

**FCC - TEST REPORT**Report Number : **709502405776-00F** Date of Issue: November 19, 2024Model : Refer to page 4Product Type : Acoustic Thermal ImagerApplicant : FOTRIC INC.Address : No. 14, Lane 2500, Xiupu Road, Pudong, 201201 Shanghai,
PEOPLE'S REPUBLIC OF CHINAManufacturer : FOTRIC INC.Address : No. 14, Lane 2500, Xiupu Road, Pudong, 201201 Shanghai,
PEOPLE'S REPUBLIC OF CHINATest Result : ☒ **Positive** ☐ **Negative**Total pages including
Appendices : 69

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch is a subcontractor to TÜV SÜD Product Service GmbH according to the principles outlined in ISO 17025.

TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch reports apply only to the specific samples tested under stated test conditions. Construction of the actual test samples has been documented. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. The manufacturer/importer is responsible to the Competent Authorities in Europe for any modifications made to the production units which result in non-compliance to the relevant regulations. TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch issued reports.

This report is the confidential property of the client. As a mutual protection to our clients, the public and ourselves, extracts from the test report shall not be reproduced except in full without our written approval.



1 Table of Contents

1	Table of Contents	2
2	Report Modification Record	3
3	Details about the Test Laboratory	3
4	Description of the Equipment under Test	4
5	Summary of Test Standards.....	9
6	Summary of Test Results	10
7	General Remarks.....	11
8	Test Setups	12
9	Systems test configuration.....	15
10	Technical Requirement	17
10.1	Conducted Emission.....	17
10.2	Emission bandwidth.....	22
10.3	Maximum conducted output power.....	24
10.4	Maximum power spectral density	25
10.5	Frequencies Stability	27
10.6	Unwanted emissions	37
11	Test Equipment List	66
12	System Measurement Uncertainty.....	67
13	Photographs of Test Set-ups	68
14	Photographs of EUT	69



2 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
709502405776-00F	First Issue	11/19/2024

3 Details about the Test Laboratory

Details about the Test Laboratory

Test Site 1

Company name: TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch
No.16 Lane, 1951 Du Hui Road,
Shanghai 201108,
P.R. China

Test Firm FCC
Registration
Number: 820234

Designation
number: CN1183

IC Company
Number: 25988

CAB identifier: CN0101

Telephone: +86 21 6141 0123
Fax: +86 21 6140 8600

4 Description of the Equipment under Test

Product: Acoustic Thermal Imager

Model no.:

Fotric 330MiX	Fotric 340MiX	Fotric 850MiX	Fotric V0MiX	Fotric EE0VM	Fotric EE0IM
Fotric 331MiX	Fotric 341MiX	Fotric 851MiX	Fotric V1MiX	Fotric EE1VM	Fotric EE1IM
Fotric 332MiX	Fotric 342MiX	Fotric 852MiX	Fotric V2MiX	Fotric EE2VM	Fotric EE2IM
Fotric 333MiX	Fotric 343MiX	Fotric 853MiX	Fotric V3MiX	Fotric EE3VM	Fotric EE3IM
Fotric 334MiX	Fotric 344MiX	Fotric 854MiX	Fotric V4MiX	Fotric EE4VM	Fotric EE4IM
Fotric 335MiX	Fotric 345MiX	Fotric 855MiX	Fotric V5MiX	Fotric EE5VM	Fotric EE5IM
Fotric 336MiX	Fotric 346MiX	Fotric 856MiX	Fotric V6MiX	Fotric EE6VM	Fotric EE6IM
Fotric 337MiX	Fotric 347MiX	Fotric 857MiX	Fotric V7MiX	Fotric EE7VM	Fotric EE7IM
Fotric 338MiX	Fotric 348MiX	Fotric 858MiX	Fotric V8MiX	Fotric EE8VM	Fotric EE8IM
Fotric 339MiX	Fotric 349MiX	Fotric 859MiX	Fotric V9MiX	Fotric EE9VM	Fotric EE9IM
Fotric 3310MiX	Fotric 3410MiX	Fotric 8510MiX	Fotric V10MiX	Fotric EE10VM	Fotric EE10IM
WWZDH2	WVZDH2	RUZDH2	4ZDH2	LLZ4D	LLZHD
WWYDH2	WVYDH2	RUYDH2	4YDH2	LLY4D	LLYHD
WWXDH2	WVXDH2	RUXDH2	4XDH2	LLX4D	LLXHD
WWWDH2	WVWDH2	RUWDH2	4WDH2	LLW4D	LLWHD
WWVDH2	WVVDH2	RUVDH2	4VDH2	LLV4D	LLVHD
WWUDH2	WVUDH2	RUUDH2	4UDH2	LLU4D	LLUHD
WWTDH2	WVTDH2	RUTDH2	4TDH2	LLT4D	LLTHD
WWSDH2	WVSDH2	RUSDH2	4SDH2	LLS4D	LLSHD
WWRDH2	WVRDH2	RURDH2	4RDH2	LLR4D	LLRHD
WWQDH2	WVQDH2	RUQDH2	4QDH2	LLQ4D	LLQHD
WWYZDH2	WVYZDH2	RUYZDH2	4YZDH2	LLYZ4D	LLYZHD
UniC78Mix	5CHNDH2				

FCC ID: 2AZTCFCAC2IN1F

Options and accessories: NA

Rating: DC 7.4V for Acoustic Thermal Imager
Input: AC 100-240V, 50/60Hz, Output DC 12V for adapter

RF Transmission Frequency:
For Bluetooth: 2402~2480MHz
For 2.4G Wi-Fi: 802.11b/g/n-HT20: 2412~2462 MHz
802.11n-HT40: 2422~2452 MHz
For 5G Wi-Fi: 5180~5240 MHz (U-NII-1)
5260~5320 MHz (U-NII-2A)
5500~5720 MHz (U-NII-2C)
5745~5825 MHz (U-NII-3)

No. of Operated Channel: 79 channels for Bluetooth EDR

Ch	Fre (MH)	Ch	Fre (MH)	Ch	Fre (MH)	Ch	Fre (MH)	Ch	Fre (MHz)
1	2402	17	2418	33	2434	49	2450	65	2466
2	2403	18	2419	34	2435	50	2451	66	2467
3	2404	19	2420	35	2436	51	2452	67	2468
4	2405	20	2421	36	2437	52	2453	68	2469
5	2406	21	2422	37	2438	53	2454	69	2470
6	2407	22	2423	38	2439	54	2455	70	2471
7	2408	23	2424	39	2440	55	2456	71	2472
8	2409	24	2425	40	2441	56	2457	72	2473
9	2410	25	2426	41	2442	57	2458	73	2474
10	2411	26	2427	42	2443	58	2459	74	2475
11	2412	27	2428	43	2444	59	2460	75	2476
12	2413	28	2429	44	2445	60	2461	76	2477
13	2414	29	2430	45	2446	61	2462	77	2478
14	2415	30	2431	46	2447	62	2463	78	2479
15	2416	31	2432	47	2448	63	2464	79	2480
16	2417	32	2433	48	2449	64	2465		

40 channels for Bluetooth 4.2 BLE

Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

2.4GHz WIFI: 11 for 802.11b/802.11g/802.11(H20);
7 for 802.11n(HT40)

802.11b/g/n(HT20)				802.11n(HT40)			
Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)	Ch	Fre(MHz)
1	2412	7	2442	3	2422	8	2447MHz
2	2417	8	2447	4	2427	9	2452MHz
3	2422	9	2452	5	2432		
4	2427	10	2457	6	2437		
5	2432	11	2462	7	2442		
6	2437						

5180~5240 MHz (U-NII-1):

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	44	5220
40	5200	48	5240

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
38	5190	46	5230

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
42	5210

5260~5320 MHz (U-NII-2A)

4 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	60	5300
56	5280	64	5320

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
54	5270	62	5310

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
58	5290		

5500~5720 MHz (U-NII-2C)

12 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	124	5620
104	5520	128	5640
108	5540	132	5660
112	5560	136	5680
116	5580	140	5700
120	5600	144	5720

6 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
102	5510	126	5630
110	5550	134	5670
118	5590	142	5710

3 channels are provided for 802.11ac (VHT80):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
106	5530	138	5690
122	5610		

5745~5825 MHz (U-NII-3): Channel 149 – 165

5 channels are provided for 802.11a, 802.11n (HT20), 802.11ac (VHT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	161	5805
153	5765	165	5825
157	5785		

2 channels are provided for 802.11n (HT40), 802.11ac (VHT40):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
151	5755	159	5795

1 channel is provided for 802.11ac (VHT80):

Channel	Frequency (MHz)
155	5755

Modulation:	Bluetooth EDR FHSS: GFSK, $\pi/4$ DQPSK, 8DPSK Bluetooth 4.2+BLE DHSS: GFSK For Wi-Fi: Direct Sequence Spread Spectrum (DSSS) for 802.11b Orthogonal Frequency Division Multiplexing (OFDM) for 802.11a/b/g/n/ac
Hardware Version:	V02
Software Version:	V6.4.2
Data speed:	1. Bluetooth EDR FHSS: 1Mbps, 2Mbps, 3Mbps 2. Bluetooth 4.2+BLE DHSS: 1Mbps 3. Wi-Fi: 11b 1 ~ 11Mbps, 11g/a 6 ~ 54Mbps, 11n HT20 6.5 ~ 72.2Mbps, 11n HT 40 13.5 ~ 150Mbps, 11ac VHT40 13.5 ~ 200Mbps, 11ac VHT80 29.3 ~ 433.3Mbps
Antenna Type:	PIFA Antenna
Antenna Gain:	1.76dBi for 2.4GHz; 5.96dBi for 5GHz
Description of the EUT:	The Equipment Under Test (EUT) is an Acoustic Thermal Imager with Bluetooth and Wi-Fi Module. The EUT support Bluetooth EDR, BLE function, Wi-Fi 2.4GHz and Wi-Fi 5GHz. According to the client's declaration, all the models share the same schematic, hardware circuit, PCB layout, including RF parameters, except for the number of enabled microphone modules. We chose model Fotric V0MiX to perform all the tests and listed the worst data in this report. Only 5GHz Wi-Fi RF testing results were included in this report.
Test sample no.:	SHA-832647-2 (RF Conducted); SHA-832647-3 (RF Radiated)



The sample's mentioned in this report is/are submitted/ supplied/ manufactured by client. The laboratory therefore assumes no responsibility for accuracy of information on the brand name, model number, origin of manufacture, consignment or any information supplied.



5 Summary of Test Standards

Test Standards	
FCC Part 15 Subpart E, 2023 Edition	PART 15 - RADIO FREQUENCY DEVICES Subpart E - Unlicensed National Information Infrastructure Devices

Test Method:
FCC KDB 558074 D01 15.247 Meas Guidance v05r02
KDB 789033 D02 General UNII Test Procedures New Rules v02r01
ANSI C63.10-2020, American National Standard for Testing Unlicensed Wireless Devices

6 Summary of Test Results

Technical Requirements						
FCC Part 15 Subpart C						
Test Condition		Pages	Test Site	Test Result		
				Pass	Fail	N/A
§15.207	Conducted emission AC power port	17-21	Site 1	☒	☐	☐
§15.407(e)	Emission bandwidth	22-23	Site 1	☒	☐	☐
15.407(a)(i)	Maximum Conducted Output Power	24	Site 1	☒	☐	☐
15.407(a)(i)	Maximum Power Spectral Density	25-26	Site 1	☒	☐	☐
§15.407(g)	Frequencies Stability	27-36	Site 1	☒	☐	☐
§15.407(b)(1), 15.407(b)(2), 15.407(b)(3), 15.407(b)(4), 15.407(b)(5), 15.407(b)(6), 15.407(b)(7), 15.209	Unwanted Emissions	37-65	Site 1	☒	☐	☐
§15.203	Antenna requirement	See note 1		☒	☐	☐

Remark 1: The EUT only operation at 5G Wi-Fi UNII Band (5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5720MHz, 5745MHz-5825MHz). The EUT operate as Clients Device without Radar Detection.

Note 1: The EUT uses a PIFA antenna, which gain is 1.76dBi for 2.4GHz and 5.96dBi for 5GHz. In accordance to §15.203, It is considered sufficiently to comply with the provisions of this section.

15.203 requirement: 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, 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. 15.247(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.

7 General Remarks

Remarks

This submittal(s) (test report) is intended for FCC ID: 2AZTCFCAC2IN1F complies with Section 15.205, 15.207, 15.209, 15.407 of the FCC Part 15, Subpart E Rules.

This report is only for 5GHz Wi-Fi. The TX and RX range is 5180MHz-5240MHz, 5260MHz-5320MHz, 5500MHz-5720MHz, 5745MHz-5825MHz.

This report is only for 5.0GHz Wi-Fi.

SUMMARY:

All tests according to the regulations cited on page 6 were

■ - Performed

□ - **Not** Performed

The Equipment under Test

■ - **Fulfills** the general approval requirements.

□ - **Does not** fulfill the general approval requirements.

Sample Received Date: July 12, 2024

Testing Start Date: July 12, 2024

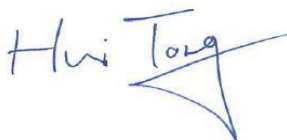
Testing End Date: November 19, 2024

- TÜV SÜD Certification and Testing (China) Co., Ltd. Shanghai Branch

Reviewed by:

Prepared by:

Tested by:



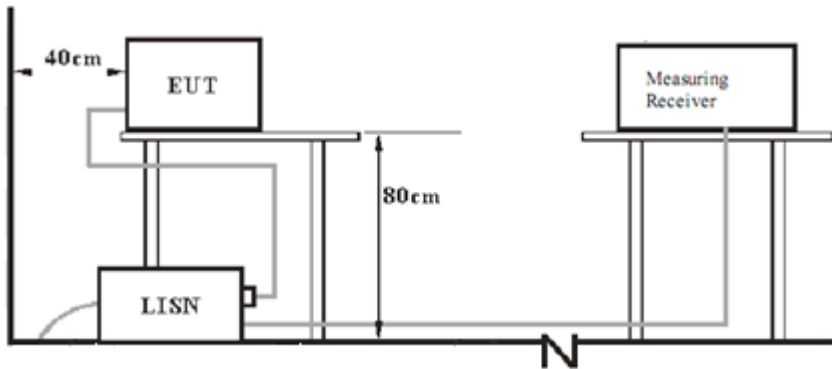
Hui TONG
Review Engineer

Wenqiang LU
Project Engineer

Chengjie GUO
Test Engineer

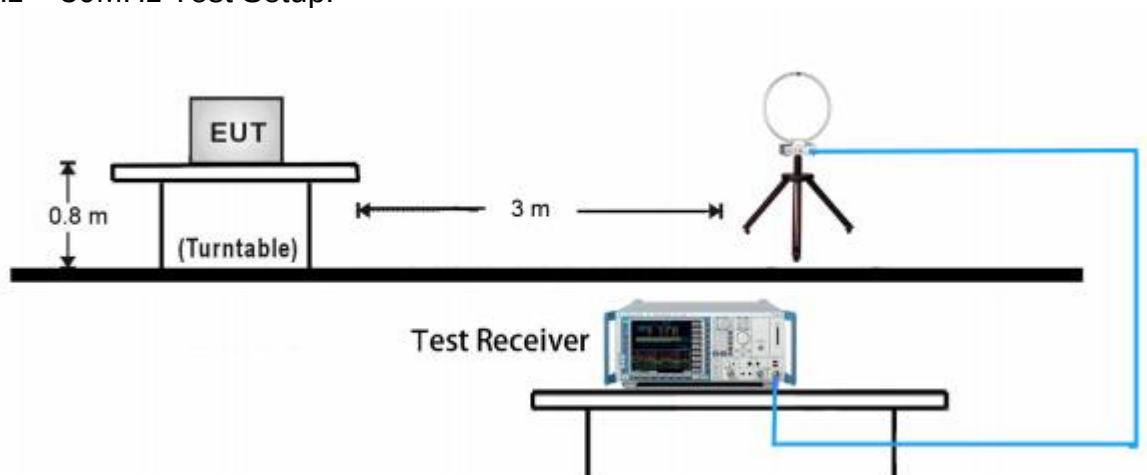
8 Test Setups

8.1 AC Power Line Conducted Emission test setups

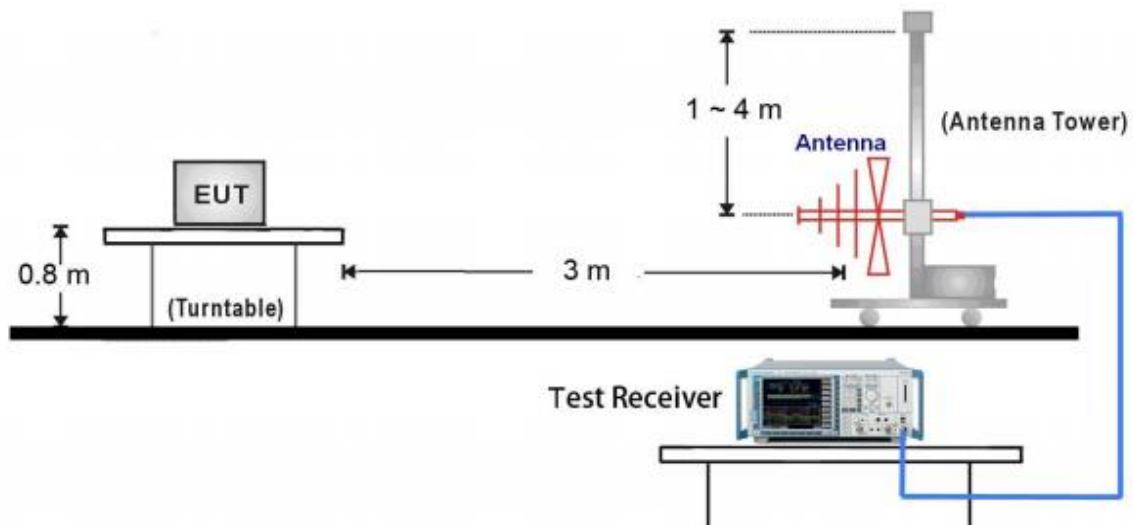


8.2 Radiated test setups

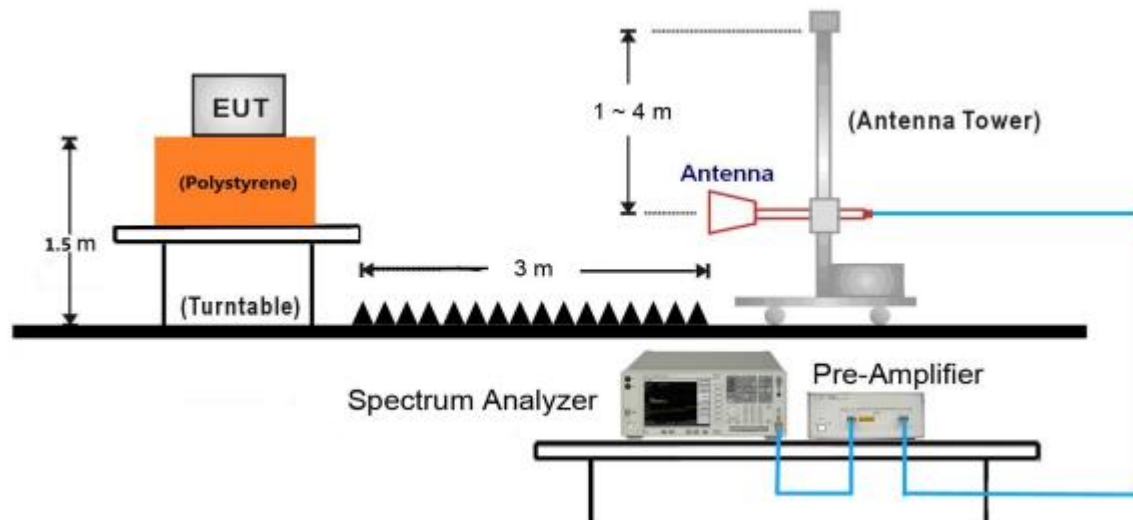
9kHz ~ 30MHz Test Setup:



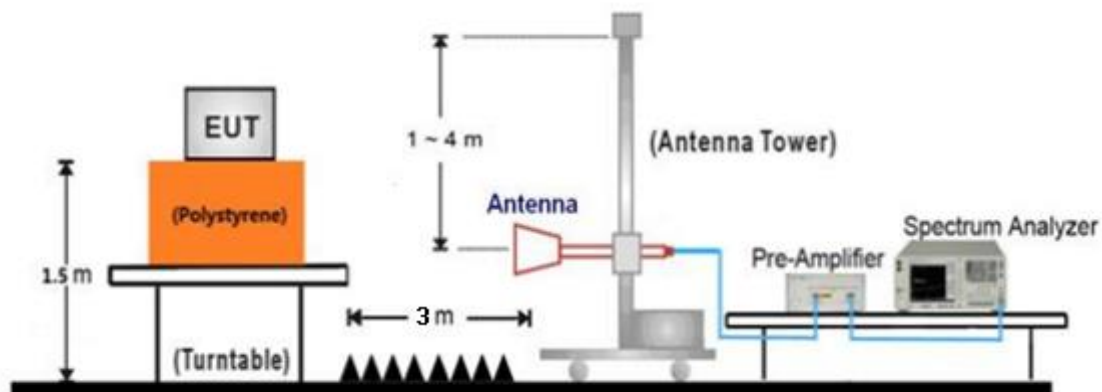
30MHz ~ 1GHz Test Setup:



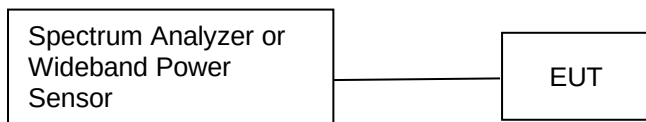
1GHz ~ 18GHz Test Setup:



18GHz ~ 40GHz Test Setup:



8.3 Conducted RF test setups



9 Systems test configuration

Auxiliary Equipment Used during Test:

DESCRIPTION	MANUFACTURER	MODEL NO.(SHIELD)	S/N(LENGTH)
Notebook	Lenove	E470	PF-OU5TS7 17/09

Test software: QRCT.exe, which used to control the EUT in continues transmitting mode.

