FCC PART 15.247

TEST REPORT

For

Xiamen Milesight IoT Co., Ltd.

Building C09, Software Park Phase III, Xiamen 361024, Fujian, China

FCC ID: 2AYHY-WT30X

Report Type:	Product Name:
Original Report	Smart Fan Coil Thermostat

Report Number:	2507R50071E-RF-01
Report Date:	2025-09-19
Reviewed By:	Ash Lin
Approved By:	Miles Chen
Prepared By:	Bay Area Compliance Laboratories Corp. (Xiamen) Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen Tel: + 86-592-3200111 www.baclcorp.com.cn

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REPORT REVISION HISTORY

Number of Revisions	Report No.	Version	Issue Date	Description
0	2507R50071E-RF-01	R1V1	2025-09-19	Initial Release

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product Name:	Smart Fan Coil Thermostat
Tested Model:	WT304-915M, WT303-915M
Multiple Model(WT304-915M):	NN304-915M, WT304, NN304
Multiple Model(WT303-915M):	NN303-915M, WT303, NN303
Trade mark:	Milesight
Power Supply:	AC 100-240V, 50/60Hz
Maximum Conducted Output Power:	7.37dBm
Operating Band/Frequency:	902.3-927.6MHz
Modulation Type:	CSS
Antenna Type:	PCB
★Maximum Antenna Gain:	-4.15dBi
EUT Received Status	Good

Note:
1. The Maximum Antenna Gain was declared by manufacturer.
2. The difference between tested model and series model is the difference in the number of sub-board relays, please refer to declaration letter for more detail.
3. All measurement and test data in this report was gathered from production sample serial number: 30C2-1(WT304-915M), 30C2-2(WT303-915M) (Assigned by the BACL (Xiamen). The EUT supplied by the applicant was received on 2025-03-25)

Objective

This test report is prepared for *Xiamen Milesight IoT Co., Ltd.* in accordance with:
Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commission's rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, and section 15.203, 15.205, 15.207, 15.209 and 15.247 rules.

Test Methodology

All tests and measurements indicated in this document were performed in accordance with ANSI C63.10-2020: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

And KDB 558074 D01 15.247 Meas Guidance v05r02.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Xiamen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Xiamen) to collect test data is located on the Unit 102, No. 902 Meifeng South Road, Binhai West Avenue, Science and Technology Innovation Park, Torch High tech Zone XiaMen.

Bay Area Compliance Laboratories Corp. (Xiamen) Lab is accredited to ISO/IEC 17025 by A2LA (Certificate Number: 7134.01) and the lab has been recognized as the IC accredited lab under the KDB 974614 D01, the IC Designation No. : CN0176.

Measurement Uncertainty

Item		U_{lab}
Radiated Emission	9kHz-150kHz	2.82 dB
	150kHz-30MHz	2.74 dB
	30MHz~200MHz	3.47 dB
	200MHz ~1GHz	4.86 dB
	1GHz~6GHz	4.88 dB
	6GHz-18GHz	4.95 dB
AC Power Lines Conducted Emissions	150kHz-30MHz	2.45 dB
Occupied Channel Bandwidth		2%
Transmitter Conducted Power(Conducted RF power)		±1.49 dB
Temperature		±1℃
Humidity		±5%
Supply voltages		±1%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

SYSTEM TEST CONFIGURATION

Test Mode and Voltage

The system was configured for testing in a typical mode (as normally used by a typical user).	
Test mode:	Test mode 1: 125k mode Transmitting
Test voltage:	Test mode 1: AC 120V/60Hz
Remark:	During all emission tests, the EUT was configured to measure its highest possible emission level and the worst case's test data was presented in this test report.

Description of Test Configuration

Channel list:

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	902.3	65	915.2
2	902.5	66	915.4
…	…	…	…
…	…	…	…
63	914.7	127	927.6
64	914.9	/	/

EUT was tested with Channel 1, 64 and 127.
The EUT is a hybrid system.

★EUT Exercise Software

RF Test Tool: certificationTools

Mode	Power level		
	Low channel	Middle channel	High channel
FHSS	**12**	**12**	**12**

Special Accessories

No special accessory.

Equipment Modifications

No modification was made to the EUT tested.

Support Equipment List and Details

For WT304-915M

Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	T480	PF1P5K4F
Unknown	Debug board	Unknown	Unknown
Unknown	Load lamp*3	Unknown	Unknown
Unknown	Ohmic Load*3	Unknown	Unknown
Unknown	Load Fan *2	Unknown	Unknown

For WT303-915M

Manufacturer	Description	Model	Serial Number
Lenovo	Laptop	T480	PF1P5K4F
Unknown	Debug board	Unknown	Unknown
Unknown	Load lamp*5	Unknown	Unknown
Unknown	Ohmic Load*3	Unknown	Unknown

External I/O Cable

For WT304-915M

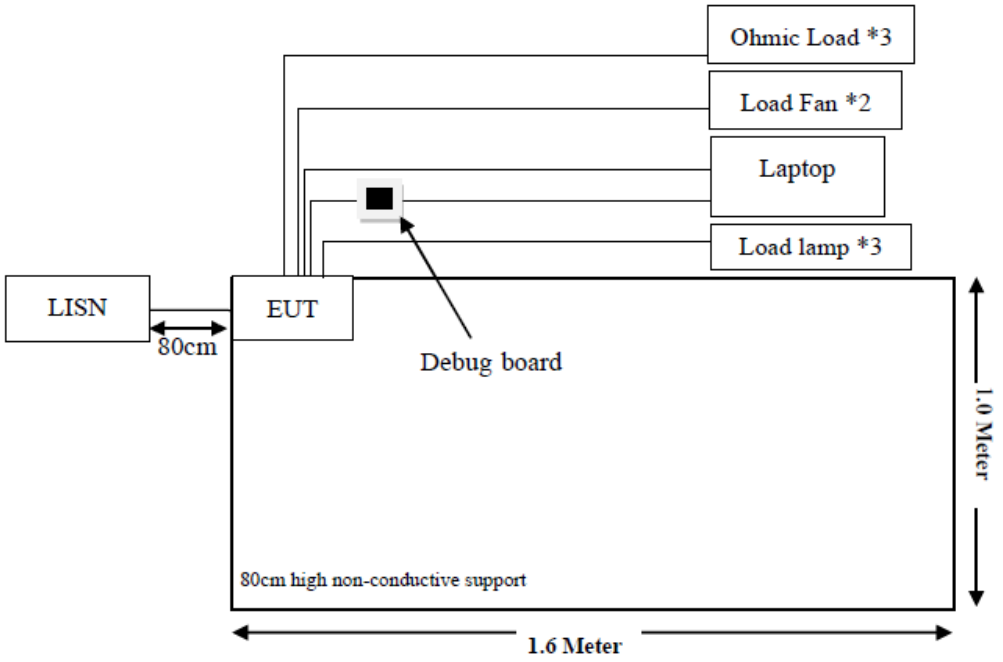
Cable Description	Length (m)	From Port	To
Copper cable	0.5	EUT	Debug board
Power cable	1	EUT	AC Source
Power cable	0.8	EUT	LISN
USB Cable	10	Debug board	Laptop
Copper cable	10	EUT	Load lamp
Copper cable	10	EUT	Ohmic Load
Copper cable	10	EUT	Load Fan
USB Cable	10	EUT	Laptop

For WT303-915M

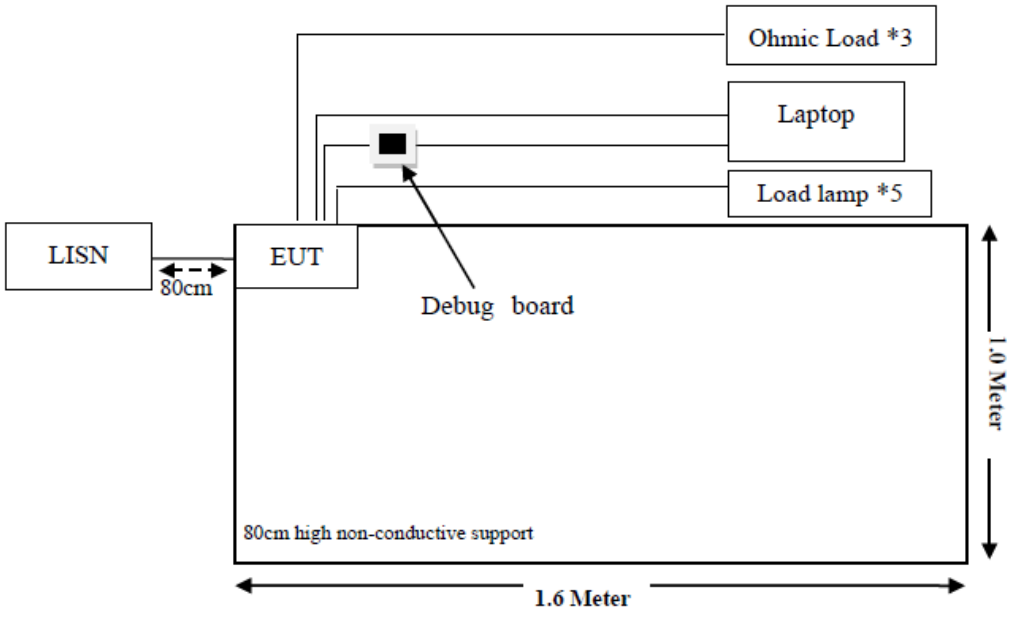
Cable Description	Length (m)	From Port	To
Copper cable	0.5	EUT	Debug board
Power cable	1	EUT	AC Source
Power cable	0.8	EUT	LISN
USB Cable	10	Debug board	Laptop
Copper cable	10	EUT	Load lamp
Copper cable	10	EUT	Ohmic Load
USB Cable	10	EUT	Laptop

Block Diagram of Test Setup

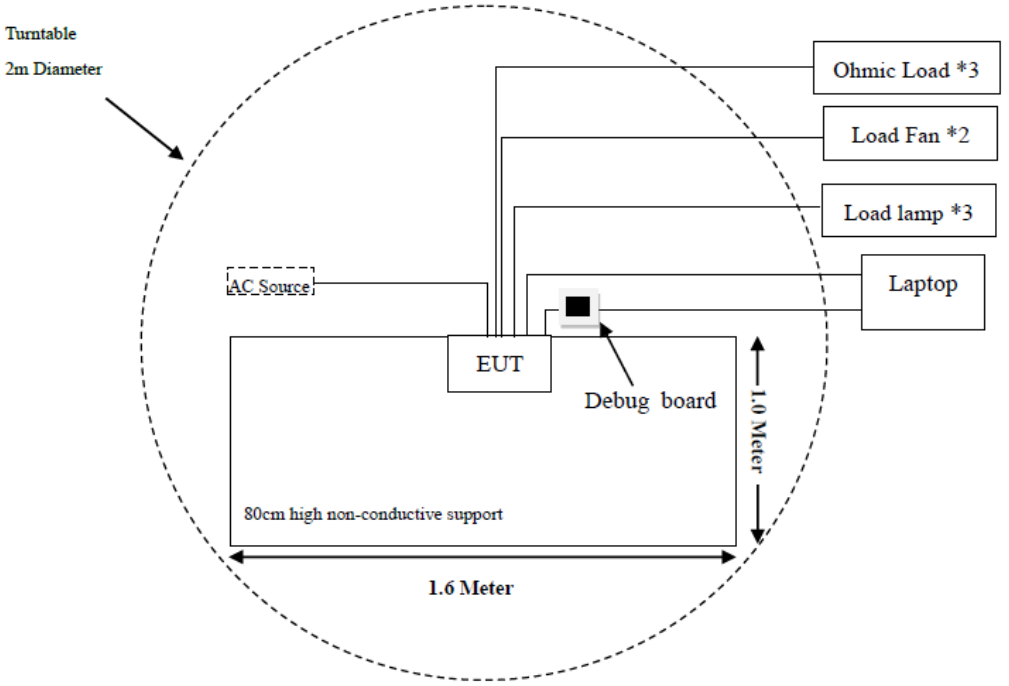
Conducted Emission:
For WT304-915M



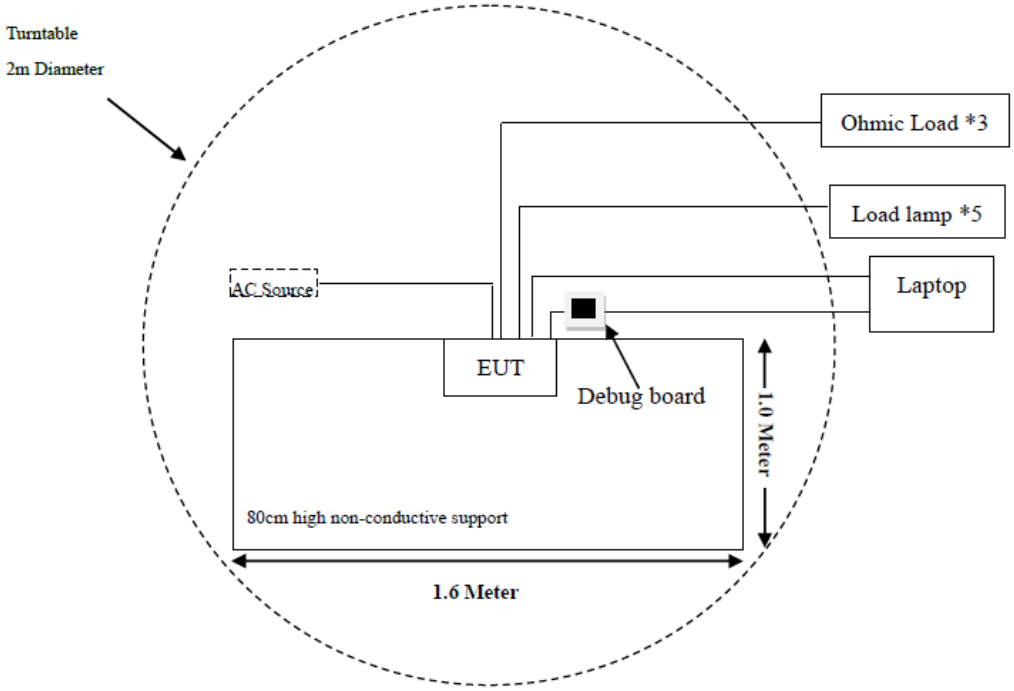
For WT303-915M



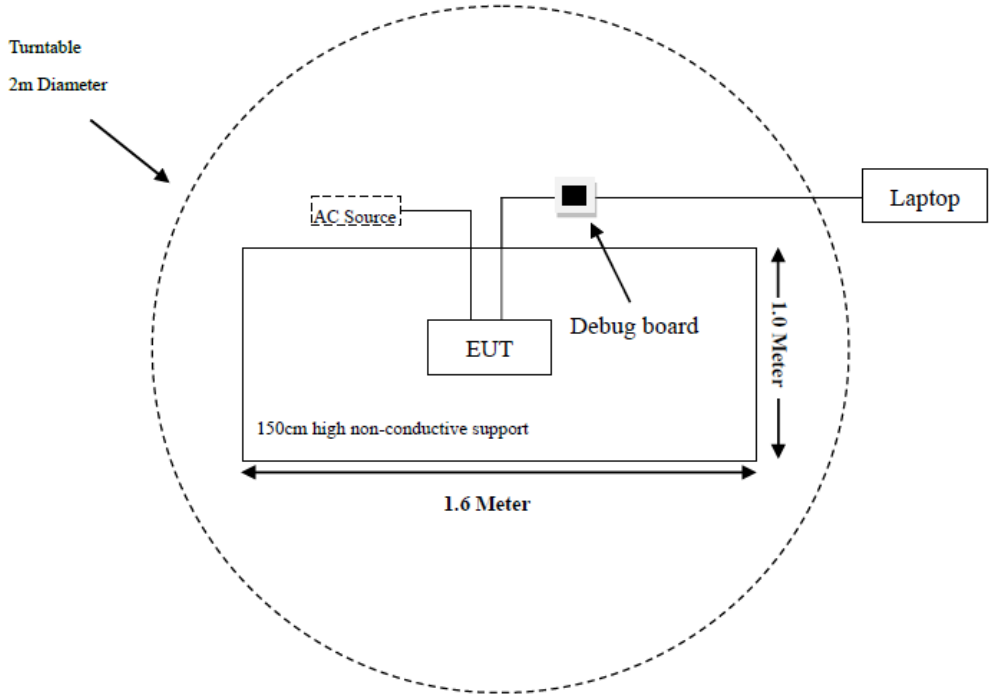
Radiated Emission：
Below 1GHz
For WT304-915M



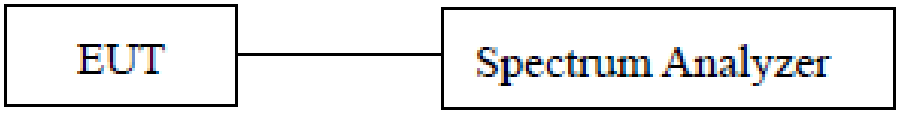
For WT303-915M



Above 1GHz:



RF Conduction:



Note: The cable assembly insertion loss of 0.5dB was entered as an offset in the spectrum analyzer. (Actual cable loss was unavailable at the time of testing, therefore loss of 0.5dB was assumed as worst case.) This was later verified to be true by laboratory.

SUMMARY OF TEST RESULTS

Standard(s)/Rule(s)	Description of Test	Result
FCC §15.207(a)	AC line conducted emissions	Compliant
FCC §15.205, §15.209, §15.247(d)	Radiated Spurious Emissions & Radiated Bands Emissions	Compliant
FCC §15.247(a)(1)(i)	20 dB Emission bandwidth	Compliant
FCC §15.247(a)(1)	Channel separation	Compliant
FCC §15.247(a)(1)(i)	Number of hopping Frequency	Compliant
FCC §15.247(f)	Time of occupancy (dwell time)	Compliant
FCC §15.247(b)(2)	Maximum Conducted output power	Compliant
FCC §15.247(d)	100 kHz Bandwidth of Frequency Band Edge	Compliant
FCC §15.203	Antenna Requirement	Compliant
FCC §15.247(f)	Power spectral density	Compliant

TEST EQUIPMENT LIST

Test Equipment	Manufacturer	Model	Serial Number	Calibration Date	Calibration Due Date
Conducted Emissions					
EMI Test Receiver	Rohde & Schwarz	ESR	103105	2025/02/20	2026/02/19
LISN	Rohde & Schwarz	ENV216	100129	2025/02/20	2026/02/19
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	0357.8810.54	2025/02/20	2026/02/19
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC001	2025/02/20	2026/02/19
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emissions Below 1 GHz					
EMI Test Receiver	Rohde & Schwarz	ESR	103103	2025/02/20	2026/02/19
Antenna	Sunol Sciences	JB6	A122022-5	2023/07/27	2026/07/26
Loop Antenna	Rohde & Schwarz	HFH2-Z2	830749/001	2023/07/27	2026/07/26
Amplifier	Sonoma	310B	120903	2025/02/20	2026/02/19
Band-Reject Filter	HX Microwave	HXLBQ-DZA05	24091101-1	2024/10/12	2025/10/11
Coaxial Cable	XINHANGWEIBO	XH400T-N-4M	CC002	2025/02/20	2026/02/19
Coaxial Cable	XINHANGWEIBO	XH460B-N-2M	CC006	2025/02/20	2026/02/19
Coaxial Cable	XINHANGWEIBO	XH460B-N-12M	CC007	2025/02/20	2026/02/19
Coaxial Cable	XINHANGWEIBO	HFH2-CC	335.3609	2025/02/20	2026/02/19
Test Software	Audix	E3	18621a	N/A	N/A
Radiated Emissions Above 1 GHz					
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2025/02/20	2026/02/19
Multiplex Switch Test Control Set	Decentest	DT7220SCU	DS79901	2025/02/21	2026/02/20
Filter Switch Unit	Decentest	DT7220FSU	DS79904	2025/02/21	2026/02/20
Band-Reject Filter	HX Microwave	HXLBQ-DZA05	24091101-1	2024/10/12	2025/10/11
Horn Aantenna	EMCO	3115	9002-3355	2024/11/19	2027/11/18
Preamplifier	GLOBAL	1313-A100M18G	4121301	2025/01/16	2026/01/15
Coaxial Cable	XINHANGWEIBO	XH800A-N-6M	CC003	2025/02/20	2026/02/19
Coaxial Cable	XINHANGWEIBO	XH800A-N-1M	CC005	2025/02/20	2026/02/19
Test Software	Audix	E3	18621a	N/A	N/A
RF Conducted Test					
Spectrum Analyzer	Rohde & Schwarz	FSV40-N	102051	2025/02/20	2026/02/19
Coaxial Cable	Lianxun	RF113	N/A	Each time	N/A

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Xiamen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

FCC §15.207(a) - AC LINE CONDUCTED EMISSIONS

Applicable Standard

(a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 μH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBμV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

(b) The limit shown in paragraph (a) of this section shall not apply to carrier current systems operating as intentional radiators on frequencies below 30 MHz. In lieu thereof, these carrier current systems shall be subject to the following standards:

(1) For carrier current system containing their fundamental emission within the frequency band 535-1705 kHz and intended to be received using a standard AM broadcast receiver: no limit on conducted emissions.
(2) For all other carrier current systems: 1000 μV within the frequency band 535-1705 kHz, as measured using a 50 μH/50 ohms LISN.
(3) Carrier current systems operating below 30 MHz are also subject to the radiated emission limits in §15.205, §15.209, §15.221, §15.223, or §15.227, as appropriate.

