

# **FCC Test Report**

Equipment	:	11ac 5G radio module
Brand Name	:	Adtran
Model No.	:	PCE4551AH-BS
FCC ID	:	HDCWLAN203XF1
Standard	:	47 CFR FCC Part 15.407
<b>Operating Band</b>	:	5150 MHz – 5250 MHz
FCC Classification	:	NII
Applicant Manufacturer	:	Adtran 901 Explorer Boulevard Huntsville, AL 35806-2807 United States

The product sample received on Jul. 03, 2013 and completely tested on Oct. 28, 2013. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2009 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.

Reviewed by:

James Fan / Assistant Manager





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# Summary of Test Result

		Conform	nance Test Specifications		
Report Clause	Ref. Std. Clause	Description	Measured	Limit	Result
1.1.2	15.203	Antenna Requirement	Antenna connector mechanism complied	FCC 15.203	Complied
3.1	15.207	AC Power-line Conducted Emissions	[dBuV]: 0.484MHz 28.52 (Margin 17.75dB) - AV 43.70 (Margin 12.57dB) - QP	FCC 15.207	Complied
3.2	15.407(a)	Emission Bandwidth	Bandwidth [MHz] 20M:24.35/40M:48.35/ 80M: 97.39	Information only	Complied
3.3	15.407(a)	RF Output Power (Maximum Conducted Output Power)	Power [dBm] 5150-5250MHz:16.41	Power[dBm] 5150-5250MHz:17	Complied
3.4	15.407(a)	Peak Power Spectral Density	PPSD[dBm/MHz] 5150-5250MHz:-1.00	PPSD [dBm/MHz] 5150-5250MHz:4	Complied
3.5	15.407(a)	Peak Excursion	10.68 dB	13 dB	Complied
3.6	15.407(b)	Transmitter Unwanted Emissions and Band Edge	Restricted Bands [dBuV/m at 3m]:5150.00MHz 52.98 (Margin 1.02dB) - AV	Non-Restricted Bands: ≤ -27dBm (68.3dBuV/m@3m) Restricted Bands: FCC 15.209	Complied
3.7	15.407(g)	Frequency Stability	2.7865 ppm	Signal shall remain in-band	Complied





# **Revision History**

Report No.	Version	Description	Issued Date
FR382902-01AN	Rev. 01	Initial issue of report	Dec. 06, 2013



# **1** General Description

# 1.1 Information

#### 1.1.1 RF General Information

RF General Information									
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N <sub>TX</sub> )	RF Output Power (dBm)	Co-location			
5150-5250	а	5180-5240	36-48 [4]	3	11.83	N/A			
5150-5250	n(HT20)	5180-5240	36-48 [4]	3	11.78	N/A			
5150-5250	n(HT40)	5190-5230	38-46 [2]	3	15.34	N/A			
5150-5250	ac(VHT20)	5180-5240	36-48 [4]	3	11.86	N/A			
5150-5250	ac(VHT40)	5190-5230	38-46 [2]	3	15.44	N/A			
5150-5250	ac(VHT80)	5210	42 [1]	3	16.41	N/A			

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

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

Note 3: 802.11 ac uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM modulation.

Note 4: Co-location, Co-location is generally defined as simultaneously transmitting (co-transmitting) antennas within 20 cm of each other. (i.e., EUT has simultaneously co-transmitting that operating 2.4GHz and 5GHz.)

# 1.1.2 Antenna Information

	Antenna Category							
	Equipment placed on the market without antennas							
⊠	Inte	gral antenna (antenna permanently attached)						
	⊠	Temporary RF connector provided						
		No temporary RF connector provided Transmit chains bypass antenna and soldered temporary RF connector provided for connected measurement. In case of conducted measurements the transmitter shall be connected to the measuring equipment via a suitable attenuator and correct for all losses in the RF path.						
$\boxtimes$	Exte	ernal antenna (dedicated antennas)						
		Single power level with corresponding antenna(s).						
	⊠	Multiple power level and corresponding antenna(s).						
	RF connector provided							
		Unique antenna connector. (e.g., MMCX, U.FL, IPX, and RP-SMA, RP-N type)						
		Standard antenna connector. (e.g., SMA, N, BNC, and TNC type)						



	Antenna General Information							
No.	No. Ant. Cat. Ant. Type Connector Gain (dBi)							
1	External	Dipole	RPSMA	5.5				
2	2 Integral PIFA UFL 6							
Note:	The antennas are profes	sionally installed.						

# 1.1.3 Type of EUT

	Identify EUT					
EU	T Serial Number	N/A				
Pre	sentation of Equipment	Production ; Pre-Production ; Prototype				
		Type of EUT				
	] Stand-alone					
	Combined (EUT where t	he radio part is fully integrated within another device)				
	Combined Equipment - Brand Name / Model No.:					
⊠	Plug-in radio					
	Other:					

# 1.1.4 Test Signal Duty Cycle

	Operated Mode for Worst Duty Cycle					
	Operated normally mode for worst duty cycle					
⊠	Operated test mode for worst duty cycle					
Test Signal Duty Cycle (x)Power Duty Factor[dB] - (10 log 1/x)						
	98.26% - IEEE 802.11a	0.08				
⊠	98.16% - IEEE 802.11ac (VHT20)	0.08				
⊠	95.91% - IEEE 802.11ac (VHT 40)	0.18				
⊠	90.45% - IEEE 802.11ac (VHT 80)	0.44				

# 1.1.5 EUT Operational Condition

Supply Voltage		AC mains	⊠	DC		
Type of DC Source		Internal DC supply		External DC adapter	Ø	Host
Test Voltage (Host)	$\boxtimes$	Vnom (110 Vac)	Ø	Vmax (126.5 Vac)	$\boxtimes$	Vmin (93.5 Vac)
Test Climatic	$\boxtimes$	Tnom (20°C)	⊠	Tmax (55°C)	Ø	Tmin (-30°C)



# 1.2 Support Equipment

	Support Equipment						
No.	No.EquipmentBrand NameModel NameSerial No.						
1	Notebook	DELL	E5420	DoC			
2	Extender card	Senao	adapter	NA			
3	Carrier board	Senao	IAP6200AG-0 0.2 LFP	NA			

# 1.3 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR FCC Part 15
- ANSI C63.10-2009
- FCC KDB 789033 v01r03
- FCC KDB 662911 v02r01
- FCC KDB 412172 v01

# **1.4 Testing Location Information**

	Testing Location								
Sporton ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.									
	Lab	TEL	. :	886-3-327-345	6 FAX : 886	6-3-318-0055			
ADD : No.3-1, Lane 6, Wen San 3rd St., Kwei Shan Hsiang, Taiwan (R.O.C.)					vei Shan Hsiang, Tao`	Yuan Hsein 333,			
	TEL : 886-3-271-8666 FAX : 886-3-318-0155								
Т	est Conditio	on	Т	est Site No.	Test Engineer	Test Environment	Test Date		
RF Conducted				TH01-HY	Mark Liao	22.1°C / 61%	Aug. 12, 2013 Oct. 28, 2013		
*AC Conduction CO01-WS Skys Huang 23°C / 58%					Aug. 13, 2013				
*Ra	*Radiated Emission 03CH01-WS Aska Huang 25°C / 65% Jul. 27 ~ Oct. 28, 20						Jul. 27 ~ Oct. 28, 2013		
	Test site registered number [657002] with FCC. Test site registered number [10807A-1] with IC.								

Note: \* Sporton Lab subcontracts this test item to ICC lab (TAF: 2732).

ICC lab is a TAF accreditation test firm and also is an approved provider of Sporton lab.



# 1.5 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						
Test Item	Uncertainty	Limit				
AC power-line conducted emissions	±2.26 dB	N/A				
Emission bandwidth	±1.42 %	N/A				
RF output power, conducted	±0.63 dB	N/A				
Power density, conducted		±0.81 dB	N/A			
All emissions, radiated	30 – 1000 MHz	±3.9 dB	N/A			
	Above 1GHz	±4.2 dB	N/A			
Temperature		±0.8 °C	N/A			
Humidity		±3 %	N/A			
DC and low frequency voltages		±3 %	N/A			
Time		±1.42 %	N/A			
Duty Cycle		±1.42 %	N/A			



# 2 Test Configuration of EUT

# 2.1 The Worst Case Modulation Configuration

Worst	Worst Modulation Used for Conformance Testing (5150-5250MHz)						
Modulation Mode	Transmit Chains (N <sub>TX</sub> )	Data Rate / MCS	Worst Data Rate / MCS				
11a	3	6-54Mbps	6 Mbps				
HT20	3	M0-23	M0				
HT40	3	M0-23	M0				
VHT20	3	M0-9	M0				
VHT40	3	M0-9	M0				
VHT80	3	M0-9	MO				

# 2.2 The Worst Case Power Setting Parameter

The Worst Case Power Setting Parameter (5150-5250 MHz band)								
Operating Mode	1 (Ar	1 (Ant. 1, 5.5dBi Dipole antenna)						
Test Software Version	art2,	art2, Version: 4_9_425						
				Test Fre	quency (MH	z)		
Modulation Mode	N <sub>TX</sub>		NCB: 20MI	Ηz	NCB: 40MHz		NCB: 80MHz	
		5180	5200	5240	5190	5230	5210	
11a,6-54Mbps	3	7.5	7.5	7.5				
HT20,M0-23	3	7.5	7.5	7.5				
HT40,M0-23	3				11.5	11.5		
VHT20,M0-9	3	7.5	7.5	7.5				
VHT40,M0-9	3				11.5	11.5		
VHT80,M0-9	3						11.5	



The Worst Case Power Setting Parameter (5150-5250 MHz band)								
Operating Mode	2 (Ar	2 (Ant. 2, 6dBi PIFA antenna)						
Test Software Version	art2,	art2, Version: 4_9_425						
				Test Free	quency (MH	z)		
Modulation Mode	N <sub>TX</sub>		NCB: 20MI	Ηz	NCB: 40MHz		NCB: 80MHz	
		5180	5200	5240	5190	5230	5210	
11a,6-54Mbps	3	7.5	7.5	7.5				
HT20,M0-23	3	7.5	7.5	7.5				
HT40,M0-23	3				11.5	11.5		
VHT20,M0-9	3	7.5	7.5	7.5				
VHT40,M0-9	3				11.5	11.5		
VHT80,M0-9	3						12	



#### 2.3 The Worst Case Measurement Configuration

The	The Worst Case Mode for Following Conformance Tests			
Tests Item	AC power-line conducted emissions			
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz			
Operating Mode	Operating Mode Description			
1	DC Power & Radio link (WLAN), Ant 1			
2	DC Power & Radio link (WLAN), Ant 2			

Th	The Worst Case Mode for Following Conformance Tests				
Tests Item	RF Output Power				
Test Condition	Conducted measurement at transmit chains				
Modulation Mode	11a, HT20, HT40, VHT20, VHT40, VHT80				
Operating Mode	Operating Mode Description				
1	DC Power & Radio link (WLAN), Ant 1				
2	DC Power & Radio link (WLAN), Ant 2				

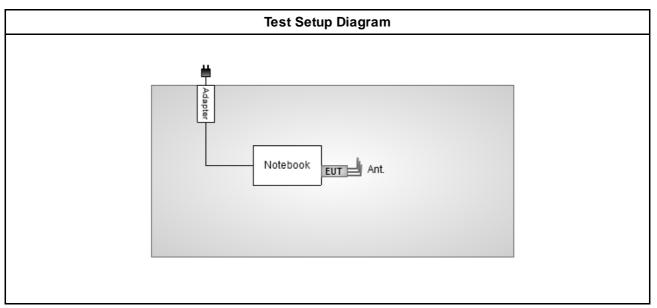
The Worst Case Mode for Following Conformance Tests				
Tests Item	Peak Power Spectral Density, Emission Bandwidth, Peak Excursion			
Test Condition	Conducted measurement at transmit chains			
Modulation Mode	11a, VHT20, VHT40, VHT80			
Operating Mode	Operating Mode Description			
1	DC Power & Radio link (WLAN), Ant 1			
2 DC Power & Radio link (WLAN), Ant 2				
Note:				

802.11n/ac modulation modes consist of HT20, HT40, VHT20, VHT40 and VHT80. After pretested, VHT20, VHT40, and VHT80 were the worst cases and were selected for final test.



The	The Worst Case Mode for Following Conformance Tests							
Tests Item	Transmitter Radiated Unwanted Emissions Transmitter Radiated Bandedge Emissions							
Test Condition	regardless of spatial multi	Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type.						
	EUT will be placed in	fixed position.						
User Position		mobileposition and operat vo orthogonal planes. The v	• • •					
		EUT will be operating multiple positions. The antenna of EUT was pre-tested on the positioned of each 3 axis. The worst plane is X.						
Operating Mode < 1GHz	1. DC Power & Radio link (WLAN), Ant 1							
	2. DC Power & Radi	2. DC Power & Radio link (WLAN), Ant 2						
Modulation Mode	11a, VHT20, VHT40, VHT	80						
	X Plane	Y Plane	Z Plane					
Orthogonal Planes of EUT								
	Note: 802.11n/ac modulation modes consist of HT20, HT40, VHT20, VHT40 and VHT80. After pretested, VHT20, VHT40, and VHT80 were the worst cases and were selected for final test.							

# 2.4 Test Setup Diagram





#### **Transmitter Test Result** 3

#### 3.1 **AC Power-line Conducted Emissions**

### 3.1.1 AC Power-line Conducted Emissions Limit

AC Power-line 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 Measuring Instruments

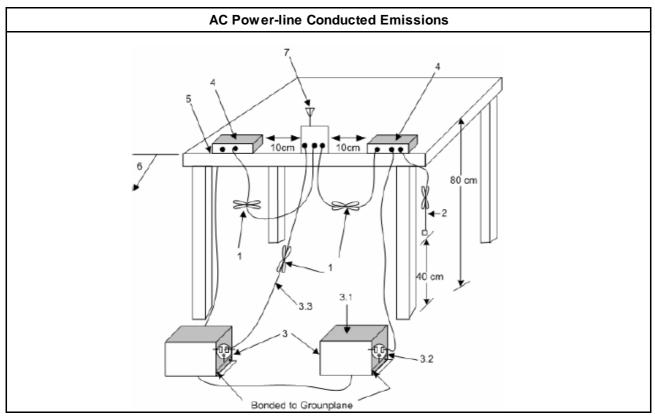
Refer a test equipment and calibration data table in this test report.

#### 3.1.3 Test Procedures

**Test Method** 

Refer as ANSI C63.10-2009, clause 6.2 for AC power-line conducted emissions.

