



FCC Radio Test Report

FCC ID: 2BH7FT4EV3

This report concerns: Original Grant

Project No.	:	2409G020
Equipment	:	AC1200 Wi-Fi Bluetooth PCIe Adapter
Brand Name	:	tp-link
Test Model	:	Archer T4E
Series Model	:	Archer T5E
Applicant	:	TP-Link Systems Inc.
Address	:	10 Mauchly, Irvine, CA 92618
Manufacturer	:	TP-Link Systems Inc.
Address	:	10 Mauchly, Irvine, CA 92618
Date of Receipt	:	Oct. 18, 2024
Date of Test	:	Oct. 23, 2024 ~ Dec. 07, 2024
Issued Date	:	Jan. 03, 2025
Report Version	:	R00
Test Sample	:	Engineering Sample No.: DG2024101862 for radiated and ac power line conducted, DG2024101863 for others.
Standard(s)	:	FCC CFR Title 47, Part 15, Subpart E

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Prepared by

Approved by

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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. BTL assumes no responsibility for the data provided by the customer, any statements, inferences or generalizations drawn by the customer or others from the reports issued by BTL.

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BTL's laboratory quality assurance procedures are in compliance with the ISO/IEC 17025: 2017 requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective. Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.



Table of Contents	Page
REPORT ISSUED HISTORY	6
1 . APPLICABLE STANDARDS	7
2 . SUMMARY OF TEST RESULTS	7
2.1 TEST FACILITY	8
2.2 MEASUREMENT UNCERTAINTY	8
2.3 TEST ENVIRONMENT CONDITIONS	9
3 . GENERAL INFORMATION	10
3.1 GENERAL DESCRIPTION OF EUT	10
3.2 TEST MODES	13
3.3 PARAMETERS OF TEST SOFTWARE	16
3.4 DUTY CYCLE	18
3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	20
3.6 SUPPORT UNITS	20
3.7 CUSTOMER INFORMATION DESCRIPTION	20
4 . AC POWER LINE CONDUCTED EMISSIONS	21
4.1 LIMIT	21
4.2 TEST PROCEDURE	21
4.3 DEVIATION FROM TEST STANDARD	21
4.4 TEST SETUP	22
4.5 EUT OPERATION CONDITIONS	22
4.6 TEST RESULTS	22
5 . RADIATED EMISSIONS	23
5.1 LIMIT	23
5.2 TEST PROCEDURE	24
5.3 DEVIATION FROM TEST STANDARD	25
5.4 TEST SETUP	25
5.5 EUT OPERATION CONDITIONS	27
5.6 TEST RESULTS - 9 KHZ TO 30 MHZ	27
5.7 TEST RESULTS - 30 MHZ TO 1000 MHZ	27
5.8 TEST RESULTS - ABOVE 1000 MHZ	27
6 . BANDWIDTH	28
6.1 LIMIT	28
6.2 TEST PROCEDURE	28



Table of Contents	Page
6.3 DEVIATION FROM STANDARD	28
6.4 TEST SETUP	29
6.5 EUT OPERATION CONDITIONS	29
6.6 TEST RESULTS	29
7 . MAXIMUM OUTPUT POWER	30
7.1 LIMIT	30
7.2 TEST PROCEDURE	30
7.3 DEVIATION FROM STANDARD	30
7.4 TEST SETUP	30
7.5 EUT OPERATION CONDITIONS	30
7.6 TEST RESULTS	30
8 . POWER SPECTRAL DENSITY	31
8.1 LIMIT	31
8.2 TEST PROCEDURE	31
8.3 DEVIATION FROM STANDARD	31
8.4 TEST SETUP	32
8.5 EUT OPERATION CONDITIONS	32
8.6 TEST RESULTS	32
9 . FREQUENCY STABILITY	33
9.1 LIMIT	33
9.2 TEST PROCEDURE	33
9.3 DEVIATION FROM STANDARD	33
9.4 TEST SETUP	33
9.5 EUT OPERATION CONDITIONS	33
9.6 TEST RESULTS	33
10 . MEASUREMENT INSTRUMENTS LIST	34
11 . EUT TEST PHOTOS	36
APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS	42
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ	45
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ	50
APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ	53
APPENDIX E - BANDWIDTH	131
APPENDIX F - MAXIMUM OUTPUT POWER	148



Table of Contents

Page

APPENDIX G - POWER SPECTRAL DENSITY

167



REPORT ISSUED HISTORY

REPORT ISSUED HISTORY					
Report No.	Version	Description	Issued Date	Note	
BTL-FCCP-4-2409G020	R00	Original Report.	Jan. 03, 2025	Valid	
	<u> </u>				



1. APPLICABLE STANDARDS

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of A2LA: KDB 789033 D02 General UNII Test Procedures New Rules v02r01 KDB 662911 D01 Multiple Transmitter Output v02r01

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

	FCC CFR Title 47, Part 15, St	ubpart E		
Standard(s) Section	Test Item	Test Result	Judgment	Remark
15.207 15.407(b)	AC Power Line Conducted Emissions	APPENDIX A	PASS	
15.407(b) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	
15.407(a) 15.407(e)	Bandwidth	Bandwidth APPENDIX E PAS		
15.407(a)	Maximum Output Power	APPENDIX F	PASS	
15.407(a)	Power Spectral Density	APPENDIX G	PASS	
15.407(g)	Frequency Stability	Frequency Stability NOTE (
15.203	Antenna Requirements		PASS	NOTE (2)
15.407(c)	Automatically Discontinue Transmission		PASS	NOTE (3)

Note:

- (1) "N/A" denotes test is not applicable in this test report.
- (2) The device what use a non-standard antenna jack were considered sufficient to comply with the provisions of 15.203.
- (2) During no any information transmission, the EUT can automatically discontinue transmission and become standby mode for power saving. the EUT can detect the controlling signal of ACK message transmitting from remote device and verify whether it shall resend or discontinue transmission.
- (3) For UNII-1 this device was functioned as a
 - Outdoor access point device
 - □ Indoor access point device
 - ☐ Fixed point-to-point access points device
 - ☑ Client device
- (4) This test items are not tested according to client's requirement.



2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of 1-2/F, 4/F, Building A, 1-2/F, Building B, 3/F, Building C, No.3, Jinshagang 1st Road, Dalang Town, Dongguan City, Guangdong People's Republic of China. BTL's Registration Number for FCC: 747969

BTL's Designation Number for FCC: CN1377

2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)) The BTL measurement uncertainty as below table:

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	<i>U</i> ,(dB)
DG-C02	CISPR	150kHz ~ 30MHz	2.88

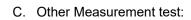
B. Radiated emissions test:

Test Site	Method	Method Measurement Frequency Range		
DG-CB01	CISPR	9kHz ~ 30MHz	2.36	

Test Site	Method	Measurement Frequency Range	Ant. H / V	<i>U</i> ,(dB)
DG-CB03 (3m)		30MHz ~ 200MHz		4.40
	CISPR	30MHz ~ 200MHz	Н	3.62
	CISER	200MHz ~ 1,000MHz		4.58
		200MHz ~ 1,000MHz	Н	3.98

Test Site	Method Measurement Frequency Range		<i>U</i> ,(dB)
DG-CB03 (3m)	CIEDD	1GHz ~ 6GHz	4.08
	CISPR	6GHz ~ 18GHz	4.62

Test Site	Method Measurement Frequency Range		<i>U</i> ,(dB)
DG-CB03 (1m)		18 ~ 26.5 GHz	3.36
	CISPR	26.5 ~ 40 GHz	3.58



Test Item	Uncertainty
Bandwidth	0.90 %
Maximum Output Power	1.3 dB
Power Spectral Density	1.4 dB
Frequency Stability	2.7 ppm
Temperature	0.8 °C
Humidity	2.2 %

Note: Unless specifically mentioned, the uncertainty of measurement has not been taken into account to declare the compliance or non-compliance to the specification.

2.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
AC Power Line Conducted Emissions	25°C	48%	AC 120V/60Hz	Hayden Chen	Nov. 11, 2024
Radiated Emissions-9kHz to 30MHz	26°C	50%	DC 3.3V	Hayden Chen	Oct. 31, 2024
Radiated Emissions-30MHz to 1000MHz	24°C	51%	DC 3.3V	Calvin Wen	Oct. 29, 2024
Radiated Emissions-Above 1000 MHz	22°C	50-51%	DC 3.3V	Jensen Zhou Calvin Wen Allen Tong	Nov. 01, 2024- Nov. 12, 2024
Bandwidth	23°C	47-48%	DC 3.3V	Parker Yang	Nov. 09, 2024- Nov. 11, 2024
Maximum Output Power	24-26°C	53-60%	DC 3.3V	Alex Yin	Oct. 29, 2024- Nov. 18, 2024
Power Spectral Density	23°C	47-48%	DC 3.3V	Parker Yang	Nov. 09, 2024- Nov. 11, 2024



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	AC1200 Wi-Fi Bluetooth PCIe Adapter
Brand Name	tp-link
Test Model	Archer T4E
Series Model	Archer T5E
Model Difference(s)	Only differ in model name.
Hardware Version	Archer T4EV3
Power Source	Supplied from PC PCIe Slot.
Power Rating	DC 3.3V
	UNII-1: 5150 MHz ~ 5250 MHz
Operation Frequency Rend(a)	UNII-2A: 5250 MHz ~ 5350 MHz
Operation Frequency Band(s)	UNII-2C: 5470 MHz ~ 5725 MHz
	UNII-3: 5725 MHz ~ 5850 MHz
Modulation Type	IEEE 802.11a/n/ac: OFDM
	IEEE 802.11a: 54/48/36/24/18/12/9/6 Mbps
Bit Rate of Transmitter	IEEE 802.11n: up to 300 Mbps
	IEEE 802.11ac: up to 866.7 Mbps
Maximum Output Power _UNII-1	IEEE 802.11ac(VHT20): 15.42 dBm (0.0348 W)
Maximum Output Power _UNII-2A	IEEE 802.11ac(VHT40): 15.95 dBm (0.0394 W)
Maximum Output Power _UNII-2C	IEEE 802.11ac(VHT80): 18.80 dBm (0.0759 W)
Maximum Output Power _UNII-3	IEEE 802.11ac(VHT80): 13.52 dBm (0.0225 W)

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.



2. Channel List:

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40)		IEEE 802.11ac(VHT80)	
UNII-1		UN	II-1	UN	II-1
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230		
44	5220				
48	5240				

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40)		IEEE 802.11ac(VHT80)	
UNII-2A		UNI	I-2A	UNI	I-2A
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
52	5260	54	5270	58	5290
56	5280	62	5310		
60	5300				
64	5320				

IEEE 802.11a IEEE 802.11n(HT20) IEEE 802.11ac(VHT20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40)		IEEE 802.11ac(VHT80)	
UNII	-2C	UNI	I-2C	UNII-2C	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	138	5690
112	5560	126	5630		
116	5580	134	5670		
120	5600	142	5710		
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

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		UN	II-3	UNII-3	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
165	5825				



3. Antenna Specification:

Ant.	Manufacturer	P/N	Antenna Type	Connector	Gain (dBi)
1	TP-LINK CORPORATION	2101504602	Dipole	N/A	2
	PTE. LTD.	3101504693	Dipole	N/A	2
2	TP-LINK CORPORATION	3101504693	Dipole	N/A	2
2	PTE. LTD.	3101504693	Dibole	IN/A	Z

Note:

 This EUT supports CDD, and all antennas have the same gain, Directional gain = G_{ANT}+Array Gain. For power measurements, Array Gain=0dB (N_{ANT}≤4), so the Directional gain=2. For power spectral density measurements, N_{ANT}=2, N_{SS} = 1. So the Directional gain=G_{ANT}+Array Gain=G_{ANT}+10log(N_{ANT}/ N_{SS})dBi=2+10log(2/1)dBi=5.01.

4. Table for Antenna Configuration:

Operating Mode TX Mode	2TX
IEEE 802.11a	V (Ant. 1 + Ant. 2)
IEEE 802.11n(HT20)	V (Ant. 1 + Ant. 2)
IEEE 802.11n(HT40)	V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT20)	V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT40)	V (Ant. 1 + Ant. 2)
IEEE 802.11ac(VHT80)	V (Ant. 1 + Ant. 2)



3.2 TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX A Mode Channel 36/40/48 (UNII-1)
Mode 2	TX AC(VHT20) Mode Channel 36/40/48 (UNII-1)
Mode 3	TX AC(VHT40) Mode Channel 38/46 (UNII-1)
Mode 4	TX AC(VHT80) Mode Channel 42 (UNII-1)
Mode 5	TX A Mode Channel 52/60/64 (UNII-2A)
Mode 6	TX AC(VHT20) Mode Channel 52/60/64 (UNII-2A)
Mode 7	TX AC(VHT40) Mode Channel 54/62 (UNII-2A)
Mode 8	TX AC(VHT80) Mode Channel 58 (UNII-2A)
Mode 9	TX A Mode Channel 100/116/140/144 (UNII-2C)
Mode 10	TX AC(VHT20) Mode Channel 100/116/140/144 (UNII-2C)
Mode 11	TX AC(VHT40) Mode Channel 102/110/134/142 (UNII-2C)
Mode 12	TX AC(VHT80) Mode Channel 106/122/138 (UNII-2C)
Mode 13	TX A Mode Channel 149/157/165 (UNII-3)
Mode 14	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 15	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 16	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 17	TX AC(VHT80) Mode Channel 138 (UNII-2C)

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test			
Final Test Mode Description			
Mode 17 TX AC(VHT80) Mode Channel 138 (UNII-2C)			
L			

	Radiated Emissions Test - Below 1GHz		
Final Test Mode Description		Description	
	Mode 17	TX AC(VHT80) Mode Channel 138 (UNII-2C)	



Radiated Emissions Test - Above 1GHz		
Final Test Mode	Description	
Mode 1	TX A Mode Channel 36/40/48 (UNII-1)	
Mode 2	TX AC(VHT20) Mode Channel 36/40/48 (UNII-1)	
Mode 3	TX AC(VHT40) Mode Channel 38/46 (UNII-1)	
Mode 4	TX AC(VHT80) Mode Channel 42 (UNII-1)	
Mode 5	TX A Mode Channel 52/60/64 (UNII-2A)	
Mode 6	TX AC(VHT20) Mode Channel 52/60/64 (UNII-2A)	
Mode 7	TX AC(VHT40) Mode Channel 54/62 (UNII-2A)	
Mode 8	TX AC(VHT80) Mode Channel 58 (UNII-2A)	
Mode 9	TX A Mode Channel 100/116/140/144 (UNII-2C)	
Mode 10	TX AC(VHT20) Mode Channel 100/116/140/144 (UNII-2C)	
Mode 11	TX AC(VHT40) Mode Channel 102/110/134/142 (UNII-2C)	
Mode 12	TX AC(VHT80) Mode Channel 106/122/138 (UNII-2C)	
Mode 13	TX A Mode Channel 149/157/165 (UNII-3)	
Mode 14	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)	
Mode 15	TX AC(VHT40) Mode Channel 151/159 (UNII-3)	
Mode 16	TX AC(VHT80) Mode Channel 155 (UNII-3)	

	Conducted Test	
Final Test Mode	Description	
Mode 1	TX A Mode Channel 36/40/48 (UNII-1)	
Mode 2	TX AC(VHT20) Mode Channel 36/40/48 (UNII-1)	
Mode 3	TX AC(VHT40) Mode Channel 38/46 (UNII-1)	
Mode 4	TX AC(VHT80) Mode Channel 42 (UNII-1)	
Mode 5	TX A Mode Channel 52/60/64 (UNII-2A)	
Mode 6	TX AC(VHT20) Mode Channel 52/60/64 (UNII-2A)	
Mode 7	TX AC(VHT40) Mode Channel 54/62 (UNII-2A)	
Mode 8	TX AC(VHT80) Mode Channel 58 (UNII-2A)	
Mode 9	TX A Mode Channel 100/116/140/144 (UNII-2C)	
Mode 10	TX AC(VHT20) Mode Channel 100/116/140/144 (UNII-2C)	
Mode 11	TX AC(VHT40) Mode Channel 102/110/134/142 (UNII-2C)	
Mode 12	TX AC(VHT80) Mode Channel 106/122/138 (UNII-2C)	
Mode 13	TX A Mode Channel 149/157/165 (UNII-3)	
Mode 14	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)	
Mode 15	TX AC(VHT40) Mode Channel 151/159 (UNII-3)	
Mode 16	TX AC(VHT80) Mode Channel 155 (UNII-3)	



Note:

- (1) For AC power line conducted emissions and radiated emission below 1 GHz test, the TX AC(VHT80) Mode Channel 138 (UNII-2C) is found to be the worst case and recorded.
- (2) For radiated emission above 1 GHz test, the spurious points of 1GHz~26.5GHz and 26.5GHz~40GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.
- (3) For radiated emission Harmonic 18-40GHz test, only tested the worst case and recorded.
- (4) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.
- (5) VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than 802.11ac VHT20 and HT40.
- (6) For radiated emission above 1 GHz test, the polarization of Vertical and Horizontal are evaluated, the worst case is Vertical and recorded.

3.3 PARAMETERS OF TEST SOFTWARE

UNII-1			
Test Software Version	REALTEK 11ac 88	322CE PCIE WLAN NIC M	lassproduction Kit
Frequency (MHz)	5180	5200	5240
IEEE 802.11a	61/61	60/60	58/58
IEEE 802.11ac(VHT20)	58/58	57/57	57/57
Frequency (MHz)	5190	5230	
IEEE 802.11ac(VHT40)	58/58	59/59	
Frequency (MHz)	5210		
IEEE 802.11ac(VHT80)	56/56		

UNII-2A			
Test Software Version	REALTEK 11ac 8	822CE PCIE WLAN NIC M	lassproduction Kit
Frequency (MHz)	5260	5300	5320
IEEE 802.11a	57/57	54/54	54/54
IEEE 802.11ac(VHT20)	59/59	57/57	58/58
Frequency (MHz)	5270	5310	
IEEE 802.11ac(VHT40)	65/65	57/57	
Frequency (MHz)	5290		
IEEE 802.11ac(VHT80)	52/52		

UNII-2C				
Test Software Version	REALTEK ²	REALTEK 11ac 8822CE PCIE WLAN NIC Massproduction Kit		
Frequency (MHz)	5500	5580	5700	5720
IEEE 802.11a	50/50	54/54	55/55	57/57
IEEE 802.11ac(VHT20)	49/49	49/49	49/49	60/60
Frequency (MHz)	5510	5550	5670	5710
IEEE 802.11ac(VHT40)	59/59	59/59	61/61	67/67
Frequency (MHz)	5530	5610	5690	
IEEE 802.11ac(VHT80)	50/50	70/70	78/78	

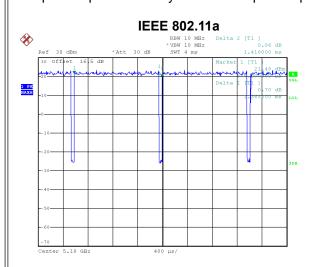


UNII-3			
Test Software Version	REALTEK 11ac 8	822CE PCIE WLAN NIC N	lassproduction Kit
Frequency (MHz)	5745	5785	5825
IEEE 802.11a	40/40	37/37	37/37
IEEE 802.11ac(VHT20)	39/39	36/36	36/36
Frequency (MHz)	5755	5795	
IEEE 802.11ac(VHT40)	42/42	42/42	
Frequency (MHz)	5775		
IEEE 802.11ac(VHT80)	53/53		



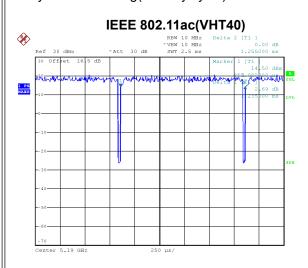
3.4 DUTY CYCLE

If duty cycle is \geq 98 %, duty factor is not required. If duty cycle is < 98 %, duty factor shall be considered. The output power = measured power + duty factor. The power spectral density = measured power spectral density + duty factor.



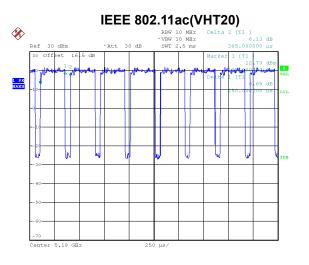
Date: 9.NOV.2024 09:41:53

Duty cycle = 1.368 ms / 1.416 ms = 96.61% Duty Factor = 10 log(1 / Duty cycle) = 0.15



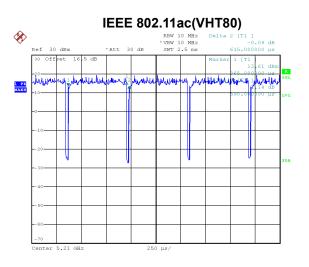
Date: 9.NOV.2024 09:48:23

Duty cycle = 1.235 ms / 1.255 ms = 98.41% Duty Factor = 10 log(1 / Duty cycle) = 0.00



Date: 9.NOV.2024 09:44:26

Duty cycle = 0.250 ms / 0.305 ms = 81.97% Duty Factor = 10 log(1 / Duty cycle) = 0.86



Date: 9.NOV.2024 09:49:26

Duty cycle = 0.590 ms / 0.615 ms = 95.93% Duty Factor = 10 log(1 / Duty cycle) = 0.18



NOTE:

For IEEE 802.11a:

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 731 Hz (Duty cycle < 98%).

For IEEE 802.11ac(VHT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 4000 Hz (Duty cycle < 98%).

For IEEE 802.11ac(VHT40):

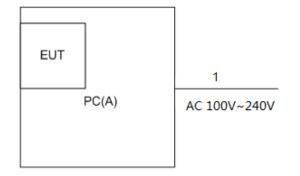
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 kHz (Duty cycle \ge 98%).

For IEEE 802.11ac(VHT80):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1695 Hz (Duty cycle < 98%).



3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
А	PC	DELL	DELL XPS	8920-D15N8

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	AC Cable	NO	NO	1.5m

3.7 CUSTOMER INFORMATION DESCRIPTION

1) The antenna gain is provided by the manufacturer.

2) Except for AC power line conducted emissions and radiated emissions, the results of all test items include cable losses. All cable losses are provided by the testing laboratory.



4. AC POWER LINE CONDUCTED EMISSIONS

4.1 LIMIT

Frequency	Limit (dBµV)
(MHz)	Quasi-peak	Aver□ge
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

NOTE:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

4.2 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

The following table is the setting of the receiver:

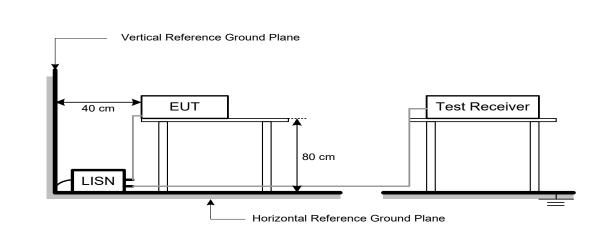
Receiver Parameter	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

4.3 DEVIATION FROM TEST STANDARD

No deviation



4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

The EUT was programmed to be in continuously transmitting/TX mode.

4.6 TEST RESULTS

Please refer to the APPENDIX A.



5. RADIATED EMISSIONS

5.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

LIMITS OF RADIATED EMISSIONS MEASUREMENT (9 kHz to 1000 MHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

LIMITS OF UNWANTED EMISSION OUT OF THE RESTRICTED BANDS (Above 1000 MHz)

Frequency	EIRP Limit	Band edge	Harmonic
(MHz)	(dBm/MHz)	at 3m (dBµV/m)	at 1m (dBµV/m)
5150-5250	-27	68.2	77.7 (Note 3)
5250-5350	-27	68.2	77.7 (Note 3)
5470-5725	-27	68.2	77.7 (Note 3)
	-27	68.2	77.7 (Note 3)
5725-5850	10	105.2	114.7 (Note 3)
NOTE (2)	15.6	110.8	120.3 (Note 3)
	27	122.2	131.7 (Note 3)

NOTE:

(1) The following formula is used to convert the equipment isotropic radiated power (eirp) to field strength: 1000000√30P E =

$$=$$
 $\mu V/m$, where P is the eirp (Watts

(2) According to 15.407(b)(4)(i), all emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(3)

$$FS_{\text{limit}} = FS_{\text{max}} - 20\log\left(\frac{d_{\text{limit}}}{d_{\text{measure}}}\right)$$

20log (d_{limit}/d_{measure})=20log (3/1)=9.5 dB. FS_{limit}: Harmonic at 3m Peak and Average limit. FS_{max}: Harmonic at 1m Peak and Average Maximum value. d_{limit}: Harmonic at 3m test distance. d_{measure}: Harmonic Actual test distance.



