Industrial Internet Innovation Center (Shanghai) Co.,Ltd.

SRD TEST REPORT

PRODUCT	Smart POS System
BRAND	SUNMI
MODEL	T6831
APPLICANT	Shanghai Sunmi Technology Co.,Ltd.
FCC ID	2AH25T6831
ISSUE DATE	September 19, 2024
STANDARD(S)	FCC Part15E

Prepared by: ***Tao Lingyan*** **Reviewed by:** ***Yang Fan*** **Approved by:** ***Zhang Min***

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1. Summary of Test Report

1.1 Test Standard(s)

No.	Test Standard	Title	Version
1	FCC Part15E	Title 47 of the Code of Federal Regulations; Chapter I Part 15 - Radio frequency devices	--

1.2 Reference Documents

No.	Test Standard	Title	Version
1	ANSI 63.10	Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz	2013
2	KDB 789033 D02 General UNII Test Procedures New Rules v02r01	Information Infrastructure (U-NII) Devices - Part 15, Subpart E	--
Note: The standard of KDB 789033 D02 General UNII Test Procedures New Rules v02r01 has not been accredited by A2LA.			

1.3 Summary of Test Results

No.	Measurement Items	FCC Rules	Verdict
1	Maximum Output Power	15.407(a)	Pass
2	Band edge compliance	15.407(b)	Pass
3	Transmitter spurious emissions radiated	15.407(b)	Pass
4	AC Powerline Conducted Emission	15.207	Pass

Note 1:
The T6831 manufactured by Shanghai Sunmi Technology Co.,Ltd. is a variant product for testing.This project is a C2PC project based on the FCC ID: 2AH25T6831. the content of the change is referred to the Product Change Description with below changes:
HARDWARE MODIFICATIONS:
Components on PCB changes: Yes
Camera changes: Please refer to the following difference chart
Other changes:
1.Added without front camera and without Pogo Pin configuration.
2.PCBA Change
The CPU chip model is changed from 8766 to 8768, and the two CPU chips are PIN to PIN, and the RF performance will not be affected.
According to the Product Change Description, we verified the worst mode power and retest the Radiated Spurious Emission and AC Powerline Conducted Emission.
There are two configurations Mainly Supply(S04aa) and Secondary Supply(S08aa) in this project. Wetested the Mainly Supply(S04aa) and the worst mode of Secondary Supply(S08aa), The description ofthedifferences between Mainly Supply(S04aa) and Secondary Supply(S08aa) are as follows:

Type of Service	Model Name	Front camera	Pogo Pin	CPU
Original	T6831	YES	YES	8766
Variant1 S04aa (Mainly Supply)	T6831	YES	YES	8768
Variant2 S08aa (Secondary Supply)	T6831	NO	NO	8768

Industrial Internet Innovation Center (Shanghai) Co., Ltd. only performed test cases which identified with Pass/Fail/Inc result in section 1.3.

Industrial Internet Innovation Center (Shanghai) Co., Ltd. has verified that the compliance of the tested device specified in section 4 of this test report is successfully evaluated according to the procedure and test methods as defined in type certification requirement listed in section 1 of this test report.

a. All the test data for each data were verified, but only the worst case was reported.

1.4 Data Provided by Applicant

No.	Item(s)	Data
1	Antenna gain of EUT	2.6 dBi

Note: The data of aantenna gain is provided by the Antenna specification may affect the validity of the test results in this report, and the impact and consequences of this shall be undertaken by the customer.

2. General Information of The Laboratory

2.1 Testing Laboratory

Lab Name	Industrial Internet Innovation Center (Shanghai) Co.,Ltd.
Address	Building 4，No. 766，Jingang Road，Pudong，Shanghai，China
Telephone	021-68866880
FCC Registration No.	708870
FCC Designation No.	CN1364

2.2 Laboratory Environmental Requirements

Temperature	15℃~35℃
Relative Humidity	25%RH~75%RH
Atmospheric Pressure	86kPa~106kPa

2.3 Project Information

Project Manager	Gao Hongning
Test Date	August 20, 2024 to September 11, 2024

3. General Information of The Customer

3.1 Applicant

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, No.388,Song Hu Road, Yang Pu District, Shanghai, China
Telephone	18826519551

3.2 Manufacturer

Company	Shanghai Sunmi Technology Co.,Ltd.
Address	Room 505, No.388,Song Hu Road, Yang Pu District, Shanghai, China
Telephone	18826519551

4. General Information of The Product

4.1 Product Description for Equipment under Test (EUT)

Product Name	Smart POS System
Model name	T6831
Date of Receipt	S02aa/S04aa: August 20, 2024 S08aa: August 26, 2024
EUT ID*	S02aa/S04aa/S08aa
SN/IMEI	S02aa: 863477070000126'863477070003120 S04aa: 863477070000159'863477070003153 S08aa: 861040700003552'861040700008551
Supported Radio Technology and Bands	GSM850/GSM900/DCS1800/PCS1900 WCDMA Band I/II/IV/V/VI/VIII/XIX LTE Band 1/2/3/4/5/7/8/18/19/20/26/28/34/38/39/40/41 BT 5.0 BR/EDR/BLE WLAN 802.11b,g,n WLAN 802.11a,n,ac GPS/Galileo/GLONASS/BDS NFC
Hardware Version	V1.0
Software Version	V3.0.4
FCC ID	2AH25T6831
NOTE1：EUT ID is the internal identification code of the laboratory. NOTE2: Samples in the test report are provided by the customer. The test results are only applicable to the samples received by the laboratory.	

4.2 Internal Identification of AE used during the test

AE ID*	Description	Model	SN/Remark
CA04	Adapter	TPA-141A050200UU01	N/A
CB02	Adapter	UC13US	N/A
UA04	AC Cable	N/A	N/A
BA04	Battery	HPPA	Guangdong Highpower NewEnergy Technology Co., Ltd.
NOTE1: AE ID is the internal identification code of the laboratory. NOTE2: By verifying that BA04 is the worst battery and adapter combination, this battery and adapter are used in all tests.			

4.3 Additional Information

WLAN Frequency	U-NII-1: 5180-5240MHz U-NII-2A: 5260-5320MHz U-NII-2C: 5500MHz-5700MHz
Occupied Channel Bandwidth	20 MHz: 802.11 a/n/ac 40 MHz: 802.11 n/ac 80 MHz: 802.11 ac
WLAN type of modulation	OFDM

Test frequency list:

UNII-1 and UNII-2A:

BW_20M	Channel	36	40	44	48	52	56	60	64
	Freq. (MHz)	5180	5200	5220	5240	5260	5280	5300	5320
BW_40M	Channel	38		46		54		62	
	Freq. (MHz)	5190		5230		5270		5310	
BW_80M	Channel	42				58			
	Freq. (MHz)	5210				5290			

UNII-2C:

BW_20M	Channel	100	104	108	112	116	120	124	128	132	136	140
	Freq. (MHz)	5500	5520	5540	5560	5580	5600	5620	5640	5660	5680	5700
BW_40M	Channel	102		110		118		126		134		/
	Freq. (MHz)	5510		5550		5590		5630		5670		/
BW_80M	Channel	106				122				/		
	Freq. (MHz)	5530				5610				/		
Note：“/” Represents empty												

Note: This report is for WLAN UNII-1, UNII-2A and UNII-2C only.

5. Test Configuration Information

5.1 Laboratory Environmental Conditions

5.1.1 Permanent Facilities

Relative Humidity	Min. = 45 %, Max. = 55 %		
Atmospheric Pressure	101kPa		
Temperature	Normal	Minimum	Maximum
	25℃	-10℃	50℃
Working Voltage of EUT	Normal	Minimum	Maximum
	7.7V	6.0V	8.8V

5.2 Test Equipments Utilized

5.2.1 Conducted Test System

No.	Name	Model	S/N	SW Version	HW Version	Manufacturer	Cal. Date	Cal. Interval
1	Test Software	TS1120	10727	V3.2.22	N/A	Tonscend	N/A	N/A
2	Automatic control unit	JS0806-2	2218060623	N/A	N/A	Tonscend	2024-03-25	1 Year
3	Wireless communication comprehensive tester	CMW500	164865	V3.8.12	N/A	R&S	2024-07-25	1 Year
4	Spectrum Analyzer	FSQ40	200063	V4.75	N/A	R&S	2023-10-16	1 Year
5	Analog Signal Generator	SMF	104770	V3.0.13.0-2.20.530.15.4	N/A	R&S	2023-10-16	1 year
6	Vector Signal Generator	SMCV100B	103691	V5.00.122.24	N/A	R&S	2024-07-25	1 Year
7	Programmable Power Supply	Keithley 2303	4039070	N/A	N/A	Keithley	2024-06-07	1 Year
8	Temperature box	B-TF-107C	BTF107C-201804107	N/A	N/A	Boyi	2024-06-07	1 Year
9	Network test unit AP	GT-AXE11000	N2IG0X401637KWF	V3.0.0.4.386_45940	N/A	ASUS	N/A	N/A
10	Vector Signal Generator	SMBV100A	257904	V4.15.125.49	N/A	R&S	2023-10-16	1 Year

5.2.2 Radiated Emission Test System

No.	Name	Model	S/N	SW Version	HW Version	Manufacturer	Cal. Date	Cal. Interval
1	Universal Radio Communication Tester	CMU200	123126	V5.2.1	B12	R&S	2023-10-16	1 Year
2	Universal Radio Communication Tester	CMW500	104178	V3.7.20	1206.0600.00	R&S	2023-10-16	1 Year
3	EMI Test Receiver	ESU40	100307	V5.1-24-3	01	R&S	2023-12-19	1 Year
4	Trilog Antenna	VULB9162	00426	N/A	N/A	Schwarzbeck	2024-08-02	1 year
5	Double Ridged Guide Antenna	ETS-3117	00135885	N/A	N/A	ETS	2023-03-23	2 years
6	EMI Test Software	EMC32 V10.35.02	N/A	N/A	N/A	R&S	N/A	N/A
7	Horn Antenna	3160-09	LM6321	N/A	N/A	R&S	2024-08-03	1 Year
8	Horn Antenna	3160-10	LM5942	N/A	N/A	R&S	2024-08-03	1 Year
9	Loop Antenna	AL-130R	121083	N/A	N/A	COM-POWER	2023-9-13	1 Year
10	Preamplifier	SCU08F1	8320024	N/A	N/A	R&S	2023-10-16	1 Year
11	Preamplifier	SCU18	10155	N/A	N/A	R&S	2023-10-16	1 Year
12	Preamplifier	SCU26	10025	N/A	N/A	R&S	2023-10-16	1 Year
13	Preamplifier	SCU40	10020	N/A	N/A	R&S	2023-10-16	1 Year
14	2-Line V-Network	ENV216	101380	N/A	N/A	R&S	2023-12-19	1 Year
15	EMI Test Software	EMC32 V10.35.02	N/A	N/A	N/A	R&S	N/A	N/A
16	Test Receiver	ESCI	101235	V5.1-24-3	0	R&S	2023-12-19	1 Year
17	Antenna Tower	TPMDC-LF	N/A	N/A	N/A	Top Precision	N/A	N/A
18	Antenna Tower	TPMDC-HF	N/A	N/A	N/A	Top Precision	N/A	N/A

5.2.3 Test Environment

Shielding Room1 (6.0 meters×3.0 meters×2.7 meters) did not exceed following limits along the conducted RF performance testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. = 20 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Ground system resistance	< 0.5 Ω
Temperature	Min. = 15 ℃, Max. = 35 ℃

Control room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber1 (9.8 meters×6.7 meters×6.7 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. = 25 %, Max. = 75 %
Shielding effectiveness	> 100 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
VSWR	Between 0 and 6 dB, from 1GHz to 18GHz
Site Attenuation Deviation	Between -4 and 4 dB,30MHz to 1GHz

5.3 Measurement Uncertainty

Measurement Uncertainty of Conduction test

Measurement Items	Range	Confidence Level	Calculated Uncertainty
Emission Bandwidth	5150-5850MHz	95%	±1.9%
Maximum Conduct Output Power	5150-5850MHz	95%	± 1.18 dB
Power Spectral Density	5150-5850MHz	95%	±0.98 dB
Band Edge Measurements	5150-5850MHz	95%	±1.21dB
Unwanted Emissions Measurement	9kHz-40GHz	95%	9kHz-7GHz:±1.21dB 7GHz-40GHz: ±3.31dB

Frequency Stability	5150-5850MHz	95%	±1.9%

Measurement Uncertainty of Radiation test

Measurement Items	**Uncertainty(dB)**
Radiated Emission 30MHz-1000MHz	±5.10
Radiated Emission 1000MHz-18000MHz	±5.66
Radiated Emission 18000MHz-40000MHz	±5.22
AC Powerline Conducted Emission	±4.38
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of *k*=2.	

