



FCC CERTIFICATION TEST REPORT

Applicant	:	MOTREX CO., LTD.
Address of Applicant	:	1-1301, 56, Geumto-ro 80beon-gil, Sujeong-gu, Seongnam-si, Gyeonggi-do, South Korea
Manufacturer	:	Skypine Electronics (ShenZhen) Co.,Ltd.
Address of Manufacturer	:	3rd Floor of Building B, Jingang Technology Park, Qiaotou Village, Fuhai Sub-District, Baoan, Shenzhen, China
Equipment under Test	:	Car Multimedia Entertainment System
Model No.	:	MTXMO610LAB
FCC ID	:	BP9-MO610LAB
Test Standard(s)	:	FCC Rules and Regulations Part 15 Subpart E, ANSI C63.10:2020, 789033 D02 General U-NII Test Procedures New Rules v02r01
Report No.	:	DDT-RE24091401-2E03
Issue Date	:	2024/11/07
Issue By	:	Guangdong Dongdian Testing Service Co., Ltd. Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808

REPORT

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Test Report Declare

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Test Standard Used:

FCC Rules and Regulations Part 15 Subpart E,

ANSI C63.10:2020,

789033 D02 General U-NII Test Procedures New Rules v02r01

We Declare:

The equipment described above is tested by Guangdong Dongdian Testing Service Co., Ltd. and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and Guangdong Dongdian Testing Service Co., Ltd. is assumed of full responsibility for the accuracy and completeness of these tests.

Report No.:	DDT-RE24091401-2E03		
Date of Receipt:	2024/09/18	Date of Test:	2024/09/18 - 2024/11/07

Prepared By:

Jacky Huang

Jacky Huang/Engineer

Approved By:



Damon Hu

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Guangdong Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	2024/11/07	

1. Summary of Test Results

No.	Test Parameter	Clause No.	Condition	Result
1	6/26db Bandwidth and 99% Bandwidth	FCC 15.407 (e)	/	Pass
2	Output Power	FCC 15.407 (a)	/	Pass
3	Power Spectral Density	FCC 15.407 (a)	/	Pass
4	Frequency Stability Measurement	FCC 15.407 (g);	/	Pass
5	Radiated Emission	FCC 15.407 (b); FCC 15.209; FCC 15.205	/	Pass
6	Band Edge Compliance	FCC 15.407 (b); FCC 15.209; FCC 15.205;	/	Pass
7	Power Line Conducted Emissions	FCC Part 15: 15.207(a)	/	N/A
8	Antenna Requirement	FCC Part 15: 15.203	/	Pass
9	Dynamic Frequency Selection	FCC 15.407 (h)	/	Pass
Note: N/A is an abbreviation for Not Applicable, and means this item is not applicable for this device or no need to test according to standard.				

2. General Test Information

2.1. Description of EUT

EUT Name	: Car Multimedia Entertainment System
Model Number	: MTXMO610LAB
EUT Function Description	: Please reference user manual of this device
Power Supply	: DC 12V
Antenna Type	: PCB antenna
Max Antenna Gain (dBi)	: -0.76

Note: This EUT support Bluetooth BR/EDR, 2.4 GHz WLAN, 5.8 GHz WLAN, this report only for 5.8 GHz WLAN.

Radio Technology	: IEEE 802.11a/n/ac
Operation frequency	: IEEE 802.11a: 5745MHz-5825MHz IEEE 802.11n HT20: 5745MHz-5825MHz IEEE 802.11n HT40: 5755MHz-5795MHz IEEE 802.11ac VHT20: 5745MHz-5825MHz IEEE 802.11ac VHT40: 5755MHz-5795MHz IEEE 802.11ac VHT80: 5775MHz
Modulation	: IEEE 802.11a: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n HT20, HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11ac: OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)

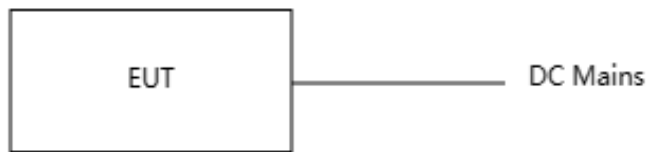
Channel information					
IEEE 802.11a IEEE 802.11n (HT20) IEEE 802.11ac (VHT20)		IEEE 802.11n (HT40) IEEE 802.11ac (VHT40)		IEEE 802.11ac (VHT80)	
UNII-3					
149	5745	151	5755	155	5775
153	5765	159	5795	/	/
157	5785	/	/	/	/
161	5805	/	/	/	/
165	5825	/	/	/	/

Note: The above EUT information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications or User's Manual. The above Antenna information is declared by manufacturer and for more detailed features description please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2.2. Accessories of EUT

Accessories	Manufacturer	Model number	Description
/	/	/	/

2.3. Block diagram of EUT configuration for test



2.4. Decision of final test mode

According pre-test, the worst test modes were reported as below:

Test software: Putty.exe

The test software was used to control EUT work in Continuous Tx mode, and select test channel, wireless mode as below table.

The pathloss of external cable: 2 dB (According to the manufacturer's claims)

Mode	Setting Tx Power	Transmit Chains	Worst Data Rate	Test Channel and Frequency (MHz)
	Ant1			
802.11a	50	149	6	5745
		157	6	5785
		165	6	5825
802.11n HT20	50	149	MCS 0	5745
		157	MCS 0	5785
		165	MCS 0	5825
802.11n HT40	50	151	MCS 0	5755
		159	MCS 0	5795
802.11ac VHT20	50	149	MCS 0	5745
		157	MCS 0	5785
		165	MCS 0	5825
802.11ac VHT40	50	151	MCS 0	5755
		159	MCS 0	5795
802.11ac VHT80	50	155	MCS 0	5775

Note: All the emissions are measured with PK detector. Scan with all mode and the worst case was recorded in this report.

2.5. Deviations of test standard

No deviation.

2.6. Test environment conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature range:	+15°C to +35 °C
Humidity range:	20% to 75%
Pressure range:	86 kPa to 106 kPa

Note: The specific temperature and humidity information of each test item refers to the temperature and humidity record in the corresponding test data.

2.7. Test laboratory

Guangdong Dongdian Testing Service Co., Ltd.

Add.: Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2.8. Measurement uncertainty

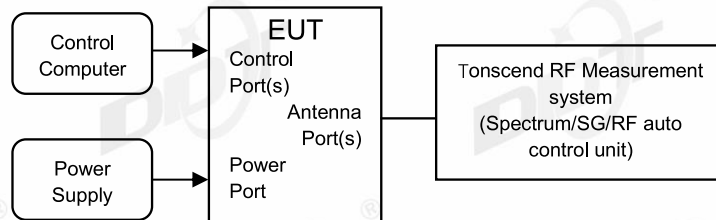
Test Item	Uncertainty
Bandwidth	1.1%
Peak Output Power (Conducted) (Spectrum analyzer)	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$);
	1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Peak Output Power (Conducted) (Power Sensor)	0.74 dB
Power Spectral Density	0.74 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$);
	1.38 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
Frequencies Stability	6.7×10^{-8} (Antenna couple method)
	5.5×10^{-8} (Conducted method)
Conducted spurious emissions	0.86 dB ($10 \text{ MHz} \leq f < 3.6 \text{ GHz}$);
	1.40 dB ($3.6 \text{ GHz} \leq f < 8 \text{ GHz}$)
	1.66 dB ($8 \text{ GHz} \leq f < 26.5 \text{ GHz}$)
Uncertainty for radio frequency (RBW < 20 kHz)	3×10^{-8}
Temperature	0.4 °C
Humidity	2 %
Uncertainty for Radiation Emission test (9 kHz – 30 MHz)	3.44 dB
Uncertainty for Radiation Emission test (30 MHz - 1 GHz)	4.70 dB (Antenna Polarize: V)
	4.84 dB (Antenna Polarize: H)
Uncertainty for Radiation Emission test (1 GHz - 40 GHz)	4.10 dB (1 - 6 GHz)
	4.40 dB (6 GHz - 18 GHz)
	3.54 dB (18 GHz - 26 GHz)
	4.30 dB (26 GHz - 40 GHz)
Uncertainty for Power line conduction emission test	3.34dB (150KHz-30MHz)
	3.72dB (9KHz-150KHz)
Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.	

3. Equipment Used During Conductive Test

Equipment	Manufacturer	Model No.	Serial Number	Due Date	Cal. Interval
☑ RF Connected Test (RF Measurement System 1#)					
SIGNAL ANALYZER	R&S	FSQ26	101272	2025/03/31	1 Year
Wideband Radio Communication Tester	R&S	CMW500	120259	2025/07/08	1 Year
MXG Vector Signal Generator	KEYSIGHT	N5182B	MY59100192	2025/03/31	1 Year
MXG Vector Signal Generator	Agilent	N5182A	MY19060405	2025/03/31	1 Year
RF Control Unit	Tonsend	JS0806-2	158060010	2025/03/31	1 Year
TEMP&HUMI Programmable Chamber	ZHIXIANG	ZXGDJS-150L	ZX170110-A	2025/04/22	1 Year
Test Software	Tonscend	JS1120-3	Ver.3.2.22	N/A	N/A

4. 6dB Bandwidth

4.1. Block diagram of test setup



4.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
6 dB Bandwidth	Minimum 500 kHz	5725 - 5850

4.3. Test procedure

Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	For 6 dB Bandwidth: RBW=100 kHz For 26 dB Bandwidth: approximately 1% of the emission bandwidth.
VBW	For 6 dB Bandwidth: VBW=300 kHz For 26 dB Bandwidth: >3 RBW
Trace	Max hold
Sweep	Auto couple

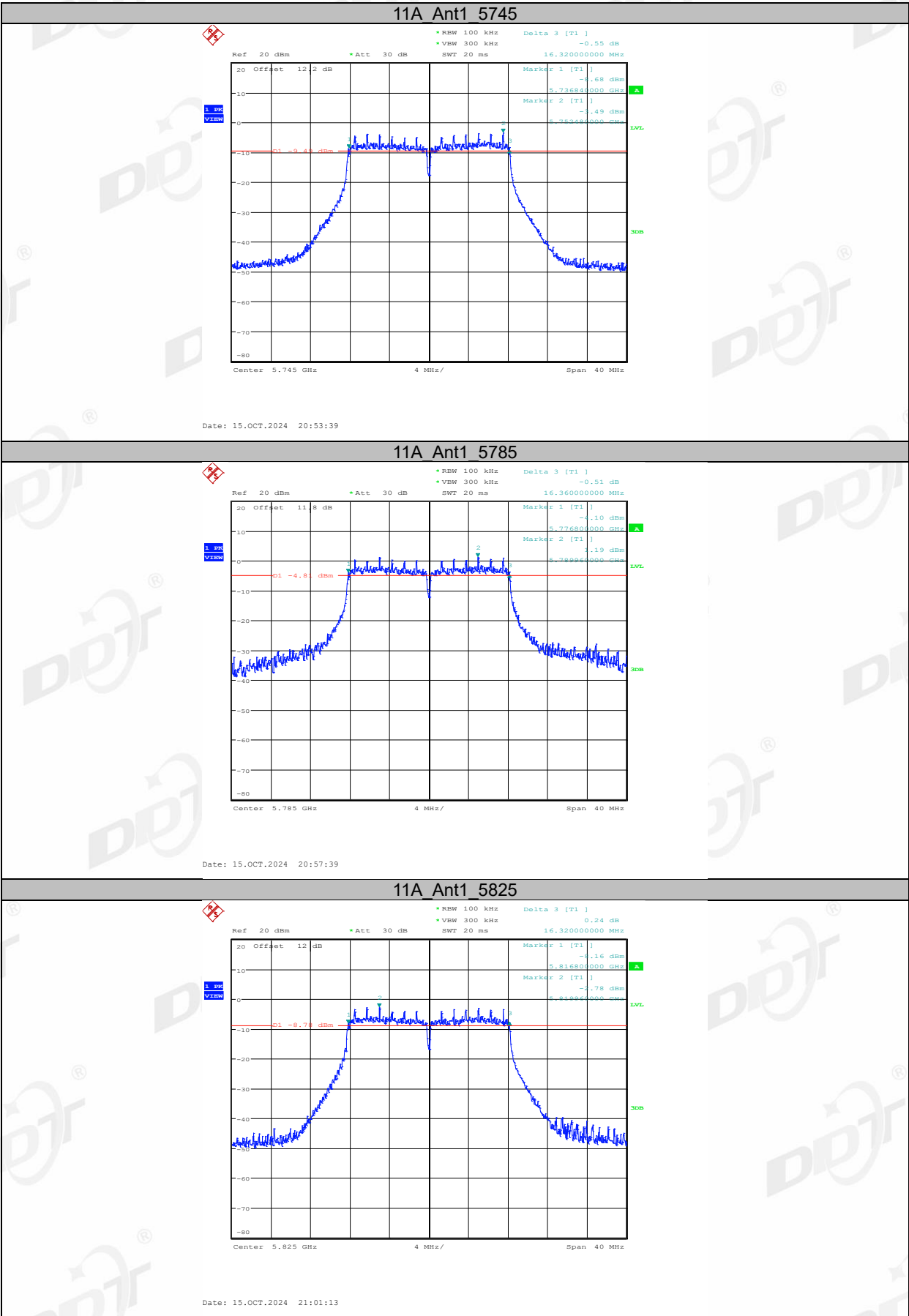
Allow the trace to stabilize, measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

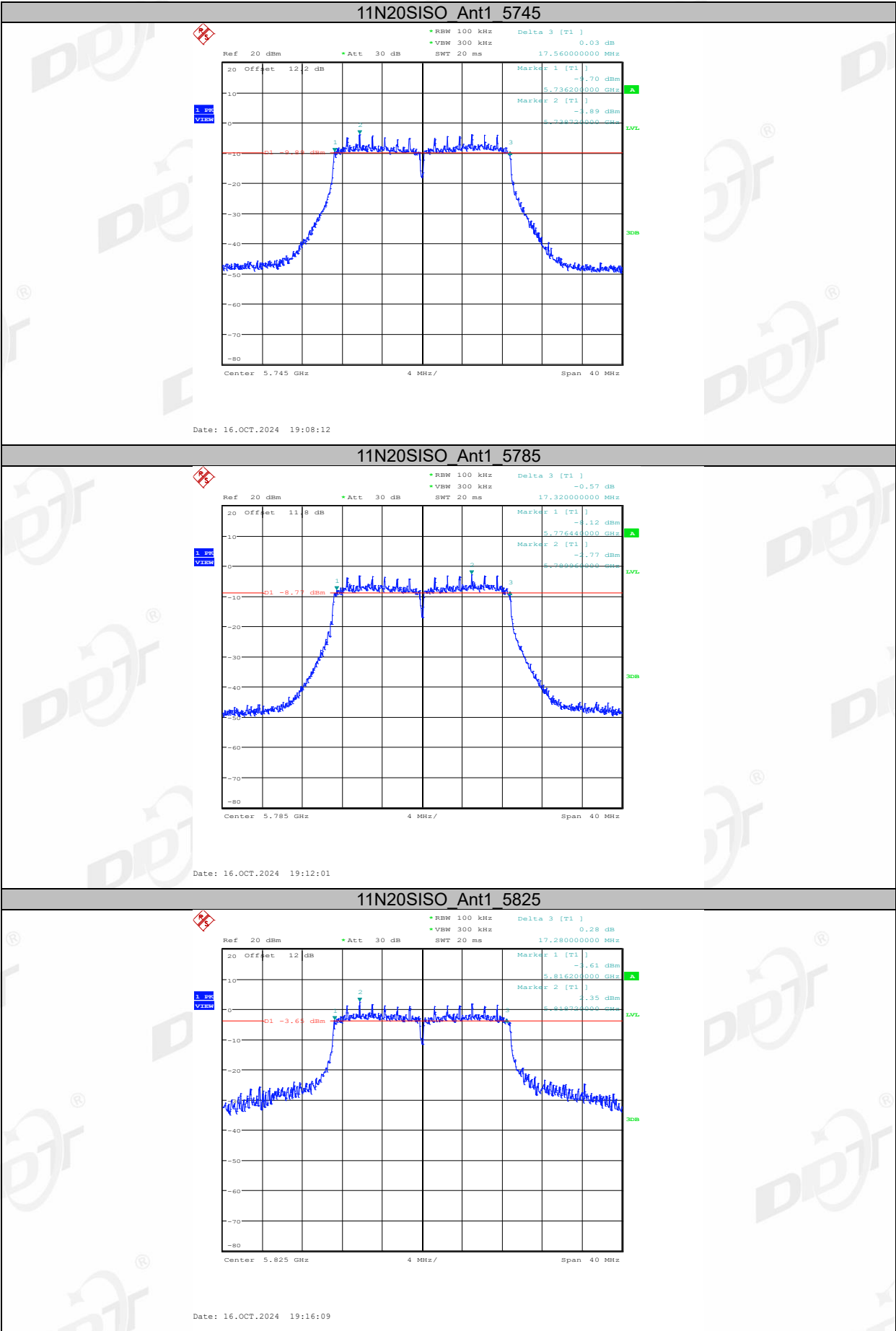
4.4. Test result B4

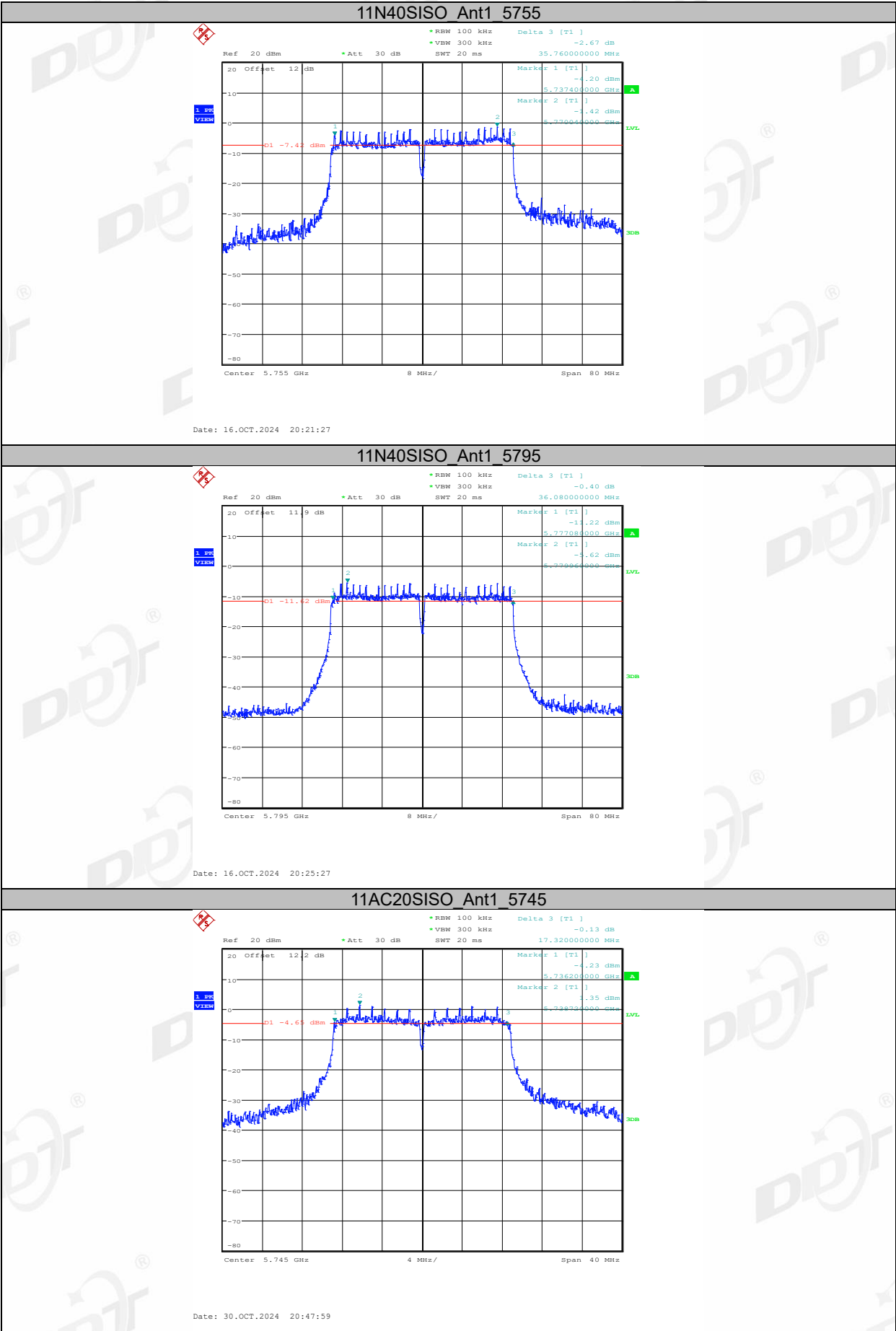
Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	23.8℃, 56%RH	Test Date:	2024.10.14-2024.10.30
Test Power Supply:	DC 12V	Sample Number:	S24091401-001

