	-12.40	AVG
8		2.0939	30.91	10.59	41.50	56.00	-14.50	QP
9		5.1379	33.09	10.53	43.62	60.00	-16.38	QP
10		8.2098	21.29	10.57	31.86	50.00	-18.14	AVG
11	*	8.3619	38.85	10.57	49.42	60.00	-10.58	QP
12		11.8658	7.62	10.58	18.20	50.00	-31.80	AVG

Remark: All the modes have been investigated, and only worst mode is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	26 ℃	Relative Humidity	54%
Pressure	1010hPa	Phase	N
Test Date	June 26, 2017	Test Mode	Mode 1



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.2939	35.24	11.08	46.32	60.41	-14.09	QP
2		0.4299	21.22	10.90	32.12	47.25	-15.13	AVG
3	*	0.6099	32.90	10.78	43.68	56.00	-12.32	QP
4		1.1818	13.03	10.62	23.65	46.00	-22.35	AVG
5		1.8540	29.86	10.60	40.46	56.00	-15.54	QP
6		3.0819	13.77	10.57	24.34	46.00	-21.66	AVG
7		4.4739	32.07	10.54	42.61	56.00	-13.39	QP
8		6.8459	18.14	10.57	28.71	50.00	-21.29	AVG
9		10.4338	27.92	10.59	38.51	60.00	-21.49	QP
10		11.9379	13.24	10.58	23.82	50.00	-26.18	AVG
11		13.7139	25.58	10.59	36.17	60.00	-23.83	QP
12		15.4739	5.53	10.59	16.12	50.00	-33.88	AVG

Remark: All the modes have been investigated, and only worst mode is presented in this report.

5.2 RADIATED EMISSION MEASUREMENT

5.2.1RADIATED EMISSION LIMITS (Frequency Range 9kHz-1000MHz)

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.

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

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).

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

5.2.2 TEST PROCEDURE

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 meters above the ground at a 3 meter open area test site. 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; 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:

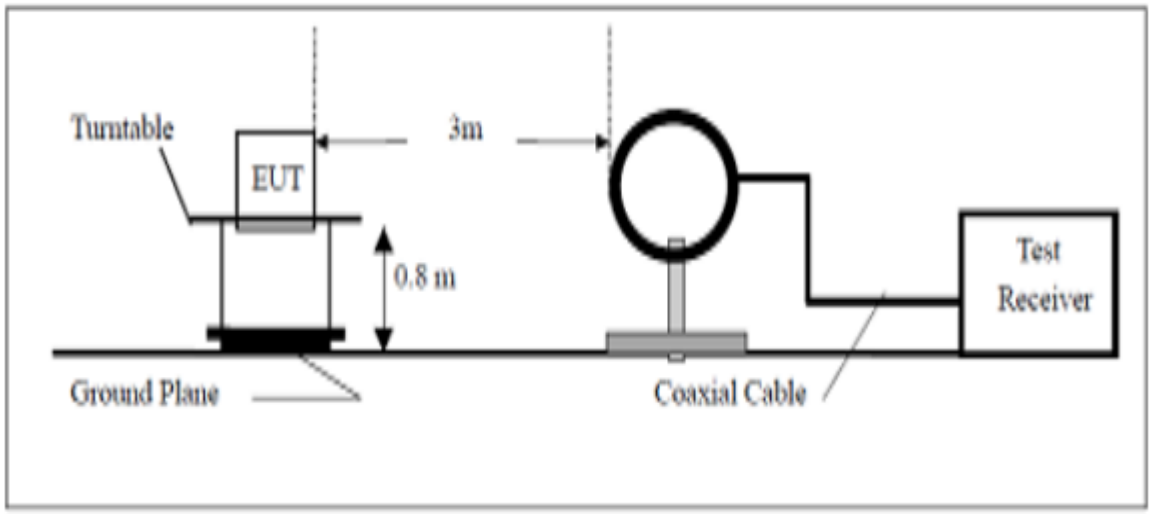
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

5.2.3 DEVIATION FROM TEST STANDARD

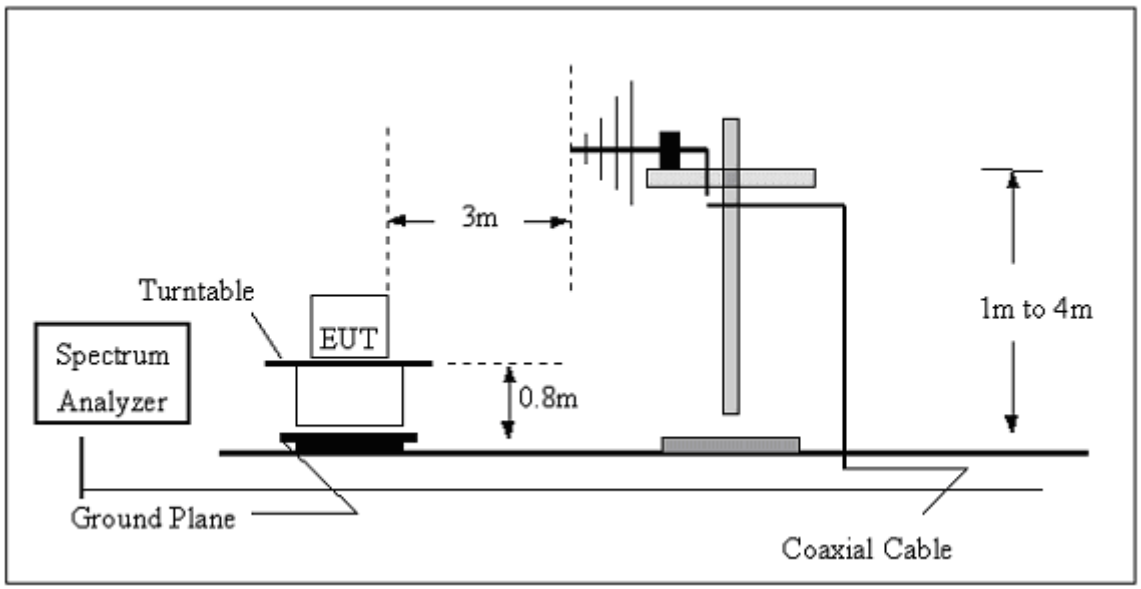
No deviation

5.2.4 TEST SETUP

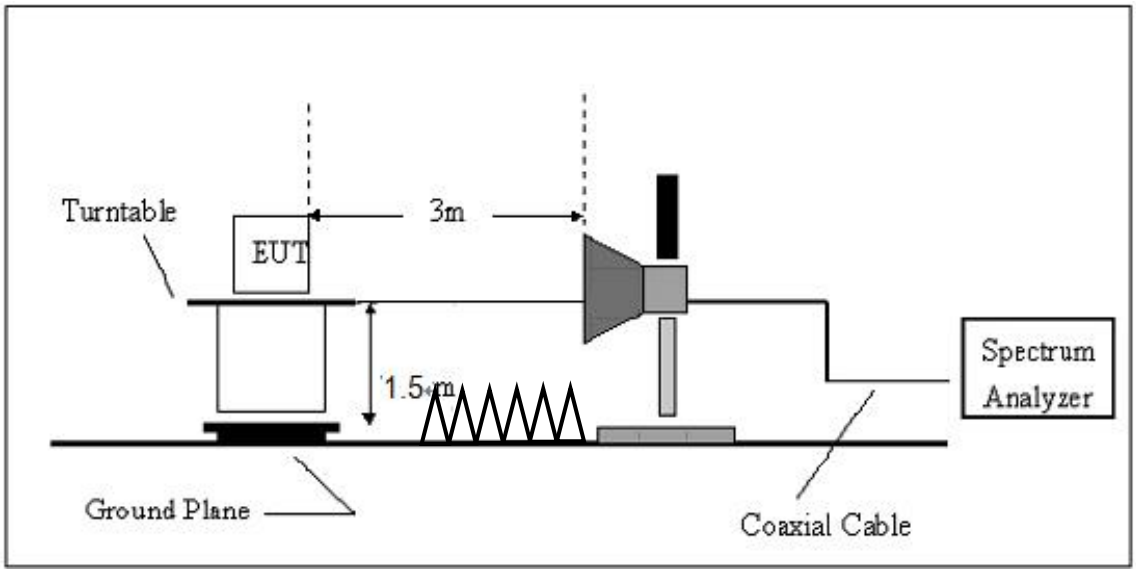
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



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



5.2.5EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.2.5.1 RESULTS (BELOW 30 MHZ)

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization	---
Test Mode	Mode 1	Test Date	June 26, 2017

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

NOTE:

No result in this part for margin above 20dB.

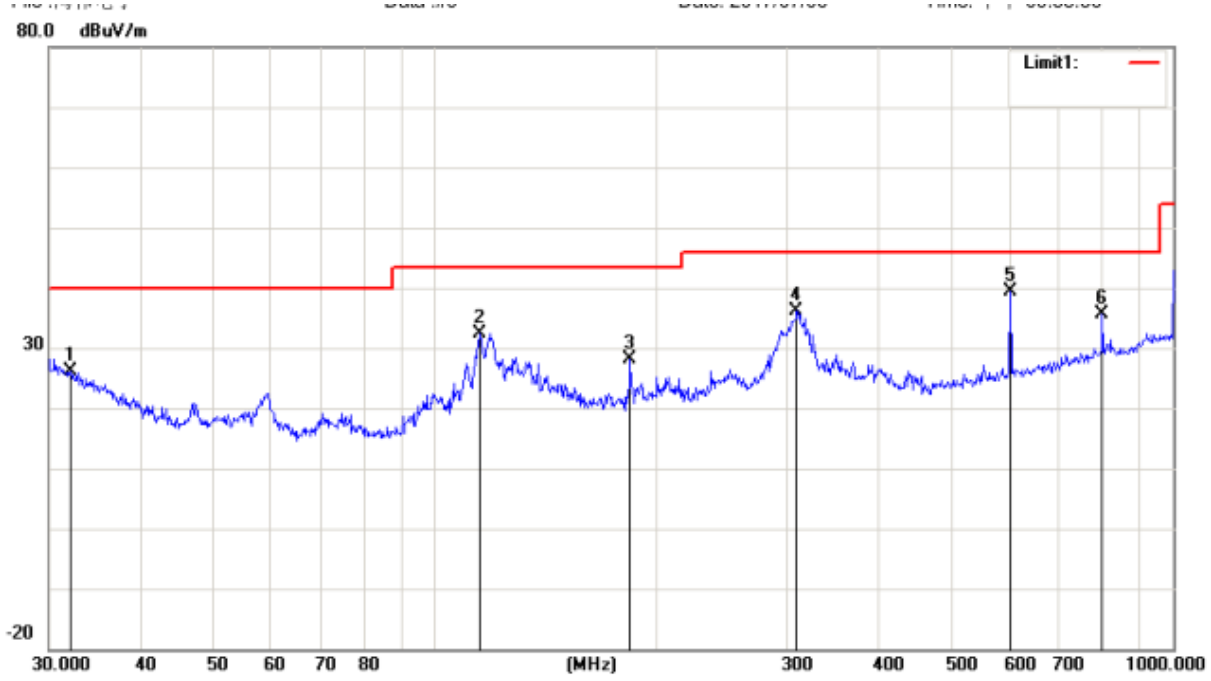
Distance extrapolation factor =40 log (specific distance/test distance)(dB);

Limit line = specific limits(dBuV) + distance extrapolation factor.

All the x/y/z orientation has been investigated, and only worst case is presented in this report.

5.2.5.2 TEST RESULTS (BETWEEN 30M – 1000 MHZ)

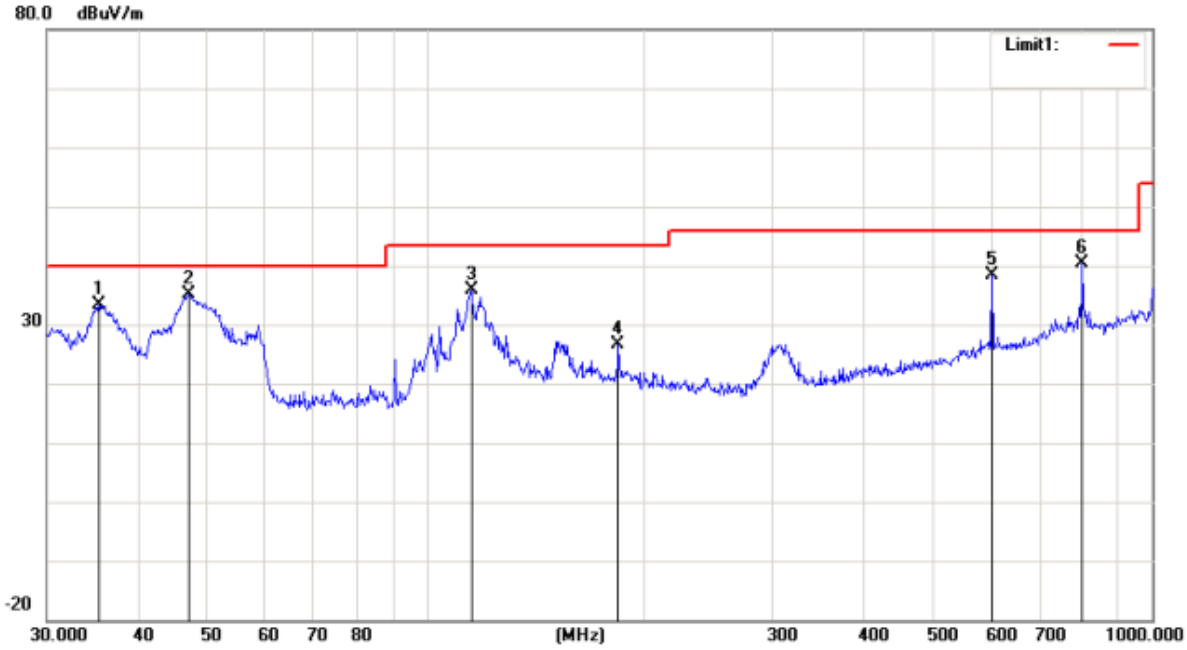
EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Horizontal
Test Mode	Mode 1	Test Date	June 26, 2017



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		32.0667	24.07	2.10	26.17	40.00	-13.83	QP
2		114.9169	35.27	-2.78	32.49	43.50	-11.01	QP
3		183.8440	33.41	-5.25	28.16	43.50	-15.34	QP
4		308.9126	40.63	-4.47	36.16	46.00	-9.84	QP
5	*	601.4265	38.26	1.04	39.30	46.00	-6.70	QP
6		801.7863	31.44	4.29	35.73	46.00	-10.27	QP

Remark: All the modes have been investigated, and only worst mode is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Vertical
Test Mode	Mode 1	Test Date	June 26, 2017



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		35.3750	33.56	-0.14	33.42	40.00	-6.58	QP
2	*	47.1599	42.75	-7.71	35.04	40.00	-4.96	QP
3		115.3205	38.64	-2.74	35.90	43.50	-7.60	QP
4		183.8440	31.93	-5.25	26.68	43.50	-16.82	QP
5		601.4265	37.37	1.04	38.41	46.00	-7.59	QP
6		801.7863	35.99	4.29	40.28	46.00	-5.72	QP

Remark: All the modes have been investigated, and only worst mode is presented in this report.

5.2.5.3 TEST RESULTS (1GHZ TO 40GHZ)

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1 TX
Test Date	June 26, 2017	Frequency	5180MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10360	V	60.68	40.30	68.2	54	-7.52	-13.70
15540	V	58.26	40.95	68.2	54	-9.94	-13.05
10360	H	59.69	39.57	68.2	54	-8.51	-14.43
15540	H	59.17	40.66	68.2	54	-9.03	-13.34

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1 TX
Test Date	June 26, 2017	Frequency	5240MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10480	V	59.89	41.96	68.2	54	-8.31	-12.04
15720	V	58.50	40.39	68.2	54	-9.70	-13.61
10480	H	59.11	39.45	68.2	54	-9.09	-14.55
15720	H	58.49	39.65	68.2	54	-9.71	-14.35

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1 TX
Test Date	June 26, 2017	Frequency	5745MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11490	V	58.53	41.20	68.2	54	-9.67	-12.80
17235	V	58.35	39.56	68.2	54	-9.85	-14.44
11490	H	58.30	40.53	68.2	54	-9.90	-13.47
17235	H	59.03	39.85	68.2	54	-9.17	-14.15

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1 TX
Test Date	June 26, 2017	Frequency	5825MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11650	V	58.08	39.57	68.2	54	-10.12	-14.43
17475	V	58.19	39.82	68.2	54	-10.01	-14.18
11650	H	58.10	39.16	68.2	54	-10.10	-14.84
17475	H	58.15	40.52	68.2	54	-10.05	-13.48

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 2TX
Test Date	June 26, 2017	Frequency	5180MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10360	V	59.65	41.25	68.2	54	-8.55	-12.75
15540	V	59.73	39.66	68.2	54	-8.47	-14.34
10360	H	58.86	40.25	68.2	54	-9.34	-13.75
15540	H	58.18	40.65	68.2	54	-10.02	-13.35

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 2TX
Test Date	June 26, 2017	Frequency	5240MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10480	V	58.47	41.14	68.2	54	-9.73	-12.86
15720	V	58.93	39.07	68.2	54	-9.27	-14.93
10480	H	58.51	40.16	68.2	54	-9.69	-13.84
15720	H	58.77	40.24	68.2	54	-9.43	-13.76

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 2TX
Test Date	June 26, 2017	Frequency	5745MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11490	V	59.39	39.89	68.2	54	-8.81	-14.11
17235	V	59.28	39.25	68.2	54	-8.92	-14.75
11490	H	58.96	40.06	68.2	54	-9.24	-13.94
17235	H	58.17	40.74	68.2	54	-10.03	-13.26

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 2TX
Test Date	June 26, 2017	Frequency	5825MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11650	V	58.64	40.42	68.2	54	-9.56	-13.58
17475	V	58.56	40.89	68.2	54	-9.64	-13.11
11650	H	59.23	40.25	68.2	54	-8.97	-13.75
17475	H	58.70	40.89	68.2	54	-9.50	-13.11

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3TX
Test Date	June 26, 2017	Frequency	5190MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10380	V	59.69	39.55	68.2	54	-8.51	-14.45
15570	V	58.68	39.65	68.2	54	-9.52	-14.35
10380	H	58.43	39.27	68.2	54	-9.77	-14.73
15570	H	59.92	40.19	68.2	54	-8.28	-13.81

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3TX
Test Date	June 26, 2017	Frequency	5230MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10460	V	58.68	41.84	68.2	54	-9.52	-12.16
15690	V	59.29	40.72	68.2	54	-8.91	-13.28
10460	H	58.27	40.62	68.2	54	-9.93	-13.38
15690	H	58.75	39.79	68.2	54	-9.45	-14.21

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3TX
Test Date	June 26, 2017	Frequency	5755MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11510	V	60.02	39.30	68.2	54	-8.18	-14.70
17265	V	59.12	39.44	68.2	54	-9.08	-14.56
11510	H	59.63	40.62	68.2	54	-8.57	-13.38
17265	H	58.83	40.01	68.2	54	-9.37	-13.99

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3TX
Test Date	June 26, 2017	Frequency	5795MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11590	V	60.99	39.70	68.2	54	-7.21	-14.30
17385	V	59.01	40.88	68.2	54	-9.19	-13.12
11590	H	58.85	39.63	68.2	54	-9.35	-14.37
17385	H	58.35	39.04	68.2	54	-9.85	-14.96

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 4TX
Test Date	June 26, 2017	Frequency	5180MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10360	V	60.52	40.05	68.2	54	-7.68	-13.95
15540	V	59.18	39.60	68.2	54	-9.02	-14.40
10360	H	58.87	39.74	68.2	54	-9.33	-14.26
15540	H	59.77	39.57	68.2	54	-8.43	-14.43

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 4TX
Test Date	June 26, 2017	Frequency	5240MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10480	V	58.23	39.53	68.2	54	-9.97	-14.47
15720	V	58.28	40.17	68.2	54	-9.92	-13.83
10480	H	58.75	39.56	68.2	54	-9.45	-14.44
15720	H	58.43	40.31	68.2	54	-9.77	-13.69

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 4TX
Test Date	June 26, 2017	Frequency	5745MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11490	V	58.48	39.56	68.2	54	-9.72	-14.44
17235	V	59.72	40.18	68.2	54	-8.48	-13.82
11490	H	59.63	39.97	68.2	54	-8.57	-14.03
17235	H	59.40	40.64	68.2	54	-8.80	-13.36

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 4TX
Test Date	June 26, 2017	Frequency	5825MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11650	V	60.33	41.03	68.2	54	-7.87	-12.97
17475	V	58.44	39.51	68.2	54	-9.76	-14.49
11650	H	58.86	40.55	68.2	54	-9.34	-13.45
17475	H	59.18	40.34	68.2	54	-9.02	-13.66

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 5TX
Test Date	June 26, 2017	Frequency	5190MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10380	V	58.01	39.55	68.2	54	-10.19	-14.45
15570	V	58.90	39.43	68.2	54	-9.30	-14.57
10380	H	59.89	39.73	68.2	54	-8.31	-14.27
15570	H	59.44	39.05	68.2	54	-8.76	-14.95

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 5TX
Test Date	June 26, 2017	Frequency	5230MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
10460	V	59.84	41.46	68.2	54	-8.36	-12.54
15690	V	58.95	40.17	68.2	54	-9.25	-13.83
10460	H	59.55	39.04	68.2	54	-8.65	-14.96
15690	H	59.15	39.39	68.2	54	-9.05	-14.61

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 5TX
Test Date	June 26, 2017	Frequency	5755MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11510	V	58.86	39.85	68.2	54	-9.34	-14.15
17265	V	59.79	40.38	68.2	54	-8.41	-13.62
11510	H	58.22	40.47	68.2	54	-9.98	-13.53
17265	H	59.39	39.51	68.2	54	-8.81	-14.49

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

EUT	8 inch Windows OS Tablet	Model Name	DT080-MS-W10
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 5TX
Test Date	June 26, 2017	Frequency	5795MHz

Freq. (MHz)	Ant.Pol.	Emission Level(dBuV)		Limit 3m(dBuV/m)		Over(dB)	
	H/V	PK	AV	PK	AV	PK	AV
11590	V	59.03	39.75	68.2	54	-9.17	-14.25
17385	V	59.26	39.07	68.2	54	-8.94	-14.93
11590	H	58.91	39.38	68.2	54	-9.29	-14.62
17385	H	59.75	39.53	68.2	54	-8.45	-14.47

Remark:
All emissions not reported were more than 20dB below the specified limit or in the noise floor.
Factor = Antenna Factor + Cable Loss – Pre-amplifier.
All the x/y/z orientation has been investigated, and only worst case is presented in this report.

