



# **FCC Radio Test Report** FCC ID: A5MYOGA27ARH7

This report concerns: Original Grant

Project No. 2112C039

Equipment : Personal Computer

: Lenovo **Brand Name** 

**Product Name** : Yoga AIO 7 27ARH7

Series Model : N/A

Applicant : Lenovo (Beijing) Limited

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Date of Receipt : Dec. 08, 2021

Date of Test : Dec. 10, 2021 ~ Jan. 08, 2022

Issued Date : Jan. 28, 2022

Report Version : R01

Test Sample : Engineering Sample No.: DG202112101 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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### 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	18
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 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	25
8.6 TEST RESULTS	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	93
APPENDIX F - MAXIMUM OUTPUT POWER	98
APPENDIX G - CONDUCTED SPURIOUS EMISSIONS	100

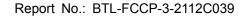




Table of Contents	Page
APPENDIX H - POWER SPECTRAL DENSITY	105



# **REPORT ISSUED HISTORY**

Report Version	Description	Issued Date
R00	Original Issue.	Jan. 27, 2022
R01	Deleted the series model.	Jan. 28, 2022



# 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 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	l

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

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

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB03 (1m) CISPR	CICDD	18 ~ 26.5 GHz	3.62
	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	22°C	53%	AC 120V/60Hz	Aries Tang
Radiated Emissions-9kHz to 30 MHz	17°C	50%	AC 120V/60Hz	Torocat Yuan
Radiated Emissions-30MHz to 1000MHz	20°C	51%	AC 120V/60Hz	Chen Mo
Radiated Emissions-Above 1000MHz	20°C	51%	AC 120V/60Hz	Chen Mo
Bandwidth	24°C	52%	DC 20V	King Huang
Maximum Output Power	24°C	52%	DC 20V	King Huang
Conducted Spurious Emissions	24°C	52%	DC 20V	King Huang
Power Spectral Density	24°C	52%	DC 20V	King Huang



# 2. GENERAL INFORMATION

# 2.1 GENERAL DESCRIPTION OF EUT

Equipment	Personal Computer
Brand Name	Lenovo
Product Name	Yoga AIO 7 27ARH7
Series Model	N/A
Model Difference(s)	N/A
RF Module Brand	Eardatek
RF Module Model	EWN-8821CUN1AA
Power Source	DC Voltage supplied from AC adapter.  1# Manufacturer/Model: Chicony/ADL170SCC3A  2# Manufacturer/Model: Delta/ADL170SDC3A  3# Manufacturer/Model: Delta/ADL300SDC3A  4# Manufacturer/Model: Liteon/ADL170SLC3A  5# Manufacturer/Model: Liteon/ADL300SLC3A
Power Rating	1#, 2#, 4# I/P:100-240V ~ 2.5A 50-60Hz O/P:20.0V === 8.5A 3#, 5# I/P:100-240V ~ 4.5A 50-60Hz O/P:20.0V === 15.0A
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 150 Mbps
Maximum Output Power	IEEE 802.11n(HT40): 18.04 dBm (0.0637 W)

# Note:

### 2. Channel List:

Official Library	marrier List.						
	CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n(HT20) CH03 - CH09 for IEEE 802.11n(HT40)						
Channel	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	high-tek	0ACAVC21014N	PIFA	N/A	2.99
1	SPEED	F-0G-48-6002-002-00	PIFA	N/A	1.38

# Note:

- 1) Both groups of antennas were evaluated and found the worst case was the high-tek, so only the worst case was recorded in this test report.
- 2) The antenna gain is provided by the manufacturer.

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



# 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 N(HT40) Mode Channel 03/06/09	
Mode 5	TX N(HT40) Mode Channel 03	

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 5 TX N(HT40) Mode Channel 03			

Radiated emissions test - Below 1GHz		
Final Test Mode	Description	
Mode 5	TX N(HT40) Mode Channel 03	

Radiated emissions test- Above 1GHz			
Final Test Mode	Description		
Mode 1	TX B Mode Channel 01/06/11		
Mode 2	TX G Mode Channel 01/06/11		
Mode 3	TX N(HT20) Mode Channel 01/06/11		
Mode 4	TX N(HT40) Mode Channel 03/06/09		

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		
Mode 4	TX N(HT40) Mode Channel 03/06/09		



### 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 N(HT40) Mode Channel 03 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 spurious emissions below 1 GHz test, all adapters had been pre-tested and in this report only recorded the worst case.

## 2.3 PARAMETERS OF TEST SOFTWARE

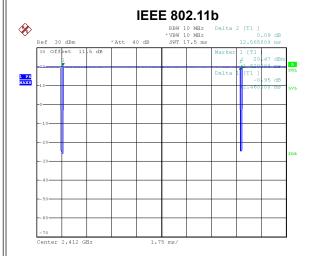
Test Software Version	IPOP V4.0		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	35	37	40
IEEE 802.11g	51	52	52
IEEE 802.11n(HT20)	49	53	47
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(HT40)	45	51	52





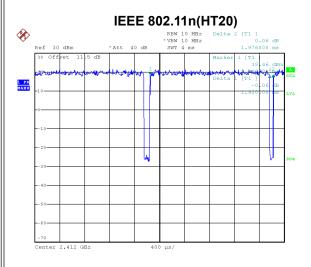
### 2.4 DUTY CYCLE

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.



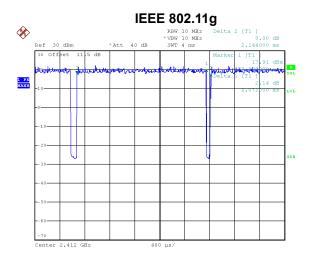
Date: 22.DEC.2021 09:53:33

Duty cycle = 12.460 ms / 12.565 ms = 99.16% Duty Factor = 10 log(1/Duty cycle) = 0.00



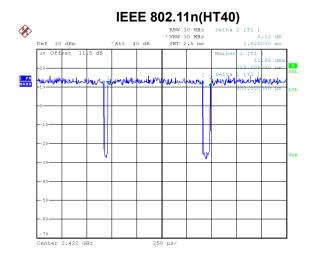
Date: 22.DEC.2021 10:35:56

Duty cycle = 1.920 ms / 1.976 ms = 97.17% Duty Factor = 10 log(1/Duty cycle) = 0.12



Date: 22.DEC.2021 09:56:10

Duty cycle = 2.072 ms / 2.144 ms = 96.64% Duty Factor = 10 log(1/Duty cycle) = 0.15



Date: 22.DEC.2021 09:59:17

Duty cycle = 0.950 ms / 1.025 ms = 92.68% Duty Factor = 10 log(1/Duty cycle) = 0.33





### 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 483 Hz.

For IEEE 802.11n(HT20):

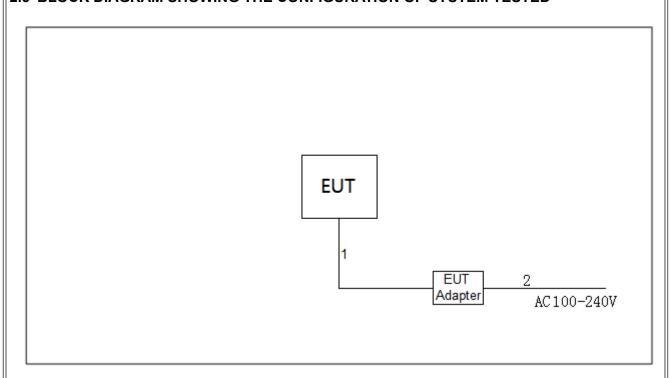
For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 521 Hz.

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 1053 Hz.



# 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
2	AC Cable	NO	NO	1.5m





### 3. AC POWER LINE CONDUCTED EMISSIONS

### **3.1 LIMIT**

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

### NOTE:

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

### 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:

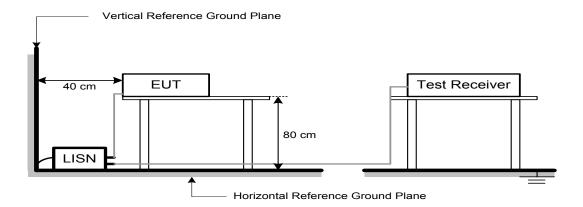
Receiver Parameters	Setting
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

### 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	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)

Fraguency (MHz)	(dBuV/m at 3 m)	
Frequency (MHz)	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

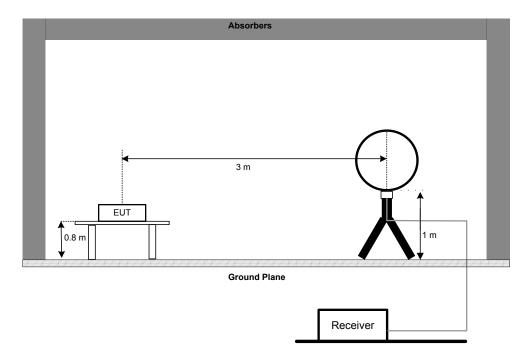


# 4.3 DEVIATION FROM TEST STANDARD

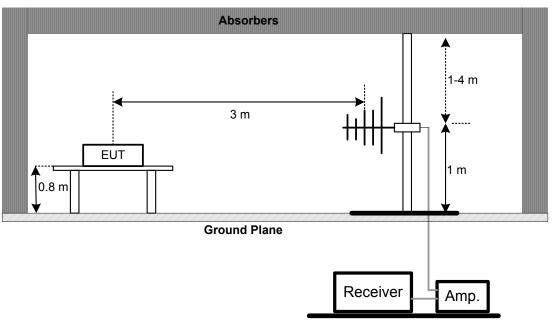
No deviation.

# 4.4 TEST SETUP

### 9 kHz to 30 MHz

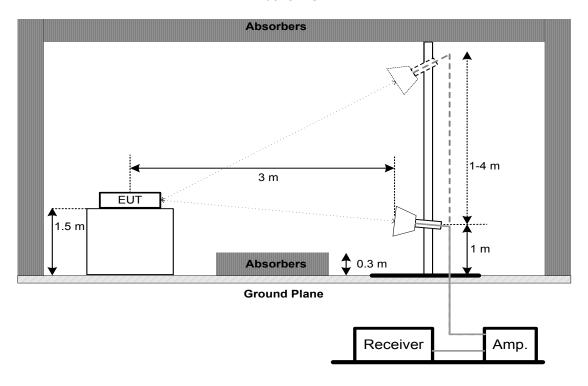


## 30 MHz to 1 GHz





### **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
ECC 15 247(a)(2)	6 dB Bandwidth	Minimum 500 kHz
FCC 15.247(a)(2)	99% Emission Bandwidth	-

### **5.2 TEST PROCEDURE**

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

or oo /v Emission Bahawath.		
Spectrum Parameters	Setting	
Span Frequency	Between 1.5 times and 5.0 times the OBW	
RBW	300 kHz For 20MHz 1 MHz For 40MHz	
VBW	1 MHz For 20MHz 3 MHz For 40MHz	
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 OUTPUT POWER**

# 6.1 LIMIT

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

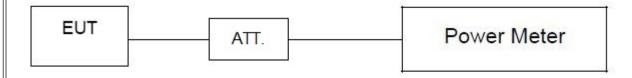
### **6.2 TEST PROCEDURE**

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

### **6.3 DEVIATION FROM STANDARD**

No deviation.

