



FCC Radio Test Report

FCC ID: 2BCGWEAP610GPDT

This report concerns: Original Grant

Project No.	:	2401G094
Equipment	:	AX1800 Desktop Wi-Fi 6 GPON Access Point
Brand Name	:	tp-link
Test Model	:	EAP610GP-Desktop
Series Model	:	NA
Applicant	:	TP-LINK CORPORATION PTE. LTD.
Address	:	7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987
Manufacturer	:	TP-LINK CORPORATION PTE. LTD.
Address	:	7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987
Date of Receipt	:	Jan. 18, 2024
Date of Test	:	Jan. 18, 2024 ~ Mar. 14, 2024
Issued Date	:	Mar. 19, 2024
Report Version	:	R00
Test Sample	:	Engineering Sample No.: SSL202401186 for radiated and conducted emissions, SSL202401187 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.

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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.



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REPORT ISSUED HISTORY

		REPORT ISSUED HISTORY		
Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2401G094	R00	Original Report.	Mar. 19, 2024	Valid
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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 NVLAP: 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, Subpart E					
Standard(s) Section	Test Item Test Res		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	APPENDIX E	PASS		
15.407(a)	Maximum Output Power	APPENDIX F	PASS		
15.407(a)	Power Spectral Density	APPENDIX G	PASS		
15.407(g)	Frequency Stability	APPENDIX H	PASS		
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 permanently attached antenna were considered sufficient to comply with the provisions of 15.203.
- (3) 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.
- (4) For UNII-1 this device was functioned as a
 - Outdoor access point device
 - \boxtimes Indoor access point device
 - Fixed point-to-point access points device
 - Client device



2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

For Radiated Emissions&Conducted Emissions&Output Power items: No. 3 Jinshagang 1st Rd. Shixia, Dalang Town, Dongguan City, Guangdong 523792.

BTL's Registration Number for FCC: 162128

BTL's Designation Number for FCC: CN5042

For other items: Room 108, Building 2, No. 1, Yile Road, Songshan Lake Zone, Dongguan City, Guangdong 523000.

BTL's Registration Number for FCC: 568794

BTL's Designation Number for FCC: CN5041

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

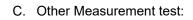
B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	<i>U</i> ,(dB)
DG-CB01	CISPR	9kHz ~ 30MHz	2.36

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

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

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



3

Test Item	Uncertainty
Bandwidth	3.8 %
Maximum Output Power	1.3 dB
Power Spectral Density	0.86 dB
Frequency Stability	56.46Hz
Temperature	0.46 °C
Humidity	1.3 %

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	19°C	28%	AC 120V/60Hz	Hayden Chen	Jan. 25, 2024
Radiated Emissions-9kHz to 30MHz	20°C	52%	AC 120V/60Hz	Hayden Chen	Jan. 26, 2024
Radiated Emissions-30MHz to 1000MHz	23°C	43%	AC 120V/60Hz	Allen Tong	Jan. 31, 2024
Dedicted Enviroisme Above 4000 Mile	23°C	43-45%	AC 120V/60Hz	Allen Tong	Jan. 31, 2024~ Feb. 01, 2024
Radiated Emissions-Above 1000 MHz	23°C	50%	AC 120V/60Hz	Jensen Zhou	Mar. 05, 2024
	25°C	41%	AC 120V/60Hz	Allen Tong	Mar. 14, 2024
Bandwidth	22-23°C	51-57%	AC 120V/60Hz	Tember Zhuang	Feb. 24, 2024
Maximum Output Power	20-23°C	49-51%	AC 120V/60Hz	Oliver Wang	Jan. 30, 2024~ Mar. 01, 2024
Power Spectral Density	22-23°C	51-57%	AC 120V/60Hz	Tember Zhuang	Feb. 24, 2024
Frequency Stability	Normal & Extreme	51-57%	Normal & Extreme	Tember Zhuang	Feb. 24, 2024



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	AX1800 Desktop Wi-Fi 6 GPON Access Point
Brand Name	tp-link
Test Model	EAP610GP-Desktop
Series Model	N/A
Model Difference(s)	N/A
Software Version	1.0
Hardware Version	1.0
Power Source	DC Voltage supplied from AC adapter.
	Model:T535081-2B4
Power Rating	I/P:100-240V ~ 50/60Hz 1.2A O/P:53.5V 0.81A
Operation Frequency Band(s)	UNII-1: 5150 MHz ~ 5250 MHz
	UNII-3: 5725 MHz ~ 5850 MHz
Modulation Type	IEEE 802.11a/n/ac: OFDM
	IEEE 802.11ax: OFDMA
	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
	IEEE 802.11ax: up to 1201 Mbps
Maximum Output Power _UNII-1 Non Beamforming	IEEE 802.11ax(HE20): 25.37 dBm (0.3443 W)
Maximum Output Power	IEEE 802.11ac(VHT80): 25.52 dBm (0.3565 W)
_UNII-3 Non Beamforming	
Maximum Output Power	IEEE 802.11ax(HE20): 25.00 dBm (0.3162 W)
_UNII-1 Beamforming	
Maximum Output Power	IEEE 802.11ac(VHT80): 25.19 dBm (0.3304 W)
_UNII-3 Beamforming	

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 802.1 IEEE 802.11n(HT20) IEEE 802.1 IEEE 802.11ac(VHT20) IEEE 802.1 IEEE 802.11ax(HE20) IEEE 802.1		1ac(VHT40)	IEEE 802.1 ⁻ IEEE 802.1		
UNII-1		UNII-1		UNII-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 802.11ax(HE20)		IEEE 802.11n(HT40) IEEE 802.11ac(VHT40) IEEE 802.11ax(HE40)		IEEE 802.11ac(VHT80) IEEE 802.11ax(HE80)	
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.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	tp-link	3101506768	Dipole	IPEX	2
2	tp-link	3101506769	Dipole	IPEX	2

Note:

1) 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. 2) Beamforming Gain is 3dB, so the Directional gain=3+2=5 dBi.

4. Table for Antenna Configuration:

For Non Beamforming:

Operating Mode	2TX
TX Mode	217
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)
IEEE 802.11ax(HE20)	V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE40)	V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE80)	V (Ant. 1 + Ant. 2)



For Beamforming:

r er Beannenning.	
Operating Mode	2TX
TX Mode	
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)
IEEE 802.11ax(HE20)	V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE40)	V (Ant. 1 + Ant. 2)
IEEE 802.11ax(HE80)	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 AX(HE20) Mode Channel 36/40/48 (UNII-1)
Mode 6	TX AX(HE40) Mode Channel 38/46 (UNII-1)
Mode 7	TX AX(HE80) Mode Channel 42 (UNII-1)
Mode 8	TX A Mode Channel 149/157/165 (UNII-3)
Mode 9	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)
Mode 10	TX AC(VHT40) Mode Channel 151/159 (UNII-3)
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)
Mode 12	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)
Mode 13	TX AX(HE40) Mode Channel 151/159 (UNII-3)
Mode 14	TX AX(HE80) Mode Channel 155 (UNII-3)

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 11	TX AC(VHT80) Mode Channel 155 (UNII-3)

	Radiated Emissions Test - Below 1GHz
Final Test Mode	Description
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)



Rad	Radiated Emissions Test - Above 1GHz_Non Beamforming		
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 AX(HE20) Mode Channel 36/40/48 (UNII-1)		
Mode 6	TX AX(HE40) Mode Channel 38/46 (UNII-1)		
Mode 7	TX AX(HE80) Mode Channel 42 (UNII-1)		
Mode 8	TX A Mode Channel 149/157/165 (UNII-3)		
Mode 9	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)		
Mode 10	TX AC(VHT40) Mode Channel 151/159 (UNII-3)		
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)		
Mode 12	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)		
Mode 13	TX AX(HE40) Mode Channel 151/159 (UNII-3)		
Mode 14	TX AX(HE80) Mode Channel 155 (UNII-3)		

Output Power Test_Non Beamforming		
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 AX(HE20) Mode Channel 36/40/48 (UNII-1)	
Mode 6	TX AX(HE40) Mode Channel 38/46 (UNII-1)	
Mode 7	TX AX(HE80) Mode Channel 42 (UNII-1)	
Mode 8	TX A Mode Channel 149/157/165 (UNII-3)	
Mode 9	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)	
Mode 10	TX AC(VHT40) Mode Channel 151/159 (UNII-3)	
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)	
Mode 12	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)	
Mode 13	TX AX(HE40) Mode Channel 151/159 (UNII-3)	
Mode 14	TX AX(HE80) Mode Channel 155 (UNII-3)	



Output Power Test_Beamforming		
Final Test Mode Description		
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 AX(HE20) Mode Channel 36/40/48 (UNII-1)	
Mode 6	TX AX(HE40) Mode Channel 38/46 (UNII-1)	
Mode 7	TX AX(HE80) Mode Channel 42 (UNII-1)	
Mode 9	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)	
Mode 10	TX AC(VHT40) Mode Channel 151/159 (UNII-3)	
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)	
Mode 12	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)	
Mode 13	TX AX(HE40) Mode Channel 151/159 (UNII-3)	
Mode 14	TX AX(HE80) Mode Channel 155 (UNII-3)	

Other Conducted Test_Non Beamforming		
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 AX(HE20) Mode Channel 36/40/48 (UNII-1)	
Mode 6	TX AX(HE40) Mode Channel 38/46 (UNII-1)	
Mode 7	TX AX(HE80) Mode Channel 42 (UNII-1)	
Mode 8	TX A Mode Channel 149/157/165 (UNII-3)	
Mode 9	TX AC(VHT20) Mode Channel 149/157/165 (UNII-3)	
Mode 10	TX AC(VHT40) Mode Channel 151/159 (UNII-3)	
Mode 11	TX AC(VHT80) Mode Channel 155 (UNII-3)	
Mode 12	TX AX(HE20) Mode Channel 149/157/165 (UNII-3)	
Mode 13	TX AX(HE40) Mode Channel 151/159 (UNII-3)	
Mode 14	TX AX(HE80) 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 155 (UNII-3) 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) 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 VHT40.
- (5) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.

(6) IEEE 802.11ax mode only supports full RU, so only the full RU is evaluated and measured inside report.



- (7) The measurements for Output Power are tested, the Non Beamforming and Beamforming are recorded in the report. The worst case is Non Beamforming and only the worst case is documented for other test items.
- (8) For radiated emission above 1GHz test, The polarization of Vertical and Horizontal are evaluated, the worst case is recorded in the test report.

Non Beamforming			
UNII-1			
Test Software Version		QATool_Dbg 0.0.2.15	
Frequency (MHz)	5180	5200	5240
IEEE 802.11a	27.5	27.5	27.5
IEEE 802.11ac(VHT20)	27.5	27.5	27.5
IEEE 802.11ax(HE20)	27.5	27.5	27.5
Frequency (MHz)	5190	5230	
IEEE 802.11ac(VHT40)	24.5	27.5	
IEEE 802.11ax(HE40)	23.5	28	
Frequency (MHz)	5210		
IEEE 802.11ac(VHT80)	18		
IEEE 802.11ax(HE80)	20.5		

3.3 PARAMETERS OF TEST SOFTWARE

UNII-3			
Test Software Version		QATool_Dbg 0.0.2.15	
Frequency (MHz)	5745	5785	5825
IEEE 802.11a	30	29.5	29.5
IEEE 802.11ac(VHT20)	29.5	29.5	29.5
IEEE 802.11ax(HE20)	29.5	29.5	29.5
Frequency (MHz)	5755	5795	
IEEE 802.11ac(VHT40)	29.5	29.5	
IEEE 802.11ax(HE40)	30	30	
Frequency (MHz)	5775		
IEEE 802.11ac(VHT80)	31		
IEEE 802.11ax(HE80)	30.5		

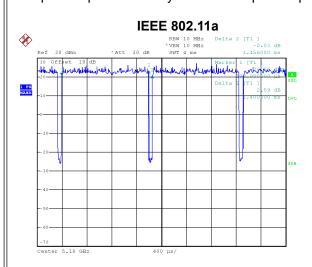
Beamforming			
UNII-1			
Test Software Version		QATool_Dbg 0.0.2.15	
Frequency (MHz)	5180	5200	5240
IEEE 802.11ac(VHT20)	27	27	27
IEEE 802.11ax(HE20)	27	27	27
Frequency (MHz)	5190	5230	
IEEE 802.11ac(VHT40)	24	27	
IEEE 802.11ax(HE40)	23	27.5	
Frequency (MHz)	5210		
IEEE 802.11ac(VHT80)	17.5		
IEEE 802.11ax(HE80)	20		

UNII-3				
Test Software Version		QATool_Dbg 0.0.2.15		
Frequency (MHz)	5745	5785	5825	
IEEE 802.11ac(VHT20)	29	29	29	
IEEE 802.11ax(HE20)	29	29	29	
Frequency (MHz)	5755	5795		
IEEE 802.11ac(VHT40)	29	29		
IEEE 802.11ax(HE40)	29.5	29.5		
Frequency (MHz)	5775			
IEEE 802.11ac(VHT80)	30.5			
IEEE 802.11ax(HE80)	30			



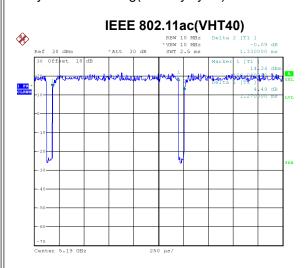
3.4 DUTY CYCLE

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.



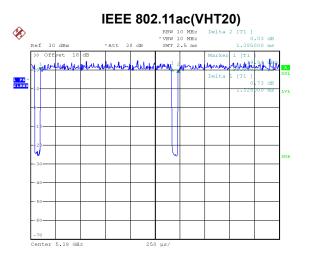


Duty cycle = 1.400 ms / 1.456 ms = 96.15% Duty Factor = 10 log(1 / Duty cycle) = 0.17



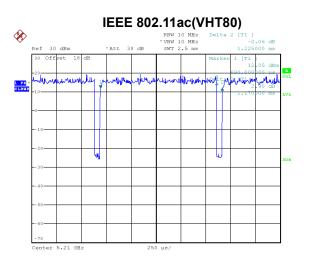
Date: 26.FEB.2024 20:51:09

Duty cycle = 1.270 ms / 1.330 ms = 95.49% Duty Factor = 10 log(1 / Duty cycle) = 0.20



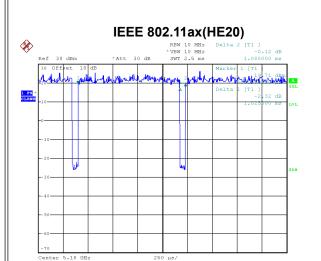
Date: 26.FEB.2024 20:52:47

Duty cycle = 1.325 ms / 1.385 ms = 95.67% Duty Factor = 10 log(1 / Duty cycle) = 0.19



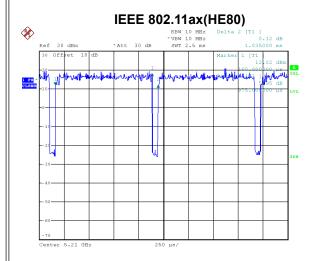
Date: 26.FEB.2024 20:52:08

Duty cycle = 1.170 ms / 1.225 ms = 95.51% Duty Factor = 10 log(1 / Duty cycle) = 0.20



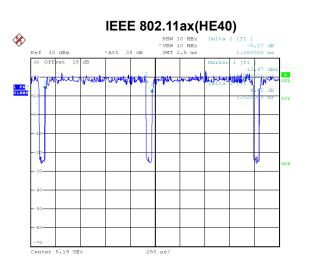
Date: 26.FEB.2024 20:52:56

Duty cycle = 1.025 ms / 1.080 ms = 94.91% Duty Factor = 10 log(1 / Duty cycle) = 0.23



Date: 26.FEB.2024 20:52:16

Duty cycle = 0.975 ms / 1.035 ms = 94.20% Duty Factor = 10 log(1 / Duty cycle) = 0.26



Date: 26.FEB.2024 20:51:18

Duty cycle = 1.020 ms / 1.080 ms = 94.44% Duty Factor = 10 log(1 / Duty cycle) = 0.25





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 714 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 755 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 787 Hz (Duty cycle < 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 855 Hz (Duty cycle < 98%).

For IEEE 802.11ax(HE20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 976 Hz (Duty cycle < 98%).

For IEEE 802.11ax(HE40):

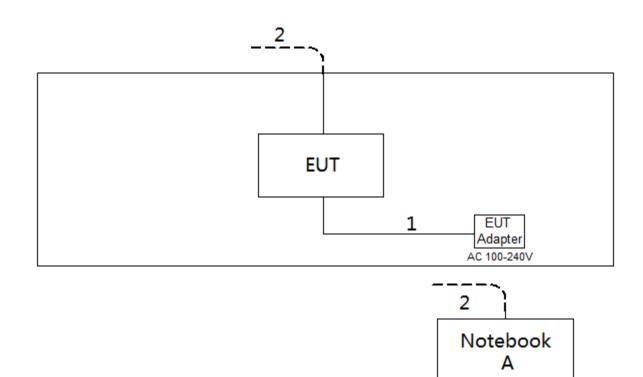
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 980 Hz (Duty cycle < 98%).

For IEEE 802.11ax(HE80):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1026 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	Notebook	Honor	14SER5 3500	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	1.5m
2	RJ45 Cable	NO	NO	10m

3.7 CUSTOMER INFORMATION DESCRIPTION

 The antenna gain and beamforming gain are provided by the manufacturer.
 Except for AC power line conducted emissions and radiated emissions, the results of all test items include cable losses. Part of the cable losses (18dB) are provided by the manufacturer, while the other parts of the cable losses are provided by the testing laboratory.



4. AC POWER LINE CONDUCTED EMISSIONS

4.1 LIMIT

Frequency	Limit (dBµV)		Limit (dBµV)	
(MHz)	Quasi-peak	Average		
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:

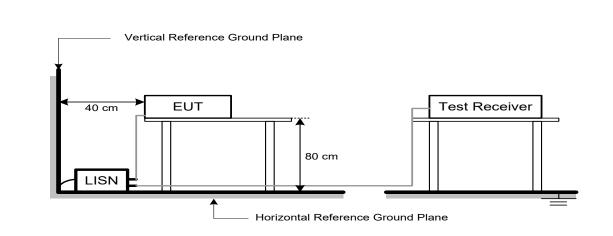
Receiver Parameter Start Frequency Stop Frequency		Setting		
		0.15 MHz		
		30 MHz		
	IF Bandwidth	9 kHz		

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)
	-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 =

(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.



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 and 1 m 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

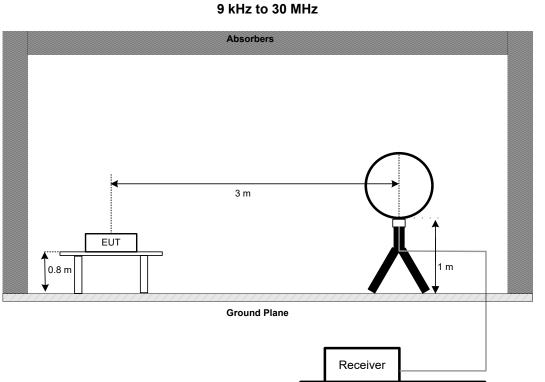
Receiver Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector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



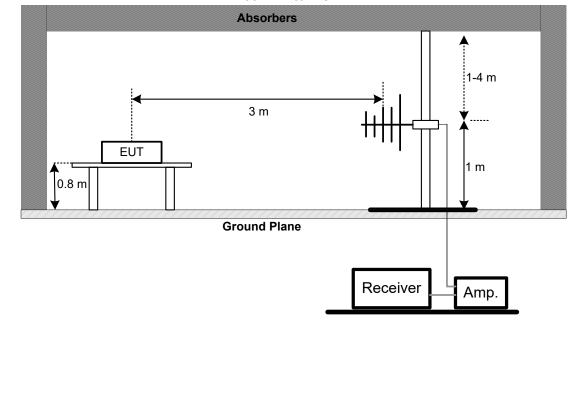
5.3 DEVIATION FROM TEST STANDARD

No deviation.

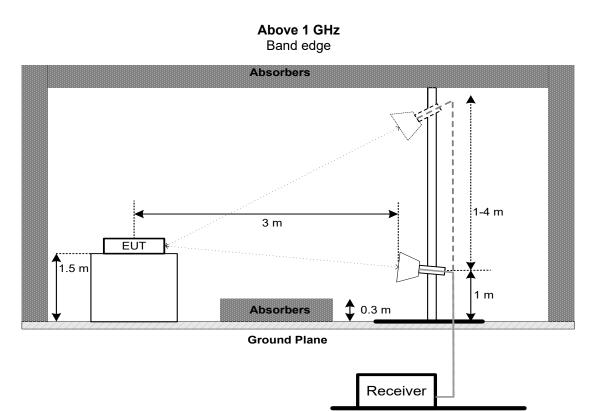
5.4 TEST SETUP



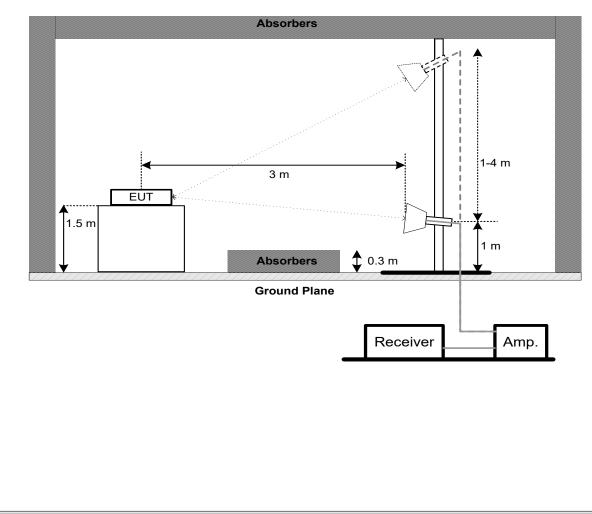
30 MHz to 1 GHz



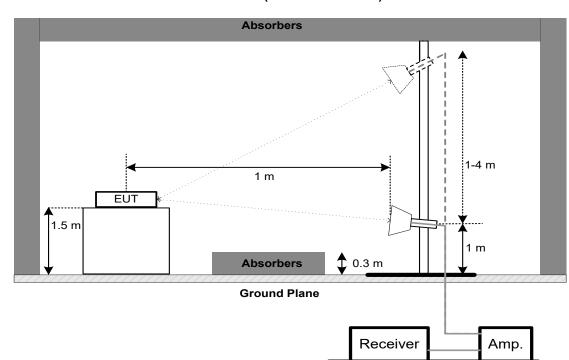




Harmonic (1 GHz to 18 GHz)



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)	26 dB Bandwidth	-	5150-5250
FCC 15.407(e)	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:

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
		1 Watt (30dBm)	5725-5850

Note:

a. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. In addition, the maximum power spectral density shall not exceed 17 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.

