

### CFR 47 FCC PART 15 SUBPART C ISED RSS-247 Issue 2

### **CERTIFICATION TEST REPORT**

For

### **Smart Cordless Vacuum & Washer**

### MODEL NUMBER: FW103000US

### ADDITIONAL MODEL NUMBER: FW103700US

### PROJECT NUMBER: 4790554902

### **REPORT NUMBER: 4790554902-1**

FCC ID: 2AV7A-FS11

IC: 26039- FS11

ISSUE DATE: Nov. 10, 2022

Prepared for

Tineco Intelligent Technology Co., Ltd.

Prepared by

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### **Revision History**

Rev.	Issue Date	Revisions	Revised By
V0	11/10/2022	Initial Issue	



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# 1. ATTESTATION OF TEST RESULTS

Company Name: Address:	Tineco Intelligent Technology Co., Ltd. NO 108 SHI HU RD (W) WU ZHONG ZONE SUZHOU JIANGSU 215128, CHINA.
Factory Information	
Company Name:	Tineco Intelligent Technology Co., Ltd.
Address:	NO 108 SHI HU RD (W) WU ZHONG ZONE SUZHOU JIANGSU 215128, CHINA.
EUT Description	
Product Name:	Smart Cordless Vacuum & Washer
Model Number:	FW103000US
Additional Model Number:	FW103700US
Model Difference	Only the main model FW103000US was tested and only the data of this model is shown in this test report. Since Their material, types of encloser, antenna location, electrical circuit design, layout, components used and internal wiring are identical, only the model number is different.
Sample Number:	5487085
Data of Receipt Sample:	Nov.01, 2022
Date Tested:	Nov.01, 2022 – Nov.10, 2022
	i
	APPLICABLE STANDARDS

APPLICABLE STANDARDS						
STANDARD	TEST RESULTS					
CFR 47 Part 15 Subpart C	PASS					
ISED RSS-247 Issue 2	PASS					
ISED RSS-GEN Issue 5	PASS					



Summary of Test Results					
Clause	Test Items	FCC Rules	Test Results		
1	6db DTS Bandwidth and 99% Bandwidth	FCC 15.247 (a) (2) RSS-247 Clause 5.2 (a) RSS-Gen Clause 6.7	Complied		
2	Conducted (average)Output Power	FCC 15.247 (b) (3) RSS-247 Clause 5.4 (d) RSS-Gen Clause 6.12	Complied		
3	Power Spectral Density	FCC 15.247 (e) RSS-247 Clause 5.2 (b)	Complied		
4	Conducted Band edge And Spurious emission	FCC 15.247 (d) RSS-247 Clause 5.5 RSS-GEN Clause 6.13	Complied		
5	Radiated Band edges and Spurious emission	FCC 15.247 (d) FCC 15.209 FCC 15.205 RSS-247 Clause 5.5 RSS-GEN Clause 8.9 RSS-GEN Clause 6.13	Complied		
6	Conducted Emission Test For AC Power Port	FCC 15.207 RSS-GEN Clause 8.8	Complied		
7	Antenna Requirement	FCC 15.203 RSS-GEN Clause 6.8	Complied		
Remark:					

Remark:

1) The measurement result for the sample received is <Pass> according to < ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15C, ISED RSS-GEN, ISED RSS-247> when <Accuracy Method> decision rule is applied.

Prepared By:

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Chris Zhong.

Chris Zhong EMC&RF Lab Operations Manager



# 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with FCC KDB 558074 D01 15.247 Meas Guidance v05r02, KDB 414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15, ISED RSS-GEN ISSUE 5, ISED RSS-247 ISSUE 2.

# 3. FACILITIES AND ACCREDITATION

Test Location	UL-CCIC Company Limited, EMC&RF Lab
Address	No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122 ,China
Accreditation Certificate	A2LA (Certificate No.: 4829.01) UL-CCIC COMPANY LIMITED has been assessed and proved to be in compliance with A2LA. FCC (FCC Designation No.: CN1247) UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules. IC (IC Designation No.: 25056; CAB No.:CN0073) UL-CCIC COMPANY LIMITED has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules.

Note 1: All tests measurement facilities use to collect the measurement data are located at No. 2, Chengwan Road, Suzhou Industrial Park, Suzhou 215122, People's Republic of China

Note 2: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. These measurements below 30MHz had been correlated to measurements performed on an OFS.

Note 3: The test anechoic chamber in UL-CCIC COMPANY LIMITED had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.



# 4. CALIBRATION AND UNCERTAINTY

### 4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

## 4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test Item	Uncertainty		
Conduction emission	3.1dB		
Radiation Emission test(include Fundamental emission) (9KHz-30MHz)	3.4dB		
Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	3.4dB		
Radiation Emission test (1GHz to 26GHz)( include Fundamental emission)	3.7dB (1GHz-18Gz)		
	4.0dB (18GHz-26.5Gz)		
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.			



# 5. EQUIPMENT UNDER TEST

# 5.1. DESCRIPTION OF EUT

Product Name:	Smart Cordless Vacuum & Washer
Model No.:	FW103000US
Operating Frequency:	IEEE 802.11b/g/n(HT20): 2412MHz to 2462MHz
Type of Modulation:	IEEE for 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE for 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK)
Channels Step:	Channels with 5MHz step
Test software of EUT:	EspRFtestTool_2.0 (manufacturer declare)
Antenna Type:	PCB antenna
Antenna Gain:	2dBi
	Remark: This data is provided by customer and our lab isn't responsible for this data
Test Voltage	AC120V



# 5.2. MAXIMUM OUTPUT POWER

Number of Transmit Chains (NTX)	IEE Std. 802.11	Channel Number	Max AV Conducted Power (dBm)
1	IEEE 802.11B SISO	1-11[11]	13.61
1	IEEE 802.11G SISO	1-11[11]	13.39
1	IEEE 802.11nHT20	1-11[11]	13.21

## 5.3. CHANNEL LIST

	Channel List for 802.11b/g/n (20 MHz)								
<u>Channel</u>	ChannelFrequency (MHz)Frequency (MHz)Frequency (MHz)Frequency (MHz)Frequency (MHz)Frequency (MHz)Frequency (MHz)								
<u>1</u>	<u>2412</u>	4	<u>2427</u>	<u>7</u>	<u>2442</u>	<u>10</u>	<u>2457</u>		
2	<u>2417</u>	<u>5</u>	<u>2432</u>	<u>8</u>	<u>2447</u>	<u>11</u>	<u>2462</u>		
<u>3</u>	2422	<u>6</u>	<u>2437</u>	9	<u>2452</u>				

## 5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel	Frequency
WiFi TX(802.11b)	CH 1, CH 6, CH 11	2412MHz, 2437MHz, 2462MHz
WiFi TX(802.11g)	CH 1, CH 6, CH 11	2412MHz, 2437MHz, 2462MHz
WiFi TX(802.11n HT20)	CH 1, CH 6, CH 11	2412MHz, 2437MHz, 2462MHz

# 5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band								
Test Softw	vare		EspRFtestTool					
	Transmit			Test C	Channel			
Modulation Mode	Antenna Number	1	NCB: 20MH	lz	NCB: 40MHz		1	
Mode		CH 1	CH 6	CH 11	CH 3	CH 6	CH 9	
802.11b	1	Default	Default	Default				
802.11g	1	Default	Default	Default	/			
802.11n HT20	1	Default	Default	Default				

Remark: The value list above is the setting of att in the software.



## 5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2400-2483.5	PCB antenna	2

Test Mode	Transmit and Receive Mode	Description				
IEEE 802.11b	⊠1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.				
IEEE 802.11g	⊠1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.				
IEEE 802.11N (HT20)	⊠1TX, 1RX	Antenna1 can be used as transmitting/receiving antenna independently.				

# 5.7. THE WORSE CASE CONFIGURATIONS

For the product, there two transmission antennas, and pre-testing both of them, only the worse data for the antenna is recorded in the report.

Worst-case data rates as provided by the client were:

802.11b mode: 1 Mbps 802.11b mode: 6 Mbps 802.11n HT20 mode: MCS0



## 5.8. DESCRIPTION OF TEST SETUP

#### SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Description
1	Laptop	ThinkPad	E590	N/A
2	Fixed Frequency Board N/A		N/A	Supply by Customer
3	USB Cable	N/A	N/A	Supply by UL Lab(100cm length)

#### I/O PORT

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	N/A	N/A	N/A	N/A	N/A

#### ACCESSORY

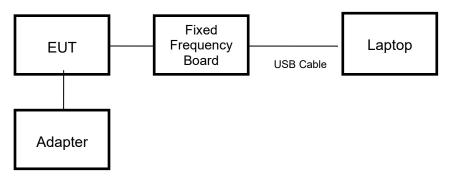
Item	Accessory	Brand Name	Model Name	Description
1	AC/DC	Class 2 Power	KL-WA260100-	INPUT:100-240V~, 50/60Hz, 1.2A
	ADAPTOR	Supply	A3	OUTPUT:26.0V=1.0A
2	AC/DC	Class 2 Power	S030-	INPUT:100-240V~, 50/60Hz, 0.8A
	ADAPTOR	Supply	1B260100HU	OUTPUT:26.0V=1.0A

Remark: Pre-testing both models of the adapters and find the model: S030-1B260100HU which is worse, so only the data of worse model: S030-1B260100HU is included in this report.

#### TEST SETUP

The EUT can work in an engineer mode with a software through a table PC.

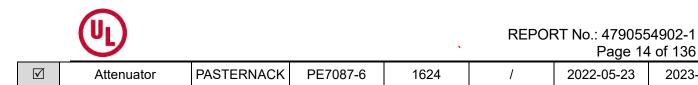
#### **SETUP DIAGRAM FOR TESTS**





### 5.9. MEASURING INSTRUMENT AND SOFTWARE USED

			ducted			(Instru						
Used	Equipment	Manufacturer	Model	No.	Seria	al No.	Upper Last Cal.	Last Cal.	Next Cal.			
$\checkmark$	EMI Test Receiver	R&S	ESR3		126	6700	2020-12-05	2021-12-04	2022-12-03			
V	Two-Line V- Network	R&S	ENV2	216	126	6701	2020-12-05	2021-12-04	2022-12-03			
	Software											
Used	Des	cription		Ma	nufac	turer	Name	Version				
V	Test Software for C	Conducted distu	irbance		R&S		EMC32	Ver. 9.25				
		Ra	diated E	missi	ons (I	nstrun	nent)					
Used	Equipment	Manufacturer	Model	No.	Seria	al No.	Upper Last Cal.	Last Cal.	Next Cal.			
$\checkmark$	Spectrum Analyzer	Keysight	N901	0B	155	5727	2021-05-09	2022-04-09	2023-04-08			
$\checkmark$	EMI test receiver	R&S	ESF	R7	22	1694	/	2022-05-20	2023-05-19			
$\checkmark$	EMI test receiver	R&S	ESR	26	126	6703	2020-12-05	2021-12-04	2022-12-03			
V	Receiver Antenna (9kHz-30MHz)	Schwarzbeck	FMZB	1513	158	5456	2018-06-15	2021-06-03	2024-06-02			
	Receiver Antenna (30MHz-1GHz)	Schwarzbeck	VULB 9	9163	126	6704	2019-02-15	2022-01-18	2025-01-17			
V	Receiver Antenna (1GHz-18GHz)	R&S	HF9	07	126	6705	2018-01-29	2022-02-28	2025-02-27			
V	Receiver Antenna (18GHz-26.5GHz)	ETS	3160 <sup>.</sup>	-10	155	5565	2019-01-05	2021-07-15	2024-07-14			
V	Pre-amplification (To 18GHz)	R&S	SCU-	18D	134	1667	2021-12-04	2022-12-03	2023-12-02			
V	Pre-amplification (To 18GHz)	Tonsend	TAP010 0	)1805	224	1539	/	2022-10-20	2023-10-19			
V	Pre-amplification (To 26.5GHz)	R&S	SCU-2	26D	135	5391	2021-12-05	2022-12-04	2022-12-03			
V	Band Reject Filter	Wainwright	WRC 2350-2 2483 2533.5-	400- .5-		1	2021-05-09	2022-04-09	2023-04-08			
V	Highpass Filter	Wainwright	WHKX10- 2700-3000- 18000-40SS			2	2021-05-09	2022-04-09	2023-04-08			
$\checkmark$	Attenuator	Wainwright	BW-N1-W5+			3	2021-05-09	2022-05-08	2023-05-07			
				Soft	ware							
Used	Descr	ription	Ma	anufac	turer		Name	Version				
$\checkmark$	Test Software for R	adiated disturba	ance 7	Fonsce	end	JS	36-RSE	4.0.0.1				
			Oth	er Ins	trume	ents						
Used	Equipment	Manufacturer	Model	No.	Seria	al No.	Upper Last Cal.	Last Cal.	Next Cal.			
	Spectrum Analyzer	Keysight	N901	0B	158	5368	2021-05-09	2022-04-09	2023-04-08			



# 2023-05-22

# 6. MEASUREMENT METHODS

No.	Test Item	KDB Name	Section
1	6dB Bandwidth and 99% Bandwidth	KDB 558074 D01 15.247 Meas Guidance v05r02	8.2
2	Conducted (average)Output Power	KDB 558074 D01 15.247 Meas Guidance v05r02	8.3.2.2 (Method AVGSA-2)
3	Power Spectral Density	KDB 558074 D01 15.247 Meas Guidance v05r02	8.4 (Method PKPSD)
4	Out-of-band emissions in non- restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.5
5	Out-of-band emissions in restricted bands	KDB 558074 D01 15.247 Meas Guidance v05r02	8.6
6	Band-edge	KDB 558074 D01 15.247 Meas Guidance v05r02	8.7
7	Conducted Emission Test For AC Power Port	ANSI C63.10-2013	6.2



# 7. ANTENNA PORT TEST RESULTS

# 7.1. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests			
Relative Humidity	66.1%			
Atmospheric Pressure:	109kPa			
Temperature	23.4°C			
Test Voltage	AC120V			



## 7.2. ON TIME AND DUTY CYCLE

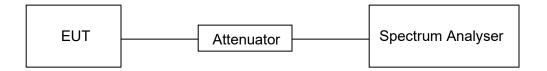
#### LIMITS

None; for reporting purposes only

#### PROCEDURE

FCC KDB 558074 Zero-Span Spectrum Analyzer Method

#### TEST SETUP



#### **RESULTS**

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (KHz)	Final Minimum VBW (KHz)
11B	4.19	4.71	0.89	89	0.51	0.239	1
11G	0.69	0.79	0.87	87	0.60	1.449	2
11N HT20	0.65	0.76	0.86	86	0.66	1.538	2

Note: 1) Duty Cycle Correction Factor= $10\log(1/x)$ .

2) Where: x is Duty Cycle(Linear)

3) Where: T is On Time (transmit duration)



pectrum Ana wept SA	lyzer 1	*	+								<b>O</b>	Frequency	
EYSIGH	<b>F</b> Input Coupli Align	ng: DC	Con	ut Z: 50 ( rections: q Ref: In	Off P	Atten: 30 dB reamp: Off	PNO Fast Gate Off IF Gain Low Sig Track Off	#Avg Type: Po Trig: Video Trig Delay: 20		S <mark>123456</mark> WWWWWW AAAAAA	2.4370	Frequency 000000 GHz	Settings
Spectrum cale/Div 10	dB	1				f LvI Offset 9.7 f Level 29.73 c		Δ	Mkr3	4.710 ms 1.88 dB	SV	00000 Hz. vept Span	
.og 19.7 9.73				Ŷ	1			<u></u> ∂2∆13	Δ1	TRIGLUE		ero Span Full Span	
10.3 20.3 30.3											Start F 2.4370	req 000000 GHz	
40.3 50.3				home				hann			Stop Fi 2.4370	req 000000 GHz	
60.3 Center 2.437 Res BW 8 MH		GHz			#\	ideo BW 8.0 M	//Hz*	Succe	10.00	Span 0 Hz ms (1001 pts)	Al CF Ste		
Marker Table		v Scale		X		Y	Function	Function Width		tion Value	8.0000	000 MHz uto	
1 Ν 2 Δ1 3 Δ1	1 1 1	t t	(Δ) (Δ)	4.19	10 ms 90 ms (Δ 10 ms (Δ						Freq O 0 Hz	ffset	
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pectrum Anal wept SA	yzer 1 💡	+					Frequency	•
KEYSIGHT	Input RF Coupling: DC Align: Auto	Input Z: 50 Ω Corrections: O Freq Ref: Int (\$		PNO Fast Gate Off IF Gain Low Sig Track Off	#Avg Type: Pov Trig: Vídeo Trig Delay: 200	wer (RMS <mark>123456</mark> .0 μs Α Α Α Α Α Α	2.437000000 GHz	ttings
Spectrum cale/Div 10 c	т		Ref Lvi Offset 9. Ref Level 29.73		Δ	Mkr3 790.0 µs -1.36 dB	Span 0.00000000 Hz Swept Span Zero Span	
19.7 9.73 9.27							Full Span	
10.3 20.3 30.3							Start Freq 2.437000000 GHz	
10.3 50.3					- Low	<b>1</b>	Stop Freq 2.437000000 GHz	
enter 2.4370 es BW 8 MH			#Video BW 8.0	MHz*	Sweep	Span 0 Hz 5.000 ms (1001 pts)	AUTO TUNE CF Step	
Marker Table Mode	Trace Scale	x	Ý	Function F	Function Width	Function Value	8.000000 MHz Auto Man	
1 N 2 Δ1 3 Δ1	1 t 1 t 1 t	3.770 (Δ) 690.0	ms 9.430 dBm μs (Δ) -44.29 dB μs (Δ) -1.361 dB				Freq Offset 0 Hz	
4 5 6							X Axis Scale Log Lin	

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## 7.3. 6 dB BANDWIDTH AND 99% BANDWIDTH

#### LIMITS

FCC Part15 (15.247) Subpart C, ISED RSS-247 Issue 2										
Section	Test Item	Limit	Frequency Range (MHz)							
FCC 15.247(a)(2)	6dB Bandwidth	>= 500KHz	2400-2483.5							
ISED RSS-Gen Clause 6.7	99% Occupied Bandwidth	For reporting purposes only.	2400-2483.5							

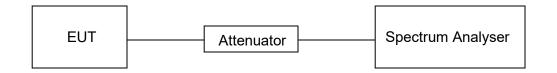
#### TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyzer and use the following settings:

Center Frequency	The centre frequency of the channel under test
Detector	Peak
	For 6dB Bandwidth :100K For 99% Occupied Bandwidth :1% to 5% of the occupied bandwidth
NBW	For 6dB Bandwidth : ≥3 × RBW For 99% Occupied Bandwidth : approximately 3×RBW
Trace	Max hold
Sweep	Auto couple

Allow the trace to stabilize and measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

#### TEST SETUP





### **RESULTS**

Test Mode	Test Channel	6dB bandwidth (MHz)	99% bandwidth (MHz)	Result
	LCH	8.544	10.603	Pass
11B	MCH	8.559	10.523	Pass
	НСН	9.040	10.548	Pass
	LCH	15.816	16.404	Pass
11G	MCH	15.681	16.392	Pass
	НСН	15.479	16.394	Pass
	LCH	16.523	17.363	Pass
11N HT20	MCH	15.675	17.304	Pass
	НСН	15.787	17.304	Pass



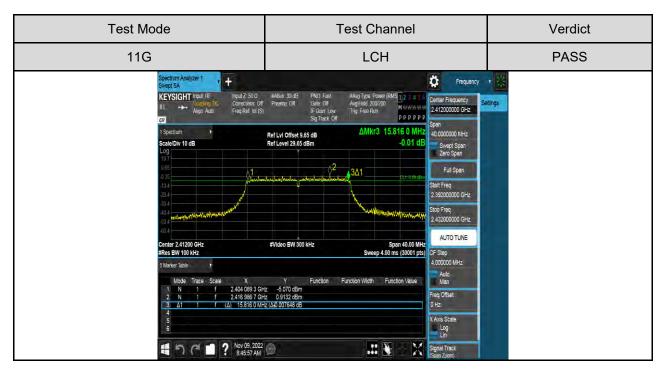
### <u>Test Graphs</u> For 6dB Bandwidth part:





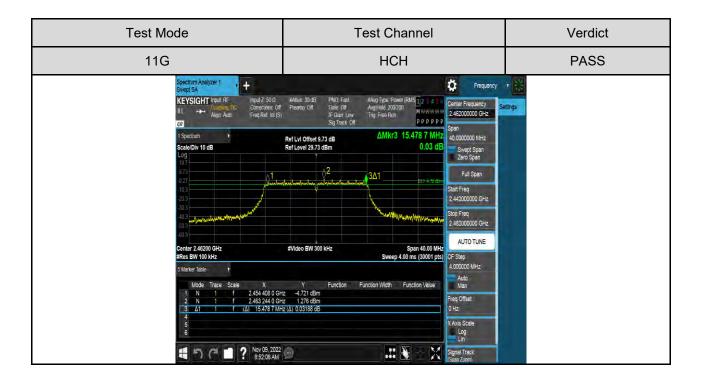




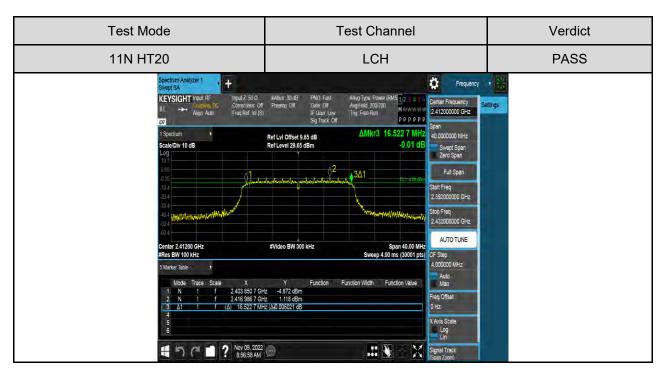




Test Mode	Test Channel	Verdict
11G	МСН	PASS
Spectrum Analyzer 1     +       KEYSIGHT Input RF     Prod 2: 50 0       RL     →       Align Auto     Pred 2: 50 0       Corrections Off     Pred 2: 50 0       Topottum     *       Scale Div 10 dB     0       0     1       0.3     -       0.3     -       0.3     -       0.3     -       0.3     -       0.3     -       0.3     -       0.40     -       0.5     -       0.6     -       1.0     1       2.0     1       2.0     1       2.0     1       2.0     -       1.00     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       2.0     1       3.0	Atten 30.4E         PNO F.st.         #AvgType Rover (RMS)         2 3 4 1         Center Frequency         2 3 4 10         Center Frequency         2 3 5 10         2 3 5 10         2 3 5 10         2 3 5 10         2 3 5 10         2 3 5 10         2 3 5 10         2 3 5 10         2 3 5 10         2 3 5 10	Setings
	X Avis State Log Lin	











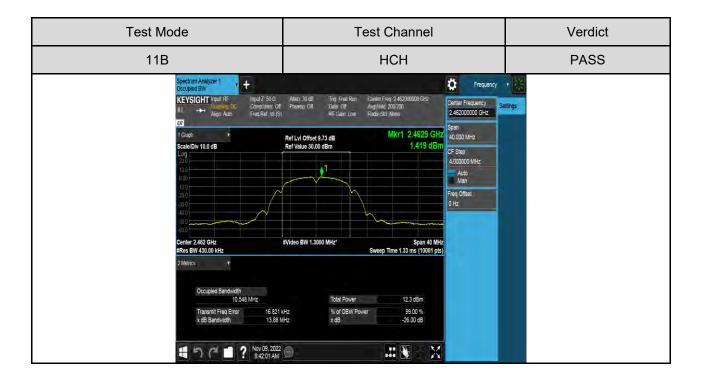
Test Mode	Test Channel	Verdict
11N HT20	НСН	PASS
Scale/Div 10 dB       Log       107       107       107       107       103       204       205       205       206       207       208       208       209       201       203       203       204       205       205       206       207       208       208       209       200       200       201       202       203       203       204       200       201       202        203	IF Gam Low Sig Track Off       Trig Free Run P P P P P P P       P P P P P P P       Span         Ref Lvi Offset 9.73 dB       ΔMkr3 15.786 7 MHz       Span       40.000000 MHz         Ref Level 29.73 dB       -0.01 dB       Sweep 5.00 MHz       Sweep 5.00 MHz         Q2       3Δ1       Staft Freq 2.44200000 GHz       Staft Freq 2.44200000 GHz         #Video BW 300 kHz       Span 40.00 MHz       Staft Freq 2.44200000 GHz         #Video BW 300 kHz       Span 40.00 MHz         Y       Function       Function Vidth         Y       Function       Function Vidth         1.580 dBm	Setings 2 Setings 2 Setings 2 Setings 2 Setings
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### For 99% Bandwidth part:



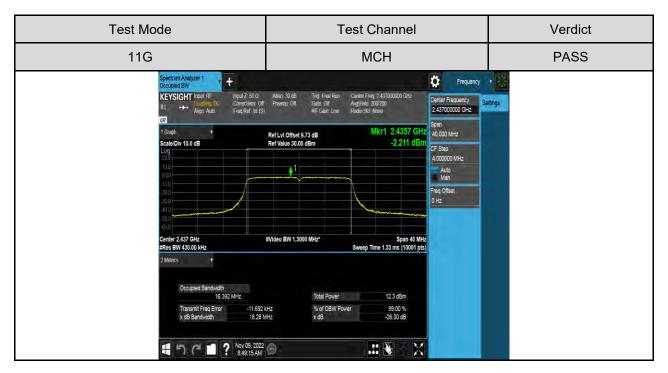


Test Mode	Test Channel		Verdict
11B	MCH		PASS
Spectrum Analyzer 1 Occupied BW KEYSIGHT Input RF RL -+ Augur Audo RU Augur Audo RU		2.437000000 GHz	ings
1 Graph • • Scale/Div 10.0 dB Log 20 0 • • • • • • • • • • • • • • • • •	Ref Lvi Offset 9.73 dB Mkr1 2.4361 GHz Ref Value 30.00 dBm 1.802 dBm	Span         40.000 MHz           CF Step         4.000000 MHz           A 000000 MHz         Man           Pres Offset         0           Hz         0	
30.0         30.0           30.0         30.0           Centler 2.437 GHz         #Res BW 430.00 KHz           2 Metrics         *           Occupied Bandwidth         10.523 MHz           Transmit Freq Error         1.8181           x dB Bandwidth         13.90 M			
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 X		



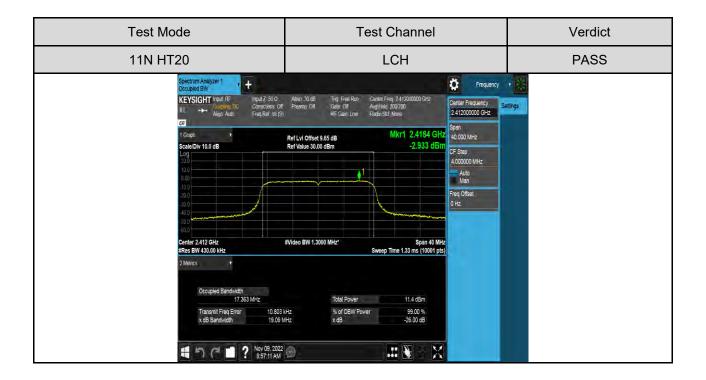


Test Mode	Test Channel	Verdict
11G	LCH	PASS
Spectrum Analyzer 1 Occupied BW KEYSIGHT Input Ri- RL → Auger Auto Corrections Off Freq Ref Int (S) Corrections Off		oy Settings
Scale/Div 10.0 dB	Ref Volue 30.00 dBm -2.915 dBm CF Step 4.00000 MHz Auto Man	
300 300 400 500 600 600 600 600 600 600 600 800 800 8	#Video BW 1.3000 MHz* Spen 40 MHz Sweep Time 1.33 ms (10001 pts)	
Z Metrics v 2 Metrics v Occupied Bandwidth 16.404 MHz Transmit Freq Error 13.222 v x dB Bandwidth 18.33 M	Total Power 11.5 dBm Hz % of OBW Power 99.00 %	





Test Mode	Test Channel	Verdict
11G	НСН	PASS
Spectrum Analyzer 1 + Cecupied BW KEVSIGHT input RF RL ++ Augur Audo RU CO	#F Gain: Low Radio Std None 2.462	er Frequency Settings
1 Graph y Scale/Div 10.0 dB	Ref Value 30.00 dBm -2.786 dBm CF St	DÖ MHZ tep
10.0		0000 MHz Auto Offset
30.0 	OH2	
#Res BW 430.00 kHz	#Video BW 1.3000 MHz* Span 40 MHz Sweep Time 1.33 ms (10001 pts)	
2 Metrics Y Occupied Bandwidth 16 394 MHz Transmit Freq Error 2 011	Total Power 11.8 dBm Hz % of OBW Power 99.00 %	
x dB Bandwidth 19.41 )	Hz x.dB -26.00.dB	
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Test Mode	Test Channel	Verdict
11N HT20	МСН	PASS
Spectrum Analyzer 1 Occupied BW KEYSIGHT Input RF RL → August Audo RL → August Audo	#IF Gain Low Radio Std None 2.43700	Frequency requests
1 Graph v ScalerDiv 10.0 dB Log 200	Ref Lvi Offset 9.73 dB         Mkr1 2.4352 GHz         Span         40.001           Ref Value 30.00 dBm         -2.624 dBm         CF Step         40.000	
10.0 0.00 -0.0 -0.0 -0.0 -0.0 -0.0 -0.0	●1 Man Freq Offs 0 Hz	
#Res BW 430.00 kHz	#Video BW 1.3000 MHz* Span 40 MHz Sweep Time 1.33 ms (10001 pts)	
2 Metrics + Occupied Bandwidth 17 304 MHz Transmit Freq Error - 20042 x dB Bandwidth 18 87 N		
・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・・		





## 7.4. CONDUCTED (AVERAGE) OUTPUT POWER

#### **LIMITS**

FCC Part15 (15.247) Subpart C , ISED RSS-247 ISSUE 2				
Section Test Item Limit Frequency Range (MHz)				
FCC 15.247(b)(3) ISED RSS-247 5.4 (d) RSS-Gen Clause 6.12	Output Power	1 watt or 30dBm	2400-2483.5	

#### TEST PROCEDURE

Method AVGSA-2 uses trace averaging across ON and OFF times of the EUT transmissions, followed by duty cycle correction. The procedure for this method is as follows:

a) Measure the duty cycle D of the transmitter output signal as described in 11.6.

b) Set span to at least 1.5 times the OBW.

c) Set RBW = 1% to 5% of the OBW, not to exceed 1 MHz.

d) Set VBW  $\geq$  [3  $\times$  RBW].

e) Number of points in sweep  $\ge$  [2  $\times$  span / RBW]. (This gives bin-to-bin spacing  $\le$  RBW / 2, so that narrowband signals are not lost between frequency bins.)

f) Sweep time = auto.

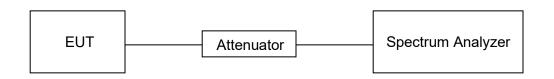
g) Detector = RMS (i.e., power averaging), if available. Otherwise, use the sample detector mode.

h) Do not use sweep triggering. Allow the sweep to "free run."

i) Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed such that the average accurately represents the true average over the ON and OFF periods of the transmitter.

j) Compute power by integrating the spectrum across the OBW of the signal using the instrument's band power measurement function with band limits set equal to the OBW band edges. If the instrument does not have a band power function, then sum the spectrum levels (in power units) at intervals equal to the RBW extending across the entire OBW of the spectrum. k) Add [10 log (1 / D)], where D is the duty cycle, to the measurement represents an average power during the actual transmission times (because the measurement represents an average over both the ON and OFF times of the transmission). For example, add [10 log (1/0.25)] = 6 dB if the duty cycle is 25%.

#### TEST SETUP





#### RESULTS

For Normal Testing Part:

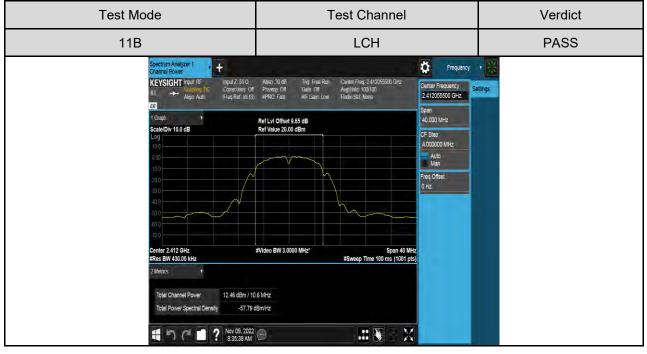
Test Mode	Test Channel	Measurement Output Power (AV)	10log(1/x) Factor	Maximum Conducted Output Power (AV)	Result
		dBm	dB	dBm	
	LCH	12.46	0.51	12.97	Pass
11B	MCH	13.10	0.51	13.61	Pass
	HCH	12.67	0.51	13.18	Pass
	LCH	12.16	0.60	12.76	Pass
11G	MCH	12.79	0.60	13.39	Pass
	HCH	12.31	0.60	12.91	Pass
	LCH	12.09	0.66	12.75	Pass
11N HT20	MCH	12.55	0.66	13.21	Pass
20	HCH	12.23	0.66	12.89	Pass

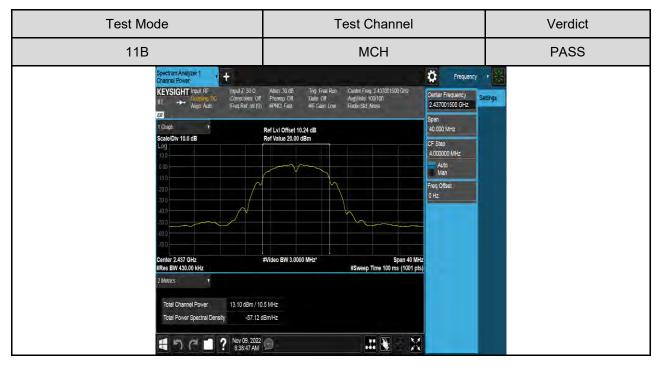
Remark:

For all the test results has been adjusted the duty cycle factor.
 For Correction Factor is refer to the result in section 7.2



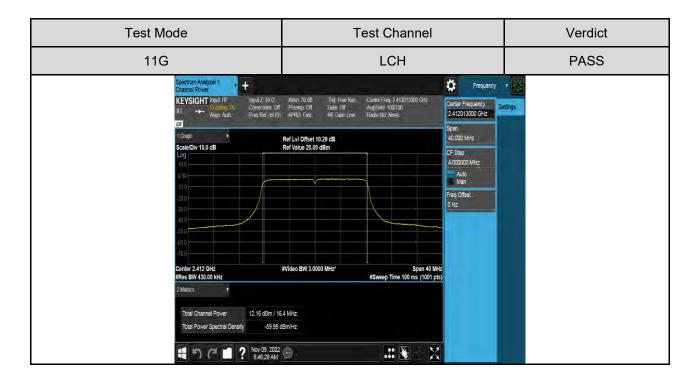
#### Test Graphs:





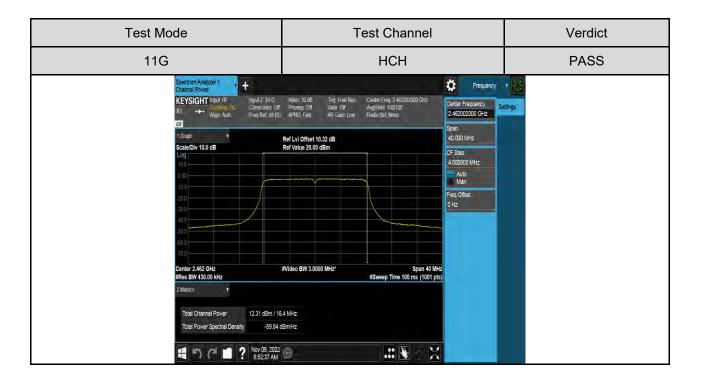


Test Mode	Test Channel	Verdict
11B	НСН	PASS
Spectrum Analyzer 1     +       Channel Power     +       KEYSIGHT insput RF     RL       RL     ++       Align Auto     Freque IZ 500       Connections Off     Freque RF int [St		Settings
1 Graph v Scale/Div 10.0 dB Log 10 0	Ref Lvl Offset 10.24 dB         4 0000 MHz           Ref Value 20.00 dBm         CF Step           4 000000 MHz         A 000000 MHz           Man         Man	
	Preq Offset 0 Hz	
48.0 .700 Center 2.452 CHz #Res BW 430.00 HHz	≢Video BW 3.0000 MHz* Span 40 MHz #Sweep Time 100 ms (1001 pts)	
2 Metrics • Total Channel Power 12.67 dBm / 10 Total Power Spectral Density -57.57		
11 う べ 目 ? Nov 09:2022 842:19 AM	9 <b></b> X	



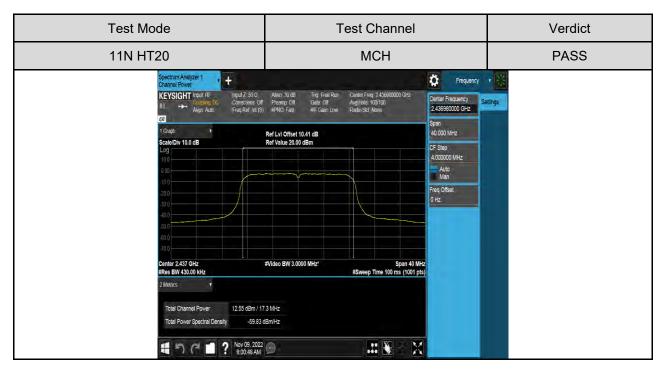


Test Mode	Test Channel	Ver	dict
11G	MCH	PA	SS
Spectrum Analyzer 1 Channel Power KEVSIGHT input RF RL ++ Augen Audo RL ++ Augen Audo 1 Graph	riednig unt issae unt nugrood tudruut 2 #PNO: Fast #IF Gain: Low Rodin Std: None 2	Frequency V	
	Ref Value 20.00 dBm Cl	Step Step Quotoo MHz: * Aufo Marn PQ Offset Hz	
500 500 700 Center 2.437 GHz #Res BW 430.00 KHz 2 Merros	#Vīdeo BW 3.0000 MHz* Span 40 MHz #Sweep Time 100 ms (1001 pts)		
Total Channel Power 12.79 dBm / 16 Total Power Spectral Density -59.36	JBM Hz		





Test Mode	Test Channel	Verdi	ct
11N HT20	LCH	PAS	S
Scale/Div 10.0 dB	EPNIC Fast = IF Gam Low Radin Ski' Mone Ref Lvi Offset 10.33 dB Ref Value 20.00 dBm	Frequency     Entropy       Certiar Frequency     Settings       2.412010500 OHz     Settings       40.0000 MHz     CF Step       40.0000 MHz     Auto       Auto     Freq.Offset       0 Hz     Hz	
4 5 7 <b>1</b> ? Nov 09, 2022 8.57.29 AM	9 <b></b>		





Test Mode	Test Channel	Verdict
11N HT20	НСН	PASS
Spectrum Analyzer 1 Channel Fower KEYSIGHT input RF RL → Auger Auxo 1 Graph ScalerDiv 10.0 dB 20 1 Graph 5 alerDiv 10.0 dB 2 aler	Free Pleans 20 dB Trg: Free Run Pleans 21 dB Trg: Free R	quency • E
1 5 C 1 2 Nov 09. 2022 9:03:41 AM		



# 7.5. POWER SPECTRAL DENSITY

# LIMITS

FCC Part15 (15.247) Subpart C, ISED RSS-247 ISSUE 2					
Section Test Item Limit Frequency Range (MHz)					
FCC §15.247 (e) ISED RSS-247 5.2 (b)	Power Spectral Density	8 dBm in any 3 kHz band	2400-2483.5		

# TEST PROCEDURE

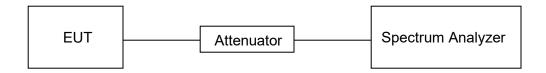
Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test		
Detector	Peak		
RBW	3 kHz ≤ RBW ≤100 kHz		
VBW	≥3 × RBW		
Span	1.5 x DTS bandwidth		
Trace	Max hold		
Sweep time	Auto couple.		