### **6.4 TEST SETUP**



### **6.5 EUT OPERATION CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

### **6.6 TEST RESULTS**

Please refer to the APPENDIX F.



### 7. CONDUCTED SPURIOUS EMISSIONS

### **7.1 LIMIT**

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

### 7.2 TEST PROCEDURE

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

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	25 MHz (20 MHz) / 60 MHz (40 MHz)
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	Feb. 28, 2022			
2	LISN	EMCO	3816/2	52765	Feb. 27, 2022			
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Feb. 27, 2022			
4	50Ω Terminator	SHX	TF5-3	15041305	Feb. 27, 2022			
5	Measurement Farad		EZ-EMC Ver.NB-03A1-01	N/A	N/A			
6	Cable N/A		RG223	12m	Mar. 09, 2022			
7	7 643 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	Feb. 27, 2022				
2*	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Aug. 23, 2024				
3	Cable	N/A	RG 213/U(9kHz~1GHz)	N/A	May 27, 2022				
4	Measurement Farad		EZ-EMC Ver.NB-03A1-01	N/A	N/A				
5	966 Chamber Room	Chamber Room ETS		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. 15, 2022				
2	Amplifier	HP	8447D	2944A08742	Feb. 28, 2022				
3	Cable	able emci LMR-400		N/A	Nov. 30, 2022				
4	Controller	oller CT SC100 N/A		N/A	N/A				
5	Controller	Controller MF MF-7802 MF780208		MF780208416	N/A				
6	Receiver Agilent		N9038A	MY52130039	Mar. 19, 2022				
7	Measurement Farad		EZ-EMC Ver.NB-03A1-01 N/A		N/A				
8	966 Chamber Room	RM	9*6*6	N/A Jul. 24, 202					

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. 21, 2022			
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 30, 2022			
3	Amplifier	Agilent	8449B	3008A02584	Jul. 10, 2022			
4	Controller	CT	SC100	N/A	N/A			
5	Controller	MF	MF-7802	MF780208416	N/A			
6	Receiver	Agilent	N9038A	MY52130039	Mar. 19, 2022			
7	EXA Spectrum Analyzer	Keysight	N9010A	MY56480488	Feb. 28, 2022			
8	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330 -K	619413	Jul. 16, 2022			
9	Cable	N/A	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. 10, 2022			
12	Measurement Software	l Faran		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 until							
1	1 Spectrum Analyzer R&S FSP40 100185 Jul. 10, 20							
2	2 Attenuator WOKEN 6SM3502 VAS1214NL Feb. 07, 2022							
3 RF Cable Tongkaichuan N/A N/A N/A								
4	DC Block	Mini	N/A	N/A	N/A			

	Maximum Output Power								
Item	Item Kind of Equipment Manufacturer Type No. Serial No. Calibrated of Equipment Calibrated of Equipmen								
1	Peak Power Analyzer	r Keysight 8990B		MY51000506 Jul. 10, 2022					
2	Wideband power sensor	Keysight	N1923A	MY58310004	Jul. 10, 2022				
3	3 Attenuator WOKEN		6SM3502	VAS1214NL	Feb. 07, 2022				
4	RF Cable	Tongkaichuan	N/A	N/A	N/A				

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

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

<sup>&</sup>quot;\*" calibration period of equipment list is three year.



# 10. EUT TEST PHOTO





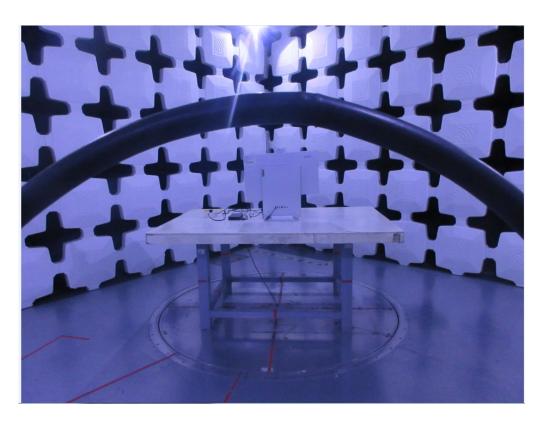




# **Radiated Emissions Test Photos**

# 9 kHz to 30 MHz



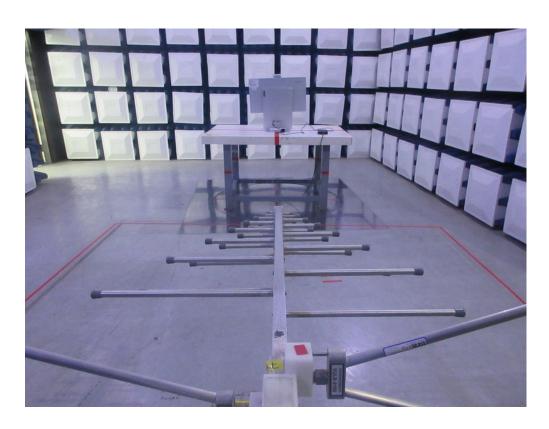




# **Radiated Emissions Test Photos**

# 30 MHz to 1 GHz







# **Radiated Emissions Test Photos**

# Above 1 GHz







# **Conducted Test Photos**



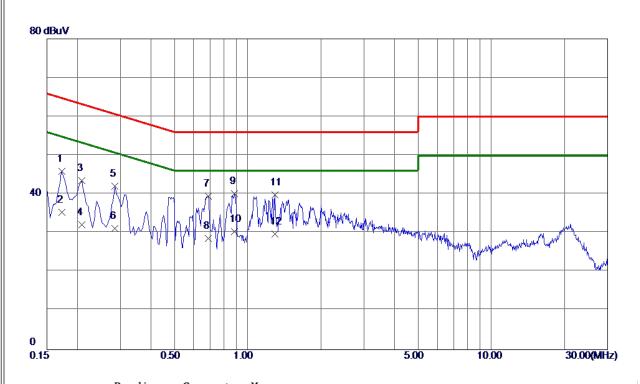




# **APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS**







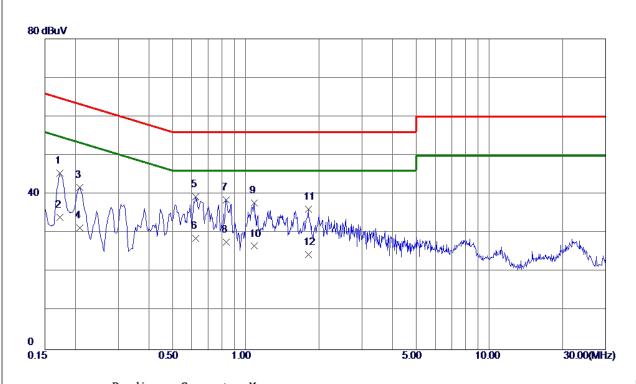
No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	0. 1725	36. 12	9. 79	45. 91	64. 84	-18. 93	QP	
2	0.1725	25. 60	9. 79	35. 39	54.84	<b>−19. 45</b>	AVG	
3	0. 2085	33. 63	9.82	43. 45	63. 26	-19. 81	QP	
4	0. 2085	22. 30	9.82	32. 12	53. 26	-21. 14	AVG	
5	0. 2850	32. 24	9. 83	42.07	60.67	-18. 60	QP	
6	0. 2850	21. 40	9. 83	31. 23	50.67	<b>−19. 44</b>	AVG	
7	0.6900	29.65	9. 91	39. 56	56.00	-16. 44	QP	
8	0.6900	18. 70	9. 91	28. 61	46.00	-17. 39	AVG	
9	0.8835	30. 18	9. 98	40. 16	56.00	-15. 84	QP	
10 *	0.8835	20. 41	9. 98	30. 39	46.00	-15. 61	AVG	
11	1. 2930	29. 72	10. 09	39. 81	56.00	-16. 19	QP	
12	1. 2930	19. 61	10. 09	29. 70	46.00	-16. 30	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. 1725	35. 53	9. 84	45. 37	64. 84	<b>−19. 47</b>	QP	
2	0. 1725	24. 30	9.84	34. 14	54.84	-20. 70	AVG	
3	0. 2085	31. 95	9. 85	41.80	63. 26	<b>-21.46</b>	QP	
4	0. 2085	21. 50	9.85	31. 35	53. 26	-21. 91	AVG	
5 *	0.6225	29. 35	9. 98	39. 33	56.00	-16. 67	QP	
6	0.6225	18. 70	9. 98	28. 68	46.00	-17. 32	AVG	
7	0.8295	28. 49	10. 05	38. 54	56.00	-17. 46	QP	
8	0.8295	17. 60	10. 05	27. 65	46.00	-18. 35	AVG	
9	1. 0859	27. 57	10. 13	37. 70	56.00	-18. 30	QP	
10	1. 0859	16. 51	10. 13	26. 64	46.00	-19. 36	AVG	
11	1.8060	25. 90	10. 22	36. 12	56. 00	-19. 88	QP	
12	1.8060	14. 30	10. 22	24. 52	46. 00	-21. 48	AVG	

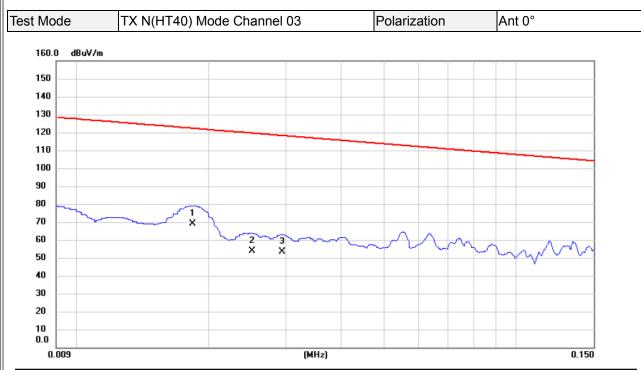
### **REMARKS**:

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



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

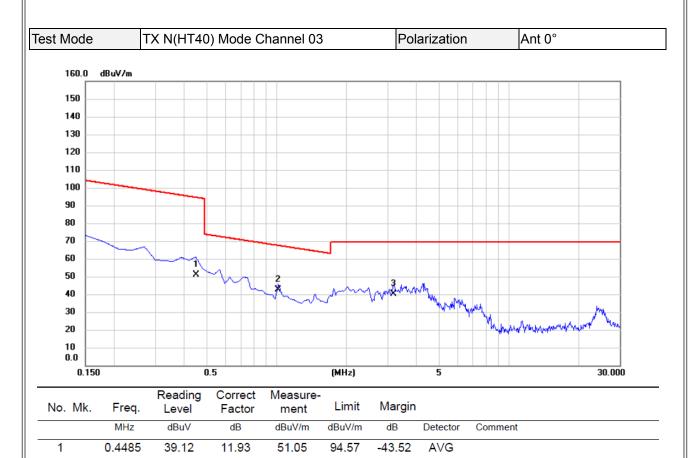




No. Mk.	Freq.	_	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	0.0184	55.32	13.60	68.92	122.31	-53.39	AVG	
2	0.0251	40.81	12.96	53.77	119.61	-65.84	AVG	
3	0.0294	40.63	12.85	53.48	118.24	-64.76	AVG	

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





67.47

69.54

-24.99

-29.33

QP

QP

# **REMARKS**:

2

3

1.0156

3.1947

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

30.84

29.63

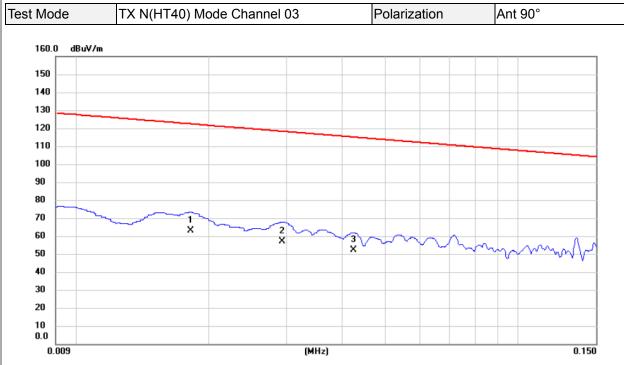
11.64

10.58

42.48

40.21

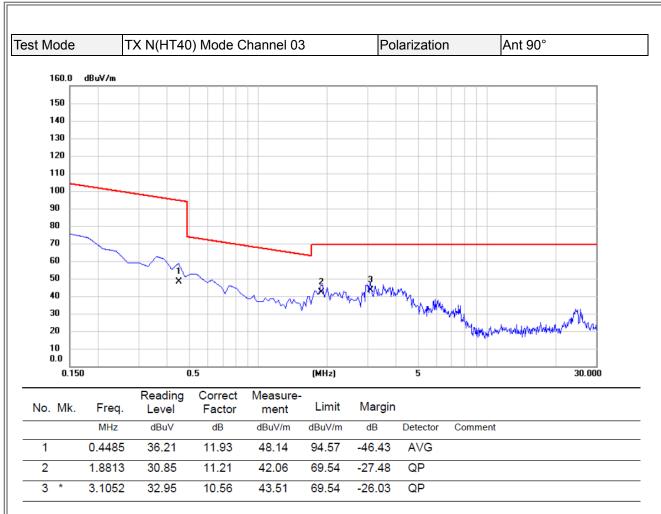




No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	0.0182	49.39	13.66	63.05	122.40	-59.35	AVG	
2	0.0293	44.28	12.85	57.13	118.27	-61.14	AVG	
3	0.0424	39.62	12.50	52.12	115.06	-62.94	AVG	

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



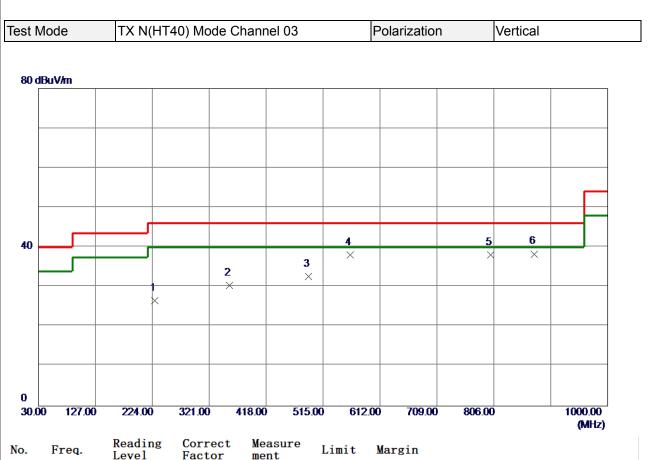


- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



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

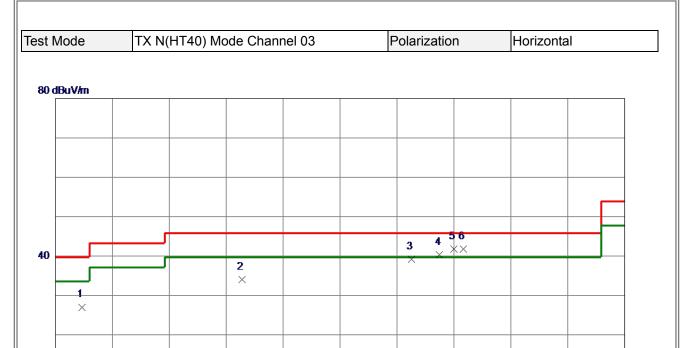




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	227. 8800	40. 73	-14. 12	26. 61	46.00	-19. 39	Peak	
2	355. 9200	40. 24	-9. 82	30. 42	46.00	-15. 58	Peak	
3	489. 7800	39. 37	-6. 72	32. 65	46.00	-13. 35	Peak	
4	561. 5600	43. 64	-5. 59	38. 05	46.00	-7. 95	Peak	
5	800. 1800	38. 70	-0. 68	38. 02	46.00	-7. 98	Peak	
6 *	874. 8700	38. 51	-0. 19	38. 32	46.00	-7. 68	Peak	

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





MHz dBuV/m dB dBuV/m dBuV/m dB Detector Comment  75,5899 44,89 -17,45 27,44 40.00 -12,56 Peak	
1 75 5899 44 89 -17 45 27 44 40 00 -12 56 Peak	
1 10.0035 11.05 11.10 21.11 10.00 12.00 1 cak	
2 348. 1600 44. 41 -10. 00 34. 41 46. 00 -11. 59 Peak	
3 637. 2199 43. 47 -3. 94 39. 53 46. 00 -6. 47 Peak	
4 684. 7500 43. 97 -3. 27 40. 70 46. 00 -5. 30 Peak	
5 * 709.0000 44.93 -2.87 42.06 46.00 -3.94 Peak	
6 725. 4900 44. 55 -2. 50 42. 05 46. 00 -3. 95 Peak	

515.00

612.00

709.00

806.00

1000.00 (MHz)

418.00

# **REMARKS**:

30.00

127.00

224.00

321.00

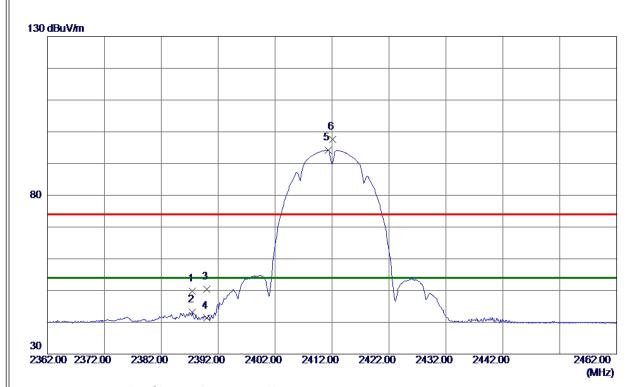
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.



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





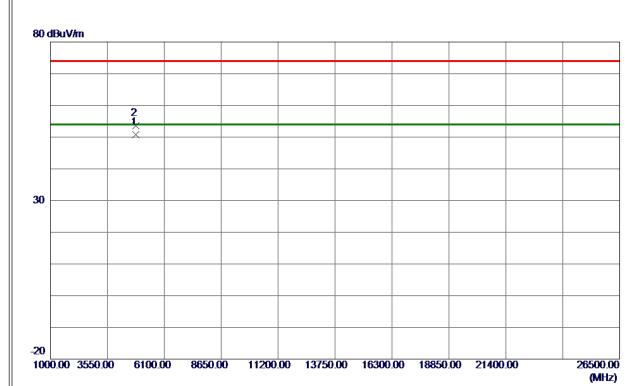


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2387. 5000	41. 53	8. 30	49.83	74.00	-24. 17	Peak	
2	2387. 5000	34. 81	8. 30	43. 11	54.00	-10.89	AVG	
3	2390. 0000	42. 13	8. 31	50. 44	74.00	-23. 56	Peak	
4	2390. 0000	32. 99	8. 31	41. 30	54.00	-12. 70	AVG	
5 *	2411. 3000	85. 93	8. 33	94. 26	54. 00	40. 26	AVG	No Limit
6	2412. 1000	89. 23	8. 33	97. 56	74. 00	23. 56	Peak	No Limit

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





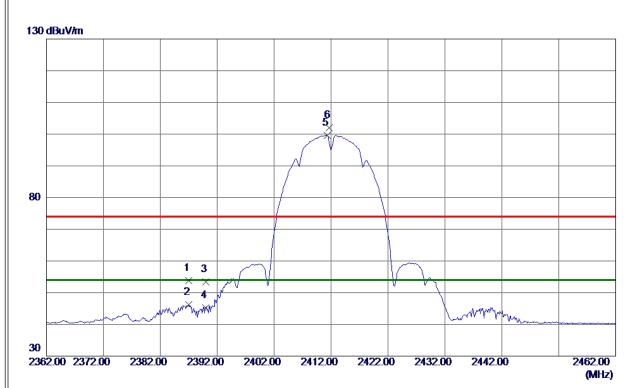


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4823. 9880	45. 66	5. 23	50. 89	54.00	-3. 11	AVG	
2	4824, 0330	48. 32	5. 23	53, 55	74. 00	-20. 45	Peak	

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



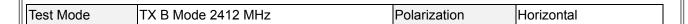


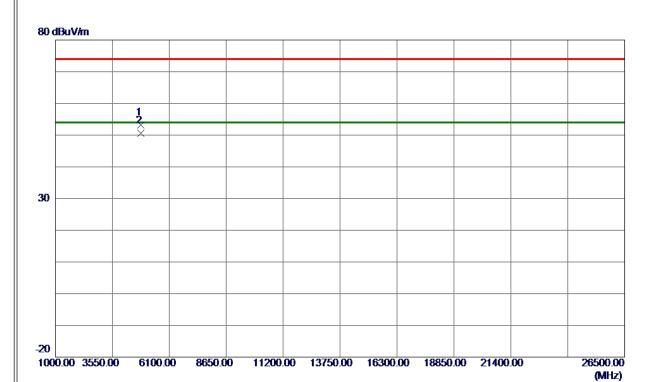


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2387. 0000	45. 47	8. 30	53. 77	74.00	-20. 23	Peak	
2	2387. 0000	37. 86	8. 30	46. 16	54.00	-7. 84	AVG	
3	2390. 0000	<b>45</b> . 12	8. 31	53. 43	74.00	-20. 57	Peak	
4	2390. 0000	36. 82	8. 31	45. 13	54.00	-8. 87	AVG	
5 *	2411. 3000	91. 25	8. 33	99. 58	54.00	45. 58	AVG	No Limit
6	2411. 7000	93. 68	8. 33	102. 01	74.00	28. 01	Peak	No Limit

