

Report No. : FR411403-23AN

# **FCC Test Report**

Equipment : 11ac Dual Band Concurrent Wall-mount AP

Brand Name : EDIMAX

Model No. : EW-7479WAC,GAP-479WAC,WAP1200

FCC ID : NDD9574791415

Standard : 47 CFR FCC Part 15.407

Operating Band : 5150 MHz - 5250 MHz

5725 MHz - 5850 MHz

FCC Classification: UNII

Applicant : EDIMAX TECHNOLOGY CO., LTD.

Manufacturer No.3, Wu-Chuan 3rd Road, Wu-Ku Industrial

Park, New Taipei City, Taiwan

The product sample received on Oct. 02, 2014 and completely tested on Mar. 11, 2016. 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:

Kevin Liang / Assistant Manager

Testing Laboratory
1190

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**APPENDIX A. TEST PHOTOS** 

APPENDIX B. PHOTOGRAPHS OF EUT

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# **Summary of Test Result**

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Conformance Test Specifications							
Report Clause	' I DESCRIPTION						
1.1.2	15.203	Antenna Requirement	Complied				
3.1	15.207	AC Power-line Conducted Emissions	Complied				
3.2	15.407(a)	Emission Bandwidth	Complied				
3.3	15.407(a)	RF Output Power (Maximum Conducted Output Power)	Complied				
3.4	15.407(a)	Peak Power Spectral Density	Complied				
3.5	15.407(b)	Transmitter Bandedge Emissions	Complied				
3.6	15.407(b)	Transmitter Unwanted Emissions	Complied				
3.7	15.407(g)	Frequency Stability	Complied				

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# **Revision History**

Report No.: FR411403-23AN

Report No.	Version	Description	Issued Date
FR411403AN	Rev. 01	Initial issue of report	Jun. 18, 2014
FR411403-04AN	Rev. 01	Update Standard version to     47 FR FCC Part 15.407.     Update RF Conducted	Oct. 06, 2014
FR411403-06AN	Rev. 01	<ol> <li>Change FCC ID.</li> <li>Change model name.</li> <li>Change Antenna number to two Antenna.</li> <li>Change I/O port and button.</li> </ol>	Nov. 29, 2014
FR411403-21AN	Rev. 01	Update information as below: 1. Add level VI adapter(WA-30J12R). 2. Update AC conduction and radiated emissions (Below 1GHz) tested.	Dec. 28, 2015
FR411403-23AN	Rev. 02	Remove Level V Adapter (DA-48T12) and add Level VI Adapter (DA-48T12)     UNII-band3, update standard version to 15.407 and update UNII-Band 1 limit.	May 11, 2016

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# 1 General Description

#### 1.1 Information

#### 1.1.1 RF General Information

RF General Information (5150-5250MHz band)							
Frequency IEEE Std. Ch. Freq. Channel Transmit RF Output Chains (N <sub>TX</sub> ) Power (dBm)							
5150-5250	а	5180-5240	36-48 [4]	1	21.35	Yes	
5150-5250	n (HT20)	5180-5240	36-48 [4]	2	24.42	Yes	
5150-5250	n (HT40)	5190-5230	38-46 [2]	2	24.91	Yes	
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	2	24.33	Yes	
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	2	24.90	Yes	
5150-5250	ac (VHT80)	5210	48 [1]	2	21.06	Yes	

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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: 802.11ac 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.)

RF General Information (5725-5850MHz band)							
Frequency Range (MHz) IEEE Std. Ch. Freq. Channel Transmit RF Output Number Chains (N <sub>TX</sub> ) Power (dBm)							
5725-5850	а	5745-5825	149-165 [5]	1	21.37	Yes	
5725-5850	n (HT20)	5745-5825	149-165 [5]	2	22.45	Yes	
5725-5850	n (HT40)	5755-5795	151-159 [2]	2	22.20	Yes	
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	2	22.49	Yes	
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	2	22.16	Yes	
5725-5850	ac (VHT80)	5775	155 [1]	2	12.62	Yes	

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: 802.11ac 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.)

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### 1.1.2 Antenna Information

	Antenna Category					
	Integral 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.					
$\boxtimes$	External antenna (dedicated antennas)					
	Single power level with corresponding antenna(s).					
	☐ Multiple power level and corresponding antenna(s).					

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	Antenna General Information							
Port No.	Ant. Cat.	Ant. Type	Model Name	Gain (dBi)				
1	Futomod	Dinolo	00040DDCV000	2.58				
2	External	Dipole	98610PRSX002	2.58				

#### Remark:

- 802.11a only include 1TX and Port1 for emission.
   802.11n/ac only include 2TX and CDD function.

## 1.1.3 Type of EUT

	Identify EUT					
EU	Γ Serial Number	N/A				
Pre	sentation of Equipment	☐ Production ; ☐ Pre-Production ; ☐ Prototype				
		Type of EUT				
$\boxtimes$	Stand-alone					
	Combined (EUT where the radio part is fully integrated within another device)					
	Combined Equipment - Brand Name / Model No.:					
	Plug-in radio (EUT intended for a variety of host systems)					
	Host System - Brand Name / Model No.:					
	Other:					

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## 1.1.4 Test Signal Duty Cycle

	Operated Mode for Worst Duty Cycle					
	Operated normally mode for worst duty cycle					
$\boxtimes$	Operated test mode for worst duty cycle					
	Test Signal Duty Cycle (x)  Power Duty Factor [dB] – (10 log 1/x)					
$\boxtimes$	100% - IEEE 802.11a	0				
$\boxtimes$	100% - IEEE 802.11n (HT20)	0				
$\boxtimes$	100% - IEEE 802.11n (HT40)	0				
$\boxtimes$	100% - IEEE 802.11ac (VHT20)	0				
$\boxtimes$	100% - IEEE 802.11ac (VHT40)	0				
$\boxtimes$	100% - IEEE 802.11ac (VHT80)	0				

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## 1.1.5 EUT Operational Condition

Supply Voltage		⊠ DC	System
Type of DC Source	☐ Internal DC supply	External DC from PoE	
Test Voltage			
Test Climatic	☐ Tnom (20°C)		☐ Tmin (-20°C)

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## 1.2 Accessories and Support Equipment

Accessories							
	Brand Name	APD	Model Name	WA-30B12			
AC Adoptor 1	Power Rating	I/P: 100-240Vac 0.8A	O/P: 12V===2.5A				
AC Adapter 1	Power cord	1.8m, non-shielded ca	ble, w/o ferrite core				
	Remark	Level V		DA-48T12			
	Brand Name	APD	Model Name	DA-48T12			
	Power Rating	I/P: 100-240Vac 1.4A ; O/P: 12V===4A					
AC Adapter 2	Power Cord	AC: 1.4m, non-shielded cable, w/o ferrite core DC: 1.5m, non-shielded cable, w/o ferrite core					
	Remark	Level VI					
	Brand Name	APD	Model Name	WA-30J12R			
A O A dandan 0	Power Rating	I/P: 100-240Vac 0.9A ; O/P: 12V===2.5A					
AC Adapter 3	Power Cord	1.8 meter, non-shielde	d cable, w/o ferrite cor	е			
	Remark	Level VI					

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Reminder: Regarding to more detail and other information, please refer to user manual.

### (For 5150~5250 MHz)

Support Equipment - RF Conducted								
No.	No. Equipment Brand Name Model Name FCC ID							
1	Notebook	DELL	E5540	DoC				
2	2 AC Adapter for Notebook DELL HA65NM130 DoC							

Support Equipment - AC Conduction						
No.	No. Equipment Brand Name Model Name FCC ID					
1	PoE	Acelink	PI-1000PT	DoC		
2	AC Adapter for PoE	UNIFIVE	UIB336-4875	DoC		

The PoE provided by the customer.

	Support Equipment - Radiated Emission						
No. Equipment Brand Name Model Name FCC ID							
1	PoE (Remote)	Acelink	PI-1000PT	DoC			
2	AC Adapter for PoE (Remote)	UNIFIVE	UIB336-4875	DoC			

The PoE provided by the customer.

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(For 5725~5850 MHz)

Support Equipment - RF Conducted						
No. Equipment Brand Name Model Name FCC ID						
1	Notebook	DELL	E5540	DoC		
2	AC Adapter for Notebook	DELL	HA65NM130	DoC		

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	Support Equipment - Radiated Emission					
No. Equipment Brand Name Model Name FCC ID						
1	PoE	Acelink	PI-1000PT	DoC		
2	AC Adapter for PoE	UNIFIVE	UIB336-4875	DoC		

The PoE provided by the customer.

## 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(UNII band1)
- ANSI C63.10-2013 (UNII band3)
- FCC KDB 789033 D02 v01r01
- FCC KDB 644545 D03 v01
- ◆ FCC-14-30A1-UNII
- FCC KDB 662911 D01 v02r01

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# 1.4 Testing Location Information

_										
				Testing	Location					
	HWA YA	ADD	:		No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.					
		TEL	:	886-3-327-3456 FAX	: 886-3-327-0973					
				Test site registered nun	nber [636805] with FCC.					
	Test Cond	ition		Test Site No.	Test Engineer	Test Environment				
	AC Condu (Mode 1~Mo			CO04-HY	Zeus	25°C / 43%				
	AC Conduction (Mode 4)			CO04-HY	Anthony	23°C / 59%				
				(For 5150~	5250 MHz)					
	RF Conducted			TH01-HY	Candy	22.1°C / 63%				
	Radiated Emission (Below 1GHz) (Mode 1~Mode 3)		1GHz) 03CH03-HY		Hunter	25.9°C / 49%				
	Radiated Emission (Below 1GHz) (Mode 4)		elow 1GHz) 03CH03-HY		Joe	25.9°C / 49%				
	Radiated Emission (Above 1GHz)		03CH03-HY		Hunter	25.9°C / 49%				
				(For 5725~	5850 MHz)					
	RF Conducted			TH01-HY	Candy	23.8°C / 64.2%				
	Radiated Em	nission		03CH03-HY	Jeff	22.2°C / 57%				

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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)

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Measurement Uncertainty				
Test Item		Uncertainty		
AC power-line conducted emissions		±2.3 dB		
Emission bandwidth, 26dB bandwidth		±0.5%		
RF output power, conducted		±0.1 dB		
Power density, conducted		±0.5 dB		
Unwanted emissions, conducted	9 – 150 kHz	±0.4 dB		
	0.15 – 30 MHz	±0.4 dB		
	30 – 1000 MHz	±0.6 dB		
	1 – 18 GHz	±0.5 dB		
	18 – 40 GHz	±0.5 dB		
	40 – 200 GHz	N/A		
All emissions, radiated	9 – 150 kHz	±2.5 dB		
	0.15 – 30 MHz	±2.3 dB		
	30 – 1000 MHz	±2.6 dB		
	1 – 18 GHz	±3.6 dB		
	18 – 40 GHz	±3.8 dB		
	40 – 200 GHz	N/A		
Temperature		±0.8 °C		
Humidity		±5 %		
DC and low frequency voltages		±0.9%		
Time		±1.4 %		
Duty Cycle		±0.5 %		

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#### **Test Configuration of EUT** 2

#### **The Worst Case Modulation Configuration** 2.1

	Worst Modulation Used for Conformance Testing					
Modulation Mode Transmit Chains (N <sub>TX</sub> ) Data Rate / MCS Worst Data Rate						
11a	1	6-54Mbps	6 Mbps			
HT20	2	MCS 0-15	MCS 0			
HT40	2	MCS 0-15	MCS 0			
VHT20	2	MCS 0-8	MCS 0			
VHT40	2	MCS 0-9	MCS 0			
VHT80	2	MCS 0-9	MCS 0			

#### 2.2 **The Worst Case Power Setting Parameter**

The Worst Case Power Setting Parameter (5150-5250MHz band)							
Test Software				DC	S		
				Test Fred	quency (MH	z)	
<b>Modulation Mode</b>	N <sub>TX</sub>		NCB: 20MH	Z	NCB:	40MHz	NCB: 80MHz
		5180	5200	5240	5190	5230	5210
11a	1	23	23	23	-	-	-
HT20	2	21	22.5	22.5	-	-	-
HT40	2	-	-	-	21	24	-
VHT20	2	21.5	22.5	22.5	-	-	-
VHT40	2	-	-	-	20	24	-
VHT80	2	-	-	-	-	-	20.5

The Worst Case Power Setting Parameter (5725-5850MHz band)							
Test Software Version				art2_v9.57	5.10 CS1		
				Test Fred	quency (MH	z)	
Modulation Mode	$N_{TX}$		NCB: 20MI	-lz	NCB:	40MHz	NCB: 80MHz
		5745	5785	5825	5755	5795	5775
11a	1	20	22	21	-	-	-
HT20	2	17.5	20	17.5	-	-	-
HT40	2	-	-	-	16	20	-
VHT20	2	17.5	20	17.5	-	-	-
VHT40	2	-	-	-	16	20	-
VHT80	2	-	-	-	-	-	11

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# 2.3 The Worst Case Measurement Configuration

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	EUT with Adapter 1			
2	EUT with Adapter 2			
3	3 EUT with PoE			
4 EUT with Adapter 3				
For operating mode 3 is the	For operating mode 3 is the worst case and it was record in this test report.			

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The Worst Case Mode for Following Conformance Tests				
Tests Item  RF Output Power, Peak Power Spectral Density, Emission Bandwidth, Peak Excursion, Transmitter Conducted Unwanted Emissions Transmitter Conducted Bandedge Emissions				
Test Condition Conducted measurement at transmit chains				
Modulation Mode 11a, HT20, HT40, VHT20, VHT40, VHT80				

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Th	e Worst Case Mode for Following Con	formance Tests		
Tests Item	Transmitter Radiated Unwanted Emissions Transmitter Radiated Bandedge Emissions			
Test Condition	regardless of spatial multiplexing MIMO	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	EUT will be placed in mobile position shall be performed three orthogonal	n and operating multiple positions. EUT l planes.		
	EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions. EUT shall be performed two orthogonal planes.			
	1. EUT with Adapter 1			
	2. EUT with Adapter 2			
Operating Mode < 1GHz	3. EUT with PoE			
	4. EUT with Adapter 3			
	For operating mode 3 is the worst case a	and it was record in this test report.		
Operating Mode > 1GHz	2. EUT with Adapter 2			
Modulation Mode	11a, HT20, HT40, VHT20, VHT40, VHT8	30		
	X Plane	Z Plane		
Orthogonal Planes of EUT				
Worst Planes of EUT	V			
Worst Planes of Antenna		V		

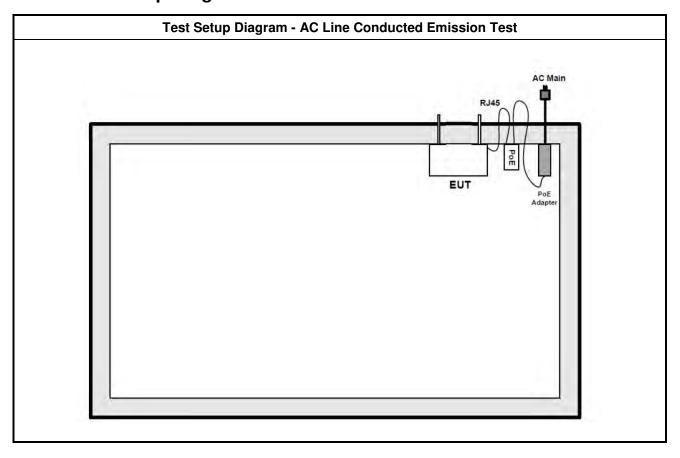
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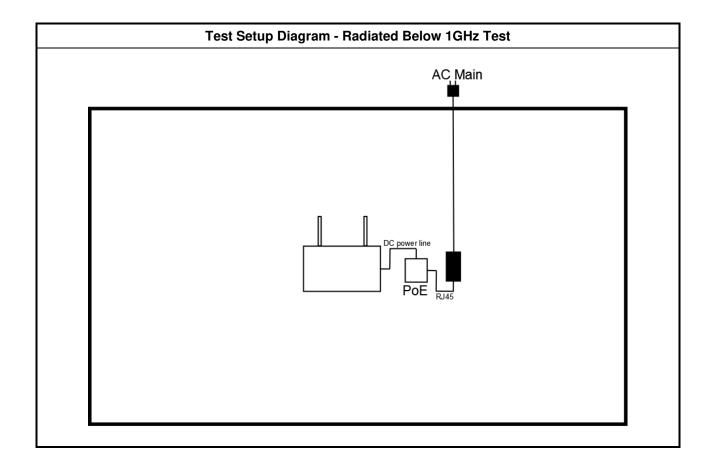
# 2.4 Test Setup Diagram



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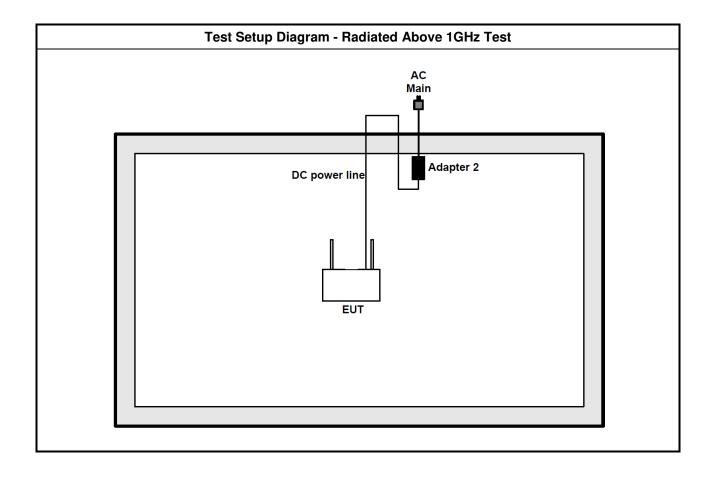
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## 3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

#### 3.1.1 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				

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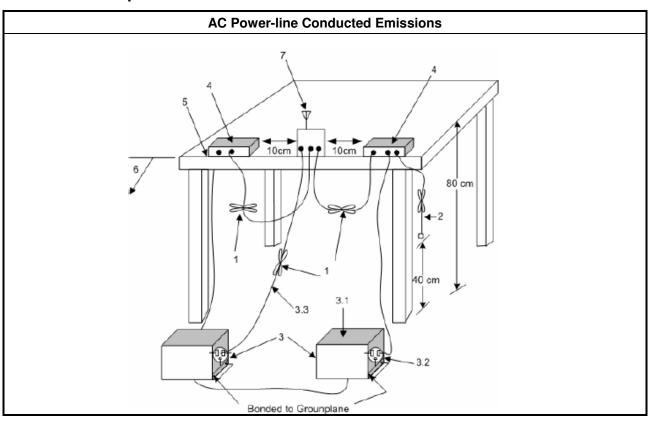
### 3.1.2 Measuring Instruments

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

#### 3.1.3 Test Procedures

	Test Method
$\boxtimes$	Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions.

