

## FCC 47 CFR PART 15 SUBPART C

## **CERTIFICATION TEST REPORT**

For

## Air Fryer

## FCC MODEL NUMBER: AF600, F6W, AF60T, AF600TM, AF600QM

## ISED MODEL NUMBER: AF600, F6W

## PROJECT NUMBER: 4789851267

## **REPORT NUMBER: 4789851267-1**

FCC ID: 2AQ3A-KY06 IC: 24268-KY06

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Prepared for

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## **Revision History**

Rev.	Issue Date	Revisions	Revised By
V0	07/06/2021	Initial Issue	



## TABLE OF CONTENTS

1.	AT	TESTATION OF TEST RESULTS	4
2.	TE	ST METHODOLOGY	6
3.	FA	CILITIES AND ACCREDITATION	6
4.	СА	LIBRATION AND UNCERTAINTY	7
	4.1.	MEASURING INSTRUMENT CALIBRATION	7
	4.2.	MEASUREMENT UNCERTAINTY	7
5.	EQ	UIPMENT UNDER TEST	8
	5.1.	DESCRIPTION OF EUT	8
	5.2.	MAXIMUM OUTPUT POWER	9
	5.3.	CHANNEL LIST	9
	5.4.	TEST CHANNEL CONFIGURATION	9
	5.5.	THE WORSE CASE POWER SETTING PARAMETER	9
	5.6.	DESCRIPTION OF AVAILABLE ANTENNAS1	0
	5.7.	THE WORSE CASE CONFIGURATIONS1	0
	5.8.	TEST ENVIRONMENT1	1
	5.9.	DESCRIPTION OF TEST SETUP1	2
i	5.10.	MEASURING INSTRUMENT AND SOFTWARE USED1	4
6.	ME	ASUREMENT METHODS1	5
7.	AN	TENNA PORT TEST RESULTS1	6
	7.1.	ON TIME AND DUTY CYCLE1	6
	7.2.	6 dB BANDWIDTH1	9
	7.3.	CONDUCTED OUTPUT POWER	1
	7.4.	POWER SPECTRAL DENSITY	3
	7.5.	CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS4	0
	7.6. 7.6 7.6 7.6 7.6	RADIATED TEST RESULTS	3 3 9 9 2
8.	AC	POWER LINE CONDUCTED EMISSIONS	6
9.	AN	TENNA REQUIREMENTS12	9



## **1. ATTESTATION OF TEST RESULTS**

## **Applicant Information**

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Air Fryer
AF600, F6W, AF60T, AF600TM, AF600QM
AF600, F6W
3812696
Apr. 14, 2021
May. 10, 2021 ~ Jun. 30, 2021

## **APPLICABLE STANDARDS**

#### STANDARD

## **TEST RESULTS**

CFR 47 Part 15 Subpart C

PASS





Summary of Test Results							
Clause	Test Items	FCC Rules	Test Results				
1	6db DTS Bandwidth	FCC 15.247 (a) (2)	PASS				
2	Conducted Power	FCC 15.247 (b) (3)	PASS				
3	Power Spectral Density	FCC 15.247 (e)	PASS				
4	Conducted Band edge And Spurious emission	FCC 15.247 (d)	PASS				
5 Radiated Band edges and Spurious emission		FCC 15.247 (d) FCC 15.209 FCC 15.205	PASS				
6	Conducted Emission Test For AC Power Port	FCC 15.207	PASS				
7	Antenna Requirement	FCC 15.203	PASS				
Remark: 1) The measurement result for the sample received is <pass> according to &lt; ANSI C63.10-2013,</pass>							

FCC CFR 47 Part 2, FCC CFR 47 Part 15C> when <Accuracy Method> decision rule is applied.

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## 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 and ISED RSS-247.

## 3. FACILITIES AND ACCREDITATION

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.
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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)	3.3dB			
Radiation Emission test(include Fundamental emission) (30MHz-1GHz)	3.3dB			
Radiation Emission test (1GHz to 26GHz)( include Fundamental emission)	3.9dB (1GHz-18Gz)			
	4.2dB (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:	Air Fryer
Model No.:	AF600
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
Sample Type:	Fixed production
Test power grade:	N/A
Test software of EUT:	UI_mptool (manufacturer declare)
Antenna Type:	PCB Antenna
Antenna Gain:	2.5 dBi

## Remark:

Model No.:

No.:	Name:	No.:	Name:	No.:	Name:
1	AF600	2	F6W	3	AF60T
4	AF600TM	5	AF600QM		

Only the main model AF600 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 name and software are different and the user can't change the RF parameters or others access the software setting.



## 5.2. MAXIMUM OUTPUT POWER

Number of Transmit Chains	IEE Std 002 11	Channel	Max AVG Conducted Power		
(NTX)		Number	(dBm)		
1	IEEE 802.11B	1-11[11]	15.91		
1	IEEE 802.11G	1-11[11]	12.16		
1	IEEE 802.11nHT20	1-11[11]	12.12		

## 5.3. CHANNEL LIST

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

## 5.4. TEST CHANNEL CONFIGURATION

Test Mode	Test Channel (MHz)
	LCH: CH01 2412
IEEE 802.11B	MCH: CH06 2437
	HCH: CH11 2462
	LCH: CH01 2412
IEEE 802.11G	MCH: CH06 2437
	HCH: CH11 2462
	LCH: CH01 2412
IEEE 802.11n HT20	MCH: CH06 2437
	HCH: CH11 2462

## 5.5. THE WORSE CASE POWER SETTING PARAMETER

The Worse Case Power Setting Parameter under 2400 ~ 2483.5MHz Band								
Test Software			SecureCRT					
	Transmit			Test C	Channel			
Modulation	Antenna Number	١	NCB: 20MHz			NCB: 40MHz		
Mode		CH 1	CH 6	CH 11	CH 3	CH 6	CH 9	
802.11b	1	N/A	N/A	N/A				
802.11g	1	N/A	N/A	N/A	/			
802.11n HT20 1 N/A N/A			N/A					



## 5.6. DESCRIPTION OF AVAILABLE ANTENNAS

Ant.	Frequency (MHz)	Antenna Type	Antenna Gain (dBi)
1	2400-2483.5	PCB Antenna	2.5

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 WIFI module, the worst-case data rates as provided by the client were:

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



## 5.8. TEST ENVIRONMENT

Environment Parameter	Selected Values During Tests		
Relative Humidity	55 ~ 65%		
Atmospheric Pressure:	1025Pa		
Temperature	TN	20 ~ 28°C	
	VL	N/A	
Voltage :	VN	AC 120V	
	VH	N/A	

Note: VL= Lower Extreme Test Voltage VN= Nominal Voltage VH= Upper Extreme Test Voltage TN= Normal Temperature



## 5.10. DESCRIPTION OF TEST SETUP

#### SUPPORT EQUIPMENT

Item	Equipment	Brand Name	Model Name	Description
1	Laptop	ThinkPad	E590	N/A

#### I/O PORT

Cable No	Port	Connector Type	Cable Type	Cable Length(m)	Remarks
1	USB	USB to TTL	USB	100cm Length	N/A