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



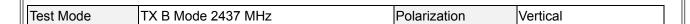


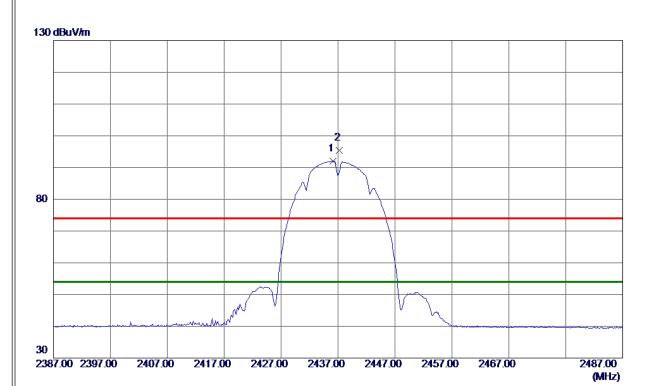


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4823. 9300	47. 90	5. 23	53. 13	74.00	-20.87	Peak	
2 *	4824. 0000	45. 30	5. 23	50. 53	54.00	-3. 47	AVG	

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





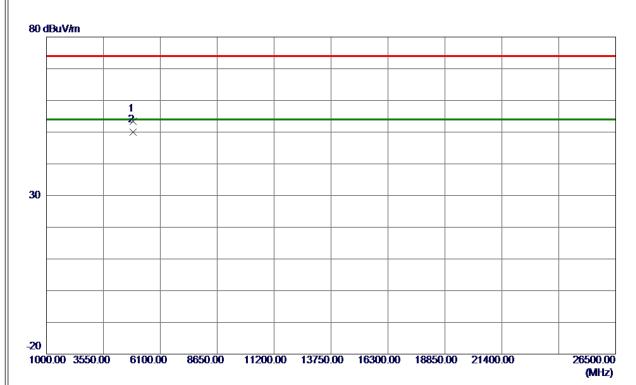


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2436. 1000	83. 73	8. 36	92. 09	54.00	38. 09	AVG	No Limit
2	2437. 2000	86. 95	8. 37	95. 32	74. 00	21. 32	Peak	No Limit

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





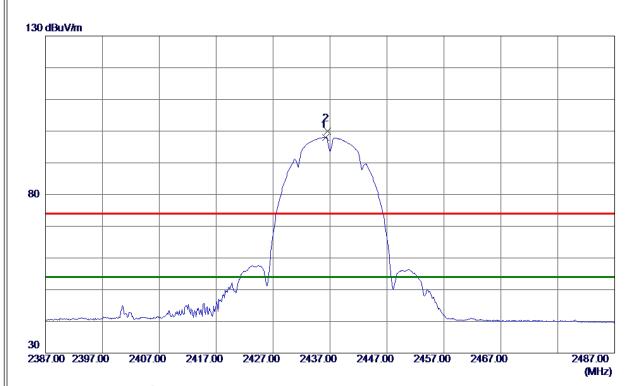


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874. 0019	47. 97	5. 48	53. 45	74.00	-20.55	Peak	
2 *	4874. 0150	44. 45	5. 48	49. 93	54. 00	-4. 07	AVG	

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





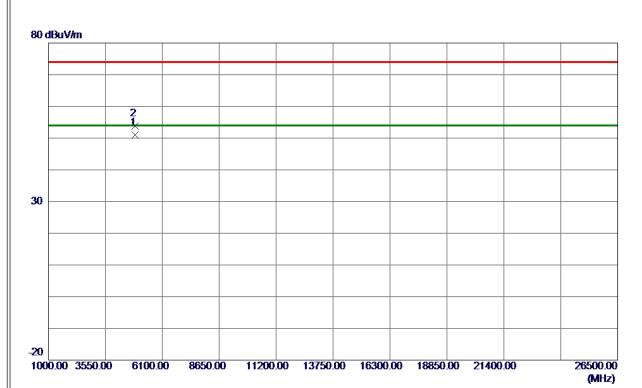


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2436. 2000	89. 67	8. 36	98. 03	54.00	44. 03	AVG	No Limit
2	2436.6000	91. 69	8. 36	100. 05	74.00	26. 05	Peak	No Limit

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



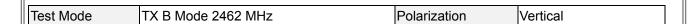


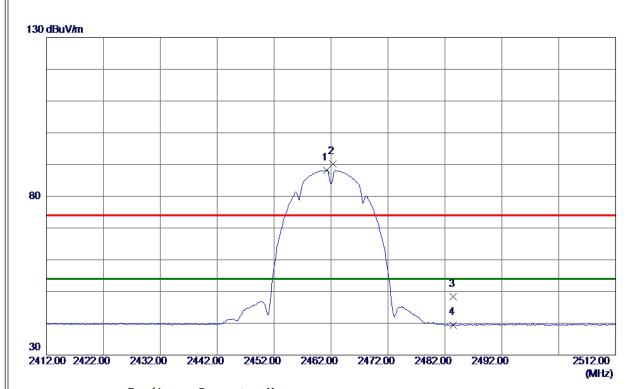


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4873. 9720	45. 44	5. 48	50. 92	54.00	-3. 08	AVG	
2	4874, 1150	48. 24	5. 48	53. 72	74. 00	-20, 28	Peak	

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



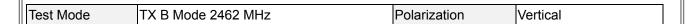


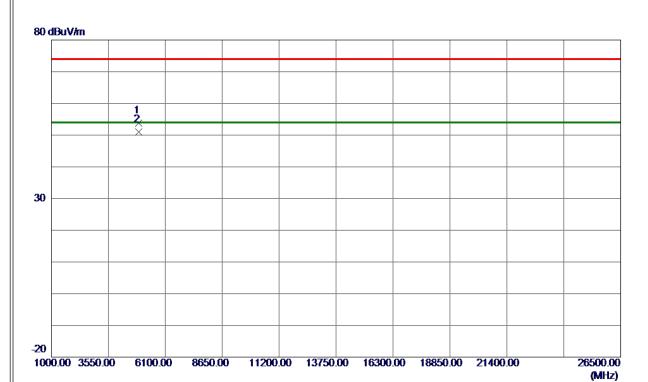


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2461. 2000	79. 84	8. 40	88. 24	54.00	34. 24	AVG	No Limit
2	2462. 3000	81. 85	8. 40	90. 25	74.00	16. 25	Peak	No Limit
3	2483. 5000	40.07	8. 42	48. 49	74.00	-25. 51	Peak	
4	2483. 5000	31. 08	8. 42	39. 50	54.00	-14. 50	AVG	

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





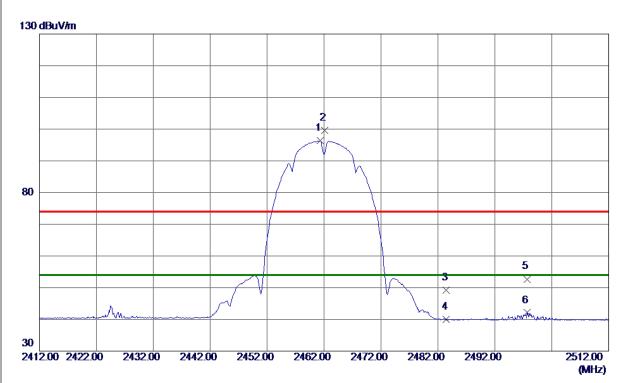


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4923. 9770	48. 07	5. 73	53. 80	74.00	-20. 20	Peak	
2 *	4924. 0099	45. 22	5. 73	50. 95	54. 00	-3. 05	AVG	

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



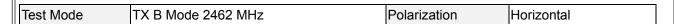


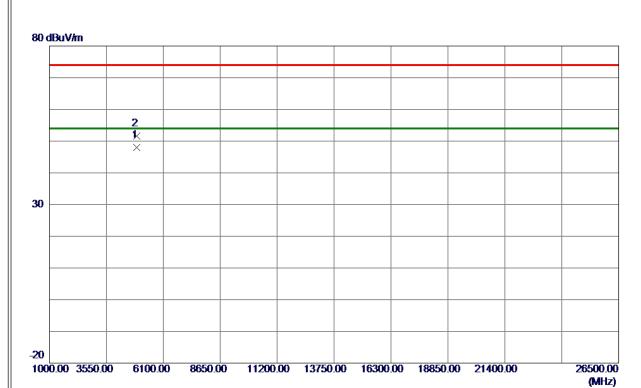


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2461. 3000	87. 91	8. 40	96. 31	54.00	42. 31	AVG	No Limit
2	2462. 1000	91. 19	8. 40	99. 59	74.00	25. 59	Peak	No Limit
3	2483. 5000	40.86	8. 42	49. 28	74.00	-24. 72	Peak	
4	2483. 5000	31. 49	8. 42	39. 91	54.00	-14. 09	AVG	
5	2497. 7000	44. 26	8. 44	52. 70	74. 00	-21. 30	Peak	
6	2497. 7000	33. 66	8. 44	42. 10	54. 00	-11. 90	AVG	

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





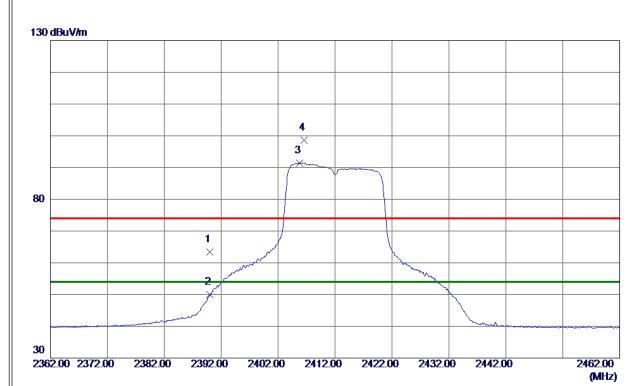


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4923. 9700	42. 20	5. 73	47. 93	54.00	-6. 07	AVG	
2	4924 0400	45 87	5 73	51 60	74 00	-22 40	Peak	