6. Measurement Results

6.1. Duty Cycle

6.1.1. Measurement Limit and Method

Standard	Limit (dBm)
FCC 47 CFR Part 15.407(a)	NA

6.1.2. Test Procedure

The measurement method is made according to KDB 789033 B

Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

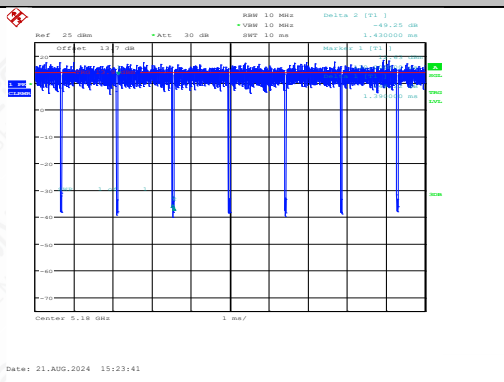
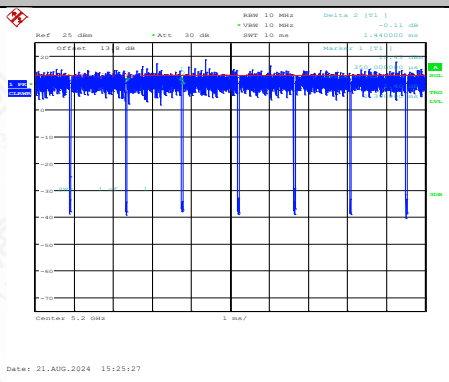
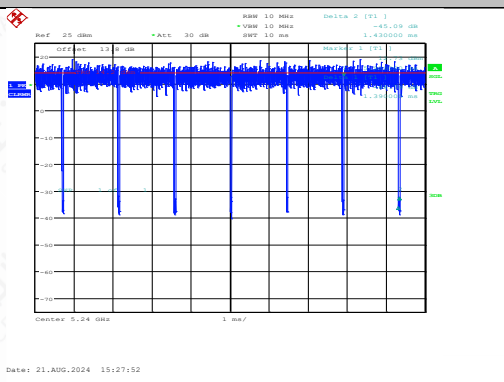
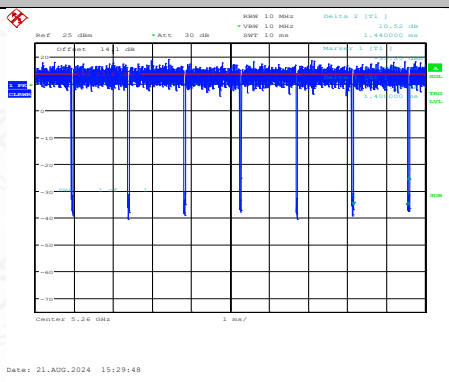
a) A diode detector and an oscilloscope that together have sufficiently short response time topermit accurate measurements of the on and off times of the transmitted signal.

b) The zero-span mode on a spectrum analyzer or EMl receiver, if the response time andspacing between bins on the sweep are sufficient to permit accurate measurements of the onand off times of the transmitted signal. Set the center frequency of the instrument to thecenter frequency of the transmission, Set RBW> EBW if possible: otherwise. set RBW tothe largest available value. Set VBW > RBW. Set detector = peak or average. The zero-span measurement method shall not be used unless both RBW and VBW are > 50/T. where 7is defined in II.B.1.a), and the number of sweep points across duration Texceeds 100. (Forexample. if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuringduty cycle shall not be used if 7 < 16.7 microseconds.)

6.1.3. Measurement Results

TestMode	Antenna	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5180	1.39	1.43	97.20
11A	Ant1	5200	1.39	1.44	96.53
11A	Ant1	5240	1.39	1.43	97.20
11A	Ant1	5260	1.40	1.44	97.22
11A	Ant1	5280	1.40	1.44	97.22
11A	Ant1	5320	1.39	1.44	96.53
11A	Ant1	5500	1.39	1.44	96.53
11A	Ant1	5580	1.39	1.44	96.53
11A	Ant1	5700	1.39	1.44	96.53

Test Graphs

NTNV-11A-Ant1-5180	NTNV-11A-Ant1-5200
	
NTNV-11A-Ant1-5240	NTNV-11A-Ant1-5260
	
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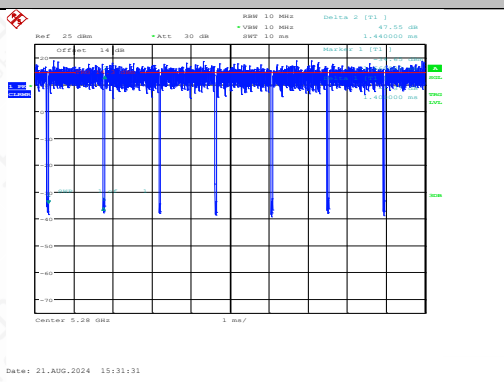	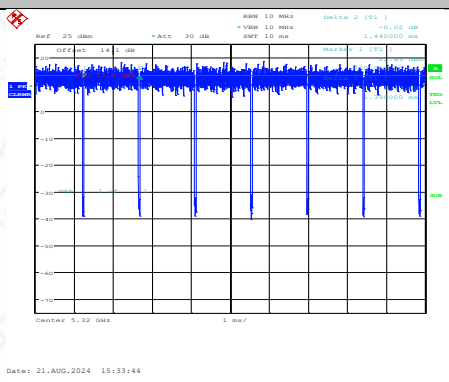
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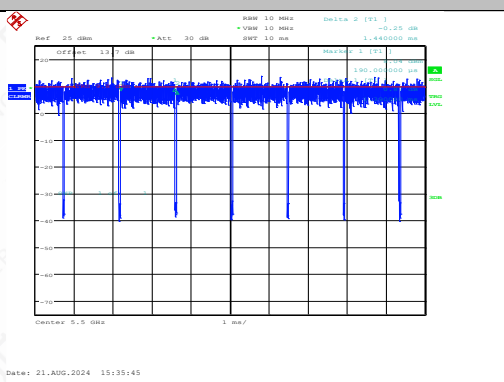	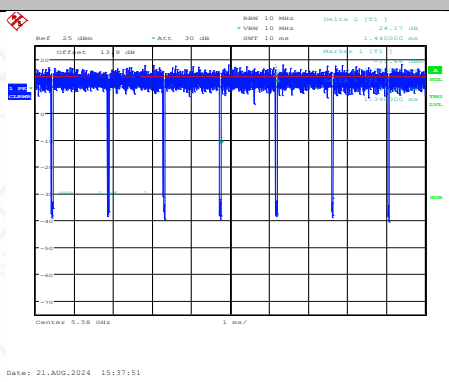

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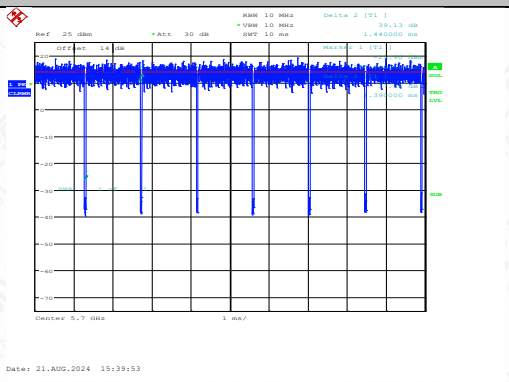
	/

6.2. Occupied 26dB Bandwidth(conducted)

6.2.1 Measurement Limt

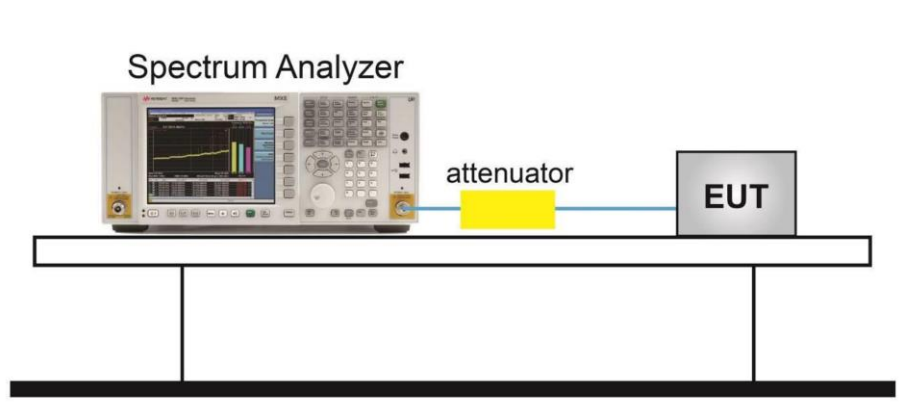
Standard	Limit(MHz)
FCC 47 CFR Part 15.407(a)	N/A

6.2.2 Test Procedure

The measurement method is made according to KDB 789033 C

1. Set RBW = approximately 1% of the emission bandwidth
2. Set the VBW > RBW
3. Detector = Peak.
4. Trace mode = max hold.
5. 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%.

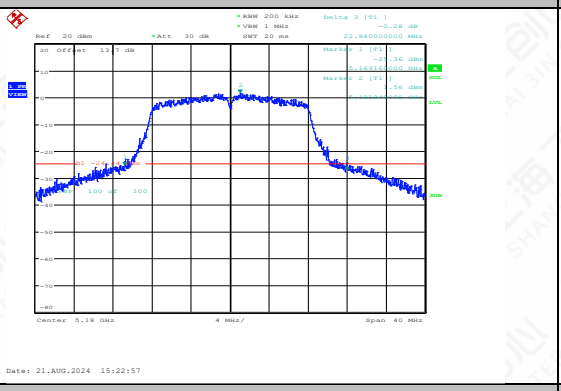
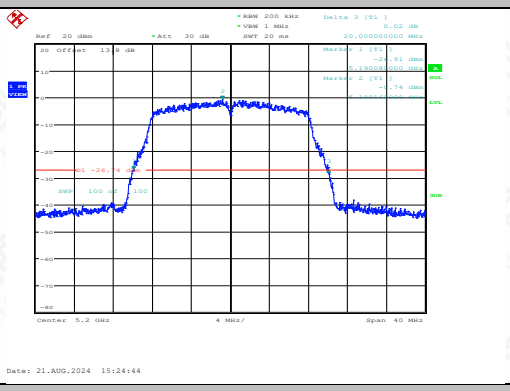
6.2.3 Test Setup



6.2.4 Measurement Results

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	22.84	5169.16	5192.00	---	---
11A	Ant1	5200	20.00	5190.08	5210.08	---	---
11A	Ant1	5240	19.92	5230.00	5249.92	---	---
11A	Ant1	5260	19.96	5250.08	5270.04	---	---
11A	Ant1	5280	20.12	5269.96	5290.08	---	---
11A	Ant1	5320	20.16	5310.04	5330.20	---	---
11A	Ant1	5500	20.08	5489.96	5510.04	---	---
11A	Ant1	5580	20.20	5569.96	5590.16	---	---
11A	Ant1	5700	19.96	5690.04	5710.00	---	---

Test Graphs

11A-Ant1-5180	11A-Ant1-5200
	
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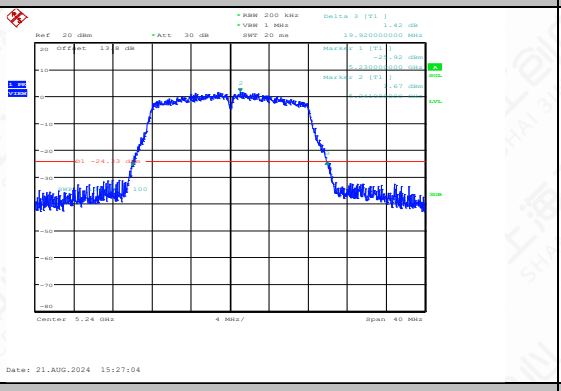	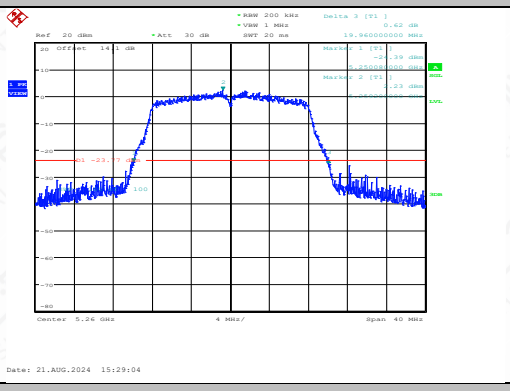
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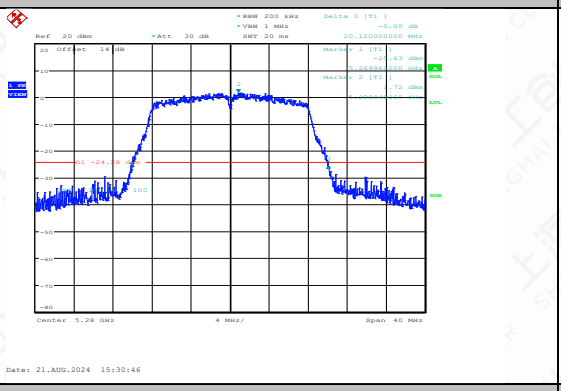	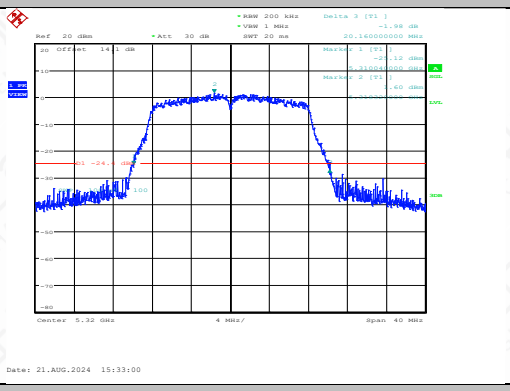
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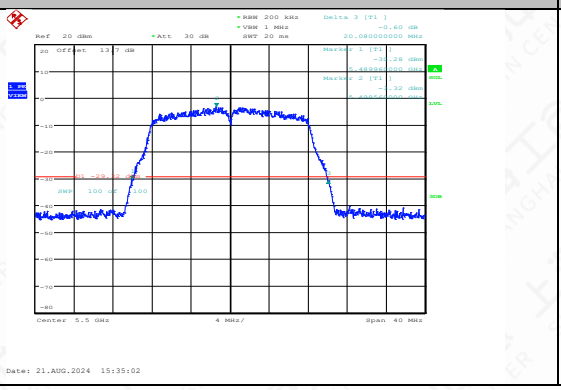	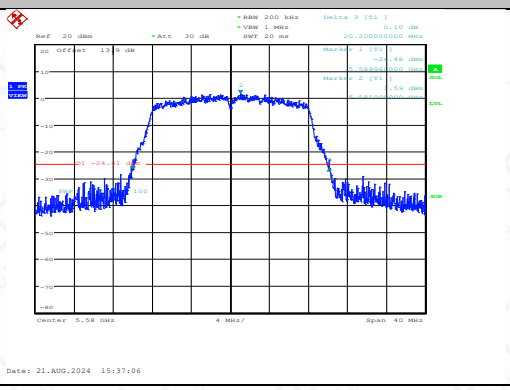

