

**FCC Test Report** 

Equipment : 802.11ac Wireless Router

Brand Name : Synology Model No. : RT2600ac

FCC ID : YOR-RT2600AC

Standard : 47 CFR FCC Part 15.247 Frequency : 2400 MHz – 2483.5 MHz

FCC Classification : DTS

Applicant : Synology Incorporated

3F-3, No.106, Chang An W. Rd., Taipei 103, Taiwan

Manufacturer : ASKEY TECHNOLOY (JIANG SU) LTD.

NO.1388, Jiao Tong Road, Wu Jiang

Economic-Technological Development Area, Jiangsu

Province215200, P.R.C

The product sample received on Jun. 03, 2016 and completely tested on Aug. 12, 2016 We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

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

Reviewed by:

Kevin Liang / Assistant Manager

Testing Laboratory

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# **Summary of Test Result**

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		Conform	ance Test Specifications	Conformance Test Specifications										
Report Clause			Measured	Limit	Result									
1.1.2	15.203	Antenna Requirement	Antenna connector mechanism complied	FCC 15.203	Complied									
3.1	15.207	AC Power-line Conducted Emissions	[dBuV]: 0.370119MHz 43.34 (Margin 15.16dB) - QP 37.59 (Margin 10.91dB) - AV	FCC 15.207	Complied									
3.2	15.247(a)	DTS Bandwidth	Refer as Appendix A	≥500kHz	Complied									
3.3	15.247(b)	Fundamental Emission Output Power	Refer as Appendix B	Power [dBm]:30	Complied									
3.4	15.247(e)	Power Spectral Density	Refer as Appendix C	PSD [dBm/3kHz]:8	Complied									
3.5	15.247(d)	Test Result of Transmitter Radiated Bandedge Emissions	Non-Restricted Bands: 2399.936 MHz: 48.81dB Restricted Bands [dBuV/m at 3m]: 2483.60MHz 65.68 (Margin 8.32dB) - PK 53.76 (Margin 0.24dB) - AV	Non-Restricted Bands:> 30 dBc Bands: FCC 15.209	Complied									
3.6	15.247(d)	Transmitter Radiated Unwanted Emissions	Restricted Bands [dBuV/m at 3m]: 875.84MHz 42.62 (Margin 3.38dB) - PK	Non-Restricted Bands:> 30 dBc Restricted Bands: FCC 15.209	Complied									

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# **Revision History**

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Report No.	Version	Description	Issued Date
FR662420AC	Rev. 01	Initial issue of report	Sep. 05, 2016

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1 General Description

### 1.1 Information

#### 1.1.1 RF General Information

Band	Mode	BWch (MHz)	CH. Number	Nss-Min	Nant
2.4G	11b	20	1-11 [11]	1	4
2.4G	11g	20	1-11 [11]	1	4
2.4G	HT20	20	1-11 [11]	1,(M0-31)	4
2.4G	HT40	40	3-9 [7]	1,(M0-31)	4

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#### Note:

- 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- BWch is the nominal channel bandwidth.
- Nss-Min is the minimum number of spatial streams.
- Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

#### 1.1.2 Antenna Information

	Antenna Category						
	Integral antenna (antenna permanently attached)						
	☐ Temporary RF connector provided						
	No temporary RF connector provided Transmit chains bypass antenna and soldered temporary RF connector provided for connected measurement. In case of conducted measurements the transmitter shall be connected to the measuring equipment via a suitable attenuator and correct for all losses in the RF path.						
$\boxtimes$	External antenna (dedicated antennas)						
	Single power level with corresponding antenna(s).						
	Multiple power level and corresponding antenna(s).						

No.	Ant. Cat.	Ant. Type	Gain (dBi)
1	External	Dipole	4.5
2	External	Dipole	4.5
3	External	Dipole	4.5
4	External	Dipole	4.5

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# 1.1.3 Type of EUT

	Identify EUT								
EU	Serial Number		N/A						
Pre	sentation of Equipmen	t	Produ	ction	; 🛛 Pro	e-Pr	oduction ; 🔲 Pro	ototyp	e
	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 int	ende	ed for a va	riety	of host s	yste	ems)		
	Host System - Brand	Nam	e / Model	No.:					
	Other:								
1.1.	4 Mode Test Du	ty C	ycle						
			Opera	ted N	lode for	r Wo	orst Duty Cycle		
$\boxtimes$	Operated test mode f	or w	orst duty c	ycle					
	Test Signal [	Outy	Cycle (x)			Power Duty Factor [dB] – (10 log 1/x)			
$\boxtimes$	99.7% - IEEE 802.11k	)				0.01			
$\boxtimes$	96.7%- IEEE 802.11g					0.15			
$\boxtimes$	98.7%- IEEE 802.11n	(HT	20)			0.06			
$\boxtimes$	97.4%- IEEE 802.11n	(HT	40)			0.11			
1.1.	5 EUT Operation	nal	Conditio	on					
Sup	ply Voltage	$\boxtimes$	AC main	ıs			DC		
Тур	e of DC Source	$\boxtimes$	External	AC a	dapter		From Host Syst	em	Battery
1.1.	6 EUT Operate I	nfo	rmation						
Items Description						iption			
Communication Mode					IP Base	ased (Load Based)			Frame Based
Beamforming Function				$\boxtimes$	With beamforming				Without beamforming
0	On anata O andition				Indoor				Outdoor
Ор	erate Condition				Fixed F	P2P			Portable Client
Operate Mode					Master	Master			

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# 1.2 Testing Applied Standards

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

- 47 CFR FCC Part 15
- ANSI C63.10-2013
- KDB 558074 D01 v03r05
- KDB 662911 D01 v02r01

# 1.3 Testing Location Information

	Testing Location									
$\boxtimes$	HWA YA	ADD	:	No. 52, Hwa Ya 1st Rd., Hwa Ya Technology Park, Kwei-Shan District, Tao Yuan City, Taiwan, R.O.C.						
	TEL : 886-3-327-3456									
	Test Condition			Test Site No.	Test Engineer	Test Environment	Test Date			
	AC Conduction			CO04-HY	Ryan	22.2°C / 54%	05/08/2016			
	RF Conducted			TH01-HY	Ryan	24.8°C / 65%	02/08/2016			
R	adiated Emission	on		03CH09-HY	Thor	22.2C / 51.8%	11/08/2016			

Test site registered number [ 553509 ] with FCC.

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# 1.4 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, 6dB bandwidth		±0.6 %			
RF output power, conducted		±0.1 dB			
Power density, conducted		±0.6 dB			
Unwanted emissions, conducted	9 – 150 kHz	±0.4 dB			
	0.15 – 30 MHz	±0.4 dB			
	30 – 1000 MHz	±0.6 dB			
	1 – 18 GHz	±0.5 dB			
	18 – 40 GHz	±0.5 dB			
	40 – 200 GHz	N/A			
All emissions, radiated	9 – 150 kHz	±2.5 dB			
	0.15 – 30 MHz	±2.3 dB			
	30 – 1000 MHz	±2.6 dB			
	1 – 18 GHz	±3.6 dB			
	18 – 40 GHz	±3.8 dB			
	40 – 200 GHz	N/A			
Temperature		±0.8 °C			
Humidity		±5 %			
DC and low frequency voltages		±0.9%			
Time		±1.4 %			
Duty Cycle		±0.6 %			

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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 / MCS					
11b	4	1-11 Mbps	1 Mbps					
11g	4	6-54 Mbps	6 Mbps					
HT20	4	MCS 0-31	MCS 0					
HT40	4	MCS 0-31	MCS 0					

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Note 1: IEEE Std. 802.11n modulation consists of HT20 and HT40 (HT: High Throughput). The EUT support HT20 and HT40. Worst modulation mode of Guard Interval (GI) is 800ns.

Note 2: Modulation modes consist below configuration:

11b: IEEE 802.11b, 11g: IEEE 802.11g, HT20/HT40: IEEE 802.11n

Note 3: RF output power specifies that Maximum Peak Conducted Output Power.

#### 2.2 Test Channel Mode

Test Software Version	QRCT V3.0.174.0

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Power Setting
2.4G	11b	20	1	4	2412	L	16.5
2.4G	11b	20	1	4	2437	М	19.5
2.4G	11b	20	1	4	2462	Н	16
2.4G	11g	20	1	4	2412	L	16
2.4G	11g	20	1	4	2437	М	20
2.4G	11g	20	1	4	2462	Н	16.5
2.4G	HT20	20	1	4	2412	L	15
2.4G	HT20	20	1	4	2437	М	20
2.4G	HT20	20	1	4	2462	Н	15.5
2.4G	HT40	40	1	4	2422	L	11
2.4G	HT40	40	1	4	2437	М	15
2.4G	HT40	40	1	4	2452	Н	12.5

#### **Abbreviation Explanation**

Band	Mode	BWch (MHz)	Nss-Min	Nant	Ch. (MHz)	Range	Test Cond.	Abbreviation
2.4G	HT20	20	1,(M0-15)	2	2412	L	TN,VN	2.4G;HT20;20;1,(M0-15);2;2412;L;TN,VN
2.4G	HT40	40	1,(M0-15)	2	2437	М	TN,VN	2.4G;HT40;40;1,(M0-15);2;2437;M;TN,VN

#### Note:

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<sup>◆</sup> Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.), S (Single Ch).

# 2.3 The Worst Case Measurement Configuration

The Worst Case Mode for Following Conformance Tests		
Tests Item AC power-line conducted emissions		
Condition	AC power-line conducted measurement for line and neutral Test Voltage: 120Vac / 60Hz	
Operating Mode	Operating Mode Description	
1	Adapter Mode	

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The Worst Case Mode for Following Conformance Tests		
Tests Item	DTS Bandwidth, Fundamental Emission Output Power, Power Spectral Density, Emissions in Non-restricted Frequency Bands	
Test Condition	Conducted measurement at transmit chains	

The Worst Case Mode for Following Conformance Tests				
Tests Item	Emissions in Restricted Frequency Bands			
Test Condition	Test Condition  Radiated measurement  If EUT consist of multiple antenna assembly (multiple antenna are used in regardless of spatial multiplexing MIMO configuration), the radiated test is be performed with highest antenna gain of each antenna type.			
	☐ EUT will be placed in	fixed position.		
User Position	EUT will be placed in mobile position and operating multiple positions.			
	EUT will be a hand-held or body-worn battery-powered devices and operating multiple positions.			
Operating Mode < 1GHz				
	X Plane	Y Plane	Z Plane	
Orthogonal Planes of EUT				
Worst Planes of EUT V				
Worst Planes of Ant			V	

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# 2.4 Accessories and Support Equipment

Accessories Information				
	Brand Name	CWT	Model Name	2ABN042F
AC Adapter	Power Rating	I/P:100 - 240Vac, 1.3A, O/P: 12Vdc, 3.5A		
	Power Cord	1.45 meter, non-shielded of	cable, w/o ferrite co	re
RJ45 Cable Power Cord		1.5 meter, non-shielded ca	able	

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

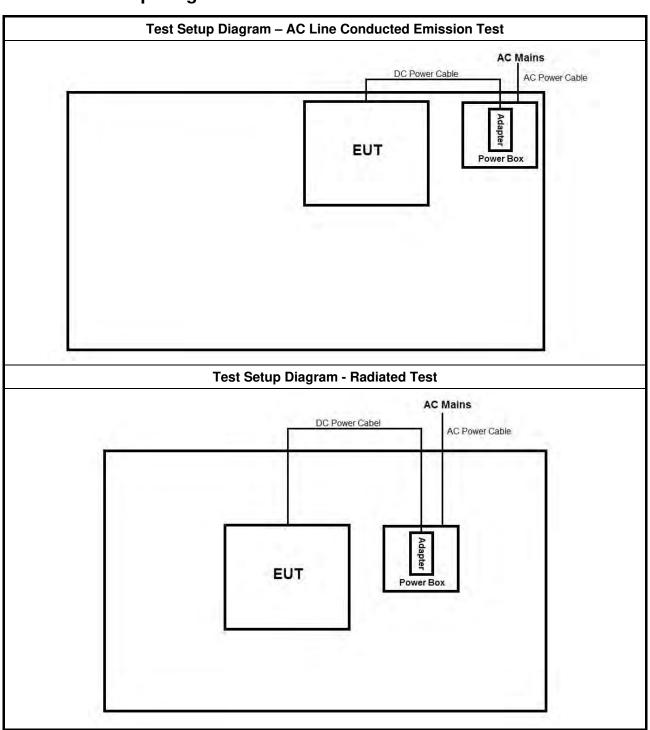
	Support Equipment - RF Conducted					
No.	Equipment	Brand Name	Model Name	FCC ID		
1	Notebook	DELL	E6400	R33002 / DOC		
2	Adapter for NB	DELL	HA65NM130	R35737 / DOC		

	Support Equipment - AC Conduction and Radiated Emission				
No.	Equipment	Brand Name	Model Name		
1	-	-	-		

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2.6 Test Setup Diagram



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3 Transmitter Test Result

### 3.1 AC Power-line Conducted Emissions

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

AC Power-line Conducted Emissions Limit		
Frequency Emission (MHz)	Quasi-Peak	Average
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50

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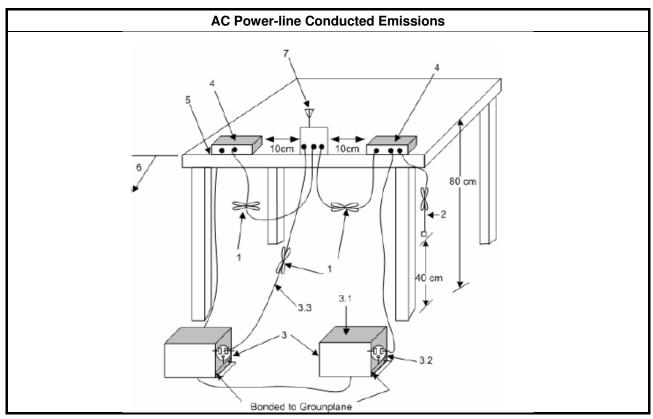
## 3.1.2 Measuring Instruments

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 conducted emissions.