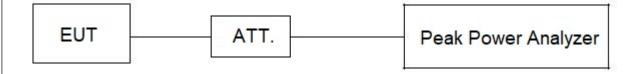
7.2 TEST PROCEDURE

- 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
		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:

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 18 dB, and the final offset is 18 + 7 = 25 dB when RBW=100kHz is used.

8.3 DEVIATION FROM STANDARD

No deviation.



8.4 TEST SETUP

EUT		SPECTRUM
	AII.	ANALYZER

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)
		An emission is maintained within the band of	5150-5250
FCC 15.407(g)	Frequency Stability	operation under all conditions of normal operation as specified in the users manual.	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

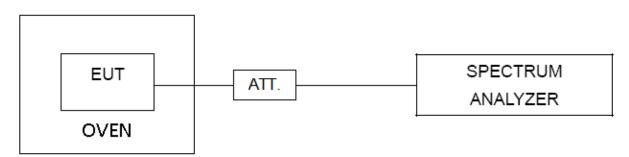
c. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value.

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	ESR3	103027	Jun. 16, 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	Apr. 01, 2024		
2	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 22, 2024		
3	Cable	N/A	RW2350-3.8A-NMB M-1.5M	N/A	Jun. 10, 2024		
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		
5	966 Chamber room	ETS	9*6*6	N/A	Jul. 11, 2024		

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	Jul. 04, 2024
5	Cable	RegalWay	LMR400-NMNM-3 m	N/A	Jul. 04, 2024
6	Cable	RegalWay	LMR400-NMNM-0. 5m	N/A	Jul. 04, 2024
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 17, 2024

For the test date: Jan. 31, 2024 ~ Feb. 01, 2024						
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	EMC INSTRUMENT	EMC118A45SE	980888	Nov. 17, 2024	
3	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	Jun. 16, 2024	
4	Double Ridged Guide Antenna	ETS	3115	75789	May 31, 2024	
5	Cable	RegalWay	RWLP50-4.0A-SMSM -9M	N/A	Jan. 22, 2025	
6	Cable	RegalWay	RWLP50-2.6A-3.5M2. 92MRA-3M	N/A	Jan. 22, 2025	
7	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330-K	619413	Jul. 06, 2024	
8	Cable	RegalWay	RWLP50-2.6A-2.92M 2.92M-1.1M	N/A	Jul. 26, 2024	
9	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 26, 2024	
10	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun. 20, 2024	
11	966 Chamber room	CM	9*6*6	N/A	May 17, 2024	
12	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A	
13	Filter	STI	STI15-9912	N/A	Jun. 16, 2024	
14	Positioning Controller	MF	MF-7802	N/A	N/A	
15	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	

For the test date: Jan. 31, 2024 ~ Feb. 01, 2024

For the test date: Mar. 05, 2024 ~ Mar. 14, 2024

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	EMC INSTRUMENT	EMC118A45SE	980888	Nov. 17, 2024	
3	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	Jun. 16, 2024	
4	Double Ridged Guide Antenna	ETS	3115	75789	May 31, 2024	
5	Cable	RegalWay	RWLP50-4.0A-SMSM -12.5M	N/A	Feb. 19, 2025	
6	Cable	RegalWay	RWLP50-4.0A-NMRA SM-2.5M	N/A	Aug. 08, 2024	
7	Cable	RegalWay	RWLP50-4.0A-NMRA SMRA-0.8M	N/A	Aug. 08, 2024	
8	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330-K	619413	Jul. 06, 2024	
9	Cable	RegalWay	RWLP50-2.6A-2.92M 2.92M-1.1M	N/A	Jul. 26, 2024	
10	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 26, 2024	
11	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun. 20, 2024	
12	966 Chamber room	CM	9*6*6	N/A	May 17, 2024	
13	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A	
14	Filter	STI	STI15-9912	N/A	Jun. 16, 2024	
15	Positioning Controller	MF	MF-7802	N/A	N/A	
16	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	



Bandwidth & Power Spectral Density								
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.				
1	Spectrum Analyzer	R&S	FSP38	100852	Jun. 16, 2024			
2	Attenuator	RegalWay	RWA-201-S-10	N/A	Sep. 26, 2024			
3	Attenuator	RegalWay	RWA-201-S-6	N/A	Sep. 26, 2024			
4	Temperature Chamber	ESPEC CORP	SU-242	93018736	Jul. 07, 2024			
5	DC Block	N/A	N/A	N/A	N/A			

	Maximum Output Power									
Item	Kind of Equipment	Manufacturer	Type No. Serial No.		Calibrated until					
1	Peak Power Analyzer	Keysight	8990B	MY51000506	Jun. 17, 2024					
2	Wideband power sensor	Keysight	N1923A	MY58310004	Jun. 17, 2024					
3	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A					

	Frequency Stability									
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until					
1	Spectrum Analyzer	R&S	FSP38	100852	Jun. 16, 2024					
2	Attenuator	RegalWay	RWA-201-S-10	N/A	Sep. 26, 2024					
3	Measurement Software	BTL	BTL Conducted Test	N/A	N/A					
4	Attenuator	RegalWay	RWA-201-S-6	N/A	Sep. 26, 2024					
5	Temperature Chamber	ESPEC CORP	SU-242	93018736	Jul. 07, 2024					
6	DC Block	N/A	N/A	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.



11. EUT TEST PHOTOS





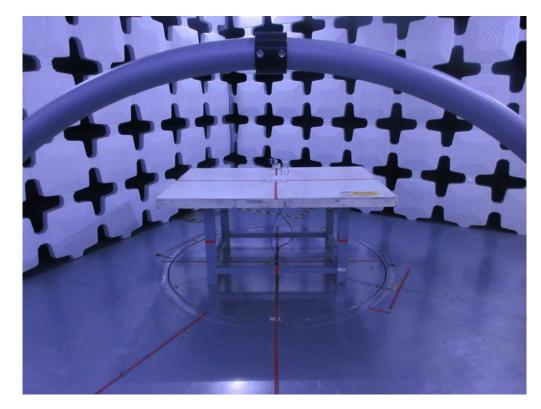
AC Power Line Conducted Emissions Test Photos

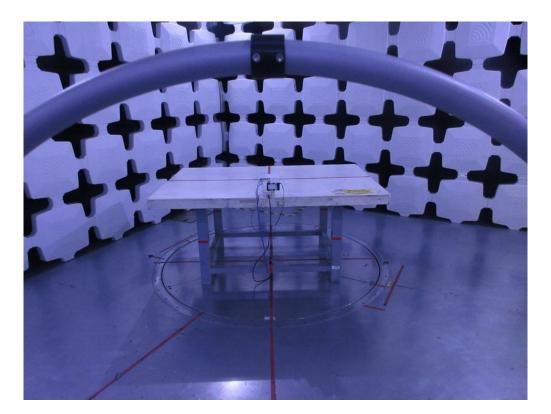




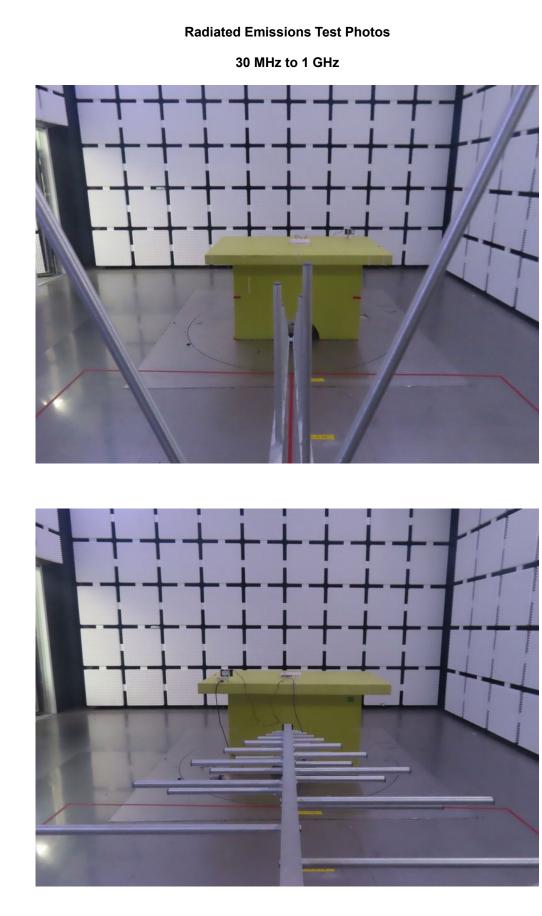
Radiated Emissions Test Photos

9 kHz to 30 MHz









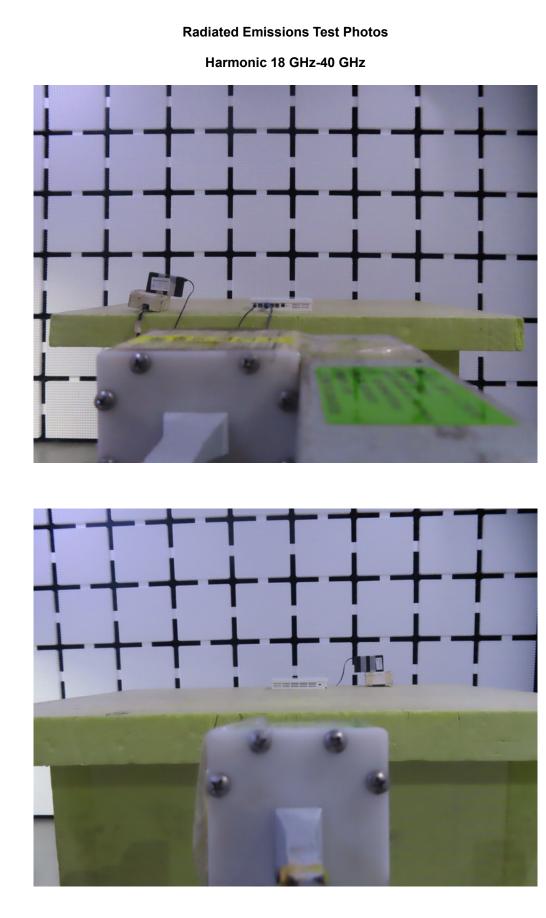






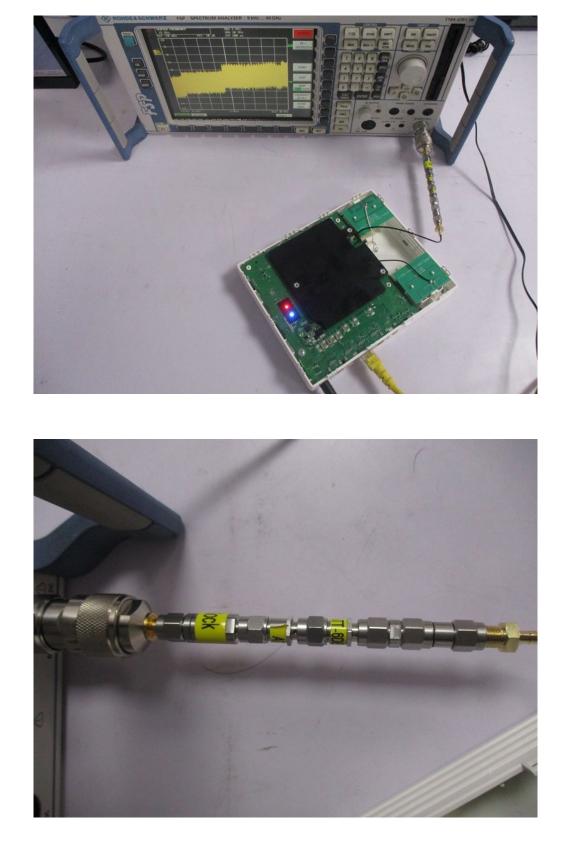
Radiated Emissions Test Photos







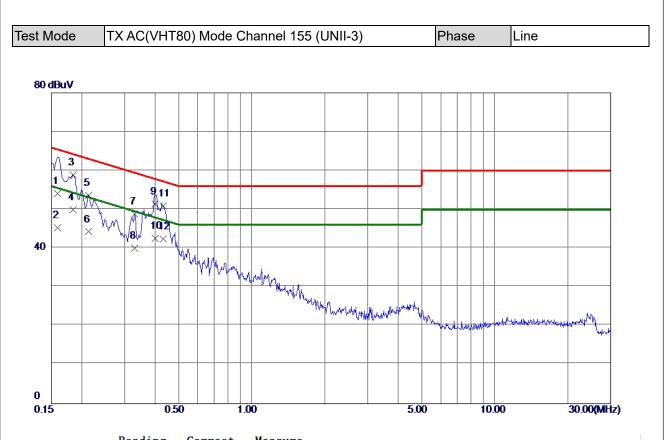
Conducted Test Photos





APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

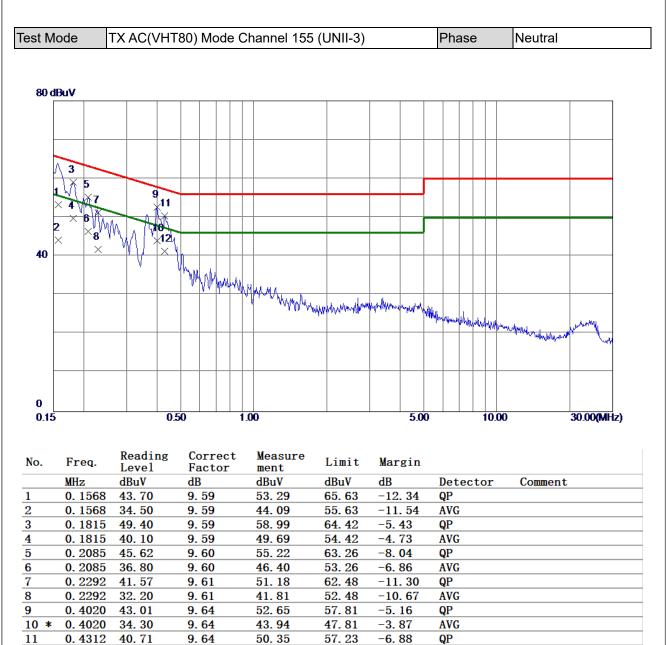




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1590	44. 30	9.74	54.04	65.52	-11. 48	QP	
2	0.1590	35.60	9.74	45.34	55.52	-10. 18	AVG	
3	0.1838	49.13	9.74	58.87	64.31	-5.44	QP	
4 *	0. 1838	40.10	9.74	49.84	54.31	-4.47	AVG	
5	0.2130	43.92	9.74	53.66	63.09	-9.43	QP	
6	0.2130	34. 50	9.74	44.24	53. 0 9	-8.85	AVG	
7	0.3300	39.00	9.77	48.77	59.4 5	-10.68	QP	
8	0.3300	30. 30	9.77	40.07	49.45	-9.38	AVG	
9	0.4020	41.60	9.77	51.37	57.81	-6.44	QP	
10	0.4020	32.80	9.77	42.57	47.81	-5.24	AVG	
11	0. 4335	41.13	9.78	50.9 1	57.19	-6.28	QP	
12	0. 4335	32.69	9.78	42.47	47.19	-4.72	AVG	

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





12

0.4312

31.60

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

9.64

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

47.23

-5.99

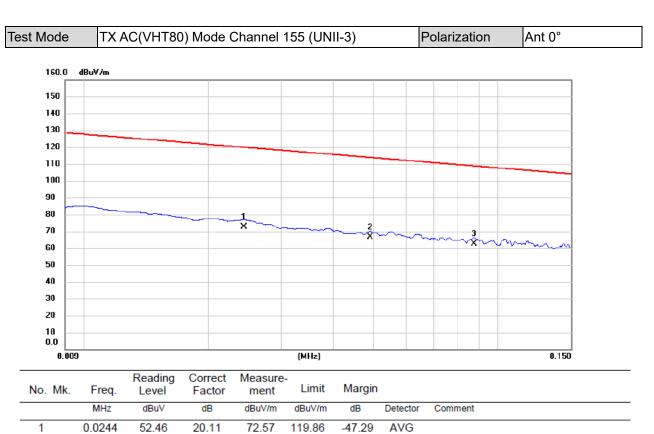
41.24

AVG



APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ





2

3 *

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

0.0492

0.0875

46.84

42.68

19.80

19.86

66.64

62.54

113.77

108.76

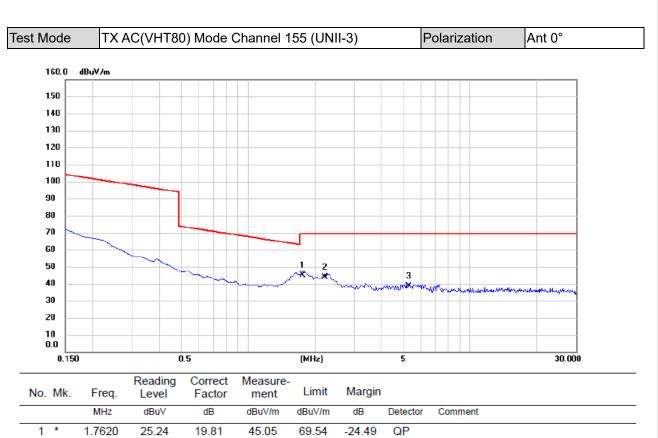
-47.13

-46.22

AVG

AVG





69.54

69.54

43.80

38.58

QP

QP

-25.74

-30.96

REMARKS:

2

3

2.2246

5.2842

23.99

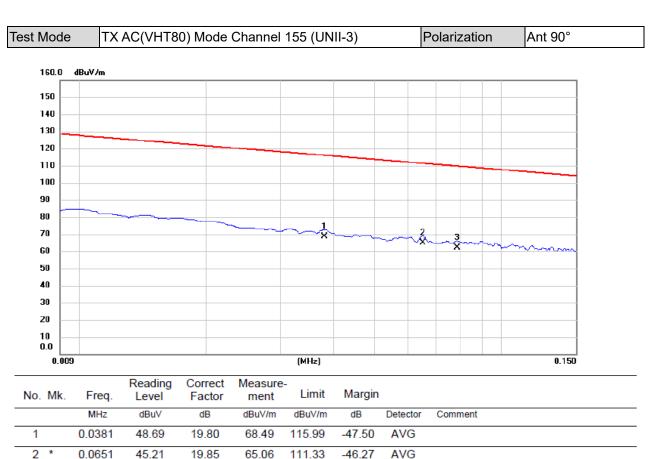
18.63

19.81

19.95

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





2 1

3

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

45.21

42.39

0.0784

19.85

19.89

65.06

62.28

111.33

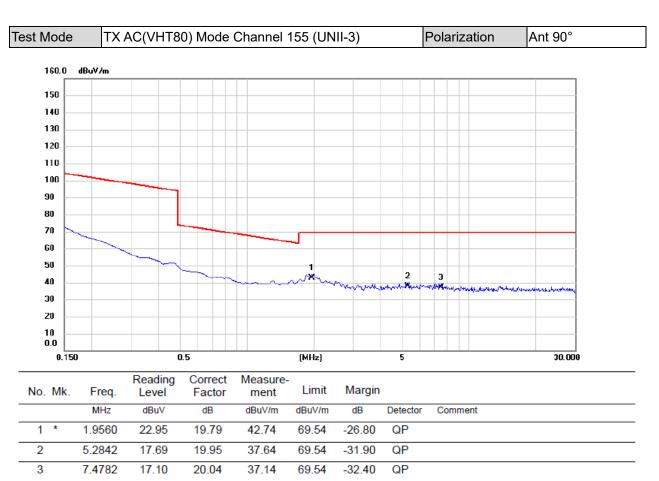
109.72

-46.27

-47.44

AVG



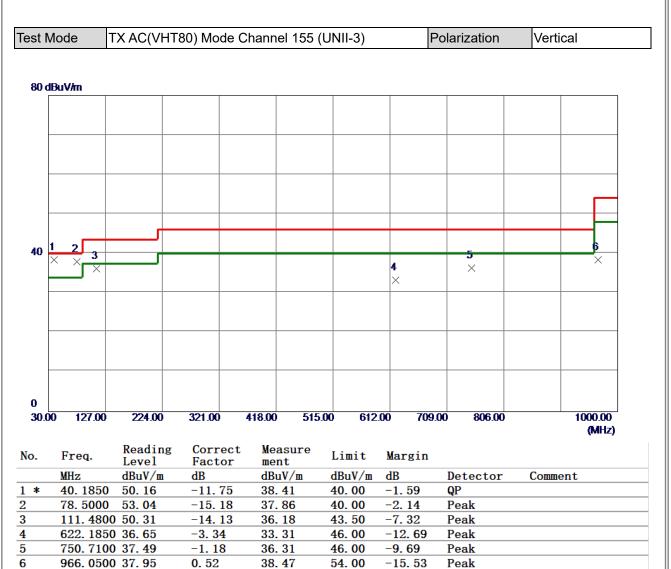


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



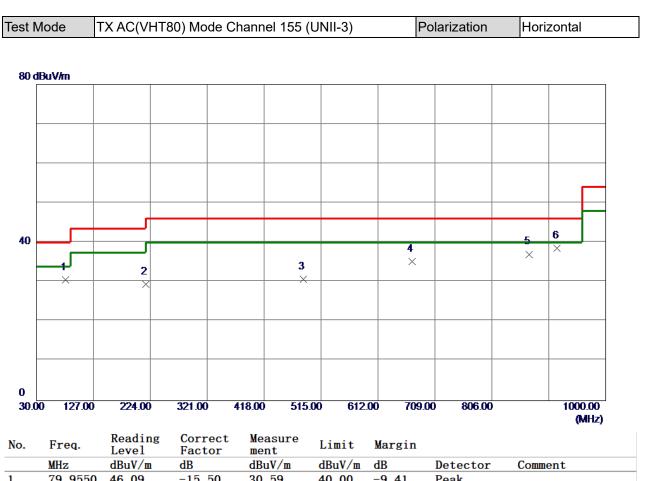
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ





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





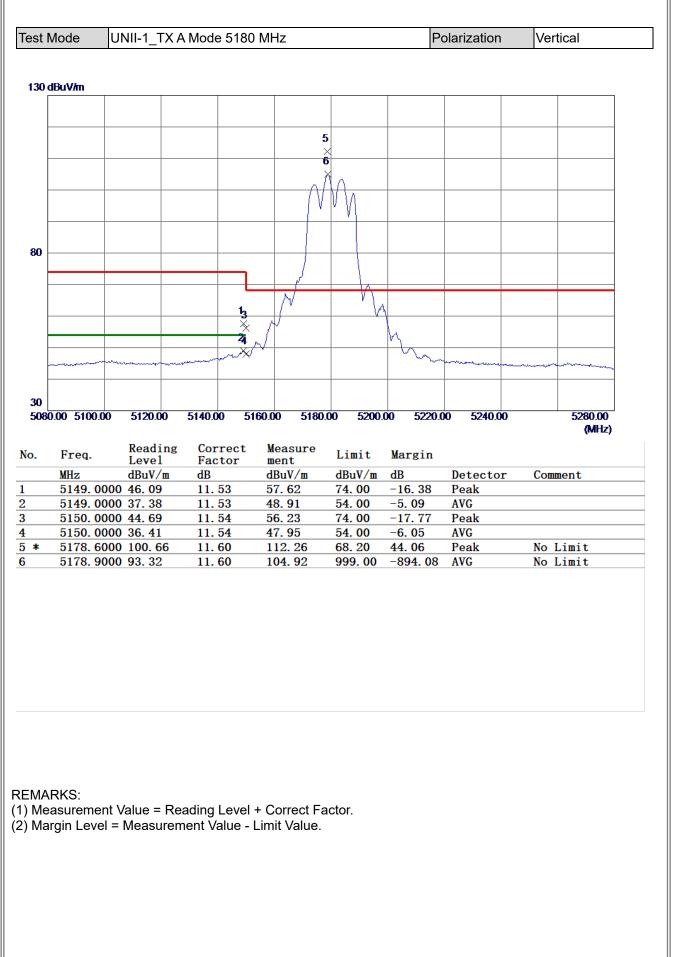
	AIIIZ		u D		CDC // III	GD	Deteetoi	COmmerre
1	79.9550	46.09	-15. 50	30. 59	40.00	-9.41	Peak	
2	216. 7250	43.88	-14. 42	29.46	46.00	-16. 54	Peak	
3	484. 9300	36. 99	-6.27	30.72	46.00	-15.28	Peak	
4	670. 2000	37.89	-2.71	35.18	46.00	-10.82	Peak	
5	869. 5350	37. 30	-0.26	37.04	46.00	-8. 96	Peak	
6 *	917. 5500	38.29	0.24	38. 53	46.00	-7.47	Peak	