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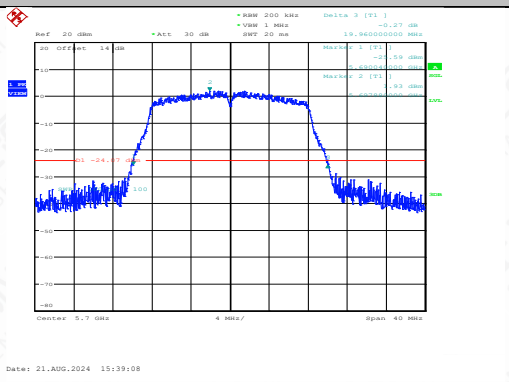	/

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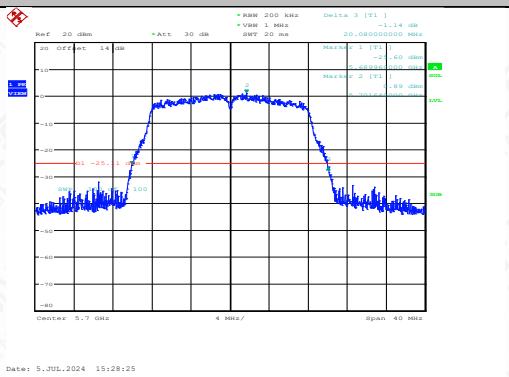
	/

6.3. Maximum Output Power-Conducted

6.3.1. Measurement Limit and Method

Standard	Limit (dBm)
FCC 47 CFR Part 15.407(a)(1)(iv)	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 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

6.3.2. Test Procedure

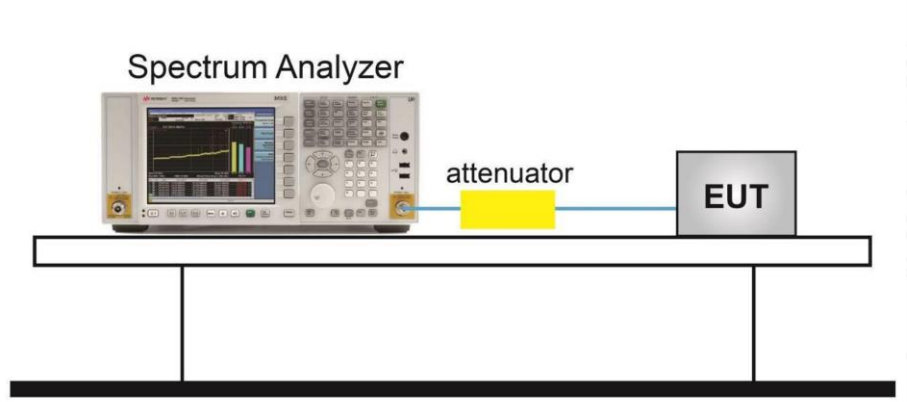
The measurement method SA-2 is made according to KDB 789033 E

Method SA-2 (trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

1. Measure the duty cycle, x, of the transmitter output signal as described in II.B.
2. Set span to encompass the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.
3. Set RBW = 1 MHz. (iv) Set VBW ≥ 3 MHz.
4. Number of points in sweep ≥ 2 × span / RBW. (This ensures that bin-to-bin spacing is ≤ RBW/2, so that narrowband signals are not lost between frequency bins.)
5. Sweep time = auto.
6. Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
7. Do not use sweep triggering. Allow the sweep to “free run.”
8. Trace average at least 100 traces in power averaging (rms) mode; however, the number of traces to be averaged shall be increased above 100 as needed to ensure that the average accurately represents the true average over the on and off periods of the transmitter.
9. Compute power by integrating the spectrum across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal using the instrument’s band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the signal.

Add 10 log (1/x), where x is the duty cycle, to the measured power to compute the average power during the actual transmission times (because the measurement represents an average over both the on and off times of the transmission). For example, add 10 log (1/0.25) = 6 dB if the duty cycle is 25%

6.3.3. Test setup



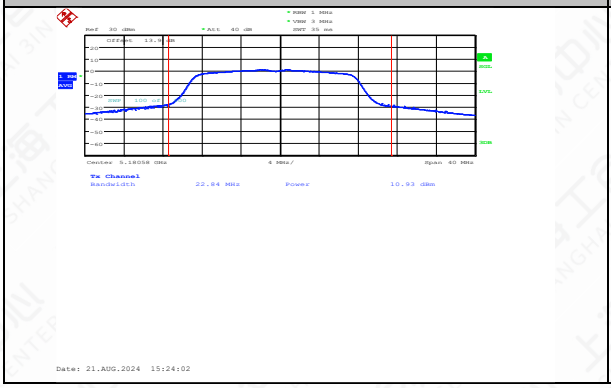
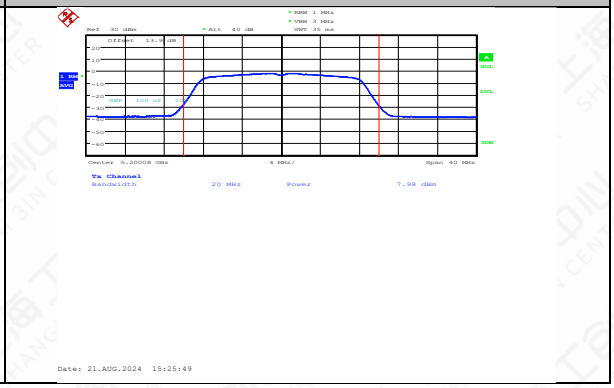
6.3.4. Measurement Results

Test Mode	Antenna	Frequency [MHz]	Set Power	Duty Cycle [%]	DC Factor [dBm]	Result [dBm]	Limit [dBm]	Gain [dBi]	EIRP [dBm]
11A	Ant1	5180	15.5	97.20	0.12	10.93	≤23.98	2.60	13.53
11A	Ant1	5200	13	96.53	0.15	7.98	≤23.98	2.60	10.58
11A	Ant1	5240	15.5	97.20	0.12	9.79	≤23.98	2.60	12.39
11A	Ant1	5260	15.5	97.22	0.12	9.93	≤23.98	2.60	12.53
11A	Ant1	5280	15.5	97.22	0.12	9.91	≤23.98	2.60	12.51
11A	Ant1	5320	15.5	96.53	0.15	9.93	≤23.98	2.60	12.53
11A	Ant1	5500	11.5	96.53	0.15	4.98	≤23.98	2.60	7.58
11A	Ant1	5580	15.5	96.53	0.15	9.51	≤23.98	2.60	12.11
11A	Ant1	5700	15.5	96.53	0.15	10.40	≤23.98	2.60	13.00

Note 1.The Duty Cycle Factor is compensated in the graph.

Note 2.The 11a data rate 6Mbps is selected as worse condition, 11n/11ac data rate MCS0 is selected as worse condition, and the following cases are performed with this condition.

Test Graphs Channel Power

11A-Ant1-5180-PASS	11A-Ant1-5200-PASS
	

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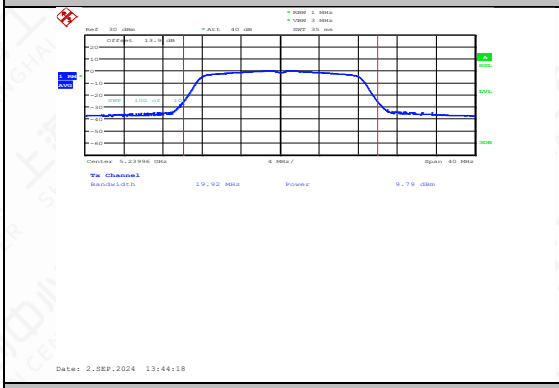
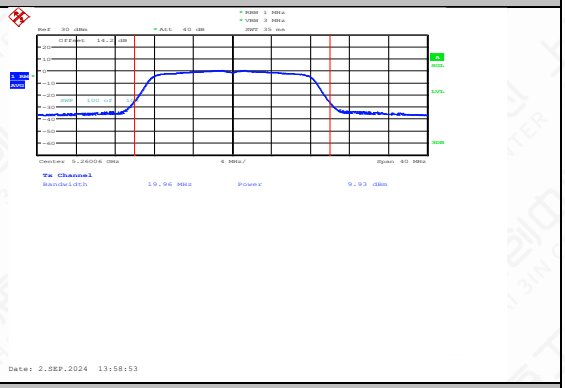
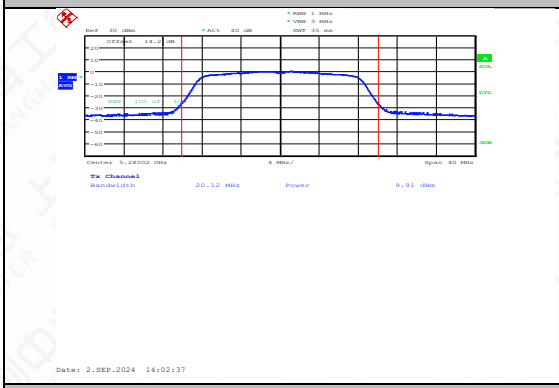
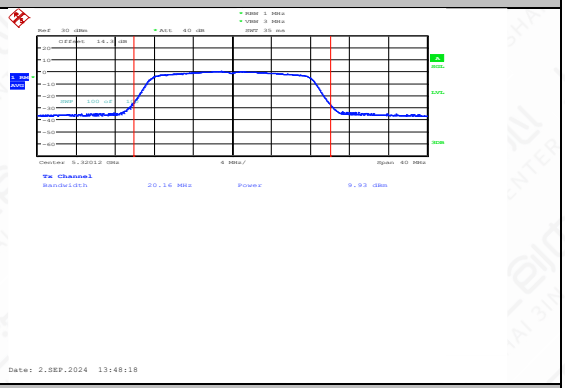
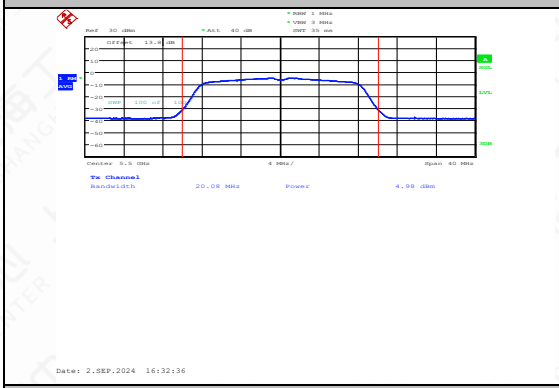
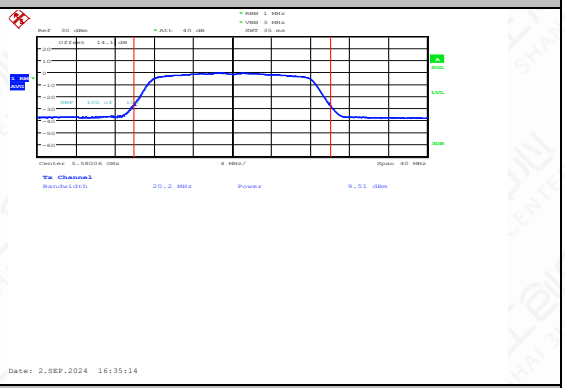
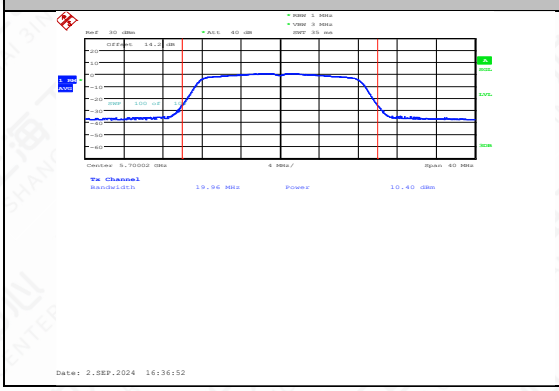
	
11A-Ant1-5280-PASS	11A-Ant1-5320-PASS
	
11A-Ant1-5500-PASS	11A-Ant1-5580-PASS
	
11A-Ant1-5700-PASS	/
	/

6.4. Band Edges Compliance

6.4.1 Measurement Limit

Above 1G, non-restricted band

Standard	EIRP Limit
15.407(b)	＜-27dBm/MHz

Above 1G, Restricted band

Standard	EIRP Limit	
15.407(b)	＜-27dBm/MHz	
15.209	Peak	74dBμV/m
	Average	54dBμV/m

EIRP[dBm] = E[dBμV/m] + 20 log (d[m]) − 104.7

E[dBμV/m] = EIRP[dBm] - 20 log (d[m]) + 104.7

E[dBμV/m] = EIRP[dBm] + 95.2 = 68.2， for d = 3m

6.4.2 Test Procedure

The measurement is made according to KDB 789033.

Marker-Delta Method: The marker-delta method, as described in ANSI C63.10, can be used to perform measurements of the radiated unwanted emissions level of emissions provided that the 99% occupied bandwidth of the fundamental is within 2 MHz of the authorized band-edge.

Procedure for peak unwanted emissions measurements above 1000 MHz

The procedure for peak unwanted emissions measurements above 1000 MHz is as follows:

a) Follow the requirements in 12.7.4.

b) Peak emission levels are measured by setting the instrument as follows:

1) RBW = 1 MHz.

2) VBW ≥ [3 × RBW].

3) Detector = peak.

4) Sweep time = auto.

5) Trace mode = max hold.

6) Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, then the time required for the trace to stabilize will increase by a factor of approximately 1 / D, where D is the duty cycle. For example, at 50% duty cycle, the measurement time will increase by a factor of two, relative to measurement time for continuous transmission.

Procedures for average unwanted emissions measurements above 1000 MHz

a) RBW = 1 MHz.

b) Video bandwidth:

1) If the EUT is configured to transmit with $D \geq 98\%$, then set VBW ≤ RBW / 100 (i.e., 10 kHz), but not less than 10 Hz.

