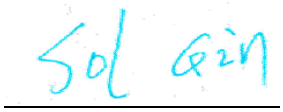
FCC Test Report

Application Purpose	:	Original grant
Applicant Name:	:	TECNO MOBILE LIMITED
FCC ID	:	2ADYY-CXAIR
Equipment Type	:	Mobile phone
Model Name	:	CX Air
Report Number	:	FCC17030129A-7
Standard(S)	:	FCC Part 15 Subpart E
Date Of Receipt	:	March 13, 2017
Date Of Issue	:	March 27, 2017

Test By :

(Daisy Qin)

Reviewed By :



(Sol Qin)

Authorized by :

(Michal Ling)

Prepared by :

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REPORT REVISE RECORD

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	March 27, 2017	Valid	Original Report

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1. GENERAL INFORMATION

GENERAL DESCRIPTION OF EUT

Test Model	CX Air
Applicant	TECNO MOBILE LIMITED
Address	ROOMS 05-15, 13A/F., SOUTH TOWER, WORLD FINANCE CENTRE, HARBOUR CITY, 17 CANTON ROAD, TSIM SHA TSUI, KOWLOON, HONG KONG
Manufacturer	SHENZHEN TECNO TECHNOLOGY CO.,LTD.
Address	1-4th Floor,3rd Building,Pacific Industrial Park,No.2088,Shenyan Road,Yantian District,Shenzhen,Guangdong,China
Equipment Type	Mobile phone
Brand Name	TECNO
Hardware version:	V1.1
Software version:	CX Air-H3713B1-N-170209V2
Extreme Temp. Tolerance	-10℃ to +65℃
Battery information:	Li-Polymer Battery : BL-32BT Voltage: 3.85V Capacity: 3200mAh Limited Charge Voltage: 4.4V
Adapter Information:	Adapter: A8-501000 Input: 100~240V 50/60Hz 200mA Output: 5V~1A
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:	PIFA Antenna
Antenna gain:	-1.4dBi
Data of receipt	March 13, 2017
Date of test	March 13, 2017 to March 27 , 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	13 for 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 at QTC 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 63.10:2013. The sample tested as described in this report is in compliance with the FCC Rules Part15 Subpart E.
All the testing was referenced KDB NO. 789033.
The test results of this report relate only to the tested sample identified in this report.

2. TEST DESCRIPTION

2.1 MEASUREMENT 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.

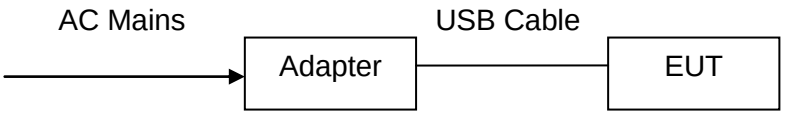
(3) Record the worst case of each test item in this report.

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 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.												

2.4 CONFIGURATION OF SYSTEM UNDER TEST



(EUT: Mobile phone)

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	/	A8-501000	/	/
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	04/25/2016	04/24/2017
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

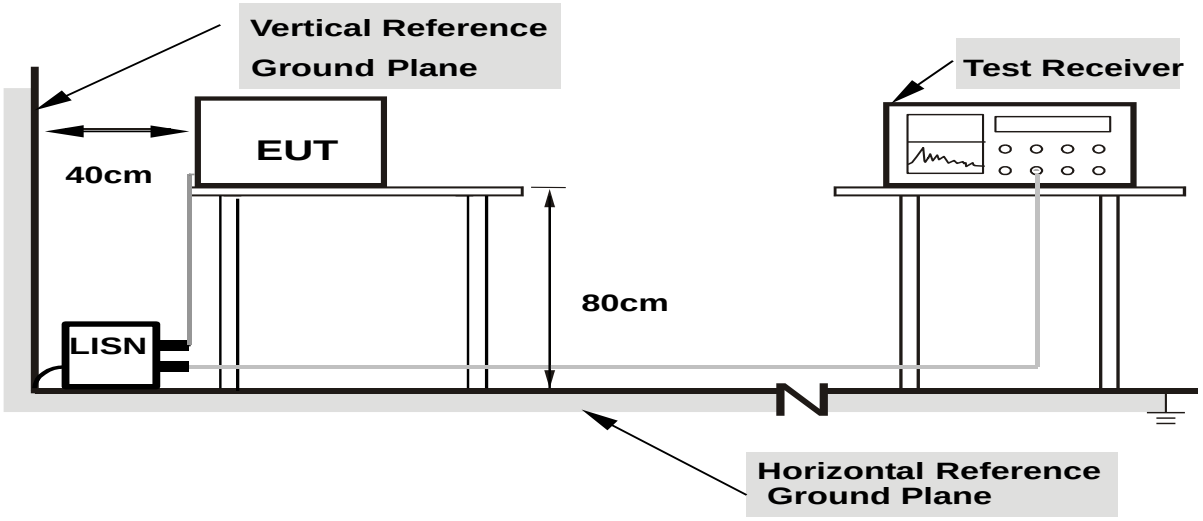
5.1.2 TEST PROCEDURE

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



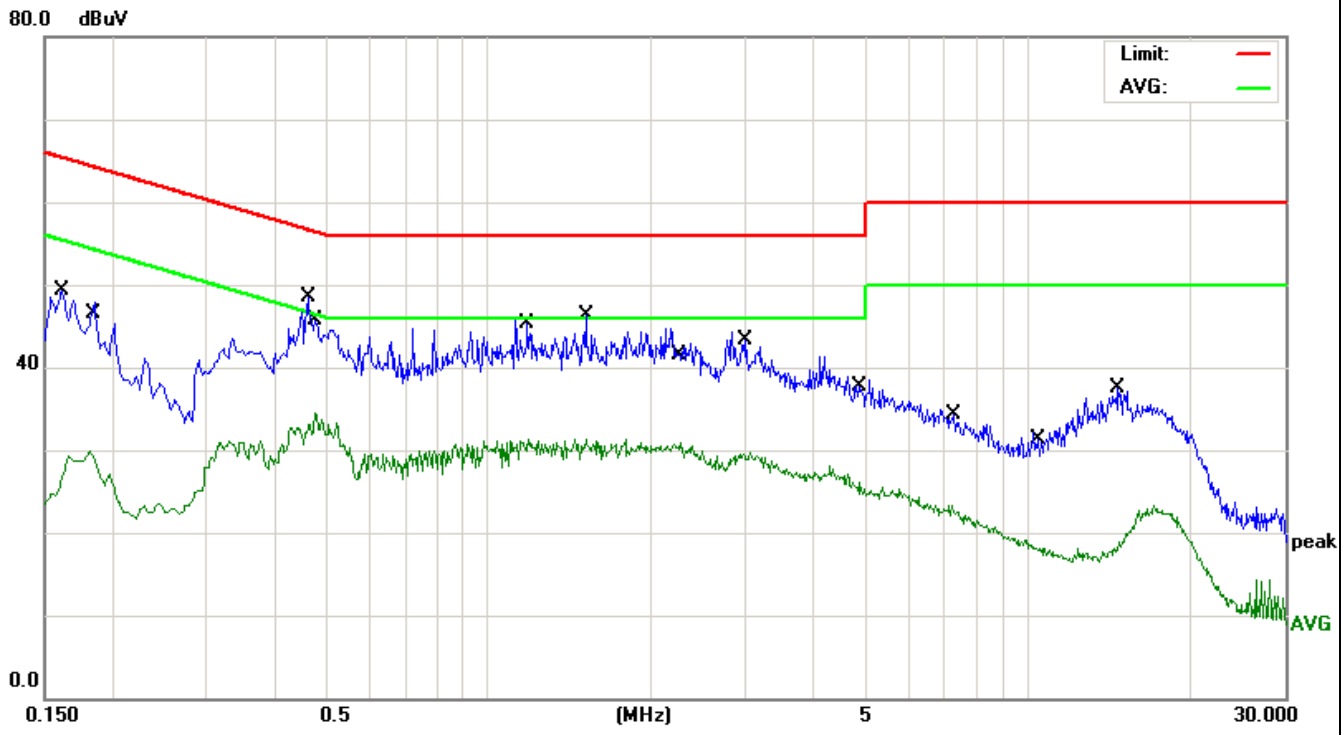
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

5.1.5 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.

5.1.6 TEST RESULTS

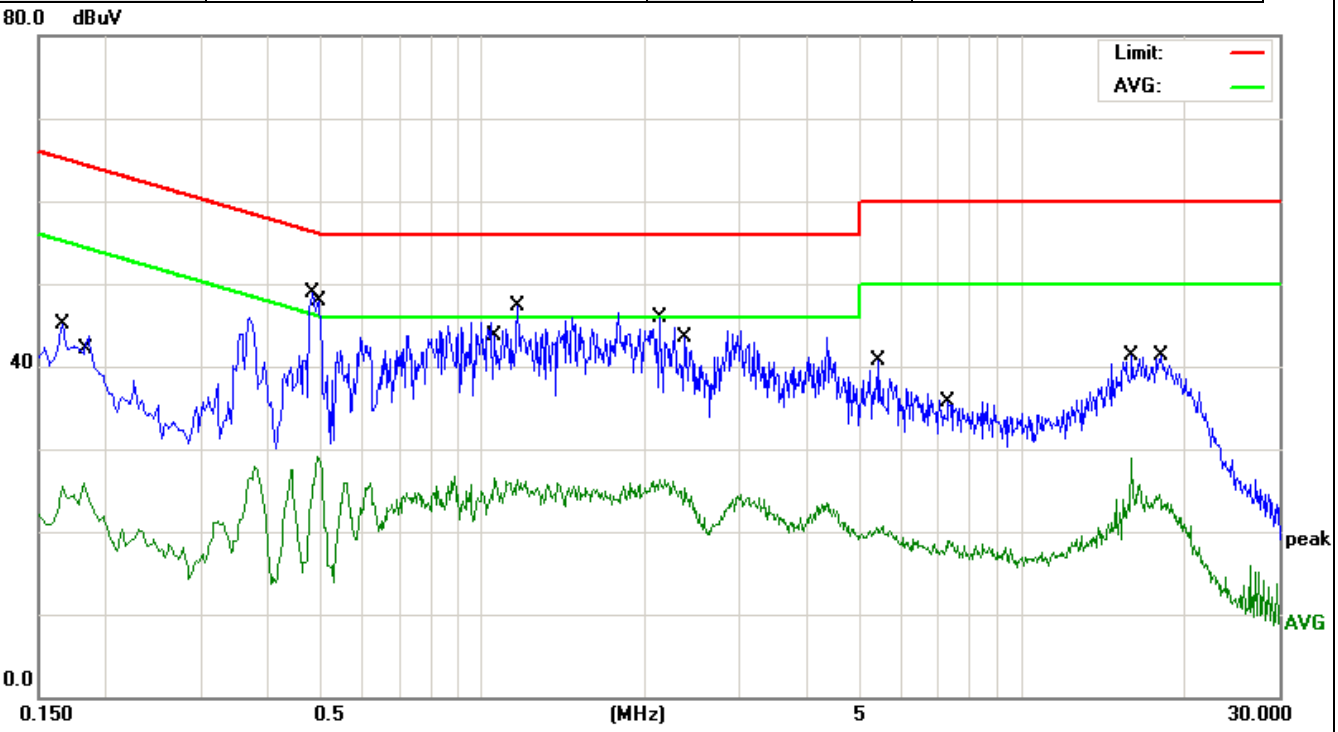
EUT	Mobile phone	Model Name	CX Air
Temperature	26 ℃	Relative Humidity	54%
Pressure	1010hPa	Phase	L
Test Date	March 27, 2017	Test Mode	Mode 1



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1620	37.55	11.79	49.34	65.36	-16.02	QP
2		0.1819	18.36	11.50	29.86	54.39	-24.53	AVG
3	*	0.4620	37.63	10.77	48.40	56.66	-8.26	QP
4		0.4780	23.83	10.74	34.57	46.37	-11.80	AVG
5		1.1900	20.73	10.67	31.40	46.00	-14.60	AVG
6		1.5180	35.66	10.63	46.29	56.00	-9.71	QP
7		2.2700	20.31	10.60	30.91	46.00	-15.09	AVG
8		3.0020	32.76	10.57	43.33	56.00	-12.67	QP
9		4.8780	15.50	10.51	26.01	46.00	-19.99	AVG
10		7.3020	23.75	10.57	34.32	60.00	-25.68	QP
11		10.5540	7.45	10.61	18.06	50.00	-31.94	AVG
12		14.7220	26.95	10.63	37.58	60.00	-22.42	QP

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

EUT	Mobile phone	Model Name	CX Air
Temperature	26 ℃	Relative Humidity	54%
Pressure	1010hPa	Phase	N
Test Date	March 27, 2017	Test Mode	Mode 1



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector
1		0.1660	33.45	11.73	45.18	65.15	-19.97	QP
2		0.1819	14.45	11.50	25.95	54.39	-28.44	AVG
3	*	0.4860	38.13	10.72	48.85	56.24	-7.39	QP
4		0.4940	18.43	10.71	29.14	46.10	-16.96	AVG
5		1.0500	15.74	10.68	26.42	46.00	-19.58	AVG
6		1.1620	36.68	10.67	47.35	56.00	-8.65	QP
7		2.1260	35.21	10.61	45.82	56.00	-10.18	QP
8		2.3740	14.77	10.60	25.37	46.00	-20.63	AVG
9		5.4380	30.08	10.53	40.61	60.00	-19.39	QP
10		7.3420	8.39	10.57	18.96	50.00	-31.04	AVG
11		15.9540	18.26	10.62	28.88	50.00	-21.12	AVG
12		18.1860	30.68	10.63	41.31	60.00	-18.69	QP

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

5.2 RADIATED EMISSION MEASUREMENT

5.2.1 RADIATED 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)	1 MHz / 1 MHz 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:

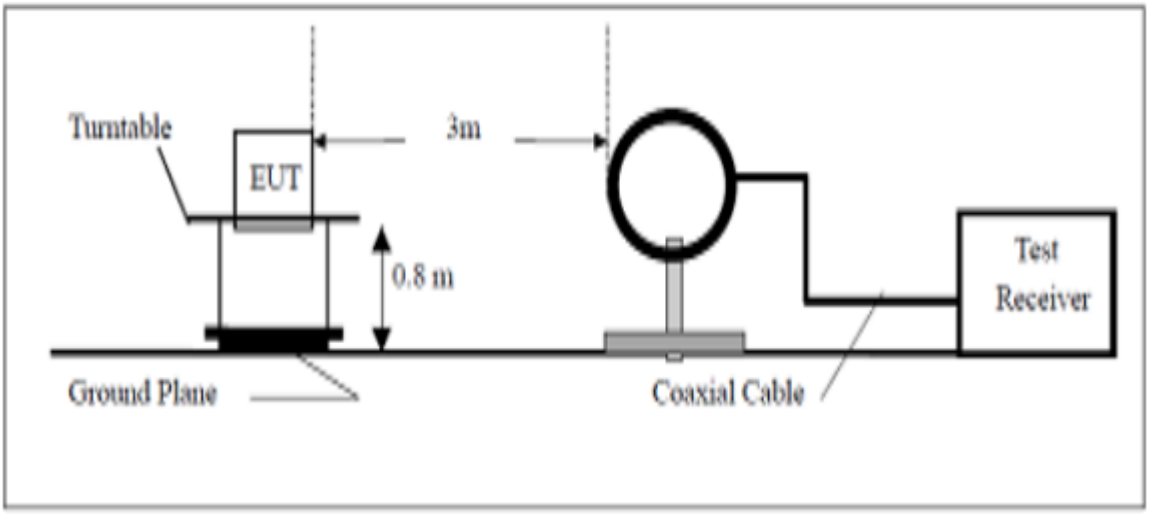
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

5.2.3 DEVIATION FROM TEST STANDARD

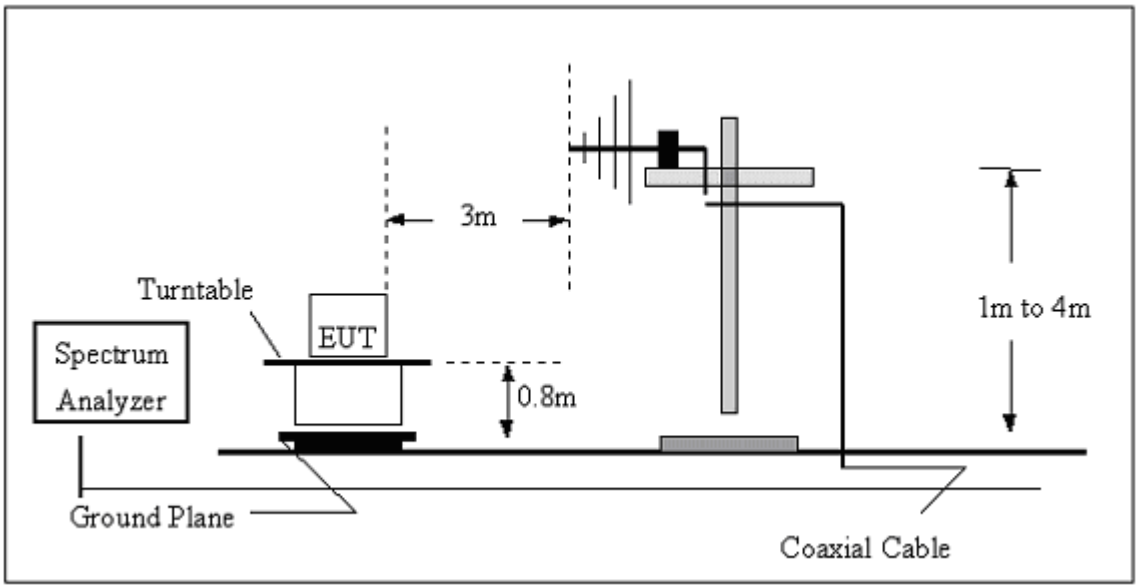
No deviation

5.2.4 TEST SETUP

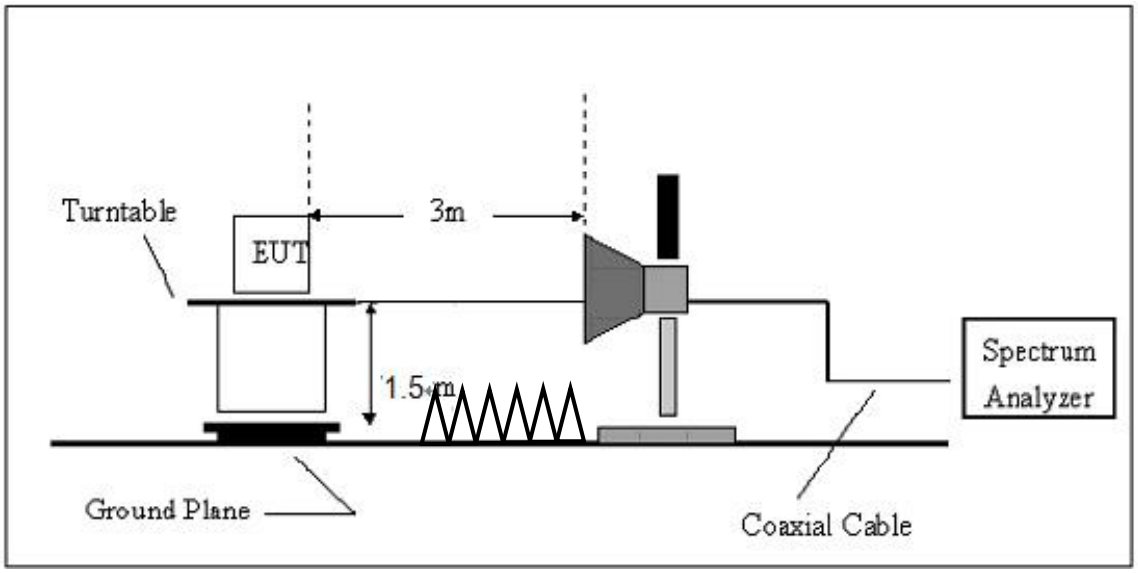
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



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



5.2.5 EUT 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)

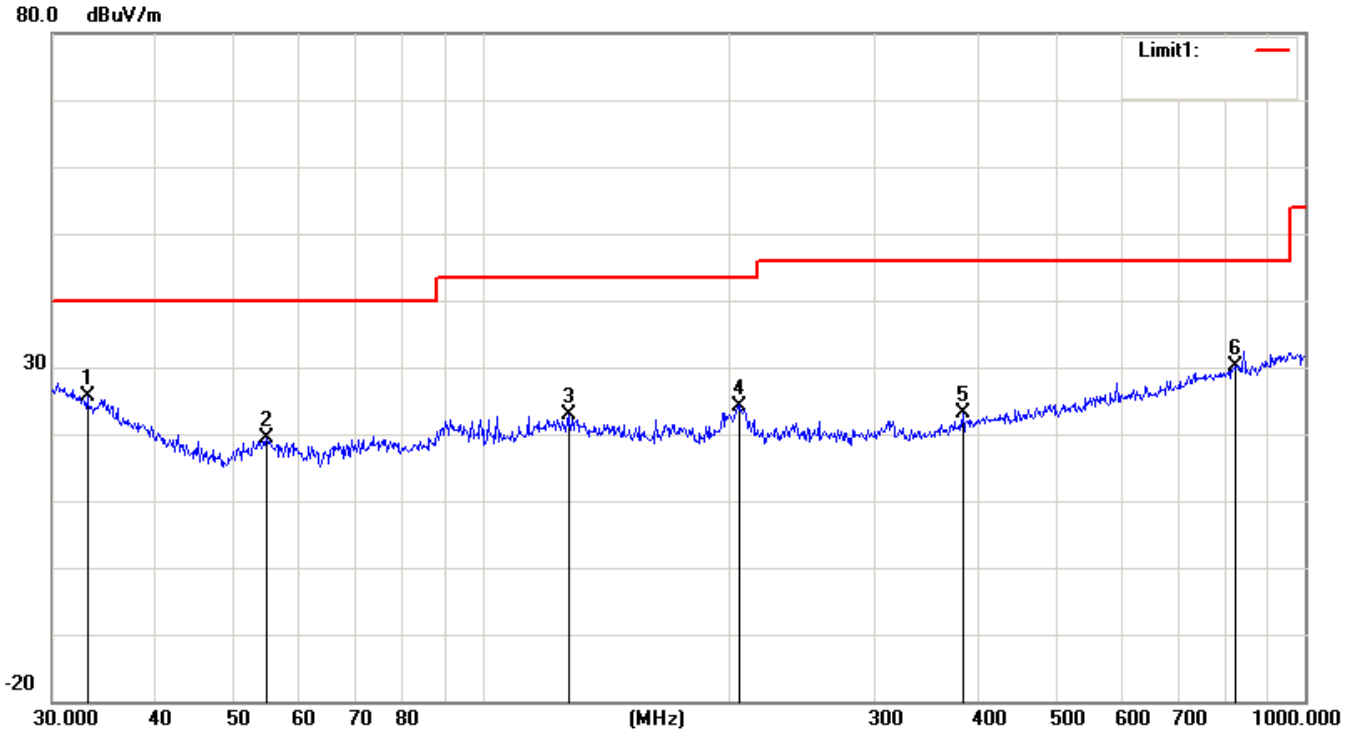
EUT	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization	---
Test Mode	Mode 1	Test Date	March 27, 2017

