





FCC C2PC Test Report

FCC ID : SQG-SSD45N

Equipment : Radio Module

Model No. : SSD45N

Brand Name : Laird Connectivity

Applicant : Laird Connectivity LLC

Address : W66N220 Commerce Court, Cedarburg, WI

53012 United States Of America

Standard : 47 CFR FCC Part 15.407

Received Date : Mar. 07, 2022

Tested Date : Apr. 01 ~ Apr. 18, 2022

We, International Certification Corporation, would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: Approved by:

Along Cheld/ Assistant Manager Gary C

Gary Chang / Manager⊾

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Appendix A. Conducted Output Power

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Release Record

Report No.	Version	Description	Issued Date
FR442904-09AN	Rev. 01	Initial issue	May 18, 2022

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Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	AC Power Line Conducted Emissions	[dBuV]: 19.428MHz 40.94 (Margin -19.06dB) - AV	Pass
15.407(b) 15.209	Unwanted Emissions	[dBuV/m at 3m]: 5725.00MHz 66.58 (Margin -1.62dB) - PK	Pass
15.407(a)	Conducted Output Power	Max Power [dBm]: 5150~5250MHz: 16.38 5250~5350MHz: 16.36 5470~5725MHz: 17.64 5725~5850MHz: 18.07	Pass

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

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1 General Description

1.1 Information

This report is issued as a FCC Class II Permissive Change.

This report is issued as a supplementary report to original ICC report no. FR442904-07AN. The difference is concerned with following items:

- ♦ New applicant name & address.
- ♦ New brand name.
- Power Amplifer, Diplexer and RF Shielding Can changed.

Related test items had been performed and recorded in the following sections. Other test results were kept as same as mentioned on original report.

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information							
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N⊤x)	Data Rate / MCS		
5150-5250 5250-5350 5470-5725 5725-5850	а	5180-5240 5260-5320 5500-5700 5745-5825	36-48 [4] 52-64 [4] 100-140 [11] 149-165 [5]	1	6-54 Mbps		
5150-5250 5250-5350 5470-5725 5725-5850	n (HT20)	5180-5240 5260-5320 5500-5700 5745-5825	36-48 [4] 52-64 [4] 100-140 [11] 149-165 [5]	1	MCS 0-7		

Note 1: RF output power specifies that Maximum Conducted Output Power.

Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.

Note 3: 802.11n supports HT20 only

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1.1.2 Antenna Details

Ant.	Brand / Model	Туре	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)				
No.	Brand / Moder	турс	Connector	2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850
1	MAG.LAYERS EDA-1513-25GR2-B 2-CY	Dipole	SMA Jack Reverse	2	2	2	2	2
2	MAG.LAYERS PCA-4606-2G4C1-A 13-CY	PCB Dipole	UFL	2.21				
3	Larid NanoBlade-IP04	PCB Dipole	UFL	2	3.9	3.9	4	4
4	Larid MAF95310 Mini NanoBlade Flex	PCB Dipole	UFL	2.79	3.38	3.38	3.38	3.38
5	Laird NanoBlue-IP04	PCB Dipole	UFL	2				
6	Ethertronics WLAN_1000146	PIFA	UFL	2.5	3.5	3.5	3.5	3.5
7	SAA / MG7018-41-000-R	Dipole	UFL	1.87	0.85	0.6	0.94	0.92
8	SAA / MG7324-41-000-R	Dipole	UFL	1.32	1.04	1.6	2.75	2.24
9	EMF2449A1-33UFL	PCB Dipole	UFL	0.8	3.3	3.3	3.3	3.3

Note: The antennas with highest gain of each type were selected for final testing in this test report

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from power supply
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1.1.4 Accessories

N/A

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1.1.5 Channel List

802.11 a / HT20					
Channel	Frequency(MHz)				
36	5180				
40	5200				
44	5220				
48	5240				
52	5260				
56	5280				
60	5300				
64	5320				
100	5500				
104	5520				
108	5540				
112	5560				
116	5580				
120	5600				
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
149	5745				
153	5765				
157	5785				
161	5805				
165	5825				

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1.1.6 Test Tool and Duty Cycle

Test Tool	Terminal, Version: 2.32.1				
	Mode	Duty Cycle (%)	Duty Factor (dB)		
Duty Cycle and Duty Factor	11a	99.26	0.03		
	HT20	99.62	0.02		

1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
11a	5180	14.5
11a	5200	14.5
11a	5240	15.5
11a	5260	16
11a	5300	16
11a	5320	15.5
11a	5500	14.5
11a	5580	17
11a	5700	14.5
11a	5745	15.5
11a	5785	18
11a	5825	18.5
HT20	5180	14
HT20	5200	14
HT20	5240	15.5
HT20	5260	15.5
HT20	5300	15.5
HT20	5320	15
HT20	5500	14.5
HT20	5580	17
HT20	5700	14.5
HT20	5745	15.5
HT20	5785	18
HT20	5825	17

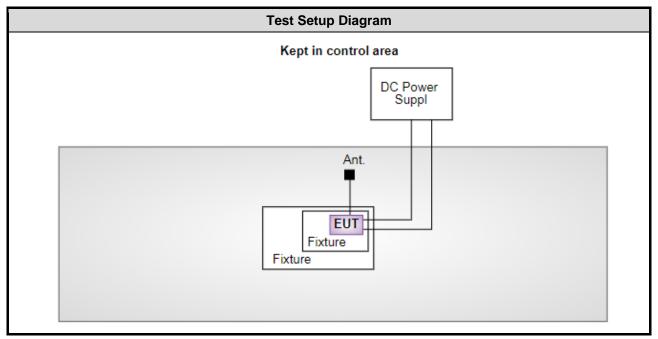
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1.2 Local Support Equipment List

	Support Equipment List								
No.	Equipment	Brand	Model	FCC ID	Remarks				
1	DC Power Supply	GWINSTEK	GPC-3060D						
2	Notebook	Lenovo	X61		Provided by applicant.				
3	DC Cable (x2)	ICC	DCC-10m-R						
4	USB - RS232-G	Pro-BEST	MK-CBL-BF810 USB						
5	Fixture				Provided by applicant.				

1.3 Test Setup Chart



Note: The notebook and USB - RS232-G are disconnected from EUT and removed from test table when EUT is set to transmit continuously.

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1.4 The Equipment List

Test Item	Conducted Emission								
Test Site	Conduction room 1 / (0	Conduction room 1 / (CO01-WS)							
Tested Date	Apr. 13, 2022	Apr. 13, 2022							
Instrument	Brand	Model No.	Serial No.	Calibration Date	Calibration Until				
Receiver	R&S	ESR3	101658	Feb. 16, 2022	Feb. 15, 2023				
LISN	R&S	ENV216	101295	Jan. 12, 2022	Jan. 11, 2023				
LISN (Support Unit)	SCHWARZBECK	NSLK 8127	8127667	Jan .07, 2022	Jan .06, 2023				
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 19, 2021	Oct. 18, 2022				
50 ohm terminal (Support Unit)	NA	50	04	May 25, 2021	May 24, 2022				
Measurement Software AUDIX e3 6.120210k NA NA NA									

Test Item	Radiated Emission						
Test Site	966 chamber3 / (03Cl	H03-WS)					
Tested Date	Apr. 01, 2022						
Instrument	Brand Model No. Serial No. Calibration Date Calibration Un						
Receiver	R&S	ESR3	101657	Mar. 15, 2022	Mar. 14, 2023		
Spectrum Analyzer	R&S	FSV40	101499	Mar. 08, 2022	Mar. 07, 2023		
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 08, 2021	Nov. 07, 2022		
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	May 06, 2021	May 05, 2022		
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Dec. 20, 2021	Dec. 19, 2022		
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170508	Jan. 11, 2022	Jan. 10, 2023		
Preamplifier	EMC	EMC02325	980187	Jul. 26, 2021	Jul. 25, 2022		
Preamplifier	Agilent	83017A	MY39501309	Sep. 06, 2021	Sep. 05, 2022		
Preamplifier	EMC	EMC184045B	980192	Jul. 14, 2021	Jul. 13, 2022		
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 05, 2021	Oct. 04, 2022		
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800 -001	Sep. 24, 2021	Sep. 23, 2022		
LF cable-3M	EMC	EMC8D-NM-NM-300 0	131103	Sep. 24, 2021	Sep. 23, 2022		
LF cable-13M	EMC	EMC8D-NM-NM-130 00	131104	Sep. 24, 2021	Sep. 23, 2022		
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Sep. 24, 2021	Sep. 23, 2022		
RF cable-8M	EMC	EMC104-SM-SM-80 00	181107	Sep. 24, 2021	Sep. 23, 2022		
Measurement Software	AUDIX	e3	6.120210g	NA	NA		
Note: Calibration Inter	val of instruments liste	d above is one year.					

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Test Item	RF Conducted									
Test Site	(TH01-WS)	(TH01-WS)								
Tested Date	Apr. 18, 2022	Apr. 18, 2022								
Instrument	ent Brand Model No. Serial No. Calibration Date Calibration Until									
Spectrum Analyzer	R&S	FSV40	101498	Nov. 29, 2021	Nov. 28, 2022					
Power Meter	Anritsu	ML2495A	1241002	Nov. 07, 2021	Nov. 06, 2022					
Power Sensor	Anritsu	Anritsu MA2411B 1207366 Nov. 07, 2021 Nov. 06, 202								
TEMP&HUMIDITY CHAMBER GIANT FORCE GCT-225-40-SP-SD MAF1212-002 May 25, 2021 May 24, 20										
DC POWER SOURCE GW INSTEK GPC-6030D GES855395 Nov. 08, 2021 Nov. 07, 2022										
Measurement Software Sporton SENSE-15407_NII V5.10 NA NA										
Note: Calibration Interval of instruments listed above is one year.										