2) If the EUT D is < 98%, then set VBW ≥ 1 / T, where T is defined in item a1) of 12.2.

c) Video bandwidth mode or display mode:

1) The instrument shall be set with video filtering applied in the power domain. Typically, this requires setting the detector mode to RMS (power averaging) and setting the average-VBW type to power (rms).

2) As an alternative, the instrument may be set to linear detector mode. Video filtering shall be applied in linear voltage domain (rather than in a log or dB domain). Some instruments require linear display mode to accomplish this. Others have a setting for average-VBW type, which can be set to "voltage" regardless of the display mode.

d) Detector = peak.

e) Sweep time = auto.

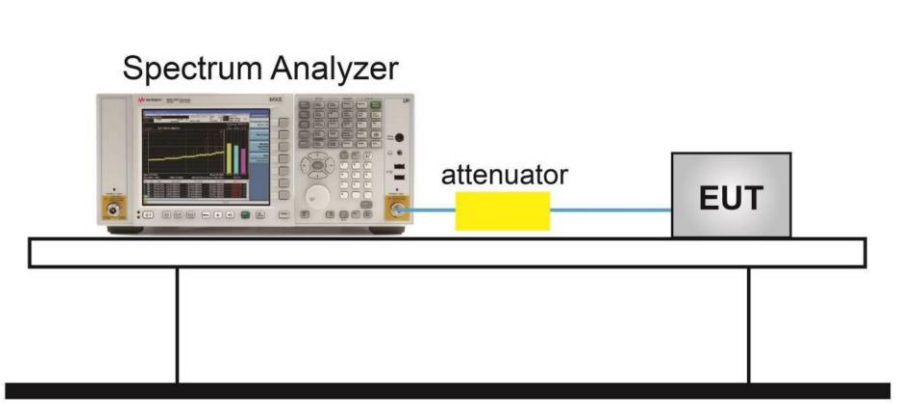
f) Trace mode = max hold.

g) Allow max hold to run for at least 50 traces if the transmitted signal is continuous or has at least 98% duty cycle. For lower duty cycles, increase the minimum number of traces by a factor of 1/x, where D is the duty cycle. For example, use at least 200 traces if the duty cycle is 25%. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—then rather than turning ON and OFF with the transmit cycle, at least 50 traces should be averaged.)

The measurement was applied in a fully anechoic chamber. While testing for spurious emission higher than 1GHz, if applied, the pre-amplifier would be equipped just at the output terminal of the antenna. Tabletop devices shall be placed on a nonconducting platform with nominal top surface dimensions 1 m by 1.5 m. For emission measurements above 1 GHz, the table height shall be 1.5 m. The turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna which was mounted on an antenna mast. During the tests, the antenna height varied from 1m to 4m and the EUT azimuth were varied from 0° to 360° in order to identify the maximum level of emissions from the EUT. In making any tests involving handheld, body-worn, or ceiling-mounted equipment, it is essential to recognize that the measured levels may be dependent on the orientation (attitude) of the three orthogonal axes of the EUT. Thus, exploratory tests as specified in 8.3.1 shall be carried out for various axes orientations to determine the attitude having maximum or near-maximum emission level. This

maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

6.4.3 Test Setup



6.4.4 Measurement Result

Mainly Supply (S04aa)

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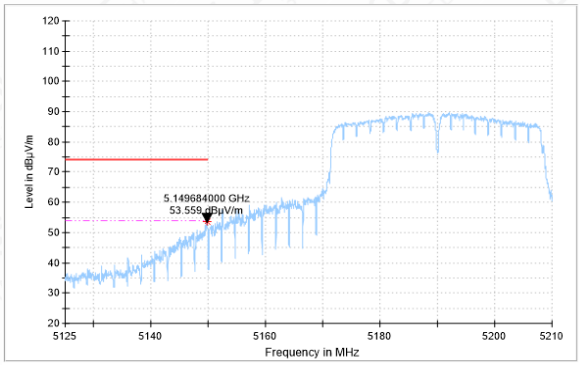	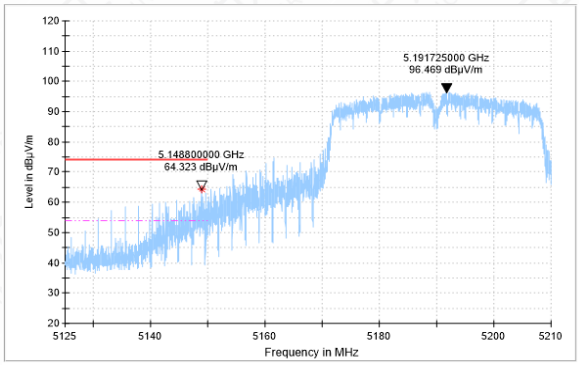
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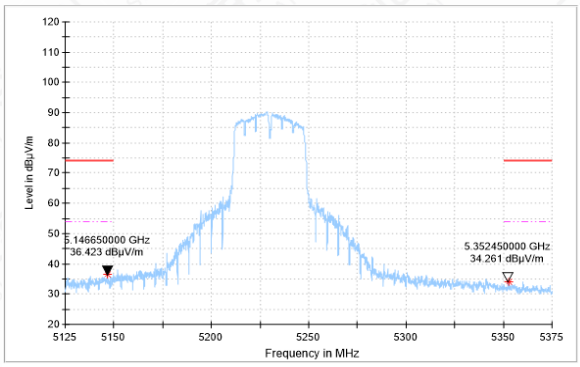	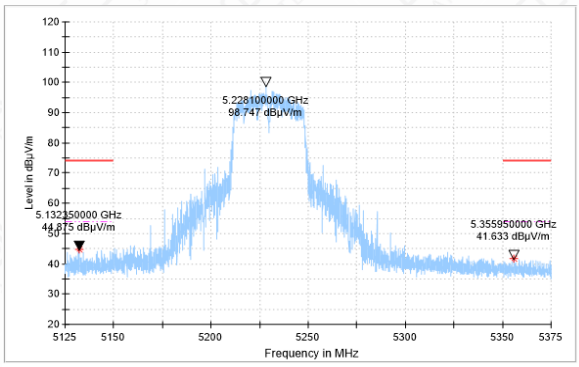

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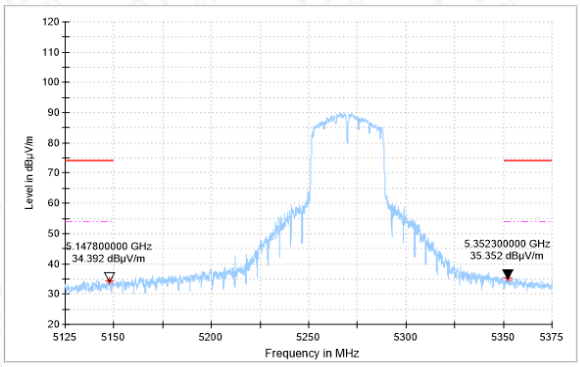	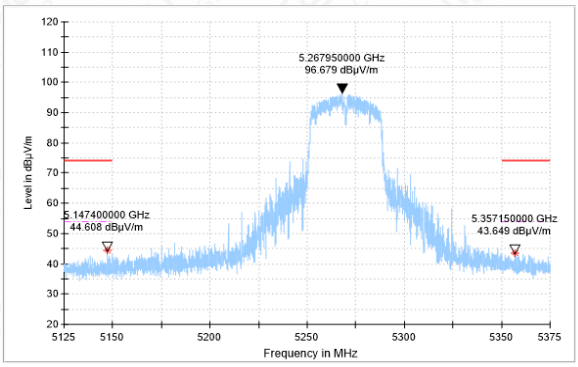
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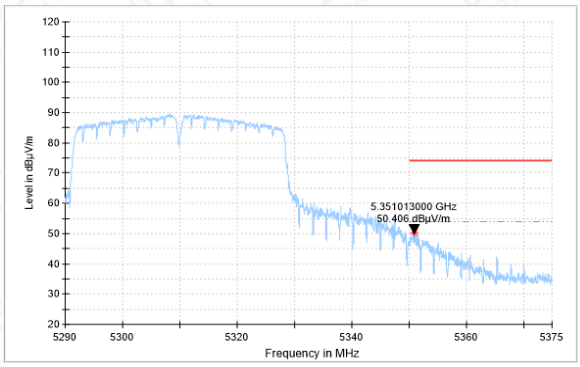	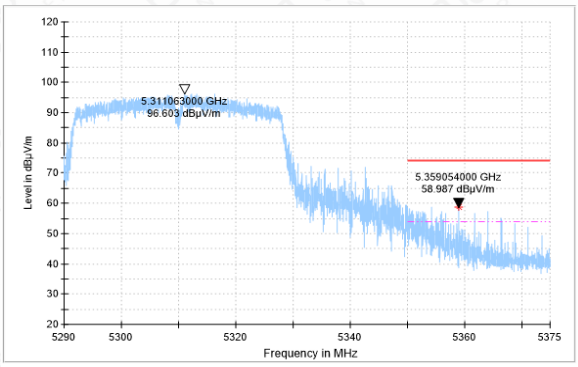
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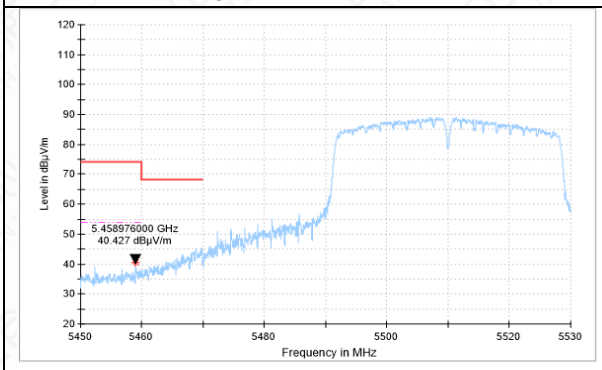	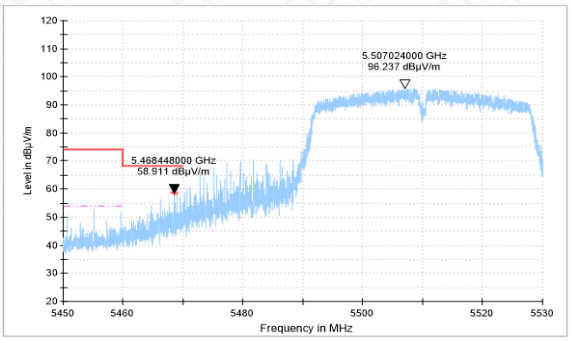
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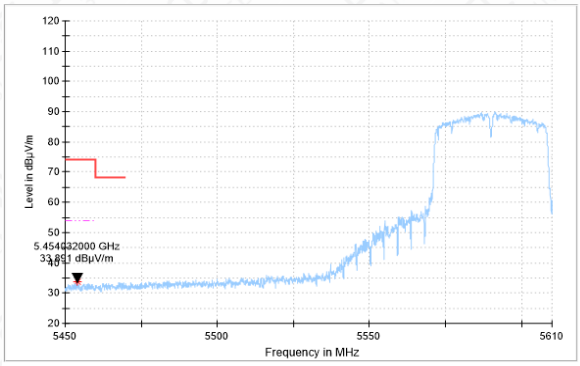	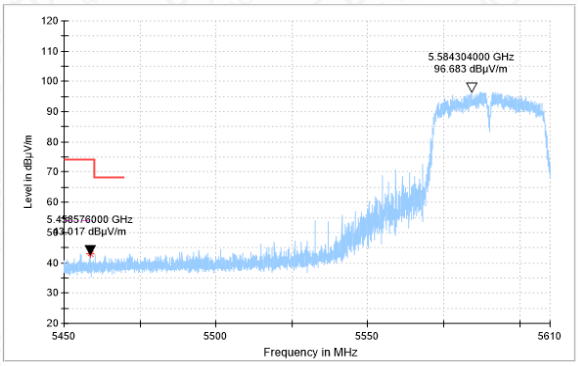

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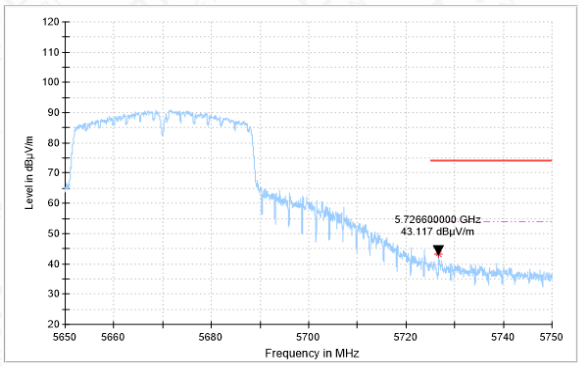	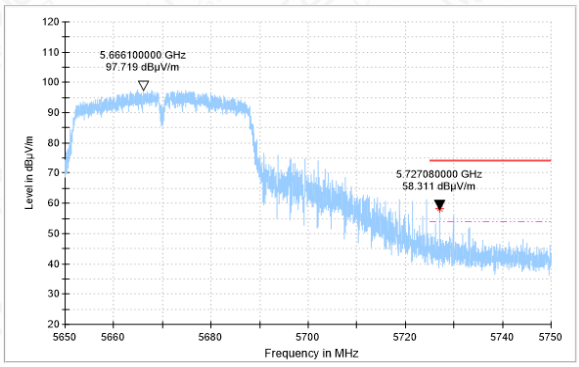

Secondary supply (S08aa)