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

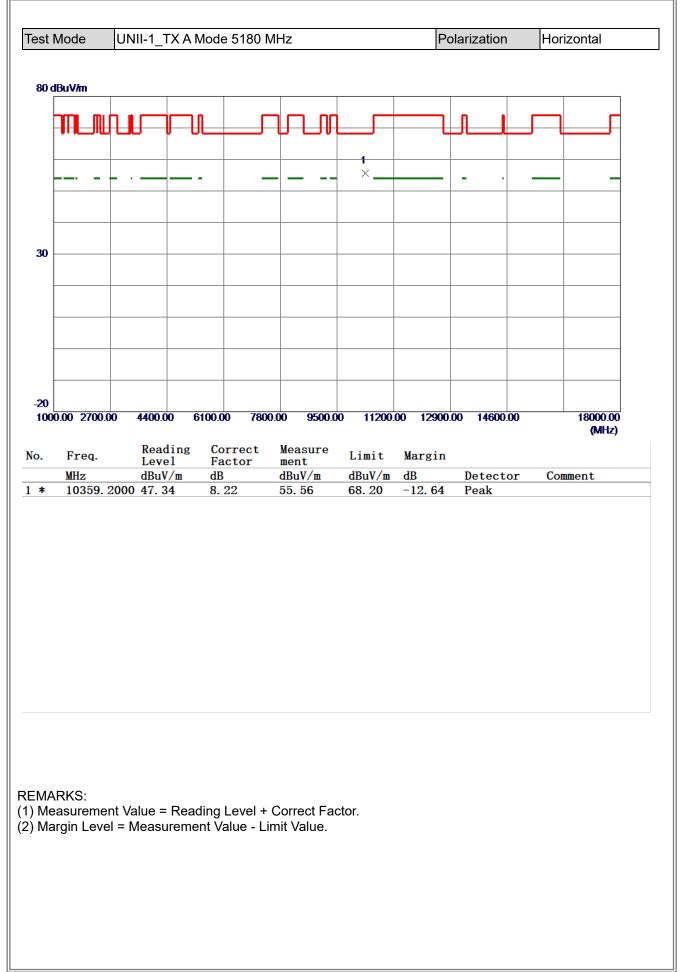


APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

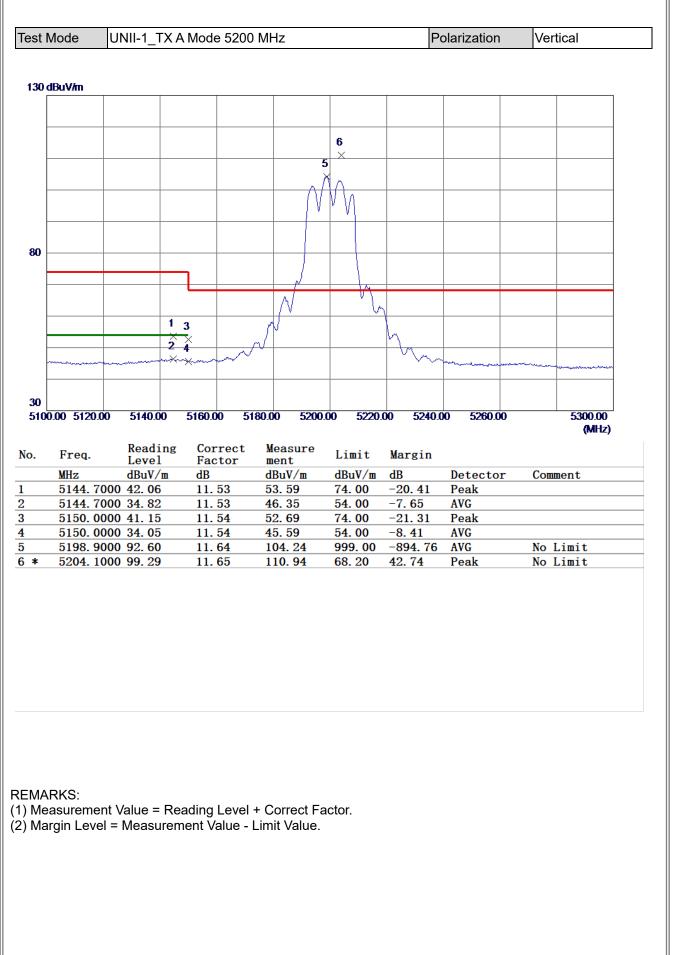




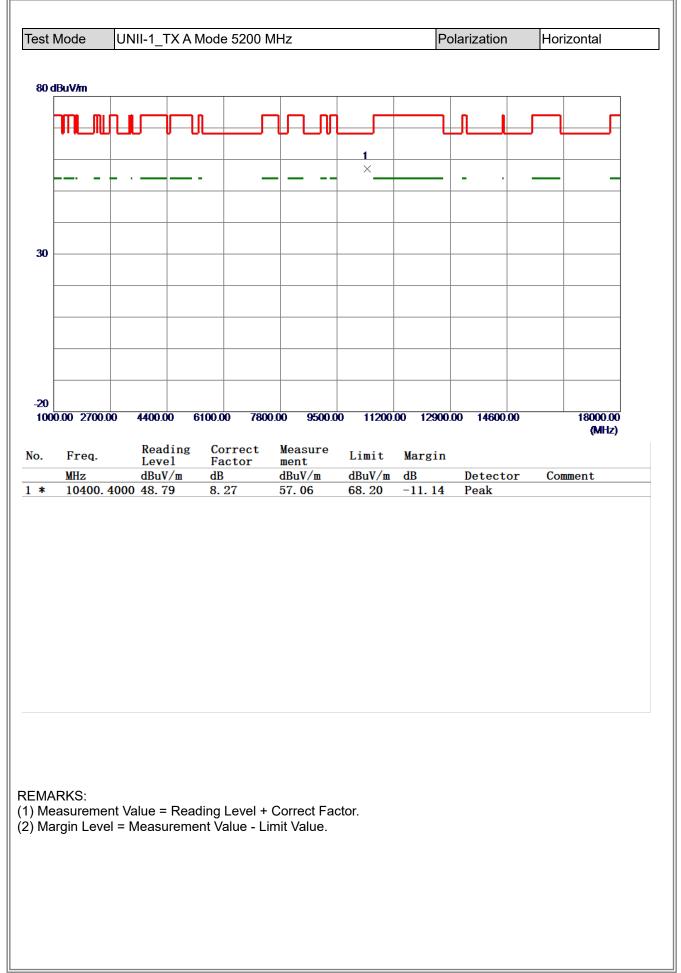




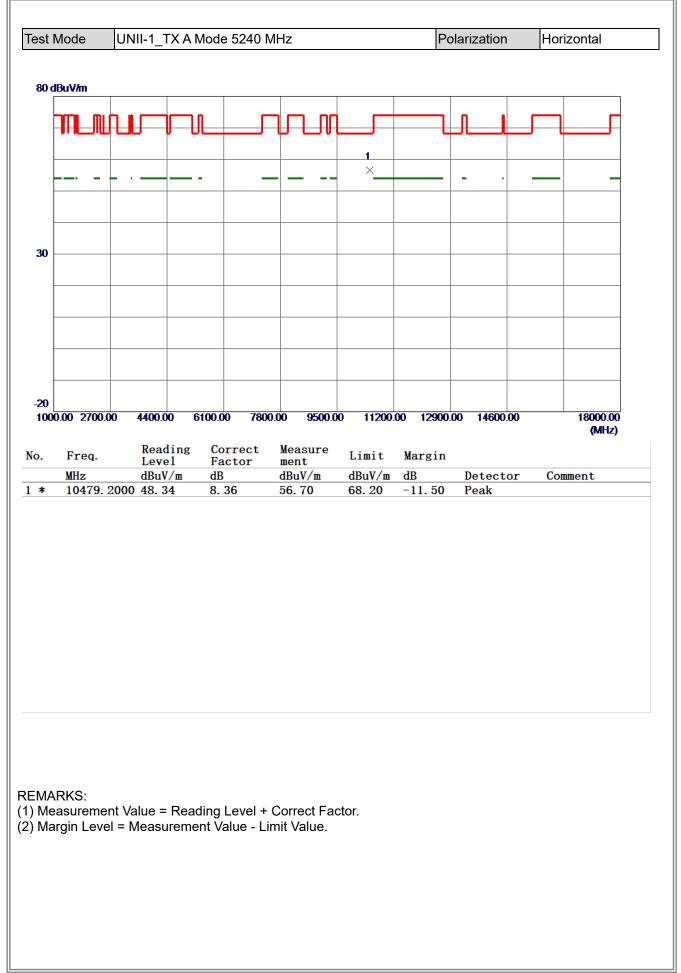




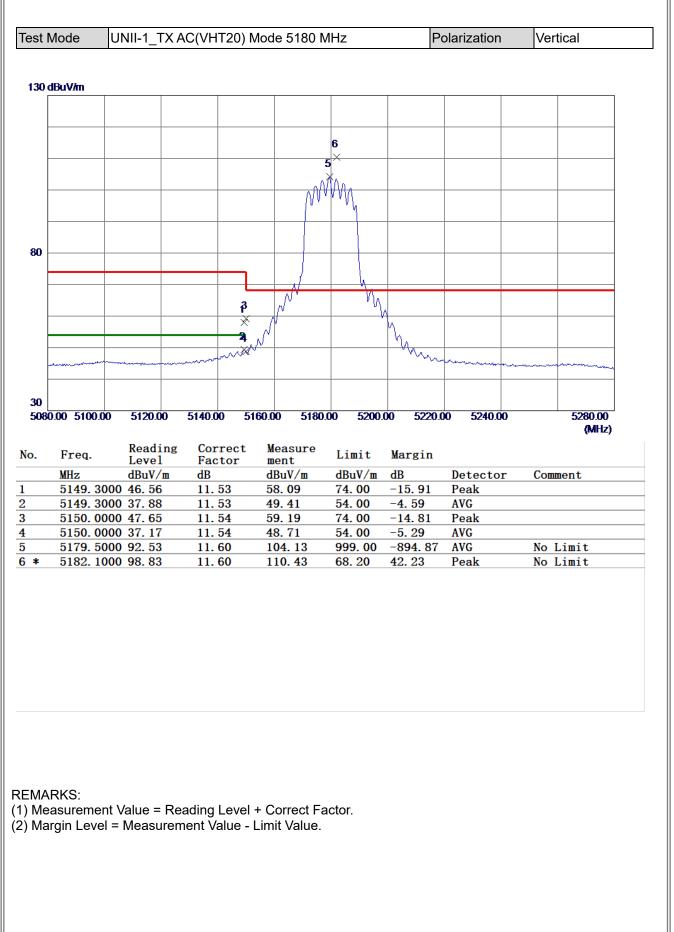




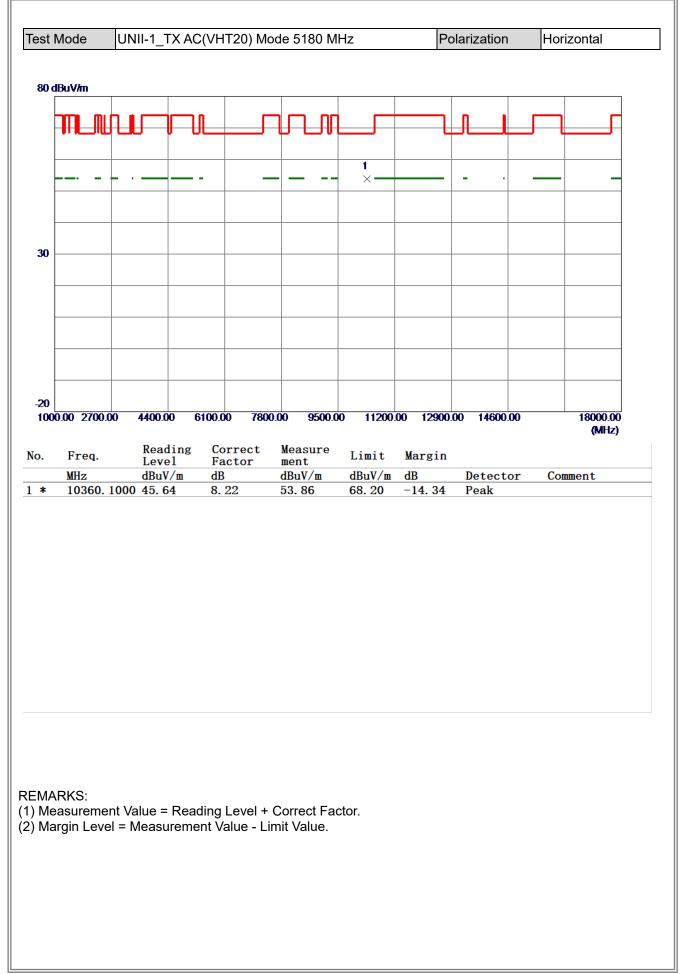




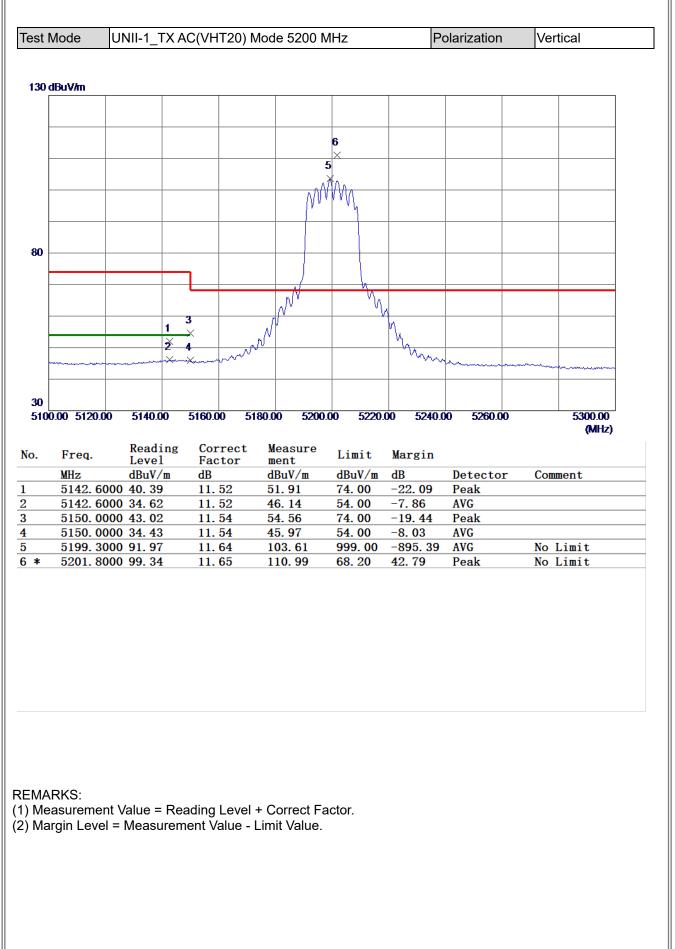




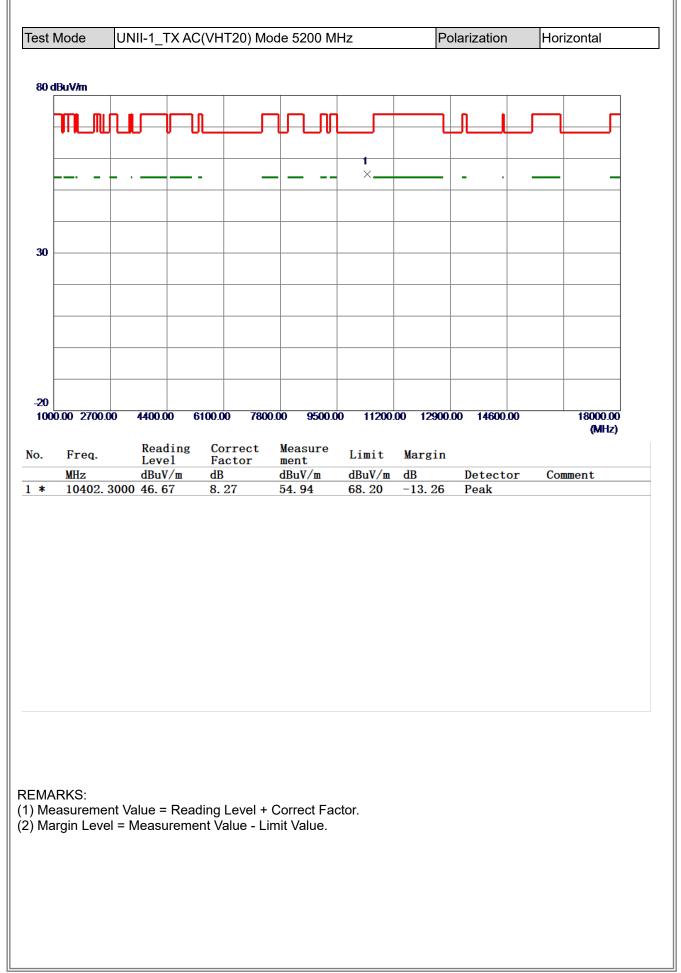




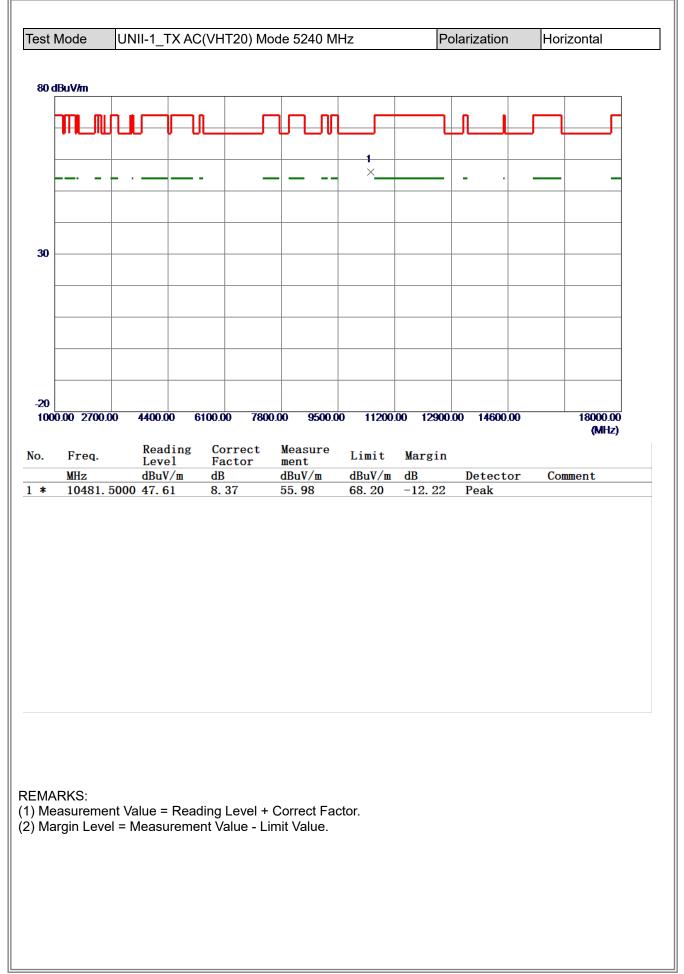




