



TEST REPORT

FCC ID: 2ADYY-AE10

Product: Mobile Phone

Model No.: AE10

Trade Mark: TECNO

Report No.: WSCT-A2LA-R&E240300009A-Wi-Fi2

Issued Date: 11 July 2024

Issued for:

TECNO MOBILE LIMITED
FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET
FOTAN NT HONGKONG

Issued By:

World Standardization Certification & Testing Group(Shenzhen) Co., Ltd.

Building A-B, Baoshi Science & Technology Park, Baoshi Road,
Bao'an District, Shenzhen, Guangdong, China

TEL: +86-755-26996192

FAX: +86-755-86376605



Note: The results contained in this report pertain only to the tested sample. This report shall not be reproduced, except in full, without written approval of World Standardization Certification & Testing Group(Shenzhen) Co., Ltd. This report must not be used by the client to claim product certification, approval, or any agency of the U.S. Government.





TABLE OF CONTENTS

1 TEST CERTIFICATION	3
2 EUT DESCRIPTION	4
3 TEST DESCRIPTION	5
3.1 MEASUREMENT UNCERTAINTY	5
3.2 TEST ENVIRONMENT AND MODE	6
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	7
3.4 DESCRIPTION OF SUPPORT UNITS (CONDUCTED MODE)	8
4 SUMMARY OF TEST RESULTS	9
5 MEASUREMENT INSTRUMENTS	10
6 FACILITIES AND ACCREDITATIONS	11
6.1 FACILITIES	11
6.2 ACCREDITATIONS	11
7 TEST RESULTS AND MEASUREMENT DATA	12
7.1 CONDUCTED EMISSION MEASUREMENT	12
7.2 DEVIATION FROM TEST STANDARD	13
7.3 RADIATED EMISSION MEASUREMENT	16
7.4 ANTENNA REQUIREMENT	38
7.5 EMISSION BANDWIDTH	39
7.6 MAXIMUM CONDUCTED OUTPUT POWER	78
7.7 POWER SPECTRAL DENSITY	152
7.8 FREQUENCY STABILITY	225
7.9 BAND EDGE EMISSIONS	261
7.10 DYNAMIC FREQUENCY SELECTION (DFS)	299
8 TEST SETUP PHOTOGRAPHS	310



1 Test Certification

Product:	Mobile Phone
Model No.:	AE10
Additional Model:	TECNO
Applicant:	TECNO MOBILE LIMITED FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Manufacturer:	TECNO MOBILE LIMITED FLAT N 16/F BLOCK B UNIVERSAL INDUSTRIAL CENTRE 19-25 SHAN MEI STREET FOTAN NT HONGKONG
Date of receipt:	14 February 2024
Date of Test:	15 February 2024 to 11 July 2024
Applicable Standards:	FCC CFR Title 47 FCC Part 15 Subpart E

The above equipment has been tested by World Standardization Certification & Testing Group(Shenzhen)Co., Ltd. and found compliance with the requirements set forth in the technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Tested By: Wang Xiang
(Wang Xiang)

Checked By: Qin Shuiquan
(Qin Shuiquan)

Approved By: Liu Fuxin
(Liu Fuxin)

Date: 11 July 2024





2 EUT Description

Product:	Mobile Phone
Model No.:	AE10
Trade Mark:	TECNO
Software version:	AE10-H833A-U-OP-240421V2267
Hardware version:	V2.0
Operation Frequency:	Band 1: 5180-5240 MHz Band 2: 5260-5320 MHz Band 3: 5500-5700 MHz Band 4: 5745-5825 MHz
Modulation type:	IEEE 802.11a/n/ac/ax: OFDM/OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM)
Antenna Type:	FIPA Antenna
Antenna Gain	ANT1: -4.06dBi ANT2: -1.83dBi
Operating Voltage:	Adapter: U700TSA Input: 100-240V~50/60Hz 2.0A Output: 5.0V~3.0A 15.0W or 5.0-10.0V~7.0A MAX or 11.0V~6.4A MAX or 4.0-20.0V~3.5A 70.0W MAX Rechargeable Li-ion Polymer Battery Model1: BL-29GT Rated Voltage: 3.86V Rated Capacity: 2973mAh/11.48Wh Typical Capacity: 3043mAh/11.75Wh Limited Charge Voltage: 4.53V Rechargeable Li-ion Polymer Battery Model2: BL-25MT Rated Voltage: 3.86V Rated Capacity: 2637mAh/10.18Wh Typical Capacity: 2707mAh/10.45Wh Limited Charge Voltage: 4.53V
Remark:	N/A.

Note: 1. N/A stands for no applicable.
2. Antenna gain provided by the customer.





3 TEST DESCRIPTION

3.1 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded 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	$\pm 3.2\text{dB}$
2	RF power, conducted	$\pm 0.16\text{dB}$
3	Spurious emissions, conducted	$\pm 0.21\text{dB}$
4	All emissions, radiated(<1GHz)	$\pm 4.7\text{dB}$
5	All emissions, radiated(>1GHz)	$\pm 4.7\text{dB}$
6	Temperature	$\pm 0.5^\circ\text{C}$
7	Humidity	$\pm 2\%$
8	Receiver Spurious Emissions	$\pm 2.5\%$
9	Transmitter Unwanted Emissions in the Spurious Domain	$\pm 2.5\%$
10	Transmitter Unwanted Emission in the out-of Band	$\pm 1.3\%$
11	Occupied Channel Bandwidth	$\pm 2.4\%$





3.2 TEST ENVIRONMENT AND MODE

Operating Environment:

Temperature:	25.0 °C
Humidity:	56 % RH
Atmospheric Pressure:	1010 mbar

Test Mode:

Engineering mode:	Keep the EUT in continuous transmitting by select channel and modulations(The value of duty cycle is 98.46%)
-------------------	--

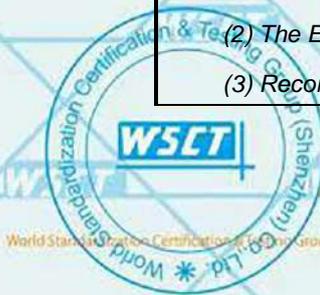
The sample was placed (0.8m below 1GHz, 1.5m above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages. For the full battery state and The output power to the maximum state.

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.

Test Mode	Description
Mode 1	802.11a
Mode 2	802.11n20
Mode 3	802.11n40
Mode 4	802.11ac20
Mode 5	802.11ac40
Mode 6	802.11ac80
Mode 7	802.11ax20
Mode 8	802.11ax40
Mode 9	802.11ax80
Mode 10	802.11ax160

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.





3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

Test program	*##3646633##*							
Mode	Test Frequency (MHz)							
	NCB: 20MHz							
802.11a	5180	5240	5260	5320	5500	5700	5745	5825
802.11n	5180	5240	5260	5320	5500	5700	5745	5825
802.11ac	5180	5240	5260	5320	5500	5700	5745	5825
802.11ax	5180	5240	5260	5320	5500	5700	5745	5825
	NCB: 40MHz							
802.11n	5190	5230	5270	5310	5510	5670	5755	5795
802.11ac	5190	5230	5270	5310	5510	5670	5755	5795
802.11ax	5190	5230	5270	5310	5510	5670	5755	5795
	NCB: 80MHz							
802.11ac	5210	5290	5530	5610	5775			
802.11ax	5210	5290	5530	5610	5775			
	NCB: 160MHz							
802.11ax	5250	5570						





CONFIGURATION OF SYSTEM UNDER TEST



(EUT: Mobile Phone)

3.4 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
1	Adapter	/	U700TSA	/	/
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.





4 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.





5 MEASUREMENT INSTRUMENTS

NAME OF EQUIPMENT	MANUFACTURER	MODEL	SERIAL NUMBER	Calibration Date	Calibration Due.
Test software	--	EZ-EMC	CON-03A	-	-
Test software	--	MTS8310	-	-	-
EMI Test Receiver	R&S	ESCI	100005	11/05/2023	11/04/2024
LISN	AFJ	LS16	16010222119	11/05/2023	11/04/2024
LISN(EUT)	Mestec	AN3016	04/10040	11/05/2023	11/04/2024
Universal Radio Communication Tester	R&S	CMU 200	1100.0008.02	11/05/2023	11/04/2024
Coaxial cable	Megalon	LMR400	N/A	11/05/2023	11/04/2024
GPIOB cable	Megalon	GPIOB	N/A	11/05/2023	11/04/2024
Spectrum Analyzer	R&S	FSU	100114	11/05/2023	11/04/2024
Pre Amplifier	H.P.	HP8447E	2945A02715	11/05/2023	11/04/2024
Pre-Amplifier	CDSI	PAP-1G18-38	--	11/05/2023	11/04/2024
Bi-log Antenna	SUNOL Sciences	JB3	A021907	11/05/2023	11/04/2024
9*6*6 Anechoic	--	--	--	11/05/2023	11/04/2024
Horn Antenna	COMPLIANCE ENGINEERING	CE18000	--	11/05/2023	11/04/2024
Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-631	11/05/2023	11/04/2024
Cable	TIME MICROWAVE	LMR-400	N-TYPE04	11/05/2023	11/04/2024
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	-	11/05/2023	11/04/2024
Loop Antenna	EMCO	6502	00042960	11/05/2023	11/04/2024
Horn Antenna	SCHWARZBECK	BBHA 9170	1123	11/05/2023	11/04/2024
Power meter	Anritsu	ML2487A	6K00003613	11/05/2023	11/04/2024
Power sensor	Anritsu	MX248XD	--	11/05/2023	11/04/2024
Spectrum Analyzer	Keysight	N9010B	MY60241089	11/05/2023	11/04/2024





6 Facilities and Accreditations

6.1 FACILITIES

All measurement facilities used to collect the measurement data are located at **Building A-B, Baoshi Science & Technology Park, Baoshi Road, Bao'an District, Shenzhen, Guangdong, China of the World Standardization Certification & Testing Group(Shenzhen) CO., LTD**

The sites are constructed in conformance with the requirements of ANSI C63.4 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

6.2 ACCREDITATIONS

China National Accreditation Service for Conformity Assessment (CNAS)

Registration number NO: L3732

American Association for Laboratory Accreditation(A2LA)

Registration NO : 5768.01

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.wsct-cert.com>





7 Test Results and Measurement Data

7.1 CONDUCTED EMISSION MEASUREMENT

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

FREQUENCY (MHz)	Class A (dBuV)		Class B (dBuV)		Standard
	Quasi-peak	Average	Quasi-peak	Average	
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	73.00	60.00	56.00	46.00	FCC
5.0 -30.0	73.00	60.00	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





