

FCC 15.247 & RSS-247 2.4 GHz Test Report

for

FUTABA Corporation

**1080 Yabutsuka Chosei-son Chosei-gun,
Chiba-ken, 299-4395 Japan.**

Product Name : Radio Control
Model Name : T26SZ
Brand : Futaba
FCC ID : AZPT26SZ-24G
IC : 2914D-T26SZ

**Prepared by: : AUDIX Technology Corporation,
EMC Department**



The test report is based on a single evaluation of one sample of the above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab logo.

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APPENDIX A TEST DATA AND PLOTS
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TEST REPORT

Applicant : FUTABA Corporation
Manufacturer : FUTABA Corporation
EUT Description
(1) Product : Radio Control
(2) Model : T26SZ
(3) Brand : Futaba
(4) Power Supply : DC 7.4V (Battery)

Applicable Standards:

Title 47 CFR FCC Part 15 Subpart C
RSS-Gen (Issue 5), Amendment 2, February 2021
RSS-247 (Issue 3), August 2023

Audix Technology Corp. tested the equipment mentioned in accordance with the requirements set forth in the above standards. Test results indicate that the equipment tested is capable of demonstrating compliance with the requirements as documented within this report.

Audix Technology Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens and samples.

Date of Report: 2024. 08. 09

Reviewed by:



(Sabrina Wang/Administrator)

Approved by:



(Johnny Hsueh/Section Manager)



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1. REVISION RECORD OF TEST REPORT

Edition No	Issued Date	Revision Summary	Report Number
0	2024. 08. 09	Original Report	EM-F240303

2. SUMMARY OF TEST RESULTS

Rule		Description	Results
FCC	IC		
15.207	RSS-Gen §8.8	Conducted Emission	PASS
15.247(d)/15.205	RSS-Gen §8.9 RSS-247 §5.5	Radiated Band Edge and Radiated Spurious Emission	PASS
15.247(a)(1)	RSS-247 §5.1(2)	20dB Bandwidth	PASS
15.247(a)(1)	RSS-247 §5.1(2)	Carrier Frequency Separation	PASS
15.247(a)(1)(iii)	RSS-247 §5.1(4)	Time of Occupancy	PASS
15.247(a)(1)(iii)	RSS-247 §5.1(4)	Number of Hopping Channels	PASS
15.247(b)(1)	RSS-247 §5.1(2)	Maximum Peak Output Power	PASS
15.247(b)(3)	RSS-247 §5.4(4)	Maximum Peak Output Power	PASS
15.247(d)	RSS-247 §5.5	Conducted Band Edges and Conducted Spurious Emission	PASS
15.247(f)	RSS-247 §5.3	DTS/Occupied Bandwidth	PASS
15.247(f)	RSS-247 §5.3	Peak Power Spectral Density	PASS
15.203	---	Antenna Requirement	Compliance

Note: 1. Decision rule according to the limit of the test standard chapter, the test value is lower than the limit specified in the test chapter, and it is judged as Pass.
2. The uncertainties value is not used in determining the result.

3. GENERAL INFORMATION

3.1. Description of Application

Applicant	FUTABA Corporation 1080 Yabutsuka Chosei-mura Chosei-gun Chiba-ken, 299-4395 Japan.
Manufacturer	FUTABA Corporation 1080 Yabutsuka Chosei-mura Chosei-gun Chiba-ken, 299-4395 Japan.
Product	Radio Control
Model	T26SZ
Brand	Futaba

3.2. Description of EUT

Test Model	T26SZ		
Serial Number	N/A		
Software Version	N/A		
Power Rating	DC7.4V (Battery)		
RF Features	#1 With TC57A RF Module: FASSTest, S-FHSS, T-FHSS		
	#2 With WTR-16 RF Board: T-FHSS		
Transmit Type	#1 With TC57A RF Module: FASSTest: 1T1R, S-FHSS: 1T, T-FHSS: 1T1R		
	#2 With WTR-16 RF Board: T-FHSS: 1T1R		
Test Sample	Sample No.	Test Item	Firmware
	01	AC Conduction, RSE, RF Conducted	N/A
Sample Status	Trial sample		
Date of Receipt	2024. 04. 15		
Date of Test	2024. 07. 23 ~ 08. 09		
Interface Ports of EUT	<ul style="list-style-type: none"> • Charge/PC (Type C) Port x 1 • S.I/F (S.BUS setting) Port x 1 • Trainer Port x 1 • Earphone Jack x 1 • Micro SD Slot x 1 • Battery Connector x 1 		
Interface Ports of Battery (LT2F2000B)	<ul style="list-style-type: none"> • Charge (Type C) Port x 1 		
Accessories Supplied	<ul style="list-style-type: none"> • Type C Cable 		

Note: Pursuant ISO 17025:2017 section 7.8.2, Audix Technology Corp. does not assume responsibility for all EUT's information including RF features, transmit type, antenna information...etc are provided by customer.

3.3. Description of EUT

ANSI C63.10:2013

3.4. Description of Key Components

Item	Supplier/Brand	Model	Specification
RF Module	Futaba	TC57A	FASSTest, S-FHSS, T-FHSS
RF Board	Futaba	WTR-16	T-FHSS
Lithium-ion polymer battery	Futaba	LT2F2000B	DC 7.4V, 2000mA, 14.8Wh
Type C Cable	YUNTONG	USB Type-C/A	Shielded, Detachable, 1.0m

3.5. Antenna Information

#1 With TC57A RF Module

No.	Antenna Type	Manufacturer	Antenna Part Number	Frequency(MHz)	Max Gain(dBi)
1.	1/2 λ Pencil	SANSEI	ANTB24	2400 - 2500	1.48

#2 With WTR-16 RF Board

No.	Antenna Type	Manufacturer	Antenna Part Number	Frequency(MHz)	Max Gain(dBi)
1.	copper wire	MASUTOMI	C-WIRE 0.08/30(0-2) WHITE 30SLM	2400 – 2483.5	-7.20

3.6. EUT Specifications Assessed in Current Report

#1 With TC57A RF Module

Mode	Fundamental Range (MHz)	Channel Number	Modulation	Data Rate (kbps)
FASSTest	2405.376 to 2472.960	23	Hybrid	136
S-FHSS	2403.250 to 2447.500	60	Frequency Hopping	128
T-FHSS	2407.500 to 2467.500	31	Frequency Hopping	128

#2 With WTR-16 RF Board

Mode	Fundamental Range (MHz)	Channel Number	Modulation	Data Rate (kbps)
T-FHSS	2407.500 to 2467.500	31	Frequency Hopping	128

Mode: FASSTest							
Channel List							
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
02	2405.376	20	2423.808	38	2442.240	56	2460.672
05	2408.448	23	2426.880	41	2445.312	59	2463.744
08	2411.520	26	2429.952	44	2448.384	62	2466.816
11	2414.592	29	2433.024	47	2451.456	65	2469.888
14	2417.664	32	2436.096	50	2454.528	68	2472.960
17	2420.736	35	2439.168	53	2457.600		

Mode: S-FHSS							
Channel List							
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
01	2403.25	16	2414.50	31	2425.75	46	2437.00
02	2404.00	17	2415.25	32	2426.50	47	2437.75
03	2404.75	18	2416.00	33	2427.25	48	2438.50
04	2405.50	19	2416.75	34	2428.00	49	2439.25
05	2406.25	20	2417.50	35	2428.75	50	2440.00
06	2407.00	21	2418.25	36	2429.50	51	2440.75
07	2407.75	22	2419.00	37	2430.25	52	2441.50
08	2408.50	23	2419.75	38	2431.00	53	2442.25
09	2409.25	24	2420.50	39	2431.75	54	2443.00
10	2410.00	25	2421.25	40	2432.50	55	2443.75
11	2410.75	26	2422.00	41	2433.25	56	2444.50
12	2411.50	27	2422.75	42	2434.00	57	2445.25
13	2412.25	28	2423.50	43	2434.75	58	2446.00
14	2413.00	29	2424.25	44	2435.50	59	2446.75
15	2413.75	30	2425.00	45	2436.25	60	2447.50

Mode: T-FHSS							
Channel List							
Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)	Channel Number	Frequency (MHz)
01	2407.5	09	2423.5	17	2439.5	25	2455.5
02	2409.5	10	2425.5	18	2441.5	26	2457.5
03	2411.5	11	2427.5	19	2443.5	27	2459.5
04	2413.5	12	2429.5	20	2445.5	28	2461.5
05	2415.5	13	2431.5	21	2447.5	29	2463.5
06	2417.5	14	2433.5	22	2449.5	30	2465.5
07	2419.5	15	2435.5	23	2451.5	31	2467.5
08	2421.5	16	2437.5	24	2453.5		

Note: Test modes are presented at section 3.7.

3.7. Test Configuration

Mode	TX _{on} (ms)	TX _{on+off} (ms)	Duty Cycle Correction Factor (dB)
FASSTest	1.400	100	-37.08
S-FHSS	2.200	100	-33.15
T-FHSS	1.500	100	-36.48

Note: Duty Cycle Correction Factor (DCCF) = $20\log(TX_{on}/TX_{on+off})$ ◦

“TX on + off” means the period of the pulse train or 100ms if the pulse train length is greater than 100ms.



Item	Test Mode
AC Conduction	Charge Mode

Item	Test Mode	Test Frequency		
Radiated Test Case	Charge Mode	---		
	Normal Mode	---		
	Radiated Spurious Emission (30MHz~1GHz)	#1 With TC57A RF Module	FASSTest 2439.168MHz	
			S-FHSS 2425.000MHz	
		#2 With WTR-16 RF Board	T-FHSS 2437.500MHz	
			T-FHSS 2437.500MHz	
	Radiated Band Edge ^{Note}	#1 With TC57A RF Module	FASSTest 2405.376MHz	
			FASSTest 2408.448MHz	
			FASSTest 2469.888MHz	
			FASSTest 2472.960MHz	
		S-FHSS	2403.250MHz	
			2404.750MHz	
			2446.000MHz	
		T-FHSS	2447.500MHz	
			2407.500MHz	
		#2 With WTR-16 RF Board	T-FHSS 2467.500MHz	
	T-FHSS 2407.500MHz			
	Radiated Spurious Emission ^{Note}	Normal Mode	---	
		#1 With TC57A RF Module	FASSTest	2405.376MHz
				2439.168MHz
2472.960MHz				
S-FHSS			2403.250MHz	
			2425.000MHz	
			2447.500MHz	
T-FHSS		2407.500MHz		
		2437.500MHz		
		2467.500MHz		
#2 With WTR-16 RF Board		T-FHSS	2407.500MHz	
			2437.500MHz	
	2467.500MHz			

Note: Mobile Device Portable Device and 3 axis were assessed. The worst scenario for Radiated Spurious Emission as follow: Lie Side Stand

Item		Test Mode	Test Frequency		
Conducted Test Case	20dB Bandwidth	#1 With TC57A RF Module	FASSTest	2405.376MHz	
				2439.168MHz	
				2472.960MHz	
			S-FHSS	2403.250MHz	
				2425.000MHz	
				2447.500MHz	
		T-FHSS	2407.500MHz		
			2437.500MHz		
			2467.500MHz		
		#2 With WTR-16 RF Board	T-FHSS	2407.500MHz	
				2437.500MHz	
				2467.500MHz	
	Carrier Frequency Separation		#1 With TC57A RF Module	FASSTest	2405.376MHz
					2439.168MHz
					2472.960MHz
		S-FHSS		2403.250MHz	
				2425.000MHz	
				2447.500MHz	
		T-FHSS	2407.500MHz		
			2437.500MHz		
			2467.500MHz		
		#2 With WTR-16 RF Board	T-FHSS	2407.500MHz	
				2437.500MHz	
				2467.500MHz	
Time of Occupancy	#1 With TC57A RF Module		FASSTest	2405.376MHz	
				2439.168MHz	
				2472.960MHz	
		S-FHSS	2403.250MHz		
			2425.000MHz		
			2447.500MHz		
	T-FHSS	2407.500MHz			
		2437.500MHz			
		2467.500MHz			
	#2 With WTR-16 RF Board	T-FHSS	2407.500MHz		
			2437.500MHz		
			2467.500MHz		
Number of Hopping Channels		#1 With TC57A RF Module	FASSTest	2439.168MHz	
			S-FHSS	2425.000MHz	
			T-FHSS	2437.500MHz	
	#2 With WTR-16 RF Board	T-FHSS	2437.500MHz		

Item	Test Mode	Test Frequency			
Conducted Test Case	Maximum Peak Output Power	#1 With TC57A RF Module	FASSTest	2405.376MHz	
				2408.448MHz	
				2439.168MHz	
				2469.888MHz	
				2472.960MHz	
		#1 With TC57A RF Module	S-FHSS	2403.250MHz	
				2404.000MHz	
				2404.750MHz	
				2425.000MHz	
				2446.000MHz	
	#1 With TC57A RF Module	T-FHSS	2446.750MHz		
			2447.500MHz		
			2407.500MHz		
	#2 With WTR-16 RF Board	T-FHSS	2409.500MHz		
			2437.500MHz		
			2467.500MHz		
	Band Edges	#1 With TC57A RF Module	FASSTest	2405.376MHz	
				2472.960MHz	
			S-FHSS	2403.250MHz	
				2447.500MHz	
T-FHSS				2407.500MHz	
		2467.500MHz			
#2 With WTR-16 RF Board		T-FHSS	2407.500MHz		
			2467.500MHz		
			#1 With TC57A RF Module	FASSTest	2405.376MHz
					2439.168MHz
	2472.960MHz				
S-FHSS	2403.250MHz				
	2425.000MHz				
#1 With TC57A RF Module	T-FHSS	2447.500MHz			
		2407.500MHz			
		2437.500MHz			
#2 With WTR-16 RF Board	T-FHSS	2467.500MHz			
		2407.500MHz			
		2437.500MHz			
		2467.500MHz			
		Spurious Emission	#1 With TC57A RF Module	FASSTest	2405.376MHz
2439.168MHz					
2472.960MHz					
S-FHSS	2403.250MHz				
	2425.000MHz				
#1 With TC57A RF Module	T-FHSS	2447.500MHz			
		2407.500MHz			
		2437.500MHz			
#2 With WTR-16 RF Board	T-FHSS	2467.500MHz			
		2407.500MHz			
		2437.500MHz			
		2467.500MHz			
		DTS/Occupied Bandwidth	#1 With TC57A RF Module	FASSTest	2405.376MHz
2439.168MHz					
2472.960MHz					
Peak Power Spectral Density	#1 With TC57A RF Module	FASSTest	2405.376MHz		
			2439.168MHz		
			2472.960MHz		

3.8. Output Power Setting

Mode		Centre Frequency	Power Setting
#1 With TC57A RF Module:	FASSTest	2405.376MHz	Default
		2408.448MHz	Default
		2439.168MHz	Default
		2469.888MHz	Default
		2472.960MHz	Default
	S-FHSS	2403.250MHz	Default
		2404.000MHz	Default
		2404.750MHz	Default
		2425.000MHz	Default
		2446.000MHz	Default
		2446.750MHz	Default
		2447.500MHz	Default
	T-FHSS	2407.500MHz	Default
		2409.500MHz	Default
		2437.500MHz	Default
2467.500MHz		Default	
#1 With TC57A RF Module:	T-FHSS	2407.500MHz	Default
		2437.500MHz	Default
		2467.500MHz	Default

3.9. Tested Supporting System List

3.9.1. Support Peripheral Unit

No.	Product	Brand	Model No.	Serial No.	Approval
1.	Power Socket	N/A	N/A	N/A	N/A
2.	AC Adapter (DC 5V) Wall-mount, 2C	Realme	VCB85AUH	N/A	N/A
3.	Earphone	I-phone	N/A	N/A	N/A
4.	Micro SD Card (16GB)	SanDisk	N/A	N/A	N/A
5.	Notebook PC	Acer	N22Q3	NHQGETA0022280EA 417600	Contains FCC ID: HLZMT7921
6.	Test Jig	Futaba	FMP-C11	N/A	N/A

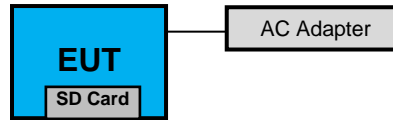
3.9.2. Cable Lists

No.	Cable Description Of The Above Support Units
1.	AC Power Cable: Unshielded, Undetachable, 1.8m
2.	USB Cable: Shielded, Detachable, 1.0m
3.	Audio Cable: Unshielded, Undetachable, 1.0m
4.	N/A
5.	Adapter: ASUS, M/N A19-090P2A DC Cord : Shielded, Undetachable, 1.5m, Bonded a ferrite core AC Power Cord : Unshielded, Detachable, 0.8m
6.	Signal Cable: Unshielded, Undetachable, 0.5m

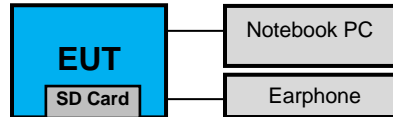
3.10. Setup Configuration

3.10.1. EUT Configuration for Power Line & Radiated Emission

- Charge mode

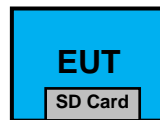


- Normal Mode

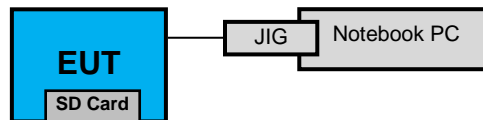


- Transmit Mode

#1 With TC57A RF Module

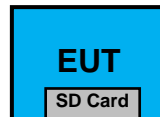


#2 With WTR-16 RF Board

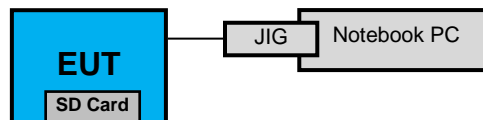


3.10.2. EUT Configuration for RF Conducted Test Items

#1 With TC57A RF Module



#2 With WTR-16 RF Board



3.11. Operating Condition of EUT

Charge Mode	The EUT connects the AC adapter on charge mode.
Normal Mode	The EUT connects the Notebook PC and used as a game controller.
Transmit Mode	#1 With TC57A RF Module: Press the button of the EUT is used for enabling EUT RF function under continues transmitting and choosing mode/channel.
	#2 With WTR-16 RF Board Test program “Futaba Term” is used for enabling EUT RF function under continue transmitting and choosing channel.