5.2 TEST PROCEDURE

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of 3 m or 1m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1 GHz)
- All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1 GHz)
- i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

The following table is the setting of the receiver:

Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

Spectrum Parameters	Setting
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic or 40 GHz, whichever is lower
RBW / VBW	1 MHz / 3 MHz for PK value
(Emission in restricted band)	1 MHz / 1/T Hz for AVG value

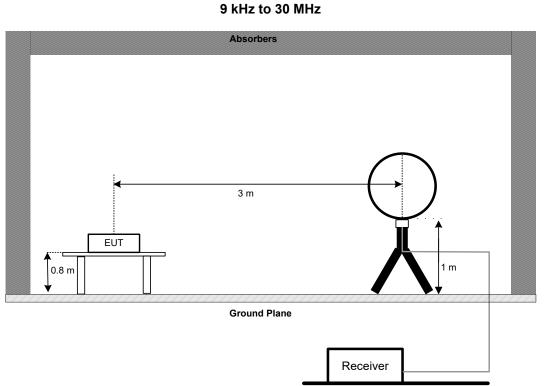
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector
Start ~ Stop Frequency	1 GHz~40 GHz for PK/AVG detector



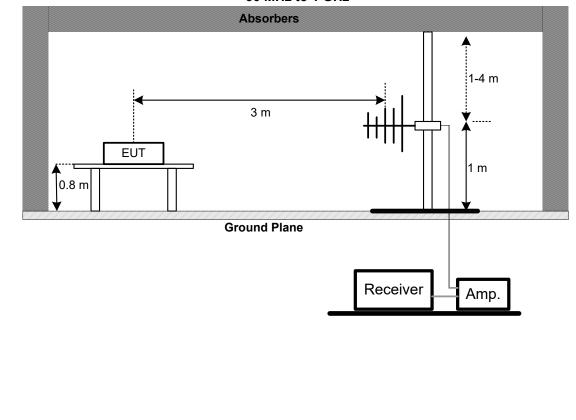
5.3 DEVIATION FROM TEST STANDARD

No deviation.

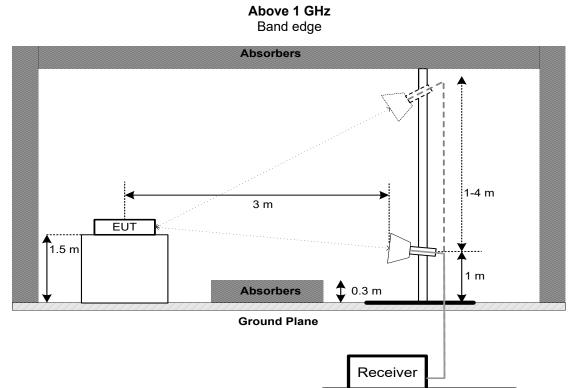
5.4 TEST SETUP



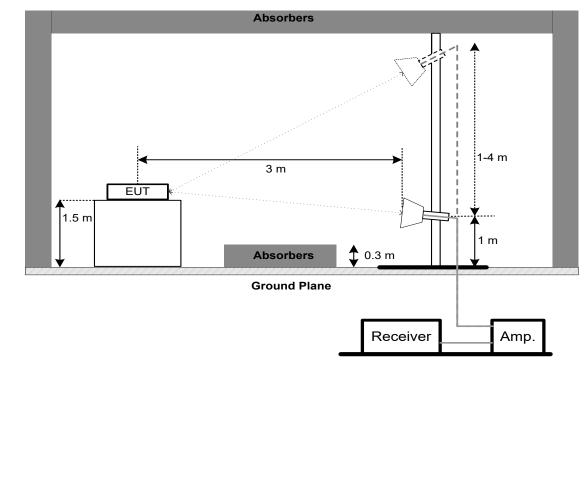
30 MHz to 1 GHz





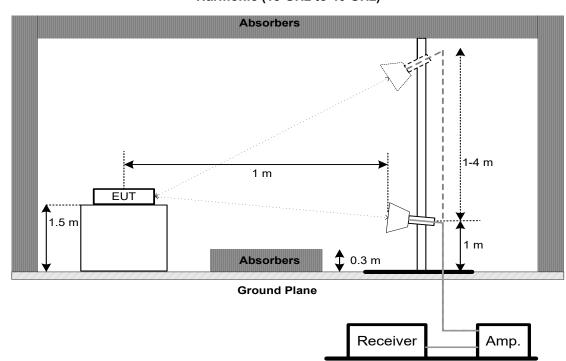


Harmonic (1 GHz to 18 GHz)





Harmonic (18 GHz to 40 GHz)



5.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 3.5 unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B.

Remark:

- (1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
- (2) Limit line = specific limits (dBuV) + distance extrapolation factor.

5.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

5.8 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX D.

Remark:

(1) No limit: This is fundamental signal, the judgment is not applicable. For fundamental signal judgment was referred to Peak output test.



6. BANDWIDTH

6.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.407(a) FCC 15.407(e)	26 dB Bandwidth	-	5150-5250
	26 dB Bandwidth	-	5250-5350
	26 dB Bandwidth	-	5470-5725
	6 dB Bandwidth	Minimum 500 kHz	5725-5850

6.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below
- b. Spectrum Setting:
 - For UNII-1, UNII-2A, UNII-2C:

Spectrum Parameter	Setting
Span Frequency	> 26 dB Bandwidth
RBW	Appromiximately 1% of the emission bandwidth
VBW	> RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

For UNII-3:

Spectrum Parameter	Setting
Span Frequency	> 6 dB Bandwidth
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

For 99% Occupied Bandwidth:

Spectrum Parameter	Setting	
Span Frequency	1.5 times to 5 times the OBW	
RBW	1% to 5% of the OBW	
VBW	≥3*RBW	
Detector	Peak	
Trace	Max Hold	
Sweep Time	Auto	

c. Measured the spectrum width with power higher than 26 dB / 6 dB below carrier.

6.3 DEVIATION FROM STANDARD

No deviation.



6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX E.



7. MAXIMUM OUTPUT POWER

7.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.407(a)	Maximum Output Power	AP device: 1 Watt (30 dBm) Client device: 250 mW (23.98 dBm)	5150-5250
		250 mW (23.98 dBm)	5250-5350
		250 mW (23.98 dBm)	5470-5725
		1 Watt (30dBm)	5725-5850

Note:

- a. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- b. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10log B, where B is the 26dB Bandwidth in megahertz.

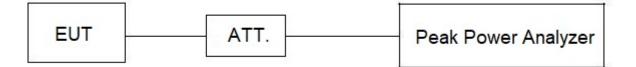
7.2 TEST PROCEDURE

- a. The EUT was directly connected to the peak power analyzer and antenna output port as show in the block diagram below.
- b. The test was performed in accordance with method of FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULTS

Please refer to the APPENDIX F.



8. POWER SPECTRAL DENSITY

8.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.407(a)	Power Spectral Density	AP device: 17 dBm/MHz Client device: 11 dBm/MHz	5150-5250
		11 dBm/MHz	5250-5350
		11 dBm/MHz	5470-5725
		30 dBm/500 kHz	5725-5850

8.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting:
 - For UNII-1, UNII-2A, UNII-2C:

Spectrum Parameter	Setting	
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal	
RBW	1 MHz.	
VBW	3 MHz.	
Detector	RMS	
Trace average	100 trace	
Sweep Time	Auto	

For UNII-3:

Spectrum Parameter	Setting		
Span Frequency	Encompass the entire emissions bandwidth (EBW) of the signal		
RBW	100 kHz.		
VBW	300 kHz.		
Detector	RMS		
Trace average	100 trace		
Sweep Time	Auto		

Note:

For UNII-3, according to KDB publication 789033 D02 General UNII Test Procedures New Rules v02r01, section II.F.5., it is acceptable to set RBW at 100kHz and VBW at 300kHz if the spectrum analyzer does not have 500 kHz RBW. Then, add 10 log (500 kHz/100 kHz) to the measured result, i.e. 7 dB.

During the test of U-NII 3 PSD, the measurement result with RBW=100kHz has been added 7 dB by compensating offset. For example, the cable loss is 16.5 dB, and the final offset is 16.5 + 7 = 23.5 dB when RBW=100kHz is used.

8.3 DEVIATION FROM STANDARD

No deviation.



8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

Please refer to the APPENDIX G.



9. FREQUENCY STABILITY

9.1 LIMIT

Section	Test Item	Limit	Frequency Range (MHz)
FCC 15.407(g)	Frequency Stability	An emission is maintained within the band of operation under all conditions of normal operation as specified in the users manual.	5150-5250 5250-5350 5470-5725 5725-5850

9.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting:

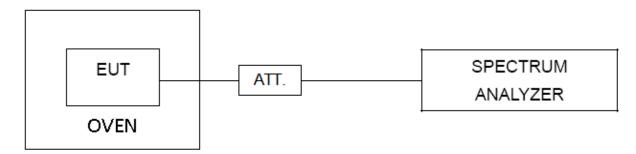
Spectrum Parameter	Setting
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	10 kHz
VBW	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

- c. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.
- d. User manual temperature is 0°C~40°C.

9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

9.6 TEST RESULTS

Please refer to the APPENDIX H.



10. MEASUREMENT INSTRUMENTS LIST

	AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	EMI TEST RECEIVER	R&S	ESCI	100382	Dec. 22, 2024	
2	TWO-LINE V-NETWORK	R&S	ENV216	101447	Dec. 22, 2024	
3	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	
4	Cable	N/A	SFT205-NMNM-9M -001	9M	Nov. 27, 2024	
5	643 Shield Room	ETS	6*4*3	N/A	N/A	

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Active Loop Antenna	Schwarzbeck	FMZB 1513-60B	1513-60 B-034	Mar. 30, 2025
2	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 22, 2024
3	Cable	N/A	RW2350-3.8A-NMB M-1.5M	N/A	Jun. 09, 2025
4	Cable	N/A	LMR400-NMNM-8 M	N/A	Sep. 09, 2025
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	966 Chamber room	ETS	9*6*6	N/A	May 16, 2025

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	1462	Dec. 13, 2024
2	Attenuator	EMC INSTRUMENT	EMCI-N-6-06	AT-06009	Dec. 13, 2024
3	Preamplifier	EMC INSTRUMENT	EMC001330	980998	Nov. 17, 2024
4	Cable	RegalWay	LMR400-NMNM -12.5m	N/A	Jun. 06, 2025
5	Cable	RegalWay	LMR400-NMNM-3 m	N/A	Jun. 06, 2025
6	Cable	RegalWay	LMR400-NMNM-0. 5m	N/A	Jun. 06, 2025
7	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024
8	Positioning Controller	MF	MF-7802	N/A	N/A
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
10	966 Chamber room	СМ	9*6*6	N/A	May 16, 2025



	,

Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Receiver	Agilent	N9038A	MY52130039	Dec.22,2024
2	Preamplifier	ËMC INSTRUMENT	EMC118A45SE	980888	Nov.17,2024
3	Double Ridged Guide Antenna	ETS	3115	75789	Jun. 15, 2025
4	Cable	RegalWay	RWLP50-4.0A-SMS M-12.5M	N/A	Jul. 03, 2025
5	Cable	RegalWay	RWLP50-4.0A-NM RASM-2.5M	N/A	Jul. 03, 2025
6	Cable	RegalWay	RWLP50-4.0A-NM RASMRA-0.8M	N/A	Jul. 03, 2025
7	966 Chamber room	CM	9*6*6	N/A	May 19,2025
8	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A
9	Filter	STI	STI15-9969	N/A	May. 31, 2025
10	Positioning Controller	MF	MF-7802	N/A	N/A
11	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
12	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	Aug. 20, 2025
13	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330 -K	619413	Jul. 17, 2025
14	Cable	RegalWay	RWLP50-2.6A-2.92 M2.92M-1.1M	N/A	Jul. 25, 2025
15	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 25, 2025
16	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun.16,2025

Bandwidth & Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Measurement Software	BTL	BTL Conducted Test	N/A	N/A
2	Isolation attenuator	Z-Link	ASMA-16-18-2W	N/A	N/A
3	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	Aug. 20, 2025
4	Spectrum Analyzer	R&S	FSP40	100185	May 31, 2025
5	Cable	RegalWay	20240619 006	RWP50-402-SMSM- 1M	N/A

	Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Peak Power Analyzer	Keysight	8990B	MY51000506	May 31, 2025	
2	Wideband power sensor	Keysight	N1923A	MY58310004	May 31, 2025	
3	Isolation attenuator	Z-Link	ASMA-10-18-2W	N/A	N/A	

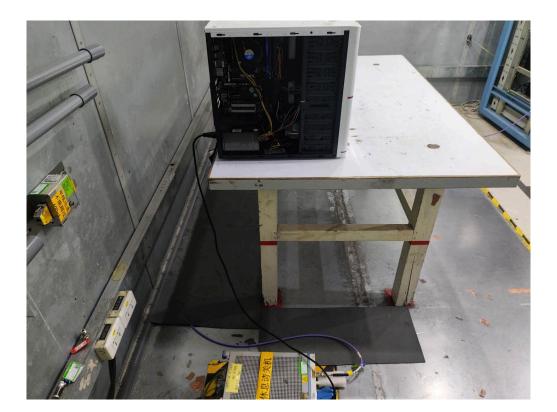
Remark: "N/A" denotes no model name, serial no. or calibration specified.

All calibration period of equipment list is one year.





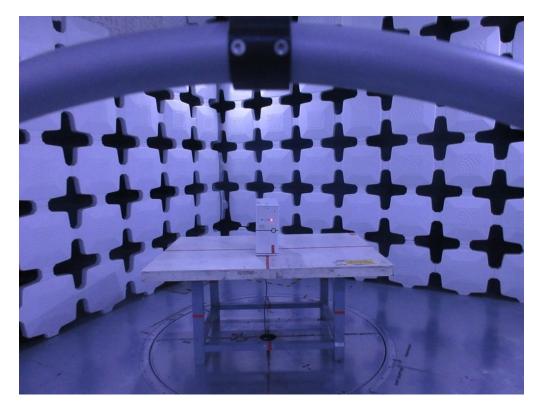
AC Power Line Conducted Emissions Test Photos

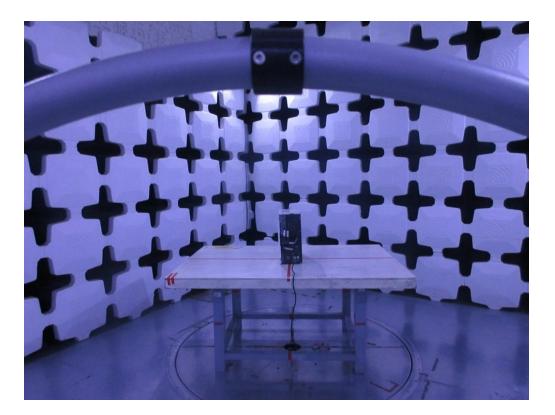




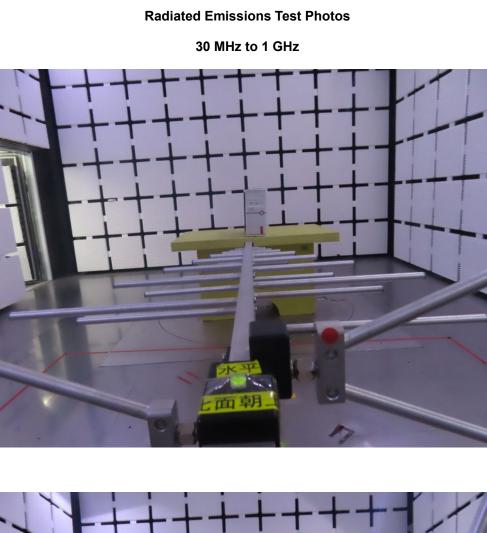
Radiated Emissions Test Photos

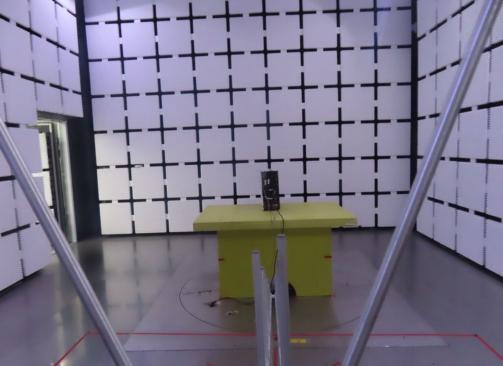
9 kHz to 30 MHz



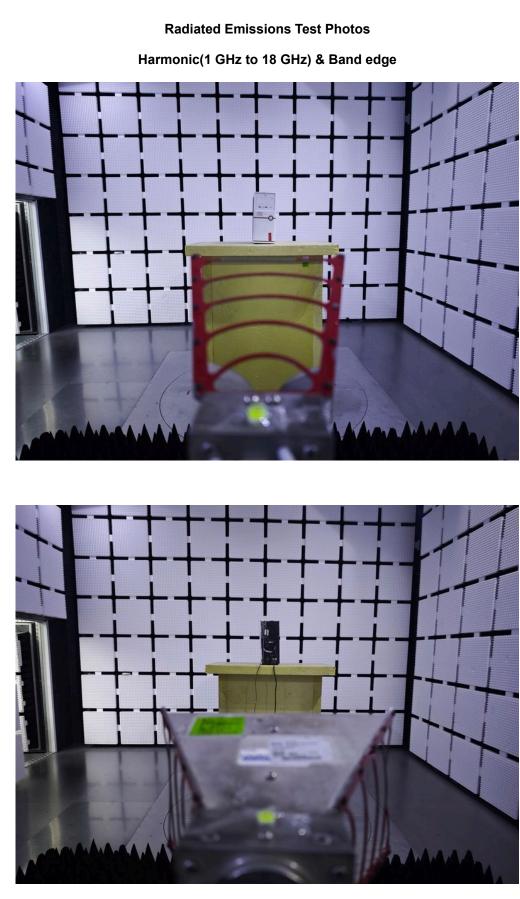




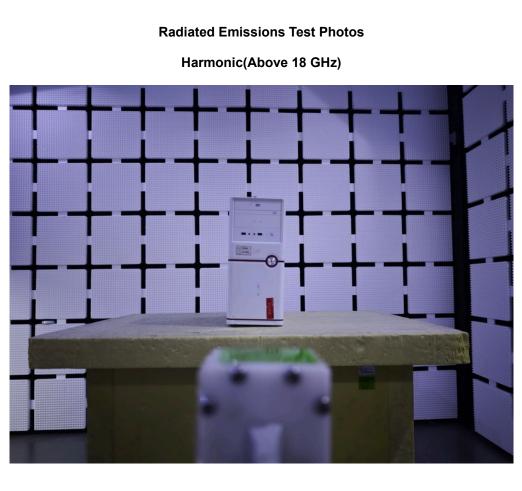


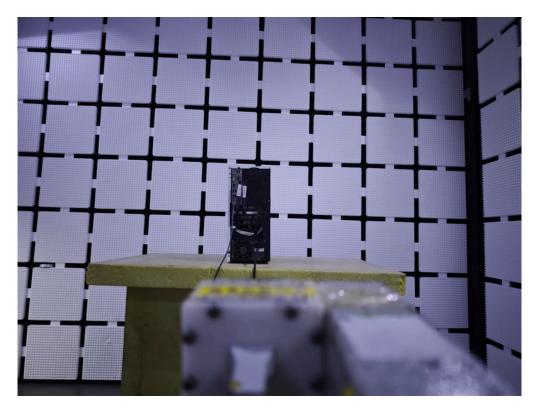








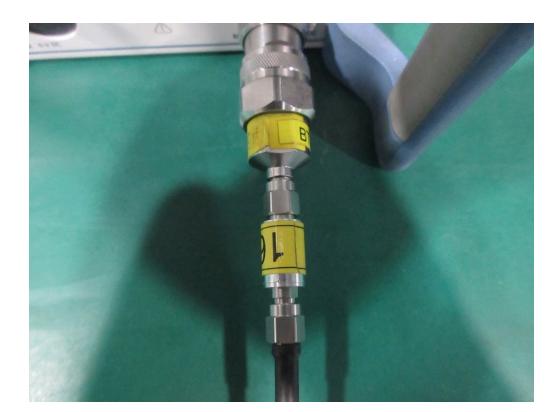








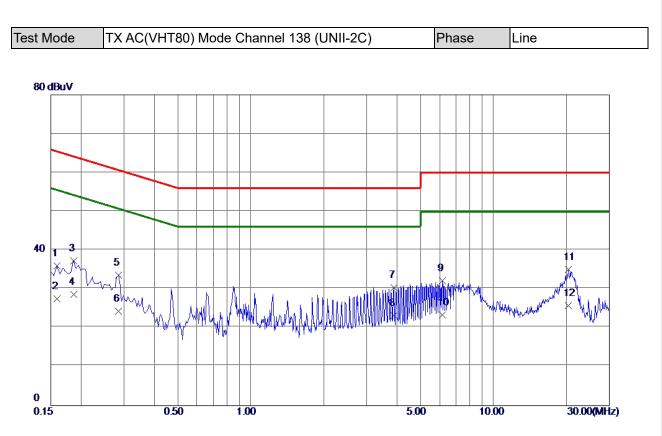
Conducted Test Photos





APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

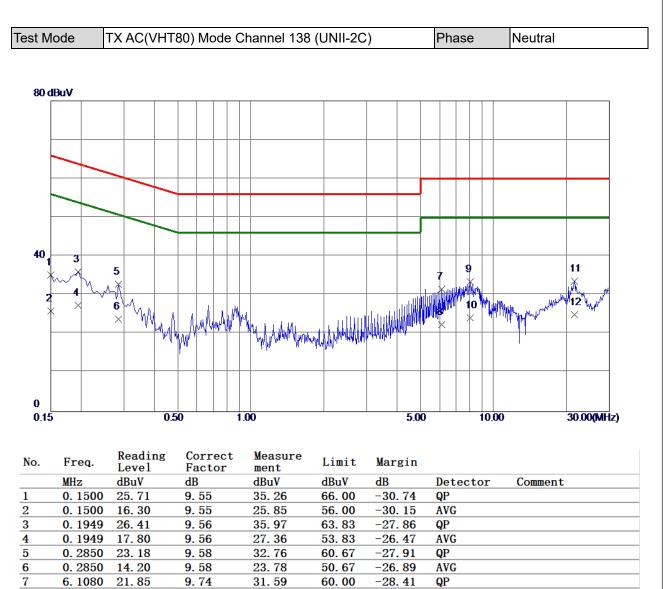




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1590	26.36	9.70	36.06	65.52	-29.46	QP	
2	0.1590	17.80	9.70	27.50	55. 52	-28. 0 2	AVG	
3	0.1860	27.61	9.70	37.31	64.21	-26. 90	QP	
4	0.1860	18. 90	9.70	28.60	54.21	-25.61	AVG	
5	0.2850	23.86	9.72	33. 58	60.67	-27.09	QP	
6	0.2850	14.60	9.72	24. 32	50.6 7	-26.35	AVG	
7	3.8940	20.67	9.80	30.47	56.00	-25. 53	QP	
8 *	3.8940	13. 40	9.80	23.20	46.00	-22.80	AVG	
9	6.1440	22.25	9.89	32.14	60.00	-27.86	QP	
10	6.1440	13. 40	9.89	23. 29	50.00	-26.71	AVG	
11	20. 2875	24.94	10.13	35.07	60.00	-24. 93	QP	
12	20. 2875	15.60	10.13	25.73	50.00	-24. 27	AVG	

- Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value Limit Value.





50.00

60.00

50.00

60.00

50.00

-27. 56

-26.61

-25.77

-26.36

-25.07

AVG

AVG

QP

AVG

QP

22.44

33.39

24.23

33.64

24.93

REMARKS:

6.1080

8.0295

8. 0295

21.5790 23.61

21.5790 14.90

12.70

23.46

14.30

8

9

10

11

12 *

(1) Measurement Value = Reading Level + Correct Factor.

9.74

9.93

9.93

10.03

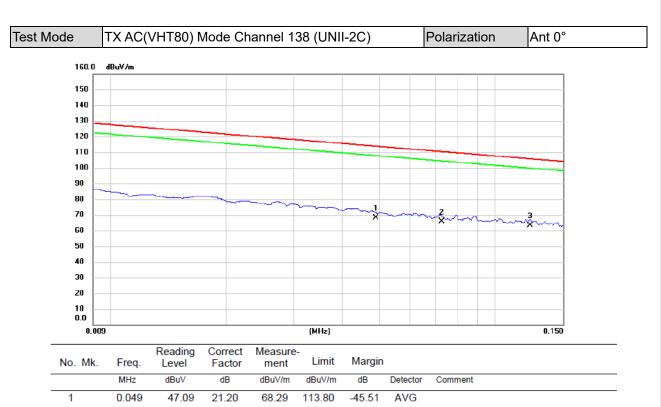
10.03

(2) Margin Level = Measurement Value - Limit Value.



APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ





AVG

QP

-44.45

-42.45

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

0.072

0.123

2

3 *

44.68

42.03

21.27

21.32

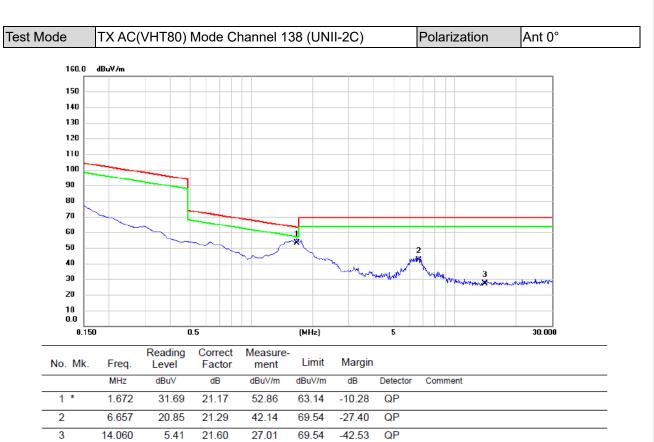
65.95

63.35

110.40

105.80





69.54

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

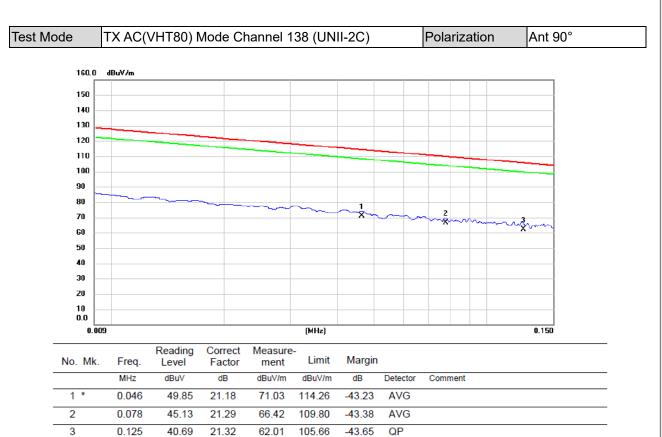
21.60

(2) Margin Level = Measurement Value - Limit Value.