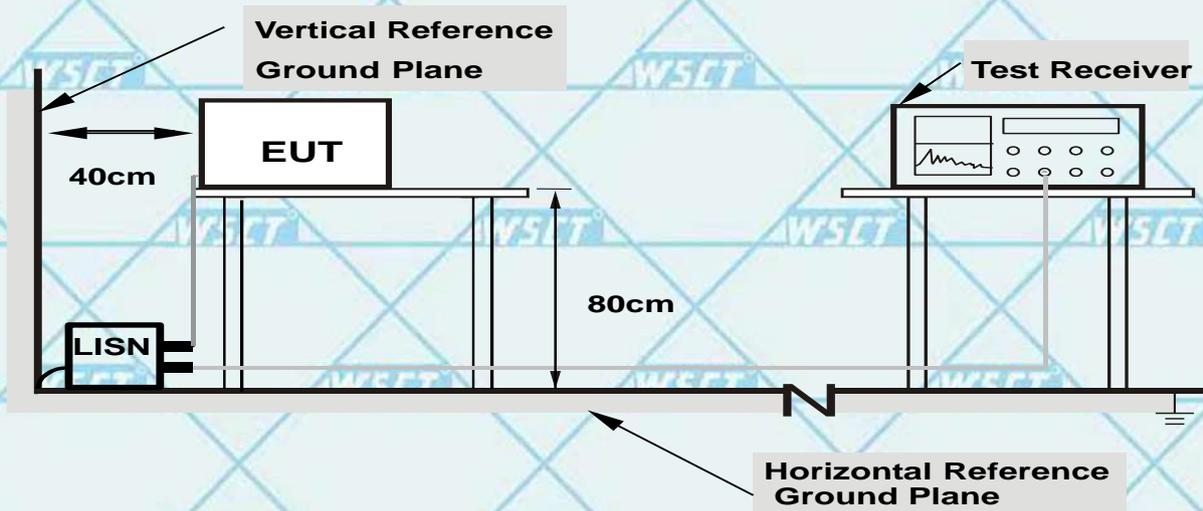
7.1.1 TEST PROCEDURE

- 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.

7.2 DEVIATION FROM TEST STANDARD

No deviation

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

7.2.1 EUT OPERATING CONDITIONS

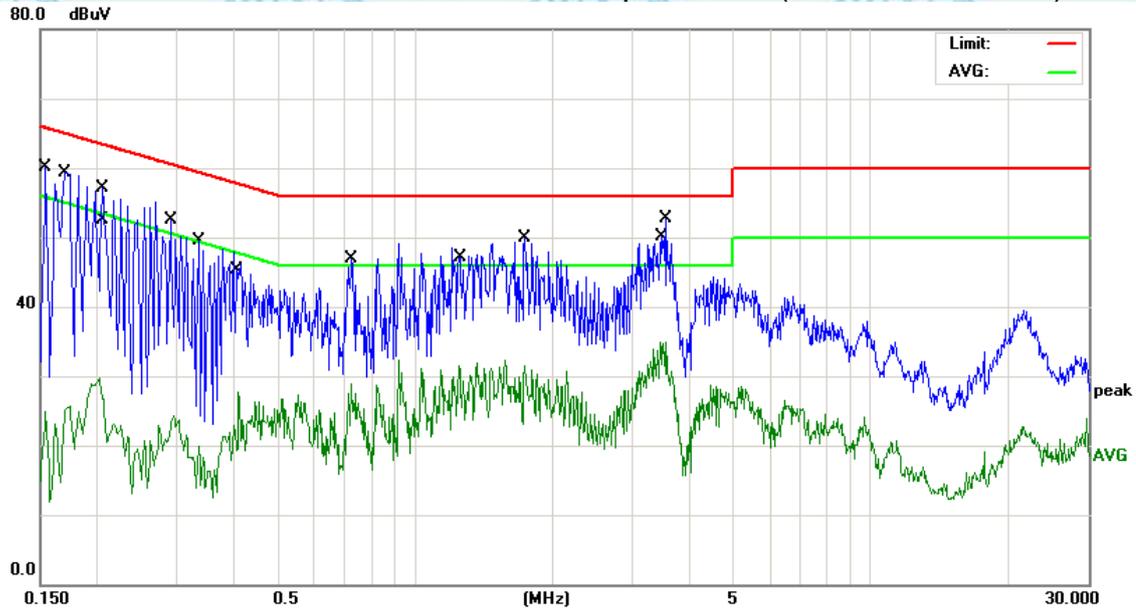
The EUT is working in the Normal link mode. All modes have been tested and normal link mode is worst.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.



7.2.2 TEST RESULTS

Conducted Emission on Line Terminal of the power line (150 kHz to 30MHz)-worst



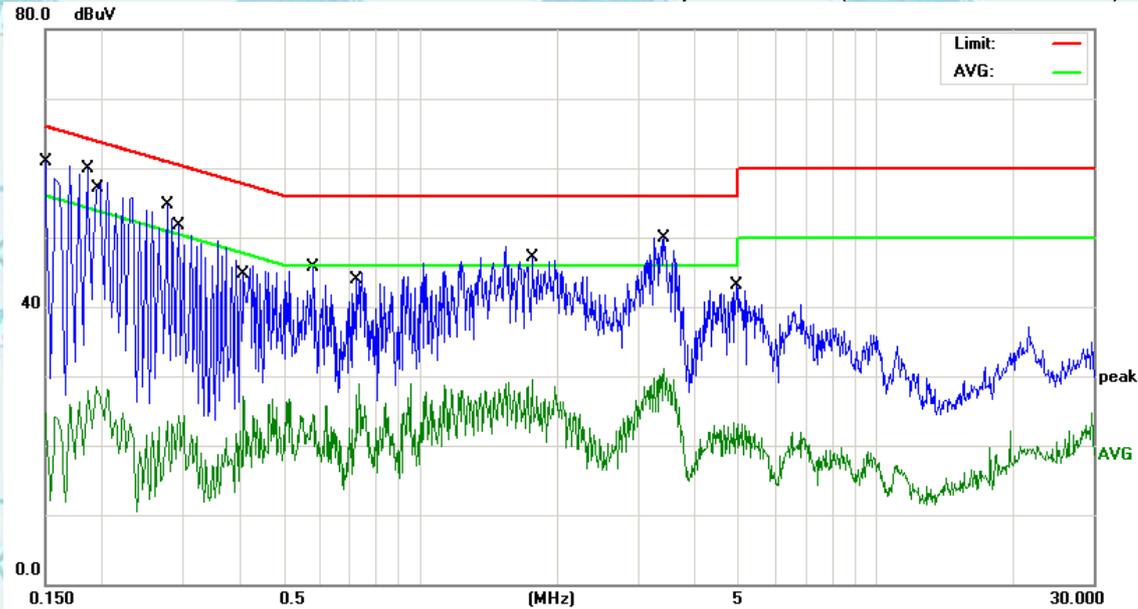
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1539	49.77	10.41	60.18	65.78	-5.60	QP
2		0.1700	48.94	10.41	59.35	64.96	-5.61	QP
3		0.2020	19.21	10.41	29.62	53.52	-23.90	AVG
4		0.2060	46.76	10.41	57.17	63.36	-6.19	QP
5		0.2900	42.08	10.43	52.51	60.52	-8.01	QP
6		0.3339	39.05	10.44	49.49	59.35	-9.86	QP
7		0.4100	17.31	10.45	27.76	47.65	-19.89	AVG
8		0.7220	18.37	10.49	28.86	46.00	-17.14	AVG
9		1.2460	20.95	10.55	31.50	46.00	-14.50	AVG
10		1.7420	20.80	10.62	31.42	46.00	-14.58	AVG
11		3.4460	24.30	10.67	34.97	46.00	-11.03	AVG
12	*	3.5580	41.95	10.68	52.63	56.00	-3.37	QP

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





Conducted Emission on Neutral Terminal of the power line (150 kHz to 30MHz)



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector
1		0.1500	50.41	10.41	60.82	65.99	-5.17	QP
2	*	0.1860	49.44	10.41	59.85	64.21	-4.36	QP
3		0.1940	18.03	10.41	28.44	53.86	-25.42	AVG
4		0.2779	44.32	10.43	54.75	60.88	-6.13	QP
5		0.2940	41.31	10.43	51.74	60.41	-8.67	QP
6		0.4100	16.67	10.45	27.12	47.65	-20.53	AVG
7		0.5820	35.31	10.48	45.79	56.00	-10.21	QP
8		0.7340	18.46	10.49	28.95	46.00	-17.05	AVG
9		1.7540	18.87	10.62	29.49	46.00	-16.51	AVG
10		3.4220	39.16	10.67	49.83	56.00	-6.17	QP
11		3.4220	20.33	10.67	31.00	46.00	-15.00	AVG
12		4.8820	12.57	10.69	23.26	46.00	-22.74	AVG

Note1:

Freq. = Emission frequency in MHz

Reading level (dBuV) = Receiver reading

Corr. Factor (dB) = Antenna factor + Cable loss

Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)

Limit (dBuV) = Limit stated in standard

Margin (dB) = Measurement (dBuV) - Limits (dBuV)

Q.P. = Quasi-Peak AVG = average

* is meaning the worst frequency has been tested in the frequency range 150 kHz to 30MHz.