Allow trace to fully stabilize and use the peak marker function to determine the maximum amplitude level within the RBW.

If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

# TEST SETUP





# **RESULTS**

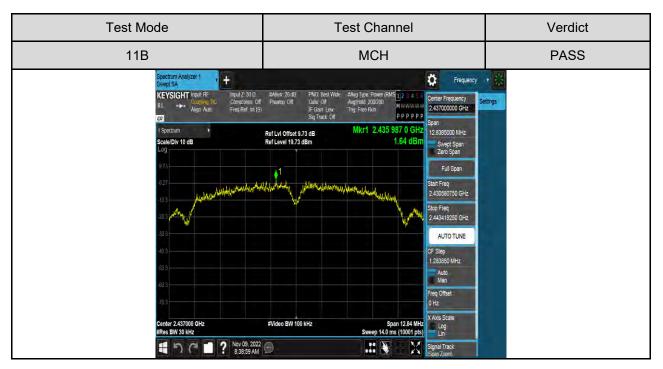
For Normal Testing Part:

Test Mode	Test Channel	Maximum Peak power spectral density (dBm/30kHz)	Result
	LCH	1.50	Pass
11B	MCH	1.64	Pass
	HCH	1.24	Pass
	LCH	-4.10	Pass
11G	MCH	-3.50	Pass
	HCH	-3.84	Pass
	LCH	-3.14	Pass
11N HT20	MCH	-3.05	Pass
	HCH	-3.06	Pass



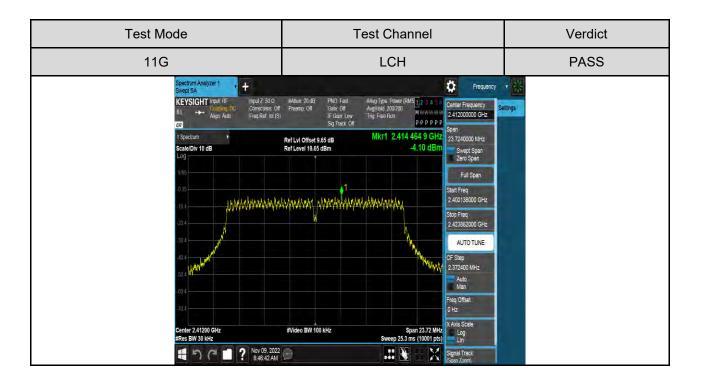
# Test Graphs:





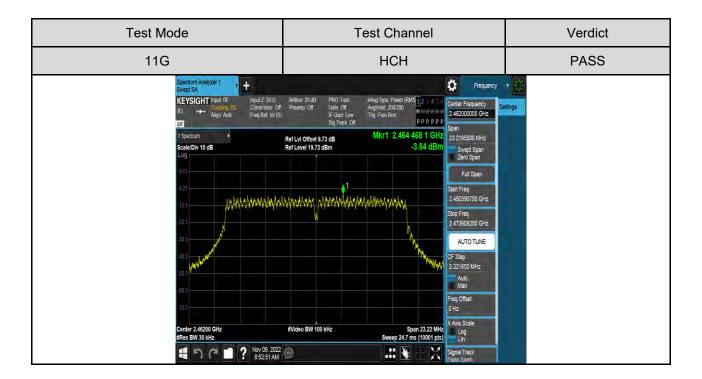


Test Mode	Test Channel	Verdict
11B	НСН	PASS
Scale/Div 10 dB Lug 973 027 10 3 20 3 20 3 20 3 20 3 20 3 20 3 20 3 2	F Gam. Low         Ting: Feen Rum         P P P P P P         Span         Span <t< td=""><td>Settings</td></t<>	Settings
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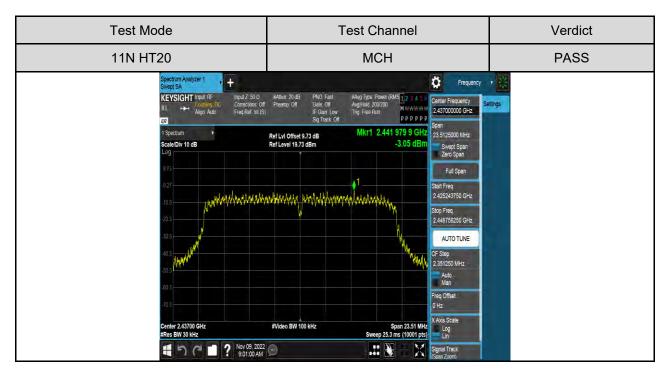


Test Mode	Test Channel	Verdict
11G	MCH	PASS
Spectrum Analyzer 1 Swent SA KEYSIGHT input RF RL - Augn Auto Compliance Of Fies Ref tat (S	Sig Track Off P P P P P P P P Span	Settings
Scale Div 10 dB Log 8.73 	Ref Lvi Offset 8.73 dB         MKM1 2.430 /26 8 GHZ         23 5215000 MHz           Ref Level 19.73 dBm         -3.50 dBm         Svept Span           Juint Stati Freq         24 2523050 GHz         245503050 GHz           Zub Stati Freq         242532050 GHz         Stop Freq           Zub Stop Freq         2445700750 GHz         Stop Freq	
-30.3 -40.3 -50.3	ALTO TUNE CF Step 2 235150 MHz Auto Man	
-70.3 Center 2.43700 GHz #Res BW 30 kHz	#Video BW 100 kHz Span 23.52 MHz Log Sweep 25.3 ms (1000 rbs) 1 m 2 m 2 m 2 m 3 span 23.52 MHz Log Sweep 25.3 ms (1000 rbs) 3 span 1 Trackt Ssan Zoem)	





Test Mode	Test Channel	Verdict
11N HT20	LCH	PASS
Spectrum Analyzer 1 Swept SA KEYSIGHT Input RF RL +	Frequency	
#Res BW 30 kHz	Sweep 26.7 ms (10001 pts)	





Test Mode	Test Channel	Verdict
11N HT20	НСН	PASS
Strectrum Analyzer 1 + Swept SA KEYSIGHT Induit RF RL → Align Audo Freq Ref Ind (S) US	F Gan Low Trig: Free Run P P P P P P Sig Track: Off P P P P P Snan	ttings
1 Spectrum V Scale/Div 10 dB Log	Ref Level 19.73 dB Mkr1 2.466 980 0 GH2 23 680600 MHz Ref Level 19.73 dBm -3.06 dBm Zero Span Zero Span	
-0.27 -10.3 	γμηγγή μηγή μηγη τη μηγή μηγη τη μηγή μηγή μηγή μηγή μηγή μηγή μηγή μηγ	
-0.3 -0.3 -0.3	CF Step 2.356050 MHz AMan	
40.3 70.3 Center 2.46200 GHz #Res BW 30 kHz	Freq Offset: 0 Hz #Video BW 100 kHz Sveep 25.3 ms (1000 tpt) Lin	
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# 7.6. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

### **LIMITS**

FCC Part15 (15.247) Subpart C, ISED RSS-247 ISSUE 2				
Section Test Item Limit				
FCC §15.247 (d) RSS-247 Clause 5.5 RSS-GEN Clause 6.13Conducted Bandedge and Spurious EmissionsAt least 30 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power				

## TEST PROCEDURE

Refer to FCC KDB 558074, connect the UUT to the spectrum analyser and use the following

Center Frequency	The centre frequency of the channel under test		
Detector	Peak		
RBW	100K		
VBW	≥3 × RBW		
Span	1.5 x DTS bandwidth		
Trace	Max hold		
Sweep time	Auto couple.		

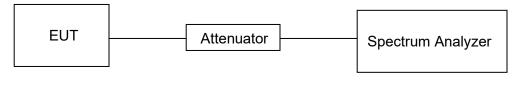
settings:

Use the peak marker function to determine the maximum PSD level.

Span	Set the center frequency and span to encompass frequency range to be measured
Detector	Peak
RBW	100K
VBW	≥3 × RBW
measurement points	≥span/RBW
Trace	Max hold
Sweep time	Auto couple.

Use the peak marker function to determine the maximum amplitude level.

### **TEST SETUP**



# Part I :Conducted Bandedge

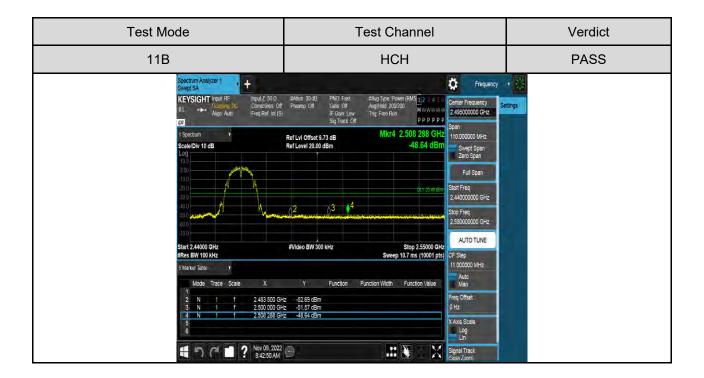
# **RESULTS TABLE**

Test Mode	Test Antenna	Test Channel	Test Result	Verdict
		LCH	See the test graphs	PASS
11B	Antenna 1	НСН	See the test graphs	PASS
11G	Antonno 1	LCH	See the test graphs	PASS
11G Antenna 1		НСН	See the test graphs	PASS
	Antonno 1	LCH	See the test graphs	PASS
11N HT20	Antenna 1	НСН	See the test graphs	PASS



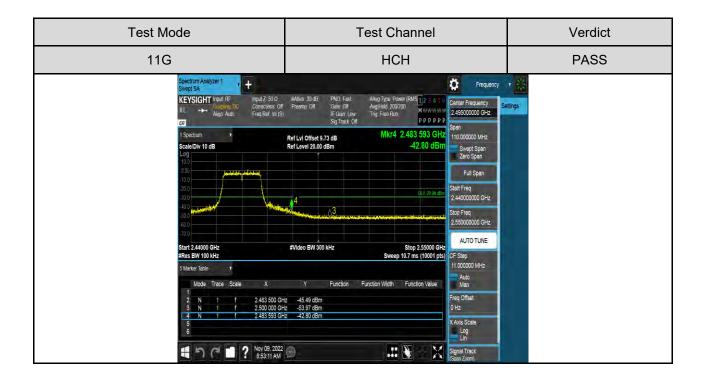
### **TEST GRAPHS**

Test Mod	le	Т	est Channel		Verdict
11B			LCH		PASS
S K R U S S S S S S S S	Mode         Trace         Scale         X           10         0	If Gam Law           Sig Track Off           Ref Lvi Offset 9.65 dB           Ref Level 20.00 dBm           If Under State 9.65 dB           If Video BW 300 KHz           Y           Function           tz         -50.85 dBm           tz         -52.28 dBm           tz         -52.28 dBm           tz         -52.85 dBm	Anglidd 200200 The Power (RMS 1 2 3 4 6 6 M V W W W P P P P P Mkr5 2.397 019 GHz 45.96 dBm 3 53 Stop 2.43000 GHz Sweep 12.7 ms (1000 Hz) Function Width Function Value	2.35500000 GHz Span 130.00000 MHz Sero Span Full Span Start Freq 2.30000000 GHz Stop Freq 2.43000000 GHz AUTO TUNE	angs



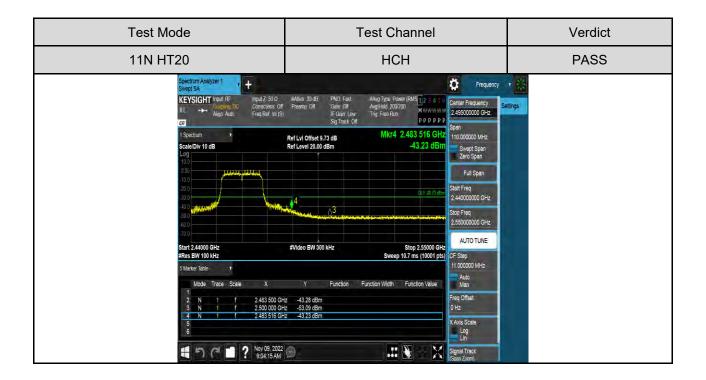


Test Channel	Verdict
LCH	PASS
EAND Type         EAND Type <t< td=""><td>tings</td></t<>	tings
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	LCH





Test Mo	de	Т	est Channel		Verdict
11N HT:	20		LCH		PASS
	Socchum Analyzer 1         +           Crept SA         reput Z S00           RL         +         Algo Auto           To post the solution of the s	If Gam Law         Sig Track Off           Sig Track Off         Sig Track Off           Ref Level 20.00 dBm         Image: Sig Track Off           #Video BW 300 kHz         Image: Sig Track Off           Y         Function           Y         Function           42         -45.37 dBm           2         -53.39 dBm           2         -53.39 dBm           2         -53.41 dBm	Ang Type Power (PMS) Typ Free Rum Typ Free Rum Mkr5 2:398 878 GHz -36:41 dBm -35:41 dBm	2.35500000 GHz Span 130.00000 MHz Swept Span Zero Span Full Span Start Freq 2.30000000 GHz Stop Freq 2.43000000 GHz AUTO TUNE	tings



# Part II :Conducted Emission

# Test Result Table

Test Mode	Test Antenna	Channel	Pref(dBm)	Puw(dBm)	Verdict
		LCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
11B SISO	Antenna 1	MCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		LCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
11G SISO	Antenna 1	MCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		LCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT20	Antenna 1	MCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS
		HCH	See the test graphs	<limit< td=""><td>PASS</td></limit<>	PASS



Test Mode	Channel	Verdict
11B	LCH	PASS





Puw test Plot

LCH SPURIOUS EMISSION	30MHz~1GHz		
Spectrum Analyzer 1 Swept SA	· + ·		Frequency +
KEYSIGHTirqutR RL →→ <sup>Dadadag</sup> AlgarAu	input Z 50 Ω #Atten: 20 dB PNO, Fast Conections Off Preamp: Off Gate: Off to Fleq.Ref.Int (S) FGam Low Sig Track. Off	#Avg Type: Power (RMS 1 2 3 4 5 6 Avg[Hold 30/30 Trig: Free Run P P P P P P	
1 Spectrum Scale/Div 10 dB Log	Ref Lvi Offset 9.65 dB Ref Level 15.00 dBm	Mkr1 79.99 MHz -48.26 dBm	970.000000 MHz
5.00			Full Span
-5.00			Start Freq 30.000000 MHz
-25.0		DL) -25.32 dBm	Stop Freq 1.00000000 GHz
-35.0			AUTO TUNE
45.0			CF Step 97.000000 MHz
-55 0 <b>4</b>	un minere the all and a trade out the sector of the billing standing in the sector	at a low product and data ( data 1 days) and a superior of	Auto Man
-75.0	Name an anna am far an an ann an an Anna an An Anna an Anna an	n ya ananyan nyanana kanana kanana kata	Freq Offset
Start 0.0300 GHz ≇Res BW 100 kHz	#Video BW 300 kHz	Stop 1.0000 GHz Sweep 94.0 ms (30001 pts)	
5 1 1	Nov 09, 2022 8:36:19 AM	11 🚯 — 💥	Signal Track (Span Zoom)





Test Mode	Channel	Verdict
11B	MCH	PASS





Puw MCH

SPURIOUS EN	MISSION_	30MHz~1GH	z				
	Spectrum Analyzer 1 Swept SA	ŧ				Frequency	* 🔐
	KEYSIGHT Input RF RL ++ Coupling DC Align: Auto	input Z: 50 Ω #Atten: 20 dB Corrections Off Preamp: Off Freq Ref. Int (S)	PNO, Fast Gate: Off IF Gain Low Sig Track Off	≢Avg Type Power (R) Avg Hold 30/30 Tng: Free Run	NS 1 2 3 4 5 6 MWWWWW PPPPPP	010.000000 MILE	Settings
	1 Spectrum: Scale/Div 10 dB Log	Ref LvI Offset 9. Ref Level 15.00			80.02 MHz 48.24 dBm	Span 970.000000 MHz Swept Span Zero Span	
	5.00					Full Span	
	-5.00					Start Freq 30.000000 MHz	
	-25.0				0L) -25.42 dBm	Stop Freq 1.000000000 GHz	
	-35.0					AUTO TUNE	
	-45.0 1					CF Step 97.000000 MHz	
	-55.0	lest vinteren en en der stillen er	antara daladan.	and which how and a first with the	-	Auto Man	
	-75.0	en levil All All Announces per tres March March March March	in an ann a chuir an	CINCLE IN DESCRIPTION OF THE PARTY OF THE PA	(Kan) (- Side and in the last	Freq Offset 0 Hz	
	Start 0.0300 GHz #Res BW 100 kHz	#Video BW 300	kHz		op 1.0000 GHz ms (30001 pts)	X Axis Scale Log Lin	
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# MCH SPURIOUS EMISSION\_1GHz~26GHz





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Test Mode	Channel	Verdict
11B	НСН	PASS

Pref test Plot





Puw test Plot

HCH SPURIOUS EMISSION	30MHz~1GHz		
Spectrum Analyzer 1 Swept SA	+		Frequency v
KEYSIGHT Input RF RL ++ Align Auto	input Z 50 Ω #Atten: 20 dB PNO Fast Corrections Off Preamp Off Gate Off Freq Ref. Int (S) IF Gain Low Sig Track Off	#Avg Type: Power (RMS 1 2 3 4 5 6 AvgHold 3030 Trig: Free Ran P P P P P	
f Spectrum Scale/Div 10 dB Log	Ref Lvi Offset 9.73 dB Ref Level 15.00 dBm	Mkr1 80.02 MHz -47.18 dBm	970 00000 MHz Swert Span Zero Span
500			Full Span
-5.00			Start Freq 30.000000 MHz
25.0		QL1-25.49.d8m	Stop Freq 1.00000000 GHz
-35.0			AUTO TUNE
45.0			CF Step 97.000000 MHz
	a na a san kina na ang na maka ang kina da ka da sa	an fer sur that a behavior between be	Auto
75 ()	yeen, daa ada adalahaya yayyaada yayada wala 🕹 maayaa ku daa na dalaha daa dalaha ku dalaha ku dalaha ku dalaha	n ar e ann an tha an	Freq Offset
Start 0.0300 GHz #Res BW 100 kHz	#Video BW 300 kHz	Stop 1.0000 GHz Sweep 94.0 ms (30001 pts)	
1 1 1	? Nov 09, 2022 8:42:59 AM	# N - X	Signal Track: (Span Zoom)