6. ANTENNA APPLICATION

6.1 Antenna requirement

The EUT'S antenna is met the requirement of FCC part 15C section 15.203 and FCC part 15C section 15.407.

FCC part 15C section 15.203 and FCC part 15C section 15.407 requirements: Systems operating in the 5150~5850MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

6.2 Result

The EUT's antenna is detachable antenna, The antenna's gain is -0.55dBi and meets the requirement.

PR-SMA antenna detail photograph

7FCC PART 15.407 REQUIREMENTS FOR 802.11A/N SYSTEMS

7. 1 Test Equipment

Please refer to Section 4 this report.

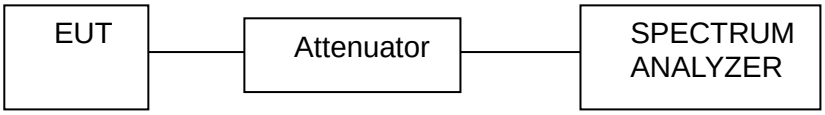
7. 2 Test Procedure

26dB Bandwidth and 99% Occupied Bandwidth:		
Test Method:	a)The transmitter was radiated to the spectrum analyzer in peak hold mode. b)Measure the maximum width of the emission that is 26 dB down from the peak of the emission Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement asneeded until the RBW/EBW ratio is approximately 1%.	
Test Equipment Setting – 26dB Bandwidth:		Test Equipment Setting – 99%% Bandwidth:
a)Attenuation: Auto b)Span Frequency: > 26dB Bandwidth c)RBW: Approximately 1% of the emission bandwidth d)VBW: VBW > RBW e)Detector: Peak f)Trace: Max Hold g)Sweep Time: Auto		a)Span: 1.5 times to 5.0 times the OBW b)RBW: 1 % to 5 % of the OBW c)VBW: ≥ 3 x RBW d)Detector: Peak e)Trace: Max Hold
6 dB Bandwidth:		
Test Method:	a)The transmitter was radiated to the spectrum analyzer in peak hold mode. b)Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of UnlicensedNational Information Infrastructure (U-NII) Devices - section (C) Emission Bandwidth. c)Multiple antenna system was performed in accordance with KDB662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band. d)Measured the spectrum width with power higher than 6dB below carrier.	
Test Equipment Setting:		
a)Attenuation: Auto b)Span Frequency: > 6dB Bandwidth c)RBW: 100kHz d)VBW: ≥ 3 x RBW		e)Detector: Peak f)Trace: Max Hold g)Sweep Time: Auto
Maximum Conducted Output Power Measurement:		
Test Method:	a)The transmitter output (antenna port) was connected to the power meter. b)Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of UnlicensedNational Information Infrastructure (U-NII) Devices - section (E) Maximum conducted output power =>3. Measurement using a Power Meter (PM) =>b) Method PM-G (Measurement using a gated RFaverage power meter). c)Multiple antenna systems was performed in accordance with KDB662911 D01 v02r01 Emissions Testing of Transmitters with Multiple Outputs in the Same Band. d)When measuring maximum conducted output power with multiple antenna systems,add every resultof the values by mathematic formula.	
Test Equipment Setting: Detector - Average		
PowerSpectral Density:		
Test Method:	a)The transmitter output (antenna port) was connected RF switch to the spectrum analyzer. b)Test was performed in accordance with KDB789033 D02 v01 for Compliance Testing of UnlicensedNational Information Infrastructure (U-NII) Devices - section (F) Maximum Power Spectral Density (PSD). c)Multiple antenna systems was performed in accordance KDB662911 D01 v02r01 in-Band Power Spectral Density (PSD) Measurements (a) Measure and sum the spectra across the outputs. d)When measuring first spectral bin of output 1 is summed with that in the first spectral bin of output 2and that from the first spectral bin of output 3 and so on up to the Nth output to obtain the value for the first frequency bin of the summed spectrum. The summed spectrum value for each of the other frequency bins is computed in the same way. e)For 5.725~5.85 GHz, the measured result of PSD level must add 10log(500kHz/RBW) and the finalresult should ≤ 30 dBm.	

Test Equipment Setting:	
a)Attenuation: Auto b)Span Frequency: Encompass the entire emissions bandwidth (EBW) of the signal c)RBW: 1000 kHz d)VBW: 3000 kHz	e)Detector: RMS f)Trace: AVERAGE g)Sweep Time: Auto h)Trace Average: 100 times
Note: If measurement bandwidth of Maximum PSD is specified in 500 kHz, add 10log(500kHz/RBW) tothe measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of thespectrum analyzer set during measurement.	

Frequency Stability Measurement:	
Test Method:	a)The transmitter output (antenna port) was connected to the spectrum analyzer. b)EUT have transmitted absence of modulation signal and fixed channelize. c)Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth. d)Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings. e)fc is declaring of channel frequency. Then the frequency error formula is (fc-f)/fc × 106 ppm and the limit is less than ±20ppm (IEEE 802.11nspecification). f)The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value g)Extreme temperature is 0°C~40°C
Test Equipment Setting:	
a)Attenuation: Auto b)Span Frequency: Entire absence of modulation emissions bandwidth c)RBW: 10 kHz d)VBW: 10 kHz	e)Sweep Time: Auto

7. 3 Test Setup



7. 4 Configuration of the EUT

Same as section 2.4of this report

7. 5 EUT Operating Condition

Same as section 2.2of this report.

7. 6 Limit

26dB Bandwidth and 99% Occupied Bandwidth:	
Limit:	No restriction limits.
6 dB Bandwidth:	
Limit:	For digital modulation systems, the minimum 6dB bandwidth shall be at least 500 kHz.
Test Equipment Setting:	
a)Attenuation: Auto b)Span Frequency: > 6dB Bandwidth c)RBW: 100kHz d)VBW: ≥ 3 x RBW	e)Detector: Peak f)Trace: Max Hold g)Sweep Time: Auto
Maximum Conducted Output Power Measurement:	
☒5.15~5.25 GHz	
☐Limit of Outdoor access point:	☐Limit of Indoor access point:
The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. 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).	The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm) provided the maximum antenna gain does not exceed 6 dBi. 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.
☐Limit of Fixed point-to-point access points:	☒Limit of Mobile and portable client devices:
The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). 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.	The maximum conducted output power over the frequency band of operation shall not exceed 250 mW (24dBm) provided the maximum antenna gain does not exceed 6 dBi. 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.
☐5.25-5.35 GHz &☐5.470-5.725 GHz	
The maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24dBm) or 11 dBm 10 log B, where B is the 26 dB emission bandwidth in megahertz. 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.	
☒5.725~5.85 GHz	
The maximum conducted output power over the frequency band of operation shall not exceed 1 W (30dBm). 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. However, fixed point-to-point U-NII devices operating in this band may employ transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter conducted power.	
Power Spectral Density	
☒5.15~5.25 GHz	
☐Limit of Outdoor access point:17 dBm/MHz	☐Limit of Indoor access point:17 dBm/MHz
☐Limit of Fixed point-to-point access points: 17 dBm/MHz	☒Limit of Mobile and portable client devices: 11 dBm/MHz
☐5.25-5.35 GHz	11 dBm/MHz
☐5.470-5.725 GHz	11 dBm/MHz
☒5.725~5.85 GHz	30 dBm/500kHz
Frequency Stability Measurement:	
Limit:	In-band emission is maintained within the band of operation under all conditions of normal operation asspecified in the user's manual. The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band (IEEE 802.11n specification).

7. 7 Test Result

A. 26DB BANDWIDTH&6DB SPECTRUM BANDWIDTH AND 99% OCCUPIED BANDWIDTH

Product	: EUT-Sample	Test Mode	: See section 2.2
Test Item	: 26dB Bandwidth and 99% Occupied Bandwidth	Temperature	: 25℃
Test Voltage	: DC 3.7V	Humidity	: 56%RH
Test Result	: **PASS**		

26dB Bandwidth

IEEE 802.11a

Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	19.936	--	**PASS**
High	5240	19.987		**PASS**

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	21.756	--	**PASS**
High	5825	20.218		**PASS**

IEEE 802.11n 5G 20MHz

Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	20.436	--	**PASS**
High	5240	20.167		**PASS**

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	20.590	--	**PASS**
High	5825	20.141		**PASS**

IEEE 802.11n 5G 40MHz

Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5190	40.128	--	**PASS**
High	5230	40.385		**PASS**

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5755	42.205	--	**PASS**
High	5795	39.782		**PASS**

IEEE 802.11ac 5G 20MHz

Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	22.269	--	**PASS**
High	5240	22.077		**PASS**

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	33.942	--	**PASS**
High	5825	23.712		**PASS**

IEEE 802.11ac 5G 40MHz
Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5190	62.404	--	PASS
High	5230	61.122		PASS

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5755	43.429	--	PASS
High	5795	43.045		PASS

99% Occupied

IEEE 802.11a
Band1

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	16.923	--	PASS
High	5240	16.987		PASS

Band4

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	17.179	--	PASS
High	5825	17.051		PASS

IEEE 802.11n 5G 20MHz
Band1

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	17.756	--	PASS
High	5240	17.756		PASS

Band4

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	17.885	--	PASS
High	5825	17.756		PASS

IEEE 802.11n 5G 40MHz
Band1

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5190	36.026	--	PASS
High	5230	36.026		PASS

Band4

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5755	36.026	--	PASS
High	5795	36.026		PASS

IEEE 802.11ac 5G 20MHz
Band1

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	18.173	--	PASS
High	5240	18.269		PASS

Band4

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	18.942	--	PASS
High	5825	18.365		PASS

IEEE 802.11ac 5G 40MHz

Band1

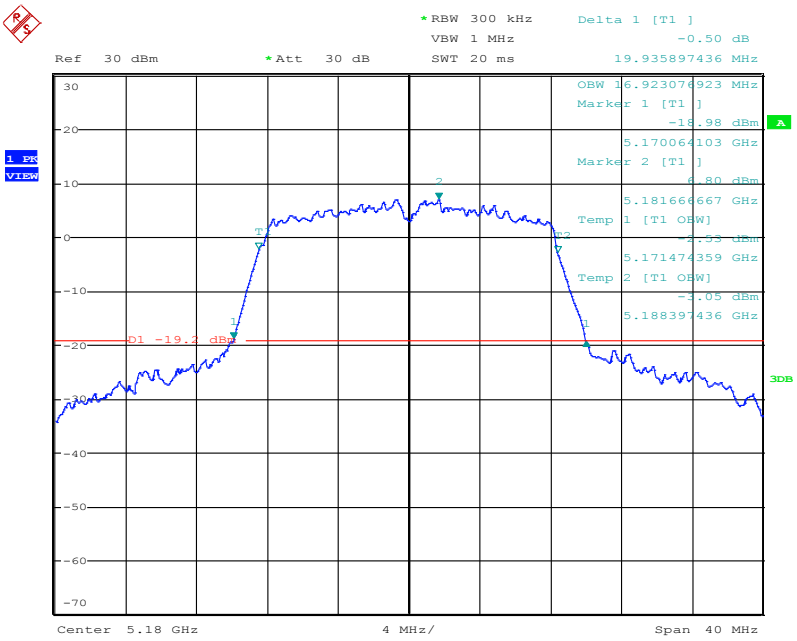
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5190	36.859	--	**PASS**
High	5230	36.859		**PASS**

Band4

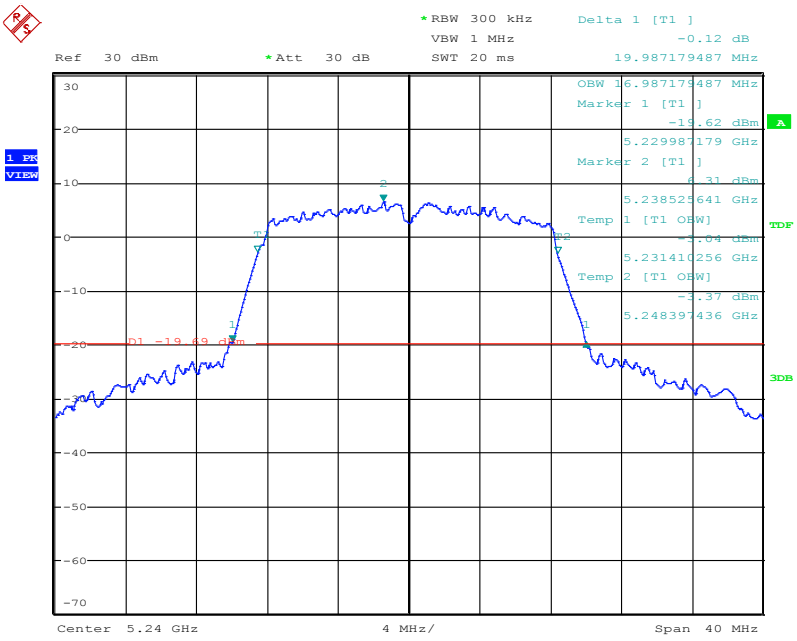
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5755	36.538	--	**PASS**
High	5795	36.378		**PASS**

IEEE 802.11a Band1

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)

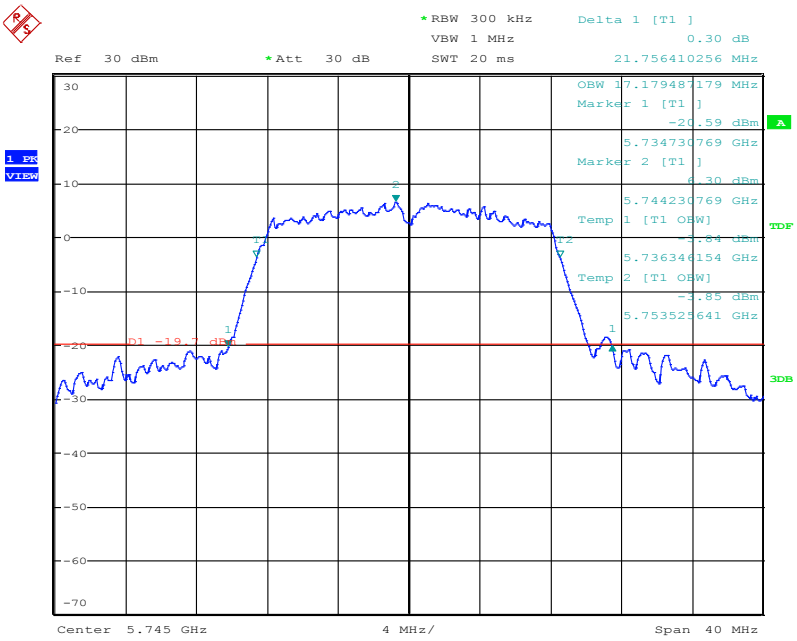


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

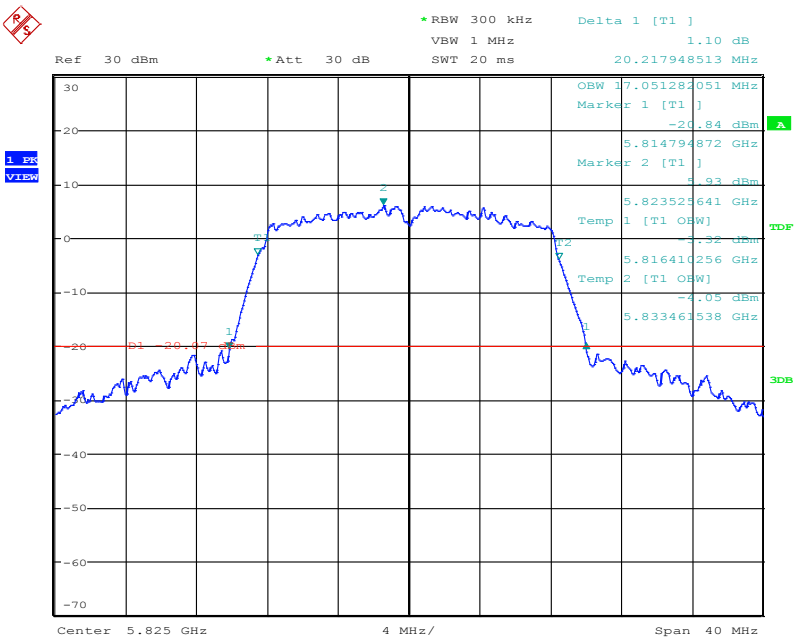


IEEE 802.11a Band4

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)

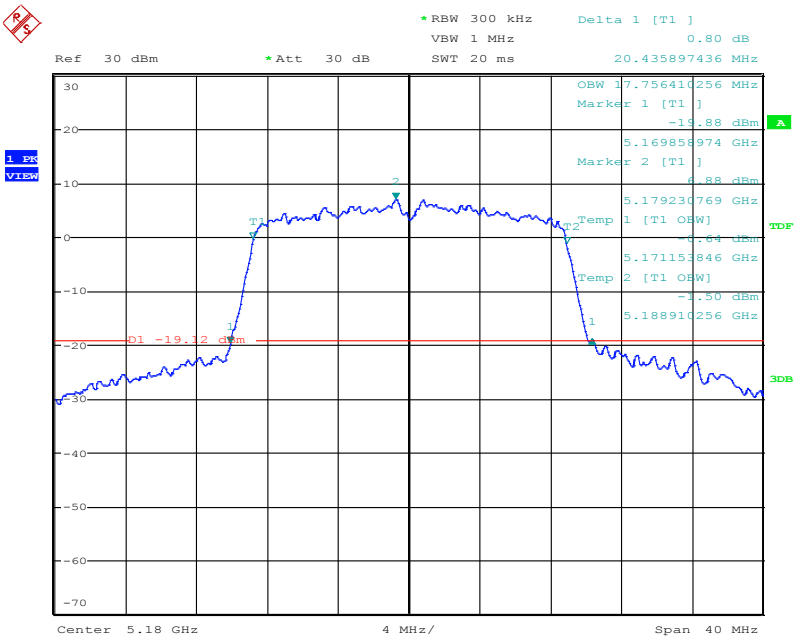


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

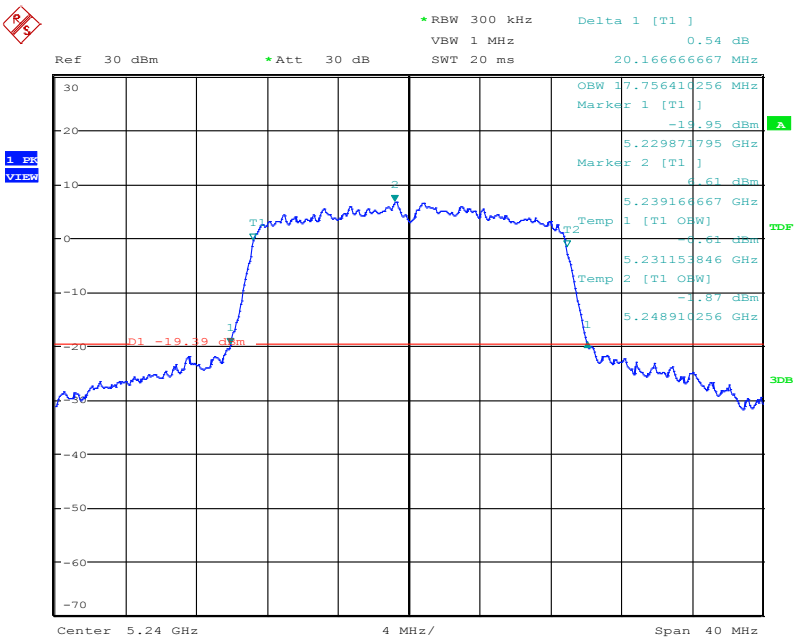


IEEE 802.11n 5G 20MHz Band1

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)

