

<b>Product Name: Set Top Box</b>	<b>Report No: FCC022022-05523RF6</b>
<b>Product Model: UIW4060MDC</b>	<b>Security Classification: Open</b>
<b>Version: V1.0</b>	<b>Total Page:30</b>

## TIRT Testing Report



<b>Prepared By:</b>	<b>Checked By:</b>	<b>Approved By:</b>	The logo for TIRT Shenzhen is a circular emblem with the text "TIRT Shenzhen" in the center and "Tairuite Inspection/Testing Technology Service Co., Ltd." around the perimeter.
Stone Tang	Randy Lv	Daniel Chen	
Stone Tang	Randy Lv	Daniel Chen	



# FCC Radio Test Report

## FCC ID: G95-UIW4060

**This report concerns: Class II Permissive Change**

**Equipment** : Set Top Box  
**Brand Name** : Technicolor  
**Test Model** : UIW4060MDC  
**Series Model** : UIW4060BRC, UIW4060ARM, UIW4060ABB, UIW4060xxxx (where x can be alphanumeric, -, or blank, for marketing strategy)  
**Applicant** : Technicolor Connected Home USA LLC  
**Address** : 4855 Peachtree Industrial Blvd, Suite 200, Norcross, GA 30092, USA  
**Manufacturer** : Technicolor Connected Home USA LLC  
**Address** : 4855 Peachtree Industrial Blvd, Suite 200, Norcross, GA 30092, USA  
**Date of Receipt** : 2022.10.12  
**Date of Test** : 2022.10.13 ~ 2022.10.24  
**Issued Date** : 2022.10.24  
**Report Version** : V1.0  
**Test Sample** : Engineering Sample No.: 20220421018668  
**Standard(s)** : FCC CFR Title 47, Part 15, Subpart C  
FCC KDB 558074 D01 15.247 Meas Guidance v05r02  
ANSI C63.10-2013

- The test result referred exclusively to the presented test model /sample.
- Without written approval of TIRT Inc. the test report shall not reproduced except in full.

Lab: Beijing TIRT Technology Service Co.,Ltd Shenzhen

Add: 101, 3 # Factory Building, Gongjin Electronics, Shatin Community, Kengzi  
Street, Pingshan District, Shenzhen City, Guangdong province, China

TEL: +86-0755-27087573



<b>Table of Contents</b>	<b>Page</b>
<b>REPORT ISSUED HISTORY</b>	<b>5</b>
<b>1 . SUMMARY OF TEST RESULTS</b>	<b>6</b>
1.1 TEST FACILITY	7
1.2 MEASUREMENT UNCERTAINTY	7
1.3 TEST ENVIRONMENT CONDITIONS	7
<b>2 . GENERAL INFORMATION</b>	<b>8</b>
2.1 GENERAL DESCRIPTION OF EUT	8
2.2 DESCRIPTION OF TEST MODES	10
2.3 PARAMETERS OF TEST SOFTWARE	11
2.4 SUPPORT UNITS	11
<b>3 . AC POWER LINE CONDUCTED EMISSIONS</b>	<b>12</b>
3.1 LIMIT	12
3.2 TEST PROCEDURE	12
3.3 DEVIATION FROM TEST STANDARD	12
3.4 TEST SETUP	13
3.5 EUT OPERATING CONDITIONS	13
3.6 TEST RESULTS	13
<b>4 . RADIATED EMISSIONS</b>	<b>14</b>
4.1 LIMIT	14
4.2 TEST PROCEDURE	15
4.3 DEVIATION FROM TEST STANDARD	16
4.4 TEST SETUP	16
4.5 EUT OPERATING CONDITIONS	17
4.6 TEST RESULTS - 9 KHZ TO 30 MHZ	17
4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ	17
<b>5 . MAXIMUM OUTPUT POWER</b>	<b>18</b>
5.1 LIMIT	18
5.2 TEST PROCEDURE	18
5.3 DEVIATION FROM STANDARD	18
5.4 TEST SETUP	18
5.5 EUT OPERATION CONDITIONS	18
5.6 TEST RESULTS	18
<b>6 . MEASUREMENT INSTRUMENTS LIST</b>	<b>19</b>



**Table of Contents****Page**

<b>7 . EUT TEST PHOTO</b>	<b>20</b>
<b>APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS</b>	<b>22</b>
<b>APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ</b>	<b>25</b>
<b>APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ</b>	<b>26</b>
<b>APPENDIX D- MAXIMUM OUTPUT POWER</b>	<b>29</b>



### REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
FCC022022-05523RF6	V1.0	Compared with original report(BTL-FCCP-1-2204C001), UIW4060MDC Hardware modification: PCB version change from LAB4 to LAB4A. Please see the following table for details. So, the AC Power Line Conducted Emissions, Radiated Emissions the worst case have been re-evaluated. In this report only updated the test results for AC Power Line Conducted Emissions, Radiated Emissions below 1GHz, Maximum Output Power, other are kept the same	2022.10.24	Valid

Change ID	Layout changes move from LAB4 version to LAB4A version
1	Add second source IC: minor adjustment of PCB footprint:(support of Wayon WP250152T3-B)
2	Move IR cell footprint to improve soldering quality.



