





# **FCC Radio Test Report**

FCC ID: 2BCGWDL110

This report concerns: Original Grant

**Project No.** : 2404G004

**Equipment**: Smart Wi-Fi Door Lock

Brand Name : tp-link, tapo Test Model : Tapo DL110

Series Model : N/A

**Applicant**: TP-LINK CORPORATION PTE. LTD.

Address : 7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987

Manufacturer : TP-LINK CORPORATION PTE. LTD.

Address: 7 Temasek Boulevard #29-03 Suntec Tower One, Singapore 038987

Date of Receipt : May 08, 2024

**Date of Test** : May 08, 2024 ~ May 31, 2024

**Issued Date** : Jul. 29, 2024

Report Version : R01

Test Sample : Engineering Sample No.: SSL20240508207 for AC power line

conducted emissions and radiated emissions, SSL20240508208 for

others.

Standard(s) : FCC CFR Title 47, Part 15, Subpart C

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

Prepared by

Nick Chen

Chay. Cai

Approved by

**∕**€hav Cai

Room 108, Building 2, No.1, Yile Road, Songshan Lake Zone, Dongguan City, Guangdong, People's Republic of China

Tel: +86-769-8318-3000 Web: www.newbtl.com Service mail: btl\_qa@newbtl.com



### **Declaration**

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

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

The report must not be used by the client to claim product certification, approval, or endorsement by A2LA or any agency of the U.S. Government.

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

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

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

### Limitation

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



Table of Contents	Page
REPORT ISSUED HISTORY	6
1 . APPLICABLE STANDARDS	7
2 . SUMMARY OF TEST RESULTS	7
2.1 TEST FACILITY	8
2.2 MEASUREMENT UNCERTAINTY	8
2.3 TEST ENVIRONMENT CONDITIONS	9
3 . GENERAL INFORMATION	10
3.1 GENERAL DESCRIPTION OF EUT	10
3.2 DESCRIPTION OF TEST MODES	11
3.3 PARAMETERS OF TEST SOFTWARE	12
3.4 DUTY CYCLE	13
3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	15
3.6 SUPPORT UNITS	15
3.7 CUSTOMER INFORMATION DESCRIPTION	15
4 . AC POWER LINE CONDUCTED EMISSIONS	16
4.1 LIMIT	16
4.2 TEST PROCEDURE	16
4.3 DEVIATION FROM TEST STANDARD	16
4.4 TEST SETUP	17
4.5 EUT OPERATION CONDITIONS	17
4.6 TEST RESULTS	17
5 . RADIATED EMISSIONS	18
5.1 LIMIT	18
5.2 TEST PROCEDURE	19
5.3 DEVIATION FROM TEST STANDARD	20
5.4 TEST SETUP	20
5.5 EUT OPERATION CONDITIONS	22
5.6 TEST RESULTS - 9 KHZ TO 30 MHZ	22
5.7 TEST RESULTS - 30 MHZ TO 1000 MHZ	22
5.8 TEST RESULTS - ABOVE 1000 MHZ	22
6 . BANDWIDTH	23
6.1 LIMIT	23
6.2 TEST PROCEDURE	23



Table of Contents	Page
6.3 DEVIATION FROM STANDARD	23
6.4 TEST SETUP	23
6.5 EUT OPERATION CONDITIONS	23
6.6 TEST RESULTS	23
7 . MAXIMUM AVERAGE OUTPUT POWER	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 . CONDUCTED SPURIOUS EMISSIONS	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	25
8.6 TEST RESULTS	25
9 . POWER SPECTRAL DENSITY	26
9.1 LIMIT	26
9.2 TEST PROCEDURE	26
9.3 DEVIATION FROM STANDARD	26
9.4 TEST SETUP	26
9.5 EUT OPERATION CONDITIONS	26
9.6 TEST RESULTS	26
10 . MEASUREMENT INSTRUMENTS LIST	27
11 . EUT TEST PHOTO	30
APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS	36
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ	39
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ	44
APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ	47
APPENDIX E - BANDWIDTH	80
APPENDIX F - MAXIMUM AVERAGE OUTPUT POWER	84



Table of Contents	Page
APPENDIX G - CONDUCTED SPURIOUS EMISSIONS	86
APPENDIX H - POWER SPECTRAL DENSITY	93



# **REPORT ISSUED HISTORY**

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2404G004	R00	Original Report.	Jul. 23, 2024	Invalid
BTL-FCCP-2-2404G004	R01	Revised report to address comments.	Jul. 29, 2024	Valid



### 1. APPLICABLE STANDARDS

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

ANSI C63.10-2013

The following reference test guidance is not within the scope of accreditation of A2LA: KDB 558074 D01 15.247 Meas Guidance v05r02

### 2. 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.



### 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No.3, Jinshagang 1st Road, Dalang, Dongguan City, Guangdong People's Republic of China.

BTL's Registration Number for FCC: 747969 BTL's Designation Number for FCC: CN1377

### 2.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95.45% 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	2.88

### B. Radiated emissions test:

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

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

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB03	303 CISPR	1GHz ~ 6GHz	4.08
(3m)	CIOPK	6GHz ~ 18GHz	4.62

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB03 (1m)	CISPR	18 ~ 26.5 GHz	3.36



### C. Other Measurement:

Test Item	Uncertainty
Bandwidth	0.90 %
Maximum Output Power	1.3 dB
Conducted Spurious Emission	1.9 dB
Power Spectral Density	1.4 dB
Temperature	0.8 °C
Humidity	2.2 %

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

### 2.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By	Test Date
AC Power Line Conducted Emissions	25°C	62%	AC 120V/60Hz	Hayden Chen	May 14, 2024
Radiated Emissions -9 kHz to 30 MHz	24°C	56%	AC 120V/60Hz	Hayden Chen	May 21, 2024
Radiated Emissions -30 MHz to 1000 MHz	23°C	51%	AC 120V/60Hz	Allen Tong	May 16, 2024
Radiated Emissions	23°C	53%	AC 120V/60Hz	Jensen Zhou	May 24, 2024
-Above 1000 MHz	23°C	51%	AC 120V/60Hz	Allen Tong	May 25, 2024
Bandwidth	23°C	65%	AC 120V/60Hz	Arvin Tong	May 20, 2024
Maximum Average Output Power	23°C	65%	AC 120V/60Hz	Arvin Tong	May 20, 2024
Conducted Spurious Emission	23°C	65%	AC 120V/60Hz	Arvin Tong	May 20, 2024
Power Spectral Density	23°C	65%	AC 120V/60Hz	Arvin Tong	May 20, 2024



# 3. GENERAL INFORMATION

# 3.1 GENERAL DESCRIPTION OF EUT

Equipment	Smart Wi-Fi Door Lock
Brand Name	tp-link, tapo
Test Model	Tapo DL110
Series Model	N/A
Model Difference(s)	N/A
Software Version	1.X
Hardware Version	1.0
Power Source	1# DC voltage supplied from AC adapter. (Supports Unit) 2# Battery Supply. Model: Tapo A110
Power Rating	1# DC 5V 2# DC 3.7V, 10000mAh
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: 22.45 dBm (0.1758 W)

### Note:

# 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)							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:

Ant.	Brand	P/N	Antenna Type	Connector	Gain (dBi)
1	TP-LINK CORPORATION PTE. LTD.	3101506803	PIFA	N/A	0

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



### 3.2 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 02
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 02				

Radiated emissions test - Below 1GHz			
Final Test Mode Description			
Mode 4 TX G Mode Channel 02			

Radiated emissions test- Above 1GHz			
Final Test Mode Description			
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		



Maximum Average Output power test			
Final Test Mode Description			
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		

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(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 02 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.
- (4) For radiated emission Harmonic 18-26.5GHz test, only tested the worst case and recorded.
- (5) For radiated emission above 1 GHz test, the polarization of Vertical and Horizontal are evaluated, the worst case is Vertical and recorded.

### 3.3 PARAMETERS OF TEST SOFTWARE

Test Software Version	EMI_Test_Tool				
Frequency (MHz)	2412	2417	2437	2457	2462
IEEE 802.11b	127+10	125	127+10	125	127+10
IEEE 802.11g	127+10	125	127+10	125	127+10
IEEE 802.11n(HT20)	60	97	100	125	127



### 3.4 DUTY CYCLE

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

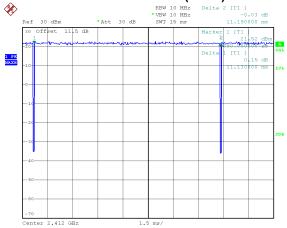




Date: 20.MAY.2024 20:03:50

Duty cycle = 0.000 ms / 0.000 ms = 0.00%Duty Factor =  $10 \log(1/\text{Duty cycle}) = 0.00$ 

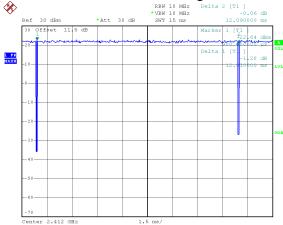
### IEEE 802.11n(HT20)



Date: 20.MAY.2024 20:08:17

Duty cycle = 11.130 ms / 11.190 ms = 99.46% Duty Factor = 10 log(1/Duty cycle) = 0.00

### IEEE 802.11g



Date: 20.MAY.2024 20:06:58

Duty cycle = 12.030 ms / 12.090 ms = 99.50% Duty Factor = 10 log(1/Duty cycle) = 0.00





### 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 1 kHz.

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 1 kHz.

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 1 kHz.

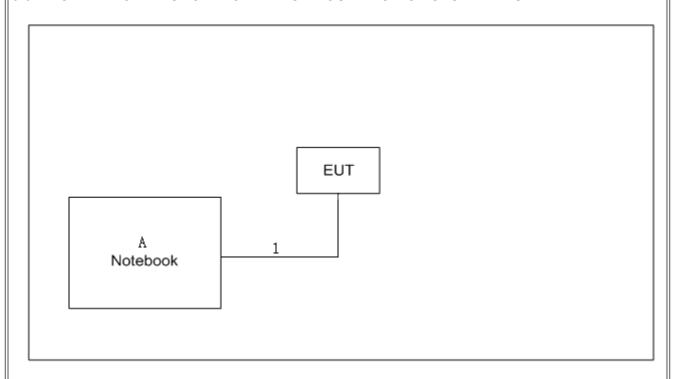
For IEEE 802.11n(HT40):

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.