(c) Measurements to demonstrate compliance with the conducted limits are not required for devices which only employ battery power for operation and which do not operate from the AC power lines or contain provisions for operation while connected to the AC power lines. Devices that include, or make provisions for, the use of battery chargers which permit operating while charging, AC adapters or battery eliminators or that connect to the AC power lines indirectly, obtainig their power through another device which is connected to the AC power lines, shall be tested to demonstrate compliance with the conducted limits.

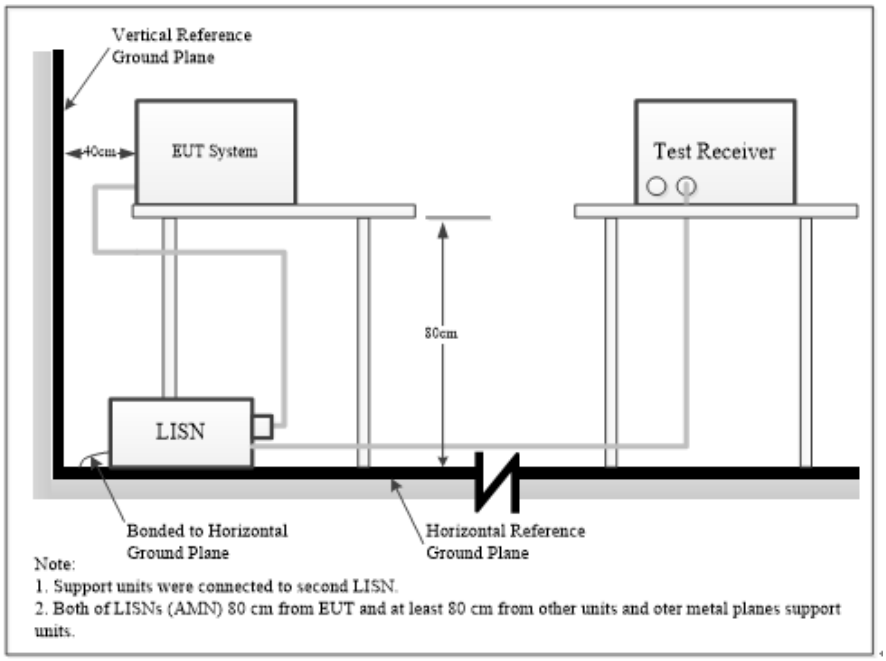
EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test System Setup



The setup of EUT is according with per ANSI C63.10-2020 measurement procedure. The specification used was with the FCC Part 15.207 limits.

The spacing between the peripherals was 10 cm.

The adapter or EUT was connected to the main LISN with a 120 V/60 Hz AC power source.

Test Procedure

The frequency and amplitude of the six highest ac power-line conducted emissions relative to the limit, measured over all the current-carrying conductors of the EUT power cords, and the operating frequency or frequency to which the EUT is tuned (if appropriate), should be reported, unless such emissions are more than 20 dB below the limit. AC power-line conducted emissions measurements are to be separately carried out only on each of the phase ("hot") line(s) and (if used) on the neutral line(s), but not on the ground [protective earth] line(s). If less than six emission frequencies are within 20 dB of the limit, then the noise level of the measuring instrument at representative frequencies should be reported. The specific conductor of the power-line cord for each of the reported emissions should be identified. Measure the six highest emissions with respect to the limit on each current-carrying conductor of each power cord associated with the EUT (but not the power cords of associated or peripheral equipment that are part of the test configuration). Then, report the six highest emissions with respect to the limit from among all the measurements identifying the frequency and specific current-carrying conductor identified with the emission. The six highest emissions should be reported for each of the current-carrying conductors, or the six highest emissions may be reported over all the current-carrying conductors.

Result &Margin Calculation

The Result is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation from the Meter Reading. The basic equation is as follows:

Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)
Result (dBµV) = Reading (dBµV) + Factor (dB)

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dBµV) –Result (dBµV)

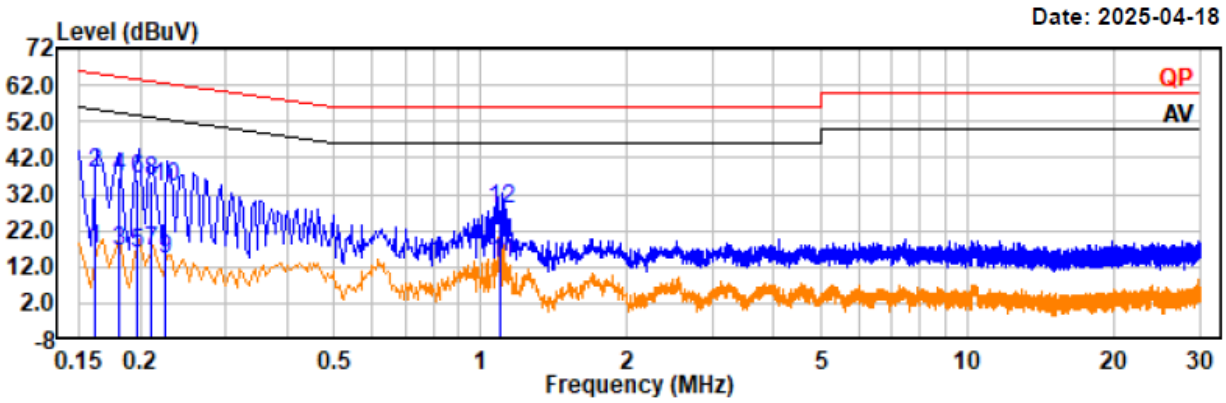
Test Data

Temperature:	21.8℃~22.5℃
Relative Humidity:	48%~52%
ATM Pressure:	99.8kPa~99.9kPa
Test Date:	2025-04-18~2025-06-18
Test Engineer:	H Wang, Wlif Wu

Note: The maximum output power mode: middle channel was tested.

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M

Temp/Humi/ATM: 21.8℃/48%/99.8kPa
Tested by: H Wang
Power Source: AC 120V/60Hz

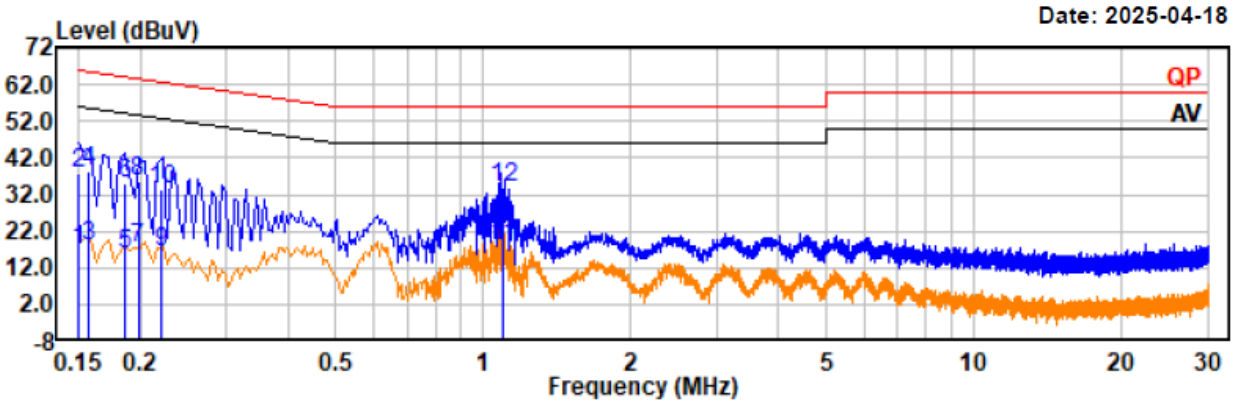


Trace: 1
Condition: IF B/W 9kHz PK/AV

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.16	-2.68	19.60	16.92	55.36	38.44	Line	Average
0.16	18.18	19.60	37.78	65.36	27.58	Line	QP
0.18	-3.60	19.84	16.24	54.44	38.20	Line	Average
0.18	16.82	19.84	36.66	64.44	27.78	Line	QP
0.20	-4.48	20.05	15.57	53.70	38.13	Line	Average
0.20	16.09	20.05	36.14	63.70	27.56	Line	QP
0.21	-4.04	20.05	16.01	53.19	37.18	Line	Average
0.21	15.64	20.05	35.69	63.19	27.50	Line	QP
0.22	-5.70	20.02	14.32	52.64	38.32	Line	Average
0.22	13.93	20.02	33.95	62.64	28.69	Line	QP
1.10	-6.39	19.49	13.10	46.00	32.90	Line	Average
1.10	8.57	19.49	28.06	56.00	27.94	Line	QP

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M

Temp/Humi/ATM: 21.8℃/48%/99.8kPa
Tested by: H Wang
Power Source: AC 120V/60Hz

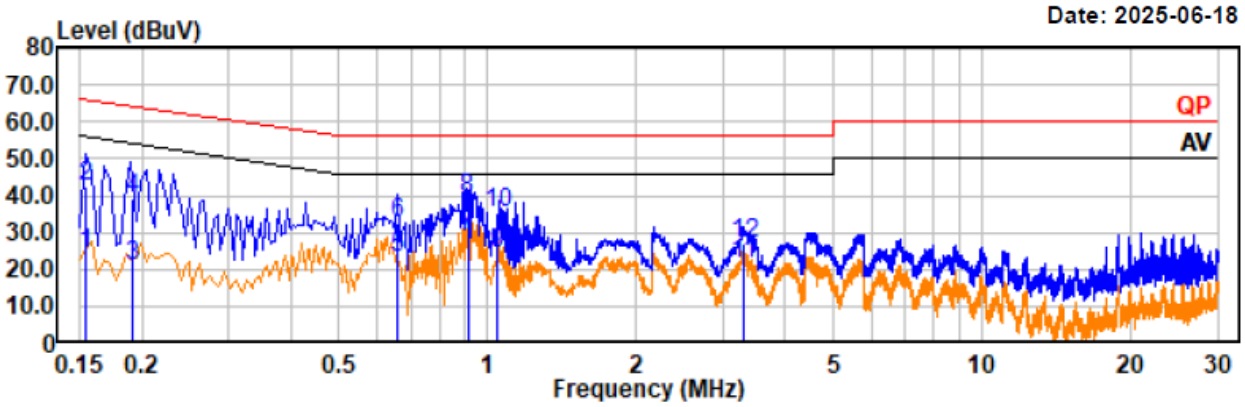


Trace: 1
Condition: IF B/W 9kHz PK/AV

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.15	-2.31	19.13	16.82	55.98	39.16	Neutral	Average
0.15	18.57	19.13	37.70	65.98	28.28	Neutral	QP
0.16	-1.31	19.19	17.88	55.59	37.71	Neutral	Average
0.16	19.11	19.19	38.30	65.59	27.29	Neutral	QP
0.19	-3.65	19.38	15.73	54.24	38.51	Neutral	Average
0.19	15.86	19.38	35.24	64.24	29.00	Neutral	QP
0.20	-2.23	19.46	17.23	53.69	36.46	Neutral	Average
0.20	16.22	19.46	35.68	63.69	28.01	Neutral	QP
0.22	-3.48	19.48	16.00	52.79	36.79	Neutral	Average
0.22	14.05	19.48	33.53	62.79	29.26	Neutral	QP
1.10	-1.28	19.42	18.14	46.00	27.86	Neutral	Average
1.10	14.42	19.42	33.84	56.00	22.16	Neutral	QP

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M

Temp/Humi/ATM: 22.5℃/52%/99.9kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

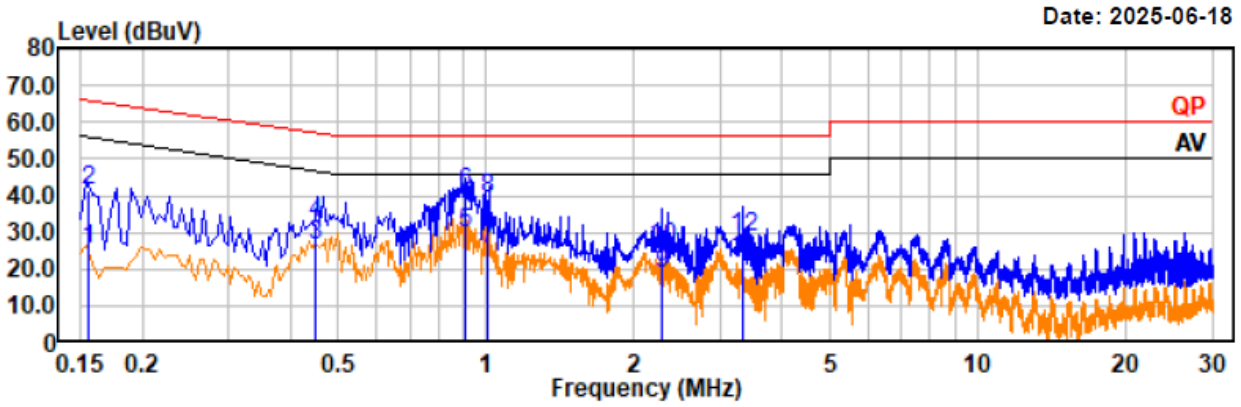


Trace: 1
Condition: IF B/W 9kHz PK/AV

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.15	4.92	19.49	24.41	55.77	31.36	Line	Average
0.15	22.91	19.49	42.40	65.77	23.37	Line	QP
0.19	0.93	19.97	20.90	53.95	33.05	Line	Average
0.19	19.43	19.97	39.40	63.95	24.55	Line	QP
0.66	3.99	19.37	23.36	46.00	22.64	Line	Average
0.66	13.10	19.37	32.47	56.00	23.53	Line	QP
0.91	9.64	19.46	29.10	46.00	16.90	Line	Average
0.91	19.60	19.46	39.06	56.00	16.94	Line	QP
1.05	4.51	19.51	24.02	46.00	21.98	Line	Average
1.05	15.67	19.51	35.18	56.00	20.82	Line	QP
3.30	1.99	19.28	21.27	46.00	24.73	Line	Average
3.30	7.90	19.28	27.18	56.00	28.82	Line	QP

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M

Temp/Humi/ATM: 22.5℃/52%/99.9kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Trace: 1
Condition: IF B/W 9kHz PK/AV

Freq MHz	Reading dBuV	Factor dB	Result dBuV	Limit dBuV	Margin dB	Phase	Remark
0.16	6.28	19.17	25.45	55.69	30.24	Neutral	Average
0.16	22.25	19.17	41.42	65.69	24.27	Neutral	QP
0.45	7.04	19.58	26.62	46.85	20.23	Neutral	Average
0.45	12.74	19.58	32.32	56.85	24.53	Neutral	QP
0.90	10.45	19.30	29.75	46.00	16.25	Neutral	Average
0.90	21.35	19.30	40.65	56.00	15.35	Neutral	QP
1.01	5.96	19.42	25.38	46.00	20.62	Neutral	Average
1.01	19.89	19.42	39.31	56.00	16.69	Neutral	QP
2.27	-0.66	19.54	18.88	46.00	27.12	Neutral	Average
2.27	6.14	19.54	25.68	56.00	30.32	Neutral	QP
3.32	2.95	19.89	22.84	46.00	23.16	Neutral	Average
3.32	8.90	19.89	28.79	56.00	27.21	Neutral	QP

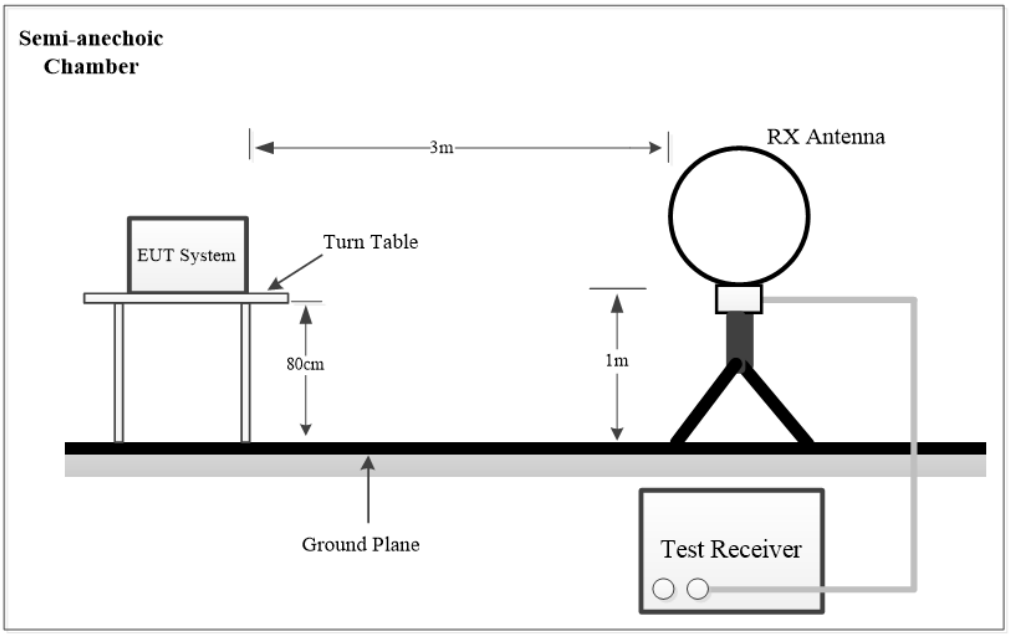
FCC §15.205, §15.209, §15.247(d) - RADIATION SPURIOUS EMISSIONS

Applicable Standard

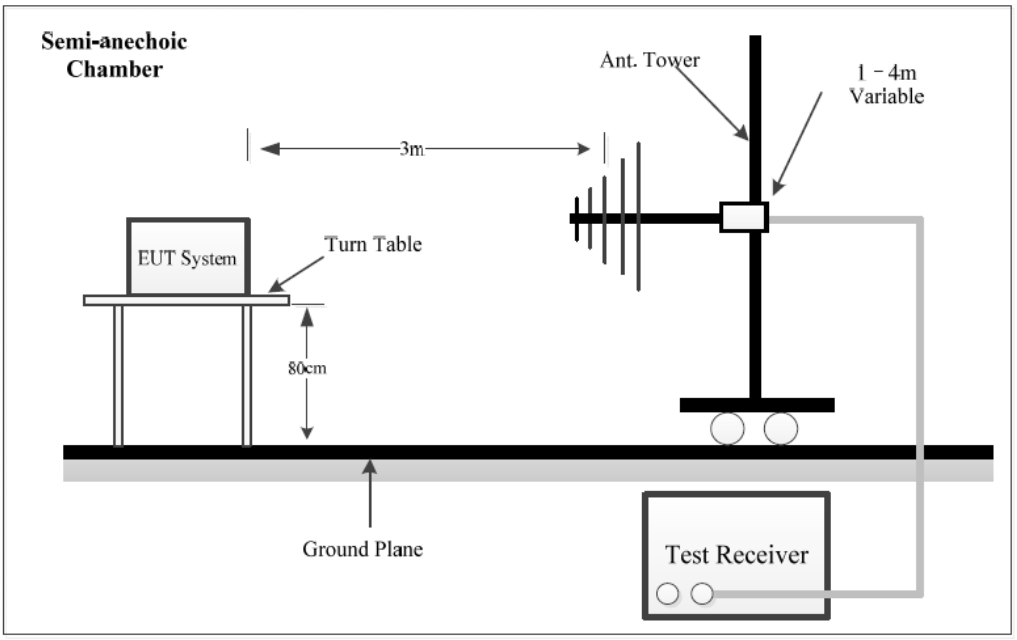
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

EUT Setup

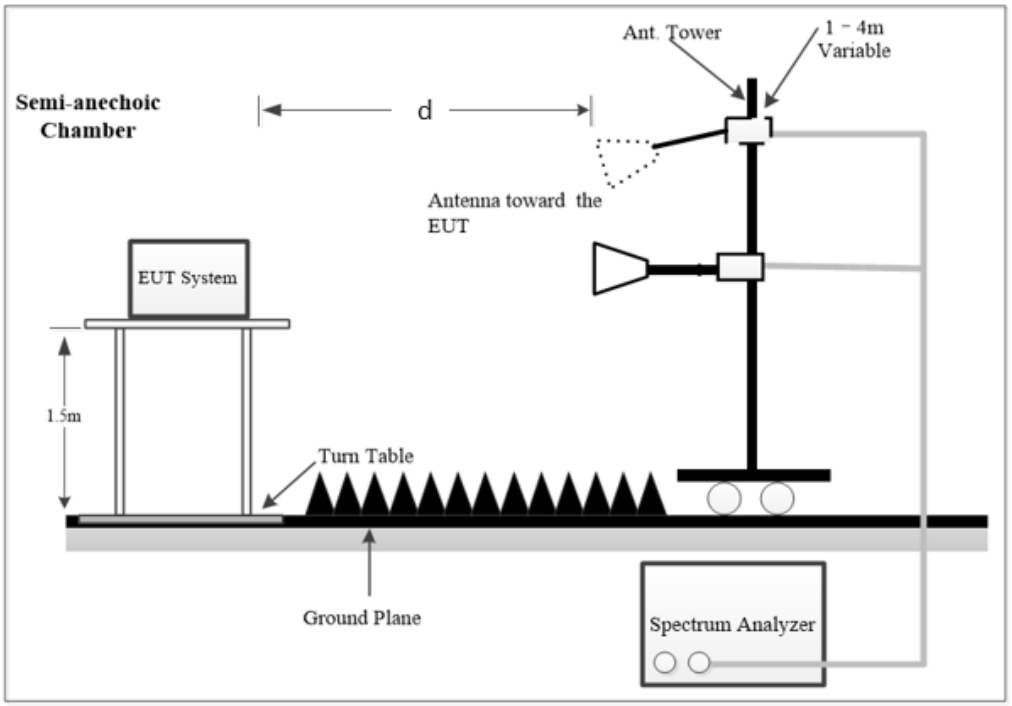
9 kHz-30MHz:



Below 1GHz:



Above 1GHz:



The radiated emissions were performed in the 3 meters distance, using the setup accordance with the ANSI C63.10-2020. The specification used was the FCC 15.209, FCC 15.247 limits.