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 =20 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)

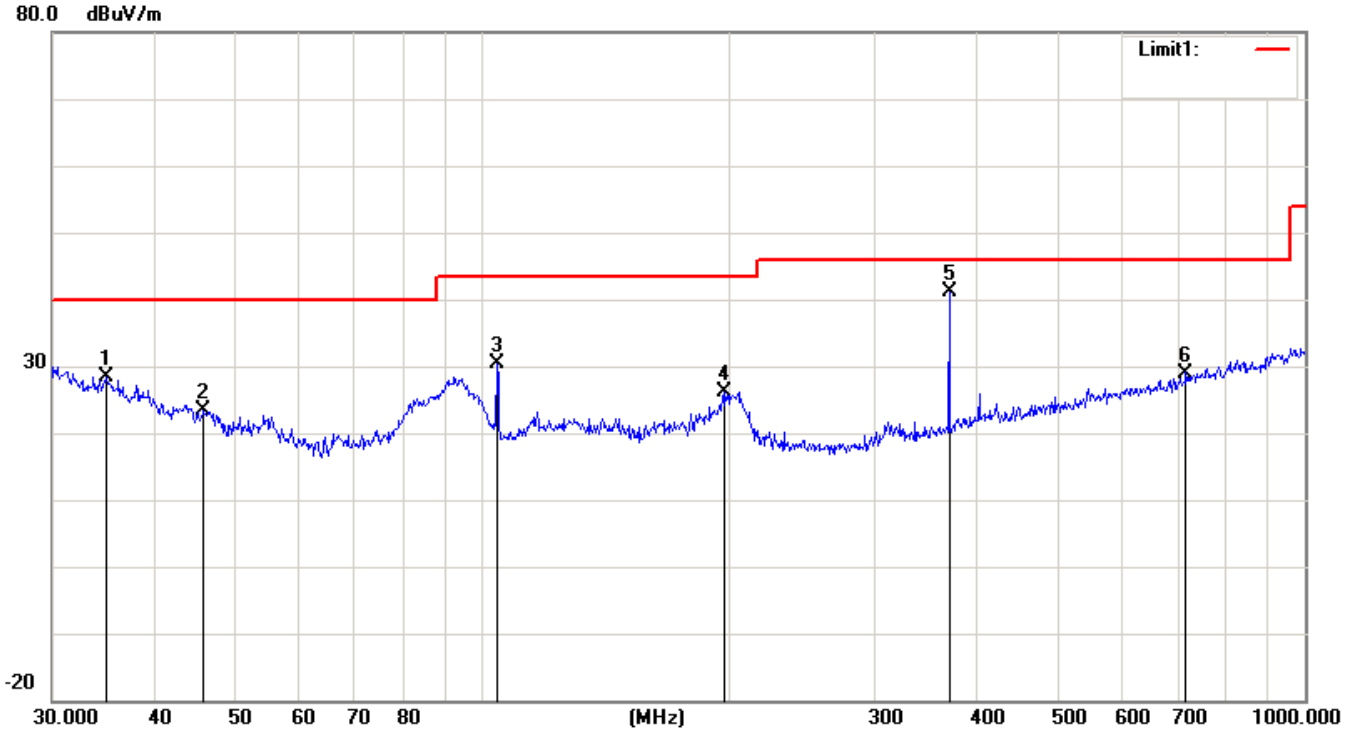
EUT	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Horizontal
Test Mode	Mode 1	Test Date	March 27, 2017



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1	*	33.0950	24.30	1.41	25.71	40.00	-14.29	QP
2		54.6429	28.88	-9.47	19.41	40.00	-20.59	QP
3		127.2176	25.01	-2.16	22.85	43.50	-20.65	QP
4		204.9551	29.25	-5.00	24.25	43.50	-19.25	QP
5		383.9318	26.16	-3.14	23.02	46.00	-22.98	QP
6		824.5968	25.05	5.15	30.20	46.00	-15.80	QP

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

EUT	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Polarization :	Vertical
Test Mode	Mode 1	Test Date	March 27, 2017



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector
1		34.8823	28.20	0.21	28.41	40.00	-11.59	QP
2		45.8553	30.54	-7.11	23.43	40.00	-16.57	QP
3		104.1701	35.53	-5.18	30.35	43.50	-13.15	QP
4		196.5098	31.29	-5.16	26.13	43.50	-17.37	QP
5	*	369.4047	44.84	-3.63	41.21	46.00	-4.79	QP
6		716.6820	26.10	2.90	29.00	46.00	-17.00	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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1 TX
Test Date	March 27, 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	59.81	39.06	74	54	-14.19	-14.94
15540	V	59.78	40.31	74	54	-14.22	-13.69
10360	H	58.22	40.27	74	54	-15.78	-13.73
15540	H	59.74	40.74	74	54	-14.26	-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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1 TX
Test Date	March 27, 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	60.82	39.97	74	54	-13.18	-14.03
15720	V	59.31	40.81	74	54	-14.69	-13.19
10480	H	59.15	40.17	74	54	-14.85	-13.83
15720	H	58.57	39.57	74	54	-15.43	-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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1 TX
Test Date	March 27, 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	60.15	40.00	74	54	-13.85	-14.00
17235	V	59.04	39.99	74	54	-14.96	-14.01
11490	H	59.45	39.48	74	54	-14.55	-14.52
17235	H	59.20	40.20	74	54	-14.80	-13.80

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 1 TX
Test Date	March 27, 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	59.43	41.89	74	54	-14.57	-12.11
17475	V	58.38	39.89	74	54	-15.62	-14.11
11650	H	59.89	40.85	74	54	-14.11	-13.15
17475	H	58.02	39.02	74	54	-15.98	-14.98

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 2 TX
Test Date	March 27, 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	60.39	41.05	74	54	-13.61	-12.95
15540	V	58.74	39.33	74	54	-15.26	-14.67
10360	H	59.43	39.28	74	54	-14.57	-14.72
15540	H	59.22	40.22	74	54	-14.78	-13.78

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 2 TX
Test Date	March 27, 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	58.11	41.00	74	54	-15.89	-13.00
15720	V	58.13	39.17	74	54	-15.87	-14.83
10480	H	59.45	40.83	74	54	-14.55	-13.17
15720	H	59.75	40.75	74	54	-14.25	-13.25

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 2 TX
Test Date	March 27, 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	60.78	40.36	74	54	-13.22	-13.64
17235	V	58.62	39.26	74	54	-15.38	-14.74
11490	H	58.20	39.86	74	54	-15.80	-14.14
17235	H	58.74	39.74	74	54	-15.26	-14.26

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 2 TX
Test Date	March 27, 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	58.60	40.05	74	54	-15.40	-13.95
17475	V	59.10	40.17	74	54	-14.90	-13.83
11650	H	58.20	40.15	74	54	-15.80	-13.85
17475	H	58.98	39.98	74	54	-15.02	-14.02

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3 TX
Test Date	March 27, 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	60.89	41.50	74	54	-13.11	-12.50
15570	V	58.01	39.06	74	54	-15.99	-14.94
10380	H	59.17	40.39	74	54	-14.83	-13.61
15570	H	59.01	40.01	74	54	-14.99	-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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3 TX
Test Date	March 27, 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	60.99	41.14	74	54	-13.01	-12.86
15690	V	59.44	39.23	74	54	-14.56	-14.77
10460	H	59.35	40.04	74	54	-14.65	-13.96
15690	H	58.31	39.31	74	54	-15.69	-14.69

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3 TX
Test Date	March 27, 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	60.66	41.77	74	54	-13.34	-12.23
17265	V	58.07	39.46	74	54	-15.93	-14.54
11510	H	59.41	39.17	74	54	-14.59	-14.83
17265	H	58.86	39.86	74	54	-15.14	-14.14

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 3 TX
Test Date	March 27, 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	59.12	39.54	74	54	-14.88	-14.46
17385	V	59.40	40.52	74	54	-14.60	-13.48
11590	H	59.72	40.90	74	54	-14.28	-13.10
17385	H	58.33	39.33	74	54	-15.67	-14.67

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 4 TX
Test Date	March 27, 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	58.03	41.90	74	54	-15.97	-12.10
15540	V	59.11	40.79	74	54	-14.89	-13.21
10360	H	58.64	39.76	74	54	-15.36	-14.24
15540	H	58.34	39.34	74	54	-15.66	-14.66

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 4 TX
Test Date	March 27, 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	59.86	40.35	74	54	-14.14	-13.65
15720	V	58.14	40.39	74	54	-15.86	-13.61
10480	H	59.75	39.09	74	54	-14.25	-14.91
15720	H	58.00	39.00	74	54	-16.00	-15.00

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 4 TX
Test Date	March 27, 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	60.77	40.96	74	54	-13.23	-13.04
17235	V	58.82	39.15	74	54	-15.18	-14.85
11490	H	58.08	39.91	74	54	-15.92	-14.09
17235	H	58.27	39.27	74	54	-15.73	-14.73

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 4 TX
Test Date	March 27, 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	60.44	41.54	74	54	-13.56	-12.46
17475	V	59.66	40.99	74	54	-14.34	-13.01
11650	H	59.16	41.00	74	54	-14.84	-13.00
17475	H	58.35	39.35	74	54	-15.65	-14.65

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 5 TX
Test Date	March 27, 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	59.25	40.56	74	54	-14.75	-13.44
15570	V	58.44	40.50	74	54	-15.56	-13.50
10380	H	58.95	40.73	74	54	-15.05	-13.27
15570	H	58.03	39.03	74	54	-15.97	-14.97

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 5 TX
Test Date	March 27, 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	59.32	40.54	74	54	-14.68	-13.46
15690	V	58.53	40.39	74	54	-15.47	-13.61
10460	H	58.61	40.14	74	54	-15.39	-13.86
15690	H	59.82	40.82	74	54	-14.18	-13.18

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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 5 TX
Test Date	March 27, 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	58.71	39.20	74	54	-15.29	-14.80
17265	V	58.19	40.40	74	54	-15.81	-13.60
11510	H	58.30	39.31	74	54	-15.70	-14.69
17265	H	58.85	39.85	74	54	-15.15	-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	Mobile phone	Model Name	CX Air
Temperature	20 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Mode	Mode 5 TX
Test Date	March 27, 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	60.89	39.69	74	54	-13.11	-14.31
17385	V	59.08	39.10	74	54	-14.92	-14.90
11590	H	59.59	40.45	74	54	-14.41	-13.55
17385	H	59.40	40.40	74	54	-14.60	-13.60

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 integrated on PCB, The antenna's gain is -1.4dBi and meets the requirement.

7 FCC PART 15.407 REQUIREMENTS FOR 802.11A/N SYSTEMS

7. 1 Test Equipment

Please refer to Section 4 this report.

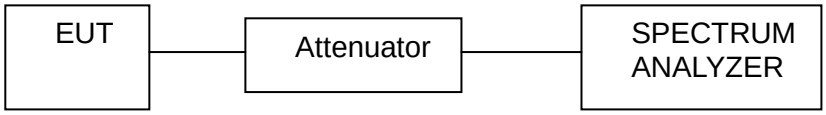
7. 2 Test Procedure

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 as needed 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 Unlicensed National 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 Unlicensed National 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 RF average 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 result of the values by mathematic formula.	
Test Equipment Setting: Detector - Average		
Power Spectral 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 Unlicensed National 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 2 and 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 final result 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) to the measured result, whereas RBW (< 500 kHz) is the reduced resolution bandwidth of the spectrum 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 2.4 of this report

7. 5 EUT Operating Condition

Same as section 2.2 of 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 as specified 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 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 5V	Humidity	: 56%RH
Test Result	: **PASS**		

26dB Bandwidth

IEEE 802.11a

Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	17.236	--	PASS
High	5240	17.121		PASS

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	16.703	--	PASS
High	5825	16.799		PASS

IEEE 802.11n 5G 20MHz

Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	18.408	--	PASS
High	5240	18.198		PASS

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	17.815	--	PASS
High	5825	17.849		PASS

IEEE 802.11n 5G 40MHz

Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5190	36.966	--	PASS
High	5230	36.495		PASS

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5755	36.106	--	PASS
High	5795	36.056		PASS

IEEE 802.11ac 5G 20MHz

Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	19.808	--	PASS
High	5240	19.808		PASS

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	19.904	--	PASS
High	5825	19.808		PASS

IEEE 802.11ac 5G 40MHz
Band1

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5190	39.583	--	PASS
High	5230	39.744		PASS

Band4

Channel	Frequency (MHz)	26dBBandwidth (MHz)	FCC Limit (kHz)	Result
Low	5755	40.064	--	PASS
High	5795	39.808		PASS

99% Occupied Bandwidth

IEEE 802.11a
Band1

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	27.46	--	PASS
High	5240	23.20		PASS

Band4

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	16.35	--	PASS
High	5825	16.30		PASS

IEEE 802.11n 5G 20MHz
Band1

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	26.62	--	PASS
High	5240	29.62		PASS

Band4

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	17.71	--	PASS
High	5825	17.60		PASS

IEEE 802.11n 5G 40MHz
Band1

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5190	50.35	--	PASS
High	5230	46.37		PASS

Band4

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5755	36.03	--	PASS
High	5795	34.91		PASS

IEEE 802.11ac 5G 20MHz
Band1

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5180	17.69	--	PASS
High	5240	17.69		PASS

Band4

Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5745	17.69	--	PASS
High	5825	17.69		PASS

IEEE 802.11ac 5G 40MHz

Band1

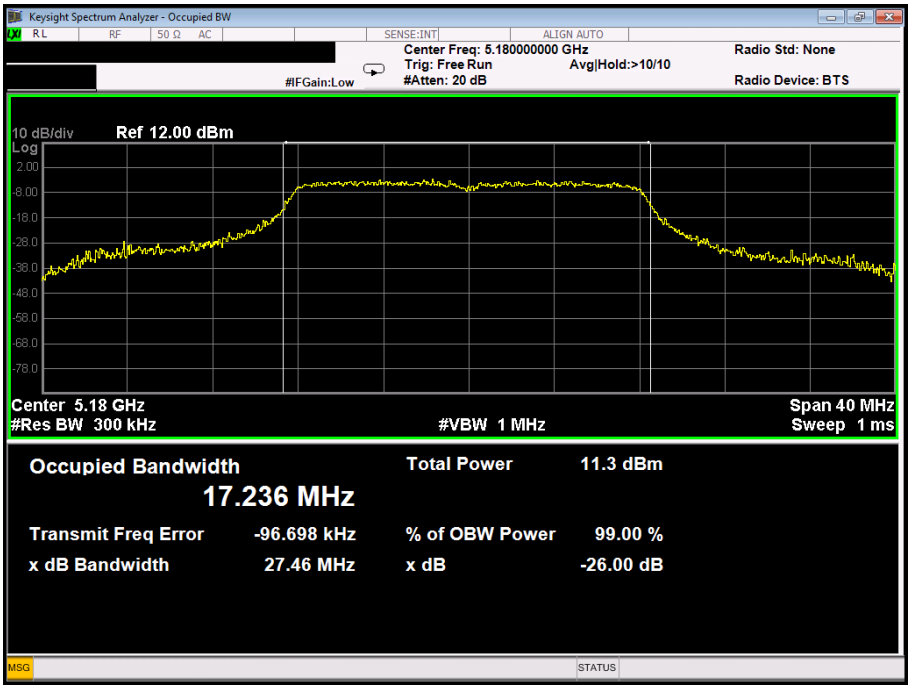
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5190	36.06	--	PASS
High	5230	36.06		PASS

Band4

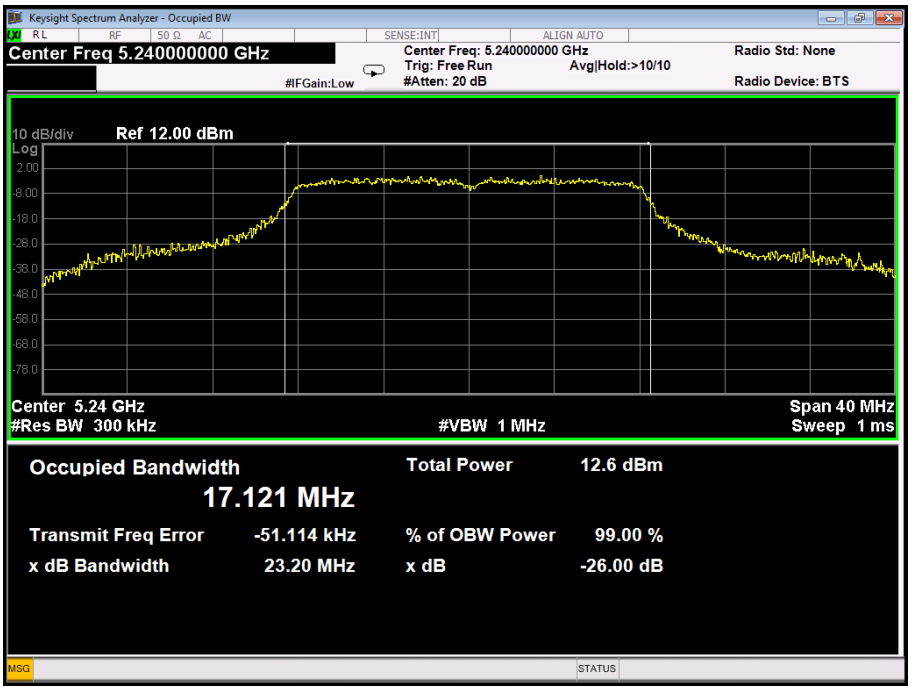
Channel	Frequency (MHz)	99% Occupied Bandwidth (MHz)	FCC Limit (kHz)	Result
Low	5755	36.22	--	PASS
High	5795	36.06		PASS