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



### 3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



### 3.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
A	Notebook	Lenovo	V310-14ISK	LR07GZNB

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	USB Cable	NO	NO	0.8m

### 3.7 CUSTOMER INFORMATION DESCRIPTION

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



### 4. AC POWER LINE CONDUCTED EMISSIONS

### **4.1 LIMIT**

Frequency of Emission (MHz)	Limit (dl	ΒμV)
	Quasi-peak	Average
0.15 - 0.5	66 to 56*	56 to 46*
0.5 - 5.0	56	46
5.0 - 30.0	60	50

### NOTE:

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

### **4.2 TEST PROCEDURE**

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

The following table is the setting of the receiver:

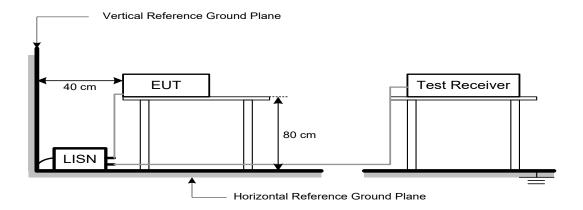
Receiver Parameters	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

### 4.3 DEVIATION FROM TEST STANDARD

No deviation.



### 4.4 TEST SETUP



# 4.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

### 4.6 TEST RESULTS

Please refer to the APPENDIX A.





### 5. RADIATED EMISSIONS

# 5.1 LIMIT

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

### LIMITS OF RADIATED 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)

Frequency (MHz)	Band edge/ Harmonic at 3m (dBµV/m)		Harmonic at	1m (dBµV/m)
rroquonoy (Wiriz)	Peak	Average	Peak	Average
Above 1000	74	54	83.5 (Note 4)	63.5 (Note 4)

### 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)

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

 $20\log (d_{limit}/d_{measure})=20\log (3/1)=9.5 dB.$ 

FS<sub>limit</sub>: Harmonic at 3m Peak and Average limit.

FS<sub>max</sub>: Harmonic at 1m Peak and Average Maximum value.

d<sub>limit</sub>: Harmonic at 3m test distance. d<sub>measure</sub>: Harmonic Actual test distance.



### **5.2 TEST PROCEDURE**

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

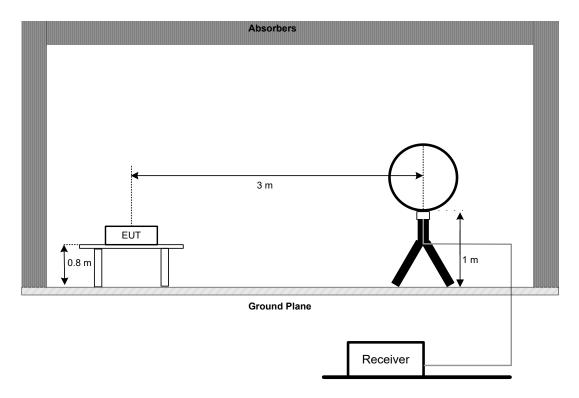


# **5.3 DEVIATION FROM TEST STANDARD**

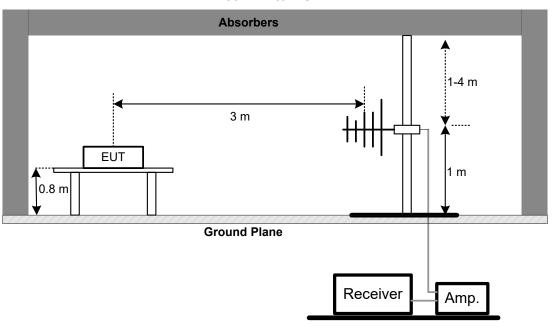
No deviation.

# 5.4 TEST SETUP

### 9 kHz to 30 MHz

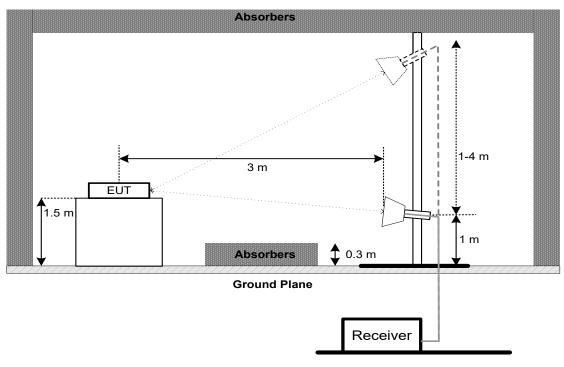


### 30 MHz to 1 GHz

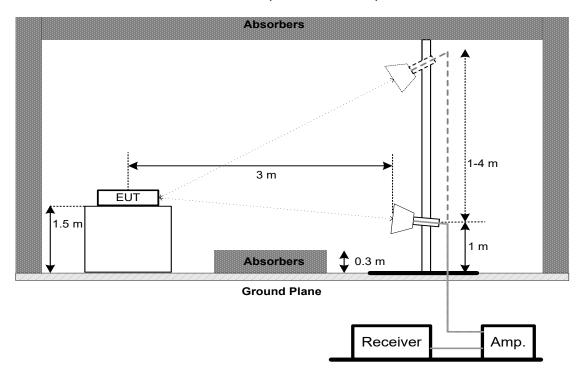




Above 1 GHz Band edge

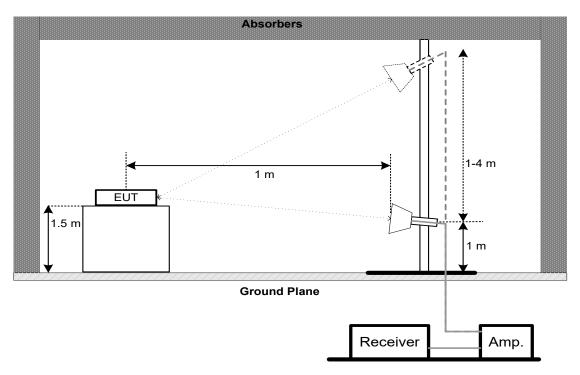


# Harmonic(1 GHz to 18 GHz)





# Harmonic(18 GHz to 26.5 GHz)



### 5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 5.6 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B.

### Remark:

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

# 5.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

### 5.8 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX D.

### Remark:

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



### 6. BANDWIDTH

### **6.1 LIMIT**

Section	Test Item	Limit
FCC 15.247(a)(2)	6 dB Bandwidth	Minimum 500 kHz
	99% Emission Bandwidth	-

### **6.2 TEST PROCEDURE**

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

### For 6 dB Bandwidth:

Of Cab Ballawiden.		
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	

### **6.3 DEVIATION FROM STANDARD**

No deviation.

### **6.4 TEST SETUP**



### **6.5 EUT OPERATION CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

### **6.6 TEST RESULTS**

Please refer to the APPENDIX E.



### 7. MAXIMUM AVERAGE OUTPUT POWER

### 7.1 LIMIT

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

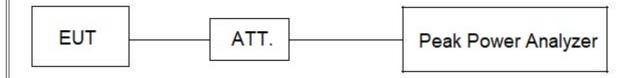
### 7.2 TEST PROCEDURE

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

### 7.3 DEVIATION FROM STANDARD

No deviation.

### 7.4 TEST SETUP



### 7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 7.6 TEST RESULTS

Please refer to the APPENDIX F.



### 8. CONDUCTED SPURIOUS EMISSIONS

### **8.1 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.

### **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:

### For Reference Level:

TOT TROIDION LOVOI.	
Spectrum Parameters	Setting
Span Frequency	≥ 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	

### 8.3 DEVIATION FROM STANDARD

No deviation.

### 8.4 TEST SETUP



### 8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### **8.6 TEST RESULTS**

Please refer to the APPENDIX G.



### 9. POWER SPECTRAL DENSITY

### 9.1 LIMIT

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

### 9.2 TEST PROCEDURE

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

Spectrum Parameters	Setting
Span Frequency	25 MHz
RBW	3 kHz
VBW	10 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

### 9.3 DEVIATION FROM STANDARD

No deviation.

### 9.4 TEST SETUP



### 9.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 9.6 TEST RESULTS

Please refer to the APPENDIX H.



# **10. MEASUREMENT INSTRUMENTS LIST**

	AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	EMI Test Receiver	R&S	ESR3	103027	Jun. 16, 2024	
2	TWO-LINE V-NETWORK	R&S	ENV216	10274	Dec. 22, 2024	
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Dec. 22, 2024	
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	
5	Cable	N/A	SFT205-NMNM-9M -001	9M	Nov. 27, 2024	
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	Active Loop Antenna	Schwarzbeck	FMZB 1513-60B	1513-60 B-034	Mar. 30, 2025	
2	MXE EMI Receiver	Keysight	N9038A	MY56400091	Dec. 22, 2024	
3	Cable	N/A	RW2350-3.8A-NMB M-1.5M	N/A	Jun. 10, 2024	
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	
5	966 Chamber room	ETS	9*6*6	N/A	Jul. 11, 2024	

	Radiated Emissions - 30 MHz to 1 GHz						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	1462	Dec. 13, 2024		
2	Attenuator	EMC INSTRUMENT	EMCI-N-6-06	AT-06009	Dec. 13, 2024		
3	Preamplifier	EMC INSTRUMENT	EMC001330	980863	Apr. 07, 2025		
4	Cable	RegalWay	LMR400-NMNM-12 .5m	N/A	Jul. 04, 2024		
5	Cable	RegalWay	LMR400-NMNM-3 m	N/A	Jul. 04, 2024		
6	Cable	RegalWay	LMR400-NMNM-0. 5m	N/A	Jul. 04, 2024		
7	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024		
8	Positioning Controller	MF	MF-7802	N/A	N/A		
9	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		
10	966 Chamber room	CM	9*6*6	N/A	May 16, 2025		