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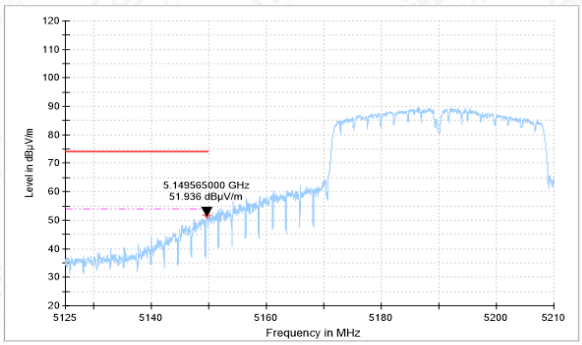	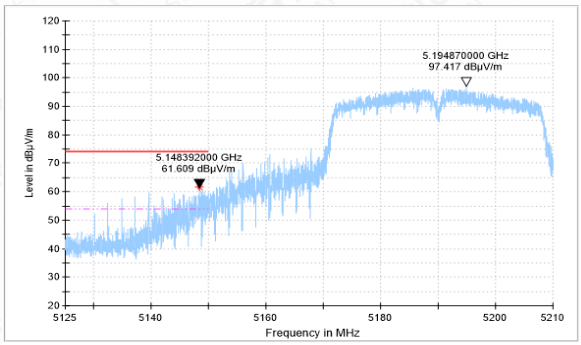
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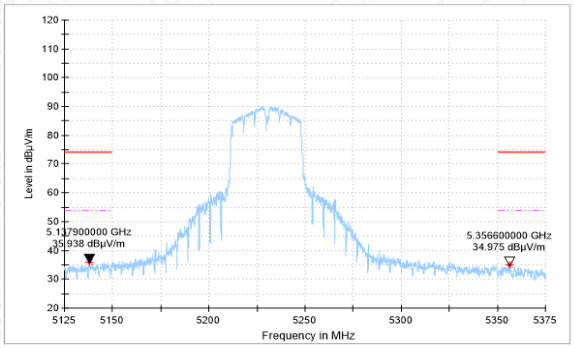	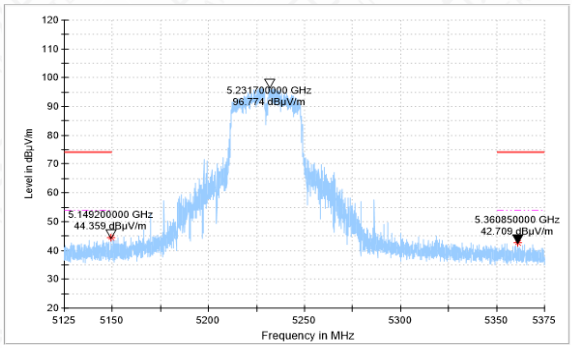
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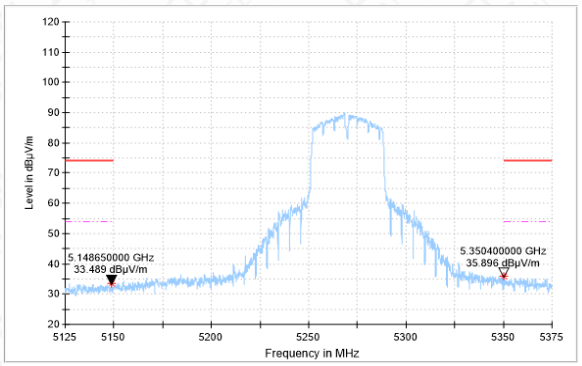	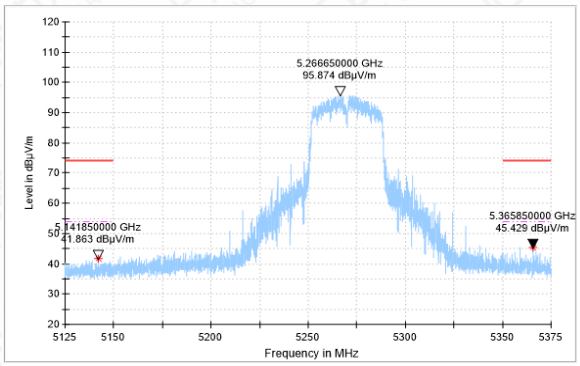

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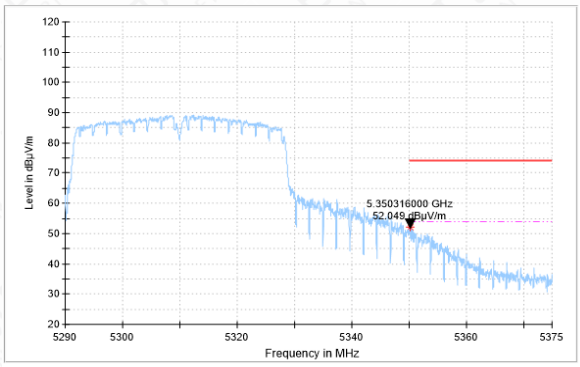	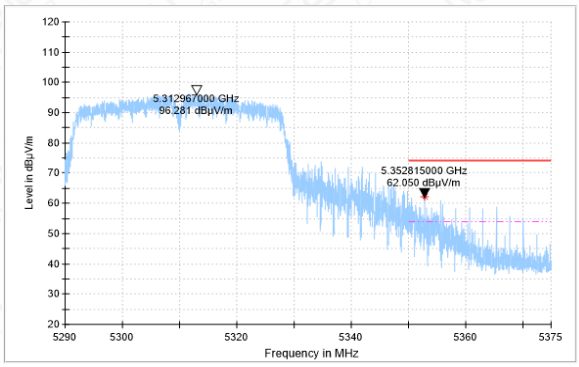
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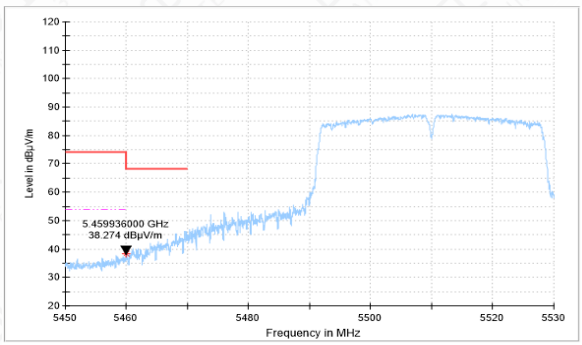	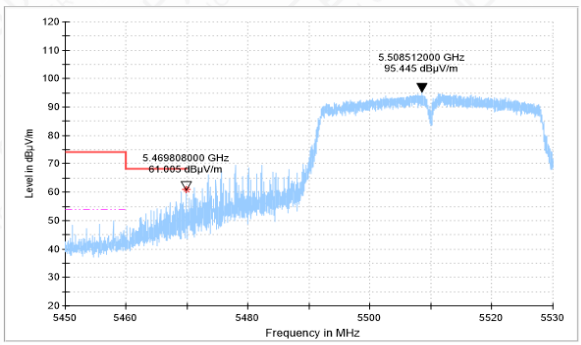
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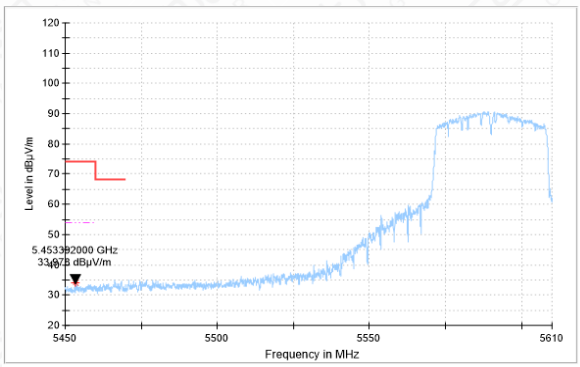	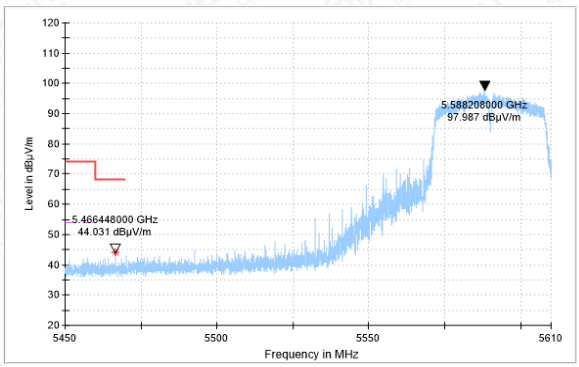
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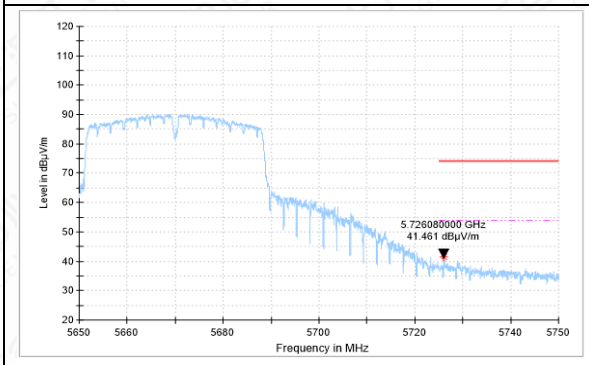
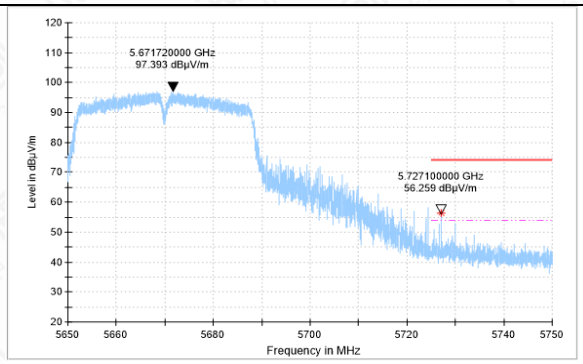
	

Note: Only data in worst mode is provided.

6.5. Transmitter Spurious Emission

6.5.1 Measurement Limit

Below 1G Limit:

Frequency of emission (MHz)	Field strength(dBμV/m)	Measurement distance(m)
0.009-0.490	129-94	3
0.490-1.705	74-63	3
1.705-30	70	3
30-88	40.0	3
88-216	43.5	3
216-960	46.0	3
Above 960	54.0	3

Note: for frequency range below 960MHz, the limit in 15.209 is defined in 10m test distance. The limit used above is calculated from 10m to 3m

Above 1G, non-restricted band

Standard	EIRP Limit
15.407(b)	-27dBm/MHz

Above 1G, Restricted band

Standard	EIRP Limit	
15.407(b)	-27dBm/MHz	
15.209	Peak	74dBμV/m
	Average	54dBμV/m

EIRP[dBm] = E[dBμV/m] + 20 log (d[m]) − 104.7

E[dBμV/m] = EIRP[dBm] - 20 log (d[m]) + 104.7

E[dBμV/m] = EIRP[dBm] + 95.2 = 68.2， for d = 3m

6.5.2 Test Procedure

The measurement is made according to KDB 789033

Set the spectrum analyzer in the following:

Procedure for Unwanted Emissions Measurements below 1000 MHz:

a) Follow the requirements in II.G.3. “General Requirements for Unwanted Emissions Measurements.”

b)Compliance shall be demonstrated using CISPR quasi-peak detection; however, peak detection is permitted as an alternative to quasi-peak detection.

Detector: Peak and Quasi-Peak

RBW=100kHz / VBW=300kHz / Sweep=AUTO

Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz:

a) Follow the requirements in II.G.3, "General Requirements for Unwanted Emissions Measurements."

b) Maximum emission levels are measured by setting the analyzer as follows:

(i) RBW = 1 MHz.

(ii) VBW ≥ 3 MHz.

(iii) Detector = Peak.

(iv) Sweep time = auto.

(v) Trace mode = max hold.

(vi) Allow sweeps to continue until the trace stabilizes. Note that if the transmission is not continuous, the time required for the trace to stabilize will increase by a factor of approximately 1/x, where x is the duty cycle. For example, at 50% duty cycle, the measurement time will increase by a factor of two relative to measurement time for continuous transmission.

Procedures for Average Unwanted Emissions Measurements above 1000 MHz:

a) Follow the requirements in section II.G.3., "General Requirements for Unwanted Emissions Measurements."

b) Average emission levels shall be measured using one of the following two methods.

c) Method AD (Average Detection): Primary method

(i) RBW = 1 MHz.

(ii) VBW ≥ 3 MHz.

(iii) Detector = power averaging (rms), if span/(# of points in sweep) ≤ RBW/2. Satisfying this condition may require increasing the number of points in the sweep or reducing the span. If the condition is not satisfied, the detector mode shall be set to peak.

(iv) Averaging type = power averaging (rms)

As an alternative, the detector and averaging type may be set for linear voltage averaging. Some instruments require linear display mode in order to use linear voltage averaging. Log or dB averaging shall not be used.

(v) Sweep time = auto.

(vi) Perform a trace average of at least 100 traces if the transmission is continuous. If the transmission is not continuous, the number of traces shall be increased by a factor of 1/x, where x is the duty cycle. For example, with 50% duty cycle, at least 200 traces shall be averaged. (If a specific emission is demonstrated to be continuous—i.e., 100% duty cycle—rather than turning on and off with the transmit cycle, at least 100 traces shall be averaged.)

(vii) If tests are performed with the EUT transmitting at a duty cycle less than 98%, a correction factor shall be added to the measurement results prior to comparing to the emission limit in order to compute the emission level that would have been measured had the test been performed at 100% duty cycle. The correction factor is computed as follows:

If power averaging (rms) mode was used in step (iv) above, the correction factor is 10 log (1/x), where x is the duty cycle. For example, if the transmit duty cycle was 50%, then 3 dB must be added to the measured emission levels.

If linear voltage averaging mode was used in step (iv) above, the correction factor is 20 log (1/x), where x is the duty cycle. For example, if the transmit duty cycle was 50%, then 6 dB must be added to the measured emission levels.

If a specific emission is demonstrated to be continuous (100% duty cycle) rather than turning on and off with the transmit cycle, no duty cycle correction is required for that emission.

Portable, small, lightweight, or modular devices that may be handheld, worn on the body, or placed on a table during operation shall be positioned on a non-conducting platform, the top of which is 80 cm above the reference ground plane. The preferred area occupied by the EUT arrangement is 1 m by 1.5 m, For emissions testing at or below 1 GHz, the table height shall be 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height shall be 1.5 m. but it may be larger or smaller to accommodate various sized EUTs. For testing purposes, ceiling- and wall-mounted devices also shall be positioned on a tabletop (see also ANSI C63.10-2013 section 6.3.4 and 6.3.5). In making any tests involving handheld, body-worn, or ceiling-mounted equipment, it is essential to recognize that the measured levels may be dependent on the orientation (attitude) of the three orthogonal axes of the EUT. Thus, exploratory tests as specified in 8.3.1 shall be carried out for various axes orientations to determine the attitude having maximum or near-maximum emission level.

