Equipment



Report No.: FR411403-27AN

: 11ac Dual Band Concurrent Wall-mount AP

# **FCC Test Report**

• •		
Brand Name	:	EDIMAX
Model No.	:	EW-7679WIC, GAP-679WIC, WAP1752, WAP1750
FCC ID	:	NDD9576791401
Standard	:	47 CFR FCC Part 15.407
Operating Band	:	5150 MHz - 5250 MHz 5725 MHz - 5850 MHz
FCC Classification	:	UNII
Applicant Manufacturer	:	EDIMAX TECHNOLOGY CO., LTD. No.3,Wu-Chuan 3rd Road,Wu-Ku Industrial Park, New Taipei City, Taiwan
Function	:	<ul><li>☐ Outdoor AP;</li><li>☐ Fixed P2P AP;</li><li>☐ Portable Client</li></ul>

The product sample received on Sep. 04, 2014 and completely tested on Mar. 21, 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

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## FCC Test Report

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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	Ref. Std. Clause	Description	Result	
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.	Version	Description	Issued Date
FR411403AN	Rev. 01	Initial issue of report	Jun. 18, 2014
FR411403-05AN	Rev. 01	1.Change antenna to PIFA antenna.     2.Change Input/output port location.     3.Change model name.	Nov. 28, 2014
FR411403-17AN	Rev. 01	1.Add level 6 adapter     2.Update AC conduction and radiated missions     (Below 1GHz) tested.	Dec. 04, 2015
FR411403-27AN	Rev. 01	<ol> <li>Remove Level V Adapter (WA-30B12) and Level V Adapter (DA-48T12)</li> <li>Add Level VI Adapter (WA-30J12R)</li> <li>UNII-band3, update standard version to 15.407 and update UNII-Band 1 limit.</li> </ol>	Dec. 04, 2015

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1 General Description

#### 1.1 Information

#### 1.1.1 RF General Information

RF General Information (5150-5250MHz band)						
Frequency Range (MHz)	IEEE Std. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N <sub>TX</sub> )	RF Output Power (dBm)	Co-location
5150-5250	а	5180-5240	36-48 [4]	1	24.35	Yes
5150-5250	n (HT20)	5180-5240	36-48 [4]	3	25.97	Yes
5150-5250	n (HT40)	5190-5230	38-46 [2]	3	27.09	Yes
5150-5250	ac (VHT20)	5180-5240	36-48 [4]	3	25.88	Yes
5150-5250	ac (VHT40)	5190-5230	38-46 [2]	3	27.03	Yes
5150-5250	ac (VHT80)	5210	42 [1]	3	17.87	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. 802.11	Ch. Freq. (MHz)	Channel Number	Transmit Chains (N <sub>TX</sub> )	RF Output Power (dBm)	Co-location	
5725-5850	а	5745-5825	149-165 [5]	1	24.76	Yes	
5725-5850	n (HT20)	5745-5825	149-165 [5]	3	23.11	Yes	
5725-5850	n (HT40)	5755-5795	151-159 [2]	3	24.54	Yes	
5725-5850	ac (VHT20)	5745-5825	149-165 [5]	3	23.17	Yes	
5725-5850	ac (VHT40)	5755-5795	151-159 [2]	3	24.09	Yes	
5725-5850	ac (VHT80)	5775	155 [1]	3	18.07	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.				

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	Antenna General Information						
Port No.	Ant. Cat.	Ant. Type	Gain <sub>(dBi)</sub>				
1			3.84				
2	Integral	PIFA	3.49				
3			3.64				

#### Remark:

- 802.11a only include 1TX and Port1 for emission.
   802.11n/ac only includes 3TX 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	0.00			
$\boxtimes$	100% - IEEE 802.11n (HT20)	0.00			
$\boxtimes$	100% - IEEE 802.11n (HT40)	0.00			
$\boxtimes$	100% - IEEE 802.11ac (VHT20)	0.00			
$\boxtimes$	100% - IEEE 802.11ac (VHT40)	0.00			
$\boxtimes$	100% - IEEE 802.11ac (VHT80)	0.00			

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## 1.1.5 EUT Operational Condition

Supply Voltage		□ DC	System
Type of DC Source	☐ Internal DC supply		

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## 1.2 Accessories and Support Equipment

Accessories					
	Brand Name	APD	Model Name	DA-48T12	
AC Adapter 1	Power Rating	I/P: 100-240Vac~50-60	/P: 100-240Vac~50-60Hz, 1.4A Max ; O/P: 12V===4A		
	Remark	Level 6			
	Brand Name	APD	Model Name	WA-30J12R	
AC Adapter 2	Power Rating	I/P: 100-240Vac~50-60Hz, 0.9A Max ; O/P: 12V===2.5A		2V <del></del> 2.5A	
	Remark	Level 6			

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

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 and AC Adapter for 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 and AC Adapter for PoE provided by the customer.

#### (For 5150~5250 MHz)

Support Equipment - RF Conducted							
No.	No. Equipment Brand Name Model Name FCC ID						
1	Notebook	DELL	E5500	DoC			
2	AC Adapter for Notebook	DELL	HA65NM130	DoC			

#### (For 5725~5850 MHz)

	Support Equipment - RF Conducted							
No.	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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#### **Testing Applied Standards** 1.3

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

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- 47 CFR FCC Part 15
- ANSI C63.10-2009(UNII band1) ANSI C63.10-2013 (UNII band3)
- FCC KDB 789033 D02 v01r02
- FCC KDB 644545 D03 v01
- FCC-14-30A1-UNII
- FCC KDB 662911 D01 v02r01

#### **Testing Location Information** 1.4

_									
	Testing Location								
HWA YA ADD : No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Taoy 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	lition		Test Site No.	Test Engineer	Test Environment			
	AC Condu	ction		CO04-HY	Ryan	25℃ / 58%			
Radiated Emission (Below 1GHz)			03CH03-HY	Jeff	21.9°C / 50%				
				(For 5150~	5250 MHz)				
	RF Condu	icted		TH01-HY	lan	22.8°C / 66%			
Radiated Emission (Above 1GHz)				03CH03-HY	Hunter	25.7°C / 51%			
				(For 5725~	5850 MHz)				
RF Conducted			TH01-HY	Jeremy	26°C / 66%				
Radiated Emission (Above 1GHz)				03CH03-HY	Jeff	21.9°C / 50%			

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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		±1.4 %			
RF output power, conducted		±0.6 dB			
Power density, conducted		±0.8 dB			
Unwanted emissions, conducted	9 – 150 kHz	±0.4 dB			
	0.15 – 30 MHz	±0.4 dB			
	30 – 1000 MHz	±0.5 dB			
	1 – 18 GHz	±0.7 dB			
	18 – 40 GHz	±0.8 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 ℃			
Humidity		±3 %			
DC and low frequency voltages		±3 %			
Time		±1.4 %			
Duty Cycle		±1.4 %			

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2 Test Configuration of EUT

## 2.1 The Worst Case Modulation Configuration

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	3	MCS 0-23	MCS 0					
HT40	3	MCS 0-23	MCS 0					
VHT20	3	MCS 0-8	MCS 0					
VHT40	3	MCS 0-9	MCS 0					
VHT80	3	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 Free	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	21	25	25	-	-	-
HT20	3	17	21	21	-	-	-
HT40	3	-	-	-	16	23	-
VHT20	3	20	21	21	-	-	-
VHT40	3	-	-	-	15.5	23	-
VHT80	3	-	-	-	-	-	14

The \	The Worst Case Power Setting Parameter (5725-5850MHz band)							
Test Software				DC	S			
				Test Fred	quency (MH	z)		
<b>Modulation Mode</b>	$N_{TX}$		NCB: 20Mi	Ηz	NCB:	40MHz	NCB: 80MHz	
		5745	5785	5825	5755	5795	5775	
11a	1	19	26	21	-	-	-	
HT20	3	17	18	17.5	-	-	-	
HT40	3	-	-	-	16	19.5	-	
VHT20	3	17	18	17.5	-	-	-	
VHT40	3	-	-	-	16	19	-	
VHT80	3	-	-	-	-	-	13	

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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						
1 EUT with adapter 1						
2	EUT with adatper 2					
3 EUT with PoE						
For operating mode 2 is	For operating mode 2 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, 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 Fo	ollowing Conformance Te	sts		
Tests Item	Transmitter Radiated Unwanted Emissions Transmitter Radiated Bandedge Emissions				
Test Condition	regardless of spatial multip	antenna assembly (multiple olexing MIMO configuration antenna gain of each anten	), the radiated test should		
	☐ EUT will be placed in	fixed position.			
User Position		mobile position and operati ree orthogonal planes.	ng multiple positions. EUT		
	EUT will be a hand-he operating multiple pos	eld or body-worn battery-pov sitions.	wered devices and		
Operating Mode < 1GHz	Operating Mode Description	n			
	1. EUT with adapter 1				
Operating Made < 4CH=	2. EUT with adapter 2				
Operating Mode < 1GHz	3. EUT with PoE				
	For operating mode 1 is the	e worst case and it was rec	ord in this test report.		
Operating Mode > 1GHz	1. EUT with adapter 1				
Modulation Mode	11a, HT20, HT40, VHT20,	VHT40, VHT80			
	X Plane	Y Plane	Z Plane		
Orthogonal Planes of EUT					
Worst Planes of EUT	V				

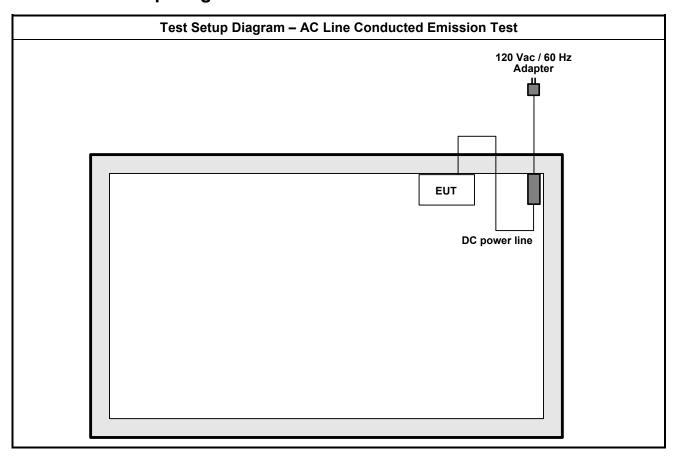
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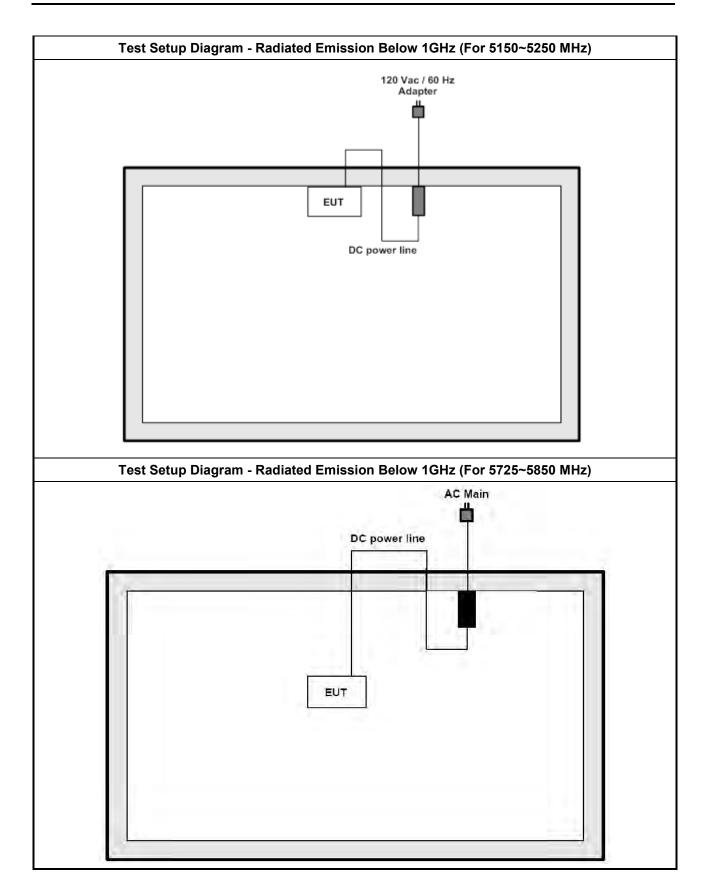
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#### 2.4 **Test Setup Diagram**



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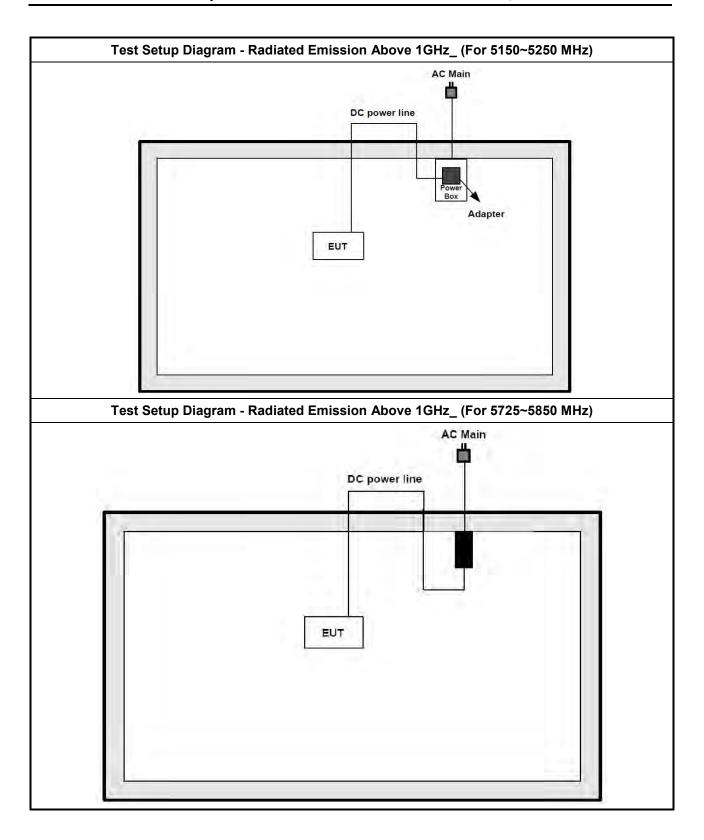
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3 Transmitter Test Result

#### 3.1 AC Power-line Conducted Emissions

#### 3.1.1 AC Power-line Conducted Emissions Limit

Fraguency Emission (MH=)	Ougoi Book	Averege
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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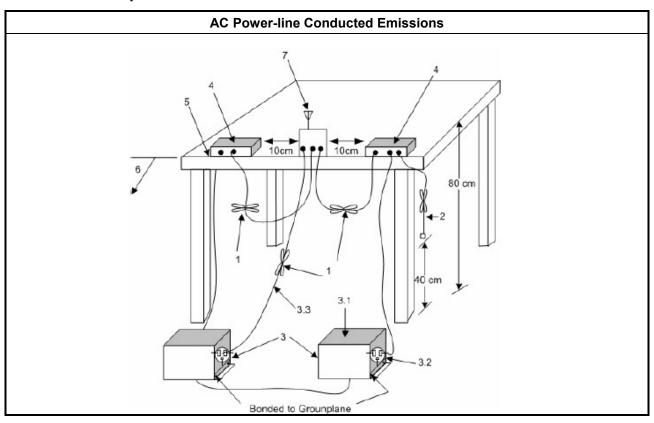
### 3.1.2 Measuring Instruments

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

#### 3.1.3 Test Procedures

Test Method	
Refer as ANSI C63.10-2013, clause 6.2 for AC power-line con-	ducted emissions.

