S T S L A B

FCC TEST REPORT

Report No: STS1606154F02

Issued for

Shenzhen EDUP Electronics Technology Co.,Ltd.

6 Floor, #6 Building, No.48, Kangzheng Road, Liantang Industrial Area, Buji Town,ShenZhen, China

Product Name:	Wireless Adapter
Brand Name:	EDUP
Model Name:	EP-DB1607
Series Model:	EP-DB1608
FCC ID:	2AHRDEP-DB1607
Test Standard:	FCC Part 15.407

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TESTING • CONSULTING • SOLUTION • CERTIFICATION
APPROVAL

TEST RESULT CERTIFICATION

Applicant's name ..... : Shenzhen EDUP Electronics Technology Co.,Ltd.

Address ..... : 6 Floor, #6 Building, No.48, Kangzheng Road, Liantang Industrial Area, Buji Town,ShenZhen, China

Manufacture's Name..... : Shenzhen EDUP Electronics Technology Co.,Ltd.

Address ..... : 6 Floor, #6 Building, No.48, Kangzheng Road, Liantang Industrial Area, Buji Town,ShenZhen, China

Product description

Product name ..... : Wireless Adapter

Model and/or type reference : EP-DB1607

Series Model ..... : EP-DB1608

Standards ..... : FCC Part15.407

Test procedure ..... ANSI C63.10-2013

This device described above has been tested by STS, and the test results show that the equipment under test (EUT) is in compliance with the FCC&IC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test .....:

Date (s) of performance of tests .....: 21 June. 2016 ~29 June. 2016

Date of Issue.....: 30 June. 2016

Test Result.....: **Pass**

Testing Engineer :

(Tony Liu)

Technical Manager :

(Vita Li)

Authorized Signatory :

(Bovey Yang)

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Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	30 June. 2016	STS1606154F02	ALL	Initial Issue

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:
§ 15.407,KDB 789033 D02 General UNII Test Procedures New Rules v01r01

FCC Part15 (15.407)		
FCC standard	Test Item	Results
15.207	AC Conducted Emission	PASS
§ 15.407 (2) (26 dB) / § 15.407 (e) (6 dB)/ § 15.407 (a) (99%)	26dB/6dB &99% Bandwidth	PASS
15.407(a) (1).(2).(3).(4).(5)	Maximum Conducted Output Power	PASS
15.407(b)& 15.209	Radiated Emission And (Unwanted Emissions) Measurement	PASS
15.407(b)7	Conducted Emission And (Unwanted Emissions) Measurement	PASS
15.407(a) (1).(2).(3).(4).(5)	Power Spectral Density	PASS
15.407(g)	Frequency Stability	PASS
15.407(c)	Automatically Discontinue Transmission	PASS
15.203/15.204	Antenna Requirement	PASS

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

(2)all tests are according to ANSI C63.10-2013

1.1 TEST FACTORY

Shenzhen STS Test Services Co., Ltd.
Add. : 1/F., Building B, Zhuoke Science Park, No.190,Chongqing Road,
Fuyong Street, Bao'an District, Shenzhen, Guangdong,China
CNAS Registration No.: L7649;
FCC Registration No.: 842334; IC Registration No.: 12108A-1

1.2 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 (9KHz-150KHz)	±2.88dB
2	Conducted Emission (150KHz-30MHz)	±2.67dB
3	RF power,conducted	±0.70dB
4	Spurious emissions,conducted	±1.19dB
5	All emissions,radiated(<1G) 30MHz-200MHz	±2.83dB
6	All emissions,radiated(<1G) 200MHz-1000MHz	±2.94dB
7	All emissions,radiated(>1G)	±3.03dB
8	Temperature	±0.5°C
9	Humidity	±2%

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Adapter	
Trade Name	EDUP	
Model Name	EP-DB1607	
Series Model	EP-DB1608	
Model Difference	Only different in model name	
Product Description	The EUT is a Wireless Adapter	
	Operation Frequency:	IEEE 802.11a/n(HT20) 5.180GHz-5.240GHz IEEE 802.11n(HT40) 5.190GHz-5.230GHz IEEE 802.11a/ n(HT20)5.745GHz-5.825GHz IEEE 802.1n(HT40)5.755GHz-5.795GHz
	Modulation Type:	IEEE for 802.11a/n/ac: OFDM(BPSK/QPSK/16QAM)
	Bit Rate of Transmitter	802.11a:54/48/36/24/18/12/9/6Mbps 802.11n/ac(20/40/80MHz):433.3/300/150/144.44/130/117/115.56/104/86.67/78/52/6.5 Mbps
	Antenna Designation:	See Note 3
	Max.Output Power(Conducted):	5.59dBm
	More details of EUT technical specification, please refer to the User's Manual.	
Test Channel	Please refer to the Note 2.	
Power rating	DC 5V, 500mA	
Hardware version number	V1.0	
Software version number	1027.6.417.2015	
Connecting I/O Port(s)	Please refer to the User's Manual	

Note:For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2.

Operation Frequency of channel			
5.180GHz-5.240GHz		5.745GHz-5.825GHz	
Channel	Frequency	Channel	Frequency
36	5180	149	5745
38	5190	151	5755
40	5200	153	5765
42	5210	157	5785
44	5220	159	5795
46	5230	161	5805
48	5240	165	5825

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:
Carrier Frequency Channel

5GHz Test Frequency:

For 802.11a/n/ac (HT20)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
36	5180	149	5745
40	5200	157	5785
48	5240	165	5825

For 802.11n/ac (HT40)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
38	5190	151	5755
46	5230	159	5795

For 802.11ac (HT80)			
Channel	Freq.(MHz)	Channel	Freq.(MHz)
42	5210	155	5775

3.

Ant	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
A	EDUP	EP-DB1607	Dipole Antenna	non-standard	2	WIFI Antenna

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.

Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11a HT20 CH36&CH40&CH48	6 Mbps
Mode 2	TX IEEE 802.11a HT20 CH149&CH157&CH165	6 Mbps
Mode 3	TX IEEE 802.11n HT20 CH36&CH40&CH48	MCS 0
Mode 4	TX IEEE 802.11n HT20 CH149&CH157&CH165	MCS 0
Mode 5	TX IEEE 802.11n HT40 CH38&CH46	MCS 0
Mode 6	TX IEEE 802.11n HT40 CH54 &CH62	MCS 0
Mode 7	TX IEEE 802.11ac HT20 CH36&CH40&CH48	NSS1 MCS0
Mode 8	TX IEEE 802.11ac HT20 CH149&CH157&CH165	NSS1 MCS0
Mode 9	TX IEEE 802.11ac HT40 CH38&CH46	NSS1 MCS0
Mode 10	TX IEEE 802.11ac HT40 CH54 &CH62	NSS1 MCS0
Mode 11	TX IEEE 802.11ac HT80 CH42	NSS1 MCS0
Mode 12	TX IEEE 802.11ac HT80 CH155	NSS1 MCS0

Note:

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

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

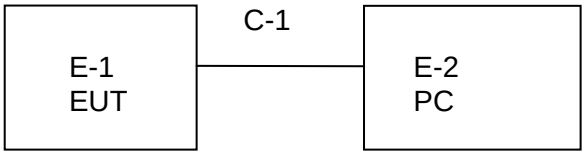
(3) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation.

AC Conducted Emission

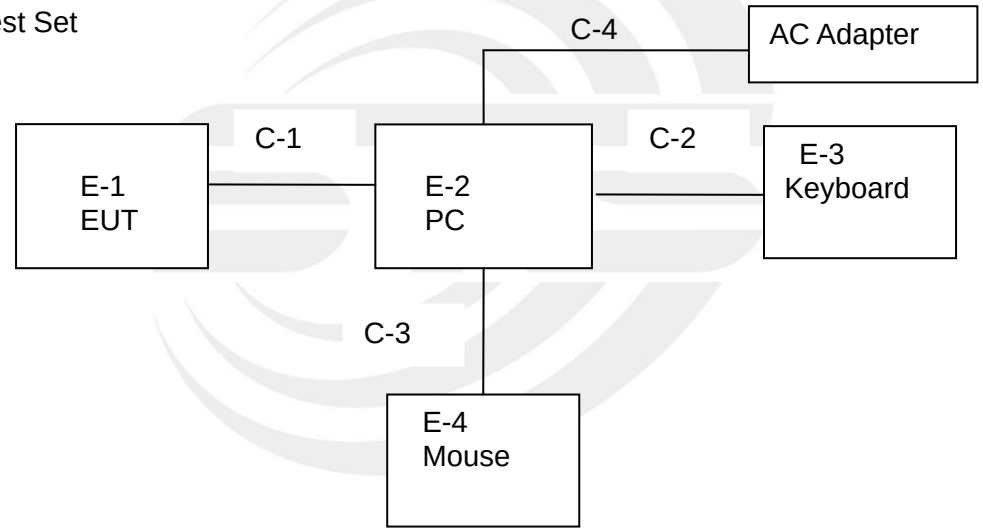
Test Case	
AC Conducted Emission	Mode 15: Keeping TX + WLAN Link

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiation Test Set



conduction Test Set



2.4 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
E-1	Wireless Adapter	EDUP	EP-DB1607	N/A	EUT
E-2	PC	4CV428DQXR	500-320cx	N/A	N/A
E-3	Keyboard	HP	PR1101U	N/A	N/A
E-4	Mouse	MOTOSPEED	F66	N/A	N/A
C-4	AC (PC Adapter)	LITEON	PA-1650-86	3X06399004	N/A

Item	Shielded Type	Ferrite Core	Length	Note
C-1	USB Cable (FTP)	NO	100cm	N/A
C-2	USB Cable (FTP)	NO	100cm	N/A
C-3	USB Cable (FTP)	NO	110cm	N/A
C-4	AC Adapter Cable (FTP)	NO	120cm	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”.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
Spectrum Analyzer	Agilent	E4407B	MY50140340	2015.10.25	2016.10.24
Spectrum Analyzer	Agilent	AV4051F	Y20141343	2015.10.25	2016.10.24
Test Receiver	R&S	ESCI	101427	2015.10.25	2016.10.24
Bilog Antenna	TESEQ	CBL6111D	34678	2015.11.25	2016.11.24
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1343	2016.03.06	2017.03.05
Horn Antenna	Schwarzbeck	BBHA 9170	9170-0741	2016.03.06	2017.03.05
50Ω Coaxial Switch	Anritsu	MP59B	6200264416	2016.06.06	2017.06.05
PreAmplifier	Agilent	8449B	60538	2015.10.25	2016.10.24
Loop Antenna	ARA	PLA-1030/B	1029	2016.06.08	2017.06.07
Low frequency cable	EM	R01	N/A	N/A	N/A
High frequency cable	SCHWARZBECK	AK9515H	SN-96286/96287	N/A	N/A

Conduction Test equipment

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
EMI Test Receiver	R&S	ESPI	102086	2015.11.20	2016.11.19
LISN	R&S	ENV216	101242	2015.10.25	2016.10.24
LISN	EMCO	3810/2NM	000-23625	2015.10.25	2016.10.24
Conduction Cable	EM	C01	N/A	N/A	N/A

RF Connected Test

Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until
USB RF power sensor	DARE	RPR3006W	15I00041SNO03	2015.10.25	2016.10.24
Spectrum Analyzer	Agilent	E4407B	MY50140340	2015.10.25	2016.10.24
Signal Analyzer	Agilent	N9020A	MY49100060	2015.11.18	2016.11.17
Spectrum Analyzer	Agilent	AV4051F	Y20141343	2015.10.25	2016.10.24

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

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

FREQUENCY (MHz)	Class B (dBuV)		Standard
	Quasi-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	CISPR
0.50 -5.0	56.00	46.00	CISPR
5.0 -30.0	60.00	50.00	CISPR

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

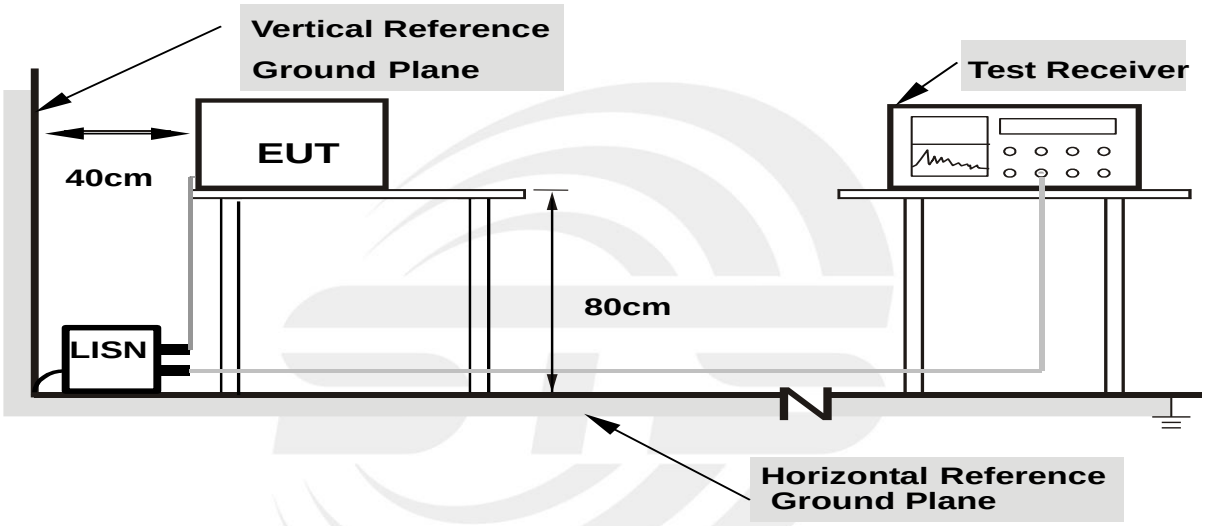
3.1.2 TEST PROCEDURE

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.

3.1.3 DEVIATION FROM TEST STANDARD

No deviation

3.1.4 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

3.1.5 EUT OPERATING CONDITIONS

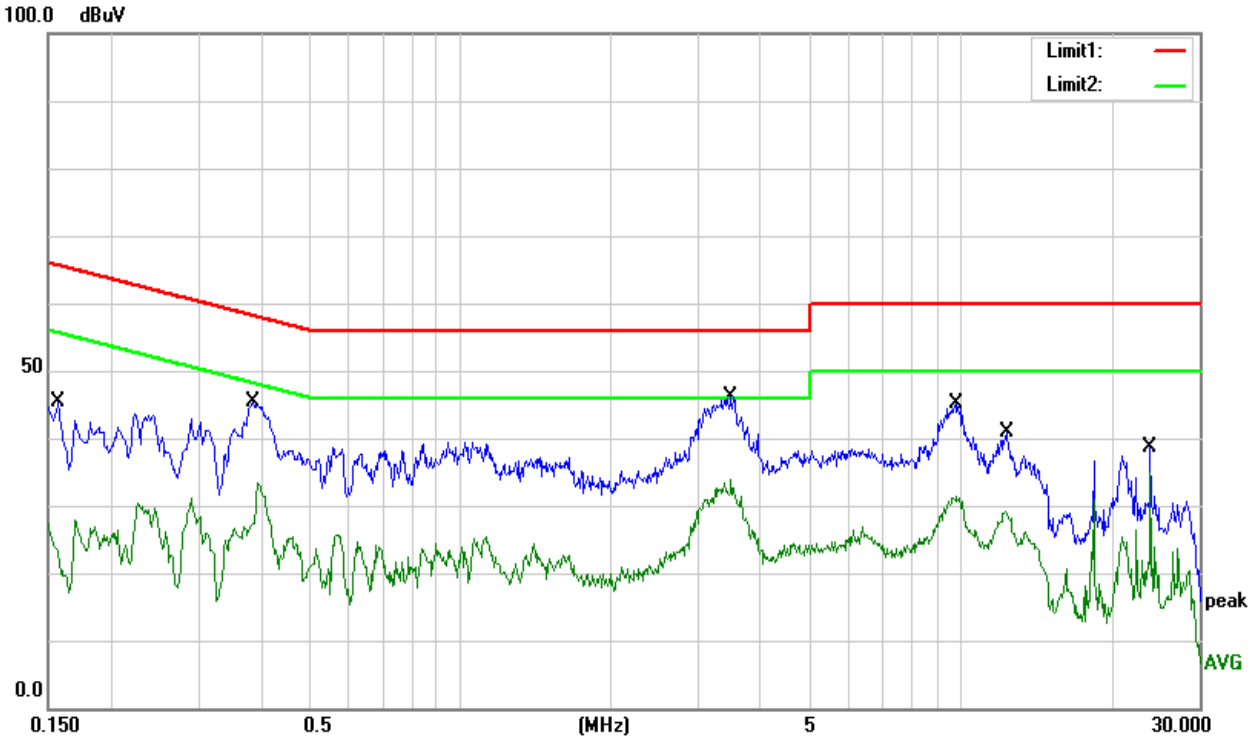
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.6 TEST RESULTS

Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	L
Test Voltage :	AC 120V/60Hz	Test Mode :	Mode 15

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.1580	36.12	9.23	45.35	65.57	-20.22	QP
0.1580	13.88	9.23	23.11	55.57	-32.46	AVG
0.3860	35.93	9.40	45.33	58.15	-12.82	QP
0.3860	18.06	9.40	27.46	48.15	-20.69	AVG
3.4980	36.87	9.26	46.13	56.00	-9.87	QP
3.4980	22.47	9.26	31.73	46.00	-14.27	AVG
9.8940	35.53	9.49	45.02	60.00	-14.98	QP
9.8940	21.34	9.49	30.83	50.00	-19.17	AVG
12.4660	31.31	9.47	40.78	60.00	-19.22	QP
12.4660	18.79	9.47	28.26	50.00	-21.74	AVG
24.0460	28.81	9.75	38.56	60.00	-21.44	QP
24.0460	11.78	9.75	21.53	50.00	-28.47	AVG

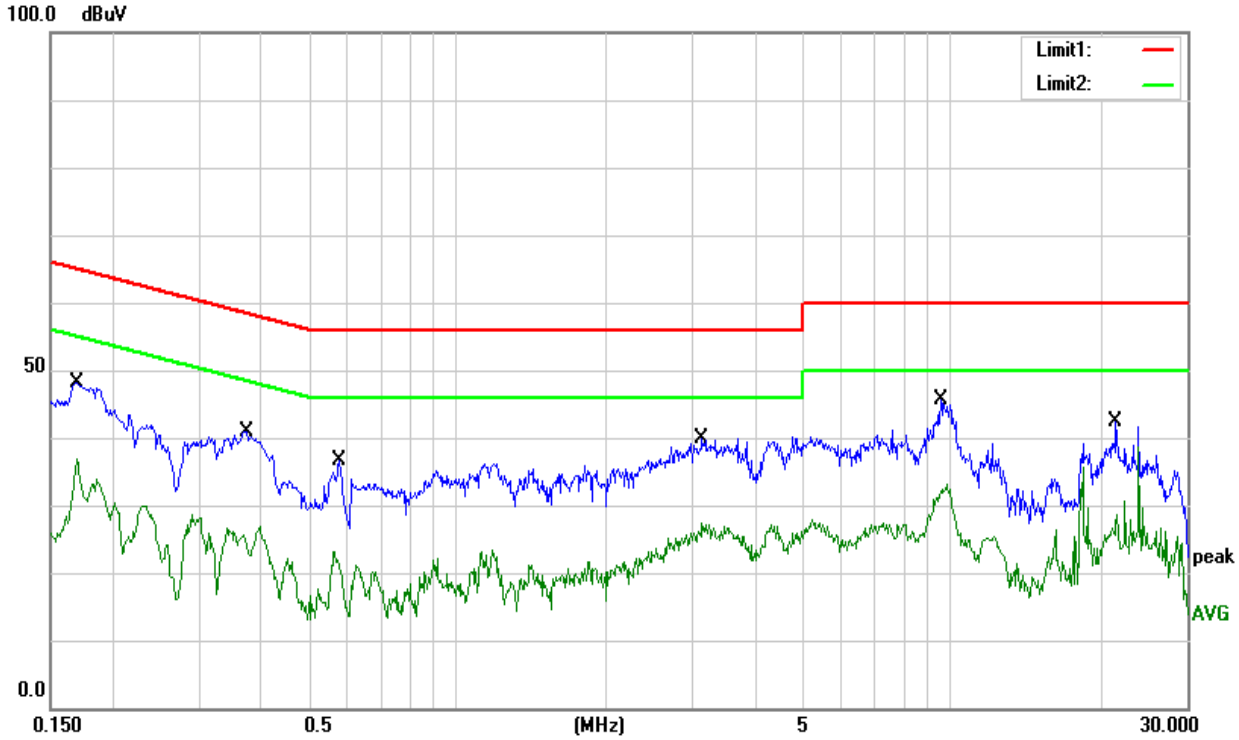
Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	26 ℃	Relative Humidity:	54%
Pressure:	1010hPa	Phase:	N
Test Voltage	AC 120V/60Hz	Test Mode	Mode 15

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.1700	38.87	9.23	48.10	64.96	-16.86	QP
0.1700	26.03	9.23	35.26	54.96	-19.70	AVG
0.3750	31.77	9.21	40.98	58.39	-17.41	QP
0.3750	13.61	9.21	22.82	48.39	-25.57	AVG
0.5780	27.49	9.18	36.67	56.00	-19.33	QP
0.5780	10.67	9.18	19.85	46.00	-26.15	AVG
3.1340	30.70	9.26	39.96	56.00	-16.04	QP
3.1340	17.27	9.26	26.53	46.00	-19.47	AVG
9.5380	36.32	9.38	45.70	60.00	-14.30	QP
9.5380	22.67	9.38	32.05	50.00	-17.95	AVG
21.5780	32.51	9.81	42.32	60.00	-17.68	QP
21.5780	16.15	9.81	25.96	50.00	-24.04	AVG

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit



3.2 RADIATED EMISSION AND (UNWANTED EMISSIONS) MEASUREMENT

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

In case the emission fall within the restricted band specified on 15.407(b)7& 15.205/209(a), then the (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)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15E.