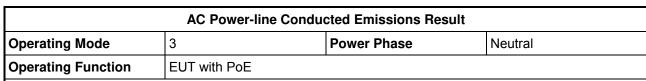
### 3.1.4 Test Setup



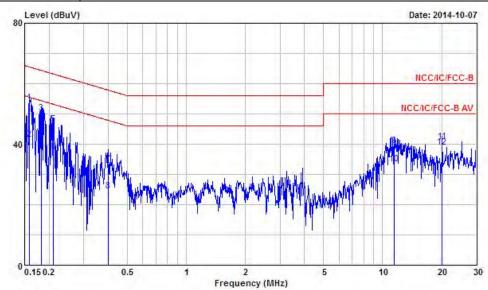
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3.1.5 Test Result of AC Power-line Conducted Emissions



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	Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1	80.1590020	53.61	-11.91	65.52	53.36	0.02	0.23	QP
2	0.1590020	41.68	-13.84	55.52	41.43	0.02	0.23	Average
3	0.1824860	50.33	-14.04	64.37	50.10	0.02	0.21	QP
4	0.1824860	39.52	-14.85	54.37	39.29	0.02	0.21	Average
5	0.2094380	46.51	-16.72	63.23	46.29	0.02	0.20	QP
6	0.2094380	37.32	-15.91	53.23	37.10	0.02	0.20	Average
7	0.4018680	33.29	-24.52	57.81	33.06	0.03	0.20	QP
8	0.4018680	24.58	-23.23	47.81	24.35	0.03	0.20	Average
9	11.440	39.38	-20.62	60.00	38.94	0.21	0.23	QP
10	11.440	33.31	-16.69	50.00	32.87	0.21	0.23	Average
11	20.109	40.77	-19.23	60.00	40.23	0.32	0.22	OP
12	@ 20.109	39.05	-10.95	50.00	38.51	0.32	0.22	Average

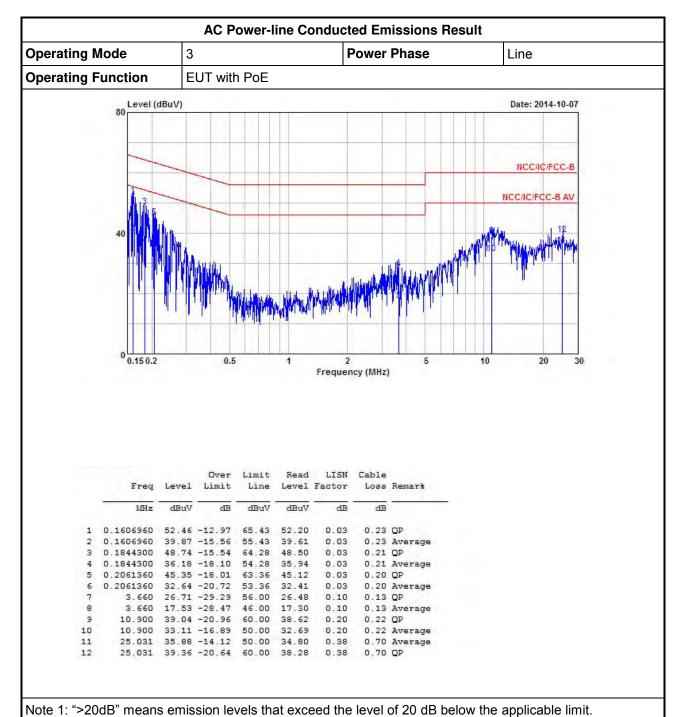
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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3.2 Emission Bandwidth

#### 3.2.1 Emission Bandwidth Limit

	Emission Bandwidth Limit						
UN	JNII Devices						
$\boxtimes$	For the 5.15-5.25 GHz band, N/A						
	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.						
$\boxtimes$	For the 5.725-5.85 GHz band, 6 dB emission bandwidth ≥ 500kHz.						

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#### 3.2.2 Measuring Instruments

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

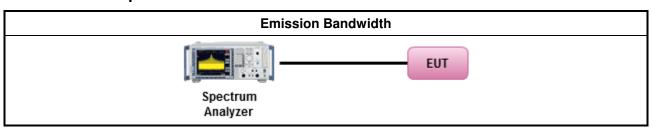
#### 3.2.3 Test Procedures

			Test Method					
$\boxtimes$	For t	the e	mission bandwidth shall be measured using one of the options below:					
	$\boxtimes$	Refe	er as FCC KDB 789033, clause C for EBW and clause D for OBW measurement.					
		Refe	er as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.					
		Refe	er as IC RSS-Gen, clause 6.6 for bandwidth testing.					
$\boxtimes$	For	or conducted measurement.						
	$\boxtimes$	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.					
		$\boxtimes$	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.					

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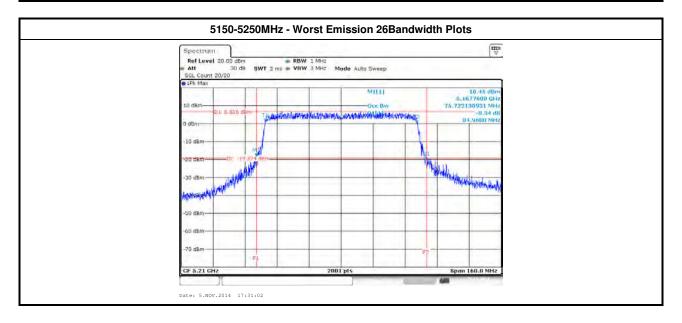
### 3.2.4 Test Setup



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#### 3.2.5 Test Result of Emission Bandwidth

Test Date: No	v. 05, 2	014	UNII Emission Bandwidth Result (5150-5250MHz band)					
Condit	ion		Emission Bandwidth (MHz)					
Modulation Mode	N	Freq.	99% Ba	ındwidth	26dB Ba	andwidth		
	N <sub>TX</sub>	(MHz)	Chain Port 1	Chain Port 2	Chain Port 1	Chain Port 2		
11a	1	5180	16.84	-	21.90	-		
11a	1	5200	16.59	-	22.72	-		
11a	1	5240	16.99	-	23.20	-		
HT20	2	5180	17.74	17.86	21.60	21.07		
HT20	2	5200	17.76	17.74	21.12	21.02		
HT20	2	5240	17.71	17.89	20.57	20.80		
HT40	2	5190	36.66	36.58	45.92	43.72		
HT40	2	5230	37.06	37.02	61.56	62.60		
VHT20	2	5180	17.69	17.84	20.87	20.77		
VHT20	2	5200	17.59	17.89	20.15	20.82		
VHT20	2	5240	17.74	17.96	20.27	21.17		
VHT40	2	5190	36.58	36.66	43.76	44.40		
VHT40	2	5230	36.98	37.02	60.40	62.08		
VHT80 2 5210		75.72	75.72	84.96	84.64			
Resu	ılt			Complied				

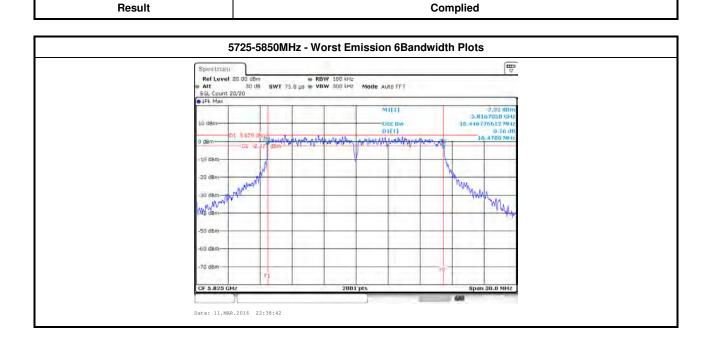


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Test Date: Mar. 11, 2016 Condition			UNII Emission Bandwidth Result (5725-5850MHz band)					
			Emission Bandwidth (MHz)					
Madulatian Mada		Freq.	99% Ba	ndwidth	6dB Bandwidth			
Modulation Mode	N <sub>TX</sub>	(MHz)	Chain Port 1	Chain Port 2	Chain Port 1	Chain Port 2		
11a	1	5745	16.44	-	16.54	-		
11a	1	5785	16.46	-	16.53	-		
11a	1	5825	16.44	-	16.47	-		
HT20	2	5745	17.66	17.64	17.77	17.67		
HT20	2	5785	17.64	17.63	17.67	17.65		
HT20	2	5825	17.70	17.66	17.80	17.67		
HT40	2	5755	36.22	36.18	36.36	36.40		
HT40	2	5795	36.18	36.18	36.36	36.40		
VHT20	2	5745	17.67	17.61	17.73	17.53		
VHT20	2	5785	17.66	17.64	17.74	17.71		
VHT20	2	5825	17.69	17.66	17.80	17.76		
VHT40	2	5755	36.18	36.18	36.40	36.44		
VHT40	2	5795	36.22	36.18	36.32	36.36		
VHT80	2	5775	75.56	75.48	76.32	76.48		

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## 3.3 RF Output Power

## 3.3.1 RF Output Power Limit

	Maximum Conducted Output Power Limit
UNI	II Devices
$\boxtimes$	For the 5.15-5.25 GHz band:
	Outdoor AP: the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W. If $G_{TX}$ > 6 dBi, then $P_{Out}$ = 30 – ( $G_{TX}$ – 6). e.i.r.p. at any elevation angle above 30 degrees $\leq$ 125mW [21dBm]
	Indoor AP: the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W. If $G_{TX}$ > 6 dBi, then $P_{Out}$ = 30 – ( $G_{TX}$ – 6)
	Point-to-point AP: the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W If $G_{TX} > 23$ dBi, then $P_{Out} = 30 - (G_{TX} - 23)$ .
	Mobile or Portable Client: the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 250 mW. If $G_{TX} > 6$ dBi, then $P_{Out} = 24 - (G_{TX} - 6)$ .
	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).
$\boxtimes$	For the 5.725-5.85 GHz band:
	Point-to-multipoint systems (P2M): the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesser of 1 W. If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ .
	Point-to-point systems (P2P): the maximum conducted output power (P <sub>Out</sub> ) shall not exceed the lesser of 1 W.
	$_{ m st}$ = maximum conducted output power in dBm, $_{ m c}$ = the maximum transmitting antenna directional gain in dBi.

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### 3.3.2 Measuring Instruments

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

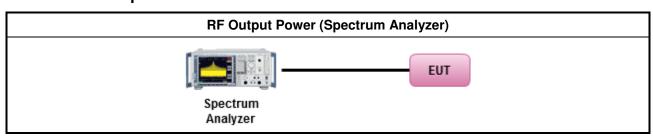
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### 3.3.3 Test Procedures

		Test Method
$\boxtimes$	Max	imum Conducted Output Power
	[dut	y cycle ≥ 98% or external video / power trigger]
	$\boxtimes$	Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).
		Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)
	duty	cycle < 98% and average over on/off periods with duty factor
		Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).
		Refer as FCC KDB 789033, clause 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, clause E Method PM (using an RF average power meter).
$\boxtimes$	For	conducted measurement.
	$\boxtimes$	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.
		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> = $P_{total} + DG$

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### 3.3.4 Test Setup



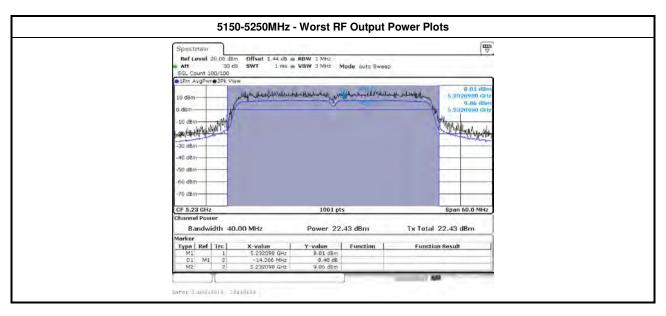
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## 3.3.5 Test Result of Maximum Conducted Output Power

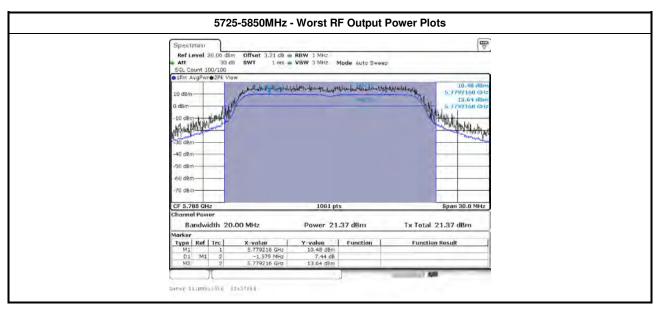
Test Date: No	v. 05, 20	014	Maximum Conducted Output Power (5150-5250MHz band)					
		Evon	C	Output Power (dBm)		Antenna Gain		
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	(dBi)	Power Limit	
11a	1	5180	21.30	-	21.30	2.58	30.00	
11a	1	5200	21.35	-	21.35	2.58	30.00	
11a	1	5240	21.07	-	21.07	2.58	30.00	
HT20	2	5180	19.35	20.02	22.71	2.58	30.00	
HT20	2	5200	20.91	21.86	24.42	2.58	30.00	
HT20	2	5240	20.65	21.67	24.20	2.58	30.00	
HT40	2	5190	18.58	19.17	21.90	2.58	30.00	
HT40	2	5230	21.34	22.40	24.91	2.58	30.00	
VHT20	2	5180	19.82	20.49	23.18	2.58	30.00	
VHT20	2	5200	20.84	21.75	24.33	2.58	30.00	
VHT20	2	5240	20.57	21.68	24.17	2.58	30.00	
VHT40	2	5190	17.47	18.12	20.82	2.58	30.00	
VHT40	2	5230	21.27	22.43	24.90	2.58	30.00	
VHT80	2	5210	17.63	18.44	21.06	2.58	30.00	
Resu	Result				Complied			



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Test Date: Ma	ır. 11, 20	)16	Maximum Conducted Output Power (5725-5850MHz band)					
		F	C	Output Power (di	Bm)	Antenna Gain		
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Chain Port 1	Chain Port 2	Sum Chain	(dBi)	Power Limit	
11a	1	5745	19.10	-	19.10	2.58	30.00	
11a	1	5785	21.37	-	21.37	2.58	30.00	
11a	1	5825	20.98	-	20.98	2.58	30.00	
HT20	2	5745	16.26	16.46	19.37	2.58	30.00	
HT20	2	5785	19.42	19.45	22.45	2.58	30.00	
HT20	2	5825	17.03	17.11	20.08	2.58	30.00	
HT40	2	5755	14.75	15.11	17.94	2.58	30.00	
HT40	2	5795	18.87	19.48	22.20	2.58	30.00	
VHT20	2	5745	16.20	16.40	19.31	2.58	30.00	
VHT20	2	5785	19.47	19.48	22.49	2.58	30.00	
VHT20	2	5825	17.09	17.12	20.12	2.58	30.00	
VHT40	2	5755	14.72	15.14	17.95	2.58	30.00	
VHT40	2	5795	18.84	19.43	22.16	2.58	30.00	
VHT80	2	5775	9.51	9.71	12.62	2.58	30.00	
Resu	Result			•	Complied			



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## 3.4 Peak Power Spectral Density

### 3.4.1 Peak Power Spectral Density Limit

		Peak Power Spectral Density Limit						
UNI	UNII Devices							
$\boxtimes$	For the 5.15-5.25 GHz band:							
		Outdoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .						
		Indoor AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 6$ dBi, then $P_{Out} = 17 - (G_{TX} - 6)$ .						
		Point-to-point AP: the peak power spectral density (PPSD) shall not exceed the lesser of 17dBm/MHz. If $G_{TX} > 23$ dBi, then $P_{Out} = 17 - (G_{TX} - 23)$ .						
		Mobile or Portable Client: the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz. If $G_{TX} > 6$ dBi, then PPSD= 11 – ( $G_{TX} - 6$ )						
		he 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz. If $G_{TX} > 6$ dBi, PPSD= 11 – ( $G_{TX} - 6$ ).						
		he 5.47-5.725 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz. If $G_{TX} >$ 6 dBi, PPSD= 11 – ( $G_{TX} -$ 6).						
$\boxtimes$	For t	he 5.725-5.85 GHz band:						
		Point-to-multipoint systems (P2M): the peak power spectral density (PPSD) $\leq$ 30 dBm/500kHz. If $G_{TX} > 6$ dBi, then PPSD= $30 - (G_{TX} - 6)$ .						
		Point-to-point systems (P2P): the peak power spectral density (PPSD) ≤ 30 dBm/500kHz.						
pow	er sh	beak power spectral density that he same method as used to determine the conducted output all be used to determine the power spectral density. And power spectral density in dBm/MHz maximum transmitting antenna directional gain in dBi.						