#### ACCESSORY

Item	Accessory	Brand Name	Model Name	Description	
1	N/A	N/A	N/A	N/A	



#### TEST SETUP

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

## SETUP DIAGRAM FOR TESTS





## 5.12. MEASURING INSTRUMENT AND SOFTWARE USED

	Conducted Emissions (Instrument)								
Used	Equipment	Manufacturer	Mode	l No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.	
$\checkmark$	EMI Test Receiver	R&S	ESR3		126700	2019-12-12	2020-12-11	2021-12-10	
$\checkmark$	Two-Line V-Network	R&S	ENV	216	126701	2019-12-12	2020-12-11	2021-12-10	
	Artificial Mains Networks	R&S	ENY	81	126711	2019-12-12	2020-12-11	2021-12-10	
				Soft	ware				
Used	Des	scription		Ma	anufacturer	Name	Version		
$\checkmark$	Test Software for 0	Conducted distur	bance		R&S	EMC32	Ver. 9.25		
		Ra	diated	Emiss	ions (Instrur	nent)			
Used	Equipment	Manufacturer	Mode	l No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.	
$\checkmark$	Spectrum Analyzer	Keysight	N901	10B	MY57110128	3 2020-05-28	2021-05-27	2022-05-26	
$\checkmark$	EMI test receiver	R&S	ESR	26	126703	2020-12-21	2021-12-20	2022-12-19	
$\checkmark$	Receiver Antenna (9kHz-30MHz)	Schwarzbeck	FMZB	1513	513-265	2020-06-15	2021-06-14	2022-06-13	
	Receiver Antenna (30MHz-1GHz)	SunAR RF Motion	JB	1	126704	N/A	2019-01-28	2022-01-27	
$\checkmark$	Receiver Antenna (1GHz-18GHz)	R&S	HF9	07	126705	2020-01-26	2021-01-25	2022-01-24	
$\checkmark$	Receiver Antenna (18GHz-26.5GHz)	Schwarzbeck	BBHA	9170	126706	2020-02-05	2021-02-04	2022-02-03	
$\checkmark$	Receiver Antenna (26.5GHz-40GHz)	ΤΟΥΟ	HAP 26-40W		00000012	2020-07-22	2021-07-21	2022-07-20	
$\checkmark$	Pre-amplification (To 1GHz)	R&S	SCU-	03D	134666	2020-02-05	2021-02-04	2022-02-03	
V	Pre-amplification (To 18GHz)	Compliance Direction System Inc.	PAP-1G	618-50	14140-13467	2020-03-17	2021-03-16	2022-03-15	
	Pre-amplification (To 26.5GHz)	R&S	SCU-	26D	134668	2020-02-05	2021-02-04	2022-02-03	
V	Band Reject Filter	Wainwright	WRC 2350-2 2483.5-2 40S	JV8- 2400- 2533.5- SS	1	2020-05-28	2021-05-27	2022-05-26	
	Highpass Filter	Wainwright	WHKX10- 2700-3000- 18000-40SS		2	2020-05-28	2021-05-27	2022-05-26	
				Soft	ware				
Used	d Description Manufacturer Name Version								
	Test Software for R	adiated disturbar	nce	Tonsce	end	JS32	V1.0		
			Oth	ner ins	struments	1.1			
Used	Equipment	Manufacturer	Mode	l No.	Serial No.	Upper Last Cal.	Last Cal.	Next Cal.	
$\checkmark$	Spectrum Analyzer	Keysight	N901	I0B	MY57110128	3 2020-05-28	2021-05-27	2022-05-26	
	Power Meter	Keysight	U202	1XA	MY57110002	2 2020-06-11	2021-06-10	2022-06-09	

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## 6. MEASUREMENT METHODS

No.	Test Item	KDB Name	Section
1	6dB Bandwidth	KDB 558074 D01 15.247 Meas Guidance v05r02	8.2
2	Output Power	KDB 558074 D01 15.247 Meas Guidance v05r02	8.3.1.3/8.3.2.3
3	Power Spectral Density	KDB 558074 D01 15.247 Meas Guidance v05r02	8.4
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. ON TIME AND DUTY CYCLE

## <u>LIMITS</u>

None; for reporting purposes only

## PROCEDURE

FCC KDB 558074 Zero-Span Spectrum Analyzer Method

#### TEST SETUP



#### **TEST ENVIRONMENT**

Temperature	21°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

#### TEST RESULTS TABLE

Mode	On Time (msec)	Period (msec)	Duty Cycle x (Linear)	Duty Cycle (%)	Duty Cycle Correction Factor (db)	1/T Minimum VBW (kHz)	Final VBW (kHz)
11B	100.3	100.3	1	100%	0	0.01	0.01
11G	100.3	100.3	1	100%	0	0.01	0.01
802.11n HT20	100.3	100.3	1	100%	0	0.01	0.01

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

- 2) Where: x is Duty Cycle(Linear)
- 3) Where: T is On Time (transmit duration)

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500

60

#### 11B ON TIME AND DUTY CYCLE MID CH (WORSE CASE) Spectrum Analyzer 1 Swept SA **O** + Frequency Input Z: 50 Ω Corrections: Off Freq Ref. Int (S) PNO Fast Gate Off IF Gain Low Sig Track Off KEYSIGHT Input RF #Atten: 40 dB Preamp: Off #Avg Type: Power (RMS 1 2 3 4 5 ) Trig: Free Run Center Frequency Settings WWWWWW ++ Align Auto 2.437000000 GHz **A A A A A** LNJ Span 1 Spectrum 0.00000000 Hz Scale/Div 10 dB Ref Level 23.00 dBm Swept Span Zero Span Log Full Span Start Freq 2.437000000 GHz Stop Freq 2.437000000 GHz AUTO TUNE Center 2.437000000 GHz Res BW 8 MHz Span 0 Hz Sweep 100.3 ms (8001 pts) #Video BW 8.0 MHz\* CF Step 8.000000 MHz 5 Marker Table v Auto Man Mode Trace Scale Function Width Function Value Function Freq Offset 0 Hz 3 4 X Axis Scale 5 6 Log Lin

X

Spectrum Analyzer 1	+					Frequenc	y v 🛃
RL Align: Auto	Input Z: 50 Ω Corrections: Off Freq Ref: Int (S)	#Atten: 40 dB Preamp: Off	PNO Fast Gate Off IF Gain Low Sig Track: Off	#Avg Type: Power (F Trig: Free Run	MS123456 WWWWWW AAAAAA	Center Frequency 2.437000000 GHz	Settings
1 Spectrum v Scale/Div 10 dB Log		Ref Level 23.00	dBm			Span 0.00000000 Hz Swept Span Zero Span	
3.00						Full Span	
-17.0						Start Freq 2.437000000 GHz	
-37.0						Stop Freq 2.437000000 GHz	
-67.0		#Video BW 8.0	MH7*		Span 0 Hz	AUTO TUNE	
Res BW 8 MHz		#11000 011 0.0		Sweep 100.	3 ms (8001 pts)	CF Step	
5 Marker Table V Mode Trace Scale	e X	Ý	Function F	Function Width Fu	inction Value	Auto Man	
2 3						Freq Offset 0 Hz	
4 5 6						X Axis Scale Log	1

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	11N (H	IT20) ON T	IME AND		YCLE MI	D CH (WOR	RSE CASE)	
Spectrum Ana Swept SA	lyzer 1 💡	+					Frequency	( 🔻 🔛
	Input RF Coupling DC Align: Auto	Input Ζ: 50 Ω Corrections: Off Freq Ref: Int (S)	#Atten: 40 dB Preamp: Off	PNO Fast Gate Off IF Gain: Low Sig Track: Off	#Avg Type: Pov Trig Free Run	ver (RMS 1 2 3 4 5 6 W W W W W A A A A A A	Center Frequency 2.437000000 GHz	Settings
1 Spectrum Scale/Div 10 Log	, dB		Ref Level 23.00	dBm			Span 0.00000000 Hz Swept Span Zero Span	
3.00							Full Span	
-17.0							Start Freq 2.437000000 GHz	
-37.0 -47.0 -57.0							Stop Freq 2.437000000 GHz	
-67.0	00000 GHz		#\/ideo B\\/ 8.0	MU-*		Span 0 Hz	AUTO TUNE	
Res BW 8 MH			#VIGEO BVV 6.0	WHZ	Sweep	100.3 ms (8001 pts)	CF Step 8.000000 MHz	
5 Walker Table Mode	Trace Scale	×	Y	Function I	Function Width	Function Value	Auto Man	
2 3							Freq Offset 0 Hz	
4 5 6							X Axis Scale Log Lin	
15	2	2 Jun 05, 2021 3:58:20 PM					EgisliTeci Konzoni	



## 7.2. 6 dB BANDWIDTH AND 99% OCCUPIED BANDWIDTH

#### **LIMITS**

FCC Part15 (15.247), Subpart C					
Section Test Item Limit Frequency Range (MHz)					
CFR 47 FCC 15.247(a)(2) ISED RSS-247 5.2 (a)	6dB Bandwidth	>= 500KHz	2400-2483.5		
ISED RSS-Gen Clause 6.7 99 % Occupied For reporting 2400-2483.5					

#### TEST PROCEDURE

Refer to ANSI C63.10-2013 clause 11.8 for DTS bandwidth and clause 6.9 for Occupied Bandwidth.