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

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

Spectrum Parameter	**Setting**
Attenuation	Auto
Detector	Peak
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier harmonic(Peak/AV)
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 5130 to 5370 MHz Upper Band Edge: 5705 to 5880 MHz
RB / VB (emission in restricted band)	1 MHz / 1 MHz, AV=1 MHz /3 MHz

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz 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 1GHz is 1.5 m) above the ground at a 3 meter anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment shall be 0.8 m(above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. 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:

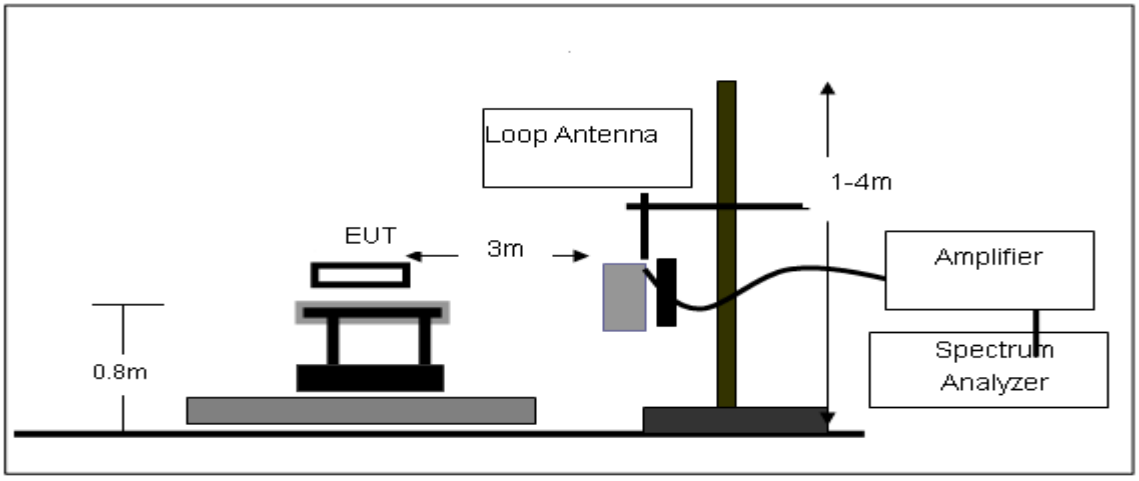
Both horizontal and vertical antenna polarities were tested and performed test to three orthogonal axis. The worst case emissions were reported

3.2.2 DEVIATION FROM TEST STANDARD

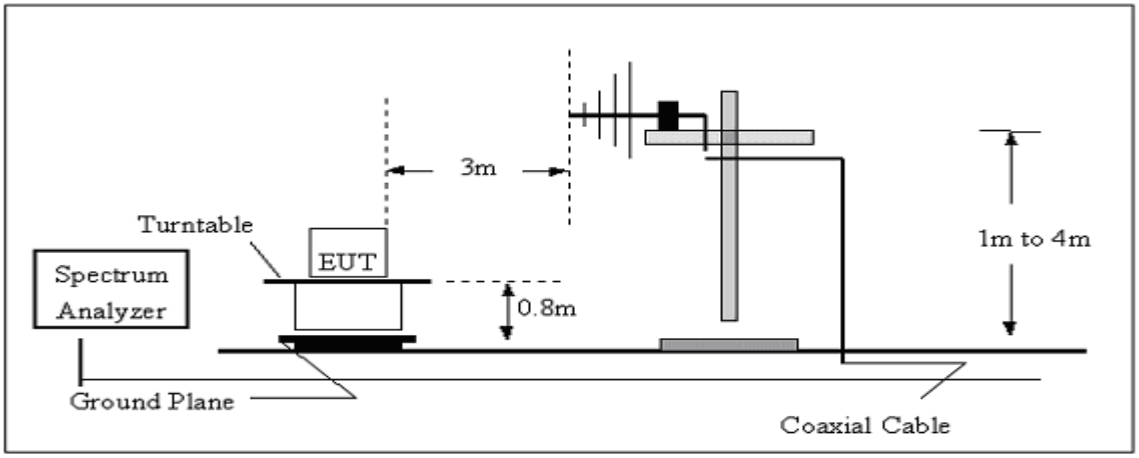
No deviation

3.2.3 TEST SETUP

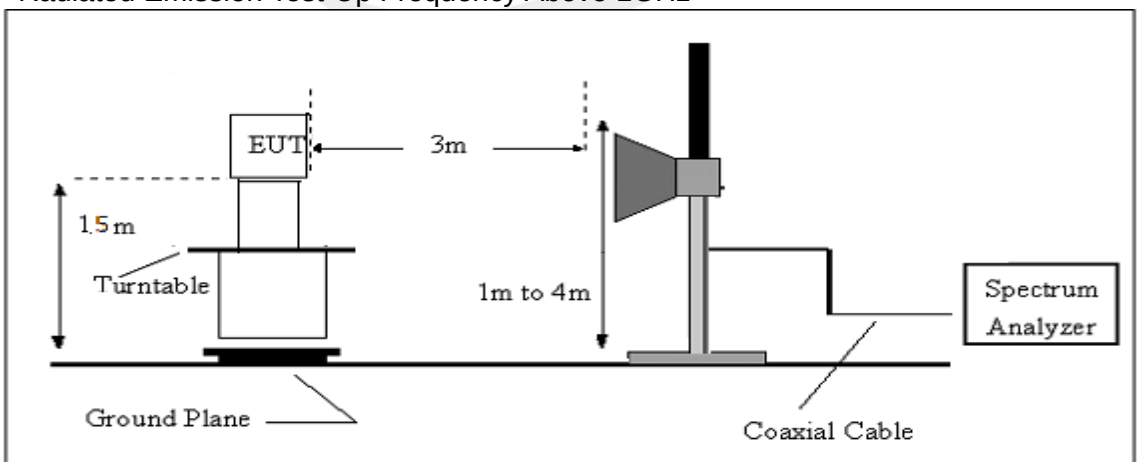
（A）Radiated Emission Test-Up Frequency Below 30MHz



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



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



3.2.4 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.

3.2.5 TEST RESULTS (BETWEEN 9KHZ – 30 MHZ)

Temperature：	20 ℃	Relative Humidtity：	48%
Pressure：	1010 hPa	Test Voltage ：	DC 5V From PC
Test Mode ：	TX Mode	Polarization :	--

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

Note:

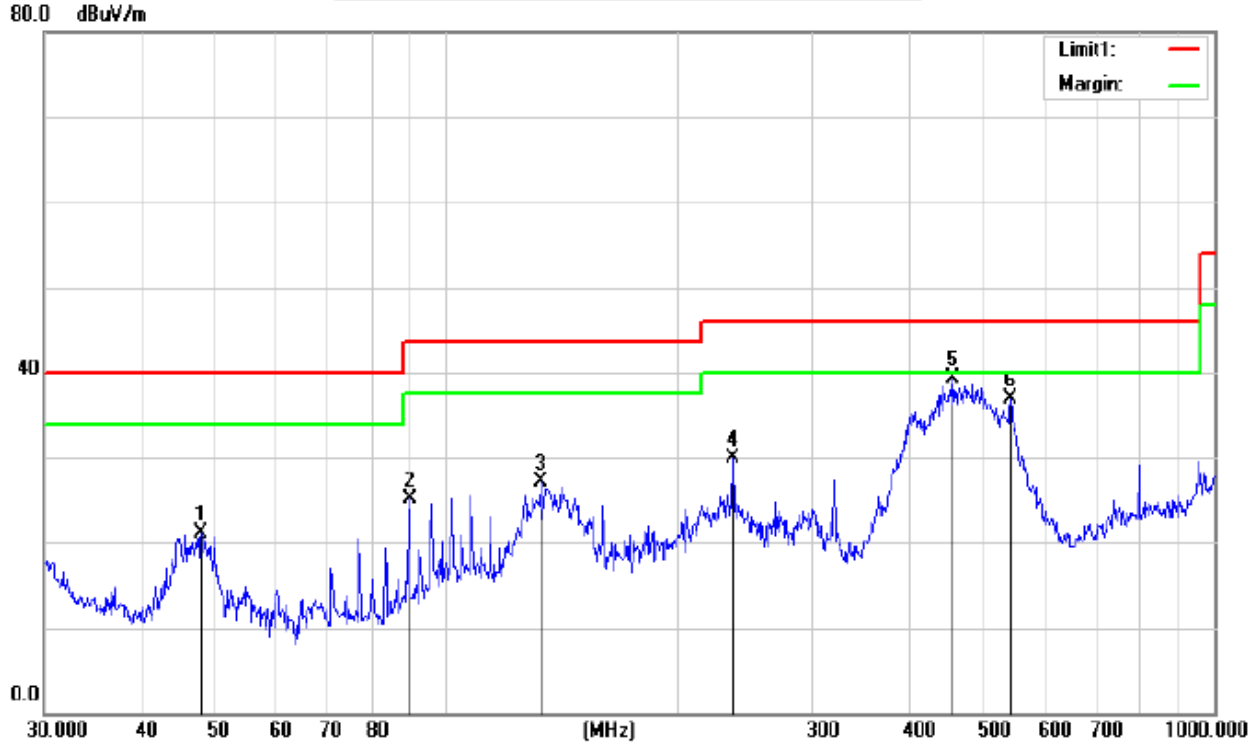
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

3.2.6 TEST RESULTS (BETWEEN 30MHZ – 1GHZ)

Temperature	26 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Voltage	DC 5V From PC
Test Mode	(Mode 5- MCS 0 worst mode)	Polarization	Horizontal

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
47.9940	41.50	-20.45	21.05	40.00	-18.95	QP
89.5900	45.32	-20.30	25.02	43.50	-18.48	QP
132.6850	44.66	-17.54	27.12	43.50	-16.38	QP
236.6447	47.89	-17.99	29.90	46.00	-16.10	QP
457.5072	49.46	-10.22	39.24	46.00	-6.76	QP
543.2740	43.79	-6.92	36.87	46.00	-9.13	QP

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit

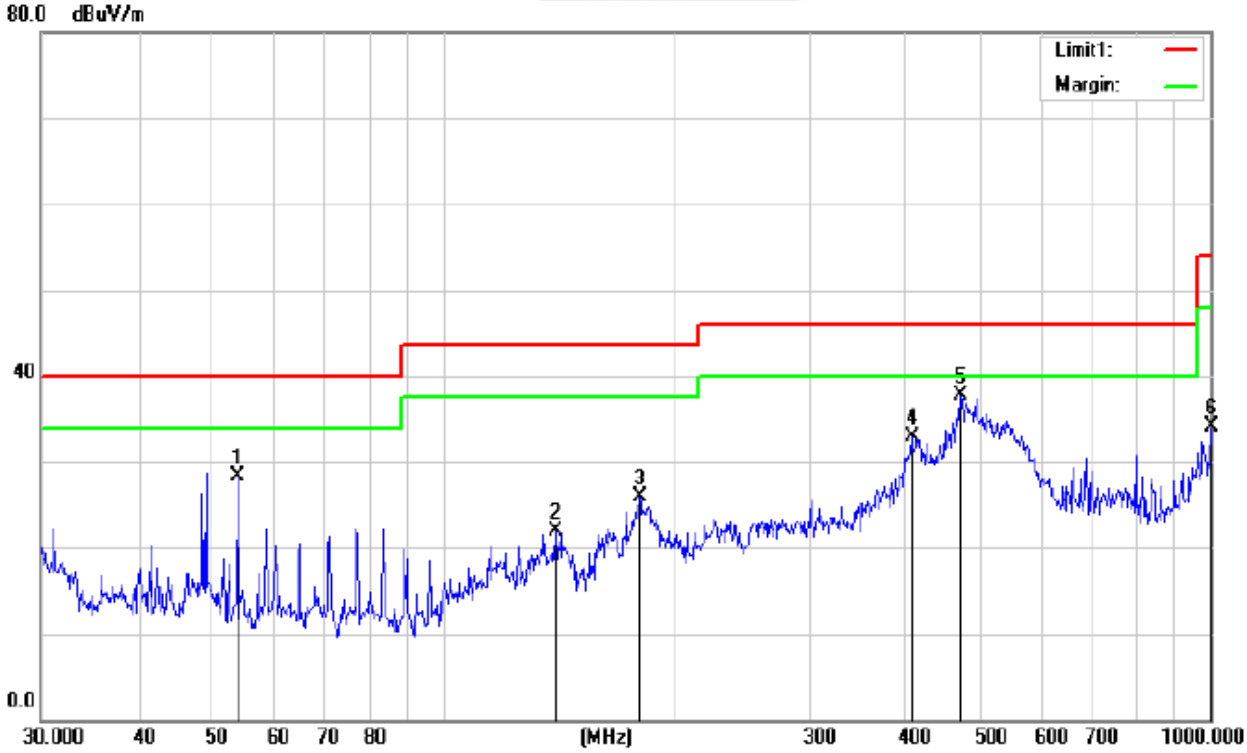


Temperature	26 ℃	Relative Humidity	48%
Pressure	1010 hPa	Test Voltage	DC 5V From PC
Test Mode	(Mode 5- MCS 0 worst mode)	Polarization	Vertical

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
53.8817	50.99	-22.59	28.40	40.00	-11.60	QP
139.8505	39.43	-17.51	21.92	43.50	-21.58	QP
180.0165	45.34	-19.44	25.90	43.50	-17.60	QP
407.5144	43.99	-11.10	32.89	46.00	-13.11	QP
472.1760	47.37	-9.69	37.68	46.00	-8.32	QP
1000.0000	34.24	-0.07	34.17	54.00	-19.83	QP

Remark:

1. Margin = Result (Result =Reading + Factor)–Limit



3.2.7 TEST RESULTS (ABOVE 1000 MHZ)

Band I(5.15-5.25) GHz (worst mode)

Low Channel (802.11a/ 5180 MHz)

Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11/ 5180 MHz)										
3265.32	44.61	44.70	6.70	28.20	-9.80	34.81	74.00	-39.19	PK	Vertical
3265.32	41.72	44.70	6.70	28.20	-9.80	31.92	54.00	-22.08	AV	Vertical
3265.29	45.01	44.70	6.70	28.20	-9.80	35.21	74.00	-38.79	PK	Horizontal
3265.29	41.81	44.70	6.70	28.20	-9.80	32.01	54.00	-21.99	AV	Horizontal
4000.28	39.84	44.20	7.90	29.70	-6.60	33.24	74.00	-40.76	PK	Vertical
4000.28	35.71	44.20	7.90	29.70	-6.60	29.11	54.00	-24.89	AV	Vertical
4000.27	39.68	44.20	7.90	29.70	-6.60	33.08	74.00	-40.92	PK	Horizontal
4000.27	36.57	44.20	7.90	29.70	-6.60	29.97	54.00	-24.03	AV	Horizontal
7236.36	37.70	43.50	11.40	35.50	3.40	41.10	74.00	-32.90	PK	Vertical
7236.36	33.57	43.50	11.40	35.50	3.40	36.97	54.00	-17.03	AV	Vertical
7236.40	37.93	43.50	11.40	35.50	3.40	41.33	74.00	-32.67	PK	Horizontal
7236.40	33.68	43.50	11.40	35.50	3.40	37.08	54.00	-16.92	AV	Horizontal
10360.43	39.68	44.50	13.80	38.80	8.10	47.78	74.00	-26.22	PK	Vertical
10360.43	36.16	44.50	13.80	38.80	8.10	44.26	54.00	-9.74	AV	Vertical
10360.44	39.01	44.50	13.80	38.80	8.10	47.11	74.00	-26.89	PK	Horizontal
10360.44	36.26	44.50	13.80	38.80	8.10	44.36	54.00	-9.64	AV	Horizontal
11036.43	32.84	43.60	14.30	39.50	10.20	43.04	74.00	-30.96	PK	Vertical
11036.43	30.72	43.60	14.30	39.50	10.20	40.92	54.00	-13.08	AV	Vertical
11036.44	32.94	43.60	14.30	39.50	10.20	43.14	74.00	-30.86	PK	Horizontal
11036.44	30.04	43.60	14.30	39.50	10.20	40.24	54.00	-13.76	AV	Horizontal
13299.95	32.25	42.60	15.90	38.90	12.20	44.45	74.00	-29.55	PK	Vertical
13299.95	28.84	42.60	15.90	38.90	12.20	41.04	54.00	-12.96	AV	Vertical
13299.94	31.58	42.60	15.90	38.90	12.20	43.78	74.00	-30.22	PK	Horizontal
13299.94	28.76	42.60	15.90	38.90	12.20	40.96	54.00	-13.04	AV	Horizontal
16000.30	31.09	42.70	18.00	37.10	12.40	43.49	74.00	-30.51	PK	Vertical
16000.30	27.61	42.70	18.00	37.10	12.40	40.01	54.00	-13.99	AV	Vertical
16000.28	30.27	42.70	18.00	37.10	12.40	42.67	74.00	-31.33	PK	Horizontal
16000.28	27.68	42.70	18.00	37.10	12.40	40.08	54.00	-13.92	AV	Horizontal
17998.36	26.98	42.70	19.40	46.50	23.20	50.18	74.00	-23.82	PK	Vertical
17998.36	20.96	42.70	19.40	46.50	23.20	44.16	54.00	-9.84	AV	Vertical
17998.24	26.91	42.70	19.40	46.50	23.20	50.11	74.00	-23.89	PK	Horizontal
17998.24	20.35	42.70	19.40	46.50	23.20	43.55	54.00	-10.45	AV	Horizontal

Mid Channel (802.11/ 5200 MHz)

Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Mid Channel (802.11/ 5200 MHz)										
3265.32	44.81	44.70	6.70	28.20	-9.80	35.01	74.00	-38.99	PK	Vertical
3265.32	40.79	44.70	6.70	28.20	-9.80	30.99	54.00	-23.01	AV	Vertical
3265.29	44.15	44.70	6.70	28.20	-9.80	34.35	74.00	-39.65	PK	Horizontal
3265.29	41.28	44.70	6.70	28.20	-9.80	31.48	54.00	-22.52	AV	Horizontal
4000.28	39.12	44.20	7.90	29.70	-6.60	32.52	74.00	-41.48	PK	Vertical
4000.28	36.61	44.20	7.90	29.70	-6.60	30.01	54.00	-23.99	AV	Vertical
4000.27	39.27	44.20	7.90	29.70	-6.60	32.67	74.00	-41.33	PK	Horizontal
4000.27	37.09	44.20	7.90	29.70	-6.60	30.49	54.00	-23.51	AV	Horizontal
7236.36	37.71	43.50	11.40	35.50	3.40	41.11	74.00	-32.89	PK	Vertical
7236.36	33.84	43.50	11.40	35.50	3.40	37.24	54.00	-16.76	AV	Vertical
7236.40	36.64	43.50	11.40	35.50	3.40	40.04	74.00	-33.96	PK	Horizontal
7236.40	34.80	43.50	11.40	35.50	3.40	38.20	54.00	-15.80	AV	Horizontal
10400.43	39.39	44.50	13.80	38.80	8.10	47.49	74.00	-26.51	PK	Vertical
10400.43	37.13	44.50	13.80	38.80	8.10	45.23	54.00	-8.77	AV	Vertical
10400.44	39.22	44.50	13.80	38.80	8.10	47.32	74.00	-26.68	PK	Horizontal
10400.44	36.03	44.50	13.80	38.80	8.10	44.13	54.00	-9.87	AV	Horizontal
11036.43	34.16	43.60	14.30	39.50	10.20	44.36	74.00	-29.64	PK	Vertical
11036.43	29.71	43.60	14.30	39.50	10.20	39.91	54.00	-14.09	AV	Vertical
11036.44	33.79	43.60	14.30	39.50	10.20	43.99	74.00	-30.01	PK	Horizontal
11036.44	31.00	43.60	14.30	39.50	10.20	41.20	54.00	-12.80	AV	Horizontal
13299.95	32.70	42.60	15.90	38.90	12.20	44.90	74.00	-29.10	PK	Vertical
13299.95	28.99	42.60	15.90	38.90	12.20	41.19	54.00	-12.81	AV	Vertical
13299.94	31.69	42.60	15.90	38.90	12.20	43.89	74.00	-30.11	PK	Horizontal
13299.94	29.90	42.60	15.90	38.90	12.20	42.10	54.00	-11.90	AV	Horizontal
16000.30	31.09	42.70	18.00	37.10	12.40	43.49	74.00	-30.51	PK	Vertical
16000.30	27.60	42.70	18.00	37.10	12.40	40.00	54.00	-14.00	AV	Vertical
16000.28	29.87	42.70	18.00	37.10	12.40	42.27	74.00	-31.73	PK	Horizontal
16000.28	27.50	42.70	18.00	37.10	12.40	39.90	54.00	-14.10	AV	Horizontal
17998.36	27.93	42.70	19.40	46.50	23.20	51.13	74.00	-22.87	PK	Vertical
17998.36	20.83	42.70	19.40	46.50	23.20	44.03	54.00	-9.97	AV	Vertical
17998.24	26.75	42.70	19.40	46.50	23.20	49.95	74.00	-24.05	PK	Horizontal
17998.24	20.85	42.70	19.40	46.50	23.20	44.05	54.00	-9.95	AV	Horizontal

High Channel (802.11a/ 5240 MHz)

Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
High Channel (802.11a/ 5240 MHz)										
3265.32	45.00	44.70	6.70	28.20	-9.80	35.20	74.00	-38.80	PK	Vertical
3265.32	42.19	44.70	6.70	28.20	-9.80	32.39	54.00	-21.61	AV	Vertical
3265.29	43.86	44.70	6.70	28.20	-9.80	34.06	74.00	-39.94	PK	Horizontal
3265.29	41.64	44.70	6.70	28.20	-9.80	31.84	54.00	-22.16	AV	Horizontal
4000.28	39.34	44.20	7.90	29.70	-6.60	32.74	74.00	-41.26	PK	Vertical
4000.28	36.75	44.20	7.90	29.70	-6.60	30.15	54.00	-23.85	AV	Vertical
4000.27	39.10	44.20	7.90	29.70	-6.60	32.50	74.00	-41.50	PK	Horizontal
4000.27	36.34	44.20	7.90	29.70	-6.60	29.74	54.00	-24.26	AV	Horizontal
7236.36	37.22	43.50	11.40	35.50	3.40	40.62	74.00	-33.38	PK	Vertical
7236.36	34.38	43.50	11.40	35.50	3.40	37.78	54.00	-16.22	AV	Vertical
7236.40	37.86	43.50	11.40	35.50	3.40	41.26	74.00	-32.74	PK	Horizontal
7236.40	34.12	43.50	11.40	35.50	3.40	37.52	54.00	-16.48	AV	Horizontal
10800.43	39.21	44.50	13.80	38.80	8.10	47.31	74.00	-26.69	PK	Vertical
10800.43	36.04	44.50	13.80	38.80	8.10	44.14	54.00	-9.86	AV	Vertical
10800.44	39.98	44.50	13.80	38.80	8.10	48.08	74.00	-25.92	PK	Horizontal
10800.44	36.25	44.50	13.80	38.80	8.10	44.35	54.00	-9.65	AV	Horizontal
11036.43	32.73	43.60	14.30	39.50	10.20	42.93	74.00	-31.07	PK	Vertical
11036.43	30.46	43.60	14.30	39.50	10.20	40.66	54.00	-13.34	AV	Vertical
11036.44	33.92	43.60	14.30	39.50	10.20	44.12	74.00	-29.88	PK	Horizontal
11036.44	30.80	43.60	14.30	39.50	10.20	41.00	54.00	-13.00	AV	Horizontal
13299.95	32.49	42.60	15.90	38.90	12.20	44.69	74.00	-29.31	PK	Vertical
13299.95	28.89	42.60	15.90	38.90	12.20	41.09	54.00	-12.91	AV	Vertical
13299.94	32.15	42.60	15.90	38.90	12.20	44.35	74.00	-29.65	PK	Horizontal
13299.94	29.15	42.60	15.90	38.90	12.20	41.35	54.00	-12.65	AV	Horizontal
17998.24	28.11	42.70	19.40	46.50	23.20	51.31	74.00	-22.69	PK	Vertical
17998.24	20.88	42.70	19.40	46.50	23.20	44.08	54.00	-9.92	AV	Vertical
17998.24	28.16	42.70	19.40	46.50	23.20	51.36	74.00	-22.64	PK	Horizontal
17998.24	20.17	42.70	19.40	46.50	23.20	43.37	54.00	-10.63	AV	Horizontal

Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2. Scan with 802.11a/n/ac(HT-20),11n/ac(HT-40),11ac(HT-80) the worst case is 802.11a.
3. he frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

Band IV(5.725-5.850) GHz

Low Channel (802.11a/ 5745 MHz)

Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Low Channel (802.11a/ 5745 MHz)										
3265.32	43.94	44.70	6.70	28.20	-9.80	34.14	74.00	-39.86	PK	Vertical
3265.32	42.34	44.70	6.70	28.20	-9.80	32.54	54.00	-21.46	AV	Vertical
3265.29	44.72	44.70	6.70	28.20	-9.80	34.92	74.00	-39.08	PK	Horizontal
3265.29	41.98	44.70	6.70	28.20	-9.80	32.18	54.00	-21.82	AV	Horizontal
4000.28	39.57	44.20	7.90	29.70	-6.60	32.97	74.00	-41.03	PK	Vertical
4000.28	38.14	44.20	7.90	29.70	-6.60	31.54	54.00	-22.46	AV	Vertical
4000.27	39.73	44.20	7.90	29.70	-6.60	33.13	74.00	-40.87	PK	Horizontal
4000.27	37.41	44.20	7.90	29.70	-6.60	30.81	54.00	-23.19	AV	Horizontal
7236.36	37.68	43.50	11.40	35.50	3.40	41.08	74.00	-32.92	PK	Vertical
7236.36	34.92	43.50	11.40	35.50	3.40	38.32	54.00	-15.68	AV	Vertical
7236.40	37.72	43.50	11.40	35.50	3.40	41.12	74.00	-32.88	PK	Horizontal
7236.40	34.76	43.50	11.40	35.50	3.40	38.16	54.00	-15.84	AV	Horizontal
11036.43	33.24	44.50	13.80	38.80	8.10	41.34	74.00	-32.66	PK	Vertical
11036.43	32.15	44.50	13.80	38.80	8.10	40.25	54.00	-13.75	AV	Vertical
11036.44	33.53	44.50	13.80	38.80	8.10	41.63	74.00	-32.37	PK	Horizontal
#REF!	31.67	44.50	13.80	38.80	8.10	39.77	54.00	-14.23	AV	Horizontal
11490.43	44.55	43.00	14.76	39.10	10.86	55.41	74.00	-18.59	PK	Vertical
11490.43	35.16	43.00	14.76	39.10	10.86	46.02	54.00	-7.98	AV	Vertical
11490.44	44.47	43.00	14.76	39.10	10.86	55.33	74.00	-18.67	PK	Horizontal
11490.44	35.32	43.00	14.76	39.10	10.86	46.18	54.00	-7.82	AV	Horizontal
13299.95	32.47	42.60	15.90	38.90	12.20	44.67	74.00	-29.33	PK	Vertical
13299.95	30.21	42.60	15.90	38.90	12.20	42.41	54.00	-11.59	AV	Vertical
13299.94	32.62	42.60	15.90	38.90	12.20	44.82	74.00	-29.18	PK	Horizontal
13299.94	30.94	42.60	15.90	38.90	12.20	43.14	54.00	-10.86	AV	Horizontal
17235.36	33.33	42.70	18.00	37.10	12.40	45.73	74.00	-28.27	PK	Vertical
17235.36	25.44	42.70	18.00	37.10	12.40	37.84	54.00	-16.16	AV	Vertical
17235.24	32.85	42.70	18.00	37.10	12.40	45.25	74.00	-28.75	PK	Horizontal
17235.24	25.65	42.70	18.00	37.10	12.40	38.05	54.00	-15.95	AV	Horizontal
17998.36	27.90	42.70	19.40	46.50	23.20	51.10	74.00	-22.90	PK	Vertical
17998.36	19.45	42.70	19.40	46.50	23.20	42.65	54.00	-11.35	AV	Vertical
17998.24	26.76	42.70	19.40	46.50	23.20	49.96	74.00	-24.04	PK	Horizontal
17998.24	19.58	42.70	19.40	46.50	23.20	42.78	54.00	-11.22	AV	Horizontal

Mid Channel (802.11a/ 5785 MHz)

Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
Mid Channel (802.11/ 5200 MHz)										
3265.32	45.06	44.70	6.70	28.20	-9.80	35.26	74.00	-38.74	PK	Vertical
3265.32	42.53	44.70	6.70	28.20	-9.80	32.73	54.00	-21.27	AV	Vertical
3265.29	43.95	44.70	6.70	28.20	-9.80	34.15	74.00	-39.85	PK	Horizontal
3265.29	42.86	44.70	6.70	28.20	-9.80	33.06	54.00	-20.94	AV	Horizontal
4000.28	38.92	44.20	7.90	29.70	-6.60	32.32	74.00	-41.68	PK	Vertical
4000.28	37.83	44.20	7.90	29.70	-6.60	31.23	54.00	-22.77	AV	Vertical
4000.27	38.80	44.20	7.90	29.70	-6.60	32.20	74.00	-41.80	PK	Horizontal
4000.27	38.11	44.20	7.90	29.70	-6.60	31.51	54.00	-22.49	AV	Horizontal
7236.36	37.35	43.50	11.40	35.50	3.40	40.75	74.00	-33.25	PK	Vertical
7236.36	35.52	43.50	11.40	35.50	3.40	38.92	54.00	-15.08	AV	Vertical
7236.40	36.75	43.50	11.40	35.50	3.40	40.15	74.00	-33.85	PK	Horizontal
7236.40	34.80	43.50	11.40	35.50	3.40	38.20	54.00	-15.80	AV	Horizontal
11036.43	33.27	44.50	13.80	38.80	8.10	41.37	74.00	-32.63	PK	Vertical
11036.43	31.02	44.50	13.80	38.80	8.10	39.12	54.00	-14.88	AV	Vertical
11036.44	32.88	44.50	13.80	38.80	8.10	40.98	74.00	-33.02	PK	Horizontal
11036.44	30.95	44.50	13.80	38.80	8.10	39.05	54.00	-14.95	AV	Horizontal
11570.43	43.98	43.00	14.80	39.10	10.90	54.88	74.00	-19.12	PK	Vertical
11570.43	34.90	43.00	14.80	39.10	10.90	45.80	54.00	-8.20	AV	Vertical
11570.44	44.06	43.00	14.80	39.10	10.90	54.96	74.00	-19.04	PK	Horizontal
11570.44	36.03	43.00	14.80	39.10	10.90	46.93	54.00	-7.07	AV	Horizontal
13299.95	32.13	42.60	15.90	38.90	12.20	44.33	74.00	-29.67	PK	Vertical
13299.95	30.70	42.60	15.90	38.90	12.20	42.90	54.00	-11.10	AV	Vertical
13299.94	31.59	42.60	15.90	38.90	12.20	43.79	74.00	-30.21	PK	Horizontal
13299.94	30.46	42.60	15.90	38.90	12.20	42.66	54.00	-11.34	AV	Horizontal
17355.36	33.60	42.70	18.00	37.10	12.40	46.00	74.00	-28.00	PK	Vertical
17355.36	24.80	42.70	18.00	37.10	12.40	37.20	54.00	-16.80	AV	Vertical
17355.24	33.98	42.70	18.00	37.10	12.40	46.38	74.00	-27.62	PK	Horizontal
17355.24	26.17	42.70	18.00	37.10	12.40	38.57	54.00	-15.43	AV	Horizontal
17998.36	28.24	42.70	19.40	46.50	23.20	51.44	74.00	-22.56	PK	Vertical
17998.36	19.14	42.70	19.40	46.50	23.20	42.34	54.00	-11.66	AV	Vertical
17998.24	27.68	42.70	19.40	46.50	23.20	50.88	74.00	-23.12	PK	Horizontal
17998.24	18.87	42.70	19.40	46.50	23.20	42.07	54.00	-11.93	AV	Horizontal

High Channel (802.11a/ 5825MHz)

Frequency (MHz)	Reading (dBuV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Comment
High Channel (802.11a/ 5240 MHz)										
3265.32	44.65	44.70	6.70	28.20	-9.80	34.85	74.00	-39.15	PK	Vertical
3265.32	42.72	44.70	6.70	28.20	-9.80	32.92	54.00	-21.08	AV	Vertical
3265.29	44.35	44.70	6.70	28.20	-9.80	34.55	74.00	-39.45	PK	Horizontal
3265.29	42.13	44.70	6.70	28.20	-9.80	32.33	54.00	-21.67	AV	Horizontal
4000.28	38.83	44.20	7.90	29.70	-6.60	32.23	74.00	-41.77	PK	Vertical
4000.28	37.18	44.20	7.90	29.70	-6.60	30.58	54.00	-23.42	AV	Vertical
4000.27	39.77	44.20	7.90	29.70	-6.60	33.17	74.00	-40.83	PK	Horizontal
4000.27	36.71	44.20	7.90	29.70	-6.60	30.11	54.00	-23.89	AV	Horizontal
7236.36	36.67	43.50	11.40	35.50	3.40	40.07	74.00	-33.93	PK	Vertical
7236.36	34.92	43.50	11.40	35.50	3.40	38.32	54.00	-15.68	AV	Vertical
7236.40	37.68	43.50	11.40	35.50	3.40	41.08	74.00	-32.92	PK	Horizontal
7236.40	34.88	43.50	11.40	35.50	3.40	38.28	54.00	-15.72	AV	Horizontal
11036.43	33.71	44.50	13.80	38.80	8.10	41.81	74.00	-32.19	PK	Vertical
11036.43	30.88	44.50	13.80	38.80	8.10	38.98	54.00	-15.02	AV	Vertical
11036.44	34.03	44.50	13.80	38.80	8.10	42.13	74.00	-31.87	PK	Horizontal
11036.44	32.11	44.50	13.80	38.80	8.10	40.21	54.00	-13.79	AV	Horizontal
11650.43	44.27	43.00	14.88	39.10	10.98	55.25	74.00	-18.75	PK	Vertical
11650.43	35.65	43.00	14.88	39.10	10.98	46.63	54.00	-7.37	AV	Vertical
11650.44	44.61	43.00	14.88	39.10	10.98	55.59	74.00	-18.41	PK	Horizontal
11650.44	35.65	43.00	14.88	39.10	10.98	46.63	54.00	-7.37	AV	Horizontal
13299.95	32.97	42.60	15.90	38.90	12.20	45.17	74.00	-28.83	PK	Vertical
13299.95	31.00	42.60	15.90	38.90	12.20	43.20	54.00	-10.80	AV	Vertical
13299.94	32.30	42.60	15.90	38.90	12.20	44.50	74.00	-29.50	PK	Horizontal
13299.94	30.95	42.60	15.90	38.90	12.20	43.15	54.00	-10.85	AV	Horizontal
17998.24	26.99	42.70	19.40	46.50	23.20	50.19	74.00	-23.81	PK	Vertical
17998.24	20.11	42.70	19.40	46.50	23.20	43.31	54.00	-10.69	AV	Vertical
17998.24	27.60	42.70	19.40	46.50	23.20	50.80	74.00	-23.20	PK	Horizontal
17998.24	19.18	42.70	19.40	46.50	23.20	42.38	54.00	-11.62	AV	Horizontal

Remark:
1.Factor = Antenna Factor + Cable Loss – Pre-amplifier.
2.Scan with 802.11a/n/ac(HT-20),11n/ac(HT-40),11ac(HT-80) the worst case is 802.11a.
3.The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

3.2.8 BAND EDGE

Band I(5.15-5.25)GHz (worst mode)

Frequency (MHz)	Meter Reading (dBμV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
802.11a BW20MHz										
5150	41.42	44.20	8.98	31.60	-3.62	37.80	74	-36.20	PK	Vertical
5150	30.85	44.20	8.98	31.60	-3.62	27.23	54	-26.77	AV	Vertical
5150	42.22	44.20	8.98	31.60	-3.62	38.60	74	-35.40	PK	Horizontal
5150	31.51	44.20	8.98	31.60	-3.62	27.89	54	-26.11	AV	Horizontal
5350	42.15	44.20	9.35	31.60	-3.25	38.90	74	-35.10	PK	Vertical
5350	31.75	44.20	9.35	31.60	-3.25	28.50	54	-25.50	AV	Vertical
5350	40.86	44.20	9.35	31.60	-3.25	37.61	74	-36.39	PK	Horizontal
5350	31.66	44.20	9.35	31.60	-3.25	28.41	54	-25.59	AV	Horizontal
802.11n BW20MHz										
5150	41.70	44.20	8.98	31.60	-3.62	38.08	74	-35.92	PK	Vertical
5150	31.43	44.20	8.98	31.60	-3.62	27.81	54	-26.19	AV	Vertical
5150	42.27	44.20	8.98	31.60	-3.62	38.65	74	-35.35	PK	Horizontal
5150	30.89	44.20	8.98	31.60	-3.62	27.27	54	-26.73	AV	Horizontal
5350	42.13	44.20	9.35	31.60	-3.25	38.88	74	-35.12	PK	Vertical
5350	31.26	44.20	9.35	31.60	-3.25	28.01	54	-25.99	AV	Vertical
5350	41.71	44.20	9.35	31.60	-3.25	38.46	74	-35.54	PK	Horizontal
5350	31.11	44.20	9.35	31.60	-3.25	27.86	54	-26.14	AV	Horizontal
802.11n BW40MHz										
5150	41.99	44.20	8.98	31.60	-3.62	38.37	74	-35.63	PK	Vertical
5150	30.57	44.20	8.98	31.60	-3.62	26.95	54	-27.05	AV	Vertical
5150	41.32	44.20	8.98	31.60	-3.62	37.70	74	-36.30	PK	Horizontal
5150	30.45	44.20	8.98	31.60	-3.62	26.83	54	-27.17	AV	Horizontal
5350	41.89	44.20	9.35	31.60	-3.25	38.64	74	-35.36	PK	Vertical
5350	30.77	44.20	9.35	31.60	-3.25	27.52	54	-26.48	AV	Vertical
5350	40.89	44.20	9.35	31.60	-3.25	37.64	74	-36.36	PK	Horizontal
5350	31.18	44.20	9.35	31.60	-3.25	27.93	54	-26.07	AV	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
802.11ac BW20MHz										
5150	40.91	44.20	8.98	31.60	-3.62	37.29	74	-36.71	PK	Vertical
5150	31.46	44.20	8.98	31.60	-3.62	27.84	54	-26.16	AV	Vertical
5150	42.02	44.20	8.98	31.60	-3.62	38.40	74	-35.60	PK	Horizontal
5150	31.84	44.20	8.98	31.60	-3.62	28.22	54	-25.78	AV	Horizontal
5350	41.68	44.20	9.35	31.60	-3.25	38.43	74	-35.57	PK	Vertical
5350	31.36	44.20	9.35	31.60	-3.25	28.11	54	-25.89	AV	Vertical
5350	40.93	44.20	9.35	31.60	-3.25	37.68	74	-36.32	PK	Horizontal
5350	31.03	44.20	9.35	31.60	-3.25	27.78	54	-26.22	AV	Horizontal
802.11ac BW40MHz										
5150	40.82	44.20	8.98	31.60	-3.62	37.20	74	-36.80	PK	Vertical
5150	30.71	44.20	8.98	31.60	-3.62	27.09	54	-26.91	AV	Vertical
5150	41.50	44.20	8.98	31.60	-3.62	37.88	74	-36.12	PK	Horizontal
5150	31.38	44.20	8.98	31.60	-3.62	27.76	54	-26.24	AV	Horizontal
5350	40.93	44.20	9.35	31.60	-3.25	37.68	74	-36.32	PK	Vertical
5350	31.02	44.20	9.35	31.60	-3.25	27.77	54	-26.23	AV	Vertical
5350	40.67	44.20	9.35	31.60	-3.25	37.42	74	-36.58	PK	Horizontal
5350	31.66	44.20	9.35	31.60	-3.25	28.41	54	-25.59	AV	Horizontal
802.11ac BW80MHz										
5150	41.83	44.20	8.98	31.60	-3.62	38.21	74	-35.79	PK	Vertical
5150	31.39	44.20	8.98	31.60	-3.62	27.77	54	-26.23	AV	Vertical
5150	41.63	44.20	8.98	31.60	-3.62	38.01	74	-35.99	PK	Horizontal
5150	31.79	44.20	8.98	31.60	-3.62	28.17	54	-25.83	AV	Horizontal
5350	41.76	44.20	9.35	31.60	-3.25	38.51	74	-35.49	PK	Vertical
5350	30.88	44.20	9.35	31.60	-3.25	27.63	54	-26.37	AV	Vertical
5350	40.93	44.20	9.35	31.60	-3.25	37.68	74	-36.32	PK	Horizontal
5350	32.08	44.20	9.35	31.60	-3.25	28.83	54	-25.17	AV	Horizontal

Band IV(5.725-5.85 GHz)

Frequency (MHz)	Meter Reading (dBμV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
802.11a BW20MHz										
5725	41.30	44.20	10.00	32.00	-2.20	39.10	74	-34.90	PK	Vertical
5725	30.72	44.20	10.00	32.00	-2.20	28.52	54	-25.48	AV	Vertical
5725	41.16	44.20	10.00	32.00	-2.20	38.96	74	-35.04	PK	Horizontal
5725	31.10	44.20	10.00	32.00	-2.20	28.90	54	-25.10	AV	Horizontal
5850	41.17	44.20	10.20	32.00	-2.00	39.17	74	-34.83	PK	Vertical
5850	31.63	44.20	10.20	32.00	-2.00	29.63	54	-24.37	AV	Vertical
5850	41.04	44.20	10.20	32.00	-2.00	39.04	74	-34.96	PK	Horizontal
5850	30.70	44.20	10.20	32.00	-2.00	28.70	54	-25.30	AV	Horizontal
802.11n BW20MHz										
5725	41.00	44.20	10.00	32.00	-2.20	38.80	74	-35.20	PK	Vertical
5725	31.43	44.20	10.00	32.00	-2.20	29.23	54	-24.77	AV	Vertical
5725	41.92	44.20	10.00	32.00	-2.20	39.72	74	-34.28	PK	Horizontal
5725	31.09	44.20	10.00	32.00	-2.20	28.89	54	-25.11	AV	Horizontal
5850	41.82	44.20	10.20	32.00	-2.00	39.82	74	-34.18	PK	Vertical
5850	31.07	44.20	10.20	32.00	-2.00	29.07	54	-24.93	AV	Vertical
5850	42.05	44.20	10.20	32.00	-2.00	40.05	74	-33.95	PK	Horizontal
5850	31.70	44.20	10.20	32.00	-2.00	29.70	54	-24.30	AV	Horizontal
802.11n BW40MHz										
5725	41.51	44.20	10.00	32.00	-2.20	39.31	74	-34.69	PK	Vertical
5725	30.51	44.20	10.00	32.00	-2.20	28.31	54	-25.69	AV	Vertical
5725	41.71	44.20	10.00	32.00	-2.20	39.51	74	-34.49	PK	Horizontal
5725	31.19	44.20	10.00	32.00	-2.20	28.99	54	-25.01	AV	Horizontal
5850	41.77	44.20	10.20	32.00	-2.00	39.77	74	-34.23	PK	Vertical
5850	31.99	44.20	10.20	32.00	-2.00	29.99	54	-24.01	AV	Vertical
5850	41.61	44.20	10.20	32.00	-2.00	39.61	74	-34.39	PK	Horizontal
5850	31.53	44.20	10.20	32.00	-2.00	29.53	54	-24.47	AV	Horizontal

Frequency (MHz)	Meter Reading (dBμV)	Amplifier (dB)	Loss (dB)	Antenna Factor (dB/m)	Orrected Factor (dB)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector Type	Comment
802.11ac BW20MHz										
5725	41.98	44.20	10.00	32.00	-2.20	39.78	74	-34.22	PK	Vertical
5725	31.32	44.20	10.00	32.00	-2.20	29.12	54	-24.88	AV	Vertical
5725	42.08	44.20	10.00	32.00	-2.20	39.88	74	-34.12	PK	Horizontal
5725	31.70	44.20	10.00	32.00	-2.20	29.50	54	-24.50	AV	Horizontal
5850	42.36	44.20	10.20	32.00	-2.00	40.36	74	-33.64	PK	Vertical
5850	31.49	44.20	10.20	32.00	-2.00	29.49	54	-24.51	AV	Vertical
5850	41.71	44.20	10.20	32.00	-2.00	39.71	74	-34.29	PK	Horizontal
5850	30.85	44.20	10.20	32.00	-2.00	28.85	54	-25.15	AV	Horizontal
802.11ac BW40MHz										
5725	40.71	44.20	10.00	32.00	-2.20	38.51	74	-35.49	PK	Vertical
5725	30.52	44.20	10.00	32.00	-2.20	28.32	54	-25.68	AV	Vertical
5725	41.77	44.20	10.00	32.00	-2.20	39.57	74	-34.43	PK	Horizontal
5725	31.16	44.20	10.00	32.00	-2.20	28.96	54	-25.04	AV	Horizontal
5850	41.80	44.20	10.20	32.00	-2.00	39.80	74	-34.20	PK	Vertical
5850	31.87	44.20	10.20	32.00	-2.00	29.87	54	-24.13	AV	Vertical
5850	40.99	44.20	10.20	32.00	-2.00	38.99	74	-35.01	PK	Horizontal
5850	31.81	44.20	10.20	32.00	-2.00	29.81	54	-24.19	AV	Horizontal
802.11ac BW80MHz										
5725	41.11	44.20	10.00	32.00	-2.20	38.91	74	-35.09	PK	Vertical
5725	30.85	44.20	10.00	32.00	-2.20	28.65	54	-25.35	AV	Vertical
5725	41.28	44.20	10.00	32.00	-2.20	39.08	74	-34.92	PK	Horizontal
5725	31.17	44.20	10.00	32.00	-2.20	28.97	54	-25.03	AV	Horizontal
5850	41.53	44.20	10.20	32.00	-2.00	39.53	74	-34.47	PK	Vertical
5850	30.73	44.20	10.20	32.00	-2.00	28.73	54	-25.27	AV	Vertical
5850	41.29	44.20	10.20	32.00	-2.00	39.29	74	-34.71	PK	Horizontal
5850	31.74	44.20	10.20	32.00	-2.00	29.74	54	-24.26	AV	Horizontal

4. CONDUCTED SPURIOUS EMISSIONS

4.1 APPLIED PROCEDURES / LIMIT

Undesirable emission limits. Except as shown in paragraph (b)(7) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

(1) 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.

