

FCC Radio Test Report

FCC ID: Q78-ZXHNH196AV9

This report concerns: Original Grant

Project No.	:	2006H021
Equipment	:	WiFi Router
Brand Name	:	ZTE
Test Model	:	ZXHN H196A
Series Model	:	N/A
Applicant	:	ZTE Corporation
Address	:	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park Nanshan District,
		Shenzhen, Guangdong, P.R. China
Manufacturer	:	ZTE Corporation
Address	:	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park Nanshan District,
		Shenzhen, Guangdong, P.R. China
Factory	:	ZTE Corporation
Address	:	ZTE Plaza, Keji Road South, Hi-Tech Industrial Park Nanshan District,
		Shenzhen, Guangdong, P.R. China
Date of Receipt	:	Aug. 17, 2020
Date of Test	:	Aug. 17, 2020~Sep. 14, 2020
Issued Date	:	Sep. 30, 2020
Report Version	:	R00
Test Sample	:	Engineering Sample No.: SH2020071627-4 for conducted;
		SH2020071627-5 for radiated.
Standard(s)	:	FCC Part15, Subpart C (15.247)
		ANSI C63.10-2013
		KDB 558074 D01 15.247 Meas Guidance v05r02

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

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Limitation

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



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REPORT ISSUED HISTORY

Report Version	Description	Issued Date
R00	Original Issue.	Sep. 30, 2020

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC Part15, Subpart C (15.247)						
Standard(s) Section	Test Item	Test Result	Judgment	Remark		
15.207	AC Power Line Conducted Emissions	APPENDIX A	N/A			
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. 29, Jintang Road, Tangzhen Industry Park, Pudong New Area, Shanghai 201210, China BTL's Test Firm Registration Number for FCC: 476765 BTL's Designation Number for FCC: CN1241

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. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	Ant. H / V	U, (dB)
		9 KHz~30 MHz	V	3.79
		9 KHz~30 MHz	Н	3.57
	CISPR	30 MHz~200 MHz	V	4.04
		30 MHz~200 MHz	Н	3.76
SH-CB01		200 MHz~1,000 MHz	V	4.24
30-0601		200 MHz~1,000 MHz	Н	3.84
		1 GHz~18 GHz	V	4.46
		1 GHz~18 GHz	Н	4.40
		18 GHz~40 GHz	V	3.95
		18 GHz~40 GHz	Η	3.95

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	26°C	60%	AC 120V/60Hz	Forest Li
Radiated Emissions-30 MHz to 1GHz	23°C	52%	AC 120V/60Hz	Forest Li
Radiated Emissions-Above 1000 MHz	24°C	58%	AC 120V/60Hz	Forest Li
Bandwidth	25.7°C	59%	AC 120V/60Hz	Forest Li
Maximum output power & e.i.r.p.	25.7°C	59%	AC 120V/60Hz	Forest Li
Conducted Spurious Emissions	25.7°C	59%	AC 120V/60Hz	Forest Li
Power Spectral Density	25.7°C	59%	AC 120V/60Hz	Forest Li



2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	WiFi Router		
Brand Name	ZTE		
Test Model	ZXHN H196A		
Series Model	N/A		
Model Difference(s)	N/A		
Software Version	T2		
Hardware Version	V9		
Power Source	DC voltage supplied from AC/DC adapter. 1# Brand/Model: MN012E-L120100 2# Brand/Model: Ruide/RD1201000-C55-35MGD		
Power Rating	1# I/P: 100-240V~50/60Hz 0.3A max O/P:12.0V 1.0A		
Fower Rating	1# I/P: 100-240V~50/60Hz 0.6A max O/P:12V 1.0A		
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 300 Mbps		
Maximum Output Power For CDD	IEEE 802.11b: 22.44 dBm (0.1754 W) IEEE 802.11g: 28.11 dBm (0.6471 W) IEEE 802.11n (HT20): 28.42 dBm (0.6950 W) IEEE 802.11n (HT40): 28.24 dBm (0.6668 W)		

Note:

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

	CH01 - CH11 for IEEE 802.11b, IEEE 802.11g, IEEE 802.11n (HT20) CH03 - CH09 for IEEE 802.11n (HT40)						
Channel Frequency (MHz) Channel Frequency (MHz) Channel Frequency (MHz) Channel (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		



Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	PCB	N/A	3.2	N/A
2	N/A	N/A	PCB	N/A	3.2	N/A

Note:

BTL

This EUT supports CDD, and all antennas have the same gain, so Directional gain= G_{ANT} +Array Gain For power spectral density measurements, Array Gain=10log(N_{ANT}/N_{SS}) dB Directional gain=3.2+10log(2/1)=6.21. So, the power density limit is 8-6.21+6=7.79

4. Table for Antenna Configuration:

Operating Mode			
	Ant. 1	Ant. 2	Ant. 1 + Ant. 2
TX Mode			
802.11b	\checkmark	\checkmark	\checkmark
802.11g	\checkmark	\checkmark	✓
802.11n(20 MHz)	\checkmark	\checkmark	✓
802.11n(40 MHz)	✓	~	✓

2.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX B Mode Channel 01/06/11
Mode 2	TX G Mode Channel 01/06/11
Mode 3	TX N-20 MHz Mode Channel 01/06/11
Mode 4	TX N-40 MHz Mode Channel 03/06/09
Mode 5	TX N20 Mode Channel 06

Following mode(s) as (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 N20 Mode Channel 06

	Radiated emissions test - Below 1GHz
Final Test Mode:	Description
Mode 5	TX N20 Mode Channel 06

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

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



NOTE:

- (1) The measurements are performed at the high, middle, low available channels.
- (2) 802.11b mode: CCK (1 Mbps)
 802.11g mode: OFDM (6 Mbps)
 802.11n HT20 mode : BPSK (13 Mbps)
 802.11n HT40 mode : BPSK (27 Mbps)
 - For radiated emission tests, the highest output powers were set for final test.
- (3) For radiated emission below 1 GHz test, the IEEE 802.11n20 Channel 06 is found to be the worst case and recorded.
- (4) For radiated emission above 1 GHz test, 1GHz~26.5GHz have been pre-tested and in this report only recorded the worst case. The remaining spurious points are all below the limit value of 20dB.



2.3 PARAMETERS OF TEST SOFTWARE

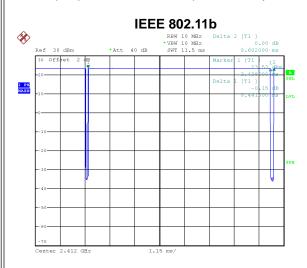
CDD

Test Software		QATool_Dbg	
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	0D	0C	1C
IEEE 802.11g	1B	1B	19
IEEE 802.11n (HT20)	18	1E	17
Frequency (MHz)	2422	2437	2452
IEEE 802.11n (HT40)	13	1C	20

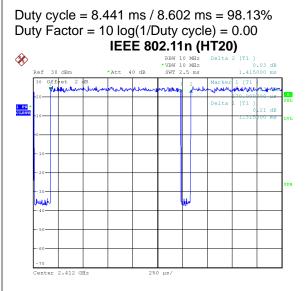


2.4 DUTY CYCLE

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.

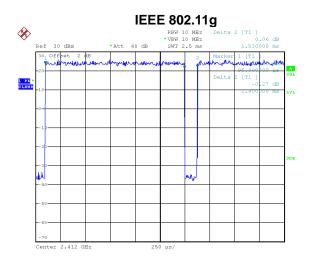


Date: 27.JUL.2020 13:57:47



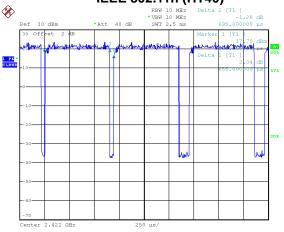
Date: 27.JUL.2020 13:58:26

Duty cycle = 1.315 ms / 1.415 ms = 92.93%Duty Factor = $10 \log(1/\text{Duty cycle}) = 0.32$,



Date: 27.JUL.2020 13:58:05





Date: 27.JUL.2020 13:58:57

Duty cycle = 0.655 ms / 0.695 ms = 94.24% Duty Factor = 10 log(1/Duty cycle) = 0.26

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 (Duty cycle > 98%).

For IEEE 802.11g and IEEE 802.11n (HT20):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 1 kHz (Duty cycle < 98%).

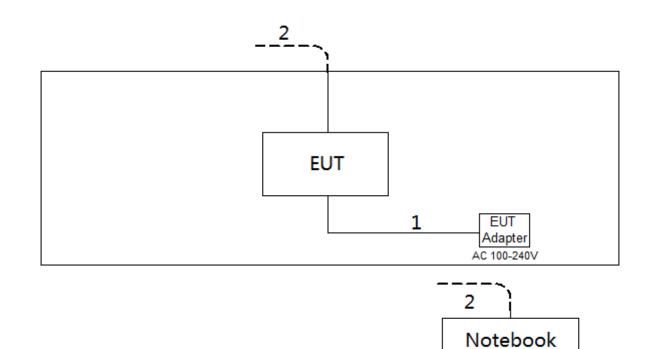
For IEEE 802.11n (HT40):

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 2 kHz (Duty cycle < 98%).



Α

2.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.6 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
A	Notebook	Dell	Inspiron 15-7559	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	DC Cable	NO	NO	1.6m
2	RJ45 Cable	NO	NO	10m



3. AC POWER LINE CONDUCTED EMISSIONS TEST

3.1 LIMIT

Frequency of Emission (MHz)	Limit (d	BμV)
Frequency of Emission (MHz)	Quasi-peak	Average
0.15 - 0.50	66 to 56*	56 to 46*
0.50 - 5.0	56	46
5.0 - 30.0	60	50

NOTE:

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

The following table is the setting of the receiver

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

3.2 TEST PROCEDURE

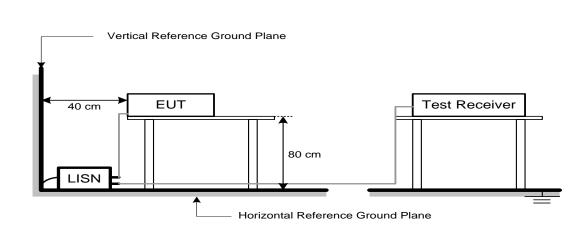
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.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

3.3 DEVIATION FROM TEST STANDARD

No deviation



3.4 TEST SETUP



3.5 EUT OPERATION CONDITIONS

EUT was programmed to be in continuously transmitting mode.

3.6 TEST RESULTS

Please refer to the APPENDIX A.



4. RADIATED EMISSIONS TEST

4.1 LIMIT

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

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-1000 MHz)

Frequency	Field Strength	Measurement Distance
(MHz)	(microvolts/meter)	(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

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

NOTE:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).
- (4) The test result calculated as following:
- Measurement Value = Reading Level + Correct Factor Correct Factor = Antenna Factor + Cable Loss - Amplifier Gain(if use) Margin Level = Measurement Value - Limit Value



Auto
1000 MHz
carrier harmonic
/ 3 MHz for Peak,
: / 1/T for Average

Receiver Parameter	Setting	
Attenuation	Auto	
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector	
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector	
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector	
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector	
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector	

4.2 TEST PROCEDURE

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

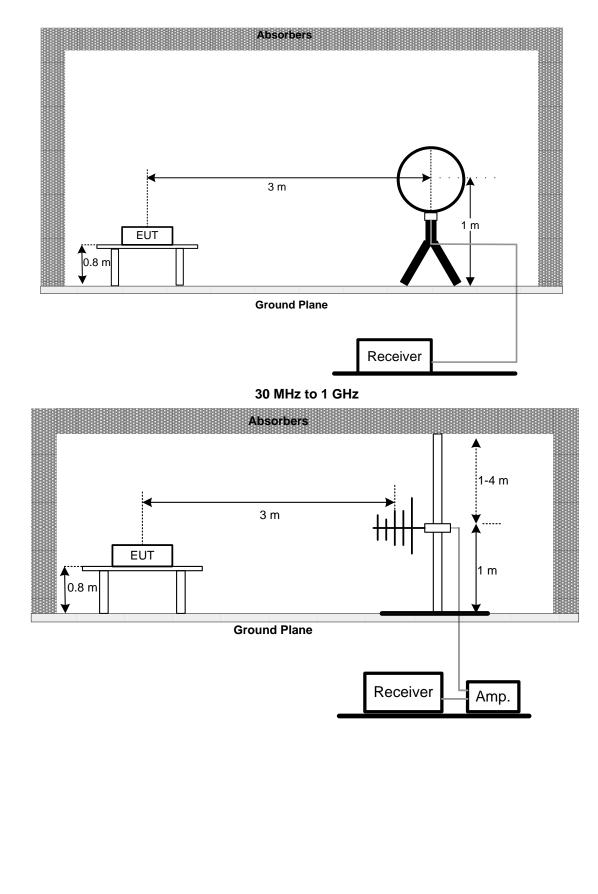
4.3 DEVIATION FROM TEST STANDARD

No deviation

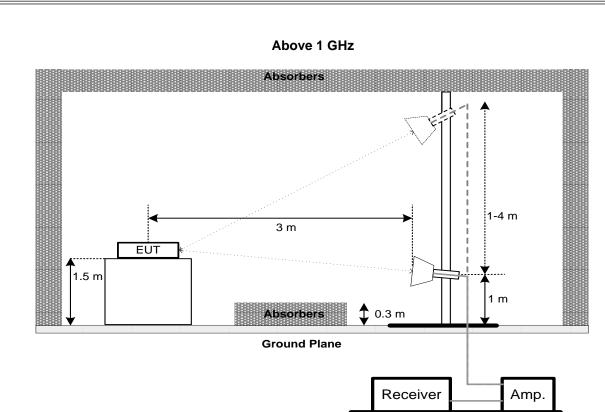


4.4 TEST SETUP









4.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULTS - 9 KHZ TO 30 MHZ

Please refer to the APPENDIX B

Remark:

(1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).

(2) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.7 TEST RESULTS - 30 MHZ TO 1000 MHZ

Please refer to the APPENDIX C.

4.8 TEST RESULTS - ABOVE 1000 MHZ

Please refer to the APPENDIX D.

Remark:

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



5. BANDWIDTH TEST

5.1 LIMIT

FCC Part15, Subpart C (15.247)					
Section	Limit				
15 247(0)(2)	6 dB Bandwidth	Minimum 500 kHz			
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. Spectrum Setting:

For 6 dB Bandwidth : RBW= 100 kHz, VBW=300 kHz, Sweep time = auto.

For 99% Emission Bandwidth B/G/N-20 Mode: RBW= 300 KHz, VBW=1 MHz, Sweep time = 2.5 ms. For 99% Emission Bandwidth N-40 Mode: RBW= 1 MHz, VBW=3 MHz, Sweep time = 2.5 ms.

c. The bandwidth was performed in accordance with method 11.8.1 of ANSI C63.10-2013.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX E.