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



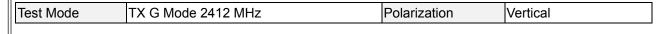


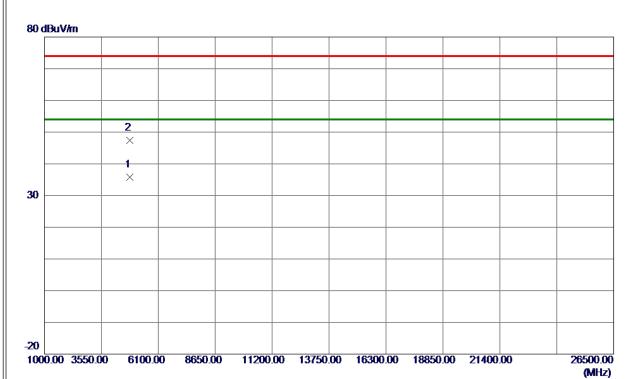


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	55. 04	8. 31	63. 35	74.00	-10.65	Peak	
2	2390. 0000	41.72	8. 31	50. 03	54.00	-3. 97	AVG	
3 *	2405. 8000	83. 15	8. 33	91. 48	54.00	37. 48	AVG	No Limit
4	2406. 6000	90. 22	8. 33	98. 55	74.00	24. 55	Peak	No Limit

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





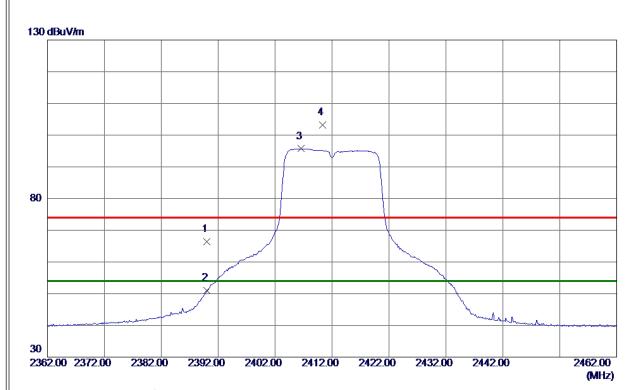


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4823. 6629	30. 49	5. 23	35. 72	54.00	-18. 28	AVG	
2	4825, 9049	42. 13	5. 24	47. 37	74.00	-26. 63	Peak	

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





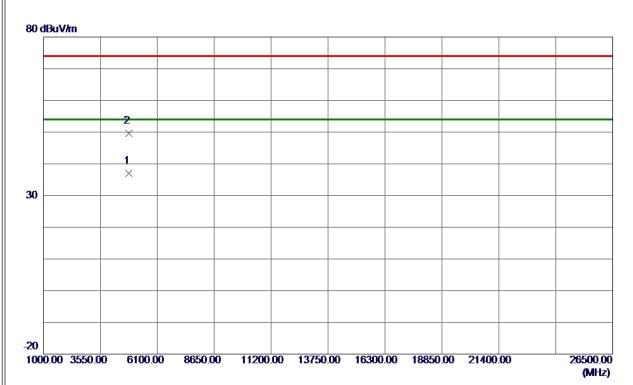


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	58. 11	8. 31	66. 42	74.00	-7. 58	Peak	
2	2390. 0000	42.64	8. 31	50. 95	54.00	-3. 05	AVG	
3 *	2406.6000	87. 37	8. 33	95. 70	54.00	41. 70	AVG	No Limit
4	2410. 3000	94. 83	8. 33	103. 16	74. 00	29. 16	Peak	No Limit

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





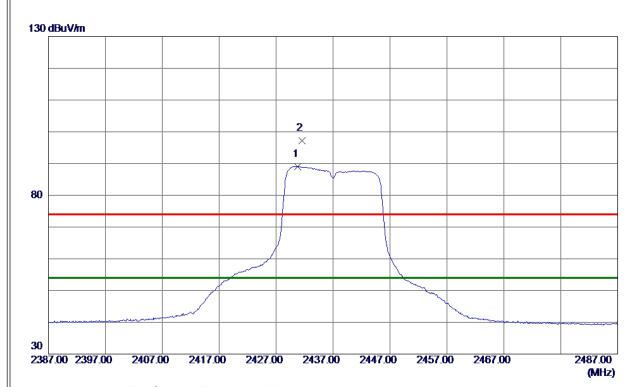


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4823. 7519	31. 70	5. 23	36. 93	54.00	-17.07	AVG	
2	4825, 1200	44. 31	5. 23	49. 54	74. 00	-24. 46	Peak	

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





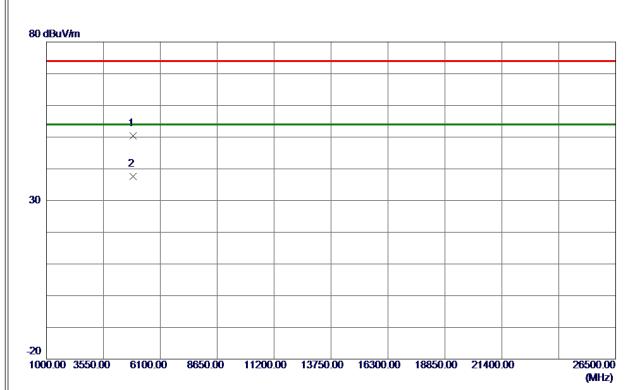


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2430. 8000	80. 72	8. 36	89. 08	54.00	35. 08	AVG	No Limit
2	2431. 5000	88. 84	8. 36	97. 20	74. 00	23. 20	Peak	No Limit

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





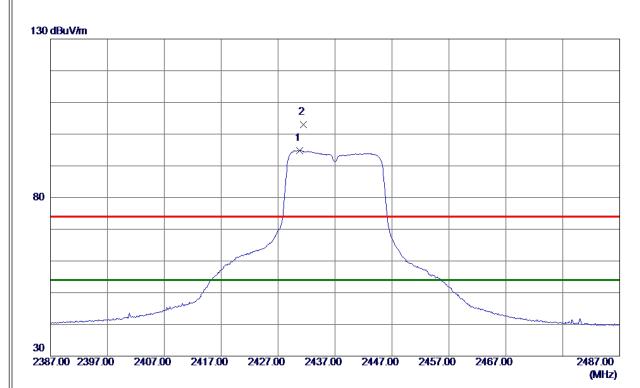


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4874. 5600	44. 85	5. 48	50. 33	74.00	-23. 67	Peak	
2 *	4874, 7799	32. 19	5. 49	37. 68	54. 00	-16. 32	AVG	

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





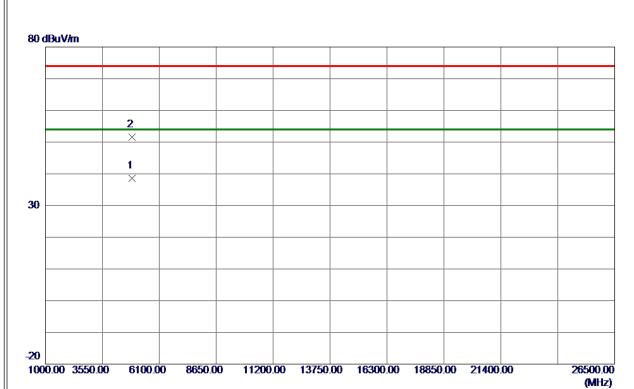


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2430. 8000	86. 44	8. 36	94. 80	54.00	40.80	AVG	No Limit
2	2431. 4000	94. 61	8. 36	102. 97	74. 00	28. 97	Peak	No Limit

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





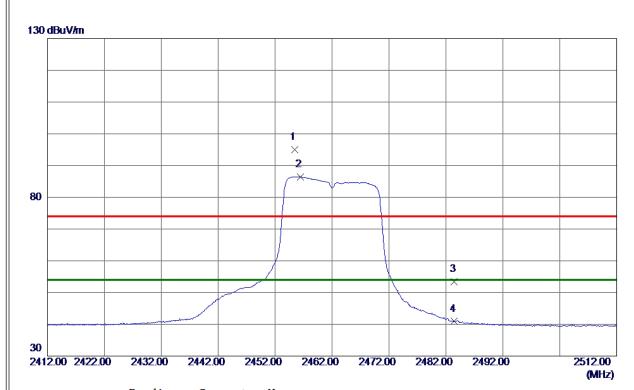


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4874. 8980	33. 17	5. 49	38. 66	54.00	-15. 34	AVG	
2	4875. 7080	46. 02	5. 49	51. 51	74. 00	-22. 49	Peak	

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





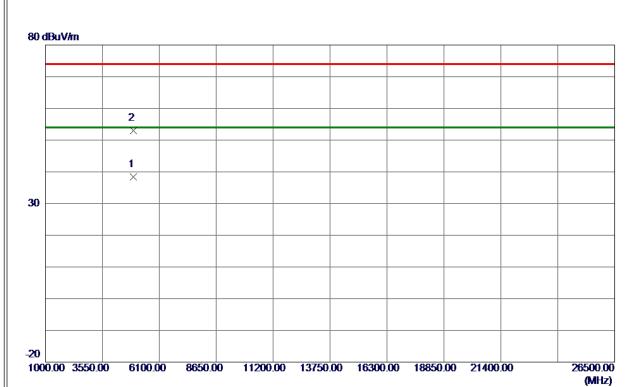


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2455. 4000	86. 56	8. 39	94. 95	74.00	20. 95	Peak	No Limit
2 *	2456. 4000	78. 09	8. 39	86. 48	54.00	32. 48	AVG	No Limit
3	2483. 5000	44. 90	8. 42	53. 32	74.00	-20. 68	Peak	
4	2483. 5000	32. 48	8. 42	40. 90	54.00	-13. 10	AVG	

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





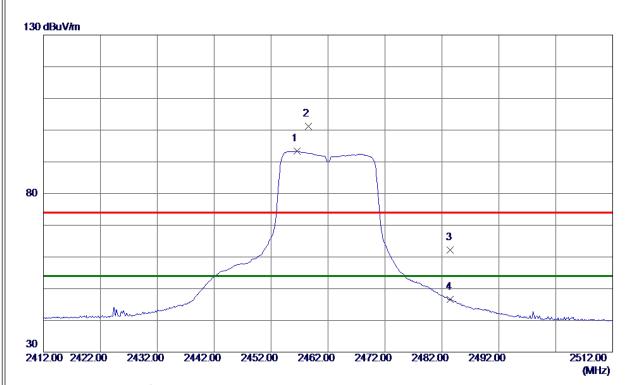


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4924. 8050	32. 61	5. 74	38. 35	54.00	-15. 65	AVG	
2	4925. 7300	47. 28	5. 74	53. 02	74. 00	-20. 98	Peak	