14.060

3

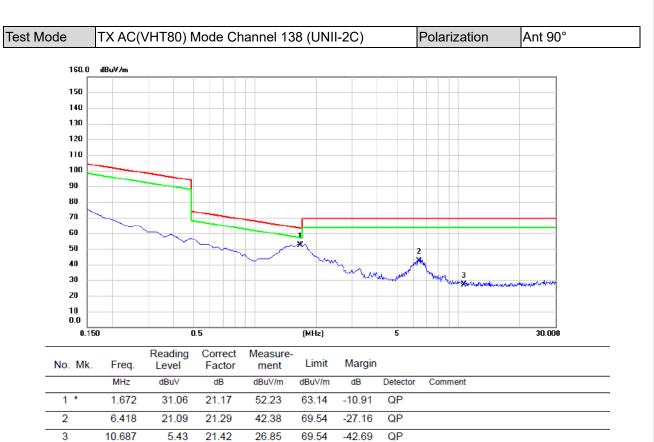




(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.





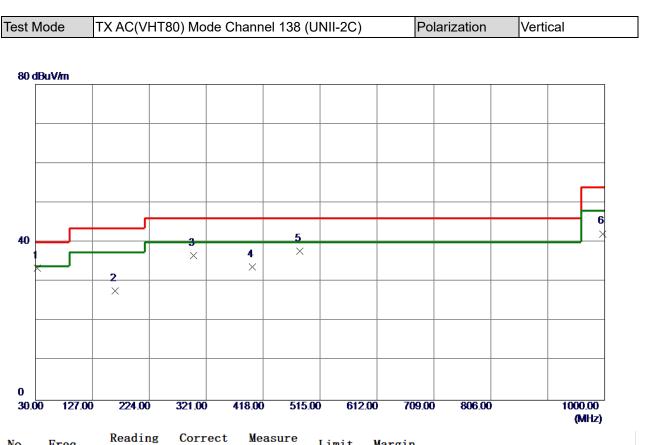
(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.



APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

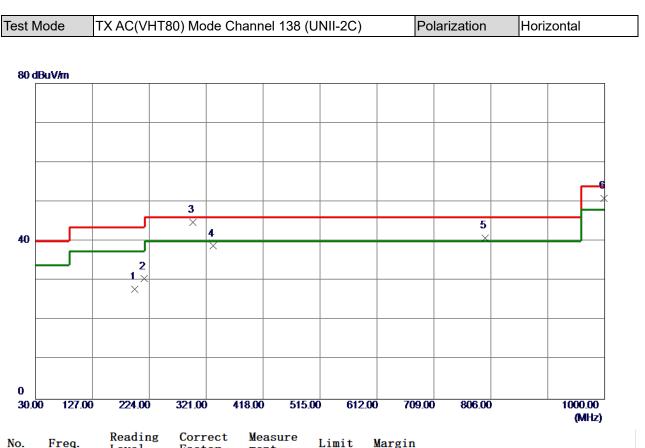




No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	33. 3950	45.93	-12.48	33. 45	40.00	-6. 55	Peak	
2	166. 2850	38.80	-11. 10	27.70	43. 52	-15.82	Peak	
3	299. 6600	47.21	-10. 59	36.62	46.0 2	-9. 40	Peak	
4	400. 0550	41.85	-8.04	33.81	46.0 2	-12.21	Peak	
5	480. 0800	44.03	-6.32	37.71	46.0 2	-8.31	Peak	
6	997. 0900	41.20	0.96	42.16	53. 97	-11.81	Peak	

- Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value Limit Value.





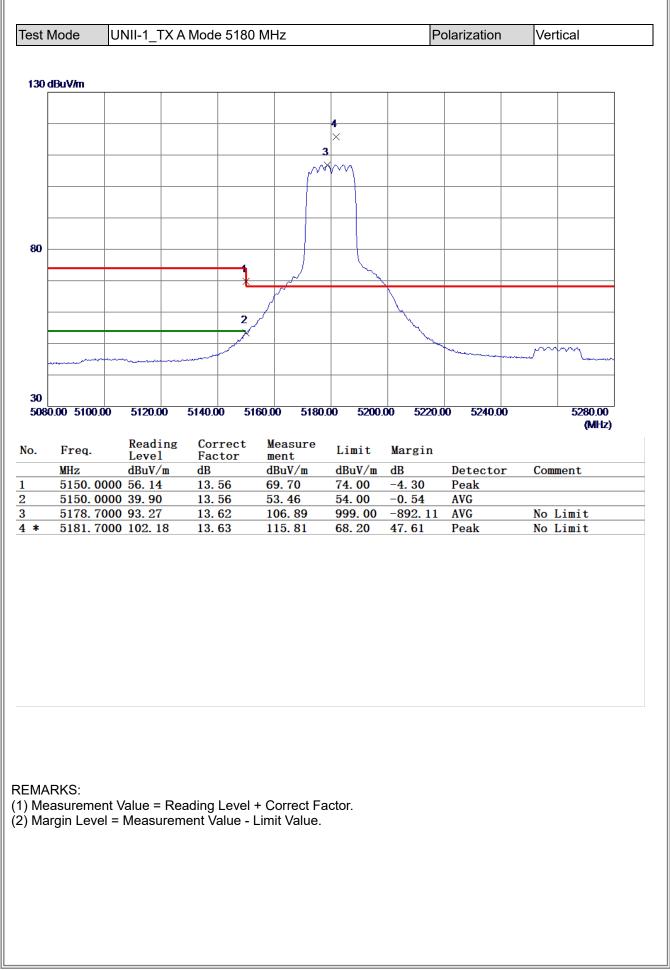
No.	Freq.	Level	Factor	ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	199. 2650	42.29	-14. 39	27.90	43. 52	-15.62	Peak	
2	215. 7550	44.87	-14. 39	30.48	43. 52	-13. 04	Peak	
3 *	298.6900	55.35	-10. 61	44.74	46.0 2	-1.28	QP	
4	333. 1250	48.42	-9.62	38.80	46.0 2	-7.22	Peak	
5	796. 3000	42.01	-1.24	40.77	46.0 2	-5.25	Peak	
6	998. 5450	49.93	0.98	50.9 1	53. 97	-3.06	Peak	

- Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value Limit Value.