(2) For transmitters operating in the 5.725-5.85 GHz band: All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of −27 dBm/MHz.

4.1.1 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	1000 KHz/3000 KHz
Trace-Mode:	Max hold

.

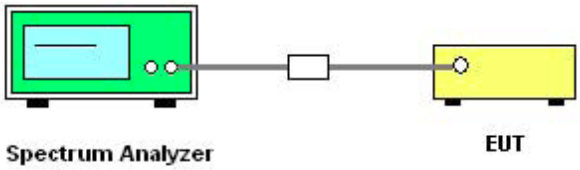
For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 5700 to 5725 MHz Upper Band Edge: 5850 to 5870 MHz
RB / VB (emission in restricted band)	1000 KHz/3000 KHz
Trace-Mode:	Max hold

4.1.2 DEVIATION FROM STANDARD

No deviation.

4.1.3 TEST SETUP



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.

Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 1000 kHz. In order to make an accurate measurement, set the span greater than RBW.

4.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

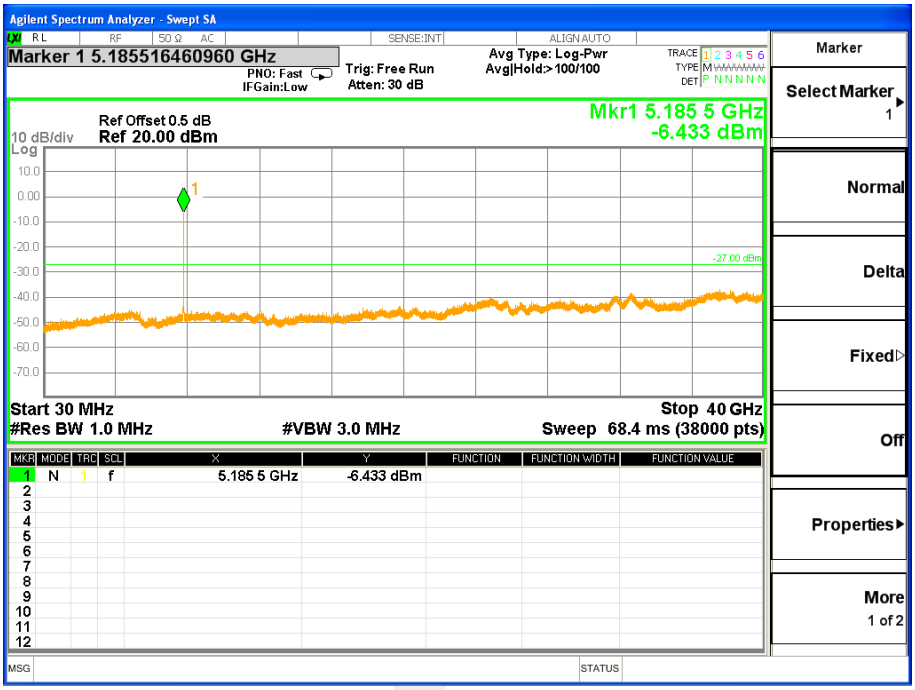
4.1.5 TEST RESULTS

Note:

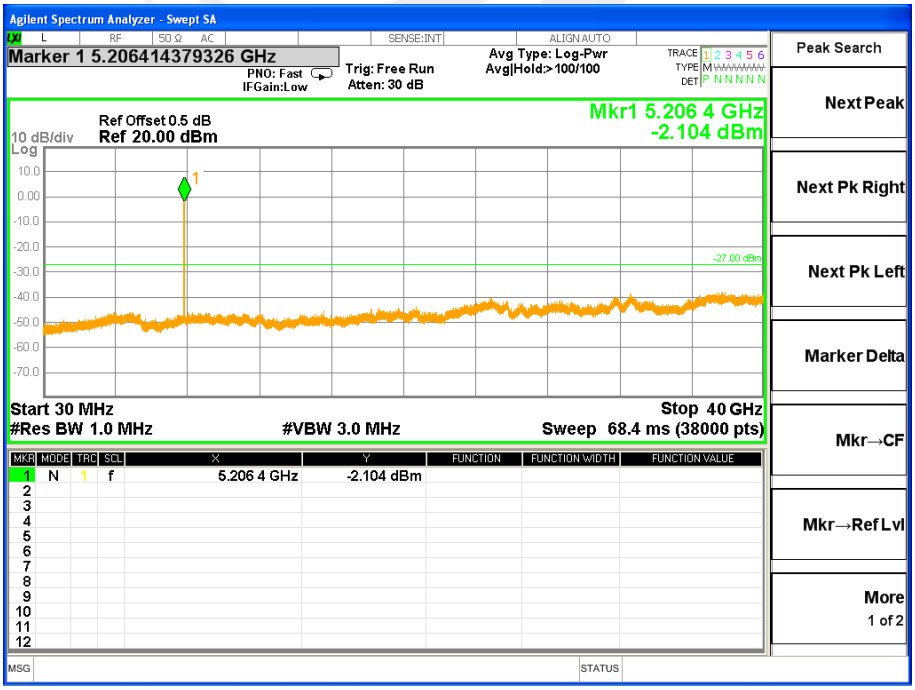
1.Above 26.5GHz amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has.

Band I (5.15-5.25GHz)

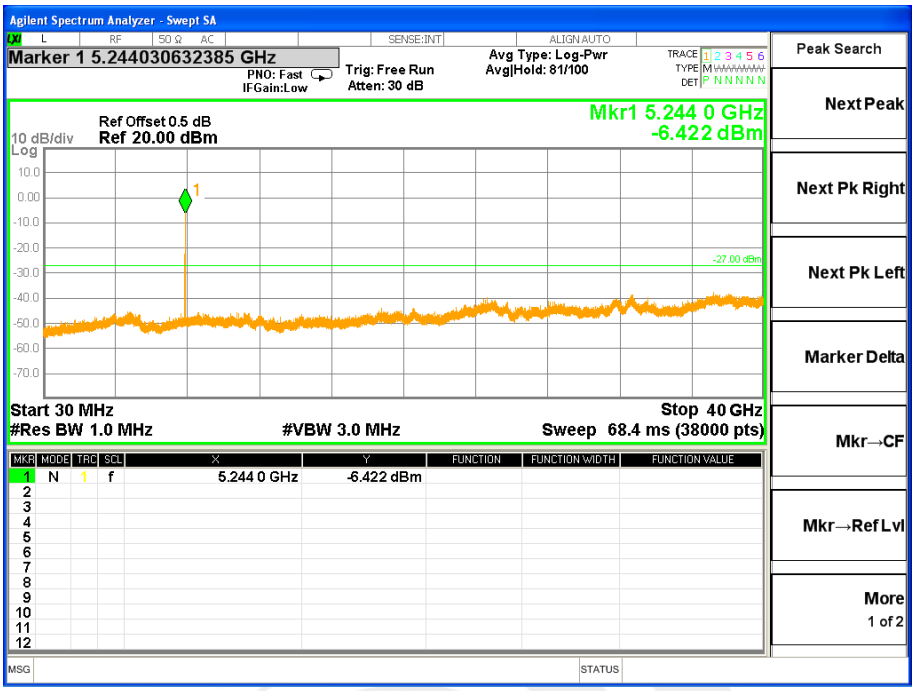
TX Spurious Emissions 802.11a Mode CH 36



TX Spurious Emissions 802.11a Mode CH 40

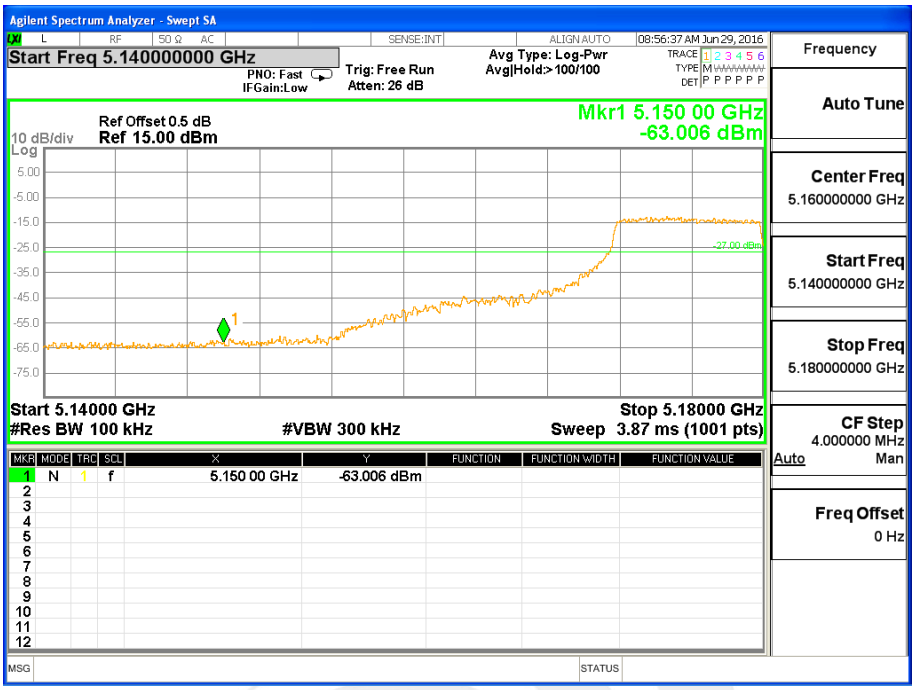


TX Spurious Emissions 802.11a Mode CH 48

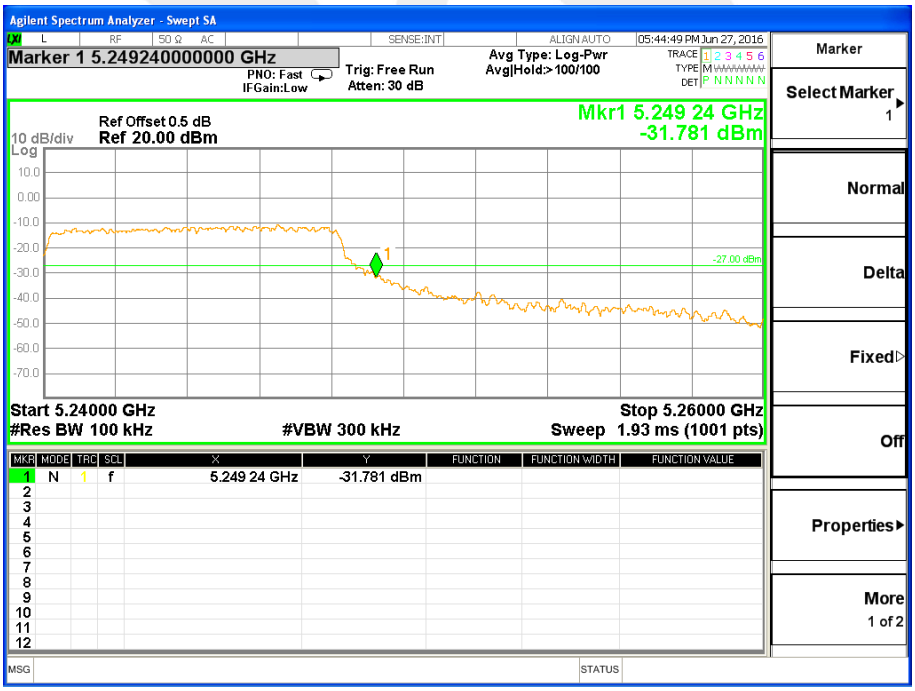


Band edge

TX Band edge 802.11a Mode CH 36

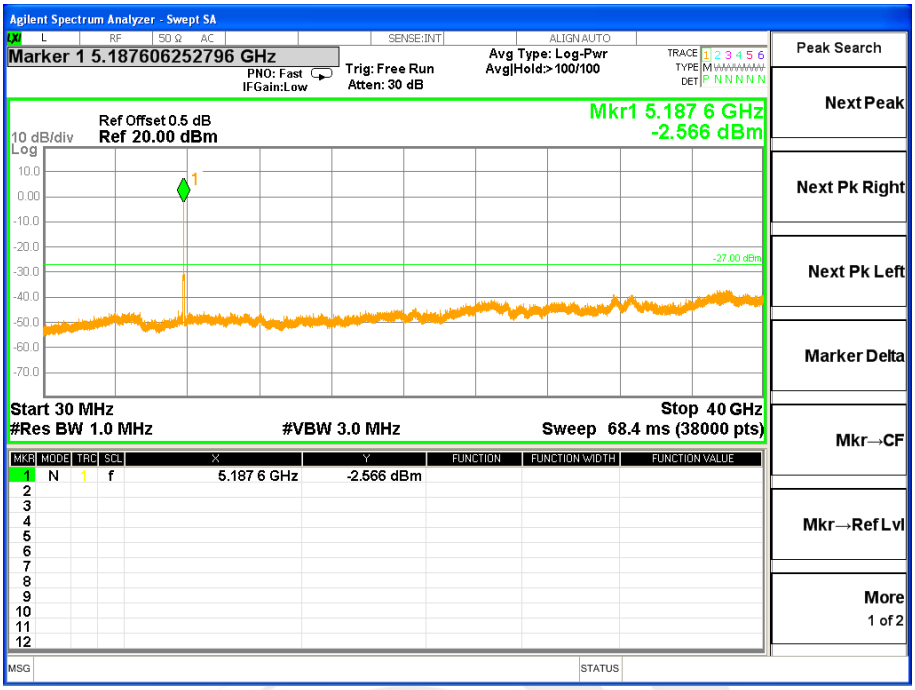


TX Band edge 802.11a Mode CH 48

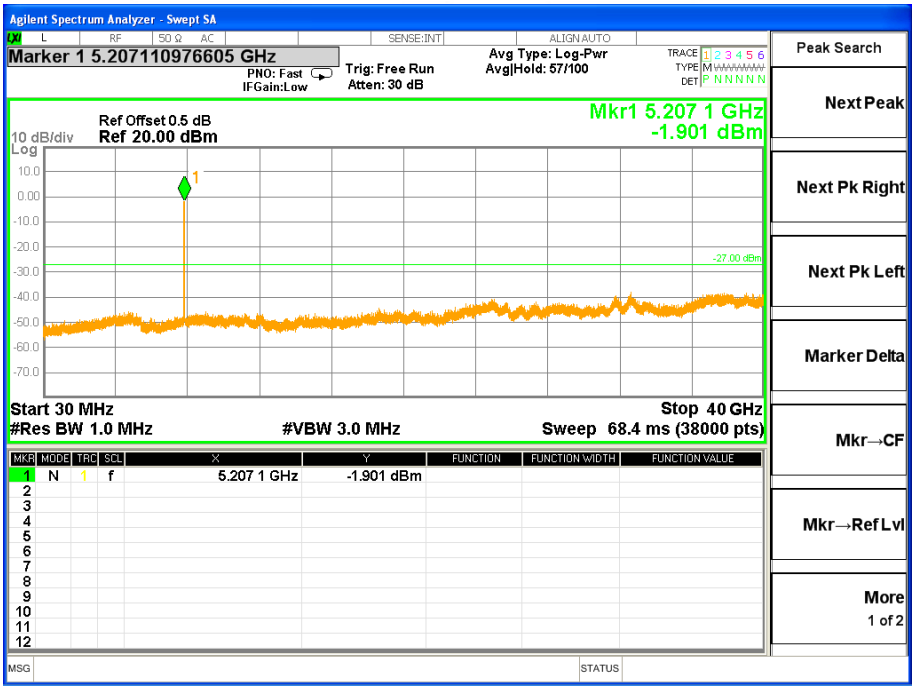


Band I (5.15-5.25GHz)

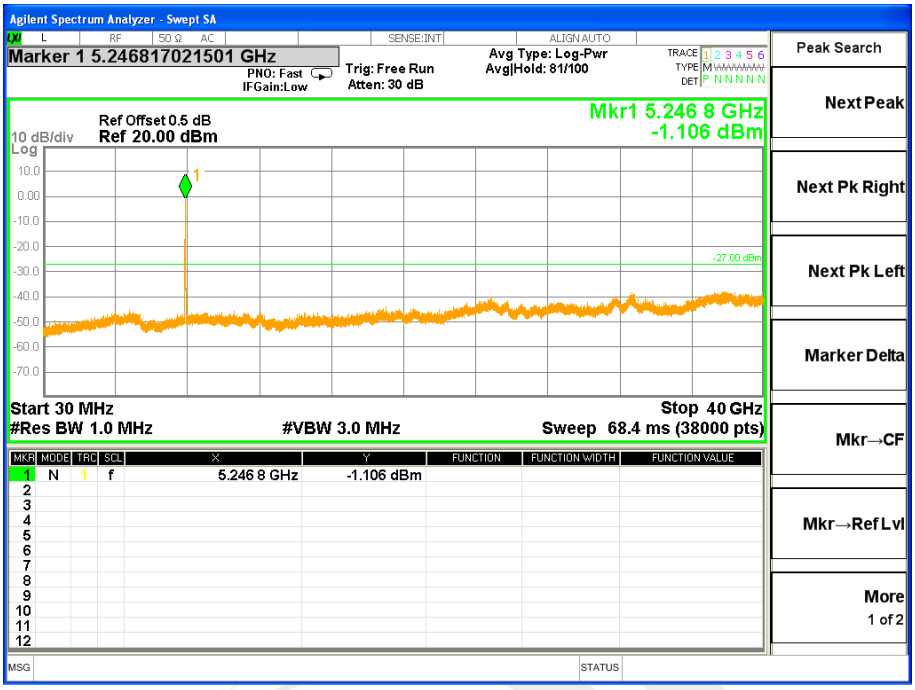
TX Spurious Emissions 802.11n(HT20) Mode CH 36