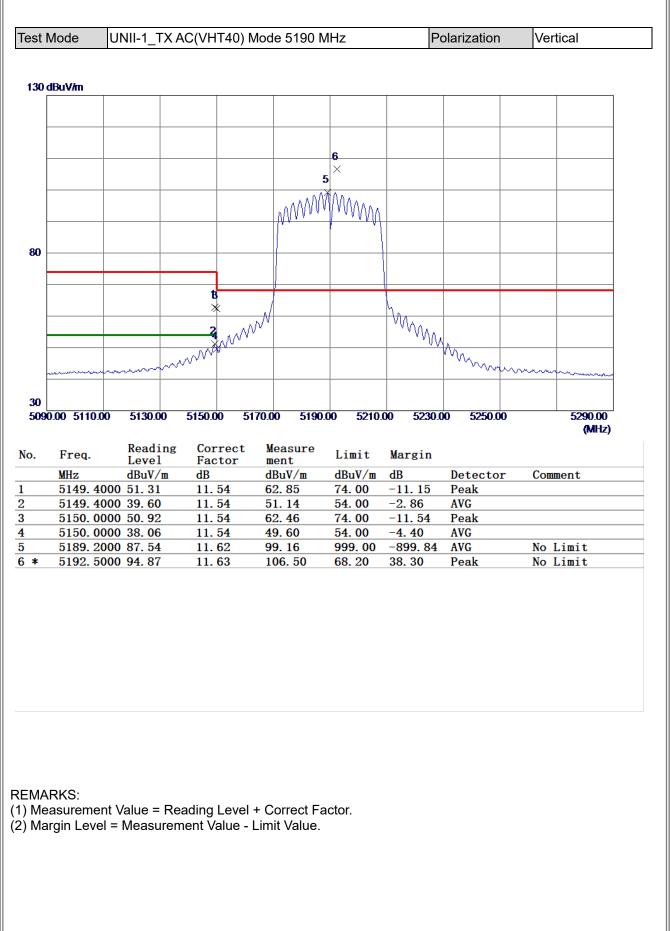




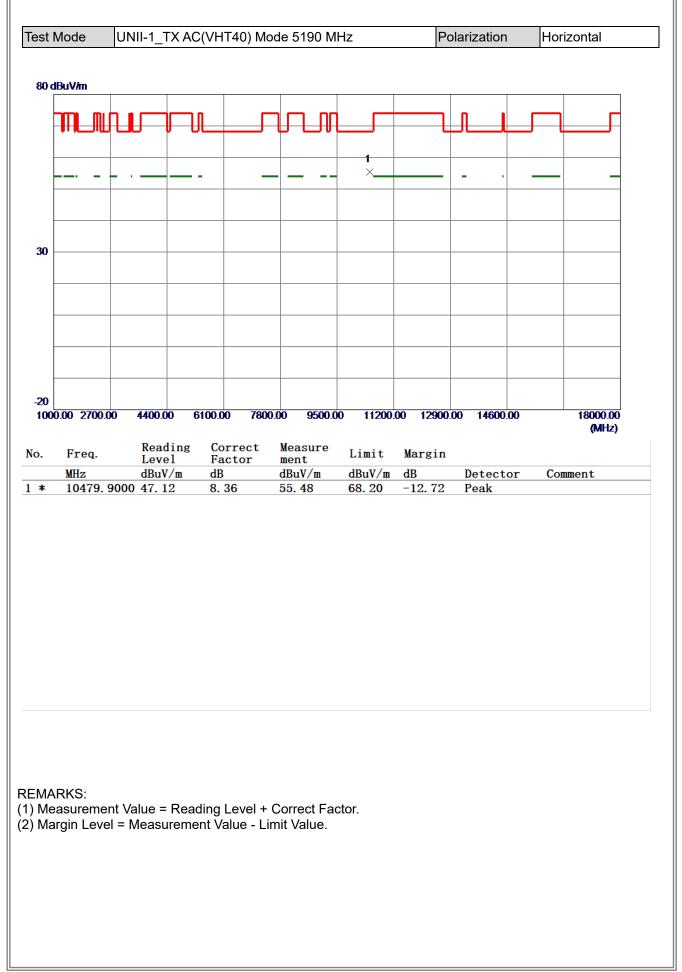




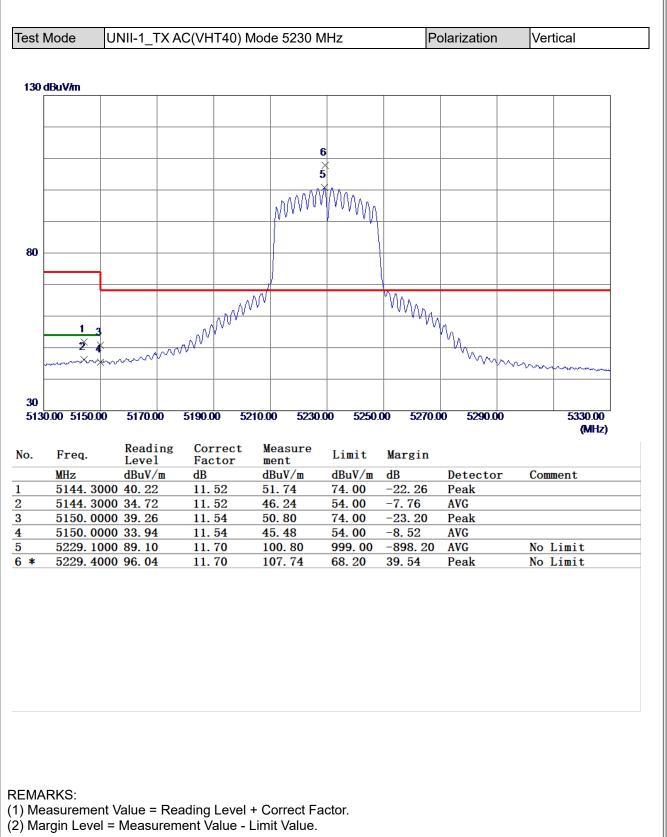




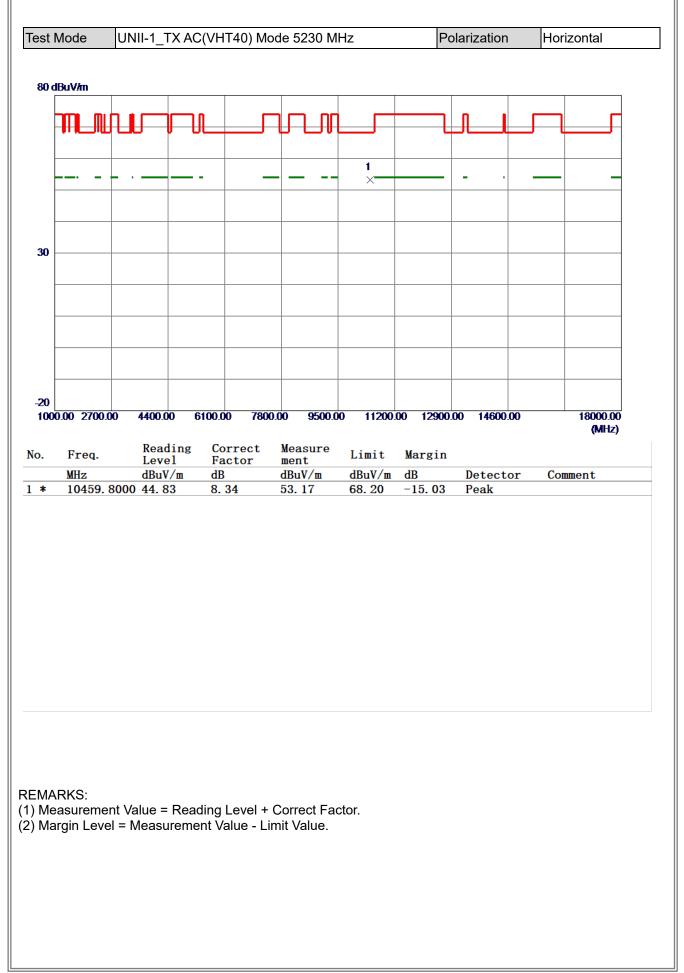




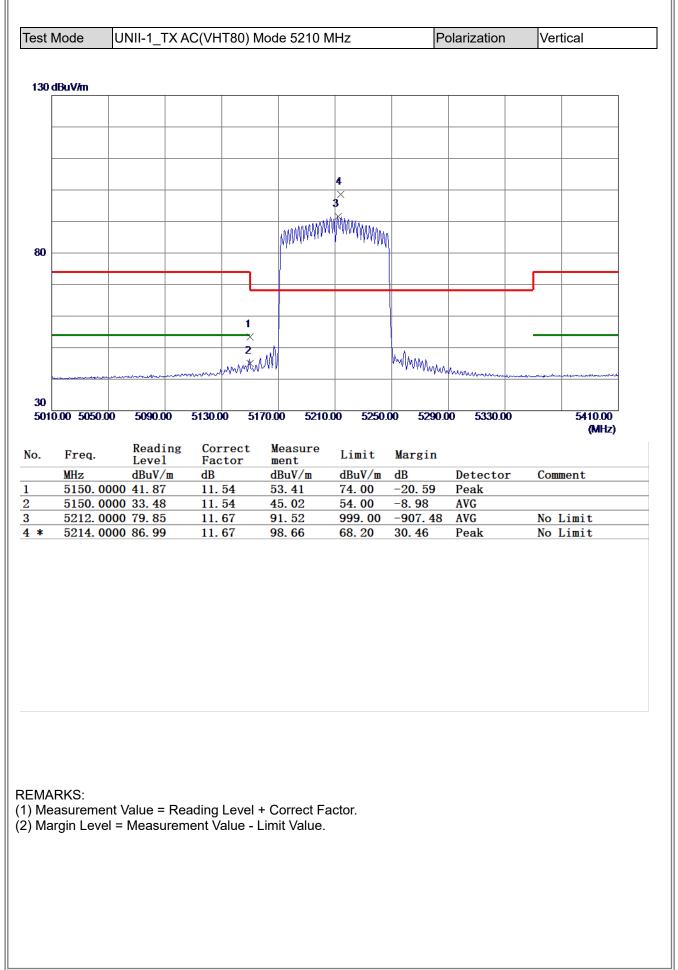




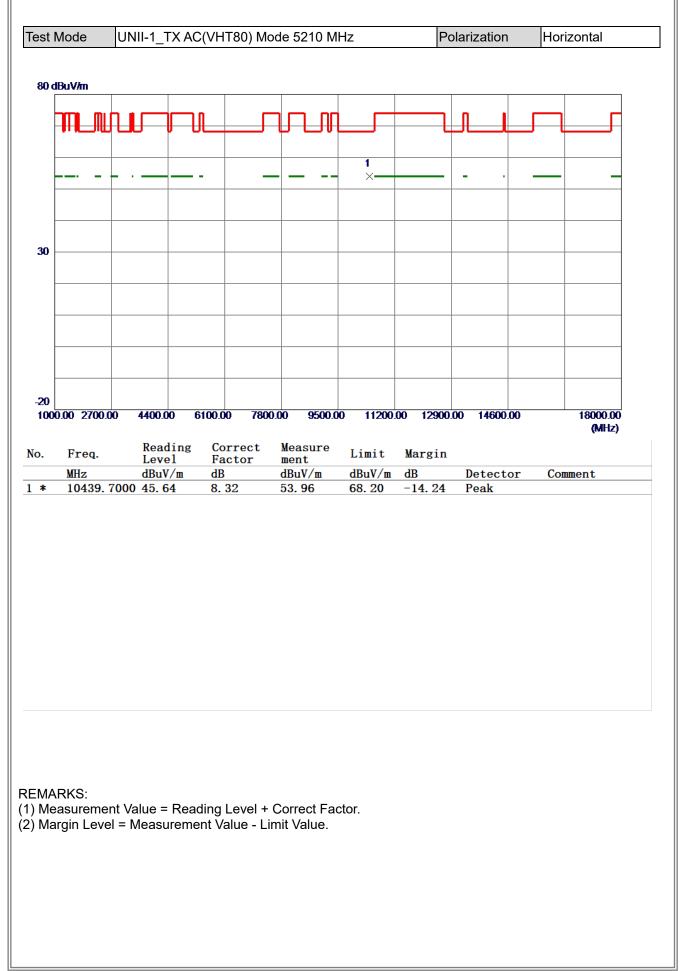




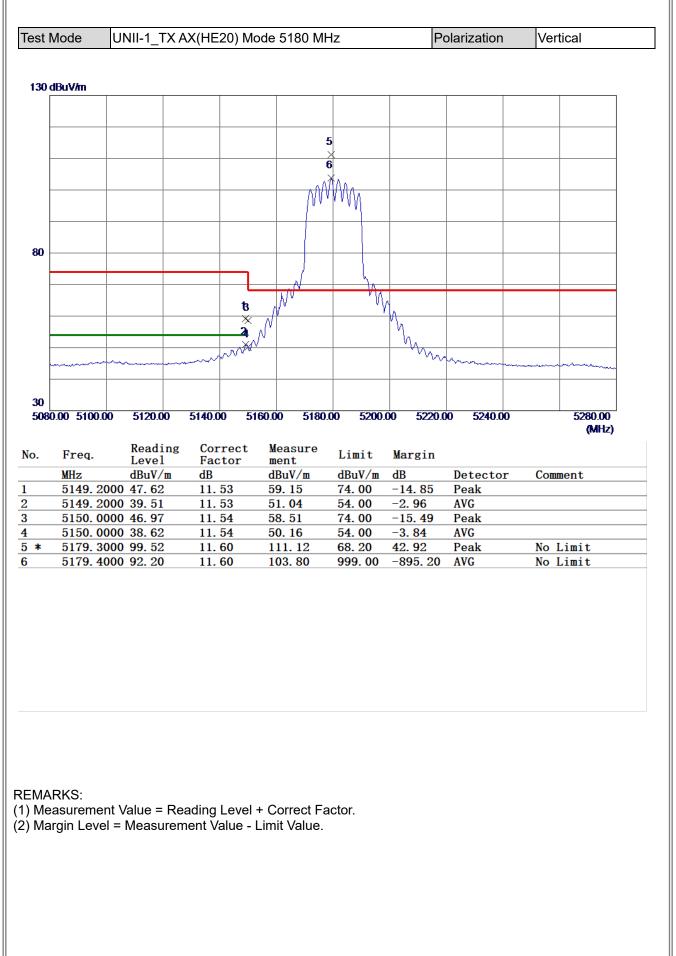




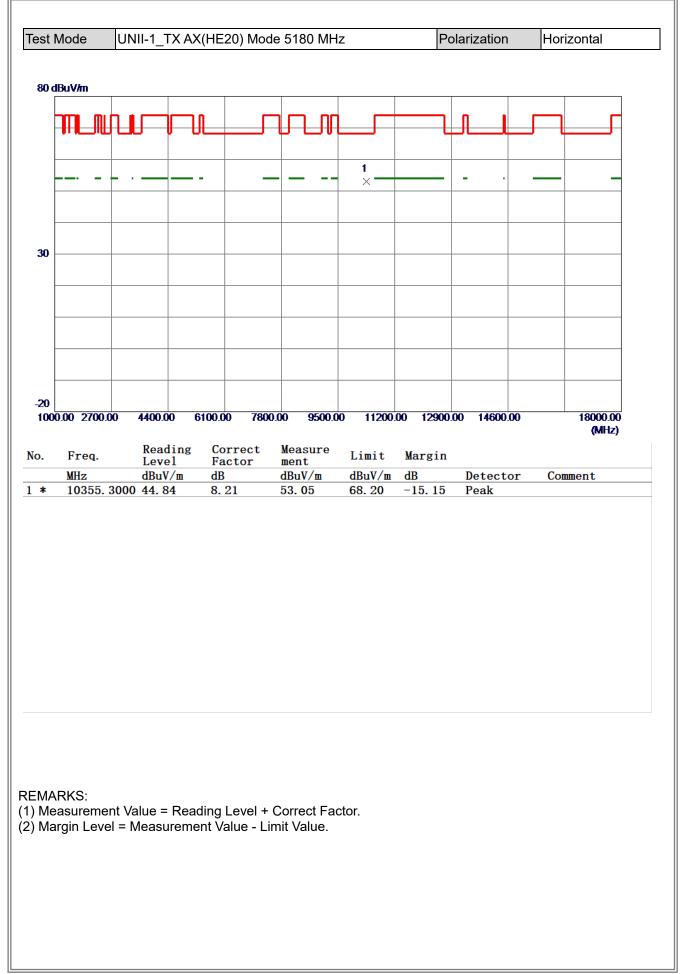




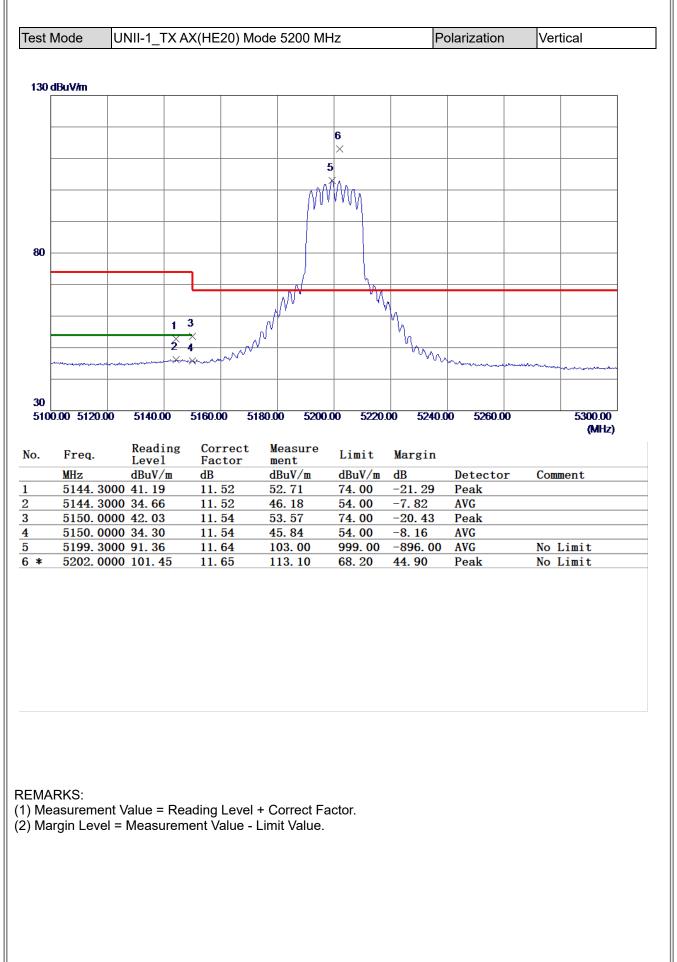




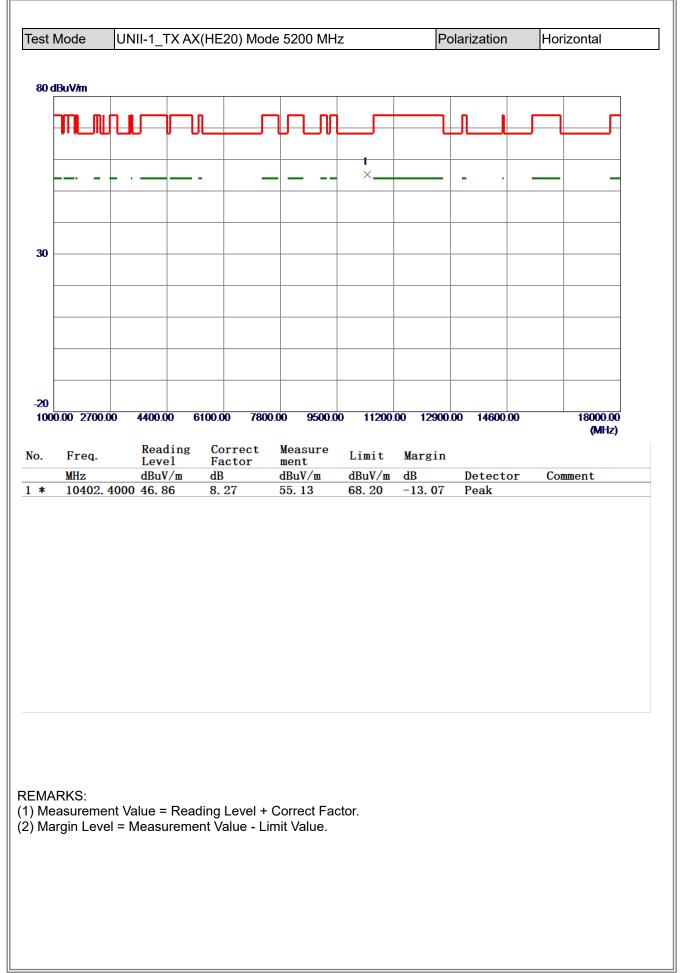




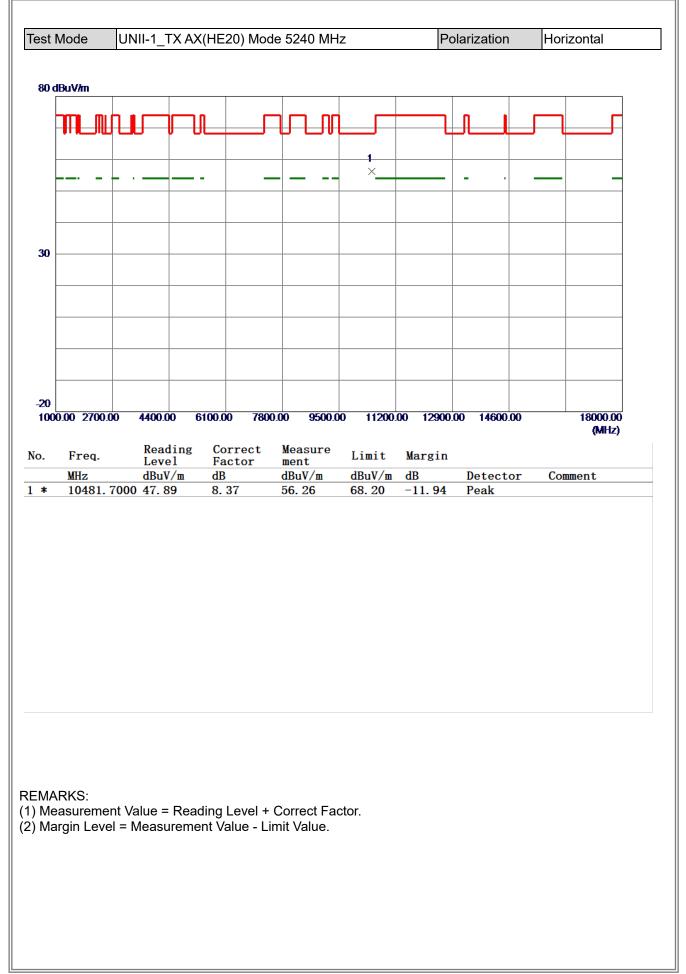




