

FCC Radio Test Report

FCC ID: 2AXJ4C420

This report concerns: Original Grant

Project No.	:	2204C109A
Equipment	:	Smart Wire-Free Security Camera
Brand Name	:	tp-link, tapo
Test Model	:	Tapo C420
Series Model	:	N/A
Applicant	:	TP-Link Corporation Limited
Address	:	Room 901, 9/F., New East Ocean Centre, 9 Science Museum Road,
		Tsim Sha Tsui, Kowloon, Hong Kong
Manufacturer	:	TP-Link Corporation Limited
Address	:	Room 901, 9/F., New East Ocean Centre, 9 Science Museum Road,
		Tsim Sha Tsui, Kowloon, Hong Kong
Date of Receipt	:	Jun. 06, 2022
Date of Test	:	Jun. 08, 2022 ~ Jul. 13, 2022
Issued Date	:	Sep. 30, 2022
Report Version	:	R02
Test Sample	:	Engineering Sample No.: DG2022053170 for conducted,
		DG2022053171 for others.
Standard(s)	:	FCC CFR Title 47, Part 15, Subpart C
		FCC KDB 558074 D01 15.247 Meas Guidance v05r02
		ANSI C63.10-2013

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

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Declaration

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

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

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

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

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

Limitation

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



Table of Contents	Page
REPORT ISSUED HISTORY	6
1. SUMMARY OF TEST RESULTS	7
1.1 TEST FACILITY	8
1.2 MEASUREMENT UNCERTAINTY	8
1.3 TEST ENVIRONMENT CONDITIONS	9
2 . GENERAL INFORMATION	10
2.1 GENERAL DESCRIPTION OF EUT	10
2.2 DESCRIPTION OF TEST MODES	11
2.3 PARAMETERS OF TEST SOFTWARE	12
2.4 DUTY CYCLE	13
2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	15
2.6 SUPPORT UNITS	15
3 . AC POWER LINE CONDUCTED EMISSIONS	16
3.1 LIMIT	16
3.2 TEST PROCEDURE	16
3.3 DEVIATION FROM TEST STANDARD	16
3.4 TEST SETUP	17
3.5 EUT OPERATION CONDITIONS	17
3.6 TEST RESULTS	17
4 . RADIATED EMISSIONS	18
4.1 LIMIT	18
4.2 TEST PROCEDURE	19
4.3 DEVIATION FROM TEST STANDARD	20
4.4 TEST SETUP	20
4.5 EUT OPERATION CONDITIONS	21
4.6 TEST RESULTS - 9 KHZ TO 30 MHZ	21
4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ	21
4.8 TEST RESULTS - ABOVE 1000 MHZ	21
5. BANDWIDTH	22
5.1 LIMIT	22
5.2 TEST PROCEDURE	22
5.3 DEVIATION FROM STANDARD	22
5.4 TEST SETUP	22





Table of Contents	Page
5.5 EUT OPERATION CONDITIONS	22
5.6 TEST RESULTS	22
6 . MAXIMUM AVERAGE OUTPUT POWER	23
6.1 LIMIT	23
6.2 TEST PROCEDURE	23
6.3 DEVIATION FROM STANDARD	23
6.4 TEST SETUP	23
6.5 EUT OPERATION CONDITIONS	23
6.6 TEST RESULTS	23
7 . CONDUCTED SPURIOUS EMISSIONS	24
7.1 LIMIT	24
7.2 TEST PROCEDURE	24
7.3 DEVIATION FROM STANDARD	24
7.4 TEST SETUP	24
7.5 EUT OPERATION CONDITIONS	24
7.6 TEST RESULTS	24
8 . POWER SPECTRAL DENSITY	25
8.1 LIMIT	25
8.2 TEST PROCEDURE	25
8.3 DEVIATION FROM STANDARD	25
8.4 TEST SETUP	25
8.5 EUT OPERATION CONDITIONS 8.6 TEST RESULTS	25 25
9. MEASUREMENT INSTRUMENTS LIST	26
10 . EUT TEST PHOTO	28
APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS	33
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ	36
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ	41
APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ	44
APPENDIX E - BANDWIDTH	105
APPENDIX F - MAXIMUM AVERAGE OUTPUT POWER	109
APPENDIX G - CONDUCTED SPURIOUS EMISSIONS	111



Table of Contents Page **APPENDIX H - POWER SPECTRAL DENSITY** 118

REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-1-2204C109A	R00	Original Report.	Sep. 09, 2022	Invalid
BTL-FCCP-1-2204C109A	R01	Changed the product name.	Sep. 13, 2022	Invalid
BTL-FCCP-1-2204C109A	R02	Updated the writing of antenna type.	Sep. 30, 2022	Valid



1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

	FCC CFR Title 47, Part 15, Subpart C					
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 Average Output Power	APPENDIX F	PASS			
15.247(d)	Conducted Spurious Emissions	APPENDIX G	PASS			
15.247(e)	Power Spectral Density	APPENDIX H	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 Rd. Shixia, Dalang Town Dongguan City, Guangdong 523792 People's Republic of China. BTL's 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	U,(dB)
DG-CB01	CISPR	9kHz ~ 30MHz	2.36

Test Site	Method	Measurement Frequency Range	Ant. H / V	U,(dB)
DG-CB03 (3m)	CISPR	30MHz ~ 200MHz	V	4.36
		30MHz ~ 200MHz	Н	3.32
		200MHz ~ 1,000MHz	V	4.08
		200MHz ~ 1,000MHz	Н	3.96

Test Site	Method Measurement Frequency Range		U,(dB)
DG-CB03 (3m)		1GHz ~ 6GHz	3.80
	n) CISPR -	6GHz ~ 18GHz	4.82

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB03 (1m)	CISPR	18 ~ 26.5 GHz	3.62
	CISPR	26.5 ~ 40 GHz	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
Humidity	±1.5%

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	56%	AC 120V/60Hz	Jeter Wang
Radiated Emissions-9kHz to 30 MHz	24°C	58%	AC 120V/60Hz	Rod Tang
Radiated Emissions-30MHz to 1000MHz	26°C	52%	AC 120V/60Hz	Meers Zhang
Radiated Emissions-Above 1000MHz	23°C	53%	AC 120V/60Hz	Meers Zhang
Bandwidth	24°C	57%	AC 120V/60Hz	Nicole Chen
Maximum Average Output Power	24.4°C	63.3%	AC 120V/60Hz	Complex Qin
Conducted Spurious Emissions	24°C	57%	AC 120V/60Hz	Nicole Chen
Power Spectral Density	24°C	57%	AC 120V/60Hz	Nicole Chen

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Smart Wire-Free Security Camera
Brand Name	tp-link, tapo
Test Model	Таро С420
Series Model	N/A
Model Difference(s)	N/A
Power Source	1# DC voltage supplied from AC adapter. Model: A8-5010002# Supplied from battery. Model: Tapo A100
Power Rating	1# Input: 100-240V~ 50/60Hz 0.2A Max. Output: 5V === 1A 2# DC 3.7V, 5200mAh
Operation Frequency	2412 MHz ~ 2462 MHz
Modulation Type	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM
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 72.2 Mbps
Maximum Average Output Power	IEEE 802.11g: 18.59 dBm (0.0723 W)

Note:

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

2. Channel List:

	CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20)						
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	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. Antenna Specification:

Ī	Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	1	tp-link	Tapo C420(US)1.0	IFA	N/A	-0.21

Note: The antenna gain is provided by the manufacturer.

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(HT20) Mode Channel 01/06/11
Mode 4	TX G Mode Channel 06
Mode 5	TX B Mode Channel 01/02/06/10/11
Mode 6	TX G Mode Channel 01/02/06/10/11
Mode 7	TX N(HT20) Mode Channel 01/02/06/10/11

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 4	TX G Mode Channel 06	

Radiated emissions test - Below 1GHz		
Final Test Mode	Description	
Mode 4	TX G Mode Channel 06	

Radiated emissions test- Above 1GHz		
Final Test Mode Description		
Mode 5	Mode 5 TX B Mode Channel 01/02/06/10/11	
Mode 6	TX G Mode Channel 01/02/06/10/11	
Mode 7	TX N(HT20) Mode Channel 01/02/06/10/11	



Conducted test		
Final Test Mode Description		
Mode 1	TX B Mode Channel 01/06/11	
Mode 2	Mode 2 TX G Mode Channel 01/06/11	
Mode 3	TX N(HT20) Mode Channel 01/06/11	

NOTE:

- (1) All the bit rate of transmitter have been tested and found the lowest rate is found to be the worst case and recorded.
- (2) For AC power line conducted emissions and radiated emission below 1 GHz test, the TX G Mode Channel 06 is found to be the worst case and recorded.
- (3) For radiated emission above 1 GHz test, the spurious points of 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.

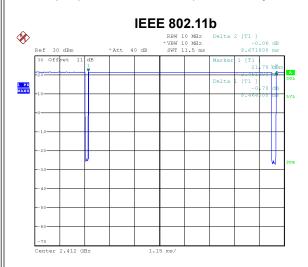
2.3 PARAMETERS OF TEST SOFTWARE

Test Software Version	WiFi_QA_Tool_v3.2.0		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	1F	1F	1F
IEEE 802.11g	1F	1F	1F
IEEE 802.11n(HT20)	1F	1E	1E



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: 21.JUN.2022 10:13:07

Duty cycle = 8.464 ms / 8.671 ms = 97.61% Duty Factor = 10 log(1/Duty cycle) = 0.10

 Set 10 ME:
 Delta 2 [1]

 *VW 10 ME:
 Delta 2 [1]

 *VW 10 ME:
 0.06 dB

 SWT 2.5 mc
 0.06 dB

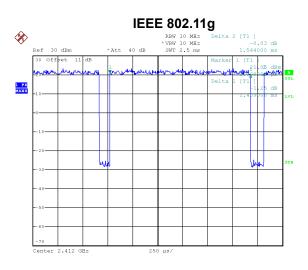
 10 Offset 11 dB
 0.01 ME:

 10 Offset 11 ME:
 0.01 ME:

 10 Offset 11 ME:

Date: 21.JUN.2022 10:15:41

Duty cycle = 1.319 ms / 1.519 ms = 86.83% Duty Factor = 10 log(1/Duty cycle) = 0.61



Date: 21.JUN.2022 10:14:06

Duty cycle = 1.409 ms / 1.544 ms = 91.26%Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.40$



NOTE:

For IEEE 802.11b:

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 118 Hz.

For IEEE 802.11g:

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 710 Hz.

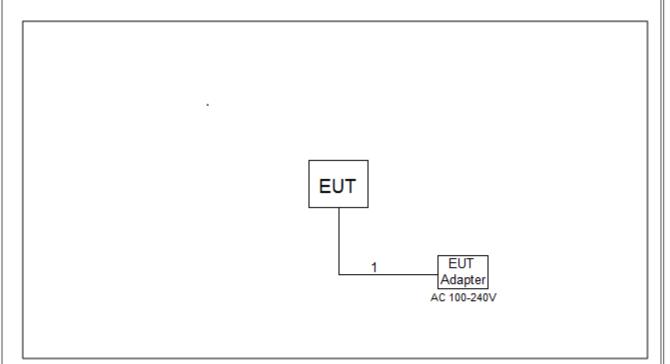
For IEEE 802.11n(HT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 758 Hz.

(Remark: The video bandwidth of the spectrum analyzer was set to 1kHz during the test.)



2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
-	-	-	-	-

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	1.2m



3. AC POWER LINE CONDUCTED EMISSIONS

3.1 LIMIT

Frequency of Emission (MHz)	Limit (dBµV)		
Frequency of Emission (Minz)	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.

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.

The following table is the setting of the receiver:

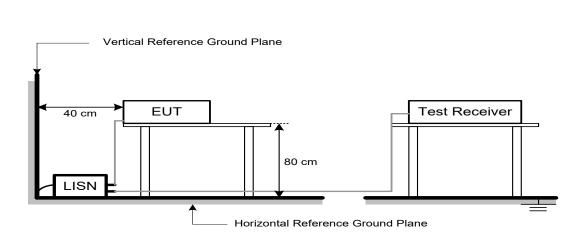
Receiver Parameters	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

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

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 (MHz)	Field Strength (microvolts/meter)	Measurement Distance (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)

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

NOTE:

(1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).



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)
- h. 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	
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~26.5 GHz for PK/AVG detector	

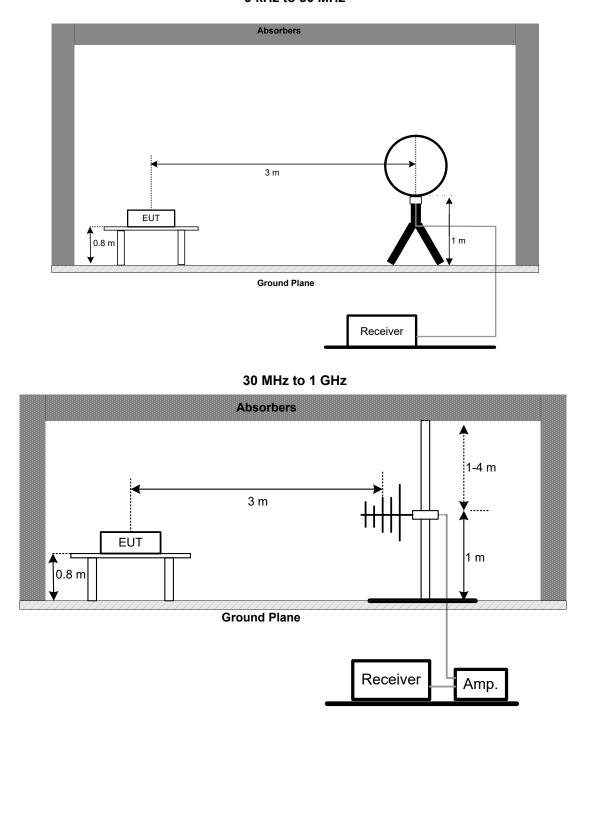


4.3 DEVIATION FROM TEST STANDARD

No deviation.

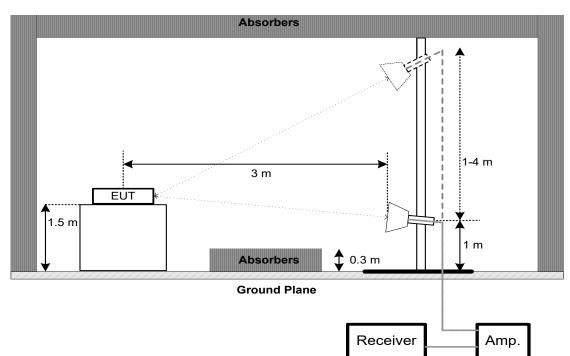
4.4 TEST SETUP

9 kHz to 30 MHz





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

5.1 LIMIT

Section	Test Item	Limit
FCC 15.247(a)(2)	6 dB Bandwidth	Minimum 500 kHz
	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. The following table is the setting of the spectrum analyzer:

For 6 dB Bandwidth:

Spectrum Parameters	Setting	
Span Frequency	> Measurement Bandwidth	
RBW	100 kHz	
VBW	300 kHz	
Detector	Peak	
Trace	Max Hold	
Sweep Time	Auto	

For 99% Emission Bandwidth:

Spectrum Parameters	Setting	
Span Frequency	Between 1.5 times and 5.0 times the OBW	
RBW	300 kHz	
VBW	1 MHz	
Detector	Peak	
Trace	Max Hold	
Sweep Time	Auto	

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 AVERAGE OUTPUT POWER

6.1 LIMIT

Section	Test Item	Limit
FCC 15.247(b)(3)	Maximum Average Output Power	1.0000 Watt or 30.00 dBm

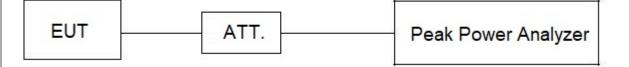
6.2 TEST PROCEDURE

- a. The EUT was directly connected to the peak power analyzer and antenna output port as show in the block diagram below.
- b. The 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. The following table is the setting of the spectrum analyzer:

_		
For	Reference	
IUI		

Spectrum Parameters	Setting	
Span Frequency	\geq 1.5 times the bandwidth.	
RBW	100 kHz	
VBW	300 kHz	
Detector	Peak	
Trace	Max Hold	
Sweep Time	Auto	

For Emission Level:

Spectrum Parameters	Setting
Start Frequency	30 MHz
Stop Frequency	26.5 GHz
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

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 G.



