

FCC Radio Test Report

FCC ID: M82-AIM58W

Project No. : 1710T083D Equipment : Computer Test Model : AIM 10W

: AIM-58, AIM-58XXXXXXXXXXXXXXXX, AIM Series Model

10WXXXXXXXXXXXXXXX (where X may be any

alphanumeric character, blank or "-".)

: Advantech Co., Ltd. Applicant

Address : No.1, Alley 20, Lane 26, Rueiguang Road, Neihu

District, Taipei 11491, Taiwan, R.O.C.

Date of Receipt : 2017/11/13 2020/12/16

: 2017/11/13 ~ 2018/2/27 Date of Test

2020/12/16 ~ 2021/4/16

Issued Date : 2021/10/15 : BTL Inc. Tested by

Prepared by

Jerry Chuang, Supervisor

Approved by

Peter Chen, Vice Manager

BTL Inc.

No.18, Ln. 171, Sec. 2, Jiuzong Rd., Neihu Dist., Taipei City 114, Taiwan

Tel: +886-2-2657-3299 Fax: +886-2-2657-3331 Web: www.newbtl.com

Report No.: BTL-FCCP-3-1710T083D Page 1 of 174

Report Version: R02



Declaration

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

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

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

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

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

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

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

Report No.: BTL-FCCP-3-1710T083D Page 2 of 174 Report Version: R02



Table of Contents	Page
1 . CERTIFICATION	6
2 . SUMMARY OF TEST RESULTS	7
2.1 TEST FACILITY	8
2.2 MEASUREMENT UNCERTAINTY	8
3 . GENERAL INFORMATION	9
3.1 GENERAL DESCRIPTION OF EUT	9
3.2 DESCRIPTION OF TEST MODES	12
3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING	13
3.4 DUTY CYCLE	14
3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTE	D 15
3.5 DESCRIPTION OF SUPPORT UNITS	15
4 . EMC EMISSION TEST	16
4.1 CONDUCTED EMISSION MEASUREMENT	16
4.1.1 POWER LINE CONDUCTED EMISSION LIMITS	16
4.1.2 TEST PROCEDURE	16
4.1.3 DEVIATION FROM TEST STANDARD	16
4.1.4 TEST SETUP	17
4.1.5 EUT OPERATING CONDITIONS	17
4.1.6 EUT TEST CONDITIONS 4.1.7 TEST RESULTS	17 17
4.2 RADIATED EMISSION MEASUREMENT	18
4.2.1 RADIATED EMISSION LIMITS	18
4.2.2 TEST PROCEDURE	19
4.2.3 DEVIATION FROM TEST STANDARD	19
4.2.4 TEST SETUP	20
4.2.5 EUT OPERATING CONDITIONS	21
4.2.6 EUT TEST CONDITIONS	21
4.2.7 TEST RESULTS (9KHZ TO 30MHZ)	21 21
4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ) 4.2.9 TEST RESULTS (ABOVE 1000 MHZ)	21
5 . BANDWIDTH TEST	22
5.1 APPLIED PROCEDURES	22
5.1.1 TEST PROCEDURE 5.1.2 DEVIATION FROM STANDARD	22 22
5.1.2 DEVIATION FROM STANDARD 5.1.3 TEST SETUP	22
5.1.4 EUT OPERATION CONDITIONS	22
5.1.5 EUT TEST CONDITIONS	22
5.1.6 TEST RESULTS	22



Table of Contents	Page
6 . MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST	23
6.1 APPLIED PROCEDURES / LIMIT	23
6.1.1 TEST PROCEDURE	23
6.1.2 DEVIATION FROM STANDARD	23
6.1.3 TEST SETUP 6.1.4 EUT OPERATION CONDITIONS	23 23
6.1.5 EUT TEST CONDITIONS	23
6.1.6 TEST RESULTS	23
7. ANTENNA CONDUCTED SPURIOUS EMISSION	24
7.1 APPLIED PROCEDURES / LIMIT	24
7.1.1 TEST PROCEDURE	24
7.1.2 DEVIATION FROM STANDARD 7.1.3 TEST SETUP	24 24
7.1.4 EUT OPERATION CONDITIONS	24
7.1.5 EUT TEST CONDITIONS	24
7.1.6 TEST RESULTS	24
8 . POWER SPECTRAL DENSITY TEST	25
8.1 APPLIED PROCEDURES / LIMIT	25
8.1.1 TEST PROCEDURE	25 25
8.1.2 DEVIATION FROM STANDARD 8.1.3 TEST SETUP	25 25
8.1.4 EUT OPERATION CONDITIONS	25 25
8.1.5 EUT TEST CONDITIONS	25
8.1.6 TEST RESULTS	25
9. MEASUREMENT INSTRUMENTS LIST	26
10 . EUT TEST PHOTO	29
APPENDIX A - CONDUCTED EMISSION	44
APPENDIX B - RADIATED EMISSION (9KHZ TO 30MHZ)	59
APPENDIX C - RADIATED EMISSION (30MHZ TO 1000MHZ)	72
APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)	83
APPENDIX E - BANDWIDTH	144
APPENDIX F - MAXIMUM PEAK CONDUCTED OUTPUT POWER	151
APPENDIX G - ANTENNA CONDUCTED SPURIOUS EMISSION	158
APPENDIX H - POWER SPECTRAL DENSITY	165

Report No.: BTL-FCCP-3-1710T083D

Page 4 of 174 Report Version: R02



REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date
BTL-FCCP-3-1710T083D	R00	Original Report.	2021/4/27
BTL-FCCP-3-1710T083D		Revised report to address TCB's comments.	2021/9/8
BTL-FCCP-3-1710T083D	R02	Revised typo.	2021/10/15



1. CERTIFICATION

Equipment : Computer Brand Name: ADVANTECH Test Model : AIM 10W

(where X may be any alphanumeric character, blank or "-".)

Applicant : Advantech Co., Ltd. Manufacturer: Advantech Co., Ltd.

: No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 11491, Taiwan, Address

R.O.C.

: N/A Factory Address : N/A

Date of Test : 2017/11/13 ~ 2018/2/27

2020/12/16 ~ 2021/4/16

Test Sample: Production Unit

Standard(s): FCC Part15, Subpart C:(15.247)

ANSI C63.10-2013

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

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. BTL-FCCP-3-1710T083D) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO/IEC 17025 quality assessment standard and technical standard(s).

Test results included in this report is only for the WIFI 2.4GHz part.

Report No.: BTL-FCCP-3-1710T083D Page 6 of 174



2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

Applied Standard(s): FCC Part15 (15.247) , Subpart C					
Standard(s) Section	Test Item	Judgment	Remark		
15.207	Conducted Emission	PASS			
15.247(d)	Antenna conducted Spurious Emission	PASS			
15.247(a)(2)	6dB Bandwidth	PASS			
15.247(b)(3)	Peak Output Power	PASS			
15.247(e)	Power Spectral Density	PASS			
15.203	Antenna Requirement	PASS			
15.247(d)/ 15.205/ 15.209	Transmitter Radiated Emissions	PASS			

NOTE:

(1)" N/A" denotes test is not applicable in this test report.



2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

No. 68-1, Ln. 169, Sec. 2, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan The test sites and facilities are covered under FCC RN: 674415 and DN: TW0659.

□ CB11

C05 ☐ CB08 □ CB16

SR05 \boxtimes

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement $y \pm U$, where expanded uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k = 2, providing a level of confidence of approximately 95 %.

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2. The BTL measurement uncertainty is less than the CISPR 16-4-2 Ucispr requirement.

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U (dB)
C05	CISPR	150 kHz ~ 30MHz	3.44

B. Radiated emissions test:

Test Site	Measurement Frequency Range	U,(dB)
CB15	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
	1 GHz ~ 6 GHz	5.21
	6 GHz ~ 18 GHz	5.51
	18 GHz ~ 26 GHz	3.69
	26 GHz ~ 40 GHz	4.23

C. Conducted test:

Test Item	U,(dB)
Number of Hopping Frequency	0.00
Average Time of Occupancy	1.20
Hopping Channel Separation	1.20
Bandwidth	1.13
Peak Output Power	1.06
Antenna conducted Spurious Emission	1.14
Conducted Band edges	1.13

NOTE:

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

Report No.: BTL-FCCP-3-1710T083D Page 8 of 174



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Computer					
Brand Name	ADVANTECH					
Test Model	AIM 10W	AIM 10W				
Series Model	AIM-58, AIM-58XXXXXXXXXXXXXXXX, AIM 10WXXXXXXXXXXXXXXXXXXX (where X may be any alphanumeric character, blank or "-".)					
Model Difference	The market distribution is	different only.				
	Operation Frequency	2412~2462 MHz				
Output Power (Max.)	Modulation Technology	802.11b:DSSS 802.11g:OFDM 802.11n:OFDM				
	Bit Rate of Transmitter	802.11b: 11/5.5/2/1 Mbps 802.11g: 54/48/36/24/18/12/9/6 Mbps 802.11n up to 144.4 Mbps				
	Output Power (Max.)	802.11b: 22.07dBm 802.11g: 24.54dBm 802.11n(20MHz): 23.61dBm				
	Output Power (Max.) Spot check test	802.11b: 21.33dBm 802.11g: 24.02dBm 802.11n(20MHz): 23.52dBm				
Power Source	DC Voltage supplied from AC/DC adapter.					
Power Rating	I/P: AC 100-240V~, 1.5A, 50~60Hz, 1.5A O/P: DC 19V==3.42A					
Products Covered	2* AC Adapter: (1) TAMURA / XEW1934N (2) FSP / FSP065-DBCM1 2* Dock: (1) Desk Docking: ADVANTECH/AIM-OFD-0000 (2) VESA Docking: ADVANTECH/AIM-DOC-0001					

NOTE:

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

Report No.: BTL-FCCP-3-1710T083D Page 9 of 174 Report Version: R02



- (2) In this report, the test results of below items refer to BTL-FCCP-3-1710083 report due to the device is identical to the original device of the referencing report, except added series models and added an external power adapter.
 - a. Conducted Emission
 - b. Antenna conducted Spurious Emission
 - c. 6dB Bandwidth
 - d. Peak Output Power
 - e. Power Spectral Density
 - f. Transmitter Radiated Emissions(30MHZ TO 1000MHZ & ABOVE 1000MHZ)

Spot checks are applied to below items:

- a. Peak Output Power
- b. Transmitter Radiated Emissions (ABOVE 1000MHZ)

After evaluated, the changes with respect to the original device below items are tested.

- a. Conducted Emission
- b. Transmitter Radiated Emissions (30MHZ TO 1000MHZ)

(3) Channel List:

CH01 – CH11 for 802.11b, 802.11g, 802.11n(20MHz)							
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
01	2412	04	2427	07	2442	10	2457
02	2417	05	2432	08	2447	11	2462
03	2422	06	2437	09	2452		

(4) Table for Filed Antenna

Ant.	Brand	Model	Type	Connector	Frequency Range (MHz)	Gain w/ Cable loss (dBi) (peak)	Gain w/o Cable Loss (dBi) (peak)				
		IEC			2400-2500	0.65	1.32	0.67			
MAIN	INPAQ	6036B0207601	PIFA	PIFA	PIFA I-pex	5150-5350	-0.69	0.32	1.01		
		WA-F-LB-02-113			5470-5725	-0.16	0.88	1.04			
		IEC			2400-2500	-1.9	-1.68	0.22			
AUX	INPAQ	6036B0207501	PIFA	PIFA	PIFA	PIFA	IFA I-pex	5150-5350	-0.05	0.28	0.33
		WA-F-LB-03-080-			5470-5725	-0.3	0.04	0.34			

Note:

The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and receivers (2T2R) and employs Cyclic Delay Diversity (CDD).

In CDD mode,

For power spectral density:

Direction gain (dBi) =

 $10*\log\{[10^{(G1/20)}+10^{(G2/20)}+...+10^{(Gn/20)}]^2/NANT\} = 2.48 \text{ dBi} < 6dBi.$

For conducted power:

For $N_{ANT} = 2 < 5$,

Direction gain (dBi) = $G_{ANT} + 0 = 0.65 + 0 = 0.65$

The Direction gain is less than 6, so conducted power limits will not be reduced.



Operating Mode	2TX
TX Mode	217
802.11b	V (ANT 1+ANT 2)
802.11g	V (ANT 1+ANT 2)
802.11n(20MHz)	V (ANT 1+ANT 2)



3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

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-20MHZ MODE CHANNEL 01/06/11
Mode 4	Normal Link

The EUT system operated these modes were found to be the worst case during the pre-scanning test as following:

For Conducted Test			
Final Test Mode	Description		
Mode 4	Normal Link		

For Radiated 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-20MHZ MODE CHANNEL 01/06/11		

Note:

(1) The measurements are performed at the high, middle, low available channels.

(2) 802.11b mode: DBPSK (1Mbps) 802.11g mode: OFDM (6Mbps)

802.11n HT20 mode: BPSK (13Mbps)

For radiated emission tests, the highest output powers were set for final test.

Report No.: BTL-FCCP-3-1710T083D Page 12 of 174



3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing, channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

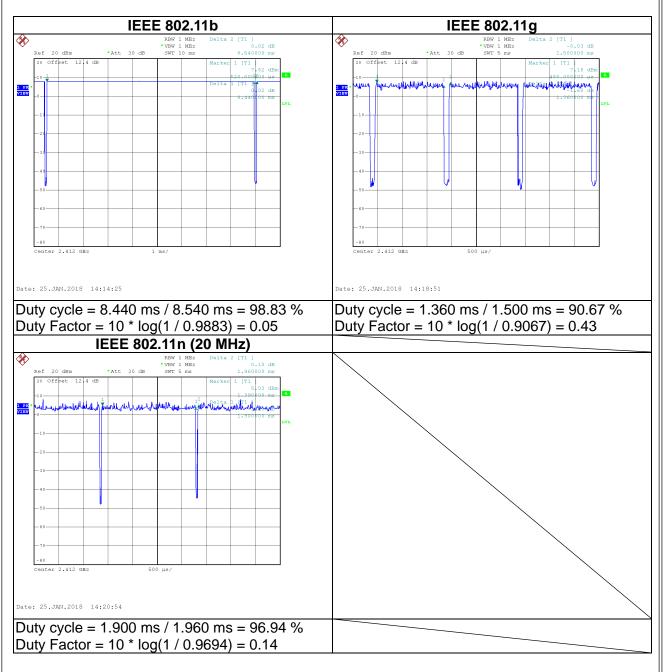
Test software version		DOC	
Frequency (MHz)	2412	2437	2462
802.11b	16	16	16
802.11g	15	15	15
802.11n (20MHz)	14	14	14

Report No.: BTL-FCCP-3-1710T083D Page 13 of 174



3.4 DUTY CYCLE

If duty cycle is \geq 98 %, duty factor is not required. If duty cycle is < 98 %, duty factor shall be considered.



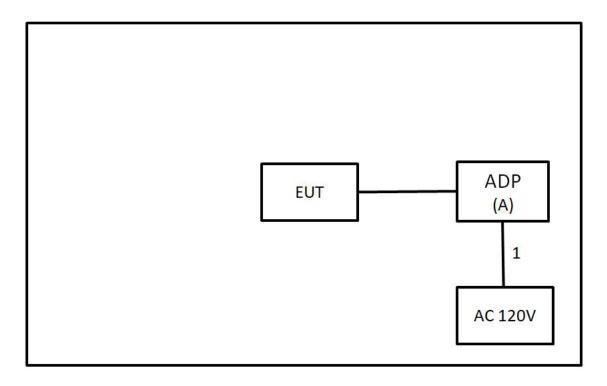
Note:

For IEEE 802.11g & IEEE 802.11n (20 MHz):

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%).



3.5 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model No.	Series No.	Remarks
A	Adapter	FSP GROUP INC	FSP065-DBCM1	IN/A	Supplied by test requester

Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	1.1m	PowerCora	Supplied by test requester



4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS (Frequency Range 150KHz-30MHz)

Frequency of Emission (MHz)	Conducted Limit (dBµV)		
	Quasi-peak	Average	
0.15 -0.50	66 to 56*	56 to 46*	
0. 0 -5.0	56	46	
5.0 -30.0	60	50	

Note:

- (1) The limit of " * " decreases with the logarithm of the frequency
- (2) The test result calculated as following: Measurement Value = Reading Level + Correct Factor Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use) Margin Level = Measurement Value - Limit Value

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

4.1.2 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 equipments 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.

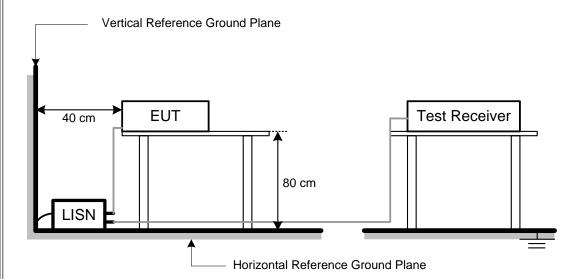
4.1.3 DEVIATION FROM TEST STANDARD

No deviation

Report No.: BTL-FCCP-3-1710T083D Page 16 of 174



4.1.4 TEST SETUP



4.1.5 EUT OPERATING CONDITIONS

The EUT was placed on the test table and programmed in normal function.