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



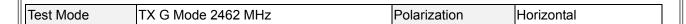


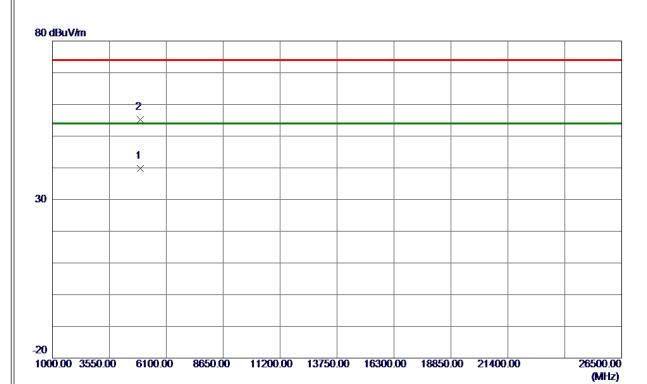


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2456. 5000	84. 97	8. 39	93. 36	54.00	39. 36	AVG	No Limit
2	2458. 5000	92. 79	8. 39	101. 18	74.00	27. 18	Peak	No Limit
3	2483. 5000	53. 77	8. 42	62. 19	74.00	-11. 81	Peak	
4	2483. 5000	38. 17	8. 42	46. 59	54. 00	<b>-7. 41</b>	AVG	

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





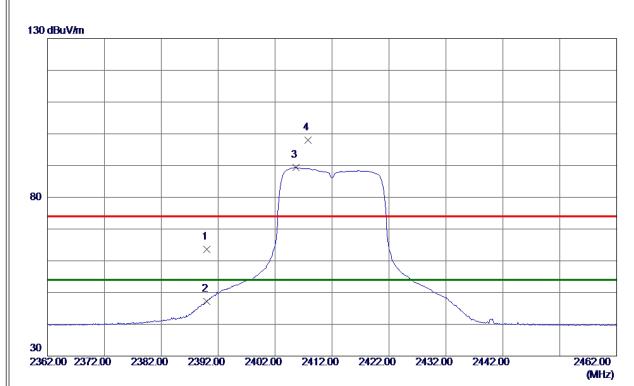


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4925. 1770	34. 03	5. 74	39. 77	54.00	-14. 23	AVG	
2	4925, 8580	49. 41	5. 74	55. 15	74. 00	-18. 85	Peak	

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



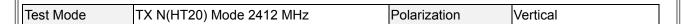


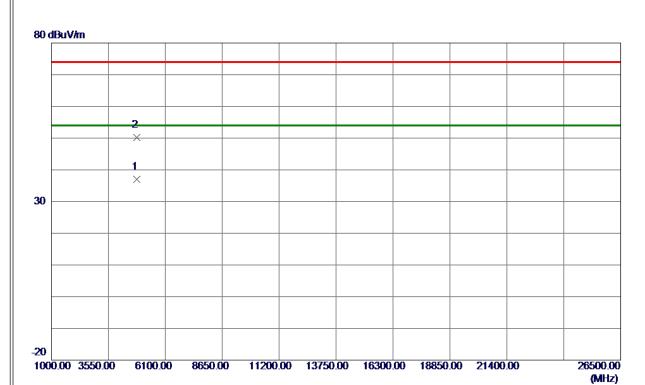


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	55. 37	8. 31	63. 68	74.00	-10. 32	Peak	
2	2390. 0000	38. 90	8. 31	47. 21	54.00	-6. 79	AVG	
3 *	2405. 7000	81. 03	8. 33	89. 36	54.00	35. 36	AVG	No Limit
4	2407. 8000	89. 59	8. 33	97. 92	74.00	23. 92	Peak	No Limit

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





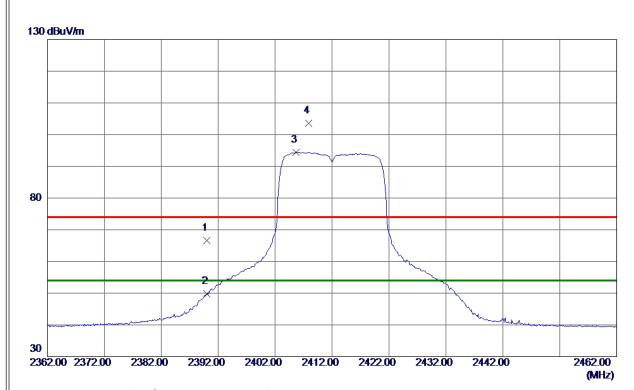


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4822. 7250	31. 74	5. 22	36. 96	54.00	-17.04	AVG	
2	4825. 0950	45. 05	5. 23	50. 28	74. 00	-23. 72	Peak	

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





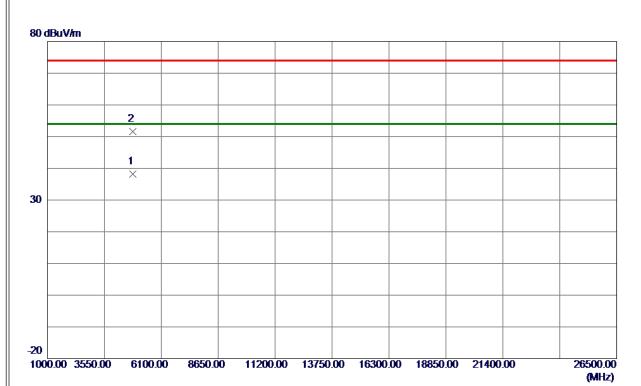


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	58. 25	8. 31	66. 56	74.00	-7. 44	Peak	
2	2390. 0000	41. 41	8. 31	49. 72	54.00	<b>-4.</b> 28	AVG	
3 *	2405. 7000	86. 16	8. 33	94. 49	54.00	40. 49	AVG	No Limit
4	2407. 9000	95. 27	8. 33	103. 60	74. 00	29. 60	Peak	No Limit

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





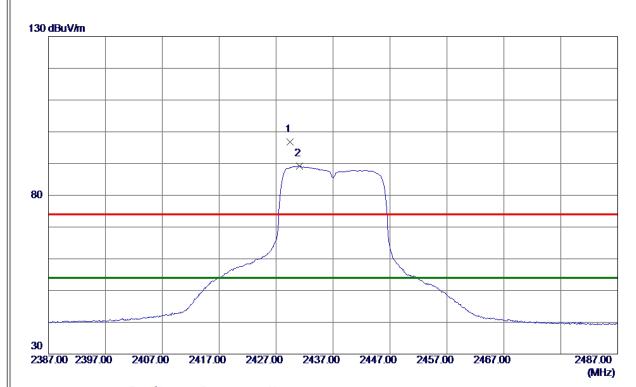


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4822. 8250	33. 06	5. 22	38. 28	54. 00	-15. 72	AVG	
2	4825. 1720	46. 29	5. 23	51. 52	74. 00	-22. 48	Peak	

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





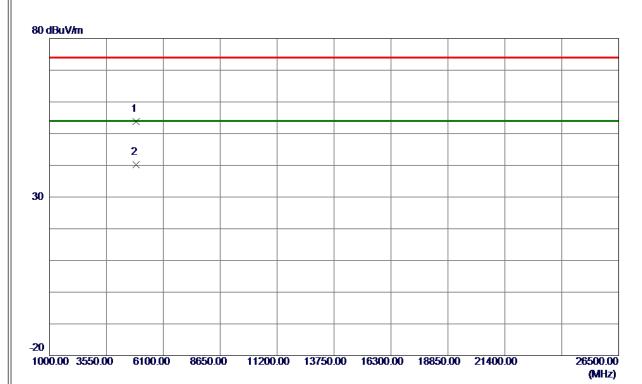


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2429. 4000	88. 44	8. 36	96. 80	74.00	22.80	Peak	No Limit
2 *	2431. 1000	80. 85	8. 36	89. 21	54.00	35. 21	AVG	No Limit

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





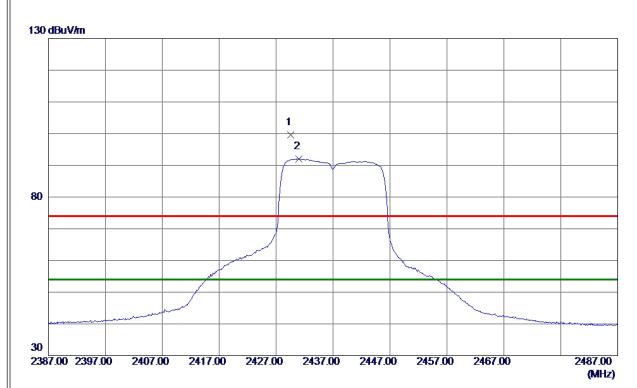


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4872. 2270	48. 37	5. 47	53. 84	74. 00	-20. 16	Peak	
2 *	4873. 8580	34. 65	5. 48	40. 13	54. 00	-13. 87	AVG	

- (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	2429. 6000	91. 23	8. 36	99. 59	74.00	25. 59	Peak	No Limit
2 *	2431. 0000	83. 69	8. 36	92. 05	54.00	38. 05	AVG	No Limit

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





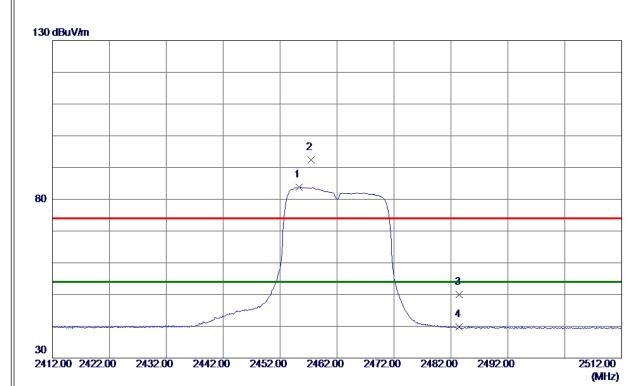


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4872. 3450	50. 48	5. 47	55. 95	74.00	-18. 05	Peak	
2 *	4874. 0070	36. 69	5. 48	42. 17	54. 00	-11. 83	AVG	

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





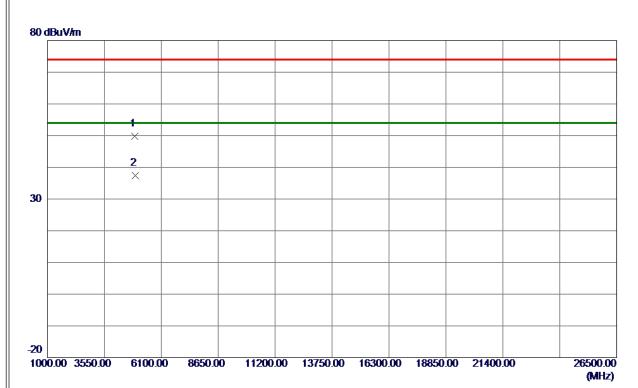


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2455. 3000	75. 33	8. 39	83. 72	54.00	29. 72	AVG	No Limit
2	2457. 4000	84. 07	8. 39	92. 46	74.00	18. 46	Peak	No Limit
3	2483. 5000	41.61	8. 42	50. 03	74.00	-23. 97	Peak	
4	2483. 5000	31. 31	8. 42	39. 73	54. 00	-14. 27	AVG	