## 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	Remark
15.207	AC Power Line Conducted Emissions	PASS	-----
15.247(d) 15.205(a) 15.209(a)	Radiated Emission	PASS	Note(3)
15.247 (a)(1)(iii)	Number of Hopping Frequency	PASS	Note(3)
15.247 (a)(1)(iii)	Average Time of Occupancy	PASS	Note(3)
15.247(a)(1)	Hopping Channel Separation	PASS	Note(3)
15.247(a)(1)	Bandwidth	PASS	Note(3)
15.247(a)(1)	Maximum Output Power	PASS	-----
15.247(d)	Conducted Spurious Emission	PASS	Note(3)
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.
- (3) For test item: Radiated Emissions above 1GHz, Number of Hopping Frequency, Average Time of Occupancy, Hopping Channel Separation, Bandwidth, Conducted Spurious Emissions and Power Spectral Density, Please refer to original report(BTL-FCCP-1-2204C001)



## 1.1 TEST FACILITY

Company:	Beijing TIRT Technology Service Co.,Ltd Shenzhen
Address:	101, 3 # Factory Building, Gongjin Electronics, Shatin Community, Kengzi Street, Pingshan District, Shenzhen City, Guangdong province, China
CNAS Registration Number:	CNAS L14158
A2LA Registration Number	6049.01
Telephone:	+86-0755-27087573

## 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 TIRT measurement uncertainty as below table:

Uncertainty	
Parameter	Uncertainty
Occupied Channel Bandwidth	$\pm 142.12$ KHz
RF power conducted	$\pm 0.74$ dB
RF power radiated	$\pm 3.25$ dB
Spurious emissions, conducted	$\pm 1.78$ dB
Spurious emissions, radiated (30MHz~1GHz)	$\pm 4.6$ dB
Spurious emissions, radiated (1GHz ~ 18GHz)	$\pm 4.9$ dB
Conduction Emissions(150kHz~30MHz)	$\pm 3.1$ dB
Humidity	$\pm 4.6\%$
Temperature	$\pm 0.7^{\circ}\text{C}$
Time	$\pm 1.25\%$

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	24. $3^{\circ}\text{C}$	52%	AC 120V/60Hz	Stone Tang
Radiated Emissions-9 kHz to 30 MHz	24. $5^{\circ}\text{C}$	55%	AC 120V/60Hz	Stone Tang
Radiated Emissions-30 MHz to 1000 MHz	24. $2^{\circ}\text{C}$	52%	AC 120V/60Hz	Stone Tang
Maximum Output Power	24. $6^{\circ}\text{C}$	54%	DC 12V	Stone Tang



## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Set Top Box
Brand Name	Technicolor
Test Model	UIW4060MDC
Series Model	UIW4060BRC, UIW4060ARM, UIW4060ABB, UIW4060xxxx (where x can be alphanumeric, -, or blank, for marketing strategy)
Model Difference(s)	All models are same, except model's name for marketing strategy.
Software Version	UIW4060TVO HC 1.0
Hardware Version	LAB4A
Power Source	DC voltage supplied from AC adapter. 1#Brand / Model: MOSO / MSA-C1500CS12.0-18G-US 2#Brand / Model: HONOR / ADS-12BP-12 12012EPCU-LV
Power Rating	1# I/P: 100-120V~ 50/60Hz 0.6A max. O/P: 12.0V $\overline{=}$ 1.5A 2# I/P: 100-120V~ 50/60Hz Max. 0.4A O/P: 12V $\overline{=}$ 1.0A
Operation Frequency	2402 MHz ~ 2480 MHz
Modulation Type	GFSK, $\pi/4$ -DQPSK, 8-DPSK
Bit Rate of Transmitter	1Mbps, 2Mbps, 3Mbps
Max. Output Power	3Mbps: 6.62 dBm (0.0046 W)

Note:

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

#### 2. Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		



## 3. Table for Filed Antenna:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Internal	N/A	3

## 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 Mode_1Mbps Channel 00/39/78
Mode 2	TX Mode_2Mbps Channel 00/39/78
Mode 3	TX Mode_3Mbps Channel 00/39/78
Mode 4	TX Mode_3Mbps Channel 39

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 Mode_3Mbps Channel 39

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 4	TX Mode_3Mbps Channel 39

Radiated emissions test - Above 1GHz	
Final Test Mode	Description
Mode 1	TX Mode_1Mbps Channel 00/39/78
Mode 3	TX Mode_3Mbps Channel 00/39/78

Maximum Output Power	
Final Test Mode	Description
Mode 1	TX Mode_1Mbps Channel 00/39/78
Mode 2	TX Mode_2Mbps Channel 00/39/78
Mode 3	TX Mode_3Mbps Channel 00/39/78

Other Conducted test	
Final Test Mode	Description
Mode 1	TX Mode_1Mbps Channel 00/39/78
Mode 3	TX Mode_3Mbps Channel 00/39/78



Note:

- (1) The measurements for Output Power were tested with DH1/3/5 during 1Mbps, 2Mbps and 3Mbps, the worst case were 1Mbps (DH5) and 3Mbps (DH5), only worst case were documented for other test items except Average Time of Occupancy.
- (2) 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.
- (3) This product has the mode of BT AFH, which was considered during testing. 800/20/X(X = 2 of DH1, X = 4 of DH3 or X = 6 of DH5) with 20, 10 or 6.67 hops per second in a channel, and then multiply 0.4\*20 (20 # of hopping). But this mode is not the worst case mode as duration of the packet is same, and this report only shows the worst case mode.
- (4) For AC power line conducted emissions and radiated spurious emissions below 1 GHz test, the 3Mbps Channel 39 is found to be the worst case and recorded.
- (5) For AC power line conducted emissions and radiated emissions below 1 GHz test, all adapters had been pre-tested and in this report only recorded the worst case.
- (6) For AC power line conducted emissions test, the prototype is tested with or without the monitor, and in this report only recorded the worst case(tested with monitor).