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## 3.4.2 Measuring Instruments

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

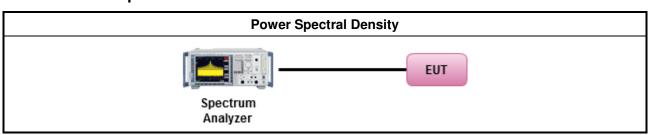
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### 3.4.3 Test Procedures

		Test Method						
$\boxtimes$	outp func	s power spectral density procedures that the same method as used to determine the conducted out power shall be used to determine the peak power spectral density and use the peak search tion on the spectrum analyzer to find the peak of the spectrum. For the peak power spectral density be measured using below options:						
	$\boxtimes$	Refer as FCC KDB 789033, F)5) power spectral density can be measured using resolution bandwidths < 1 MHz provided that the results are integrated over 1 MHz bandwidth						
	[duty	cycle ≥ 98% or external video / power trigger]						
		Refer as FCC KDB 789033, clause E Method SA-1 (spectral trace averaging).						
		Refer as FCC KDB 789033, clause E Method SA-1 Alt. (RMS detection with slow sweep speed)						
	duty	cycle < 98% and average over on/off periods with duty factor						
		Refer as FCC KDB 789033, clause E Method SA-2 (spectral trace averaging).						
		Refer as FCC KDB 789033, clause E Method SA-2 Alt. (RMS detection with slow sweep speed)						
$\boxtimes$	For	conducted measurement.						
	$\boxtimes$	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 cas						
	$\boxtimes$	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.						
		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.						

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## 3.4.4 Test Setup



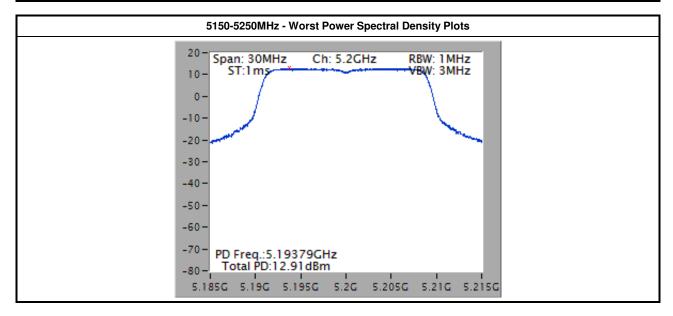
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3.4.5 Test Result of Peak Power Spectral Density

Peak Power Spectral Density Result (5150-5250MHz band)						
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Peak Power Spectral Density (dBm/MHz)	PSD Limit	Antenna Gain (dBi)	
11a	1	5180	10.20	17.00	2.58	
11a	1	5200	10.37	17.00	2.58	
11a	1	5240	10.21	17.00	2.58	
HT20	2	5180	11.08	17.00	5.59	
HT20	2	5200	12.91	17.00	5.59	
HT20	2	5240	12.56	17.00	5.59	
HT40	2	5190	7.39	17.00	5.59	
HT40	2	5230	10.25	17.00	5.59	
VHT20	2	5180	11.63	17.00	5.59	
VHT20	2	5200	12.78	17.00	5.59	
VHT20	2	5240	12.66	17.00	5.59	
VHT40	2	5190	6.31	17.00	5.59	
VHT40	2	5230	10.28	17.00	5.59	
VHT80	2	5210	3.24	17.00	5.59	
Resu	ılt		1	Complied	•	

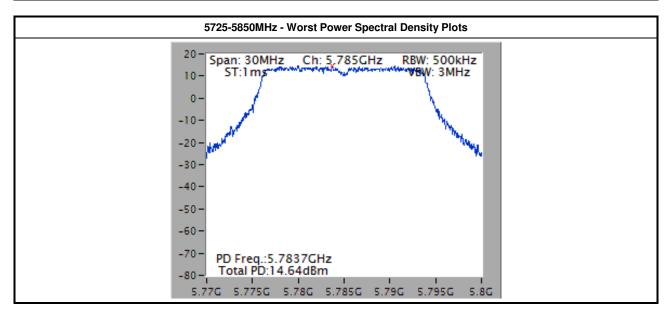
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Peak Power Spectral Density Result (5725-5850MHz band)						
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Peak Power Spectral Density (dBm)	PSD Limit (500kHz)	Antenna Gain (dBi)	
11a	1	5745	11.97	30.00	2.58	
11a	1	5785	14.62	30.00	2.58	
11a	1	5825	13.88	30.00	2.58	
HT20	2	5745	11.21	30.00	5.59	
HT20	2	5785	14.60	30.00	5.59	
HT20	2	5825	12.17	30.00	5.59	
HT40	2	5755	6.91	30.00	5.59	
HT40	2	5795	11.36	30.00	5.59	
VHT20	2	5745	11.59	30.00	5.59	
VHT20	2	5785	14.64	30.00	5.59	
VHT20	2	5825	12.46	30.00	5.59	
VHT40	2	5755	7.04	30.00	5.59	
VHT40	2	5795	11.50	30.00	5.59	
VHT80	2	5775	-0.88	30.00	5.59	
Resu	ult			Complied		

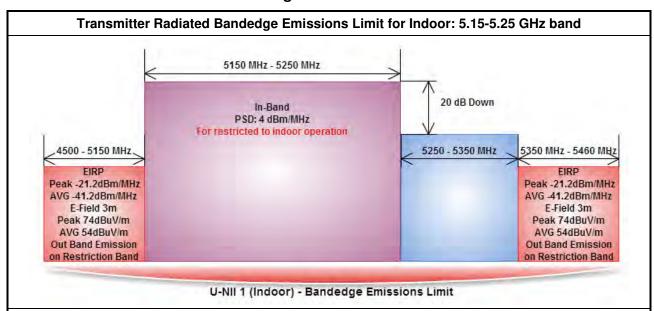


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3.5 Transmitter Bandedge Emissions

#### 3.5.1 Transmitter Radiated Bandedge Emissions Limit



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Refer as FCC KDB 789033, G)2)c)(i) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm or -17 dBm peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.

#### 3.5.2 Measuring Instruments

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

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3.5.3 Test Procedures

	Test Method						
$\boxtimes$	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].						
	Refer as ANSI C63.10, clause 6.9.2.2 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.						
	If EUT operate in adjacent contiguous bands, bandedge testing performed at the lowest frequency channel at lower-band and highest frequency channel at higher-band. Transmitter in-band emissions will consist of adjacent contiguous bands (e.g., IEEE 802.11ac VHT160 The lowest frequency channel at lower-band and highest frequency channel at higher-band in-band emissions will consist of two adjacent contiguous bands.)						
	Operating in 5.15-5.25 GHz band (lower-band) and 5.25-5.35 GHz band (higher-band).						
	Operating in 5.47-5.725 GHz band (lower-band) and 5.725-5.85 GHz band (higher-band).						
	If EUT operate in individual non-contiguous bands, bandedge testing performed at the lowest frequency channel and highest frequency channel within lower-band and higher-band. (e.g., (e.g., IEEE 802.11ac VHT160)						
	Operating in 5.25-5.35 GHz band (lower-band) and 5.47-5.725 GHz band (higher-band).						
	Operating in 5.15-5.25 GHz band (lower-band) and 5.725-5.85 GHz band (higher-band).						
	For the transmitter unwanted emissions shall be measured using following options below:						
	Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.						
	Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.						
	Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).						
	Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).						
	☐ Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 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, clause H)5) measurement procedure peak limit.						
	Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.						
$\boxtimes$	For the transmitter bandedge emissions shall be measured using following options below:						
	Refer as FCC KDB 789033, clause H)3)d) for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).						
	Refer as ANSI C63.10, clause 6.9.2 for band-edge testing.						
	Refer as ANSI C63.10, clause 6.9.3 for marker-delta method for band-edge measurements.						
	For radiated measurement, refer as ANSI C63.10, clause 6.6. Test distance is 3m.						
	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). Measurements in the bandedge are typically made at a closer distance 3m, because the instrumentation noise floor is typically close to the radiated emission limit.						

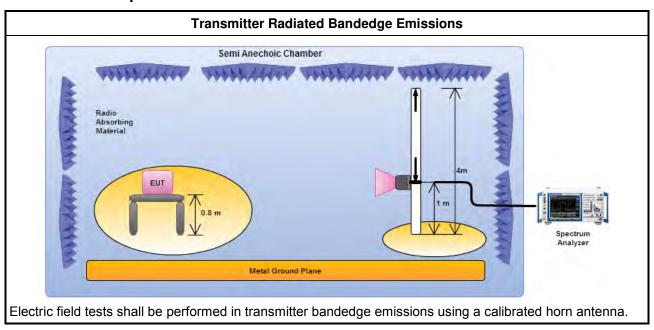
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#### **Test Setup** 3.5.4



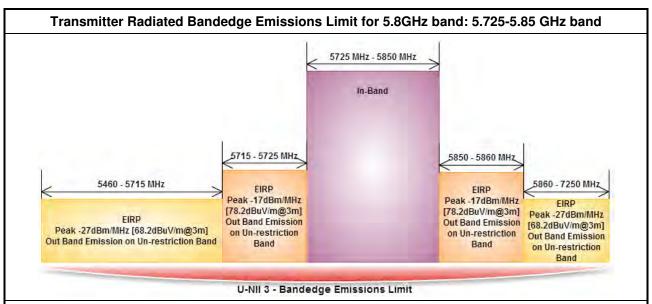
#### **Transmitter Radiated Bandedge Emissions (with Antenna)** 3.5.5

Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11a	1	5180	3	5148.60	69.11	74	5149.90	52.86	54	V
11a	1	5240	3	5377.80	61.05	74	5392.20	47.45	54	V
HT20	2	5180	3	5149.80	65.93	74	5149.80	51.96	54	V
HT20	2	5240	3	5398.80	61.75	74	5397.60	47.86	54	V
HT40	2	5190	3	5149.50	67.92	74	5148.62	52.49	54	V
HT40	2	5230	3	5356.80	60.77	74	5394.60	47.98	54	V
VHT20	2	5180	3	5149.90	67.33	74	5149.90	53.00	54	V
VHT20	2	5240	3	5377.80	60.66	74	5394.00	48.08	54	V
VHT40	2	5190	3	5147.74	64.57	74	5149.72	52.34	54	V
VHT40	2	5230	3	5389.20	61.52	74	5395.20	48.03	54	V
VHT80	2	5210	3	5149.20	65.81	74	5149.80	52.97	54	V
VHT80	2	5210	3	5375.40	60.45	74	5391.60	47.75	54	V

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3.5.6 Transmitter Radiated Bandedge Emissions Limit



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Refer as FCC KDB 789033, G)2)c)(i) specifying that if a non-restricted-band out-of-band emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm or -17 dBm peak emission limit. Reason for change: to ensure that emission requirements in the non-restricted bands are not more stringent than those in the restricted bands.

### 3.5.7 Measuring Instruments

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

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## 3.5.8 Test Procedures

		Test Method					
$\boxtimes$	The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].					
$\boxtimes$	channel and highest frequency channel within the allowed operating band.						
	If EUT operate in adjacent contiguous bands, bandedge testing performed at the lowest frequency channel at lower-band and highest frequency channel at higher-band. Transmitter in-band emissions will consist of adjacent contiguous bands (e.g., IEEE 802.11ac VHT160 The lowest frequency channel at lower-band and highest frequency channel at higher-band in-band emissions will consist of two adjacent contiguous bands.)						
		Operating in 5.15-5.25 GHz band (lower-band) and 5.25-5.35 GHz band (higher-band).					
		Operating in 5.47-5.725 GHz band (lower-band) and 5.725-5.85 GHz band (higher-band).					
	If EUT operate in individual non-contiguous bands, bandedge testing performed at the lowest frequency channel and highest frequency channel within lower-band and higher-band. (e.g., (e.g., IEEE 802.11ac VHT160)						
		Operating in 5.25-5.35 GHz band (lower-band) and 5.47-5.725 GHz band (higher-band).					
		Operating in 5.15-5.25 GHz band (lower-band) and 5.725-5.85 GHz band (higher-band).					
$\boxtimes$	For the transmitter unwanted emissions shall be measured using following options below:						
	Refer as FCC KDB 789033, clause H)2) for unwanted emissions into non-restricted bands.						
	$\boxtimes$	Refer as FCC KDB 789033, clause H)1) for unwanted emissions into restricted bands.					
		Refer as FCC KDB 789033, H)6) Method AD (Trace Averaging).					
		Refer as FCC KDB 789033, H)6) Method VB (Reduced VBW).					
		☐ Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse time.					
		Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.					
		Refer as FCC KDB 789033, clause H)5) measurement procedure peak limit.					
		Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.					
$\boxtimes$	For	he transmitter bandedge emissions shall be measured using following options below:					
		Refer as FCC KDB 789033, clause H)3)d) for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).					
		Refer as ANSI C63.10, clause 6.10 for band-edge testing.					
		Refer as ANSI C63.10, clause 6.10.6.2 for marker-delta method for band-edge measurements.					
$\boxtimes$	For radiated measurement, refer as ANSI C63.10, clause 6.6. Test distance is 3m.						
$\boxtimes$	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). Measurements in the bandedge are typically made at a closer distance 3m, because the instrumentation noise floor is typically close to the radiated emission limit.						

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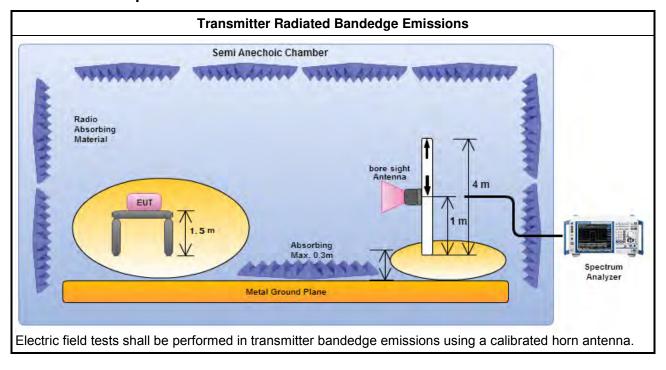
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# 3.5.9 Test Setup



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# 3.5.10 Transmitter Radiated Bandedge Emissions (with Antenna)

Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Pol.
11a	1	5745	3	5714.890	66.64	68.2	V
11a	1	5745	3	5724.340	70.38	78.2	V
11a	1	5825	3	5863.300	66.74	68.2	V
11a	1	5825	3	5850.490	68.95	78.2	V
HT20	2	5745	3	5714.470	66.74	68.2	V
HT20	2	5745	3	5723.710	73.01	78.2	V
HT20	2	5825	3	5860.570	66.72	68.2	V
HT20	2	5825	3	5859.520	67.63	78.2	V
HT40	2	5755	3	5714.740	66.80	68.2	V
HT40	2	5755	3	5722.020	69.36	78.2	V
HT40	2	5795	3	5860.900	66.77	68.2	V
HT40	2	5755	3	5858.200	66.17	78.2	V
VHT20	2	5745	3	5713.000	66.80	68.2	V
VHT20	2	5745	3	5723.500	74.58	78.2	V
VHT20	2	5825	3	5860.150	67.13	68.2	V
VHT20	2	5825	3	5858.680	68.61	78.2	V
VHT40	2	5755	3	5713.700	66.99	68.2	V
VHT40	2	5755	3	5724.620	71.25	78.2	V
VHT40	2	5795	3	5862.700	66.47	68.2	V
VHT40	2	5795	3	5858.500	67.01	78.2	V
VHT80	2	5775	3	5714.800	66.71	68.2	V
VHT80	2	5775	3	5719.120	70.11	78.2	V

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3.6 Transmitter Unwanted Emissions

### 3.6.1 Transmitter Radiated Unwanted Emissions 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						

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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 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 closer 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 - 5.85 GHz	5.715 5.725 GHz: e.i.r.p17 dBm [78.2 dBuV/m@3m] 5.85 5.86 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.