8. POWER SPECTRAL DENSITY

8.1 LIMIT

Section	Test Item	Limit
FCC 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. The following table is the setting of the spectrum analyzer:

Spectrum Parameters	Setting			
Span Frequency	1.5 times the DTS bandwidth			
RBW	3 kHz			
VBW	10 kHz			
Detector	Peak			
Trace	Max Hold			
Sweep Time Auto				

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	Jan. 22, 2023				
2	LISN	EMCO	3816/2	52765	Jan. 23, 2023				
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Jan. 23, 2023				
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A				
5	Cable	N/A	RG223	12m	Mar. 08, 2023				
6	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	MXE EMI Receiver	Keysight	N9038A	MY56400091	Jan. 22, 2023				
2*	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Aug. 23, 2024				
3	Cable	N/A	RG 213/U(9kHz~1GHz)	N/A	Jun. 17, 2022 Jun. 17, 2023				
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. 17, 2022				

	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. 03, 2023				
2	Amplifier	HP	8447D	2944A08742	Jan. 22, 2023				
3	Cable	emci	LMR-400	N/A	Nov. 30, 2022				
4	Controller	Controller CT SC100 N/A		N/A	N/A				
5	Controller	MF	MF-7802	MF780208416	N/A				
6	Receiver	Agilent	N9038A	MY52130039	Jan. 22, 2023				
7	Measurement Software	Harad – – – – N/A		N/A	N/A				
8	966 Chamber Room	RM	9*6*6	N/A	Jul. 24, 2022				



	Radiated Emissions - Above 1 GHz								
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until				
1	Double Ridged Horn Antenna	ARA	DRG-118A	16554	Apr. 18, 2023				
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	May 27, 2023				
3	Amplifier	Agilent	8449B	3008A02584	Jul. 03, 2022 Jul. 03, 2023				
4	Controller	СТ	SC100	N/A	N/A				
5	Controller	MF	MF-7802 MF780208416		N/A				
6	Receiver	Agilent	N9038A	MY52130039	Jan. 22, 2023				
7	EXA Spectrum Analyzer	Keysight	N9010A	MY56480488	Jan. 22, 2023				
8*	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330 -K	619413	Jul. 16, 2022				
9	Cable	Talent microwave	A81-SMAMSMAM- 12.5M	N/A	Oct. 15, 2022				
10	Cable	Talent microwave	A40-2.92M2.92M-2. 5M	N/A	Nov. 30, 2022				
11	Filter	STI	STI15-9912	N/A	Jul. 03, 2022 Jul. 03, 2023				
12	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A				
13	966 Chamber Room	RM	9*6*6	N/A	Jul. 24, 2022				

Bandwidth & Conducted Spurious Emissions & Power Spectral Density									
Item	Item Kind of Equipment Manufacturer Type No. Serial No. Calibrated unt								
1	Spectrum Analyzer	R&S	FSP40	100185	Jul. 03, 2022 Jul. 03, 2023				
2	2 Attenuator WOKEN 6SM3502 VAS1214NL N/A								
3	3 RF Cable Tongkaichuan N/A N/A								
4	DC Block	Mini	N/A	N/A	N/A				

	Maximum Average Output Power								
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until				
1	Peak Power Analyzer	eak Power Analyzer Keysight 8990B M		MY51000506	Jul. 03, 2022 Jul. 03, 2023				
2	Wideband power sensor	Keysight	N1923A	MY58310004	Jul. 03, 2022 Jul. 03, 2023				
3	Attenuator	WOKEN	6SM3502	VAS1214NL	N/A				
4	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.





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AC Power Line Conducted Emissions Test Photos

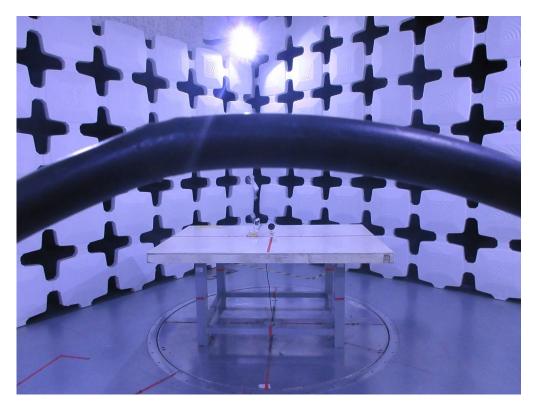


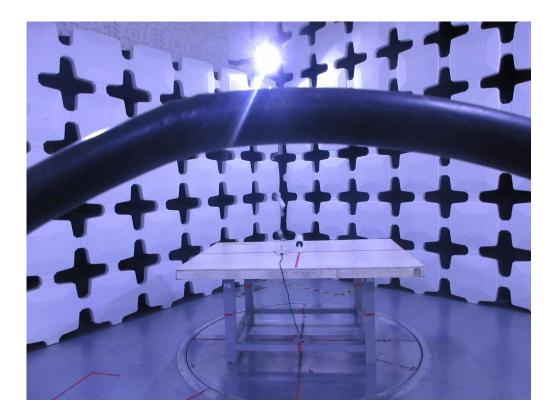




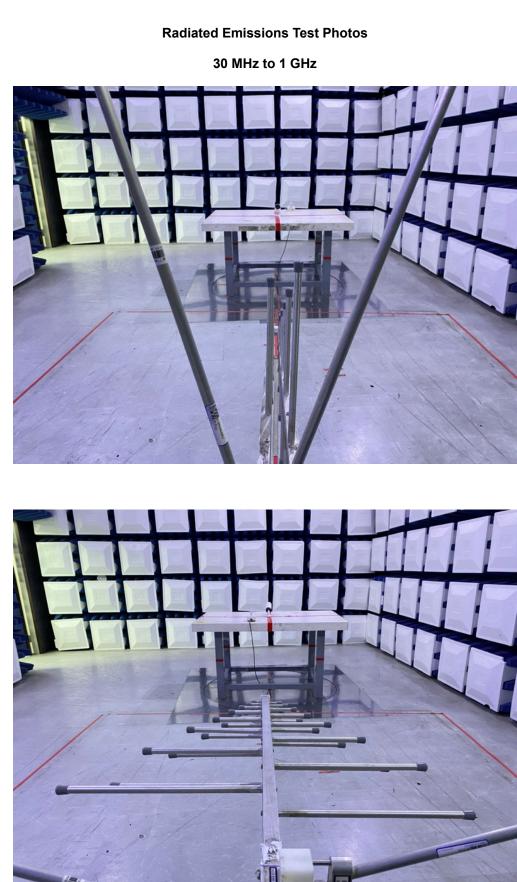
Radiated Emissions Test Photos

9 kHz to 30 MHz





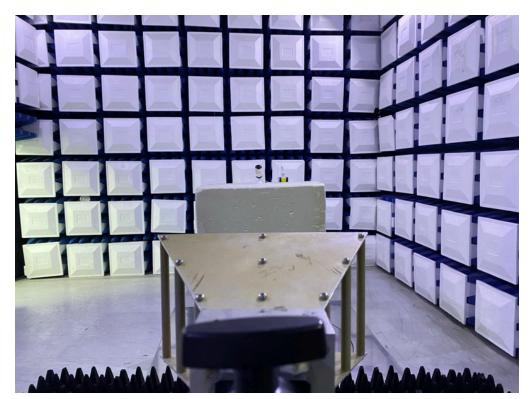


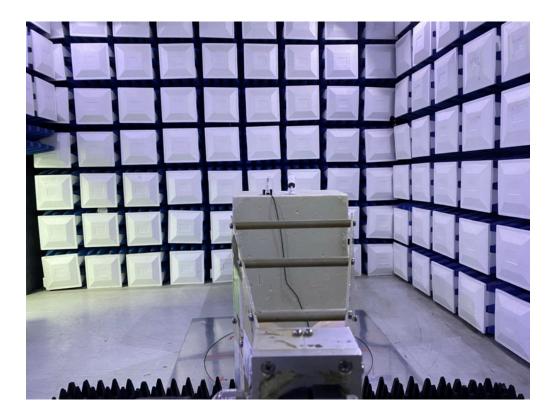




Radiated Emissions Test Photos

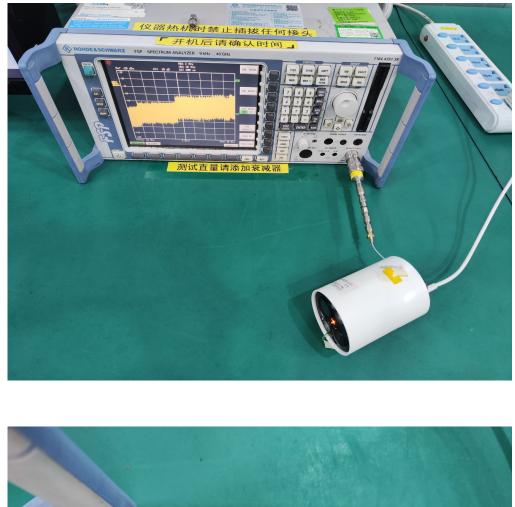
Above 1 GHz







Conducted Test Photos

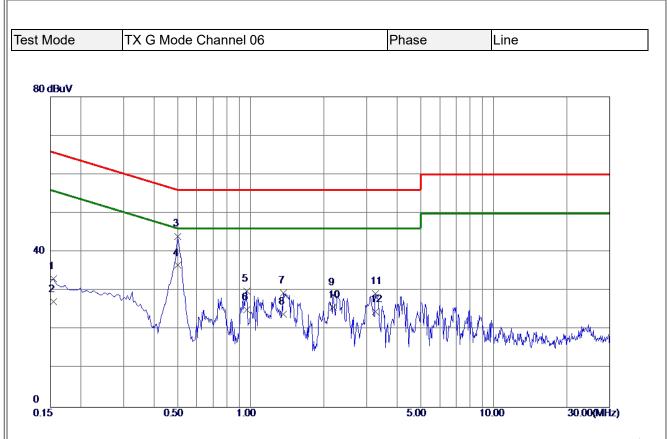






APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS



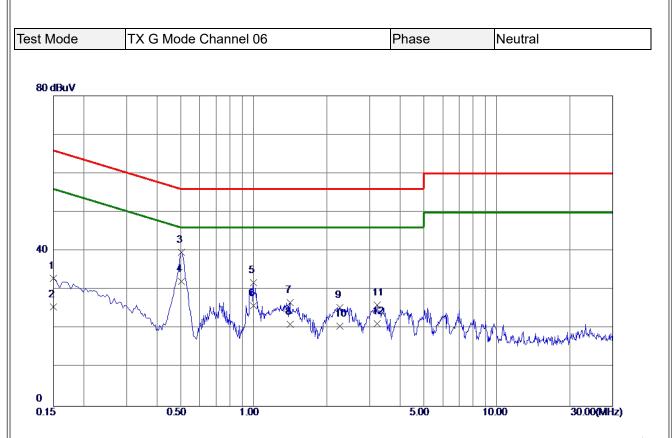


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1545	23.43	9.66	33. 09	65.75	-32.66	QP	
2	0.1545	17.60	9.66	27.26	55.75	-28. 49	AVG	
3	0. 5010	34. 32	9.76	44. 0 8	56.00	-11. 9 2	QP	
4 *	0.5010	26.80	9.76	36.56	46.00	-9.44	AVG	
5	0.9645	20.09	9.82	29.91	56.00	-26. 09	QP	
6	0.9645	15.30	9.82	25.12	46.00	-20.88	AVG	
7	1. 3650	19.52	9.85	29.37	56.00	-26.63	QP	
8	1.3650	14. 19	9.85	24.04	46.00	-21.96	AVG	
9	2. 1885	1 9.0 2	9.90	28.92	56.00	-27.08	QP	
10	2.1885	15.80	9.90	25.70	46.00	-20. 30	AVG	
11	3. 2595	19.27	9.99	29.26	56.00	-26.74	QP	
12	3. 2595	14.70	9.99	2 4. 69	46.00	-21.31	AVG	

REMARKS:

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





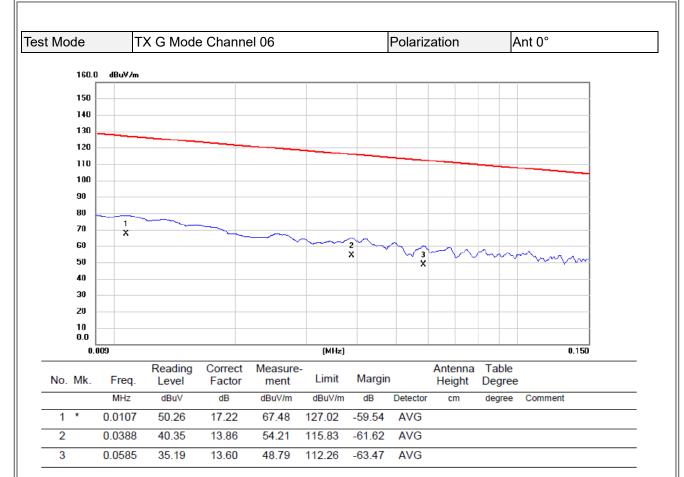
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0.1500	23. 24	9.70	32.94	66.00	-33.06	QP	
2	0.1500	15.91	9.70	25.61	56.00	-30. 39	AVG	
3	0.5055	29.96	9.79	39.75	56.00	-16.25	QP	
4 *	0. 5055	22. 30	9.79	32.09	46.00	-13. 91	AVG	
5	0.9960	22.03	9.86	31.89	56.00	-24.11	QP	
6	0.9960	16.10	9.86	25.96	46.00	-20. 04	AVG	
7	1.4100	16.82	9.88	26.70	56.00	-29.30	QP	
8	1.4100	11.30	9.88	21.18	46.00	-24.82	AVG	
9	2.2695	15.51	9.94	25.45	56.00	- 30. 55	QP	
10	2.2695	10.71	9.94	20.65	46.00	-25.35	AVG	
11	3. 2280	16.04	10.02	26.06	56.00	-29. 94	QP	
12	3. 2280	11. 20	10.02	21.22	46.00	-24. 78	AVG	

REMARKS:

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

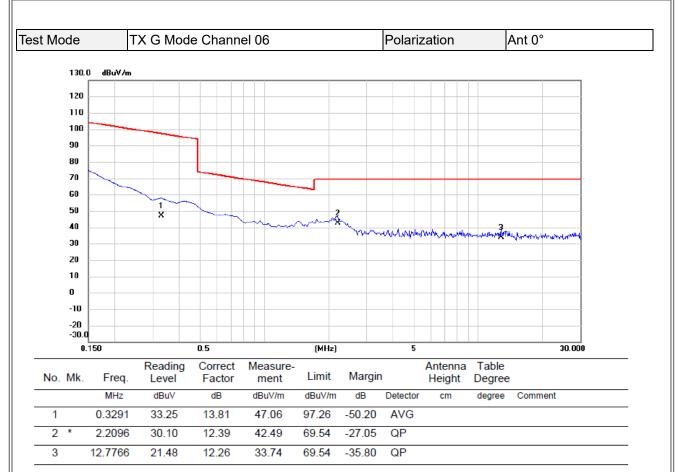


APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

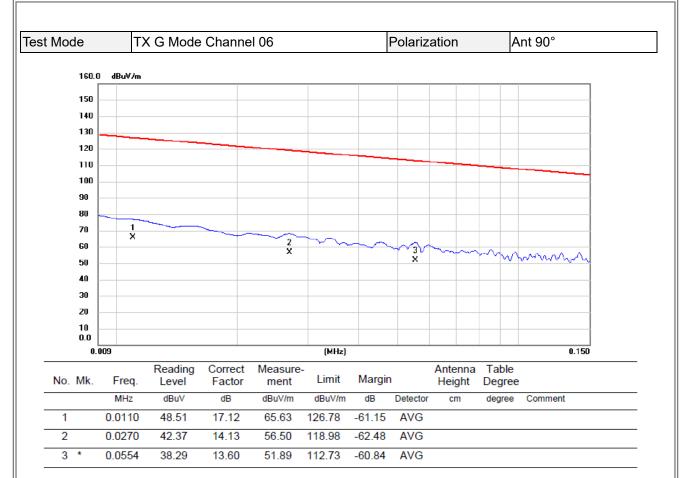


- Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value Limit Value.