4.1.6 EUT TEST CONDITIONS

Temperature: 25°C, 19°C Relative Humidity: 55%, 61% Test Voltage: AC 120V/60Hz

4.1.7 TEST RESULTS

Please refer to the Appendix A.



4.2 RADIATED EMISSION MEASUREMENT

4.2.1 RADIATED EMISSION LIMITS

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 (9KHz-1000MHz)

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
960~1000	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	(dBuV/m) (at 3 meters)		
Frequency (Miriz)	PEAK	AVERAGE	
Above 1000	74	54	

Notes:

- (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

Report No.: BTL-FCCP-3-1710T083D Page 18 of 174



Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW	1MHz / 3MHz for Peak,
(Emission in restricted band)	1MHz / 1/T for Average

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

4.2.2 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 1GHz)
- 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 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- 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 1GHz)
- 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 1GHz)
- i. For the actual test configuration, please refer to the related Item -EUT Test Photos.

4.2.3 DEVIATION FROM TEST STANDARD

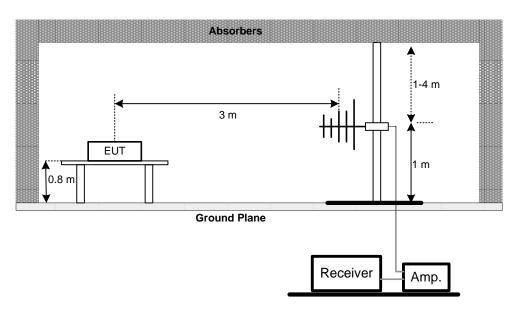
No deviation

Report No.: BTL-FCCP-3-1710T083D Page 19 of 174

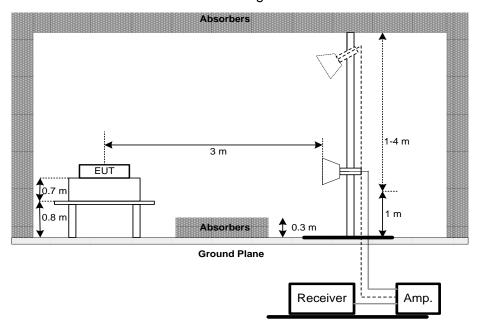


4.2.4 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) Radiated Emission Test Set-Up Frequency Above 1 GHz
Band edge

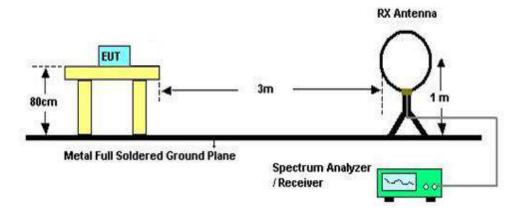


Report No.: BTL-FCCP-3-1710T083D

Page 20 of 174 Report Version: R02



(C) For Radiated Emissions Below 30MHz



4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.2.6 EUT TEST CONDITIONS

Temperature: 25°C, 21°C Relative Humidity: 55%, 70% Test Voltage: AC 120V/60Hz

4.2.7 TEST RESULTS (9KHZ TO 30MHZ)

Please refer to the Appendix B

Remark:

- (1) The amplitude of spurious emissions which are attenuated by more than 20 dB below the permissible value has no need to be reported.
- (2) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
- (3) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.2.8 TEST RESULTS (30MHZ TO 1000 MHZ)

Please refer to the Appendix C.

4.2.9 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.

Report No.: BTL-FCCP-3-1710T083D Page 21 of 174



5. BANDWIDTH TEST

5.1 APPLIED PROCEDURES

FCC Part15 (15.247), Subpart C					
Section Test Item Frequency Range (MHz) Result					
15.247(a)(2) Bandwidth 2400-2483.5 PASS					

5.1.1 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= 100KHz, VBW=300KHz, Sweep time = 2.5 ms.

5.1.2 DEVIATION FROM STANDARD

No deviation.

5.1.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

5.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

5.1.6 TEST RESULTS

Please refer to the Appendix E.

Report No.: BTL-FCCP-3-1710T083D Report Version: R02



6. MAXIMUM PEAK CONDUCTED OUTPUT POWER TEST

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C							
Section	Test Item	Limit	Frequency Range (MHz)	Result			
15.247(b)(3)	Maximum Output Power	1 Watt or 30dBm	2400-2483.5	PASS			

6.1.1 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 peak conducted output power was performed in accordance with method 9.1.2 of FCC KDB 558074 D01 DTS Meas Guidance.

6.1.2 DEVIATION FROM STANDARD

No deviation.

6.1.3 TEST SETUP

EUT	Power Meter

6.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

6.1.5 EUT TEST CONDITIONS

Temperature: 25°C, 22.5°C Relative Humidity: 55%, 51% Test Voltage: AC 120V/60Hz

6.1.6 TEST RESULTS

Please refer to the Appendix F.

Report No.: BTL-FCCP-3-1710T083D Page 23 of 174



7. ANTENNA CONDUCTED SPURIOUS EMISSION

7.1 APPLIED PROCEDURES / LIMIT

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits.

7.1.1 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= 100KHz, VBW=300KHz, Sweep time = Auto.
- c Offset=antenna gain+cable loss

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

7.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

7.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

7.1.6 TEST RESULTS

Please refer to the Appendix G.

Report No.: BTL-FCCP-3-1710T083D Page 24 of 174



8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247), Subpart C						
Section	Test Item	Frequency Range (MHz)	Result			
15.247(e)	Power Spectral Density	8 dBm (in any 3KHz)	2400-2483.5	PASS		

8.1.1 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=3KHz, VBW=10KHz, Sweep time = Auto.

8.1.2 DEVIATION FROM STANDARD

No deviation.

8.1.3 TEST SETUP

EUT	SPECTRUM
	ANALYZER

8.1.4 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

8.1.5 EUT TEST CONDITIONS

Temperature: 25°C Relative Humidity: 55% Test Voltage: AC 120V/60Hz

8.1.6 TEST RESULTS

Please refer to the Appendix H.



9. MEASUREMENT INSTRUMENTS LIST

	Conducted Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	Jan. 24, 2019	
2	Test Cable	TIMES	CFD300-NL	C02	Jun. 13, 2019	
3	EMI Test Receiver	R&S	ESR7	101433	Dec. 07, 2019	
4	Measurement Software	EZ	EZ_EMC (Version NB-03A)	N/A	N/A	

	Conducted Emission Measurement (For Adapter: FSP / FSP065-DBCM1)							
Item	tem Kind of Equipment Manufacturer Type No.				Calibrated until			
1	TWO-LINE V-NETWORK	R&S	ENV216	101050	2021/6/10			
2	Test Cable	EMCI	EMC400-BM-BM- 5000	170501	2021/6/7			
3	EMI Test Receiver	R&S	ESCI	100080	2021/6/14			
4	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A			

	Radiated Emission Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Preamplifier	EMCI	012645B	980267	Feb. 28, 2018	
2	Preamplifier	EMCI	EMC02325	980217	Dec. 27, 2019	
3	Preamplifier	EMCI	EMC2654045	980030	Feb. 13, 2019	
4	Test Cable	EMCI	EMC104-SM-S M-8000	8m	Jan. 03, 2019	
5	Test Cable	EMCI	EMC104-SM-S M-800	150207	Jan. 03, 2019	
6	Test Cable	EMCI	EEMC104-SM-S M-3000	151205	Jan. 03, 2019	
7	MXE EMI Receiver	Agilent	N9038A	MY5542012 7	Jan. 08, 2019	
8	Signal Analyzer	Agilent	N9010A	MY5222099 0	Feb. 21, 2019	
9	Loop Ant	EMCO	6502	42960	Nov. 23, 2018	
10	Horm Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	Feb. 28, 2018	
11	Horm Ant	Schwarzbeck	BBHA 9170	187	Dec. 05, 2019	
12	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	9168-548	Jan. 15, 2019	
13	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0623	Jan. 15, 2019	



	Radiated Emission Measurement (For Spot check test)						
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Preamplifier	EMCI	EMC001340	980555	2021/4/9		
2	Preamplifier	EMCI	EMC02325B	980217	2021/4/9		
3	Preamplifier	EMCI	EMC012645B	980267	2021/4/9		
4	Preamplifier	EMCI	EMC184045SE	980512	2021/5/31		
5	Test Cable	EMCI	EMC-SM-SM-10 00	180809	2021/4/9		
6	Test Cable	EMCI	EMC104-SM-S M-3000	151205	2021/4/9		
7	Test Cable	EMCI	EMC-SM-SM-70 00	180408	2021/4/9		
8	MXE EMI Receiver	Agilent	N9038A	MY554200087	2021/6/9		
9	Signal Analyzer	Agilent	N9010A	MY56480554	2021/8/24		
10	Loop Ant	Electro-Metrics	EMCI-LPA600	274	2021/6/15		
11	Horn Ant	SCHWARZBECK	BBHA 9120D	9120D-1342	2021/6/11		
12	Horn Ant	Schwarzbeck	BBHA 9170	BBHA 9170340	2021/7/8		
13	Trilog-Broadband Antenna	Schwarzbeck	VULB 9168	VULB 9168-352	2021/7/23		
14	5dB Attenuator	EMCI	EMCI-N-6-05	AT-N0625	2021/7/23		
15	Measurement Software	EZ	EZ_EMC (Version NB-03A1-01)	N/A	N/A		

	6dB Bandwidth Measurement					
Item	Item Kind of Equipment Manufacturer Type No. Serial No. Calibrated until					
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 25, 2018	

	Peak Output Power Measurement					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until	
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 25, 2018	
2	Power Meter	Anritsu	ML2495A	1128008	Aug. 16, 2018	
3	Power Sensor	Anritsu	MA2411B	1126001	Aug. 16, 2018	

Peak Output Power Measurement (For Spot check test)								
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	Power Meter	Anritsu	ML2495A	1128008	2021/6/10			
2	Power Sensor	Anritsu	MA2411B	1126001	2021/6/10			



Antenna Conducted Spurious Emission Measurement							
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until		
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 25, 2018		

	Power Spectral Density Measurement							
Iten	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until			
1	Spectrum Analyzer	R&S	R&S/FSP30	100854	May 25, 2018			

Remark: "N/A" denotes no model name, serial no. or calibration specified. All calibration period of equipment list is one year.

Report No.: BTL-FCCP-3-1710T083D Page 28 of 174



10. EUT TEST PHOTO









Conducted Measurement Photos Desk Docking







Conducted Measurement Photos VESA Docking







Conducted Measurement Photos Adapter: FSP / FSP065-DBCM1







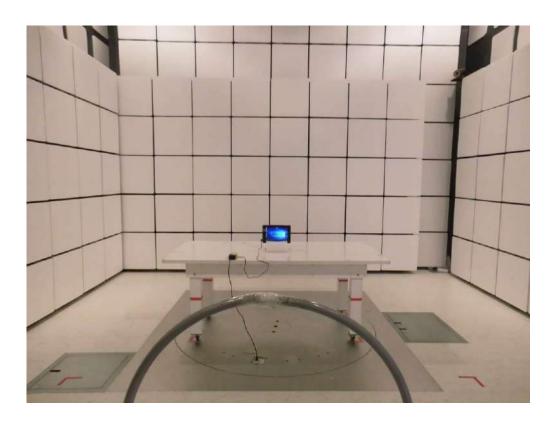
Conducted Measurement Photos Adapter: FSP / FSP065-DBCM1+ VESA Docking







Radiated Measurement Photos 9KHz to 30MHz



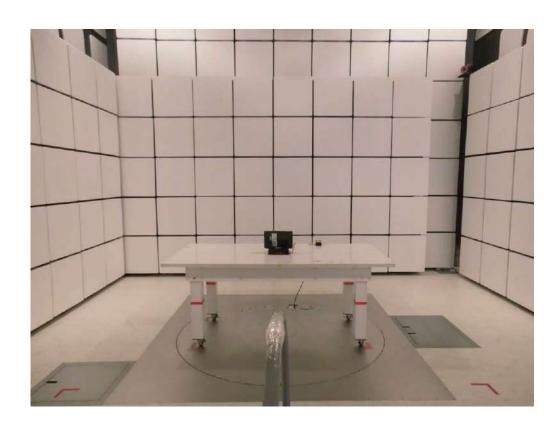




Radiated Measurement Photos 9KHz to 30MHz

Desk Docking

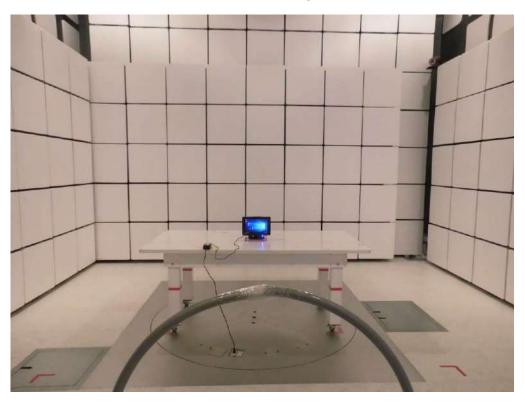


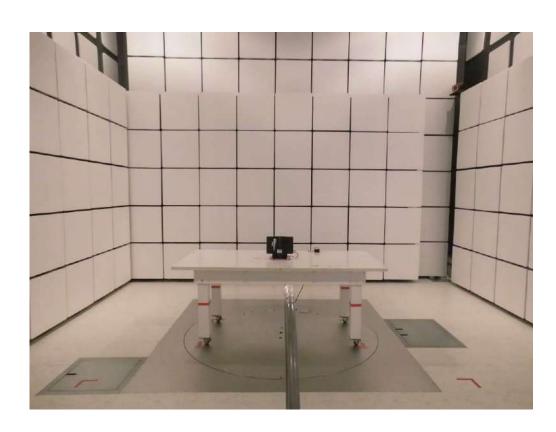




Radiated Measurement Photos 9KHz to 30MHz

VESA Docking













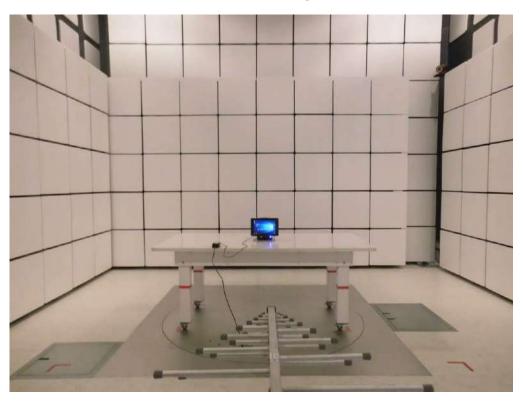
Desk Docking

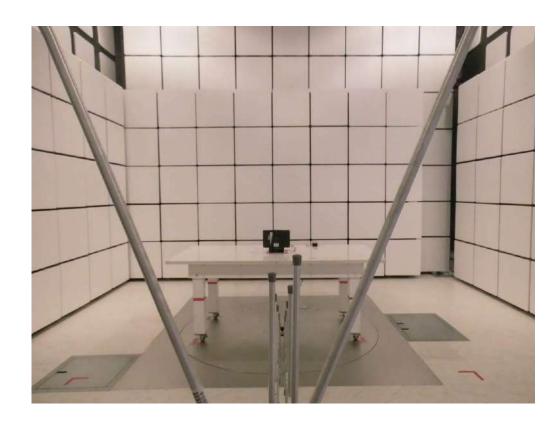






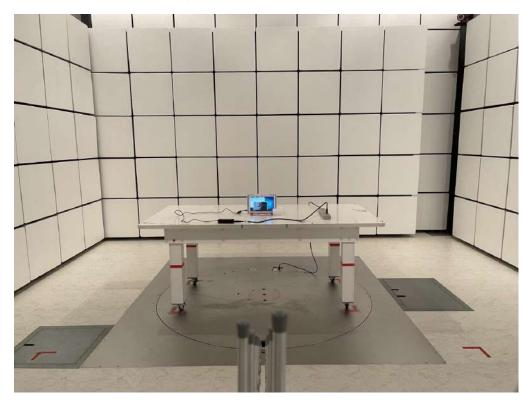
VESA Docking

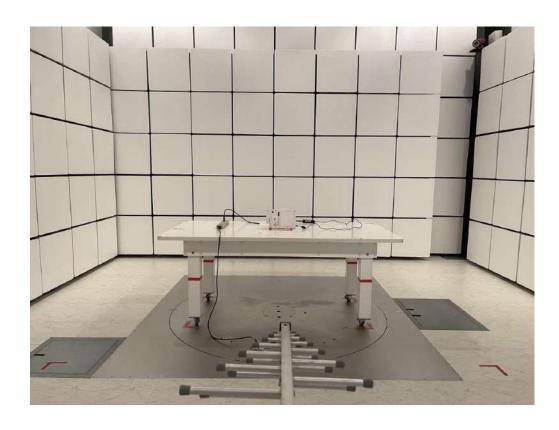






Adapter: FSP / FSP065-DBCM1

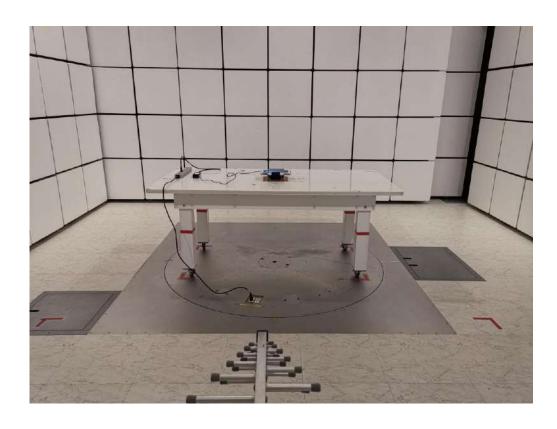






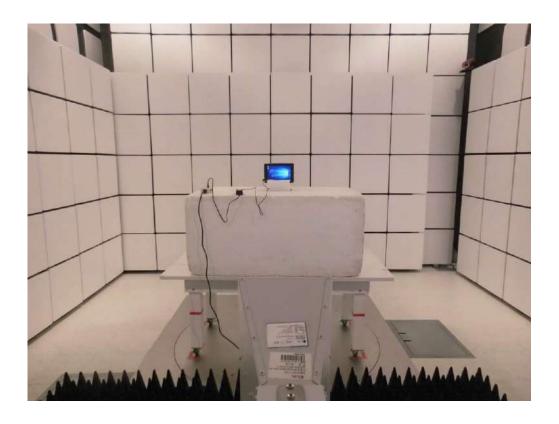
Adapter: FSP / FSP065-DBCM1+ VESA Docking







