

FCC C2PC Test Report

FCC ID : WBV-AP230

Equipment : Access Point

Model No. : AP230

Brand Name : Aerohive

Applicant : Aerohive Networks Inc.

Address : 330 Gibraltar Drive, Sunnyvale, CA 94089

Standard : 47 CFR FCC Part 15.407

Received Date : Jan. 21, 2014

Tested Date : Feb. 05 ~ Apr. 01, 2014

We, International Certification Corp., 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 may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Approved & Reviewed by:

Gary Chang / Manager

ilac MRA



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Release Record

Report No.	Version	Description	Issued Date
FR412201-01	Rev. 01	Initial issue	Apr. 14, 2014
FR412201-01	Rev. 02	Modify typing error of P26/29 and power limit of P28/31/35/38	Aug. 28, 2014

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Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.469MHz 44.06 (Margin -2.48dB) - AV	Pass
15.407(b)(1)(2)(3) 15.209	Radiated Emissions	[dBuV/m at 3m]: 5380.00MHz 53.00 (Margin -1.00dB) – AV [dBuV/m at 3m]: 6142.00MHz 53.00 (Margin -1.00dB) – AV [dBuV/m at 3m]: 5470.00MHz 53.00 (Margin -1.00dB) – AV [dBuV/m at 3m]: 5958.00MHz 67.20 (Margin -1.00dB) – PK [dBuV/m at 3m]: 5350.00MHz 53.00 (Margin -1.00dB) – AV	Pass
15.407(a)(1)(2)(3)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(a)(1)(2)(3)	RF Output Power	Power [dBm]: Non-beamforming mode 5250~5350 MHz: 11a: 21.45 HT20: 18.67 HT40: 21.29 VHT20: 18.76 VHT40: 21.44 VHT80: 17.95 5470~5725 MHz: 11a: 23.08 HT20: 18.74 HT40: 21.69 VHT20: 18.80 VHT40: 21.78 VHT80: 21.91 Beamforming mode 5250~5350 MHz: 11a: 21.45 HT20: 18.10 HT40: 18.78 VHT20: 18.17 VHT40: 18.90 VHT40: 18.90 VHT80: 16.26 5470~5725 MHz: 11a: 23.08 HT20: 18.80 HT20: 18.80 HT40: 18.78 VHT40: 18.90 VHT80: 16.26 5470~5725 MHz: 11a: 23.08 HT20: 18.80 HT40: 18.78 VHT40: 19.27 VHT80: 19.35	Pass
15.407(a)(1)(2)(3)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(a)(6)	Peak Excursion	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

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1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information							
IEEE Std. Frequency 802.11 Range (MHz)		Ch. Freq. (MHz) Channel Number		Transmit Chains (N _{TX})	Data Rate / MCS		
а	5250-5350 5470-5725	5260-5320 5500-5720	52-64 [4] 100-144 [9]	1	6-54 Mbps		
n (HT20)	5250-5350 5470-5725	5260-5320 5500-5720	52-64 [4] 100-144 [9]	3	MCS 0-23		
n (HT40) 5250-5350 5270-5310 5470-5725 5510-5710		54-62 [2] 102-142 [4]	3	MCS 0-23			
ac (VHT20)	5250-5350 5470-5725	5260-5320 5500-5720	52-64 [4] 100-144 [9]	3	MCS 0-8		
ac (VHT40)	5250-5350 5470-5725	5270-5310 5510-5710	54-62 [2] 102-142 [4]	3	MCS 0-9		
ac (VHT80)	5250-5350 5470-5725	5290 5530-5690	58 [1] 106-138 [2]	3	MCS 0-9		

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

Note

This report is issued as a FCC Class II Permissive Change. The modification is only concerned with adding 5250~5350MHz and 5470~5725 MHz band by software setting.

1.1.2 Antenna Details

Ant No	Madel Type		Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)		
Ant. No.	t. No. Model Type	5250~5350		5470~5725		
4	ANT 4(5G)	PIFA	UFL	6.21	6.15	
5	ANT 5(5G)	PIFA	UFL	5.95	6.12	
6	ANT 6(5G)	PIFA	UFL	6.57	5.25	

1.1.3 EUT Operational Condition

Power Supply Type 12Vdc from adapter 48Vdc or 55Vdc from PoE

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Note 2: 802.11a/n/ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM,256QAM modulation.

Note 3: The EUT includes MIMO CDD function with beamforming.

Note 4: 1TX function transmits signal through chain 0 only.



1.1.4 Accessories

	Accessories						
No.	Equipment	Description					
Brand Name: DVE Model Name: DSA-24PFD-15 FUS Power Rating: I/P: 100-240Vac, 50-60Hz, 0.8A O/P: 12Vdc, 2.0A DC 1.5m non-shielded cable w/o core							
Brand Name: Powertron Electronics Corp. Model Name: PA1024-120HUB200 Power Rating: I/P: 100-240Vac, 50-60Hz, 0.6A O/P: 12Vdc, 2.0A, 24W DC 1.5m non-shielded cable w/o core		Model Name: PA1024-120HUB200 Power Rating: I/P: 100-240Vac, 50-60Hz, 0.6A O/P: 12Vdc, 2.0A, 24W					

1.1.5 Support Units

	Support Units					
No.	Equipment	Description				
1	PoE 1	Brand Name: PowerDsine Model Name: PD-3501G/AC Power Rating: I/P: 100-240Vac, 50-60Hz, 0.5A O/P: 48Vdc, 0.35A				
Brand Name: PowerDsine Model Name: PD-9001GR/AT/AC Power Rating: I/P: 100-240Vac, 50-60Hz, 0.67A O/P: 55Vdc, 0.6A		Model Name: PD-9001GR/AT/AC Power Rating: I/P: 100-240Vac, 50-60Hz, 0.67A				

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1.1.6 Channel List

802.11 a / H	IT20 / VHT20	HT40 /	VHT40
Channel	Frequency(MHz)	Channel	Frequency(MHz)
52	5260	54	5270
56	5280	62	5310
60	5300	102	5510
64	5320	110	5550
100	5500	134	5670
104	5520	142	5710
108	5540	VHT 80	
112	5560	58	5290
116	5580	106	5530
132	5660	138	5690
136	5680		
140	5700		
144	5720		

1.1.7 Test Tool and Duty Cycle

Test Tool	Hyperterminal, Version 5.1					
	Mode	Beamforming		Non-Beamforming		
	Wode	Duty cycle (%)	Duty factor (dB)	Duty cycle (%)	Duty factor (dB)	
Duty Cycle and Duty Footor	11a	99.17%	0.04	99.17%	0.04	
Duty Cycle and Duty Factor	VHT20	99.63%	0.02	99.12%	0.04	
	VHT40	98.82%	0.05	98.23%	0.08	
	VHT80	98.49%	0.07	95.56%	0.20	

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1.1.8 Power Setting

		Pow	ver Set
Modulation Mode	Test Frequency (MHz)	Beamforming	Non-Beamforming
11a	5260	82	82
11a	5300	82	82
11a	5320 74		74
11a	5500	76	76
11a	5580	88	88
11a	5700	70	70
11a	5720	78	78
HT20	5260	47	50
HT20	5300	47	50
HT20	5320	47	50
HT20	5500	52	52
HT20	5580	52	52
HT20	5700	54	54
HT20	5720	52	56
HT40	5270	50	60
HT40	5310	50	57
HT40	5510	52	54
HT40	5550	52	60
HT40	5670	54	66
HT40	5710	58	66
VHT20	5260	47	50
VHT20	5300	47	50
VHT20	5320	47	50
VHT20	5500	52	52
VHT20	5580	52	52
VHT20	5700	54	54
VHT20	5720	52	56
VHT40	5270	50	60
VHT40	5310	50	57
VHT40	5510	52	54
VHT40	5550	52	60
VHT40	5670	54	66
VHT40	5710	58	66
VHT80	5290	42	48
VHT80	5530	45	46
VHT80	5690	60	68

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1.2 Local Support Equipment List

	Support Equipment List							
No.	Equipment	Brand	Model	S/N	FCC ID	Signal cable / Length (m)		
1	Notebook	DELL	E6430		DoC	RJ45, 1m non-shielded cable w/o core. RJ45, 10m non-shielded cable w/o core.		
2	Notebook	DELL	E6430		DoC			
3	Module	WNC	DNXB-AH5					

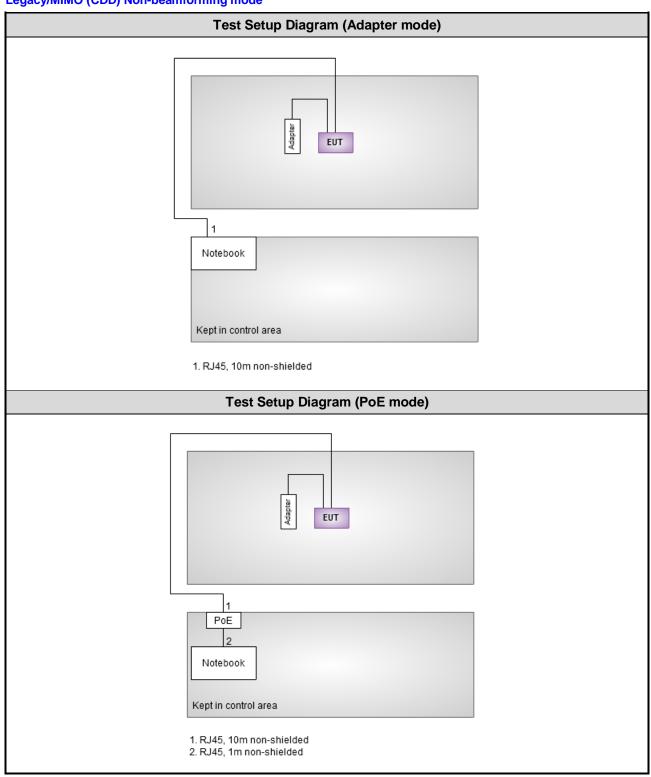
Note: Module card is provided by applicant.

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1.3 Test Setup Chart

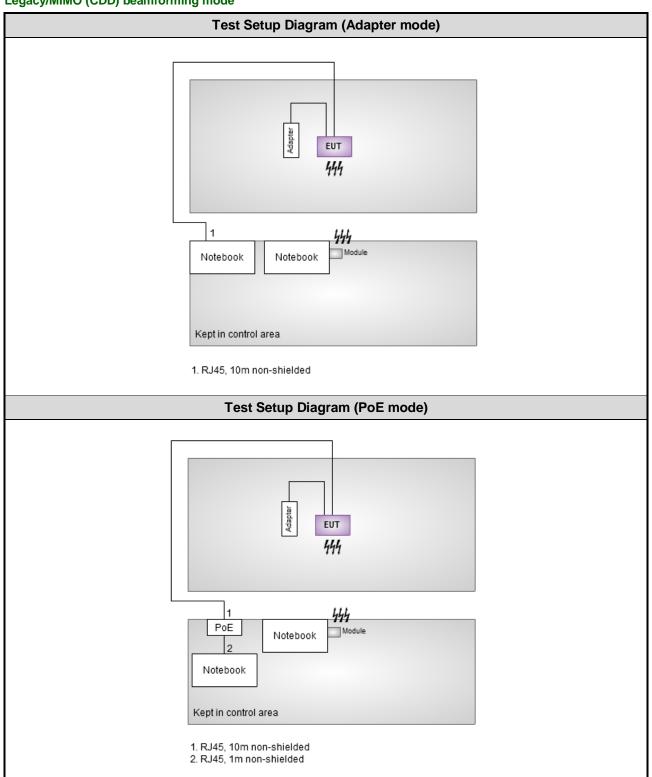
Legacy/MIMO (CDD) Non-beamforming mode



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Legacy/MIMO (CDD) beamforming mode



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1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)			
Test date	Feb. 21, 2014				
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
EMC Receiver	R&S	ESCS 30	100169	Oct. 15, 2013	Oct. 14, 2014
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 23, 2013	Nov. 22, 2014
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Dec. 04, 2013	Dec. 03, 2014
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Apr. 24, 2013	Apr. 23, 2014
50 ohm terminal (Support Unit)	NA	50	04	Apr. 22, 2013	Apr. 21, 2014
Note: Calibration Inter	rval of instruments liste	d above is one year.			

Test Item	Radiated Emission				
Test Site	966 chamber 2 / (03C	H02-WS)			
Test date	Feb. 05 ~ Feb. 13, 20	14			
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSP 40	100305	Mar. 20, 2013	Mar. 19, 2014
Receiver	R&S	ESR3	101657	Jan. 18,2014	Jan. 17, 2015
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-524	Jan. 08, 2014	Jan. 07, 2015
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120D	BBHA 9120 D 1095	Jan. 07, 2014	Jan. 06, 2015
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Dec. 27, 2013	Dec. 26, 2014
Amplifier	Burgeon	BPA-530	100218	Dec. 09, 2013	Dec. 08, 2014
Amplifier	Agilent	83017A	MY39501309	Dec. 09, 2013	Dec. 08, 2014
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16140/4	Dec. 17, 2013	Dec. 16, 2014
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16018/4	Dec. 17, 2013	Dec. 16, 2014
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16015/4	Dec. 17, 2013	Dec. 16, 2014
RF Cable-R03m	Woken	CFD400NL-LW	CFD400NL-003	Dec. 17, 2013	Dec. 16, 2014
RF Cable-R10m	Woken	CFD400NL-LW	CFD400NL-004	Dec. 17, 2013	Dec. 16, 2014
control	EM Electronics	EM1000	060608	N/A	N/A
Note: Calibration Inter-	val of instruments listed	above is one year.			

Loop Antenna	R&S	HFH2-Z2	100330	Nov. 15, 2012	Nov. 14, 2014
Amplifier	EM	EM18G40G	060572	Jun. 20, 2013	Jun. 19, 2015
Note: Calibration Interv	val of instruments listed	l above is two year.			

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Test Item	RF Conducted				
Test Site	(TH01-WS)				
Test date	Mar. 31 ~ Apr. 01, 20	14			
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until
Spectrum Analyzer	R&S	FSV40	101498	Jan. 25, 2014	Jan. 24, 2015
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Dec. 11, 2013	Dec. 10, 2014
Power Meter	Anritsu	ML2495A	1241002	Oct. 24, 2013	Oct. 23, 2014
Power Sensor	Anritsu	MA2411B	1207366	Oct. 24, 2013	Oct. 23, 2014
Note: Calibration Inter	rval of instruments liste	d above is one year.			

1.5 Testing Applied Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.407

ANSI C63.10-2009

FCC KDB 412172

FCC KDB 789033 D01 General UNII Test procedures v01r03

FCC KDB 662911 D01 Multiple Transmitter Output v02r01

Note: The EUT has been tested and complied with FCC part 15B requirement. FCC Part 15B test results are issued to another report.

1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Measurement Uncertainty	
Parameters	Uncertainty
Bandwidth	±74.147 Hz
Conducted power	±0.717 dB
Power density	±2.687 dB
Frequency error	±74.147 Hz
Temperature	±0.3 °C
AC conducted emission	±2.43 dB
Radiated emission	±2.49 dB

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2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	14°C / 58%	Skys Huang
Radiated Emissions	03CH02-WS	20°C / 65%	Aska Huang
RF Conducted	TH01-WS	24°C / 63%	Felix Sung

FCC site registration No.: 657002IC site registration No.: 10807A-2

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate (Mbps) / MCS	Test Configuration
Conducted Emissions	VHT40	5510	MCS 0	1, 2, 3, 4
Radiated Emissions ≤1GHz	VHT40	5510	MCS 0	1, 2
	11a	5260 / 5300 5320 5500 / 5580 / 5700 / 5720	6 Mbps	
	HT20	5260 / 5300 5320 5500 / 5580 / 5700 / 5720	MCS 0	
RF Output Power	HT40	5270 / 5310 5510 / 5550 / 5670 / 5710	MCS 0	1, 3
	VHT20	5260 / 5300 5320 5500 / 5580 / 5700 / 5720	MCS 0	
	VHT40	5270 / 5310 5510 / 5550 / 5670 / 5710	MCS 0	
	VHT80	5290 / 5530 / 5690	MCS 0	
	11a	5260 / 5300 5320 5500 / 5580 / 5700 / 5720	6 Mbps	
Radiated Emissions >1GHz Emission Bandwidth	VHT20	5260 / 5300 5320 5500 / 5580 / 5700 / 5720	MCS 0	1, 3
Peak Power Spectral Density	VHT40	5270 / 5310 5510 5550 / 5670 / 5710	MCS 0	
	VHT80	5290 / 5530 / 5690	MCS 0	

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	11a	5260 / 5580	6 Mbps	
	VHT20	5320 / 5500	MCS 0	4
	VHT40	5270 / 5670	MCS 0	1
Peak Excursion	VHT80	5290 / 5690	MCS 0	
Peak Excursion	11a	5260 / 5580	6 Mbps	
	VHT20	5300 / 5500	MCS 0	3
	VHT40	5310 / 5710	MCS 0	S
	VHT80	5290 / 5690	MCS 0	
Frequency Stability	Un-modulation	5320		1, 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. Adapter 1 and Adapter 2 had been pretested and fund that **Adapter 2** was the worst case and was selected for final testing. (Adapter 1: DSA-24PFD-15 FUS; Adapter 2: PA1024-120HUB200).
- PoE 1 and PoE 2 had been pretested and fund that PoE 2 was the worst case and was selected for final testing. (PoE 1: PD-3501G/AC; PoE 2: PD-9001GR/AT/AC).
- 4. Test configurations are listed as below:
 - 1) Configuration 1: Legacy/MIMO (CDD) Non-beamforming mode, Adapter mode
 - 2) Configuration 2: Legacy/MIMO (CDD) Non-beamforming mode, PoE mode
 - 3) Configuration 3: Legacy/MIMO (CDD) beamforming mode, Adapter mode
 - 4) Configuration 4: Legacy/MIMO (CDD) beamforming mode, PoE mode

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3 Transmitter Test Results

3.1 Conducted Emissions

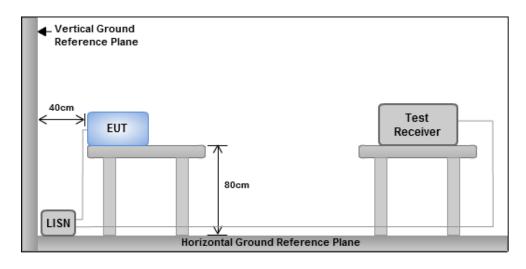
3.1.1 Limit of Conducted Emissions

	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.	

3.1.2 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

3.1.3 Test Setup



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

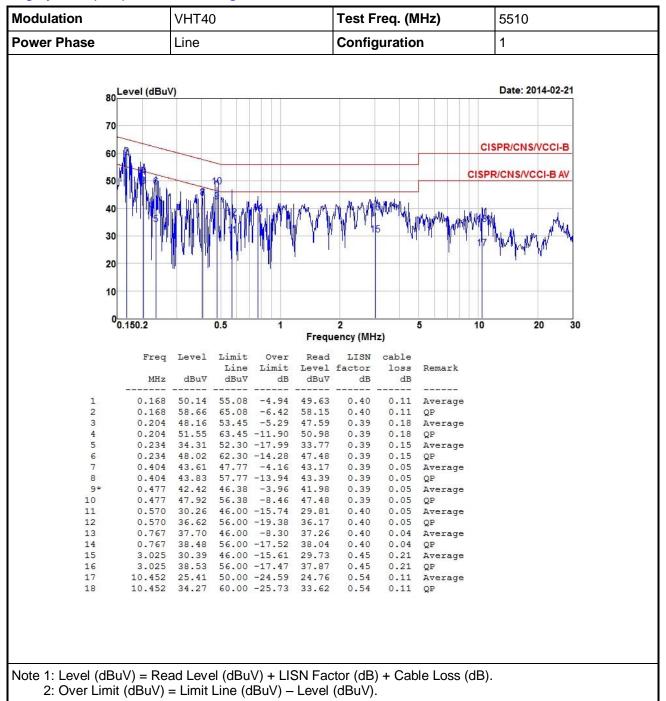
Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

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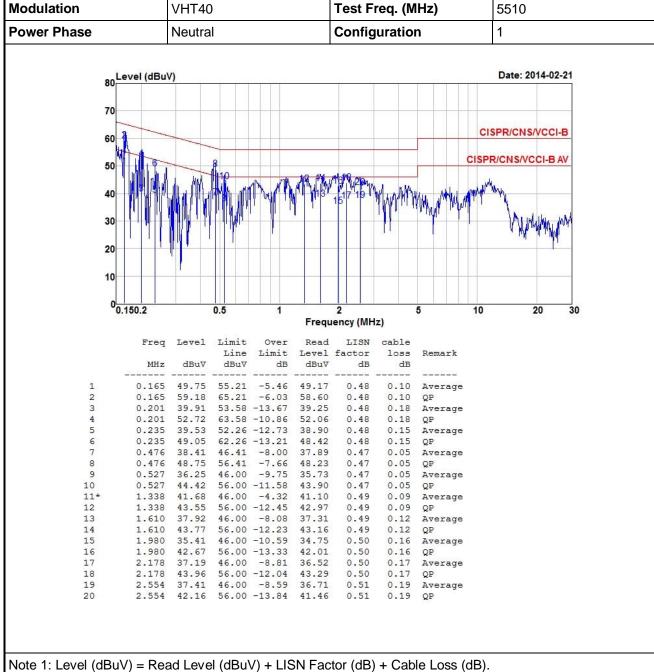
3.1.4 Test Result of Conducted Emissions

Legacy/MIMO (CDD) Non- beamforming mode



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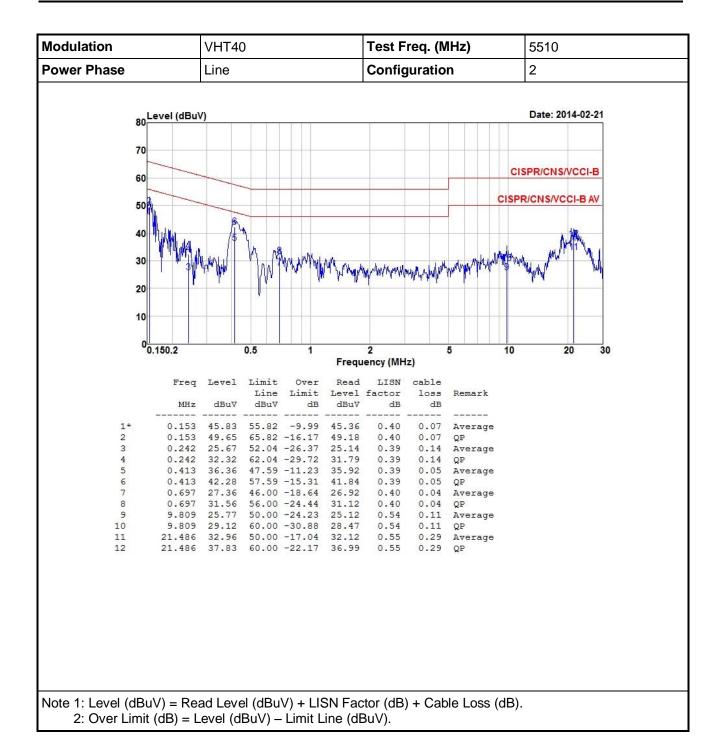




2: Over Limit (dB) = Level (dBuV) - Limit Line (dBuV).