3.12. Description of Test Facility

Name of Test Firm	Audix Technology Corporation / EMC Department No. 491, Zhongfu Rd., Linkou Dist., New Taipei City 244, Taiwan Tel: +886-2-26092133 Fax: +886-2-26099303 Website : www.audixtech.com Contact e-mail: attemc_report@audixtech.com
Accreditations	The laboratory is accredited by following organizations under ISO/IEC 17025:2017 (1) NVLAP(USA) NVLAP Lab Code 200077-0 (2) TAF(Taiwan) No. 1724
Test Facilities	FCC OET Designation Number under APEC MRA by NCC is : TW1724 ISED CAB Identifier Number under APEC TEL MRA by NCC is TW1724 (1) No.8 Shielded Room (2) No.1 3m Semi Anechoic Chamber

3.13.Measurement Uncertainty

The measurement uncertainty levels have been estimated as specified in ETSI TR 100 028-2001

Test Items/Facilities		Frequency Range	Uncertainty
Conduction Test	<input type="checkbox"/>	No. 7 Shielded Room	9kHz-150kHz ±3.6dB
			150kHz-30MHz ±3.3dB
	<input checked="" type="checkbox"/>	No. 8 Shielded Room	9kHz-150kHz ±3.7dB
			150kHz-30MHz ±3.4dB
Radiation Test	<input checked="" type="checkbox"/>	No.1 3m Semi Anechoic Chamber	30MHz-200MHz, 3m, Horizontal ±3.8dB
			200MHz-1000MHz, 3m, Horizontal ±4.2dB
			30MHz-200MHz, 3m, Vertical ±4.7dB
			200MHz-1000MHz, 3m, Vertical ±4.8dB
			1GHz-6GHz, 3m ±4.8dB
			6GHz-18GHz, 3m ±4.3dB
	<input type="checkbox"/>	No.3 3m Semi Anechoic Chamber	30MHz-200MHz, 3m, Horizontal ±3.9dB
			200MHz-1000MHz, 3m, Horizontal ±4.2dB
			30MHz-200MHz, 3m, Vertical ±4.7dB
			200MHz-1000MHz, 3m, Vertical ±4.8dB
			1GHz-6GHz, 3m ±4.5dB
			6GHz-18GHz, 3m ±4.0dB
	<input type="checkbox"/>	No.4 3m Semi Anechoic Chamber	30MHz-200MHz, 3m, Horizontal ±3.9dB
			200MHz-1000MHz, 3m, Horizontal ±4.3dB
			30MHz-200MHz, 3m, Vertical ±4.8dB
			200MHz-1000MHz, 3m, Vertical ±4.9dB
			1GHz-6GHz, 3m ±4.2dB
			6GHz-18GHz, 3m ±3.8dB
	<input type="checkbox"/>	No.5 3m Semi Anechoic Chamber	30MHz-200MHz, 3m, Horizontal ±3.9dB
			200MHz-1000MHz, 3m, Horizontal ±4.1dB
			30MHz-200MHz, 3m, Vertical ±4.8dB
			200MHz-1000MHz, 3m, Vertical ±4.7dB
			1GHz-6GHz, 3m ±4.8dB
			6GHz-18GHz, 3m ±4.6dB
Radiated emissions (18GHz-40GHz)		18GHz-40GHz, 3m	±3.4dB

Remark : Uncertainty = $ku_c(y)$

Test Item	Uncertainty
20dB Bandwidth	$\pm 0.2\text{kHz}$
6dB Bandwidth	$\pm 0.05\text{kHz}$
99% Occupied Bandwidth	$\pm 0.38\%$
Carrier Frequency Separation	$\pm 0.2\text{kHz}$
Time of Occupancy	$\pm 0.03\text{sec}$
Maximum peak Output power	$\pm 0.52\text{dB}$
Conducted Emission Limitations	$\pm 0.13\text{dB}$
Power spectral density	$\pm 0.13\text{dB}$

4. MEASUREMENT EQUIPMENT LIST

4.1. Conducted Emission Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Test Receiver	R&S	ESR3	101774	2024.01.09	1 Year
2.	A.M.N.	R&S	ENV4200	100169	2023.11.13	1 Year
3.	FOUR-LINE V-NETWORK	R&S	ENV432	101567	2024.06.07	1 Year
4.	Pulse Limiter	R&S	ESH3-Z2	100354	2023.12.09	1 Year
5.	Digital Thermo-Hygro Meter	iMax	HTC-1	No.8 S/R	2024.04.11	1 Year
6.	Coaxial Cable	Yeida	RG/58AU	CE-08	2023.09.06	1 Year
7.	Test Software	Audix	e3	V9 18621a	N.C.R.	N.C.R.

4.2. Radiated Emission Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Agilent	N9010A-526	MY53400071	2023.08.16	1 Year
2.	Spectrum Analyzer	Keysight	N9010B-544	MY55460198	2024.03.21	1 Year
3.	Test Receiver	R&S	ESCS30	100338	2024.06.18	1 Year
4.	Amplifier	HP	8447D	2944A06305	2023.12.20	1 Year
5.	Microwave Preamplifier	HP	8449B	3008A01284	2024.06.11	1 Year
6.	Microwave Amplifier	Keysight	83051A	MY56480113	2023.09.11	1 Year
7.	Bilog Antenna	TESEQ	CBL6112D	33821	2024.02.17	1 Year
8.	Double-Ridged Waveguide Horn	EMCO	3115	9112-3775	2024.04.30	1 Year
9.	Horn Antenna	COM-POWER	AH-840	101092	2024.01.12	1 Year
10.	2.4GHz Notch Filter	K&L Microwave	7NSL10-2441.5/ E130.5-O/O	2	2024.04.11	1 Year
11.	High-Pass Filter	Microwave	H3G018G1	484796	2024.04.11	1 Year
12.	Coaxial Cable	MIYAZAKI	5D2W	RE-11	2024.01.05	1 Year
13.	Coaxial Cable	HUBER+SUHNER	SUCOFLEX 106	RE-14	2024.01.05	1 Year
14.	Coaxial Cable	HUBER+SUHNER	SUCOFLEX 102	RE-30	2023.08.21	1 Year
15.	Digital Thermo-Hygro Meter	iMax	HTC-1	No.1 3m A/C	2024.04.11	1 Year
16.	Test Software	Audix	e3	V9 18621a	N.C.R.	N.C.R.

4.3. RF Conducted Measurement

Item	Type	Manufacturer	Model No.	Serial No.	Cal. Date	Cal. Interval
1.	Spectrum Analyzer	Keysight	N9010B	MY59071380	2024.03.29	1 Year
2.	Digital Thermo-Hygro Meter	iMax	HTC-1	RF-03	2024.04.11	1 Year

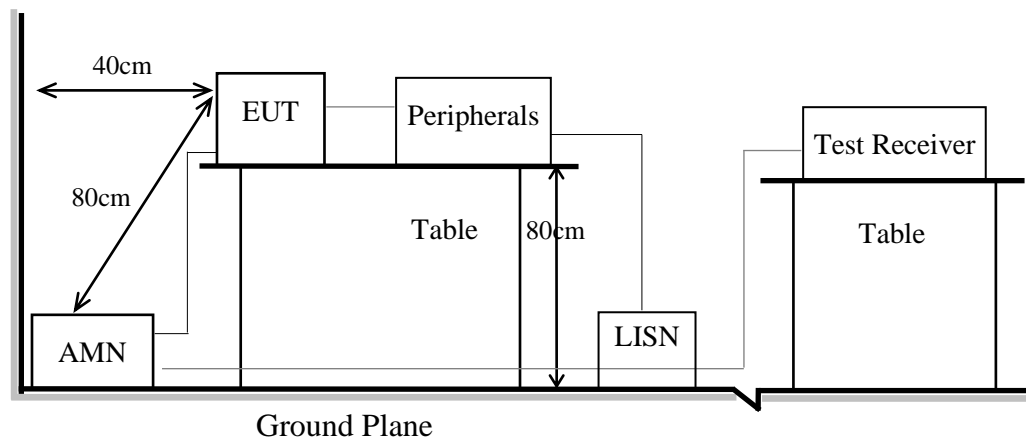
5. CONDUCTED EMISSION

5.1. Block Diagram of Test Setup

5.1.1. Block Diagram of EUT

Indicated as section 3.10

5.1.2. Shielded Room Setup Diagram



5.2. Conducted Emission Limit

Frequency	Conducted Limit	
	Quasi-Peak Level	Average Level
150kHz ~ 500kHz	66 ~ 56 dB μ V	56 ~ 46 dB μ V
500kHz ~ 5MHz	56 dB μ V	46 dB μ V
5MHz ~ 30MHz	60 dB μ V	50 dB μ V

Remark1.: If the average limit is met when using a Quasi-Peak detector, the measurement using the average detector is not required.

2.: The lower limit applies to the band edges.

5.3. Test Procedure

- 5.3.1. To set up the EUT as indicated in ANSI C63.10. The EUT was placed on the table which has 80 cm height to the ground and 40 cm distance to the conducting wall.
- 5.3.2. Power supplier of the EUT was connected to the AC mains through an Artificial Mains Network (A.M.N.).
- 5.3.3. The AC power supplies to all peripheral devices must be provided through line impedance stabilization network (L.I.S.N.)
- 5.3.4. Checking frequency range from 150kHz to 30 MHz and record the emission which does not have 20 dB below limit.

5.4. Test Results

Please refer to Appendix A.

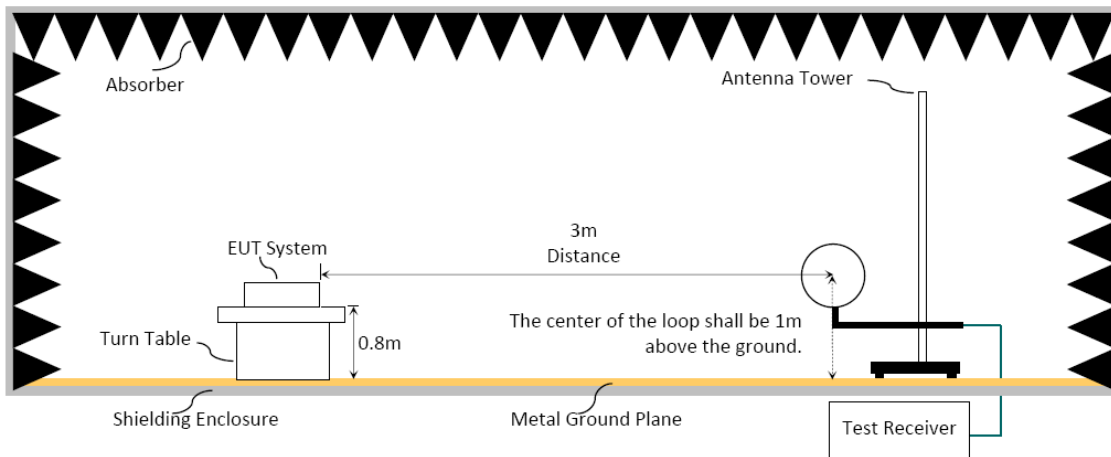
6. RADIATED EMISSION

6.1. Block Diagram of Test Setup

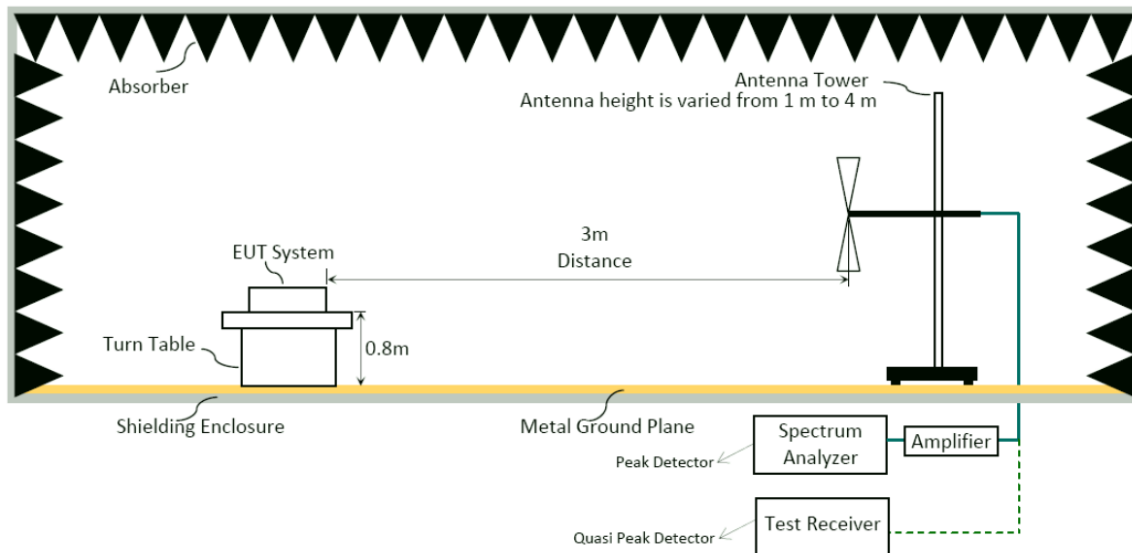
6.1.1. Block Diagram of EUT

Indicated as section 3.10

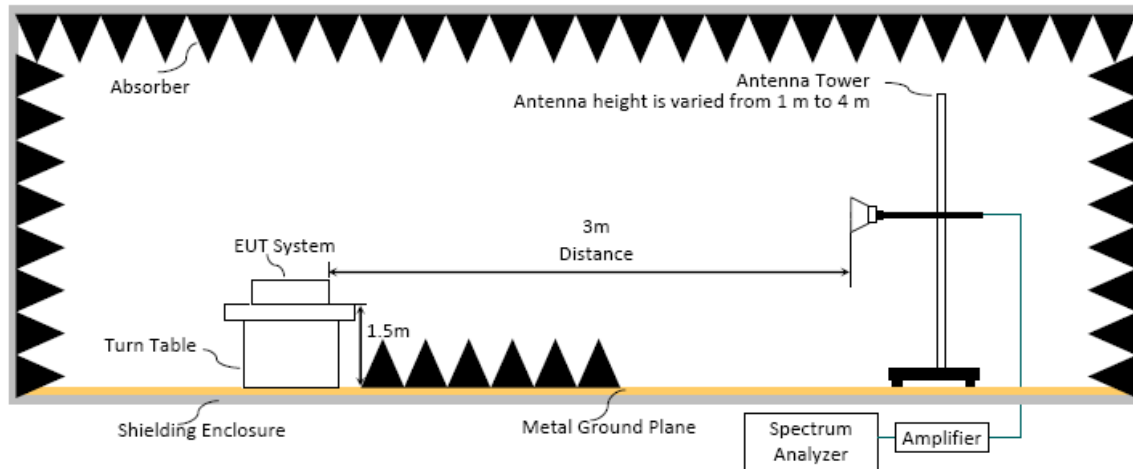
6.1.2. Setup Diagram for 9kHz-30MHz



6.1.3. Setup Diagram for 30-1000MHz



6.1.4. Setup Diagram for above 1GHz



6.2. Radiated Emission Limits

In any 100kHz bandwidth outside the frequency band, the radio frequency power produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205/ RSS-Gen Section 8.10 table 6, must also comply with the radiated emission limits specified as below.

Frequency (MHz)	Distance(m)	Limits	
		dB μ V/m	μ V/m
0.009 - 0.490	300	67.6-20 log f(kHz)	2400/f kHz
0.490 - 1.705	30	87.6-20 log f(kHz)	24000/f kHz
1.705 - 30	30	29.5	30
30 - 88	3	40.0	100
88- 216	3	43.5	150
216- 960	3	46.0	200
Above 960	3	54.0	500
Above 1000	3	74.0 dB μ V/m (Peak) 54.0 dB μ V/m (Average)	

Remark : (1) dB μ V/m = 20 log (μ V/m)

- (2) The tighter limit applies to the edge between two frequency bands.
- (3) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.
- (4) Fundamental and emission fall within operation band are exempted from this section.
- (5) Pursuant to ANSI C63.10: 6.6.4.3, if the maximized peak measured value complies with the average limit, then it is unnecessary to perform an average measurement.

6.3. Test Procedure

Frequency Range 9kHz~30MHz:

The EUT setup on the turntable which has 0.8 m height to the ground. The turn table rotated 360 degrees and antenna fixed to 1 m to find the maximum emission level. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

- (1) RBW = 9kHz with peak and average detector.
- (2) Detector: average and peak (9kHz-490kHz)
Q.P. (490kHz-30MHz)

Frequency Range 30MHz ~ 25GHz:

The EUT setup on the turn table which has 80cm (for 30-1000MHz) and 1.5m (for above 1GHz) height to the ground. The turn table rotated 360 degrees and antenna varied from 1 m to 4 m to find the maximum emission level. Both horizontal and vertical polarization are required. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.10-2013 regulation.

Frequency below 1GHz:

Spectrum Analyzer is used for pre-testing with following setting:

- (1)RBW = 120KHz
- (2)VBW $\geq 3 \times$ RBW.
- (3)Detector = Peak.
- (4)Sweep time = auto.
- (5)Trace mode = max hold.
- (6)Allow sweeps to continue until the trace stabilizes.

Note 1: When peak-detected value is lower than limit that the measurement using the Q.P. detector is not required, otherwise using Q.P. for final measurement.

Note 2: When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds.

Frequency above 1GHz to 10th harmonic(up to 25 GHz):

Peak Detector:

- (1)RBW = 1MHz
- (2)VBW $\geq 3 \times$ RBW.
- (3)Detector = Peak.
- (4)Sweep time = auto.
- (5)Trace mode = max hold.
- (6)Allow sweeps to continue until the trace stabilizes.

Note: When peak-detected value is lower than limit that the measurement using the average detector is not required, otherwise using average detector for final measurement.

Average Detector:**■ Option 1 (For #2 With WTR-16 RF Board Mode):**

- (1) RBW = 1MHz
- (2) VBW $\geq 1/T$. (Duty Cycle < 98%)
- (3) VBW = 10Hz (Duty Cycle $\geq 98\%$, when duty cycle presented in section 3.7)

Modulation Type	VBW Setting (VBW $\geq 1/T$)
T-FHSS	10 Hz

- (4) Detector = Peak.
- (5) Sweep time = auto.
- (6) Trace mode = max hold.
- (7) Allow sweeps to continue until the trace stabilizes.

■ Option 2 (For #1 With TC57A RF Module Mode):

Average Emission Level = Peak Emission Level + D.C.C.F.