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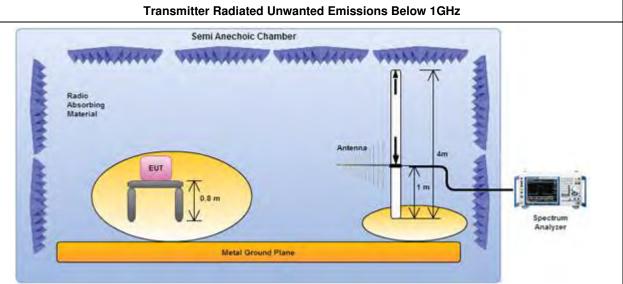
# **3.6.3 Test Procedures (For 5150-5250MHz)**

		Test Method
	perf equ abor are be e dista	asurements may be performed at a distance other than the limit distance provided they are not formed in the near field and the emissions to be measured can be detected by the measurement ipment. 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 impractical. When performing measurements at a distance other than that specified, the results shall extrapolated 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 asurements).
	The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].
	For	the transmitter unwanted emissions shall be measured using following options below:
	$\boxtimes$	Refer as FCC KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.
	$\boxtimes$	Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands.
		Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).
		Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).
		Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 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, clause G)5) measurement procedure peak limit.
		Refer as ANSI C63.10, clause 4.2.3.2.2 measurement procedure peak limit.
$\boxtimes$	For	radiated measurement.
	$\boxtimes$	Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m.
	$\boxtimes$	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3m.
		Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. For 1 GHz to 5 GHz, test distance is 3m; For 5 GHz to 40 GHz, test distance is 3m.
	The	any unwanted emissions level shall not exceed the fundamental emission level.
		amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value no need to be reported.

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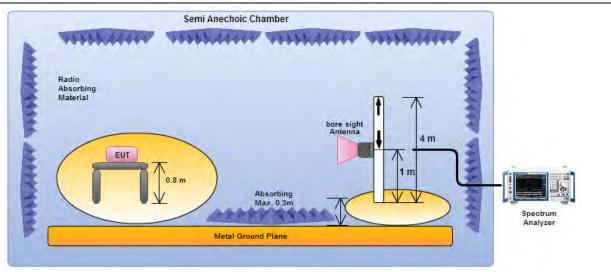


3.6.4 **Test Setup** 



Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna. Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna.

### **Transmitter Radiated Unwanted Emissions Above 1GHz**



Electric field tests shall be performed in the frequency range of 1 GHz to 10th harmonic of highest fundamental frequency or 40 GHz using a calibrated horn antenna.

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# **3.6.5 Test Procedures (For 5725-5850MHz)**

	Test Method	
	Measurements may be performed at a distance other than the limit distance provided they are performed in the near field and the emissions to be measured can be detected by the measurem equipment. Measurements shall not be performed at a distance greater than 30 m for frequence above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or leare impractical. When performing measurements at a distance other than that specified, the results slip be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of line distance for field-strength measurements, inverse of linear distance-squared for power-dense measurements).	ent ies ess nall ear
$\boxtimes$	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].	
	For the transmitter unwanted emissions shall be measured using following options below:	
	Refer as FCC KDB 789033, clause G)2) for unwanted emissions into non-restricted bands.	
	Refer as FCC KDB 789033, clause G)1) for unwanted emissions into restricted bands.	
	Refer as FCC KDB 789033, G)6) Method AD (Trace Averaging).	
	Refer as FCC KDB 789033, G)6) Method VB (Reduced VBW).	
	Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse tim	e.
	Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions.	
	Refer as FCC KDB 789033, clause G)5) measurement procedure peak limit.	
	Refer as ANSI C63.10, clause 4.1.4.2.2 measurement procedure peak limit.	
	For radiated measurement.	
	$oxed{\boxtimes}$ Refer as ANSI C63.10, clause 6.4 for radiated emissions below 30 MHz and test distance is 3m	1.
	Refer as ANSI C63.10, clause 6.5 for radiated emissions 30 MHz to 1 GHz and test distance is 3	₿m.
	Refer as ANSI C63.10, clause 6.6 for radiated emissions above 1GHz. For 1 GHz to 5 GHz, test distance is 3m; For 5 GHz to 40 GHz, test distance is 3m.	
$\boxtimes$	The any unwanted emissions level shall not exceed the fundamental emission level.	
$\boxtimes$	All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible va has no need to be reported.	lue

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3.6.6 Test Setup

# Semi Anechoic Chamber Radio Absorbing Material Netal Ground Plane Transmitter Radiated Unwanted Emissions Below 1GHz Semi Anechoic Chamber Antenna Antenna Spectrum Analyzer

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Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna. Electric field tests shall be performed in the frequency range of 30 MHz to 1000 MHz using a calibrated bi-log antenna.

# Semi Anechoic Chamber Radio Absorbing Material Metal Ground Plane Semi Anechoic Chamber Absorbing Max. 0.3m Absorbing Max. 0.3m

Electric field tests shall be performed in the frequency range of 1 GHz to 10th harmonic of highest fundamental frequency or 40 GHz using a calibrated horn antenna.

# 3.6.7 Transmitter Radiated Unwanted Emissions-with Antenna (Below 30MHz)

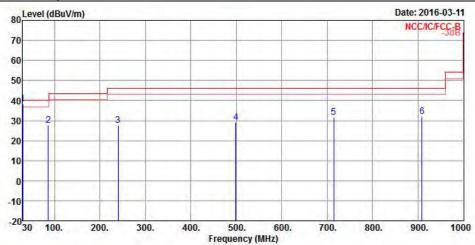
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

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# 3.6.8 Transmitter Radiated Unwanted Emissions (Below 1GHz)





	Freq	Level	Over Limit	F 14 V 7 7		Antenna Factor		Preamp Factor	
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
!	30.000	38.28	-1.72	40.00	39.45	25.62	0.78	27.57	QP
-	86.260	27.77	-12.23	40.00	39.25	14.50	1.41	27.39	Peak
3	239.520	27.58	-18.42	46.00	33.99	18.01	2.42	26.84	Peak
4	499.480	28.92	-17.08	46.00	29.40	23.80	3.56	27.84	Peak
5	714.820	31.60	-14.40	46.00	29.36	25.70	4.44	27.90	Peak
6	908.820	32.21	-13.79	46.00	27.20	27.61	4.98	27.58	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

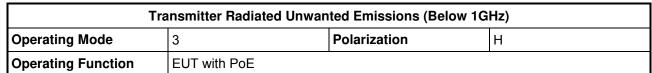
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

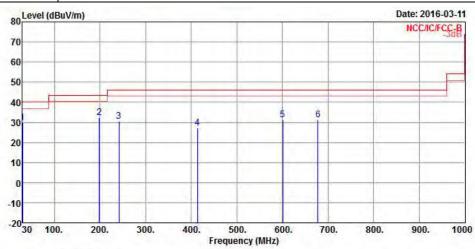
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

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	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Remark
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	30.000	29.73	-10.27	40.00	30.90	25.62	0.78	27.57	Peak
2	198.780	32.33	-11.17	43.50	40.78	16.24	2.27	26.96	Peak
3	241.460	30.48	-15.52	46.00	36.71	18.18	2.43	26.84	Peak
4	414.120	27.18	-18.82	46.00	28.78	22.52	3.28	27.40	Peak
5	600.360	31.17	-14.83	46.00	30.25	24.84	4.07	27.99	Peak
6	677.960	31.36	-14.64	46.00	29.56	25.41	4.33	27.94	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

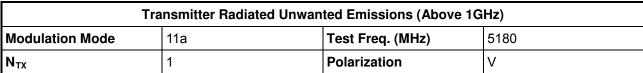
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

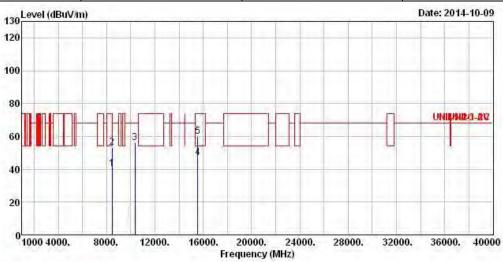
Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

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# 3.6.9 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5150-5250MHz





			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	$\overline{\text{dBuV/m}}$	dBuV	dB/m	dB	dB	
1	8456.00	40.49	-13.51	54.00	27.35	38.03	8.03	32.92	Average
2	8456.00	53.17	-20.83	74.00	40.03	38.03	8.03	32.92	Peak
3	10360.00	56.04	-12.16	68.20	40.93	39.00	8.92	32.81	Peak
4	15540.00	47.21	-6.79	54.00	30.21	37.64	11.59	32.23	Average
5	15540.00	59.99	-14.01	74.00	42.99	37.64	11.59	32.23	Peak

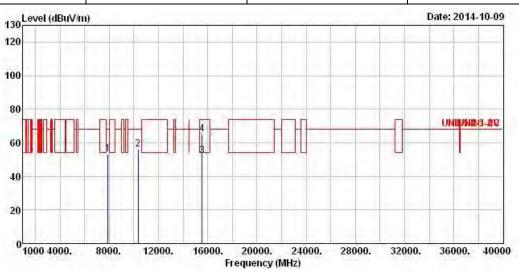
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	Modulation Mode11aTest Freq. (MHz)5180							
$N_{TX}$	1	Polarization	Н					

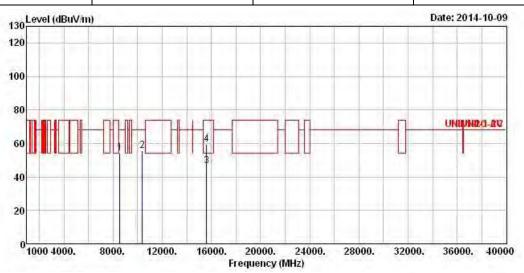


			Over	Limit	Read	Antenna	Cable	Preamp		
	Freq	Level	Limit	Line	Le∨el	Factor	Loss	Factor	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		_
1	7904.00	53.05	-15.15	68.20	40.77	37.00	8.14	32.86	Peak	
2	10360.00	56.23	-11.97	68.20	41.12	39.00	8.92	32.81	Peak	
3	15540.00	52.12	-1.88	54.00	35.12	37.64	11.59	32.23	Average	
4	15540.00	65.33	-8.67	74.00	48.33	37.64	11.59	32.23	Peak	

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	11a	Test Freq. (MHz)	5200				
N <sub>TX</sub>	1	Polarization	V				

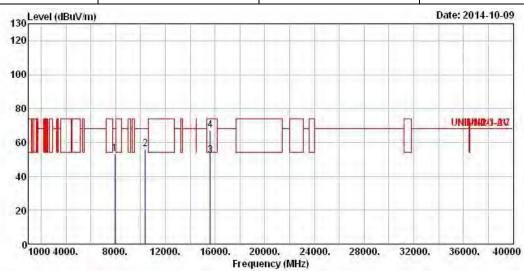


			Over	Limit	ReadA	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8544.00	54.30	-13.90	68.20	41.12	38.12	7.99	32.93	Peak
2	10400.00	55.58	-12.62	68.20	40.41	39.00	8.94	32.77	Peak
3	15600.00	46.75	-7.25	54.00	29.89	37.53	11.59	32.26	Average
4	15600.00	59.37	-14.63	74.00	42.51	37.53	11.59	32.26	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	nsmitter Radiated Unwan	Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	11a	Test Freq. (MHz)	5200					
$N_{TX}$	1	Polarization	Н					



	Freq	Level	0∨er Limit	Limit Line		Antenna Factor		The same of the sa	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7926.00	53.02	- 15 . 18	68.20	40.65	37.02	8.21	32.86	Peak
2	10400.00	55.96	-12.24	68.20	40.79	39.00	8.94	32.77	Peak
3	15600.00	52.22	-1.78	54.00	35.36	37.53	11.59	32.26	Average
4	15600.00	67.04	-6.96	74.00	50.18	37.53	11.59	32.26	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

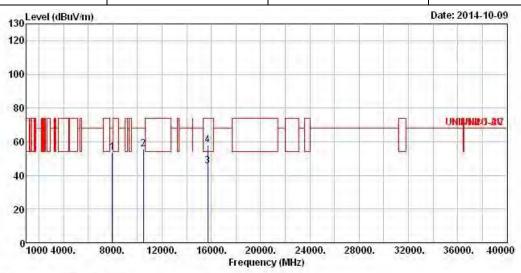
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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FCC Test Report

Report No. : FR411403-23AN

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	11a	Test Freq. (MHz)	5240
N <sub>TX</sub>	1	Polarization	V



			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7968.00	53.76	-14.44	68.20	41.28	37.07	8.28	32.87	Peak
2	10480.00	55.69	-12.51	68.20	40.40	39.00	8.99	32.70	Peak
3	15720.00	45.56	-8.44	54.00	28.93	37.34	11.59	32.30	Average
4	15720.00	57.98	-16.02	74.00	41.35	37.34	11.59	32.30	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. TEL: 886-3-327-3456

FAX: 886-3-327-0973

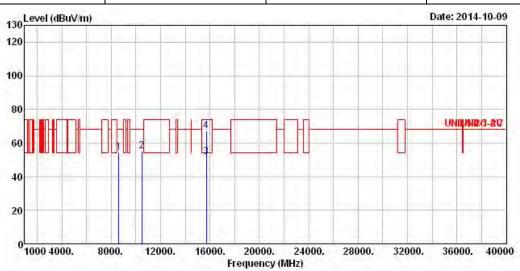
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Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	11a	Test Freq. (MHz)	5240
$N_{TX}$	1	Polarization	Н

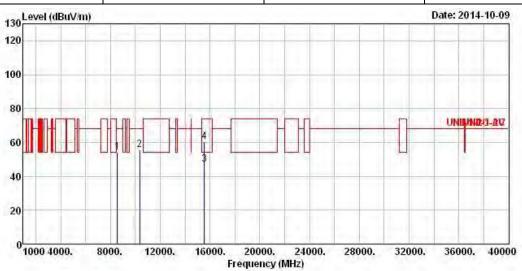


	Freq	Level	Over Limit	Limit Line		Antenna Factor		ACTION NAMED IN	Remark
	MHz	dBuV/m	dB	$\overline{\text{dBuV/m}}$	dBuV	dB/m	dB	dB	_
1	8610.00	54.18	-14.02	68.20	41.02	38.15	7.95	32.94	Peak
2	10480.00	55.30	-12.90	68.20	40.01	39.00	8.99	32.70	Peak
3	15720.00	51.93	-2.07	54.00	35.30	37.34	11.59	32.30	Average
4	15720.00	66.98	-7.02	74.00	50.35	37.34	11.59	32.30	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	HT20	Test Freq. (MHz)	5180
$N_{TX}$	2	Polarization	V

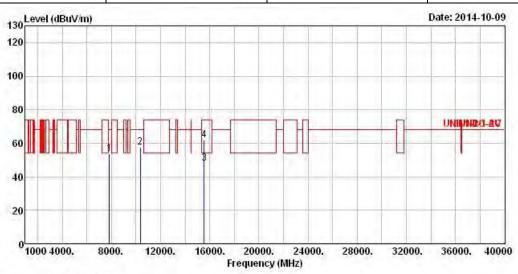


	Freq	Level	0∨er Limit	Limit Line		Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8562.00	54.39	-13.81	68.20	41.22	38.13	7.97	32.93	Peak
2	10360.00	55.67	-12.53	68.20	40.56	39.00	8.92	32.81	Peak
3	15540.00	47.00	-7.00	54.00	30.00	37.64	11.59	32.23	Average
4	15540.00	60.54	-13.46	74.00	43.54	37.64	11.59	32.23	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	HT20	Test Freq. (MHz)	5180				
$N_{TX}$	2	Polarization	Н				

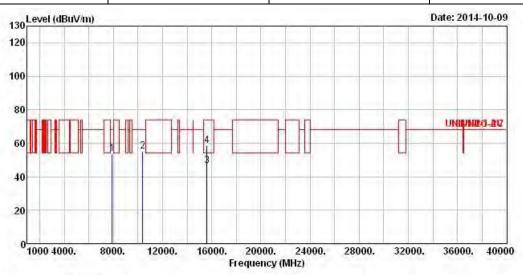


	Frea	Level				Antenna Factor		property of the same of the sa	
	10.07				30,67	- 5000			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7836.00	53.61	-14.59	68.20	41.52	36.93	8.00	32.84	Peak
2	10360.00	57.49	-10.71	68.20	42.38	39.00	8.92	32.81	Peak
3	15540.00	48.11	-5.89	54.00	31.11	37.64	11.59	32.23	Average
4	15540.00	61.75	-12.25	74.00	44.75	37.64	11.59	32.23	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	HT20	Test Freq. (MHz)	5200
$N_{TX}$	2	Polarization	V

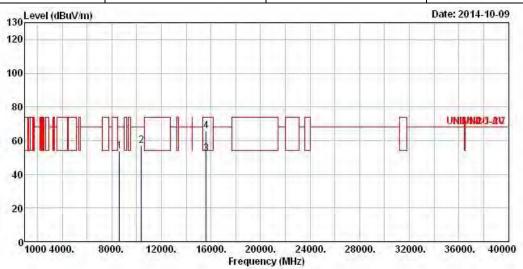


		Over	Limit	Read	Antenna	Cable	Preamp	
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
7920.00	53.66	-14.54	68.20	41.36	37.02	8.14	32.86	Peak
10400.00	55.06	-13.14	68.20	39.89	39.00	8.94	32.77	Peak
15600.00	46.54	-7.46	54.00	29.68	37.53	11.59	32.26	Average
15600.00	58.74	-15.26	74.00	41.88	37.53	11.59	32.26	Peak
	7920.00 10400.00 15600.00	MHz dBuV/m 7920.00 53.66 10400.00 55.06 15600.00 46.54	Freq Level Limit  MHz dBuV/m dB  7920.00 53.66 -14.54 10400.00 55.06 -13.14 15600.00 46.54 -7.46	Freq Level Limit Line    MHz   dBuV/m   dB   dBuV/m     7920.00   53.66   -14.54   68.20     10400.00   55.06   -13.14   68.20     15600.00   46.54   -7.46   54.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  7920.00 53.66 -14.54 68.20 41.36 10400.00 55.06 -13.14 68.20 39.89 15600.00 46.54 -7.46 54.00 29.68	Freq Level Limit Line Level Factor    MHz   dBuV/m   dB   dBuV/m   dBuV   dB/m     7920.00   53.66   -14.54   68.20   41.36   37.02     10400.00   55.06   -13.14   68.20   39.89   39.00     15600.00   46.54   -7.46   54.00   29.68   37.53	Freq Level Limit Line Level Factor Loss    MHz   dBuV/m   dB   dBuV/m   dBuV   dB/m   dB	Freq Level Limit Line Level Factor Loss Factor