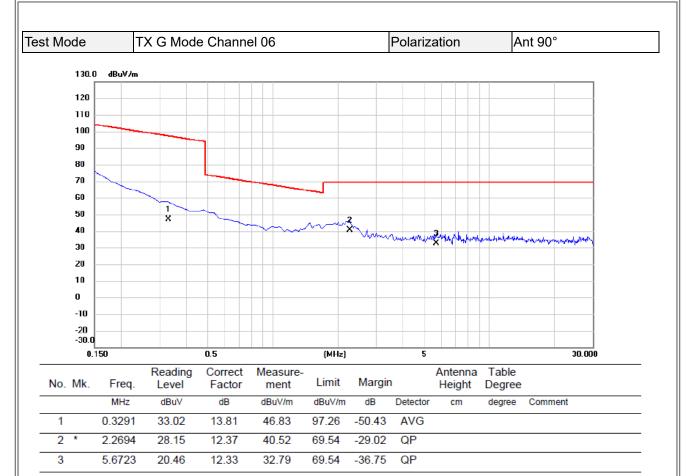




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



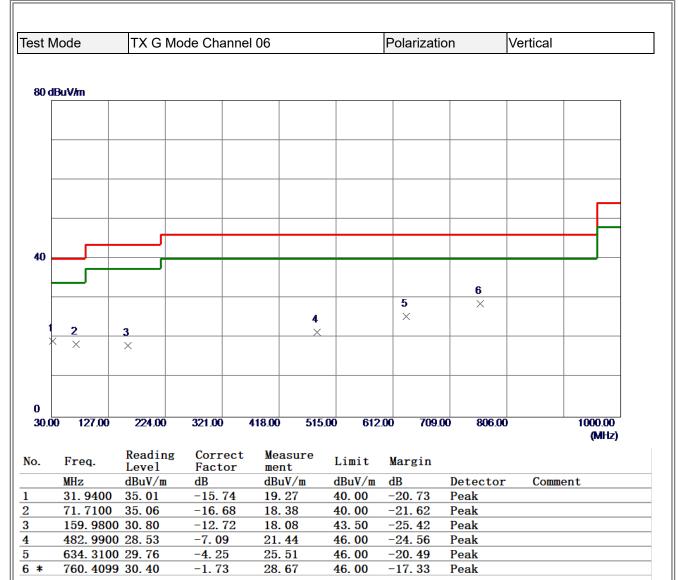
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



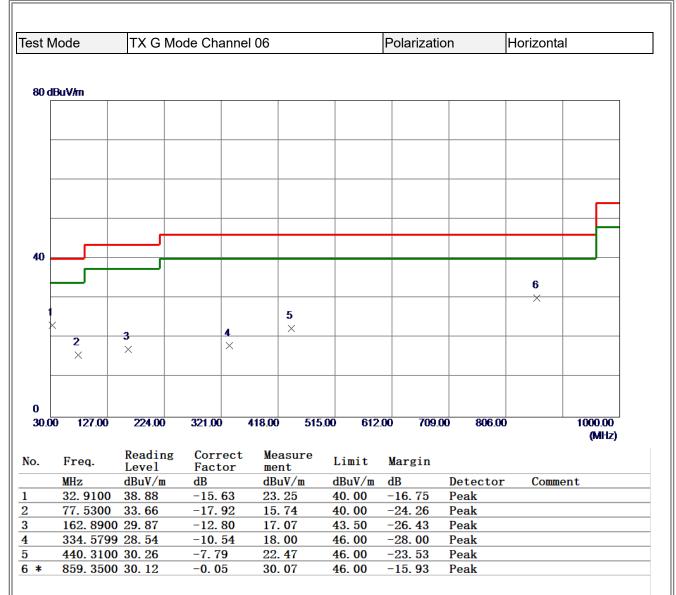
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ



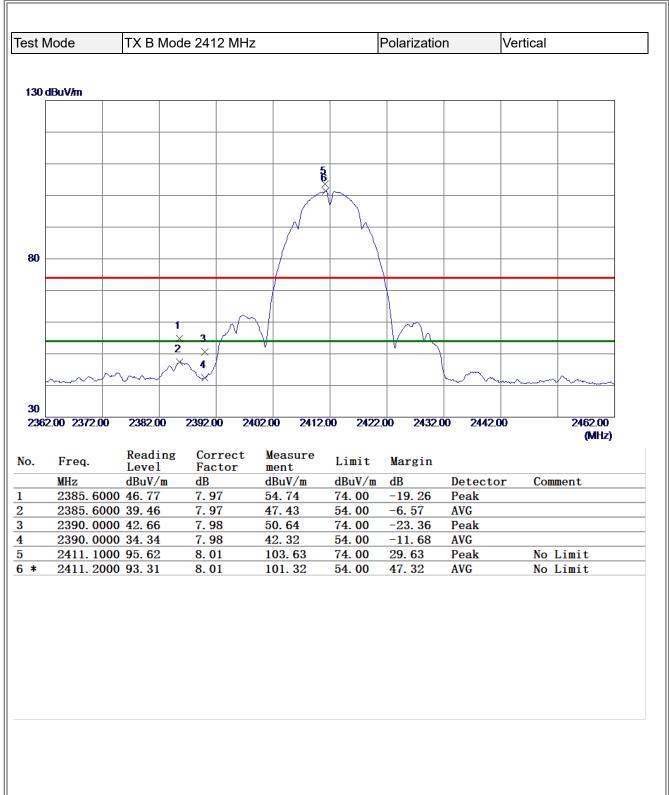
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



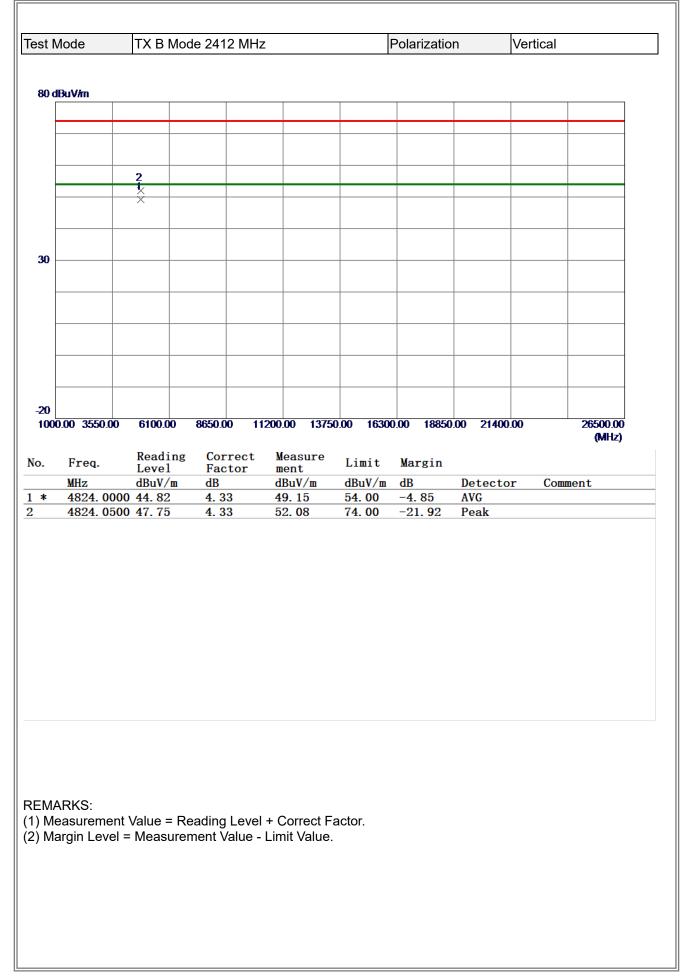
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

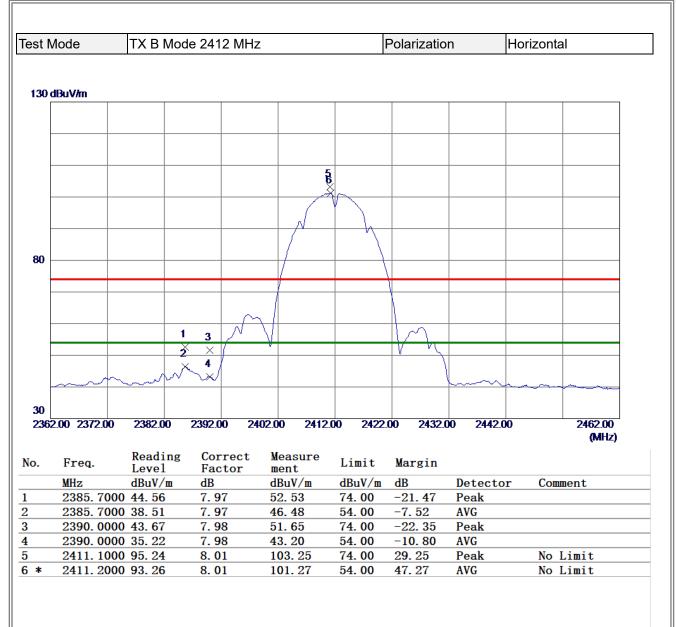


APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

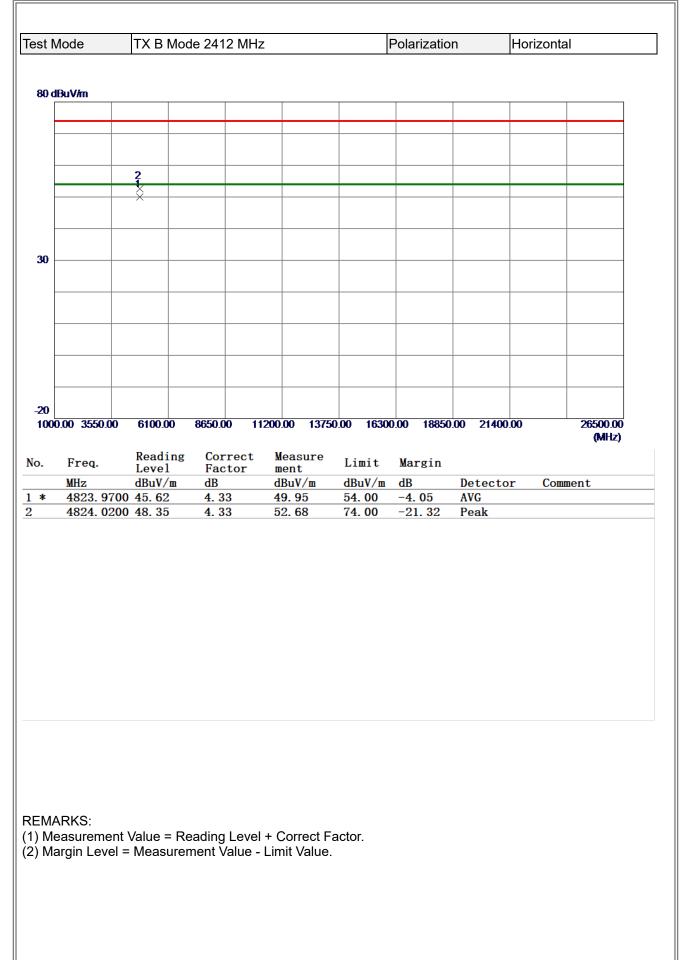


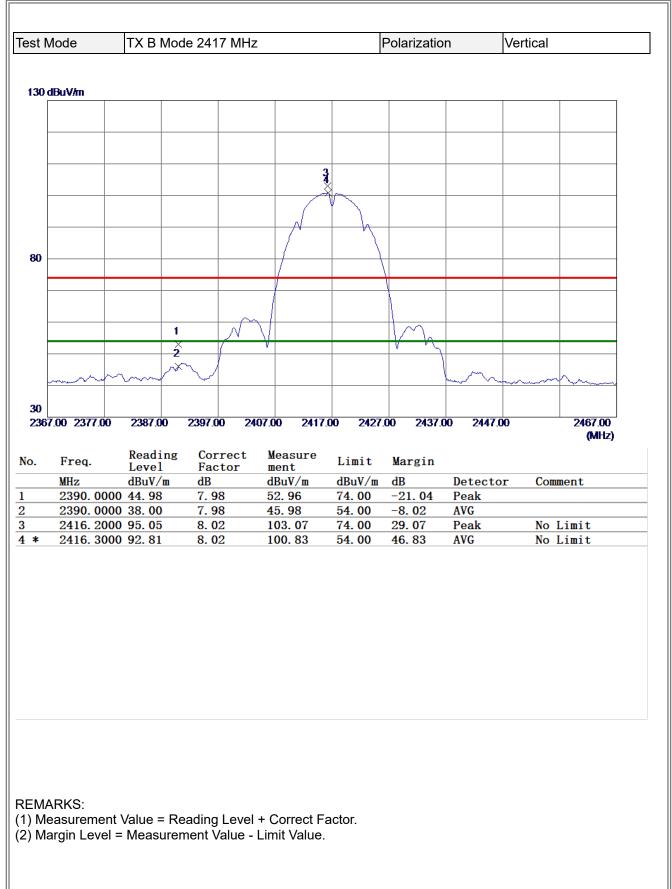
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