7.3 RADIATED EMISSION MEASUREMENT

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 (micromvolts/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





7.3.1 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

7.3.2 DEVIATION FROM TEST STANDARD

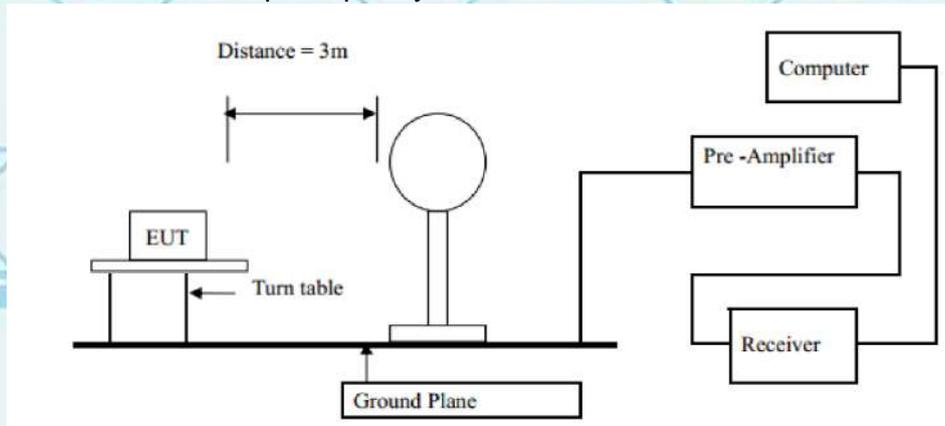
No deviation



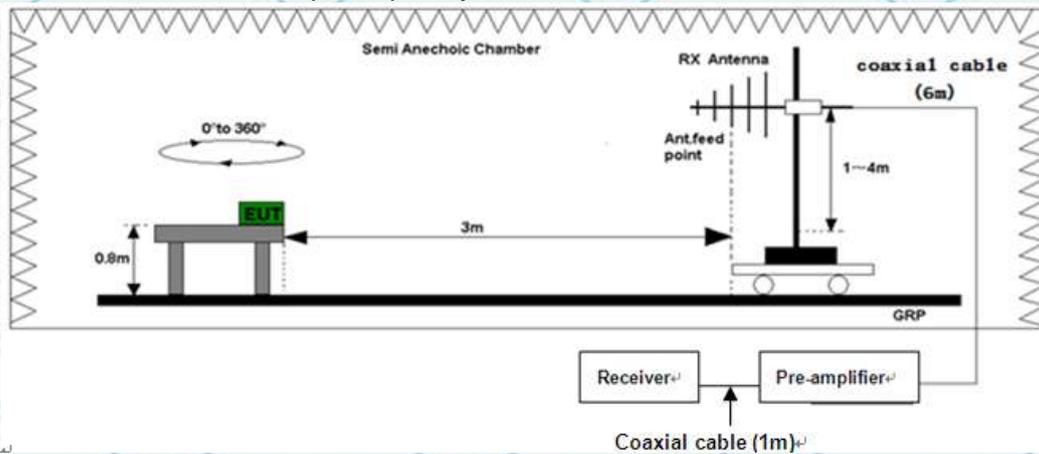


7.3.3 TEST SETUP

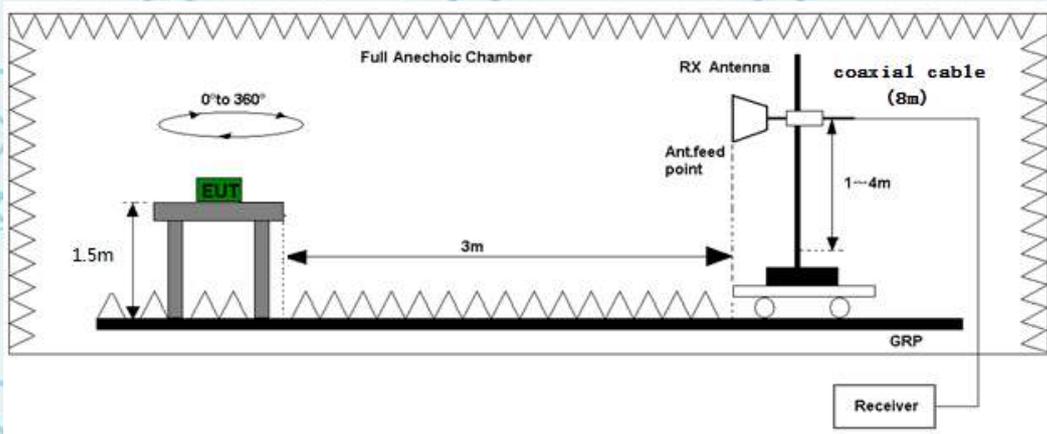
(A) Radiated Emission Test-Up Frequency Below 30MHz



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



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





7.3.4 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.

7.3.5 RESULTS (BELOW 30 MHZ)

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

Note 1: The symbol of "--" in the table which means not application.

Note 2: For the test data above 1 GHz, According the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Note 4: The EUT is working in the Normal link mode below 1 GHz. All modes have been tested and normal link mode is worst.

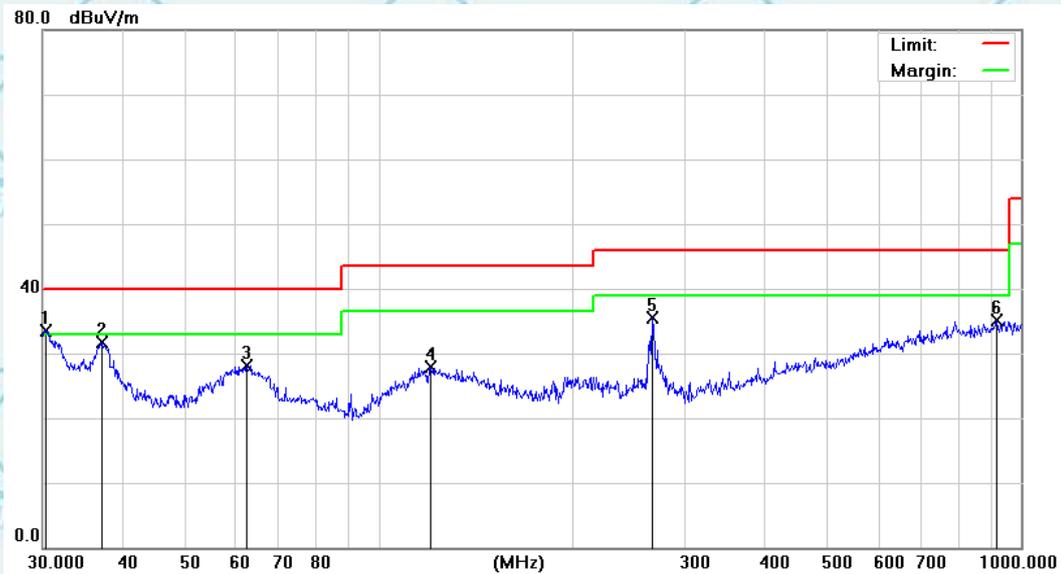




7.3.6 TEST RESULTS (BETWEEN 30M – 1000 MHZ)

Please refer to following diagram for individual
Below 1GHz

Horizontal:



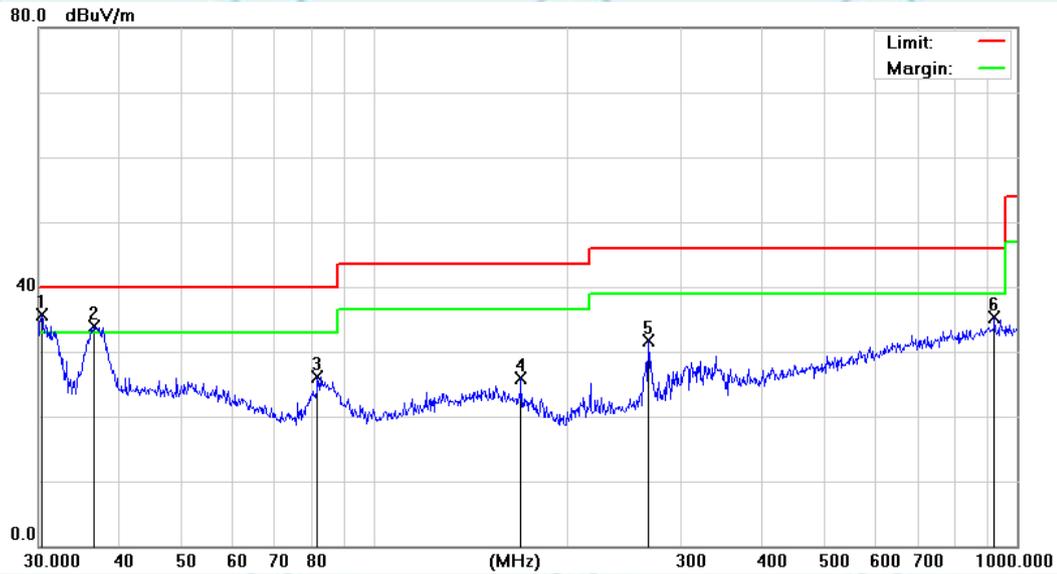
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	30.3173	36.80	-3.20	33.60	40.00	-6.40	QP
2		37.1550	34.07	-2.38	31.69	40.00	-8.31	QP
3		62.2128	31.81	-3.72	28.09	40.00	-11.91	QP
4		120.2766	31.82	-3.97	27.85	43.50	-15.65	QP
5		266.6089	39.20	-3.70	35.50	46.00	-10.50	QP
6		916.0687	27.95	7.22	35.17	46.00	-10.83	QP

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





Vertical:



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measurement dBuV/m	Limit dBuV/m	Over dB	Detector
1	*	30.3173	38.83	-3.20	35.63	40.00	-4.37	QP
2	!	36.6375	36.35	-2.47	33.88	40.00	-6.12	QP
3		81.4970	32.99	-6.85	26.14	40.00	-13.86	QP
4		169.0054	28.61	-2.80	25.81	43.50	-17.69	QP
5		266.6089	35.45	-3.70	31.75	46.00	-14.25	QP
6		922.5157	27.91	7.30	35.21	46.00	-10.79	QP

Note1:

- Freq. = Emission frequency in MHz
- Reading level (dBuV) = Receiver reading
- Corr. Factor (dB) = Antenna factor + Cable loss - Amplifier factor.
- Measurement (dBuV) = Reading level (dBuV) + Corr. Factor (dB)
- Limit (dBuV) = Limit stated in standard
- Margin (dB) = Measurement (dBuV) – Limits (dBuV)



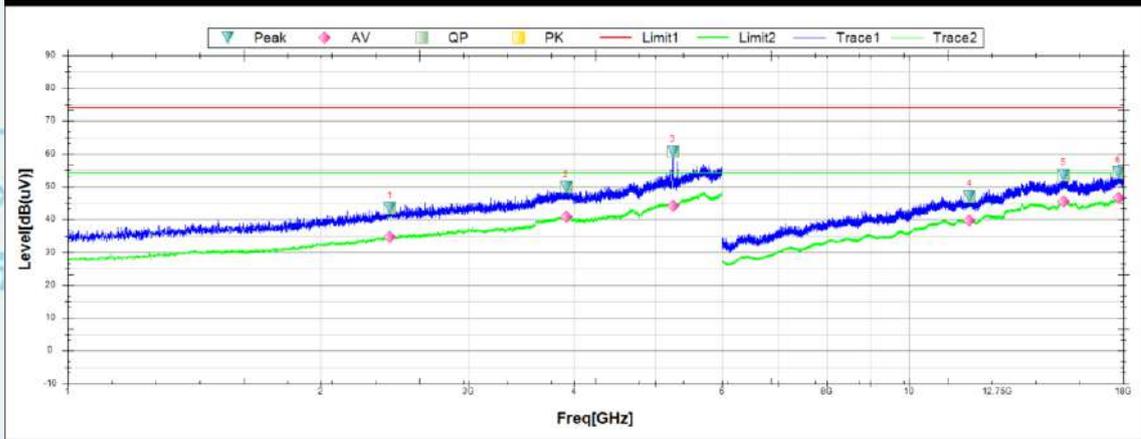


7.3.7 TEST RESULTS (ABOVE 1GHZ)

Note: 1.The spurious above 18G is noise only, do not show on the report.