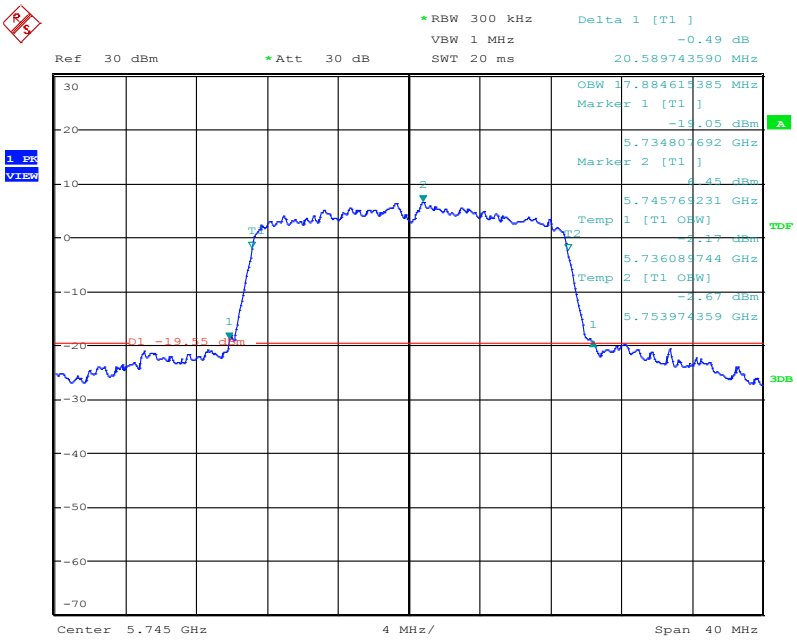


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

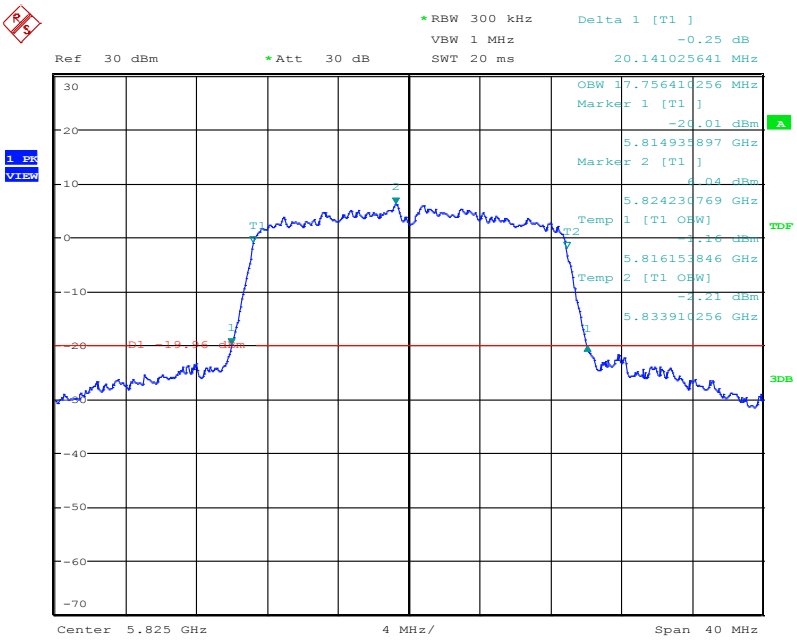


IEEE 802.11n 5G 20MHz Band4

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)

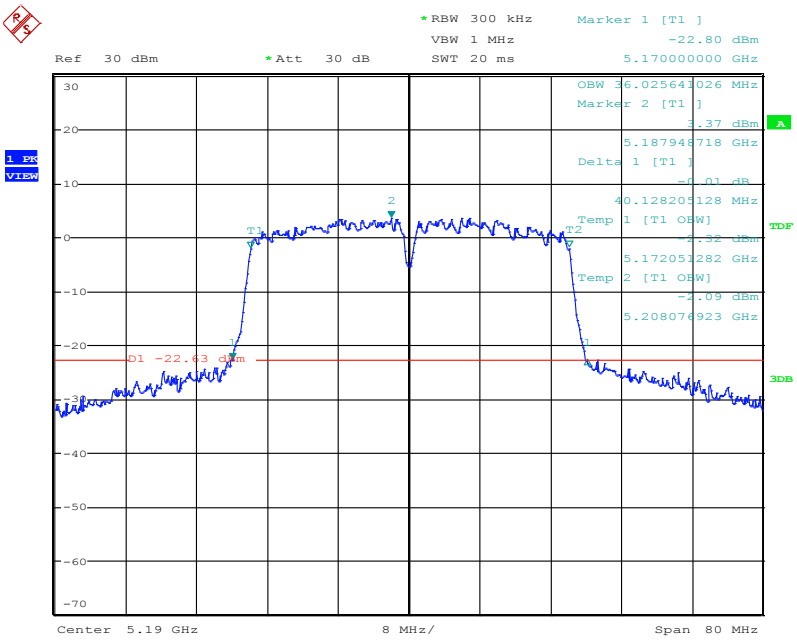


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

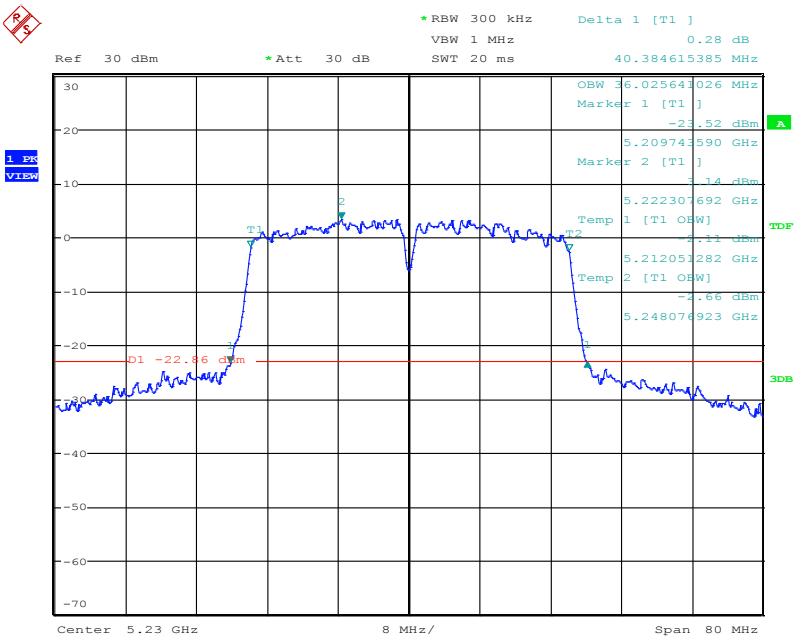


IEEE 802.11n 5G 40MHz Band1

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)

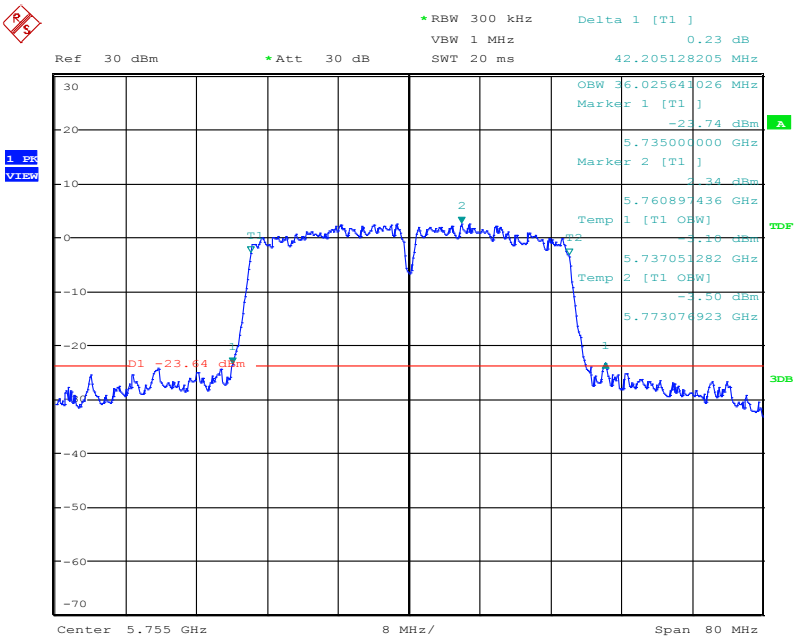


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

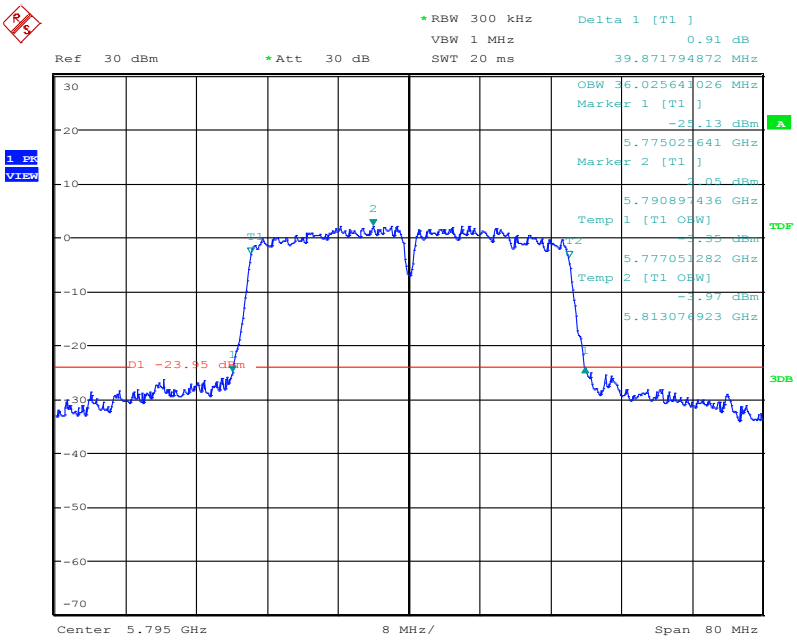


IEEE 802.11n 5G 40MHz Band4

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)

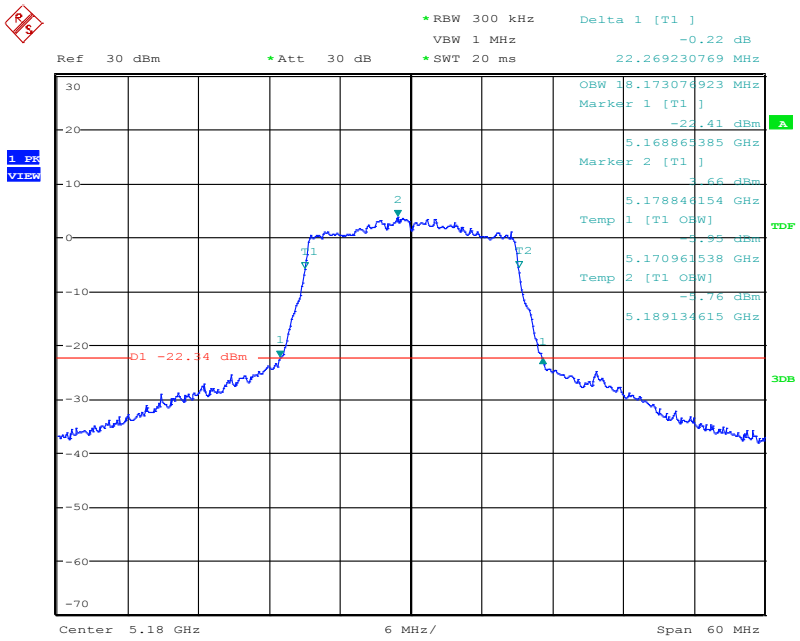


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

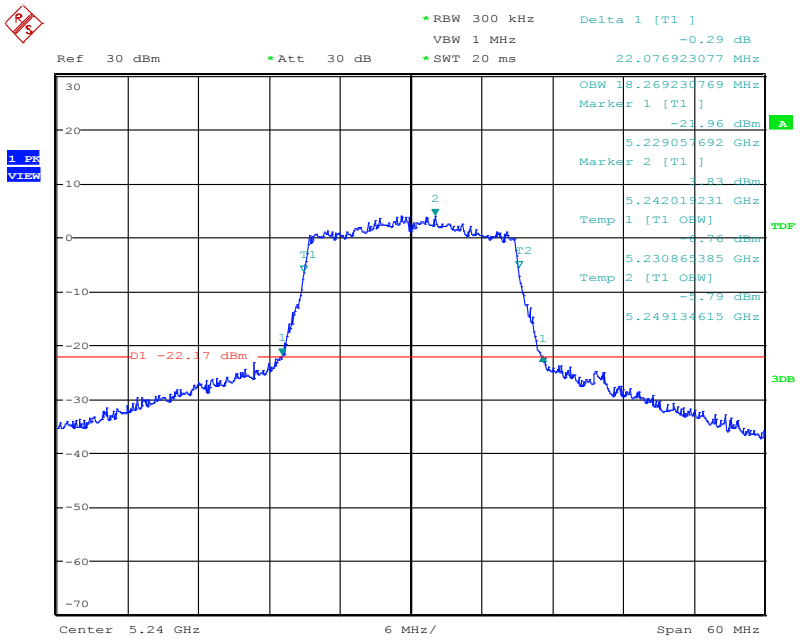


IEEE 802.11ac 5G 20MHz Band1

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)

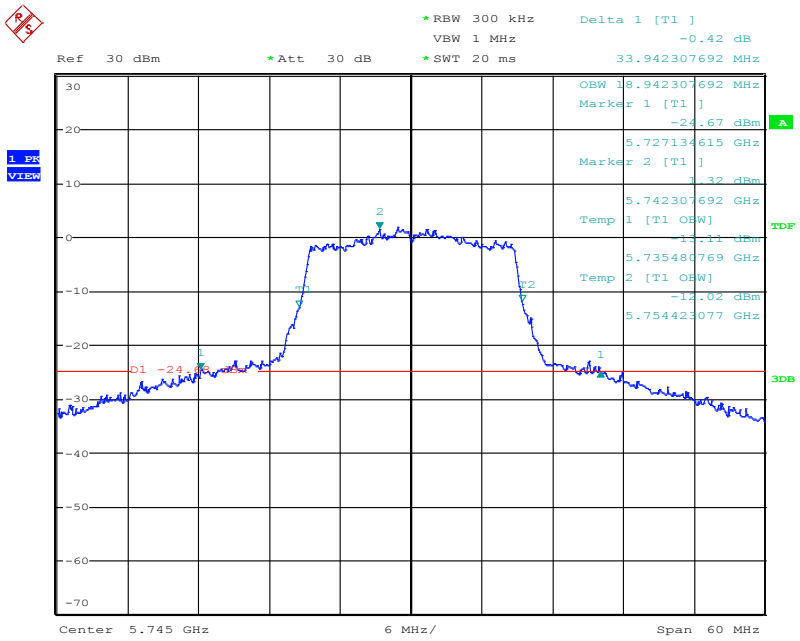


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

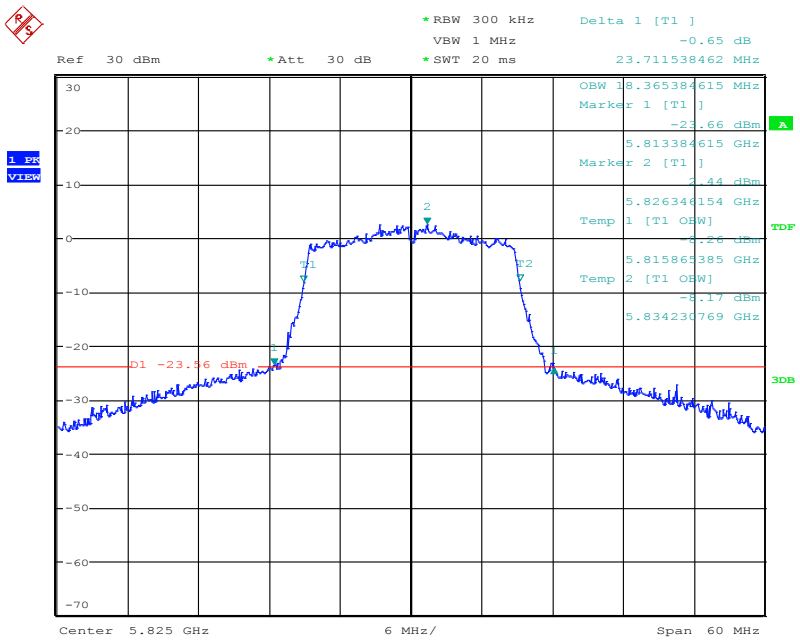


IEEE 802.11ac 5G 20MHz Band4

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)

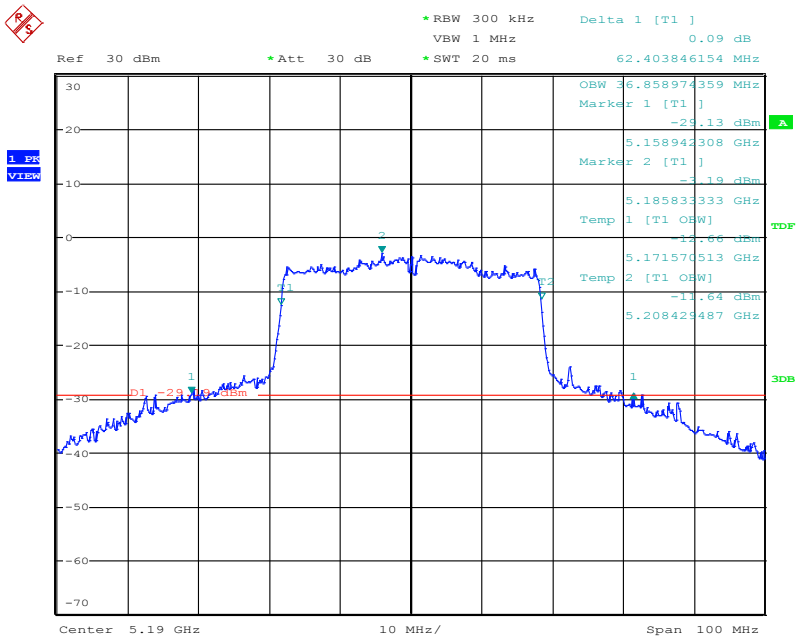


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

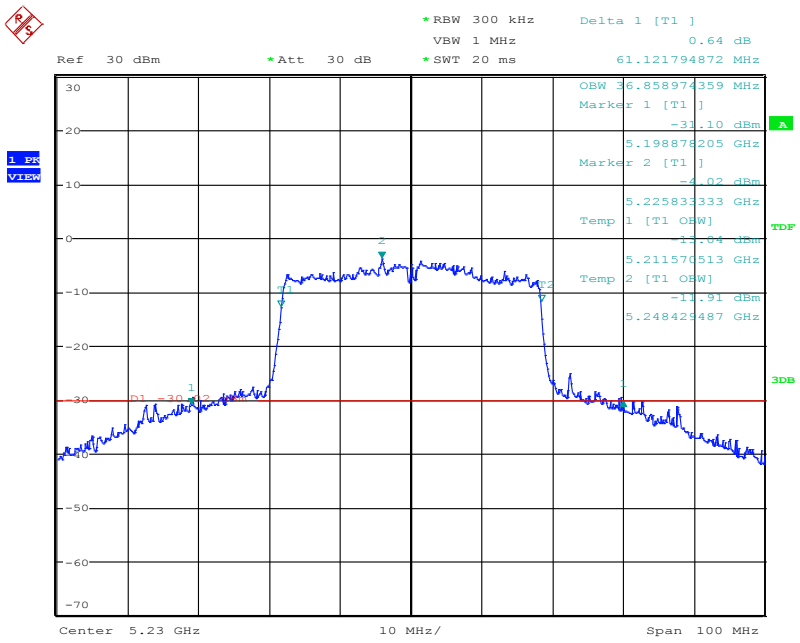


IEEE 802.11ac 5G 40MHz Band1

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)