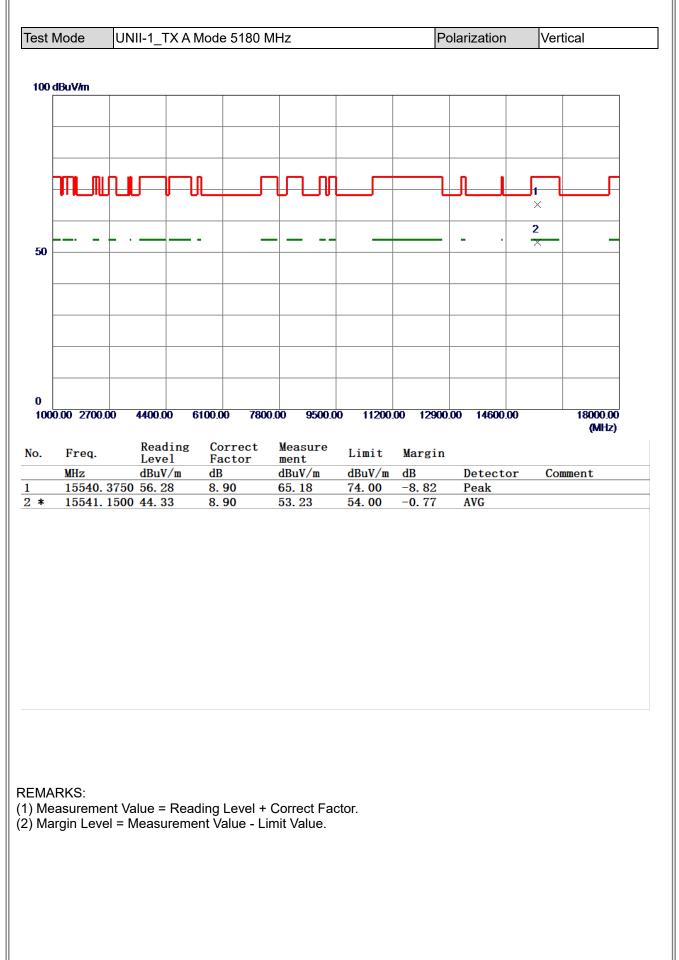


APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

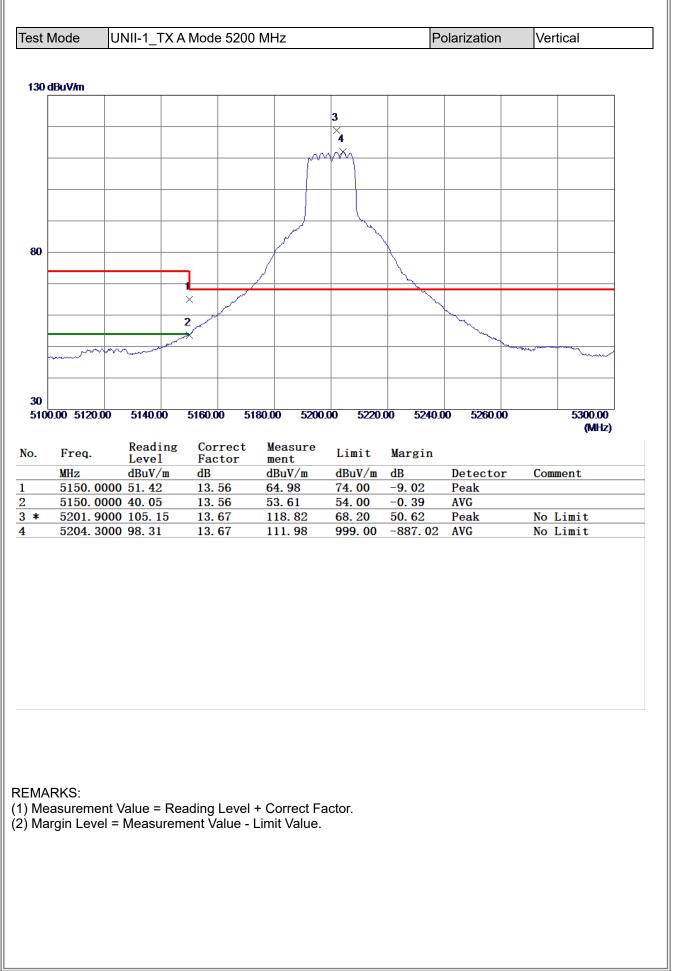




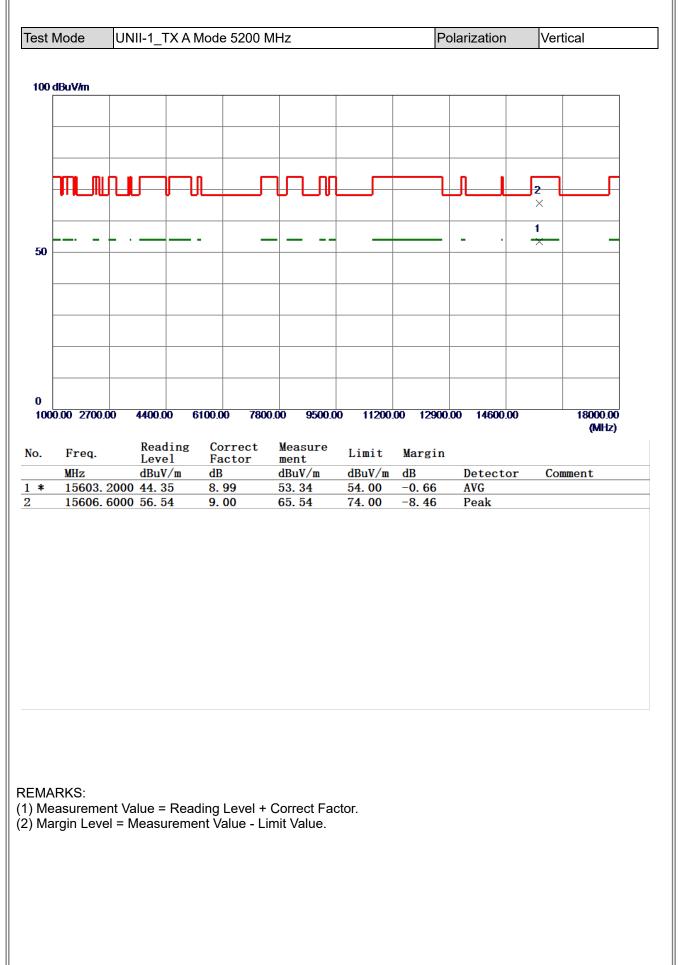








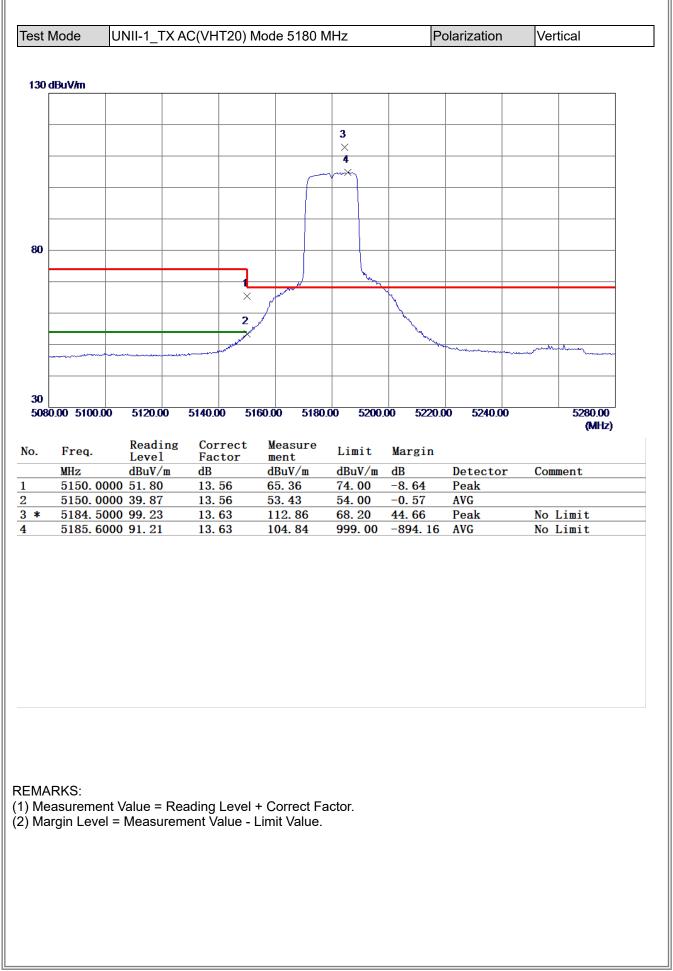




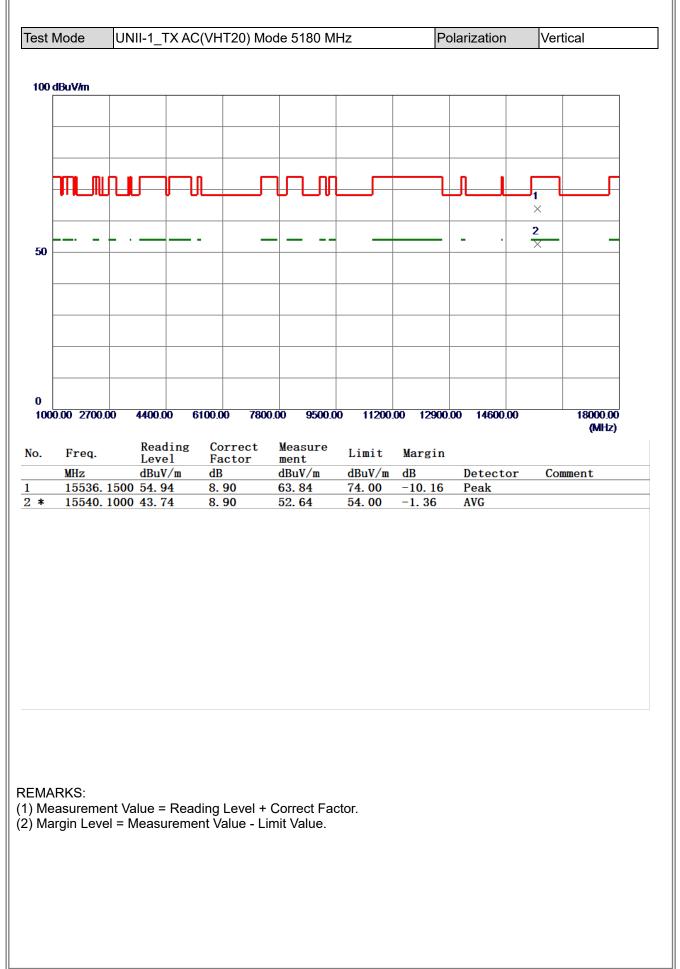




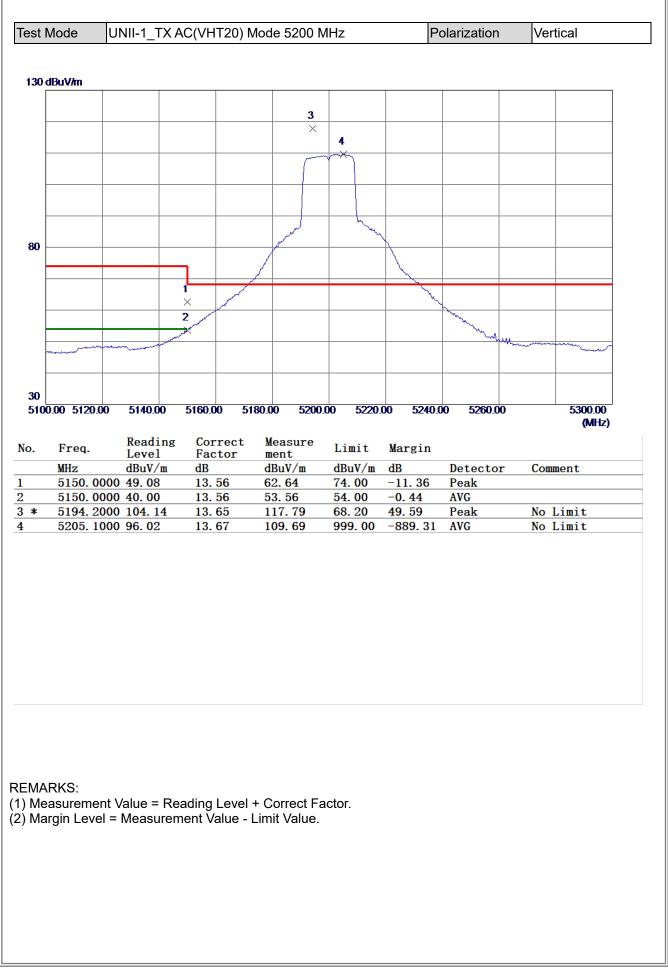




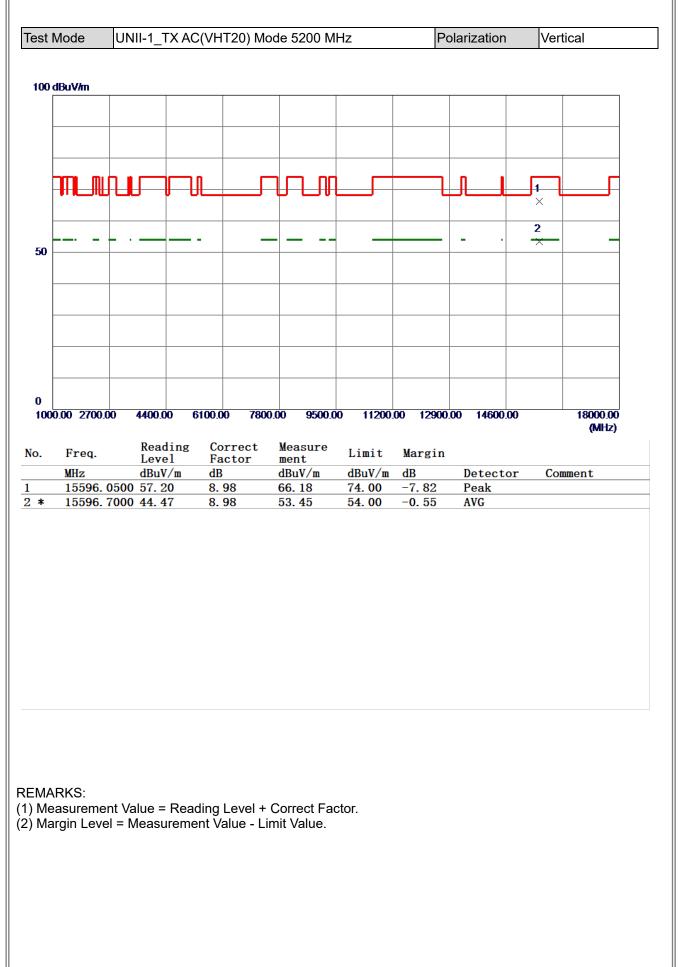




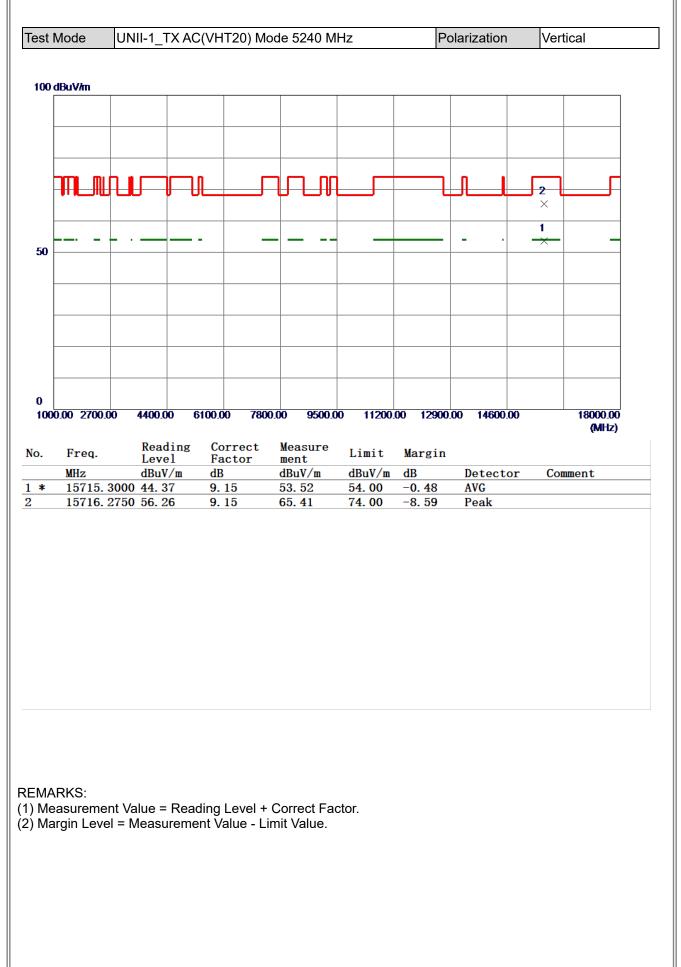




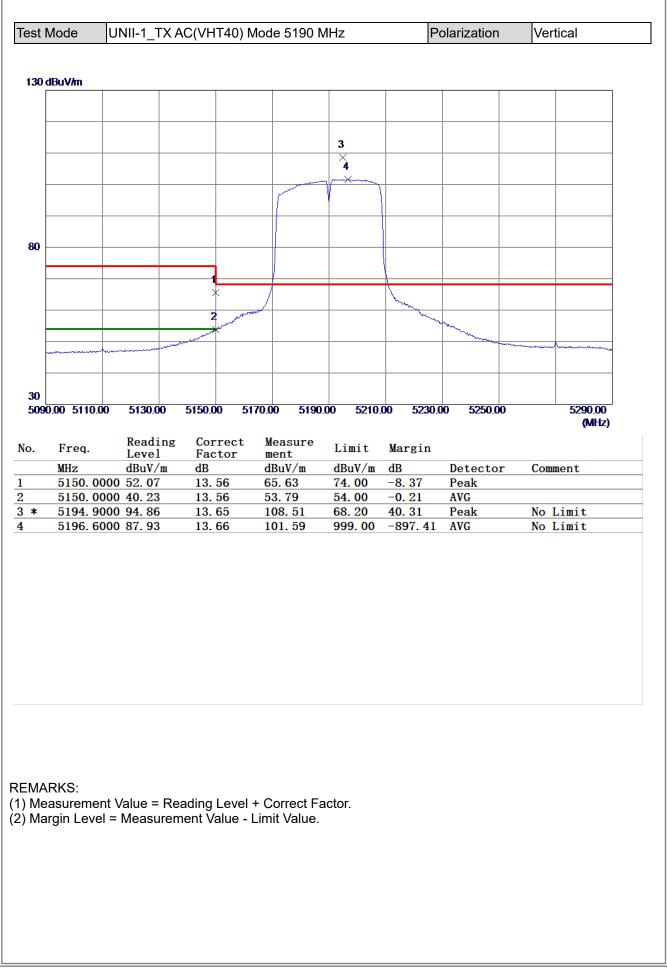




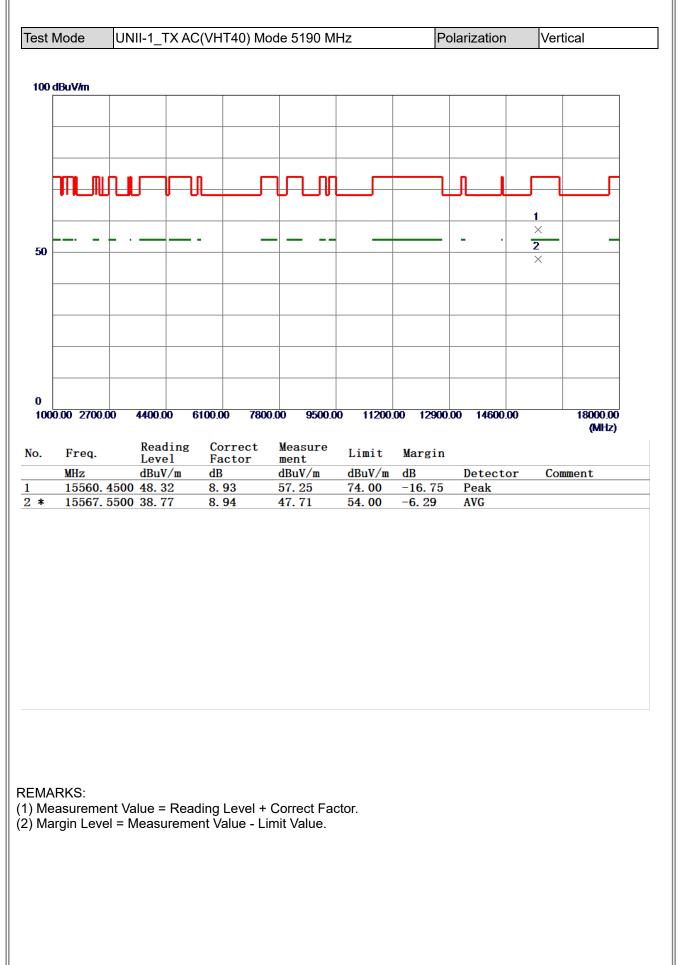




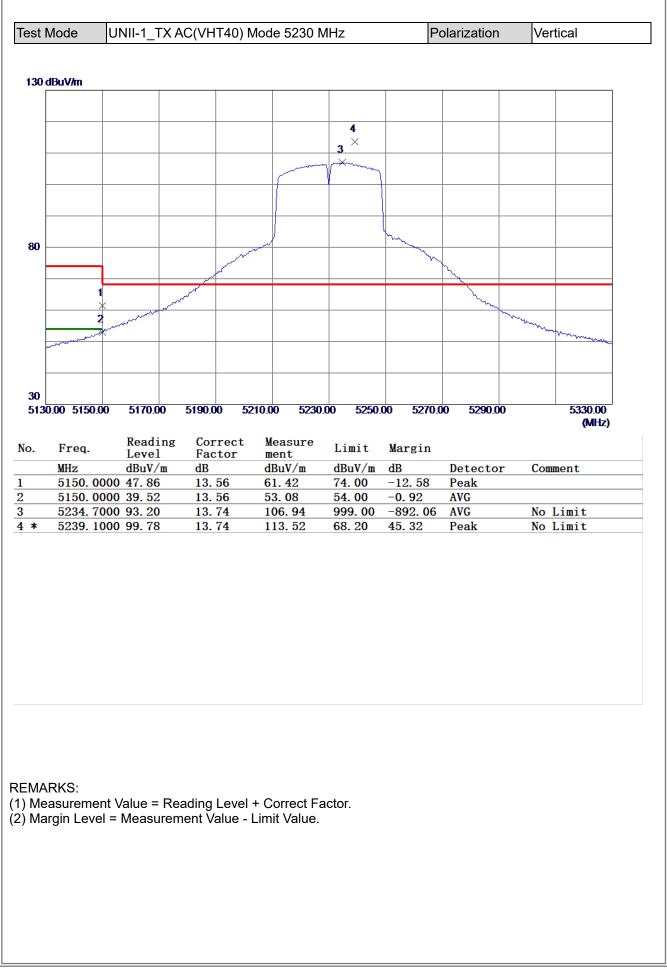