#### 3.1.4 **Test Setup**

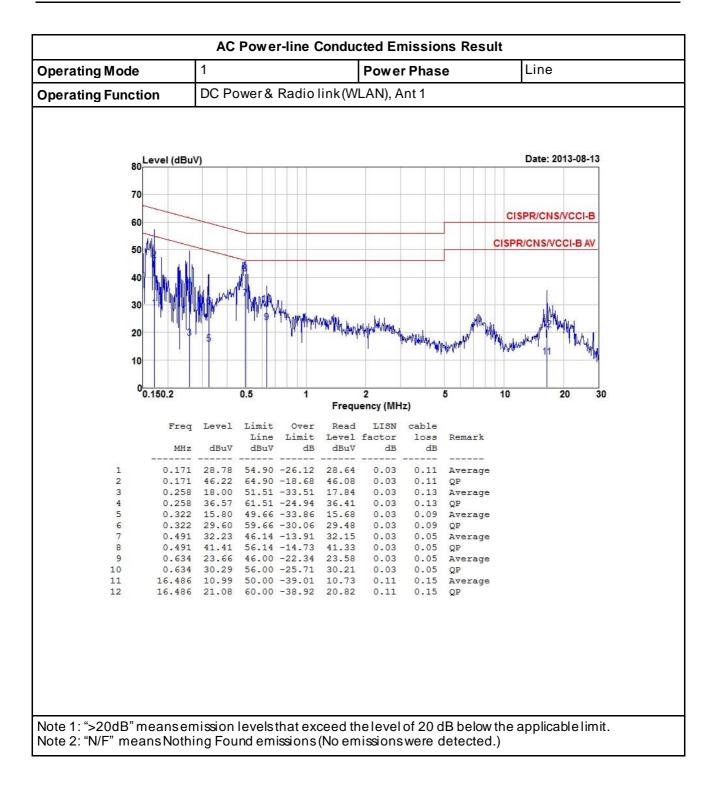




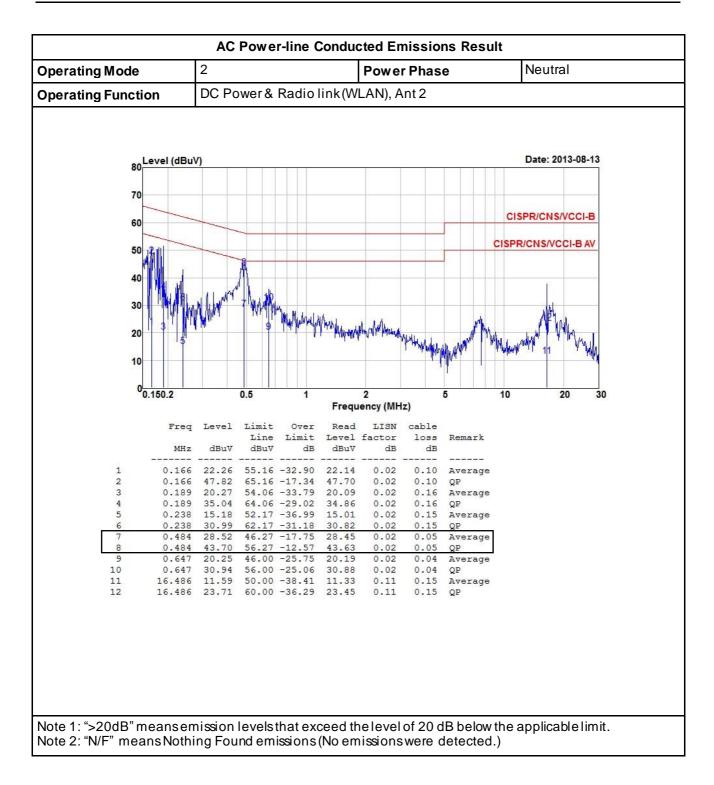
		1				Powe	r Phas	е	Neutra	al
Operating Function		DC Pc	wer&	Radio I	ink(W	LAN), A	nt 1			
Leve	el (dBuV	'n							Date: 20	13-08-13
80										
70										
c0									CISPR/CNS/	VCCI-B
60										
50								C	SPR/CNS/VC	CI-B AV
			16							
40										
30	MA ha	ILM	THWAL	0.1		ana			121	
	1111			"Y'my which	WINDLIG	A. Manully	0.0	M.	A.	100
20	1 3	a la	1		. Mar Mary	Wah a dan ha	White the	9 MAN	LI BILLIN PULAN 11	Think
10							WALL .	AMMA I	MALO L. I.	N
0.150	0.2		0.5	1		2		5	10 2	20 ;
					Frequ	ency (MH	z)			
	Freq	Level		Over	Read		cable			
	MHz	dBuV	Line dBuV	Limit dB	dBuV	factor dB	dB	Remark		
				-28.23	26.54	0.02	0.11	Average		
		26 67	54 90		20.01					
2	0.171	26.67 45.04	54.90 64.90	-19.86	44.91	0.02	0.11	QP		
2 3	0.171 0.171 0.253	45.04 16.89	64.90 51.64	-19.86 -34.75	16.73	0.02	0.14	Average		
2 3 4 5	0.171 0.171 0.253 0.253 0.491	45.04 16.89 36.10 31.55	64.90 51.64 61.64 46.14	-19.86 -34.75 -25.54 -14.59	16.73 35.94 31.48	0.02 0.02 0.02	0.14 0.14 0.05	Average QP Average		
2 3 4 5 6	0.171 0.171 0.253 0.253 0.491 0.491	45.04 16.89 36.10 31.55 42.33	64.90 51.64 61.64 46.14 56.14	-19.86 -34.75 -25.54 -14.59 -13.81	16.73 35.94 31.48 42.26	0.02 0.02 0.02 0.02	0.14 0.14 0.05 0.05	Average QP Average QP		
2 3 4 5 6 7 8	0.171 0.171 0.253 0.253 0.491 0.491 0.647 0.647	45.04 16.89 36.10 31.55 42.33 17.16 29.58	64.90 51.64 61.64 46.14 56.14 46.00 56.00	-19.86 -34.75 -25.54 -14.59 -13.81 -28.84 -26.42	16.73 35.94 31.48 42.26 17.10 29.52	0.02 0.02 0.02 0.02 0.02 0.02	0.14 0.14 0.05 0.05 0.04 0.04	Average QP Average QP Average QP		
2 3 4 5 6 7 8 9	0.171 0.253 0.253 0.491 0.491 0.647 0.647 7.486	45.04 16.89 36.10 31.55 42.33 17.16 29.58 13.78	64.90 51.64 61.64 46.14 56.14 46.00 56.00 50.00	-19.86 -34.75 -25.54 -14.59 -13.81 -28.84 -26.42 -36.22	16.73 35.94 31.48 42.26 17.10 29.52 13.55	0.02 0.02 0.02 0.02 0.02 0.02 0.02	0.14 0.05 0.05 0.04 0.04 0.15	Average QP Average QP Average QP Average		
2 3 4 5 6 7 8 9 10 11 1	0.171 0.253 0.253 0.491 0.491 0.647 0.647 7.486 7.486 6.486	45.04 16.89 36.10 31.55 42.33 17.16 29.58 13.78 24.33	64.90 51.64 61.64 46.14 56.14 46.00 56.00 50.00 60.00 50.00	-19.86 -34.75 -25.54 -14.59 -13.81 -28.84 -26.42 -36.22 -35.67 -36.41	16.73 35.94 31.48 42.26 17.10 29.52 13.55 24.10	0.02 0.02 0.02 0.02 0.02 0.02	0.14 0.14 0.05 0.05 0.04 0.04	Average QP Average QP Average QP		

# 3.1.5 Test Result of AC Power-line Conducted Emissions

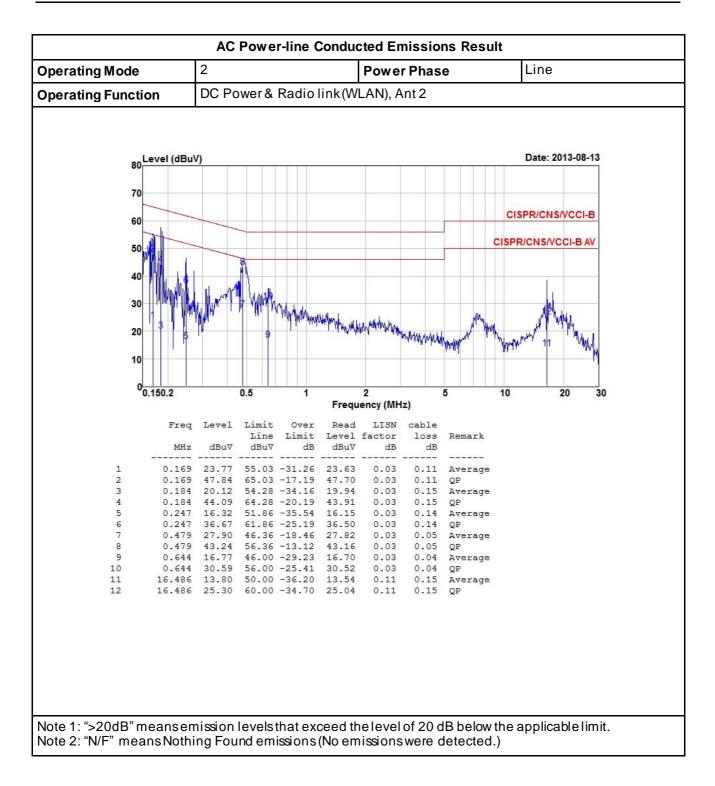














# 3.2 Emission Bandwidth

# 3.2.1 Emission Bandwidth (EBW) Limit

	Emission Bandwidth (EBW) Limit
UN	II Devices
Ø	For the 5.15-5.25 GHz band, the maximum conducted output power shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
	For the 5.25-5.35 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
	For the 5.47-5.725 GHz band, the maximum conducted output power shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz.
	For the 5.725-5.825 GHz band, the maximum conducted output power shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz
LE	LAN Devices
⊠	For the band 5.15-5.25 GHz, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.
	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz
	For the 5.725-5.825 GHz band, the maximum e.i.r.p. shall not exceed 4.0 W or 23 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.

#### 3.2.2 Measuring Instruments

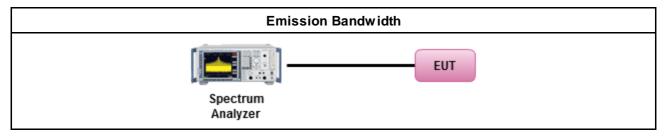
Refer a test equipment and calibration data table in this test report.

#### 3.2.3 Test Procedures

		Test Method							
⊠	For	the emission bandwidth shall be measured using one of the options below:							
	Ø	Refer as FCC KDB 789033 v01r03, clause C for EBW and clause D for OBW measurement.							
		Referas ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.							
	$\boxtimes$	Referas IC RSS-Gen, clause 4.6 for bandwidth testing.							
⊠	For	conducted measurement.							
		The EUT supports single transmit chain and measurements performed on this transmit chain.							
		The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.							
	$\boxtimes$	The EUT supports multiple transmit chains using options given below:							
		Option 1: Multiple transmit chains measurements need to be performed on one of the active transmit chains (antenna outputs). All measurement had be performed on transmit chains 1.							
		Option 2: Multiple transmit chains measurements need to be performed on each transmit chains individually (antenna outputs). All measurement had be performed on all transmit chains.							



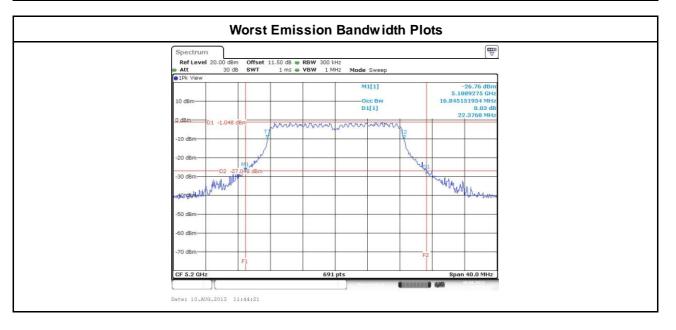
# 3.2.4 Test Setup





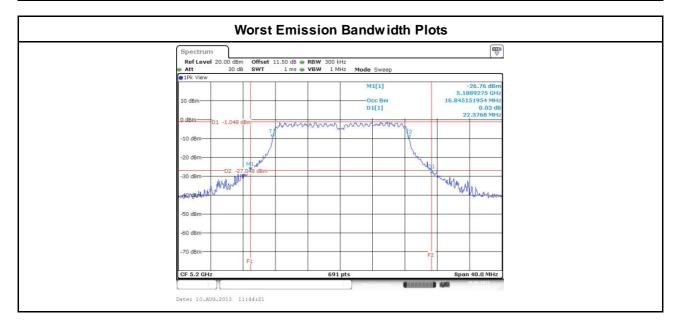
Operatin	Operating Mode														
		UNII Em	ission	ssion Bandwidth Result (5150-5250MHz band)											
Cond	ition			Emission Bandwidth (MHz)											
Modulation		Freq.	g	9% Ba	ndwidt	h	2	6dB Ba	ndwid	th	Powe	r Limit			
Mode	N <sub>TX</sub>	(MHz)	Chain- Port 1	Chain- Port 2	Chain- Port 3	Chain- Port 4	Chain- Port 1	Chain- Port 2	Chain- Port 3	Chain- Port 4	99% BW	26dB BW			
11a	3	5180	17.08	16.90	16.85		22.84	22.55	23.36		16.27	17.00			
11a	3	5200	17.13	16.90	16.85		23.71	22.78	22.38		16.27	17.00			
11a	3	5240	17.13	16.96	16.90		23.48	23.01	22.96		16.28	17.00			
VHT20	3	5180	18.12	18.12	18.00		24.00	23.77	23.59		16.55	17.00			
VHT20	3	5200	18.18	18.12	18.12		23.71	23.83	24.23		16.58	17.00			
VHT20	3	5240	18.23	18.12	18.06		24.35	24.12	24.06		16.57	17.00			
VHT40	3	5190	37.51	37.28	37.28		47.30	46.15	46.15		17.00	17.00			
VHT40	3	5230	37.28	37.28	37.28		48.35	47.19	46.84		17.00	17.00			
VHT80	3	5210	76.18	75.94	76.41		92.29	92.99	96.70		17.00	17.00			
Res	Result			Complied											

### 3.2.5 Test Result of Emission Bandwidth





Operating	Operating Mode														
		UNII Em	ission	Bandw	idth Re	sult (5′	150-525	50MHz	band)						
Condi	tion			Emission Bandwidth (MHz)											
Modulation		Freq.	g	9% Ba	ndwidt	h	2	6dB Ba	ndwidt	th	Powe	r Limit			
Mode	N <sub>TX</sub>	(MHz)	Chain- Port 1	Chain- Port 2	Chain- Port 3	Chain- Port 4	Chain- Port 1	Chain- Port 2	Chain- Port 3	Chain- Port 4	99% BW	26dB BW			
11a	3	5180	17.08	16.90	16.85		22.84	22.55	23.36		16.27	17.00			
11a	3	5200	17.13	16.90	16.85		23.71	22.78	22.38		16.27	17.00			
11a	3	5240	17.13	16.96	16.90		23.48	23.01	22.96		16.28	17.00			
VHT20	3	5180	18.12	18.12	18.00		24.00	23.77	23.59		16.55	17.00			
VHT20	3	5200	18.18	18.12	18.12		23.71	23.83	24.23		16.58	17.00			
VHT20	3	5240	18.23	18.12	18.06		24.35	24.12	24.06		16.57	17.00			
VHT40	3	5190	37.51	37.28	37.28		47.30	46.15	46.15		17.00	17.00			
VHT40	3	5230	37.28	37.28	37.28		48.35	47.19	46.84		17.00	17.00			
VHT80	3	5210	75.95	76.18	76.18		97.39	93.91	97.16		17.00	17.00			
Res	ult			-		-	Com	plied	-	-	-				





# 3.3 **RF Output Power**

# 3.3.1 RF Output Power Limit

	Maximum Conducted Output Power Limit						
UN	II Devices						
Ø	For the 5.15-5.25 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 50 mW or 4 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .						
	For the 5.25-5.35 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX}$ > 6 dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .						
	For the 5.47-5.725 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX}$ > 6 dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .						
	For the 5.725-5.825 GHz band:						
	Point-to-multipoint systems (P2M): the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ .						
	Point-to-point systems (P2P): the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W or 17 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$ .						
LE-	LAN Devices						
	For the 5.15-5.25 GHz band, the maximum e.i.r.p. shall not exceed 200 mW or 10 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.						
	For the 5.25-5.35 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz						
	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the maximum e.i.r.p. shall not exceed 1.0 W or 17 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz						
	For the 5.725-5.825 GHz band, the maximum e.i.r.p. shall not exceed 4.0 W or 23 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.						
	Point-to-multipoint systems (P2M): the maximum e.i.r.p. shall not exceed 4.0 W or 23 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz.						
	□ Point-to-point systems (P2P): the maximum e.i.r.p. shall not exceed 4.0 W or 23 + 10 log B, dBm, whichever power is less. B is the 99% emission bandwidth in MHz. If e.i.r.p. > 36 dBm, G <sub>TX</sub> ≤P <sub>Out</sub>						
	<sub>it</sub> = maximum conducted output power in dBm, = the maximum transmitting antenna directional gain in dBi.						

### 3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.



# 3.3.3 Test Procedures

		Test Method						
⊠	Мах	cimum Conducted Output Power						
		Refer as FCC KDB 789033 v01r03, clause E Method SA-1 (spectral trace averaging).						
	Refer as FCC KDB 789033 v01r03, dause E Method SA-1 Alt. (RMS detection with slow speed)							
		Refer as FCC KDB 789033 v01r03, clause E Method SA-2 (spectral trace averaging).						
		Refer as FCC KDB 789033 v01r03, dause E Method SA-2 Alt. (RMS detection with slow sweep speed)						
	Wid	eband RF power meter and average over on/off periods with duty factor						
	⊠	Refer as FCC KDB 789033 v01r03, clause E Method PM-G (using a gated RF average power meter).						
⊠	For	conducted measurement.						
		The EUT supports single transmit chain and measurements performed on this transmit chain.						
		The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.						
		The EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.						
	X	If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + + P_n$ (calculated in linear unit [mW] and transfer to log unit[dBm]) EIRP <sub>total</sub> = P <sub>total</sub> + DG						

# 3.3.4 Test Setup

RF Output Power (Power Meter)							
EUT Power Meter							



Operating Mode		1			
	Dire	ctional Gain (I	DG) Result		
Transmit Chains No.		1	2	3	-
Maximum G <sub>ANT</sub> (dBi)		5.5	5.5	5.5	-
Modulation Mode	DG (dBi)	N <sub>TX</sub>	N <sub>SS</sub>	STBC	Array Gain (dB)
11a,6-54Mbps	5.5	3	1	-	-
HT20,M0-23	5.5	3	1	-	-
HT40,M0-23	5.5	3	1	-	-
VHT20,M0-9	5.5	3	1	-	-
VHT40,M0-9	5.5	3	1	-	-
VHT80,M0-9	5.5	3	1	-	-

#### 3.3.5 Directional Gain for Power Measurement

Note 1: For CDD transmissions, directional gain is calculated as power measurements: Directional Gain (DG) =  $G_{ANT}$  + Array Gain, where Array Gain is as follows: Array Gain = 0 dB (i.e., no array gain) for  $N_{TX} \le 4$ ; Array Gain = 0 dB (i.e., no array gain) for channel widths  $\ge 40$  MHz for any  $N_{TX}$ ;

Operating Mode		2			
	Dire	ectional Gain (I	DG) Result		
Transmit Chains No	-	1	2	3	-
Maximum G <sub>ANT</sub> (dBi	)	6	6	6	-
Modulation Mode	DG (dBi)	N <sub>TX</sub>	N <sub>SS</sub>	STBC	Array Gain (dB)
11a,6-54Mbps	6	3	1	-	-
HT20,M0-23	6	3	1	-	-
HT40,M0-23	6	3	1	-	-
VHT20,M0-9	6	3	1	-	-
VHT40,M0-9	6	3	1	-	-
VHT80,M0-9	6	3	1	-	-
Note 1: For CDD transmissions Directional Gain (DG) = Array Gain = 0 dB (i.e., Array Gain = 0 dB (i.e.,	G <sub>ANT</sub> + Ari no array g	ray Gain, where ain) for N <sub>TX</sub> ≤4;	Array Gainisas	follows:	



Operatin	Operating Mode												
	Ма	ximum (	conducted Output Power (5150-5250MHz band)										
Condi	ition					RF Outp	ut Pow	er (dBm	)				
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Chain Port 1	Chain Port 2	Chain Port 3	Chain Port 4	Sum Chain	Power Limit	DG (dBi)	EIRP Power	EIRP Limit		
11a	3	5180	6.82	7.40	6.45		11.68	17.00	5.50	17.18	23.00		
11a	3	5200	6.81	7.41	6.94		11.83	17.00	5.50	17.33	23.00		
11a	3	5240	6.68	7.34	6.72		11.70	17.00	5.50	17.20	23.00		
HT20	3	5180	6.68	7.26	6.59		11.62	17.00	5.50	17.12	23.00		
HT20	3	5200	6.78	7.39	6.84		11.78	17.00	5.50	17.28	23.00		
HT20	3	5240	6.62	7.30	6.61		11.63	17.00	5.50	17.13	23.00		
HT40	3	5190	10.32	10.93	10.42		15.34	17.00	5.50	20.84	23.00		
HT40	3	5230	10.26	10.86	10.58		15.34	17.00	5.50	20.84	23.00		
VHT20	3	5180	6.73	7.30	6.62		11.66	17.00	5.50	17.16	23.00		
VHT20	3	5200	6.85	7.46	6.92		11.86	17.00	5.50	17.36	23.00		
VHT20	3	5240	6.62	7.32	6.67		11.65	17.00	5.50	17.15	23.00		
VHT40	3	5190	10.35	11.01	10.52		15.41	17.00	5.50	20.91	23.00		
VHT40	3	5230	10.34	11.03	10.62		15.44	17.00	5.50	20.94	23.00		
VHT80	3	5210	10.65	11.23	11.18		15.80	17.00	5.50	21.30	23.00		
Res	Result				Complied								