The EUT was placed on a non-conductive table. Below 18GHz , the measurement antenna was placed at a distance of 3 meters from the EUT. Above 18GHz , the measurement antenna was placed at a distance of 1 meter from the EUT. During the tests, the antenna height varied from 1m to 4m and the EUT azimuth were varied from 0° to 360° in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

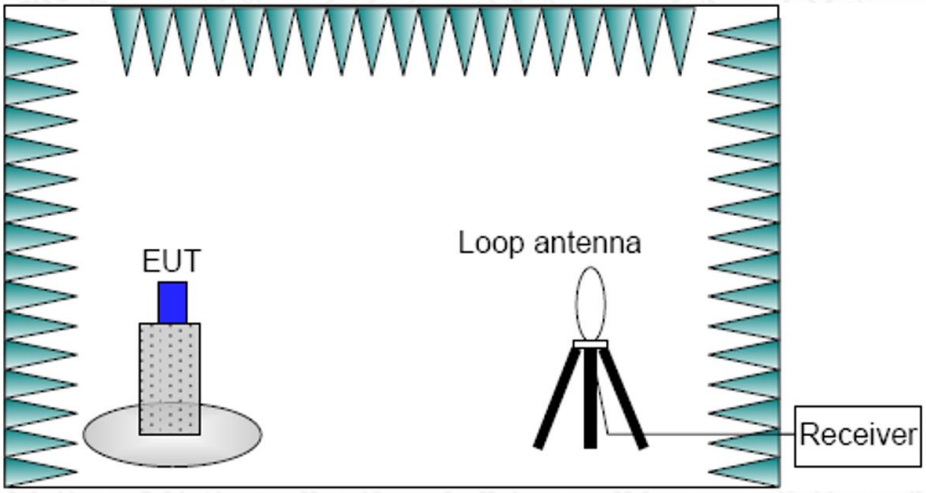
Remark:

1. Factor= Antenna Factor + Cable Loss (-Amplifier, is employed)
2. Measured level= Original Receiver Reading + Factor
3. Margin = Limit – Measured level

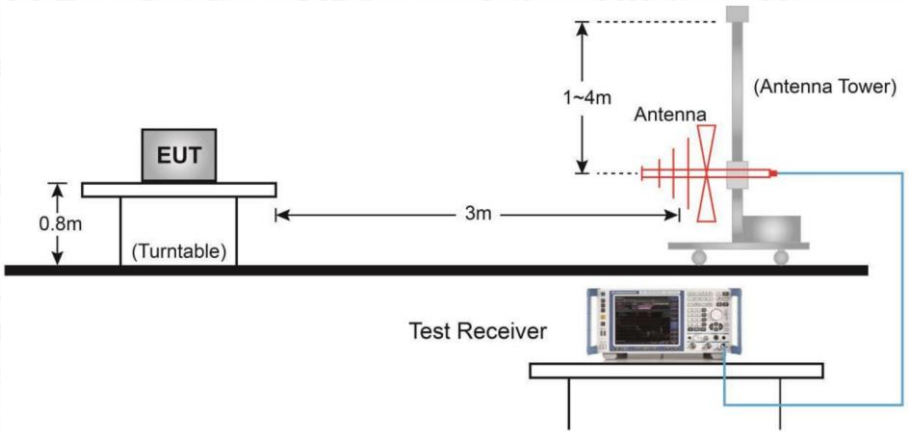
4. If the PK measured level is lower than AV limit, the AV test can be elided

6.5.3 Test Setup

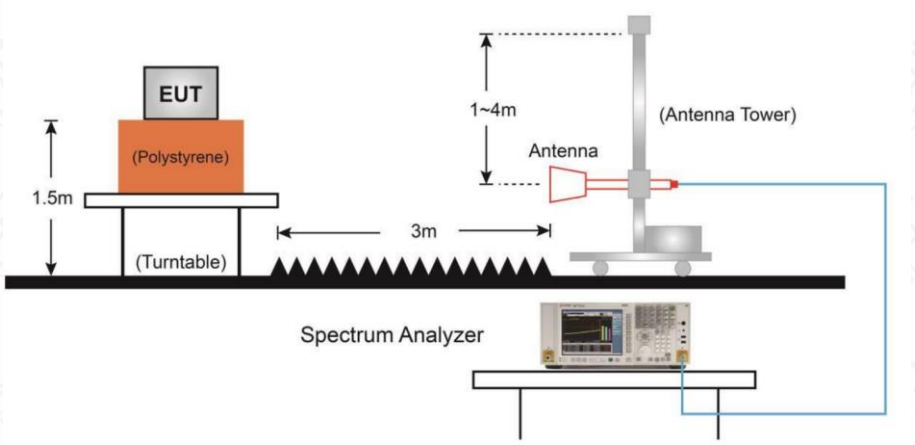
Below 30MHz Test Setup



Below 1GHz Test Setup

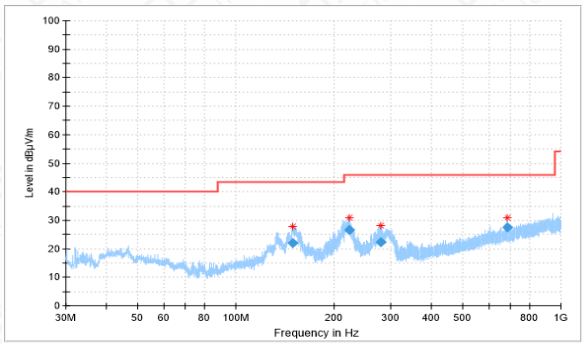
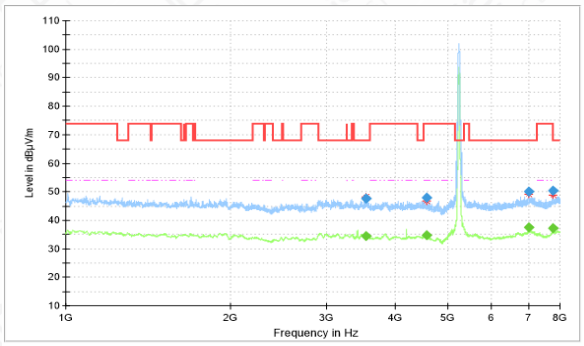
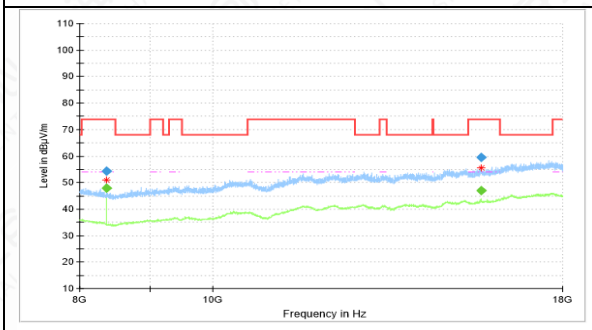
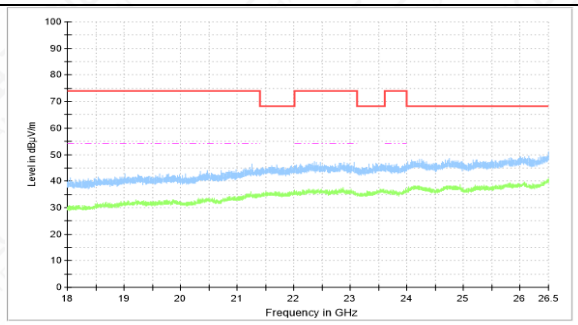
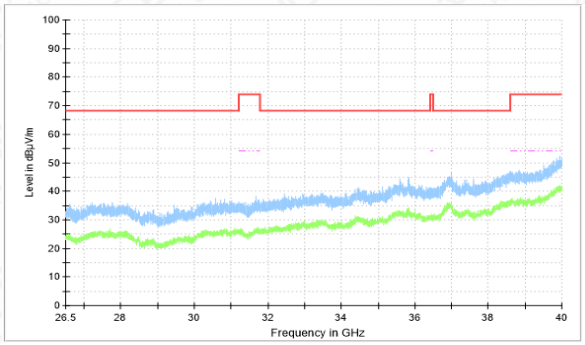
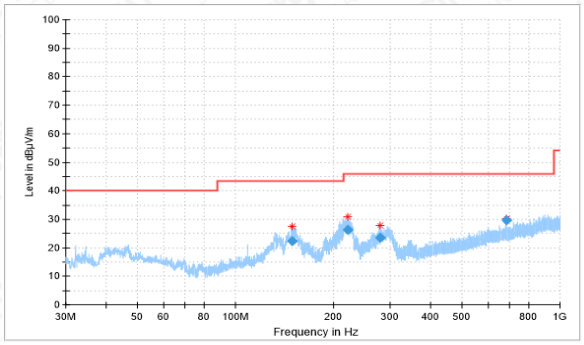


Above 1GHz Test Setup

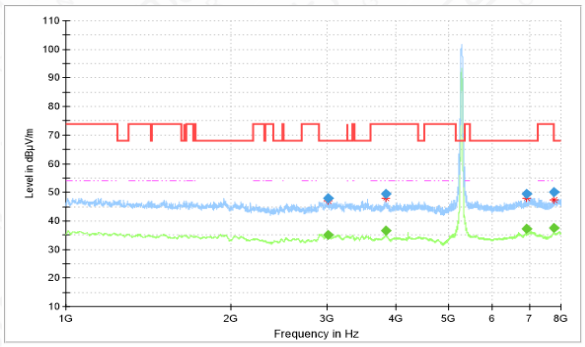


6.5.4 Measurement Results

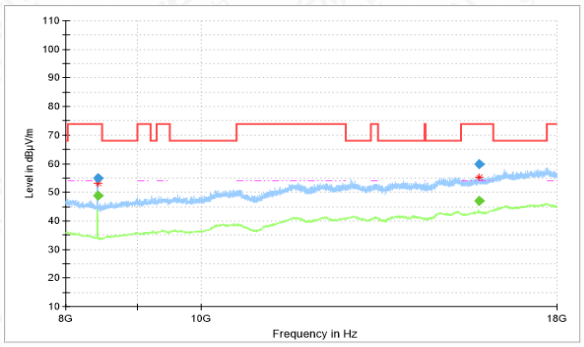
Mainly Supply (S04aa)