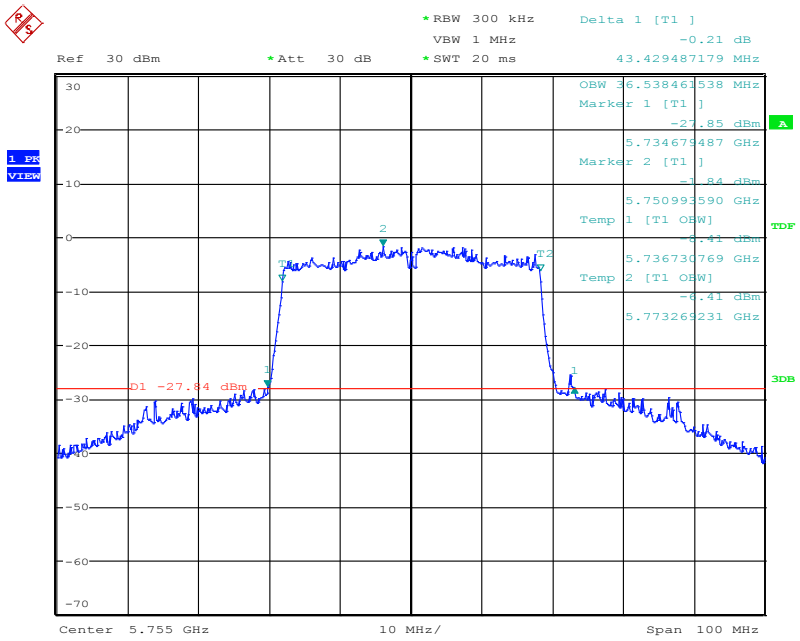


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

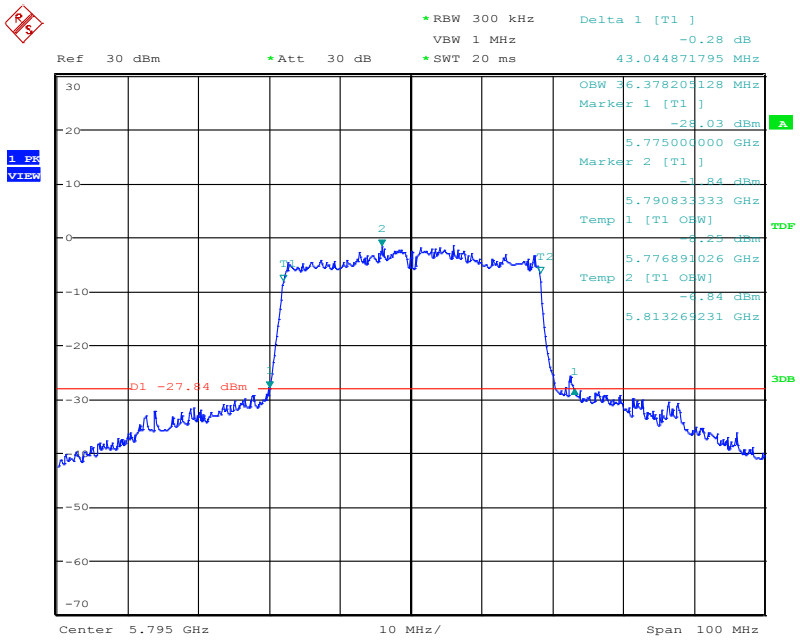


IEEE 802.11ac 5G 40MHz Band4

26dB Bandwidth and 99% Occupied Bandwidth (CH Low)



26dB Bandwidth and 99% Occupied Bandwidth (CH High)



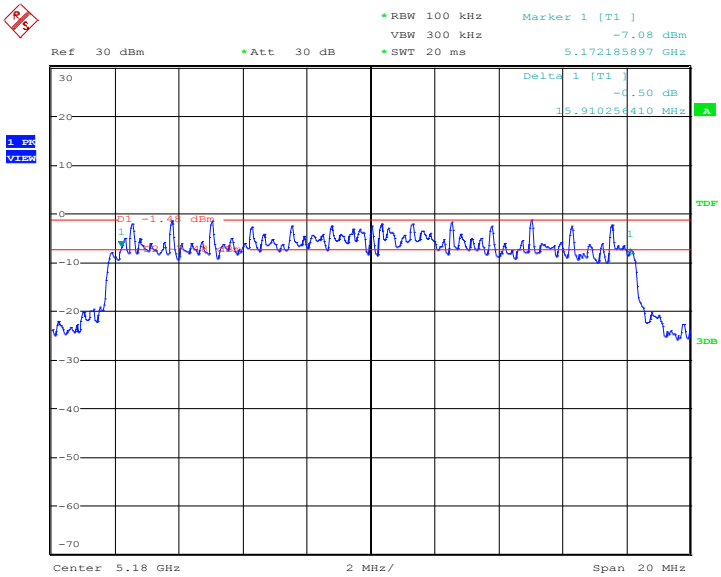
B. 6 DB BANDWIDTH

Product	: EUT-Sample	Test Mode	: See Section 2.2
Test Item	: 6 dB BW	Temperature	: 25℃
Test Voltage	: DC 3.7V	Humidity	: 56%RH
Test Result	: **PASS**		

IEEE 802.11a

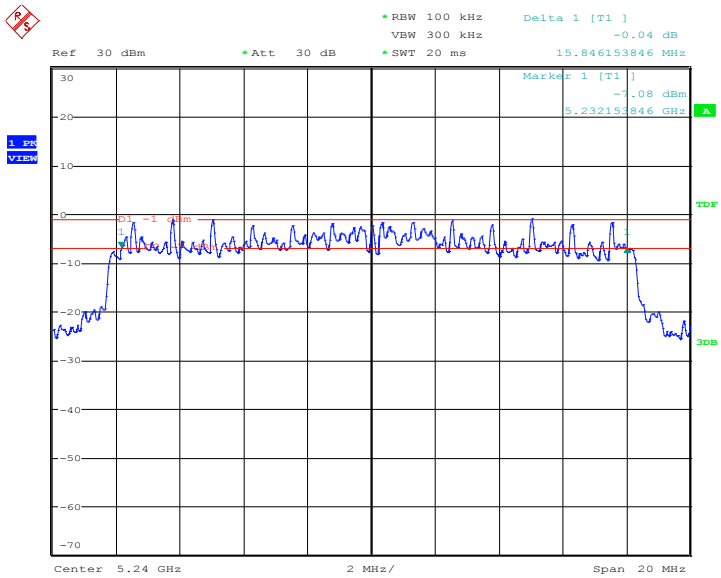
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5180**	15.91	> 0.5MHz
High	**5240**	15.85	> 0.5MHz

Channel Low



Date: 27.JUN.2017 11:34:44

Channel High

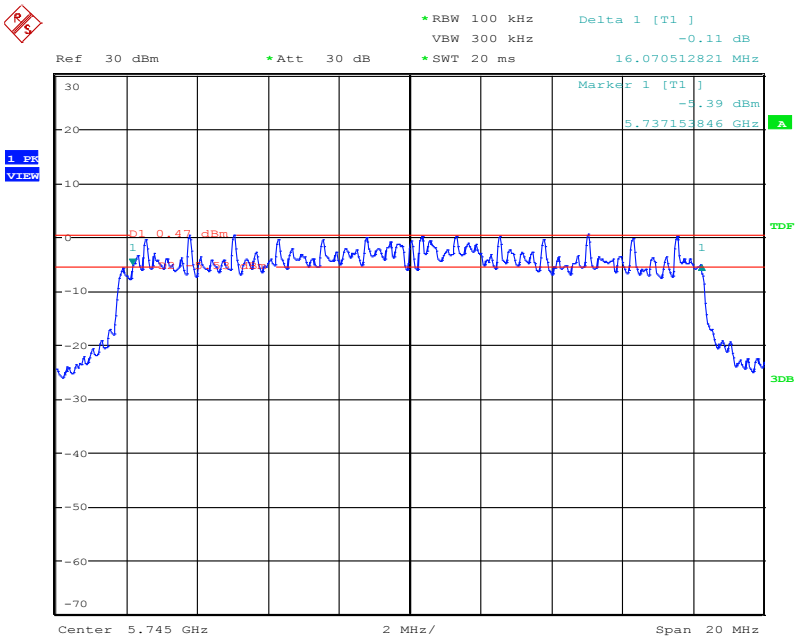


Date: 27.JUN.2017 11:37:14

IEEE 802.11a

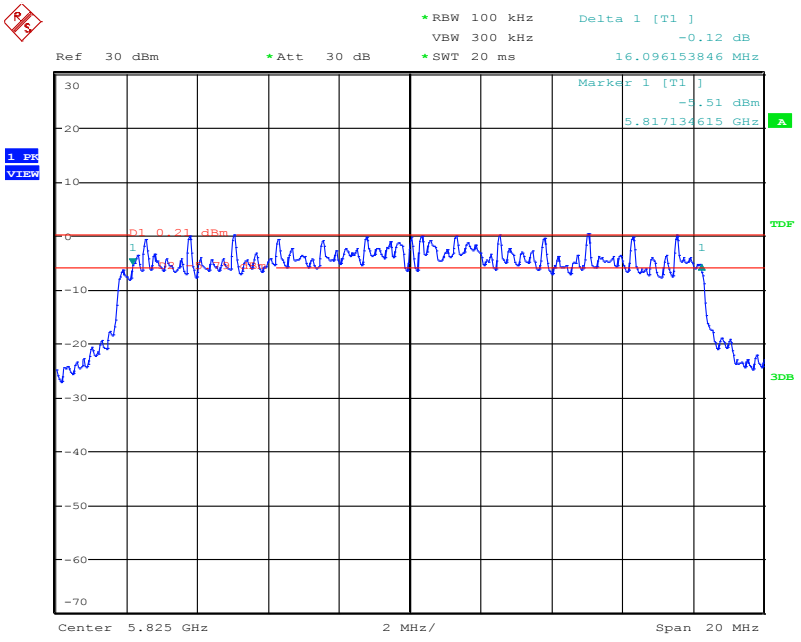
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5745**	16.07	> 0.5MHz
High	**5825**	16.10	> 0.5MHz

Channel Low



Date: 27.JUN.2017 11:39:36

Channel High



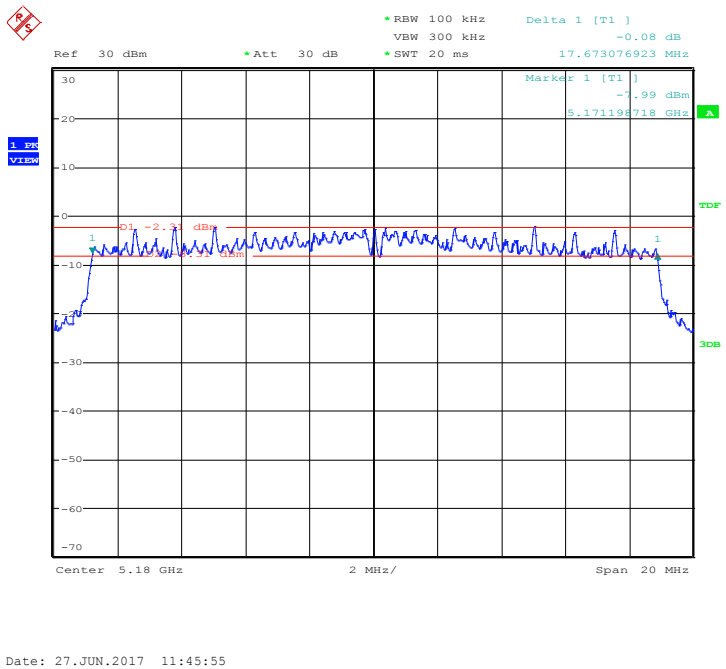
Date: 27.JUN.2017 11:41:48

Product	: EUT-Sample	Test Mode	: See Section 2.2
Test Item	: 6 dB BW	Temperature	: 25℃
Test Voltage	: DC 3.7V	Humidity	: 56%RH
Test Result	: **PASS**		

IEEE802.11n 20MHz

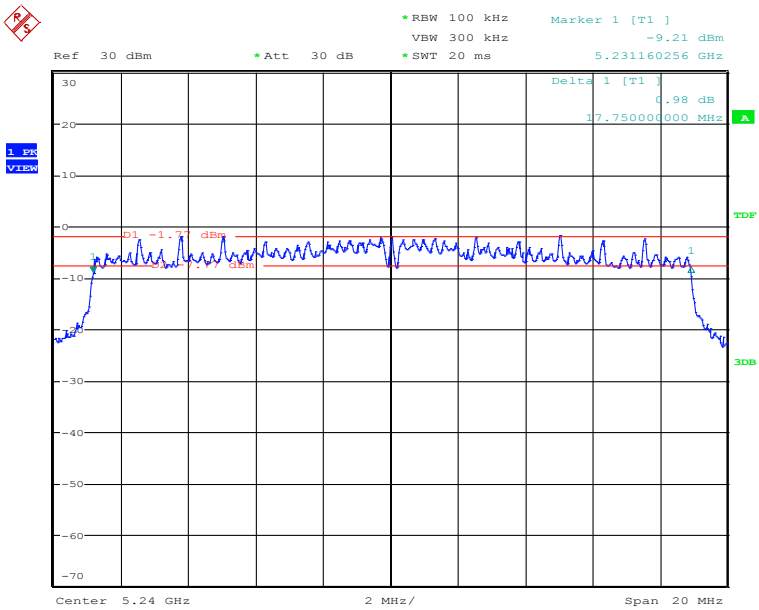
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5180**	17.67	> 0.5MHz
High	**5240**	17.75	> 0.5MHz

Channel Low



Date: 27.JUN.2017 11:45:55

Channel High

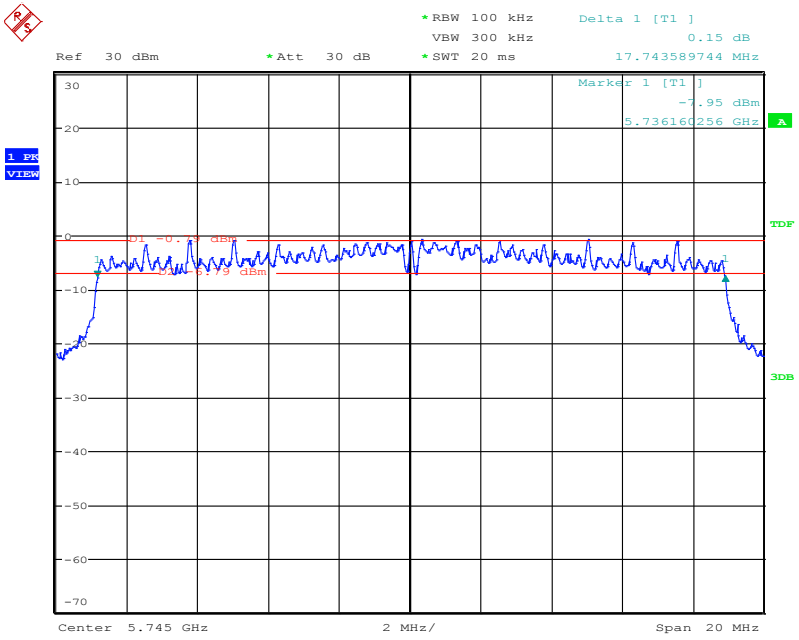


Date: 27.JUN.2017 11:52:24

IEEE 802.11n 20MHz

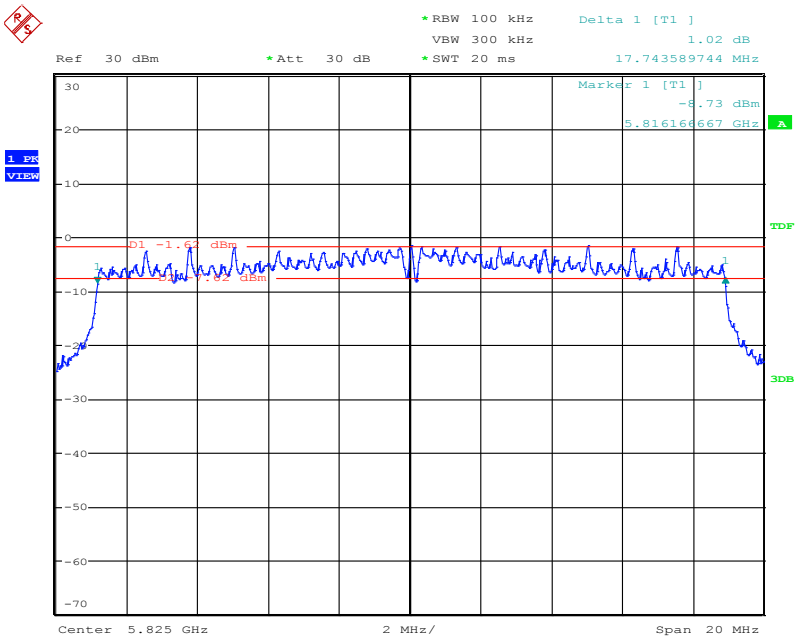
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5745**	17.744	> 0.5MHz
High	**5825**	17.744	> 0.5MHz

Channel Low



Date: 27.JUN.2017 11:55:12

Channel High

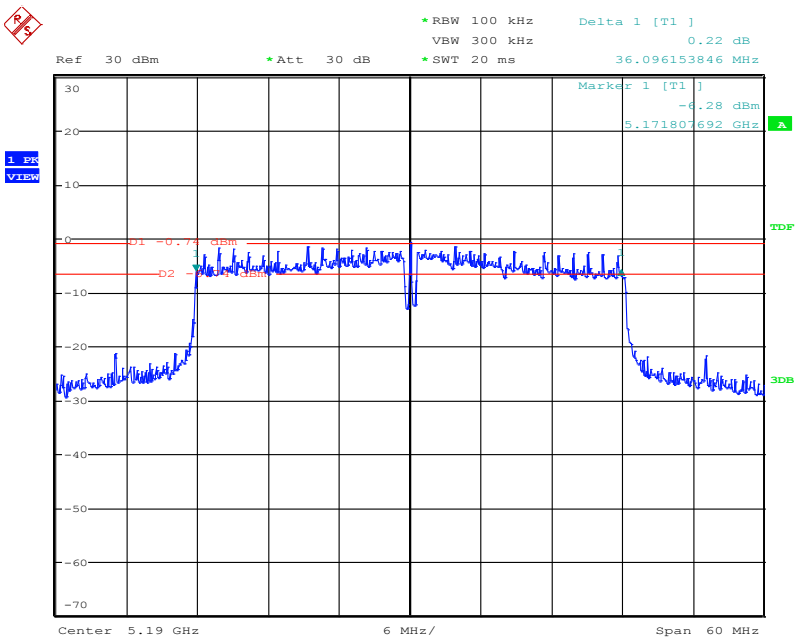


Date: 27.JUN.2017 11:57:24

IEEE802.11n 40MHz

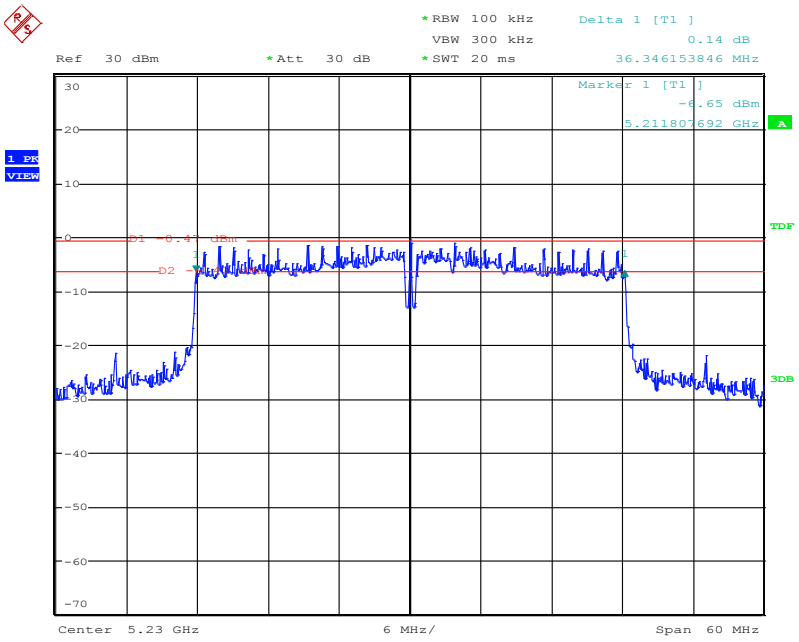
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5190**	36.10	> 0.5MHz
High	**5230**	36.35	> 0.5MHz