## 3.1.4 Test Setup



#### 3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix I

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## 3.2 DTS Bandwidth

#### 3.2.1 6dB Bandwidth Limit

6dB Bandwidth Limit		
Systems using digital modulation techniques:		
■ 6 dB bandwidth ≥ 500 kHz.		

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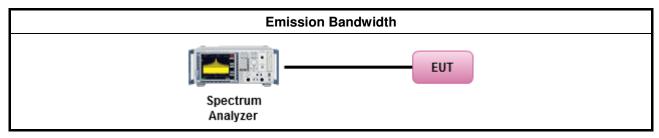
## 3.2.2 Measuring Instruments

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

## 3.2.3 Test Procedures

	Test Method				
•	For the emission bandwidth shall be measured using one of the options below:				
	Refer as KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement.				
	Refer as KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement.				
	Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing.				

## 3.2.4 Test Setup



#### 3.2.5 Test Result of Emission Bandwidth

Refer as Appendix A

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# 3.3 Fundamental Emission Output Power

# 3.3.1 Fundamental Emission Output Power Limit

Max	Maximum Peak Conducted Output Power or Maximum Conducted Output Power Limit						
•	2400-2483.5 MHz Band:						
	•	If $G_{TX} \le 6$ dBi, then $P_{Out} \le 30$ dBm (1 W)					
	•	Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm					
	•	Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm					
	•	Smart antenna system (SAS):					
		- Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm					
		- Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm					
		- Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm					
e.i.r	.p. P	ower Limit:					
•	240	0-2483.5 MHz Band					
	•	Point-to-multipoint systems (P2M): P <sub>eirp</sub> ≤ 36 dBm (4 W)					
	•	Point-to-point systems (P2P): $P_{eirp} \le MAX(36, [P_{Out} + G_{TX}]) dBm$					
	•	Smart antenna system (SAS)					
		- Single beam: $P_{eirp} \le MAX(36, P_{Out} + G_{TX}) dBm$					
		- Overlap beam: $P_{eirp} \le MAX(36, P_{Out} + G_{TX}) dBm$					
		- Aggregate power on all beams: $P_{eirp} \le MAX(36, [P_{Out} + G_{TX} + 8]) dBm$					
$G_{TX}$	$\mathbf{P}_{\text{Out}}$ = maximum peak conducted output power or maximum conducted output power in dBm, $\mathbf{G}_{\text{TX}}$ = the maximum transmitting antenna directional gain in dBi. $\mathbf{P}_{\text{eirp}}$ = e.i.r.p. Power in dBm.						

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## 3.3.2 Measuring Instruments

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

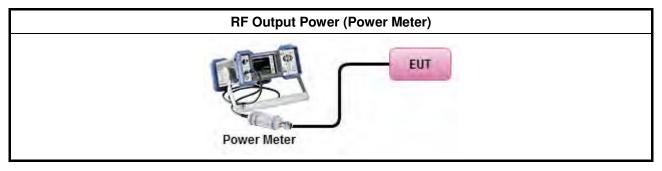
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#### 3.3.3 Test Procedures

	Test Method
•	Maximum Peak Conducted Output Power
	☐ Refer as KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method).
	☐ Refer as KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW)
•	Maximum Conducted Output Power
	[duty cycle ≥ 98% or external video / power trigger]
	Refer as KDB 558074, clause 9.2.2.2 Method AVGSA-2 (spectral trace averaging).
	Refer as KDB 558074, clause 9.2.2.3 Method AVGSA-2 Alt. (slow sweep speed)
	duty cycle < 98% and average over on/off periods with duty factor
	Refer as KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging).
	Refer as KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed)
	RF power meter and average over on/off periods with duty factor or gated trigger
	Refer as KDB 558074, clause 9.2.3 Method AVGPM (using an RF average power meter).
•	For conducted measurement.
	■ If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them.
	If multiple transmit chains, EIRP calculation could be following as methods: P <sub>total</sub> = P <sub>1</sub> + P <sub>2</sub> + + P <sub>n</sub> (calculated in linear unit [mW] and transfer to log unit [dBm]) EIRP <sub>total</sub> = P <sub>total</sub> + DG

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# 3.3.4 Test Setup



## 3.3.5 Test Result of Maximum Average Conducted Output Power

Refer as Appendix B

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# 3.4 Power Spectral Density

## 3.4.1 Power Spectral Density Limit

Power Spectral Density Limit
<ul> <li>Power Spectral Density (PSD) ≤ 8 dBm/3kHz</li> </ul>

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## 3.4.2 Measuring Instruments

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

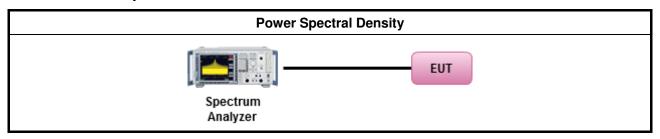
#### 3.4.3 Test Procedures

	Test Method										
•	Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option).										
	Refer as KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak).										
	[duty cycle ≥ 98% or external video / power trigger]										
	Refer as KDB 558074, clause 10.3 Method AVGPSD-2 (spectral trace averaging).										
	Refer as KDB 558074, clause 10.4 Method AVGPSD-2 (slow sweep speed)										
duty cycle < 98% and average over on/off periods with duty factor											
	Refer as KDB 558074, clause 10.5 Method AVGPSD-2 Alt (spectral trace averaging).										
	Refer as KDB 558074, clause 10.6 Method AVGPSD-2 Alt. (slow sweep speed)										
•	For conducted measurement.										
	If 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 spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the N <sub>TX</sub> output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace.										
	Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits,										
	Option 3: 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.										

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# 3.4.4 Test Setup



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# 3.4.5 Test Result of Power Spectral Density

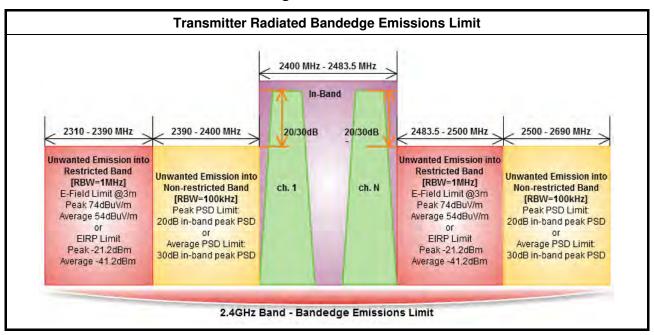
Refer as Appendix C

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3.5 Transmitter Radiated Bandedge Emissions

#### 3.5.1 Transmitter Radiated Bandedge Emissions Limit



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## 3.5.2 Measuring Instruments

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

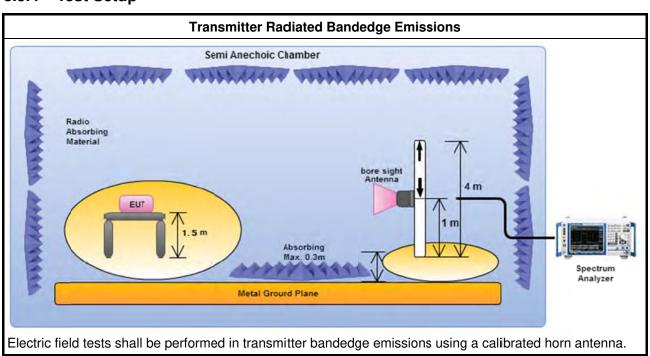
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#### 3.5.3 Test Procedures

		Test Method							
$\boxtimes$	The	average emission levels shall be measured in [duty cycle ≥ 98 or duty factor].							
$\boxtimes$		er as ANSI C63.10, clause 6.10 bandedge testing shall be performed at the lowest frequency nnel and highest frequency channel within the allowed operating band.							
$\boxtimes$	For	the transmitter unwanted emissions shall be measured using following options below:							
	$\boxtimes$	Refer as KDB 558074, clause 11 for unwanted emissions into non-restricted bands.							
	$\boxtimes$	Refer as KDB 558074, clause 12 for unwanted emissions into restricted bands.							
	Refer as KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥98%)								
	Refer as KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).								
Refer as KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW≥1/T).									
	☐ Refer as ANSI C63.10, clause 4.1.4.2.3 (Reduced VBW). VBW ≥ 1/T, where T is pulse ti								
		Refer as ANSI C63.10, clause 4.1.4.2.4 average value of pulsed emissions.							
		Refer as KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit.							
$\boxtimes$	For	the transmitter bandedge emissions shall be measured using following options below:							
	Refer as KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz).								
		Refer as ANSI C63.10, clause 6.10 for band-edge testing.							
	$\boxtimes$	Refer as ANSI C63.10, clause 6.10.6.2 for marker-delta method for band-edge measurements.							
$\boxtimes$		radiated measurement, refer as KDB 558074, clause 12.2.7 and ANSI C63.10, clause 6.6. Test ance is 3m.							

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## 3.5.4 Test Setup



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# FCC Test Report

# 3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

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Refer as Appendix D

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3.6 Transmitter Radiated Unwanted Emissions

#### 3.6.1 Transmitter in Radiated Unwanted Emissions Limit

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

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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 Limit						
RF output power procedure	Limit (dB)					
Peak output power procedure	20					
Average output power procedure	30					

Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.

Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.

#### 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

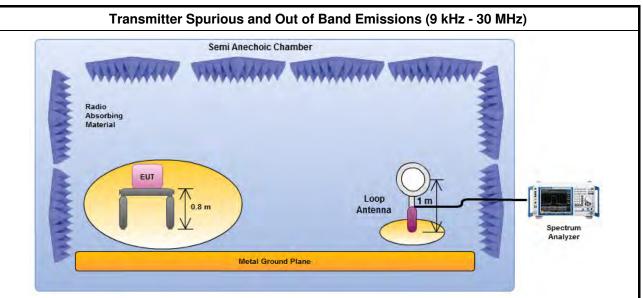
		Test Method											
	perfo equi extra dista	Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than 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).											
$\boxtimes$	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 KDB 558074, clause 11 for unwanted emissions into non-restricted bands.											
	$\boxtimes$	Refer as KDB 558074, clause 12 for unwanted emissions into restricted bands.											
		☐ Refer as KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle ≥98%)											
		Refer as KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor).											
		Refer as KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW≥1/T).											
		☐ 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 KDB 558074, clause 11.3 and 12.2.4 measurement procedure peak limit.											
		Refer as KDB 558074, clause 12.2.3 measurement procedure Quasi-Peak limit.											
$\boxtimes$	For	radiated measurement, refer as KDB 558074, clause 12.2.7.											
	$\boxtimes$	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 1 GHz and 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 30 dB below the permissible value no need to be reported.											

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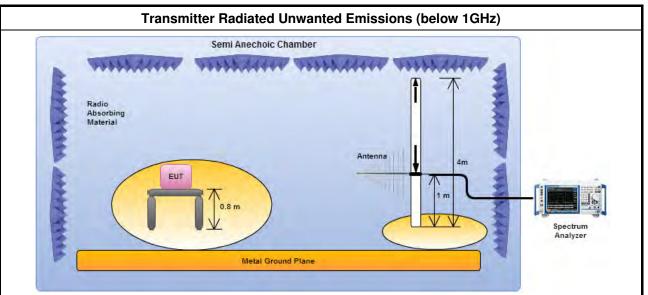


### 3.6.4 Test Setup



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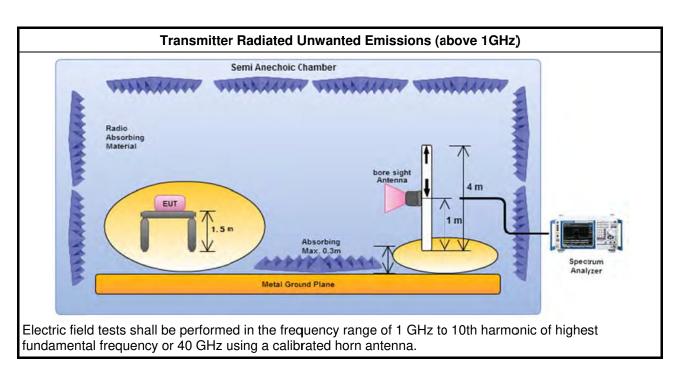
Magnetic field tests shall be performed in the frequency range of 9 kHz to 30 MHz using a calibrated loop antenna.



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

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## 3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported. Any spurious which has more than 20 dB of margin compared to the applicable limit is not necessarily reported.

### 3.6.6 Transmitter Radiated Unwanted Emissions

Refer as Appendix E

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4 Test Equipment and Calibration Data

## **Instrument for AC Conduction**

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date		
EMC Receiver	KEYSIGHT	N9038A	MY54130031	20Hz ~ 8.4GHz	14/04/2016	13/04/2017		
LISN	SCHWARZBECK MESS-ELEKTRONIK	NSLK 8127	8127-477	9kHz ~ 30MHz	26/01/2016	25/01/2017		
LISN (Support Unit)	R&S	ENV216	101295	9kHz ~ 30MHz	04/11/2015	03/11/2016		
EMI Filter	LINDGREN	LRE-2030	2651	< 450 Hz	NCR	NCR		

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NCR: Non-Calibration required.