## 2.3 PARAMETERS OF TEST SOFTWARE

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level.

Test Software Version	IPOP V4.0.0.0		
Frequency (MHz)	2402	2441	2480
1Mbps	default	default	default
2Mbps	default	default	default
3Mbps	default	default	default

## 2.4 SUPPORT UNITS

Support Equipment				
No.	Equipment	Brand Name	Model Name	Remarks
1	HDMI Cable	/	/	0.9m/6m,Unshielding
2	Loudspeaker box	SA-A4	SOAIY	/
3	USB disk	/	Kingston	/
4	Displayer	T24S-28	LENOVO	M032004854IT
5	Lan Cable	/	/	10m,Unshielding
6	Optical fiber Cable	/	/	10m,Unshielding



### 3. AC POWER LINE CONDUCTED EMISSIONS

#### 3.1 LIMIT

Frequency of Emission (MHz)	Limit (dB $\mu$ V)	
	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:

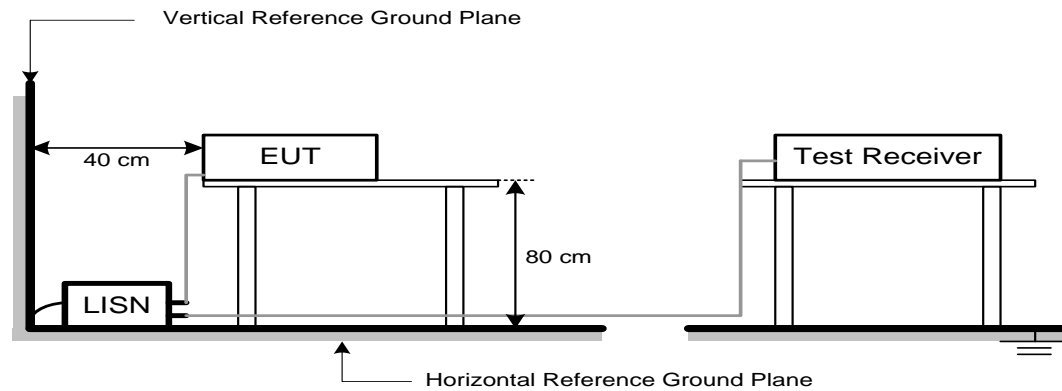
Receiver Parameters	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

#### 3.3 DEVIATION FROM TEST STANDARD

No deviation.



### 3.4 TEST SETUP



### 3.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical function (as a customer would normally use it), EUT was programmed to be in continuously transmitting data or hopping on mode.

### 3.6 TEST RESULTS

Please refer to the APPENDIX A.

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of 『Note』 . If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform in this case, a “\*” marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150 kHz to 30 MHz.



#### 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

- 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)
- 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)
- 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.
- 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).
- 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.
- 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.
- All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.  
(below 1 GHz)
- All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1 GHz)
- 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 (Emission in restricted band)	1 MHz / 3 MHz for PK value 1 MHz / 1/T Hz for AVG value