NOTE: d is testing distance:

For Radiated Emission test (1GHz-10GHz), which was performed at 3 m distance.

EMI Test Receiver & Spectrum Analyzer Setup

The system was investigated from 9 kHz to 10 GHz.

During the radiated emission test, the EMI Test Receiver & Spectrum Analyzer Setup was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	300Hz	1 kHz	200Hz	QP
150 kHz – 30 MHz	10kHz	30 kHz	9 kHz	QP
30 MHz – 1000 MHz	100 kHz	300 kHz	/	PK
	/	/	120kHz	QP

1GHz~10GHz:
Pre-scan:

Measurement	RBW	Video B/W	Detector
PK	1MHz	3MHz	PK
Ave.	1MHz	5kHz	PK

Final measurement for emission identified during the pre-scan:

Measurement	RBW	Video B/W	Detector
PK	1MHz	3MHz	PK
Ave.	1MHz	10Hz	PK

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

For each measurement antenna alignment, the EUT shall be rotated through 0°to 360°on a turntable. The report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground parallel) unless the margin is greater than 20 dB, then the following statement shall be made: “all emissions were greater than 20 dB below the limit.”

Below 1GHz, if the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is at least 6 dB below the QP emission limit, there's no need to record the measured QP level of the emissions in the report.

Above 1GHz, if the measured peak level of the emissions that the measuring receiver reading level plus corrected factor is below the AV emission limit, there's no need to record the measured AV level of the emissions in the report.

Result &Margin Calculation

The Result is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

For 9 kHz to 10GHz Radiated emission test
Factor (dB/m) =Antenna Factor (dB/m) + Cable Loss (dB) - Amplifier Gain (dB)

Result (dBμV/m) = Reading (dBμV) + Factor (dB/m)

The "**Margin**" column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7dB means the emission is 7dB below the limit. The equation for margin calculation is as follows:

Margin (dB) = Limit (dBμV/m) –Result (dBμV/m)

Test Data

Please refer to the below table and plots.

Frequency Range:	Below 1 GHz	Above 1 GHz
Temperature:	22.1℃~22.8℃	22.1℃
Relative Humidity:	50 %~61%	50 %
ATM Pressure:	100.1kPa~100.2kPa	100.1kPa
Test Date:	2025-04-07~2025-06-17	2025-04-07
Test Engineer:	Wlif Wu	Wlif Wu

Note: Pre-scan in the X, Y and Z axes of orientation, the worst case Z-axis of orientation was recorded.

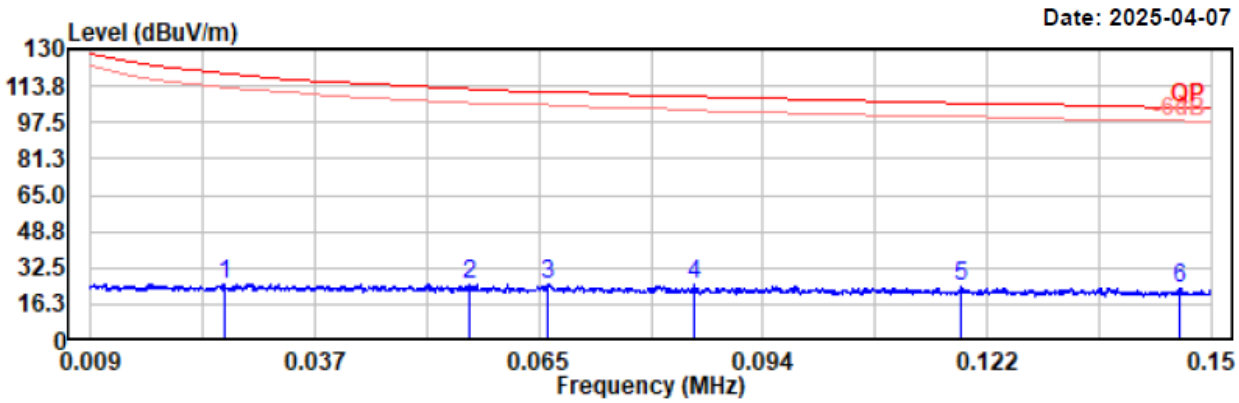
1)9 kHz-30MHz

Pre-scan in parallel, ground-parallel and perpendicular of orientation of loop antenna, parallel is worst case.

Note: The maximum output power mode: middle channel was tested.

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

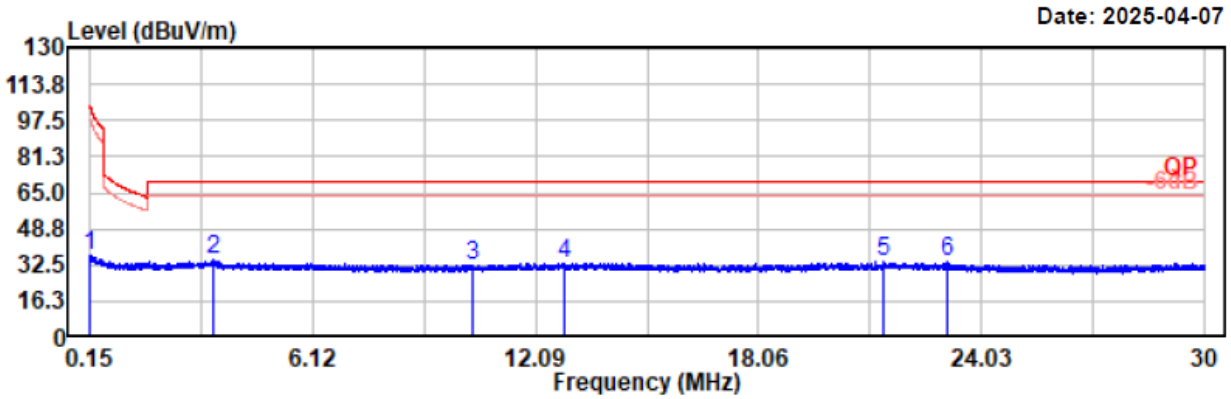


Condition: PK RBW:300Hz VBW:1kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
0.026	5.57	19.87	25.44	119.40	93.96	Peak
0.057	5.33	19.91	25.24	112.54	87.30	Peak
0.067	5.52	19.84	25.36	111.15	85.79	Peak
0.085	5.71	19.76	25.47	109.03	83.56	Peak
0.119	4.58	19.73	24.31	106.13	81.82	Peak
0.146	3.95	19.73	23.68	104.32	80.64	Peak

Project No.:2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source:AC 120V/60Hz

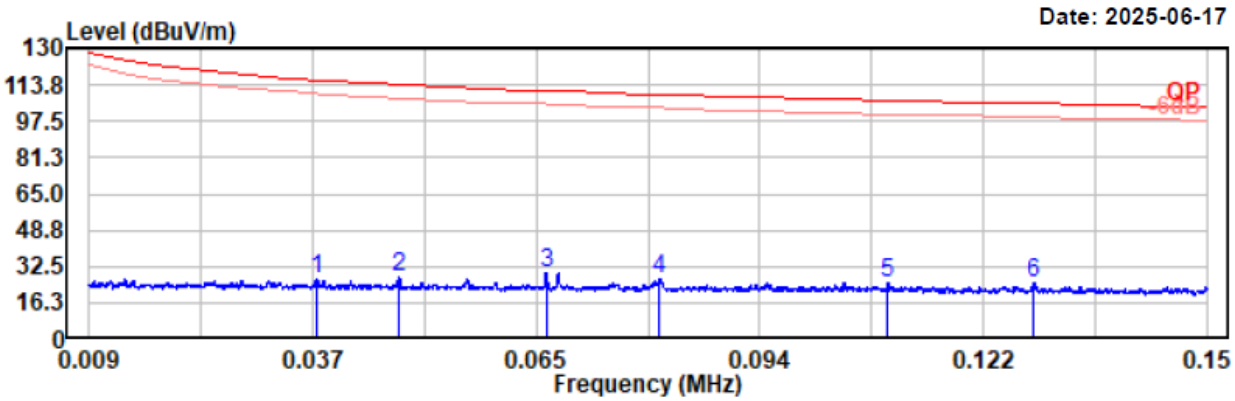


Condition: PK RBW:10kHz VBW:30kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
0.150	17.39	19.72	37.11	104.08	66.97	Peak
3.472	15.30	19.80	35.10	69.54	34.44	Peak
10.392	12.96	19.70	32.66	69.54	36.88	Peak
12.863	13.66	19.73	33.39	69.54	36.15	Peak
21.388	13.92	20.13	34.05	69.54	35.49	Peak
23.129	13.70	20.17	33.87	69.54	35.67	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

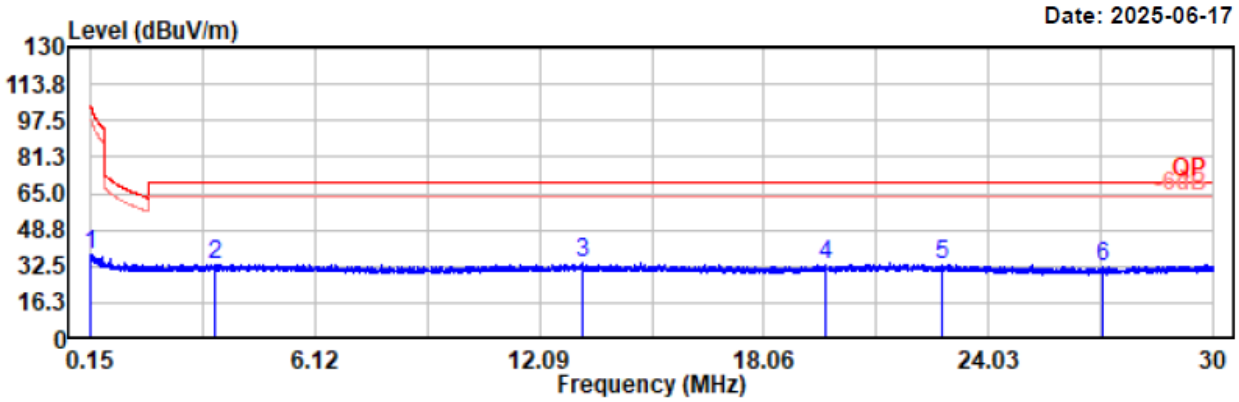


Condition: PK RBW:300Hz VBW:1kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
0.038	7.15	19.91	27.06	116.10	89.04	Peak
0.048	8.07	19.91	27.98	113.97	85.99	Peak
0.067	9.59	19.84	29.43	111.13	81.70	Peak
0.081	6.81	19.72	26.53	109.45	82.92	Peak
0.110	5.13	19.73	24.86	106.80	81.94	Peak
0.128	5.78	19.73	25.51	105.45	79.94	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Condition: PK RBW:10kHz VBW:30kHz SWT:auto

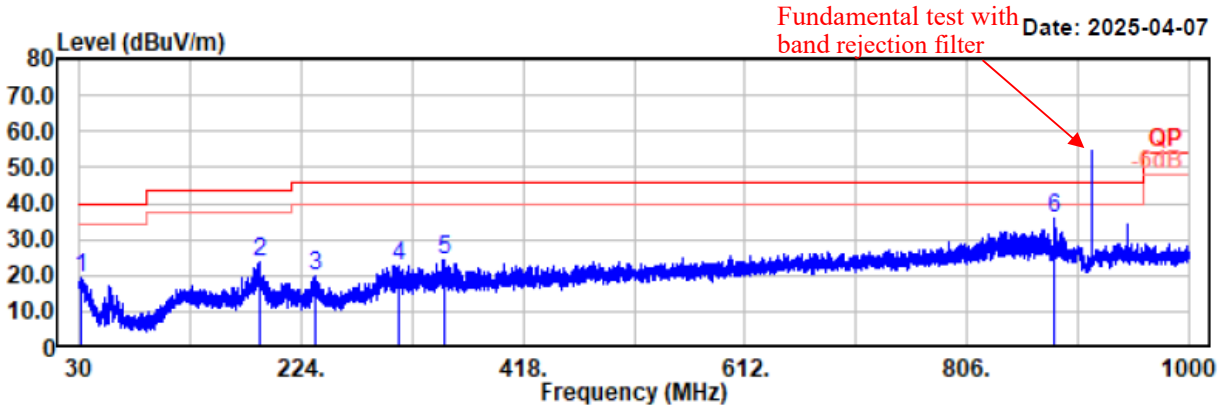
Freq	Reading	Factor	Result	Limit	Margin	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	
0.150	18.38	19.72	38.10	104.08	65.98	Peak
3.451	13.80	19.80	33.60	69.54	35.94	Peak
13.233	14.24	19.74	33.98	69.54	35.56	Peak
19.708	12.96	20.07	33.03	69.54	36.51	Peak
22.779	13.24	20.17	33.41	69.54	36.13	Peak
27.048	12.53	20.12	32.65	69.54	36.89	Peak

2) 30MHz-1GHz

Note: The maximum output power mode: middle channel was tested.

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

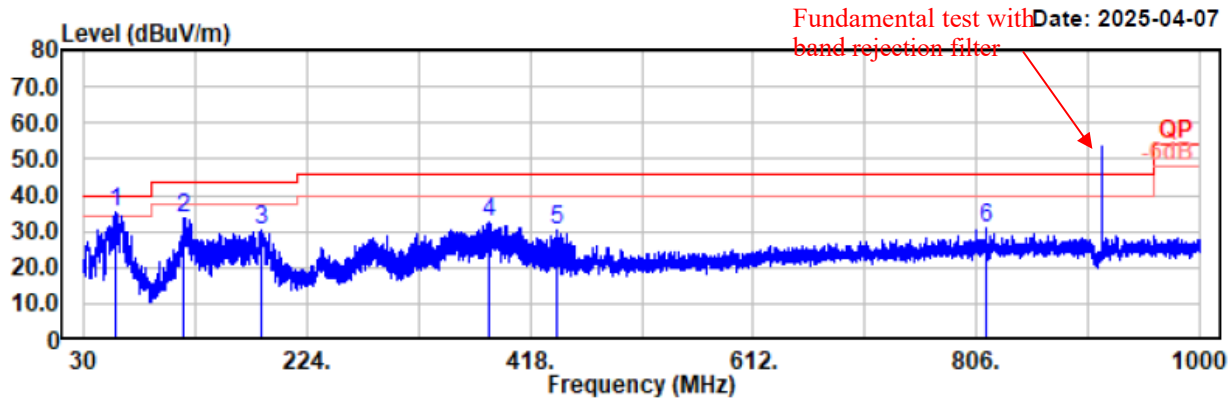


Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
31.75	25.40	-6.27	19.13	40.00	20.87	Horizontal	Peak
187.82	36.23	-12.39	23.84	43.50	19.66	Horizontal	Peak
236.03	31.89	-11.96	19.93	46.00	26.07	Horizontal	Peak
308.68	31.86	-9.05	22.81	46.00	23.19	Horizontal	Peak
348.65	32.38	-8.07	24.31	46.00	21.69	Horizontal	Peak
882.92	33.62	2.37	35.99	46.00	10.01	Horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



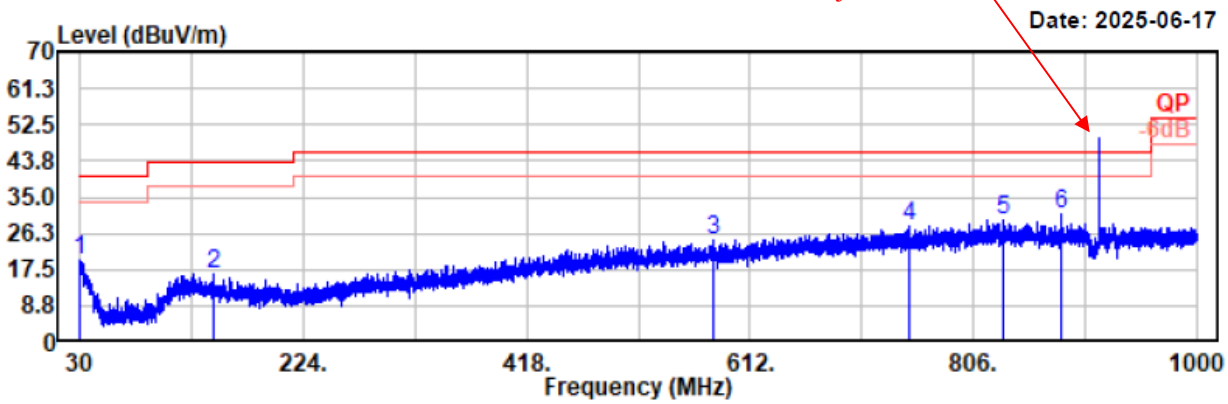
Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
57.74	52.83	-17.63	35.20	40.00	4.80	Vertical	QP
117.30	44.46	-10.63	33.83	43.50	9.67	Vertical	Peak
183.75	42.97	-12.53	30.44	43.50	13.06	Vertical	Peak
382.98	39.28	-6.98	32.30	46.00	13.70	Vertical	Peak
441.09	35.19	-5.04	30.15	46.00	15.85	Vertical	Peak
814.73	29.59	1.40	30.99	46.00	15.01	Vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

Fundamental test with band rejection filter



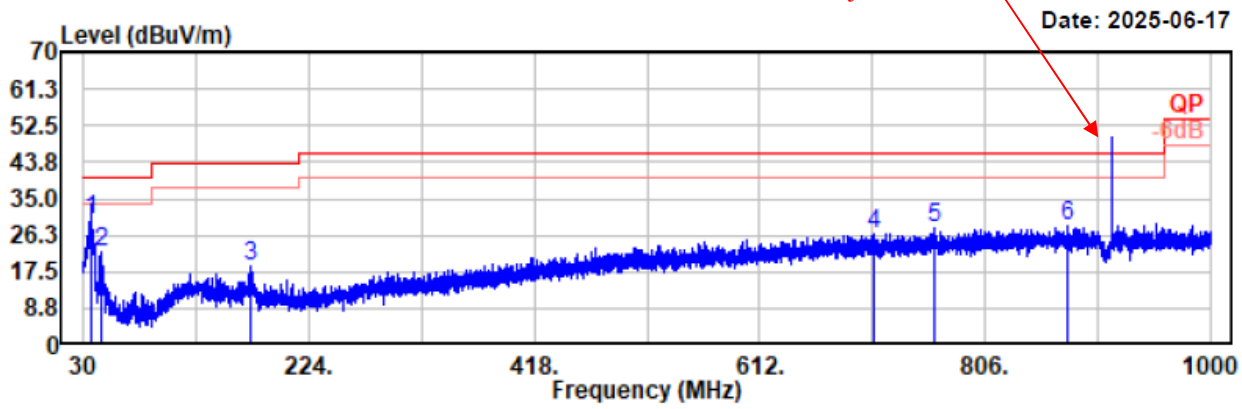
Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
30.39	25.53	-5.70	19.83	40.00	20.17	Horizontal	Peak
146.69	27.63	-11.10	16.53	43.50	26.97	Horizontal	Peak
580.28	27.16	-2.58	24.58	46.00	21.42	Horizontal	Peak
749.84	27.21	0.55	27.76	46.00	18.24	Horizontal	Peak
831.41	27.72	1.77	29.49	46.00	16.51	Horizontal	Peak
882.92	28.74	2.37	31.11	46.00	14.89	Horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

Fundamental test with band rejection filter



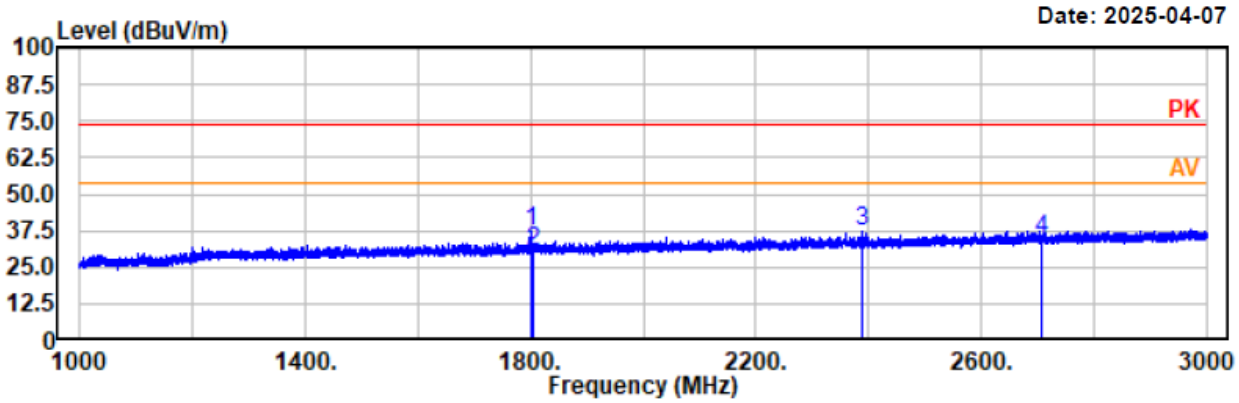
Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
36.60	38.98	-9.19	29.79	40.00	10.21	Vertical	QP
44.74	37.32	-15.03	22.29	40.00	17.71	Vertical	Peak
173.66	30.79	-12.07	18.72	43.50	24.78	Vertical	Peak
710.16	26.81	-0.09	26.72	46.00	19.28	Vertical	Peak
762.93	27.40	0.67	28.07	46.00	17.93	Vertical	Peak
876.71	26.36	2.28	28.64	46.00	17.36	Vertical	Peak