2. Report and only recorded the worst-case scenario 802.11a.

11a, 1 GHz to 18 GHz, Channel (5180 MHz), ANT H



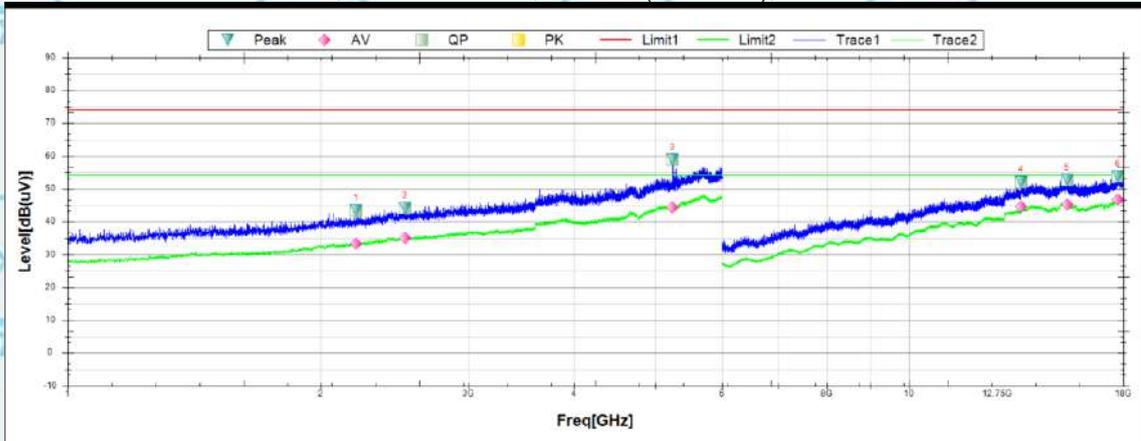
Suspected Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2417.5000	43.54	5.32	38.22	74	-30.46	287.2	Horizontal	PK	Pass
2	3914.3750	49.77	11.32	38.45	74	-24.23	308.8	Horizontal	PK	Pass
3	5246.2500	60.64	17.13	43.51	74	-13.36	6.5	Horizontal	PK	Pass
4	11815.5000	47.1	38.77	8.33	74	-26.9	0	Horizontal	PK	Pass
5	15288.0000	53.52	39.31	14.21	74	-20.48	67.8	Horizontal	PK	Pass
6	17760.0000	54.26	44.89	9.37	74	-19.74	277	Horizontal	PK	Pass

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2417.5000	34.73	5.32	29.41	54	-19.27	287.2	Horizontal	AV	Pass
2	3914.3750	40.8	11.32	29.48	54	-13.2	308.8	Horizontal	AV	Pass
3	5246.2500	44.13	17.13	27	54	-9.87	6.5	Horizontal	AV	Pass
4	11815.5000	39.64	38.77	0.87	54	-14.36	0	Horizontal	AV	Pass
5	15288.0000	45.44	39.31	6.13	54	-8.56	67.8	Horizontal	AV	Pass
6	17760.0000	46.62	44.89	1.73	54	-7.38	277	Horizontal	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5180 MHz), ANT V



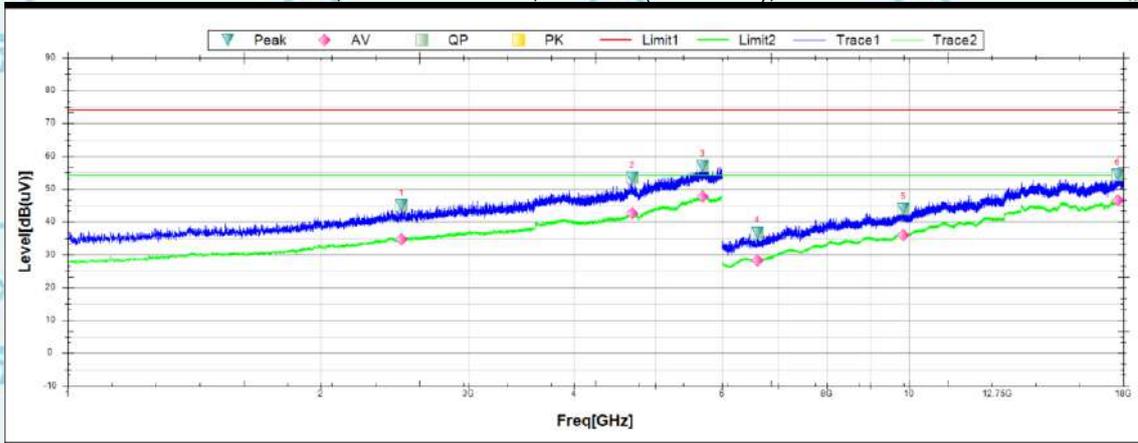
Suspected Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2203.7500	43.51	3.68	39.83	74	-30.49	360	Vertical	PK	Pass
2	2520.6250	44.21	5.75	38.46	74	-29.79	360	Vertical	PK	Pass
3	5243.7500	58.99	17.13	41.86	74	-15.01	66.2	Vertical	PK	Pass
4	13615.5000	52.18	40.5	11.68	74	-21.82	142	Vertical	PK	Pass
5	15432.0000	52.69	38.86	13.83	74	-21.31	352.4	Vertical	PK	Pass
6	17748.0000	53.94	44.81	9.13	74	-20.06	279.4	Vertical	PK	Pass

Final Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2203.7500	33.21	3.68	29.53	54	-20.79	360	Vertical	AV	Pass
2	2520.6250	35.1	5.75	29.35	54	-18.9	360	Vertical	AV	Pass
3	5243.7500	44.32	17.13	27.19	54	-9.68	66.2	Vertical	AV	Pass
4	13615.5000	44.58	40.5	4.08	54	-9.42	142	Vertical	AV	Pass
5	15432.0000	45.13	38.86	6.27	54	-8.87	352.4	Vertical	AV	Pass
6	17748.0000	46.79	44.81	1.98	54	-7.21	279.4	Vertical	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5240 MHz), ANT H



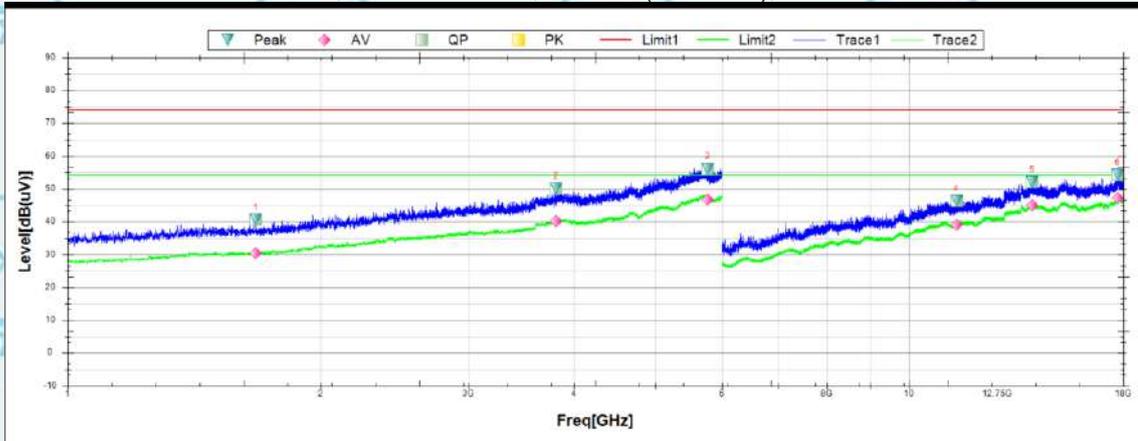
Suspected Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2494.3750	45	5.48	39.52	74	-29	189.3	Horizontal	PK	Pass
2	4693.1250	53.4	14.77	38.63	74	-20.6	17.4	Horizontal	PK	Pass
3	5689.3750	56.96	21	35.96	74	-17.04	279	Horizontal	PK	Pass
4	6607.5000	36.72	34.44	2.28	74	-37.28	353.4	Horizontal	PK	Pass
5	9853.5000	43.99	38	5.99	74	-30.01	348.6	Horizontal	PK	Pass
6	17730.0000	54.22	44.69	9.53	74	-19.78	339.9	Horizontal	PK	Pass

Final Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2494.3750	34.73	5.48	29.25	54	-19.27	189.3	Horizontal	AV	Pass
2	4693.1250	42.66	14.77	27.89	54	-11.34	17.4	Horizontal	AV	Pass
3	5689.3750	47.76	21	26.76	54	-6.24	279	Horizontal	AV	Pass
4	6607.5000	28.27	34.44	-6.17	54	-25.73	353.4	Horizontal	AV	Pass
5	9853.5000	36.05	38	-1.95	54	-17.95	348.6	Horizontal	AV	Pass
6	17730.0000	46.53	44.69	1.84	54	-7.47	339.9	Horizontal	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5240 MHz), ANT V



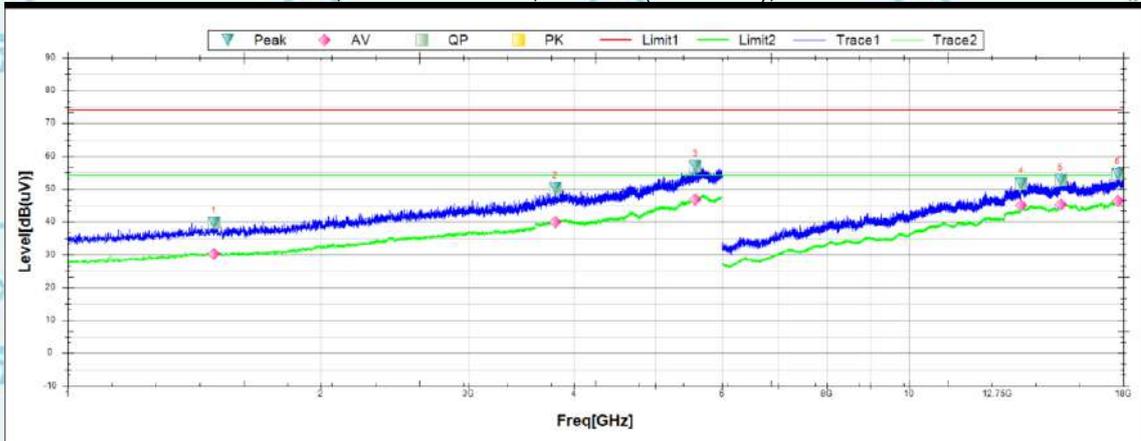
Suspected Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1673.7500	40.54	0.22	40.32	74	-33.46	250.3	Vertical	PK	Pass
2	3810.6250	50.18	10.76	39.42	74	-23.82	1	Vertical	PK	Pass
3	5774.3750	56.17	20.56	35.61	74	-17.83	350.2	Vertical	PK	Pass
4	11403.0000	46.38	39.14	7.24	74	-27.62	295.8	Vertical	PK	Pass
5	14035.5000	52.01	41.45	10.56	74	-21.99	331.7	Vertical	PK	Pass
6	17736.0000	54.31	44.73	9.58	74	-19.69	259.9	Vertical	PK	Pass