Spectrum 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

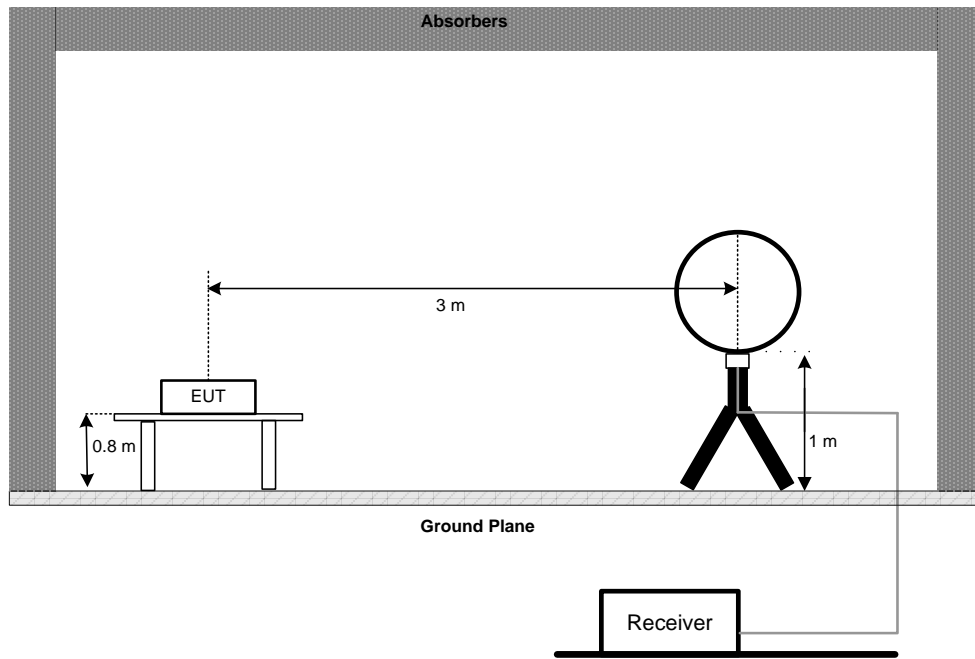


### 4.3 DEVIATION FROM TEST STANDARD

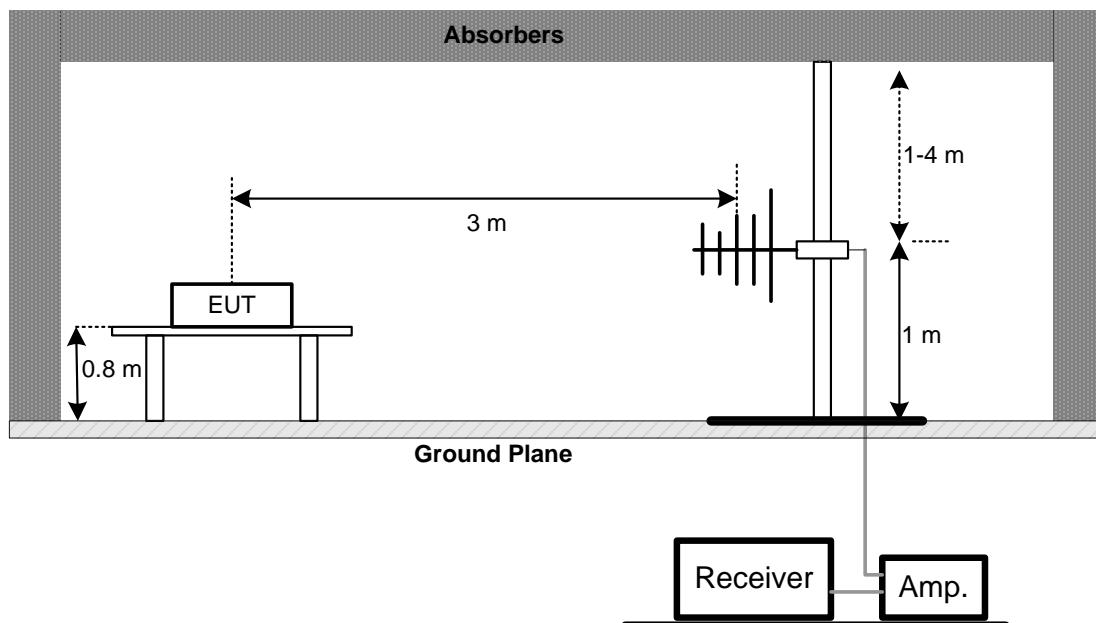
No deviation.

### 4.4 TEST SETUP

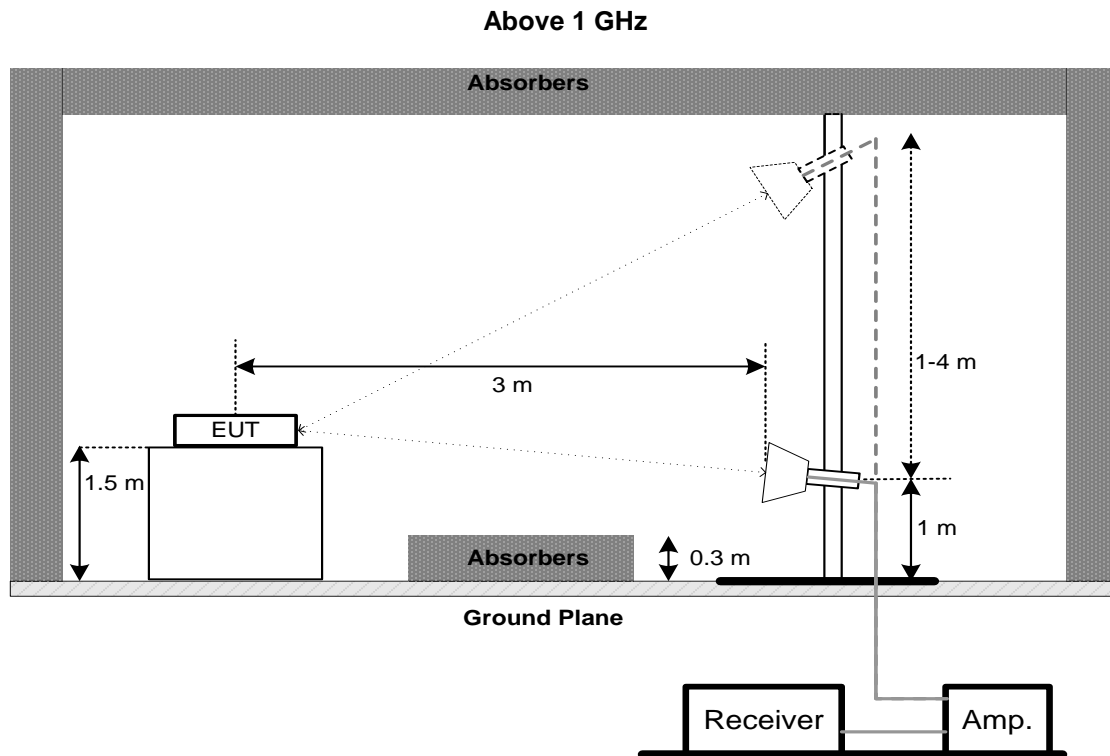
#### 9 kHz to 30 MHz



#### 30 MHz to 1 GHz







#### 4.5 EUT OPERATING 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 =  $40 \log (\text{specific distance} / \text{test distance})$  (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.