3) 1 GHz-10 GHz

Project No.: 2507R50071E RF
Test Mode: 125k 902.3MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

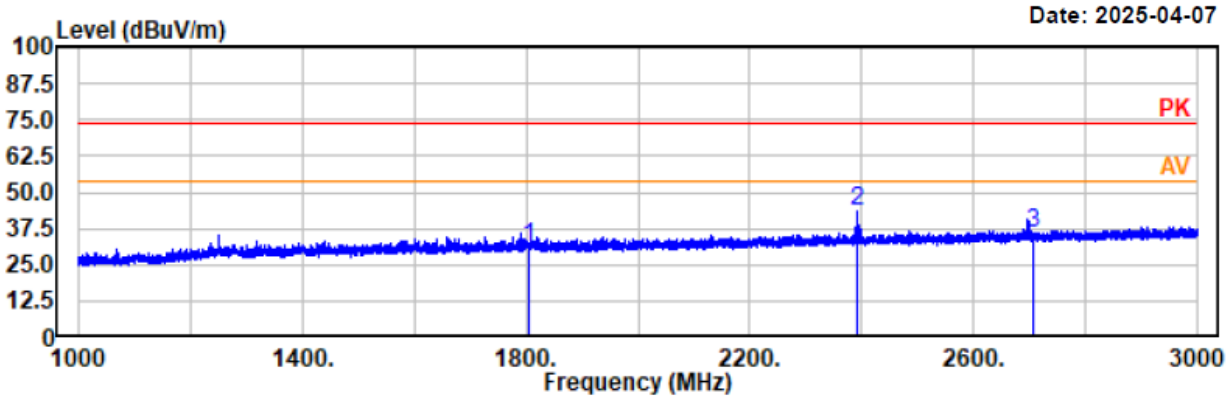


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1800.00	50.61	-13.22	37.39	74.00	36.61	horizontal	Peak
1804.60	43.66	-13.21	30.45	74.00	43.55	horizontal	Peak
2388.60	48.36	-11.16	37.20	74.00	36.80	horizontal	Peak
2706.80	44.51	-10.00	34.51	74.00	39.49	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

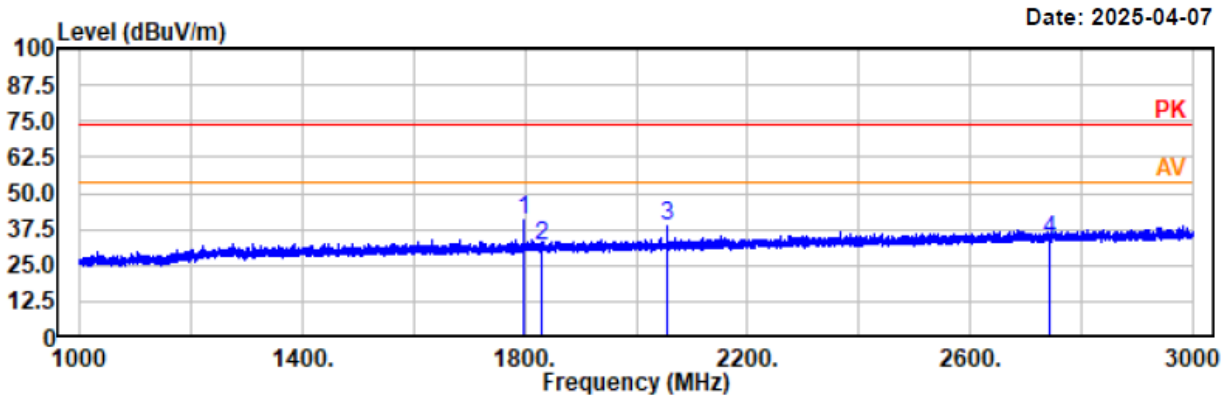


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1804.60	44.47	-13.21	31.26	74.00	42.74	vertical	Peak
2391.20	54.87	-11.16	43.71	74.00	30.29	vertical	Peak
2706.90	45.88	-10.00	35.88	74.00	38.12	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

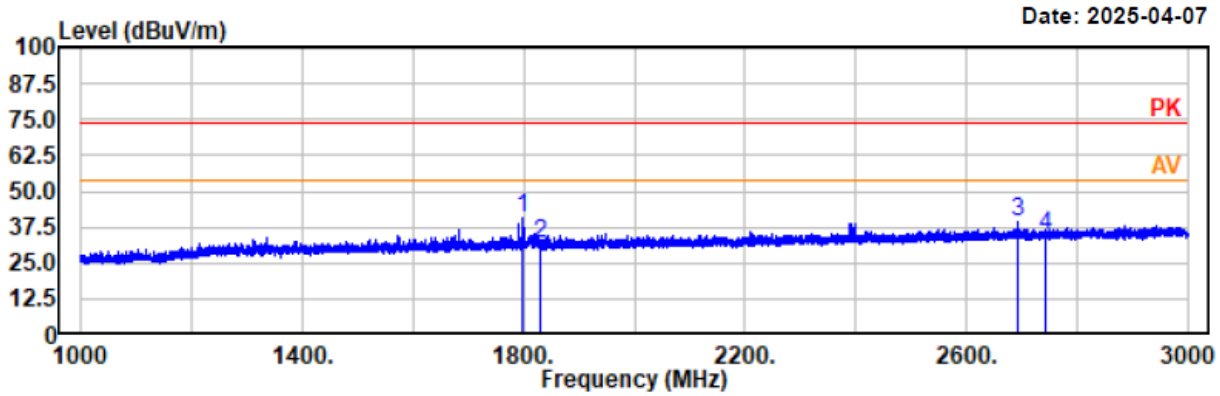


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1797.40	53.65	-13.24	40.41	74.00	33.59	horizontal	Peak
1829.80	44.92	-13.14	31.78	74.00	42.22	horizontal	Peak
2056.60	51.03	-12.41	38.62	74.00	35.38	horizontal	Peak
2744.40	44.01	-9.95	34.06	74.00	39.94	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

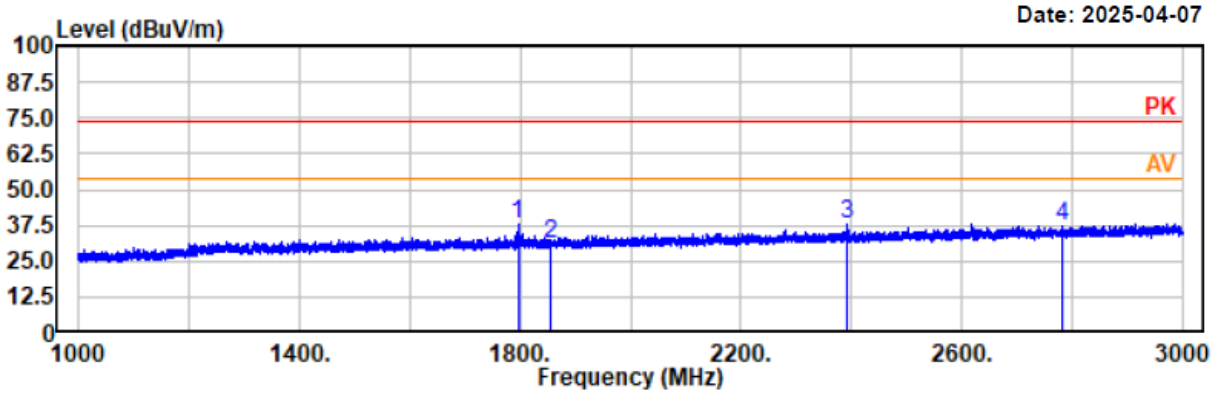


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1797.20	54.11	-13.24	40.87	74.00	33.13	vertical	Peak
1829.80	44.92	-13.14	31.78	74.00	42.22	vertical	Peak
2691.80	49.34	-10.03	39.31	74.00	34.69	vertical	Peak
2744.40	44.51	-9.95	34.56	74.00	39.44	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

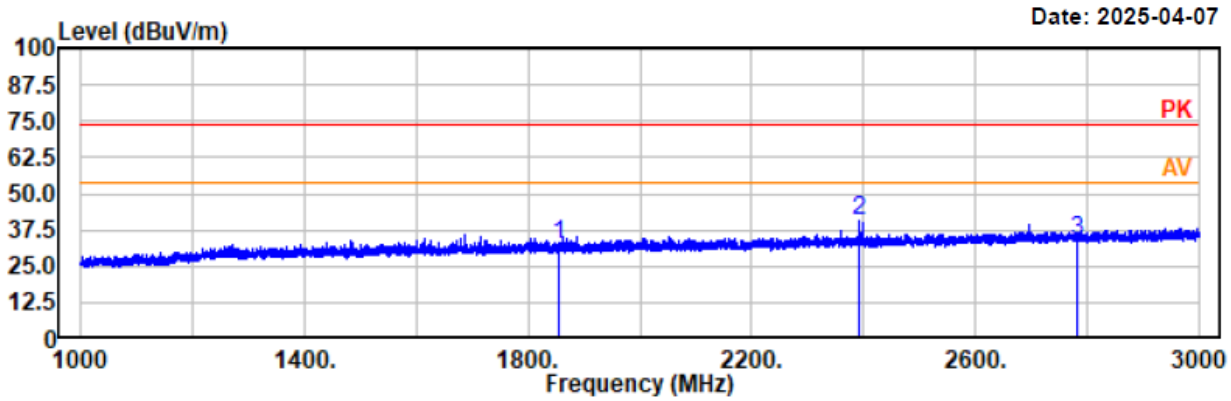


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1796.00	51.48	-13.24	38.24	74.00	35.76	horizontal	Peak
1855.20	43.95	-13.08	30.87	74.00	43.13	horizontal	Peak
2391.20	49.32	-11.16	38.16	74.00	35.84	horizontal	Peak
2782.80	46.74	-9.84	36.90	74.00	37.10	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

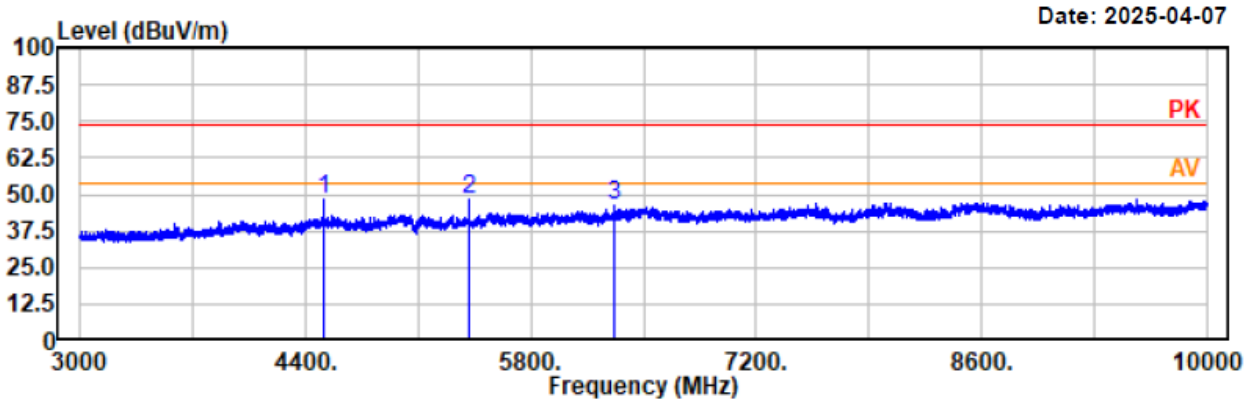


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1855.20	45.73	-13.08	32.65	74.00	41.35	vertical	Peak
2391.00	52.10	-11.16	40.94	74.00	33.06	vertical	Peak
2782.80	43.96	-9.84	34.12	74.00	39.88	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

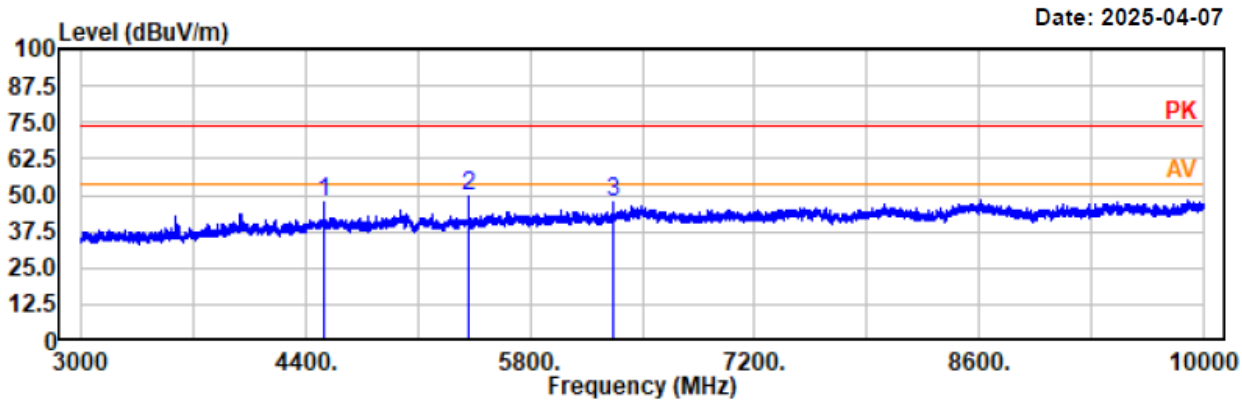


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4510.90	53.43	-5.29	48.14	74.00	25.86	horizontal	Peak
5414.50	52.58	-4.38	48.20	74.00	25.80	horizontal	Peak
6317.20	48.99	-2.49	46.50	74.00	27.50	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

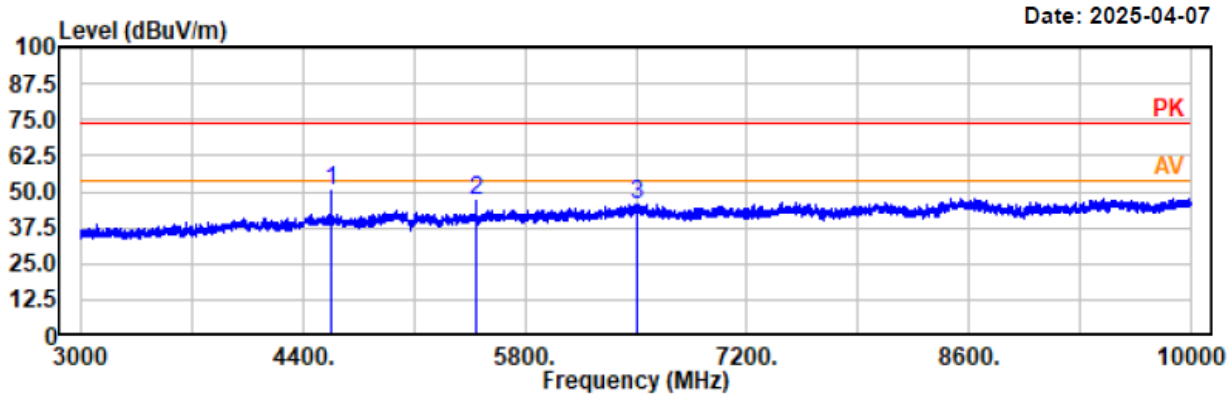


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4511.80	52.60	-5.30	47.30	74.00	26.70	vertical	Peak
5413.60	54.34	-4.38	49.96	74.00	24.04	vertical	Peak
6316.30	50.38	-2.50	47.88	74.00	26.12	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

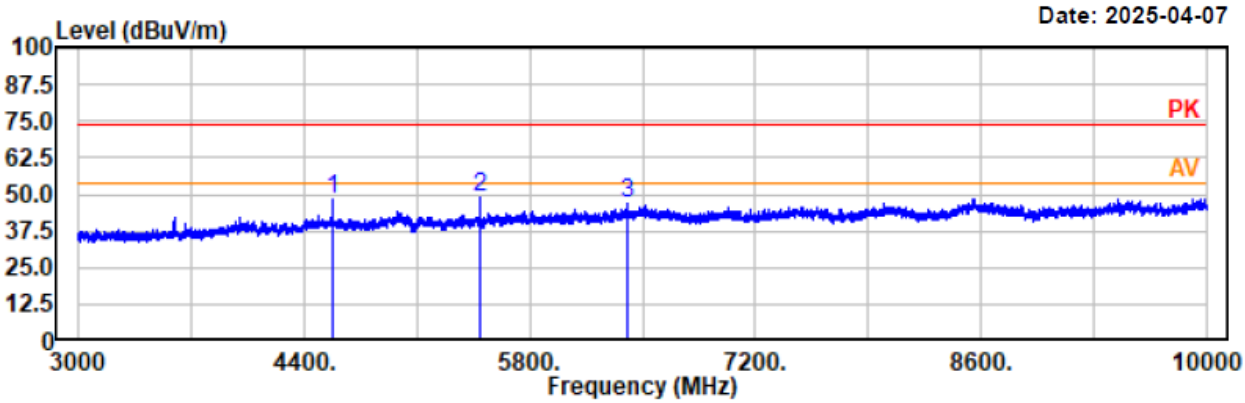


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4574.80	55.35	-5.28	50.07	74.00	23.93	horizontal	Peak
5489.20	51.06	-4.34	46.72	74.00	27.28	horizontal	Peak
6504.40	47.43	-1.86	45.57	74.00	28.43	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

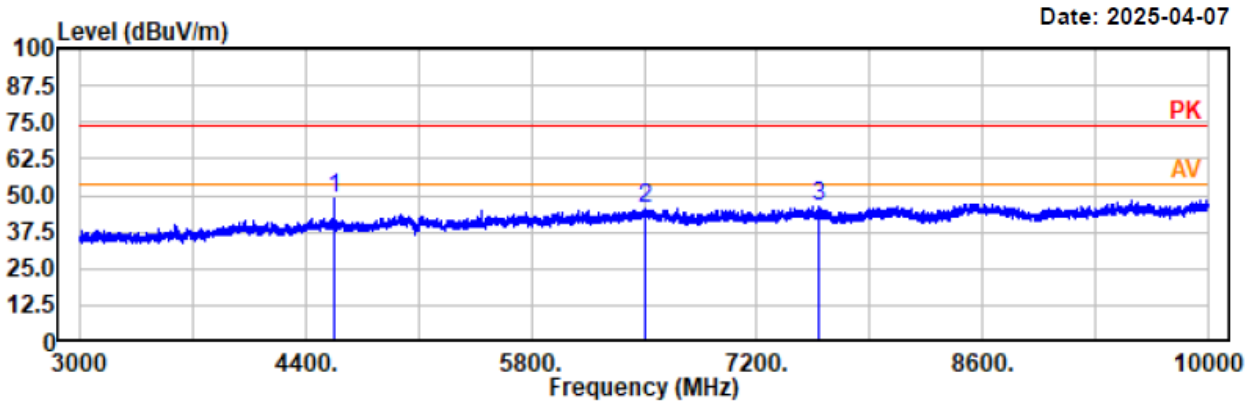


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
4574.80	53.44	-5.28	48.16	74.00	25.84	vertical	Peak
5490.10	53.40	-4.34	49.06	74.00	24.94	vertical	Peak
6404.50	49.09	-2.17	46.92	74.00	27.08	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

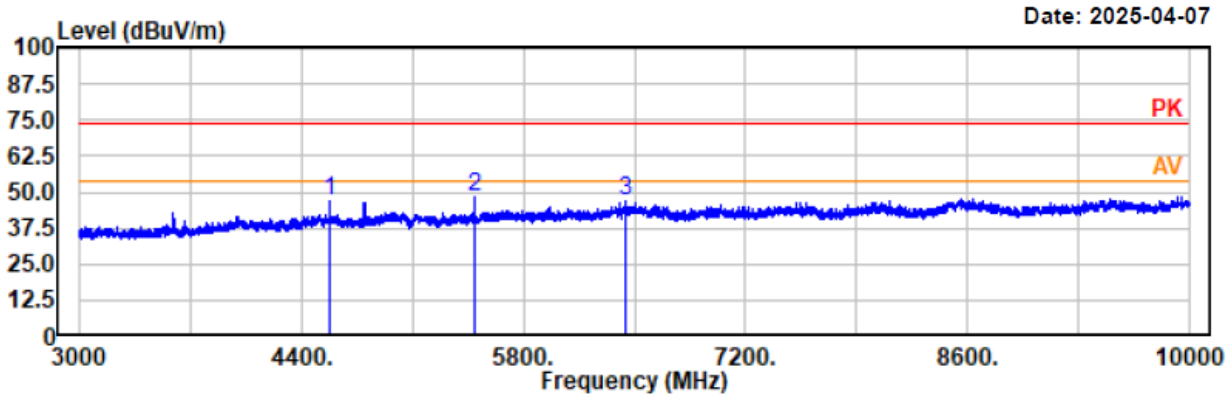


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4574.80	54.01	-5.28	48.73	74.00	25.27	horizontal	Peak
6508.90	47.32	-1.86	45.46	74.00	28.54	horizontal	Peak
7582.60	48.00	-1.84	46.16	74.00	27.84	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 22.1℃/50%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