6.4. Measurement Result Explanation

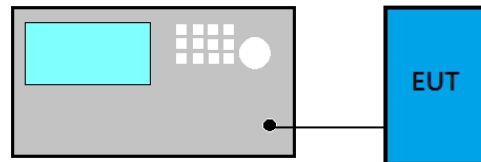
- Peak Emission Level(dB μ V/m) = Antenna Factor(dB/m) + Cable Loss (dB) – Preamp Gain (dB) + Reading(dB μ V).
- Average Emission Level(dB μ V/m) = Antenna Factor(dB/m) + Cable Loss (dB) – Preamp Gain (dB) + Reading(dB μ V).
- Average Emission Level(dB μ V/m) = Peak Emission Level(dB μ V/m) + DCCF(dB) Duty Cycle Correction Factor (DCCF)(dB) = $20\log(TX_{on}/TX_{on+off})$ presented in section 3.7.
- ERP(dBm) = Peak Emission Level(dB μ V/m) - 95.2dB - 2.14dB

6.5. Test Results

Please refer to Appendix A.

7. 20dB/OCCUPIED BANDWIDTH

7.1. Block Diagram of Test Setup



7.2. Specification Limits

Alternatively, frequency hopping systems operating in the 2400-2483.5MHz band may have hopping channel carrier frequencies that are separated by 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater.

7.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10:2013:

For 20dB Bandwidth

- (1) Set Span range 2~5 times the OBW
- (2) Set $VBW \geq 3 \times RBW$.
- (3) Detector = Peak.
- (4) Trace mode = Max hold.
- (5) Sweep = Auto couple.
- (6) Allow the trace to stabilize.
- (7) Setting channel bandwidth function x dB to -20 dB to record the final bandwidth.

For 99% Occupied Bandwidth

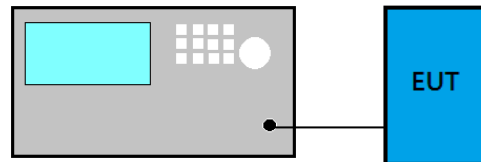
- (8) Set Span range 1.5~5 times the OBW
- (9) Set RBW close to 1% to 5% of OBW.
- (10) Set $VBW \geq 3 \times RBW$.
- (11) Detector = Peak.
- (12) Trace mode = Max hold
- (13) Sweep = Auto couple.
- (14) Allow the trace to stabilize.

7.4. Test Results

Please refer to Appendix A

8. CARRIER FREQUENCY SEPARATION

8.1. Block Diagram of Test Setup



8.2. Specification Limits

Alternatively, frequency hopping systems operating in the 2400-2483.5MHz band may have hopping channel carrier frequencies that are separated by 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output no greater than 125mW.

8.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10:2013:

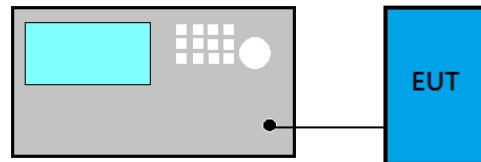
- (1) Span = Wide enough to capture the peaks of two adjacent channels
- (2) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
- (3) $VBW \geq RBW$
- (4) Sweep = Auto
- (5) Detector function = Peak
- (6) Trace = Max hold
- (7) Allow the trace to stabilize.

8.4. Test Results

Please refer to Appendix A

9. TIME OF OCCUPANCY

9.1. Block Diagram of Test Setup



9.2. Specification Limits

Frequency hopping systems in the 2400-2483.5MHz shall use at least 15 non-overlapping channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by number of hopping channels employed.

9.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10:2013:

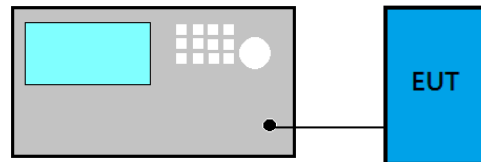
- (1) Span: Zero span, centered on a hopping channel.
- (2) RBW shall be \leq channel spacing and where possible RBW should be set $\gg 1/T$, where T is the expected dwell time per channel.
- (3) Sweep: As necessary to capture the entire dwell time per hopping channel; where possible use a video trigger and trigger delay so that the transmitted signal starts a little to the right of the start of the plot. The trigger level might need slight adjustment to prevent triggering when the system hops on an adjacent channel; a second plot might be needed with a longer sweep time to show two successive hops on a channel.
- (4) Detector function = Peak
- (5) Trace = Max hold

9.4. Test Results

Please refer to Appendix A

10. NUMBER OF HOPPING CHANNELS

10.1. Block Diagram of Test Setup



10.2. Specification Limits

Frequency hopping systems which use fewer than 20 hopping frequencies may employ intelligent hopping techniques to avoid interference to other transmissions. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 non-overlapping channels.

10.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10:2013:

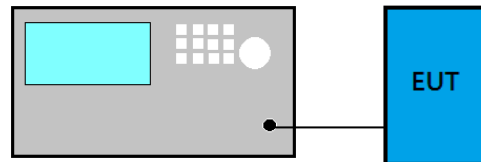
- (1) Span: The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
- (2) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
- (3) VBW \geq RBW
- (4) Sweep = Auto
- (5) Detector function = Peak
- (6) Trace = m=Max hold
- (7) Allow the trace to stabilize.

10.4. Test Results

Please refer to Appendix A

11. MAXIMUM PEAK OUTPUT POWER

11.1. Block Diagram of Test Setup



11.2. Specification Limits

The Limits of maximum Peak Output Power for frequency hopping systems in 2400-2483.5MHz is: 0.125Watt. (21dBm)

11.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10:2013:

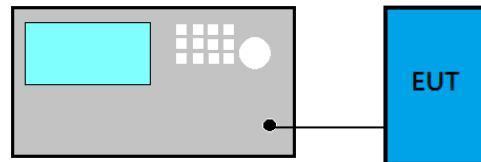
- (a) Use the following spectrum analyzer settings
 - (1) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
 - (2) RBW > 20 dB bandwidth of the emission being measured.
 - (3) VBW \geq RBW
 - (4) Sweep: Auto
 - (5) Detector function: Peak
 - (6) Trace: Max hold
- (b) Allow trace to stabilize.
- (c) Use the marker-to-peak function to set the marker to the peak of the emission.

11.4. Test Results

Please refer to Appendix A

12. EMISSION LIMITATIONS

12.1. Block Diagram of Test Setup



12.2. Specification Limits

In any 100kHz 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 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, that the required attenuation shall be 30 dB instead of 20 dB.

Attenuation below the general limits specified in Section 15.209(a)/RSS-Gen Section 8.9 table 4 is not required. In addition, radiated emissions which fall in restricted bands, as defined in Section 15.205(a)/RSS-Gen Section 8.10 table 6, must also comply with the radiated emission limits specified in Section 15.209(a)/RSS-Gen Section 8.9 table 4. (See Section 15.205(c)).

12.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10:2013:

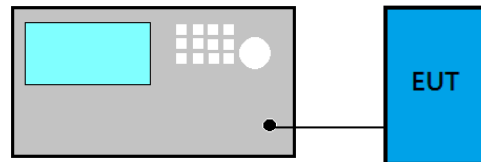
- (1) Set span wide enough to capture the peak level of the in-band emission and all spurious emissions; up to 10th harmonic.
- (2) RBW = 100 kHz
- (3) VBW \geq RBW
- (4) Sweep = Auto
- (5) Detector function = Peak
- (6) Trace = Max hold

12.4. Test Results

Please refer to Appendix A

13. DTS/OCCUPIED BANDWIDTH

13.1. Block Diagram of Test Setup



13.2. Specification Limits

The minimum bandwidth shall be at least 500kHz.

13.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10:2013:

For DTS Bandwidth

- (1) Set RBW = 100 kHz.
- (2) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- (3) Detector = Peak.
- (4) Trace mode = max hold.
- (5) Sweep = auto couple.
- (6) Allow the trace to stabilize.
- (7) Setting channel bandwidth function x to -6dB power to record the final bandwidth..

For 99% Occupied Bandwidth

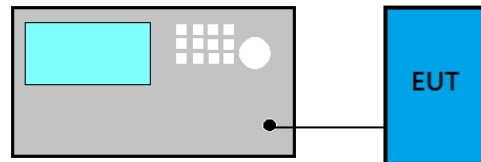
- (15) Set Span range 1.5~5 times the OBW
- (16) Set RBW close to 1% to 5% of OBW.
- (17) Set VBW $\geq 3 \times$ RBW.
- (18) Detector = Peak.
- (19) Trace mode = Max hold
- (20) Sweep = Auto couple.
- (21) Allow the trace to stabilize.

13.4. Test Results

Please refer to Appendix A

14. POWER SPECTRAL DENSITY

14.1. Block Diagram of Test Setup



14.2. Specification Limits

The peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band.

14.3. Test Procedure

Following measurement procedure is reference to ANSI C63.10:2013:

■ Method PKPSD (peak PSD)

- (1) Set analyzer center frequency to DTS channel center frequency.
- (2) Set the span to 1.5 times the DTS bandwidth.
- (3) Set the RBW to: $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- (4) Set the VBW $\geq 3 \times \text{RBW}$.
- (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 level.
- (10) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

□ Method AVGPSD-2

- (1) Using peak PSD procedure step 1 to step 4.
- (2) Detector = RMS detector
- (3) Sweep time = auto couple
- (4) Trace mode = trace averaging over a minimum of 100 traces
- (5) Use the peak marker function to determine the maximum amplitude level.
- (6) Duty cycle factor is added when duty cycle presented in section 3.7 < 98%.
- (7) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

14.4. Test Results

Please refer to Appendix A



15. DEVIATION TO TEST SPECIFICATIONS

【NONE】



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APPENDIX A

TEST DATA AND PLOTS

(Model: T26SZ)

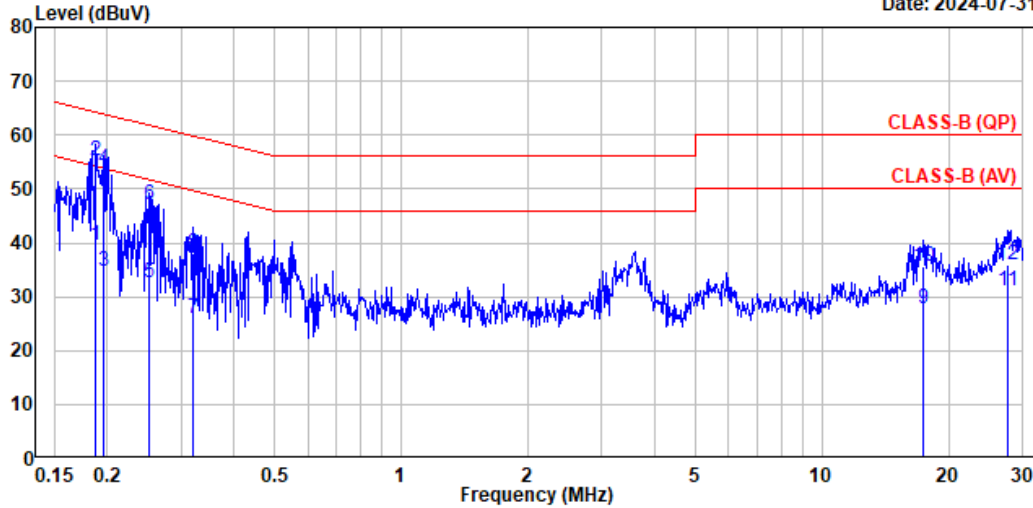
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A.1 CONDUCTED EMISSION

Test Date	2023/07/31	Temp./Hum.	25°C/61%
Test Voltage	DC 5V (Via AC Adapter)	Tested By	Bruce Tseng
Test Mode	Charge		

File: C:\test_data\2024\C1M2404XXX\C1M2404133-C-Mains-RF\DATA\C1M2404181-C-Mains_00004.EMI
 Date: 2024-07-31



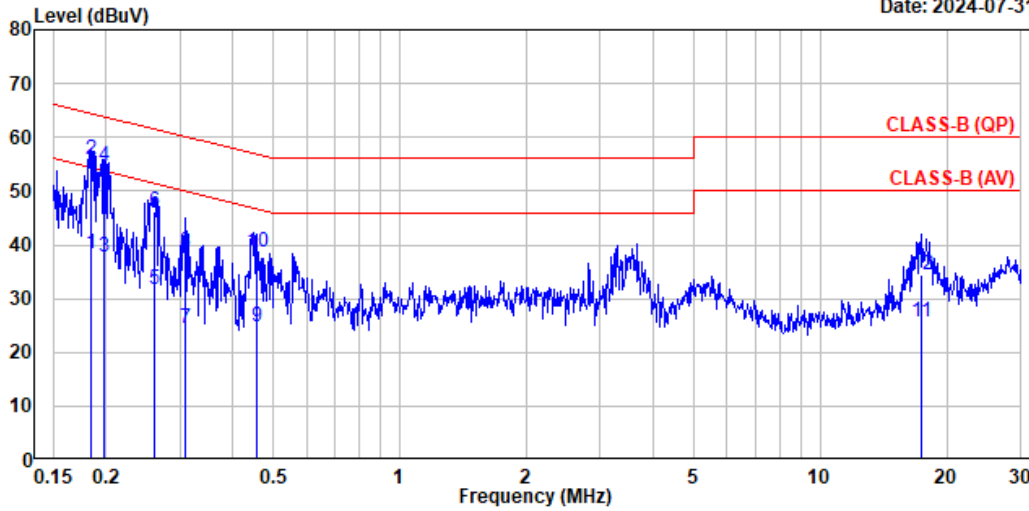
Site No.	: No.8 Shielded Room	Data No.	: 4
Instrument 1	: Receiver ESR(774)		
Instrument 2	: ENV432 (567)(A) CE-08 ESH3-Z2 (354)		
Limit	: CLASS-B (QP)	Phase	: Neutral
Environment	: 25°C/61%	Test Rating	: DC 5V
EUT Model	: T26SZ	Engineer	: Bruce
Test Mode	: Charge		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.188	10.26	0.03	9.85	19.42	39.56	54.14	14.58	Average
2	0.188	10.26	0.03	9.85	35.18	55.32	64.14	8.82	QP
3	0.195	10.26	0.03	9.85	14.70	34.84	53.81	18.97	Average
4	0.195	10.26	0.03	9.85	33.51	53.65	63.81	10.16	QP
5	0.252	10.26	0.03	9.85	12.37	32.51	51.69	19.18	Average
6	0.252	10.26	0.03	9.85	26.98	47.12	61.69	14.57	QP
7	0.320	10.26	0.03	9.85	5.82	25.96	49.71	23.75	Average
8	0.320	10.26	0.03	9.85	17.89	38.03	59.71	21.68	QP
9	17.425	10.82	0.19	9.93	6.84	27.78	50.00	22.22	Average
10	17.425	10.82	0.19	9.93	14.65	35.59	60.00	24.41	QP
11	27.563	11.31	0.24	9.99	9.67	31.21	50.00	18.79	Average
12	27.563	11.31	0.24	9.99	14.38	35.92	60.00	24.08	QP

Remarks: 1. Emission Level(dBμV)= AMN Factor(dB) + Cable Loss(dB) + Pulse Att.(dB) + Reading(dBμV).

Test Date	2023/07/31	Temp./Hum.	25°C/61%
Test Voltage	DC 5V (Via AC Adapter)	Tested By	Bruce Tseng
Test Mode	Charge		

File: C:\test_data\2024\C1M2404XXX\C1M2404133-C-Mains-RF\DATA\C1M2404181-C-Mains_00003.EMI
 Date: 2024-07-31



Site No.	: No.8 Shielded Room	Data No.	: 3
Instrument 1	: Receiver ESR(774)		
Instrument 2	: ENV432 (567)(A) CE-08 ESH3-Z2 (354)		
Limit	: CLASS-B (QP)	Phase	: Line
Environment	: 25°C/61%	Test Rating	: DC 5V
EUT Model	: T26SZ	Engineer	: Bruce
Test Mode	: Charge		

	Freq. (MHz)	AMN Factor (dB)	Cable Loss (dB)	Pulse Att. (dB)	Reading (dBμV)	Emission Level (dBμV)	Limits (dBμV)	Margin (dB)	Remark
1	0.184	10.25	0.03	9.85	18.14	38.27	54.30	16.03	Average
2	0.184	10.25	0.03	9.85	35.68	55.81	64.30	8.49	QP
3	0.197	10.25	0.03	9.85	17.55	37.68	53.72	16.04	Average
4	0.197	10.25	0.03	9.85	34.39	54.52	63.72	9.20	QP
5	0.261	10.25	0.03	9.85	11.51	31.64	51.40	19.76	Average
6	0.261	10.25	0.03	9.85	26.16	46.29	61.40	15.11	QP
7	0.309	10.25	0.03	9.85	4.45	24.58	50.00	25.42	Average
8	0.309	10.25	0.03	9.85	18.47	38.60	60.00	21.40	QP
9	0.456	10.25	0.03	9.85	4.58	24.71	46.77	22.06	Average
10	0.456	10.25	0.03	9.85	18.50	38.63	56.77	18.14	QP
11	17.425	10.59	0.19	9.93	4.89	25.60	50.00	24.40	Average
12	17.425	10.59	0.19	9.93	13.60	34.31	60.00	25.69	QP

Remarks: 1. Emission Level(dBμV)= AMN Factor(dB) + Cable Loss(dB) + Pulse Att.(dB) + Reading(dBμV).

A.2 RADIATED EMISSION

Test Date	2024/07/23	Temp./Hum.	23°C/44%
Test Voltage	(1)DC 5V (Via AC Adapter) (2)DC 7.4V (Via Battery)	Tested By	Harry Huang

A.2.1 Emissions within Restricted Frequency Bands

A.2.1.1 Frequency 9kHz~30MHz

The emissions (9kHz~30MHz) not reported for there is no emission be found.