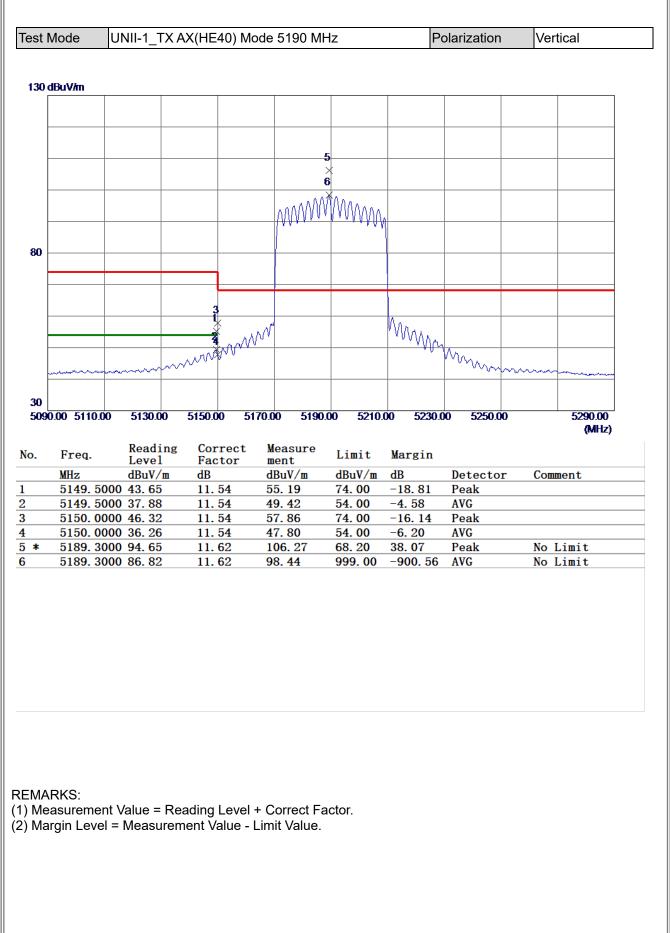




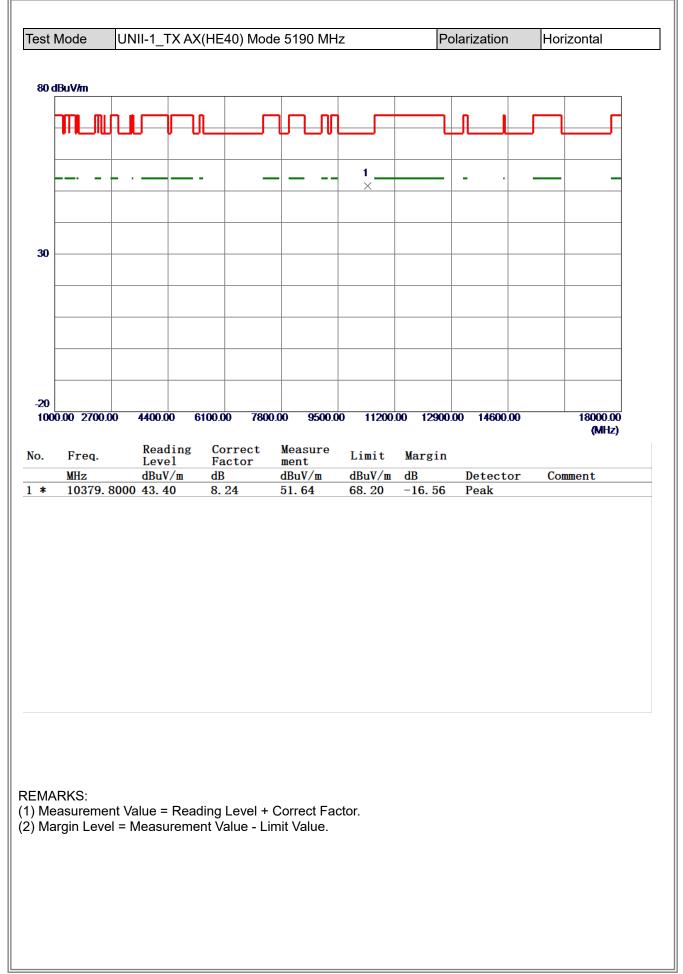




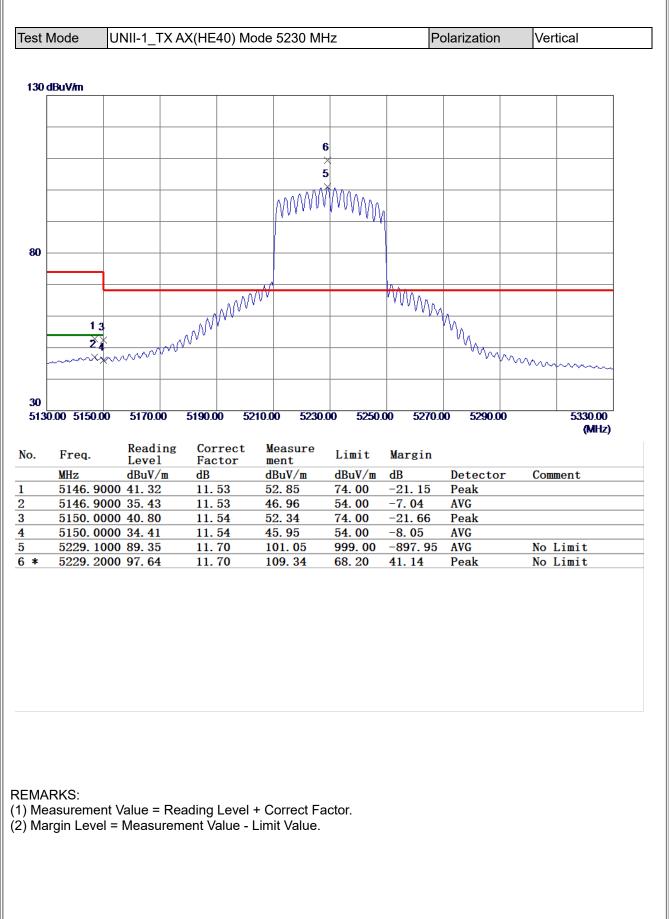




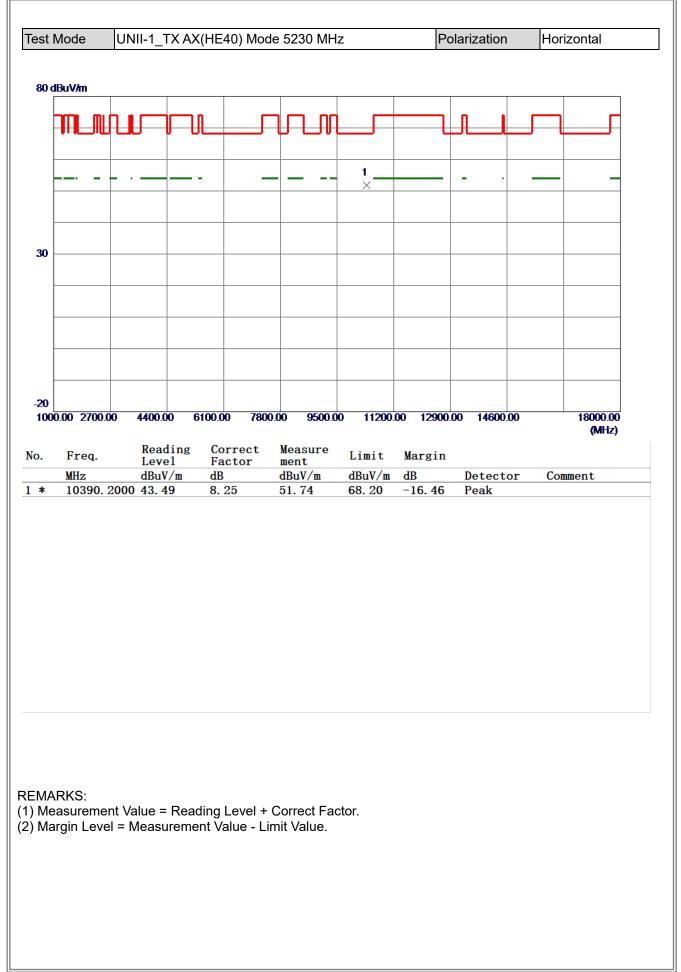




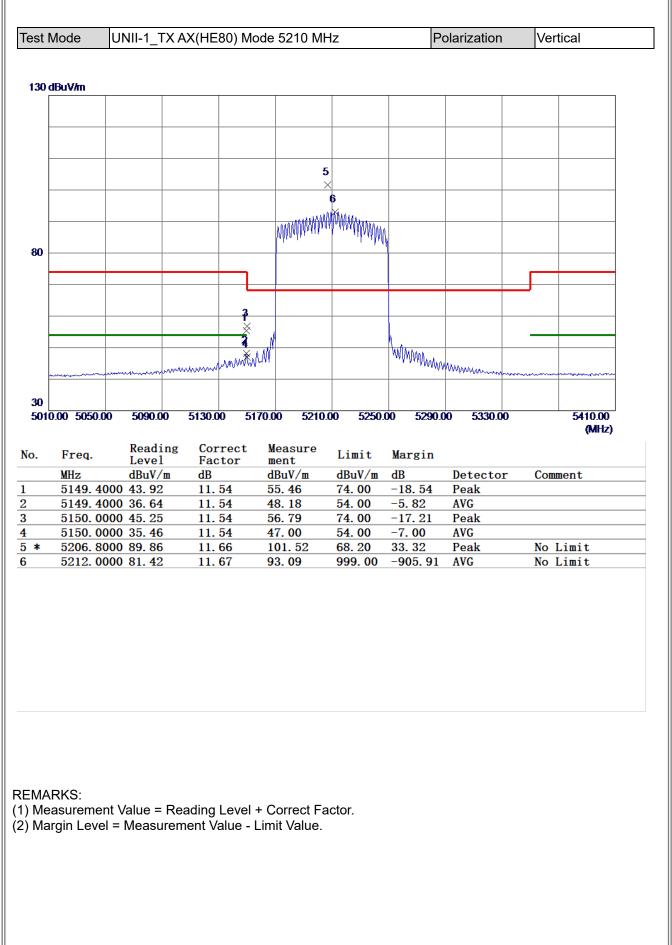




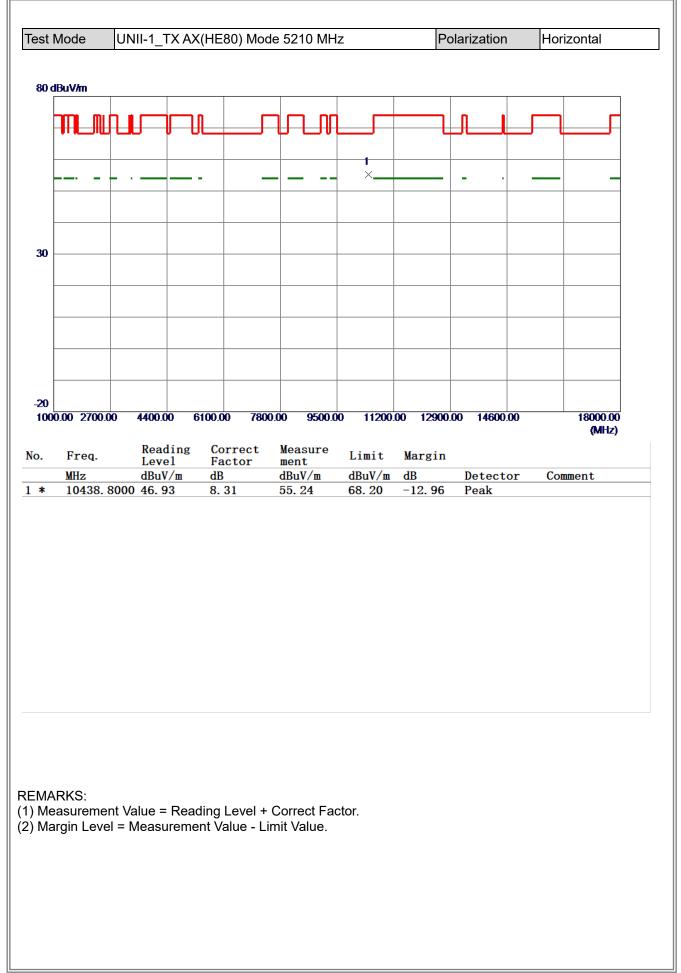




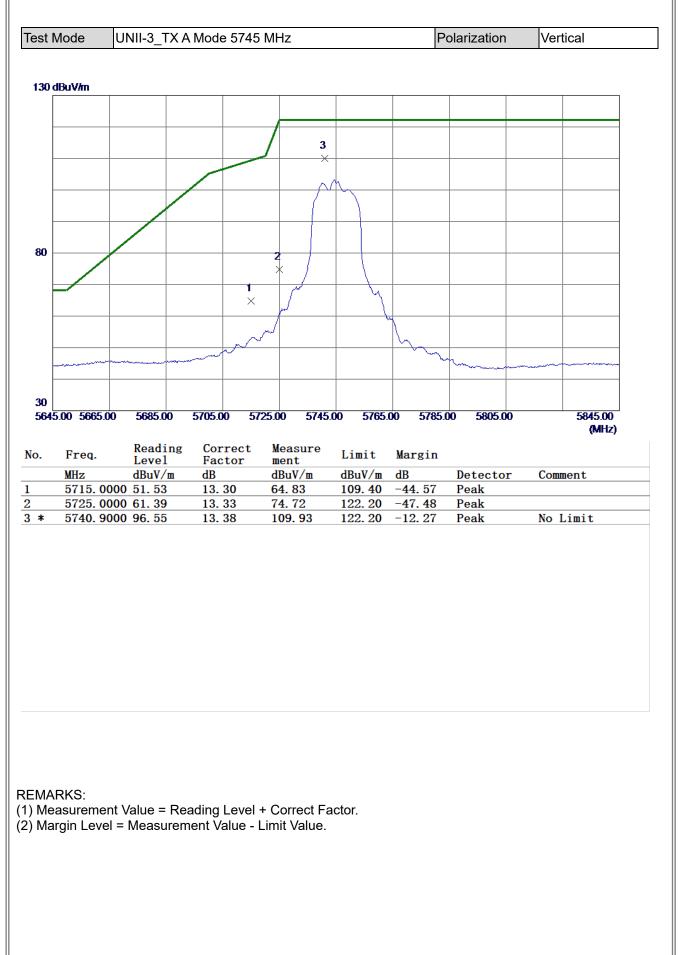




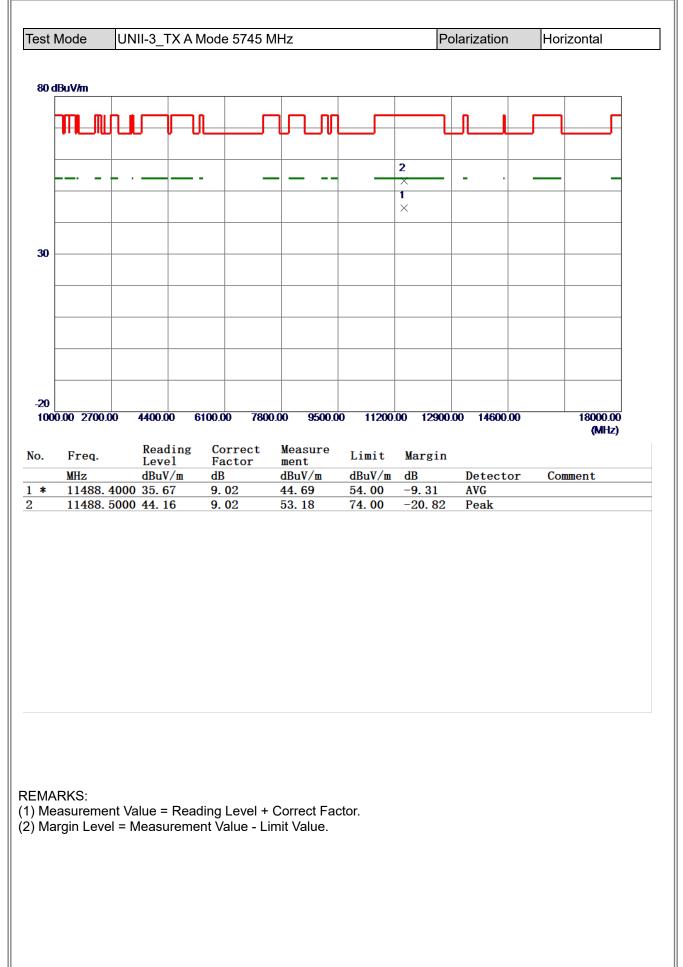




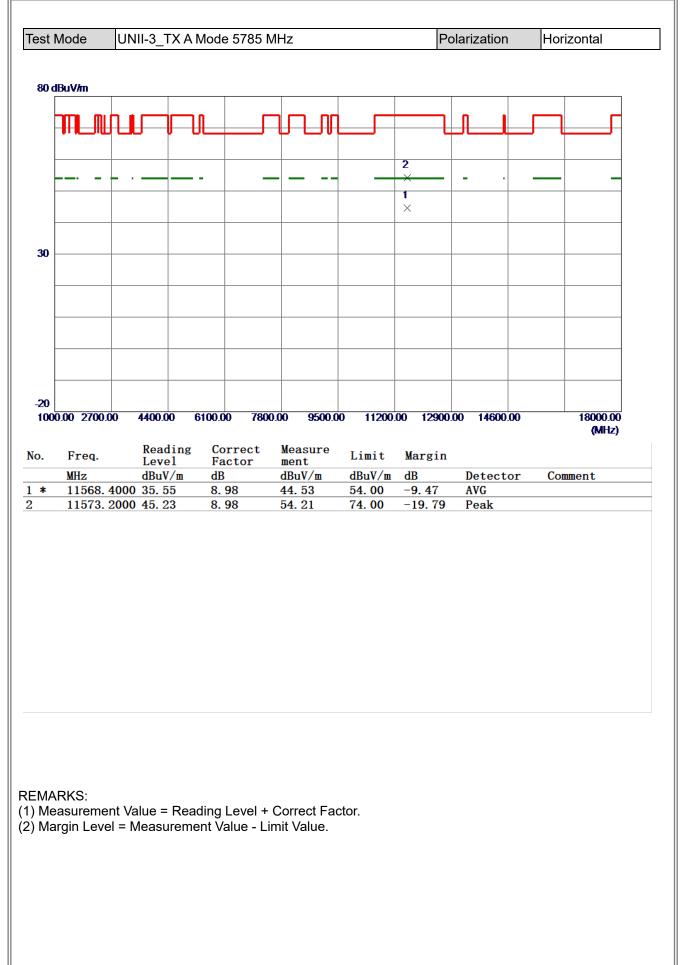




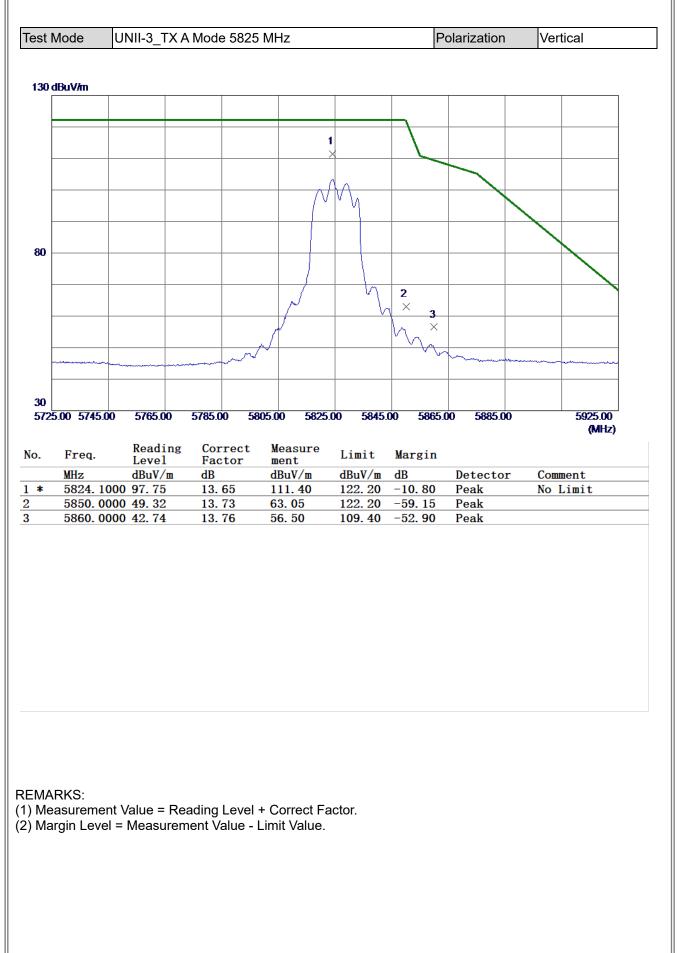




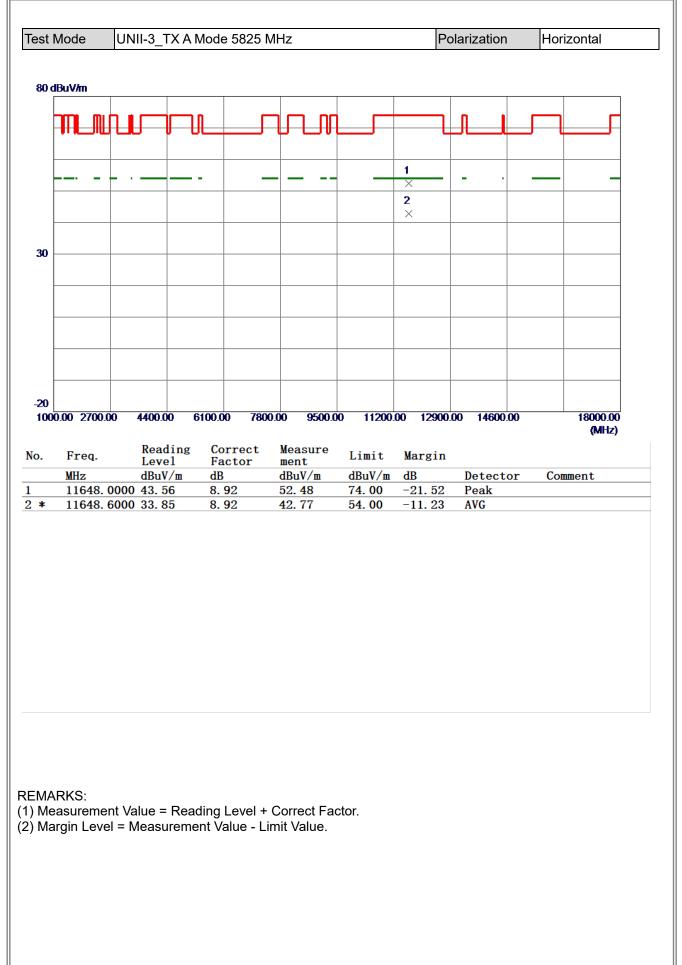




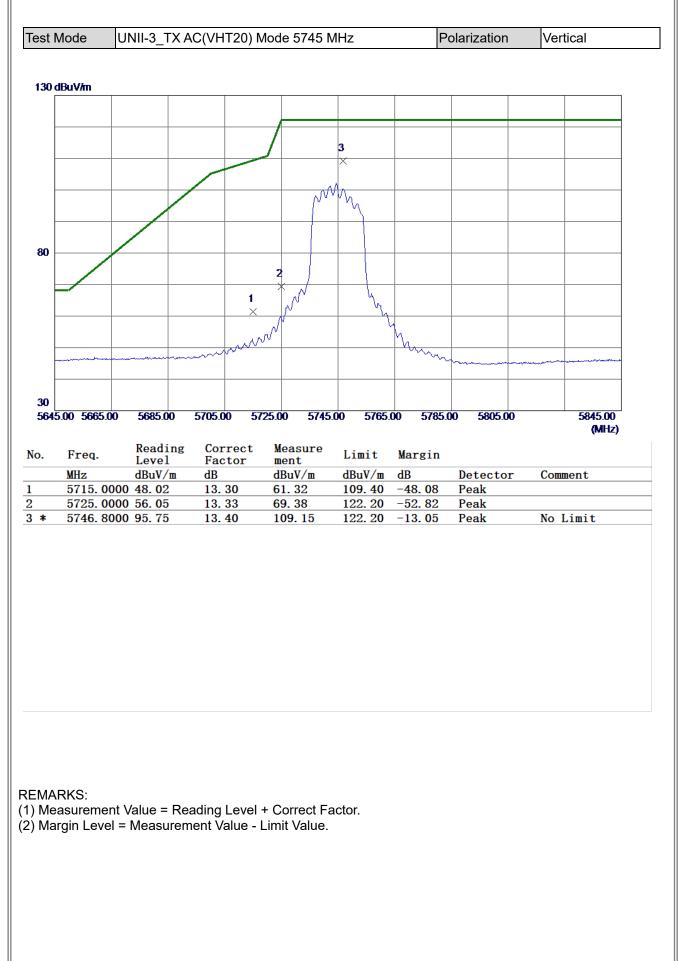