6. MAXIMUM OUTPUT POWER TEST

6.1 LIMIT

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

6.2 TEST PROCEDURE

- a. The EUT was directly connected to the power meter and antenna output port as show in the block diagram below.
- b. The maximum conducted output power was performed in accordance with method 11.9.1.3 (for peak power) or 11.9.2.3.1 (for AVG power) of ANSI C63.10-2013 and FCC KDB 662911 D01 v02r01 Multiple Transmitter Output.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP

EUT	Power Meter

6.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.6 TEST RESULTS

Please refer to the APPENDIX F.



7. CONDUCTED SPURIOUS EMISSIONS

7.1 LIMIT

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

7.2 TEST PROCEDURE

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

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



SPECTRUM ANALYZER

7.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.6 TEST RESULTS

Please refer to the APPENDIX G.



8. POWER SPECTRAL DENSITY TEST

8.1 LIMIT

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

8.2 TEST PROCEDURE

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

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.6 TEST RESULTS

Please refer to the APPENDIX H.



9. MEASUREMENT INSTRUMENTS LIST

	AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Line Impedance Stabilisation Network	Schwarzbeck	NNLK 8121	8121-822	Mar. 21, 2021	
2	TWO-LINE V-NETWORK	R&S	ENV216	101340	Aug. 23, 2021	
3	Test Cable	emci	EMCRG400-BM-N M-10000	170628	Jul. 15, 2021	
4	EMI Test Receiver	R&S	ESCI	100082	Mar. 21, 2021	
5	50Ω Terminator	SHX	TF2-1G-A	17051602	Mar. 21, 2021	
6	50Ω coaxial switch	Anritsu	MP59B	6201750902	Mar. 21, 2021	
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	

	Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Loop Antenna	EMCI	EMCI LPA600	275	Apr. 02, 2021	
2	EMI Test Receiver	R&S	ESCI	100082	Mar. 21, 2021	
3	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A	

	Radiated Emissions - 30 MHz to 1 GHz						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	TRILOG Broadband Antenna	Schwarzbeck	VULB 9168	719	Apr. 02, 2021		
2	Pre-Amplifier	emci	EMC9135	980400	Mar. 21, 2021		
3	MXE EMI Receiver	Keysight	N9038A	MY57150106	May 06, 2021		
4	Test Cable	emci	EMC104-SM-SM-7 000	170330	Apr. 13, 2021		
5	Test Cable	emci	EMC104-SM-SM-1 000	170331	Apr. 13, 2021		
6	Test Cable	emci	EMC104-SM-NM-3 500	170621	Apr. 13, 2021		
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		



		Radiated E	Emissions - Above 1	GHz			
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Double-Ridged Waveguide Horn Antenna	ETS-Lindgren	9120D	00206960	Apr. 02, 2021		
2	Pre-Amplifier	emci	EMC012645SE	980421	May 11, 2021		
3	EXA Spectrum Analyzer	Keysight	N9010A	MY56480545	Mar. 21, 2021		
4	Test Cable	emci	EMC104-SM-SM-7 000	170330	Apr. 13, 2021		
5	Test Cable	emci	EMC104-SM-SM-1 000	170331	Apr. 13, 2021		
6	Test Cable	emci	EMC104-SM-NM-3 500	170621	Apr. 13, 2021		
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		
8	MXE EMI Receiver	Keysight	N9038A	MY57150106	May 06, 2021		
9	Double-Ridged Waveguide Horn Antenna	ETS-Lindgren	3116C	00203919	Mar. 21, 2021		
10	Pre-Amplifier	emci	EMC184045SE	980409	Mar. 21, 2021		
11	EXA Spectrum Analyzer	Keysight	N9010A	MY56480579	Mar. 21, 2021		
12	Test Cable	emci	EMC102-KM-KM-8 00	170654	Mar. 21, 2021		
13	Test Cable	emci	Super Reliable-40G-SS11- 7000	W0030860001	Mar. 21, 2021		
14	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A		

Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100626	Mar. 06, 2021

Maximum Output Power					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Peak Power Analyze	Keysight	8990B	MY51000507	Mar. 21, 2021
2	Wideband Power Sensor	Keysight	N9123A	MY58310003	Mar. 21, 2021

	Antenna Conducted Spurious Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Spectrum Analyzer	R&S	FSP40	100626	Mar. 06, 2021	

Power Spectral Density					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100626	Mar. 06, 2021

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

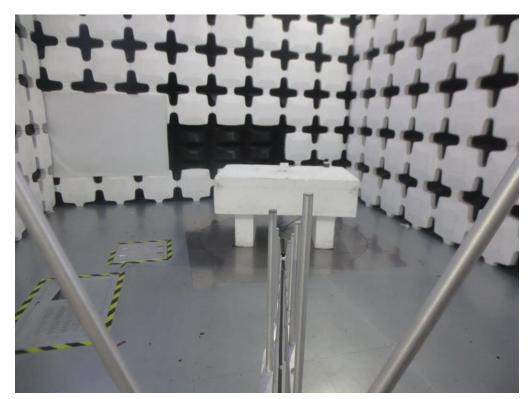
All calibration period of equipment list is one year.

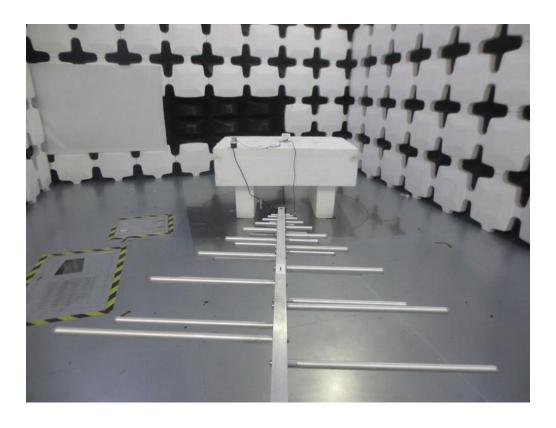


10. EUT TEST PHOTO

Radiated Emissions Test Photos

30 MHz to 1 GHz

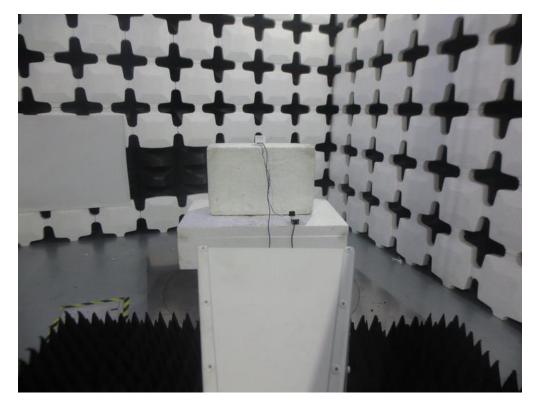




3โL



Above 1 GHz

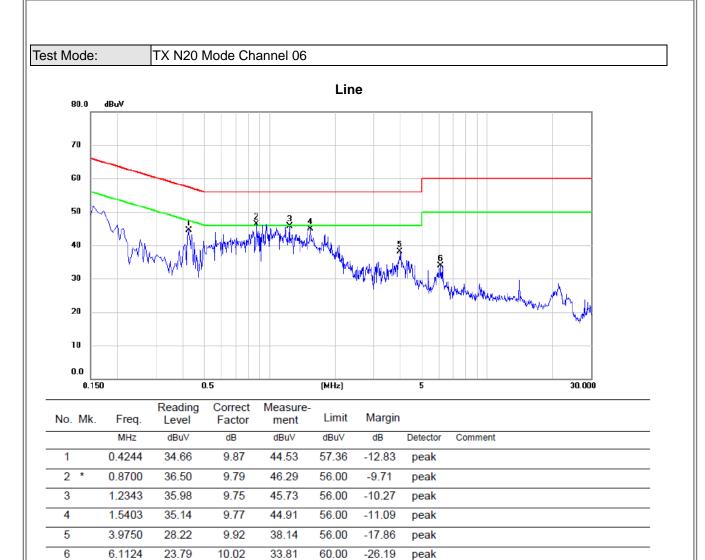






APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

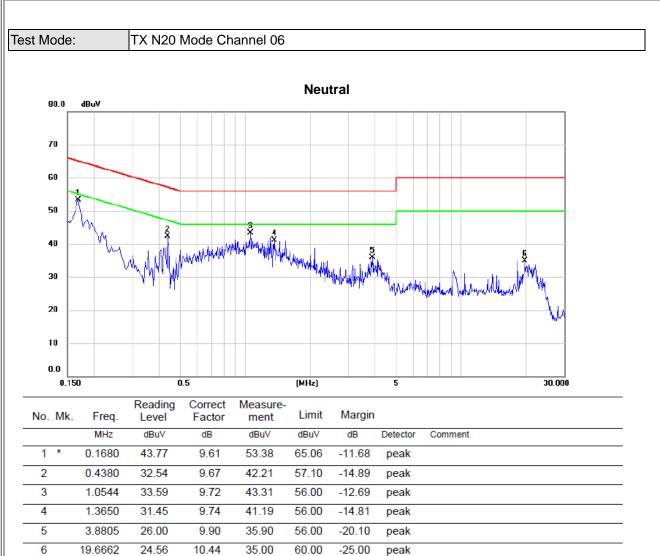
BIL



REMARKS:

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





REMARKS:

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

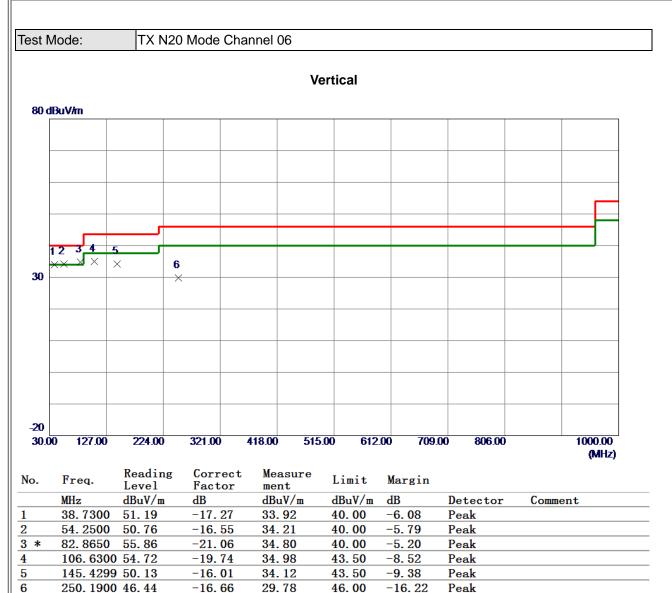
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

Note: Below 30MHz, The measured value have enough margin over 20dB than the limit, therefore they are not reported.



APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ





46.00

Peak

REMARKS:

6

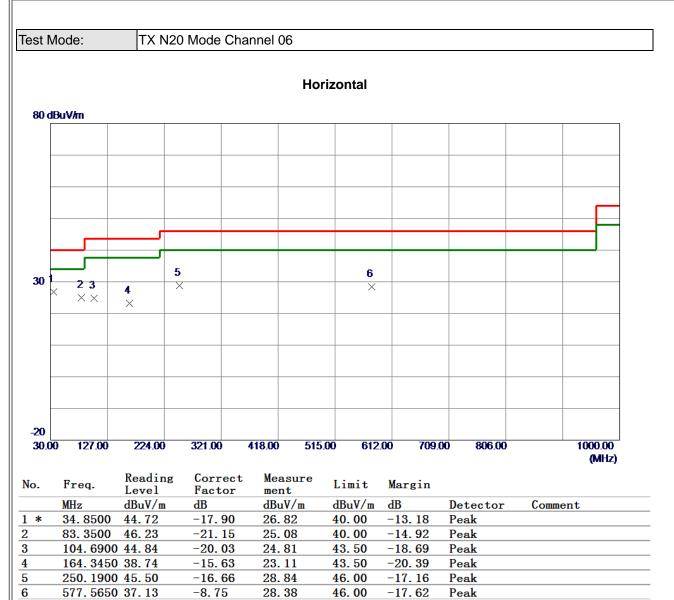
250. 1900 46. 44

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

-16.66

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





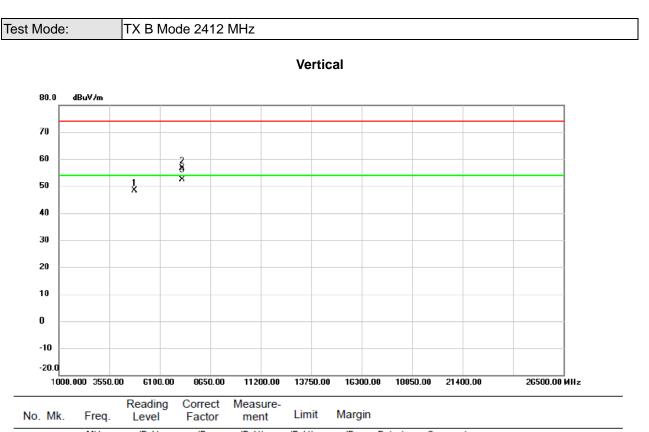
REMARKS: (1) Measurement Value = Reading Level + Correct Factor.