TX Spurious Emissions 802.11n(HT20) Mode CH 40

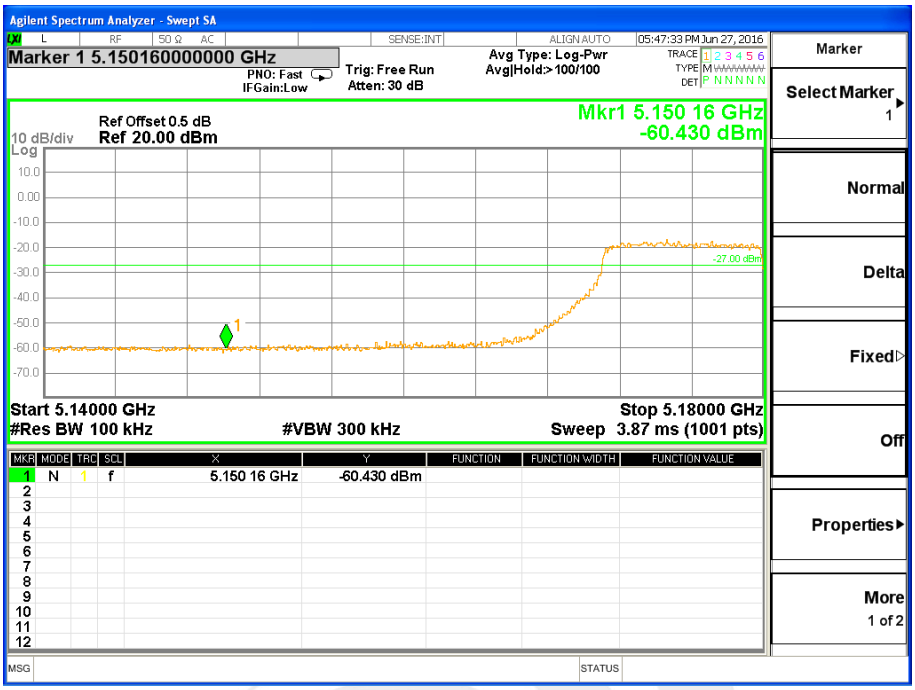


TX Spurious Emissions 802.11n(HT20) Mode CH 48

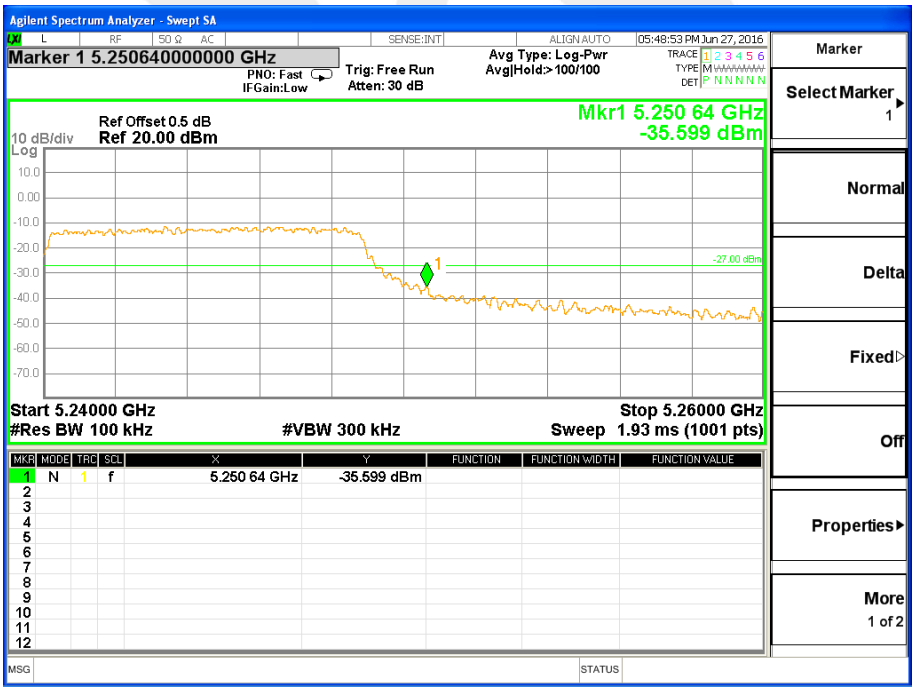


Band edge

TX Band edge 802.11n(HT20) Mode CH 36

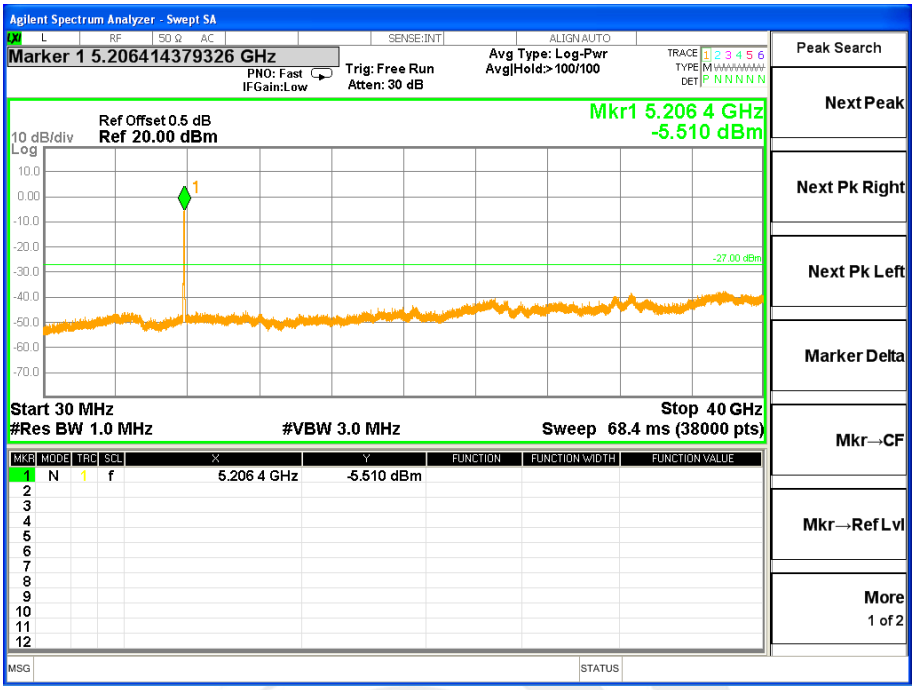


TX Band edge 802.11n(HT20) Mode CH 48

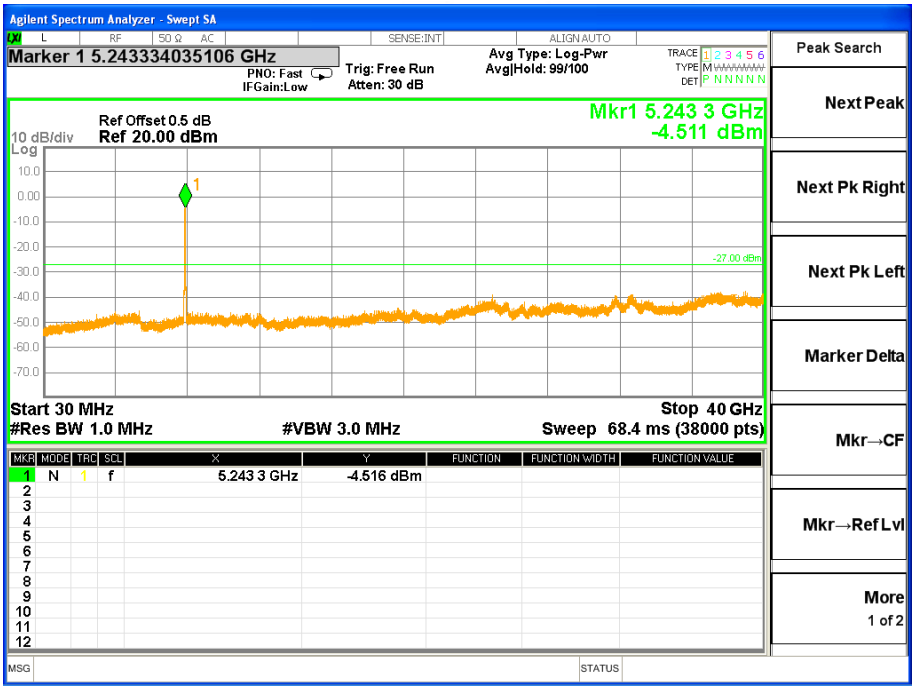


Band I (5.15-5.25GHz)

TX Spurious Emissions 802.11n(HT40) Mode CH 38

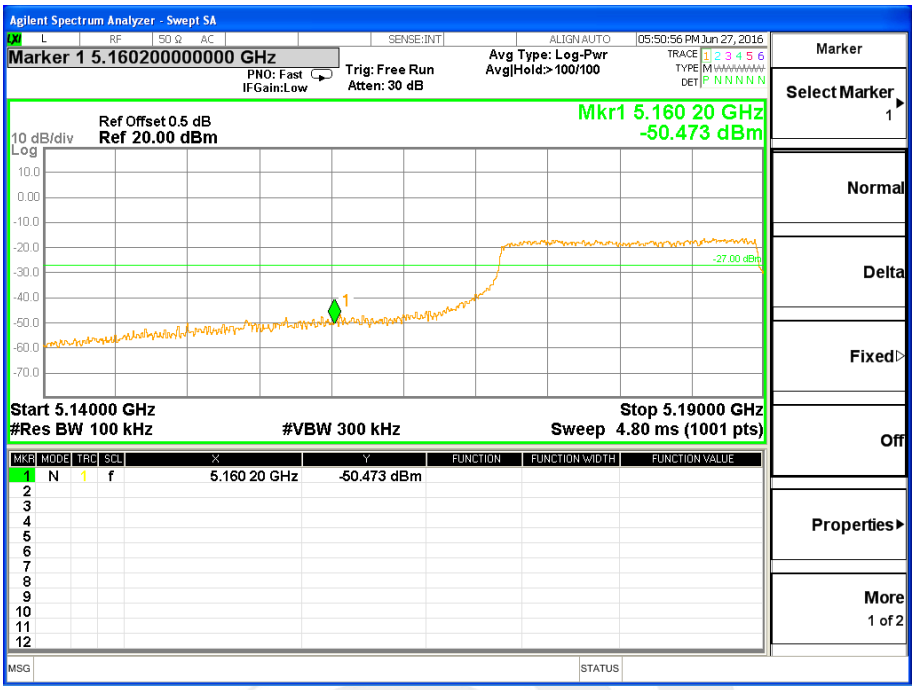


TX Spurious Emissions 802.11n(HT40) Mode CH 46

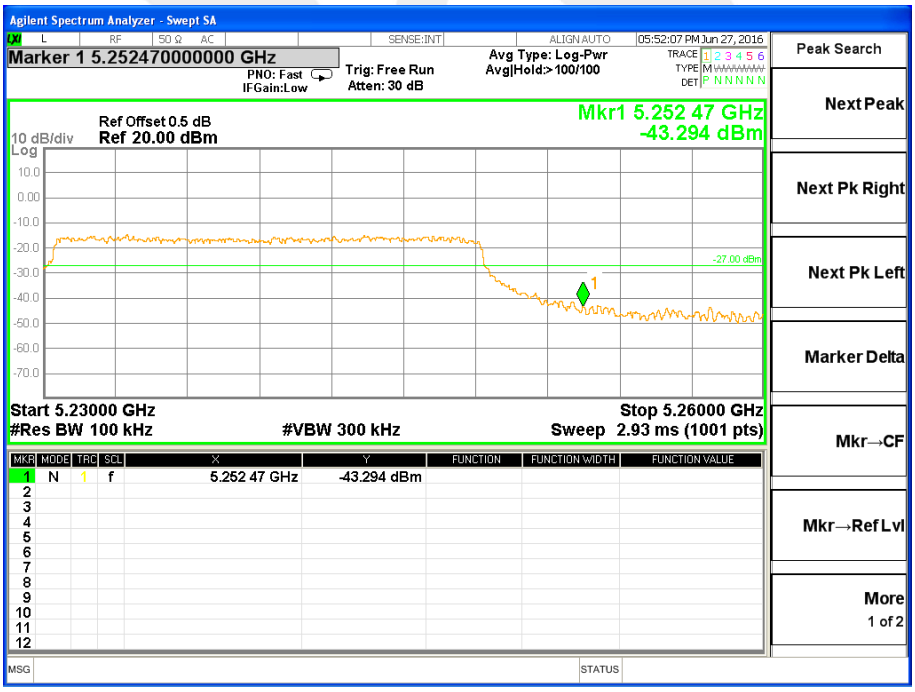


Band edge

TX Band edge 802.11n(HT40) Mode CH 38

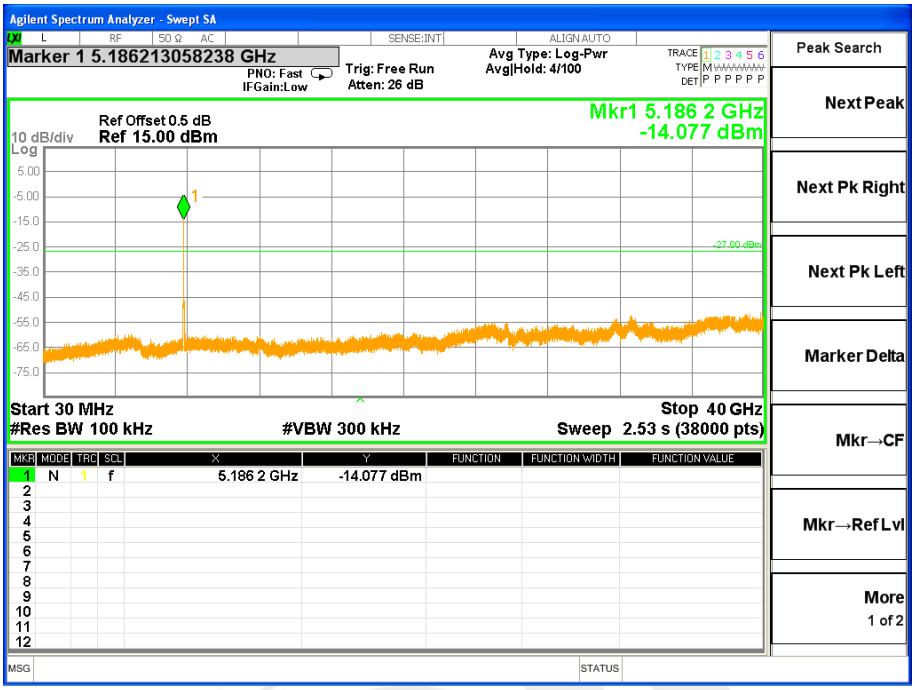


TX Band edge 802.11n(HT40) Mode CH 46

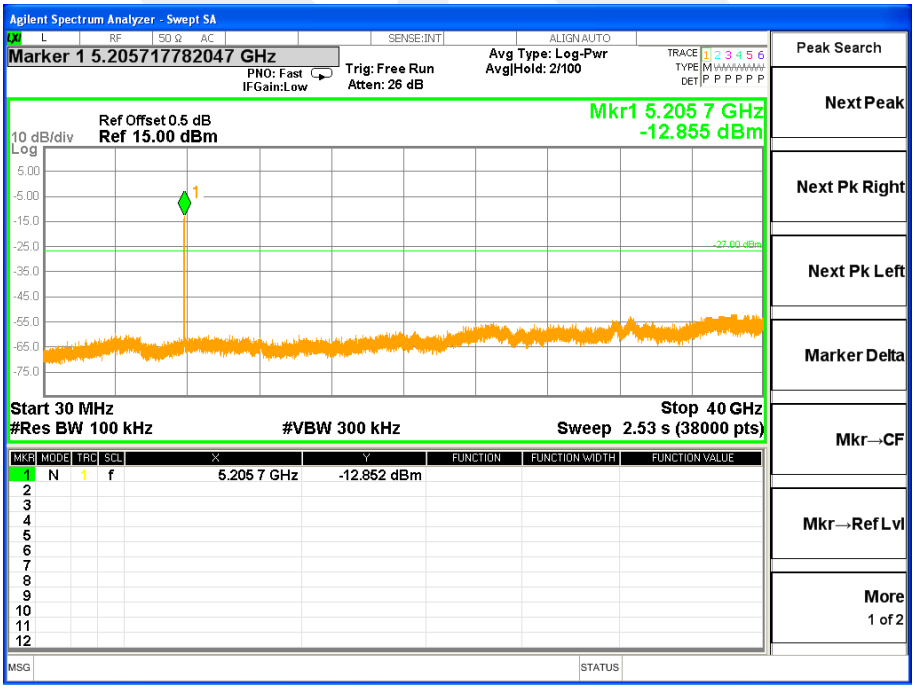


Band I (5.15-5.25GHz)

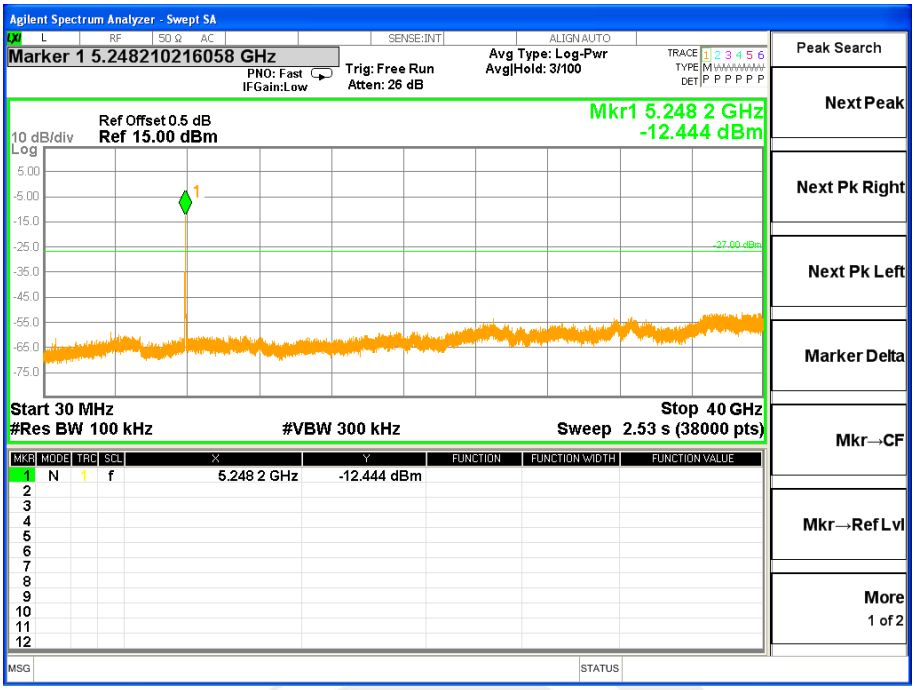
TX Spurious Emissions 802.11ac(HT20) Mode CH 36



TX Spurious Emissions 802.11ac(HT20) Mode CH 40

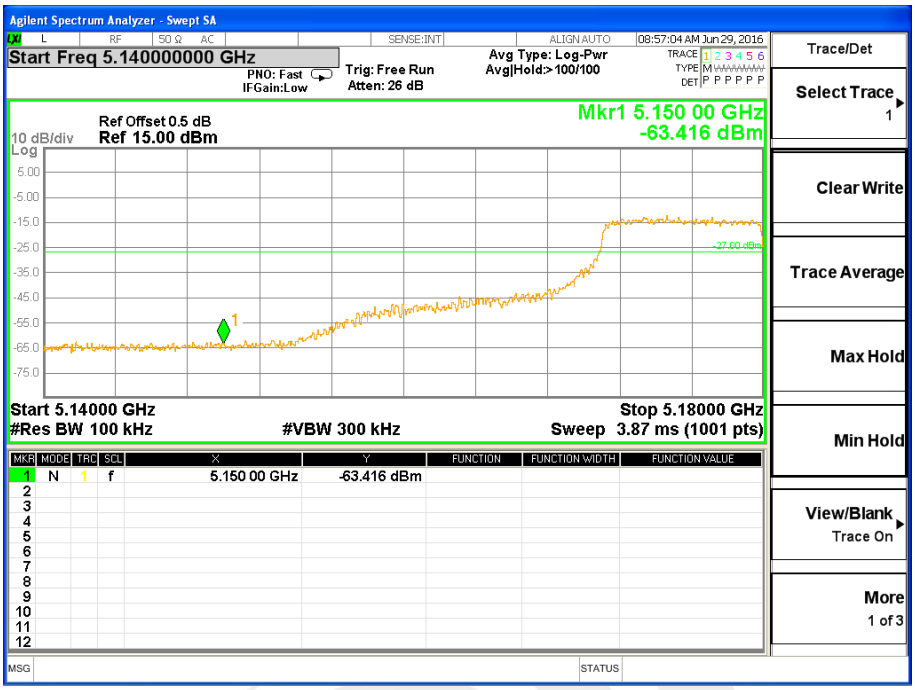


TX Spurious Emissions 802.11ac(HT20) Mode CH 48

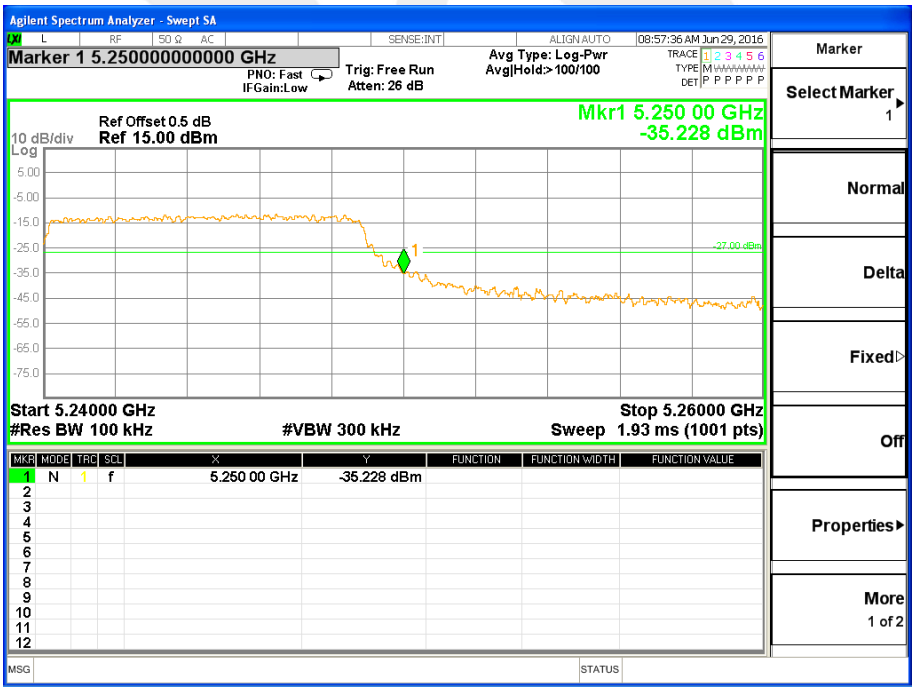


Band edge

TX Band edge 802.11ac(HT20) Mode CH 36

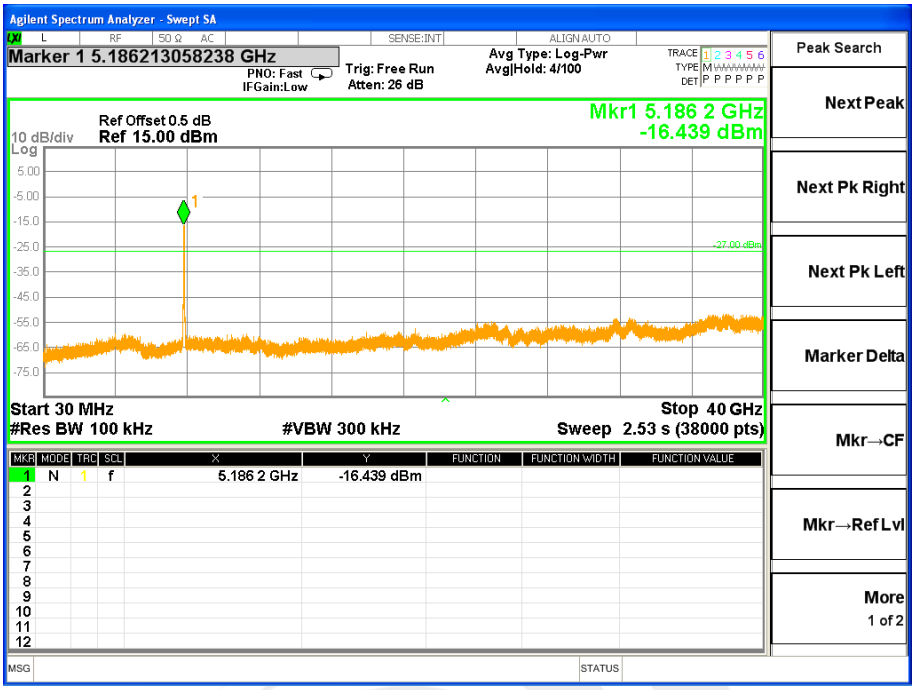


TX Band edge 802.11ac(HT20) Mode CH 48

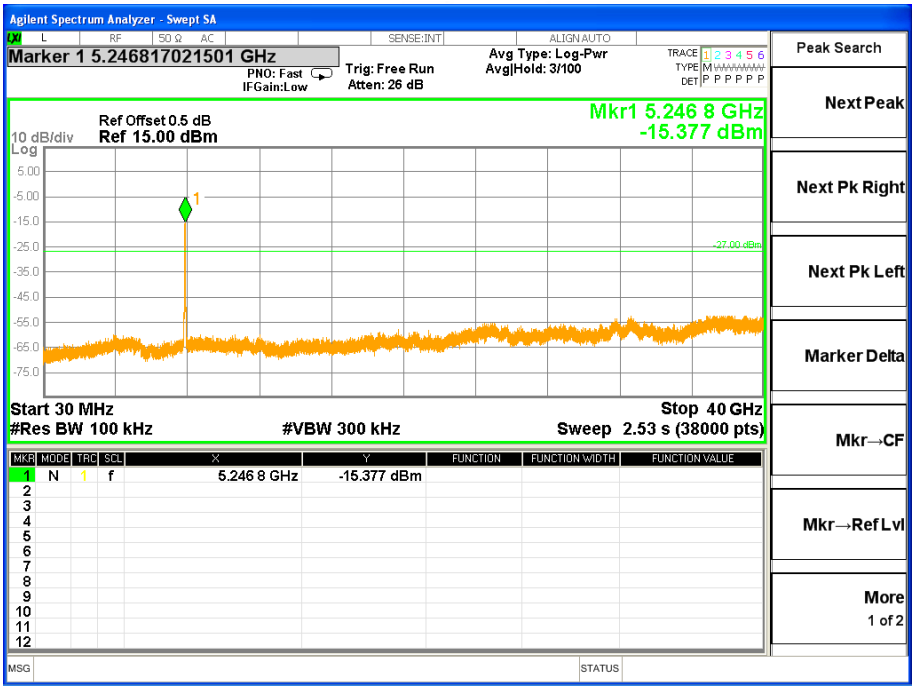


Band I (5.15-5.25GHz)