Radiated Measurement Photos Above 1GHz

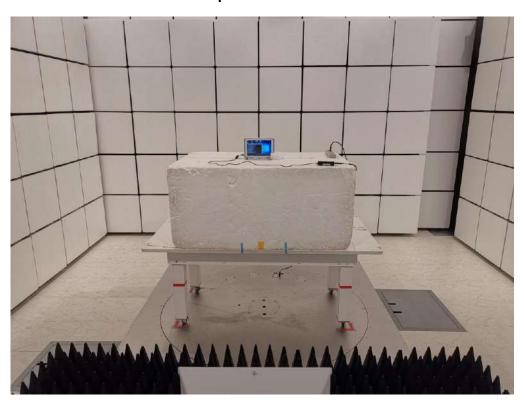






Radiated Measurement Photos Above 1GHz

Spot check test







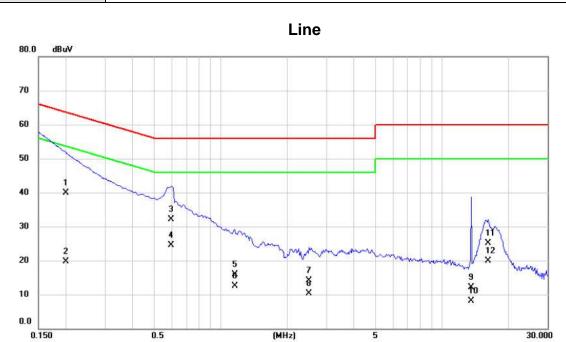
APPENDIX A - CONDUCTED EMISSION

Report No.: BTL-FCCP-3-1710T083D Page 44 of 174

Report Version: R02







No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1997	30.20	9.71	39.91	63.62	-23.71	QP	
2		0.1997	9.90	9.71	19.61	53.62	-34.01	AVG	
3		0.5990	22.30	9.74	32.04	56.00	-23.96	QP	
4	*	0.5990	14.70	9.74	24.44	46.00	-21.56	AVG	
5		1.1570	6.10	9.74	15.84	56.00	-40.16	QP	
6		1.1570	2.80	9.74	12.54	46.00	-33.46	AVG	
7		2.4980	4.30	9.78	14.08	56.00	-41.92	QP	
8		2.4980	0.50	9.78	10.28	46.00	-35.72	AVG	
9		13.5500	2.10	9.98	12.08	60.00	-47.92	QP	
10		13.5500	-1.90	9.98	8.08	50.00	-41.92	AVG	
11		16.1500	15.20	9.98	25.18	60.00	-34.82	QP	
12		16.1500	9.90	9.98	19.88	50.00	-30.12	AVG	

Page 45 of 174 Report Version: R02



0.0

0.150

0.5



(MHz)

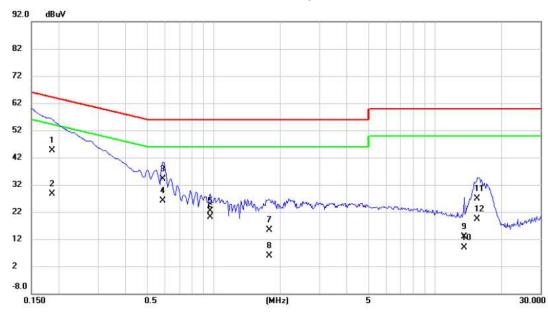
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2123	29.20	9.65	38.85	63.11	-24.26	QP	
2		0.2123	9.60	9.65	19.25	53.11	-33.86	AVG	
3		0.5990	21.60	9.68	31.28	56.00	-24.72	QP	
4	*	0.5990	14.10	9.68	23.78	46.00	-22.22	AVG	
5		1.1750	7.70	9.69	17.39	56.00	-38.61	QP	
6		1.1750	-0.70	9.69	8.99	46.00	-37.01	AVG	
7		1.6430	8.30	9.71	18.01	56.00	-37.99	QP	
8		1.6430	4.50	9.71	14.21	46.00	-31.79	AVG	
9		13.5500	2.30	9.98	12.28	60.00	-47.72	QP	
10		13.5500	-1.50	9.98	8.48	50.00	-41.52	AVG	
11		15.8500	16.00	9.99	25.99	60.00	-34.01	QP	
12		15.8500	10.70	9.99	20.69	50.00	-29.31	AVG	

Report No.: BTL-FCCP-3-1710T083D

30.000



Test Mode: Normal Link_Desk Docking Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1857	35.00	9.72	44.72	64.23	-19.51	QP	
2		0.1857	18.90	9.72	28.62	54.23	-25.61	AVG	
3		0.5900	24.30	9.74	34.04	56.00	-21.96	QP	
4		0.5900	16.40	9.74	26.14	46.00	-19.86	AVG	
5		0.9680	12.70	9.74	22.44	56.00	-33.56	QP	
6		0.9680	10.40	9.74	20.14	46.00	-25.86	AVG	
7		1.7780	5.70	9.77	15.47	56.00	-40.53	QP	
8		1.7780	-4.00	9.77	5.77	46.00	-40.23	AVG	
9		13.5500	2.80	9.98	12.78	60.00	-47.22	QP	
10		13.5500	-1.20	9.98	8.78	50.00	-41.22	AVG	
11		15.5500	16.90	9.98	26.88	60.00	-33.12	QP	
12		15.5500	9.40	9.98	19.38	50.00	-30.62	AVG	

Report No.: BTL-FCCP-3-1710T083D

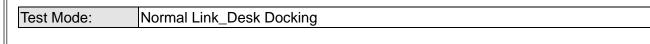
Page 47 of 174 Report Version: R02



12

-8.0 0.150

0.5



Neutral 92.0 dBuV 82 72 62 52 1 X 42 32 9 X 10 X 22

(MHz)

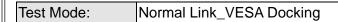
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1780	35.10	9.65	44.75	64.58	-19.83	QP	
2		0.1780	13.60	9.65	23.25	54.58	-31.33	AVG	
3		0.5990	29.80	9.68	39.48	56.00	-16.52	QP	
4	*	0.5990	27.80	9.68	37.48	46.00	-8.52	AVG	
5		1.4270	7.90	9.69	17.59	56.00	-38.41	QP	
6		1.4270	3.80	9.69	13.49	46.00	-32.51	AVG	
7		1.8860	7.80	9.71	17.51	56.00	-38.49	QP	
8		1.8860	3.20	9.71	12.91	46.00	-33.09	AVG	
9		4.2260	7.50	9.77	17.27	56.00	-38.73	QP	
10		4.2260	1.10	9.77	10.87	46.00	-35.13	AVG	
11		15.4500	14.20	9.99	24.19	60.00	-35.81	QP	
12		15.4500	7.00	9.99	16.99	50.00	-33.01	AVG	

Report No.: BTL-FCCP-3-1710T083D

Page 48 of 174 Report Version: R02

30.000





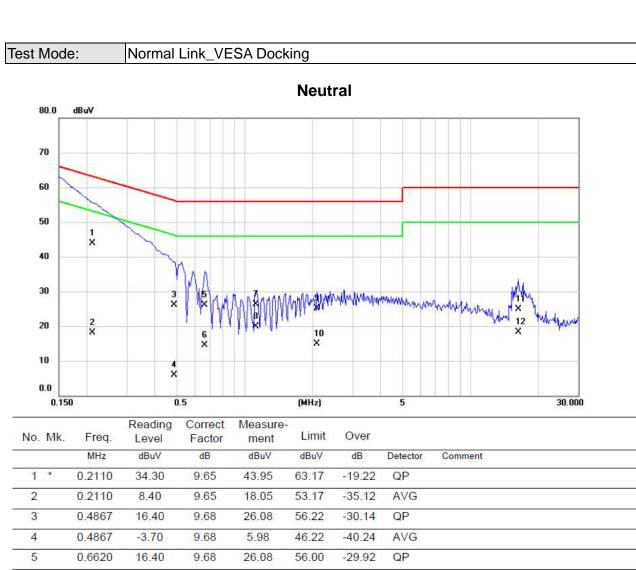
Eine 80.0 dBuV 70 60 50 1 X 40 20 2 X 6 X 10 0.150 0.5 (MHz) 5 30.000

	MHz	dBuV	5356		Limit	Over		
		abar	dB	dBuV	dBuV	dB	Detector	Comment
	0.2130	33.90	9.71	43.61	63.09	-19.48	QP	
	0.2130	8.80	9.71	18.51	53.09	-34.58	AVG	
	0.5270	29.10	9.74	38.84	56.00	-17.16	QP	
k	0.5270	24.00	9.74	33.74	46.00	-12.26	AVG	
	0.6890	17.80	9.74	27.54	56.00	-28.46	QP	
	0.6890	3.50	9.74	13.24	46.00	-32.76	AVG	
	0.8960	14.80	9.74	24.54	56.00	-31.46	QP	
	0.8960	7.90	9.74	17.64	46.00	-28.36	AVG	
	1.0580	12.10	9.74	21.84	56.00	-34.16	QP	
	1.0580	3.60	9.74	13.34	46.00	-32.66	AVG	
	15.9000	13.80	9.98	23.78	60.00	-36.22	QP	
	15.9000	7.00	9.98	16.98	50.00	-33.02	AVG	
		0.5270 0.5270 0.6890 0.6890 0.8960 0.8960 1.0580	0.5270 29.10 0.5270 24.00 0.6890 17.80 0.6890 3.50 0.8960 14.80 0.8960 7.90 1.0580 12.10 1.0580 3.60 15.9000 13.80	0.5270 29.10 9.74 0.5270 24.00 9.74 0.6890 17.80 9.74 0.6890 3.50 9.74 0.8960 14.80 9.74 0.8960 7.90 9.74 1.0580 12.10 9.74 1.0580 3.60 9.74 15.9000 13.80 9.98	0.5270 29.10 9.74 38.84 0.5270 24.00 9.74 33.74 0.6890 17.80 9.74 27.54 0.6890 3.50 9.74 13.24 0.8960 14.80 9.74 24.54 0.8960 7.90 9.74 17.64 1.0580 12.10 9.74 21.84 1.0580 3.60 9.74 13.34 15.9000 13.80 9.98 23.78	0.5270 29.10 9.74 38.84 56.00 0.5270 24.00 9.74 33.74 46.00 0.6890 17.80 9.74 27.54 56.00 0.6890 3.50 9.74 13.24 46.00 0.8960 14.80 9.74 24.54 56.00 0.8960 7.90 9.74 17.64 46.00 1.0580 12.10 9.74 21.84 56.00 1.0580 3.60 9.74 13.34 46.00 15.9000 13.80 9.98 23.78 60.00	0.5270 29.10 9.74 38.84 56.00 -17.16 0.5270 24.00 9.74 33.74 46.00 -12.26 0.6890 17.80 9.74 27.54 56.00 -28.46 0.6890 3.50 9.74 13.24 46.00 -32.76 0.8960 14.80 9.74 24.54 56.00 -31.46 0.8960 7.90 9.74 17.64 46.00 -28.36 1.0580 12.10 9.74 21.84 56.00 -34.16 1.0580 3.60 9.74 13.34 46.00 -32.66 15.9000 13.80 9.98 23.78 60.00 -36.22	0.5270 29.10 9.74 38.84 56.00 -17.16 QP 0.5270 24.00 9.74 33.74 46.00 -12.26 AVG 0.6890 17.80 9.74 27.54 56.00 -28.46 QP 0.6890 3.50 9.74 13.24 46.00 -32.76 AVG 0.8960 14.80 9.74 24.54 56.00 -31.46 QP 0.8960 7.90 9.74 17.64 46.00 -28.36 AVG 1.0580 12.10 9.74 21.84 56.00 -34.16 QP 1.0580 3.60 9.74 13.34 46.00 -32.66 AVG 15.9000 13.80 9.98 23.78 60.00 -36.22 QP

Report No.: BTL-FCCP-3-1710T083D

Page 49 of 174 Report Version: R02

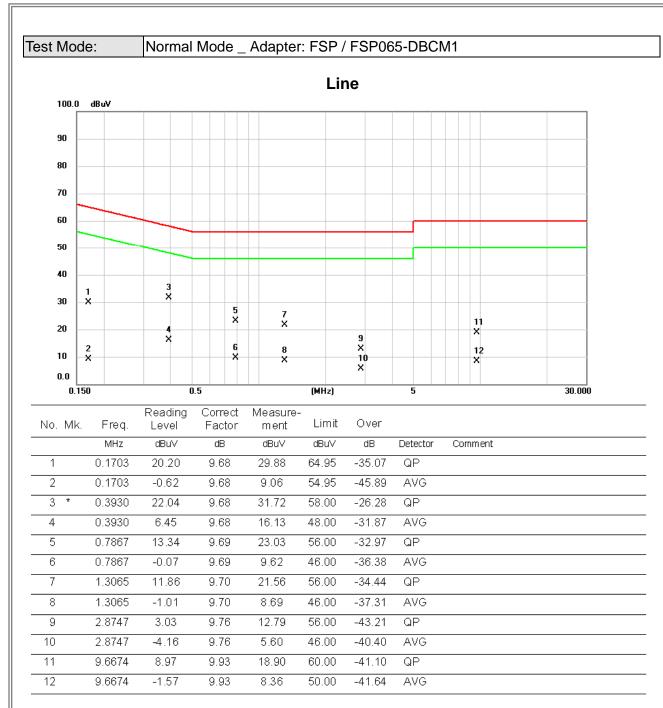




1 *	0.2110	34.30	9.65	43.95	63.17	-19.22	QP
2	0.2110	8.40	9.65	18.05	53.17	-35.12	AVG
3	0.4867	16.40	9.68	26.08	56.22	-30.14	QP
4	0.4867	-3.70	9.68	5.98	46.22	-40.24	AVG
5	0.6620	16.40	9.68	26.08	56.00	-29.92	QP
6	0.6620	4.80	9.68	14.48	46.00	-31.52	AVG
7	1.1210	16.70	9.69	26.39	56.00	-29.61	QP
8	1.1210	10.30	9.69	19.99	46.00	-26.01	AVG
9	2.0840	15.40	9.71	25.11	56.00	-30.89	QP
10	2.0840	5.20	9.71	14.91	46.00	-31.09	AVG
11	16.2500	15.00	9.99	24.99	60.00	-35.01	QP
12	16.2500	8.40	9.99	18.39	50.00	-31.61	AVG

Page 50 of 174 Report Version: R02

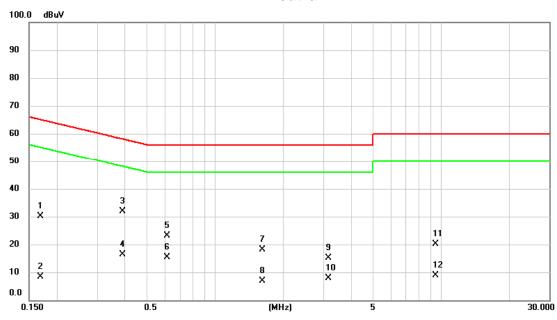






Test Mode: Normal Mode_ Adapter: FSP / FSP065-DBCM1

Neutral



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1	0.1680	20.47	9.68	30.15	65.06	-34.91	QP	
2	0.1680	-1.24	9.68	8.44	55.06	-46.62	AVG	
3 *	0.3907	22.28	9.68	31.96	58.05	-26.09	QP	
4	0.3907	6.58	9.68	16.26	48.05	-31.79	AVG	
5	0.6134	13.38	9.68	23.06	56.00	-32.94	QP	
6	0.6134	5.61	9.68	15.29	46.00	-30.71	AVG	
7	1.6125	8.37	9.72	18.09	56.00	-37.91	QP	
8	1.6125	-2.91	9.72	6.81	46.00	-39.19	AVG	
9	3.1514	5.38	9.76	15.14	56.00	-40.86	QP	
10	3.1514	-1.96	9.76	7.80	46.00	-38.20	AVG	
11	9.4290	10.21	9.92	20.13	60.00	-39.87	QP	
12	9.4290	-1.07	9.92	8.85	50.00	-41.15	AVG	