Remark:

- (1) Worst case for 2# adapter was recored



## 5. MAXIMUM OUTPUT POWER

### 5.1 LIMIT

Section	Test Item	Limit
FCC 15.247(a)(1)	Maximum Output Power	0.1250 Watt or 20.97 dBm

Note: Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

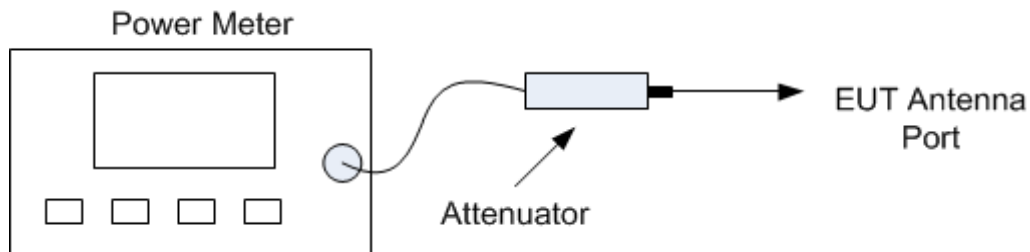
### 5.2 TEST PROCEDURE

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

### 5.3 DEVIATION FROM STANDARD

No deviation.

### 5.4 TEST SETUP



### 5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

### 5.6 TEST RESULTS

Please refer to the APPENDIX D.



## 6. MEASUREMENT INSTRUMENTS LIST

No.	Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Receiver	Rohde&Schwarz	ESCI	1166.5950.03	2022/11/16
2	AMN	Rohde&Schwarz	ENV216	3560.6550.05	2022/11/09
3	AMN	Schwarzbeck	NSLK8127	#829	2022/11/09
4	ECSI RF IN RF Cable	Rohde&Schwarz	RP-X1	\	2022/11/18
5	ECSI RF IN RF Cable	Rohde&Schwarz	Sapre sm	\	2022/11/09
6	EMI Receiver	Rohde&Schwarz	ESR7	102013	2022/11/09
7	Spectrum analyzer	Rohde&Schwarz	FSV30	103741	2022/11/09
8	EMI receiver	Rohde&Schwarz	ESU	100184	2023/07/20
9	Spectrum analyzer	KEYSIGHT	N9010A-44	MY51440158	2022/11/09
10	Loop Antenna*	Schwarzbeck	FMZB1519B	00029	2025/07/03
11	Integral Antenna	Schwarzbeck	VULB 9163	VULB 9163-361	2022/11/09
12	Integral Antenna	Schwarzbeck	BBHA 9120D	BBHA 9120D 1201	2022/11/09
13	Integral Antenna	Schwarzbeck	BBHA 9170	9170#685	2022/11/09
14	Preamplifier	CD Systems Inc	PAP-03036-30	85060000	2022/11/09
15	Preamplifier	Schwarzbeck	BBV9721	9721-019	2022/11/09
16	Preamplifier	emci	EMC012645 SE	980417	2022/11/09
17	ECSI RF IN RF Cable	Rohde&Schwarz	AP-X1	\	2022/11/09
18	Spectrum Analyzer	Agilent	N9010A	MY52221119	2022/11/09
19	Power Collection Unit	Tonscend	JS0806-2	188060134	2022/11/09
20	Tonscend Test System	Tonscend	2.6.77.0518	NA	NA
21	10dB Attenuator	Tonscend	10dB	NA	NA
22	Temp&Humidity Recorder	Anymetre	JR900	NA	2022/11/03
23	Temp&Humidity Chamber	ETOMA	NTH1100-30 A	16080628	2022/11/03
24	Filter	STI	STI15-9845	N/A	N/A
25	Filter	STI	5.1G	N/A	N/A
26	Filter	STI	STI15-9845	N/A	N/A
27	Testing Software	EZ-EMC	TW-03A2	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.