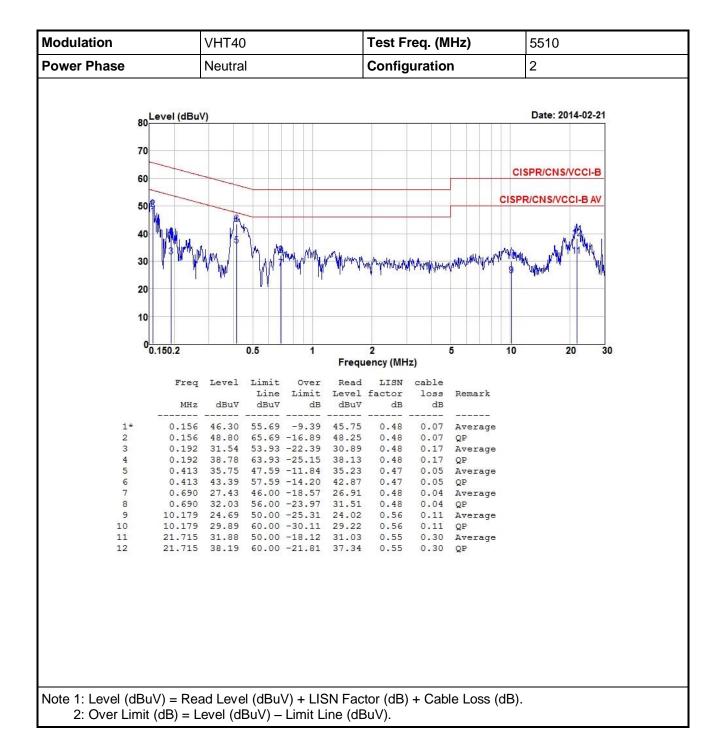
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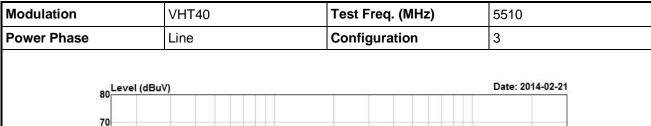


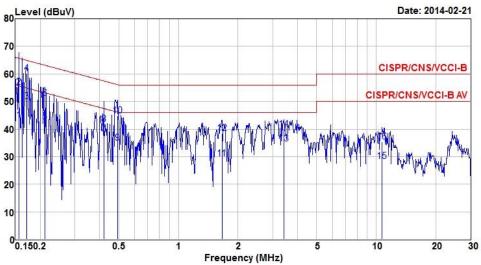


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Legacy/MIMO (CDD) beamforming mode





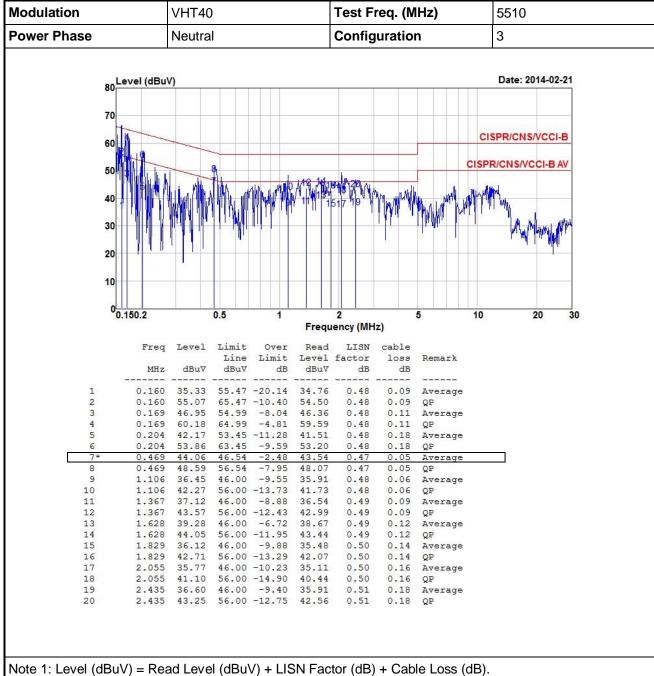
	Freq	Level dBuV	Limit Line dBuV	Limit	Read Level dBuV	factor		Remark
1	0.156	43.23	55.69	-12.46	42.76	0.40	0.07	Average
2	0.156	55.15	65.69	-10.54	54.68	0.40	0.07	QP
3	0.170	50.09	54.94	-4.85	49.58	0.40	0.11	Average
4*	0.170	60.14	64.94	-4.80	59.63	0.40	0.11	QP
5	0.211	42.71	53.18	-10.47	42.15	0.39	0.17	Average
6	0.211	51.31	63.18	-11.87	50.75	0.39	0.17	QP
7	0.419	38.18	47.46	-9.28	37.74	0.39	0.05	Average
8	0.419	41.87	57.46	-15.59	41.43	0.39	0.05	QP
9	0.494	34.91	46.10	-11.19	34.47	0.39	0.05	Average
10	0.494	44.77	56.10	-11.33	44.33	0.39	0.05	QP
11	1.662	29.33	46.00	-16.67	28.78	0.42	0.13	Average
12	1.662	38.44	56.00	-17.56	37.89	0.42	0.13	QP
13	3.417	34.59	46.00	-11.41	33.92	0.45	0.22	Average
14	3.417	39.94	56.00	-16.06	39.27	0.45	0.22	QP
15	10.733	28.35	50.00	-21.65	27.70	0.54	0.11	Average
16	10.733	35.44	60.00	-24.56	34.79	0.54		QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).

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

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

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Modulation		VHT40	0			Test F	req. (N	/lHz)	55	10	
Power Phase		Line				Config	guratio	n	4		
80	Level (dBu)	/)							Dat	te: 2014-02	2-21
Ŭ.											
70	0										
60	0								CISPR/	CNS/VCC	I-B
			_						SDDICN	IS/VCCI-B	A\/
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1	0.150.2		0.5	1		2		5	10	20	30
					Frequ	ency (MH	z)				
	Freq	Level	Limit	Over	Read	LISN factor	cable	Remark			
	MHz	dBuV	dBuV	Limit dB	dBuV	dB	dB	Remark			
1*	0.156	45.02	55.69	-10.67	44.55	0.40	0.07	Average			
2	0.156			-16.71			0.07	QP			
3 4	0.413	42.18	47.59				0.05	Average			
5	0.661		46.00			0.40		Average			
6		31.45					0.04				
7	1.016	23.40	46.00	-22.60	22.95	0.41	0.04	Average			
8		28.84					0.04	100			
9		25.13						Average			
10		28.93									
11		30.77						Average			
12	22.416	36.40	60.00	-23.60	35.51	0.55	0.34	QP			

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Modulation		VHT40			Test Freq. (MHz)				5510		
Power Phase		Neutra	.1			Config	juratio	n	4		
an ^L	evel (dBu\	/)							Da	te: 2014-0	2-21
80											
70						-				-	
9000									CISPR	CNS/VCC	I-B
60		-							0.0.10		
50									ISPR/CN	IS/VCCI-B	AV
	W	A	~			-					
40	M.M.	- N,	1			-	7,			L MAR	
	I K "ANNAR" W	W L 3	M M	NIA MAYIJI	Mu la la				Military.	1 MAN 11	M,
30	W	W. W.	N/V	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	d undanishing	AND THE PROPERTY OF	MANAMANA	A white and an entering and	ANA 6	, M	WW
20		11	4		- 4		7 11				
20											
10		-									
000	.150.2		0.5	1	V-20-1	2		5	10	20	30
					Frequ	ency (MH	lz)				
	Freq	Level	Limit	Over	Read		cable				
	MHz	dBuV	Line dBuV	Limit dB	Level dBuV	factor dB	loss	Remark			
1* 2	0.153	47.28	55.82 65.82		46.73	0.48	0.07	Average QP			
3				-13.35		0.47		Average			
4		42.44			41.92	0.47	0.05	10000			
5				-20.75		0.48		Average			
6				-24.55		0.48					
7 8				-24.69 -29.29		0.52	0.22	Average			
9				-25.54				Average			
10				-30.11		0.56					
11				-19.58				Average			
11	00 000	36.19	60.00	-23.81	35.25	0.54	0.40	QP			

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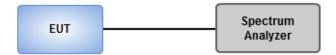


3.2 Emission Bandwidth

3.2.1 Test Procedures

- 1. Set RBW = approximately 1% of the emission bandwidth.
- 2. Set the VBW > RBW, Detector = Peak.
- 3. Trace mode = max hold.
- 4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

3.2.2 Test Setup



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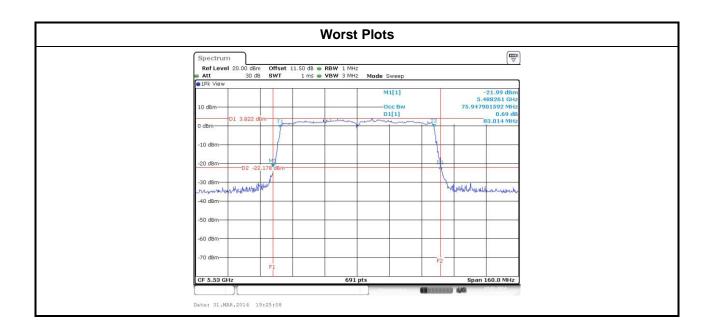
3.2.3 Test Result of Emission Bandwidth

Legacy/MIMO (CDD) Non- beamforming mode

				Emis	sion Band	width				
		Eroa	26dB	Bandwidth	(MHz)	99% E	Bandwidth	(MHz)	Power lin	nit (dBm)
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Chain 0	Chain 1	Chain 2	26dB BW	99% OBW
11a	1	5260	37.74			17.15			24.00	23.34
11a	1	5300	36.81			17.08			24.00	23.32
11a	1	5320	29.10			16.93			24.00	23.29
11a	1	5500	28.81			16.93			24.00	23.29
11a	1	5580	42.10			17.58			24.00	23.45
11a	1	5700	21.68			16.97			24.00	23.30
VHT20	3	5260	20.70	20.52	20.70	17.91	17.76	17.84	24.00	23.49
VHT20	3	5300	20.75	20.64	20.52	17.95	17.76	17.80	24.00	23.49
VHT20	3	5320	20.70	20.52	20.70	17.91	17.76	17.84	24.00	23.49
VHT20	3	5500	20.81	20.70	20.70	17.91	17.76	17.80	24.00	23.49
VHT20	3	5580	20.64	20.46	20.58	17.91	17.80	17.80	24.00	23.50
VHT20	3	5700	20.87	20.52	20.64	17.98	17.80	17.80	24.00	23.50
VHT40	3	5270	41.04	40.58	40.23	36.60	36.53	36.53	24.00	24.00
VHT40	3	5310	40.93	40.35	40.23	36.60	36.53	36.66	24.00	24.00
VHT40	3	5510	40.93	40.35	40.23	36.66	36.53	36.60	24.00	24.00
VHT40	3	5550	40.93	40.81	40.46	36.60	36.53	36.53	24.00	24.00
VHT40	3	5670	41.04	40.70	40.46	36.73	36.60	36.53	24.00	24.00
VHT80	3	5290	82.78	82.55	82.09	75.65	75.65	75.65	24.00	24.00
VHT80	3	5530	83.01	82.09	82.09	75.65	75.65	75.77	24.00	24.00

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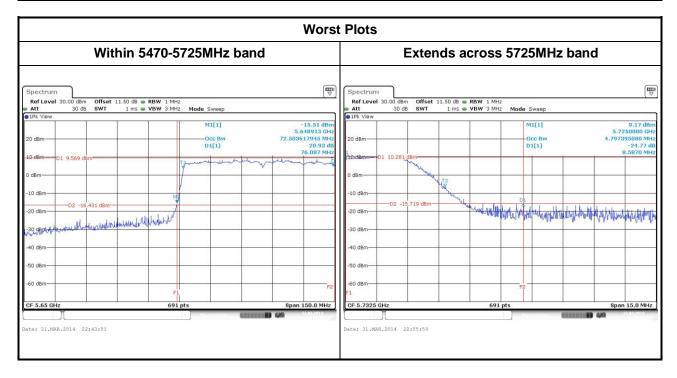
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Channel that extends across the 5.725 GHz boundary

	UNII Emission Bandwidth Result (Within 5470-5725MHz band)											
		Freq.	26dB	Bandwidth	(MHz)	99% E	Bandwidth	Power Limit (dBm)				
Mode	N _{TX}	(MHz)	Chain 0	Chain 1	Chain 2	Chain 0	Chain 1	Chain 2	26dB BW	99% OBW		
11a	1	5720	15.52			13.69			28.91	28.36		
VHT20	3	5720	15.40	15.28	15.34	14.00	13.89	13.97	28.84	28.43		
VHT40	3	5710	35.61	35.41	35.20	33.21	33.21	33.21	30.00	30.00		
VHT80	3	5690	76.09	76.09	75.87	72.45	72.45	72.45	30.00	30.00		

	UNII Emission Bandwidth Result (Extends across 5725MHz band)											
		Freq.	26dB	Bandwidth	(MHz)	99% Bandwidth (MHz)			Power Limit (dBm)			
Mode	N _{TX}	(MHz)	Chain 0	Chain 1	Chain 2	Chain 0	Chain 1	Chain 2	26dB BW	99% OBW		
11a	1	5720	7.70			4.62			25.86	23.65		
VHT20	3	5720	5.43	5.39	5.35	4.44	4.36	4.34	24.28	23.37		
VHT40	3	5710	8.59	5.72	5.48	4.46	4.33	4.27	24.39	23.30		
VHT80	3	5690	7.04	6.78	6.43	5.18	5.11	5.11	25.08	24.08		



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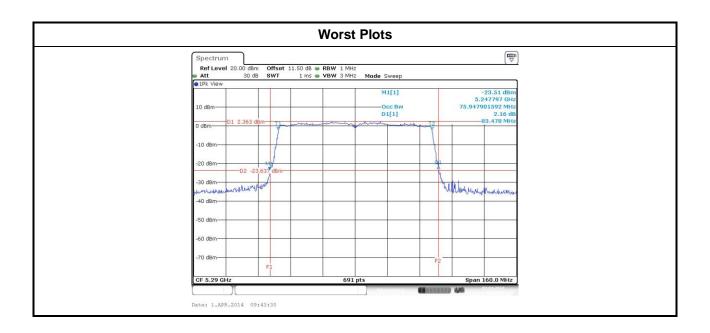


Legacy/MIMO (CDD) beamforming mode

				Emis	sion Band	width				
		Freq.	26dB	Bandwidth	(MHz)	99% E	Bandwidth	(MHz)	Power lin	nit (dBm)
Mode	N _{TX}	(MHz)	Chain 0	Chain 1	26dB BW	26dB BW	Chain 1	Chain 2	26dB BW	99% OBW
11a	1	5260	37.74			17.15			24.00	23.34
11a	1	5300	36.81			17.08			24.00	23.32
11a	1	5320	29.10			16.93			24.00	23.29
11a	1	5500	28.81			16.93			24.00	23.29
11a	1	5580	42.10			17.58			24.00	23.45
11a	1	5700	21.68			16.97			24.00	23.30
VHT20	3	5260	20.70	20.58	20.46	17.95	17.73	17.80	24.00	23.49
VHT20	3	5300	20.75	20.64	20.70	17.95	17.73	17.76	24.00	23.49
VHT20	3	5320	20.70	20.52	20.52	17.91	17.73	17.80	24.00	23.49
VHT20	3	5500	20.64	20.58	20.70	17.95	17.73	17.76	24.00	23.49
VHT20	3	5580	20.75	20.35	20.52	17.91	17.73	17.76	24.00	23.49
VHT20	3	5700	20.81	20.46	20.58	17.95	17.73	17.80	24.00	23.49
VHT40	3	5270	41.16	40.70	40.46	36.60	36.47	36.60	24.00	24.00
VHT40	3	5310	40.93	40.46	40.35	36.60	36.47	36.60	24.00	24.00
VHT40	3	5510	41.04	40.70	40.46	36.60	36.53	36.60	24.00	24.00
VHT40	3	5550	40.93	40.58	40.35	36.66	36.53	36.53	24.00	24.00
VHT40	3	5670	40.93	40.46	40.58	36.73	36.53	36.60	24.00	24.00
VHT80	3	5290	83.48	82.55	82.09	75.90	75.53	75.53	24.00	24.00
VHT80	3	5530	83.25	82.55	81.86	75.77	75.53	75.53	24.00	24.00

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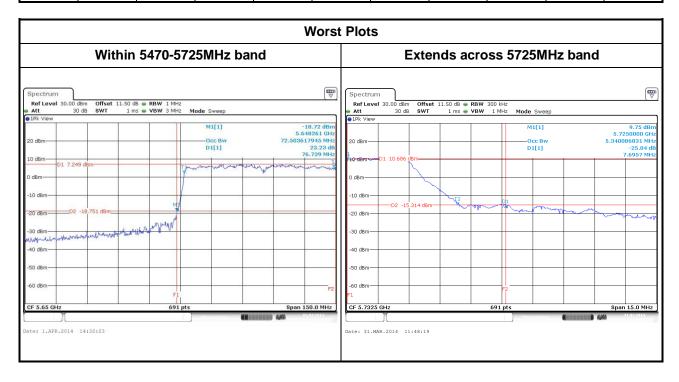
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Channel that extends across the 5.725 GHz boundary

	UNII Emission Bandwidth Result (Within 5470-5725MHz band)											
		Freq.	26dB I	Bandwidth	(MHz)	99% E	Bandwidth	(MHz)	Power Li	wer Limit (dBm)		
Mode	N _{TX}	(MHz)	Chain 0	Chain 1	Chain 2	Chain 0	Chain 1	Chain 2	26dB BW	99% OBW		
11a	1	5720	15.52			13.69			28.91	28.36		
VHT20	3	5720	15.40	15.15	15.28	14.00	13.93	13.97	28.80	28.44		
VHT40	3	5710	35.91	35.20	35.51	33.21	33.28	33.21	30.00	30.00		
VHT80	3	5690	76.52	76.74	75.44	72.45	72.45	72.45	30.00	30.00		

	UNII Emission Bandwidth Result (Extends across 5725MHz band)										
		Freg.	26dB	Bandwidth	(MHz)	99% E	Bandwidth	(MHz)	Power Limit (dBm)		
Mode	N _{TX}	(MHz)	Chain 0	Chain 1	Chain 2	Chain 0	Chain 1	Chain 2	26dB BW	99% OBW	
11a	1	5720	7.70			4.62			25.86	23.65	
VHT20	3	5720	5.35	5.26	5.30	4.41	4.30	4.36	24.21	23.33	
VHT40	3	5710	5.65	5.37	5.26	4.38	4.25	4.24	24.21	23.27	
VHT80	3	5690	7.17	6.91	6.65	5.25	5.17	5.07	25.23	24.05	



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3.3 RF Output Power

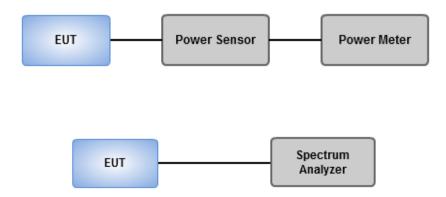
3.3.1 Limit of RF Output Power

	Frequency Band (GHz)	Limit					
\boxtimes	5.25~5.35	250mW or 11dBm+10 log B					
\boxtimes	5.47~5.725	250mW or 11dBm+10 log B					
Note	Note: "B" is the 26dB emission bandwidth in MHz.						

3.3.2 Test Procedures

- Power meter (For channel that does not extends across the 5.725 GHz boundary)
 - 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 (i.e., RMS) mode
- 3. Compute power by integrating the spectrum across the 26 dB EBW

3.3.3 Test Setup



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3.3.4 Test Result of Maximum Conducted Output Power

Legacy/MIMO (CDD) Non- beamforming mode

			RF O	utput Power	(dBm)			
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Total Power (mW)	Total Power (dBm)	Limit (dBm)
11a	1	5260	21.45			139.637	21.45	23.79
11a	1	5300	21.41			138.357	21.41	23.79
11a	1	5320	19.40			87.096	19.40	23.79
11a	1	5500	20.01			100.231	20.01	23.85
11a	1	5580	23.08			203.236	23.08	23.85
11a	1	5700	17.89			61.518	17.89	23.85
HT20	3	5260	13.51	14.22	13.94	73.637	18.67	23.43
HT20	3	5300	13.41	14.32	13.91	73.571	18.67	23.43
HT20	3	5320	13.25	14.42	13.77	72.628	18.61	23.43
HT20	3	5500	13.70	14.38	13.79	74.791	18.74	23.85
HT20	3	5580	13.79	14.18	13.40	71.993	18.57	23.85
HT20	3	5700	13.68	14.11	13.43	71.127	18.52	23.85
HT40	3	5270	16.02	17.13	16.32	134.491	21.29	23.43
HT40	3	5310	15.16	15.92	15.11	104.328	20.18	23.43
HT40	3	5510	14.09	15.06	14.18	83.889	19.24	23.85
HT40	3	5550	15.73	16.86	15.69	123.008	20.90	23.85
HT40	3	5670	16.82	17.29	16.61	147.478	21.69	23.85

Note:

Mode	Frequency band (MHz)	Directional gain (dBi)	Power limit shall be reduced (dB)
11a	5250~5350	6.21	0.21
HT20 / HT40 / VHT20 / VHT40 / VHT80	5250~5350	6.57	0.57
11a	5470 ~ 5725	6.15	0.15
HT20 / HT40 / VHT20 / VHT40 / VHT80	5470 ~ 5725	6.15	0.15

^{1.} Gain of antenna 0 is selected for 802.11a since 11a only transmits signal through antenna 0

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^{2.} Maximum antenna gain is selected to the directional gain.



			RF O	utput Power	(dBm)			
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Total Power (mW)	Total Power (dBm)	Limit (dBm)
VHT20	3	5260	13.59	14.29	14.07	75.236	18.76	23.43
VHT20	3	5300	13.49	14.38	14.01	74.928	18.75	23.43
VHT20	3	5320	13.32	14.49	13.83	73.752	18.68	23.43
VHT20	3	5500	13.75	14.43	13.88	75.881	18.80	23.85
VHT20	3	5580	13.89	14.27	13.51	73.660	18.67	23.85
VHT20	3	5700	13.78	14.18	13.55	72.706	18.62	23.85
VHT40	3	5270	16.16	17.32	16.43	139.210	21.44	23.43
VHT40	3	5310	15.22	16.01	15.25	106.665	20.28	23.43
VHT40	3	5510	14.15	15.10	14.21	84.724	19.28	23.85
VHT40	3	5550	15.85	16.98	15.76	126.018	21.00	23.85
VHT40	3	5670	16.92	17.36	16.72	150.644	21.78	23.85
VHT80	3	5290	12.65	13.93	12.86	62.445	17.95	23.43
VHT80	3	5530	11.63	12.86	11.98	49.650	16.96	23.85

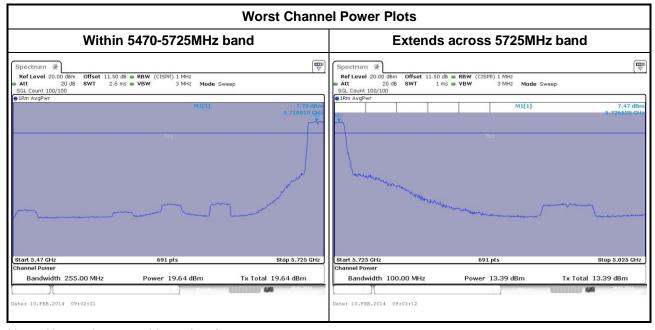
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Channel that extends across the 5.725 GHz boundary

	N	/laximum Co	nducted Out	out Power (W	/ithin 5470-57	725MHz band	1)					
	RF Output Power (dBm)											
Mode N _{TX} Freq. (MHz) Chain 0 Chain 1 Chain 2 Total Power (mW) CdBm)												
11a	1	5720	19.64			92.045	19.64	28.76				
HT20	3	5720	12.96	13.41	12.77	60.621	17.83	28.69				
HT40	3	5710	16.13	16.67	16.09	128.116	10.00	29.85				
VHT20	3	5720	12.93	13.67	12.85	62.190	17.94	28.69				
VHT40	3	5710	16.30	16.85	15.95	130.430	21.15	29.85				
VHT80	3	5690	16.65	17.55	17.19	155.392	21.91	29.85				

	Ма	ximum Cond	lucted Outpu	t Power (Ext	ends across	5725MHz ba	nd)					
	RF Output Power (dBm)											
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Total Power (mW)	Total Power (dBm)	Limit (dBm)				
11a	1	5720	13.39			21.827	13.39	25.71				
HT20	3	5720	7.01	7.49	7.07	15.727	11.97	24.13				
HT40	3	5710	6.26	6.28	6.25	12.690	11.03	24.24				
VHT20	3	5720	7.17	7.52	7.16	16.061	12.06	24.13				
VHT40	3	5710	6.34	6.44	6.20	12.880	11.10	24.24				
VHT80	3	5690	2.37	2.64	3.31	5.702	7.56	24.93				



Note: Above plots are without duty factor.