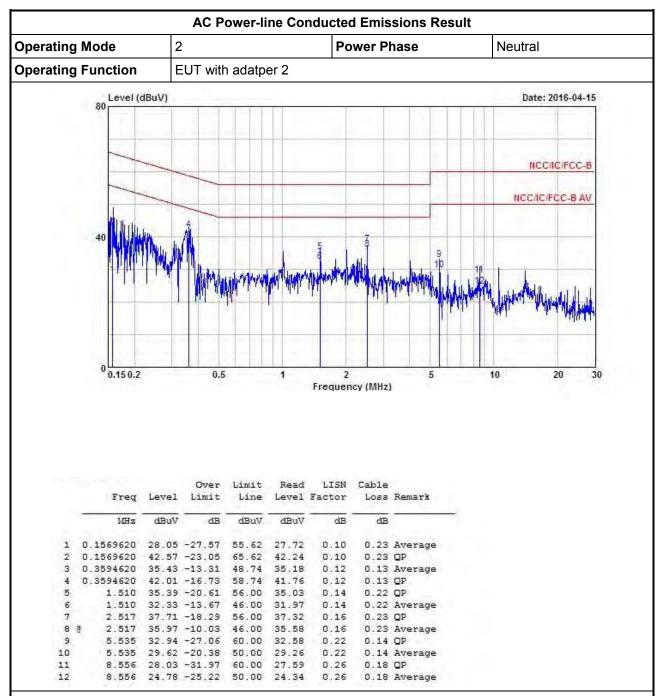
#### 3.1.4 Test Setup



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3.1.5 Test Result of AC Power-line Conducted Emissions



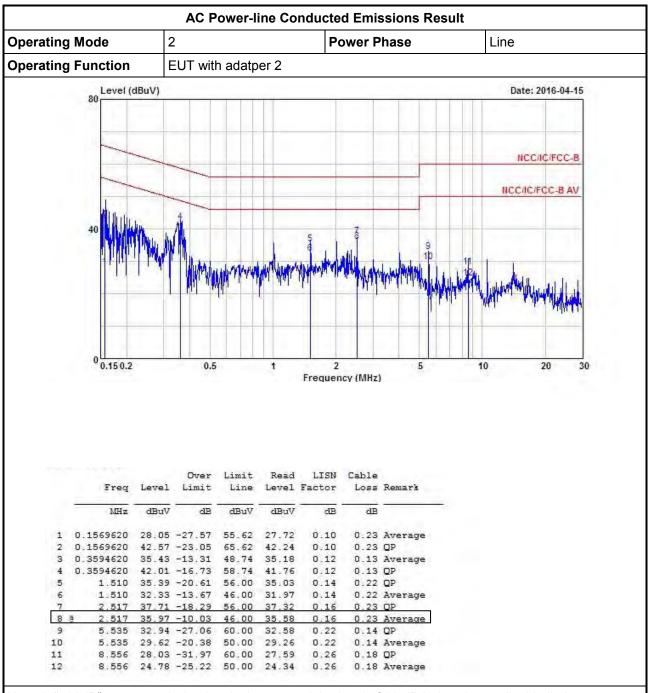
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Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.

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

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Note 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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#### 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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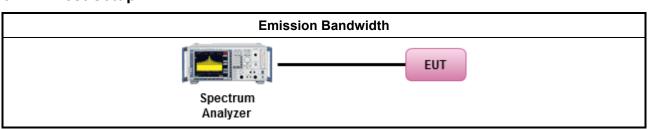
### 3.2.2 Measuring Instruments

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

#### 3.2.3 Test Procedures

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

### 3.2.4 Test Setup



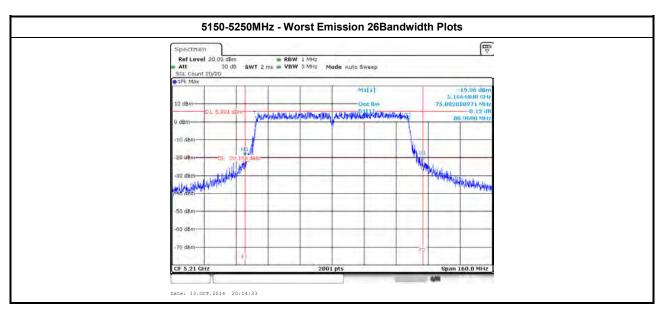
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3.2.5 Test Result of Emission Bandwidth

Condit	ion				Emission Bar	ndwidth (MHz)				
		Freq.		99% Bandwidth		. ,	26dB Bandwidt	h		
Modulation Mode	N <sub>TX</sub>	(MHz)	Chain Port 1	Chain Port 2	Chain Port 3	Chain Port 1	Chain Port 2	Chain Port 3		
11a	1	5180	16.84	-	-	20.45	-	-		
11a	1	5200	17.21	-	-	32.30	-	-		
11a	1	5240	20.18	-	-	37.02	-	-		
HT20	3	5180	17.81	17.76	17.91	21.10	20.42	21.17		
HT20	3	5200	17.81	17.69	17.81	21.10	20.17	21.40		
HT20	3	5240	17.94	17.81	17.89	21.05	20.75	21.12		
HT40	3	5190	36.70	36.74	36.66	45.52	45.32	45.72		
HT40	3	5230	36.86	36.66	36.90	47.64	44.64	47.64		
VHT20	3	5180	17.76	17.79	17.89	21.00	20.82	21.15		
VHT20	3	5200	17.81	17.79	17.89	21.20	20.75	21.17		
VHT20	3	5240	17.81	17.69	17.74	21.50	20.42	21.15		
VHT40	3	5190	36.70	36.62	36.58	44.68	44.68	44.56		
VHT40	3	5230	36.82	36.58	36.82	51.80	45.32	49.32		
VHT80	3	5210	75.88	75.88	75.88	88.96	85.36	88.48		
Result				Complied						

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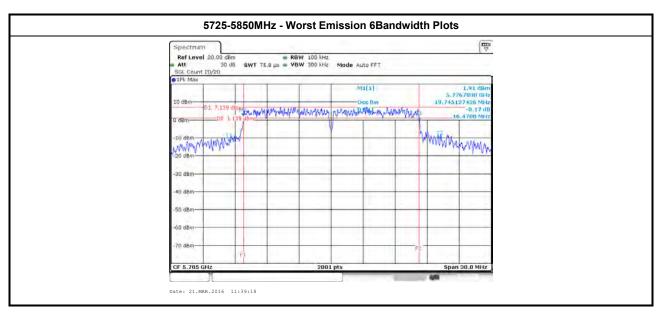
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FCC Test Report

Condit	ion		Emission Bandwidth (MHz)							
Mandadadi an Manda		Freq.		99% Bandwidth	1		6dB Bandwidth	1		
Modulation Mode	N <sub>TX</sub>	(MHz)	Chain Port 1	Chain Port 2	Chain Port 3	Chain Port 1	Chain Port 2	Chain Port 3		
11a	1	5745	16.47	-	-	16.48	-	-		
11a	1	5785	19.74	-	-	16.47	-	-		
11a	1	5825	16.43	-	-	16.48	-	-		
HT20	3	5745	17.66	17.61	17.63	17.76	17.62	17.67		
HT20	3	5785	17.70	17.61	17.66	17.80	17.59	17.70		
HT20	3	5825	17.63	17.69	17.73	17.67	17.73	17.82		
HT40	3	5755	36.18	36.18	36.22	36.48	36.32	36.68		
HT40	3	5795	36.22	36.22	36.18	36.52	36.36	36.36		
VHT20	3	5745	17.66	17.63	17.69	17.67	17.71	17.74		
VHT20	3	5785	17.70	17.66	17.67	17.76	17.71	17.73		
VHT20	3	5825	17.73	17.76	17.63	17.79	17.77	17.67		
VHT40	3	5755	36.22	36.22	36.18	36.48	36.48	36.36		
VHT40	3	5795	36.18	36.26	36.22	36.44	36.48	36.48		
VHT80	3	5775	75.56	75.32	75.32	75.84	75.68	75.60		
Resu	ılt			Complied						

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## 3.3 RF Output Power

### 3.3.1 RF Output Power Limit

	Maximum Conducted Output Power Limit
UNI	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 $G_{T.}$ > 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 lesse 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 o 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in MHz. If $G_{TX}$ > 6 dBi, ther $P_{Out}$ = 24 – ( $G_{TX}$ – 6).
	For the 5.47-5.725 GHz band, the maximum conducted output power ( $P_{Out}$ ) shall not exceed the lesse 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:
	$oxed{oxed}$ Point-to-multipoint systems (P2M): the maximum conducted output power (P <sub>Out</sub> ) 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.
	= maximum conducted output power in dBm, = 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.

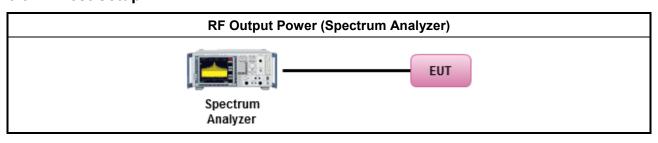
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### 3.3.3 Test Procedures

		Test Method
$\boxtimes$	Maximum Conducted Output Po	wer
	[duty cycle ≥ 98% or external vid	eo / power trigger]
	Refer as FCC KDB 789033	, clause E Method SA-1 (spectral trace averaging).
	Refer as FCC KDB 789033 (RMS detection with slow s	
	duty cycle < 98% and average o	ver on/off periods with duty factor
	Refer as FCC KDB 789033	, clause E Method SA-2 (spectral trace averaging).
	Refer as FCC KDB 789033 (RMS detection with slow s	
	Wideband 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.	
		ansmit chain and measurements performed on this transmit chain. The
	☐ The EUT supports diversity	transmitting and the results on transmit chain port 1 is the worst case.
	Refer as FCC KDB 662	transmit chains using options given below: 911, In-band power measurements. Using the measure-and-sumnsmit ports individually. Sum the power (in linear power units e.g., mW) all sample and save them.
	$P_{\text{total}} = P_1 + P_2 + + P_n$	EIRP calculation could be following as methods:  W] and transfer to log unit [dBm])

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## 3.3.4 Test Setup



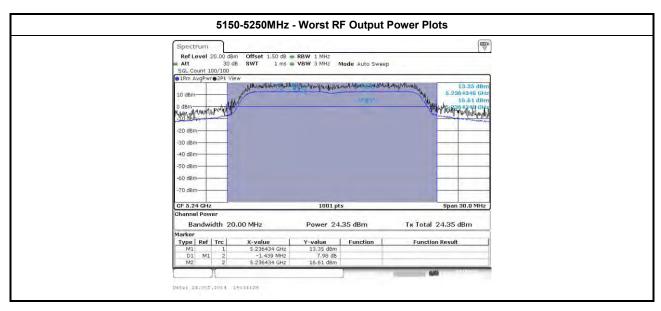
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3.3.5 Test Result of Maximum Conducted Output Power

	Maximum Conducted Output Power (5150-5250MHz band)							
		_		Output Po	wer (dBm)	Antonno Coin		
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Chain Port 1	Chain Port 2	Chain Port 3	Sum Chain	Antenna Gain (dBi)	Power Limit
11a	1	5180	21.07	-	-	21.07	3.84	30.00
11a	1	5200	24.27	-	-	24.27	3.84	30.00
11a	1	5240	24.35	-	-	24.35	3.84	30.00
HT20	3	5180	16.79	16.80	16.79	21.56	3.66	30.00
HT20	3	5200	21.20	21.21	21.19	25.97	3.66	30.00
HT20	3	5240	21.01	20.99	20.98	25.76	3.66	30.00
HT40	3	5190	14.87	14.87	14.88	19.64	3.66	30.00
HT40	3	5230	22.33	22.31	22.32	27.09	3.66	30.00
VHT20	3	5180	20.19	20.17	20.16	24.94	3.66	30.00
VHT20	3	5200	21.11	21.11	21.11	25.88	3.66	30.00
VHT20	3	5240	21.02	20.98	21.01	25.77	3.66	30.00
VHT40	3	5190	14.35	14.36	14.35	19.12	3.66	30.00
VHT40	3	5230	22.31	22.20	22.27	27.03	3.66	30.00
VHT80	3	5210	13.10	13.11	13.10	17.87	3.66	30.00
Resu					Complied			

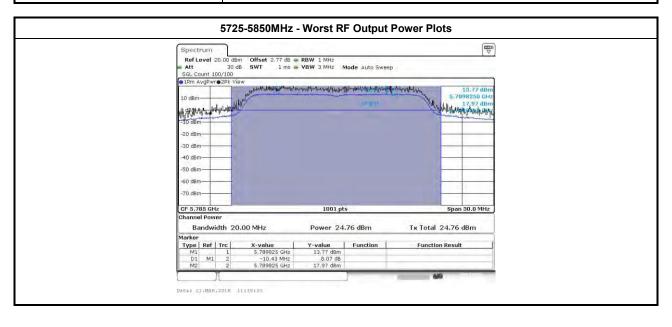
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	Maximum Conducted Output Power (5725-5850MHz band)							
		Ewa er		Output Po	Antenna Gain			
Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Chain Port 1	Chain Port 2	Chain Port 3	Sum Chain	(dBi)	Power Limit
11a	1	5745	19.55	-	-	19.55	3.84	30.00
11a	1	5785	24.76	-	-	24.76	3.84	30.00
11a	1	5825	21.24	-	-	21.24	3.84	30.00
HT20	3	5745	17.24	18.86	16.42	22.40	3.66	30.00
HT20	3	5785	17.80	19.43	17.54	23.11	3.66	30.00
HT20	3	5825	18.00	19.29	16.76	22.91	3.66	30.00
HT40	3	5755	15.89	16.92	15.27	20.85	3.66	30.00
HT40	3	5795	19.51	20.43	19.29	24.54	3.66	30.00
VHT20	3	5745	17.48	18.54	16.59	22.38	3.66	30.00
VHT20	3	5785	17.86	19.40	17.74	23.17	3.66	30.00
VHT20	3	5825	17.69	19.15	16.81	22.76	3.66	30.00
VHT40	3	5755	16.06	17.11	15.26	20.98	3.66	30.00
VHT40	3	5795	19.06	20.00	18.80	24.09	3.66	30.00
VHT80	3	5775	12.75	14.38	12.52	18.07	3.66	30.00
Resi			•	•	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	I Dev	rices
$\boxtimes$	For t	he 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 – $(G_{TX} - 6)$
		the 5.25-5.35 GHz band, the peak power spectral density (PPSD) $\leq$ 11 dBm/MHz. If $G_{TX} > 6$ dBi, PPSD= 11 – ( $G_{TX} - 6$ ).
		the 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	peak 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.