#### HCH SPURIOUS EMISSION\_1GHz~26GHz + Ö Frequency PNO Fast Gate Off IF Gam Low Sig Track Off input Z: 50 Ω Corrections: Off Freq Ref: Int (S) #Avg Type: Pow Avg|Hold: 30/30 Thg: Free Run KEYSIGHT Input RI en: 20 dE amp: Off Center Frequency 13.750000000 GHz tings Align Auto Mkr2 9.847 65 GH Ref LvI Offset 9.73 dB Ref Level 15.00 dBm 25.5000000 GHz -42.94 dE ale/Div 10 dB Swept Span Zero Span Full Span Start Freq 1.000000000 GHz Stop Freq 26.500000000 GHz AUTO TUNE Stop 26.50 GHz Sweep 2.44 s (30001 pts) #Video BW 300 kHz Start 1.00 GHz Res BW 100 kHz CF Step 2.550000000 GHz Auto Man X 2.460 30 GHz 9.847 65 GHz Trace Scale Function Function Width Function Valu 3.471 dBm -42.94 dBm Freq Offset 0 Hz X Axis Scale Log Lin ● つ C ■ ? Nov 09, 2022 8:44:23 AM X Signal Track



Test Mode	Channel	Verdict
11G	LCH	PASS





Puw test Plot LCH SPURIOUS

SPURIOUS EMISSION_3	80MHz~1GHz				
Spectrum Analyzer 1 Swept SA	+			Frequency	•
KEYSIGHT Input RF RL ++- Align Auto	Corrections Off Preamp Off G Freq Ref. Int (S)	late: Off 🛛 🛛 Avg +	Type: Power (RMS 1 2 3 4 5 6 kold 30/30 Free Run P P P P P P	515.000000 MHz	Settings
1 Spectrum Scale/Div 10 dB Log	Ref Lvi Offset 9.65 d Ref Level 15.00 dBm		Mkr1 79.99 MHz -47.91 dBm		
5.00				Full Span	
-5.00				Start Freq 30.000000 MHz	
-25.0			QL1 -28,87 dBm	Stop Freq 1.000000000 GHz	
.35.0				AUTO TUNE	
45.0				CF Step 97.000000 MHz	
-00.0	Control and Alfreeners and alfred his she at a faith of the	Latitudianid) a bitati	taling for a set for solar hand a state of a second set	Auto Man	
-75.0	and a state of the	e tite Raw, tec. this is fuil	ara deletera di bili de la segura	Freq Offset 0 Hz	
Start 0.0300 GHz #Res BW 100 kHz	#Video BW 300 kHz	8	Stop 1.0000 GHz Sweep 94.0 ms (30001 pts)	X Axis Scale Log Lin	
	? Nov 09, 2022 8:47:11 AM			Signal Track (Span Zoom)	

LCH SPURIOUS E	MISSION_1GHz~	26GHz		
	Spectrum Analyzer 1			🔅 Frequency 🕇 🔆
	KEYSIGHT         Input RF         Input 2:50 Ω           RL         ++         Company 0C         Corrections 0           Align: Auto         Freq Ref: Int (		=Avg Type: Power (RMS 12 3 4 5 6 Avg Hold 30/30 Trig: Free Run P P P P P	
	1 Spectrum: • Scale/Div 10 dB	Ref LvI Offset 9.65 dB Ref Level 15.00 dBm	Mkr2 7.237 30 GHz -47.15 dBm	Swept Span
	500 1 500 1 150			Zero Span
	-250 -350 -450		DL1-22,87 cBm	Start Freq 1.00000000 GHz
	-55 0 -65 0 -75 0			Stop Freq 26 50000000 GHz
	Start 1.00 GHz #Res BW 100 kHz	#Video BW 300 kHz	Stop 26.50 GHz Sweep 2.44 s (30001 pts)	
	5 Marker Table  Mode Trace Scale X N 1 f 2.416.95 C		Function Width Function Value	Auto
	2 N 1 f 7.237 30 C 3 4			Freq Offset 0 Hz
	5 6			X Avis Scale Log Lin
	1 つ C 1 ? Nov 09.202 8:48:35 AM	(@		Signal Track: (Span Zoom)



Test Mode	Channel	Verdict
11G	MCH	PASS





Puw test Plot

MANY ADVIDUATIO	EL LIO OLOLI	
MCH SPURIOUS		201/102~1(202



# MCH SPURIOUS EMISSION\_1GHz~26GHz

Spectrum Analyzer 1 Swept SA	+	Frequency +
KEYSIGHT Input RF Rt → Chargeng PC Alge Auto	Preg Rel. lit (5) Prodit Low The Rul	12 3 4 5 0 Center Frequency M WWWWW 13 75000000 GHz p p p p p p Soan
1 Spectrum   Scale/Div 10 dB  Log  Add	Ref Lvi Offset 9.73 dB Mkr2 7.310 Ref Level 15.00 dBm - 47	0 40 GHz 25 500000 GHz 25 500000 GHz 25 500000 GHz 25 Svert Span 25 Svert Span
5 00 5 00 1 5 00		Full Span
-25 0 -35 0 -45 0	<b>↓</b> 2	0.1 20 T 6= 1.00000000 GHz
-55 0 -65 0 -75 0		Stop Freq 26.50000000 GHz
Start 1.00 GHz #Res BW 100 kHz	#Video BW 300 kHz Stop Sweep 2.44 s	p 26.50 GHz (30001 pts) CF Step
5 Marker Table v Mode Trace Scale		2.550000000 GHz Auto Man
1 N 1 f 2 N 1 f 3	2.434.80 GHz 0.8639 dBm 7.310.40 GHz -47.14 dBm	Freq Offset D Hz
5.6		X Avis Scale Log Lin
4 7 C 1	? Nov 09. 2022 💬 📰 💽	Signal Track: Gan Zoomi



Test Mode	Channel	Verdict
11G	HCH	PASS





Puv HC

iw test Plot						
CH SPURIOUS EN	IISSION_3	30MHz~1GH	z			
	Spectrum Analyzer 1 Swept SA	+			Frequenc	y 👎 😽
	KEYSIGHT Input RF RL + Align: Auto	input Z 50 Ω #Atten: 20 dB Corrections: Off Preamp: Off Freq Ref. Int (S)	PNO Fast Gate Off IF Gain Low Sig Track Off	#Avg Type: Power (RMS 1 2 3 4 5 6 Avg Hold 30/30 Trig: Free Run P P P P P P	010.000000 IMITE	Settings
	1 Spectrum   Scale/Div 10 dB Log	Ref Lvi Offset 9. Ref Level 15.00		Mkr1 80.02 MHz -47.66 dBm	070.00000 ma in	
	5.00				Full Span	
	-5.00				Start Freq 30.000000 MHz	
	-25.0			DLT-29.04 dBm	Stop Freq 1.00000000 GHz	
	.35.0				AUTO TUNE	

	1 つ C 1 ? Nov 05 8:53:	19AM 💬		Signal Track (Span Zoom)
HCH SPURIOUS	EMISSION_1GH	z~26GHz		
	Spectrum Analyzer 1 +			Frequency 🔹 🔆
	KEYSIGHT Input Z RL ++ Augur Auto Freq Re	xis Off Preamp Off Gate Off	#Avg Type: Power (RMS 1 2 3 4 5 6 Avg Hold 30/30 Trig: Free Run P P P P P P	
	1 Spectrum   Scale/Div 10 dB	Ref Lvi Offset 9.73 dB Ref Level 15.00 dBm	Mkr2 7.386 90 GHz -47.49 dBm	Span 25.500000 GHz Swept Span Zero Span
	500			Full Span
	-25.0		DL1 29 M d8m	Start Freq 1.00000000 GHz
	.45.0 .55.0 .65.0			Stop Freq 26.50000000 GHz
	-75 0 Start 1.00 GHz	#Video BW 300 kHz	Stop 26.50 GHz	AUTO TUNE
	#Res BW 100 kHz 5 Marker Table		Sweep 2.44 s (30001 pts)	CF Step 2.55000000 GHz
	Mode Trace Scale X	Y Function 90 GHz 0.4146 dBm	Function Width Function Value	Auto Man
		90 GHz -47.49 dBm	1	Freq Offset 0 Hz
	4 5 6			X Axis Scale Log Lin
		a. 2022	H 💽 – 💥	Signal Track: (Span Zoom)

CF Step 97.000000 MHz Auto Man req Offse 0 Hz X Axis Scale



Test Mode	Channel	Verdict
11N HT20	LCH	PASS





Puw test Plot

LCH SPURIOUS EMISSION	_30MHz~1GHz		
Spectrum Analyzer 1 Swept SA	+	¢	Frequency v 👯
KEYSIGHT input Ri RL →→ Alger Au 201	imputZ 50 Ω #Atten:20 dB PNO Fast ## Corrections: Off Preamp:Off Gale:Off Au to Freq.Ref.Int (S) IFGain Low Sig Track Off	Avg Type: Power (RMS 1 2 3 4 5 1) vgHold 3030 Ng Free Run P P P P P P P	
1 Spectrum Scale/Div 10 dB Log	Ref Lvi Offset 9.65 dB Ref Level 15.00 dBm	Mkr1 80.02 MHz -47.90 dBm	ot Span
5.00		Ful	I Span
-5.00		Start Freq 30.00000	
-25.0		011-26.71 dBm 1.00000	0000 GHz
.35.0		AUT	O TUNE
45.0		CF Step 97.00000	10 MHz
	e cana ana aire an bha an an ann an Airean Airean Airean an Airean Airean Airean	Auto	
-75 0	n y ner linner (elle bor) ers en en son eller sider side fil ers an anserer y en en anter sider beide	Freq Offse 0 Hz	
Start 0.0300 GHz #Res BW 100 kHz	#Video BW 300 kHz	Stop 1.0000 GHz Sweep 94.0 ms (30001 pts)	ale
100	<b>?</b> Nov 09, 2022	Signal Tra	sc/c m1

LCH SPURIOUS EMIS	SSION 1GHz~26GHz	
Spe	ectrum Analyzer 1 +	Frequency +
KE RL ری	Augn Auto Freq Ref. Int (S) IF Gain Low Thy Free Run	
	Spectrum Ref Lvi Offset 9,65 dB Mkr2 7.243 25 GHz zaleDiv 10 dB Ref Level 15.00 dBm -46.57 dBm	Swept Span
50 50 45		Zero Span Full Span
	0	Start Freq 1.00000000 GHz
-40 55 70		Stop Freq 26 50000000 GHz
	0 at 1.00 GHz ≢Video BW 300 kHz Stop 26.50 GHz ets BW 100 kHz Sweep 2.44 s (30001 pts	
5 M	Marker Table v Mode Trace Scale X Y Function Function Worth Function Value	2.55000000 GHz Auto Man
	1 N 1 f 2.405 90 GHz 0.4177 dBm 2 N 1 f 7.243 23 GHz -46.57 dBm 3	Freq Offset D Hz
	4 5 5 6	X Axis Scale
	籠 つ イ 💼 ? Nov 05.2022 💬 🛛 📰 🔭 🗙	Signal Track: Issan Zoomi



Test Mode	Channel	Verdict
11N HT20	MCH	PASS





MCH

Puw

test Plot I SPURIOUS	EMISSION	30MHz~1GH	Z			P
	Spectrum Analyzer 1 Swept SA	+			Frequency	y • 🛞
	KEYSIGHT Input RF RL ↔ Align: Auto	input Z 50 Ω #Atten: 20 dB Corrections Off Preamp Off Freq Ref Int (S)	PNO Fast Gate Off IF Gain Low Sig Track Off	#Avg Type: Power (RMS 1 2 3 4 5 6 Avg Hold 30/30 Trig: Free Run P P P P P P	Center Frequency 515.000000 MHz	Settings
	1 Spectrum   Scale/Div 10 dB Log	Ref Lvi Offset 9. Ref Level 15.00		Mkr1 80.02 MHz -47.25 dBm	Span 970.000000 MHz Swept Span Zero Span	
	5.00				Full Span	
	-5.00				Start Freq 30.000000 MHz	
	-15.0			QL1 -26 59 dBm	Stop Freq 1.000000000 GHz	
	435.0				AUTO TUNE	
	-45.0				CF Step 97.000000 MHz	
	-55.0	a an 1991 thinks a than we take to be the state of the state	(edisconstra) Assessment	dynlastanan avai ta'n an tai diilahan dalaan	Auto Man	
	-75 0	nered had den nier oor oor de prost kinsterier.	i ductore i chi scretino	ayna ndaraan is in dirida di baranayad	Freq Offset 0 Hz	

#Video BW 300 kHz

# MCH SPURIOUS EMISSION 1GHz~26GHz

Start 0.0300 GHz #Res BW 100 kHz

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ICH 3FURIOUS EIVIISSIUN	
Spectrum Analyzer 1 swept SA	+ Frequency + 🔆
KEYSIGHT inquit RE RL Augus Audo Augus Audo	Incluit Z 50 Ω     #Main 20 dB     PNO/ Fast     #Mg Type Power (RMS 12 B 4 5 fr Augitabid 30 Q)     Center Frequency     Settings       Check Ref Ref Nu (S)     Fast Can Low Ting Free Run     M W W W W W     N W W W W W     13 75000000 GHz       Sig Track Off     Sig Track Off     Sig Track Off     Sig Track Off     Sig Track Off
1 Spectrum Scale/Div 10 dB	Ref Level 15.00 dBm 46.96 dBm Swept Span
Log 500 01 -500	Zero Span Full Span
-13 0 -25 0 	0(1-3:59-den Start Freq 1.00000000 GHz
45.0 55.0 65.0	Stop Freq 26 50000000 GHz
-75 0 Start 1.00 GHz	#Video BW 300 kHz Stop 26.50 GHz
#Res BW 100 kHz 5 Marker Table • Mode Trace Scale	Sweep 2.44 s (30001 pts)         (CF Step 2.5500000 GHz;           X         Y         Function Width         Function Value
1 N 1 f 2 N 1 F 3	2.430 55 GHz 1.272 dBm 7.307 85 GHz -46.96 dBm 0 Hz
5.6	X.Avis S/ste- Log Lin
1 n c -	? Nov 09. 2022 💬 📰 💽 - 🔀 Signal Track ISban Zoem

X Axis Scale

Log Lin

Stop 1.0000 GHz Sweep 94.0 ms (30001 pts)

.:: 🔖



Test Mode	Channel	Verdict
11N HT20	HCH	PASS





Puw test Plot

HCH SPURIOUS EN	MISSION 3	0MHz~1GHz	<u>z</u>					
	Spectrum Analyzer 1 Swept SA	ŧ				Frequency	( + 🔛	
	KEYSIGHT Input RF RL + Aign: Auto	Input Z: 50 Ω #Atten: 20 dB Corrections: Off Preamp: Off Freq Ref. Int (S)	PNO. Fast Gate: Off IF Gain Low Sig Track Off	THO, FIER RUIT	1 2 3 4 5 6 M W W W W P P P P P P	010.000000 11112	Settings	
	1 Spectrum   Scale/Div 10 dB Log	Ref LvI Offset 9.7 Ref Level 15.00 d			).02 MHz ).96 dBm	Span 970.000000 MHz Swept Span Zero Span		
	5.00					Full Span	P	
	-5.00					Start Freq 30.000000 MHz		
	-25.0				011 -25 73 dBm	Stop Freq 1.000000000 GHz		
	-35.0					AUTO TUNE		
	45.0					CF Step 97.000000 MHz		
	-00.0	sa da na sa in Milian seconda an di Kasila da sa da da sa	natali (use qui kat	an a star data di Kama	a the address of	Auto Man		
	-75.0	and and the product of the state of the stat	(kosta a regeria	<mark>Ale stanoga oblasta maida da se</mark>	rtikitepati.	Freq Offset 0 Hz		
	Start 0.0300 GHz #Res BW 100 kHz	#Video BW 300	kHz	Stop Sweep 94.0 ms	1.0000 GHz (30001 pts)			
	1701	? Nov 09, 2022 9:04:25 AM			X	Signal Track (Span Zoom)		

#### HCH SPURIOUS EMISSION\_1GHz~26GHz ÷ Ö Frequency PNO Fast Gate Off IF Gam Low Sig Track Off input Z' 50 C #Avg Type: Pow Avg|Hold: 30/30 Thg: Free Run KEYSIGHT Input RI IS 1 2 3 4 en: 20 dE amp: Off Center Frequency 13.750000000 GHz Corrections Off Freq Ref. Int (S) tings Align Auto M\*\*\*\*\*\*\* P P P P P P Mkr2 7.386 05 GH Ref LvI Offset 9.73 dB Ref Level 15.00 dBm 25.5000000 GHz -47.01 dE ale/Div 10 dE Swept Span Zero Span Full Span Start Freq 1.000000000 GHz Stop Freq 26.500000000 GHz AUTO TUNE #Video BW 300 kHz Stop 26.50 GHz Sweep 2.44 s (30001 pts) Start 1.00 GHz Res BW 100 kHz CF Step 2.550000000 GHz Auto Man X 1 2.459 45 GHz 0.4812 dBm 1.386 05 GHz -47.01 dBm Trace Scale Function Function Width Function Valu Freq Offset 0 Hz X Axis Scale Log Lin X Nov 09, 2022 9.05:50 AM Signal Track



# 7.7. RADIATED TEST RESULTS

# 7.7.1.LIMITS AND PROCEDURE

## **LIMITS**

# Please refer to FCC §15.205 and §15.209, ISED RSS-247 Clause 5.5, ISED RSS-GEN Clause 8.9&6.13 (Transmitter)

## Radiation Disturbance Test Limit for ISED(9KHz-1GHz)

Except where otherwise indicated in the applicable RSS, radiated emissions shall comply with the field strength limits shown in table 5 and table 6. Additionally, the level of any transmitter unwanted emission shall not exceed the level of the transmitter's fundamental emission.

Table 5 – General field strength limits at frequencies above 30 MHz		
Frequency (MHz)	Field strength (µV/m at 3 m)	
30 - 88	100	
88 - 216	150	
216 - 960	200	
Above 960	500	

Table 6 – General field strength limits at frequencies below 30 MHz			
Frequency	Magnetic field strength (H-Field) (μA/m)	Measurement distance (m)	
9 - 490 kHz <sup>Note 1</sup>	6.37/F (F in kHz)	300	
490 - 1705 kHz	63.7/F (F in kHz)	30	
1.705 - 30 MHz	0.08	30	

**Note 1:** The emission limits for the ranges 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.



# Please refer to FCC KDB 558074 Radiation Disturbance Test Limit for FCC (9KHz-1GHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
960~1000	500	3

Note: 1) At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

(2) At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two 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). This paragraph (f) shall not apply to Access BPL devices operating below 30 MHz.



# Radiation Disturbance Test Limit for FCC (Above 1G)

Frequency (MHz)	dB(uV/m) (at 3 meters)		
	Peak	Average	
Above 1000	74	54	

### Restricted bands of operation

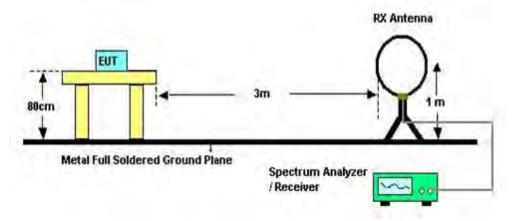
MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
<sup>1</sup> 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

Note: <sup>1</sup>Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz. <sup>2</sup>Above 38.6c



# TEST SETUP AND PROCEDURE

Below 30MHz



The setting of the spectrum analyser

RBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
VBW	200Hz (From 9kHz to 0.15MHz)/ 9KHz (From 0.15MHz to 30MHz)
Sweep	Auto
Detector	Peak/QP/ Average
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013

2. The EUT was arranged to its worst case and then turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both Horizontal, Face-on and Face-off polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 0.8 meter above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a 1m height antenna tower.