Connect the EUT to the spectrum analyser and use the following settings:

Center Frequency	The centre frequency of the channel under test	
Frequency Span	Between 0.5 times and 1.5 times the OBW	
Detector	Peak	
RBW	For 6 dB Bandwidth: 100 kHz For 99 % Occupied Bandwidth: 1 % to 5 % of the occupied bandwidth	
VBW	For 6 dB Bandwidth: ≥3 × RBW For 99 % Occupied Bandwidth: ≥3 × RBW	
Trace	Max hold	
Sweep	Auto couple	

a) Use the 99 % power bandwidth function of the instrument, allow the trace to stabilize and report the measured bandwidth.

b) 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



#### **TEST ENVIRONMENT**

Temperature	21°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

#### TEST RESULTS TABLE

Test Mode	Test Channel	6dB bandwidth (MHz)	99% bandwidth (MHz)	Result
	LCH	9.092	14.052	Pass
11B	MCH	9.082	14.041	Pass
	HCH	9.092	14.049	Pass
	LCH	16.54	16.668	Pass
11G	MCH	16.56	16.653	Pass
	HCH	16.56	16.682	Pass
	LCH	17.80	17.819	Pass
11N HT20	MCH	17.77	17.814	Pass
	НСН	17.76	17.817	Pass

# TEST GRAPHS 6dB Bandwdith





























#### 99% Bandwidth



Test Mode	Test Channel	Verdict
11B	MCH	PASS
Spectrum Analyzer 1 Occupied BW VEVVICUT Inmet RE Innet 7:50.0 AB	201 40 - 1700 - Frae Dun - Center Fram 7 (1970)1000 (2Hz	Frequency V
RL ++ Algoning DC Corrections Of Pr Align Auto Freq Ref. Int (S)	eamp Off Gate Off AvgHold: 10/10 #F Gain Low Radio Std: None	2.437000000 GHz
1 Graph Ref Scale/Div 10.0 dB Ref	Lvi Offset 8.12 dB Value 30.00 dBm	Span 40.000 MHz
Log 20.0 10.0	mm mma	4.000000 MHz
100 -200 -200	- Why why -	Man Freq Offset
300 400		
Center 2.437 GHz #Vid #Res BW 200.00 kHz	eo BW 620.00 kHz Span 40 MHz Sweep Time 1.07 ms (8001 pts)	
2 Metrics	1	
Occupied Bandwidth 14,041 MHz	Total Power 20.7 dBm	
Transmit Freq Error -7.354 KHz x dB Bandwidth 9.138 MHz	% of OBW Power 99.00 % x dB -6.00 dB	
4 5 C 1 2 Jun 05, 2021 💬		

























## 7.3. CONDUCTED OUTPUT POWER

#### **LIMITS**

FCC Part15 (15.247), Subpart C				
Section Test Item Limit Frequency Range (MHz)				
FCC 15.247(b)(3)	Output Power	1 watt or 30dBm	2400-2483.5	

#### TEST PROCEDURE

Place the EUT on the table and set it in the transmitting mode.

Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the Power sensor.

Measure the power of each channel.

Peak Detector use for Peak result.

AVG Detector use for AVG result.

#### TEST SETUP





#### **TEST ENVIRONMENT**

Temperature	21°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

#### TEST RESULTS TABLE

Test Mode	Test Channel	Maximum Conducted Output Power (AV)	LIMIT
		dBm	dBm
	LCH	15.91	30
11B	MCH	15.36	30
	HCH	15.61	30
	LCH	12.00	30
11G	MCH	11.83	30
	HCH	12.16	30
	LCH	12.05	30
11n HT20	MCH	11.79	30
	HCH	12.12	30



## 7.4. POWER SPECTRAL DENSITY

#### **LIMITS**

FCC Part15 (15.247), Subpart C				
Section Test Item Limit Frequency Range (MHz)				
FCC §15.247 (e)	Power Spectral Density	8 dBm/3 kHz	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





#### **TEST ENVIRONMENT**

Temperature	21°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

#### TEST RESULTS TABLE

Test Mode	Test Channel	Maximum Peak power spectral density (dBm/30kHz)	Result
	LCH	1.43	Pass
11B	MCH	0.88	Pass
	HCH	1.07	Pass
	LCH	-5.0	Pass
11G	MCH	-5.15	Pass
	HCH	-4.83	Pass
	LCH	-4.35	Pass
11n HT20	MCH	-4.50	Pass
	HCH	-4.27	Pass



#### **TEST GRAPHS**





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# 7.5. CONDUCTED BANDEDGE AND SPURIOUS EMISSIONS

#### LIMITS

FCC Part15 (15.247), Subpart C			
Section Test Item Limit			
FCC §15.247 (d)	Conducted Bandedge and Spurious Emissions	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



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### **TEST ENVIRONMENT**

Temperature	21°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

#### PART I: CONDUCTED BANDEDGE

#### TEST RESULTS TABLE

Test Mode	Test Channel	Carrier Power[dBm]	Max. Spurious Level [dBm]	Limit [dBm]	Verdict
110	LCH	6.498	-40.79	-23.50	PASS
IID	HCH	6.312	-39.92	-23.69	PASS
110	LCH	-2.067	-41.23	-32.07	PASS
110	HCH	-2.139	-39.91	-32.14	PASS
11NI UT20	LCH	-1.701	-41.12	-31.70	PASS
	HCH	-1.547	-41.52	-31.55	PASS



#### **TEST GRAPHS**





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Test Mode	Test Channel	Verdict
11N HT20	НСН	PASS
11N HT20         Spectrum Analyzer 1         Swept SA         KEYSIGHT Input RF         RE Corrections Off Pre         Ref Insut RF         Scale/Div 10 dB         Ref I         Scale/Div 10 dB         Center 2.48350 GHz         #Viti #Res BW 100 kHz         SMarker Table         Mode Trace Scale X         1       n       1       f       2.459 112 5 GHz       2         3       n       1       f       2.485 500 CHz       #Viti #Res BW 100 kHz	HCH         Inter-40 dB       PNO, Fast       #AvgTivpe: Power (RMS = 2 3 4 3 6       Center         amp: Off       Gate Off       #AvgTivpe: Power (RMS = 2 3 4 3 6       Center         Sig Track: Off       Trg. Free Run       P P P P P       P         vi Offset 8.51 dB       Mkr4 2.488 500 0 GHz       Span       100.0         evel 30.00 dBm       -41.52 dBm       Start F       2433         d2 4 4       0       Span 100.0 MHz       Span 100.0 MHz         Sweep 9.60 ms (8001 pbs)       CF Start 1.54 68       CF Start 1.54 68         44.66 dBm       44.66 dBm       Hunction Width       Function Value         42.64 dBm       Hunction Value       Hunction Value       Hunction Value	PASS Frequency Frequency Settings COCOOD GHz Settings Full Span Full Span Freq SCOCOOD GHz UTO TUNE PD COCOOD MH2 uto Treq SCOCOOD GH2 UTO TUNE PD COCOO MH2 uto Treq SCOCOO GH2 UTO TUNE PD COCOO MH2 UTO TUNE PD COCOO MH2 UTO Treq SCOCOO GH2 UTO T
4 N 1 f 2.488 500 0 GHz 5 5 6 6 2 2 488 500 0 GHz 5 6 2 2 488 500 0 GHz 5 6 2 2 488 500 0 GHz 5 6 2 2 488 500 0 GHz 5 7 2 400 0 GHZ 5 7 2	41.52 dBm X Avis	Scale og Track Zcom)

### PART II: CONDUCTED EMISSION

### **TEST RESULTS TABLE**

Test Mode	Channel	Pref(dBm)	Puw(dBm)	Verdict
	LCH	6.33	<limit< td=""><td>PASS</td></limit<>	PASS
11B	MCH	5.95	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	6.22	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	-2.15	<limit< td=""><td>PASS</td></limit<>	PASS
11G	MCH	-2.30	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	-2.01	<limit< td=""><td>PASS</td></limit<>	PASS
	LCH	-1.55	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT20	MCH	-1.77	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	-1.52	<limit< td=""><td>PASS</td></limit<>	PASS

#### **TEST GRAPHS**

Test Mode	Channel	Verdict
11B	LCH	PASS











Test Mode	Channel	Verdict
11B	MCH	PASS











Test Mode	Channel	Verdict
11B	НСН	PASS











Test Mode	Channel	Verdict
11G	LCH	PASS











Test Mode	Channel	Verdict
11G	MCH	PASS











Test Mode	Channel	Verdict
11G	НСН	PASS











Test Mode	Channel	Verdict
11N HT20	LCH	PASS











Test Mode	Channel	Verdict
11N HT20	MCH	PASS











Test Mode	Channel	Verdict
11N HT20	НСН	PASS











# 7.6. RADIATED TEST RESULTS

# 7.6.1.LIMITS AND PROCEDURE

### <u>LIMITS</u>

Please refer to FCC §15.205 and §15.209

Please refer to FCC KDB 558074

Radiation Disturbance Test Limit for FCC (Class B)(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)

	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	( <sup>2</sup> )	
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)



## Above 1G



The setting of the spectrum analyser

RBW	1M
VBW	PEAK:3M AVG: See note6
Sweep	Auto
Detector	Peak/Average(10Hz)
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 set VBW ≤RBW/100, but not less than list in section 7.1 with average detector, max hold to run for at least 50 traces for average measurements.