#### **Instrument for Conducted Test**

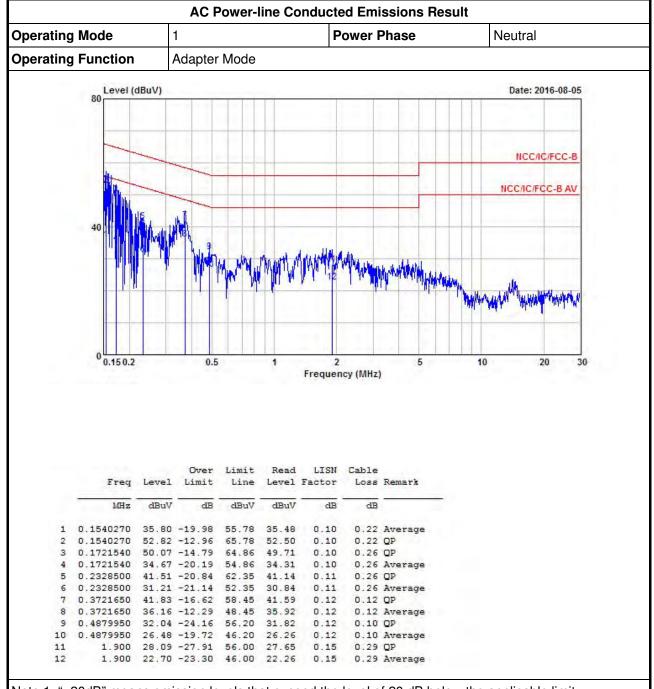
Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Spectrum Analyzer	R&S	FSV 40	101500	9KHz~40GHz	12/05/2016	11/05/ 2017
Power Sensor	Anritsu	MA2411B	917017	300MHz ~ 40GHz	04/02/2016	03/02/2017
Power Meter	Anritsu	ML2495A	949003	300MHz ~ 40GHz	04/02/2016	03/02/2017
Signal Generator	R&S	SMR40	100116	10MHz ~ 40GHz	28/07/2015	27/07/2016

#### **Instrument for Radiated Test**

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
3m Semi Anechoic Chamber	TDK	SAC-3M	03CH09-HY	30MHz ~ 1GHz 3m	25/04/2016	24/04/2017
3m Semi Anechoic Chamber	TDK		03CH09-HY	1GHz ~ 18GHz 3m	30/06/2016	29/06/2017
Amplifier	EMC	EMC9135	980232	9kHz ~ 1.0GHz	29/01/2016	28/01/2017
Amplifier	Agilent	8449B	3008A02096	1GHz ~ 26.5GHz	11/04/2016	10/04/2017
Spectrum	KEYSIGHT	N9010A	MY54200885	10Hz ~ 44GHz	04/07/2016	03/07/2017
Bilog Antenna & 5dB Attenuator	TESEQ & MTJ	CBL 6111D & MTJ6102	35418	30MHz ~ 1GHz	31/03/2016	30/03/2017
Horn Antenna	SCHWARZBECK	BBHA 9120D	BBHA 9120D 1534	1GHz ~ 18GHz	22/04/2016	21/04/2017
Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170614	18GHz ~ 40GHz	04/01/2016	03/01/2017
Loop Antenna	ROHDE&SCHWARZ	HFH2-Z2	100330	9 kHz~30 MHz	10/11/2014	09/11/2016

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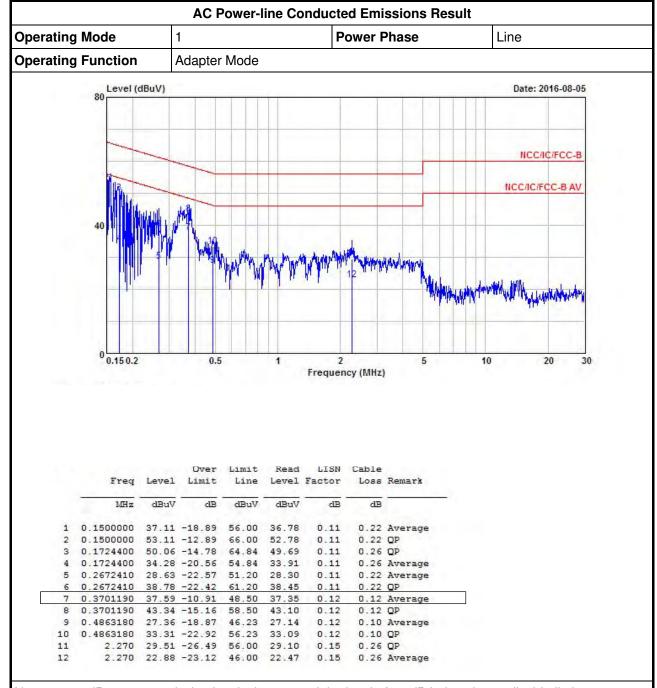
Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit. Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

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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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EBW Result
Appendix A

Summary

Mode	Max-N dB	Max-OBW ITU-Code		Min-N dB	Min-OBW	
	(Hz)	(Hz)		(Hz)	(Hz)	
2.4G;11b;20;1;4	9.05M	12.894M	12M9G1D	7.05M	12.419M	
2.4G;11g;20;1;4	16.3M	16.392M 16M4D1D	16M4D1D	14.175M	16.317M	
2.4G;HT20;20;1,(M0-31);4	17.55M	17.616M	17M6D1D	15.425M	17.516M	
2.4G;HT40;40;1,(M0-31);4	36.3M	36.182M	36M2D1D	33.8M	36.032M	

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EBW Result
Appendix A

# Result

Mode	Result	Limit	P1-N dB	P1-OBW	P2-N dB	P2-OBW	P3-N dB	P3-OBW	P4-N dB	P4-OBW
			(Hz)							
2.4G;11b;20;1;4;2412;L;TN,VN	Pass	500k	8M	12.594M	7.5M	12.619M	8.025M	12.419M	8.05M	12.819M
2.4G;11b;20;1;4;2437;M;TN,VN	Pass	500k	9.05M	12.794M	8.5M	12.569M	7.575M	12.844M	8.525M	12.894M
2.4G;11b;20;1;4;2462;H;TN,VN	Pass	500k	8M	12.744M	7.05M	12.444M	7.5M	12.544M	7.55M	12.844M
2.4G;11g;20;1;4;2412;L;TN,VN	Pass	500k	15.925M	16.392M	15.875M	16.392M	15.65M	16.317M	16M	16.392M
2.4G;11g;20;1;4;2437;M;TN,VN	Pass	500k	16M	16.367M	15.225M	16.367M	14.175M	16.342M	15.85M	16.367M
2.4G;11g;20;1;4;2462;H;TN,VN	Pass	500k	16.3M	16.392M	15.675M	16.342M	16M	16.367M	15.65M	16.367M
2.4G;HT20;20;1,(M0-31);4;2412;L;TN,VN	Pass	500k	16.5M	17.616M	15.65M	17.591M	15.6M	17.541M	15.425M	17.541M
2.4G;HT20;20;1,(M0-31);4;2437;M;TN,VN	Pass	500k	16.525M	17.616M	17.125M	17.566M	16.25M	17.516M	16.275M	17.566M
2.4G;HT20;20;1,(M0-31);4;2462;H;TN,VN	Pass	500k	17.55M	17.591M	16.525M	17.566M	15.925M	17.566M	16.275M	17.541M
2.4G;HT40;40;1,(M0-31);4;2422;L;TN,VN	Pass	500k	35.25M	36.132M	36.3M	36.182M	35.05M	36.132M	35M	36.132M
2.4G;HT40;40;1,(M0-31);4;2437;M;TN,VN	Pass	500k	34.95M	36.082M	33.8M	36.032M	35.9M	36.132M	35.05M	36.132M
2.4G;HT40;40;1,(M0-31);4;2452;H;TN,VN	Pass	500k	36.25M	36.082M	35M	36.132M	35.65M	36.132M	35.05M	36.132M

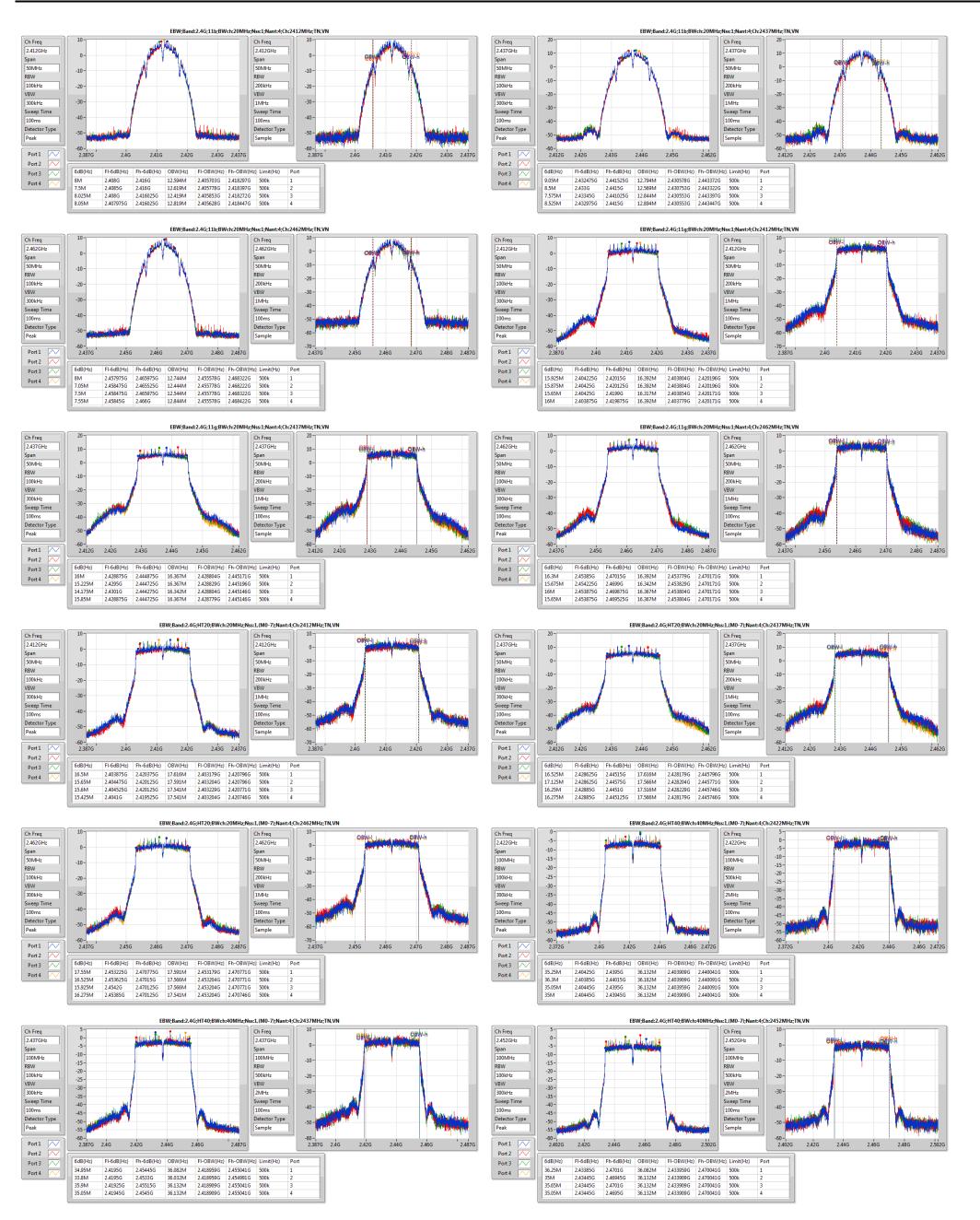
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EBW Result
Appendix A



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PowerAV Result

Appendix B

Summary

Mode	Sum	Sum	EIRP	EIRP		
	(dBm)	(W)	(dBm)	(W)		
2.4G;11b;20;1;4	26.13	0.4102	30.63	1.15611		
2.4G;11g;20;1;4	26.75	0.47315	31.25	1.33352		
2.4G;HT20;20;1,(M0-31);4	26.57	0.45394	31.07	1.27938		
2.4G;HT40;40;1,(M0-31);4	21.66	0.14655	26.16	0.41305		

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PowerAV Result

Appendix B

# Result

Mode	Result	DG	EIRP	EIRP Lim.	Sum	Sum Lim.	P1	P2	P3	P4
		(dBi)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)	(dBm)
2.4G;11b;20;1;4;2412;L;TN,VN	Pass	4.50	27.59	36.00	23.09	30.00	17.33	16.80	17.00	17.15
2.4G;11b;20;1;4;2437;M;TN,VN	Pass	4.50	30.63	36.00	26.13	30.00	20.35	20.04	20.08	19.97
2.4G;11b;20;1;4;2462;H;TN,VN	Pass	4.50	27.07	36.00	22.57	30.00	16.64	16.62	16.55	16.39
2.4G;11g;20;1;4;2412;L;TN,VN	Pass	4.50	27.40	36.00	22.90	30.00	17.11	16.58	16.79	17.01
2.4G;11g;20;1;4;2437;M;TN,VN	Pass	4.50	31.25	36.00	26.75	30.00	20.83	20.81	20.64	20.62
2.4G;11g;20;1;4;2462;H;TN,VN	Pass	4.50	27.90	36.00	23.40	30.00	17.46	17.46	17.25	17.35
2.4G;HT20;20;1,(M0-31);4;2412;L;TN,VN	Pass	4.50	26.17	36.00	21.67	30.00	15.81	15.41	15.53	15.81
2.4G;HT20;20;1,(M0-31);4;2437;M;TN,VN	Pass	4.50	31.07	36.00	26.57	30.00	20.64	20.59	20.42	20.53
2.4G;HT20;20;1,(M0-31);4;2462;H;TN,VN	Pass	4.50	26.59	36.00	22.09	30.00	16.09	16.15	15.97	16.07
2.4G;HT40;40;1,(M0-31);4;2422;L;TN,VN	Pass	4.50	22.23	36.00	17.73	30.00	11.66	11.65	11.81	11.70
2.4G;HT40;40;1,(M0-31);4;2437;M;TN,VN	Pass	4.50	26.16	36.00	21.66	30.00	15.65	15.55	15.62	15.73
2.4G;HT40;40;1,(M0-31);4;2452;H;TN,VN	Pass	4.50	23.59	36.00	19.09	30.00	13.10	13.19	12.86	13.13

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PSD Result
Appendix C

Summary

Mode	PD	EIRP.PD
	(dBm/RBW)	(dBm/RBW)
2.4G;11b;20;1;4	1.34	11.86
2.4G;11g;20;1;4	-1.71	8.81
2.4G;HT20;20;1,(M0-31);4	-2.57	7.95
2.4G;HT40;40;1,(M0-31);4	-9.30	1.22