14	Radiated Emissions - Above 1 GHz							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	Receiver	Agilent	N9038A	MY52130039	Dec. 22, 2024			
2	Preamplifier	EMC INSTRUMENT	EMC118A45SE	980888	Nov. 17, 2024			
3	Preamplifier	EMC INSTRUMENT	EMC118A45SE	981001	Nov. 17, 2024			
4	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	Jun. 16, 2024			
5	Double Ridged Guide Antenna	ETS	3115	75789	May 31, 2024			
6	Cable	RegalWay	A81-SMAMSMAM- 12.5M	N/A	Aug. 08, 2024			
7	Cable	RegalWay	RWLP50-4.0A-SMS M-9M	N/A	Jan. 22, 2025			
8	Cable	RegalWay	RWLP50-2.6A-3.5 M2.92MRA-3M	N/A	Jan. 22, 2025			
9	Cable	RegalWay	RWLP50-4.0A-SMS M-12.5M	N/A	Feb. 19, 2025			
10	Cable	RegalWay	RWLP50-4.0A-NM RASM-2.5M	N/A	Aug. 08, 2024			
11	Cable	RegalWay	RWLP50-4.0A-NM RASMRA-0.8M	N/A	Aug. 08, 2024			
12	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330 -K	619413	Jul. 06, 2024			
13	Cable	RegalWay	RWLP50-2.6A-2.92 M2.92M-1.1M	N/A	Jul. 26, 2024			
14	Cable	Tonscend	HF160-KMKM-3M	N/A	Jul. 26, 2024			
15	Broad-Band Horn Antenna	Schwarzbeck	BBHA9170(3m)	9170-319	Jun. 20, 2024			
16	966 Chamber room	CM	9*6*6	N/A	May 19, 2025			
17	Attenuator	Talent Microwave	TA10A2-S-18	N/A	N/A			
18	Filter	STI	STI15-9912	N/A	Jun. 16, 2024			
19	Positioning Controller	MF	MF-7802	N/A	N/A			
20	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A			

Bandwidth & Conducted Spurious Emissions & Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Jun. 16, 2024
2	EXA Spectrum Analyzer	Keysight	N9010A	MY55150209	Jun. 16, 2024
3	Attenuator	Talent Microwave	TA10A0-S-26.5	N/A	N/A
4	DC Block	N/A	N/A	N/A	N/A
5	Measurement Software	BTL	BTL Conducted Test	N/A	N/A





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

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

All calibration period of equipment list is one year.



# 11. EUT TEST PHOTO



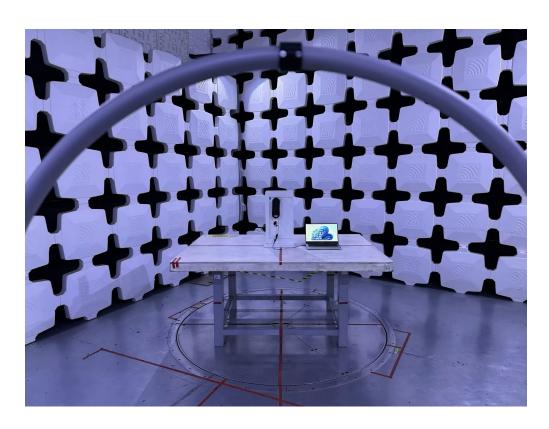






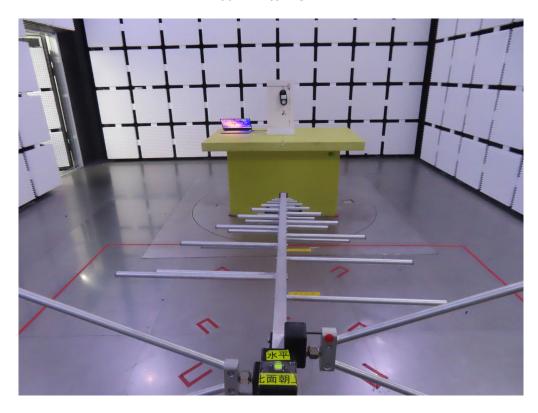
# 9 kHz to 30 MHz

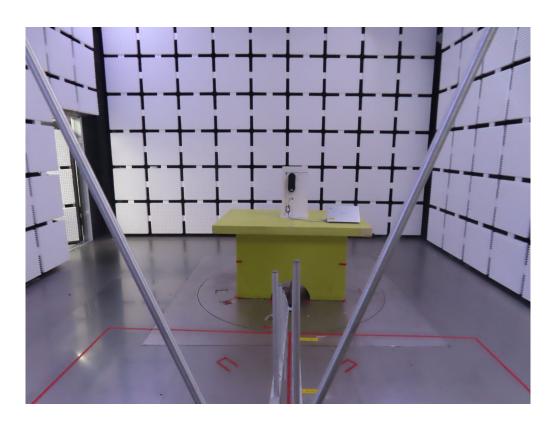






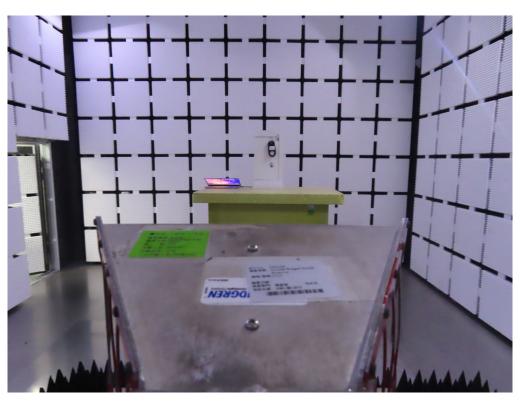
# 30 MHz to 1 GHz







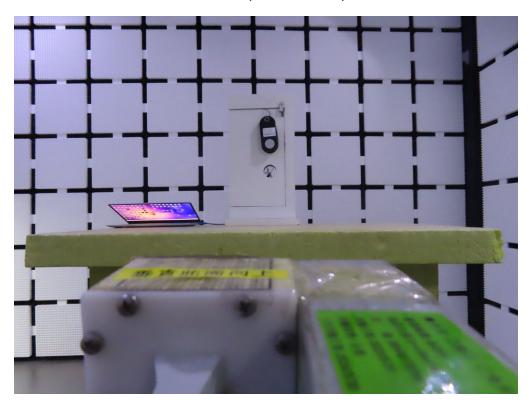
# Band edge & Harmonic(1 GHz to 18 GHz)

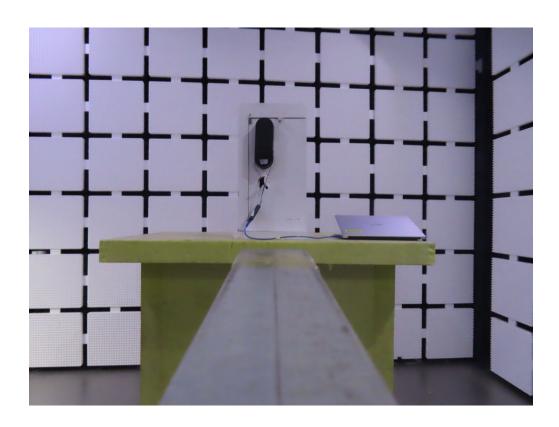






# Harmonic(Above 18 GHz)







# **Conducted Test Photos**

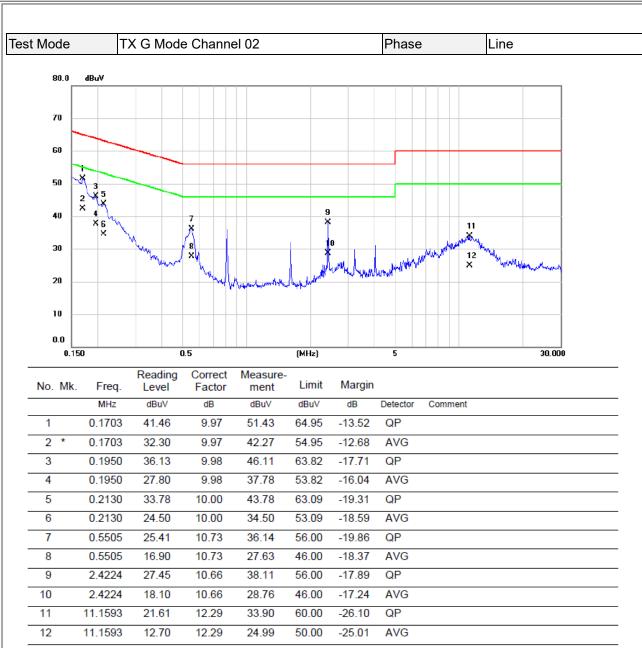






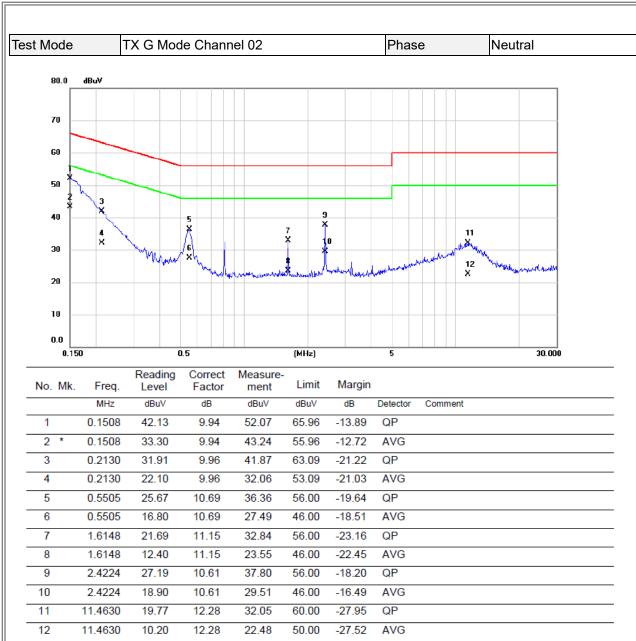
# **APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS**