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



X axis, Y axis positions:



Note: For all radiated test, EUT in each of three orthogonal axis emissions had been tested, but only the worse case (X axis) data recorded in the report.



# 7.6.2. TEST ENVIRONMENT

Temperature	21°C	Relative Humidity	56%
Atmosphere Pressure	101kPa	Test Voltage	AC 120V

# 7.6.3. RESTRICTED BANDEDGE

### TEST RESULT TABLE

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
11G	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	HCH	<limit< td=""><td>PASS</td></limit<>	PASS
11N HT20	LCH	<limit< td=""><td>PASS</td></limit<>	PASS
	MCH	<limit< td=""><td>PASS</td></limit<>	PASS
	НСН	<limit< td=""><td>PASS</td></limit<>	PASS



#### **TEST GRAPHS**





#### PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2315.5457	43.27	12.33	55.60	74.00	-18.40	Horizontal
2	2357.9822	41.35	12.76	54.11	74.00	-19.89	Horizontal
3	2390.0000	39.11	13.07	52.18	74.00	-21.82	Horizontal

#### AV Result:

No. Level Factor	Remark
[MHz] [dBuV/m] [dB] [dBuV/m] [dBuV/m] [dB]	
1 2315.5457 28.53 12.33 40.43 54.00 -13.14	Horizontal
2 2357.9822 28.76 12.76 41.52 54.00 -12.48	Horizontal

Note: 1. Peak detector: RBW: 1 MHz, VBW: 3 MHz;

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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.





### PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2342.9054	42.27	12.62	54.89	74.00	-19.11	Vertical
2	2380.5413	41.68	13.06	54.74	74.00	-19.26	Vertical
3	2390.0000	40.31	13.07	53.38	74.00	-20.62	Vertical

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2342.9054	28.51	12.62	41.13	54.00	-12.87	Vertical
2	2380.5413	28.27	13.06	41.33	54.00	-12.67	Vertical

Note: 1. Peak detector: RBW: 1 MHz, VBW: 3 MHz;

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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.





### PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	39.58	12.97	52.55	74.00	-21.45	Horizontal
2	2498.0623	41.41	13.11	54.52	74.00	-19.48	Horizontal
3	2540.3675	41.21	13.41	54.62	74.00	-19.38	Horizontal
4	2556.1870	41.01	13.39	54.40	74.00	-19.60	Horizontal

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2498.0623	28.43	13.11	41.54	54.00	-12.46	Horizontal
2	2540.3675	28.53	13.41	41.94	54.00	-12.06	Horizontal
3	2556.1870	28.18	13.39	41.57	54.00	-12.43	Horizontal

Note: 1. Peak detector: RBW: 1 MHz, VBW: 3 MHz;

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	40.33	12.97	53.30	74.00	-20.70	Vertical
2	2491.0639	41.64	13.01	54.65	74.00	-19.35	Vertical
3	2501.2802	42.00	13.15	55.15	74.00	-18.85	Vertical
4	2535.3719	41.48	13.42	54.90	74.00	-19.10	Vertical
5	2555.1519	41.32	13.38	54.70	74.00	-19.30	Vertical

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2491.0140	28.16	13.01	41.17	54.00	-12.83	Vertical
2	2501.2303	27.48	13.15	40.63	54.00	-13.37	Vertical
3	2535.3220	26.73	13.41	40.14	54.00	-13.86	Vertical
4	2555.1020	27.20	13.38	40.58	54.00	-13.42	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2346.3370	41.78	12.66	54.44	74.00	-19.56	Horizontal
2	2376.3783	41.82	13.01	54.83	74.00	-19.17	Horizontal
3	2385.0419	44.48	13.06	57.54	74.00	-16.46	Horizontal
4	2390.0000	45.92	13.07	58.99	74.00	-15.01	Horizontal

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2346.3370	29.53	12.66	42.19	54.00	-11.81	Horizontal
2	2376.3783	29.47	13.01	42.48	54.00	-11.52	Horizontal
3	2385.0366	30.47	13.06	43.53	54.00	-10.47	Horizontal
4	2390.0000	31.13	13.07	44.20	54.00	-9.80	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2344.5181	41.40	12.64	54.04	74.00	-19.96	Vertical
2	2372.3278	42.36	12.96	55.32	74.00	-18.68	Vertical
3	2378.7598	43.71	13.05	56.76	74.00	-17.24	Vertical
4	2390.0000	48.44	13.07	61.51	74.00	-12.49	Vertical

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2344.5181	29.53	12.64	42.17	54.00	-11.83	Vertical
2	2372.3278	29.41	12.96	42.37	54.00	-11.63	Vertical
3	2378.7598	31.15	13.05	44.20	54.00	-9.80	Vertical
4	2390.0000	31.97	13.07	45.04	54.00	-8.96	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	42.61	12.97	55.58	74.00	-18.42	Horizontal
2	2492.4591	41.01	13.03	54.04	74.00	-19.96	Horizontal
3	2520.3625	41.25	13.23	54.48	74.00	-19.52	Horizontal
4	2568.0010	41.17	13.44	54.61	74.00	-19.39	Horizontal

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	31.14	12.97	44.18	54.00	-9.89	Horizontal
2	2492.4591	29.47	13.03	42.50	54.00	-11.50	Horizontal
3	2520.3625	29.86	13.23	43.09	54.00	-10.91	Horizontal
4	2568.0010	29.34	13.44	42.78	54.00	-11.22	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	45.48	12.97	58.45	74.00	-15.55	Vertical
2	2493.4492	41.85	13.05	54.90	74.00	-19.10	Vertical
3	2524.9981	41.44	13.32	54.76	74.00	-19.24	Vertical
4	2532.7391	41.63	13.42	55.05	74.00	-18.95	Vertical
5	2550.1113	41.92	13.35	55.27	74.00	-18.73	Vertical

# AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	32.41	12.97	45.38	54.00	-8.62	Vertical
2	2493.4492	30.43	13.05	43.48	54.00	-10.52	Vertical
3	2524.9981	29.24	13.32	42.56	54.00	-11.44	Vertical
4	2532.7391	29.53	13.42	42.95	54.00	-11.05	Vertical
5	2550.1113	29.39	13.35	42.74	54.00	-11.26	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2347.6685	42.38	12.67	55.05	74.00	-18.95	Horizontal
2	2362.2015	42.36	12.81	55.17	74.00	-18.83	Horizontal
3	2376.6783	41.85	13.02	54.87	74.00	-19.13	Horizontal
4	2384.8919	44.56	13.06	57.62	74.00	-16.38	Horizontal
5	2390.0000	49.93	13.07	63.00	74.00	-11.00	Horizontal

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2347.6685	29.42	12.67	42.09	54.00	-11.91	Horizontal
2	2362.2015	29.23	12.81	42.04	54.00	-11.96	Horizontal
3	2376.6783	31.52	13.02	44.54	54.00	-9.46	Horizontal
4	2384.8919	32.77	13.06	45.83	54.00	-8.17	Horizontal
5	2390.0000	33.90	13.07	46.97	54.00	-7.03	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2339.4362	42.63	12.59	55.22	74.00	-18.78	Vertical
2	2361.5639	42.93	12.80	55.73	74.00	-18.27	Vertical
3	2366.2145	42.84	12.87	55.71	74.00	-18.29	Vertical
4	2381.4789	44.30	13.06	57.36	74.00	-16.64	Vertical
5	2390.0000	51.13	13.07	64.20	74.00	-9.80	Vertical

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2339.4362	29.66	12.59	42.25	54.00	-11.75	Vertical
2	2361.5639	29.45	12.80	42.25	54.00	-11.75	Vertical
3	2366.2145	29.52	12.87	42.39	54.00	-11.61	Vertical
4	2381.4789	31.15	13.06	44.21	54.00	-9.79	Vertical
5	2390.0000	33.27	13.07	46.34	54.00	-7.66	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	46.04	12.97	59.01	74.00	-14.99	Horizontal
2	2505.0381	42.51	13.17	55.68	74.00	-18.32	Horizontal
3	2541.8752	41.21	13.40	54.61	74.00	-19.39	Horizontal
4	2574.7293	41.89	13.45	55.34	74.00	-18.66	Horizontal

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	32.80	12.97	45.77	54.00	-8.23	Horizontal
2	2505.0381	29.27	13.17	42.44	54.00	-11.56	Horizontal
3	2541.8752	29.82	13.40	43.22	54.00	-10.78	Horizontal
4	2574.7293	29.76	13.45	43.21	54.00	-10.79	Horizontal

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	48.93	12.97	61.90	74.00	-12.10	Vertical
2	2488.0935	42.82	12.99	55.81	74.00	-18.19	Vertical
3	2545.7007	41.11	13.38	54.49	74.00	-19.51	Vertical
4	2556.1195	41.50	13.39	54.89	74.00	-19.11	Vertical
5	2570.1613	42.13	13.45	55.58	74.00	-18.42	Vertical

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	2483.5000	33.41	12.97	46.38	54.00	-7.62	Vertical
2	2488.0935	31.58	12.99	44.57	54.00	-9.43	Vertical
3	2545.7007	29.42	13.38	42.80	54.00	-11.20	Vertical
4	2556.1195	29.39	13.39	42.78	54.00	-11.22	Vertical
5	2570.1613	29.43	13.45	42.88	54.00	-11.12	Vertical

- 2. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 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.