The system was configured to channel:

Test Mode	Channel	Index Value (Power level setting)	Frequency (MHz)
802.11a, 802.11n HT20 802.11ac20	36	14	5180
	44	14	5200
	48	14	5240
	52	14	5260
	56	14	5280
	64	14	5320
	100	14	5500
	120	14	5600
	140	14	5700
	144	14	5720
	149	14	5745
	157	14	5785
	165	14	5825
802.11n HT40 802.11ac40	38	12	5190
	46	12	5230
	54	12	5270
	62	12	5310
	102	12	5510
	118	12	5590
	134	12	5670
	142	12	5710
	151	12	5755
	159	12	5795
802.11ac80	42	11	5210
	58	11	5290
	106	11	5530
	122	11	5610
	138	11	5690
	155	11	5775

The pre-test has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates.

Modulation Type	Data Rate
802.11a OFDM	6Mbps
802.11n (HT20): OFDM	MCS0 (6.5Mbps)
802.11n (HT40): OFDM	MCS0 (13.5Mbps)
802.11ac (VHT20): OFDM	11ac 6.5Mbps (20MHz)
802.11ac (VHT40): OFDM	11ac 13.5Mbps (40MHz)
802.11ac (VHT80): OFDM	11ac 29.3Mbps (80MHz)

10 Technical Requirement

10.1 Conducted Emission

Test Method

1. The EUT was placed on a table, which is 0.8m above ground plane
2. The power line of the EUT is connected to the AC mains through a Artificial Mains Network (A.M.N.).
3. Maximum procedure was performed to ensure EUT compliance
4. A EMI test receiver is used to test the emissions from both sides of AC line

Limit

Frequency MHz	QP Limit dB μ V	AV Limit dB μ V
0.150-0.500	66-56*	56-46*
0.500-5	56	46
5-30	60	50

*Decreasing linearly with logarithm of the frequency

Conducted Emission

Conducted Emission worse case test result as below:

150k-30MHz Conducted Emission Test

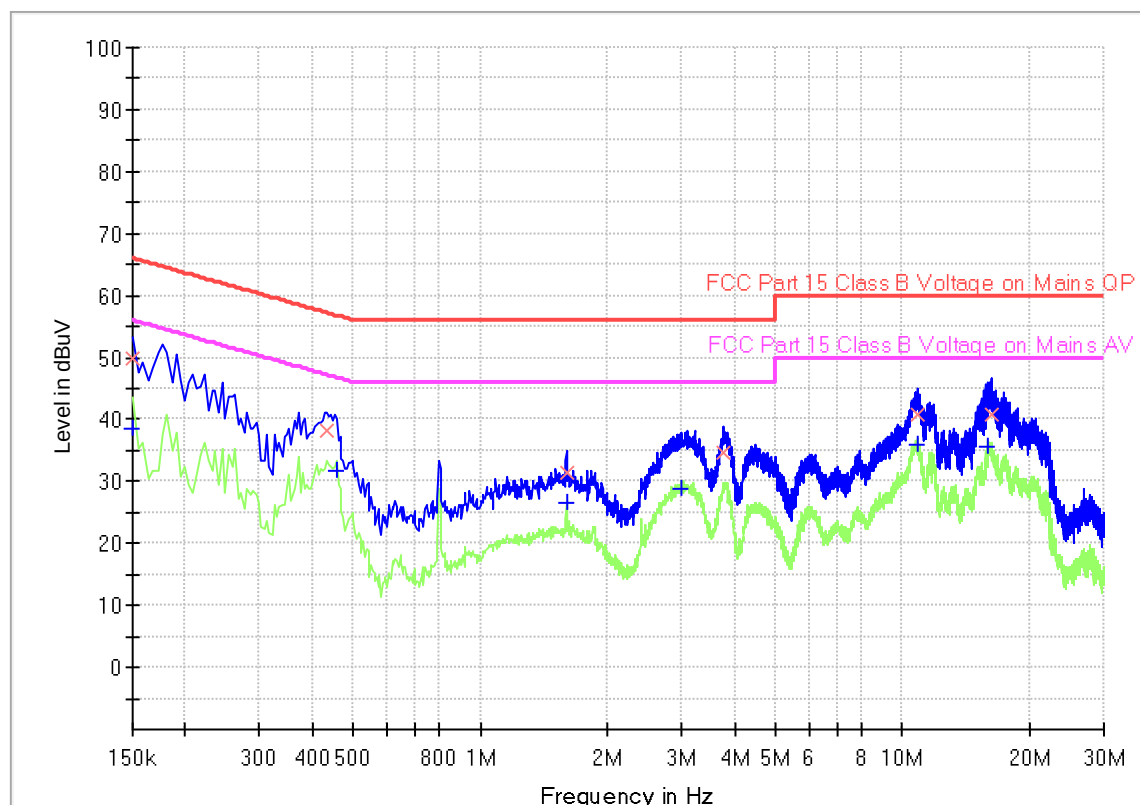
EUT Information

EUT Name: Acoustic Thermal Imager
 Model: Fotric V0MiX
 Client: FOTRIC INC
 Op Cond: Power on, AC 120V/60Hz, TX_5755MHz at 802.11n HT40 (worse case)
 Operator: Huali CHENG
 Standard: FCC Part 15.207(a)
 Comment: Phase L
 Sample No.: SHA-831405-2

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup: Voltage with 2-Line-LISN
 Receiver: [ESR 3]
 Level Unit: dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.150000	---	38.44	56.00	17.56	1000.0	9.000	L1	19.4
0.150000	49.96	---	66.00	16.04	1000.0	9.000	L1	19.4
0.433500	38.31	---	57.19	18.88	1000.0	9.000	L1	19.5
0.456000	---	31.60	46.77	15.17	1000.0	9.000	L1	19.5
1.599000	31.36	---	56.00	24.64	1000.0	9.000	L1	19.5
1.599000	---	26.67	46.00	19.33	1000.0	9.000	L1	19.5
3.007500	---	28.85	46.00	17.15	1000.0	9.000	L1	19.5
3.772500	34.51	---	56.00	21.49	1000.0	9.000	L1	19.6
10.828500	40.80	---	60.00	19.20	1000.0	9.000	L1	19.8
10.860000	---	35.79	50.00	14.21	1000.0	9.000	L1	19.8
15.990000	---	35.46	50.00	14.54	1000.0	9.000	L1	20.1
16.323000	40.92	---	60.00	19.08	1000.0	9.000	L1	20.1

Note 1: Measure Level = Reading Level + Factor

Factor = Cable Loss + LISN Factor + 10dB Attenuator

(The Reading Level is recorded by software which is not shown in the sheet)

150k-30MHz Conducted Emission Test

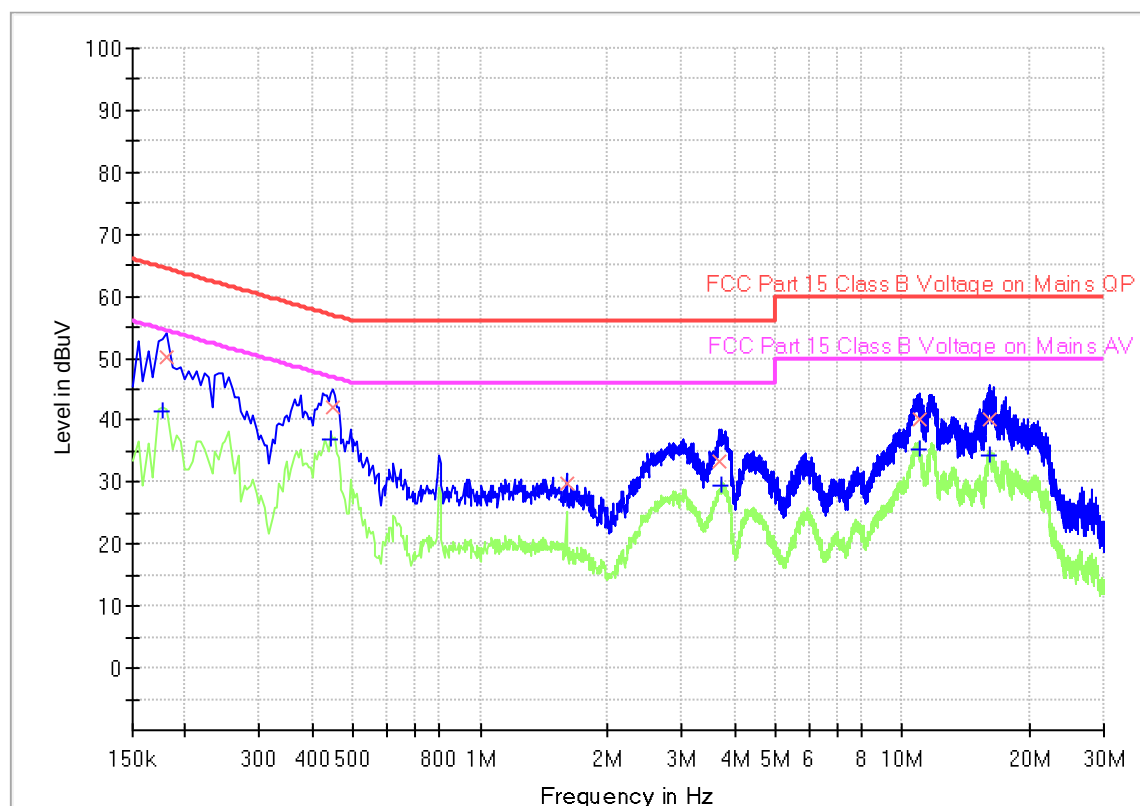
EUT Information

EUT Name: Acoustic Thermal Imager
 Model: Fotric V0MiX
 Client: FOTRIC INC
 Op Cond: Power on, AC 120V/60Hz, TX_5755MHz at 802.11n HT40 (worse case)
 Operator: Huali CHENG
 Standard: FCC Part 15.207(a)
 Comment: Phase N
 Sample No.: SHA-831405-2

Scan Setup: Voltage with 2-Line-LISN pre [EMI conducted]

Hardware Setup: Voltage with 2-Line-LISN
 Receiver: [ESR 3]
 Level Unit: dBuV

Subrange	Step Size	Detectors	IF BW	Meas. Time	Preamp
9 kHz - 150 kHz	100 Hz	PK+	200 Hz	0.02 s	0 dB
150 kHz - 30 MHz	4.5 kHz	PK+; AVG	9 kHz	0.01 s	0 dB



Final Result

Frequency (MHz)	QuasiPeak (dBuV)	CAverage (dBuV)	Limit (dBuV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	Corr. (dB)
0.177000	---	41.45	54.63	13.18	1000.0	9.000	N	19.4
0.181500	50.07	---	64.42	14.35	1000.0	9.000	N	19.4
0.442500	---	36.86	47.01	10.15	1000.0	9.000	N	19.5
0.447000	42.01	---	56.93	14.92	1000.0	9.000	N	19.5
1.599000	---	27.07	46.00	18.93	1000.0	9.000	N	19.5
1.599000	29.95	---	56.00	26.05	1000.0	9.000	N	19.5
3.664500	33.46	---	56.00	22.54	1000.0	9.000	N	19.6
3.723000	---	29.33	46.00	16.67	1000.0	9.000	N	19.6
10.923000	40.24	---	60.00	19.76	1000.0	9.000	N	19.7
10.954500	---	35.24	50.00	14.76	1000.0	9.000	N	19.7
16.093500	---	34.26	50.00	15.74	1000.0	9.000	N	20.0
16.138500	40.08	---	60.00	19.92	1000.0	9.000	N	20.0

Note 1: Measure Level = Reading Level + Factor

Factor = Cable Loss + LISN Factor + 10dB Attenuator

(The Reading Level is recorded by software which is not shown in the sheet)

10.2 Emission bandwidth

1、 Test Method of 26dB Bandwidth

According to KDB789033 D02

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

Limit: No limit

2、 Test Method of 6dB Bandwidth

According to KDB789033 D02

- a) Set RBW = 100KHz
- b) Set the video bandwidth (VBW) $\geq 3 \times$ RBW
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) 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.

Limit: $\geq 500\text{KHz}$

3、 Test Method of 99% Bandwidth

According to KDB789033 D02

- a) Set center frequency to the nominal EUT channel center frequency
- b) Set span = 1.5 times to 5.0 times the OBW.
- c) Set RBW = 1 % to 5 % of the OBW
- d) Set VBW $\geq 3 \cdot$ RBW
- e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
- f) Use the 99 % power bandwidth function of the instrument (if available).
- g) If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.

Limit: No limit



Test result as below table:

26dB Bandwidth Test Result:

Test data should be referred to Appendix A for 709502405776-00F.

99% Bandwidth Test Result

Test data should be referred to Appendix A for 709502405776-00F.

6dB Bandwidth Test Result

Test data should be referred to Appendix A for 709502405776-00F.

10.3 Maximum conducted output power

Test Method

According to C63.10, the EUT was placed on 0.8m height table, the RF output of EUT was connected to the Spectrum Analyzer by RF cable. The path loss was compensated to the results for each measurement.

1. Measure the duty cycle
2. Use the following spectrum analyzer settings:
RBW=1MHz, VBW≥3MHz, Span≥ the 99% Bandwidth of the emission being measured
Sweep = auto, Detector function = power averaging.
3. Trace average at least 100 traces in power averaging (rms) mode
4. Add $10 \log (1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times

15.407 Limits:

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26dB emission bandwidth in megahertz.

For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

Maximum conducted output power Test Result:

Test data should be referred to Appendix A for 709502405776-00F.

10.4 Maximum power spectral density

Test Method

According to C63.10, the EUT was placed on 0.8m height table, the RF output of EUT was connected to the test power meter by RF cable. The path loss was compensated to the results for each measurement.

1. Create an average power spectrum for the EUT operating mode being tested by following the instructions in II.E.2. for measuring maximum conducted output power using a spectrum analyzer or EMI receiver: select the appropriate test method (SA-1, SA-2, SA-3, or alternatives to each) and apply it up to, but not including, the step labeled, "Compute power...." (This procedure is required even if the maximum conducted output power measurement was performed using a power meter, method PM.)
 2. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
 3. Make the following adjustments to the peak value of the spectrum, if applicable:
 - a) If Method SA-2 or SA-2 Alternative was used, add $10 \log (1/x)$, where x is the duty cycle, to the peak of the spectrum.
 - b) If Method SA-3 Alternative was used and the linear mode was used in II.E.2.g)(viii), add 1 dB to the final result to compensate for the difference between linear averaging and power averaging.
 4. The result is the Maximum PSD over 1 MHz reference bandwidth.
 5. For devices operating in the bands 5.15–5.25 GHz, 5.25–5.35 GHz, and 5.47–5.725 GHz, the preceding procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in Section 15.407(a)(5). For devices operating in the band 5.725–5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of RBWs less than 1 MHz, or 500 kHz, "provided that the measured power is integrated over the full reference bandwidth" to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 kHz bandwidth, the following adjustments to the procedures apply:
 - a) Set $RBW \geq 1/T$, where T is defined in II.B.1.a).
 - b) Set $VBW \geq 3$ RBW.
 - c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10 \log (500 \text{ kHz}/RBW)$ to the measured result, whereas $RBW (< 500 \text{ kHz})$ is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
 - d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10 \log (1\text{MHz}/RBW)$ to the measured result, whereas $RBW (< 1 \text{ MHz})$ is the reduced resolution bandwidth of spectrum analyzer set during measurement.
 - e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.
- Note: As a practical matter, it is recommended to use reduced RBW of 100 kHz for the II.F.5.c) and II.F.5.d), since $RBW=100 \text{ kHz}$ is available on nearly all spectrum analyzers.



Limit: The maximum power spectral density shall not exceed 11dBm for the 5.15-5.25GHz, 5.25-5.35GHz, 5.47-5.725 GHz Band in any 1 megahertz band.
For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30dBm in any 1 500kHz band.

For client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Test Result:

Test data should be referred to Appendix A for 709502405776-00F

10.5 Frequencies Stability

Test Method

1. Connect the UUT to the spectrum analyzer
2. Set Centre Frequency of the channel under test.
3. Set Detector PEAK
4. Set RBW: 10KHz, VBW: 3RBW
5. Set Span: Encompass the entire emissions bandwidth (EBW) of the signal.
6. Allow the trace to stabilize, find the peak value of the power envelope and record the frequency, then calculated the frequency drift.

The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.

User manual temperature is -20 to 50 °C.

Manufacturers of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

Limit: 20ppm

Test Results (All conditions and all modes were performed, only list Worst-Case in the report)

Remark: NV is normal Voltage: 120V~, HV is High Voltage: 138V~, LV is Low Voltage: 102V~, NT is normal Temperature: +20 °C.