IEEE 802.11a Band1

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

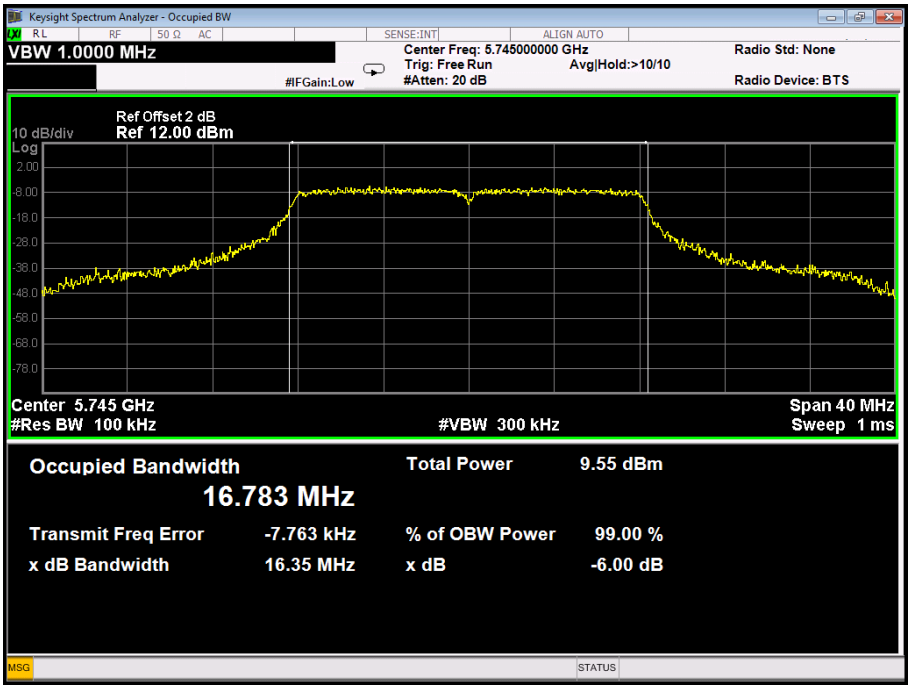


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

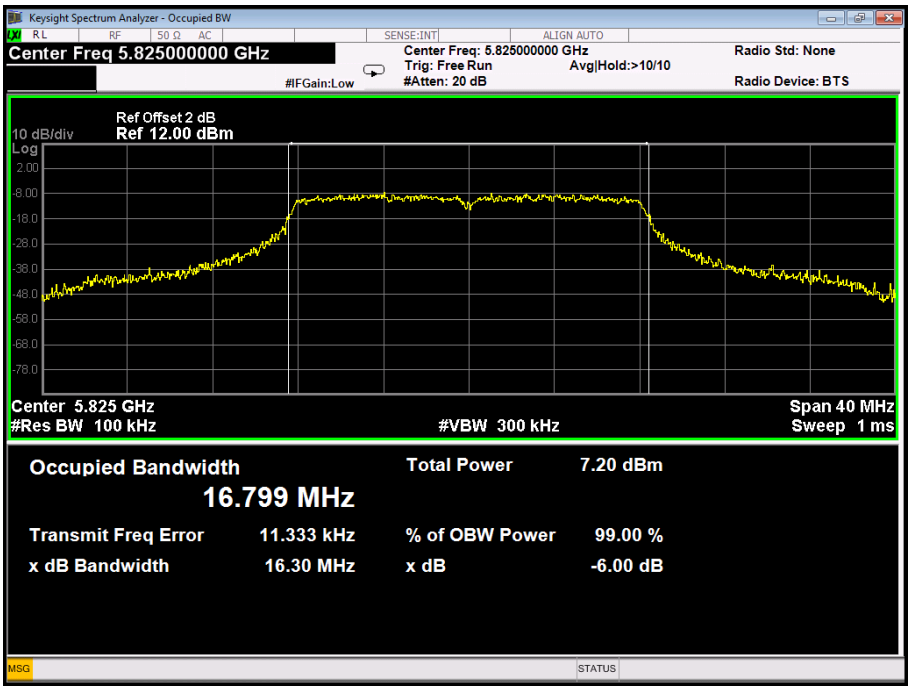


IEEE 802.11a Band4

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

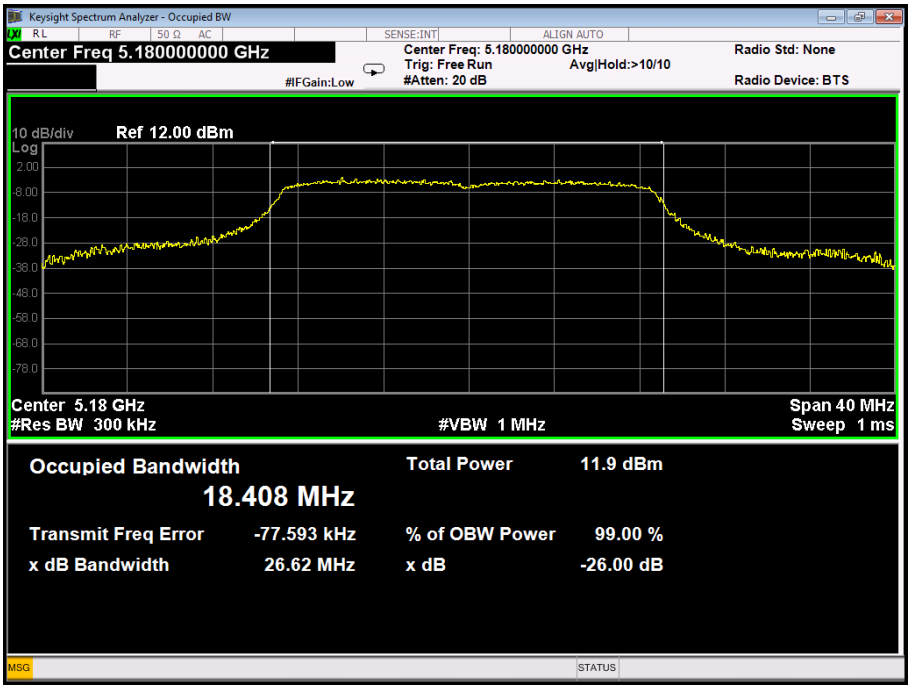


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

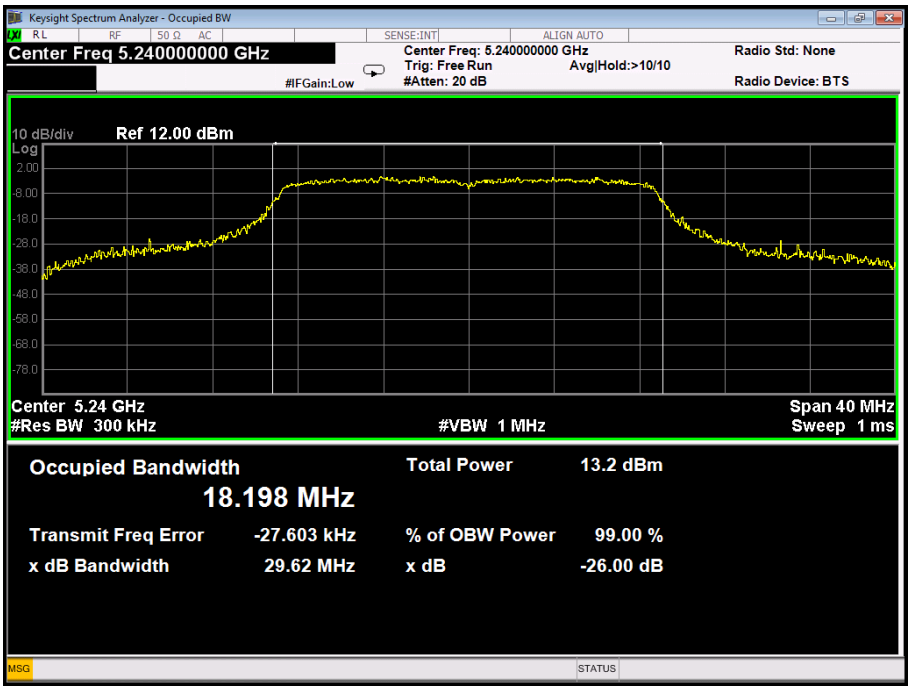


IEEE 802.11n 5G 20MHz Band1

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

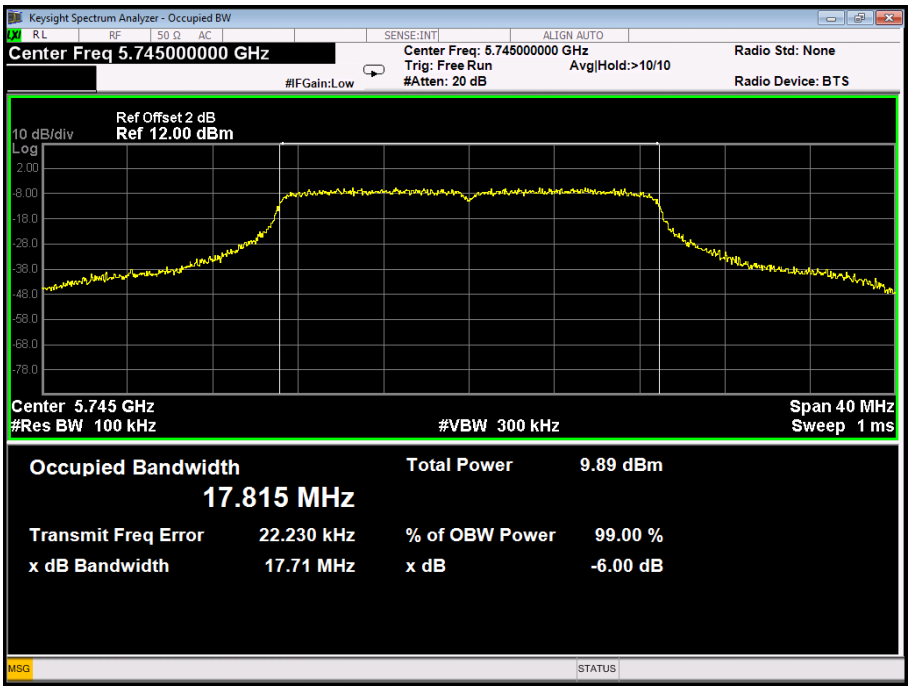


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

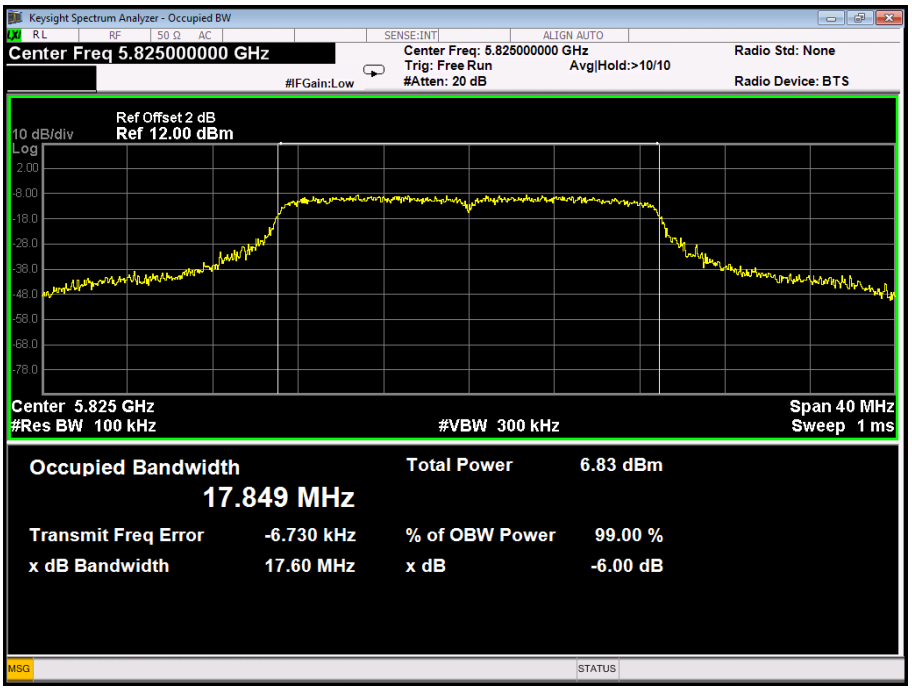


IEEE 802.11n 5G 20MHz Band4

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

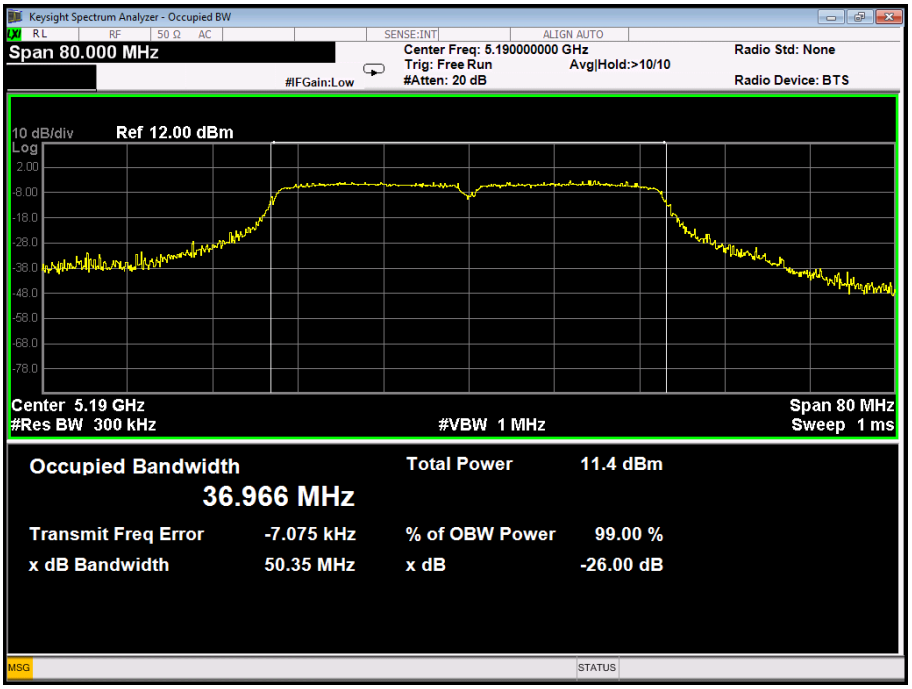


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

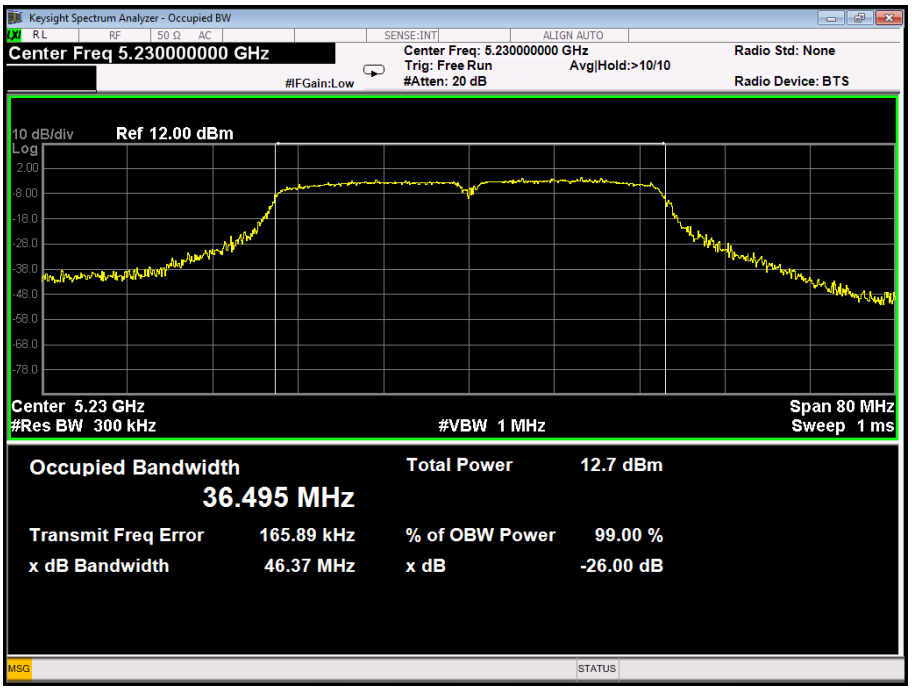


IEEE 802.11n 5G 40MHz Band1

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

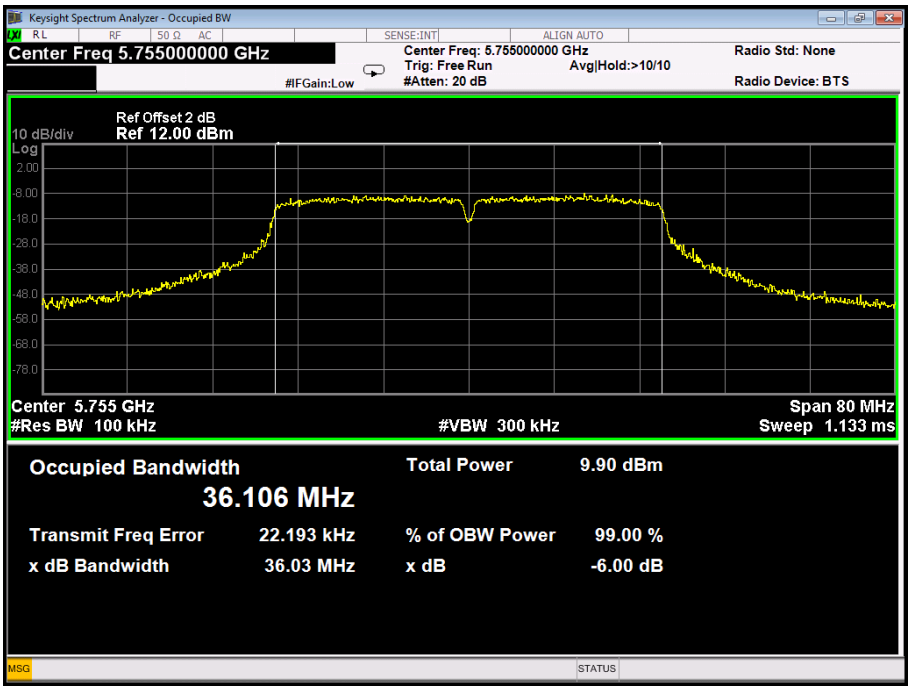


26dB Bandwidth and 99% Occupied Bandwidth (CH High)

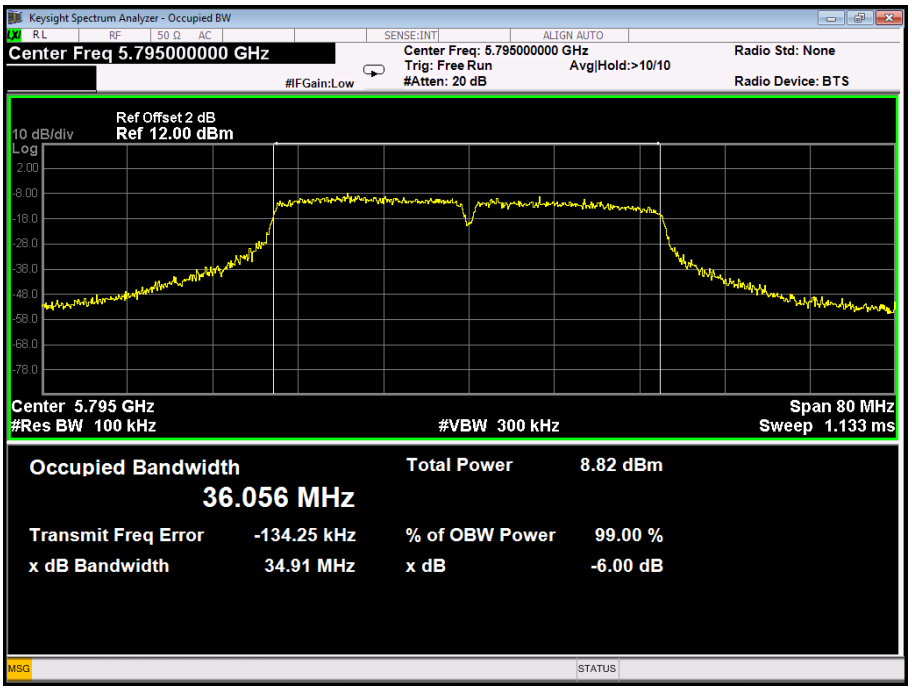


IEEE 802.11n 5G 40MHz Band4

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

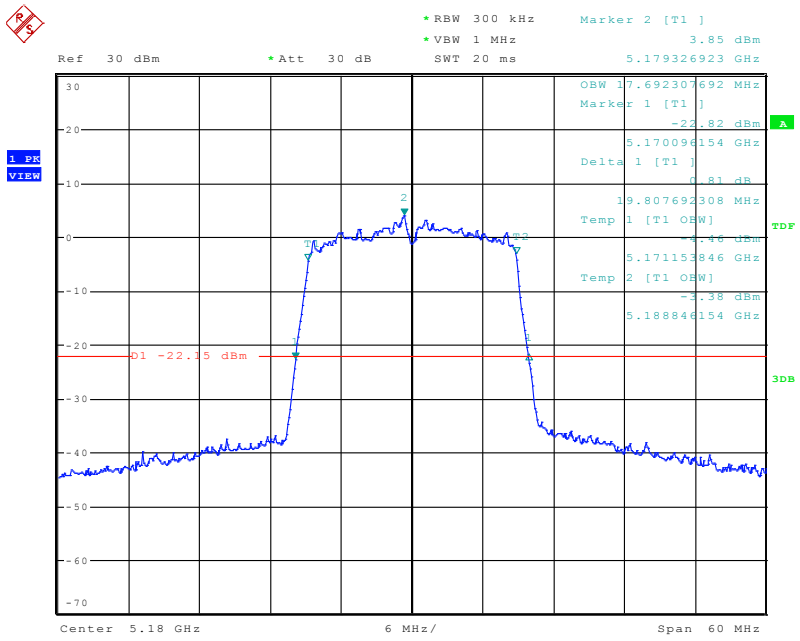


26dB Bandwidth and 99% Occupied Bandwidth (CH High)



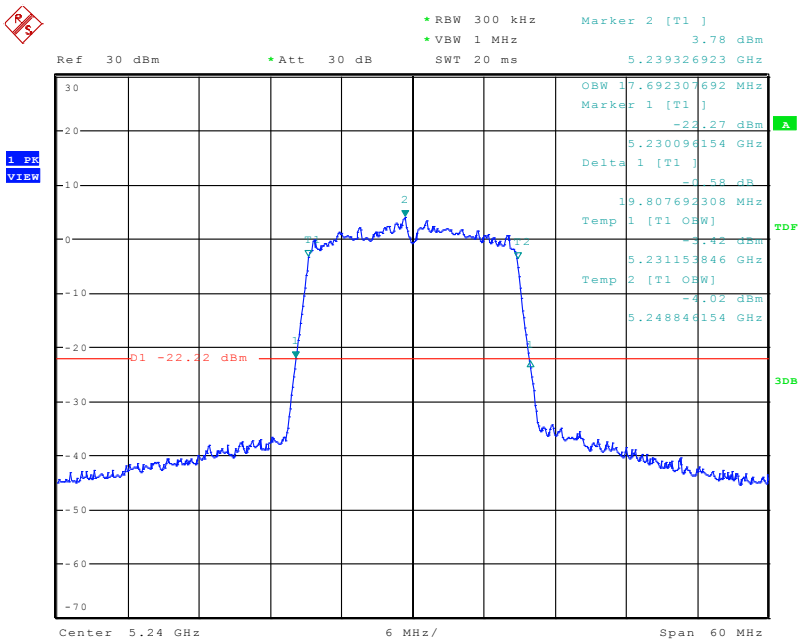
IEEE 802.11ac 5G 20MHz Band1

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



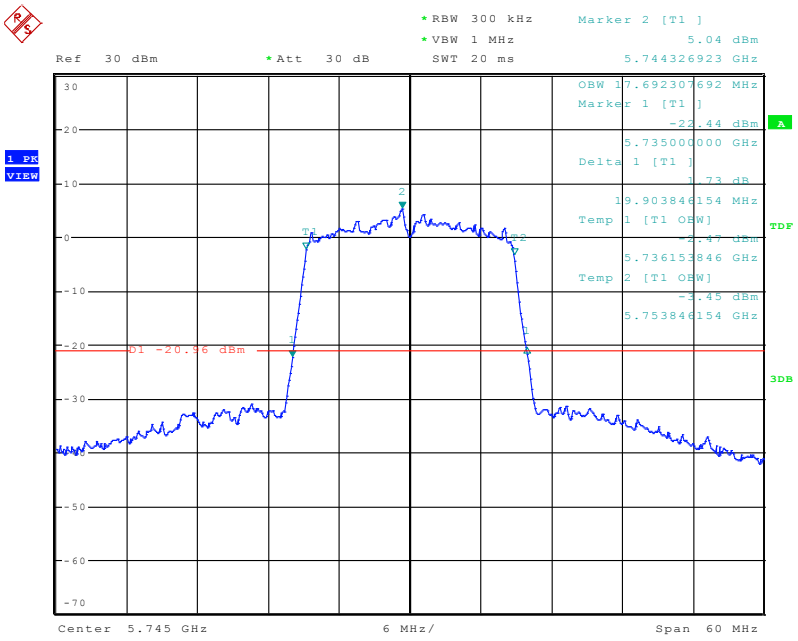
Date: 27.MAR.2017 17:50:40

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



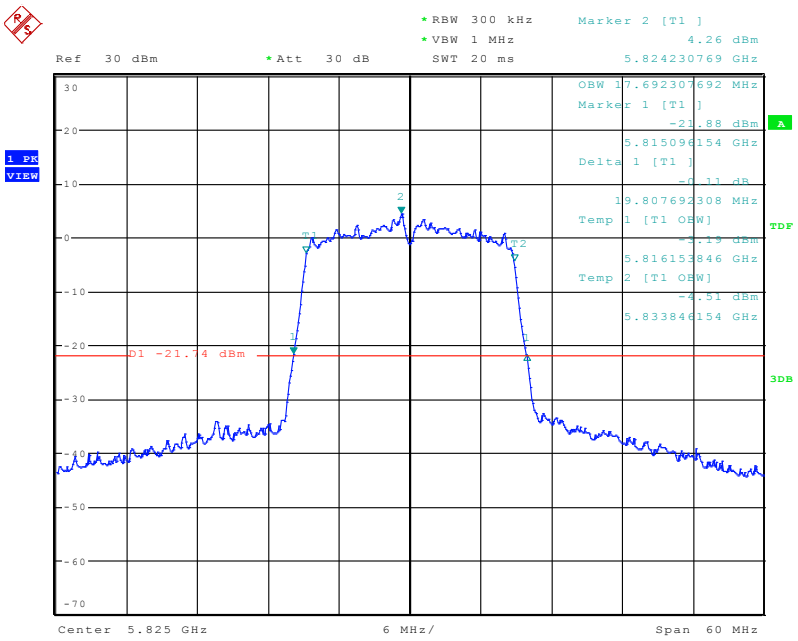
IEEE 802.11ac 5G 20MHz Band4

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



Date: 27.MAR.2017 18:27:46

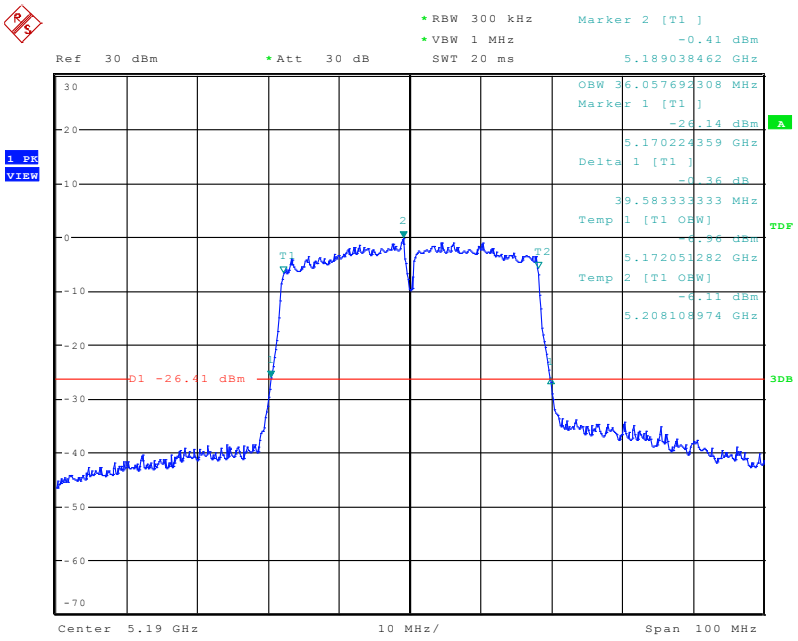
26dB Bandwidth and 99% Occupied Bandwidth (CH High)



