

# FCC Radio Test Report

# FCC ID: 2AUA9-RQZY004

#### This report concerns: Original Grant

Project No. Equipment Brand Name Test Model		2005C172 AX1800 Wi-Fi6 Smart WiFi Router ROCK, rock space RSD0616
Series Model	:	N/A
Applicant	:	Shenzhen Renqing Excellent Technology Co., Ltd.
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Manufacturer	:	Shenzhen Renqing Excellent Technology Co., Ltd.
Address	:	104, No.15, Longfu Industrial Zone, Tongsheng Community, Dalang Street, Dalang Street, Longhua District, Shenzhen, Guangdong , China
Date of Receipt	:	May 27, 2020
Date of Test	:	May 28, 2020 ~ Jun. 30, 2020
Issued Date	:	Oct. 09, 2020
<b>Report Version</b>	:	R01
Test Sample	:	Engineering Sample No.: DG20200527305 for conducted, DG20200527306 for radiated.
Standard(s)	:	FCC Part15, Subpart C (15.247) ANSI C63.10-2013 FCC KDB 558074 D01 15.247 Meas Guidance v05r02

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

There bared by : Chella Zheng

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#### 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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# **APPENDIX H - POWER SPECTRAL DENSITY**

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# **REPORT ISSUED HISTORY**

Report Version	Description	Issued Date
R00	Original Issue.	Jul. 23, 2020
R01	Changed the product name.	Oct. 09, 2020

# 1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

	FCC Part15, Subpart C (15.247)					
Standard(s) Section	Test Item	Test Result	Judgment	Remark		
15.207	AC Power Line Conducted Emissions	APPENDIX A	PASS			
15.247(d) 15.205(a) 15.209(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS			
15.247(a)(2)	Bandwidth	APPENDIX E	PASS			
15.247(b)(3)	Maximum Output Power	APPENDIX F	PASS			
15.247(d)	Conducted Spurious Emissions	APPENDIX G	PASS			
15.247(e) Power Spectral Density APPENDIX H PA		PASS				
15.203	Antenna Requirement		PASS	Note(2)		

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.



#### 1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Shixia, Dalang Town, Dongguan, Guangdong, China. BTL's Test Firm Registration Number for FCC: 357015 BTL's Designation Number for FCC: CN1240

1.2 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	U, (dB)
DG-C02	CISPR	150kHz ~ 30MHz	2.60

#### B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
		9kHz ~ 30MHz	V	3.79
		9kHz ~ 30MHz	Н	3.57
	CISPR	30MHz ~ 200MHz	V	4.88
		30MHz ~ 200MHz	Н	4.14
DG-CB03		200MHz ~ 1,000MHz	V	4.62
DG-CD03		200MHz ~ 1,000MHz	Н	4.80
		1GHz ~ 6GHz	I	4.58
		6GHz ~ 18GHz	I	5.18
		18GHz ~ 26.5GHz	I	3.62
		26.5GHz ~ 40GHz	-	4.00

#### C. Other Measurement:

Test Item	Uncertainty
Bandwidth	±3.8 %
Maximum Output Power	±0.95 dB
Conducted Spurious Emission	±2.71 dB
Power Spectral Density	±0.86 dB
Temperature	±0.08 °C
Time	±0.58 %
Supply voltages	±0.3 %

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

## **1.3 TEST ENVIRONMENT CONDITIONS**

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	25°C	55%	AC 120V/60Hz AC 240V/50Hz	Sheldon Ou
Radiated Emissions-9K-30MHz	25°C	60%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions-30 MHz to 1GHz	22°C	54%	AC 120V/60Hz	Sheldon Ou
Radiated Emissions-Above 1000 MHz	22°C	54%	AC 120V/60Hz	Sheldon Ou
Bandwidth	25°C	60%	DC 12V	Hayden Chen
Maximum output power	25°C	60%	DC 12V	Laughing Zhang
Conducted Spurious Emissions	25°C	60%	DC 12V	Hayden Chen
Power Spectral Density	25°C	60%	DC 12V	Hayden Chen

# 2. GENERAL INFORMATION

#### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	AX1800 Wi-Fi6 Smart WiFi Router				
Equipment					
Brand Name	ROCK, rock space				
Test Model	RSD0616				
Series Model	N/A				
Model Difference(s)	N/A				
Power Source	DC voltage supplied from AC adapter. Model: RD1201500-C55-153MG				
Power Rating	I/P: 100-240V ~50/60Hz 0.6A O/P: 12V === 1.5A				
Operation Frequency	2412 MHz ~ 2462 MHz				
Modulation Type IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM IEEE vht: 256QAM IEEE 802.11ax: OFDMA					
Bit Rate of Transmitter	IEEE 802.11b: 11/5.5/2/1 Mbps IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps IEEE 802.11n: up to 300 Mbps IEEE vht: up to 400 Mbps IEEE 802.11ax: up to 573.6 Mbps				
Maximum Output Power	IEEE 802.11b: 20.87 dBm (0.1222 W) IEEE 802.11g: 23.76 dBm (0.2377 W) IEEE 802.11n (HT20): 23.62 dBm (0.2301 W) IEEE 802.11n (HT40): 19.22 dBm (0.0836 W) IEEE vht20: 23.35 dBm (0.2163 W) IEEE vht40: 19.18 dBm (0.0828 W) IEEE 802.11ax (HEW20): 23.59 dBm (0.2286 W) IEEE 802.11ax (HEW40): 18.79 dBm (0.0757 W)				

Note:

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

#### 2. Channel List:

ſ	CH01 – CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20), IEEE vht20,							
	IEEE 802.11ax (HEW20) CH03 – CH09 for IEEE 802.11n (HT40), IEEE vht40, IEEE 802.11ax (HEW40)							
	(	CH03 - CH09	offor IEEE 80	<u>)2.11n (H140</u>	), IEEE vht4	10, IEEE 802	.11ax (HEW4	10)
					Frequency (MHz)			
	01	2412	04	2427	07	2442	10	2457
	02	2417	05	2432	08	2447	11	2462
	03	2422	06	2437	09	2452		

3. RU Configuration:

IEEE 802.11ax(HEW20)	Resource Unit	242 Tone(20M)
1222 002.1 Tax(112W20)	Specific Resource Unit	61
	Resource Unit	484 Tone(40M)
IEEE 802.11ax(HEW40)	Specific Resource Unit	65

Remark: IEEE 802.11ax mode only supports the highest tone, so the highest tone was evaluated and measured inside report.



#### 4. Antenna Specification:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	<b>SLEing</b> <sup>•</sup>	N/A	Dipole	N/A	5.13
2	<b>SLEing</b> <sup>®</sup>	N/A	Dipole	N/A	5.13
Mater					

Note:

This EUT supports CDD, and all antennas have the same gain, then the Directional gain =  $G_{ANT}$ +Array Gain,

For power measurements, Array Gain = 0 dB ( $N_{ANT} \le 4$ ), so the Directional gain=5.13.

For power spectral density measurements,  $N_{ANT} = 2$ ,  $N_{SS} = 1$ . So Directional gain =  $G_{ANT}$  + Array Gain =  $G_{ANT}$ +10log ( $N_{ANT}/N_{SS}$ ) dB =5.13+10log(2/1)dBi=8.14. Then, the power spectral density limit is 8-(8.14-6)=5.86.

#### 5. Table for Antenna Configuration:

Operating Mode TX Mode	1TX	2TX
IEEE 802.11b	V (Ant. 2)	-
IEEE 802.11g	-	V (Ant. 1 + Ant. 2)
IEEE 802.11n (HT20)	-	V (Ant. 1 + Ant. 2)
IEEE 802.11n (HT40)	-	V (Ant. 1 + Ant. 2)
IEEE vht20	-	V (Ant. 1 + Ant. 2)
IEEE vht40	-	V (Ant. 1 + Ant. 2)
IEEE 802.11ax (HEW20)	-	V (Ant. 1 + Ant. 2)
IEEE 802.11ax (HEW40)	-	V (Ant. 1 + Ant. 2)

## 2.2 DESCRIPTION OF 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 B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09
Mode 5	TX vht-20 MHz Mode Channel 01/06/11
Mode 6	TX vht-40 MHz Mode Channel 03/06/09
Mode 7	TX AX-20 MHz Mode Channel 01/06/11
Mode 8	TX AX-40 MHz Mode Channel 03/06/09
Mode 9	TX G Mode Channel 06

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 9	Mode 9 TX G Mode Channel 06	

Radiated emissions test - Below 1GHz		
Final Test Mode Description		
Mode 9 TX G Mode Channel 06		

Radiated emissions test- Above 1GHz		
Final Test Mode	Description	
Mode 1	TX B Mode Channel 01/06/11	
Mode 2	TX G Mode Channel 01/06/11	
Mode 3	TX N-20 MHz Mode Channel 01/06/11	
Mode 4	TX N-40 MHz Mode Channel 03/06/09	
Mode 7	TX AX-20 MHz Mode Channel 01/06/11	
Mode 8	TX AX-40 MHz Mode Channel 03/06/09	

Output Power test		
Final Test Mode Description		
Mode 1	TX B Mode Channel 01/06/11	
Mode 2	TX G Mode Channel 01/06/11	
Mode 3	TX N-20 MHz Mode Channel 01/06/11	
Mode 4	TX N-40 MHz Mode Channel 03/06/09	
Mode 5	TX vht-20 MHz Mode Channel 01/06/11	
Mode 6	TX vht-40 MHz Mode Channel 03/06/09	
Mode 7	TX AX-20 MHz Mode Channel 01/06/11	
Mode 8	TX AX-40 MHz Mode Channel 03/06/09	

Other Conducted test		
Final Test Mode	Description	
Mode 1	TX B Mode Channel 01/06/11	
Mode 2	TX G Mode Channel 01/06/11	
Mode 3	TX N-20 MHz Mode Channel 01/06/11	
Mode 4	TX N-40 MHz Mode Channel 03/06/09	
Mode 7	TX AX-20 MHz Mode Channel 01/06/11	
Mode 8	TX AX-40 MHz Mode Channel 03/06/09	

NOTE:

- (1) The measurements are performed at the high, middle, low available channels.
- (2) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.
- (3) For radiated emission below 1 GHz test, the IEEE 802.11g Channel 06 is found to be the worst case and recorded.
- (4) For radiated emission above 1 GHz test, 1GHz~26.5GHz 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.
- (5) The measurements for Output Power were tested, the worst case were IEEE 802.11b mode, IEEE 802.11b mode, IEEE 802.11a (HT20) mode, IEEE 802.11n(HT40) mode, IEEE 802.11ax(HEW20) mode and IEEE 802.11ax(HEW40) mode, only the worst case were documented for other test items.
- (6) For radiated emissions, the TX WLAN 2.4G B Mode 2437MHz + WLAN 5G A Mode 5785MHz was found the worst case of simultaneous transmission and recorded.

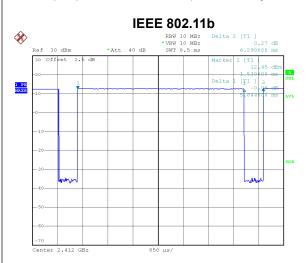
#### 2.3 PARAMETERS OF TEST SOFTWARE

Test Software	accessMTool_REL_3_1_0_4		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	79	79	79
IEEE 802.11g	66	78	67
IEEE 802.11n (HT20)	66	78	66
IEEE vht20	60	77	66
IEEE 802.11ax (HEW20)	62	77	54
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	58	64	62
IEEE vht40	56	63	60
IEEE 802.11ax (HEW40)	56	60	60



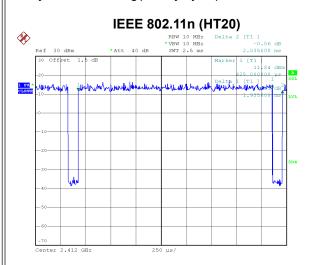
# 2.4 DUTY CYCLE

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.



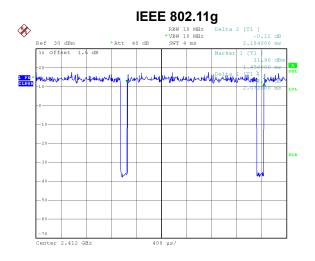
Date: 1.JUN.2020 20:44:16

Duty cycle = 5.644 ms / 6.290 ms = 89.73% Duty Factor = 10 log(1/Duty cycle) = 0.47



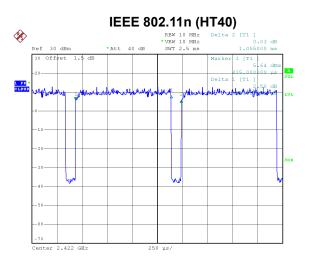
Date: 1.JUN.2020 20:45:10

Duty cycle = 1.935 ms / 2.035 ms = 95.09% Duty Factor = 10 log(1/Duty cycle) = 0.22



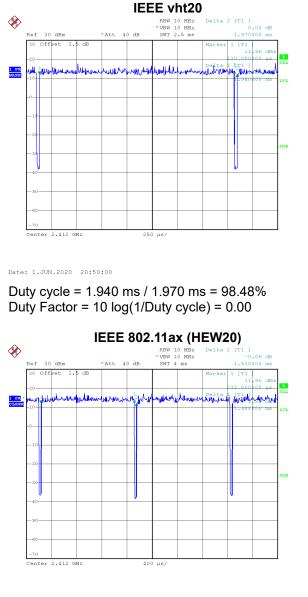
Date: 1.JUN.2020 20:44:47

Duty cycle = 2.072 ms / 2.184 ms = 94.87% Duty Factor = 10 log(1/Duty cycle) = 0.23



Date: 1.JUN.2020 20:45:33

Duty cycle = 0.955 ms / 1.055 ms = 90.52%Duty Factor =  $10 \log(1/\text{Duty cycle}) = 0.43$ 



Date: 1.JUN.2020 20:45:59

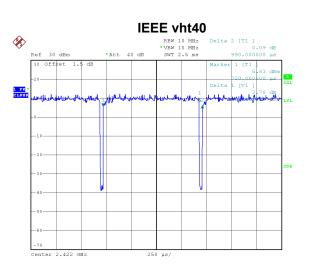
Duty cycle = 1.488 ms / 1.520 ms = 97.89% Duty Factor = 10 log(1/Duty cycle) = 0.09

#### NOTE:

For IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20), IEEE vht20 and IEEE 802.11ax (HEW20): For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle < 98%).

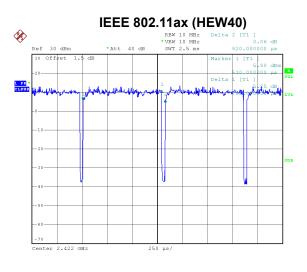
For IEEE 802.11n (HT40), IEEE vht40 and IEEE 802.11ax (HEW40):

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 < 98%).



#### Date: 1.JUN.2020 20:50:24

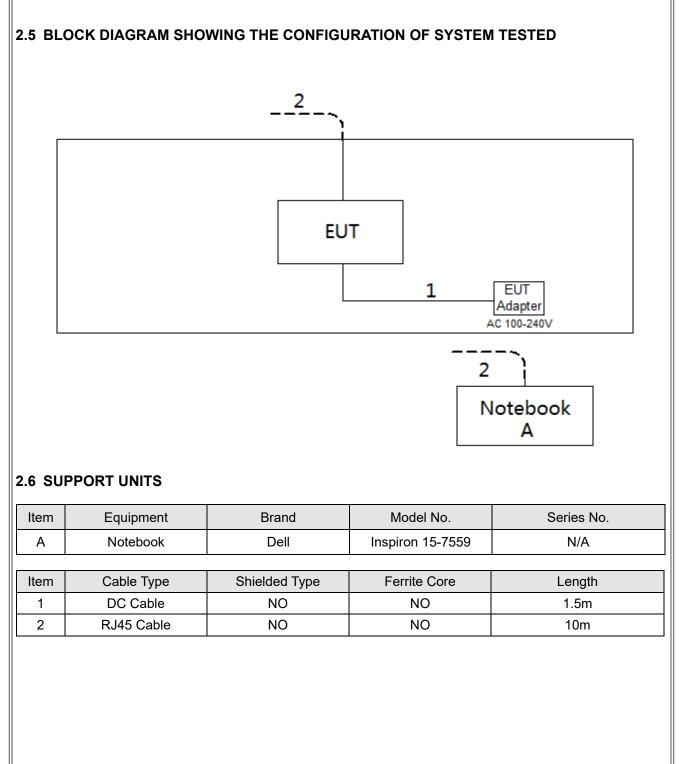
Duty cycle = 0.960 ms / 0.990 ms = 96.97% Duty Factor = 10 log(1/Duty cycle) = 0.13



#### Date: 1.JUN.2020 20:46:19

Duty cycle = 0.785 ms / 0.820 ms = 95.73% Duty Factor = 10 log(1/Duty cycle) = 0.19







# 3. AC POWER LINE CONDUCTED EMISSIONS TEST

#### 3.1 LIMIT

Frequency of Emission (MHz)	Limit (dBµV)	
Frequency of Emission (Minz)	Quasi-peak	Average
0.15 - 0.50	66 to 56*	56 to 46*
0.50 - 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.

#### The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

#### 3.2 TEST PROCEDURE

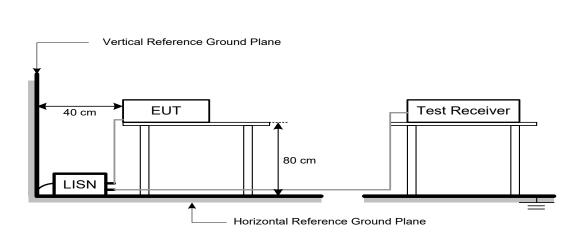
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 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.

#### 3.3 DEVIATION FROM TEST STANDARD

No deviation



# 3.4 TEST SETUP



#### 3.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

#### 3.6 TEST RESULTS

Please refer to the APPENDIX A.



# 4. RADIATED EMISSIONS TEST

#### 4.1 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 EMISSION MEASUREMENT (9 kHz-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 RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

#### For WLAN 2.4GHz:

Frequency (MHz)	(dBuV/m at 3 m)		
Frequency (Miriz)	Peak	Average	
Above 1000	74	54	

For WLAN 5GHz:

Frequency (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dBµV/m)
	-27 NOTE(4)	68.3
5725-5850	10 NOTE(4)	105.3
5725-5650	15.6 NOTE(4)	110.9
	27 NOTE(4)	122.3

NOTE:

- (1) The limit for radiated test was performed according to FCC PART 15C & FCC PART 15E.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) 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 5 MHz above or below the band edge.

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW	1 MHz / 3 MHz for Peak,
(Emission in restricted band)	1 MHz / 1/T for Average

Receiver Parameter	Setting	
Attenuation	Auto	
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	

#### 4.2 TEST PROCEDURE

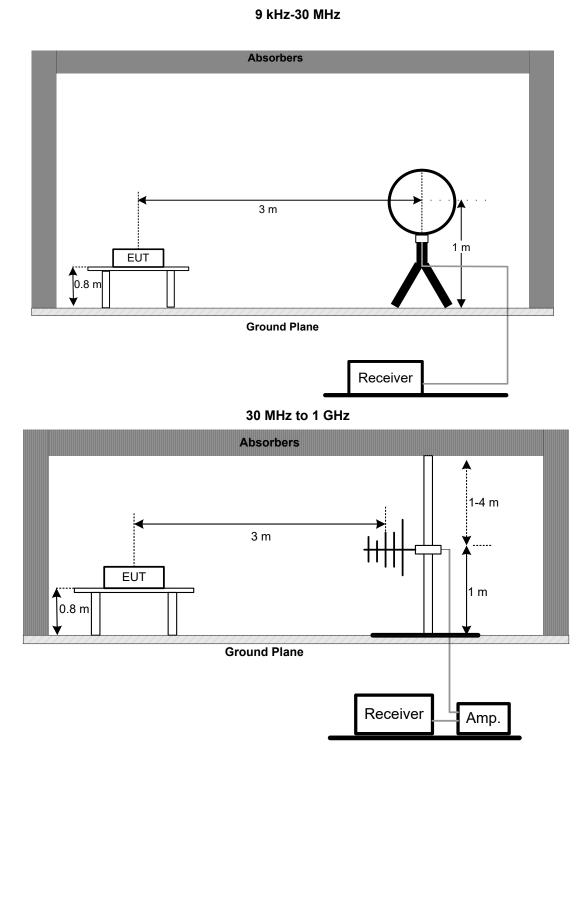
- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
- b. The measuring distance of 3 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 1 GHz)
- 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.

## 4.3 DEVIATION FROM TEST STANDARD

No deviation

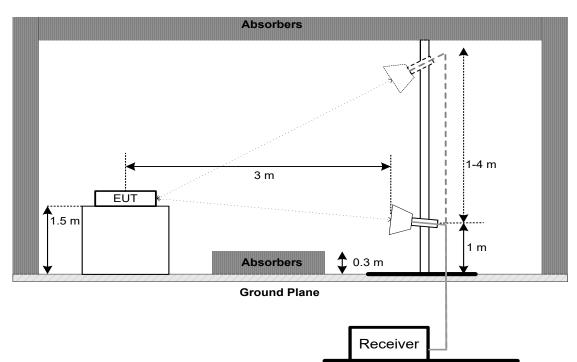


# 4.4 TEST SETUP



# <u>3TL</u>

#### Above 1 GHz



#### 4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 4.6 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.

#### 4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

#### 4.8 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.



# 5. BANDWIDTH TEST

#### 5.1 LIMIT

FCC Part15, Subpart C (15.247)				
Section	Test Item Limit			
15.247(a)(2)	6 dB Bandwidth	Minimum 500 kHz		
13.247(d)(2)	99% Emission Bandwidth	-		

#### 5.2 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 6 dB Bandwidth: RBW= 100 kHz, VBW=300 kHz, Sweep time = auto. For 99% Emission Bandwidth: B/G/N-20/ vht-20/AX-20 Mode: RBW= 300 KHz, VBW=1 MHz, Sweep time = 2.5 ms. N-40/vht-40/AX-40 Mode: RBW= 1 MHz, VBW=3 MHz, Sweep time = 2.5 ms.
  c. The bandwidth was performed in accordance with method 11.8.1 of ANSI C63.10-2013.