# 3.3.6 Test Result of Maximum Conducted Output Power



Operating	Operating Mode			2								
	Ма	iximum (	Conducted Output Power (5150-5250MHz band)									
Condi	tion		RF Output Power (dBm)									
Modulation Mode	N <sub>T</sub>		Chain Port 1	Chain Port 2	Chain Port 3	Chain Port 4	Sum Chain	Power Limit	DG (dBi)	EIRP Power	EIRP Limit	
11a	3	5180	6.82	7.40	6.45		11.68	17.00	6.00	17.68	23.00	
11a	3	5200	6.81	7.41	6.94		11.83	17.00	6.00	17.83	23.00	
11a	3	5240	6.68	7.34	6.72		11.70	17.00	6.00	17.70	23.00	
HT20	3	5180	6.68	7.26	6.59		11.62	17.00	6.00	17.62	23.00	
HT20	3	5200	6.78	7.39	6.84		11.78	17.00	6.00	17.78	23.00	
HT20	3	5240	6.62	7.30	6.61		11.63	17.00	6.00	17.63	23.00	
HT40	3	5190	10.32	10.93	10.42		15.34	17.00	6.00	21.34	23.00	
HT40	3	5230	10.26	10.86	10.58		15.34	17.00	6.00	21.34	23.00	
VHT20	3	5180	6.73	7.30	6.62		11.66	17.00	6.00	17.66	23.00	
VHT20	3	5200	6.85	7.46	6.92		11.86	17.00	6.00	17.86	23.00	
VHT20	3	5240	6.62	7.32	6.67		11.65	17.00	6.00	17.65	23.00	
VHT40	3	5190	10.35	11.01	10.52		15.41	17.00	6.00	21.41	23.00	
VHT40	3	5230	10.34	11.03	10.62		15.44	17.00	6.00	21.44	23.00	
VHT80	3	5210	11.48	11.89	11.52		16.41	17.00	6.00	22.41	23.00	
Res	ult					(	Complie	d		-		



# 3.4 Peak Power Spectral Density

### 3.4.1 Peak Power Spectral Density Limit

	Peak Power Spectral Density Limit							
UN	UNII Devices							
⊠	For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) $\leq 4 \text{ dBm/MHz}$ . If $G_{TX} > 6 \text{ dBi}$ , then PPSD = 4 – ( $G_{TX} - 6$ ).							
	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz. If G <sub>TX</sub> > 6 dBi, then PPSD= 11 – (G <sub>TX</sub> – 6).							
	For the 5.47-5.725 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz. If G <sub>TX</sub> > 6 dBi, then PPSD= 11 - (G <sub>TX</sub> - 6).							
	For the 5.725-5.825 GHz band:							
	Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) $\leq$ 17 dBm/MHz. If G <sub>TX</sub> > 6 dBi, then PPSD= 17 – (G <sub>TX</sub> – 6).							
	Point-to-point systems (P2P): the peak power spectral density (PPSD) $\leq$ 17 dBm/MHz. If G <sub>TX</sub> > 23 dBi, then PPSD = 17 - (G <sub>TX</sub> - 23).							
LE	LAN Devices							
Ø	For the 5.15-5.25 GHz band, the peak power spectral density (PPSD) $\leq$ 4 dBm/MHz and the e.i.r.p. peakpower spectral density (PPSD) $\leq$ 10 dBm/MHz.							
	For the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz and the e.i.r.p. peakpower spectral density (PPSD) $\leq$ 17 dBm/MHz.							
	For the 5.47-5.6 GHz band and 5.65-5.725 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz and the e.i.r.p. peakpower spectral density (PPSD) $\leq$ 17 dBm/MHz.							
	For the 5.725-5.825 GHz band, the peak power spectral density (PPSD) $\leq$ 17 dBm/MHz and the e.i.r.p. peakpower spectral density (PPSD) $\leq$ 23 dBm/MHz.							
роу	<b>SD</b> = peak power spectral density that he same method as used to determine the conducted output ver shall be used to determine the power spectral density. And power spectral density in dBm/MHz = the maximum transmitting antenna directional gain in dBi.							

### **3.4.2 Measuring Instruments**

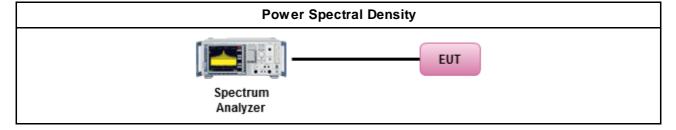
Refer a test equipment and calibration data table in this test report.



#### 3.4.3 Test Procedures

		Test Method								
X	Peak power spectral density procedures that the same method as used to determine the conducted output power shall be used to determine the peak power spectral density and use the peak search function on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density shall be measured using below options:									
		Refer as FCC KDB 789033 v01r03, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth								
	Refer as FCC KDB 789033 v01r03, clause E Method SA-1 (spectral trace averaging For 11a / HT20									
	Refer as FCC KDB 789033 v01r03, dause E Method SA-1 Alt. (RMS detection with speed)									
		Refer as FCC KDB 789033 v01r03, clause E Method SA-2 (spectral trace averaging).								
	Ø	Refer as FCC KDB 789033 v01r03, dause E Method SA-2 Alt. (RMS detection with slow sweep speed)								
		For HT40 / 11ac VHT80 mode								
⊠	r	conducted measurement.								
		The EUT supports single transmit chain and measurements performed on this transmit chain.								
		The EUT supports diversity transmitting and the results on transmit chain port 1 is the worst case.								
	⊠	The EUT supports multiple transmit chains using options given below:								
		Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.								
		Option 2: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit.								
	X	If multiple transmit chains, EIRP PPSD calculation could be following as methods: $PPSD_{total} = PPSD_1 + PPSD_2 + + PPSD_n$ (calculated in linear unit [mW] and transfer to log unit[dBm]) $EIRP_{total} = PPSD_{total} + DG$								
	⊠	Each individually PPSD plots refer as test report clause 3.3.5 with each individually PPSD plots.								
L		1								

# 3.4.4 Test Setup





# 3.4.5 Directional Gain for Power Spectral Density Measurement

Operating Mode		1								
Directional Gain (DG) Result										
Transmit Chains No.	Transmit Chains No. 1 2 3 -									
Maximum G <sub>ANT</sub> (dBi)		5.5	5.5	5.5	-					
Modulation Mode	DG (dBi)	N <sub>TX</sub>	N <sub>SS</sub>	STBC	Array Gain (dB)					
11a,6-54Mbps	10.27	3	1	-	4.77					
HT20,M0-23	10.27	3	1	-	4.77					
HT40,M0-23	10.27	3	1	-	4.77					
VHT20,M0-9	10.27	3	1	-	4.77					
VHT40,M0-9	10.27	3	1	-	4.77					
VHT80,M0-9	10.27	3	1	-	4.77					
Note 1: Directional Gain = $G_{ANT}$ +	ArrayGa	ain, Array gain =	10log(N <sub>AT</sub> /N <sub>SS</sub> )c	IB	1					

Operating Mode	2				
	Dire	ectional Gain (D	G) Result		
Transmit Chains No.		1	2	3	-
Maximum G <sub>ANT</sub> (dBi)		6	6	6	-
Modulation Mode	DG (dBi)	N <sub>TX</sub>	N <sub>SS</sub>	STBC	Array Gain (dB)
11a,6-54Mbps	10.77	3	1	-	4.77
HT20,M0-23	10.77	3	1	-	4.77
HT40,M0-23	10.77	3	1	-	4.77
VHT20,M0-9	10.77	3	1	-	4.77
VHT40,M0-9	10.77	3	1	-	4.77
VHT80,M0-9	3	1	-	4.77	
Note 1: Directional Gain = $G_{ANT}$ +	Array Ga	ain, Array gain =	10log(N <sub>AT</sub> /N <sub>SS</sub> )d	B	

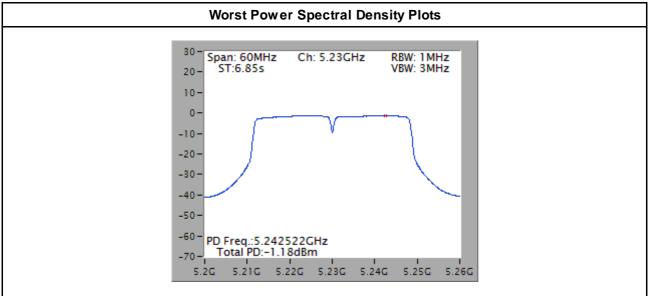


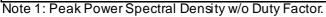
Operatin	g Mod	e	1						
	Pea	ak Powe	r Spectral Der	nsity Result (5	150-5250MHz	z band)			
Cond	ition			Peak Power S	Spectral Dens	ity (dBm/MHz	)		
Modulation Mode N <sub>TX</sub> Freq. (MHz)			Sum Chain	PSD Limit	DG (dBi)	EIRP PSD	EIRP Limit		
11a	3	5180	-1.07	-0.27	10.27	9.20	10.00		
11a	3	5200	-1.09	-0.27	10.27	9.18	10.00		
11a	3	5240	-1.18	-0.27	10.27	9.09	10.00		
VHT20	3	5180	-1.50	-0.27	10.27	8.77	10.00		
VHT20	3	5200	-1.49	-0.27	10.27	8.78	10.00		
VHT20	3	5240	-1.33	-0.27	10.27	8.94	10.00		
VHT40	3	5190	-1.15	-0.27	10.27	9.12	10.00		
VHT40	3	5230	-1.00	-0.27	10.27	9.27	10.00		
VHT80	3	5210	-3.96	-0.27	10.27	6.31	10.00		
Res	ult				Complied		•		

#### 3.4.6 Test Result of Peak Power Spectral Density

Note 1: PSD = sum each transmit chains by bin-to-bin PSD

Note 2: Directional gain =  $5.5 + 10 \times \log(3/1) = 10.27 \text{ dBi} > 6 \text{dBi}$ , limit shall be reduced to 4 dBm - (10.27 dBi - 6 dBi) = -0.27 dBm



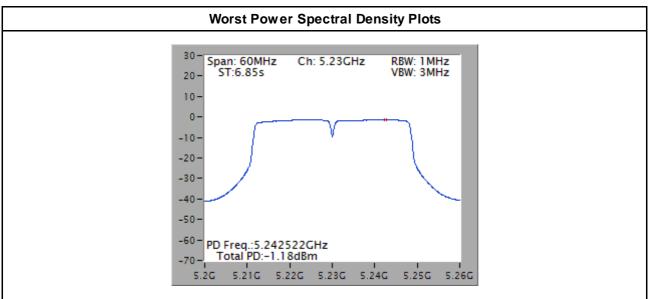




Operatin	g Mod	9	2						
	Pea	ak Powe	r Spectral Der	nsity Result (5	150-5250MHz	z band)			
Cond	ition			Peak Power S	Spectral Dens	ity (dBm/MHz	)		
Modulation Mode N <sub>TX</sub> Freq. (MHz)			Sum Chain	PSD Limit	DG (dBi)	EIRP PSD	EIRP Limit		
11a	3	5180	-1.07	-0.77	10.77	9.70	10.00		
11a	3	5200	-1.09	-0.77	10.77	9.68	10.00		
11a	3	5240	-1.18	-0.77	10.77	9.59	10.00		
VHT20	3	5180	-1.50	-0.77	10.77	9.27	10.00		
VHT20	3	5200	-1.49	-0.77	10.77	9.28	10.00		
VHT20	3	5240	-1.33	-0.77	10.77	9.44	10.00		
VHT40	3	5190	-1.15	-0.77	10.77	9.62	10.00		
VHT40	3	5230	-1.00	-0.77	10.77	9.77	10.00		
VHT80	3	5210	-3.56	-0.77	10.77	7.21	10.00		
Res		4 ma m m i 4			Complied		•		

Note 1: PSD = sum each transmit chains by bin-to-bin PSD

Note 2: Directional gain =  $6 + 10 \text{ * } \log(3/1) = 10.77 \text{ dBi} > 6 \text{dBi}$ , limit shall be reduced to 4 dBm - (10.77 dBi - 6 dBi) = -0.77 dBm



Note 1: Peak Power Spectral Density w/o Duty Factor.



# 3.5 Peak Excursion

### 3.5.1 Peak Excursion Limit

#### **Peak Excursion Limit**

UN	UNII Devices				
Ø	Peak excursion $\leq$ 13 dB. The ratio of the maximum of the peak-max-hold spectrum to the maximum of the average spectrum for continuous transmission does not exceed 13 dB. (Earlier procedures that required computing the ratio of the two spectra at each frequency across the emission band width can lead to unintended failures at band edges and will no longer be required.)				
LE	LE-LAN Devices				

N/A

#### 3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.5.3 Test Procedures

		Test Method			
⊠	Refer as FCC KDB 789033 v01r03, clause G peakexcursion method.				
⊠	Testing each modulation mode on a single channel is sufficient to demonstrate compliance with the peakexcursion requirement				
⊠	For conducted measurement.				
	Testing a single output port is sufficient to demonstrate compliance with the peak excursion.				
		Test result plots refer as test report dause 3.3.5 with peak excursion ratio of the maximum of the peak-max-hold spectrum to the maximum of the average spectrum.			

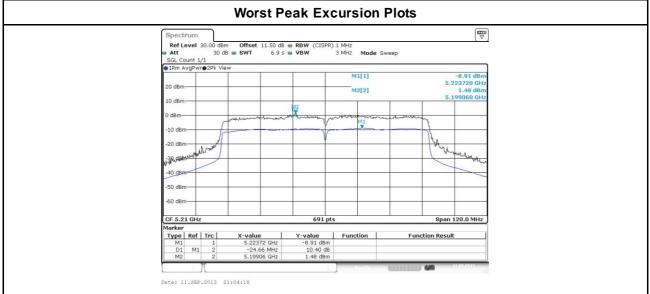
### 3.5.4 Test Setup

Peak Excursion
EUT
Spectrum Analyzer



#### 3.5.5 Test Result of Peak Excursion

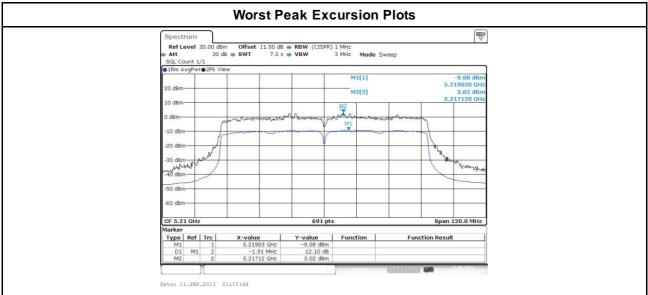
Operating Mode			1					
	UNII Peak Excursion Result							
Condi	ition				Peak Excu	ursion (dB)		
Modulation Mode N <sub>TX</sub> Freq. (MHz)		BPSK	QPSK	16QAM	64QAM	256QAM	Limit	
11a	3	5200	7.65	8.95	8.87	8.99	-	13.0
VHT20	3	5200	7.62	8.65	9.09	9.16	9.38	13.0
VHT40	3	5230	7.96	8.05	8.34	8.87	8.53	13.0
VHT80 3 5210		9.96	9.65	9.77	8.29	8.43	13.0	
Res	Result				Com	plied		



Note 1: Peak excursion = Mark2 value - (Mark 1 value + duty factor)



Operatin	Operating Mode							
	UNII Peak Excursion Result							
Condi	Condition				Peak Excu	ursion (dB)		
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	BPSK	QPSK	16QAM	64QAM	256QAM	Limit
11a	3	5200	7.65	8.95	8.87	8.99	-	13.0
VHT20	3	5200	7.62	8.65	9.09	9.16	9.38	13.0
VHT40	3	5230	7.96	8.05	8.34	8.87	8.53	13.0
VHT80 3 5210		9.17	10.16	10.68	8.90	8.98	13.0	
Res	Result				Com	plied		



Note 1: Peak excursion = Mark2 value - (Mark 1 value + duty factor)



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#### 3.6 **Transmitter Radiated Unwanted Emissions and Band Edge**

#### 3.6.1 Transmitter Radiated Unwanted Emissions and Band Edge Limit

Unwanted emissions below 1 GHz and restricted band emissions above 1GHz 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: Test distance for frequencies at or above 30 MHz, 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				

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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).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a doser distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

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).

#### 3.6.2 **Measuring Instruments**

Refer a test equipment and calibration data table in this test report.



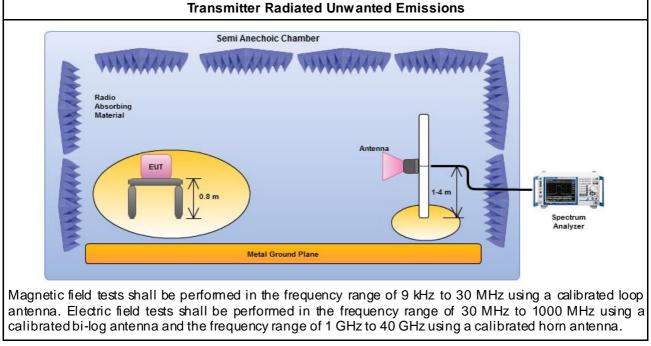
# 3.6.3 Test Procedures

		Test Method
	perf equi abo are i be e dista	surements may be performed at a distance other than the limit distance provided they are not ormed in the near field and the emissions to be measured can be detected by the measurement pment. Measurements shall not be performed at a distance greater than 30 m for frequencies we 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less mpractical. When performing measurements at a distance other than that specified, the results shall xtrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear ance for field-strength measurements, inverse of linear distance-squared for power-density isurements).
		Measurements in the frequency range 5 GHz - 10GHz are typically made at a doser distance 3m, because the instrumentation noise floor is typically close to the radiated emission limit.
		Measurements in the frequency range 10 GHz - 18GHz are typically made at a closer distance 1m, because the instrumentation noise floor is typically close to the radiated emission limit.
		Measurements in the frequency range above 18 GHz - 40GHz are typically made at a closer distance 0.5m, because the instrumentation noise floor is typically close to the radiated emission limit.
⊠	The	average emission levels shall be measured in [duty cycle $\geq$ 98 or duty factor].
⊠	For	the transmitter unwanted emissions shall be measured using following options below:
	⊠	Refer as FCC KDB 789033 v01r03, clause H)2) for unwanted emissions into non-restricted bands.
	⊠	Refer as FCC KDB 789033 v01r03, clause H)1) for unwanted emissions into restricted bands.
		Refer as FCC KDB 789033 v01r03, H)6) Method AD (Trace Averaging).
		Refer as FCC KDB 789033 v01r03, H)6) Method VB (Reduced VBW).
		Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$ , where T is pulse time.
		Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.
		Refer as FCC KDB 789033 v01r03, clause H)5) measurement procedure peaklimit.
		Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peaklimit.
	For	radiated measurement.
	⊠	Refer as ANSI C63.10, clause 6.4 for radiated emissions from below 30 MHz.
	⊠	Refer as ANSI C63.10, clause 6.5 for radiated emissions from 30 MHz to 1000 MHz.
	⊠	Refer as ANSI C63.10, clause 6.6 for radiated emissions from above 1 GHz.