Date: 27.MAR.2017 18:29:19

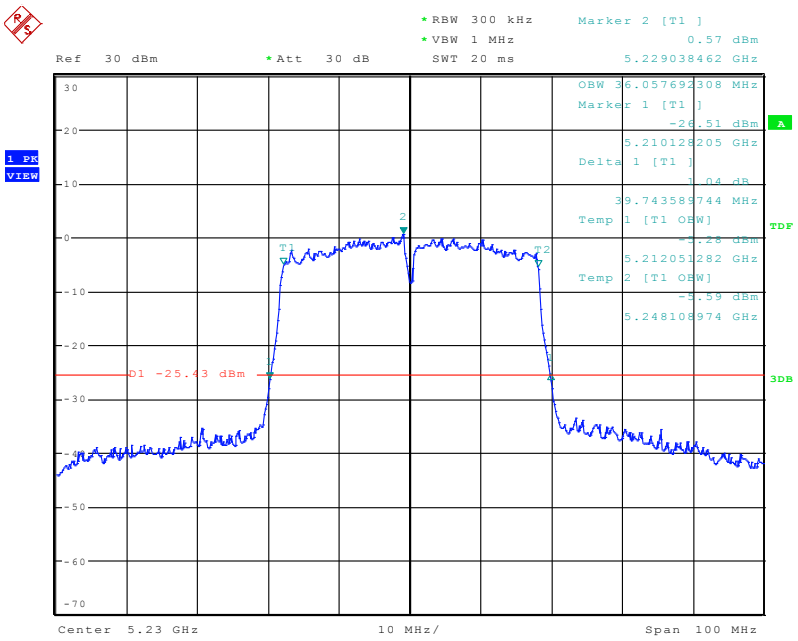
IEEE 802.11ac 5G 40MHz Band1

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



Date: 27.MAR.2017 18:34:30

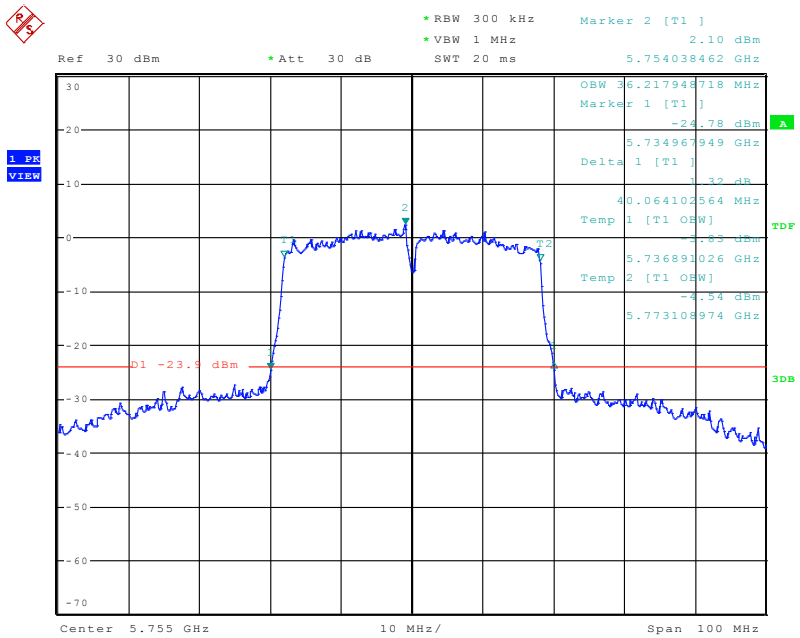
26dB Bandwidth and 99% Occupied Bandwidth (CH High)



Date: 27.MAR.2017 18:37:06

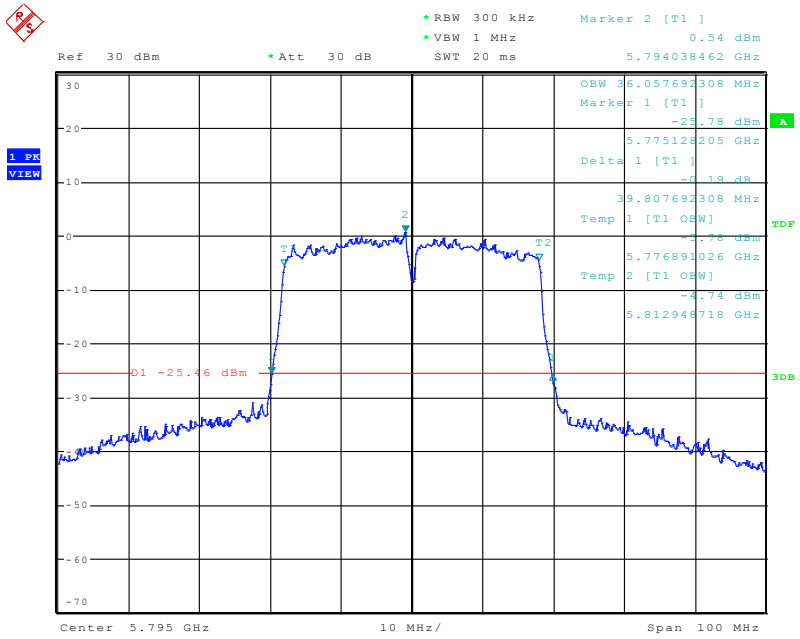
IEEE 802.11ac 5G 40MHz Band4

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



Date: 27.MAR.2017 18:40:15

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



Date: 27.MAR.2017 18:42:45

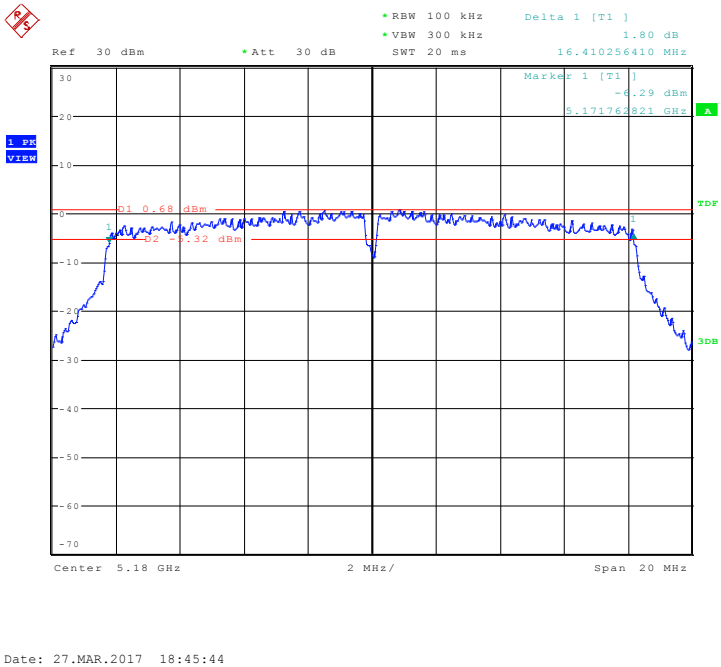
B. 6 dB Bandwidth

Product	: EUT-Sample	Test Mode	: See Section 2.2
Test Item	: 6 dB BW	Temperature	: 25 ℃
Test Voltage	: DC 5V	Humidity	: 56%RH
Test Result	: **PASS**		

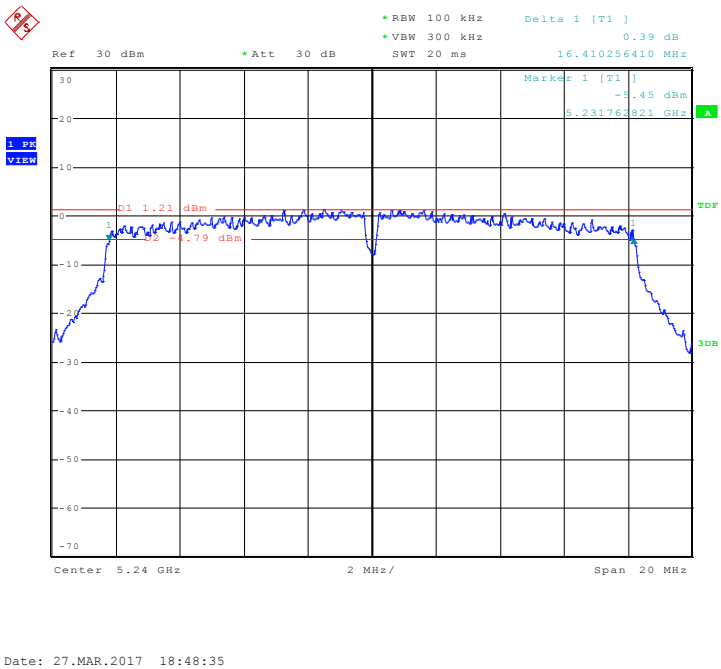
IEEE 802.11a

Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	5180	16.41	> 0.5MHz
High	5240	16.41	> 0.5MHz

Channel Low



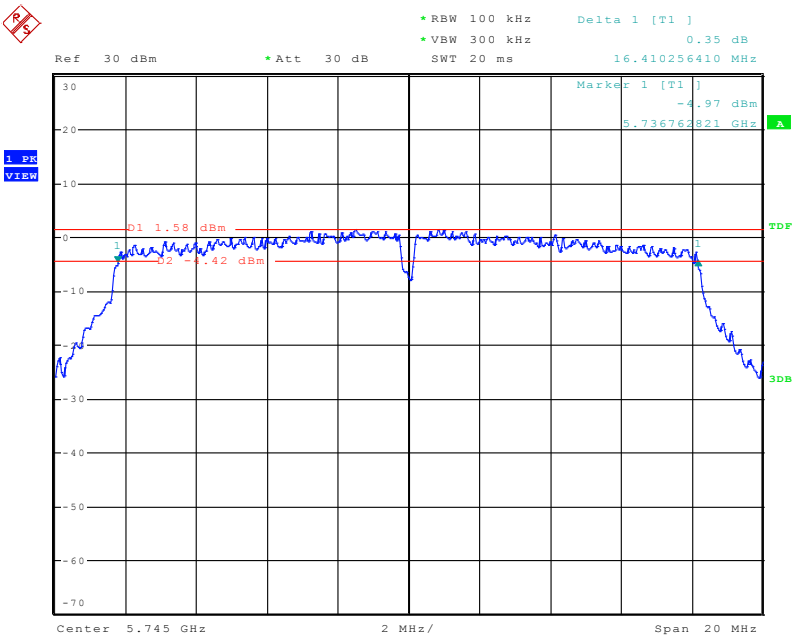
Channel High



IEEE 802.11a

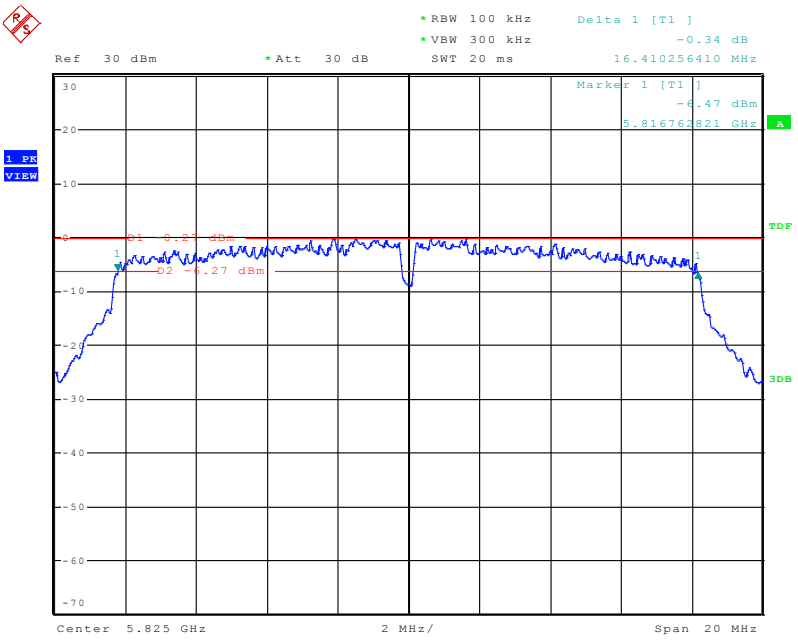
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5745**	16.41	> 0.5MHz
High	**5825**	16.41	> 0.5MHz

Channel Low



Date: 27.MAR.2017 18:50:35

Channel High



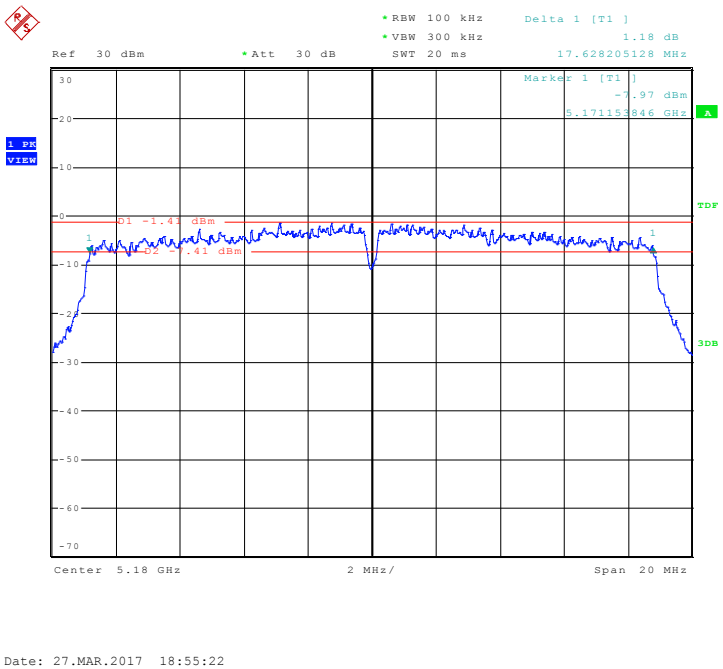
Date: 27.MAR.2017 18:52:18

Product	: EUT-Sample	Test Mode	: See Section 2.2
Test Item	: 6 dB BW	Temperature	: 25 ℃
Test Voltage	: DC 5V	Humidity	: 56%RH
Test Result	: **PASS**		

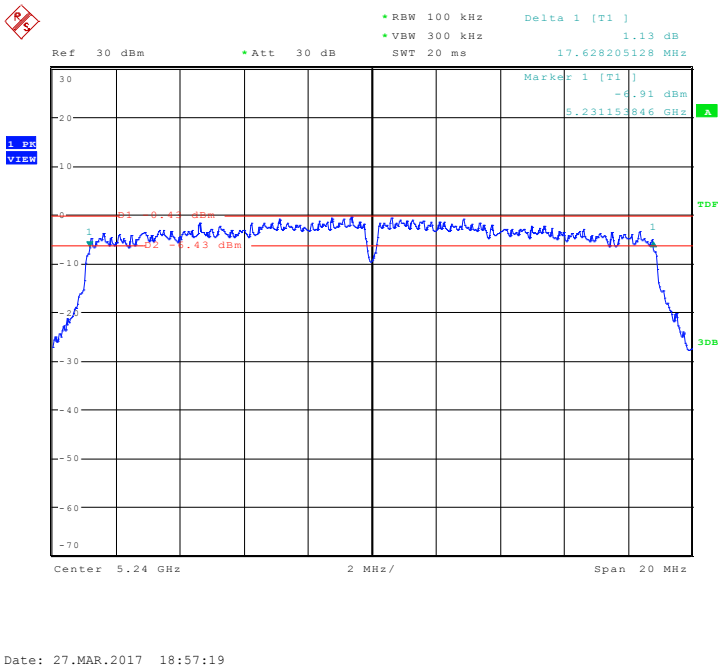
IEEE 802.11n 20MHz

Channel	Measured Frequency (MHz)	**6 dB Bandwidth (MHz)**	**Limit**
Low	**5180**	17.63	> 0.5MHz
High	**5240**	17.63	> 0.5MHz

Channel Low



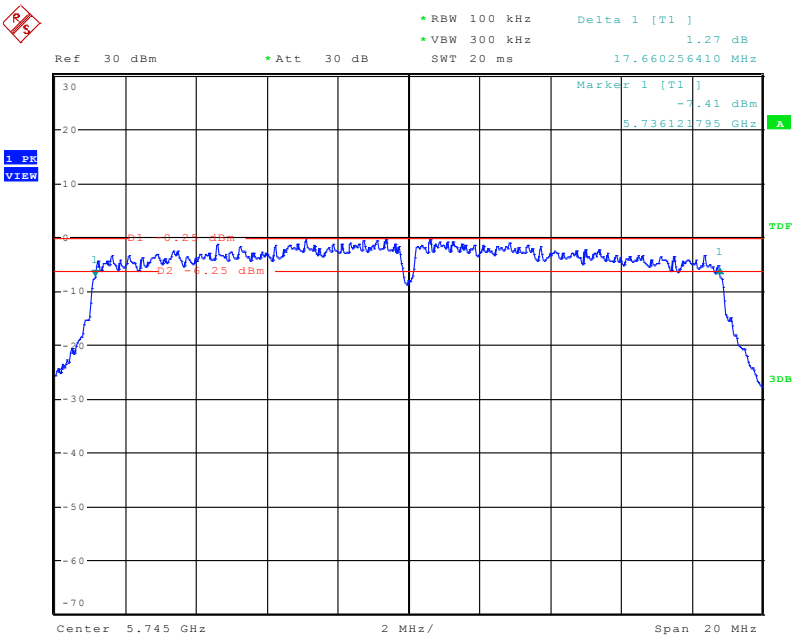
Channel High



IEEE 802.11n 20MHz

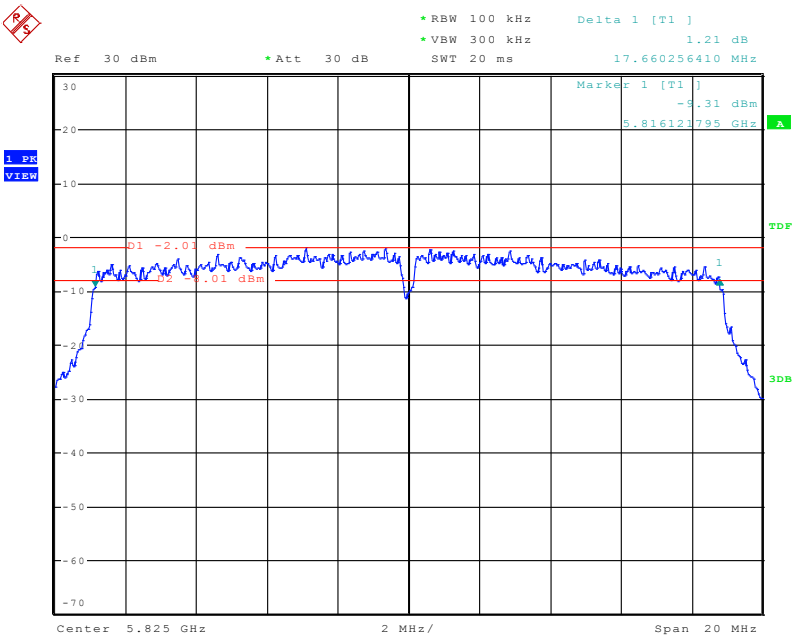
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5745**	17.66	> 0.5MHz
High	**5825**	17.66	> 0.5MHz