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	Modulation Mode HT20 Test Freq. (MHz) 5200							
$N_{TX}$	2 Polarization		Н					

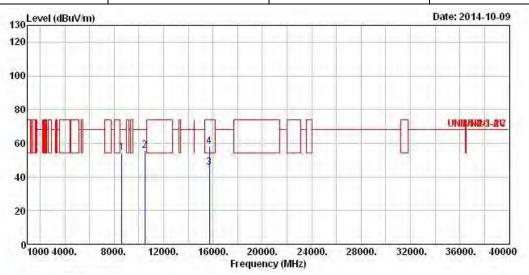


	Freq	Level	O∨er Limit	Limit Line		Antenna Factor		The second second	
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8616.00	53.65	-14.55	68.20	40.49	38.15	7.95	32.94	Peak
2	10400.00	57.14	-11.06	68.20	41.97	39.00	8.94	32.77	Peak
3	15600.00	52.48	-1.52	54.00	35.62	37.53	11.59	32.26	Average
4	15600.00	65.91	-8.09	74.00	49.05	37.53	11.59	32.26	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	Modulation Mode HT20 Test Freq. (MHz) 5240							
$N_{TX}$	N <sub>TX</sub> 2 Polarization							

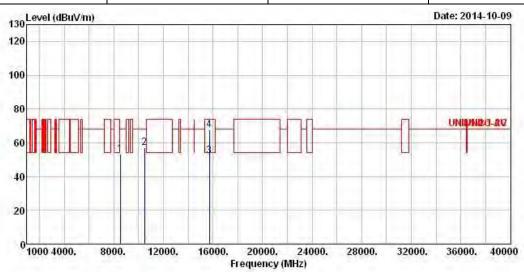


			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8616.00	54.14	-14.06	68.20	40.98	38.15	7.95	32.94	Peak
2	10480.00	55.67	-12.53	68.20	40.38	39.00	8.99	32.70	Peak
3	15720.00	45.59	-8.41	54.00	28.96	37.34	11.59	32.30	Average
4	15720.00	58.09	-15.91	74.00	41.46	37.34	11.59	32.30	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode HT20 Test Freq. (MHz) 5240								
$N_{TX}$	2	Polarization	Н					

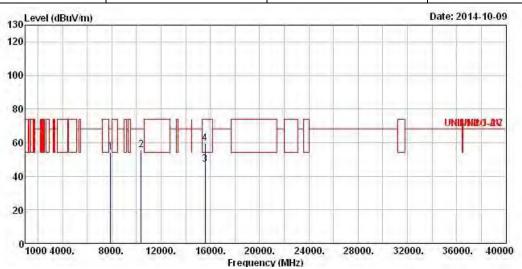


			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8514.00	53.39	-14.81	68.20	40.21	38.11	7.99	32.92	Peak
2	10480.00	56.89	-11.31	68.20	41.60	39.00	8.99	32.70	Peak
3	15720.00	52.36	-1.64	54.00	35.73	37.34	11.59	32.30	Average
4	15720.00	67.64	-6.36	74.00	51.01	37.34	11.59	32.30	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	Modulation ModeHT40Test Freq. (MHz)5190							
$N_{TX}$	2	Polarization	V					



			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7896.00	54.13	-14.07	68.20	41.84	37.00	8.14	32.85	Peak
2	10380.00	55.51	-12.69	68.20	40.36	39.00	8.94	32.79	Peak
3	15570.00	46.79	-7.21	54.00	29.86	37.59	11.59	32.25	Average
4	15570.00	59.44	-14.56	74.00	42.51	37.59	11.59	32.25	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

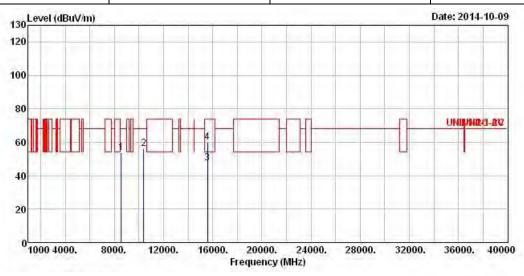
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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FCC Test Report

Report No.: FR411403-23AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	Modulation ModeHT40Test Freq. (MHz)5190							
$N_{TX}$	Polarization	Н						



			Over	Limit	ReadA	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Le∨el	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8562.00	53.77	-14.43	68.20	40.60	38.13	7.97	32.93	Peak
2	10380.00	55.91	-12.29	68.20	40.76	39.00	8.94	32.79	Peak
3	15570.00	47.46	-6.54	54.00	30.53	37.59	11.59	32.25	Average
4	15570.00	59.98	-14.02	74.00	43.05	37.59	11.59	32.25	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

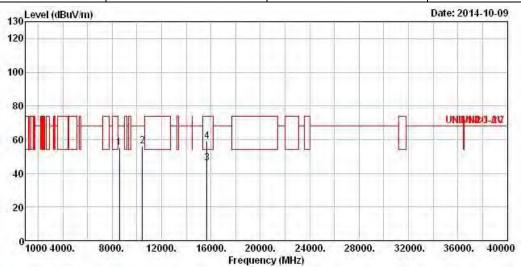
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	Modulation Mode HT40 Test Freq. (MHz) 5230							
$N_{TX}$	2	Polarization	V					

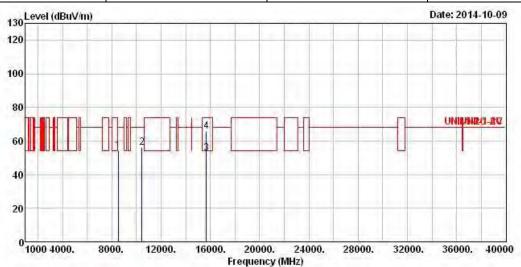


		Over	Limit	Read	Antenna	Cable	Preamp	
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
8598.00	55.14	-13.06	68.20	41.99	38.14	7.95	32.94	Peak
10460.00	56.09	-12.11	68.20	40.82	39.00	8.99	32.72	Peak
15690.00	46.00	-8.00	54.00	29.30	37.40	11.59	32.29	Average
15690.00	58.97	-15.03	74.00	42.27	37.40	11.59	32.29	Peak
	MHz 8598.00 10460.00 15690.00	MHz dBuV/m 8598.00 55.14 10460.00 56.09 15690.00 46.00	Freq Level Limit  MHz dBuV/m dB  8598.00 55.14 -13.06 10460.00 56.09 -12.11 15690.00 46.00 -8.00	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  8598.00 55.14 -13.06 68.20 10460.00 56.09 -12.11 68.20 15690.00 46.00 -8.00 54.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  8598.00 55.14 -13.06 68.20 41.99 10460.00 56.09 -12.11 68.20 40.82 15690.00 46.00 -8.00 54.00 29.30	Freq         Level         Limit         Line         Level         Factor           MHz         dBuV/m         dB dBuV/m         dBuV         dBuV         dB/m           8598.00         55.14 -13.06         68.20         41.99         38.14           10460.00         56.09 -12.11         68.20         40.82         39.00           15690.00         46.00         -8.00         54.00         29.30         37.40	Freq         Level         Limit         Line         Level         Factor         Loss           MHz         dBuV/m         dB         dBuV/m         dBuV         dB/m         dB           8598.00         55.14         -13.06         68.20         41.99         38.14         7.95           10460.00         56.09         -12.11         68.20         40.82         39.00         8.99           15690.00         46.00         -8.00         54.00         29.30         37.40         11.59	Freq Level Limit Line Level Factor Loss Factor

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation ModeHT40Test Freq. (MHz)5230						
$N_{TX}$	N <sub>TX</sub> 2 Pola		Н			

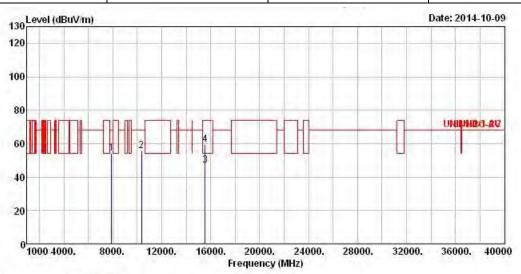


			Over	Limit	ReadA	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8538.00	54.09	-14.11	68.20	40.92	38.11	7.99	32.93	Peak
2	10460.00	55.98	-12.22	68.20	40.71	39.00	8.99	32.72	Peak
3	15690.00	52.86	-1.14	54.00	36.16	37.40	11.59	32.29	Average
4	15690.00	65.83	-8.17	74.00	49.13	37.40	11.59	32.29	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode VHT20 Test Freq. (MHz) 5180							
$N_{TX}$	2	Polarization	V				

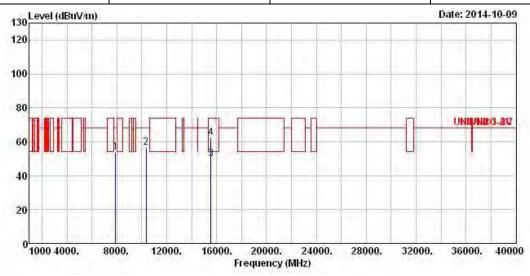


			0ver			Antenna			
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	7902.00	54.30	-13.90	68.20	42.01	37.00	8.14	32.85	Peak
2	10360.00	55.55	-12.65	68.20	40.44	39.00	8.92	32.81	Peak
3	15540.00	47.18	-6.82	54.00	30.18	37.64	11.59	32.23	Average
4	15540.00	59.54	-14.46	74.00	42.54	37.64	11.59	32.23	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	VHT20	Test Freq. (MHz)	5180			
$N_{TX}$	2	Polarization	Н			

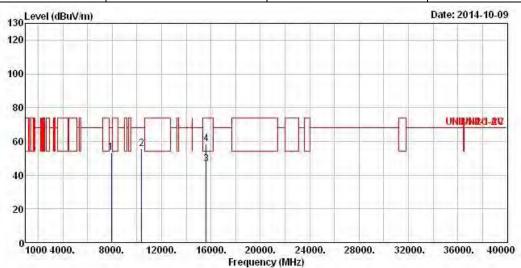


	Freq	Level	Over Limit			Antenna Factor		Property of the state of the	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7914.00	53.51	-14.69	68.20	41.21	37.02	8.14	32.86	Peak
2	10360.00	56.49	-11.71	68.20	41.38	39.00	8.92	32.81	Peak
3	15540.00	49.93	-4.07	54.00	32.93	37.64	11.59	32.23	Average
4	15540.00	62.54	-11.46	74.00	45.54	37.64	11.59	32.23	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	VHT20	Test Freq. (MHz)	5200				
N <sub>TX</sub> 2		Polarization	V				

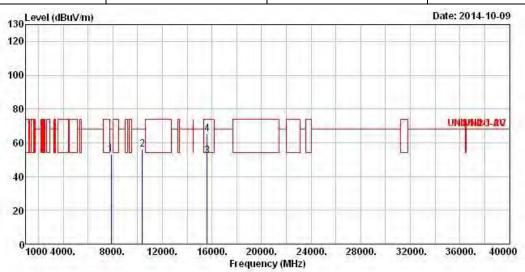


			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7932.00	53.42	-14.78	68.20	41.04	37.03	8.21	32.86	Peak
2	10400.00	55.66	-12.54	68.20	40.49	39.00	8.94	32.77	Peak
3	15600.00	46.63	-7.37	54.00	29.77	37.53	11.59	32.26	Average
4	15600.00	58.73	-15.27	74.00	41.87	37.53	11.59	32.26	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	VHT20	Test Freq. (MHz)	5200				
N <sub>TX</sub> 2		Polarization	Н				

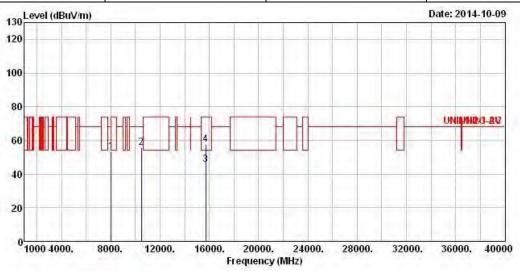


	Freq	Le∨el		Limit Line					
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7884.00	53.43	-14.77	68.20	41.16	36.98	8.14	32.85	Peak
2	10400.00	56.16	-12.04	68.20	40.99	39.00	8.94	32.77	Peak
3	15600.00	52.33	-1.67	54.00	35.47	37.53	11.59	32.26	Average
4	15600.00	65.44	-8.56	74.00	48.58	37.53	11.59	32.26	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	VHT20	Test Freq. (MHz)	5240			
$N_{TX}$	2	Polarization	V			

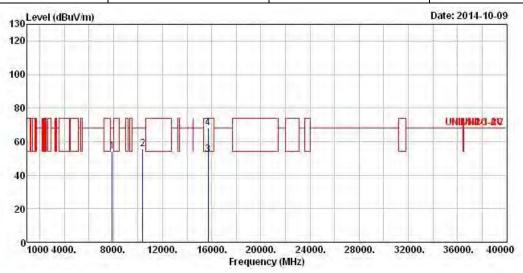


	Freq	Le∨el	Over Limit	Limit Line		Antenna Factor		The state of the s	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	8022.00	53.18	- 15 . 02	68.20	40.67	37.13	8.26	32.88	Peak
2	10480.00	55.72	-12.48	68.20	40.43	39.00	8.99	32.70	Peak
3	15720.00	45.51	-8.49	54.00	28.88	37.34	11.59	32.30	Average
4	15720.00	57.76	-16.24	74.00	41.13	37.34	11.59	32.30	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Modulation Mode	VHT20	Test Freq. (MHz)	5240
N <sub>TX</sub>	2	Polarization	Н



	Freq	Le∨el	Over Limit			Antenna Factor		West Countries	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7896.00	54.42	-13.78	68.20	42.13	37.00	8.14	32.85	Peak
2	10400.00	55.72	-12.48	68.20	40.55	39.00	8.94	32.77	Peak
3	15720.00	52.31	-1.69	54.00	35.68	37.34	11.59	32.30	Average
4	15720.00	68.00	-6.00	74.00	51.37	37.34	11.59	32.30	Peak
4	15720.00	68.00	-6.00	74.00	51.37	37.34	11.59	32.30	Peak

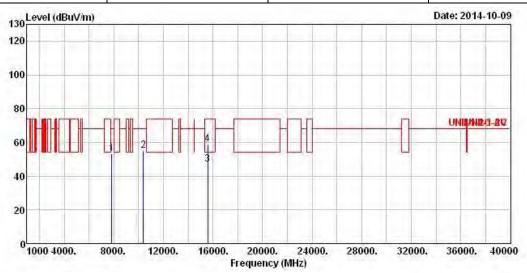
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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FCC Test Report

Report No.: FR411403-23AN

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	VHT40	Test Freq. (MHz)	5190
$N_{TX}$	2	Polarization	V

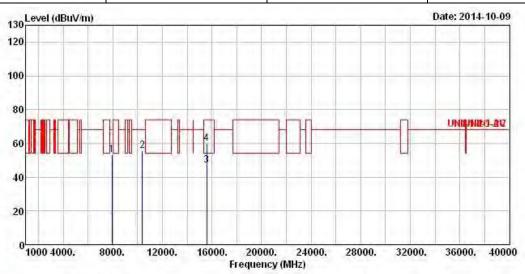


	Freq	Level	Over Limit	Limit Line		Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7848.00	53.22	-14.98	68.20	41.04	36.95	8.07	32.84	Peak
2	10380.00	55.25	-12.95	68.20	40.10	39.00	8.94	32.79	Peak
3	15570.00	46.88	-7.12	54.00	29.95	37.59	11.59	32.25	Average
4	15570.00	59.18	-14.82	74.00	42.25	37.59	11.59	32.25	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 68 of 107 TEL: 886-3-327-3456 Report Version : Rev. 01

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	VHT40	Test Freq. (MHz)	5190
$N_{TX}$	2	Polarization	Н

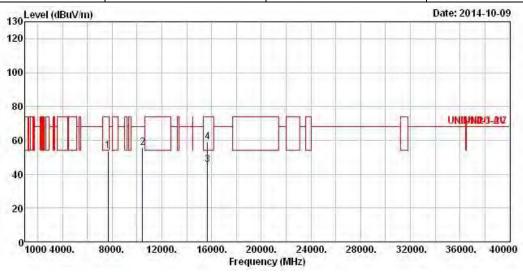


	Freq	Level	Over Limit	Limit Line	LUMP GOT	Antenna Factor		SET ALL MARKET AND ADMINISTRATION OF THE PARTY OF THE PAR	Remark
3-	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB	
1	7935.00	53.13	-15.07	68.20	40.75	37.03	8.21	32.86	Peak
2	10380.00	55.74	-12.46	68.20	40.59	39.00	8.94	32.79	Peak
3	15570.00	47.16	-6.84	54.00	30.23	37.59	11.59	32.25	Average
4	15570.00	59.81	-14.19	74.00	42.88	37.59	11.59	32.25	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)  Modulation Mode VHT40 Test Freq. (MHz) 5230			
Modulation Mode	VHT40	Test Freq. (MHz)	5230
$N_{TX}$	2	Polarization	V