Condition	Mode	Time (mins)	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
-30C 120V	a	0	5180	Ant1	5180	0	0	25	Pass
-20C 120V	a	0	5180	Ant1	5180	0	0	25	Pass
-10C 120V	a	0	5180	Ant1	5180	0	0	25	Pass
0C 120V	a	0	5180	Ant1	5180	0	0	25	Pass
10C 120V	a	0	5180	Ant1	5179.98	-20000	-3.86	25	Pass
20C 120V	a	0	5180	Ant1	5179.98	-20000	-3.86	25	Pass
30C 120V	a	0	5180	Ant1	5180	0	0	25	Pass
40C 120V	a	0	5180	Ant1	5180.02	20000	3.86	25	Pass
50C 120V	a	0	5180	Ant1	5180	0	0	25	Pass
-30C 120V	a	0	5200	Ant1	5199.98	-20000	-3.85	25	Pass
-20C 120V	a	0	5200	Ant1	5199.98	-20000	-3.85	25	Pass
-10C 120V	a	0	5200	Ant1	5200	0	0	25	Pass
0C 120V	a	0	5200	Ant1	5200	0	0	25	Pass
10C 120V	a	0	5200	Ant1	5200	0	0	25	Pass
20C 120V	a	0	5200	Ant1	5200	0	0	25	Pass
30C 120V	a	0	5200	Ant1	5199.98	-20000	-3.85	25	Pass
40C 120V	a	0	5200	Ant1	5200	0	0	25	Pass
50C 120V	a	0	5200	Ant1	5199.98	-20000	-3.85	25	Pass
-30C 120V	a	0	5240	Ant1	5240	0	0	25	Pass
-20C 120V	a	0	5240	Ant1	5240	0	0	25	Pass
-10C 120V	a	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass
0C 120V	a	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass
10C 120V	a	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass
20C 120V	a	0	5240	Ant1	5240	0	0	25	Pass
30C 120V	a	0	5240	Ant1	5240	0	0	25	Pass
40C 120V	a	0	5240	Ant1	5240.02	20000	3.82	25	Pass
50C 120V	a	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass
-30C 120V	a	0	5260	Ant1	5260.02	20000	3.8	25	Pass
-20C 120V	a	0	5260	Ant1	5260	0	0	25	Pass
-10C 120V	a	0	5260	Ant1	5259.98	-20000	-3.8	25	Pass
0C 120V	a	0	5260	Ant1	5259.98	-20000	-3.8	25	Pass
10C 120V	a	0	5260	Ant1	5260	0	0	25	Pass
20C 120V	a	0	5260	Ant1	5260	0	0	25	Pass
30C 120V	a	0	5260	Ant1	5260	0	0	25	Pass
40C 120V	a	0	5260	Ant1	5260	0	0	25	Pass
50C 120V	a	0	5260	Ant1	5259.98	-20000	-3.8	25	Pass
-30C 120V	a	0	5280	Ant1	5280	0	0	25	Pass
-20C 120V	a	0	5280	Ant1	5280	0	0	25	Pass
-10C 120V	a	0	5280	Ant1	5280	0	0	25	Pass
0C 120V	a	0	5280	Ant1	5280	0	0	25	Pass
10C 120V	a	0	5280	Ant1	5280	0	0	25	Pass
20C 120V	a	0	5280	Ant1	5279.98	-20000	-3.79	25	Pass
30C 120V	a	0	5280	Ant1	5279.98	-20000	-3.79	25	Pass
40C 120V	a	0	5280	Ant1	5280	0	0	25	Pass
50C 120V	a	0	5280	Ant1	5279.98	-20000	-3.79	25	Pass
-30C 120V	a	0	5320	Ant1	5320	0	0	25	Pass
-20C 120V	a	0	5320	Ant1	5320	0	0	25	Pass
-10C 120V	a	0	5320	Ant1	5320	0	0	25	Pass
0C 120V	a	0	5320	Ant1	5319.98	-20000	-3.76	25	Pass
10C 120V	a	0	5320	Ant1	5319.98	-20000	-3.76	25	Pass
20C 120V	a	0	5320	Ant1	5320	0	0	25	Pass
30C 120V	a	0	5320	Ant1	5320	0	0	25	Pass
40C 120V	a	0	5320	Ant1	5320	0	0	25	Pass
50C 120V	a	0	5320	Ant1	5319.98	-20000	-3.76	25	Pass
-30C 120V	a	0	5500	Ant1	5500	0	0	25	Pass
-20C 120V	a	0	5500	Ant1	5500	0	0	25	Pass
-10C 120V	a	0	5500	Ant1	5499.98	-20000	-3.64	25	Pass
0C 120V	a	0	5500	Ant1	5499.98	-20000	-3.64	25	Pass
10C 120V	a	0	5500	Ant1	5500	0	0	25	Pass
20C 120V	a	0	5500	Ant1	5500	0	0	25	Pass
30C 120V	a	0	5500	Ant1	5500	0	0	25	Pass
40C 120V	a	0	5500	Ant1	5500	0	0	25	Pass
50C 120V	a	0	5500	Ant1	5499.98	-20000	-3.64	25	Pass
-30C 120V	a	0	5600	Ant1	5600	0	0	25	Pass
-20C 120V	a	0	5600	Ant1	5600	0	0	25	Pass
-10C 120V	a	0	5600	Ant1	5600	0	0	25	Pass
0C 120V	a	0	5600	Ant1	5600	0	0	25	Pass
10C 120V	a	0	5600	Ant1	5600	0	0	25	Pass



20C 120V	a	0	5600	Ant1	5599.98	-20000	-3.57	25	Pass
30C 120V	a	0	5600	Ant1	5599.98	-20000	-3.57	25	Pass
40C 120V	a	0	5600	Ant1	5600	0	0	25	Pass
50C 120V	a	0	5600	Ant1	5600	0	0	25	Pass
-30C 120V	a	0	5700	Ant1	5700	0	0	25	Pass
-20C 120V	a	0	5700	Ant1	5700	0	0	25	Pass
-10C 120V	a	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
0C 120V	a	0	5700	Ant1	5700	0	0	25	Pass
10C 120V	a	0	5700	Ant1	5700	0	0	25	Pass
20C 120V	a	0	5700	Ant1	5700	0	0	25	Pass
30C 120V	a	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
40C 120V	a	0	5700	Ant1	5700	0	0	25	Pass
50C 120V	a	0	5700	Ant1	5700	0	0	25	Pass
-30C 120V	a	0	5720	Ant1	5719.98	-20000	-3.5	25	Pass
-20C 120V	a	0	5720	Ant1	5719.98	-20000	-3.5	25	Pass
-10C 120V	a	0	5720	Ant1	5719.98	-20000	-3.5	25	Pass
0C 120V	a	0	5720	Ant1	5719.98	-20000	-3.5	25	Pass
10C 120V	a	0	5720	Ant1	5720	0	0	25	Pass
20C 120V	a	0	5720	Ant1	5720.02	20000	3.5	25	Pass
30C 120V	a	0	5720	Ant1	5720	0	0	25	Pass
40C 120V	a	0	5720	Ant1	5719.98	-20000	-3.5	25	Pass
50C 120V	a	0	5720	Ant1	5720	0	0	25	Pass
-30C 120V	a	0	5745	Ant1	5745	0	0	25	Pass
-20C 120V	a	0	5745	Ant1	5745	0	0	25	Pass
-10C 120V	a	0	5745	Ant1	5745	0	0	25	Pass
0C 120V	a	0	5745	Ant1	5745	0	0	25	Pass
10C 120V	a	0	5745	Ant1	5745	0	0	25	Pass
20C 120V	a	0	5745	Ant1	5745	0	0	25	Pass
30C 120V	a	0	5745	Ant1	5744.98	-20000	-3.48	25	Pass
40C 120V	a	0	5745	Ant1	5745	0	0	25	Pass
50C 120V	a	0	5745	Ant1	5745	0	0	25	Pass
-30C 120V	a	0	5785	Ant1	5785	0	0	25	Pass
-20C 120V	a	0	5785	Ant1	5785.02	20000	3.46	25	Pass
-10C 120V	a	0	5785	Ant1	5785	0	0	25	Pass
0C 120V	a	0	5785	Ant1	5785.02	20000	3.46	25	Pass
10C 120V	a	0	5785	Ant1	5785	0	0	25	Pass
20C 120V	a	0	5785	Ant1	5785	0	0	25	Pass
30C 120V	a	0	5785	Ant1	5785	0	0	25	Pass
40C 120V	a	0	5785	Ant1	5784.98	-20000	-3.46	25	Pass
50C 120V	a	0	5785	Ant1	5785	0	0	25	Pass
-30C 120V	a	0	5825	Ant1	5825	0	0	25	Pass
-20C 120V	a	0	5825	Ant1	5825	0	0	25	Pass
-10C 120V	a	0	5825	Ant1	5824.98	-20000	-3.43	25	Pass
0C 120V	a	0	5825	Ant1	5825.02	20000	3.43	25	Pass
10C 120V	a	0	5825	Ant1	5824.98	-20000	-3.43	25	Pass
20C 120V	a	0	5825	Ant1	5824.98	-20000	-3.43	25	Pass
30C 120V	a	0	5825	Ant1	5825	0	0	25	Pass
40C 120V	a	0	5825	Ant1	5824.98	-20000	-3.43	25	Pass
50C 120V	a	0	5825	Ant1	5824.98	-20000	-3.43	25	Pass
-30C 120V	n20	0	5180	Ant1	5180	0	0	25	Pass
-20C 120V	n20	0	5180	Ant1	5180	0	0	25	Pass
-10C 120V	n20	0	5180	Ant1	5180	0	0	25	Pass
0C 120V	n20	0	5180	Ant1	5180	0	0	25	Pass
10C 120V	n20	0	5180	Ant1	5180.02	20000	3.86	25	Pass
20C 120V	n20	0	5180	Ant1	5180	0	0	25	Pass
30C 120V	n20	0	5180	Ant1	5180	0	0	25	Pass
40C 120V	n20	0	5180	Ant1	5180	0	0	25	Pass
50C 120V	n20	0	5180	Ant1	5179.98	-20000	-3.86	25	Pass
-30C 120V	n20	0	5200	Ant1	5200	0	0	25	Pass
-20C 120V	n20	0	5200	Ant1	5200	0	0	25	Pass
-10C 120V	n20	0	5200	Ant1	5199.98	-20000	-3.85	25	Pass
0C 120V	n20	0	5200	Ant1	5199.98	-20000	-3.85	25	Pass
10C 120V	n20	0	5200	Ant1	5200	0	0	25	Pass
20C 120V	n20	0	5200	Ant1	5200	0	0	25	Pass
30C 120V	n20	0	5200	Ant1	5199.98	-20000	-3.85	25	Pass
40C 120V	n20	0	5200	Ant1	5200	0	0	25	Pass
50C 120V	n20	0	5200	Ant1	5200	0	0	25	Pass
-30C 120V	n20	0	5240	Ant1	5240	0	0	25	Pass
-20C 120V	n20	0	5240	Ant1	5240	0	0	25	Pass
-10C 120V	n20	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass



0C 120V	n20	0	5240	Ant1	5240	0	0	25	Pass
10C 120V	n20	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass
20C 120V	n20	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass
30C 120V	n20	0	5240	Ant1	5240	0	0	25	Pass
40C 120V	n20	0	5240	Ant1	5240	0	0	25	Pass
50C 120V	n20	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass
-30C 120V	n20	0	5260	Ant1	5259.98	-20000	-3.8	25	Pass
-20C 120V	n20	0	5260	Ant1	5260.02	20000	3.8	25	Pass
-10C 120V	n20	0	5260	Ant1	5259.98	-20000	-3.8	25	Pass
0C 120V	n20	0	5260	Ant1	5260	0	0	25	Pass
10C 120V	n20	0	5260	Ant1	5260	0	0	25	Pass
20C 120V	n20	0	5260	Ant1	5259.98	-20000	-3.8	25	Pass
30C 120V	n20	0	5260	Ant1	5259.98	-20000	-3.8	25	Pass
40C 120V	n20	0	5260	Ant1	5260	0	0	25	Pass
50C 120V	n20	0	5260	Ant1	5259.98	-20000	-3.8	25	Pass
-30C 120V	n20	0	5280	Ant1	5280	0	0	25	Pass
-20C 120V	n20	0	5280	Ant1	5280	0	0	25	Pass
-10C 120V	n20	0	5280	Ant1	5280	0	0	25	Pass
0C 120V	n20	0	5280	Ant1	5280	0	0	25	Pass
10C 120V	n20	0	5280	Ant1	5280	0	0	25	Pass
20C 120V	n20	0	5280	Ant1	5279.98	-20000	-3.79	25	Pass
30C 120V	n20	0	5280	Ant1	5280	0	0	25	Pass
40C 120V	n20	0	5280	Ant1	5280	0	0	25	Pass
50C 120V	n20	0	5280	Ant1	5280.02	20000	3.79	25	Pass
-30C 120V	n20	0	5320	Ant1	5320	0	0	25	Pass
-20C 120V	n20	0	5320	Ant1	5319.98	-20000	-3.76	25	Pass
-10C 120V	n20	0	5320	Ant1	5319.98	-20000	-3.76	25	Pass
0C 120V	n20	0	5320	Ant1	5320	0	0	25	Pass
10C 120V	n20	0	5320	Ant1	5320	0	0	25	Pass
20C 120V	n20	0	5320	Ant1	5319.98	-20000	-3.76	25	Pass
30C 120V	n20	0	5320	Ant1	5319.98	-20000	-3.76	25	Pass
40C 120V	n20	0	5320	Ant1	5320	0	0	25	Pass
50C 120V	n20	0	5320	Ant1	5319.98	-20000	-3.76	25	Pass
-30C 120V	n20	0	5500	Ant1	5500	0	0	25	Pass
-20C 120V	n20	0	5500	Ant1	5500	0	0	25	Pass
-10C 120V	n20	0	5500	Ant1	5500	0	0	25	Pass
0C 120V	n20	0	5500	Ant1	5500	0	0	25	Pass
10C 120V	n20	0	5500	Ant1	5500	0	0	25	Pass
20C 120V	n20	0	5500	Ant1	5499.98	-20000	-3.64	25	Pass
30C 120V	n20	0	5500	Ant1	5500	0	0	25	Pass
40C 120V	n20	0	5500	Ant1	5500	0	0	25	Pass
50C 120V	n20	0	5500	Ant1	5500	0	0	25	Pass
-30C 120V	n20	0	5600	Ant1	5599.98	-20000	-3.57	25	Pass
-20C 120V	n20	0	5600	Ant1	5599.98	-20000	-3.57	25	Pass
-10C 120V	n20	0	5600	Ant1	5600	0	0	25	Pass
0C 120V	n20	0	5600	Ant1	5599.98	-20000	-3.57	25	Pass
10C 120V	n20	0	5600	Ant1	5600	0	0	25	Pass
20C 120V	n20	0	5600	Ant1	5600	0	0	25	Pass
30C 120V	n20	0	5600	Ant1	5600	0	0	25	Pass
40C 120V	n20	0	5600	Ant1	5600	0	0	25	Pass
50C 120V	n20	0	5600	Ant1	5599.98	-20000	-3.57	25	Pass
-30C 120V	n20	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
-20C 120V	n20	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
-10C 120V	n20	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
0C 120V	n20	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
10C 120V	n20	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
20C 120V	n20	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
30C 120V	n20	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
40C 120V	n20	0	5700	Ant1	5700	0	0	25	Pass
50C 120V	n20	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
-30C 120V	n20	0	5720	Ant1	5720	0	0	25	Pass
-20C 120V	n20	0	5720	Ant1	5720	0	0	25	Pass
-10C 120V	n20	0	5720	Ant1	5719.98	-20000	-3.5	25	Pass
0C 120V	n20	0	5720	Ant1	5720.02	20000	3.5	25	Pass
10C 120V	n20	0	5720	Ant1	5720.02	20000	3.5	25	Pass
20C 120V	n20	0	5720	Ant1	5720	0	0	25	Pass
30C 120V	n20	0	5720	Ant1	5719.98	-20000	-3.5	25	Pass
40C 120V	n20	0	5720	Ant1	5719.98	-20000	-3.5	25	Pass
50C 120V	n20	0	5720	Ant1	5720	0	0	25	Pass
-30C 120V	n20	0	5745	Ant1	5745	0	0	25	Pass

-20C 120V	n20	0	5745	Ant1	5745	0	0	25	Pass
-10C 120V	n20	0	5745	Ant1	5744.98	-20000	-3.48	25	Pass
0C 120V	n20	0	5745	Ant1	5744.98	-20000	-3.48	25	Pass
10C 120V	n20	0	5745	Ant1	5745.02	20000	3.48	25	Pass
20C 120V	n20	0	5745	Ant1	5745	0	0	25	Pass
30C 120V	n20	0	5745	Ant1	5745	0	0	25	Pass
40C 120V	n20	0	5745	Ant1	5744.98	-20000	-3.48	25	Pass
50C 120V	n20	0	5745	Ant1	5745.02	20000	3.48	25	Pass
-30C 120V	n20	0	5785	Ant1	5785.02	20000	3.46	25	Pass
-20C 120V	n20	0	5785	Ant1	5784.98	-20000	-3.46	25	Pass
-10C 120V	n20	0	5785	Ant1	5785	0	0	25	Pass
0C 120V	n20	0	5785	Ant1	5785	0	0	25	Pass
10C 120V	n20	0	5785	Ant1	5784.98	-20000	-3.46	25	Pass
20C 120V	n20	0	5785	Ant1	5785.02	20000	3.46	25	Pass
30C 120V	n20	0	5785	Ant1	5785	0	0	25	Pass
40C 120V	n20	0	5785	Ant1	5784.98	-20000	-3.46	25	Pass
50C 120V	n20	0	5785	Ant1	5785.02	20000	3.46	25	Pass
-30C 120V	n20	0	5825	Ant1	5825	0	0	25	Pass
-20C 120V	n20	0	5825	Ant1	5825	0	0	25	Pass
-10C 120V	n20	0	5825	Ant1	5824.98	-20000	-3.43	25	Pass
0C 120V	n20	0	5825	Ant1	5825	0	0	25	Pass
10C 120V	n20	0	5825	Ant1	5825	0	0	25	Pass
20C 120V	n20	0	5825	Ant1	5825	0	0	25	Pass
30C 120V	n20	0	5825	Ant1	5825	0	0	25	Pass
40C 120V	n20	0	5825	Ant1	5825	0	0	25	Pass
50C 120V	n20	0	5825	Ant1	5825	0	0	25	Pass
-30C 120V	n40	0	5190	Ant1	5190	0	0	25	Pass
-20C 120V	n40	0	5190	Ant1	5190	0	0	25	Pass
-10C 120V	n40	0	5190	Ant1	5190	0	0	25	Pass
0C 120V	n40	0	5190	Ant1	5190	0	0	25	Pass
10C 120V	n40	0	5190	Ant1	5190.04	40000	7.71	25	Pass
20C 120V	n40	0	5190	Ant1	5190	0	0	25	Pass
30C 120V	n40	0	5190	Ant1	5190	0	0	25	Pass
40C 120V	n40	0	5190	Ant1	5190	0	0	25	Pass
50C 120V	n40	0	5190	Ant1	5190	0	0	25	Pass
-30C 120V	n40	0	5230	Ant1	5230	0	0	25	Pass
-20C 120V	n40	0	5230	Ant1	5230	0	0	25	Pass
-10C 120V	n40	0	5230	Ant1	5230	0	0	25	Pass
0C 120V	n40	0	5230	Ant1	5229.96	-40000	-7.65	25	Pass
10C 120V	n40	0	5230	Ant1	5230	0	0	25	Pass
20C 120V	n40	0	5230	Ant1	5229.96	-40000	-7.65	25	Pass
30C 120V	n40	0	5230	Ant1	5230	0	0	25	Pass
40C 120V	n40	0	5230	Ant1	5230	0	0	25	Pass
50C 120V	n40	0	5230	Ant1	5230	0	0	25	Pass
-30C 120V	n40	0	5270	Ant1	5270	0	0	25	Pass
-20C 120V	n40	0	5270	Ant1	5270	0	0	25	Pass
-10C 120V	n40	0	5270	Ant1	5270	0	0	25	Pass
0C 120V	n40	0	5270	Ant1	5270	0	0	25	Pass
10C 120V	n40	0	5270	Ant1	5269.96	-40000	-7.59	25	Pass
20C 120V	n40	0	5270	Ant1	5270	0	0	25	Pass
30C 120V	n40	0	5270	Ant1	5270	0	0	25	Pass
40C 120V	n40	0	5270	Ant1	5270.04	40000	7.59	25	Pass
50C 120V	n40	0	5270	Ant1	5270	0	0	25	Pass
-30C 120V	n40	0	5310	Ant1	5310	0	0	25	Pass
-20C 120V	n40	0	5310	Ant1	5310	0	0	25	Pass
-10C 120V	n40	0	5310	Ant1	5310	0	0	25	Pass
0C 120V	n40	0	5310	Ant1	5310	0	0	25	Pass
10C 120V	n40	0	5310	Ant1	5310	0	0	25	Pass
20C 120V	n40	0	5310	Ant1	5310	0	0	25	Pass
30C 120V	n40	0	5310	Ant1	5310	0	0	25	Pass
40C 120V	n40	0	5310	Ant1	5310	0	0	25	Pass
50C 120V	n40	0	5310	Ant1	5310	0	0	25	Pass
-30C 120V	n40	0	5510	Ant1	5510	0	0	25	Pass
-20C 120V	n40	0	5510	Ant1	5510	0	0	25	Pass
-10C 120V	n40	0	5510	Ant1	5510	0	0	25	Pass
0C 120V	n40	0	5510	Ant1	5510	0	0	25	Pass
10C 120V	n40	0	5510	Ant1	5510	0	0	25	Pass
20C 120V	n40	0	5510	Ant1	5510	0	0	25	Pass
30C 120V	n40	0	5510	Ant1	5510	0	0	25	Pass
40C 120V	n40	0	5510	Ant1	5510.04	40000	7.26	25	Pass