Final Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1673.7500	30.36	0.22	30.14	54	-23.64	250.3	Vertical	AV	Pass
2	3810.6250	40.14	10.76	29.38	54	-13.86	1	Vertical	AV	Pass
3	5774.3750	46.78	20.56	26.22	54	-7.22	350.2	Vertical	AV	Pass
4	11403.0000	39.01	39.14	-0.13	54	-14.99	295.8	Vertical	AV	Pass
5	14035.5000	45.11	41.45	3.66	54	-8.89	331.7	Vertical	AV	Pass
6	17736.0000	47.22	44.73	2.49	54	-6.78	259.9	Vertical	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5260 MHz), ANT H



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1493.1250	39.67	-0.37	40.04	74	-34.33	31.6	Horizontal	PK	Pass
2	3799.3750	50.39	10.68	39.71	74	-23.61	200.1	Horizontal	PK	Pass
3	5580.6250	56.89	20.06	36.83	74	-17.11	316.1	Horizontal	PK	Pass
4	13618.5000	51.75	40.51	11.24	74	-22.25	33.2	Horizontal	PK	Pass
5	15162.0000	52.68	39.7	12.98	74	-21.32	290.2	Horizontal	PK	Pass
6	17733.0000	54.46	44.71	9.75	74	-19.54	52.3	Horizontal	PK	Pass

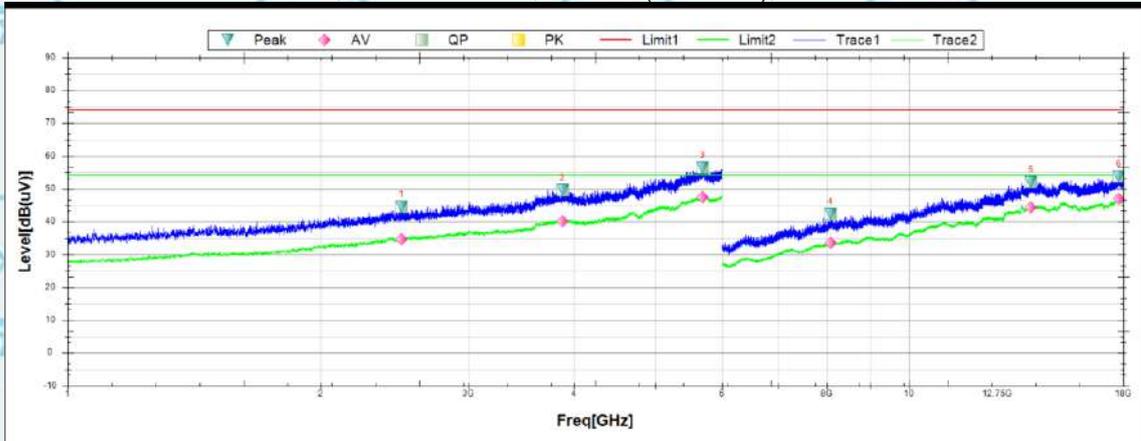
Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1493.1250	30.26	-0.37	30.63	54	-23.74	31.6	Horizontal	AV	Pass
2	3799.3750	39.86	10.68	29.18	54	-14.14	200.1	Horizontal	AV	Pass
3	5580.6250	46.77	20.06	26.71	54	-7.23	316.1	Horizontal	AV	Pass
4	13618.5000	44.97	40.51	4.46	54	-9.03	33.2	Horizontal	AV	Pass
5	15162.0000	45.18	39.7	5.48	54	-8.82	290.2	Horizontal	AV	Pass
6	17733.0000	46.32	44.71	1.61	54	-7.68	52.3	Horizontal	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5260 MHz), ANT V



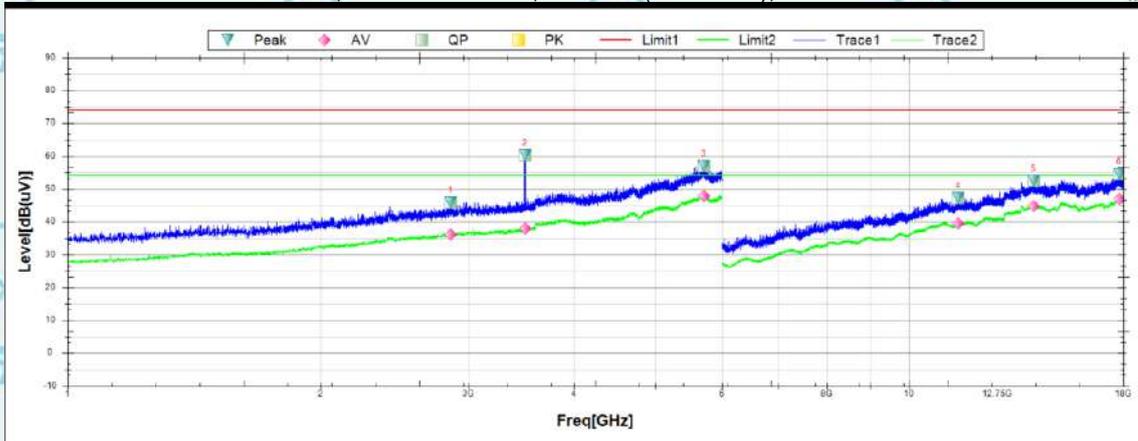
Susputed Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2495.6250	44.62	5.5	39.12	74	-29.38	4.6	Vertical	PK	Pass
2	3875.6250	49.69	11.12	38.57	74	-24.31	75.8	Vertical	PK	Pass
3	5690.6250	56.4	21.01	35.39	74	-17.6	191.8	Vertical	PK	Pass
4	8077.5000	42.33	37.03	5.3	74	-31.67	238.8	Vertical	PK	Pass
5	13977.0000	52.01	41.44	10.57	74	-21.99	191	Vertical	PK	Pass
6	17785.5000	53.8	45.06	8.74	74	-20.2	1.9	Vertical	PK	Pass

Final Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2495.6250	34.72	5.5	29.22	54	-19.28	4.6	Vertical	AV	Pass
2	3875.6250	40.12	11.12	29	54	-13.88	75.8	Vertical	AV	Pass
3	5690.6250	47.54	21.01	26.53	54	-6.46	191.8	Vertical	AV	Pass
4	8077.5000	33.55	37.03	-3.48	54	-20.45	238.8	Vertical	AV	Pass
5	13977.0000	44.42	41.44	2.98	54	-9.58	191	Vertical	AV	Pass
6	17785.5000	47.07	45.06	2.01	54	-6.93	1.9	Vertical	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5320 MHz), ANT H



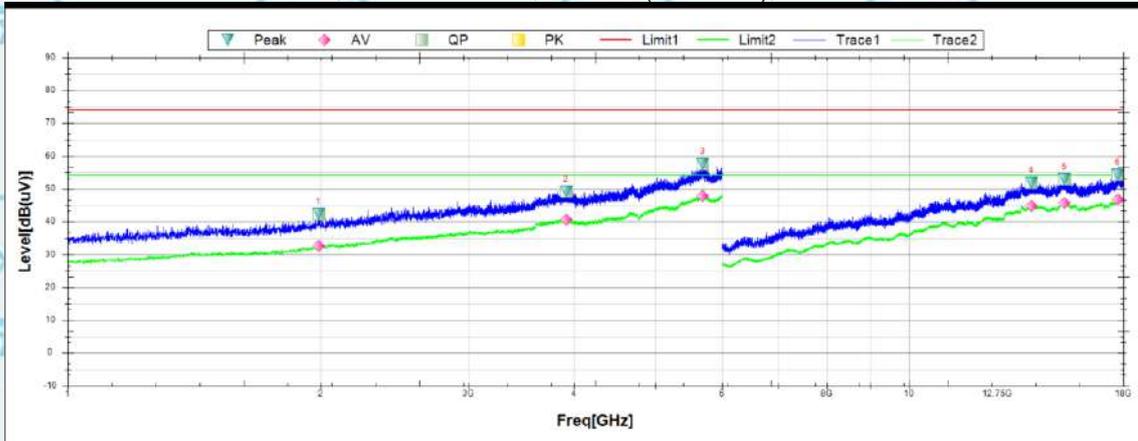
Suspected Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2852.5000	45.95	7.13	38.82	74	-28.05	12.1	Horizontal	PK	Pass
2	3498.1250	60.29	9.68	50.61	74	-13.71	114.1	Horizontal	PK	Pass
3	5714.3750	56.94	21.2	35.74	74	-17.06	274.2	Horizontal	PK	Pass
4	11460.0000	47.31	39.09	8.22	74	-26.69	270	Horizontal	PK	Pass
5	14088.0000	52.46	41.39	11.07	74	-21.54	344.3	Horizontal	PK	Pass
6	17796.0000	54.48	45.13	9.35	74	-19.52	180.3	Horizontal	PK	Pass

Final Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2852.5000	36.22	7.13	29.09	54	-17.78	12.1	Horizontal	AV	Pass
2	3498.1250	37.89	9.68	28.21	54	-16.11	114.1	Horizontal	AV	Pass
3	5714.3750	47.89	21.2	26.69	54	-6.11	274.2	Horizontal	AV	Pass
4	11460.0000	39.52	39.09	0.43	54	-14.48	270	Horizontal	AV	Pass
5	14088.0000	44.74	41.39	3.35	54	-9.26	344.3	Horizontal	AV	Pass
6	17796.0000	46.94	45.13	1.81	54	-7.06	180.3	Horizontal	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5320 MHz), ANT V