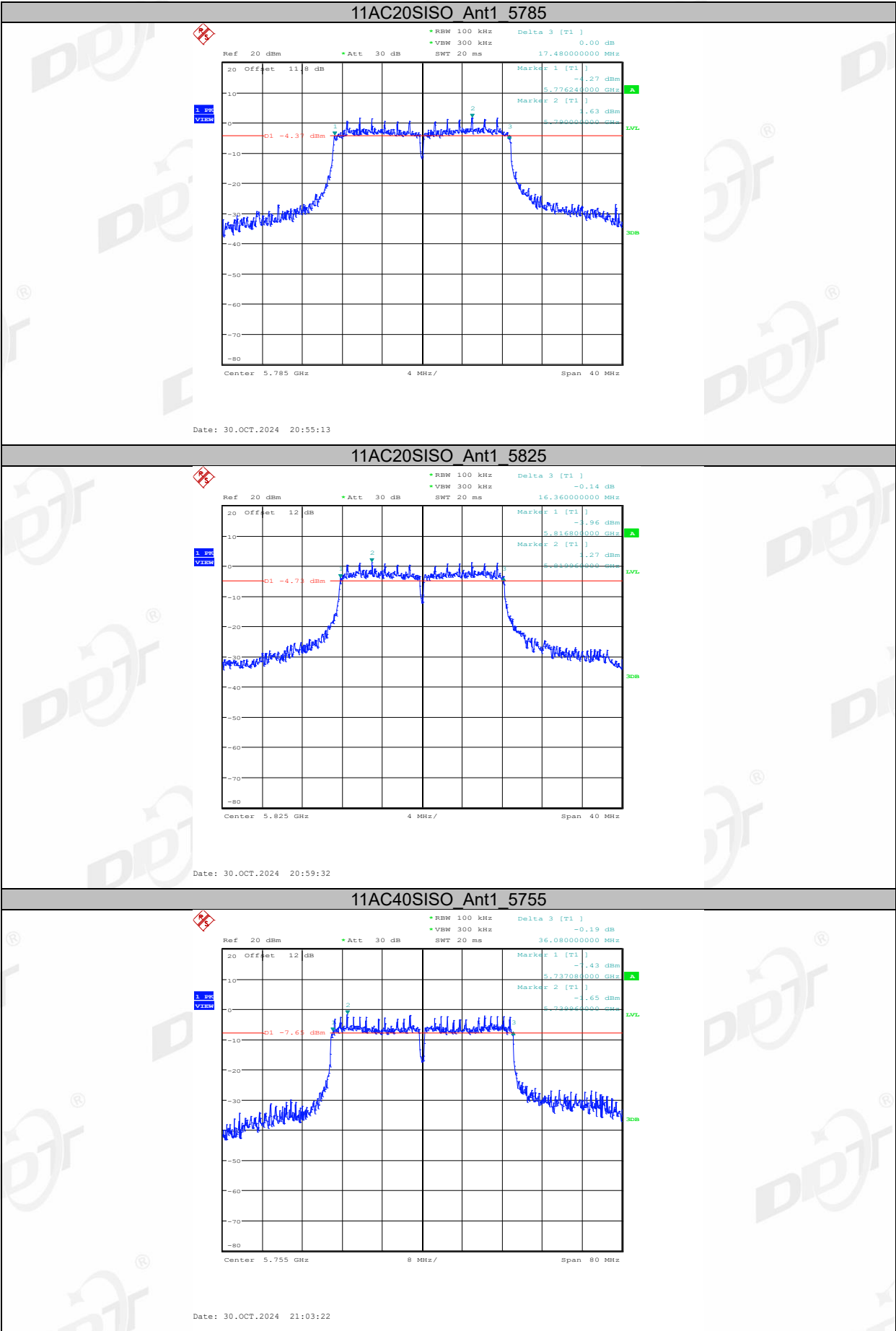
Test Mode	Antenna	Frequency [MHz]	6db EBW [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	16.32	5736.84	5753.16	0.5	PASS
		5785	16.36	5776.80	5793.16	0.5	PASS
		5825	16.32	5816.80	5833.12	0.5	PASS
11N20SISO	Ant1	5745	17.56	5736.20	5753.76	0.5	PASS
		5785	17.32	5776.44	5793.76	0.5	PASS
		5825	17.28	5816.20	5833.48	0.5	PASS
11N40SISO	Ant1	5755	35.76	5737.40	5773.16	0.5	PASS
		5795	36.08	5777.08	5813.16	0.5	PASS
11AC20SISO	Ant1	5745	17.32	5736.20	5753.52	0.5	PASS
		5785	17.48	5776.24	5793.72	0.5	PASS
		5825	16.36	5816.80	5833.16	0.5	PASS
11AC40SISO	Ant1	5755	36.08	5737.08	5773.16	0.5	PASS
		5795	35.68	5777.08	5812.76	0.5	PASS
11AC80SISO	Ant1	5775	75.20	5737.40	5812.60	0.5	PASS

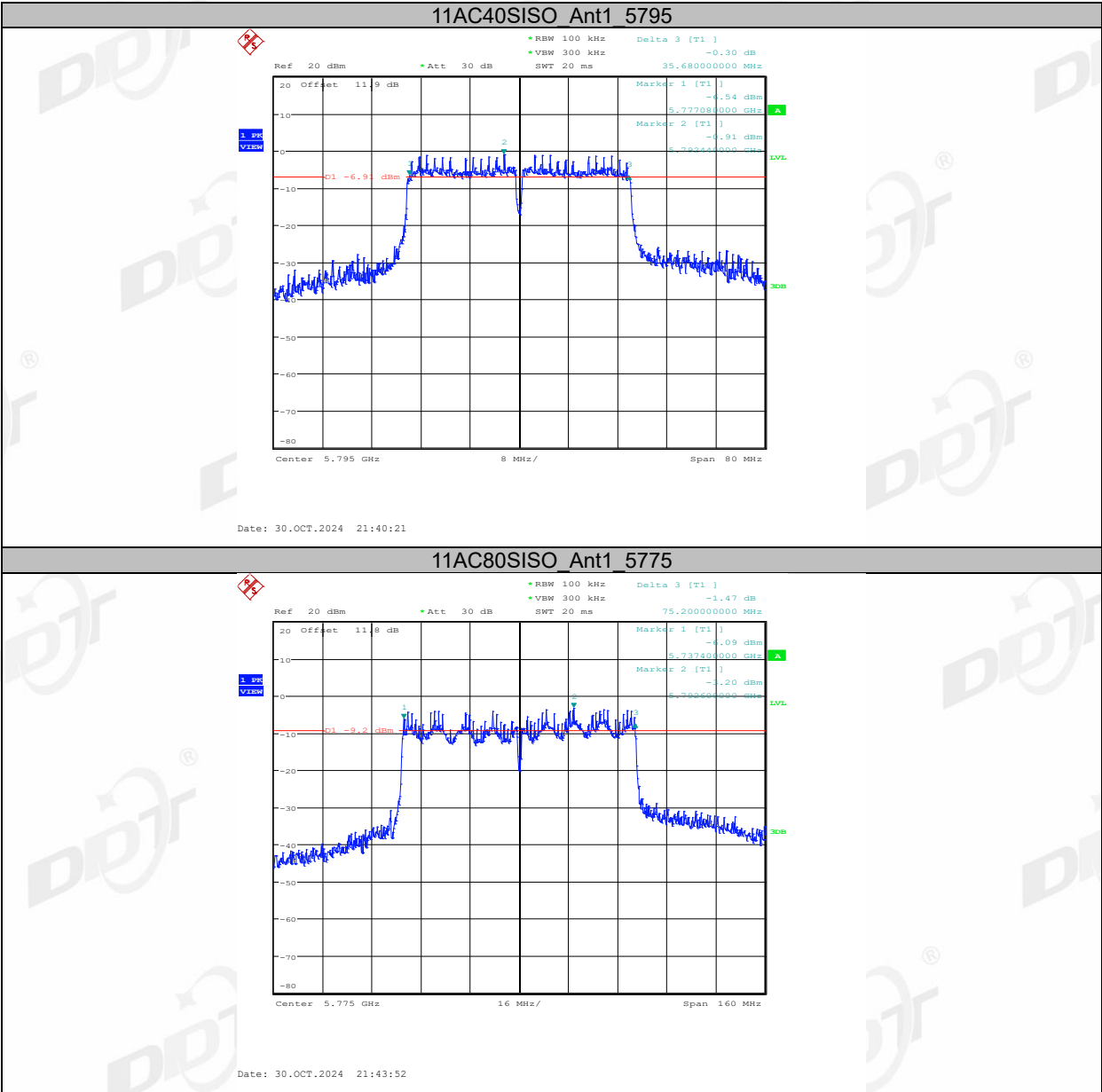
4.5. Test graphs B4





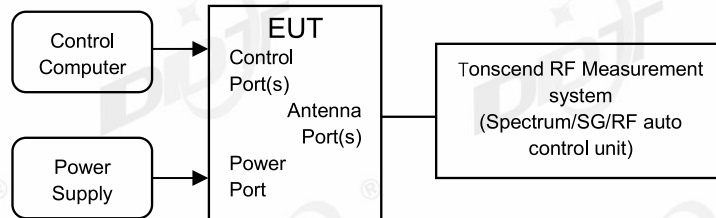






5. 99% Bandwidth

5.1. Block diagram of test setup



5.2. Limits

Just for Report.

5.3. Test procedure

- (1) Connect EUT's antenna output to spectrum analyzer by RF cable.

Center Frequency	The center frequency of the channel under test
Detector	Peak
RBW	1% to 5% of the OBW
VBW	approximately three times the RBW
Trace	Max hold

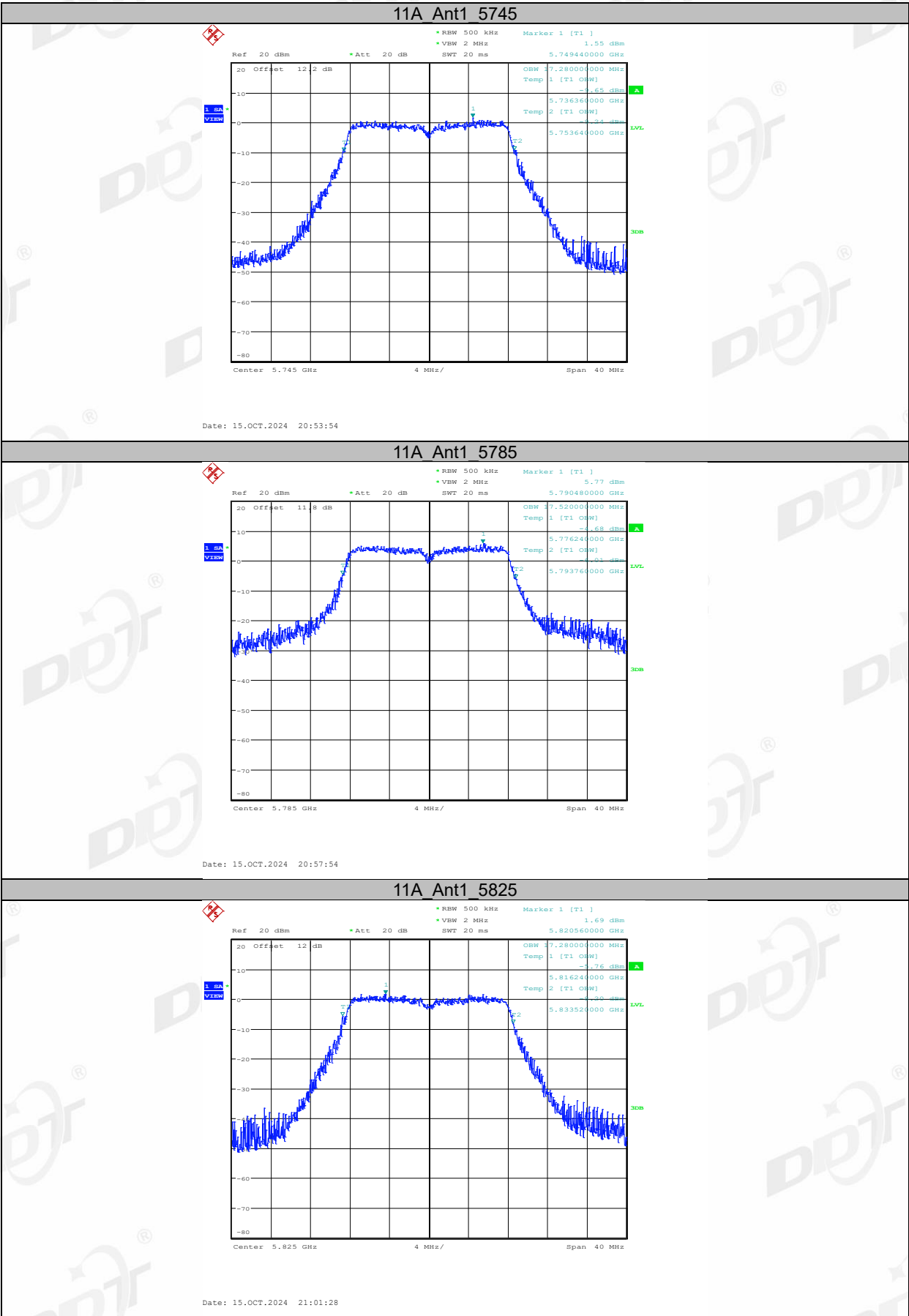
- (2) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

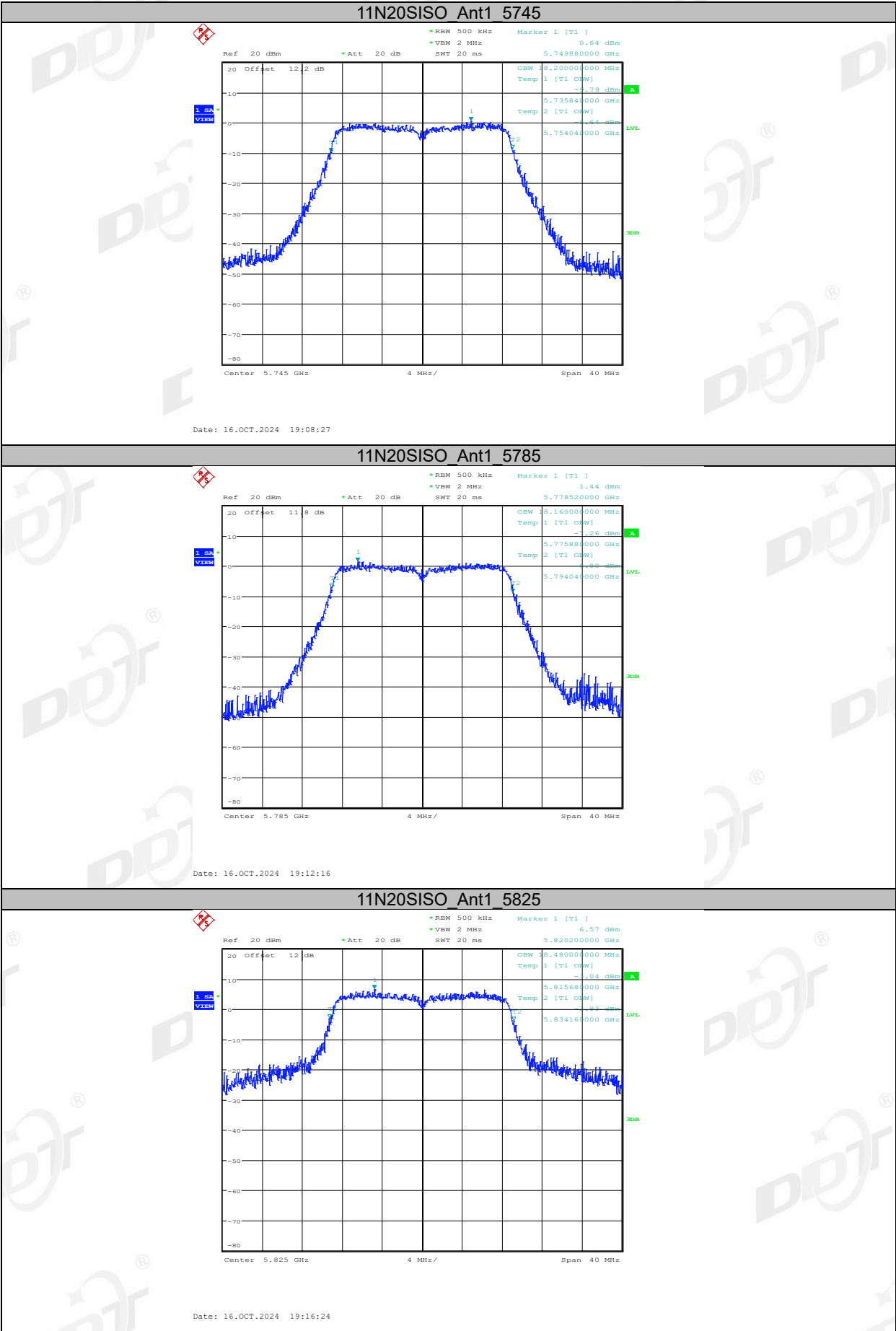
5.4. Test result

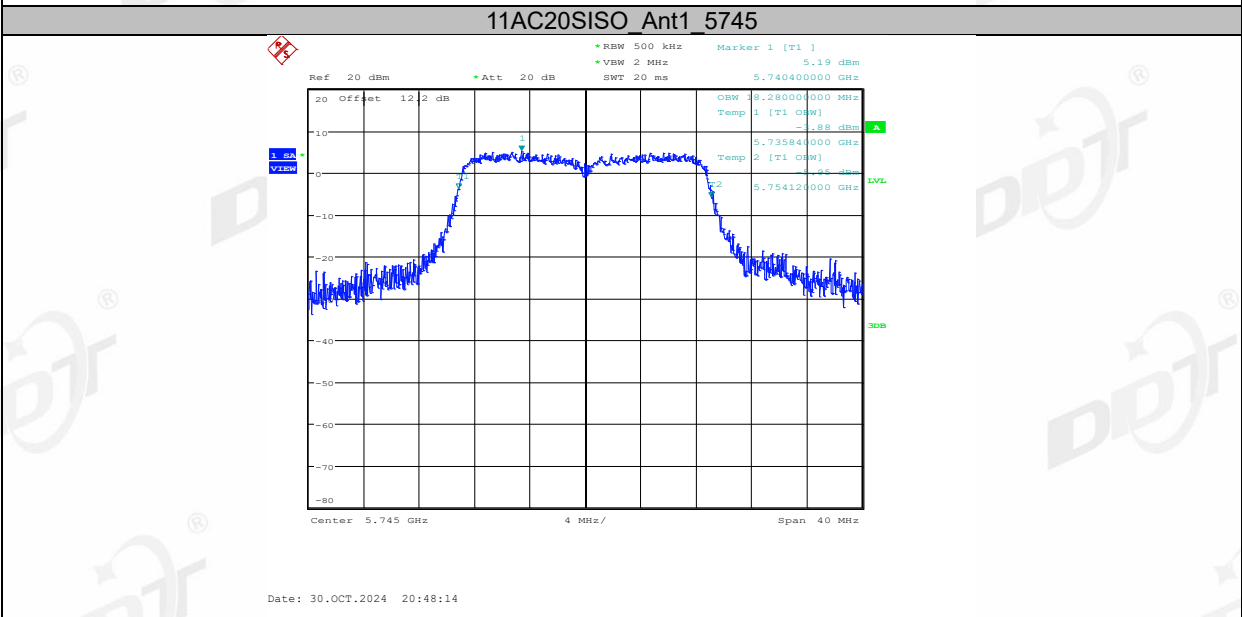
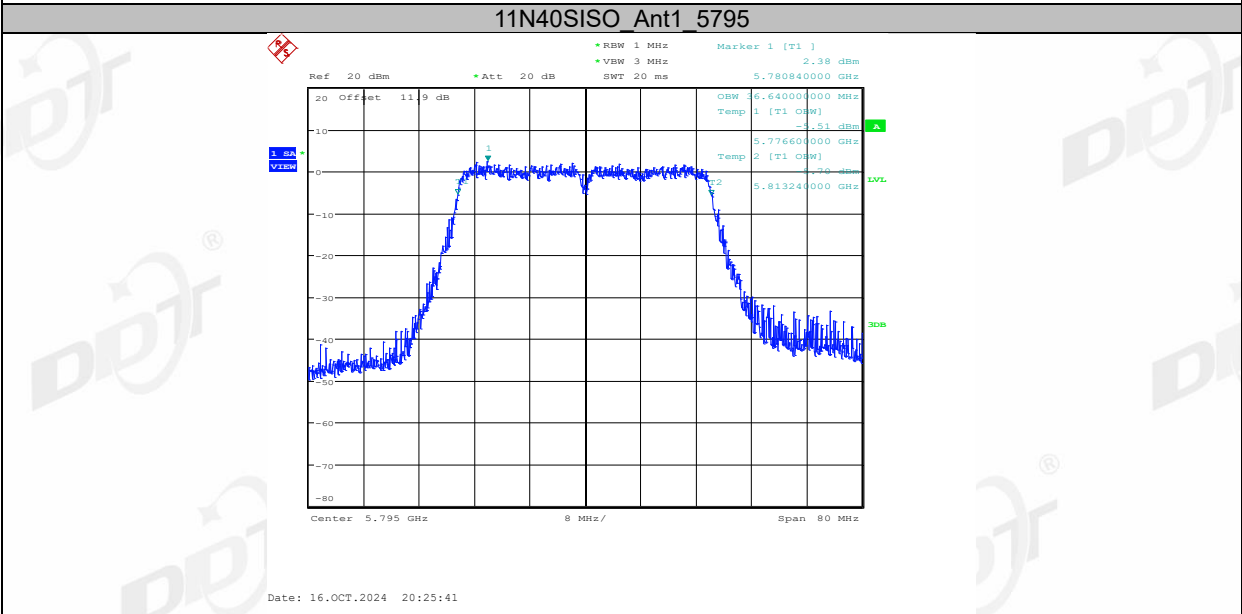
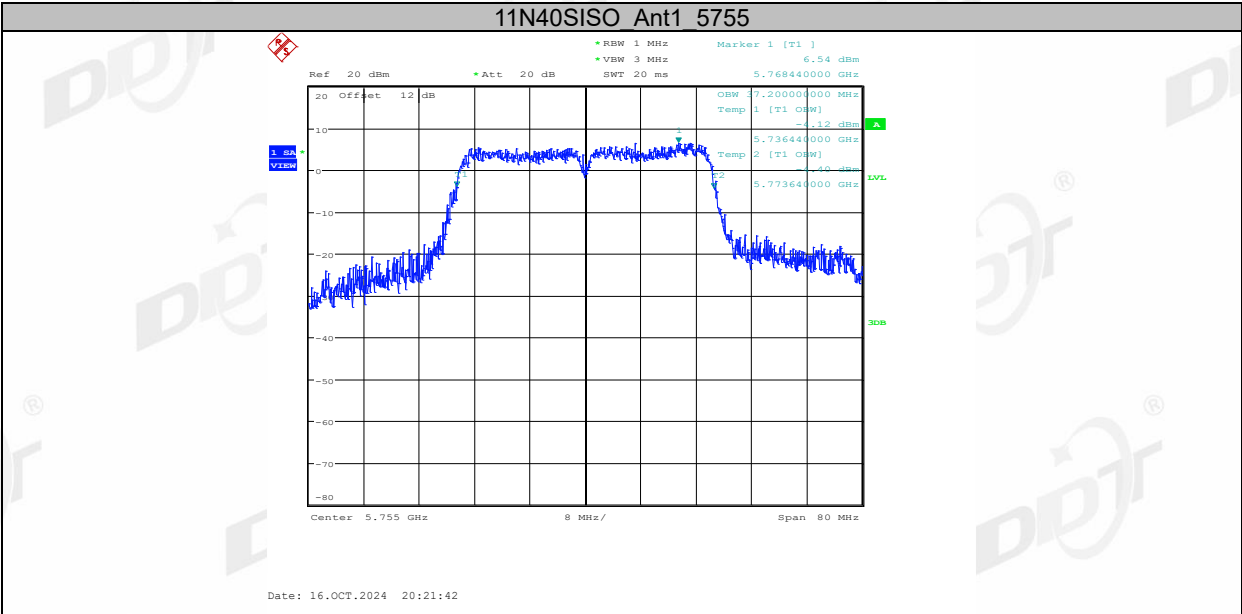
Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	23.8℃, 56%RH	Test Date:	2024.10.14-2024.10.30
Test Power Supply:	DC 12V	Sample Number:	S24091401-001