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PSD Result
Appendix C

# Result

Mode	Result	Meas.RBW	Lim.RBW	BWCF	DG	Sum.Max	PD	PD.Limit	EIRP.PD	EIRP.PD.Li m	P1	P2	P3	P4
		(Hz)	(Hz)	(dB)	(dBi)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
2.4G;11b;20;1;4;2412;L;TN,VN	Pass	3k	3k	0.00	10.52	-2.00	-2.00	8.00	8.52	Inf	-5.76	-5.59	-6.61	-5.62
2.4G;11b;20;1;4;2437;M;TN,VN	Pass	3k	3k	0.00	10.52	1.34	1.34	8.00	11.86	Inf	-3.36	-2.12	-2.83	-1.64
2.4G;11b;20;1;4;2462;H;TN,VN	Pass	3k	3k	0.00	10.52	-3.14	-3.14	8.00	7.38	Inf	-6.18	-5.94	-6.19	-5.22
2.4G;11g;20;1;4;2412;L;TN,VN	Pass	3k	3k	0.00	10.52	-5.86	-5.86	8.00	4.66	Inf	-9.75	-10.76	-9.70	-10.42
2.4G;11g;20;1;4;2437;M;TN,VN	Pass	3k	3k	0.00	10.52	-1.71	-1.71	8.00	8.81	Inf	-6.26	-5.92	-5.69	-6.57
2.4G;11g;20;1;4;2462;H;TN,VN	Pass	3k	3k	0.00	10.52	-5.26	-5.26	8.00	5.26	Inf	-10.11	-9.87	-10.41	-9.52
2.4G;HT20;20;1,(M0-31);4;2412;L;TN,VN	Pass	3k	3k	0.00	10.52	-7.06	-7.06	8.00	3.46	Inf	-11.69	-11.49	-12.07	-11.74
2.4G;HT20;20;1,(M0-31);4;2437;M;TN,VN	Pass	3k	3k	0.00	10.52	-2.57	-2.57	8.00	7.95	Inf	-6.34	-5.92	-6.86	-6.24
2.4G;HT20;20;1,(M0-31);4;2462;H;TN,VN	Pass	3k	3k	0.00	10.52	-6.49	-6.49	8.00	4.03	Inf	-10.54	-11.42	-9.74	-11.34
2.4G;HT40;40;1,(M0-31);4;2422;L;TN,VN	Pass	3k	3k	0.00	10.52	-13.54	-13.54	8.00	-3.02	Inf	-18.46	-18.79	-16.59	-18.68
2.4G;HT40;40;1,(M0-31);4;2437;M;TN,VN	Pass	3k	3k	0.00	10.52	-9.30	-9.30	8.00	1.22	Inf	-12.47	-13.14	-14.15	-13.07
2.4G;HT40;40;1,(M0-31);4;2452;H;TN,VN	Pass	3k	3k	0.00	10.52	-11.71	-11.71	8.00	-1.19	Inf	-16.72	-16.30	-16.59	-17.04

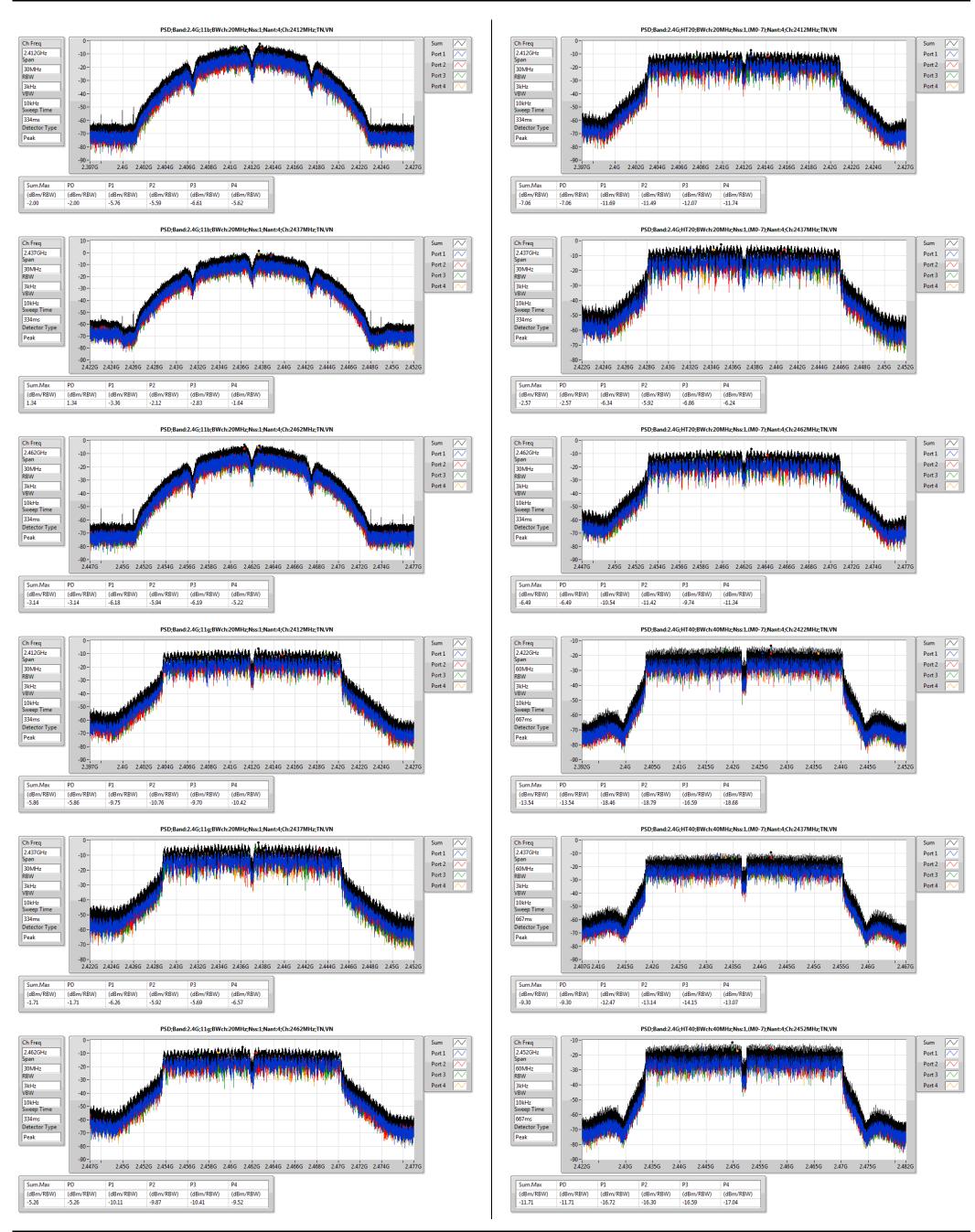
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PSD Result Appendix C



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# Transmitter Radiated Bandedge Emissions

Appendix D

Modulation	N <sub>TX</sub>	Test Freq. (MHz)	In-band PSD [i] (dBuV/100kHz)	Freq. (MHz)	Out-band PSD [o] (dBuV/100kHz)	[i] – [o] (dB)	Limit (dB)	Pol.
11b	4	2412	115.96	2397.136	52.07	63.89	30	V
11b	4	2462	117.49	2503.000	53.12	64.37	30	V
11g	4	2412	111.65	2399.936	59.16	52.49	30	V
11g	4	2462	112.59	2502.200	50.49	62.10	30	V
HT20	4	2412	110.97	2399.936	62.16	48.81	30	V
HT20	4	2462	110.64	2504.800	50.15	60.49	30	V
HT40	4	2422	105.99	2391.312	55.01	50.98	30	V
HT40	4	2452	106.46	2504.480	50.03	56.43	30	V

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.
11b	4	2412	3	233.616	63.00	74	2373.168	53.35	54	V
11b	4	2462	3	2484.400	64.98	74	2495.800	53.19	54	V
11g	4	2412	3	2389.968	65.08	74	2389.968	53.49	54	V
11g	4	2462	3	2485.400	64.16	74	2483.600	53.65	54	V
HT20	4	2412	3	2389.968	63.88	74	2389.968	53.58	54	٧
HT20	4	2462	3	2483.600	65.68	74	2483.600	53.76	54	٧
HT40	4	2422	3	2389.992	65.30	74	2389.992	53.30	54	٧
HT40	4	2452	3	2484.080	67.13	74	2484.080	53.69	54	V

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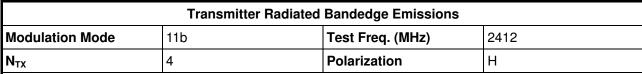
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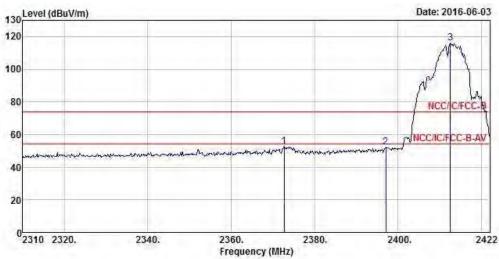


Appendix D



## **Transmitter Radiated Bandedge Emissions (Non-restricted Band)**





	Freq	Level	Over Limit			Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	2372.720	52.53			21.31	26.97	4.25	0.00	Peak
2	2397.136	52.07			20.76	27.03	4.28	0.00	Peak
3	2412.592	115.96			84.61	27.07	4.28	0.00	Peak

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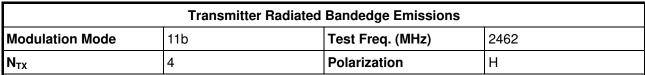
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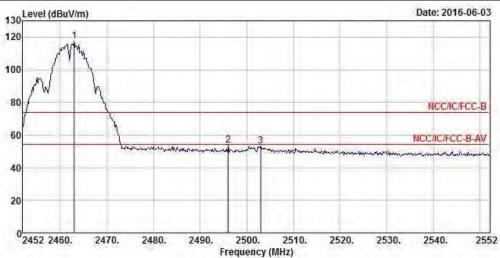
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Freq	Level	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0.0400 0.400	100 E 20 M	Antenna Factor			Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
2463.000	117.49			85.94	27.20	4.35	0.00	Peak
2496.000	53.63			21.99	27.29	4.35	0.00	Peak
2503.000	53.12			21.43	27.31	4.38	0.00	Peak

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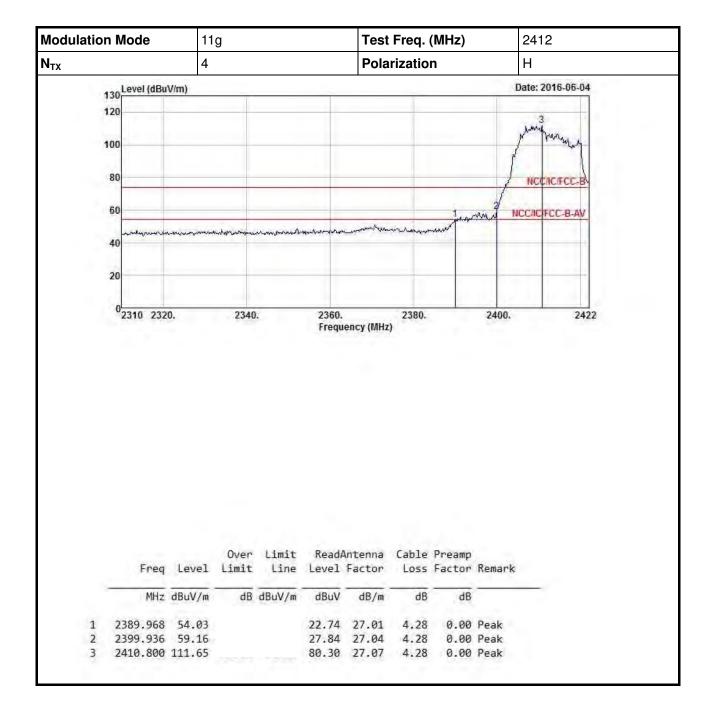
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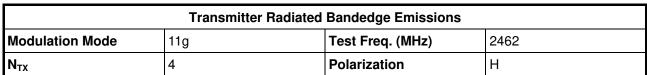
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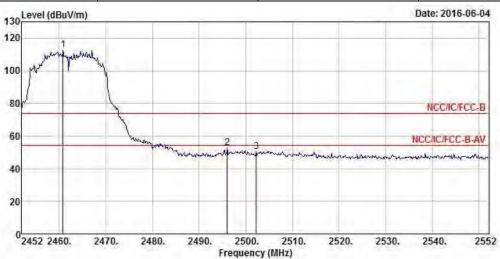
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MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
2460.800	112.59			81.07	27.20	4.32	0.00	Peak
2496.000	52.77			21.13	27.29	4.35	0.00	Peak
2502.200	50.49			18.80	27.31	4.38	0.00	Peak

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1 2 3

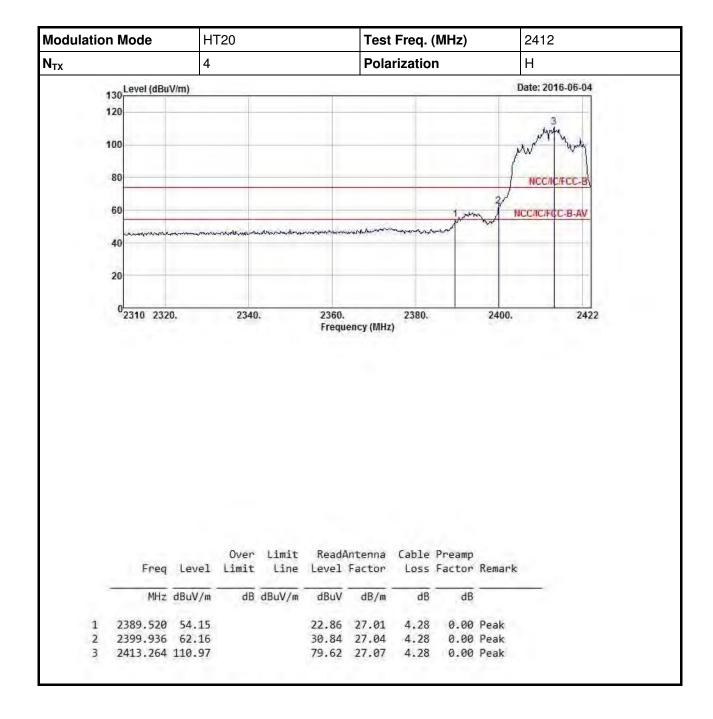
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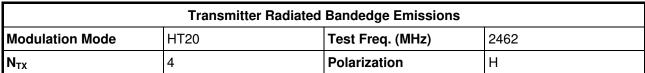