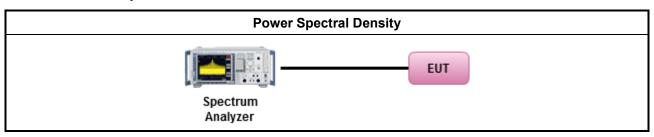
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### 3.4.3 Test Procedures

		Test Method
$\boxtimes$	outp func	c 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:
		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]
	$\boxtimes$	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)
$\boxtimes$	For	conducted measurement.
	$\boxtimes$	The EUT supports single transmit chain and measurements performed on this transmit chain. The chain is port 1.
		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: 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 + \ldots + 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



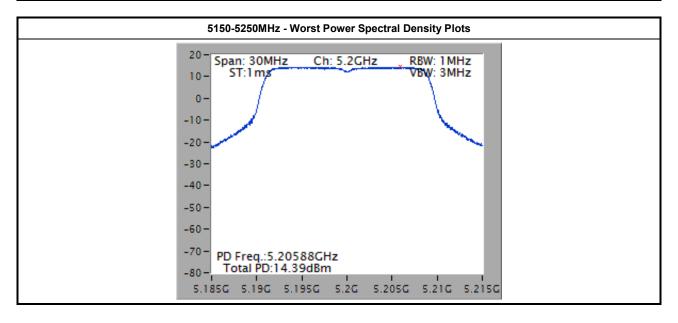
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3.4.5 Test Result of Peak Power Spectral Density

Peak Power Spectral Density Result (5150-5250MHz band)							
Modulation Mode	N <sub>TX</sub> Freq. (MHz) 1 5180		Peak Power Spectral Density (dBm)	PSD Limit	Antenna Gain (dBi)		
11a			10.02	17.00			
11a	1	5200	13.33	3.84			
11a	1	5240	13.35	13.35 17.00			
HT20 3 518			9.86	8.43			
HT20	3	5200	14.39	14.57	8.43		
HT20	3	5240	14.22	14.57	8.43		
HT40 3		5190	5.04	14.57	8.43		
HT40 3 5230 VHT20 3 5180		5230	12.49	14.57	8.43		
		5180	13.39	14.57	8.43		
VHT20 3 5200		14.27	14.57	8.43			
VHT20 3		5240	14.16	14.57	8.43		
VHT40	3	5190	4.55	14.57	8.43		
VHT40 3		5230	12.92	14.57	8.43		
VHT80	3	5210	0.08	14.57	8.43		
Resu	ılt	•	1	Complied			

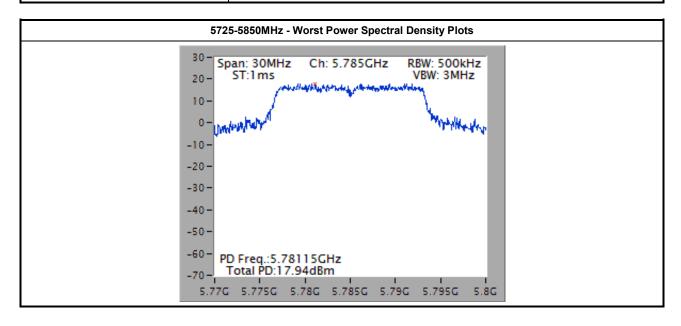
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Peak Power Spectral Density Result (5725-5850MHz band)							
Modulation Mode	N <sub>TX</sub> Freq. (MHz)		Peak Power Spectral Density (dBm)	PSD Limit (500kHz)	Antenna Gain (dBi)		
11a	1	5745	11.37	30.00	3.84		
11a	1	5785	17.94	30.00	3.84		
11a	1	5825	14.57	30.00	3.84		
HT20	3	5745	14.94	27.57	8.43		
HT20	3	5785	15.93	27.57	8.43		
HT20	3	5825	15.69	27.57	8.43		
HT40		5755	10.04	27.57	8.43 8.43		
HT40		5795	14.49	27.57			
VHT20 3		5745	15.14	27.57	8.43		
VHT20	3	5785	16.14	27.57	8.43		
VHT20			16.01	27.57	8.43		
VHT40			10.57	27.57	8.43		
VHT40	3	5795	13.27	27.57	8.43		
VHT80 3 5775			3.97 27.57 8.4				
Result			1	Complied			

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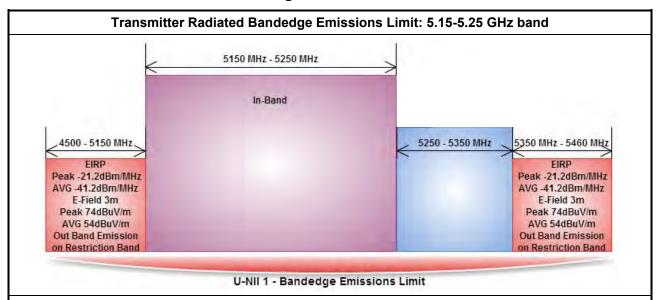


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3.5 Transmitter Bandedge Emissions

#### 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

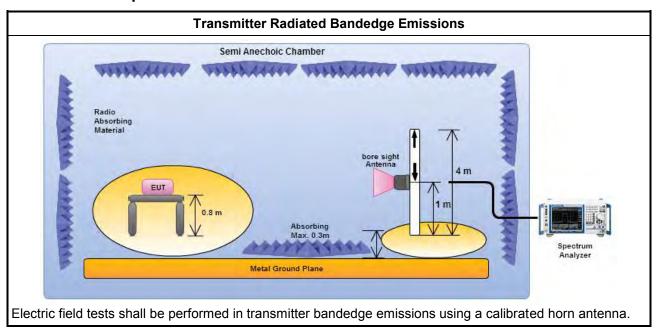
		Test Method					
$\boxtimes$	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].						
$\boxtimes$	Refer as ANSI C63.10, clause 6.9.2.2 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.						
	char will d at lo	JT operate in adjacent contiguous bands, bandedge testing performed at the lowest frequency and lower-band and highest frequency channel at higher-band. Transmitter in-band emissions consist of adjacent contiguous bands (e.g., IEEE 802.11ac VHT160 The lowest frequency channel wer-band and highest frequency channel at higher-band in-band emissions will consist of two cent 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:						
	$\boxtimes$	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 4.2.3.2.3 (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 t	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 6.9.2 for band-edge testing.					
		Refer as ANSI C63.10, clause 6.9.3 for marker-delta method for band-edge measurements.					
$\boxtimes$	For	radiated measurement, refer as ANSI C63.10, clause 6.6. Test distance is 3m.					
	perfo equi extra dista mea	surements may be performed at a distance other than the limit distance provided they are not bring in the near field and the emissions to be measured can be detected by the measurement prize present. When performing measurements at a distance other than that specified, the results shall be applied to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear ince for field-strength measurements, inverse of linear distance-squared for power-density surements). Measurements in the bandedge are typically made at a closer distance 3m, because instrumentation noise floor is typically close to the radiated emission limit.					

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3.5.4 Test Setup



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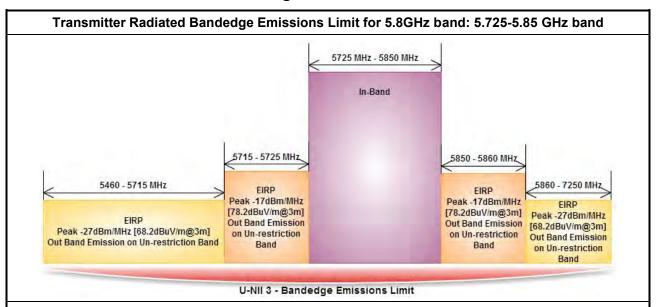
## 3.5.5 Transmitter Radiated Bandedge Emissions (with Antenna)

Modulation Mode	N <sub>TX</sub>	Freq. (MHz)	Measure Distance (m)	Freq. (MHz) PK	Level (dBuV/m) PK	Limit (dBuV/m) PK	Freq. (MHz) AV	Level (dBuV/m) AV	Limit (dBuV/m) AV	Pol.
11a	1	5180	3	5148.80	69.85	74	5150.00	52.46	54	V
11a	1	5240	3	5368.20	61.55	74	5398.20	48.73	54	V
HT20	3	5180	3	5148.00	68.81	74	5148.20	52.90	54	V
HT20	3	5240	3	5384.40	61.63	74	5399.40	48.34	54	V
HT40	3	5190	3	5149.94	66.66	74	5149.94	52.76	54	V
HT40	3	5230	3	5372.40	61.02	74	5392.80	47.49	54	V
VHT20	3	5180	3	5148.00	68.73	74	5147.80	52.30	54	V
VHT20	3	5240	3	5385.60	61.75	74	5395.80	48.31	54	V
VHT40	3	5190	3	5149.94	65.31	74	5149.94	51.07	54	V
VHT40	3	5230	3	5389.80	60.88	74	5355.00	47.80	54	V
VHT80	3	5210	3	5142.00	66.89	74	5142.60	52.44	54	V
VHT80	3	5210	3	5353.20	61.33	74	5380.80	47.40	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

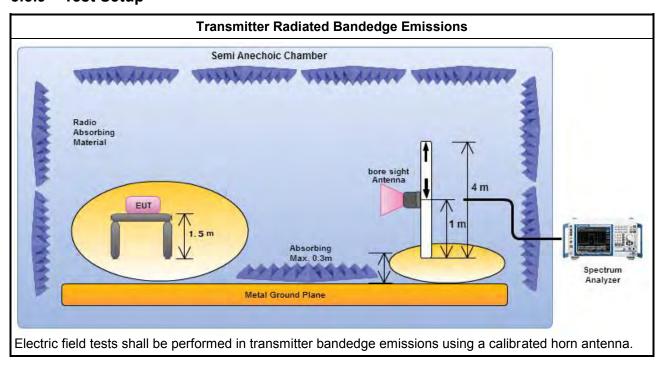
		Test Method					
$\boxtimes$	The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].						
$\boxtimes$	Refer as ANSI C63.10, clause 6.10 bandedge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band.						
	char will d at lo	JT operate in adjacent contiguous bands, bandedge testing performed at the lowest frequency and lower-band and highest frequency channel at higher-band. Transmitter in-band emissions consist of adjacent contiguous bands (e.g., IEEE 802.11ac VHT160 The lowest frequency channel wer-band and highest frequency channel at higher-band in-band emissions will consist of two cent 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).					
	char	IT operate in individual non-contiguous bands, bandedge testing performed at the lowest frequency inel and highest frequency channel within lower-band and higher-band. (e.g., (e.g., IEEE 802.11ac 160)					
		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:						
	$\boxtimes$	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).					
	$\boxtimes$	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.					
	perfo equi extra dista mea	surements may be performed at a distance other than the limit distance provided they are not bring or the near field and the emissions to be measured can be detected by the measurement price. When performing measurements at a distance other than that specified, the results shall be applied to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear ince for field-strength measurements, inverse of linear distance-squared for power-density surements). Measurements in the bandedge are typically made at a closer distance 3m, because instrumentation noise floor is typically close to the radiated emission limit.					

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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	5714.680	67.05	68.2	V
11a	1	5745	3	5724.550	73.93	78.2	V
11a	1	5825	3	5862.880	67.15	68.2	V
11a	1	5825	3	5850.280	70.01	78.2	V
HT20	3	5745	3	5714.680	66.89	68.2	V
HT20	3	5745	3	5724.760	74.07	78.2	V
HT20	3	5825	3	5864.140	67.11	68.2	V
HT20	3	5825	3	5853.220	71.17	78.2	V
HT40	3	5755	3	5707.980	66.17	68.2	V
HT40	3	5755	3	5724.620	75.59	78.2	V
HT40	3	5795	3	5860.300	64.62	68.2	V
HT40	3	5795	3	5855.500	67.12	78.2	V
VHT20	3	5745	3	5714.890	66.65	68.2	V
VHT20	3	5745	3	5724.970	71.83	78.2	V
VHT20	3	5825	3	5864.140	66.58	68.2	V
VHT20	3	5825	3	5852.800	70.45	78.2	V
VHT40	3	5755	3	5705.640	66.07	68.2	V
VHT40	3	5755	3	5724.880	72.17	78.2	V
VHT40	3	5795	3	5866.300	65.47	68.2	V
VHT40	3	5795	3	5851.600	67.65	78.2	V
VHT80	3	5775	3	5714.800	66.91	68.2	V
VHT80	3	5775	3	5725.060	71.99	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										
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								
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]				

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							
	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. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. 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).								
$\boxtimes$	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:							
	$\boxtimes$	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.							
	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.							
	$\boxtimes$	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.							
$\boxtimes$		implitude 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

# Semi Anechoic Chamber Radio Absorbing Material

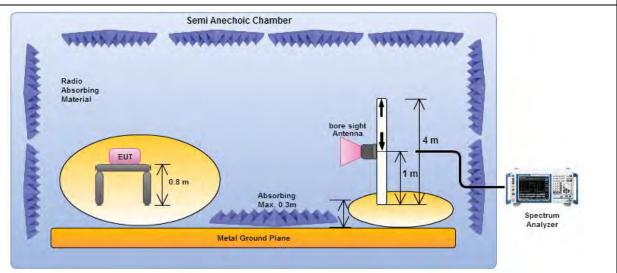
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Analyzer

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.

Metal Ground Plane

### **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)**

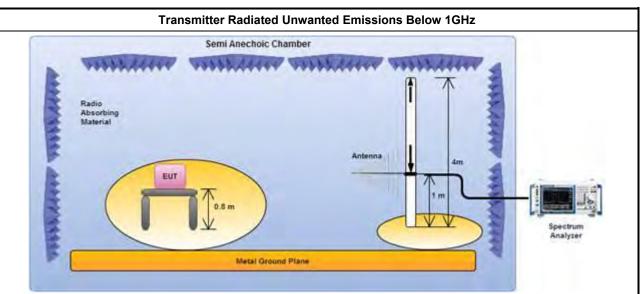
		Test Method								
	Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 m for frequencies above 30 MHz, unless it can be further demonstrated that measurements at a distance of 30 m or less are impractical. 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).									
$\boxtimes$	The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].								
$\boxtimes$	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 4.1.4.2.2 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.								
	$\boxtimes$	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.								
$\boxtimes$		mplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value no need to be reported.								