Report No.: BTL-FCCP-3-1710T083D

Page 52 of 174 Report Version: R02



Test Mode: Idle Mode Adapter: FSP / FSP065-DBCM1 Line 100.0 dBuV 90 RΠ 70 60 50 40 1 X 30 7 X 20 X 10 X 2 X 8 8 12 10 0.030.000 0.150 0.5 (MHz) 5 Correct Reading Measure-Limit Over Freq. No. Mk. Level Factor ment MHz dBu∀ dBu∀ dBu∀ dΒ dΒ Detector Comment 0.1667 29.96 65.12 -35.16 QΡ 1 20.28 9.68 2 0.1667 -1.01 9.68 8.67 55.12 -46.45 AVG 3 0.4042 22.44 9.68 32.12 57.77 -25.65 QΡ 0.4042 7.18 9.68 16.86 47.77 -30.91 AVG 4 14.24 5 0.6000 9.68 23.92 56.00 -32.08 QΡ 0.6000 7.40 9.68 17.08 46.00 -28.92 AVG 6 1.0274 12.10 21.79 56.00 QΡ 7 9.69 -34.21 -1.20 8 1.0274 9.69 8.49 46.00 -37.51 AVG 9 3.1514 2.40 9.76 12.16 56.00 -43.84 QΡ 3.1514 -4.36 9.76 5.40 46.00 -40.60 10 AVG 11 9.4245 8.90 9.92 18.82 60.00 -41.18 QΡ

12

9.4245

-1.57

9.92

8.35

50.00

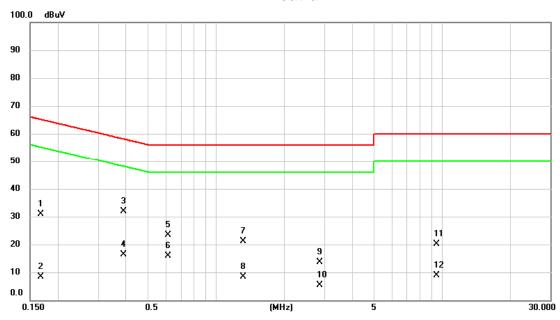
-41.65

AVG



Test Mode: Idle Mode _ Adapter: FSP / FSP065-DBCM1

Neutral



No. Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
	MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1	0.1668	21.20	9.68	30.88	65.12	-34.24	QP	
2	0.1668	-1.27	9.68	8.41	55.12	-46.71	AVG	
3 *	0.3907	22.29	9.68	31.97	58.05	-26.08	QP	
4	0.3907	6.63	9.68	16.31	48.05	-31.74	AVG	
5	0.6134	13.66	9.68	23.34	56.00	-32.66	QP	
6	0.6134	6.11	9.68	15.79	46.00	-30.21	AVG	
7	1.3178	11.53	9.70	21.23	56.00	-34.77	QP	
8	1.3178	-1.28	9.70	8.42	46.00	-37.58	AVG	
9	2.8568	3.99	9.76	13.75	56.00	-42.25	QP	
10	2.8568	-4.45	9.76	5.31	46.00	-40.69	AVG	
11	9.4290	10.16	9.92	20.08	60.00	-39.92	QP	
12	9.4290	-1.03	9.92	8.89	50.00	-41.11	AVG	

Report No.: BTL-FCCP-3-1710T083D

Page 54 of 174 Report Version: R02



80.0

70

60

50

30

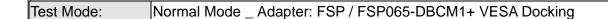
20

10 0

-10 -20.0

0.150

dBuV



3 X

0.5

5 X

No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.3997	33.51	9.68	43.19	57.86	-14.67	QР	
2	*	0.3997	26.41	9.68	36.09	47.86	-11.77	AVG	
3		0.8070	19.59	9.69	29.28	56.00	-26.72	QP	
4		0.8070	11.49	9.69	21.18	46.00	-24.82	AVG	
5		1.0657	17.90	9.69	27.59	56.00	-28.41	QР	
6		1.0657	9.67	9.69	19.36	46.00	-26.64	AVG	
7		8.8215	15.42	9.90	25.32	60.00	-34.68	QP	
8		8.8215	10.00	9.90	19.90	50.00	-30.10	AVG	
9		13.5600	19.57	9.94	29.51	60.00	-30.49	QР	
10		13.5600	11.37	9.94	21.31	50.00	-28.69	AVG	
11		18.4268	7.29	9.96	17.25	60.00	-42.75	QР	
12		18.4268	3.02	9.96	12.98	50.00	-37.02	AVG	

(MHz)

Report No.: BTL-FCCP-3-1710T083D

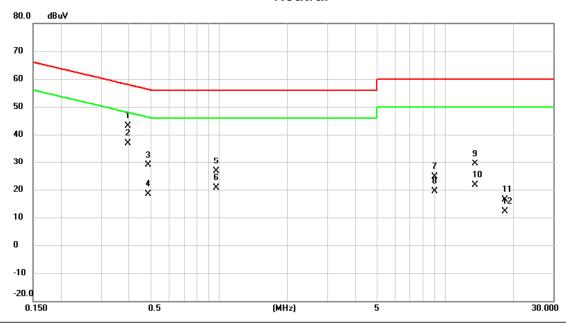
Page 55 of 174 Report Version: R02

30.000



Test Mode: Normal Mode_ Adapter: FSP / FSP065-DBCM1+ VESA Docking

Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.3952	33.39	9.68	43.07	57.95	-14.88	QР	
2	*	0.3952	27.29	9.68	36.97	47.95	-10.98	AVG	
3		0.4852	19.32	9.68	29.00	56.25	-27.25	QP	
4		0.4852	8.69	9.68	18.37	46.25	-27.88	AVG	
5		0.9690	17.02	9.69	26.71	56.00	-29.29	QP	
6		0.9690	10.91	9.69	20.60	46.00	-25.40	AVG	
7		8.9925	14.73	9.91	24.64	60.00	-35.36	QΡ	
8		8.9925	9.41	9.91	19.32	50.00	-30.68	AVG	
9		13.5600	19.54	9.94	29.48	60.00	-30.52	QP	
10		13.5600	11.69	9.94	21.63	50.00	-28.37	AVG	
11		18.3435	6.42	9.96	16.38	60.00	-43.62	QP	
12		18.3435	2.27	9.96	12.23	50.00	-37.77	AVG	

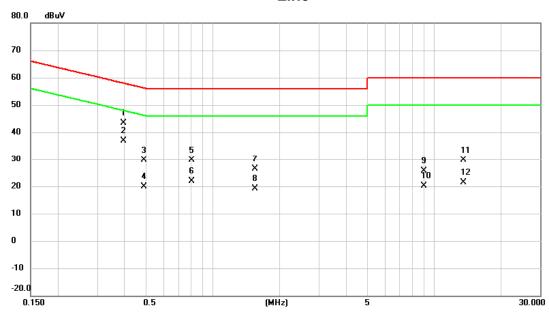
Report No.: BTL-FCCP-3-1710T083D

Page 56 of 174 Report Version: R02



Test Mode: Idle Mode _ Adapter: FSP / FSP065-DBCM1+ VESA Docking

Line



No. I	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.3975	33.66	9.68	43.34	57.91	-14.57	QP	
2	*	0.3975	27.22	9.68	36.90	47.91	-11.01	AVG	
3		0.4897	19.85	9.68	29.53	56.17	-26.64	QP	
4		0.4897	10.12	9.68	19.80	46.17	-26.37	AVG	
5		0.8025	19.94	9.69	29.63	56.00	-26.37	QP	
6		0.8025	12.28	9.69	21.97	46.00	-24.03	AVG	
7		1.5494	16.69	9.72	26.41	56.00	-29.59	QР	
8		1.5494	9.34	9.72	19.06	46.00	-26.94	AVG	
9		9.0218	15.76	9.91	25.67	60.00	-34.33	QP	
10		9.0218	10.15	9.91	20.06	50.00	-29.94	AVG	
11		13.5600	19.66	9.94	29.60	60.00	-30.40	QP	
12		13.5600	11.39	9.94	21.33	50.00	-28.67	AVG	

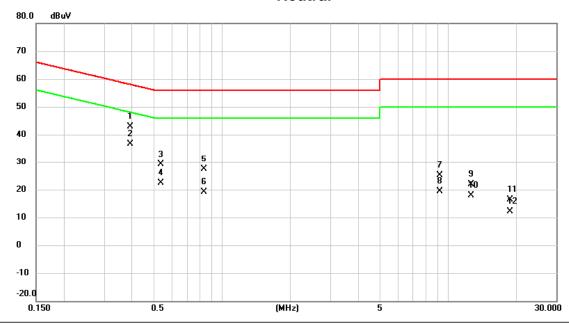
Report No.: BTL-FCCP-3-1710T083D

Page 57 of 174 Report Version: R02



Test Mode: Idle Mode _ Adapter: FSP / FSP065-DBCM1+ VESA Docking

Neutral



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBu∨	dB	dBu∨	dBu∨	dB	Detector	Comment
1		0.3930	33.22	9.68	42.90	58.00	-15.10	QP	
2	*	0.3930	26.93	9.68	36.61	48.00	-11.39	AVG	
3		0.5370	19.54	9.68	29.22	56.00	-26.78	QP	
4		0.5370	12.65	9.68	22.33	46.00	-23.67	AVG	
5		0.8317	17.64	9.69	27.33	56.00	-28.67	QP	
6		0.8317	9.44	9.69	19.13	46.00	-26.87	AVG	
7		9.1770	15.34	9.91	25.25	60.00	-34.75	QP	
8		9.1770	9.59	9.91	19.50	50.00	-30.50	AVG	
9		12.6623	11.86	9.94	21.80	60.00	-38.20	QP	
10		12.6623	7.90	9.94	17.84	50.00	-32.16	AVG	
11		18.7215	6.42	9.96	16.38	60.00	-43.62	QP	
12		18.7215	2.22	9.96	12.18	50.00	-37.82	AVG	

Report No.: BTL-FCCP-3-1710T083D

Page 58 of 174 Report Version: R02



APPENDIX B - RADIATED EMISSION (9KHZ TO 30MHZ)	

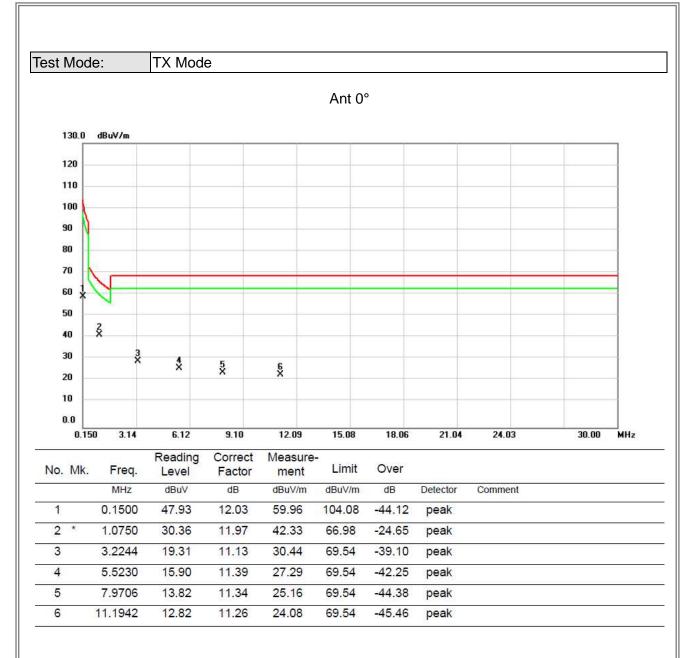
Page 59 of 174 Report Version: R02



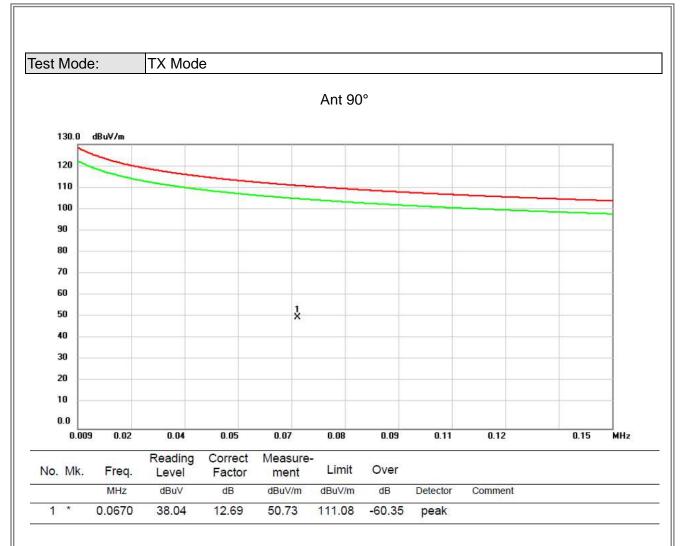
Test Mode: TX Mode Ant 0° 130.0 dBuV/m 120 110 100 90 80 70 60 50 X 40 30 20 10 0.0 0.02 0.04 0.05 0.07 0.08 0.09 0.11 0.12 0.15 MHz 0.009

	-,,		0000000	_ ********	V-13000			127115-03	0.01110/77357000	 0.00.00.00
No.	Mk.	Freq.	Reading Level		Measure- ment		Over			
		MHz	dBu∀	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
1	*	0.0903	36.62	12.27	48.89	108.49	-59.60	peak		





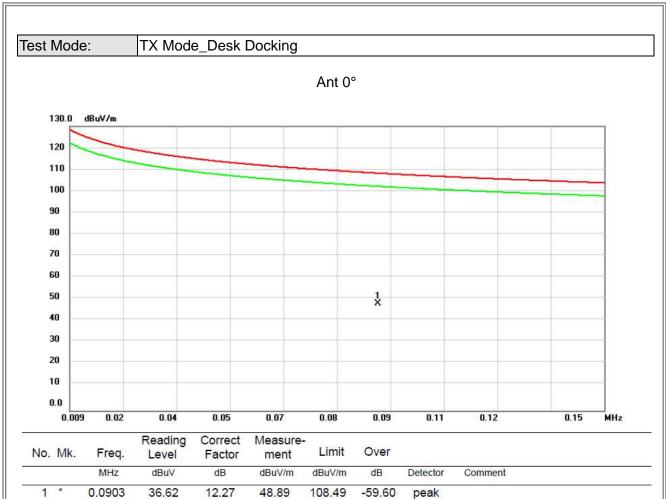




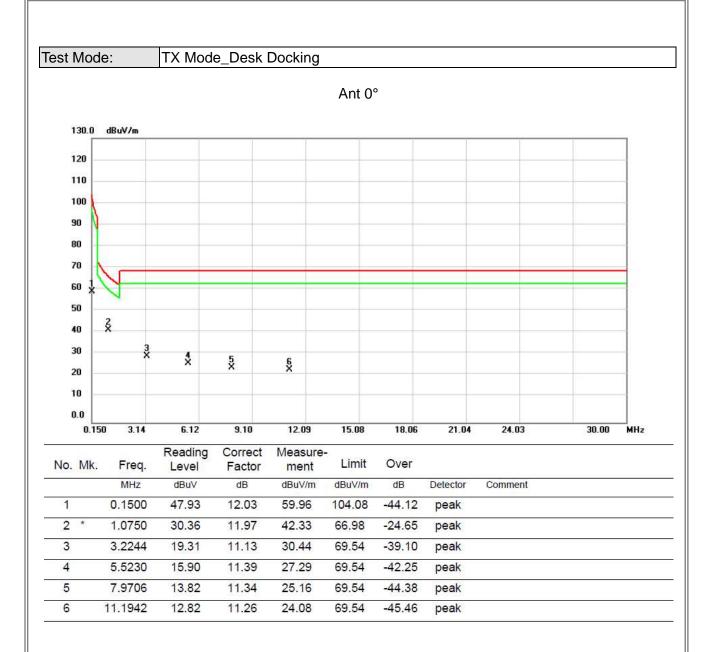


Test Mode: TX Mode Ant 90° 130.0 dBuV/m 120 110 100 90 80 70 60 50 2 X 40 X 30 * 5 X 20 10 0.0 0.150 3.14 6.12 9.10 12.09 15.08 18.06 21.04 24.03 30.00 MHz Reading Correct Measure-Limit Over No. Mk. Freq. Level Factor ment MHz dΒ dBuV dBuV/m dBuV/m dΒ Detector Comment 0.1500 47.93 12.03 59.96 104.08 -44.12 peak 1 0.5080 48.35 -25.14 2 36.55 11.80 73.49 peak 3 2.1200 23.06 11.50 34.56 69.54 -34.98 peak 5.0750 16.98 11.40 28.38 69.54 -41.16 4 peak -44.04 5 6.8960 14.14 11.36 25.50 69.54 peak 6 11.1942 12.82 11.26 24.08 69.54 -45.46 peak