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



APPENDIX D - RADIATED EMISSION- ABOVE 1000 MHZ

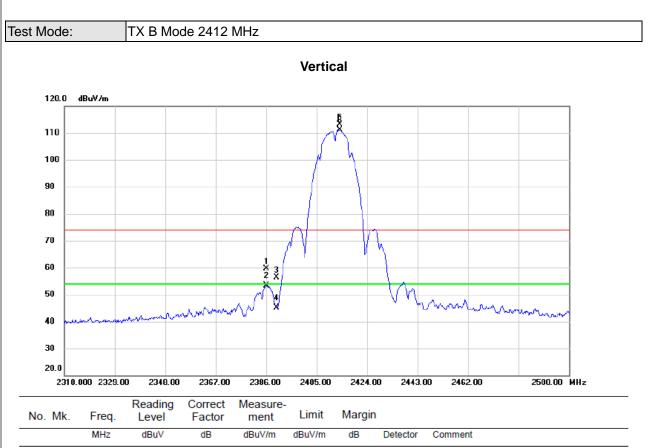




						-		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4824.033	59.35	-10.90	48.45	74.00	-25.55	peak	
2	7236.004	60.81	-4.17	56.64	74.00	-17.36	peak	
3 *	7236.870	56.60	-4.17	52.43	54.00	-1.57	AVG	

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

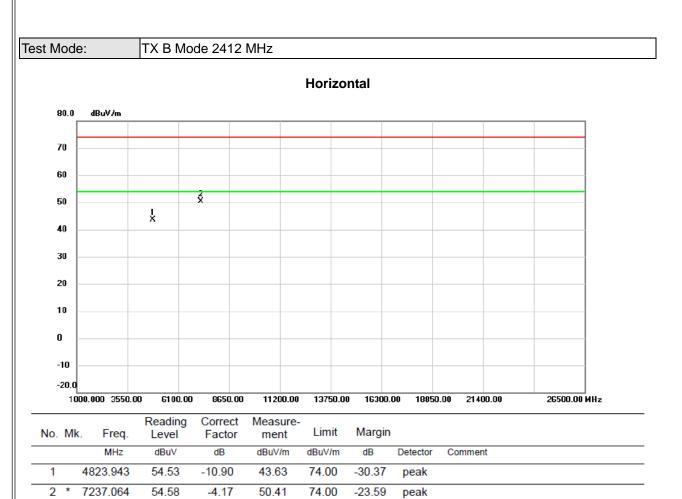




	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	2386.190	27.88	31.74	59.62	74.00	-14.38	peak	
2	2386.190	21.70	31.74	53.44	54.00	-0.56	AVG	
3	2390.000	24.52	31.74	56.26	74.00	-17.74	peak	
4	2390.000	13.34	31.74	45.08	54.00	-8.92	AVG	
5 X	2413.740	81.49	31.72	113.21	74.00	39.21	peak	No limit
6 *	2413.740	79.37	31.72	111.09	54.00	57.09	AVG	No limit

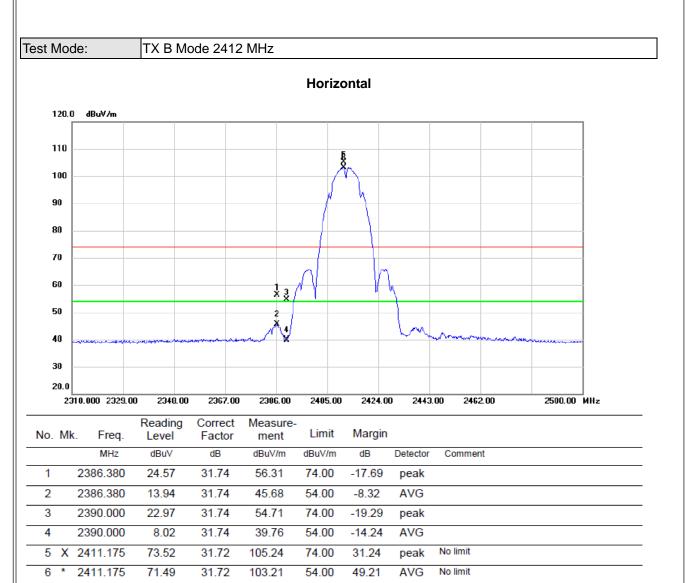
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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





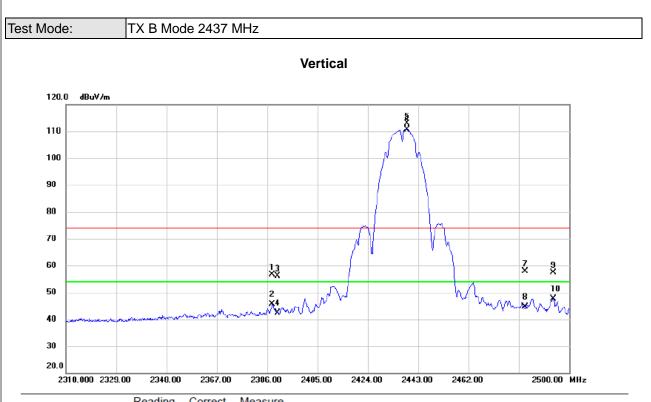
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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

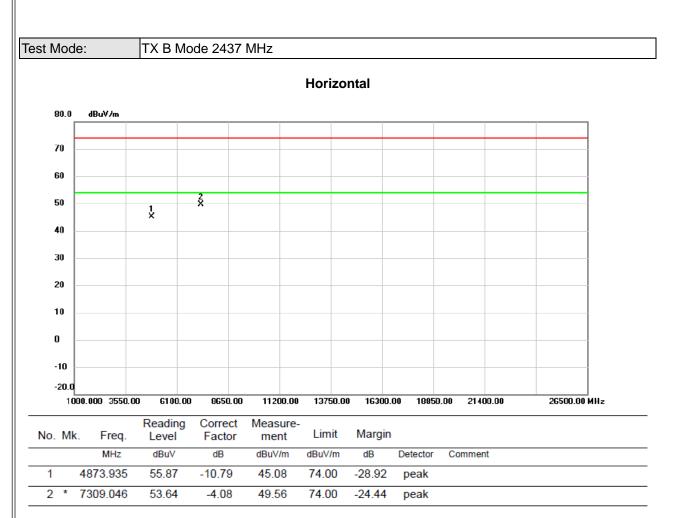




No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2387.995	24.76	31.75	56.51	74.00	-17.49	peak	
2		2387.995	13.78	31.75	45.53	54.00	-8.47	AVG	
3		2390.000	24.38	31.74	56.12	74.00	-17.88	peak	
4		2390.000	10.62	31.74	42.36	54.00	-11.64	AVG	
5	Х	2438.820	81.10	31.71	112.81	74.00	38.81	peak	No limit
6	*	2438.820	78.98	31.71	110.69	54.00	56.69	AVG	No limit
7		2483.500	26.15	31.72	57.87	74.00	-16.13	peak	
8		2483.500	12.88	31.72	44.60	54.00	-9.40	AVG	
9		2493.920	25.77	31.71	57.48	74.00	-16.52	peak	
10		2493.920	16.03	31.71	47.74	54.00	-6.26	AVG	

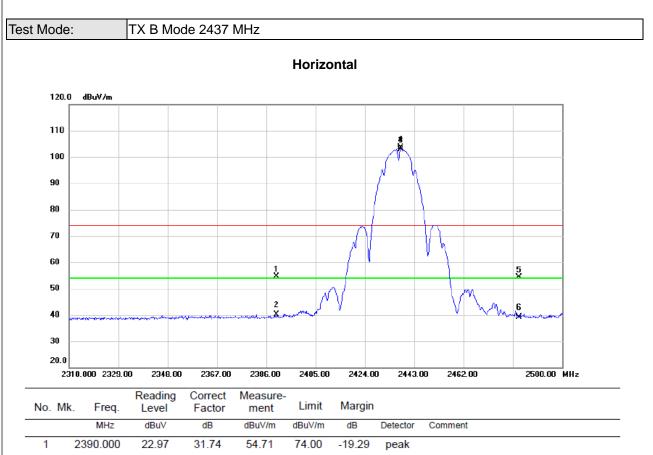
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.





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

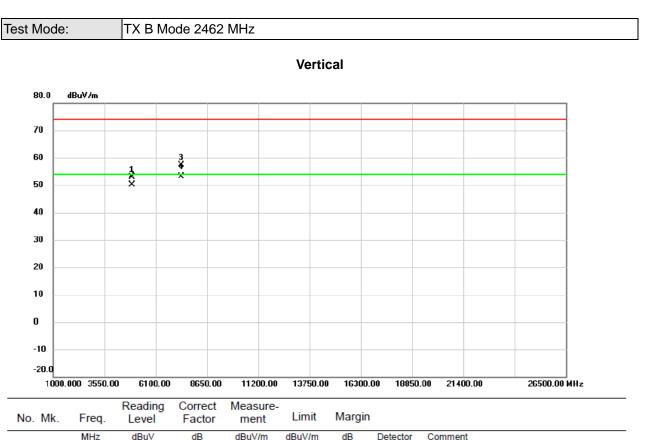




1	2390.000	22.97	31.74	54.71	74.00	-19.29	peak	
2	2390.000	8.31	31.74	40.05	54.00	-13.95	AVG	
3 X	2437.775	72.03	31.71	103.74	74.00	29.74	peak	No limit
4 *	2437.775	71.28	31.71	102.99	54.00	48.99	AVG	No limit
5	2483.500	22.73	31.72	54.45	74.00	-19.55	peak	
6	2483.500	7.42	31.72	39.14	54.00	-14.86	AVG	

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

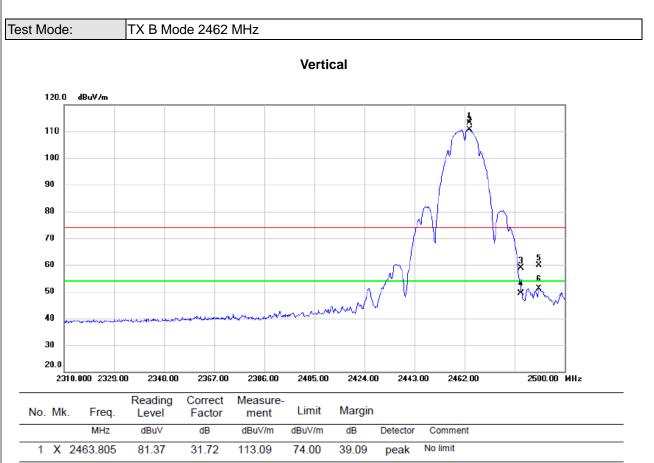
BIL



	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4923.874	63.40	-10.63	52.77	74.00	-21.23	peak	
2	4924.109	60.72	-10.63	50.09	54.00	-3.91	AVG	
3	7384.396	61.44	-3.98	57.46	74.00	-16.54	peak	
4 *	7385.328	57.06	-3.98	53.08	54.00	-0.92	AVG	

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

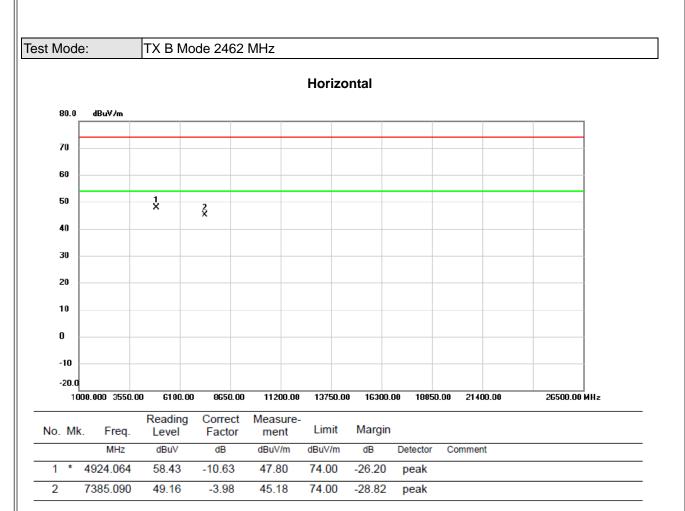




1	X 2463.805	81.37	31.72	113.09	74.00	39.09	peak	No limit
2	* 2463.805	79.02	31.72	110.74	54.00	56.74	AVG	No limit
3	2483.500	27.15	31.72	58.87	74.00	-15.13	peak	
4	2483.500	17.77	31.72	49.49	54.00	-4.51	AVG	
5	2490.310	28.12	31.71	59.83	74.00	-14.17	peak	
6	2490.310	19.46	31.71	51.17	54.00	-2.83	AVG	

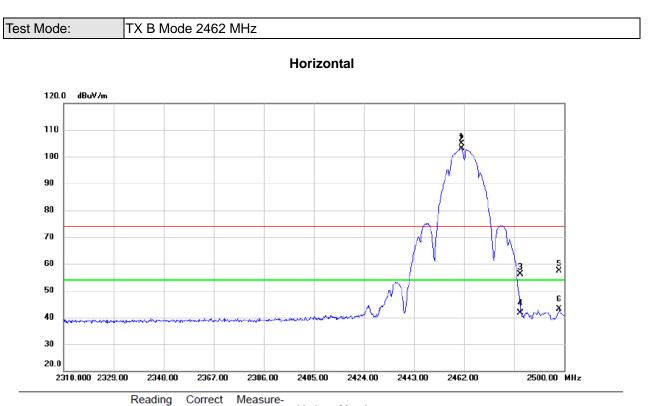
- Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value Limit Value.





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

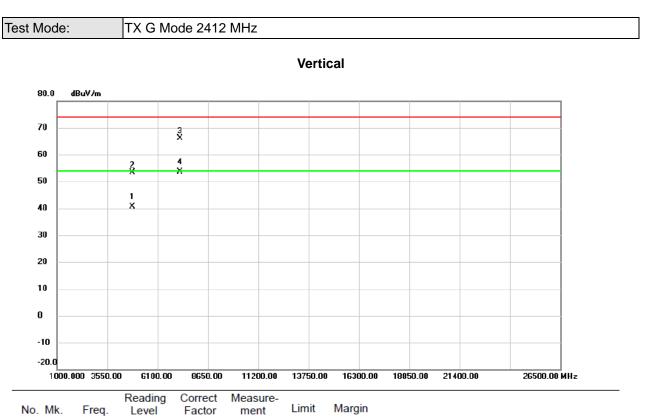




No.	Mk	. Freq.	Level	Factor	ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	Х	2461.240	73.24	31.72	104.96	74.00	30.96	peak	No limit
2	*	2461.240	71.29	31.72	103.01	54.00	49.01	AVG	No limit
3		2483.500	24.45	31.72	56.17	74.00	-17.83	peak	
4		2483.500	9.94	31.72	41.66	54.00	-12.34	AVG	
5		2498.195	25.64	31.71	57.35	74.00	-16.65	peak	
6		2498.195	11.54	31.71	43.25	54.00	-10.75	AVG	

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

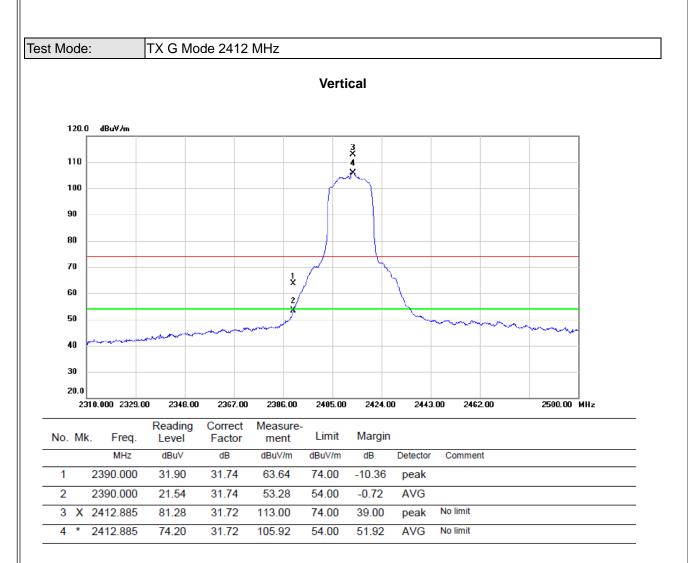




No.	Mk.	Freq.	Level		ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4	1823.348	51.53	-10.90	40.63	54.00	-13.37	AVG	
2	4	1827.898	64.39	-10.90	53.49	74.00	-20.51	peak	
3	7	7228.780	70.25	-4.18	66.07	74.00	-7.93	peak	
4	* 7	7238.426	57.81	-4.16	53.65	54.00	-0.35	AVG	

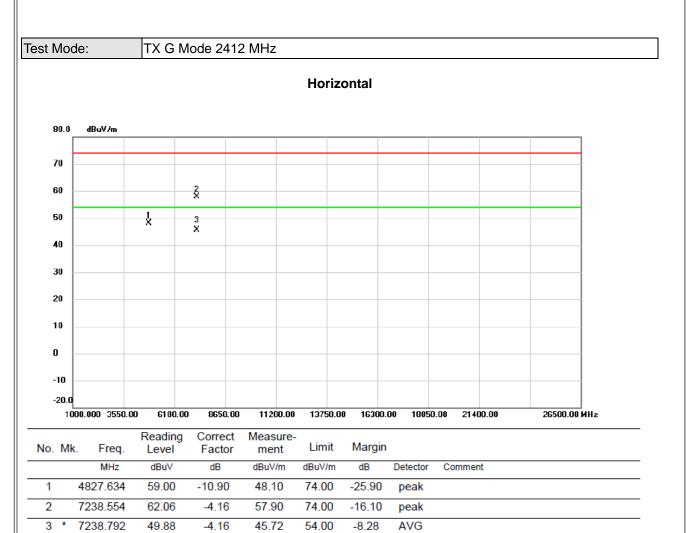
- Measurement Value = Reading Level + Correct Factor.
 Margin Level = Measurement Value Limit Value.