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Legacy/MIMO (CDD) beamforming mode

RF Output Power (dBm)										
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Total Power (mW)	Total Power (dBm)	Limit (dBm)		
11a	1	5260	21.45			139.637	21.45	23.79		
11a	1	5300	21.41			138.357	21.41	23.79		
11a	1	5320	19.40			87.096	19.40	23.79		
11a	1	5500	20.01			100.231	20.01	23.85		
11a	1	5580	23.08			203.236	23.08	23.85		
11a	1	5700	17.89			61.518	17.89	23.85		
HT20	3	5260	12.76	13.92	13.03	63.631	18.04	18.98		
HT20	3	5300	12.81	14.02	13.06	64.564	18.10	18.98		
HT20	3	5320	12.74	13.89	12.96	63.053	18.00	18.98		
HT20	3	5500	13.76	14.44	13.85	75.832	18.80	19.38		
HT20	3	5580	13.68	14.25	13.49	72.278	18.59	19.38		
HT20	3	5700	13.74	14.16	13.52	72.211	18.59	19.38		
HT40	3	5270	13.66	14.25	13.97	74.781	18.74	18.98		
HT40	3	5310	13.66	14.42	13.92	75.557	18.78	18.98		
HT40	3	5510	13.81	14.54	13.62	75.503	18.78	19.38		
HT40	3	5550	13.78	14.45	13.52	74.230	18.71	19.38		
HT40	3	5670	13.66	13.97	13.65	71.347	18.53	19.38		

Note:

Mode	Frequency band (MHz)	Directional gain (dBi)	Power limit shall be reduced (dB)
11a	5250~5350	6.21	0.21
HT20 / HT40 / VHT20 / VHT40 / VHT80	5250~5350	11.02	5.02
11a	5470 ~ 5725	6.15	0.15
HT20 / HT40 / VHT20 / VHT40 / VHT80	5470 ~ 5725	10.62	4.62

^{1.} Gain of antenna 0 is selected for 802.11a since 11a only transmits signal through antenna 0

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^{2.} Directional gain = $10 * log((10^{gG1/20} + 10^{G2/20} + 10^{G3/20})^2/3)$ for HT20 / HT40 / VHT20 / VHT40 / VHT80



			RF O	utput Power	(dBm)			
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Total Power (mW)	Total Power (dBm)	Limit (dBm)
VHT20	3	5260	12.64	14.04	13.06	63.947	18.06	18.98
VHT20	3	5300	12.93	14.09	13.08	65.602	18.17	18.98
VHT20	3	5320	12.82	13.99	13.02	64.248	18.08	18.98
VHT20	3	5500	13.81	14.51	13.93	77.010	18.87	19.38
VHT20	3	5580	13.72	14.31	13.57	73.279	18.65	19.38
VHT20	3	5700	13.82	14.21	13.60	73.371	18.66	19.38
VHT40	3	5270	13.73	14.31	14.02	75.817	18.80	18.98
VHT40	3	5310	13.81	14.51	14.05	77.702	18.90	18.98
VHT40	3	5510	13.88	14.62	13.71	76.904	18.86	19.38
VHT40	3	5550	13.85	14.58	13.60	75.883	18.80	19.38
VHT40	3	5670	13.77	14.02	13.78	72.936	18.63	19.38
VHT80	3	5290	11.15	12.04	11.23	42.301	16.26	18.98
VHT80	3	5530	11.25	11.95	11.58	43.391	16.37	19.38

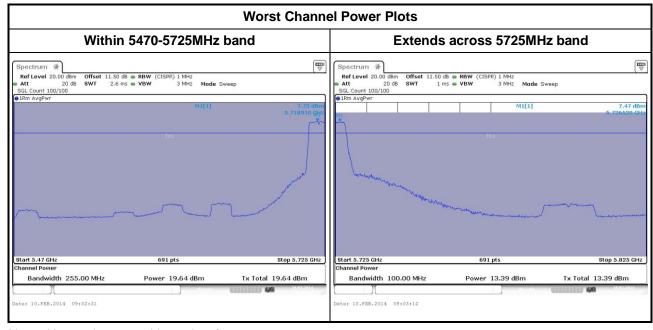
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Channel that extends across the 5.725 GHz boundary

	Maximum Conducted Output Power (Within 5470-5725MHz band)										
	RF Output Power (dBm)										
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Total Power (mW)	Total Power (dBm)	Limit (dBm)			
11a	1	5720	19.64			92.045	19.64	28.76			
HT20	3	5720	12.17	12.76	12.14	51.730	17.14	24.18			
HT40	3	5710	14.32	14.45	14.25	81.508	10.00	25.38			
VHT20	3	5720	12.27	12.84	12.15	52.502	17.20	24.18			
VHT40	3	5710	14.36	14.84	14.26	84.437	19.27	25.38			
VHT80	3	5690	14.13	15.02	14.54	86.095	19.35	25.38			

	Maximum Conducted Output Power (Extends across 5725MHz band)										
	RF Output Power (dBm)										
Mode	N _{TX}	Freq. (MHz)	Chain 0	Chain 1	Chain 2	Total Power (mW)	Total Power (dBm)	Limit (dBm)			
11a	1	5720	13.39			21.827	13.39	25.71			
HT20	3	5720	6.48	6.71	6.36	13.460	11.29	19.59			
HT40	3	5710	4.03	3.97	3.69	7.363	8.67	19.59			
VHT20	3	5720	6.45	6.76	6.57	13.698	11.37	19.59			
VHT40	3	5710	4.05	4.00	3.77	7.435	8.71	19.59			
VHT80	3	5690	0.20	0.64	1.10	3.494	5.43	20.61			



Note: Above plots are without duty factor.

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3.4 Peak Power Spectral Density

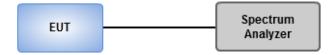
3.4.1 Limit of Peak Power Spectral Density

	Frequency Band (GHz)	Limit (dBm)
\boxtimes	5.25~5.35	11
\boxtimes	5.47~5.725	11

3.4.2 Test Procedures

- Method SA-1 (For 11a / 11ac VHT20 mode)
 - 1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
 - 2. Trace average 100 traces.
 - 3. Use the peak marker function to determine the maximum amplitude level.
- ☐ Method SA-2
 - 1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
 - 2. Set sweep time ≥ 10 * (number of points in sweep) * (symbol period of the transmitted signal).
 - 3. Perform a single sweep.
 - 4. Use the peak marker function to determine the maximum amplitude level.
- Method SA-2 Alternative (For 11ac VHT40 / VHT80 mode)
 - 1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
 - 2. Set sweep time ≥ 10 * (number of points in sweep) * (total on/off period of the transmitted signal).
 - 3. Perform a single sweep.
 - 4. Use the peak marker function to determine the maximum amplitude level.
 - 5. Add 10 log(1/x), where x is the duty cycle.

3.4.3 Test Setup



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3.4.4 Test Result of Peak Power Spectral Density

Legacy/MIMO (CDD) Non- beamforming mode

Co	ondition		ı	Peak Power Spectral Density (dBm)								
Modulation Mode	N _{TX}	Freq. (MHz)	PPSD w/o D.F (dBm)	Duty factor (dB)	PPSD with D.F (dBm)	PPSD Limit (dBm)						
11a	1	5260	8.74	0.00	8.74	10.79						
11a	1	5300	8.92	0.00	8.92	10.79						
11a	1	5320	6.99	0.00	6.99	10.79						
11a	1	5500	7.57	0.00	7.57	10.85						
11a	1	5580	10.57	0.00	10.57	10.85						
11a	1	5700	5.42	0.00	5.42	10.85						
11a	1	5720	7.81	0.00	7.81	10.85						
VHT20	3	5260	5.63	0.00	5.63	5.98						
VHT20	3	5300	5.77	0.00	5.77	5.98						
VHT20	3	5320	5.69	0.00 5.69		5.98						
VHT20	3	5500	5.24	0.00	5.24	6.38						
VHT20	3	5580	5.02	0.00	5.02	6.38						
VHT20	3	5700	5.14	0.00	5.14	6.38						
VHT20	3	5720	6.24	0.00	6.24	6.38						
VHT40	3	5270	5.41	0.00	5.41	5.98						
VHT40	3	5310	5.47	0.00	5.47	5.98						
VHT40	3	5510	5.18	0.00	5.18	6.38						
VHT40	3	5550	5.46	0.00	5.46	6.38						
VHT40	3	5670	5.65	0.00	5.65	6.38						
VHT40	3	5710	5.79	0.00	5.79	6.38						
VHT80	3	5290	-0.50	0.20	-0.30	5.98						
VHT80	3	5530	-1.03	0.20	-0.83	6.38						
VHT80	3	5690	3.24	0.20	3.44	6.38						

Note:

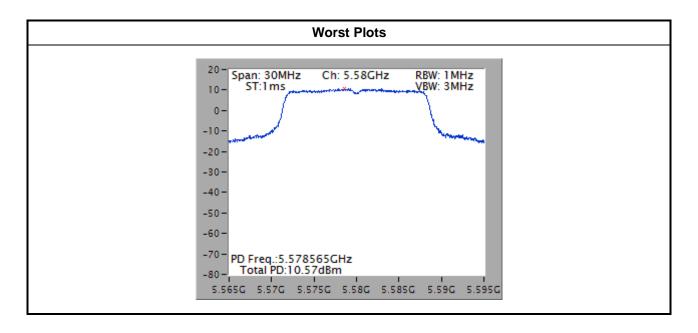
- 1. D.F is duty factor.
- 2. PPSD limit is reduced since directional gain > 6 dBi . Please refer next page for detail information
- 3. Test result for VHT20/VHT40/VHT80 are bin-by-bin summing measured value of each TX port

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Mode	Frequency band (MHz)	Directional gain (dBi)	Power limit shall be reduced (dB)
11a	5250~5350	6.21	0.21
HT20 / HT40 / VHT20 / VHT40 / VHT80	5250~5350	11.02	5.02
11a	5470 ~ 5725	6.15	0.15
HT20 / HT40 / VHT20 / VHT40 / VHT80	5470 ~ 5725	10.62	4.62

Note1: Gain of antenna 0 is selected for 802.11a since 11a only transmits signal through antenna 0 Note2: Directional gain = $10 * \log((10^{9G1/20}+10^{G2/20}+10^{G3/20})^2/3)$ for HT20 / HT40 / VHT20 / VHT40 / VHT80



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Legacy/MIMO (CDD) beamforming mode

Co	ondition			Peak Power Spec	tral Density (dBm)
Modulation Mode	N _{TX}	Freq. (MHz)	PPSD w/o D.F (dBm)	Duty factor (dB)	PPSD with D.F (dBm)	PPSD Limit (dBm)
11a	1	5260	8.74	0.00	8.74	10.79
11a	1	5300	8.92	0.00	8.92	10.79
11a	1	5320	6.99	0.00	6.99	10.79
11a	1	5500	7.57	0.00	7.57	10.85
11a	1	5580	10.57	0.00	10.57	10.85
11a	1	5700	5.42	0.00	5.42	10.85
11a	1	5720	7.81	0.00	7.81	10.85
VHT20	3	5260	5.34	0.00	5.34	5.98
VHT20	3	5300	5.72 0.00		5.72	5.98
VHT20	3	5320	5.72	0.00	5.72	5.98
VHT20	3	5500	5.39	0.00	5.39	6.38
VHT20	3	5580	5.28	0.00	5.28	6.38
VHT20	3	5700	5.52	0.00	5.52	6.38
VHT20	3	5720	5.33	0.00	5.33	6.38
VHT40	3	5270	2.59	0.00	2.59	5.98
VHT40	3	5310	2.59	0.00	2.59	5.98
VHT40	3	5510	2.68	0.00	2.68	6.38
VHT40	3	5550	2.71	0.00	2.71	6.38
VHT40	3	5670	2.53	0.00	2.53	6.38
VHT40	3	5710	3.86	0.00	3.86	6.38
VHT80	3	5290	-2.73	0.00	-2.73	5.98
VHT80	3	5530	-2.65	0.00	-2.65	6.38
VHT80	3	5690	0.87	0.00	0.87	6.38

Note:

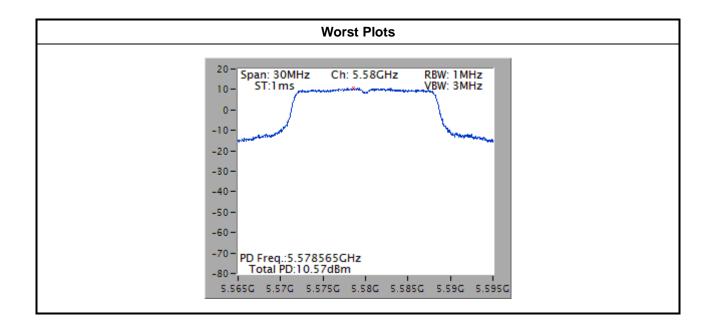
- D.F is duty factor.
 PPSD limit is reduced since directional gain > 6 dBi . Please refer next page for detail information
 Test result for VHT20/VHT40/VHT80 are bin-by-bin summing measured value of each TX port

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Mode	Frequency band (MHz)	Directional gain (dBi)	Power limit shall be reduced (dB)
11a	5250~5350	6.21	0.21
HT20 / HT40 / VHT20 / VHT40 / VHT80	5250~5350	11.02	5.02
11a	5470 ~ 5725	6.15	0.15
HT20 / HT40 / VHT20 / VHT40 / VHT80	5470 ~ 5725	10.62	4.62

Note1: Gain of antenna 0 is selected for 802.11a since 11a only transmits signal through antenna 0 Note2: Directional gain = $10 * \log((10^{9G1/20}+10^{G2/20}+10^{G3/20})^2/3)$ for HT20 / HT40 / VHT20 / VHT40 / VHT80



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3.5 Peak Excursion

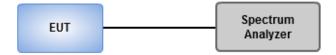
3.5.1 Peak Excursion Limit

Peak excursion of the modulation envelope shall not exceed 13 dB across any 1 MHz bandwidth.

3.5.2 Test Procedures

- 1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = peak.
- 2. Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.
- 3. Use the peak search function to find the peak of the spectrum.
- 4. Use the procedure of section 3.4.2 to measure the PPSD.
- 5. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD

3.5.3 Test Setup



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3.5.4 Test Result of Peak Excursion

Legacy/MIMO (CDD) Non- beamforming mode

Frequency	y band(MHz)	5250~5350							
Mode	Modulation Mode	N _{TX}	Freq. (MHz)	Measured value(dB)	Duty factor (dB)	Peak Excursion (dB)	Limit		
11a	BPSK	1	5260	7.86	0.00	7.86	13		
11a	QPSK	1	5260	8.18	0.14	8.04	13		
11a	16QAM	1	5260	8.87	0.16	8.71	13		
11a	64QAM	1	5260	8.23	0.22	8.01	13		
VHT20	BPSK	3	5320	9.36	0.00	9.36	13		
VHT20	QPSK	3	5320	8.34	0.00	8.34	13		
VHT20	16QAM	3	5320	8.66	0.16	8.50	13		
VHT20	64QAM	3	5320	9.30	0.32	8.98	13		
VHT20	256QAM	3	5320	9.39	0.47	8.92	13		
VHT40	BPSK	3	5270	8.70	0.00	8.70	13		
VHT40	QPSK	3	5270	8.43	0.18	8.25	13		
VHT40	16QAM	3	5270	9.21	0.32	8.89	13		
VHT40	64QAM	3	5270	8.79	0.61	8.18	13		
VHT40	256QAM	3	5270	9.37	0.75	8.62	13		
VHT80	BPSK	3	5290	9.31	0.20	9.11	13		
VHT80	QPSK	3	5290	9.47	0.35	9.12	13		
VHT80	16QAM	3	5290	9.20	0.61	8.59	13		
VHT80	64QAM	3	5290	10.22	0.94	9.28	13		
VHT80	256QAM	3	5290	8.99	1.13	7.86	13		

Note: Measured value = Peak-max-hold spectrum to the maximum of the average spectrum for continuous transmission. Since the duty cycle is < 98 %, duty factor is required to average spectrum Peak exclusion = Measured value – duty factor

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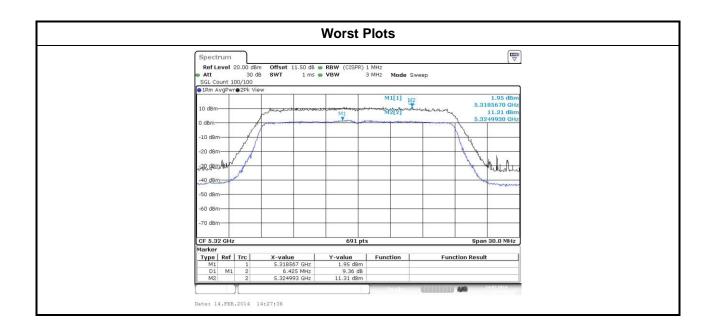


Frequency	band(MHz)				5470~5725		
Mode	Modulation Mode	N _{TX}	Freq. (MHz)	Measured value(dB)	Duty factor (dB)	Peak Excursion (dB)	Limit
11a	BPSK	1	5580	7.32	0.00	7.32	13
11a	QPSK	1	5580	8.64	0.14	8.50	13
11a	16QAM	1	5580	8.80	0.16	8.64	13
11a	64QAM	1	5580	8.78	0.22	8.56	13
VHT20	BPSK	3	5500	9.10	0.00	9.10	13
VHT20	QPSK	3	5500	8.23	0.00	8.23	13
VHT20	16QAM	3	5500	8.83	0.16	8.67	13
VHT20	64QAM	3	5500	9.30	0.32	8.98	13
VHT20	256QAM	3	5500	9.71	0.47	9.24	13
VHT40	BPSK	3	5670	8.62	0.00	8.62	13
VHT40	QPSK	3	5670	8.59	0.18	8.41	13
VHT40	16QAM	3	5670	9.21	0.32	8.89	13
VHT40	64QAM	3	5670	9.43	0.61	8.82	13
VHT40	256QAM	3	5670	8.93	0.75	8.18	13
VHT80	BPSK	3	5690	9.31	0.20	9.11	13
VHT80	QPSK	3	5690	9.01	0.35	8.66	13
VHT80	16QAM	3	5690	9.69	0.61	9.08	13
VHT80	64QAM	3	5690	9.94	0.94	9.00	13
VHT80	256QAM	3	5690	10.17	1.13	9.04	13

Note: Measured value = Peak-max-hold spectrum to the maximum of the average spectrum for continuous transmission. Since the duty cycle is < 98 %, duty factor is required to average spectrum Peak exclusion = Measured value – duty factor

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Legacy/MIMO (CDD) beamforming mode

Frequency	band(MHz)	5250~5350							
Mode	Modulation Mode	N _{TX}	Freq. (MHz)	Measured value(dB)	Duty factor (dB)	Peak Excursion (dB)	Limit		
11a	BPSK	1	5260	7.86	0.00	7.86	13		
11a	QPSK	1	5260	8.18	0.14	8.04	13		
11a	16QAM	1	5260	8.87	0.16	8.71	13		
11a	64QAM	1	5260	8.23	0.22	8.01	13		
VHT20	BPSK	3	5300	8.68	0.00	8.68	13		
VHT20	QPSK	3	5300	8.93	0.00	8.93	13		
VHT20	16QAM	3	5300	9.73	0.11	9.62	13		
VHT20	64QAM	3	5300	9.52	0.19	9.33	13		
VHT20	256QAM	3	5300	10.27	0.24	10.03	13		
VHT40	BPSK	3	5310	8.41	0.00	8.41	13		
VHT40	QPSK	3	5310	9.33	0.09	9.24	13		
VHT40	16QAM	3	5310	9.73	0.18	9.55	13		
VHT40	64QAM	3	5310	9.68	0.32	9.36	13		
VHT40	256QAM	3	5310	10.88	0.38	10.50	13		
VHT80	BPSK	3	5290	9.25	0.00	9.25	13		
VHT80	QPSK	3	5290	9.46	0.18	9.28	13		
VHT80	16QAM	3	5290	9.62	0.38	9.24	13		
VHT80	64QAM	3	5290	10.66	0.48	10.18	13		
VHT80	256QAM	3	5290	9.60	0.73	8.87	13		

Note: Measured value = Peak-max-hold spectrum to the maximum of the average spectrum for continuous transmission. Since the duty cycle is < 98 %, duty factor is required to average spectrum Peak exclusion = Measured value – duty factor

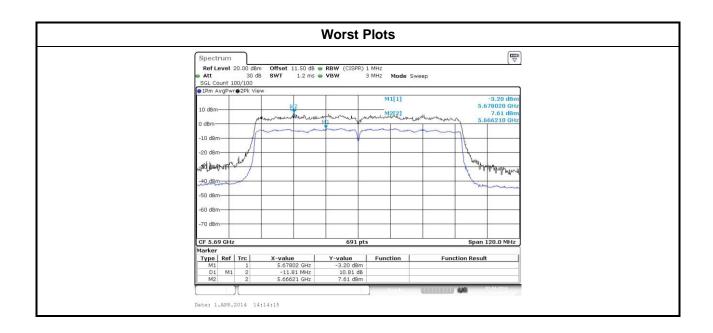
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Frequency	/ band(MHz)	5470~5725							
Mode	Modulation Mode	N _{TX}	Freq. (MHz)	Measured value(dB)	Duty factor (dB)	Peak Excursion (dB)	Limit		
11a	BPSK	1	5580	7.32	0.00	7.32	13		
11a	QPSK	1	5580	8.64	0.14	8.50	13		
11a	16QAM	1	5580	8.80	0.16	8.64	13		
11a	64QAM	1	5580	8.78	0.22	8.56	13		
VHT20	BPSK	3	5500	8.45	0.00	8.45	13		
VHT20	QPSK	3	5500	9.55	0.00	9.55	13		
VHT20	16QAM	3	5500	8.81	0.11	8.70	13		
VHT20	64QAM	3	5500	9.67	0.19	9.48	13		
VHT20	256QAM	3	5500	10.41	0.24	10.17	13		
VHT40	BPSK	3	5710	9.82	0.00	9.82	13		
VHT40	QPSK	3	5710	8.90	0.09	8.81	13		
VHT40	16QAM	3	5710	9.06	0.18	8.88	13		
VHT40	64QAM	3	5710	10.06	0.32	9.74	13		
VHT40	256QAM	3	5710	10.53	0.38	10.15	13		
VHT80	BPSK	3	5690	10.81	0.00	10.81	13		
VHT80	QPSK	3	5690	9.53	0.18	9.35	13		
VHT80	16QAM	3	5690	9.50	0.38	9.12	13		
VHT80	64QAM	3	5690	10.17	0.48	9.69	13		
VHT80	256QAM	3	5690	10.05	0.73	9.32	13		

Note: Measured value = Peak-max-hold spectrum to the maximum of the average spectrum for continuous transmission. Since the duty cycle is < 98 %, duty factor is required to average spectrum Peak exclusion = Measured value – duty factor

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3.6 Transmitter Radiated and Band Edge Emissions

3.6.1 Limit of Transmitter Radiated and Band Edge Emissions

	Restricted Band	Emissions Limit	
Frequency Range (MHz)	Field Strength (uV/m)	Field Strength (dBuV/m)	Measure Distance (m)
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 - 5.825 GHz	5.715 5.725 GHz: e.i.r.p17 dBm [78.2 dBuV/m@3m] 5.825 5.835 GHz: e.i.r.p17 dBm [78.2 dBuV/m@3m] Other un-restricted band: e.i.r.p27 dBm [68.2 dBuV/m@3m]

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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3.6.2 Test Procedures

- 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 a height of 0.8 m test table above the ground plane.
- 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.