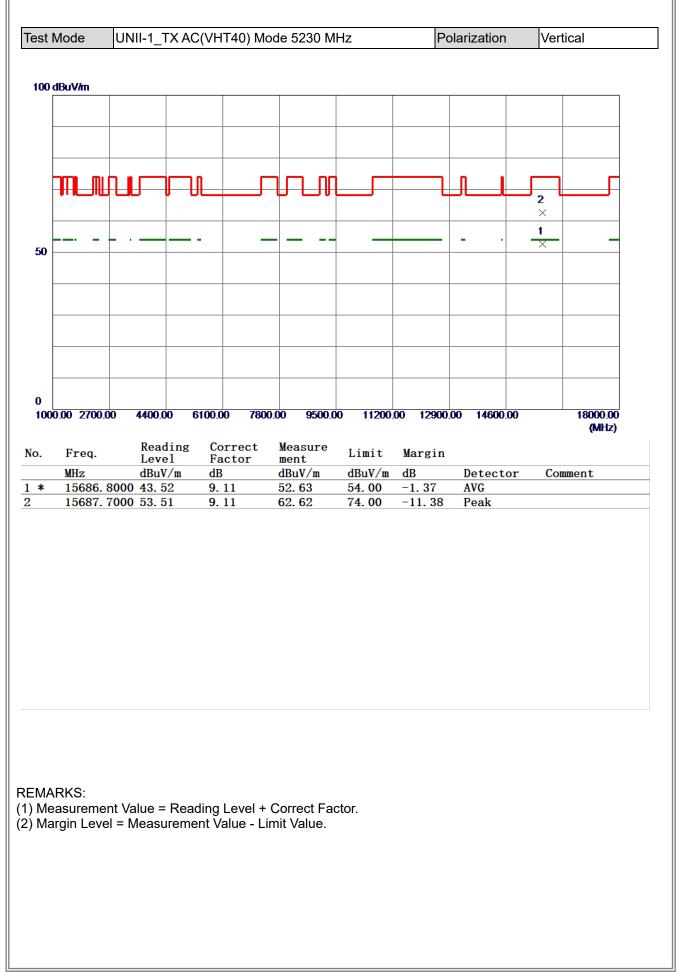




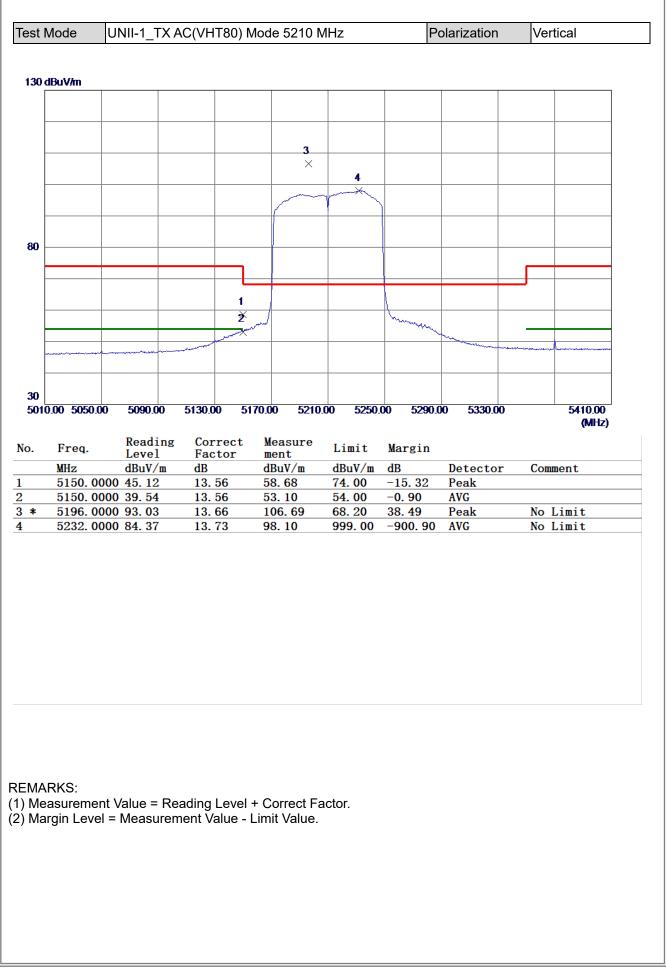




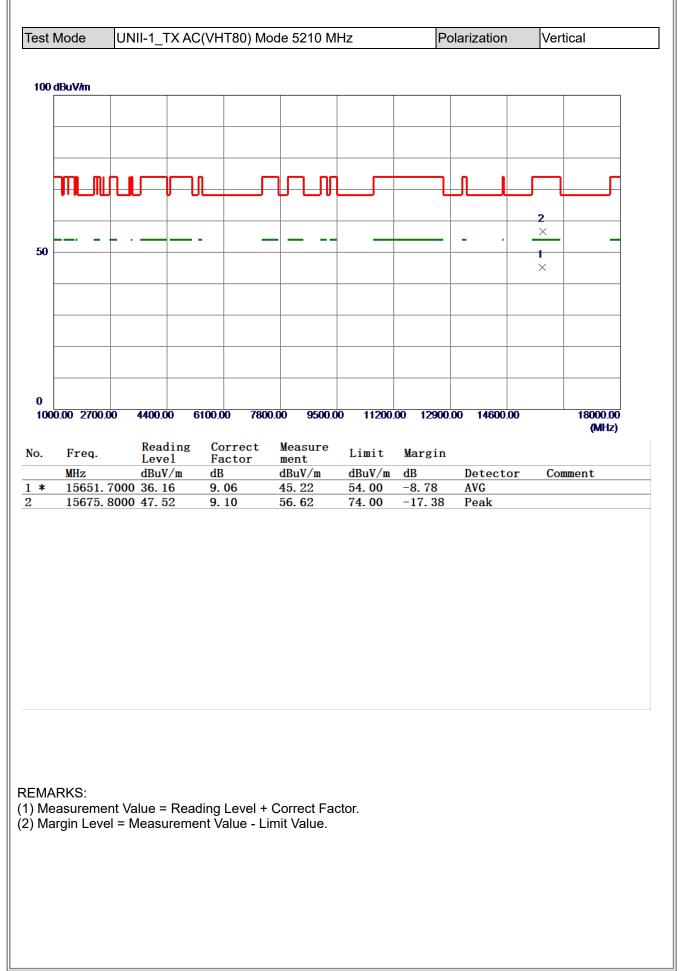




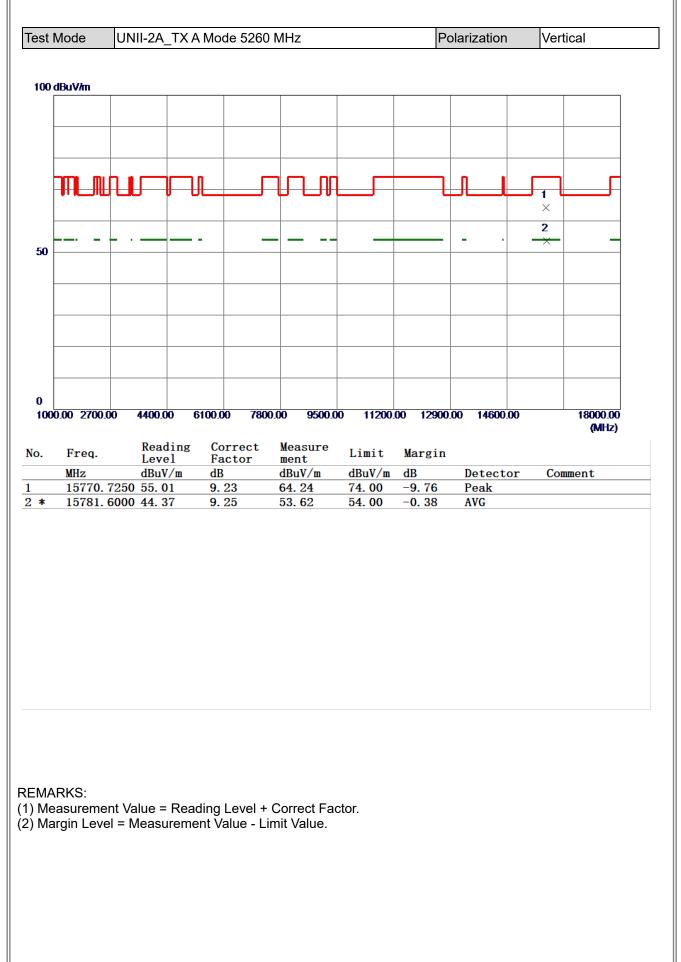




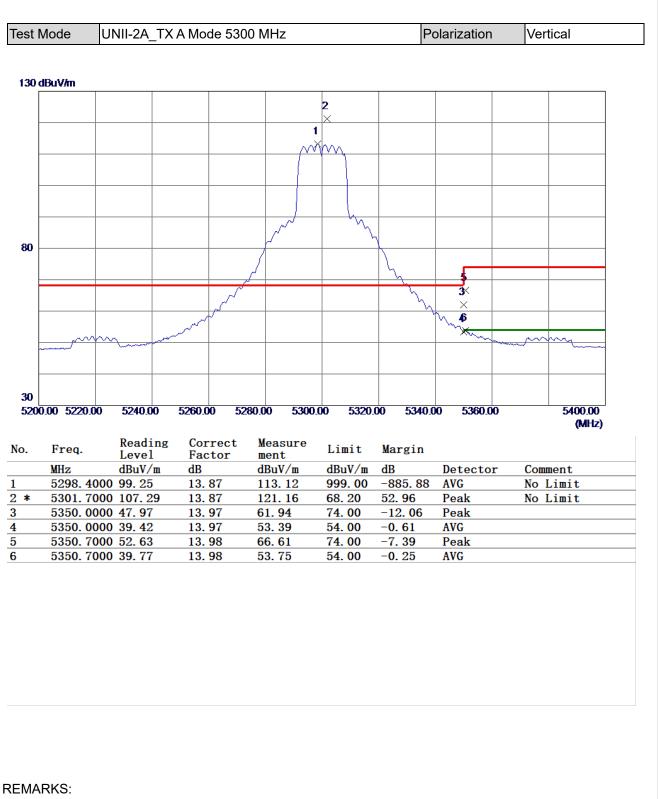






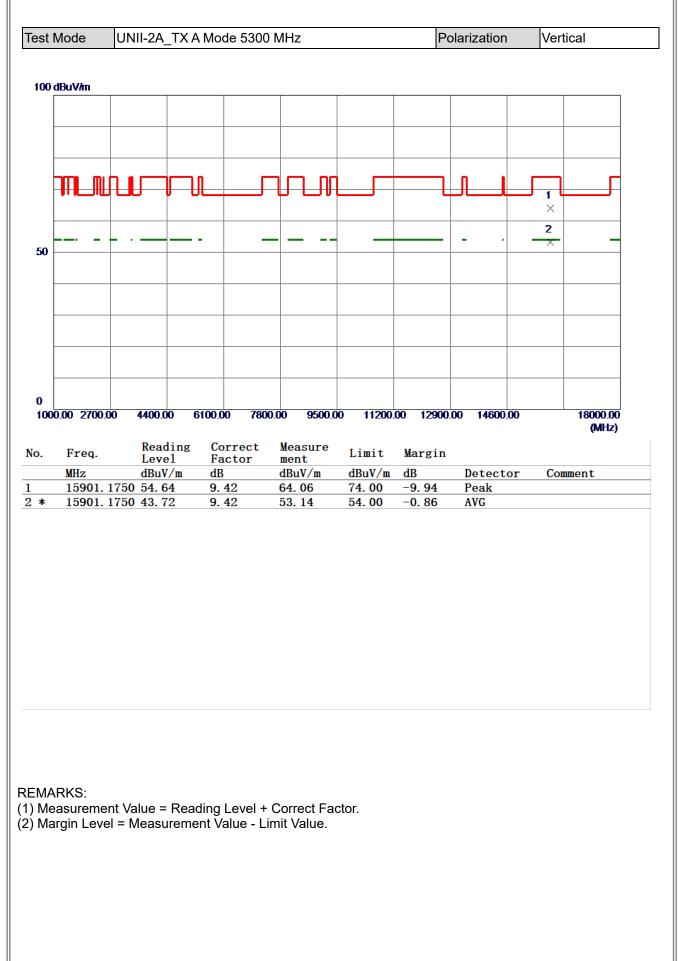




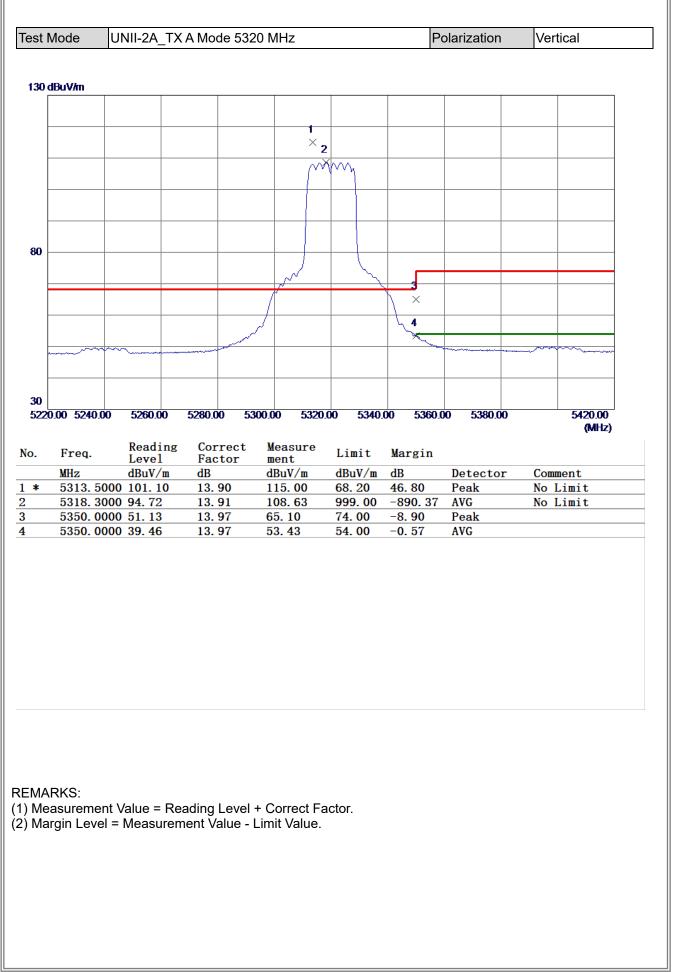


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

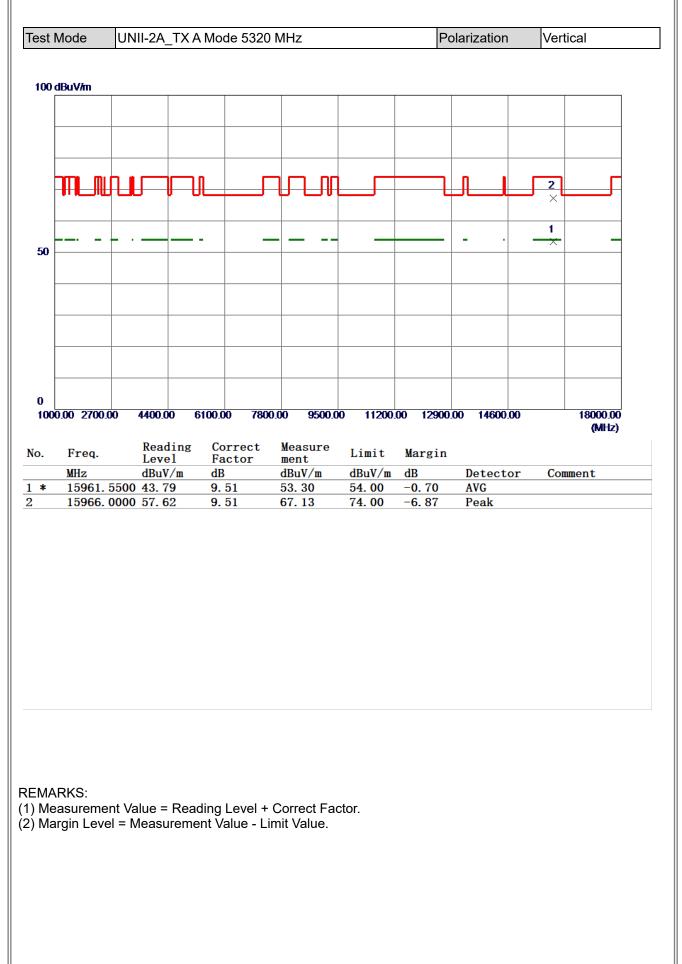




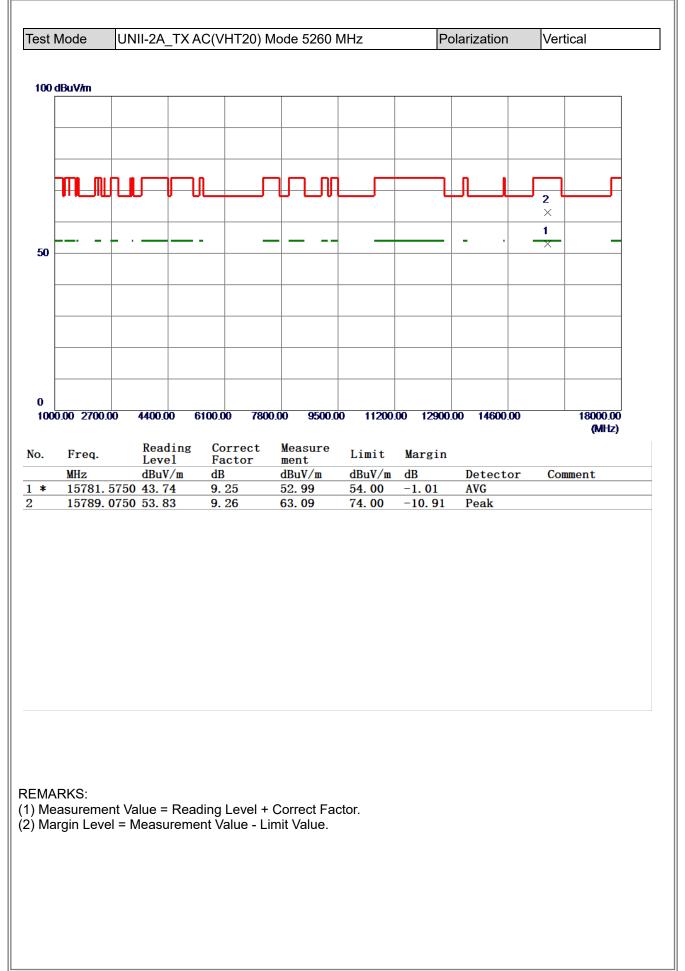




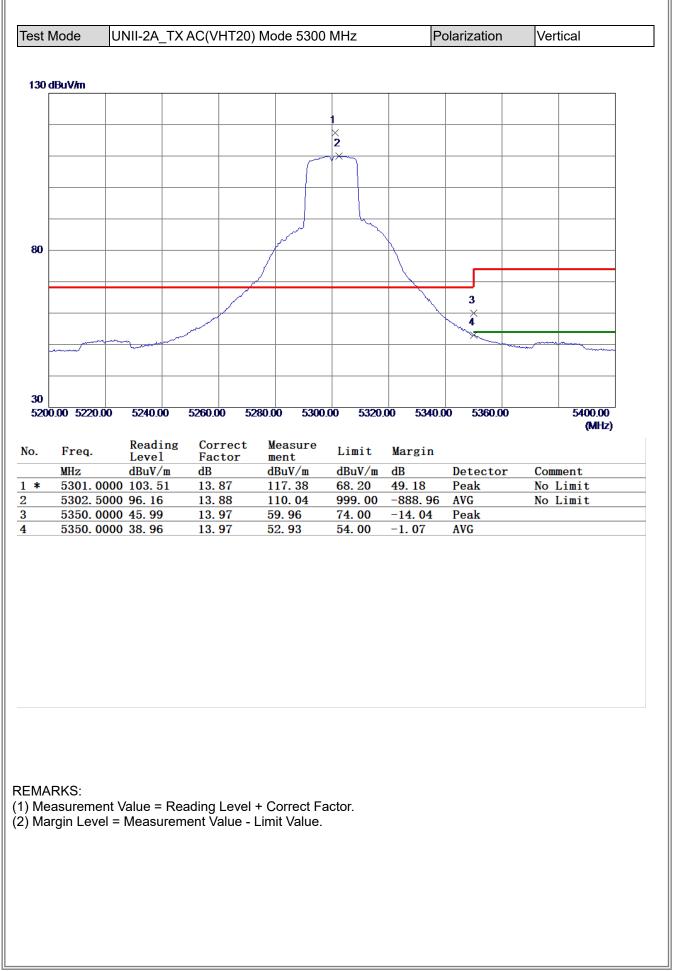




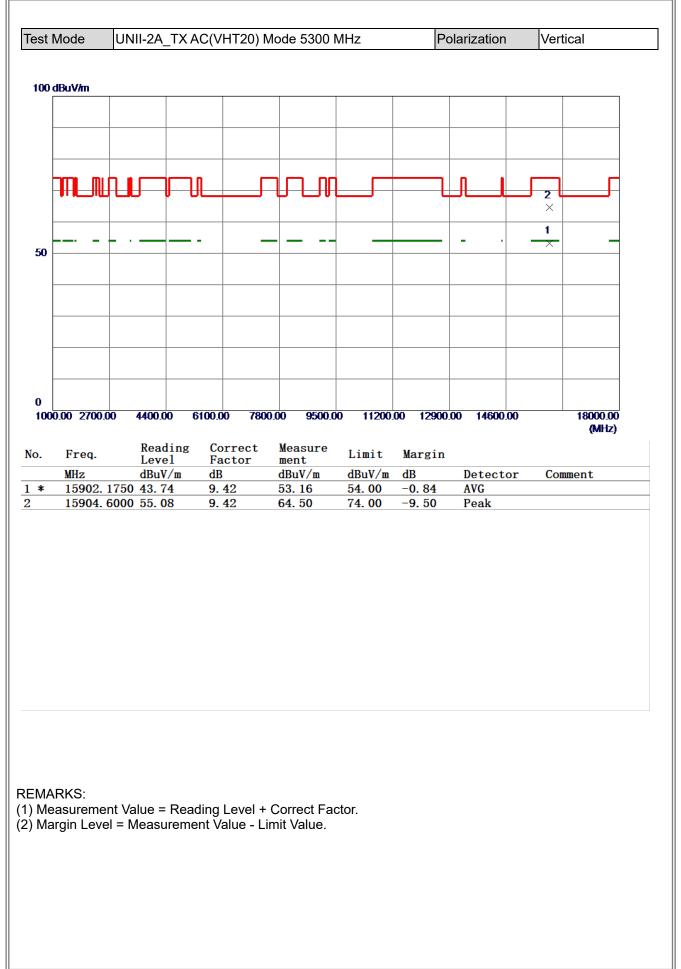




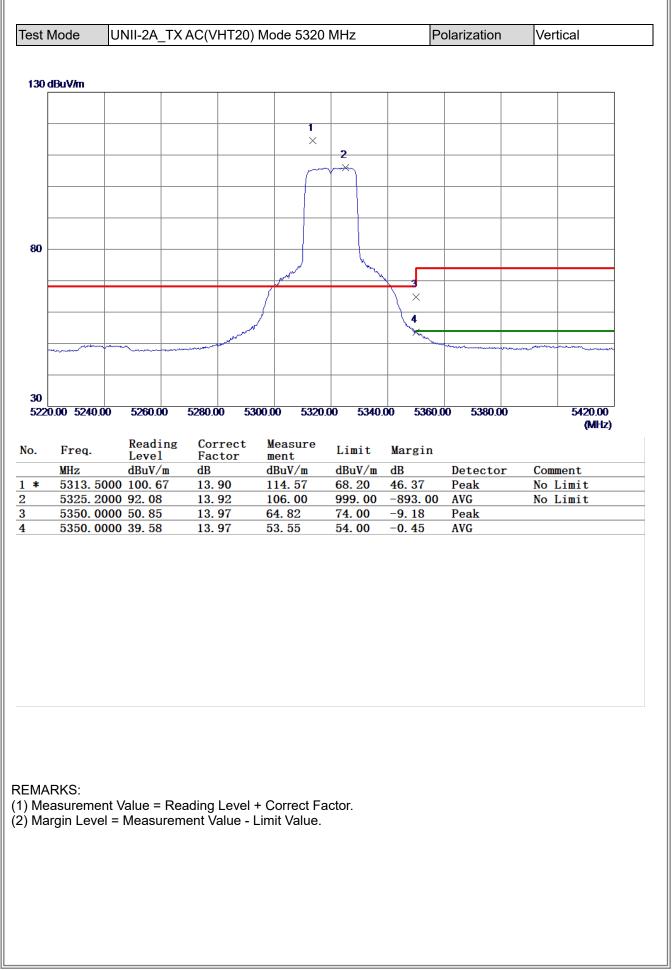