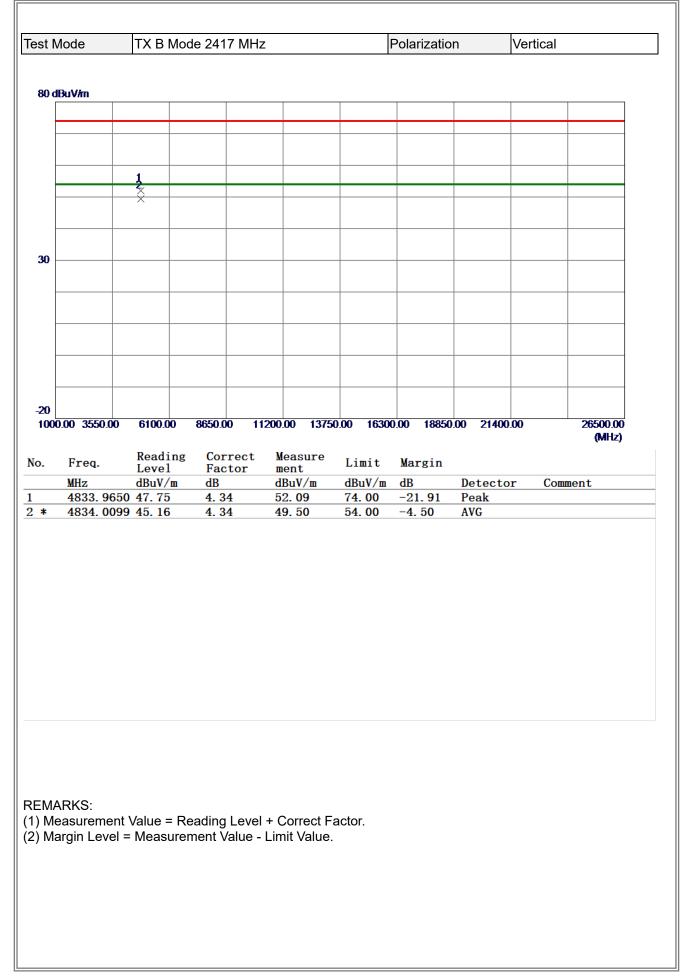


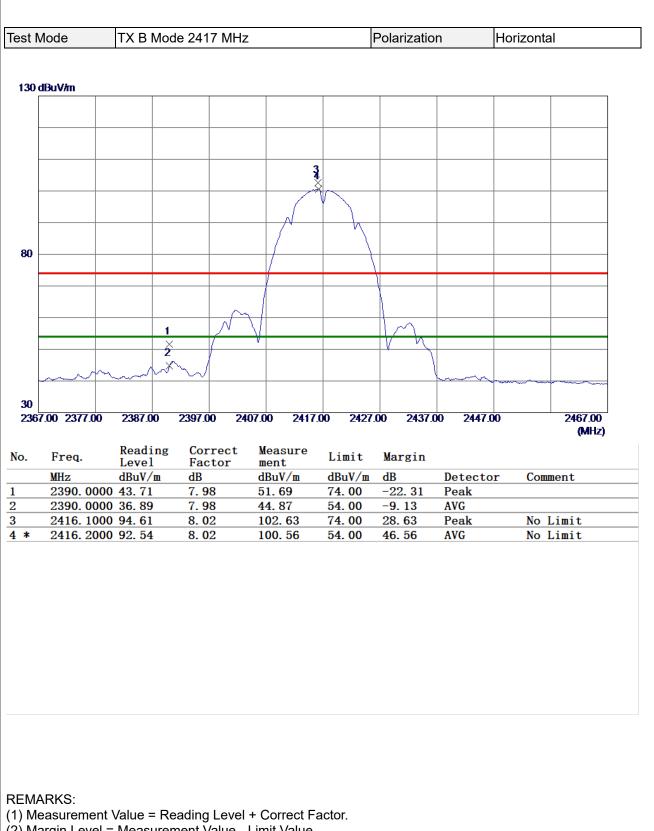


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



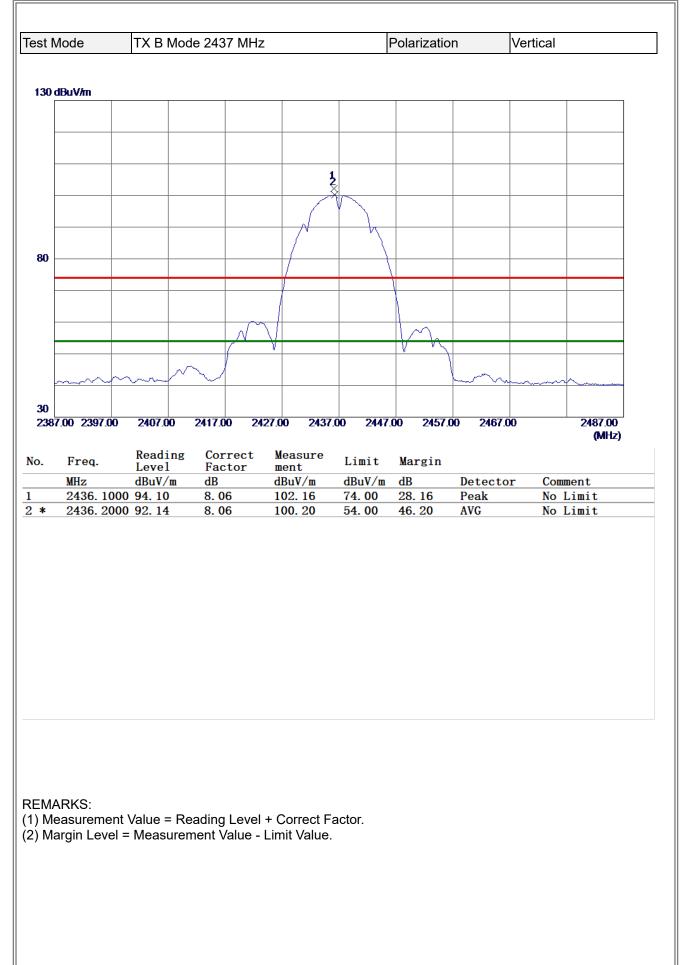






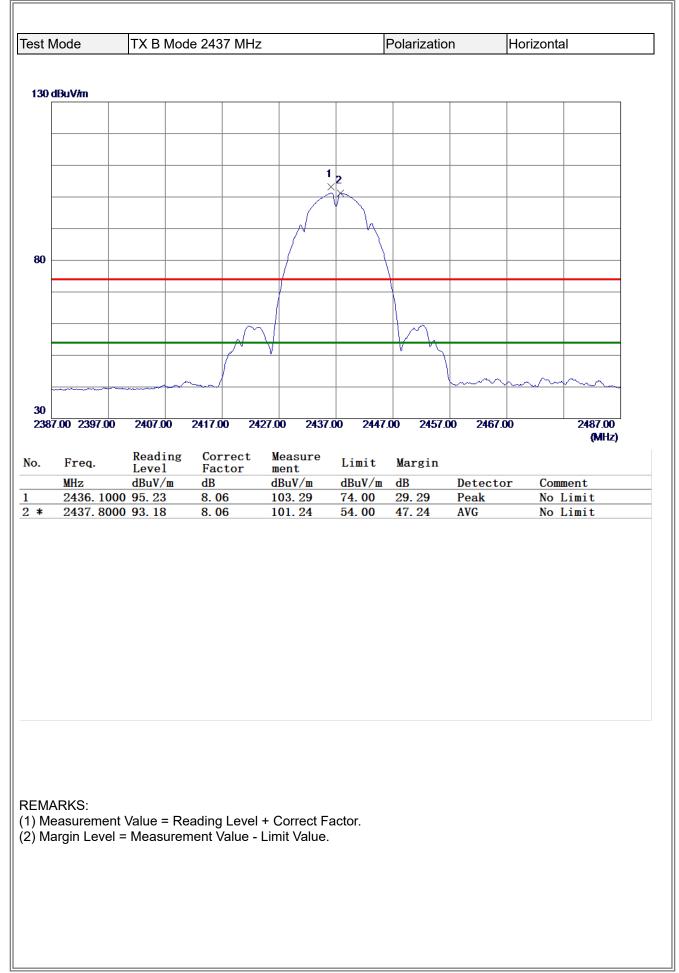
BTL

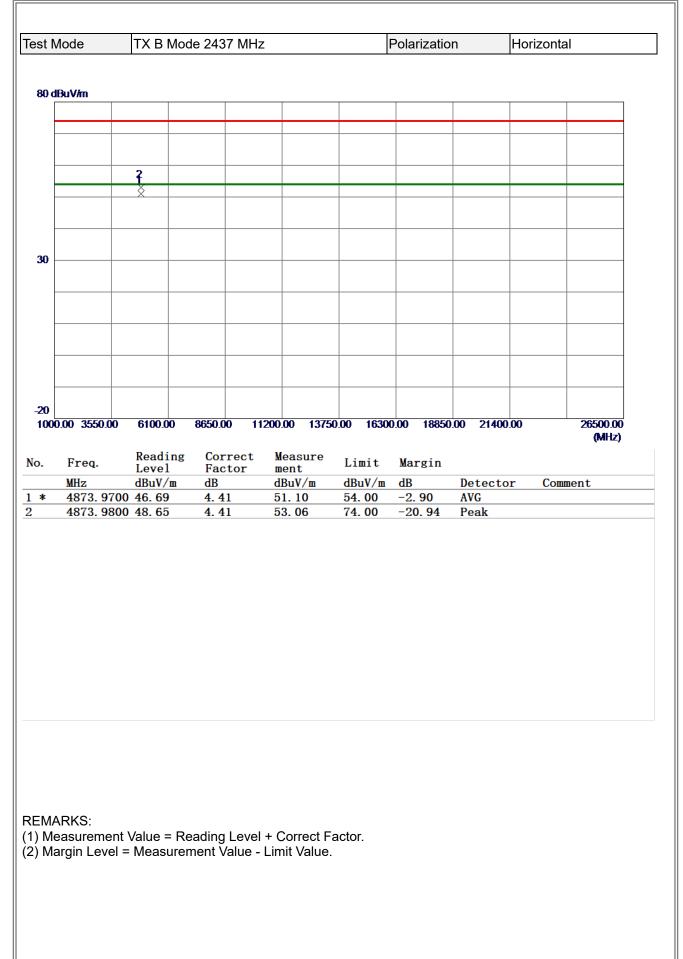
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		0 48.25						<u>JI Com</u>	
*	4833. 980	0 48.25	4.34	52. 59	74.00	-21. 41	Peak		

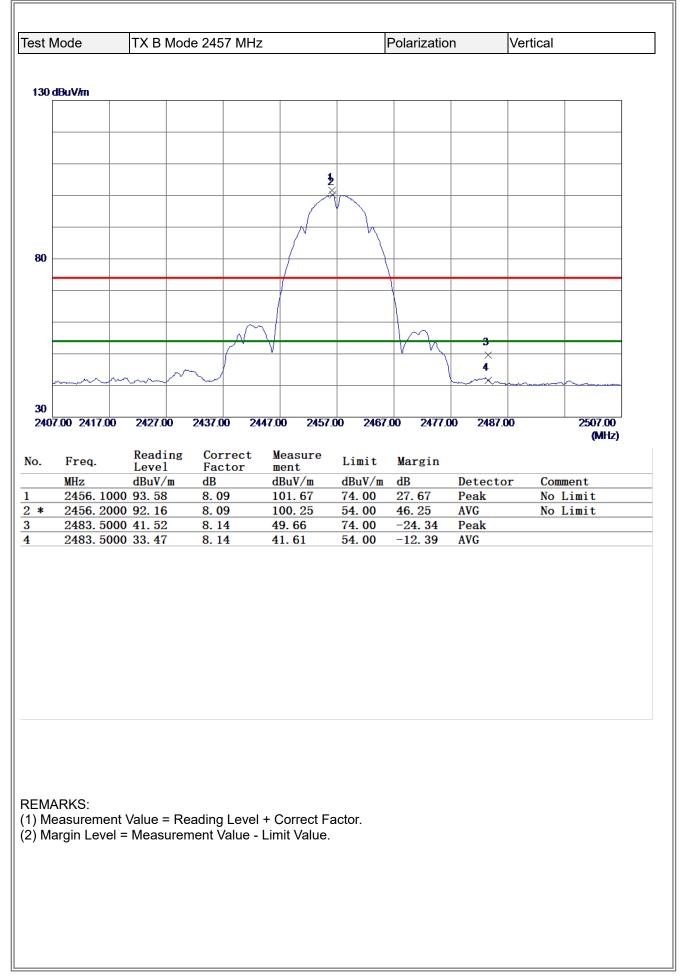


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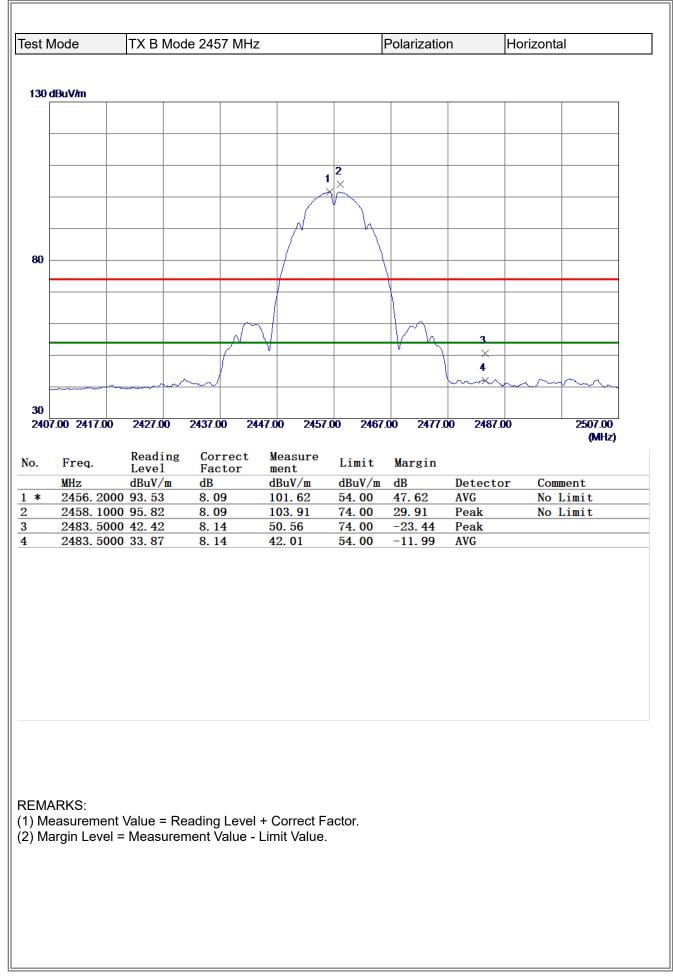


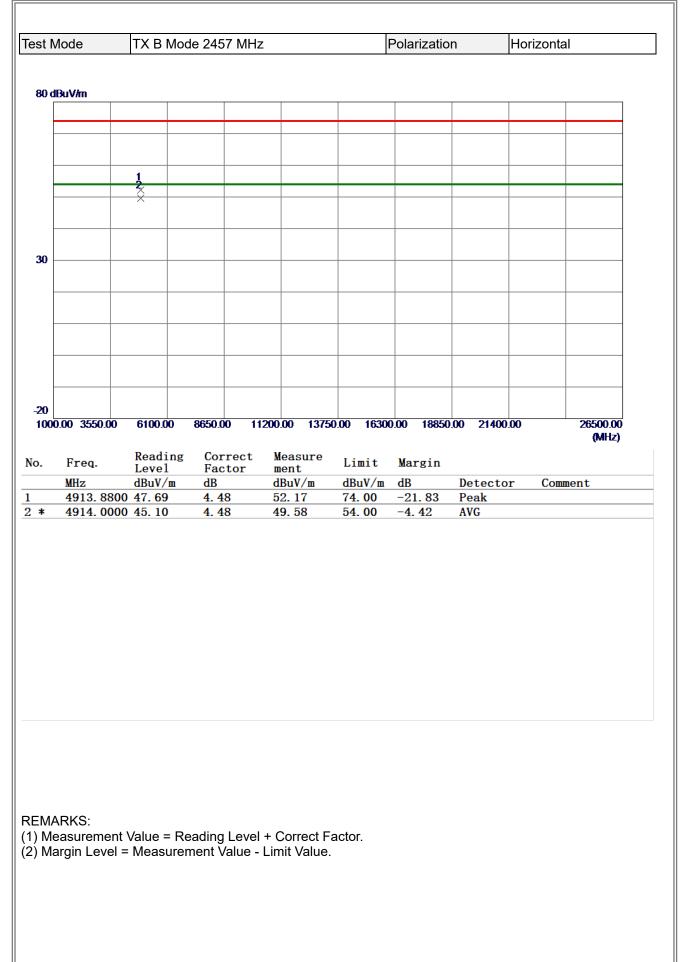


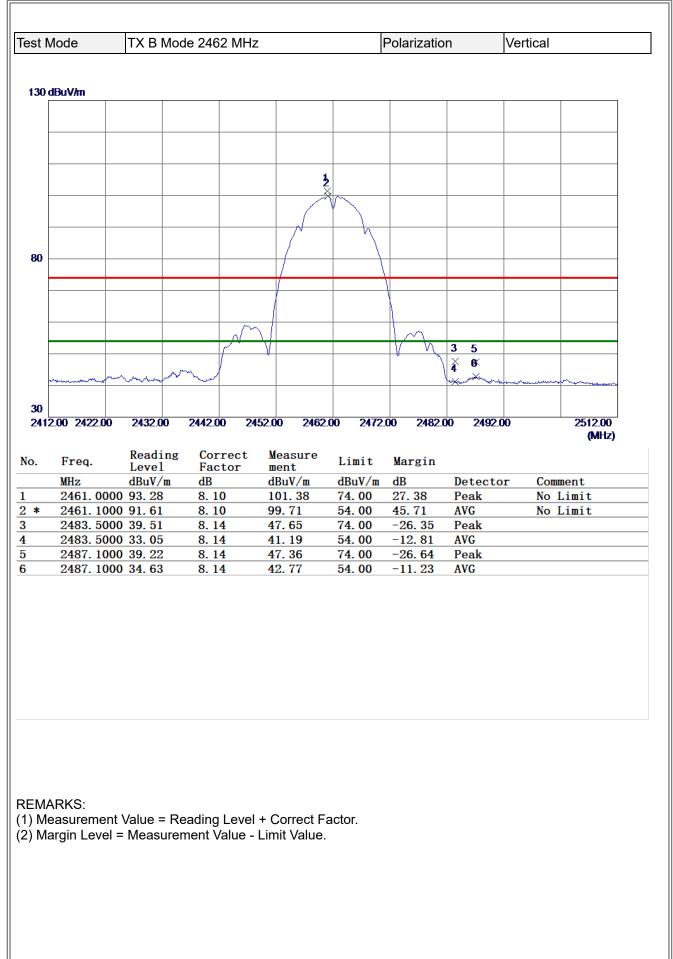


BLL

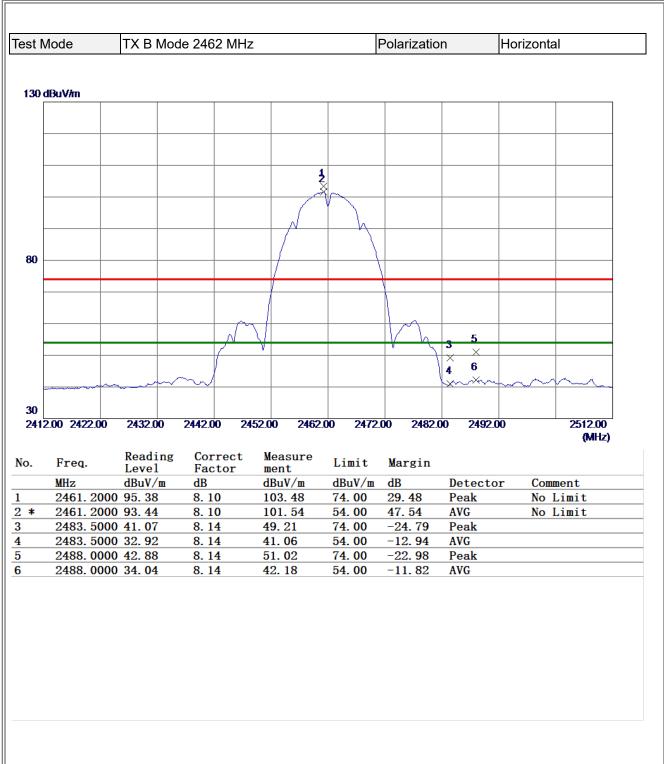
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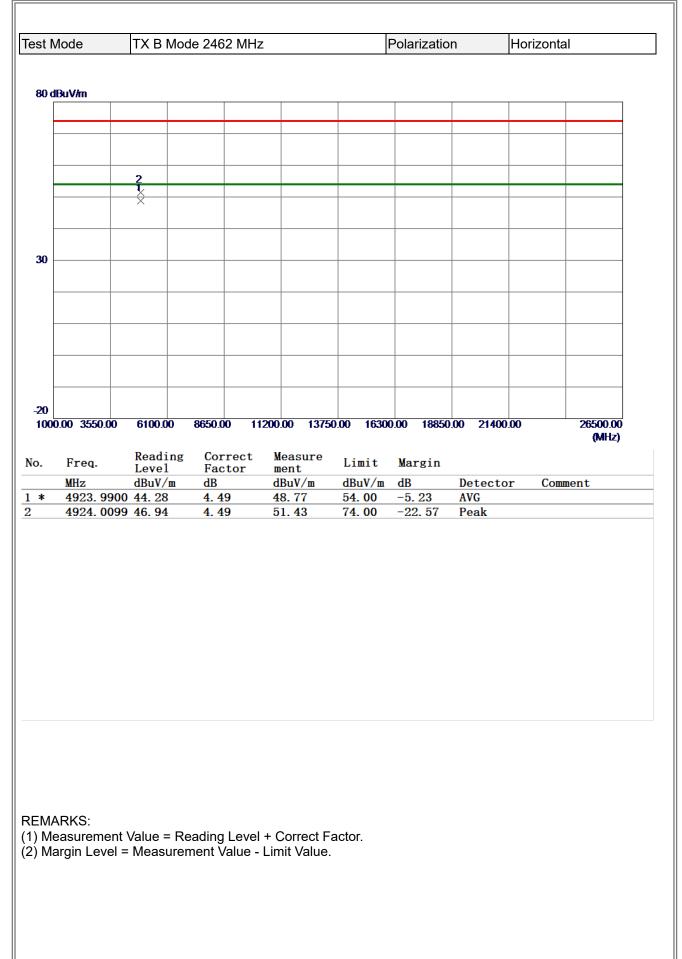