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## 3.6.6 Test Setup



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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 Spectrum Analyzer

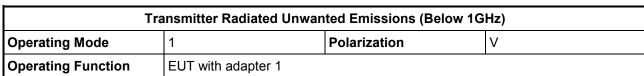
Electric field tests shall be performed in the frequency range of 1 GHz to 10th harmonic of highest fundamental frequency or 40 GHz using a calibrated horn antenna.

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

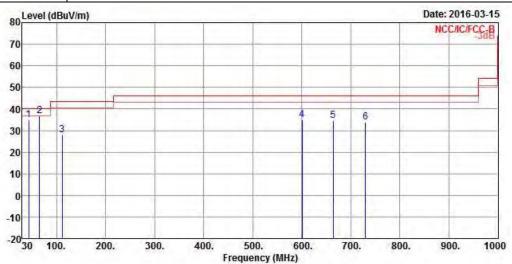
All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

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# Transmitter Radiated Unwanted Emissions (Below 1GHz)



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	Freq	Level	Over Limit			Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	43.580	34.84	-5.16	40.00	43.89	17.53	0.95	27.53	Peak
2	64.920	36.81	-3.19	40.00	50.51	12.57	1.19	27.46	Peak
3	111.480	28.15	-15.35	43.50	35.33	18.49	1.63	27.30	Peak
4	600.360	34.99	-11.01	46.00	34.07	24.84	4.07	27.99	Peak
5	664.380	34.50	-11.50	46.00	32.77	25.38	4.29	27.94	Peak
6	730.340	33.93	-12.07	46.00	31.37	25.96	4.48	27.88	Peak

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

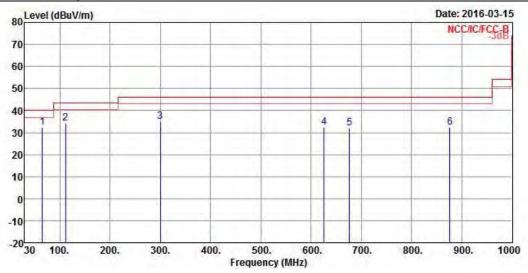
Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)

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			Antenna Factor		Preamp Factor	
-	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	64.920	32.32	-7.68	40.00	46.02	12.57	1.19	27.46	Peak
2	111.480	34.27	-9.23	43.50	41.45	18.49	1.63	27.30	Peak
3	299.660	34.89	-11.11	46.00	39.17	19.77	2.61	26.66	Peak
4	625.580	32.44	-13.56	46.00	31.15	25.10	4.16	27.97	Peak
5	676.020	31.94	-14.06	46.00	30.14	25.41	4.33	27.94	Peak
6	875.840	32.56	-13.44	46.00	28.04	27.35	4.82	27.65	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.)

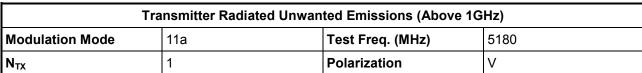
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical).

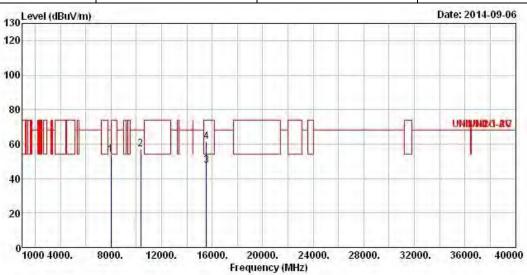
Note 4: No level of unwanted emissions exceeds the level of the fundamental emission.

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

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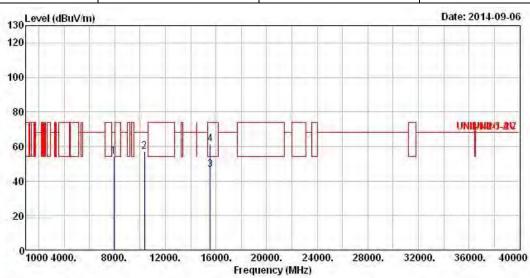
		Over	1000					
Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
8001.000	53.69	-14.51	68.20	41.21	37.10	8.26	32.88	Peak
10360.000	57.22	-10.98	68.20	42.11	39.00	8.92	32.81	Peak
15540.000	47.31	-6.69	54.00	30.31	37.64	11.59	32.23	Average
15540.000	61.26	-12.74	74.00	44.26	37.64	11.59	32.23	Peak
	MHz 8001.000 10360.000 15540.000	MHz dBuV/m 8001.000 53.69 10360.000 57.22 15540.000 47.31	Freq Level Limit  MHz dBuV/m dB  8001.000 53.69 -14.51 10360.000 57.22 -10.98 15540.000 47.31 -6.69	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  8001.000 53.69 -14.51 68.20 10360.000 57.22 -10.98 68.20 15540.000 47.31 -6.69 54.00	Freq         Level         Limit         Line         Level           MHz         dBuV/m         dB         dBuV/m         dBuV/m           8001.000         53.69         -14.51         68.20         41.21           10360.000         57.22         -10.98         68.20         42.11           15540.000         47.31         -6.69         54.00         30.31	Freq         Level         Limit         Line         Level         Factor           MHz         dBuV/m         dB         dBuV/m         dBuV         dB/m           8001.000         53.69         -14.51         68.20         41.21         37.10           10360.000         57.22         -10.98         68.20         42.11         39.00           15540.000         47.31         -6.69         54.00         30.31         37.64	Freq         Level         Limit         Line         Level         Factor         Loss           MHz         dBuV/m         dB         dBuV/m         dBuV         dB/m         dB/m         dB           8001.000         53.69         -14.51         68.20         41.21         37.10         8.26           10360.000         57.22         -10.98         68.20         42.11         39.00         8.92           15540.000         47.31         -6.69         54.00         30.31         37.64         11.59	Freq         Level         Limit         Line         Level         Factor         Loss         Factor           MHz         dBuV/m         dB         dBuV/m         dBuV         dB/m         dB         dB           8001.000         53.69         -14.51         68.20         41.21         37.10         8.26         32.88           10360.000         57.22         -10.98         68.20         42.11         39.00         8.92         32.81           15540.000         47.31         -6.69         54.00         30.31         37.64         11.59         32.23

- 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)	5180					
N <sub>TX</sub>	1	Polarization	Н					

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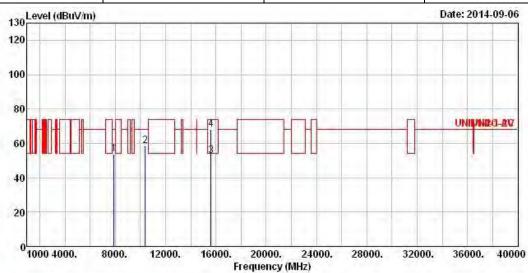
			0ver	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7922.000	54.01	-14.19	68.20	41.71	37.02	8.14	32.86	Peak
2	10360.000	57.27	-10.93	68.20	42.16	39.00	8.92	32.81	Peak
3	15540.000	46.65	-7.35	54.00	29.65	37.64	11.59	32.23	Average
4	15540.000	61.41	-12.59	74.00	44.41	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				

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	Freq	Level	0∨er Limit	Limit Line		Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	7894.000	53.58	-14.62	68.20	41.29	37.00	8.14	32.85	Peak
2	10400.000	58.36	-9.84	68.20	43.19	39.00	8.94	32.77	Peak
3	15600.000	52.88	-1.12	54.00	36.02	37.53	11.59	32.26	Average
4	15600.000	67.93	-6.07	74.00	51.07	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.

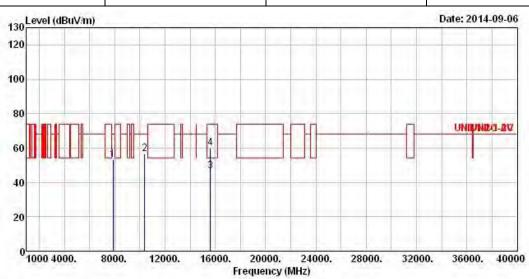
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Transmitter Radiated Unwanted Emissions (Above 1GHz)

Modulation Mode 11a Test Freq. (MHz) 5200

N<sub>TX</sub> 1 Polarization H

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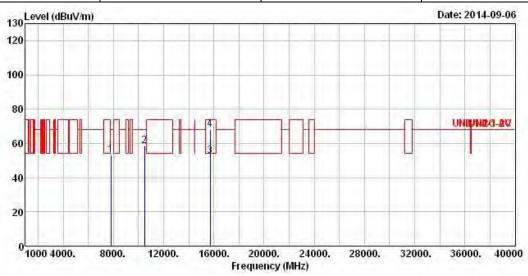


			0ver	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	7861.000	53.38	-14.82	68.20	41.18	36.97	8.07	32.84	Peak
2	10400.000	56.43	-11.77	68.20	41.26	39.00	8.94	32.77	Peak
3	15600.000	46.38	-7.62	54.00	29.52	37.53	11.59	32.26	Average
4	15600.000	59.98	-14.02	74.00	43.12	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	11a	Test Freq. (MHz)	5240				
N <sub>TX</sub>	1	Polarization	V				



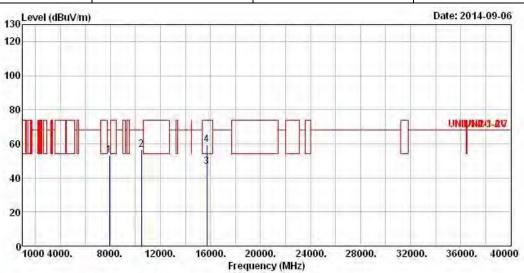
	Freq	Le∨el	Over Limit			Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7811.000	53.33	-14.87	68.20	41.24	36.92	8.00	32.83	Peak
2	10480.000	58.45	-9.75	68.20	43.16	39.00	8.99	32.70	Peak
3	15720.000	52.89	-1.11	54.00	36.26	37.34	11.59	32.30	Average
4	15720.000	68.33	-5.67	74.00	51.70	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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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	11a	Test Freq. (MHz)	5240				
$N_{TX}$	1	Polarization	Н				



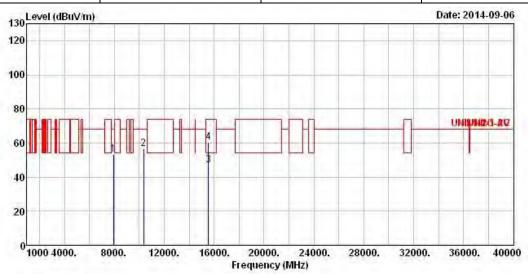
	Freq	Over Limit Freq Level Limit Line L					The second second	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7939.000	53.47	-14.73	68.20	41.09	37.03	8.21	32.86	Peak
2	10480.000	56.49	-11.71	68.20	41.20	39.00	8.99	32.70	Peak
3	15720.000	46.66	-7.34	54.00	30.03	37.34	11.59	32.30	Average
4	15720.000	59.64	-14.36	74.00	43.01	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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Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	HT20	Test Freq. (MHz)	5180			
N <sub>TX</sub>	3	Polarization	V			



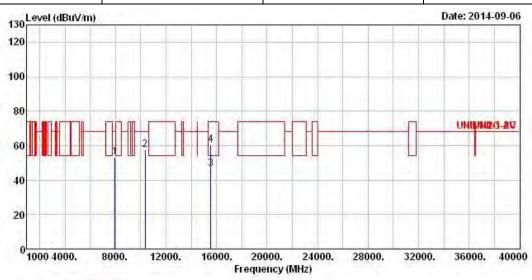
			Over	Limit	ReadA	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Le∨el	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7921.000	53.36	-14.84	68.20	41.06	37.02	8.14	32.86	Peak
2	10360.000	56.51	-11.69	68.20	41.40	39.00	8.92	32.81	Peak
3	15540.000	46.81	-7.19	54.00	29.81	37.64	11.59	32.23	Average
4	15540.000	60.48	-13.52	74.00	43.48	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	HT20	Test Freq. (MHz)	5180				
N <sub>TX</sub>	3	Polarization	Н				

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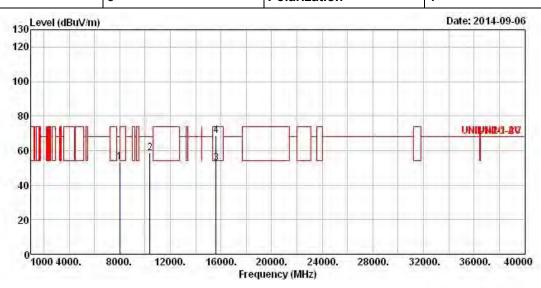
			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	_
1	7961.000	53.43	-14.77	68.20	41.04	37.05	8.21	32.87	Peak
2	10360.000	57.57	-10.63	68.20	42.46	39.00	8.92	32.81	Peak
3	15540.000	46.50	-7.50	54.00	29.50	37.64	11.59	32.23	Average
4	15540.000	60.21	-13.79	74.00	43.21	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	HT20	Test Freq. (MHz)	5200				
N <sub>TY</sub>	3	Polarization	V				

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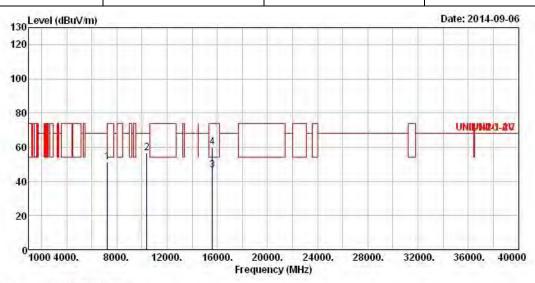
				Limit	ReadAntenna		Cable	Preamp		
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	8000.000	53.29	-14.91	68.20	40.79	37.10	8.28	32.88	Peak	
2	10400.000	58.43	-9.77	68.20	43.26	39.00	8.94	32.77	Peak	
3	15600.000	52.84	-1.16	54.00	35.98	37.53	11.59	32.26	Average	
4	15600.000	68.70	-5.30	74.00	51.84	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	HT20	Test Freq. (MHz)	5200				
N <sub>TX</sub>	3	Polarization	Н				

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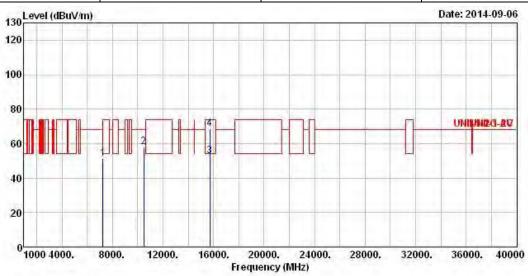
	Freq	Over Limit Rea Freq Level Limit Line Leve					The second second	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7240.000	51.30	-16.90	68.20	40.78	35.93	7.23	32.64	Peak
2	10400.000	56.55	-11.65	68.20	41.38	39.00	8.94	32.77	Peak
3	15600.000	46.45	-7.55	54.00	29.59	37.53	11.59	32.26	Average
4	15600.000	60.15	-13.85	74.00	43.29	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	HT20	Test Freq. (MHz)	5240					
N <sub>TX</sub>	3	Polarization	V					