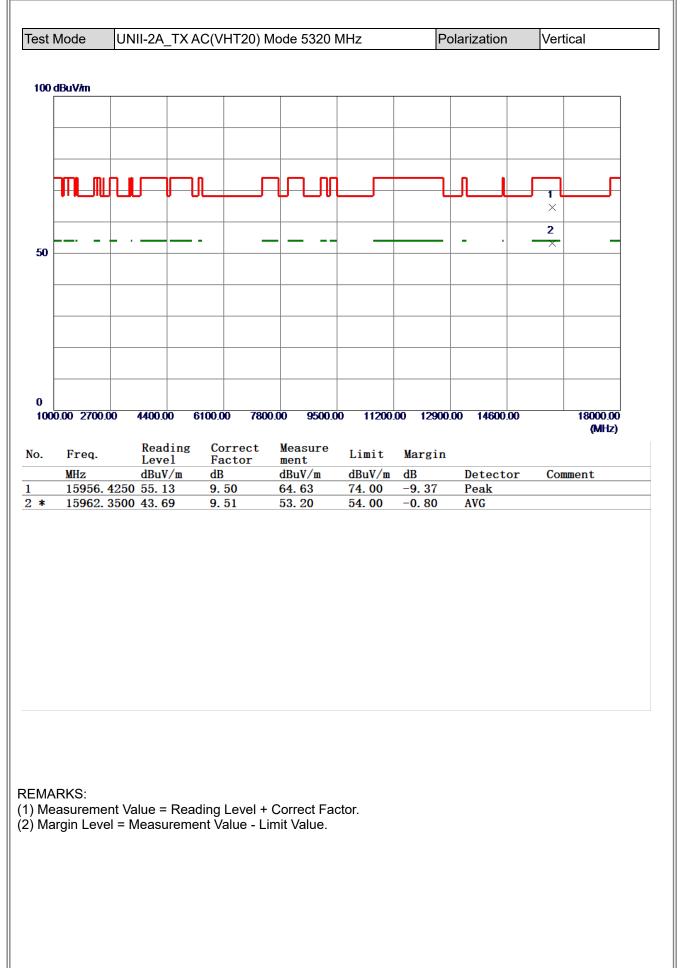




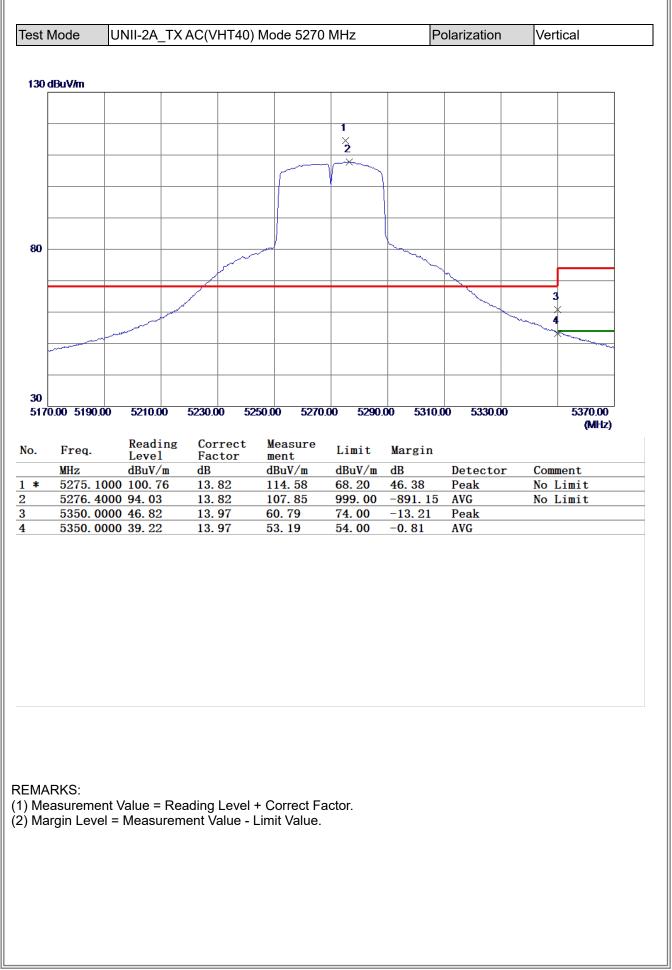




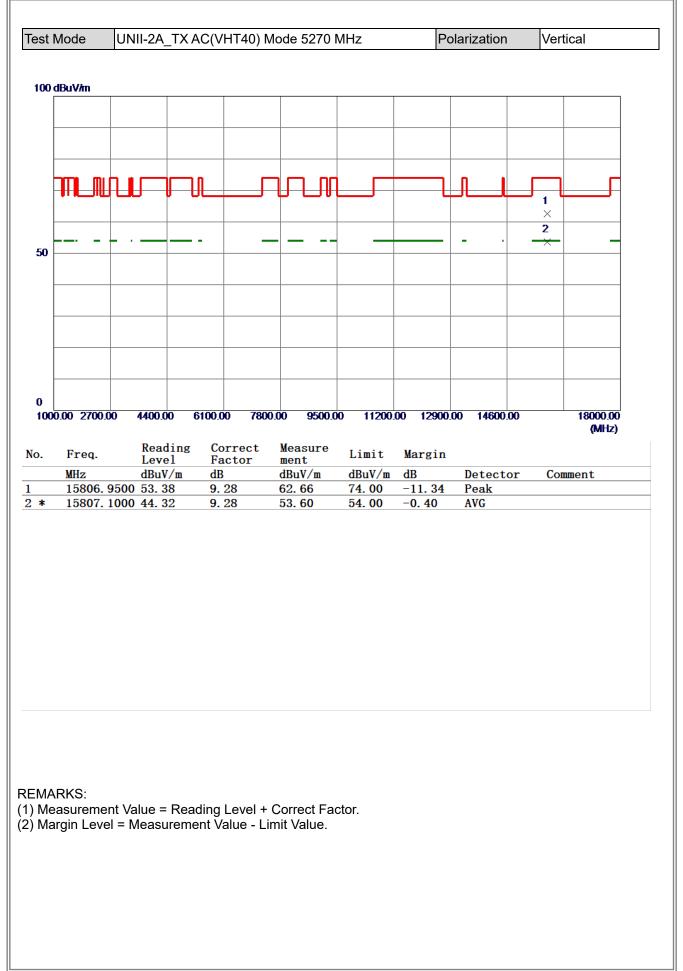




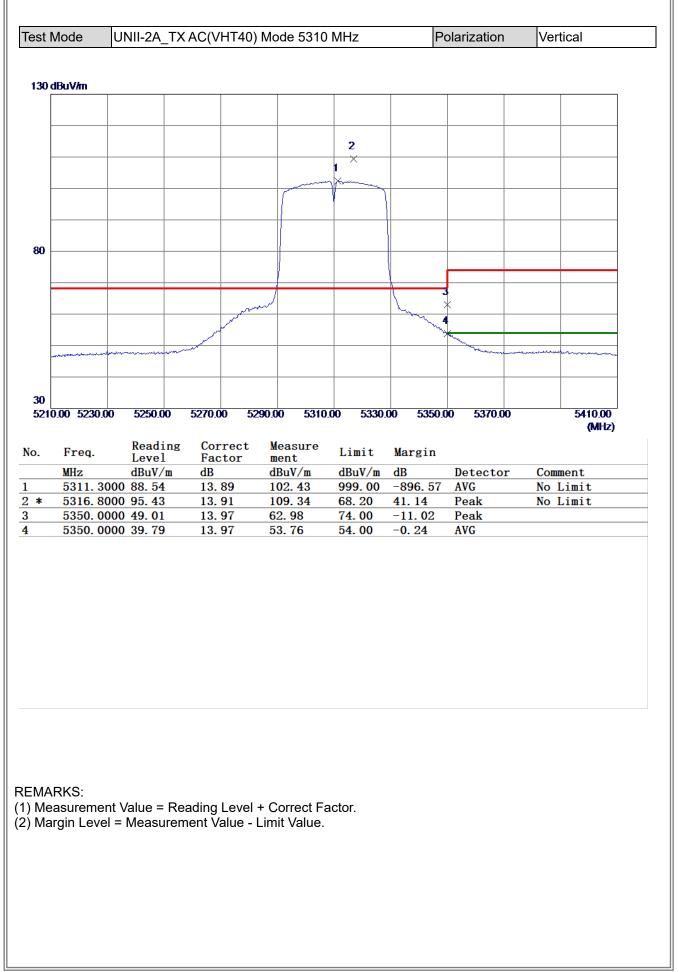




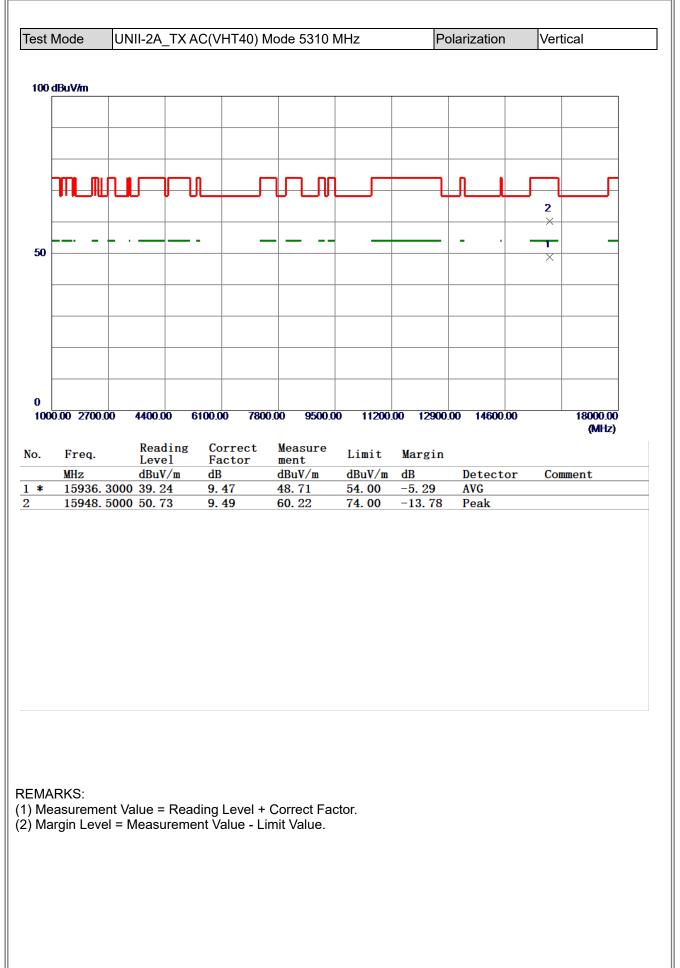




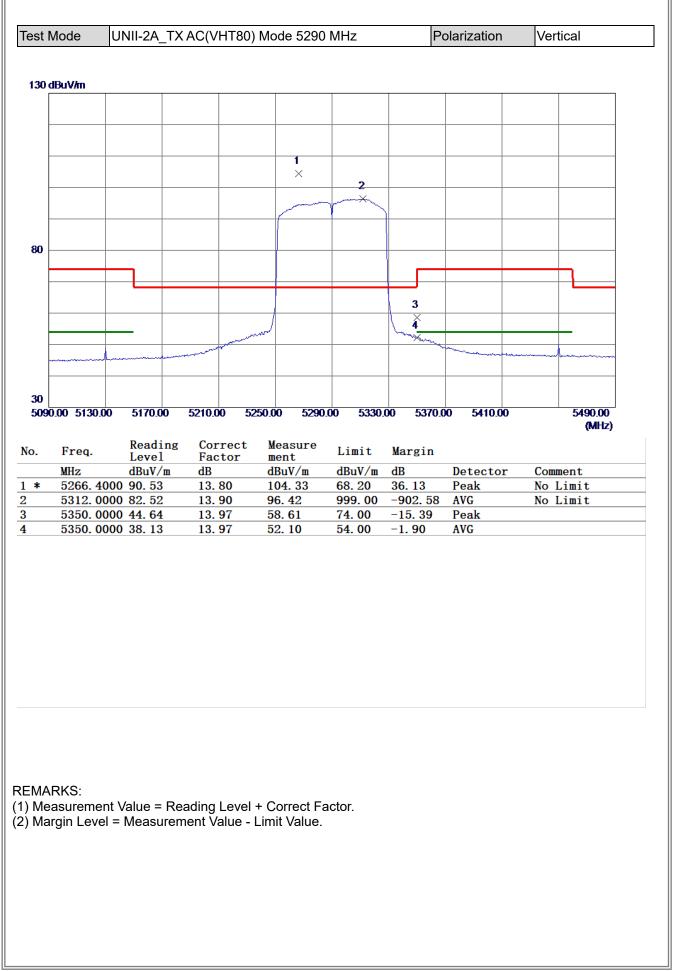




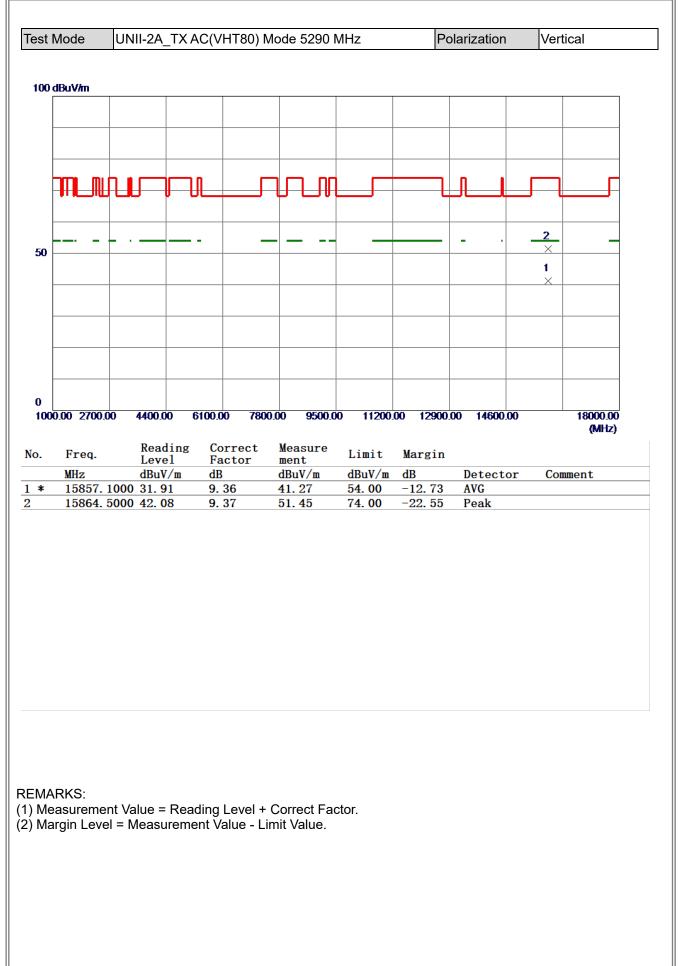




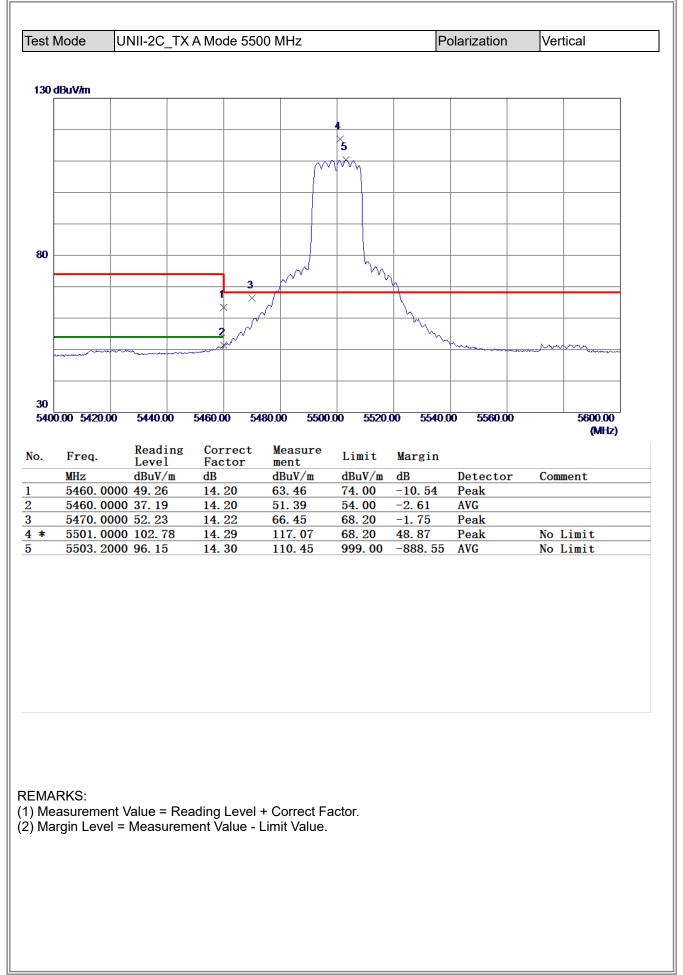




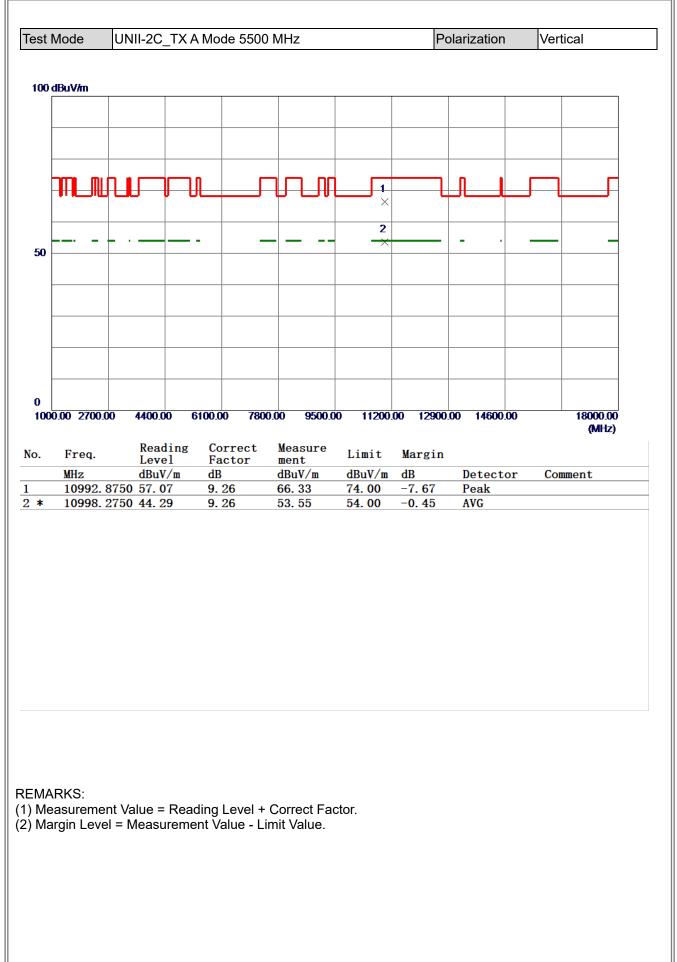




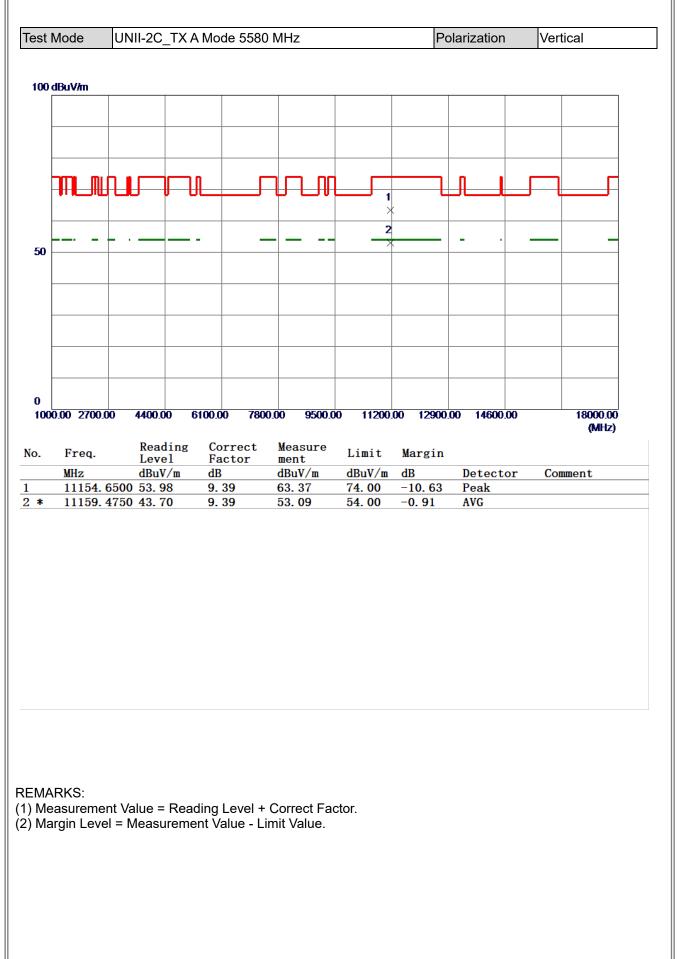
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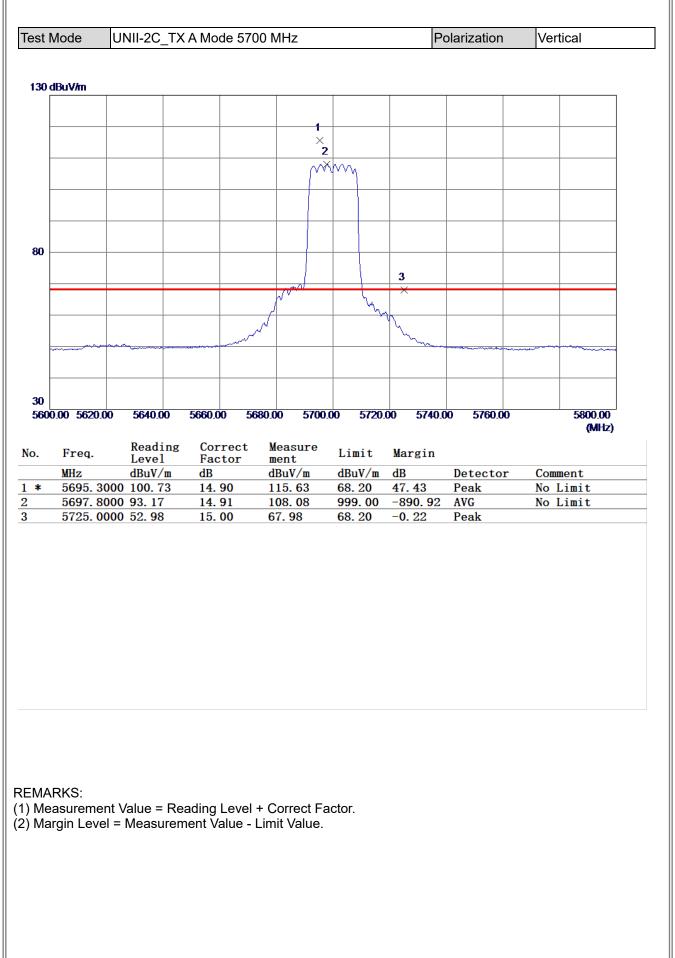