Test Mode	Antenna	Frequency [MHz]	OCB [MHz]	FL [MHz]	FH [MHz]	Limit [MHz]	Verdict
11A	Ant1	5745	17.28	5736.3600	5753.6400	---	---
		5785	17.52	5776.2400	5793.7600	---	---
		5825	17.28	5816.2400	5833.5200	---	---
11N20SISO	Ant1	5745	18.20	5735.8400	5754.0400	---	---
		5785	18.16	5775.8800	5794.0400	---	---
		5825	18.48	5815.6800	5834.1600	---	---
11N40SISO	Ant1	5755	37.20	5736.4400	5773.6400	---	---
		5795	36.64	5776.6000	5813.2400	---	---
11AC20SISO	Ant1	5745	18.28	5735.8400	5754.1200	---	---
		5785	18.36	5775.8400	5794.2000	---	---
		5825	17.68	5816.2000	5833.8800	---	---
11AC40SISO	Ant1	5755	37.28	5736.4400	5773.7200	---	---
		5795	37.04	5776.4400	5813.4800	---	---
11AC80SISO	Ant1	5775	76.96	5736.7600	5813.7200	---	---

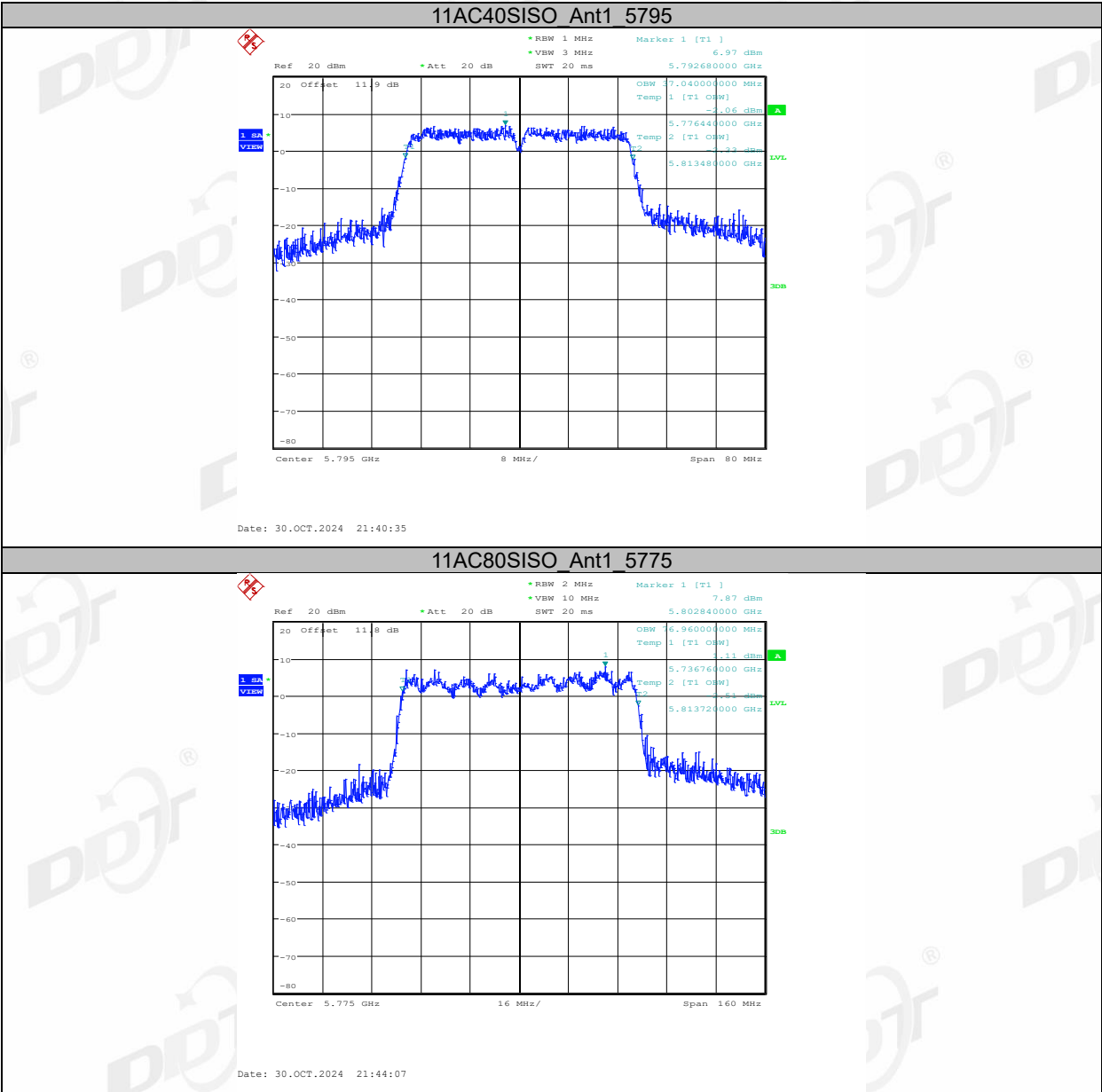
5.5. Test graphs





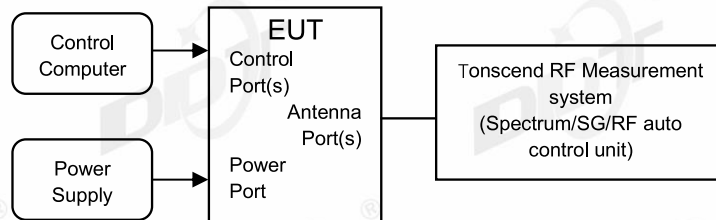






6. Duty Cycle

6.1. Block diagram of test setup



6.2. Limit

Just for Report.

6.3. Test procedure

- (1) Connected the EUT's antenna port to the Spectrum Analyzer by suitable attenuator, The cable loss and attenuator loss have been put into spectrum analyzer as amplitude offset. set the Spectrum Analyzer as below:

Centre Frequency: The centre frequency of the middle hopping channel.

Resolution BW: 10 MHz.

Video BW: 10 MHz.

Span: Zero span.

Detector: Peak.

Trace Mode: Clear Write.

Sweep: Video Trigger

- (2) When the trace is complete, measure the sending time of 1 burst and the duty cycle of 1 burst cycle.
- (3) Calculate dwell time follow below formula:
$$\text{Duty cycle} = \text{Pulse's on time} / \text{Burst cycle}$$

6.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#		
Ambient Condition:	23.8℃, 56%RH	Test Date:	2024.10.14-2024.10.30		
Test Power Supply:	DC 12V	Sample Number:	S24091401-001		

Test Mode	Antenna	Frequency [MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11A	Ant1	5745	2.08	2.23	93.27
		5785	2.07	2.15	96.28
		5825	2.08	2.24	92.86
11N20SISO	Ant1	5745	1.93	2.09	92.34
		5785	1.93	2.05	94.15
		5825	1.94	2.05	94.63
11N40SISO	Ant1	5755	0.95	1.09	87.16
		5795	0.95	1.09	87.16
11AC20SISO	Ant1	5745	1.94	2.02	96.04
		5785	1.94	2.05	94.63
		5825	2.07	2.16	95.83
11AC40SISO	Ant1	5755	0.96	1.13	84.96
		5795	0.96	1.10	87.27
11AC80SISO	Ant1	5775	0.46	0.64	71.88

11A Ant1 5745

RBW 10 MHz Delta 2 [T1] -0.14 dB
VBW 10 MHz
SWT 5 ms 2.230000 ms

Ref 20 dBm Att 25 dB

20 Offset 12 dB

Marker 1 [T1] 1.18 dBm
Delta 1 [T1] -0.07 dB
Delta 2 [T1] -0.14 dB
2.230000 ms

Center 5.745 GHz 500 μ s/

Date: 15.OCT.2024 20:54:08

11A Ant1 5785

RBW 10 MHz Delta 2 [T1] 0.10 dB
VBW 10 MHz
SWT 5 ms 2.150000 ms

Ref 20 dBm Att 25 dB

20 Offset 11.8 dB

Marker 1 [T1] 1.00 dBm
Delta 1 [T1] -0.07 dB
Delta 2 [T1] 0.10 dB
2.150000 ms

Center 5.785 GHz 500 μ s/

Date: 15.OCT.2024 20:58:08

11A Ant1 5825

RBW 10 MHz Delta 2 [T1] 0.08 dB
VBW 10 MHz
SWT 5 ms 2.240000 ms

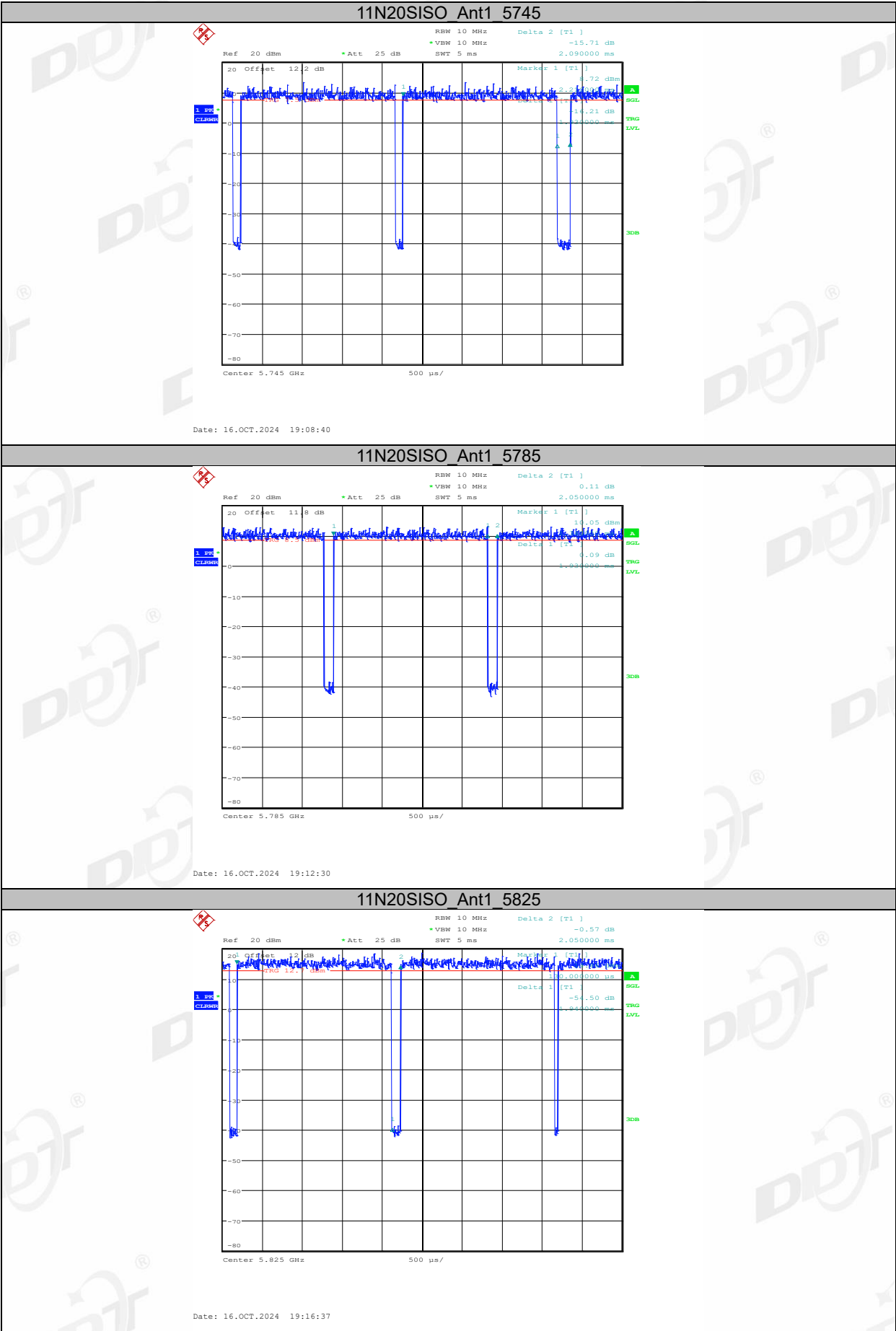
Ref 20 dBm Att 25 dB

20 Offset 12 dB

Marker 1 [T1] 1.00 dBm
Delta 1 [T1] -0.07 dB
Delta 2 [T1] 0.08 dB
2.240000 ms

Center 5.825 GHz 500 μ s/

Date: 15.OCT.2024 21:01:41



11N20SISO_Ant1_5825

Ref 20 dBm

Att 25 dB

RBW 10 MHz

VBW 10 MHz

SWT 5 ms

Delta 2 [T1]

-0.57 dB

2.050000 ms

Marker 1 [T1]

100.000000 us

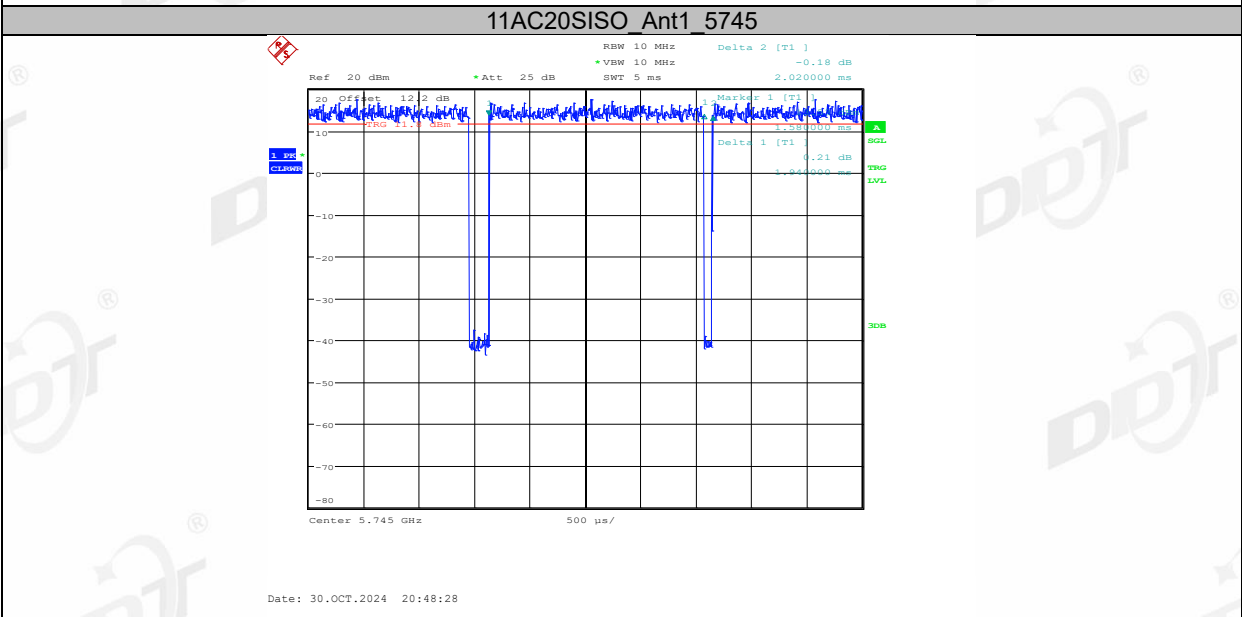
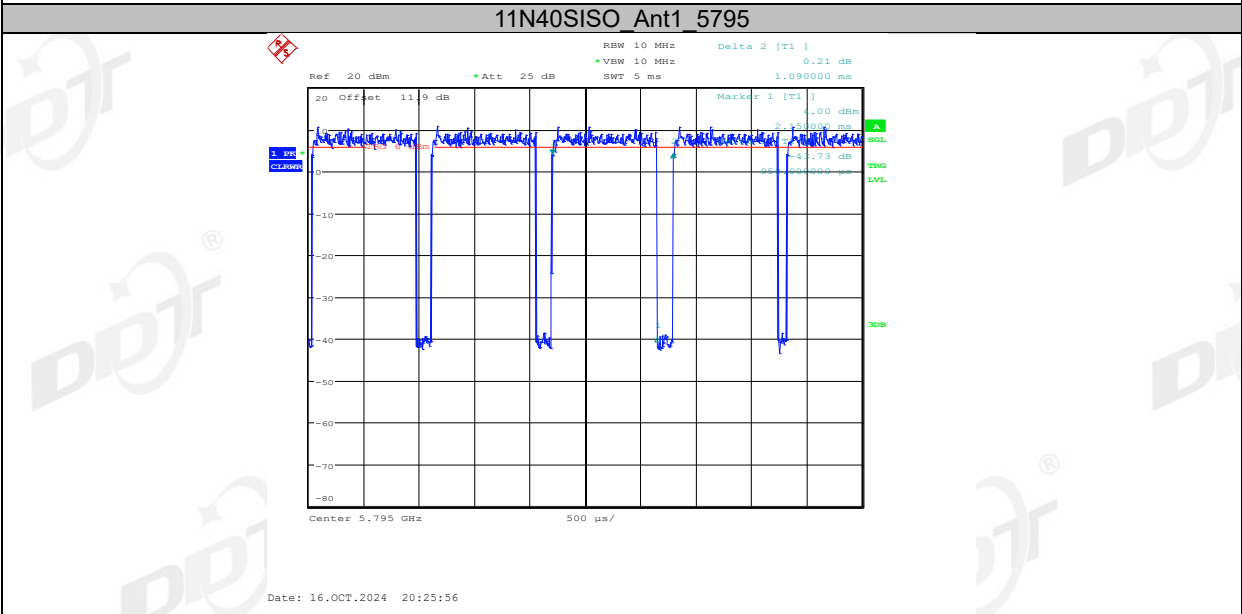
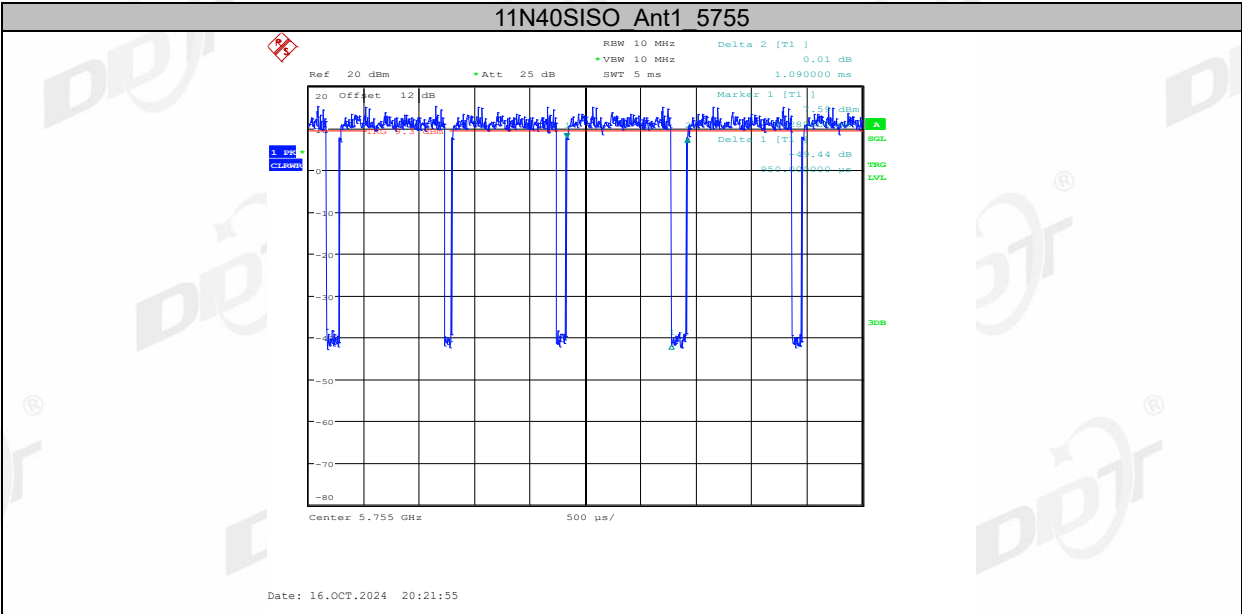
Delta 1 [T1]