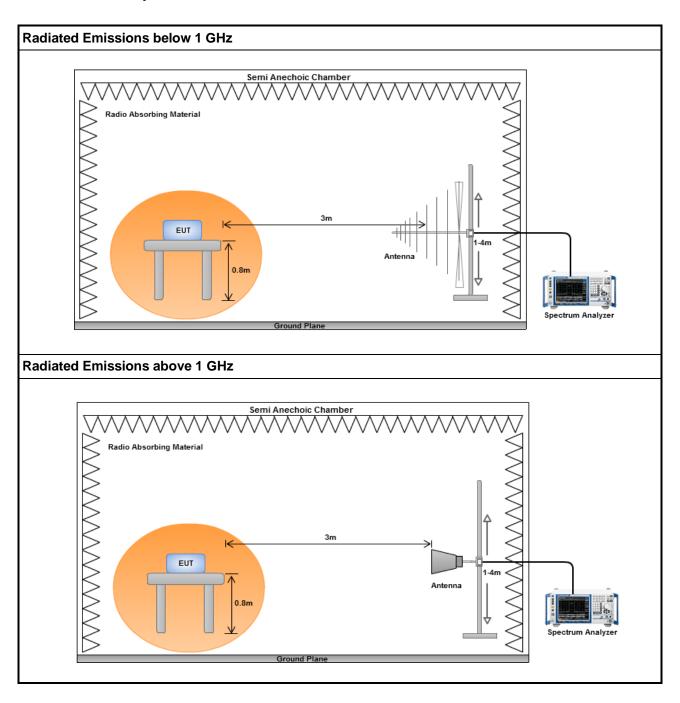
Note:

- 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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3.6.3 Test Setup

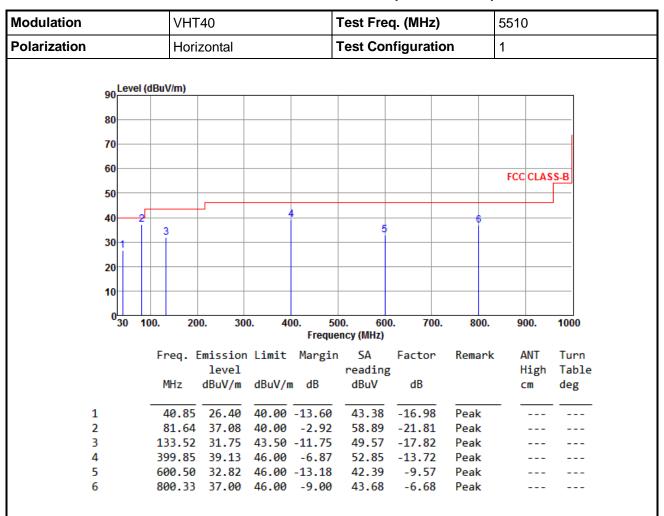


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Legacy/MIMO (CDD) Non- beamforming mode

3.6.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)



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

*Factor includes antenna factor, cable loss and amplifier gain

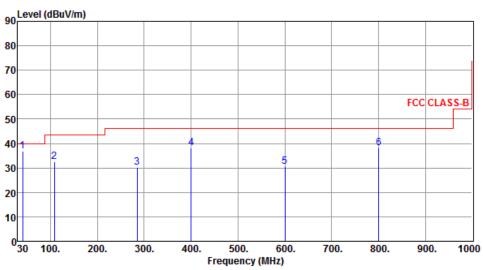
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

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

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Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Vertical	Test Configuration	1



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Ū	SA reading dBuV		Remark	ANT High cm	Turn Table deg
1	40.34	36.88	40.00	-3.12	53.89	-17.01	QP		
2	108.68	32.38	43.50	-11.12	52.68	-20.30	Peak		
3	285.34	30.14	46.00	-15.86	46.75	-16.61	Peak		
4	399.94	38.10	46.00	-7.90	51.82	-13.72	Peak		
5	600.50	30.68	46.00	-15.32	40.25	-9.57	Peak		
6	800.30	38.15	46.00	-7.85	44.83	-6.68	Peak		

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

*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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Modulation				VHT	40		-	Test Fre	q. (MHz)		5510)	
Polarization				Hori	zontal		-	Test Cor	nfiguratio	on	2		
	90 <mark>.</mark>	Level	(dBu\	//m)									
l	80												
l	70												
	60										FCC	CLAS	S R
	50										100	OLAS	3.6
	40						j			6			_
	30	1		2 3	4								
	20	_											
l	10	_											
	0	30	100.	20	0. 30	0. 40	0. 50	0. 600	0. 700.	800.	9(00.	1000
								ncy (MHz)					
			Fr	req. I	Emission	Limit	Margin		Factor	Remark		ANT.	Turn
			M	MHz	level dBuV/m	dBuV/m	dB	reading dBuV	dB			ligh :m	Table deg
1				1.74	32.46	40.00	-7.54	48.93	-16.47	Peak			
2				2.42			-11.74	48.65		Peak			
3 4				92.63 94.72			-11.83 -15.99	51.28 46.36	-19.61 -16.35	Peak Peak			

399.84 37.76 46.00 -8.24 51.48 -13.72

800.10 38.25 46.00 -7.75 44.93 -6.68 Peak

Peak

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

*Factor includes antenna factor, cable loss and amplifier gain

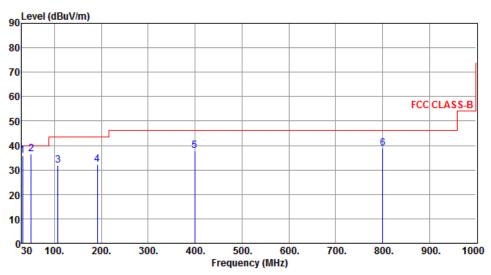
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

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

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Modulation	VHT40	Test Freq. (MHz)	5510
Polarization	Vertical	Test Configuration	2



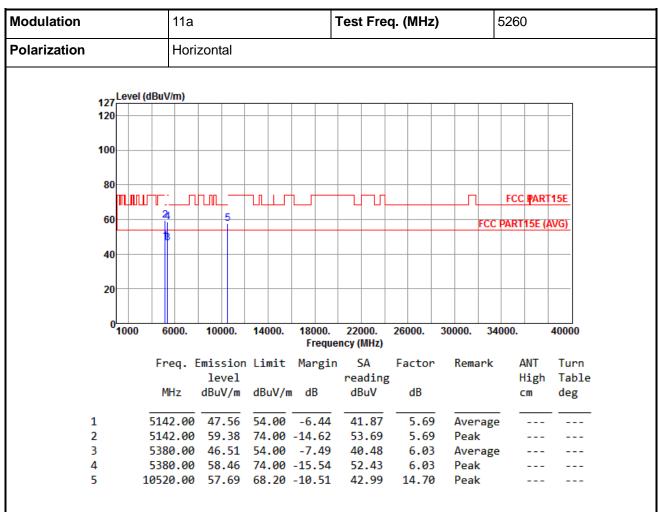
	Freq.	Emission level	Limit	Margin	SA reading		Remark	ANT High	Turn Table
	MHz	dBuV/m	dBuV/m	ı dB	dBuV	dB		cm	deg
1	31.66	35.79	40.00	-4.21	53.47	-17.68	QP		
2	50.31	36.37	40.00	-3.63	52.68	-16.31	QP		
3	107.82	31.82	43.50	-11.68	52.25	-20.43	Peak		
4	191.12	32.08	43.50	-11.42	51.63	-19.55	Peak		
5	399.72	37.71	46.00	-8.29	51.44	-13.73	Peak		
6	800.06	39.00	46.00	-7.00	45.68	-6.68	Peak		

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

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3.6.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a



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

*Factor includes antenna factor, cable loss and amplifier gain

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

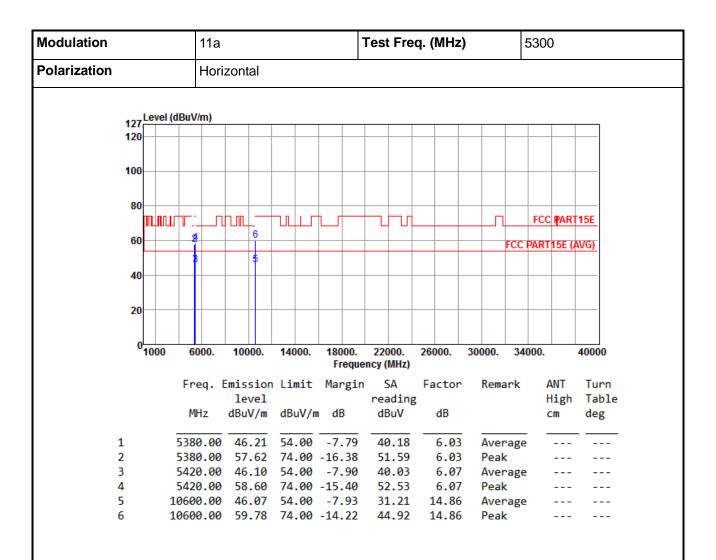
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Modulation				11a					7	Test	Fre	q. (MHz	<u>z</u>)		5	5260)		
Polarization				Vert	ical														
			•																
12	7Le	vel (d	BuV	/m)															
12				-				+			-								
10	00—			-				+			_								
8	0							_			_								
	m		2	⊥л			$\neg \bot$	几		一	址					FCC	PART	T15E	
6	io _		7			5					_							A) (C)	
	~ <u> </u>		1	+		5		+			-				FCC I	AKI	15E (<i>i</i>	AVG)	
	10																		
4																			
4	20																		
	⁰ 10	00	60	000.	100	00.	14000	. 1	8000. Freque	2200		26000.	300	00.	340	000.		40000)
			_						_									_	
			Fre	eq.		sion vel	Limi	יו ד	largin	S/ read		Factor	· K	Rema	rĸ	_	NT ligh	Tur Tab	
			М	Hz			dBuV	/m	dВ	dBu	_	dB					m TBU	deg	
			- 1-11	12	ubu	v / III	ubuv,		ub	ubt		ub						ueg	
1		-	514	2.00	52	.73	54.00	-	1.27	47.	04	5.69	9 4	lver	age	-			_
2			514	2.00	65	.42	74.00) -	8.58	59.	73	5.69		eak					-
3				0.00		.73	54.00		3.27	44.	70	6.0	3 A	lver	age				-
4							74.00			56.		6.0		eak					-
5		10	0520	0.00	54	.66	68.20) -1	3.54	39.	96	14.70	9 P	eak?					-

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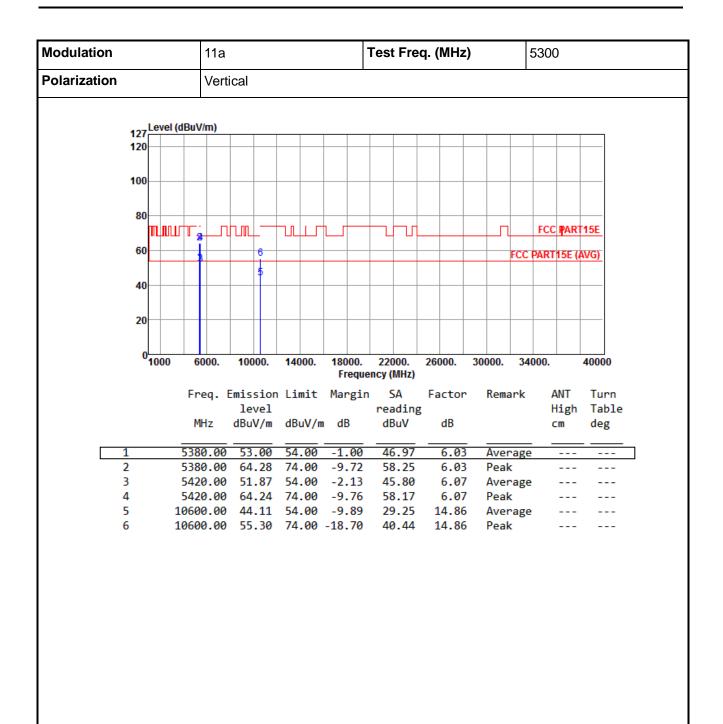


Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain

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

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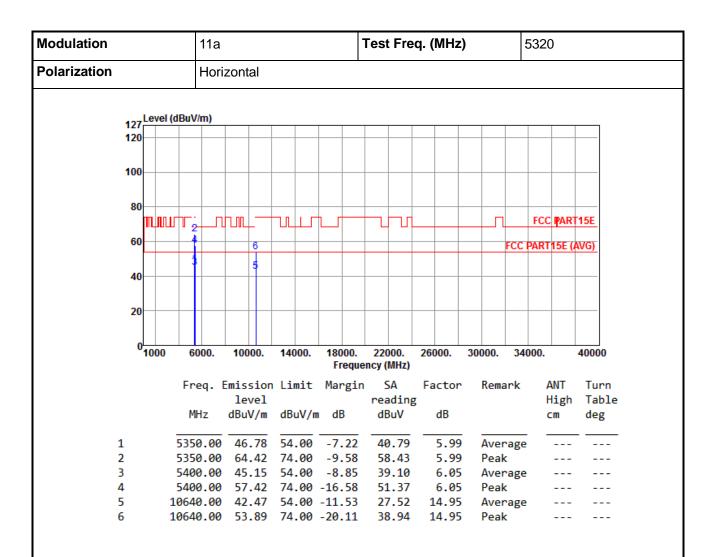
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

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

*Factor includes antenna factor, cable loss and amplifier gain

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

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Modulation	11a			-	Test Fre	q. (MHz)		532	0	
Polarization	Vert	ical		I						
127 Level	(dBuV/m)									
120										
100										
80	+ -									
mun.	┅ ┇┷┸	/////					——	FC	PART	15E
60	+H-	6					F	CC PART	15E (A	AVG)
	+ \$1	5							,,,,,,	,
40										
20										
01000	6000.	10000.	14000.	18000.	22000. ncy (MHz)	26000.	30000.	34000.		40000
	F 1					C+	Remar	.1.	ANT	T
	rreq.	Emission level	LTHITC	Margin	SA reading	Factor	Remar		ANI High	Turn Table
	MHz	dBuV/m	dBuV/n	ı dB	dBuV	dB			CM	deg
1	5350.00	52.52	54.00	-1.48	46.53	5.99	Avera			
2	5350.00		74.00		64.45	5.99	Peak	-D-		
3	5400.00	49.07	54.00	-4.93	43.02	6.05	Avera	age		
4	5400.00				56.25	6.05	Peak			
	10640.00					14.95	Avera	age		
6	10640.00	54.10	74.00	-19.90	39.15	14.95	Peak			

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Modulation			11a					,	Tes	Fre	q. (I	MHz)		;	5500)	
Polarization			Hori	zont	al			L						1			
127	Level	l (dBuV	/m)														
120		_										_					
100																	
80																	
						η.			┌	ПП		_	——Г	FC	C PAR	7 1 15E	(74)
60					6									FCC	PART	15E (<i>i</i>	AVG)
40					5												
20																	
0	1000	60	000.	100	00.	1400	0.	18000. Freque)00. MHz)	260	000.	30000.	34	000.		40000
		Fr	eq. E	miss	sion	Lim	it	Margin		iΑ	Fa	ctor	Rema	ark	A	ANT	Turn
		М	Hz		/el //m	dBu\	//m	dB		ding BuV		dB				digh cm	Table deg
1		542	0.00	46.	.01	54.0	90	-7.99	39	9.94	_	6.07	Ave	rage			
2		542	0.00	56.	.74	74.0	90	-17.26		.67		6.07	Peal	_			
3			0.00		.23			-5.77		2.09		6.14	Ave	_	!		
4 5			0.00					-9.49		3.37		6.14	Peal				
		1100	0.00	43.	. /1	54.	10	-10.29	- 28	3.02	1	5.69	Ave	rage			

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

*Factor includes antenna factor, cable loss and amplifier gain

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

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Modulation			11a					Т	est	Fre	q. (M H	z)		550	0	
Polarization			Vert	ical												
		ovol (dE	Qu\//m\													
		evel (dE	ou v/iiij											Т.	Т	
	120															
	100															
	80	+						-	-	-			-	+	-	
	П		Г .4 □						\neg	ᇺ			∏_FC	C PAF	₹ 1 15E	(74)
	60		4		6								FCC	PΔRT	15E (AVG)
	<u> </u>		1										100	-	152 (1007
	40				1			_								
	20															
	ام															
	ັ1	000	6000.	100	00.	14000)0. :quen	220 Icy (N		26000.	30000	. 34	000.		40000
			Frea.	Emiss	ion	ı Limi	t Mar				Facto	r Re	mark		ΔNT	Turn
			•	lev						ding				I	High	Tabl
			MHz	dBu\	//m	dBuV	/m dB		dB	uV	dB			(cm	deg
	1	5	420.00	50.	27	54.0	0 -3.	73	44	. 20	6.0	7 Av	erage			
	2	5	420.00	61.	44		0 -12.			. 37	6.0		ak			
	3	5	470.00	52.	76	54.0	0 -1.	24	46	.62	6.1	4 Av	erage	2		
	4						0 -4.			.67	6.1		ak			
	5						0 -11.0			. 22	15.69		erage	2		
	6	11	000.00	54.	93	74.0	0 -19.0	ð7	39	. 24	15.69	9 Pe	ak			

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Modulation	11a		Test Freq.	(MHz)	5580
Polarization	Horizontal				ı
127 Level (dE	BuV/m)				
120					
100					
80					FOC BADTAFF
60	12			 	FCC PART15E
00	4			FC	C PART15E (AVG)
40	3				
20					
0 1000	6000. 10000.	14000. 18000.		5000. 30000.	34000. 40000
			iency (MHz)		
	Freq. Emissio level	n Limit Margi	n SA F reading	actor Remar	k ANT Tur High Tab
		dBuV/m dB	dBuV	dB	cm deg
1 5	500.00 59.55	68.20 -8.65	53.38	6.17 Peak	
	660.00 58.82			6.46 Peak	
	160.00 42.63 160.00 54.88			15.53 Avera; 15.53 Peak	ge

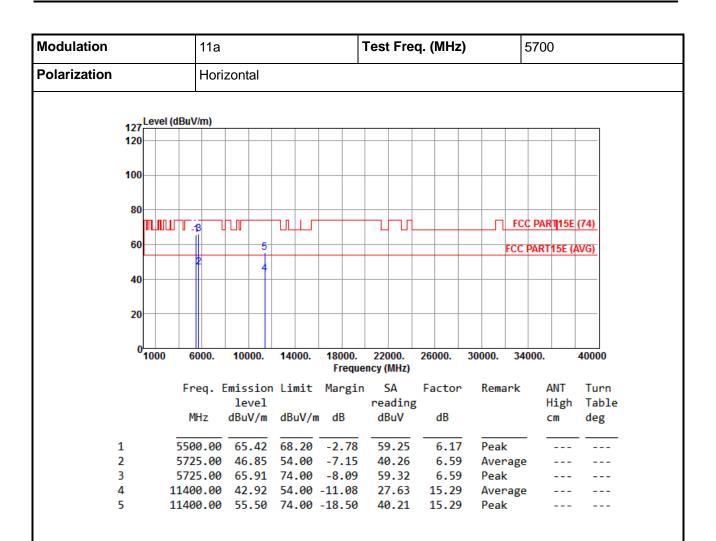
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Modulation					11a						-	Test	Fre	q. (MHz	2)			5580)		
Polarization					Ver	ical												ı				
	127	Lev	el (d	BuV	/m)																	1
	120																					
	100																					
	80		1015	<u> </u>			_	<u> </u>											FCC	DA D	T15E	
	60			I -1		U 1101											' '					
	-	\vdash					4											FCC	PARI	15E (AVG)	
	40						3															
	20																					
	0	100	10	60	000.	100	000.	140	000.		00. eque	220 ncy ()00. MHz)	26	000.	300	000.	340	000.		400	00
				Fre	eq.			n Li	mit	Mar	rgin		A		actor	•	Rema	ark		ANT		ırn
				M	Ηz		vel V/m	dB	uV/n	n di	3		ding BuV		dB					digh cm	Ta de	ble g
	1		-	5500	0.00	65	.99	68	.20	-2	21	- 59	.82	-	6.17	,	Peal	<u> </u>	-			
	2			5666	0.00	65	.39			-2		58	.93		6.46		Peal				-	
	3				0.00		.77			-11			.24		15.53			rage			-	
	4		1:	1160	0.00	54	.46	74	.00	-19	.54	38	.93	1	15.53	3	Peal	•			-	

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Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor , cable loss and amplifier gain

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

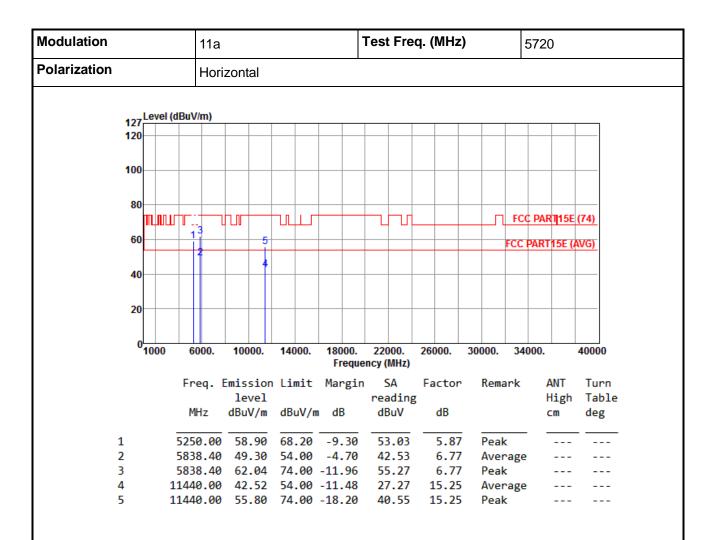
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Modulation	11a			-	Test Free	q. (MHz)		5700	
Polarization	Verti	cal		L					
127Level (d	BuV/m)								
120									
100									
80	3						ПБ	CC PART 15E	(74)
60	"- <u>1</u>						\top		
00	9	5					FC	C PART15E (AVG)
40		4							
20									
20									
0 1000	6000.	10000.	14000.	18000. Freque	22000. ncy (MHz)	26000.	30000. 3	4000.	40000
	Freq. E	mission	Limit			Factor	Remark	ANT	Turn
	-	level			reading			High	Table
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg
	5500.00	61.30	68.20	-6.90	55.13	6.17	Peak		
	5725.00			-2.16	45.25	6.59	Averag	ge	
	5725.00 L400.00	72.94 42.32	74.00	-1.06	66.35	6.59	Peak		
			54.00 74.00		27.03 39.57	15.29 15.29	Averag Peak	ge	

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

*Factor includes antenna factor, cable loss and amplifier gain

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

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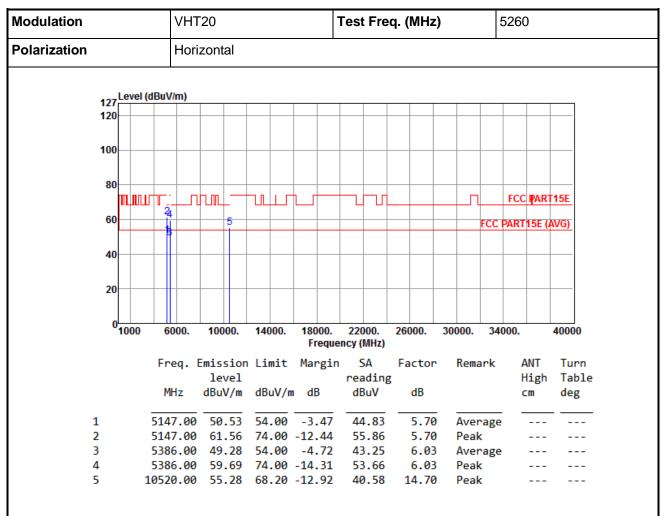