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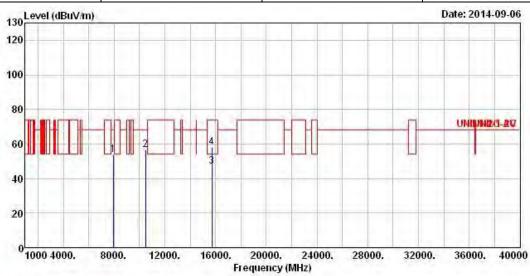


			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	_
1	7239.000	51.49	-16.71	68.20	40.97	35.93	7.23	32.64	Peak
2	10480.000	57.99	-10.21	68.20	42.70	39.00	8.99	32.70	Peak
3	15720.000	52.65	-1.35	54.00	36.02	37.34	11.59	32.30	Average
4	15720.000	68.83	-5.17	74.00	52.20	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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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	HT20	Test Freq. (MHz)	5240				
$N_{TX}$	3	Polarization	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	7926.000	53.61	-14.59	68.20	41.24	37.02	8.21	32.86	Peak
2	10480.000	56.59	-11.61	68.20	41.30	39.00	8.99	32.70	Peak
3	15720.000	46.79	-7.21	54.00	30.16	37.34	11.59	32.30	Average
4	15720.000	57.84	-16.16	74.00	41.21	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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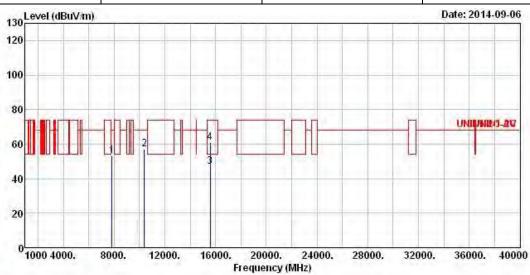
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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	HT40	Test Freq. (MHz)	5190				
$N_{TX}$	3	Polarization	V				

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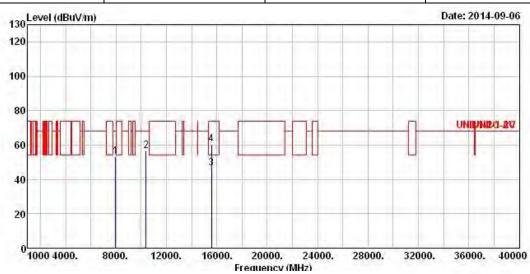
			0ver	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7824.000	53.34	-14.86	68.20	41.25	36.92	8.00	32.83	Peak
2	10380.000	56.95	-11.25	68.20	41.80	39.00	8.94	32.79	Peak
3	15570.000	47.08	-6.92	54.00	30.15	37.59	11.59	32.25	Average
4	15570.000	60.84	-13.16	74.00	43.91	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	HT40	Test Freq. (MHz)	5190				
N <sub>TX</sub>	3	Polarization	Н				

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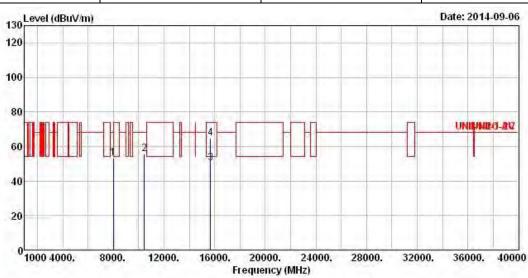


	Freq	Level		Limit Line					Remark	
	-									
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	7968.000	53.26	-14.94	68.20	40.78	37.07	8.28	32.87	Peak	
2	10380.000	56.47	-11.73	68.20	41.32	39.00	8.94	32.79	Peak	
3	15570.000	46.52	-7.48	54.00	29.59	37.59	11.59	32.25	Average	
4	15570.000	60.45	-13.55	74.00	43.52	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	HT40	Test Freq. (MHz)	5230				
$N_{TX}$	3	Polarization	V				



			0ver	Limit	Read	Antenna	Cable	Preamp	
	Freq	Le∨el	Limit	Line	Le∨el	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8000.000	53.24	-14.96	68.20	40.74	37.10	8.28	32.88	Peak
2	10460.000	55.54	-12.66	68.20	40.27	39.00	8.99	32.72	Peak
3	15690.000	50.34	-3.66	54.00	33.64	37.40	11.59	32.29	Average
4	15690.000	64.71	-9.29	74.00	48.01	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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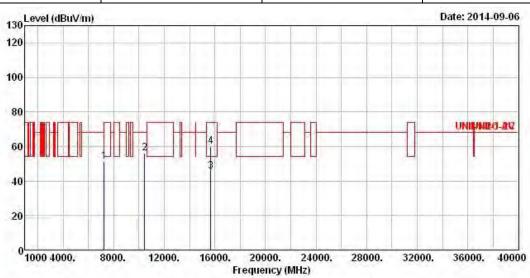
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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	HT40	Test Freq. (MHz)	5230				
N <sub>TX</sub>	3	Polarization	Н				

Report No.: FR411403-27AN



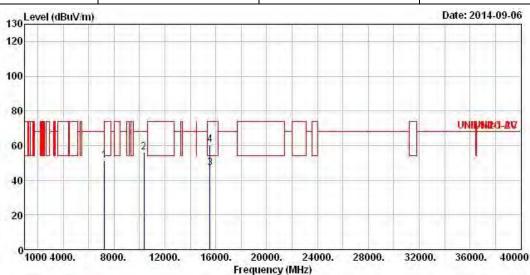
			0ver	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7241.000	51.27	-16.93	68.20	40.75	35.93	7.23	32.64	Peak
2	10460.000	56.26	-11.94	68.20	40.99	39.00	8.99	32.72	Peak
3	15690.000	45.68	-8.32	54.00	28.98	37.40	11.59	32.29	Average
4	15690.000	60.13	-13.87	74.00	43.43	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						
$N_{TX}$	3	Polarization	V						

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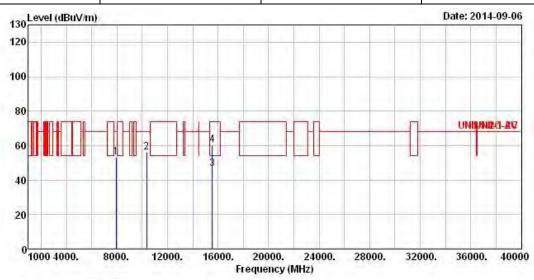


	Freq	Level	0∨er Limit	Limit Line		Antenna Factor		The second second	Remark
		dBuV/m		dBuV/m			— dB	——dB	-
1	7241.000	51.40	-16.80	68.20	40.88	35.93	7.23	32.64	Peak
2	10360.000	56.32	-11.88	68.20	41.21	39.00	8.92	32.81	Peak
3	15540.000	46.89	-7.11	54.00	29.89	37.64	11.59	32.23	Average
4	15540.000	60.51	-13.49	74.00	43.51	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 <sub>TX</sub>	3	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	7924.000	53.24	-14.96	68.20	40.87	37.02	8.21	32.86	Peak
2	10360.000	56.21	-11.99	68.20	41.10	39.00	8.92	32.81	Peak
3	15540.000	46.51	-7.49	54.00	29.51	37.64	11.59	32.23	Average
4	15540.000	60.67	-13.33	74.00	43.67	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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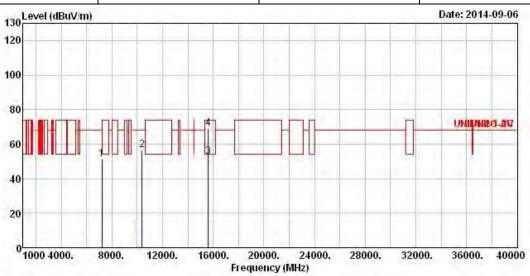
Report Version

: Rev. 01

Report No.: FR411403-27AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	VHT20	Test Freq. (MHz)	5200					
$N_{TX}$	3	Polarization	V					

Report No.: FR411403-27AN



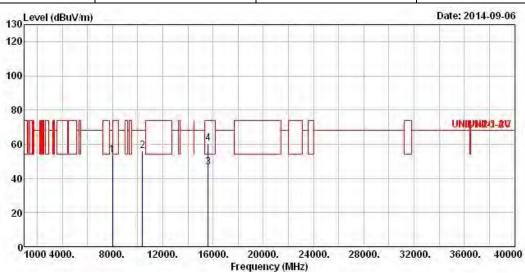
			0ver	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7219.000	51.21	-16.99	68.20	40.76	35.88	7.20	32.63	Peak
2	10400.000	56.51	-11.69	68.20	41.34	39.00	8.94	32.77	Peak
3	15600.000	52.81	-1.19	54.00	35.95	37.53	11.59	32.26	Average
4	15600.000	69.02	-4.98	74.00	52.16	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					
$N_{TX}$	3	Polarization	Н					

Report No.: FR411403-27AN



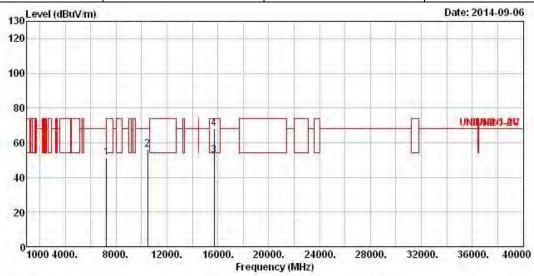
			Over	Limit	ReadA	ntenna	Cable	Preamp		
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	
	MHz	dBuV/m	dB	$\overline{\text{dBuV/m}}$	dBuV	dB/m	dB	dB	-	
1	8001.000	53.74	-14.46	68.20	41.26	37.10	8.26	32.88	Peak	
2	10400.000	56.23	-11.97	68.20	41.06	39.00	8.94	32.77	Peak	
3	15600.000	46.44	-7.56	54.00	29.58	37.53	11.59	32.26	Average	
4	15600.000	60.54	-13.46	74.00	43.68	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							
$N_{TX}$	3	Polarization	V				

Report No.: FR411403-27AN

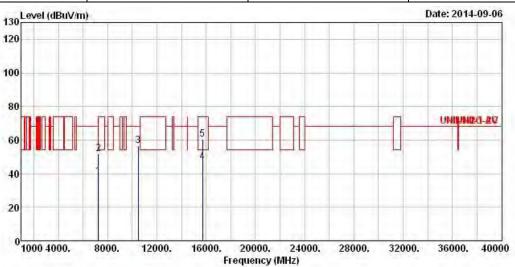


Freq	Level	7 5 7						Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
7238.000	51.42	-16.78	68.20	40.90	35.93	7.23	32.64	Peak
10480.000	56.35	-11.85	68.20	41.06	39.00	8.99	32.70	Peak
15720.000	52.59	-1.41	54.00	35.96	37.34	11.59	32.30	Average
15720.000	67.91	-6.09	74.00	51.28	37.34	11.59	32.30	Peak
	7238,000 10480,000 15720,000	MHz dBuV/m 7238.000 51.42 10480.000 56.35 15720.000 52.59	Freq Level Limit  MHz dBuV/m dB  7238.000 51.42 -16.78 10480.000 56.35 -11.85 15720.000 52.59 -1.41	Freq Level Limit Line    MHz   dBuV/m   dB   dBuV/m     7238.000   51.42   -16.78   68.20     10480.000   56.35   -11.85   68.20     15720.000   52.59   -1.41   54.00	Freq         Level         Limit         Line         Level           MHz         dBuV/m         dB dBuV/m         dBuV/m         dBuV           7238.000         51.42         -16.78         68.20         40.90           10480.000         56.35         -11.85         68.20         41.06           15720.000         52.59         -1.41         54.00         35.96	Freq         Level         Limit         Line         Level         Factor           MHz         dBuV/m         dB dBuV/m         dBuV         dBuV         dB/m           7238.000         51.42 -16.78         68.20         40.90         35.93           10480.000         56.35 -11.85         68.20         41.06         39.00           15720.000         52.59         -1.41         54.00         35.96         37.34	Freq         Level         Limit         Line         Level         Factor         Loss           MHz         dBuV/m         dB         dBuV/m         dBuV         dB/m         dB           7238.000         51.42 -16.78         68.20         40.90         35.93         7.23           10480.000         56.35 -11.85         68.20         41.06         39.00         8.99           15720.000         52.59         -1.41         54.00         35.96         37.34         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 Mode	VHT20	Test Freq. (MHz) 5240						
$N_{TX}$	3	Polarization	Н					

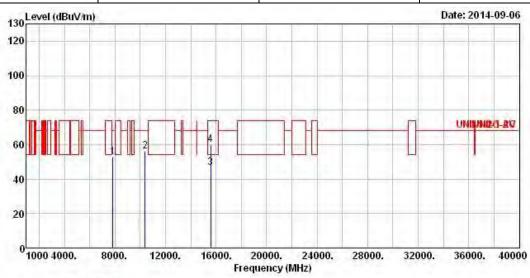


	Freq	Le∨el	Over Limit	Limit Line		Antenna Factor		Preamp Factor	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	_
1	7256.000	38.16	-15.84	54.00	27.61	35.97	7.23	32.65	Average
2	7256.000	51.96	-22.04	74.00	41.41	35.97	7.23	32.65	Peak
3	10480.000	56.66	-11.54	68.20	41.37	39.00	8.99	32.70	Peak
4	15720.000	47.24	-6.76	54.00	30.61	37.34	11.59	32.30	Average
5	15720.000	60.30	-13.70	74.00	43.67	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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Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	VHT40	Test Freq. (MHz)	5190					
N <sub>TX</sub>	3	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	7824.000	52.95	-15.25	68.20	40.86	36.92	8.00	32.83	Peak
2	10380.000	55.94	-12.26	68.20	40.79	39.00	8.94	32.79	Peak
3	15570.000	46.52	-7.48	54.00	29.59	37.59	11.59	32.25	Average
4	15570.000	60.19	-13.81	74.00	43.26	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)

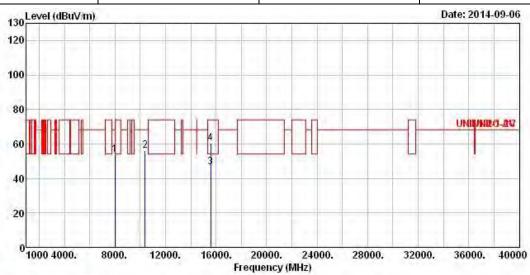
Note 4: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

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)	5190					
$N_{TX}$	3	Polarization	Н					