## 7. EUT TEST PHOTO

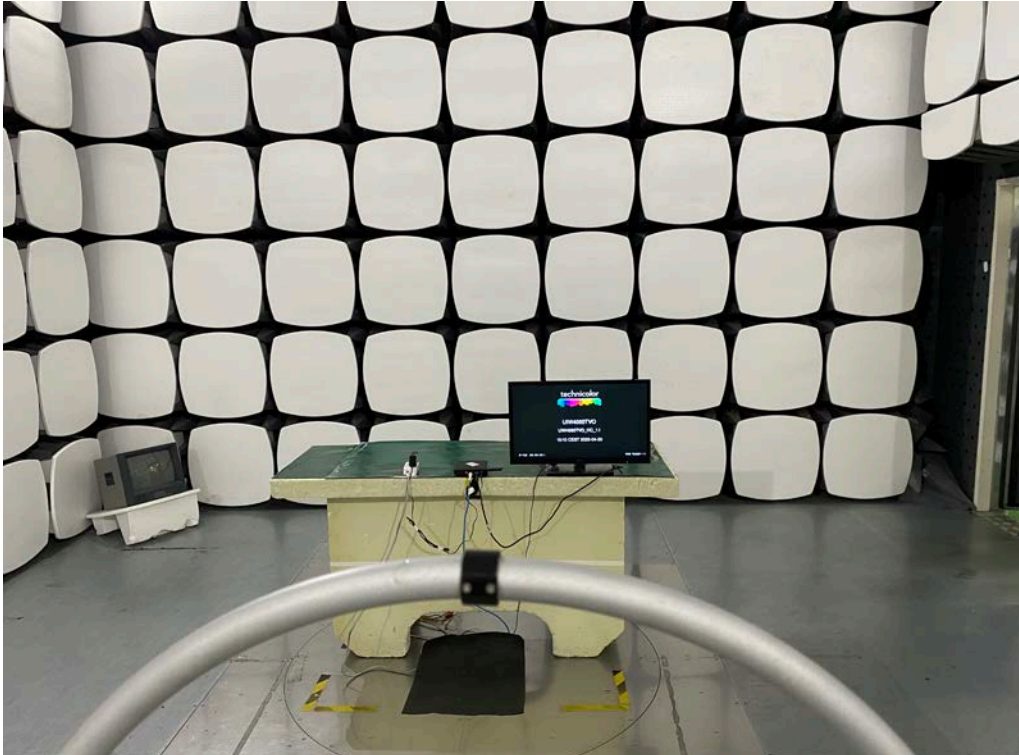
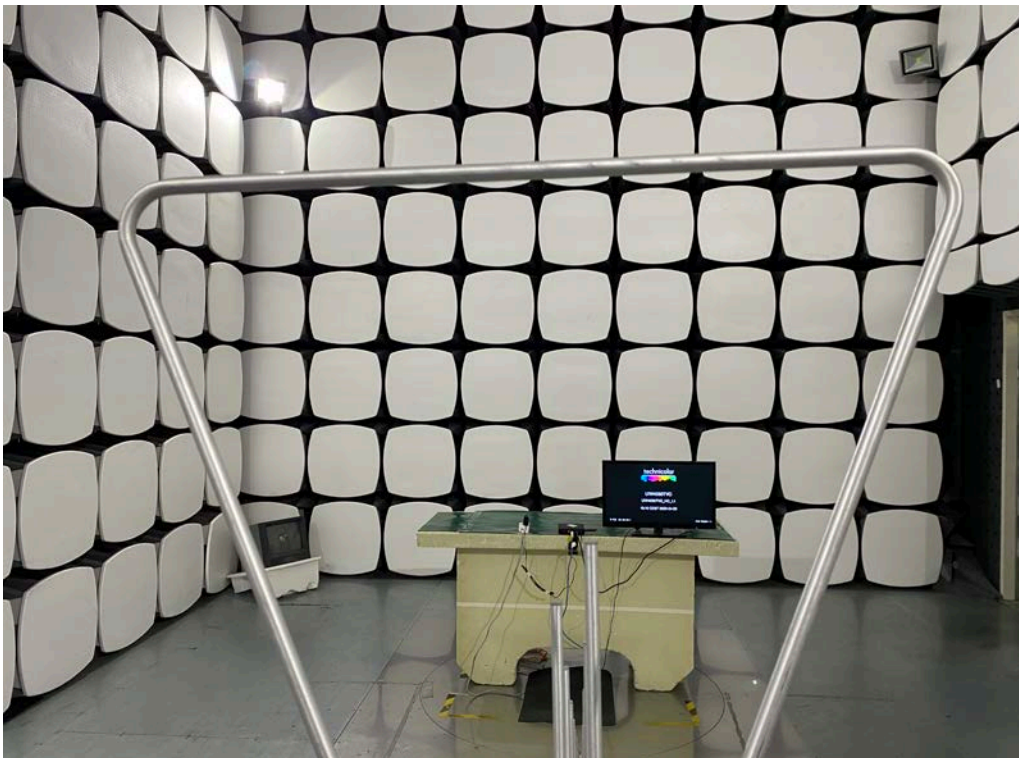
### AC Power Line Conducted Emissions Test Photos



### Conducted Test Photos





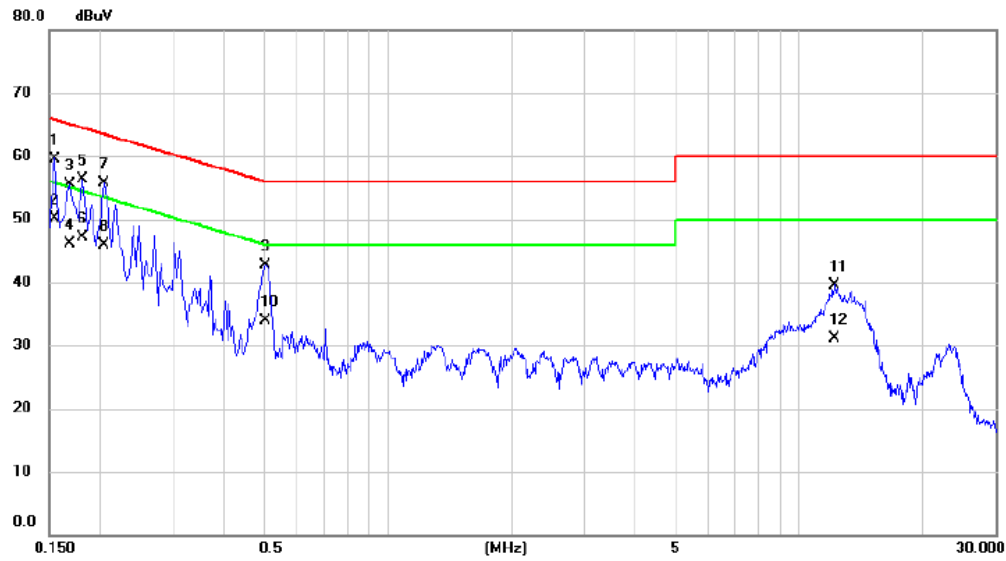
**Radiated Emissions Test Photos****9 kHz to 30 MHz****30 MHz to 1000 MHz**