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



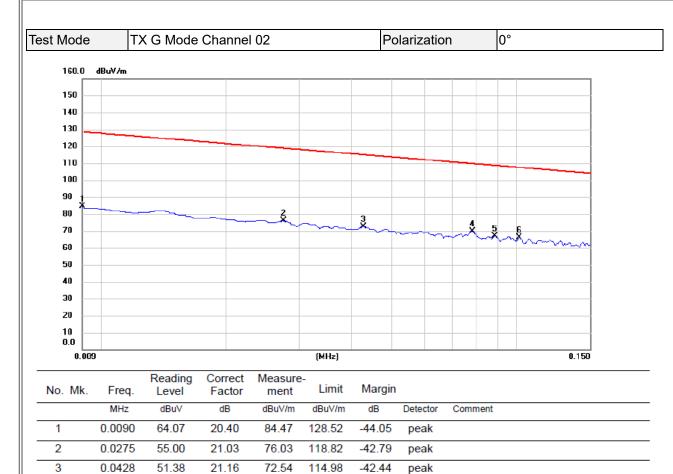


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



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





114.98

109.75

108.65

107.48

69.66

67.13

66.26

peak

peak

peak peak

-40.09

-41.52

-41.22

# **REMARKS:**

3

4

5

6

0.0781

0.0887

0.1015

48.37

45.83

44.93

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

21.16

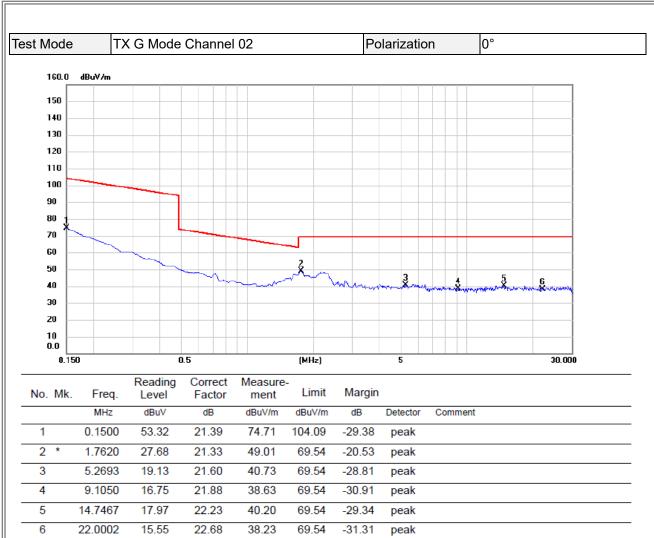
21.29

21.30

21.33

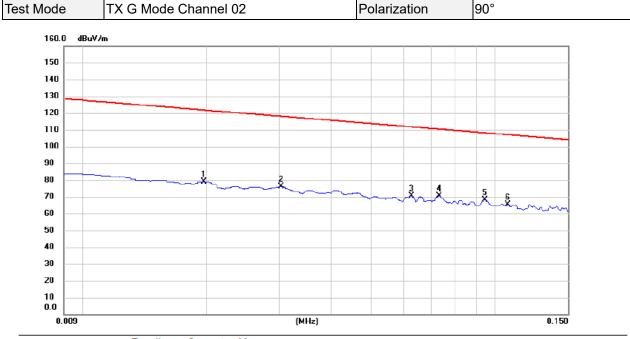
(2) Margin Level = Measurement Value - Limit Value.





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

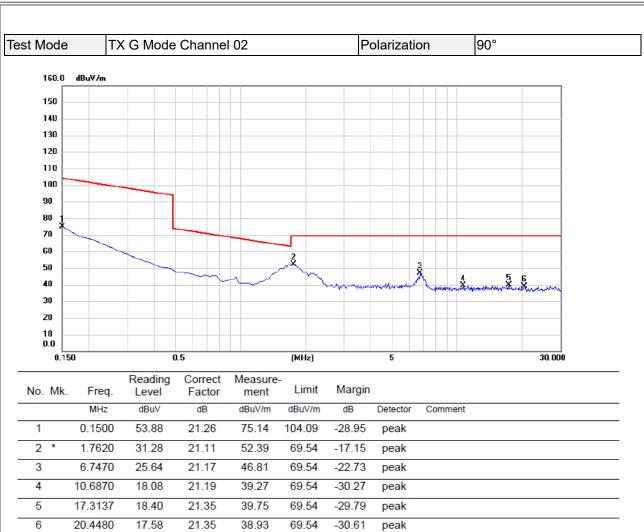




No. Mk.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	0.0197	58.37	20.79	79.16	121.72	-42.56	peak	
2	0.0303	55.08	21.10	76.18	117.98	-41.80	peak	
3	0.0627	49.45	21.24	70.69	111.66	-40.97	peak	
4 *	0.0732	49.27	21.28	70.55	110.31	-39.76	peak	
5	0.0943	46.95	21.33	68.28	108.12	-39.84	peak	
6	0.1074	44.27	21.32	65.59	106.99	-41.40	peak	

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



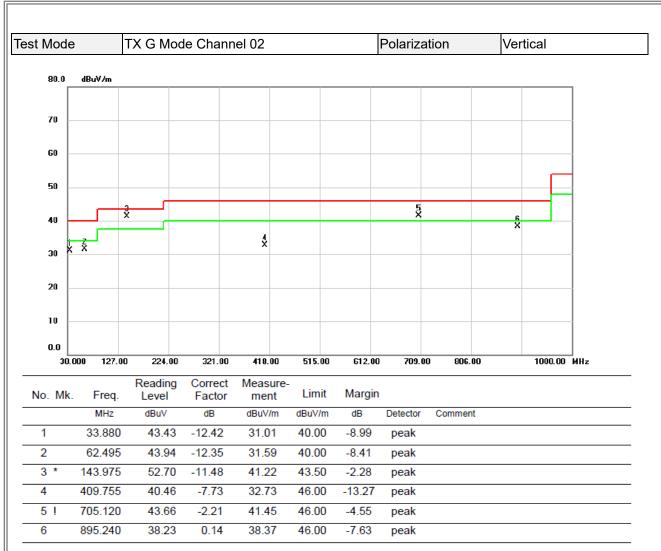


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



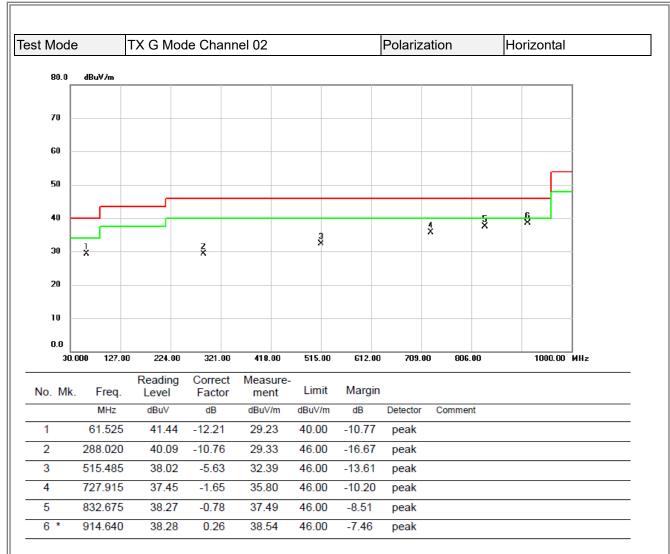
APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ





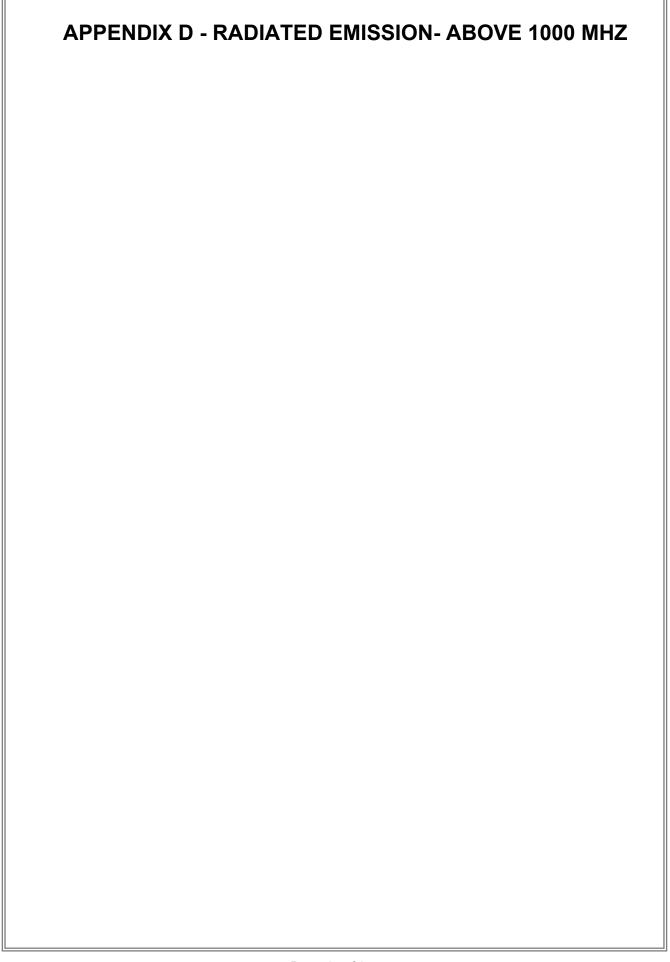
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





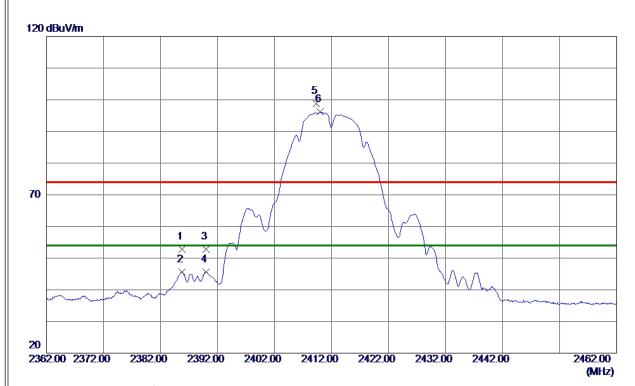
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.