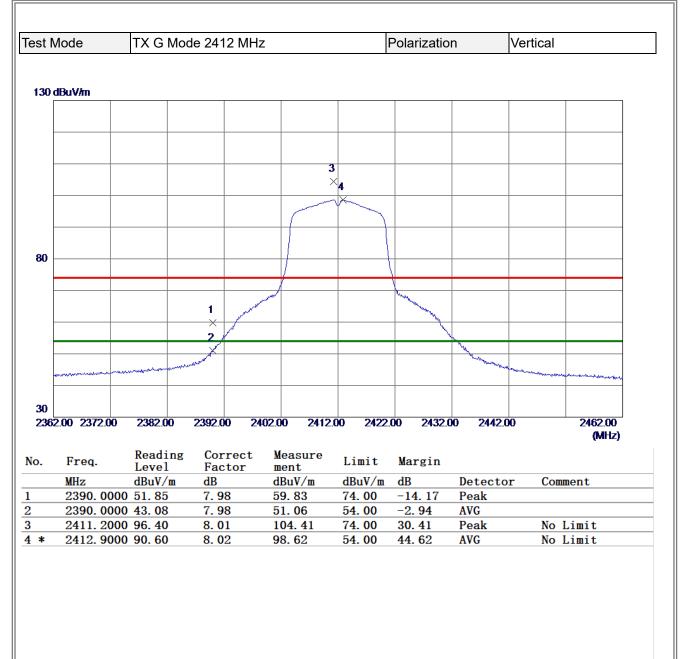


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X Image: Contract Measure Limit Margin MHz dBuV/m dB dBuV/m dB Detector Comment 4923.9650 48.88 4.49 53.37 74.00 -20.63 Peak	
X Image: Contract Measure Limit Margin MHz dBuV/m dB dBuV/m dB Detector Comment 4923.9650 48.88 4.49 53.37 74.00 -20.63 Peak	
X Image: Contract Measure Limit Margin MHz dBuV/m dB dBuV/m dB Detector Comment 4923.9650 48.88 4.49 53.37 74.00 -20.63 Peak	
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Image: Contract Measure Limit Margin Reading Correct Measure ment Limit Margin MHz dBuV/m dB dBuV/m dB Detector Comment 4923.9650 48.88 4.49 53.37 74.00 -20.63 Peak	
Image: Contract Measure Limit Margin Reading Correct Measure ment Limit Margin MHz dBuV/m dB dBuV/m dB Detector Comment 4923.9650 48.88 4.49 53.37 74.00 -20.63 Peak	
Image: Non-State Reading Correct Measure Limit Margin MHz dBuV/m dB dBuV/m dB Detector Comment 4923.9650 48.88 4.49 53.37 74.00 -20.63 Peak	
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4923. 9650 48. 88 4. 49 53. 37 74. 00 -20. 63 Peak	+
	L



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

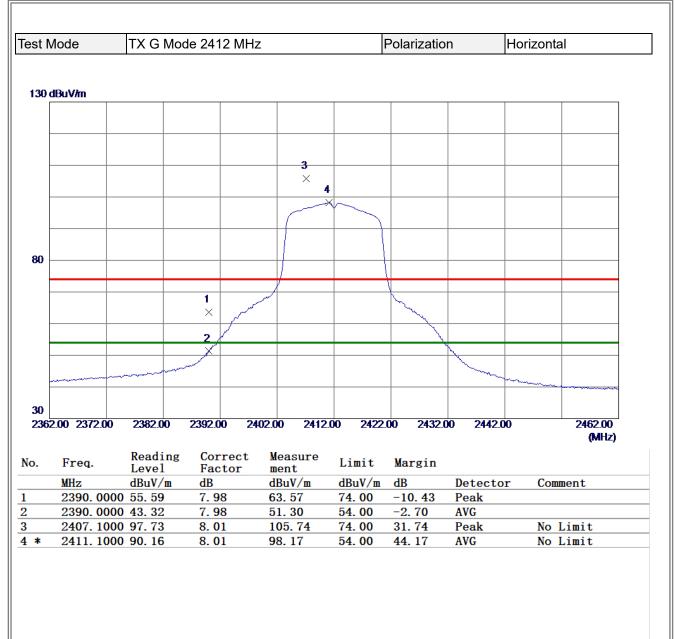




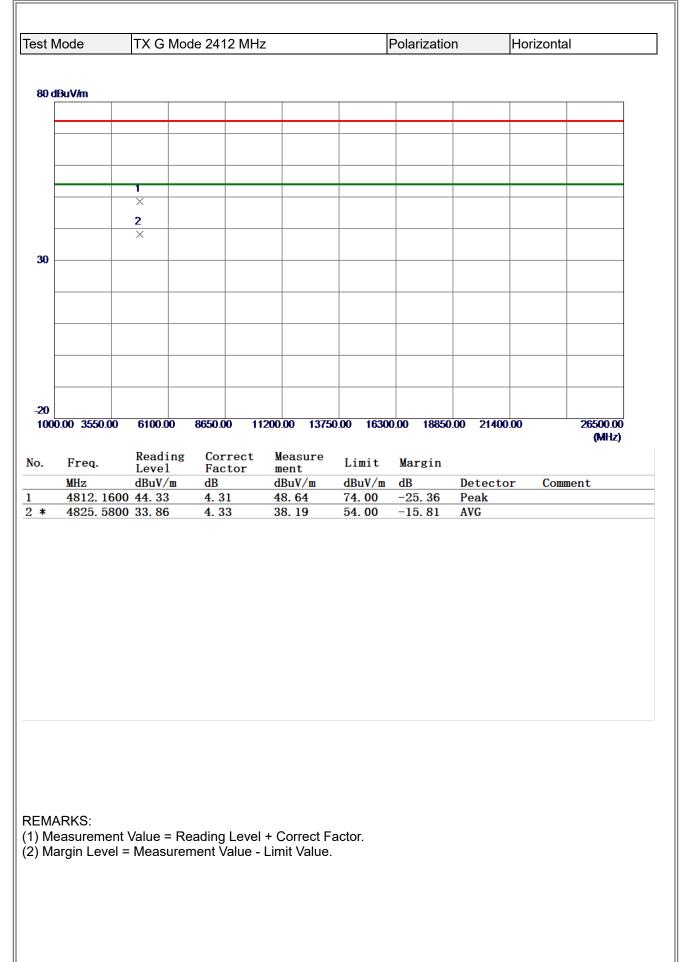
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

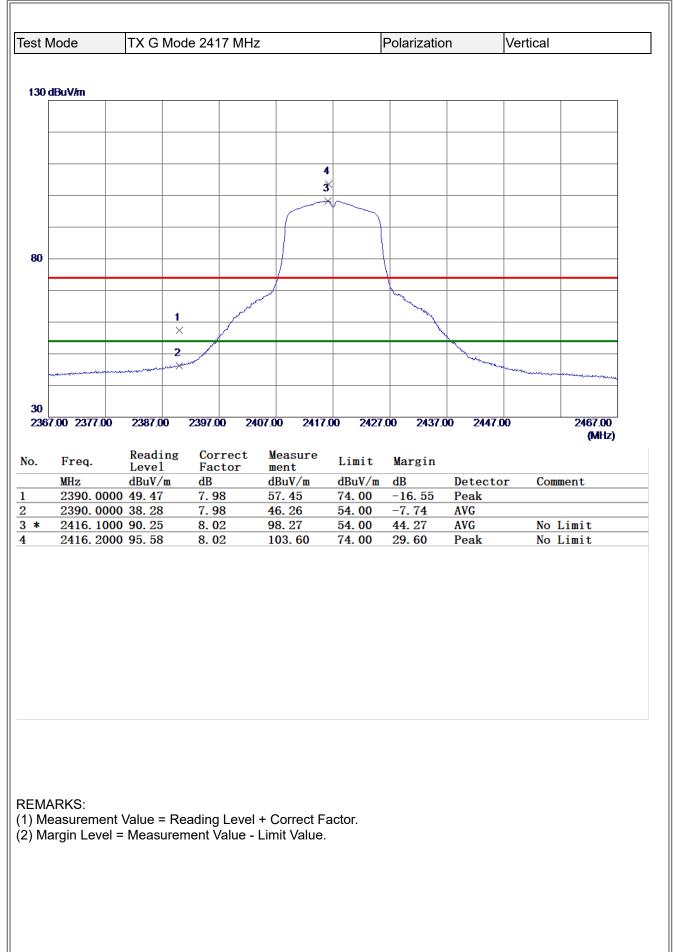
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υ.	Frea.	Readi	ng C	orrect		easure	Limit	Margin			
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*	MHz 4824.00	Level dBuV/	F md	actor B	m di 47	ent BuV/m	dBuV/m	dB		or Con	ment
	MHz 4824.00	Level dBuV/ 00 42.97	F md	actor B . 33	m di 47	ent 3uV/m 7.30	dBuV/m 74. 00	dB -26. 70	Peak	o <u>r Con</u>	ment



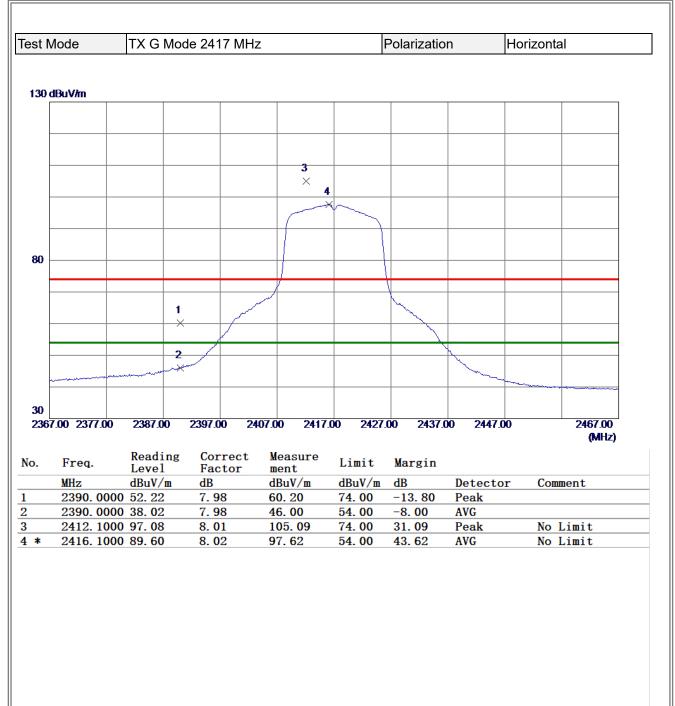
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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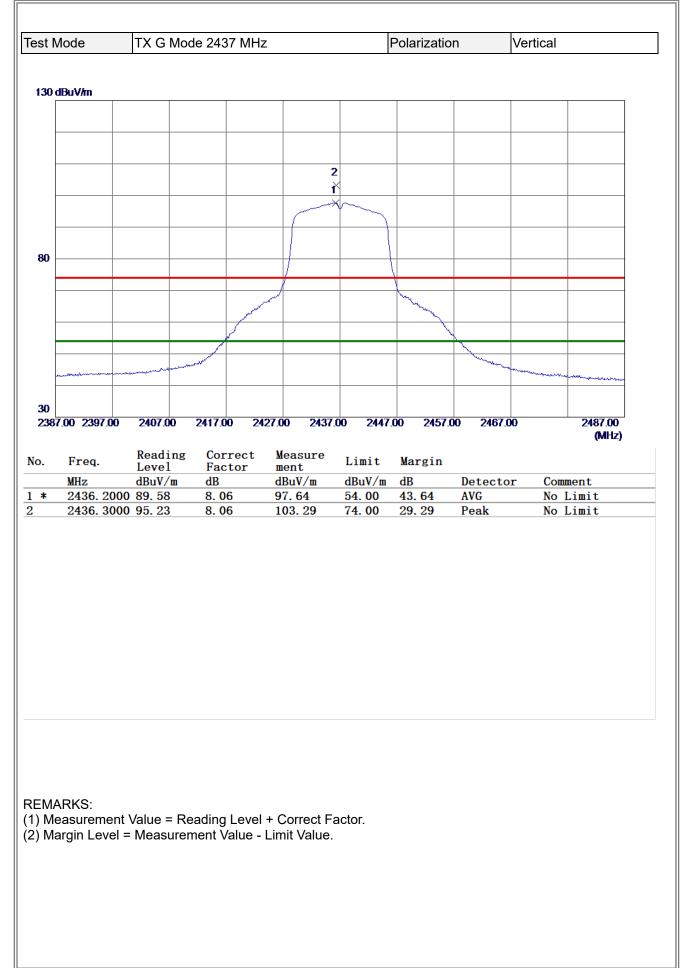
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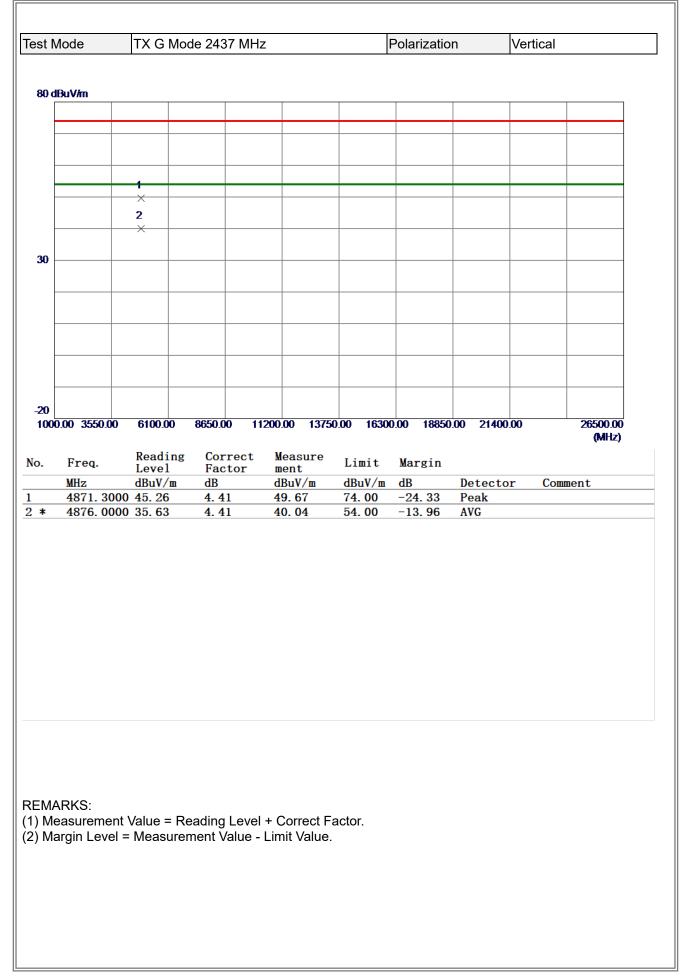
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.