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



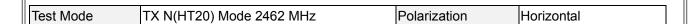


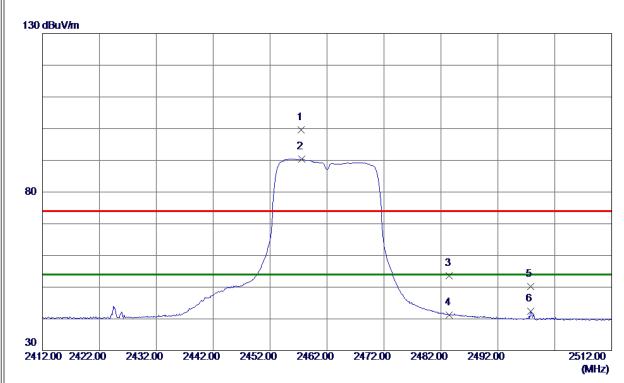


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4922. 4900	44. 15	5. 73	49. 88	74. 00	-24. 12	Peak	
2 *	4925. 4580	31. 70	5. 74	37. 44	54. 00	-16. 56	AVG	

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



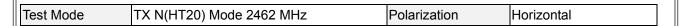




No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2457. 5000	91. 15	8. 39	99. 54	74.00	25. 54	Peak	No Limit
2 *	2457. 6000	82. 00	8. 39	90. 39	<b>54.00</b>	36. 39	AVG	No Limit
3	2483. 5000	45. 23	8. 42	53. 65	74.00	-20. 35	Peak	
4	2483. 5000	32. 84	8. 42	41. 26	<b>54.00</b>	-12. 74	AVG	
5	2497. 8000	41.81	8. 44	50. 25	74.00	-23. 75	Peak	
6	2497. 8000	33. 87	8. 44	42. 31	<b>54.00</b>	-11. 69	AVG	

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





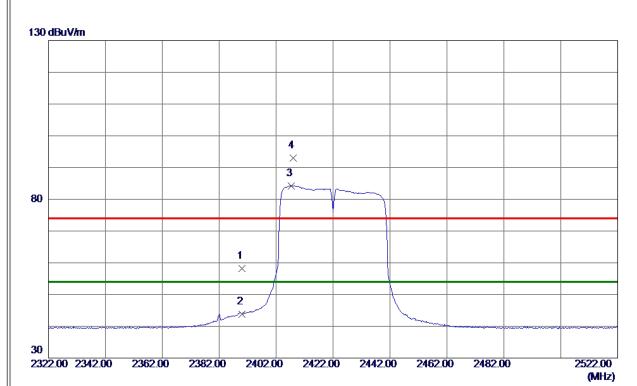


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4924. 5730	47. 88	5. 74	53. 62	74.00	-20. 38	Peak	
2 *	4925. 4900	35. 08	5. 74	40. 82	54. 00	-13. 18	AVG	

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





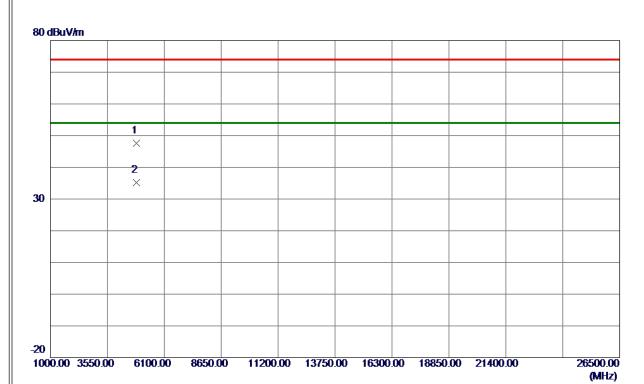


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	49.85	8. 31	58. 16	74.00	-15. 84	Peak	
2	2390. 0000	35. 57	8. 31	43.88	54.00	-10. 12	AVG	
3 *	2407. 4000	75. 95	8. 33	84. 28	54.00	30. 28	AVG	No Limit
4	2408. 0000	84. 69	8. 33	93. 02	74.00	19. 02	Peak	No Limit

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





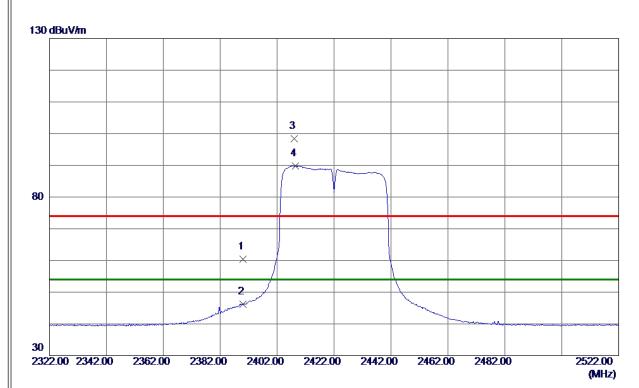


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4844. 5970	42. 35	5. 33	47. 68	74.00	-26. 32	Peak	
2 *	4845. 5419	29. 95	5. 34	35. 29	54. 00	-18. 71	AVG	

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



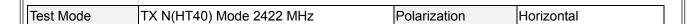


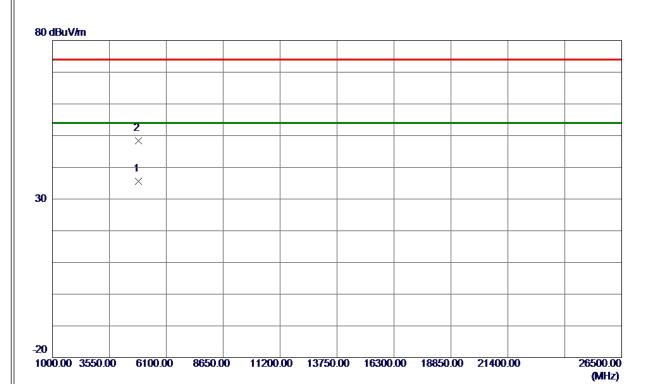


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	52. 09	8. 31	60. 40	74.00	-13. 60	Peak	
2	2390. 0000	37. 90	8. 31	46. 21	54.00	-7. 79	AVG	
3	2408. 0000	90. 14	8. 33	98. 47	74.00	24. 47	Peak	No Limit
4 *	2408. 4000	81. 47	8. 33	89. 80	54. 00	35. 80	AVG	No Limit

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





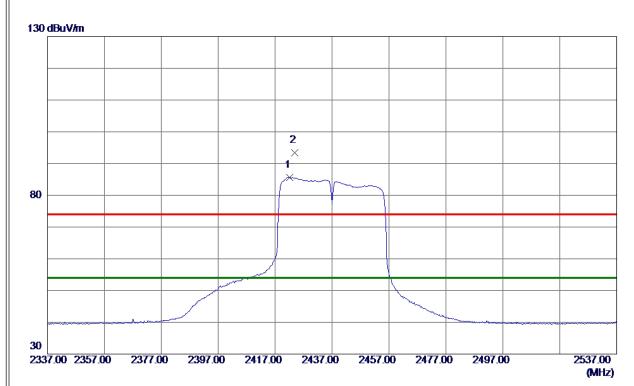


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	4844. 0800	30. 35	5. 33	35. 68	54.00	-18. 32	AVG	
2	4845. 9169	42. 97	5. 34	48. 31	74. 00	-25. 69	Peak	

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





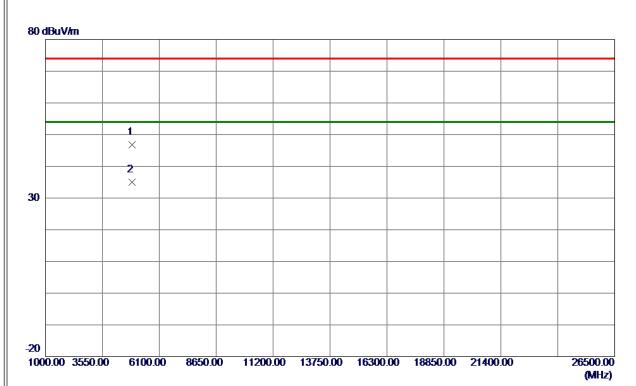


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2422. 2000	77. 23	8. 35	85. 58	54.00	31. 58	AVG	No Limit
2	2423. 8000	85. 13	8. 35	93. 48	74.00	19. 48	Peak	No Limit

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



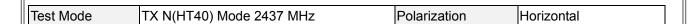


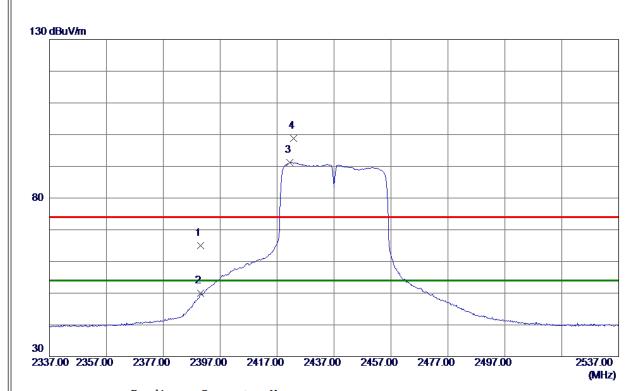


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4873. 6900	41. 33	5. 48	46. 81	74.00	-27. 19	Peak	
2 *	4875. 7599	29. 60	5. 49	35. 09	54. 00	-18. 91	AVG	

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





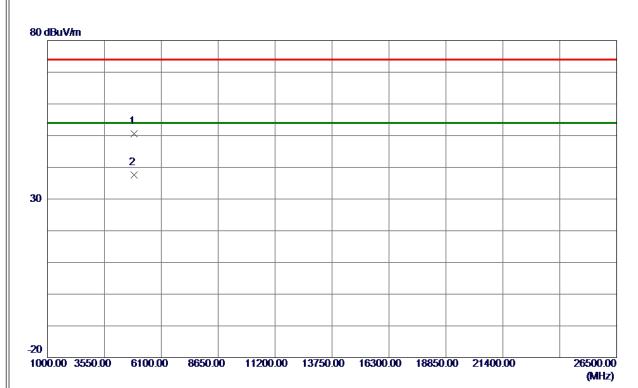


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2390. 0000	56. 76	8. 31	65. 07	74.00	-8. 93	Peak	
2	2390. 0000	41. 76	8. 31	50. 07	54.00	-3. 93	AVG	
3 *	2421. 4000	82. 89	8. 35	91. 24	54.00	37. 24	AVG	No Limit
4	2422. 8000	90. 38	8. 35	98. 73	74.00	24. 73	Peak	No Limit