	Frea	Level	0∨er Limit	Limit Line		Antenna			Remark
		dBuV/m		dBuV/m	dBuV	dB/m	dB	dB	
1	8002.000				41.10		8.26	32.88	Peak
2	10380.000								
3	15570.000	46.44	-7.56	54.00	29.51	37.59	11.59	32.25	Average
4	15570.000	60.24	-13.76	74.00	43.31	37.59	11.59	32.25	Peak

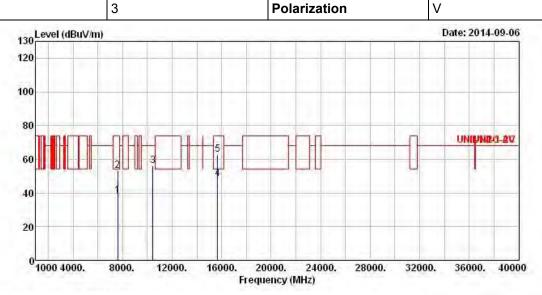
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted 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

N<sub>TX</sub> 3 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	7621.000	38.49	-15.51	54.00	26.91	36.72	7.64	32.78	Average
2	7621.000	53.22	-20.78	74.00	41.64	36.72	7.64	32.78	Peak
3	10460.000	56.29	-11.91	68.20	41.02	39.00	8.99	32.72	Peak
4	15690.000	48.27	-5.73	54.00	31.57	37.40	11.59	32.29	Average
5	15690.000	62.85	-11.15	74.00	46.15	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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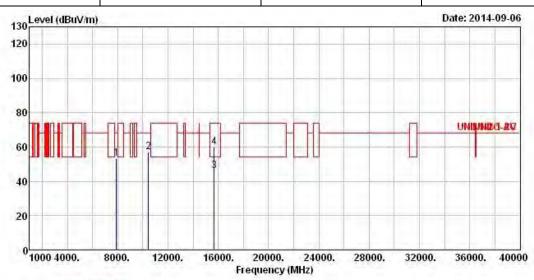
Report Version

: Rev. 01

Report No.: FR411403-27AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	VHT40	Test Freq. (MHz)	5230					
N <sub>TX</sub>	3	Polarization	Н					

Report No.: FR411403-27AN

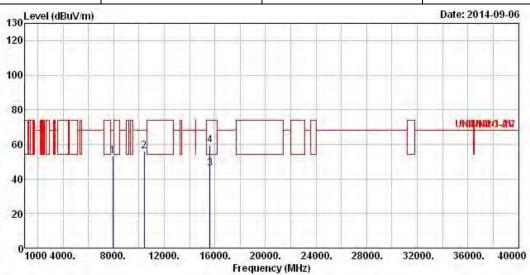


	Freq	Le∨el	Over Limit			Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	_
1	7891.000	53.45	-14.75	68.20	41.18	36.98	8.14	32.85	Peak
2	10460.000	57.06	-11.14	68.20	41.79	39.00	8.99	32.72	Peak
3	15690.000	45.86	-8.14	54.00	29.16	37.40	11.59	32.29	Average
4	15690.000	59.76	-14.24	74.00	43.06	37.40	11.59	32.29	Peak
		200							

- 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	VHT80	Test Freq. (MHz)	5210				
N <sub>TX</sub>	3	Polarization	V				



	Freq	Level	0∨er Limit			Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7939.000	53.35	- 14.85	68.20	40.97	37.03	8.21	32.86	Peak
2	10420.000	56.34	-11.86	68.20	41.12	39.00	8.97	32.75	Peak
3	15630.000	45.93	-8.07	54.00	29.13	37.48	11.59	32.27	Average
4	15630.000	59.42	-14.58	74.00	42.62	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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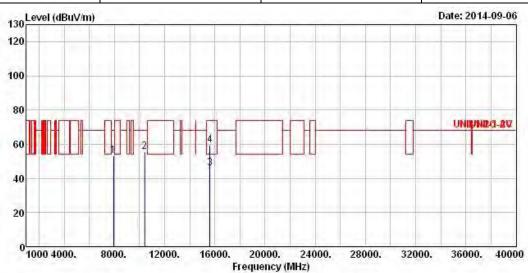
Report Version

: Rev. 01

Report No.: FR411403-27AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	VHT80	Test Freq. (MHz)	5210				
N <sub>TX</sub>	3	Polarization	Н				

Report No.: FR411403-27AN



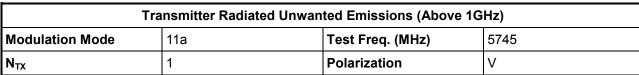
	Freq	Level		Limit Line					Remark
	MHz	dBuV/m	——dB	dBuV/m	dBuV	dB/m	——dB	dB	-
1	7922.000	53.24	-14.96	68.20	40.94	37.02	8.14	32.86	Peak
2	10420.000	55.66	-12.54	68.20	40.44	39.00	8.97	32.75	Peak
3	15630.000	45.87	-8.13	54.00	29.07	37.48	11.59	32.27	Average
4	15630.000	59.68	-14.32	74.00	42.88	37.48	11.59	32.27	Peak

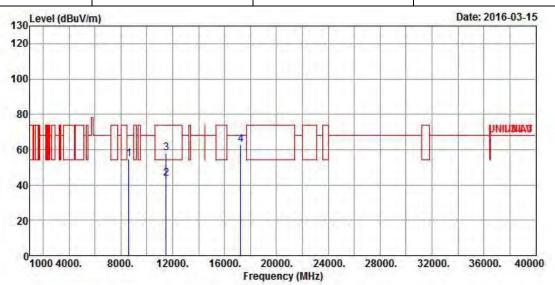
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted 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.: FR411403-27AN





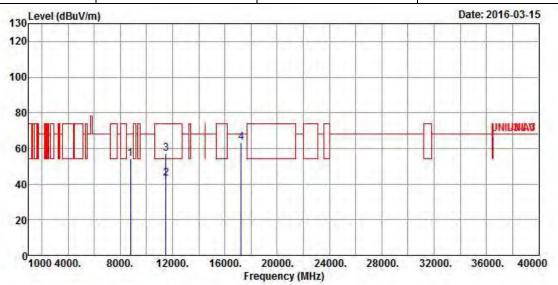
	Freq	Level				Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8619.000	54.80	-13.40	68.20	43.96	37.72	6.10	32.98	Peak
2	11490.000	43.43	-10.57	54.00	29.93	39.18	6.78	32.46	Average
3	11490.000	58.00	-16.00	74.00	44.50	39.18	6.78	32.46	Peak
4	17235.000	62.97	-5.23	68.20	44.26	41.72	8.53	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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FCC Test Report No.: FR411403-27AN

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



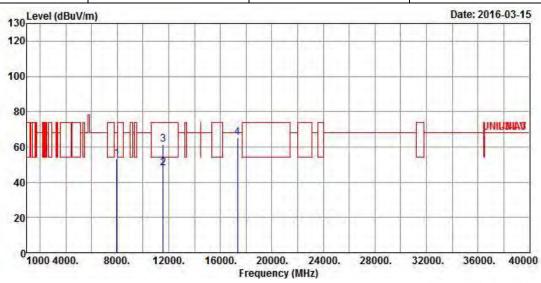
	Freq	Level				Antenna Factor		The second second	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8796.000	54.06	-14.14	68.20	43.25	37.76	6.09	33.04	Peak
2	11490.000	43.12	-10.88	54.00	29.62	39.18	6.78	32.46	Average
3	11490.000	57.15	-16.85	74.00	43.65	39.18	6.78	32.46	Peak
4	17235.000	63.24	-4.96	68.20	44.53	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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FCC Test Report No.: FR411403-27AN

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



	Enoa	Loug		Limit Line					Pomank
	Freq	rever	LIMIT	Line	rever	ractor	LOSS	ractor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7973.000	53.39	-14.81	68.20	43.44	37.06	5.82	32.93	Peak
2	11570.000	47.80	-6.20	54.00	34.20	39.23	6.84	32.47	Average
3	11570.000	61.59	-12.41	74.00	47.99	39.23	6.84	32.47	Peak
4	17355.000	65.04	-3.16	68.20	45.52	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.

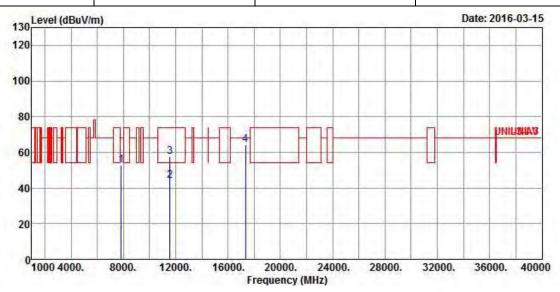
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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

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Т	GHz)		
Modulation Mode	11a	Test Freq. (MHz)	5785
N <sub>TX</sub>	1	Polarization	Н

Report No.: FR411403-27AN



Freq	Level		Limit Line	100000000000000000000000000000000000000			Apple of the second	
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
7838.000	53.00	-15.20	68.20	43.23	36.90	5.78	32.91	Peak
11570.000	43.91	-10.09	54.00	30.31	39.23	6.84	32.47	Average
11570.000	57.78	-16.22	74.00	44.18	39.23	6.84	32.47	Peak
17355.000	64.07	-4.13	68.20	44.55	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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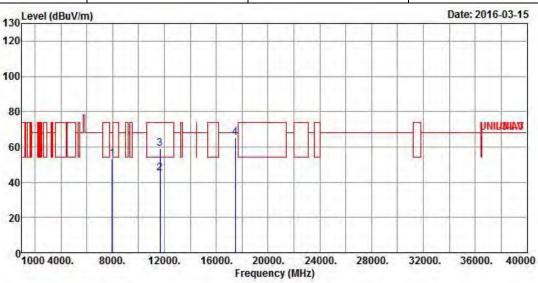
FAX: 886-3-327-0973

1 2 3

Transmitter Radiated Unwanted Emissions (Above 1GHz)

Report No.: FR411403-27AN

Modulation Mode11aTest Freq. (MHz)5825N<sub>TX</sub>1PolarizationV



	Freq	Level				Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7961.000	53.19	-15.01	68.20	43.27	37.04	5.81	32.93	Peak
2	11650.000	45.04	-8.96	54.00	31.36	39.26	6.90	32.48	Average
3	11650.000	59.23	-14.77	74.00	45.55	39.26	6.90	32.48	Peak
4	17475.000	65.18	-3.02	68.20	44.85	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.

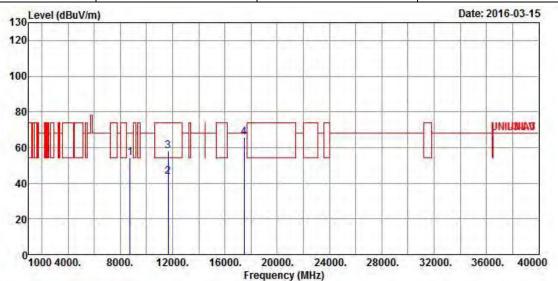
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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	11a	Test Freq. (MHz)	5825					
$N_{TX}$	1	Polarization	Н					



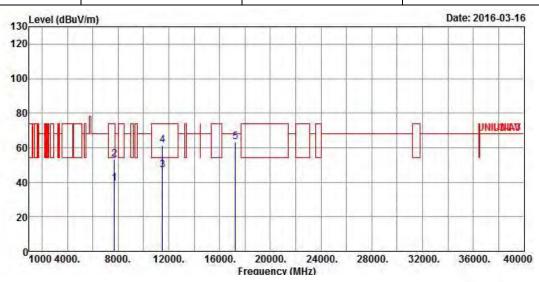
	Freq	Level	Over Limit			Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8747.000	54.01	-14.19	68.20	43.20	37.75	6.09	33.03	Peak
2	11650.000	43.50	-10.50	54.00	29.82	39.26	6.90	32.48	Average
3	11650.000	57.95	-16.05	74.00	44.27	39.26	6.90	32.48	Peak
4	17475.000	65.87	-2.33	68.20	45.54	43.54	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	HT20	Test Freq. (MHz)	5745					
N <sub>TX</sub>	3	Polarization	V					

Report No.: FR411403-27AN



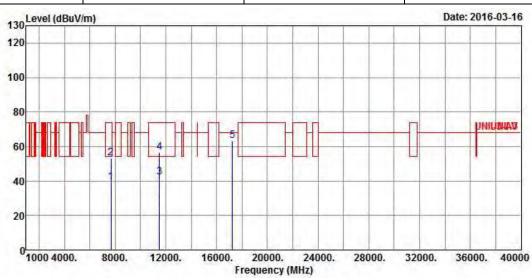
	Freq	Level	Over Limit			Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7716.000	39.17	-14.83	54.00	29.55	36.76	5.75	32.89	Average
2	7716.000	53.23	-20.77	74.00	43.61	36.76	5.75	32.89	Peak
3	11490.000	46.99	-7.01	54.00	33.49	39.18	6.78	32.46	Average
4	11490.000	61.50	-12.50	74.00	48.00	39.18	6.78	32.46	Peak
5	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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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	HT20	Test Freq. (MHz)	5745				
N <sub>TX</sub>	3	Polarization	Н				

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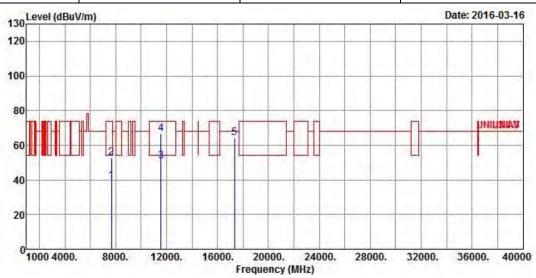
	Freq	Level	Over Limit			Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7685.000	39.18	-14.82	54.00	29.61	36.72	5.74	32.89	Average
2	7685.000	53.24	-20.76	74.00	43.67	36.72	5.74	32.89	Peak
3	11490.000	42.12	-11.88	54.00	28.62	39.18	6.78	32.46	Average
4	11490.000	56.63	-17.37	74.00	43.13	39.18	6.78	32.46	Peak
5	17235.000	63.32	-4.88	68.20	44.61	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	HT20	Test Freq. (MHz)	5785				
N <sub>TX</sub>	3	Polarization	V				



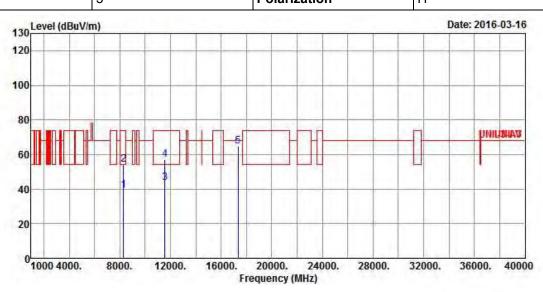
	Freq	Level				Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7680.000	39.23	-14.77	54.00	29.66	36.72	5.74	32.89	Average
2	7680.000	52.98	-21.02	74.00	43.41	36.72	5.74	32.89	Peak
3	11570.000	50.93	-3.07	54.00	37.33	39.23	6.84	32.47	Average
4	11570.000	66.85	-7.15	74.00	53.25	39.23	6.84	32.47	Peak
5	17355.000	64.17	-4.03	68.20	44.65	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	HT20	Test Freq. (MHz)	5785				
N-w	3	Polarization	Н				

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	Freq	Level	Over Limit			Antenna Factor		Preamp Factor		
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	_	_
1	8307.000	39.33	-14.67	54.00	28.80	37.47	6.00	32.94	Average	
2	8307.000	54.42	-19.58	74.00	43.89	37.47	6.00	32.94	Peak	
3	11570.000	43.74	-10.26	54.00	30.14	39.23	6.84	32.47	Average	
4	11570.000	57.31	-16.69	74.00	43.71	39.23	6.84	32.47	Peak	
5	17355.000	64.64	-3.56	68.20	45.12	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.