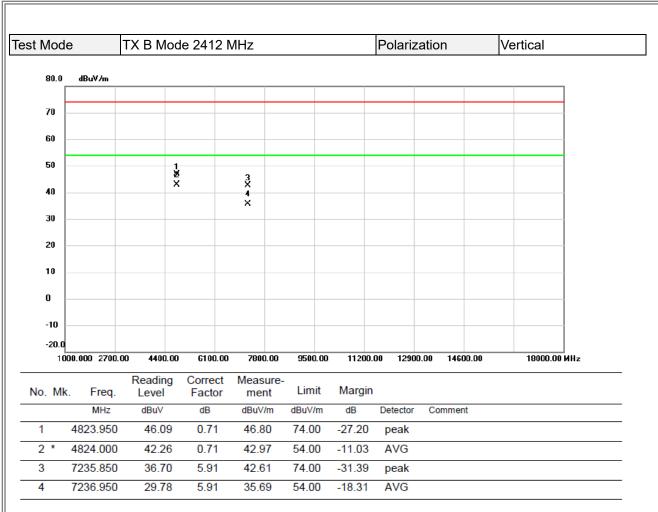




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2385. 7500	46. 74	6. 00	52. 74	74.00	-21. 26	Peak	
2	2385. 7500	39. 65	6. 00	45. 65	54.00	-8. 35	AVG	
3	2390. 0000	46. 88	6. 00	52. 88	74.00	-21. 12	Peak	
4	2390. 0000	39. 59	6. 00	45. 59	54.00	-8. 41	AVG	
5	2409. 3500	92. 72	6. 00	98. 72	74. 00	24. 72	Peak	No Limit
6 *	2410. 0500	90. 12	6. 00	96. 12	54. 00	42. 12	AVG	No Limit

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

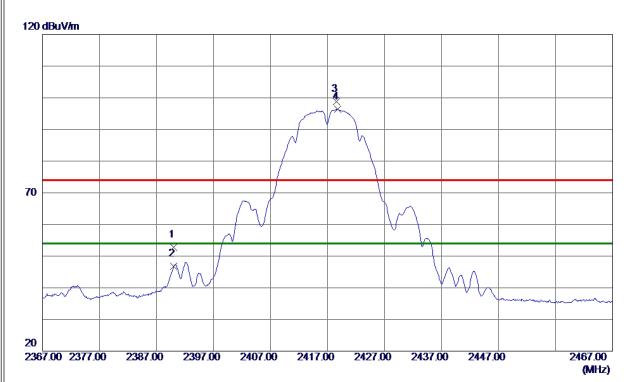




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



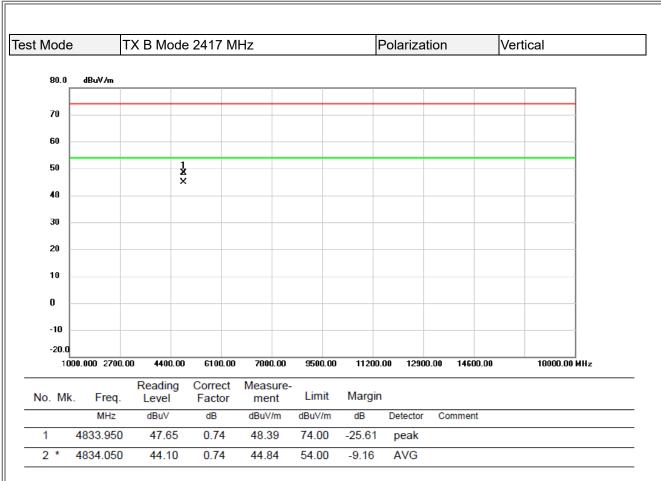




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	46. 86	6. 00	52. 86	74.00	-21. 14	Peak	
2	2390. 0000	40. 79	6. 00	46. 79	74.00	-27. 21	Peak	
3 *	2418. 6000	92. 81	6. 00	98. 81	74.00	24. 81	Peak	No Limit
4	2418. 7500	90. 36	6. 00	96. 36	74. 00	22. 36	Peak	No Limit

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

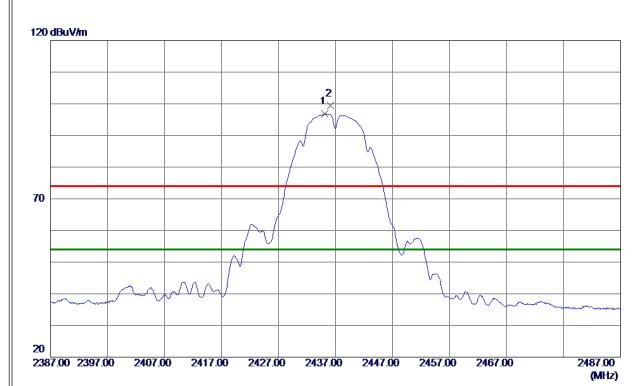




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



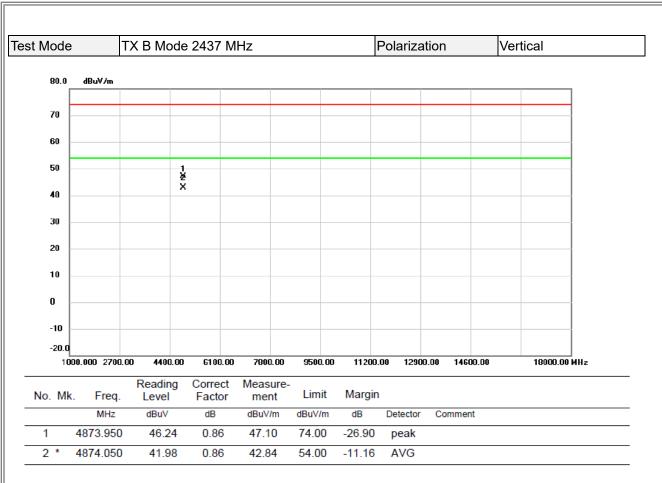




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2435. 1000	90. 78	6. 00	96. 78	<b>54.00</b>	42. 78	AVG	No Limit
2	2436. 1000	93. 30	6. 00	99. 30	74.00	25. 30	Peak	No Limit

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

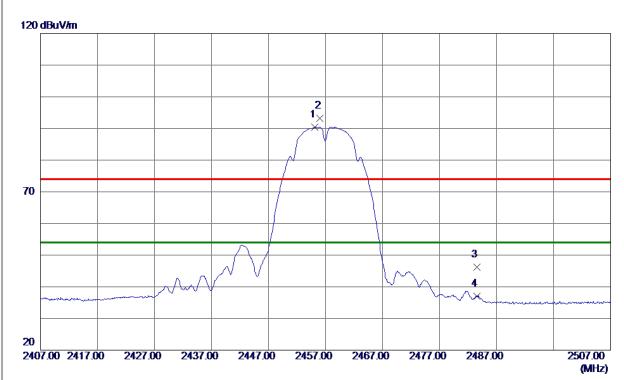




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



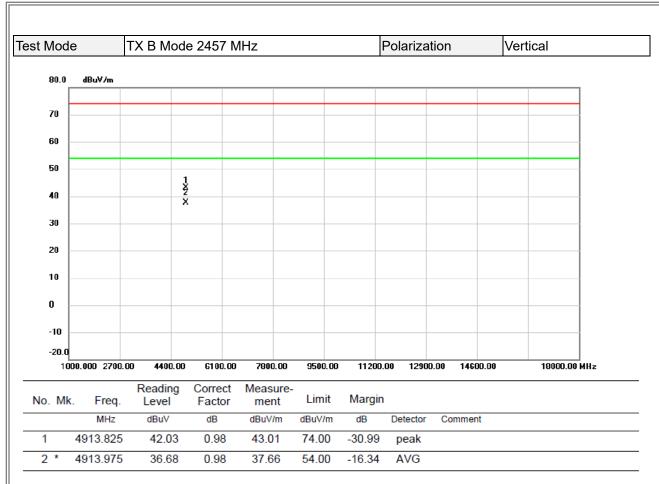




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2455. 1000	84. 44	6. 00	90. 44	54.00	36. 44	AVG	No Limit
2	2456. 0500	87. 16	6. 00	93. 16	74.00	19. 16	Peak	No Limit
3	2483. 5000	40. 29	6. 00	46. 29	74.00	-27. 71	Peak	
4	2483. 5000	30. 98	6. 00	36. 98	54. 00	-17. 02	AVG	

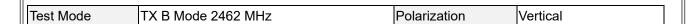
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

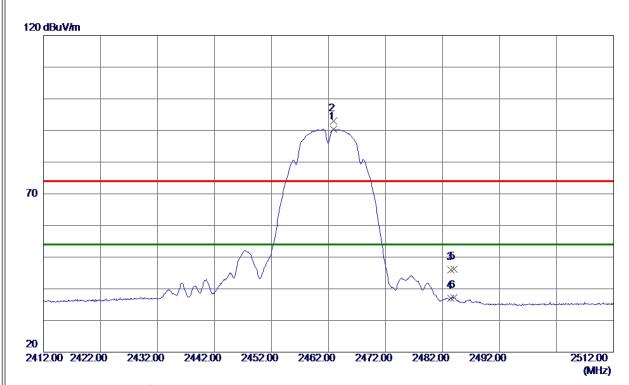




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



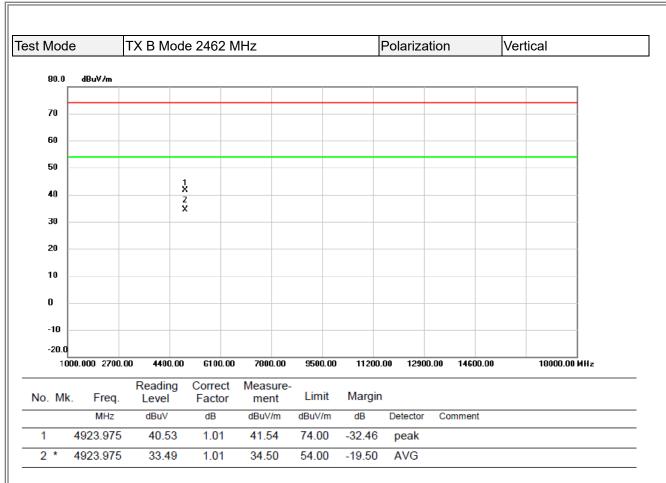




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2462. 8500	84. 37	6. 00	90. 37	<b>54.00</b>	36. 37	AVG	No Limit
2	2462. 9000	87. 02	6. 00	93. 02	74.00	19.02	Peak	No Limit
3	2483. 5000	39. 95	6. 00	45. 95	74.00	-28. 05	Peak	
4	2483. 5000	31. 08	6. 00	37. 08	54. 00	-16. 92	AVG	
5	2484. 0000	40. 22	6. 00	46. 22	74. 00	-27. 78	Peak	
6	2484. 0000	31. 28	6. 00	37. 28	<b>54. 00</b>	-16. 72	AVG	