RSE-11N(40M)-CH46-30MHz-1GHz	RSE-11N(40M)-CH46-1GHz-8GHz
	
RSE-11N(40M)-CH46-8GHz-18GHz	**RSE-11N(40M)-CH46-18GHz-26.5GHz**
	
RSE-11N(40M)-CH46-26.5GHz-40GHz	**RSE-11N(40M)-CH54-30MHz-1GHz**
	

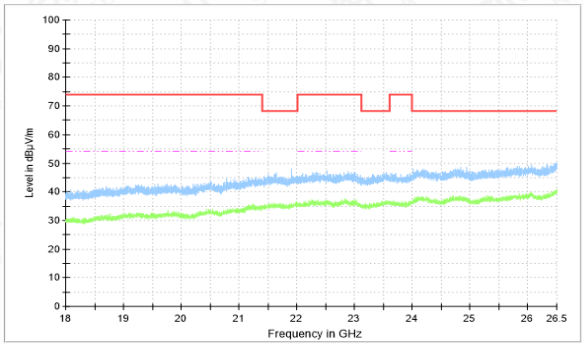
RSE-11N(40M)-CH54-1GHz-8GHz



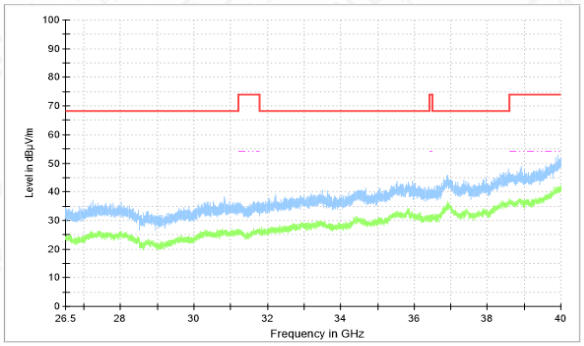
RSE-11N(40M)-CH54-8GHz-18GHz



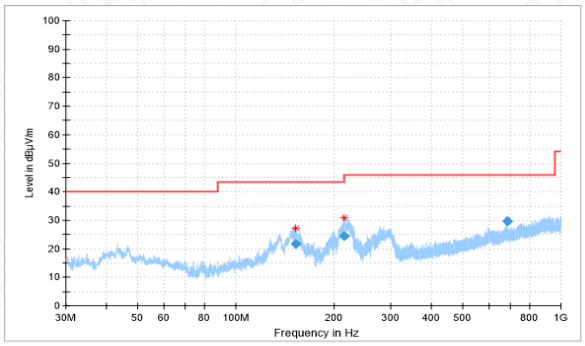
RSE-11N(40M)-CH54-18GHz-26.5GHz



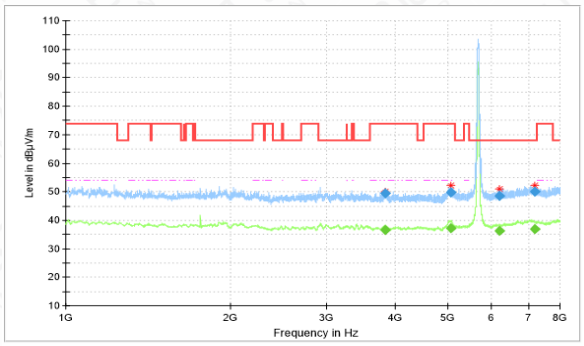
RSE-11N(40M)-CH54-26.5GHz-40GHz



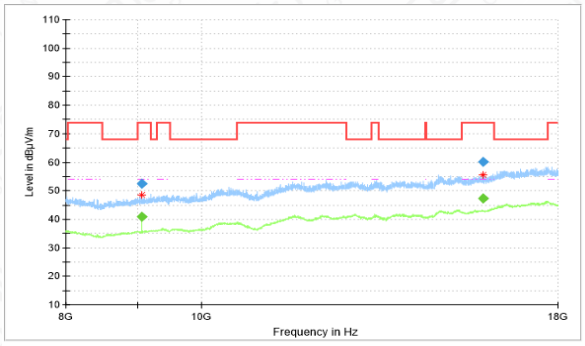
RSE-11N(40M)-CH134-30MHz-1GHz



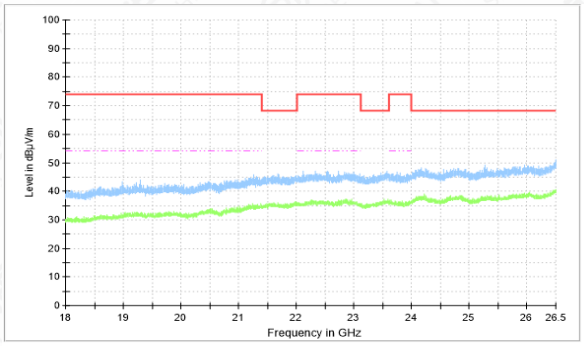
RSE-11N(40M)-CH134-1GHz-8GHz

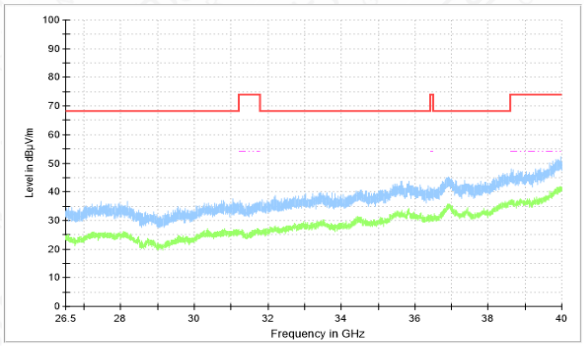


RSE-11N(40M)-CH134-8GHz-18GHz

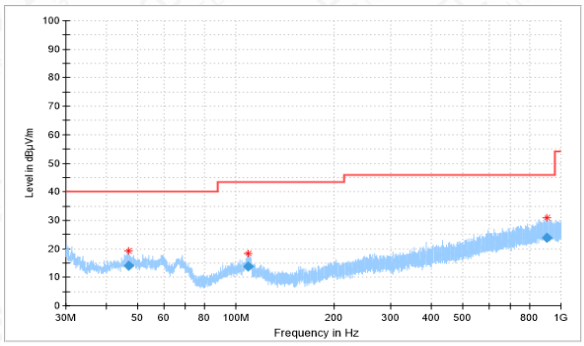
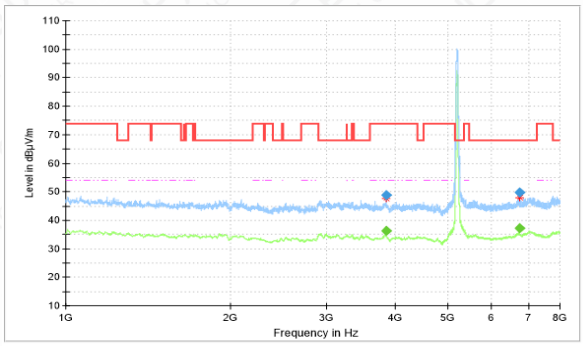
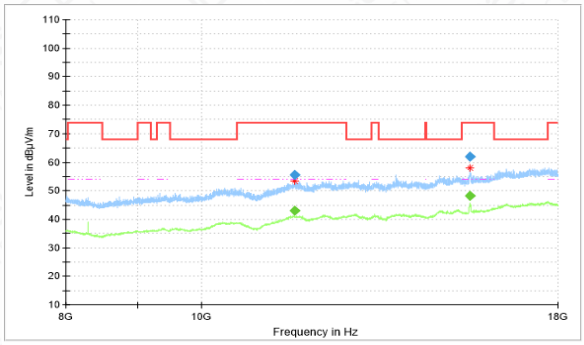
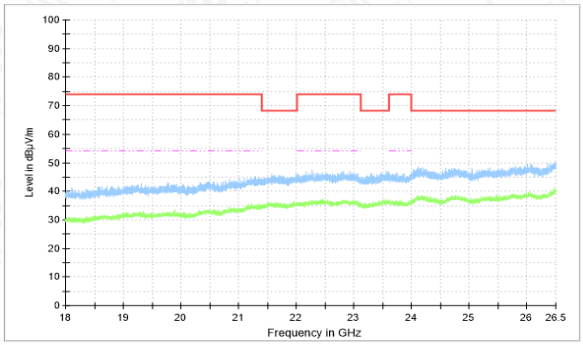
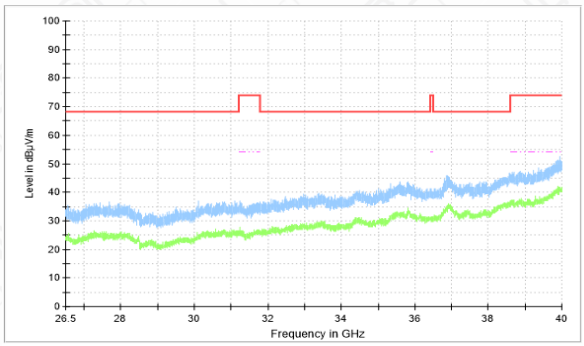
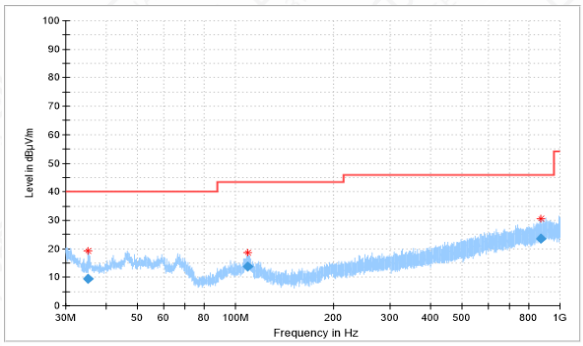


RSE-11N(40M)-CH134-18GHz-26.5GHz

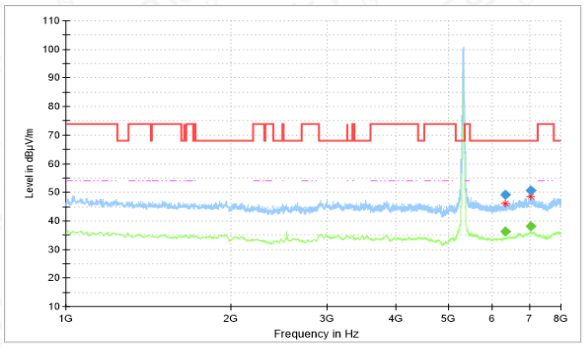


RSE-11N(40M)-CH134-26.5GHz-40GHz	/
	/

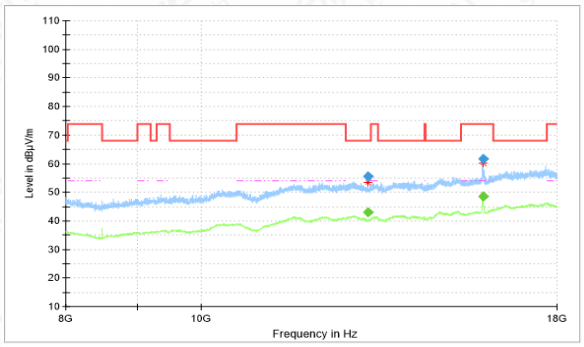
Secondary supply (S08aa)

RSE-11N(40M)-CH38-30MHz-1GHz	RSE-11N(40M)-CH38-1GHz-8GHz
	
RSE-11N(40M)-CH38-8GHz-18GHz	**RSE-11N(40M)-CH38-18GHz-26.5GHz**
	
RSE-11N(40M)-CH38-26.5GHz-40GHz	**RSE-11N(40M)-CH62-30MHz-1GHz**
	

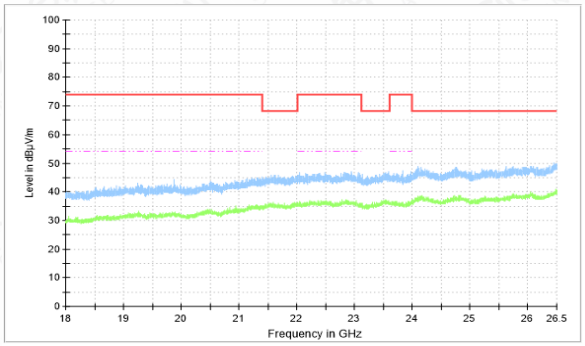
RSE-11N(40M)-CH62-1GHz-8GHz



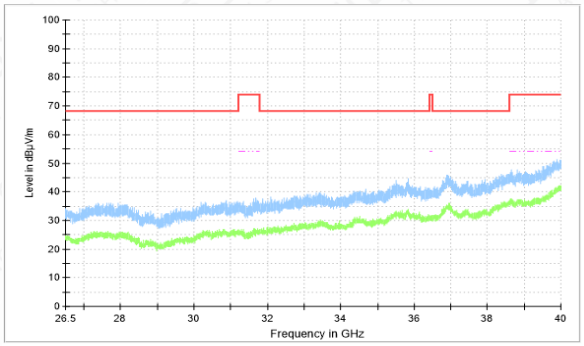
RSE-11N(40M)-CH62-8GHz-18GHz



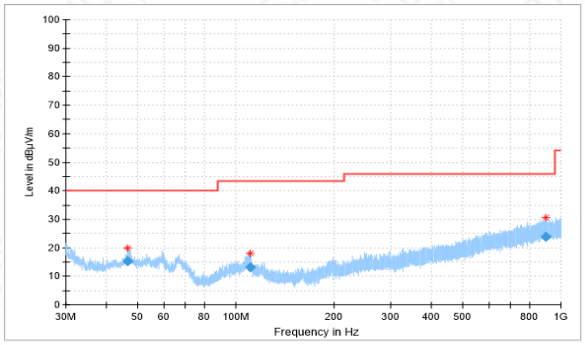
RSE-11N(40M)-CH62-18GHz-26.5GHz



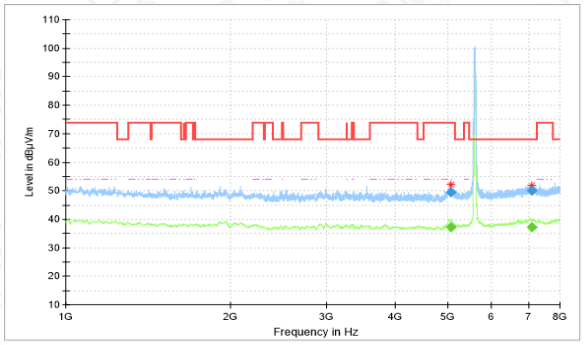
RSE-11N(40M)-CH62-26.5GHz-40GHz



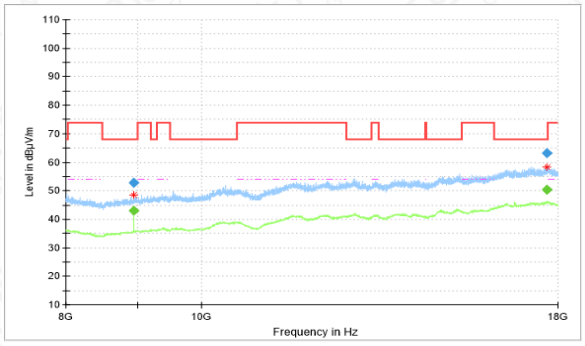
RSE-11N(40M)-CH118-30MHz-1GHz



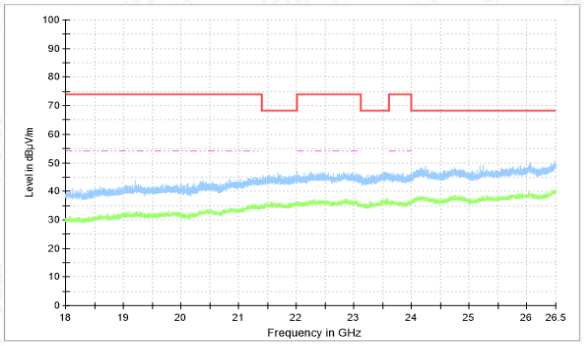
RSE-11N(40M)-CH118-1GHz-8GHz

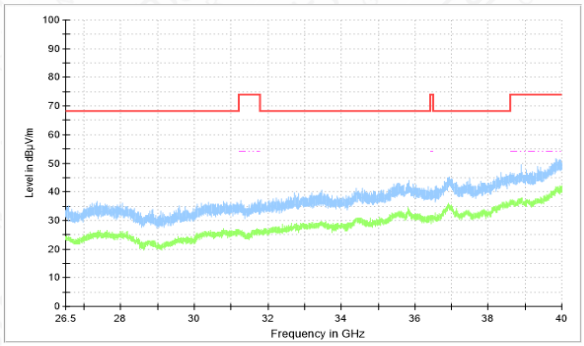


RSE-11N(40M)-CH118-8GHz-18GHz



RSE-11N(40M)-CH118-18GHz-26.5GHz



RSE-11N(40M)-CH118-26.5GHz-40GHz	/
	/

Note：

1. The out-of- limit signal in the picture is the main frequency signal.
2. Only data in worst mode is provided.
3. The test data below 30MHz is more than 20dB lower than the limit value, so it is not provided in the report.
4. Horizontal and vertical polarity is all have been tested, the result of them is synthesized in the above data diagram.