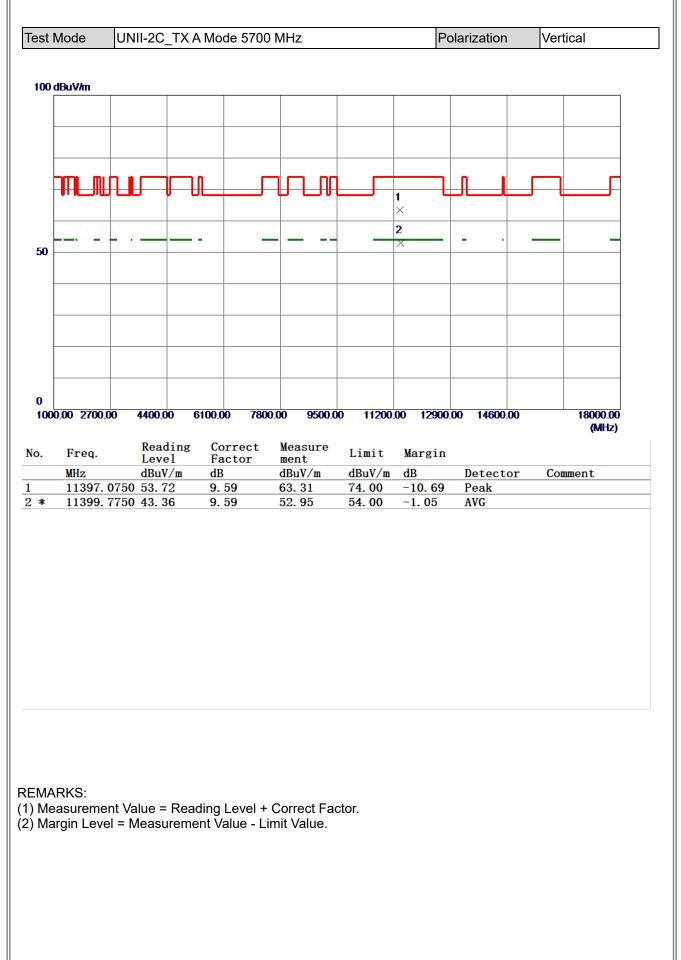




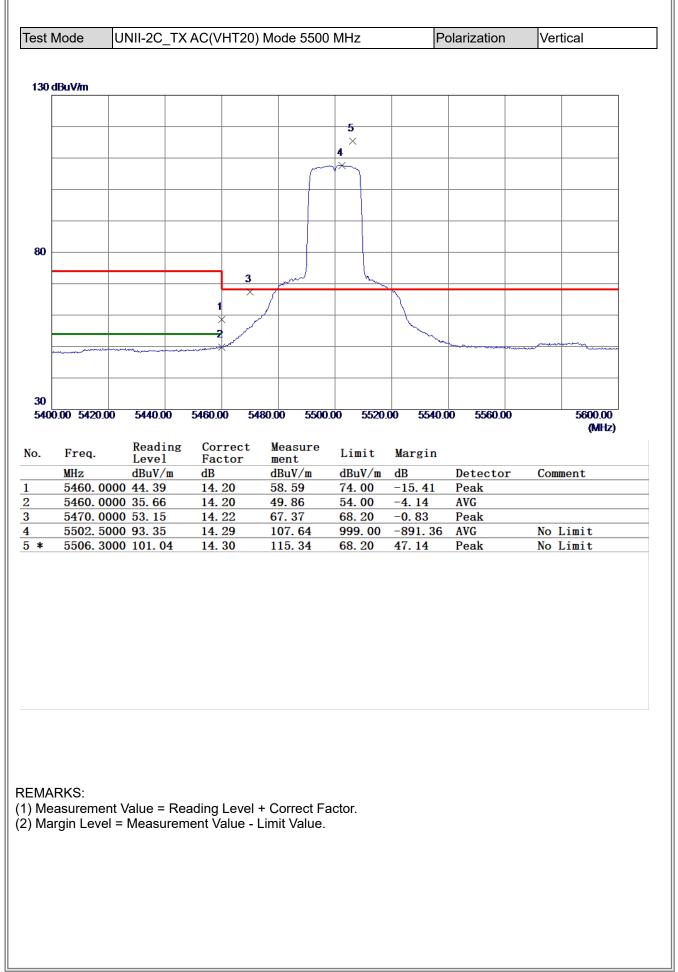




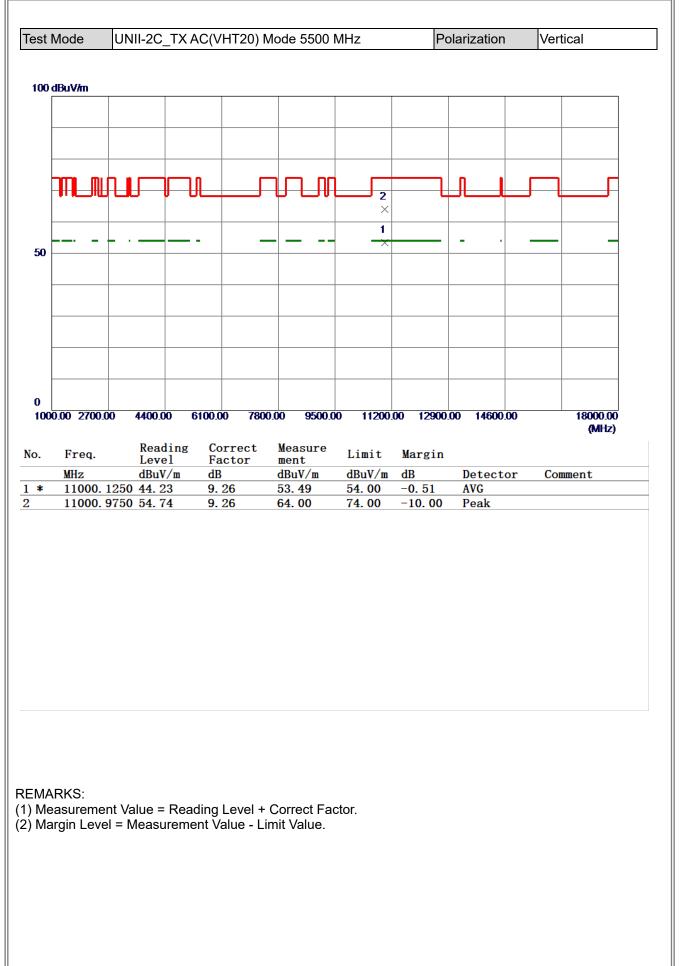




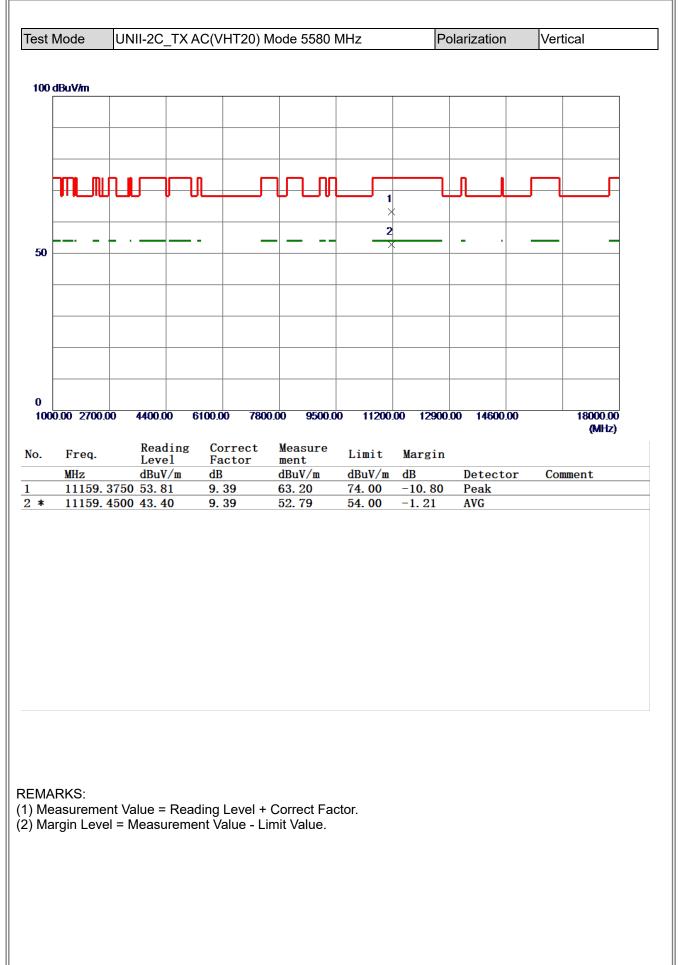




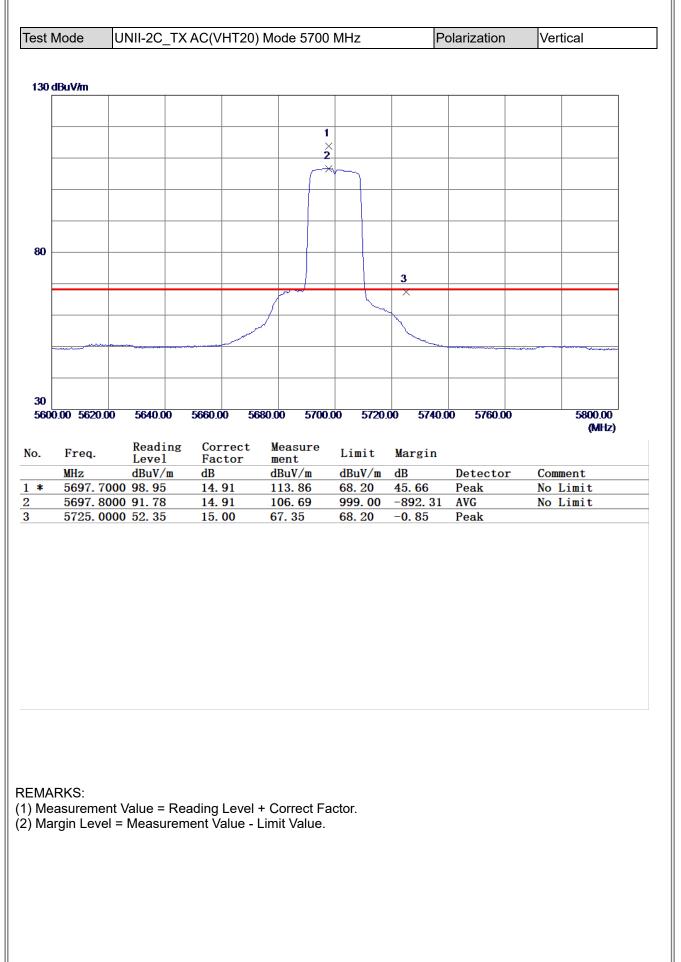




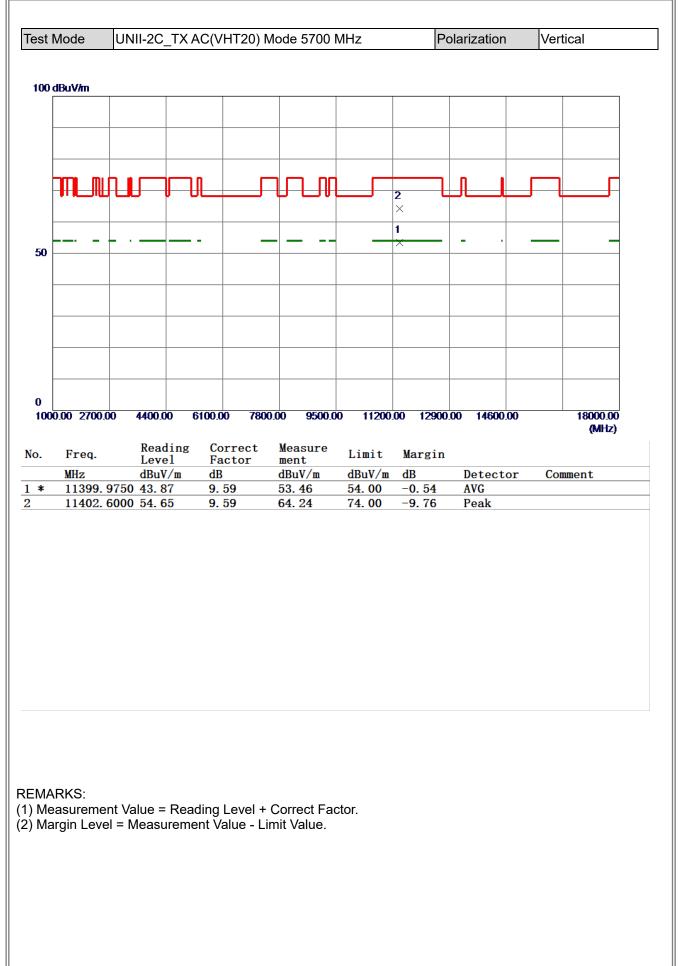




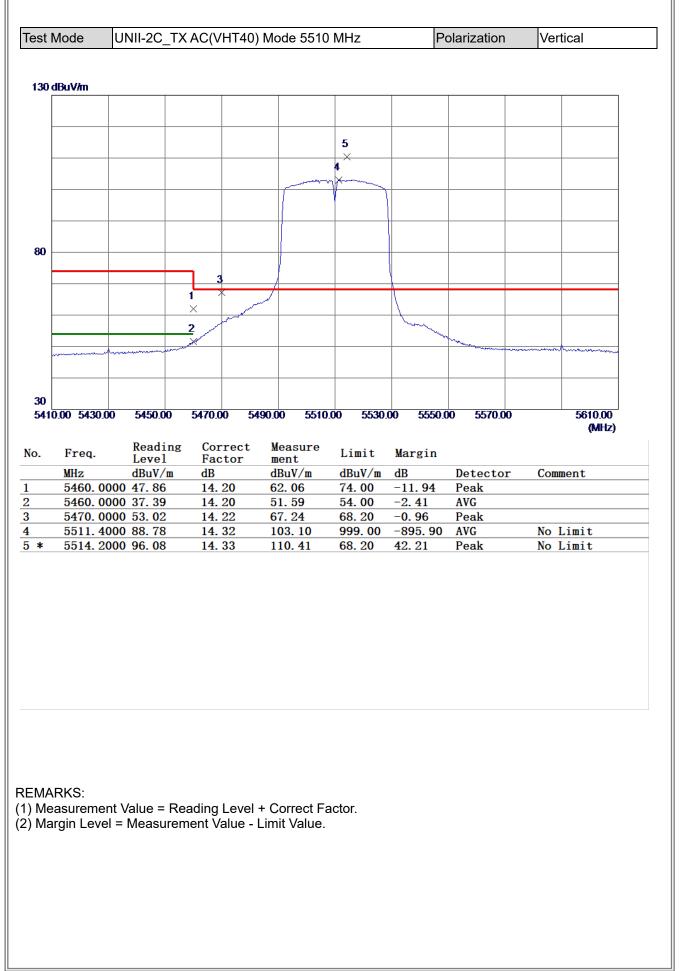




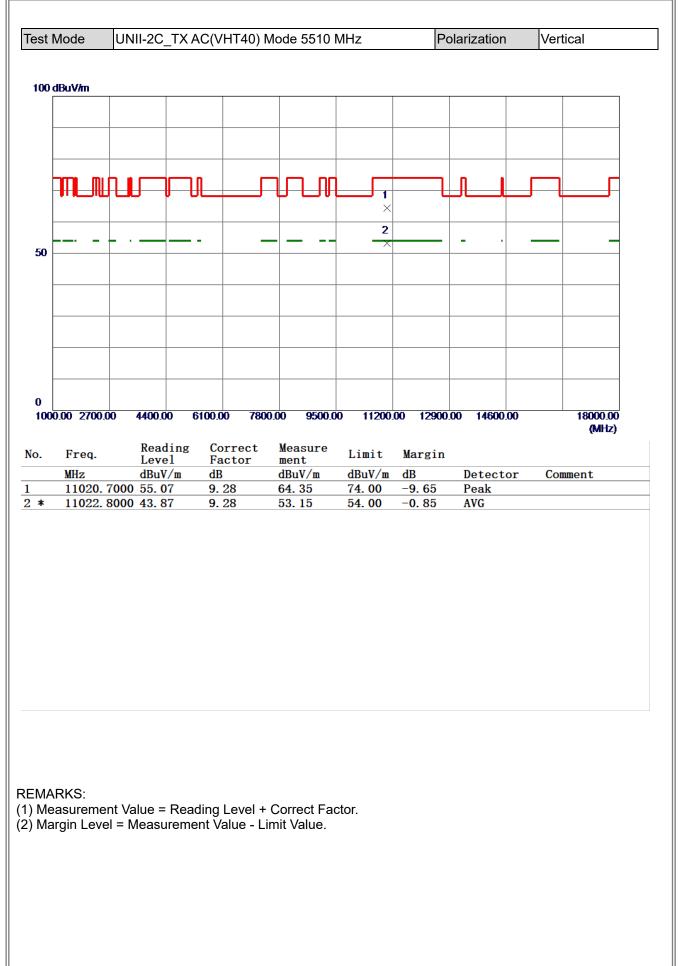




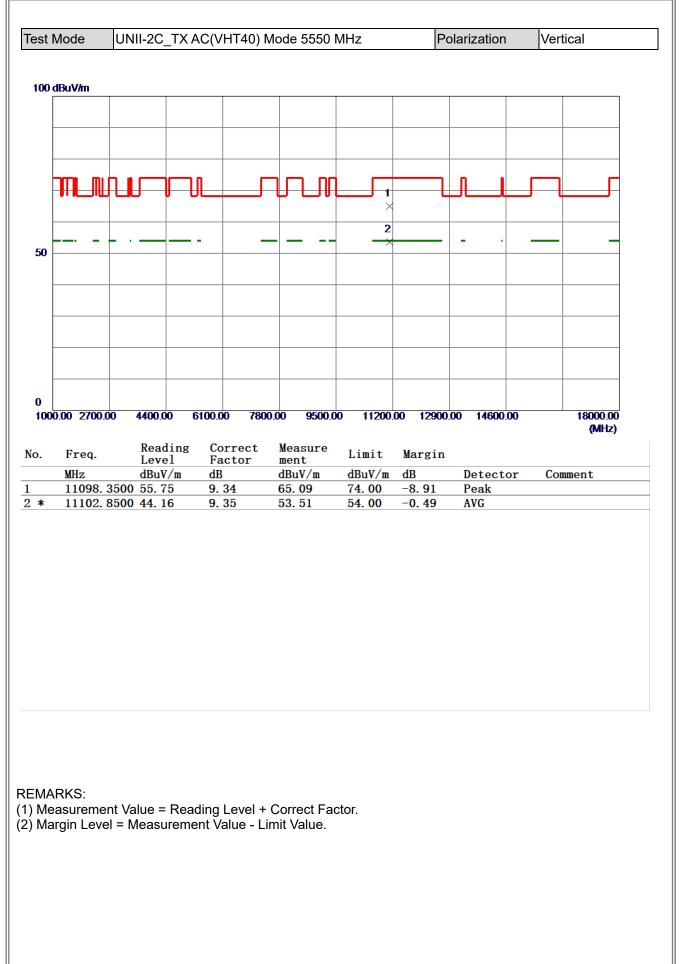




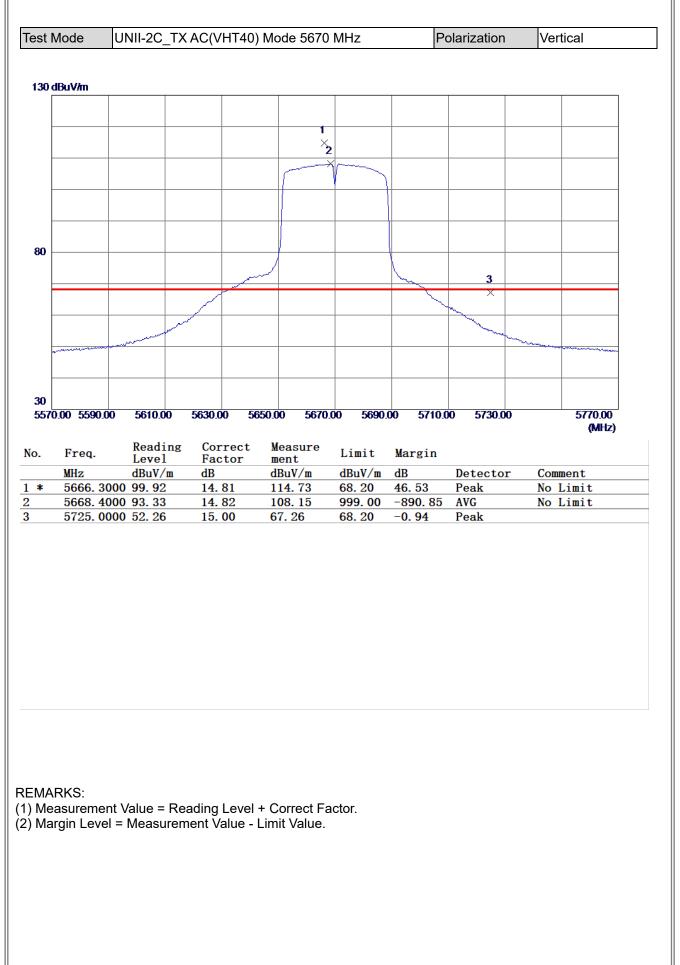




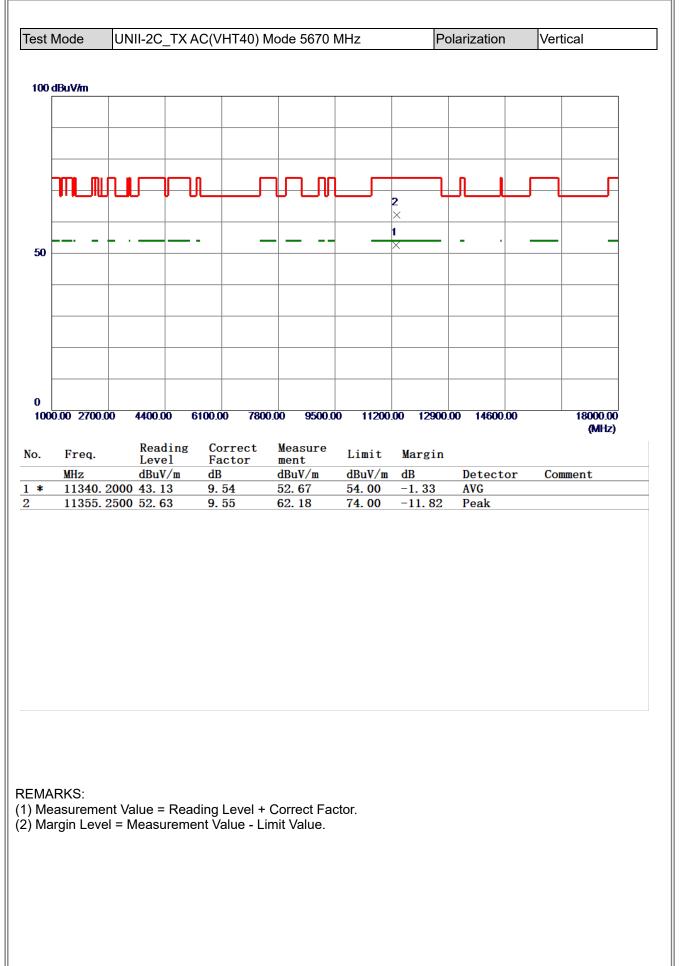




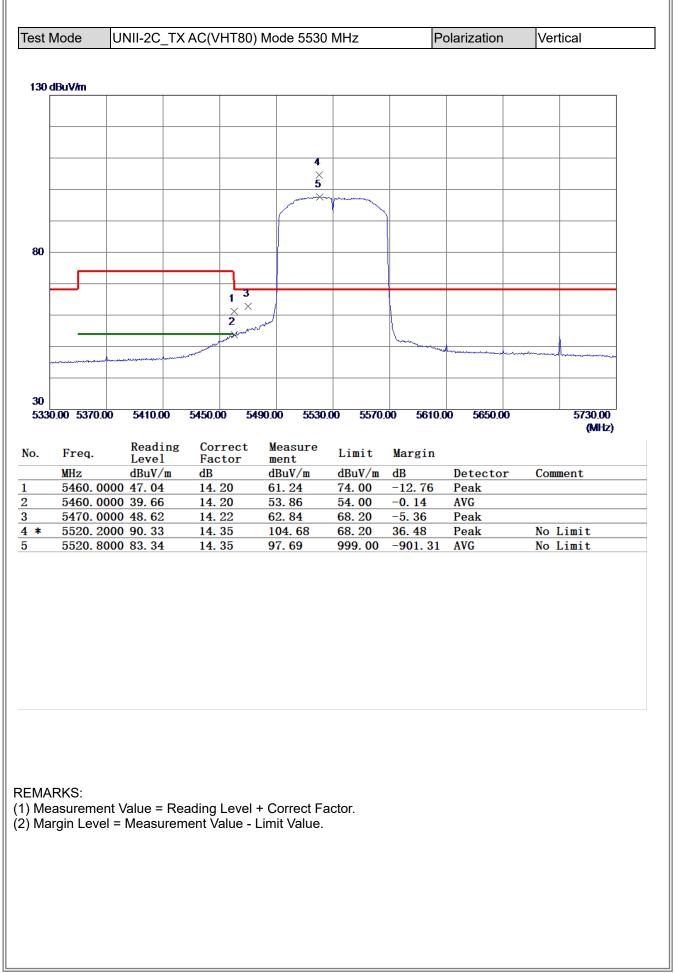




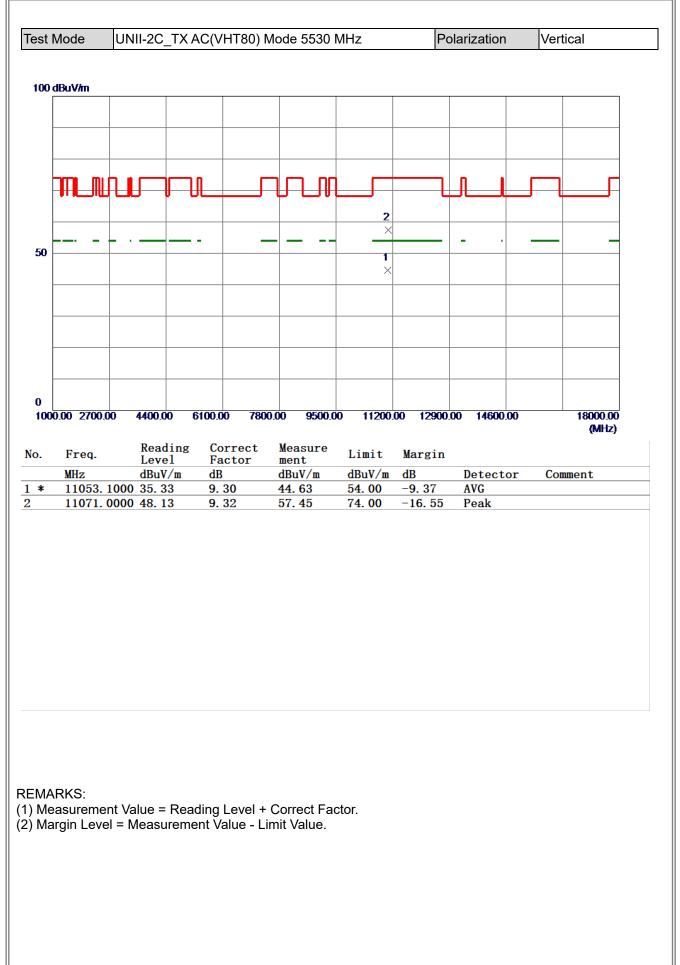




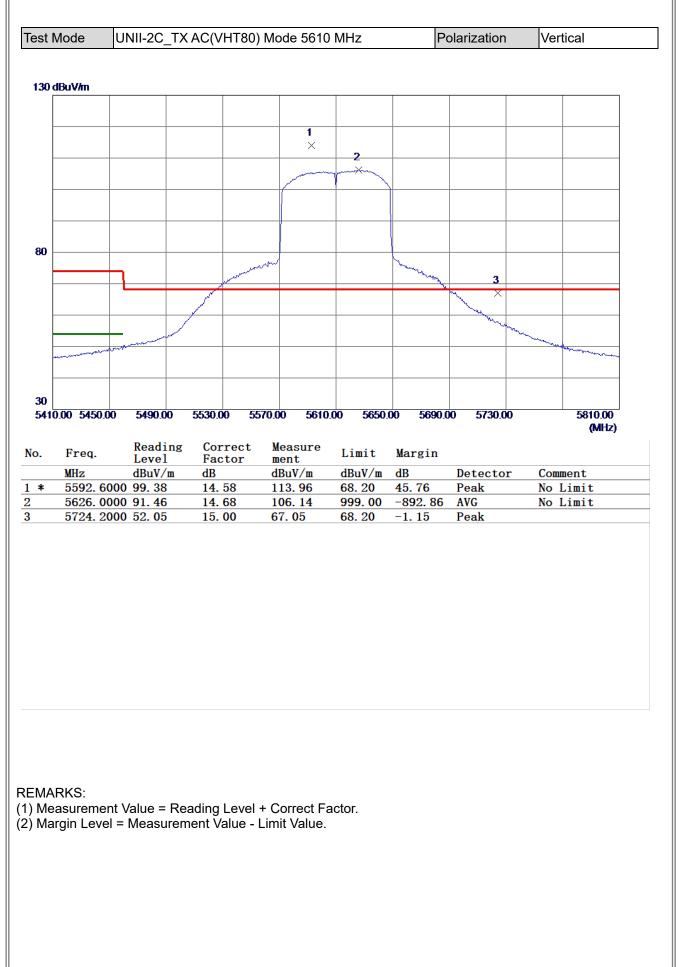




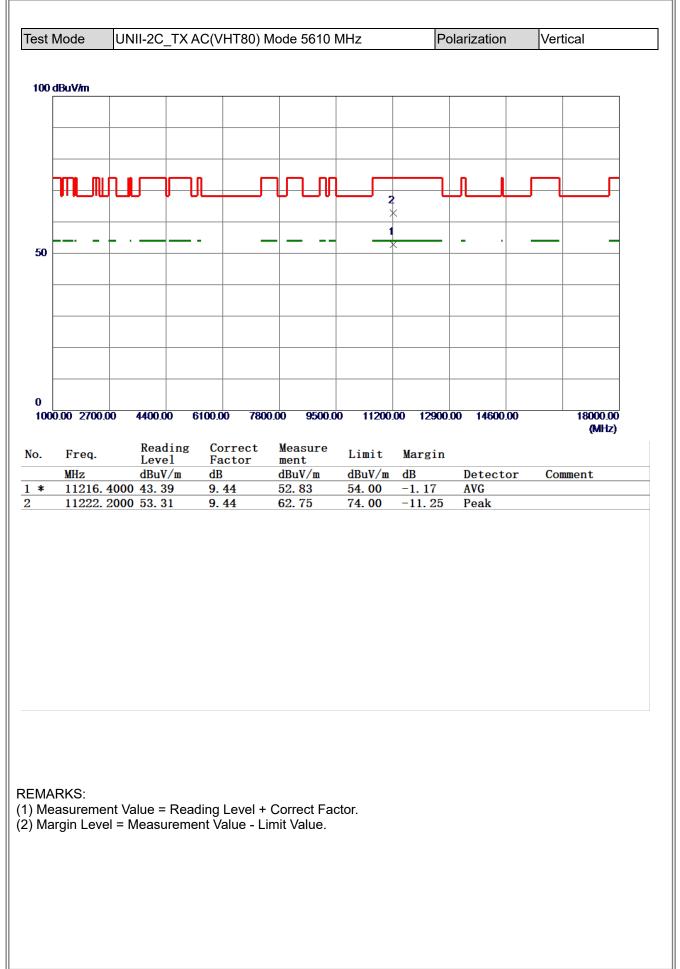




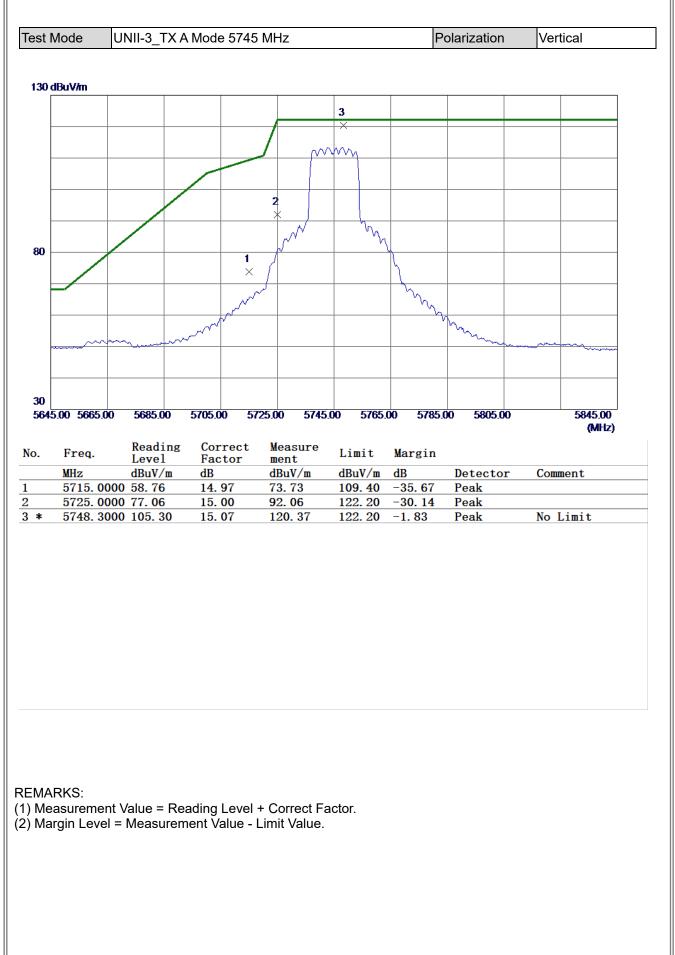












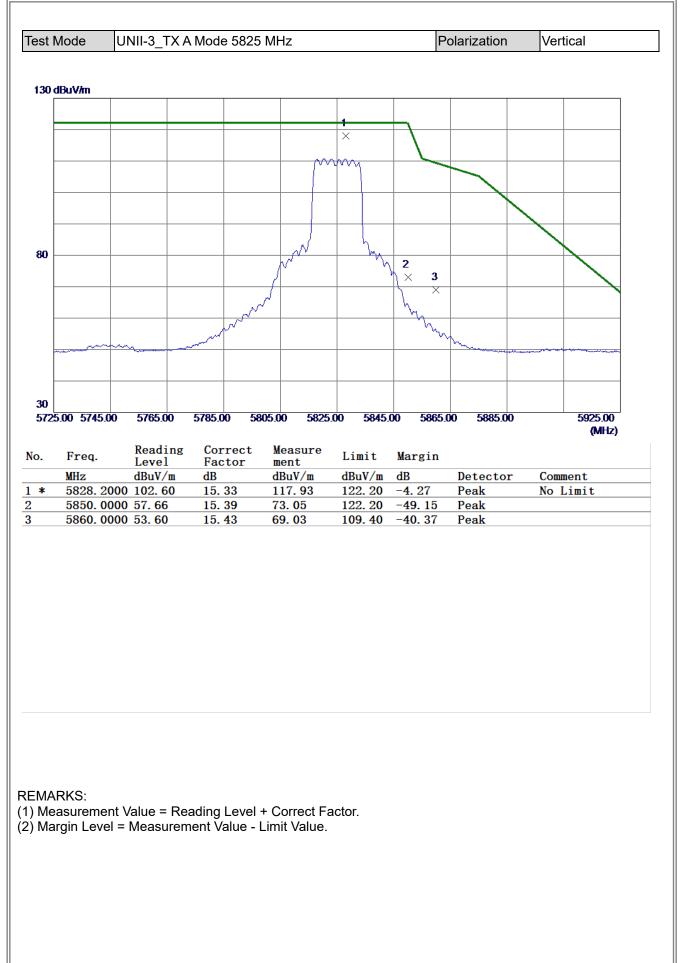




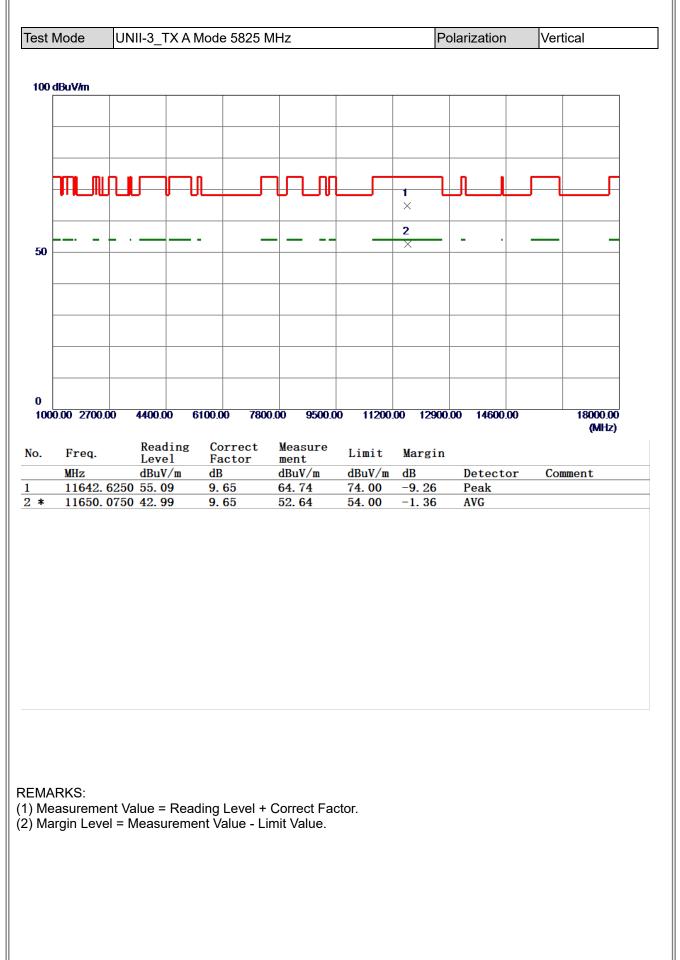




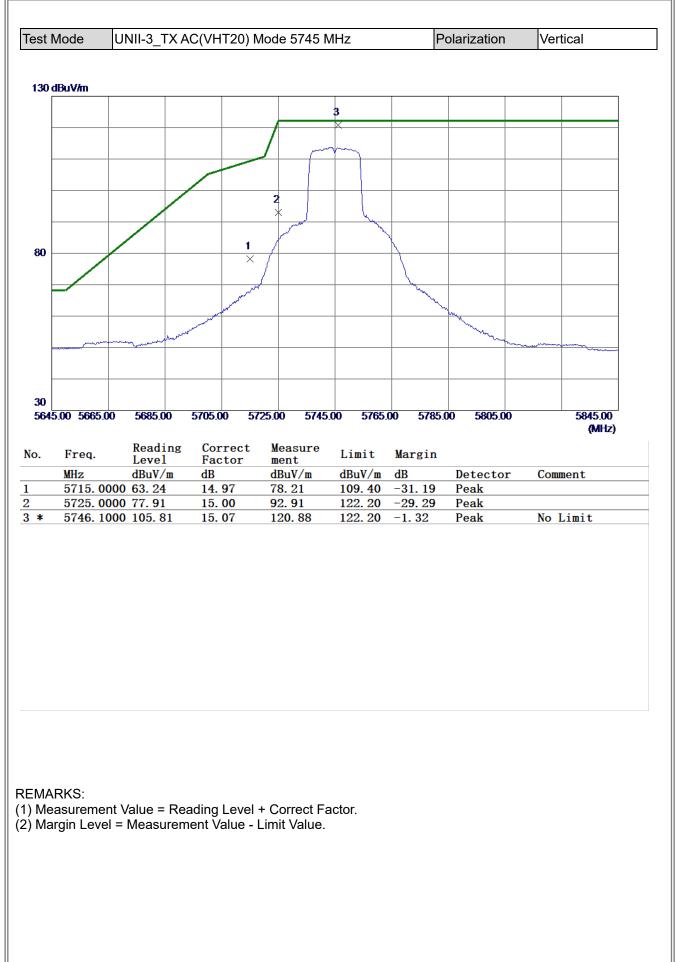
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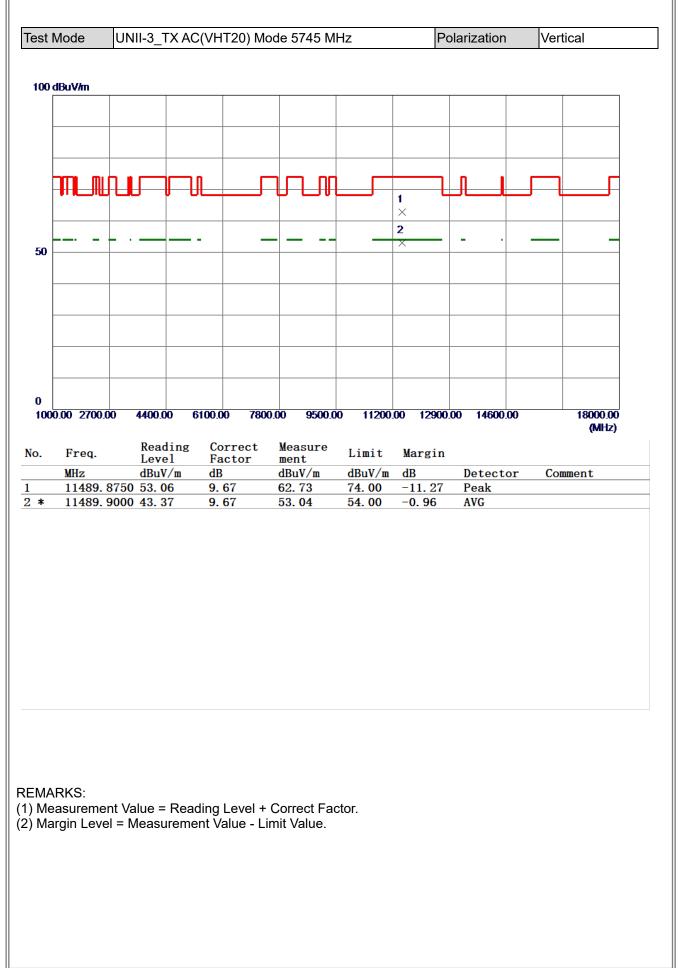