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

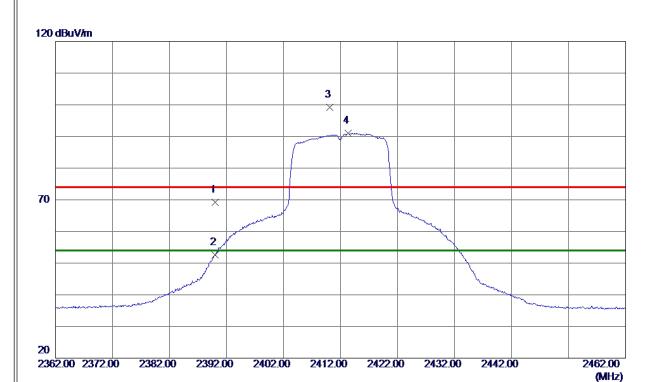




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



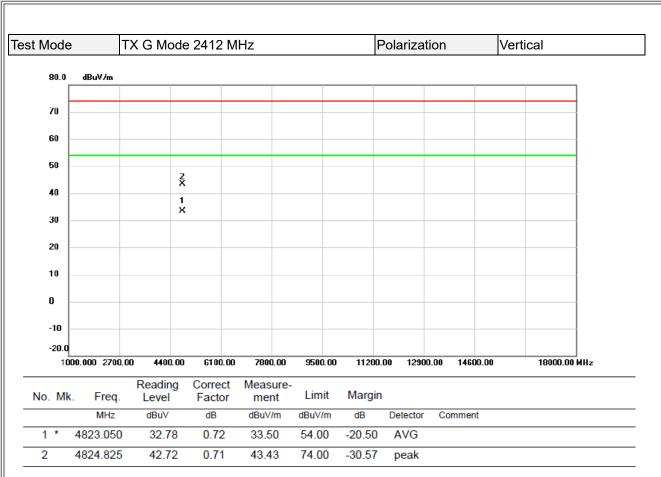




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	63. 16	6. 00	69. 16	74.00	<b>-4.84</b>	Peak	
2	2390. 0000	46. 57	6. 00	52. 57	54.00	-1. 43	AVG	
3	2410. 1500	93. 24	6. 00	99. 24	74.00	25. 24	Peak	No Limit
4 *	2413. 3500	85. 01	6. 00	91. 01	54.00	37. 01	AVG	No Limit

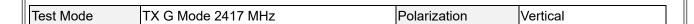
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

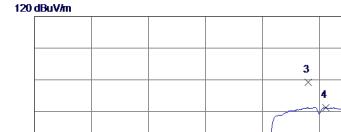


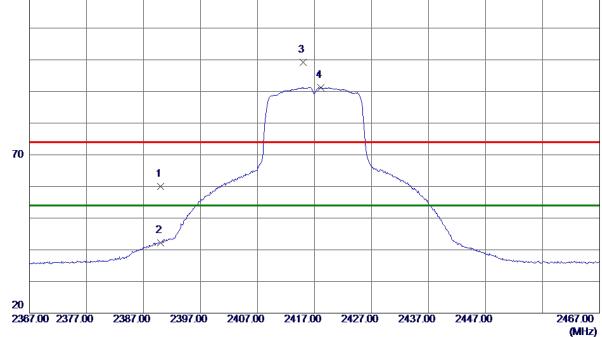


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





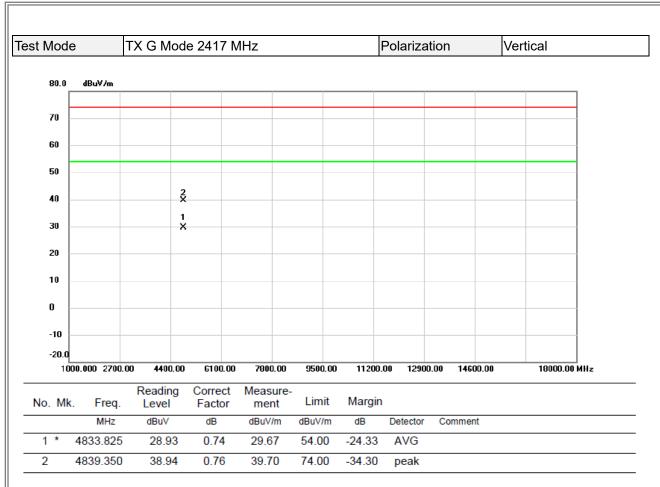




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	53. 92	6. 00	59. 92	74.00	-14. 08	Peak	
2	2390. 0000	36. 26	6. 00	42. 26	54.00	-11. 74	AVG	
3	2414. 9500	93. 16	6. 00	99. 16	74.00	25. 16	Peak	No Limit
4 *	2418. 1000	85. 21	6. 00	91. 21	54. 00	37. 21	AVG	No Limit

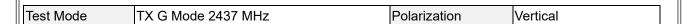
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

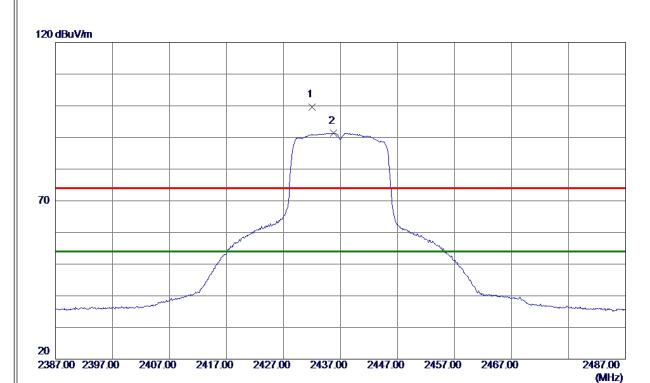




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



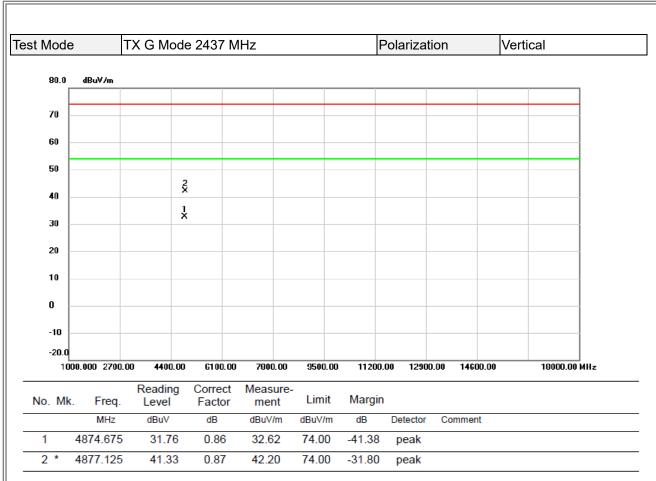




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2431. 9500	93. 57	6. 00	99. 57	74.00	25. 57	Peak	No Limit
2 *	2435. 7500	85. 30	6. 00	91. 30	54. 00	37. 30	AVG	No Limit

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

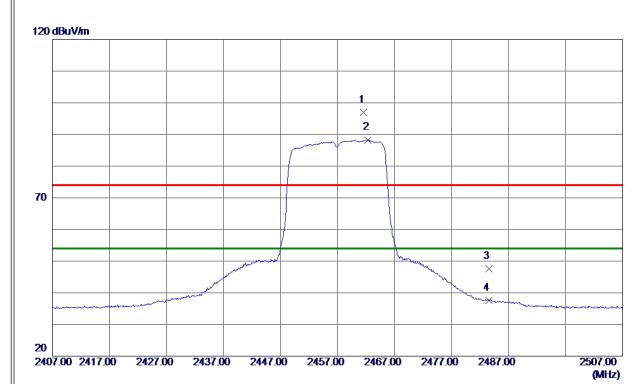




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



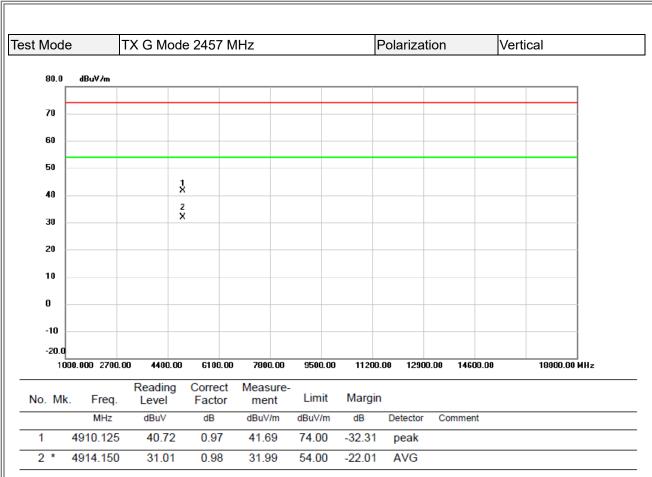




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2461. 5500	90. 94	6. 00	96. 94	74.00	22. 94	Peak	No Limit
2 *	2462. 3000	82. 30	6. 00	88. 30	54.00	34. 30	AVG	No Limit
3	2483. 5000	41.67	6. 00	47. 67	74.00	-26. 33	Peak	
4	2483. 5000	31. 61	6. 00	37. 61	54. 00	-16. 39	AVG	

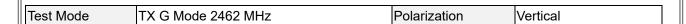
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.