	Freq	Le∀el	0∨er Limit	256788		Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7682.00	53.95	-20.05	74.00	42.26	36.78	7.71	32.80	Peak
2	10460.00	55.63	-12.57	68.20	40.36	39.00	8.99	32.72	Peak
3	15690.00	45.63	-8.37	54.00	28.93	37.40	11.59	32.29	Average
4	15690.00	58.98	-15.02	74.00	42.28	37.40	11.59	32.29	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC.
TEL: 886-3-327-3456

FAX: 886-3-327-0973

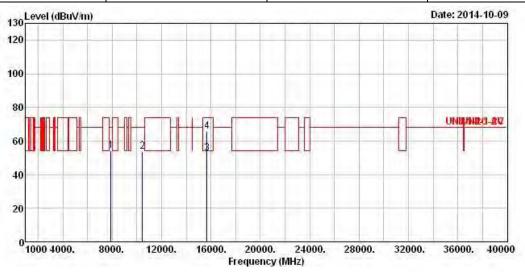
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Transmitter Radiated Unwanted Emissions (Above 1GHz)  Modulation Mode VHT40 Test Freq. (MHz) 5230			
Modulation Mode	VHT40	Test Freq. (MHz)	5230
$N_{TX}$	2	Polarization	Н



	Freq	Le∨el	0∨er Limit	Limit Line		Antenna Factor		Preamp Factor	Remark
,	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7908.00	54.01	-14.19	68.20	41.73	37.00	8.14	32.86	Peak
2	10460.00	53.73	-14.47	68.20	38.46	39.00	8.99	32.72	Peak
3	15690.00	53.00	-1.00	54.00	36.30	37.40	11.59	32.29	Average
4	15690.00	65.88	-8.12	74.00	49.18	37.40	11.59	32.29	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

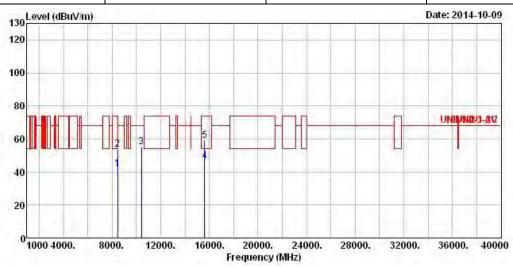
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	VHT80	Test Freq. (MHz)	5210
$N_{TX}$	2	Polarization	V

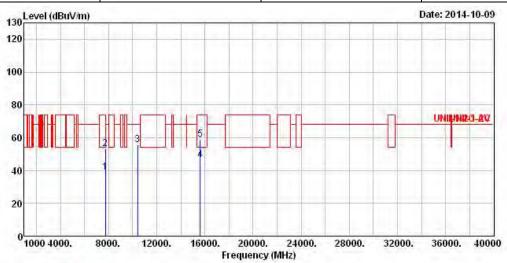


			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Le∨el	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8454.00	41.78	-12.22	54.00	28.67	38.00	8.03	32.92	Average
2	8454.00	53.86	-20.14	74.00	40.75	38.00	8.03	32.92	Peak
3	10420.00	55.11	-13.09	68.20	39.89	39.00	8.97	32.75	Peak
4	15630.00	46.33	-7.67	54.00	29.53	37.48	11.59	32.27	Average
5	15630.00	58.88	-15.12	74.00	42.08	37.48	11.59	32.27	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)				
Modulation Mode	VHT80	Test Freq. (MHz)	5210		
$N_{TX}$	2	Polarization	Н		



			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBu∀	dB/m	dB	dB	
1	7734.000	39.09	-14.91	54.00	27.21	36.83	7.86	32.81	Average
2	7734.000	53.42	-20.58	74.00	41.54	36.83	7.86	32.81	Peak
3	10420.000	55.87	-12.33	68.20	40.65	39.00	8.97	32.75	Peak
4	15630.000	46.72	-7.28	54.00	29.92	37.48	11.59	32.27	Average
5	15630.000	58.79	-15.21	74.00	41.99	37.48	11.59	32.27	Peak

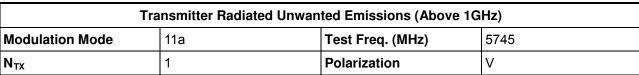
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

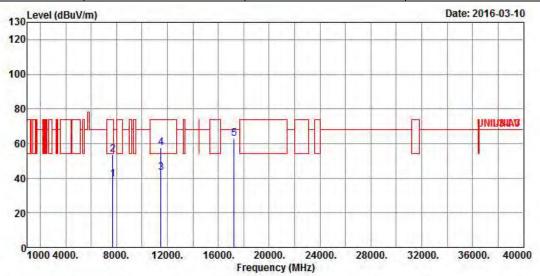
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3.6.10 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 5725-5850MHz

Report No.: FR411403-23AN





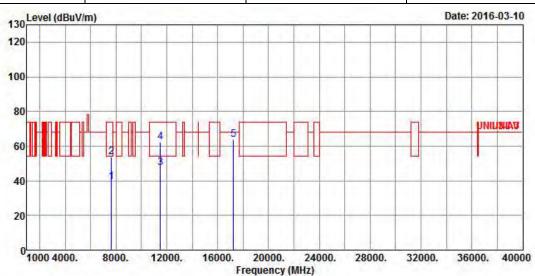
	Freq	Level	Over Limit			Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7708.000	39.31	-14.69	54.00	29.69	36.76	5.75	32.89	Average
2	7708.000	53.58	-20.42	74.00	43.96	36.76	5.75	32.89	Peak
3	11490.000	43.34	-10.66	54.00	29.84	39.18	6.78	32.46	Average
4	11490.000	57.55	-16.45	74.00	44.05	39.18	6.78	32.46	Peak
5	17235.000	62.69	-5.51	68.20	43.98	41.72	8.53	31.54	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

SPORTON INTERNATIONAL INC. Page No. : 74 of 107 TEL: 886-3-327-3456 Report Version : Rev. 01

Report No. : FR411403-23AN

Tra	ınsmitter Radiated Unwan	itter Radiated Unwanted Emissions (Above 1GHz)			
Modulation Mode	11a	Test Freq. (MHz)	5745		
N <sub>TX</sub>	1	Polarization	Н		



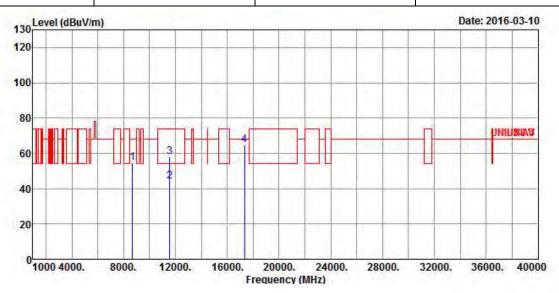
	Freq	Level		Limit Line					Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7645.000	39.16	-14.84	54.00	29.63	36.68	5.73	32.88	Average
2	7645.000	53.60	-20.40	74.00	44.07	36.68	5.73	32.88	Peak
3	11490.000	47.68	-6.32	54.00	34.18	39.18	6.78	32.46	Average
4	11490.000	62.39	-11.61	74.00	48.89	39.18	6.78	32.46	Peak
5	17235.000	63.88	-4.32	68.20	45.17	41.72	8.53	31.54	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Report No.: FR411403-23AN

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)					
Modulation Mode	11a	Test Freq. (MHz)	5785			
N <sub>TX</sub>	1	Polarization	V			



	Freq	Level				Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8692.000	54.78	-13.42	68.20	43.95	37.74	6.10	33.01	Peak
2	11570.000	44.06	-9.94	54.00	30.46	39.23	6.84	32.47	Average
3	11570.000	57.90	-16.10	74.00	44.30	39.23	6.84	32.47	Peak
4	17355.000	64.93	-3.27	68.20	45.41	42.63	8.46	31.57	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

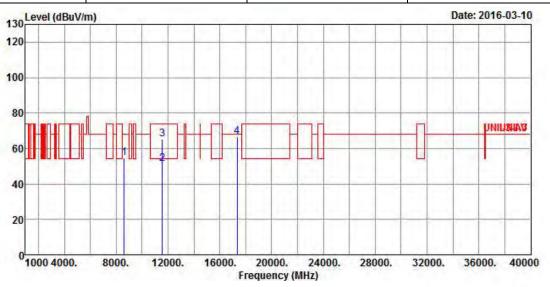
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Report No.: FR411403-23AN

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	11a	Test Freq. (MHz)	5785
N <sub>TX</sub>	1	Polarization	Н



	Freq	Level				Antenna Factor		1000000	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8631.000	54.62	-13.58	68.20	43.77	37.73	6.10	32.98	Peak
2	11570.000	51.24	-2.76	54.00	37.64	39.23	6.84	32.47	Average
3	11570.000	65.13	-8.87	74.00	51.53	39.23	6.84	32.47	Peak
4	17355.000	66.79	-1.41	68.20	47.27	42.63	8.46	31.57	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

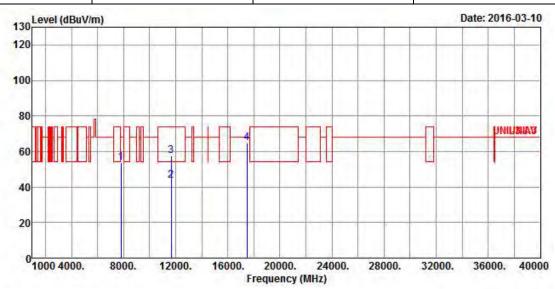
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Report No.: FR411403-23AN

Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	lz)			
Modulation Mode	11a	Test Freq. (MHz)	5825			
N <sub>TX</sub>	1	Polarization	V			



	Freq	Level		Limit Line				- C.	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	7815.000	53.55	-14.65	68.20	43.80	36.88	5.78	32.91	Peak
2	11650.000	43.83	-10.17	54.00	30.15	39.26	6.90	32.48	Average
3	11650.000	57.71	-16.29	74.00	44.03	39.26	6.90	32.48	Peak
4	17475.000	64.89	-3.31	68.20	44.56	43.54	8.40	31.61	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

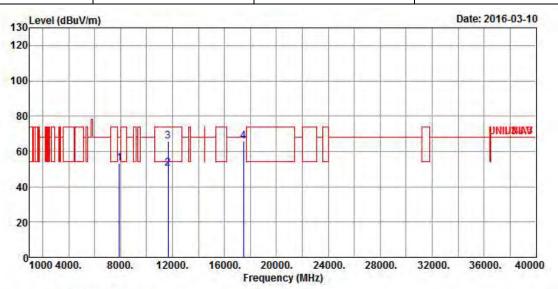
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	Modulation Mode 11a Test Freq. (MHz) 5825							
$N_{TX}$	N <sub>TX</sub> 1 Polarization							



	Freq	Level		Limit Line					Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7909.000	53.27	-14.93	68.20	43.41	36.98	5.80	32.92	Peak
2	11650.000	50.58	-3.42	54.00	36.90	39.26	6.90	32.48	Average
3	11650.000	65.86	-8.14	74.00	52.18	39.26	6.90	32.48	Peak
4	17475.000	65.65	-2.55	68.20	45.32	43.54	8.40	31.61	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

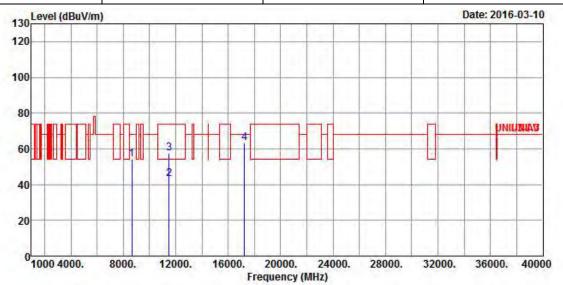
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	Modulation ModeHT20Test Freq. (MHz)5745							
N <sub>TX</sub>	2	Polarization	V					



	Freq	Level		Limit Line	A STATE OF				Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8654.000	54.28	-13.92	68.20	43.44	37.73	6.10	32.99	Peak
2	11490.000	43.33	-10.67	54.00	29.83	39.18	6.78	32.46	Average
3	11490.000	57.39	-16.61	74.00	43.89	39.18	6.78	32.46	Peak
4	17235.000	63.49	-4.71	68.20	44.78	41.72	8.53	31.54	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

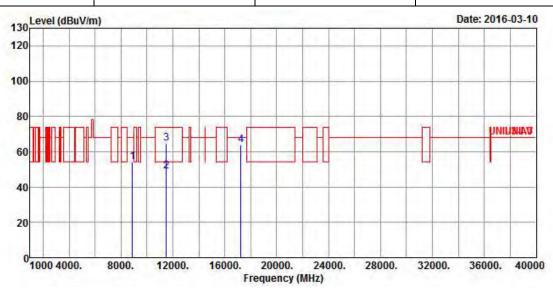
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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FAX: 886-3-327-0973

Tr	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	Modulation Mode HT20 Test Freq. (MHz) 5745							
N <sub>TX</sub>	2	Polarization	Н					



Freq	Level	(F) (F)					CO CONTRACTOR OF THE PARTY OF T	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
8871.000	53.97	-14.23	68.20	43.18	37.77	6.09	33.07	Peak
11490.000	48.88	-5.12	54.00	35.38	39.18	6.78	32.46	Average
11490.000	64.59	-9.41	74.00	51.09	39.18	6.78	32.46	Peak
17235.000	63.83	-4.37	68.20	45.12	41.72	8.53	31.54	Peak
	MHz 8871.000 11490.000 11490.000	MHz dBuV/m 8871.000 53.97 11490.000 48.88 11490.000 64.59	Freq Level Limit  MHz dBuV/m dB  8871.000 53.97 -14.23 11490.000 48.88 -5.12 11490.000 64.59 -9.41	MHz dBuV/m dB dBuV/m 8871.000 53.97 -14.23 68.20 11490.000 48.88 -5.12 54.00 11490.000 64.59 -9.41 74.00	Freq         Level         Limit         Line         Level           MHz         dBuV/m         dB dBuV/m         dBuV/m         dBuV           8871.000         53.97         -14.23         68.20         43.18           11490.000         48.88         -5.12         54.00         35.38           11490.000         64.59         -9.41         74.00         51.09	Freq         Level         Limit         Line         Level         Factor           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m           8871.000         53.97         -14.23         68.20         43.18         37.77           11490.000         48.88         -5.12         54.00         35.38         39.18           11490.000         64.59         -9.41         74.00         51.09         39.18	Freq         Level         Limit         Line         Level         Factor         Loss           MHz         dBuV/m         dB         dBuV/m         dBuV         dB/m         dB           8871.000         53.97         -14.23         68.20         43.18         37.77         6.09           11490.000         48.88         -5.12         54.00         35.38         39.18         6.78           11490.000         64.59         -9.41         74.00         51.09         39.18         6.78	Freq         Level         Limit         Line         Level         Factor         Loss Factor           MHz         dBuV/m         dB         dBuV/m         dBuV         dB/m         dB         dB           8871.000         53.97         -14.23         68.20         43.18         37.77         6.09         33.07           11490.000         48.88         -5.12         54.00         35.38         39.18         6.78         32.46           11490.000         64.59         -9.41         74.00         51.09         39.18         6.78         32.46

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

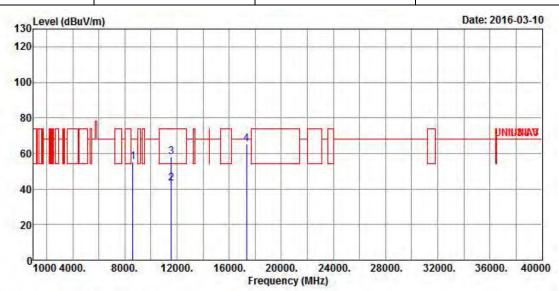
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode HT20 Test Freq. (MHz) 5785							
N <sub>TX</sub>	2	Polarization	V				



Freq	Level				Antenna Factor			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
8625.000	54.99	-13.21	68.20	44.14	37.73	6.10	32.98	Peak
11570.000	43.40	-10.60	54.00	29.80	39.23	6.84	32.47	Average
11570.000	57.98	-16.02	74.00	44.38	39.23	6.84	32.47	Peak
17355.000	65.21	-2.99	68.20	45.69	42.63	8.46	31.57	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

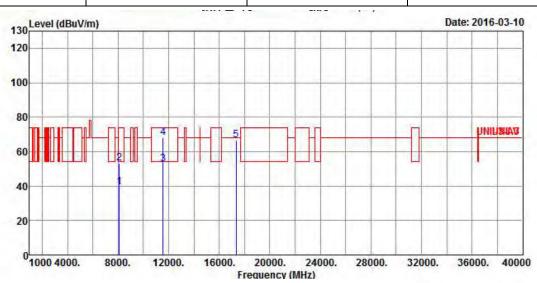
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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FAX: 886-3-327-0973