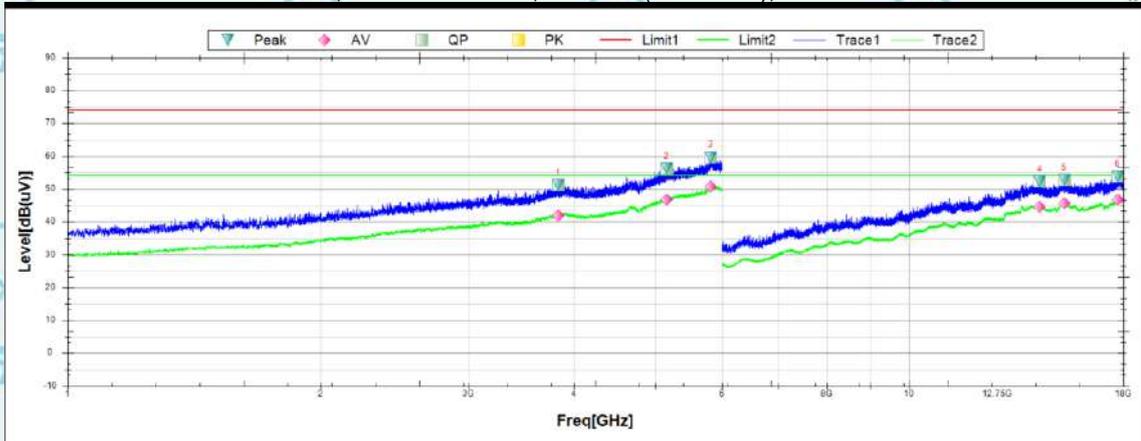
Suspected Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	1987.5000	42.37	2.25	40.12	74	-31.63	197.7	Vertical	PK	Pass
2	3915.0000	49.21	11.33	37.88	74	-24.79	188.2	Vertical	PK	Pass
3	5691.8750	57.6	21.03	36.57	74	-16.4	181	Vertical	PK	Pass
4	13987.5000	51.93	41.47	10.46	74	-22.07	347	Vertical	PK	Pass
5	15331.5000	53.04	39.17	13.87	74	-20.96	208.9	Vertical	PK	Pass
6	17739.0000	54.2	44.75	9.45	74	-19.8	273.4	Vertical	PK	Pass

Final Data List											
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	Last
1	1987.5000	32.6	2.25	30.35	54	-21.4	197.7	Vertical	AV	Pass	
2	3915.0000	40.62	11.33	29.29	54	-13.38	188.2	Vertical	AV	Pass	
3	5691.8750	47.79	21.03	26.76	54	-6.21	181	Vertical	AV	Pass	
4	13987.5000	44.78	41.47	3.31	54	-9.22	347	Vertical	AV	Pass	
5	15331.5000	45.65	39.17	6.48	54	-8.35	208.9	Vertical	AV	Pass	
6	17739.0000	46.73	44.75	1.98	54	-7.27	273.4	Vertical	AV	Pass	





11a, 1 GHz to 18 GHz, Channel (5500 MHz), ANT H



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	3830.0000	51.19	10.87	40.32	74	-22.81	313.7	Horizontal	PK	Pass
2	5156.8750	56.19	17.06	39.13	74	-17.81	59	Horizontal	PK	Pass
3	5820.6250	59.69	20.05	39.64	74	-14.31	231.2	Horizontal	PK	Pass
4	14322.0000	52.26	41.08	11.18	74	-21.74	345.6	Horizontal	PK	Pass
5	15316.5000	52.77	39.22	13.55	74	-21.23	151.6	Horizontal	PK	Pass
6	17730.0000	53.89	44.69	9.2	74	-20.11	359.5	Horizontal	PK	Pass

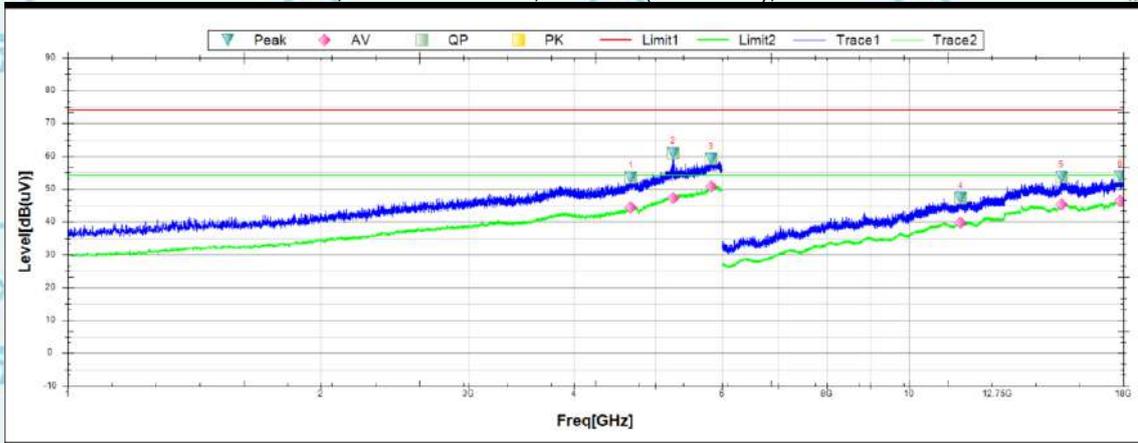
Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB (uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	Last
1	3830.0000	42.02	10.87	31.15	54	-11.98	313.7	Horizontal	AV	Pass	
2	5156.8750	46.82	17.06	29.76	54	-7.18	59	Horizontal	AV	Pass	
3	5820.6250	50.7	20.05	30.65	54	-3.3	231.2	Horizontal	AV	Pass	
4	14322.0000	44.5	41.08	3.42	54	-9.5	345.6	Horizontal	AV	Pass	
5	15316.5000	45.6	39.22	6.38	54	-8.4	151.6	Horizontal	AV	Pass	
6	17730.0000	46.88	44.69	2.19	54	-7.12	359.5	Horizontal	AV	Pass	





11a, 1 GHz to 18 GHz, Channel (5500 MHz), ANT V



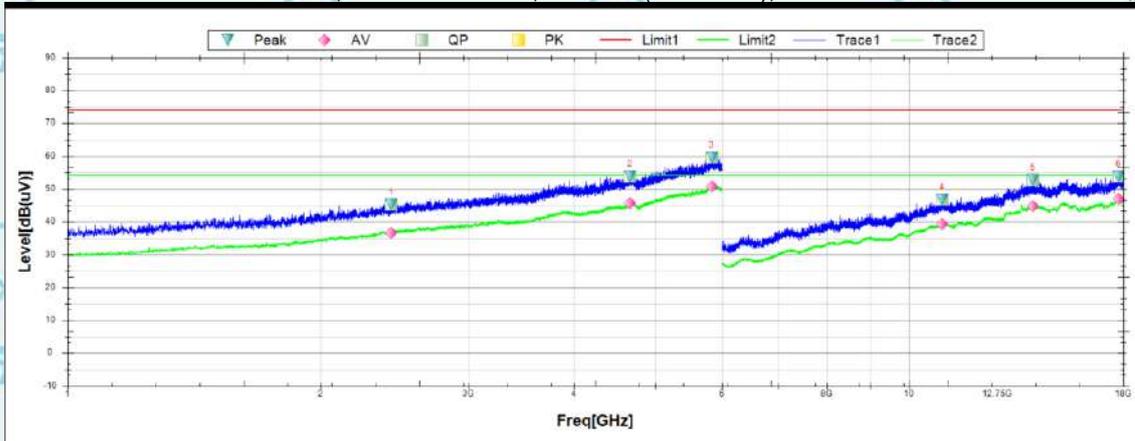
Suspected Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	4674.3750	53.43	14.67	38.76	74	-20.57	355.8	Vertical	PK	Pass
2	5253.7500	60.96	17.13	43.83	74	-13.04	306.6	Vertical	PK	Pass
3	5826.2500	59.19	19.99	39.2	74	-14.81	280.2	Vertical	PK	Pass
4	11533.5000	47.22	39.02	8.2	74	-26.78	0	Vertical	PK	Pass
5	15186.0000	53.72	39.62	14.1	74	-20.28	293.8	Vertical	PK	Pass
6	17850.0000	53.76	45.5	8.26	74	-20.24	192.2	Vertical	PK	Pass

Final Data List											
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	Last
1	4674.3750	44.28	14.67	29.61	54	-9.72	355.8	Vertical	AV	Pass	
2	5253.7500	47.33	17.13	30.2	54	-6.67	306.6	Vertical	AV	Pass	
3	5826.2500	50.69	19.99	30.7	54	-3.31	280.2	Vertical	AV	Pass	
4	11533.5000	39.66	39.02	0.64	54	-14.34	0	Vertical	AV	Pass	
5	15186.0000	45.23	39.62	5.61	54	-8.77	293.8	Vertical	AV	Pass	
6	17850.0000	46.41	45.5	0.91	54	-7.59	192.2	Vertical	AV	Pass	





11a, 1 GHz to 18 GHz, Channel (5700 MHz), ANT H



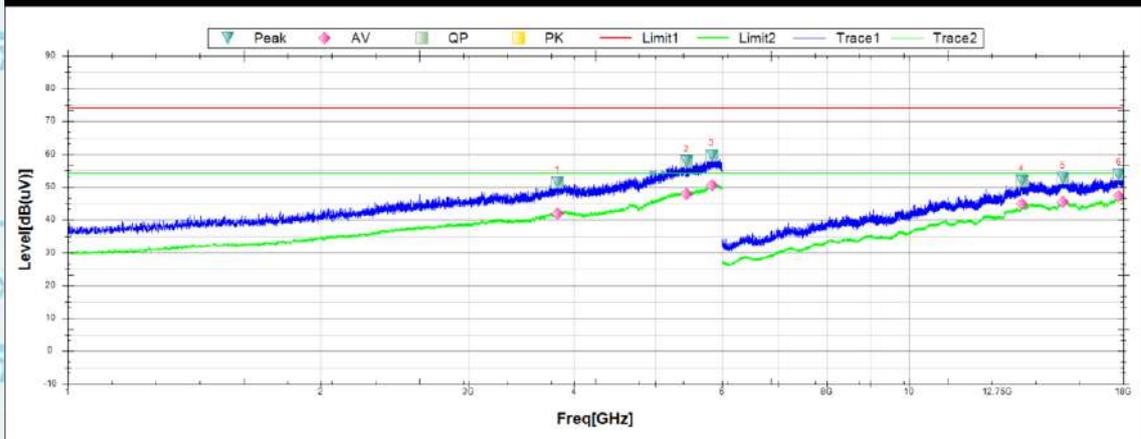
Susputed Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2425.6250	45.3	5.37	39.93	74	-28.7	198.9	Horizontal	PK	Pass
2	4668.1250	53.84	14.62	39.22	74	-20.16	63.8	Horizontal	PK	Pass
3	5834.3750	59.54	20.04	39.5	74	-14.46	187	Horizontal	PK	Pass
4	10957.5000	46.77	39.44	7.33	74	-27.23	13	Horizontal	PK	Pass
5	14061.0000	52.72	41.42	11.3	74	-21.28	43.9	Horizontal	PK	Pass
6	17769.0000	53.79	44.95	8.84	74	-20.21	230.4	Horizontal	PK	Pass