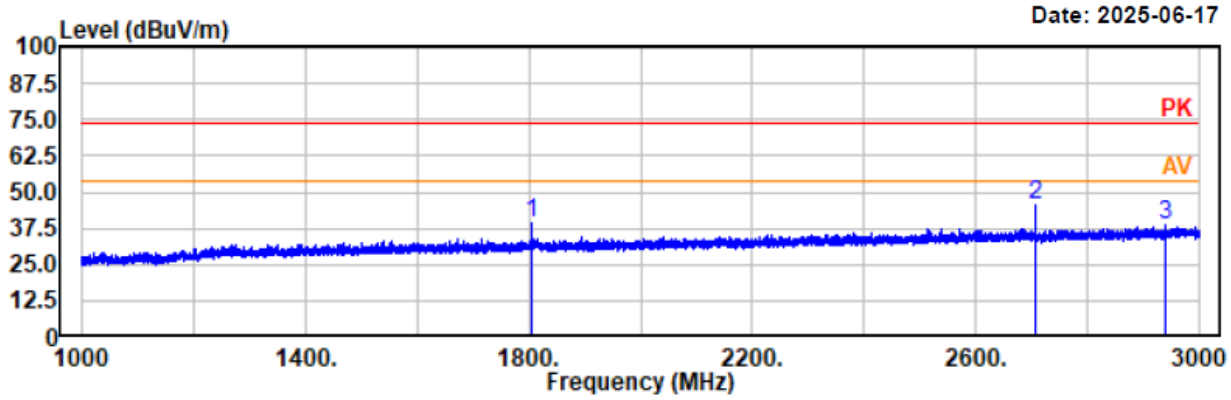


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
4574.80	52.51	-5.28	47.23	74.00	26.77	vertical	Peak
5490.10	52.48	-4.34	48.14	74.00	25.86	vertical	Peak
6444.10	48.59	-1.99	46.60	74.00	27.40	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

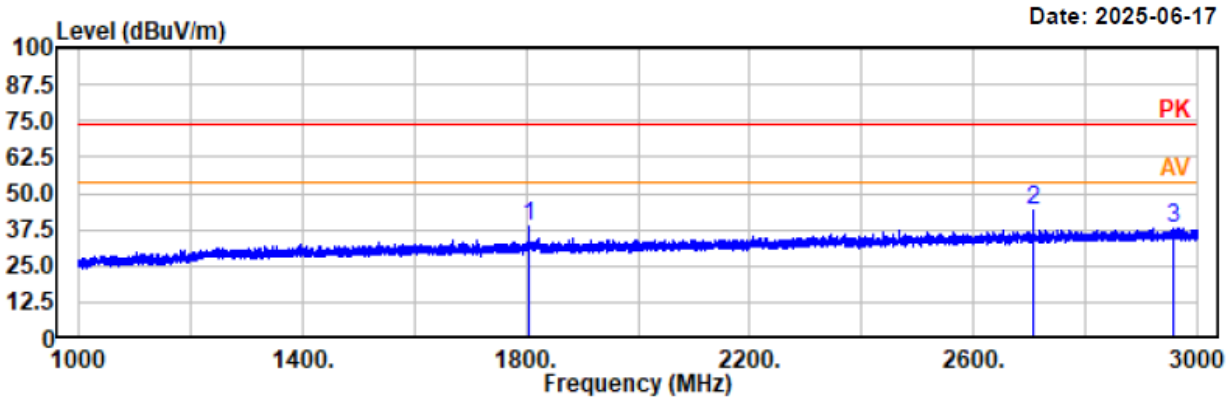


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1804.60	52.71	-13.21	39.50	74.00	34.50	horizontal	Peak
2707.00	55.59	-10.00	45.59	74.00	28.41	horizontal	Peak
2938.60	47.78	-9.29	38.49	74.00	35.51	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

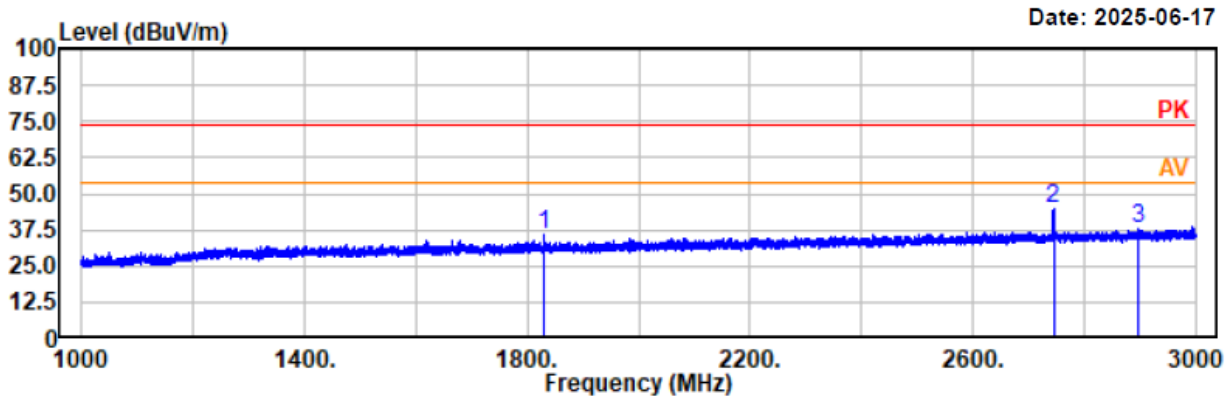


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1804.60	51.62	-13.21	38.41	74.00	35.59	vertical	Peak
2707.00	54.33	-10.00	44.33	74.00	29.67	vertical	Peak
2957.20	47.34	-9.17	38.17	74.00	35.83	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

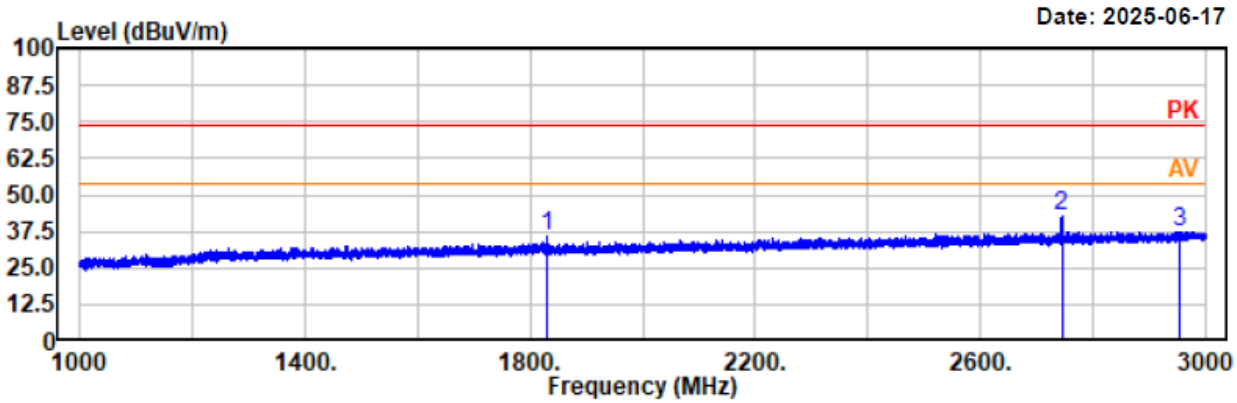


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1829.80	48.73	-13.14	35.59	74.00	38.41	horizontal	Peak
2744.80	54.76	-9.95	44.81	74.00	29.19	horizontal	Peak
2896.60	47.30	-9.56	37.74	74.00	36.26	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

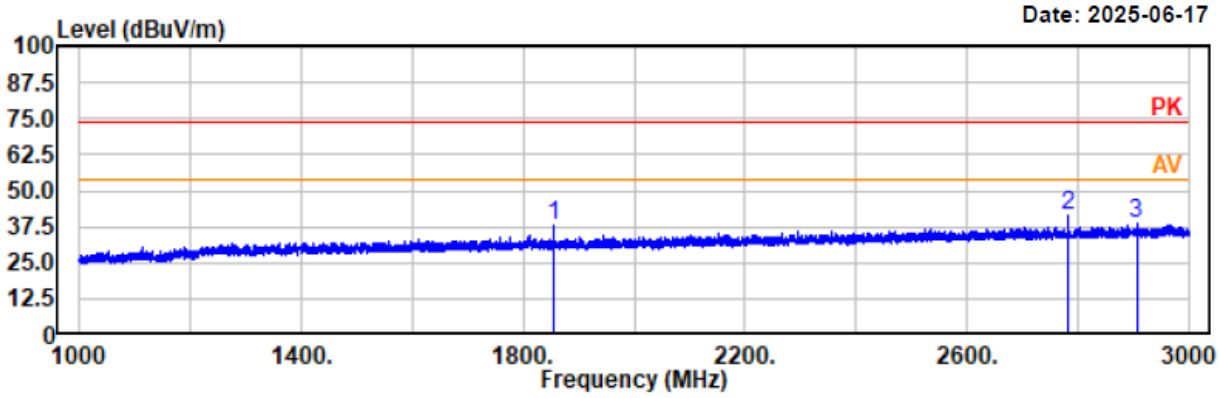


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1829.60	48.98	-13.14	35.84	74.00	38.16	vertical	Peak
2744.80	52.55	-9.95	42.60	74.00	31.40	vertical	Peak
2955.20	46.38	-9.18	37.20	74.00	36.80	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

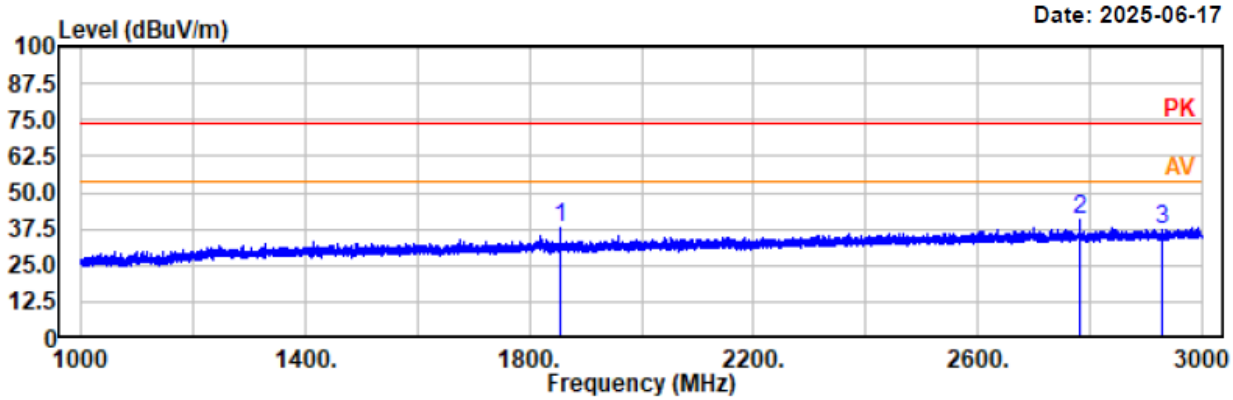


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
1855.20	51.02	-13.08	37.94	74.00	36.06	horizontal	Peak
2782.80	51.49	-9.84	41.65	74.00	32.35	horizontal	Peak
2905.80	47.84	-9.51	38.33	74.00	35.67	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

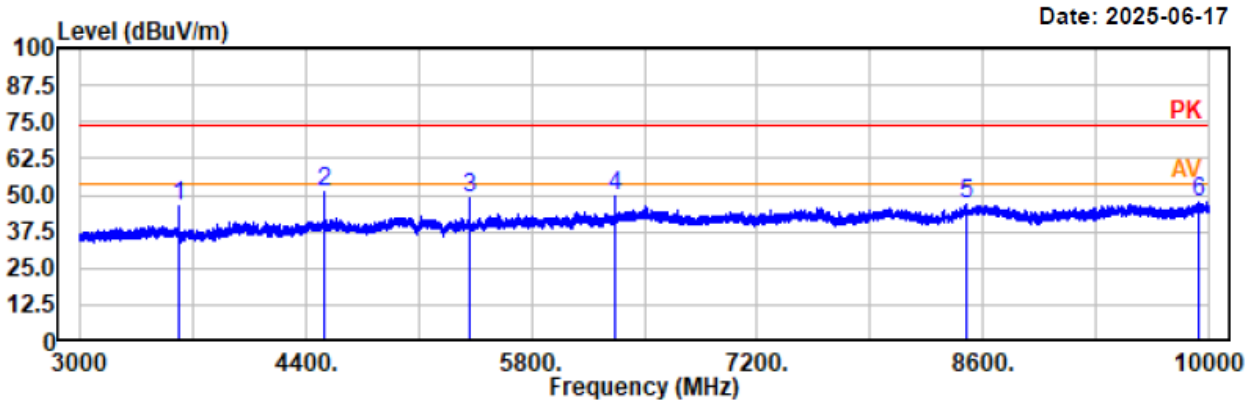


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
1855.20	51.34	-13.08	38.26	74.00	35.74	vertical	Peak
2782.80	50.77	-9.84	40.93	74.00	33.07	vertical	Peak
2928.40	46.88	-9.35	37.53	74.00	36.47	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

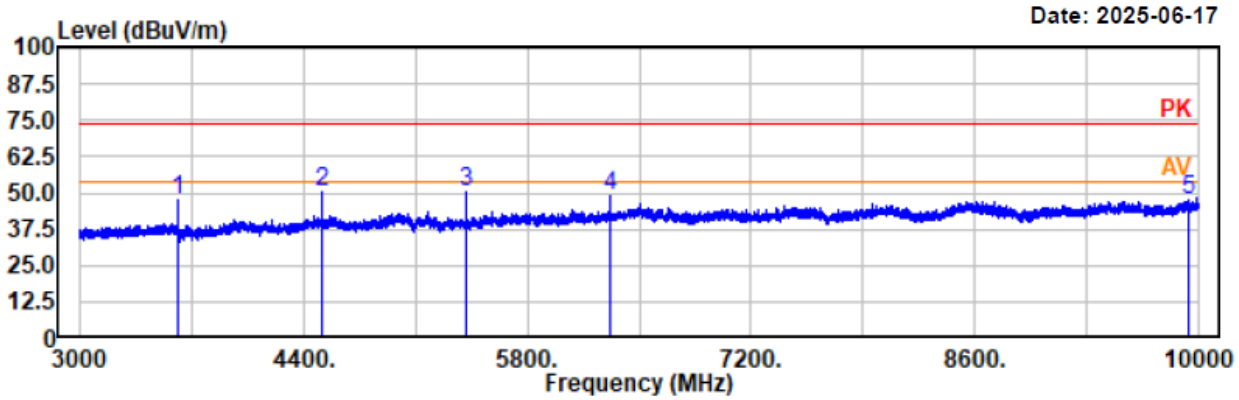


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
3609.00	54.10	-7.65	46.45	74.00	27.55	horizontal	Peak
4512.00	56.42	-5.30	51.12	74.00	22.88	horizontal	Peak
5414.30	53.59	-4.38	49.21	74.00	24.79	horizontal	Peak
6316.60	52.41	-2.50	49.91	74.00	24.09	horizontal	Peak
8495.70	46.65	-0.03	46.62	74.00	27.38	horizontal	Peak
9937.70	45.90	1.38	47.28	74.00	26.72	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

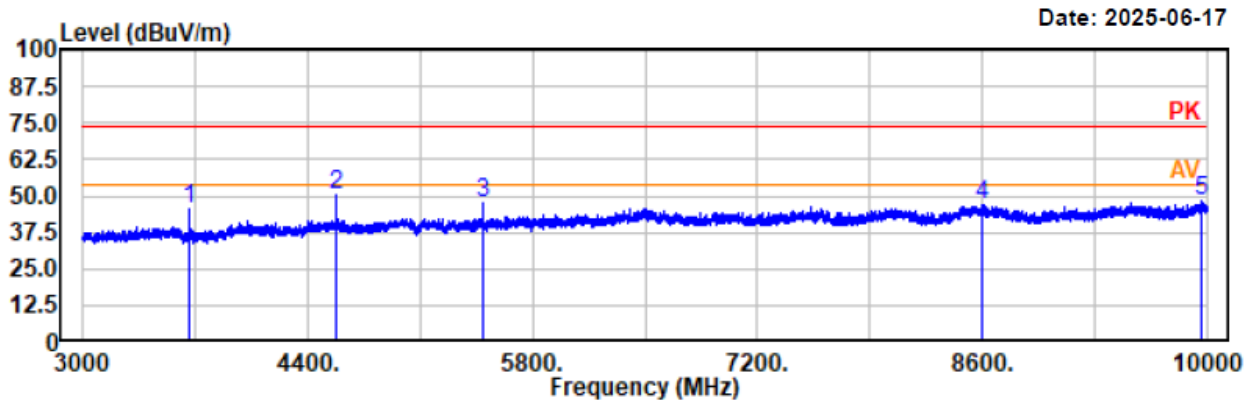


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
3609.00	55.24	-7.65	47.59	74.00	26.41	vertical	Peak
4511.30	55.69	-5.29	50.40	74.00	23.60	vertical	Peak
5413.60	54.64	-4.38	50.26	74.00	23.74	vertical	Peak
6315.90	51.49	-2.50	48.99	74.00	25.01	vertical	Peak
9943.30	46.29	1.38	47.67	74.00	26.33	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

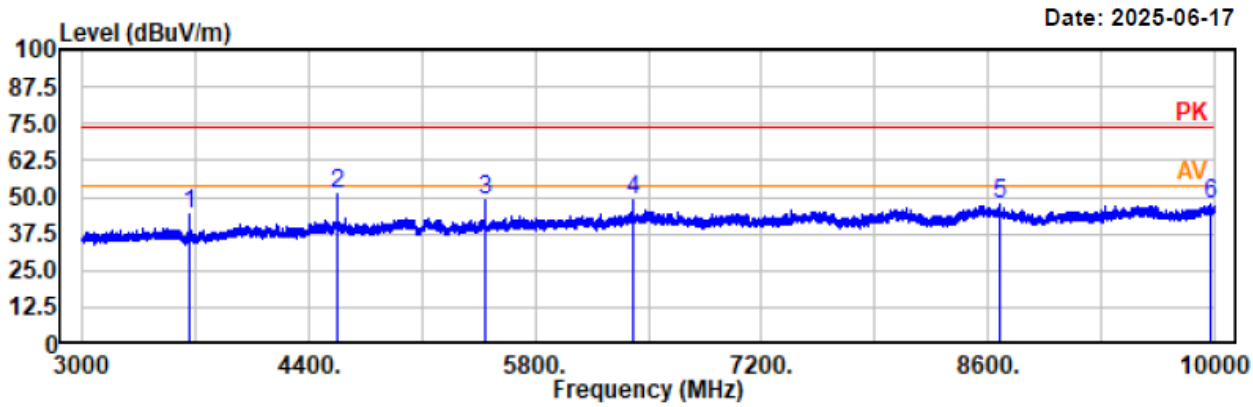


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
3659.40	52.64	-7.32	45.32	74.00	28.68	horizontal	Peak
4574.30	55.79	-5.28	50.51	74.00	23.49	horizontal	Peak
5489.90	51.61	-4.34	47.27	74.00	26.73	horizontal	Peak
8594.40	47.13	-0.27	46.86	74.00	27.14	horizontal	Peak
9970.60	46.71	1.45	48.16	74.00	25.84	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 914.9MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

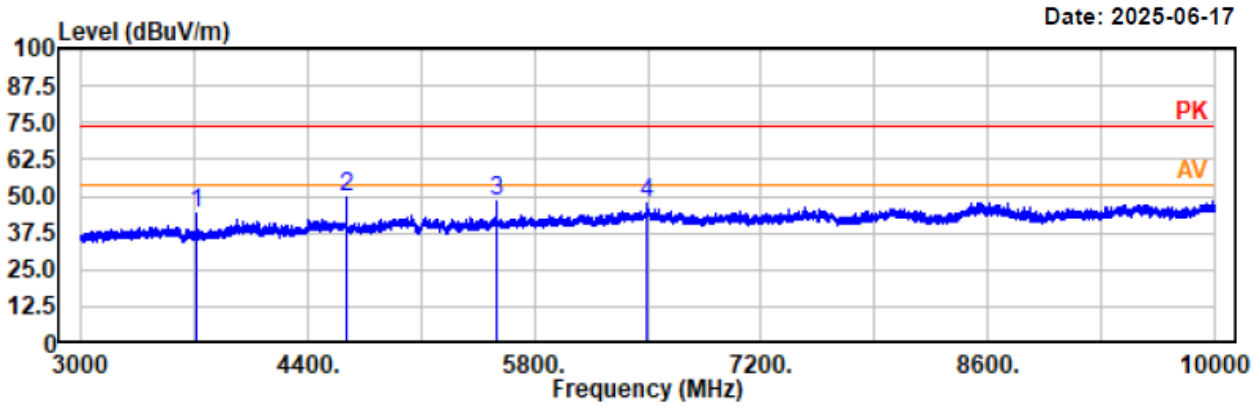


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
3659.40	51.55	-7.32	44.23	74.00	29.77	vertical	Peak
4574.30	56.51	-5.28	51.23	74.00	22.77	vertical	Peak
5489.90	53.39	-4.34	49.05	74.00	24.95	vertical	Peak
6404.10	50.82	-2.17	48.65	74.00	25.35	vertical	Peak
8674.90	47.65	-0.40	47.25	74.00	26.75	vertical	Peak
9979.00	46.41	1.48	47.89	74.00	26.11	vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