A.2.1.2 Frequency Below 1 GHz

Mode	Charge	Frequency	---
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
33.104	22.64	1.41	26.50	29.22	26.77	40.00	13.23	Peak
144.848	16.69	3.01	26.06	35.07	28.71	43.50	14.79	Peak
274.440	18.24	4.27	25.69	37.16	33.98	46.00	12.02	Peak
378.424	20.61	5.54	26.36	33.37	33.17	46.00	12.83	Peak
754.008	24.80	7.58	27.40	32.36	37.35	46.00	8.65	Peak
983.704	26.87	8.92	26.87	30.61	39.53	54.00	14.47	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
31.552	23.34	1.39	26.50	30.90	29.12	40.00	10.88	Peak
91.692	15.06	2.39	26.34	36.85	27.96	43.50	15.54	Peak
150.862	16.23	3.07	26.03	40.83	34.11	43.50	9.39	Peak
279.872	18.32	4.32	25.68	33.68	30.64	46.00	15.36	Peak
379.976	20.65	5.56	26.37	33.07	32.91	46.00	13.09	Peak
524.894	23.15	6.69	27.29	32.20	34.74	46.00	11.26	Peak

Mode	Normal	Frequency	---
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
63.534	11.79	2.01	26.43	44.17	31.55	40.00	8.45	Peak
100.394	16.41	2.50	26.32	40.21	32.80	43.50	10.70	Peak
153.883	16.03	3.10	26.02	37.86	30.98	43.50	12.52	Peak
291.069	18.49	4.42	25.66	35.38	32.62	46.00	13.38	Peak
451.534	22.02	6.25	26.90	33.50	34.88	46.00	11.12	Peak
539.943	23.34	6.71	27.33	34.03	36.75	46.00	9.25	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
59.377	11.95	1.94	26.45	50.21	37.64	40.00	2.36	Peak
96.237	15.82	2.45	26.33	47.99	39.92	43.50	3.58	Peak
153.883	16.03	3.10	26.02	37.89	31.01	43.50	12.49	Peak
324.049	19.26	4.85	25.89	34.30	32.51	46.00	13.49	Peak
539.943	23.34	6.71	27.33	33.45	36.17	46.00	9.83	Peak
895.517	26.07	8.41	27.16	32.48	39.81	46.00	6.19	Peak

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2439.168MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
34.850	21.92	1.44	26.50	31.23	28.09	40.00	11.91	Peak
210.258	15.57	3.65	25.81	48.49	41.90	43.50	1.60	QP
229.658	16.73	3.84	25.77	41.46	36.26	46.00	9.74	Peak
416.383	21.41	5.94	26.65	39.81	40.51	46.00	5.49	Peak
691.217	24.48	7.27	27.49	33.57	37.84	46.00	8.16	Peak
812.467	25.18	7.88	27.31	33.83	39.59	46.00	6.41	Peak
991.108	26.92	8.96	26.85	33.15	42.19	54.00	11.81	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
30.000	24.02	1.36	26.51	33.58	32.46	40.00	7.54	Peak
150.442	16.26	3.07	26.03	38.33	31.64	43.50	11.86	Peak
210.258	15.57	3.65	25.81	42.00	35.41	43.50	8.09	Peak
360.608	20.21	5.33	26.21	32.00	31.33	46.00	14.67	Peak
675.858	24.42	7.20	27.49	35.11	39.24	46.00	6.76	Peak
788.217	24.97	7.75	27.35	32.91	38.28	46.00	7.72	Peak

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2425.000MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
30.000	24.02	1.36	26.51	31.75	30.62	40.00	9.38	Peak
169.842	15.19	3.28	25.95	38.29	30.81	43.50	12.69	Peak
210.258	15.57	3.65	25.81	48.16	41.57	43.50	1.93	QP
417.192	21.43	5.95	26.66	39.50	40.22	46.00	5.78	Peak
552.183	23.50	6.73	27.36	32.79	35.66	46.00	10.34	Peak
786.600	24.96	7.74	27.35	32.98	38.32	46.00	7.68	Peak
850.458	25.61	8.13	27.24	33.30	39.81	46.00	6.19	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
32.425	22.95	1.40	26.50	30.92	28.77	40.00	11.23	Peak
108.408	17.07	2.61	26.26	34.51	27.92	43.50	15.58	Peak
155.292	15.93	3.12	26.01	37.03	30.06	43.50	13.44	Peak
210.258	15.57	3.65	25.81	41.27	34.68	43.50	8.82	Peak
378.392	20.61	5.54	26.36	34.54	34.33	46.00	11.67	Peak
685.558	24.46	7.24	27.49	36.04	40.26	46.00	5.74	Peak

Test Mode: #1 With TC57A RF Module

Mode	T-FHSS	Frequency	TX 2437.500MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
34.042	22.23	1.43	26.50	30.91	28.07	40.00	11.93	Peak
119.725	17.91	2.75	26.19	38.80	33.26	43.50	10.24	Peak
270.075	18.18	4.23	25.70	37.10	33.82	46.00	12.18	Peak
391.325	20.90	5.69	26.46	40.21	40.34	46.00	5.66	Peak
488.325	22.65	6.55	27.15	35.97	38.03	46.00	7.97	Peak
929.675	26.39	8.62	27.05	32.85	40.81	46.00	5.19	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
31.617	23.31	1.39	26.50	31.29	29.48	40.00	10.52	Peak
89.817	14.72	2.37	26.35	36.78	27.52	43.50	15.98	Peak
155.292	15.93	3.12	26.01	36.74	29.77	43.50	13.73	Peak
431.742	21.69	6.08	26.77	34.23	35.24	46.00	10.76	Peak
679.900	24.44	7.22	27.49	35.26	39.43	46.00	6.57	Peak
957.158	26.63	8.77	26.96	32.83	41.28	46.00	4.72	Peak

Test Mode: #2 With WTR-16 RF Board

Mode	T-FHSS	Frequency	TX 2437.500MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
69.608	11.77	2.11	26.41	46.80	34.27	40.00	5.73	Peak
75.267	12.23	2.21	26.39	49.71	37.76	40.00	2.24	Peak
210.258	15.57	3.65	25.81	45.95	39.35	43.50	4.15	Peak
337.975	19.63	5.03	26.01	41.50	40.15	46.00	5.85	Peak
400.217	21.11	5.79	26.53	38.38	38.75	46.00	7.25	Peak
873.092	25.84	8.28	27.20	34.27	41.19	46.00	4.81	Peak

Antenna at Vertical Polarization

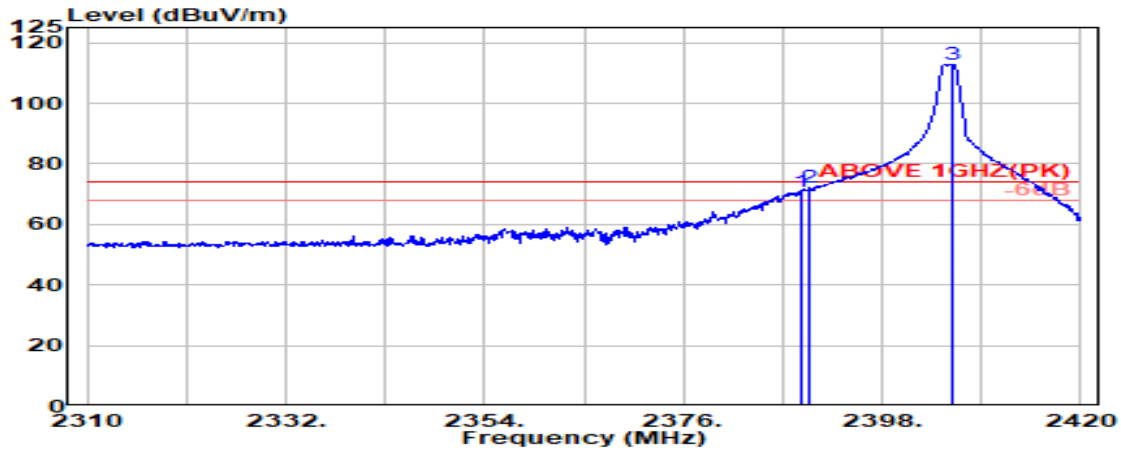
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
30.808	23.66	1.37	26.51	31.50	30.03	40.00	9.97	Peak
156.100	15.86	3.12	26.01	41.39	34.37	43.50	9.13	Peak
418.808	21.46	5.97	26.67	33.59	34.35	46.00	11.65	Peak
485.092	22.59	6.52	27.13	34.33	36.32	46.00	9.68	Peak
671.008	24.40	7.17	27.49	36.07	40.15	46.00	5.85	Peak
963.625	26.69	8.81	26.94	33.64	42.20	54.00	11.80	Peak

A.2.1.3 Frequency Above 1 GHz to 10th harmonics

Band Edge:

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2405.376MHz
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Antenna at Horizontal Polarization

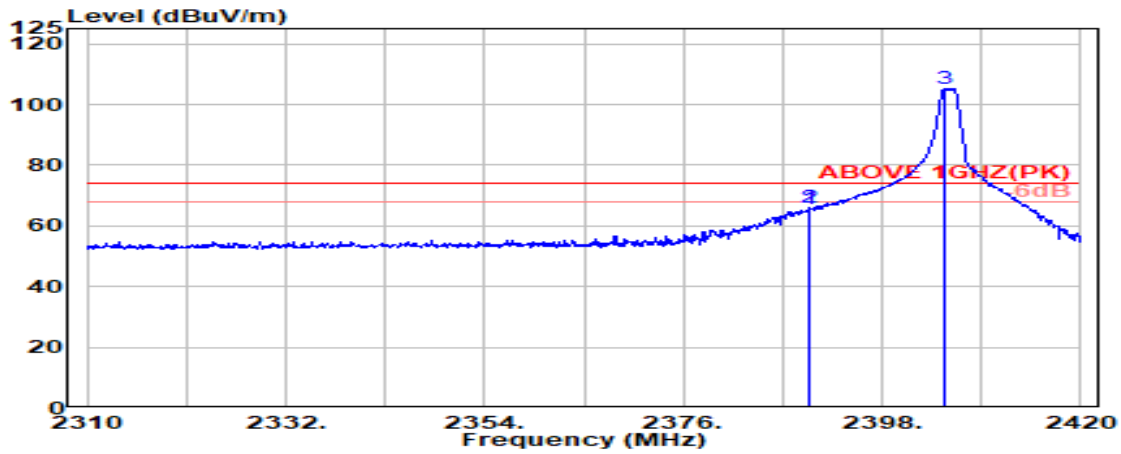
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.017	28.22	5.72	39.93	76.97	70.98	74.00	3.02	Peak
2390.000	28.22	5.72	39.93	78.08	72.09	74.00	1.91	Peak
@ 2405.883	28.21	5.74	39.93	118.92	112.94	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2389.017	70.98	-37.08	33.90	54.00	20.10	Average
2390.000	72.09	-37.08	35.01	54.00	18.99	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2405.376MHz
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Antenna at Vertical Polarization

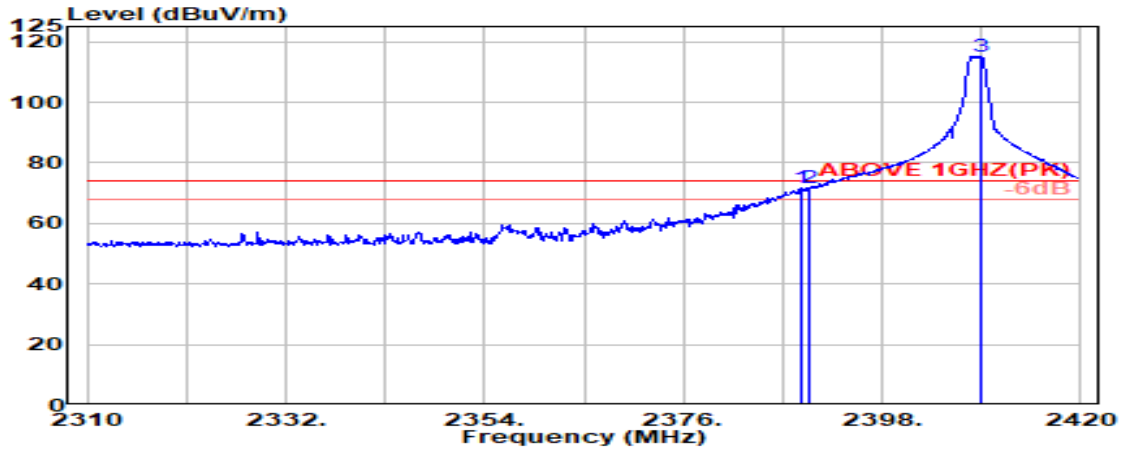
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.842	28.22	5.72	39.93	71.62	65.63	74.00	8.37	Peak
2390.000	28.22	5.72	39.93	72.05	66.06	74.00	7.94	Peak
@ 2404.875	28.21	5.74	39.93	111.25	105.28	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2389.842	65.63	-37.08	28.55	54.00	25.45	Average
2390.000	66.06	-37.08	28.98	54.00	25.02	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2408.448MHz
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Antenna at Horizontal Polarization

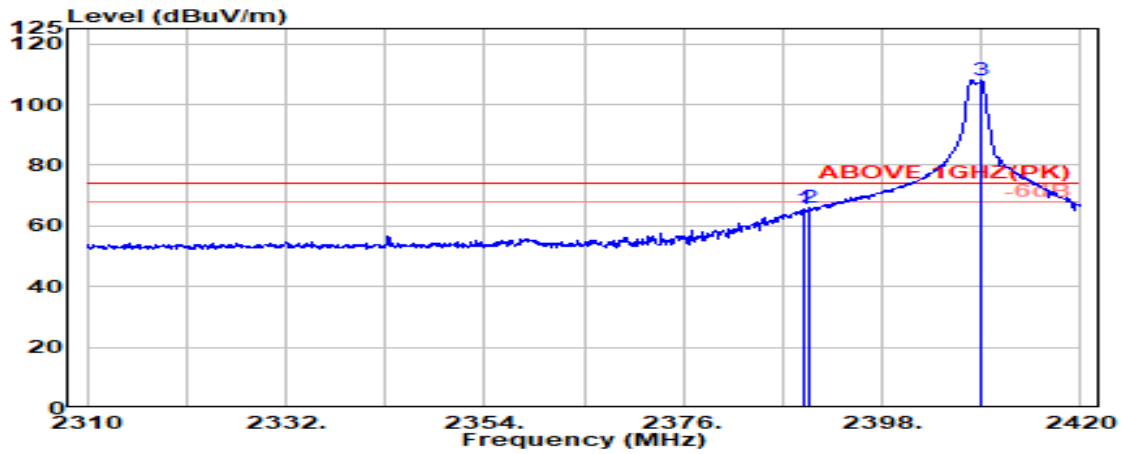
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.017	28.22	5.72	39.93	77.85	71.87	74.00	2.13	Peak
2390.000	28.22	5.72	39.93	77.63	71.64	74.00	2.36	Peak
@ 2409.000	28.22	5.74	39.93	120.92	114.95	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2389.017	71.87	-37.08	34.79	54.00	19.21	Average
2390.000	71.64	-37.08	34.56	54.00	19.44	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2408.448MHz
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Antenna at Vertical Polarization

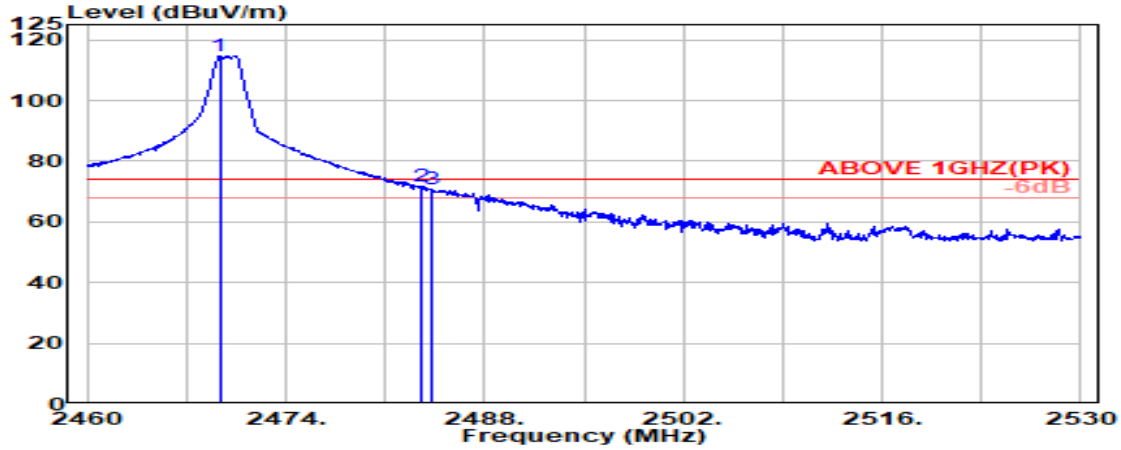
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.475	28.22	5.72	39.93	71.46	65.47	74.00	8.53	Peak
2390.000	28.22	5.72	39.93	72.05	66.07	74.00	7.93	Peak
@ 2409.000	28.22	5.74	39.93	113.93	107.97	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2389.475	65.47	-37.08	28.39	54.00	25.61	Average
2390.000	66.07	-37.08	28.99	54.00	25.01	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2469.888MHz
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Antenna at Horizontal Polarization

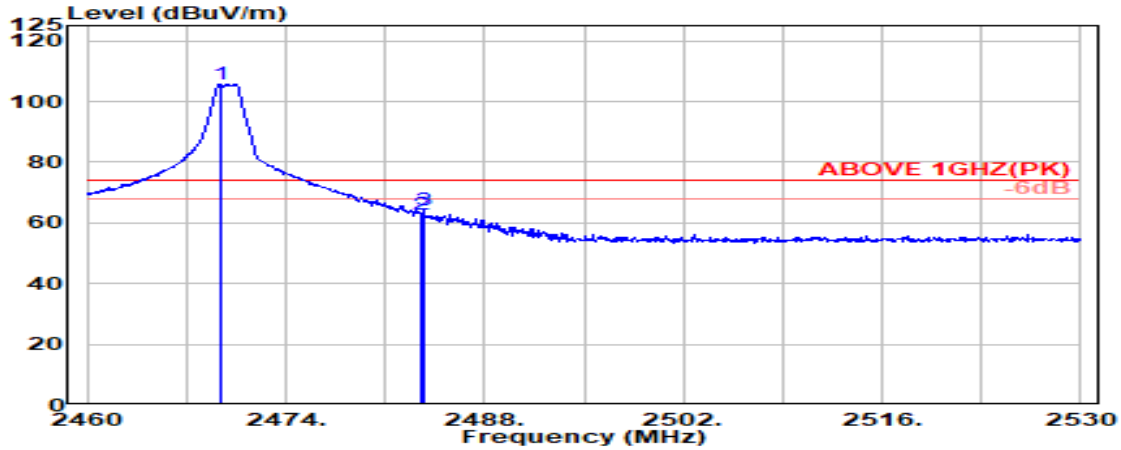
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2469.333	28.34	5.81	39.92	120.60	114.83	---	---	Peak
2483.500	28.37	5.83	39.92	77.19	71.46	74.00	2.54	Peak
2484.325	28.37	5.83	39.92	76.70	70.98	74.00	3.02	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	71.46	-37.08	34.38	54.00	19.62	Average
2484.325	70.98	-37.08	33.90	54.00	20.10	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2469.888MHz
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Antenna at Vertical Polarization