#### 5.3 DEVIATION FROM STANDARD

No deviation.

#### 5.4 TEST SETUP



#### 5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 5.6 TEST RESULTS

Please refer to the APPENDIX E.



## 6. MAXIMUM OUTPUT POWER TEST

#### 6.1 LIMIT

FCC Part15, Subpart C (15.247)				
Section Test Item Limit				
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm		

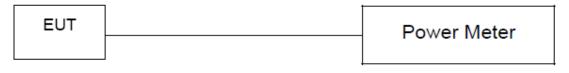
#### 6.2 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- b. The maximum conducted output power was performed in accordance with method 11.9.2.3.1 of ANSI C63.10-2013.

#### 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 F.



# 7. CONDUCTED SPURIOUS EMISSIONS

#### 7.1 LIMIT

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

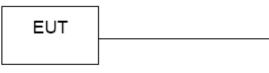
#### 7.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 100 kHz, VBW=300 kHz, Sweep time = Auto.

#### 7.3 DEVIATION FROM STANDARD

No deviation.

#### 7.4 TEST SETUP



SPECTRUM ANALYZER

#### 7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

#### 7.6 TEST RESULTS

Please refer to the APPENDIX G.



# 8. POWER SPECTRAL DENSITY TEST

#### 8.1 LIMIT

FCC Part15, Subpart C (15.247)					
Section	Section Test Item Limit				
15.247(e)	Power Spectral Density	8 dBm (in any 3 kHz)			

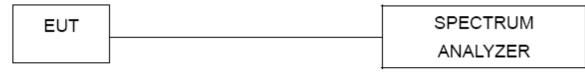
#### 8.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW=3 kHz, VBW=10 kHz, Sweep time = Auto.
- c. The Power Spectral Density was performed in accordance with method 11.10.2 of ANSI C63.10-2013.

#### 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 H.

# 9. 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	Feb. 28, 2021	
2	LISN	EMCO	3816/2	52765	Mar. 01, 2021	
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Feb. 28, 2021	
4	50Ω Terminator	SHX	TF5-3	15041305	Mar. 01, 2021	
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	
6	Cable	N/A	RG223	12m	Mar. 10, 2021	
7	643 Shield Room	ETS	6*4*3m	N/A	N/A	

	Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Antenna	EM	EM-6876-1	230	Apr. 16, 2021	
2	Cable	N/A	RG 213/U	N/A	May 29, 2021	
3	EMI Test Receiver	R&S	ESCI	100895	Feb. 28, 2021	
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	
5	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021	

	Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 09, 2021	
2*	Amplifier	HP	8447D	2944A09673	Aug. 11, 2021	
3	Receiver	Agilent	N9038A	MY52130039	Aug. 03, 2020	
4	Cable	emci	LMR-400(30MHz-1 GHz)(8m+5m)	N/A	May 22, 2021	
5	Controller	СТ	SC100	N/A	N/A	
6	Controller	MF	MF-7802	MF780208416	N/A	
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	
8	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021	

	Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Double Ridged Guide Antenna	ETS	3115	75789	May 12, 2021	
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 23, 2021	
3	Amplifier	Agilent	8449B	3008A02333	Mar. 01, 2021	
4	Microwave Preamplifier With Adaptor	EMC INSTRUMENT	EMC2654045	980039 & HA01	Mar. 07, 2021	
5	Receiver	Agilent	N9038A	MY52130039	Aug. 03, 2020	
6	Controller	СТ	SC100	N/A	N/A	
7	Controller	MF	MF-7802	MF780208416	N/A	
8	Cable	N/A	EMC104-SM-SM-6 000	N/A	May 09, 2021	
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	
10	Filter	STI	STI15-9912	N/A	Jul. 25, 2021	
11	966 Chambe Room	RM	9*6*6m	N/A	Jul. 25, 2021	

Bandwidth & Antenna Conducted Spurious Emissions & Power Spectral Density								
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	Spectrum Analyzer	R&S	FSP40	100185	Aug. 03, 2020			
2	RF Cable	Tongkaichuan	N/A	N/A	N/A			
3	DC Block	Mini	N/A	N/A	N/A			
3		0						

Maximum Output Power								
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	Peak Power Analyzer	Keysight	8990B	MY51000506	Aug. 03, 2020			
2	Wideband power sensor	Keysight	N1923A	MY58310004	Aug. 03, 2020			
3	RF Cable	Tongkaichuan	N/A	N/A	N/A			

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

"\*" calibration period of equipment list is three year.

Except \* item, all calibration period of equipment list is one year.

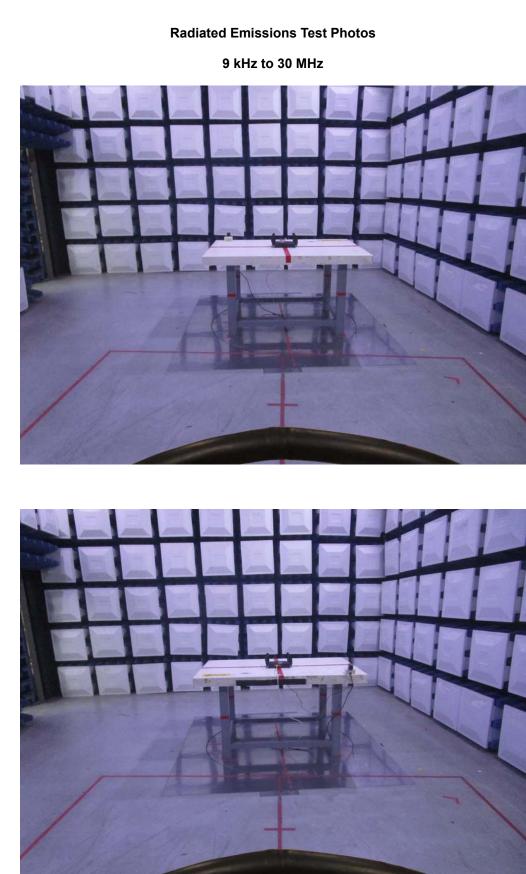


#### AC Power Line Conducted Emissions Test Photos

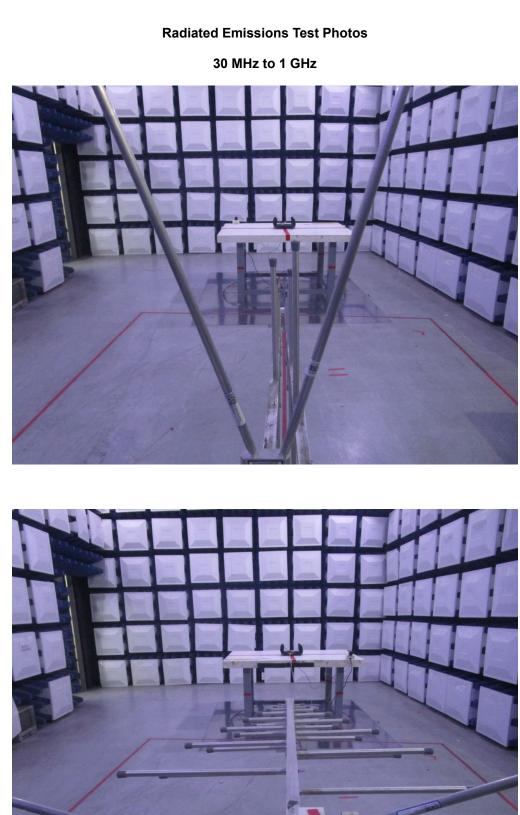














#### **Radiated Emissions Test Photos**

Above 1 GHz

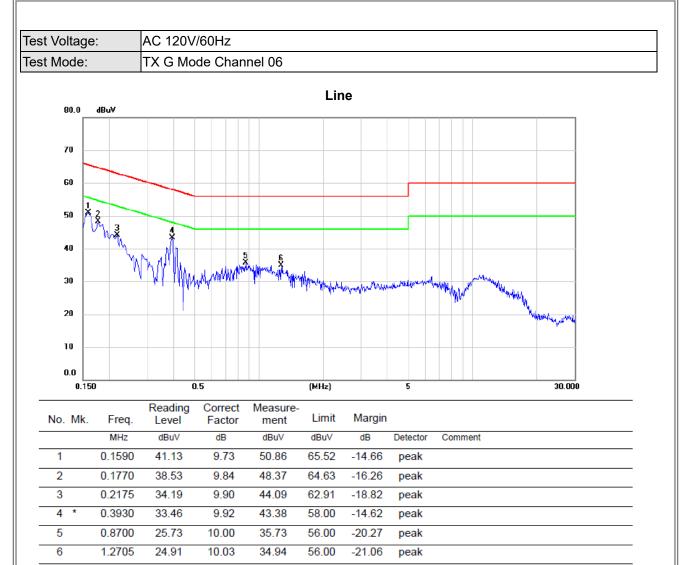






# **APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS**

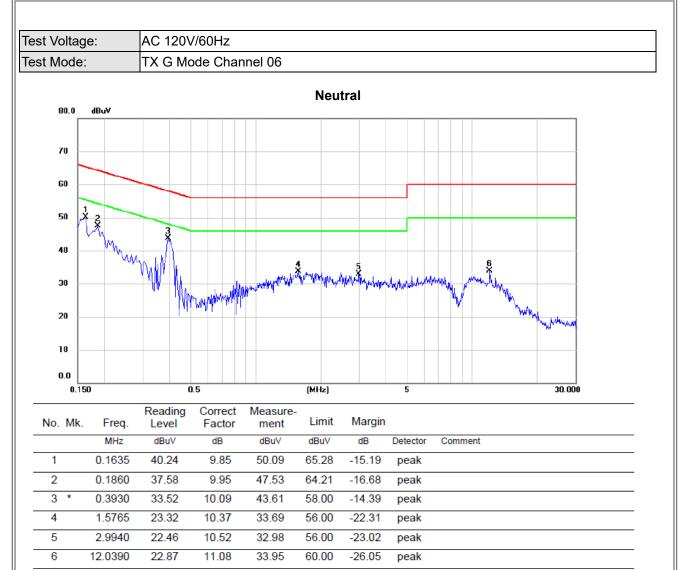




**REMARKS**:

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

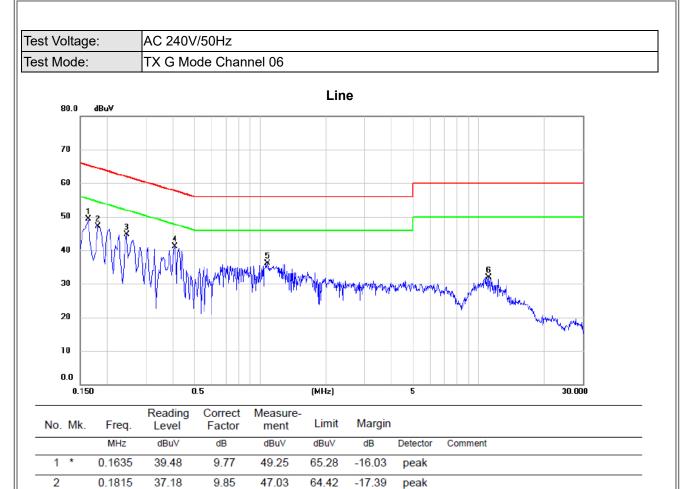




**REMARKS**:

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





3

4

5

6

0.2445

0.4065

1.0815

11.1570

34.76

31.14

25.99

21.21

9.87

9.92

10.02

10.75

44.63

41.06

36.01

31.96

61.94

57.72

56.00

60.00

-17.31

-16.66

-19.99

-28.04

peak

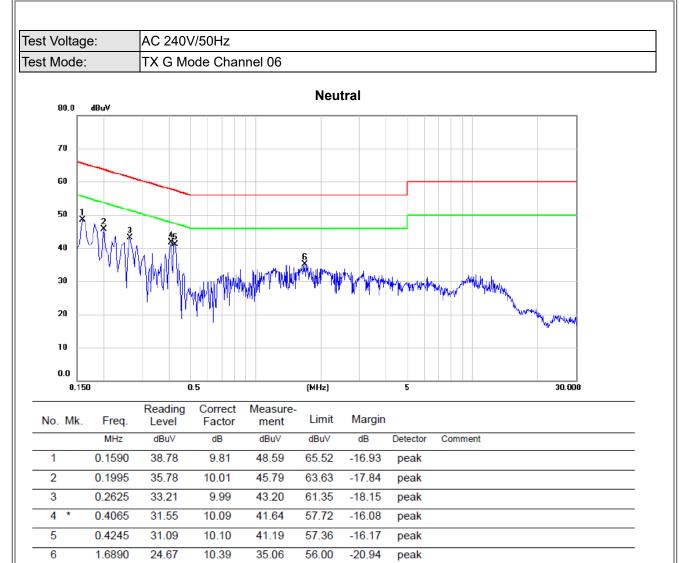
peak

peak

peak

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



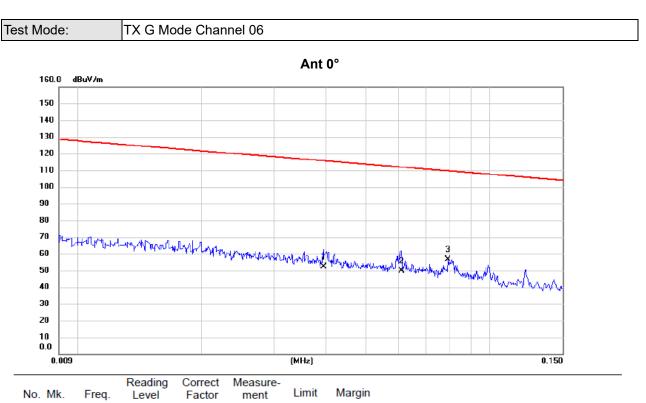


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



## **APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ**

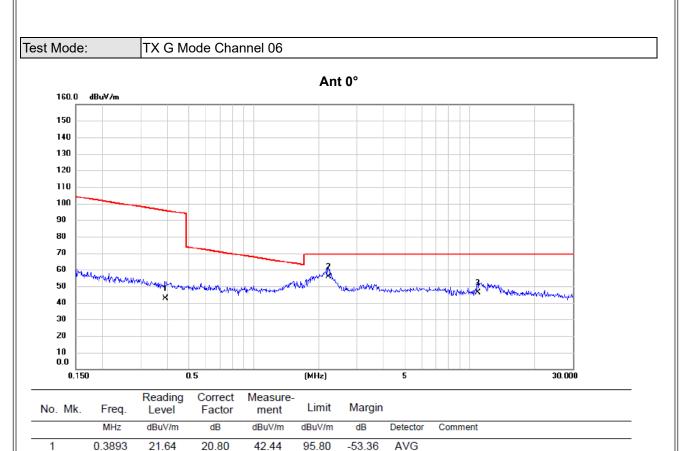




MHz         dBuV/m         dB         dBuV/m         dB         Detector         Comment           1         0.0395         31.25         21.00         52.25         115.67         -63.42         AVG           2         0.0610         28.76         20.97         49.73         111.90         -62.17         AVG           3         *         0.0792         35.54         20.99         56.53         109.63         -53.10         AVG	NO. WK.	Freq.	Level	Factor	ment	LIIIII	margin		
2 0.0610 28.76 20.97 49.73 111.90 -62.17 AVG		MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
	1	0.0395	31.25	21.00	52.25	115.67	-63.42	AVG	
3 * 0.0792 35.54 20.99 56.53 109.63 -53.10 AVG	2	0.0610	28.76	20.97	49.73	111.90	-62.17	AVG	
	3 *	0.0792	35.54	20.99	56.53	109.63	-53.10	AVG	

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





2 \*

3

2.2250

10.9050

33.85

23.82

21.84

22.45

55.69

46.27

69.54

69.54

-13.85

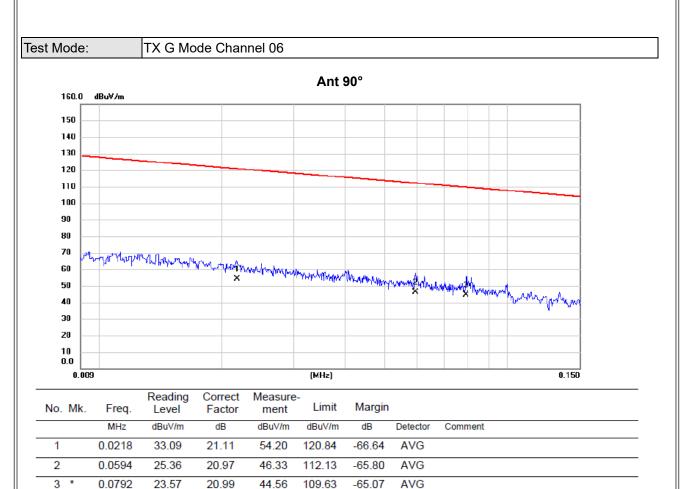
-23.27

QP

QP

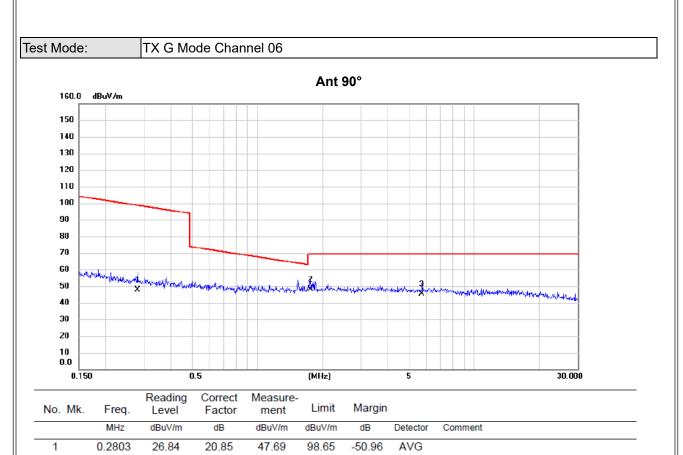
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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





QP

QP

-21.36

-24.19

**REMARKS**:

2 \*

3

1.7530

5.7437

26.42

23.51

21.76

21.84

48.18

45.35

69.54

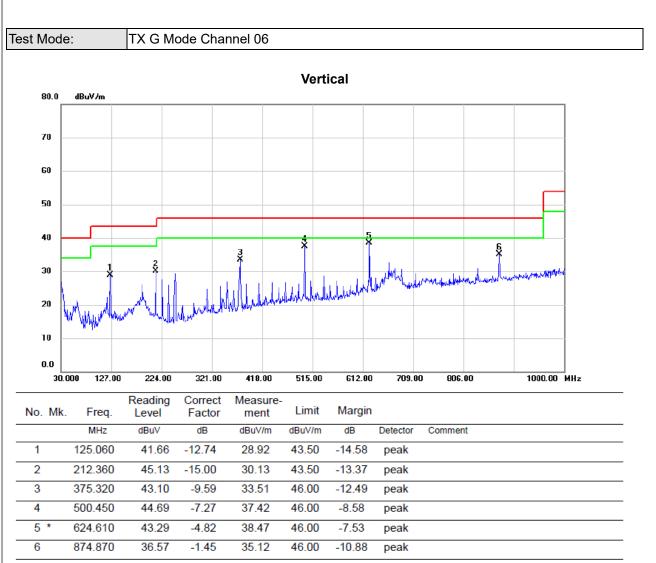
69.54

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



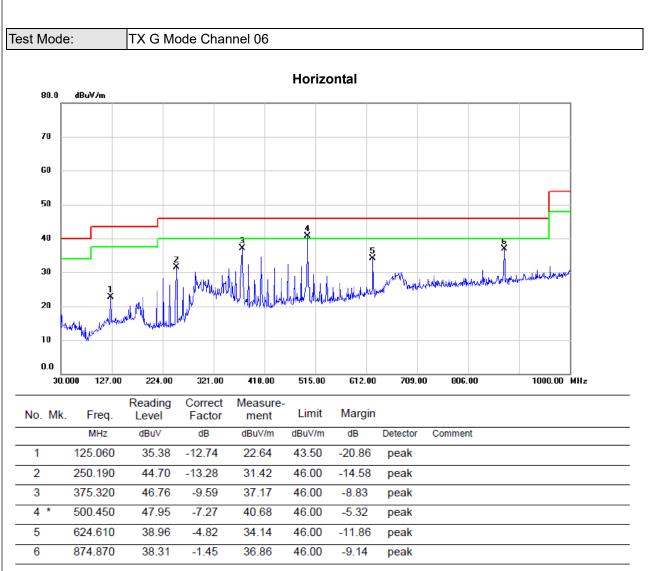
## APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ