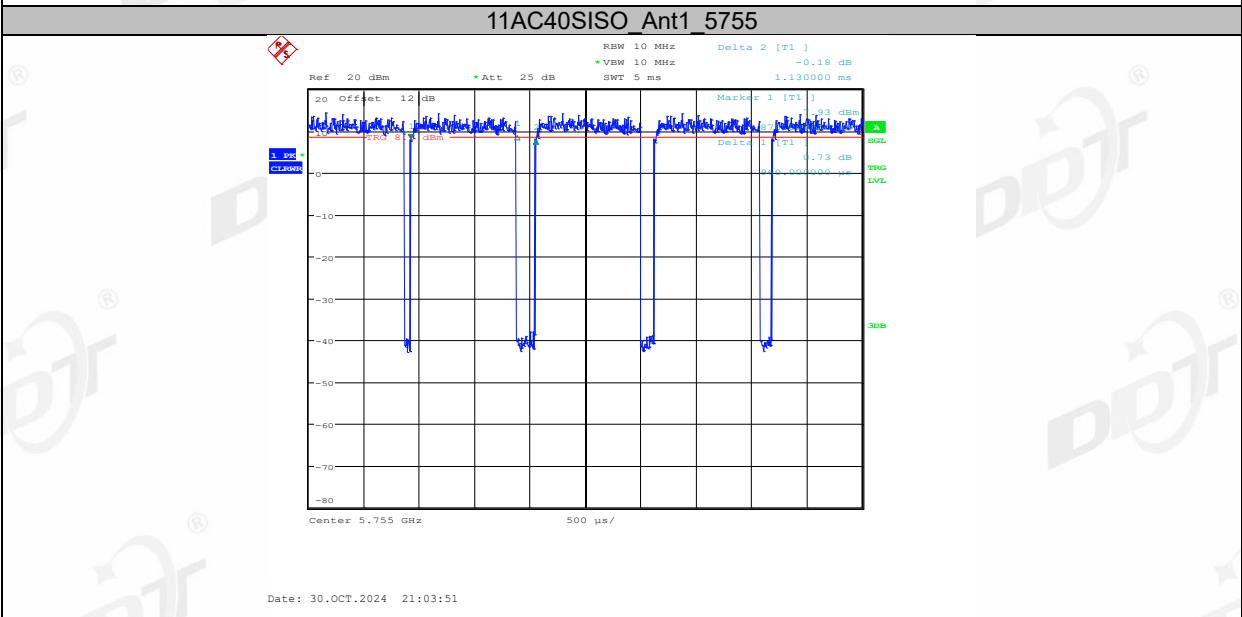
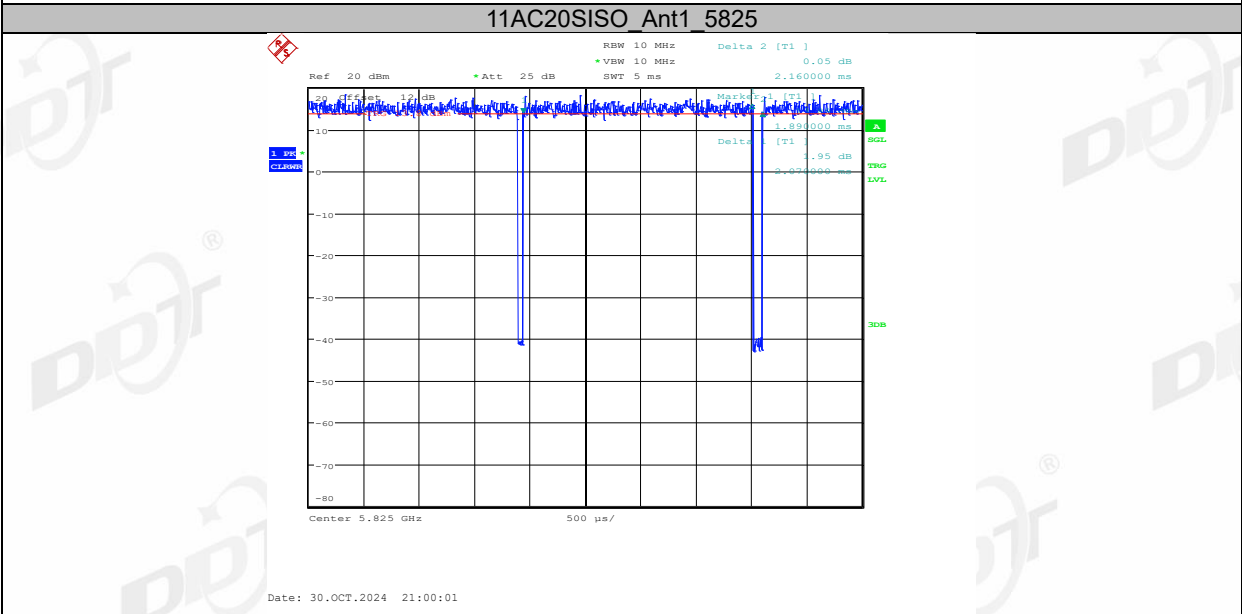
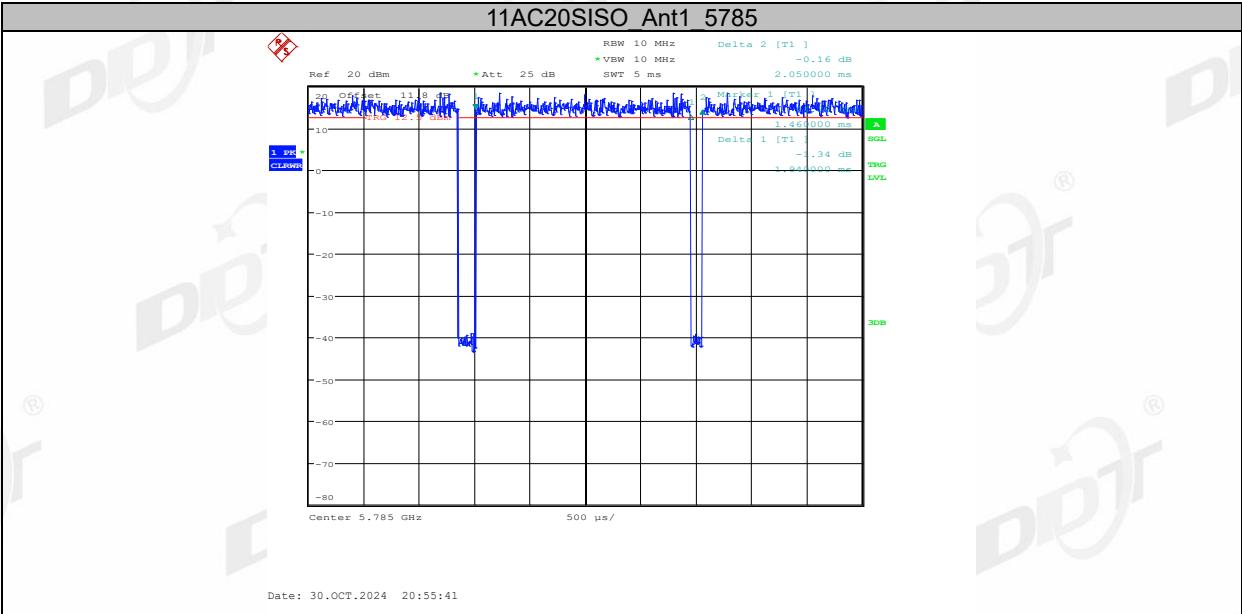
-51.50 dB

1.040000 ms

Center 5.825 GHz 500 us/

Date: 16.OCT.2024 19:16:37

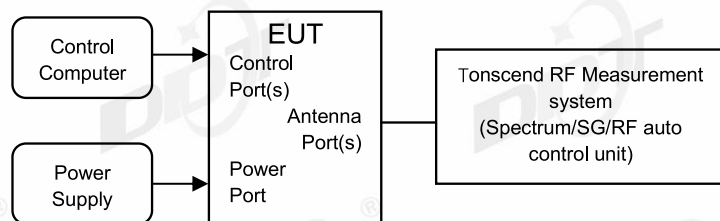






7. Maximum Output Power

7.1. Block diagram of test setup



7.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Maximum Output Power	For FCC: outdoor access point: 1 W(30 dBm) indoor access point: 1 W(30 dBm) fixed point-to-point access points1 W(30 dBm) client devices: 250 mW (24 dBm)	5150-5250
	For FCC: 250 mW (24 dBm) or $11 + 10 \log_{10} B$	5250-5350
	For FCC: 250 mW (24 dBm) or $11 + 10 \log_{10} B$	5470 - 5725
	1 Watt (30 dBm)	5725-5850
Note: For FCC: B=26 bandwidth		

7.3. Test procedure

Connect each EUT's antenna output to power sensor by RF cable and attenuator

Measure the output power of each antenna port by power sensor.

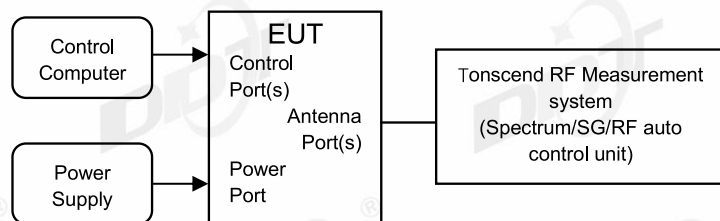
7.4. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	23.8℃, 56%RH	Test Date:	2024.10.14-2024.10.30
Test Power Supply:	DC 12V	Sample Number:	S24091401-001

Test Mode	Antenna	Frequency [MHz]	Duty Cycle [%]	DC Factor [dB]	Result [dBm]	Limit [dBm]	Verdict
11A	Ant1	5745	93.27	0.30	13.03	≤30.00	PASS
		5785	96.28	0.16	13.25	≤30.00	PASS
		5825	92.86	0.32	13.21	≤30.00	PASS
11N20SISO	Ant1	5745	92.34	0.35	13.05	≤30.00	PASS
		5785	94.15	0.26	13.24	≤30.00	PASS
		5825	94.63	0.24	12.98	≤30.00	PASS
11N40SISO	Ant1	5755	87.16	0.60	12.98	≤30.00	PASS
		5795	87.16	0.60	13.59	≤30.00	PASS
11AC20SISO	Ant1	5745	96.04	0.18	12.45	≤30.00	PASS
		5785	94.63	0.24	12.72	≤30.00	PASS
		5825	95.83	0.18	12.56	≤30.00	PASS
11AC40SISO	Ant1	5755	84.96	0.71	12.62	≤30.00	PASS
		5795	87.27	0.59	13.03	≤30.00	PASS
11AC80SISO	Ant1	5775	71.88	1.43	13.16	≤30.00	PASS

8. Power Spectral Density

8.1. Block diagram of test setup



8.2. Limits

FCC Part15, Subpart E		
Test Item	Limit	Frequency Range (MHz)
Power Spectral Density	For FCC: Other than Mobile and portable:17 dBm/MHz Mobile and portable client devices:11 dBm/MHz	5150-5250
	11 dBm/MHz	5250-5350
	11 dBm/MHz	5470 - 5725
	30 dBm/500 kHz	5725-5850

8.3. Test procedure

The transmitter output was connected to a spectrum analyzer. Power density was measured by spectrum analyzer with 1MHz RBW and 3MHz VBW.

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

5150 MHz~5250 MHz, 5250 MHz~5350 MHz, 5470 MHz~5725 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	1MHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

5725 MHz-5850 MHz

Center Frequency	The centre frequency of the channel under test
Detector	RMS
RBW	500 kHz
VBW	$\geq 3 \times \text{RBW}$
Span	Encompass the entire emissions bandwidth (EBW) of the signal
Trace	Max hold
Sweep time	Auto

8.4. Test result

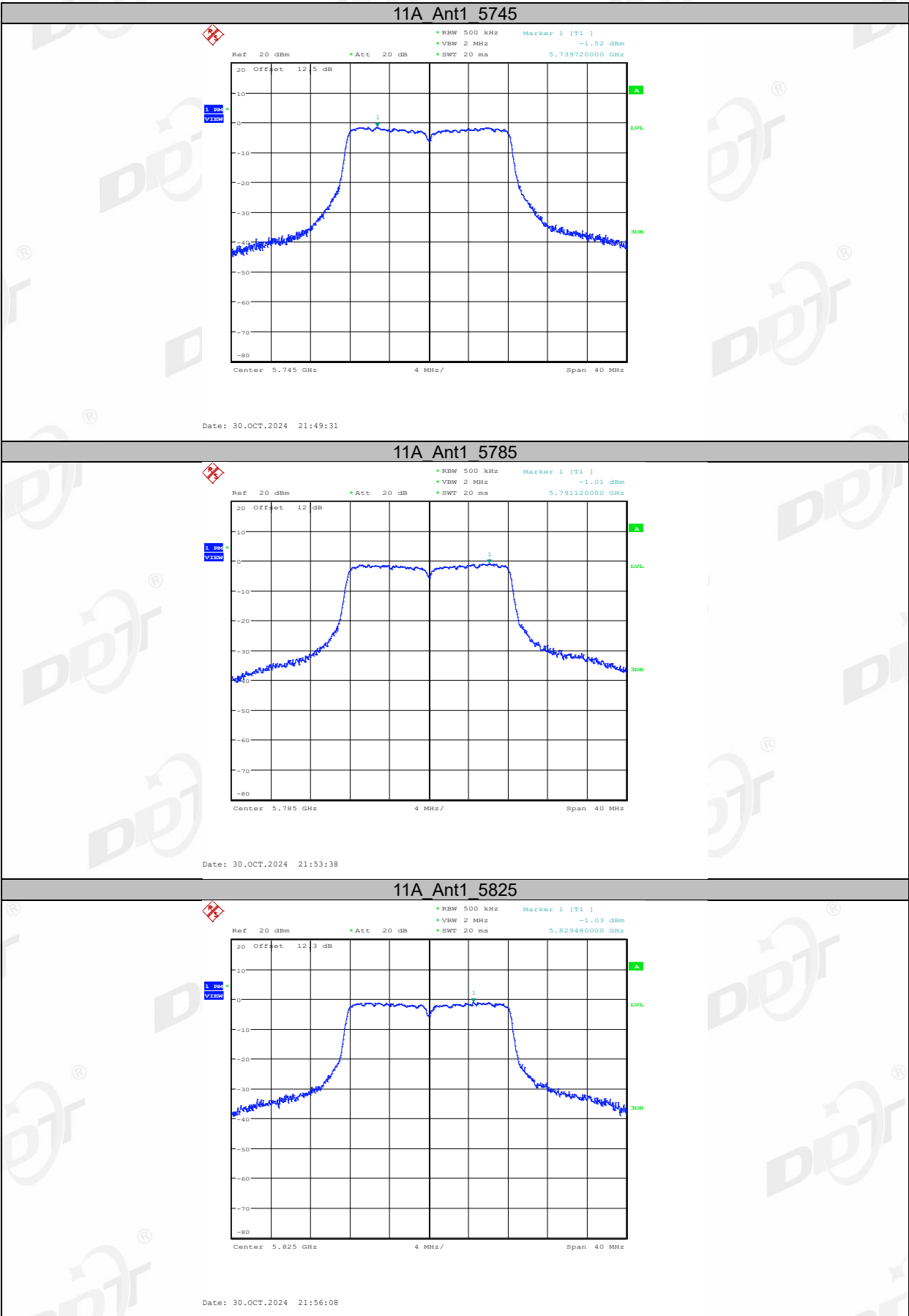
Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	23.8°C, 56%RH	Test Date:	2024.10.14-2024.10.30
Test Power Supply:	DC 12V	Sample Number:	S24091401-001

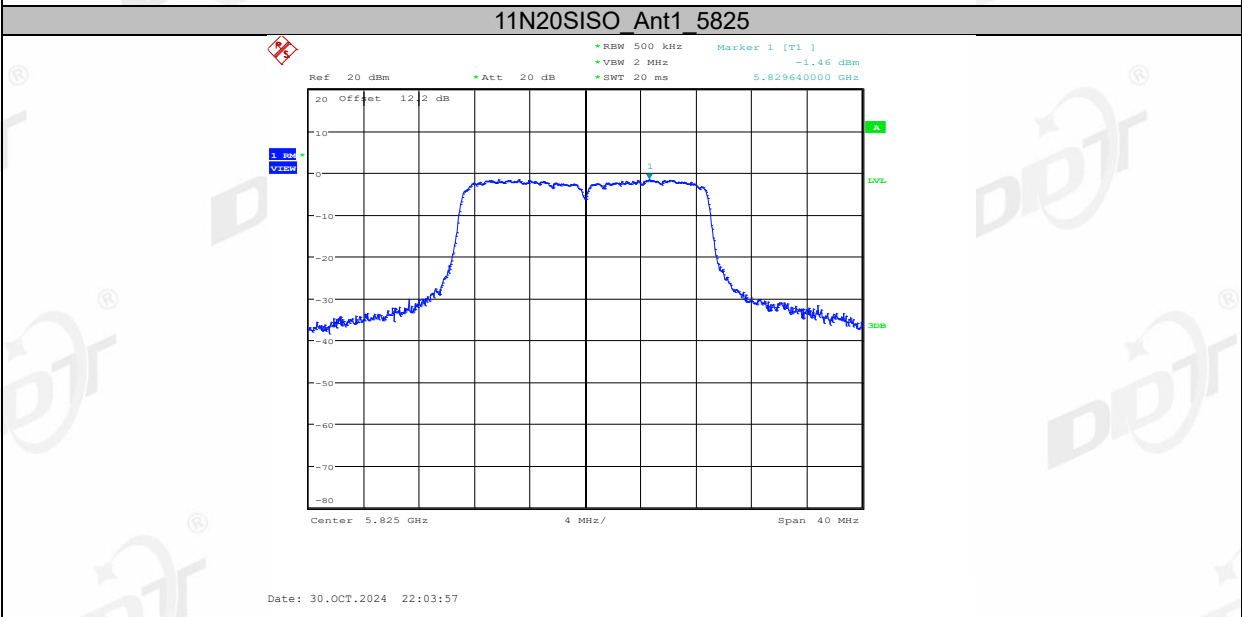
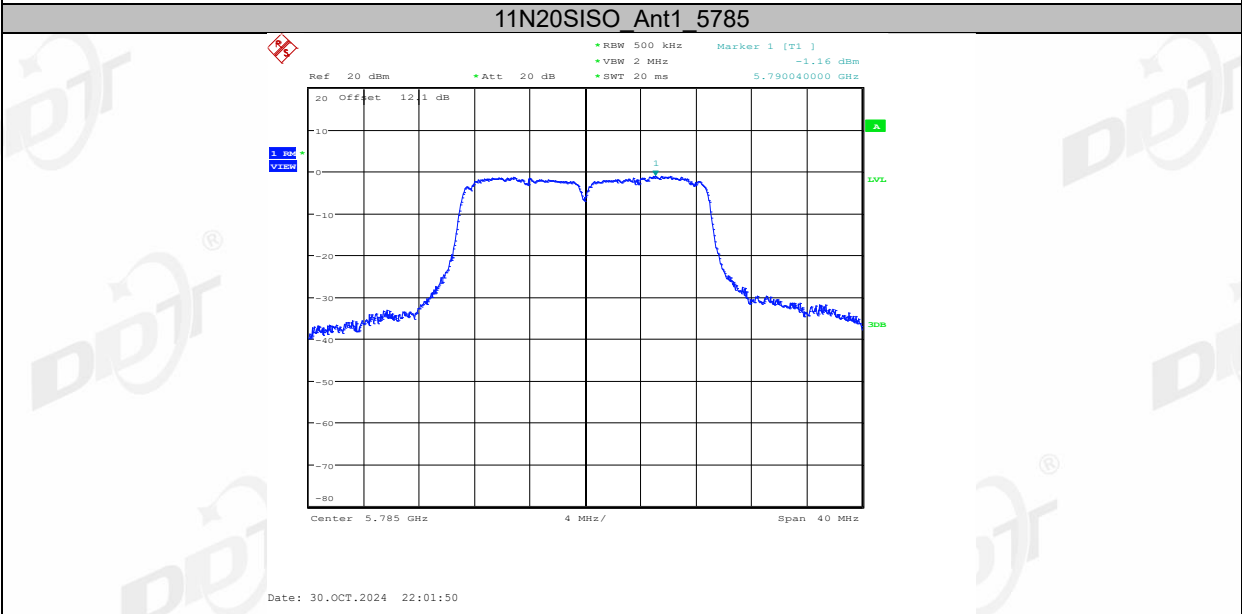
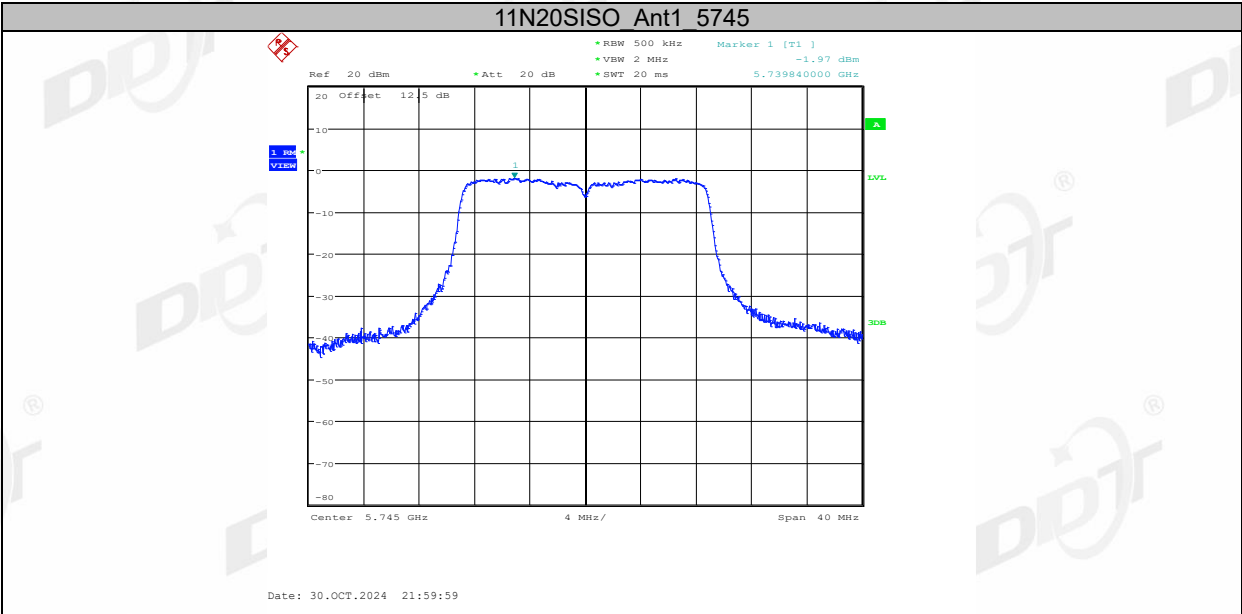
Test Mode	Antenna	Frequency [MHz]	Result [dBm/MHz]	Limit [dBm/MHz]	Verdict
11A	Ant1	5745	-1.52	≤ 30.00	PASS
		5785	-1.01	≤ 30.00	PASS
		5825	-1.03	≤ 30.00	PASS
11N20SISO	Ant1	5745	-1.97	≤ 30.00	PASS
		5785	-1.16	≤ 30.00	PASS
		5825	-1.46	≤ 30.00	PASS
11N40SISO	Ant1	5755	-4.55	≤ 30.00	PASS
		5795	-3.80	≤ 30.00	PASS
11AC20SISO	Ant1	5745	-2.17	≤ 30.00	PASS
		5785	-1.37	≤ 30.00	PASS
		5825	-1.44	≤ 30.00	PASS
11AC40SISO	Ant1	5755	-4.51	≤ 30.00	PASS
		5795	-3.99	≤ 30.00	PASS
11AC80SISO	Ant1	5775	-5.37	≤ 30.00	PASS