Channel Low



Date: 27.MAR.2017 18:59:38

Channel High

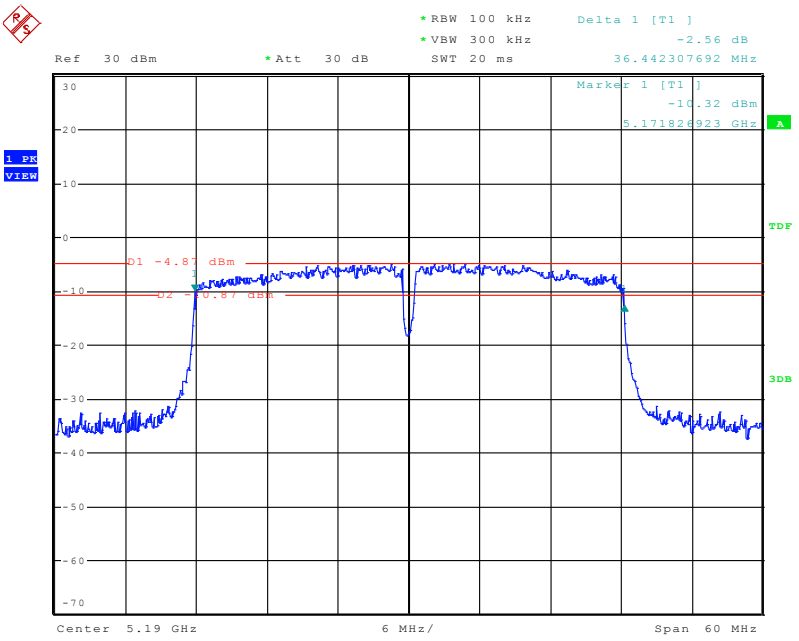


Date: 27.MAR.2017 19:00:55

IEEE802.11n 40MHz

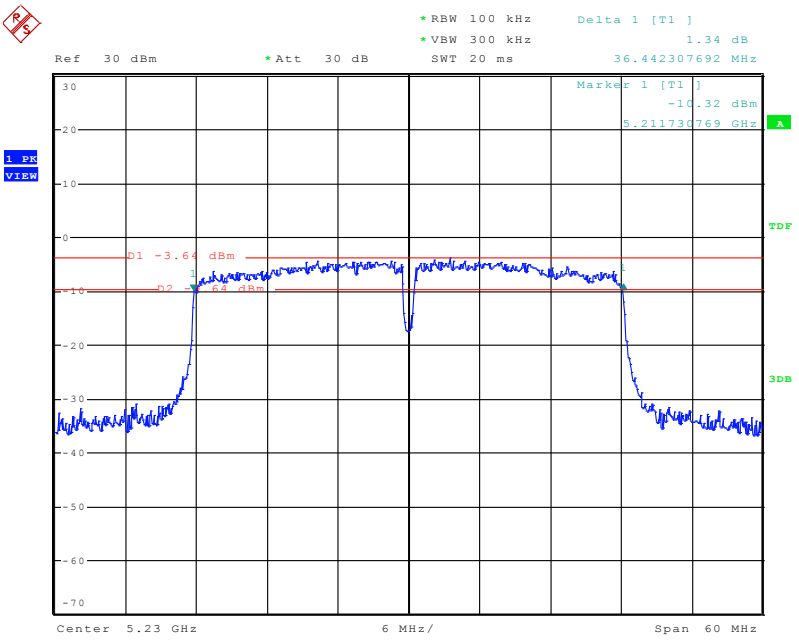
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5190**	36.44	> 0.5MHz
High	**5230**	36.44	> 0.5MHz

Channel Low



Date: 27.MAR.2017 19:05:22

Channel High

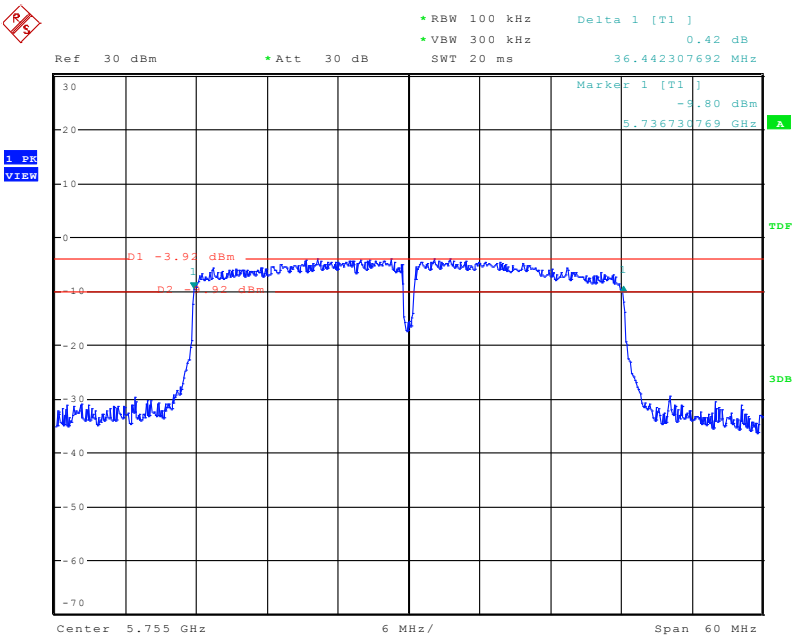


Date: 27.MAR.2017 19:07:06

IEEE 802.11n 40MHz

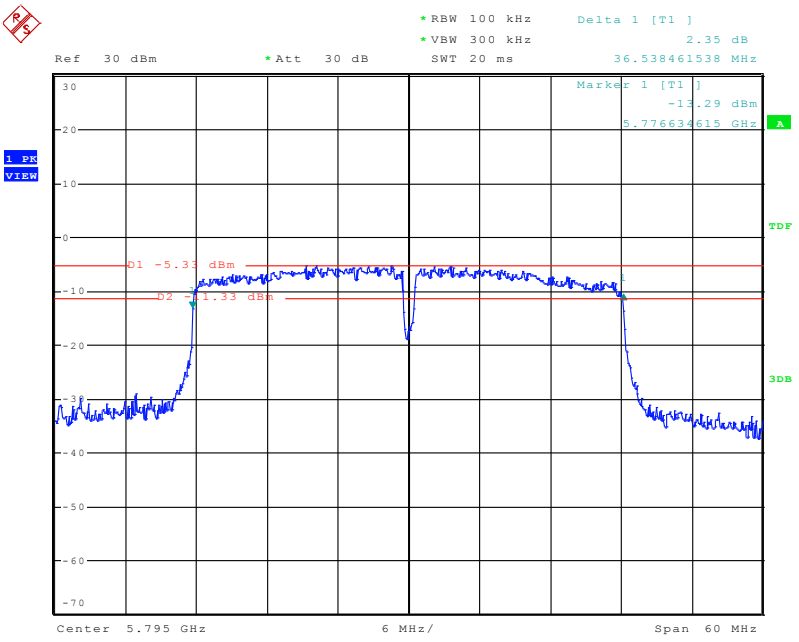
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5755**	36.44	> 0.5MHz
High	**5795**	36.54	> 0.5MHz

Channel Low



Date: 27.MAR.2017 19:11:43

Channel High

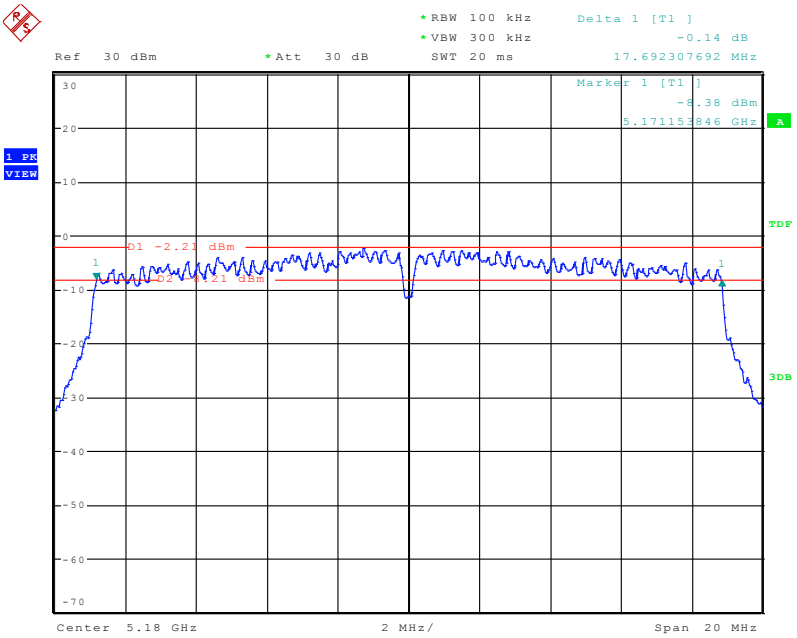


Date: 27.MAR.2017 19:14:13

802.11ac 5GHz 20MHz

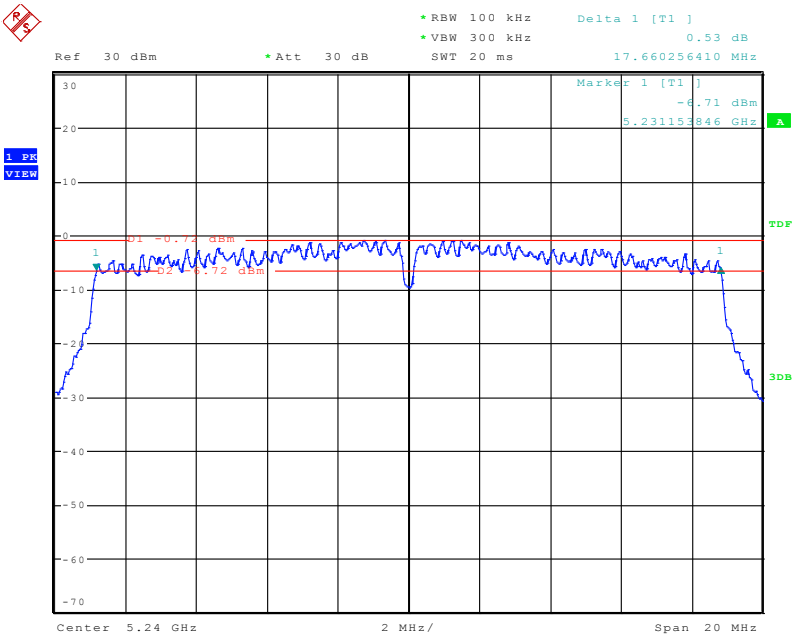
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5180**	17.69	> 0.5MHz
High	**5240**	17.66	> 0.5MHz

Channel Low



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

Channel High

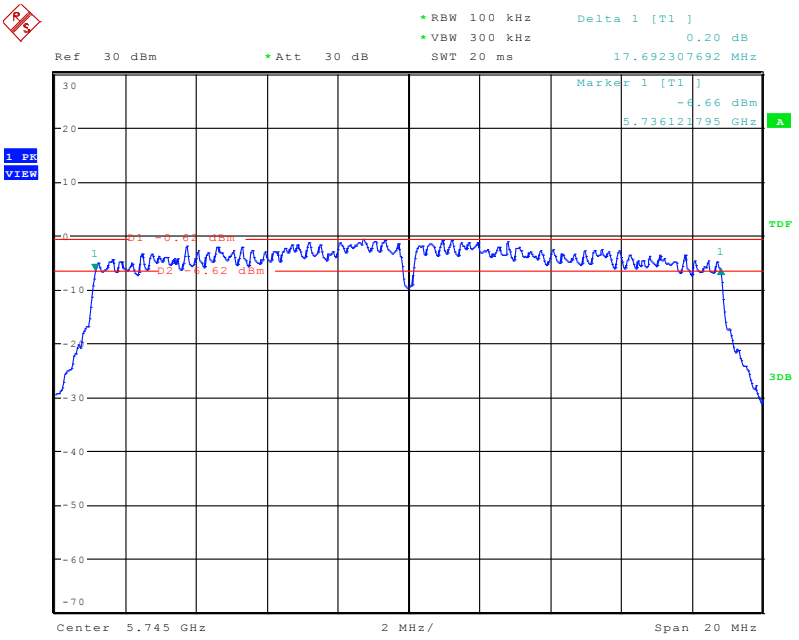


Date: 27.MAR.2017 19:17:54

802.11ac 5GHz 20MHz

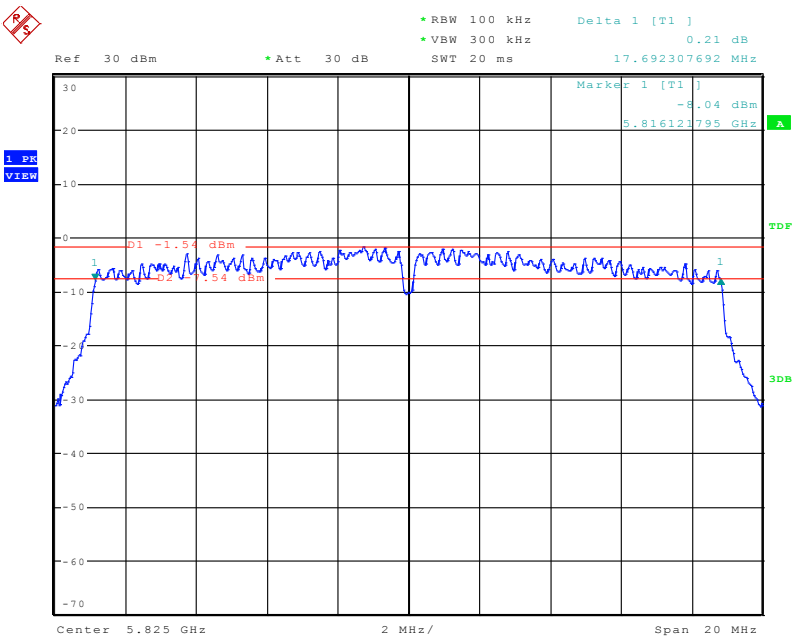
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5745**	17.69	> 0.5MHz
High	**5825**	17.69	> 0.5MHz

Channel Low



Date: 27.MAR.2017 19:19:48

Channel High

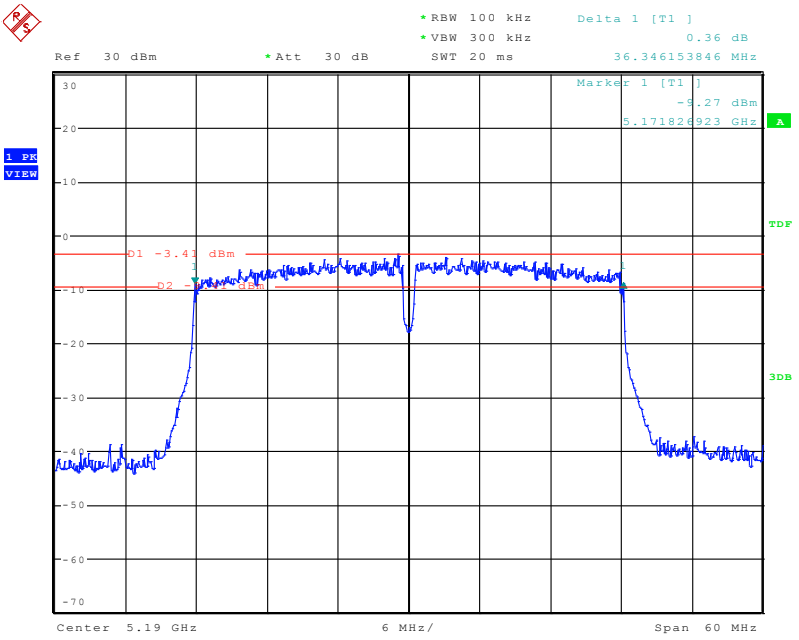


Date: 27.MAR.2017 19:21:40

802.11ac 5GHz 40MHz

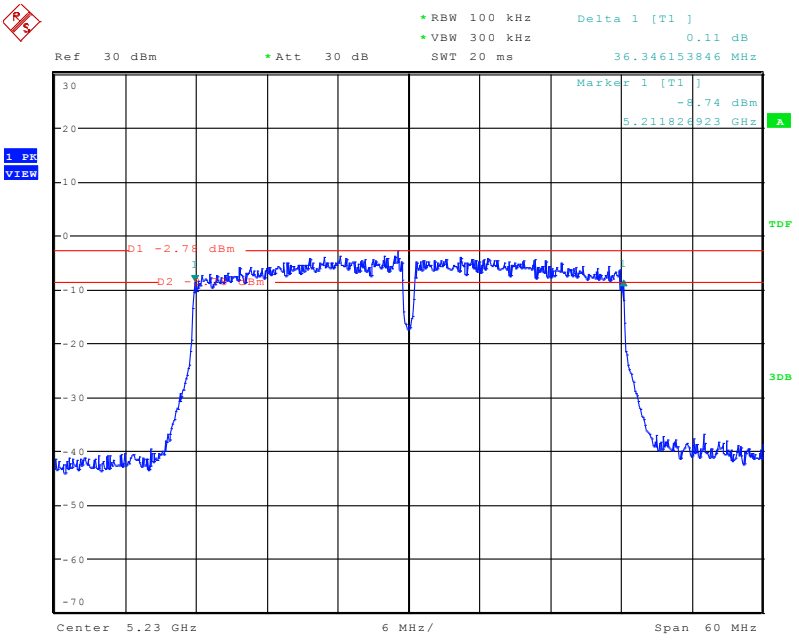
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5190**	36.35	> 0.5MHz
High	**5230**	36.35	> 0.5MHz

Channel Low



Date: 27.MAR.2017 19:23:20

Channel High

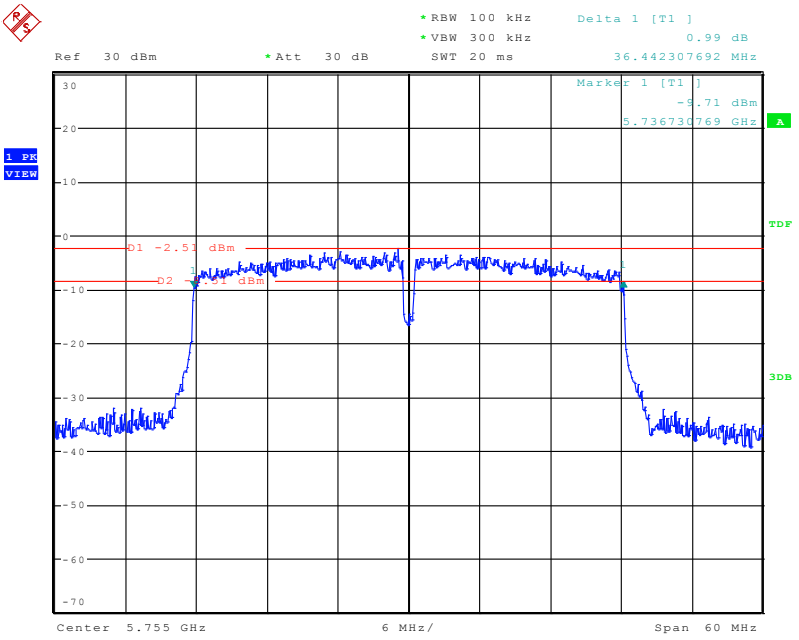


Date: 27.MAR.2017 19:24:28

802.11ac 5GHz 40MHz

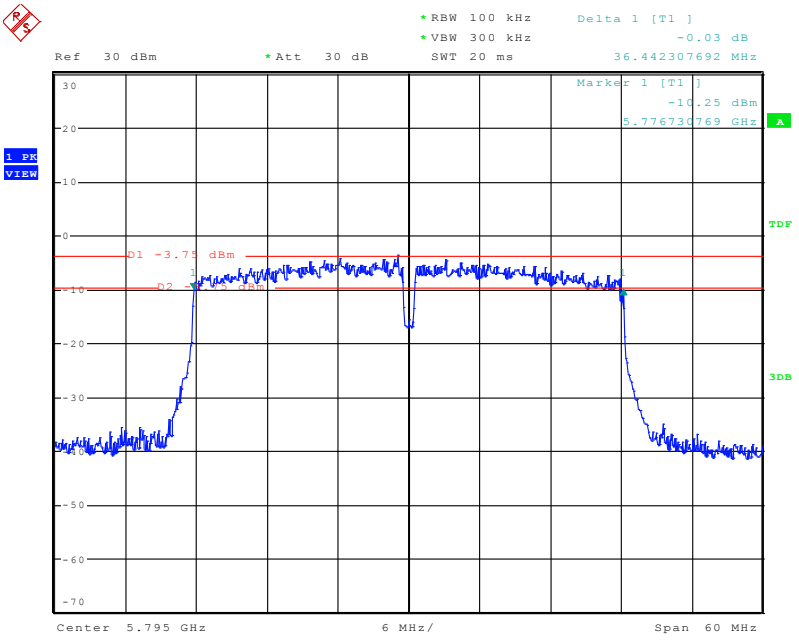
Channel	Measured Frequency (MHz)	6 dB Bandwidth (MHz)	Limit
Low	**5755**	36.44	> 0.5MHz
High	**5795**	36.44	> 0.5MHz

Channel Low



Date: 27.MAR.2017 19:26:45

Channel High



Date: 27.MAR.2017 19:29:28

C. Peak Power

Product	: EUT-Sample	Test Mode	: See Section 2.2
Test Item	: Peak Power	Temperature	: 25 ℃
Test Voltage	: DC 5V	Humidity	: 56%RH
Test Result	: **PASS**		

IEEE 802.11a Band1

Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5180	15.84	0.25/24.00	PASS
High	5240	15.70		PASS

IEEE 802.11a Band4

Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5745	15.97	1.00/30.00	PASS
High	5825	16.25		PASS

IEEE 802.11n 5G 20MHz Band1

Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5180	15.63	0.25/24.00	PASS
High	5240	15.94		PASS

IEEE 802.11n 5G 20MHz Band4

Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5745	15.61	1.00/30.00	PASS
High	5825	15.14		PASS

IEEE 802.11n 5G 40MHz Band1

Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5190	12.97	0.25/24.00	PASS
High	5230	12.92		PASS

IEEE 802.11n 5G 40MHz Band4

Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5755	12.98	1.00/30.00	PASS
High	5795	12.89		PASS

IEEE 802.11ac 5G 20MHz Band1

Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5180	15.15	0.25/24.00	PASS
High	5240	15.52		PASS