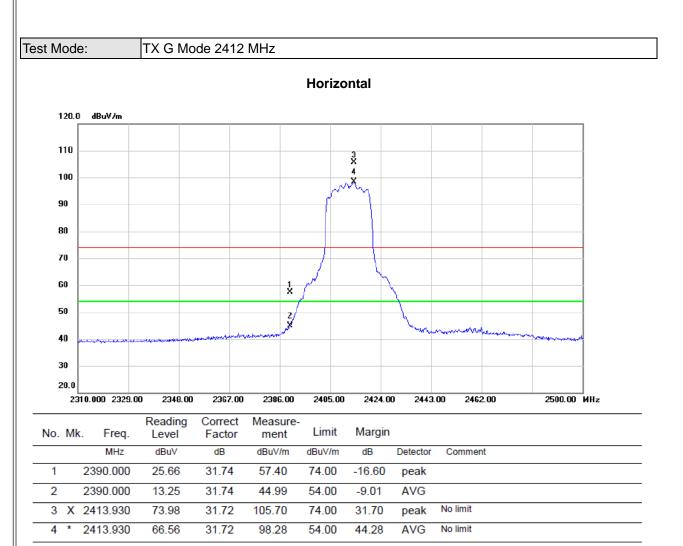
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





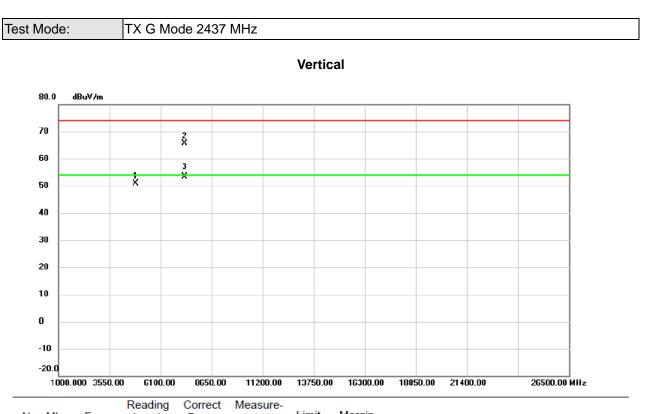
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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

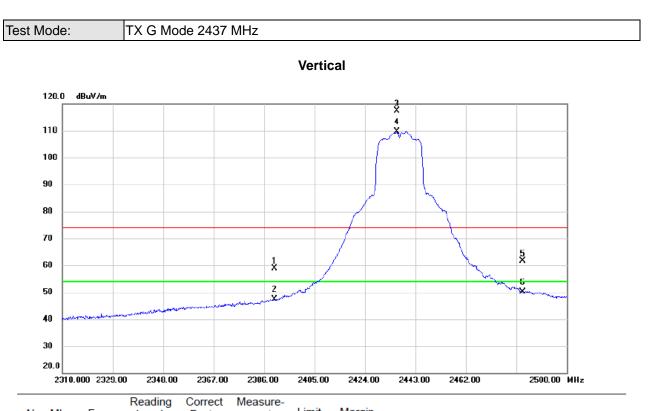




No.	Mk	. Freq.			ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4868.396	61.68	-10.80	50.88	74.00	-23.12	peak	
2		7311.734	69.69	-4.08	65.61	74.00	-8.39	peak	
3	*	7311.876	57.54	-4.08	53.46	54.00	-0.54	AVG	

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

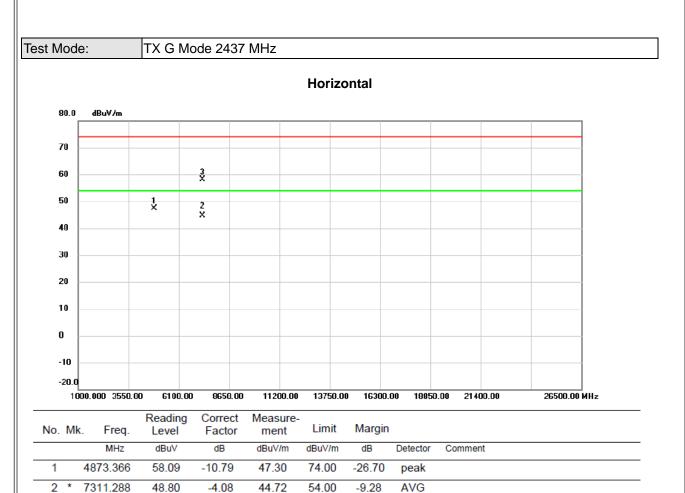




MHz dBuV dB dBuV/m dBuV/m dB Detector Comment 1 2390.000 27.19 31.74 58.93 74.00 -15.07 peak 2 2390.000 15.56 31.74 47.30 54.00 -6.70 AVG 3 X 2436.065 85.76 31.71 117.47 74.00 43.47 peak No limit 4 * 2436.065 77.90 31.71 109.61 54.00 55.61 AVG No limit 5 2483.500 29.83 31.72 61.55 74.00 -12.45 peak 6 2483.500 18.35 31.72 50.07 54.00 -3.93 AVG	No.	Mk	. Freq.	Level	Factor	measure- ment	Limit	Margin		
2 2390.000 15.56 31.74 47.30 54.00 -6.70 AVG 3 X 2436.065 85.76 31.71 117.47 74.00 43.47 peak No limit 4 * 2436.065 77.90 31.71 109.61 54.00 55.61 AVG No limit 5 2483.500 29.83 31.72 61.55 74.00 -12.45 peak			MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
3 X 2436.065 85.76 31.71 117.47 74.00 43.47 peak No limit 4 * 2436.065 77.90 31.71 109.61 54.00 55.61 AVG No limit 5 2483.500 29.83 31.72 61.55 74.00 -12.45 peak	1		2390.000	27.19	31.74	58.93	74.00	-15.07	peak	
4 * 2436.065 77.90 31.71 109.61 54.00 55.61 AVG No limit 5 2483.500 29.83 31.72 61.55 74.00 -12.45 peak	2		2390.000	15.56	31.74	47.30	54.00	-6.70	AVG	
5 2483.500 29.83 31.72 61.55 74.00 -12.45 peak	3	Х	2436.065	85.76	31.71	117.47	74.00	43.47	peak	No limit
	4	*	2436.065	77.90	31.71	109.61	54.00	55.61	AVG	No limit
6 2483.500 18.35 31.72 50.07 54.00 -3.93 AVG	5		2483.500	29.83	31.72	61.55	74.00	-12.45	peak	
	6		2483.500	18.35	31.72	50.07	54.00	-3.93	AVG	

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





3

7311.787

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

-4.08

58.11

74.00

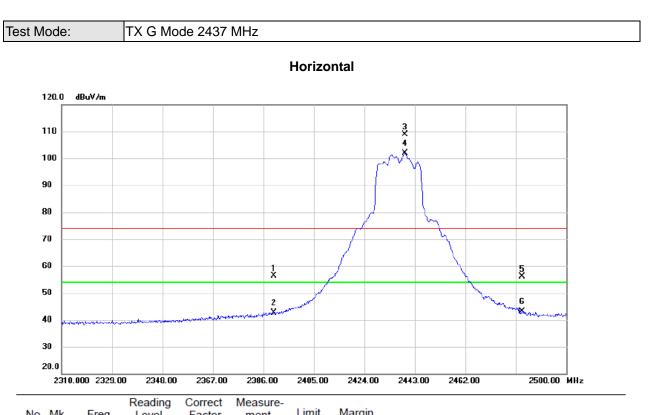
-15.89

peak

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

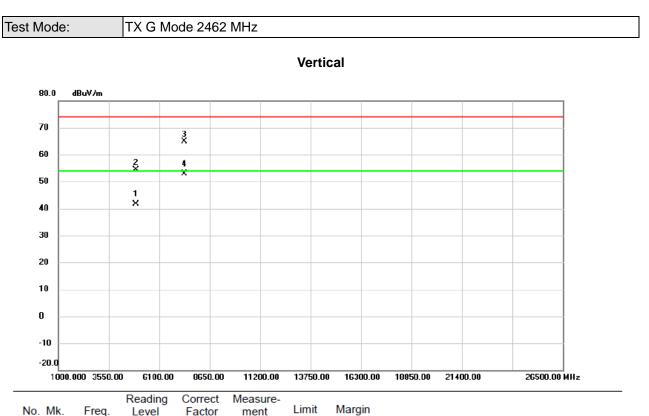
62.19





No.	Mk	. Freq.	Level	Factor	ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	24.72	31.74	56.46	74.00	-17.54	peak	
2		2390.000	10.87	31.74	42.61	54.00	-11.39	AVG	
3	Х	2439.295	77.22	31.72	108.94	74.00	34.94	peak	No limit
4	*	2439.295	70.16	31.72	101.88	54.00	47.88	AVG	No limit
5		2483.500	24.43	31.72	56.15	74.00	-17.85	peak	
6		2483.500	11.51	31.72	43.23	54.00	-10.77	AVG	

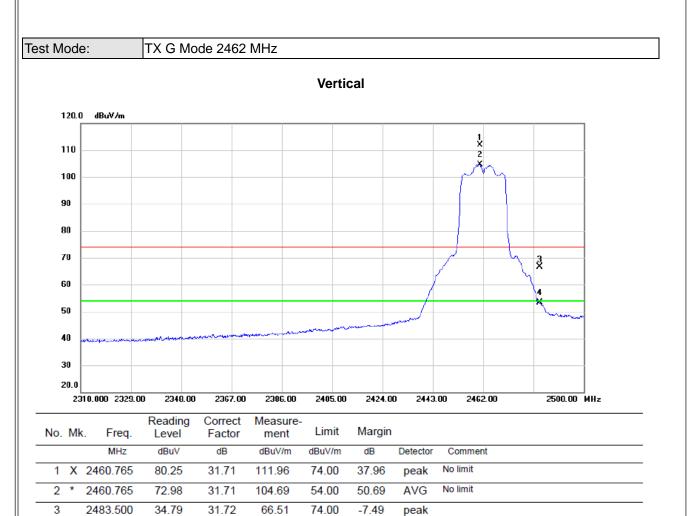
- (1) Measurement Value = Reading Level + Correct Factor.(2) Margin Level = Measurement Value Limit Value.



No.	Mk.	Freq.	Level	Factor	ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4922.512	52.29	-10.63	41.66	54.00	-12.34	AVG	
2		4927.988	64.93	-10.61	54.32	74.00	-19.68	peak	
3		7378.830	68.94	-3.99	64.95	74.00	-9.05	peak	
4	*	7384.306	56.91	-3.98	52.93	54.00	-1.07	AVG	

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





4

2483.500

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

31.72

53.30

54.00

-0.70

AVG

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

21.58





peak

AVG

REMARKS:

3 *

7383.696

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

-3.98

45.34

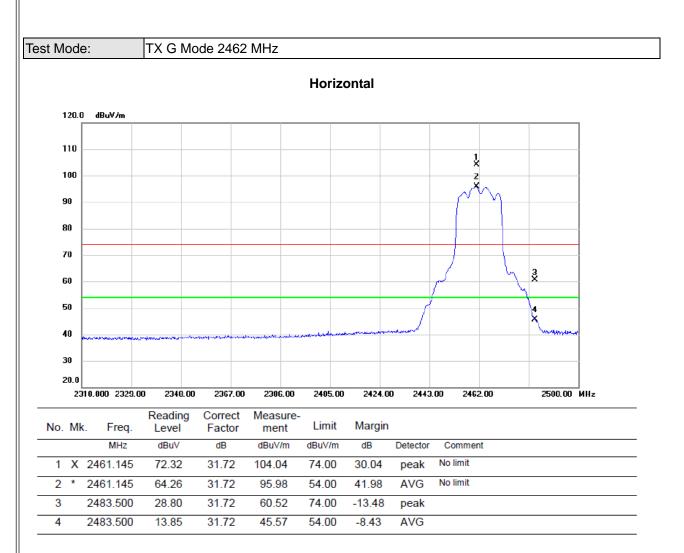
54.00

-8.66

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

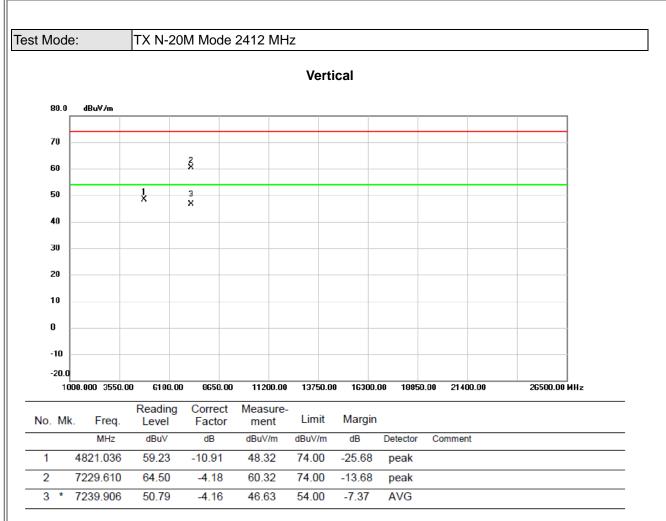
49.32





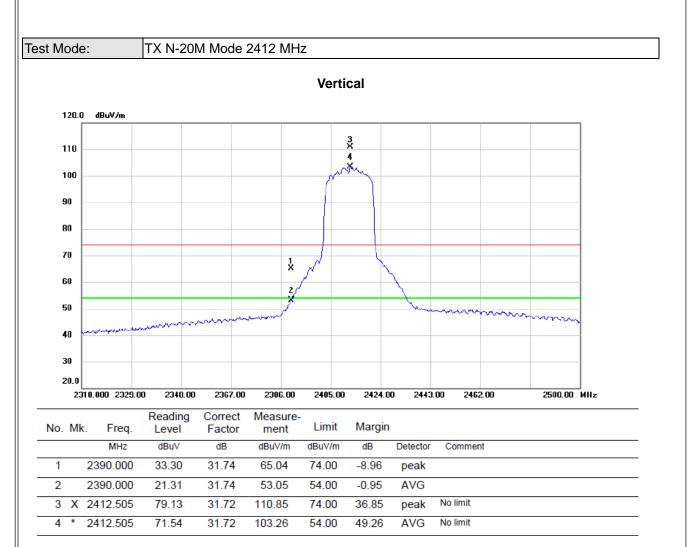
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