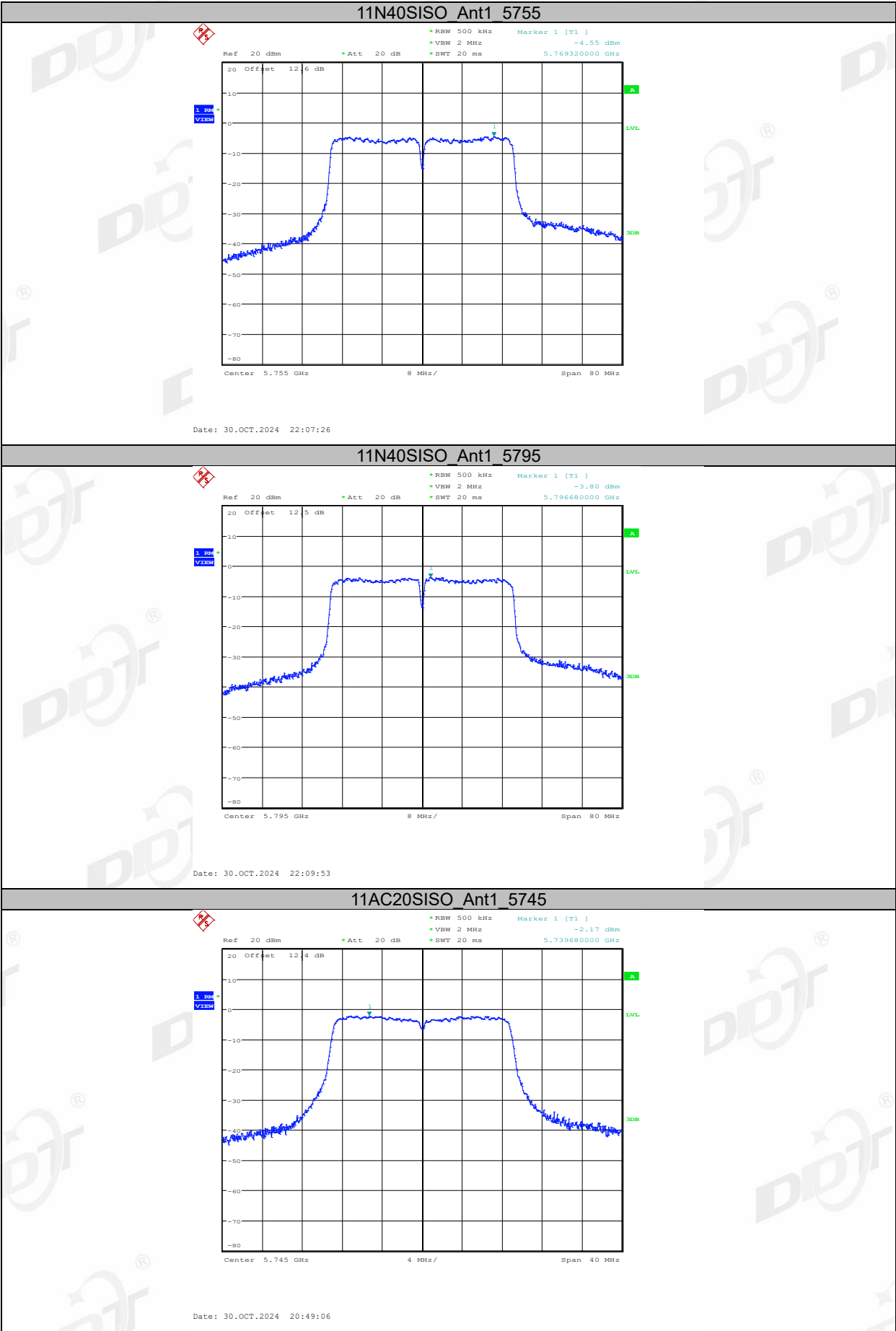
Note:

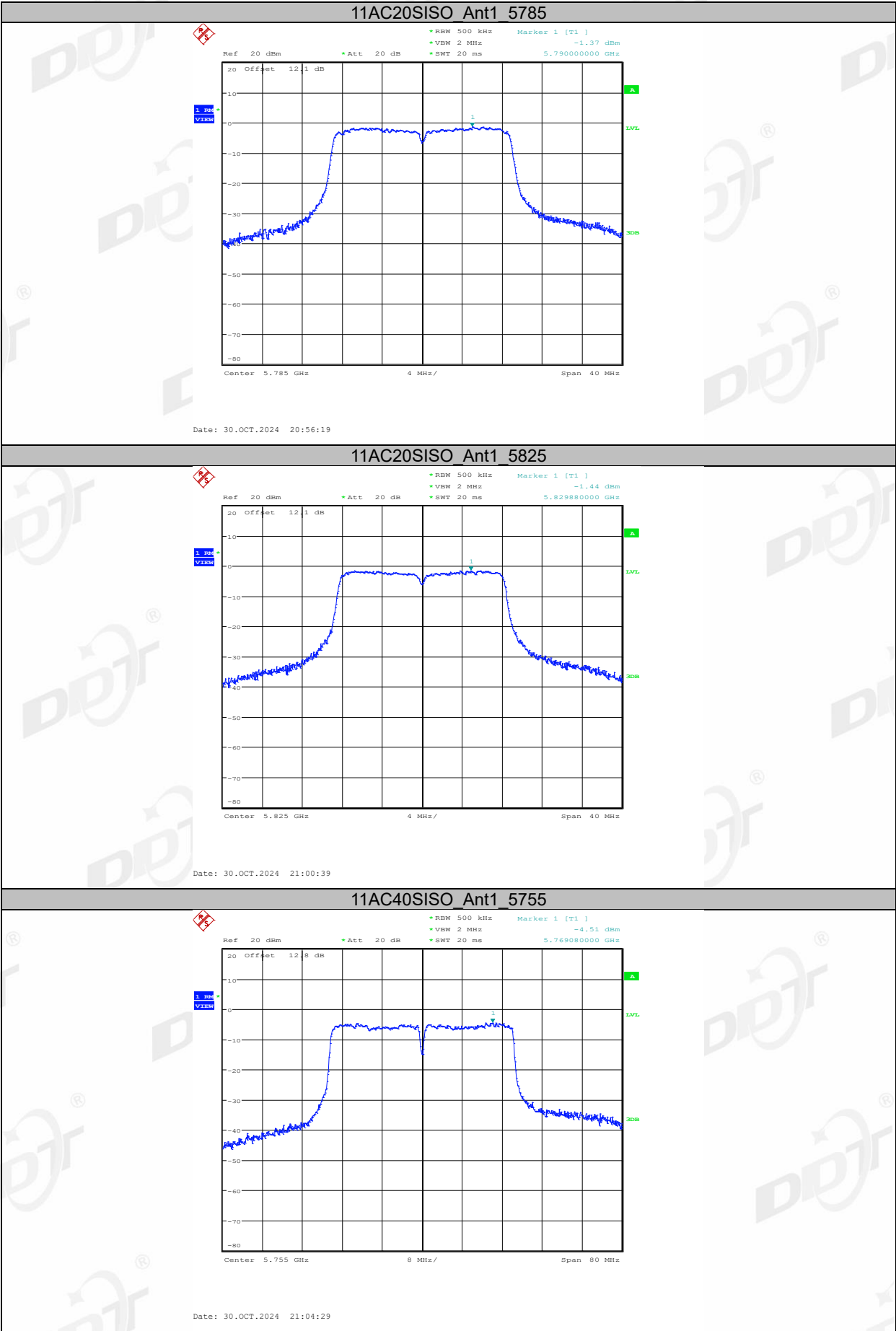
- 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.
- 2.The Duty Cycle Factor is compensated in the graph.

8.5. Test graphs











9. Frequency Stability Measurement

9.1. Limit of Frequency Stability

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

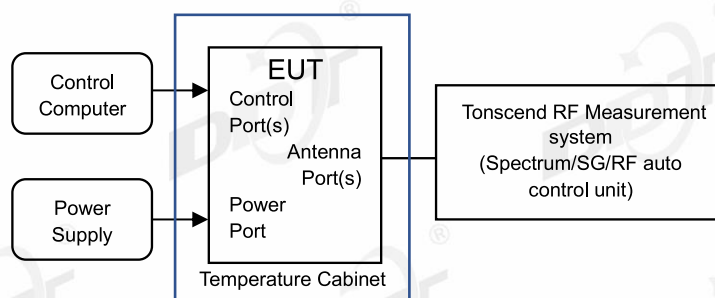
9.2. Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

9.3. Test procedures

- (1) To ensure emission at the band edge is maintained within the authorized band, those values shall be measured by radiation emissions at upper and lower frequency points, and finally compensated by frequency deviation as procedures below.
- (2) The EUT was operated at the maximum output power, and connected to the spectrum analyzer, which is set to maximum hold function and peak detector. The peak value of the power envelope was measured and noted. The upper and lower frequency points were respectively measured relatively 10 dB lower than the measured peak value.
- (3) The frequency deviation was calculated by adding the upper frequency point and the lower frequency point divided by two. Those detailed values of frequency deviation are provided in table below.

9.4. Test setup



9.5. Test result

Test Engineer:	Zora Zhang	Test Site:	RF Measurement System 1#
Ambient Condition:	23.8℃, 56%RH	Test Date:	2024.10.14-2024.10.30
Test Power Supply:	DC 12V	Sample Number:	S24091401-001

Voltage								
Test Mode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (℃)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5745	NV	NT	-60000.00	-10.443864	20	PASS
			LV	NT	-40000.00	-6.962576	20	PASS
			HV	NT	-20000.00	-3.481288	20	PASS
		5785	NV	NT	-20000.00	-3.457217	20	PASS
			LV	NT	-40000.00	-6.914434	20	PASS
			HV	NT	-40000.00	-6.914434	20	PASS
		5825	NV	NT	-20000.00	-3.433476	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	-40000.00	-6.866953	20	PASS
11N40SISO	Ant1	5755	NV	NT	-40000.00	-6.950478	20	PASS
			LV	NT	-40000.00	-6.950478	20	PASS
			HV	NT	-40000.00	-6.950478	20	PASS
		5795	NV	NT	-80000.00	-13.805004	20	PASS
			LV	NT	0.00	0.000000	20	PASS
			HV	NT	0.00	0.000000	20	PASS
11AC80SISO	Ant1	5775	NV	NT	0.00	0.000000	20	PASS
			LV	NT	-80000.00	-13.852814	20	PASS
			HV	NT	0.00	0.000000	20	PASS

Temperature								
Test Mode	Antenna	Frequency [MHz]	Voltage [Vdc]	Temperature (°C)	Deviation (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
11A	Ant1	5745	NV	-30	-40000.00	-6.962576	20	PASS
			NV	-20	-40000.00	-6.962576	20	PASS
			NV	-10	-40000.00	-6.962576	20	PASS
			NV	0	-20000.00	-3.481288	20	PASS
			NV	10	-40000.00	-6.962576	20	PASS
			NV	20	-20000.00	-3.481288	20	PASS
			NV	30	-20000.00	-3.481288	20	PASS
			NV	40	-20000.00	-3.481288	20	PASS
			NV	50	-40000.00	-6.962576	20	PASS
		5785	NV	-30	-20000.00	-3.457217	20	PASS
			NV	-20	-20000.00	-3.457217	20	PASS
			NV	-10	-40000.00	-6.914434	20	PASS
			NV	0	-20000.00	-3.457217	20	PASS
			NV	10	-20000.00	-3.457217	20	PASS
			NV	20	-20000.00	-3.457217	20	PASS
			NV	30	-20000.00	-3.457217	20	PASS
			NV	40	-20000.00	-3.457217	20	PASS
			NV	50	-40000.00	-6.914434	20	PASS
		5825	NV	-30	-20000.00	-3.433476	20	PASS
			NV	-20	-20000.00	-3.433476	20	PASS
			NV	-10	-40000.00	-6.866953	20	PASS
			NV	0	-20000.00	-3.433476	20	PASS
			NV	10	-40000.00	-6.866953	20	PASS
			NV	20	-20000.00	-3.433476	20	PASS
			NV	30	-40000.00	-6.866953	20	PASS
			NV	40	-40000.00	-6.866953	20	PASS
			NV	50	-20000.00	-3.433476	20	PASS
11N40SISO	Ant1	5755	NV	-30	-40000.00	-6.950478	20	PASS

			NV	-20	-40000.00	-6.950478	20	PASS
			NV	-10	-40000.00	-6.950478	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	-40000.00	-6.950478	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-40000.00	-6.950478	20	PASS
			NV	50	-40000.00	-6.950478	20	PASS
		5795	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	-40000.00	-6.902502	20	PASS
			NV	0	0.00	0.000000	20	PASS
			NV	10	0.00	0.000000	20	PASS
			NV	20	0.00	0.000000	20	PASS
			NV	30	0.00	0.000000	20	PASS
			NV	40	-40000.00	-6.902502	20	PASS
			NV	50	0.00	0.000000	20	PASS
11AC80SISO	Ant1	5775	NV	-30	0.00	0.000000	20	PASS
			NV	-20	0.00	0.000000	20	PASS
			NV	-10	0.00	0.000000	20	PASS
			NV	0	-80000.00	-13.852814	20	PASS
			NV	10	-80000.00	-13.852814	20	PASS
			NV	20	-80000.00	-13.852814	20	PASS
			NV	30	-80000.00	-13.852814	20	PASS
			NV	40	0.00	0.000000	20	PASS
			NV	50	0.00	0.000000	20	PASS

10. Antenna Requirements

10.1. Limit

For intentional device, according to FCC 47 CFR Section 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. And according to FCC 47 CFR Section 15.247 (b), if transmitting antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

10.2. Result

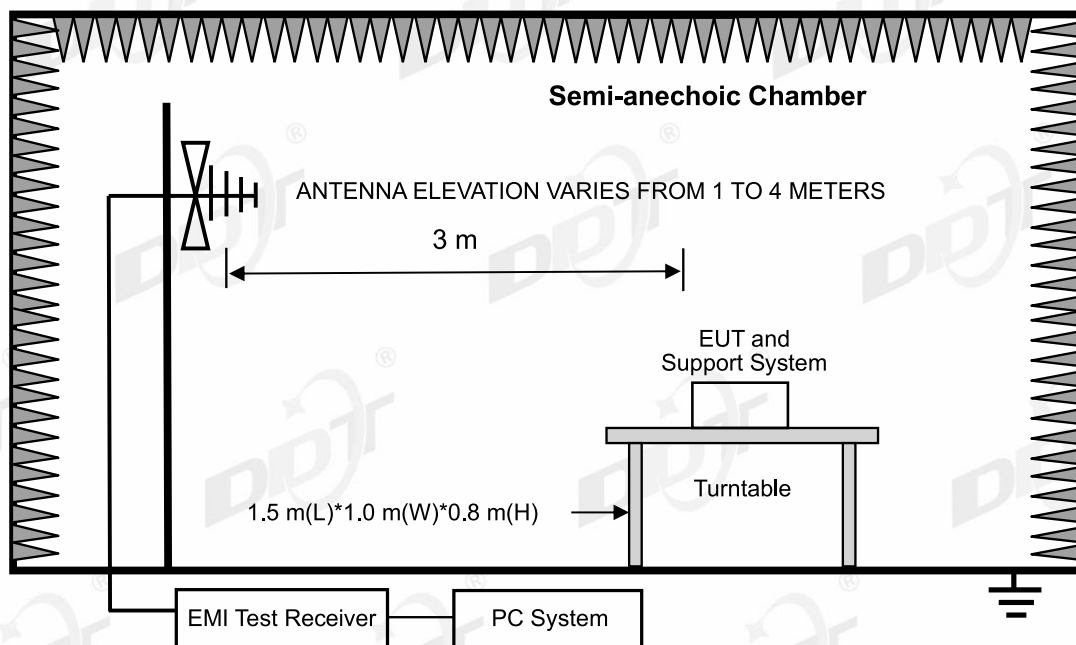
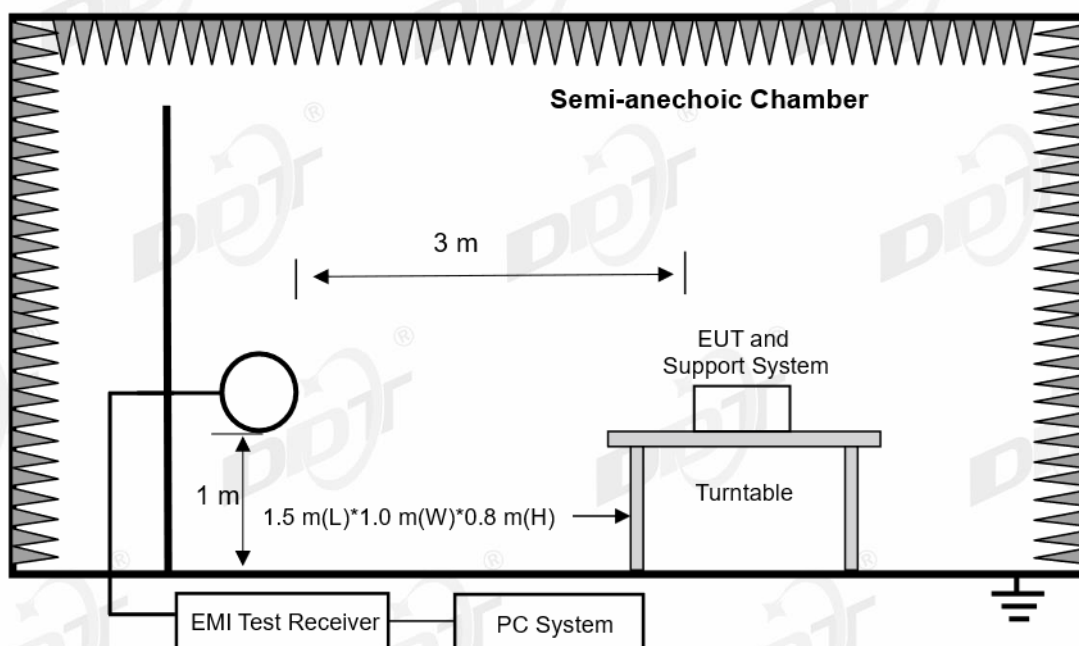
The antenna used for this product as Antenna information described in section 2.1 of the report, and there is no other antenna than that furnished by the responsible party shall be used with the device.