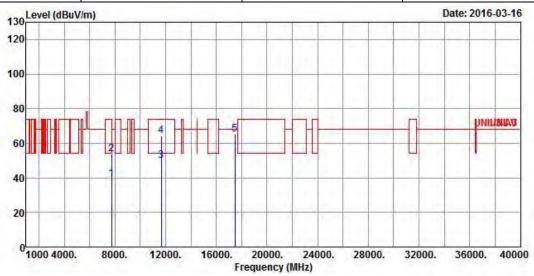
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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	HT20	Test Freq. (MHz)	5825			
N <sub>TX</sub>	3	Polarization	V			



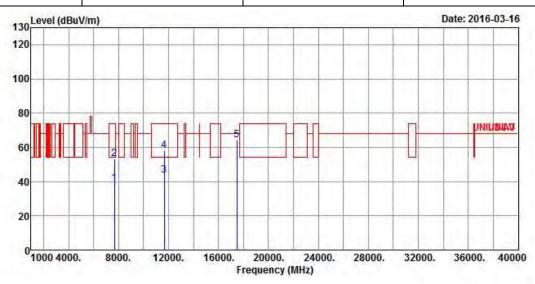
	Freq	Level	Over Limit	Limit Line		Antenna Factor			Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	_	-
1	7725.000	39.13	-14.87	54.00	29.50	36.78	5.75	32.90	Average	
2	7725.000	53.78	-20.22	74.00	44.15	36.78	5.75	32.90	Peak	
3	11650.000	49.89	-4.11	54.00	36.21	39.26	6.90	32.48	Average	
4	11650.000	64.13	-9.87	74.00	50.45	39.26	6.90	32.48	Peak	
5	17475.000	65.08	-3.12	68.20	44.75	43.54	8.40	31.61	Peak	
-	17475.000	05.00	3.12	00.20	77.12	73.37	0.40	21.01	1 Cuit	

- 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 <sub>TX</sub>	3	Polarization	Н				

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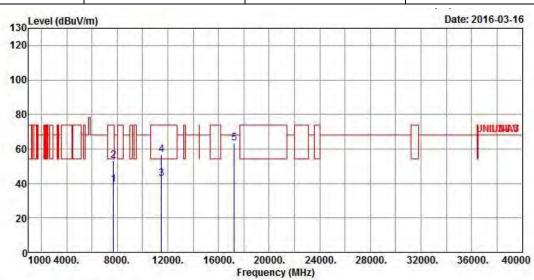
	Freq	Level	Over Limit	Limit Line		Antenna Factor			Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		-
1	7668.000	39.08	-14.92	54.00	29.52	36.70	5.74	32.88	Average	
2	7668.000	53.38	-20.62	74.00	43.82	36.70	5.74	32.88	Peak	
3	11650.000	43.60	-10.40	54.00	29.92	39.26	6.90	32.48	Average	
4	11650.000	58.07	-15.93	74.00	44.39	39.26	6.90	32.48	Peak	
5	17475.000	64.46	-3.74	68.20	44.13	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>	3	Polarization	V				

Report No.: FR411403-27AN



	Freq	Level	Over Limit			Antenna Factor				
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		-
1	7720.000	39.12	-14.88	54.00	29.51	36.76	5.75	32.90	Average	
2	7720.000	53.26	-20.74	74.00	43.65	36.76	5.75	32.90	Peak	
3	11510.000	42.69	-11.31	54.00	29.17	39.20	6.78	32.46	Average	
4	11510.000	56.56	-17.44	74.00	43.04	39.20	6.78	32.46	Peak	
5	17265.000	63.53	-4.67	68.20	44.60	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.

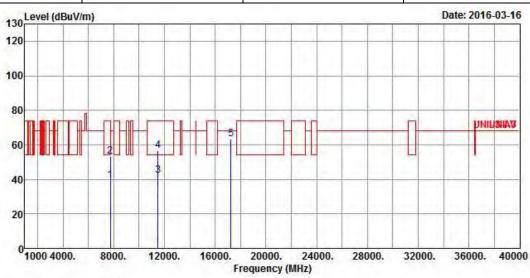
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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 <sub>TX</sub>	3	Polarization	Н			

Report No.: FR411403-27AN



	Freq	Level	Over Limit	Limit Line		Antenna Factor		Application of the Control	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7732.000	39.14	-14.86	54.00	29.50	36.78	5.76	32.90	Average
2	7732.000	53.29	-20.71	74.00	43.65	36.78	5.76	32.90	Peak
3	11510.000	42.35	-11.65	54.00	28.83	39.20	6.78	32.46	Average
4	11510.000	56.55	-17.45	74.00	43.03	39.20	6.78	32.46	Peak
5	17265.000	63.41	-4.79	68.20	44.48	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.

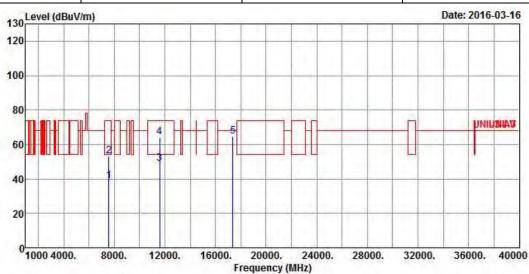
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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) 5795						
N <sub>TX</sub>	3	Polarization	V			

Report No.: FR411403-27AN



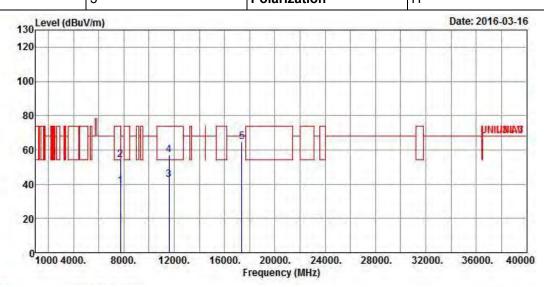
			Over	Limit	Read/	Antenna	Cable	Preamp		
	Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-	_
1	7573.000	38.68	-15.32	54.00	29.23	36.60	5.72	32.87	Average	
2	7573.000	53.35	-20.65	74.00	43.90	36.60	5.72	32.87	Peak	
3	11590.000	48.99	-5.01	54.00	35.36	39.23	6.87	32.47	Average	
4	11590.000	64.08	-9.92	74.00	50.45	39.23	6.87	32.47	Peak	
5	17385.000	64.83	-3.37	68.20	45.09	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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Tr	Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	Modulation Mode HT40 Test Freq. (MHz) 5795							
N-w	3	Polarization	Н					

Report No.: FR411403-27AN



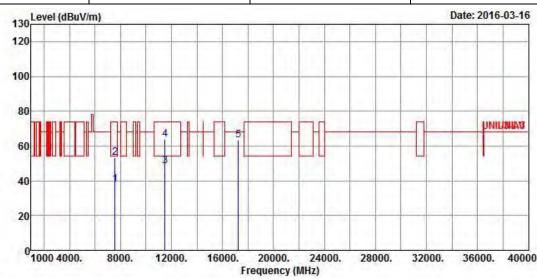
	Freq	Level	Over Limit	Limit Line		Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	_
1	7737.000	39.00	-15.00	54.00	29.36	36.78	5.76	32.90	Average
2	7737.000	54.44	-19.56	74.00	44.80	36.78	5.76	32.90	Peak
3	11590.000	42.87	-11.13	54.00	29.24	39.23	6.87	32.47	Average
4	11590.000	57.31	-16.69	74.00	43.68	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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TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report	Report No. : FR411403-27AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode	VHT20	Test Freq. (MHz)	5745			
N <sub>TX</sub>	3	Polarization	V			



	Freq	Level	Over Limit	Limit Line		Antenna Factor			Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	_	
1	7584.000	37.73	-16.27	54.00	28.28	36.60	5.72	32.87	Average	
2	7584.000	53.27	-20.73	74.00	43.82	36.60	5.72	32.87	Peak	
3	11490.000	48.57	-5.43	54.00	35.07	39.18	6.78	32.46	Average	
4	11490.000	63.98	-10.02	74.00	50.48	39.18	6.78	32.46	Peak	
5	17235.000	63.12	-5.08	68.20	44.41	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.

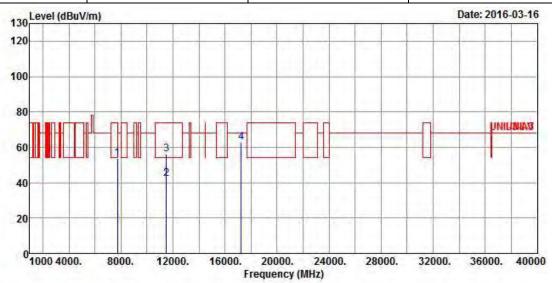
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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 <sub>TX</sub>	3	Polarization	Н			

Report No.: FR411403-27AN



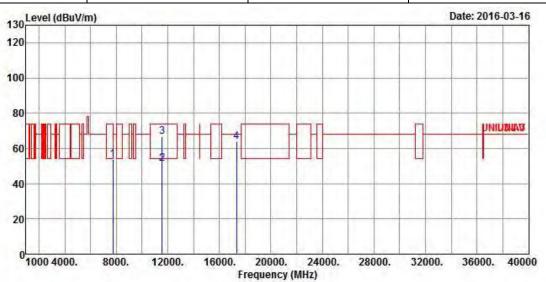
Freq	Level							Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
7752.000	53.75	-14.45	68.20	44.09	36.80	5.76	32.90	Peak
11490.000	42.06	-11.94	54.00	28.56	39.18	6.78	32.46	Average
11490.000	56.28	-17.72	74.00	42.78	39.18	6.78	32.46	Peak
17235.000	62.99	-5.21	68.20	44.28	41.72	8.53	31.54	Peak
	7752.000 11490.000 11490.000	MHz dBuV/m 7752.000 53.75 11490.000 42.06 11490.000 56.28	Freq Level Limit  MHz dBuV/m dB  7752.000 53.75 -14.45 11490.000 42.06 -11.94 11490.000 56.28 -17.72	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  7752.000 53.75 -14.45 68.20 11490.000 42.06 -11.94 54.00 11490.000 56.28 -17.72 74.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  7752.000 53.75 -14.45 68.20 44.09 11490.000 42.06 -11.94 54.00 28.56 11490.000 56.28 -17.72 74.00 42.78	Freq Level Limit Line Level Factor  MHz dBuV/m dB dBuV/m dBuV dB/m  7752.000 53.75 -14.45 68.20 44.09 36.80 11490.000 42.06 -11.94 54.00 28.56 39.18 11490.000 56.28 -17.72 74.00 42.78 39.18	Freq Level Limit Line Level Factor Loss  MHz dBuV/m dB dBuV/m dBuV dB/m dB  7752.000 53.75 -14.45 68.20 44.09 36.80 5.76 11490.000 42.06 -11.94 54.00 28.56 39.18 6.78 11490.000 56.28 -17.72 74.00 42.78 39.18 6.78	7752.000 53.75 -14.45 68.20 44.09 36.80 5.76 32.90 11490.000 42.06 -11.94 54.00 28.56 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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Transmitter Radiated Unwanted Emissions (Above 1GHz)						
Modulation Mode VHT20 Test Freq. (MHz) 5785						
N <sub>TX</sub>	3	Polarization	V			

Report No.: FR411403-27AN



	Freq	Level	Over Limit		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Antenna Factor		The state of the s	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7753.000	53.63	-14.57	68.20	43.97	36.80	5.76	32.90	Peak
2	11570.000	51.23	-2.77	54.00	37.63	39.23	6.84	32.47	Average
3	11570.000	66.48	-7.52	74.00	52.88	39.23	6.84	32.47	Peak
4	17355.000	63.86	-4.34	68.20	44.34	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.

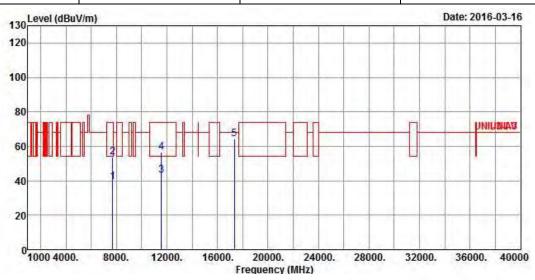
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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

SPORTON INTERNATIONAL INC. Page No. : 91 of 105 TEL : 886-3-327-3456 Report Version : Rev. 01

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	VHT20	Test Freq. (MHz)	5785						
N <sub>TX</sub>	3	Polarization	Н						

Report No.: FR411403-27AN



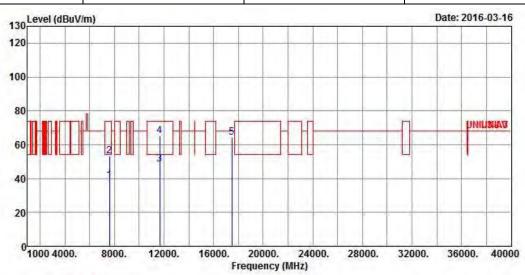
	Freq	Level	Over Limit			Antenna Factor		Preamp Factor	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	7696.000	39.14	-14.86	54.00	29.54	36.74	5.75	32.89	Average
2	7696.000	53.56	-20.44	74.00	43.96	36.74	5.75	32.89	Peak
3	11570.000	43.28	-10.72	54.00	29.68	39.23	6.84	32.47	Average
4	11570.000	56.69	-17.31	74.00	43.09	39.23	6.84	32.47	Peak
5	17355.000	64.24	-3.96	68.20	44.72	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>	3	Polarization	V					

Report No.: FR411403-27AN



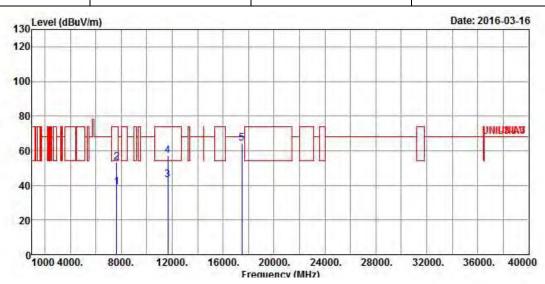
	Freq	Level	Over Limit	Limit Line		Antenna Factor		The second second	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	T
1	7600.000	38.75	-15.25	54.00	29.29	36.62	5.72	32.88	Average
2	7600.000	53.02	-20.98	74.00	43.56	36.62	5.72	32.88	Peak
3	11650.000	48.64	-5.36	54.00	34.96	39.26	6.90	32.48	Average
4	11650.000	65.39	-8.61	74.00	51.71	39.26	6.90	32.48	Peak
5	17475.000	64.16	-4.04	68.20	43.83	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	VHT20	Test Freq. (MHz)	5825				
N <sub>TX</sub>	3	Polarization	Н				

Report No.: FR411403-27AN



	Freq	Level	Over Limit	Limit Line	100 E 22 E 11	Antenna Factor			Remark	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	7652.000	39.03	-14.97	54.00	29.49	36.68	5.74	32.88	Average	
2	7652.000	53.06	-20.94	74.00	43.52	36.68	5.74	32.88	Peak	
3	11650.000	42.96	-11.04	54.00	29.28	39.26	6.90	32.48	Average	
4	11650.000	57.04	-16.96	74.00	43.36	39.26	6.90	32.48	Peak	
5	17475.000	64.47	-3.73	68.20	44.14	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.