# 7.6.4. SPURIOUS EMISSIONS

# TEST RESULTS TABLE

### 1) For 1GHz~18GHz

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
	HCH	<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 9KHz~30MHz

Test Mode	Channel	Puw(dBm)	Verdict
11B	HCH	<limit< td=""><td>PASS</td></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.

## 3) For 30MHz~1GHz

Test Mode	Channel	Puw(dBm)	Verdict
11B	HCH	<limit< td=""><td>PASS</td></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 18GHz~26.5GHz

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

PK Limit AV Limit PK
PK Detector X AV Detector

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1114.5143	41.52	-5.49	36.03	74.00	-37.97	Horizontal
2	1329.2912	42.75	-5.67	37.08	74.00	-36.92	Horizontal
3	1412.3015	41.94	-5.46	36.48	74.00	-37.52	Horizontal
4	1791.8490	41.94	-3.76	38.18	74.00	-35.82	Horizontal
5	2220.1525	42.05	-2.22	39.83	74.00	-34.17	Horizontal
6	2748.9686	42.02	-0.44	41.58	74.00	-32.42	Horizontal

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





-	PK Limit	-	AV Limit	- PK
	PK Detector	*	AV Detector	

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1332.2915	45.04	-5.68	39.36	74.00	-34.64	Vertical
2	1643.5804	42.25	-5.03	37.22	74.00	-36.78	Vertical
3	2049.6312	41.62	-2.38	39.24	74.00	-34.76	Vertical
4	2315.1644	46.39	-1.65	44.74	74.00	-29.26	Vertical
5	2512.1890	44.09	-0.37	43.72	74.00	-30.28	Vertical
6	2943.7430	41.66	0.55	42.21	74.00	-31.79	Vertical

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





-	PK Limit	-	AV Limit	- PK
	PK Detector	*	AV Detector	

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1054.5068	41.65	-5.62	36.03	74.00	-37.97	Horizontal
2	1333.0416	41.85	-5.67	36.18	74.00	-37.82	Horizontal
3	1786.3483	41.68	-3.82	37.86	74.00	-36.14	Horizontal
4	2051.1314	41.51	-2.41	39.10	74.00	-34.90	Horizontal
5	2340.6676	42.62	-1.80	40.82	74.00	-33.18	Horizontal
6	2901.2377	41.44	0.34	41.78	74.00	-32.22	Horizontal

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





- PK Limit	- AV Limit	- PK
PK Detector	AV Detector	

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1333.5417	45.78	-5.67	40.11	74.00	-33.89	Vertical
2	1643.8305	41.93	-5.03	36.90	74.00	-37.10	Vertical
3	1816.3520	41.95	-3.94	38.01	74.00	-35.99	Vertical
4	2031.3789	41.22	-2.68	38.54	74.00	-35.46	Vertical
5	2338.4173	46.18	-1.81	44.37	74.00	-29.63	Vertical
6	2539.9425	44.21	-0.96	43.25	74.00	-30.75	Vertical

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1153.0191	42.68	-5.59	37.09	74.00	-36.91	Horizontal
2	1331.7915	44.01	-5.68	38.33	74.00	-35.67	Horizontal
3	1791.8490	41.84	-3.76	38.08	74.00	-35.92	Horizontal
4	2296.4121	42.03	-1.88	40.15	74.00	-33.85	Horizontal
5	2480.1850	43.40	-0.56	42.84	74.00	-31.16	Horizontal
6	2958.7448	41.83	0.96	42.79	74.00	-31.21	Horizontal

AV Detector

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





# PK Limit AV Limit PK PK Detector AV Detector

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1330.2913	47.16	-5.68	41.48	74.00	-32.52	Vertical
2	1411.8015	41.97	-5.44	36.53	74.00	-37.47	Vertical
3	1830.1038	41.93	-3.69	38.24	74.00	-35.76	Vertical
4	2358.6698	45.44	-1.25	44.19	74.00	-29.81	Vertical
5	2544.4431	44.77	-0.97	43.80	74.00	-30.20	Vertical
6	2971.7465	40.88	1.03	41.91	74.00	-32.09	Vertical

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1200.0250	41.60	-5.56	36.04	74.00	-37.96	Horizontal
2	1333.5417	41.74	-5.67	36.07	74.00	-37.93	Horizontal
3	1826.8534	41.85	-3.74	38.11	74.00	-35.89	Horizontal
4	2123.1404	41.93	-2.38	39.55	74.00	-34.45	Horizontal
5	2378.9224	44.41	-1.08	43.33	74.00	-30.67	Horizontal
6	2465.9332	43.96	-0.63	43.33	74.00	-30.67	Horizontal

AV Detector

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1330.2913	45.69	-5.68	40.01	74.00	-33.99	Vertical
2	1382.2978	44.56	-5.75	38.81	74.00	-35.19	Vertical
3	1858.8574	41.71	-3.68	38.03	74.00	-35.97	Vertical
4	2042.1303	41.35	-2.39	38.96	74.00	-35.04	Vertical
5	2217.9022	43.94	-2.24	41.70	74.00	-32.30	Vertical
6	2376.6721	48.92	-1.10	47.82	74.00	-26.18	Vertical

AV Detector

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





- PK Limit	-	AV Limit	— РК
PK Detector	*	AV Detector	

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1328.0410	43.67	-5.66	38.01	74.00	-35.99	Horizontal
2	1678.3348	42.52	-4.84	37.68	74.00	-36.32	Horizontal
3	1826.8534	41.64	-3.74	37.90	74.00	-36.10	Horizontal
4	1901.1126	42.02	-3.28	38.74	74.00	-35.26	Horizontal
5	2478.9349	43.50	-0.56	42.94	74.00	-31.06	Horizontal
6	2729.9662	41.35	-0.49	40.86	74.00	-33.14	Horizontal

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1330.0413	46.98	-5.68	41.30	74.00	-32.70	Vertical
2	1617.0771	41.99	-5.13	36.86	74.00	-37.14	Vertical
3	1839.6050	42.95	-3.72	39.23	74.00	-34.77	Vertical
4	2105.1381	41.39	-2.53	38.86	74.00	-35.14	Vertical
5	2297.9122	44.80	-1.87	42.93	74.00	-31.07	Vertical
6	2523.4404	43.72	-0.46	43.26	74.00	-30.74	Vertical

AV Detector

- 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. 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.
- 6. 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	L
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dB

No.	Frequency	Level	Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1329.7912	42.83	-5.68	37.15	74.00	-36.85	Horizontal
2	1491.3114	42.31	-5.80	36.51	74.00	-37.49	Horizontal
3	1798.8499	41.92	-3.83	38.09	74.00	-35.91	Horizontal
4	2024.1280	41.77	-2.79	38.98	74.00	-35.02	Horizontal
5	2350.9189	41.73	-1.63	40.10	74.00	-33.90	Horizontal
6	2866.2333	41.53	0.14	41.67	74.00	-32.33	Horizontal

AV Detector

\*

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1161.2702	44.39	-5.53	38.86	74.00	-35.14	Vertical
2	1327.2909	46.71	-5.66	41.05	74.00	-32.95	Vertical
3	1833.1041	41.99	-3.70	38.29	74.00	-35.71	Vertical
4	1990.8739	42.27	-3.08	39.19	74.00	-34.81	Vertical
5	2305.1631	44.47	-1.75	42.72	74.00	-31.28	Vertical
6	2655.9570	43.49	-0.72	42.77	74.00	-31.23	Vertical