Modulation				11a						Tes	Fre	q. (MF	lz)		5	720		
Polarization				Vert	ical										·			
		evel	(dBuV	/m)									_					
1	20																	
1	00		-															
	80																	
	60 	ши		3 1		_		Ш								PART		
	00			2		5									FCC P	ART1	5E (A	AVG)
	40					4												
	20																	
	0	000	6	000.	100	00	140	20	18000.	221	000.	26000.	3	0000.	340	nn		40000
		000	0		100		140		Freque			20000.	J		340	ου.		40000
			Fr	eq. I		sion vel	Lim	it	Margir		A ding	Facto	or	Rema	ark		NT igh	Turn Tabl
			М	Hz			dBu	V/m	dB		BuV	dB				CI		deg
1			525	0.00	65	.29	68.	20	-2.91	59	.42	5.8	37	Peal	ς	_		
2				8.40		.76	54.		-1.24		.99	6.7			rage			
3				8.40					-7.38		.85	6.7		Peal				
4				0.00					-11.35		7.40	15.2			rage			
5			1144	0.00	55	.56	/4.	99	-18.44	46	31	15.7	25	Peal	C			

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3.6.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT20



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

*Factor includes antenna factor, cable loss and amplifier gain

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

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Modulation	VHT2	20		1	Test Fred	q. (MHz)		5260	
Polarization	Vertic	cal							
127 Level (dB	uV/m)								
120									
100									
100									
80									
					$\neg u$		-	FCC IP/	ART15E
60	24	5					FC	CC PART15	E (AVG)
40	18								
40									
20									
01000	6000.	10000.	14000.	18000.	22000.	26000.	30000.	34000.	40000
	Enoa Fr	miccion	limit	Margin	ncy (MHz) SA	Factor	Remar	k AN	Γ Turn
'	req. Li	level	LIMIT	Hargin	reading		Kelliai	Hi ₂	
	MHz (dBu V /m	dBuV/m	ı dB	dBuV	dB		cm	_
1 5	147.00	47.01	54.00	-6.99	41.31	5.70	Avera	ge	
				-15.54	52.76	5.70	Peak		
	386.00			-7.45	40.52	6.03	Avera	ge -	
	386.00	57.46 54.03		-16.54	51.43 39.33	6.03 14.70	Peak Peak		

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Modulation	VHT	T20		-	Γest Fre	q. (MHz)		530	0	
Polarization	Hori	zontal		I						
127 Level	(dBuV/m)									
120										
100										
80										
mun		/////					———	FCC	PART	15E
60	4	6					F	CC PART	15F (A	VG)
								oo i raiti	132 (1	
40										
20										
0										
1000	6000.	10000.	14000.	18000. Freque	22000. ncy (MHz)	26000.	30000.	34000.		40000
	Frea.	Emission	Limit			Factor	Remar	rk /	ANT	Turn
		level			reading				High	Table
	MHz	dBuV/m	dBuV/n	n dB	dBuV	dB			cm	deg
1	5380.00	52.33	54.00	-1.67	46.30	6.03	Avera	 age		
2	5380.00	61.76	74.00	-12.24	55.73	6.03	Peak	-		
3		49.62			43.55	6.07	Avera	age		
4		60.45			54.38	6.07	Peak			
5	10600.00					14.86	Avera	age		
6	10600.00	55.02	74.00	-18.98	40.16	14.86	Peak			

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Modulation			VHT	20			Test Fre	q. (MHz))	530	0	
Polarization			Vert	ical		L						
	27 Leve	l (dRu\	//m)									
	20	- (020										
10	00											
	80											
			<u>, </u>						П	FC	PART	15E
	60		3	6					F	CC PAR	T15E (A	AVG)
	40											
	20											
	01000) 6	000.	10000.	14000.	18000.	22000.	26000.	30000.	34000.		40000
		Fr	ea. I	Emissio	n limit	Margin	ency (MHz) SA	Factor	Rema	rk	ANT	Turn
			-	level	L		reading	3			High	Table
		M	1Hz	dBuV/m	ı dBuV/	m dB	dBuV	dB			CM	deg
1				47.26		-6.74	41.23	6.03				
2			0.00			-15.29	52.68	6.03	Peak			
3 4				46.54 57.14		-7.46 -16.86	40.47 51.07	6.07 6.07		_		
5				43.09		-10.91	28.23	14.86	Aver			
6		1060	0.00	54.50	74.00	-19.50	39.64	14.86	Peak	_		

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Modulation		VHT	20			Test Fre	q. (MHz))	532	20	
Polarization		Horiz	zontal						l		
127 Le	evel (dBu	V/m)									
120											
100											
80											-
Ш	шштг		┅╙—					——	FC	C PAR	T15E
60		4	6						CC PAR	T15F (AVG)
											,
40—											
20											
0											
-10	000	6000.	10000.	14000		22000. ency (MHz)	26000.	30000.	34000.	•	40000
	F	req. E	missio	on Limit	Margir		Factor	Rema	rk	ANT	Turn
			level		·	reading	3			High	Table
	ı	MHz	dBuV/n	n dBuV,	m dB	dBuV	dB			cm	deg
1	53	50.00	46.13	54.00	-7.87	40.14	5.99	Aver	age		
2	53	50.00	57.28		-16.72	51.29	5.99		_		
3	54	00.00	50.75	54.00	-3.25	44.70	6.05	Aver	age		
4					-13.97		6.05				
5					-10.94		14.95		_		
6	106	40.00	54.93	3 74.00	-19.07	39.98	14.95	Peak			

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Modulation			VHT	20		1	Γest Fre	q. (MHz)		5320	
Polarization			Verti	cal		L					
	La	ual (dD	\ [[m]								
	127 Le	vei (aB	uv/m)								
	120										
	100										
	100										
	80										
			-:п		حبليد					FCC PAF	RT15E
	60		4						-	C DADTACE	(AVC)
			+	6					FC	C PART15E	(AVG)
	40			5							
	20										
	010	00	6000.	10000.	14000.	18000.	22000.	26000.	30000.	34000.	40000
						Freque	ncy (MHz)				
		F	Freq. [n Limit	Margin		Factor	Remar		Turn
			MHz	level	dBuV/n	n dB	reading dBuV	g dB		High cm	n Table deg
			11112	ubuv/iii	ubuv/ii	ıı ub	abav	ub		CIII	ueg
1		53	350.00	45.53	54.00	-8.47	39.54	5.99	Avera	ge	
2			350.00	56.65		-17.35	50.66	5.99	Peak		
3				48.48		-5.52	42.43	6.05	Avera	ge	
4 5			100.00	59.49 43.38		-14.51 -10.62	53.44 28.43	6.05 14.95	Peak		
									Avera; Peak	Re	
6			540.00		74.00		39.19	14.95	Peak		

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Modulation	١	/HT2	20					Test	Fre	q. (MH	z)		5500)	
Polarization	ŀ	Horiz	onta	al											
127 Leve	l (dBuV/n	n)													
120							+								
100															
80															
I		ПГ		_		Н			\neg _			1	FCC	PAR'	T15E
60	â			-											
-				÷			+					FCC	PART	15E (AVG)
40				1											
20			_	_								-			
0 1000) 600	00.	1000	00.	1400). 1	8000.	220	00.	26000.	30000.	34	000.		40000
	-					-	Freque								
	Fre	q. E			ı Limi	t M	argin		Α	Factor	r Rem	ark	4	ANT	Turn
			lev						ding					ligh	
	MH:	Z (dBuV	//m	dBuV	/m	dB	dE	ωV	dB			(_m	deg
1	5378	.00	51.	12	54.0	- 0	2.88	45	.10	6.0	2 Ave	rage	-		
2	5378		60.		74.0				.56	6.0					
3	5460		45.		54.0		8.50		.38	6.1		rage	•		
4	5460		57.		74.0				.42	6.1					
5 6	5470 11000		59. 43.		68.2 54.0				.10	6.14 15.69		ık rage			
7	11000								.05	15.69		_			

*Factor includes antenna factor, cable loss and amplifier gain

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

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Modulation	VHT20		Test Freq. (MI	lz) 5	500
Polarization	Vertical				
Lovel (dD)	u\//m\				
127 Level (dB	1 VIII)				
120					
100					
80					
ירי ריוול ווון				\perp	FCC PART15E
60	<u> </u>	7		FCC D	PART15E (AVG)
				TCC P	ARTISE (AVO)
40					
40					
20					
1000	6000. 10000		0. 22000. 26000 quency (MHz)	. 30000. 340	00. 40000
F	rea. Emissi	on Limit Marg	in SA Fact	or Remark	ANT Turn
	leve	_	reading		High Table
	MHz dBuV/	m dBuV/m dB	dBuV dB		cm deg
1 53	78.00 49.4	54.00 -4.5	4 43.44 6.	02 Average	
	78.00 60.5			_	
	60.00 45.5				
4 54	160.00 56.3	0 74.00 -17.7	0 50.18 6.	12 Peak	
5 54	70.00 59.4	7 68.20 -8.7	3 53.33 6.	14 Peak	
	000.00 43.5				
7 116	00.00 55.8	2 74.00 -18.1	8 40.13 15.	69 Peak	

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Modulation	VHT20	ר	Test Freq. (MHz)	558	Ю
Polarization	Horizontal			<u> </u>	
127 Level (dB	uV/m)				
120					
100					
80					
60 111111111	23 5				T15E (AVG)
40	4				
20					
0 1000	6000. 10000.	14000. 18000. Freque	22000. 26000. ncy (MHz)	30000. 34000.	40000
1	Freq. Emission level	Limit Margin	SA Factor reading		ANT Turn High Table
		dBuV/m dB	dBuV dB		cm deg
1 5	115.00 51.08	54.00 -2.92	45.44 5.64	Average	
	115.00 61.26	74.00 -12.74	55.62 5.64		
	812.00 62.95		56.18 6.77		
	160.00 42.97 160.00 55.46	74.00 -11.03	27.44 15.53 39.93 15.53	Average Peak	

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Modulation	VHT	20		•	Test Free	q. (MHz)		5580	
Polarization	Verti	cal							
127 Level (dE	BuV/m)								
120									
100									
80									
	23		$\neg \mu \Gamma$				-	FCC PAR	T15E
60	1	5					FC	C PART 15E (AVG)
40		4							
20									
0 1000	6000.	10000.	14000.	18000.	22000.	26000.	30000. 3	4000.	40000
1000	0000.	10000.	14000.		ncy (MHz)	20000.	30000. 3	4000.	40000
	Freq. E	mission level	Limit	Margin	SA reading	Factor	Remark	: ANT High	Turn Table
	MHz	dBuV/m	dBuV/m	ı dB	dBuV	dB		cm	deg
1 5	115.00	50.85	54.00	-3.15	45.21	5.64	Averag	e	
	115.00		74.00		53.27	5.64	Peak		
		60.20		-8.00	53.43	6.77	Peak		
	160.00	43.18 55.41		-10.82 -18.59	27.65 39.88	15.53 15.53	Averag Peak	e	

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Modulation	VHT20	Test Fred	q. (MHz)	5700
Polarization	Horizontal	<u> </u>		l
127 Level (dBu\	V/m)			
120				
100				
80				FCC PART15E
60	4		FCC	C PART15E (AVG)
40	3			
20				
0 1000 6	5000. 10000. 1400	00. 18000. 22000. Frequency (MHz)	26000. 30000. 3	4000. 40000
Fr	req. Emission Limi	_	Factor Remark	
N	level MHz dBuV/m dBuV	reading V/m dB dBuV	dB	High Table cm deg
1 572	25.00 64.23 68.2	20 -3.97 57.64	6.59 Peak	
		20 -4.04 57.45	6.71 Peak	
	00.00 43.44 54.0 00.00 55.47 74.0	00 -10.56 28.15 00 -18.53 40.18	15.29 Averag 15.29 Peak	ge

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Modulation	VHT20		Test Freq. (MHz)	57	700
Polarization	Vertical	<u> </u>			
127 Level (dBuV	//m)				
120					
100					
80					
				-	FCC PART15E
60	4			FCC PA	ART15E (AVG)
40	3				
20					
0 1000 60	000. 10000.	14000. 18000. Freque	22000. 26000. ncy (MHz)	30000. 3400	00. 40000
Fr		Limit Margin		Remark	ANT Turn
М	level Hz dBuV/m	dBuV/m dB	reading dBuV dB		High Table cm deg
1 572	5.00 62.07	68.20 -6.13	55.48 6.59	Peak	
	8.00 61.50	68.20 -6.70	54.79 6.71	Peak	
3 1140	0.00 42.82	54.00 -11.18	27.53 15.29 39.18 15.29	Average Peak	

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odulation	VHT20	-	Test Freq. (MHz	2) 5	5720
olarization	Horizontal	l			
127 Level (dB	uV/m)				
120					
100					
80					
	12		$\Box\Box$	- $ -$	FCC IPART15E
60	5			FCC P	PART15E (AVG)
40					
40					
20					
0 <mark>1000</mark>	6000. 10000.	14000. 18000.	22000. 26000. ncy (MHz)	30000. 340	00. 40000
1	rea. Emission	Limit Margin		Remark	ANT Turn
	level		reading		High Table
	MHz dBuV/m	dBuV/m dB	dBuV dB		cm deg
1 52	50.00 66.34	68.20 -1.86	60.47 5.83	7 Peak	
		68.20 -1.24	60.19 6.7		
		68.20 -1.26	60.12 6.83		
4 114	40.00 43.82	54.00 -10.18 74.00 -17.81	28.57 15.25 40.94 15.25	Average	

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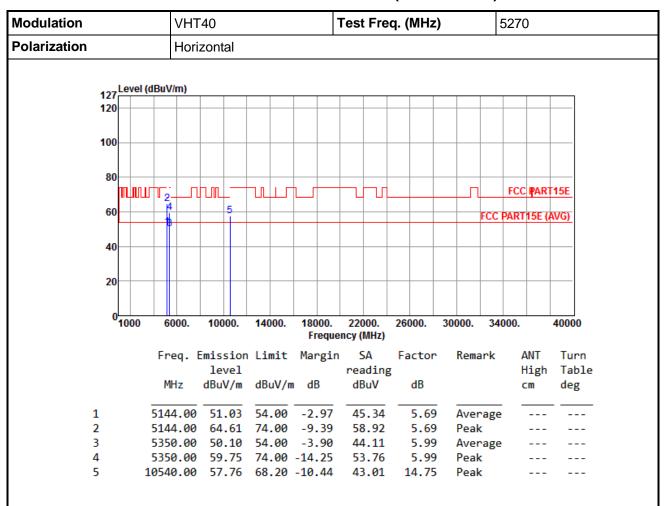


Modulation	VHT	VHT20				q. (MHz)	5720	5720		
Polarization	Vert	Vertical								
127 Leve	l (dBuV/m)									
120										
100										
80										
I	ШГ12	ın m —					П	FCC PAR	T15E	
60		5					EC	C PART15E (AV/G)	
		4					100	C FAILT ISE (AVO	
40										
20										
0										
~1000	6000.	10000.	14000.	18000. Freque	22000. ency (MHz)	26000.	30000. 3	4000.	40000	
	Freq.	Emission	Limit	Margin		Factor	Remark	ANT	Turn	
		level	ID 1//	ID.	reading			High	Table	
	MHz	dBuV/m	dBuV/m	ı dB	dBuV	dB		CM	deg	
1	5250.00	66.01	68.20	-2.19	60.14	5.87	Peak			
2	5839.25		68.20	-1.94	59.49	6.77	Peak			
3	5958.00			-2.14	59.24	6.82	Peak			
4 5	11440.00	43.90 55.61		-10.10	28.65 40.36	15.25 15.25	Averag Peak	e		

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3.6.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT40



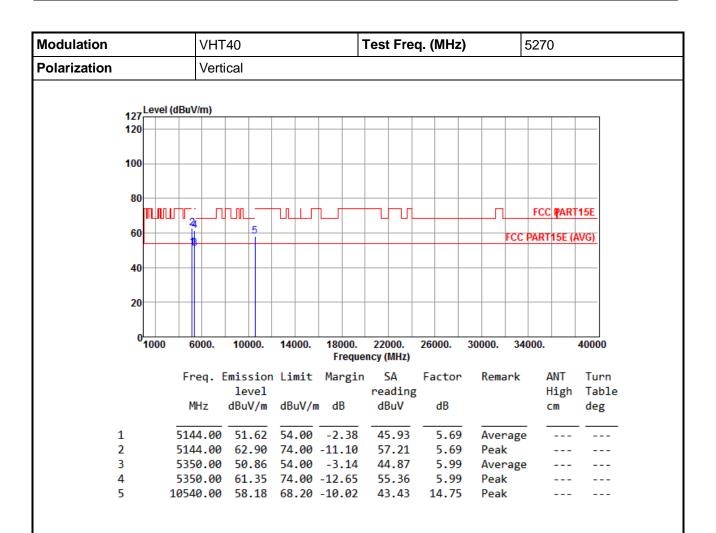
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

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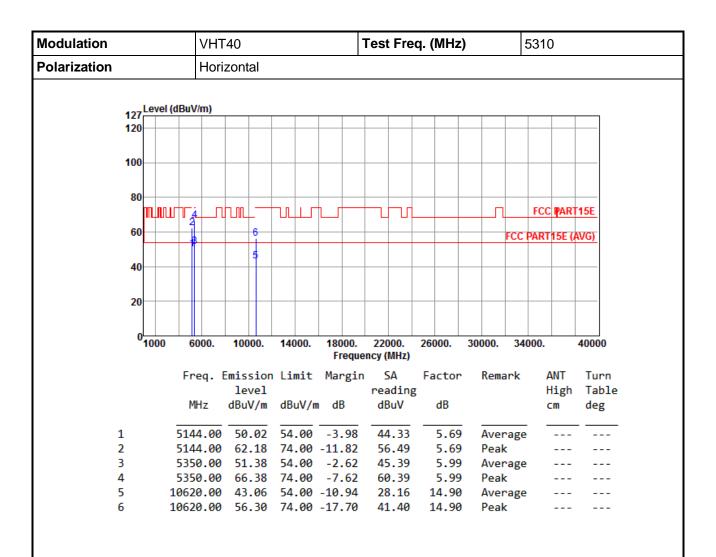


*Factor includes antenna factor, cable loss and amplifier gain

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

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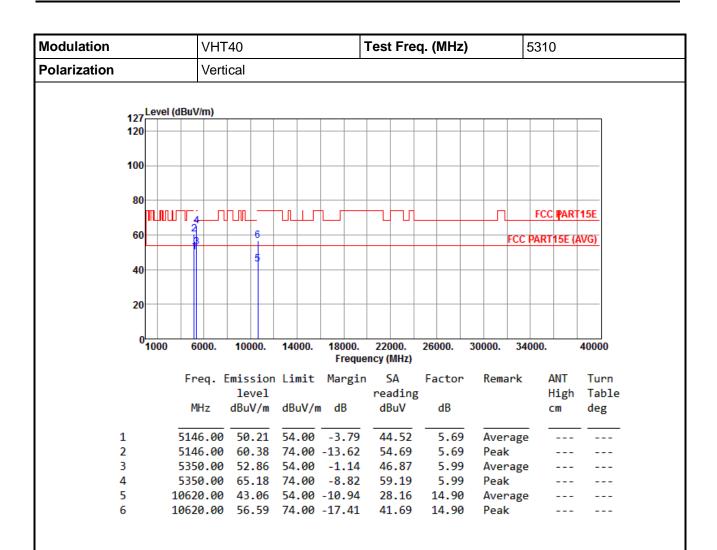


*Factor includes antenna factor, cable loss and amplifier gain

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

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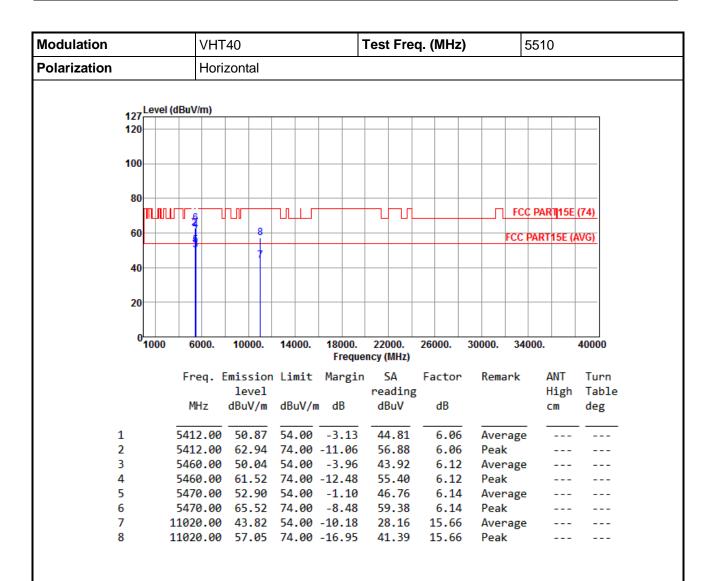


*Factor includes antenna factor, cable loss and amplifier gain

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

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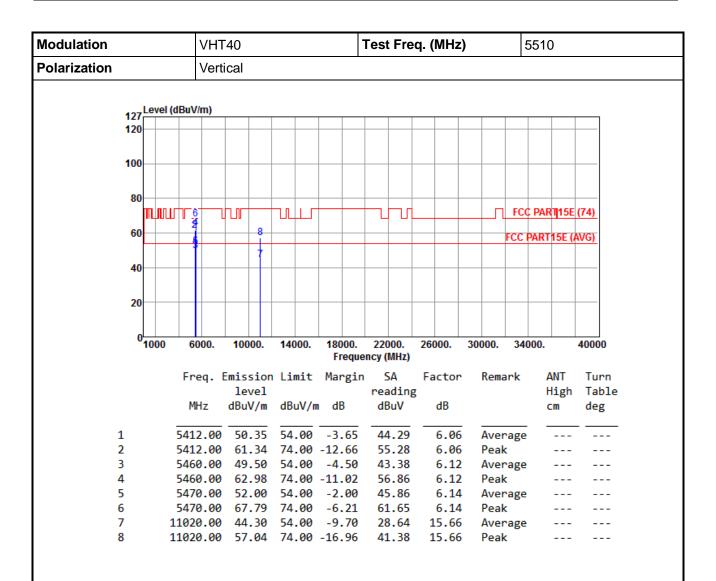


*Factor includes antenna factor, cable loss and amplifier gain

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

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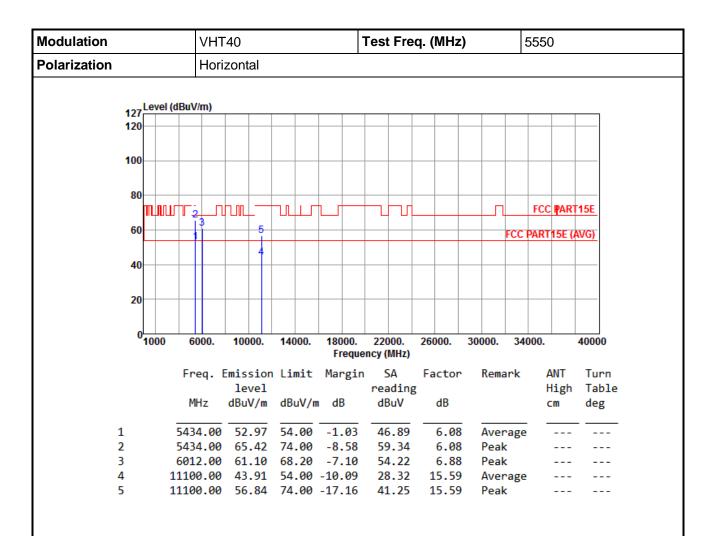


*Factor includes antenna factor, cable loss and amplifier gain

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

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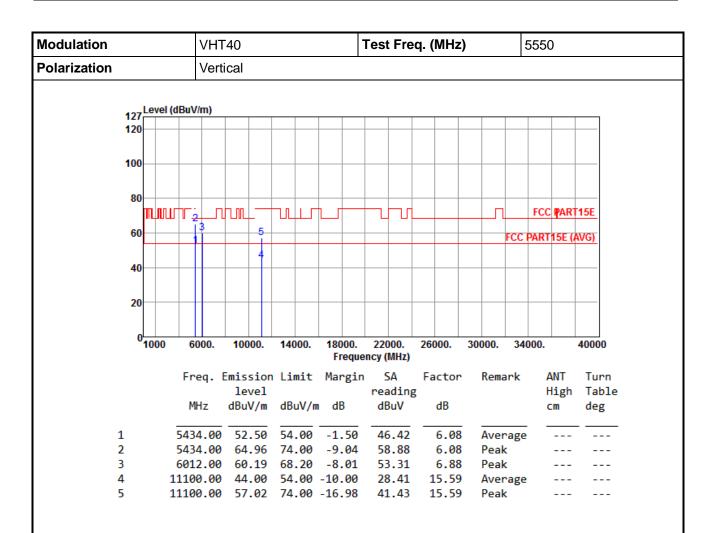