1.5 Test Standards

47 CFR FCC Part 15.407 ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 412172 D01 Determining ERP and EIRP v01r01 FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)).

Measurement Uncertainty				
Parameters	Uncertainty			
Conducted power	±0.808 dB			
AC conducted emission	±2.92 dB			
Unwanted Emission ≤ 1GHz	±3.96 dB			
Unwanted Emission > 1GHz	±4.51 dB			
Time	±0.1%			
Temperature	±0.4 °C			

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2 Test Configuration

2.1 Testing Facility

Test Laboratory	International Certification Corporation
Test Site	CO01-WS, TH01-WS
Address of Test Site	No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 33381, Taiwan (R.O.C.)
Test Site	03CH03-WS
Address of Test Site	No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 333, Taiwan (R.O.C.)

FCC Designation No.: TW0009FCC site registration No.: 207696

➤ ISED#: 10807C

➤ CAB identifier: TW2732

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2.2 The Worst Test Modes and Channel Details

Frequency band 5150~5350 MHz / 5470~5725 MHz						
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration		
AC Power Line Conducted Emissions	11a	5580	6 Mbps	1		
Unwanted Emissions ≤1GHz	11a	5580	6 Mbps	1, 2, 3		
Onwanted Emissions > 1GHz	11a	5240	6 Mbps	4		
Our dust of Outrot Brown	11a	5180 / 5200 / 5240 / 5260 / 5300 / 5320 / 5500 / 5580 / 5700	6 Mbps	4		
Conducted Output Power	HT20	5180 / 5200 / 5240 / 5260 / 5300 / 5320 / 5500 / 5580 / 5700	MCS 0	1		
	11a	5180 / 5320	6 Mbps	4		
Unwented Emissions > 1CHz		5180 / 5320 / 5700		1		
Unwanted Emissions >1GHz	HT20	5180 / 5320 / 5700	MCS 0	2		
		5700		3		
	Frequency b	and 5725-5850 MHz				
Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration		
AC Power Line Conducted Emissions	11a	5825	6 Mbps	1		
Unwanted Emissions ≤1GHz	11a	5825	6 Mbps	1, 2, 3		
Conducted Output Dower	11a	5745 / 5785 / 5825	6 Mbps	1		
Conducted Output Power	HT20	5745 / 5785 / 5825	MCS 0	1		
	11a	5785	6 Mbps	2		
Unwanted Emissions >1GHz	HT20	5785	MCS 0	1		
	HT20	5785	MCS 0	3		

NOTE:

- 1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement X, Y, and Z-plane. The **Y-plane** results were found as the worst case and were shown in this report.
- 2. Test configurations are listed as below:
 - 1) Configuration 1 : PCB Dipole antenna (Antenna No.3)
 - 2) Configuration 2 : PIFA antenna (Antenna No.6)
 - 3) Configuration 3 : Dipole antenna (Antenna No.8) / 5.47 ~ 5.725 GHz
 - 4) Configuration 4: Dipole antenna (Antenna No.1) / 5.15 ~ 5.35 GHz

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3 Transmitter Test Results

3.1 Conducted Output Power

3.1.1 Limit of Conducted Output Power

	Frequency band 5150-5250 MHz				
Оре	erating Mode	Limit			
	Outdoor access point	Conducted Power: 1 W 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)			
	Indoor access point	Conducted Power: 1 W			
	Fixed point-to-point access points	Conducted Power: 1 W			
\boxtimes	Client devices	Conducted Power: 250 mW			

Fre	quency Band (MHz)	Limit				
	5250 ~ 5350	Conducted Power: 250mW or 11dBm+10 log B				
\boxtimes						
\boxtimes						
Not	Note: "B" is the 26dB emission bandwidth in MHz.					

3.1.2 Test Procedures

Method PM-G (Measurement using a gated RF average power meter)

Measurements is performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

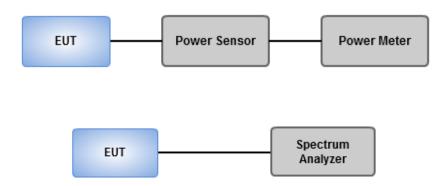
Spectrum analyzer (For channel that extends across the 5.725 GHz boundary)

- 1. Set RBW = 1MHz, VBW = 3MHz, Sweep time = Auto, Detector = RMS.
- 2. Trace average at least 100 traces in power averaging mode.
- 3. Compute power by integrating the spectrum across the 26 dB EBW.
- 4. Add 10 log(1/X, X:duty cycle) if duty cycle is <98%).

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3.1.3 Test Setup



3.1.4 Test Results

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Refer to Appendix A.

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3.2 Unwanted Emissions

3.2.1 Limit of Unwanted Emissions

Restricted Band Emissions Limit						
Frequency Range (MHz) Field Strength (uV/m) Field Strength (dBuV/m) Measure Distr						
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300			
0.490~1.705	24000/F(kHz)	33.8 - 23	30			
1.705~30.0	30	29	30			
30~88	100	40	3			
88~216	150	43.5	3			
216~960	200	46	3			
Above 960	500	54	3			

Note 1:

Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit **Note 2**:

Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

	Un-restricted band emissions above 1GHz Limit					
Operating Band	Limit					
5.15 - 5.25 GHz	e.i.r.p27 dBm [68.2 dBuV/m@3m]					
5.25 - 5.35 GHz	e.i.r.p27 dBm [68.2 dBuV/m@3m]					
5.47 - 5.725 GHz	e.i.r.p27 dBm [68.2 dBuV/m@3m]					
5.725 - 5.850 GHz	All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.					

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

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3.2.2 Test Procedures

- 1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
- 2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
- 3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

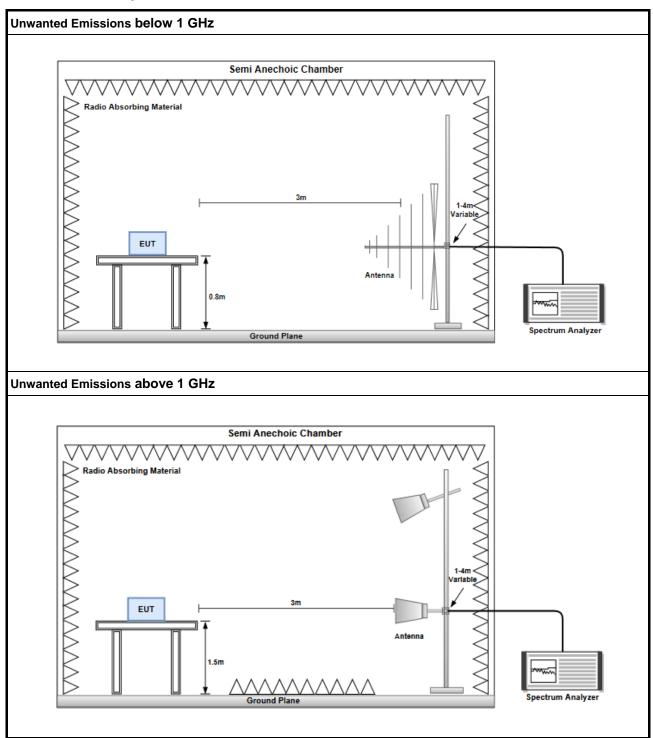
Note:

- 1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
- 2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
- 3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

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3.2.3 Test Setup



3.2.4 Test Results

Refer to Appendix B.

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3.3 AC Power Line Conducted Emissions

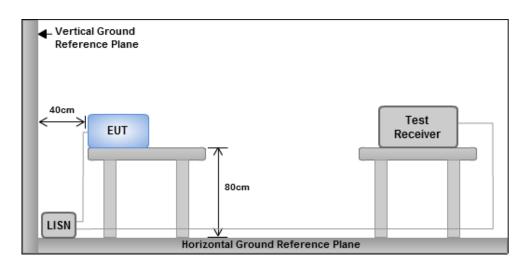
3.3.1 Limit of AC Power Line Conducted Emissions

Conducted Emissions Limit						
Frequency Emission (MHz) Quasi-Peak Average						
0.15-0.5 66 - 56 * 56 - 46 *						
0.5-5 56 46						
5-30 60 50						
Note 1: * Decreases with the logarithm of the frequency.						

3.3.2 Test Procedures

- 1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
- 2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
- 3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
- 4. This measurement was performed with AC 120V/60Hz

3.3.3 Test Setup



Note: 1. Support units were connected to second LISN.

Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.3.4 Test Results

Refer to Appendix C.

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4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corporation (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou

Tel: 886-2-2601-1640 No.30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan (R.O.C.)

Kwei Shan

Tel: 886-3-271-8666
No.3-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)
No.2-1, Lane 6, Wen San 3rd
St., Kwei Shan Dist., Tao Yuan
City 33381, Taiwan (R.O.C.)

Kwei Shan Site II

Tel: 886-3-271-8640 No.14-1, Lane 19, Wen San 3rd St., Kwei Shan Dist., Tao Yuan City 333, Taiwan (R.O.C.)