AV Detector

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1329.5412	42.92	-5.68	37.24	74.00	-36.76	Horizontal
2	1714.5893	42.96	-4.40	38.56	74.00	-35.44	Horizontal
3	2096.3870	42.82	-2.53	40.29	74.00	-33.71	Horizontal
4	2370.1713	42.66	-1.13	41.53	74.00	-32.47	Horizontal
5	2740.9676	41.56	-0.46	41.10	74.00	-32.90	Horizontal
6	2956.2445	41.36	0.90	42.26	74.00	-31.74	Horizontal

AV Detector

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1331.5414	47.07	-5.68	41.39	74.00	-32.61	Vertical
2	1483.8105	42.35	-5.80	36.55	74.00	-37.45	Vertical
3	1907.8635	42.11	-3.31	38.80	74.00	-35.20	Vertical
4	2318.9149	46.26	-1.66	44.60	74.00	-29.40	Vertical
5	2515.6895	43.78	-0.35	43.43	74.00	-30.57	Vertical
6	2909.4887	42.16	0.43	42.59	74.00	-31.41	Vertical

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1193.7742	42.17	-5.57	36.60	74.00	-37.40	Horizontal
2	1330.7913	43.06	-5.68	37.38	74.00	-36.62	Horizontal
3	1801.3502	41.97	-3.88	38.09	74.00	-35.91	Horizontal
4	2120.8901	41.45	-2.40	39.05	74.00	-34.95	Horizontal
5	2762.2203	41.56	-0.26	41.30	74.00	-32.70	Horizontal
6	2905.2382	41.99	0.39	42.38	74.00	-31.62	Horizontal

AV Detector

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1329.0411	46.29	-5.67	40.62	74.00	-33.38	Vertical
2	1393.2992	45.09	-5.74	39.35	74.00	-34.65	Vertical
3	1832.3540	41.99	-3.69	38.30	74.00	-35.70	Vertical
4	2120.6401	42.85	-2.40	40.45	74.00	-33.55	Vertical
5	2347.6685	46.07	-1.71	44.36	74.00	-29.64	Vertical
6	2512.1890	43.74	-0.37	43.37	74.00	-30.63	Vertical

AV Detector

- 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. 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.
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1328.7911	44.25	-5.67	38.58	74.00	-35.42	Horizontal
2	1558.0698	41.82	-5.53	36.29	74.00	-37.71	Horizontal
3	1801.1001	42.24	-3.87	38.37	74.00	-35.63	Horizontal
4	2111.6390	41.99	-2.53	39.46	74.00	-34.54	Horizontal
5	2354.4193	41.52	-1.46	40.06	74.00	-33.94	Horizontal
6	2899.2374	41.89	0.35	42.24	74.00	-31.76	Horizontal

AV Detector

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



-	PK Limit	-	AV Limit	- PK
	PK Detector	*	AV Detector	

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1195.7745	43.27	-5.56	37.71	74.00	-36.29	Vertical
2	1328.7911	45.53	-5.67	39.86	74.00	-34.14	Vertical
3	1625.3282	42.47	-5.04	37.43	74.00	-36.57	Vertical
4	2038.8799	41.15	-2.43	38.72	74.00	-35.28	Vertical
5	2308.1635	44.47	-1.69	42.78	74.00	-31.22	Vertical
6	2511.9390	44.42	-0.37	44.05	74.00	-29.95	Vertical

- 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. 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.
- 6. 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

#### PK Result:

**PK** Limit

**PK Detector** 

AV Limit

\* AV Detector

- PK

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4187.0234	40.28	4.52	44.80	74.00	-29.20	Horizontal
2	4822.7278	43.66	5.35	49.01	74.00	-24.99	Horizontal
3	7513.6892	40.09	8.67	48.76	74.00	-25.24	Horizontal
4	10823.4779	37.82	12.16	49.98	74.00	-24.02	Horizontal
5	13949.4937	37.13	14.24	51.37	74.00	-22.63	Horizontal
6	16942.3678	37.07	18.44	55.51	74.00	-18.49	Horizontal
7	17285.5357	37.31	17.76	55.07	74.00	-18.93	Horizontal

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16942.3678	26.03	18.44	44.47	54.00	-9.53	Horizontal
2	17285.5357	27.11	17.76	44.87	54.00	-9.13	Horizontal

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4822.7278	44.28	5.35	49.63	74.00	-24.37	Vertical
2	7523.0654	38.81	8.76	47.57	74.00	-26.43	Vertical
3	8946.3683	38.45	8.98	47.43	74.00	-26.57	Vertical
4	11011.0014	38.10	12.47	50.57	74.00	-23.43	Vertical
5	15252.7816	36.48	14.78	51.26	74.00	-22.74	Vertical
6	16938.6173	37.46	18.45	55.91	74.00	-18.09	Vertical
7	17165.5207	37.23	18.31	55.54	74.00	-18.46	Vertical

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16938.6173	26.77	18.45	45.22	54.00	-8.78	Vertical
2	17165.5207	27.39	18.31	45.70	54.00	-8.30	Vertical

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





# PK Detector \* AV Detector

# PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4873.3592	43.26	5.32	48.58	74.00	-25.42	Horizontal
2	6180.3976	39.60	5.95	45.55	74.00	-28.45	Horizontal
3	7433.0541	40.10	8.57	48.67	74.00	-25.33	Horizontal
4	11016.6271	36.90	12.52	49.42	74.00	-24.58	Horizontal
5	14028.2535	37.26	14.65	51.91	74.00	-22.09	Horizontal
6	16946.1183	36.45	18.39	54.84	74.00	-19.16	Horizontal
7	17338.0423	37.93	17.55	55.48	74.00	-18.52	Horizontal

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16946.1183	26.69	18.39	45.08	54.00	-8.92	Horizontal
2	17338.0423	28.34	17.55	45.89	54.00	-8.11	Horizontal

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4873.3592	43.92	5.32	49.24	74.00	-24.76	Vertical
2	7344.9181	38.94	8.51	47.45	74.00	-26.55	Vertical
3	8951.9940	39.54	9.06	48.60	74.00	-25.40	Vertical
4	10847.8560	37.51	12.37	49.88	74.00	-24.12	Vertical
5	13947.6185	36.86	14.27	51.13	74.00	-22.87	Vertical
6	17071.7590	36.17	19.11	55.28	74.00	-18.72	Vertical
7	17604.3255	37.63	17.64	55.27	74.00	-18.73	Vertical

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17071.7590	25.97	19.11	45.08	54.00	-8.92	Vertical
2	17071.7590	25.91	19.11	45.02	54.00	-8.98	Vertical
3	17604.3255	27.49	17.64	45.13	54.00	-8.87	Vertical
4	17604.3255	27.18	17.64	44.82	54.00	-9.18	Vertical

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4923.9905	42.32	5.18	47.50	74.00	-26.50	Horizontal
2	7258.6573	38.80	8.68	47.48	74.00	-26.52	Horizontal
3	9000.7501	38.37	9.09	47.46	74.00	-26.54	Horizontal
4	10988.4986	37.86	12.31	50.17	74.00	-23.83	Horizontal
5	14013.2517	36.82	14.29	51.11	74.00	-22.89	Horizontal
6	16940.4926	37.01	18.46	55.47	74.00	-18.53	Horizontal
7	17291.1614	37.26	17.89	55.15	74.00	-18.85	Horizontal

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16940.4926	26.99	18.46	45.45	54.00	-8.55	Horizontal
2	17291.1614	27.15	17.89	45.04	54.00	-8.96	Horizontal

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4923.9905	43.10	5.18	48.28	74.00	-25.72	Vertical
2	7440.5551	38.89	8.65	47.54	74.00	-26.46	Vertical
3	8959.4949	38.94	9.05	47.99	74.00	-26.01	Vertical
4	10915.3644	37.68	12.25	49.93	74.00	-24.07	Vertical
5	13844.4806	37.43	13.51	50.94	74.00	-23.06	Vertical
6	16884.2355	38.05	17.77	55.82	74.00	-18.18	Vertical
7	17371.7965	36.95	18.52	55.47	74.00	-18.53	Vertical

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16884.2355	27.67	17.77	45.44	54.00	-8.56	Vertical
2	17371.7965	25.88	18.52	44.40	54.00	-9.60	Vertical

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. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.

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No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4421.4277	40.58	5.25	45.83	74.00	-28.17	Horizontal
2	5454.6818	40.17	5.74	45.91	74.00	-28.09	Horizontal
3	7378.6723	39.46	8.58	48.04	74.00	-25.96	Horizontal
4	10849.7312	37.07	12.43	49.50	74.00	-24.50	Horizontal
5	14035.7545	36.65	14.43	51.08	74.00	-22.92	Horizontal
6	16897.3622	37.47	17.95	55.42	74.00	-18.58	Horizontal
7	17197.3997	37.35	18.31	55.66	74.00	-18.34	Horizontal

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16897.3622	26.48	17.95	44.43	54.00	-9.57	Horizontal
2	17197.3997	27.38	18.31	45.69	54.00	-8.31	Horizontal

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.