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



Test Mode	TX Mode_3Mbps Channel 39	Phase	Line
-----------	--------------------------	-------	------



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1545	49.94	9.66	59.60	65.75	-6.15	QP	
2	*	0.1545	40.50	9.66	50.16	55.75	-5.59	AVG	
3		0.1680	45.87	9.67	55.54	65.06	-9.52	QP	
4		0.1680	36.40	9.67	46.07	55.06	-8.99	AVG	
5		0.1815	46.57	9.67	56.24	64.42	-8.18	QP	
6		0.1815	37.50	9.67	47.17	54.42	-7.25	AVG	
7		0.2040	45.95	9.69	55.64	63.45	-7.81	QP	
8		0.2040	36.20	9.69	45.89	53.45	-7.56	AVG	
9		0.5055	33.02	9.76	42.78	56.00	-13.22	QP	
10		0.5055	24.10	9.76	33.86	46.00	-12.14	AVG	
11		12.2145	29.07	10.53	39.60	60.00	-20.40	QP	
12		12.2145	20.50	10.53	31.03	50.00	-18.97	AVG	

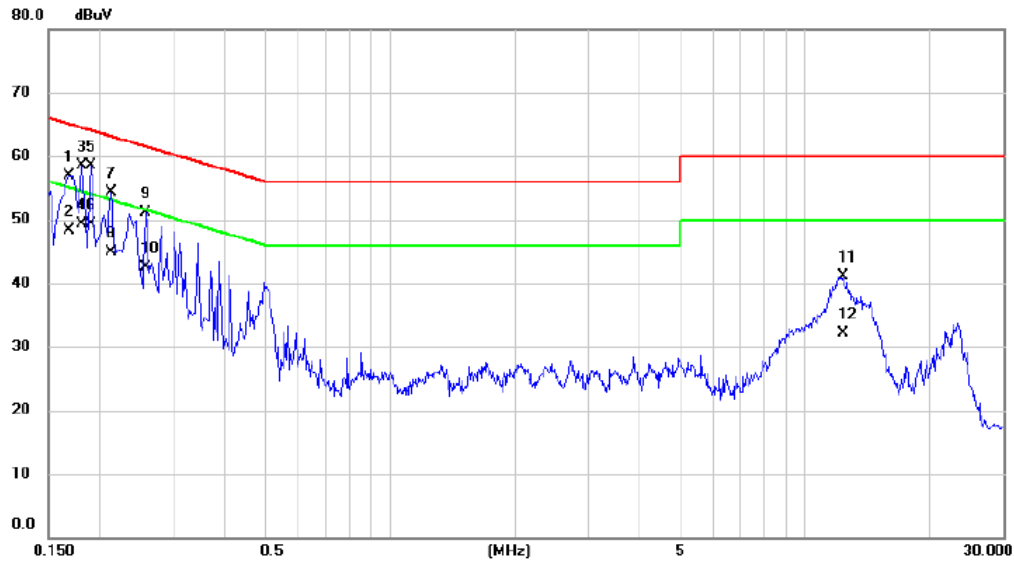
#### REMARKS:

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

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



Test Mode	TX Mode_3Mbps Channel 39	Phase	Neutral
-----------	--------------------------	-------	---------



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Margin dB	Detector	Comment
1		0.1680	47.22	9.71	56.93	65.06	-8.13	QP	
2		0.1680	38.50	9.71	48.21	55.06	-6.85	AVG	
3		0.1815	48.81	9.71	58.52	64.42	-5.90	QP	
4		0.1815	39.50	9.71	49.21	54.42	-5.21	AVG	
5		0.1905	48.70	9.73	58.43	64.01	-5.58	QP	
6	*	0.1905	39.50	9.73	49.23	54.01	-4.78	AVG	
7		0.2130	44.51	9.73	54.24	63.09	-8.85	QP	
8		0.2130	35.20	9.73	44.93	53.09	-8.16	AVG	
9		0.2580	41.32	9.75	51.07	61.50	-10.43	QP	
10		0.2580	32.70	9.75	42.45	51.50	-9.05	AVG	
11		12.3585	30.64	10.55	41.19	60.00	-18.81	QP	
12		12.3585	21.60	10.55	32.15	50.00	-17.85	AVG	