50C 120V	n40	0	5510	Ant1	5510	0	0	25	Pass
-30C 120V	n40	0	5590	Ant1	5590	0	0	25	Pass
-20C 120V	n40	0	5590	Ant1	5590.04	40000	7.16	25	Pass
-10C 120V	n40	0	5590	Ant1	5590	0	0	25	Pass
0C 120V	n40	0	5590	Ant1	5590	0	0	25	Pass
10C 120V	n40	0	5590	Ant1	5590	0	0	25	Pass
20C 120V	n40	0	5590	Ant1	5590	0	0	25	Pass
30C 120V	n40	0	5590	Ant1	5590	0	0	25	Pass
40C 120V	n40	0	5590	Ant1	5590	0	0	25	Pass
50C 120V	n40	0	5590	Ant1	5589.96	-40000	-7.16	25	Pass
-30C 120V	n40	0	5670	Ant1	5670	0	0	25	Pass
-20C 120V	n40	0	5670	Ant1	5670	0	0	25	Pass
-10C 120V	n40	0	5670	Ant1	5670	0	0	25	Pass
0C 120V	n40	0	5670	Ant1	5670	0	0	25	Pass
10C 120V	n40	0	5670	Ant1	5670	0	0	25	Pass
20C 120V	n40	0	5670	Ant1	5670	0	0	25	Pass
30C 120V	n40	0	5670	Ant1	5670	0	0	25	Pass
40C 120V	n40	0	5670	Ant1	5669.96	-40000	-7.05	25	Pass
50C 120V	n40	0	5670	Ant1	5670.04	40000	7.05	25	Pass
-30C 120V	n40	0	5710	Ant1	5710	0	0	25	Pass
-20C 120V	n40	0	5710	Ant1	5710	0	0	25	Pass
-10C 120V	n40	0	5710	Ant1	5710	0	0	25	Pass
0C 120V	n40	0	5710	Ant1	5710	0	0	25	Pass
10C 120V	n40	0	5710	Ant1	5710	0	0	25	Pass
20C 120V	n40	0	5710	Ant1	5710	0	0	25	Pass
30C 120V	n40	0	5710	Ant1	5710	0	0	25	Pass
40C 120V	n40	0	5710	Ant1	5710	0	0	25	Pass
50C 120V	n40	0	5710	Ant1	5710	0	0	25	Pass
-30C 120V	n40	0	5755	Ant1	5755	0	0	25	Pass
-20C 120V	n40	0	5755	Ant1	5755	0	0	25	Pass
-10C 120V	n40	0	5755	Ant1	5755	0	0	25	Pass
0C 120V	n40	0	5755	Ant1	5755	0	0	25	Pass
10C 120V	n40	0	5755	Ant1	5755	0	0	25	Pass
20C 120V	n40	0	5755	Ant1	5754.96	-40000	-6.95	25	Pass
30C 120V	n40	0	5755	Ant1	5755	0	0	25	Pass
40C 120V	n40	0	5755	Ant1	5755	0	0	25	Pass
50C 120V	n40	0	5755	Ant1	5755	0	0	25	Pass
-30C 120V	n40	0	5795	Ant1	5795	0	0	25	Pass
-20C 120V	n40	0	5795	Ant1	5795.04	40000	6.9	25	Pass
-10C 120V	n40	0	5795	Ant1	5795	0	0	25	Pass
0C 120V	n40	0	5795	Ant1	5795	0	0	25	Pass
10C 120V	n40	0	5795	Ant1	5795	0	0	25	Pass
20C 120V	n40	0	5795	Ant1	5795	0	0	25	Pass
30C 120V	n40	0	5795	Ant1	5795	0	0	25	Pass
40C 120V	n40	0	5795	Ant1	5795	0	0	25	Pass
50C 120V	n40	0	5795	Ant1	5795	0	0	25	Pass
-30C 120V	ac20	0	5180	Ant1	5180.02	20000	3.86	25	Pass
-20C 120V	ac20	0	5180	Ant1	5180.02	20000	3.86	25	Pass
-10C 120V	ac20	0	5180	Ant1	5180	0	0	25	Pass
0C 120V	ac20	0	5180	Ant1	5180.02	20000	3.86	25	Pass
10C 120V	ac20	0	5180	Ant1	5180	0	0	25	Pass
20C 120V	ac20	0	5180	Ant1	5180.02	20000	3.86	25	Pass
30C 120V	ac20	0	5180	Ant1	5180.02	20000	3.86	25	Pass
40C 120V	ac20	0	5180	Ant1	5180.02	20000	3.86	25	Pass
50C 120V	ac20	0	5180	Ant1	5180	0	0	25	Pass
-30C 120V	ac20	0	5200	Ant1	5200	0	0	25	Pass
-20C 120V	ac20	0	5200	Ant1	5200	0	0	25	Pass
-10C 120V	ac20	0	5200	Ant1	5200	0	0	25	Pass
0C 120V	ac20	0	5200	Ant1	5200	0	0	25	Pass
10C 120V	ac20	0	5200	Ant1	5200	0	0	25	Pass
20C 120V	ac20	0	5200	Ant1	5200	0	0	25	Pass
30C 120V	ac20	0	5200	Ant1	5200	0	0	25	Pass
40C 120V	ac20	0	5200	Ant1	5200.02	20000	3.85	25	Pass
50C 120V	ac20	0	5200	Ant1	5200	0	0	25	Pass
-30C 120V	ac20	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass
-20C 120V	ac20	0	5240	Ant1	5240	0	0	25	Pass
-10C 120V	ac20	0	5240	Ant1	5240	0	0	25	Pass
0C 120V	ac20	0	5240	Ant1	5240	0	0	25	Pass
10C 120V	ac20	0	5240	Ant1	5239.98	-20000	-3.82	25	Pass
20C 120V	ac20	0	5240	Ant1	5240	0	0	25	Pass

30C 120V	ac20	0	5240	Ant1	5240.02	20000	3.82	25	Pass
40C 120V	ac20	0	5240	Ant1	5240	0	0	25	Pass
50C 120V	ac20	0	5240	Ant1	5240	0	0	25	Pass
-30C 120V	ac20	0	5260	Ant1	5260	0	0	25	Pass
-20C 120V	ac20	0	5260	Ant1	5260	0	0	25	Pass
-10C 120V	ac20	0	5260	Ant1	5260.02	20000	3.8	25	Pass
0C 120V	ac20	0	5260	Ant1	5259.98	-20000	-3.8	25	Pass
10C 120V	ac20	0	5260	Ant1	5260	0	0	25	Pass
20C 120V	ac20	0	5260	Ant1	5260	0	0	25	Pass
30C 120V	ac20	0	5260	Ant1	5260	0	0	25	Pass
40C 120V	ac20	0	5260	Ant1	5260	0	0	25	Pass
50C 120V	ac20	0	5260	Ant1	5260	0	0	25	Pass
-30C 120V	ac20	0	5280	Ant1	5280	0	0	25	Pass
-20C 120V	ac20	0	5280	Ant1	5279.98	-20000	-3.79	25	Pass
-10C 120V	ac20	0	5280	Ant1	5280	0	0	25	Pass
0C 120V	ac20	0	5280	Ant1	5280	0	0	25	Pass
10C 120V	ac20	0	5280	Ant1	5280	0	0	25	Pass
20C 120V	ac20	0	5280	Ant1	5280	0	0	25	Pass
30C 120V	ac20	0	5280	Ant1	5280	0	0	25	Pass
40C 120V	ac20	0	5280	Ant1	5280	0	0	25	Pass
50C 120V	ac20	0	5280	Ant1	5280	0	0	25	Pass
-30C 120V	ac20	0	5320	Ant1	5320	0	0	25	Pass
-20C 120V	ac20	0	5320	Ant1	5320	0	0	25	Pass
-10C 120V	ac20	0	5320	Ant1	5320	0	0	25	Pass
0C 120V	ac20	0	5320	Ant1	5320.02	20000	3.76	25	Pass
10C 120V	ac20	0	5320	Ant1	5320	0	0	25	Pass
20C 120V	ac20	0	5320	Ant1	5320.02	20000	3.76	25	Pass
30C 120V	ac20	0	5320	Ant1	5320	0	0	25	Pass
40C 120V	ac20	0	5320	Ant1	5320	0	0	25	Pass
50C 120V	ac20	0	5320	Ant1	5320	0	0	25	Pass
-30C 120V	ac20	0	5500	Ant1	5500	0	0	25	Pass
-20C 120V	ac20	0	5500	Ant1	5500	0	0	25	Pass
-10C 120V	ac20	0	5500	Ant1	5500	0	0	25	Pass
0C 120V	ac20	0	5500	Ant1	5500	0	0	25	Pass
10C 120V	ac20	0	5500	Ant1	5500	0	0	25	Pass
20C 120V	ac20	0	5500	Ant1	5500	0	0	25	Pass
30C 120V	ac20	0	5500	Ant1	5500	0	0	25	Pass
40C 120V	ac20	0	5500	Ant1	5500	0	0	25	Pass
50C 120V	ac20	0	5500	Ant1	5500	0	0	25	Pass
-30C 120V	ac20	0	5600	Ant1	5600	0	0	25	Pass
-20C 120V	ac20	0	5600	Ant1	5599.98	-20000	-3.57	25	Pass
-10C 120V	ac20	0	5600	Ant1	5600	0	0	25	Pass
0C 120V	ac20	0	5600	Ant1	5600	0	0	25	Pass
10C 120V	ac20	0	5600	Ant1	5600	0	0	25	Pass
20C 120V	ac20	0	5600	Ant1	5600	0	0	25	Pass
30C 120V	ac20	0	5600	Ant1	5600	0	0	25	Pass
40C 120V	ac20	0	5600	Ant1	5600	0	0	25	Pass
50C 120V	ac20	0	5600	Ant1	5599.98	-20000	-3.57	25	Pass
-30C 120V	ac20	0	5700	Ant1	5700	0	0	25	Pass
-20C 120V	ac20	0	5700	Ant1	5700	0	0	25	Pass
-10C 120V	ac20	0	5700	Ant1	5700	0	0	25	Pass
0C 120V	ac20	0	5700	Ant1	5700	0	0	25	Pass
10C 120V	ac20	0	5700	Ant1	5700	0	0	25	Pass
20C 120V	ac20	0	5700	Ant1	5700	0	0	25	Pass
30C 120V	ac20	0	5700	Ant1	5700	0	0	25	Pass
40C 120V	ac20	0	5700	Ant1	5699.98	-20000	-3.51	25	Pass
50C 120V	ac20	0	5700	Ant1	5700	0	0	25	Pass
-30C 120V	ac20	0	5720	Ant1	5720	0	0	25	Pass
-20C 120V	ac20	0	5720	Ant1	5720	0	0	25	Pass
-10C 120V	ac20	0	5720	Ant1	5720	0	0	25	Pass
0C 120V	ac20	0	5720	Ant1	5720	0	0	25	Pass
10C 120V	ac20	0	5720	Ant1	5720	0	0	25	Pass
20C 120V	ac20	0	5720	Ant1	5720	0	0	25	Pass
30C 120V	ac20	0	5720	Ant1	5720	0	0	25	Pass
40C 120V	ac20	0	5720	Ant1	5720	0	0	25	Pass
50C 120V	ac20	0	5720	Ant1	5720	0	0	25	Pass
-30C 120V	ac20	0	5745	Ant1	5745	0	0	25	Pass
-20C 120V	ac20	0	5745	Ant1	5745	0	0	25	Pass
-10C 120V	ac20	0	5745	Ant1	5745	0	0	25	Pass
0C 120V	ac20	0	5745	Ant1	5745	0	0	25	Pass



10C 120V	ac20	0	5745	Ant1	5744.98	-20000	-3.48	25	Pass
20C 120V	ac20	0	5745	Ant1	5745	0	0	25	Pass
30C 120V	ac20	0	5745	Ant1	5745	0	0	25	Pass
40C 120V	ac20	0	5745	Ant1	5745	0	0	25	Pass
50C 120V	ac20	0	5745	Ant1	5745	0	0	25	Pass
-30C 120V	ac20	0	5785	Ant1	5785	0	0	25	Pass
-20C 120V	ac20	0	5785	Ant1	5785	0	0	25	Pass
-10C 120V	ac20	0	5785	Ant1	5785	0	0	25	Pass
0C 120V	ac20	0	5785	Ant1	5785	0	0	25	Pass
10C 120V	ac20	0	5785	Ant1	5785	0	0	25	Pass
20C 120V	ac20	0	5785	Ant1	5785	0	0	25	Pass
30C 120V	ac20	0	5785	Ant1	5785	0	0	25	Pass
40C 120V	ac20	0	5785	Ant1	5785	0	0	25	Pass
50C 120V	ac20	0	5785	Ant1	5785	0	0	25	Pass
-30C 120V	ac20	0	5825	Ant1	5825	0	0	25	Pass
-20C 120V	ac20	0	5825	Ant1	5825	0	0	25	Pass
-10C 120V	ac20	0	5825	Ant1	5825	0	0	25	Pass
0C 120V	ac20	0	5825	Ant1	5825	0	0	25	Pass
10C 120V	ac20	0	5825	Ant1	5825	0	0	25	Pass
20C 120V	ac20	0	5825	Ant1	5825	0	0	25	Pass
30C 120V	ac20	0	5825	Ant1	5825	0	0	25	Pass
40C 120V	ac20	0	5825	Ant1	5824.98	-20000	-3.43	25	Pass
50C 120V	ac20	0	5825	Ant1	5825	0	0	25	Pass
-30C 120V	ac40	0	5190	Ant1	5189.96	-40000	-7.71	25	Pass
-20C 120V	ac40	0	5190	Ant1	5190	0	0	25	Pass
-10C 120V	ac40	0	5190	Ant1	5189.96	-40000	-7.71	25	Pass
0C 120V	ac40	0	5190	Ant1	5190	0	0	25	Pass
10C 120V	ac40	0	5190	Ant1	5190	0	0	25	Pass
20C 120V	ac40	0	5190	Ant1	5190	0	0	25	Pass
30C 120V	ac40	0	5190	Ant1	5189.96	-40000	-7.71	25	Pass
40C 120V	ac40	0	5190	Ant1	5189.96	-40000	-7.71	25	Pass
50C 120V	ac40	0	5190	Ant1	5189.96	-40000	-7.71	25	Pass
-30C 120V	ac40	0	5230	Ant1	5230	0	0	25	Pass
-20C 120V	ac40	0	5230	Ant1	5230	0	0	25	Pass
-10C 120V	ac40	0	5230	Ant1	5230	0	0	25	Pass
0C 120V	ac40	0	5230	Ant1	5229.96	-40000	-7.65	25	Pass
10C 120V	ac40	0	5230	Ant1	5229.96	-40000	-7.65	25	Pass
20C 120V	ac40	0	5230	Ant1	5229.96	-40000	-7.65	25	Pass
30C 120V	ac40	0	5230	Ant1	5230	0	0	25	Pass
40C 120V	ac40	0	5230	Ant1	5230	0	0	25	Pass
50C 120V	ac40	0	5230	Ant1	5230	0	0	25	Pass
-30C 120V	ac40	0	5270	Ant1	5270	0	0	25	Pass
-20C 120V	ac40	0	5270	Ant1	5269.96	-40000	-7.59	25	Pass
-10C 120V	ac40	0	5270	Ant1	5270	0	0	25	Pass
0C 120V	ac40	0	5270	Ant1	5269.96	-40000	-7.59	25	Pass
10C 120V	ac40	0	5270	Ant1	5269.96	-40000	-7.59	25	Pass
20C 120V	ac40	0	5270	Ant1	5270	0	0	25	Pass
30C 120V	ac40	0	5270	Ant1	5269.96	-40000	-7.59	25	Pass
40C 120V	ac40	0	5270	Ant1	5269.96	-40000	-7.59	25	Pass
50C 120V	ac40	0	5270	Ant1	5270	0	0	25	Pass
-30C 120V	ac40	0	5310	Ant1	5310	0	0	25	Pass
-20C 120V	ac40	0	5310	Ant1	5310	0	0	25	Pass
-10C 120V	ac40	0	5310	Ant1	5310	0	0	25	Pass
0C 120V	ac40	0	5310	Ant1	5309.96	-40000	-7.53	25	Pass
10C 120V	ac40	0	5310	Ant1	5310	0	0	25	Pass
20C 120V	ac40	0	5310	Ant1	5310	0	0	25	Pass
30C 120V	ac40	0	5310	Ant1	5310	0	0	25	Pass
40C 120V	ac40	0	5310	Ant1	5310	0	0	25	Pass
50C 120V	ac40	0	5310	Ant1	5310	0	0	25	Pass
-30C 120V	ac40	0	5510	Ant1	5510	0	0	25	Pass
-20C 120V	ac40	0	5510	Ant1	5510	0	0	25	Pass
-10C 120V	ac40	0	5510	Ant1	5510	0	0	25	Pass
0C 120V	ac40	0	5510	Ant1	5510	0	0	25	Pass
10C 120V	ac40	0	5510	Ant1	5509.96	-40000	-7.26	25	Pass
20C 120V	ac40	0	5510	Ant1	5510	0	0	25	Pass
30C 120V	ac40	0	5510	Ant1	5510	0	0	25	Pass
40C 120V	ac40	0	5510	Ant1	5510	0	0	25	Pass
50C 120V	ac40	0	5510	Ant1	5510	0	0	25	Pass
-30C 120V	ac40	0	5590	Ant1	5590	0	0	25	Pass
-20C 120V	ac40	0	5590	Ant1	5590	0	0	25	Pass