AV Detector

**PK Detector** 

# PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4610.8264	40.66	5.31	45.97	74.00	-28.03	Vertical
2	5700.3375	40.65	5.33	45.98	74.00	-28.02	Vertical
3	7378.6723	38.64	8.58	47.22	74.00	-26.78	Vertical
4	9253.9067	39.70	8.86	48.56	74.00	-25.44	Vertical
5	10746.5933	38.18	12.09	50.27	74.00	-23.73	Vertical
6	16884.2355	37.33	17.77	55.10	74.00	-18.90	Vertical
7	17186.1483	37.00	18.13	55.13	74.00	-18.87	Vertical

### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16884.2355	26.39	17.77	44.16	54.00	-9.84	Vertical
2	17186.1483	27.48	18.13	45.61	54.00	-8.39	Vertical

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4788.9736	39.94	6.09	46.03	74.00	-27.97	Horizontal
2	5634.7043	40.66	5.40	46.06	74.00	-27.94	Horizontal
3	7519.3149	38.72	8.76	47.48	74.00	-26.52	Horizontal
4	10844.1055	37.56	12.26	49.82	74.00	-24.18	Horizontal
5	17011.7515	37.08	18.49	55.57	74.00	-18.43	Horizontal
6	17519.9400	37.66	17.72	55.38	74.00	-18.62	Horizontal

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17011.7515	26.67	18.49	45.16	54.00	-8.84	Horizontal
2	17519.9400	26.39	17.72	44.11	54.00	-9.89	Horizontal

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4457.0571	40.06	5.72	45.78	74.00	-28.22	Vertical
2	5587.8235	40.05	5.44	45.49	74.00	-28.51	Vertical
3	7427.4284	38.58	8.56	47.14	74.00	-26.86	Vertical
4	11164.7706	37.99	12.00	49.99	74.00	-24.01	Vertical
5	15972.8716	37.28	15.82	53.10	74.00	-20.90	Vertical
6	17039.8800	36.54	18.89	55.43	74.00	-18.57	Vertical
7	17613.7017	37.91	17.78	55.69	74.00	-18.31	Vertical

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17039.8800	26.75	18.89	45.64	54.00	-8.36	Vertical
2	17613.7017	27.22	17.78	45.00	54.00	-9.00	Vertical

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4790.8489	39.76	6.10	45.86	74.00	-28.14	Horizontal
2	7301.7877	38.86	8.53	47.39	74.00	-26.61	Horizontal
3	8854.4818	39.64	8.24	47.88	74.00	-26.12	Horizontal
4	12049.8812	37.04	12.64	49.68	74.00	-24.32	Horizontal
5	13996.3745	37.14	14.24	51.38	74.00	-22.62	Horizontal
6	17032.3790	36.93	19.00	55.93	74.00	-18.07	Horizontal
7	17379.2974	36.29	18.60	54.89	74.00	-19.11	Horizontal

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17032.3790	26.92	19.00	45.92	54.00	-8.08	Horizontal
2	17379.2974	26.08	18.60	44.68	54.00	-9.32	Horizontal

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4712.0890	41.14	5.65	46.79	74.00	-27.21	Vertical
2	7479.9350	39.06	8.84	47.90	74.00	-26.10	Vertical
3	8980.1225	39.07	8.92	47.99	74.00	-26.01	Vertical
4	10793.4742	37.90	12.08	49.98	74.00	-24.02	Vertical
5	13923.2404	36.81	14.16	50.97	74.00	-23.03	Vertical
6	16653.5817	38.01	16.79	54.80	74.00	-19.20	Vertical
7	17551.8190	37.04	18.05	55.09	74.00	-18.91	Vertical

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16653.5817	26.09	16.79	42.88	54.00	-11.12	Vertical
2	17551.8190	26.79	18.05	44.84	54.00	-9.16	Vertical

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4348.2935	41.55	5.28	46.83	74.00	-27.17	Horizontal
2	7412.4266	38.60	8.65	47.25	74.00	-26.75	Horizontal
3	9055.1319	39.42	8.90	48.32	74.00	-25.68	Horizontal
4	11022.2528	37.15	12.50	49.65	74.00	-24.35	Horizontal
5	13938.2423	36.24	14.40	50.64	74.00	-23.36	Horizontal
6	16987.3734	36.59	18.77	55.36	74.00	-18.64	Horizontal
7	17549.9437	37.56	18.08	55.64	74.00	-18.36	Horizontal

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16987.3734	26.37	18.77	45.14	54.00	-8.86	Horizontal
2	17549.9437	27.67	18.08	45.75	54.00	-8.25	Horizontal

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4200.1500	41.25	4.77	46.02	74.00	-27.98	Vertical
2	4802.1003	40.24	5.58	45.82	74.00	-28.18	Vertical
3	7483.6855	39.26	8.75	48.01	74.00	-25.99	Vertical
4	10845.9807	37.49	12.32	49.81	74.00	-24.19	Vertical
5	15970.9964	37.11	15.85	52.96	74.00	-21.04	Vertical
6	16691.0864	36.45	18.17	54.62	74.00	-19.38	Vertical
7	17201.1501	37.10	18.30	55.40	74.00	-18.60	Vertical

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	16691.0864	27.10	18.17	45.27	54.00	-8.73	Vertical
2	16691.0864	26.90	18.17	45.07	54.00	-8.93	Vertical
3	17201.1501	27.32	18.30	45.62	54.00	-8.38	Vertical
4	17201.1501	27.35	18.30	45.65	54.00	-8.35	Vertical

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. Only the worst case emission was recorded, if it complies with the limit, the other emissions deemed to comply with the limit.



# PK Detector \* AV Detector

## PK Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4413.9267	40.80	5.23	46.03	74.00	-27.97	Horizontal
2	7538.0673	38.92	8.72	47.64	74.00	-26.36	Horizontal
3	9402.0503	39.11	8.46	47.57	74.00	-26.43	Horizontal
4	10495.3119	38.16	11.59	49.75	74.00	-24.25	Horizontal
5	12051.7565	37.34	12.64	49.98	74.00	-24.02	Horizontal
6	17026.7533	36.57	18.81	55.38	74.00	-18.62	Horizontal
7	17516.1895	37.28	17.74	55.02	74.00	-18.98	Horizontal

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17026.7533	26.46	18.81	45.27	54.00	-8.73	Horizontal
2	17516.1895	27.07	17.74	44.81	54.00	-9.19	Horizontal

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4155.1444	40.63	4.80	45.43	74.00	-28.57	Vertical
2	4865.8582	40.45	5.34	45.79	74.00	-28.21	Vertical
3	7399.2999	39.20	8.68	47.88	74.00	-26.12	Vertical
4	9070.1338	39.19	8.84	48.03	74.00	-25.97	Vertical
5	11018.5023	37.29	12.54	49.83	74.00	-24.17	Vertical
6	17189.8987	37.33	18.18	55.51	74.00	-18.49	Vertical
7	17555.5694	36.93	17.98	54.91	74.00	-19.09	Vertical

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17189.8987	26.82	18.18	45.00	54.00	-9.00	Vertical
2	17189.8987	27.03	18.18	45.21	54.00	-8.79	Vertical
3	17555.5694	27.62	17.98	45.60	54.00	-8.40	Vertical
4	17555.5694	27.05	17.98	45.03	54.00	-8.97	Vertical

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	5214.6518	40.96	5.46	46.42	74.00	-27.58	Horizontal
2	7517.4397	38.70	8.73	47.43	74.00	-26.57	Horizontal
3	10823.4779	38.26	12.16	50.42	74.00	-23.58	Horizontal
4	13938.2423	37.21	14.40	51.61	74.00	-22.39	Horizontal
5	15777.8472	37.80	15.26	53.06	74.00	-20.94	Horizontal
6	17041.7552	36.43	18.83	55.26	74.00	-18.74	Horizontal
7	17476.8096	37.27	17.80	55.07	74.00	-18.93	Horizontal

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17041.7552	26.56	18.83	45.39	54.00	-8.61	Horizontal
2	17476.8096	26.94	17.80	44.74	54.00	-9.26	Horizontal