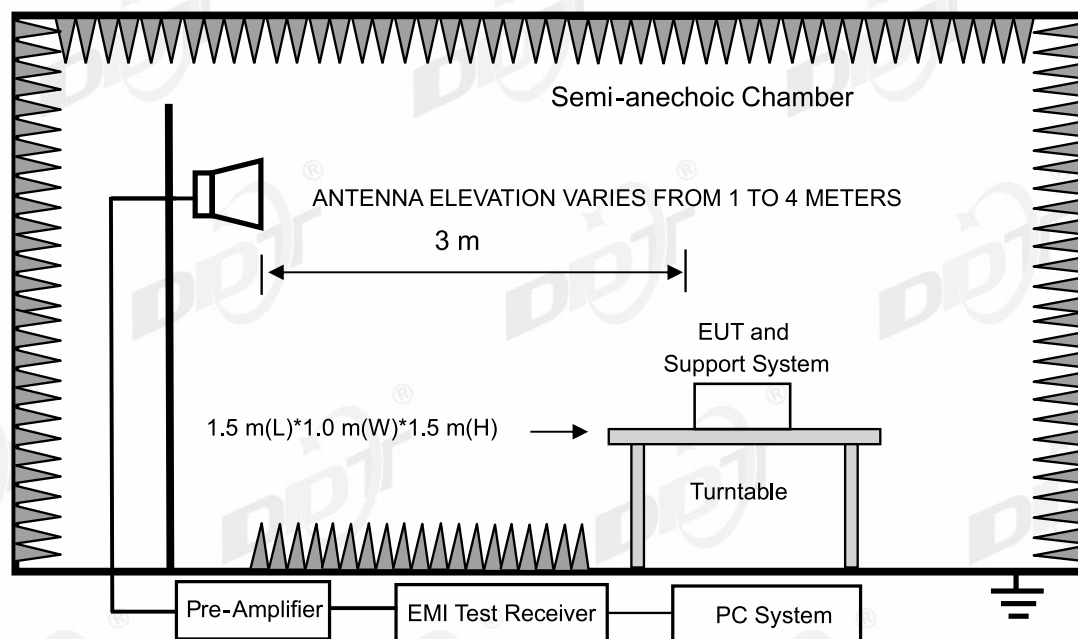
11. Radiated Emission

11.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To	Cal. Interval
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2025/03/31	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2025/07/11	1 Year
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2025/03/31	1 Year
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2025/03/31	1 Year
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11	2 Year
Hochgewinn-Hornantenne	SCHWARZBECK	BBHA 9120 D	DDT-ZC02129	2025/09/18	2 Year
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2025/04/22	1 Year
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2025/03/31	1 Year
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	2025/03/31	1 Year
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/	/
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2025/04/22	1 Year
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2025/04/22	1 Year
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2025/03/31	1 Year
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2025/04/26	1 Year
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/	/
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2025/08/25	1 Year
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2025/03/31	1 Year
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2025/03/31	1 Year

11.2. Block diagram of test setup





11.3. Limits

(1) FCC 15.205 Restricted frequency band

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
¹ 0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.1772&4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.2072&4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(²)
13.36-13.41			

¹Until February 1, 1999, this restricted band shall be 0.490-0.510 MHz

²Above 38.6

(2) FCC 15.209 Limit & RSS-Gen section 8.9 Limit

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		uV/m	dBuV/m
0.009 ~ 0.490	300	2400/F(kHz)	67.6-20log(F)
0.490 ~ 1.705	30	24000/F(kHz)	87.6-20log(F)
1.705 ~ 30.0	30	30	29.54
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0
Above 1000	3	74.0 dBuV/m (Peak) 54.0 dBuV/m (Average)	

Note:

(1) The emission limits shown in the above table are based on measurements employing a CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz and above 1000 MHz, radiated emissions limits in these three bands are based on measurements employing an average detector.

(2) At frequencies below 30 MHz, measurement may be performed at a distance closer than that specified, and the limit at closer measurement distance can be extrapolated by below formula:

$$\text{Limit}_{3m}(\text{dBuV/m}) = \text{Limit}_{30m}(\text{dBuV/m}) + 40\log(30m/3m)$$

(3) Limit for this EUT

The emissions appearing within 15.205 restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions shall be at least 20 dB below the fundamental emissions or comply with 15.209 limits.

11.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

11.5. Test procedure

(1) EUT was placed on a non-metallic table, 80 cm above the ground plane inside a semi-anechoic chamber for below 1G and 150 cm above the ground plane inside a fully-anechoic chamber for above 1G.

(2) Test antenna was located 3 m from the EUT on an adjustable mast, and the antenna used as below table.

Test frequency range	Test antenna used	Test antenna distance
9 kHz - 30 MHz	Active Loop antenna	3 m
30 MHz - 1 GHz	Trilog Broadband Antenna	3 m
1 GHz - 18 GHz	Double Ridged Horn Antenna(1 GHz-18 GHz)	3 m
18 GHz - 40 GHz	Horn Antenna(18 GHz-40 GHz)	1 m

According ANSI C63.10:2020 clause 6.4.6 and 6.5.3, for measurements below 30 MHz, Antenna was located 3 m from EUT, the loop antenna was positioned in three antenna orientations (parallel, perpendicular, and round-parallel), for each measurement antenna alignment, the EUT shall be rotated through 0° to 360° on a turntable, and the lowest height of the magnetic antenna shall be 1 m above the ground. For measurement above 30MHz, the trilog Broadband Antenna or Horn Antenna was located 3m from EUT, Measurements were made with the antenna positioned in both the horizontal and vertical planes of Polarization, and the measurement antenna was varied from 1 m to 4 m. in height above the reference ground plane to obtain the maximum signal strength.

(3) Below pre-scan procedure was first performed in order to find prominent frequency spectrum radiated emissions from 9 kHz to 25 GHz:

(a) Scanning the peak frequency spectrum with the antenna specified in step (3), and the EUT was rotated 360 degree, the antenna height was varied from 1 m to 4 m (Except loop antenna, it's fixed 1 m above ground.)

(b) Change work frequency or channel of device if practicable.

(c) Change modulation type of device if practicable.

(d) Change power supply range from 85% to 115% of the rated supply voltage

(e) Rotated EUT though three orthogonal axes to determine the attitude of EUT arrangement produces highest emissions.

Spectrum frequency from 9 kHz to 25 GHz (tenth harmonic of fundamental frequency) was investigated, and no any obvious emission were detected from 18 GHz to 25 GHz, so below final test was performed with frequency range from 9 kHz to 18 GHz.

(4) For final emissions measurements at each frequency of interest, the EUT was rotated and the antenna height was varied between 1 m and 4 m in order to maximize the emission. Measurements in both horizontal and vertical polarities were made and the data was recorded. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed according to ANSI C63.10:2020 on Radiated Emission test.

(5) The emissions from 9 kHz to 1 GHz were measured based on CISPR QP detector except for the frequency bands 9 - 90 kHz, 110 - 490 kHz, for emissions from 9 kHz - 90 kHz, 110 kHz - 490 kHz and above 1 GHz were measured based on average detector, for emissions above 1 GHz, peak emissions also be measured and need comply with Peak limit.

(6) The emissions from 9 kHz to 1 GHz, QP or average values were measured with EMI receiver with below RBW.

Frequency band	RBW
9 kHz - 150 kHz	200 Hz
150 kHz - 30 MHz	9 kHz
30 MHz - 1 GHz	120 kHz

(7) For emissions above 1GHz, both Peak and Average level were measured with Spectrum Analyzer, and the RBW is set at 1 MHz, VBW is set at 3 MHz for Peak measure; According ANSI C63.10:2020 clause 4.1.4.2.2 procedure for average measure.

(8) For portable device, X axis, Y axis, Z axis are tested, and worse setup is reported.

(9) According exploratory test, the emission levels are 20 dB below the limit detected from 9 kHz to 30 MHz and 18 GHz to 40 GHz, so the final test was performed with frequency range from 30 MHz to 18 GHz and recorded in below.

(10) 30 MHz ~ 40 GHz: (Scan with all mode, the worst case is record and report)

(11) For emissions below 1 GHz, according exploratory explorer test, when change Tx mode and channel, have no distinct influence on emissions level, so for emissions below 1 GHz, the final test was only performed with the worst mode.

11.6. Test result

PASS. (See below detailed test result)

11.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC20 5825MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

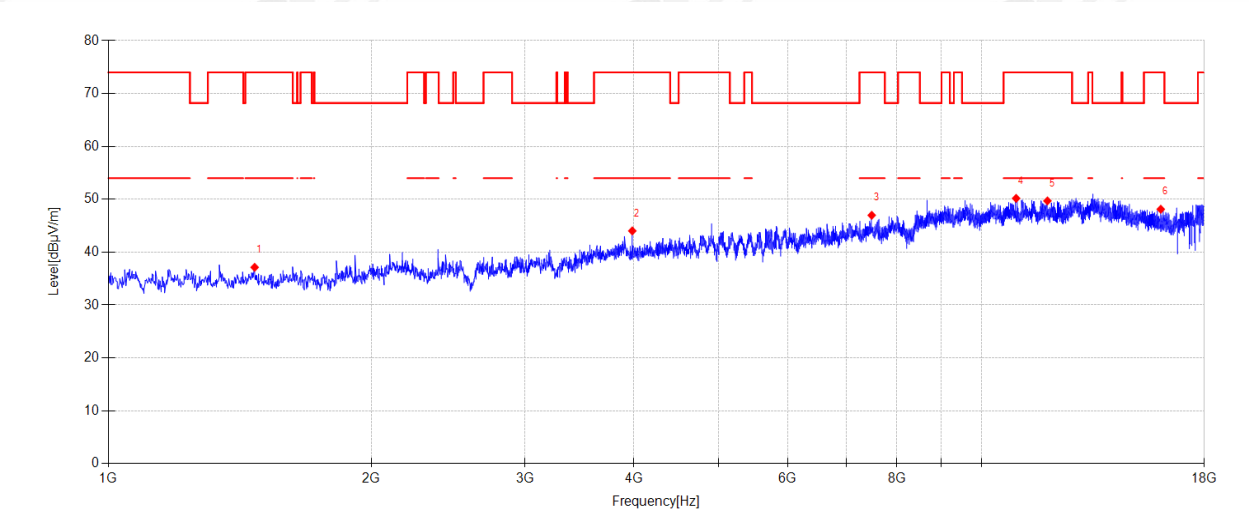
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d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\7

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1470.900	46.33	25.38	2.84	-37.42	37.13	74.00	36.87	PK	Horizontal
2	3981.800	48.22	30.97	4.51	-39.68	44.02	74.00	29.98	PK	Horizontal
3	7487.200	44.76	36.53	6.25	-40.56	46.98	74.00	27.02	PK	Horizontal
4	10956.900	42.54	39.30	7.37	-39.03	50.18	74.00	23.82	PK	Horizontal
5	11900.400	42.77	38.90	7.93	-39.90	49.70	74.00	24.30	PK	Horizontal
6	16045.000	40.65	37.96	8.94	-39.43	48.12	74.00	25.88	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC20 5825MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

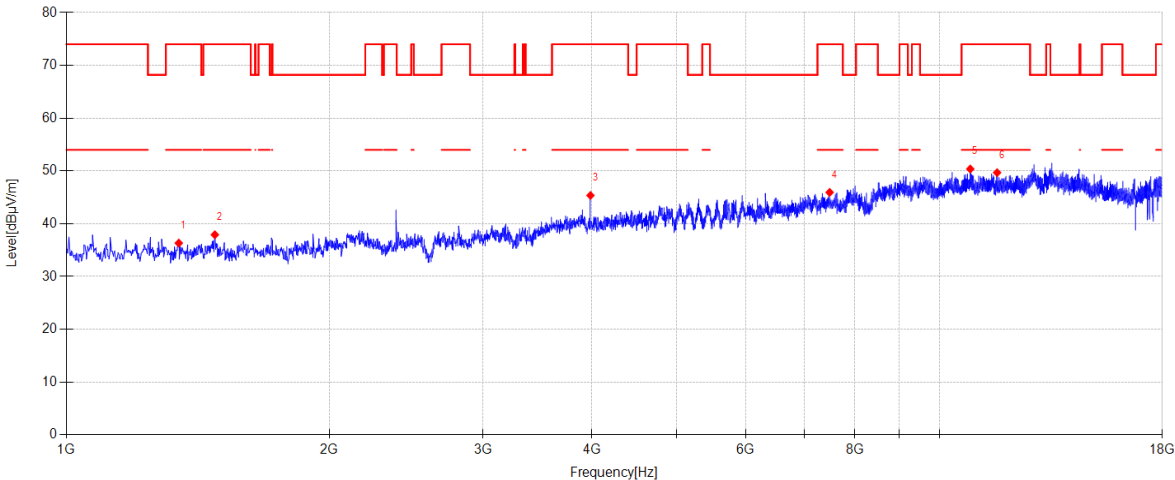
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Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBµV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Detector	Polarity
1	1345.100	46.08	24.78	2.71	-37.24	36.33	74.00	37.67	PK	Vertical
2	1479.400	47.07	25.42	2.85	-37.43	37.91	74.00	36.09	PK	Vertical
3	3983.500	49.56	30.97	4.51	-39.68	45.36	74.00	28.64	PK	Vertical
4	7485.500	43.72	36.53	6.25	-40.56	45.94	74.00	28.06	PK	Vertical
5	10846.400	42.78	39.35	7.33	-39.09	50.37	74.00	23.63	PK	Vertical
6	11642.000	42.55	39.00	7.77	-39.64	49.68	74.00	24.32	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC20 5785MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

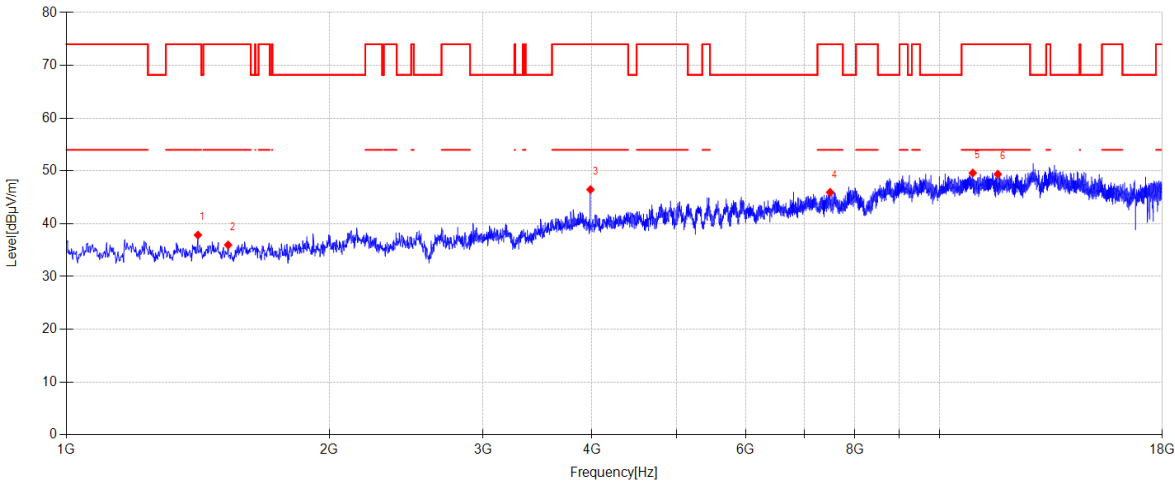
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d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\9

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1414.800	47.26	25.16	2.78	-37.34	37.86	74.00	36.14	PK	Horizontal
2	1532.100	45.54	25.05	2.90	-37.51	35.98	74.00	38.02	PK	Horizontal
3	3983.500	50.68	30.97	4.51	-39.68	46.48	74.00	27.52	PK	Horizontal
4	7494.000	43.74	36.51	6.26	-40.56	45.95	74.00	28.05	PK	Horizontal
5	10917.800	42.02	39.30	7.35	-39.05	49.62	74.00	24.38	PK	Horizontal
6	11664.100	42.26	39.00	7.79	-39.66	49.39	74.00	24.61	PK	Horizontal

Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC20 5785MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

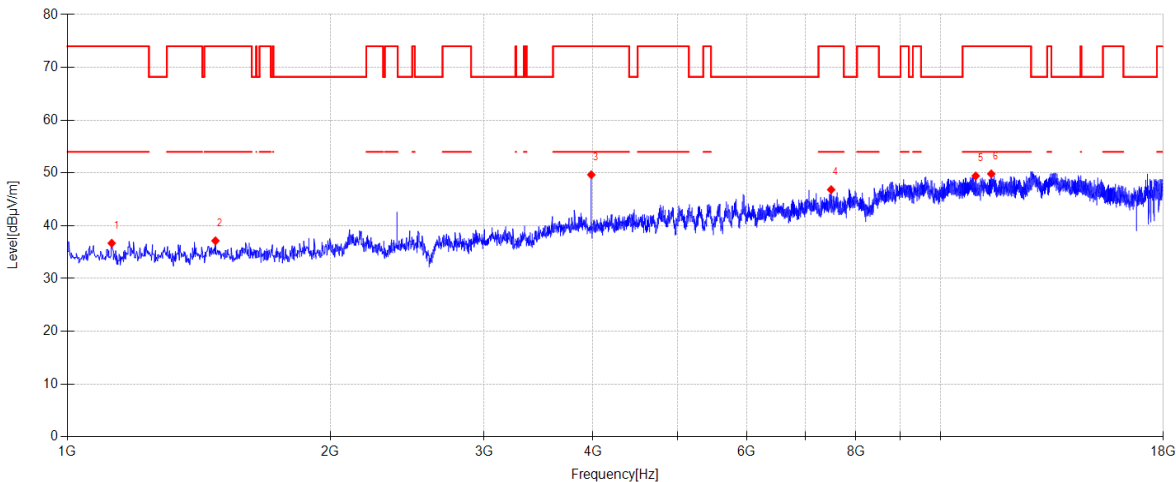
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Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1124.100	46.47	24.64	2.50	-36.92	36.69	74.00	37.31	PK	Vertical
2	1477.700	46.32	25.41	2.84	-37.43	37.14	74.00	36.86	PK	Vertical
3	3981.800	53.86	30.97	4.51	-39.68	49.66	74.00	24.34	PK	Vertical
4	7495.700	44.61	36.51	6.26	-40.55	46.83	74.00	27.17	PK	Vertical
5	10973.900	41.79	39.30	7.37	-39.02	49.44	74.00	24.56	PK	Vertical
6	11432.900	42.35	39.27	7.64	-39.43	49.83	74.00	24.17	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC20 5745MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

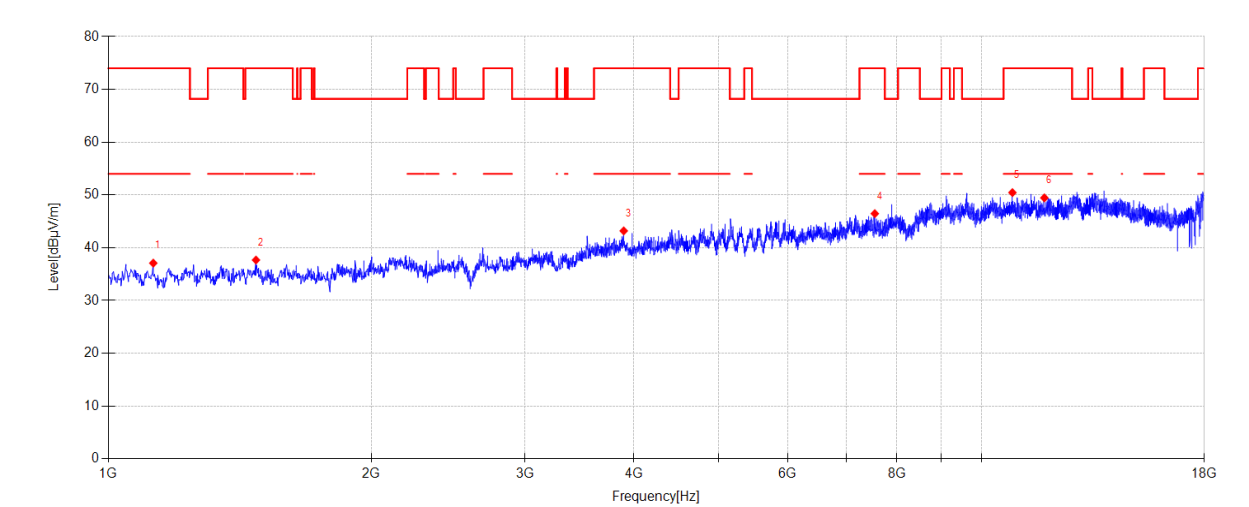
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d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\11

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1125.800	46.85	24.65	2.50	-36.92	37.08	74.00	36.92	PK	Horizontal
2	1476.000	46.86	25.40	2.84	-37.43	37.67	74.00	36.33	PK	Horizontal
3	3893.400	47.23	31.16	4.45	-39.65	43.19	74.00	30.81	PK	Horizontal
4	7548.400	44.28	36.40	6.29	-40.51	46.46	74.00	27.54	PK	Horizontal
5	10851.500	42.86	39.35	7.33	-39.09	50.45	74.00	23.55	PK	Horizontal
6	11805.200	42.49	38.90	7.87	-39.81	49.45	74.00	24.55	PK	Horizontal

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC20 5745MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

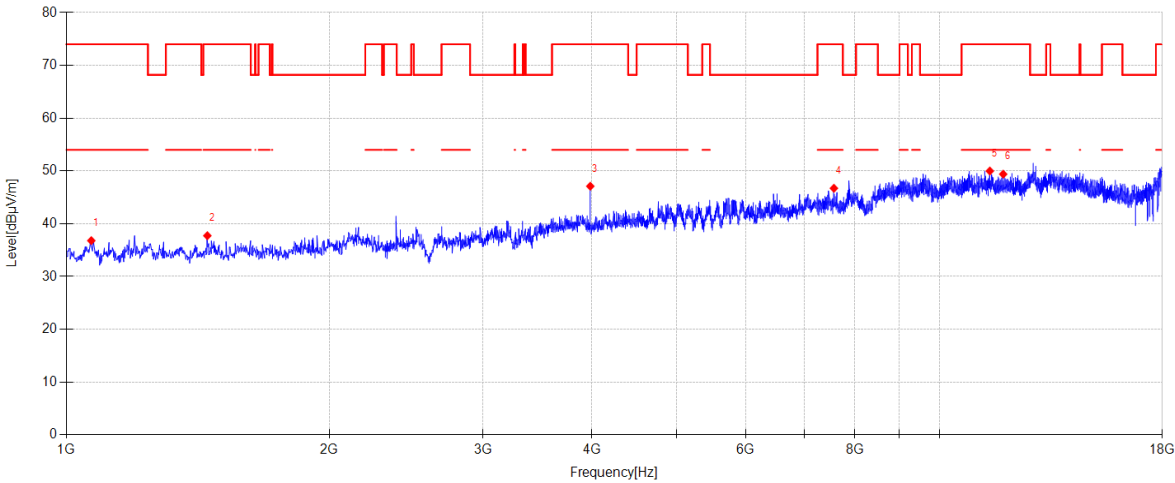
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d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\12