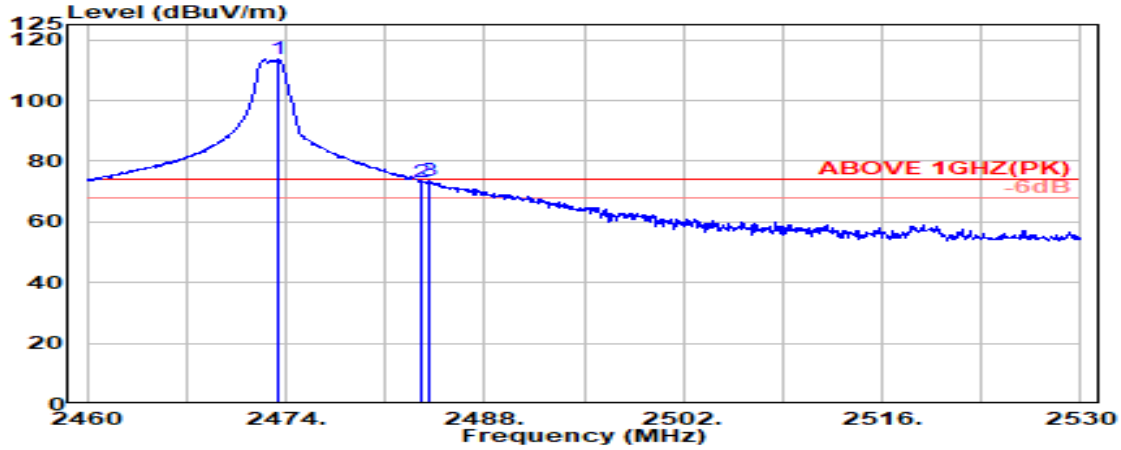
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2469.450	28.34	5.81	39.92	111.44	105.68	---	---	Peak
2483.500	28.37	5.83	39.92	68.56	62.83	74.00	11.17	Peak
2483.683	28.37	5.83	39.92	69.68	63.95	74.00	10.05	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	62.83	-37.08	25.75	54.00	28.25	Average
2483.683	63.95	-37.08	26.87	54.00	27.13	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2472.960MHz
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Antenna at Horizontal Polarization

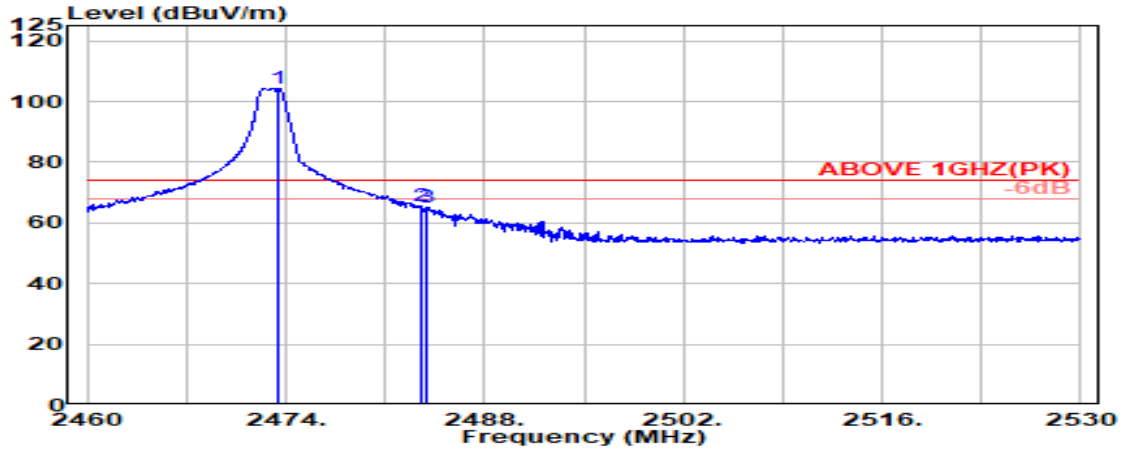
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2473.475	28.35	5.82	39.92	119.38	113.63	---	---	Peak
2483.500	28.37	5.83	39.92	78.91	73.19	74.00	0.81	Peak
2484.150	28.37	5.83	39.92	79.21	73.49	74.00	0.51	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	73.19	-37.08	36.11	54.00	17.89	Average
2484.150	73.49	-37.08	36.41	54.00	17.59	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2472.960MHz
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Antenna at Vertical Polarization

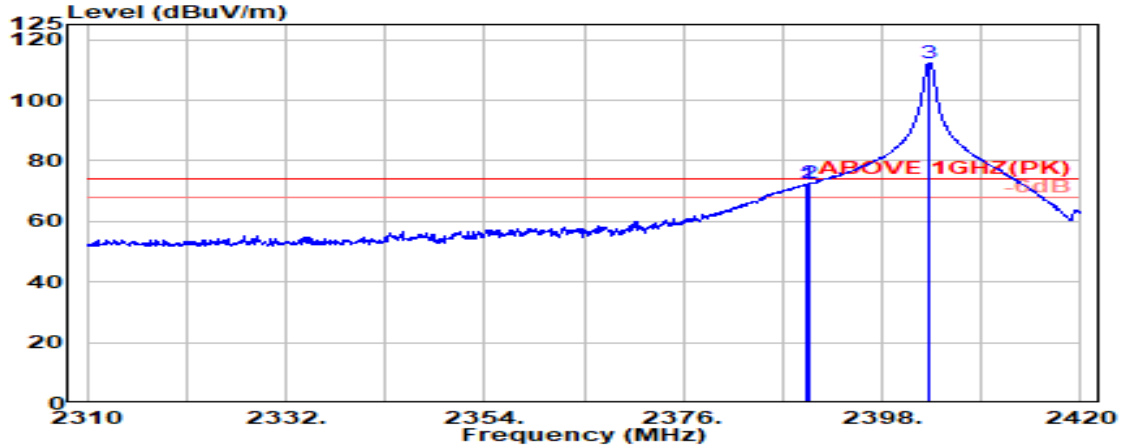
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2473.475	28.35	5.82	39.92	110.14	104.39	---	---	Peak
2483.500	28.37	5.83	39.92	71.46	65.74	74.00	8.26	Peak
2483.917	28.37	5.83	39.92	70.94	65.22	74.00	8.78	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	65.74	-37.08	28.66	54.00	25.34	Average
2483.917	65.22	-37.08	28.14	54.00	25.86	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2403.250MHz
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Antenna at Horizontal Polarization

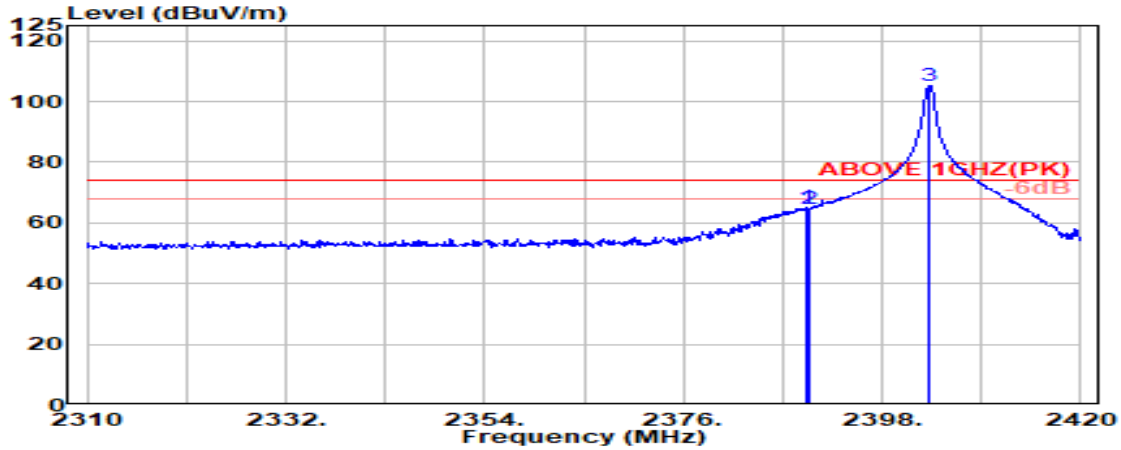
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.750	28.22	5.72	39.93	78.33	72.34	74.00	1.66	Peak
2390.000	28.22	5.72	39.93	78.65	72.66	74.00	1.34	Peak
@ 2403.317	28.21	5.74	39.93	118.42	112.43	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2389.750	72.34	-33.15	39.19	54.00	14.81	Average
2390.000	72.66	-33.15	39.51	54.00	14.49	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2403.250MHz
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Antenna at Vertical Polarization

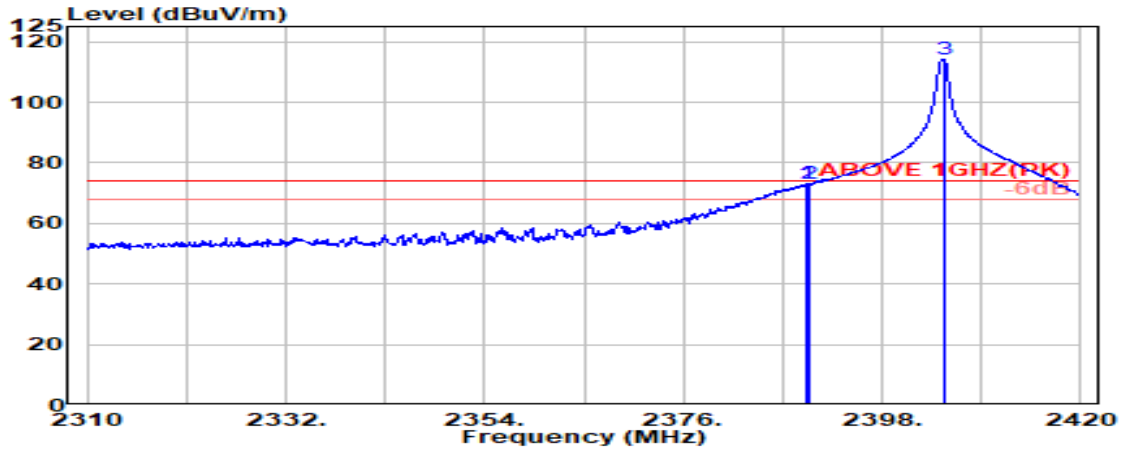
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.567	28.22	5.72	39.93	71.30	65.31	74.00	8.69	Peak
2390.000	28.22	5.72	39.93	70.38	64.39	74.00	9.61	Peak
@ 2403.225	28.21	5.74	39.93	111.13	105.15	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2389.567	65.31	-33.15	32.16	54.00	21.84	Average
2390.000	64.39	-33.15	31.24	54.00	22.76	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2404.750MHz
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Antenna at Horizontal Polarization

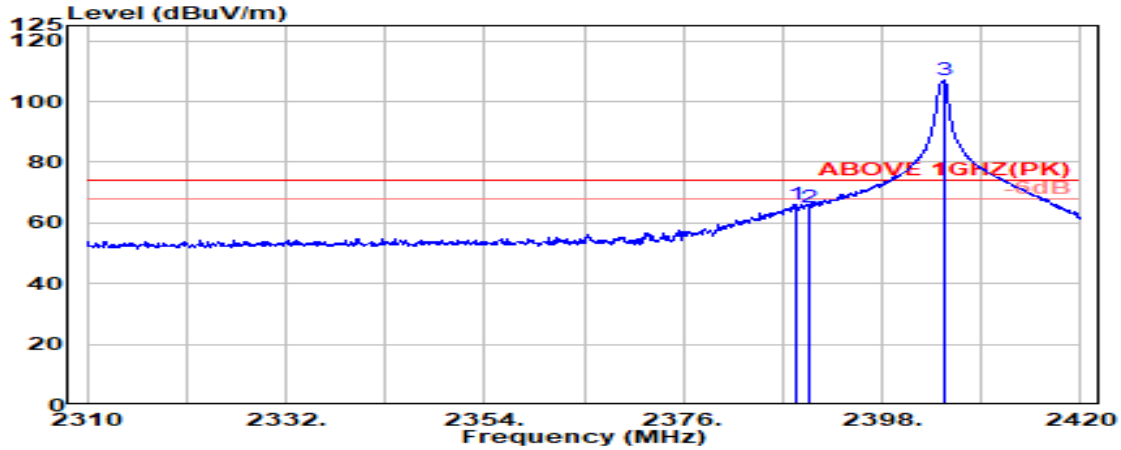
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.750	28.22	5.72	39.93	78.93	72.94	74.00	1.06	Peak
2390.000	28.22	5.72	39.93	78.97	72.98	74.00	1.02	Peak
@ 2404.783	28.21	5.74	39.93	119.96	113.98	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2389.750	72.94	-33.15	39.79	54.00	14.21	Average
2390.000	72.98	-33.15	39.83	54.00	14.17	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2404.750MHz
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Antenna at Vertical Polarization

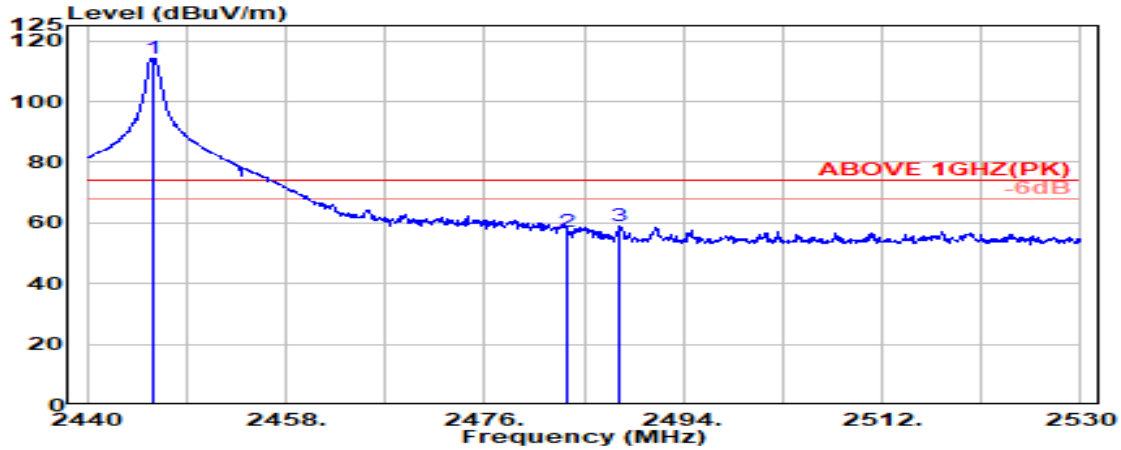
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2388.375	28.22	5.72	39.93	72.16	66.18	74.00	7.82	Peak
2390.000	28.22	5.72	39.93	71.18	65.20	74.00	8.80	Peak
@ 2404.783	28.21	5.74	39.93	112.82	106.84	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2388.375	66.18	-33.15	33.03	54.00	20.97	Average
2390.000	65.20	-33.15	32.05	54.00	21.95	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2446.000MHz
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Antenna at Horizontal Polarization

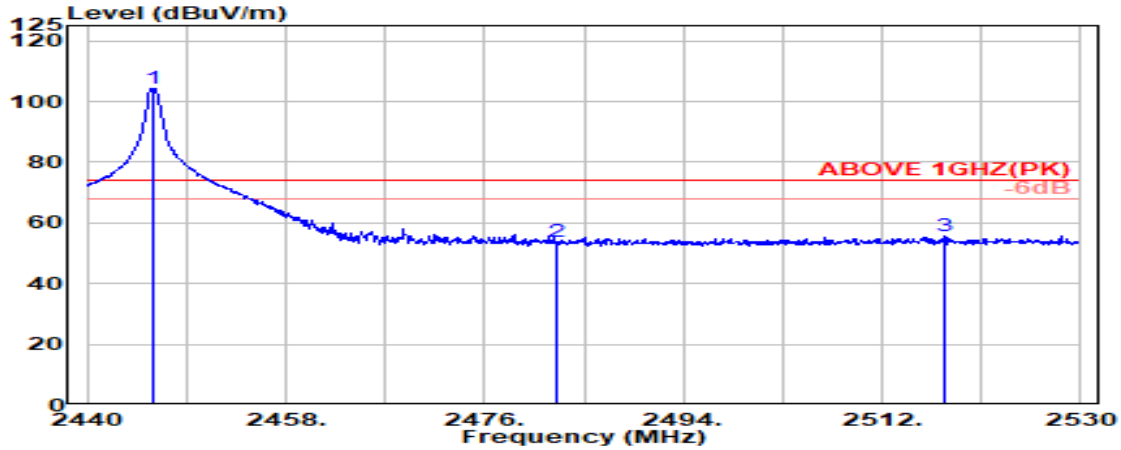
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2446.000	28.29	5.79	39.92	119.99	114.14	---	---	Peak
2483.500	28.37	5.83	39.92	62.81	57.08	74.00	16.92	Peak
2488.150	28.38	5.84	39.92	64.44	58.73	74.00	15.27	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	57.08	-33.15	23.93	54.00	30.07	Average
2488.150	58.73	-33.15	25.58	54.00	28.42	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2446.000MHz
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Antenna at Vertical Polarization

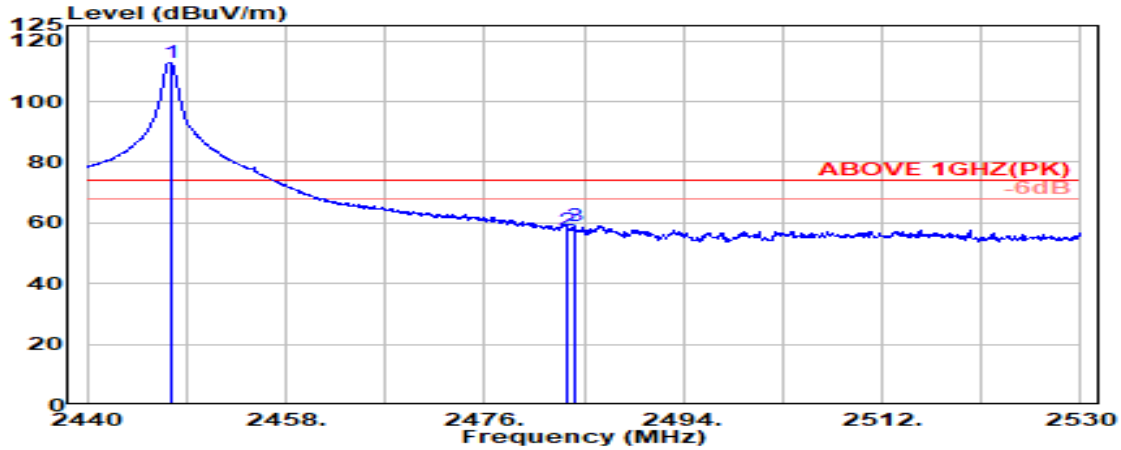
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2446.000	28.29	5.79	39.92	110.23	104.39	---	---	Peak
2483.500	28.37	5.83	39.92	59.55	53.82	74.00	20.18	Peak
2517.625	28.51	5.87	39.92	61.00	55.46	74.00	18.54	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	53.82	-33.15	20.67	54.00	33.33	Average
2517.625	55.46	-33.15	22.31	54.00	31.69	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2447.500MHz
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Antenna at Horizontal Polarization