Channel Low



Date: 27.JUN.2017 13:50:43

Channel High

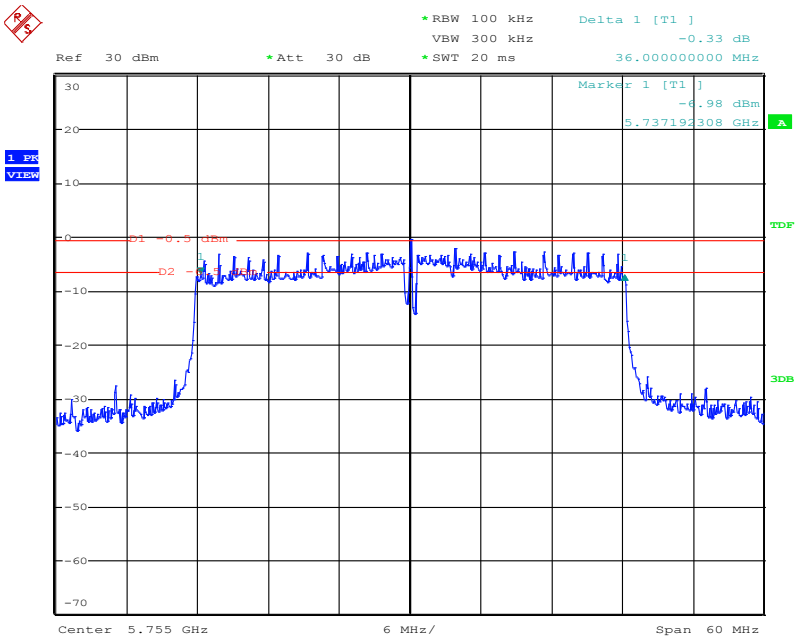


Date: 27.JUN.2017 13:53:40

IEEE 802.11n 40MHz

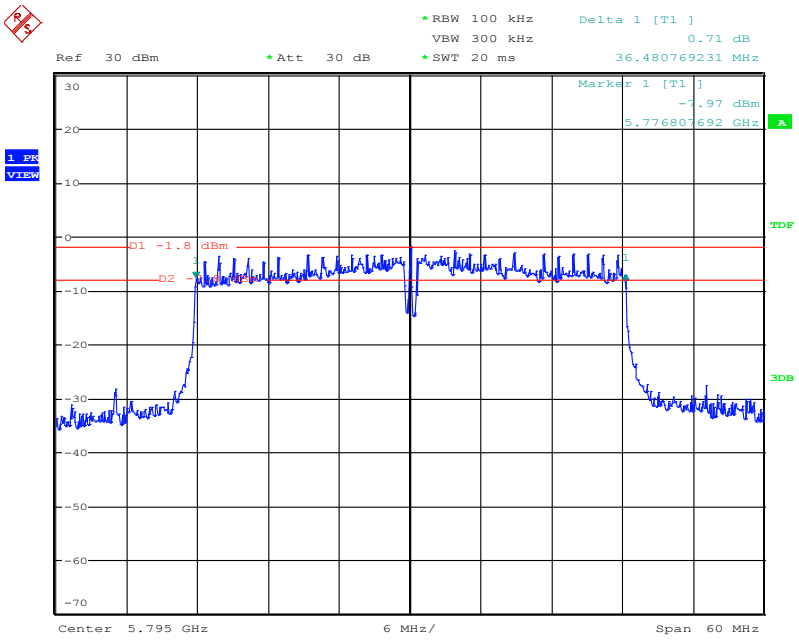
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5755**	36.00	> 0.5MHz
High	**5795**	36.48	> 0.5MHz

Channel Low



Date: 27.JUN.2017 13:57:42

Channel High

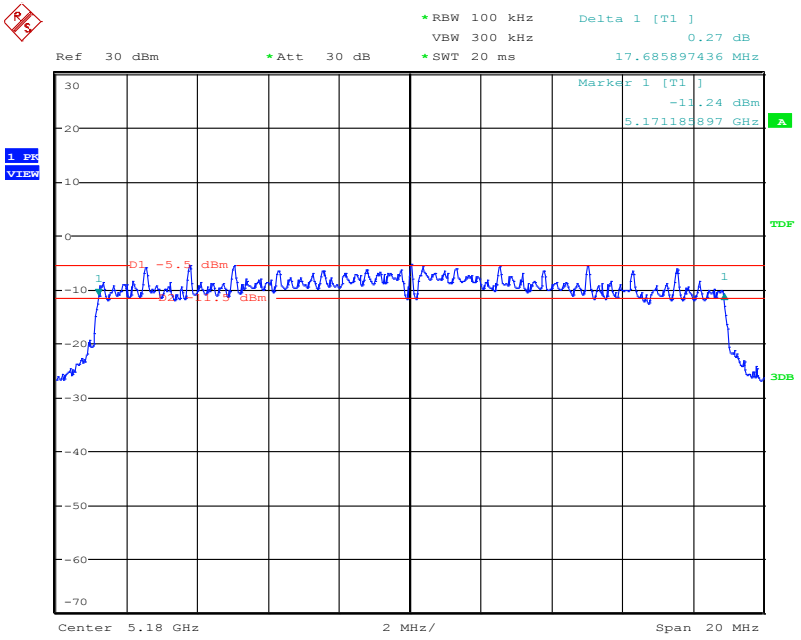


Date: 27.JUN.2017 14:01:53

802.11ac 5GHz 20MHz

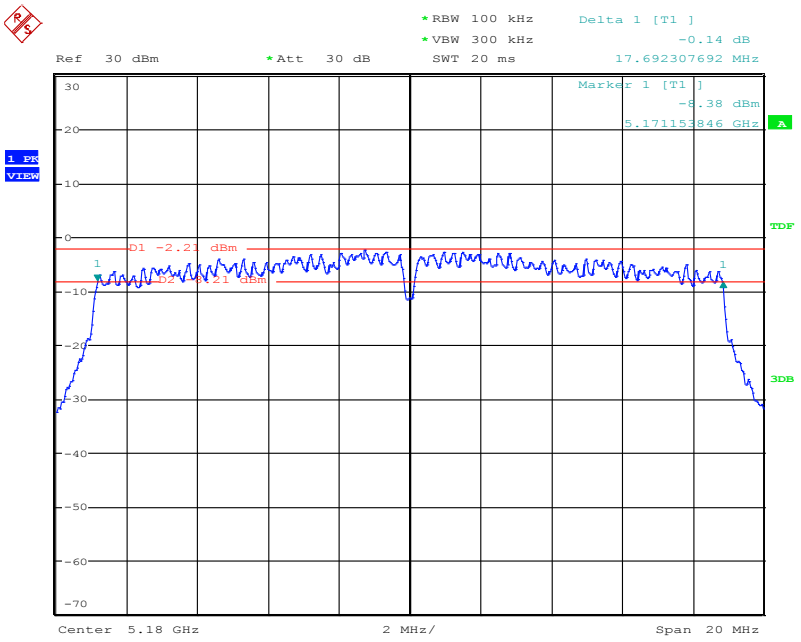
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5180**	17.67	> 0.5MHz
High	**5240**	17.69	> 0.5MHz

Channel Low



Date: 27.JUN.2017 11:20:32

Channel High

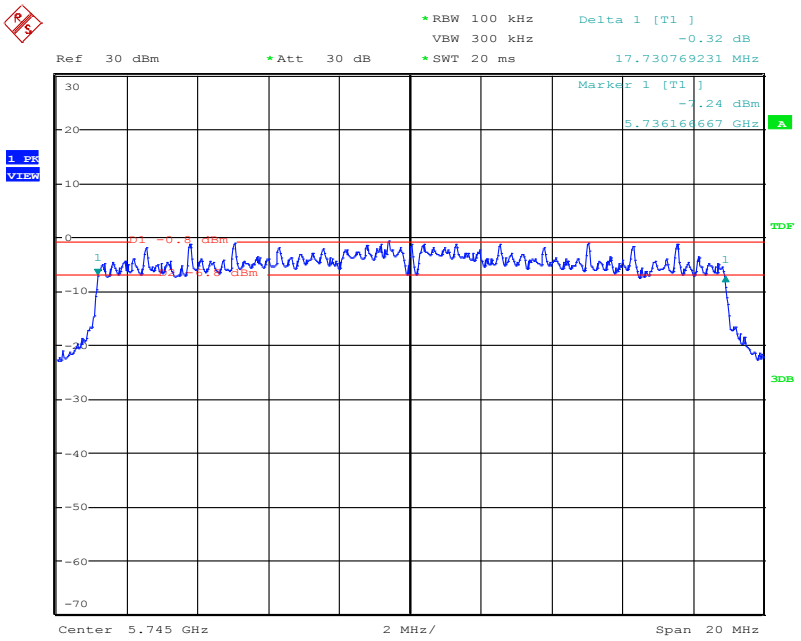


Date: 27.MAR.2017 19:16:11

802.11ac 5GHz 20MHz

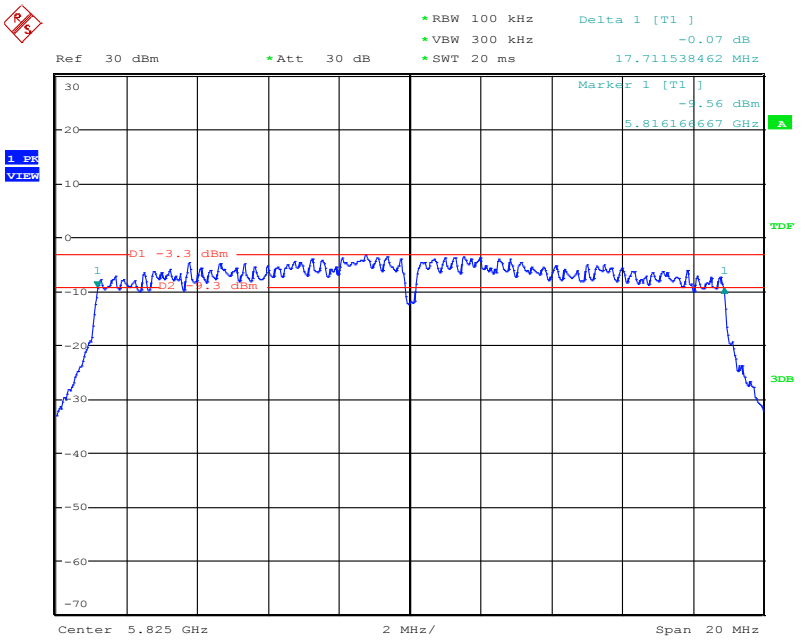
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5745**	17.73	> 0.5MHz
High	**5825**	17.71	> 0.5MHz

Channel Low



Date: 27.JUN.2017 11:15:19

Channel High

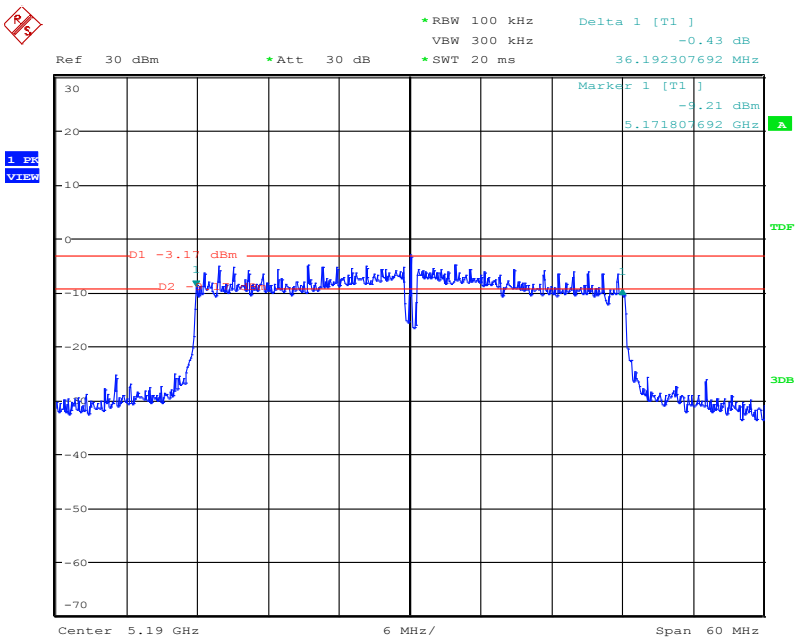


Date: 28.JUN.2017 19:52:28

802.11ac 5GHz 40MHz

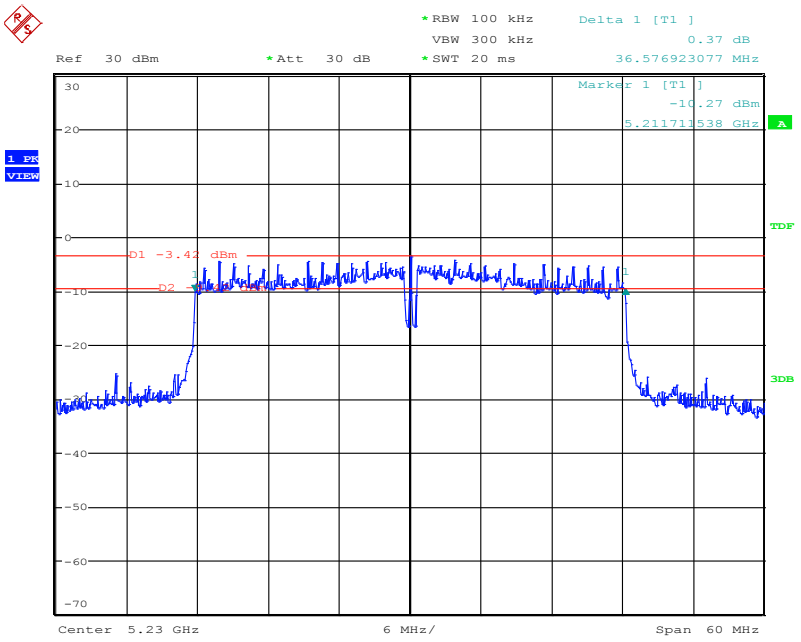
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5190**	36.19	> 0.5MHz
High	**5230**	36.58	> 0.5MHz

Channel Low



Date: 27.JUN.2017 11:09:20

Channel High

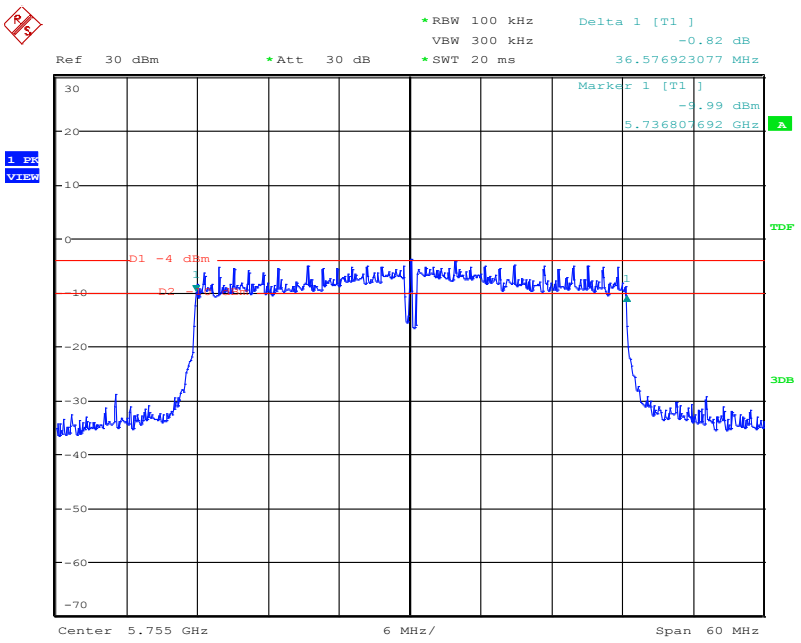


Date: 27.JUN.2017 11:05:36

802.11ac 5GHz 40MHz

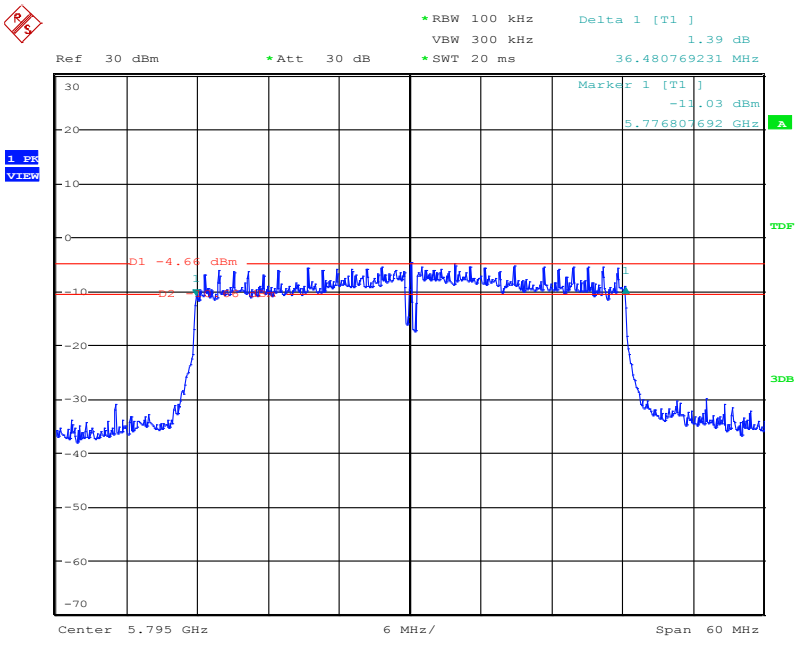
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5755**	36.58	> 0.5MHz
High	**5795**	36.48	> 0.5MHz

Channel Low



Date: 27.JUN.2017 11:00:39

Channel High



Date: 27.JUN.2017 10:57:24

C. MAXIMUM CONDUCTED OUTPUT POWER

The test method

Test Requirement: FCC 47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(3)

Test Method: KDB 789033 D02 v01r04 Section E.3.a (Method PM)

Limits:

1. 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 conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, 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 conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, 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 conducted output power over the frequency band of operation shall not exceed 1 W. In addition, 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-topoint operations.

(iv) For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, 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.

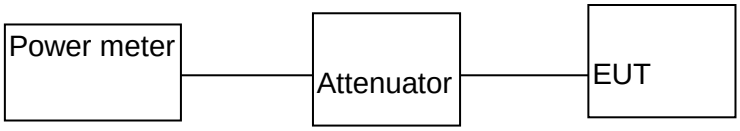
2. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 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

Test Procedure:

1. Connected the EUT's antenna port to measure device by 10dB attenuator.
2. Method PM is used to perform output power measurement, trigger and gating function of wide band power meter is enabled to measure max output power of Tx on burst.