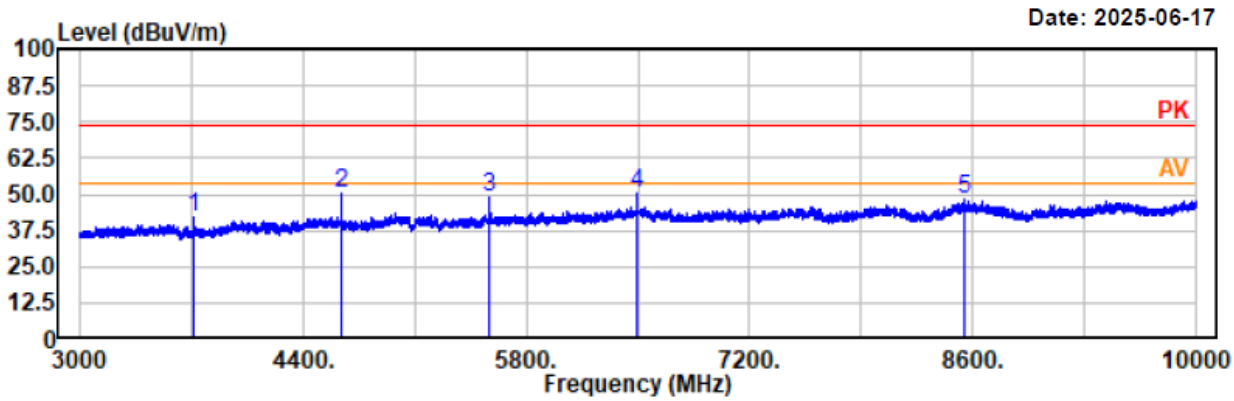


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
3710.50	51.39	-7.09	44.30	74.00	29.70	horizontal	Peak
4638.00	54.56	-5.24	49.32	74.00	24.68	horizontal	Peak
5565.50	52.29	-4.16	48.13	74.00	25.87	horizontal	Peak
6493.00	49.47	-1.87	47.60	74.00	26.40	horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 22.8℃/61%/100.2kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



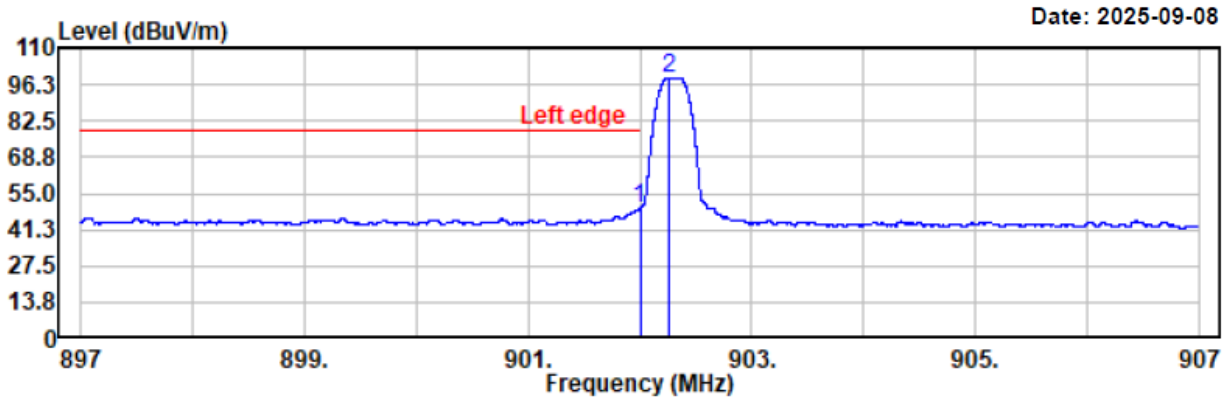
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
3710.50	48.95	-7.09	41.86	74.00	32.14	vertical	Peak
4638.00	55.60	-5.24	50.36	74.00	23.64	vertical	Peak
5566.20	53.39	-4.16	49.23	74.00	24.77	vertical	Peak
6493.00	51.97	-1.87	50.10	74.00	23.90	vertical	Peak
8551.70	48.22	-0.15	48.07	74.00	25.93	vertical	Peak

Radiated Bands Emissions:

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 25.8℃/58%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

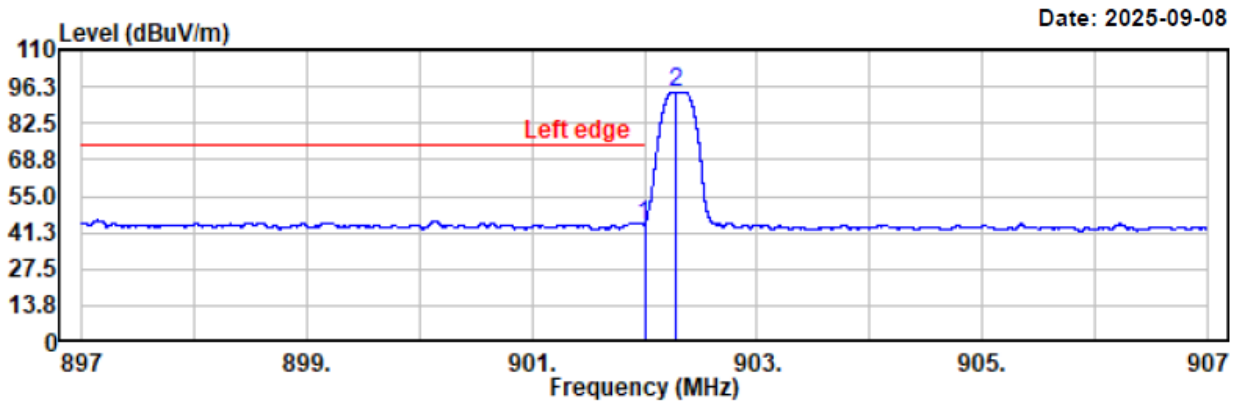


Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
902.00	14.69	34.28	48.97	78.74	29.77	Horizontal	Peak
902.25	64.46	34.28	98.74	125.20	26.46	Horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 25.8℃/58%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

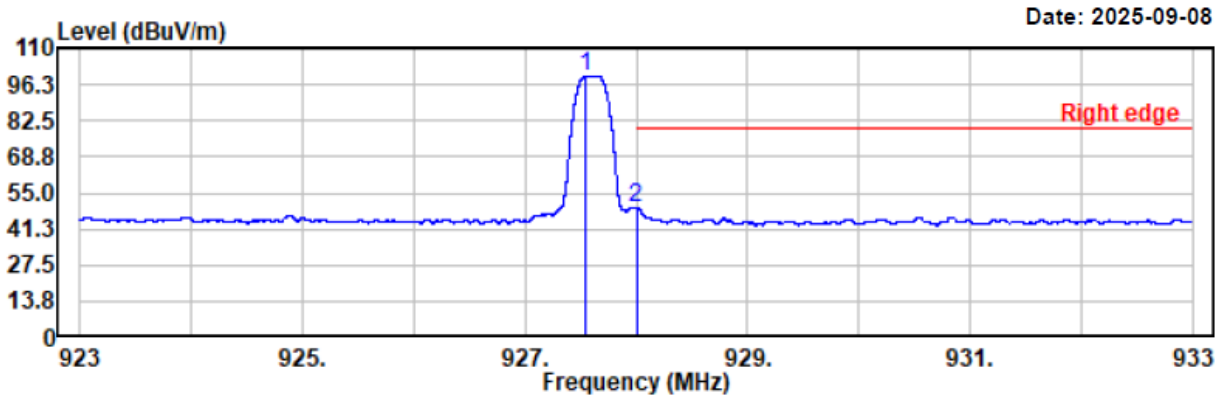


Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
902.00	10.02	34.28	44.30	74.09	29.79	Vertical	Peak
902.28	59.81	34.28	94.09	125.20	31.11	Vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 25.8℃/58%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

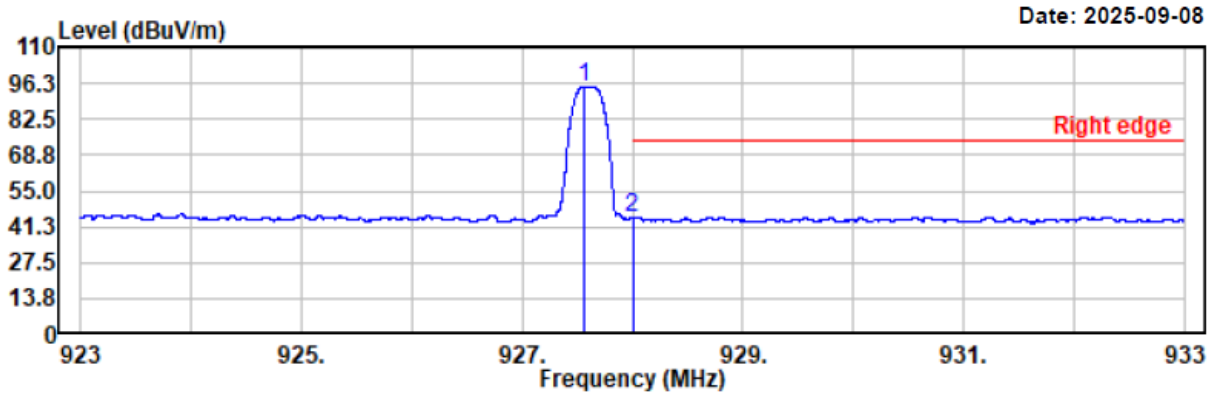


Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
927.54	64.91	34.57	99.48	125.20	25.72	Horizontal	Peak
928.00	14.64	34.57	49.21	79.48	30.27	Horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT304-915M
Test distance: 3m

Temp/Humi/ATM: 25.8℃/58%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

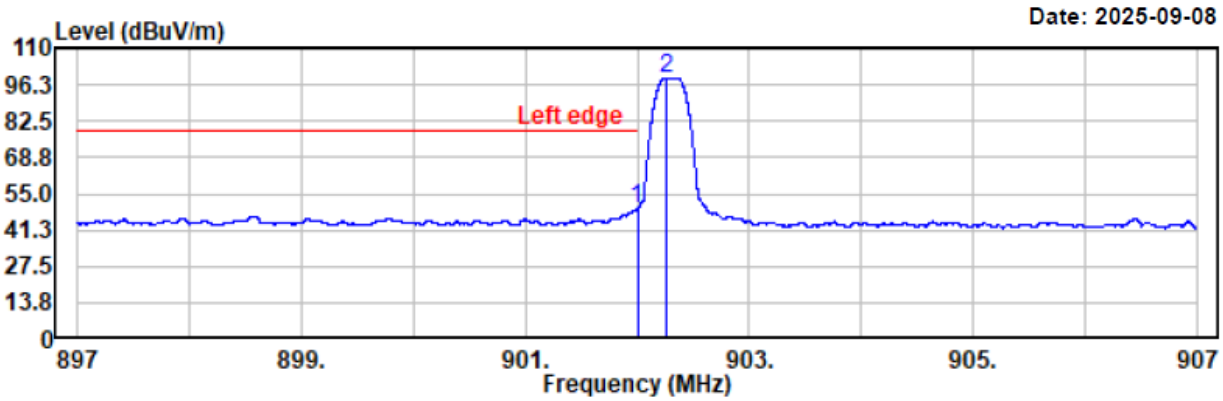


Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
927.57	60.12	34.57	94.69	125.20	30.51	Vertical	Peak
928.00	10.07	34.57	44.64	74.69	30.05	Vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 25.8℃/58%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

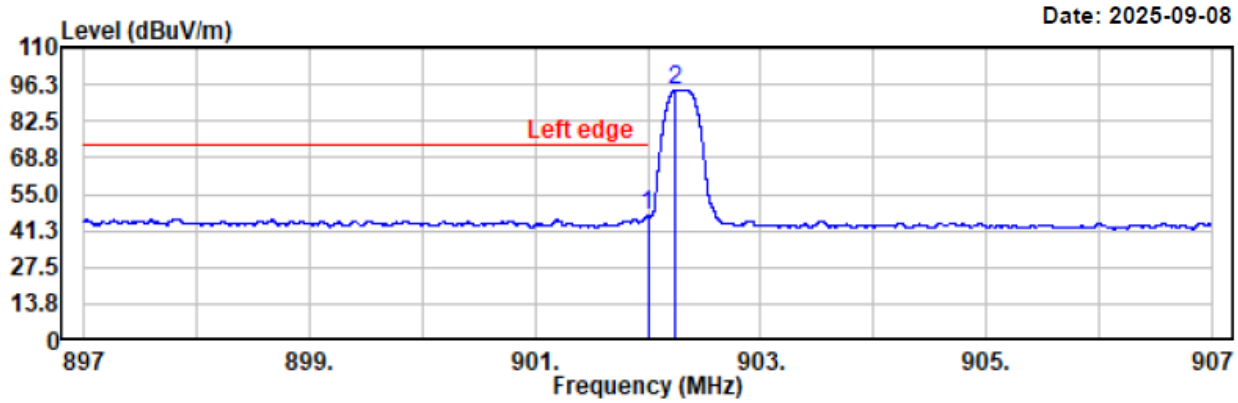


Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
902.00	14.93	34.28	49.21	78.84	29.63	Horizontal	Peak
902.26	64.56	34.28	98.84	125.20	26.36	Horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 902.3MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 25.8℃/58%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

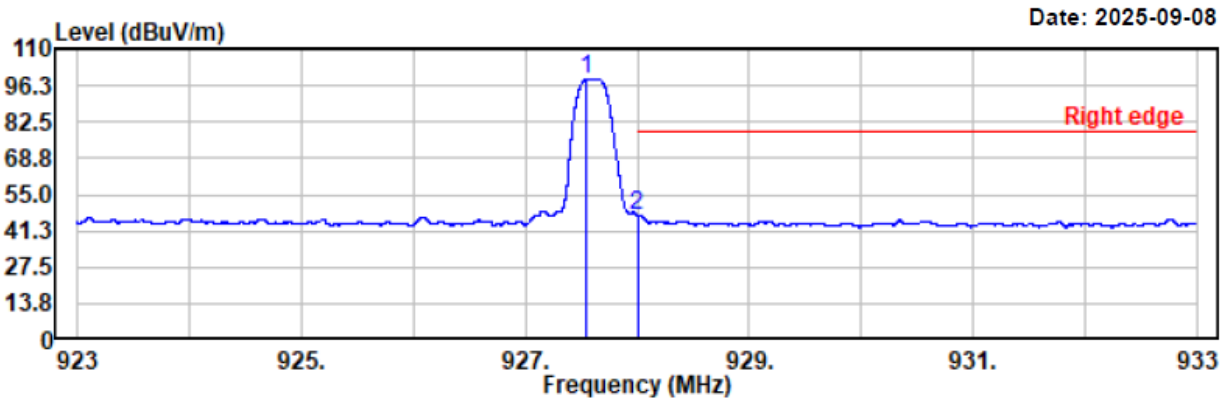


Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
902.00	12.45	34.28	46.73	73.83	27.10	Vertical	Peak
902.24	59.55	34.28	93.83	125.20	31.37	Vertical	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 25.8℃/58%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

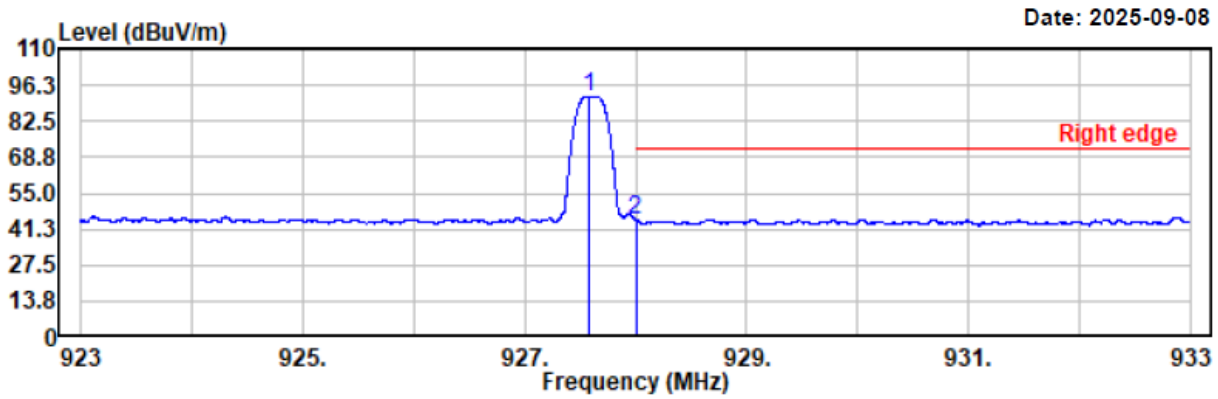


Condition: PK RBW:100kHz VBW:300kHz SWT:auto

Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
927.54	64.00	34.57	98.57	125.20	26.63	Horizontal	Peak
928.00	12.59	34.57	47.16	78.57	31.41	Horizontal	Peak

Project No.: 2507R50071E-RF
Test Mode: 125k 927.6MHz
EUT Model: WT303-915M
Test distance: 3m

Temp/Humi/ATM: 25.8℃/58%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Condition: PK RBW:100kHz VBW:300kHz SWT:auto

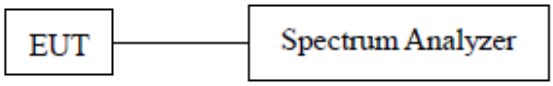
Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
927.58	57.19	34.57	91.76	125.20	33.44	Vertical	Peak
928.00	10.39	34.57	44.96	71.76	26.80	Vertical	Peak

FCC §15.247(a)(1)(i) - 20 dB EMISSION BANDWUDTH

Applicable Standard

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

EUT Setup



Test Procedure

According to ANSI C63.10-2020 Section 6.9.2

a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be at least three times RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.6.2

d) Steps a) through c) might require iteration to adjust within the specified tolerances.
e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target "−xx dB down" requirement; that is, if the requirement calls for measuring the −20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.

f) Set detection mode to peak and trace mode to max-hold.

g) Determine the reference value: Set the EUT to transmit an unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

h) Determine the "−xx dB down amplitude" using [(reference value) − xx]. Alternatively, this calculation may be made by using the marker-delta function of the instrument.

i) If the reference value is determined by an unmodulated carrier, then turn the EUT modulation ON, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).