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



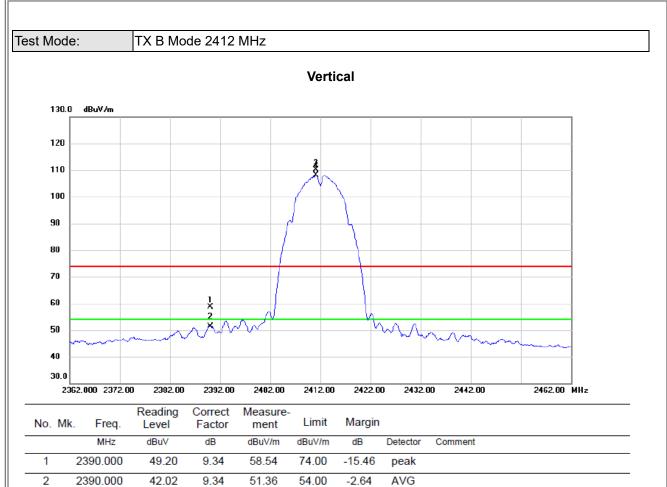


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



## **APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ**





2411.200

2411.200

3 X

4 \*

100.78

98.69

9.39

9.39

110.17

108.08

74.00

54.00

36.17

54.08

No Limit

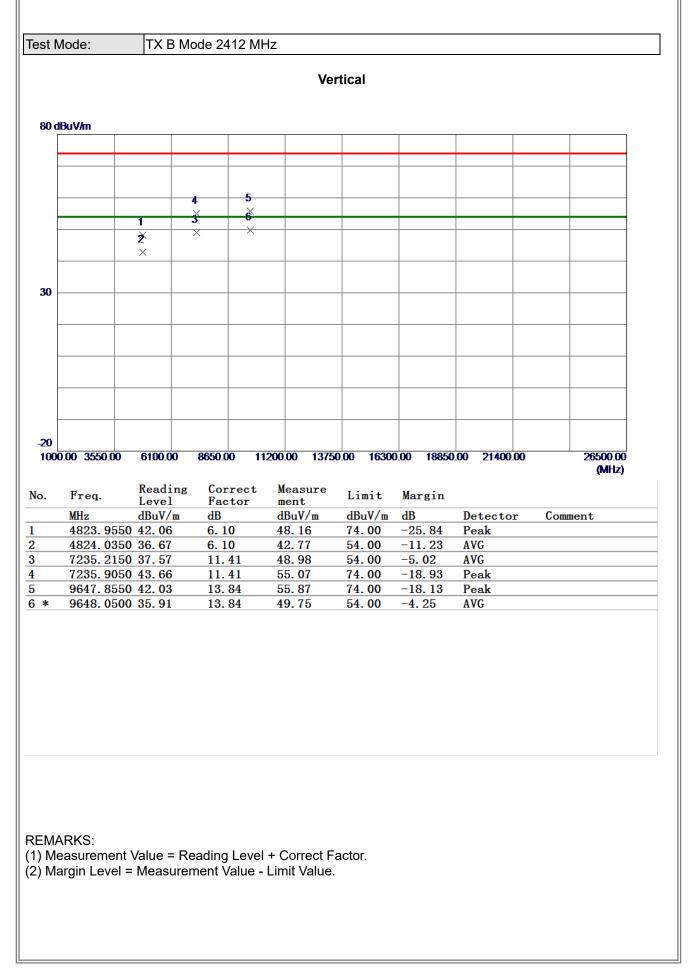
No Limit

peak

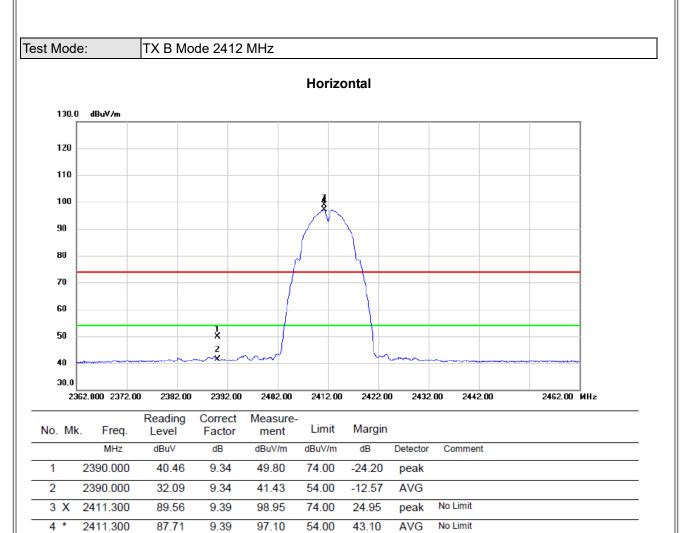
AVG

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



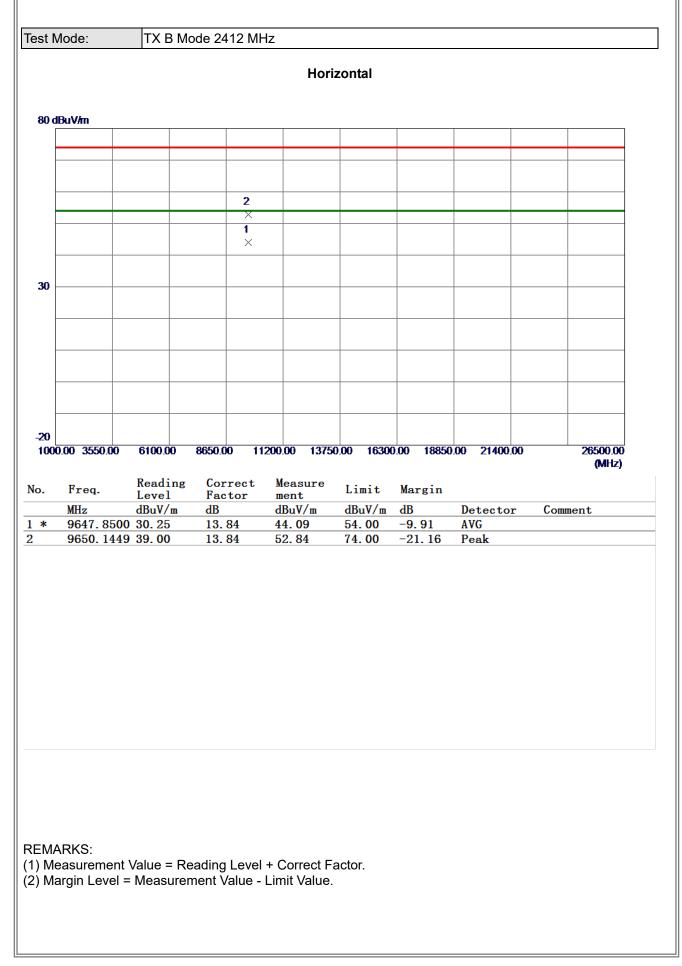




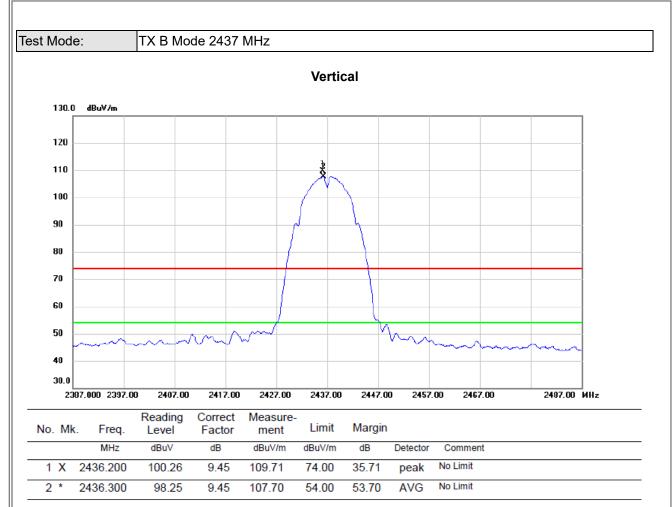


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



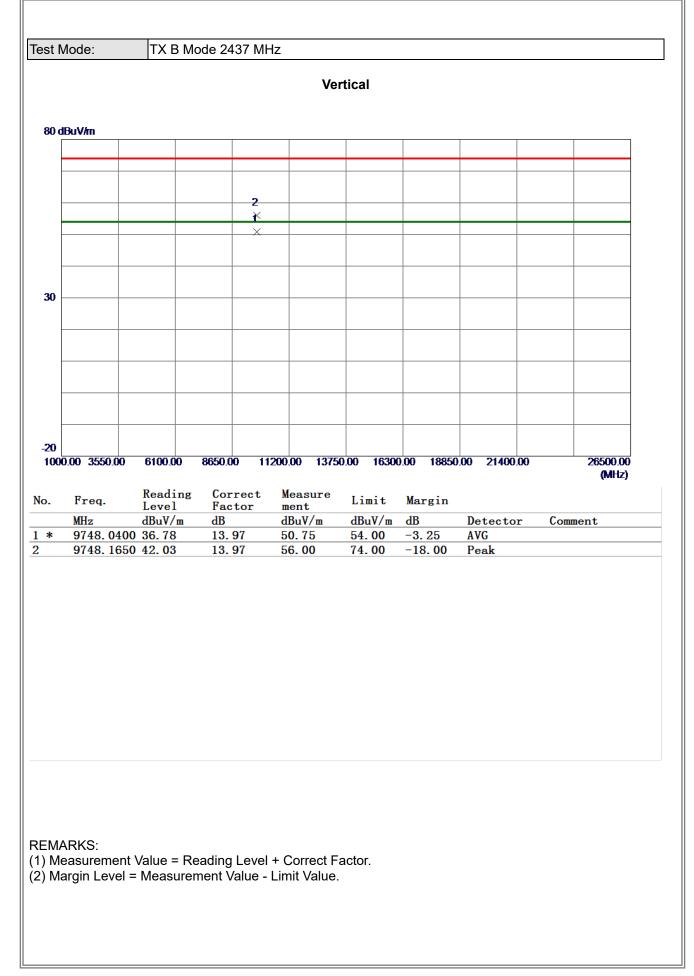




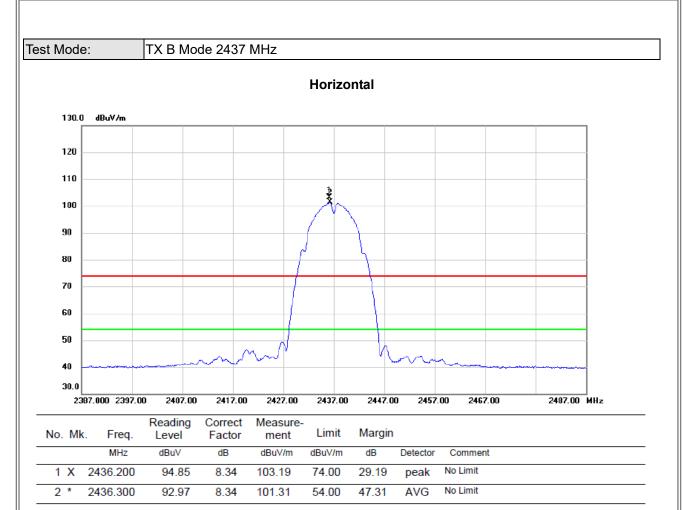


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



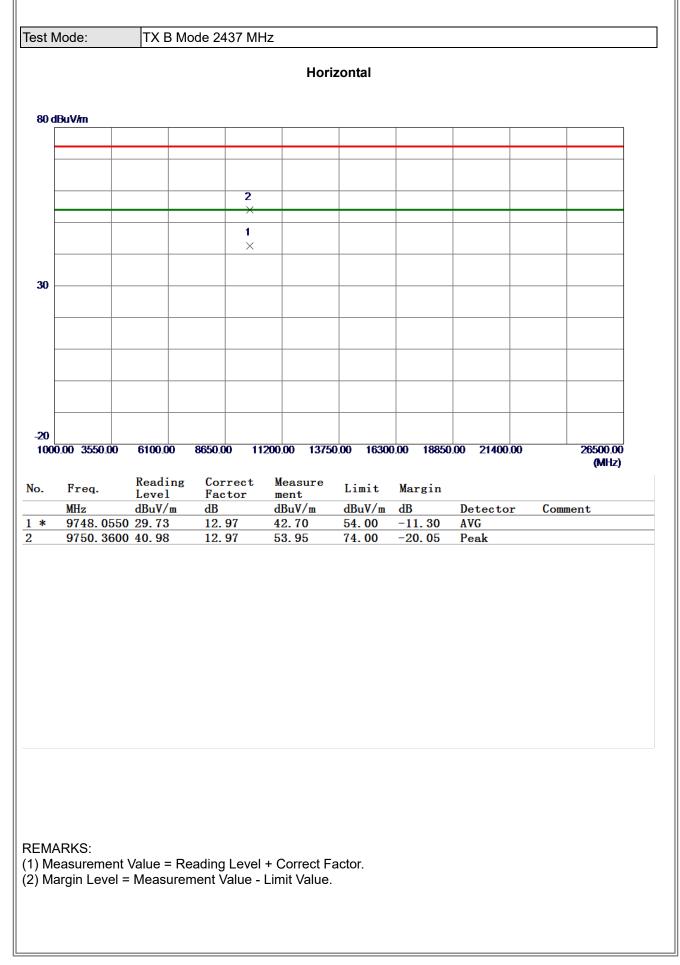




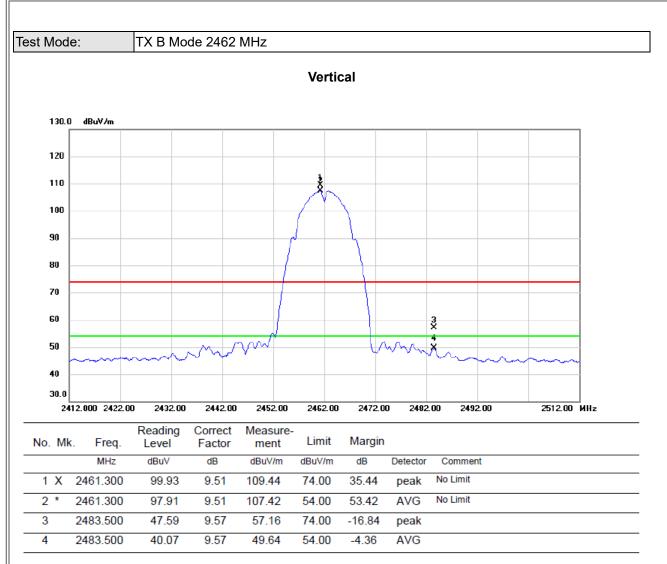


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



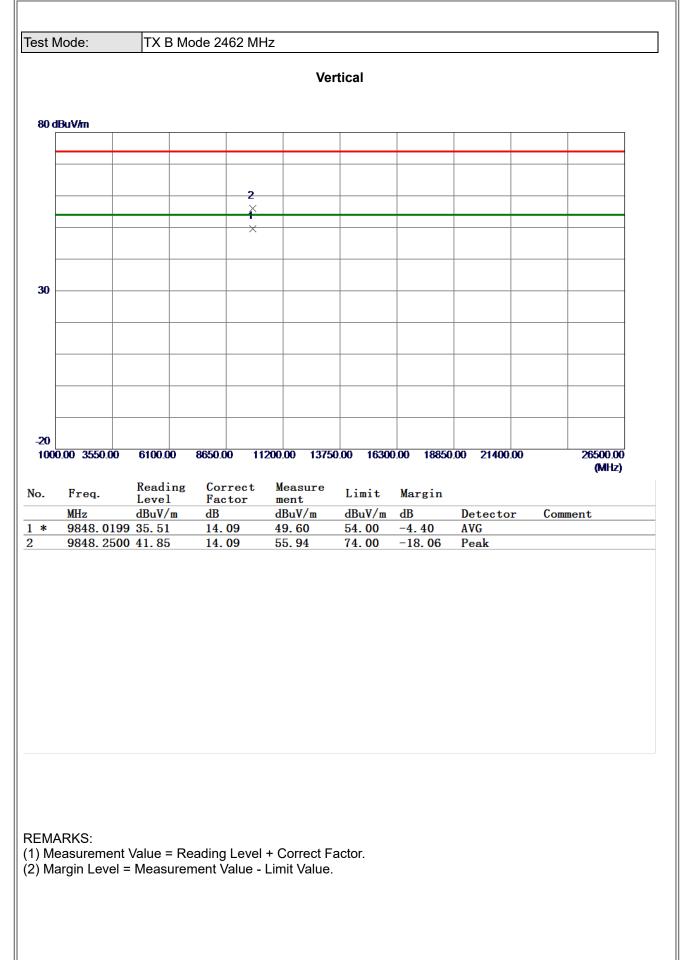




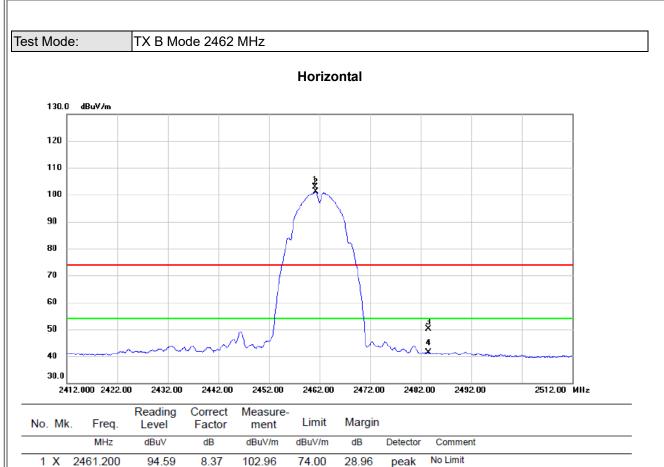


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.









No Limit

REMARKS:

2 \*

3

4

2461.300

2483.500

2483.500

92.67

41.71

32.94

8.37

8.39

8.39

101.04

50.10

41.33

54.00

74.00

54.00

47.04

-23.90

-12.67

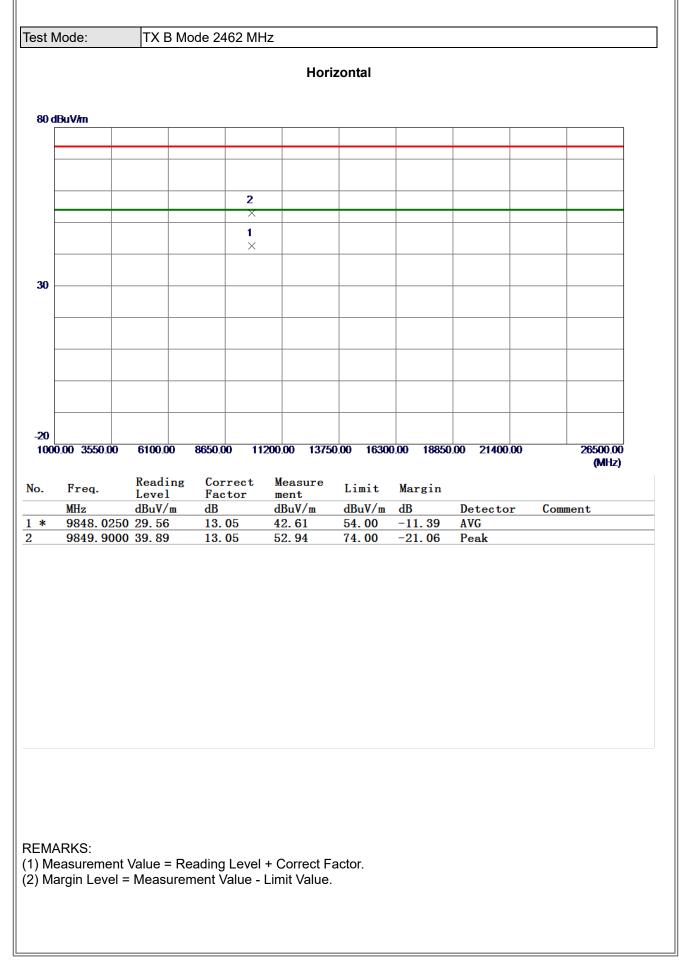
AVG

peak

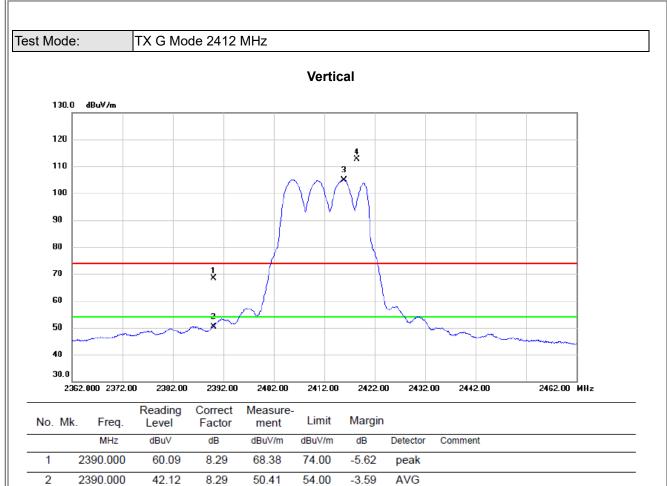
AVG

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









3 \*

4 X

2415.900

2418.500

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

96.59

104.21

8.32

8.32

104.91

112.53

54.00

74.00

50.91

38.53

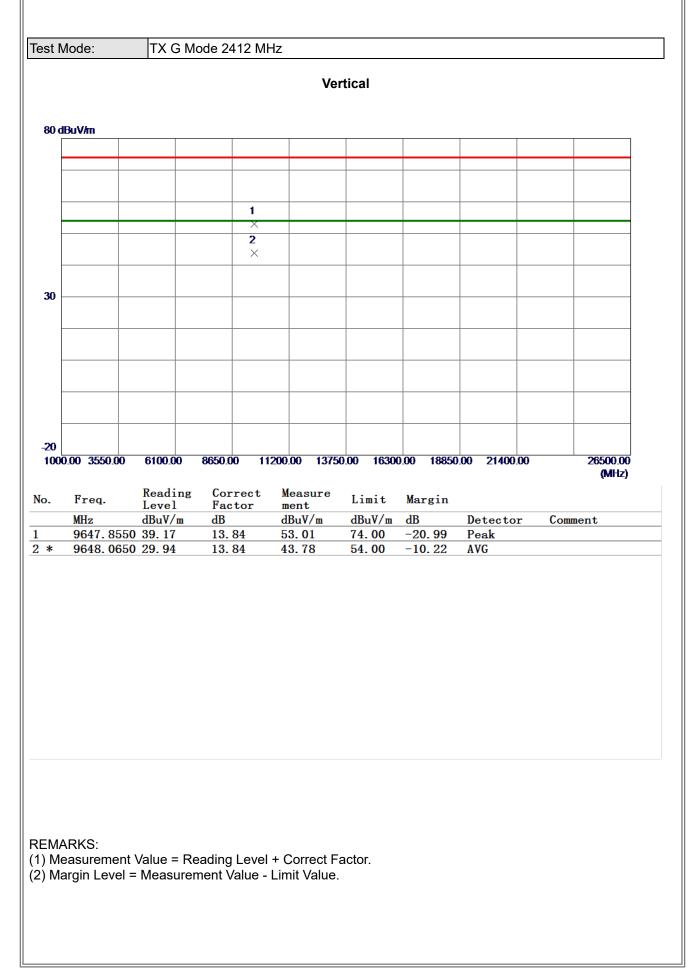
AVG

peak

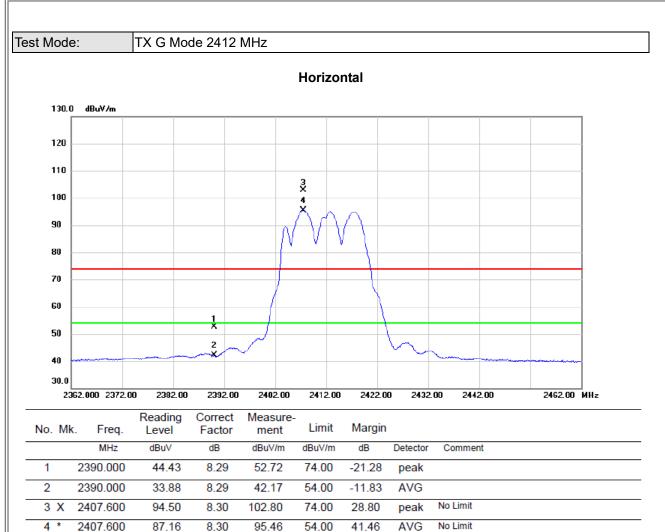
No Limit

No Limit



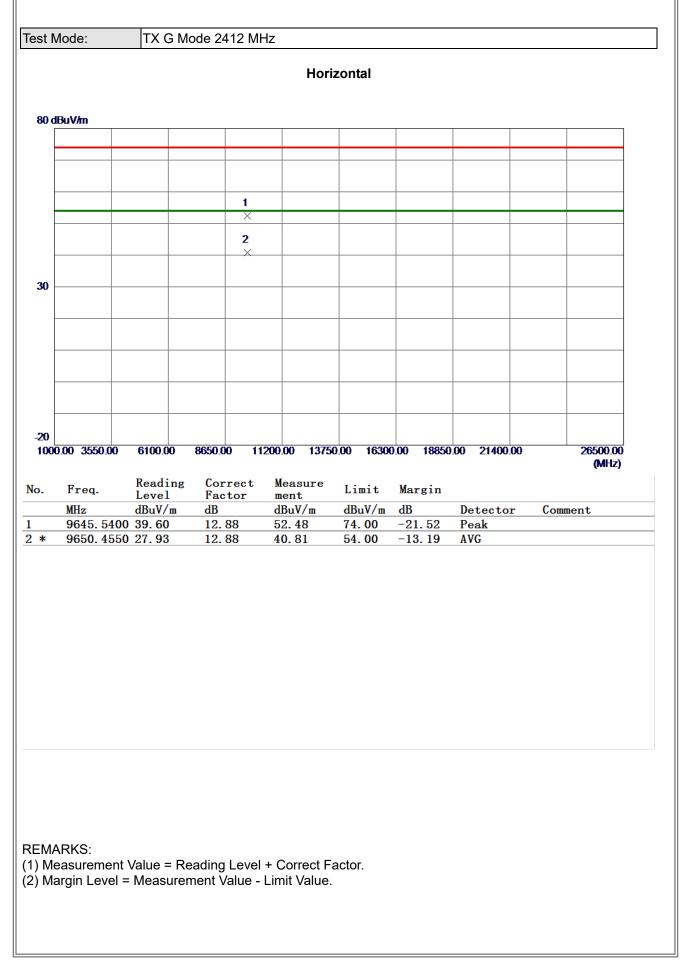




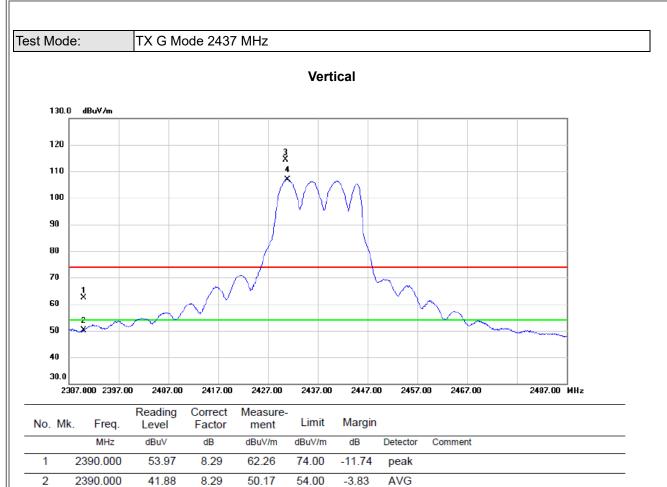


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.









2430.600

2430.900

3 X

4 \*

106.03

98.62

8.32

8.32

114.35

106.94

74.00

54.00

40.35

52.94

No Limit

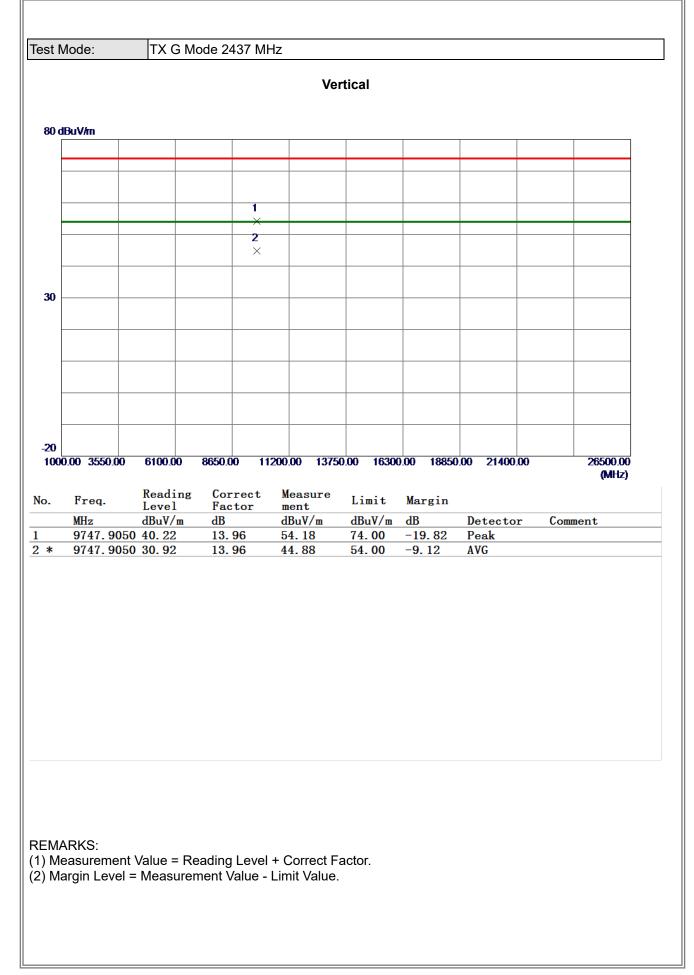
No Limit

peak

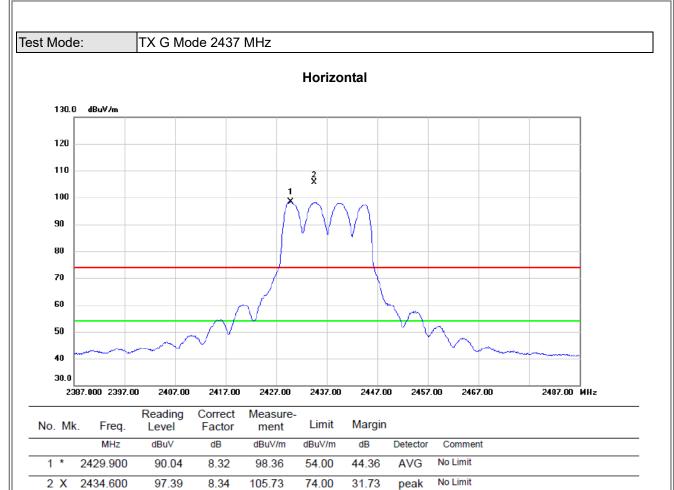
AVG

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



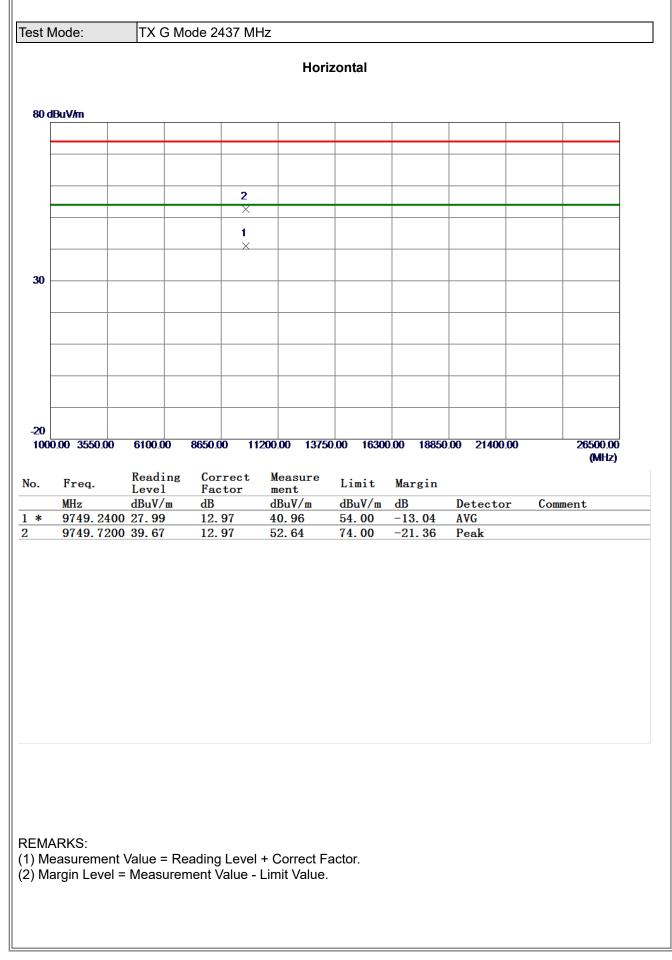




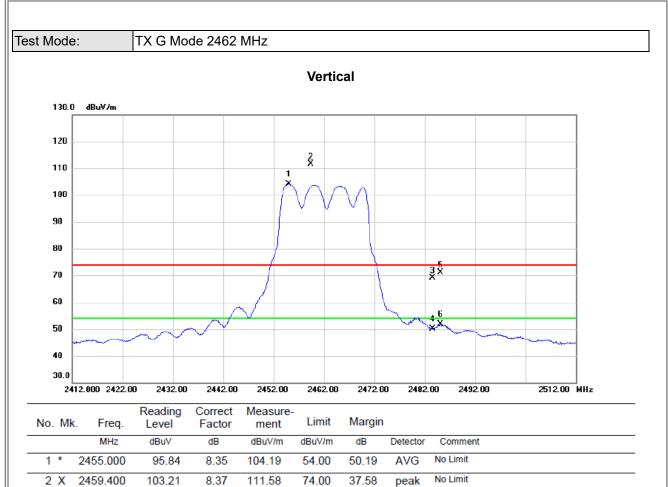


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.









2483.500

2483.500

2485.100

2485.100

3

4

5

6

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

60.79

41.73

62.78

43.42

8.39

8.39

8.39

8.39

69.18

50.12

71.17

51.81

74.00

54.00

74.00

54.00

-4.82

-3.88

-2.83

-2.19

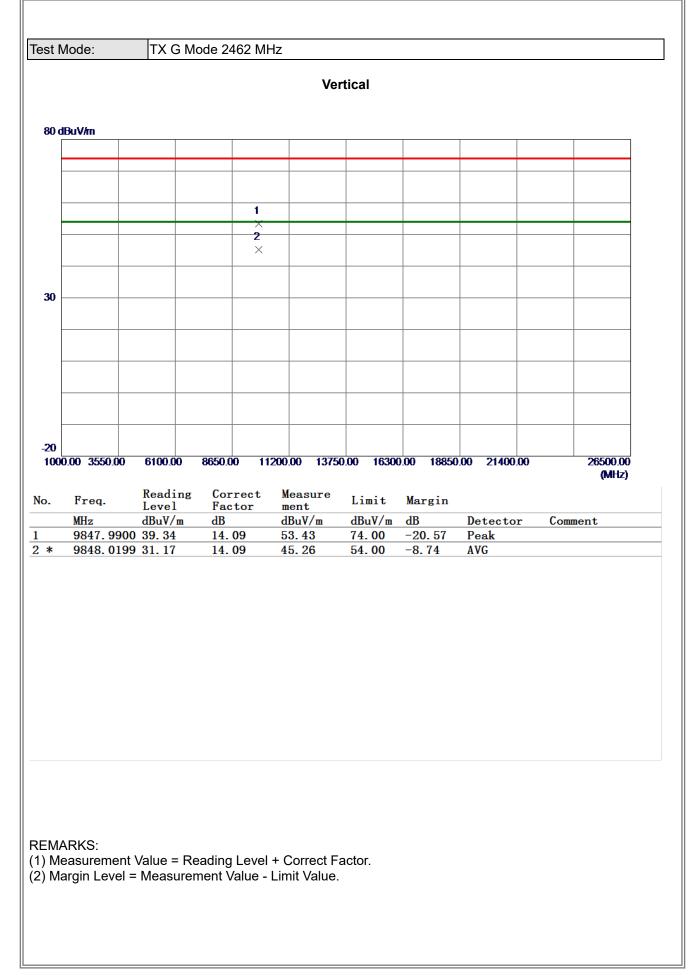
peak

AVG

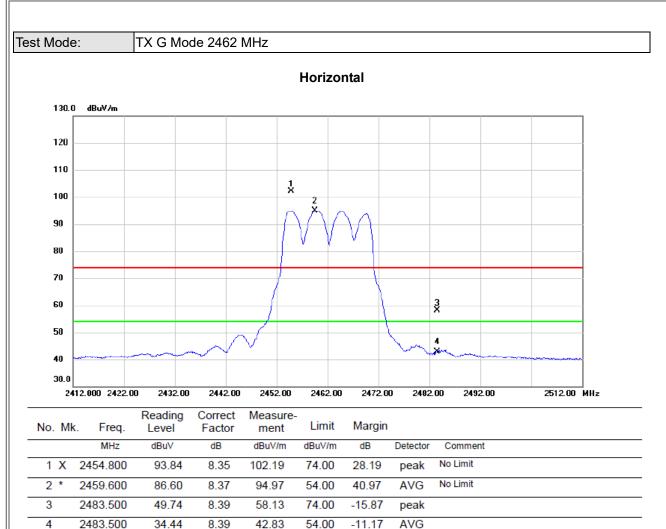
peak

AVG



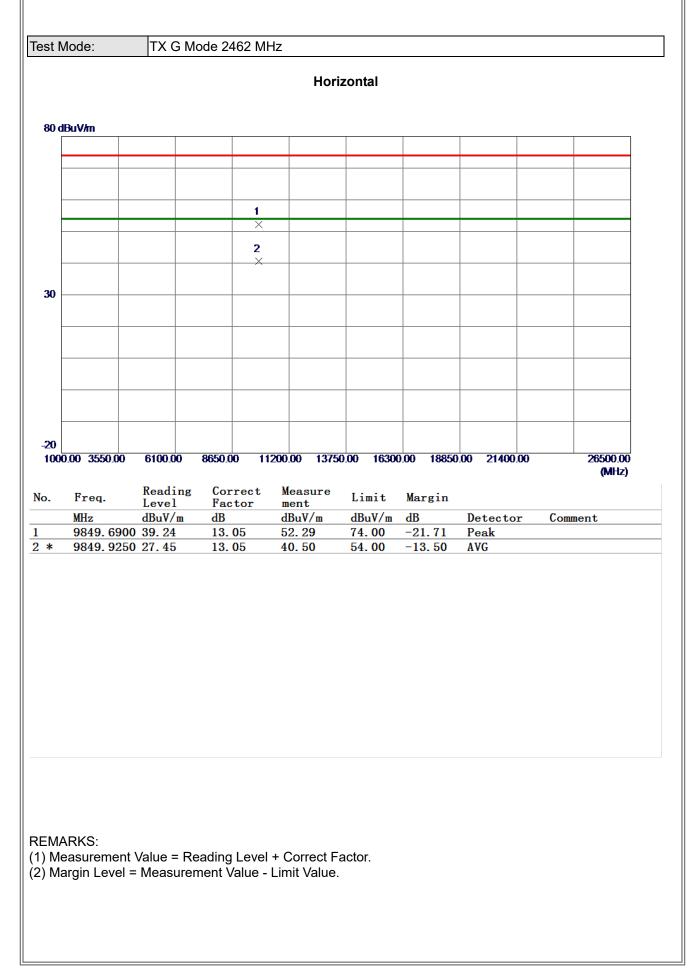




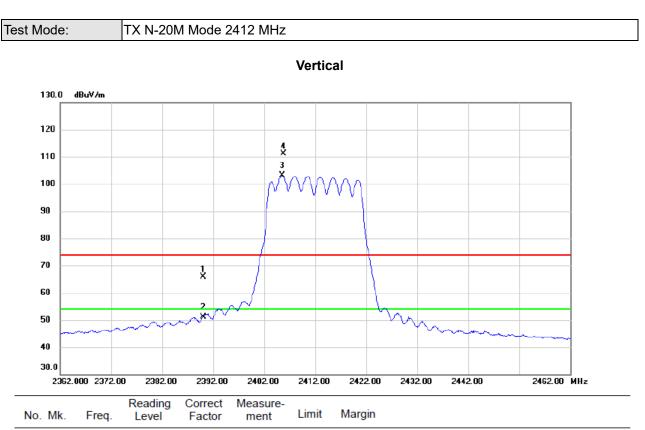


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





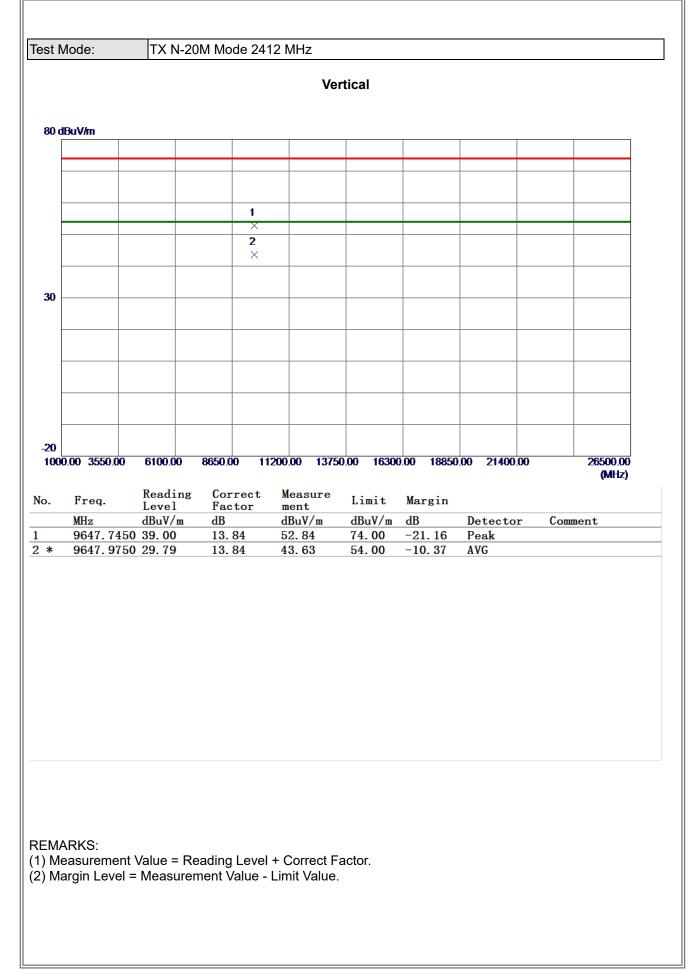




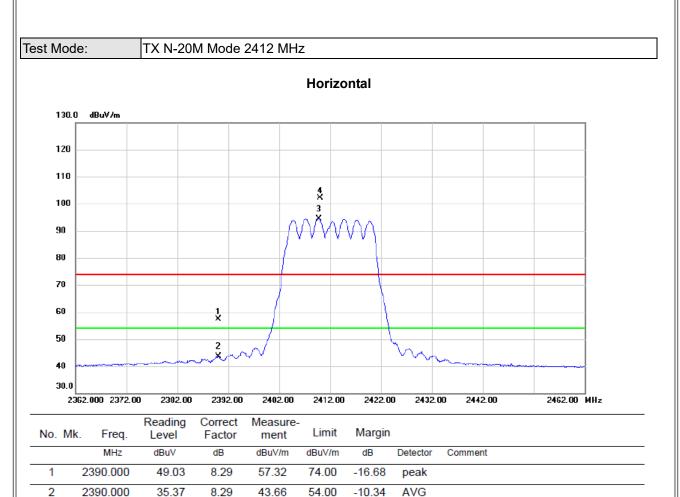
No.	Mk.	Freq.	Level	Factor	ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	57.47	8.29	65.76	74.00	-8.24	peak	
2		2390.000	42.77	8.29	51.06	54.00	-2.94	AVG	
3	*	2405.500	94.74	8.30	103.04	54.00	49.04	AVG	No Limit
4	Х	2405.800	102.77	8.30	111.07	74.00	37.07	peak	No Limit