*Factor includes antenna factor, cable loss and amplifier gain

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

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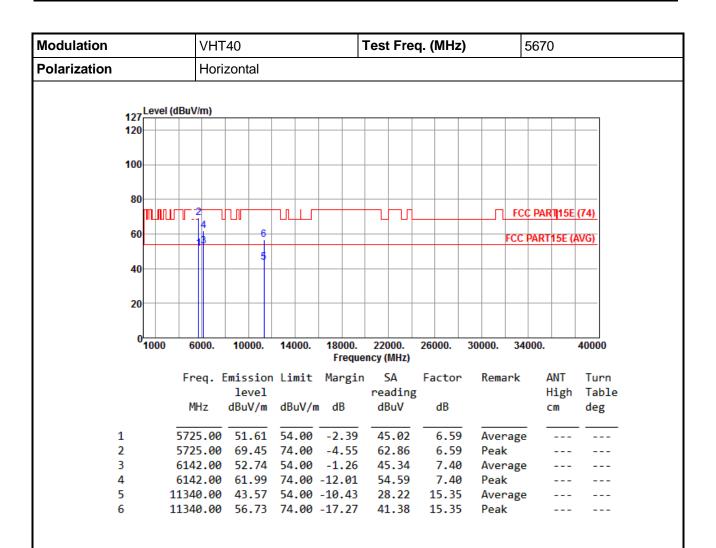


*Factor includes antenna factor, cable loss and amplifier gain

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

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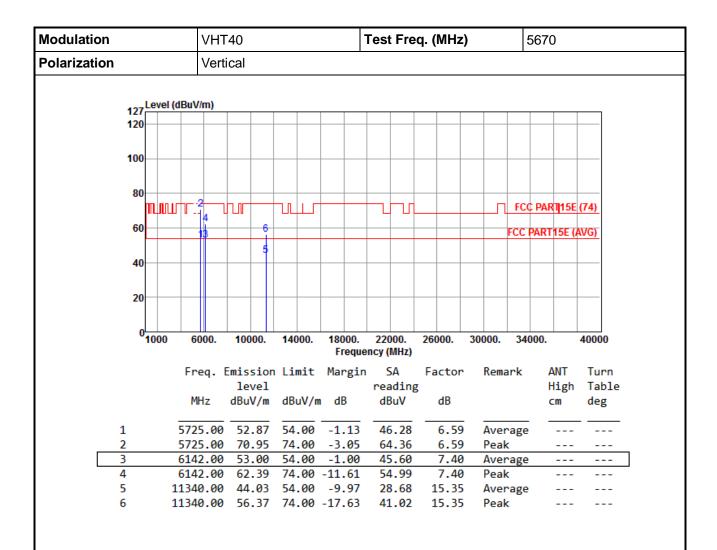


*Factor includes antenna factor, cable loss and amplifier gain

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

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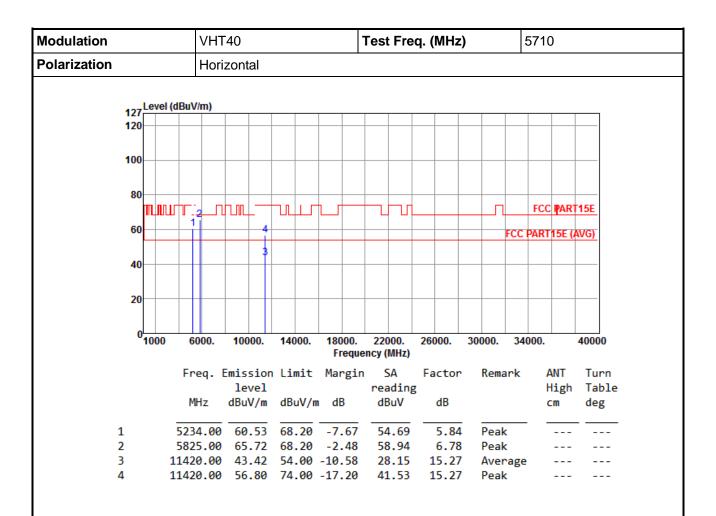


*Factor includes antenna factor, cable loss and amplifier gain

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

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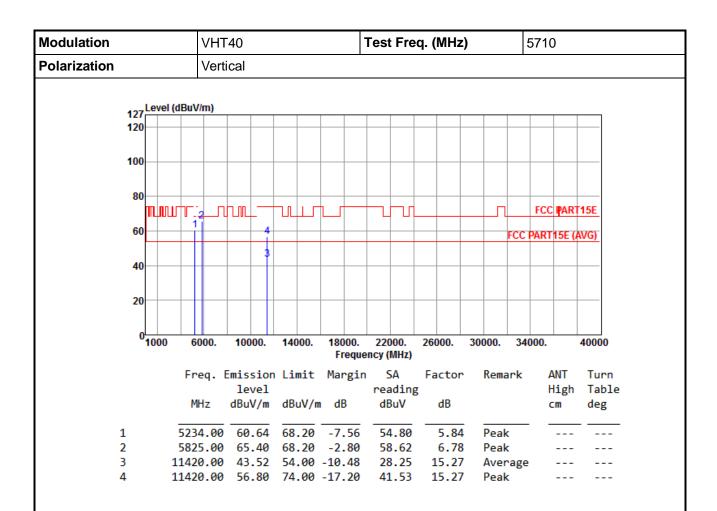


Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor, cable loss and amplifier gain

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

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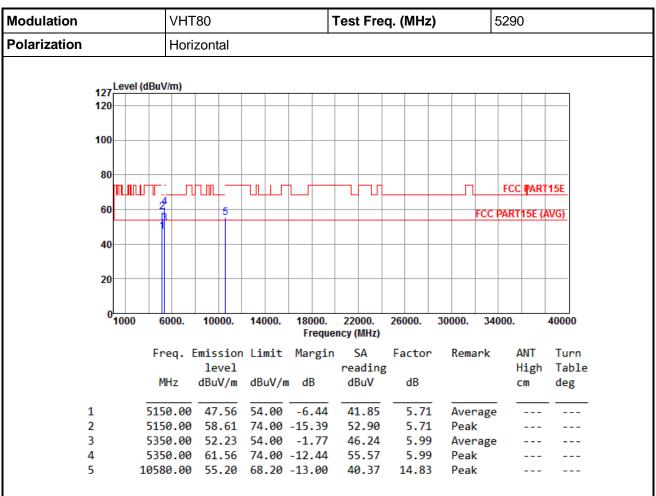
*Factor includes antenna factor, cable loss and amplifier gain

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

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3.6.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80



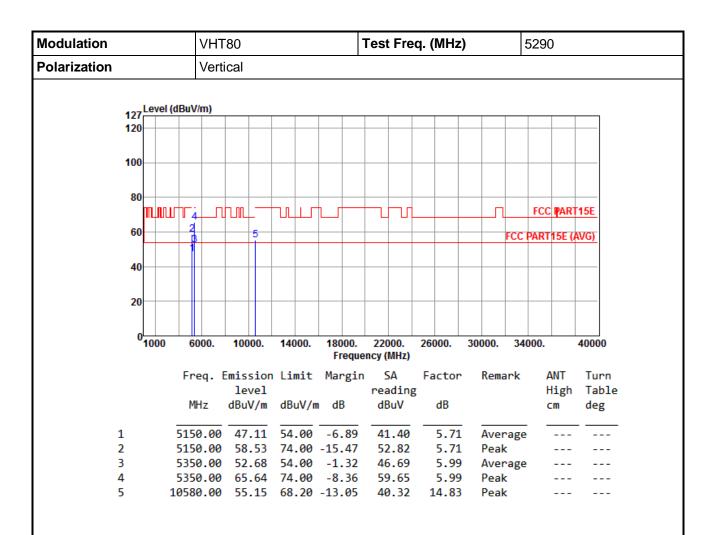
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

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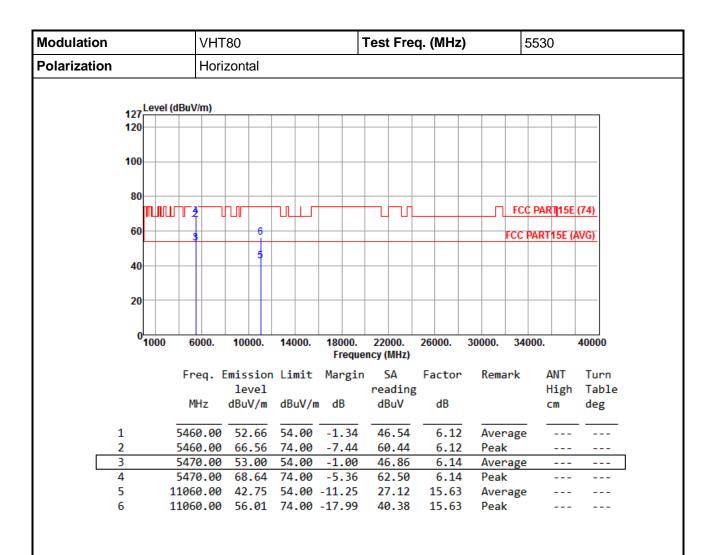


*Factor includes antenna factor, cable loss and amplifier gain

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

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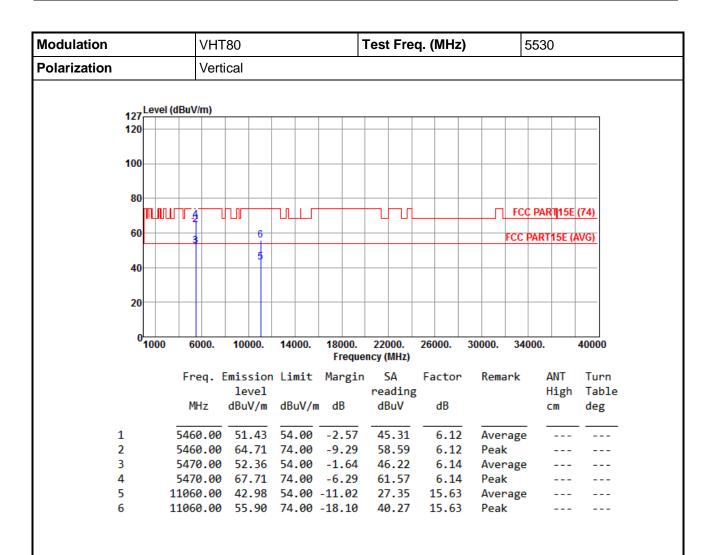


*Factor includes antenna factor, cable loss and amplifier gain

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

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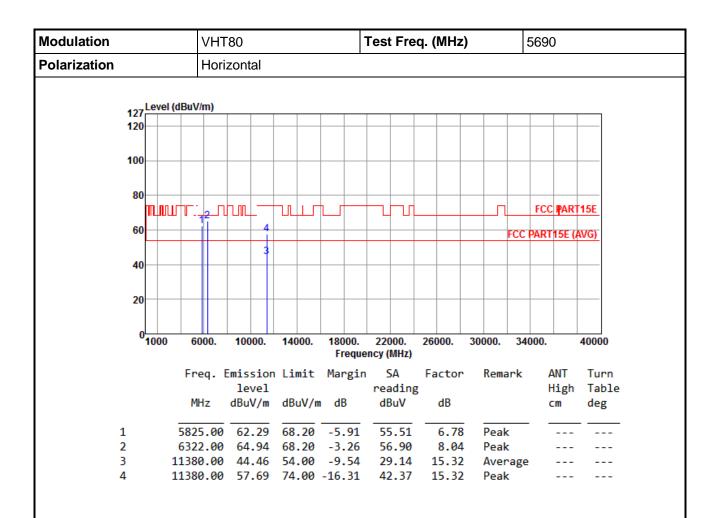


*Factor includes antenna factor, cable loss and amplifier gain

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

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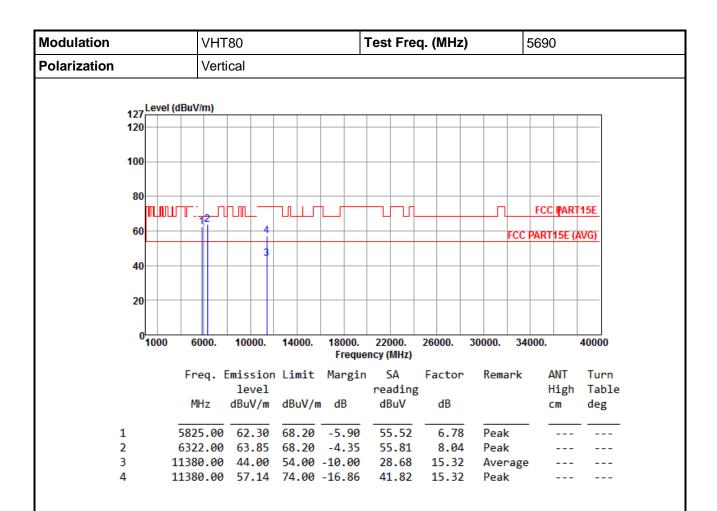


*Factor includes antenna factor, cable loss and amplifier gain

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

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*Factor includes antenna factor, cable loss and amplifier gain

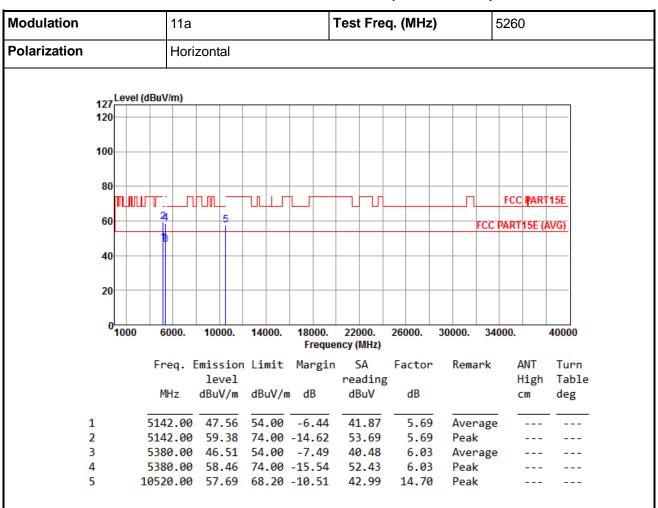
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

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Legacy/MIMO (CDD) beamforming mode

3.6.9 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a



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

*Factor includes antenna factor, cable loss and amplifier gain

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

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Modulation		11a				q. (MHz)	5260		
Polarization	Ver	tical							
127 Level	(dBuV/m)								
120									
100									
80									
60 	I						FCC	FCC PART	
									,
40									
20									
0	6000.	10000.	14000.	18000. Freque	22000. ncy (MHz)	26000.	30000. 34	1000.	40000
	Freq.	Emission	Limit	Margin		Factor	Remark	ANT	Turn
	MHz	level dBuV/m	dBuV/m	dB	reading dBuV	dB		High cm	Table deg
1	5142.00	52.73	54.00	-1.27	47.04	5.69	Average	<u> </u>	
2	5142.00		74.00	-8.58	59.73	5.69	Peak		
3 4		50.73 62.60	54.00 74.00		44.70 56.57	6.03	Average Peak	e	

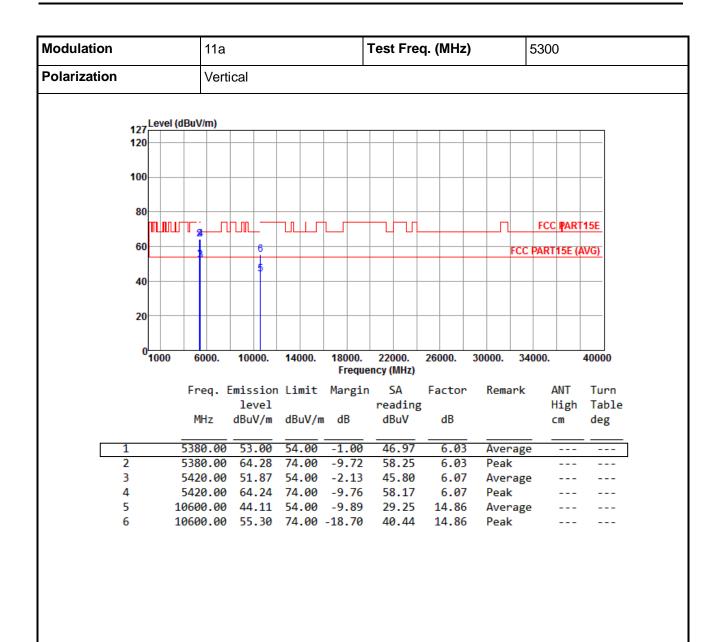
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Modulation	dulation 11a		1a 1			q. (MHz)	5300		
Polarization	Horizontal					I			
	<u>.</u>								
127 Level	(dBuV/m)								
120									
100									
80									
	┅╌ ╵		حىللىد	 	$\neg \bot \neg \bot$			FCC PAR	T15E
60	g .	6							
00	- Ī						FCC	C PART15E (AVG)
		1							
40									
20									
0 <mark>1000</mark>	6000.	10000.	14000.	18000.	22000.	26000.	30000. 3	4000.	40000
				Freque	ncy (MHz)				
	Freq. E		Limit	Margin		Factor	Remark		Turn
		level			reading			High	
	MHz	dBuV/m	dBuV/m	ı dB	dBuV	dB		cm	deg
1	5380.00	46.21	54 00	-7.79	40.18	6.03	Averag	<u> </u>	
2	5380.00		74.00		51.59	6.03	Peak		
3	5420.00				40.03	6.07	Averag	e	
4	5420.00				52.53	6.07	Peak		
5	10600.00	46.07	54.00	-7.93	31.21	14.86	Averag	e	
6	10600.00	59.78	74.00	-14.22	44.92	14.86	Peak		

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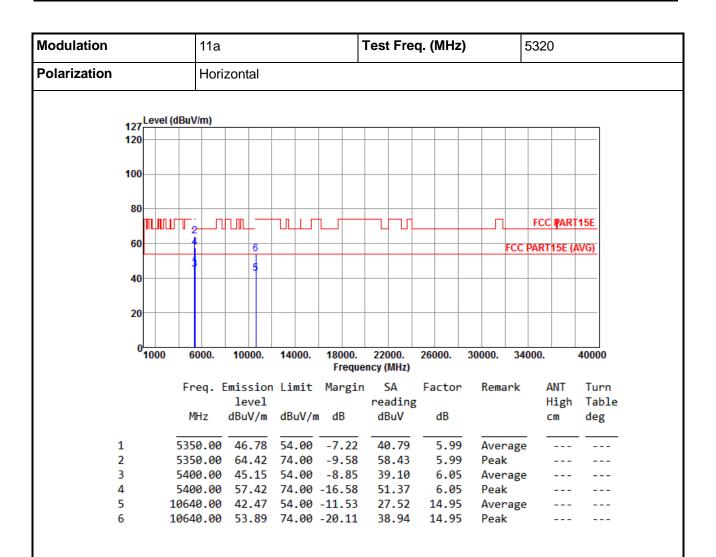


*Factor includes antenna factor, cable loss and amplifier gain

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

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*Factor includes antenna factor, cable loss and amplifier gain

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

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Modulation		11a					Test	Fre	q. (MHz))	Ę	5320)	
Polarization		Vert	ical								<u> </u>			
		•												
127 Le	evel (dBu	V/m)												
120														
100														
80														
ll l		الله		-	ТЩ			丌		П		FCC	PART	15E
60		+		6				\rightarrow			FCC I	PART	15E (<i>l</i>	AVG)
		1		5										
40				1										
20														
0														
0 <mark>L</mark>	000	6000.	100	00.	14000		220 ency (N		26000.	30000.	340	000.		40000
	F	rea.	Emis	sion	Limit	Margi			Factor	Rema	rk	А	NT	Turn
				/el		0-		ding					igh	
		MHz	dBu\	//m	dBuV/	m dB	dB	uV	dB				m	deg
1	53	50.00	52	.52	54.00	-1.48	46	.53	5.99	Aver	age	_		
2	53	50.00	70	.44	74.00	-3.56		.45	5.99	Peak				
3		00.00			54.00			.02	6.05	Aver				
4		00.00				-11.70		. 25	6.05	Peak				
5						-11.19		.86	14.95	Aver				
6	106	40.00	54	.10	/4.00	-19.90	39	.15	14.95	Peak				

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Modulation				11a					-	Test	Fre	q. (MI	Hz)		;	5500	0	
Polarization				Hori	zont	al			I_						ı			
	127	Level	(dBuV	/m)														
	120			-				+					_				-	
	100																	
	80																	
				+-			ىلىد	+			ΤЛ				FC	C PAR	₹ ∏ 15E	(74)
			╜ │╙ 4	: L	1 🗆 🛮		Щ	١ ا		_				'	10	- IAI	14152	(14)
	60					6									FCC	PART	15E (AVG)
			1			5												
	40							+					_					
	20	-		-				+	_				_			-	-	
	0																	
	_	1000	60	000.	100	00.	14000	. 1	18000. Freque	220		26000).	30000.	34	000.		40000
			_									_		_				_
			Fr	eq. I			Limi'	t M	Margin		A	Fact	or	Rema	ark		ANT	Turi
				u_		vel	4D. M	/	AD.		ding	_	,				High	
			M	Hz	dBu\	v/m	dBuV,	/ m	ав	at	₿uV	dB)			(cm	deg
1	l		5/12	0.00	16	.01	5/1 0	<u> </u>	7.99	30	.94		07	Avei	nage	-		
	2			0.00		.74	74.0				.67		07 07	Peal	_			
	3			0.00		.23			-5.77		.09		14	Ave				
_	1			0.00			74.0				3.37		14	Peal	_			
	5						54.0				.02	15.		Ave				
(5		1100	0.00	55	.52	74.0	a -1	18.48	39	.83	15.	69	Peal				

*Factor includes antenna factor, cable loss and amplifier gain

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

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Modulation			11a					T	est	Free	q. (MHz	:)	5	5500)	
Polarization			Vert	ical				<u> </u>					<u> </u>			
	127Le	vel (dBu	ıV/m)													
	120							_								
	100															
	80															
	- 1		4				+		 -	址			FCC	PAR	T 15E	(74)
	60		2				_									
	•••		1		6					-			FCC I	PART	15E (<i>i</i>	AVG)
	40				5											
	40															
	20															
	010	00	6000.	100	00.	14000			220		26000.	30000.	340	000.		40000
							Fre	equer	ıcy (N	IHZ)						
		F	req.			Limi	t Mar	gin			Factor	Rem	ark		MT	Turn
					vel					ding					ligh	Table
			MHz	dBu'	V/m	dBuV	/m dB		dBi	ı۷	dB			C	m	deg
1		5/	20.00	50	.27	54 0	0 -3.	73	44	.20	6.07	Δνα	rage	_		
2			20.00		.44		0 -12.			.37	6.07					
3			70.00				0 -1.			.62	6.14		 rage			
4		54	70.00	69	.81	74.0	0 -4.	19	63	.67	6.14					
5							0 -11.			.22	15.69		rage			
6		110	00.00	54	.93	74.0	0 -19.	07	39	. 24	15.69	Pea	k			