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

For Conducted RF test setup



(EUT: Mobile phone)

Test Data:

Band 1: 5150 MHz ~ 5250 MHz

Mode	Channel/ Frequency (MHz)	Maximum conducted output power (dBm)	Limit(dBm)	Pass / Fail
		Meas Power		
IEEE 802.11a	36 (5180)	15.12	30	Pass
	44 (5220)	15.22	30	Pass
	48 (5240)	**15.34**	30	Pass
IEEE 802.11n-HT20	36 (5180)	14.23	30	Pass
	44 (5220)	14.33	30	Pass
	48 (5240)	14.32	30	Pass
802.11n(HT40)	38 (5190)	13.14	30	Pass
	46 (5230)	13.21	30	Pass
IEEE 802.11ac-HT20	36(5180)	12.33	30	Pass
	48(5240)	12.56	30	Pass
IEEE 802.11ac-HT40	38(5190)	12.47	30	Pass
	46(5230)	12.54	30	Pass

Band 4: 5725 MHz ~ 5850 MHz

Mode	Channel/ Frequency (MHz)	Maximum conducted output power (dBm)	Limit(dBm)	Pass / Fail
		Meas Power		
IEEE 802.11a	149 (5745)	15.22	30	Pass
	157 (5785)	15.20	30	Pass
	165 (5825)	**15.31**	30	Pass
IEEE 802.11n-HT20	149 (5745)	14.15	30	Pass
	157 (5785)	14.18	30	Pass
	165 (5825)	14.47	30	Pass
802.11n(HT40)	151 (5755)	13.41	30	Pass
	159 (5795)	13.52	30	Pass
IEEE 802.11ac-HT20	149(5745)	12.13	30	Pass
	165(5825)	12.18	30	Pass
IEEE 802.11ac-HT40	151(5755)	12.22	30	Pass
	159(5795)	12.13	30	Pass

D. PEAK POWER SPECTRAL DENSITY

Product	: EUT-Sample	Test Mode	: See Section 2.2
Test Item	: Peak Power Spectral Density	Temperature	: 25℃
Test Voltage	: DC 3.7V	Humidity	: 56%RH
Test Result	: **PASS**		

IEEE 802.11a
Band1

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5180	3.657	17dBm/MHz	PASS
High	5240	2.715		PASS

Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5745	1.164	30dBm/500 kHz	PASS
High	5825	0.965		PASS

IEEE 802.11n 5G 20MHz
Band1

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5180	2.976	17dBm/MHz	PASS
High	5240	2.049		PASS

Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5745	1.104	30dBm/500 kHz	PASS
High	5825	0.996		PASS

IEEE 802.11n 5G 40MHz
Band1

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5190	0.508	17dBm/MHz	PASS
High	5230	-0.938		PASS

Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5755	-1.709	30dBm/500 kHz	PASS
High	5795	-0.866		PASS

IEEE 802.11ac 5G 20MHz
Band1

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5180	2.23	17dBm/MHz	PASS
High	5240	2.65		PASS

Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5745	2.17	30dBm/500 kHz	PASS
High	5825	1.36		PASS

IEEE 802.11ac 5G 40MHz

Band1

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5190	0.19	17dBm/MHz	PASS
High	5230	-0.55		PASS

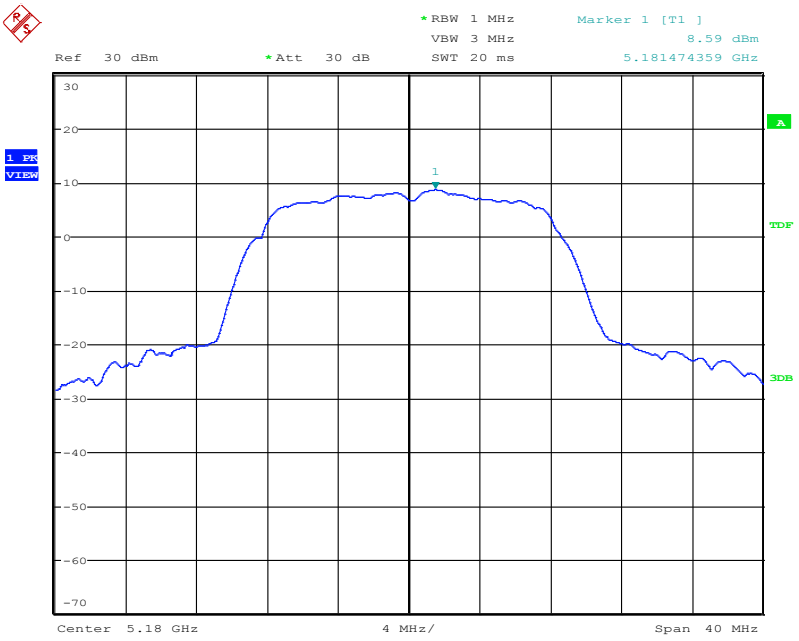
Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5755	0.93	30dBm/500 kHz	PASS
High	5795	0.14		PASS

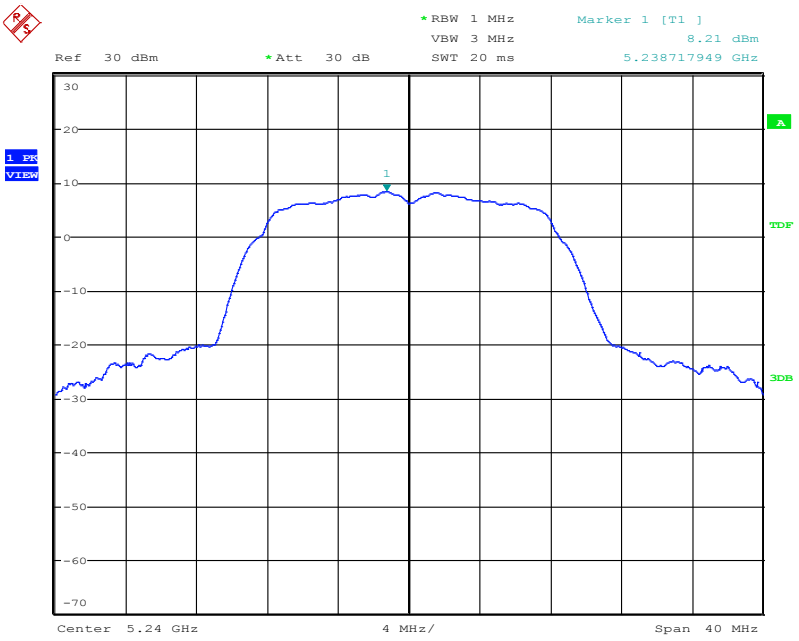
Note: For 5.725~5.85GHz (Band4): Power Density(dBm/500kHz)= Power Density (dBm/MHz)- 10log(500kHz/RBW) (dB)

IEEE 802.11a Band1

PPSD (CH Low)

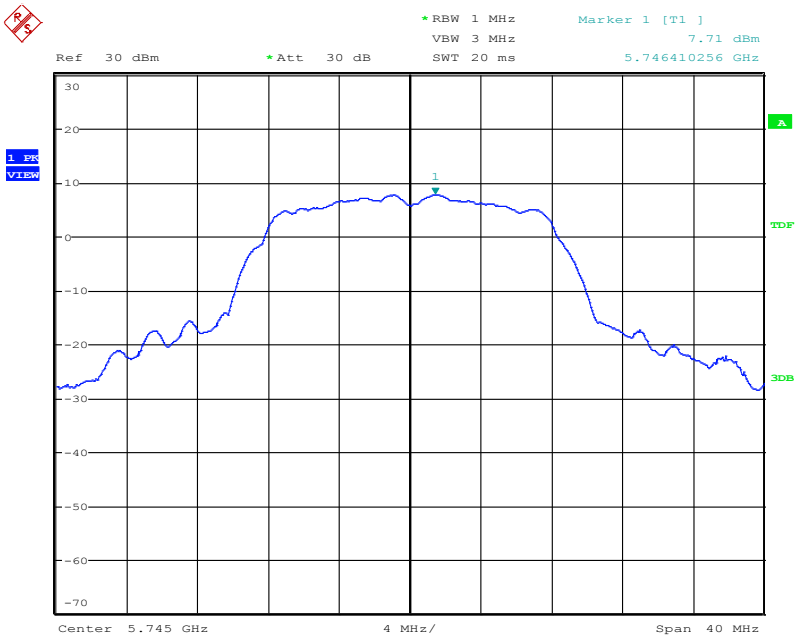


PPSD (CH High)



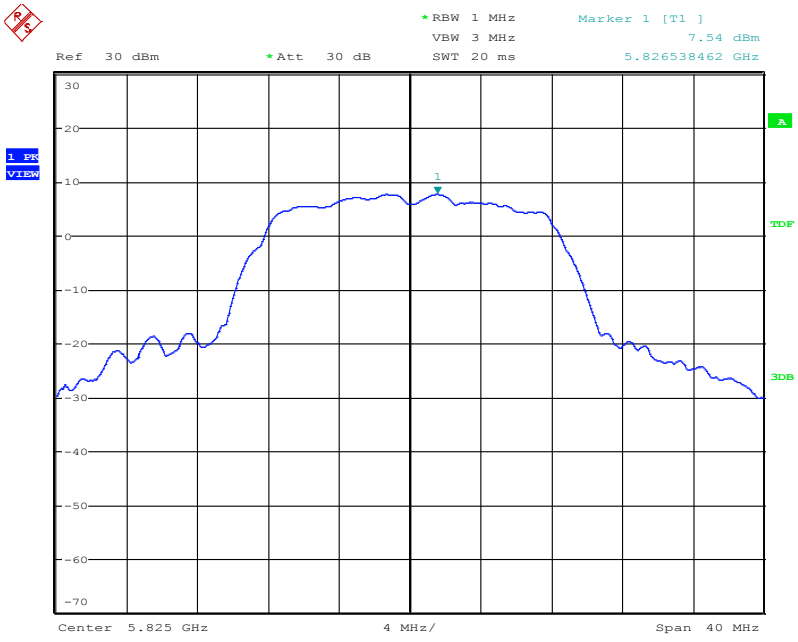
IEEE 802.11a Band4

PPSD (CH Low)



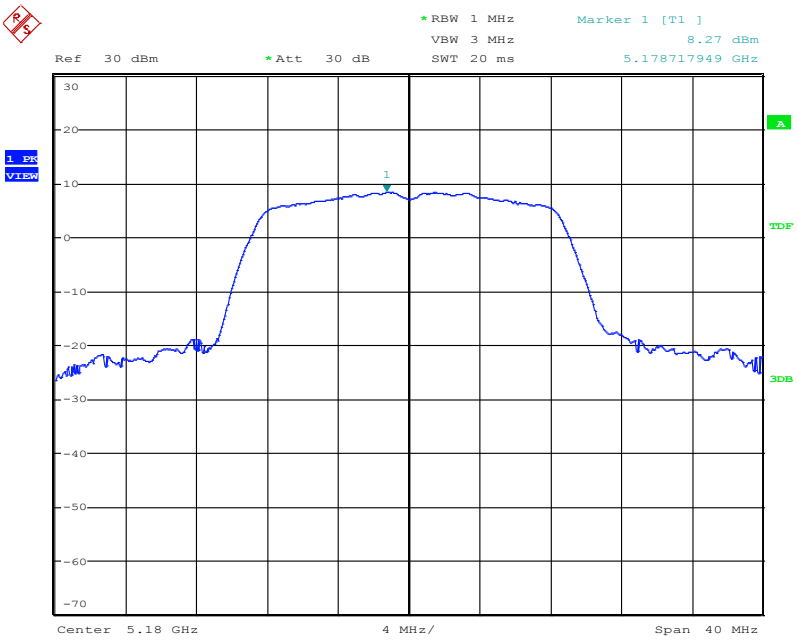
D.

PPSD (CH High)

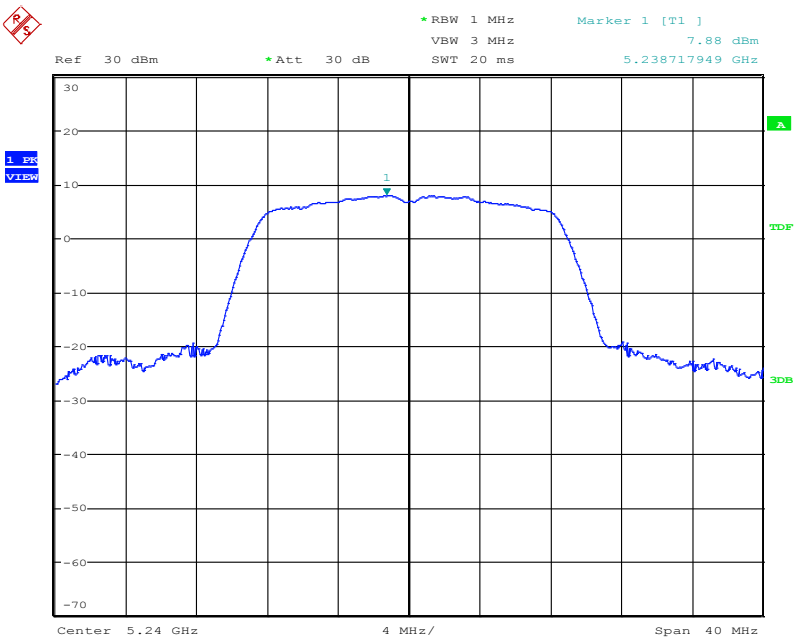


IEEE 802.11n 5G 20MHz Band1

PPSD (CH Low)

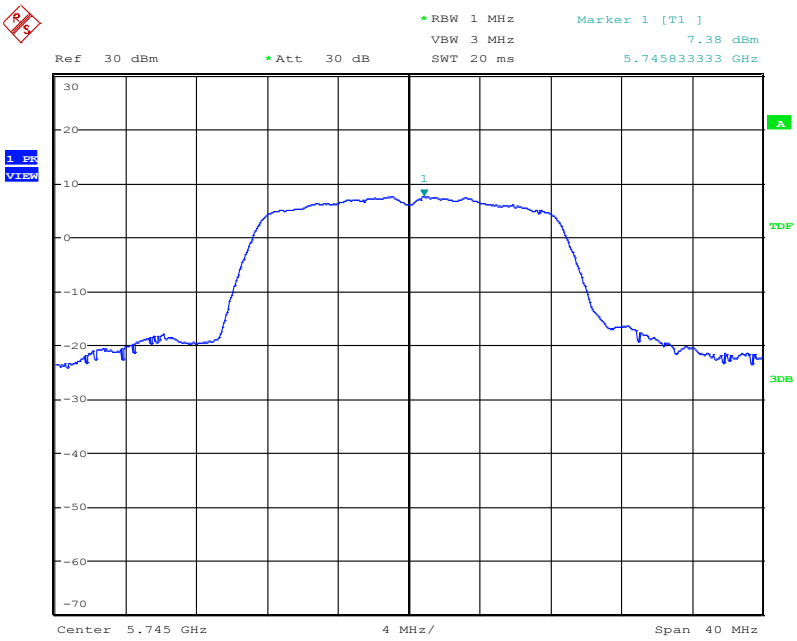


PPSD (CH High)

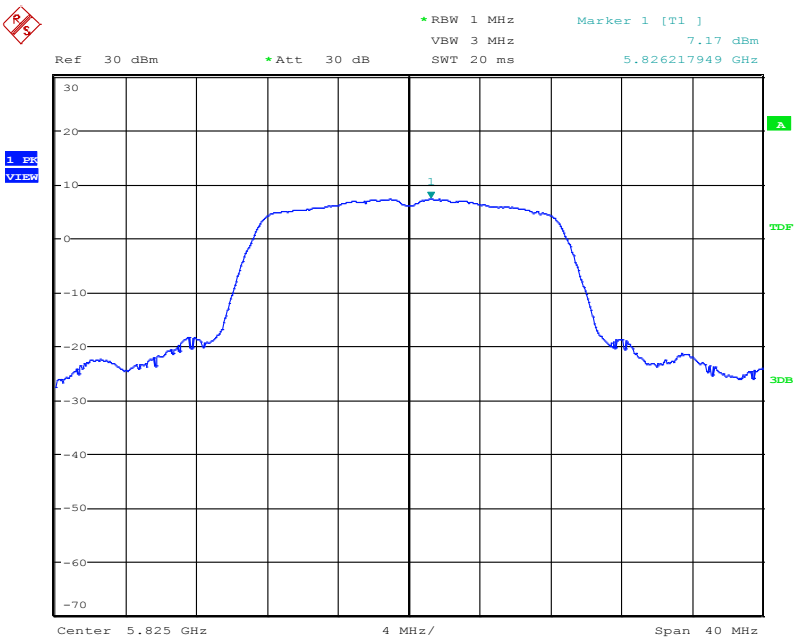


IEEE 802.11n 5G 20MHz Band4

PPSD (CH Low)

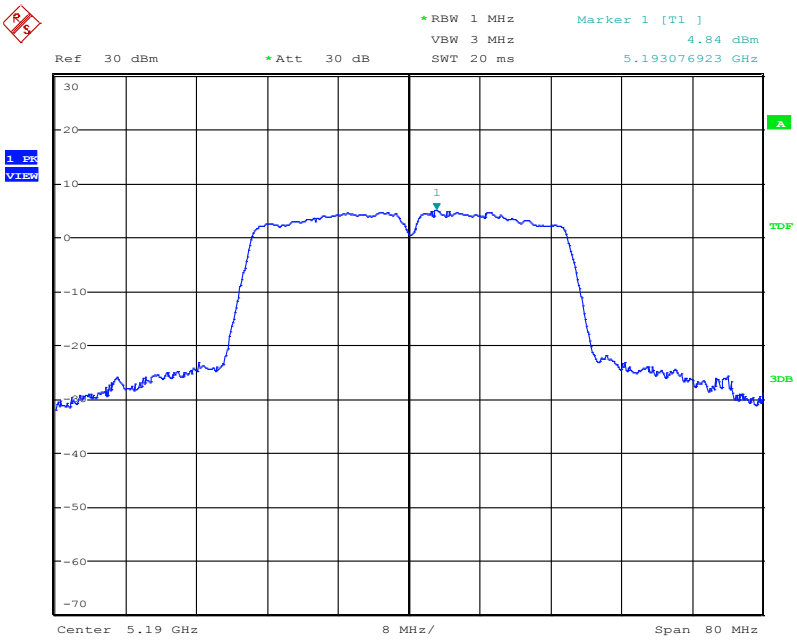


PPSD (CH High)

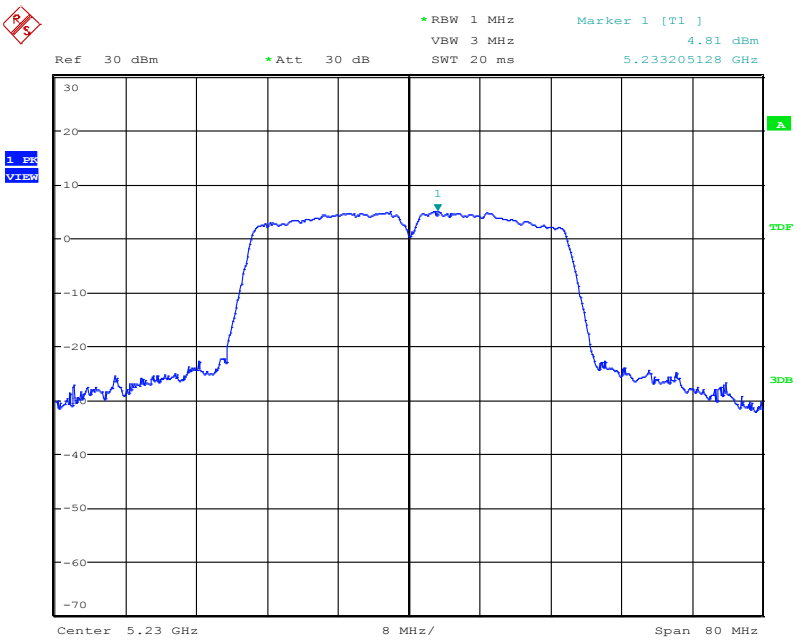


IEEE 802.11n 5G 40MHz Band1

PPSD (CH Low)

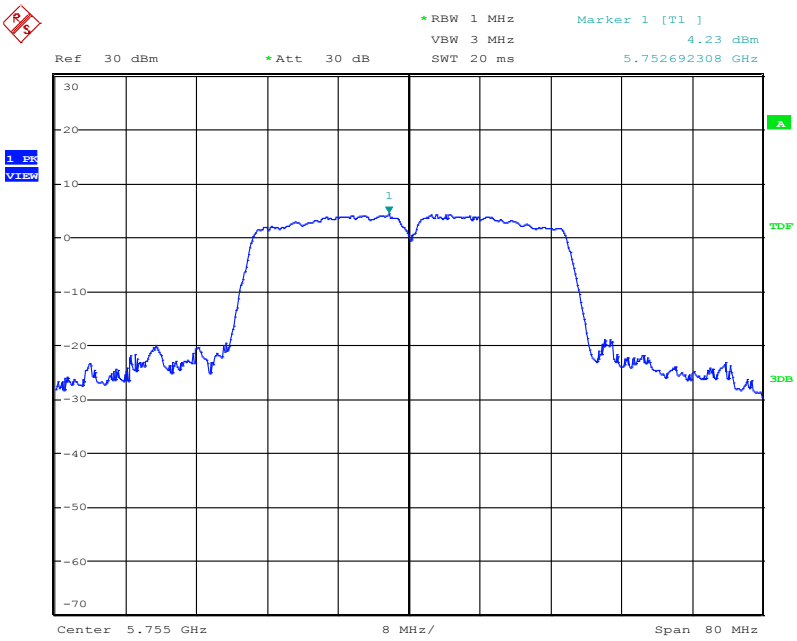


PPSD (CH High)