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









No Limit

No Limit

AVG

peak

**REMARKS**:

3 \*

2409.800

4 X 2410.100

86.11

93.80

8.31

8.31

94.42

102.11

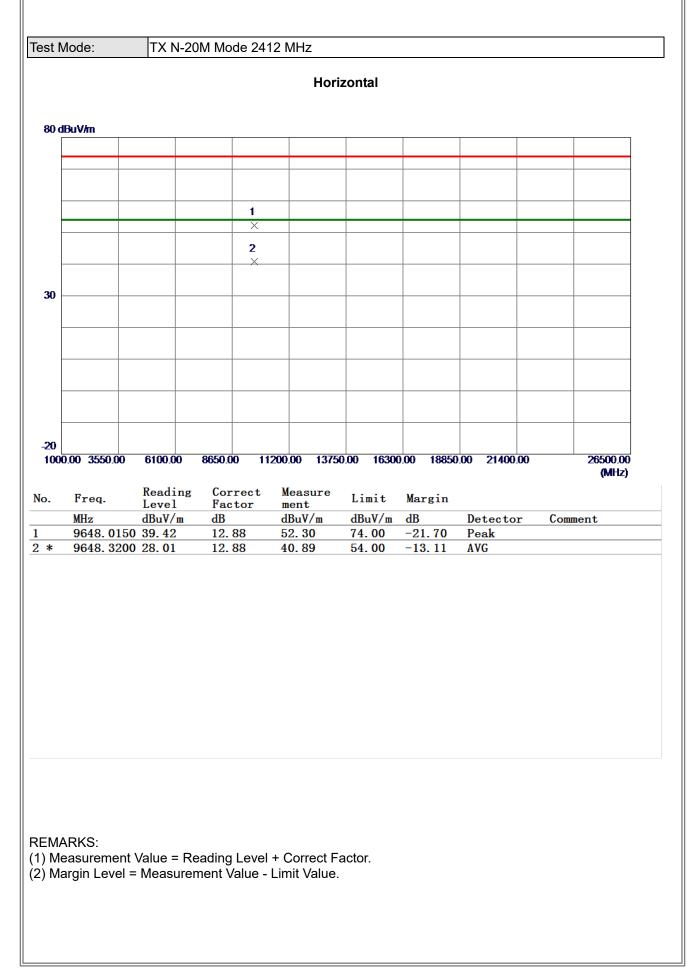
54.00

74.00

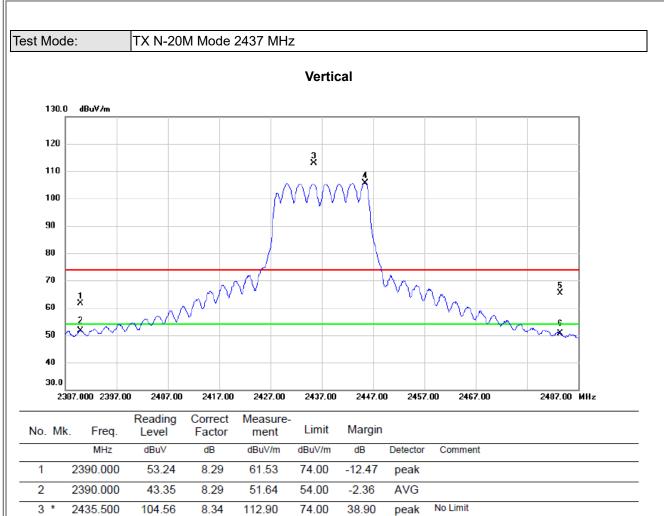
40.42

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









74.00

74.00

54.00

31.69

-8.63

-3.29

No Limit

peak

peak

AVG

REMARKS:

2445.400

2483.500

2483.500

4 X

5

6

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

97.34

56.98

42.32

8.35

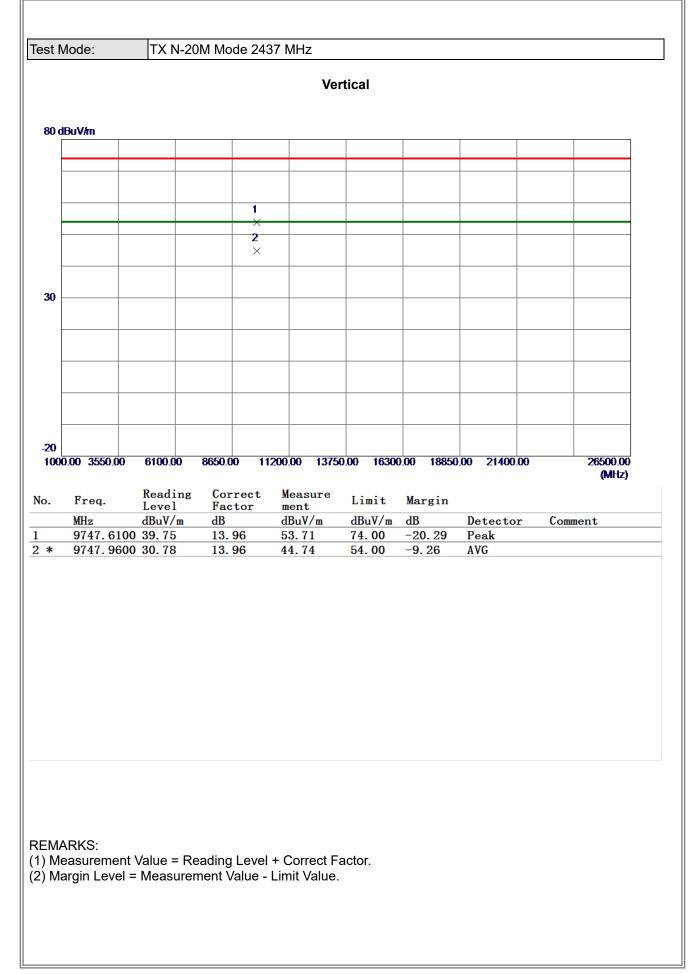
8.39

8.39

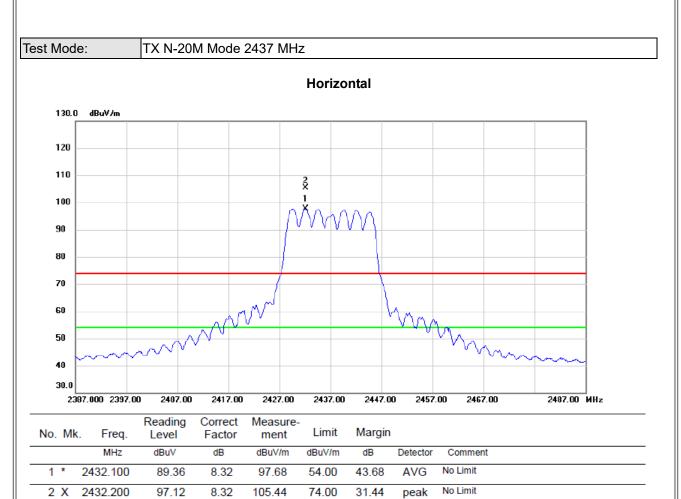
105.69

65.37



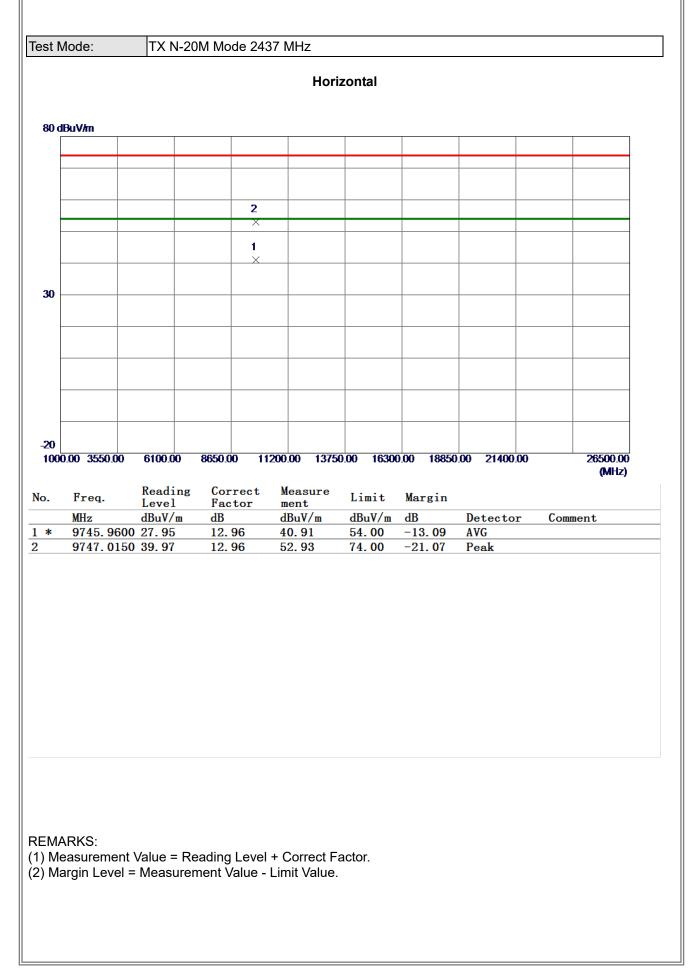




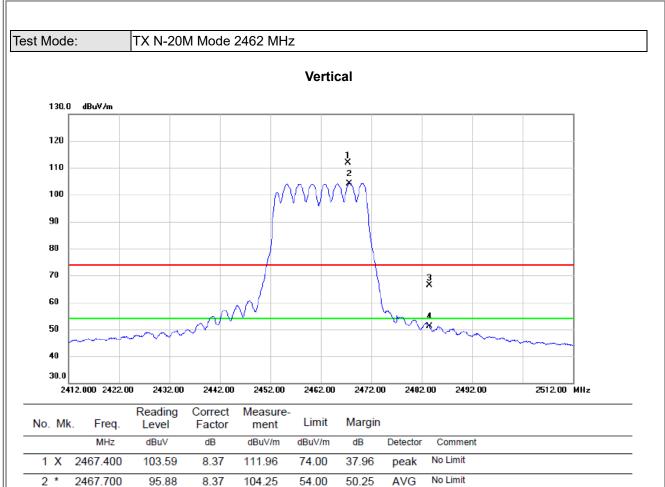


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.









peak

AVG

-7.50

-2.90

**REMARKS**:

3

4

2483.500

2483.500

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

58.11

42.71

8.39

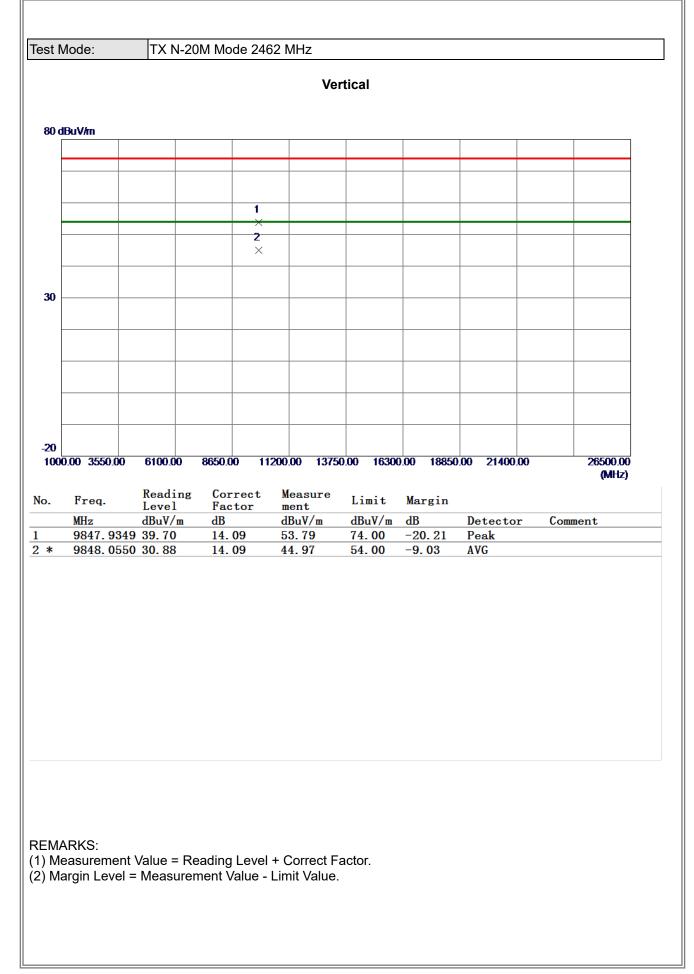
8.39

66.50

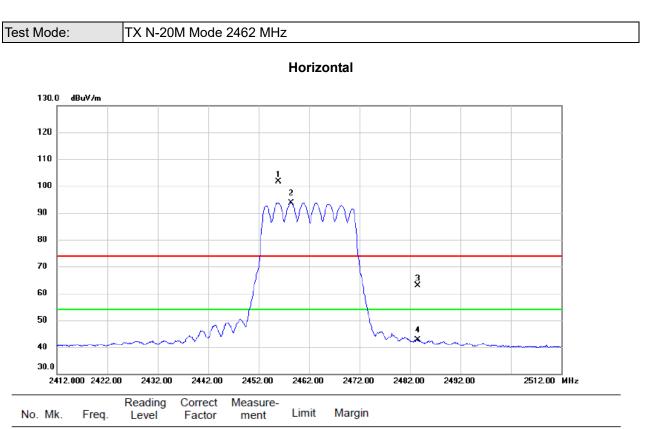
51.10

74.00





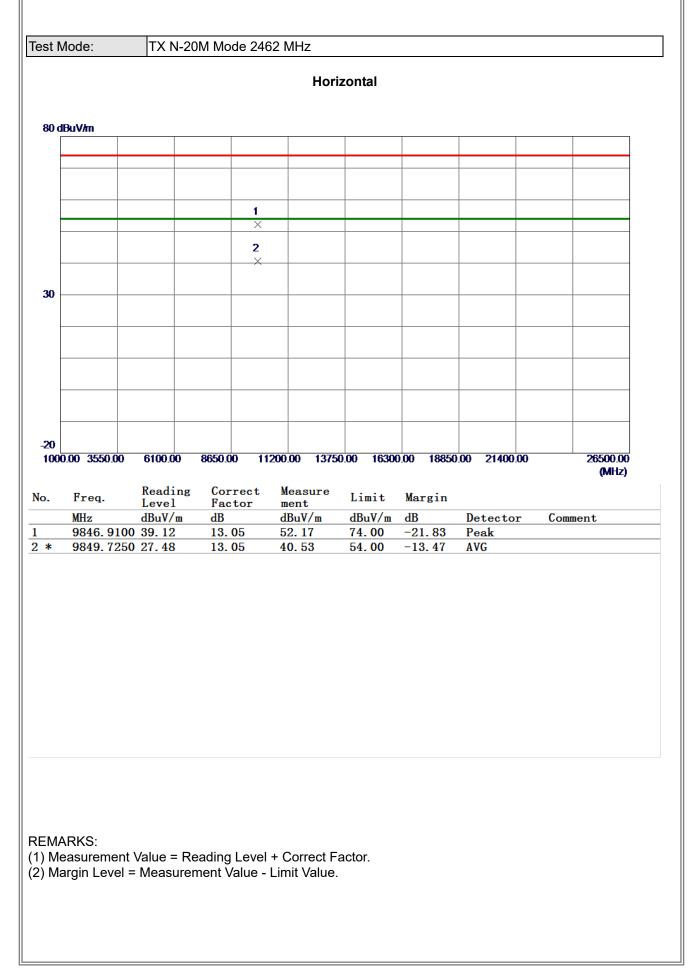




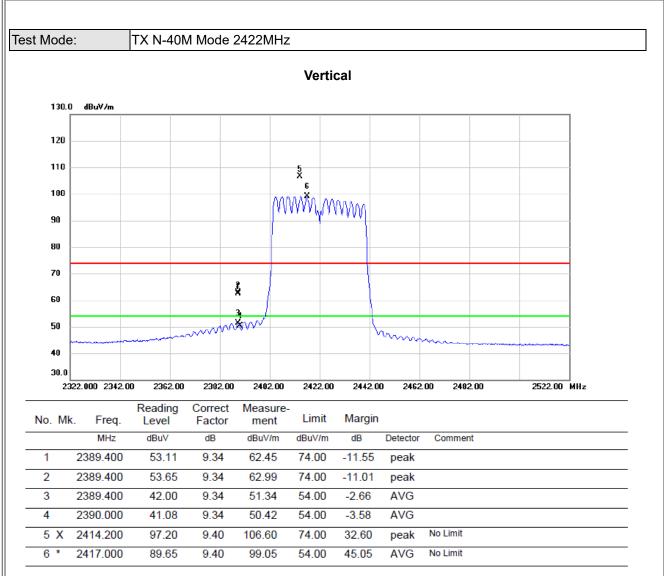
NO. WIN	. Tieq.	Level	Factor	ment	Linne	margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 X	2455.900	93.17	8.36	101.53	74.00	27.53	peak	No Limit
2 *	2458.500	85.38	8.37	93.75	54.00	39.75	AVG	No Limit
3	2483.500	54.48	8.39	62.87	74.00	-11.13	peak	
4	2483.500	34.17	8.39	42.56	54.00	-11.44	AVG	

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



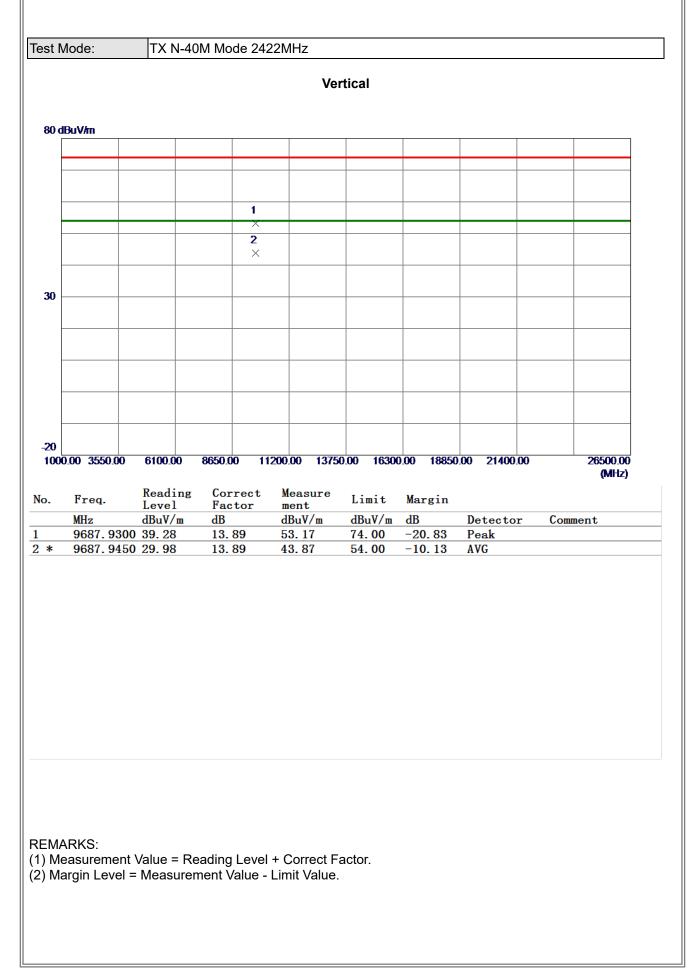




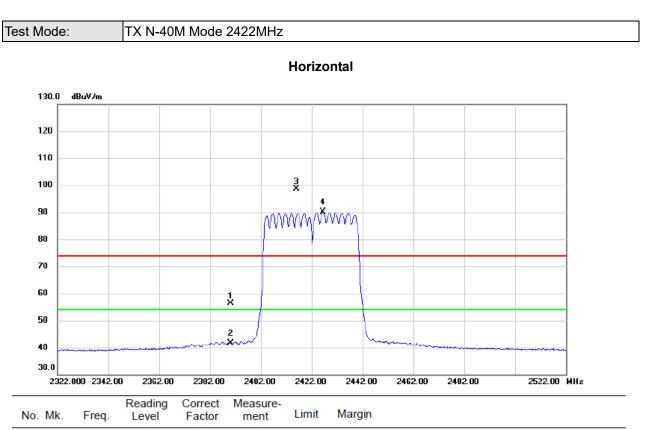


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





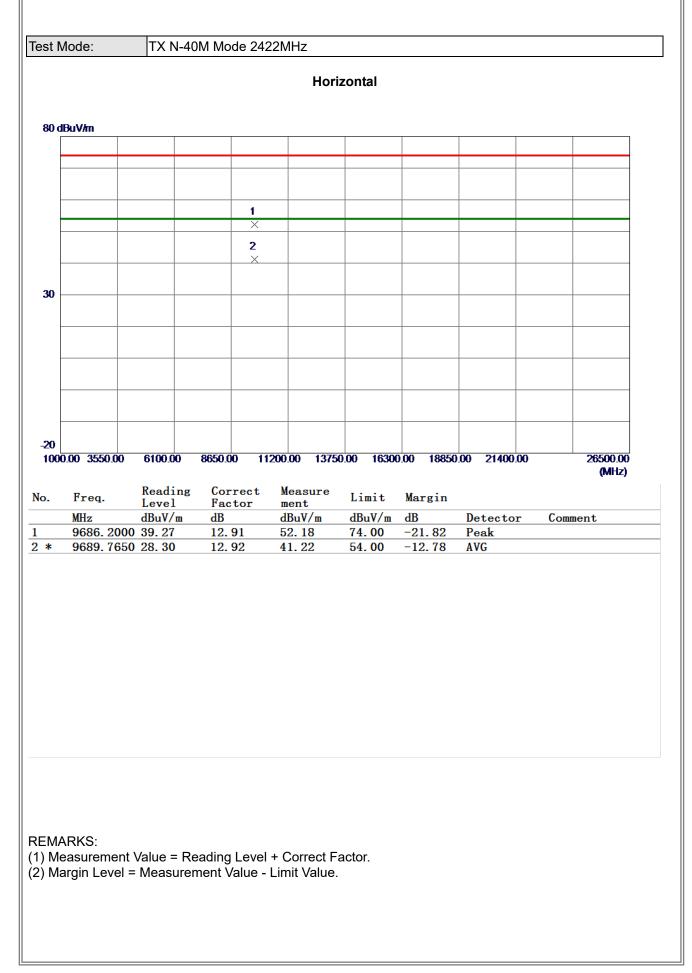




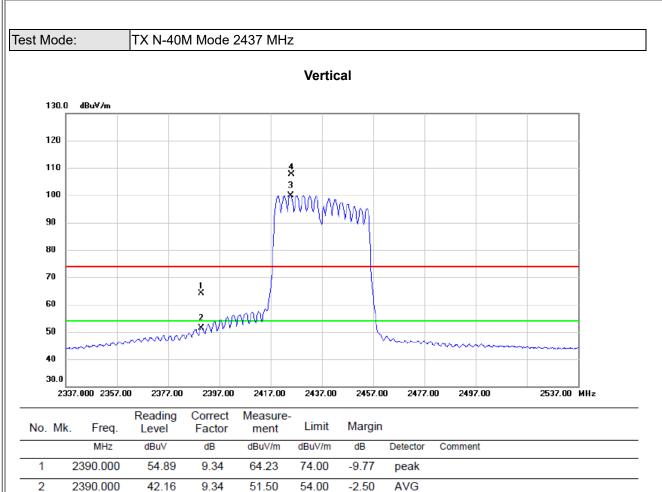
110.		ricq.	Lever	racio	ment				
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2	390.000	48.13	8.29	56.42	74.00	-17.58	peak	
2	2	390.000	33.32	8.29	41.61	54.00	-12.39	AVG	
3	X 2	416.000	90.22	8.32	98.54	74.00	24.54	peak	No Limit
4	* 2	426.400	81.83	8.32	90.15	54.00	36.15	AVG	No Limit