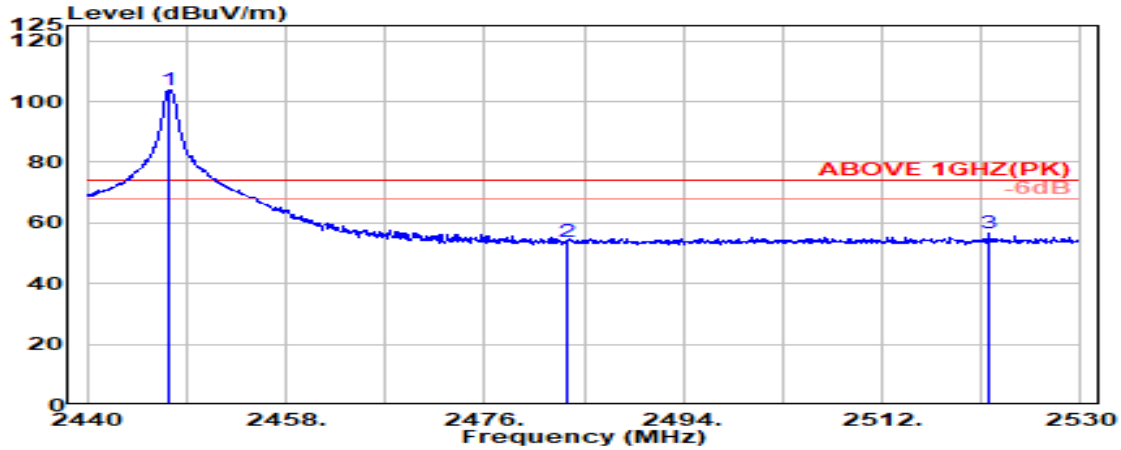
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2447.575	28.30	5.79	39.92	118.77	112.93	---	---	Peak
2483.500	28.37	5.83	39.92	63.47	57.74	74.00	16.26	Peak
2484.100	28.37	5.83	39.92	64.76	59.03	74.00	14.97	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	57.74	-33.15	24.59	54.00	29.41	Average
2484.100	59.03	-33.15	25.88	54.00	28.12	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2447.5MHz
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Antenna at Vertical Polarization

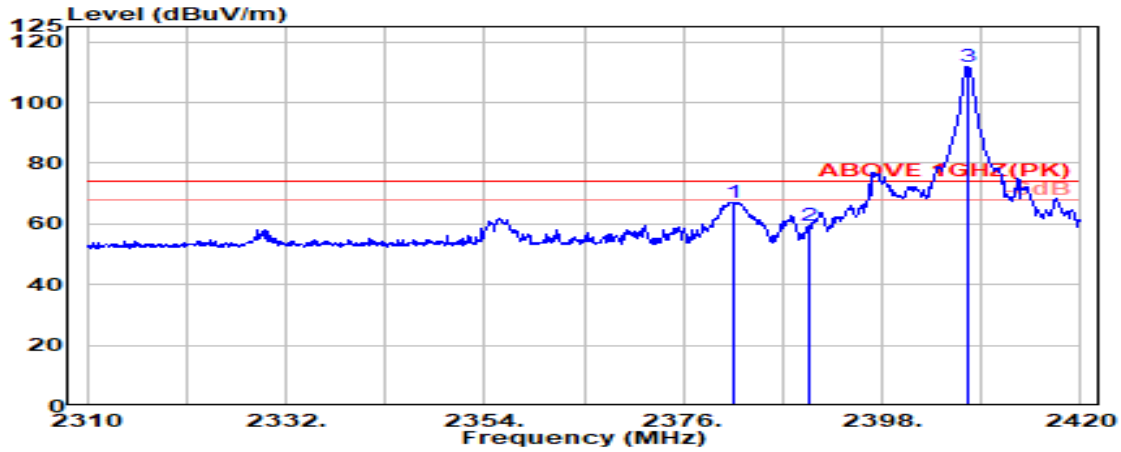
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2447.500	28.30	5.79	39.92	109.76	103.92	---	---	Peak
2483.500	28.37	5.83	39.92	59.52	53.79	74.00	20.21	Peak
2521.750	28.53	5.88	39.92	62.30	56.78	74.00	17.22	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	53.79	-33.15	20.64	54.00	33.36	Average
2521.750	56.78	-33.15	23.63	54.00	30.37	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	T-FHSS	Frequency	TX 2407.500MHz
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Antenna at Horizontal Polarization

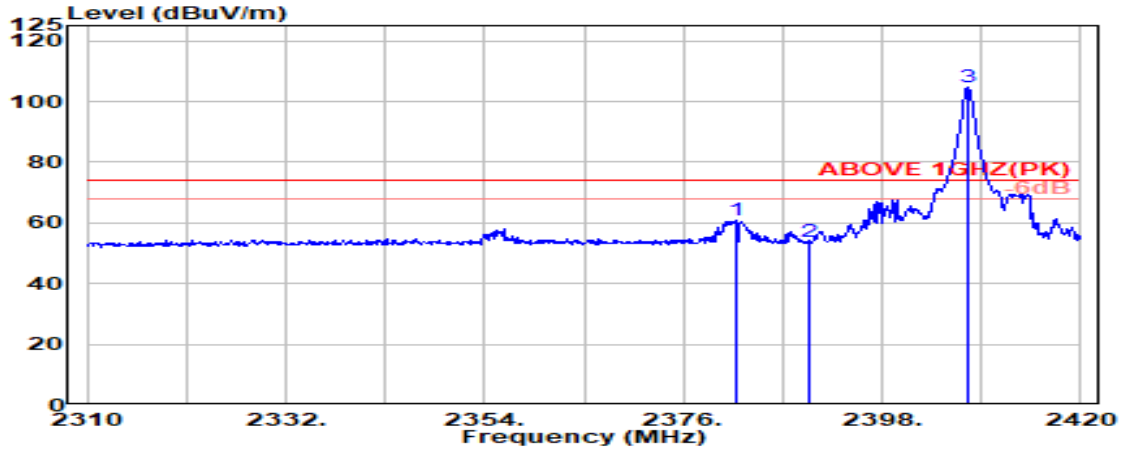
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2381.500	28.24	5.71	39.93	73.20	67.21	74.00	6.79	Peak
2390.000	28.22	5.72	39.93	65.19	59.21	74.00	14.79	Peak
@ 2407.533	28.22	5.74	39.93	117.97	112.00	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2381.500	67.21	-36.48	30.73	54.00	23.27	Average
2390.000	59.21	-36.48	22.73	54.00	31.27	Average

Remark: The "@" means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	T-FHSS	Frequency	TX 2407.500MHz
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Antenna at Vertical Polarization

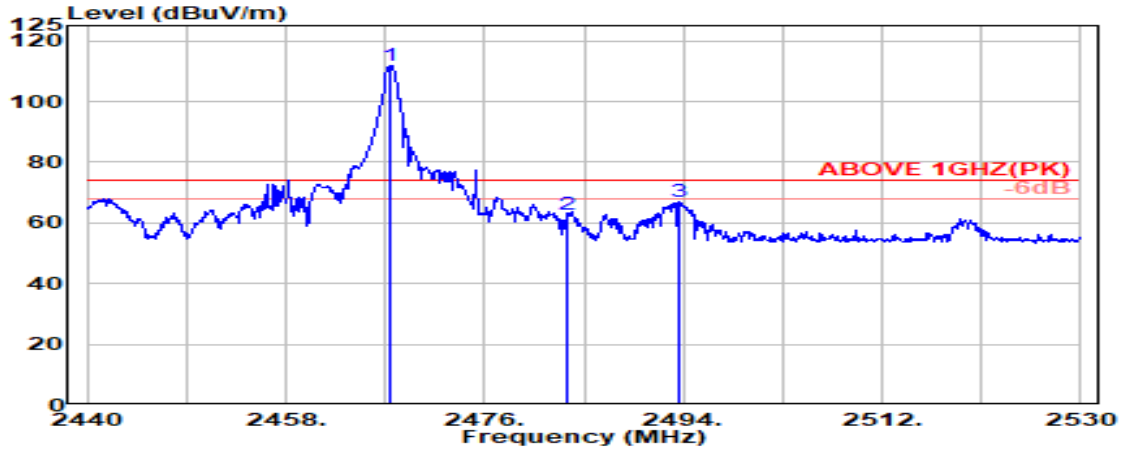
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2381.958	28.24	5.71	39.93	66.61	60.63	74.00	13.37	Peak
2390.000	28.22	5.72	39.93	59.93	53.94	74.00	20.06	Peak
@ 2407.442	28.22	5.74	39.93	110.53	104.56	---	---	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2381.958	60.63	-36.48	24.15	54.00	29.85	Average
2390.000	53.94	-36.48	17.46	54.00	36.54	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2467.500MHz
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Antenna at Horizontal Polarization

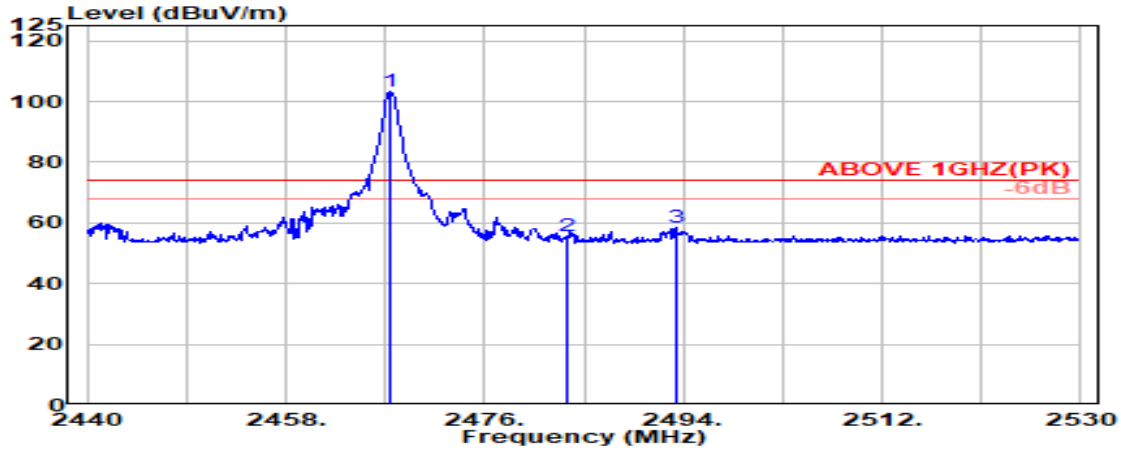
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2467.450	28.34	5.81	39.92	117.68	111.91	---	---	Peak
2483.500	28.37	5.83	39.92	68.32	62.60	74.00	11.40	Peak
2493.700	28.39	5.84	39.92	72.47	66.78	74.00	7.22	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	62.60	-36.48	26.12	54.00	27.88	Average
2493.700	66.78	-36.48	30.30	54.00	23.70	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2467.5MHz
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Antenna at Vertical Polarization

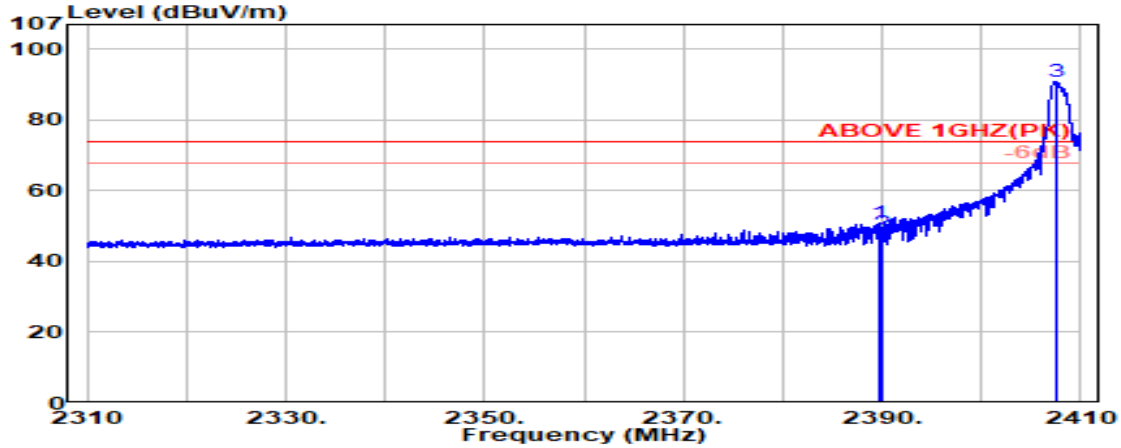
Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2467.450	28.34	5.81	39.92	108.85	103.08	---	---	Peak
2483.500	28.37	5.83	39.92	61.41	55.69	74.00	18.31	Peak
2493.325	28.39	5.84	39.92	64.08	58.39	74.00	15.61	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
2483.500	55.69	-36.48	19.21	54.00	34.79	Average
2493.325	58.39	-36.48	21.91	54.00	32.09	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

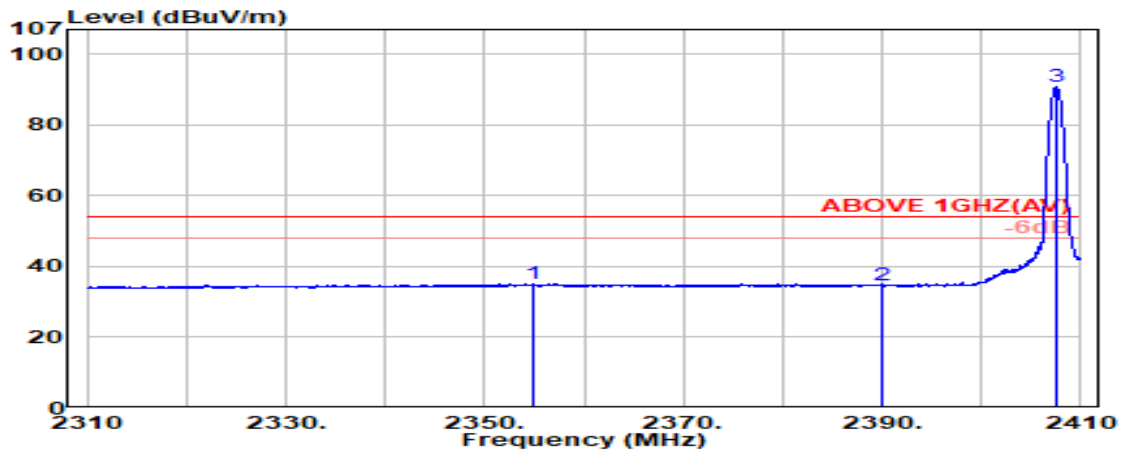
Test Mode: #2 With WTR-16 RF Board

Mode	T-FHSS	Frequency	TX 2407.500MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.760	28.22	5.72	39.93	56.82	50.84	74.00	23.16	Peak
2390.000	28.22	5.72	39.93	54.03	48.04	74.00	25.96	Peak
@ 2407.620	28.22	5.74	39.93	96.65	90.68	---	---	Peak



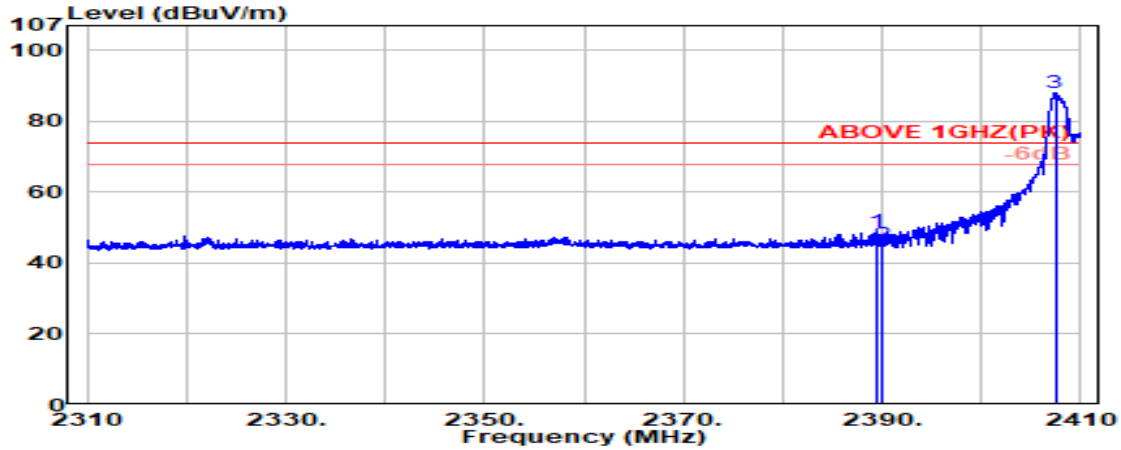
Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2354.820	28.29	5.68	39.93	41.07	35.10	54.00	18.90	Average
2390.000	28.22	5.72	39.93	40.60	34.62	54.00	19.38	Average
@ 2407.500	28.22	5.74	39.93	96.77	90.80	---	---	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