IEEE 802.11ac 5G 20MHz Band4

Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5745	15.58	1.00/30.00	PASS
High	5825	15.13		PASS

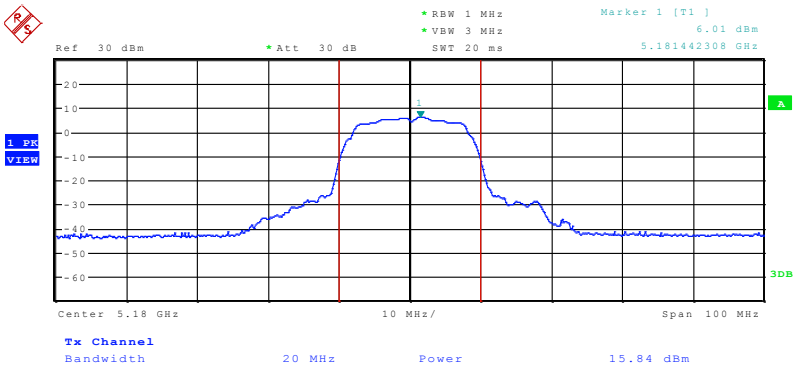
IEEE 802.11ac 5G 40MHz Band1

Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5190	12.45	0.25/24.00	PASS
High	5230	12.89		PASS

IEEE 802.11ac 5G 40MHz Band4

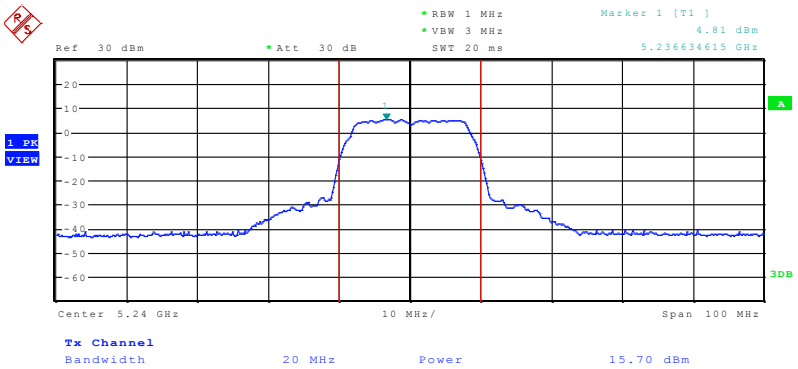
Channel	Frequency (MHz)	Output Power (dBm)	FCC Limit (W/dBm)	Result
Low	5755	12.78	1.00/30.00	PASS
High	5795	12.39		PASS

20M-802.11a 5180MHz



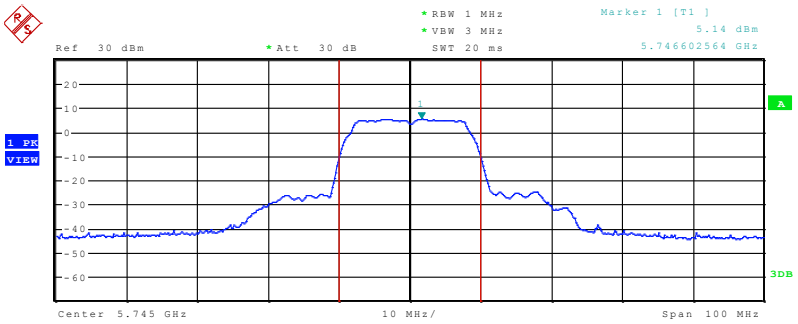
Date: 27.MAR.2017 19:34:37

20M-802.11a 5240MHz



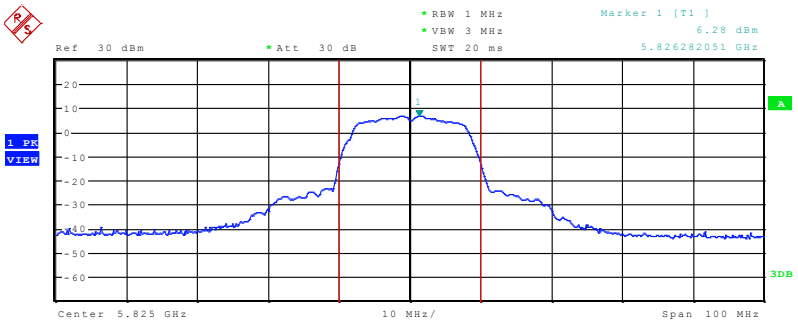
Date: 27.MAR.2017 19:35:55

20M-802.11a 5745MHz

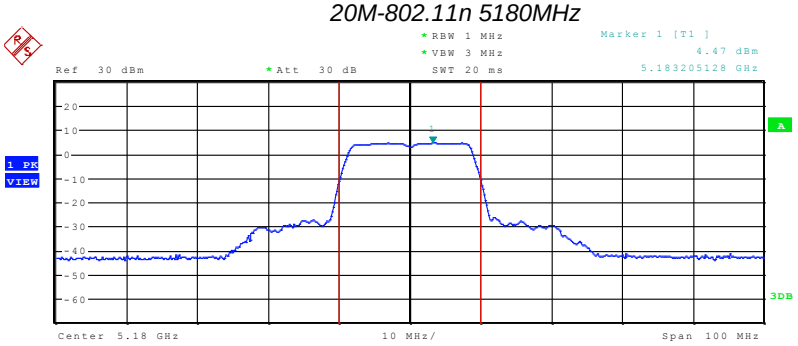


Date: 27.MAR.2017 19:36:39

20M-802.11a 5825MHz



20M-802.11n 5180MHz

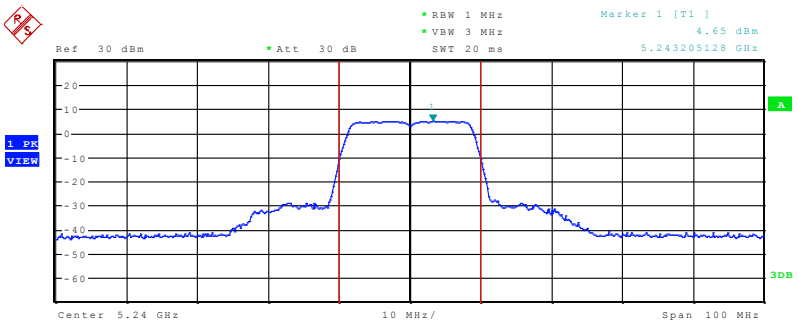


Tx Channel

Bandwidth 20 MHz Power 15.63 dBm

Date: 27.MAR.2017 19:39:11

20M-802.11n 5240MHz

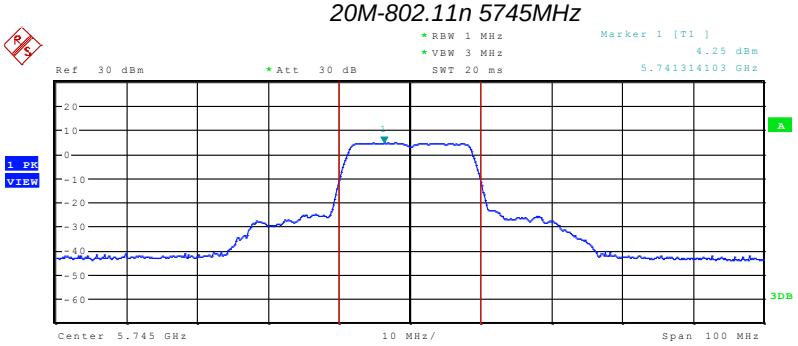


Tx Channel

Bandwidth 20 MHz Power 15.94 dBm

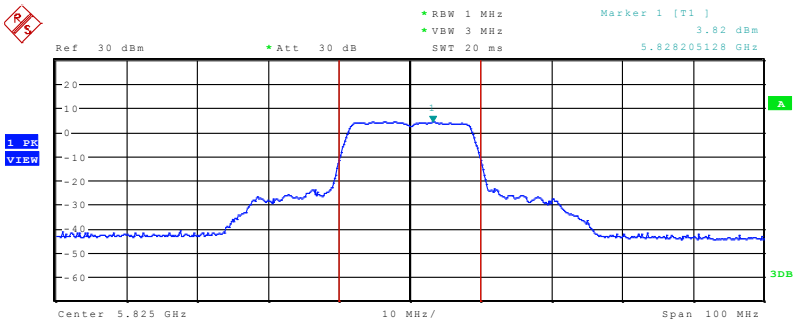
Date: 27.MAR.2017 19:39:57

20M-802.11n 5745MHz



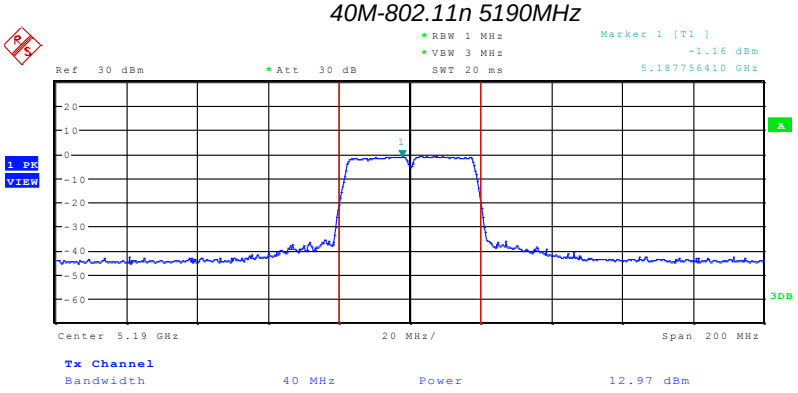
Date: 27.MAR.2017 19:40:51

20M-802.11n 5825MHz



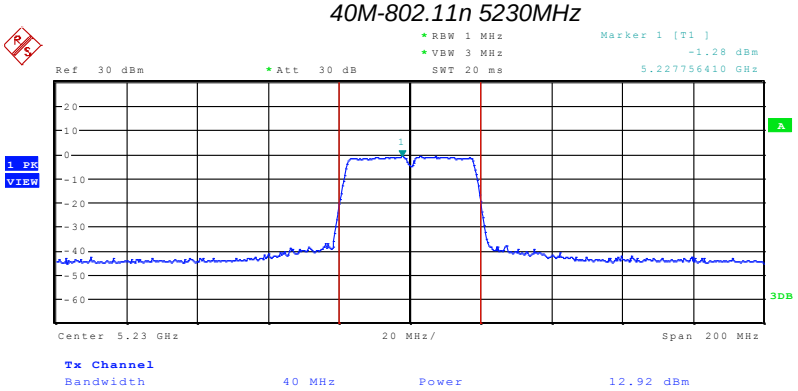
Date: 27.MAR.2017 19:41:56

40M-802.11n 5190MHz



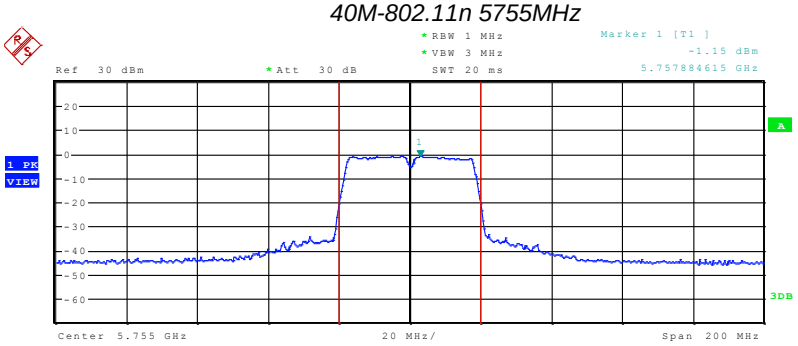
Date: 27.MAR.2017 19:44:30

40M-802.11n 5230MHz



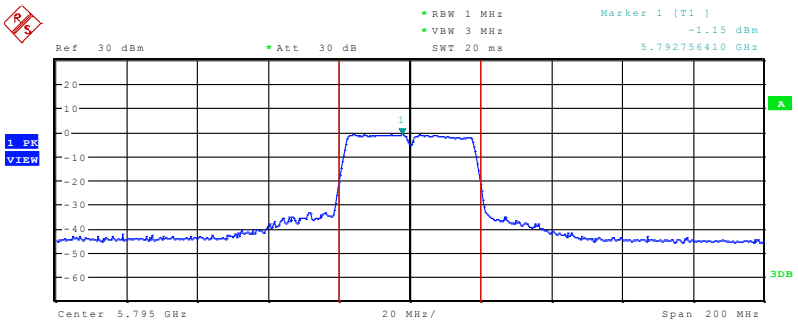
Date: 27.MAR.2017 19:45:36

40M-802.11n 5755MHz



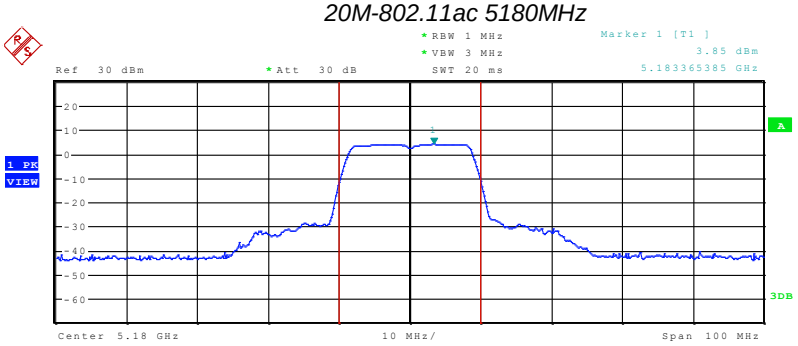
Date: 27.MAR.2017 19:46:57

40M-802.11n 5795MHz



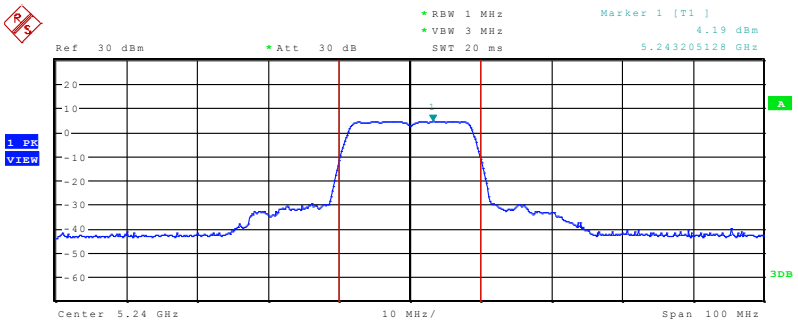
Date: 27.MAR.2017 19:48:01

20M-802.11ac 5180MHz



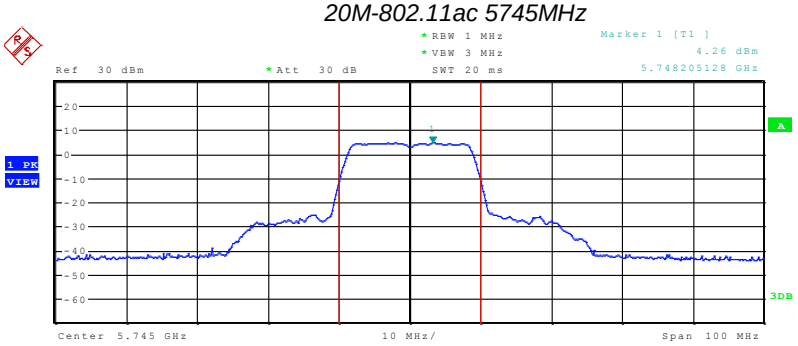
Date: 27.MAR.2017 19:49:16

20M-802.11ac 5240MHz



Date: 27.MAR.2017 19:50:11

20M-802.11ac 5745MHz

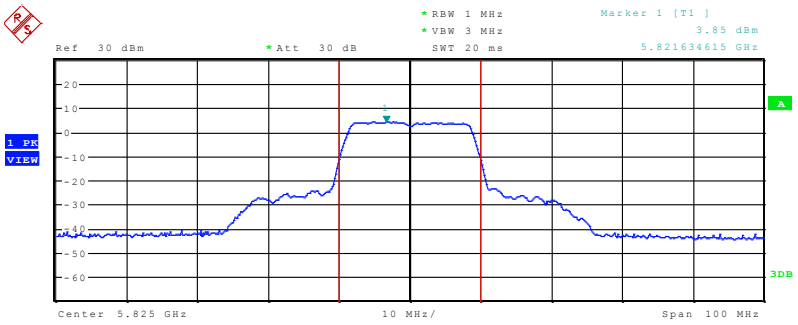


Tx Channel

Bandwidth	20 MHz	Power	15.58 dBm

Date: 27.MAR.2017 19:51:12

20M-802.11ac 5825MHz

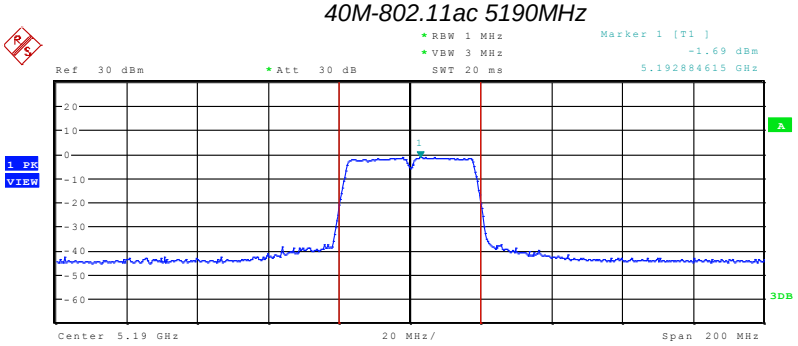


Tx Channel

Bandwidth	20 MHz	Power	15.13 dBm

Date: 27.MAR.2017 19:52:13

40M-802.11ac 5190MHz

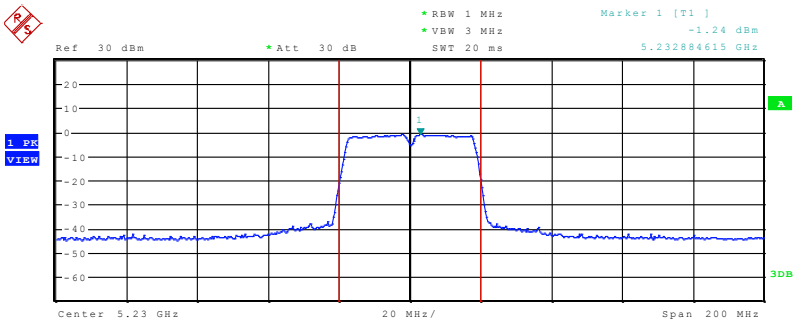


Tx Channel

Bandwidth 40 MHz Power 12.45 dBm

Date: 27.MAR.2017 19:53:16

40M-802.11ac 5230MHz

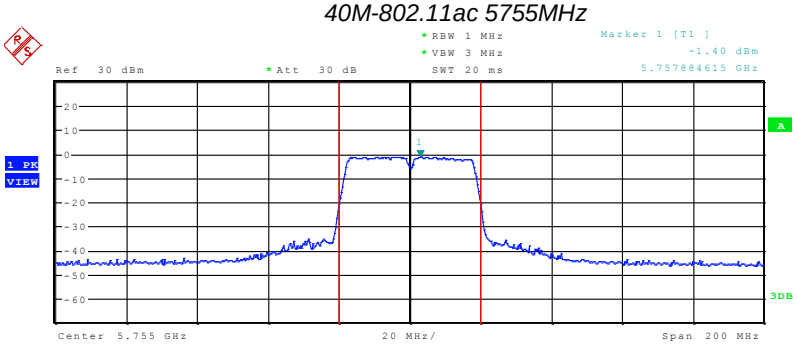


Tx Channel

Bandwidth 40 MHz Power 12.89 dBm

Date: 27.MAR.2017 19:54:29

40M-802.11ac 5755MHz

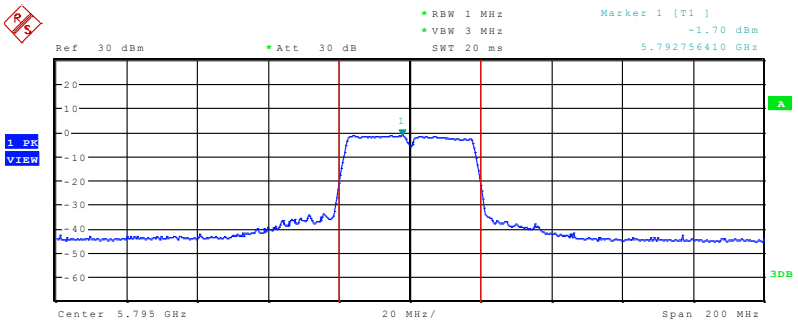


Tx Channel

Bandwidth	40 MHz	Power	12.78 dBm

Date: 27.MAR.2017 19:55:22

40M-802.11ac 5795MHz



Tx Channel

Bandwidth	40 MHz	Power	12.39 dBm

Date: 27.MAR.2017 19:56:55

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 5V	Humidity	: 56%RH
Test Result	: **PASS**		

IEEE 802.11a
Band1

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5180	3.657	11dBm/MHz	PASS
High	5240	2.715		PASS

Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5745	1.164	30dBm/500 kHz (26.99dBm/MHz)	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	11dBm/MHz	PASS
High	5240	2.049		PASS

Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5745	1.104	30dBm/500 kHz (26.99dBm/MHz)	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	11dBm/MHz	PASS
High	5230	-0.938		PASS

Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5755	-1.709	30dBm/500 kHz (26.99dBm/MHz)	PASS
High	5795	-0.866		PASS

IEEE 802.11ac 5G 20MHz
Band1

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5180	2.14	11dBm/MHz	PASS
High	5240	2.80		PASS

Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5745	1.23	30dBm/500 kHz (26.99dBm/MHz)	PASS
High	5825	1.60		PASS

IEEE 802.11ac 5G 40MHz
Band1

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5190	0.30	11dBm/MHz	PASS
High	5230	-0.07		PASS