# REMARKS:

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

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



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

Test Mode	TX Mode_3Mbps Channel 39
-----------	--------------------------

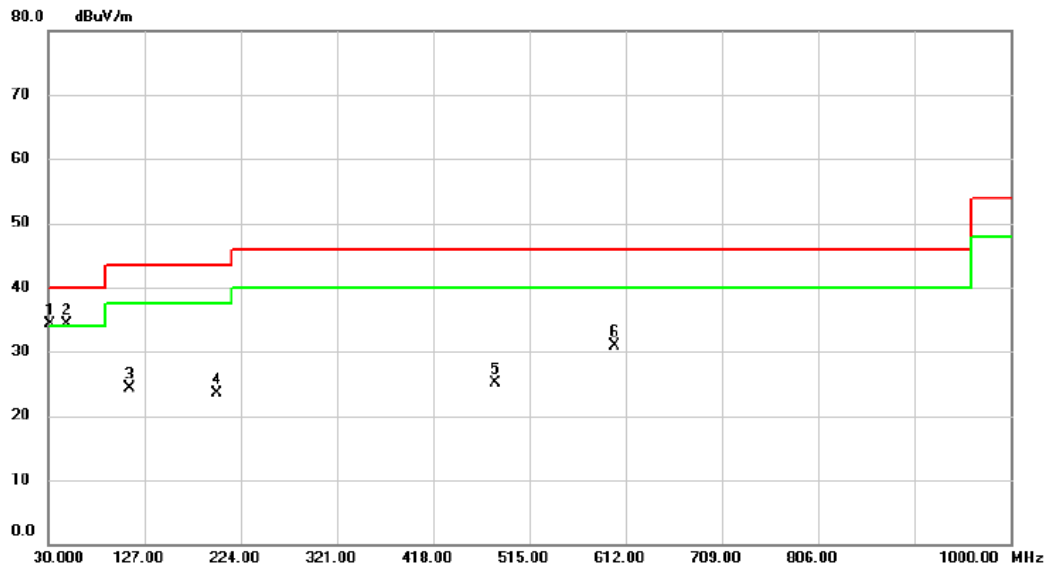
The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.



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



Test Mode	TX Mode_3Mbps Channel 39	Polarization	Vertical
-----------	--------------------------	--------------	----------



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dBuV/m	Margin dB	Detector	Comment
1	*	31.9400	50.08	-15.74	34.34	40.00	-5.66	peak	
2	!	48.4300	48.54	-14.29	34.25	40.00	-5.75	peak	
3		111.4800	39.66	-15.28	24.38	43.50	-19.12	peak	
4		199.7500	39.07	-15.62	23.45	43.50	-20.05	peak	
5		480.0800	32.23	-7.12	25.11	46.00	-20.89	peak	
6		600.3600	35.67	-4.79	30.88	46.00	-15.12	peak	

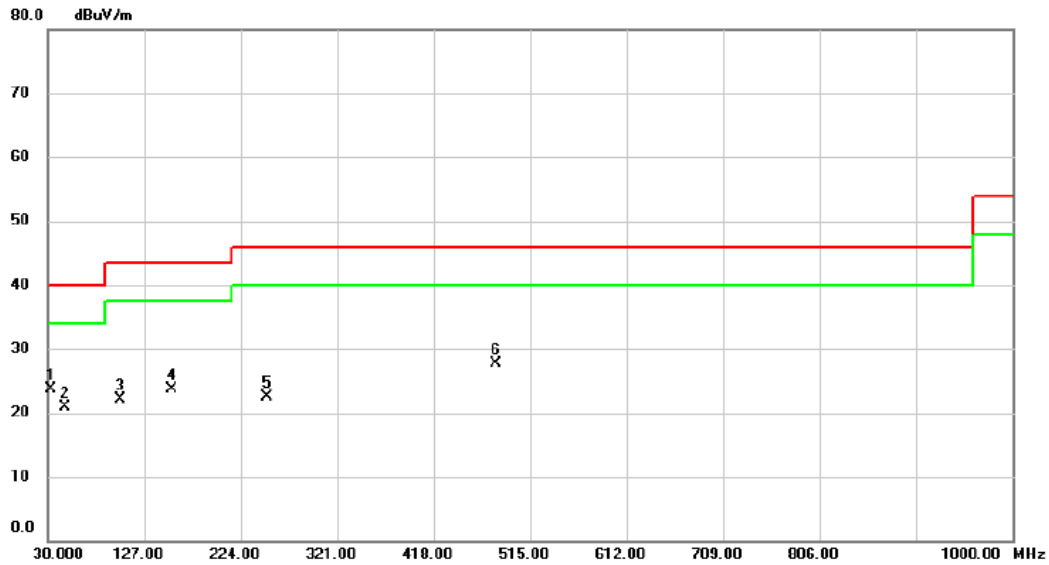
# REMARKS:

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

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



Test Mode	TX Mode_3Mbps Channel 39	Polarization	Horizontal
-----------	--------------------------	--------------	------------



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin	Detector	Comment
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB		
1	*	32.9100	39.26	-15.62	23.64	40.00	-16.36	peak	
2		47.4600	35.18	-14.31	20.87	40.00	-19.13	peak	
3		102.7500	38.75	-16.56	22.19	43.50	-21.31	peak	
4		154.1600	36.49	-12.72	23.77	43.50	-19.73	peak	
5		250.1900	35.75	-13.17	22.58	46.00	-23.42	peak	
6		480.0800	34.80	-7.12	27.68	46.00	-18.32	peak	

# REMARKS:

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



## **APPENDIX D- MAXIMUM OUTPUT POWER**



Test Mode	TX Mode _1Mbps
-----------	----------------

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Test Result
00	2402	4.51	20.97	0.1250	Pass
39	2441	5.00	20.97	0.1250	Pass
78	2480	5.34	20.97	0.1250	Pass

Test Mode	TX Mode _2Mbps
-----------	----------------

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Test Result
00	2402	5.95	20.97	0.1250	Pass
39	2441	6.24	20.97	0.1250	Pass
78	2480	5.95	20.97	0.1250	Pass

Test Mode	TX Mode _3Mbps
-----------	----------------

Channel	Frequency (MHz)	Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Test Result
00	2402	6.38	20.97	0.1250	Pass
39	2441	6.62	20.97	0.1250	Pass
78	2480	6.44	20.97	0.1250	Pass

**End of Test Report**