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









No Limit

No Limit

AVG

peak

45.85

33.62

**REMARKS**:

2424.800

2425.000

3 \*

4 X

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

90.43

98.20

9.42

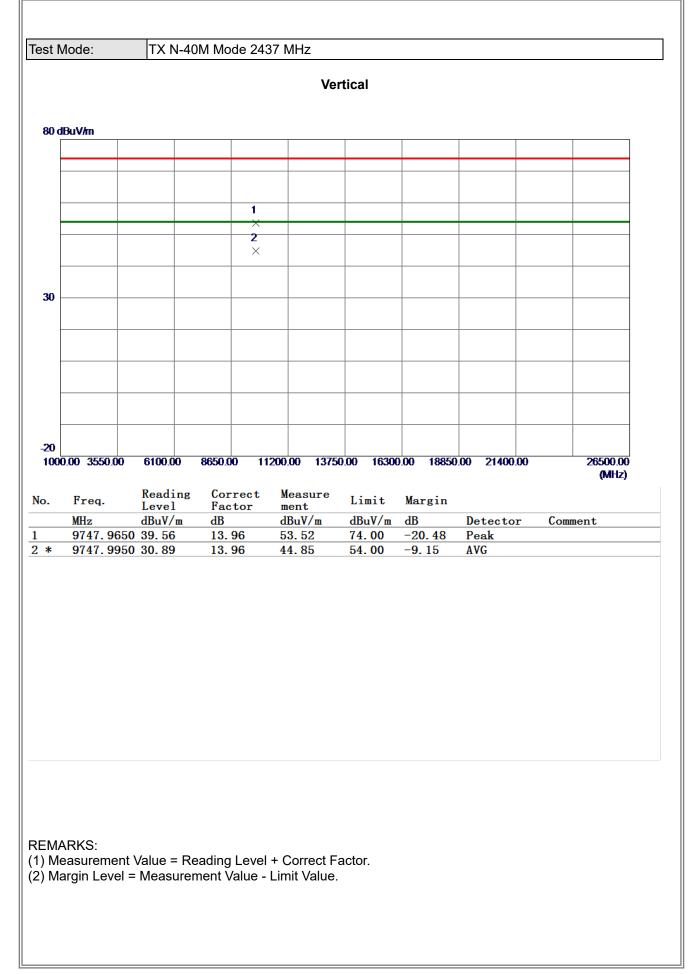
9.42

99.85

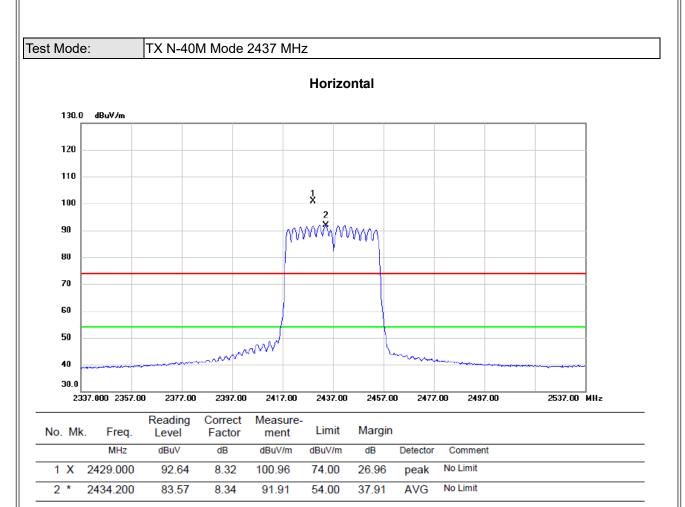
107.62

54.00





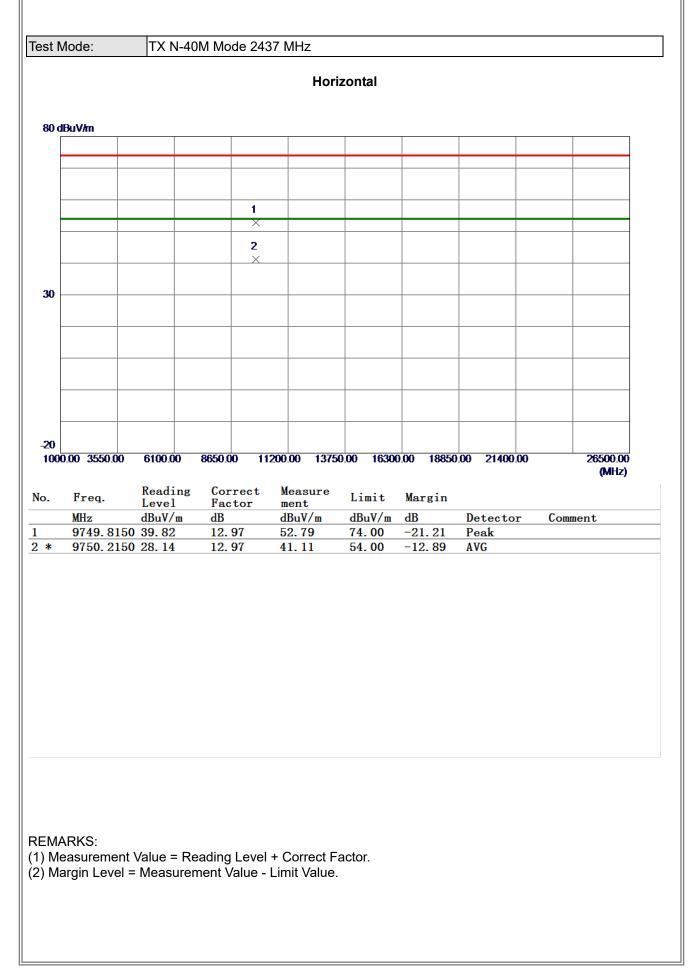




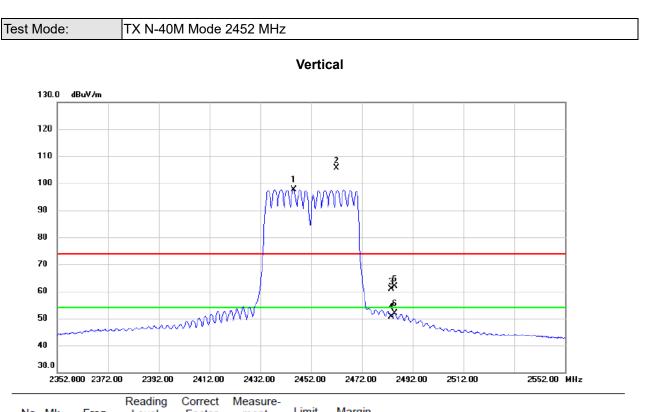
(1) Measurement Value = Reading Level + Correct Factor.

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





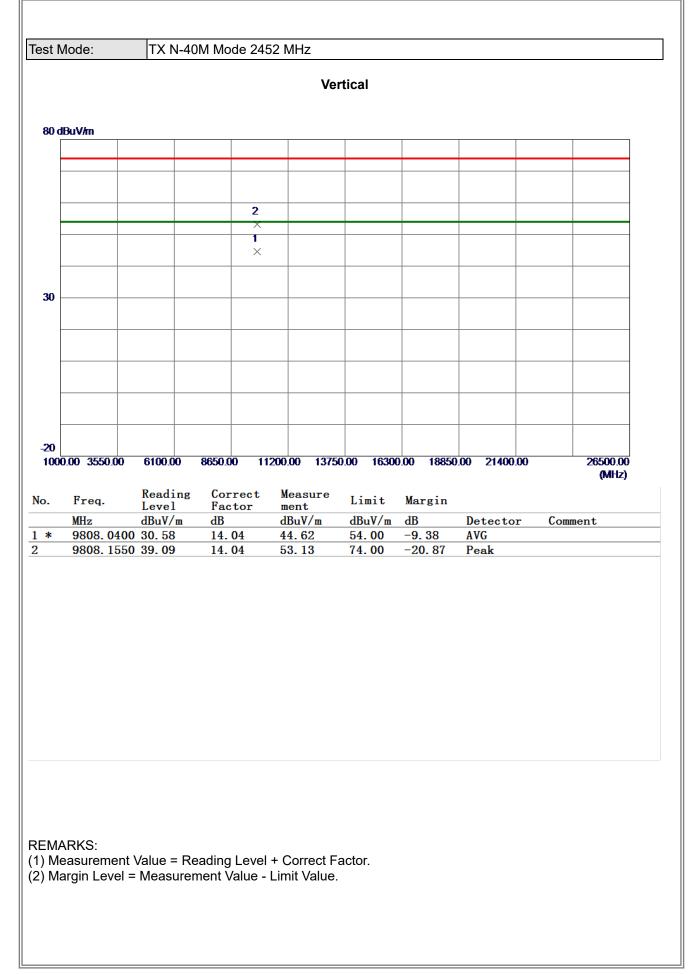




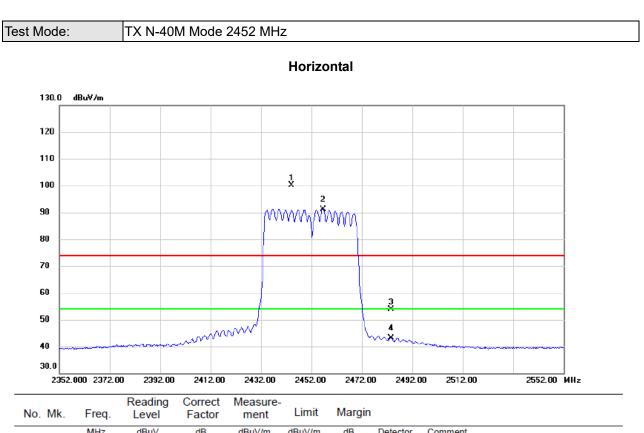
No.	Mk	. Freq.	Level	Factor	ment	Limit	Margin			
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
1	*	2445.200	88.24	9.47	97.71	54.00	43.71	AVG	No Limit	
2	Х	2462.000	96.02	9.51	105.53	74.00	31.53	peak	No Limit	
3		2483.500	51.33	9.57	60.90	74.00	-13.10	peak		
4		2483.500	41.00	9.57	50.57	54.00	-3.43	AVG		
5		2484.800	52.40	9.57	61.97	74.00	-12.03	peak		
6		2484.800	42.34	9.57	51.91	54.00	-2.09	AVG		

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





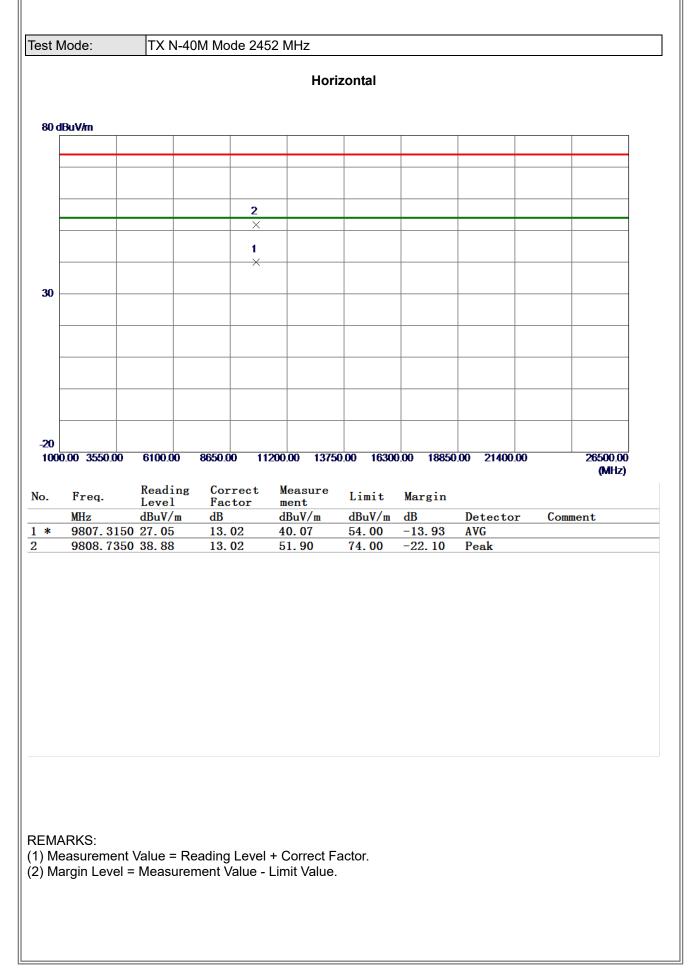




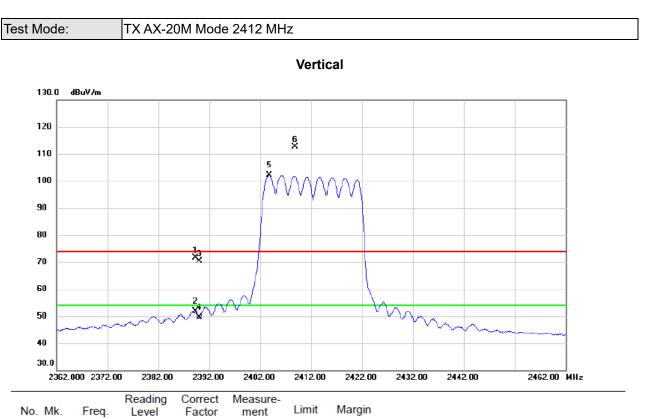
NO.	IVIN.	ricq.	Level	Factor	ment	Linit	margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 3	X 2	2444.000	91.77	8.34	100.11	74.00	26.11	peak	No Limit
2	* 2	2456.600	82.88	8.36	91.24	54.00	37.24	AVG	No Limit
3	2	2483.500	45.61	8.39	54.00	74.00	-20.00	peak	
4	2	2483.500	34.62	8.39	43.01	54.00	-10.99	AVG	

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





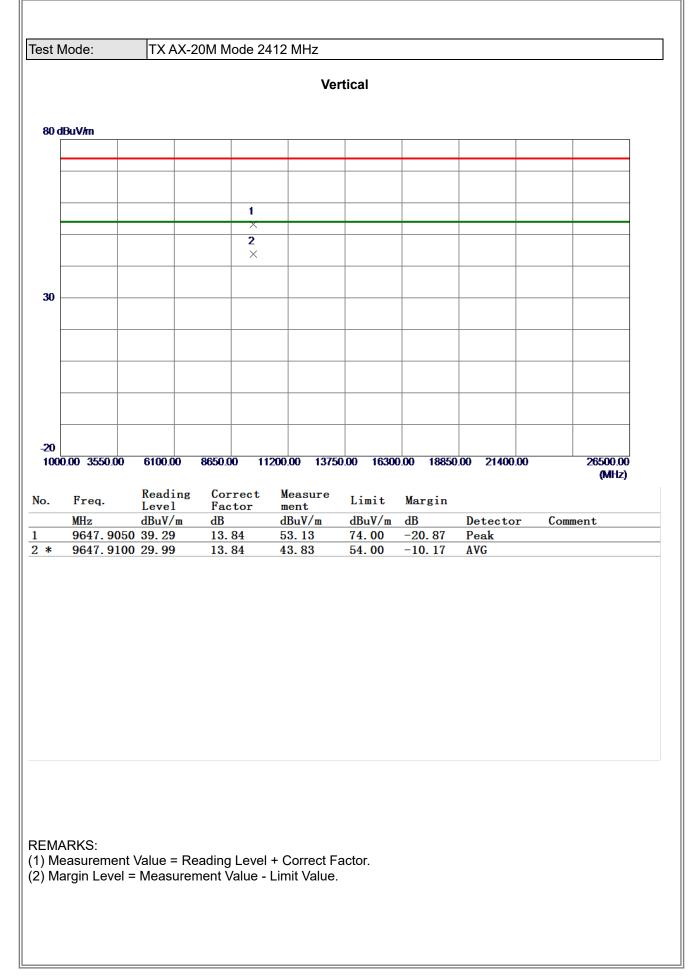




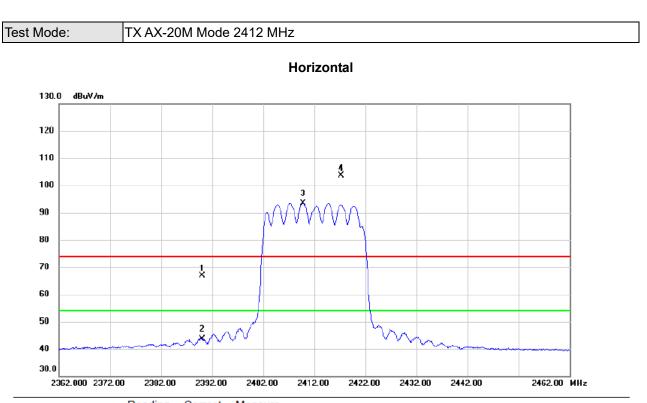
No.	Mk.	Freq.	Level	Factor	ment	Limit	Margin	I	
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2389.300	63.32	8.29	71.61	74.00	-2.39	peak	
2		2389.300	43.70	8.29	51.99	54.00	-2.01	AVG	
3		2390.000	62.15	8.29	70.44	74.00	-3.56	peak	
4		2390.000	41.23	8.29	49.52	54.00	-4.48	AVG	
5	*	2403.800	93.73	8.30	102.03	54.00	48.03	AVG	No Limit
6	Х	2408.800	104.26	8.31	112.57	74.00	38.57	peak	No Limit

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





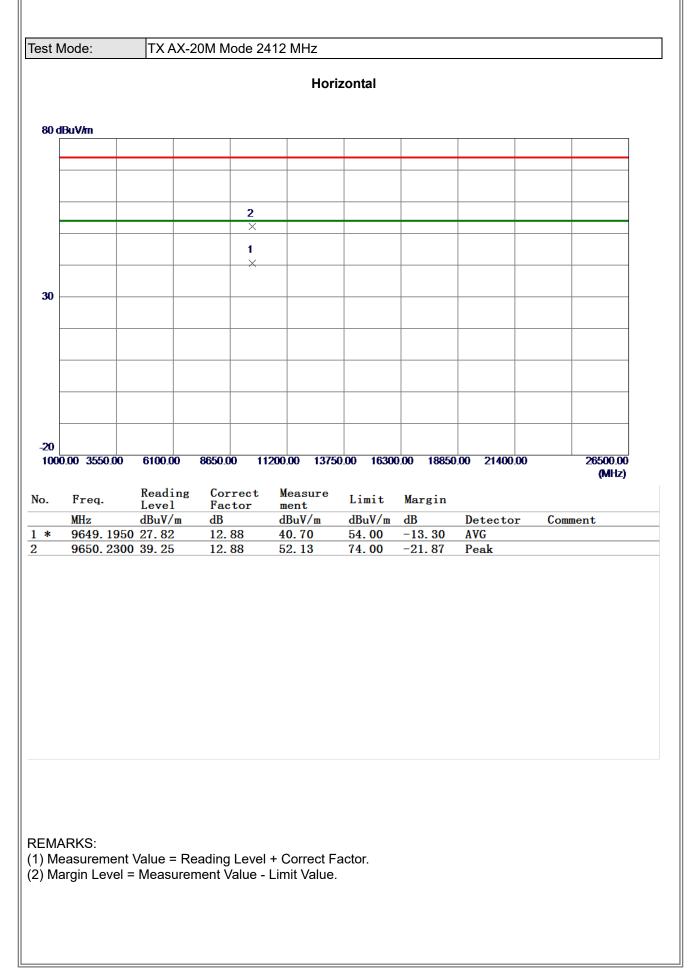




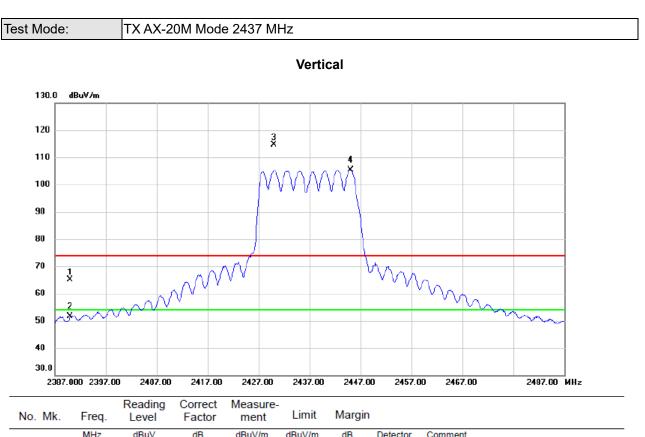
	No. M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
-		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1	2390.000	58.49	8.29	66.78	74.00	-7.22	peak	
	2	2390.000	35.37	8.29	43.66	54.00	-10.34	AVG	
-	3 *	2409.800	85.17	8.31	93.48	54.00	39.48	AVG	No Limit
_	4 X	2417.300	95.32	8.32	103.64	74.00	29.64	peak	No Limit