TX Spurious Emissions 802.11ac(HT40) Mode CH 38

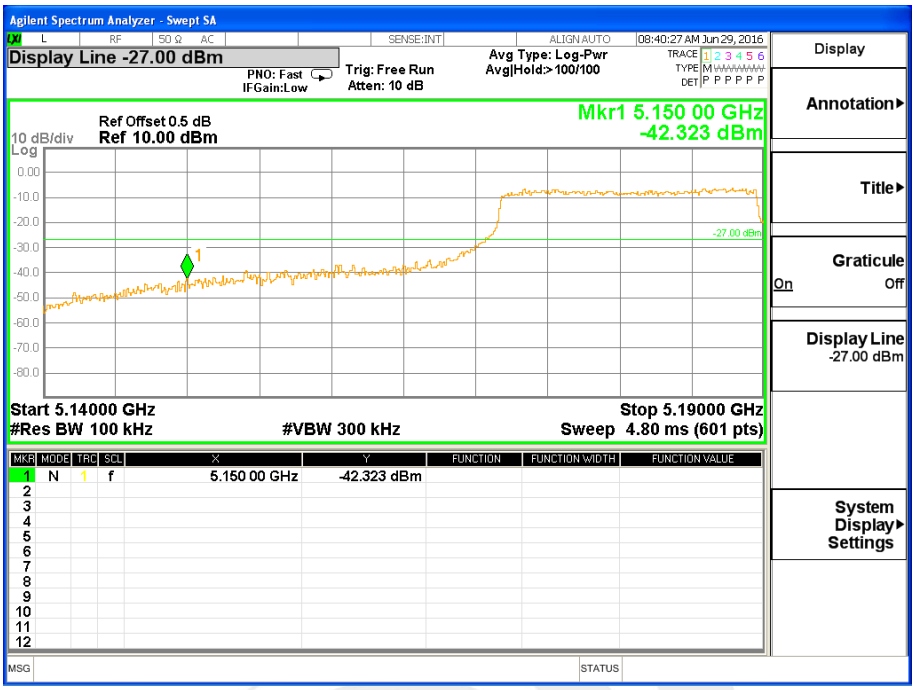


TX Spurious Emissions 802.11 ac(HT40) Mode CH 46

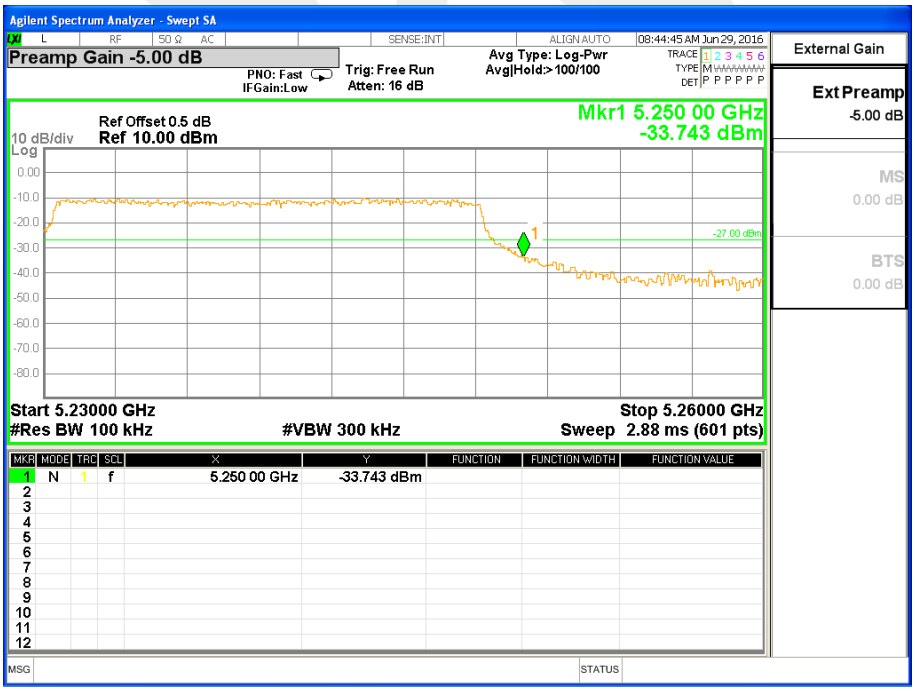


Band edge

TX Band edge 802.11 ac(HT40) Mode CH 38

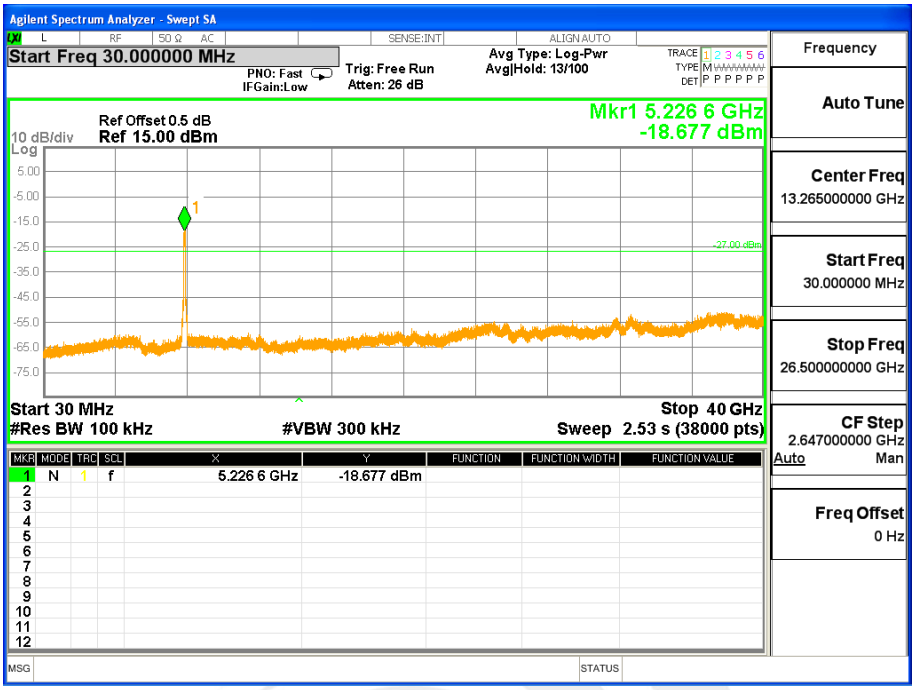


TX Band edge 802.11 ac(HT40) Mode CH 46



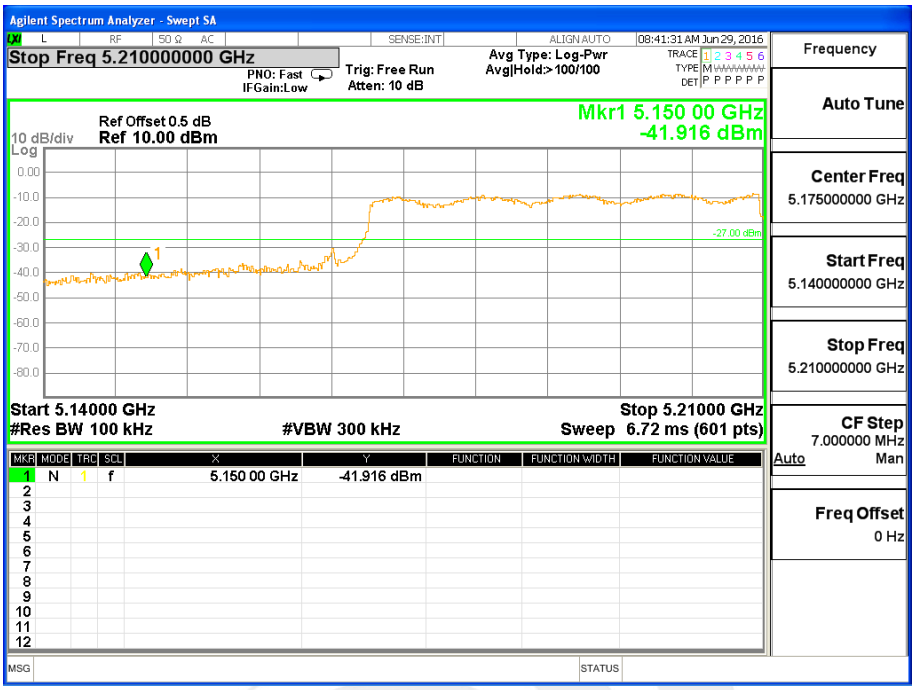
Band I (5.15-5.25GHz)

TX Spurious Emissions 802.11ac(HT80) Mode CH 42

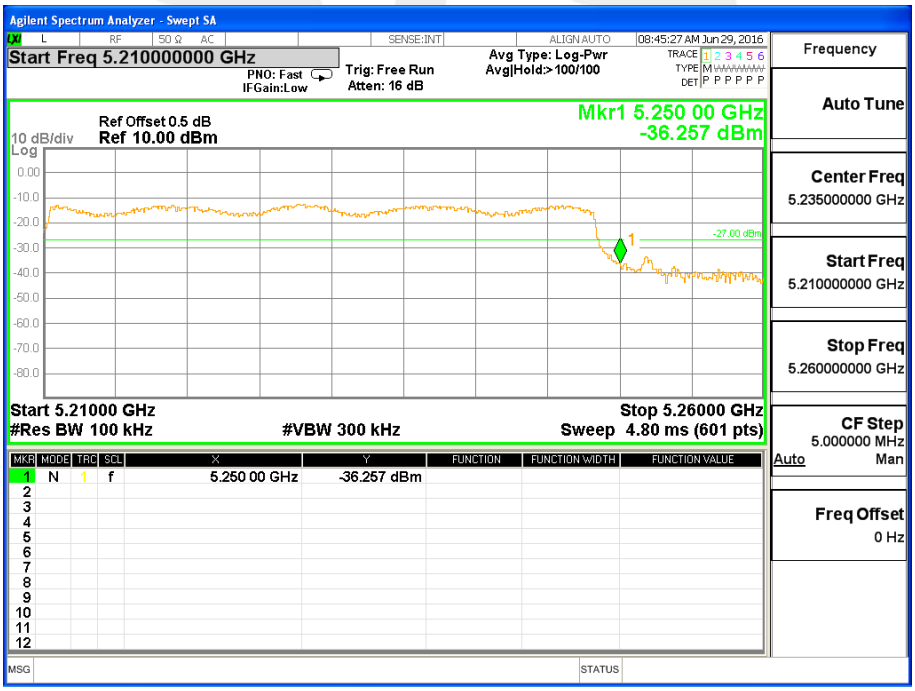


Band edge

TX Band edge 802.11ac(HT80) Mode CH 42 Left

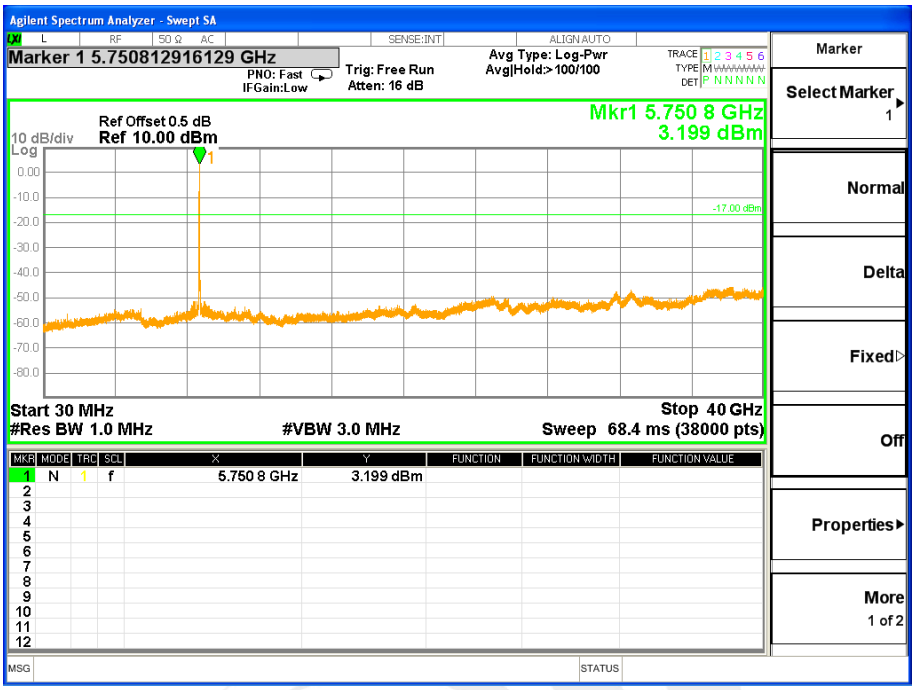


TX Band edge 802.11ac(HT80) Mode CH 42 Right

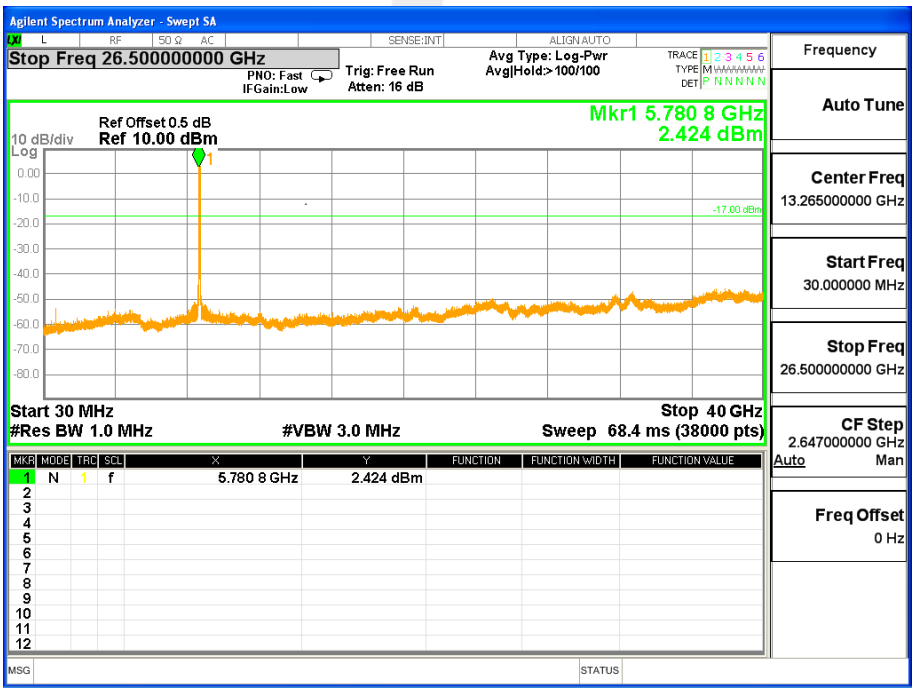


Band IV (5.725-5.85GHz)

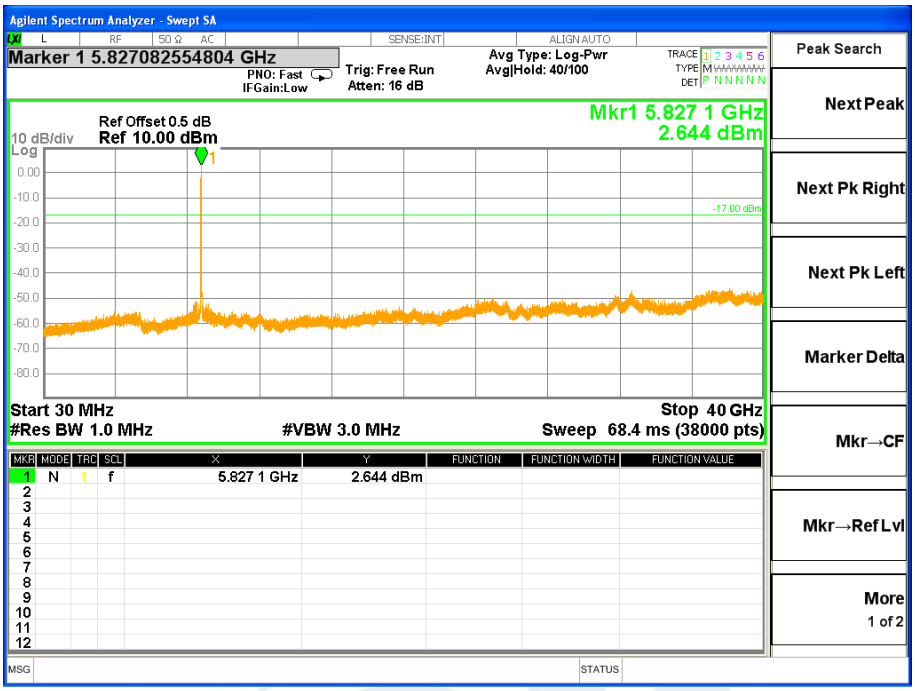
TX Spurious Emissions 802.11a Mode CH 149