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666 Fax: 886-3-318-0345

Email: ICC Service@icertifi.com.tw

==END==

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Conducted Output Power

Appendix A

Summary

Mode	Total Power	Total Power	EIRP	EIRP
	(dBm)	(W)	(dBm)	(W)
5.15-5.25GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.38	0.04345	20.28	0.10666
802.11n HT20_Nss1,(MCS0)_1TX	16.24	0.04207	20.14	0.10328
5.25-5.35GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	16.36	0.04325	20.26	0.10617
802.11n HT20_Nss1,(MCS0)_1TX	16.22	0.04188	20.12	0.10280
5.47-5.725GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	17.64	0.05808	21.64	0.14588
802.11n HT20_Nss1,(MCS0)_1TX	17.60	0.05754	21.60	0.14454
5.725-5.85GHz	-	-	-	-
802.11a_Nss1,(6Mbps)_1TX	18.07	0.06412	22.07	0.16106
802.11n HT20_Nss1,(MCS0)_1TX	18.00	0.06310	22.00	0.15849

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Result

Mode	Result	DG	Port 1	Total Power	Power Limit	EIRP	EIRP Limit
		(dBi)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)
802.11a_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	3.90	15.49	15.49	24.00	19.39	30.00
5200MHz	Pass	3.90	15.06	15.06	24.00	18.96	30.00
5240MHz	Pass	3.90	16.38	16.38	24.00	20.28	30.00
5260MHz	Pass	3.90	16.36	16.36	24.00	20.26	30.00
5300MHz	Pass	3.90	16.11	16.11	24.00	20.01	30.00
5320MHz	Pass	3.90	15.65	15.65	24.00	19.55	30.00
5500MHz	Pass	4.00	15.29	15.29	24.00	19.29	30.00
5580MHz	Pass	4.00	17.64	17.64	24.00	21.64	30.00
5700MHz	Pass	4.00	15.01	15.01	24.00	19.01	30.00
5745MHz	Pass	4.00	15.66	15.66	30.00	19.66	36.00
5785MHz	Pass	4.00	18.03	18.03	30.00	22.03	36.00
5825MHz	Pass	4.00	18.07	18.07	30.00	22.07	36.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
5180MHz	Pass	3.90	15.29	15.29	24.00	19.19	30.00
5200MHz	Pass	3.90	15.02	15.02	24.00	18.92	30.00
5240MHz	Pass	3.90	16.24	16.24	24.00	20.14	30.00
5260MHz	Pass	3.90	16.22	16.22	24.00	20.12	30.00
5300MHz	Pass	3.90	16.01	16.01	24.00	19.91	30.00
5320MHz	Pass	3.90	15.49	15.49	24.00	19.39	30.00
5500MHz	Pass	4.00	15.06	15.06	24.00	19.06	30.00
5580MHz	Pass	4.00	17.6	17.60	24.00	21.60	30.00
5700MHz	Pass	4.00	14.98	14.98	24.00	18.98	30.00
5745MHz	Pass	4.00	15.52	15.52	30.00	19.52	36.00
5785MHz	Pass	4.00	18	18.00	30.00	22.00	36.00
5825MHz	Pass	4.00	17.49	17.49	30.00	21.49	36.00

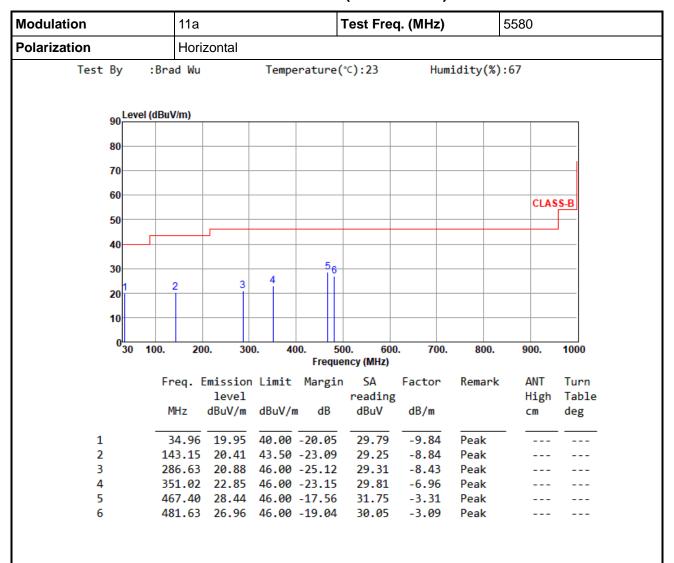
DG = Directional Gain **Port X** = Port X output power

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Configuration 1: PCB Dipole antenna (Antenna No.3)

Transmitter Radiated Unwanted Emissions (Below 1GHz)

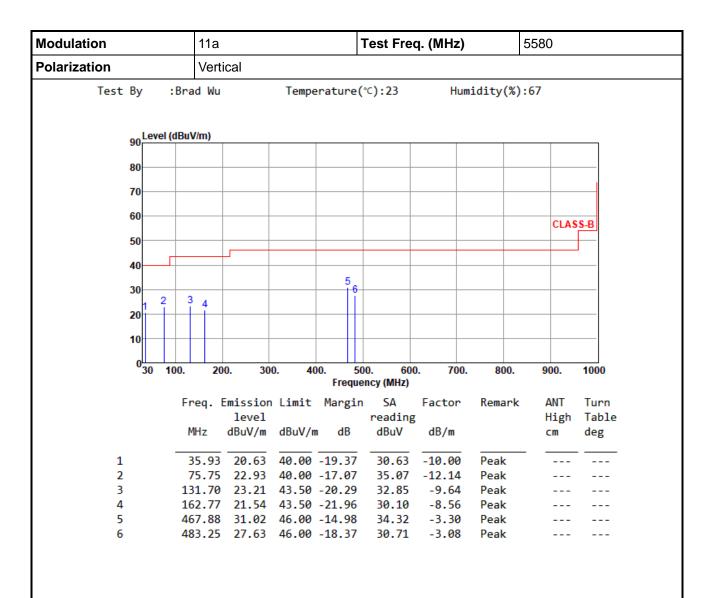


Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) - Limit (dBuV/m).

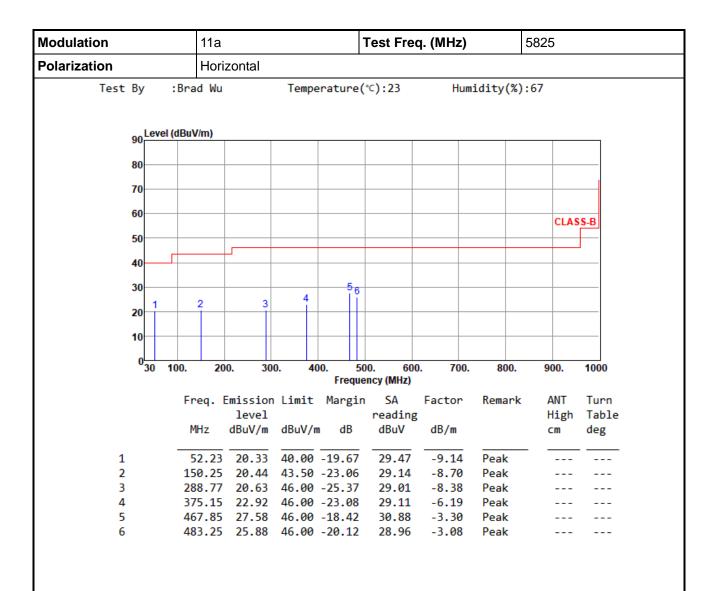




*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

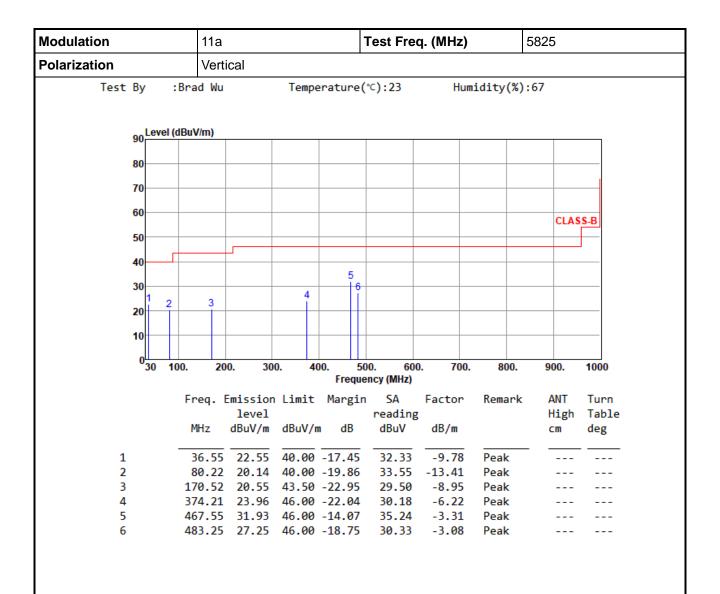




*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



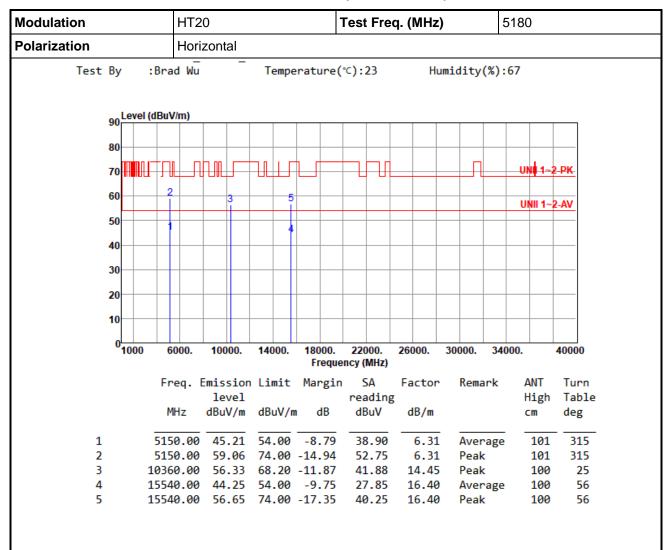


*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



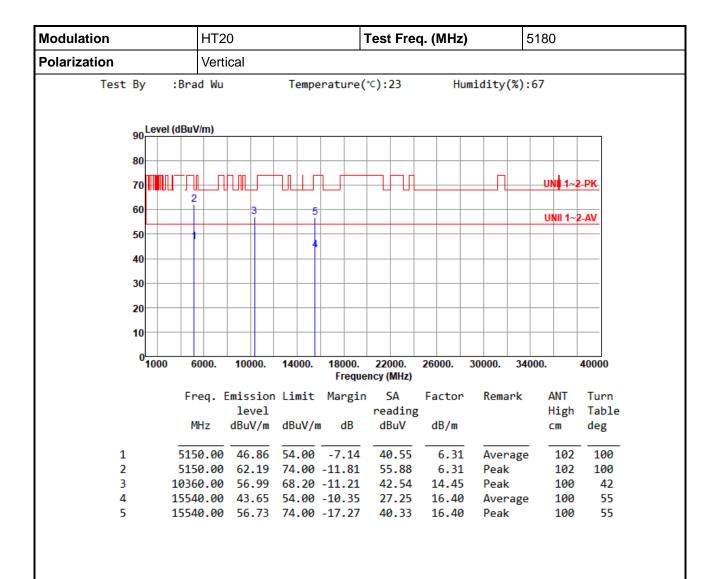
Transmitter Radiated Unwanted Emissions (Above 1GHz)



Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

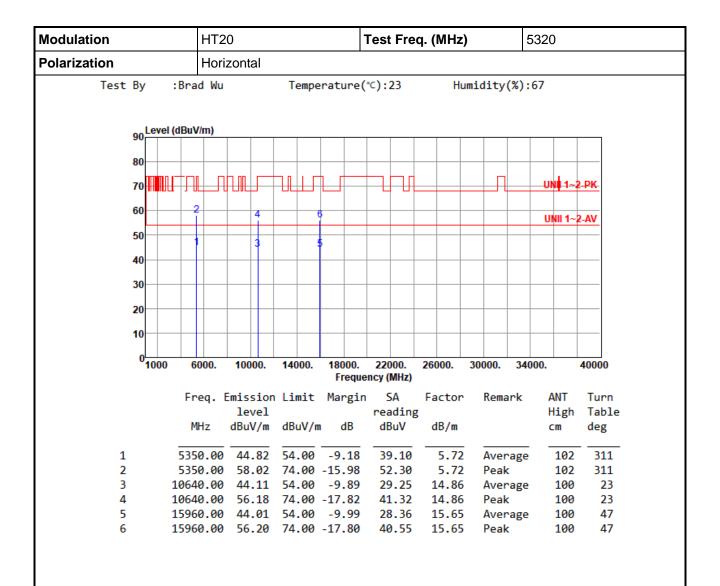
*Factor includes antenna factor, cable loss and amplifier gain





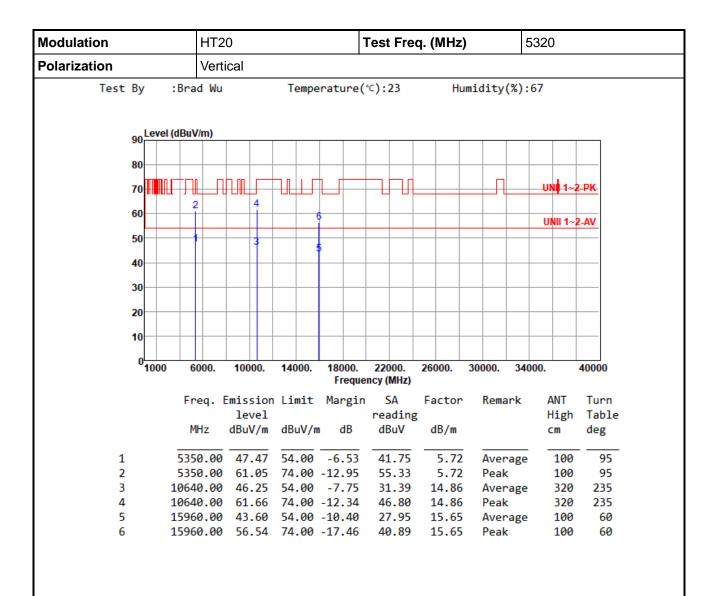
*Factor includes antenna factor, cable loss and amplifier gain





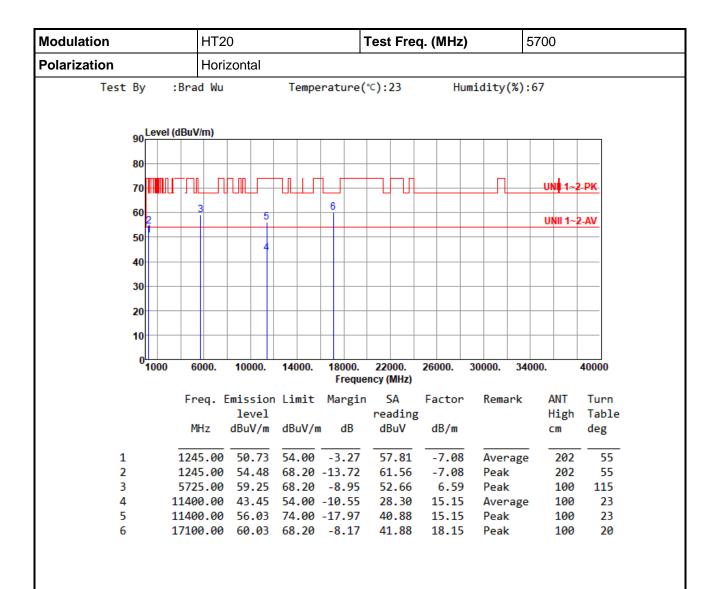
*Factor includes antenna factor, cable loss and amplifier gain





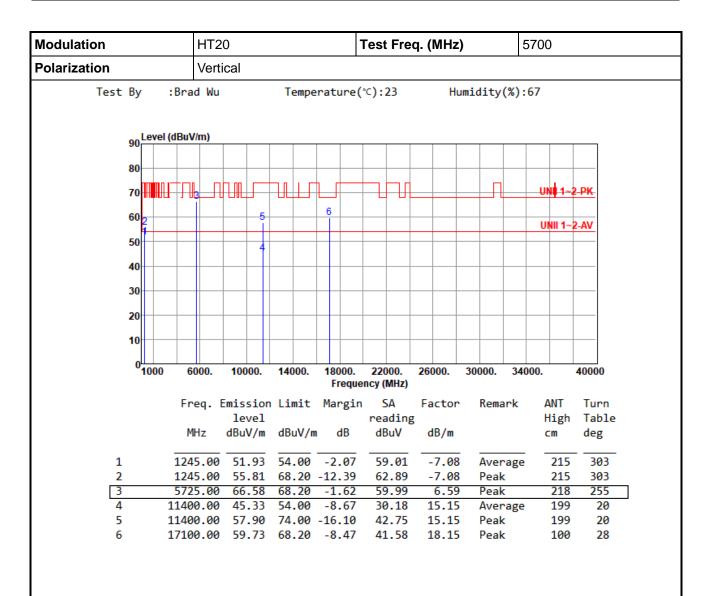
*Factor includes antenna factor, cable loss and amplifier gain





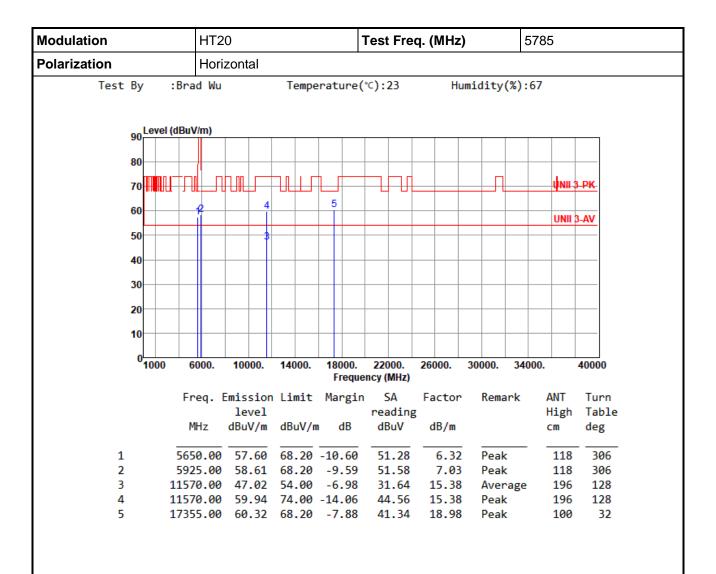
*Factor includes antenna factor, cable loss and amplifier gain





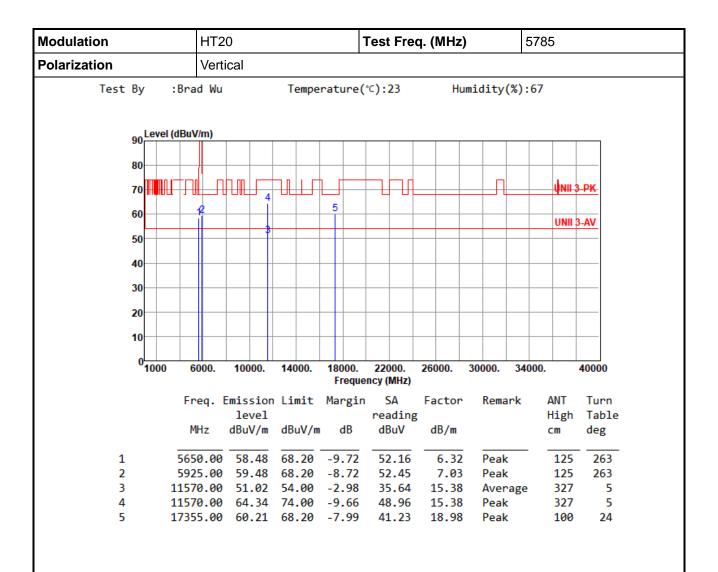
*Factor includes antenna factor, cable loss and amplifier gain