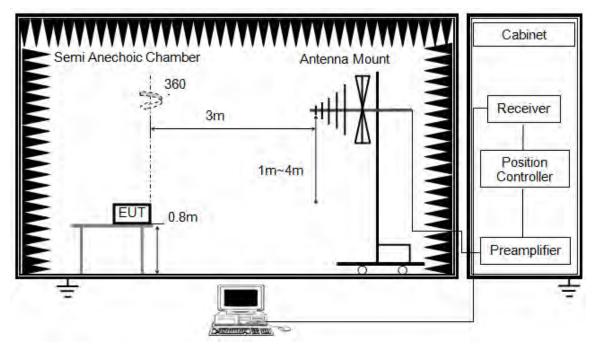
5. The radiated emission limits are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector

6. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

7. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)



# Below 1G



The setting of the spectrum analyser

RBW	120K
VBW	300K
Sweep	Auto
Detector	Peak/QP
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

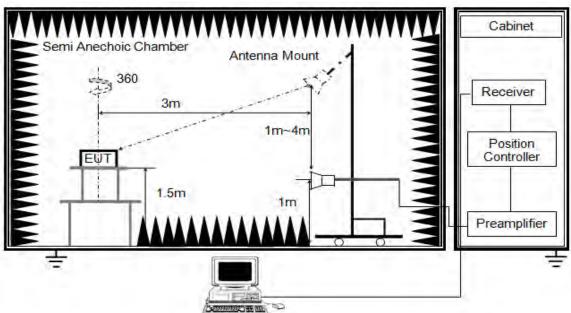
3. The EUT was placed on a turntable with 0.8 meter above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

6. For the actual test configuration, please refer to the related Item in this test report (Photographs of the Test Configuration)





The setting of the spectrum analyser

RBW	1M
IV B W	PEAK:3M AVG: See note6
Sweep	Auto
Detector	Peak
Trace	Max hold

1. The testing follows the guidelines in ANSI C63.10-2013.

2. The EUT was arranged to its worst case and then tune the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

3. The EUT was placed on a turntable with 1.5m above ground.

4. The EUT was set 3 meters from the interference receiving antenna, which was mounted on the top of a variable height antenna tower.

5. For measurement above 1GHz, the emission measurement will be measured by the peak detector. This peak level, once corrected, must comply with the limit specified in Section 15.209.

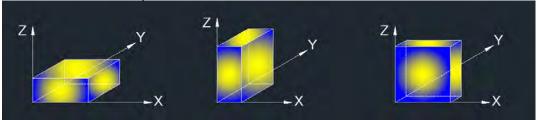
6. For measurements above 1 GHz, the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements; and 1 MHz resolution bandwidth with video bandwidth  $\geq$ 1/T but not less than the setting list in section 7.2 when use peak detector, max hold to be run for at least [50\*(1/Duty Cycle)] traces for average measurements. For the Duty Cycle need to refer the results in section 7.2.

7. For the actual test configuration, please refer to the related item in this test report (Photographs of the Test Configuration)

Form-ULID-008536-9 V2.0



## X axis, Y axis, Z axis positions:



Note: For all radiated test, the EUT can only working in Z axis.

# 7.7.2. RESTRICTED BANDEDGE

#### **TEST ENVIRONMENT**

Environment Parameter	Selected Values During Tests
Relative Humidity	54.6%
Atmospheric Pressure:	102KPa
Temperature	21°C

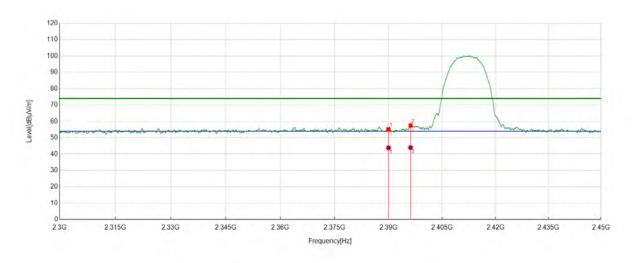
### Test Result Table

Test Mode	Channel	Puw(dBm)	Verdict
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11B	НСН	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11G	НСН	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT20	НСН	<limit< td=""><td>PASS</td></limit<>	PASS



#### Test Graphs:

11B LCH Horizontal PASS	Test Mode	Channel	Polarization	Verdict	
	11B LCH		Horizontal	PASS	

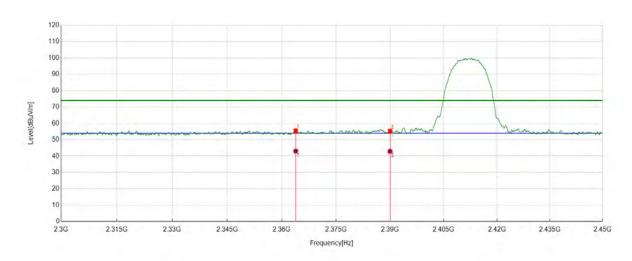


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1 2200 0000	43.99	11.25	55.24	74.00	-18.76	peak
1 2390.0000	32.54	11.25	43.79	54.00	-10.21	average	
2	2 2396.162	46.26	11.17	57.43	74.00	-16.57	peak
2		32.72	11.17	43.89	54.00	-10.11	average

- Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor.
  - 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

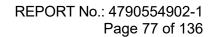


Test Mode	Test Mode Channel		Verdict	
11B	LCH	Vertical	PASS	



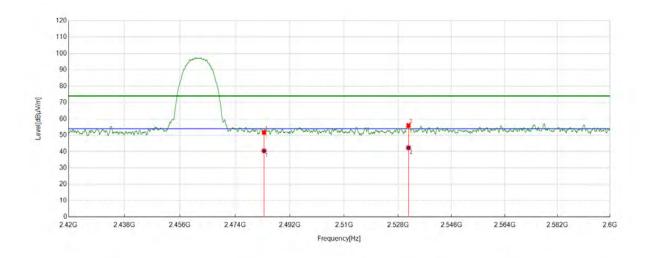
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	4 0000 0547	44.28	11.19	55.47	74.00	-18.53	peak
1 2303.8	2363.8517	31.85	11.19	43.04	54.00	-10.96	average
2	2 2390.0000	44.01	11.25	55.26	74.00	-18.74	peak
2		31.67	11.25	42.92	54.00	-11.08	average

- Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor.
  - 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





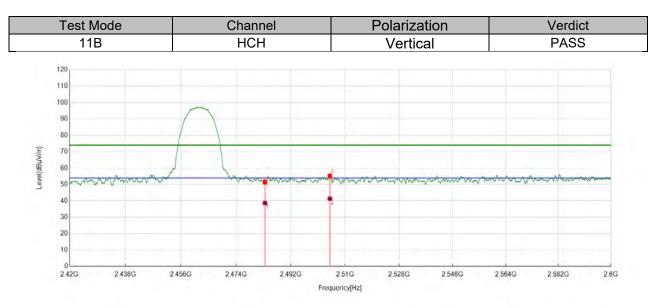
Test Mode	Test Mode Channel		Verdict	
11B	HCH	Horizontal	PASS	



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1 2492 5000	40.44	11.28	51.72	74.00	-22.28	peak
1 2483.5000	29.15	11.28	40.43	54.00	-13.57	average	
2	2531.5014	44.18	11.87	56.05	74.00	-17.95	peak
2		30.46	11.87	42.33	54.00	-11.67	average

- Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor.
  - 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





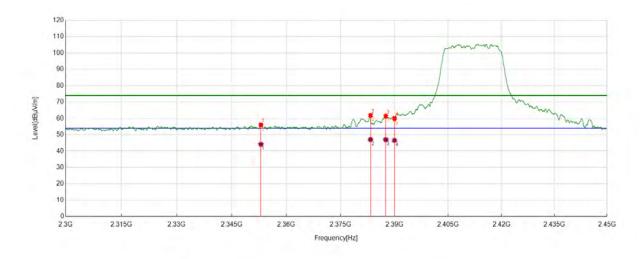
	No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
		(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
	1 0400 5000	40.16	11.28	51.44	74.00	-22.56	peak	
1 2403	2483.5000	27.40	11.28	38.68	54.00	-15.32	average	
Γ	0	2 2504.9256	43.88	11.48	55.36	74.00	-18.64	peak
	2		29.85	11.48	41.33	54.00	-12.67	average

Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

- 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 3. Measurement = Reading Level + Correct Factor.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Test Mode Channel		Verdict	
11G			PASS	

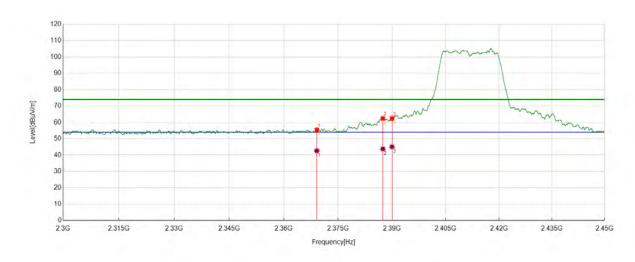


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2252 0216	44.94	11.15	56.09	74.00	-17.91	peak
I	1 2353.0316	33.01	11.15	44.16	54.00	-9.84	average
2	0 0000 0467	50.45	11.29	61.74	74.00	-12.26	peak
2	2383.3167	35.78	11.29	47.07	54.00	-6.93	average
2	3 2387.5734	50.02	11.26	61.28	74.00	-12.72	peak
3		35.70	11.26	46.96	54.00	-7.04	average
4	4 0000 0000	48.80	11.25	60.05	74.00	-13.95	peak
4	2390.0000	35.28	11.25	46.53	54.00	-7.47	average

- Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
  - 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor.
  - 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict	
11G	LCH	Vertical	PASS	

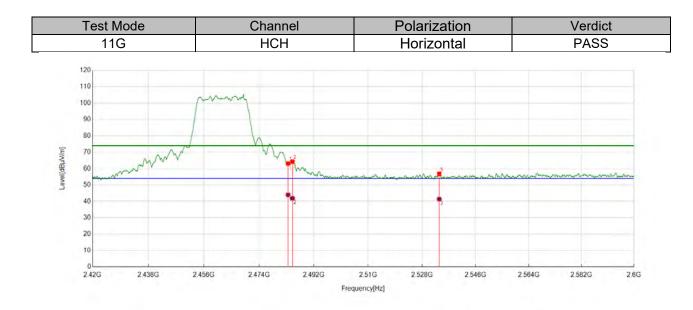


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2369.1211	44.13	11.26	55.39	74.00	-18.61	peak
	2309.1211	31.33	11.26	42.59	54.00	-11.41	average
2	2207 4422	51.18	11.27	62.45	74.00	-11.55	peak
2	2387.4422	32.48	11.27	43.75	54.00	-10.25	average
3	2390.0000	51.06	11.25	62.31	74.00	-11.69	peak
3	2390.0000	33.84	11.25	45.09	54.00	-8.91	average

Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
2. Test setup: RBW: 1 MHz. VBW: 3 MHz. Sweep time: auto.

- 3. Measurement = Reading Level + Correct Factor.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

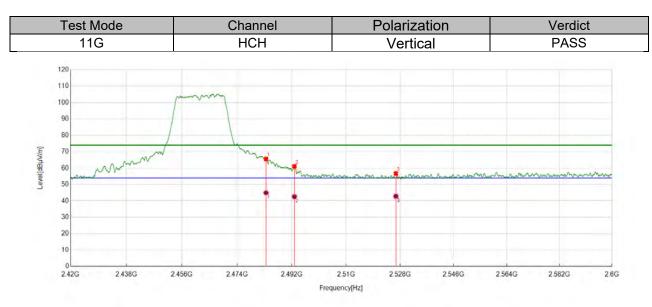




No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2492 5000	51.91	11.28	63.19	74.00	-10.81	peak
I	2483.5000	32.69	11.28	43.97	54.00	-10.03	average
2	2484.9431	52.90	11.30	64.20	74.00	-9.80	peak
2	2404.9431	30.56	11.30	41.86	54.00	-12.14	average
3	2533.7517	44.88	11.87	56.75	74.00	-17.25	peak
3	2000.7017	29.53	11.87	41.40	54.00	-12.60	average

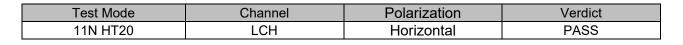
- Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
  - 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor.
  - 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

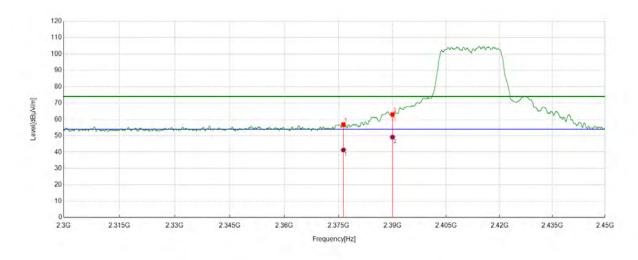




No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2492 5000	54.28	11.28	65.56	74.00	-8.44	peak
1	2483.5000	33.66	11.28	44.94	54.00	-9.06	average
2	2492.8641	49.63	11.42	61.05	74.00	-12.95	peak
2	2492.0041	31.13	11.42	42.55	54.00	-11.45	average
3	2526.5958	44.90	11.77	56.67	74.00	-17.33	peak
3	2020.0900	31.07	11.77	42.84	54.00	-11.16	average

- Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor.
  - 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



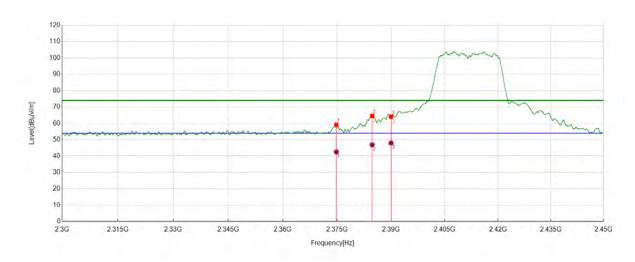


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1 0076 0400	45.65	11.30	56.95	74.00	-17.05	peak
1 2376.3408	29.99	11.30	41.29	54.00	-12.71	average	
2	0 0000 0000	51.82	11.25	63.07	74.00	-10.93	peak
2	2390.0000	37.87	11.25	49.12	54.00	-4.88	average

- Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor.
  - 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict	
11N HT20	LCH	Vertical	PASS	

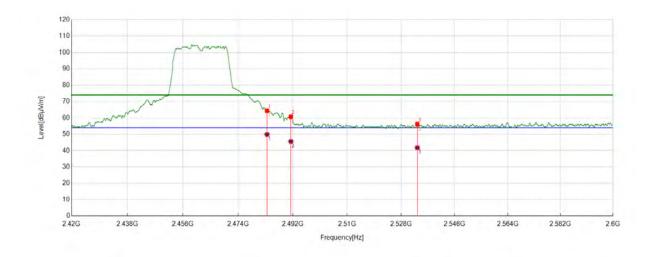


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2374.8031	47.87	11.29	59.16	74.00	-14.84	peak
I	2374.0031	31.23	11.29	42.52	54.00	-11.48	average
2	2384.7606	53.21	11.29	64.50	74.00	-9.50	peak
2	2304.7000	35.56	11.29	46.85	54.00	-7.15	average
3	2390.0000	52.81	11.25	64.06	74.00	-9.94	peak
3	2390.0000	36.73	11.25	47.98	54.00	-6.02	average

- Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
  - 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor.
  - 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict	
11N HT20	HCH	Horizontal	PASS	

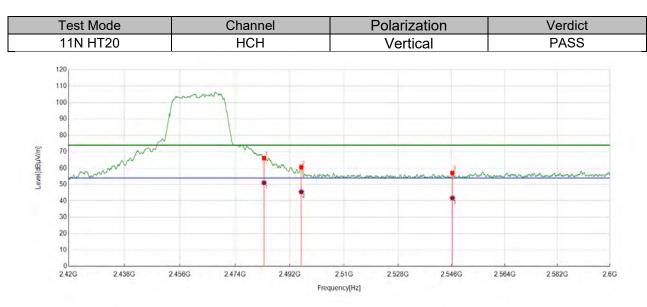


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.5000	53.06	11.28	64.34	74.00	-9.66	peak
I	2463.3000	38.55	11.28	49.83	54.00	-4.17	average
2	2401 2564	49.33	11.40	60.73	74.00	-13.27	peak
2	2491.3564	34.12	11.40	45.52	54.00	-8.48	average
3	2533.4367	44.39	11.87	56.26	74.00	-17.74	peak
3	2000.4007	29.87	11.87	41.74	54.00	-12.26	average

Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

- 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 3. Measurement = Reading Level + Correct Factor.
- 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.5000	54.86	11.28	66.14	74.00	-7.86	peak
I	2403.3000	39.76	11.28	51.04	54.00	-2.96	average
2	2405 912	49.19	11.43	60.62	74.00	-13.38	peak
2	2495.812	34.01	11.43	45.44	54.00	-8.56	average
3	2546.2633	45.33	11.82	57.15	74.00	-16.85	peak
3	2040.2033	29.88	11.82	41.70	54.00	-12.30	average

- Note: 1. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
  - 3. Measurement = Reading Level + Correct Factor.
  - 4. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



## 7.7.3. SPURIOUS EMISSIONS

Test Result Table: 1) For 1GHz~3GHz

Environment Parameter	Selected Values During Tests
Relative Humidity	54.6%
Atmospheric Pressure:	102KPa
Temperature	21°C

Test Mode	Channel	Puw(dBm)	Verdict
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11B	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	НСН	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11G	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	НСН	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT20	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	НСН	<limit< td=""><td>PASS</td></limit<>	PASS

## 2) For 3GHz~18GHz

Environment Parameter	Selected Values During Tests	
Relative Humidity	54.6%	
Atmospheric Pressure:	102KPa	
Temperature	21°C	

Test Mode	Channel	Puw(dBm)	Verdict
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11B	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	НСН	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11G	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	НСН	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT20	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS



#### 3) For 18GHz~26.5GHz

Environment Parameter	Selected Values During Tests	
Relative Humidity	54.6%	
Atmospheric Pressure:	102KPa	
Temperature	21°C	

Test Mode	Channel	Puw(dBm)	Verdict
11B	MCH	<limit< th=""><th>PASS</th></limit<>	PASS

#### Remark:

1) Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report.

#### 4) For 30MHz~1GHz

Environment Parameter	Selected Values During Tests	
Relative Humidity	55%	
Atmospheric Pressure:	102KPa	
Temperature	21.3°C	

Test Mode	Channel	Puw(dBm)	Verdict
11B	MCH	<limit< th=""><th>PASS</th></limit<>	PASS

Remark:

1) Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report.

#### 5) For 9KHz~30MHz

Environment Parameter	Selected Values During Tests	
Relative Humidity	55%	
Atmospheric Pressure:	102KPa	
Temperature	21.3°C	

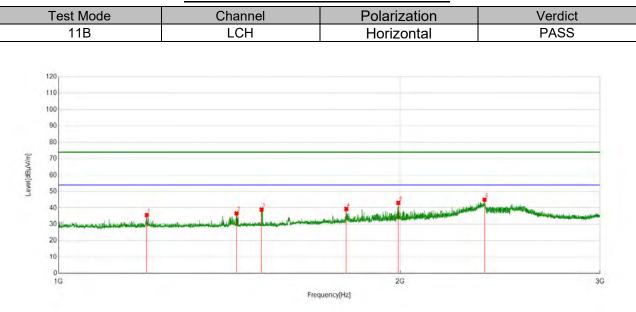
Test Mode	Channel	Puw(dBm)	Verdict
11B	MCH	<limit< th=""><th>PASS</th></limit<>	PASS

#### Remark:

1) Through pre-testing all the test modes and test channels, but only the data of the worst case is included in this test report.