TX Spurious Emissions 802.11a Mode CH 157

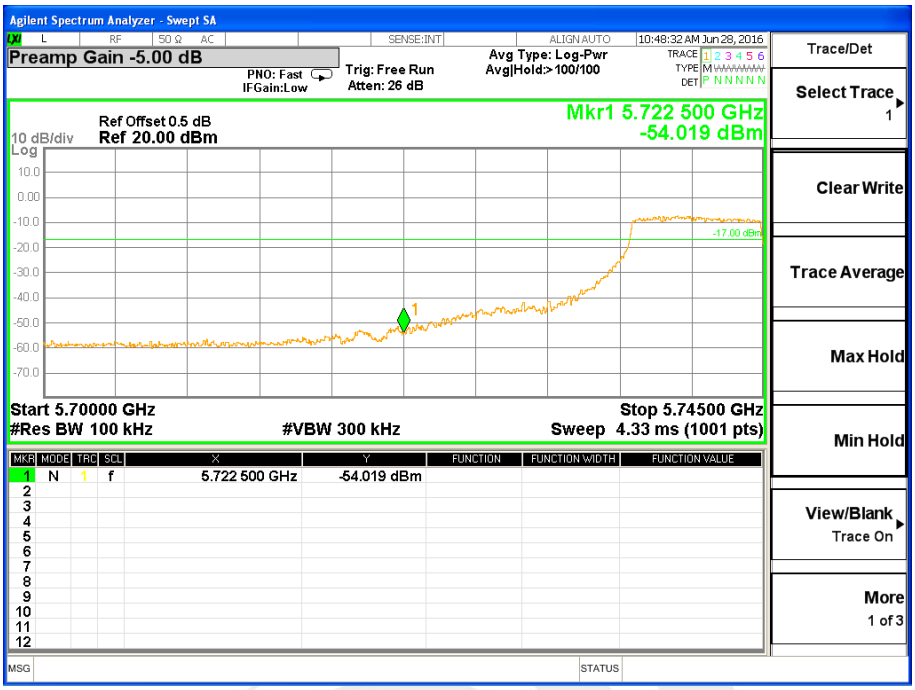


TX Spurious Emissions 802.11a Mode CH 165

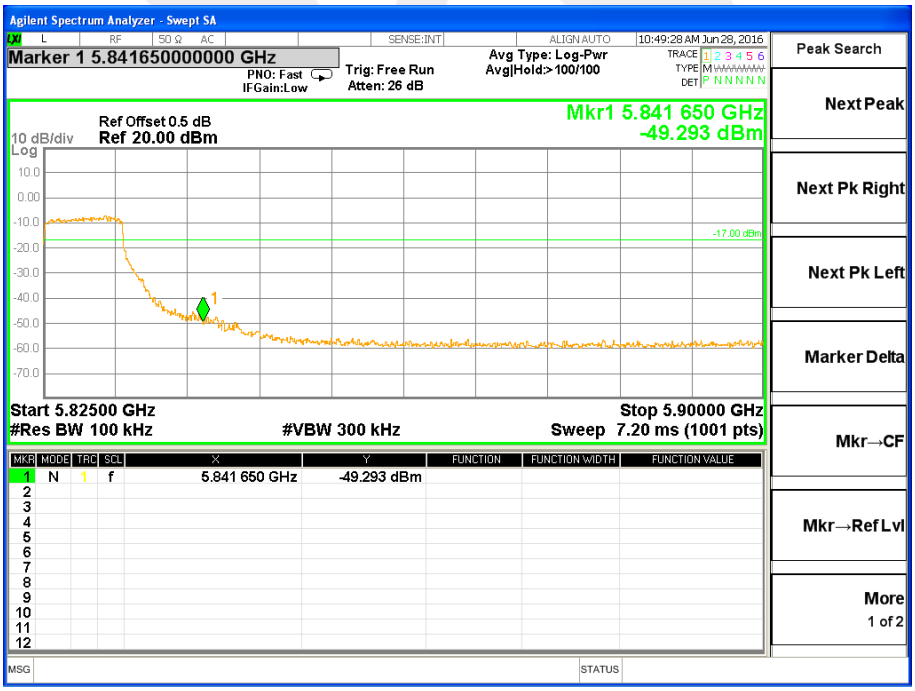


Band edge

TX Band edge 802.11a Mode CH 149

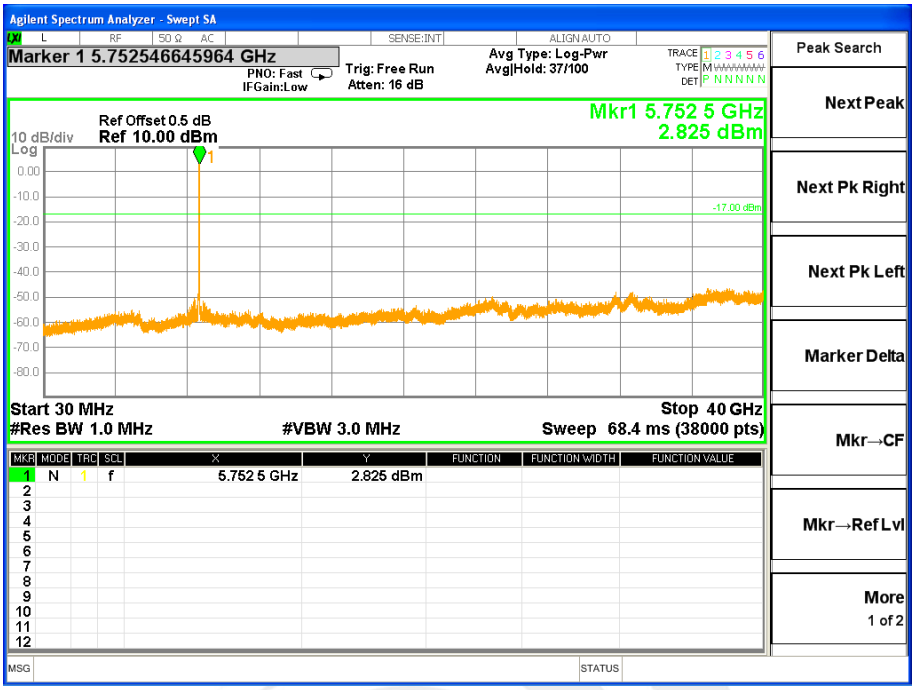


TX Band edge 802.11a Mode CH 165

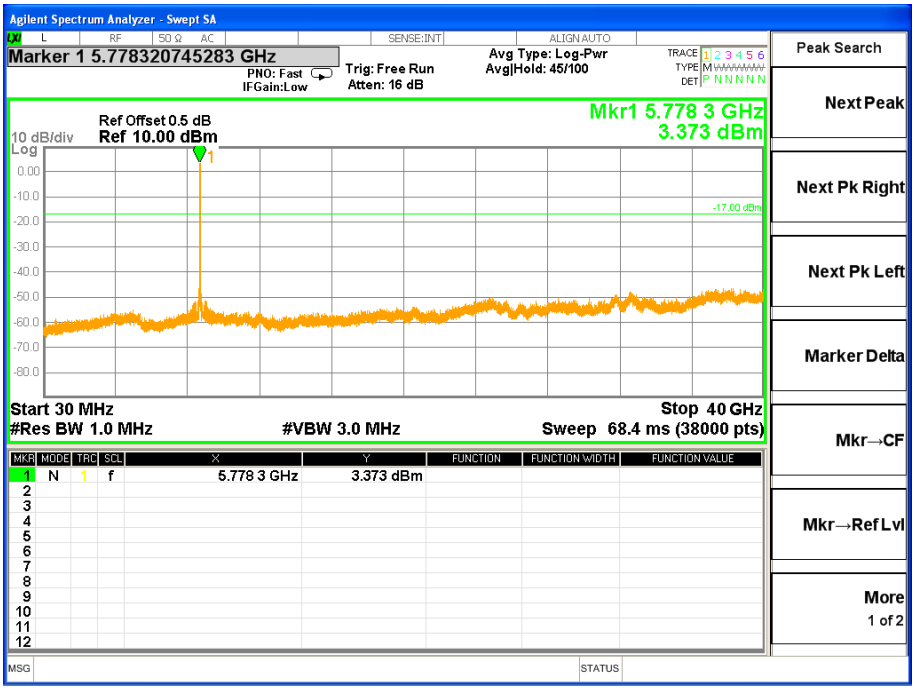


Band IV (5.725-5.85GHz)

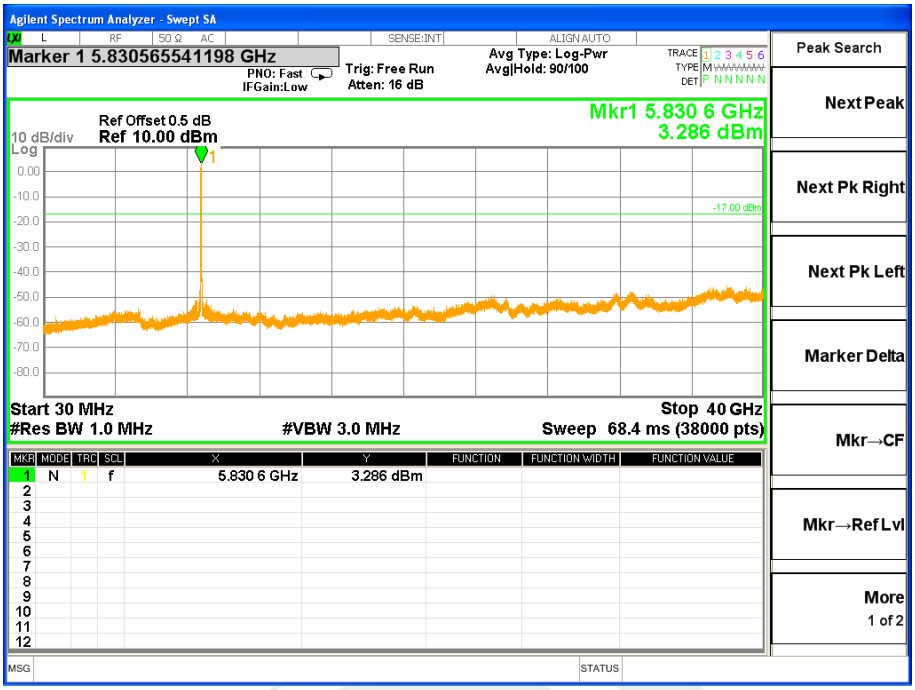
TX Spurious Emissions 802.11n(HT20) Mode CH 149



TX Spurious Emissions 802.11n(HT20) Mode CH 157

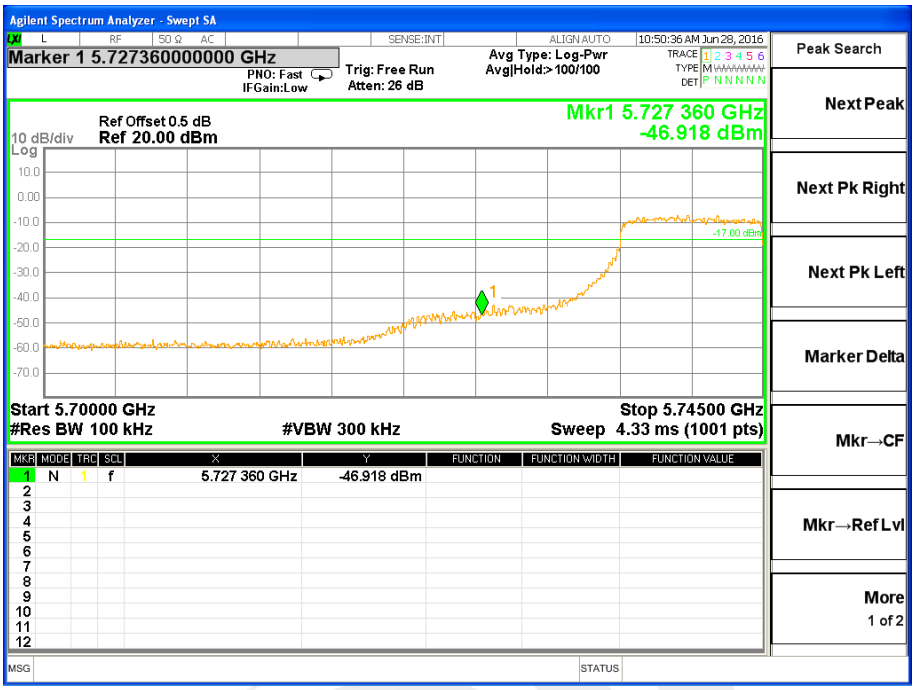


TX Spurious Emissions 802.11n(HT20) Mode CH 165

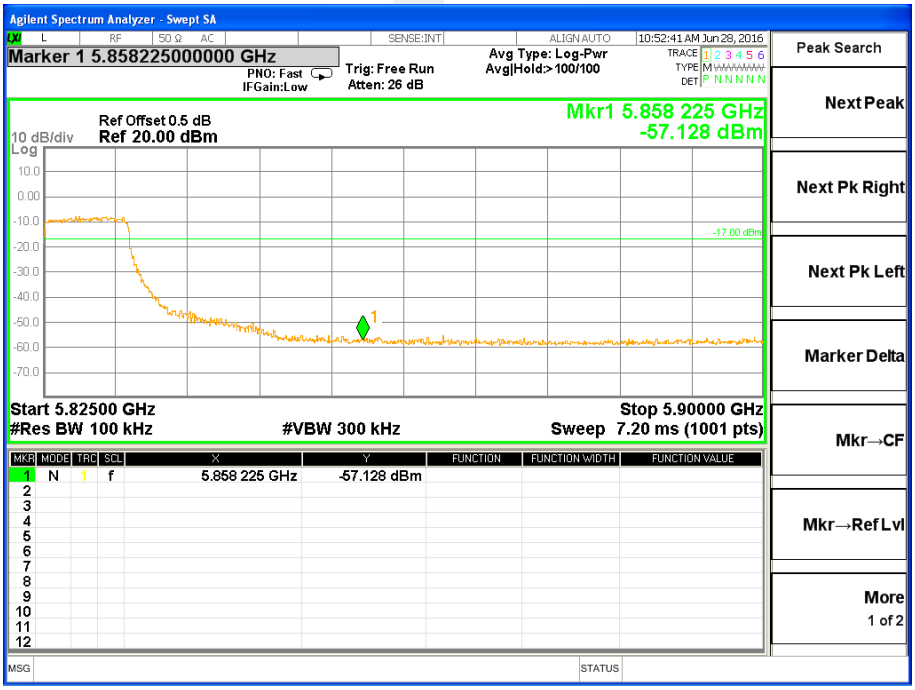


Band edge

TX Band edge 802.11n(HT20) Mode CH 149

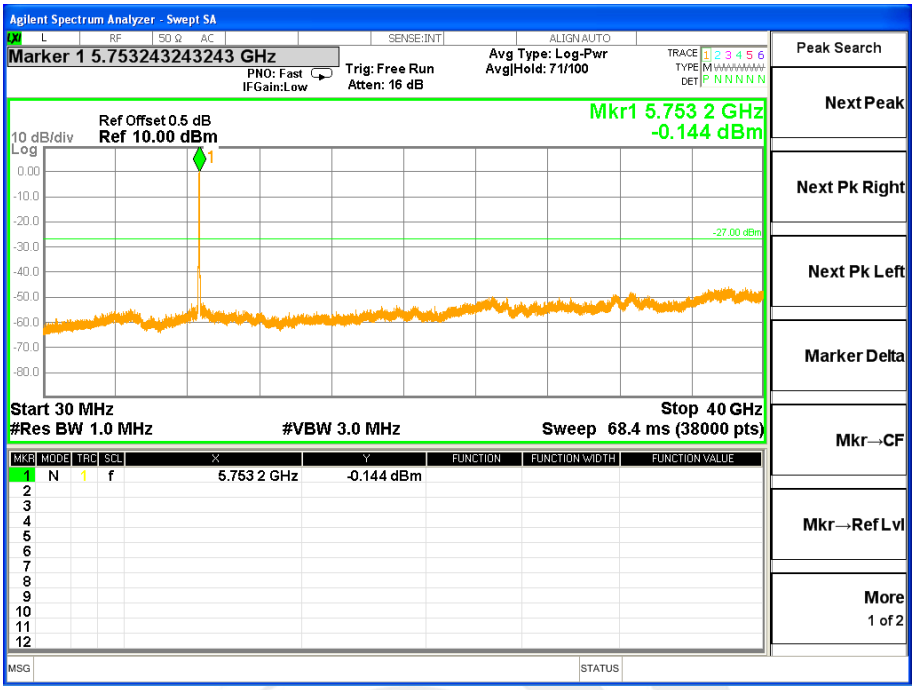


TX Band edge 802.11n(HT20) Mode CH 165

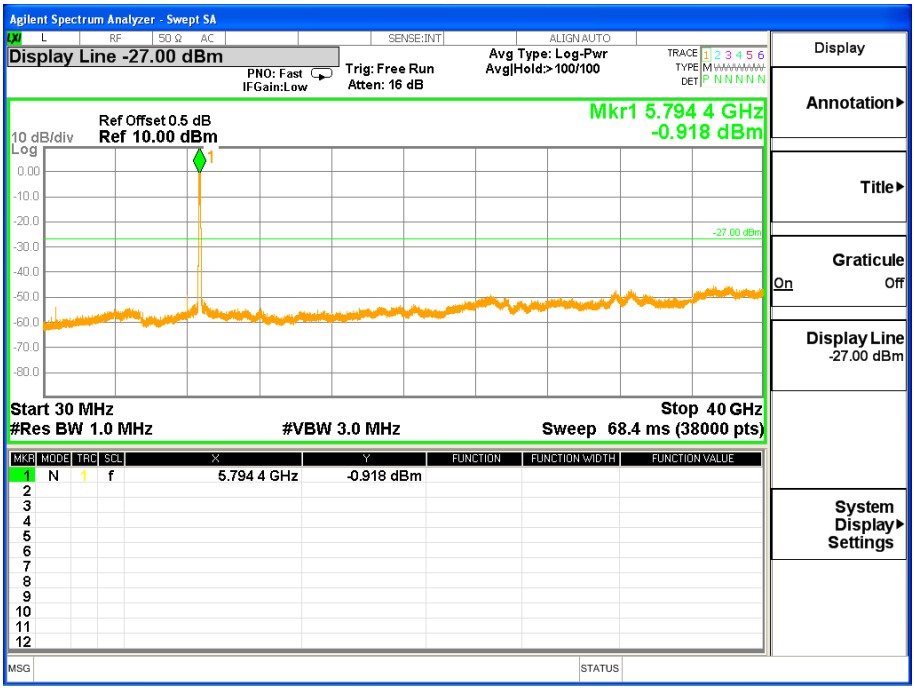


Band IV (5.725-5.85GHz)

TX Spurious Emissions 802.11n(HT40) Mode CH 151

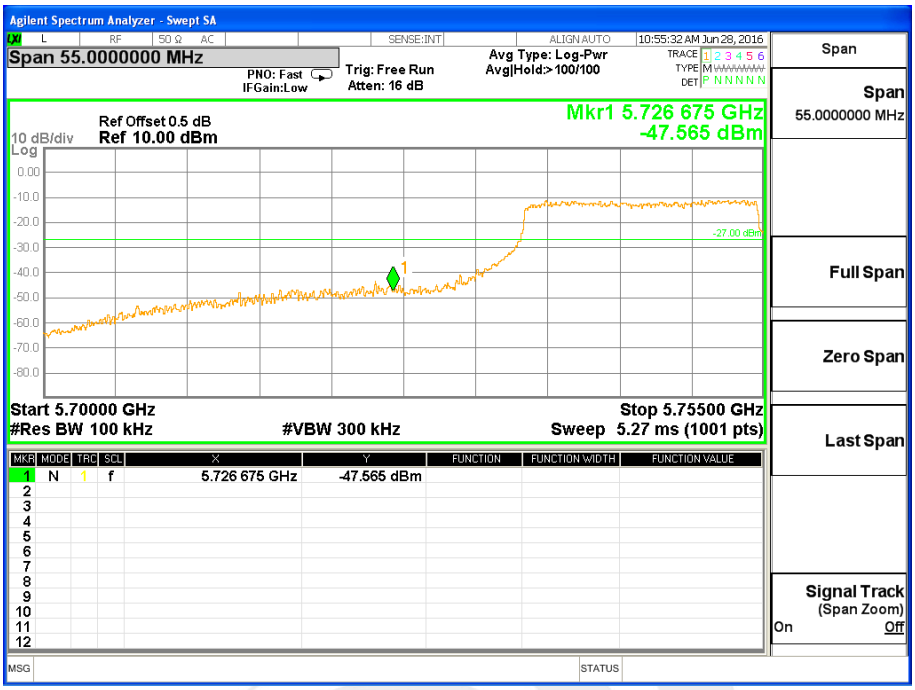


TX Spurious Emissions 802.11n(HT40) Mode CH 159

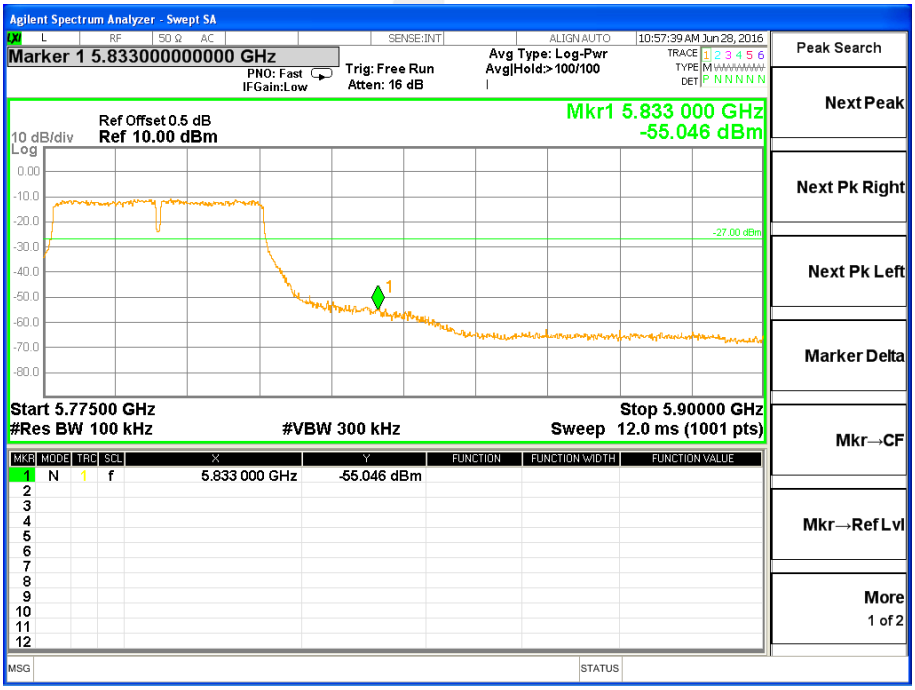


Band edge

TX Band edge 802.11n(HT40) Mode CH 151

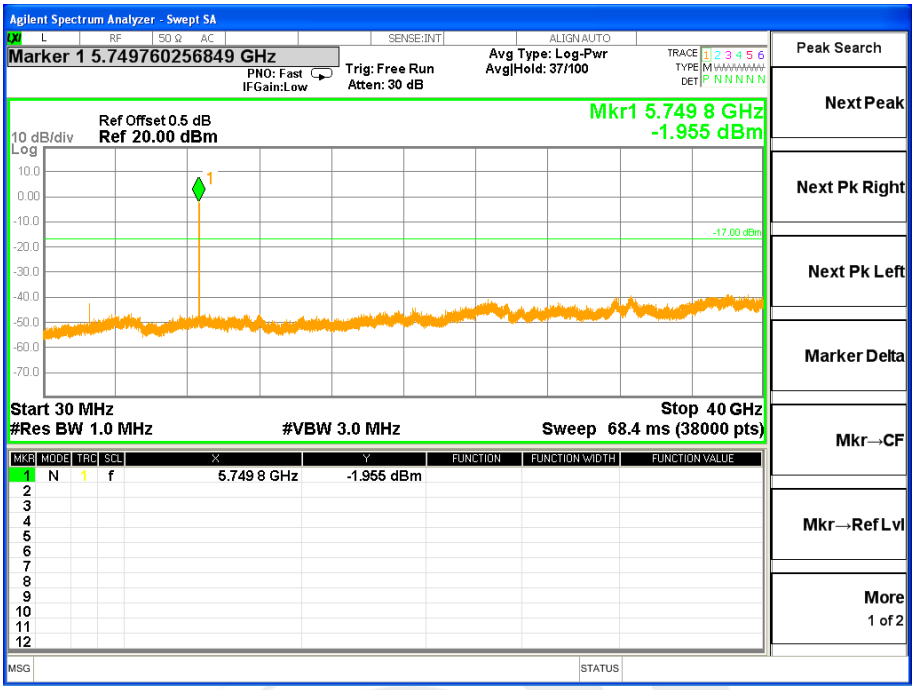


TX Band edge 802.11n(HT40) Mode CH 159

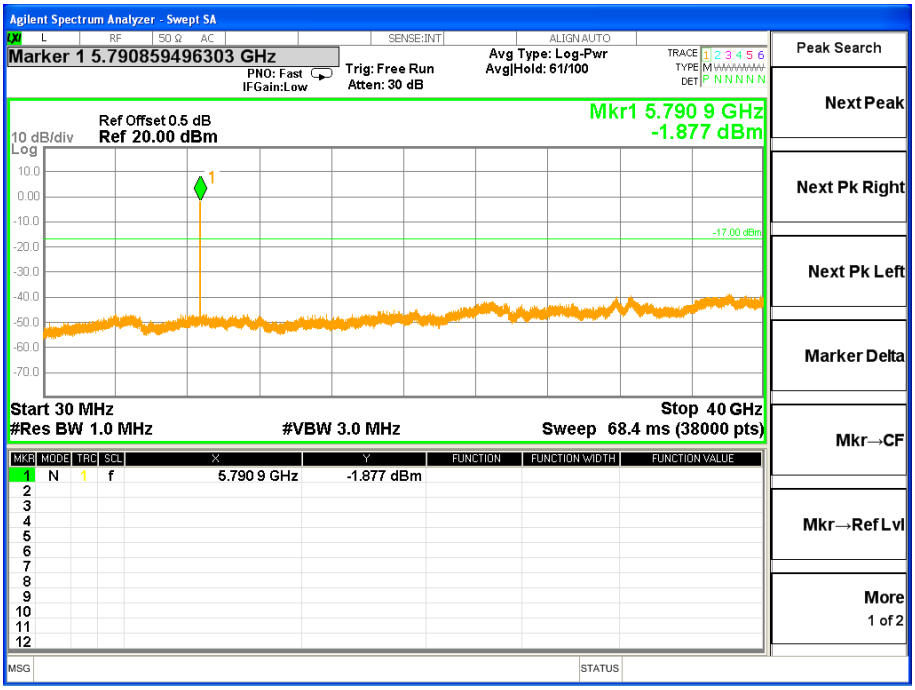


Band IV (5.725-5.85GHz)