*Factor includes antenna factor, cable loss and amplifier gain



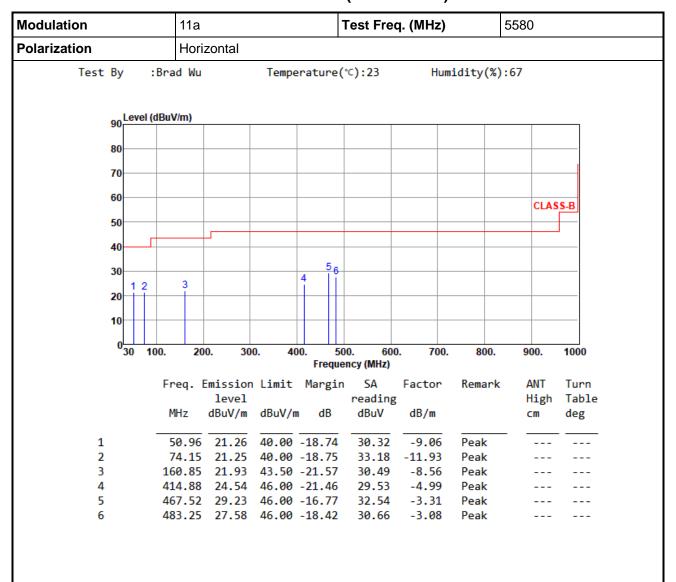


*Factor includes antenna factor, cable loss and amplifier gain



Configuration 2: PIFA antenna (Antenna No.6)

Transmitter Radiated Unwanted Emissions (Below 1GHz)



Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

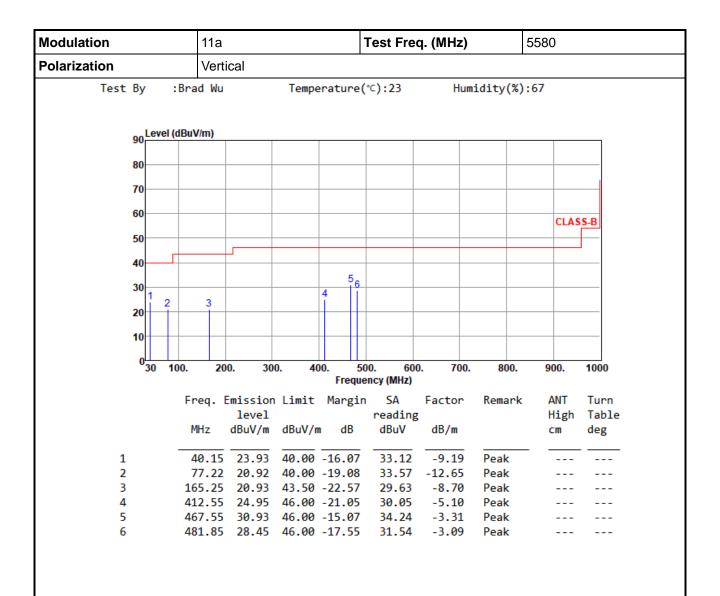
*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

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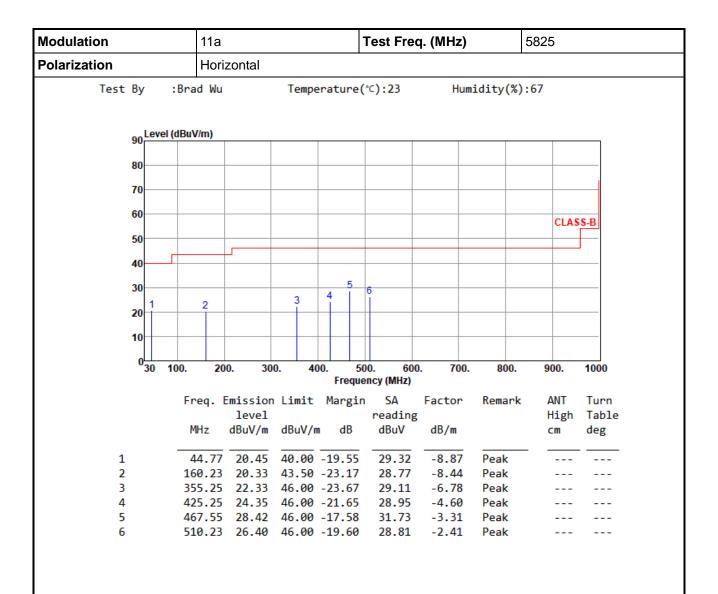




*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

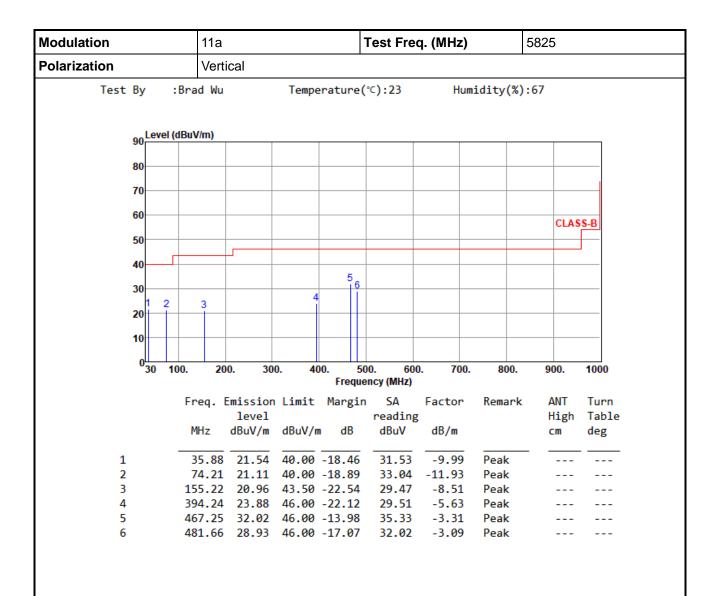




*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



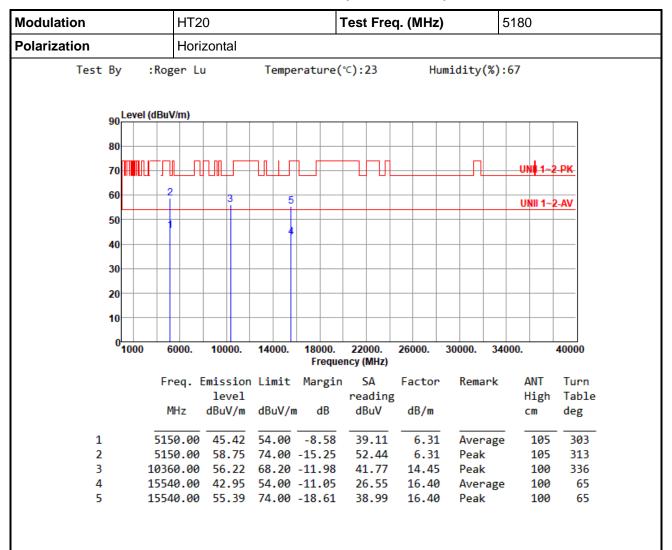


*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



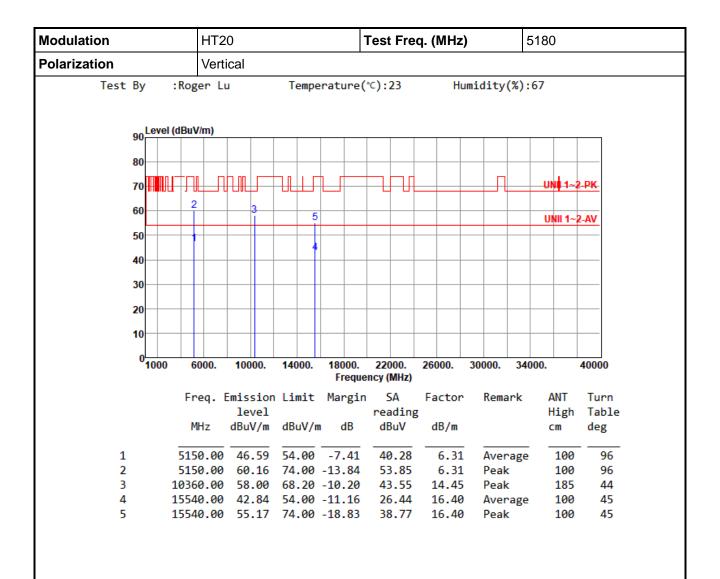
Transmitter Radiated Unwanted Emissions (Above 1GHz)



Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

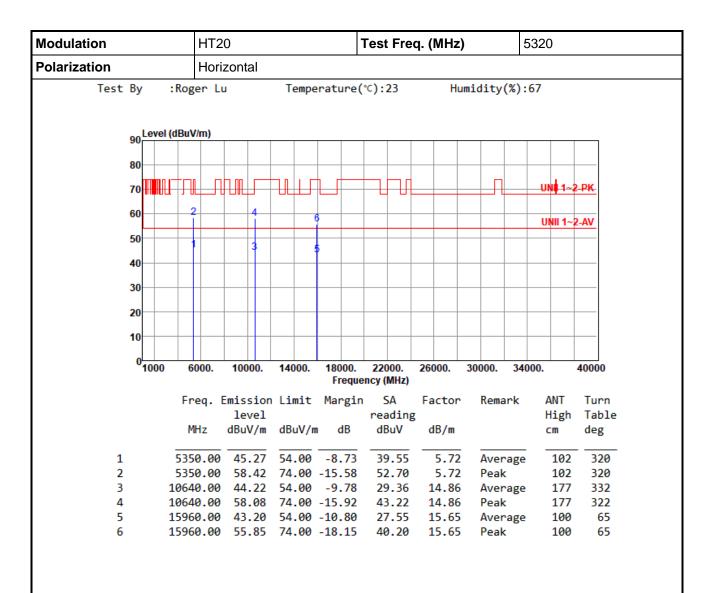
*Factor includes antenna factor, cable loss and amplifier gain