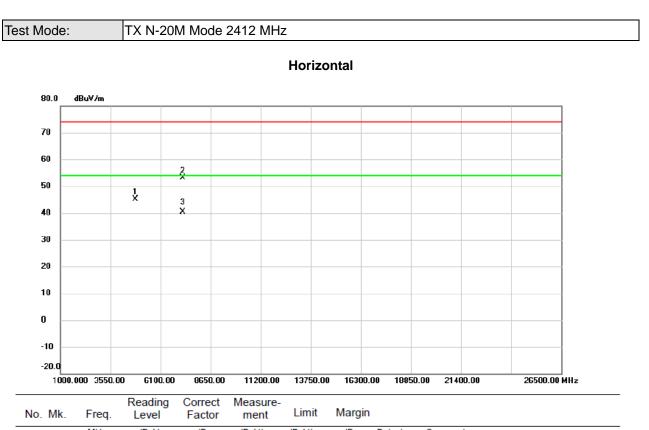
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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

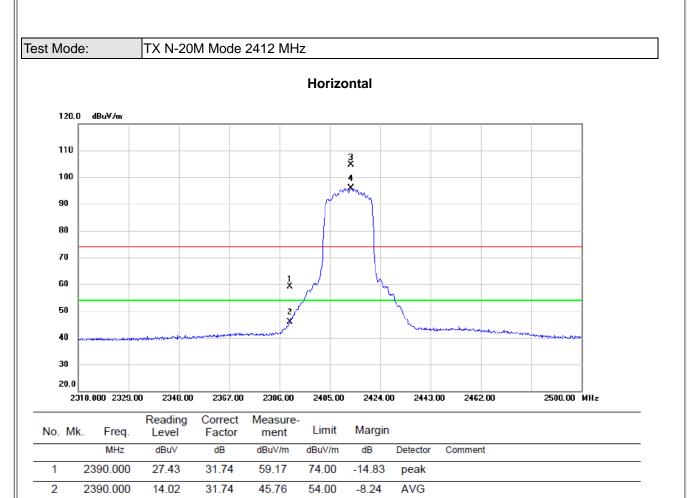




140. 1	ik. Troq.	Level	racior	ment				
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4826.024	56.15	-10.91	45.24	74.00	-28.76	peak	
2	7235.196	57.23	-4.17	53.06	74.00	-20.94	peak	
3 *	7237.448	44.53	-4.17	40.36	54.00	-13.64	AVG	

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





74.00

54.00

30.66

41.95

No limit

No limit

peak

AVG

4 *

3 X 2413.075

2413.075

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

72.94

64.23

31.72

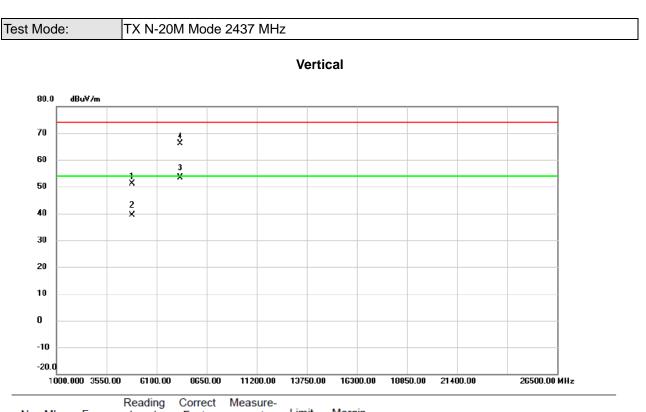
31.72

104.66

95.95

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

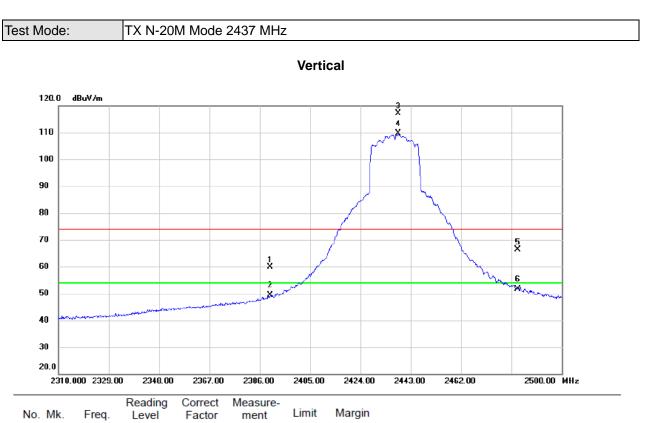




No.	. Mk	. Freq.		Factor	ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		4870.812	62.01	-10.79	51.22	74.00	-22.78	peak	
2		4871.248	50.20	-10.79	39.41	54.00	-14.59	AVG	
3	*	7309.848	57.41	-4.08	53.33	54.00	-0.67	AVG	
4		7310.314	70.22	-4.08	66.14	74.00	-7.86	peak	

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

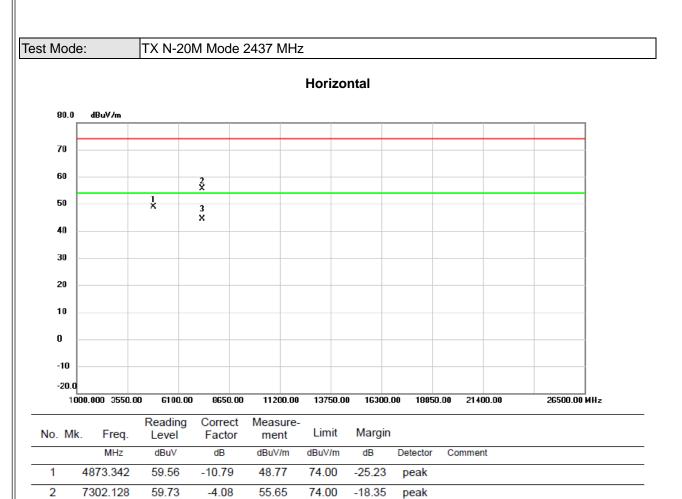




No.	Mk.	Freq.	Level	Factor	ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	28.12	31.74	59.86	74.00	-14.14	peak	
2		2390.000	17.59	31.74	49.33	54.00	-4.67	AVG	
3	Х	2438.345	85.44	31.71	117.15	74.00	43.15	peak	No limit
4	*	2438.345	77.85	31.71	109.56	54.00	55.56	AVG	No limit
5		2483.500	34.58	31.72	66.30	74.00	-7.70	peak	
6		2483.500	19.87	31.72	51.59	54.00	-2.41	AVG	

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





3 *

7310.340

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

-4.08

44.36

54.00

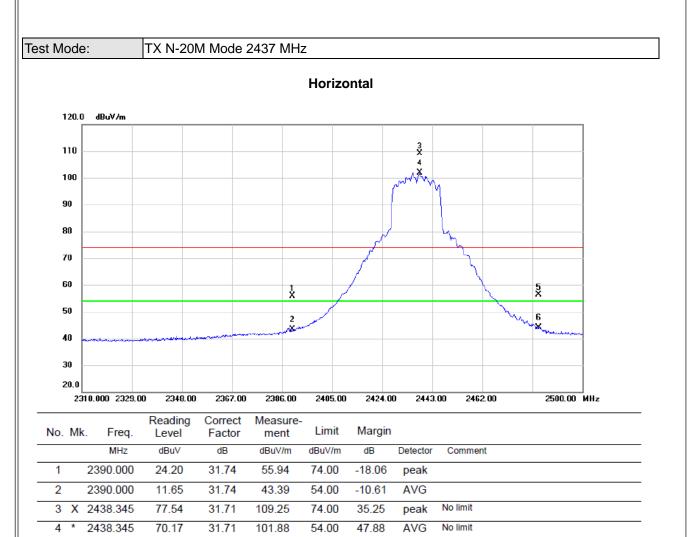
-9.64

AVG

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

48.44





5

6

2483.500

2483.500

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

31.72

31.72

56.40

44.06

74.00

54.00

-17.60

-9.94

peak

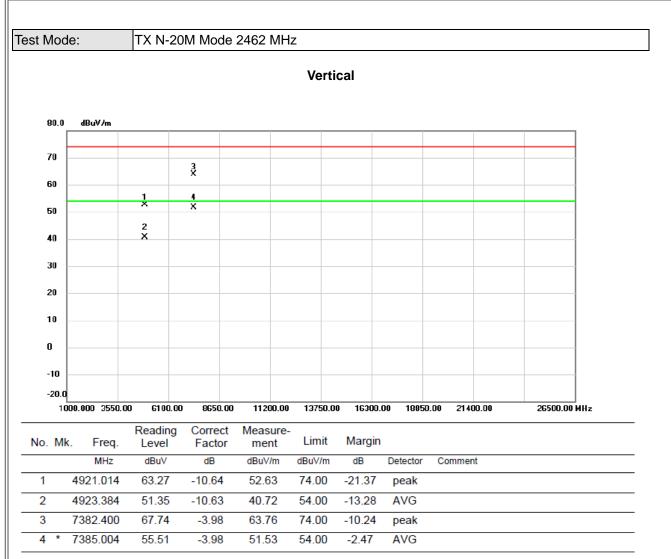
AVG

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

24.68

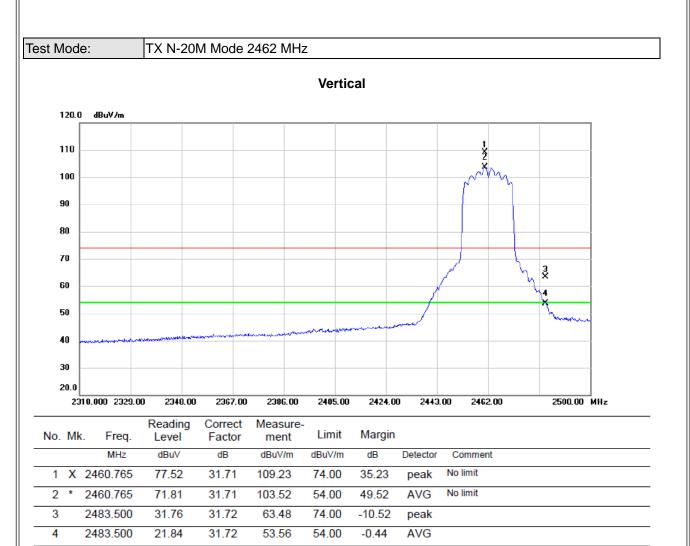
12.34





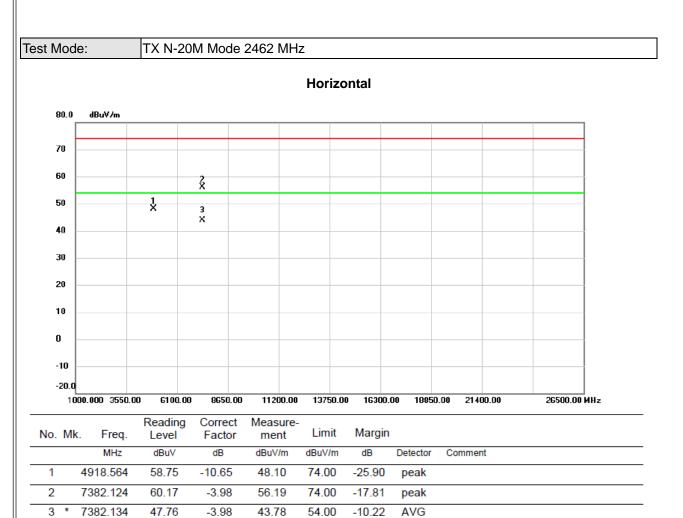
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





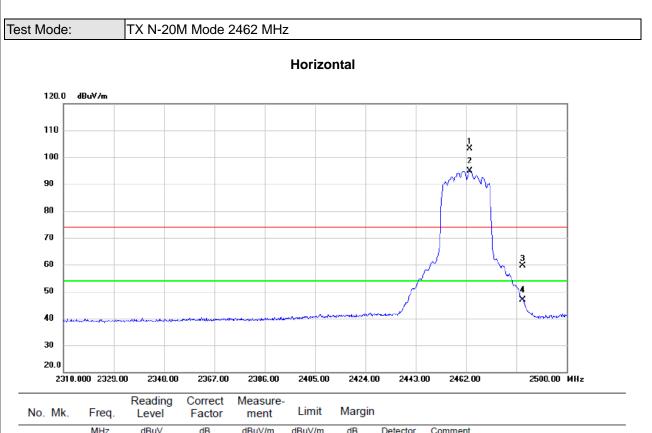
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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

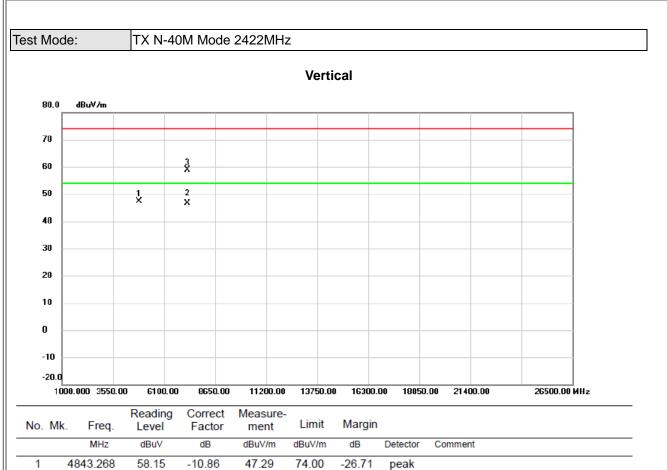




						-		
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1 X :	2463.425	71.38	31.72	103.10	74.00	29.10	peak	No limit
2 * 2	2463.425	63.10	31.72	94.82	54.00	40.82	AVG	No limit
3 2	2483.500	27.83	31.72	59.55	74.00	-14.45	peak	
4 2	2483.500	15.27	31.72	46.99	54.00	-7.01	AVG	