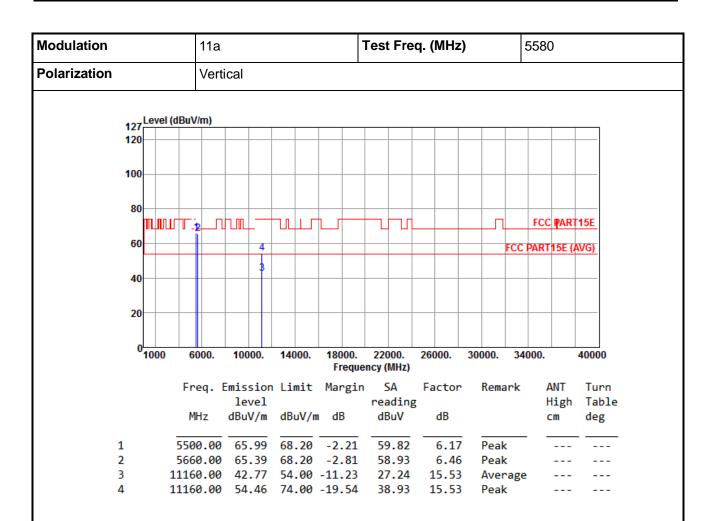
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Modulation		11a			-	Test Fre	q. (MHz)		5580	
Polarization		Horiz	zontal		L				1	
127	Level (d	BuV/m)								
120										
100										
80										
		1					+++	$+$ \sqcap	FCC IP	ART15E
60)		4					FC	C PART15	E (AVG)
40			3							
20										
(1000	6000.	10000.	14000.	18000. Freque	22000. ency (MHz)	26000.	30000. 3	4000.	40000
		Freq. E		n Limit	Margin		Factor	Remark		
		MHz	level dBuV/m	dBuV/m	ı dB	reading dBuV	dB		Hi; cm	
1		5500.00	59.55	68.20	-8.65	53.38	6.17	Peak		
2		5660.00	58.82		-9.38	52.36	6.46	Peak	-	
3		1160.00					15.53	Averag	ge -	
4	11	1160.00	54.88	74.00	-19.12	39.35	15.53	Peak	-	

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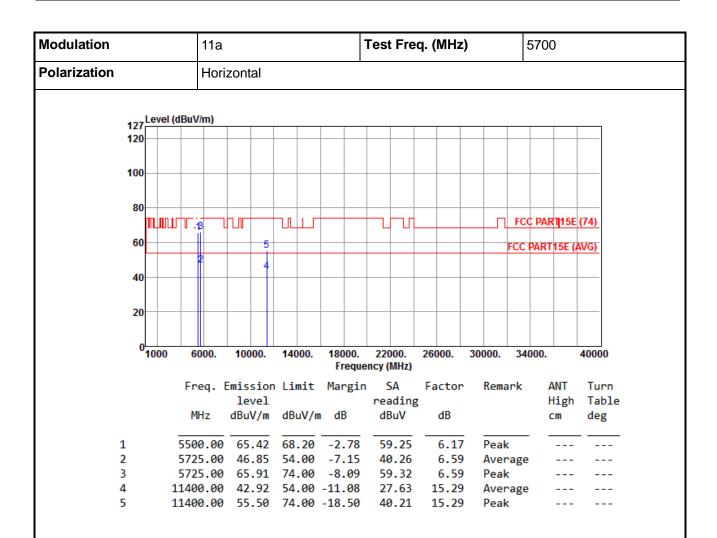


Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor, cable loss and amplifier gain

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

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Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB) *Factor includes antenna factor, cable loss and amplifier gain

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

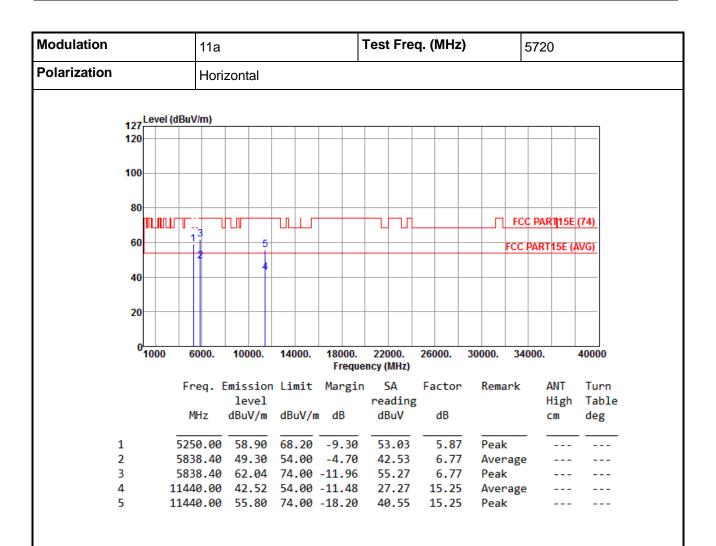
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Modulation	11a	1	est Freq. (MHz)	570	00
Polarization	Vertical				
127 Level (dBi	uV/m)				
120					
100					
80	3				
min utr				FC¢ PA	ART[15E (74)
60	5			FCC PAF	RT15E (AVG)
40	4				
20					
0 1000	6000. 10000.	14000. 18000.	22000. 26000.	30000. 34000	. 40000
		-	ncy (MHz)		
F	req. Emission level	Limit Margin	SA Factor reading	Remark	ANT Turn High Table
	MHz dBuV/m	dBuV/m dB	dBuV dB		cm deg
1 55	61.30	68.20 -6.90	55.13 6.17	Peak	
		54.00 -2.16	45.25 6.59	Average	
		74.00 -1.06	66.35 6.59	Peak	
4 114 5 114	100.00 42.32	54.00 -11.68	27.03 15.29 39.57 15.29	Average Peak	

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*Factor includes antenna factor, cable loss and amplifier gain

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

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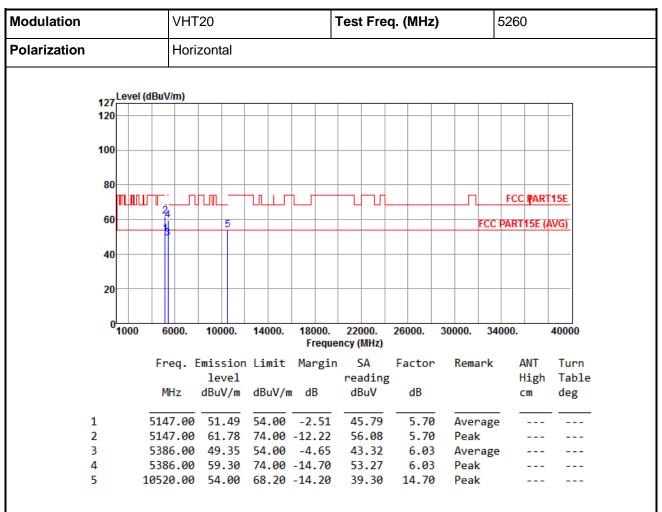


Modulation			11a					7	Γest	Fre	q. (MHz	:)	5	720		
Polarization			Ver	tical				I					I			
		el (dB	uV/m)													1
12	20															
10	00															
8	80						4									
4			1.3 		_		1			Ⴠ					5E (74)	
	20		2		5								FCC F	ART15	E (AVG)	
4	10				4											
2	20															
	0100	0	6000.	100	00.	14000).	18000.	220	00.	26000.	30000.	340	00.	400	00
								Freque	ncy (N	AHZ)						
		F	req.		sion vel	Limi	t	Margin		A ding	Factor	Ren	ıark	AN Hig		rn ble
			MHz	dBu	V/m	dBuV	/m	dB	dB	_	dB			cm	de	
1		52	250.00	65	.29	68.2	0 -	-2.91	59	.42	5.87	Pea	ak			
2			338.40		.76	54.0		-1.24		.99	6.77		erage			
3			338.40					-7.38		.85	6.77					
4			140.00					11.35		.40	15.25		erage			
5		114	140.00	55	.56	74.0	0 -	18.44	40	.31	15.25	Pea	k			

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3.6.10 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT20



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

*Factor includes antenna factor, cable loss and amplifier gain

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

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Modulation		VHT	20		-	Test Fre	q. (MHz)		526	60	
Polarization		Verti	cal								
127 ^L	_evel (dE	BuV/m)									
120											
100-											
80-											
1		┎╧┷┸	┅┖—	حىلىت					FC	C PAR	T15E
60		24 II	5						FCC PAR	T15E (AVG)
		13									
40											
20-											
20											
01	1000	6000.	10000.	14000.	18000.	22000.	26000.	30000.	34000		40000
						ncy (MHz)					
		Freq. E	mission level	Limit	Margin	SA reading	Factor	Rema	rk	ANT High	Turn Table
		MHz	dBuV/m	dBuV/m	ı dB	dBuV	dB			cm	deg
1	5	147.00	47.12	54.00	-6.88	41.42	5.70	Aver	age		
2		147.00		74.00		52.88	5.70	Peak			
3			46.63	54.00		40.60	6.03	Aver	_		
4		386.00	57.73		-16.27	51.70	6.03	Peak			
5	10	520.00	53.27	68.20	-14.93	38.57	14.70	Peak			

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Modulation	VHT20		Test Freq.	(MHz)	5300	
Polarization	Horizontal		1			
	•					
127 Level (dBu	IV/m)					
120						
100						
80						
		+			FCC PART	15E
60	4 1 1 1					
00	6			FC	C PART15E (A	(VG)
40						
20						
1000	6000. 10000.	14000. 18000		30000.	34000.	40000
		_	uency (MHz)			
F		n Limit Margi		actor Remar		Turn
	level MHz dBuV/m	dBuV/m dB	reading dBuV	dB	High	Table
'	MINZ GBUV/III	abuv/m ab	abuv	UD	cm	deg
1 53	80.00 52.55	54.00 -1.45	46.52	6.03 Avera	 ge	
	80.00 62.12			6.03 Peak		
3 54	20.00 49.78	54.00 -4.22	43.71	6.07 Avera	ge	
	20.00 60.49			6.07 Peak		
		54.00 -11.19		14.86 Avera	ge	
6 106	00.00 54.59		39.73	14.86 Peak		

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Modulation			VHT	20			Test	Fre	q. (MHz))	5	300	
Polarization			Vert	ical			ı						
			•										
1	127 Lev	el (dBu	V/m)										
1	120							\dashv					
1	100							\dashv					
	80	101		- nn -	+.Ш			7,1				FCC PAR	T45E
		шг				_	4	Щ				TCC IFAIL	IIJE
	60		1	6							FCC P	ART15E (AVG)
			ľ	\$									
	40												
	20												
	20												
	0												
	100	0	6000.	10000	. 1400		. 2200 uency (M		26000.	30000.	340	00.	40000
		F	rea.	Fmissi	on lim	it Marg			Factor	Rema	ark	ANT	Turn
			4.	leve			read					High	
			MHz	dBuV/ı	m dBu\	//m dB	dBu	V	dB			cm	deg
		<u></u>	00.00	47.4	<u> </u>			43					
1 2			80.00 80.00	47.40 58.2		00 -6.5 00 -15.7			6.03 6.03		rage v		
3				46.5		00 -13.7 00 -7.4			6.07		rage		
4			20.00			00 -16.6			6.07		_		
5		106	00.00	42.7	5 54.0	00 -11.2	5 27.	89	14.86	Ave	rage		
6		106	00.00	53.7	1 74.0	00 -20.2	9 38.	85	14.86	Peal	k		

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Modulation	VHT20		7	Test Free	q. (MHz)		5320	
Polarization	Horizon	tal	L					
127 Level (di	BuV/m)							
120								
100								
80								
						╨ ┸	FCC PART	15E
60	4	6				FCC	PART15E (A	AVG)
		5					1	
40		1						
20								
0 1000	6000. 10	000. 14000.	18000.	22000.	26000.	30000. 34	1000.	40000
1000	0000. 10	000. 14000.		ncy (MHz)	20000.	30000. 34	1000.	40000
	Frea. Emis	sion Limit			Factor	Remark	ANT	Turn
		evel		reading			High	Table
	MHz dBu	ıV/m dBuV/	m dB	dBuV	dB		cm	deg
_								
			-7.80	40.21	5.99	Average	2	
			-16.09 -3.10	51.92 44.85	5.99 6.05	Peak		
	400.00 50 400.00 60		-3.10	54.33	6.05	Average Peak		
	0640.00 42		-11.45	27.60	14.95	Average		
			-19.72	39.33	14.95	Peak		

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Modulation		VHT	20		-	Γest Fre	q. (MHz)		532	0	
Polarization		Verti	ical		L						
127 ^l	Level (dBı	ıV/m)									
120											
100											
80-											
		::						——Л	FCC	PART	15E
60		4	6					F	CC PART	15E (/	WG)
		+							JO TAIL	102 (1	100)
40			5								
20		1									
0											
91	1000	6000.	10000.	14000.	18000. Freque	22000. ncy (MHz)	26000.	30000.	34000.		40000
	F	req. [missior	Limit	Margin	SA	Factor	Remar	·k	ANT	Turn
			level			reading	;		1	High	Table
		MHz	dBuV/m	dBuV/n	ı dB	dBuV	dB		(cm	deg
1	53	50.00	45.50	54.00	-8.50	39.51	5.99	Avera	 nge		
2		50.00	56.77		-17.23	50.78	5.99	Peak	0-		
3	54	00.00	48.60		-5.40	42.55	6.05	Avera	ige		
4	54	00.00	59.26		-14.74	53.21	6.05	Peak			
5		40.00	42.38		-11.62	27.43	14.95	Avera	ige		
6	106	40.00	53.48	74.00	-20.52	38.53	14.95	Peak			

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Modulation				VH	Γ20					Test	Fre	q. (I	MHz))	!	5500)	
Polarization				Hor	izon	al			<u> </u>						1			
				•														
	127	Leve	(dBu\	//m)														
	120	\vdash						+										
	100																	
	80																	
	00	m.lnr		.				\Box			ΤЛ					FCC	PART	T15E
	60					7			_						FCC			
		+				H		+							FCC	PART	IDE (/	AVG)
	40	-				L.		_										
	20	\vdash						+										
	0	1000	6	000.	100	000.	1400).	18000.	220	000.	260	000.	30000.	340	000.		40000
									Freque	ency (MHz)							
			Fr	eq.			n Limi	t i	Margir		A		ctor	Rema	ark		ANT.	Turn
			N	lHz		vel V/m	dBuV	/m	dВ		idin∉ BuV		dB				ligh :m	Tabl deg
				1112	ubu	• /	abav	/ ···	ub	u			ub				-1111	ucg
	1			8.00		.30			-2.70		.28		6.02	Avei				
	2			8.00		.76			13.24		.74		6.02	Peal				
	3 4			0.00 0.00		.54 .65			-8.46 16.35		.53		6.12 6.12	Avei Peal	_	!		
	5			0.00		.89			-9.31		.75		6.14	Peal				
	6			0.00	43	.13	54.0	0 -	10.87	27	.44	1	5.69	Avei	_			
	7		1100	0.00	55	.07	74.0	0 -	18.93	39	.38	1	5.69	Peal	C			

*Factor includes antenna factor , cable loss and amplifier gain Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

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Modulation	VHT20		Test Freq. (5500			
Polarization	Vertical						
127 Level (dBu\	√/m)						
120							
100							
100							
80					ECC BADTAFF		
ָרירע יעיוו ן	<u>-</u>			+	FCC PART15E		
60	7			FC	C PART15E (AVG)		
40	 						
20							
20							
⁰ 1000 6	5000. 10000.	14000. 18000.		000. 30000.	34000. 40000		
		Frequ	iency (MHz)				
Fr	req. Emission	n Limit Margi	n SA Fa	actor Remark	k ANT Tur		
	level		reading		High Tab		
M	1Hz dBuV/m	dBuV/m dB	dBuV	dB	cm deg		
1 537	78.00 49.23	54.00 -4.77	43.21	6.02 Averag			
	78.00 60.51	74.00 -13.49		6.02 Peak			
	50.00 45.38			6.12 Averag	ge		
	50.00 56.96			6.12 Peak			
		68.20 -9.00		6.14 Peak			
5 547	0.00 33.20	00.20					
		54.00 -11.39		15.69 Avera	ge		

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Modulation	VHT	20		-	Test Fre	q. (MHz)		5580)	
Polarization	Hori	zontal		L						
Leve	el (dBuV/m)									
	i (ubu viiii)									
120										
100										
80										
m.j.r.	шг. 23		$\neg \mu$					FCC	PART	15E
60	2.3	5						CC DADT	455 / 6	VC
		- ĭ						CC PART	ISE (A	(VG)
40		†								
40										
20										
0 <mark>100</mark> 0	6000.	10000.	14000.	18000.	22000.	26000.	30000.	34000.		40000
				Freque	ncy (MHz)					
	Freq.	Emission	Limit	Margin	SA	Factor	Remar	rk A	ANT	Turn
		level			reading	;		H	ligh	Table
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		c	m	deg
1	5115.00	51.73	54.00		46.09	5.64	Avera	age		
2	5115.00		74.00		55.77	5.64	Peak			
3	5812.00				56.10	6.77	Peak			
4 5	11160.00			-10.49	27.98	15.53	Avera	age		
5	11160.00	55.42	74.00	-10.58	39.89	15.53	Peak			

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Modulation	VHT	20		1	est Free	q. (MHz)		5580	
Polarization	Vert	ical		L					
127 Level (dBuV/m)								
120									
100									
80									
תיוויות	ПГ:П 23							FCC PAR	T15E
60	111	5					FCC	PART15E (AVG)
40		4							
20									
01000	6000.	10000.	14000.	18000.	22000.	26000.	30000. 34	1000.	40000
				Freque	ncy (MHz)				
	Freq. I	Emission level	Limit	Margin	SA reading	Factor	Remark	ANT High	Turn Table
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg
_	5115.00	50.96	54.00	-3.04	45.32	5.64	Average	e	
	5115.00		74.00		53.70	5.64	Peak		
		59.75			52.98	6.77	Peak		
4 1	11160.00	777 33	54.00	-11 6/	26.80	15.53	Average		

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Modulation	VHT20	Test Fr	eq. (MHz)	5700
Polarization	Horizontal	<u> </u>		
127 Level (dBu\	V/m)			
120				
100				
80	·	, ,	-	FCC PART15E
60			FO	CC PART15E (AVG)
40	3			20 17411102 (140)
20				
0 1000 6	6000. 10000. 14000.	18000. 22000.	26000. 30000.	34000. 40000
1000 0	0000. 10000. 14000.	Frequency (MHz		34000. 40000
Fr	req. Emission Limit level	Margin SA readir	Factor Remar	k ANT Turn High Table
M	MHz dBuV/m dBuV/m	dB dBuV	dB	cm deg
1 572	25.00 64.48 68.20	-3.72 57.89	6.59 Peak	
		-3.77 57.72		
	00.00 43.28 54.00 00.00 55.27 74.00			ge

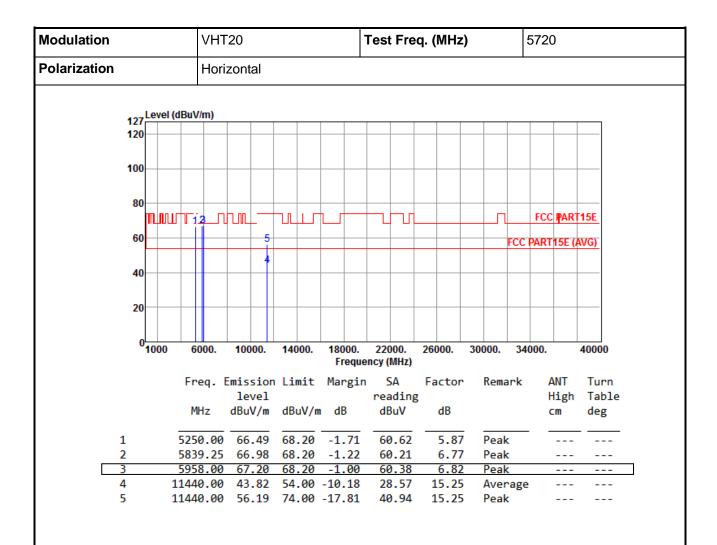
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Modulation				VI	HT:	20					1	Γest	Fre	q. (MHz	2)			5700)		
Polarization				Ve	erti	cal																
1	27	Level	(dBu\	//m))																	1
1	20			+	+																	
1	00			+																		
	80	m nn		-				<u></u>		, ,									ECC	IDA D	T15E	
	60		. 11	2														FCC				
	"			╫	\dashv		4											FCC	PAKI	15E ((AVG)	
	40	+		╁			Ť															
	20			╁																		
	0	1000	6	6000).	100	000.	14	000.		000. reque		000. MHz)	260	000.	300	000.	34	000.		4000	00
			Fr	eq.	. E				mit	Mai	rgin		A		ctor	•	Rema	ark		ANT	Tu	
			M	1Hz			vel V/m		uV/n	n di	В		ding BuV		dB					digh cm	Ta de	ble g
1			572	25.6	90	62	.58	68	.20	-5	.62	- 55	.99	_	6.59)	Peak	ĸ	-			
2							.61			-6			.90		6.71		Peak				-	
3			1140 1140				.61 .27		.00	-11			3.98		5.29 5.29		Aver Peal	rage			-	

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*Factor includes antenna factor, cable loss and amplifier gain

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

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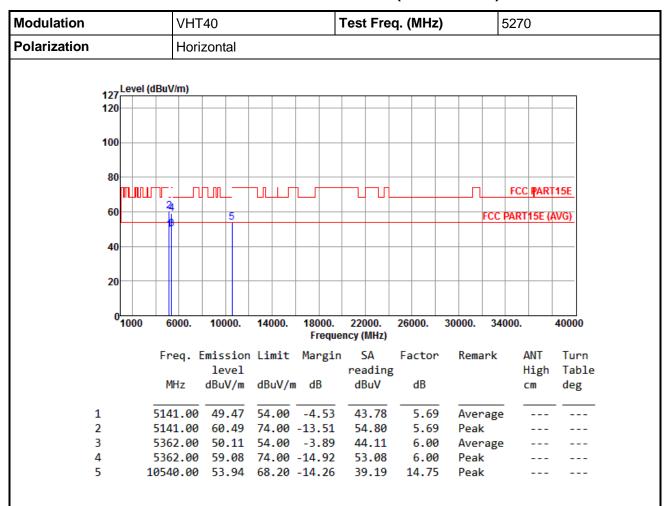


	C PART15E
100 80 101 102 100 100 100 100 100 100 100 10	C PART15E
100 80 100 60 5 FCC PAR	C PART15E
80 FCC PAR	C PART15E
80 FCC PAR	C PART15E
60 5 FCC PAR	C PART15E
60 5 FCC PAR	C IPART15E
60 5 FCC PAR	
4	T15E (AVG)
40	102 (110)
20	
0 1000 6000. 10000. 14000. 18000. 22000. 26000. 30000. 34000.	4000
Frequency (MHz)	4000
···	ANT Tur
level reading MHz dBuV/m dBuV/m dB dBuV dB	High Tab cm deg
1 5250.00 66.41 68.20 -1.79 60.54 5.87 Peak	
2 5839.25 66.53 68.20 -1.67 59.76 6.77 Peak	
3 5958.00 66.11 68.20 -2.09 59.29 6.82 Peak	
4 11440.00 43.90 54.00 -10.10 28.65 15.25 Average 5 11440.00 55.61 74.00 -18.39 40.36 15.25 Peak	

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3.6.11 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT40



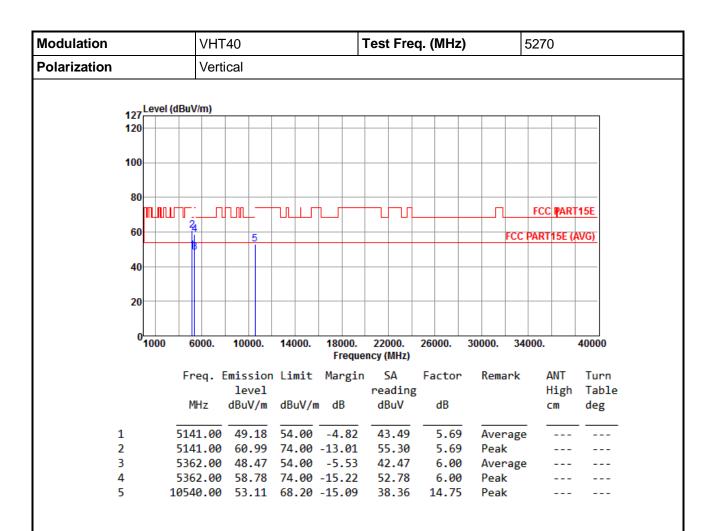
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