-10C 120V	ac40	0	5590	Ant1	5590	0	0	25	Pass
0C 120V	ac40	0	5590	Ant1	5590	0	0	25	Pass
10C 120V	ac40	0	5590	Ant1	5590	0	0	25	Pass
20C 120V	ac40	0	5590	Ant1	5589.96	-40000	-7.16	25	Pass
30C 120V	ac40	0	5590	Ant1	5590	0	0	25	Pass
40C 120V	ac40	0	5590	Ant1	5590	0	0	25	Pass
50C 120V	ac40	0	5590	Ant1	5589.96	-40000	-7.16	25	Pass
-30C 120V	ac40	0	5670	Ant1	5670	0	0	25	Pass
-20C 120V	ac40	0	5670	Ant1	5670	0	0	25	Pass
-10C 120V	ac40	0	5670	Ant1	5670	0	0	25	Pass
0C 120V	ac40	0	5670	Ant1	5670	0	0	25	Pass
10C 120V	ac40	0	5670	Ant1	5670	0	0	25	Pass
20C 120V	ac40	0	5670	Ant1	5669.96	-40000	-7.05	25	Pass
30C 120V	ac40	0	5670	Ant1	5670	0	0	25	Pass
40C 120V	ac40	0	5670	Ant1	5670	0	0	25	Pass
50C 120V	ac40	0	5670	Ant1	5670	0	0	25	Pass
-30C 120V	ac40	0	5710	Ant1	5710	0	0	25	Pass
-20C 120V	ac40	0	5710	Ant1	5710	0	0	25	Pass
-10C 120V	ac40	0	5710	Ant1	5710	0	0	25	Pass
0C 120V	ac40	0	5710	Ant1	5710	0	0	25	Pass
10C 120V	ac40	0	5710	Ant1	5710	0	0	25	Pass
20C 120V	ac40	0	5710	Ant1	5710	0	0	25	Pass
30C 120V	ac40	0	5710	Ant1	5710	0	0	25	Pass
40C 120V	ac40	0	5710	Ant1	5710	0	0	25	Pass
50C 120V	ac40	0	5710	Ant1	5709.96	-40000	-7.01	25	Pass
-30C 120V	ac40	0	5755	Ant1	5755	0	0	25	Pass
-20C 120V	ac40	0	5755	Ant1	5755	0	0	25	Pass
-10C 120V	ac40	0	5755	Ant1	5754.96	-40000	-6.95	25	Pass
0C 120V	ac40	0	5755	Ant1	5755	0	0	25	Pass
10C 120V	ac40	0	5755	Ant1	5754.96	-40000	-6.95	25	Pass
20C 120V	ac40	0	5755	Ant1	5755	0	0	25	Pass
30C 120V	ac40	0	5755	Ant1	5754.96	-40000	-6.95	25	Pass
40C 120V	ac40	0	5755	Ant1	5755	0	0	25	Pass
50C 120V	ac40	0	5755	Ant1	5754.96	-40000	-6.95	25	Pass
-30C 120V	ac40	0	5795	Ant1	5795	0	0	25	Pass
-20C 120V	ac40	0	5795	Ant1	5794.96	-40000	-6.9	25	Pass
-10C 120V	ac40	0	5795	Ant1	5794.96	-40000	-6.9	25	Pass
0C 120V	ac40	0	5795	Ant1	5795	0	0	25	Pass
10C 120V	ac40	0	5795	Ant1	5794.96	-40000	-6.9	25	Pass
20C 120V	ac40	0	5795	Ant1	5794.96	-40000	-6.9	25	Pass
30C 120V	ac40	0	5795	Ant1	5794.96	-40000	-6.9	25	Pass
40C 120V	ac40	0	5795	Ant1	5794.96	-40000	-6.9	25	Pass
50C 120V	ac40	0	5795	Ant1	5794.96	-40000	-6.9	25	Pass
-30C 120V	ac80	0	5210	Ant1	5209.92	-80000	-15.36	25	Pass
-20C 120V	ac80	0	5210	Ant1	5210	0	0	25	Pass
-10C 120V	ac80	0	5210	Ant1	5210	0	0	25	Pass
0C 120V	ac80	0	5210	Ant1	5210	0	0	25	Pass
10C 120V	ac80	0	5210	Ant1	5210	0	0	25	Pass
20C 120V	ac80	0	5210	Ant1	5210	0	0	25	Pass
30C 120V	ac80	0	5210	Ant1	5209.92	-80000	-15.36	25	Pass
40C 120V	ac80	0	5210	Ant1	5210	0	0	25	Pass
50C 120V	ac80	0	5210	Ant1	5210	0	0	25	Pass
-30C 120V	ac80	0	5290	Ant1	5290.08	80000	15.12	25	Pass
-20C 120V	ac80	0	5290	Ant1	5290	0	0	25	Pass
-10C 120V	ac80	0	5290	Ant1	5290	0	0	25	Pass
0C 120V	ac80	0	5290	Ant1	5290	0	0	25	Pass
10C 120V	ac80	0	5290	Ant1	5290	0	0	25	Pass
20C 120V	ac80	0	5290	Ant1	5290.08	80000	15.12	25	Pass
30C 120V	ac80	0	5290	Ant1	5290	0	0	25	Pass
40C 120V	ac80	0	5290	Ant1	5290.08	80000	15.12	25	Pass
50C 120V	ac80	0	5290	Ant1	5290	0	0	25	Pass
-30C 120V	ac80	0	5530	Ant1	5530.08	80000	14.47	25	Pass
-20C 120V	ac80	0	5530	Ant1	5530	0	0	25	Pass
-10C 120V	ac80	0	5530	Ant1	5530	0	0	25	Pass
0C 120V	ac80	0	5530	Ant1	5530	0	0	25	Pass
10C 120V	ac80	0	5530	Ant1	5530	0	0	25	Pass
20C 120V	ac80	0	5530	Ant1	5530.08	80000	14.47	25	Pass
30C 120V	ac80	0	5530	Ant1	5530	0	0	25	Pass
40C 120V	ac80	0	5530	Ant1	5530	0	0	25	Pass
50C 120V	ac80	0	5530	Ant1	5529.92	-80000	-14.47	25	Pass



-30C 120V	ac80	0	5610	Ant1	5610.08	80000	14.26	25	Pass
-20C 120V	ac80	0	5610	Ant1	5610	0	0	25	Pass
-10C 120V	ac80	0	5610	Ant1	5610.08	80000	14.26	25	Pass
0C 120V	ac80	0	5610	Ant1	5610.08	80000	14.26	25	Pass
10C 120V	ac80	0	5610	Ant1	5610.08	80000	14.26	25	Pass
20C 120V	ac80	0	5610	Ant1	5610.08	80000	14.26	25	Pass
30C 120V	ac80	0	5610	Ant1	5610	0	0	25	Pass
40C 120V	ac80	0	5610	Ant1	5610	0	0	25	Pass
50C 120V	ac80	0	5610	Ant1	5610	0	0	25	Pass
-30C 120V	ac80	0	5690	Ant1	5690	0	0	25	Pass
-20C 120V	ac80	0	5690	Ant1	5690	0	0	25	Pass
-10C 120V	ac80	0	5690	Ant1	5690	0	0	25	Pass
0C 120V	ac80	0	5690	Ant1	5690	0	0	25	Pass
10C 120V	ac80	0	5690	Ant1	5689.92	-80000	-14.06	25	Pass
20C 120V	ac80	0	5690	Ant1	5690	0	0	25	Pass
30C 120V	ac80	0	5690	Ant1	5689.92	-80000	-14.06	25	Pass
40C 120V	ac80	0	5690	Ant1	5690	0	0	25	Pass
50C 120V	ac80	0	5690	Ant1	5690	0	0	25	Pass
-30C 120V	ac80	0	5775	Ant1	5775.08	80000	13.85	25	Pass
-20C 120V	ac80	0	5775	Ant1	5775.08	80000	13.85	25	Pass
-10C 120V	ac80	0	5775	Ant1	5775.08	80000	13.85	25	Pass
0C 120V	ac80	0	5775	Ant1	5775	0	0	25	Pass
10C 120V	ac80	0	5775	Ant1	5775	0	0	25	Pass
20C 120V	ac80	0	5775	Ant1	5775.08	80000	13.85	25	Pass
30C 120V	ac80	0	5775	Ant1	5775	0	0	25	Pass
40C 120V	ac80	0	5775	Ant1	5775.08	80000	13.85	25	Pass
50C 120V	ac80	0	5775	Ant1	5775	0	0	25	Pass

10.6 Unwanted emissions

Transmitting spurious emission test result as below:

Test Method

Radiated Mode:

1. The EUT was placed on a turn table which is 1.5m above ground plane for above 1GHz and 0.8m above ground for below 1GHz at 3meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
2. The EUT was set 3 meters away from the interference – receiving antenna, which was mounted on the top of a variable – height antenna tower.
3. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
4. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned
5. Use the following spectrum analyzer settings According to C63.10:

For Above 1GHz

Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 1MHz, VBW $\geq$ RBW for peak measurement and VBW = 10Hz for average measurement, Sweep = auto, Detector function = peak, Trace = max hold.

For Below 1GHz

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious
RBW = 100 KHz, VBW $\geq$ RBW for peak measurement, Sweep = auto, Detector function = peak, Trace = max hold.

Note:

1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120 KHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average ((duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor (20log(1/duty cycle)).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (duty cycle > 98%) for Average detection (AV) at frequency above 1GHz.

Limit

(1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.

(4) For transmitters operating in the 5.725-5.85 GHz band:

(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

According to part 15.407(b), the radio emission outside the operating frequency band shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power. Radiated emissions which fall in the restricted bands, as defined in section 15.205, must comply with the radiated emission limits specified in section 15.209.

Frequency MHz	Field Strength uV/m	Field Strength dBμV/m	Detector
30-88	100	40	QP
88-216	150	43.5	QP
216-960	200	46	QP
960-1000	500	54	QP
Above 1000	500	54	AV
Above 1000	5000	74	PK

According to C63.10, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement, so AV emission value did not show in below table if the peak value complies with average limit.

Transmitting spurious emission worse case test result as below:

Transmitting spurious emission test result as below:

Test mode:5G_U-NII-1_802.11a_5180MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10365.41	48.16	68.20	20.04	PK	Hor
10359.56	48.95	68.20	19.25	PK	Ver
5148.88	50.14	74.00	23.86	PK	Hor
5148.32	56.38	74.00	17.62	PK	Ver
5148.32	40.10	54.00	13.90	AV	Ver

Test mode:5G_U-NII-1_802.11a_5200MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10399.41	48.25	68.20	19.95	PK	Ver
10398.88	48.38	68.20	19.82	PK	Hor

Test mode:5G_U-NII-1_802.11a_5240MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10478.56	49.12	68.20	19.08	PK	Ver
10478.03	48.96	68.20	19.24	PK	Hor

Test mode:5G_U-NII-1_802.11ac20_5180MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10362.75	48.76	68.20	19.44	PK	Ver
10356.38	48.60	68.20	19.60	PK	Hor
5127.76	48.03	74.00	25.97	PK	Hor
5149.70	57.02	74.00	16.98	PK	Ver
5149.70	42.00	54.00	12.00	AV	Ver

Test mode:5G_U-NII-1_802.11ac20_5200MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10405.78	49.25	68.20	18.95	PK	Ver
10406.84	48.64	68.20	19.56	PK	Hor

Test mode:5G_U-NII-1_802.11ac20_5240MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10480.69	49.38	68.20	18.83	PK	Ver
10475.91	49.40	68.20	18.80	PK	Hor

Test mode:5G_U-NII-1_802.11ac40_5190MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10388.78	48.01	68.20	20.19	PK	Hor
10389.84	47.93	68.20	20.27	PK	Ver
5149.79	48.73	74.00	25.27	PK	Hor
5149.15	62.41	74.00	11.60	PK	Ver
5149.15	51.40	54.00	2.60	AV	Ver

Test mode:5G_U-NII-1_802.11ac40_5230MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10464.75	48.62	68.20	19.58	PK	Hor
10458.38	48.96	68.20	19.24	PK	Ver

Test mode:5G_U-NII-1_802.11ac80_5210MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10420.13	48.61	68.20	19.59	PK	Hor
10421.19	48.38	68.20	19.82	PK	Ver
5149.58	61.44	74.00	12.56	PK	Ver
5149.58	51.00	54.00	3.00	AV	Ver
5140.73	50.75	74.00	23.25	PK	Hor

Test mode:5G_U-NII-1_802.11n20_5180MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10361.69	48.77	68.20	19.43	PK	Ver
10359.56	48.95	68.20	19.25	PK	Hor
5128.04	47.92	74.00	26.08	PK	Hor
5148.60	54.66	74.00	19.34	PK	Ver
5148.60	40.70	54.00	13.30	AV	Ver

Test mode:5G_U-NII-1_802.11n20_5200MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10396.75	49.31	68.20	18.89	PK	Ver
10407.91	48.72	68.20	19.48	PK	Hor

Test mode:5G_U-NII-1_802.11n20_5240MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10480.16	49.71	68.20	18.49	PK	Hor
10483.88	48.00	68.20	20.20	PK	Ver

Test mode:5G_U-NII-1_802.11n40_5190MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10372.31	48.22	68.20	19.98	PK	Hor
10377.63	49.68	68.20	18.52	PK	Ver
5145.25	49.96	74.00	24.04	PK	Hor
5149.93	65.61	74.00	8.39	PK	Ver
5149.93	52.50	54.00	1.50	AV	Ver

Test mode:5G_U-NII-1_802.11n40_5230MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10456.78	49.33	68.20	18.87	PK	Hor
10457.31	48.89	68.20	19.31	PK	Ver

Test mode:5G_U-NII-2A_802.11a_5260MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10518.94	48.86	68.20	19.34	PK	Ver
10524.78	48.77	68.20	19.43	PK	Hor

Test mode:5G_U-NII-2A_802.11a_5280MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10564.09	48.94	68.20	19.26	PK	Hor
10563.56	49.26	68.20	18.94	PK	Ver

Test mode:5G_U-NII-2A_802.11a_5320MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10638.47	48.24	74.00	25.76	PK	Ver
10641.13	49.07	74.00	24.93	PK	Hor
5350.52	49.38	74.00	24.62	PK	Ver
5372.52	46.89	74.00	27.11	PK	Hor

Test mode:5G_U-NII-2A_802.11ac20_5260MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10515.75	48.62	68.20	19.58	PK	Ver
10522.13	48.23	68.20	19.97	PK	Hor

Test mode:5G_U-NII-2A_802.11ac20_5280MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10560.91	49.29	68.20	18.91	PK	Hor
10558.78	49.76	68.20	18.44	PK	Ver

Test mode:5G_U-NII-1_802.11ac20_5320MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10646.97	48.42	74.00	25.58	PK	Hor
10639.53	48.40	74.00	25.60	PK	Ver
5372.30	47.08	74.00	26.92	PK	Hor
5350.14	49.66	74.00	24.34	PK	Ver

Test mode:5G_U-NII-2A_802.11ac40_5270MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10536.47	49.07	68.20	19.13	PK	Hor
10540.19	48.70	68.20	19.50	PK	Ver

Test mode:5G_U-NII-2A_802.11ac40_5310MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10619.34	47.98	74.00	26.03	PK	Ver
10618.81	48.28	74.00	25.73	PK	Hor
5414.17	44.73	74.00	29.27	PK	Hor
5351.74	54.46	74.00	19.54	PK	Ver
5351.74	41.90	54.00	12.10	AV	Ver

Test mode:5G_U-NII-2A_802.11ac80_5290MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10583.22	48.63	68.20	19.57	PK	Ver
10581.63	49.09	68.20	19.11	PK	Hor
5356.22	51.86	74.00	22.14	PK	Ver
5384.02	46.07	74.00	27.93	PK	Hor

Test mode:5G_U-NII-2A_802.11n20_5260MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10522.13	49.72	68.20	18.48	PK	Hor
10522.66	49.68	68.20	18.52	PK	Ver

Test mode:5G_U-NII-2A_802.11n20_5280MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11563.91	50.50	68.20	17.70	PK	Hor
10563.56	49.64	68.20	18.56	PK	Ver

Test mode:5G_U-NII-2A_802.11n20_5320MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10637.94	48.25	74.00	25.75	PK	Hor
10644.84	48.42	74.00	25.58	PK	Ver
5371.71	50.19	74.00	23.81	PK	Ver
5371.74	46.24	74.00	27.76	PK	Hor

Test mode:5G_U-NII-2A_802.11n40_5270MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10542.31	48.17	68.20	20.03	PK	Ver
10546.03	48.94	68.20	19.26	PK	Hor

Test mode:5G_U-NII-2A_802.11n40_5310MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
10624.66	48.70	74.00	25.30	PK	Ver
10623.06	48.98	74.00	25.02	PK	Hor
5350.03	51.81	74.00	22.19	PK	Ver
5353.68	50.28	74.00	23.72	PK	Hor

Test mode:5G_U-NII-2C_802.11a_5500MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5457.17	51.94	74.00	22.06	PK	Hor
10994.94	49.34	74.00	24.66	PK	Hor
5447.22	51.05	74.00	22.95	PK	Ver
10998.13	49.14	74.00	24.86	PK	Ver

Test mode:5G_U-NII-2C_802.11a_5600MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11197.88	49.04	74.00	24.96	PK	Hor
11197.88	48.76	74.00	25.24	PK	Ver

Test mode:5G_U-NII-2C_802.11a_5700MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5727.21	57.37	68.20	10.84	PK	Hor
11400.28	50.28	74.00	23.72	PK	Hor
5725.45	60.30	68.20	7.90	PK	Ver
11398.69	48.84	74.00	25.16	PK	Ver

Test mode:5G_U-NII-2C_802.11a_5720MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5458.68	43.07	74.00	30.93	PK	Hor
5871.24	44.61	74.00	29.39	PK	Hor
11436.41	49.82	74.00	24.18	PK	Hor
5454.60	43.46	74.00	30.54	PK	Ver
5879.27	45.64	74.00	28.36	PK	Ver
11440.13	49.62	74.00	24.38	PK	Ver

Test mode:5G_U-NII-2C_802.11ac20_5500MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5448.26	48.84	74.00	25.16	PK	Hor
11003.97	48.58	74.00	25.42	PK	Hor
5448.02	51.71	74.00	22.29	PK	Ver
10996.53	48.83	74.00	25.17	PK	Ver

Test mode:5G_U-NII-2C_802.11ac20_5600MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11198.41	49.00	74.00	25.00	PK	Hor
11205.84	49.11	74.00	24.89	PK	Ver

Test mode:5G_U-NII-2C_802.11ac20_5700MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5726.52	59.81	68.20	8.39	PK	Hor
11397.63	49.80	74.00	24.20	PK	Hor
5726.86	59.29	68.20	8.91	PK	Ver
11404.53	49.65	74.00	24.35	PK	Ver

Test mode:5G_U-NII-2C_802.11ac20_5720MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5439.05	43.98	74.00	30.02	PK	Hor
5896.32	45.03	74.00	28.97	PK	Hor
11439.06	49.36	74.00	24.64	PK	Hor
5436.02	44.51	74.00	29.49	PK	Ver
5873.00	44.56	74.00	29.44	PK	Ver
11444.38	49.63	74.00	24.37	PK	Ver

Test mode:5G_U-NII-2C_802.11ac40_5510MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5459.82	51.90	74.00	22.10	PK	Hor
11015.13	49.90	74.00	24.10	PK	Hor
5459.46	54.60	74.00	19.40	PK	Ver
5459.46	41.90	54.00	12.10	AV	Ver
11021.50	48.45	74.00	25.55	PK	Ver

Test mode:5G_U-NII-2C_802.11ac40_5590MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11180.88	50.12	74.00	23.88	PK	Hor
11185.66	49.17	74.00	24.83	PK	Ver

Test mode:5G_U-NII-2C_802.11ac40_5670MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5726.08	50.66	68.20	17.54	PK	Hor
11345.56	50.04	74.00	23.96	PK	Hor
5727.25	50.81	68.20	17.39	PK	Ver
11335.47	49.59	74.00	24.41	PK	Ver

Test mode:5G_U-NII-2C_802.11ac40_5710MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5412.04	44.89	74.00	29.11	PK	Hor
5885.48	44.83	74.00	29.17	PK	Hor
11424.19	50.23	74.00	23.77	PK	Hor
5451.81	43.87	74.00	30.13	PK	Ver
5888.34	45.35	74.00	28.65	PK	Ver
11425.78	51.45	74.00	22.55	PK	Ver

Test mode:5G_U-NII-2C_802.11ac80_5530MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5459.58	53.69	74.00	30.20	PK	Hor
5459.58	43.80	54.00	0.31	AV	Hor
11059.75	49.11	74.00	24.89	PK	Hor
5459.49	57.64	74.00	16.36	PK	Ver
5459.49	47.20	54.00	6.80	AV	Ver
11057.63	48.65	74.00	25.35	PK	Ver

Test mode:5G_U-NII-2C_802.11ac80_5610MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5817.90	46.04	68.20	22.16	PK	Ver
11223.91	49.29	74.00	24.71	PK	Ver
11227.63	49.94	74.00	24.06	PK	Hor
5725.53	44.63	68.20	23.57	PK	Hor

Test mode:5G_U-NII-2C_802.11ac80_5690MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11384.88	50.54	74.00	23.46	PK	Hor
5457.91	43.41	74.00	30.59	PK	Hor
5850.06	45.04	74.00	28.96	PK	Hor
5457.58	44.25	74.00	29.75	PK	Ver
5866.95	44.91	74.00	29.09	PK	Ver
11384.34	50.66	74.00	23.34	PK	Ver

Test mode:5G_U-NII-2C_802.11n20_5500MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11005.03	48.32	74.00	25.68	PK	Ver
5448.34	52.00	74.00	22.00	PK	Ver
5459.84	49.98	74.00	24.02	PK	Hor
11003.97	48.72	74.00	25.28	PK	Hor