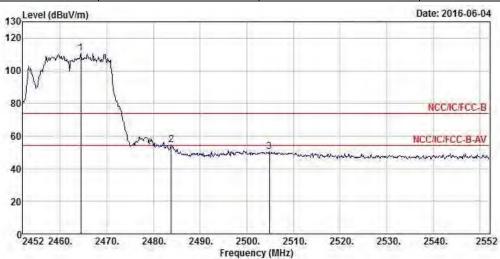
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	Freq	Level	Over Limit		100000000000000000000000000000000000000	Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	_
1	2464.400	110.64			79.08	27.21	4.35	0.00	Peak
2	2483.800	54.89			23.28	27.26	4.35	0.00	Peak
3	2504.800	50.15			18.46	27.31	4.38	0.00	Peak

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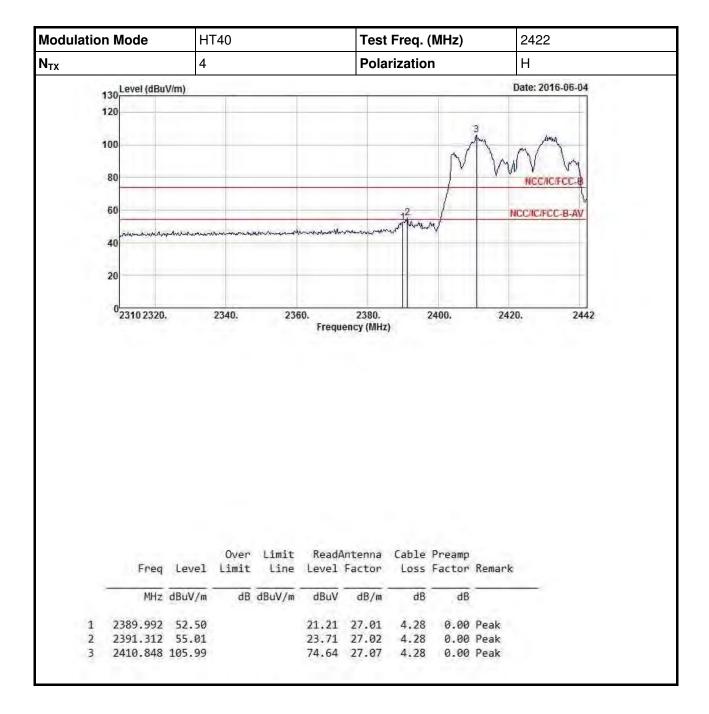
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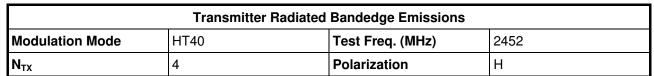
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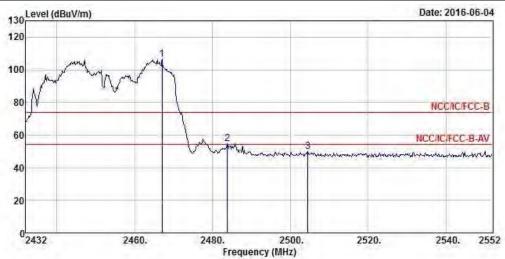
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	Freq	Level	1000	Limit Line	SCENE W	Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	2467.040	106.46			74.90	27.21	4.35	0.00	Peak
2	2483.840	54.87			23.26	27.26	4.35	0.00	Peak
3	2504.480	50.03			18.34	27.31	4.38	0.00	Peak

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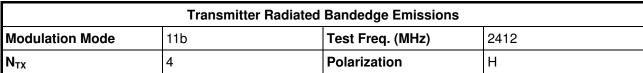
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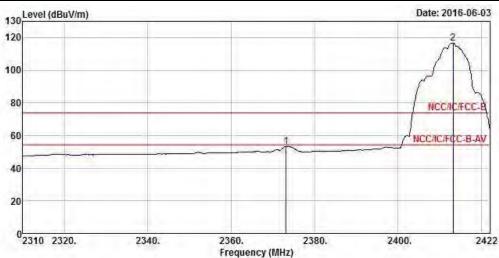
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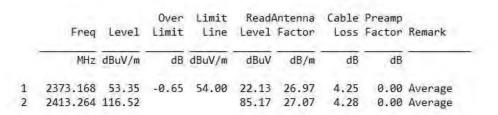
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### 1.1.1 Transmitter Radiated Bandedge Emissions (Restricted Band)







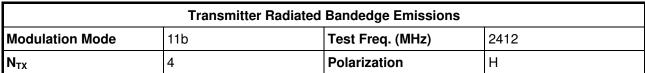
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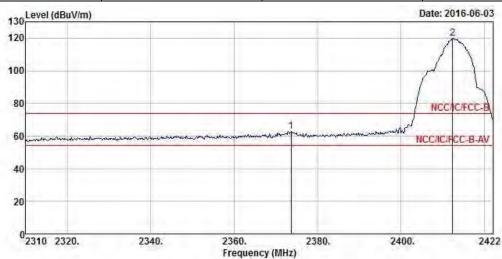
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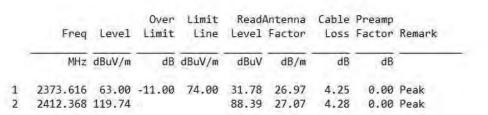
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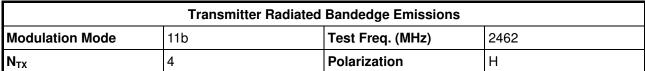


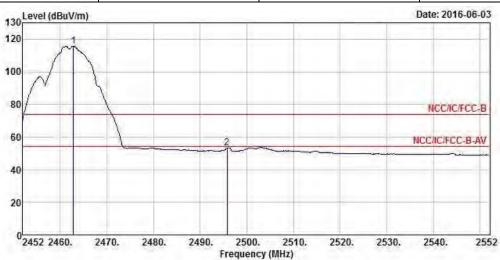
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MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
2462.800	115.78			84.23	27.20	4.35	0.00	Average
2495.800	53.19	-0.81	54.00	21.55	27.29	4.35	0.00	Average

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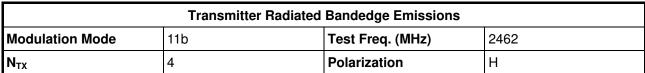
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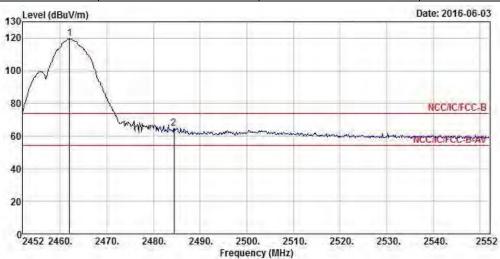
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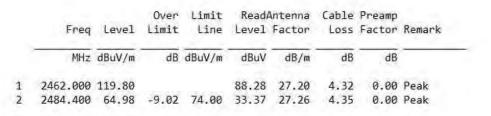
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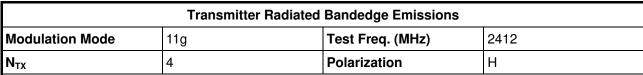
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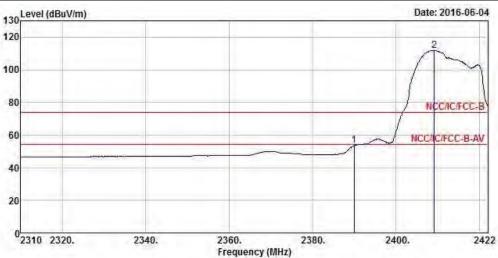
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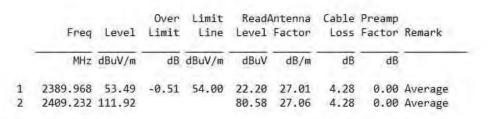
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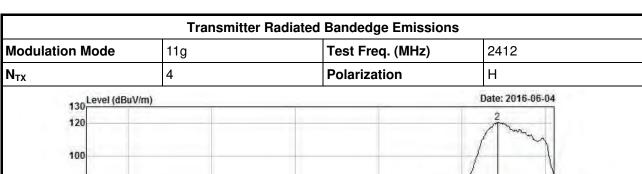


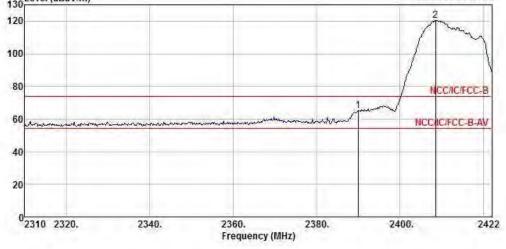
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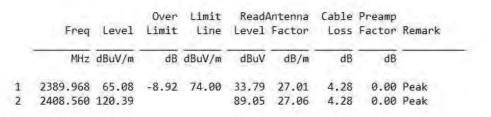
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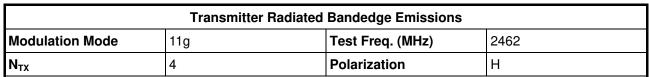


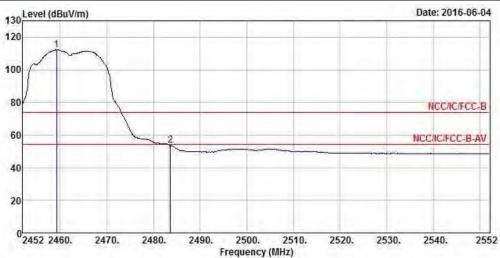


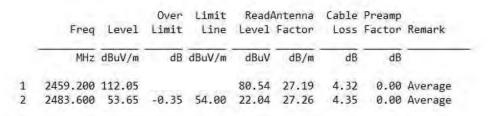
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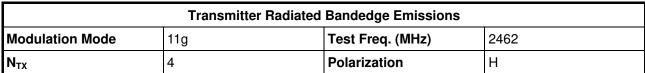


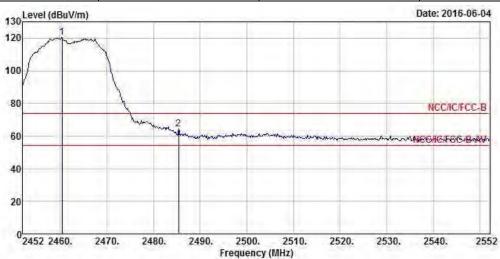
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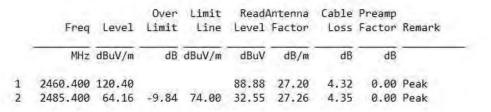
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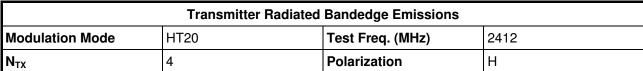
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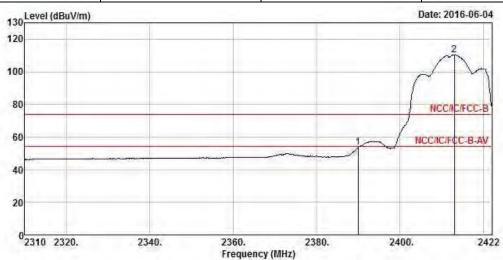
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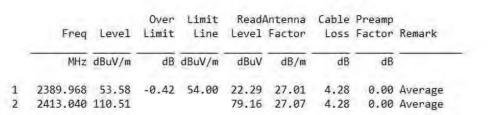
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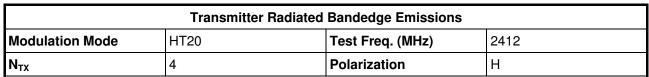


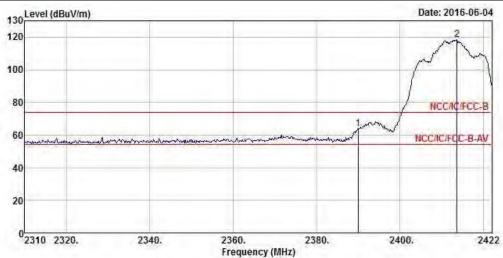
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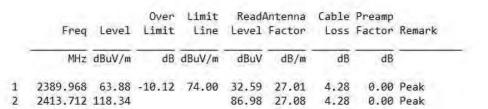
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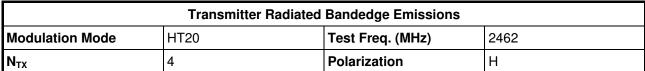


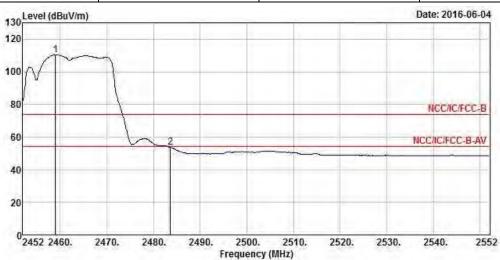
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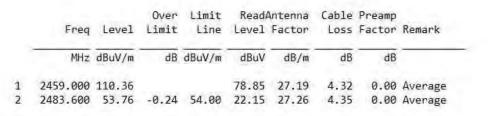
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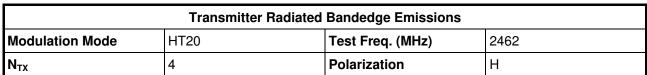