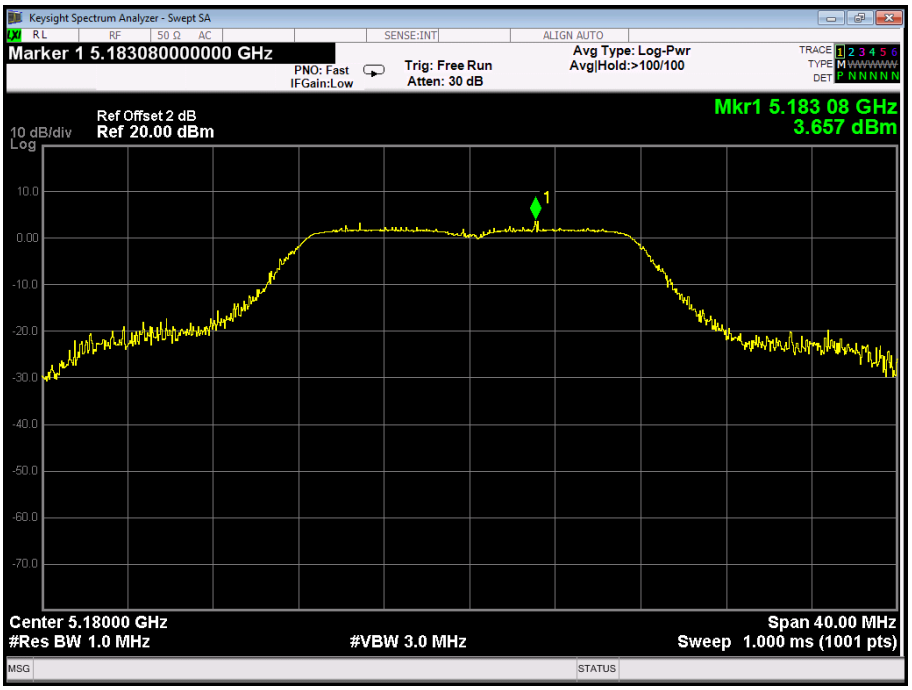
Band4

Channel	Frequency (MHz)	PPSD (dBm)	FCC Limit (kHz)	Result
Low	5755	0.09	30dBm/500 kHz (26.99dBm/MHz)	PASS
High	5795	-0.68		PASS

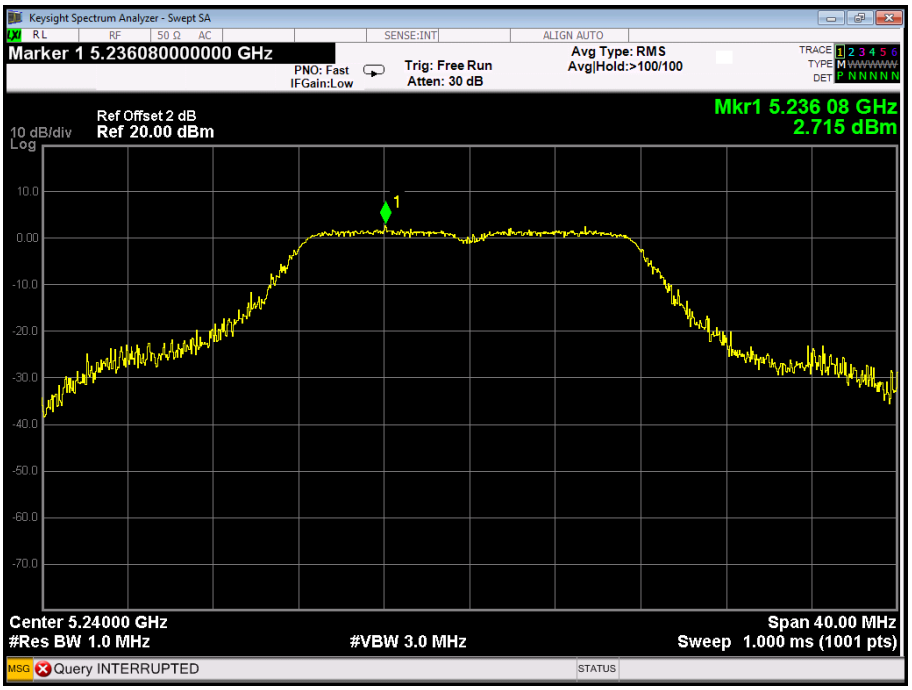
Note: For 5.725~5.85GHz (Band4): Power Density (dBm/500kHz)= Power Density (dBm/MHz)- 10log(500kHz/RBW) (dB)

IEEE 802.11a Band1

PPSD (CH Low)

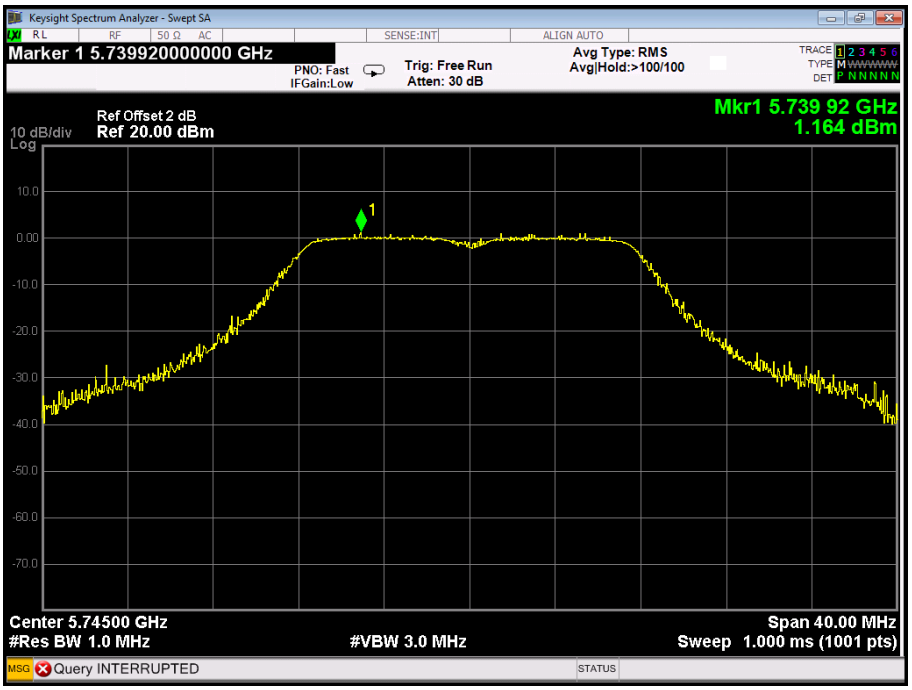


PPSD (CH High)

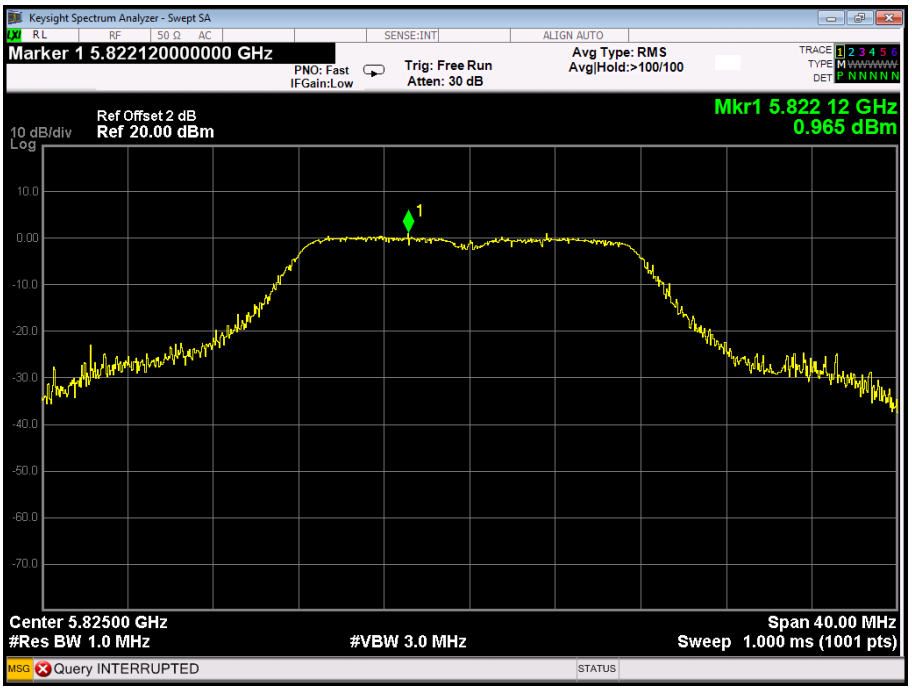


IEEE 802.11a Band4

PPSD (CH Low)

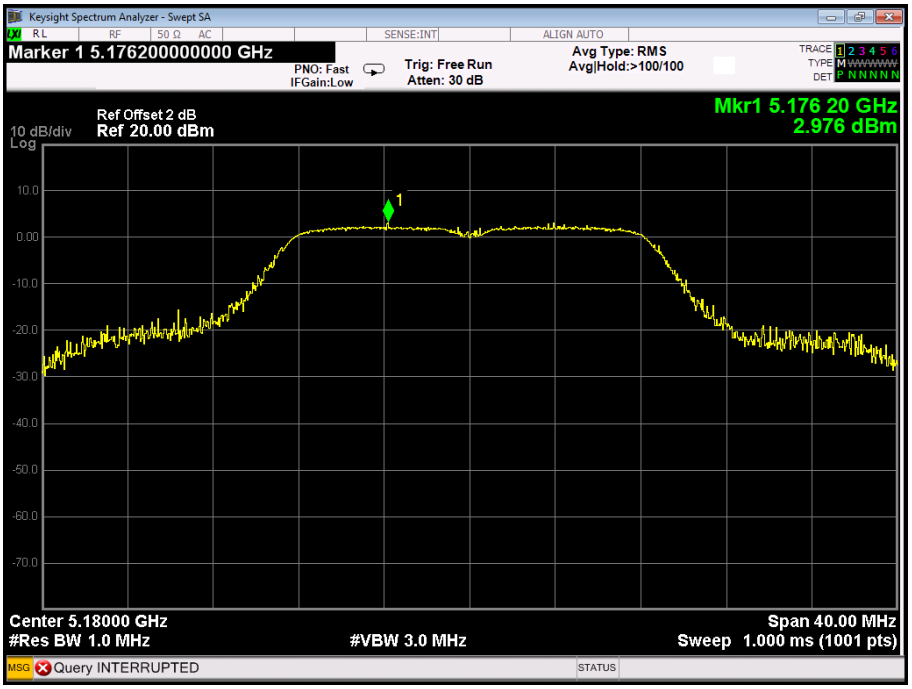


PPSD (CH High)

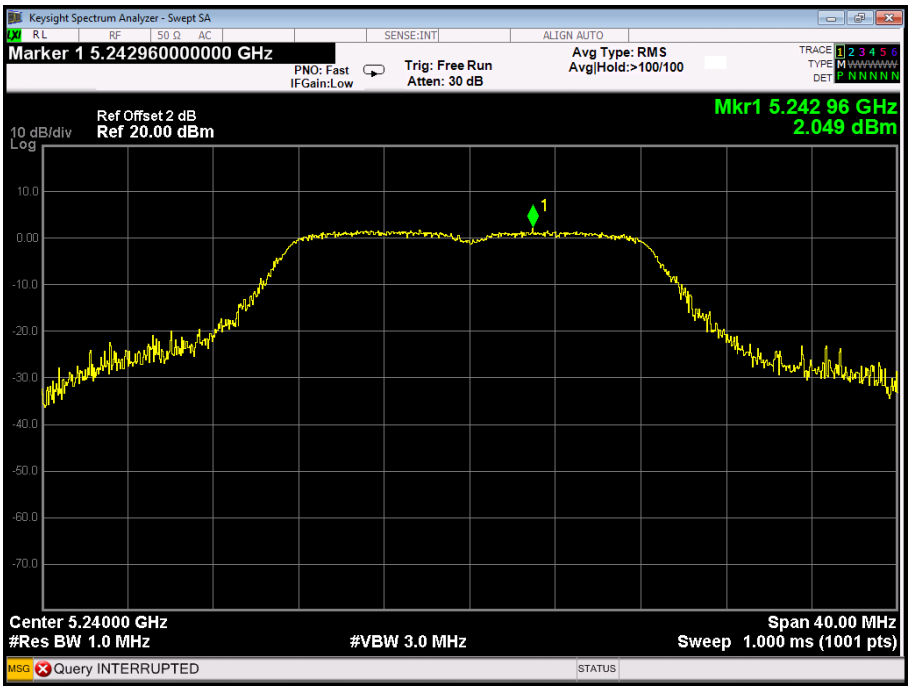


IEEE 802.11n 5G 20MHz Band1

PPSD (CH Low)

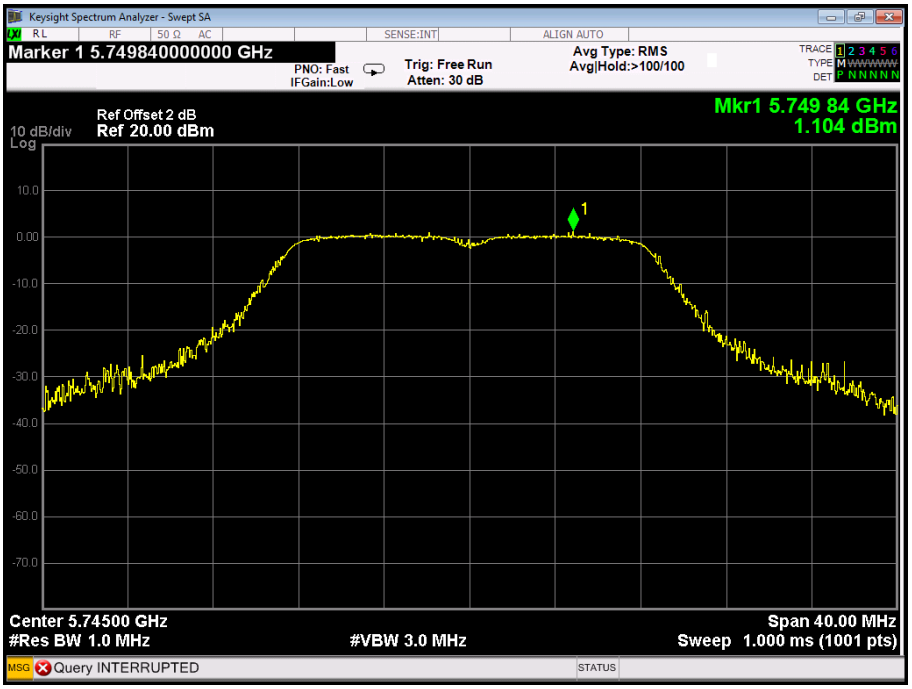


PPSD (CH High)

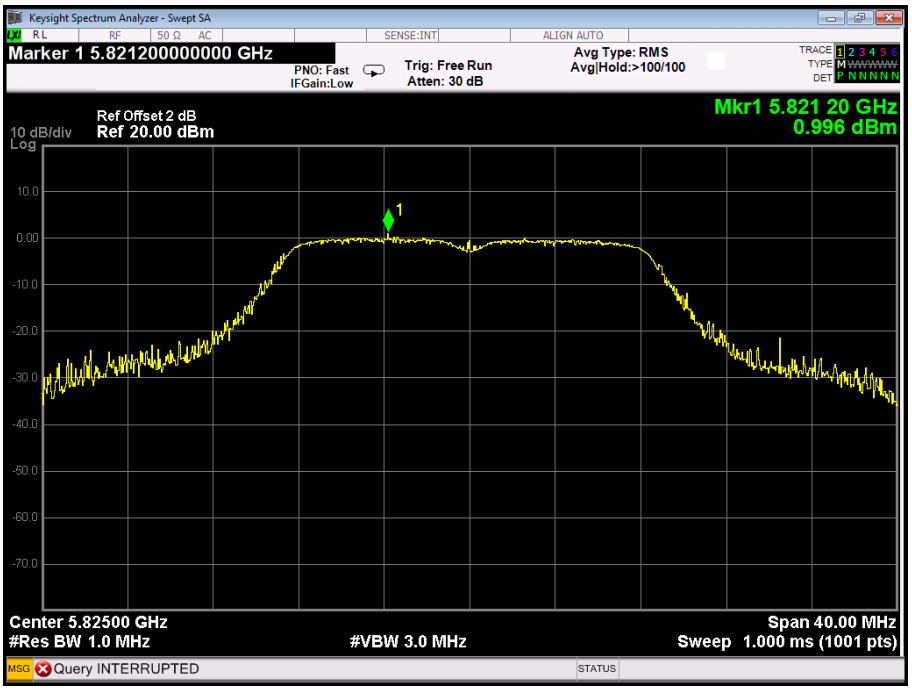


IEEE 802.11n 5G 20MHz Band4

PPSD (CH Low)

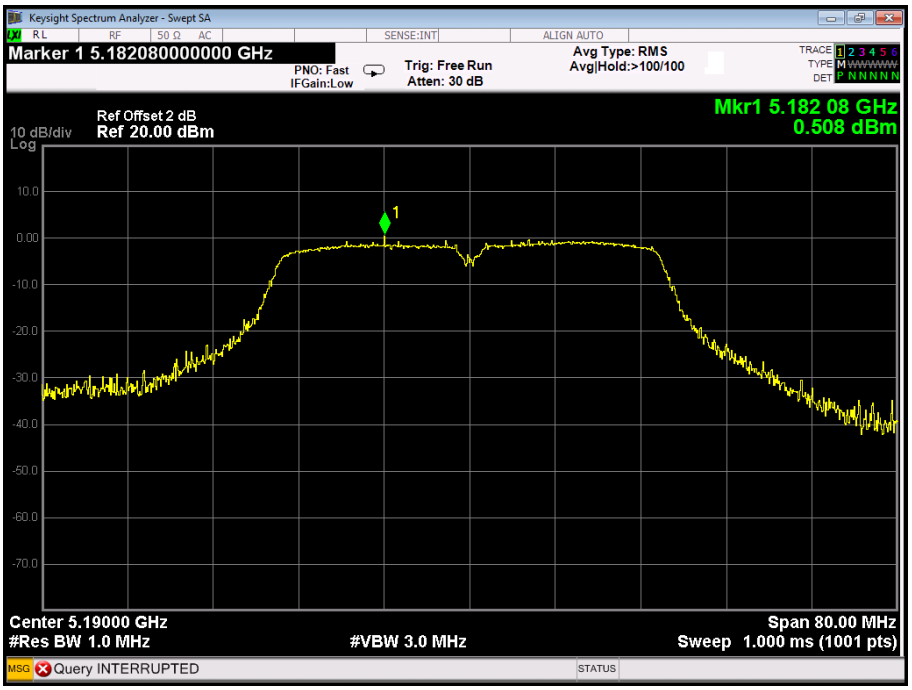


PPSD (CH High)

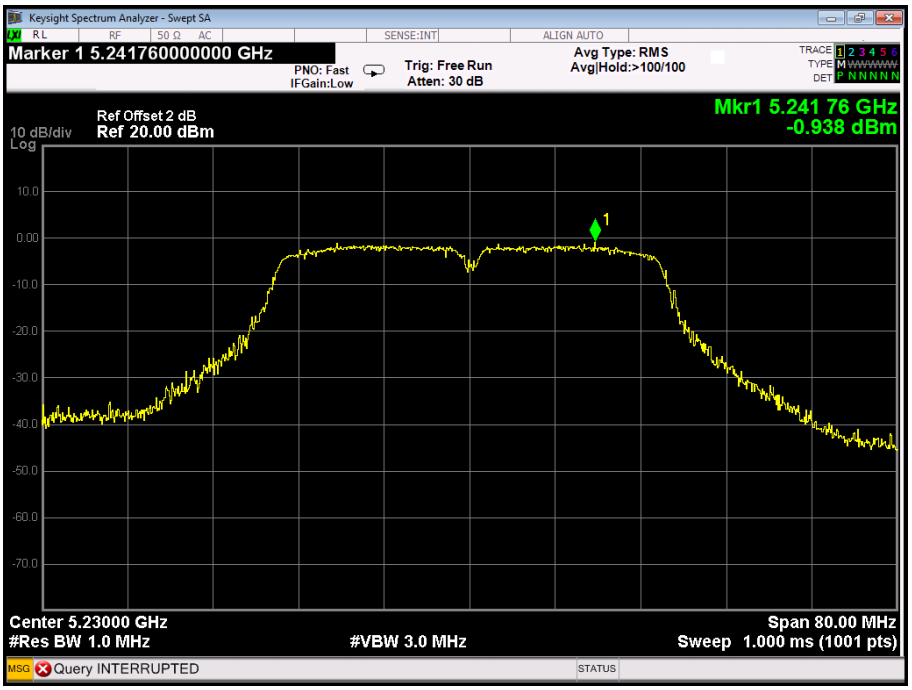


IEEE 802.11n 5G 40MHz Band1

PPSD (CH Low)

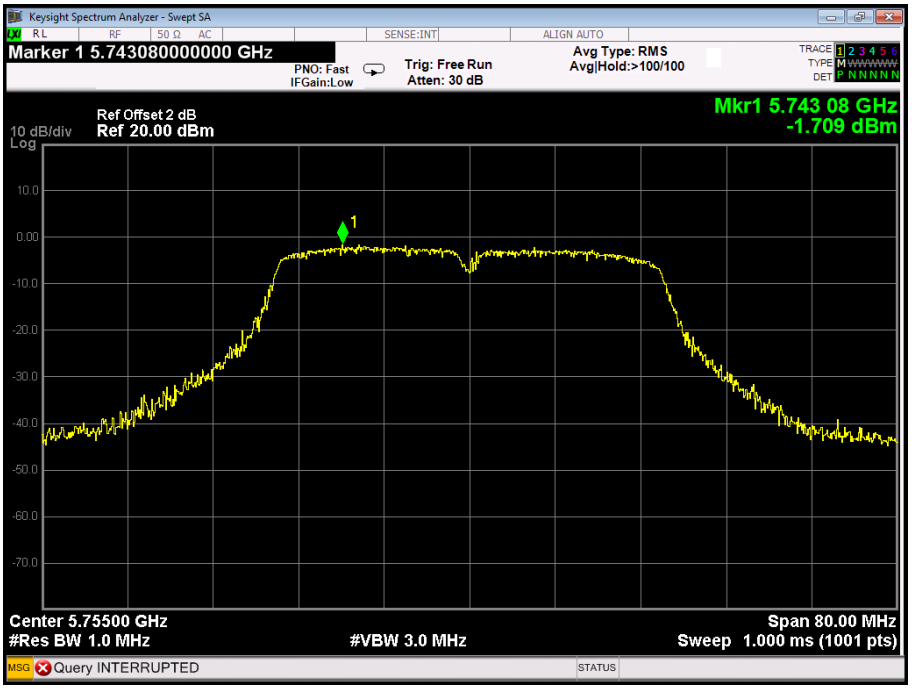


PPSD (CH High)