1 2 3

Tr	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	Modulation Mode HT20 Test Freq. (MHz) 5785							
N <sub>TX</sub>	2	Polarization	Н					



	Freq	Level	Over Limit			Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8110.000	39.56	-14.44	54.00	29.39	37.22	5.89	32.94	Average
2	8110.000	53.22	-20.78	74.00	43.05	37.22	5.89	32.94	Peak
3	11570.000	52.81	-1.19	54.00	39.21	39.23	6.84	32.47	Average
4	11570.000	67.98	-6.02	74.00	54.38	39.23	6.84	32.47	Peak
5	17355.000	66.72	-1.48	68.20	47.20	42.63	8.46	31.57	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

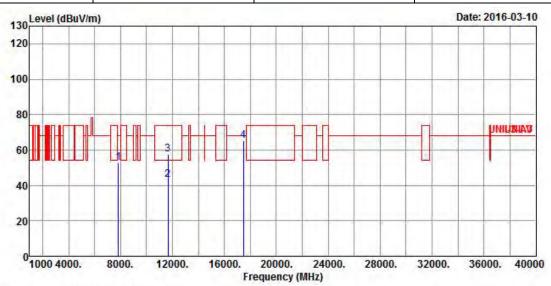
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	Modulation Mode HT20 Test Freq. (MHz) 5825							
$N_{TX}$	Polarization	V						



Freq	Level						1	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
7851.000	52.84	-15.36	68.20	43.05	36.92	5.79	32.92	Peak
11650.000	43.24	-10.76	54.00	29.56	39.26	6.90	32.48	Average
11650.000	57.70	-16.30	74.00	44.02	39.26	6.90	32.48	Peak
17475.000	65.48	-2.72	68.20	45.15	43.54	8.40	31.61	Peak
	7851.000 11650.000 11650.000	MHz dBuV/m 7851.000 52.84 11650.000 43.24 11650.000 57.70	Freq Level Limit  MHz dBuV/m dB  7851.000 52.84 -15.36 11650.000 43.24 -10.76 11650.000 57.70 -16.30	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  7851.000 52.84 -15.36 68.20 11650.000 43.24 -10.76 54.00 11650.000 57.70 -16.30 74.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  7851.000 52.84 -15.36 68.20 43.05 11650.000 43.24 -10.76 54.00 29.56 11650.000 57.70 -16.30 74.00 44.02	Freq Level Limit Line Level Factor  MHz dBuV/m dB dBuV/m dBuV dB/m  7851.000 52.84 -15.36 68.20 43.05 36.92 11650.000 43.24 -10.76 54.00 29.56 39.26 11650.000 57.70 -16.30 74.00 44.02 39.26	Freq         Level         Limit         Line         Level         Factor         Loss           MHz         dBuV/m         dB         dBuV/m         dBuV         dB/m         dB           7851.000         52.84         -15.36         68.20         43.05         36.92         5.79           11650.000         43.24         -10.76         54.00         29.56         39.26         6.90           11650.000         57.70         -16.30         74.00         44.02         39.26         6.90	7851.000 52.84 -15.36 68.20 43.05 36.92 5.79 32.92 11650.000 43.24 -10.76 54.00 29.56 39.26 6.90 32.48 11650.000 57.70 -16.30 74.00 44.02 39.26 6.90 32.48

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

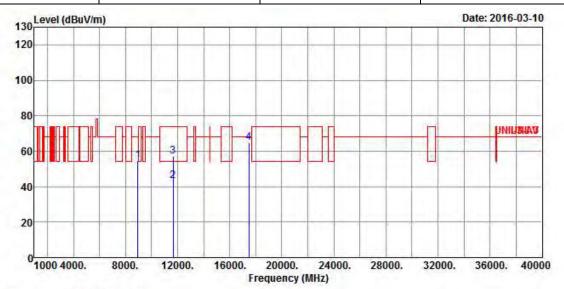
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	HT20	Test Freq. (MHz)	5825			
$N_{TX}$	2	Polarization	Н			



	Freq	Level				Antenna Factor				
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		-
1	8949.000	54.55	-13.65	68.20	43.77	37.79	6.08	33.09	Peak	
2	11650.000	43.28	-10.72	54.00	29.60	39.26	6.90	32.48	Average	
3	11650.000	57.27	-16.73	74.00	43.59	39.26	6.90	32.48	Peak	
4	17475.000	64.70	-3.50	68.20	44.37	43.54	8.40	31.61	Peak	

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

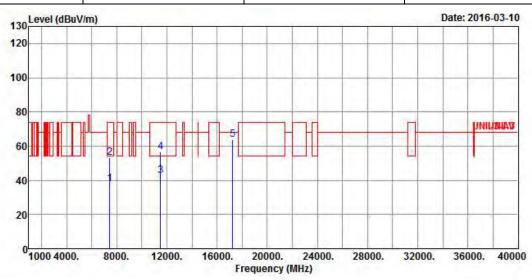
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	HT40	Test Freq. (MHz)	5755				
N <sub>TX</sub>	2	Polarization	V				



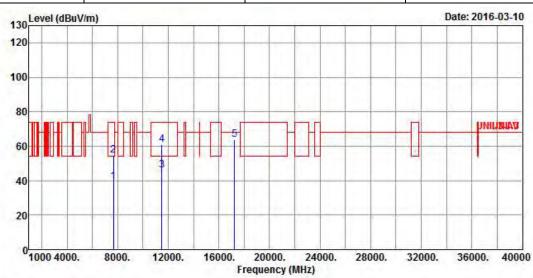
	Freq	Level		Limit Line				A	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7457.000	38.04	-15.96	54.00	28.81	36.41	5.67	32.85	Average
2	7457.000	53.33	-20.67	74.00	44.10	36.41	5.67	32.85	Peak
3	11510.000	42.80	-11.20	54.00	29.28	39.20	6.78	32.46	Average
4	11510.000	56.46	-17.54	74.00	42.94	39.20	6.78	32.46	Peak
5	17265.000	64.02	-4.18	68.20	45.09	41.98	8.50	31.55	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	HT40	Test Freq. (MHz)	5755			
$N_{TX}$ 2		Polarization	Н			

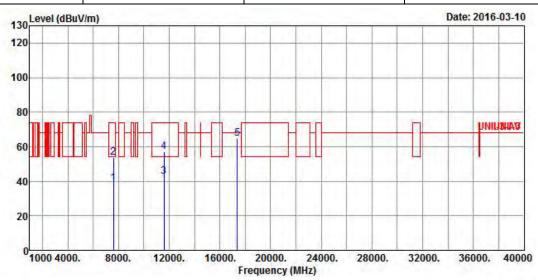


Freq	Level							Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
7684.000	39.50	-14.50	54.00	29.93	36.72	5.74	32.89	Average
7684.000	54.51	-19.49	74.00	44.94	36.72	5.74	32.89	Peak
11510.000	46.27	-7.73	54.00	32.75	39.20	6.78	32.46	Average
11510.000	61.14	-12.86	74.00	47.62	39.20	6.78	32.46	Peak
17265.000	63.88	-4.32	68.20	44.95	41.98	8.50	31.55	Peak
	7684.000 7684.000 11510.000 11510.000	MHz dBuV/m  7684.000 39.50  7684.000 54.51 11510.000 46.27 11510.000 61.14	Freq Level Limit  MHz dBuV/m dB  7684.000 39.50 -14.50 7684.000 54.51 -19.49 11510.000 46.27 -7.73 11510.000 61.14 -12.86	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  7684.000 39.50 -14.50 54.00 7684.000 54.51 -19.49 74.00 11510.000 46.27 -7.73 54.00 11510.000 61.14 -12.86 74.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  7684.000 39.50 -14.50 54.00 29.93  7684.000 54.51 -19.49 74.00 44.94  11510.000 46.27 -7.73 54.00 32.75  11510.000 61.14 -12.86 74.00 47.62	Freq Level Limit Line Level Factor  MHz dBuV/m dB dBuV/m dBuV dB/m  7684.000 39.50 -14.50 54.00 29.93 36.72 7684.000 54.51 -19.49 74.00 44.94 36.72 11510.000 46.27 -7.73 54.00 32.75 39.20 11510.000 61.14 -12.86 74.00 47.62 39.20	Freq Level Limit Line Level Factor Loss  MHz dBuV/m dB dBuV/m dBuV dB/m dB  7684.000 39.50 -14.50 54.00 29.93 36.72 5.74 7684.000 54.51 -19.49 74.00 44.94 36.72 5.74 11510.000 46.27 -7.73 54.00 32.75 39.20 6.78 11510.000 61.14 -12.86 74.00 47.62 39.20 6.78	7684.000 39.50 -14.50 54.00 29.93 36.72 5.74 32.89 7684.000 54.51 -19.49 74.00 44.94 36.72 5.74 32.89 11510.000 46.27 -7.73 54.00 32.75 39.20 6.78 32.46 11510.000 61.14 -12.86 74.00 47.62 39.20 6.78 32.46

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	HT40	Test Freq. (MHz)	5795			
$N_{TX}$	2	Polarization	V			

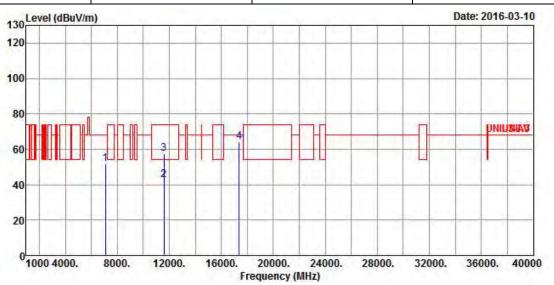


	Freq	Level	Over Limit			Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7605.000	38.91	-15.09	54.00	29.43	36.64	5.72	32.88	Average
2	7605.000	53.70	-20.30	74.00	44.22	36.64	5.72	32.88	Peak
3	11590.000	42.52	-11.48	54.00	28.89	39.23	6.87	32.47	Average
4	11590.000	56.96	-17.04	74.00	43.33	39.23	6.87	32.47	Peak
5	17385.000	64.87	-3.33	68.20	45.13	42.89	8.44	31.59	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	HT40	Test Freq. (MHz)	5795				
$N_{TX}$	2	Polarization	Н				



	Freq	Level				Antenna Factor			Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		_
1	7082.000	51.96	-16.24	68.20	43.88	35.42	5.40	32.74	Peak	
2	11590.000	42.65	-11.35	54.00	29.02	39.23	6.87	32.47	Average	
3	11590.000	57.47	-16.53	74.00	43.84	39.23	6.87	32.47	Peak	
4	17385.000	64.25	-3.95	68.20	44.51	42.89	8.44	31.59	Peak	

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

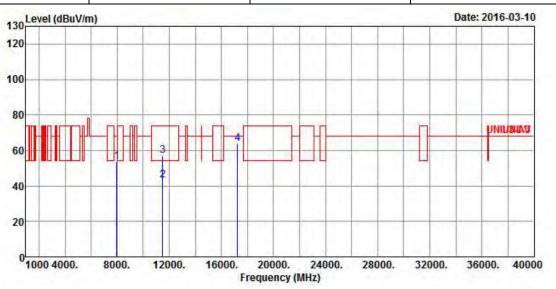
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Report No.: FR411403-23AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	VHT20	Test Freq. (MHz)	5745			
$N_{TX}$	2	Polarization	V			



	Freq	Level				Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7961.000	53.70	-14.50	68.20	43.78	37.04	5.81	32.93	Peak
2	11490.000	43.10	-10.90	54.00	29.60	39.18	6.78	32.46	Average
3	11490.000	57.27	-16.73	74.00	43.77	39.18	6.78	32.46	Peak
4	17235.000	63.92	-4.28	68.20	45.21	41.72	8.53	31.54	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

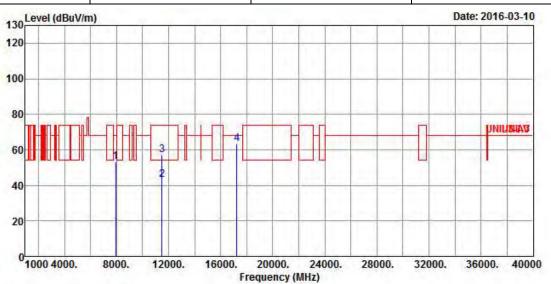
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	VHT20	Test Freq. (MHz)	5745				
$N_{TX}$	2		Н				



	Freq	Level			ReadAntenna Level Factor		A STATE OF THE STA	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7921.000	53.37	-14.83	68.20	43.49	37.00	5.80	32.92	Peak
2	11490.000	43.11	-10.89	54.00	29.61	39.18	6.78	32.46	Average
3	11490.000	56.99	-17.01	74.00	43.49	39.18	6.78	32.46	Peak
4	17235.000	63.52	-4.68	68.20	44.81	41.72	8.53	31.54	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

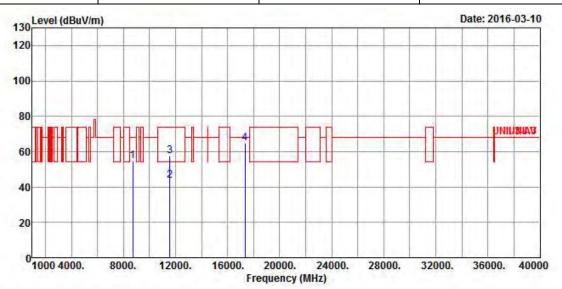
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	VHT20	Test Freq. (MHz)	5785					
N <sub>TX</sub> 2		Polarization	V					



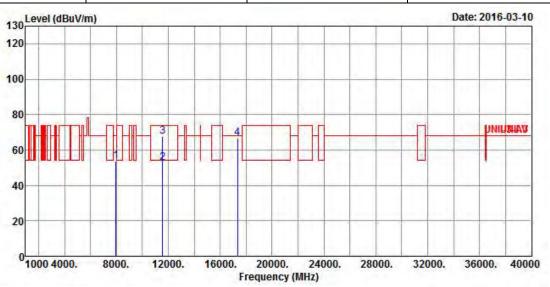
	Freq	Level				Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8719.000	54.62	-13.58	68.20	43.80	37.74	6.10	33.02	Peak
2	11570.000	43.80	-10.20	54.00	30.20	39.23	6.84	32.47	Average
3	11570.000	57.74	-16.26	74.00	44.14	39.23	6.84	32.47	Peak
4	17355.000	64.67	-3.53	68.20	45.15	42.63	8.46	31.57	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	VHT20	Test Freq. (MHz)	5785				
$N_{TX}$	2	Polarization	Н				



	Freq	Level	Over Limit			Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7976.000	53.90	-14.30	68.20	43.96	37.06	5.82	32.94	Peak
2	11570.000	52.92	-1.08	54.00	39.32	39.23	6.84	32.47	Average
3	11570.000	67.65	-6.35	74.00	54.05	39.23	6.84	32.47	Peak
4	17355.000	66.44	-1.76	68.20	46.92	42.63	8.46	31.57	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

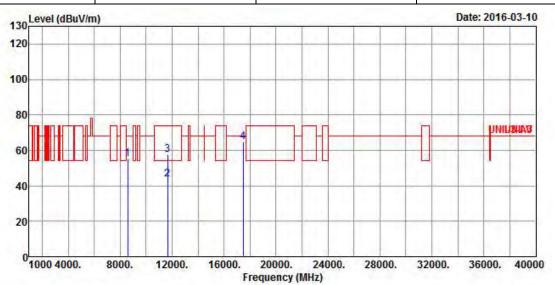
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	VHT20	Test Freq. (MHz)	5825				
N <sub>TX</sub>	2	Polarization	V				



	Freq		Limit ReadAnt Line Level Fa					Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8605.000	55.02	-13.18	68.20	44.17	37.72	6.10	32.97	Peak
2	11650.000	43.49	-10.51	54.00	29.81	39.26	6.90	32.48	Average
3	11650.000	57.60	-16.40	74.00	43.92	39.26	6.90	32.48	Peak
4	17475.000	64.68	-3.52	68.20	44.35	43.54	8.40	31.61	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

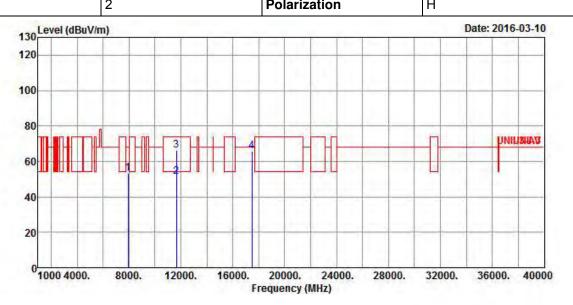
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	VHT20	Test Freq. (MHz)	5825						
N <sub>TX</sub>	2	Polarization	Н						

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	Freq	Level				Antenna Factor		The second second second	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		_
1	7936.000	53.09	-15.11	68.20	43.19	37.02	5.81	32.93	Peak	
2	11650.000	51.38	-2.62	54.00	37.70	39.26	6.90	32.48	Average	
3	11650.000	66.17	-7.83	74.00	52.49	39.26	6.90	32.48	Peak	
4	17475.000	65.70	-2.50	68.20	45.37	43.54	8.40	31.61	Peak	