Test mode:5G_U-NII-2C_802.11n20_5600MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11203.72	49.65	74.00	24.35	PK	Ver
11203.19	49.80	74.00	24.20	PK	Hor

Test mode:5G_U-NII-2C_802.11n20_5700MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5725.07	59.81	68.20	8.39	PK	Hor
11401.34	49.17	74.00	24.83	PK	Hor
5725.43	61.93	68.20	6.27	PK	Ver
11397.63	49.69	74.00	24.31	PK	Ver

Test mode:5G_U-NII-2C_802.11n20_5720MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11445.97	49.61	74.00	24.39	PK	Hor
5459.18	43.85	74.00	30.15	PK	Hor
5855.40	44.95	74.00	29.05	PK	Hor
5447.52	43.55	74.00	30.45	PK	Ver
5896.65	44.74	74.00	29.26	PK	Ver
11442.78	49.70	74.00	24.30	PK	Ver

Test mode:5G_U-NII-2C_802.11n40_5510MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5458.65	52.00	74.00	22.00	PK	Ver
11023.63	49.79	74.00	24.21	PK	Ver
11022.56	49.57	74.00	24.43	PK	Hor
5459.69	50.55	74.00	23.45	PK	Hor

Test mode:5G_U-NII-2C_802.11n40_5590MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11184.59	49.78	74.00	24.23	PK	Hor
11184.59	49.48	74.00	24.52	PK	Ver

Test mode:5G_U-NII-2C_802.11n40_5670MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
5728.70	50.63	68.20	17.57	PK	Hor
11345.03	50.65	74.00	23.35	PK	Hor
11343.44	48.65	74.00	25.35	PK	Ver
5734.65	52.88	68.20	15.32	PK	Ver

Test mode:5G_U-NII-2C_802.11n40_5710MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11422.06	50.04	74.00	23.97	PK	Ver
5451.97	44.06	74.00	29.94	PK	Ver
5894.89	45.32	74.00	28.68	PK	Ver
54339.85	44.27	74.00	29.73	PK	Hor
5890.16	45.12	74.00	28.88	PK	Hor
11422.59	50.47	74.00	23.53	PK	Hor

Test mode:5G_U-NII-3_802.11a_5745MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11492.19	50.00	74.00	24.00	PK	Hor
11487.41	49.75	74.00	24.26	PK	Ver

Test mode:5G_U-NII-3_802.11a_5785MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11569.22	49.61	74.00	24.39	PK	Hor
11575.59	49.94	74.00	24.06	PK	Ver

Test mode:5G_U-NII-3_802.11a_5825MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11655.81	50.88	74.00	23.12	PK	Hor
11654.75	50.71	74.00	23.29	PK	Ver

Test mode:5G_U-NII-3_802.11ac20_5745MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11491.66	49.69	74.00	24.31	PK	Ver
11486.34	49.30	74.00	24.71	PK	Hor

Test mode:5G_U-NII-3_802.11ac20_5785MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11572.41	49.56	74.00	24.44	PK	Ver
11565.50	49.95	74.00	24.05	PK	Hor

Test mode:5G_U-NII-3_802.11ac20_5825MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11652.09	49.99	74.00	24.01	PK	Ver
11651.56	50.52	74.00	23.48	PK	Hor

Test mode:5G_U-NII-3_802.11ac40_5755MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11510.25	49.24	74.00	24.76	PK	Ver
11507.59	50.10	74.00	23.90	PK	Hor

Test mode:5G_U-NII-3_802.11ac40_5795MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11588.88	49.32	74.00	24.68	PK	Hor
11591.00	49.39	74.00	24.61	PK	Ver

Test mode:5G_U-NII-3_802.11ac80_5775MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11554.34	48.48	74.00	25.52	PK	Ver
11557.53	49.81	74.00	24.19	PK	Hor

Test mode:5G_U-NII-3_802.11n20_5745MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11493.78	49.09	74.00	24.91	PK	Hor
11486.34	49.27	74.00	24.73	PK	Ver

Test mode:5G_U-NII-3_802.11n20_5785MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11575.59	50.50	74.00	23.50	PK	Hor
11562.31	49.53	74.00	24.47	PK	Ver

Test mode:5G_U-NII-3_802.11n20_5825MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11644.13	50.16	74.00	23.84	PK	Ver
11644.13	50.41	74.00	23.59	PK	Hor

Test mode:5G_U-NII-3_802.11n40_5755MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11508.66	49.07	74.00	24.93	PK	Hor
11508.13	49.75	74.00	24.25	PK	Ver

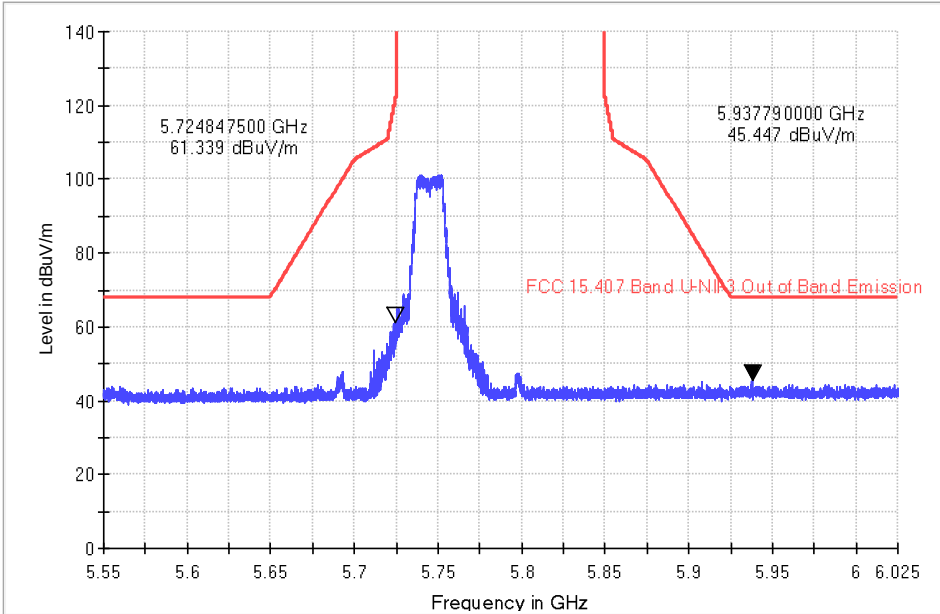
Test mode:5G_U-NII-3_802.11n40_5795MHz					
Frequency MHz	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Polarization
11584.09	49.73	74.00	24.27	PK	Hor
11592.06	49.51	74.00	24.49	PK	Ver

- (1) Above 1GHz Corrector factor= Antenna Factor +Cable Loss - Amp. Factor.
- (2) Below 1GHz Corrector factor= Antenna Factor +Cable Loss.
- (3) “*” is not in restricted band, its limit is -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBuV/m can be determined by adding a “conversion” factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions.
- (4) All the test result for unwanted emissions and band edge (included the restricted bands) are shown from page 38 to 47. Straddle channels 138(5690MHz), 142(5710MHz) and 144 (5720MHz) were tested separately.”
- (5) We test all modes and only the worst case for each bandwidth recorded in the report.
- (6) Testing is carried out with frequency rang 30MHz to 40GHz, which data of measurement within this frequency range shown “---” in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (7) The frequency, which start from 9KHz to 30MHz and 18-40GHz, was pre-scanned and the result which was 20dB lower than the limit line per 15.31(o) was not reported.



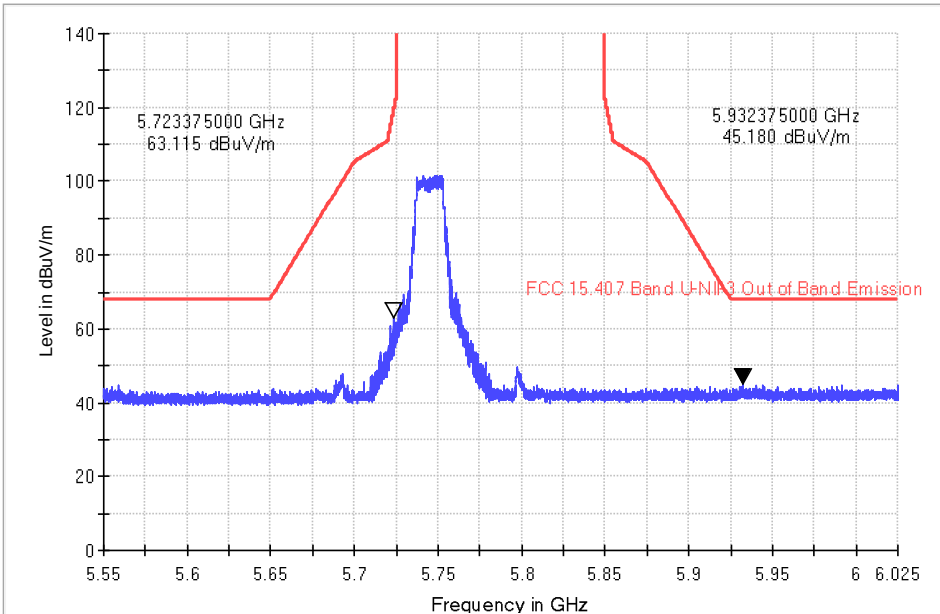
Out of Band Emission
802.11a: CH 5745MHz
Horizontal