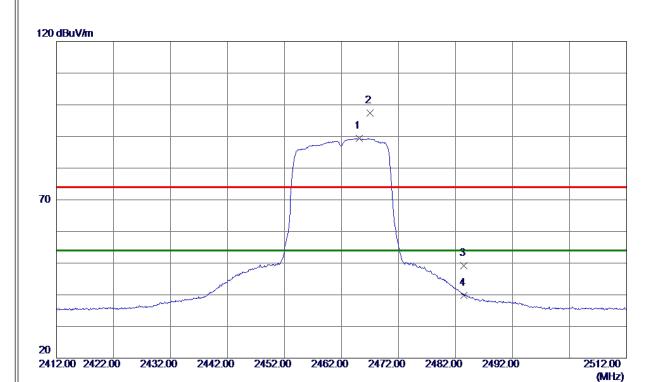




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



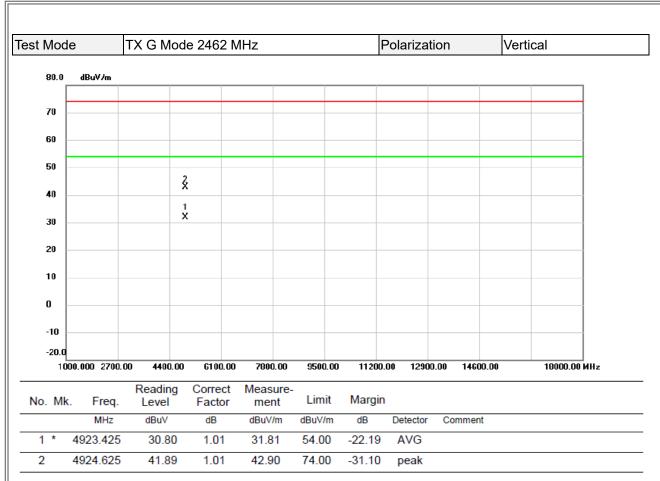




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2465. 1500	83. 33	6. 00	89. 33	54.00	35. 33	AVG	No Limit
2	2467. 0500	91. 40	6. 00	97. 40	74.00	23. 40	Peak	No Limit
3	2483. 5000	43. 12	6. 00	49. 12	74.00	-24. 88	Peak	
4	2483. 5000	33. 86	6. 00	39. 86	54.00	-14. 14	AVG	

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

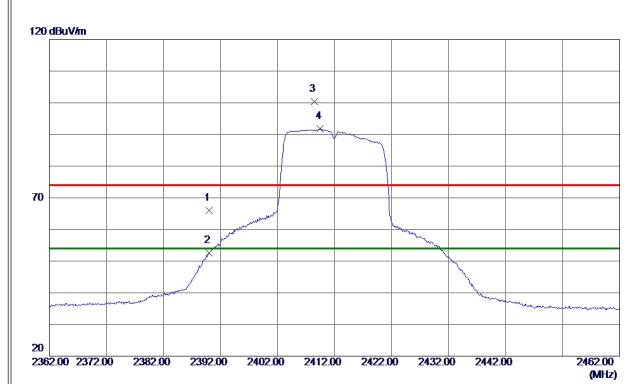




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



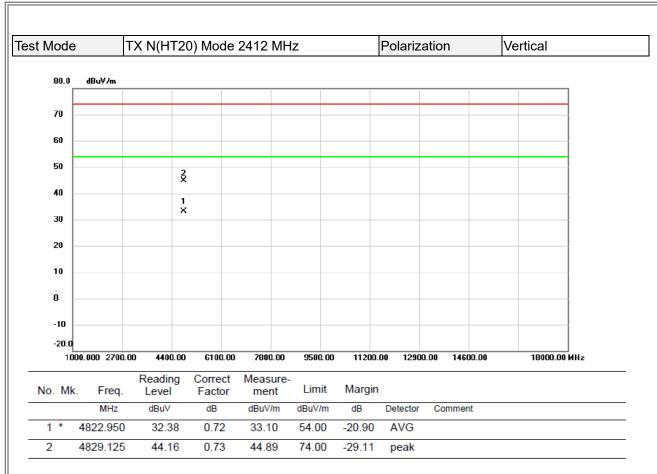




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	59. 94	6. 00	65. 94	74.00	-8. 06	Peak	
2	2390. 0000	46. 66	6. 00	52. 66	54.00	-1. 34	AVG	
3	2408. 4000	94. 38	6. 00	100. 38	74.00	26. 38	Peak	No Limit
4 *	2409. 5000	85. 76	6. 00	91. 76	54. 00	37. 76	AVG	No Limit

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

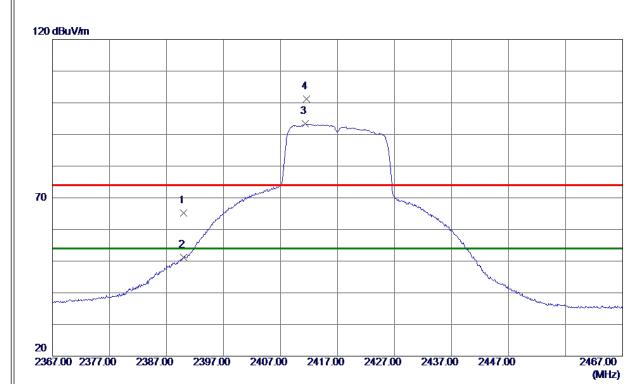




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



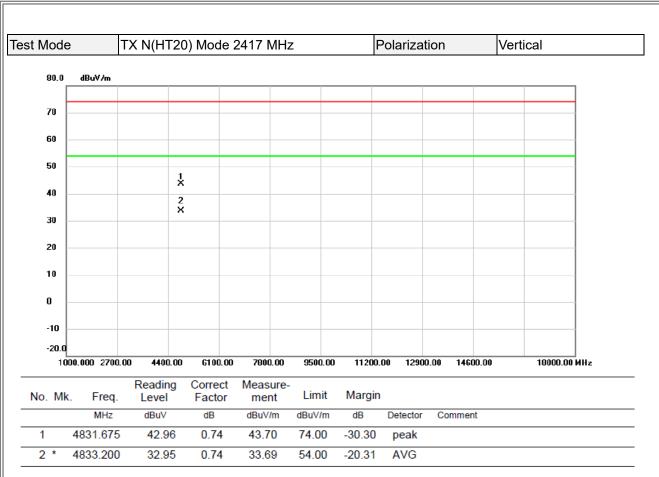




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	59. 13	6. 00	65. 13	74.00	-8. 87	Peak	
2	2390. 0000	45. 14	6. 00	51. 14	54.00	-2.86	AVG	
3 *	2411. 3500	87. 31	6. 00	93. 31	54.00	39. 31	AVG	No Limit
4	2411. 5500	95. 19	6. 00	101. 19	74. 00	27. 19	Peak	No Limit

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

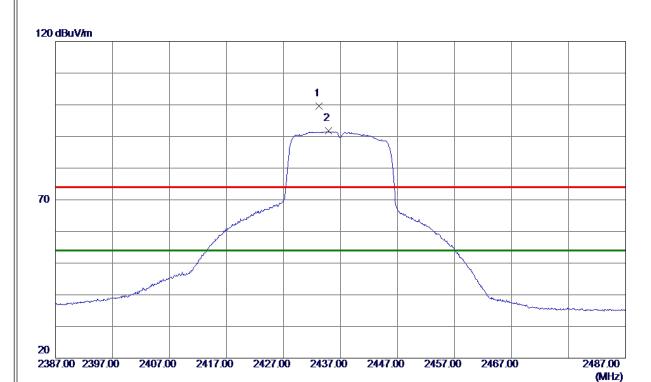




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



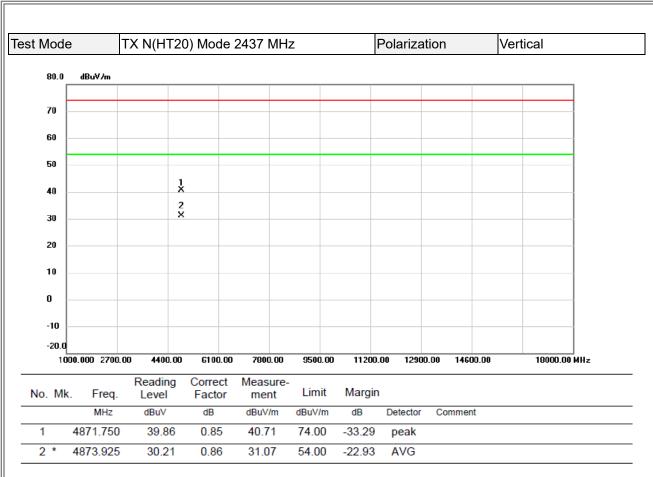




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2433. 2500	93. 57	6. 00	99. 57	74.00	25. 57	Peak	No Limit
2 *	2434. 8500	85. 78	6. 00	91. 78	54.00	37. 78	AVG	No Limit

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

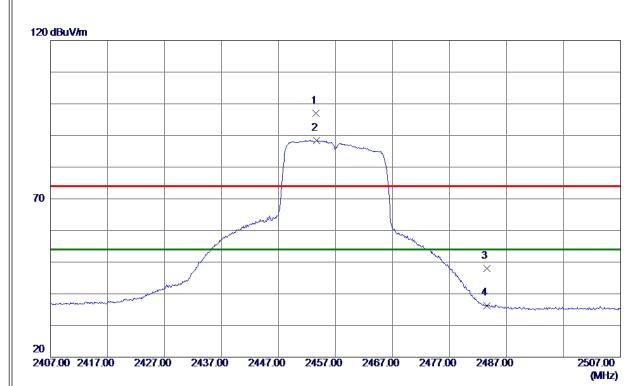




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



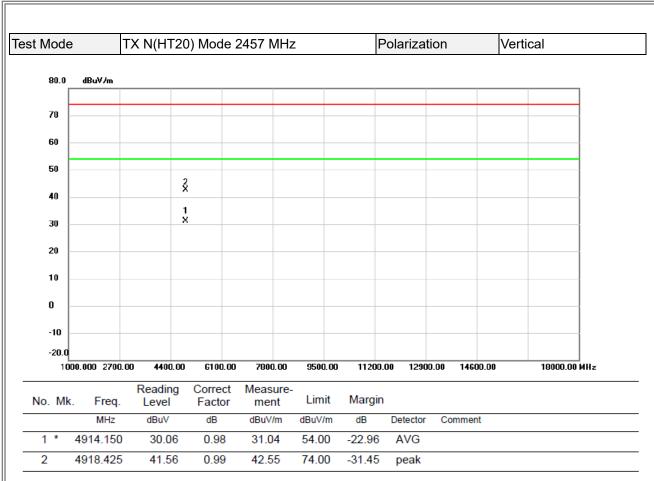




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2453. 6000	91. 05	6. 00	97. 05	74.00	23. 05	Peak	No Limit
2 *	2453. 7000	82. 49	6. 00	88. 49	54.00	34. 49	AVG	No Limit
3	2483. 5000	42. 08	6. 00	48. 08	74.00	-25. 92	Peak	
4	2483. 5000	30. 30	6. 00	36. 30	54. 00	-17. 70	AVG	