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	4335.1669	40.42	5.22	45.64	74.00	-28.36	Vertical
2	5878.4848	39.95	5.27	45.22	74.00	-28.78	Vertical
3	7271.7840	39.14	8.60	47.74	74.00	-26.26	Vertical
4	10669.7087	38.24	11.77	50.01	74.00	-23.99	Vertical
5	14026.3783	37.09	14.55	51.64	74.00	-22.36	Vertical
6	17030.5038	37.32	19.03	56.35	74.00	-17.65	Vertical
7	17555.5694	37.03	17.98	55.01	74.00	-18.99	Vertical

#### AV Result:

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	17030.5038	26.27	19.03	45.30	54.00	-8.70	Vertical
2	17030.5038	26.31	19.03	45.34	54.00	-8.66	Vertical
3	17555.5694	27.01	17.98	44.99	54.00	-9.01	Vertical
4	17555.5694	27.14	17.98	45.12	54.00	-8.88	Vertical

- 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- 3. Peak detector: RBW: 1 MHz, VBW: 3 MHz;
- 4. Average detector: RBW: 1 MHz, VBW: 1/T MHz(refer to clause 7.1.);
- 5. For above 3GHz part, filter losses were only considered in the spurious frequency bands and the authorized band was not corrected for HPF losses;
- 6. 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)

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	18372.3372	49.96	-0.98	48.98	74.00	-25.02	Horizontal
2	19445.9946	48.99	-0.76	48.23	74.00	-25.77	Horizontal
3	20512.0012	48.46	-0.70	47.76	74.00	-26.24	Horizontal
4	21424.1424	48.82	-0.59	48.23	74.00	-25.77	Horizontal
5	23006.1506	48.14	1.22	49.36	74.00	-24.64	Horizontal
6	26001.0001	48.70	1.66	50.36	74.00	-23.64	Horizontal

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.







PK Limit AV Limit PK
PK Detector # AV Detector

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	19193.5194	49.89	-0.97	48.92	74.00	-25.08	Vertical
2	20192.3692	48.91	-0.60	48.31	74.00	-25.69	Vertical
3	21877.2377	48.64	0.00	48.64	74.00	-25.36	Vertical
4	22853.9854	48.50	1.12	49.62	74.00	-24.38	Vertical
5	23573.1573	49.05	-0.30	48.75	74.00	-25.25	Vertical
6	25867.5368	49.30	1.45	50.75	74.00	-23.25	Vertical

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.



### Part IV: 30MHz~1GHz



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

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	44.4544	13.61	17.94	31.55	40.00	-8.45	Horizontal
2	53.0883	12.98	14.39	27.37	40.00	-12.63	Horizontal
3	100.5261	10.58	16.98	27.56	43.50	-15.94	Horizontal
4	119.7340	7.43	20.33	27.76	43.50	-15.74	Horizontal
5	480.7071	6.93	25.20	32.13	46.00	-13.87	Horizontal
6	734.7755	7.44	28.97	36.41	46.00	-9.59	Horizontal

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.





_	- QP Limit	— РК
0	QP Detector	

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	44.2604	13.32	18.06	31.38	40.00	-8.62	Vertical
2	100.6231	9.14	17.00	26.14	43.50	-17.36	Vertical
3	162.3212	7.24	18.69	25.93	43.50	-17.57	Vertical
4	298.2318	7.02	20.49	27.51	46.00	-18.49	Vertical
5	476.5357	6.51	25.09	31.60	46.00	-14.40	Vertical
6	709.2619	7.46	28.69	36.15	46.00	-9.85	Vertical

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.



## Part V: 9KHz~30MHz



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



No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	0.0155	39.86	-60.98	-21.12	43.77	-64.89	Horizontal
2	0.0215	33.52	-60.86	-27.34	40.97	-68.31	Horizontal
3	0.0312	37.43	-60.92	-23.49	37.71	-61.20	Horizontal
4	0.0469	35.00	-61.02	-26.02	34.18	-60.20	Horizontal
5	0.0609	36.85	-61.21	-24.36	31.91	-56.27	Horizontal
6	0.1444	44.36	-61.25	-16.89	24.41	-41.30	Horizontal

- 2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
- 3. 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.





No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark	
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]		
1	0.1859	38.74	-61.13	-22.39	22.22	-44.61	Vertical	
2	0.2532	37.31	-60.80	-23.49	19.53	-43.02	Vertical	
3	0.2908	38.78	-60.77	-21.99	18.33	-40.32	Vertical	
4	0.3405	44.27	-60.73	-16.46	16.96	-33.42	Vertical	
5	0.4172	38.24	-60.67	-22.43	15.05	-37.48	Vertical	
6	0.4342	39.42	-60.65	-21.23	14.56	-35.79	Vertical	

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

QP Detector

- 2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
- 3. 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.







-	- QP Limit	- PK
0	QP Detector	

No.	Frequency	Reading Level	Correct Factor	Result	Limit	Margin	Remark
	[MHz]	[dBuV/m]	[dB]	[dBuV/m]	[dBuV/m]	[dB]	
1	1.0803	38.32	-20.34	17.98	26.94	-8.96	Vertical
2	1.1098	38.32	-20.34	17.98	26.70	-8.72	Vertical
3	2.2195	30.27	-20.27	10.00	29.54	-19.54	Vertical
4	3.2406	24.61	-20.37	4.24	29.54	-25.30	Vertical
5	8.6474	21.64	-19.19	2.45	29.54	-27.09	Vertical
6	13.3340	23.47	-19.14	4.33	29.54	-25.21	Vertical

- Note: 1. Measurement = Reading Level + Correct Factor.
  - 2. If Peak Result complies with AV and QP limit, AV and QP Result are deemed to comply with AV limit.
  - 3. 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.



## 8. AC POWER LINE CONDUCTED EMISSIONS

## LIMITS

Please refer to FCC §15.207 (a)

	Limit (dBuV)					
	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.







### LINE L RESULTS (WORST-CASE CONFIGURATION)

## Final\_Result

Frequency [MHz]	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Meas. Time [ms]	Bandwidth [kHz]	Line	Filter	Corr. [dB]
28.582125		19.45	50.00	30.55	1000.0	9.000	L1	OFF	10.1
28.582125	27.10		60.00	32.90	1000.0	9.000	L1	OFF	10.1
28.626900		22.99	50.00	27.01	1000.0	9.000	L1	OFF	10.1
28.626900	32.97		60.00	27.03	1000.0	9.000	L1	OFF	10.1
28.671675	31.62		60.00	28.38	1000.0	9.000	L1	OFF	10.1
28.671675		21.26	50.00	28.74	1000.0	9.000	L1	OFF	10.1
29.298525		16.86	50.00	33.14	1000.0	9.000	L1	OFF	10.1
29.335838	32.33		60.00	27.67	1000.0	9.000	L1	OFF	10.1
29.335838		23.88	50.00	26.12	1000.0	9.000	L1	OFF	10.1
29.507475	28.62		60.00	31.38	1000.0	9.000	L1	OFF	10.1
29.507475		19.48	50.00	30.52	1000.0	9.000	L1	OFF	10.1
29.731350	30.81		60.00	29.19	1000.0	9.000	L1	OFF	10.2

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 HCH of 11b which is the worst case, so only the worst case is included in this test report.





## Final\_Result

Frequency [MHz]	QuasiPeak [dBµV]	Average [dBµV]	Limit [dBµV]	Margin [dB]	Meas. Time [ms]	Bandwidth [kHz]	Line	Filter	Corr. [dB]
0.224625		35.36	52.65	35.28	1000.0	9.000	Ν	OFF	9.6
0.224625	42.26		62.65	26.89	1000.0	9.000	Ν	OFF	9.6
28.768688	34.09		60.00	25.91	1000.0	9.000	Ν	OFF	9.9
28.858238		24.06	50.00	25.94	1000.0	9.000	Ν	OFF	9.9
28.858238	32.09		60.00	27.91	1000.0	9.000	Ν	OFF	9.9
29.216438		23.49	50.00	26.51	1000.0	9.000	Ν	OFF	9.9
29.619413	30.95		60.00	29.05	1000.0	9.000	Ν	OFF	10.0
29.619413		22.88	50.00	27.12	1000.0	9.000	Ν	OFF	10.0
29.656725	34.62		60.00	25.38	1000.0	9.000	Ν	OFF	10.0
29.664188		23.77	50.00	26.23	1000.0	9.000	Ν	OFF	10.0
29.701500		22.96	50.00	27.04	1000.0	9.000	Ν	OFF	10.0
29.701500	35.09		60.00	24.91	1000.0	9.000	Ν	OFF	10.0

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 HCH of 11b which 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 GAIN

The antenna gain of EUT is less than 6 dBi

## END OF REPORT