Final Data List										
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2425.6250	36.67	5.37	31.3	54	-17.33	198.9	Horizontal	AV	Pass
2	4668.1250	45.61	14.62	30.99	54	-8.39	63.8	Horizontal	AV	Pass
3	5834.3750	50.79	20.04	30.75	54	-3.21	187	Horizontal	AV	Pass
4	10957.5000	39.21	39.44	-0.23	54	-14.79	13	Horizontal	AV	Pass
5	14061.0000	44.78	41.42	3.36	54	-9.22	43.9	Horizontal	AV	Pass
6	17769.0000	46.98	44.95	2.03	54	-7.02	230.4	Horizontal	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5700 MHz), ANT V



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	3821.8750	51.36	10.82	40.54	74	-22.64	92.6	Vertical	PK	Pass
2	5443.7500	57.88	19.65	38.23	74	-16.12	357	Vertical	PK	Pass
3	5835.6250	59.64	20.05	39.59	74	-14.36	15.6	Vertical	PK	Pass
4	13627.5000	51.83	40.53	11.3	74	-22.17	208.9	Vertical	PK	Pass
5	15250.5000	52.76	39.42	13.34	74	-21.24	350.1	Vertical	PK	Pass
6	17787.0000	53.83	45.07	8.76	74	-20.17	315.3	Vertical	PK	Pass

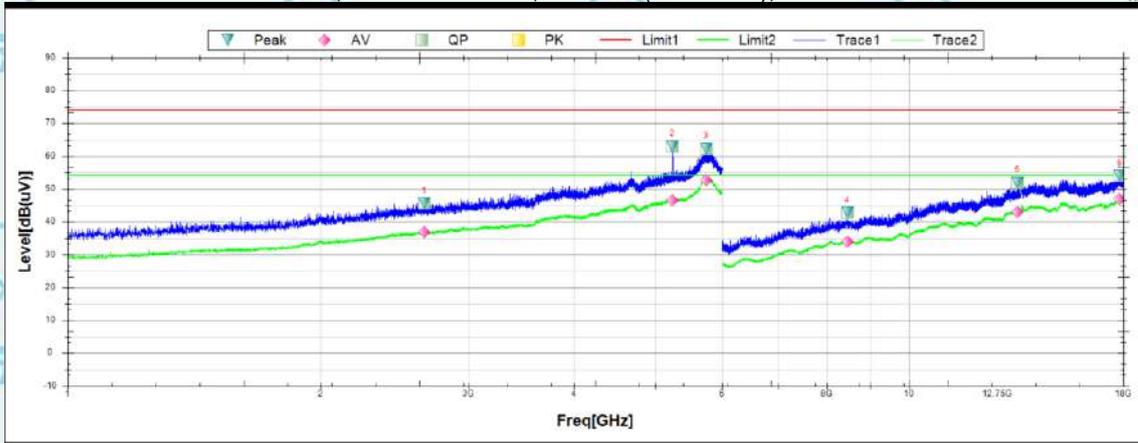
Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	3821.8750	42.01	10.82	31.19	54	-11.99	92.6	Vertical	AV	Pass
2	5443.7500	47.94	19.65	28.29	54	-6.06	357	Vertical	AV	Pass
3	5835.6250	50.58	20.05	30.53	54	-3.42	15.6	Vertical	AV	Pass
4	13627.5000	44.81	40.53	4.28	54	-9.19	208.9	Vertical	AV	Pass
5	15250.5000	45.41	39.42	5.99	54	-8.59	350.1	Vertical	AV	Pass
6	17787.0000	47.29	45.07	2.22	54	-6.71	315.3	Vertical	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5745 MHz), ANT H



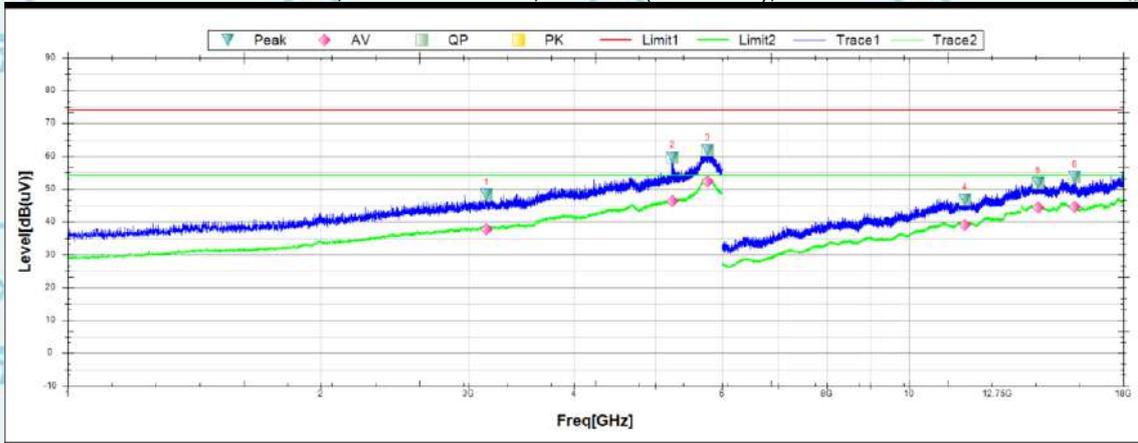
Susputed Data List											
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	
1	2655.6250	45.72	6.15	39.57	74	-28.28	195.1	Horizontal	PK	Pass	
2	5241.2500	63.02	17.12	45.9	74	-10.98	1.7	Horizontal	PK	Pass	
3	5743.7500	62.34	20.89	41.45	74	-11.66	3.1	Horizontal	PK	Pass	
4	8460.0000	42.7	37.18	5.52	74	-31.3	114.4	Horizontal	PK	Pass	
5	13479.0000	51.97	40.15	11.82	74	-22.03	168.2	Horizontal	PK	Pass	
6	17824.5000	54.04	45.32	8.72	74	-19.96	356.6	Horizontal	PK	Pass	

Final Data List											
NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	Last
1	2655.6250	36.88	6.15	30.73	54	-17.12	195.1	Horizontal	AV	Pass	
2	5241.2500	46.59	17.12	29.47	54	-7.41	1.7	Horizontal	AV	Pass	
3	5743.7500	52.68	20.89	31.79	54	-1.32	3.1	Horizontal	AV	Pass	
4	8460.0000	33.93	37.18	-3.25	54	-20.07	114.4	Horizontal	AV	Pass	
5	13479.0000	42.94	40.15	2.79	54	-11.06	168.2	Horizontal	AV	Pass	
6	17824.5000	46.91	45.32	1.59	54	-7.09	356.6	Horizontal	AV	Pass	





11a, 1 GHz to 18 GHz, Channel (5745 MHz), ANT V



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	3147.5000	48.3	8.02	40.28	74	-25.7	254	Vertical	PK	Pass
2	5243.7500	59.68	17.13	42.55	74	-14.32	222.9	Vertical	PK	Pass
3	5771.8750	61.88	20.58	41.3	74	-12.12	1	Vertical	PK	Pass
4	11667.0000	46.75	38.9	7.85	74	-27.25	320.1	Vertical	PK	Pass
5	14257.5000	51.9	41.17	10.73	74	-22.1	91.8	Vertical	PK	Pass
6	15769.5000	53.54	37.81	15.73	74	-20.46	351.4	Vertical	PK	Pass

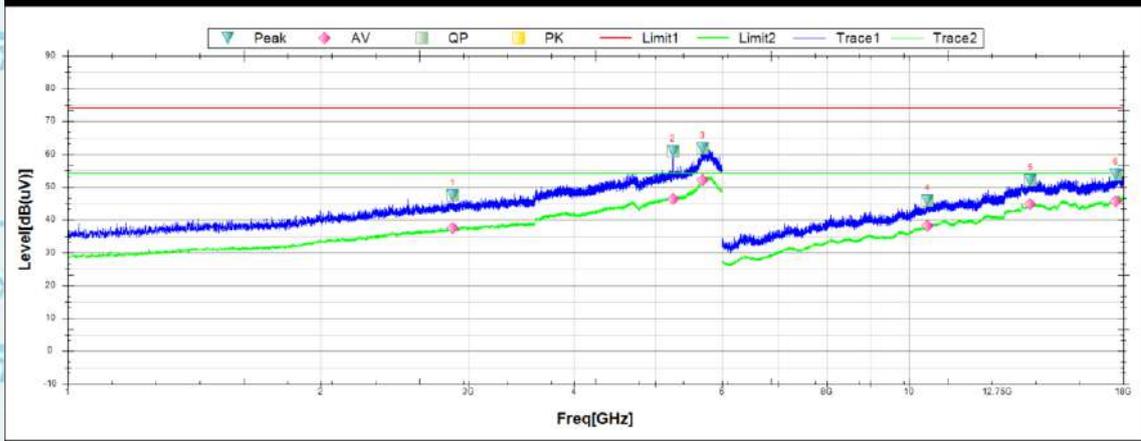
Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	3147.5000	37.74	8.02	29.72	54	-16.26	254	Vertical	AV	Pass
2	5243.7500	46.33	17.13	29.2	54	-7.67	222.9	Vertical	AV	Pass
3	5771.8750	52.41	20.58	31.83	54	-1.59	1	Vertical	AV	Pass
4	11667.0000	38.99	38.9	0.09	54	-15.01	320.1	Vertical	AV	Pass
5	14257.5000	44.45	41.17	3.28	54	-9.55	91.8	Vertical	AV	Pass
6	15769.5000	44.52	37.81	6.71	54	-9.48	351.4	Vertical	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5825 MHz), ANT H



Susputed Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2868.7500	47.37	7.22	40.15	74	-26.63	120.5	Horizontal	PK	Pass
2	5245.6250	60.98	17.13	43.85	74	-13.02	113.4	Horizontal	PK	Pass
3	5689.3750	61.73	21	40.73	74	-12.27	220.9	Horizontal	PK	Pass
4	10537.5000	45.96	38.85	7.11	74	-28.04	178.6	Horizontal	PK	Pass
5	13959.0000	51.98	41.39	10.59	74	-22.02	1.9	Horizontal	PK	Pass
6	17626.5000	53.9	44	9.9	74	-20.1	351.1	Horizontal	PK	Pass