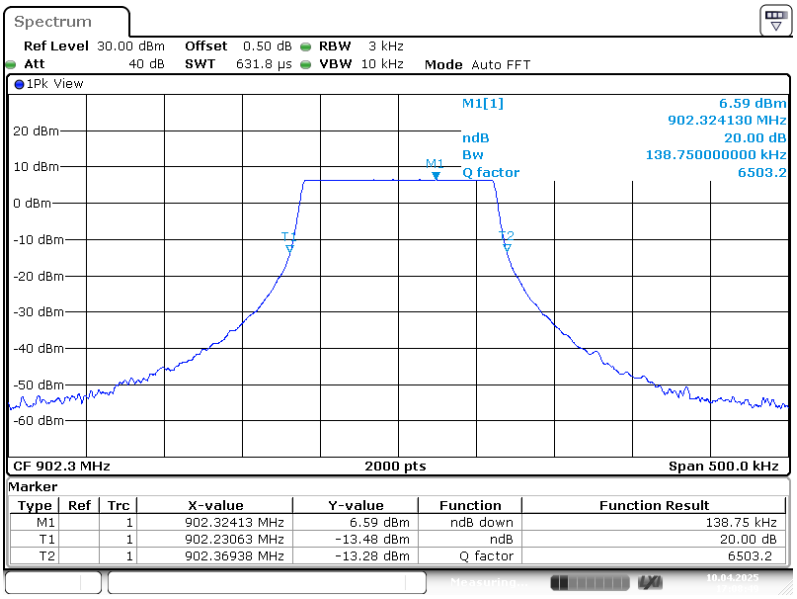
j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the "−xx dB down amplitude" determined in step h). If a marker is below this "−xx dB down amplitude" value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the "−xx dB down amplitude" determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Test Data

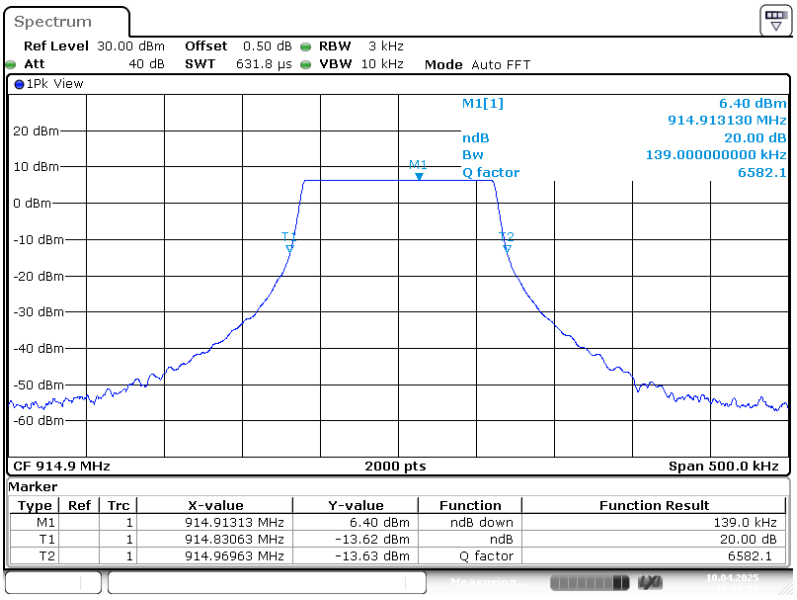
Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-04-10	Environment:	Temp.: 22℃ Humi.: 57% Atm.:100.4kPa
Test Channel	**Test Frequency (MHz)**	**20 dB Bandwidth (MHz)**	**Limit (MHz)**
Lowest	902.3	0.139	<0.25
Middle	914.9	0.139	<0.25
Highest	927.6	0.138	<0.25

Lowest Channel



ProjectNo.:2507R50071E-RF Tester:Braylon Ma
Date: 10.APR.2025 17:08:49

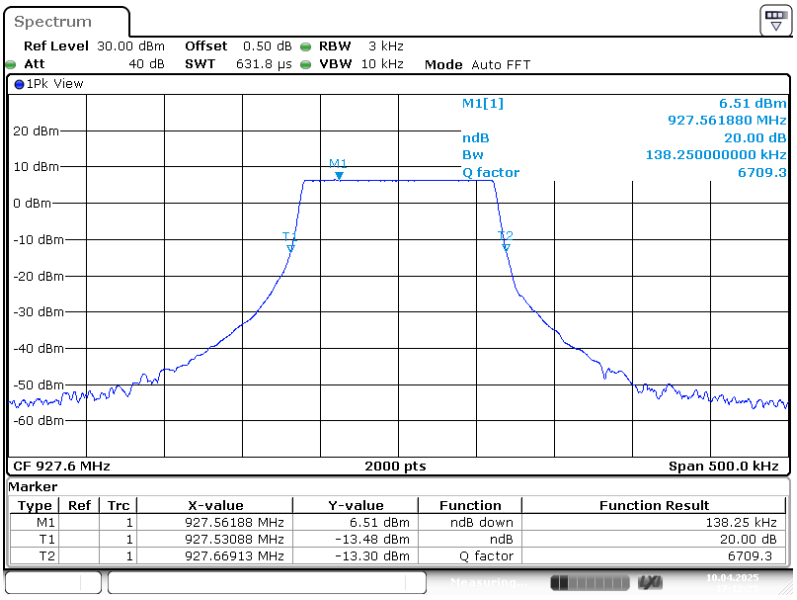
Middle Channel



ProjectNo.:2507R50071E-RF Tester:Braylon Ma

Date: 10.APR.2025 17:09:59

High Channel



ProjectNo.:2507R50071E-RF Tester:Braylon Ma

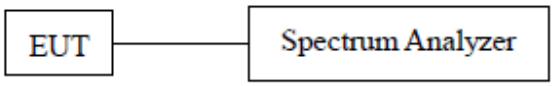
Date: 10.APR.2025 17:12:25

FCC §15.247(a)(1) - CHANNEL SEPARATION

Applicable Standard

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

EUT Setup



Test Procedure

According to ANSI C63.10-2020 Section 7.8.2

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

a) Span: Wide enough to capture the peaks of two adjacent channels.
b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
c) Video (or average) bandwidth (VBW) ≥ RBW.
d) Sweep: No faster than coupled (auto) time.
e) Detector function: Peak.
f) Trace: Max-hold.
g) Allow the trace to stabilize.

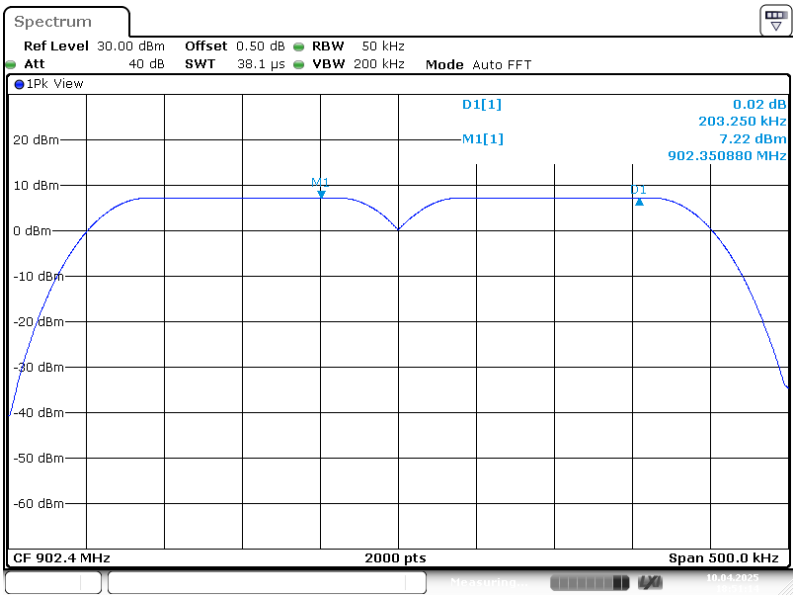
Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Compliance of an EUT with the appropriate regulatory limit shall be determined. A plot of the data shall be included in the test report.

Where the device shares the same channel plan (carrier frequencies and number of channels) across multiple data rates or modulation schemes then the carrier separation need only be measured for one of those modulation schemes or data rates.

Test Data

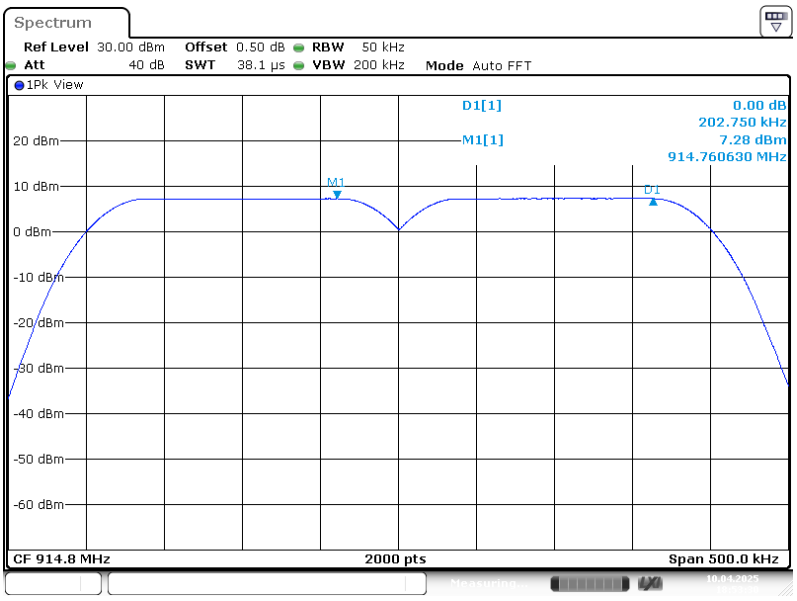
Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-04-10	Environment:	Temp.: 22℃ Humi.: 57% Atm.:100.4kPa
Test Channel	**Test Frequency (MHz)**	**Channel Separation (MHz)**	**Limits (MHz)**
Lowest	902.3~902.5	0.203	0.139
Middle	914.7~914.9	0.203	0.139
Highest	927.4~927.6	0.203	0.138

Lowest Channel



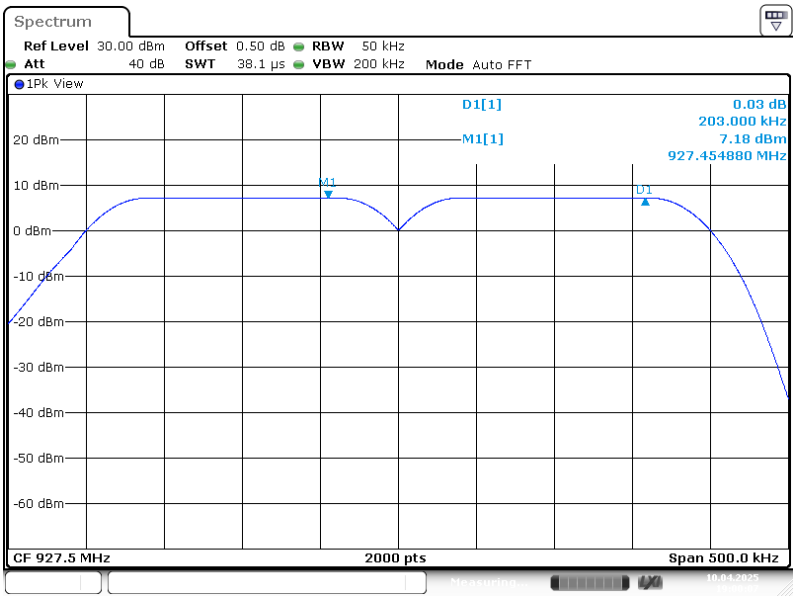
ProjectNo.:2507R50071E-RF Tester:Braylon Ma
Date: 10.APR.2025 18:51:14

Middle Channel



ProjectNo.:2507R50071E-RF Tester:Braylon Ma
Date: 10.APR.2025 18:53:30

Highest Channel



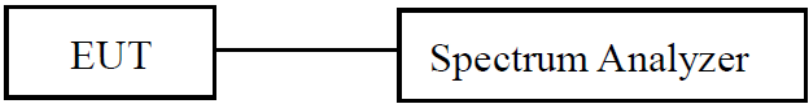
ProjectNo.:2507R50071E-RF Tester:Braylon Ma
Date: 10.APR.2025 19:00:07

FCC §15.247(a)(1)(i) - NUMBER OF HOPPING FREQUENCY

Applicable Standard

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

EUT Setup



Test Procedure

According to ANSI C63.10-2020 Section 7.8.3

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

a) Span: The frequency band of operation. Depending on the number of channels the device supports, it could be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
b) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
c) VBW ≥ RBW.
d) Sweep: No faster than coupled (auto) time.
e) Detector function: Peak.
f) Trace: Max-hold.
g) Allow the trace to stabilize.

It might prove necessary to break the span up into subranges to show clearly all of the hopping frequencies. Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels. A spectral plot of the data shall be included in the test report.

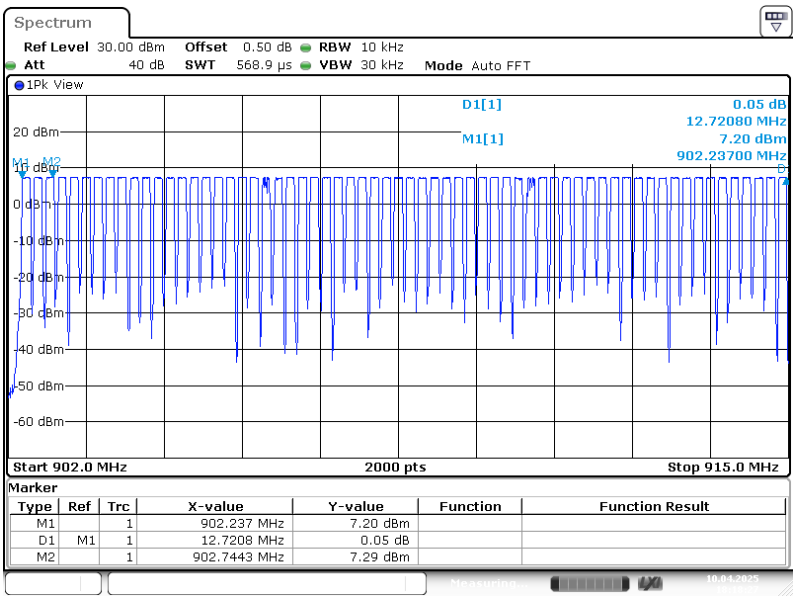
Where the device shares the same channel plan (carrier frequencies and number of channels) across multiple data rates or modulation schemes then the number of channels need only be measured for one of those modulation schemes or data rates.

Test Data

Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-04-10	Environment:	Temp.: 22℃ Humi.: 57% Atm.:100.4kPa

Frequency Range(MHz)	Number of Hopping Channel
902-928	127

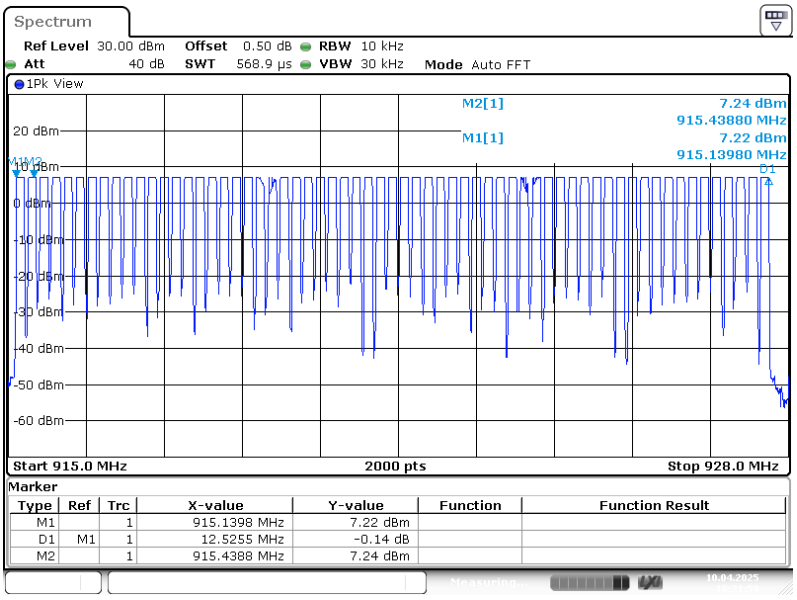
902-915MHz



ProjectNo.:2507R50071E-RF Tester:Braylon Ma

Date: 10.APR.2025 18:18:27

915-928MHz



ProjectNo.:2507R50071E-RF Tester:Braylon Ma

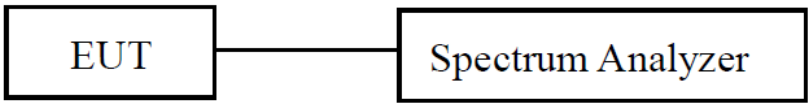
Date: 10.APR.2025 18:21:59

FCC §15.247(f) - TIME OF OCCUPANCY (DWELL TIME)

Applicable Standard

For the purposes of this section, hybrid systems are those that employ a combination of both frequency hopping and digital modulation techniques. The frequency hopping operation of the hybrid system, with the direct sequence or digital modulation operation turned-off, shall have an average time of occupancy on any frequency not to exceed 0.4seconds within a time period in seconds equal to the number of hopping frequencies employed multiplied by 0.4. The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

EUT Setup



Test Procedure

According to ANSI C63.10-2020 Section 7.8.4

Use the following spectrum analyzer settings to determine the dwell time per hop:

a) Span: Zero span, centered on a hopping channel.
b) RBW shall be ≤ channel spacing and where possible RBW should be set >> 1 / T, where T is the expected transmission time per hop.
c) Sweep time: Set so that the start of the first transmission and end of the last transmission for the hop are clearly captured. Setting the sweep time to be slightly longer than the hopping period per channel (hopping period = 1/hopping rate) should achieve this.
d) Use a video trigger, where possible with a trigger delay, so that the start of the transmission is clearly observed. The trigger level might need adjustment to reduce the chance of triggering when the system hops on an adjacent channel.
e) Detector function: Peak.
f) Trace: Clear-write, single sweep.
g) Place markers at the start of the first transmission on the channel and at the end of the last transmission. The dwell time per hop is the time between these two markers.

To determine the number of hops on a channel in the regulatory observation period repeat the measurement using a longer sweep time. When the device uses a single hopping sequence the period of measurement should be sufficient to capture at least 2 hops. When the device uses a dynamic hopping sequence, or the sequence varies, the period of measurement may need to capture multiple hops to better determine the average time of occupancy. Count the number of hops on the channel across the sweep time.

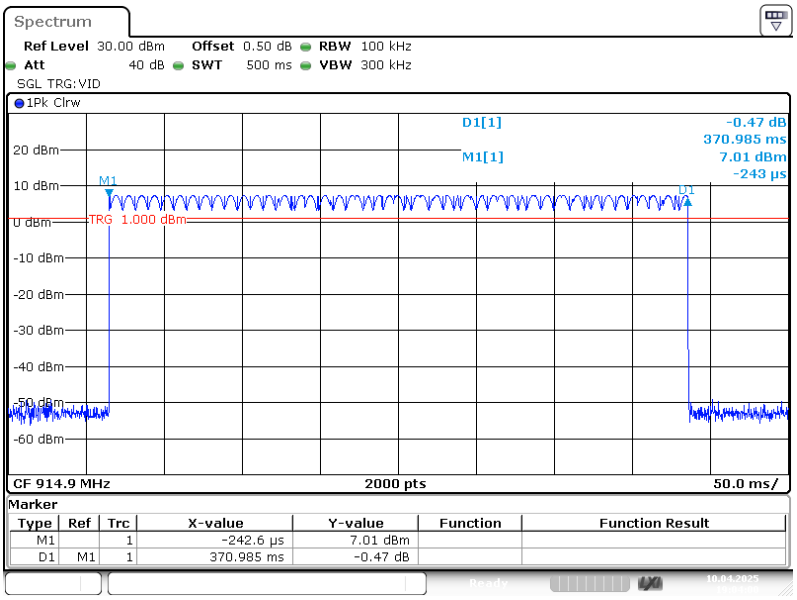
Test Data

Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-04-10~2025-09-18	Environment:	Temp.: 22~25.2℃ Humi.: 50~57% Atm.:100.2~100.4kPa

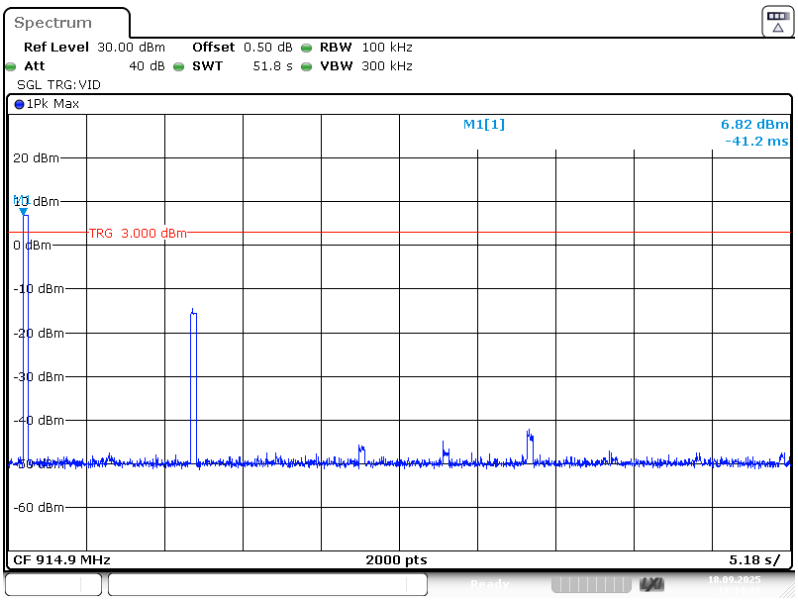
Test Frequency (MHz)	Pulse width (ms)	Observation time (s)	Hopping Numbers in Observation time	Dwell Time (s)	Limit (s)
914.9	370.985	50.8	1	0.371	0.400

Note1: Observation time=127*0.4=50.8s
Note2: In order to display the complete waveform, the trigger was delayed by one second, and the observation time was set to 50.8 seconds during testing.