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





peak

AVG

peak

REMARKS:

1

2

* 3

7265.016

7265.284

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

-4.13

-4.13

46.53

58.78

54.00

74.00

-7.47

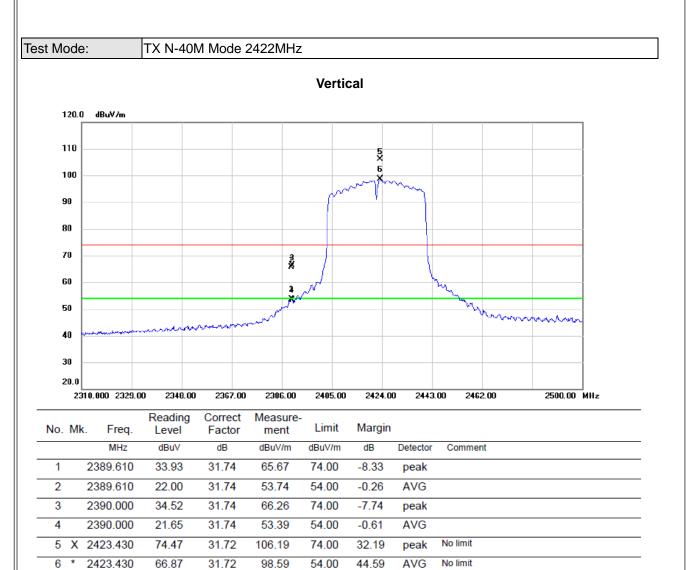
-15.22

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

50.66

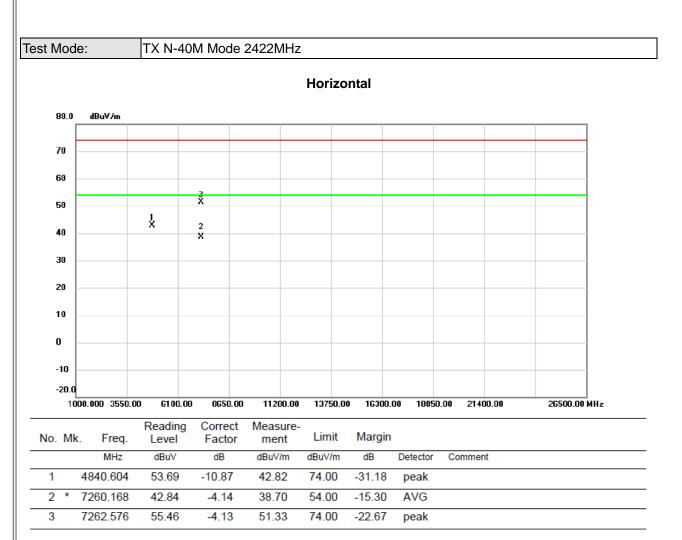
62.91





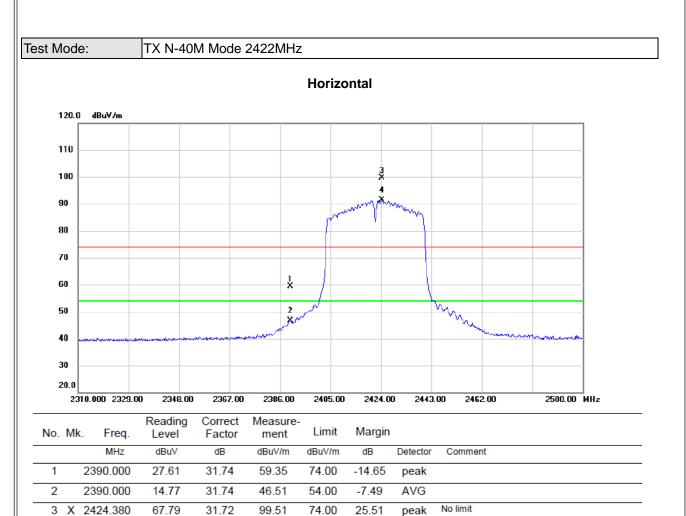
- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value Limit Value.





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





peak

AVG

No limit

REMARKS:

4 * 2424.380

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

31.72

91.26

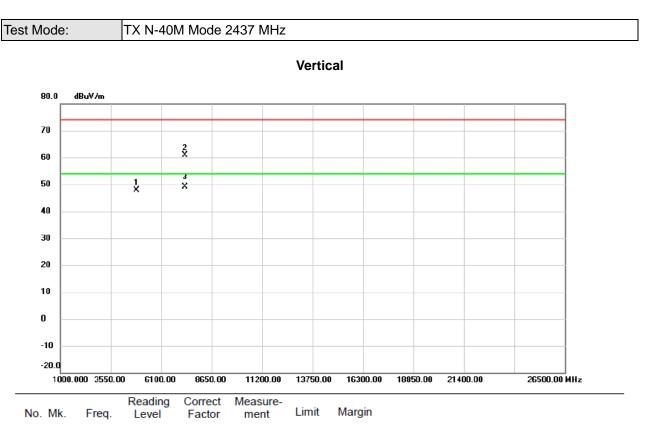
54.00

37.26

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

59.54

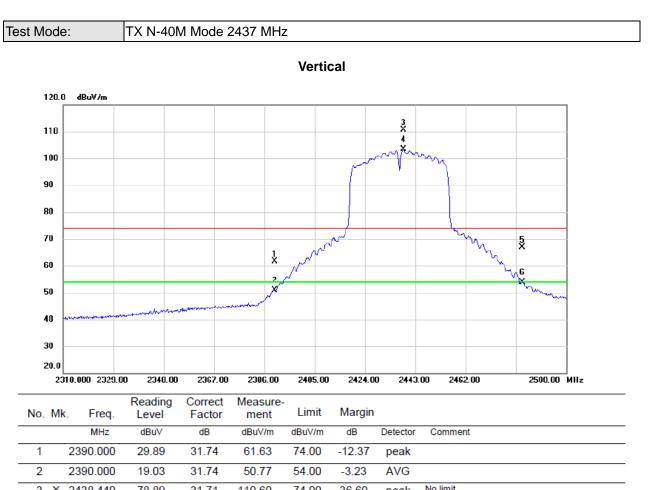




No.	Mk.	Freq.	Level	Factor	ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4	872.876	58.73	-10.79	47.94	74.00	-26.06	peak	
2	7	308.976	64.88	-4.08	60.80	74.00	-13.20	peak	
3	* 7	309.098	53.16	-4.08	49.08	54.00	-4.92	AVG	

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

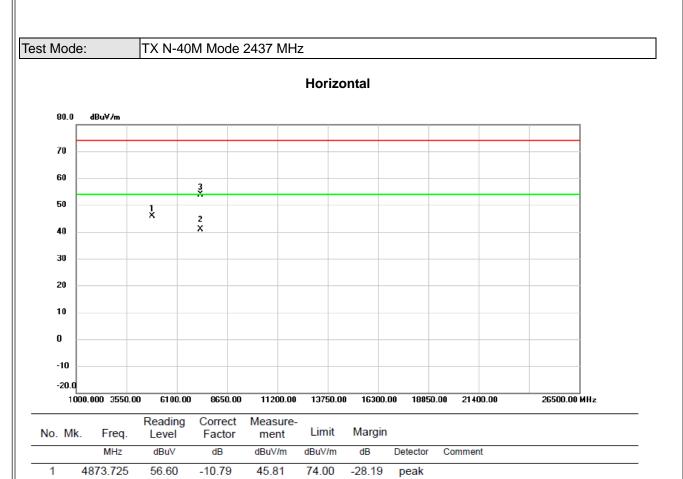




	3)	X 2438.440	78.89	31.71	110.60	74.00	36.60	peak	No limit
	4 *	2438.440	71.79	31.71	103.50	54.00	49.50	AVG	No limit
	5	2483.500	35.18	31.72	66.90	74.00	-7.10	peak	
_	6	2483.500	22.06	31.72	53.78	54.00	-0.22	AVG	

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

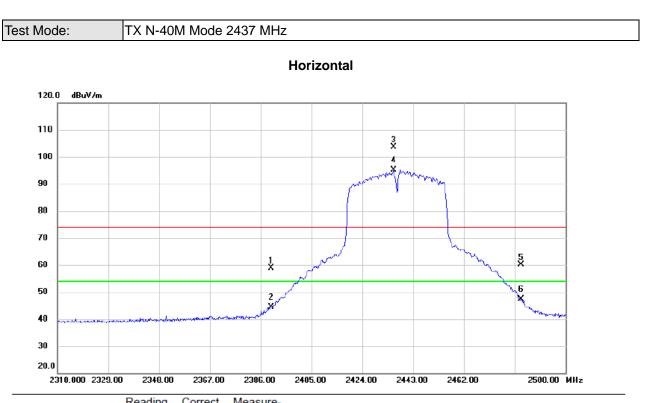




2 *	ł	7303.912	44.99	-4.08	40.91	54.00	-13.09	AVG
3		7306.512	57.91	-4.08	53.83	74.00	-20.17	peak

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

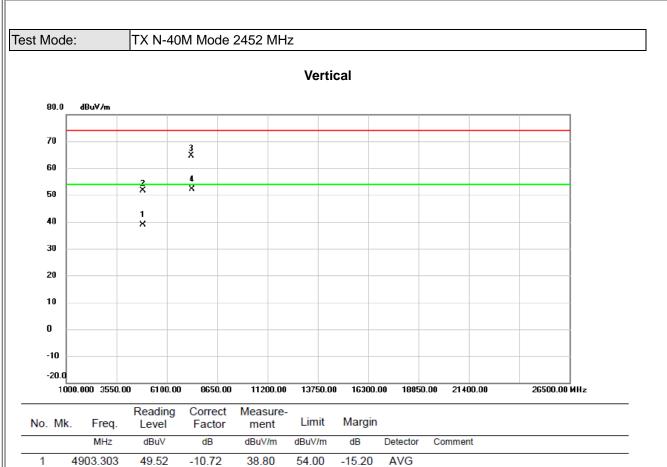




No.	Mk	. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		2390.000	27.12	31.74	58.86	74.00	-15.14	peak	
2		2390.000	12.68	31.74	44.42	54.00	-9.58	AVG	
3	Х	2435.685	71.91	31.71	103.62	74.00	29.62	peak	No limit
4	*	2435.685	63.50	31.71	95.21	54.00	41.21	AVG	No limit
5		2483.500	28.34	31.72	60.06	74.00	-13.94	peak	
6		2483.500	15.57	31.72	47.29	54.00	-6.71	AVG	

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





2		4903.361	62.42	-10.72	51.70	74.00	-22.30	peak	
3		7357.668	68.56	-4.02	64.54	74.00	-9.46	peak	
4	*	7364.828	56.22	-4.00	52.22	54.00	-1.78	AVG	

REMARKS:

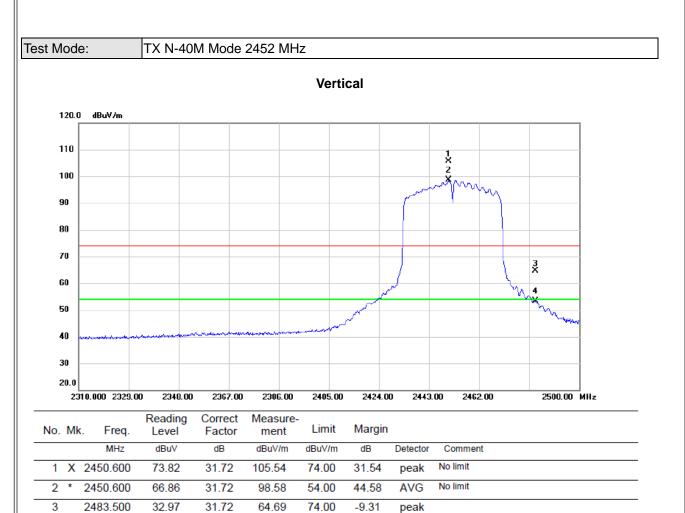
2

2

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

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





4

2483.500

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

31.72

53.32

54.00

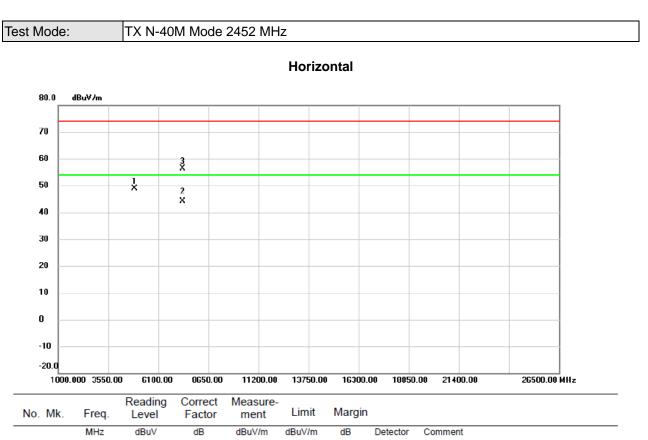
-0.68

AVG

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

21.60

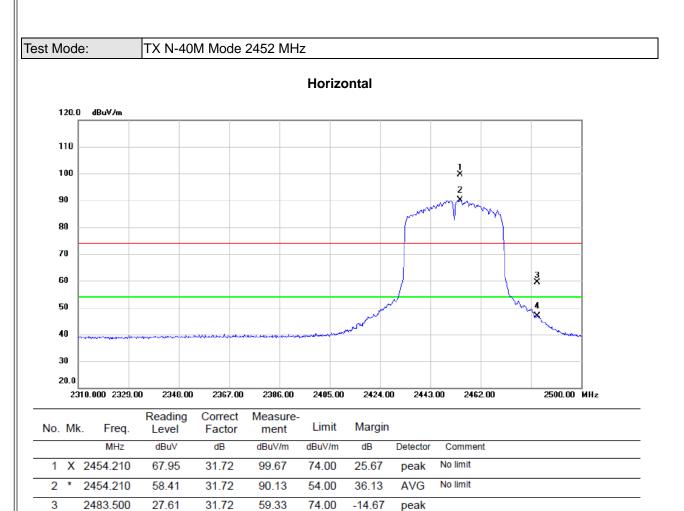




	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	4903.565	59.67	-10.72	48.95	74.00	-25.05	peak	
2 *	7357.341	48.05	-4.02	44.03	54.00	-9.97	AVG	
3	7357.553	60.37	-4.02	56.35	74.00	-17.65	peak	