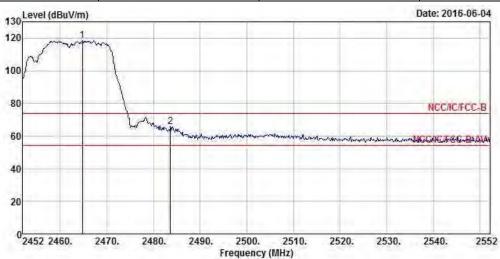
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	Freq	Level		100000000000000000000000000000000000000	100 E 20 M	Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	2464.800	118.38			86.82	27.21	4.35	0.00	Peak
2	2483.600	65.68	-8.32	74.00	34.07	27.26	4.35	0.00	Peak

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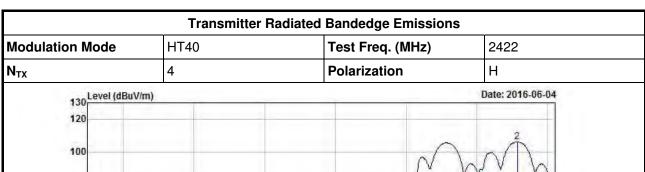
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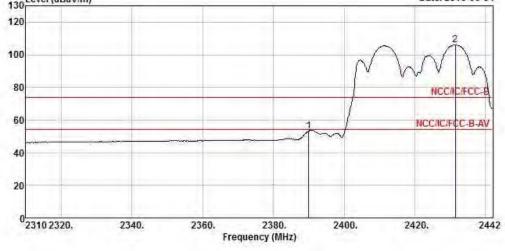
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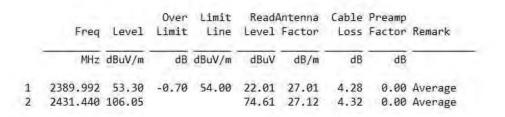
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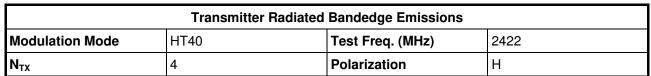
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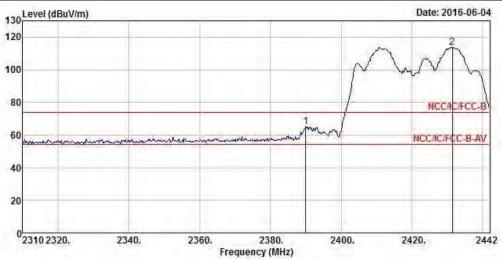
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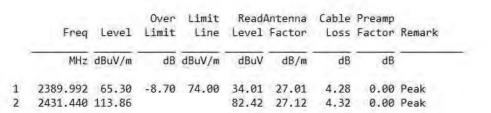
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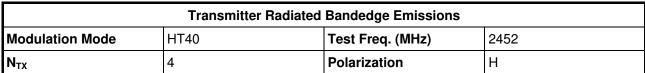


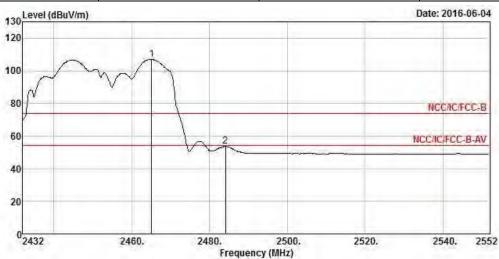
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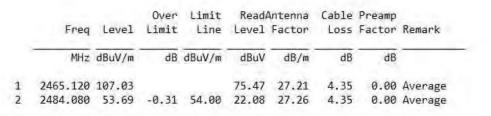
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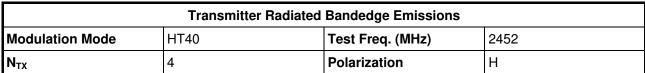
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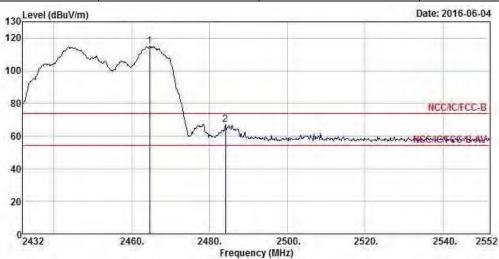
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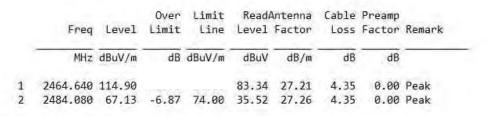
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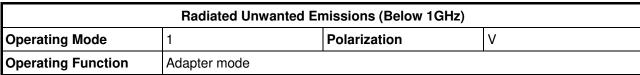


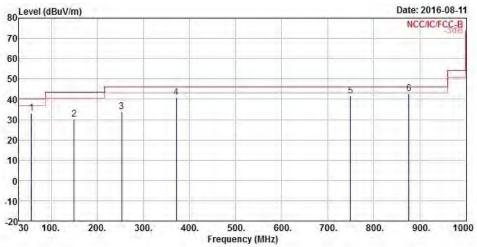
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#### **Transmitter Radiated Unwanted Emissions (Below 1GHz)**





	Freq	Level	Over Limit			Antenna Factor		Preamp Factor	
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	57.160	33.30	-6.70	40.00	58.10	11.88	0.46	37.14	Peak
2	149.310	30.07	-13.43	43.50	49.36	16.63	0.69	36.61	Peak
3	253.100	33.97	-12.03	46.00	51.17	18.31	0.89	36.40	Peak
4	371.440	40.99	-5.01	46.00	55.68	20.81	1.08	36.58	Peak
5	749.740	41.68	-4.32	46.00	50.70	26.90	1.60	37.52	Peak
6	875.840	42.62	-3.38	46.00	50.21	28.30	1.76	37.65	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.)

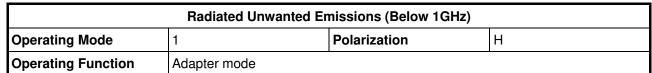
Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)

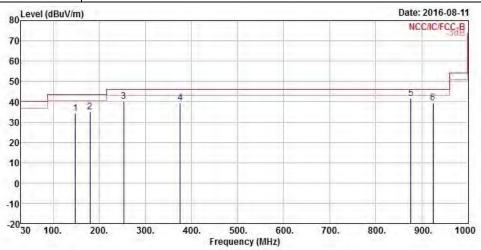
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	Freq	Level				Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	148.340	34.32	-9.18	43.50	53.58	16.67	0.68	36.61	Peak
2	179.380	35.03	-8.47	43.50	56.21	14.54	0.76	36.48	Peak
3	253.100	40.21	-5.79	46.00	57.41	18.31	0.89	36.40	Peak
4	375.320	39.25	-6.75	46.00	53.86	20.91	1.08	36.60	QP
5	875.840	41.46	-4.54	46.00	49.05	28.30	1.76	37.65	Peak
6	924.340	39.38	-6.62	46.00	45.91	29.23	1.82	37.58	Peak

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

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

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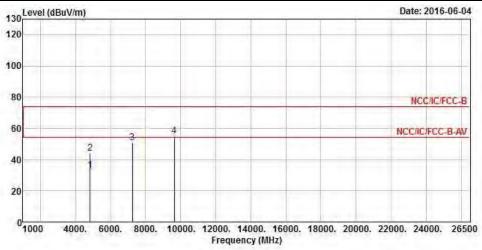
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#### Transmitter Radiated Unwanted Emissions (Above 1GHz)

Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	11b	Test Freq. (MHz)	2412							
N <sub>TX</sub>	4	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	-
4824.000	33.08	-20.92	54.00	30.98	31.15	6.11	35.16	Average
4824.000	43.95	-30.05	74.00	41.85	31.15	6.11	35.16	Peak
7236.000	50.77			42.70	35.91	7.57	35.41	Peak
9648.000	55.03			43.49	38.69	8.80	35.95	Peak
	MHz 4824.000 4824.000 7236.000	MHz dBuV/m 4824.000 33.08 4824.000 43.95	Freq Level Limit  MHz dBuV/m dB  4824.000 33.08 -20.92 4824.000 43.95 -30.05 7236.000 50.77	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  4824.000 33.08 -20.92 54.00 4824.000 43.95 -30.05 74.00 7236.000 50.77	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  4824.000 33.08 -20.92 54.00 30.98 4824.000 43.95 -30.05 74.00 41.85 7236.000 50.77 42.70	Freq Level Limit Line Level Factor  MHz dBuV/m dB dBuV/m dBuV dB/m  4824.000 33.08 -20.92 54.00 30.98 31.15 4824.000 43.95 -30.05 74.00 41.85 31.15 7236.000 50.77 42.70 35.91	Freq         Level         Limit         Line         Level         Factor         Loss           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m         dB           4824.000         33.08 -20.92         54.00         30.98         31.15         6.11           4824.000         43.95 -30.05         74.00         41.85         31.15         6.11           7236.000         50.77         42.70         35.91         7.57	Freq         Level         Limit         Line         Level         Factor         Loss Factor           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m         dB         dB           4824.000         33.08 -20.92         54.00         30.98         31.15         6.11         35.16           4824.000         43.95 -30.05         74.00         41.85         31.15         6.11         35.16           7236.000         50.77         42.70         35.91         7.57         35.41

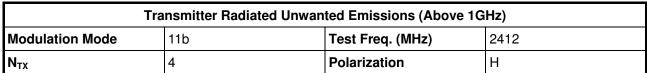
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted 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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (119.74 dBuV/m).
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

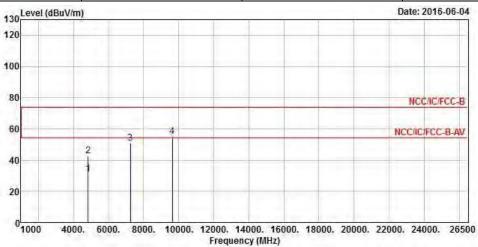
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			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Leve1	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4824.000	31.38	-22.62	54.00	29.28	31.15	6.11	35.16	Average
2	4824.000	42.78	-31.22	74.00	40.68	31.15	6.11	35.16	Peak
3	7236.000	50.85			42.78	35.91	7.57	35.41	Peak
4	9648.000	55.13			43.59	38.69	8.80	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (119.74dBuV/m).

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

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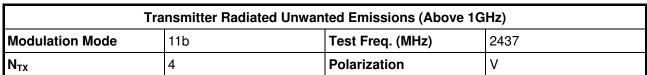
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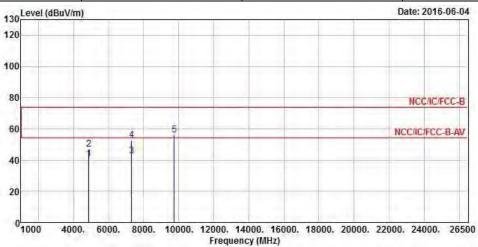
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	Freq	Level	Over Limit	12000	10-44	Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	40.95	-13.05	54.00	38.76	31.22	6.13	35.16	Average
2	4874.000	47.09	-26.91	74.00	44.90	31.22	6.13	35.16	Peak
3	7311.000	42.62	-11.38	54.00	34.33	36.11	7.60	35.42	Average
4	7311.000	52.54	-21.46	74.00	44.25	36.11	7.60	35.42	Peak
5	9748.000	55.97			44.28	38.75	8.89	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (120.92 dBuV/m).

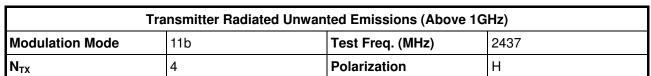
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

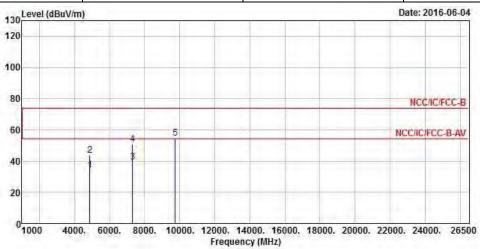
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	Freq	Level	Over Limit	44000	Vibra and A	Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	33.87	-20.13	54.00	31.68	31.22	6.13	35.16	Average
2	4874.000	43.66	-30.34	74.00	41.47	31.22	6.13	35.16	Peak
3	7311.000	39.15	-14.85	54.00	30.86	36.11	7.60	35.42	Average
4	7311.000	50.80	-23.20	74.00	42.51	36.11	7.60	35.42	Peak
5	9748.000	54.75			43.06	38.75	8.89	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (120.92 dBuV/m).

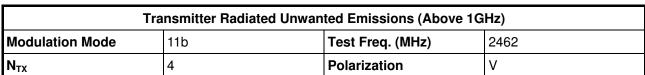
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

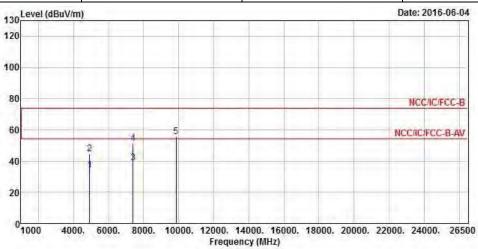
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	Freq	Level	Over Limit		No.	Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	34.17	-19.83	54.00	31.86	31.29	6.17	35.15	Average
2	4924.000	44.46	-29.54	74.00	42.15	31.29	6.17	35.15	Peak
3	7386.000	38.77	-15.23	54.00	30.48	36.11	7.60	35.42	Average
4	7386.000	51.26	-22.74	74.00	42.97	36.11	7.60	35.42	Peak
5	9848.000	55.83			43.95	38.81	9.03	35.96	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (119.80 dBuV/m).

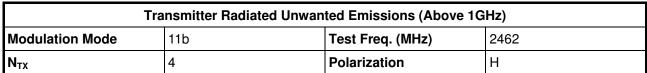
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

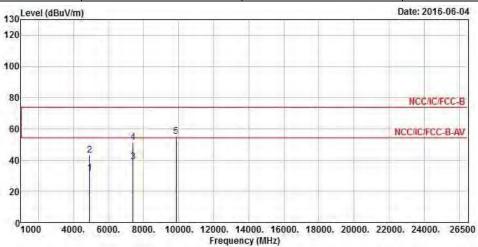
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	Freq	Level	Over Limit	1990,00	William Alba	Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	31.61	-22.39	54.00	29.30	31.29	6.17	35.15	Average
2	4924.000	43.07	-30.93	74.00	40.76	31.29	6.17	35.15	Peak
3	7386.000	38.79	-15.21	54.00	30.29	36.30	7.63	35.43	Average
4	7386.000	51.33	-22.67	74.00	42.83	36.30	7.63	35.43	Peak
5	9848.000	55.36			43.48	38.81	9.03	35.96	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (119.80dBuV/m).