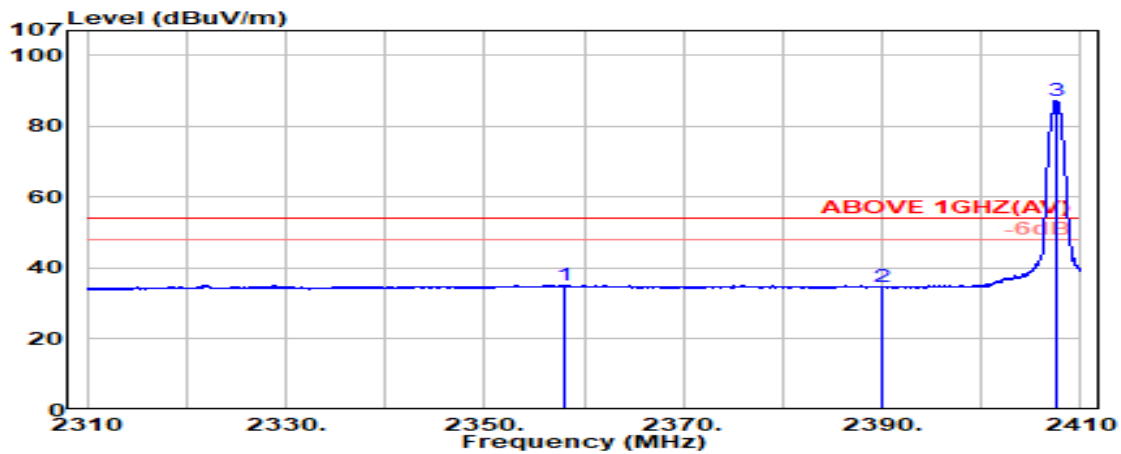
Test Mode: #2 With WTR-16 RF Board

Mode	T-FHSS	Frequency	TX 2407.500MHz
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Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2389.360	28.22	5.72	39.93	54.70	48.71	74.00	25.29	Peak
2390.000	28.22	5.72	39.93	51.21	45.22	74.00	28.78	Peak
@ 2407.420	28.21	5.74	39.93	94.14	88.17	---	---	Peak



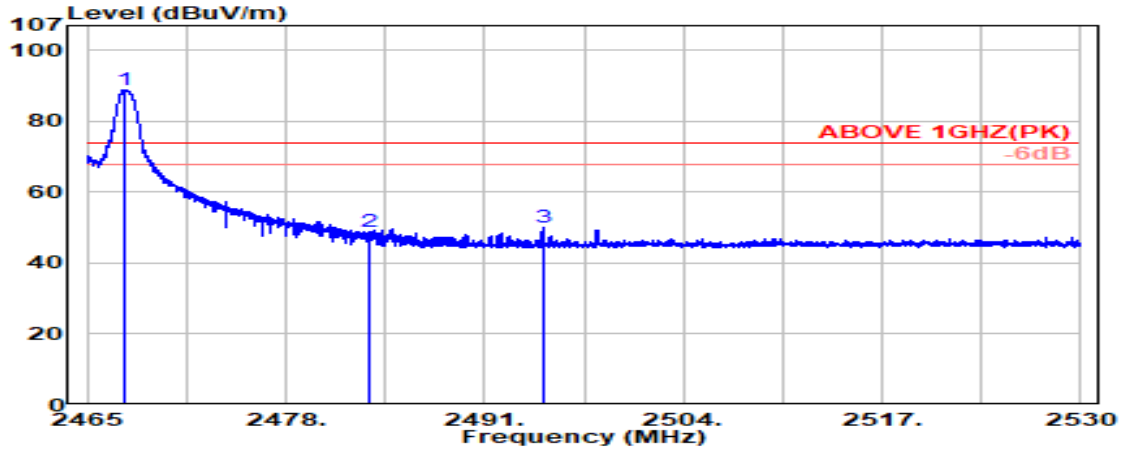
Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
2358.160	28.28	5.68	39.93	41.15	35.18	54.00	18.82	Average
2390.000	28.22	5.72	39.93	40.62	34.63	54.00	19.37	Average
@ 2407.520	28.22	5.74	39.93	93.36	87.39	---	---	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

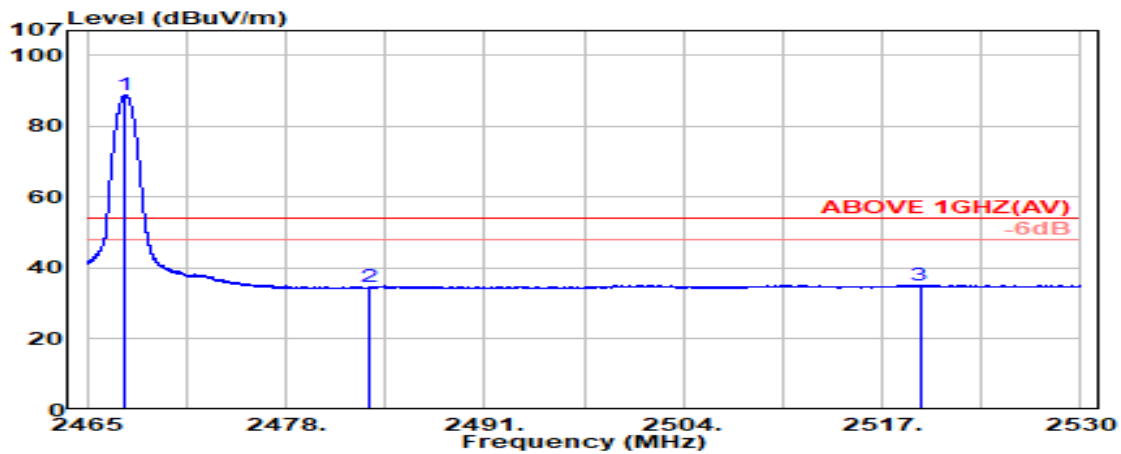
Test Mode: #2 With WTR-16 RF Board

Mode	FASSTest	Frequency	TX 2467.500MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2467.483	28.34	5.81	39.92	94.53	88.75	---	---	Peak
2483.500	28.37	5.83	39.92	54.71	48.99	74.00	25.01	Peak
2494.796	28.39	5.84	39.92	55.61	49.92	74.00	24.08	Peak



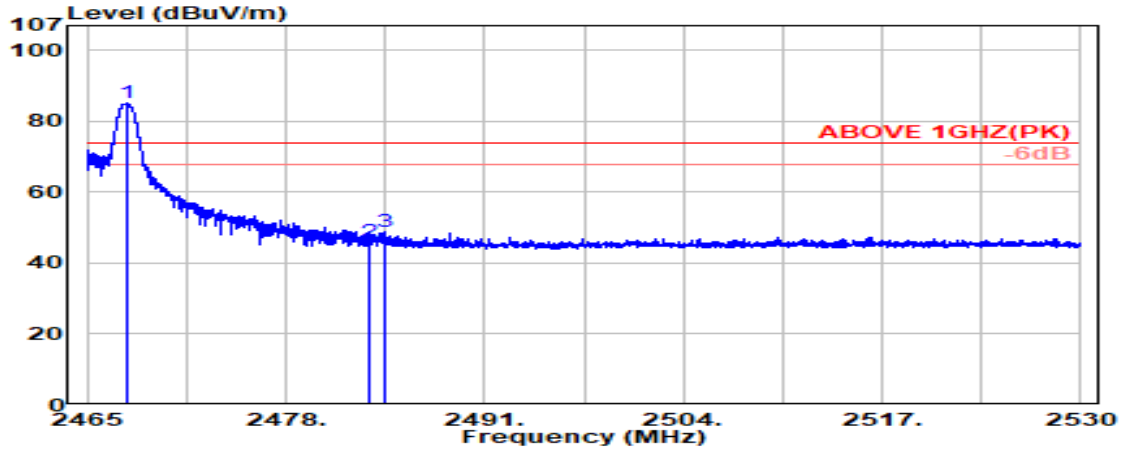
Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2467.483	28.34	5.81	39.92	94.56	88.79	---	---	Average
2483.499	28.37	5.83	39.92	40.41	34.68	54.00	19.32	Average
2519.470	28.52	5.87	39.92	40.68	35.15	54.00	18.85	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

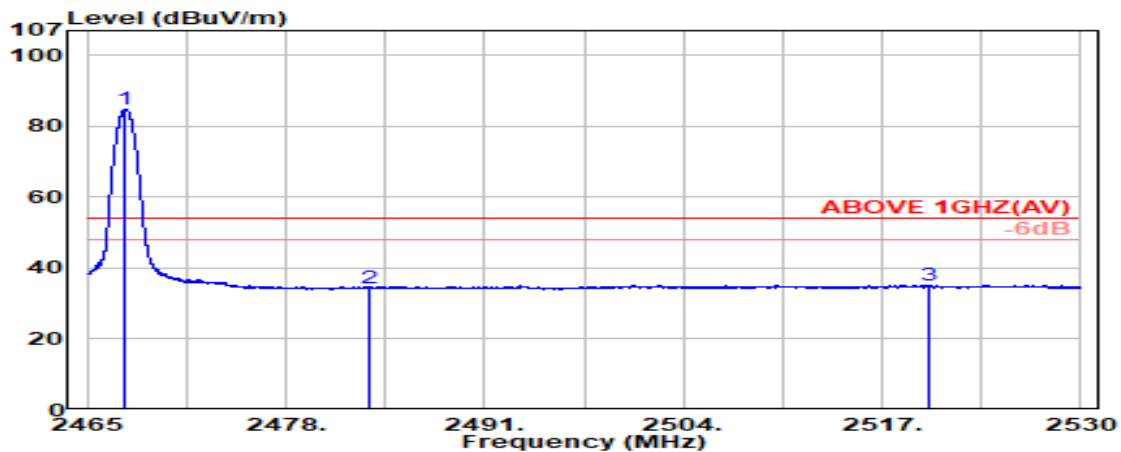
Test Mode: #2 With WTR-16 RF Board

Mode	FASSTest	Frequency	TX 2467.500MHz
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Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2467.574	28.34	5.81	39.92	90.84	85.06	---	---	Peak
2483.500	28.37	5.83	39.92	51.90	46.18	74.00	27.82	Peak
2484.409	28.37	5.83	39.92	54.59	48.87	74.00	25.13	Peak



Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
@ 2467.496	28.34	5.81	39.92	90.73	84.95	---	---	Average
2483.499	28.37	5.83	39.92	40.17	34.45	54.00	19.55	Average
2520.003	28.52	5.87	39.92	40.79	35.26	54.00	18.74	Average

Remark: The “@” means fundamental frequency, it is ignored in this section.

A.2.2 Emissions outside the frequency band:

The emissions (up to 25GHz) not reported for there is no emission be found.

Mode	Charge	Frequency	---
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4880.000	33.16	8.16	39.34	45.57	47.55	54.00	6.45	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4880.000	33.16	8.16	39.34	43.74	45.72	54.00	8.28	Peak

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2405.376MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4810.752	32.94	8.13	39.37	48.62	50.32	74.00	23.68	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4810.752	50.32	-37.08	13.24	54.00	40.76	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4810.752	32.94	8.13	39.37	52.15	53.85	74.00	20.15	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4810.752	53.85	-37.08	16.77	54.00	37.23	Average

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2439.168MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4878.336	33.16	8.16	39.34	53.69	55.67	74.00	18.33	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4878.336	55.67	-37.08	18.59	54.00	35.41	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4878.336	33.16	8.16	39.34	56.31	58.29	74.00	15.71	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4878.336	58.29	-37.08	21.21	54.00	32.79	Average

Test Mode: #1 With TC57A RF Module

Mode	FASSTest	Frequency	TX 2472.960MHz
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4945.920	33.20	8.19	39.31	48.46	50.55	74.00	23.45	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4945.920	50.55	-37.08	13.47	54.00	40.53	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4945.920	33.20	8.19	39.31	52.28	54.37	74.00	19.63	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4945.920	54.37	-37.08	17.29	54.00	36.71	Average

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2403.250MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4806.500	32.93	8.13	39.37	50.66	52.34	74.00	21.66	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4806.500	52.34	-37.08	15.26	54.00	38.74	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4806.500	32.93	8.13	39.37	53.11	54.79	74.00	19.21	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4806.500	54.79	-37.08	17.71	54.00	36.29	Average

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2425.000MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4850.000	33.10	8.15	39.35	55.66	57.56	74.00	16.44	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4850.000	57.56	-37.08	20.48	54.00	33.52	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4850.000	33.10	8.15	39.35	56.29	58.18	74.00	15.82	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4850.000	58.18	-37.08	21.10	54.00	32.90	Average

Test Mode: #1 With TC57A RF Module

Mode	S-FHSS	Frequency	TX 2447.500MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4895.000	33.19	8.17	39.33	50.96	52.99	74.00	21.01	Peak

Emission Frequency (MHz)	Peak Emission Level (dB μ V/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
4895.000	52.99	-37.08	15.91	54.00	38.09	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dB μ V)	Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Detector
4895.000	33.19	8.17	39.33	53.49	55.52	74.00	18.48	Peak

Emission Frequency (MHz)	Peak Emission Level (dB μ V/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dB μ V/m)	Limits (dB μ V/m)	Margin (dB)	Remark
4895.000	55.52	-37.08	18.44	54.00	35.56	Average

Test Mode: #1 With TC57A RF Module

Mode	T-FHSS	Frequency	TX 2407.500MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4815.000	32.96	8.13	39.37	50.61	52.33	74.00	21.67	Peak
Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)		Limits (dBμV/m)	Margin (dB)	Remark	
4815.000	52.33	-37.08	15.25		54.00	38.75	Average	

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4815.000	32.96	8.13	39.37	53.92	55.64	74.00	18.36	Peak
Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)		Limits (dBμV/m)	Margin (dB)	Remark	
4815.000	55.64	-37.08	18.56		54.00	35.44	Average	

Test Mode: #1 With TC57A RF Module

Mode	T-FHSS	Frequency	TX 2437.500MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4875.000	33.15	8.16	39.34	56.06	58.03	74.00	15.97	Peak
Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)		Limits (dBμV/m)	Margin (dB)	Remark	
4875.000	58.03	-33.15	24.88		54.00	29.12	Average	

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4875.000	33.15	8.16	39.34	57.73	59.70	74.00	14.30	Peak
Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)		Limits (dBμV/m)	Margin (dB)	Remark	
4875.000	59.70	-33.15	26.55		54.00	27.45	Average	

Test Mode: #1 With TC57A RF Module

Mode	T-FHSS	Frequency	TX 2467.500MHz					
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4935.000	33.20	8.19	39.31	51.66	53.74	74.00	20.26	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4935.000	53.74	-36.48	17.26	54.00	36.74	Average

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4935.000	33.20	8.19	39.31	52.57	54.65	74.00	19.35	Peak

Emission Frequency (MHz)	Peak Emission Level (dBμV/m)	Duty Cycle Correction Factor (dB)	Average Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Remark
4935.000	54.65	-36.48	18.17	54.00	35.83	Average

Test Mode: #2 With WTR-16 RF Board

Mode	T-FHSS	Frequency	TX 2407.500MHz			
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4815.000	32.96	8.13	39.37	42.85	44.57	54.00	9.43	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4815.000	32.96	8.13	39.37	43.20	44.92	54.00	9.08	Peak

Mode	T-FHSS	Frequency	TX 2437.500MHz			
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4875.000	33.15	8.16	39.34	41.90	43.87	54.00	10.13	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4875.000	33.15	8.16	39.34	41.13	43.10	54.00	10.90	Peak

Mode	T-FHSS	Frequency	TX 2467.500MHz			
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Antenna at Horizontal Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4935.000	33.20	8.19	39.31	41.13	43.20	54.00	10.80	Peak

Antenna at Vertical Polarization

Emission Frequency (MHz)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamplifier Gain (dB)	Read Level (dBμV)	Emission Level (dBμV/m)	Limits (dBμV/m)	Margin (dB)	Detector
4935.000	33.20	8.19	39.31	40.90	42.98	54.00	11.02	Peak

A.2.3 Emissions in Non-restricted Frequency Bands:

All emission levels below the FCC 15.209(a)/RSS-Gen Section 8.9 table 4 general radiated emissions limits is not required.

A.3 20dB/OCCUPIED BANDWIDTH

Test Date	2024/07/26~08/09	Temp./Hum.	24°C/54%
Cable Loss	1.50 dB	Tested By	Sean Wang
Test Voltage	DC 7.4V (Via Battery)		

A.3.1 Emission Bandwidth Result

Test Mode: #1 With TC57A RF Module

Mode	Centre Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit 2/3 (20dB Bandwidth)
FASSTest	2405.376	2.659	2.4632	1.773
	2439.168	2.663	2.5303	1.775
	2472.960	2.665	2.5522	1.777
S-FHSS	2403.250	0.2592	0.25442	0.173
	2425.000	0.2592	0.25440	0.173
	2447.500	0.2595	0.25520	0.173
T-FHSS	2407.500	0.2638	0.24998	0.176
	2437.500	0.2604	0.24268	0.174
	2467.500	0.2605	0.24367	0.174

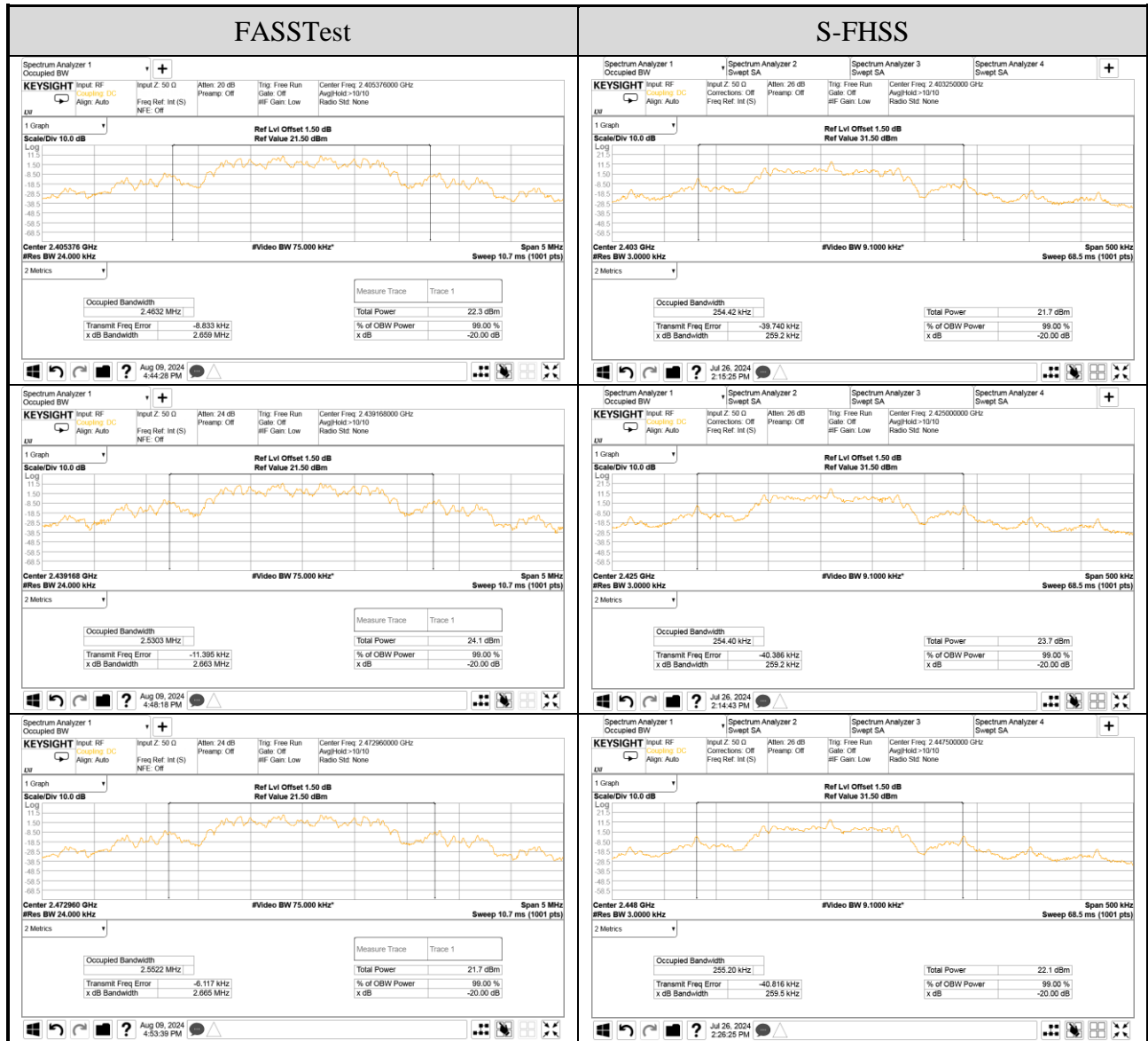
Remark: The maximum two-thirds of the 20dB bandwidth shall be at maximum 1.777MHz.