## Part I: 1GHz~3GHz



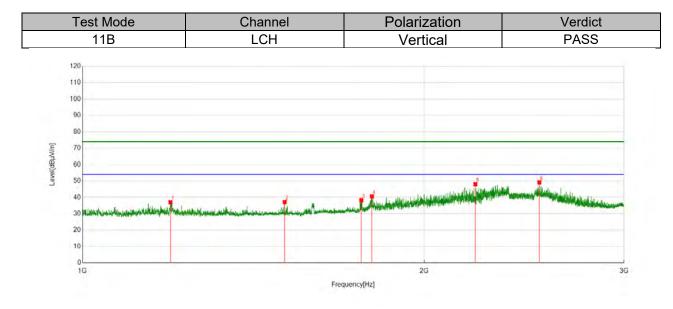
#### HARMONICS AND SPURIOUS EMISSIONS

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1196.0245	58.18	-22.56	35.62	74.00	-38.38	peak
2	1435.0544	57.64	-21.01	36.63	74.00	-37.37	peak
3	1509.8137	59.57	-20.59	38.98	74.00	-35.02	peak
4	1793.0991	57.90	-18.57	39.33	74.00	-34.67	peak
5	1992.6241	60.61	-17.58	43.03	74.00	-30.97	peak
6	2373.4217	60.29	-15.29	45.00	74.00	-29.00	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

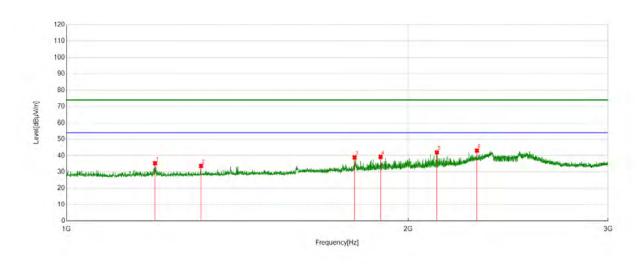


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1195.2744	59.58	-22.56	37.02	74.00	-36.98	peak
2	1507.0634	57.73	-20.62	37.11	74.00	-36.89	peak
3	1760.5951	57.31	-19.00	38.31	74.00	-35.69	peak
4	1798.8499	59.10	-18.50	40.60	74.00	-33.40	peak
5	2218.9024	64.73	-16.72	48.01	74.00	-25.99	peak
6	2526.4408	63.50	-14.33	49.17	74.00	-24.83	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11B	MCH	Horizontal	PASS

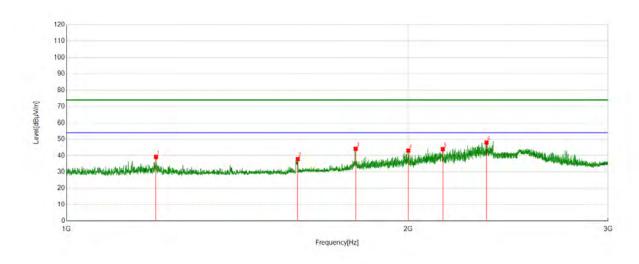


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1196.7746	57.84	-22.56	35.28	74.00	-38.72	peak
2	1313.7892	55.29	-21.59	33.70	74.00	-40.30	peak
3	1793.8492	57.51	-18.57	38.94	74.00	-35.06	peak
4	1891.1114	57.39	-18.17	39.22	74.00	-34.78	peak
5	2119.89	58.84	-16.89	41.95	74.00	-32.05	peak
6	2299.4124	59.26	-16.22	43.04	74.00	-30.96	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11B	MCH	Vertical	PASS

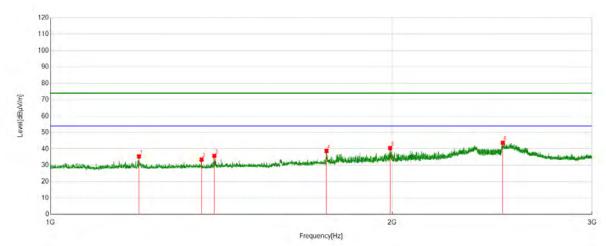


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1199.0249	61.75	-22.56	39.19	74.00	-34.81	peak
2	1598.5748	57.54	-19.69	37.85	74.00	-36.15	peak
3	1797.8497	62.69	-18.51	44.18	74.00	-29.82	peak
4	2000.375	60.53	-17.47	43.06	74.00	-30.94	peak
5	2145.6432	60.82	-16.86	43.96	74.00	-30.04	peak
6	2344.4181	63.95	-16.03	47.92	74.00	-26.08	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

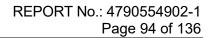


Test Mode	Channel	Polarization	Verdict
11B	НСН	Horizontal	PASS

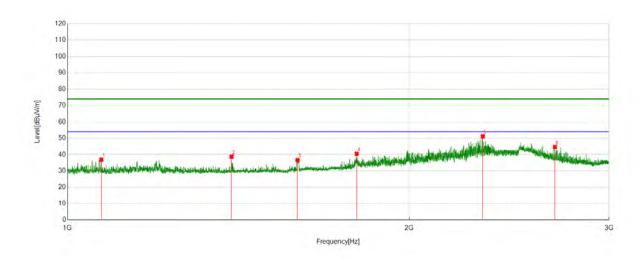


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1196.5246	57.99	-22.56	35.43	74.00	-38.57	peak
2	1358.5448	54.76	-21.29	33.47	74.00	-40.53	peak
3	1394.2993	57.06	-21.28	35.78	74.00	-38.22	peak
4	1750.5938	57.91	-19.16	38.75	74.00	-35.25	peak
5	1991.624	58.13	-17.60	40.53	74.00	-33.47	peak
6	2503.4379	57.95	-14.27	43.68	74.00	-30.32	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11B	HCH	Vertical	PASS

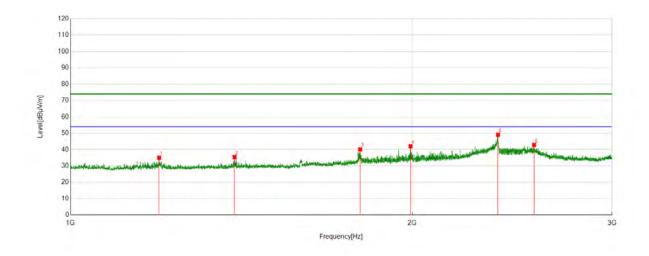


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1071.0089	59.50	-22.58	36.92	74.00	-37.08	peak
2	1394.7994	59.96	-21.25	38.71	74.00	-35.29	peak
3	1594.5743	56.52	-19.85	36.67	74.00	-37.33	peak
4	1798.0998	59.05	-18.51	40.54	74.00	-33.46	peak
5	2322.1653	67.25	-16.05	51.20	74.00	-22.80	peak
6	2687.961	58.90	-14.22	44.68	74.00	-29.32	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

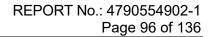


Test Mode	Channel	Polarization	Verdict
11G	LCH	Horizontal	PASS

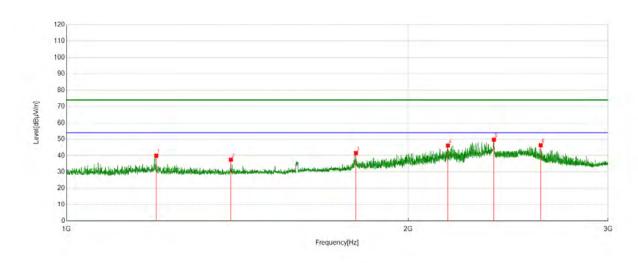


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1197.0246	57.54	-22.56	34.98	74.00	-39.02	peak
2	1394.7994	56.69	-21.25	35.44	74.00	-38.56	peak
3	1799.6	58.65	-18.48	40.17	74.00	-33.83	peak
4	1993.6242	59.60	-17.57	42.03	74.00	-31.97	peak
5	2380.4226	64.42	-15.29	49.13	74.00	-24.87	peak
6	2561.1951	57.49	-14.62	42.87	74.00	-31.13	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11G	LCH	Vertical	PASS

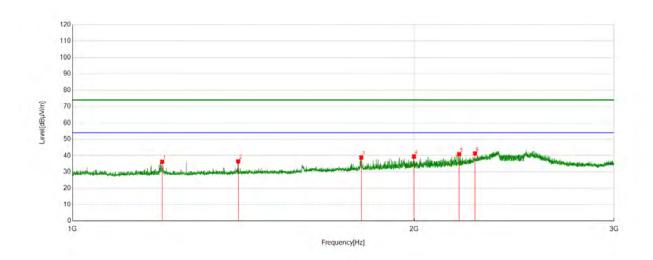


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1199.775	62.55	-22.57	39.98	74.00	-34.02	peak
2	1395.7995	58.70	-21.21	37.49	74.00	-36.51	peak
3	1798.8499	60.03	-18.50	41.53	74.00	-32.47	peak
4	2167.896	63.05	-16.91	46.14	74.00	-27.86	peak
5	2379.9225	65.05	-15.29	49.76	74.00	-24.24	peak
6	2616.9521	60.27	-13.98	46.29	74.00	-27.71	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11G	MCH	Horizontal	PASS

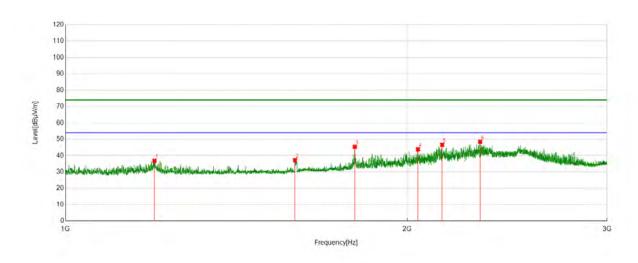


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1199.5249	58.84	-22.57	36.27	74.00	-37.73	peak
2	1399.5499	57.54	-21.05	36.49	74.00	-37.51	peak
3	1796.3495	57.38	-18.52	38.86	74.00	-35.14	peak
4	1999.1249	56.93	-17.49	39.44	74.00	-34.56	peak
5	2190.8989	57.74	-16.88	40.86	74.00	-33.14	peak
6	2262.6578	57.84	-16.51	41.33	74.00	-32.67	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

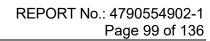


Test Mode	Channel	Polarization	Verdict
11G	MCH	Vertical	PASS

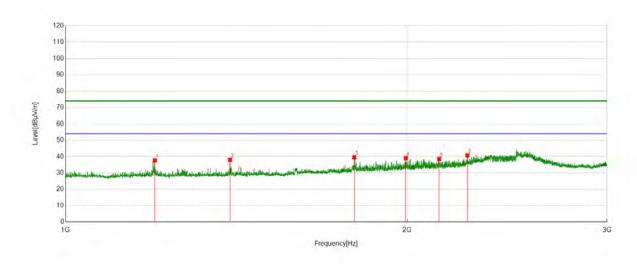


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1197.7747	59.39	-22.56	36.83	74.00	-37.17	peak
2	1592.8241	57.12	-19.91	37.21	74.00	-36.79	peak
3	1798.3498	63.88	-18.50	45.38	74.00	-28.62	peak
4	2044.1305	60.54	-16.73	43.81	74.00	-30.19	peak
5	2147.1434	63.46	-16.87	46.59	74.00	-27.41	peak
6	2318.9149	64.51	-16.03	48.48	74.00	-25.52	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11G	HCH	Horizontal	PASS

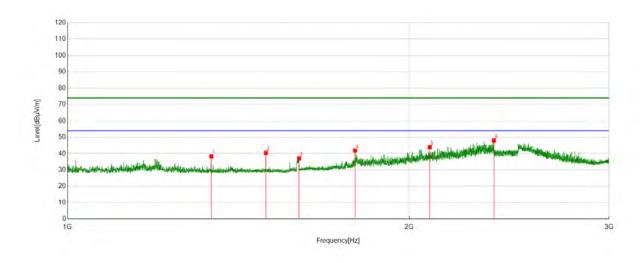


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1198.7748	60.21	-22.56	37.65	74.00	-36.35	peak
2	1396.2995	59.23	-21.19	38.04	74.00	-35.96	peak
3	1796.3495	58.06	-18.52	39.54	74.00	-34.46	peak
4	1994.6243	56.59	-17.55	39.04	74.00	-34.96	peak
5	2133.8917	55.28	-16.76	38.52	74.00	-35.48	peak
6	2260.1575	57.31	-16.52	40.79	74.00	-33.21	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11G	HCH	Vertical	PASS

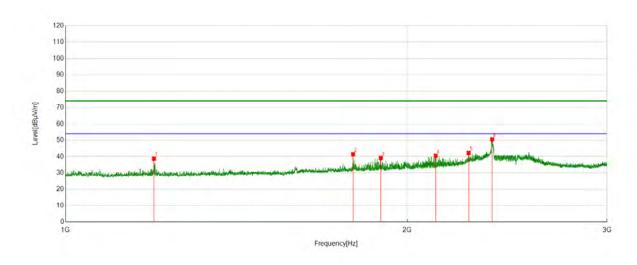


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1338.7923	59.81	-21.45	38.36	74.00	-35.64	peak
2	1495.5619	61.11	-20.68	40.43	74.00	-33.57	peak
3	1599.5749	56.71	-19.66	37.05	74.00	-36.95	peak
4	1792.099	60.42	-18.59	41.83	74.00	-32.17	peak
5	2085.3857	60.99	-17.06	43.93	74.00	-30.07	peak
6	2375.1719	63.26	-15.29	47.97	74.00	-26.03	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11N HT20	LCH	Horizontal	PASS

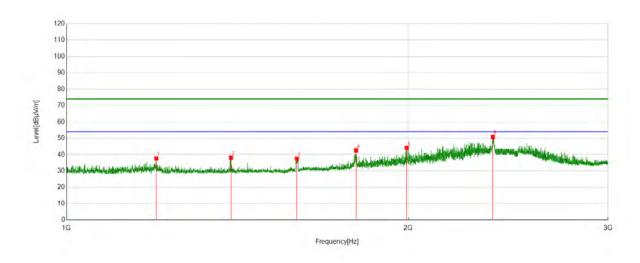


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1196.5246	61.29	-22.56	38.73	74.00	-35.27	peak
2	1792.099	60.01	-18.59	41.42	74.00	-32.58	peak
3	1895.862	57.26	-18.15	39.11	74.00	-34.89	peak
4	2119.1399	57.45	-16.90	40.55	74.00	-33.45	peak
5	2265.6582	58.73	-16.51	42.22	74.00	-31.78	peak
6	2376.4221	65.83	-15.29	50.54	74.00	-23.46	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11N HT20	LCH	Vertical	PASS

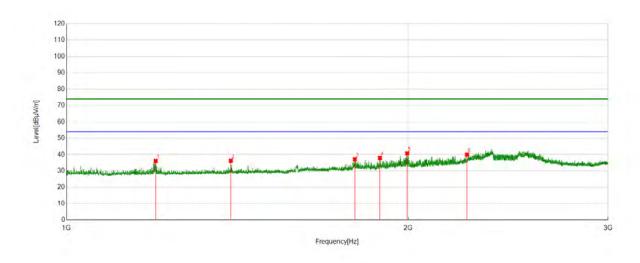


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1199.775	60.18	-22.57	37.61	74.00	-36.39	peak
2	1396.0495	59.38	-21.20	38.18	74.00	-35.82	peak
3	1595.8245	57.26	-19.80	37.46	74.00	-36.54	peak
4	1799.3499	61.06	-18.49	42.57	74.00	-31.43	peak
5	1994.1243	61.73	-17.57	44.16	74.00	-29.84	peak
6	2374.6718	66.08	-15.29	50.79	74.00	-23.21	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11N HT20	MCH	Horizontal	PASS

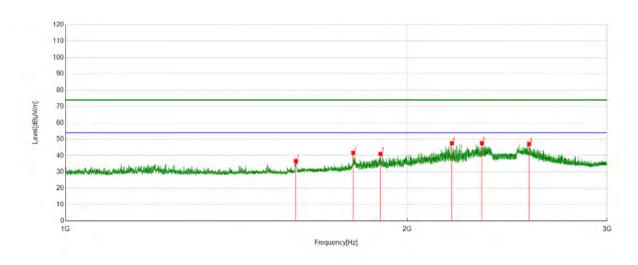


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1198.2748	58.72	-22.56	36.16	74.00	-37.84	peak
2	1395.5494	57.47	-21.22	36.25	74.00	-37.75	peak
3	1794.8494	55.72	-18.55	37.17	74.00	-36.83	peak
4	1888.6111	56.13	-18.21	37.92	74.00	-36.08	peak
5	1996.1245	58.30	-17.53	40.77	74.00	-33.23	peak
6	2253.6567	56.61	-16.56	40.05	74.00	-33.95	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11N HT20	MCH	Vertical	PASS

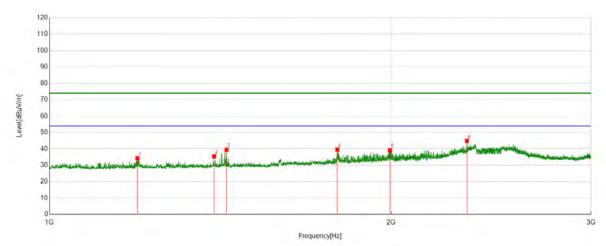


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1595.8245	56.52	-19.80	36.72	74.00	-37.28	peak
2	1792.8491	60.25	-18.57	41.68	74.00	-32.32	peak
3	1894.6118	59.18	-18.16	41.02	74.00	-32.98	peak
4	2190.1488	64.43	-16.88	47.55	74.00	-26.45	peak
5	2327.666	63.71	-16.10	47.61	74.00	-26.39	peak
6	2561.4452	61.76	-14.62	47.14	74.00	-26.86	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11N HT20	НСН	Horizontal	PASS

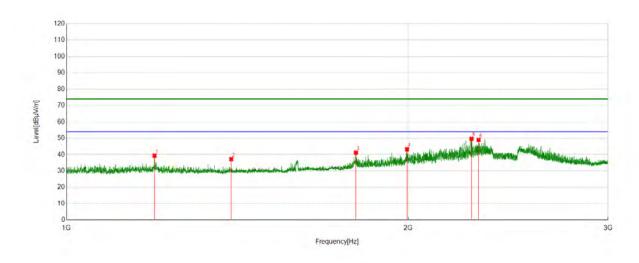


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1195.2744	56.83	-22.56	34.27	74.00	-39.73	peak
2	1396.5496	56.61	-21.18	35.43	74.00	-38.57	peak
3	1432.054	60.48	-21.06	39.42	74.00	-34.58	peak
4	1793.0991	58.11	-18.57	39.54	74.00	-34.46	peak
5	1995.1244	56.68	-17.55	39.13	74.00	-34.87	peak
6	2332.4166	61.05	-16.12	44.93	74.00	-29.07	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11N HT20	HCH	Vertical	PASS

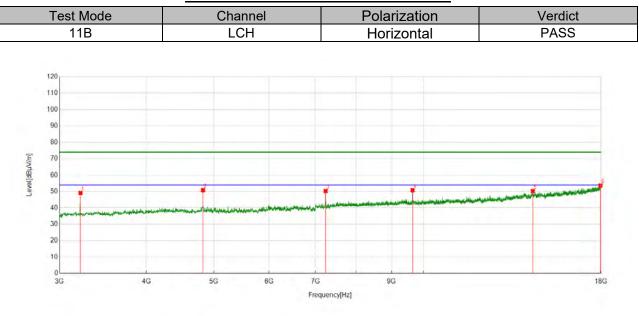


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	1195.5244	61.87	-22.56	39.31	74.00	-34.69	peak
2	1396.7996	58.39	-21.17	37.22	74.00	-36.78	peak
3	1798.8499	59.67	-18.50	41.17	74.00	-32.83	peak
4	1995.3744	60.81	-17.55	43.26	74.00	-30.74	peak
5	2274.1593	66.11	-16.47	49.64	74.00	-24.36	peak
6	2307.1634	65.10	-16.13	48.97	74.00	-25.03	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For below 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for Band Reject Filter losses The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



## Part II: 3GHz~18GHz



#### HARMONICS AND SPURIOUS EMISSIONS

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3215.652	60.61	-11.50	49.11	74.00	-24.89	peak
2	4822.7278	57.22	-6.42	50.80	74.00	-23.20	peak
3	7236.1545	52.27	-2.01	50.26	74.00	-23.74	peak
4	9647.706	49.38	1.37	50.75	74.00	-23.25	peak
5	14363.9205	40.90	9.35	50.25	74.00	-23.75	peak
6	17968.121	36.86	16.84	53.70	74.00	-20.30	peak

Note: 1. Measurement = Reading Level + Correct Factor.