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

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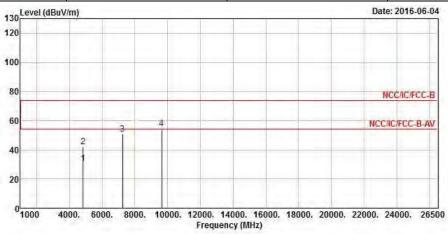
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Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode 11g Test Freq. (MHz) 2412								
N <sub>TX</sub>	4	Polarization	V					



			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	4824.000	30.77	-23.23	54.00	28.67	31.15	6.11	35.16	Average
2	4824.000	42.36	-31.64	74.00	40.26	31.15	6.11	35.16	Peak
3	7236.000	50.79	-23.21	74.00	42.72	35.91	7.57	35.41	Peak
4	9648.000	54.90			43.36	38.69	8.80	35.95	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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (120.39dBuV/m).
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

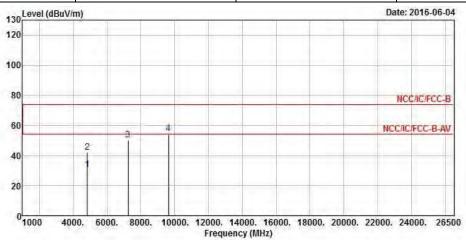
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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	11g	Test Freq. (MHz)	2412						
$N_{TX}$	4	Polarization	Н						



	Freq	Level		Limit Line	100-100	Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	— dB	-
1	4824.000	30.47	-23.53	54.00	28.37	31.15	6.11	35.16	Average
2	4824.000	42.19	-31.81	74.00	40.09	31.15	6.11	35.16	Peak
3	7236.000	50.36	-23.64	74.00	42.29	35.91	7.57	35.41	Peak
4	9648.000	54.69			43.15	38.69	8.80	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (120.39 dBuV/m).

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

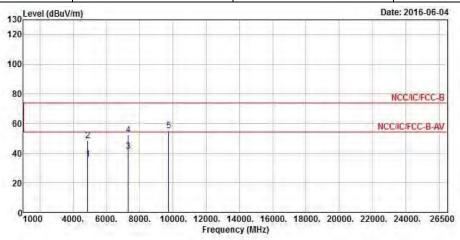
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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)								
Modulation Mode	11g	Test Freq. (MHz)	2437						
$N_{TX}$	4	Polarization	V						



	Freq	Leve1	Over Limit	44.00		Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	35.88	-18.12	54.00	33.69	31.22	6.13	35.16	Average
2	4874.000	48.42	-25.58	74.00	46.23	31.22	6.13	35.16	Peak
3	7311.000	41.37	-12.63	54.00	33.08	36.11	7.60	35.42	Average
4	7311.000	52.13	-21.87	74.00	43.84	36.11	7.60	35.42	Peak
5	9748.000	54.98			43.29	38.75	8.89	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (121.08 dBuV/m).

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

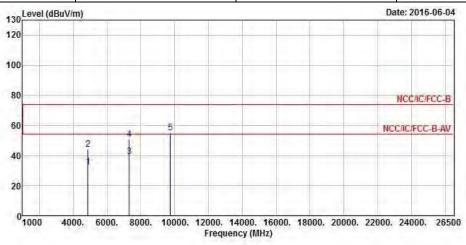
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Transmitter Radiated Unwanted Emissions (Above 1GHz)					
Modulation Mode	11g	Test Freq. (MHz)	2437		
N <sub>TX</sub>	4	Polarization	Н		



			Limit	Read	ReadAntenna		Preamp	
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
4874.000	32.46	-21.54	54.00	30.27	31.22	6.13	35.16	Average
4874.000	44.09	-29.91	74.00	41.90	31.22	6.13	35.16	Peak
7311.000	39.57	-14.43	54.00	31.28	36.11	7.60	35.42	Average
7311.000	50.70	-23.30	74.00	42.41	36.11	7.60	35.42	Peak
9748.000	55.10			43.41	38.75	8.89	35.95	Peak
	MHz 4874.000 4874.000 7311.000 7311.000	MHz dBuV/m 4874.000 32.46 4874.000 44.09 7311.000 39.57 7311.000 50.70	Freq Level Limit  MHz dBuV/m dB  4874.000 32.46 -21.54 4874.000 44.09 -29.91 7311.000 39.57 -14.43 7311.000 50.70 -23.30	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  4874.000 32.46 -21.54 54.00 4874.000 44.09 -29.91 74.00 7311.000 39.57 -14.43 54.00 7311.000 50.70 -23.30 74.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  4874.000 32.46 -21.54 54.00 30.27 4874.000 44.09 -29.91 74.00 41.90 7311.000 39.57 -14.43 54.00 31.28 7311.000 50.70 -23.30 74.00 42.41	Freq Level Limit Line Level Factor  MHz dBuV/m dB dBuV/m dBuV dB/m  4874.000 32.46 -21.54 54.00 30.27 31.22 4874.000 44.09 -29.91 74.00 41.90 31.22 7311.000 39.57 -14.43 54.00 31.28 36.11 7311.000 50.70 -23.30 74.00 42.41 36.11	Freq Level Limit Line Level Factor Loss    MHz dBuV/m	Freq Level Limit Line Level Factor Loss Factor  MHz dBuV/m dB dBuV/m dBuV dB/m dB dB  4874.000 32.46 -21.54 54.00 30.27 31.22 6.13 35.16 4874.000 44.09 -29.91 74.00 41.90 31.22 6.13 35.16 7311.000 39.57 -14.43 54.00 31.28 36.11 7.60 35.42 7311.000 50.70 -23.30 74.00 42.41 36.11 7.60 35.42

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (121.08 dBuV/m).

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

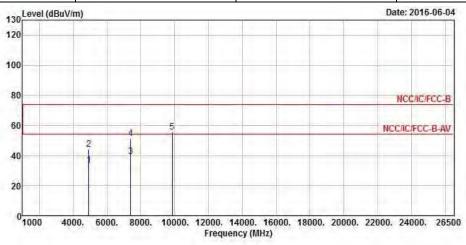
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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)					
Modulation Mode	11g	Test Freq. (MHz)	2462			
N <sub>TX</sub>	4	Polarization	V			



				Limit Re	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	4924.000	33.47	-20.53	54.00	31.16	31.29	6.17	35.15	Average
2	4924.000	44.17	-29.83	74.00	41.86	31.29	6.17	35.15	Peak
3	7386.000	39.52	-14.48	54.00	31.02	36.30	7.63	35.43	Average
4	7386.000	51.17	-22.83	74.00	42.67	36.30	7.63	35.43	Peak
5	9848.000	55.59			43.71	38.81	9.03	35.96	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (120.40 dBuV/m).

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

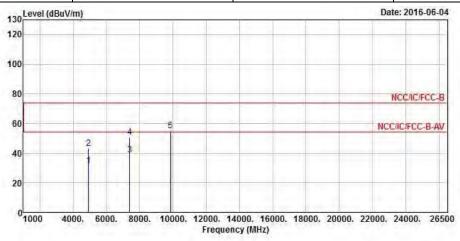
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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)					
Modulation Mode	11g	Test Freq. (MHz)	2462			
N <sub>TX</sub>	4	Polarization	Н			



	Freq	Leve1	Over Limit	Calabora D		Antenna Factor			
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	=
1	4924.000	31.56	-22.44	54.00	29.25	31.29	6.17	35.15	Average
2	4924.000	43.01	-30.99	74.00	40.70	31.29	6.17	35.15	Peak
3	7386.000	38.95	-15.05	54.00	30.45	36.30	7.63	35.43	Average
4	7386.000	50.76	-23.24	74.00	42.26	36.30	7.63	35.43	Peak
5	9848.000	55.13			43.25	38.81	9.03	35.96	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (120.40 dBuV/m).

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

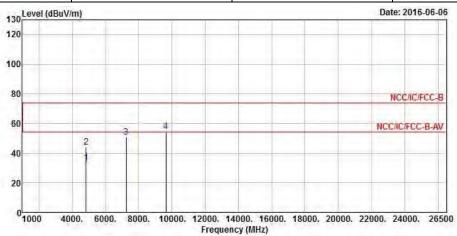
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Transmitter Radiated Unwanted Emissions (Above 1GHz)					
Modulation Mode	HT20	Test Freq. (MHz)	2412		
$N_{TX}$	4	Polarization	V		



			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	4824.000	33.38	-20.62	54.00	31.28	31.15	6.11	35.16	Average
2	4824.000	44.29	-29.71	74.00	42.19	31.15	6.11	35.16	Peak
3	7236.000	50.74			42.67	35.91	7.57	35.41	Peak
4	9648.000	54.90			43.36	38.69	8.80	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (118.34 dBuV/m).

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

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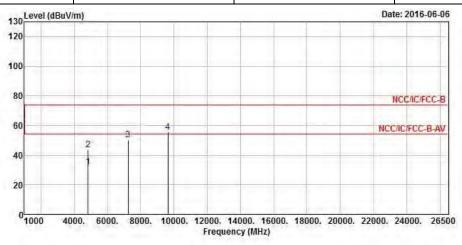
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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)					
Modulation Mode	HT20	Test Freq. (MHz)	2412			
N <sub>TX</sub>	4	Polarization	Н			



			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Leve1	Limit	Line	Level	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4824.000	32.36	-21.64	54.00	30.26	31.15	6.11	35.16	Average
2	4824.000	43.85	-30.15	74.00	41.75	31.15	6.11	35.16	Peak
3	7236.000	50.23			42.16	35.91	7.57	35.41	Peak
4	9648.000	55.59			44.05	38.69	8.80	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (118.34 dBuV/m).

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

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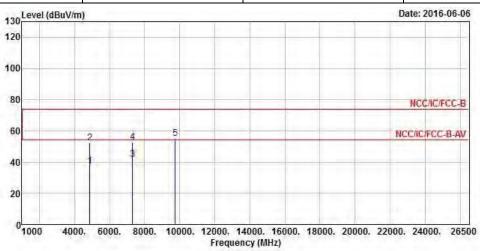
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Tra	Transmitter Radiated Unwanted Emissions (Above 1GHz)					
Modulation Mode	HT20	Test Freq. (MHz)	2437			
$N_{TX}$	4	Polarization	V			



	Freq	Level	Over Limit	19300	10-25	Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	4874.000	37.32	-16.68	54.00	35.13	31.22	6.13	35.16	Average
2	4874.000	52.36	-21.64	74.00	50.17	31.22	6.13	35.16	Peak
3	7311.000	41.55	-12.45	54.00	33.26	36.11	7.60	35.42	Average
4	7311.000	52.87	-21.13	74.00	44.58	36.11	7.60	35.42	Peak
5	9748.000	55.36			43.67	38.75	8.89	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (120.68 dBuV/m).

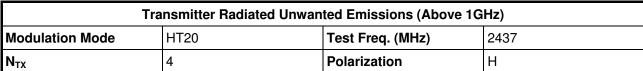
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

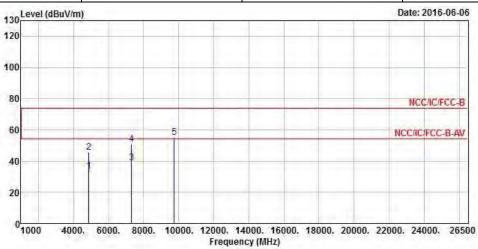
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Freq	Level	77.74	12000	10-25	An a section			Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
4874.000	33.54	-20.46	54.00	31.35	31.22	6.13	35.16	Average
4874.000	45.39	-28.61	74.00	43.20	31.22	6.13	35.16	Peak
7311.000	39.04	-14.96	54.00	30.75	36.11	7.60	35.42	Average
7311.000	51.04	-22.96	74.00	42.75	36.11	7.60	35.42	Peak
9748.000	55.02			43.33	38.75	8.89	35.95	Peak
	MHz 4874.000 4874.000 7311.000 7311.000	MHz dBuV/m 4874.000 33.54 4874.000 45.39 7311.000 39.04 7311.000 51.04	Freq Level Limit  MHz dBuV/m dB  4874.000 33.54 -20.46 4874.000 45.39 -28.61 7311.000 39.04 -14.96 7311.000 51.04 -22.96	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  4874.000 33.54 -20.46 54.00 4874.000 45.39 -28.61 74.00 7311.000 39.04 -14.96 54.00 7311.000 51.04 -22.96 74.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  4874.000 33.54 -20.46 54.00 31.35 4874.000 45.39 -28.61 74.00 43.20 7311.000 39.04 -14.96 54.00 30.75 7311.000 51.04 -22.96 74.00 42.75	Freq Level Limit Line Level Factor  MHz dBuV/m dB dBuV/m dBuV dB/m  4874.000 33.54 -20.46 54.00 31.35 31.22 4874.000 45.39 -28.61 74.00 43.20 31.22 7311.000 39.04 -14.96 54.00 30.75 36.11 7311.000 51.04 -22.96 74.00 42.75 36.11	Freq         Level         Limit         Line         Level         Factor         Loss           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m         dB           4874.000         33.54 -20.46         54.00         31.35         31.22         6.13           4874.000         45.39 -28.61         74.00         43.20         31.22         6.13           7311.000         39.04 -14.96         54.00         30.75         36.11         7.60           7311.000         51.04 -22.96         74.00         42.75         36.11         7.60	Freq         Level         Limit         Line         Level         Factor         Loss Factor           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m         dB         dB           4874.000         33.54 -20.46         54.00         31.35         31.22         6.13         35.16           4874.000         45.39 -28.61         74.00         43.20         31.22         6.13         35.16           7311.000         39.04 -14.96         54.00         30.75         36.11         7.60         35.42           7311.000         51.04 -22.96         74.00         42.75         36.11         7.60         35.42

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (120.68 dBuV/m).