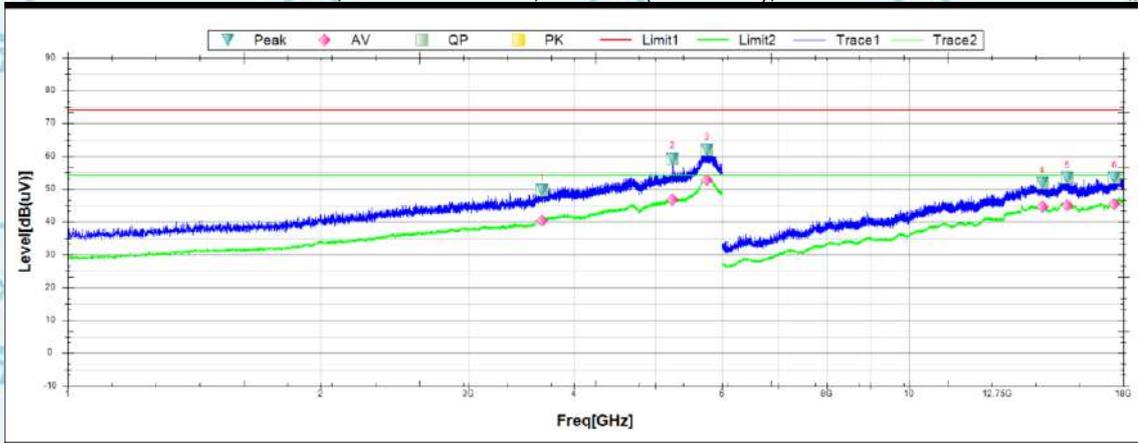
Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	2868.7500	37.4	7.22	30.18	54	-16.6	120.5	Horizontal	AV	Pass
2	5245.6250	46.3	17.13	29.17	54	-7.7	113.4	Horizontal	AV	Pass
3	5689.3750	52.08	21	31.08	54	-1.92	220.9	Horizontal	AV	Pass
4	10537.5000	38.12	38.85	-0.73	54	-15.88	178.6	Horizontal	AV	Pass
5	13959.0000	44.73	41.39	3.34	54	-9.27	1.9	Horizontal	AV	Pass
6	17626.5000	45.63	44	1.63	54	-8.37	351.1	Horizontal	AV	Pass





11a, 1 GHz to 18 GHz, Channel (5825 MHz), ANT V



Suspected Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict
1	3665.6250	49.69	10.32	39.37	74	-24.31	194.6	Vertical	PK	Pass
2	5245.0000	59.26	17.13	42.13	74	-14.74	76.2	Vertical	PK	Pass
3	5762.5000	61.96	20.69	41.27	74	-12.04	277	Vertical	PK	Pass
4	14418.0000	51.86	40.96	10.9	74	-22.14	360	Vertical	PK	Pass
5	15457.5000	53.37	38.78	14.59	74	-20.63	50.6	Vertical	PK	Pass
6	17580.0000	53.48	43.69	9.79	74	-20.52	255	Vertical	PK	Pass

Final Data List

NO.	Freq. [MHz]	Reading [dB(uV)]	Factor [dB]	Level [dB(uV)]	Limit [dB]	Margin [dB]	Deg [°]	Polarity	Trace	Verdict	Last
1	3665.6250	40.33	10.32	30.01	54	-13.67	194.6	Vertical	AV	Pass	
2	5245.0000	46.68	17.13	29.55	54	-7.32	76.2	Vertical	AV	Pass	
3	5762.5000	52.7	20.69	32.01	54	-1.3	277	Vertical	AV	Pass	
4	14418.0000	44.5	40.96	3.54	54	-9.5	360	Vertical	AV	Pass	
5	15457.5000	44.92	38.78	6.14	54	-9.08	50.6	Vertical	AV	Pass	
6	17580.0000	45.47	43.69	1.78	54	-8.53	255	Vertical	AV	Pass	

Note:

1. All emissions not reported were more than 20dB below the specified limit or in the noise floor.
2. Emission Level= Reading Level+ Probe Factor +Cable Loss.
3. Data of measurement within this frequency range shown "--" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
4. EUT has been tested in unfolded states, and the report only reflects data in the unfolded state (worst-case scenario)





7.4 ANTENNA REQUIREMENT

Standard requirement:	The EUT'S antenna is met the requirement of FCC part 15C section 15.203 and FCC part 15E section 15.407.
FCC part 15E 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.	
E.U.T Antenna:	
The Wi-Fi antenna is a FIPA Antenna. it meets the standards, and the best case gain of the antenna is ANT1: -4.06dBi, ANT2: -1.83dBi,	





7.5 EMISSION BANDWIDTH

7.5.1 TEST EQUIPMENT

Please refer to Section 5 this report.

7.5.2 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:	e)Detector: Peak f)Trace: Max Hold g)Sweep Time: Auto
a)Attenuation: Auto b)Span Frequency: > 6dB Bandwidth c)RBW: 100kHz d)VBW: ≥ 3 x RBW	
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 $10\log(500\text{kHz}/\text{RBW})$ 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 $(f_c-f)/f_c \times 106$ ppm and the limit is less than ± 20 ppm (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 $0^{\circ}\text{C}-40^{\circ}\text{C}$
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

7.5.3 CONFIGURATION OF THE EUT

Same as section 3.4 of this report

7.5.4 EUT OPERATING CONDITION

Same as section 3.5 of this report.





7.5.5 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	e)Detector: Peak
b)Span Frequency: > 6dB Bandwidth	f)Trace: Max Hold
c)RBW: 100kHz	g)Sweep Time: Auto
d)VBW: ≥ 3 x RBW	
Maximum Conducted Output Power Measurement:	
<input checked="" type="checkbox"/> 5.15~5.25 GHz	
<input type="checkbox"/> Limit of Outdoor 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).	<input type="checkbox"/> 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.
<input type="checkbox"/> Limit of Fixed point-to-point access points: 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.	<input checked="" type="checkbox"/> Limit of Mobile and portable client devices: 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.
<input checked="" type="checkbox"/> 5.25-5.35 GHz & <input checked="" type="checkbox"/> 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.	
<input checked="" type="checkbox"/> 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	
<input checked="" type="checkbox"/> 5.15~5.25 GHz	
<input type="checkbox"/> Limit of Outdoor access point: 17 dBm/MHz	<input type="checkbox"/> Limit of Indoor access point: 17 dBm/MHz
<input type="checkbox"/> Limit of Fixed point-to-point access points: 17 dBm/MHz	<input checked="" type="checkbox"/> Limit of Mobile and portable client devices: 11 dBm/MHz
<input type="checkbox"/> 5.25-5.35 GHz	11 dBm/MHz
<input type="checkbox"/> 5.470-5.725 GHz	11 dBm/MHz
<input checked="" type="checkbox"/> 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).

7.5.6 TEST RESULT

-26dB Bandwidth and 99% Occupied Bandwidth

Product	: EUT-Sample	Test Mode	: See section 3.4
Test Item	: -26dB Bandwidth/-6dB Bandwidth and 99% Occupied Bandwidth	Temperature	: 25 °C
Test Voltage	: DC 3.86V	Humidity	: 56%RH
Test Result	: PASS		

-26Db&99% Bandwidth

Mode	Frequency (MHz)	-26 dB Bandwidth (MHz)	99%dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
a	5180	20.99	16.462	0.5	Pass
a	5240	20.67	16.478	0.5	Pass
a	5260	20.67	16.487	0.5	Pass
a	5320	20.38	16.481	0.5	Pass
a	5500	20.49	16.464	0.5	Pass
a	5700	20.74	16.499	0.5	Pass
n20	5180	21.65	17.640	0.5	Pass
n20	5240	21.33	17.624	0.5	Pass
n20	5260	21.36	17.678	0.5	Pass
n20	5320	21.56	17.654	0.5	Pass
n20	5500	21.42	17.689	0.5	Pass
n20	5700	21.35	17.647	0.5	Pass
n40	5190	39.53	35.968	0.5	Pass
n40	5230	39.82	36.022	0.5	Pass
n40	5270	40.07	36.070	0.5	Pass
n40	5310	39.75	35.963	0.5	Pass
n40	5510	39.37	35.965	0.5	Pass
n40	5670	40.28	35.996	0.5	Pass
ac20	5180	22.40	17.654	0.5	Pass
ac20	5240	21.75	17.659	0.5	Pass
ac20	5260	21.75	17.646	0.5	Pass
ac20	5320	21.28	17.652	0.5	Pass
ac20	5500	21.50	17.636	0.5	Pass
ac20	5700	21.28	17.652	0.5	Pass
ac40	5190	39.62	35.953	0.5	Pass
ac40	5230	39.46	35.020	0.5	Pass
ac40	5270	39.93	36.044	0.5	Pass
ac40	5310	39.45	35.968	0.5	Pass
ac40	5510	40.16	35.998	0.5	Pass
ac40	5670	39.77	35.959	0.5	Pass
ac80	5210	78.72	75.709	0.5	Pass
ac80	5290	79.04	75.690	0.5	Pass
ac80	5530	79.25	75.596	0.5	Pass
ac80	5610	78.95	75.683	0.5	Pass
ax20	5180	21.98	18.869	0.5	Pass





Report No.: WSCT-A2LA-R&E240300009A-Wi-Fi2

Certificate #5768.01

For Question, Please Contact with WSCT
wsct-cert.com

ax20	5240	21.35	18.847	0.5	Pass
ax20	5260	21.29	18.890	0.5	Pass
ax20	5320	21.69	18.854	0.5	Pass
ax20	5500	21.36	18.830	0.5	Pass
ax20	5700	21.62	18.878	0.5	Pass
ax40	5190	39.02	37.533	0.5	Pass
ax40	5230	39.13	37.646	0.5	Pass
ax40	5270	39.29	37.521	0.5	Pass
ax40	5310	39.28	37.534	0.5	Pass
ax40	5510	39.17	37.615	0.5	Pass
ax40	5670	39.39	37.594	0.5	Pass
ax80	5210	78.98	77.369	0.5	Pass
ax80	5290	79.42	77.233	0.5	Pass
ax80	5530	79.07	77.274	0.5	Pass
ax80	5610	79.28	77.129	0.5	Pass
ax160	5250	159.1	155.98	0.5	Pass
ax160	5570	159.1	156.08	0.5	Pass

-6dB&99% Bandwidth

Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	99%dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
a	5745	15.30	16.345	0.5	Pass
a	5825	16.02	16.348	0.5	Pass
n20	5745	12.54	17.550	0.5	Pass
n20	5825	15.07	17.542	0.5	Pass
n40	5755	32.45	35.918	0.5	Pass
n40	5795	33.87	35.943	0.5	Pass
ac20	5745	16.89	17.543	0.5	Pass
ac20	5825	15.39	17.538	0.5	Pass
ac40	5755	31.33	35.921	0.5	Pass
ac40	5795	35.31	35.937	0.5	Pass
ac80	5775	75.73	75.620	0.5	Pass
ax20	5745	17.25	18.794	0.5	Pass
ax20	5825	18.21	18.811	0.5	Pass
ax40	5755	30.90	37.503	0.5	Pass
ax40	5795	35.10	37.540	0.5	Pass
ax80	5775	77.59	77.242	0.5	Pass





-26Db&99% Bandwidth

Test Graphs

-26dB Bandwidth NVNT a 5180MHz



-26dB Bandwidth NVNT a 5240MHz