	Test Method				
For conducted and cabinet radiation measurement, refer as FCC KDB 789033 v01r03, clause H)3).					
	For conducted unwanted emissions into non-restricted bands (relative emission limits). Devices with multiple transmit chains: Refer as FCC KDB 662911, when testing out-of-band and spurious emissions against relative emission limits, tests may be performed on each output individually without summing or adding 10 log(N) if the measurements are made relative to the in-band emissions on the individual outputs.				
	For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add 10 log(N) dB				



## 3.6.4 Test Setup



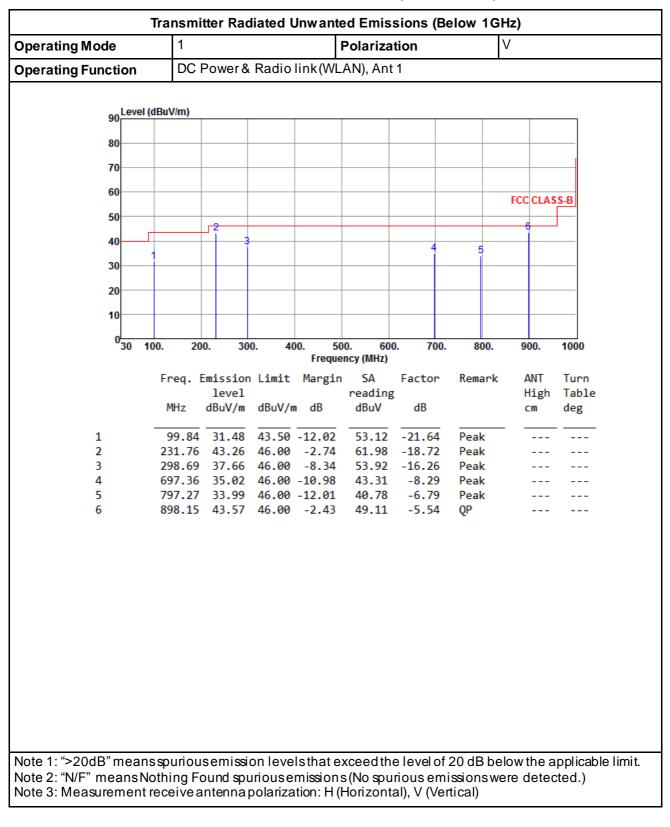
Note: The test distance is 3m.

# 3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.



#### 3.6.6 Transmitter Radiated Unwanted Emissions (Below 1GHz)



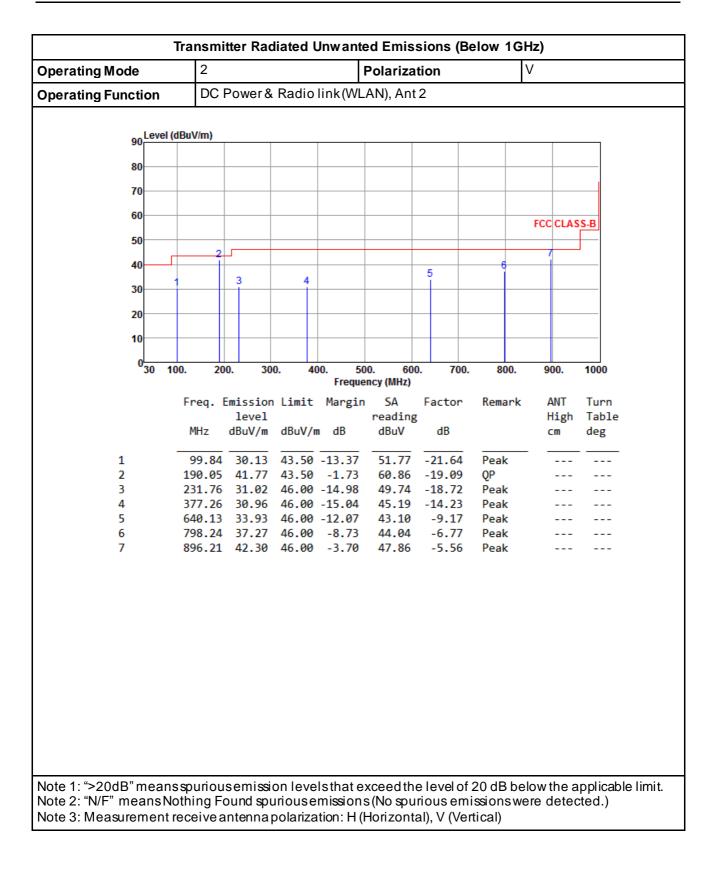




perating Mode	1				Polarizat	tion		Н		
perating Function	DC	Power&	Radio	link(WL	AN), Ant	1		•		
90 Level (d	BuV/m)									
80										
70										
60								FC	C CLAS	S.B
50										
40									6	J
1	2	3			4	5				
30										
20										
10										
0										
<sup>0</sup> 30 10	0. 20	0. 30	0. 40	0. 50 Freque	0. 600 ncy (MHz)	). 700	. 80	0.	900.	1000
	Freq.	Emission	limit			Factor	Rema	ink	ANT	Turn
		level			reading		The life	ii k	High	Table
	MHz	dBuV/m	dBuV/n	ı dB	dBuV	dB			cm	deg
1	99.84	31.84	43.50	-11.66	53.48	-21.64	Peak			
2		32.82	43.50	-10.68	51.49	-18.67	Peak			
3	298.69			-13.07	49.19		Peak			
4 5		32.32 35.01			42.07 44.17	-9.75 -9.16	Peak Peak			
6		40.03			45.57	-5.54	Peak			
ote 1: ">20dB" means	spuriou	semissi	on leve	lsthat e	xceedthe	e level o	f 20 dB	below	the a	pplicat
								swere		







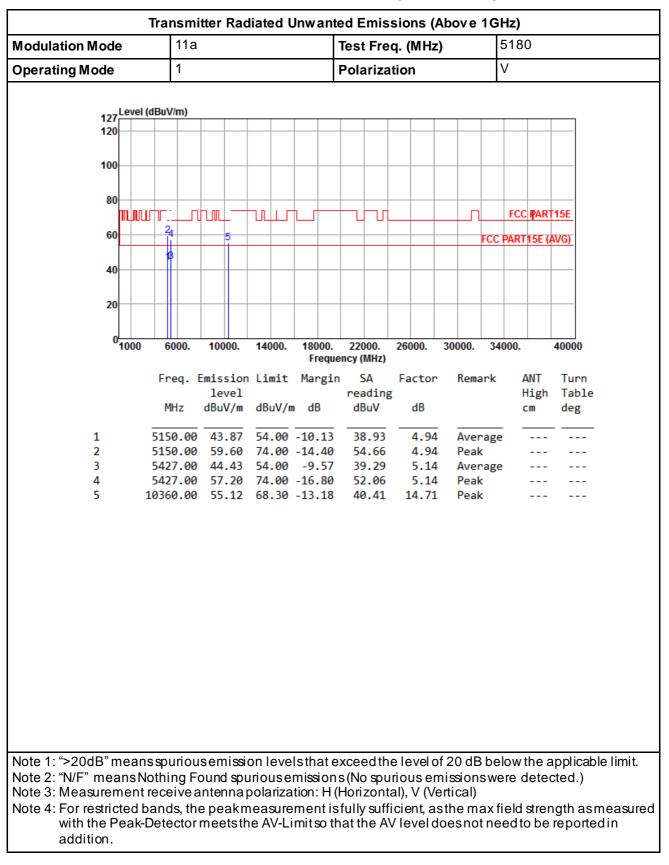




perating Mode	2			1	Polarizat	tion	ŀ	4	
perating Function	DC	Power&	Radio	link(WL	AN), Ant	2			
90 Level (dE	BuV/m)								
80									
70									
60									
								FCC CLAS	SS-B
50									
40						4		6	
30	2			3		-i			
20									
10									
0									
0 <mark>30 100</mark>	. 20	0. 300	0. 40	0. 50	0. 600 ncy (MHz)	). 700.	800.	900.	1000
	Enora I	Emission	limit			Factor	Pomonk	ANT	Turn
	Freq. i	Emission level	LIMIC	margin	SA reading	Factor	Remark	High	Table
	MHz	dBuV/m	dBuV/m	dB	dBuV	dB		cm	deg
-									
1	98.87 190.05		43.50 43.50		51.23 52.51	-21.77 -19.09	Peak		
	499.48		45.00		41.21		Peak Peak		
	641.10			-11.34	43.82	-9.16	Peak		
	797.27	33.06	46.00	-12.94	39.85	-6.79	Peak		
6	898.15	34.76	46.00	-11.24	40.30	-5.54	Peak		
te 1: ">20dB" means	spuriou	semissio	on leve	Isthat e	xceedthe	elevelof	20 dB bel	ow the a	pplicat
e 2: "N/F" meansNot									



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







lodulation Mode	;	11	а					Г	est	Fre	q. (M⊦	lz)		Ę	518	0	
Operating Mode		1						F	ola	riza	tion			ł	┥		
		BuV/m)															
120																	
100																	
100																	
80			_									_					
	ուստ	T,	որու						-1	᠇			П	4	FCC	PART	1 <u>5</u> E
60		4	_	5										FCC	PART	15E (/	AVG)
		18															
40			_									-	_				
20												-					
U	1000	6000.	100	000.	140	00.	1800 Fre		220 1cy (I		26000.	3	0000.	34	000.		40000
		Freq.	Emis	sion	Lir	nit	Mar	gin	S	Α	Facto	or	Rema	ark		ANT	Turn
		-	le	vel				-	rea	ding					H	ligh	Tabl
		MHz	dBu	V/m	dBu	uV/m	ı dB		dB	uV	dB				0	cm	deg
1	ī	5150.0	0 44	02	54	00	-9	98	39	.08	4.9	14		rage	-		
2		5150.0								.76	4.9		Peal	_			
3		5427.0								.40	5.1	.4	Aver	rage			
4		5427.0								.15	5.1		Peal				
5	10	0360.0	0 55	.23	68	. 30	-13.0	07	40	.52	14.7	1	Peal	ĸ			
Lata 1. "> 00 d D" ~																	
														SWE	ie c	iete(	sied.)
lote 2: "N/F" mea	nont r	acaivo	anto	nnn						70nti	י יי יוב						
lote 2: "N/F" mea lote 3: Measuren														ax fi	eld	strer	ngth a
Note 1: ">20dB" m Note 2: "N/F" mea Note 3: Measuren Note 4: For restric with the P	ted ba	ands, t	he pe	akm	neas	sure	men	tisf	ully	suffi	cient,	ast	he m				





Modulation Mode	11	la					Test	Fre	q. (MHz	:)	5	520	0	
Operating Mode	1						Pola	riza	tion		١	/		
	el (dBuV/m)	)												
120														
100														
100														
80														
μη		JUUL	-	ᇺ				고			Ц	FCC	PART	15E
60	- 21		5								FCC I	PART	15E ( <i>l</i>	AVG)
	ß													
40														
20														
0														
0 <mark></mark> 100	0 6000	). 100	000.	140	00.	18000. Freque		00. MHz)	26000.	30000.	340	000.		40000
	Frea	. Emis	sion	Lin	nit	Margir		A	Factor	Rem	ark	4	ANT .	Turn
			vel					ding	1			H	ligh	Table
	MHz	dBu	V/m	dBu	uV/m	ı dB	dB	υV	dB			C	m	deg
1	5150.	00 44	. 26	54.	.00	-9.74	39	.32	4.94	Ave	rage	-		
2						-17.52		.54	4.94		_			
3						-9.24		.62	5.14		rage			
4						-16.59 -13.13		.27	5.14 14.75					
Note 1: ">20dB" mea Note 2: "N/F" means Note 3: Measuremer Note 4: For restricted	Nothing nt receiv	Found e antei	d spu nna p	iriou pola	ısei riza	mission tion:H(	s(No Hori:	spu zonta	rious er al), V (V	nission ertical)	swe	re c	leteo	cted.)





1 0	Iodulation Mode	11;	a			Test Fre	q. (MHz	)	52	00	
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the application: H (brizontal), V (Vertical)	perating Mode	1				Polariza	ition		Н		
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the application: H (brizontal), V (Vertical)											
Image: constraint of the second the level of 20 dB below the application: H (bor spars) and spars and sparse detected.)         Image: constraint of the second the level of 20 dB below the application: H (bor sparse) and sparse detected.)         Image: constraint of the second the level of 20 dB below the application: H (bor sparse) and sparse detected.)         Image: constraint of the second the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second the level of 20 dB below the application: H (bor sparse)         Image: constraint of the second		el (dBuV/m)									
lote 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the application: H (Horizontal), V (Vertical) 10400.00 55.28 68.30 -13.62 40.53 14.75 Peak	120										
ote 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applica 5 10400.00 55.28 68.30 -13.02 40.53 14.75 Peak	100										
of 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applications of the second state and sta											
of 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applications of the spurious emissions (No spurious emissions were detected.) of 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the application of the spurious emissions (No spurious emissions were detected.) of 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the application of the spurious emissions (No spurious emissions were detected.) of 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the application of the spurious emissions (No spurious emissions were detected.) of 2: "NF" means Nothing Found spurious emissions (No spurious emissions were detected.) of 3: Measurement receive antenna polarization: II (Horizontal). V (Vertical) of 4: For restricted bands, the peak measurement isfully sufficient, as the max field strength a with the Peak-Detector meets the AV-Limits othat the AV level does not need to be report	80										
Of the second s	ուս	/₩^┲.	ղու_−						F	CC PAR	T15E
tote 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the application of 5.28 68.30 -13.02 40.53 14.75 Peak	60		5						FCC PA	RT15E (	AVG)
20       0       0000       10000       14000       18000       22000       26000       30000       34000       40000         Freq. Emission Limit Margin SA         Factor Remark ANT Turn level         MHz       dBuV/m       dB       dBuV       dB       cm       deg         1       5150.00       43.96       54.00       -10.04       39.02       4.94       Average           2       5150.00       7.85       74.00       -16.15       52.91       4.94       Peak           3       5427.00       44.84       54.00       -9.52       39.34       5.14       Average           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak          5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak          5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak          5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak <td></td> <td>18</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		18									
0       1000       6000.       10000.       14000.       18000.       22000.       26000.       30000.       34000.       40000         Freq. Emission Limit Margin SA level       Factor Remark ANT Turn reading         MHz       dBuV/m dB       dBuV/m dB       cm       deg         1       5150.00       43.96       54.00       -10.04       39.02       4.94       Average           2       5150.00       57.85       74.00       -16.15       52.91       4.94       Peak           3       5427.00       44.48       54.00       -9.52       39.34       5.14       Average           4       5427.00       57.81       74.00       -16.19       52.67       5.14       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak	40										
0         1000         6000.         10000.         14000.         18000.         22000.         26000.         30000.         34000.         40000           Freq. Emission Limit Margin SA Jevel         Factor Remark ANT Turn reading         ANT dury         ANT dury           MHz         dBuV/m         dB         dBuV/m         dB         Cm         deg           1         5150.00         73.96         54.00         -10.44         39.02         4.94         Average            2         5150.00         73.85         74.00         -16.15         52.91         4.94         Average             3         5427.00         44.48         54.00         -9.52         39.34         5.14         Average             4         5427.00         57.81         74.00         -16.19         52.67         5.14         Peak             5         10400.00         55.28         68.30         -13.02         40.53         14.75         Peak            5         10400.00         55.28         68.30         -13.02         40.53         14.75         Peak <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>											
Frequency (MHz)         Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark ANT Turn Level reading High Tabl         MHz         dBuV/m       dBuV/m       dBuV       dB       cm       deg         1       5150.00       4.94       Average          2       5150.00       67.85       74.00       -16.15       52.91       4.94       Average          2       5150.00       67.81       74.00       -16.19       52.67       5.14       Peak          4       5427.00       57.81       74.00       -13.02       40.53       14.75       Peak          5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak         5       10400.00       55.28       68.30       -13.02 <t< td=""><td>20</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	20										
Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark ANT Turn level reading reading High Tabl         MHz       dBuV/m       dB       dBuV       dB       cm       deg         1       5150.00       43.96       54.00       -10.04       39.02       4.94       Average           2       5150.00       57.85       74.00       -16.15       52.91       4.94       Average           3       5427.00       44.48       54.00       -9.52       39.34       5.14       Average           4       5427.00       57.81       74.00       -16.19       52.67       5.14       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           5       10400.00       55.28       68.30       -13											
Freq. Emission Limit Margin SA Factor Remark light Turn level       reading reading       ANT Turn High Table Cm         MHz       dBuV/m       dBuV/m       dB       dBuV       dB       cm       deg         1       5150.00       43.96       54.00       -10.04       39.02       4.94       Average           2       5150.00       57.85       74.00       -16.15       52.91       4.94       Peak           3       5427.00       44.48       54.00       -9.52       39.34       5.14       Average	<sup>0</sup> 1000	6000.	10000.	14000.			26000.	30000.	34000	).	40000
level       reading       High Tabl         MHz       dBuV/m       dBuV/m       dB       dBuV       dB       cm       deg         1       5150.00       43.96       54.00       -10.04       39.02       4.94       Average           2       5150.00       57.85       74.00       -16.15       52.91       4.94       Peak           3       5427.00       44.48       54.00       -9.52       39.34       5.14       Average           4       5427.00       57.81       74.00       -16.19       52.67       5.14       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           61       20.02B       means spurious emission levels that exceed the level of 20 dB below the applicz       ote 2: "N/F" means Nothing Found spuri		Freq.	Emissio	on Limit			Factor	Rema	ark	ANT	Turn
1       5150.00       43.96       54.00       -10.04       39.02       4.94       Average           2       5150.00       57.85       74.00       -16.15       52.91       4.94       Peak           3       5427.00       44.48       54.00       -9.52       39.34       5.14       Average          4       5427.00       57.81       74.00       -16.19       52.67       5.14       Peak          4       5427.00       57.81       74.00       -16.19       52.67       5.14       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           5       10401.00<					0		3			High	Table
2       5150.00       57.85       74.00       -16.15       52.91       4.94       Peak           3       5427.00       44.48       54.00       -9.52       39.34       5.14       Average          4       5427.00       57.81       74.00       -16.19       52.67       5.14       Peak          5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak          5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak          5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           6       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           6       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           5       10400.00       55.28       68.30       -13.02       40.53       14.75       Peak           6       10.75       Peak </td <td></td> <td>MHz</td> <td>dBuV/n</td> <td>ı dBuV∕</td> <td>m dB</td> <td>dBuV</td> <td>dB</td> <td></td> <td></td> <td>cm</td> <td>deg</td>		MHz	dBuV/n	ı dBuV∕	m dB	dBuV	dB			cm	deg
2 5150.00 57.85 74.00 -16.15 52.91 4.94 Peak 3 5427.00 44.48 54.00 -9.52 39.34 5.14 Average 4 5427.00 57.81 74.00 -16.19 52.67 5.14 Peak 5 10400.00 55.28 68.30 -13.02 40.53 14.75 Peak 5 10400.00 55.28 68.30 -13.02 40.53 14.75 Peak 6 10400.00 55.28 68.30 -13.02 40.53 14.75 Peak	1	5150 0	a 43.96	54.00	-10 04	39.02	4 94		rage		
4 5427.00 57.81 74.00 -16.19 52.67 5.14 Peak 5 10400.00 55.28 68.30 -13.02 40.53 14.75 Peak 5 10400.00 55.28 68.30 -13.02 40.53 14.75 Peak 0 tot 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applica ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.) ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical) ote 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength a with the Peak-Detector meets the AV-Limitso that the AV level does not need to be report									_		
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Modulation Mode	11	la					٦	ſest	Free	q. (M⊦	lz)		!	524	0	
Operating Mode	1						F	Pola	riza	tion			'	V		
	el (dBuV/m)	)														
120																
100																
100																
80			_								_	_				
וניש		JUL	ц—			╷╷╷		-1	᠇		_	Л		FCO	PAR	1 <u>5</u>
60	- 24		5								+-	_	FCC	PART	15E (/	AVG)
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0	0 6000	). 1(	0000.	140	000.	180 Fr	00. equei	220 ncy (I		26000.	3	0000.	34	000.		40000
	Frea	. Emi	ssior	ı Li	mit				A	Facto	r	Rema	ark		ANT	Turn
			evel				0		ding						High	
	MHz	dB	uV/m	dB	uV/n	n dB		dB	uV	dB					cm	deg
1	5150.	aa _	3 11	54	00	-10	80	38	.17	4.9	<u>_</u>	Aver	0000			
2	5150.								.95	4.9		Peal	_			
3	5427.							39	.40	5.1		Aver	rage			
4	5427.								.39	5.1		Peal				
5	10480.	00 5	5.17	68	.30	-13.	13	40	.33	14.8	4	Peal	¢			
Note 1: ">20dB" mea Note 2: "N/F" means Note 3: Measuremer Note 4: For restricted with the Peal addition.	Nothing ht receiv bands,	Four e ante the p	ndspu enna eakn	urio pola nea:	use triza sure	missi ition: emen	ions H(H itisf	s (No Horiz <sup>i</sup> ully	spu zonta suffi	rious e al), V ( cient,	emi Ver ast	ssion tical) he m	swe axfi	ere o ield	dete strer	cted.) ngth a