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

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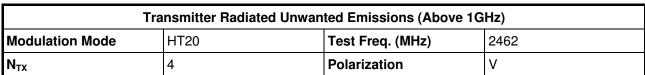
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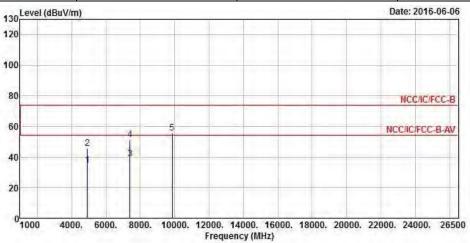
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			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Leve1	evel Limit	Line	Leve1	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4924.000	34.33	-19.67	54.00	32.02	31.29	6.17	35.15	Average
2	4924.000	45.60	-28.40	74.00	43.29	31.29	6.17	35.15	Peak
3	7386.000	38.95	-15.05	54.00	30.45	36.30	7.63	35.43	Average
4	7386.000	51.17	-22.83	74.00	42.67	36.30	7.63	35.43	Peak
5	9848.000	55.73			43.85	38.81	9.03	35.96	Peak

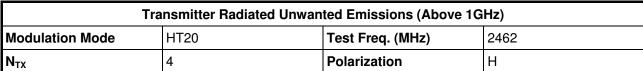
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted 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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (118.38 dBuV/m).
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

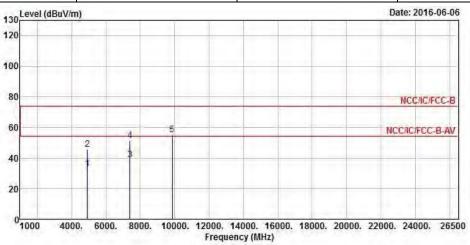
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		Over	Limit	Read	Antenna	Cable	Preamp	
Freq	Level	Limit	Line	Level	Factor	Loss	Factor	Remark
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
4924.000	33.23	-20.77	54.00	30.92	31.29	6.17	35.15	Average
4924.000	45.71	-28.29	74.00	43.40	31.29	6.17	35.15	Peak
7386.000	38.91	-15.09	54.00	30.41	36.30	7.63	35.43	Average
7386.000	51.21	-22.79	74.00	42.71	36.30	7.63	35.43	Peak
9848.000	55.14	181-06-30-4		43.26	38.81	9.03	35.96	Peak
	MHz 4924.000 4924.000 7386.000 7386.000	MHz dBuV/m 4924.000 33.23 4924.000 45.71 7386.000 38.91 7386.000 51.21	Freq Level Limit  MHz dBuV/m dB  4924.000 33.23 -20.77 4924.000 45.71 -28.29 7386.000 38.91 -15.09 7386.000 51.21 -22.79	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  4924.000 33.23 -20.77 54.00 4924.000 45.71 -28.29 74.00 7386.000 38.91 -15.09 54.00 7386.000 51.21 -22.79 74.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  4924.000 33.23 -20.77 54.00 30.92 4924.000 45.71 -28.29 74.00 43.40 7386.000 38.91 -15.09 54.00 30.41 7386.000 51.21 -22.79 74.00 42.71	Freq Level Limit Line Level Factor  MHz dBuV/m dB dBuV/m dBuV dB/m  4924.000 33.23 -20.77 54.00 30.92 31.29 4924.000 45.71 -28.29 74.00 43.40 31.29 7386.000 38.91 -15.09 54.00 30.41 36.30 7386.000 51.21 -22.79 74.00 42.71 36.30	Freq Level Limit Line Level Factor Loss           MHz         dBuV/m         dB dBuV/m         dBuV dB/m         dB           4924.000         33.23         -20.77         54.00         30.92         31.29         6.17           4924.000         45.71         -28.29         74.00         43.40         31.29         6.17           7386.000         38.91         -15.09         54.00         30.41         36.30         7.63           7386.000         51.21         -22.79         74.00         42.71         36.30         7.63	Freq Level Limit         Line         Level         Factor         Loss         Factor           MHz         dBuV/m         dB         dBuV/m         dBuV         dB/m         dB/m         dB         dB           4924.000         33.23         -20.77         54.00         30.92         31.29         6.17         35.15           4924.000         45.71         -28.29         74.00         43.40         31.29         6.17         35.15           7386.000         38.91         -15.09         54.00         30.41         36.30         7.63         35.43           7386.000         51.21         -22.79         74.00         42.71         36.30         7.63         35.43

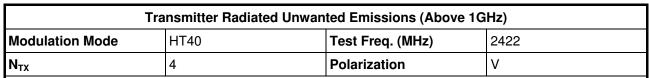
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted 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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (118.38 dBuV/m).
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

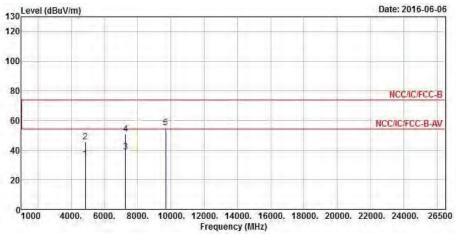
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	Freq	Freq	Level	Over Limit	-	1000000	Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB		
1	4844.000	34.12	-19.88	54.00	31.97	31.18	6.13	35.16	Average	
2	4844.000	45.41	-28.59	74.00	43.26	31.18	6.13	35.16	Peak	
3	7266.000	38.85	-15.15	54.00	30.69	35.99	7.59	35.42	Average	
4	7266.000	51.01	-22.99	74.00	42.85	35.99	7.59	35.42	Peak	
5	9688.000	55.39			43.79	38.71	8.84	35.95	Peak	

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (113.86dBuV/m).

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

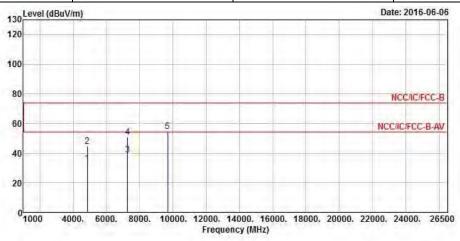
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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT40	Test Freq. (MHz)	2422						
N <sub>TX</sub>	Polarization	Н							



	Freq	Level	Over Limit	44.00		Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4844.000	32.86	-21.14	54.00	30.71	31.18	6.13	35.16	Average
2	4844.000	44.71	-29.29	74.00	42.56	31.18	6.13	35.16	Peak
3	7266.000	38.72	-15.28	54.00	30.56	35.99	7.59	35.42	Average
4	7266.000	50.74	-23.26	74.00	42.58	35.99	7.59	35.42	Peak
5	9688.000	54.81			43.21	38.71	8.84	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (113.86 dBuV/m).

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

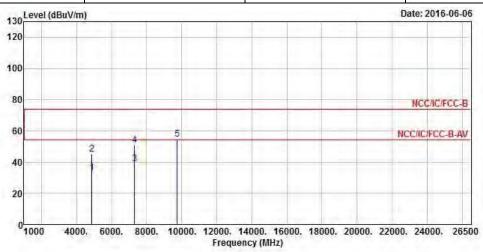
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Transmitter Radiated Unwanted Emissions (Above 1GHz)									
Modulation Mode	HT40	Test Freq. (MHz)	2437						
N <sub>TX</sub>	4	Polarization	V						



Freq	Level	20.75		No	And the mean transfer			
MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
4874.000	33.07	-20.93	54.00	30.88	31.22	6.13	35.16	Average
4874.000	44.87	-29.13	74.00	42.68	31.22	6.13	35.16	Peak
7311.000	39.08	-14.92	54.00	30.79	36.11	7.60	35.42	Average
7311.000	50.92	-23.08	74.00	42.63	36.11	7.60	35.42	Peak
9748.000	54.65			42.96	38.75	8.89	35.95	Peak
	MHz 4874.000 4874.000 7311.000 7311.000	MHz dBuV/m 4874.000 33.07 4874.000 44.87 7311.000 39.08 7311.000 50.92	Freq Level Limit  MHz dBuV/m dB  4874.000 33.07 -20.93 4874.000 44.87 -29.13 7311.000 39.08 -14.92 7311.000 50.92 -23.08	Freq Level Limit Line  MHz dBuV/m dB dBuV/m  4874.000 33.07 -20.93 54.00 4874.000 44.87 -29.13 74.00 7311.000 39.08 -14.92 54.00 7311.000 50.92 -23.08 74.00	Freq Level Limit Line Level  MHz dBuV/m dB dBuV/m dBuV  4874.000 33.07 -20.93 54.00 30.88 4874.000 44.87 -29.13 74.00 42.68 7311.000 39.08 -14.92 54.00 30.79 7311.000 50.92 -23.08 74.00 42.63	Freq         Level         Limit         Line         Level         Factor           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m           4874.000         33.07 -20.93         54.00         30.88         31.22           4874.000         44.87 -29.13         74.00         42.68         31.22           7311.000         39.08 -14.92         54.00         30.79         36.11           7311.000         50.92 -23.08         74.00         42.63         36.11	Freq         Level         Limit         Line         Level         Factor         Loss           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m         dB           4874.000         33.07 -20.93         54.00         30.88         31.22         6.13           4874.000         44.87 -29.13         74.00         42.68         31.22         6.13           7311.000         39.08 -14.92         54.00         30.79         36.11         7.60           7311.000         50.92 -23.08         74.00         42.63         36.11         7.60	Freq         Level         Limit         Line         Level         Factor         Loss Factor           MHz         dBuV/m         dB dBuV/m         dBuV         dB/m         dB dB           4874.000         33.07 -20.93         54.00         30.88         31.22         6.13         35.16           4874.000         44.87 -29.13         74.00         42.68         31.22         6.13         35.16           7311.000         39.08 -14.92         54.00         30.79         36.11         7.60         35.42           7311.000         50.92 -23.08         74.00         42.63         36.11         7.60         35.42

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (118.05dBuV/m).

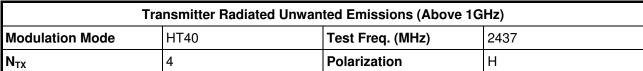
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

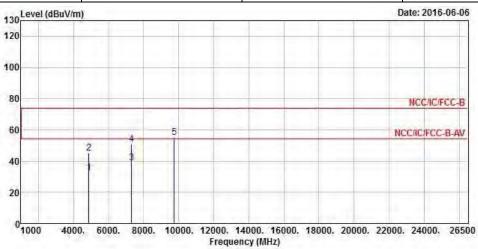
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	Freq	Level	Over Limit	120,20	Non-with.	Antenna Factor		Preamp Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4874.000	32.79	-21.21	54.00	30.60	31.22	6.13	35.16	Average
2	4874.000	44.90	-29.10	74.00	42.71	31.22	6.13	35.16	Peak
3	7311.000	38.89	-15.11	54.00	30.60	36.11	7.60	35.42	Average
4	7311.000	51.09	-22.91	74.00	42.80	36.11	7.60	35.42	Peak
5	9748.000	55.00			43.31	38.75	8.89	35.95	Peak

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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (118.05 dBuV/m).

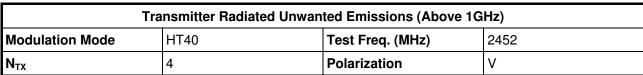
Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

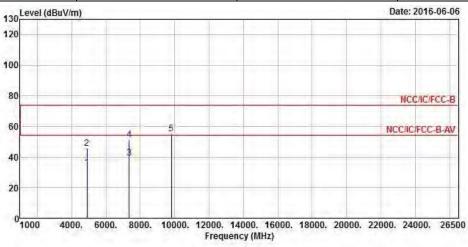
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	Freq	Leve1	Over Limit	100000		Antenna Factor			Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	-
1	4904.000	33.23	-20.77	54.00	30.96	31.27	6.15	35.15	Average
2	4904.000	45.54	-28.46	74.00	43.27	31.27	6.15	35.15	Peak
3	7356.000	39.44	-14.56	54.00	31.03	36.23	7.61	35.43	Average
4	7356.000	51.09	-22.91	74.00	42.68	36.23	7.61	35.43	Peak
5	9808.000	55.18			43.37	38.78	8.99	35.96	Peak

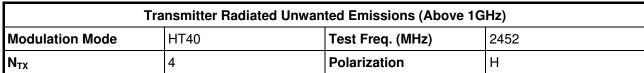
- Note 1: ">20dB" means spurious emission levels that exceed the level of 20 dB below the applicable limit.
- Note 2: "N/F" means Nothing Found spurious emissions (No spurious emissions were detected.)
- Note 3: Measurement receive antenna polarization: H (Horizontal), V (Vertical)
- Note 4: For restricted 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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (114.90 dBuV/m).
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

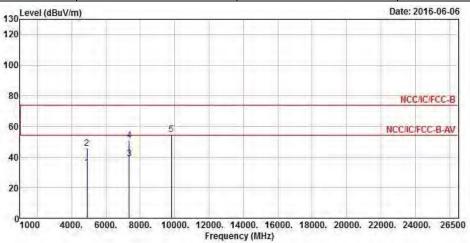
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			Over	Limit	Read	Antenna	Cable	Preamp	
	Freq	Level	Limit	Line	Leve1	Factor	Loss	Factor	Remark
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	
1	4904.000	32.95	-21.05	54.00	30.68	31.27	6.15	35.15	Average
2	4904.000	45.76	-28.24	74.00	43.49	31.27	6.15	35.15	Peak
3	7356.000	38.91	-15.09	54.00	30.50	36.23	7.61	35.43	Average
4	7356.000	51.02	-22.98	74.00	42.61	36.23	7.61	35.43	Peak
5	9808.000	54.91			43.10	38.78	8.99	35.96	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, unwanted emissions shall be attenuated by at least 30 dB relative to the maximum measured in-band level (114.90 dBuV/m).
- Note 6: No level of unwanted emissions exceeds the level of the fundamental emission.

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