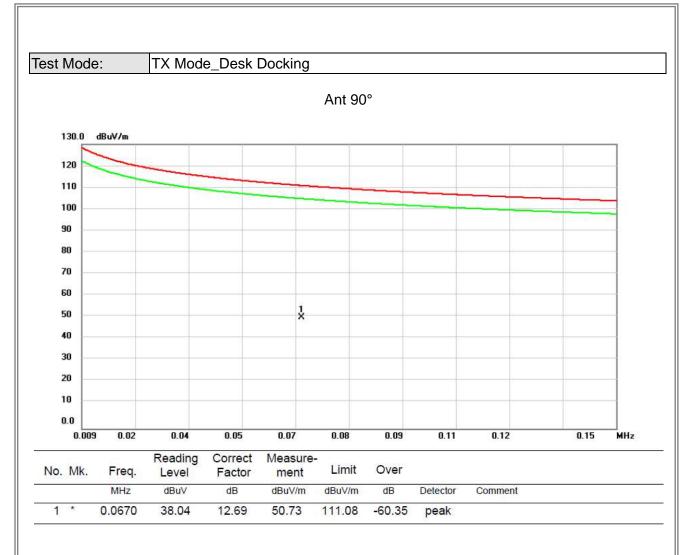




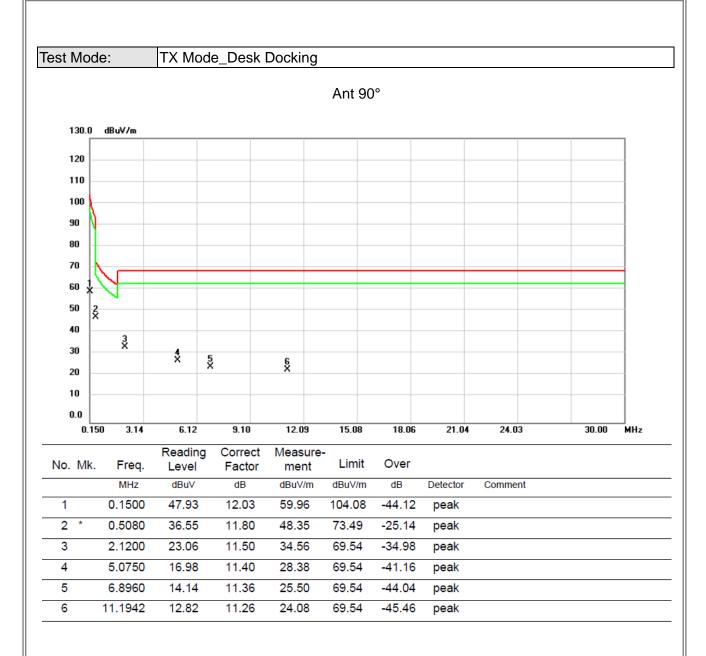




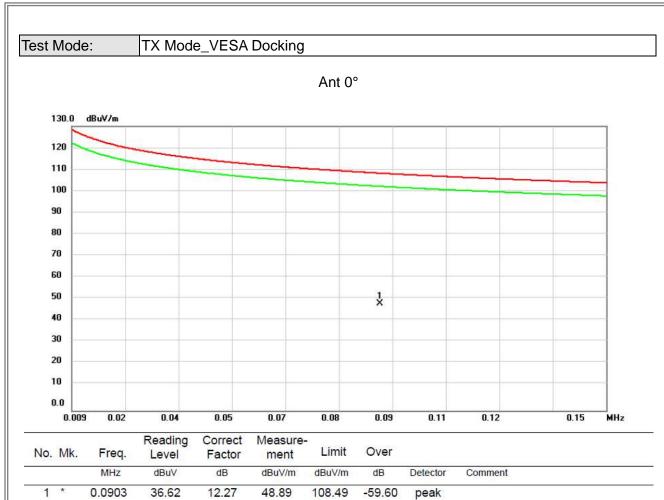




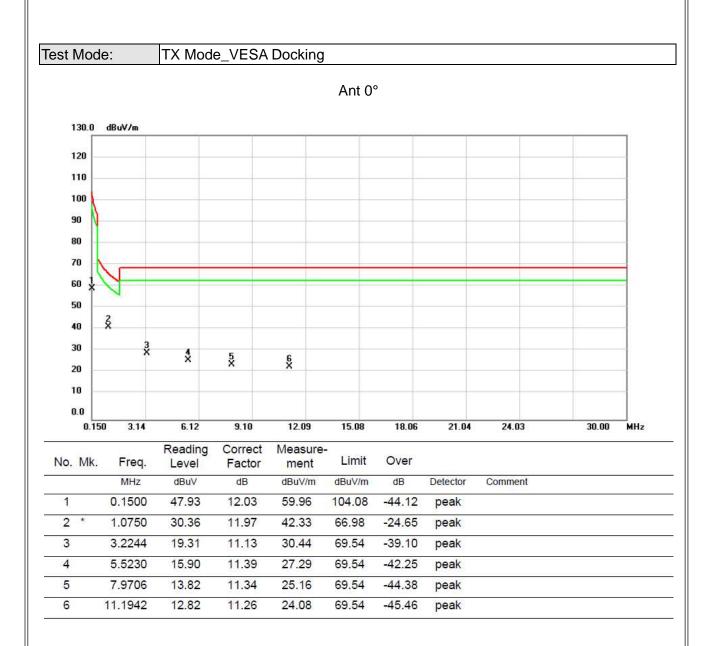




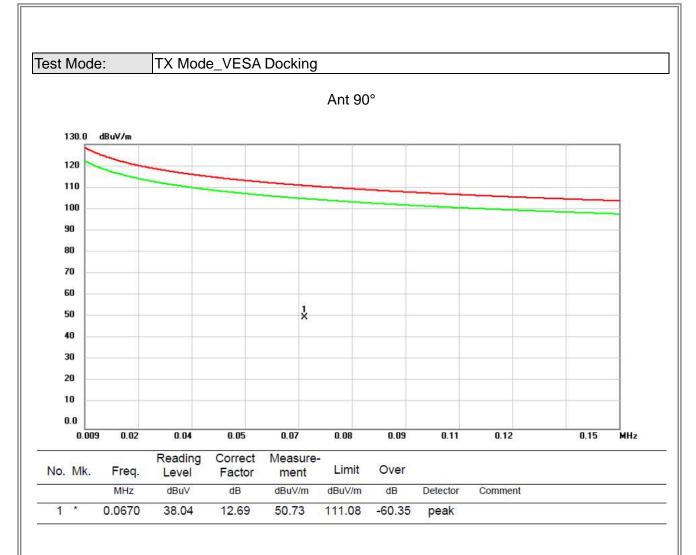




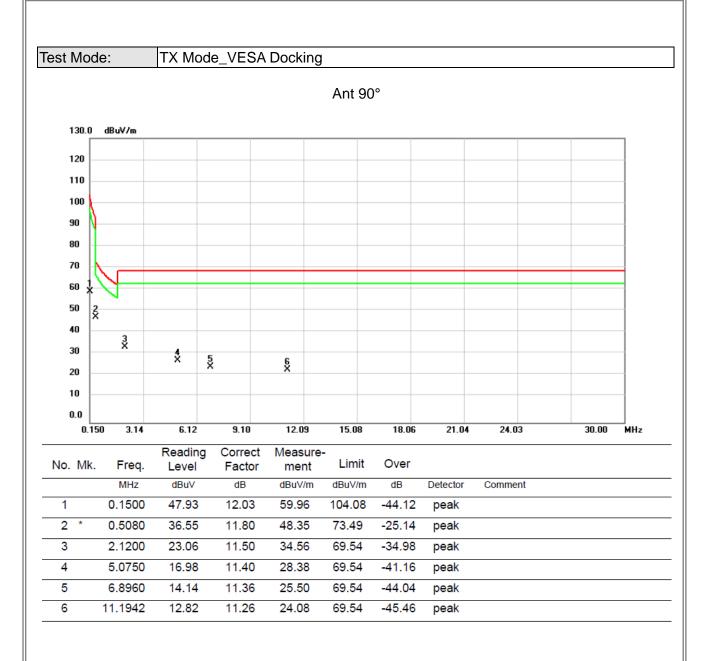










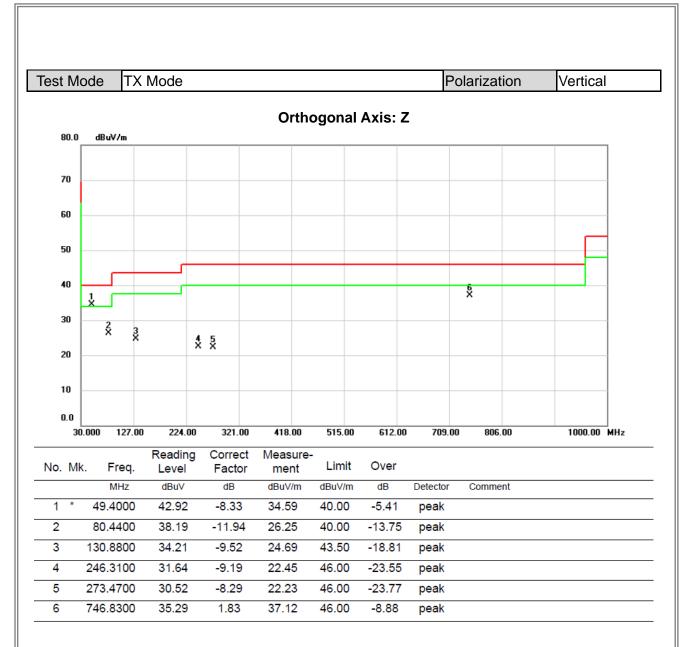




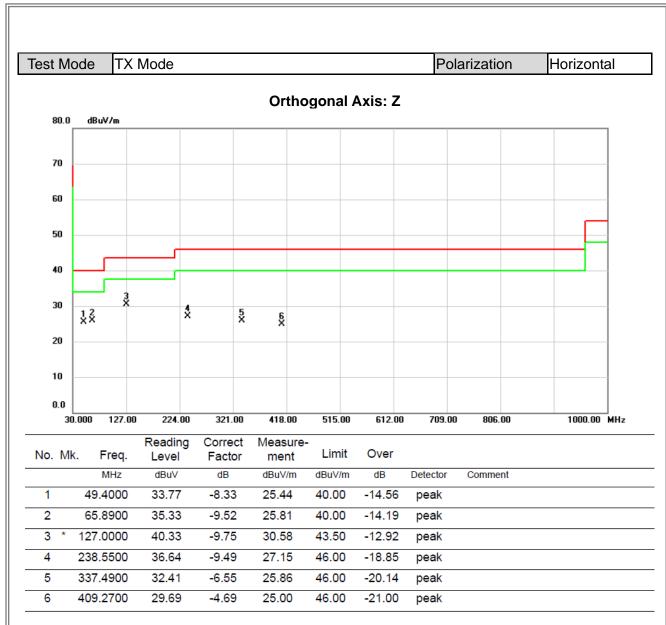
APPENDIX C - RADIATED EMISSION (30MHZ TO 1000MHZ)

Page 72 of 174 Report Version: R02

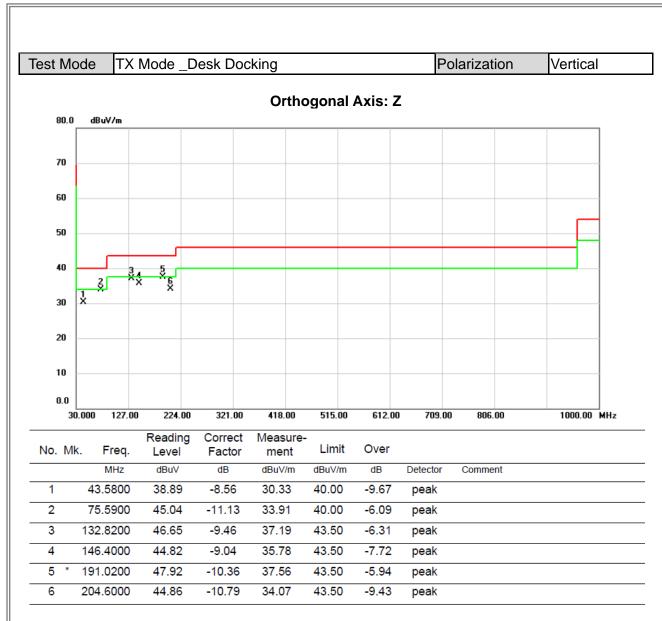




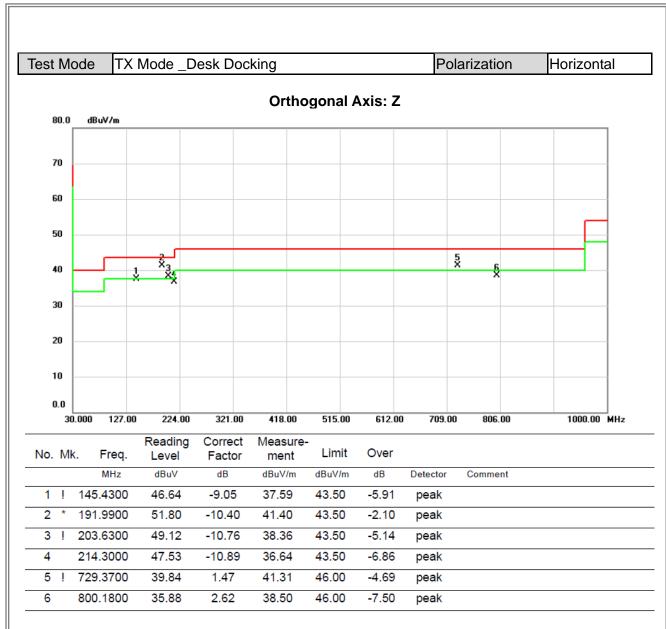




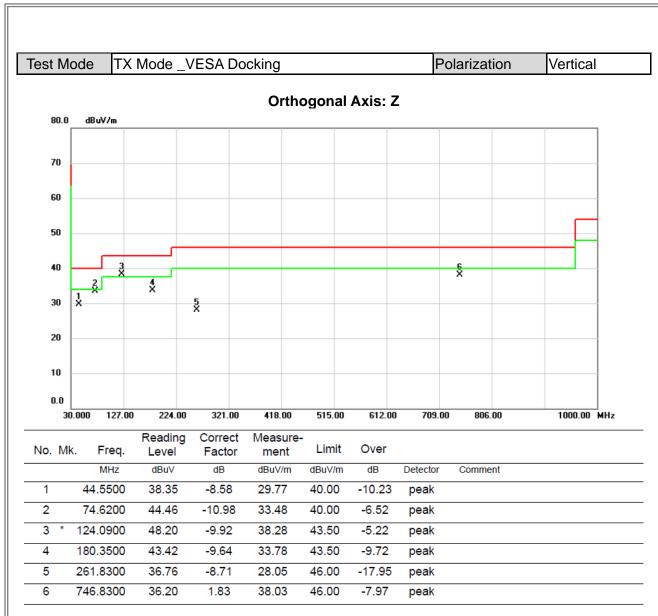






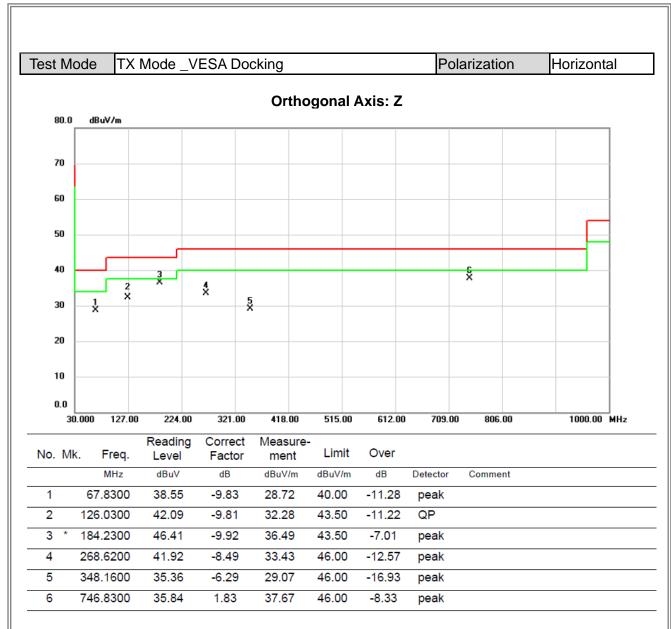




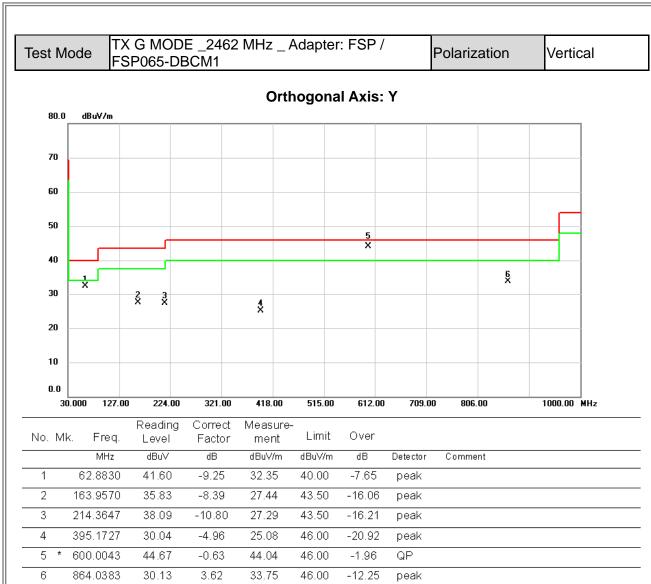


Page 77 of 174 Report Version: R02



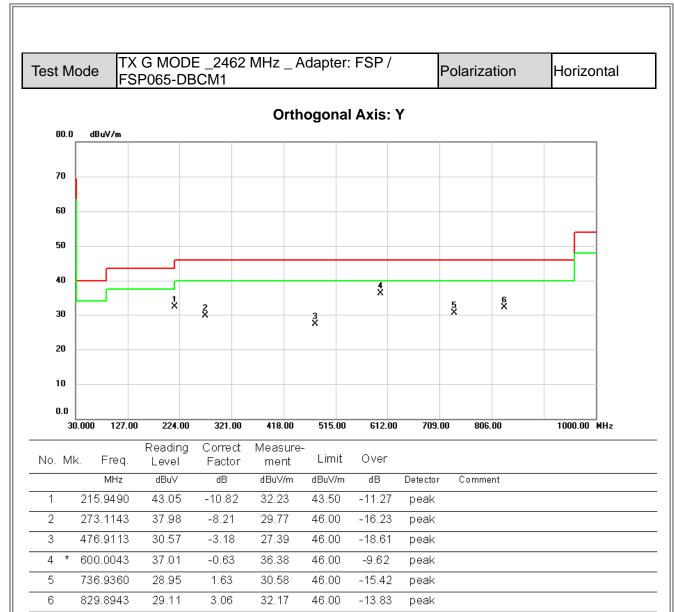






Page 79 of 174 Report Version: R02





Page 80 of 174 Report Version: R02

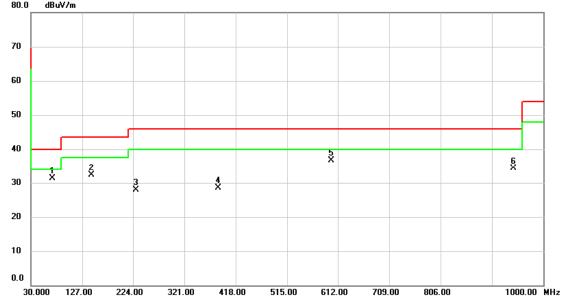


Test Mode TX G MODE _2462 MHz _ Adapter: FSP / FSP065-DBCM1+ VESA Docking Polarization Vertical