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





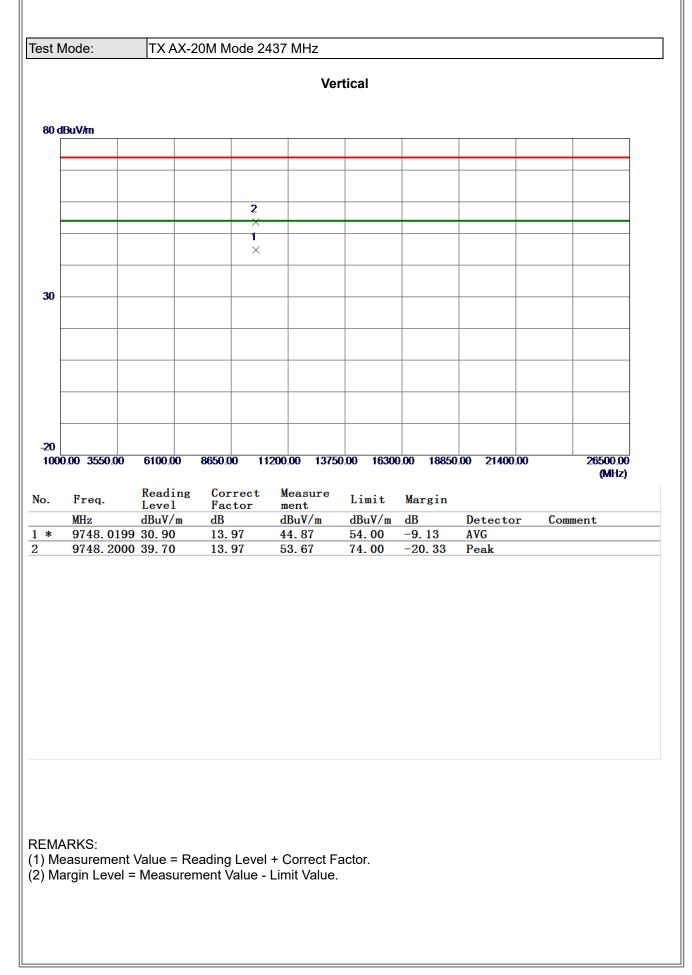




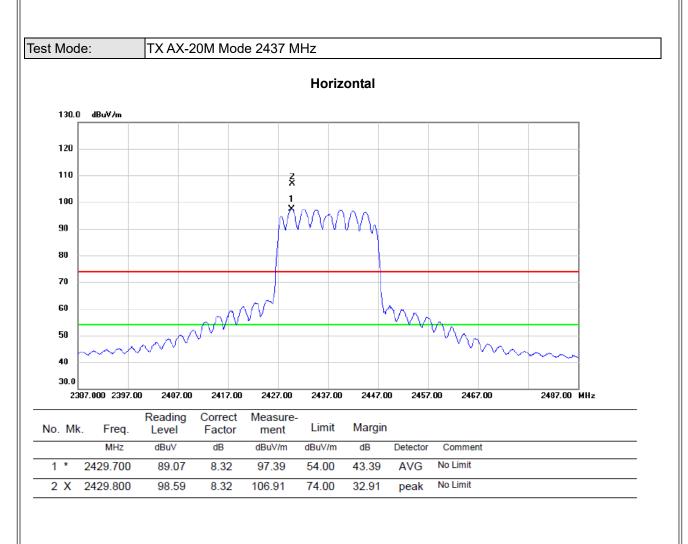
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390.000	56.89	8.29	65.18	74.00	-8.82	peak	
2	2390.000	43.22	8.29	51.51	54.00	-2.49	AVG	
3 X	2430.000	106.39	8.32	114.71	74.00	40.71	peak	No Limit
4 *	2445.000	96.98	8.34	105.32	54.00	51.32	AVG	No Limit

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



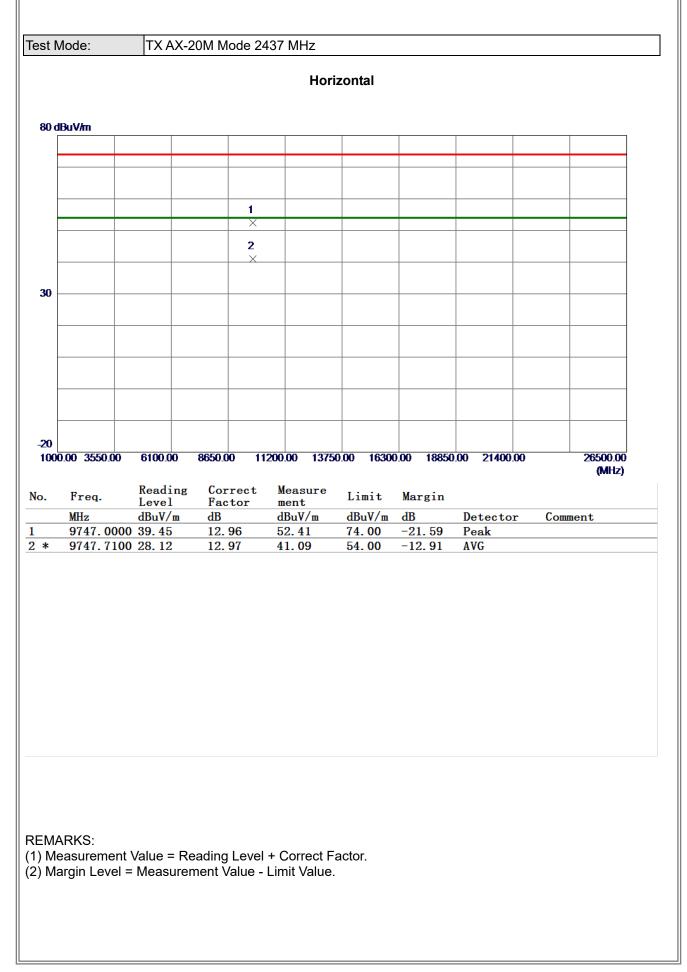




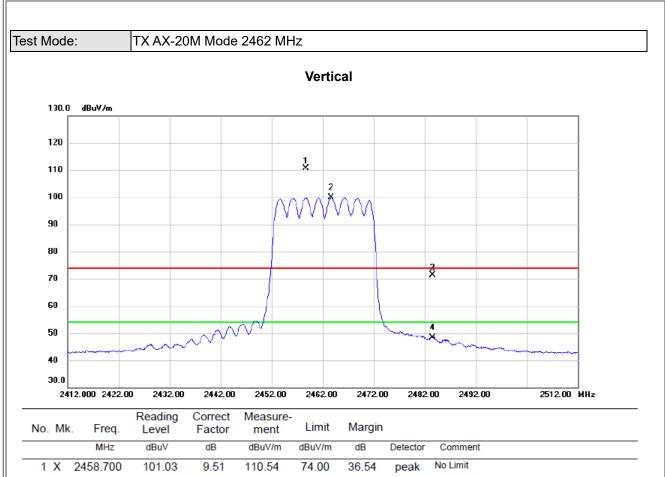


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.









\*

2

3

4

2463.700

2483.500

2483.500

90.24

61.91

38.70

9.52

9.57

9.57

99.76

71.48

48.27

54.00

74.00

54.00

45.76

-2.52

-5.73

AVG

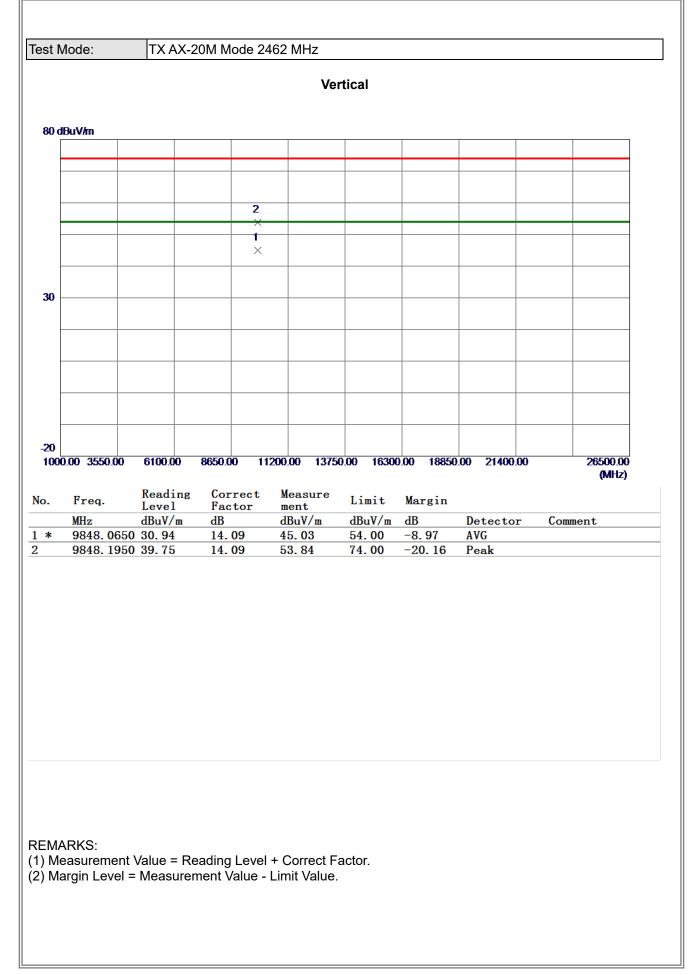
peak

AVG

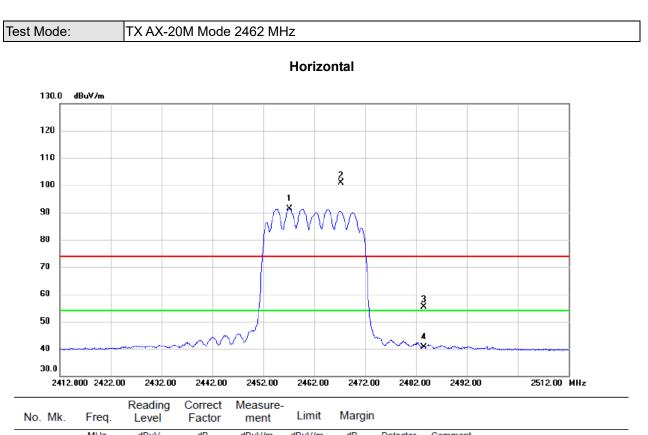
No Limit

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





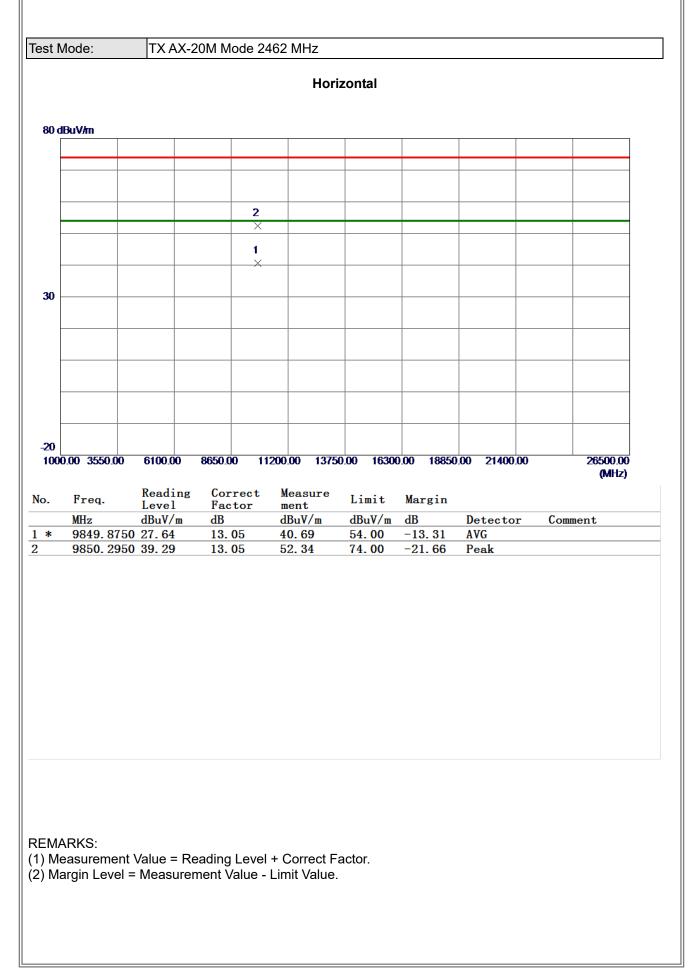




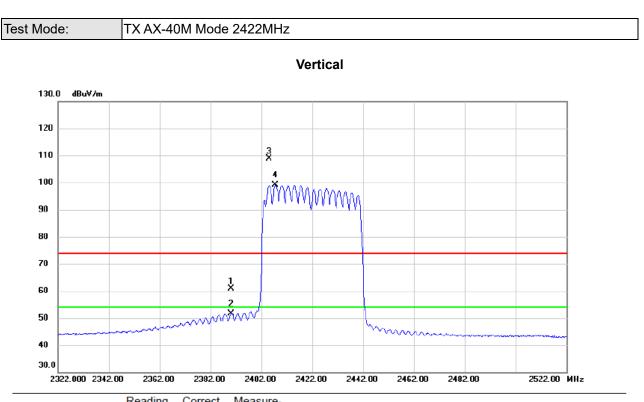
		20101				-		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2457.200	83.03	8.36	91.39	54.00	37.39	AVG	No Limit
2 X	2467.300	92.56	8.37	100.93	74.00	26.93	peak	No Limit
3	2483.500	46.88	8.39	55.27	74.00	-18.73	peak	
4	2483.500	32.27	8.39	40.66	54.00	-13.34	AVG	

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





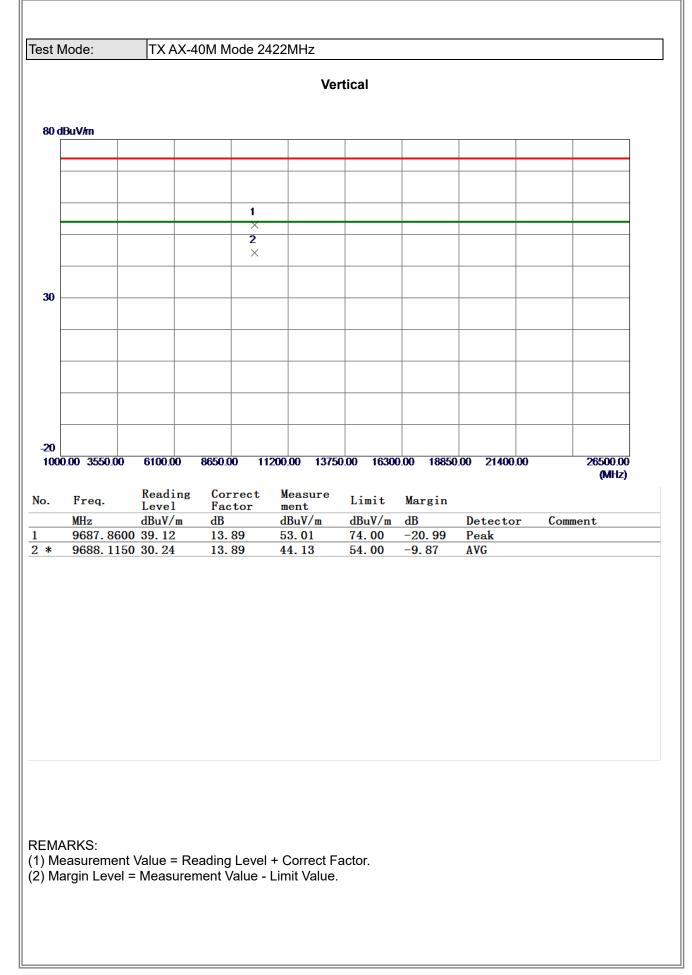




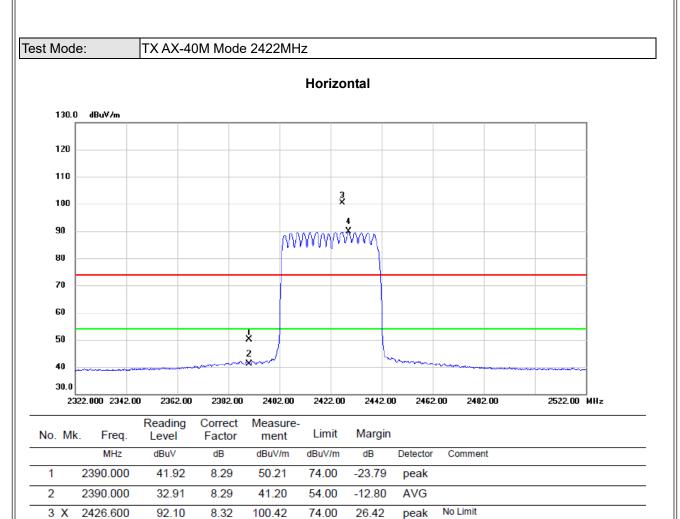
No	. Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	51.64	9.34	60.98	74.00	-13.02	peak	
2		2390.000	42.17	9.34	51.51	54.00	-2.49	AVG	
3	Х	2405.000	99.61	9.37	108.98	74.00	34.98	peak	No Limit
4	*	2407.600	89.70	9.37	99.07	54.00	45.07	AVG	No Limit