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

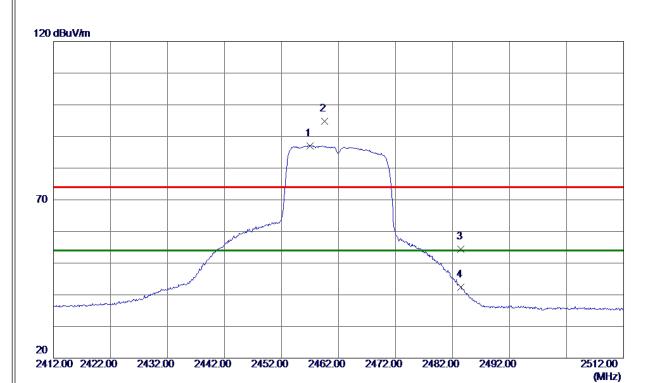




- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



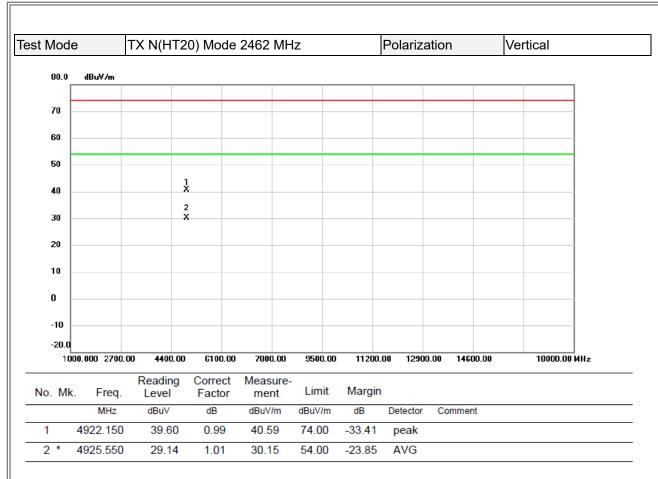




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2457. 0000	81. 10	6. 00	87. 10	<b>54.00</b>	33. 10	AVG	No Limit
2	2459. 5500	88. 85	6. 00	94. 85	74.00	20.85	Peak	No Limit
3	2483. 5000	48. 40	6. 00	54. 40	74.00	-19. 60	Peak	
4	2483. 5000	36. 39	6. 00	42. 39	54. 00	-11. 61	AVG	

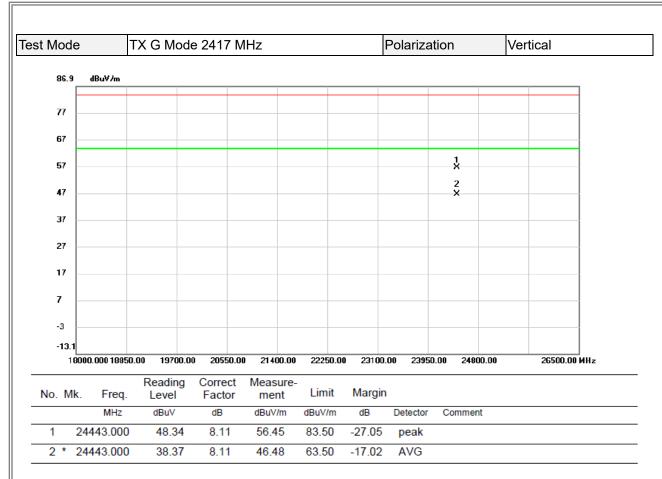
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.





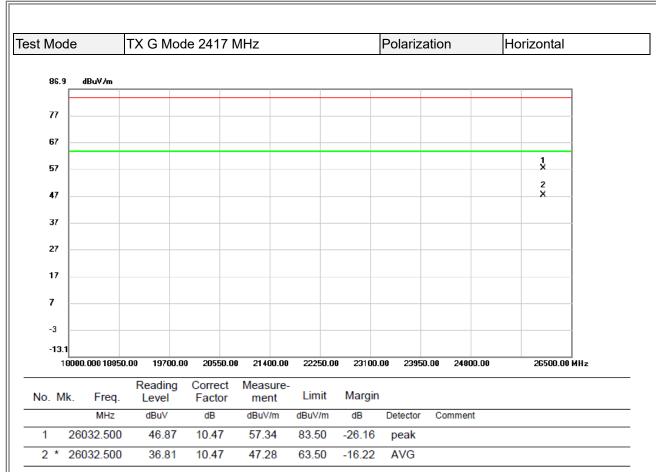
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





- (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.

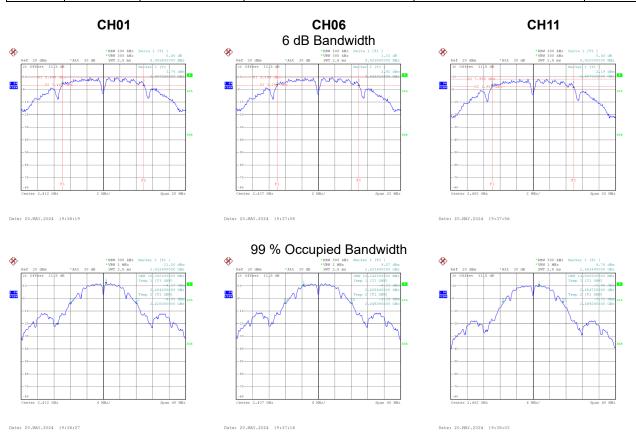


APPENDIX E - BANDWIDTH	



	Test Mode	TX B Mode
ı	1001111040	17 C D 1110 G C

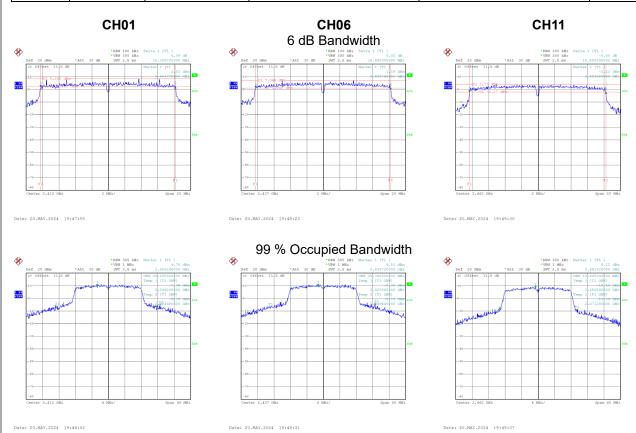
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	9.910	16.000	0.5	Complies
06	2437	9.929	16.240	0.5	Complies
11	2462	9.910	14.560	0.5	Complies





Test Mode	TX G Mode
103t Wood	I A O MOGC

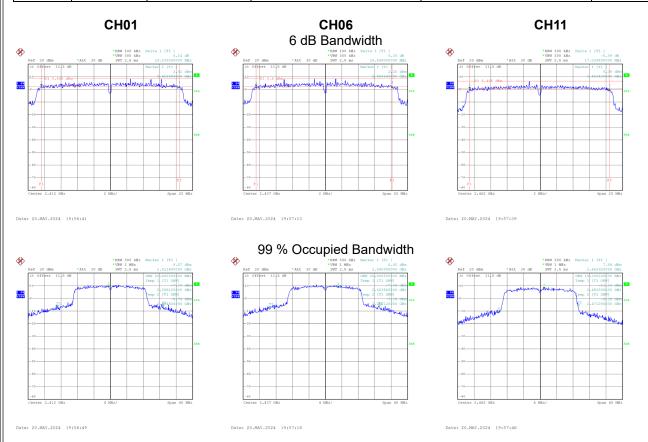
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	16.390	25.200	0.5	Complies
06	2437	16.460	25.760	0.5	Complies
11	2462	16.580	18.640	0.5	Complies





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	16.830	25.680	0.5	Complies
06	2437	16.599	26.560	0.5	Complies
11	2462	17.040	19.280	0.5	Complies





# **APPENDIX F - MAXIMUM AVERAGE OUTPUT POWER**



Test Mode	TX B Mode
100t Wiodo	I I A D IVIOGO

Channel	Frequency (MHz)	Average Output Power (dBm)	Duty Factor	Average Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	21.38	0.00	21.38	30.00	1.0000	Complies
02	2417	22.45	0.00	22.45	30.00	1.0000	Complies
06	2437	21.27	0.00	21.27	30.00	1.0000	Complies
10	2457	20.79	0.00	20.79	30.00	1.0000	Complies
11	2462	21.08	0.00	21.08	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	21.39	0.00	21.39	30.00	1.0000	Complies
02	2417	21.13	0.00	21.13	30.00	1.0000	Complies
06	2437	21.32	0.00	21.32	30.00	1.0000	Complies
10	2457	19.11	0.00	19.11	30.00	1.0000	Complies
11	2462	21.18	0.00	21.18	30.00	1.0000	Complies

Test Mode	TX N(HT20) Mode
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Channel	Frequency (MHz)	Average Output Power (dBm)	Duty Factor	Average Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	16.34	0.00	16.34	30.00	1.0000	Complies
02	2417	19.11	0.00	19.11	30.00	1.0000	Complies
06	2437	19.22	0.00	19.22	30.00	1.0000	Complies
10	2457	18.82	0.00	18.82	30.00	1.0000	Complies
11	2462	19.02	0.00	19.02	30.00	1.0000	Complies



# **APPENDIX G - CONDUCTED SPURIOUS EMISSIONS**