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	1068.000	46.75	24.44	2.45	-36.84	36.80	74.00	37.20	PK	Vertical
2	1450.500	47.00	25.30	2.82	-37.39	37.73	74.00	36.27	PK	Vertical
3	3981.800	51.31	30.97	4.51	-39.68	47.11	74.00	26.89	PK	Vertical
4	7570.500	44.46	36.44	6.31	-40.49	46.72	74.00	27.28	PK	Vertical
5	11421.000	42.49	39.28	7.64	-39.42	49.99	74.00	24.01	PK	Vertical
6	11830.700	42.43	38.90	7.89	-39.83	49.39	74.00	24.61	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

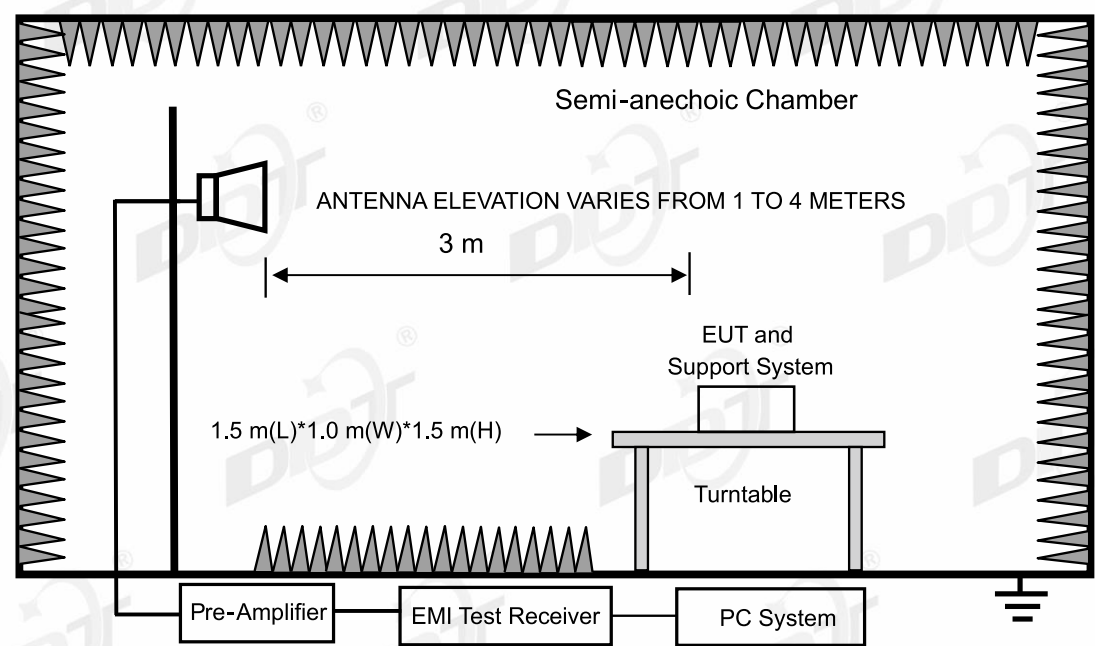
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

12. Band Edge Compliance

12.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To	Cal. Interval
PSA Series Spectrum Analyzer	Agilent	E4447A	DDT-ZC00517	2025/03/31	1 Year
Trilog Broadband Antenna	Schwarzbeck	VULB 9163	DDT-ZC02050	2025/07/11	1 Year
RF cable	Yuhu Technology	ZT26S-SMAJ-SMAJ-1M	DDT-ZC02037	2025/03/31	1 Year
EMI TEST RECEIVER	R&S	ESU26	DDT-ZC01909	2025/03/31	1 Year
Active Loop Antenna	Schwarzbeck	FMZB1519	DDT-ZC00524	2025/09/11	2 Year
Hochgewinn-Hornantenne	SCHWARZBECK	BBHA 9120 D	DDT-ZC02129	2025/09/18	2 Year
High pass filter	Micro-Tronics	HPM50102	DDT-ZC00561	2025/04/22	1 Year
RF Cable	N/A	W13.02 AP1-X2	DDT-ZC04023	2025/03/31	1 Year
RF cable	Zhongke Junchuang	JCT26S-NJ-NJ-1.5M	DDT-ZC02762	2025/03/31	1 Year
Micro-Tronics filters	REBES	BRM50716	DDT-ZC03240	/	/
High pass filter	Micro-Tronics	HPM50108	DDT-ZC00560	2025/04/22	1 Year
High Pass filter	Xi'an Xingbo	XBLBQ-GTA67	DDT-ZC02179	2025/04/22	1 Year
Pre-amplifier	COM-POWER	PAM-840A	DDT-ZC01693	2025/03/31	1 Year
Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	DDT-ZC00506	2025/04/26	1 Year
Micro-Tronics filters	REBES	BRM50702	DDT-ZC03242	/	/
Pre-amplifier	COM-POWER	PAM-118A	DDT-ZC01293	2025/08/25	1 Year
RF Cable	N/A	W24.02 HL-562	DDT-ZC04022	2025/03/31	1 Year
RF cable	Yuhu Technology	JCTB810-NJ-NJ-9M	DDT-ZC02538	2025/03/31	1 Year

12.2. Block diagram of test setup



12.3. Limits

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating solely in the 5.725-5.850 GHz band:
All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

12.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

12.5. Test procedure

Same with Emissions in Restricted Frequency Bands except change investigated frequency range 5.725-5.85 GHz.

Note: Same with Radiated Emission except change investigated frequency range.

Remark: All restriction band have been tested, and only the worst case is shown in report. According to the results of the radiated Emission test, it can be judged that the Vertical direction is the Worst case.

12.6. Test result

PASS. (See below detailed test result)

12.7. Test data

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC20 5745MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

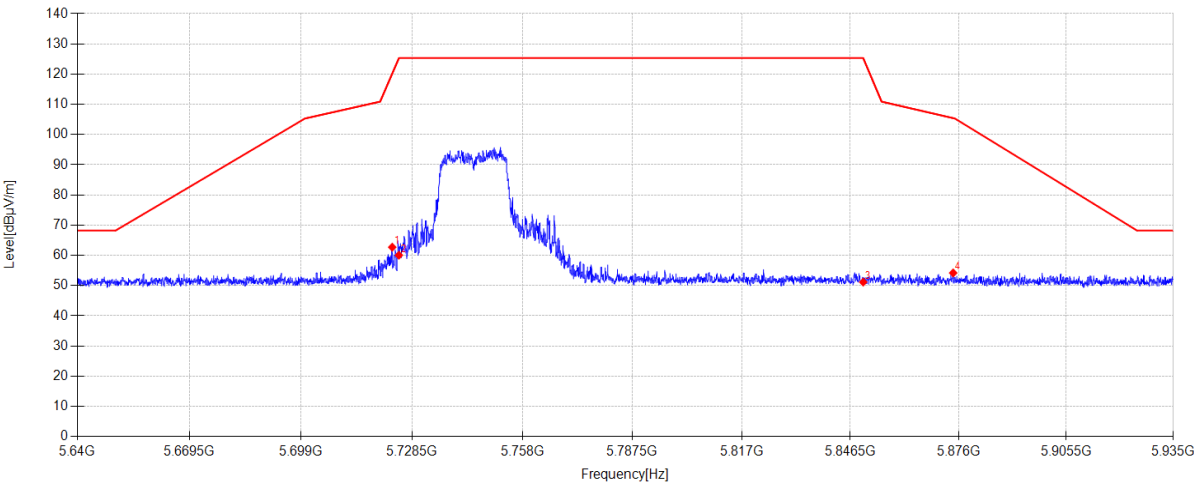
File Path:

d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\14

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5723.220	52.69	33.74	5.87	-29.60	62.70	120.17	57.47	PK	Vertical
2	5725.000	50.03	33.75	5.87	-29.60	60.05	125.30	65.25	PK	Vertical
3	5850.000	40.82	34.00	5.94	-29.60	51.16	125.27	74.11	PK	Vertical
4	5874.525	43.78	34.05	5.95	-29.60	54.18	105.43	51.25	PK	Vertical

Note:

- Level = Reading + Cable loss + Antenna Factor + AMP
- If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
- Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC20 5785MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

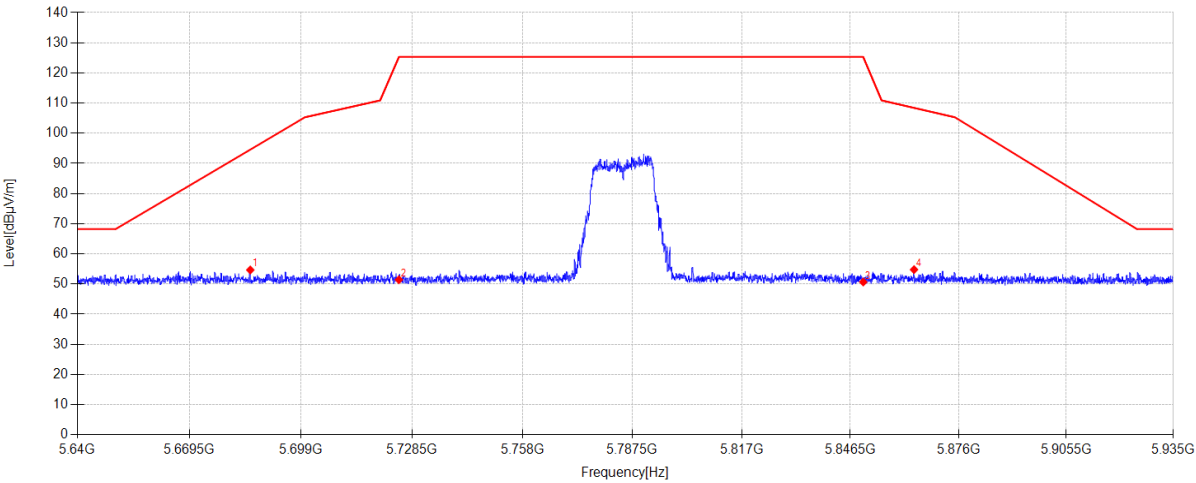
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d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\16

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5685.548	44.87	33.54	5.85	-29.60	54.66	94.58	39.92	PK	Vertical
2	5725.000	41.40	33.75	5.87	-29.60	51.42	125.30	73.88	PK	Vertical
3	5850.000	40.33	34.00	5.94	-29.60	50.67	125.27	74.60	PK	Vertical
4	5863.846	44.41	34.03	5.94	-29.60	54.78	108.42	53.64	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC20 5825MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

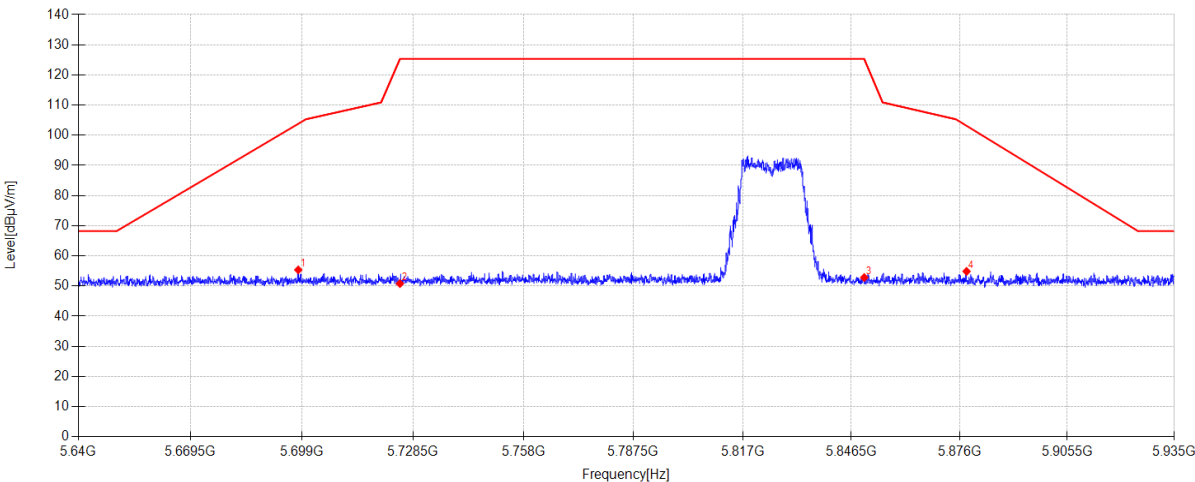
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Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5697.997	45.50	33.59	5.86	-29.60	55.35	103.81	48.46	PK	Vertical
2	5725.000	40.78	33.75	5.87	-29.60	50.80	125.30	74.50	PK	Vertical
3	5850.000	42.48	34.00	5.94	-29.60	52.82	125.27	72.45	PK	Vertical
4	5877.918	44.45	34.06	5.95	-29.60	54.86	103.14	48.28	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-12

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

11A 5745MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

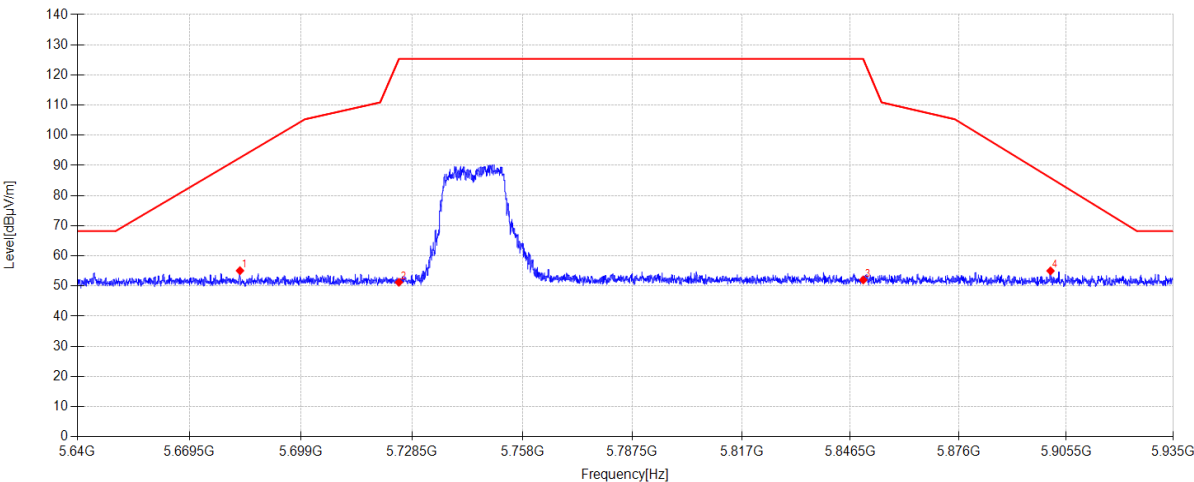
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Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5682.834	45.31	33.53	5.85	-29.60	55.09	92.56	37.47	PK	Vertical
2	5725.000	41.22	33.75	5.87	-29.60	51.24	125.30	74.06	PK	Vertical
3	5850.000	41.69	34.00	5.94	-29.60	52.03	125.27	73.24	PK	Vertical
4	5901.193	44.56	34.10	5.96	-29.60	55.02	85.86	30.84	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-17

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

11A 5785MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

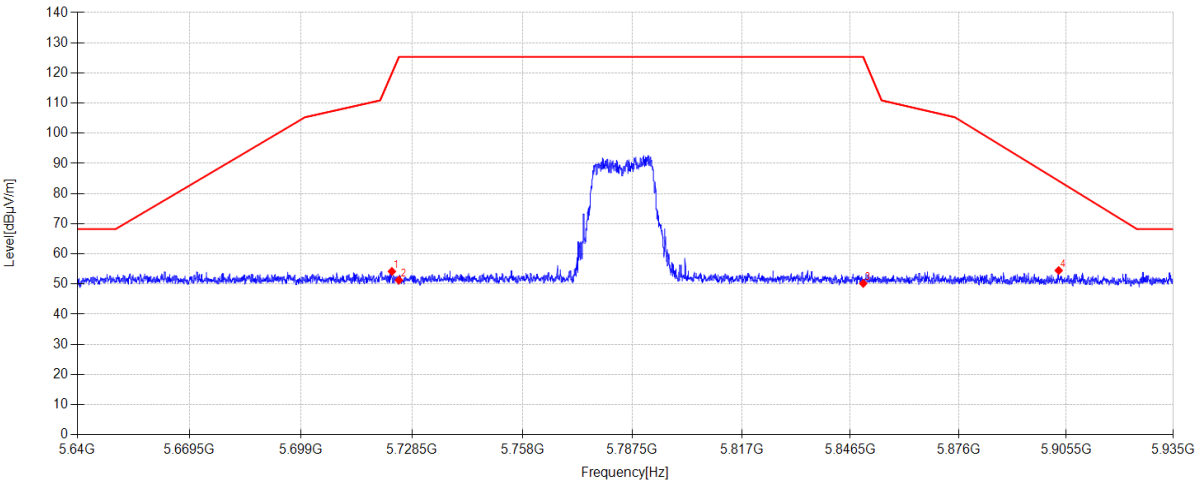
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Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5723.131	44.16	33.74	5.87	-29.60	54.17	119.92	65.75	PK	Vertical
2	5725.000	41.26	33.75	5.87	-29.60	51.28	125.30	74.02	PK	Vertical
3	5850.000	39.86	34.00	5.94	-29.60	50.20	125.27	75.07	PK	Vertical
4	5903.435	44.01	34.11	5.96	-29.60	54.48	84.20	29.72	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-17

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

11A 5825MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

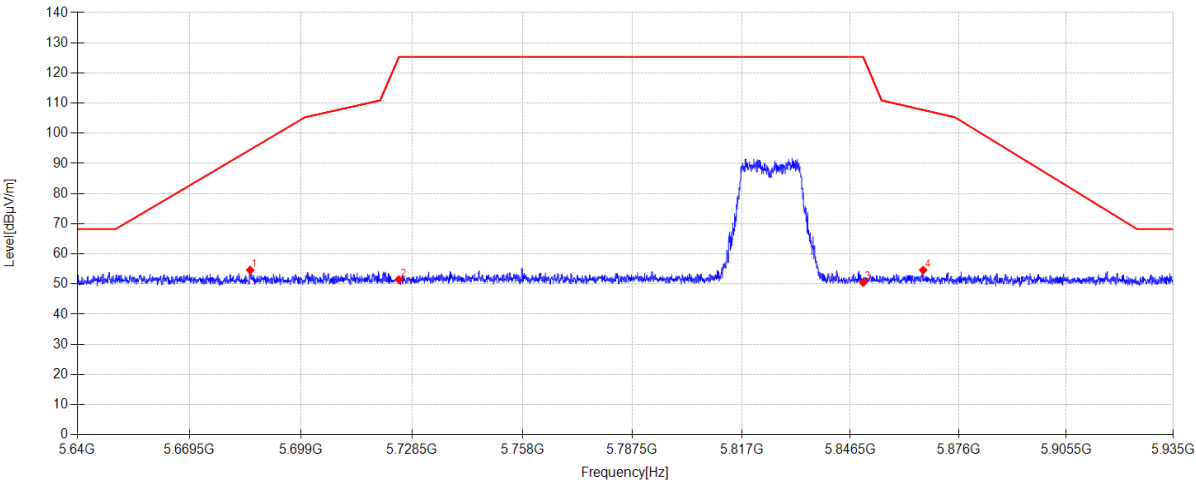
File Path:

d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\29

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5685.519	44.83	33.54	5.85	-29.60	54.62	94.55	39.93	PK	Vertical
2	5725.000	41.43	33.75	5.87	-29.60	51.45	125.30	73.85	PK	Vertical
3	5850.000	40.14	34.00	5.94	-29.60	50.48	125.27	74.79	PK	Vertical
4	5866.324	44.26	34.03	5.94	-29.60	54.63	107.73	53.10	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-17

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC40 5755MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

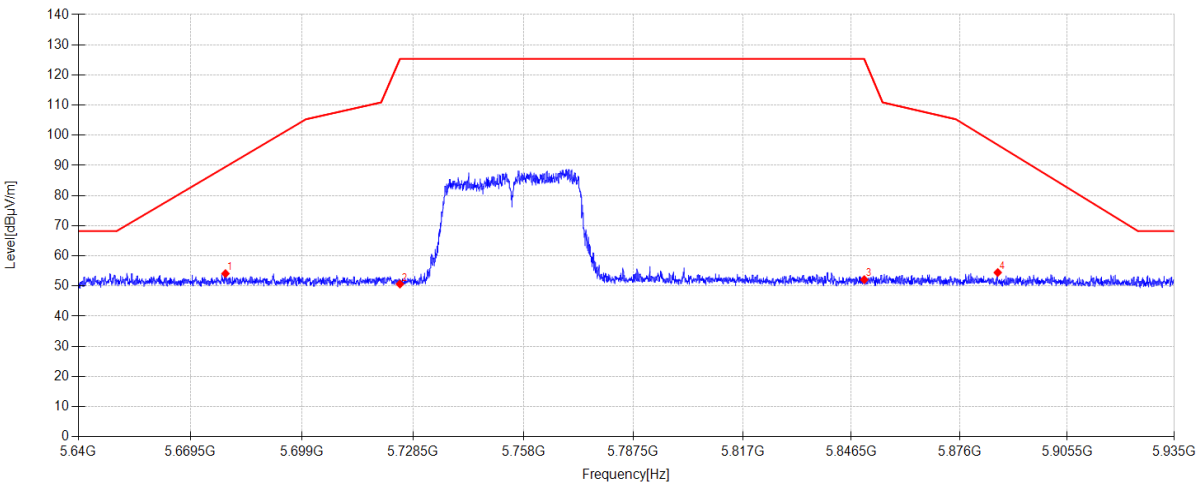
File Path:

d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\30

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5678.734	44.37	33.51	5.85	-29.60	54.13	89.52	35.39	PK	Vertical
2	5725.000	40.64	33.75	5.87	-29.60	50.66	125.30	74.64	PK	Vertical
3	5850.000	41.77	34.00	5.94	-29.60	52.11	125.27	73.16	PK	Vertical
4	5886.443	44.05	34.07	5.95	-29.60	54.47	96.81	42.34	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-17