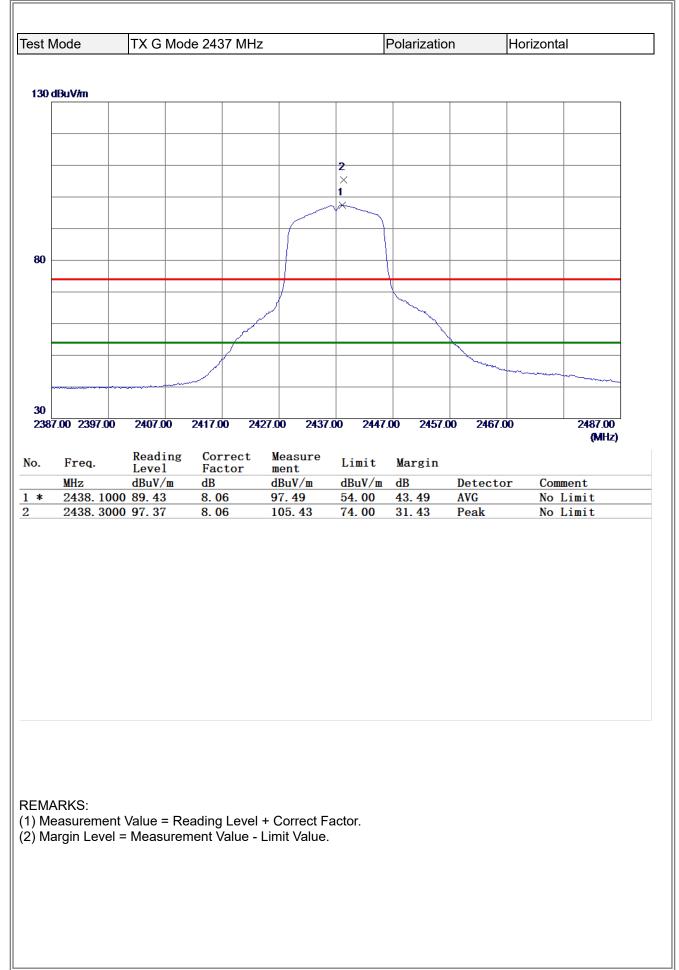
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MHz 4834.06	Level dBuV/m	Factor dB	ment dBuV/m	dBuV/m	dB		or Co	mment
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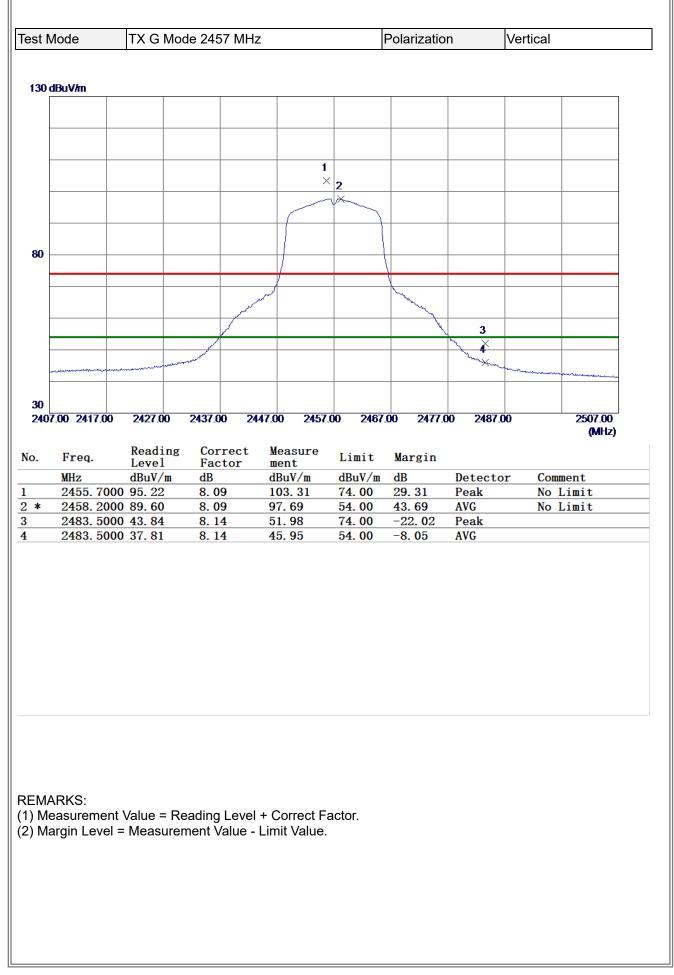
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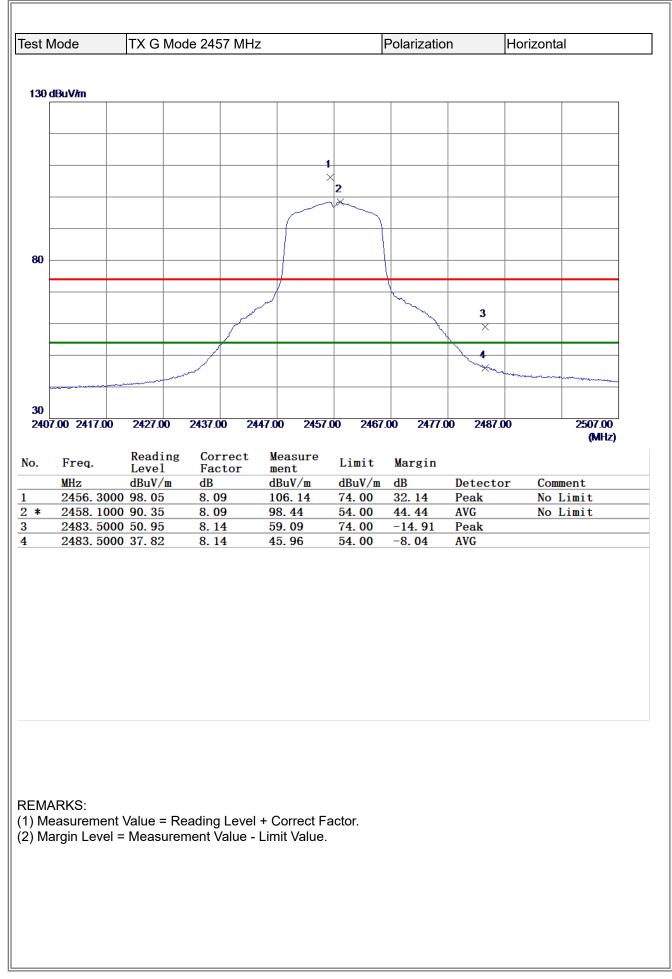
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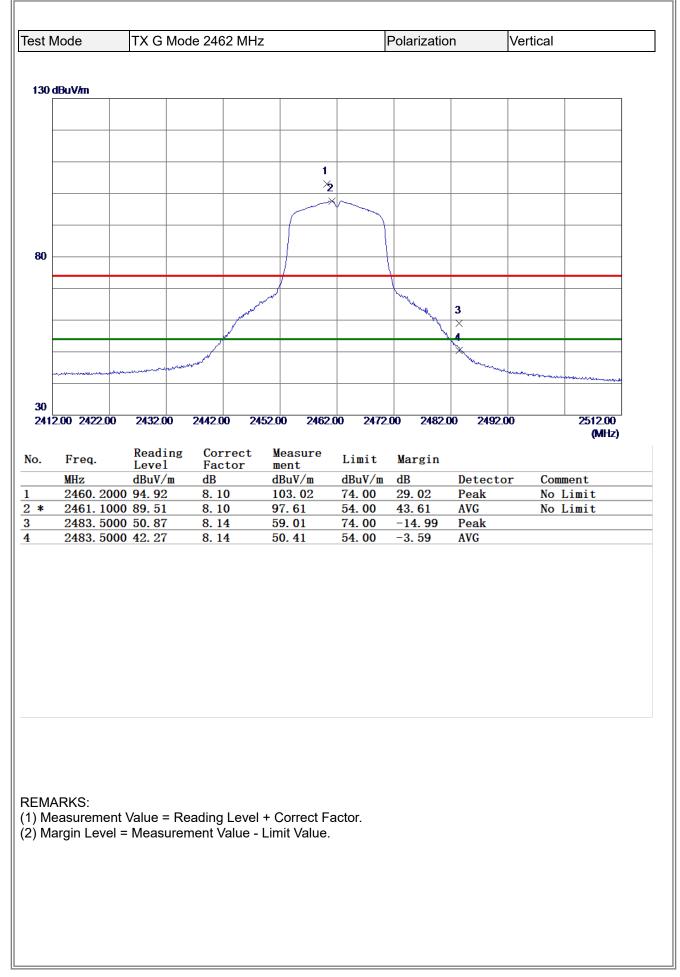
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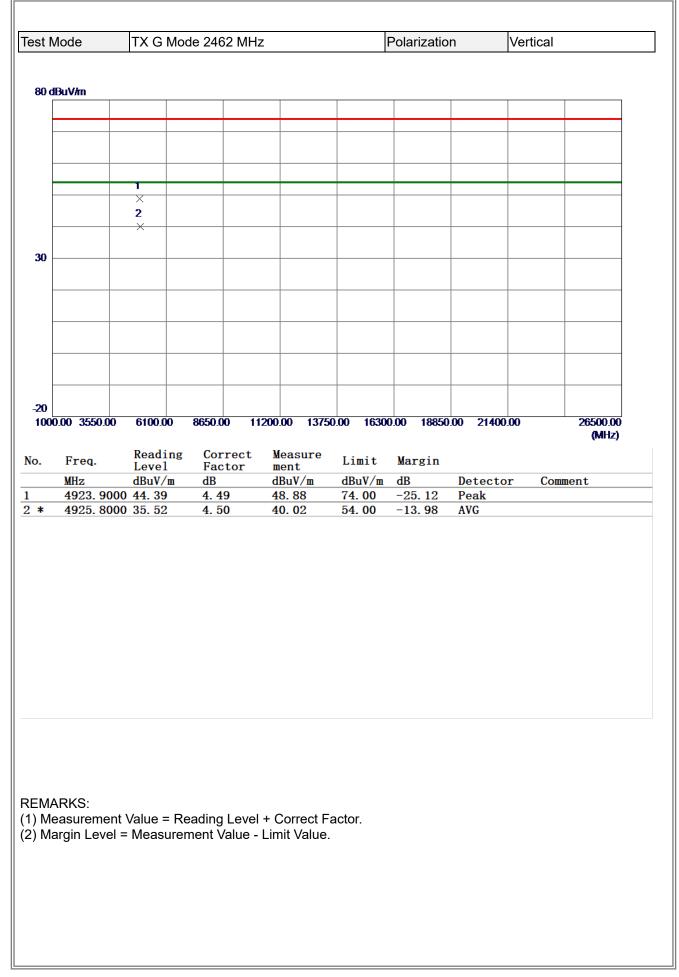
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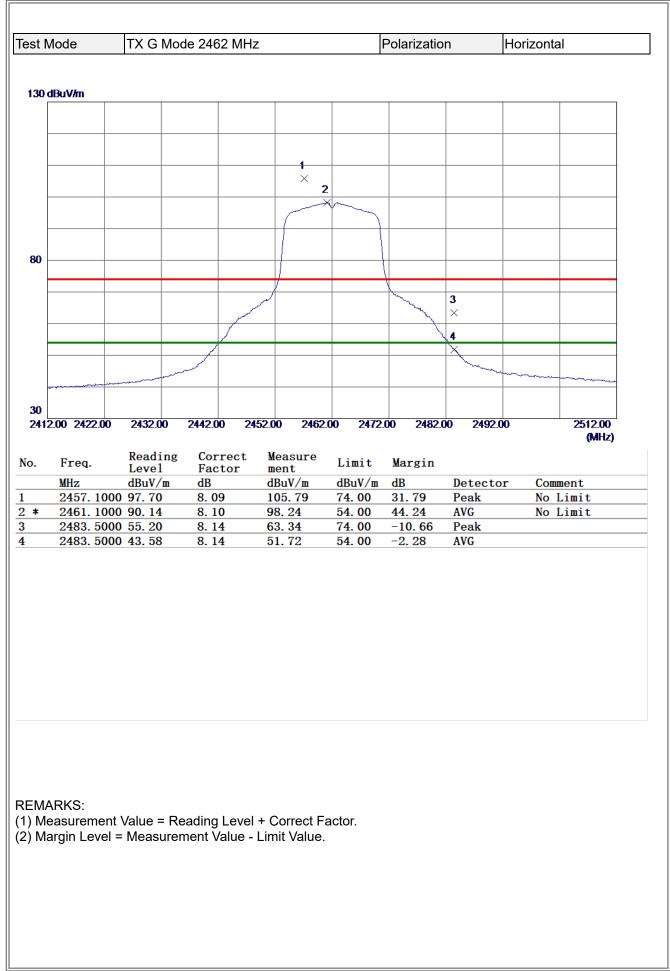
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:MARKS:	:MARKS:	:MARKS:	MARKS:	EMARKS:	*	MHz 4925.800 4926.250	Level dBuV/m 00 45.29	Factor dB 4.50	ment dBuV/m 49.79	dBuV/m 74. 00	dB −24. 21	Peak	or Comm	lent
Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	EMARKS:) Measurement Value = Reading Level + Correct Factor.	* EM4	MHz 4925. 800 4926. 250	Level dBuV/m 00 45. 29 00 33. 52	Factor dB 4.50 4.50	ment dBuV/m 49.79 38.02 + Correct Fa	dBuV/m 74.00 54.00	dB −24. 21	Peak	or Comm	lent
Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.		* EM4) Me	MHz 4925. 800 4926. 250	Level dBuV/m 00 45. 29 00 33. 52	Factor dB 4.50 4.50	ment dBuV/m 49.79 38.02 + Correct Fa	dBuV/m 74.00 54.00	dB −24. 21	Peak	or Comm	lent
Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.) Measurement Value = Reading Level + Correct Factor.) Me	MHz 4925. 800 4926. 250	Level dBuV/m 00 45. 29 00 33. 52	Factor dB 4.50 4.50	ment dBuV/m 49.79 38.02 + Correct Fa	dBuV/m 74.00 54.00	dB −24. 21	Peak	or Comm	lent
Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.) Measurement Value = Reading Level + Correct Factor.	* EM4	MHz 4925. 800 4926. 250	Level dBuV/m 00 45. 29 00 33. 52	Factor dB 4.50 4.50	ment dBuV/m 49.79 38.02 + Correct Fa	dBuV/m 74.00 54.00	dB −24. 21	Peak	or Comm	lent
Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.) Measurement Value = Reading Level + Correct Factor.	* EM4	MHz 4925. 800 4926. 250	Level dBuV/m 00 45. 29 00 33. 52	Factor dB 4.50 4.50	ment dBuV/m 49.79 38.02 + Correct Fa	dBuV/m 74.00 54.00	dB −24. 21	Peak	or Comm	
Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.	Measurement Value = Reading Level + Correct Factor.) Measurement Value = Reading Level + Correct Factor.	* EM4	MHz 4925. 800 4926. 250	Level dBuV/m 00 45. 29 00 33. 52	Factor dB 4.50 4.50	ment dBuV/m 49.79 38.02 + Correct Fa	dBuV/m 74.00 54.00	dB −24. 21	Peak	or Comm	lent



Test	Mode	TX N(H	T20) Mode 2	2412 MHz		Polarizatic	n	Vertical
130	dBuV/m							
					3			
					4			
					Annual	χ		
80				/		}		
			1					
			ž	mand		and manufaction of the	and a	
			sund for the second second				- White have been	and the second
30								
236	2.00 2372.00	2382.00	2392.00	2402.00 2412.	00 2422	2.00 2432	00 2442.0	0 2462.00 (MHz)
				t Vacauma	T.I.I.I.A	Margin		
No.	Freq.	Readin Level	Factor	ment	Limit			
	MHz	Level dBuV/m	Factor dB	ment dBuV/m	dBuV/m	dB	Detector	r Comment
No. 1 2	MHz 2390.000	Level dBuV/m 0 39.91	Factor	ment	dBuV/m 74. 00	dB -26.11	Detector Peak AVG	r Comment
1	MHz	Level dBuV/m 0 39.91 0 34.57 0 89.29	Factor dB 7.98	ment dBuV/m 47.89	dBuV/m	dB	Peak	r Comment No Limit No Limit

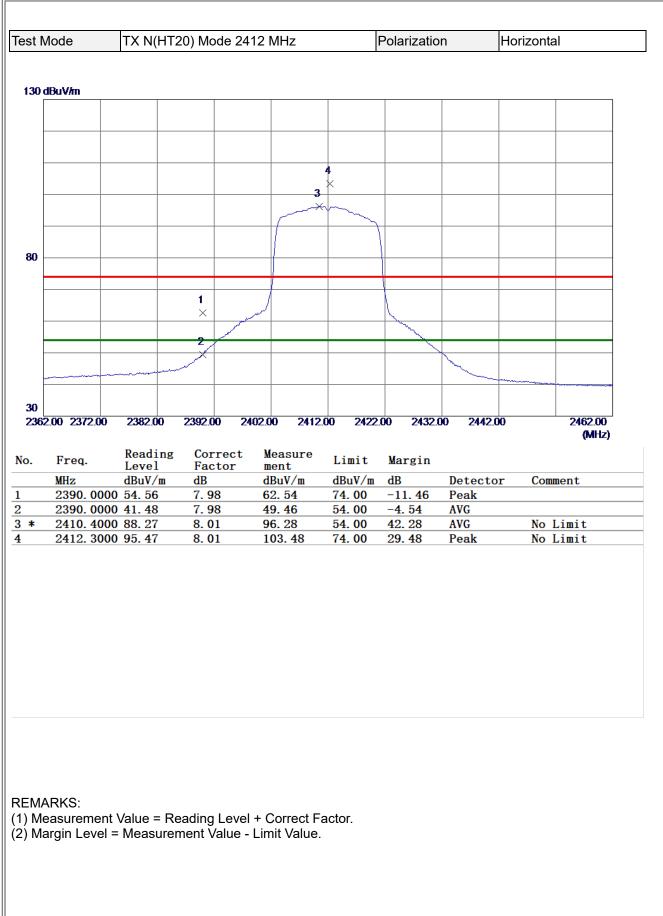
REMARKS:

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



Mode	TX N(HT	20) Mode 2	412 MHz	I	Polarizatio	n	Vertical	
) dBuV/m								
	_							
	2 ×							
	1							
	×							
)								
00.00 3550.0	00 6100.00	8650.00	11200.00 1375	0.00 1630	0.00 18850	0.00 2140	0.00	26500.00 (MHz)
Freq.	Reading	Correct		Limit	Margin			
MHz	Level dBuV/m	Factor dB	ment dBuV/m	dBuV/m	dB	Detect	or Com	ment
	500 31.17	4. 33	35. 50	54.00	-18.50	AVG	01 001	
4824.6	000 40. 42	4. 33	44.75	74.00	-29.25	Peak		

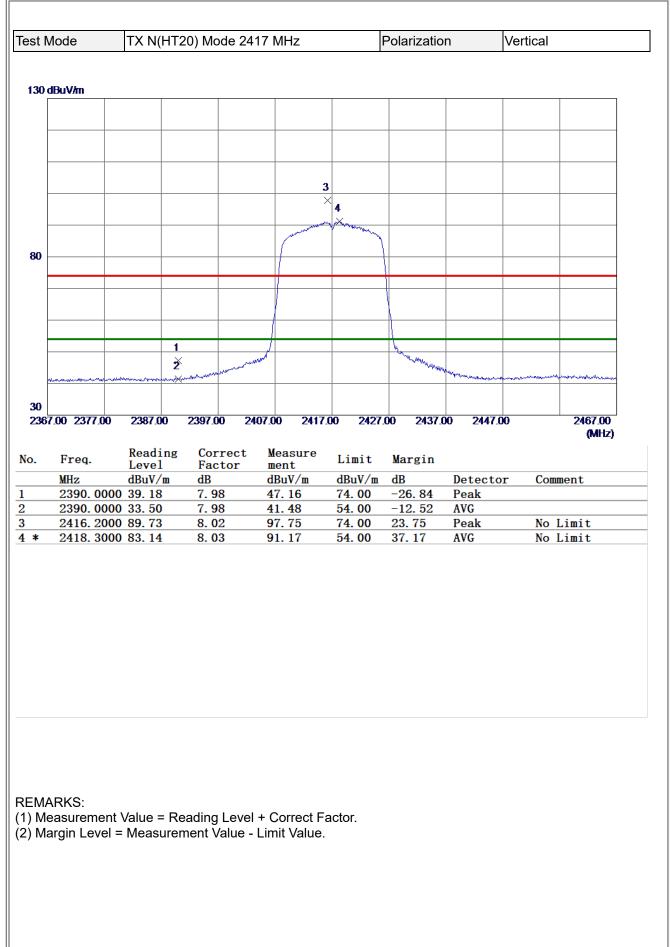






t Mode	TX N(H	T20) Mode	e 2412 MHz		Polarizatio	on	Horizon	tal
) dBuV/m								
	1							
	X							
	2							
	X							
) <u> </u>								
0 00.00 3550 .	00 6100.00	8650.00	11200.00 1	13750.00 1630	0.00 18850).00 214 00).00	26500.00
								(MHz)
_	D 11							
Freq.	Reading Level	g Corre Facto	ct Measur r ment	re Limit	Margin			
MHz	Level dBuV/m	Facto	ct Measur r ment dBuV/m	LIMIU	dB	Detecto	or Co	mment
MHz 4824.5	Level	Facto	r ment	n <u>dBuV/m</u> 74.00	dB	Detecto Peak AVG	or Co	mment
MHz 4824.5	Level dBuV/m 000 45.01	Facto dB 4.33	r ment dBuV/m 49.34	n <u>dBuV/m</u> 74.00	dB -24.66	Peak	or Co	mment

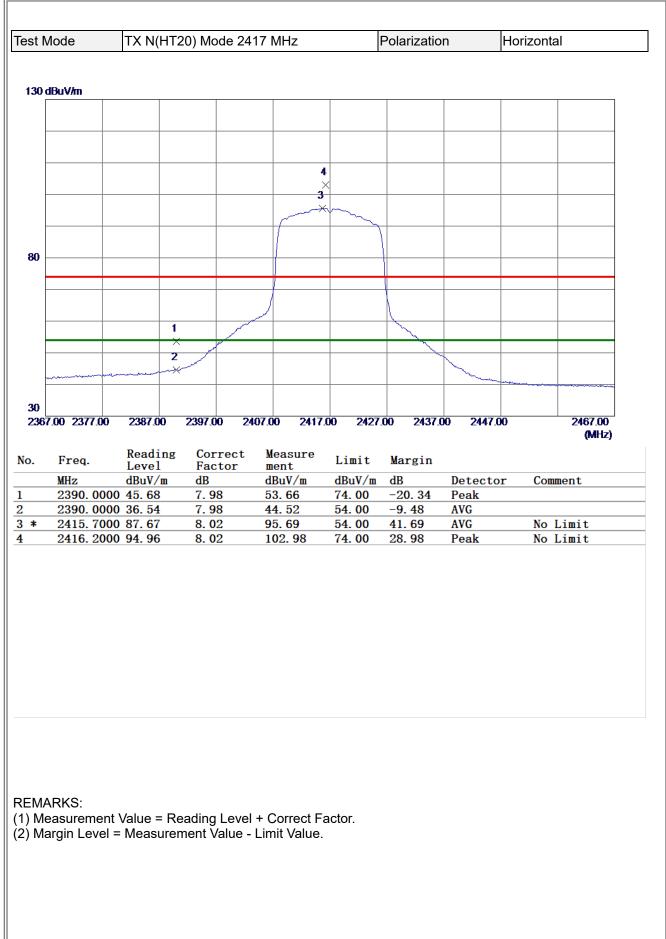






st Mode	TX N(H	Г20) Mode 24	17 MHz		Polarizatio	'n	Vertical	
80 dBuV/m								
	1							
	×							
	2 ×							
30								
-20		0050.00	1000 00 4075					00500.00
1000.00 3550	0.00 6100.00	8650.00 11	1200.00 13750	0.00 1630	0.00 18850	0.00 2140	0.00	26500.00 (MHz)
	Reading	g Correct	Measure	Limit	Venein			
o. Freq.	Level	Factor						
1011			ment		Margin	D ()	0	
MHz 4831.	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detect Peak	or Com	ment
4831.						Detect Peak AVG	or Com	ment
4831.	dBuV/m 9500 40.38	dB 4. 34	dBuV/m 44.72	dBuV/m 74. 00	dB -29. 28	Peak	or Com	ment

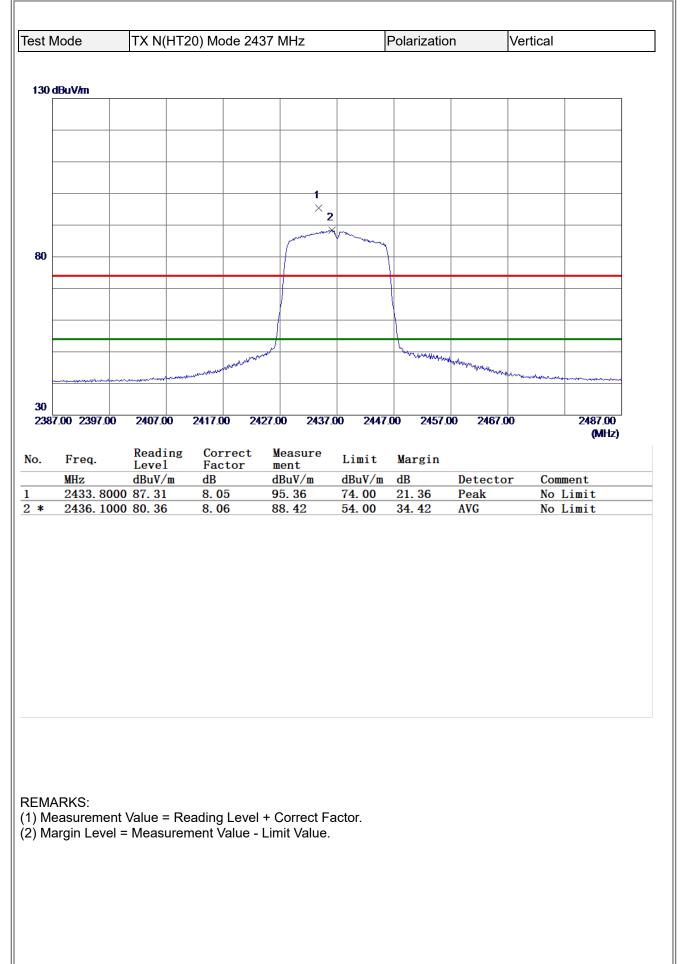






	IX N(H	T20) Mode 2	2417 MHz		Polarizatio	n	Horizontal	
) dBuV/m								
	1							
	×							
	2 ×							
0								
D								
000.00 3550	.00 6100.00	8650.00	11200.00 1375	0.00 1630	0.00 18850	0.00 21400).00	26500.00 (MHz)
P	Reading	g Correct	t Measure		. ·			(/
Freq. MHz	Level dBuV/m	Factor dB	ment dBuV/m	Limit dBuV/m	Margin dB	Detecto	or Comm	ont
	3200 44. 03	4. 34	48.37	74. 00		Peak		ent
	1000 33.30	4.34	37.64	54.00	-16.36	AVG		

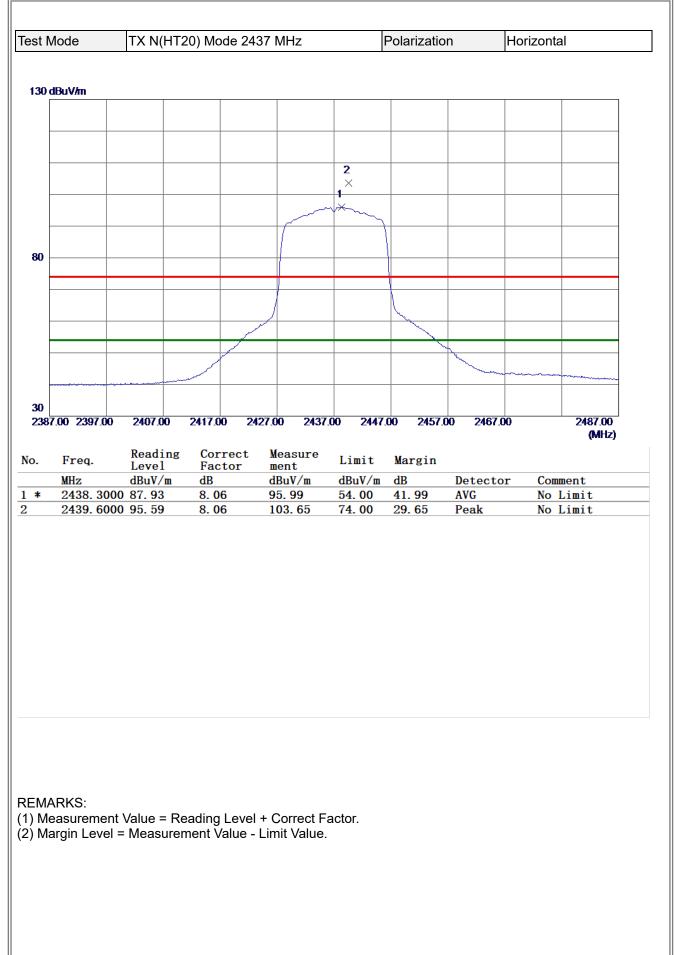






st Mode	TX N(F	IT20) Mode	2437 MHz		Polarizatio	n	Vertical	
0 dBuV/m								
	2 ×							
	X							
o								
20								
000.00 3550	0.00 6100.00	8650.00	11200.00 1375	0.00 1630	0.00 18850	0.00 21400).00	26500.00 (MHz)
_	Readir	ng Correc	ct Measure					(111122)
. Freq.	Level	Factor	r ment	Limit	Margin			
MHz ⊧ 4873.	dBuV/m 9500 32.31	<u>dB</u> 4. 41	dBuV/m 36.72	dBuV/m 54.00		Detecto	or Com	lent
	5000 52.51	1. 11			-17 28	AVG		
4874.	6500 41.84	4. 41	46. 25	74.00	-17.28 -27.75	AVG Peak		
4874.	6500 41.84							

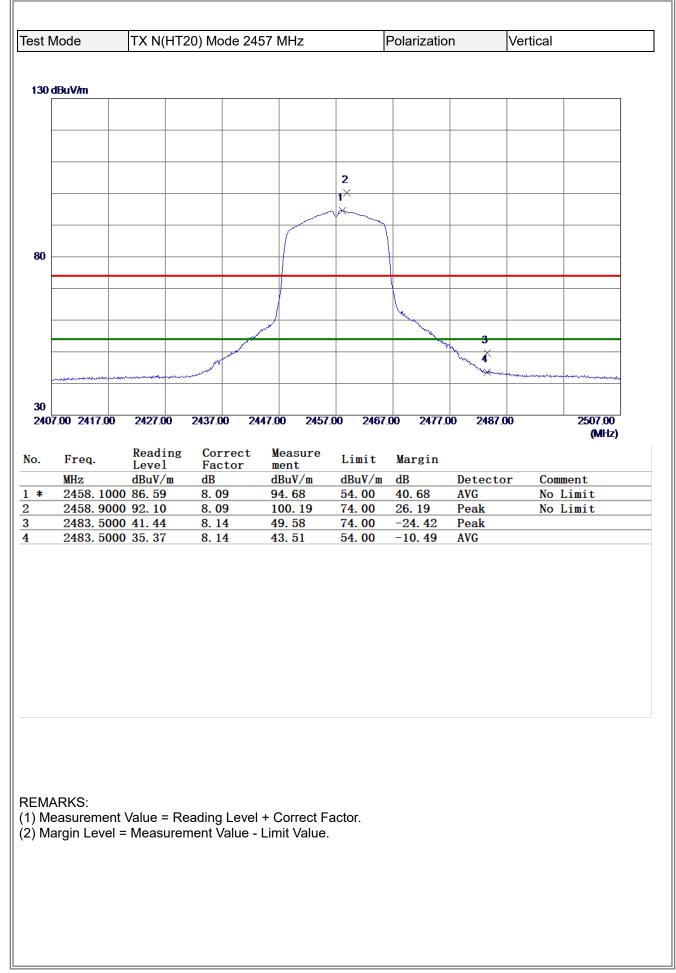






Mode	TX N(H	T20) Mode	2437 MHz		Polarizatic	n	Horizont	al
dBuV/m								
	2							
	×							
)								
b l								
00.00 3550.0	0 6100.00	8650.00	11200.00 137	50.00 1630	0.00 18850	0.00 21400	0.00	26500.00 (MHz)
	Readin	g Correc	t Measure	Limit	. ·			(init iz)
Freq.	Level	Factor		1 1 m 1 f				
MIL					Margin	Detect	an Can	mont
MHz 4874.27	dBuV/m 799 44. 39		dBuV/m 48.80	dBuV/m 74.00	dB	Detecto Peak	or Con	ment
4874.27	dBuV/m	dB	dBuV/m	dBuV/m	dB		or Com	ment
4874.27	dBuV/m 799 44.39	dB 4.41	dBuV/m 48.80	dBuV/m 74. 00	dB -25. 20	Peak	or Con	ment