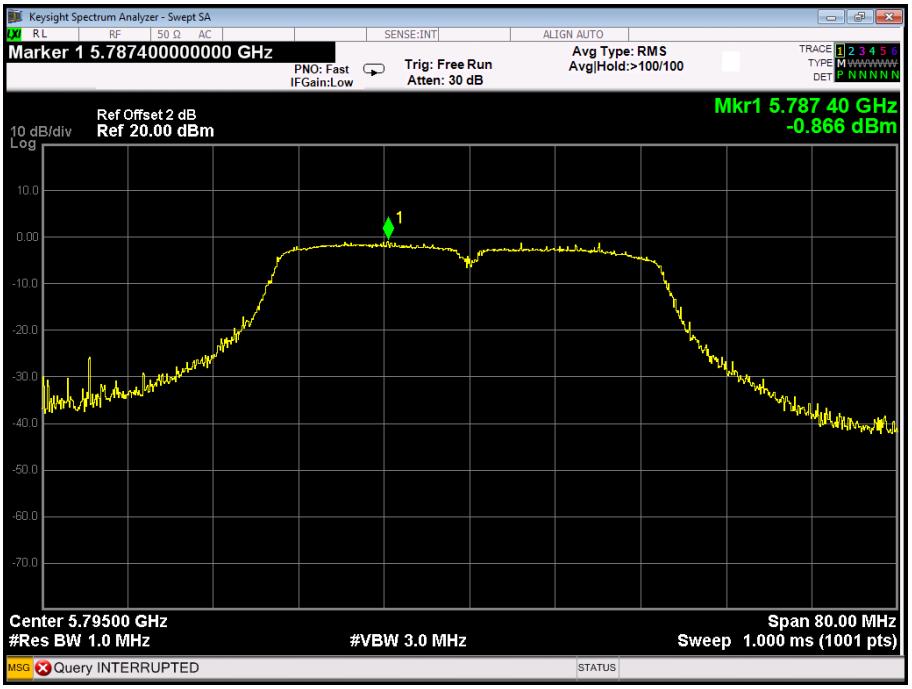


IEEE 802.11n 5G 40MHz Band4

PPSD (CH Low)

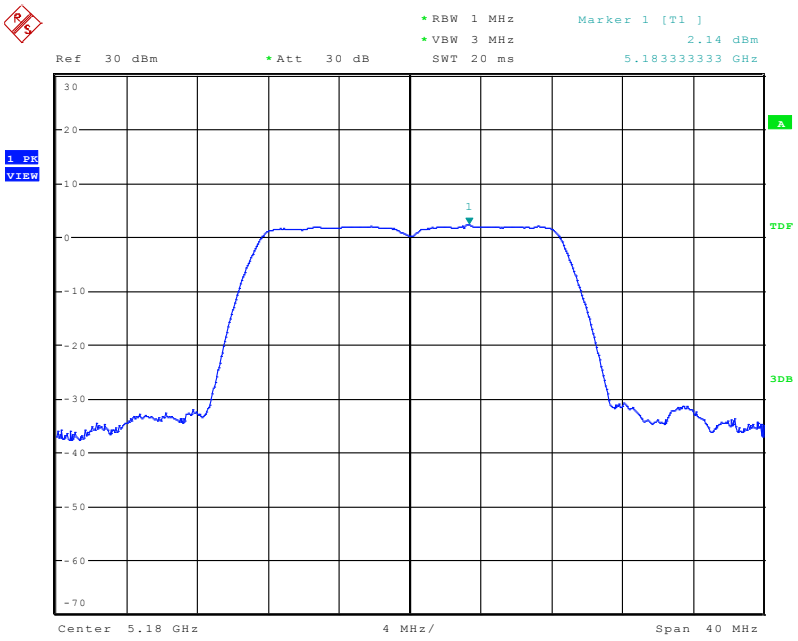


PPSD (CH High)



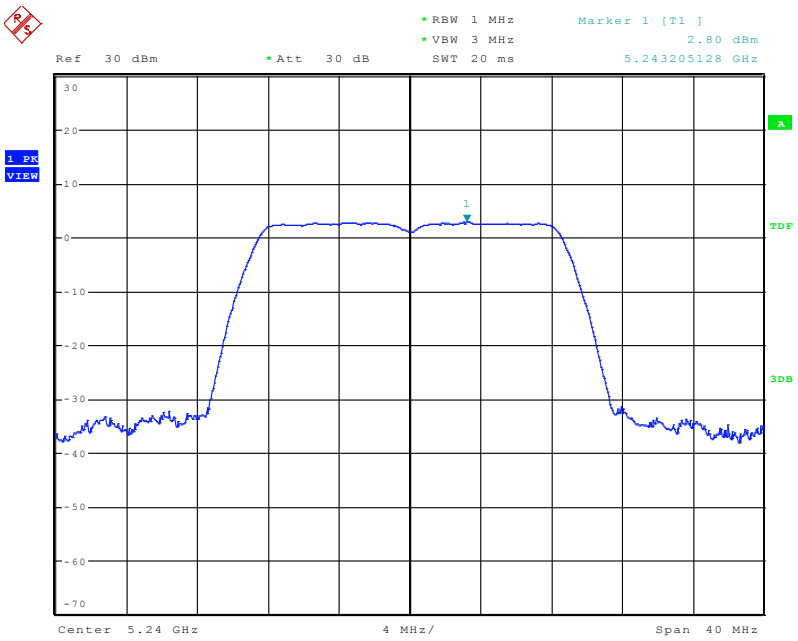
IEEE 802.11ac 5G 20MHz Band1

PPSD (CH Low)



Date: 27.MAR.2017 20:00:34

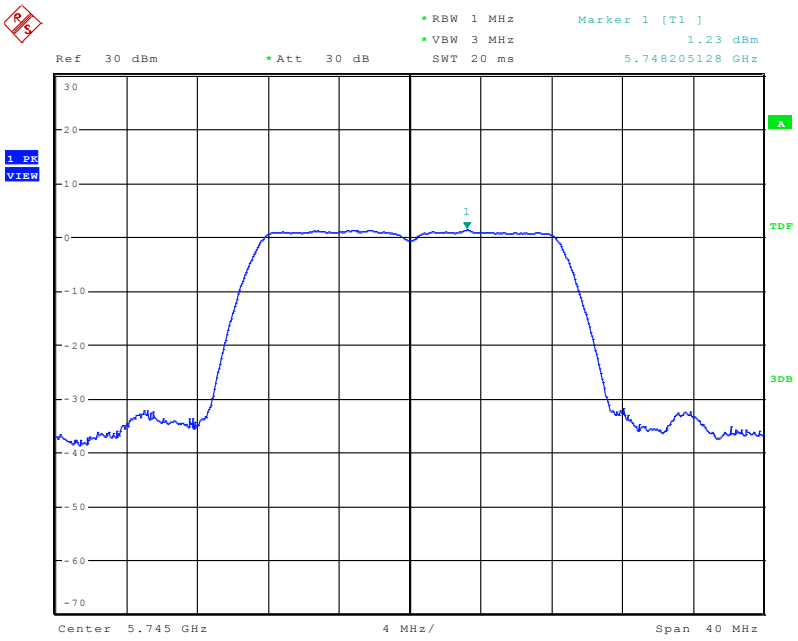
PPSD (CH High)



Date: 27.MAR.2017 20:01:09

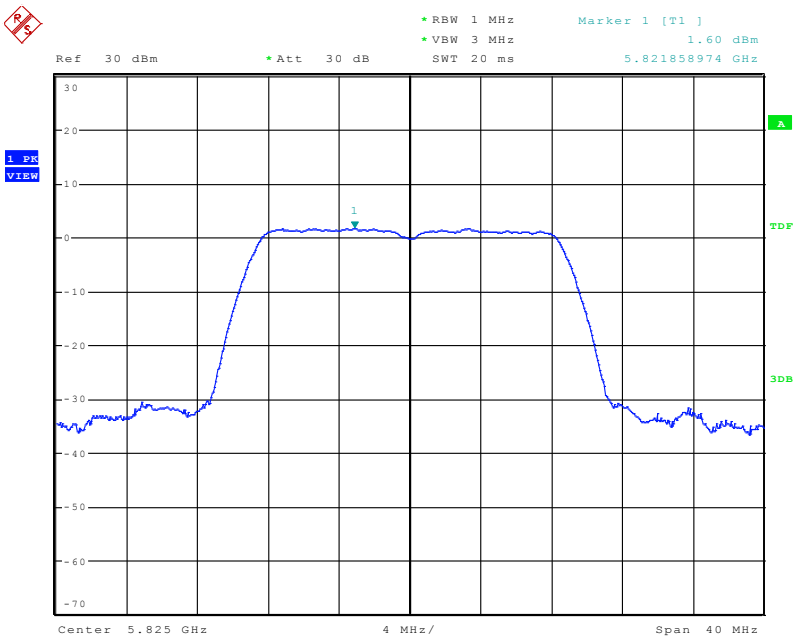
IEEE 802.11ac 5G 20MHz Band4

PPSD (CH Low)



Date: 27.MAR.2017 20:02:05

PPSD (CH High)



Date: 27.MAR.2017 20:02:49

IEEE 802.11ac 5G 40MHz Band1

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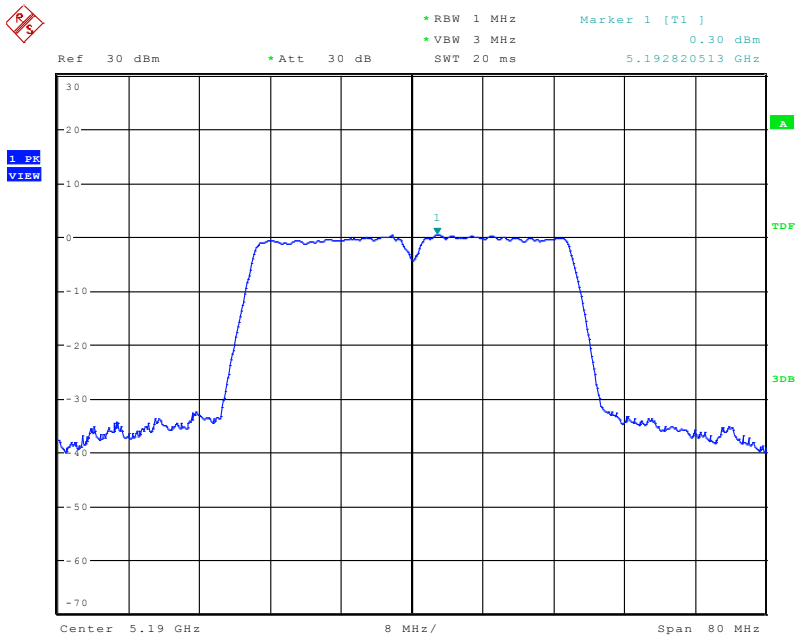

Date: 27.MAR.2017 20:04:06

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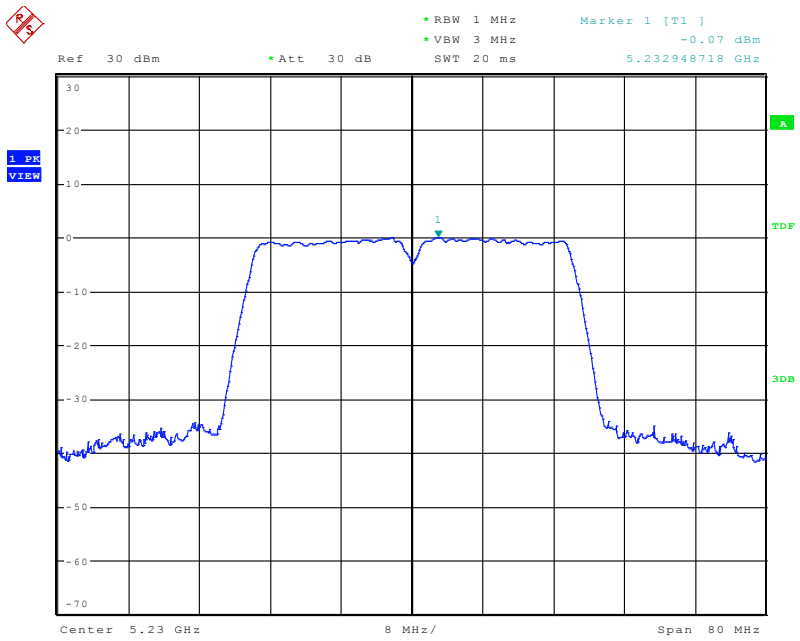

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IEEE 802.11ac 5G 40MHz Band4

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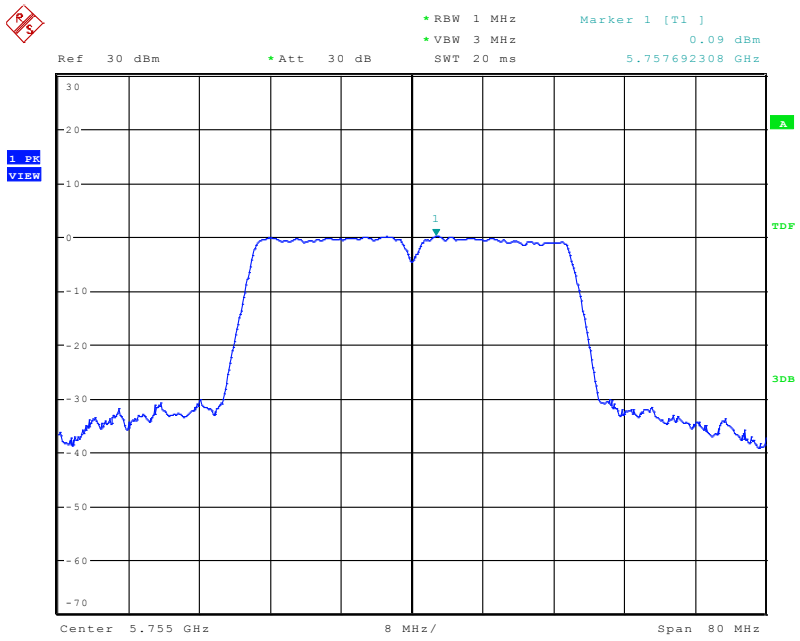

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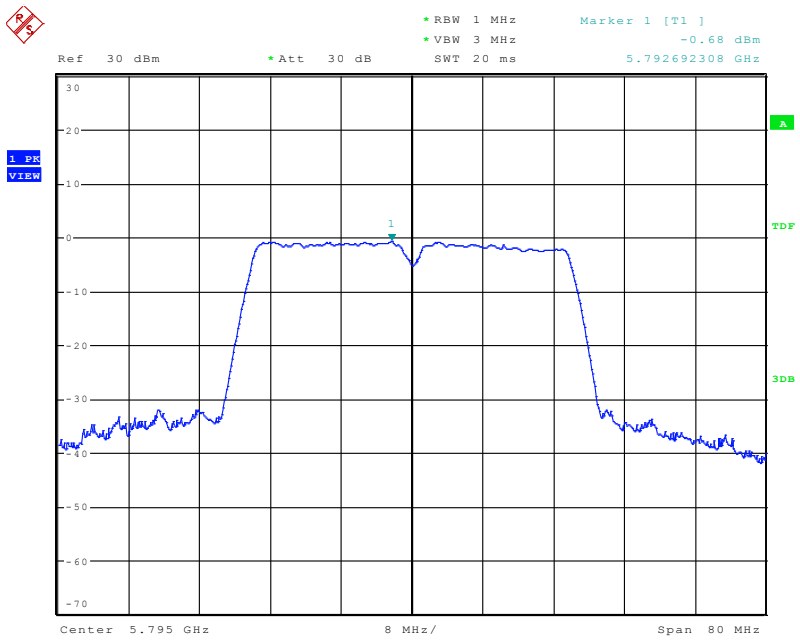

Date: 27.MAR.2017 20:06:10

E. Frequency Stability

Product:	Mobile phone	Test Mode:	Mode: IEEE 802.11a
Test Item:	Frequency Stability	Temperature:	25 ℃
Test Voltage:	DC 5V	Humidity:	56%RH
Test Result:	**PASS**		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5180 MHz	5240 MHz	5745 MHz	5825 MHz
126.50	5179.9488	5239.9206	5744.9168	5824.9134
110.00	5179.9488	5239.9206	5744.9168	5824.9134
93.50	5179.9488	5239.9206	5744.9168	5824.9134
Max. Deviation (MHz)	0.0512	0.0794	0.0832	0.0866
Max. Deviation (ppm)	9.88	15.15	14.48	14.87

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5180 MHz	5240 MHz	5745 MHz	5825 MHz
0	5179.9494	5239.9202	5744.9156	5824.9132
10	5179.9494	5239.9202	5744.9156	5824.9132
20	5179.9494	5239.9202	5744.9156	5824.9132
30	5179.9494	5239.9202	5744.9156	5824.9132
40	5179.9494	5239.9202	5744.9156	5824.9132
Max. Deviation (MHz)	0.0506	0.0792	0.0844	0.0868
Max. Deviation (ppm)	9.77	15.11	15.42	14.90

Product:	Mobile phone	Test Mode:	Mode: IEEE 802.11n 20MHz
Test Item:	Frequency Stability	Temperature:	25 ℃
Test Voltage:	DC 5V	Humidity:	56%RH
Test Result:	**PASS**		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5180 MHz	5240 MHz	5745 MHz	5825 MHz
126.50	5179.9522	5239.9224	5744.9214	5824.9256
110.00	5179.9522	5239.9218	5744.9212	5824.9254
93.50	5179.9520	5239.9222	5744.9212	5824.9256
Max. Deviation (MHz)	0.0480	0.0782	0.0788	0.0746
Max. Deviation (ppm)	9.26	14.92	13.72	12.81

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5180 MHz	5240 MHz	5745 MHz	5825 MHz
0	5179.9522	5239.9224	5744.9214	5824.9256
10	5179.9522	5239.9218	5744.9212	5824.9254
20	5179.9520	5239.9222	5744.9212	5824.9256
30	5179.9522	5239.9222	5744.9214	5824.9252
40	5179.9518	5239.9218	5744.9214	5824.9254
Max. Deviation (MHz)	0.0482	0.0782	0.0788	0.0748
Max. Deviation (ppm)	9.31	14.92	13.72	12.84

Product:	Mobile phone	Test Mode:	Mode: IEEE 802.11n 40MHz
Test Item:	Frequency Stability	Temperature:	25 ℃
Test Voltage:	DC 5V	Humidity:	56%RH
Test Result:	**PASS**		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz	5230 MHz	5755 MHz	5795 MHz
126.50	5189.9348	5229.9214	5744.9162	5794.9124
110.00	5189.9348	5229.9214	5744.9162	5794.9124
93.50	5189.9348	5229.9214	5744.9162	5794.9124
Max. Deviation (MHz)	0.0652	0.0786	0.0838	0.0876
Max. Deviation (ppm)	12.56	15.03	14.56	15.12

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5190 MHz	5230 MHz	5755 MHz	5795 MHz
0	5189.9344	5229.9210	5754.9162	5794.9128
10	5189.9344	5229.9210	5754.9162	5794.9128
20	5189.9344	5229.9210	5754.9162	5794.9128
30	5189.9344	5229.9210	5754.9162	5794.9128
40	5189.9344	5229.9210	5754.9162	5794.9128
Max. Deviation (MHz)	0.0656	0.0790	0.0838	0.0872
Max. Deviation (ppm)	12.64	15.11	14.56	15.05

Product:	Mobile phone	Test Mode:	Mode: IEEE 802.11ac 20MHz
Test Item:	Frequency Stability	Temperature:	25 ℃
Test Voltage:	DC 5V	Humidity:	56%RH
Test Result:	**PASS**		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5180 MHz	5240 MHz	5745 MHz	5825 MHz
126.50	5179.9556	5239.9236	5744.9228	5824.9244
110.00	5179.9556	5239.9236	5744.9228	5824.9242
93.50	5179.9554	5239.9234	5744.9230	5824.9242
Max. Deviation (MHz)	0.0446	0.0766	0.0770	0.0758
Max. Deviation (ppm)	8.61	14.62	13.40	13.01

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5180 MHz	5240 MHz	5745 MHz	5825 MHz
0	5179.9536	5239.9248	5744.9224	5824.9234
10	5179.9536	5239.9244	5744.9224	5824.9234
20	5179.9535	5239.9246	5744.9224	5824.9236
30	5179.9534	5239.9246	5744.9222	5824.9236
40	5179.9534	5239.9244	5744.9222	5824.9234
Max. Deviation (MHz)	0.0466	0.0756	0.0776	0.0766
Max. Deviation (ppm)	9.00	14.43	13.51	13.15

Product:	Mobile phone	Test Mode:	Mode: IEEE 802.11ac 40MHz
Test Item:	Frequency Stability	Temperature:	25 ℃
Test Voltage:	DC 5V	Humidity:	56%RH
Test Result:	**PASS**		

Voltage vs. Frequency Stability

Voltage	Measurement Frequency (MHz)			
(V)	5190 MHz	5230 MHz	5755 MHz	5795 MHz
126.50	5189.9322	5229.9206	5744.9154	5794.9166
110.00	5189.9322	5229.9206	5744.9154	5794.9166
93.50	5189.9322	5229.9206	5744.9152	5794.9162
Max. Deviation (MHz)	0.0678	0.0794	0.0848	0.0838
Max. Deviation (ppm)	13.06	15.18	14.74	14.46

Temperature vs. Frequency Stability

Temperature	Measurement Frequency (MHz)			
(℃)	5190 MHz	5230 MHz	5755 MHz	5795 MHz
0	5189.9314	5229.9222	5754.9188	5794.9146
10	5189.9314	5229.9224	5754.9188	5794.9144
20	5189.9316	5229.9224	5754.9186	5794.9146
30	5189.9316	5229.9224	5754.9184	5794.9142
40	5189.9314	5229.9224	5754.9184	5794.9142
Max. Deviation (MHz)	0.0686	0.0776	0.0816	0.0858
Max. Deviation (ppm)	13.22	14.84	14.18	14.81