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









4 \*

2429.000

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

81.50

8.32

89.82

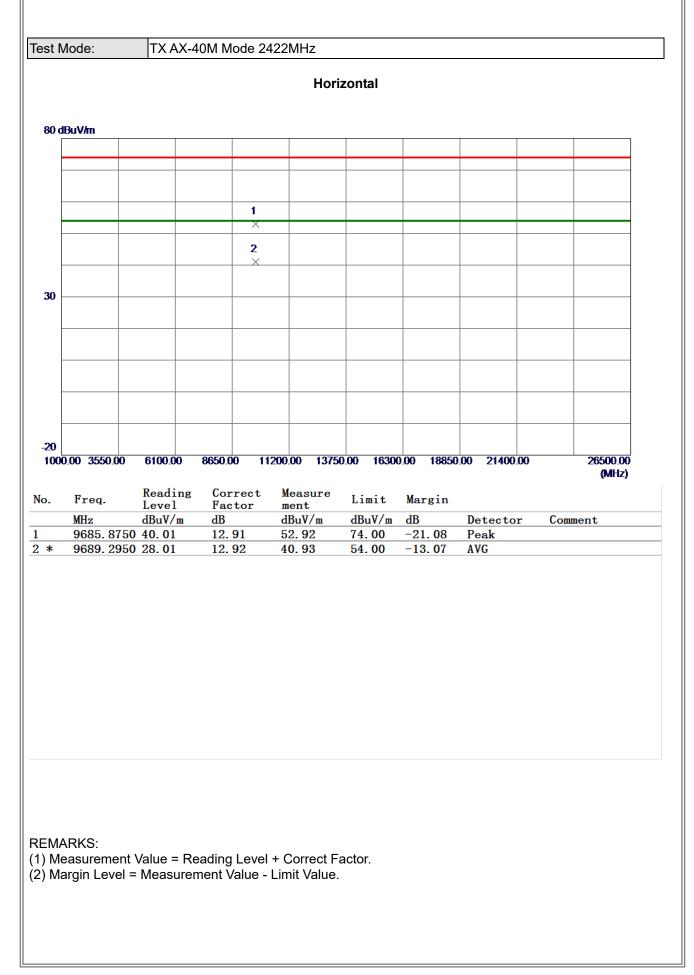
54.00

35.82

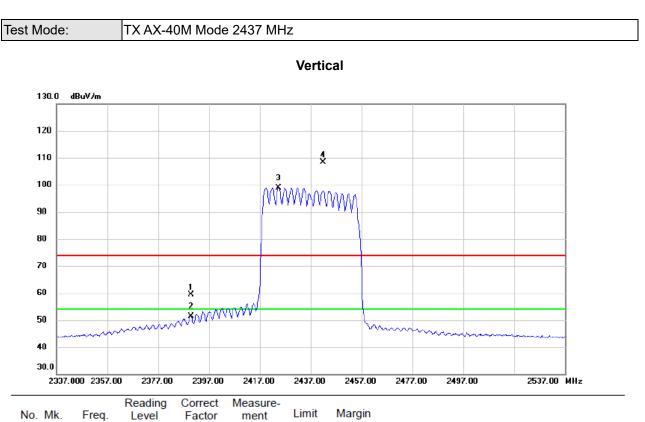
AVG

No Limit





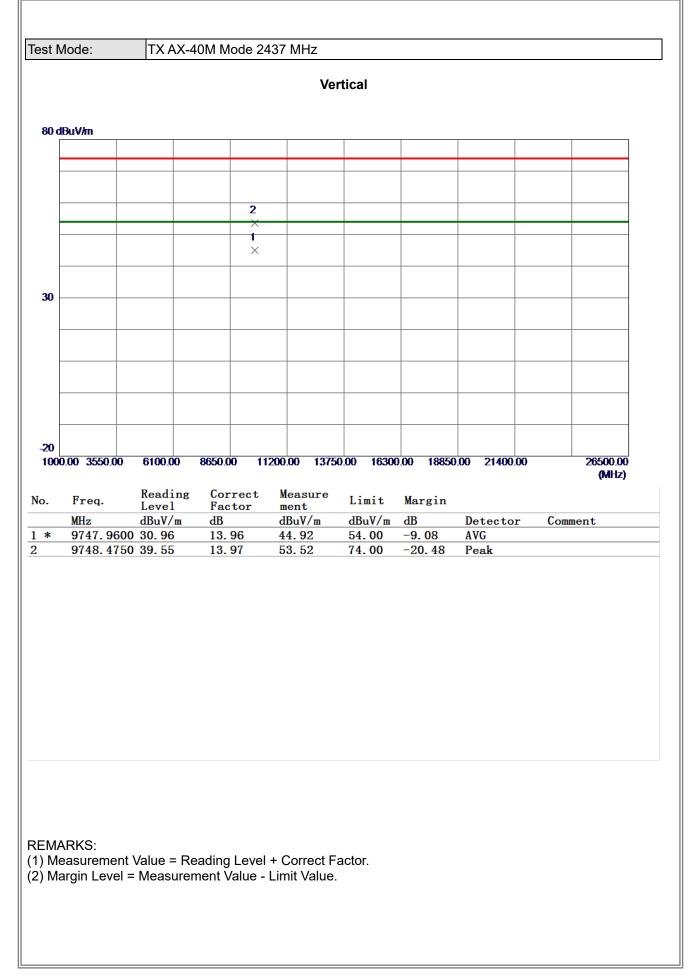




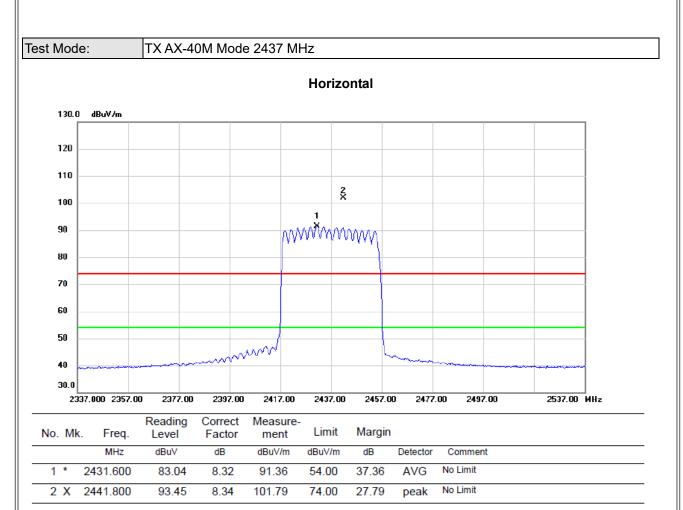
No.	Mk	Freq.	Level	Factor	ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	50.13	9.34	59.47	74.00	-14.53	peak	
2		2390.000	41.95	9.34	51.29	54.00	-2.71	AVG	
3	*	2424.400	89.48	9.42	98.90	54.00	44.90	AVG	No Limit
4	Х	2442.000	98.81	9.46	108.27	74.00	34.27	peak	No Limit

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



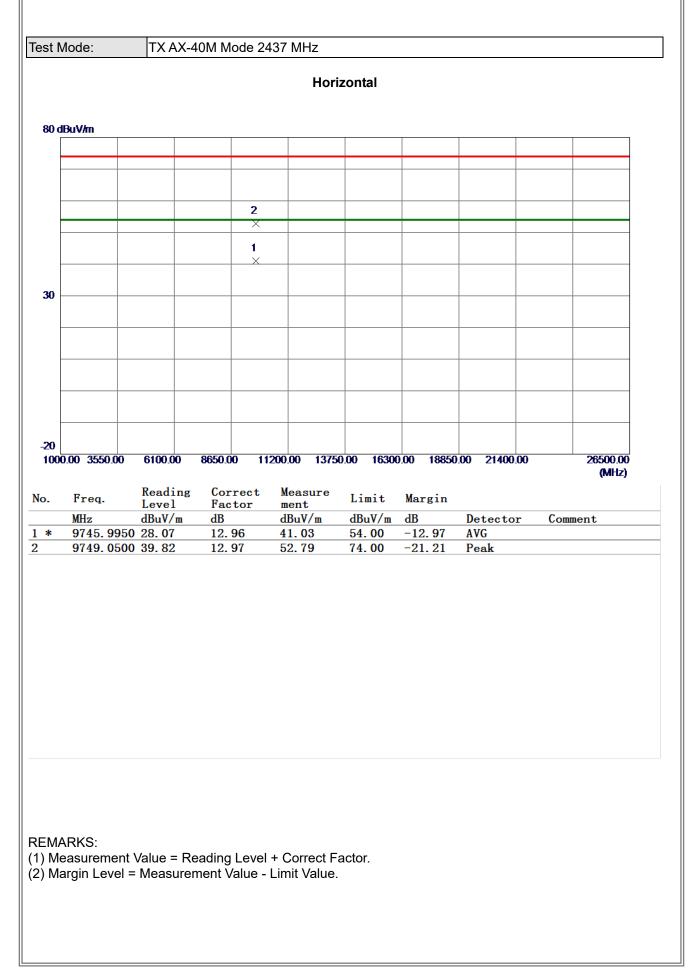




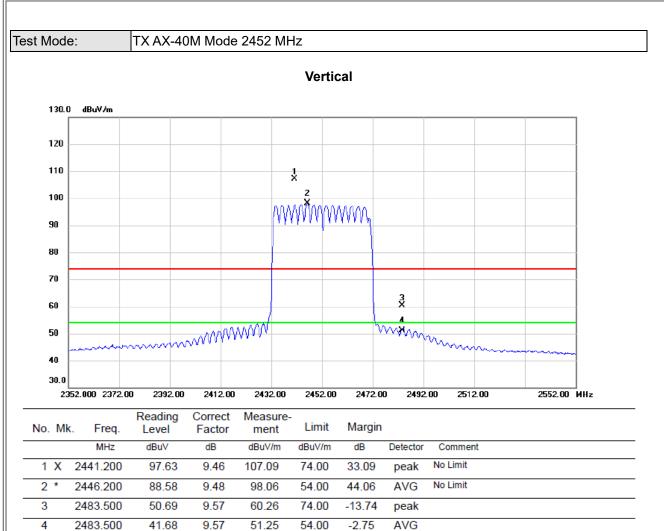


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



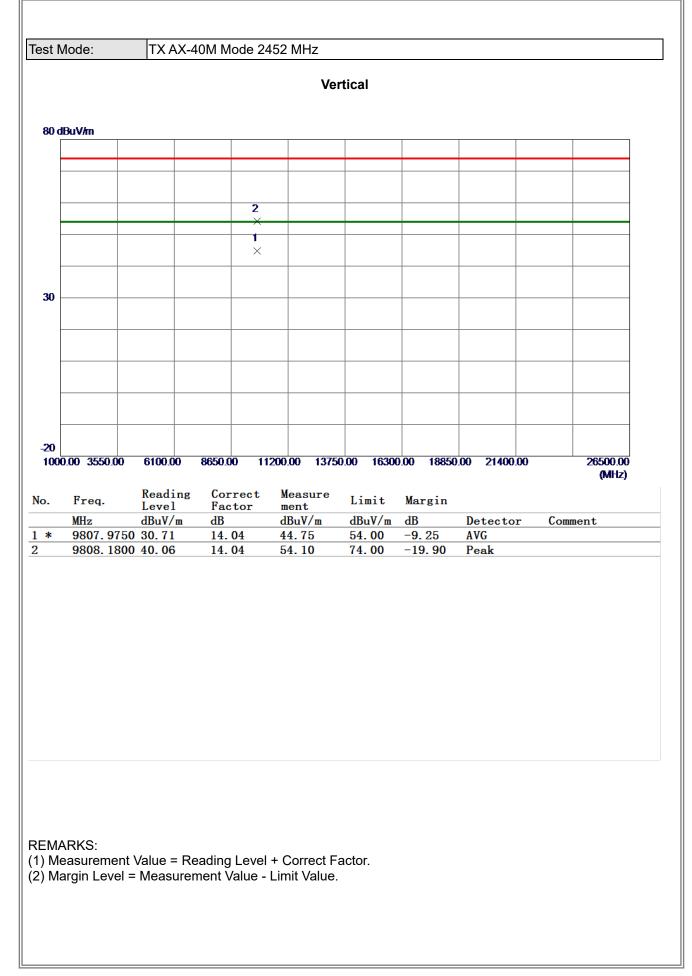




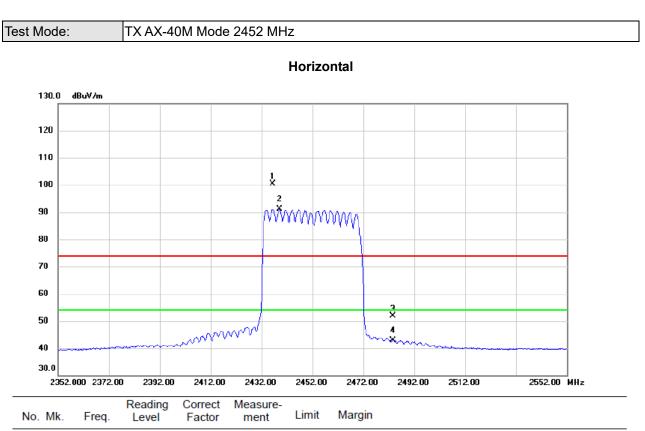


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





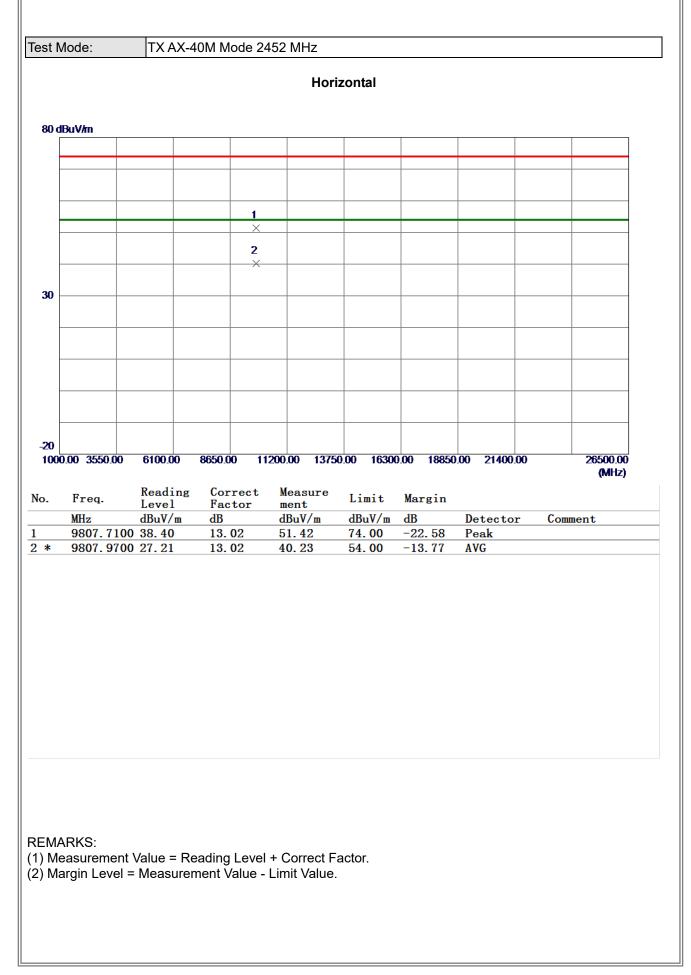




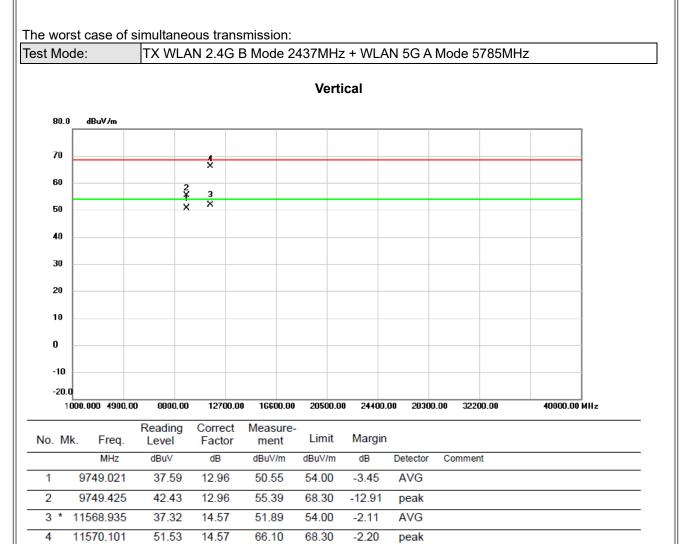
INU	. IVIN	. Fieq.	Level	Factor	ment	Linne	margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	Х	2436.400	92.14	8.34	100.48	74.00	26.48	peak	No Limit
2	*	2439.000	82.73	8.34	91.07	54.00	37.07	AVG	No Limit
3	}	2483.500	43.44	8.39	51.83	74.00	-22.17	peak	
4	-	2483.500	34.42	8.39	42.81	54.00	-11.19	AVG	

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



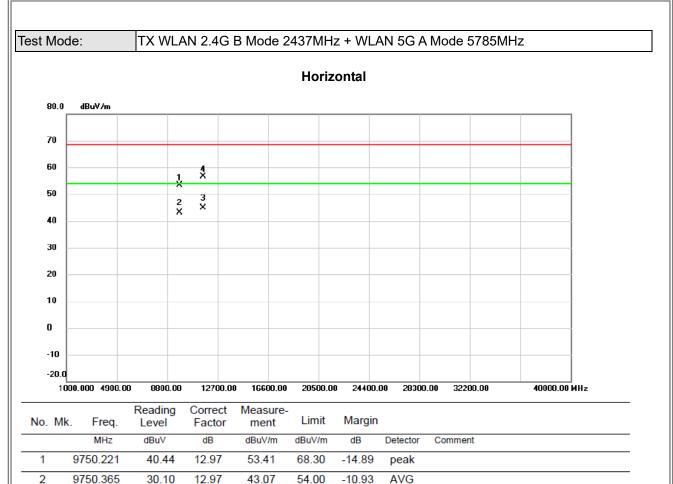






- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





54.00

68.30

44.80

56.58

AVG

peak

-9.20

-11.72

**REMARKS**:

3 \*

4

11568.882

11570.328

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

30.23

42.01

14.57

14.57

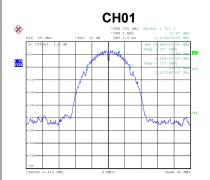


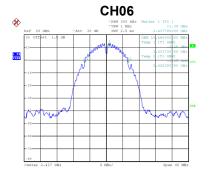
## **APPENDIX E - BANDWIDTH**

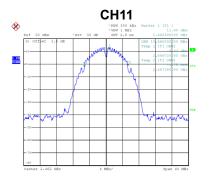


	-			
Test Mode	TX B Mode			
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	7.08	500	Complies
06	2437	7.07	500	Complies
11	2462	7.07	500	Complies
*** *** Ref 20 dBm *Att 30 dB 5 20 Offet 1.6 dB	VIC     2.5.5 km²     7.6.7950000 MBL       Marine 3     177. mb     27. mb       Marine 3     177. mb     400000 MBL       Marine 4     177. mb     4000000 MBL       Marine 4     177. mb     4000000000000000000000000000000000000	CFUCE Control of the second s	1 (T1 ) 0.0050000 MHz Ref 20 dBm *Att 30 dB 1 (T1 ) 0 00ffet 1.6 dB	entransition of the second sec
	Frequency			

Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	10.56	Complies
06	2437	10.56	Complies
11	2462	10.56	Complies







Date: 10.JUN.2020 09:48:46

Date: 10.JUN.2020 09:44:49

Date: 10.JUN.2020 09:47:11



est Mode	TX G Mode			
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	16.42	500	Complies
06	2437	16.44	500	Complies
11	2462	16.44	500	Complies
mef         10         -Att         30           10         10         10         10         10           10         10         10         10         10           10         10         10         10         10           10         10         10         10         10           10         10         10         10         10           10         10         10         10         10           10         10         10         10         10           10         10         10         10         10           10         10         10         10         10         10           10         10         10         10         10         10         10           10         10         10         10         10         10         10         10           10         10         10         10         10         10         10         10         10           10         10         10         10         10         10         10         10           10         10         10         10         10         10	EXECUSE 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	Image: Contract of the second seco	La 1 [1] 	EHIN: "PRUE 10 BALE 1 [1]] "PT 20 BALE 1 [1]] "PT 20 BALE 1 [1]] (TT 10 BALE 1 [1]
Channel	Frequency	99 % Emissio	on Bandwidth (MHz)	Result
Channel	(MHz)		· · ·	
01	(MHz) 2412		17.12	Complies
01 06	2412 2437		17.12 17.28	Complies Complies
01	2412		17.12	Complies

Date: 10.JUN.2020 08:17:43

Date: 10.JUN.2020 08:19:30

Date: 10.JUN.2020 08:22:40



	1			
est Mode	TX N-20M Mode			
	Frequency	6 dB Bandwidth	6 dB Bandwidth Min. Limit	
Channel	(MHz)	(MHz)	(kHz)	Result
01	2412	17.62	500	Complies
06	2437	17.62	500	Complies
11	2462	17.62	500	Complies
C	H01	CH06		CH11
Ref 20 dBm *Att 30 dB 2 20 0ffset 1.5 dB -10	gan 10 km s Called 1 (T 1 ) 907 24 km 0.35 km 1 (T 1 ) 907 24 km 1 (T 1 4 1	Arr 10 data       Arr 10 data	sa international distribution of the second dist	- 2002 10 Mar. 0 Letta - 1 (T. ) - 2002 20 Mar. 0 Letta - 1 (T. ) - 2012
Channel	Frequency (MHz)	99 % Emissio	on Bandwidth (MHz)	Result
01	2412		18.32	Complies
06	2437		18.48	Complies
11	2462		18.32	Complies
CI	H01	CH06		CH11
A 12 2 data	201 30 201 2012 Next+0 1 (11) NY 1 401: 5.4 (11) NY 1 4 3 (11)	**************************************	1-422000     20     3000     *X.5     30-00       0     1121000     3000     100000     100000     100000       0     1121000     30000     100000     100000     100000       0     11210000     300000     100000     100000     100000       0     11210000     300000     100000     100000     100000       0     11210000     300000     100000     100000       0     112100000     1000000     1000000     1000000       0     1121000000     10000000     10000000     10000000       0     11200000000000     10000000000     100000000000     1000000000000000       0     11200000000000000000000000000000000000	-1982 JOB ME NALKE 1 [1] -2993 JOB ME NALKE 1 [1] -2994 JOB T 1072 JAS m Control 10 -1072 JAS m Co
er 10.400.2020 08:25:01		Date: 10.JUN.2020 00:26:49	Date: 10.300.2020 08:28:11	

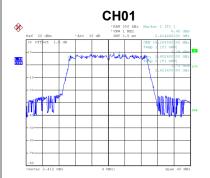


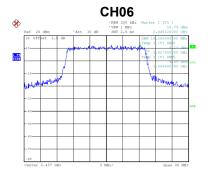
Test Mode	TX N-40M Mode			
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	36.36	500	Complies
06	2437	36.39	500	Complies
09	2452	36.44	500	Complies
**************************************	HOAS	CFUEDE A CALL OF CALL	a 1 (12)	EXPENSION 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.
Channel	Frequency (MHz)	99 % Emissio	n Bandwidth (MHz)	Result
03	2422		37.12	Complies
06	2437		Complies	
09	2452		37.12	Complies
🌮 :	H03 20 2 3 00 20 2 0	CPUCCO CONTRACTOR		EXPENSION 1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.

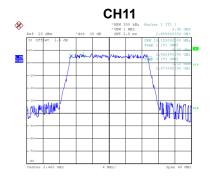


Test Mode	TX AX-20M Mode			
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	19.04	500	Complies
06	2437	19.04	500	Complies
11	2462	19.07	500	Complies
Ref 20 dBm         *Att 30 dB           Image: Att 30 dB         Image: Att 30 dB	Image: 100 (100 (100 (100 (100 (100 (100 (100	Creating and a series of the s	1 (T1 ) A03900000 MB: Ref 20 dBm *Att 30 dB 1 (T1 ) 1 (T1 ) 0 dBm +Att 30 dB 1 (T1 ) 1	H11 2010 State Let 12 State 2010 State Let 12 State Let 12 State 2010 State Let 12 State Let

Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	19.20	Complies
06	2437	19.28	Complies
11	2462	19.12	Complies







Date: 10.JUN.2020 09:29:28

Date: 10.JUN.2020 10:22:48

Date: 10.JUN.2020 09:34:01