Nodulation Mode		11a						٦	Test	Free	q. (M⊦	lz)		Ę	524	0	
Operating Mode		1						F	Pola	riza	tion			ł	┥		
127Le	vel (dB	uV/m)															
120																	
100																	
80												_					
m				-					1	᠇			п		FCC	PART	T15E
60		24		5								-		FCC	PART	15E (/	AVG)
		18															
40												+					
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0 <mark></mark>	00	6000.	100	00.	140	00.	180 Fr	00. eque	220 ncy (1		26000.	3	0000.	34(	000.		40000
	F	Freq.	Emis	sion	Lir	nit				A	Facto	r	Rema	ark		ANT	Turn
				/el				0		ding						ligh	
		MHz	dBu	//m	dBu	uV/m	n dE	3	dB	uV	dB				0	cm	deg
1	51	150.00	13	85	54	00	-10	15	38	.91	4.9		Aver	0000	-		
2		150.00								.51	4.9		Peal	_			
3		427.00							39	.49	5.1		Aver	rage			
4		427.00								.09	5.1		Peal				
5	104	480.00	55	.40	68	.30	-12.	.90	40	.56	14.8	4	Peal	¢			
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Note 1: ">20dB" me Note 2: "N/F" means																	
lote 3: Measureme														3 100	100		oleu.)
lote 4: For restricte	d bar	nds, th	ере	akm	ieas	sure	mer	ntisi	fully	suffi	cient,	ast	hem				
with the Pea																	





Modulation Mode		11a					٦	ſest	Free	q. (MHz	:)		518	30	
Operating Mode		2					F	Pola	rizat	tion			V		
	evel (dB	uV/m)													
120															
100															
100															
80-															
		n			ШĽ			-1					FC		T15E
60															
		2	Ť			+						FC	C PAR	T15E (	AVG)
40					_										
		Ĩ													
20					_	_						_			
0	00	6000.	10000		4000.	190	000.	220	00	26000.	30000	⊥.	34000.		40000
		0000.	10000		1000.		reque			20000.	50000		54000.		40000
	F	Freq. E	missi	on L	imit	Mai	rgin	S	Α	Factor	Rei	narl	k	ANT	Turn
			leve				-		ding					High	Table
		MHz	dBuV/	′m d	BuV/ı	m di	В	dB	uV	dB				cm	deg
1			24.7	77 5	1 00	10	22	- 20	00	1.0/	<u></u>				
1 2		150.00 150.00			4.00				.83 .63	4.94 4.94		eraj	ge		
3		427.00							.98	5.14		eraj	ge		
4		427.00							.82	5.14					
5	103	360.00	55.2	2 6	8.30	-13	.08	40	.51	14.71	. Pe	ak			
ote 1: ">20dB" me ote 2: "N/F" mean ote 3: Measureme ote 4: For restricte with the Pe	sNoti ent rec ed bar	hing Fo ceive a nds, the	ound s ntenn e peal	spurio lapo kmea	ouse Iariza asure	emiss ation emer	sions :H(H ntist	s (No Horiz <sup>i</sup> ully	spui conta suffi	rious ei al), V (V cient, a	nissio ertical sthe r	nsv ) nax	vere a fiela	dete dete	cted.) ngth as





Operating Mode		11a							est	Free	q. (MI	72)		`	518	0	
Operating wode		2						F	Pola	riza	tion			I	-1		
127	el (dBu	V/m)												1			
120												+					
400																	
100																	
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		; п	un_	_	บป	Г	╷╓						П		FCC	PART	T15E
60														FCC	DADT		
		4	Ĭ									+		FLL	PARI	15E (/	AVG)
40		18										_					
20												_					
0 <mark>0</mark>	0 0	6000.	1000	0.	1400	0.	180	00.	220	00.	26000	. :	30000.	34	000.		40000
							Fre	eque	ncy (I	/Hz)							
	F	req. E			Lim	it	Mar	gin		Α	Fact	or	Rema	ark		ANT	Turr
		MHz	lev dBuV		40.0	1/-	- dD			ding uV	dB					ligh	
		MITZ	abuv	/ m	abu	v/m	a a b		ab	uv	ab					cm	deg
1	51	50.00	37.	93	54.0	00	-16.	07	32	.99	4.	94	Aver	rage	-		
2		50.00					-8.		60	.67		94	Peal	< _			
3		27.00								.64		14	Aver	-			
4		27.00								.18 .68	5. 14.	14 71	Peal Peal				
lote 1: ">20dB" means																	
lote 2: "N/F" means lote 3: Measureme														3 100	16 (	16160	cieu.)
Note 4: For restricted														ax fi	eld	strer	ngth a
with the Pea																	





perating Mode         2         Polarization         V           120	127       Level (dBuV/m)         100       100         80       100         9       100         100       100         100       100         100       100         100       100         100       100         100       100         100       1000         100       1000         100       1000         100       1000         100       1000         100       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000         1000       1000 <th></th> <th>V</th> <th></th> <th></th> <th></th> <th></th> <th>Free</th> <th></th>		V					Free												
120       100       100       100       100       100       100       100       100       100       100       100       100       115         80       1	120 100 80 100 80 100 100 100 100		v	\			tion	riza	Pola							2	:			Node
120       100       100       100       100       100       100       100       100       100       100       100       115         80       100       100       100       100       100       100       115       115         100       1000       6000.       10000.       14000.       18000.       22000.       26000.       30000.       34000.       40000         1000       6000.       10000.       14000.       18000.       22000.       26000.       30000.       34000.       40000         Frequency (MHz)       Frequency (MHz)       Factor       Remark       ANT       Turn         1       5150.000       34.90       54.00       -19.10       29.96       4.94       Average          2       5150.00       34.90       54.00       -19.10       29.96       4.94       Average          3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average          4       5427.00       48.90       74.00<-25.10	120       1000       1000       14000       18000       22000       26000       30000       34000         100       1000       10000       14000       18000       22000       26000       30000       34000         100       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       6000       30000																			
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60       5	60       5       60       5       60       FCC PART         40       20       5       60       60       60       FCC PART         20       20       60       60       60       60       FCC PART         20       20       60       60       60       60       60       60       60         20       1000       6000.       10000.       14000.       18000.       22000.       26000.       30000.       34000.         Freq. Emission Limit Margin SA       Factor Remark A       1       1       1       1       60       1 <td></td>																			
60       24       5       60       FCC PARTISE (AVG)         40       20       60       6000.       10000.       14000.       18000.       22000.       26000.       30000.       34000.       40000         9       1000       6000.       10000.       14000.       18000.       22000.       26000.       30000.       34000.       40000         Freq. Emission Limit Margin SA       Factor Remark ANT Turn High Table       High Table       mdeg       1       5150.00       34.90       54.00       -19.10       29.96       4.94       Average           2       5150.00       34.90       54.00       -19.10       29.96       4.94       Average           3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average          4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak	60       24       5       60       FCC PART         40       20       60       6000.       10000.       14000.       18000.       22000.       26000.       30000.       34000.         9       1000       6000.       10000.       14000.       18000.       22000.       26000.       30000.       34000.         Freq. Emission Limit Margin SA level       Factor Remark A       Remark A       H       H       H         MHz       dBuV/m       dBuV/m       dB       dBuV       dB       c       c         1       5150.00       34.90       54.00       -19.10       29.96       4.94       Average         2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak         3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average         4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak					_													- 10	80
40       24       1	40       21       1	C PART15E	FCC PAF		Л			ᇺ							սու		T	∎↓₩₩	Π	
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0 1000 6000. 10000. 14000. 18000. 22000. 26000. 30000. 34000. 40000 Frequency (MHz) Freq. Emission Limit Margin SA Factor Remark ANT Turn level reading High Table MHz dBuV/m dBuV/m dB dBuV dB cm deg 1 5150.00 34.90 54.00 -19.10 29.96 4.94 Average 2 5150.00 49.76 74.00 -24.24 44.82 4.94 Peak 3 5427.00 35.29 54.00 -18.71 30.15 5.14 Average 4 5427.00 48.90 74.00 -25.10 43.76 5.14 Peak	0 1000 6000. 10000. 14000. 18000. 22000. 26000. 30000. 34000. Frequency (MHz) Freq. Emission Limit Margin SA Factor Remark A level reading H MHz dBuV/m dBuV/m dB dBuV dB c 1 5150.00 34.90 54.00 -19.10 29.96 4.94 Average 2 5150.00 49.76 74.00 -24.24 44.82 4.94 Peak 3 5427.00 35.29 54.00 -18.71 30.15 5.14 Average 4 5427.00 48.90 74.00 -25.10 43.76 5.14 Peak				_												₿		)	40
0 1000 6000. 10000. 14000. 18000. 22000. 26000. 30000. 34000. 40000 Frequency (MHz) Freq. Emission Limit Margin SA Factor Remark ANT Turn level reading High Table MHz dBuV/m dBuV/m dB dBuV dB cm deg 1 5150.00 34.90 54.00 -19.10 29.96 4.94 Average 2 5150.00 49.76 74.00 -24.24 44.82 4.94 Peak 3 5427.00 35.29 54.00 -18.71 30.15 5.14 Average 4 5427.00 48.90 74.00 -25.10 43.76 5.14 Peak	0 1000 6000. 10000. 14000. 18000. 22000. 26000. 30000. 34000. Frequency (MHz) Freq. Emission Limit Margin SA Factor Remark A level reading H MHz dBuV/m dBuV/m dB dBuV dB c 1 5150.00 34.90 54.00 -19.10 29.96 4.94 Average 2 5150.00 49.76 74.00 -24.24 44.82 4.94 Peak 3 5427.00 35.29 54.00 -18.71 30.15 5.14 Average 4 5427.00 48.90 74.00 -25.10 43.76 5.14 Peak																			
Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark level       Remark High Table         1       6       1	Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark A level reading         MHz       dBuV/m       dBuV/m       dBuV       dB       H         MHz       dBuV/m       dBuV/m       dB       c       c         1       5150.00       34.90       54.00       -19.10       29.96       4.94       Average         2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak         3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average         4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak																			20
Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark level       Remark High Table reading         MHz       dBuV/m       dBuV/m       dBuV       dB       High Table deg         1       5150.00       34.90       54.00       -19.10       29.96       4.94       Average          2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak          3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average          4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak	Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark A level reading         MHz       dBuV/m       dBuV/m       dBuV       dB       c         1       5150.00       34.90       54.00       -19.10       29.96       4.94       Average         2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak         3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average         4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak																			0
Freq. Emission Limit Margin level       SA reading reading       Factor reading       Remark reading       ANT Turn High rable         MHz       dBuV/m       dBuV/m       dB       dBuV       dB       dB       dB       deg         1       5150.00       34.90       54.00       -19.10       29.96       4.94       Average           2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak           3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average           4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak	Freq. Emission Limit Margin       SA reading reading       Factor       Remark       A H H H H H H H H H H H H H H H H H H H	. 4000	4000.	340	30000.	3	26000.					000.	14(	00.	100	00.	60	000	10	
level         reading         High         Table           MHz         dBuV/m         dBuV/m         dBuV         dB         cm         deg           1         5150.00         34.90         54.00         -19.10         29.96         4.94         Average             2         5150.00         49.76         74.00         -24.24         44.82         4.94         Peak             3         5427.00         35.29         54.00         -18.71         30.15         5.14         Average             4         5427.00         48.90         74.00         -25.10         43.76         5.14         Peak	level         reading         H           MHz         dBuV/m         dBuV/m         dBuV         dB         c           1         5150.00         34.90         54.00         -19.10         29.96         4.94         Average           2         5150.00         49.76         74.00         -24.24         44.82         4.94         Peak           3         5427.00         35.29         54.00         -18.71         30.15         5.14         Average           4         5427.00         48.90         74.00         -25.10         43.76         5.14         Peak	ANT Tu	ANT	ark	Rema	or	Facto					mit	Li	sion	mis	q.E	Fre			
1       5150.00       34.90       54.00       -19.10       29.96       4.94       Average           2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak           3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average          4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak	1       5150.00       34.90       54.00       -19.10       29.96       4.94       Average         2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak         3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average         4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak	High Ta						ding	rea	-				vel	le					
2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak           3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average           4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak	2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak         3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average         4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak	cm de	CM				dB	uV	dE	B	ı d	uV/m	dB	V/m	dBu	z	MH			
2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak           3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average           4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak	2       5150.00       49.76       74.00       -24.24       44.82       4.94       Peak         3       5427.00       35.29       54.00       -18.71       30.15       5.14       Average         4       5427.00       48.90       74.00       -25.10       43.76       5.14       Peak		e	age	Aver	94	4.9	.96	29	.10	-19	.00	54	.90	34	.00	150	5		1
4 5427.00 48.90 74.00 -25.10 43.76 5.14 Peak	4 5427.00 48.90 74.00 -25.10 43.76 5.14 Peak			_																
			e	<u> </u>																
5 10400100 55115 00150 15117 40150 14175 FCuk																				
					I Can		14.7		40	• • • •	-15		00	.15			400	10		5
	ote 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below t	the appli	elow the	bel	20 dB	of	elevel	dthe	xce	nate	lsth	eve	on l	nissi	sem	rious	spu	eans	ne	)dB" m
ote 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applica	lote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were d				ission	emi	riouse	spu	s(No	sion	mis	use	irio	spι	unc	ig Fo	thin	nsNo	ar	" mea
ote 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicat ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)	lote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)																			
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Modulation Mode	e	11a						Test	Free	q. (MHz	:)	5	520	0	
Operating Mode		2					I	Pola	riza	tion		ŀ	-		
	Level (d	BuV/m)													
120															
100															
100															
80															
	TUU				⊥⊥⊥			-1	∿			Ц	FCC	PART	15E
60		2	5									FCC I	PART	15E ( <i>i</i>	AVG)
		Ĩ													
40		-18													
20															
20															
O															
	1000	6000.	1000	0. 1	14000.		)00. reque	220 ncy (I		26000.	30000.	340	000.		40000
		Freq. I	Emiss	ion	Limit					Factor	Rem	ark	1	ANT	Turn
			lev	el			-	rea	ding				H	ligh	
		MHz	dBuV	/m (	dBuV/	m di	В	dB	uV	dB			0	m	deg
1	5	5150.00	37.	47	54.00	-16	.53	32	.53	4.94	Ave	rage	-		
2		5150.00							.38	4.94		_			
3		5427.00							.39	5.14		rage			
4		5427.00 3400.00							.07 .52	5.14 14.75					
5	1	400.00		27		15	.05	40		14.75	ica	ĸ			
lote 1: ">20dB" n															
ote 2: "N/F" mea													reo	teteo	cted.)
lote 3: Measurer													ماط	otror	ath ac
loto 1. For restric	tod ha	nde th		kma				FI           / /	CIITTI	CIDD1 0	etnam	<b>9 7 1</b>			
lote 4: For restric with the P															





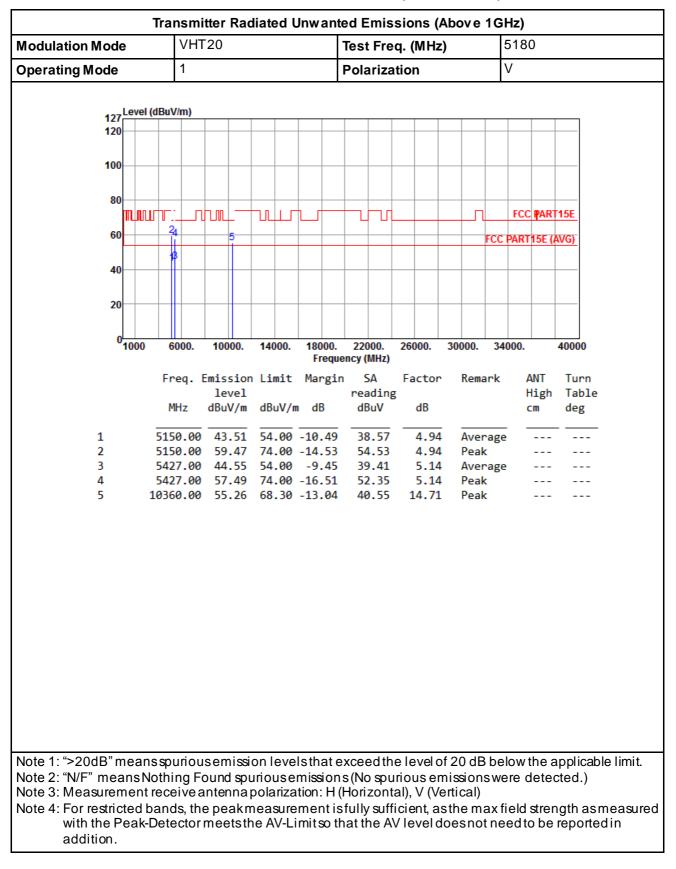
Modulation Mode		11a						1	Test	Free	q. (M⊦	z)		!	524	0	
Operating Mode		2						F	Pola	riza	tion			'	V		
	vel (dBu	V/m)															
120																	
100																	
100																	
80																	
II.		:: <b></b> _Л		- †	ՆԼ		Ľ		-1	ᇺ				μ	FCC	PAR	T15E
60			:	5										FCC	PART	15E (/	AVG)
		24 															
40		8											_				
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0 <mark></mark>	00	6000.	100	00.	140	00.		)00. requei	220 ncy (I		26000.	3	0000.	34	000.		40000
	F	req. E	miss	ion	Lir	nit				Α	Facto	r	Rema	ark		ANT	Turi
			lev	/el				-	rea	ding						High	Tab:
	I	MHz	dBu\	//m	dBı	uV/m	ı di	В	dB	uV	dB					cm	deg
1	51	50.00	34.	.91	54	.00	-19	.09	29	.97	4.9	4	Ave	rage			
2		50.00								.55	4.9		Peal	_			
3		27.00								.63	5.1		Ave	<u> </u>			
4		27.00								.21	5.1 14.8		Peal Peal				
Note 1: ">20dB" me Note 2: "N/F" means Note 3: Measureme Note 4: For restricte with the Pea	sNoth nt rec d ban	ing Fo eive a ds, the	ound nten epea	spu nap akm	riou ola eas	use iriza sure	miss tion mer	ions :H(H ntist	s (No Horiz fully	spu zonta suffi	rious e al), V (' cient,	emi Verl ast	ssion ical) he m	swe axf	ere o ield	deteo strer	cted.) ngth a