Test Mode: #2 With WTR-16 RF Board

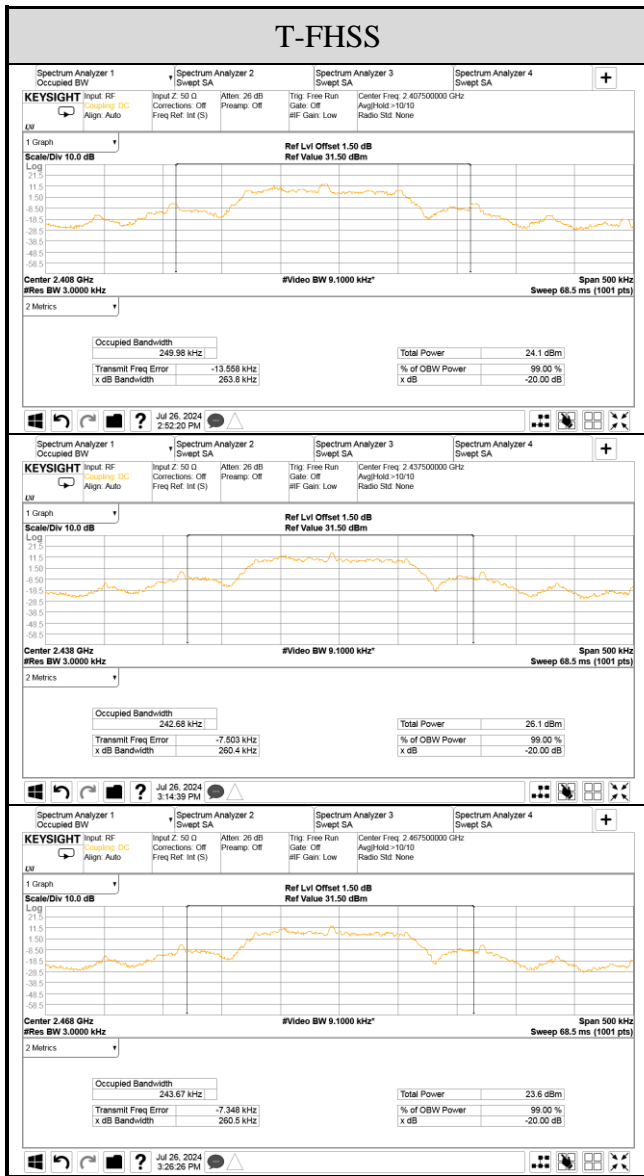
Mode	Centre Frequency (MHz)	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit 2/3 (20dB Bandwidth)
T-FHSS	2407.500	0.2636	0.27475	0.176
	2437.500	0.2633	0.28689	0.176
	2467.500	0.2650	0.27575	0.177

Remark: The maximum two-thirds of the 20dB bandwidth shall be at maximum 0.177MHz.

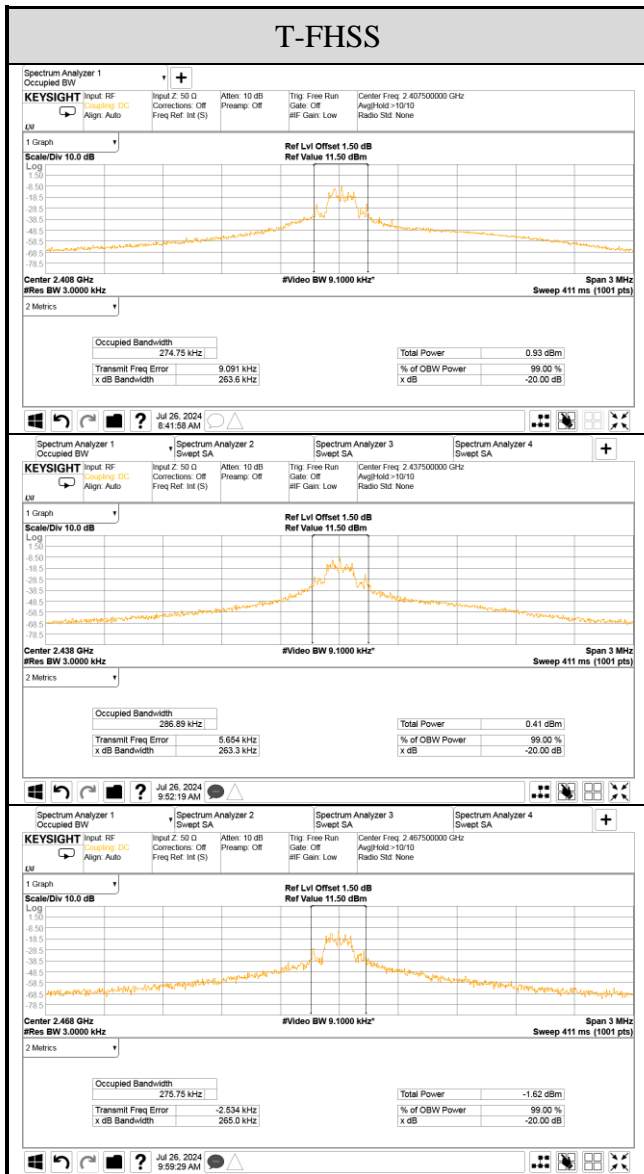
A.3.2 Measurement Plots
Test Mode: #1 With TC57A RF Module



Test Mode: #1 With TC57A RF Module



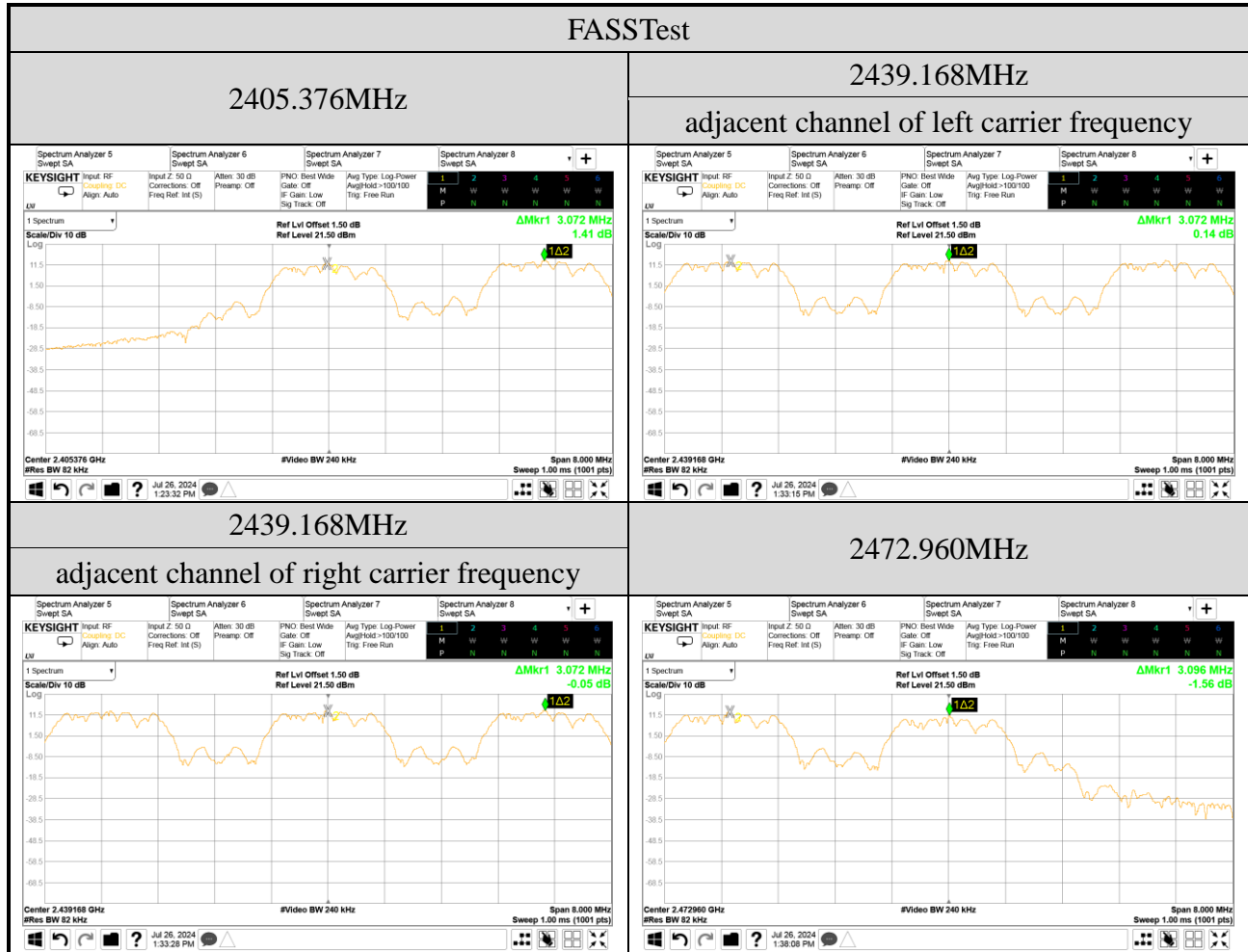
Test Mode: #2 With WTR-16 RF Board



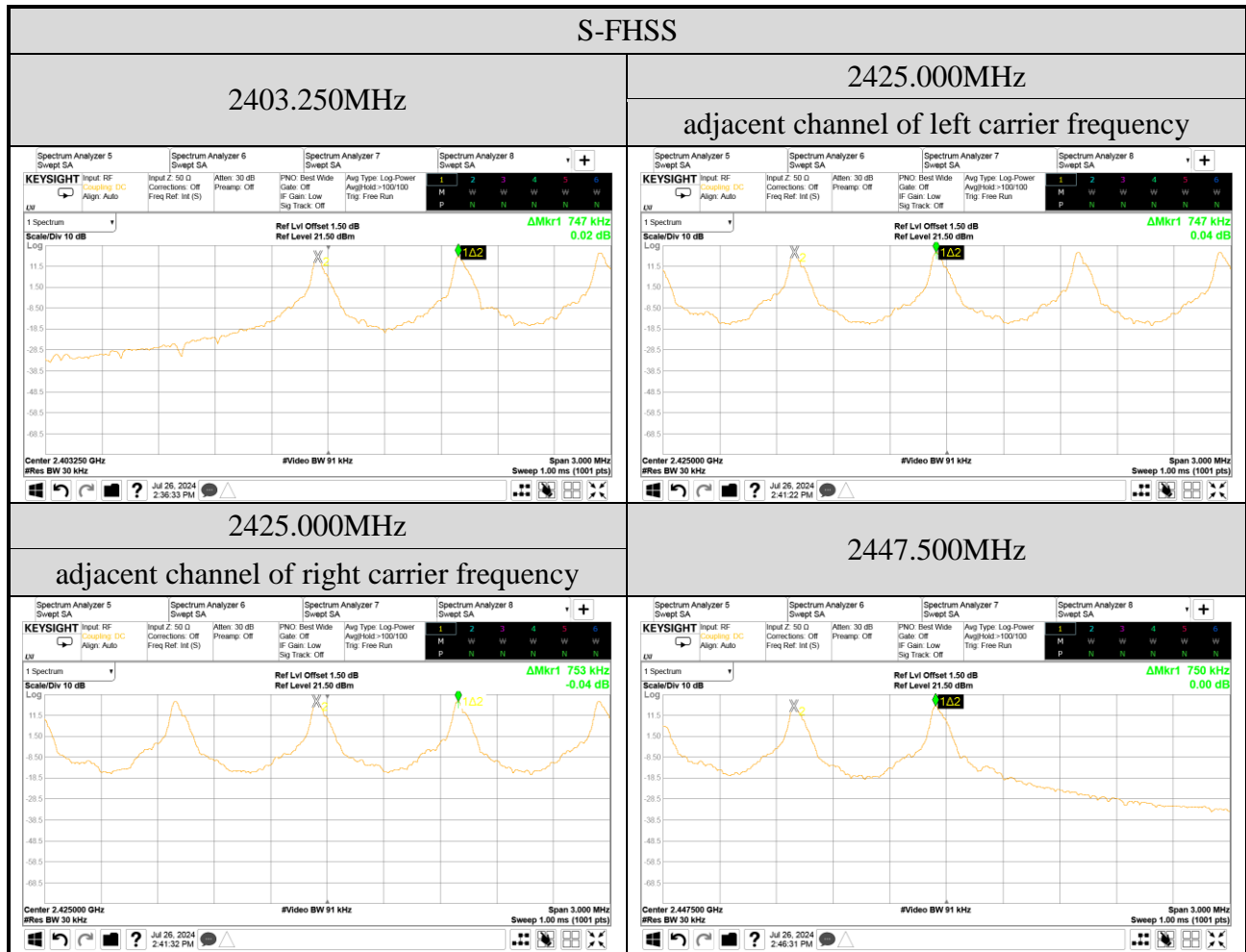
A.4 CARRIER FREQUENCY SEPARATION

Test Date	2024/07/26	Temp./Hum.	24°C/54%
Cable Loss	1.50 dB	Tested By	Sean Wang
Test Voltage	DC 7.4V (Via Battery)		

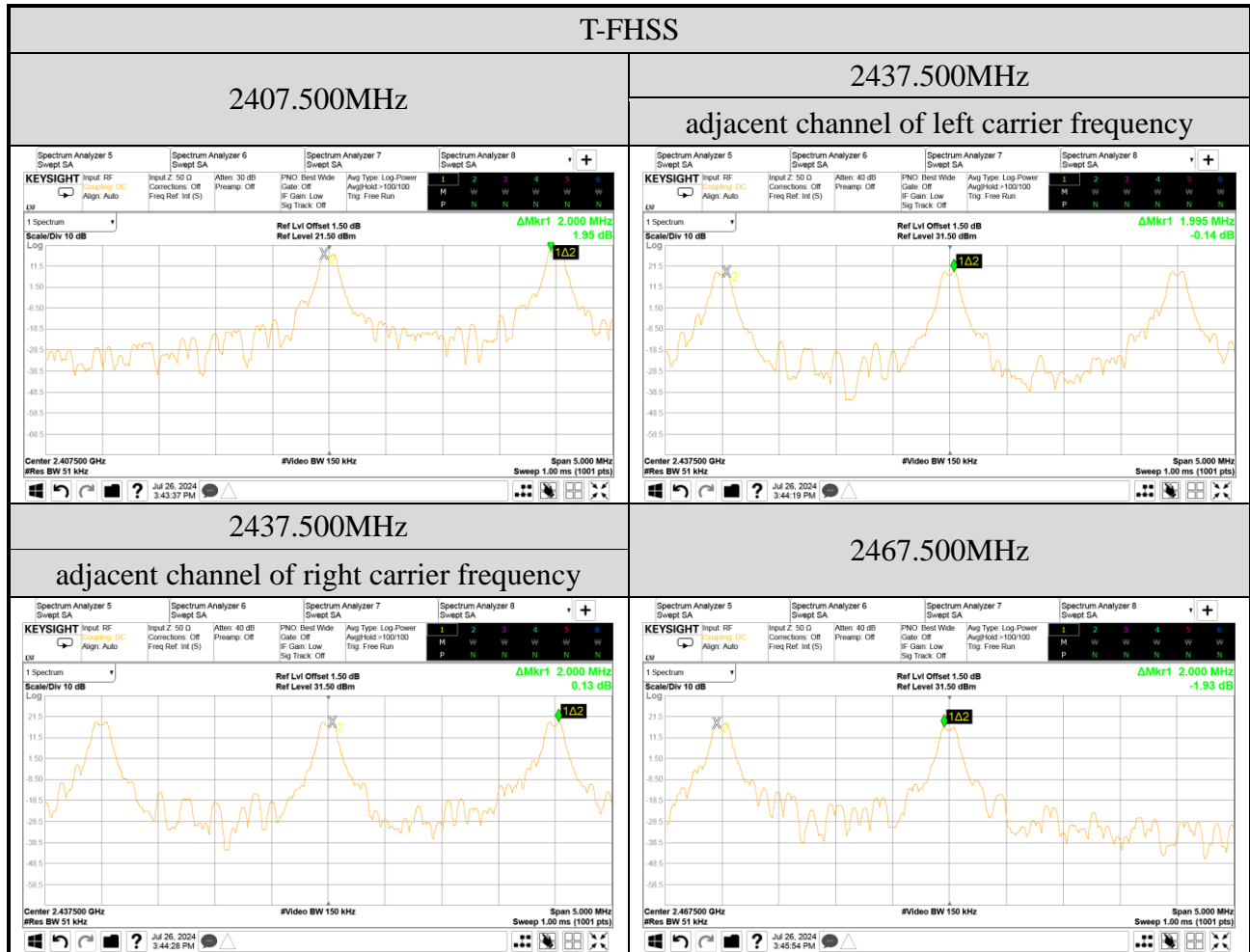
Test Mode: #1 With TC57A RF Module



Test Mode: #1 With TC57A RF Module



Test Mode: #1 With TC57A RF Module



Test Mode: #2 With WTR-16 RF Board