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

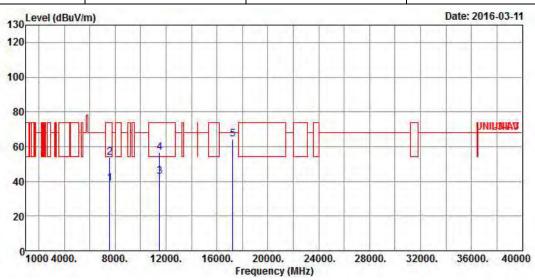
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	VHT40	Test Freq. (MHz)	5755				
N <sub>TX</sub> 2		Polarization	V				

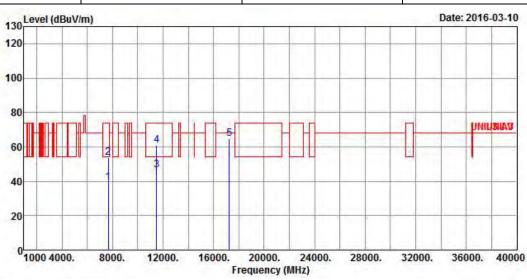


	Freq	Level	Over Limit			Antenna Factor		100000000000000000000000000000000000000		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		_
1	7565.000	38.84	-35.16	74.00	29.42	36.58	5.71	32.87	Peak	
2	7565.000	53.60	-20.40	74.00	44.18	36.58	5.71	32.87	Peak	
3	11510.000	42.57	-11.43	54.00	29.05	39.20	6.78	32.46	Average	
4	11510.000	56.65	-17.35	74.00	43.13	39.20	6.78	32.46	Peak	
5	17265.000	64.35	-3.85	68.20	45.42	41.98	8.50	31.55	Peak	

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	VHT40	Test Freq. (MHz)	5755
$N_{TX}$	2	Polarization	Н

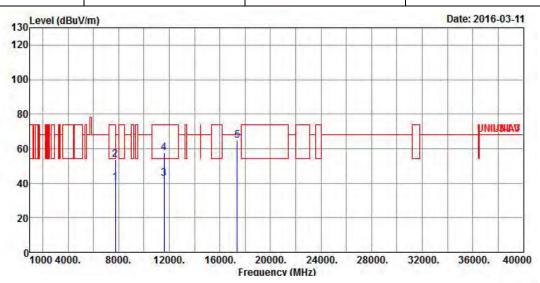


	Freq	Level	Over Limit	7 TO 1 TO 1		Antenna Factor		P. 2	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	7685.000	39.53	-14.47	54.00	29.96	36.72	5.74	32.89	Average
2	7685.000	53.50	-20.50	74.00	43.93	36.72	5.74	32.89	Peak
3	11510.000	46.50	-7.50	54.00	32.98	39.20	6.78	32.46	Average
4	11510.000	60.90	-13.10	74.00	47.38	39.20	6.78	32.46	Peak
5	17265.000	64.61	-3.59	68.20	45.68	41.98	8.50	31.55	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tr	ansmitter Radiated Unwar	ited Emissions (Above 1G	Hz)
Modulation Mode	VHT40	Test Freq. (MHz)	5795
N <sub>TX</sub>	2	Polarization	V

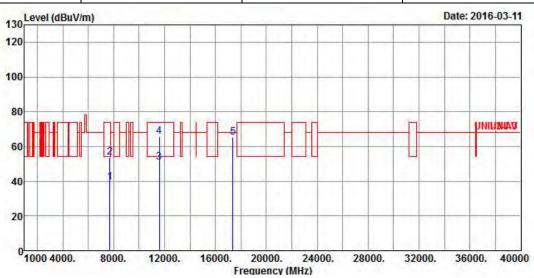


	Freq	Level	Over Limit	Limit Line		Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7748.000	40.25	-13.75	54.00	30.59	36.80	5.76	32.90	Average
2	7748.000	53.60	-20.40	74.00	43.94	36.80	5.76	32.90	Peak
3	11590.000	42.87	-11.13	54.00	29.24	39.23	6.87	32.47	Average
4	11590.000	57.37	-16.63	74.00	43.74	39.23	6.87	32.47	Peak
5	17385.000	64.78	-3.42	68.20	45.04	42.89	8.44	31.59	Peak

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	VHT40	Test Freq. (MHz)	5795
$N_{TX}$	2	Polarization	Н

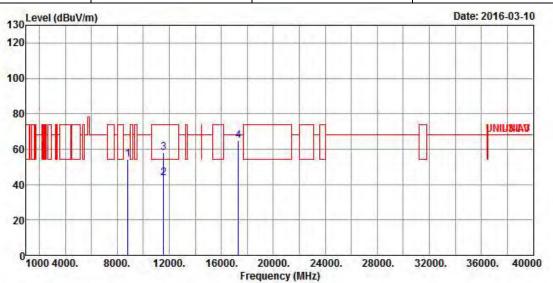


	Freq	Level	1000	Limit Line	- Walter	Antenna Factor			Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		-
1	7700.000	39.35	-14.65	54.00	29.75	36.74	5.75	32.89	Average	
2	7700.000	53.84	-20.16	74.00	44.24	36.74	5.75	32.89	Peak	
3	11590.000	50.72	-3.28	54.00	37.09	39.23	6.87	32.47	Average	
4	11590.000	65.61	-8.39	74.00	51.98	39.23	6.87	32.47	Peak	
5	17385.000	65.09	-3.11	68.20	45.35	42.89	8.44	31.59	Peak	

- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.
- Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	nsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	VHT80	Test Freq. (MHz)	5775
$N_{TX}$	2	Polarization	V



Freq	Level	20.7						Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
8818.000	54.30	-13.90	68.20	43.50	37.76	6.09	33.05	Peak
11550.000	43.81	-10.19	54.00	30.22	39.22	6.84	32.47	Average
11550.000	58.13	-15.87	74.00	44.54	39.22	6.84	32.47	Peak
17325.000	64.91	-3.29	68.20	45.64	42.37	8.46	31.56	Peak
	MHz 8818.000 11550.000	MHz dBuV/m 8818.000 54.30 11550.000 43.81 11550.000 58.13	Freq Level Limit  MHz dBuV/m dB  8818.000 54.30 -13.90 11550.000 43.81 -10.19 11550.000 58.13 -15.87	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  8818.000 54.30 -13.90 68.20 11550.000 43.81 -10.19 54.00 11550.000 58.13 -15.87 74.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  8818.000 54.30 -13.90 68.20 43.50 11550.000 43.81 -10.19 54.00 30.22 11550.000 58.13 -15.87 74.00 44.54	Freq Level Limit Line Level Factor  MHz dBuV/m dB dBuV/m dBuV dB/m  8818.000 54.30 -13.90 68.20 43.50 37.76 11550.000 43.81 -10.19 54.00 30.22 39.22 11550.000 58.13 -15.87 74.00 44.54 39.22	Freq         Level         Limit         Line         Level         Factor         Loss           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m         dB           8818.000         54.30         -13.90         68.20         43.50         37.76         6.09           11550.000         43.81         -10.19         54.00         30.22         39.22         6.84           11550.000         58.13         -15.87         74.00         44.54         39.22         6.84	Freq         Level         Limit         Line         Level         Factor         Loss Factor           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m         dB         dB           8818.000         54.30         -13.90         68.20         43.50         37.76         6.09         33.05           11550.000         43.81         -10.19         54.00         30.22         39.22         6.84         32.47           11550.000         58.13         -15.87         74.00         44.54         39.22         6.84         32.47

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

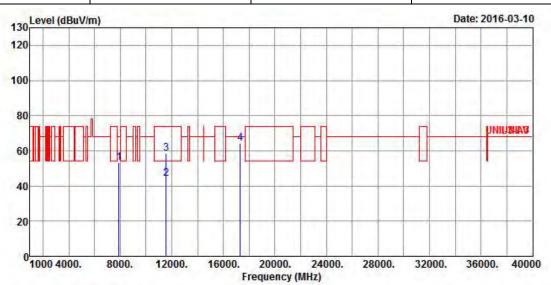
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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Tra	ınsmitter Radiated Unwan	ted Emissions (Above 1G	Hz)
Modulation Mode	VHT80	Test Freq. (MHz)	5775
$N_{TX}$	2	Polarization	Н



	Freq	Level	Over Limit	Limit Line		Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7896.000	53.48	-14.72	68.20	43.62	36.98	5.80	32.92	Peak
2	11550.000	44.01	-9.99	54.00	30.42	39.22	6.84	32.47	Average
3	11550.000	58.38	-15.62	74.00	44.79	39.22	6.84	32.47	Peak
4	17325.000	64.28	-3.92	68.20	45.01	42.37	8.46	31.56	Peak

Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.

Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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## 3.7 Frequency Stability

#### 3.7.1 Frequency Stability Limit

# Frequency Stability Limit UNII Devices ☐ In-band emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual. IEEE Std. 802.11n-2009 ☐ The transmitter center frequency tolerance shall be ± 20 ppm maximum for the 5 GHz band.

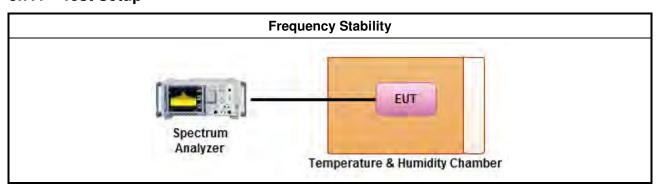
#### 3.7.2 Measuring Instruments

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

#### 3.7.3 Test Procedures

	Test Method								
	Refer as ANSI C63.10, clause 6.8 for frequency stability tests								
	$\boxtimes$	Frequency stability with respect to ambient temperature							
	$\boxtimes$	Frequency stability when varying supply voltage							
$\boxtimes$	For	conducted measurement.							
		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 in the maximum emitted power level.							

#### 3.7.4 Test Setup



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3.7.5 Test Result of Frequency Stability

	Frequency Stability Result										
Mo	Mode Frequency Stability (ppm)										
Condition	Freq. (MHz)	Test Frequency (MHz)					Frequency S	tability (ppm)			
Condition 1 req. (Mira	rreq. (MITIZ)	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min		
T20°CVmax	5180	5179.97178	5179.97180	5179.97180	5179.97135	-5.4479	-5.4440	-5.4440	-5.5309		
T20°CVmin	5180	5179.97250	5179.97135	5179.97180	5179.97250	-5.3089	-5.5309	-5.4440	-5.3089		
T50°CVnom	5180	5179.93440	5179.93444	5179.93440	5179.93650	-12.6641	-12.6564	-12.6641	-12.2587		
T40°CVnom	5180	5179.95052	5179.95052	5179.95022	5179.95050	-9.5521	-9.5521	-9.6100	-9.5560		
T30°CVnom	5180	5179.96226	5179.96182	5179.96139	5179.96096	-7.2857	-7.3707	-7.4537	-7.5367		
T20°CVnom	5180	5179.97250	5179.97250	5179.97250	5179.97180	-5.3089	-5.3089	-5.3089	-5.4440		
T10°CVnom	5180	5179.98550	5179.99783	5179.99711	5179.99638	-2.7992	-0.4189	-0.5579	-0.6988		
T0°CVnom	5180	5180.01013	5180.01013	5180.00941	5180.00868	1.9556	1.9556	1.8166	1.6757		
T-10°CVnom	5180	5180.01563	5180.01520	5180.01520	5180.01476	3.0174	2.9344	2.9344	2.8494		
T-20°CVnom	5180	5180.01737	5180.01693	5180.01737	5180.01737	3.3533	3.2683	3.3533	3.3533		
Limit	(ppm)			-			±	20	•		
Res	sult				Com	plied					

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Note 1: Measure at 85 % [Vmin] and 115 % [Vmax] of the nominal voltage [Vnom]. Note 2: The nominal voltage refer test report clause 1.1.5 for EUT operational condition.

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# 4 Test Equipment and Calibration Data

#### AC Power-line Conducted Emissions (Mode 1 ~ Mode 3)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
EMC Receiver	R&S	ESCS 30	100174	9kHz ~ 2.75GHz	Mar. 26, 2014	Mar. 25, 2015
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	Jan. 21, 2014	Jan. 20, 2015
RF Cable-CON	HUBER+SUHNER	RG213/U	7.61183201e+012	9kHz ~ 30MHz	Oct. 30, 2013	Oct. 29, 2014
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	N/A

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Note: Calibration Interval of instruments listed above is one year.

#### AC Power-line Conducted Emissions (Mode 4)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
EMC Receiver	R&S	ESCS 30	100174	9kHz ~ 2.75GHz	Apr. 15. 2015	Apr. 14. 2016
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	Jan. 22, 2015	Jan. 21, 2016
RF Cable-CON	HUBER+SUHNER	RG213/U	07611832020001	9kHz ~ 30MHz	Oct. 30, 2015	Oct. 29, 2016
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	N/A	N/A

Note: Calibration Interval of instruments listed above is one year.

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# For 5150-5250 MHz <RF Conducted>

<ni conducted=""></ni>						
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101013	9kHz ~ 40GHz	Jan. 25, 2014	Jan. 24, 2015
AC Power Source	G.W	APS-9102	EL920581	AC 0V ~ 300V	Jul. 15, 2014	Jul. 14, 2015
Temp. and Humidity Chamber	Giant Force	GTH-225-20-SP-SD	MAA1112-00 7	-20 ~ 100 °C	Nov. 20, 2013	Nov. 19, 2014
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Jul. 31, 2014	Jul. 30, 2015
RF Cable-2m	HUBER+SUHNER	SUCOFLEX_104	SN 345675/4	30MHz ~ 26.5GHz	Dec. 02, 2013	Dec. 01, 2014
RF Cable-2m	HUBER+SUHNER	SUCOFLEX_104	SN 345679/4	30MHz ~ 26.5GHz	Dec. 02, 2013	Dec. 01, 2014
Power Sensor	Anritsu	MA2411B	0917017	300MHz ~ 40GHz	Jan. 28, 2014	Jan. 27, 2015
Power Meter	Anritsu	ML2495A	0949003	300MHz ~ 40GHz	Jan. 28, 2014	Jan. 27, 2015

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Radiated Emission(Below 1GHz) Mode 1 ~ Mode 3

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	Nov. 30, 2013	Nov. 29, 2014
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	May. 05, 2014	May. 04, 2015
Spectrum	R&S	FSP40	100004	9kHz ~ 40GHz	Mar. 27, 2014	Mar. 26, 2015
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30MHz ~ 1GHz	Sep. 20, 2014	Sep. 19, 2015
RF Cable-R03m	Jye Bao	RG142	CB021	9kHz ~ 1GHz	Nov. 16, 2013	Nov. 15, 2014
Turn Table	EM Electronics	EM Electronics	060615	0 ~ 360 degree	N/A	N/A
Antenna Mast	MF	MF-7802	MF780208179	1 ~ 4 m	N/A	N/A

Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
Loop Antenna	TESEQ	HLA 6120	31244	9kHz ~ 30MHz	Dec. 02, 2012	Dec. 01, 2014

Note: Calibration Interval of instruments listed above is two year.

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Radiated Emission(Below 1GHz) Mode 4

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	Nov. 28, 2015	Nov. 27, 2016
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	May 11, 2015	May 10, 2016
Spectrum	R&S	FSP40	100004	9kHz ~ 40GHz	Apr. 02, 2015	Apr. 01, 2016
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30MHz ~ 1GHz	Sep. 18, 2015	Sep. 17, 2016
Turn Table	EM Electronics	EM Electronics	060615	0 ~ 360 degree	N/A	N/A
Antenna Mast	MF	MF-7802	MF780208179	1 ~ 4 m	N/A	N/A

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Note: Calibration Interval of instruments listed above is one year.

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
Loop Antenna	R&S	HFH2-Z2	100330	9 kHz~30 MHz	Nov. 16, 2015	Nov. 15, 2017

Note: Calibration Interval of instruments listed above is two years.

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#### For 5725~5850 MHz <RF Conducted>

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
Temp. and Humidity Chamber	Giant Force	GTH-225-40-CP-AR	MAA1311-008	-40 ~ 100°C	Apr. 23, 2015	Apr. 22, 2016
Spectrum Analyzer	R&S	FSV 40	101500	9KHz~40GHz	May 06, 2015	May 05, 2016
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Jul. 28, 2015	Jul. 27, 2016

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#### <Radiation Emissions >

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	30MHz ~ 1GHz 3m	Nov. 28, 2015	Nov. 27, 2016
3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	1GHz ~ 18GHz 3m	Dec. 16, 2015	Dec. 15, 2016
Amplifier	HP	8447D	2944A08033	10kHz ~ 1.3GHz	May 11, 2015	May 10, 2016
Amplifier	Agilent	8449B	3008A02120	1GHz ~ 26.5GHz	Sep. 02, 2015	Sep. 01, 2016
Spectrum	R&S	FSV40	101513	9kHz ~ 40GHz	Feb. 16, 2016	Feb. 15, 2017
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30MHz ~ 1GHz	Sep. 18, 2015	Sep. 17, 2016
Horn Antenna	ETS ·	3115	6741	1GHz ~ 18GHz	Jul. 15, 2015	Jul. 14, 2016
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	18GHz ~ 40GHz	Jan. 29, 2016	Jan. 28, 2017

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
Amplifier	MITEQ	JS44-18004000-33-8P	1840917	18GHz ~ 40GHz	Jun. 02, 2015	Jun. 01, 2017
Loop Antenna	R&S	HFH2-Z2	100330	9 kHz~30 MHz	Nov. 16, 2015	Nov. 15, 2017

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