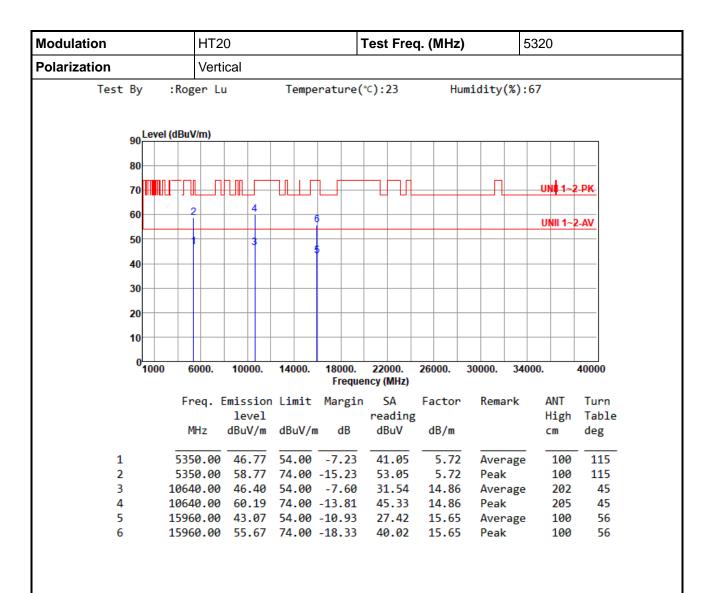
*Factor includes antenna factor, cable loss and amplifier gain





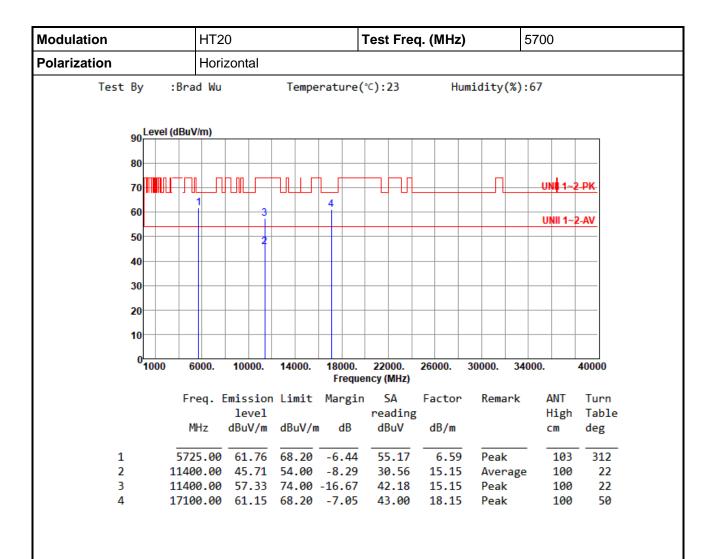
*Factor includes antenna factor, cable loss and amplifier gain





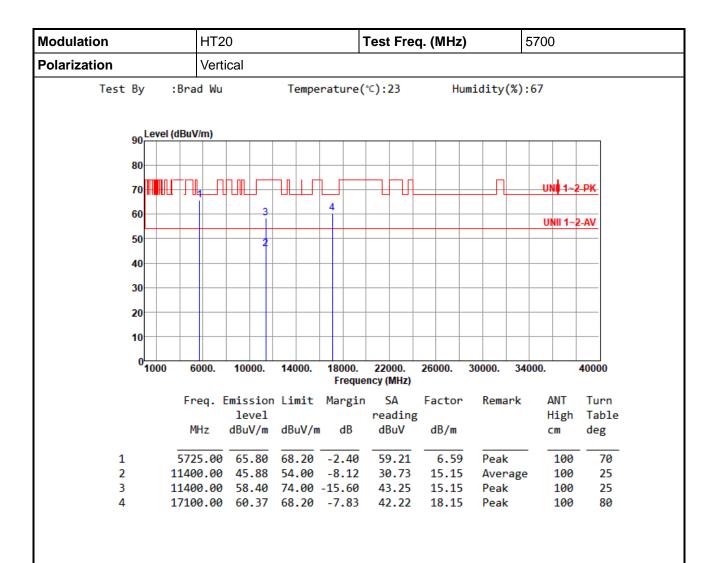
*Factor includes antenna factor, cable loss and amplifier gain





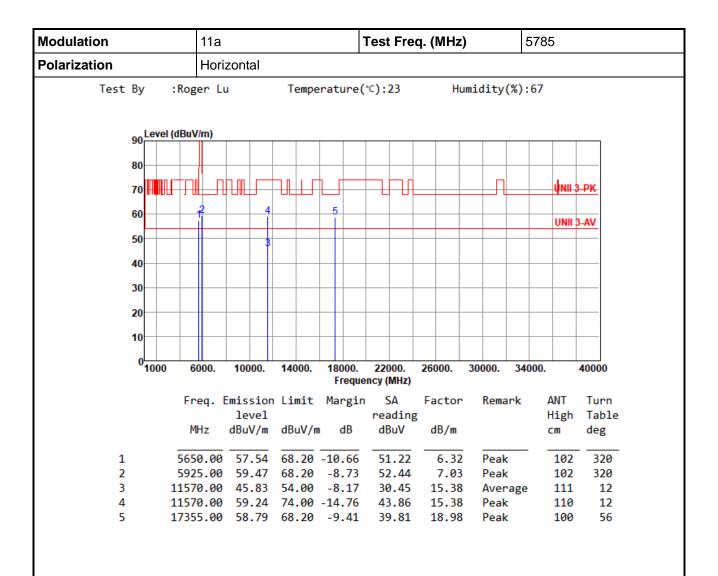
*Factor includes antenna factor, cable loss and amplifier gain





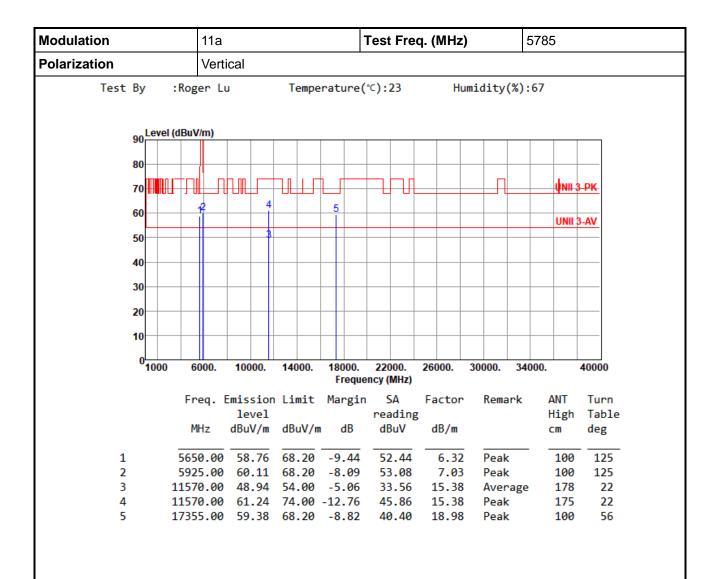
*Factor includes antenna factor, cable loss and amplifier gain





*Factor includes antenna factor, cable loss and amplifier gain



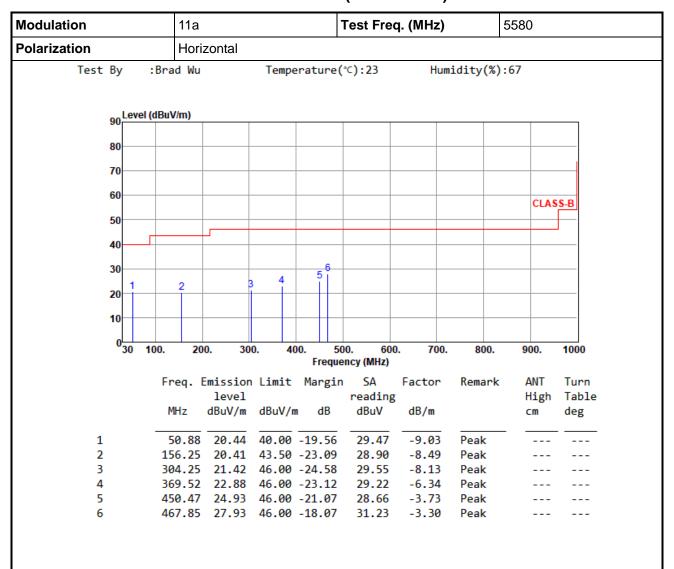


*Factor includes antenna factor, cable loss and amplifier gain



Configuration 3: Dipole antenna (Antenna No.8)

Transmitter Radiated Unwanted Emissions (Below 1GHz)

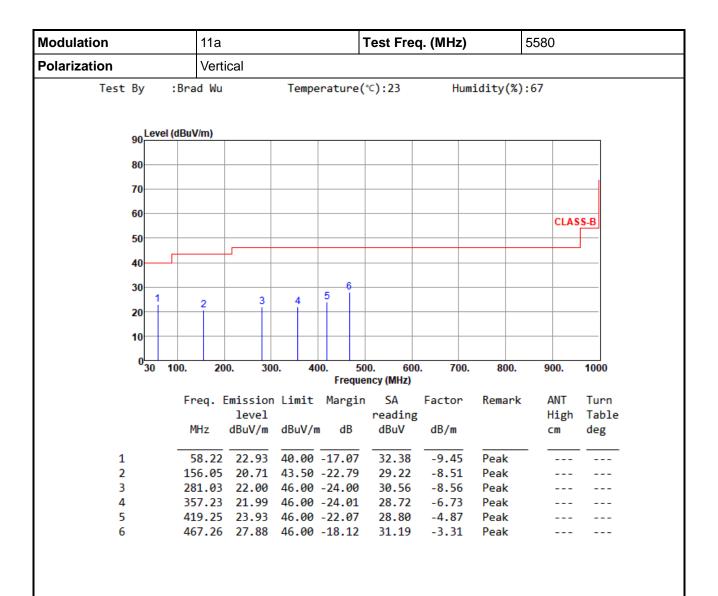


Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) - Limit (dBuV/m).