Operating Mode		2															
120								F	Pola	riza	tion			I	Η		
120																	
	el (dBuV	<u>/m)</u>															
100																	
100																	
80																	
n,n	ייין אווי	⊥_∩		_						고		_		μ	FCC	PAR	15 <u>E</u>
60	2			5										FCC	PART	15E (/	AVG)
	Ĩ																
40																	
20																	
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0	0 60	000.	100	00.	140	000.	180 Fr	00. eque	220 ncy (I		2600	).	30000.	34	000.		40000
	Fre	eq. E	Emiss	sion	Li	mit				A	Fact	tor	Rema	ark		ANT	Turn
				vel				0		ding						ligh	
	M	Hz	dBu\	V/m	dB	uV/n	n dE	3	dB	uV	dl	3			0	cm	deg
1	515	0.00	37	.19	54	.00	-16.	81	32	.25	4	.94	Ave	rage	-		
2		0.00								.65		.94	Peal	_			
3		7.00								.87		.14	Ave	<u> </u>			
4	542 1048	7.00 a aa								.03 .79		.14 .84	Peal Peal				
2	1040	0.00	22	.05	00	. 50	-12.	0/	40	.79	14	.04	real	ĸ			
lote 1: ">20dB" mea	nsspu	ıriou	sem	nissio	on l	eve	lsth	atex	kcee	dth	elev	el of	20 dE	3 be	low	the a	applica
lote 2: "N/F" means	Nothi	ng Fo	ound	spu	irio	use	miss	ions	s (No	spu	rious	em	nission				
lote 3: Measuremen																	<i>,</i> <b>-</b>
lote 4: For restricted																	
with the Peal addition.	<-Dete	ctor	mee	tsth	e A	v-Li	mits	io th	at th	e A	/ leve	eldo	pesno	tne	edt	o be	report









60       4       5       FCC PART1         40       8       4       5       FCC PART1         20       0       0       0       0       0         0       0       0       0       0       0       0         0       0       0       0       0       0       0       0         0       0       0       0       0       0       0       0       0         0       0       0       0       0       0       0       0       0       0         0	CC PART 15E
120       1000       1000       14000       18000       22000       26000       30000       34000         1       5       1       1       5150.00       14.21       54.00       -9.79       39.27       4.94       Average       1         1       5150.00       62.79       74.00       -11.21       57.85       4.94       Peak       1       3       5427.00       44.59       54.00       -9.41       39.45       5.14       Average       4       54.27.00       58.78       74.00       -15.22       53.64       5.14       Peak       5	C PART15E
120       1000       1000       1000       1000       1000       12000       1000       1000       1000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         1000       6000       10000       14000       18000       22000       26000       30000       34000         10000       6000       10000	C PART15E
100 80 100 100 100 100 100 100 1	C PART15E
80	C PART15E
$\begin{array}{c ccccc} & & & & & & & & & & & & & & & & &$	C PART15E
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	C PART15E
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	C PART15E
40       3       5       6	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	RT15E (AVG)
20 0 0 0 1000 6000. 10000. 14000. 18000. 22000. 26000. 30000. 34000. Frequency (MHz) Freq. Emission Limit Margin SA Factor Remark All level reading Hi MHz dBuV/m dBuV/m dB dBuV dB cr 1 5150.00 44.21 54.00 -9.79 39.27 4.94 Average 2 5150.00 62.79 74.00 -11.21 57.85 4.94 Peak 3 5427.00 44.59 54.00 -9.41 39.45 5.14 Average 4 4 5427.00 58.78 74.00 -15.22 53.64 5.14 Peak	
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Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark All level         level       reading       H:         MHz       dBuV/m       dBuV/m       dBuV       dB       cr         1       5150.00       44.21       54.00       -9.79       39.27       4.94       Average         2       5150.00       62.79       74.00       -11.21       57.85       4.94       Peak       -         3       5427.00       44.59       54.00       -9.41       39.45       5.14       Average       -         4       5427.00       58.78       74.00       -15.22       53.64       5.14       Peak       -	
Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark All level         reading       reading       H:         MHz       dBuV/m       dBuV/m       dBuV       dB       cr         1       5150.00       44.21       54.00       -9.79       39.27       4.94       Average         2       5150.00       62.79       74.00       -11.21       57.85       4.94       Peak       -         3       5427.00       44.59       54.00       -9.41       39.45       5.14       Average       -         4       5427.00       58.78       74.00       -15.22       53.64       5.14       Peak       -	
Freq. Emission Limit Margin SA       Factor Remark       All History         level       reading       History       History         MHz       dBuV/m       dBuV/m       dB       dBuV       dB       cr         1       5150.00       44.21       54.00       -9.79       39.27       4.94       Average       -         2       5150.00       62.79       74.00       -11.21       57.85       4.94       Peak       -         3       5427.00       44.59       54.00       -9.41       39.45       5.14       Average       -         4       5427.00       58.78       74.00       -15.22       53.64       5.14       Peak	. 4000
level         reading         H           MHz         dBuV/m         dBuV/m         dBuV         dB         cr           1         5150.00         44.21         54.00         -9.79         39.27         4.94         Average         -           2         5150.00         62.79         74.00         -11.21         57.85         4.94         Peak         -           3         5427.00         44.59         54.00         -9.41         39.45         5.14         Average         -           4         5427.00         58.78         74.00         -15.22         53.64         5.14         Peak         -	ANT Tu
MHz       dBuV/m       dBuV/m       dB       dBuV       dB       cr         1       5150.00       44.21       54.00       -9.79       39.27       4.94       Average       -         2       5150.00       62.79       74.00       -11.21       57.85       4.94       Peak       -         3       5427.00       44.59       54.00       -9.41       39.45       5.14       Average       -         4       5427.00       58.78       74.00       -15.22       53.64       5.14       Peak       -	High Ta
2       5150.00       62.79       74.00       -11.21       57.85       4.94       Peak         3       5427.00       44.59       54.00       -9.41       39.45       5.14       Average         4       5427.00       58.78       74.00       -15.22       53.64       5.14       Peak	cm de
2         5150.00         62.79         74.00         -11.21         57.85         4.94         Peak           3         5427.00         44.59         54.00         -9.41         39.45         5.14         Average           4         5427.00         58.78         74.00         -15.22         53.64         5.14         Peak	
3         5427.00         44.59         54.00         -9.41         39.45         5.14         Average           4         5427.00         58.78         74.00         -15.22         53.64         5.14         Peak	
5 10360.00 55.32 68.30 -12.98 40.61 14.71 Peak	
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the level of 20 dB below the spurious and spurious	
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were de Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)	delected
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field s	
with the Peak-Detector meets the AV-Limit so that the AV level does not need to	a strenath





Iodulation Mode	VHT	20			Test Fre	q. (MHz	)	52	00	
perating Mode	1				Polariza	ation		V		
	(dBuV/m)									
120										
100										
80									_	
m.n								F	CC PAR	15E
60	24	5						FCC PA	RT15E (	AVG)
	18									
40										
20										
0										
01000	6000.	10000.	14000.	18000. Freque	22000. ncy (MHz)	26000.	30000.	34000	).	40000
	Fred	mission	limit	Margin		Factor	Rema	ark	ANT	Turn
	1104.1	level	· LIMIC	nu gri	reading		TC-III		High	
	MHz	dBuV/m	dBuV/n	n dB	dBuV	dB			cm	deg
4	<u></u>	44.35	<u></u>				<u></u>			
1 2	5150.00 5150.00			-9.65 -17.29	39.41 51.77			rage		
3	5427.00				39.57			rage		
4	5427.00							<u> </u>		
5	10400.00	55.48	68.30	-12.82	40.73	14.75	Peal	ĸ		
lote 1: ">20dB" mear lote 2: "N/F" means N lote 3: Measurement lote 4: For restricted	Nothing Fo treceive a	ound spu Intenna	uriouse polariza	mission: tion: H (	s (No spu Horizoni	urious en tal), V (Ve	nission ertical)	swere	dete	cted.)





Iodulation Mode		VHT	20					1	<b>Fes</b> t	Fre	q. (MH:	z)		Ę	520	0	
)perating Mode		1						I	Pola	riza	tion			ł	Η		
	vel (dBu	V/m)															
120—																	
100																	
80		_															
m				-		Ш	<del>ا</del> للا		-1	Л			╷╷	4	FCO	PAR	15E
60		24 		5										FCC	PART	15E (/	AVG)
		18															
40																	
20																	
0 <mark></mark>	00	6000.	100	00.	140	000.		)00. reque	220 ncv (I		26000.	30	000.	34(	000.		40000
	F	req.	mico	ion	Lie	mi+				Α	Factor	•	Rema	ank		ANT	Turn
			lev				T G	8±		ding			TC-III			High	
	i	MHz	dBu\	//m	dB	uV/n	n di	В	dB	uV	dB					cm	deg
1	51	50.00	13	85	54	00	10	15	- 20	.91	4.94	1	Av.01	rage			
2		50.00								.00	4.9		Peal	<u> </u>			
3	54	27.00	44.	58	54	.00	-9	.42		.44	5.14		Ave	rage			
4		27.00								.97	5.14		Peal				
5	104	00.00	55.	.43	68	.30	-12	.87	40	.68	14.7	0	Peal	ĸ			
	00000		m	iooid	- n l	<u></u>	lath	<u></u>		dth		- f - J	0 45		0.11	the	nnlin
lote 1: ">20dB" me lote 2: "N/F" mean																	
lote 3: Measureme														3 100			sicu.)
lote 4: For restricte	d ban	ds, th	epea	akm	ieas	sure	emei	ntis	fullv	suffi	cient. a	sth	ie m	ax fi	eld	strer	ngth a
with the Pea	ak-Det	ector	mee	tsth	eА	V-L	mite	so th	at tr	ne Al	/level	doe	sno	tne	edt	o be	repor





Iodulation Mode		VHI	20					-	Test	Free	q. (MHz	<u>z)</u>		5	24	0	
perating Mode		1						I	Pola	riza	tion			V	/		
	evel (dB	uv/m)															
120																	
100																	
80																	
Π	կուլի			-			ľ		-1	ᄱ					FCC	PART	15E
60		24		5										FCC F	PART	15E (/	AVG)
		ß															
40							<u> </u>										
20																	
20																	
0																	
0 <u>-</u> 10	000	6000.	100	00.	140	000.		)00. reque	220 ncy (I		26000.	300	00.	340	00.		40000
	1	Freq.	Emiss	sion	Li	mit	Маг	rgin	S	Α	Factor	• F	Rema	ark	4	ANT	Turn
			lev	/el				-		ding					H	ligh	Tabl
		MHz	dBu\	//m	dB	uV/n	n di	В	dB	uV	dB				0	cm	deg
1	5	150.00	43	26	54	00	-10	74	- 38	.32	4.94	īī	lver	age	-		
2		150.00								.98	4.94		Peak	<u> </u>			
3		427.00								.66	5.14			rage			
4		427.00								.57	5.14		Peak				
5	104	480.00	55.	.43	68	.30	-12	.8/	40	.59	14.84	+ +	Peak	C			
ote 1: ">20dB" me	anee	nuriou	som	icci	onl	0.10	leth	at a		dth		of 20		bol	0.147	thos	nnlies
lote 2: "N/F" mean																	
ote 3: Measureme																	
lote 4: For restricte	ed bai	nds, th	e pe	akm	nea	sure	mer	ntis	fully	suffi	cient, a	sthe	e ma	ax fi	eld	strer	ngth a
with the Pe addition.	ak-De	etector	mee	tstr	ie A	V-LI	mits	so th	attr	ie Al	/ level o	loes	sno	tnee	eate	оре	repon





Nodulation Mode		VHI	20						<b>Fest</b>	Fre	q. (MHz	<u>z)</u>		5	524	0	
Operating Mode		1						I	Pola	riza	tion			ł	-1		
127 Lev	/el (dBu	<u>V/m)</u>															
120																	
100																	
80																	
m.				-			ען			Л					FCO	PART	[15 <u>E</u>
60		2 <b>4</b>		5										FCC I	PART	15E (/	AVG)
	· ·	<b>1</b> 8															
40																	
20																	
0		6000.	100	00	140	000.	180	000.	220	00	26000.	300	000.	340	000.		40000
			100					reque			20000.	500		540			40000
	F	req.			Li	mit	Mai	rgin		Α	Factor	•	Rema	ark		ANT	Turn
		MHz		/el	dB		n di	R		ding uV	dB					High cm	Tabl deg
		112	ubu	//	ub	uv/1			ub	uv	ub						ueg
1		50.00								.62	4.94			rage			
2 3		50.00 27.00								.40 .50	4.94 5.14		Peak				
4		27.00								. 44	5.14		Peak	rage «			
5		80.00								.47	14.84		Peak				
ote 1: ">20dB" mea	ansso	uriou	sem	issi	on l	eve	lsth	ate	kcee	dth	elevelo	of 20	) dP	shel	ow	the a	applica
lote 2: "N/F" means																	
lote 3: Measureme	nt rec	eivea	Inter	nap	oola	iriza	tion	: H (ŀ	loriz	zonta	al), V (V	erti	cal)				
lote 4: For restricted with the Pea																	
with the Dee	vk Dot	ontor	moo	teth	Δ	\/_I i	mite	on th	at th	~ ^\		100	c n o	tno	odt	n ha	ronor





Modulation Mode	e	VHI	20					1	ſest	Fre	q. (MH	lz)		Ļ	518	0	
Operating Mode		2						F	Pola	riza	tion			١	V		
	Level (d	BuV/m)															
120												-					
100																	
100																	
80													_				
	րուրու				иµ	_	u†		-1	ᆪ				μ	FCC	PAR	15E
60		2	5		_	_						-	_	FCC	PART	15E (/	AVG)
		4															
40		18						-				+	_				
20																	
ſ																	
· · · ·	1000	6000.	1000	0.	1400	0.	1800 Fre		220 ncy (I		26000.	3	0000.	34(	000.		40000
		Freq.	Emiss	ion	Limi	t					Facto	or	Rema	ark		ANT	Turn
			lev	el					rea	ding						High	
		MHz	dBuV	/m	dBu∖	//m	dB		dB	uV	dB				0	cm	deg
1		5150.00	35.	09	54.0	00	-18.9	91	30	.15	4.9	94	Ave	rage	-		
2		5150.00								.90	4.9		Peal	<u> </u>			
3		5427.00								.54	5.1		Ave	-			
4		5427.00 0360.00								.58 .43	5.1 14.7		Peal Peal				
,	10		55.	14	00.5		-15.1		40	.45	14.7	1	i cai	~			
Note 1: ">20dB" n																	
Note 2: "N/F" mea														swe	reo	deteo	cted.)
Note 3: Measuren Note 4: For restric														av fi	ماط	etror	ath a
					zasu	IIEI	nen	. 151	ullv	SUIII	UREIT	ası		a x 11	eiu	Suer	iguia
with the P																	





Modulation Mode		VHT	20					-	Test	Fre	q. (MH	lz)		ţ	518	0	
Operating Mode		2						I	Pola	riza	tion			I	4		
	/el (dBu	V/m)															
120																	
100																	
80		_										-	_				
ու		z⊥_∩		-								_			FCC	PART	15E
60		4		5										FCC	PART	15E (/	AVG)
		ĩ															
40		8											_				
20																	
0	00 (	6000.	100	00.	140	000.		000. reque	220		26000.	3	0000.	34	000.		40000
	г.	req. E	mico	ion	1.4.	+		-		A .	Facto		Rema	ank		ANT	Turn
	FI	eq. (	lev		LTI	IIL	ria	гдти		A ding		n.	Nema	агк		High	
	1	٩Hz	dBu\	//m	dBu	uV/n	n di	В		uV	dB					cm	deg
												_					
1 2		50.00					-16			.94 .48	4.9		Ave Peal	<u> </u>			
2 3		27.00								.40	5.1		Ave				
4		27.00								.37	5.1		Peal	-			
5	1030	50.00	55.	20	68.	. 30	-13	.10	40	.49	14.7	'1	Peal	¢			
Note 1: ">20dB" me Note 2: "N/F" means Note 3: Measureme Note 4: For restricte with the Pea	sNoth nt rec d ban	ing Fo eive a ds, the	ound nten epea	spu nap akm	riou ola eas	use iriza sure	miss ition emei	sions :H(H ntis	s (No Horiz fully	spu zonta suffi	rious e al), V ( cient,	emi Ver ast	ssion tical) he m	swe axfi	ere o eld	deteo strer	cted.) ngth a





Modulation Mode	e	VH	Г20					٦	<b>Fes</b> t	Fre	q. (MH	lz)		ţ	520	0	
Operating Mode		2						F	Pola	riza	tion			ľ	V		
	Level (d	BuV/m)															
120																	
100																	
100																	
80																	
	րուրու		r.n.		น					Л				Ļ	FCC	PART	15E
60				5								-		FCC	PART	15E (/	AVG)
		4															
40		- 18 -										-					
20												-	_				
U	1000	6000.	100	00.	140	00.		)00. reque	220 ncy (I		26000.	3	0000.	34	000.		40000
		Freq.	Emiss	ion	Lin	nit	Mar	rgin	S	Α	Facto	r	Rema	ark		ANT	Turn
			lev							ding						ligh	
		MHz	dBu∖	//m	dBu	uV/m	ı di	В	dB	uV	dB					cm	deg
1		5150.00	34.	99	54.	.00	-19	.01	30	.05	4.9	4	Ave	rage	-		
2		5150.00								.93	4.9	4	Peal	<u> </u>			
3		5427.00								.28	5.1		Ave	<u> </u>			
4		5427.00 0400.00								.42	5.1 14.7		Peal Peal				
,	10	400.00	55.	1	00.	. 50	-12		40	. 50	14.7	5	rea	ĸ			
Note 1: ">20dB" n																	
Note 2: "N/F" mea														SWE	ere	deteo	cted.)
Note 3: Measurer														~ · · f	ا م ا ما	otro	ath a
Viata 1. Ear reatric	todho	nda th	~ ~ ~ ~														
Note 4: For restric with the P																	