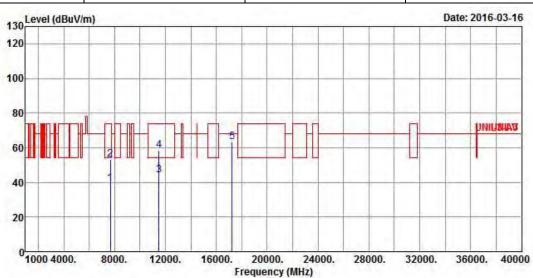
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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>	3	Polarization	V					

Report No.: FR411403-27AN



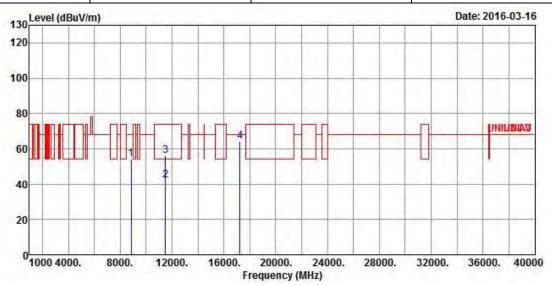
	Freq	Level	Over Limit			Antenna Factor				
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	7688.000	39.19	-14.81	54.00	29.62	36.72	5.74	32.89	Average	
2	7688.000	53.22	-20.78	74.00	43.65	36.72	5.74	32.89	Peak	
3	11510.000	44.17	-9.83	54.00	30.65	39.20	6.78	32.46	Average	
4	11510.000	58.31	-15.69	74.00	44.79	39.20	6.78	32.46	Peak	
5	17265.000	63.36	-4.84	68.20	44.43	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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TEL: 886-3-327-3456 Report Version : Rev. 01

FCC Test Report No.: FR411403-27AN

Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	VHT40	Test Freq. (MHz)	5755					
N <sub>TX</sub>	3	Polarization	Н					



	Freq	Level	Over Limit			Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	8842.000	54.18	-14.02	68.20	43.38	37.77	6.09	33.06	Peak
2	11510.000	42.22	-11.78	54.00	28.70	39.20	6.78	32.46	Average
3	11510.000	56.25	-17.75	74.00	42.73	39.20	6.78	32.46	Peak
4	17265.000	64.07	-4.13	68.20	45.14	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.

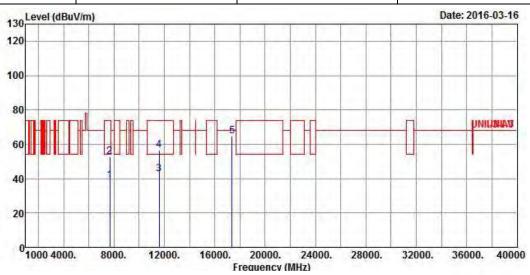
Note 5: For un-restricted bands emission satisfies both the average and peak limits of 15.209, it is not required to satisfy the -27 dBm peak emission limit of 15.407.

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	VHT40	Test Freq. (MHz)	5795					
N <sub>TX</sub>	3	Polarization	V					

Report No.: FR411403-27AN



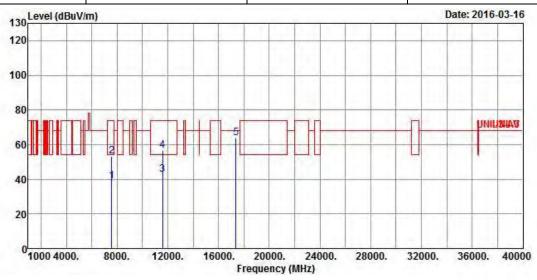
	Freq	Level	Over Limit	Limit Line		Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7664.000	39.09	-14.91	54.00	29.53	36.70	5.74	32.88	Average
2	7664.000	52.90	-21.10	74.00	43.34	36.70	5.74	32.88	Peak
3	11590.000	42.50	-11.50	54.00	28.87	39.23	6.87	32.47	Average
4	11590.000	56.77	-17.23	74.00	43.14	39.23	6.87	32.47	Peak
5	17385.000	64.58	-3.62	68.20	44.84	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	VHT40	Test Freq. (MHz)	5795					
N <sub>TX</sub>	3	Polarization	Н					



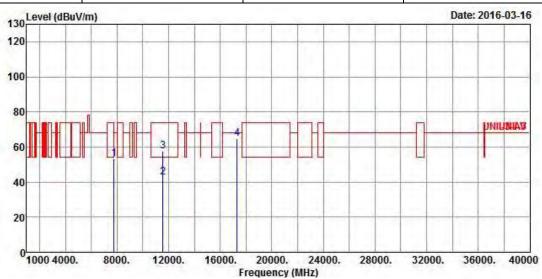
	Freq	Level				Antenna Factor		The second second	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7576.000	38.70	-15.30	54.00	29.25	36.60	5.72	32.87	Average
2	7576.000	53.33	-20.67	74.00	43.88	36.60	5.72	32.87	Peak
3	11590.000	42.58	-11.42	54.00	28.95	39.23	6.87	32.47	Average
4	11590.000	56.66	-17.34	74.00	43.03	39.23	6.87	32.47	Peak
5	17385.000	63.87	-4.33	68.20	44.13	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	VHT80	Test Freq. (MHz)	5775					
N <sub>TX</sub>	3	Polarization	V					

Report No.: FR411403-27AN



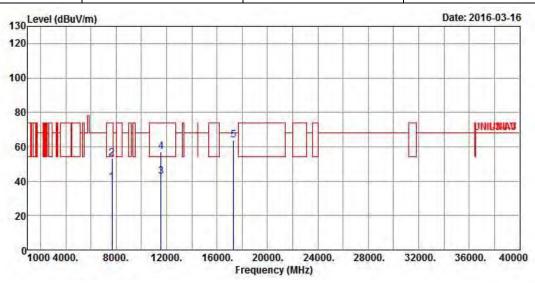
Freq	Level							Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
7784.000	53.05	-15.15	68.20	43.34	36.84	5.77	32.90	Peak
11550.000	42.49	-11.51	54.00	28.90	39.22	6.84	32.47	Average
11550.000	57.40	-16.60	74.00	43.81	39.22	6.84	32.47	Peak
17325.000	64.53	-3.67	68.20	45.26	42.37	8.46	31.56	Peak
	MHz 7784.000 11550.000 11550.000	MHz dBuV/m 7784.000 53.05 11550.000 42.49 11550.000 57.40	Freq Level Limit  MHz dBuV/m dB  7784.000 53.05 -15.15 11550.000 42.49 -11.51 11550.000 57.40 -16.60	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  7784.000 53.05 -15.15 68.20 11550.000 42.49 -11.51 54.00 11550.000 57.40 -16.60 74.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  7784.000 53.05 -15.15 68.20 43.34 11550.000 42.49 -11.51 54.00 28.90 11550.000 57.40 -16.60 74.00 43.81	Freq Level Limit Line Level Factor  MHz dBuV/m dB dBuV/m dBuV dB/m  7784.000 53.05 -15.15 68.20 43.34 36.84 11550.000 42.49 -11.51 54.00 28.90 39.22 11550.000 57.40 -16.60 74.00 43.81 39.22	Freq Level Limit Line Level Factor Loss  MHz dBuV/m dB dBuV/m dBuV dB/m dB  7784.000 53.05 -15.15 68.20 43.34 36.84 5.77 11550.000 42.49 -11.51 54.00 28.90 39.22 6.84 11550.000 57.40 -16.60 74.00 43.81 39.22 6.84	7784.000 53.05 -15.15 68.20 43.34 36.84 5.77 32.90 11550.000 42.49 -11.51 54.00 28.90 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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Transmitter Radiated Unwanted Emissions (Above 1GHz)							
Modulation Mode	VHT80	Test Freq. (MHz)	5775				
N <sub>TX</sub>	3	Polarization	Н				



	Freq	Level	Over Limit			Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	7660.000	39.17	-14.83	54.00	29.61	36.70	5.74	32.88	Average
2	7660.000	53.33	-20.67	74.00	43.77	36.70	5.74	32.88	Peak
3	11550.000	42.54	-11.46	54.00	28.95	39.22	6.84	32.47	Average
4	11550.000	57.09	-16.91	74.00	43.50	39.22	6.84	32.47	Peak
5	17325.000	63.78	-4.42	68.20	44.51	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

# 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.

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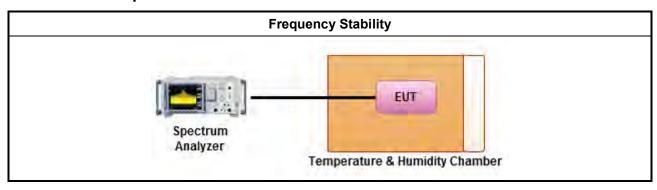
## 3.7.1 Measuring Instruments

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

### 3.7.2 Test Procedures

_									
	Test Method								
$\boxtimes$	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.							

# 3.7.3 Test Setup



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3.7.4 Test Result of Frequency Stability

	Frequency Stability Result										
Mo	ode	Frequency Stability (ppm)									
Condition	Eroa (MUz)		Test Frequ	ency (MHz)			Frequency S	tability (ppm)			
Condition	Freq. (MHz)	0 min	2 min	5 min	10 min	0 min	2 min	5 min	10 min		
T20°CVmax	5745	5744.98177	5744.98220	5744.98046	5744.98177	-3.1732	-3.0983	-3.4012	-3.1732		
T20°CVmin	5745	5744.98220	5744.98263	5744.98133	5744.98009	-3.0983	-3.0235	-3.2498	-3.4656		
T50°CVnom	5745	5744.97438	5744.97482	5744.97525	5744.97569	-4.4595	-4.3829	-4.3081	-4.2315		
T40°CVnom	5745	5744.97091	5744.97048	5744.97004	5744.97004	-5.0635	-5.1384	-5.2150	-5.2150		
T30°CVnom	5745	5744.97438	5744.97395	5744.97352	5744.97352	-4.4595	-4.5344	-4.6092	-4.6092		
T20°CVnom	5745	5744.98220	5744.98263	5744.98177	5744.98009	-3.0983	-3.0235	-3.1732	-3.4656		
T10°CVnom	5745	5744.99305	5744.99262	5744.99219	5744.99175	-1.2097	-1.2846	-1.3594	-1.4360		
T0°CVnom	5745	5745.00217	5745.00174	5745.00130	5745.00087	0.3777	0.3029	0.2263	0.1514		
T-10°CVnom	5745	5745.01710	5745.01693	5745.01650	5745.01606	2.9765	2.9469	2.8721	2.7955		
T-20°CVnom	5745	5745.01997	5745.02041	5745.02084	5745.02171	3.4761	3.5527	3.6275	3.7789		
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**

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

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# For 5150-5250 MHz

<RF Conducted>

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	MAA1112-007	-20 ~ 100℃	Nov. 20, 2013	Nov. 19, 2014
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Jul. 31, 2014	Jul. 30, 2015

# For 5725~5850 MHz <RF Conducted>

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101500	9KHz~40GHz	May 06, 2015	May 05, 2016
Temp. and Humidity Chamber	Giant Force	GTH-225-20-S	MAB0103-001	-20 ~ 100℃	Jun. 12, 2015	Jun. 11, 2016
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	Jul. 28, 2015	Jul. 27, 2016
Power Sensor	Anritsu	MA2411B	1027452	300MHz ~ 40GHz	Feb. 22, 2016	Feb. 21, 2017
Power Meter	Anritsu	ML2495A	1124009	300MHz ~ 40GHz	Feb. 22, 2016	Feb. 21, 2017
AC Power Source	G.W	APS-9102	EL920581	AC 0V ~ 300V	Jun. 25, 2015	Jun. 24, 2016

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For 5150-5250 MHz

Radiated Emission (Below 1GHz)

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. 21, 2013	Sep. 20, 2014
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

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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

For 5725~5850 MHz

Radiated Emission (Below 1GHz)

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	FSV40	101513	9kHz ~ 40GHz	Feb. 16, 2016	Feb. 15, 2017
Bilog Antenna	SCHAFFNER	CBL 6112D	22237	30MHz ~ 1GHz	Sep. 18, 2015	Sep. 17, 2016

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

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For 5150-5250 MHz Radiated Emission (Above 1GHz)

Adulated Elilission (Above 1912)								
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	Agilent	8449B	3008A02120	1GHz ~ 26.5GHz	Sep. 01, 2014	Aug. 31, 2015		
Spectrum	R&S	FSP40	100004	9kHz ~ 40GHz	Mar. 27, 2014	Mar. 26, 2015		
Horn Antenna	ETS · LINDGREN	3115	6741	1GHz ~ 18GHz	Jun. 11, 2014	Jun. 10, 2015		
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170154	15GHz ~ 40GHz	Jan. 10, 2014	Jan. 09, 2015		
RF Cable-high	SUHNER	SUCOFLEX 106	03CH03-HY	1GHz ~ 40GHz	Dec. 11, 2013	Dec. 10, 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		

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Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Last Cal.	Calibration Due Date
Amplifier	EM	EM18G40G	060604	18GHz ~ 40GHz	Oct. 17, 2013	Oct. 16, 2014

For 5725~5850 MHz Radiated Emission (Above 1GHz)

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	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
Horn Antenna	ETS · LINDGREN	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

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