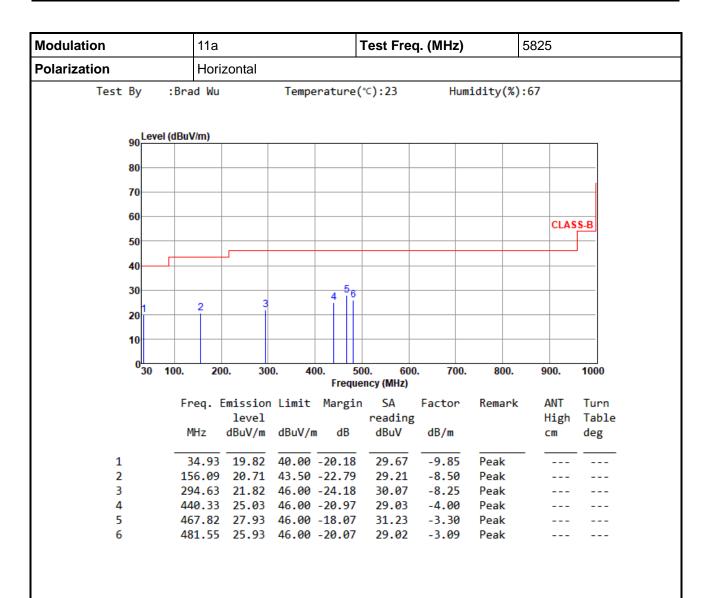




*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

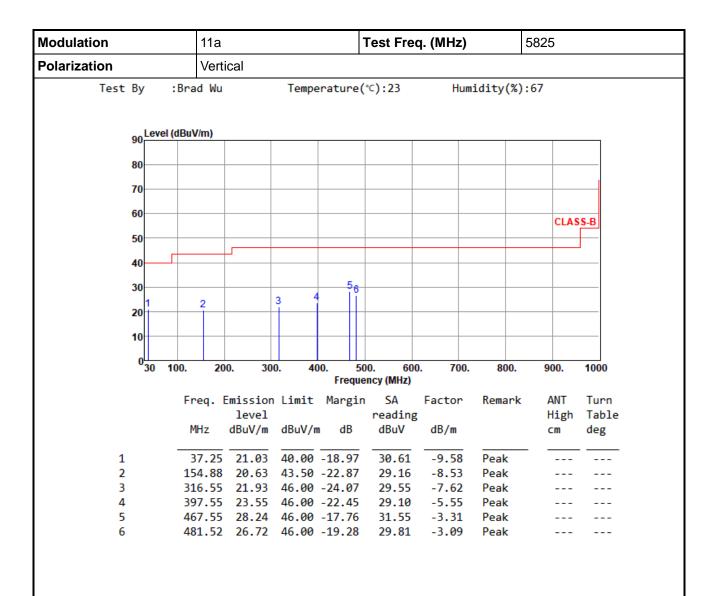




*Factor includes antenna factor , cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



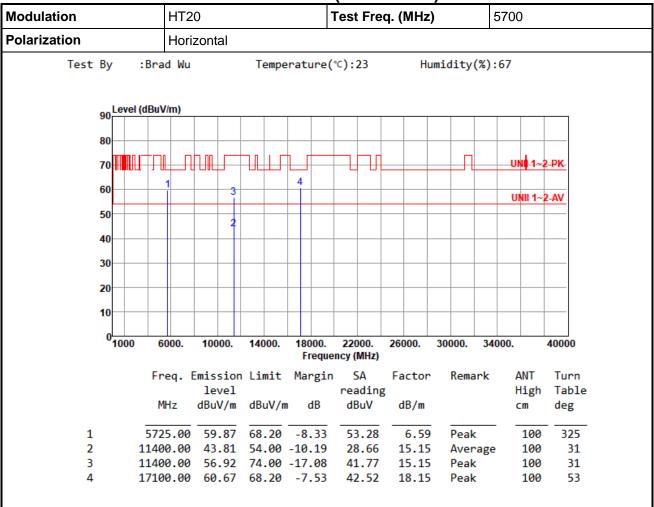


*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



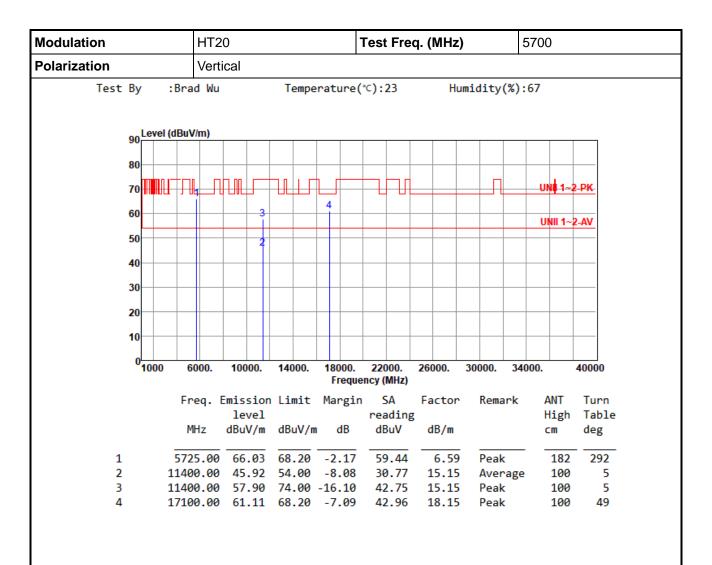
Transmitter Radiated Unwanted Emissions (Above 1GHz)



Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

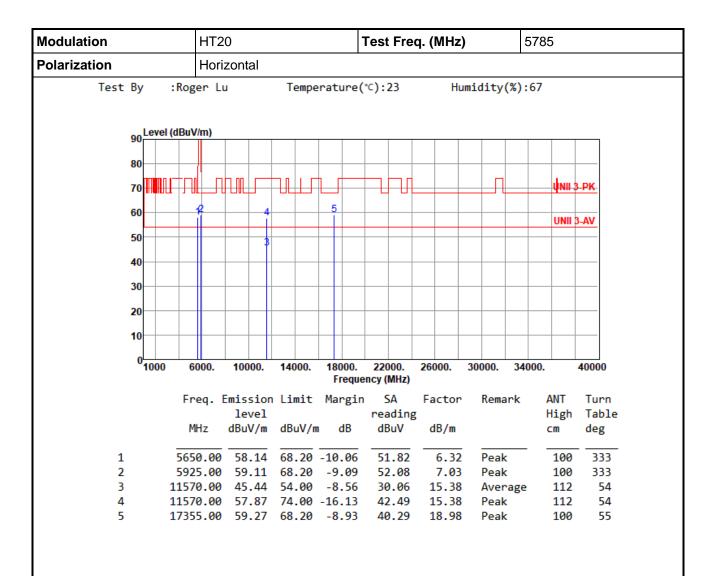
*Factor includes antenna factor, cable loss and amplifier gain





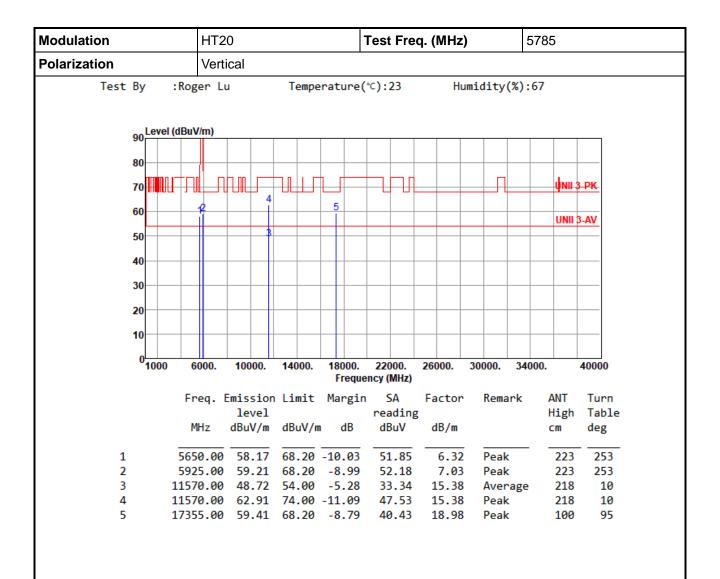
*Factor includes antenna factor, cable loss and amplifier gain





*Factor includes antenna factor, cable loss and amplifier gain



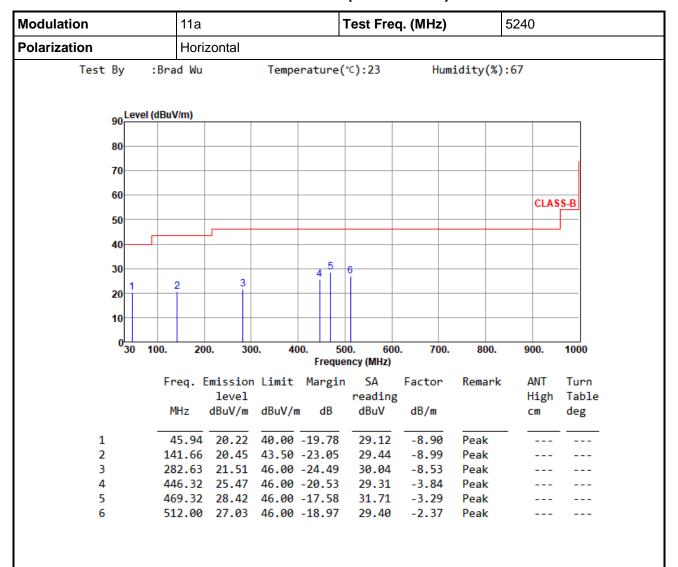


*Factor includes antenna factor, cable loss and amplifier gain



Configuration 4: Dipole antenna (Antenna No.1) / 5.15 ~ 5.35 GHz

Transmitter Radiated Unwanted Emissions (Below 1GHz)



Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

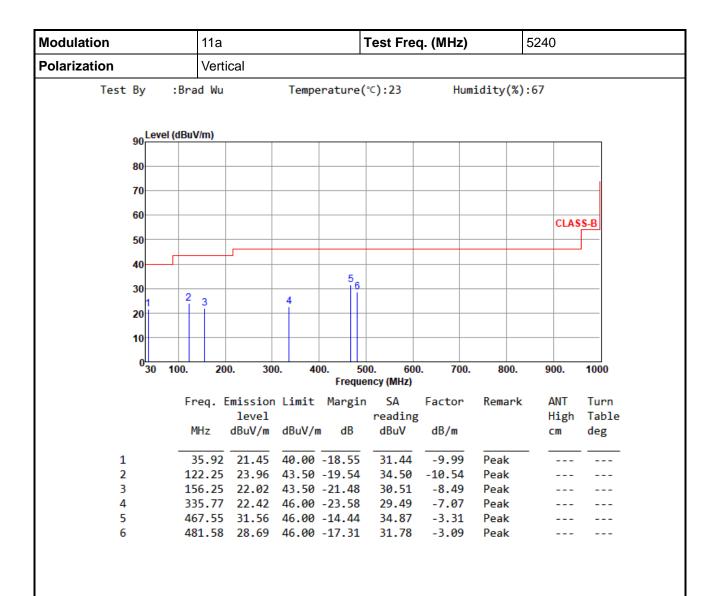
*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

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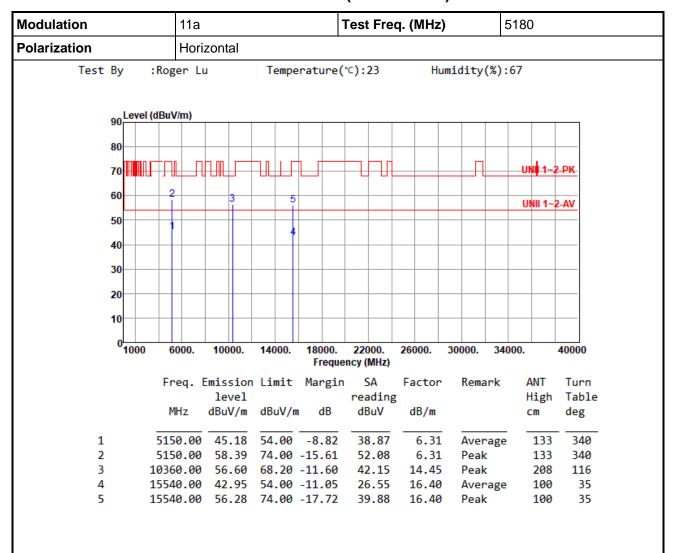


*Factor includes antenna factor, cable loss and amplifier gain

Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).



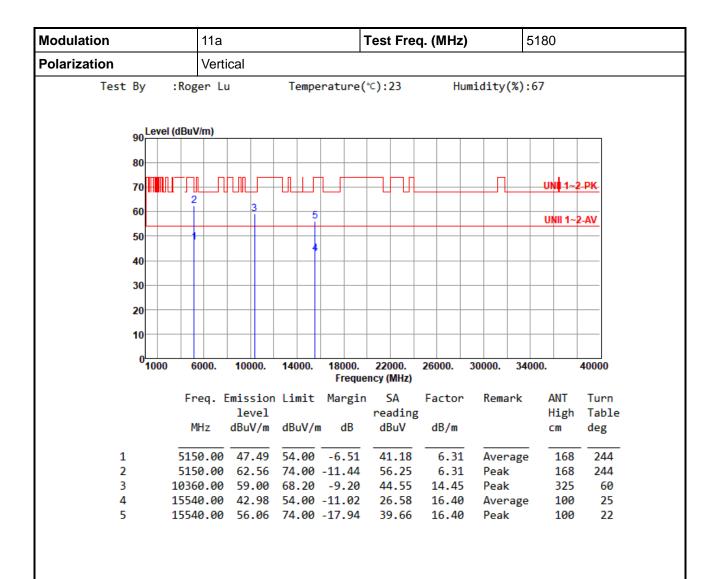
Transmitter Radiated Unwanted Emissions (Above 1GHz)



Note 1: Emission Level (dBuV/m) = SA Reading (dBuV) + Factor* (dB/m)

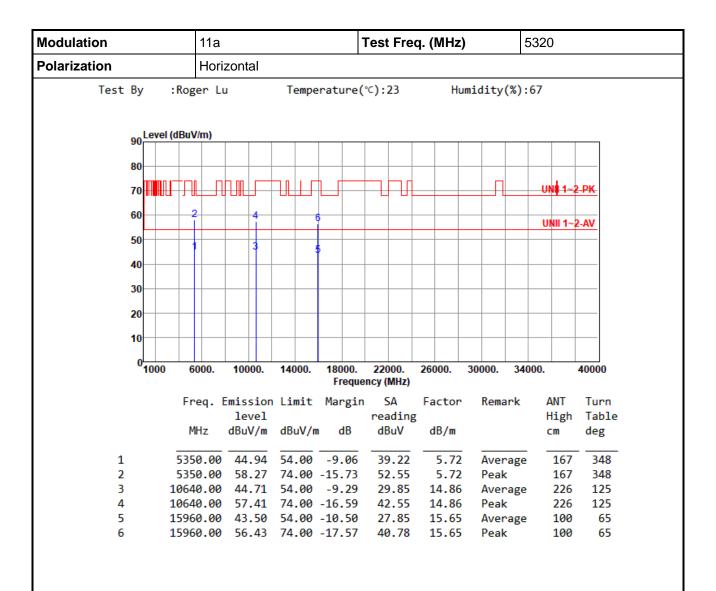
*Factor includes antenna factor, cable loss and amplifier gain





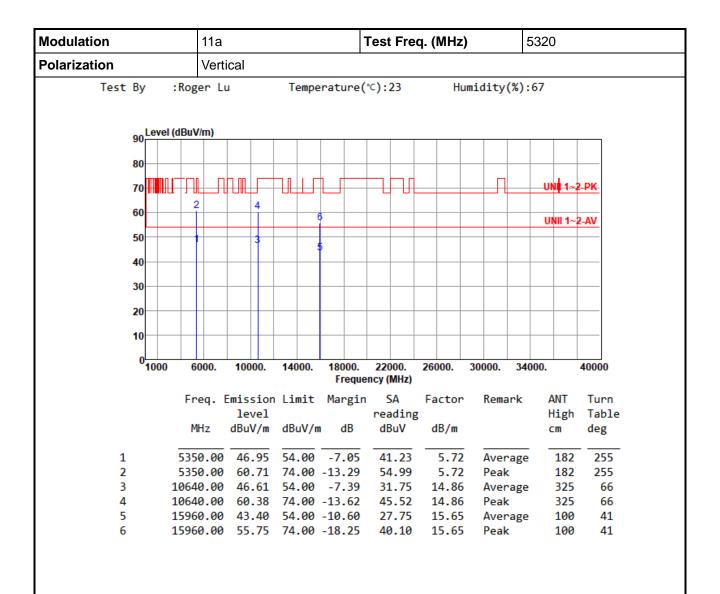
*Factor includes antenna factor, cable loss and amplifier gain





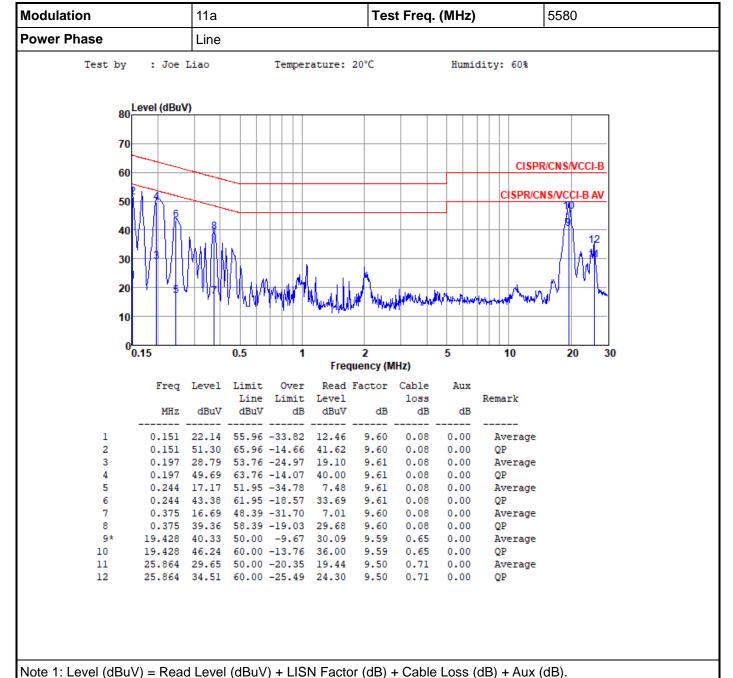
*Factor includes antenna factor, cable loss and amplifier gain





*Factor includes antenna factor, cable loss and amplifier gain





2: Over Limit (dB) = Level (dBuV) - Limit Line (dBuV).