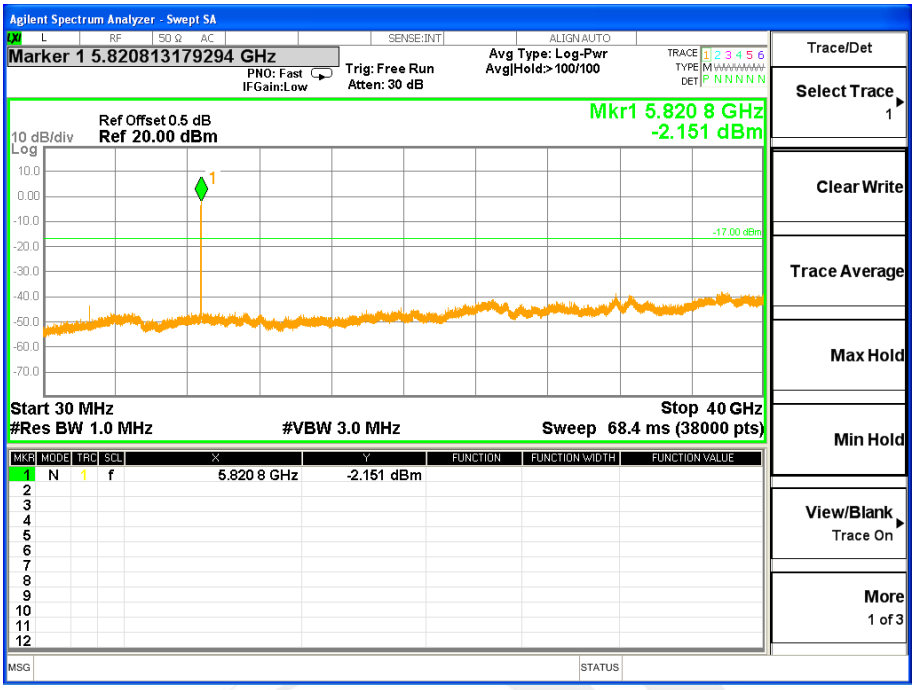
TX Spurious Emissions 802.11ac(HT20) Mode CH 149



TX Spurious Emissions 802.11ac(HT20) Mode CH 157

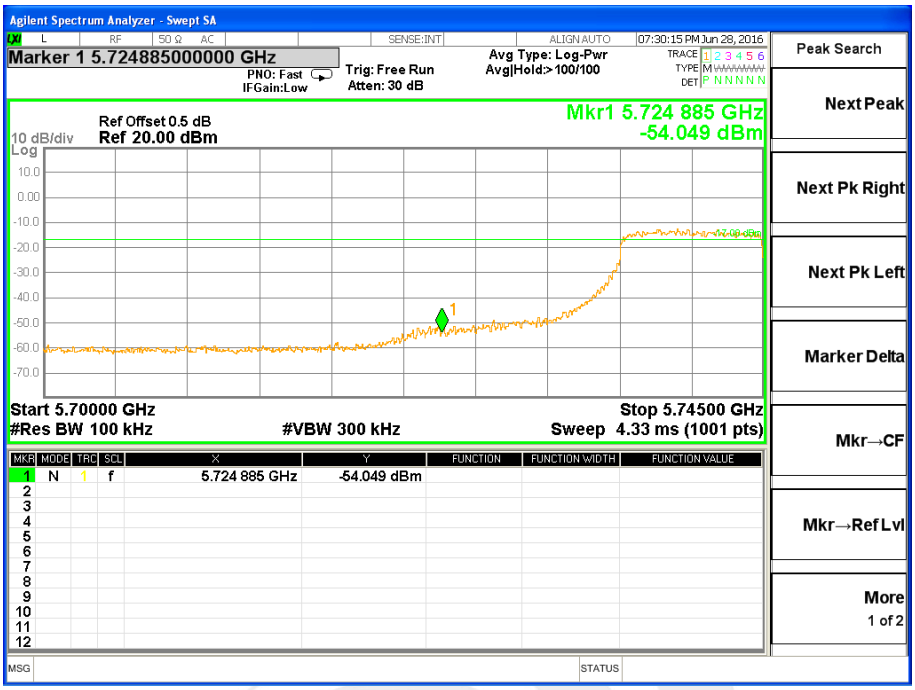


TX Spurious Emissions 802.11ac(HT20) Mode CH 165

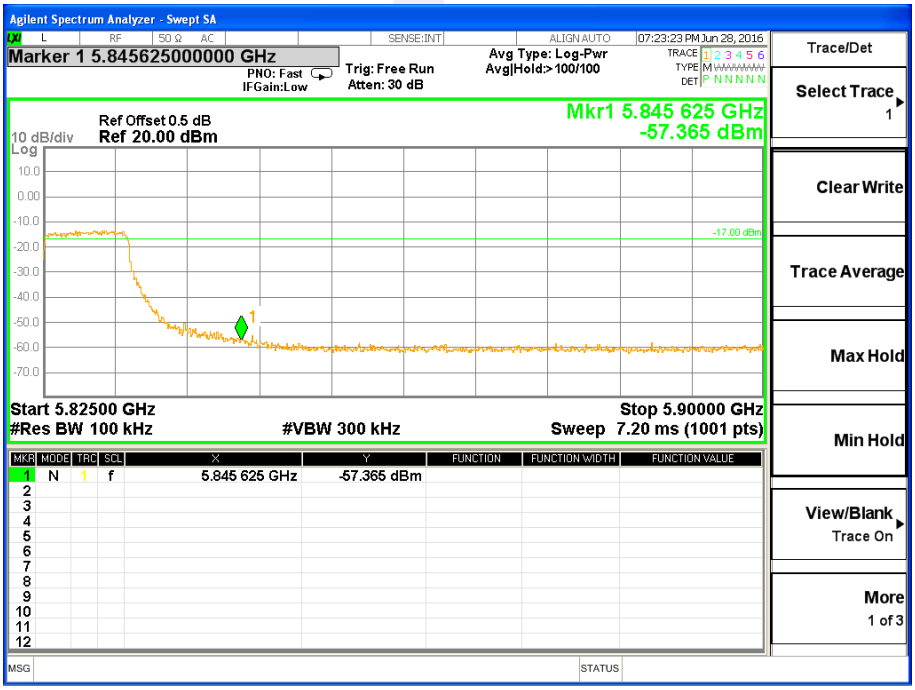


Band edge

TX Band edge 802.11ac(HT20) Mode CH 149

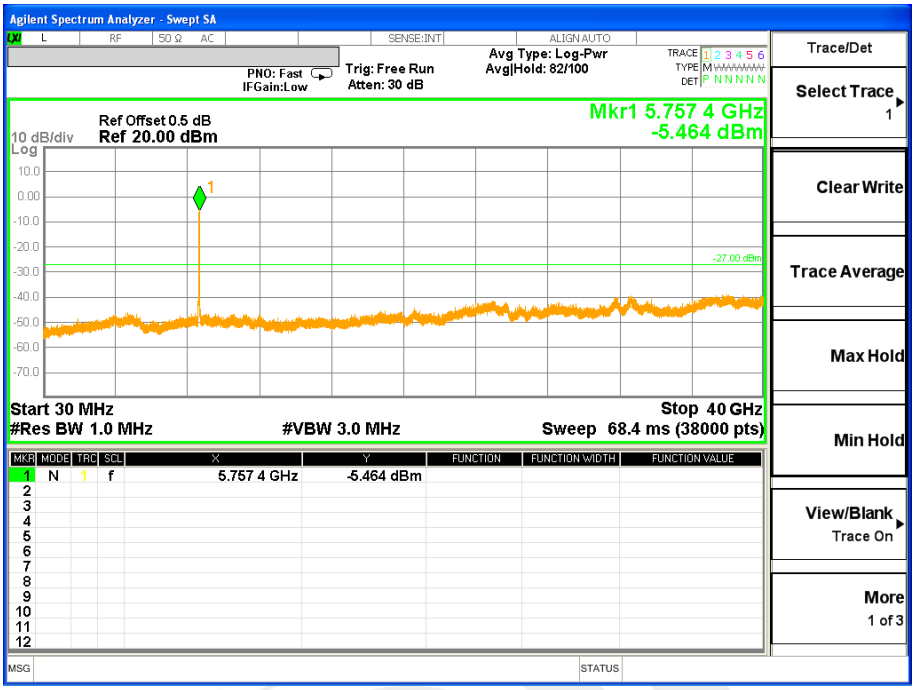


TX Band edge 802.11ac(HT20) Mode CH 165

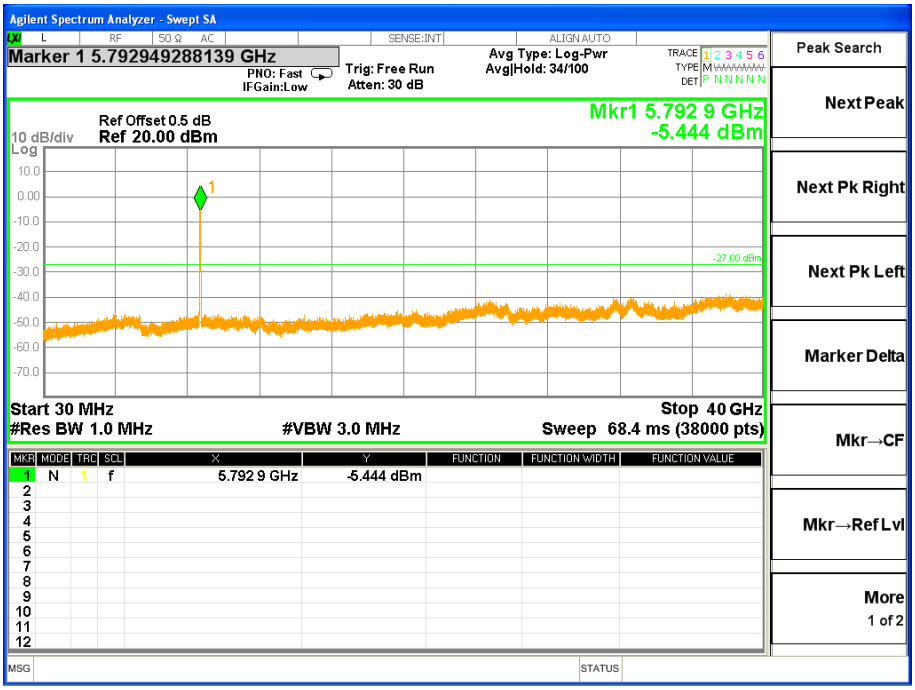


Band IV (5.725-5.85GHz)

TX Spurious Emissions 802.11ac(HT40) Mode CH 151

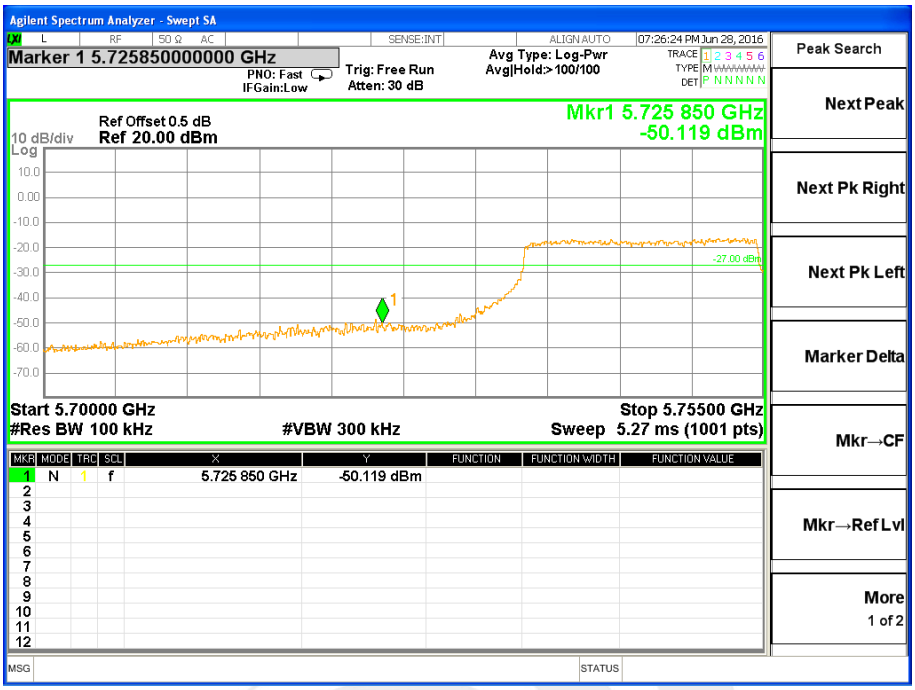


TX Spurious Emissions 802.11ac(HT40) Mode CH 159

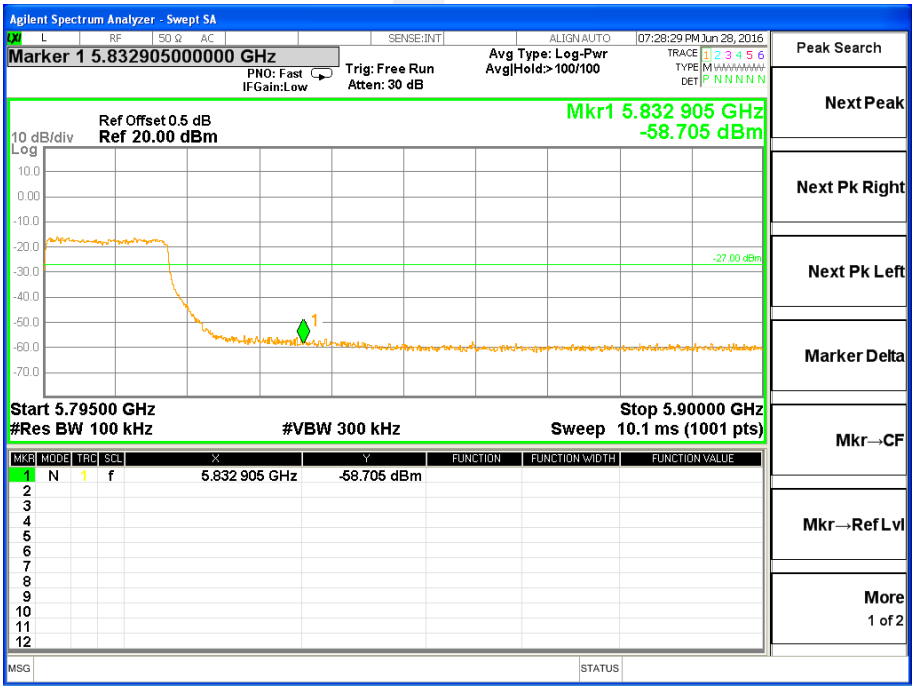


Band edge

TX Band edge 802.11ac(HT40) Mode CH 151

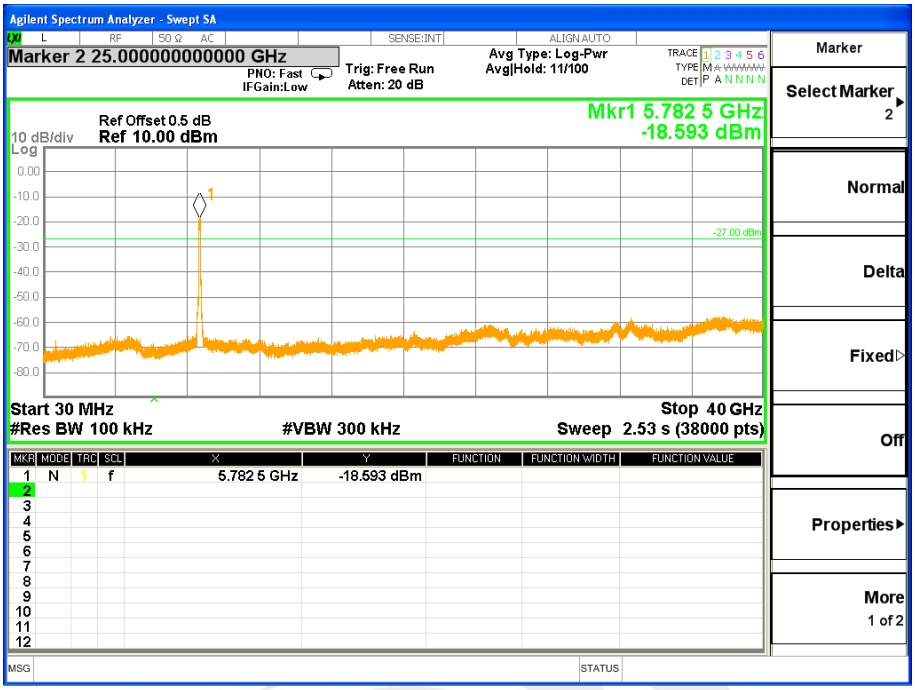


TX Band edge 802.11ac(HT40) Mode CH 159



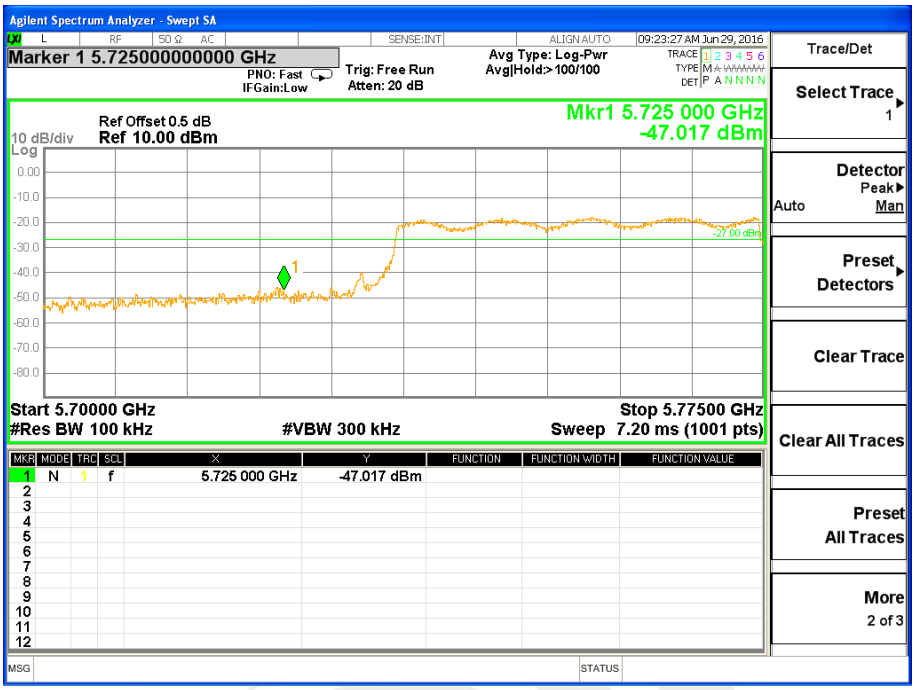
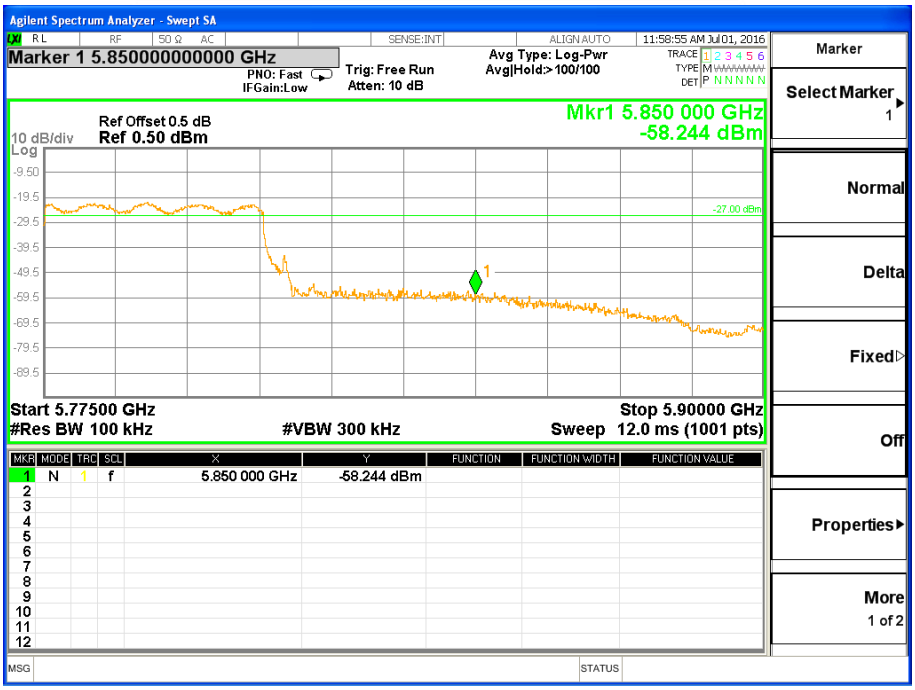
Band IV (5.725-5.85GHz)

TX Spurious Emissions 802.11ac(HT80) Mode CH 155



Band edge

TX Band edge 802.11ac(HT80) Mode CH 155 Left



TX Band edge 802.11ac(HT80) Mode CH 155 Right