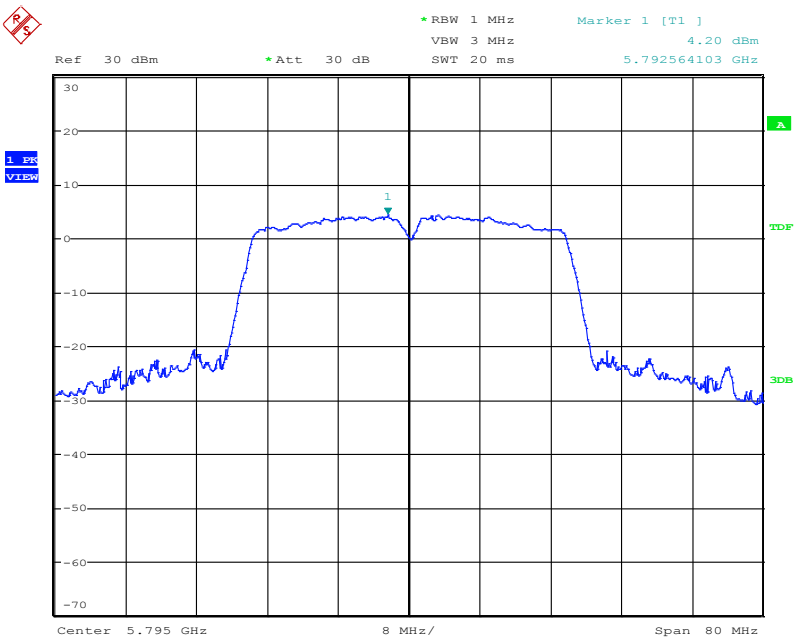


IEEE 802.11n 5G 40MHz Band4

PPSD (CH Low)

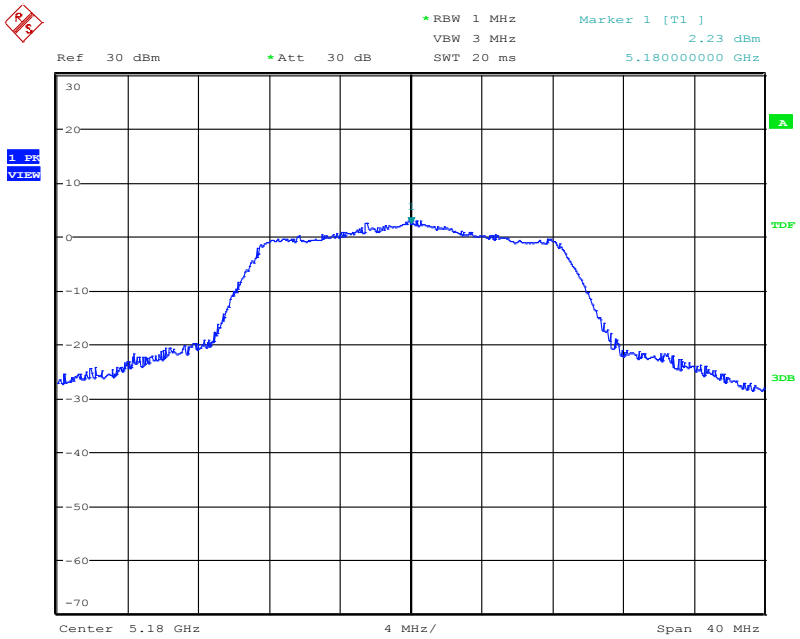


PPSD (CH High)

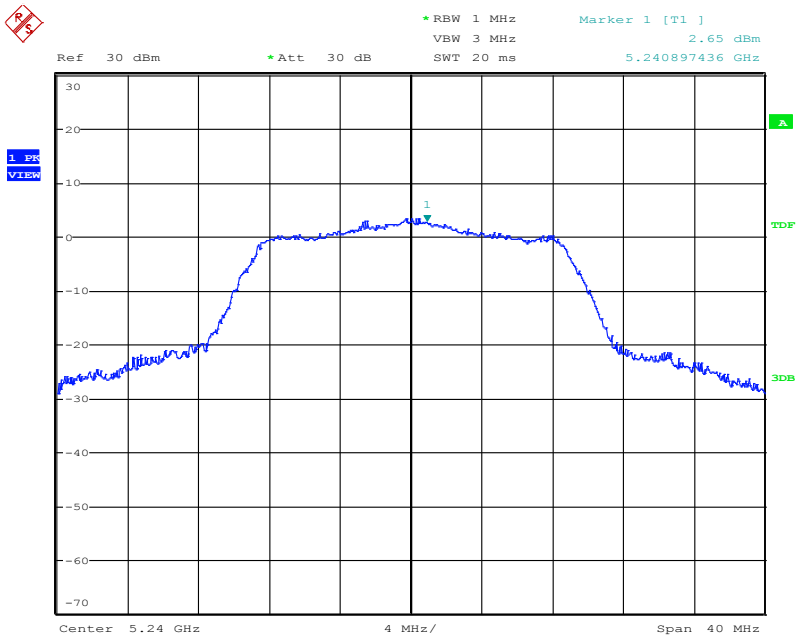


IEEE 802.11ac 5G 20MHz Band1

PPSD (CH Low)

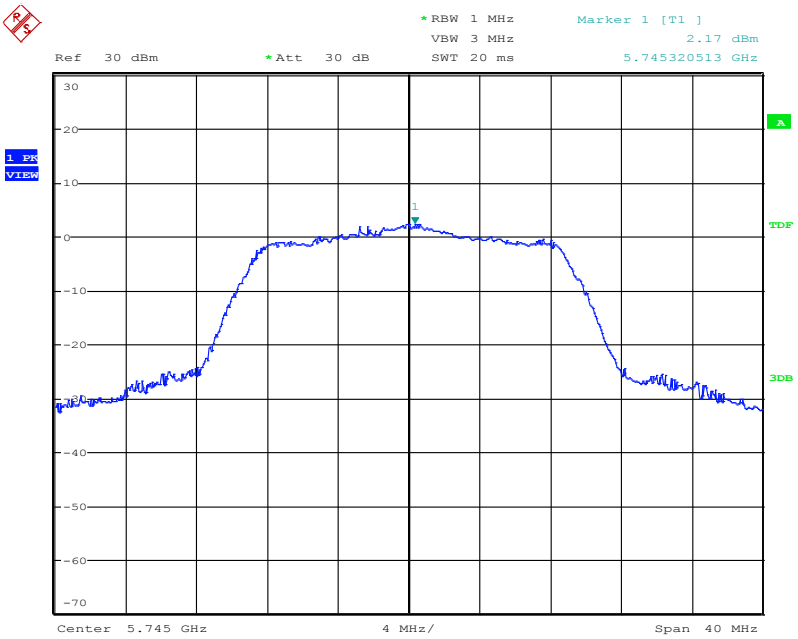


PPSD (CH High)

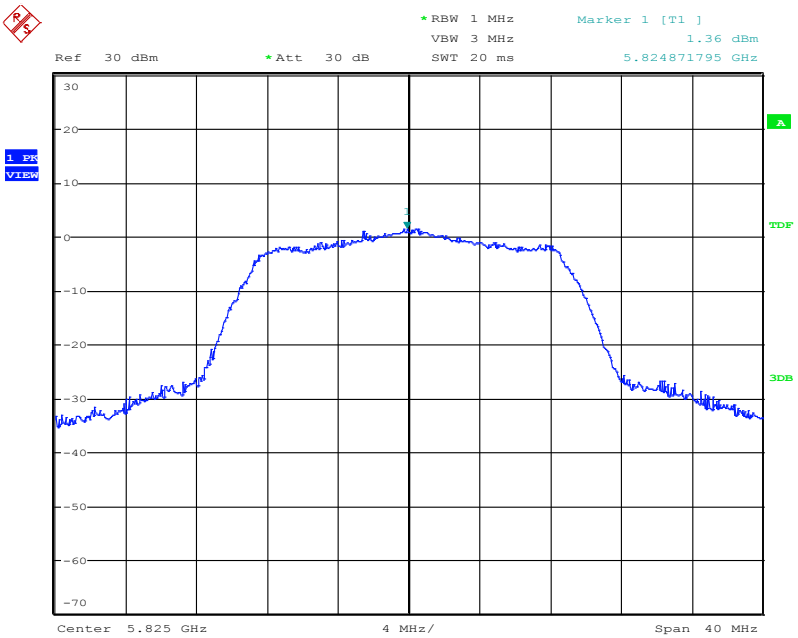


IEEE 802.11ac 5G 20MHz Band4

PPSD (CH Low)

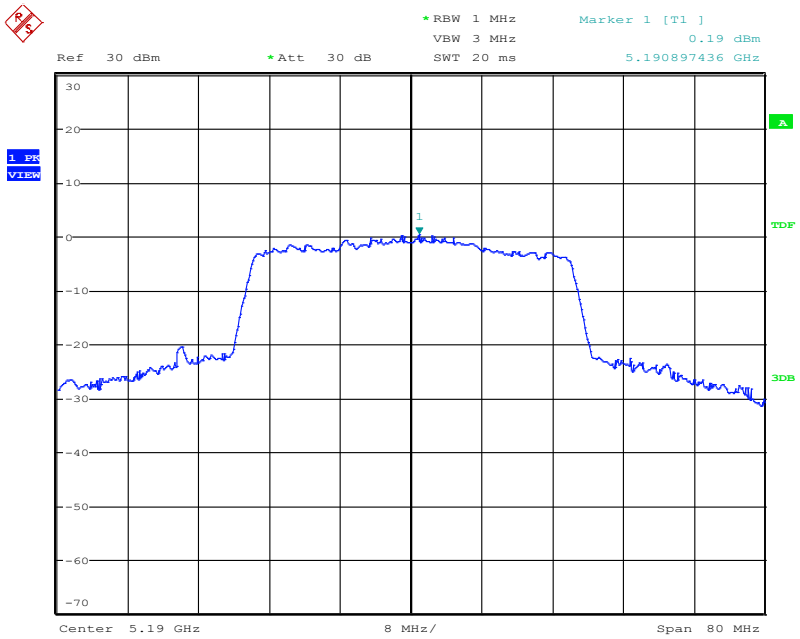


PPSD (CH High)

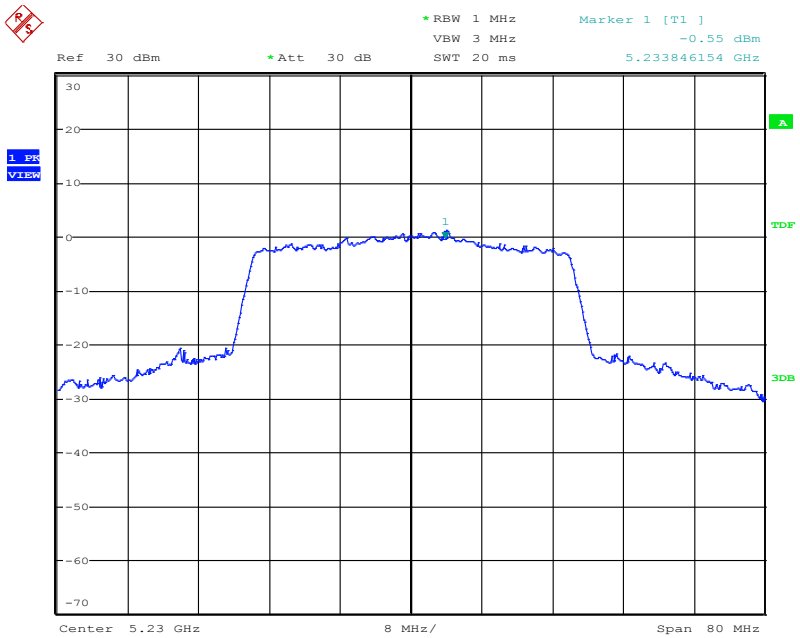


IEEE 802.11ac 5G 40MHz Band1

PPSD (CH Low)

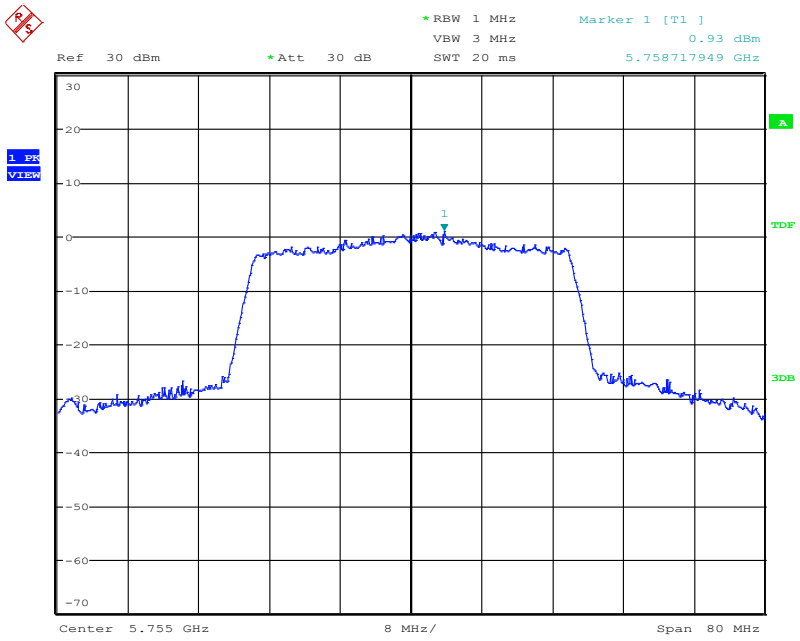


PPSD (CH High)

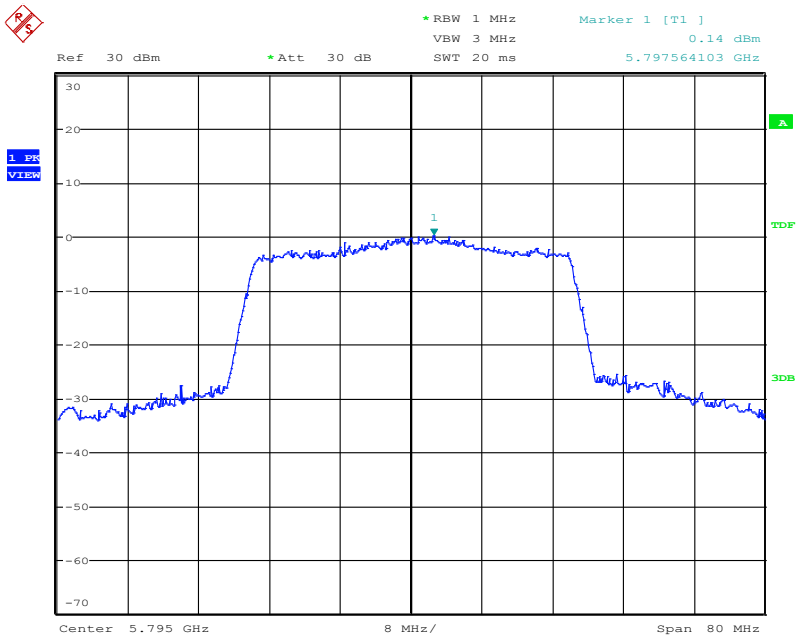


IEEE 802.11ac 5G 40MHz Band4

PPSD (CH Low)



PPSD (CH High)



8.BAND EDGE EMISSIONS

8. 1 Test Equipment

Please refer to Section 4 this report.

8. 2 Test Procedure

Band Edge Emissions Measurement:	
Test Method:	a.)The EUT was tested according to ANSI C63.10. b)The EUT, peripherals were put on the turntable which table size is 1m x 1.5 m, table high 1.5 m. All set up is according to ANSI C63.10. c)The frequency spectrum from 9 kHz to 40 GHz was investigated. All readings from 9 kHz to 150 kHz are quasi-peak values with a resolution bandwidth of 200 Hz. All readings from 150 kHz to 30 MHz are quasi-peak values with a resolution bandwidth of 9 KHz. All readings from 30 MHz to 1 GHz are quasi-peak values with a resolution bandwidth of 120 KHz. All readings are above 1 GHz , peak values with a resolution bandwidth of 1 MHz . Measurements were made at 3 meters. d)The emissions from the EUT were measured continuously at every azimuth by rotating the turntable. The Receiving antenna high is varied from 1 m to 4 m high to find the maximum emission for each frequency. Emissions below 30MHz were measured with a loop antenna while emission above 30MHz were measured using a broadband E-field antenna. e) Maximizing procedure was performed on the six (6) highest emissions to ensure EUT compliance is with all installation combinations. All data was recorded in the peak detection mode. Quasi-peak readings was performed only when an emission was found to be marginal (within -4 dB of specification limit), and are distinguished with a "**QP**" in the data table. f)Each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 8 and 13 of ANSI C63.10.
Band Edge Emissions Measurement:	
Test Equipment Setting:	
a)Attenuation: Auto b)Span Frequency: 100 MHz c)RBW/VBW (Emission in restricted band): 1MHz / 3MHz for Peak, 1MHz / 1/T for Average	d)RBW/VBW(Emission in non-restricted band) 1MHz / 3MHz for peak

8. 3 Test Setup

Same as section 2.2of this report

8. 4 Configuration of the EUT

Same as section 2.2of this report

8. 5 EUT Operating Condition

Same as section 2.2of this report.

8. 6 Limit

Spurious Radiated Emission & Band Edge Emissions Measurement:	
Limit:	For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of −27 dBm/MHz. For transmitters operating in the 5.725-5.85 GHz band: (i) All emissions shall be limited to a level of −27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge. (ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.
Note: Applies to harmonics/spurious emissions that fall in the restricted bands listed in section 15.205. The maximum permitted average field strength is listed in section 15.209. 47 CFR § 15.237(c): The emission limits as specified above are based on measurement instrument employing an average detector. The provisions in section 15.35 for limiting peak emissions apply.	

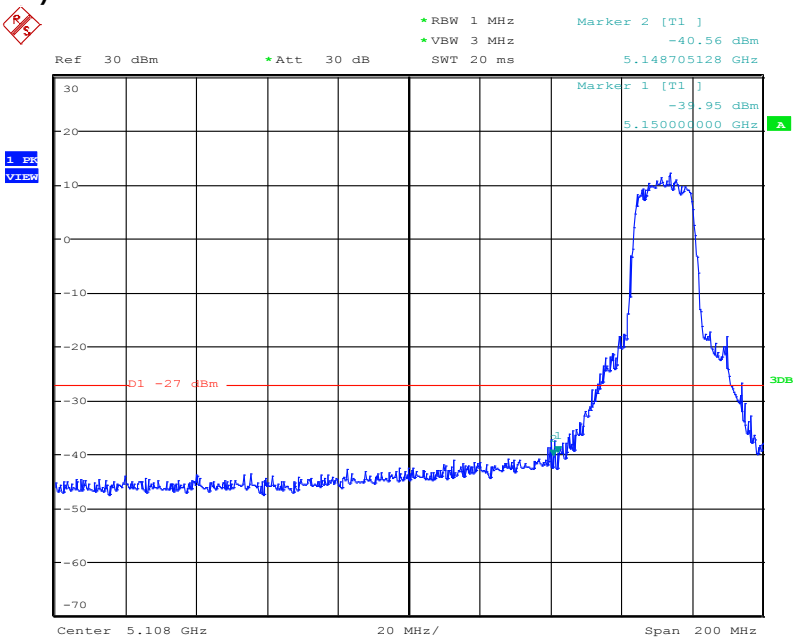
8. 7 Test Result

Band Edge and Fundamental Emissions

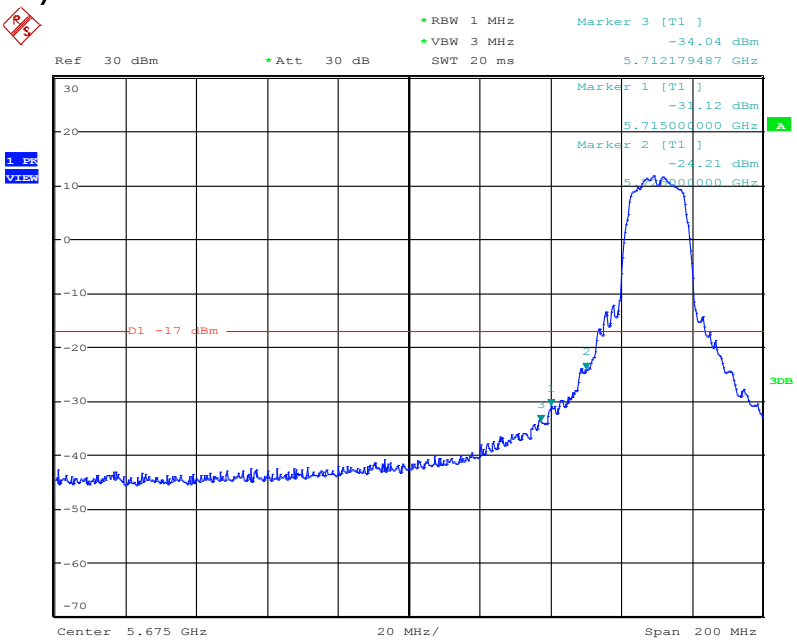
Product:	8 inch Windows OS Tablet	Test Mode:	IEEE 802.11a/n/ac 5G
Test Item:	Band Edge and Fundamental Emissions	Temperature:	25℃
Test Voltage:	3.7V	Humidity:	56%RH
Test Result:	PASS		