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





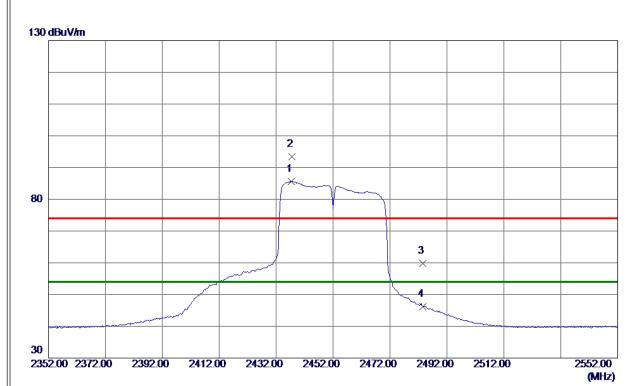


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4873. 7799	45. 13	5. 48	50. 61	74. 00	-23. 39	Peak	
2 *	4874. 3200	32. 13	5. 48	37. 61	54. 00	-16. 39	AVG	

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





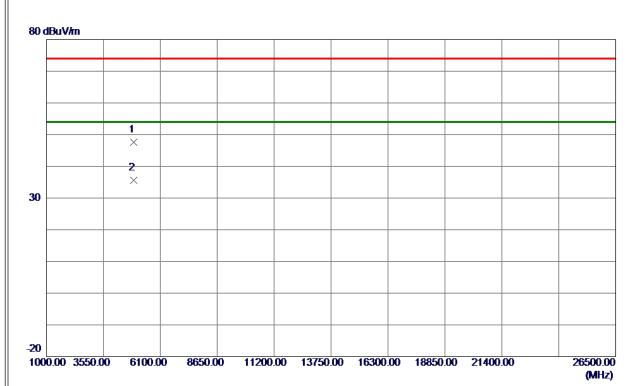


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 *	2437. 4000	77. 26	8. 37	85. 63	54.00	31. 63	AVG	No Limit
2	2437. 6000	85. 01	8. 37	93. 38	74.00	19. 38	Peak	No Limit
3	2483. 5000	51. 41	8. 42	59. 83	74.00	-14. 17	Peak	
4	2483. 5000	37. 84	8. 42	46. 26	54.00	-7. 74	AVG	

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





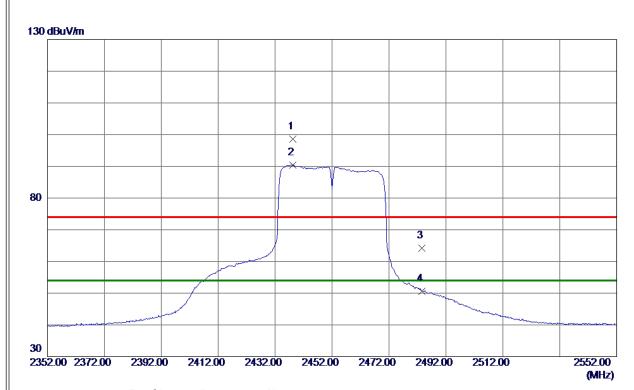


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4901. 5299	41. 94	5. 62	47. 56	74.00	-26. 44	Peak	
2 *	4905. 3580	29. 95	5. 64	35. 59	54. 00	-18. 41	AVG	

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





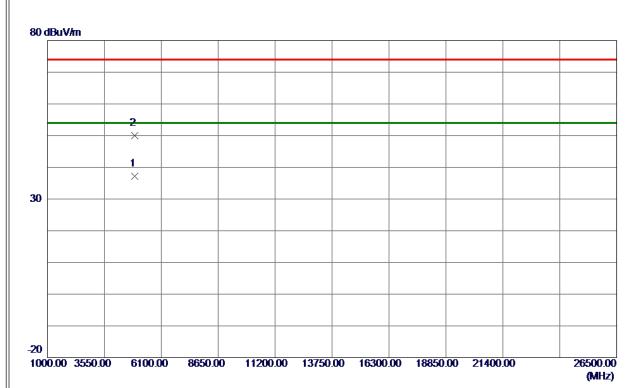


No.	Freq.	Reading Level	Correct Factor	Measure ment	Limit	Margin		
	MHz	dBuV/m	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2438. 2000	90. 21	8. 37	98. 58	74.00	24. 58	Peak	No Limit
2 *	2438. 2000	82. 08	8. 37	90. 45	54.00	36. 45	AVG	No Limit
3	2483. 5000	55. 86	8. 42	64. 28	74.00	<b>-9.</b> 72	Peak	
4	2483. 5000	42. 20	8. 42	50. 62	54. 00	-3. 38	AVG	

- (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 *	4902. 6580	31. 55	5. 63	37. 18	54.00	-16.82	AVG	
2	4903. 6600	44. 40	5. 63	50. 03	74.00	-23. 97	Peak	

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

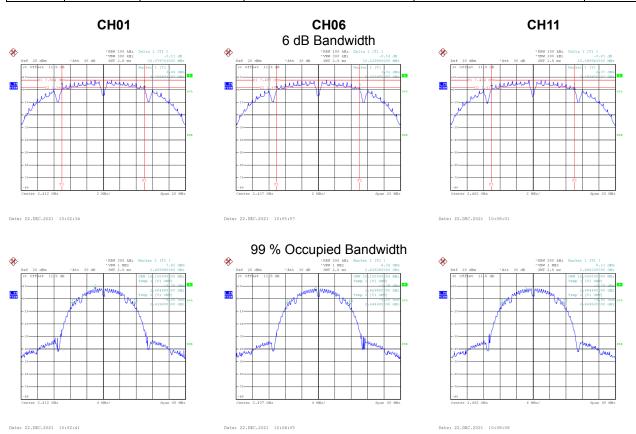


APPENDIX E - BANDWIDTH					



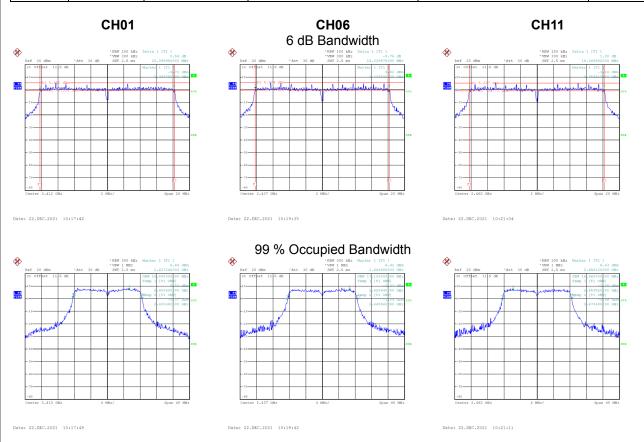
Test Mode	TX B Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	10.080	15.120	0.5	Complies
06	2437	10.130	15.120	0.5	Complies
11	2462	10.100	15.040	0.5	Complies





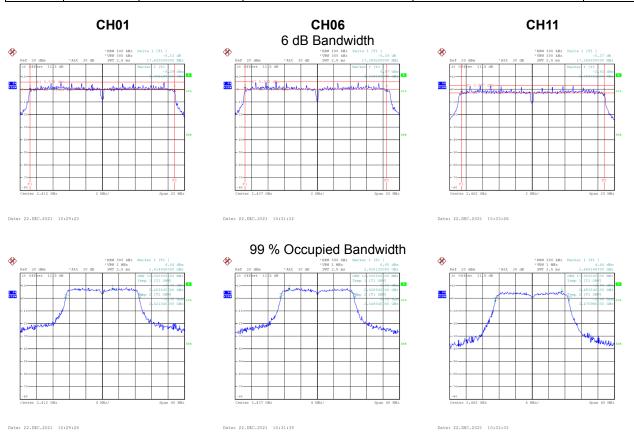
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	16.400	16.880	0.5	Complies
06	2437	16.340	17.120	0.5	Complies
11	2462	16.370	16.960	0.5	Complies





Test Mode	TX N(HT20) Mode

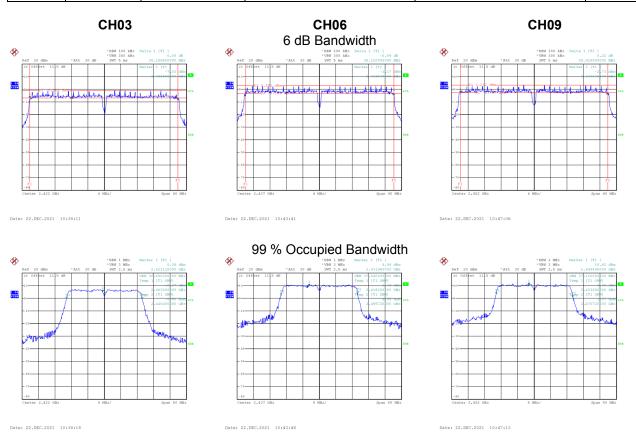
Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
01	2412	17.620	18.000	0.5	Complies
06	2437	17.269	18.000	0.5	Complies
11	2462	17.359	17.920	0.5	Complies





l	Test Mode	TX N(HT40) Mode
ı	rest wode	

(Channell ' ' I		6 dB Bandwidth (MHz)	99 % Occupied Bandwidth (MHz)	6 dB Bandwidth Min. Limit (MHz)	Result
03	2422	36.160	36.800	0.5	Complies
06	2437	36.120	37.440	0.5	Complies
09	2452	35.919	37.120	0.5	Complies





# **APPENDIX F - MAXIMUM OUTPUT POWER**



	Test Mode	TX B Mode
ı	1000 111000	.,

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	15.67	0.00	15.67	30.00	1.0000	Complies
06	2437	15.56	0.00	15.56	30.00	1.0000	Complies
11	2462	17.43	0.00	17.43	30.00	1.0000	Complies

# Test Mode TX G Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	15.93	0.15	16.08	30.00	1.0000	Complies
06	2437	17.28	0.15	17.43	30.00	1.0000	Complies
11	2462	17.04	0.15	17.19	30.00	1.0000	Complies

# Test Mode TX N(HT20) Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	15.02	0.12	15.14	30.00	1.0000	Complies
06	2437	17.64	0.12	17.76	30.00	1.0000	Complies
11	2462	17.33	0.12	17.45	30.00	1.0000	Complies

# Test Mode TX N(HT40) Mode

Channel	Frequency (MHz)	Output Power (dBm)	Duty Factor	Output Power + Duty Factor (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	17.71	0.33	18.04	30.00	1.0000	Complies
06	2437	15.76	0.33	16.09	30.00	1.0000	Complies
09	2452	15.94	0.33	16.27	30.00	1.0000	Complies