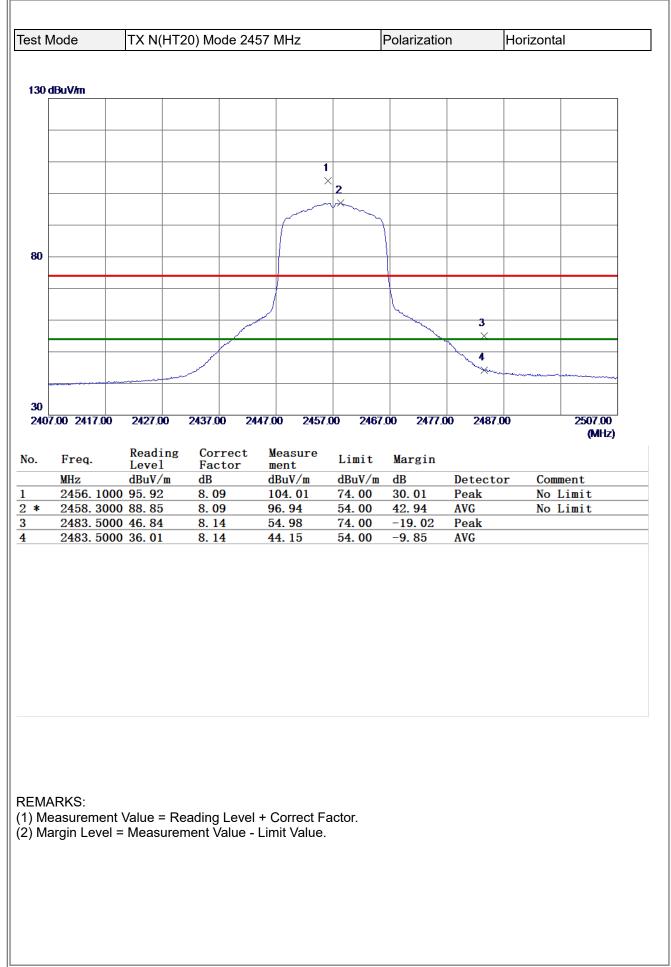






Mode	TX N(H	T20) Mode 24	457 MHz		Polarizatio	n	Vertical	
) dBuV/m								
	2							
	×							
	1							
	×							
00.00 3550.0	0 6100.00	8650.00 1	1200.00 13750	00 16200	0.00 18850	.00 2140	0.00	26500.00
00.00 5550.0	0 0100.00	0000.00	1200.00 13730	100 10500	0.00 10000	2140	0.00	20500.00 (MHz)
Freq.	Reading Level	g Correct		Limit				
		Hactor	ment	LIMIU	Margin			
MHz	dBuV/m	Factor dB	ment dBuV/m	dBuV/m	Margin dB	Detect	or Com	ment
4914. 90	dBuV/m 000 32.34	dB 4. 48	dBuV/m 36.82	dBuV/m 54.00	dB −17. 18	AVG		
4914.90	dBuV/m	dB	dBuV/m	dBuV/m	dB			ment Limit
4914.90	dBuV/m 000 32.34	dB 4. 48	dBuV/m 36.82	dBuV/m 54.00	dB −17. 18	AVG		







st Mode	TX N(H	T20) Mode 2	457 MHz		Polarizatio	n	Horizontal	
0 dBuV/m								
	2							
	1 ×							
0								
20								
000.00 3550	.00 6100.00	8650.00	11200.00 1375	0.00 16300	0.00 18850	0.00 21400).00	26500.00 (MHz)
. Freq.	Reading	g Correct Factor	Measure ment	Limit	Margin			
	Level	Factor			Margin			
MHz	dBuV/m	dB				Detecto	or Comm	ent
* 4914.8	8500 33.12	dB 4. 48	dBuV/m 37.60	dBuV/m 54. 00	dB -16. 40	Detecto AVG	or Comm	ent
* 4914.8		dB	dBuV/m	dBuV/m	dB		or Comm	ent
* 4914.8	8500 33.12	dB 4. 48	dBuV/m 37.60	dBuV/m 54. 00	dB -16. 40	AVG	or Comm	ent



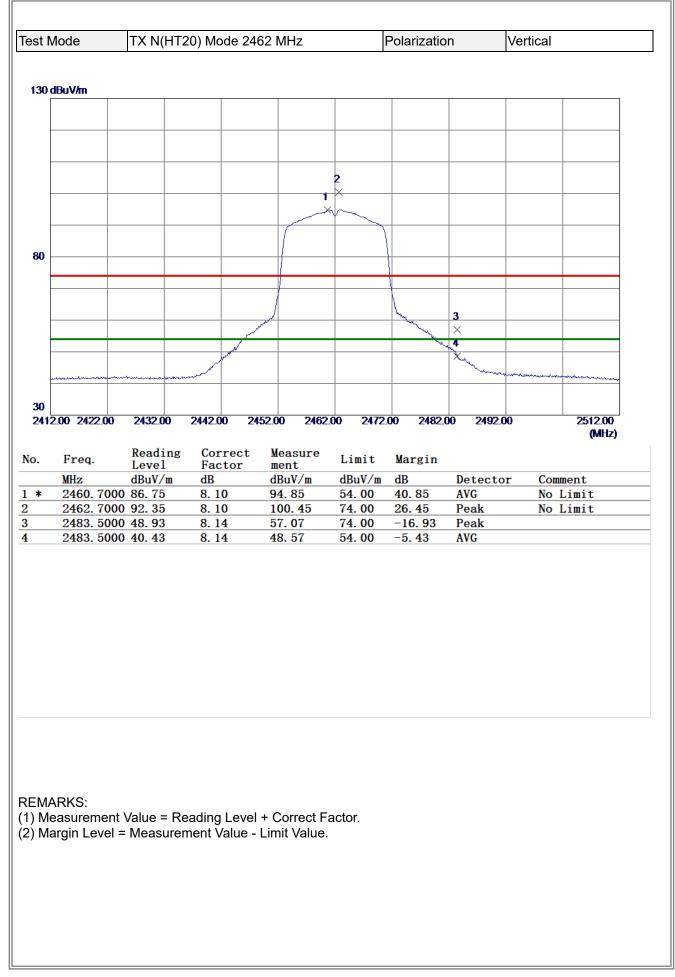
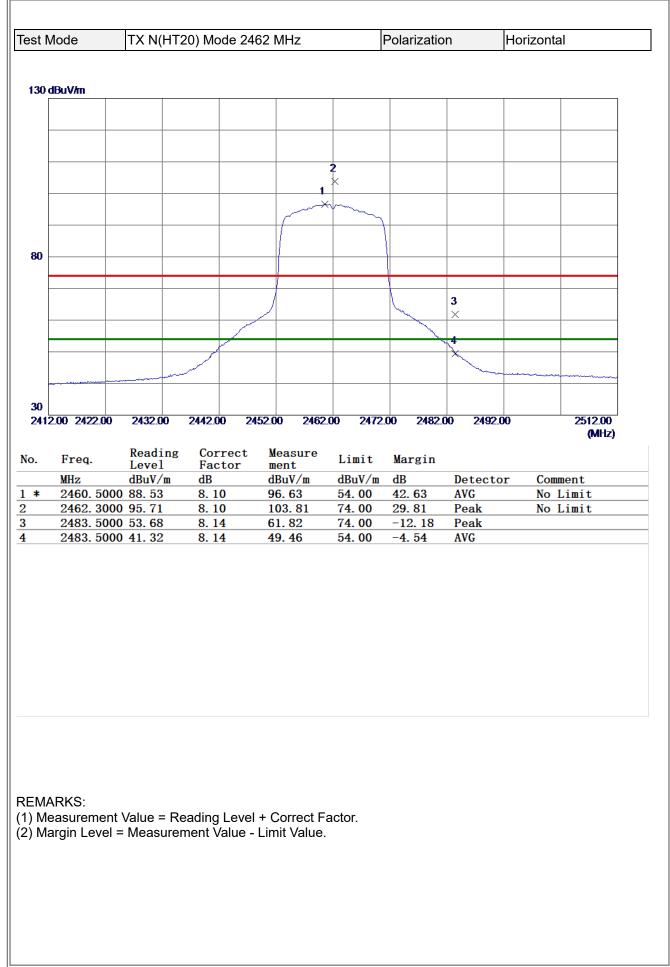




Image: Contract Measure Limit Margin Reading Correct Measure Limit Margin MHz dBuV/m dB dBuV/m dBuV/m dB Detector Comment	st Mode	1ode TX N(HT20) Mode 2462 MHz				Polarization		Vertical	
2 2									
× 1 -	0 dBuV/m								
× 1 -									
× 1 × 1 1 × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × × ×									
× 1 -									
× 1 -									
× 1 . 1 .		2							
X X		X							
30									
20 .									
000.00 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 2650 (N Freq. Reading Correct Measure Level Factor ment Limit Margin MHz dBuV/m dB dBuV/m dBUV/m dB Detector Comment ≰ 4921.9000 32.33 4.49 36.82 54.00 -17.18 AVG	0								
000.00 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 2650 . Freq. Reading Correct Measure Limit Margin . Freq. Evel Factor ment Limit Margin MHz dBuV/m dB dBuV/m dBuV/m dB Detector Comment * 4921.9000 32.33 4.49 36.82 54.00 -17.18 AVG									
000.00 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 2650 . Freq. Reading Correct Measure Limit Margin . Freq. Evel Factor ment Limit Margin MHz dBuV/m dB dBuV/m dBuV/m dB Detector Comment * 4921.9000 32.33 4.49 36.82 54.00 -17.18 AVG									
1000.00 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 2650 (N Freq. Reading Correct Measure Level Factor ment Limit Margin MHz dBuV/m dB dBuV/m dBUV/m dB Detector Comment * 4921.9000 32.33 4.49 36.82 54.00 -17.18 AVG									
000.00 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 2650 . Freq. Reading Correct Measure Limit Margin . Freq. Evel Factor ment Limit Margin MHz dBuV/m dB dBuV/m dBuV/m dB Detector Comment * 4921.9000 32.33 4.49 36.82 54.00 -17.18 AVG									
000.00 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 2650 . Freq. Reading Correct Measure Limit Margin . Freq. Evel Factor ment Limit Margin MHz dBuV/m dB dBuV/m dBuV/m dB Detector Comment * 4921.9000 32.33 4.49 36.82 54.00 -17.18 AVG									
Reading Level Correct Factor Measure ment Limit Margin MHz dBuV/m dB dBuV/m dBuV/m dB Detector Comment * 4921.9000 32.33 4.49 36.82 54.00 -17.18 AVG									
Reading Level Correct Factor Measure ment Limit Margin MHz dBuV/m dB dBuV/m dBuV/m dB Detector Comment * 4921.9000 32.33 4.49 36.82 54.00 -17.18 AVG									
Freq.Reading LevelCorrect FactorMeasure mentLimit MarginMarginMHzdBuV/mdBdBuV/mdBuV/mdBDetectorComment*4921.900032.334.4936.8254.00-17.18AVG	000.00 3550.	.00 6100.00	8650.00	11200.00 1375	0.00 1630	0.00 18850	00 2140	0.00	26500.00 (MHz)
MHz Level Factor ment Limit Margin MHz dBuV/m dB dBuV/m dBuV/m dB Detector Comment * 4921.9000 32.33 4.49 36.82 54.00 -17.18 AVG	-	Reading	g Correct	Measure					(00122)
* 4921. 9000 32. 33 4. 49 36. 82 54. 00 -17. 18 AVG		Level	Factor	ment			D ()		
								or Com	ment
	4921.1								







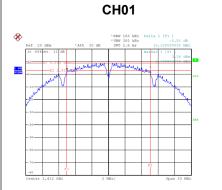
st Mode	TX N(H	T20) Mode 2	2462 MHz		Polarizatio	n	Horizonta	l
0 dBuV/m								
	2							
	×							
	1 ×							
ю — — —								
20			44000.00 4075		00 40050			00500.00
000.00 3550	.00 6100.00	8650.00	11200.00 1375	0.00 1630	0.00 18850	00 2140	00.00	26500.00 (MHz)
. Freq.	Readin Level	g Correct Factor	t Measure ment	Limit	Margin			
MHz	Level dBuV/m	Factor dB	ment dBuV/m	dBuV/m	dB	Detecto	or Com	nent
MHz * 4924.2	Level	Factor	ment		dB	Detecto AVG Peak	or Com	ient
MHz * 4924.2	Level dBuV/m 2450 32.94	Factor dB 4.49	ment dBuV/m 37.43	dBuV/m 54. 00	dB −16. 57	AVG	or Com	nent

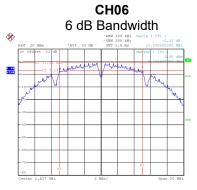


APPENDIX E - BANDWIDTH

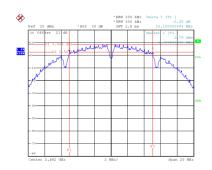


Test Mode TX B Mode										
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result					
01	2412	10.100	14.640	0.5	Complies					
06	2437	10.030	14.640	0.5	Complies					
11	2462	10.100	14.560	0.5	Complies					

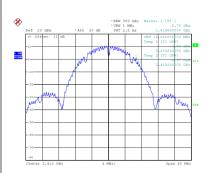




CH11

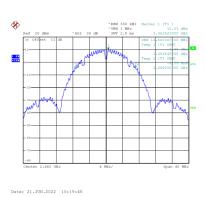








Date: 21.JUN.2022 10:19:40



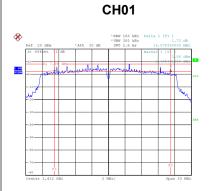
Date: 21.JUN.2022 10:18:10

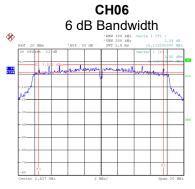
Date: 21.JUN.2022 10:18:59

Date: 21.JUN.2022 10:18:51

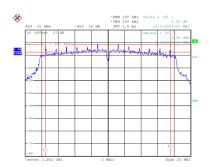


Test Mode TX G Mode										
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result					
01	2412	14.078	17.040	0.5	Complies					
06	2437	15.119	17.040	0.5	Complies					
11	2462	15.120	16.960	0.5	Complies					

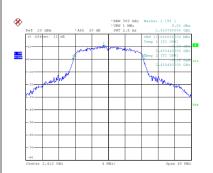




CH11

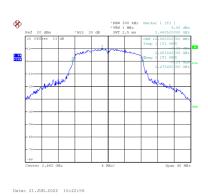


Date: 21.JUN.2022 10:21:37



99 % Occupied Bandwidth

Date: 21.JUN.2022 10:22:51



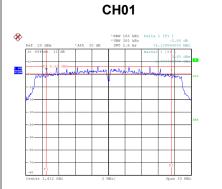
Date: 21.JUN.2022 10:21:45

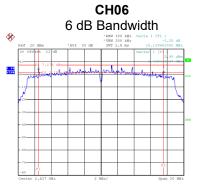
Date: 21.JUN.2022 10:22:25

Date: 21.JUN.2022 10:22:18



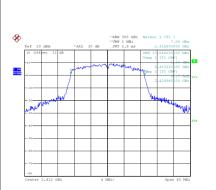
Test Mode TX N(HT20) Mode										
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result					
01	2412	15.140	17.840	0.5	Complies					
06	2437	15.140	17.760	0.5	Complies					
11	2462	15.120	17.760	0.5	Complies					





CH11

• RBW 100 kHz • VBW 300 kHz

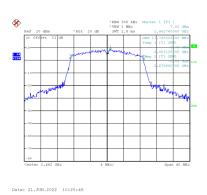






8

1 25



Date: 21.JUN.2022 10:24:25

Date: 21.JUN.2022 10:24:18

Date: 21.JUN.2022 10:25:12

Date: 21.JUN.2022 10:25:04



APPENDIX F - MAXIMUM AVERAGE OUTPUT POWER



Test Mode TX B Mode										
Channel	Frequency (MHz)	Average Output Power (dBm)	Duty Factor	Average Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result			
01	2412	17.96	0.10	18.06	30.00	1.0000	Complies			
06	2437	17.94	0.10	18.04	30.00	1.0000	Complies			
11	2462	17.75	0.10	17.85	30.00	1.0000	Complies			

Test Mode TX G Mode

Channel	Frequency (MHz)	Average Output Power (dBm)	Duty Factor	Average Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	17.74	0.40	18.14	30.00	1.0000	Complies
06	2437	18.19	0.40	18.59	30.00	1.0000	Complies
11	2462	17.85	0.40	18.25	30.00	1.0000	Complies

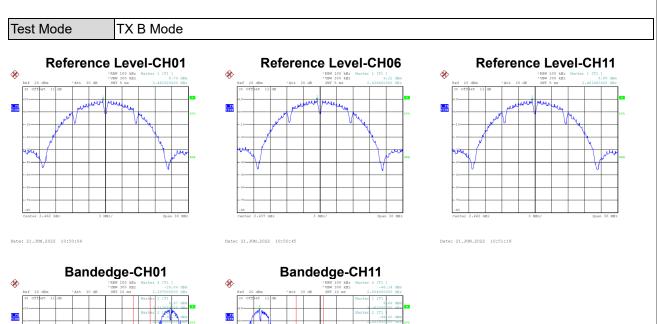
Test Mode TX N(HT20) Mode

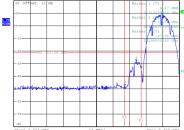
Channel	Frequency (MHz)	Average Output Power (dBm)	Duty Factor	Average Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	16.65	0.61	17.26	30.00	1.0000	Complies
06	2437	16.54	0.61	17.15	30.00	1.0000	Complies
11	2462	16.37	0.61	16.98	30.00	1.0000	Complies

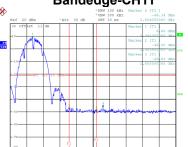


APPENDIX G - CONDUCTED SPURIOUS EMISSIONS









Date: 21.JUN.2022 11:01:42

Date: 21.JUN.2022 11:03:30