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





4

2483.500

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

31.72

46.88

54.00

-7.12

AVG

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

15.16

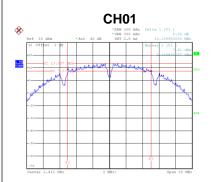


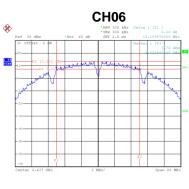
APPENDIX E - BANDWIDTH

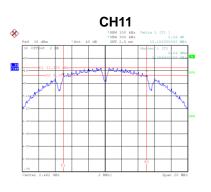


С	D	D
-		

Т	Test Mode TX B Mode									
	Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result					
	01	2412	10.11	500	Complies					
	06	2437	10.11	500	Complies					
	11	2462	10.10	500	Complies					





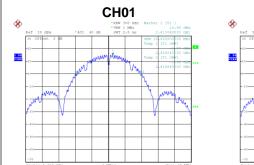


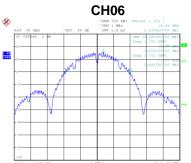
Date: 27.JUL.2020 17:28:34

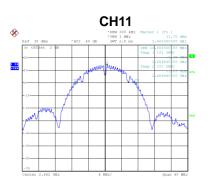
Date: 27.JUL.2020 17:32:05



Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	15.60	Complies
06	2437	15.44	Complies
11	2462	14.80	Complies







Date: 27.JUL.2020 17:28:41

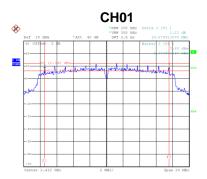
Date: 27.JUL.2020 17:32:12

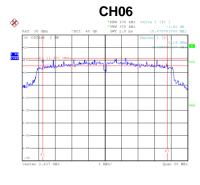
Date: 27.JUL.2020 17:41:22

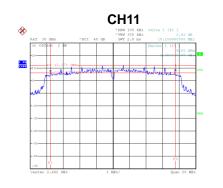


Test Mode TX G Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	15.08	500	Complies
06	2437	15.08	500	Complies
11	2462	15.16	500	Complies





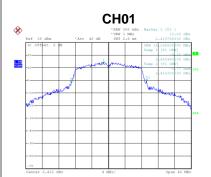


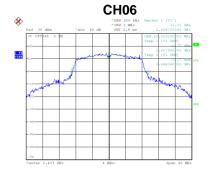
Date: 27.JUL.2020 17:47:53

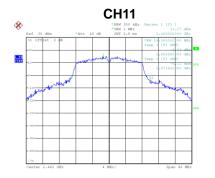
Date: 27.JUL.2020 17:56:08

Date: 27.JUL.2020 17:58:38

Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	18.24	Complies
06	2437	18.40	Complies
11	2462	19.36	Complies







Date: 27.JUL.2020 17:47:59

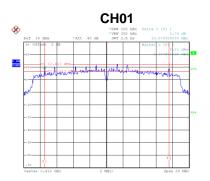
Date: 27.JUL.2020 17:56:15

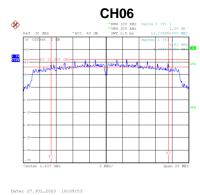
Date: 27.JUL.2020 17:58:45

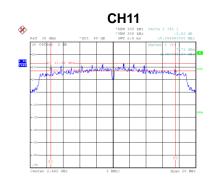


Test Mode	TX N-20M Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
01	2412	15.08	500	Complies
06	2437	14.24	500	Complies
11	2462	15.10	500	Complies





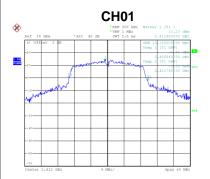


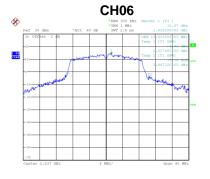
Date: 27.JUL.2020 18:04:21

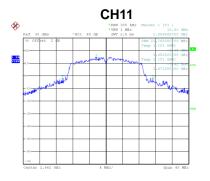
ласе	1 61	*007	.2020	18103	12

Date: 27.JUL.2020 18:19:59

Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
01	2412	19.12	Complies
06	2437	19.92	Complies
11	2462	21.76	Complies







Date: 27.JUL.2020 18:04:28

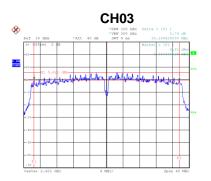
Date: 27.JUL.2020 18:10:00

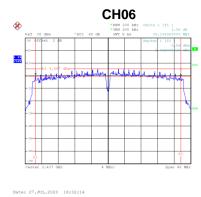
Date: 27.JUL.2020 18:20:06

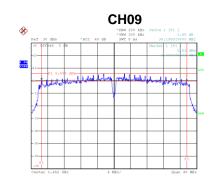


Test Mode TX N-40M Mode

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	6 dB Bandwidth Min. Limit (kHz)	Result
03	2422	35.20	500	Complies
06	2437	35.20	500	Complies
09	2452	35.20	500	Complies





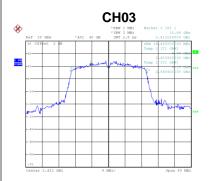


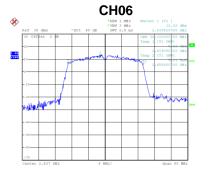
Date: 27.JUL.2020 18:43:49

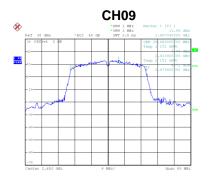
Date: 27.JUL.2020 18:43:56

Date: 27.JUL.2020 18:29:27

Channel	Frequency (MHz)	99 % Emission Bandwidth (MHz)	Result
03	2422	36.48	Complies
06	2437	36.32	Complies
09	2452	36.48	Complies







Date: 27.JUL.2020 18:29:34

Date: 27.JUL.2020 18:32:20



APPENDIX F - MAXIMUM OUTPUT POWER



CDD

Test Mode TX B Mode_Ant. 1					
C	Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (W)	Result
	01	2412	11.97	1.0000	Complies
	06	2437	11.42	1.0000	Complies
	11	2462	19.51	1.0000	Complies

Test Mode TX B Mode_Ant. 2

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (W)	Result
01	2412	11.84	1.0000	Complies
06	2437	11.15	1.0000	Complies
11	2462	19.34	1.0000	Complies

Test Mode TX B Mode_Total

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	14.92	30.00	1.0000	Complies
06	2437	14.30	30.00	1.0000	Complies
11	2462	22.44	30.00	1.0000	Complies



Test Mode

TX G Mode_Ant. 1

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (W)	Result
01	2412	25.41	1.0000	Complies
06	2437	25.31	1.0000	Complies
11	2462	24.83	1.0000	Complies

Test Mode TX G Mode_Ant. 2

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (W)	Result
01	2412	24.76	1.0000	Complies
06	2437	24.58	1.0000	Complies
11	2462	24.03	1.0000	Complies

Test Mode

TX G Mode_Total

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	28.11	30.00	1.0000	Complies
06	2437	27.97	30.00	1.0000	Complies
11	2462	27.46	30.00	1.0000	Complies



Test Mode

TX N-20M Mode_Ant. 1

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (W)	Result
01	2412	24.67	1.0000	Complies
06	2437	25.77	1.0000	Complies
11	2462	24.21	1.0000	Complies

Test Mode TX N-20M Mode_Ant. 2

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (W)	Result
01	2412	24.03	1.0000	Complies
06	2437	25.02	1.0000	Complies
11	2462	23.55	1.0000	Complies

Test Mode TX N-20M Mode_Total

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
01	2412	27.37	30.00	1.0000	Complies
06	2437	28.42	30.00	1.0000	Complies
11	2462	26.90	30.00	1.0000	Complies



Test Mode T

TX N-40M Mode_Ant. 1

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (W)	Result
03	2422	12.94	1.0000	Complies
06	2437	25.61	1.0000	Complies
09	2452	25.25	1.0000	Complies

Test Mode TX N-40M Mode_Ant. 2

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (W)	Result
03	2422	22.27	1.0000	Complies
06	2437	24.61	1.0000	Complies
09	2452	25.21	1.0000	Complies

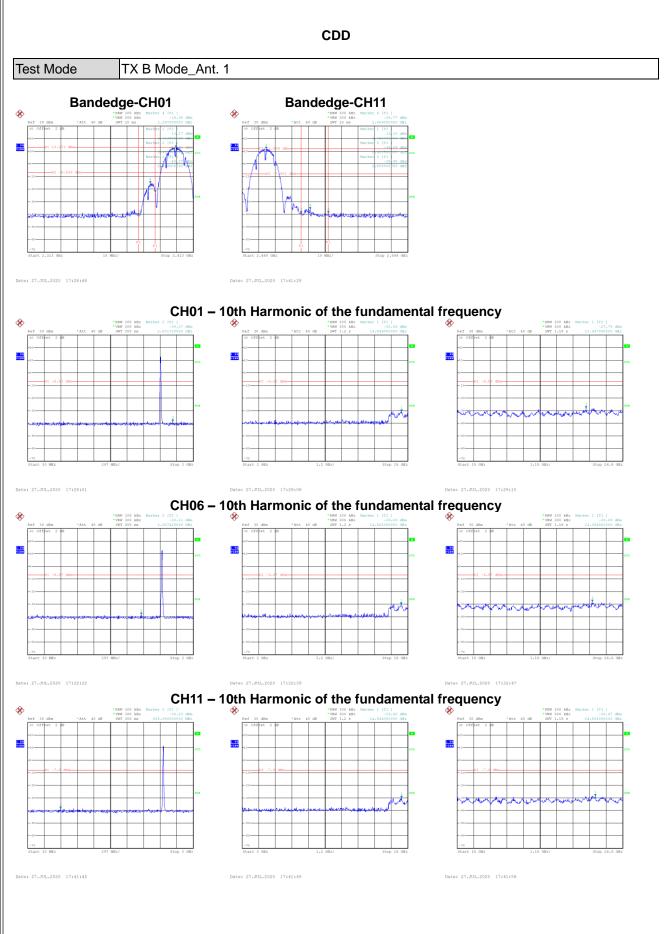
Test Mode TX N-40M Mode_Total

Channel	Frequency (MHz)	Peak Output Power (dBm)	Max. Limit (dBm)	Max. Limit (W)	Result
03	2422	22.75	30.00	1.0000	Complies
06	2437	28.15	30.00	1.0000	Complies
09	2452	28.24	30.00	1.0000	Complies