Mainly Supply (S04aa)

RSE-11N(40M)-CH46-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
149.7	22.13	-17	39.13	21.37	43.50	H
222.9	26.74	-12	38.74	19.26	46.00	H
279.0	22.22	-10	32.22	23.78	46.00	H
684.0	27.42	-1	28.42	18.58	46.00	H

RSE-11N(40M)-CH46-1GHz-8GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
3532.6	47.46	1	46.46	20.74	68.20	V
4569.6	48.02	1	47.02	25.98	74.00	V
7003.9	50.12	4	46.12	18.08	68.20	V
7750.2	50.25	4	46.25	17.95	68.20	H

RSE-11N(40M)-CH46-1GHz-8GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
3532.6	34.6	1	33.6	---	---	V
4569.6	34.92	1	33.92	19.08	54.00	V
7003.9	37.58	4	33.58	---	---	V
7750.2	37.34	4	33.34	---	---	H

RSE-11N(40M)-CH46-8GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
8368.0	54.21	4	50.21	19.79	74.00	V
15701.0	59.64	15	44.64	14.36	74.00	V

RSE-11N(40M)-CH46-8GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
8368.0	47.8	4	43.8	6.20	54.00	V
15701.0	47.13	15	32.13	6.87	54.00	V

RSE-11N(40M)-CH54-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
149.8	22.31	-16	38.31	21.19	43.50	H
221.6	26.31	-12	38.31	19.69	46.00	H
278.2	23.53	-10	33.53	22.47	46.00	H
684.0	29.8	-1	30.8	16.20	46.00	H

RSE-11N(40M)-CH54-1GHz-8GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
3006.0	48.06	1	47.06	20.14	68.20	V
3828.9	49.48	2	47.48	24.52	74.00	H
6928.1	49.48	4	45.48	18.72	68.20	V
7750.1	49.94	4	45.94	18.26	68.20	V

RSE-11N(40M)-CH54-1GHz-8GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
3006.0	34.97	1	33.97	---	---	V
3828.9	36.57	2	34.57	17.44	54.00	H
6928.1	37.26	4	33.26	---	---	V
7750.1	37.49	4	33.49	---	---	V

RSE-11N(40M)-CH54-8GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
8431.8	55.1	3	52.1	18.90	74.00	V
15837.5	59.7	15	44.7	14.30	74.00	H

RSE-11N(40M)-CH54-8GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
8431.8	48.95	3	45.95	5.05	54.00	V
15837.5	47.15	15	32.15	6.85	54.00	H

RSE-11N(40M)-CH134-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
152.4	21.79	-16	37.79	21.71	43.50	H

216.2	24.57	-12	36.57	21.43	46.00	H
684.0	29.68	-1	30.68	16.32	46.00	H

RSE-11N(40M)-CH134-1GHz-8GHz

Frequency (MHz)	MaxPeak(dBµV/m)	ARpl (dB)	PMea (dBµV/m)	Margin(dB)	Limit(dBµV/m)	Polarity
3832.9	49.35	2	47.35	24.65	74.00	H
5054.6	49.91	5	44.91	24.09	74.00	H
6194.1	48.66	3	45.66	19.54	68.20	H
7196.9	49.98	4	45.98	18.22	68.20	H

RSE-11N(40M)-CH134-1GHz-8GHz

Frequency (MHz)	Average(dBµV/m)	ARpl (dB)	PMea (dBµV/m)	Margin(dB)	Limit(dBµV/m)	Polarity
3832.9	36.51	2	34.51	17.49	54.00	H
5054.6	37.26	5	32.26	16.74	54.00	H
6194.1	36.2	3	33.2	---	---	H
7196.9	37.02	4	33.02	---	---	H

RSE-11N(40M)-CH134-8GHz-18GHz

Frequency (MHz)	MaxPeak(dBµV/m)	ARpl (dB)	PMea (dBµV/m)	Margin(dB)	Limit(dBµV/m)	Polarity
9072.2	52.59	5	47.59	21.41	74.00	V
15915.8	60	15	45	14.00	74.00	V

RSE-11N(40M)-CH134-8GHz-18GHz

Frequency (MHz)	Average(dBµV/m)	ARpl (dB)	PMea (dBµV/m)	Margin(dB)	Limit(dBµV/m)	Polarity
9072.2	40.99	5	35.99	13.01	54.00	V
15915.8	47.24	15	32.24	6.76	54.00	V

Secondary supply (S08aa)

RSE-11N(40M)-CH38-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBµV/m)	ARpl (dB)	PMea (dBµV/m)	Margin(dB)	Limit(dBµV/m)	Polarity
46.9	14.12	-12	26.12	25.88	40.00	H
109.2	13.64	-13	26.64	29.86	43.50	H
902.8	23.94	2	21.94	22.06	46.00	H

RSE-11N(40M)-CH38-1GHz-8GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
3842.4	48.96	2	46.96	25.04	74.00	H
6739.5	49.66	4	45.66	18.54	68.20	V

RSE-11N(40M)-CH38-1GHz-8GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
3842.4	36.17	2	34.17	17.83	54.00	H
6739.5	37.34	4	33.34	---	---	V

RSE-11N(40M)-CH38-8GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
11659.0	55.58	10	45.58	18.42	74.00	V
15558.8	61.97	14	47.97	12.03	74.00	V

RSE-11N(40M)-CH38-8GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
11659.0	42.95	10	32.95	11.05	54.00	V
15558.8	48.27	14	34.27	5.73	54.00	V

RSE-11N(40M)-CH62-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
35.1	9.47	-15	24.47	30.53	40.00	H
109.4	13.74	-13	26.74	29.76	43.50	H
870.9	23.5	1	22.5	22.50	46.00	H

RSE-11N(40M)-CH62-1GHz-8GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
6324.8	49.08	3	46.08	19.12	68.20	V
7029.8	50.66	4	46.66	17.54	68.20	V

RSE-11N(40M)-CH62-1GHz-8GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
6324.8	36.43	3	33.43	---	---	V
7029.8	38	4	34	---	---	V

RSE-11N(40M)-CH62-8GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
13167.0	55.58	10	45.58	12.62	68.20	H
15935.0	61.69	15	46.69	12.31	74.00	V

RSE-11N(40M)-CH62-8GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
13167.0	43.04	10	33.04	---	---	H
15935.0	48.62	15	33.62	5.38	54.00	V

RSE-11N(40M)-CH118-30MHz-1GHz

Frequency (MHz)	QuasiPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
46.4	15.15	-12	27.15	24.85	40.00	H
110.6	13.15	-13	26.15	30.35	43.50	H
895.8	23.76	1	22.76	22.24	46.00	H

RSE-11N(40M)-CH118-1GHz-8GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
5062.1	49.43	5	44.43	24.57	74.00	H
7108.2	50.18	4	46.18	18.02	68.20	H

RSE-11N(40M)-CH118-1GHz-8GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
5062.1	37.11	5	32.11	16.89	54.00	H
7108.2	37.17	4	33.17	---	---	H

RSE-11N(40M)-CH118-8GHz-18GHz

Frequency (MHz)	MaxPeak(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
8943.8	52.8	5	47.8	15.40	68.20	V
17681.8	63.07	18	45.07	5.13	68.20	V

RSE-11N(40M)-CH118-8GHz-18GHz

Frequency (MHz)	Average(dBμV/m)	ARpl (dB)	PMea (dBμV/m)	Margin(dB)	Limit(dBμV/m)	Polarity
8943.8	43.04	5	38.04	---	---	V
17681.8	50.45	18	32.45	---	---	V

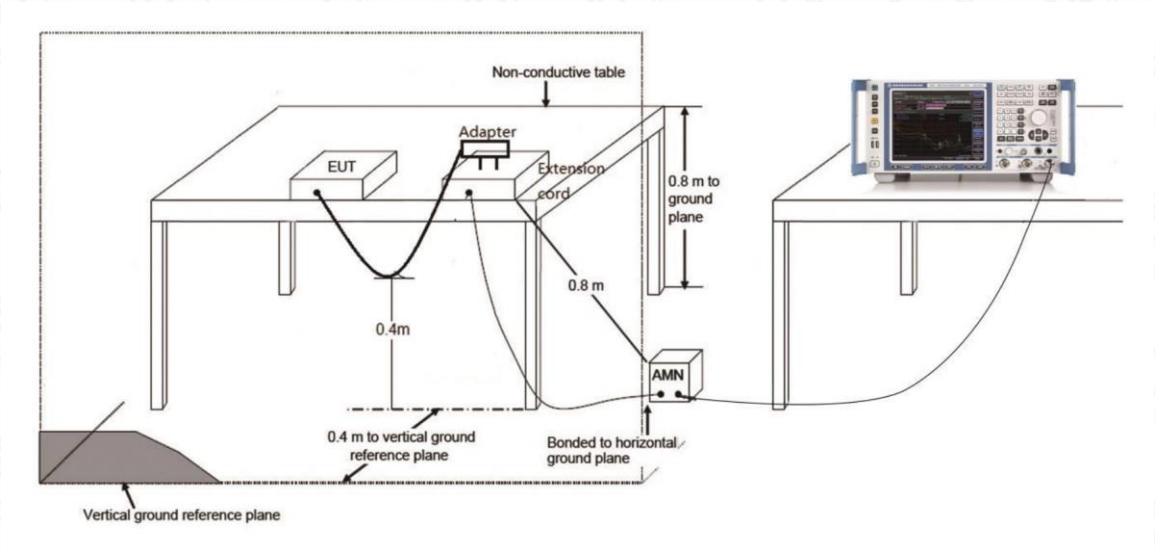
6.6. AC Powerline Conducted Emission

6.6.1. Method of Measurement: ANSI C63.10-2013-clause 6.2

1. The one EUT cable configuration and arrangement and mode of operation that produced the emission with the highest amplitude relative to the limit is selected for the final measurement, while applying the appropriate modulating signal to the EUT.
2. If the EUT is relocated from an exploratory test site to a final test site, the highest emissions shall be remaximized at the final test location before final ac power-line conducted emission measurements are performed.
3. The final test on all current-carrying conductors of all of the power cords to the equipment that comprises the EUT (but not the cords associated with other non-EUT equipment in the system) is then performed for the full frequency range for which the EUT is being tested for compliance without further variation of the EUT arrangement, cable positions, or EUT mode of operation.
4. If the EUT is comprised of equipment units that have their own separate ac power connections, e.g., floor-standing equipment with independent power cords for each shelf that are able to connect directly to the ac power network, each current-carrying conductor of one unit is measured while the other units are connected to a second (or more) LISN(s). All units shall be separately measured. If a power strip is provided by the manufacturer, to supply all of the units making up the EUT, only the conductors in the power cord of the power strip shall be measured.

If the EUT uses a detachable antenna, these measurements shall be made with a suitable dummy load connected to the antenna output terminals; otherwise, the tests shall be made with the antenna connected and, if adjustable, fully extended. When measuring the ac conducted emissions from a device that operates between 150 kHz and 30 MHz a non-detachable antenna may be replaced with a dummy load for the measurements within the fundamental emission band of the transmitter, but only for those measurements.36 Record the six highest EUT emissions relative to the limit of each of the current-carrying conductors of the power cords of the equipment that comprises the EUT over the frequency range specified by the procuring or regulatory agency. Diagram or photograph the test setup that was used. See Clause 8 for full reporting requirements.

6.6.2. Test Setup



6.6.3. Test Condition

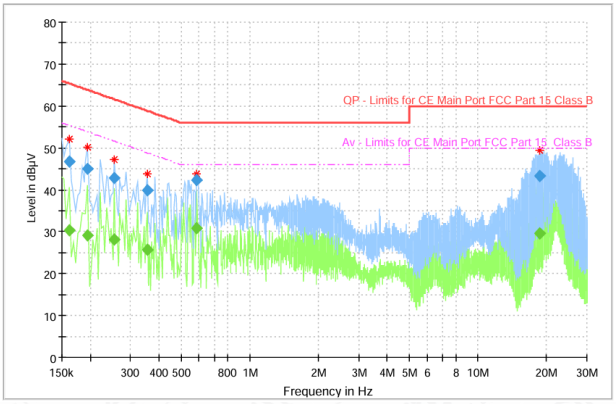
Voltage（V）	Frequency（Hz）
120	60

6.6.4. Measurement limit

(Quasi-peak-average Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)	Average Limit (dBμV)	Conclusion
0.15 to 0.5	66 to 56	56 to 46	P
0.5 to 5	56	46	
5 to 30	60	50	
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.			

6.6.5. Measurement Result

11A-5180MHz	/
	/

Frequency (MHz)	QuasiPeak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas.Time (ms)	Bandwidth (kHz)	Line	Filter	Corr. (dB)
0.161194	---	30.31	55.40	25.10	15000.0	9.000	L1	ON	9.6
0.161194	46.62	---	65.40	18.78	15000.0	9.000	L1	ON	9.6
0.194775	---	29.06	53.83	24.77	15000.0	9.000	L1	ON	9.6
0.194775	44.91	---	63.83	18.92	15000.0	9.000	L1	ON	9.6
0.254475	---	28.25	51.61	23.36	15000.0	9.000	L1	ON	9.6
0.254475	42.80	---	61.61	18.81	15000.0	9.000	L1	ON	9.6
0.355219	---	25.59	48.84	23.25	15000.0	9.000	L1	ON	9.6
0.355219	39.87	---	58.84	18.97	15000.0	9.000	L1	ON	9.6
0.586556	---	30.84	46.00	15.16	15000.0	9.000	L1	ON	9.6
0.586556	42.23	---	56.00	13.77	15000.0	9.000	L1	ON	9.6
18.720431	---	29.57	50.00	20.43	15000.0	9.000	L1	ON	10.0
18.720431	43.39	---	60.00	16.61	15000.0	9.000	L1	ON	10.0

Note:All modes have been tested and only the worst mode is recorded in the report.

Annex A: Revised History

Version	Revised Content
V0	Initial

Annex B: Accreditation Certificate

Accredited Laboratory

A2LA has accredited

INDUSTRIAL INTERNET INNOVATION CENTER (SHANGHAI) CO., LTD.

Shanghai, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 20th day of September 2023.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 3682.01
Valid to February 28, 2025

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

END OF REPORT