Modulation Mode	VHT	20			Test Fr	əq. (MHz	)	52	00	
Operating Mode	2				Polariz	ation		Н		
	el (dBuV/m)									
120										
100										
80										
mu						1		FC	C IPAR	T15E
60	2	5					F	CC PAF	RT15E (	AVG)
	Ĩ									
40									_	
20										
0 <mark>1000</mark>	6000.	10000.	14000.	18000. Freque	22000. ncy (MHz)	26000.	30000.	34000		40000
	Enog	mission	limit	Margin		Factor	Remar	ak	ANT	Turn
	rreq. i	level		nargin	readin		Nelliai	ĸ	High	
	MHz	dBuV/m	dBuV/r	n dB	dBuV	dB			cm	deg
1	<u></u>	77 50	<u>- 4 00</u>	16 50	- 22 50		A			
1 2	5150.00 5150.00			-16.50 -13.94	32.56 55.12			<u> </u>		
3	5427.00				32.19					
4	5427.00	50.75	74.00	-23.25	45.61	5.14	Peak			
5	10400.00	55.51	68.30	-12.79	40.76	14.75	Peak			
Note 1: ">20dB" mea Note 2: "N/F" means Note 3: Measuremen Note 4: For restricted with the Peak addition.	Nothing Fo It receive a bands, the	ound spu ntenna e peakn	uriouse polariza neasure	mission ation:H( ementis	s (No sp Horizon fully suf	urious en tal), V (Ve ficient, as	nissions ertical) sthe ma	were x field	dete dete	cted.) ngth as





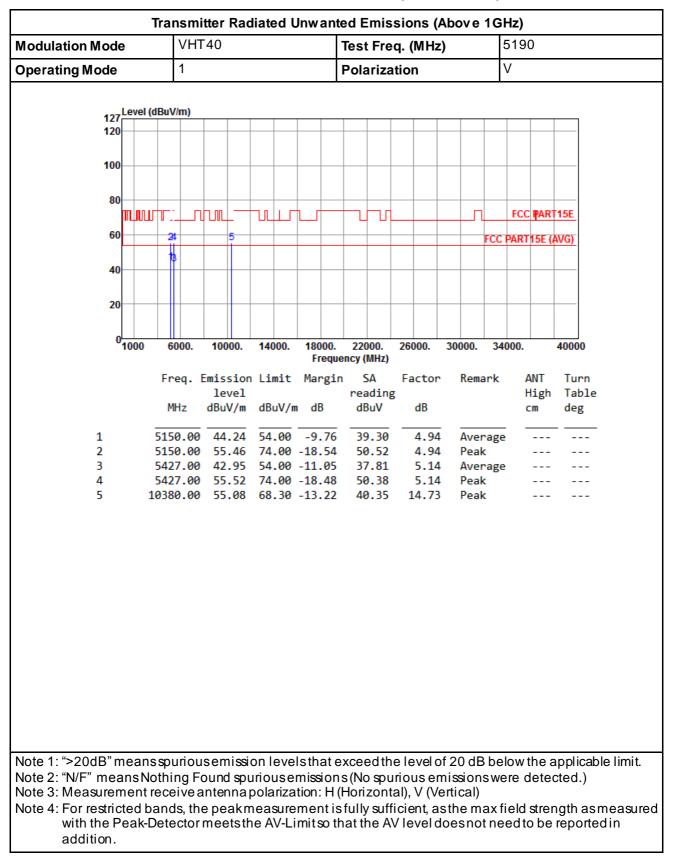
1 5150.00 34.68	n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	26000. Factor dB 4.94 4.94	Aver	FCC PAR 34000		AVG) 40000 Turn
120 100 80 60 24 40 20 0 1000 6000. 1000 6000. 1000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	14000. 18000 Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	. 22000. uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	FCC PAR 34000	ANT High	AVG) 40000 Turn Tabl
120 100 80 60 24 40 20 0 1000 6000. 1000 6000. 1000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	14000. 18000 Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	. 22000. uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	FCC PAR 34000	ANT High	AVG) 40000 Turn Tabl
100 80 100 60 24 40 20 0 1000 6000. 1000 6000. 1000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	14000. 18000 Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	. 22000. uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	FCC PAR 34000	ANT High	AVG) 40000 Turn Tabl
80 60 24 40 20 0 1000 6000. 1000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	14000. 18000 Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	. 22000. uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	FCC PAR 34000	ANT High	AVG) 40000 Turn Tabl
80 60 24 40 20 0 1000 6000. 10000. Freq. Emission 1000 MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	14000. 18000 Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	. 22000. uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	FCC PAR 34000	ANT High	AVG) 40000 Turn Tabl
60 24 40 20 0 1000 6000. 1000. Freq. Emission 1 5150.00 34.68 2 5150.00 40. 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 48.37	14000. 18000 Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	. 22000. uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	FCC PAR 34000	ANT High	AVG) 40000 Turn Tabl
60 24 40 20 0 1000 6000. 1000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	14000. 18000 Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	. 22000. uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	FCC PAR 34000	ANT High	AVG) 40000 Turn Tabl
40 20 0 1000 6000. 10000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	34000. ark	ANT High	40000 Turn Tabl
40 20 0 1000 6000. 10000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	34000. ark	ANT High	40000 Turn Tabl
20 0 1000 6000. 10000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	ark	ANT High	Turn Tabl
0 1000 6000. 10000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	ark	ANT High	Turn Tabl
0 1000 6000. 10000. Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	ark	ANT High	Turn Tabl
Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	ark	ANT High	Turn Tabl
Freq. Emission level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	Freq n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	uency (MHz) in SA reading dBuV 2 29.74 4 42.82 3 30.26	Factor dB <u>4.94</u> 4.94	Rema Aver	ark	ANT High	Turn Tabl
level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	n Limit Margi dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	in SA reading dBuV 2 29.74 4 42.82 3 30.26	dB 	Aver	age	High	Tabl
level MHz dBuV/m 1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	dBuV/m dB 54.00 -19.32 74.00 -26.24 54.00 -18.66	reading dBuV 2 29.74 4 42.82 3 30.26	dB 	Aver	age	High	Tabl
1 5150.00 34.68 2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	54.00 -19.32 74.00 -26.24 54.00 -18.66	2 29.74 4 42.82 3 30.26	4.94		<u> </u>	cm 	deg 
2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	74.00 -26.24 54.00 -18.60	4 42.82 30.26	4.94		<u> </u>		
2 5150.00 47.76 3 5427.00 35.40 4 5427.00 48.37	74.00 -26.24 54.00 -18.60	4 42.82 30.26	4.94		<u> </u>		
4 5427.00 48.37							
	74.00 -25.63		5.14		<u> </u>		
5 10460.00 55.16	69 20 12 11						
	00.00 -10.12	40.54	14.04	reak	<b>C</b>		
Note 1: ">20dB" means spurious emissi	ion levels that	exceedth	elevelo	f 20 dB	below	the 2	applica
Note 2: "N/F" means Nothing Found spi							
Note 3: Measurement receive antenna	polarization: H	(Horizont	al), V (Ve	ertical)			
Note 4: For restricted bands, the peakn	neasurementi	sfully suff	icient, as	sthem			
with the Peak-Detector meetsthed addition.	heAV-Limitso	that the A	Vleveld	oesno	t need	to be	repor





Aodulation Mode		VHT	20					٦	<b>Fest</b>	Free	q. (MHz	<u>z)</u>		5	24(	)	
Operating Mode		2						F	Pola	riza	tion			Н			
	.evel (dE	BuV/m)															
120-																	
100																	
80																	
	mµnur†	╔╌่่่่่่่่ᢩᢩ⊓		-	ᇺ				-1	ᇺ			Л		FCC	PART	15E
60		2,		5										FCC P	ART	15E (A	WG)
		Ĩ															
40																	
20																	
20																	
0																	
-1	1000	6000.	100	00.	140	00.	180 Fr		220 ncy (I		26000.	3000	)0.	340	00.		40000
		Freq.	Emiss	ion	Lin	nit		•		A	Factor	R	ema	ark	۵	NT	Turn
			lev					0		ding						ligh	
		MHz	dBu∖	//m	dBu	uV/m	ı dB	3	dB	uV	dB				C	m	deg
1	5	150.00	36.	96	54.	.00	-17.	04	32	.02	4.94	Δ	ver	age	-		
2		150.00					-20.			.11	4.94		eak	<u> </u>			
3		427.00								.19	5.14			age			
4		427.00								.28	5.14		eak				
5	10	480.00	55.	50	68.	. 30	-12.	74	40	.72	14.84	F P	eak	5			
ote 1: ">20dB" m	oaned	nuriou	som	iccio	n l	0.1/0	leth	at as		dth		of 20	ЧВ	hold	<b></b> t	hoo	nnlies
Note 2: "N/F" mea																	
lote 3: Measurem														201			
Note 4: For restrict	ed ba	nds, th	e pea	akm	eas	sure	mer	ntisi	fully	suffi	cient, a	sthe	ma	ax fie	eld	stren	igth as
with the Pe addition.	eak-De	etector	mee	tsth	e A'	V-Li	mits	io th	at th	ie A\	/levelc	loes	not	tnee	dto	be	report









Modulation Mode	VHT	40		-	Test Fi	eq. (MH	z)		51	90	
Operating Mode	1				Polaria	ation			Н		
1											
127 Level (	1BuV/m)										
120											
100											
80											
T.U.U	╢╌┼┚					Л			F	CC PAR	T15E
60	2	5							FCC PAI	RT15E (	AVG)
	3										
40											
20											
20											
0											
01000	6000.	10000.	14000.	18000. Freque	22000. ncy (MH)		300	00.	34000		40000
	Freq. E	mission	Limit	Margin	SA	Facto	r F	Rema	rk	ANT	Turn
		level			readi	0				High	
	MHz	dBuV/m	dBuV/n	n dB	dBuV	dB				cm	deg
1	5150.00	48.56	54.00	-5.44	43.6	2 4.9	4 4	Aver	age		
	5150.00				55.5			Peak			
	5427.00 5427.00				38.0 50.7			Aver Peak	<u> </u>		
	0380.00							<sup>p</sup> eak			
Note 1: ">20dB" means Note 2: "N/F" means No Note 3: Measurement r Note 4: For restricted b with the Peak-E	othing Fo eceive a ands, the	ound spu intenna j e peakm	uriouse polariza neasure	mission: ition:H(l ementis	s(Nosp Horizon fullysu	ourious e ntal), V (\ fficient, a	emiss /ertic asthe	ions :al) e ma	swere ax fiel	dete d strer	cted.) ngth as





Frequency(MHz) Freq. Emission Limit Margin SA Factor Remark ANT	odulation Mode	VHT40		-	Test Fre	q. (MHz)	)	52	30	
120 100 100 100 100 100 100 10000 1000 1000 1000 1000 1000 1000 1000 1000 1000 1000	perating Mode	1		I	Polariza	tion		V		
120       100       100       100       100       100       100       100       100       100       100       100       1000       1000       1000       1000       1000       1200       2000       2000       3000       3400       4         0       0       0       0       1000       14000       18000       22000       26000       30000       34000       4         1       0       0       0       0       100       1000       18000       22000       26000       30000       34000       4         1       0       0       0       0       1000       18000       1000       2000       30000       34000       4         1       0       0       0       0       10       1000       18000       2000       30000       34000       4         1       0       0       0       10       10       10       100       1000										
100       0		Buv/m)								
Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the ag 1 0460.00 55.81 68.30 -12.49 40.99 14.82 Peak	120									
bit 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the ag bit 2: ">20dB" means spurious emission levels that exceed the level of 20 dB below the ag bit 2: "Nets means nothing Found spurious emissions (No spurious emissions were detect bit 3: "Neasurement receive antenna polarization: H (Horizontal), V (Vertical)	100									
<pre>of 1: "&gt;20dB" means spurious emission levels that exceed the level of 20 dB below the ag</pre>										
0       23       5       0       FCC PARTISE (A         0       0       0       0       0       0       0         0       0       0       0       0       0       0       0         0       0       0       0       0       0       0       0       0         0       0       0       0       0       0       0       0       0       0         0       0       0       0       0       0       0       0       0       0         0       0       0       0       0       0       0       0       0       0       0         1       5150.00       43.34       54.00       -10.66       38.40       4.94       Average          2       5150.00       55.47       74.00       -18.53       50.53       4.94       Peak          3       5427.00       55.73       74.00       -18.27       50.59       5.14       Peak          5       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          5       10460.00 </td <td>80</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>_</td> <td></td>	80								_	
the first of the f	m_nuur-		╷──┼┅╷╷╻╴				П	FC	C PAR	15 <u>E</u>
20 0 0 0 0 0 0 0 0 0 0 0 0 0	60	24	5					FCC PAF	RT15E (/	AVG)
20		13								
0         1000         6000.         10000.         14000.         18000.         22000.         26000.         30000.         34000.         4           Freq. Emission Limit Margin SA Factor Remark ANT Level reading High MHz dBuV/m dB dBuV dB cm           1         5150.00         43.34         54.00         -10.66         38.40         4.94         Average            2         5150.00         55.47         74.00         -18.53         50.53         4.94         Peak            3         5427.00         43.35         54.00         -10.65         38.21         5.14         Average            4         5427.00         95.73         74.00         -18.27         50.59         5.14         Peak            5         10460.00         55.81         68.30         -12.49         40.99         14.82         Peak            5         10460.00         55.81         68.30         -12.49         40.99         14.82         Peak            5         10460.00         55.81         68.30         -12.49         40.99         14.82         Peak    tote 1: ">>20dB" means spurious emission levels that ex	40									
0         1000         6000.         10000.         14000.         18000.         22000.         26000.         30000.         34000.         4           Freq. Emission Limit Margin SA Factor Remark ANT Level reading High MHz dBuV/m dB dBuV dB cm           1         5150.00         43.34         54.00         -10.66         38.40         4.94         Average            2         5150.00         55.47         74.00         -18.53         50.53         4.94         Peak            3         5427.00         43.35         54.00         -10.65         38.21         5.14         Average            4         5427.00         95.73         74.00         -18.27         50.59         5.14         Peak            5         10460.00         55.81         68.30         -12.49         40.99         14.82         Peak            5         10460.00         55.81         68.30         -12.49         40.99         14.82         Peak            5         10460.00         55.81         68.30         -12.49         40.99         14.82         Peak    tote 1: ">>20dB" means spurious emission levels that ex										
Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark ANT level reading Reduced to the second s	20									
Frequency (MHz)         Freq. Emission Limit Margin SA Factor Remark ANT level reading Reduced to the second s	0									
Freq. Emission Limit Margin SA       Factor Remark ANT         level       reading         MHz       dBuV/m       dB       dBuV         1       5150.00       43.34       54.00       -10.66       38.40       4.94       Average          2       5150.00       55.47       74.00       -18.53       50.53       4.94       Peak          3       5427.00       43.35       54.00       -10.65       38.21       5.14       Average          4       5427.00       55.73       74.00       -18.27       50.59       5.14       Peak          5       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          5       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          60te 1: ">>20dB" means spurious emission levels that exceed the level of 20 dB below the agot etc."       monstance          60te 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect of etc."       N(Vertical)	°1000	6000. 10	000. 14000.			26000.	30000.	34000	•	40000
Ievel         reading         High           1         5150.00         43.34         54.00         -10.66         38.40         4.94         Average            2         5150.00         55.47         74.00         -18.53         50.53         4.94         Average            3         5427.00         43.35         54.00         -10.65         38.21         5.14         Average            4         5427.00         55.73         74.00         -18.27         50.59         5.14         Peak            5         10460.00         55.81         68.30         -12.49         40.99         14.82         Peak            5         10460.00         55.81         68.30         -12.49         40.99         14.82         Peak            5         10460.00         55.81         68.30         -12.49         40.99         14.82         Peak            60te 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the ago incurve and spurious emissions (No spurious emissions were detection incurve and spurious emissions (No spurious emissions were detection incurve and spurious emissions (No spurious emissions were detection incurve and there ago incurve and there ago incurve and there ago		Freq. Emis	ssion limit			Factor	Rema	rk	ΔΝΤ	Turn
1       5150.00       43.34       54.00       -10.66       38.40       4.94       Average          2       5150.00       55.47       74.00       -18.53       50.53       4.94       Peak          3       5427.00       43.35       54.00       -10.65       38.21       5.14       Average          4       5427.00       55.73       74.00       -18.27       50.59       5.14       Peak          5       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          5       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          6       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          6       74.00       -18.27       50.59       5.14       Peak           7       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          0te 2: "N/F" meansNothing Found spurious emissions (No spurious emissions were detect of 20 dB below the agote 2: "N/F" meansNothing Found spurious emissions (No spurious emissions were det				1101 8111			T C III C			
2       5150.00       55.47       74.00       -18.53       50.53       4.94       Peak          3       5427.00       43.35       54.00       -10.65       38.21       5.14       Average          4       5427.00       55.73       74.00       -18.27       50.59       5.14       Peak          5       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          6       5.75       7.81       68.30       -12.49       40.99       14.82       Peak          6       7.77       means spurious emission levels that exceed the level of 20 dB below the apote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect of 2.50       7.50       7.50       7.50       7.50       7.50       7.50       7.50       7.50		MHz dBu	uV/m dBuV/m	ı dB	dBuV	dB			cm	deg
2       5150.00       55.47       74.00       -18.53       50.53       4.94       Peak          3       5427.00       43.35       54.00       -10.65       38.21       5.14       Average          4       5427.00       55.73       74.00       -18.27       50.59       5.14       Peak          5       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          5       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          5       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          6       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          6       10460.00       55.81       68.30       -12.49       40.99       14.82       Peak          6       7.00       7.01       7.01       7.01       7.01       7.01       7.01         7       7.02       7.01       7.02       7.02       7.02       7.02       7.02       7.02 <t< td=""><td>1 -</td><td>150 00 13</td><td>3 3/ 5/ 00</td><td>-10 66</td><td>38 /0</td><td>4 94</td><td>Avor</td><td></td><td></td><td></td></t<>	1 -	150 00 13	3 3/ 5/ 00	-10 66	38 /0	4 94	Avor			
3 5427.00 43.35 54.00 -10.65 38.21 5.14 Average 4 5427.00 55.73 74.00 -18.27 50.59 5.14 Peak 5 10460.00 55.81 68.30 -12.49 40.99 14.82 Peak 5 10460.00 55.81 68.30 -12.49 40.99 14.82 Peak										
5 10460.00 55.81 68.30 -12.49 40.99 14.82 Peak lote 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the ap- lote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect lote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
lote 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the ap lote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect lote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)	5 16	460.00 55	5.81 68.30	-12.49	40.99	14.82	Peak			
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detections of the spurious emissions were detection and the spurious antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
lote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect lote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
ote 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detect ote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)	ote 1 <sup>.</sup> ">20dB" means	souriouser	mission leve	Isthate	xceedth	e level o	f 20 dB	belov	the a	applica
lote 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)										
lote 4: For restricted bands, the peak measurement is fully sufficient, as the max field streng	ote 3: Measurement re	eceiveante	nnapolariza	tion: H (H	Horizonta	al), V (Ve	ertical)			
	ote 4: For restricted ba	nds, the pe	eakmeasure	mentis	fully suffi	cient, as	sthem			
with the Peak-Detector meets the AV-Limits that the AV level does not need to be readdition.		etectorme	etsthe AV-Li	mitso th	at the A\	/leveld	oesnot	need	to be	report