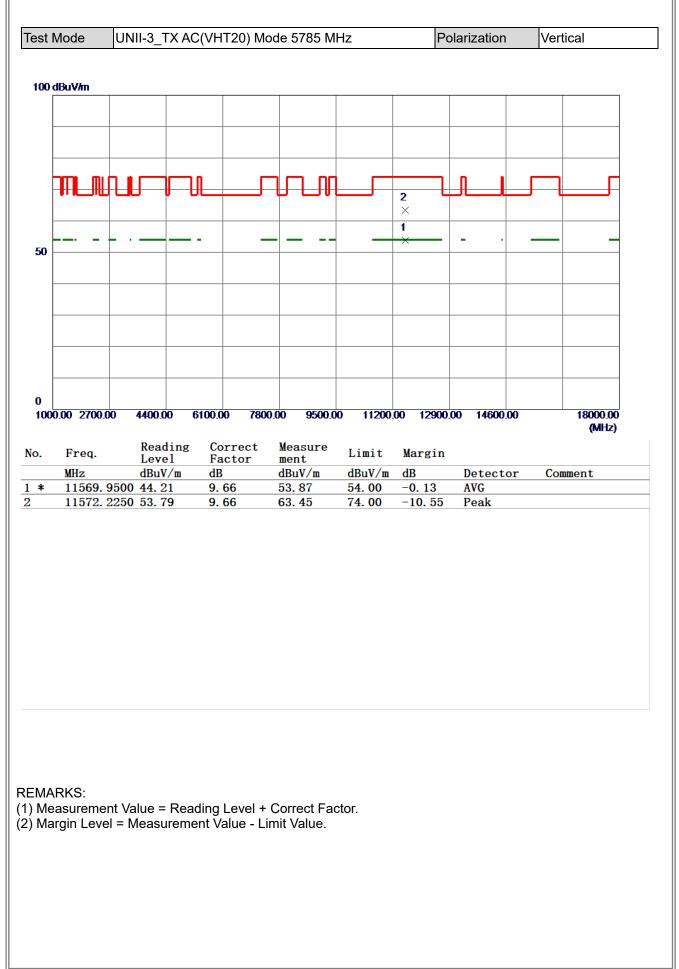




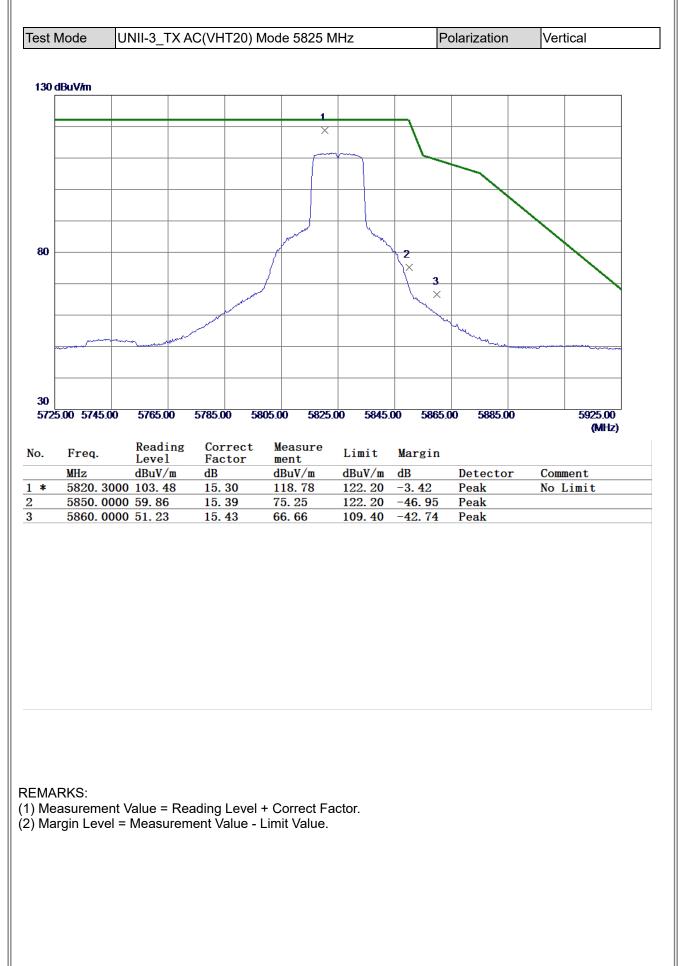




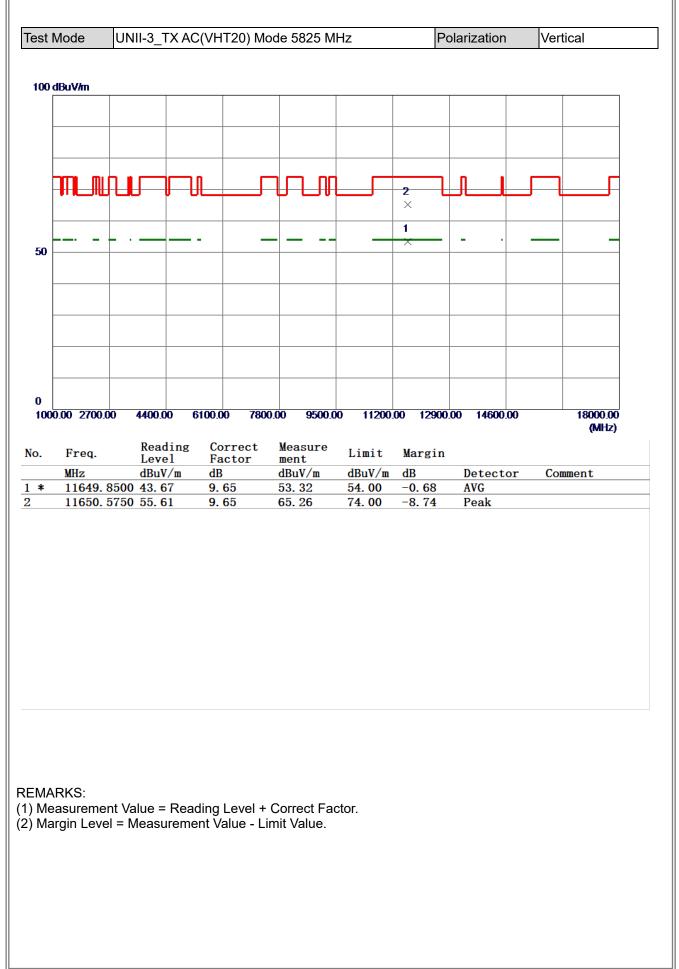




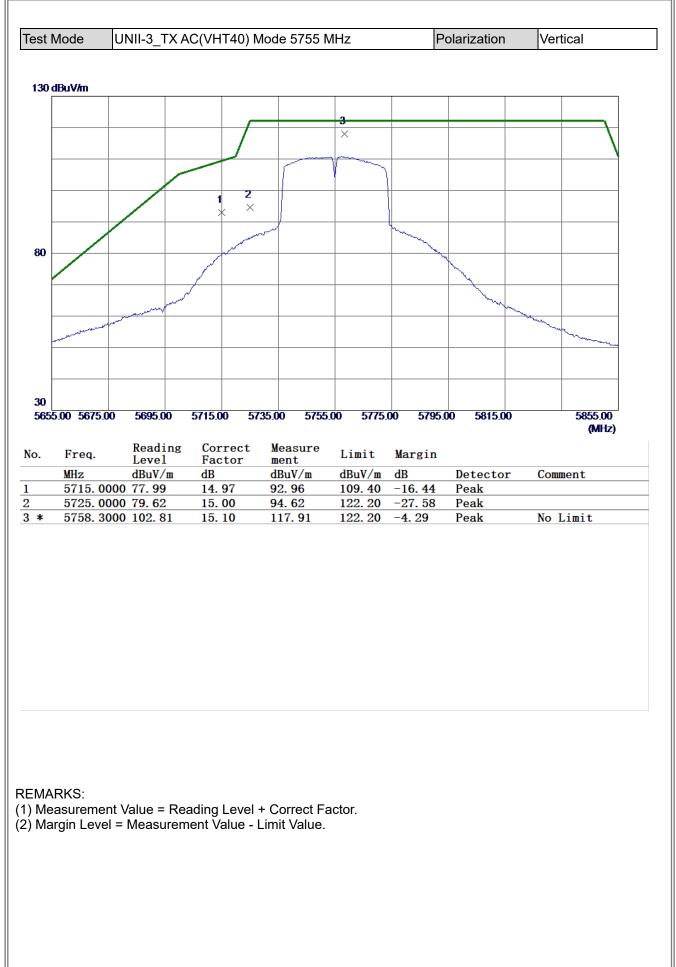




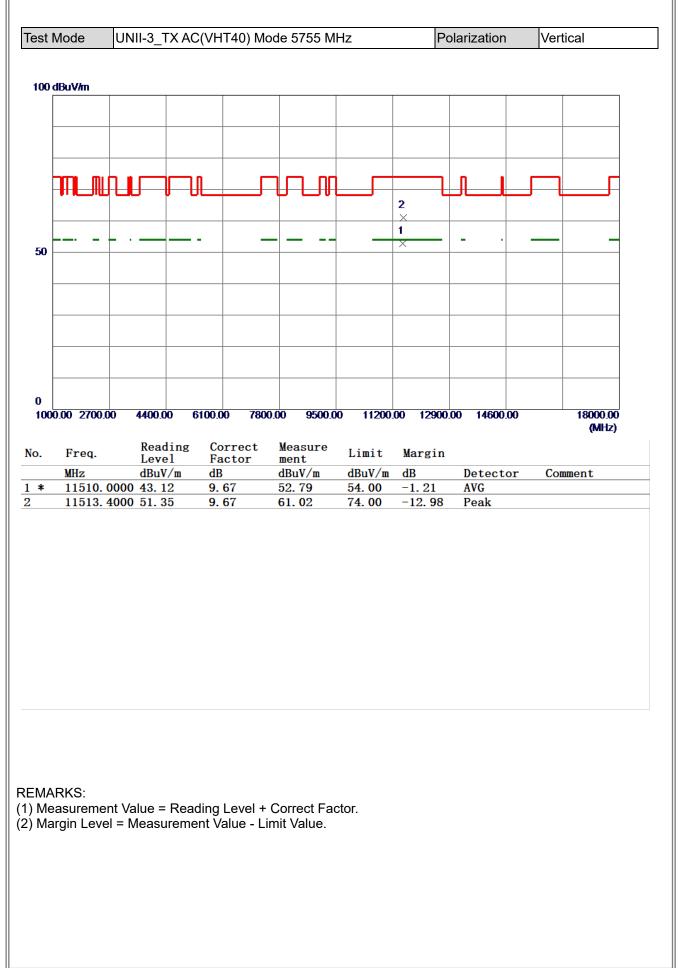




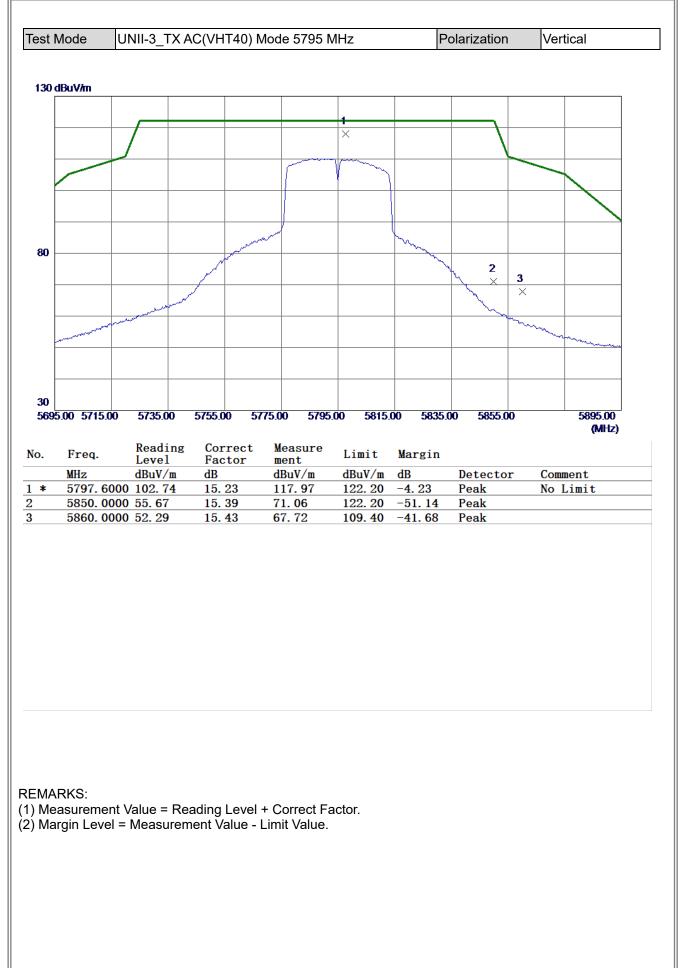




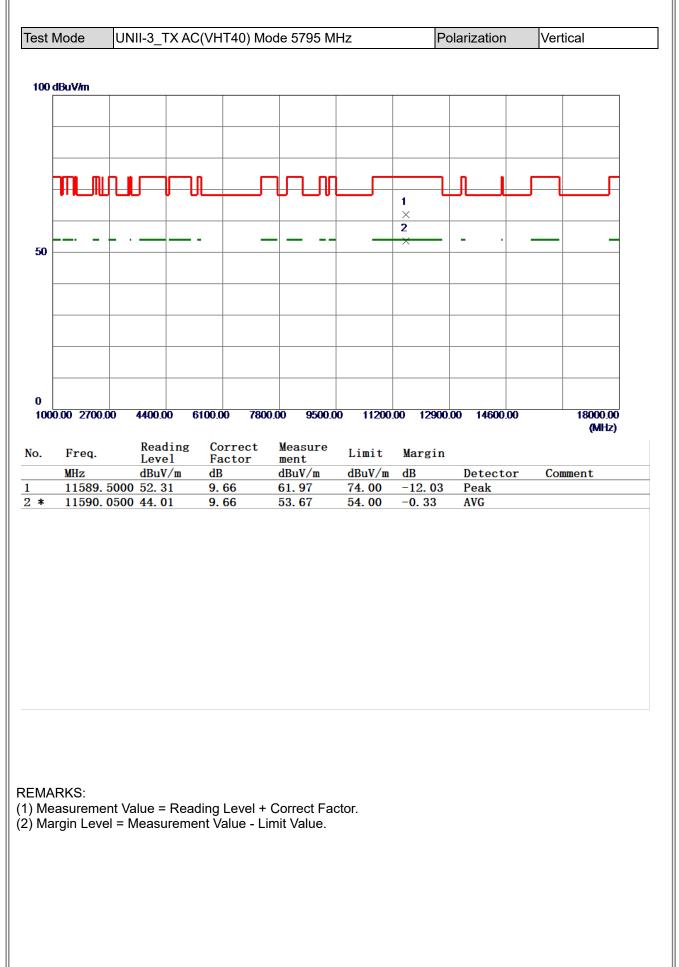




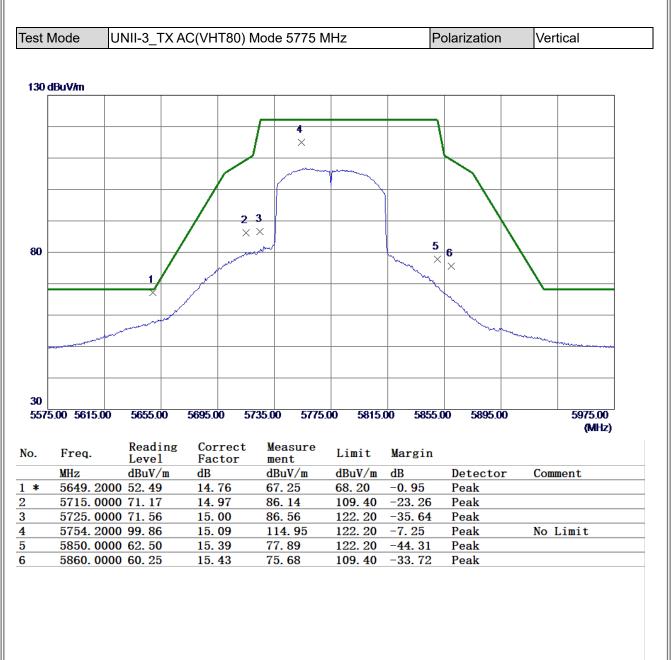






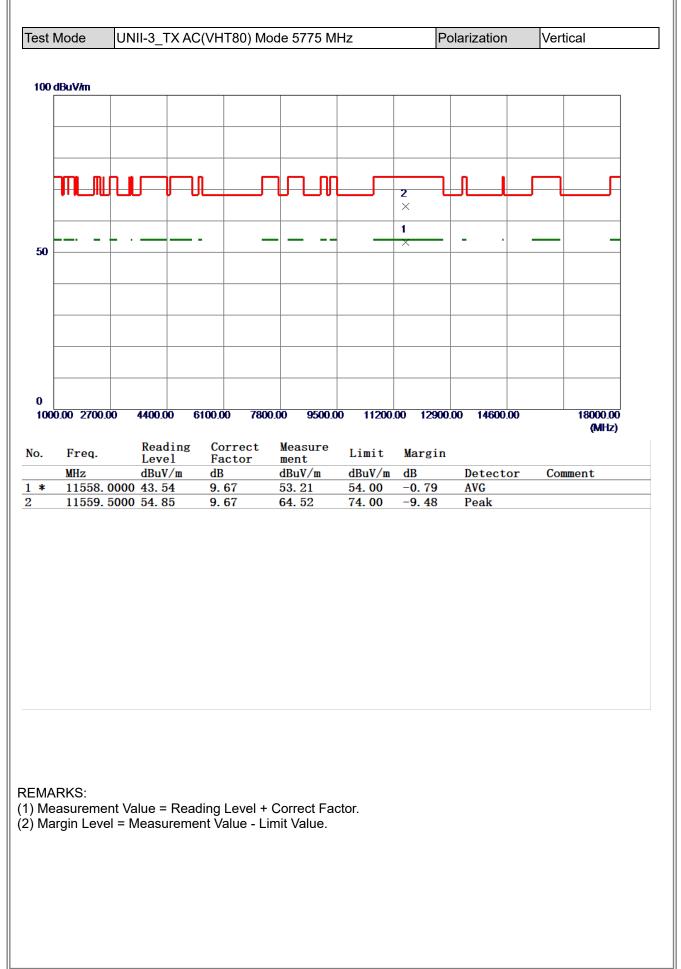




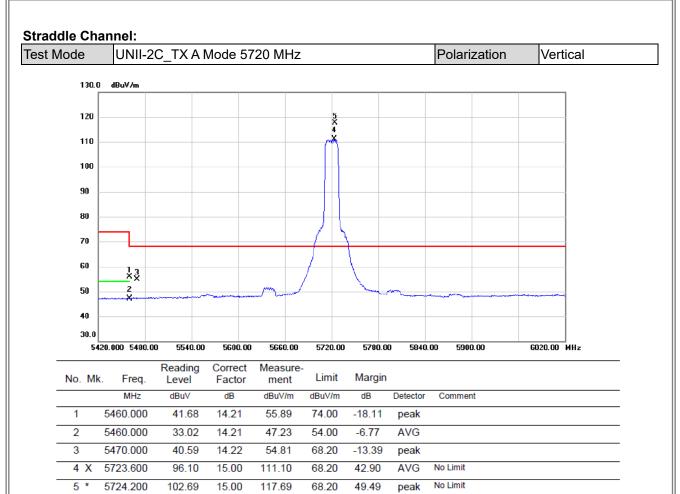


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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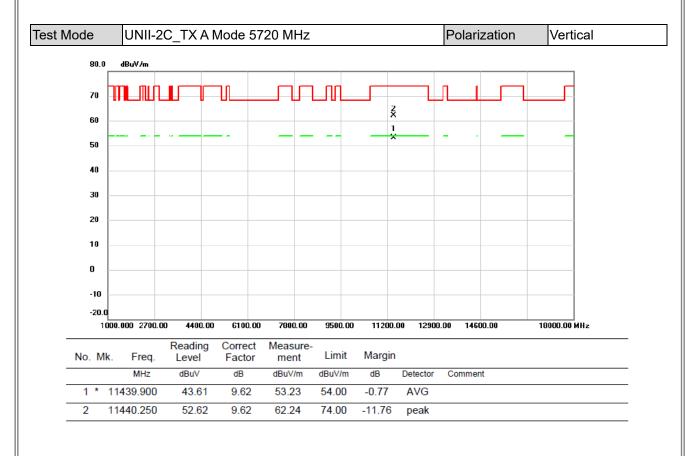


REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

BIL



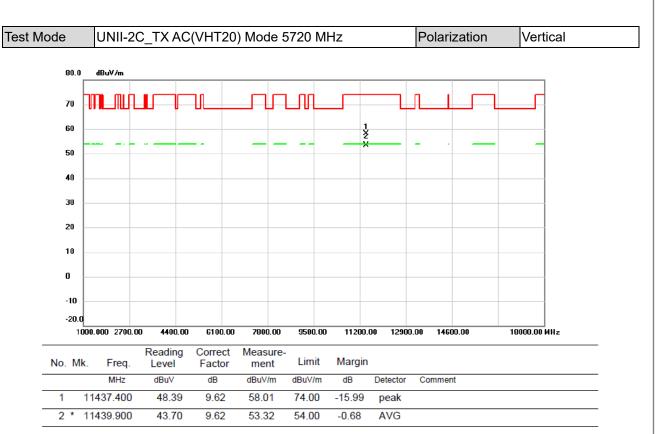
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



Mode	e UNI	I-2C_TX A	C(VHT2	0) Mode	5720 Mł	Ηz		Polarization	Vertical
130.0 Г	dBu∀/m								
120					4 ×				
110					5				
100									
90									
80					[
70					(
60	13 XX					$\left\{ + \right\}$			
50	2 X		~	s	/		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
40									
30.0 54	20.000 5480.00	D 5540.00	5600.00	5660.00	5720.00	5780.0	0 5840	0.00 5900.00	6020.00 MHz
lo. Mk	. Freq.	Reading Level	Correct Factor	Measure ment	- Limit	Margin	1		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
1	5460.000	39.96	14.21	54.17	74.00	-19.83	peak		
2	5460.000	32.81	14.21	47.02	54.00	-6.98	AVG		
2	5470.000	39.85	14.22	54.07	68.20	-14.13	peak		
3									

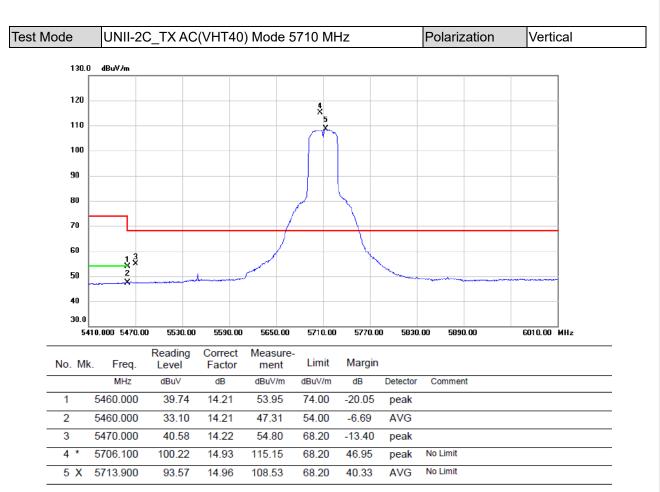
(1) Measurement Value = Reading Level + Correct Factor.
(2) Margin Level = Measurement Value - Limit Value.





- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

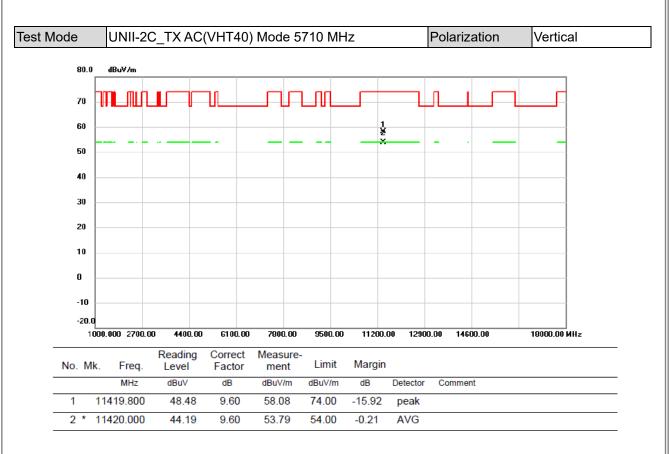




(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

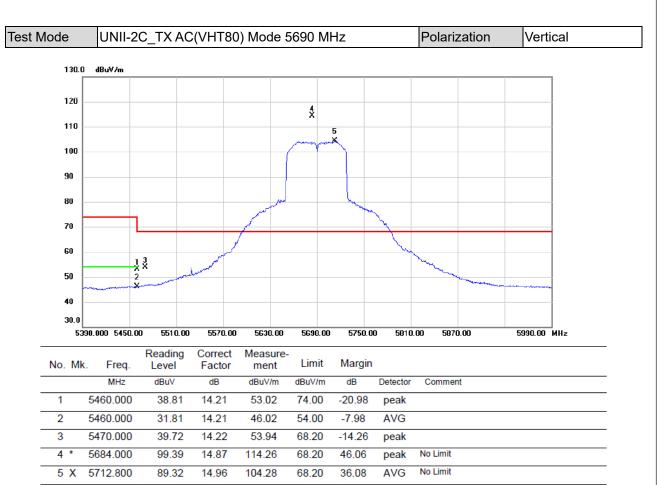




(1) Measurement Value = Reading Level + Correct Factor.

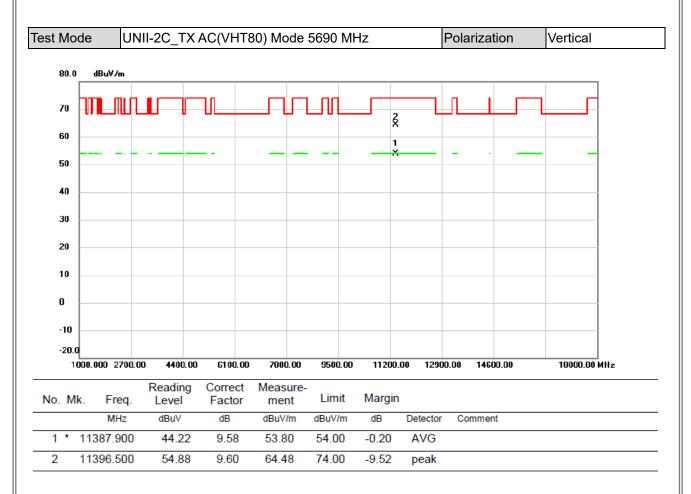
(2) Margin Level = Measurement Value - Limit Value.





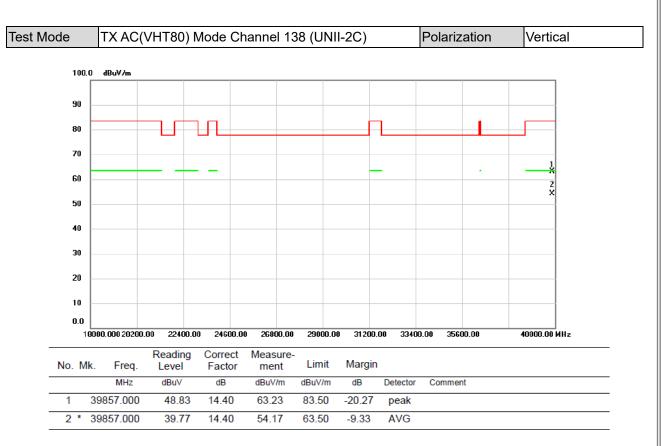
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





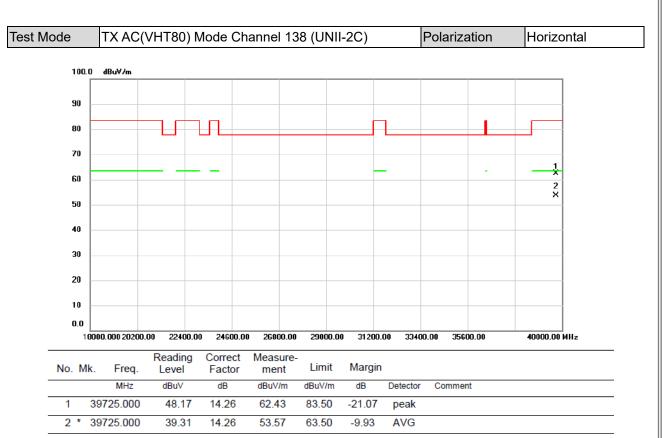
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



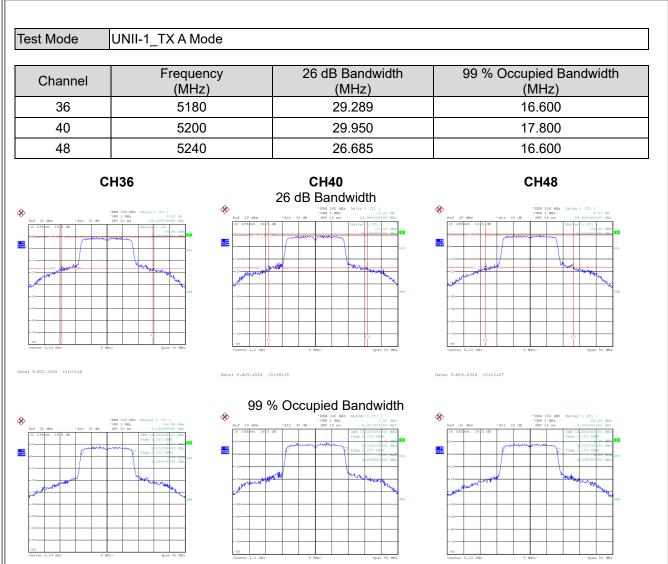


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



APPENDIX E - BANDWIDTH





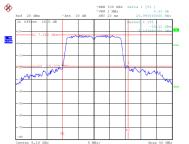
Date: 9.NOV.2024 15:09:48

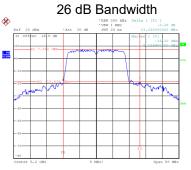
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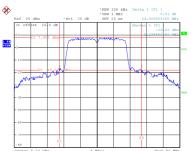
Date: 9.NOV.2024 15:12:53



Test Mode UNII-1_TX AC(VHT20) Mode Frequency 26 dB Bandwidth 99 % Occupied Bandwidth Channel (MHz) (MHz) (MHz) 36 5180 20.990 17.800 5200 23.290 17.800 40 48 5240 24.889 17.800 **CH36 CH40 CH48** 26 dB Bandwidth 8 Ø *REW 300 kHz *VEW 1 MHz

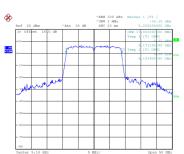






Date: 9.NOV.2024 15:26

Date: 9.NOV.2024 15:26:02

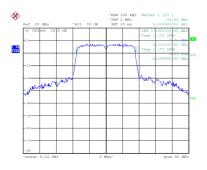


Date: 9.NOV.2024 15:27:38



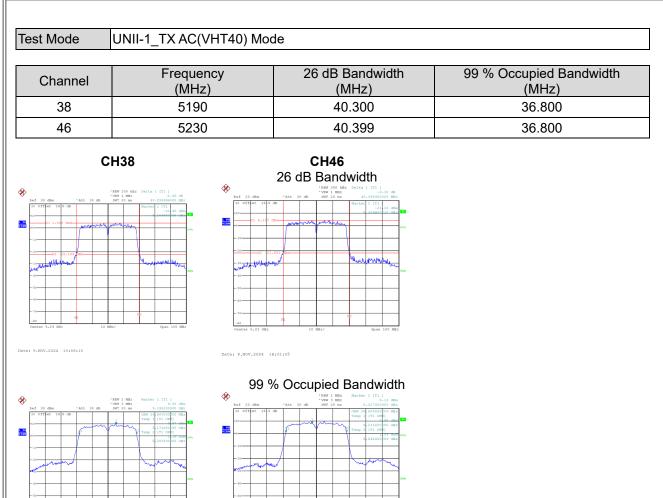
Date: 9.NOV.2024 15:29:43

Date: 9.NOV.2024 15:29:09



Date: 9.NOV.2024 15:27:06





Date: 9.NOV.2024 15:57:17

Date: 9.NOV.2024 16:00:31



<page-header></page-header>	Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
<figure></figure>	42	5210	167.196	76.400
		(MHz) 5210	<figure><figure><figure><figure></figure></figure></figure></figure>	(MHz)