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

AC40 5795MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

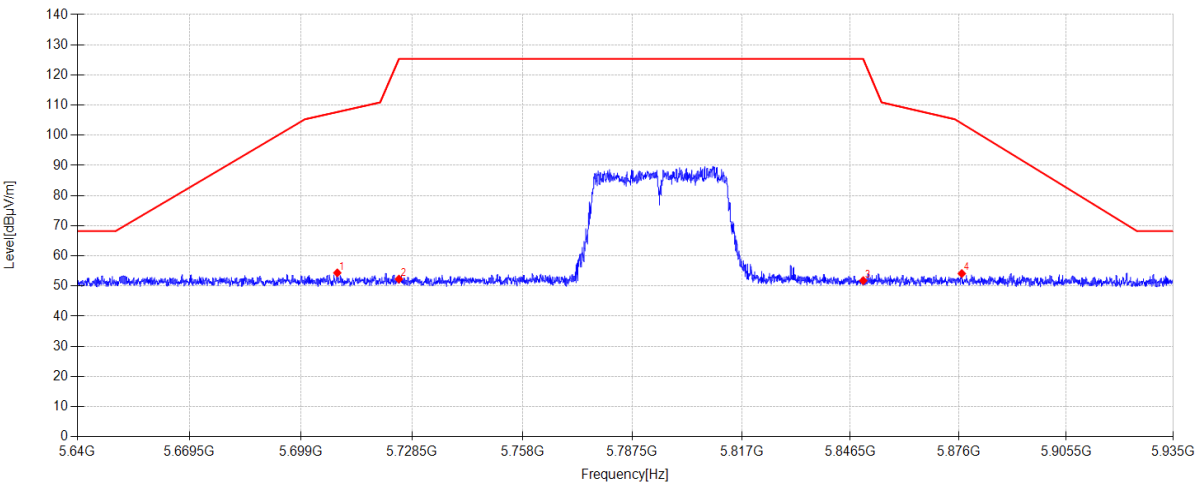
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d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\31

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5708.617	44.46	33.65	5.86	-29.60	54.37	107.71	53.34	PK	Vertical
2	5725.000	42.29	33.75	5.87	-29.60	52.31	125.30	72.99	PK	Vertical
3	5850.000	41.46	34.00	5.94	-29.60	51.80	125.27	73.47	PK	Vertical
4	5876.885	43.74	34.05	5.95	-29.60	54.14	103.90	49.76	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

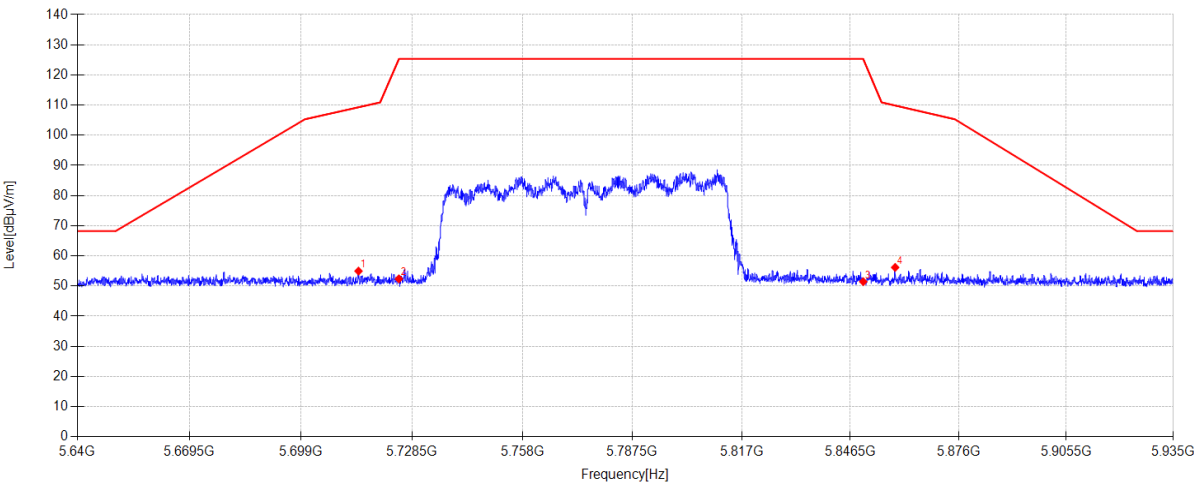
2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date: 2024-10-17 Tested By: Zhong Nan
EUT: Car Multimedia Entertainment System Model Number: MTXMO610LAB
Test Mode: AC80 5775MHz TX Mode Power Supply: DC 12V
Condition: Temp:24.5°C;Humi:47.4% Test Site: DDT 3# Chamber
File Path: d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\32
Memo: Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5714.252	44.99	33.69	5.87	-29.60	54.95	109.29	54.34	PK	Vertical
2	5725.000	42.37	33.75	5.87	-29.60	52.39	125.30	72.91	PK	Vertical
3	5850.000	41.11	34.00	5.94	-29.60	51.45	125.27	73.82	PK	Vertical
4	5858.684	45.81	34.02	5.94	-29.60	56.17	109.87	53.70	PK	Vertical

- Note:
- 1. Level = Reading + Cable loss + Antenna Factor + AMP
 - 2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.
 - 3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-17

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

N20 5745MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

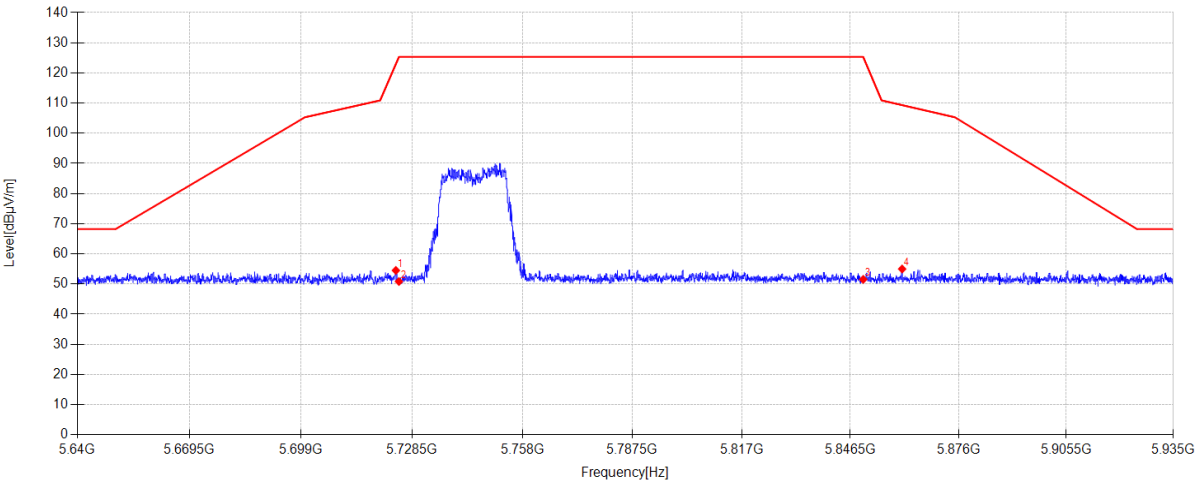
File Path:

d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\33

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5724.193	44.49	33.75	5.87	-29.60	54.51	122.98	68.47	PK	Vertical
2	5725.000	40.81	33.75	5.87	-29.60	50.83	125.30	74.47	PK	Vertical
3	5850.000	41.21	34.00	5.94	-29.60	51.55	125.27	73.72	PK	Vertical
4	5860.601	44.63	34.02	5.94	-29.60	54.99	109.33	54.34	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-17

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

N20 5785MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

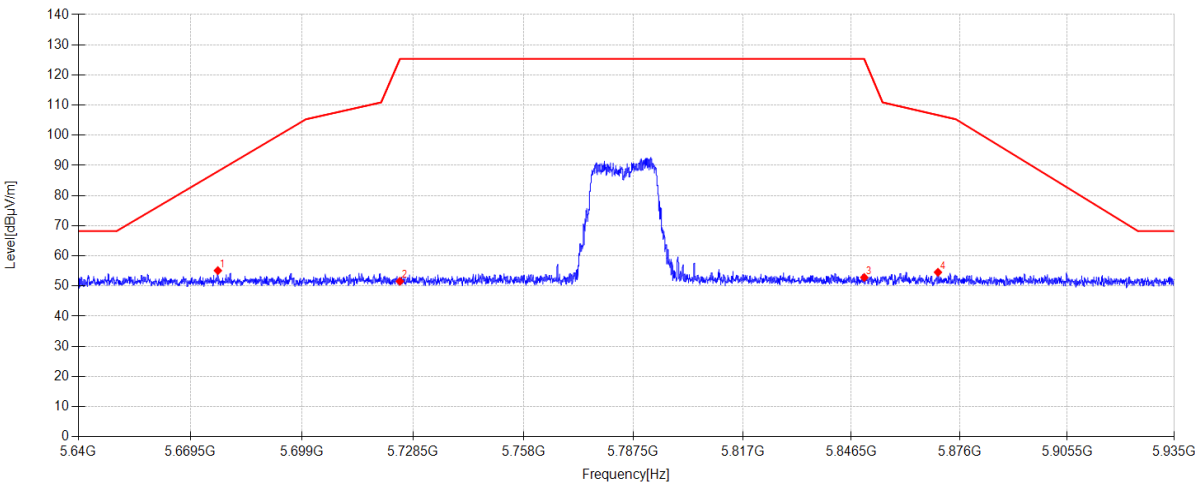
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d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\34

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5676.728	45.35	33.51	5.85	-29.60	55.11	88.03	32.92	PK	Vertical
2	5725.000	41.55	33.75	5.87	-29.60	51.57	125.30	73.73	PK	Vertical
3	5850.000	42.50	34.00	5.94	-29.60	52.84	125.27	72.43	PK	Vertical
4	5870.100	44.18	34.04	5.95	-29.60	54.57	106.67	52.10	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-17

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

N20 5825MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

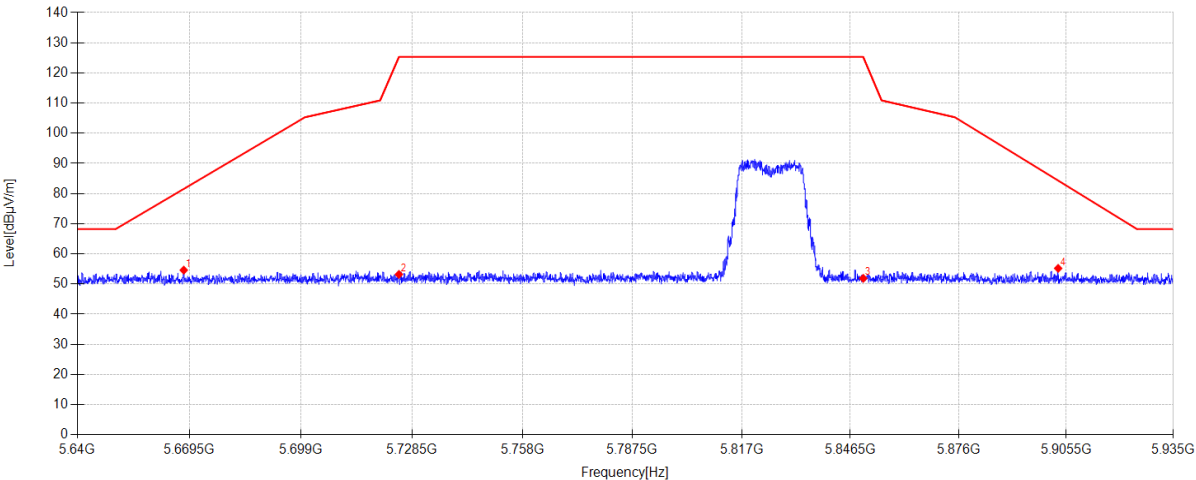
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Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5667.996	44.90	33.47	5.84	-29.60	54.61	81.55	26.94	PK	Vertical
2	5725.000	43.18	33.75	5.87	-29.60	53.20	125.30	72.10	PK	Vertical
3	5850.000	41.55	34.00	5.94	-29.60	51.89	125.27	73.38	PK	Vertical
4	5903.288	44.73	34.11	5.96	-29.60	55.20	84.31	29.11	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-17

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

N40 5755MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

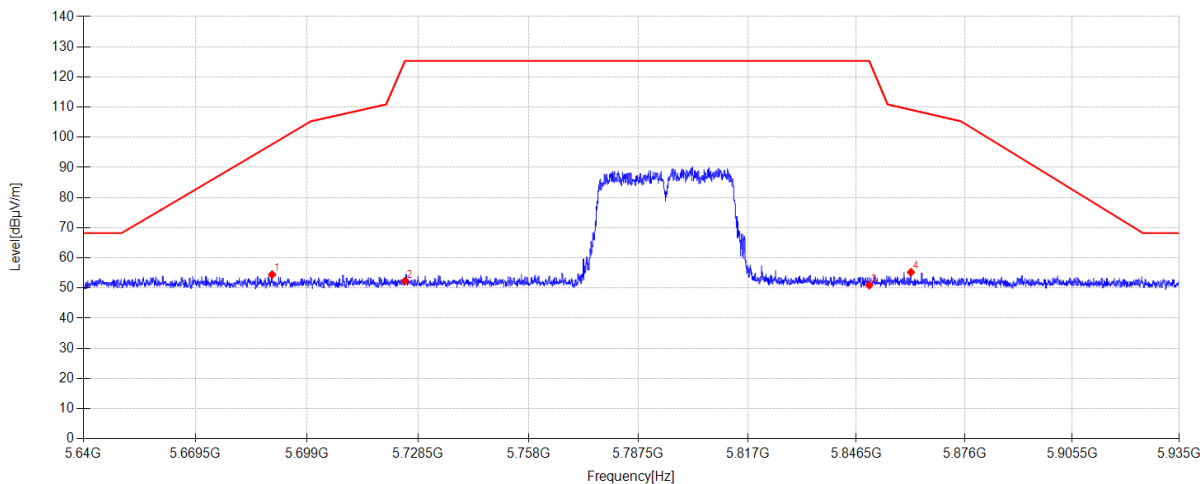
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Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5689.737	44.66	33.56	5.85	-29.60	54.47	97.68	43.21	PK	Vertical
2	5725.000	42.25	33.75	5.87	-29.60	52.27	125.30	73.03	PK	Vertical
3	5850.000	40.60	34.00	5.94	-29.60	50.94	125.27	74.33	PK	Vertical
4	5861.368	44.88	34.02	5.94	-29.60	55.24	109.12	53.88	PK	Vertical

- Note:
1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

TR-4-E-009 Radiated Emission Test Result

Test Date:

2024-10-17

Tested By:

Zhong Nan

EUT:

Car Multimedia Entertainment System

Model Number:

MTXMO610LAB

Test Mode:

N40 5795MHz TX Mode

Power Supply:

DC 12V

Condition:

Temp:24.5°C;Humi:47.4%

Test Site:

DDT 3# Chamber

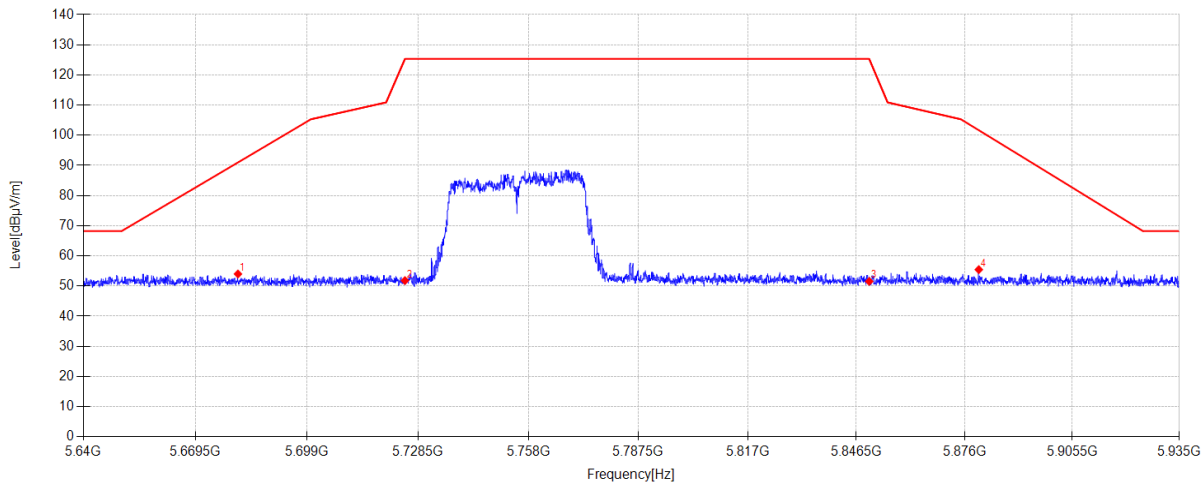
File Path:

d:\ts\2024 report data\Q24091401-2E\FCC ABOVE1G 5GWIFI\37

Memo:

Sample Number:S24091401 Power Setting:50

Test Graph



Data List										
NO.	Freq. [MHz]	Reading [dBμV/m]	Antenna Factor [dB]	Cable loss [dB]	AMP [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Detector	Polarity
1	5680.710	44.22	33.52	5.85	-29.60	53.99	90.99	37.00	PK	Vertical
2	5725.000	41.79	33.75	5.87	-29.60	51.81	125.30	73.49	PK	Vertical
3	5850.000	41.21	34.00	5.94	-29.60	51.55	125.27	73.72	PK	Vertical
4	5879.894	45.03	34.06	5.95	-29.60	55.44	101.67	46.23	PK	Vertical

Note:

1. Level = Reading + Cable loss + Antenna Factor + AMP

2. If Peak Result complies with AV limit, AV Result is deemed to comply with AV limit.

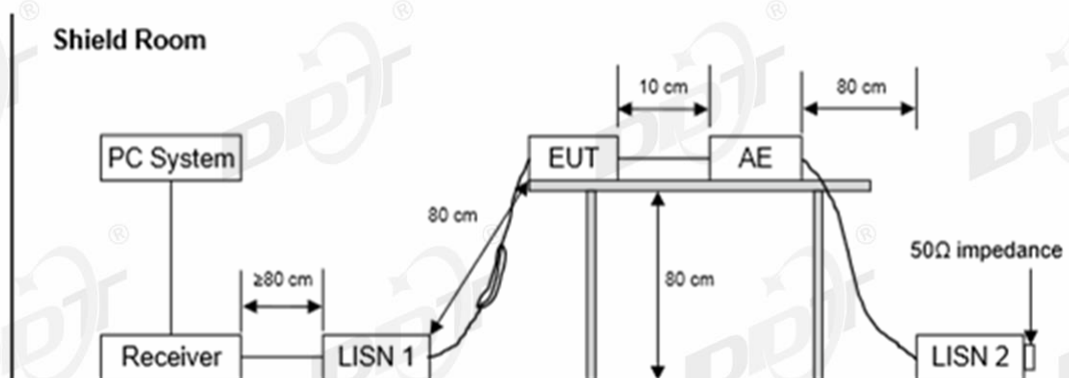
3. Test setup: RBW: 1 MHz, VBW: 3 MHz, Sweep time: auto.

13. Power Line Conducted Emissions

13.1. Test equipment

Equipment	Manufacturer	Model No.	Serial No.	Cal Due To
/	/	/	/	/

13.2. Block diagram of test setup



13.3. Limits

Frequency	Quasi-Peak Level dB(uV)	Average Level dB(uV)
150 kHz~500 kHz	66 ~ 56*	56 ~ 46*
500 kHz~5 MHz	56	46
5 MHz~30 MHz	60	50

Note 1: * Decreasing linearly with logarithm of frequency.

Note 2: The lower limit shall apply at the transition frequencies.

13.4. Assistant equipment used for test

Assistant equipment	Manufacturer	Model number	Description	other
/	/	/	/	/

13.5. Test procedure

The EUT and Support equipment, if needed, were put placed on a non-metallic table, 80cm above the ground plane.

All support equipment power received from a second LISN.

Emissions were measured on each current carrying line of the EUT using an EMI Test Receiver connected to the LISN powering the EUT.

The Receiver scanned from 150 kHz to 30 MHz for emissions in each of the test modes.

During the above scans, the emissions were maximized by cable manipulation.

The test mode(s) described in clause 2.4 were scanned during the preliminary test.

After the preliminary scan, we found the test mode producing the highest emission level.

The EUT configuration and worse cable configuration of the above highest emission levels were recorded for reference of the final test.

EUT and support equipment were set up on the test bench as per the configuration with highest emission level in the preliminary test.

A scan was taken on both power lines, Neutral and Line, recording at least the six highest emissions.

Emission frequency and amplitude were recorded into a computer in which correction factors were used to calculate the emission level and compare reading to the applicable limit.

The test data of the worst-case condition(s) was recorded.

The bandwidth of test receiver is set at 9 kHz.

13.6. Test result

Not applicable. EUT is DC powered.

15. Photos of the EUT

Please refer to DDT-Q24091401-1E appendix I

-----End Report-----