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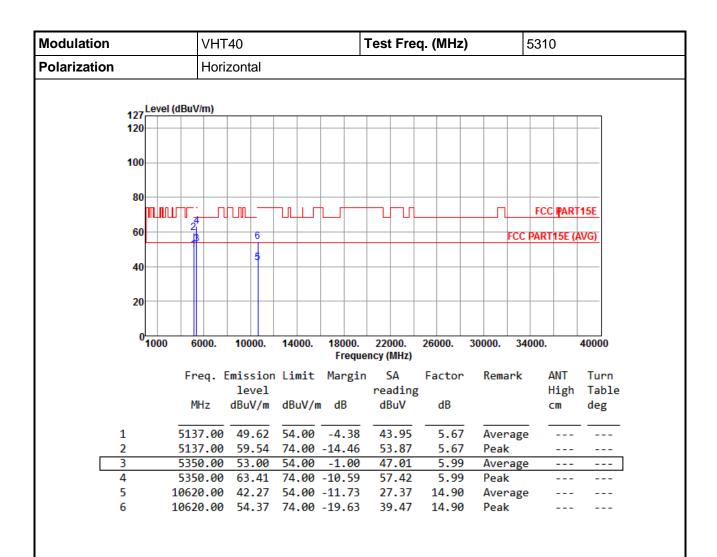


*Factor includes antenna factor, cable loss and amplifier gain

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

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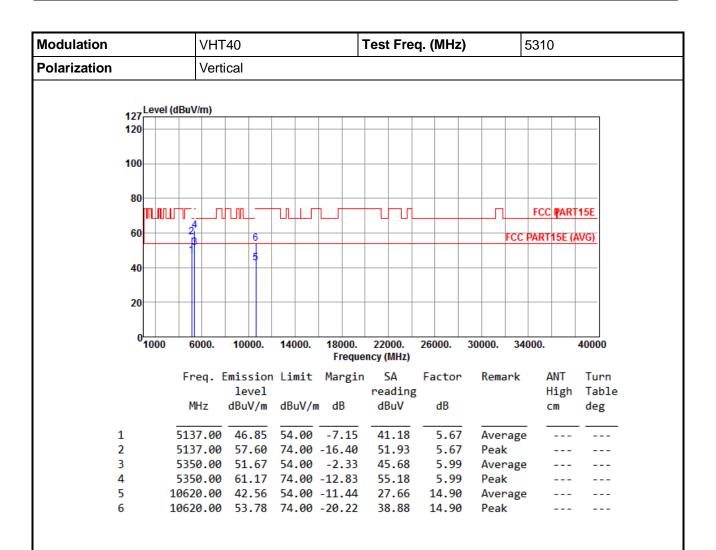


*Factor includes antenna factor, cable loss and amplifier gain

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

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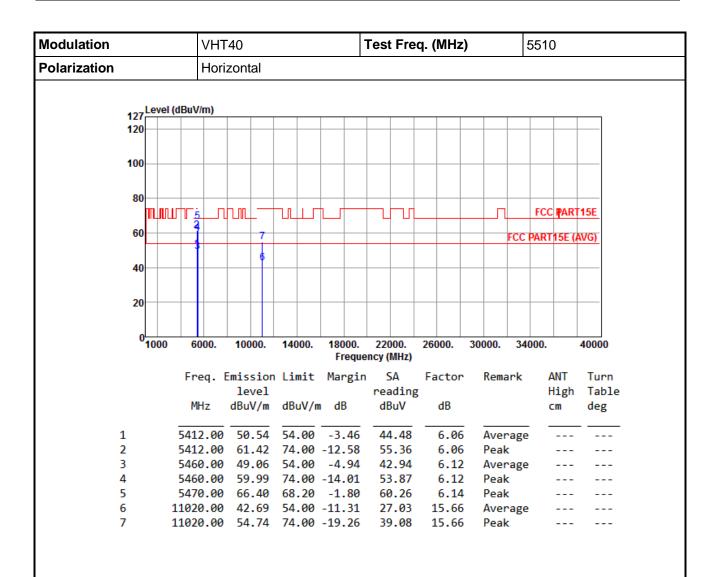


*Factor includes antenna factor, cable loss and amplifier gain

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

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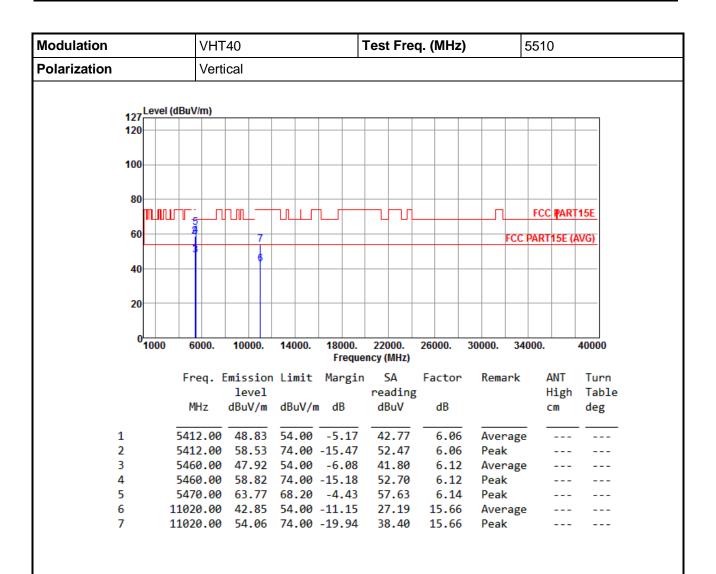


*Factor includes antenna factor, cable loss and amplifier gain

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

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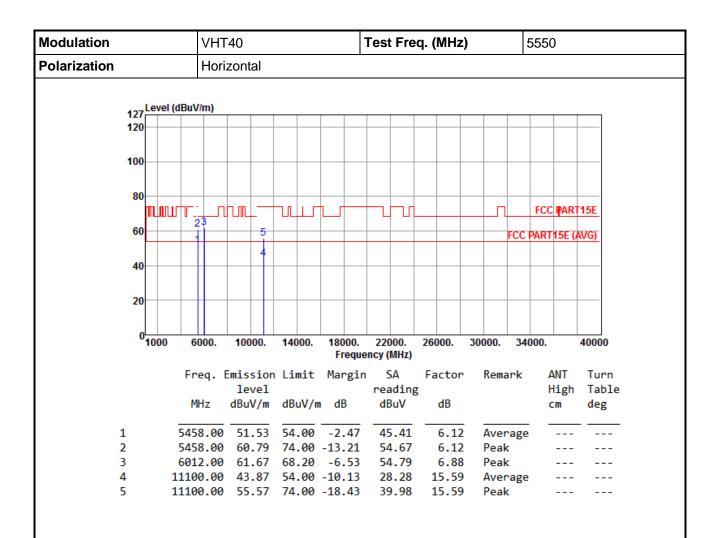


*Factor includes antenna factor, cable loss and amplifier gain

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

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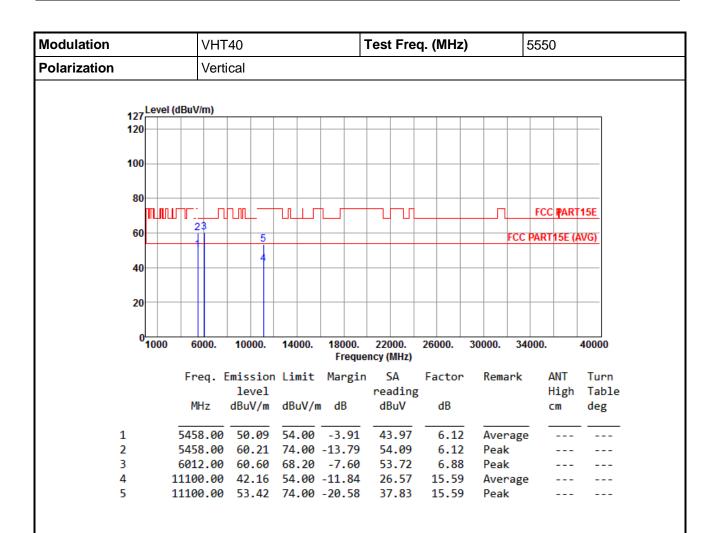


*Factor includes antenna factor, cable loss and amplifier gain

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

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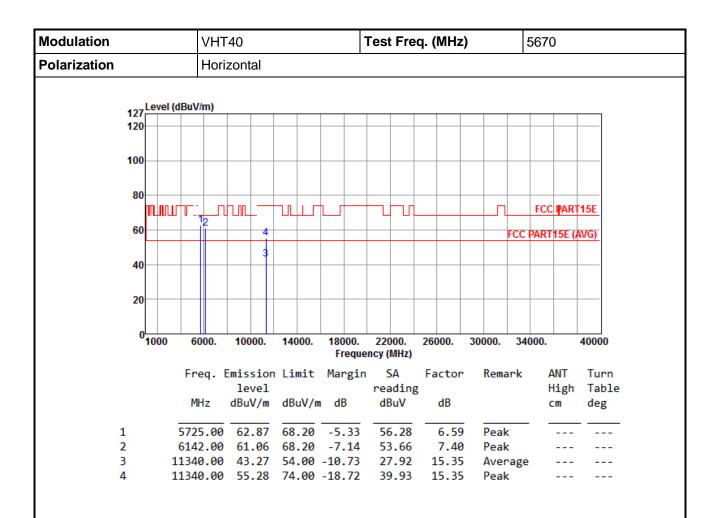


*Factor includes antenna factor, cable loss and amplifier gain

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

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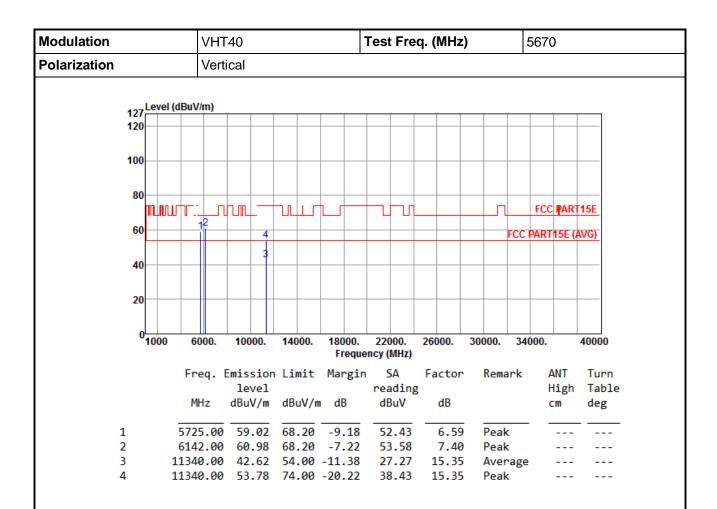


*Factor includes antenna factor, cable loss and amplifier gain

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

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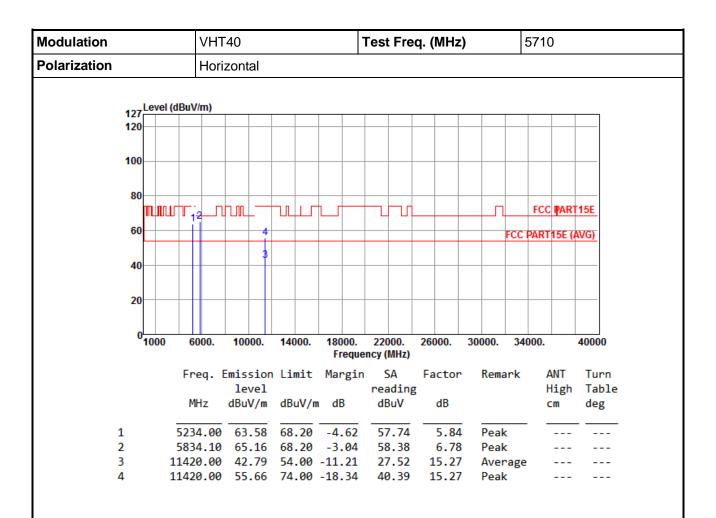


*Factor includes antenna factor, cable loss and amplifier gain

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

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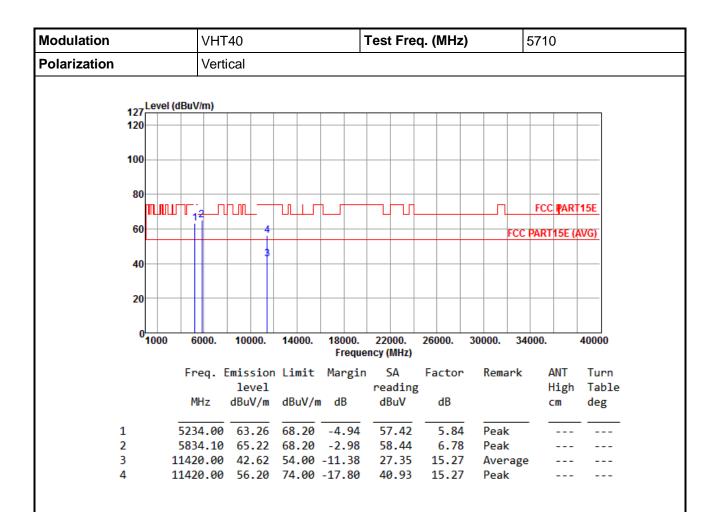


*Factor includes antenna factor, cable loss and amplifier gain

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

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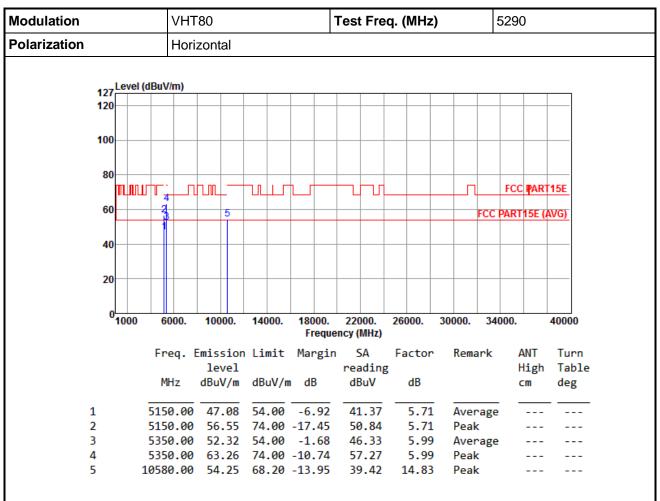
*Factor includes antenna factor, cable loss and amplifier gain

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

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3.6.12 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80



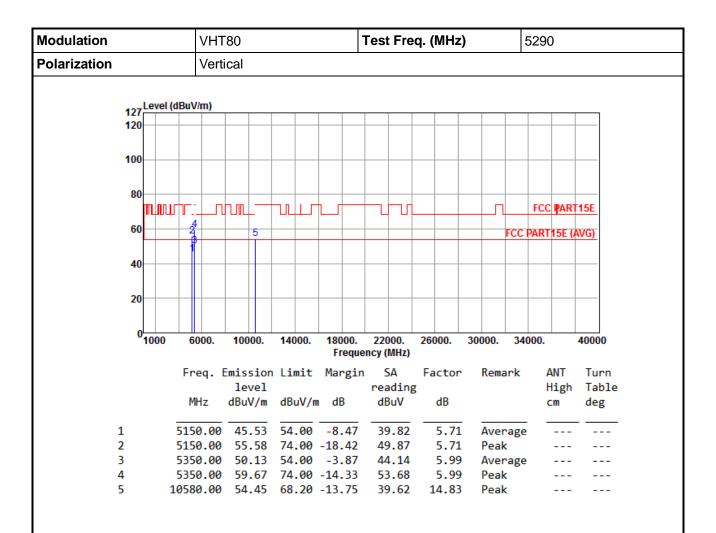
Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)

*Factor includes antenna factor, cable loss and amplifier gain

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

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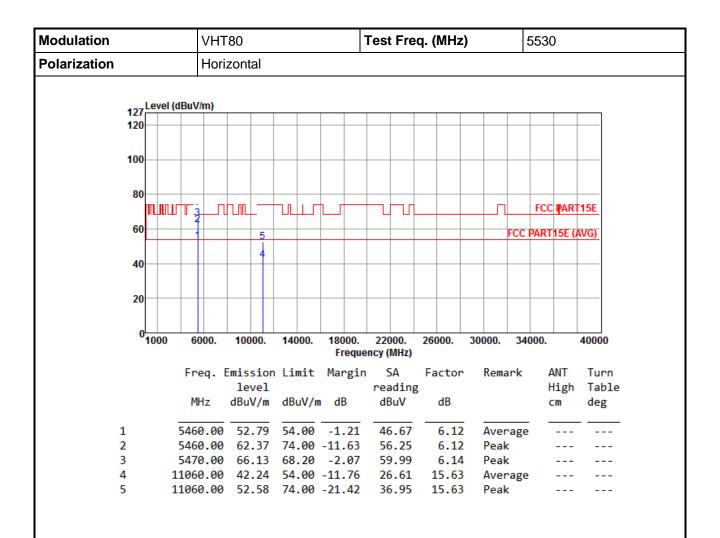


*Factor includes antenna factor, cable loss and amplifier gain

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

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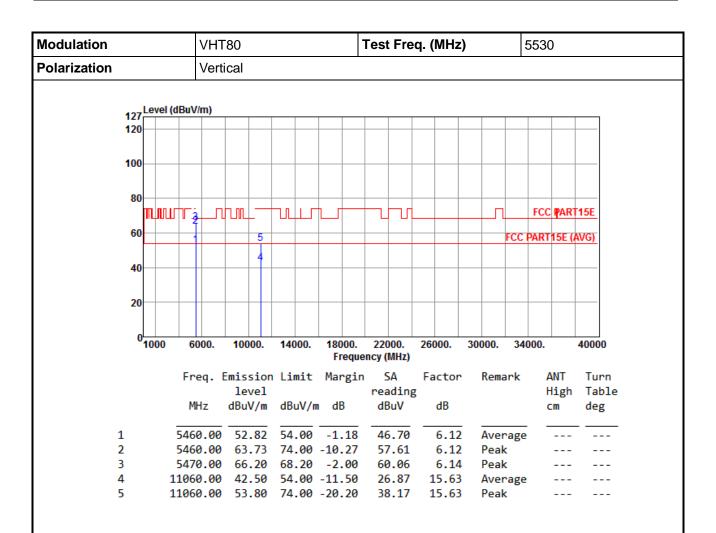


*Factor includes antenna factor, cable loss and amplifier gain

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

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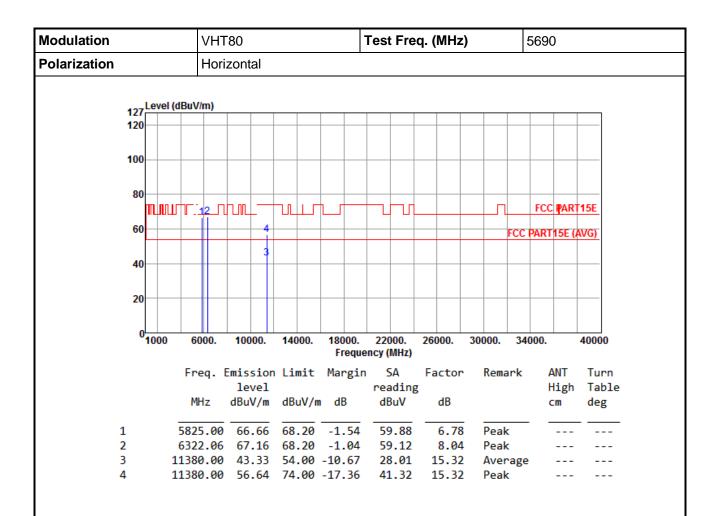


*Factor includes antenna factor, cable loss and amplifier gain

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

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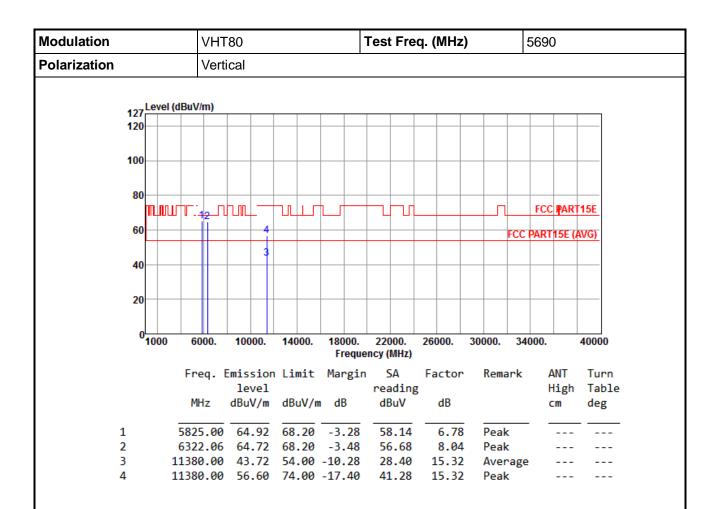


*Factor includes antenna factor, cable loss and amplifier gain

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

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*Factor includes antenna factor, cable loss and amplifier gain

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

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3.7 Frequency Stability

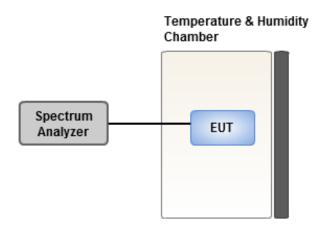
3.7.1 Limit of Frequency Stability

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

3.7.2 Test Procedures

- The EUT is installed in an environment test chamber with external power source.
- Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.
- 3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
- 4. When temperature is stabled, measure the frequency stability.
- 5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.

3.7.3 Test Setup



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3.7.4 Test Result of Frequency Stability.

Legacy/MIMO (CDD) Non- beamforming mode

Frequency: 5320 MHz								
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes				
T20°CVmax	3.76	2.74	2.89	3.40				
T20°CVmin	1.21	0.59	0.50	0.89				
T50°CVnom	2.10	1.93	2.61	2.61				
T40°CVnom	2.63	2.64	1.71	1.67				
T30°CVnom	2.11	2.43	2.69	2.38				
T20°CVnom	2.07	2.73	2.46	2.05				
T10°CVnom	2.27	1.59	1.45	1.38				
T0°CVnom	0.90	0.62	0.84	0.94				
T-10°CVnom	0.87	0.90	0.51	0.76				
T-20°CVnom	1.26	1.12	1.27	1.11				
T-30°CVnom	0.70	0.75	0.30	0.62				
Vnom [Vdc]: 110		Vmax [Vdc]: 126.5	Vmax [Vdc]: 126.5					
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30				

Legacy/MIMO (CDD) beamforming mode

Frequency: 5320 MHz										
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes						
T20°CVmax	3.14	2.45	2.17	2.44						
T20°CVmin	1.23	1.64	2.02	1.43						
T50°CVnom	3.31	3.31	3.39	2.94						
T40°CVnom	1.92	1.87	2.69	1.98						
T30°CVnom	2.46	1.60	2.08	2.59						
T20°CVnom	1.99	1.67	1.76	1.58						
T10°CVnom	0.40	0.44	0.28	0.86						
T0°CVnom	1.32	0.92	0.74	0.89						
T-10°CVnom	-0.01	0.37	0.79	0.58						
T-20°CVnom	0.29	0.23	0.23	-0.33						
T-30°CVnom	0.17	-0.40	0.17	0.10						
Vnom [Vdc]: 110		Vmax [Vdc]: 126.5	•	Vmin [Vdc]: 93.5						
Tnom [°C]: 20		Tmax [°C]: 50		Tmin [°C]: -30						

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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 Corp, 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 Hsiang. Location map can be found on our website http://www.icertifi.com.tw.

Linkou Kwei Shan

Tel: 886-2-2601-1640 Tel: 886-3-271-8666

No. 30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei
City, Taiwan, R.O.C.

No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan
Hsiang, Tao Yuan Hsien 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: 886-3-318-0155

Email: ICC_Service@icertifi.com.tw

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