FCC 15.407 U-NII Out of Band Emission



Vertical

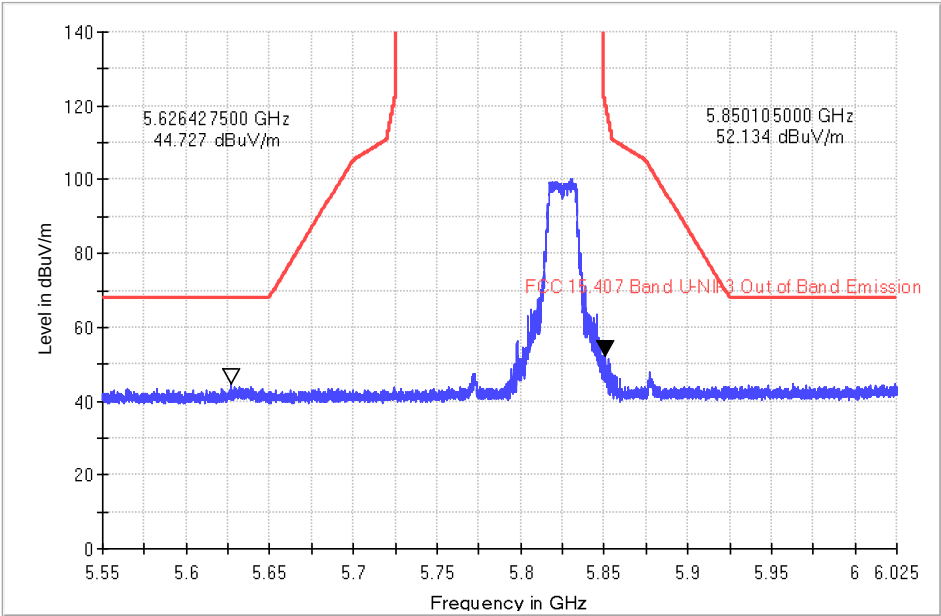
FCC 15.407 U-NII Out of Band Emission





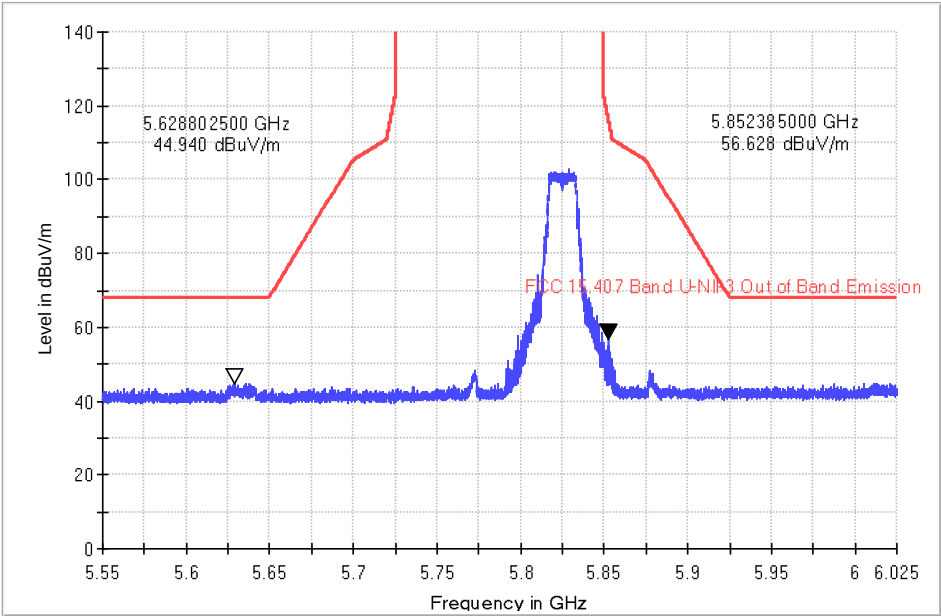
802.11a: CH 5825MHz
Horizontal

FCC 15.407 U-NII Out of Band Emission



Vertical

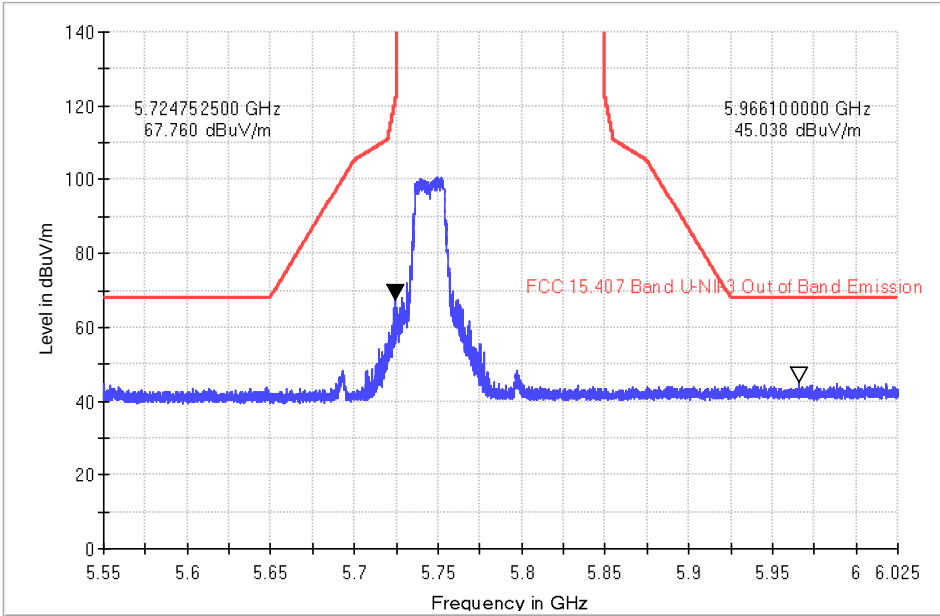
FCC 15.407 U-NII Out of Band Emission





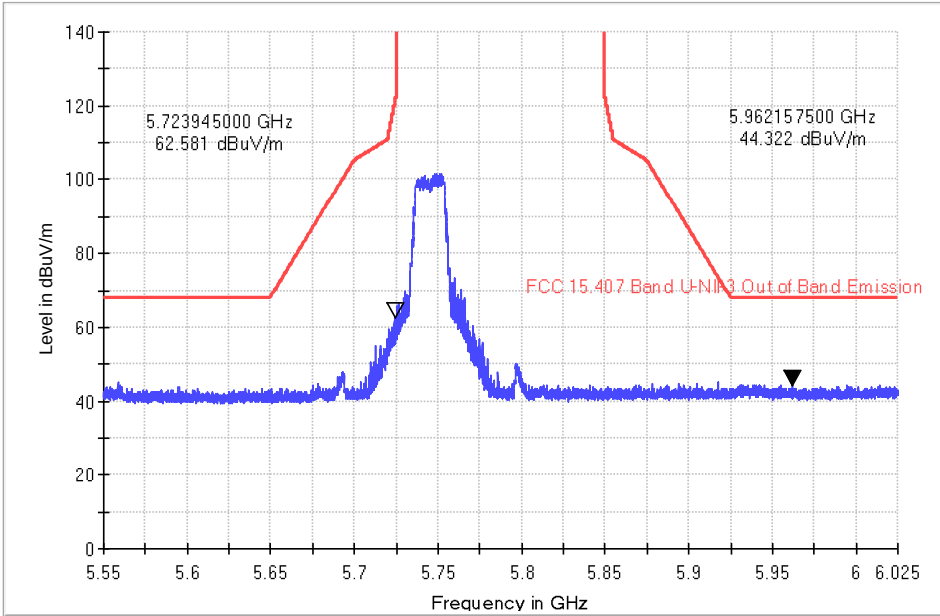
802.11n20: CH 5745MHz
Horizontal

FCC 15.407 U-NII Out of Band Emission



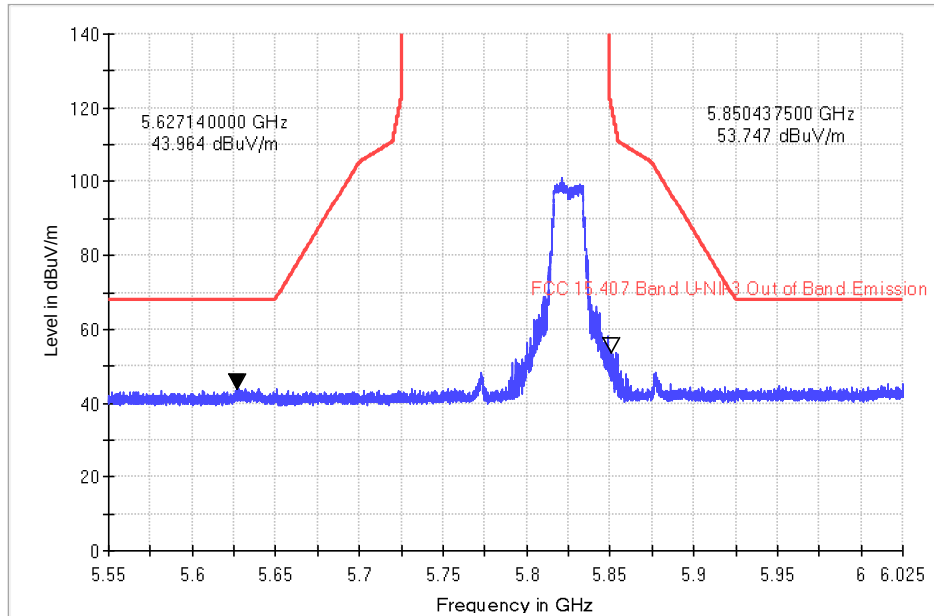
Vertical

FCC 15.407 U-NII Out of Band Emission



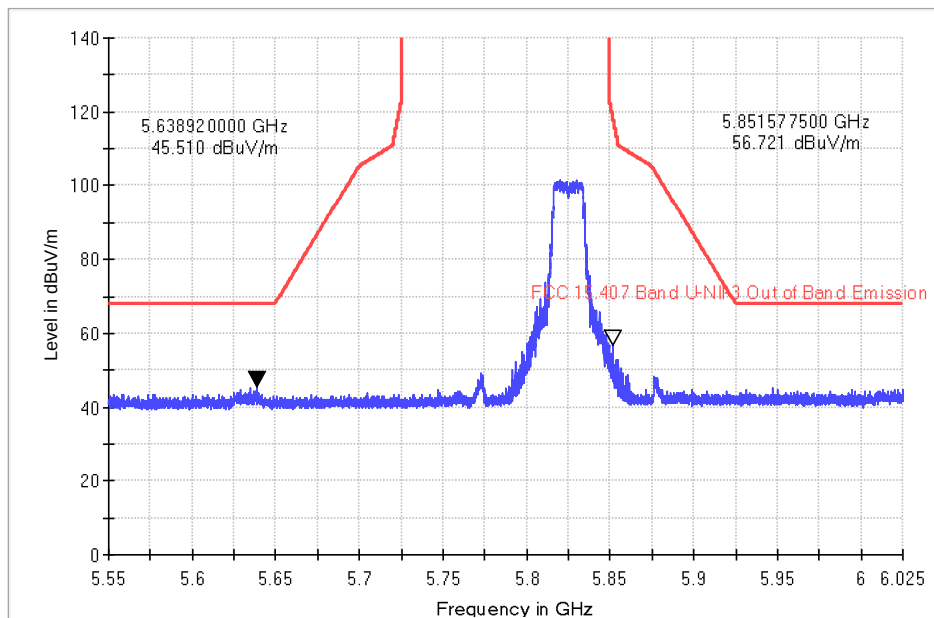
802.11n20: CH 5825MHz Horizontal

FCC 15.407 U-NII Out of Band Emission



Vertical

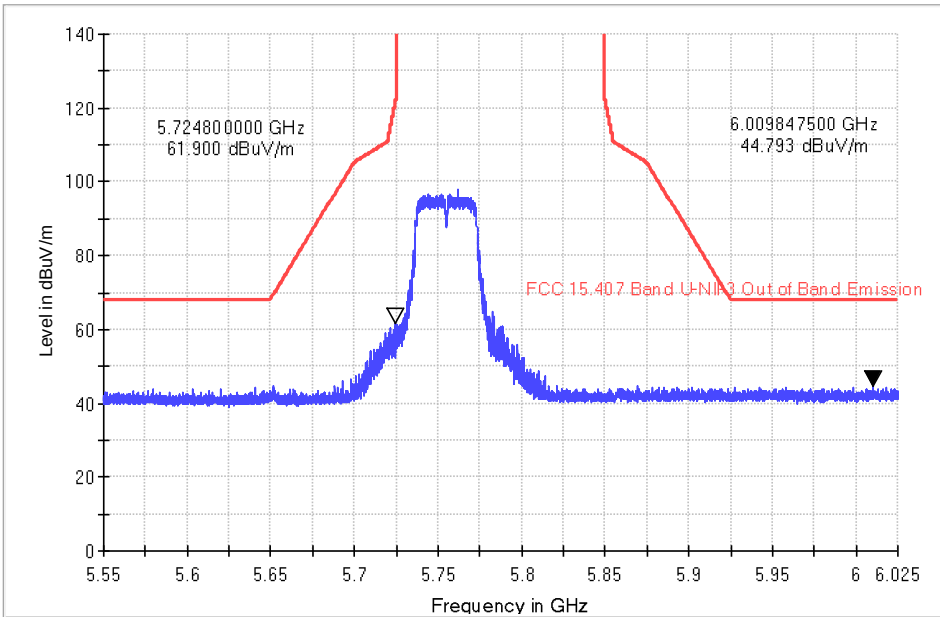
FCC 15.407 U-NII Out of Band Emission





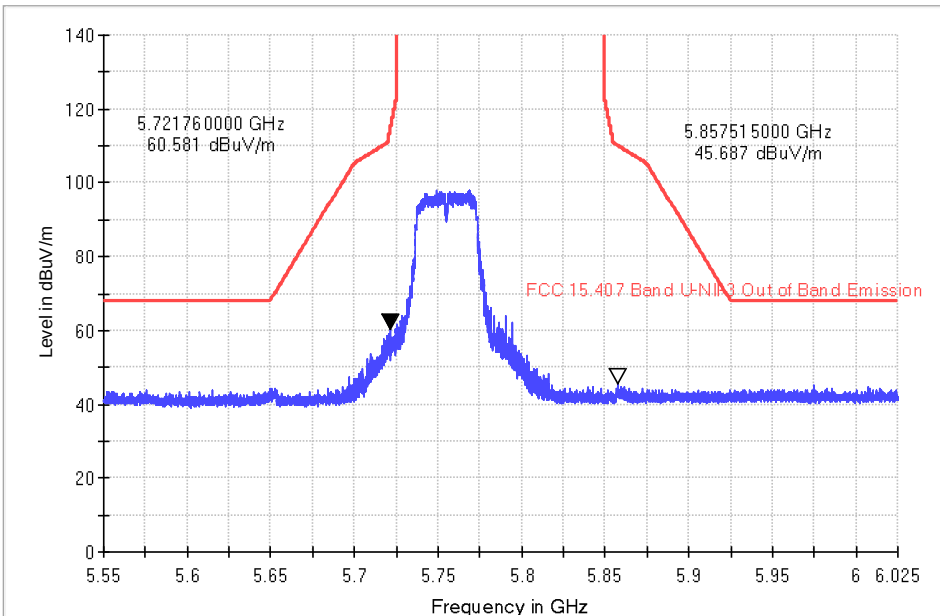
802.11n40: CH 5755MHz
Horizontal

FCC 15.407 U-NII Out of Band Emission



Vertical

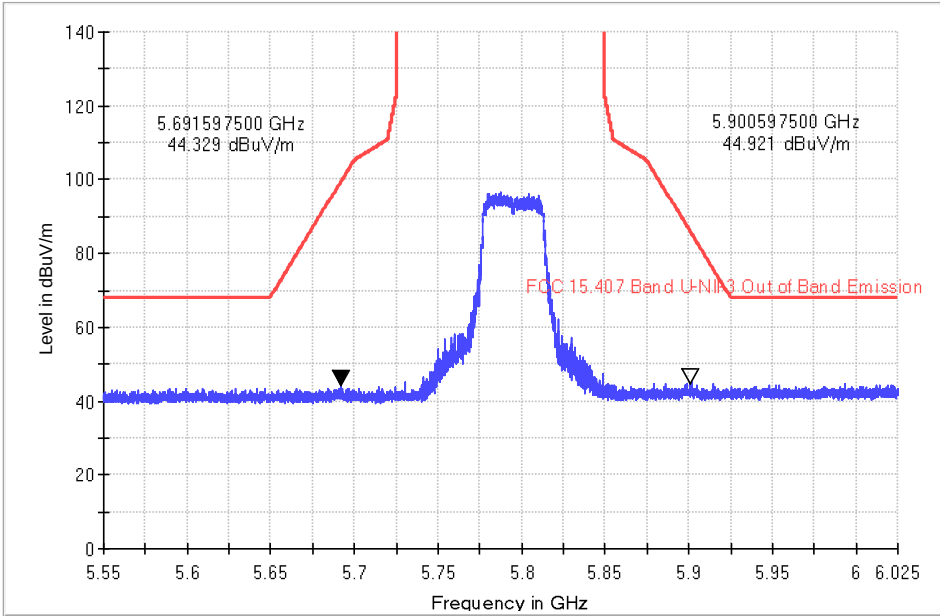
FCC 15.407 U-NII Out of Band Emission





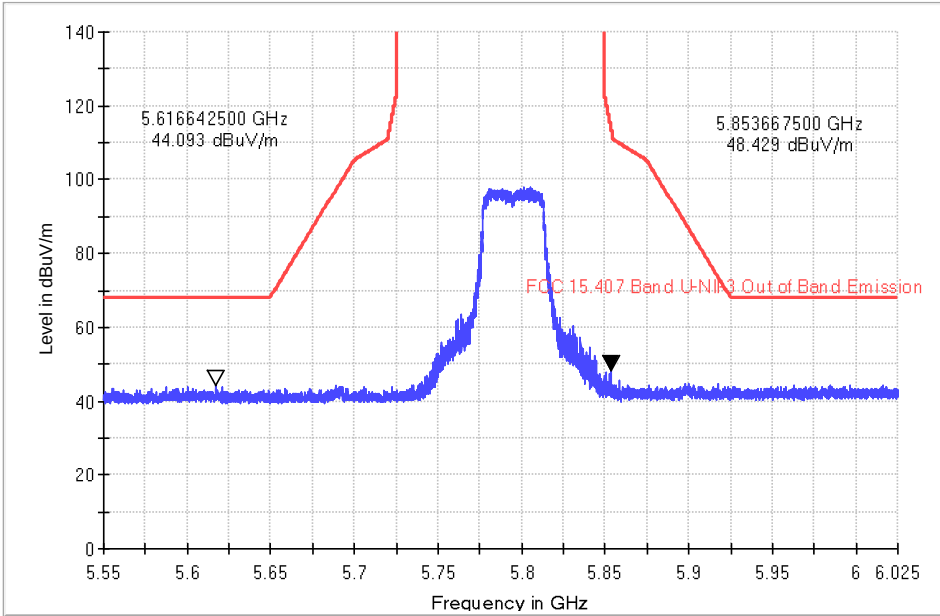
802.11n40: CH 5795MHz
Horizontal

FCC 15.407 U-NII Out of Band Emission



Vertical

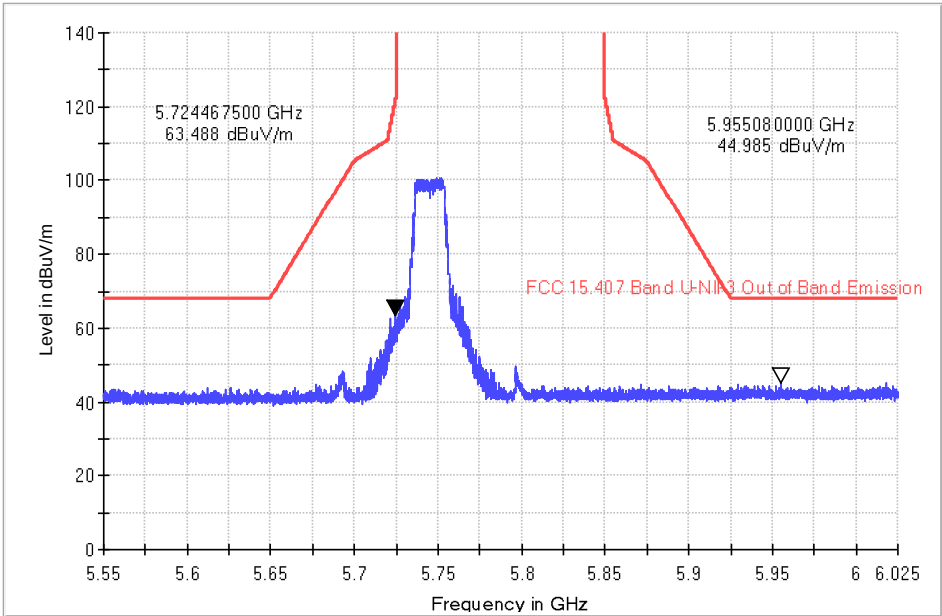
FCC 15.407 U-NII Out of Band Emission





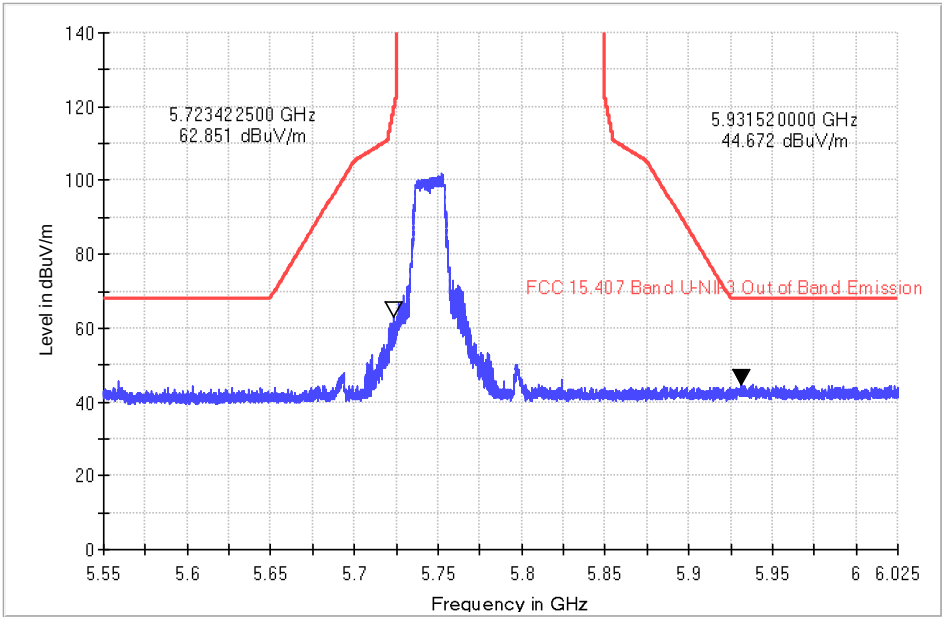
802.11ac20: CH 5745MHz
Horizontal

FCC 15.407 U-NII Out of Band Emission



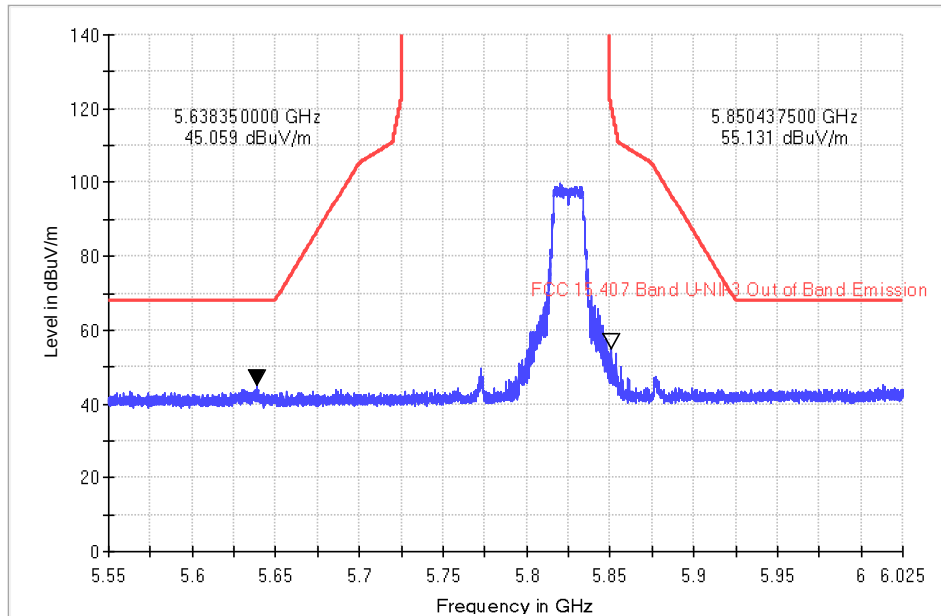
Vertical

FCC 15.407 U-NII Out of Band Emission



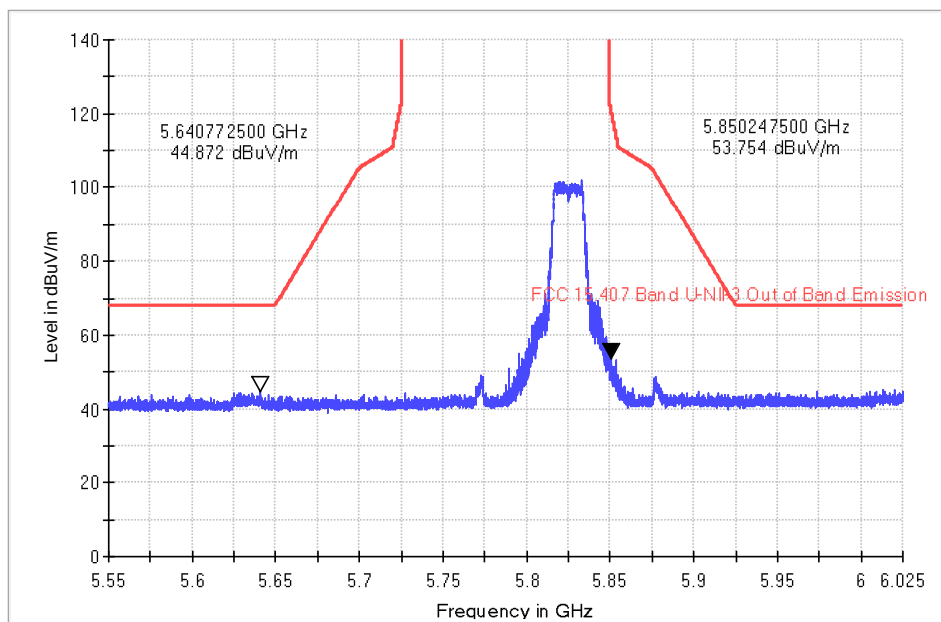
802.11ac20: CH 5825MHz Horizontal

FCC 15.407 U-NII Out of Band Emission



Vertical

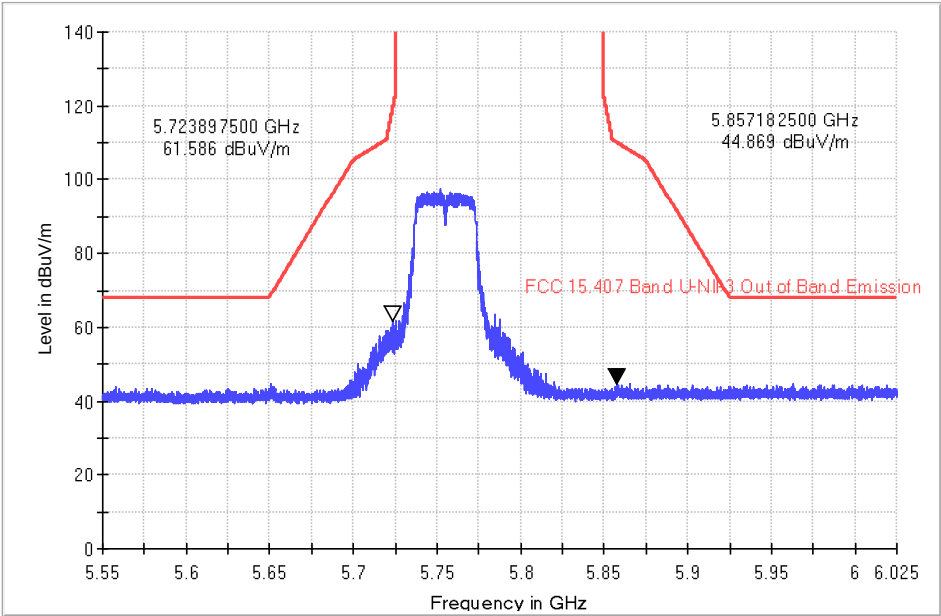
FCC 15.407 U-NII Out of Band Emission





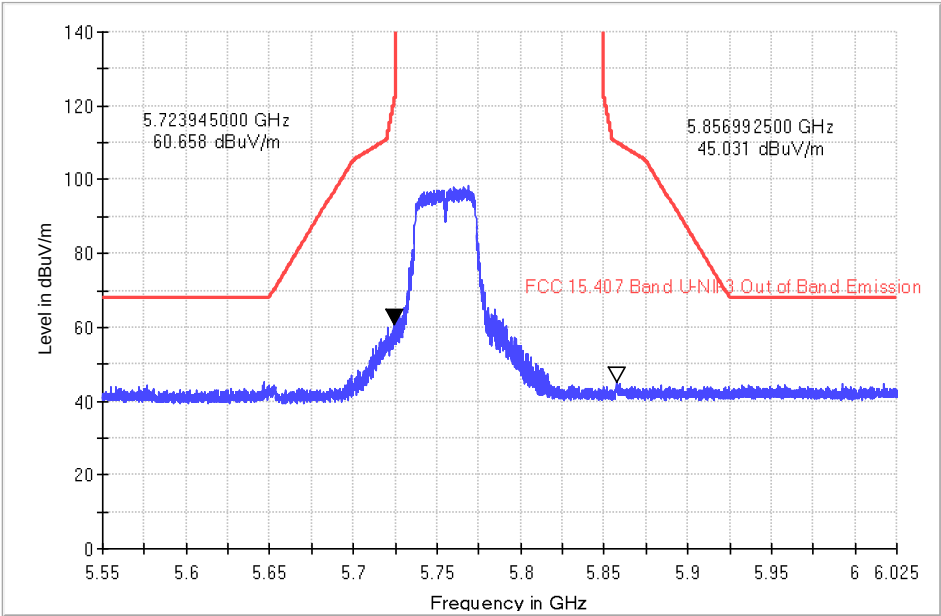
802.11ac40: CH 5755MHz
Horizontal

FCC 15.407 U-NII Out of Band Emission



Vertical

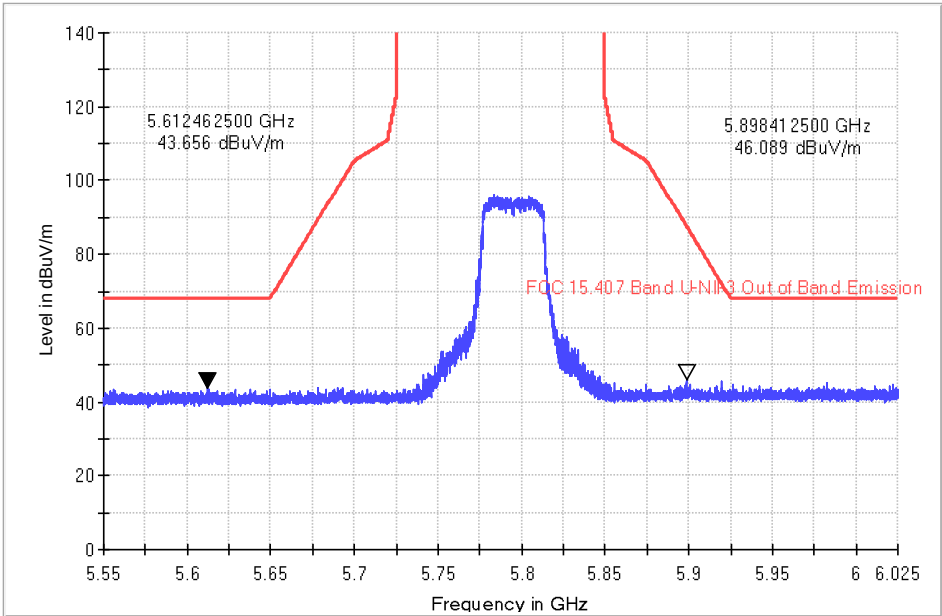
FCC 15.407 U-NII Out of Band Emission





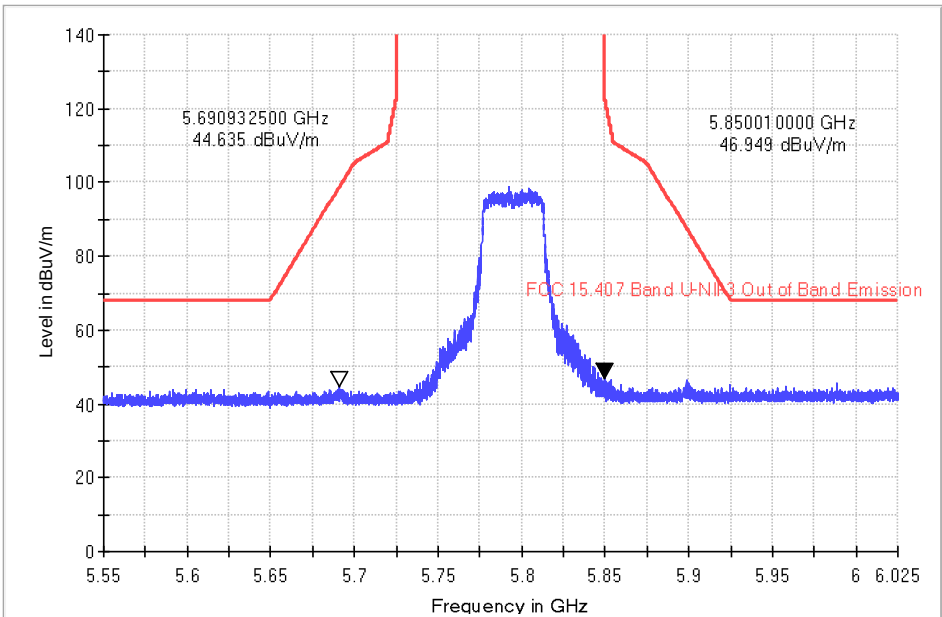
802.11ac40: CH 5795MHz
Horizontal

FCC 15.407 U-NII Out of Band Emission



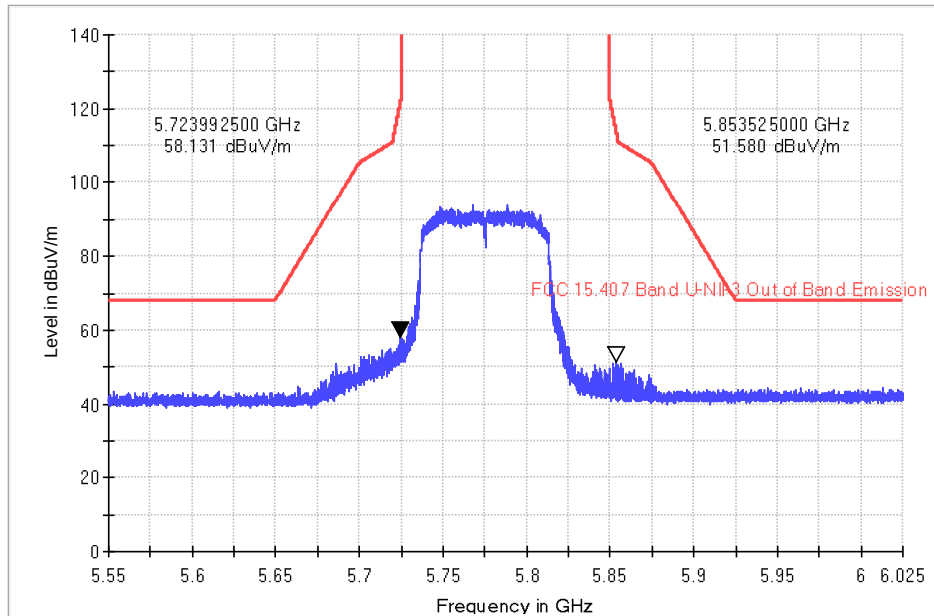
Vertical

FCC 15.407 U-NII Out of Band Emission



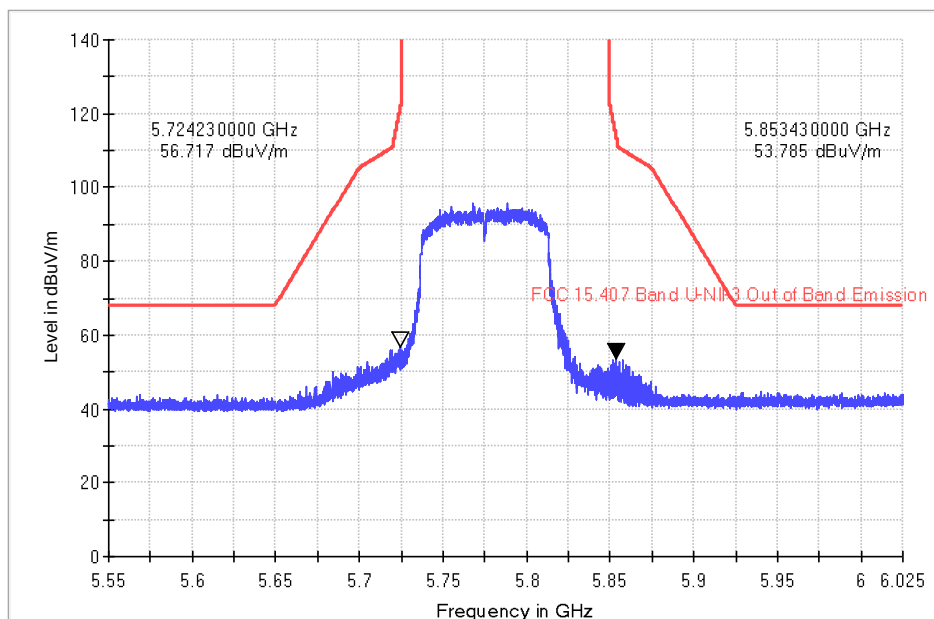
802.11ac80: CH 5775MHz Horizontal

FCC 15.407 U-NII Out of Band Emission



Vertical

FCC 15.407 U-NII Out of Band Emission



The worst case of Radiated Emission below 1GHz:

30-1000MHz Radiated Emission

EUT Information

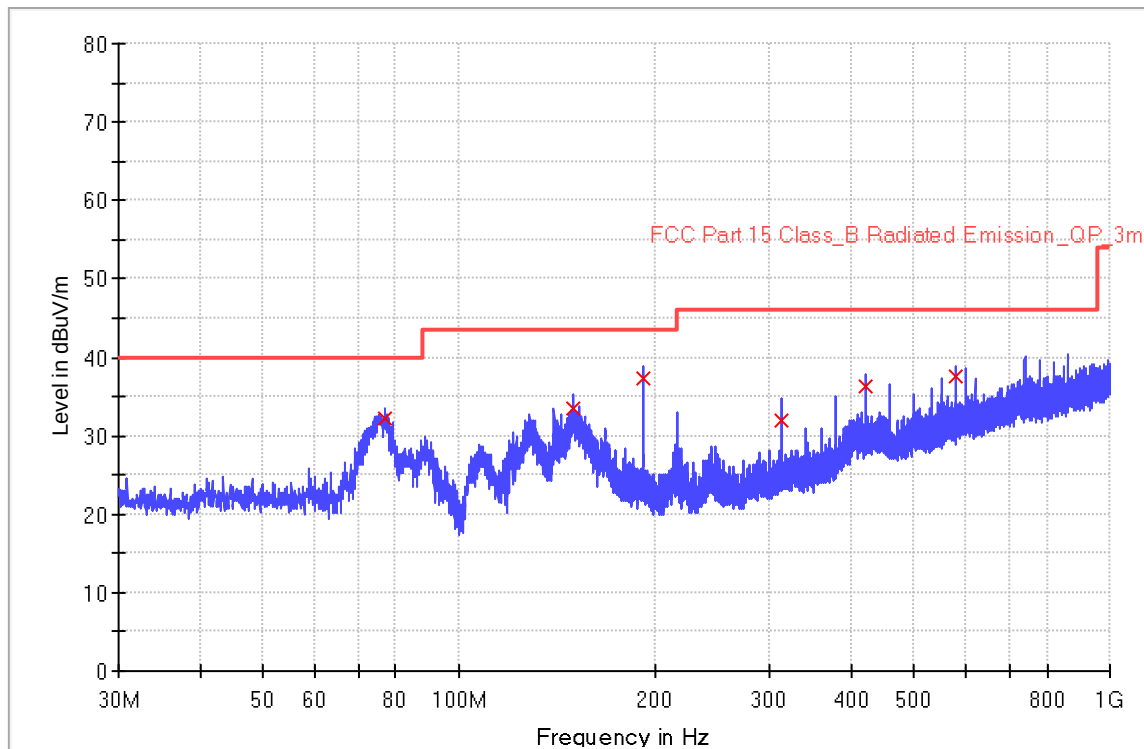
EUT Name:	Acoustic Thermal Imager
Model:	Fotric V0MiX
Client:	FOTRIC INC
Op Cond:	Power on, AC120V/60Hz, TX_5755MHz at 802.11n40
Operator:	Huali CHENG
Test Spec:	FCC Part 15.209(a)
Comment:	Horizontal
Sample No:	SHA-831405-2

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup:	RE_VULB9168
Receiver:	[ESR 3]
Level Unit:	dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamplifier
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB

RE_VULB9168_pre_Cont_30-1000



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - QPK (dB)
76.960000	32.1	1000.0	120.000	135.0	H	286.0	17.0	7.9
150.000000	33.6	1000.0	120.000	154.0	H	246.0	20.9	9.9
192.000000	37.2	1000.0	120.000	188.0	H	138.0	18.3	6.3
311.960000	31.8	1000.0	120.000	168.0	H	148.0	21.9	14.2
420.000000	36.2	1000.0	120.000	149.0	H	165.0	24.7	9.8
580.040000	37.6	1000.0	120.000	162.0	H	254.0	28.2	8.4

(continuation of the "Limit and Margin" table from column 16 ...)

Frequency (MHz)	Limit - QPK (dBuV/m)	Comment
76.960000	40.0	
150.000000	43.5	
192.000000	43.5	
311.960000	46.0	
420.000000	46.0	
580.040000	46.0	

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

30-1000MHz Radiated Emission

EUT Information

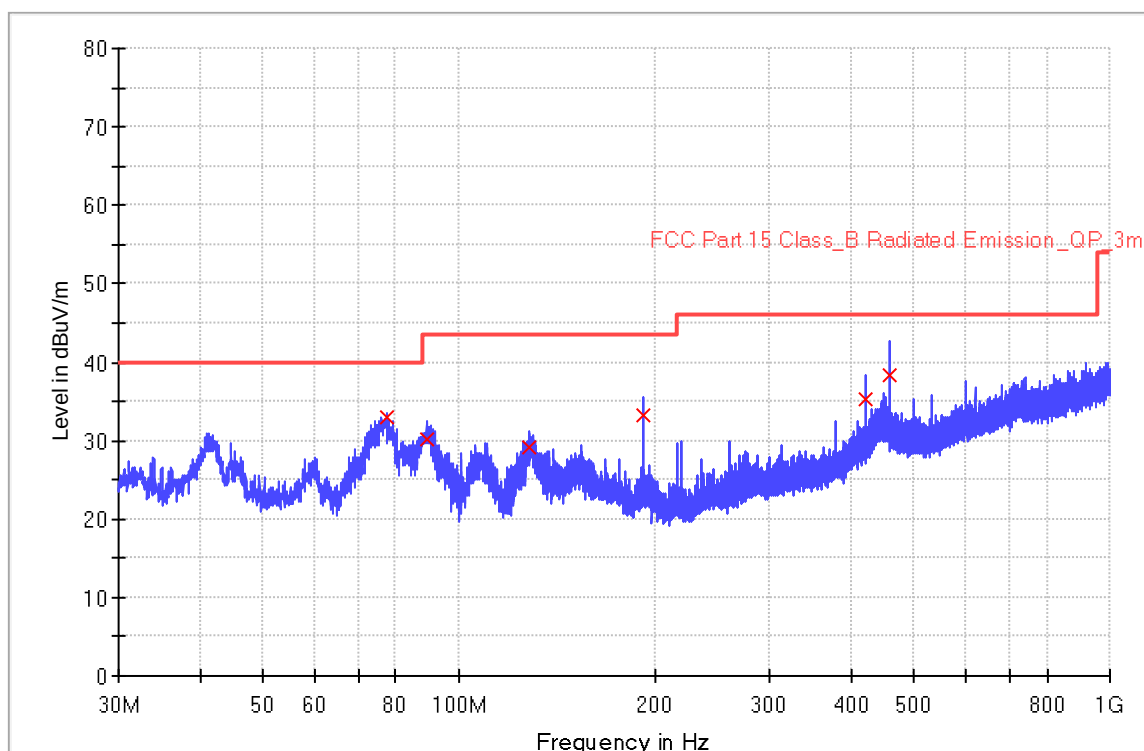
EUT Name: Acoustic Thermal Imager
Model: Fotric V0MiX
Client: FOTRIC INC
Op Cond: Power on, AC120V/60Hz, TX_5755MHz at 802.11n40
Operator: Huali CHENG
Test Spec: FCC Part 15.209(a)