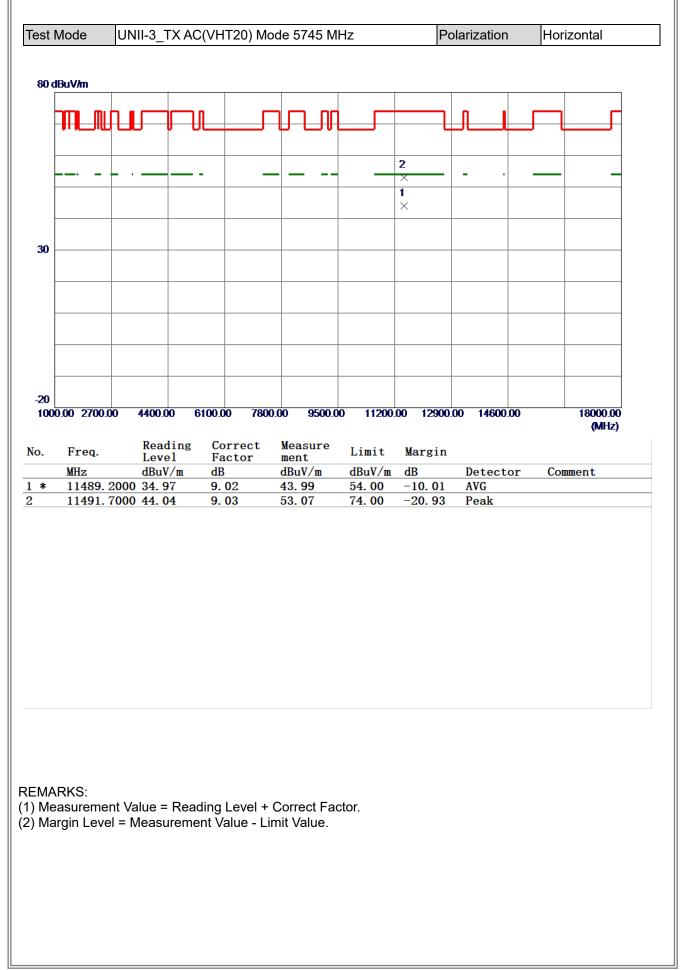




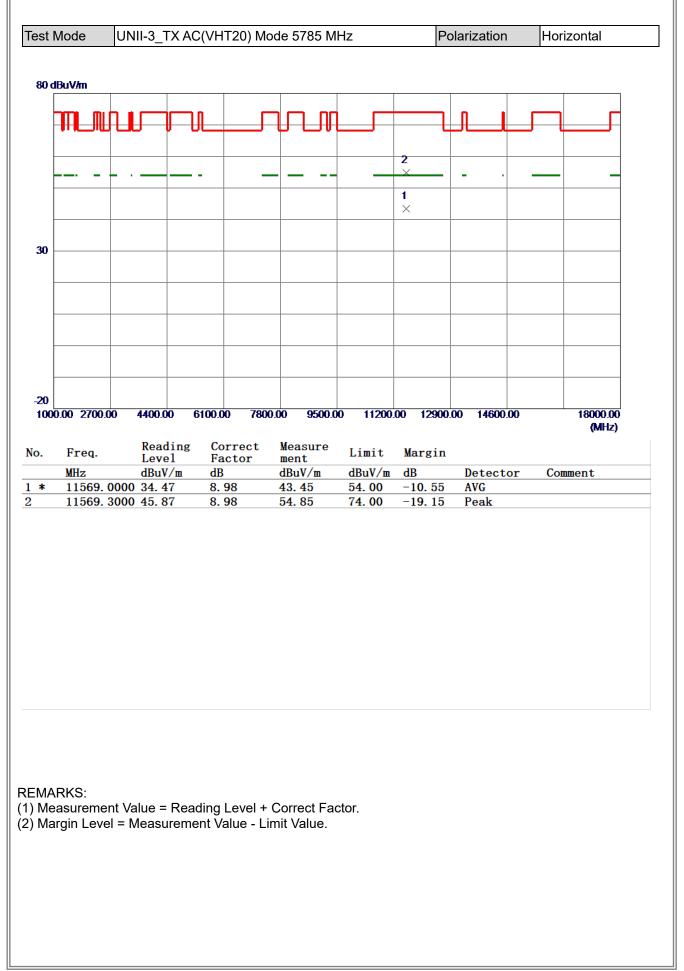




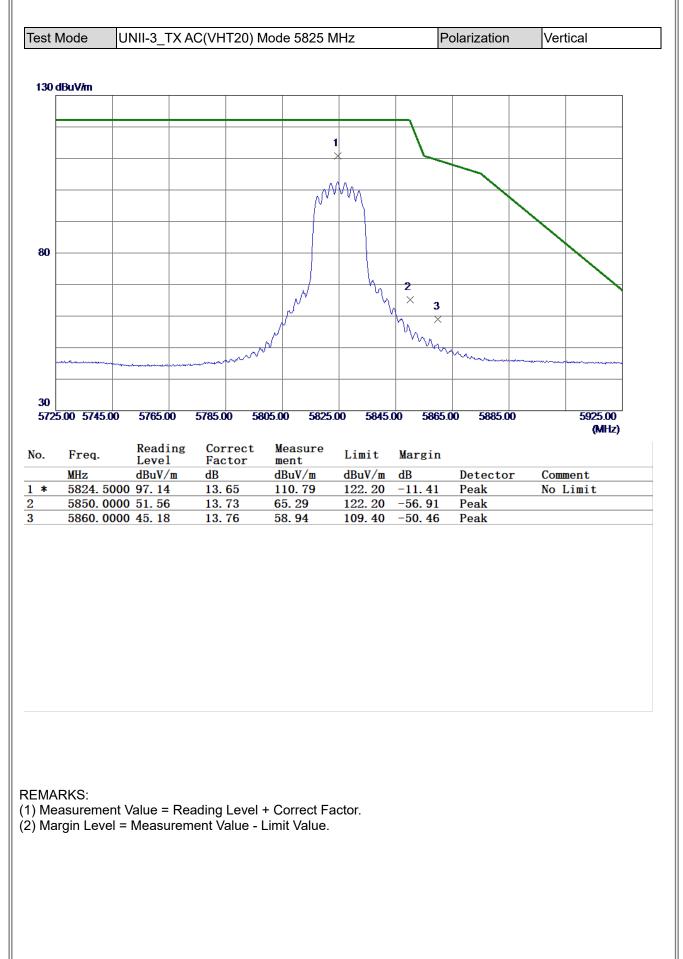




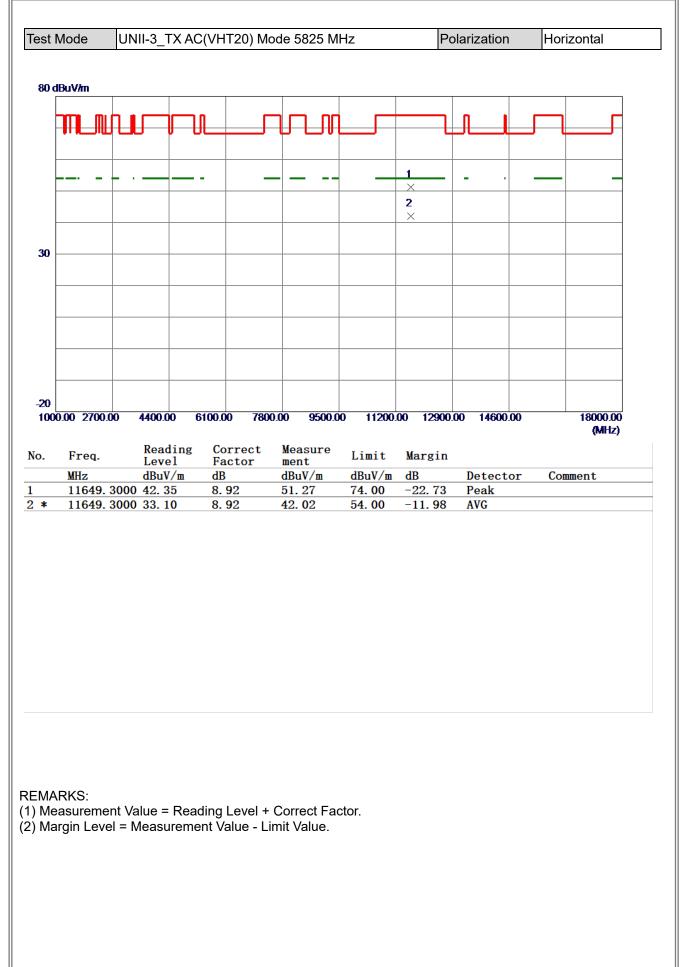




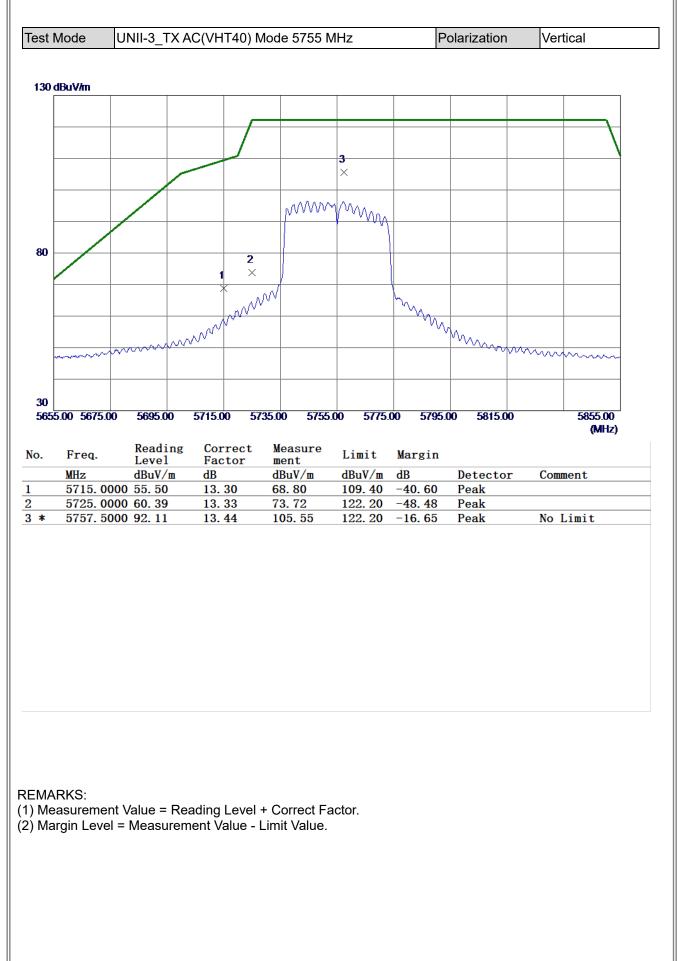




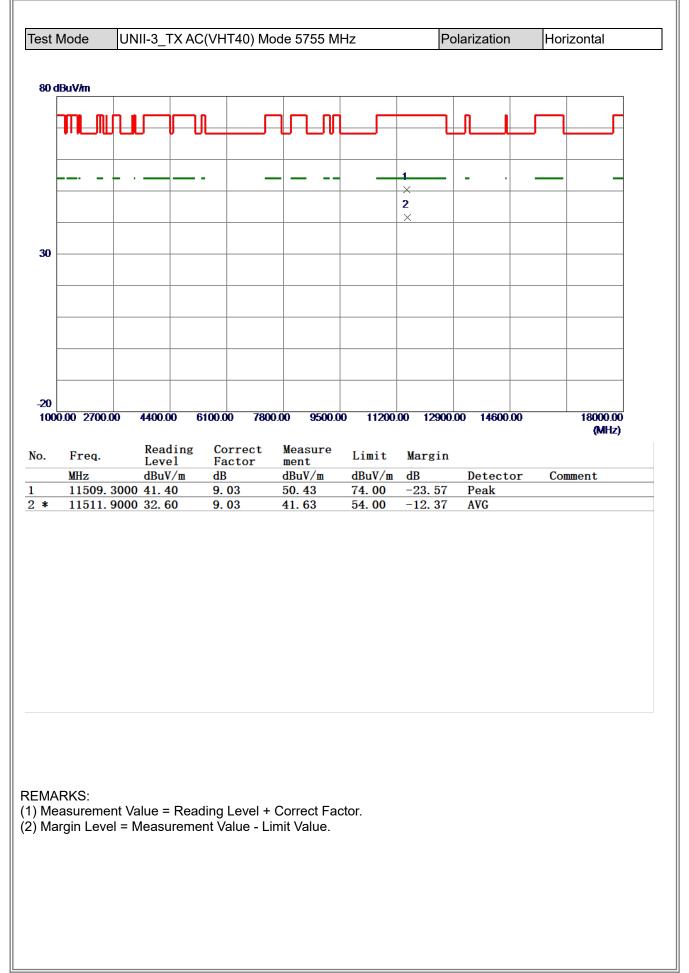




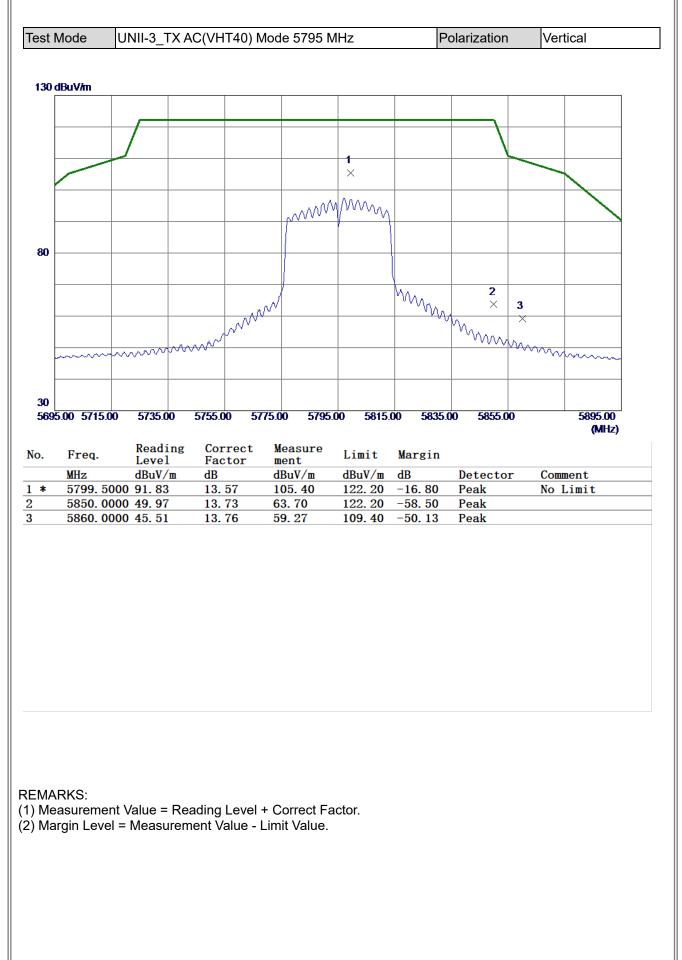




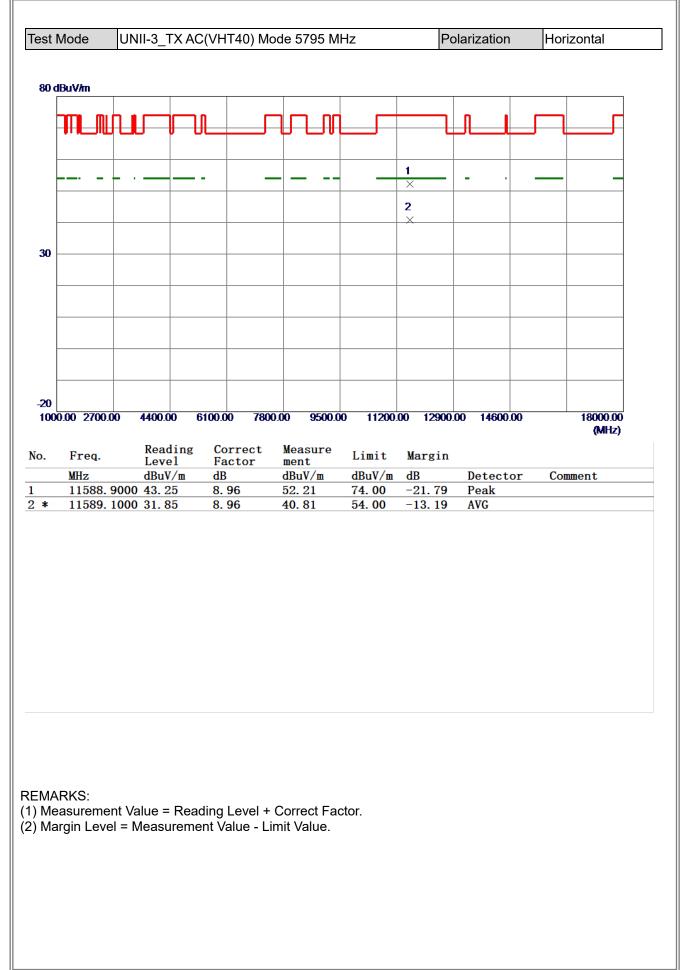




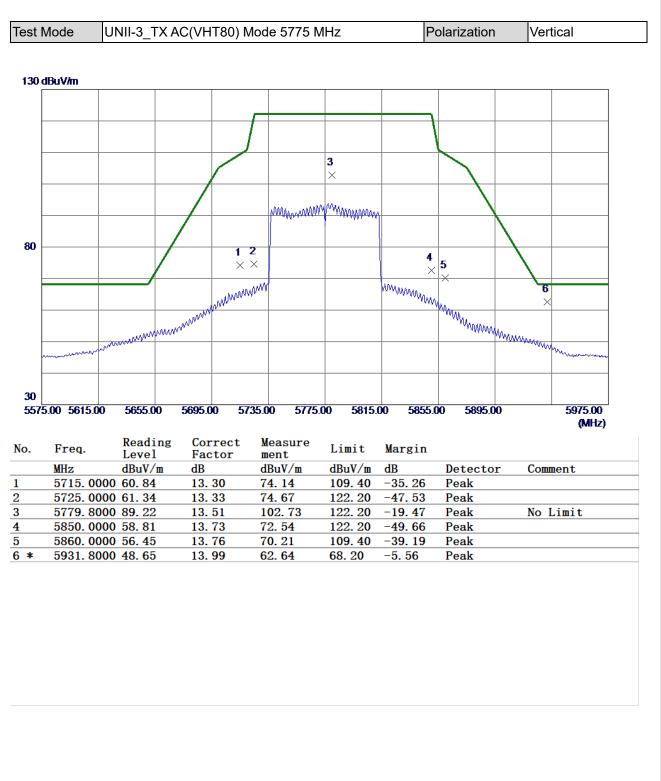








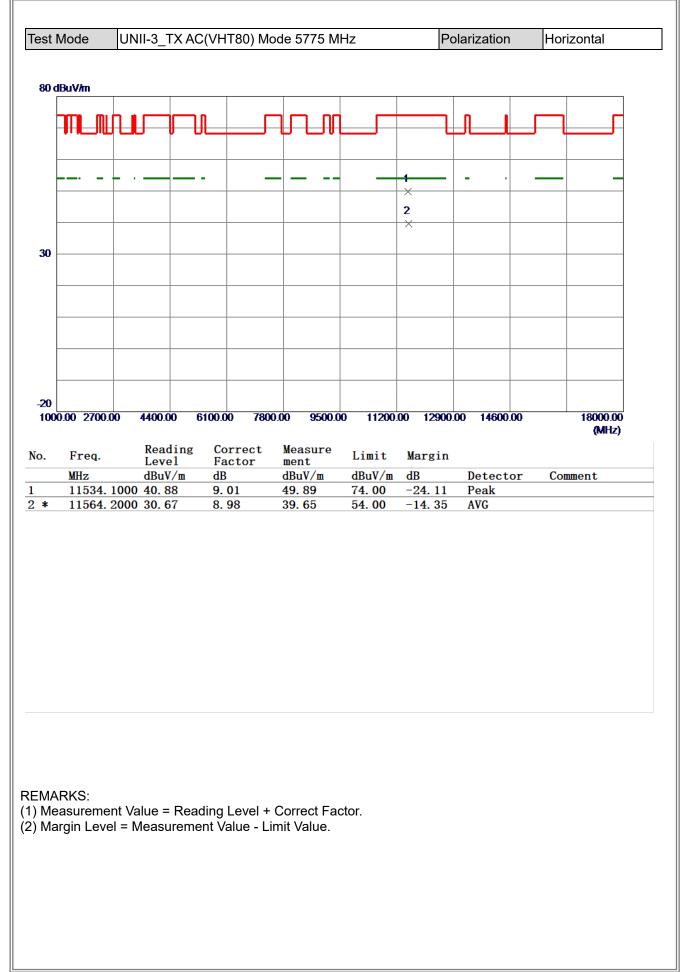




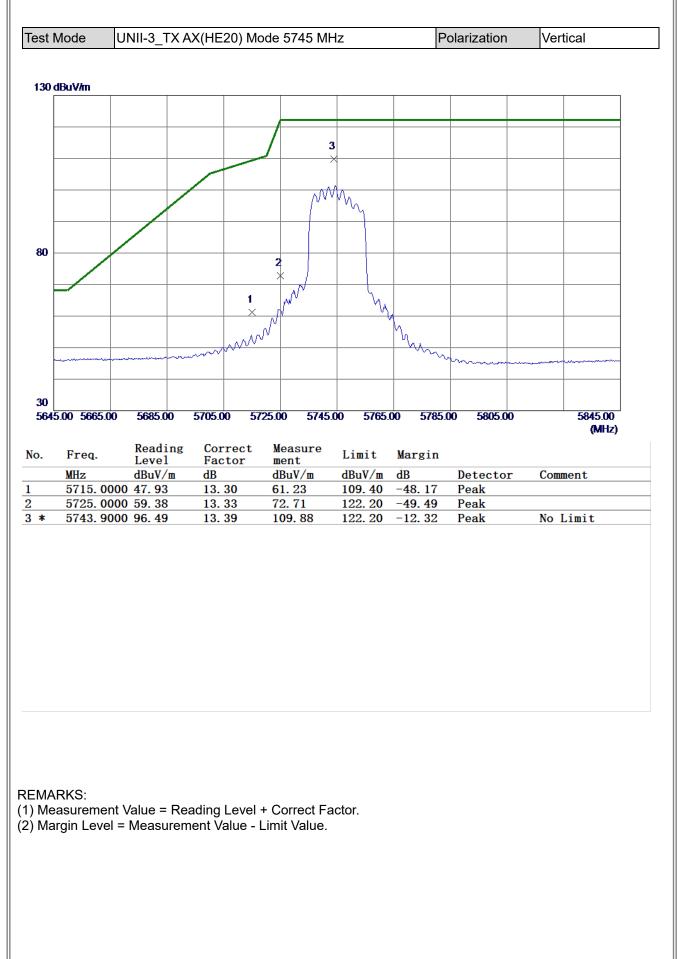
REMARKS:

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

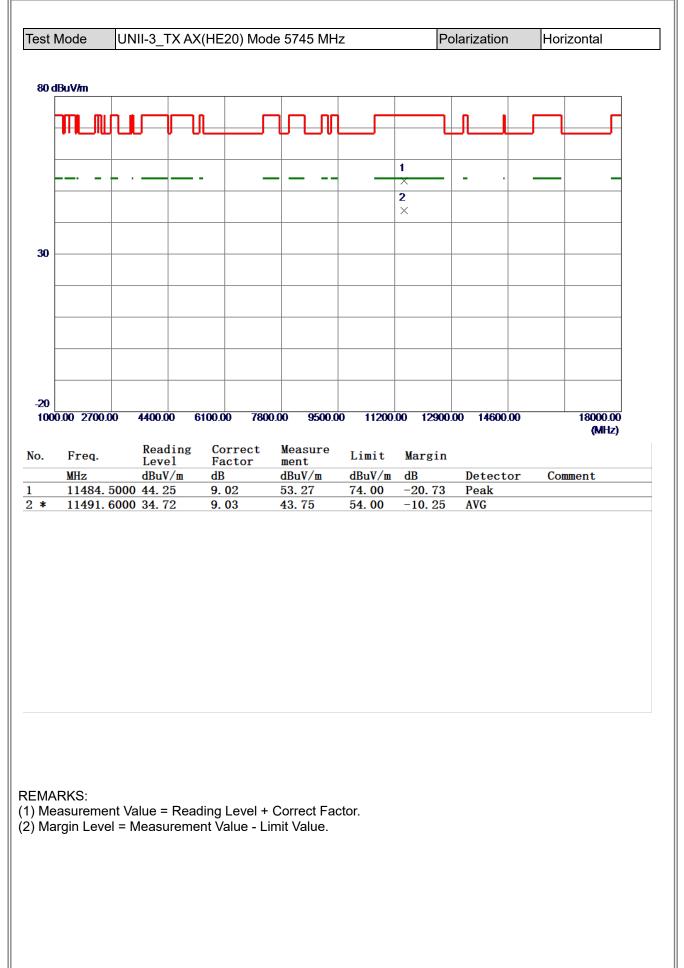




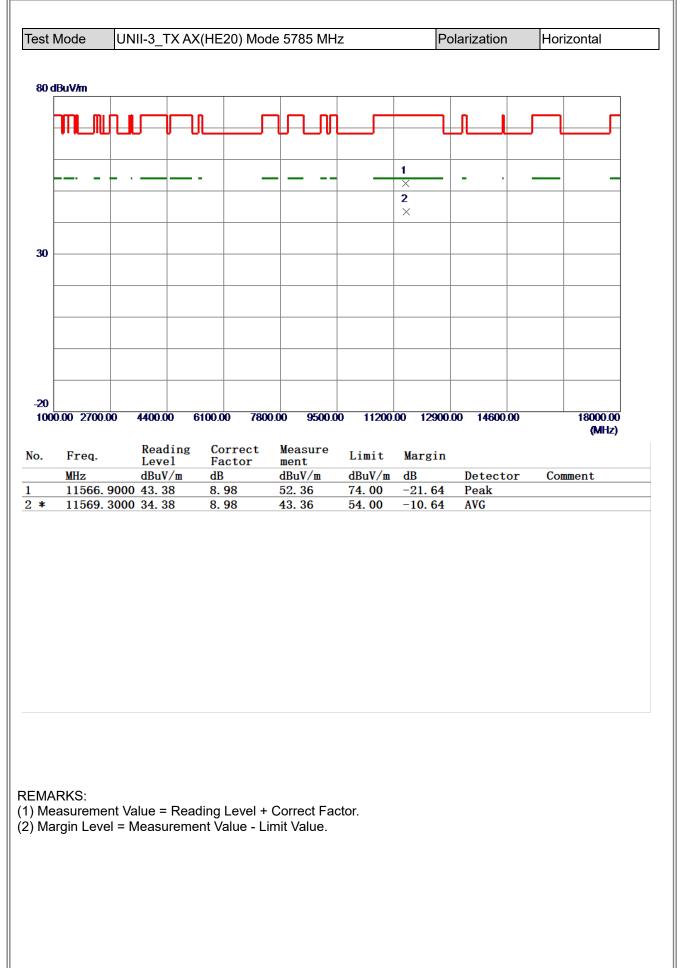




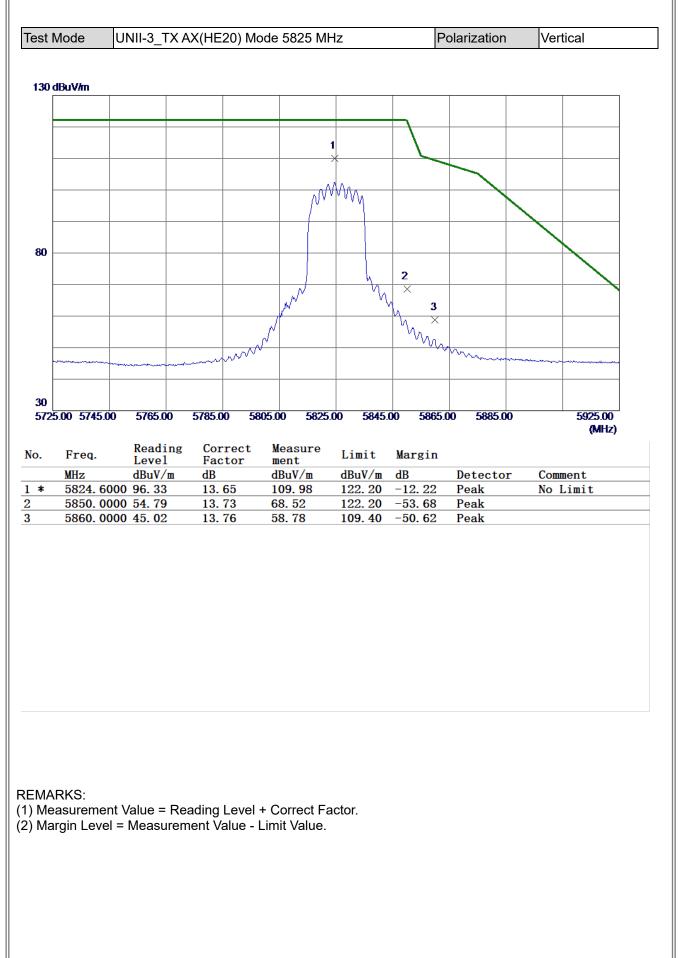




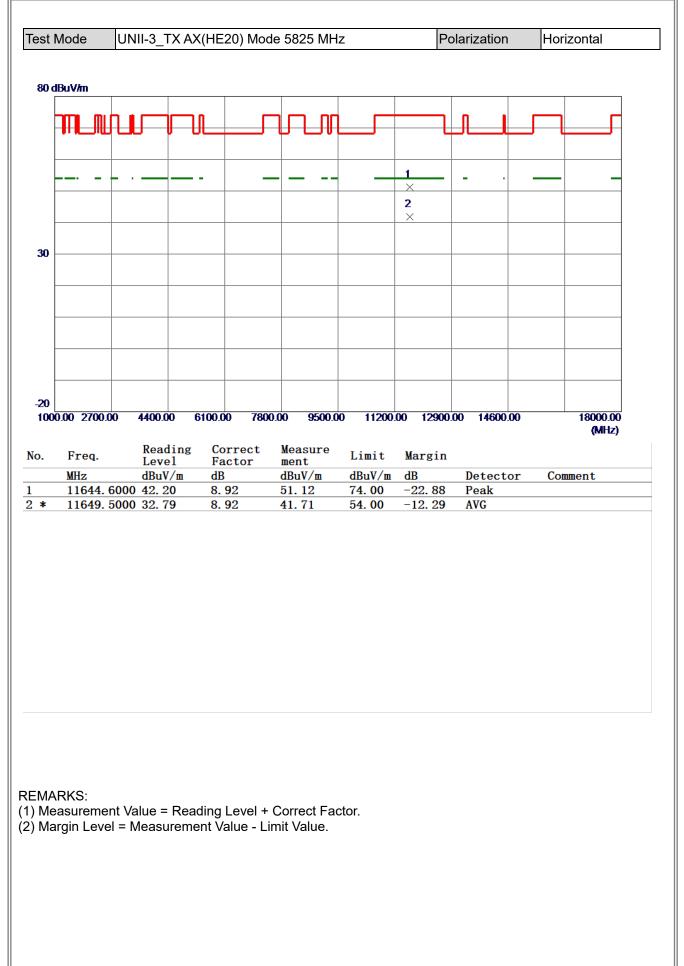




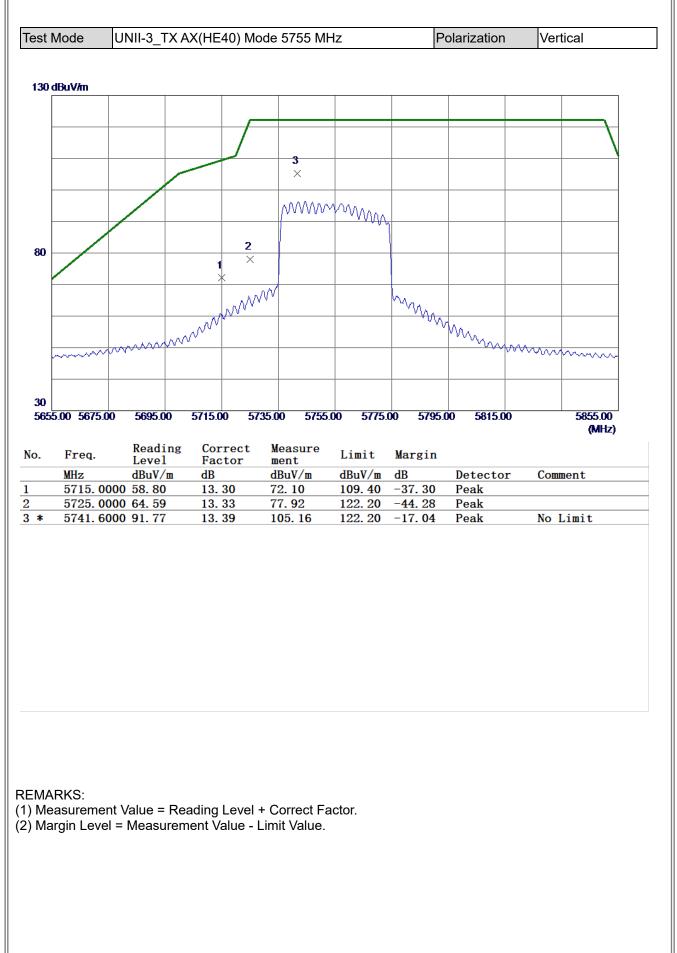




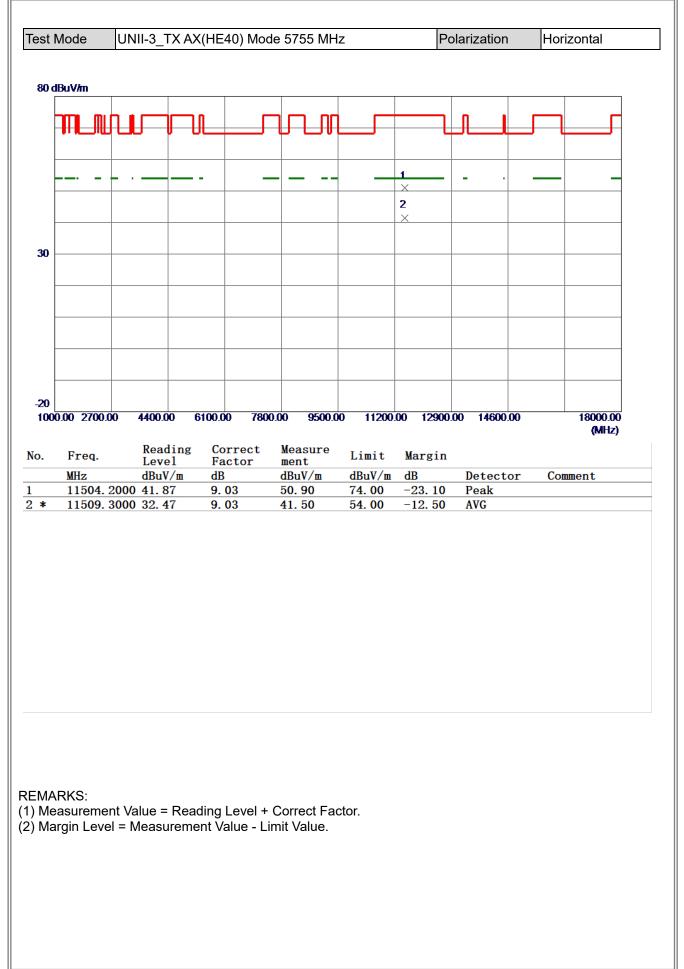




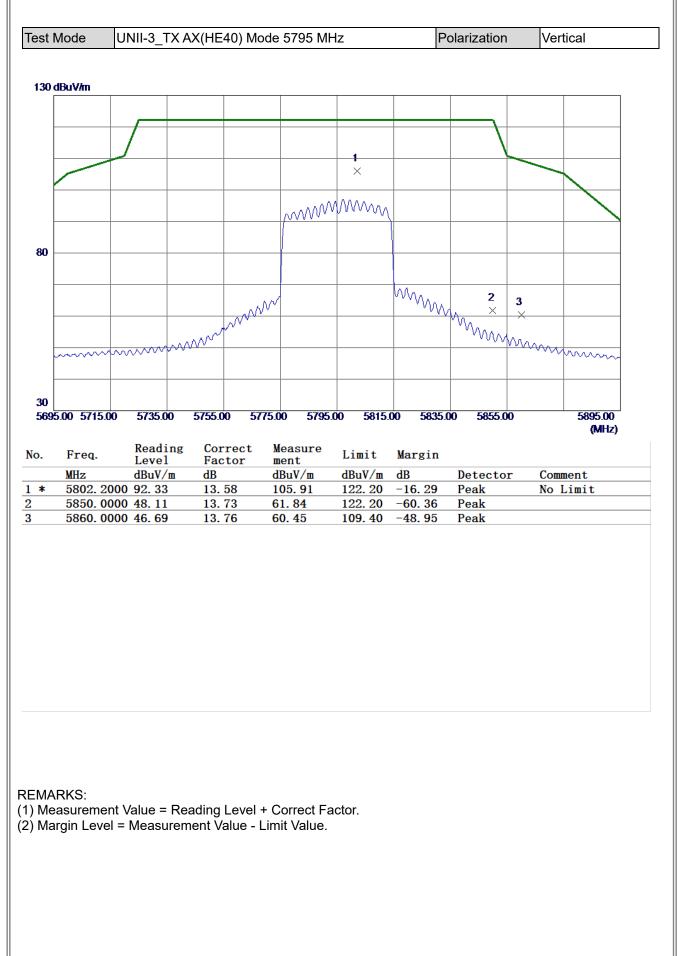




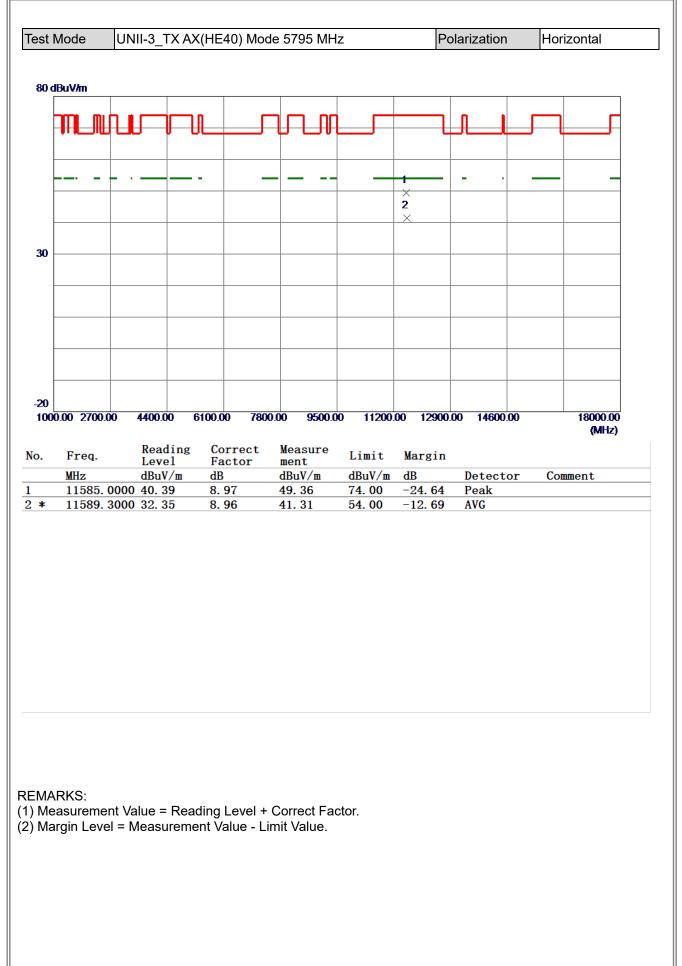




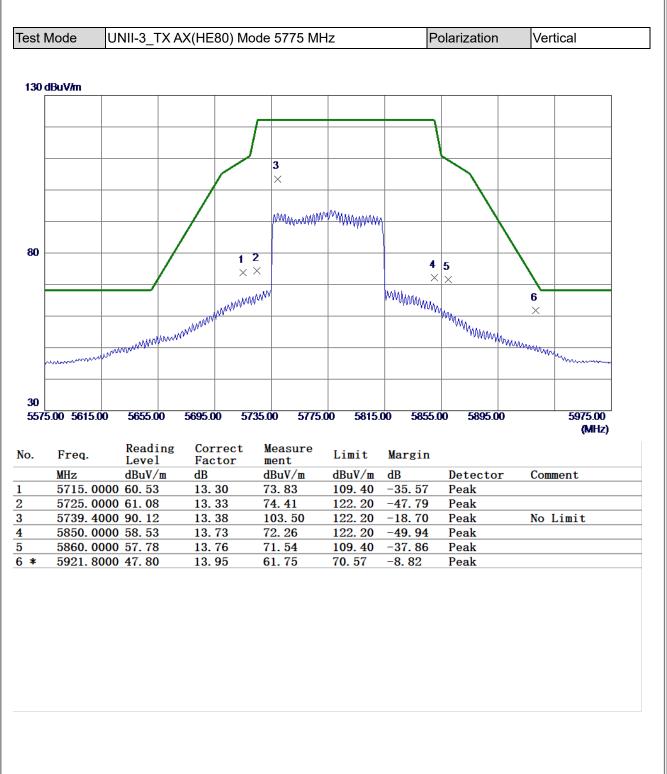








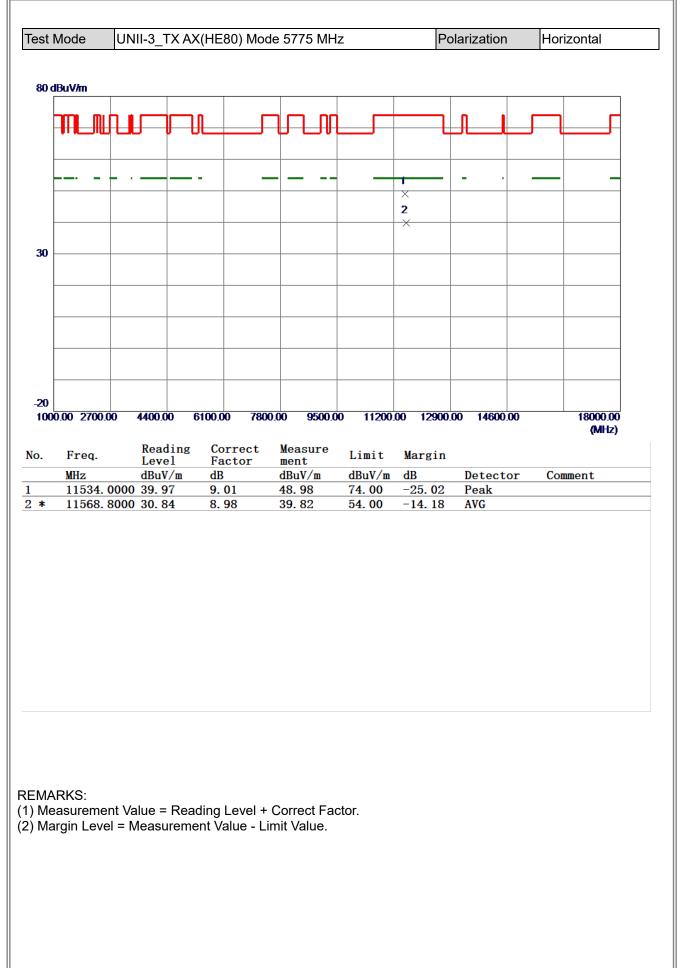




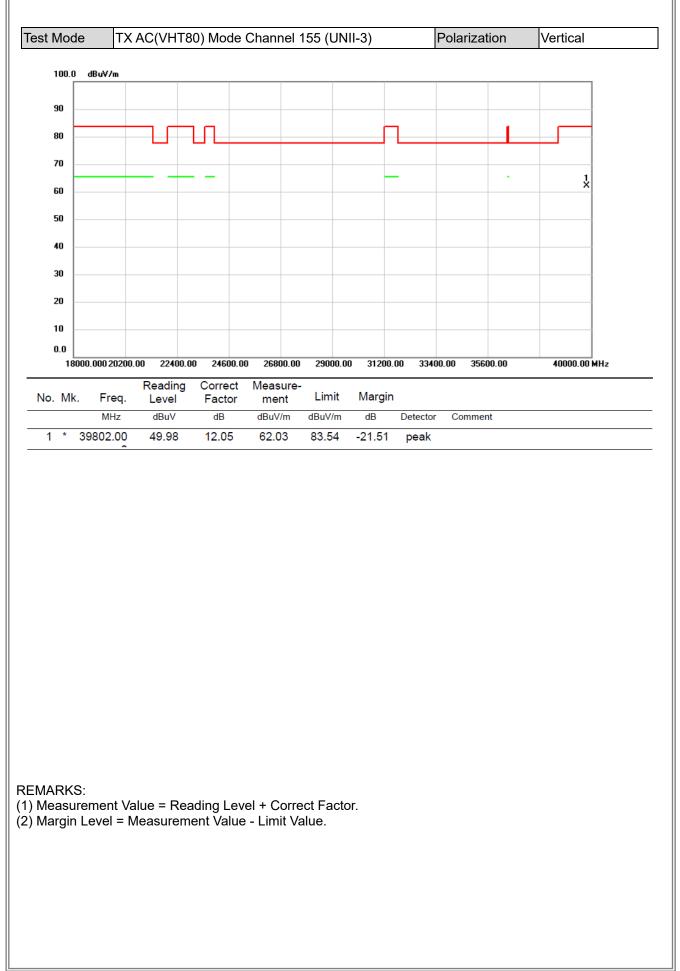
REMARKS:

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

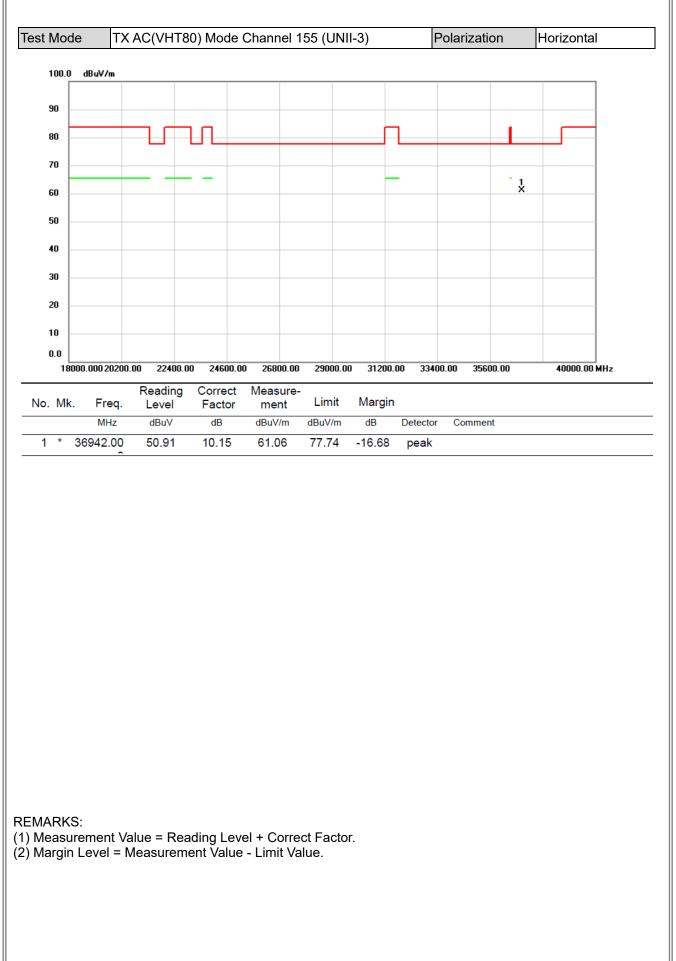










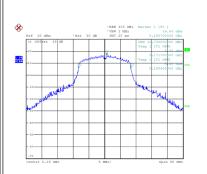


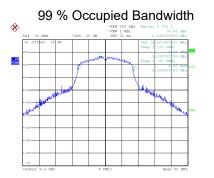


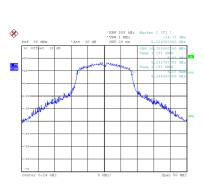
APPENDIX E - BANDWIDTH



Test Mode	UNII-1_TX A Mode		
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
36	5180	26.900	16.700
40	5200	28.100	16.800
48	5240	25.789	16.700
С	H36	CH40 26 dB Bandwidth	CH48
Ref 30 dBm *Att 30 dB	 1282 O LIAE LALE 1 (21) 21.000 C LIAE LALE 1 (21) 21.000 C LIAE LALE (21)		Provide
te: 26.FEB.2024 15:39:03	Date: 26.FEB.202	4 15:41:14	Date: 26.FEB.2024 15:42:16







Date: 26.FEB.2024 15:38:36

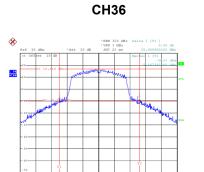
Date: 26.FEB.2024 15:40:49

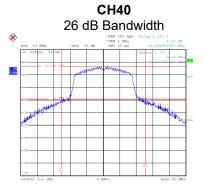
Date: 26.FEB.2024 15:41:53



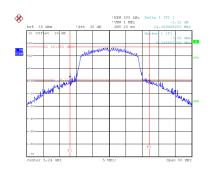
Test Mode UNII-1_TX AC(VHT20) Mode

Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
36	5180	25.700	17.800
40	5200	25.600	17.800
48	5240	24.090	17.700



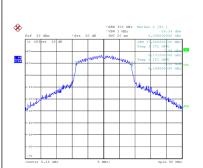


CH48



Date: 26.FEB.2024 15:48:59

Date: 26.FEB.2024 15:48:30



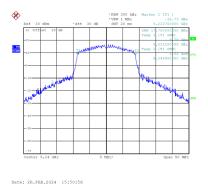


8

1 PE VIEW



Date: 26.FEB.2024 15:51:20



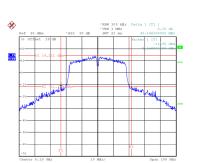
Date: 26.FEB.2024 15:49:53

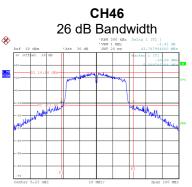
Page 114 of 171



Test Mode UNII-1_TX AC(VHT40) Mode Frequency 26 dB Bandwidth 99 % Occupied Bandwidth Channel (MHz) (MHz) (MHz) 38 5190 45.186 36.800 46 5230 43.788 36.800

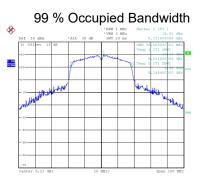
CH38





Date: 26.FEB.2024 15:58:37

 Date: 26.FEB.2024 16:00:14



Date: 26.FEB.2024 15:57:51

Date: 26.FEB.2024 15:59:23



Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
42	5210	113.596	76.000
42	inf 30 eff 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 100 101 101 101 101 101 101 101 101 101 101 101	<figure></figure>	76.000
	99	% Occupied Bandwidth	
	ref 10 minutes in the second s	*AX. 30 cm *20 20 min 5.1 a cm 5.0 cm **** 30 cm **** 5.0 cm 5.0 cm 5.0 cm *** 10 cm **** 5.0 cm 5.0 cm 5.0 cm *** 10 cm **** 5.0 cm 5.0 cm 5.0 cm *** 10 cm **** 5.0 cm 5.0 cm 5.0 cm *** 10 cm 10 cm 10 cm 5.0 cm 5.0 cm *** 10 cm 10 cm 10 cm 10 cm 5.0 cm *** 10 cm 10 cm 10 cm 10 cm 10 cm *** 10 cm 10 cm 10 cm 10 cm 10 cm *** 10 cm 10 cm 10 cm 10 cm 10 cm *** 10 cm 10 cm 10 cm 10 cm 10 cm *** 10 cm 10 cm 10 cm 10 cm 10 cm *** 10 cm 10 cm 10 cm 10 cm 10 cm *** 10 cm 10 cm 10 cm 10 cm 10 cm *** 10 cm 10 cm 10 cm 10 cm 10 cm *** 10 cm 10 cm 10 cm 10 cm 10 cm *** <td></td>	

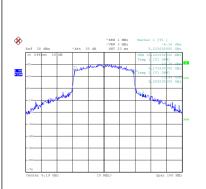


Channel	Frequency (MHz)		26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
36	5180		25.050	19.100
40	5200		27.249	19.100
48	5240		22.500	18.900
C	CH36	*	CH40 26 dB Bandwidth	CH48
3 dm - 4 3 d 0179+ 1 0 0119+ 1 0 0109+ 1 0 0109+ 1 0 0109+ 1 0 0100+ 1000+ 1000+ 1000+ 1000+ 1000+ 1000+ 1000+ 100+	************************************	10 Offee 13 B		Image: Control of the state
	*REW 300 kHz Narker 1 [T1]	99 % 🚸	6 Occupied Bandwidth	*28W 300 kHz Markor 1 [71]
33 cm *34 3 cm 0774c 31 cm 0774c 11 cm 0 cm	**************************************	Ref 20 dBn 10 orfjest 10 dD 11	- XEE 30 cm - VIII - VIIII - VIIII - VIII - VIIII - VIIII - VIII - VIII - VIII - VIII - VIII - VIIII - VIIIII - VIIII - VIIIII - VIIII - VIIII - VIIIII - VIIIII - VIIIII - VIIIII - VIIII - VIIIII - VIIII - VIIII - VIIIIII - VIIIII - VIIIIIII - VIIIII - VIIIIIIII	Image: 10 cm/m *Att 10 cm/m *Att 20 cm/



1 PR

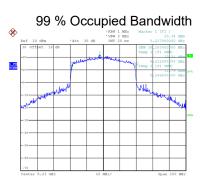
Test Mode	UNII-1_TX AX(HE40) Mo	de	
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
38	5190	53.400	38.200
46	5230	43.696	38.200
۲ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰۰۰ ۲۰	*130 300 HHz Sulta 1 [T1] *200 1 HHz Sulta 1 [T1] *200 1 HHz Sulta 1 [T1] *200 1 HHz Sulta 1 [T1]	CH46 26 dB Bandwidth	





1 PK VIEW

W.



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Date: 26.FEB.2024 16:37:09



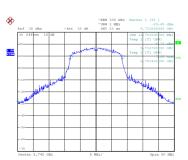
Channel	Frequency (MHz)	26 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)
42	5210	106.200	77.600
	ar 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	20 MEL/ Dipan 200 MEL	
	Date: 26.FEB.202	DEZ 20 MEL/ Den 200 MEL	



Test Mode	e UNII-3_	TX A Mode			
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
149	5745	15.200	16.700	0.5	Complies
157	5785	15.100	16.700	0.5	Complies
165	5825	15.150	16.700	0.5	Complies
Ref 30 dBm 30 Offlet 19 dB -22	CH149	1 (T1) 0.97 dB 1.9992000 MB 1 (T1) 1 (T1)	CH157 6 dB Bandwidth	CH165	Dulta 3 [71] 15.14992000 MHz Marked 1 [7] 9.0 0000
Center 5-745 (Es	S NEX		5 MEZ 2004 50 MEZ	13.404 0000 000 000 000	The second secon
te: 26.FEB.2024 15:	44:13	Date: 26.FEB.2024 15:	45:39	Date: 26.FEB.2024 15:47:00	

99 % Occupied Bandwidth

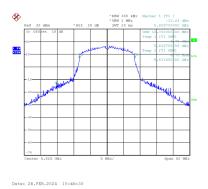
the we





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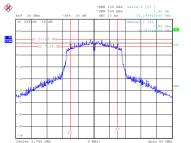
Date: 26.FEB.2024 15:45:09

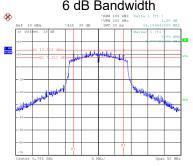
8

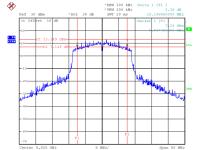
1 PR



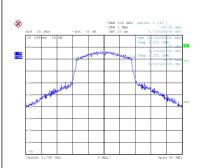
Test Mode	e UNII-3_	TX AC(VHT20) Mode	9		
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
149	5745	15.200	17.700	0.5	Complies
157	5785	15.200	17.700	0.5	Complies
165	5825	15.200	17.700	0.5	Complies
	CH149		CH157 6 dB Bandwidth	CH165	
*	*RBW 100 kHz Delta 1 *VBW 300 kHz	80	*RBW 100 kHz Delta 1 [T1] *VEW 300 kHz 1.00 dB *Att 30 dB SWT 20 ms 15.199942000 MHz	*RBW 100 kHz *VBW 300 kHz Ref 30 dHm *Att 30 dB SWT 20 ms	Delta 1 [T1] 2.36 dB 15.199950000 MHz



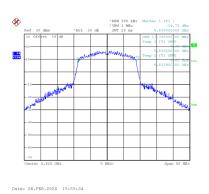




Date: 26.FEB.2024 15:53:09



Date: 26.FEB.2024 15:56:04



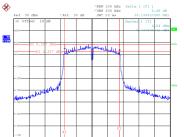
Date: 26.FEB.2024 15:52:39

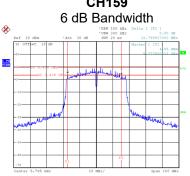
Date: 26.FEB.2024 15:54:19

Date: 26.FEB.2024 15:54:49



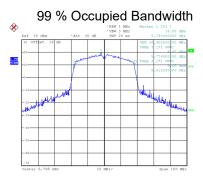
Test Mode	e UNII-3_	TX AC(VHT40) Mode	9		
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
151	5755	35.200	36.400	0.5	Complies
159	5795	32.800	36.400	0.5	Complies
	CH151	æ	CH159 6 dB Bandwidth		





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Date: 26.FEB.2024 16:03:09



hannel Frequency (MHz) 155 5775	6 dB Bandwidth (MHz) 70.800	99 % Occupied Bandwidth (MHz) 75.600	6 dB Bandwidth Min. Limit (MHz) 0.5	Result Complies
	No No No No	CH155 Solution Image: Solution		