Modulation Mode	e	\	/HT	40					1	<b>Fest</b>	Fre	q. (MI	Hz)		Ę	523	0	
Operating Mode		1	1						I	Pola	riza	tion			ł	Η		
		_																
	Level (d	BuV/r	n)															
120																		
100																		
80													_					
	ուստ	T						Ľ		-1	╷			П		FCC	PAR	15 <u>E</u>
60		24			5										FCC	PART	15E (/	AVG)
		13																
40																		
20																		
· · · ·	1000	600	00.	100	00.	14(	000.		000. reque	220 ncv (1		26000	. 3	80000.	34(	000.		40000
		Eno	a F	mic	cion	1.1	mi+		rgin		Α	Fact	on	Rema	ank		ANT	Turn
		rre	4. L		vel		III C	na	1 STII		ding		UI.	item.			High	
		MH	z	dBu	V/m	dB	uV/n	n d	В		uV	dB					cm	deg
1	-	5150	00	- 11	75		.00	-9	25	20	.81	4.	04	Aver		-		
2		5150						-17			.26		94 94	Peal	<u> </u>			
3		5427				54	.00	-10	.60		.26	5.		Aver	rage			
4		5427									.38	5.		Peal				
5	10	0460	.00	55	.43	68	.30	-12	.87	40	.61	14.	82	Peal	¢			
lote 1: ">20dB" n																		
lote 2: "N/F" mea															swe	ere o	deteo	cted.)
Note 3: Measurer Note 4: For restric															ay fi	ماط	etror	nath a
		1103	,	, hg	unii					uny	Jun	U U U I,			unii			
with the P			tor	mee	etsth	ne A	N-Li	imit	so th	at th	e A\	/leve	ldo	esno	tne	edt	o be	repor





lodulation Mode	;	VH	IT40					٦	<b>Fes</b> t	Free	q. (MHz	z)		5	519	0	
Operating Mode		2						F	Pola	riza	tion			٧	/		
	Level (d	BuV/m)															
120																	
100																	
80	_																
	TUUU	╹-:	որու	<u> </u>					-1	∿			Л		FCC	PART	15E
60		~		5										FCC P	PART	15E ( <i>l</i>	AVG)
		4															
40		-13															
20																	
20																	
0																	
	1000	6000.	10	000.	14	000.		)00. Teque	220 ncy (I		26000.	300	00.	340	00.		40000
		Freq.	Emis	sior	ı Li	mit	Mar	rgin	s	Α	Factor	R	ema	ark	4	ANT	Turn
		-	le	vel				-	rea	ding					H	ligh	
		MHz	dBu	ıV∕m	dB	uV/n	n dE	3	dB	uV	dB				0	m	deg
1	5	5150.0	0 36	.46	54	.00	-17.	.54	31	.52	4.94	Ā	ver	age	-		
2		5150.0								.52	4.94		eak	_			
3		5427.0								.69	5.14			age			
4		5427.0 0380.0								.14 .04	5.14 14.73		'eak 'eak				
	1		0 3-	• • • •	00		10.		40		14.71		Cun	•			
lote 1: ">20dB" m																	
lote 2: "N/F" mea lote 3: Measurem														swe	re c	ieteo	cea.)
lote 4: For restric														ax fi	eld	strer	nath a
with the P	eak-D	etecto	rmee	ətsth	ne A	V-Li	imits	so th	at tr	∣e A\	/levelo	loes	not	tnee	edto	be c	repor





Modulation Mode		VHT	40					1	<b>Fes</b> t	Fre	q. (MH	łz)		ť	519	0	
Operating Mode		2						I	Pola	riza	tion			I	Η		
127 Leve	el (dBu\	//m)															
120																	
100													_				
80													_				
n n				-			ען		-1	Л		-		ļ	FCO	C IPART	15E
60	Ī	1		5										FCC	PAR	Г <b>15Е (</b> /	AVG)
40																	
20													_				
0	0 6	000.	100	00.	140	000.	180	000.	220	00.	26000.	3	0000.	34	000.		40000
								reque									
	Fr	eq. I			Li	mit	Ma	rgin		A	Facto	or	Rema	ark		ANT	Turn
	м	Hz		/el //m	dB	uV/n	n d	R		ding uV	dB					High cm	Tabl deg
												_				<b>C</b> III	
1		0.00					-5			.97	4.9		Ave	<u> </u>			
2 3		0.00 7.00								.03 .48	4.9 5.3		Peal Avei				
4		7.00								.05	5.3		Peal	-			
5	1038	0.00	55	.47	68	.30	-12	.83	40	.74	14.	73	Peal	k			
lote 1: ">20dB" mea lote 2: "N/F" means	Nothi	ng Fo	ound	lspu	irio	use	miss	sions	s (No	spu	rious	emi	ssion	swe			
Note 3: Measuremer Note 4: For restricted with the Peal	lbanc	ls, the	e pe	akm	iea	sure	me	ntis	fully	suffi	cient,	ast	hem	ax fi			





Modulation Mode	;	VH	T40					1	<b>Fest</b>	Fre	q. (MHz	<u>z)</u>		Ę	523	0	
Operating Mode		2						I	Pola	riza	tion			١	V		
		BuV/m)															
120																	
100																	
100																	
80																	
	munur		տո	<u> </u>					-1	고			∟л	4	FC	PART	15E
60				5										FCC	PAR	15E (/	AVG)
		24 1															
40		18															
20																	
0	1000	6000.	100	000.	14	000.		)00. reque	220		26000.	30	000.	34(	000.		40000
		Freq.	Emic	cior						мп <i>2)</i> А	Factor		Rema	ank		ANT	Turn
		Freq.		vel		mic	na	гдти		A ding			Nema	агк		High	
		MHz			dB	uV/n	n di	В		uV	dB					cm	deg
4	-			- 10	<b>F</b> 4		- 10	<u> </u>				-					
1		5150.00 5150.00								.46 .77	4.94 4.94		Peal	rage k			
3		5427.00								.28	5.14			rage			
4		5427.00								.52	5.14		Peal	κŪ			
5	16	0460.00	54	.94	68	.30	-13	.36	40	.12	14.82	2	Peal	k			
Note 1: ">20dB" m Note 2: "N/F" mea Note 3: Measuren Note 4: For restric	nsNo nentre	thing F eceive	oune ante	d spu nna	urio pola	use ariza	miss tion	sions :H(H	s (No Horiz	spu zonta	rious ei al), V (V	nis erti	sion cal)	swe	ere	deteo	cted.)
with the P addition.																	

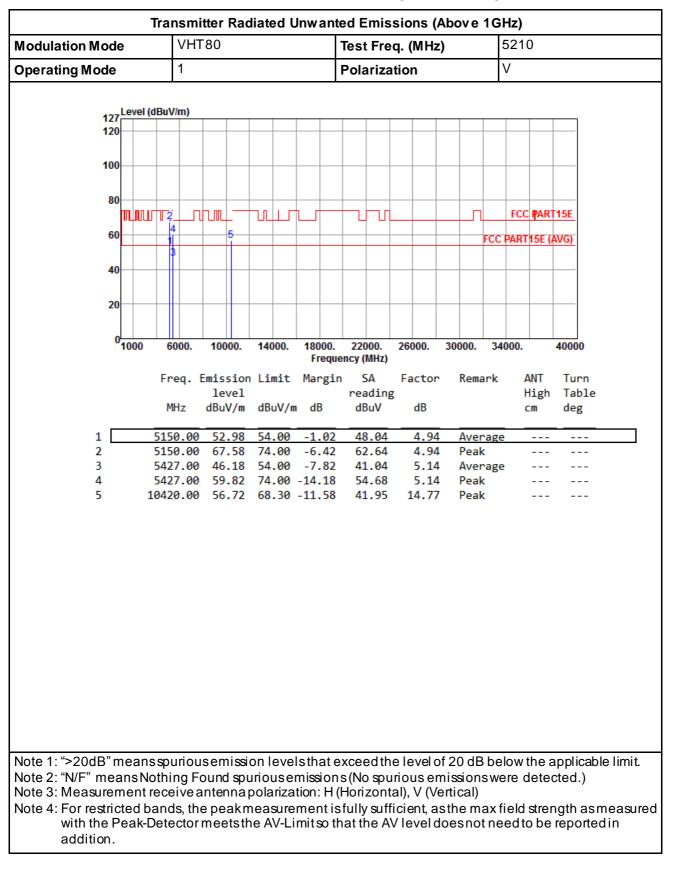




Modulation Mode	VHT	40			Test Fre	eq. (MHz	)	52	30	
Operating Mode	2				Polariza	ation		Н		
	l (dBuV/m)									
120										
100										
80									_	
րդո							П	F	C PAR	15E
60	2	5						FCC PAI	RT15E (J	AVG)
	Í									
40										
20										
0 <mark>1000</mark>	6000.	10000.	14000.	18000. Freque	22000. ncy (MHz)	26000.	30000.	34000		40000
	Enor	mission	limit	Margin		Factor	Rema	nk	ANT	Turn
	rieq. i	level		nargin	readin		Nemic		High	
	MHz	dBuV/m	dBuV/r	n dB	dBuV	dB			cm	deg
4	<u></u>	- 20, 40	<b>FA</b> 00	44.00	- 24 - 24					
1 2	5150.00 5150.00			-14.82	34.24 51.21					
3	5427.00				32.39					
4	5427.00							۲Ū		
5	10460.00	55.75	68.30	-12.55	40.93	14.82	Peak	5		
Note 1: ">20dB" mea Note 2: "N/F" means Note 3: Measuremen Note 4: For restricted	Nothing Fo treceive a	ound spu Intenna	uriouse polariza	mission ation: H (	s (Nosp Horizon	urious en tal), V (Ve	nission ertical)	swere	dete	cted.)



#### 3.6.10 Transmitter Radiated Unwanted Emissions (Above 1GHz) for VHT80







Modulation Mode		VHT	80					٦	<b>Fest</b>	Fre	q. (MH	z)		ţ	521	0	
Operating Mode		1						F	Pola	riza	tion			I	-		
	evel (dB	uV/m)															
120																	
100																	
80																	
m				.	սւ		Ľ		-1	ᇺ					FCO	PART	15E
60		24												FCC	PAR	15E ( <i>l</i>	AVG)
		3															
40—													_				
20																	
0 <mark>10</mark>	00	6000.	1000	)0.	140	00.		00. eque	220		26000.	3	0000.	34	000.		40000
	r	Freq. B	micc	ion	1.1.0	+		-		A .	Facto		Rema	ank		ANT	Turn
		rreq. i	lev		LTI	ш	riar	.Вти		A ding		r.	Remo	агк		High	
		MHz	dBuV		dBu	ıV∕m	ı dE	3		uV	dB					cm	deg
	_											-					
1 2		150.00			54.		-9.			.02	4.9		Ave Peal	<u> </u>			
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2       5150.00       56.10       74.00       -17.90       51.16       4.94       Peak           3       5427.00       42.58       54.00       -11.42       37.44       5.14       Average          4       5427.00       54.11       74.00       -19.89       48.97       5.14       Peak          5       10420.00       55.99       68.30       -12.31       41.22       14.77       Peak          5       10420.00       55.99       68.30       -12.31       41.22       14.77       Peak          60       10420.00       55.99       68.30       -12.31       41.22       14.77       Peak          60       10420.00       55.99       68.30       -12.31       41.22       14.77       Peak          100       54.75       70.00       55.99       68.30       -12.31       41.22       14.77       Peak          100       19.75       70.76       70.77       Peak           100       51.99       68.30       12.31       41.22       14.77       Peak	1	51	50.00	43.	18	54.	00	-10.8	82	38	.24	4.94	ī	Aver	rage	-		
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	lote 4: For restricte	ed bar	nds, the	epea	akm	eas	ure	ment	tisf	ully	suffi	cient, a	sth	e m				



# 3.7 Frequency Stability

## 3.7.1 Frequency Stability Limit

	Frequency Stability Limit
UN	II Devices
	In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.
LE-	-LAN Devices
⊠	N/A

#### IEEE Std. 802.11n-2009

The transmitter center frequency tolerance shall be  $\pm 20$  ppm maximum for the 5 GHz band and  $\pm 25$  ppm maximum for the 2.4 GHz band.

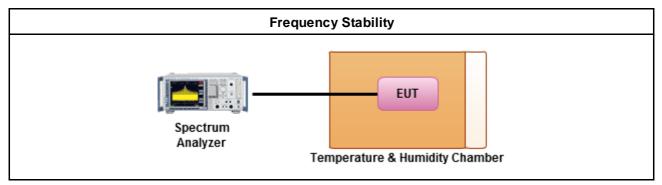
#### 3.7.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.7.3 Test Procedures

		Test Method
⊠	Refe	er as ANSI C63.10, clause 6.8 for frequency stability tests
	⊠	Frequency stability with respect to ambient temperature
	⊠	Frequency stability when varying supply voltage
$\boxtimes$	For	conducted measurement.
	Ø	For conducted measurements on devices with multiple transmit chains: Measurements need only to be performed on one of the active transmit chains (antenna outputs)
		radiated measurement. The equipment to be measured and the test antenna shall be oriented to ain the maximum emitted power level.

#### 3.7.4 Test Setup





Frequency Stability Result								
Мо	de	Frequency Stability (ppm)						
Condition	Freq. (MHz)	Test Frequency (MHz)	Frequency Stability (ppm)					
T <sub>20°C</sub> Vmax	5200	5200.01333	2.5635					
T <sub>20°C</sub> Vmin	5200	5200.01382	2.6577					
$T_{55^{\circ}C}Vnom$	5200	5200.00805	1.5481					
$T_{50^{\circ}C}$ Vnom	5200	5200.01127	2.1673					
$T_{40^{\circ}C}$ Vnom	5200	5200.00673	1.2942					
$T_{30^\circ C}$ Vnom	5200	5200.01304	2.5077					
$T_{20^{\circ}C}$ Vnom	5200	5200.00430	0.8269					
T <sub>10°C</sub> Vnom	5200	5200.01203	2.3135					
$T_{0^{\circ}C}$ Vnom	5200	5200.01433	2.7558					
T <sub>-10°C</sub> Vnom	5200	5200.01338	2.5731					
T <sub>-20°C</sub> Vnom	5200	5200.01022	1.9654					
T <sub>-30°C</sub> Vnom	5200	5200.01449	2.7865					
Limit (	ppm)	2	20					
Result		Complied						



# 4 Test Equipment and Calibration Data

Test Item	Conducted Emission									
Test Site	Conduction room 1 / (C	Conduction room 1 / (CO01-WS)								
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until					
EMC Receiver	R&S	ESCS 30	100169	Oct. 02, 2012	Oct. 01, 2013					
LISN	SCHWARZBECK MESS-ELEKTRONIK	Schwarzbeck 8127	8127-667	Dec. 04, 2012	Dec. 03, 2013					
LISN (Support Unit)	SCHWARZBECK MESS-ELEKTRONIK	Schwarzbeck 8127	8127-666	Dec. 04, 2012	Dec. 03, 2013					
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Dec. 25, 2012	Dec. 24, 2013					
50 ohm terminal	NA	50	01	Apr. 22, 2013	Apr. 21, 2014					
50 ohm terminal	NA	50	02	Apr. 22, 2013	Apr. 21, 2014					
50 ohm terminal	NA	50	03	Apr. 22, 2013	Apr. 21, 2014					
50 ohm terminal (Support Unit)	NA	50	04	Apr. 22, 2013	Apr. 21, 2014					

Test Item	Test Item Radiated Emission above 1GHz							
Test Site	966 chamber1 / (03CH01-WS)							
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until			
3m semi-anechoic chamber	CHAMPRO	SAC-03	03CH01-WS	Jan. 04, 2013	Jan. 03, 2014			
Spectrum Analyzer	R&S	FSV40	101498	Jan. 24, 2013	Jan. 23, 2014			
Receiver	R&S	ESR3	101658	Jan. 28, 2013	Jan. 27, 2014			
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jan. 11, 2013	Jan. 10, 2014			
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Feb. 18, 2013	Feb. 17, 2014			
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Jan. 14, 2013	Jan. 13, 2014			
Amplifier	Burgeon	BPA-530	100219	Nov 28, 2012	Nov. 27, 2013			
Amplifier	Agilent	83017A	MY39501308	Dec. 18, 2012	Dec. 17, 2013			
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 25, 2012	Dec. 24, 2013			
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 25, 2012	Dec. 24, 2013			
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 25, 2012	Dec. 24, 2013			
RF Cable-R03m	Woken	CFD400NL-LW	CFD400NL-001	Dec. 25, 2012	Dec. 24, 2013			
RF Cable-R10m	Woken	CFD400NL-LW	CFD400NL-002	Dec. 25, 2012	Dec. 24, 2013			
control	EM Electronics	EM1000	60612	N/A	N/A			

Loop AntennaR&SHFH2-Z2100330Nov 15, 2012Nov 14, 2014AmplifierMITEQAMF-6F-2604009121372Apr. 19, 2013Apr. 18, 2015Note: Calibration Interval of instruments listed above is two year.



Test Item	RF Conducted								
Test Site	TH01-HY	TH01-HY							
Instrument	Manufacturer	Model No.	Serial No.	Calibration Date	Calibration Until				
Spectrum Analyzer	R&S	FSV 40	101063	Feb. 18, 2013	Feb. 17, 2014				
Spectrum Analyzer	R&S	FSP 40	100305	Mar. 20, 2013	Mar. 19, 2014				
Temp. and Humidity Chamber	Giant Force	GTH-225-20-SP-SD	MAA1112-007	Nov 21, 2012	Nov 20, 2013				
Signal Generator	R&S	SMB100A	175727	Jan. 14, 2013	Jan. 13, 2014				
Power Sensor	Anritsu	MA2411B	0917017	Feb. 02, 2013	Feb. 01, 2014				
Power Meter	Anritsu	ML2495A	0949003	Feb. 02, 2013	Feb. 01, 2014				