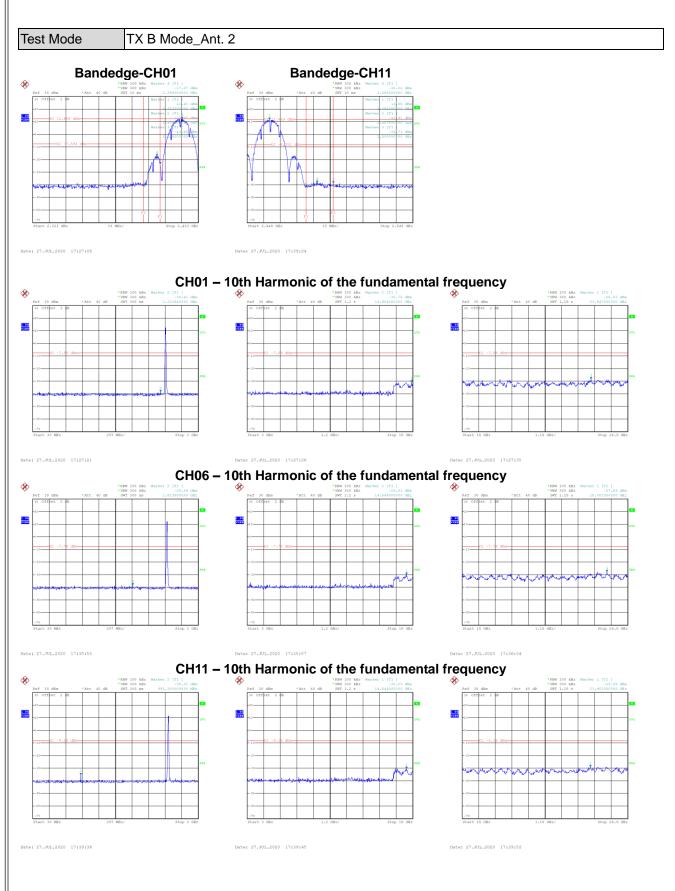


APPENDIX G - CONDUCTED SPURIOUS EMISSIONS

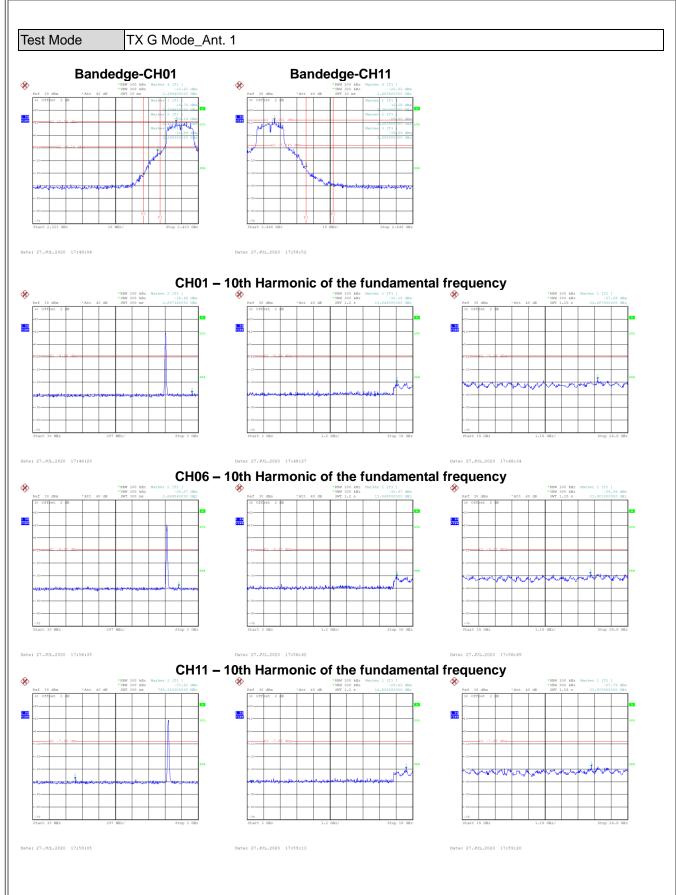




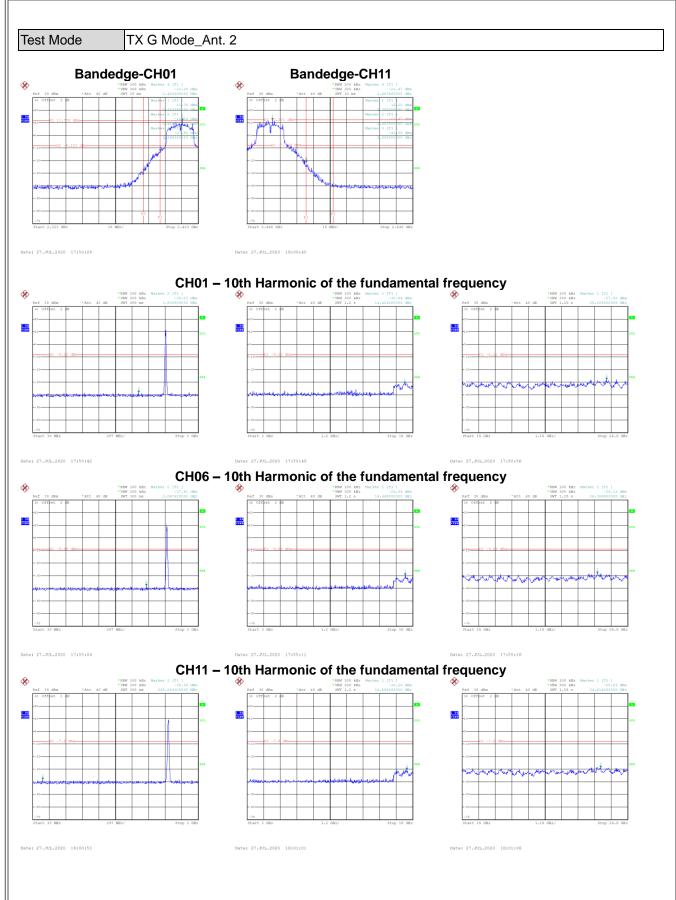




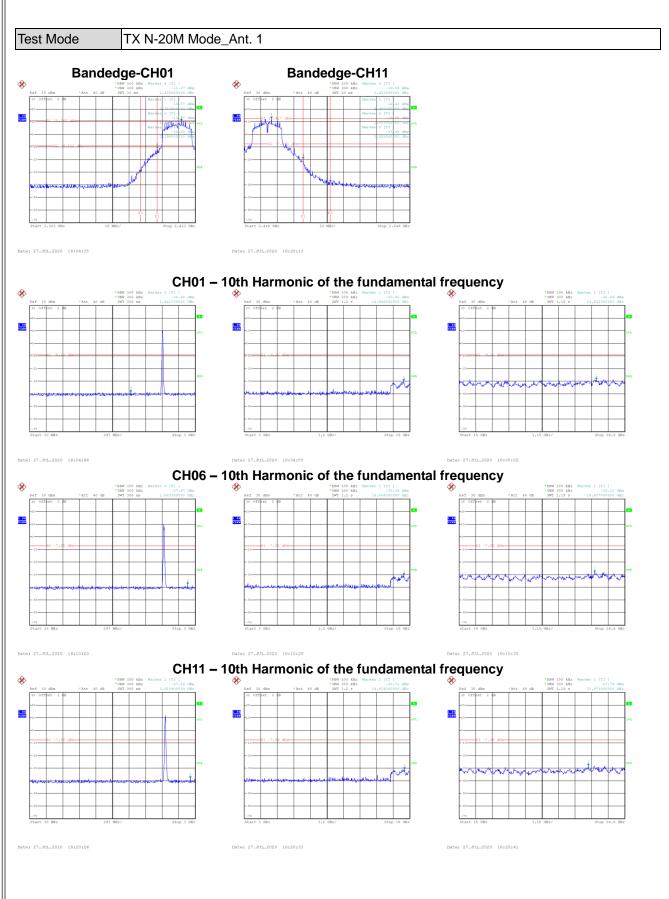




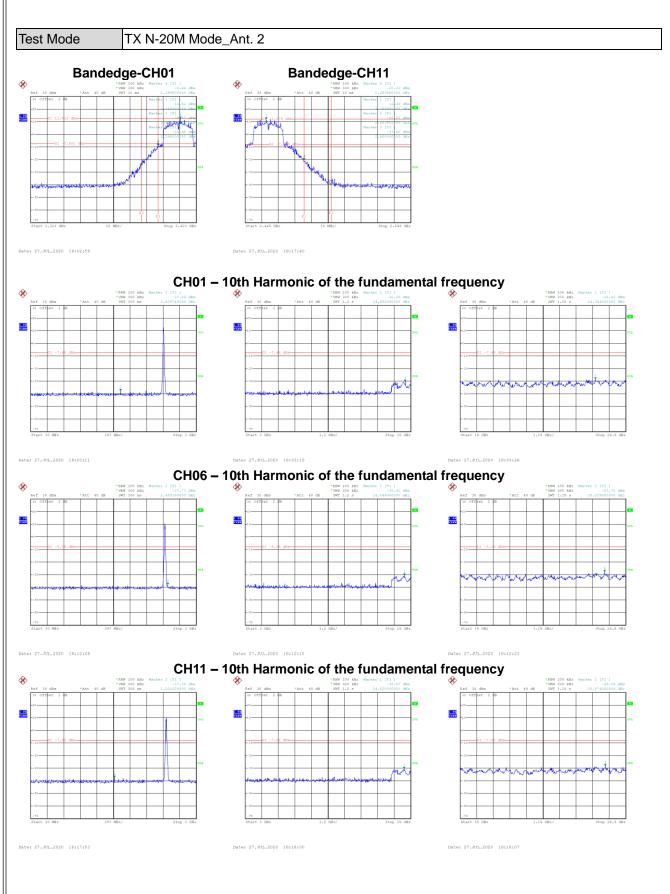




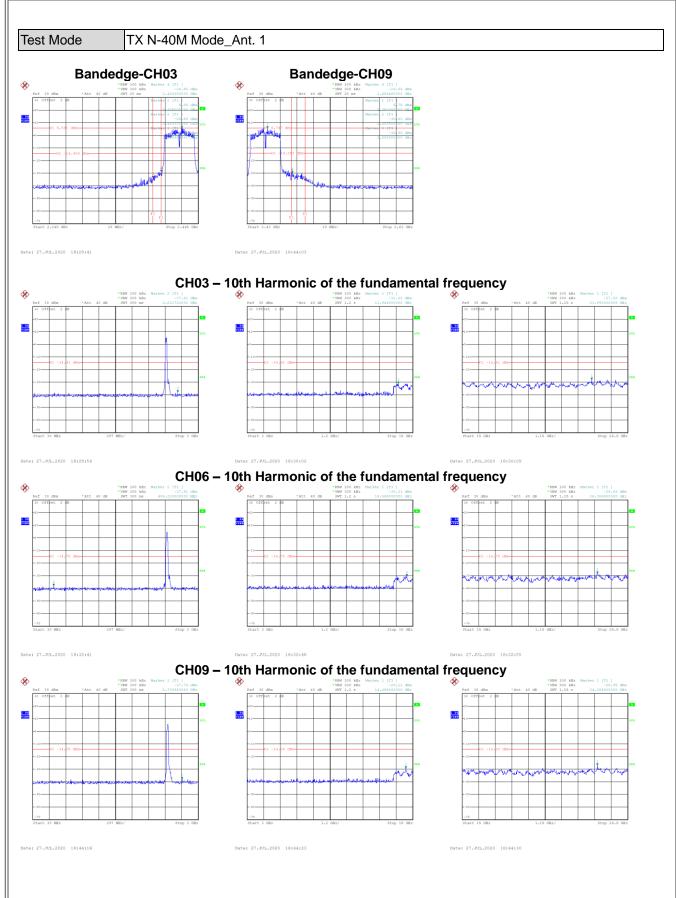




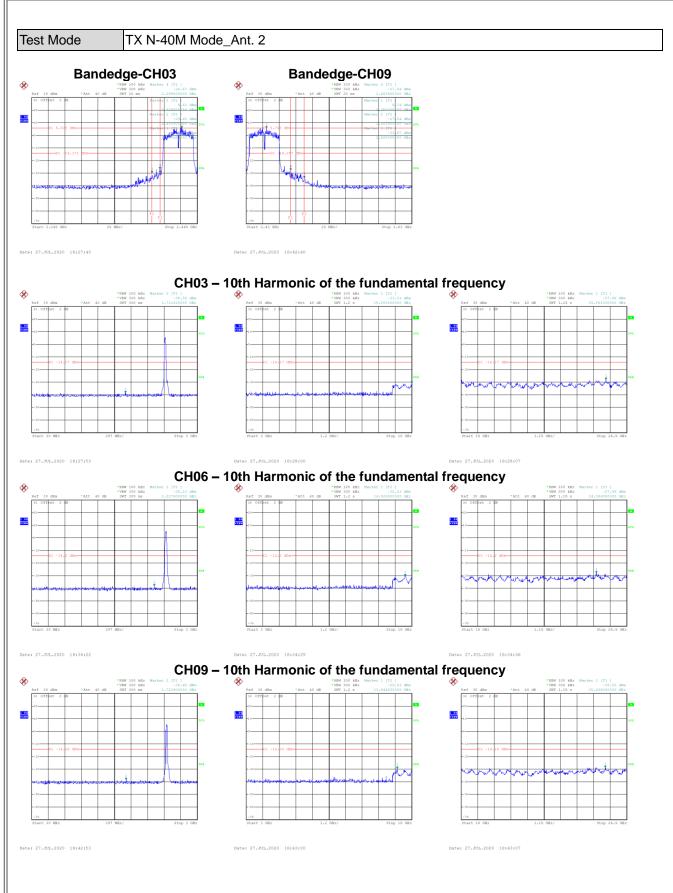












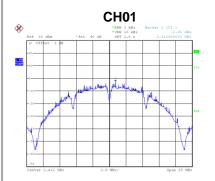


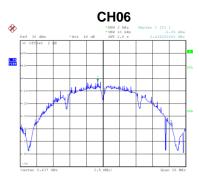
APPENDIX H - POWER SPECTRAL DENSITY



CDD

Test Mode	TX B Mode_Ant. 1			
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-2.65	7.79	Complies
06	2437	-2.05	7.79	Complies
11	2462	-3.46	7.79	Complies







Date: 27.JUL.2020 17:29:41

Test Mode

TX B Mode_Ant. 2

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-3.49	7.79	Complies
06	2437	-4.54	7.79	Complies
11	2462	-4.31	7.79	Complies





Date: 27.JUL.2020 17:34:53



Date: 27.JUL.2020 17:38:41

Date: 27.JUL.2020 17:26:25

Test Mode

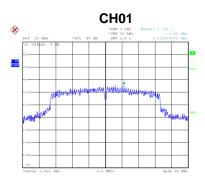
TX B Mode_Total

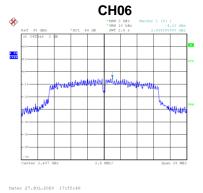
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-0.04	7.79	Complies
06	2437	-0.11	7.79	Complies
11	2462	-0.85	7.79	Complies



Test Mode	TX G Mode_Ant. 1			
	_			
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result

01	2412	-3.82	7.79	Complies
06	2437	-4.21	7.79	Complies
11	2462	-3.82	7.79	Complies





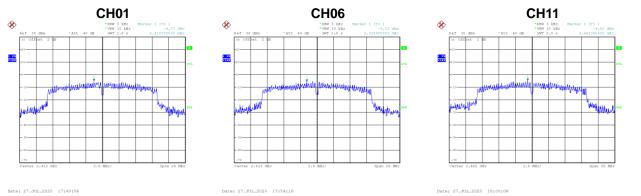


Date: 27.JUL.2020 17:47:34

Test Mode

TX G Mode_Ant. 2

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-4.73	7.79	Complies
06	2437	-5.23	7.79	Complies
11	2462	-4.52	7.79	Complies



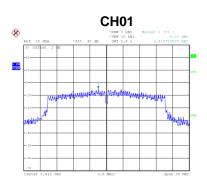
Date: 27.JUL.2020 17:49:56

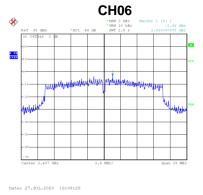
TX G Mode_Total Test Mode

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-1.24	7.79	Complies
06	2437	-1.68	7.79	Complies
11	2462	-1.15	7.79	Complies



Test Mode TX N-20M Mode_Ant. 1					
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result	
01	2412	-4.30	7.79	Complies	
06	2437	-2.94	7.79	Complies	
11	2462	-4.33	7.79	Complies	





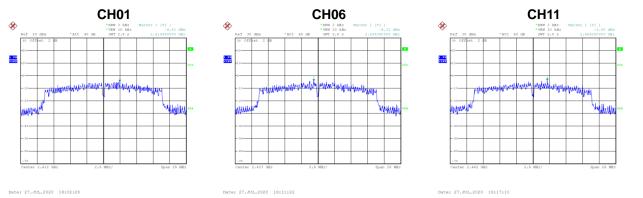


Test Mode

Date: 27.JUL.2020 18:04:02

TX N-20M Mode_Ant. 2

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-4.81	7.79	Complies
06	2437	-4.31	7.79	Complies
11	2462	-3.80	7.79	Complies



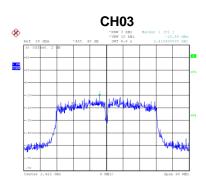
Date: 27.JUL.2020 18:02:29

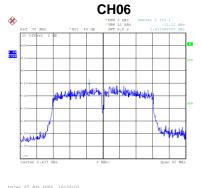
TX N-20M Mode_Total Test Mode

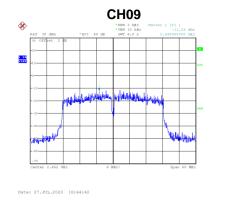
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
01	2412	-1.54	7.79	Complies
06	2437	-0.56	7.79	Complies
11	2462	-1.05	7.79	Complies



Test Mode	TX N-40M Mode_Ant. 1			
Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
03	2422	-10.86	7.79	Complies
06	2437	-11.12	7.79	Complies
09	2452	-11.24	7.79	Complies





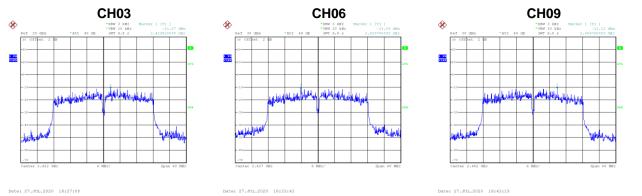


Test Mode

Date: 27.JUL.2020 18:30:20

TX N-40M Mode_Ant. 2

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
03	2422	-11.07	7.79	Complies
06	2437	-11.26	7.79	Complies
09	2452	-11.12	7.79	Complies



Date: 27.JUL.2020 18:27:09

Test Mode TX N-40M Mode_Total

Channel	Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Max. Limit (dBm/3kHz)	Result
03	2422	-7.95	7.79	Complies
06	2437	-8.18	7.79	Complies
09	2452	-8.17	7.79	Complies

End of Test Report