Comment: Horizontal
Sample No: SHA-831405-2

Sweep Setup: RE_VULB9168_pre_Cont_30-1000 [EMI radiated]

Hardware Setup: RE_VULB9168
Receiver: [ESR 3]
Level Unit: dBuV/m

Subrange	Step Size	Detectors	Bandwidth	Sweep Time	Preamplifier
30 MHz - 1 GHz	48.5 kHz	PK+	120 kHz	0.2 s	20 dB

RE_VULB9168_pre_Cont_30-1000



Limit and Margin

Frequency (MHz)	QuasiPeak (dBuV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)	Margin - QPK (dB)
77.520000	33.0	1000.0	120.000	135.0	V	16.0	16.8	7.0
89.560000	30.3	1000.0	120.000	122.0	V	48.0	14.7	13.2
128.360000	29.1	1000.0	120.000	168.0	V	72.0	19.0	14.4
192.000000	33.2	1000.0	120.000	154.0	V	168.0	18.3	10.3
420.000000	35.2	1000.0	120.000	195.0	V	155.0	24.7	10.8
460.000000	38.4	1000.0	120.000	146.0	V	212.0	25.8	7.6

(continuation of the "Limit and Margin" table from column 16 ...)

Frequency (MHz)	Limit - QPK (dBuV/m)	Comment
77.520000	40.0	
89.560000	43.5	
128.360000	43.5	
192.000000	43.5	
420.000000	46.0	
460.000000	46.0	

Note 1: Measure Level (dBuV/m) = Reading Level (dBuV) + Factor (dB)

Factor (dB) = Cable Loss (dB) + Antenna Factor (dB/m)

Note 2: The test trace is same as the ambient noise and the amplitude of the emissions are attenuated more than 20dB below the permissible (the test frequency range: 9kHz ~ 30MHz, 18GHz ~ 25GHz), therefore no data appear in the report.

11 Test Equipment List

List of Test Instruments
Test Site1

	DESCRIPTION	MANUFACTURER	MODEL NO.	SERIAL NO.	CAL. DATE	CAL. DUE DATE
C RE	Signal spectrum analyzer	Agilent	N9020B	MY59050168	2024-2-19	2025-2-18
	EMI Test Receiver	Rohde & Schwarz	ESR3	101906	2023-8-1	2024-7-31
	EMI Test Receiver	Rohde & Schwarz	ESR3	101906	2024-8-1	2025-7-31
	Signal Analyzer	Rohde & Schwarz	FSV40	101091	2023-8-1	2024-7-31
	Signal Analyzer	Rohde & Schwarz	FSV40	101091	2024-8-1	2025-7-31
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	961	2021-9-23	2024-9-22
	Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	961	2024-8-30	2025-8-29
	Horn Antenna	Rohde & Schwarz	HF907	102393	2024-4-14	2027-4-13
	Pre-amplifier	Shenzhen HzEMC	HPA-081843	HYP A23026	2024-4-16	2025-4-15
	Loop antenna	Rohde & Schwarz	HFH2-Z2	100443	2024-6-26	2025-6-25
	DOUBLE-RIDGED WAVEGUIDE HORN WITH PRE-AMPLIFIER (18 GHZ - 40 GHZ)	ETS-Lindgren	3116C	00246076	2023-7-7	2026-7-6
	3m Semi-anechoic chamber	TDK	9X6X6	----	2024-5-8	2027-5-7
CE	EMI Test Receiver	Rohde & Schwarz	ESR3	101907	2023-8-1	2024-7-31
	EMI Test Receiver	Rohde & Schwarz	ESR3	101907	2024-8-1	2025-7-31
	LISN	Rohde & Schwarz	ENV216	101924	2023-8-1	2024-7-31
	LISN	Rohde & Schwarz	ENV216	101924	2024-8-1	2025-7-31

Measurement Software Information			
Test Item	Software	Manufacturer	Version
C	MTS 8310	MWRFTest	3.0.0.0
	Power Viewer	Rohde & Schwarz	V 11.0
RE	EMC 32	Rohde & Schwarz	V10.50.40
CE	EMC 32	Rohde & Schwarz	V9.15.03

C - Conducted RF tests

- Conducted peak output power
- 6dB Occupied Bandwidth
- Power spectral density*
- Conducted Band Edge and Out-of-Band Emissions



12 System Measurement Uncertainty

For a 95% confidence level, the measurement expanded uncertainties for defined systems, in accordance with the recommendations of ISO 17025 were:

Items	Extended Uncertainty
Conducted Disturbance at Mains Terminals	150kHz to 30MHz, LISN, 3.16dB
Radiated Disturbance	9kHz to 30MHz, 3.52dB 30MHz to 1GHz, 5.03dB (Horizontal) 5.12dB (Vertical) 1GHz to 18GHz, 5.49dB 18GHz to 40GHz, 5.63dB
RF Conducted Measurement	Power related: 1.16dB Frequency related: 6.00×10^{-8}

Measurement Uncertainty Decision Rule:

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2023, clause 4.4.3.

13 Photographs of Test Set-ups

Refer to the < Test Setup photos >.

14 Photographs of EUT

Refer to the < External Photos > & < Internal Photos >.

-----End of Test Report-----