Orthogonal Axis: X

80.0 dBuV/m

70



	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
_			MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1	*	70.8693	42.03	-10.76	31.27	40.00	-8.73	peak	
-	2	1	144.9773	40.79	-8.56	32.23	43.50	-11.27	peak	
-	3	2	229.5613	38.23	-10.38	27.85	46.00	-18.15	peak	
-	4	3	885.2463	33.74	-5.22	28.52	46.00	-17.48	peak	
-	5	6	800.0043	37.28	-0.63	36.65	46.00	-9.35	peak	
-	6	g	943.5136	29.34	4.97	34.31	46.00	-11.69	peak	
_										

Report No.: BTL-FCCP-3-1710T083D

Page 81 of 174 Report Version: R02



TX G MODE _2462 MHz _ Adapter: FSP / Test Mode Polarization Horizontal FSP065-DBCM1+ VESA Docking **Orthogonal Axis: X** dBuV/m 80.0 70 60 50 40 8 8 5 X 30 χ 20 10 0.0 30.000 127.00 224.00 321.00 418.00 515.00 612.00 709.00 806.00 1000.00 MHz Reading Correct Measure-Limit Over No. Mk. Freq. Level Factor ment MHz dBuV dB dBuV/m dBuV/m dΒ Detector Comment 145.6563 45.80 -8.54 37.26 43.50 -6.24 QΡ 1 2 228.3973 43.73 -10.44 33.29 46.00 -12.71 peak 3 388.0593 32.61 -5.15 27.46 46.00 -18.54 peak

Report No.: BTL-FCCP-3-1710T083D

600.2953

809.3303

979.8240

4

5

6

29.84

29.23

29.45

-0.63

2.72

5.46

29.21

31.95

34.91

46.00

46.00

54.00

-16.79

-14.05

-19.09

peak

peak

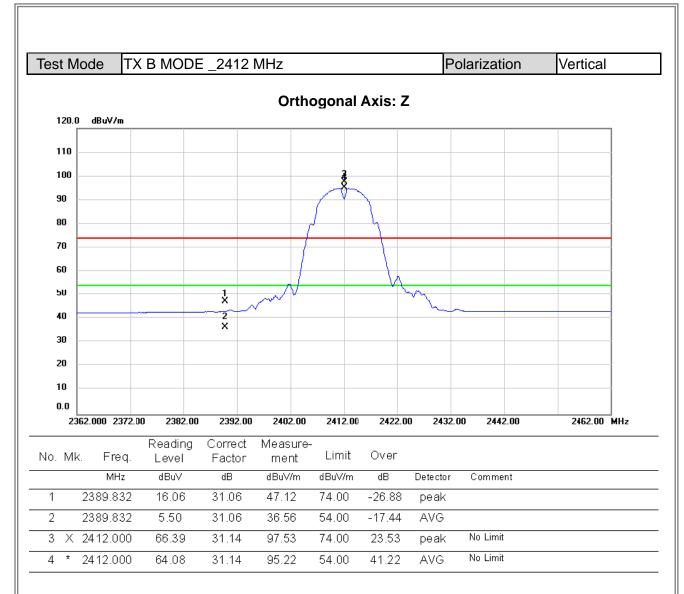
peak



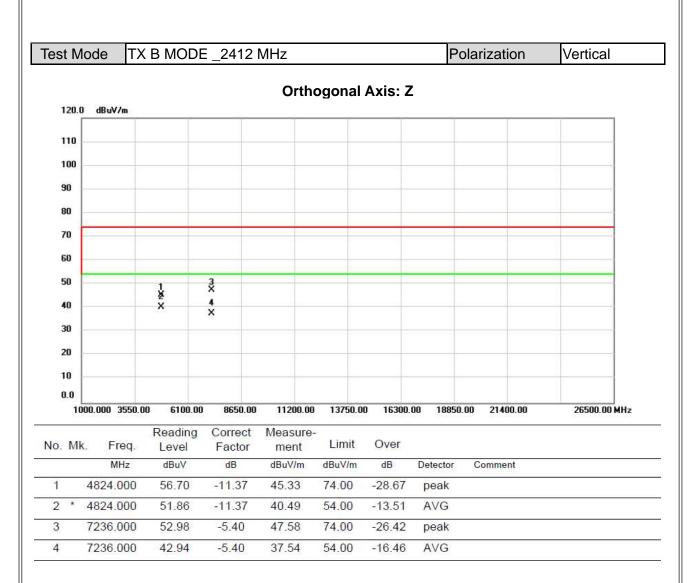
APPENDIX D - RADIATED EMISSION (ABOVE 1000MHZ)