IEEE 802.11a

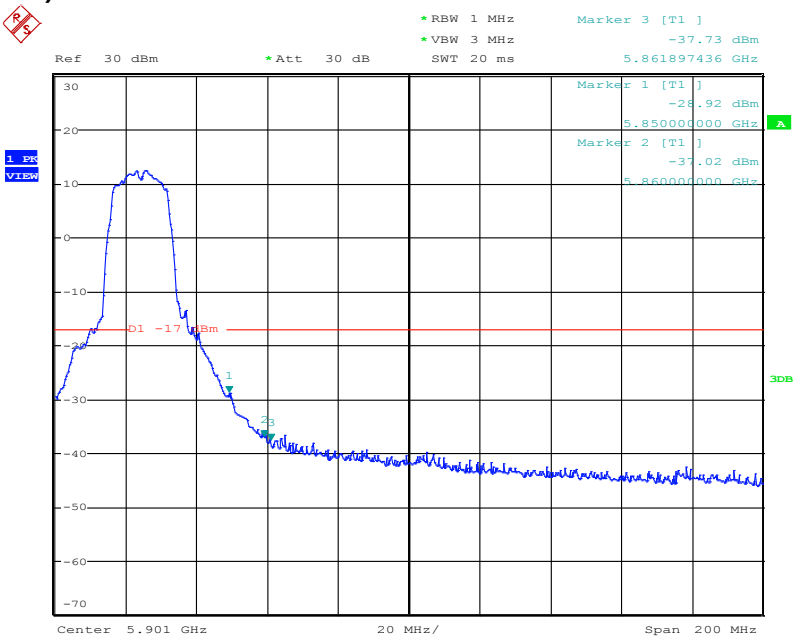
Channel Low (5180MHz)



Channel Low (5745MHz)

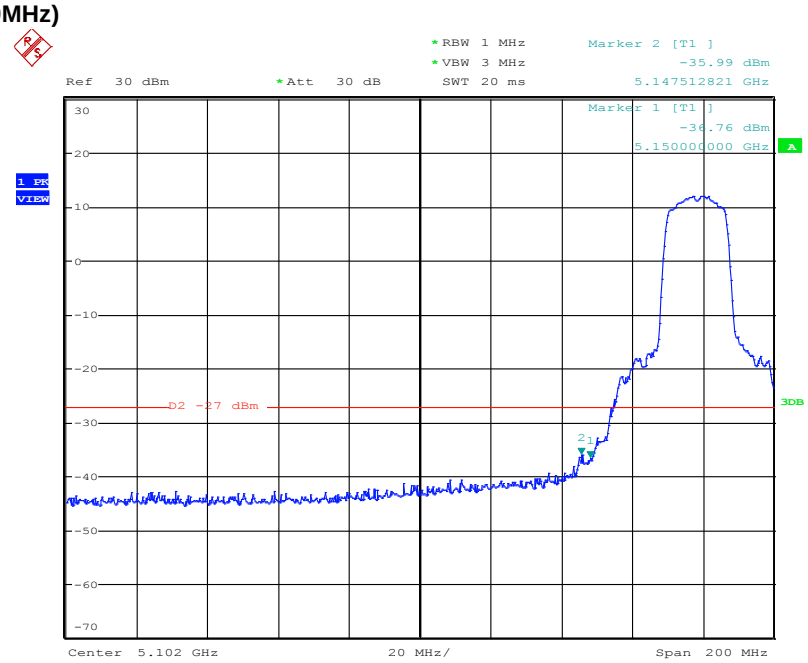


Channel High (5825MHz)

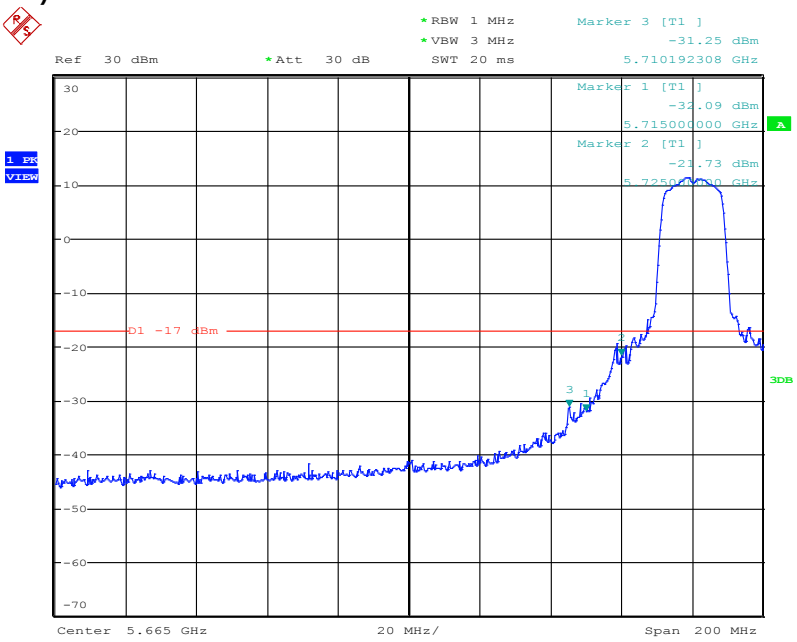


IEEE 802.11n 20MHz

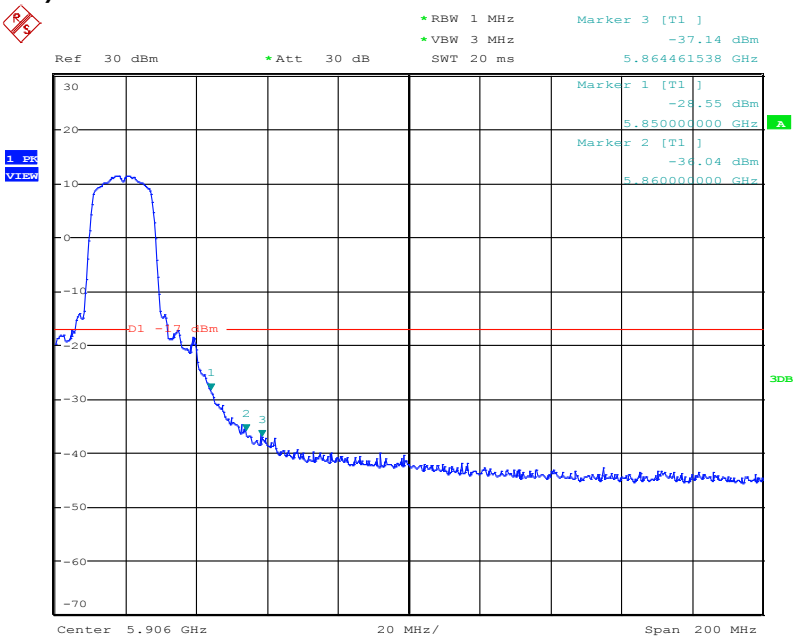
Channel Low (5180MHz)



Channel Low (5745MHz)

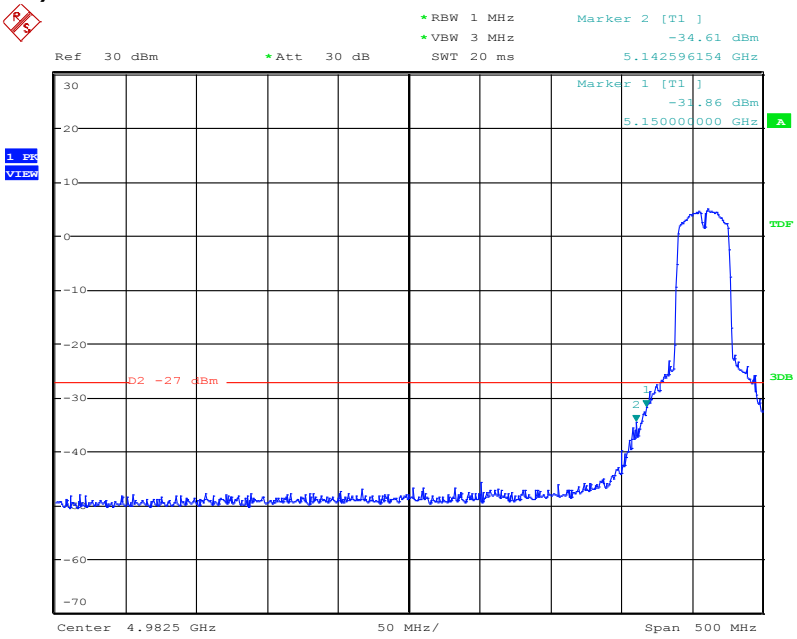


Channel High (5825MHz)

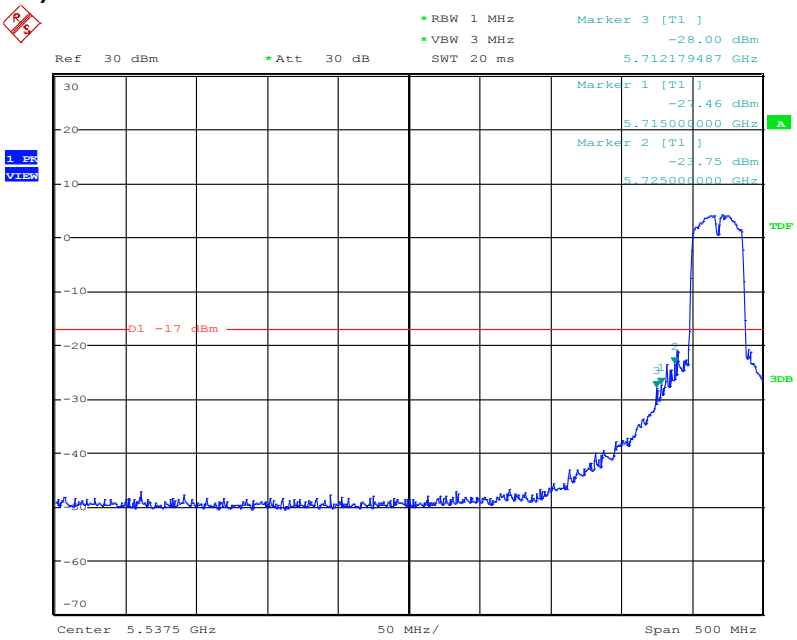


IEEE 802.11n 40MHz

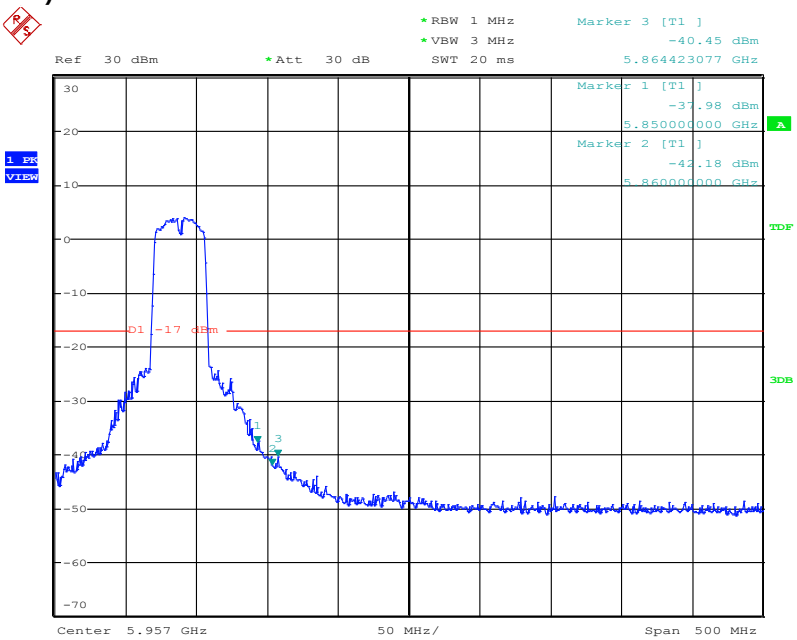
Channel Low (5190MHz)



Channel Low (5755MHz)

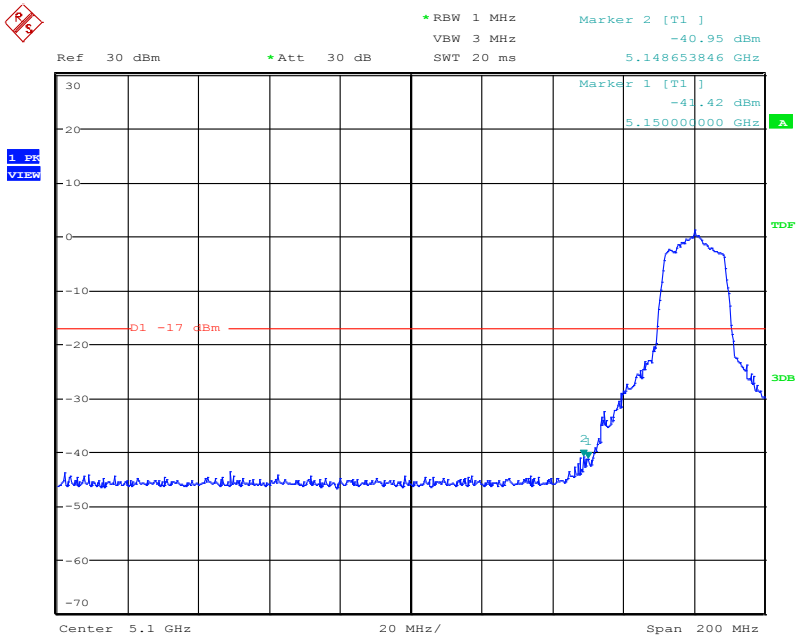


Channel High (5795MHz)

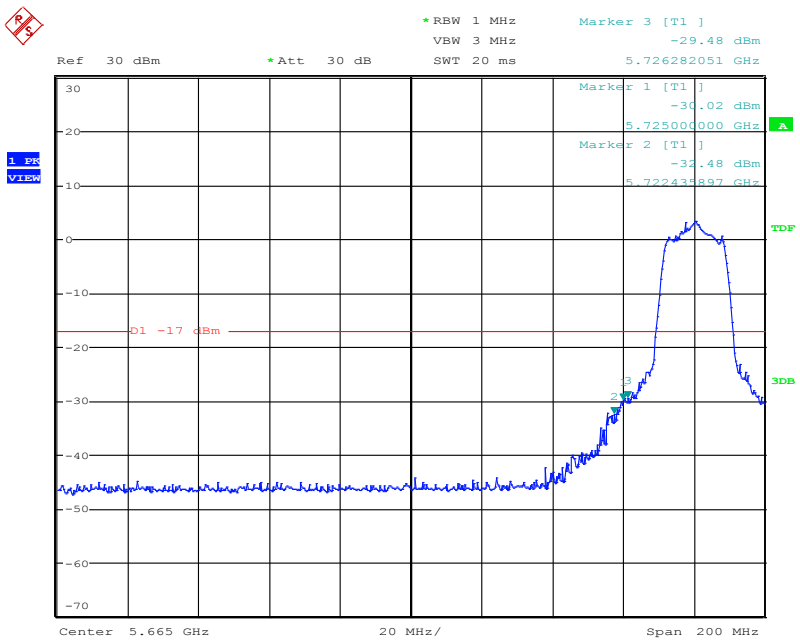


IEEE 802.11ac 20MHz

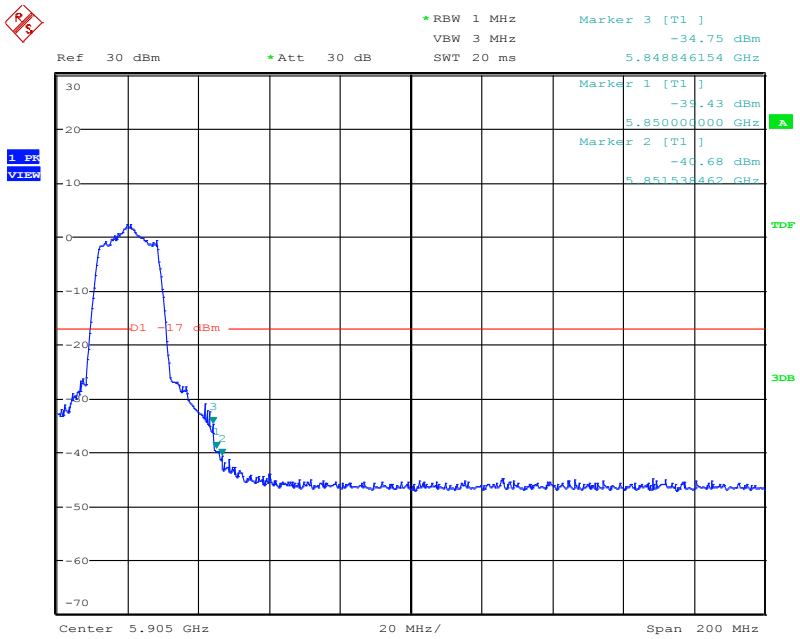
Channel Low (5180MHz)



Channel Low (5745MHz)

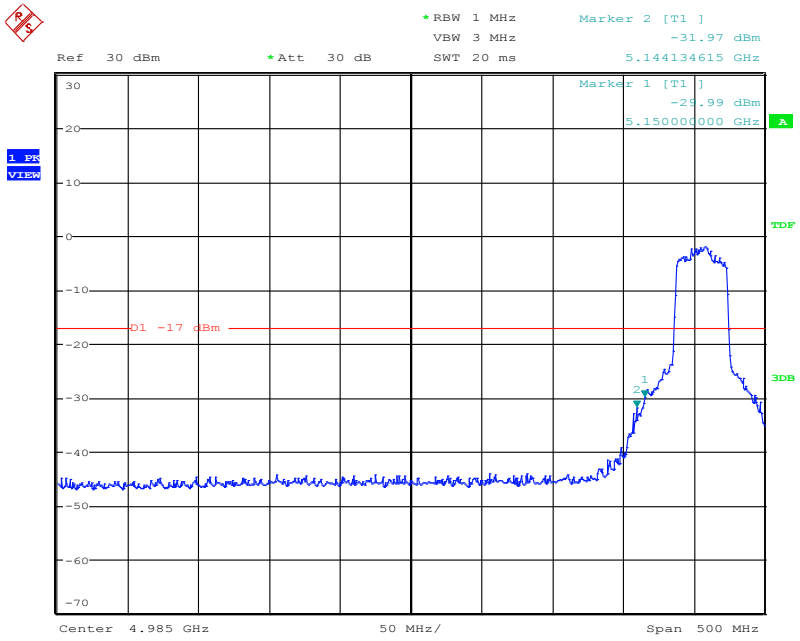


Channel High (5825MHz)

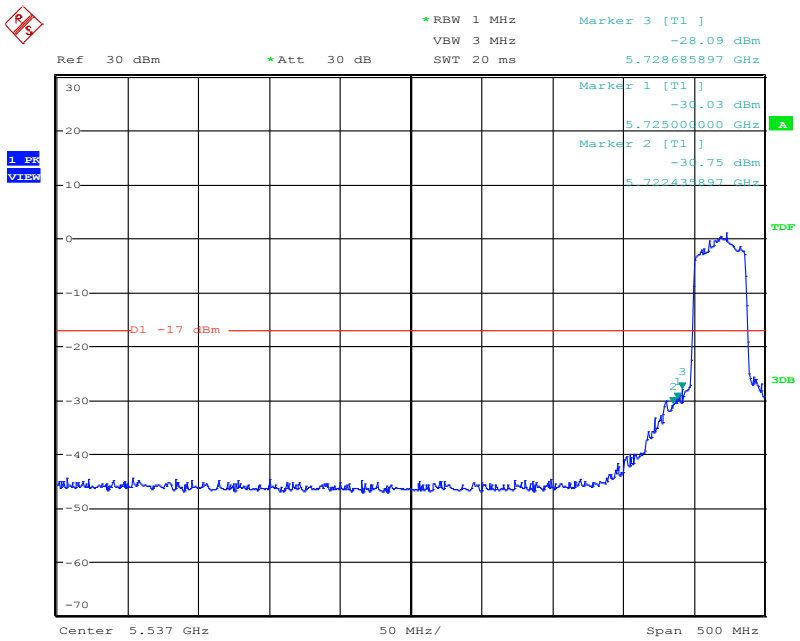


IEEE 802.11n 40MHz

Channel Low (5190MHz)



Channel Low (5755MHz)



Channel High (5795MHz)