Pulse width



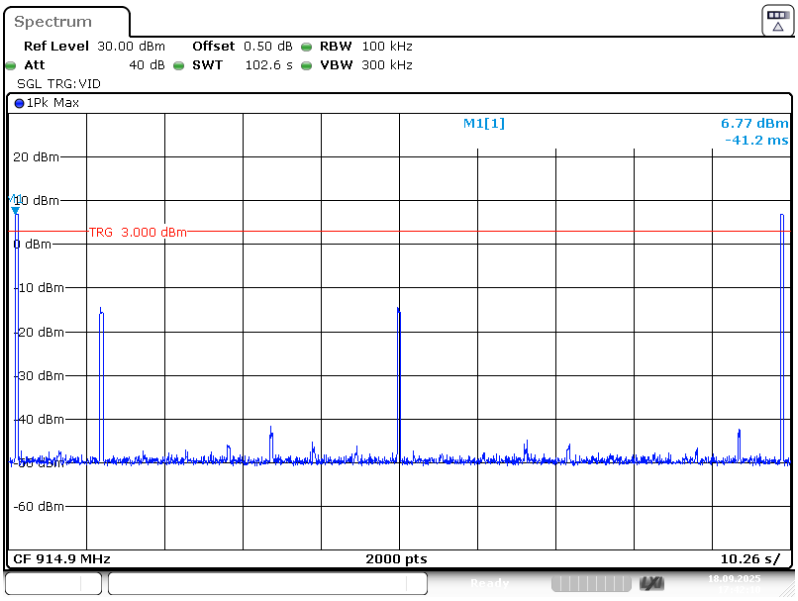
Hopping Numbers in Observation time (51.8s)



ProjectNo.:2507R50071E-RF Tester:Braylon Ma

Date: 18.SEP.2025 17:34:31

Hopping Numbers in Observation time (102.6s)



ProjectNo.:2507R50071E-RF Tester:Braylon Ma

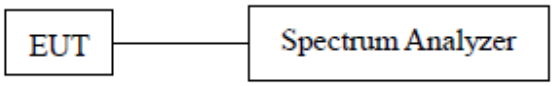
Date: 18.SEP.2025 17:42:10

FCC §15.247(b)(2) – MAXIMUNM CONDUCTED OUTPUT POWER

Applicable Standard

For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

EUT Setup



Test Procedure

According to ANSI C63.10-2020 Section 7.8.5

This is an RF-conducted test to evaluate maximum peak output power. Use a direct connection between the antenna port of the unlicensed wireless device and the spectrum analyzer, through suitable attenuation. Frequency hopping shall be disabled for this test. Use the following spectrum analyzer setting:

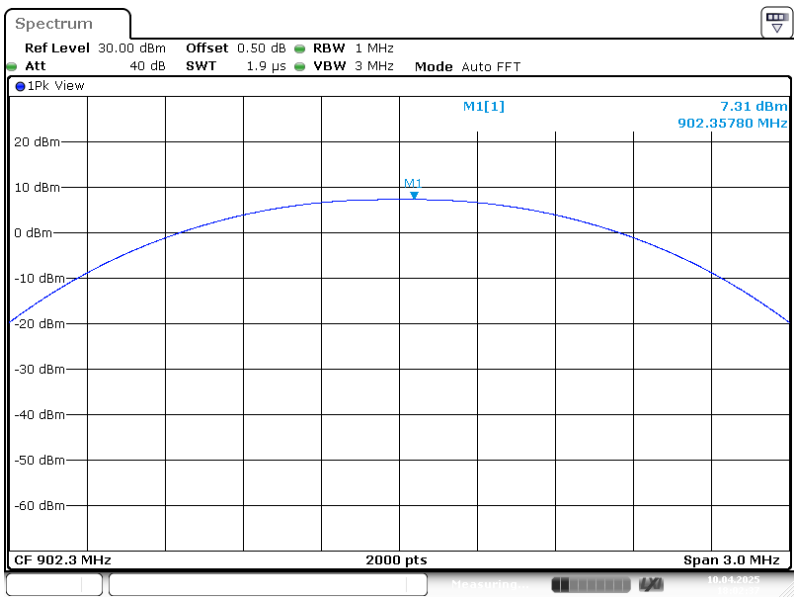
a) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
b) RBW > 20 dB bandwidth of the emission being measured.
c) VBW ≥ RBW.
d) Sweep: No faster than coupled (auto) time.
e) Detector function: Peak.
f) Trace: Max-hold.
g) Allow trace to stabilize.
h) Use the marker-to-peak function to set the marker to the peak of the emission.
i) The indicated level is the peak output power, after any corrections for external attenuators and cables.
j) A plot of the test results and setup description shall be included in the test report.

Test Data

Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-04-10	Environment:	Temp.: 22℃ Humi.: 57% Atm.:100.4kPa

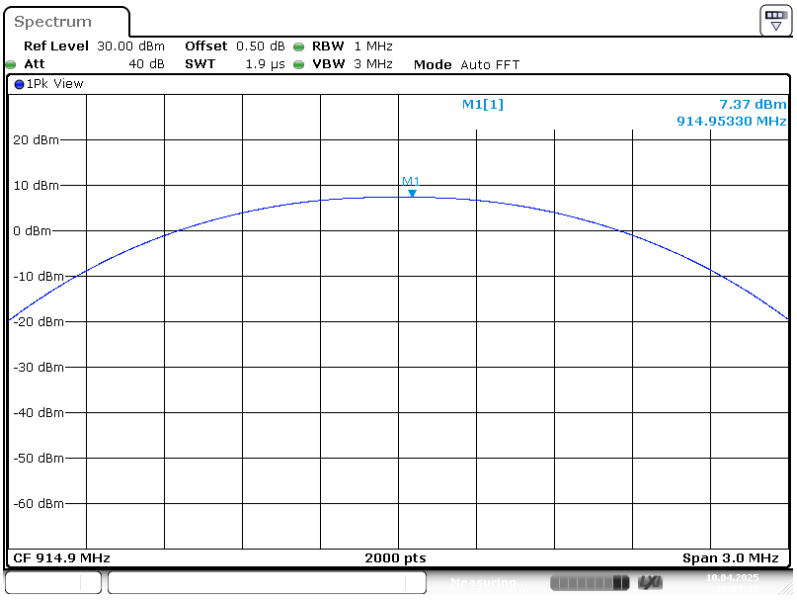
Test Channel	Test Frequency (MHz)	Peak Conducted Output Power (dBm)	Limits (dBm)
Lowest	902.3	7.31	30
Middle	914.9	7.37	30
Highest	927.6	7.26	30

Lowest Channel



ProjectNo.:2507R50071E-RF Tester:Braylon Ma
Date: 10.APR.2025 18:02:36

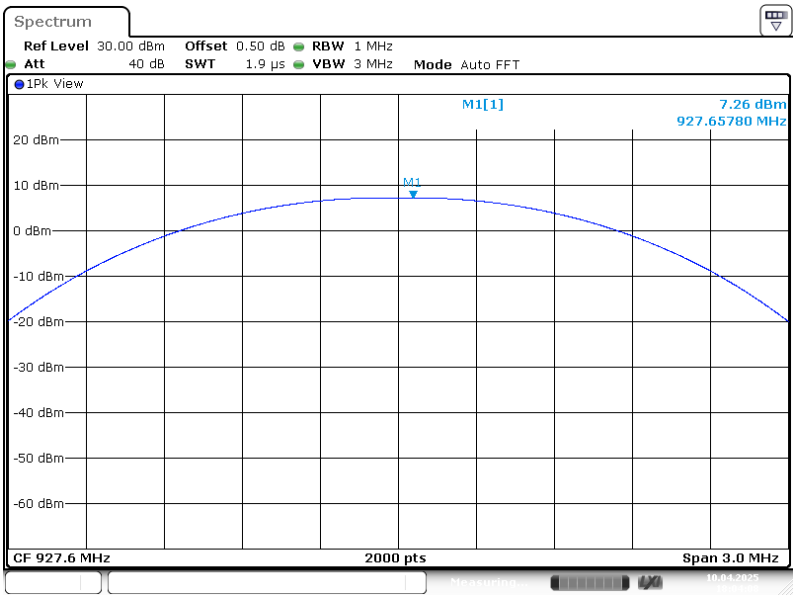
Middle Channel



ProjectNo.:2507R50071E-RF Tester:Braylon Ma

Date: 10.APR.2025 18:03:31

Highest Channel



ProjectNo.:2507R50071E-RF Tester:Braylon Ma

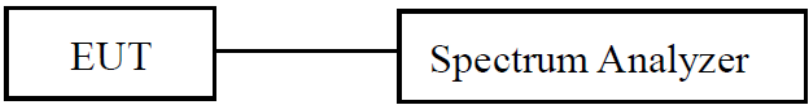
Date: 10.APR.2025 18:04:08

FCC §15.247(d) - 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE

Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator 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, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

EUT Setup



Test Procedure

According to ANSI C63.10-2020 Section 7.8.7.2

For band-edge measurements, use the band-edge procedure in 6.10. Band-edge measurements shall be tested both on single channels, and with the EUT hopping.

a) Set the center frequency and span to encompass frequency range to be measured.
b) Set the RBW = 100 kHz.
c) Set the VBW ≥ [3 × RBW].
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.
Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements. Report the three highest emissions relative to the limit.

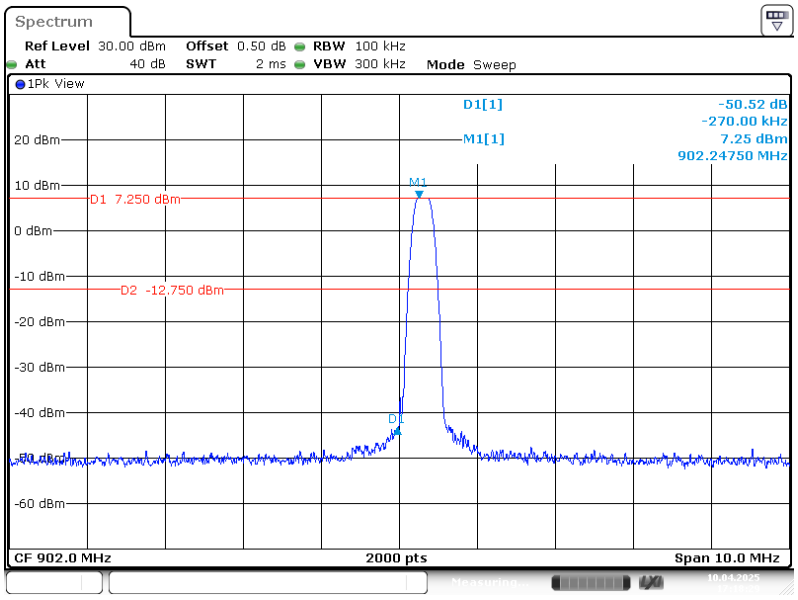
Test Data

Test Mode:	Transmitting	Test Engineer:	Braylon Ma
Test Date:	2025-04-10	Environment:	Temp.: 22℃ Humi.: 57% Atm.:100.4kPa

Please refer to the below plots:

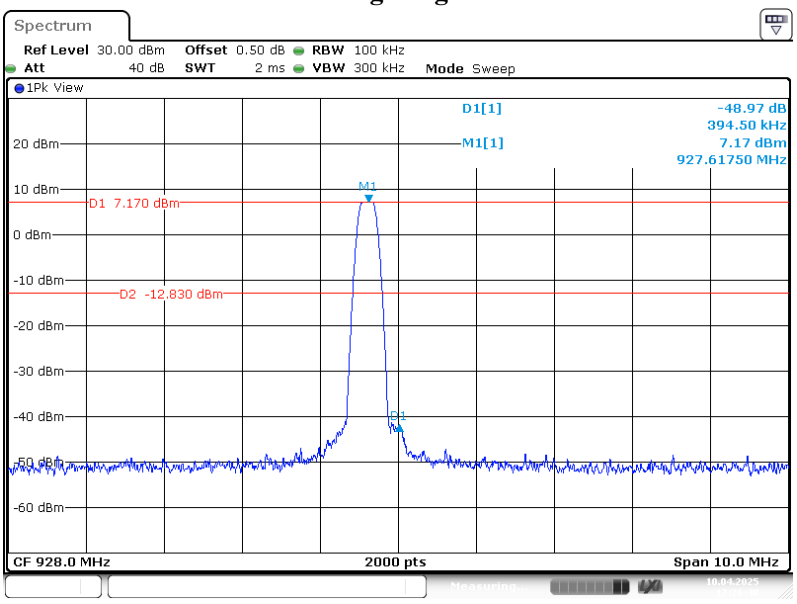
Single Mode

Band Edge-Left Side



ProjectNo.:2507R50071E-RF Tester:Braylon Ma
Date: 10.APR.2025 17:18:28

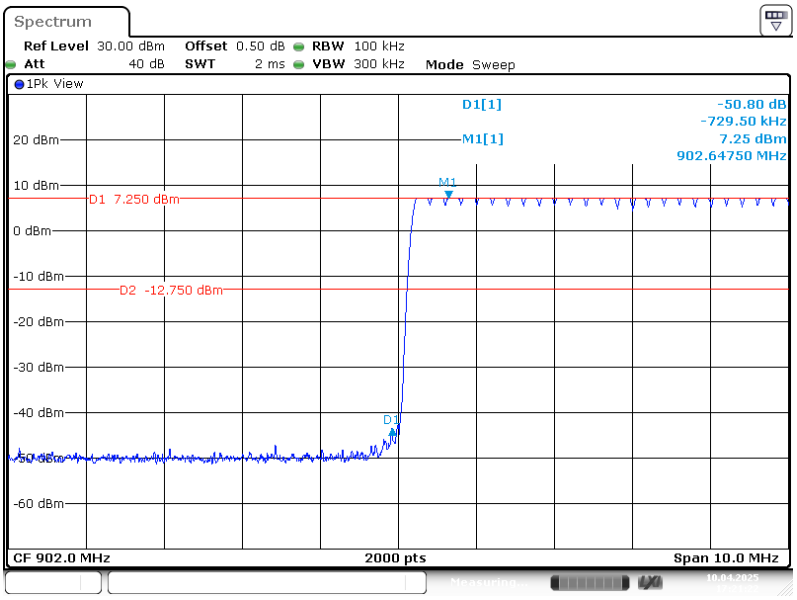
Band Edge-Right Side



ProjectNo.:2507R50071E-RF Tester:Braylon Ma
Date: 10.APR.2025 17:26:40

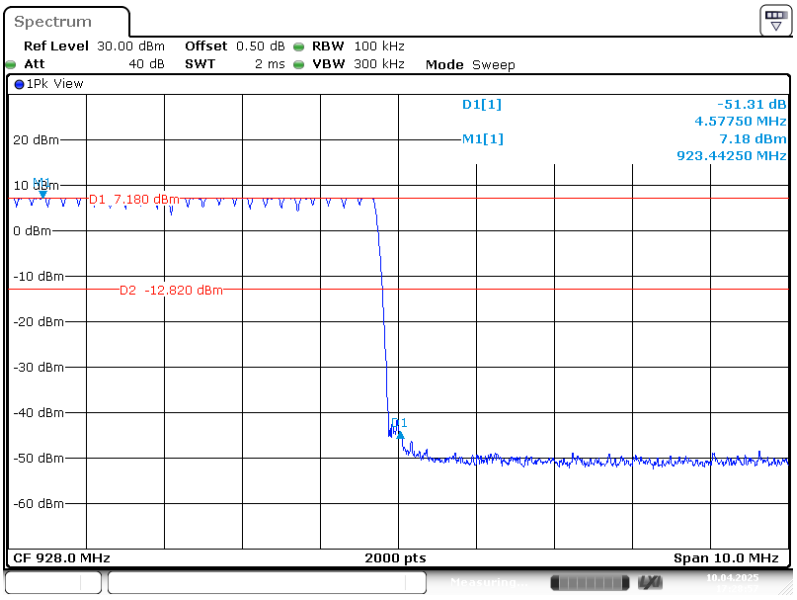
Hopping Mode

Band Edge-Left Side



ProjectNo.:2507R50071E-RF Tester:Braylon Ma
Date: 10.APR.2025 17:21:22

Band Edge-Right Side



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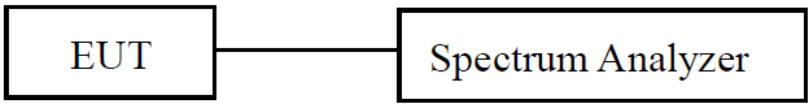
FCC §15.247(f) - POWER SPECTRAL DENSITY

Applicable Standard

For the purposes of this section, hybrid systems are those that employ a combination of both frequency hopping and digital modulation techniques. The frequency hopping operation of the hybrid system, with the direct sequence or digital modulation operation turned-off, shall have an average time of occupancy on any frequency not to exceed 0.4 seconds within a time period in seconds equal to the number of hopping frequencies employed multiplied 0.4. The power spectral density conducted from the intentional radiator to the antenna due to the digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

EUT Setup



Test Procedure

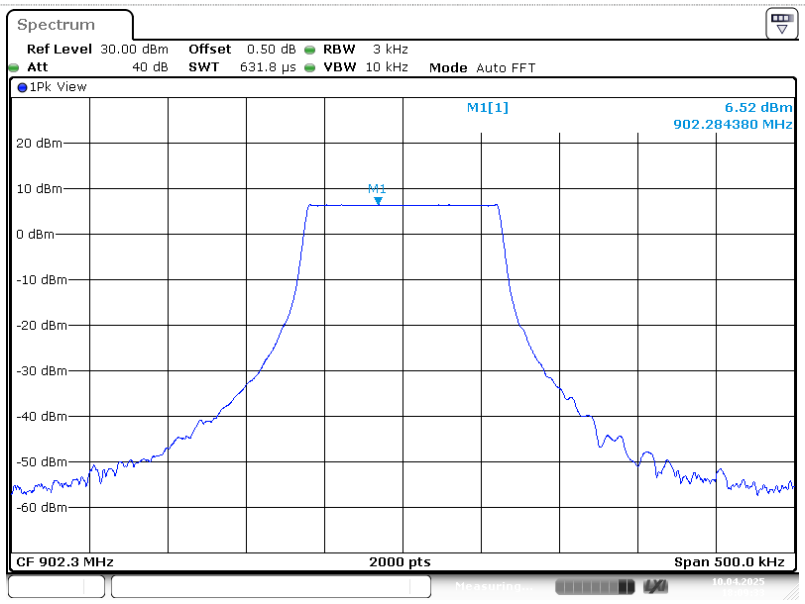
Test Method: ANSI C63.10-2020 Clause 11.10.2

1. Use this procedure when the maximum peak conducted output power in the fundamental emission is used to demonstrate compliance.
2. Set the RBW to: 3kHz≤ RBW≤100 kHz.
3. Set the VBW ≥ 3×RBW.
4. Set the span to 1.5 times the DTS bandwidth.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude Result within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

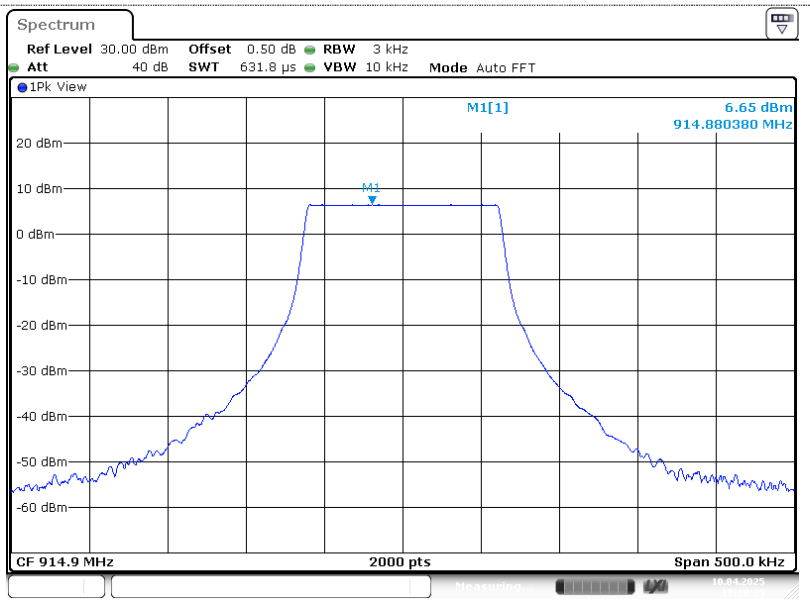
Test Data

Test Mode:	Transmitting	**Test Engineer:**	Braylon Ma
Test Date:	2025-04-10	**Environment:**	Temp.: 21.5℃ Humi.: 53% Atm :100.3kPa
Test Channel	**Test Frequency (MHz)**	**Power Spectral Density (dBm/3kHz)**	**Limit (dBm/3kHz)**
Lowest	902.3	6.52	≤8.00
Middle	914.9	6.65	≤8.00
Highest	927.6	6.54	≤8.00

Lowest Channel



Middle Channel



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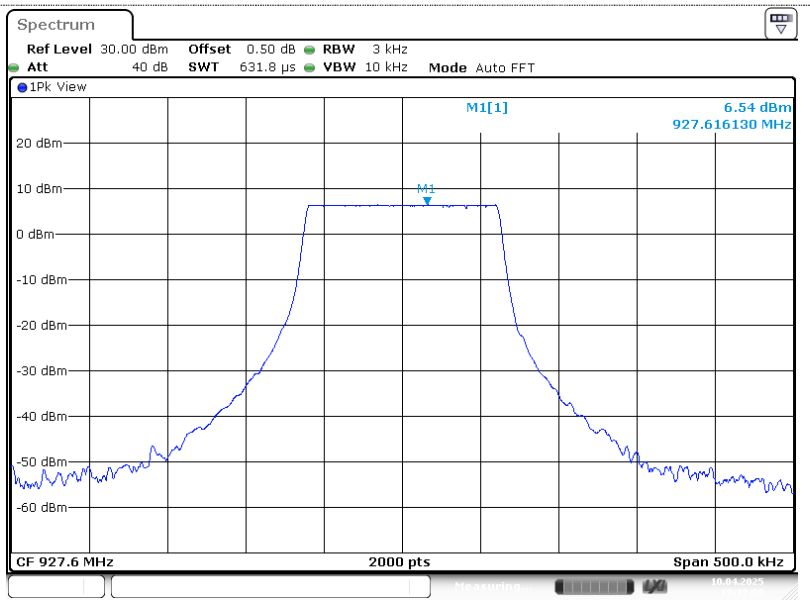
Highest Channel



ProjectNo.:2507R50071E-RF Tester:Braylon Ma

Date: 10.APR.2025 18:12:09

FCC §15.203 - ANTENNA REQUIREMENT

Applicable Standard

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of §§15.211, 15.213, 15.217, 15.219, 15.221, or §15.236. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with §15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

Antenna Connector Construction

The EUT has one PCB Antenna and the antenna gain is -4.15 dBi and antenna impedance is 50Ω, fulfill the requirement of this section. Please refer to the EUT photos.

Result: Compliance

APPENDIX A - EUT PHOTOGRAPHS

Please refer to the attachment 2507R50071E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2507R50071E-RF-INP EUT INTERNAL PHOTOGRAPHS.

APPENDIX B - TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2507R50071E-RF-TSP TEST SETUP PHOTOGRAPHS.

Declarations

1. Bay Area Compliance Laboratories Corp. (Xiamen) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk "★".

2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.

3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.

4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor k=2 with the 95% confidence interval.

5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Xiamen).

6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

*******END OF REPORT*******