Page 83 of 174 Report Version: R02



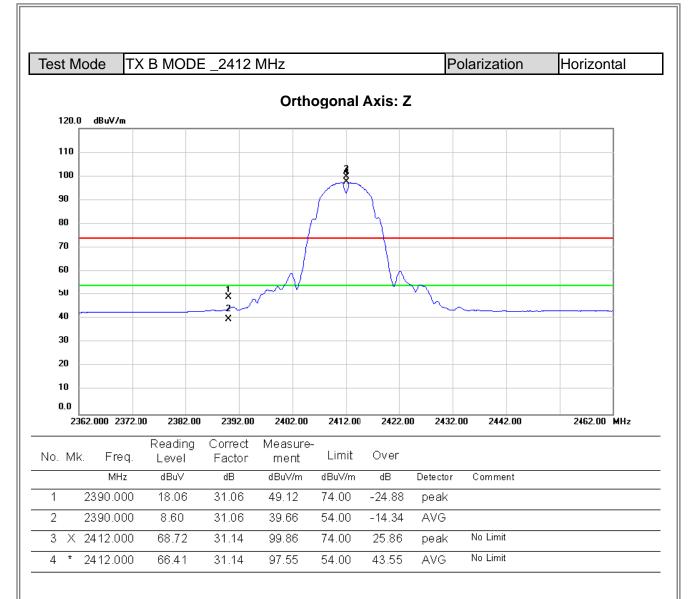






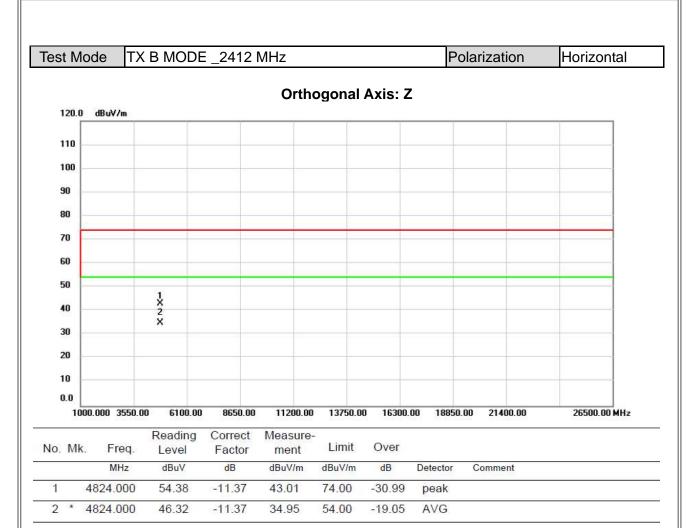
Page 85 of 174 Report Version: R02





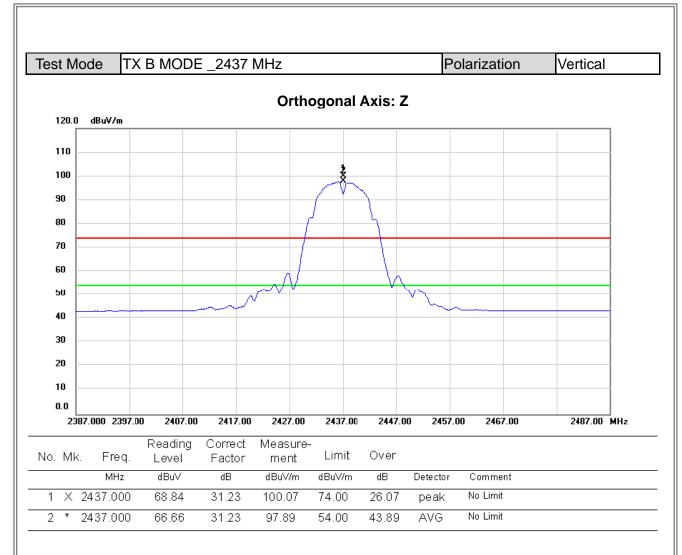
Page 86 of 174 Report Version: R02



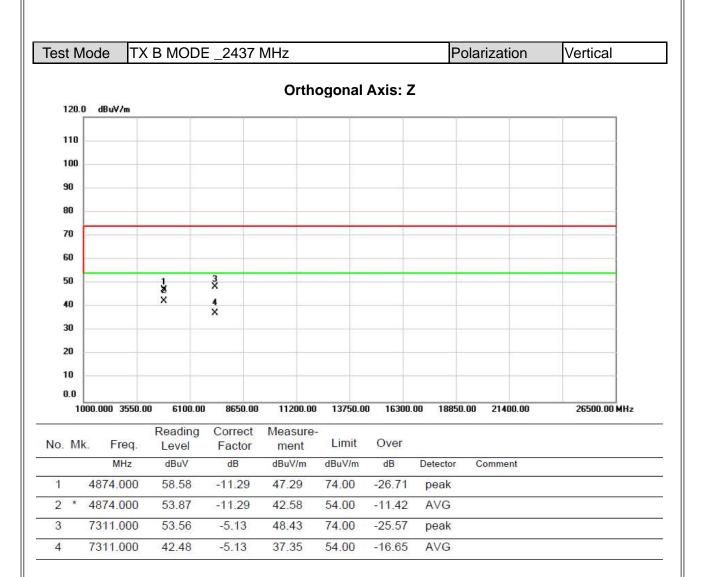


Page 87 of 174 Report Version: R02

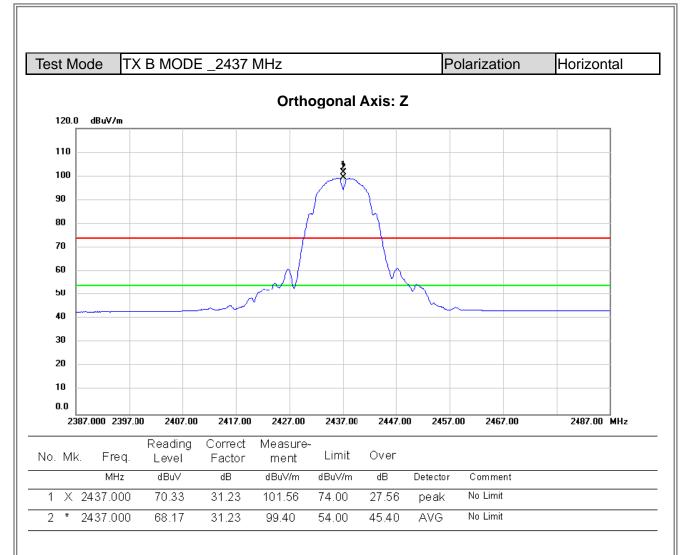






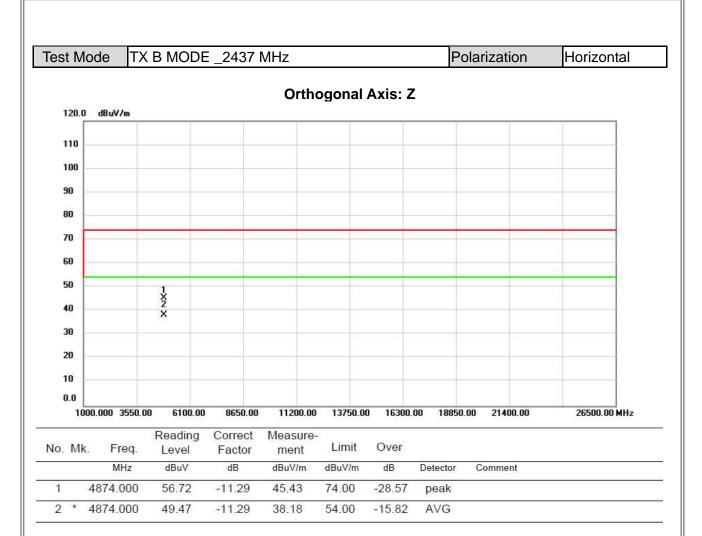




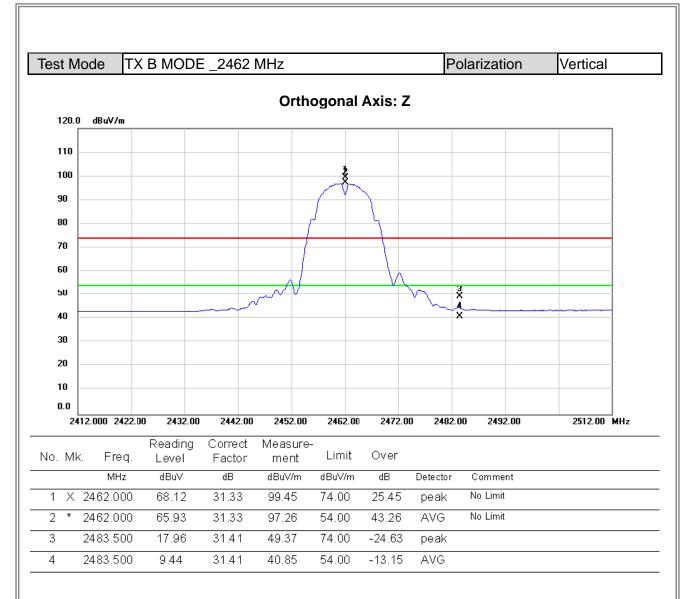


Page 90 of 174 Report Version: R02



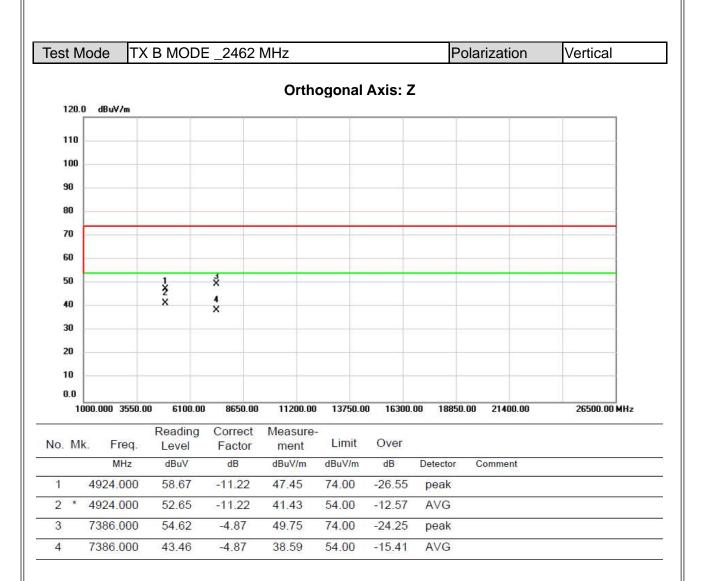




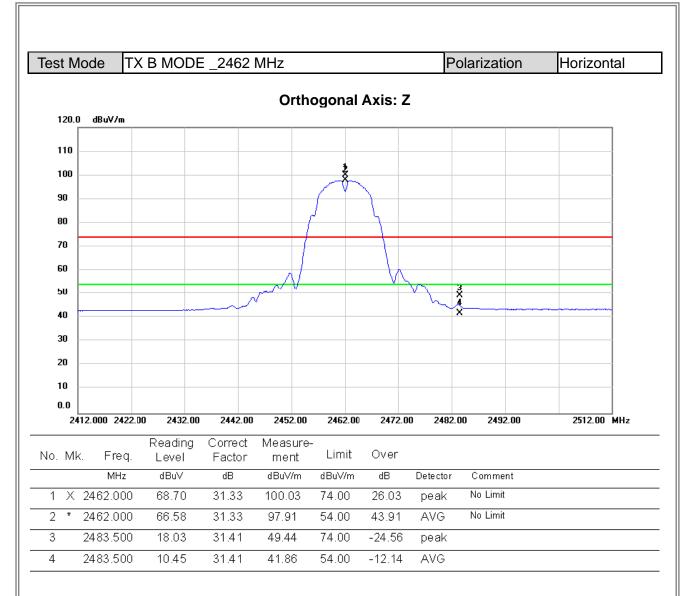


Page 92 of 174 Report Version: R02



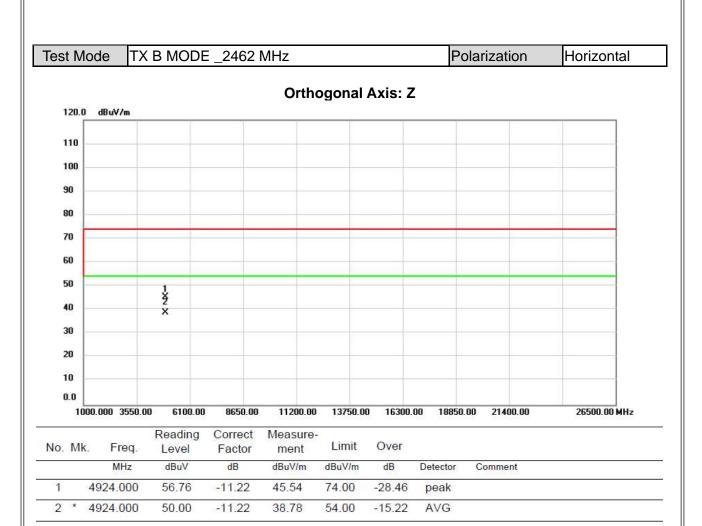




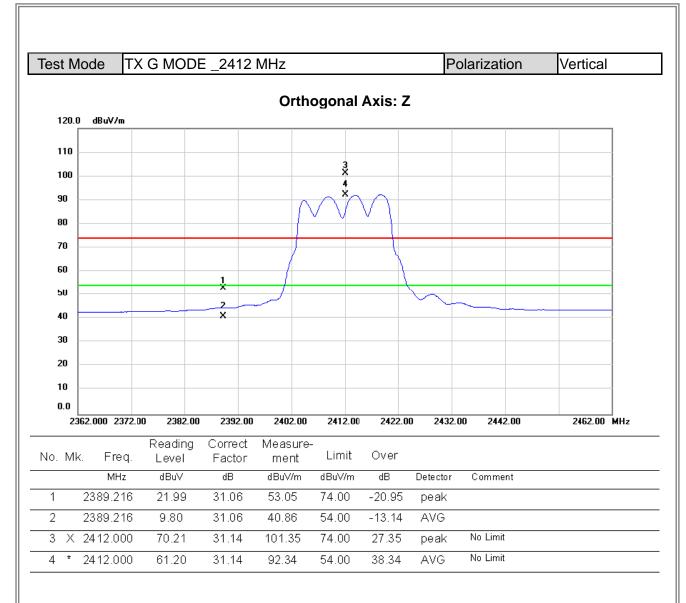


Page 94 of 174 Report Version: R02



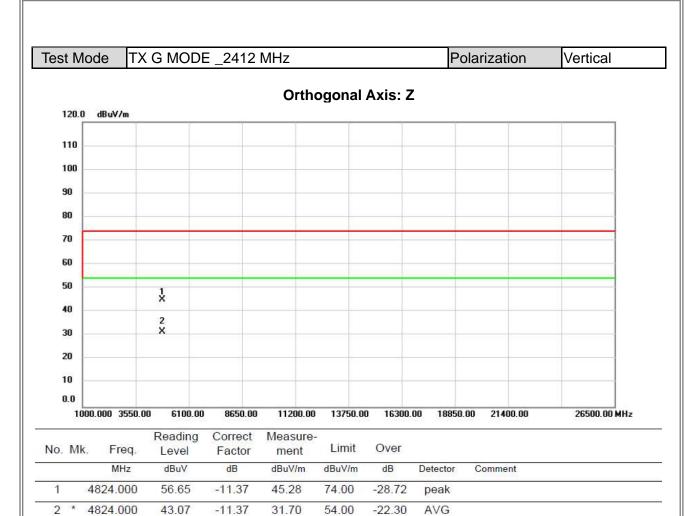




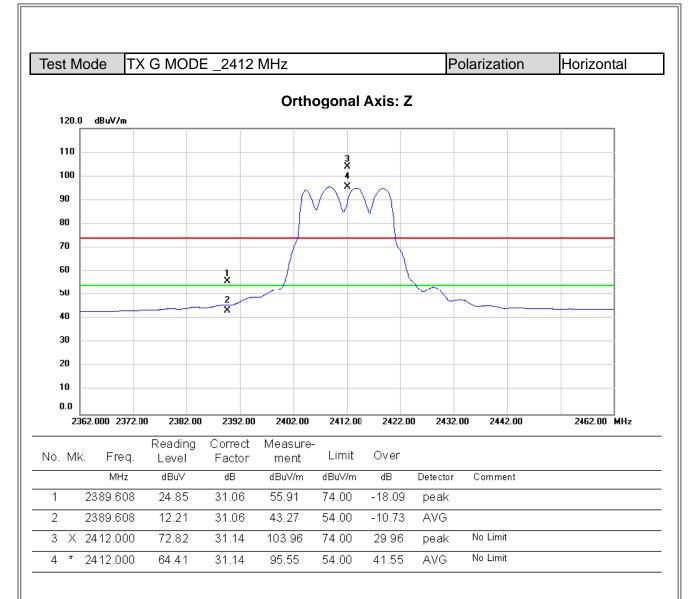


Page 96 of 174 Report Version: R02



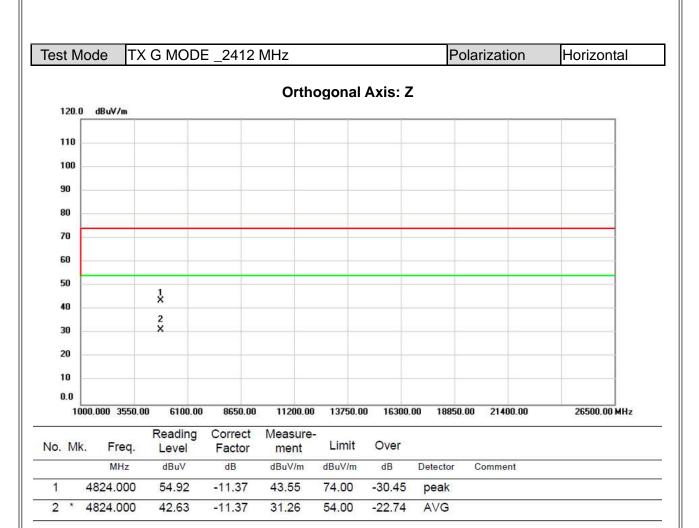






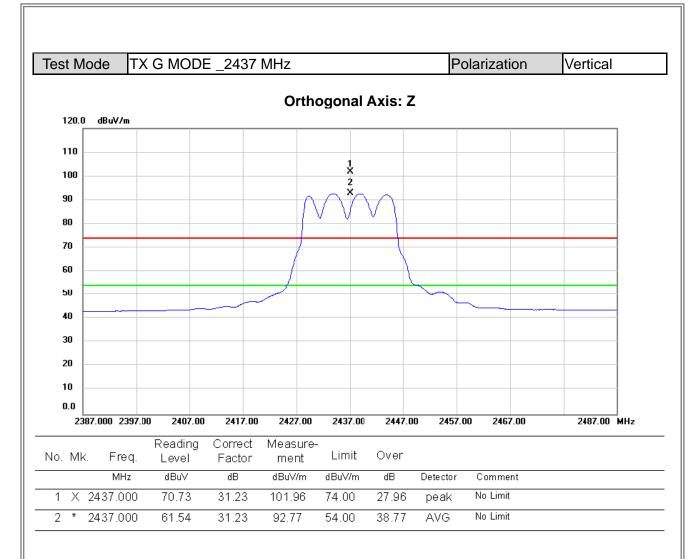
Page 98 of 174 Report Version: R02





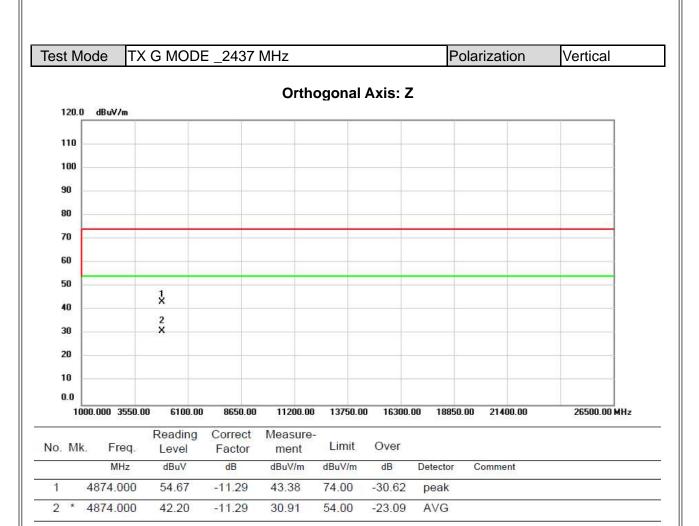
Page 99 of 174 Report Version: R02





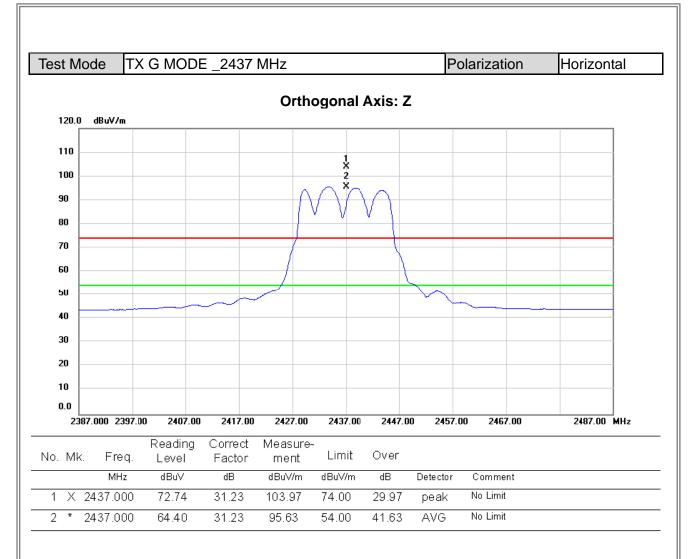
Page 100 of 174 Report Version: R02





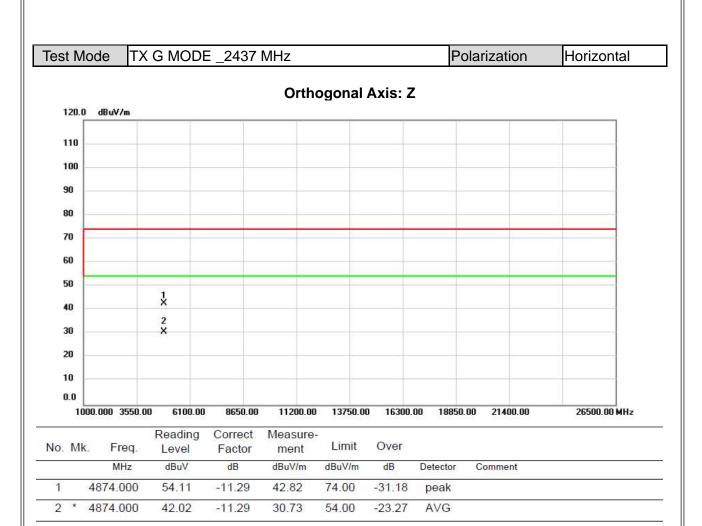
Page 101 of 174 Report Version: R02



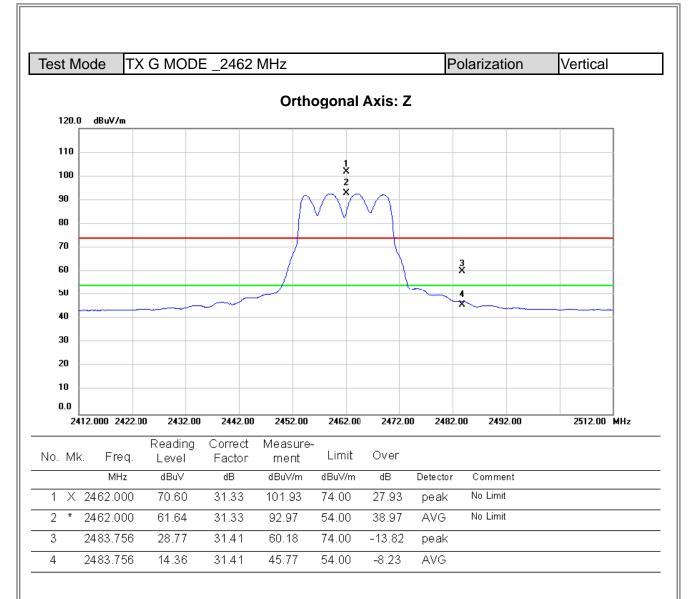


Page 102 of 174 Report Version: R02

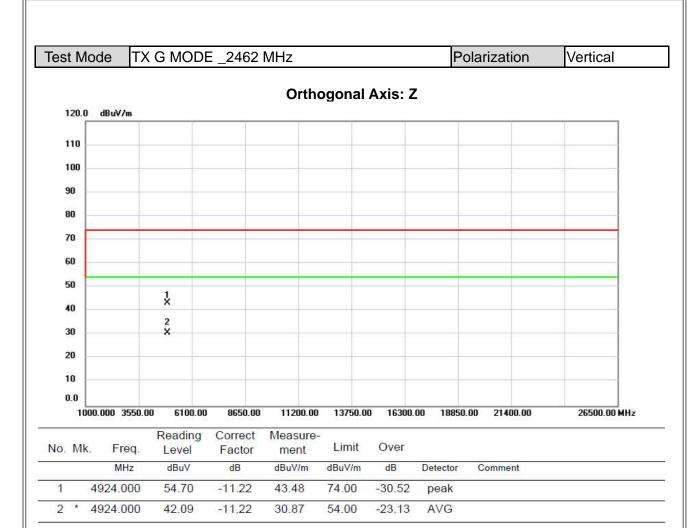