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

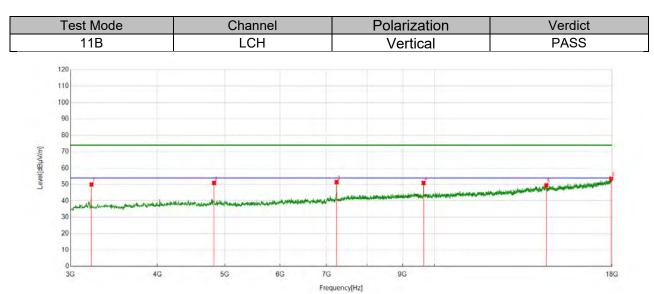
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Peak: Peak detector.

5. AVG: VBW refer to section 7.2.

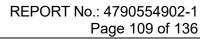
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



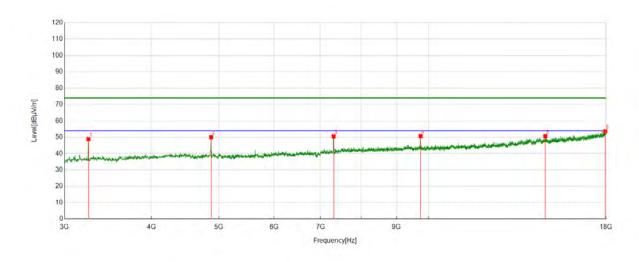


Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
3215.652	61.48	-11.50	49.98	74.00	-24.02	peak
4822.7278	57.37	-6.42	50.95	74.00	-23.05	peak
7236.1545	53.50	-2.01	51.49	74.00	-22.51	peak
9647.706	49.61	1.37	50.98	74.00	-23.02	peak
14483.9355	40.02	9.55	49.57	74.00	-24.43	peak
17947.4934	37.05	16.51	53.56	74.00	-20.44	peak
	(MHz) 3215.652 4822.7278 7236.1545 9647.706 14483.9355	Frequency         Level           (MHz)         (dBuV)           3215.652         61.48           4822.7278         57.37           7236.1545         53.50           9647.706         49.61           14483.9355         40.02	Frequency         Level         Factor           (MHz)         (dBuV)         (dB/m)           3215.652         61.48         -11.50           4822.7278         57.37         -6.42           7236.1545         53.50         -2.01           9647.706         49.61         1.37           14483.9355         40.02         9.55	Frequency         Level         Factor         Result           (MHz)         (dBuV)         (dB/m)         (dBuV/m)           3215.652         61.48         -11.50         49.98           4822.7278         57.37         -6.42         50.95           7236.1545         53.50         -2.01         51.49           9647.706         49.61         1.37         50.98           14483.9355         40.02         9.55         49.57	Frequency         Level         Factor         Result         Limit           (MHz)         (dBuV)         (dB/m)         (dBuV/m)         (dBuV/m)           3215.652         61.48         -11.50         49.98         74.00           4822.7278         57.37         -6.42         50.95         74.00           7236.1545         53.50         -2.01         51.49         74.00           9647.706         49.61         1.37         50.98         74.00           14483.9355         40.02         9.55         49.57         74.00	FrequencyLevelFactorResultLimitMargin(MHz)(dBuV)(dB/m)(dBuV/m)(dBuV/m)(dB)3215.65261.48-11.5049.9874.00-24.024822.727857.37-6.4250.9574.00-23.057236.154553.50-2.0151.4974.00-22.519647.70649.611.3750.9874.00-23.0214483.935540.029.5549.5774.00-24.43

- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
   Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



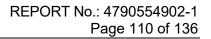
Test Mode	Channel	Polarization	Verdict
11B	MCH	Horizontal	PASS



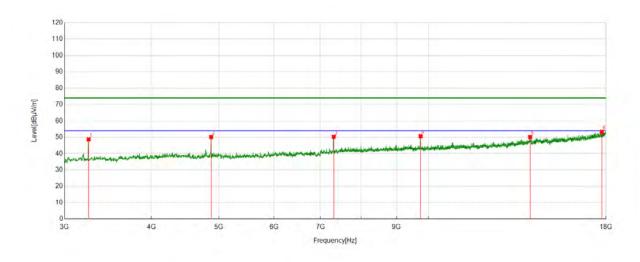
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3247.5309	60.30	-11.41	48.89	74.00	-25.11	peak
2	4873.3592	56.42	-6.40	50.02	74.00	-23.98	peak
3	7309.2887	52.68	-2.16	50.52	74.00	-23.48	peak
4	9747.0934	49.12	1.60	50.72	74.00	-23.28	peak
5	14722.0903	41.16	9.47	50.63	74.00	-23.37	peak
6	17953.1191	36.98	16.60	53.58	74.00	-20.42	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11B	MCH	Vertical	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3249.4062	60.20	-11.47	48.73	74.00	-25.27	peak
2	4873.3592	56.51	-6.40	50.11	74.00	-23.89	peak
3	7311.1639	52.39	-2.15	50.24	74.00	-23.76	peak
4	9747.0934	48.99	1.60	50.59	74.00	-23.41	peak
5	14002.0002	40.99	9.11	50.10	74.00	-23.90	peak
6	17748.7186	37.63	15.65	53.28	74.00	-20.72	peak

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Peak: Peak detector.

5. AVG: VBW refer to section 7.2.

6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.

7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

10

3G

18G

Test Mode	Channel	Polarization	Verdict	
11B	НСН	Horizontal	PASS	
120,				
110				
100				
90				
80				
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70 60 50				
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30				
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9G

7G

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3281.2852	60.40	-10.66	49.74	74.00	-24.26	peak
2	4923.9905	54.56	-6.18	48.38	74.00	-25.62	peak
3	7384.298	52.79	-1.88	50.91	74.00	-23.09	peak
4	9848.356	49.07	1.55	50.62	74.00	-23.38	peak
5	12539.3174	41.44	5.42	46.86	74.00	-27.14	peak
6	17906.2383	36.64	16.40	53.04	74.00	-20.96	peak

Note: 1. Measurement = Reading Level + Correct Factor.

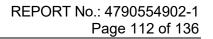
5G

6G

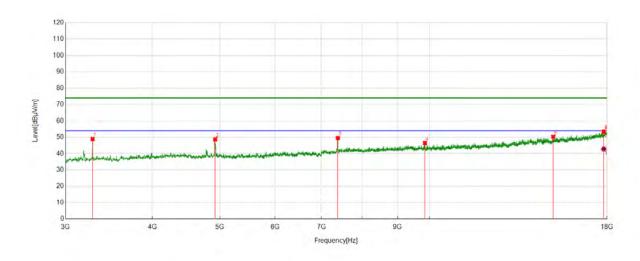
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
   Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.

4G

- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11B	HCH	Vertical	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3281.2852	59.57	-10.66	48.91	74.00	-25.09	peak
2	4922.1153	54.87	-6.17	48.70	74.00	-25.30	peak
3	7386.1733	51.36	-1.85	49.51	74.00	-24.49	peak
4	9853.9817	44.86	1.59	46.45	74.00	-27.55	peak
5	15063.3829	40.61	9.64	50.25	74.00	-23.75	peak
6	17804.9756	37.68	15.74	53.42	74.00	-20.58	peak
0	17004.9750	27.07	15.74	42.81	54.00	-11.19	average

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Peak: Peak detector.

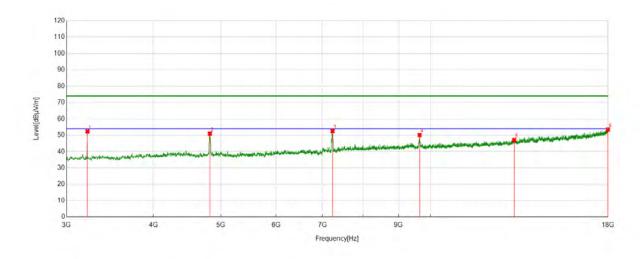
5. AVG: VBW refer to section 7.2.

6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.

7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11G	LCH	Horizontal	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3215.652	63.78	-11.50	52.28	74.00	-21.72	peak
2	4820.8526	57.45	-6.44	51.01	74.00	-22.99	peak
3	7234.2793	54.56	-2.02	52.54	74.00	-21.46	peak
4	9649.5812	48.73	1.39	50.12	74.00	-20.88	peak
5	13193.7742	40.43	6.62	47.05	74.00	-26.95	peak
6	17992.4991	36.92	16.58	53.50	74.00	-20.50	peak

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

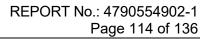
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

4. Peak: Peak detector.

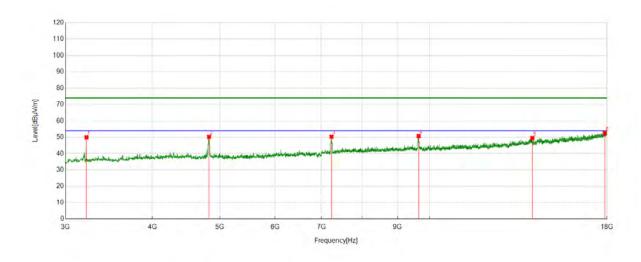
5. AVG: VBW refer to section 7.2.

6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.

7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



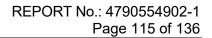
Test Mode	Channel	Polarization	Verdict
11G	LCH	Vertical	PASS



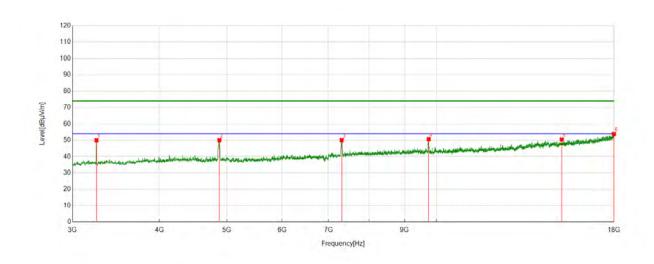
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3215.652	61.43	-11.50	49.93	74.00	-24.07	peak
2	4822.7278	56.62	-6.42	50.20	74.00	-23.80	peak
3	7234.2793	52.33	-2.02	50.31	74.00	-20.19	peak
4	9651.4564	49.34	1.38	50.72	74.00	-23.28	peak
5	14058.2573	40.39	9.11	49.50	74.00	-24.50	peak
6	17870.6088	35.55	16.94	52.49	74.00	-21.51	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



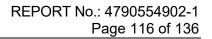
Test Mode	Channel	Polarization	Verdict
11G	MCH	Horizontal	PASS



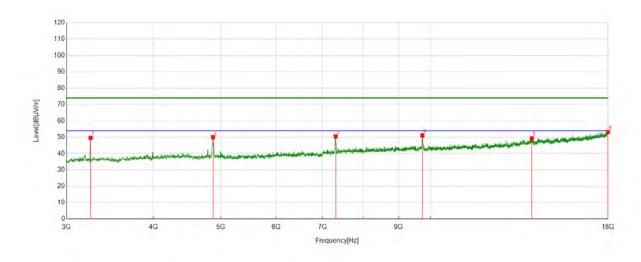
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3247.5309	61.40	-11.41	49.99	74.00	-24.01	peak
2	4877.1096	56.36	-6.34	50.02	74.00	-23.98	peak
3	7309.2887	52.23	-2.16	50.07	74.00	-23.93	peak
4	9748.9686	49.11	1.54	50.65	74.00	-23.35	peak
5	15142.1428	40.62	9.80	50.42	74.00	-23.58	peak
6	17990.6238	37.28	16.58	53.86	74.00	-20.14	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



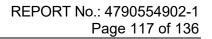
Test Mode	Channel	Polarization	Verdict
11G	MCH	Vertical	PASS



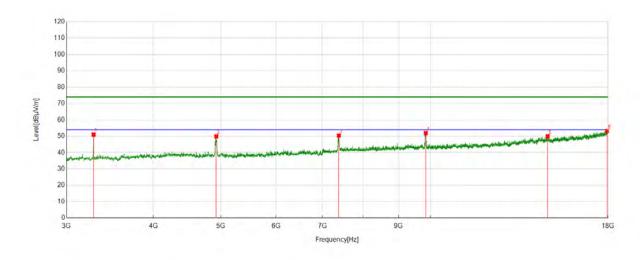
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3249.4062	61.08	-11.47	49.61	74.00	-24.39	peak
2	4871.4839	56.51	-6.43	50.08	74.00	-23.92	peak
3	7309.2887	52.63	-2.16	50.47	74.00	-23.53	peak
4	9741.4677	49.40	1.75	51.15	74.00	-22.85	peak
5	13990.7488	40.31	9.01	49.32	74.00	-24.68	peak
6	17998.1248	36.67	16.58	53.25	74.00	-20.75	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



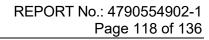
Test Mode	Channel	Polarization	Verdict
11G	HCH	Horizontal	PASS



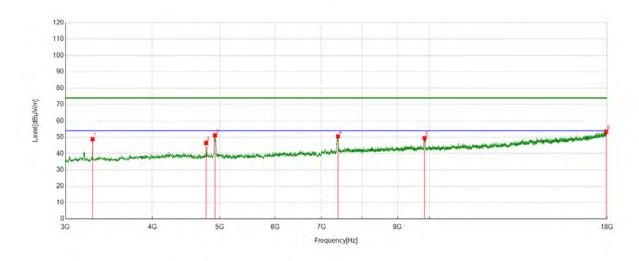
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3281.2852	61.69	-10.66	51.03	74.00	-22.97	peak
2	4923.9905	56.08	-6.18	49.90	74.00	-24.10	peak
3	7386.1733	52.26	-1.85	50.41	74.00	-23.59	peak
4	9848.356	50.38	1.55	51.93	74.00	-22.07	peak
5	14742.7178	40.16	9.80	49.96	74.00	-24.04	peak
6	17938.1173	36.60	16.61	53.21	74.00	-20.79	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



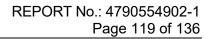
Test Mode	Channel	Polarization	Verdict
11G	HCH	Vertical	PASS



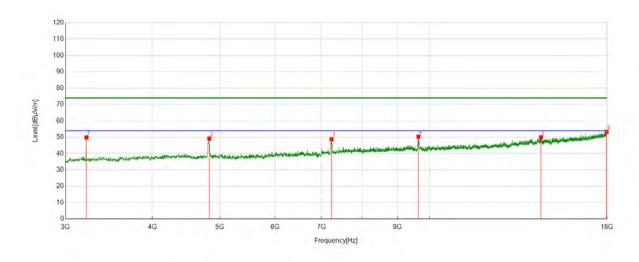
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3281.2852	59.50	-10.66	48.84	74.00	-25.16	peak
2	4777.7222	53.14	-6.62	46.52	74.00	-27.48	peak
3	4920.24	57.39	-6.18	51.21	74.00	-22.79	peak
4	7389.9237	52.26	-1.78	50.48	74.00	-23.52	peak
5	9842.7303	47.88	1.61	49.49	74.00	-24.51	peak
6	17945.6182	36.94	16.52	53.46	74.00	-20.54	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



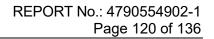
Test Mode	Channel	Polarization	Verdict
11N HT20	LCH	Horizontal	PASS



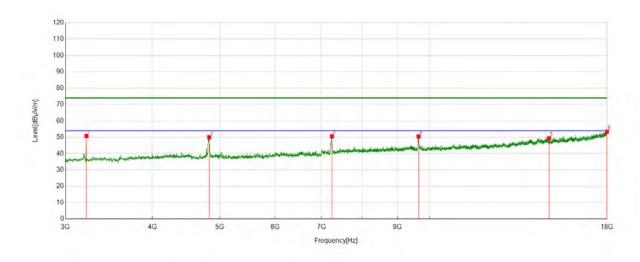
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3215.652	61.38	-11.50	49.88	74.00	-24.12	peak
2	4826.4783	55.55	-6.40	49.15	74.00	-24.85	peak
3	7234.2793	50.86	-2.02	48.84	74.00	-25.16	peak
4	9643.9555	49.02	1.34	50.36	74.00	-23.64	peak
5	14467.0584	40.29	9.68	49.97	74.00	-24.03	peak
6	17977.4972	36.55	16.78	53.33	74.00	-20.67	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



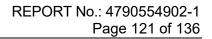
Test Mode	Channel	Polarization	Verdict
11N HT20	LCH	Vertical	PASS



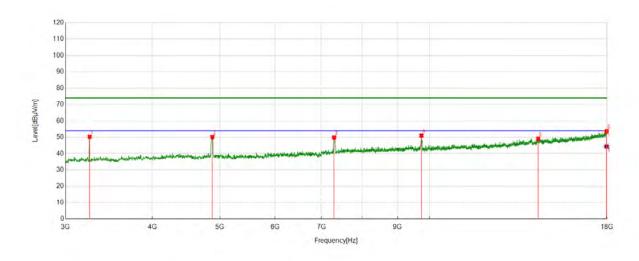
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3215.652	62.24	-11.50	50.74	74.00	-23.26	peak
2	4826.4783	56.43	-6.40	50.03	74.00	-23.97	peak
3	7243.6555	52.55	-2.01	50.54	74.00	-23.46	peak
4	9647.706	49.10	1.37	50.47	74.00	-23.53	peak
5	14858.9824	40.02	9.41	49.43	74.00	-24.57	peak
6	17994.3743	36.88	16.57	53.45	74.00	-20.55	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



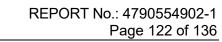
Test Mode	Channel	Polarization	Verdict
11N HT20	MCH	Horizontal	PASS



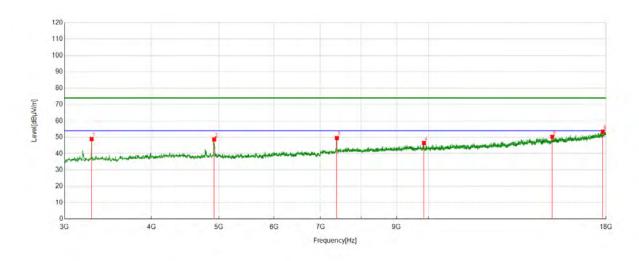
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3249.4062	61.72	-11.47	50.25	74.00	-23.75	peak
2	4877.1096	56.47	-6.34	50.13	74.00	-23.87	peak
3	7296.162	51.90	-2.08	49.82	74.00	-24.18	peak
4	9741.4677	49.30	1.75	51.05	74.00	-22.95	peak
5	14333.9167	39.61	9.51	49.12	74.00	-24.88	peak
6	17969.9962	36.83	16.84	53.67	74.00	-20.33	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11N HT20	MCH	Vertical	PASS



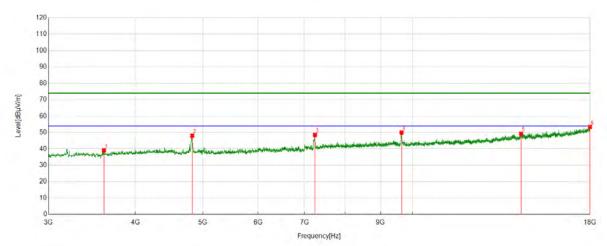
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3281.2852	59.57	-10.66	48.91	74.00	-25.09	peak
2	4922.1153	54.87	-6.17	48.70	74.00	-25.30	peak
3	7386.1733	51.36	-1.85	49.51	74.00	-24.49	peak
4	9853.9817	44.86	1.59	46.45	74.00	-27.55	peak
5	15063.3829	40.61	9.64	50.25	74.00	-23.75	peak
6	17804.9756	37.68	15.74	53.42	74.00	-20.58	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

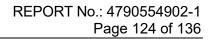


Test Mode	Channel	Polarization	Verdict
11N HT20	НСН	Horizontal	PASS

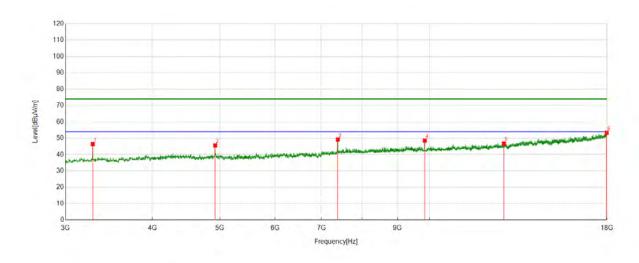


No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3603.8255	49.22	-10.15	39.07	74.00	-34.93	peak
2	4826.4783	54.43	-6.40	48.03	74.00	-25.97	peak
3	7243.6555	50.55	-2.01	48.54	74.00	-25.46	peak
4	9647.706	48.60	1.37	49.97	74.00	-24.03	peak
5	14328.291	39.80	9.46	49.26	74.00	-24.74	peak
6	17994.3743	36.88	16.57	53.45	74.00	-20.55	peak

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



Test Mode	Channel	Polarization	Verdict
11N HT20	HCH	Vertical	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	3283.1604	57.14	-10.72	46.42	74.00	-27.58	peak
2	4922.1153	51.77	-6.17	45.60	74.00	-28.40	peak
3	7386.1733	51.04	-1.85	49.19	74.00	-24.81	peak
4	9848.356	47.07	1.55	48.62	74.00	-25.38	peak
5	12796.2245	41.19	5.58	46.77	74.00	-27.23	peak
6	17979.3724	36.58	16.77	53.35	74.00	-20.65	peak

Note: 1. Measurement = Reading Level + Correct Factor.

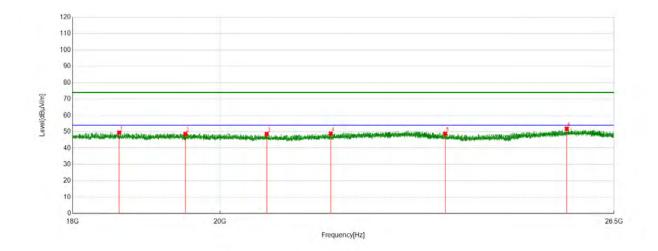
- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 4. Peak: Peak detector.
- 5. AVG: VBW refer to section 7.2.
- 6. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses. The proper operation of the transmitter prior to adding the filter to the measurement chain.
- 7. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



# Part III: 18GHz~26.5GHz

### SPURIOUS EMISSIONS 18GHz TO 26.5GHz (WORST-CASE CONFIGURATION)

Test Mode	Channel	Polarization	Verdict
11B	MCH	Horizontal	PASS



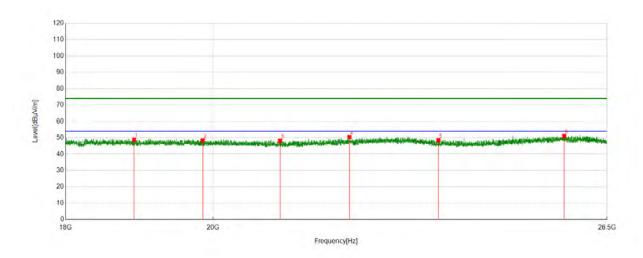
No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	18610.361	50.46	-0.97	49.49	74.00	-24.51	peak
2	19509.751	49.41	-0.72	48.69	74.00	-25.31	peak
3	20678.6179	49.51	-0.85	48.66	74.00	-25.34	peak
4	21646.8647	49.25	-0.31	48.94	74.00	-25.06	peak
5	23490.6991	48.99	-0.10	48.89	74.00	-25.11	peak
6	25620.162	50.79	1.05	51.84	74.00	-22.16	peak

Note: 1.If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

- 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.
- 3. Measurement = Reading Level + Correct Factor.



Test Mode	Channel	Polarization	Verdict
11B	MCH	Vertical	PASS



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark	
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		
1	18904.4904	49.94	-1.11	48.83	74.00	-25.17	peak	
2	19852.3352	48.97	-0.60	48.37	74.00	-25.63	peak	
3	20981.2481	49.11	-0.99	48.12	74.00	-25.88	peak	
4	22045.5546	50.20	0.23	50.43	74.00	-23.57	peak	
5	23492.3992	48.61	-0.11	48.50	74.00	-25.50	peak	
6	25700.9201	49.95	1.18	51.13	74.00	-22.87	peak	

Note: 1.If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit. 2. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

3. Measurement = Reading Level + Correct Factor.



# Part IV: 30MHz~1GHz

#### Test Mode Polarization Verdict Channel 11B MCH Horizontal PASS MaxPeak Average Limit1 Trace1 100 90 80 70 Level[dB(uV)] 60 50 40 6 5 30 20 mounter monter an 10 0 100M 30M зоом Frequency[MHz]

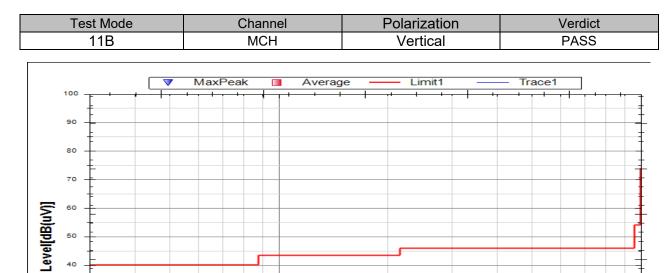
#### SPURIOUS EMISSIONS 30M TO 1GHHz (WORST-CASE CONFIGURATION)

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	49.8900	-1.08	21.03	19.95	40.00	-20.05	peak
2	91.3679	1.93	17.12	19.05	43.50	-24.45	peak
3	110.5303	1.45	18.34	19.79	43.50	-23.71	peak
4	159.2850	3.90	15.85	19.75	43.50	-23.75	peak
5	479.9507	3.66	25.23	28.89	46.00	-17.11	peak
6	751.619	1.57	30.08	31.65	46.00	-14.35	peak

Note: 1. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit. 2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

3. Measurement = Reading Level + Correct Factor.





N	о.	Frequ	ency	, R	Reading Level		Correct Factor	Result	Limi	it	Margin	Rem	ark	
							Fr	equency	[MHz]					
	30M				·	1	оом		30	ом		• •	•	1G
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No.	Frequency	Level	Factor	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	40.4301	5.23	20	25.23	40.00	-14.77	peak
2	65.4139	12.33	17.84	30.17	40.00	-9.83	peak
3	76.3292	10.66	14.75	25.41	40.00	-14.59	peak
4	108.1046	8.5	18.51	27.01	43.50	-16.49	peak
5	141.8206	10.75	15.31	26.06	43.50	-17.44	peak
6	777.3304	1.78	30.08	31.86	46.00	-14.14	peak

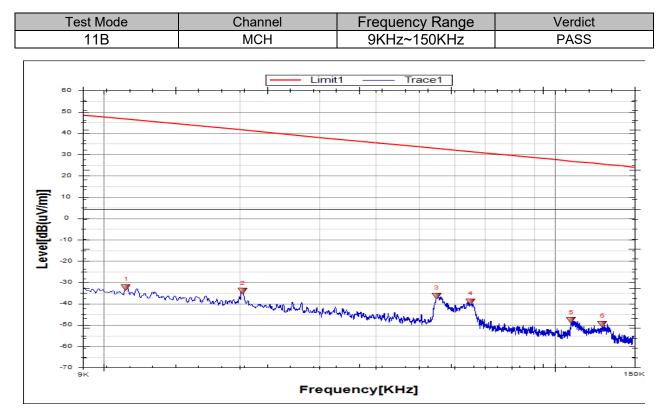
Note: 1. If Peak Result complies with QP limit, QP Result is deemed to comply with QP limit. 2. Test setup: RBW: 120 kHz, VBW: 300 kHz, Sweep time: auto.

3. Measurement = Reading Level + Correct Factor.



# Part V: 9KHz~30MHz

## SPURIOUS EMISSIONS Below 30MHz (WORST CASE CONFIGURATION-FACE ON)



No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	IC Result	IC Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.0112	29.46	-61.90	-32.44	46.88	-83.94	-4.62	-79.32	peak
2	0.0203	27.68	-61.81	-34.13	41.47	-85.63	-10.03	-75.60	peak
3	0.0547	25.39	-61.73	-36.34	32.88	-87.84	-18.62	-69.22	peak
4	0.0650	22.74	-61.76	-39.02	31.38	-90.52	-20.12	-70.40	peak
5	0.1087	13.95	-61.81	-47.86	26.89	-99.36	-24.61	-74.75	peak
6	0.1275	12.26	-61.82	-49.56	25.50	-101.06	-26.00	-75.06	peak

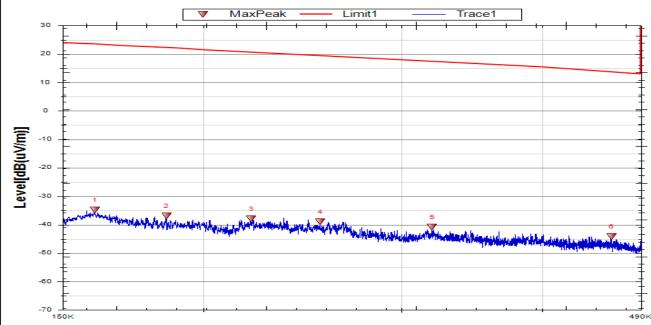
Note: 1. Measurement = Reading Level + Correct Factor.

- 2. Result 300m= Result 3m-80 dBuV/m
- 3. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
- 4. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report
- 5. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency X KHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.

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Test Mode	Channel	Frequency Range	Verdict
11B	MCH	150KHz~490Hz	PASS



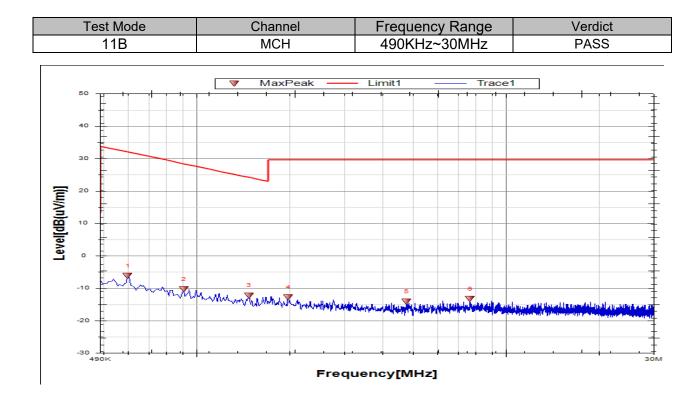
#### Frequency[KHz]

No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	IC Result	IC Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.1601	27.03	-61.84	-34.81	23.51	-86.31	-27.99	-58.32	peak
2	0.1853	25.03	-61.85	-36.82	22.25	-88.32	-29.25	-59.07	peak
3	0.2206	23.9	-61.87	-37.97	20.85	-89.47	-30.65	-58.82	peak
4	0.254	22.9	-61.89	-38.99	19.68	-90.49	-31.82	-58.67	peak
5	0.3195	21.15	-61.91	-40.76	17.57	-92.26	-33.93	-58.33	peak
6	0.4612	17.77	-61.87	-44.1	13.87	-95.60	-37.63	-57.97	peak

Note: 1. Measurement = Reading Level + Correct Factor.

- 2. Result 300m= Result 3m-80 dBuV/m
- 3. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
- 4. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report
- 5. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω. For example, the measurement frequency X KHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.





No.	Frequency	Reading Level	Correct Factor	FCC Result	FCC Limit	IC Result	IC Limit	Margin	Remark
	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dBuA/m)	(dBuA/m)	(dB)	
1	0.6007	15.7	-21.88	-6.18	32.03	-57.68	-19.47	-38.21	peak
2	0.9106	11.51	-21.85	-10.34	28.42	-61.84	-23.08	-38.76	peak
3	1.4788	9.59	-21.82	-12.23	24.21	-63.73	-27.29	-36.44	peak
4	1.9806	9.07	-21.81	-12.74	29.54	-64.24	-21.96	-42.28	peak
5	4.7772	7.54	-21.72	-14.18	29.54	-65.68	-21.96	-43.72	peak
6	7.6771	8.43	-21.7	-13.27	29.54	-64.77	-21.96	-42.81	peak

- 2. Result 30m= Result 3m-40 dBuV/m
- 3. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
- 4. All 3 polarizations(Horizontal, Face-on and Face-off) of the loop antenna had been tested, but only the worst data recorded in the report
- 5. The limits in CFR 47, Part 15, Subpart C, paragraph 15.209 (a), are identical to those in RSS-GEN Section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377Ω;. For example, the measurement frequency X KHz resulted in a level of Y dBuV/m, which is equivalent to Y-51.5 = Z dBuA/m, which has the same margin, W dB, to the corresponding RSS-GEN Table 6 limit as it has to be 15.209(a) limit.



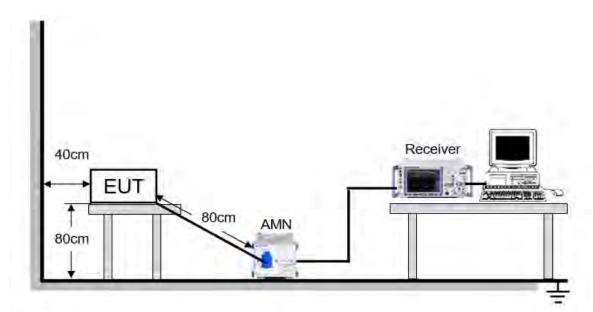
# 8. AC POWER LINE CONDUCTED EMISSIONS

# LIMITS

Please refer to FCC §15.207 (a), ISED RSS-Gen Clause 8.8

FREQUENCY (MHz)	Lin	nit (dBuV)
FREQUENCT (MILZ)	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

# TEST SETUP AND PROCEDURE



The EUT is put on a table of non-conducting material that is 80cm high. The vertical conducting wall of shielding is located 40cm to the rear of the EUT. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.). A EMI Measurement Receiver (R&S Test Receiver ESR3) is used to test the emissions from both sides of AC line. According to the requirements in Section 6.2 of ANSI C63.10-2013.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-Peak and average detector mode. The bandwidth of EMI test receiver is set at 9kHz.

The arrangement of the equipment is installed to meet the standards and operating in a manner, which tends to maximize its emission characteristics in a normal application.

# TEST ENVIRONMENT:

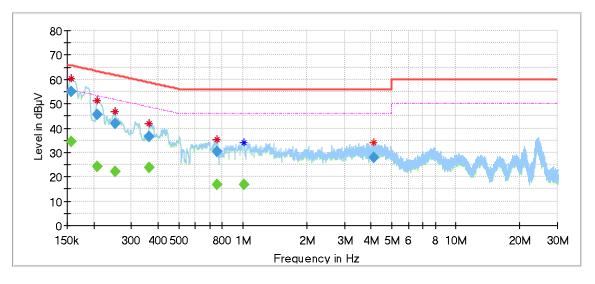
Environment Parameter	Selected Values During Tests
Relative Humidity	50.4%
Atmospheric Pressure:	102.1Кра
Temperature	<b>22.8</b> ℃

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## TEST RESULTS (WORST CASE CONFIGURATION)

### For L Line:



# Final\_Result

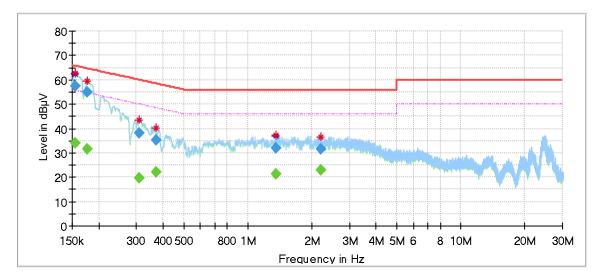
Frequency	QuasiPeak	Average	Limit	Margin	Meas.	Bandwidth	Line	Filter	Corr.
(MHz)	(dBµV)	(dBµV)	(dBµV)	(dB)	Time	(kHz)			(dB)
					(ms)				
0.155970		34.29	55.68	21.39	1000.0	9.000	L1	OFF	9.6
0.155970	55.00		65.68	10.67	1000.0	9.000	L1	OFF	9.6
0.208208		24.02	53.28	29.26	1000.0	9.000	L1	OFF	9.5
0.208208	45.37		63.28	17.91	1000.0	9.000	L1	OFF	9.5
0.251490		22.15	51.71	29.56	1000.0	9.000	L1	OFF	9.5
0.251490	41.69		61.71	20.01	1000.0	9.000	L1	OFF	9.5
0.364920	36.34		58.62	22.28	1000.0	9.000	L1	OFF	9.6
0.364920		23.91	48.62	24.71	1000.0	9.000	L1	OFF	9.6
0.758940	30.51		56.00	25.49	1000.0	9.000	L1	OFF	9.6
0.758940		16.66	46.00	29.34	1000.0	9.000	L1	OFF	9.6
1.017143		16.99	46.00	29.01	1000.0	9.000	L1	OFF	9.5
4.134975	28.04		56.00	27.96	1000.0	9.000	L1	OFF	9.8

Note: 1. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

- 2. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
- 3. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.
- 4. The extension cord/outlet strip was calibrated with the LISN as required by ANSI C63.10:2013 Clause 6.2.2.
- 5. Pre-testing all test modes and channels, and find the MCH of 11B mode which is the worst case, so only the worst case is included in this test report.



## For N Line:



# Final\_Result

Frequency	QuasiPeak	Average	Limit	Margin	Meas.	Bandwidth	Line	Filter	Corr.
(MHz)	(dBµV)	(dBµV)	(dBµV)	(dB)	Time	(kHz)			(dB)
					(ms)				
0.154478		34.00	55.76	21.75	1000.0	9.000	Ν	OFF	9.5
0.154478	57.54		65.76	8.22	1000.0	9.000	Ν	OFF	9.5
0.176865		31.49	54.63	23.14	1000.0	9.000	Ν	OFF	9.5
0.176865	54.81		64.63	9.82	1000.0	9.000	Ν	OFF	9.5
0.309698		19.57	49.98	30.41	1000.0	9.000	Ν	OFF	9.6
0.309698	37.98		59.98	22.00	1000.0	9.000	Ν	OFF	9.6
0.369398	35.15		58.51	23.37	1000.0	9.000	Ν	OFF	9.5
0.369398		21.96	48.51	26.55	1000.0	9.000	Ν	OFF	9.5
1.361910	32.06		56.00	23.94	1000.0	9.000	Ν	OFF	9.6
1.361910		21.54	46.00	24.46	1000.0	9.000	Ν	OFF	9.6
2.200695		22.96	46.00	23.04	1000.0	9.000	Ν	OFF	9.5
2.200695	31.57		56.00	24.43	1000.0	9.000	Ν	OFF	9.5

Note: 1. If QP Result complies with AV limit, AV Result is deemed to comply with AV limit.

- 2. Test setup: RBW: 200 Hz (9 kHz—150 kHz), 9 kHz (150 kHz—30 MHz).
- 3. Step size: 80Hz (0.009MHz-0.15MHz), 4 kHz (0.15MHz-30MHz), Scan time: auto.
- 4. The extension cord/outlet strip was calibrated with the LISN as required by ANSI C63.10:2013 Clause 6.2.2.
- 5. Pre-testing all test modes and channels, and find the MCH of 11B mode swhich is the worst case, so only the worst case is included in this test report.

# 9. ANTENNA REQUIREMENTS

## APPLICABLE REQUIREMENTS

## Please refer to FCC §15.203

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

## Please refer to FCC §15.247(b)(4)

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

## ANTENNA CONNECTOR

EUT has a EUT with one PCB antenna.

## ANTENNA GAIN

The antenna gain of EUT is less than 6 dBi

# **END OF REPORT**