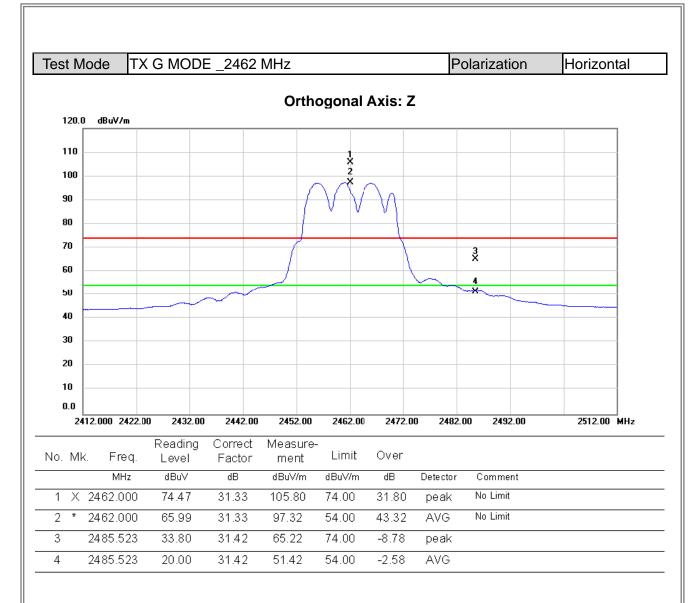






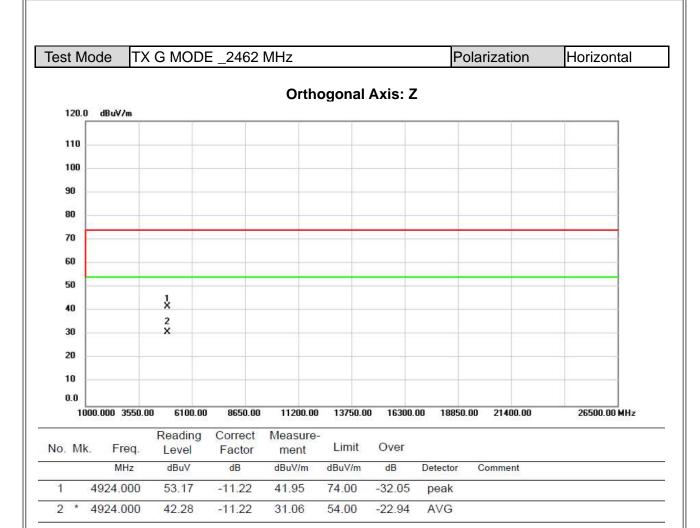




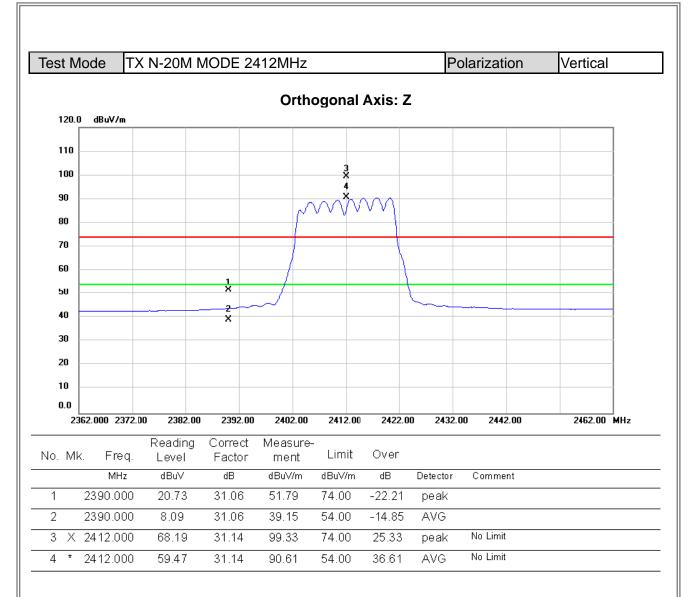


Page 106 of 174 Report Version: R02



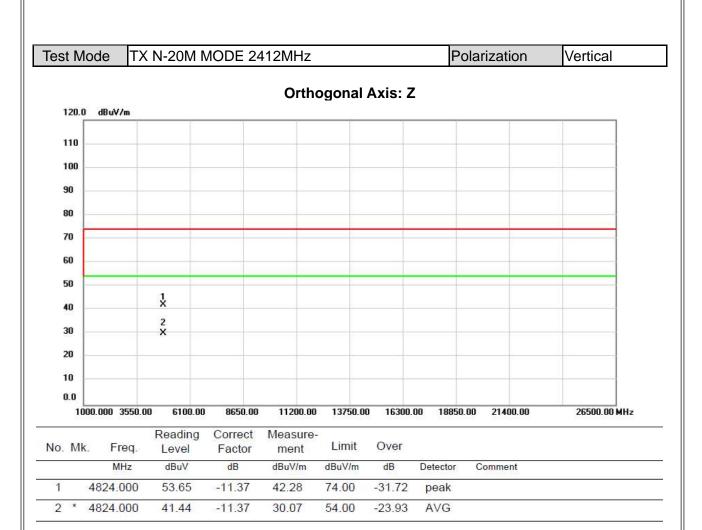




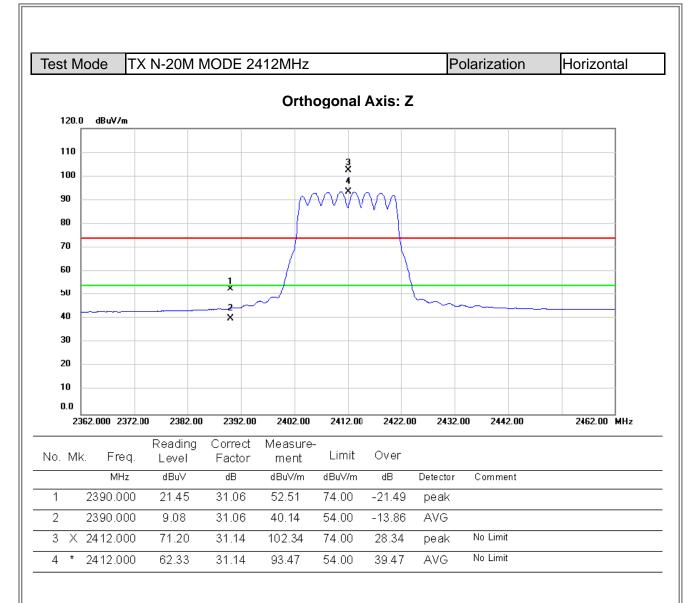


Page 108 of 174 Report Version: R02



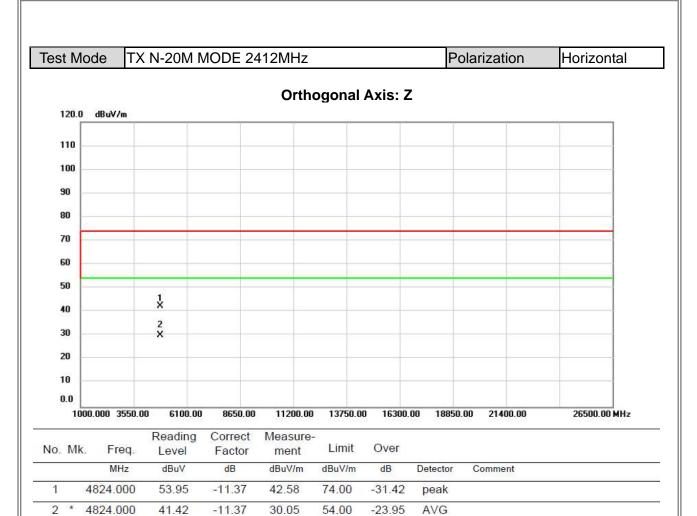




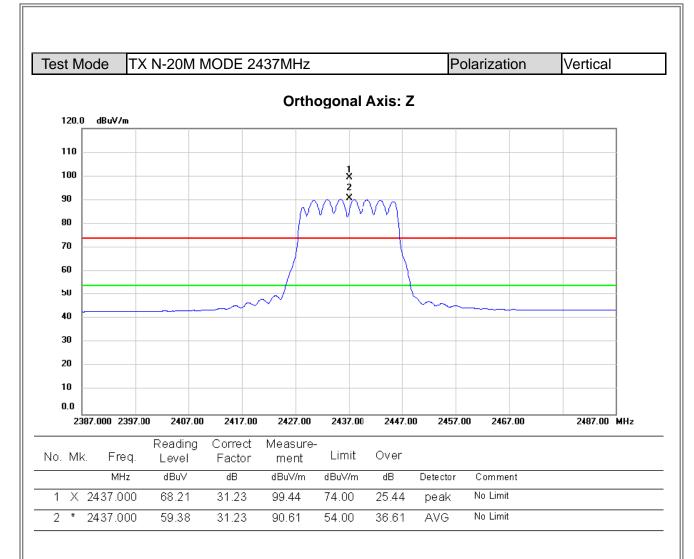


Page 110 of 174 Report Version: R02



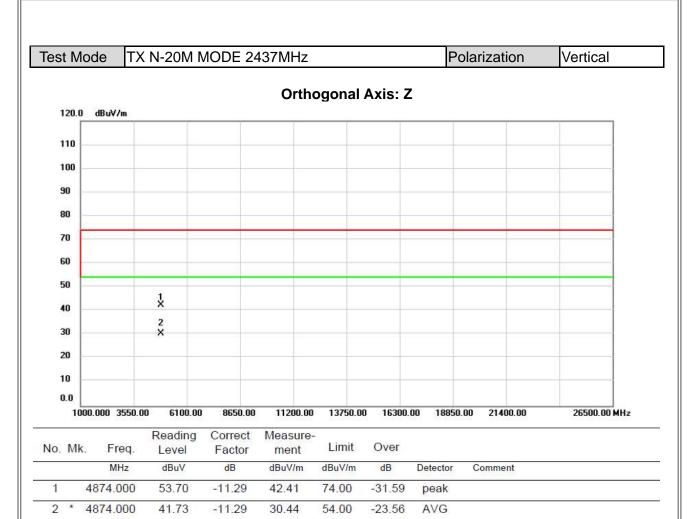






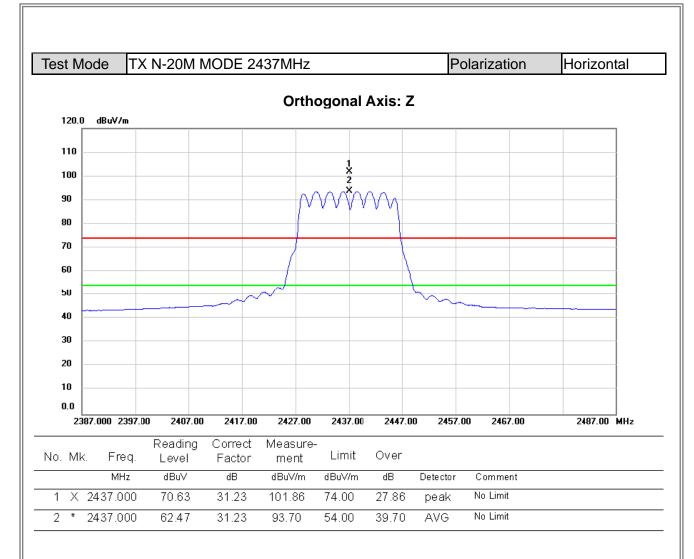
Page 112 of 174 Report Version: R02



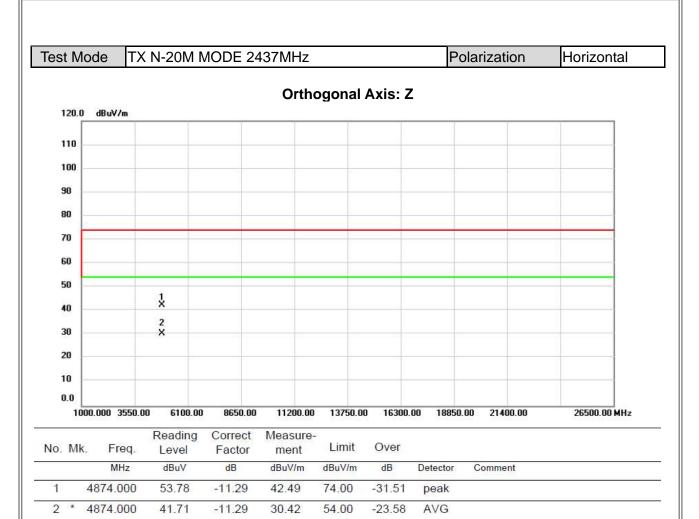


Page 113 of 174 Report Version: R02

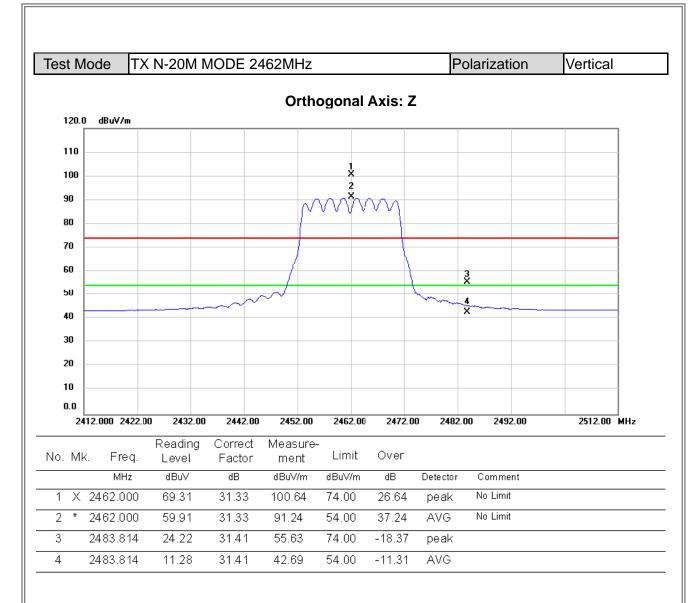






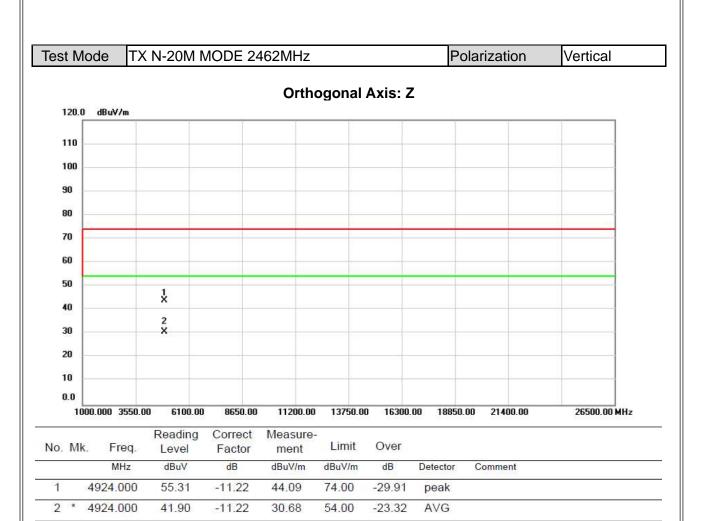




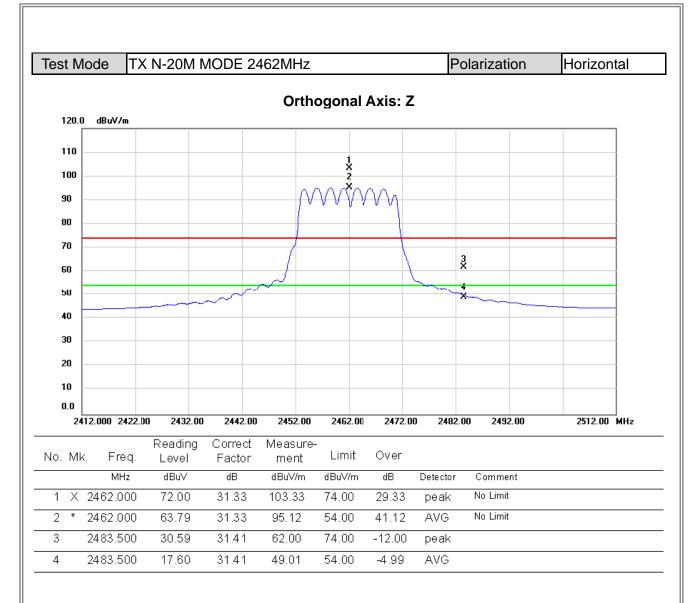


Page 116 of 174 Report Version: R02

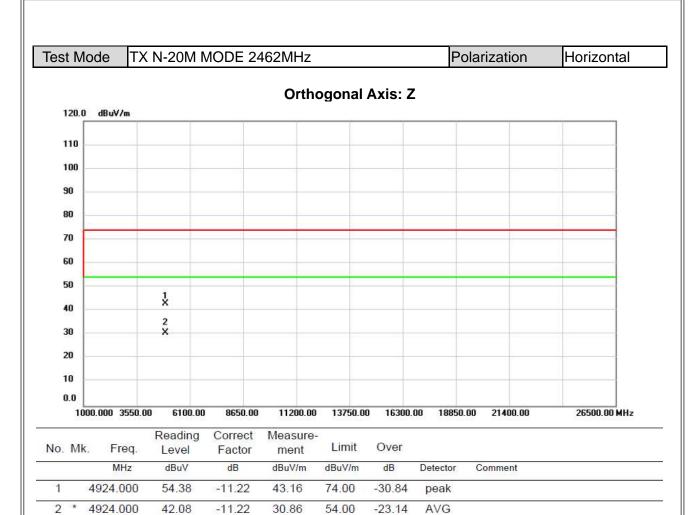










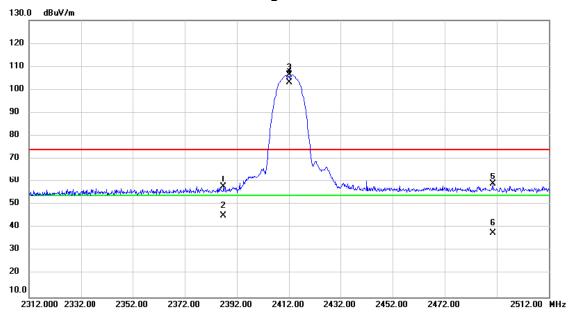




Spot check test:



Orthogonal Axis: Y



	No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
-			MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detector	Comment
-	1	- 2	2386.907	27.06	30.78	57.84	74.00	-16.16	peak	
	2	2	2386.907	14.58	30.78	45.36	54.00	-8.64	AVG	
-	3	X 2	2412.000	75.47	30.88	106.35	74.00	32.35	peak	No Limit
-	4	* 2	2412.000	72.17	30.88	103.05	54.00	49.05	AVG	No Limit
	5	2	2490.593	27.78	31.19	58.97	74.00	-15.03	peak	
-	6	2	2490.593	6.50	31.19	37.69	54.00	-16.31	AVG	
-										

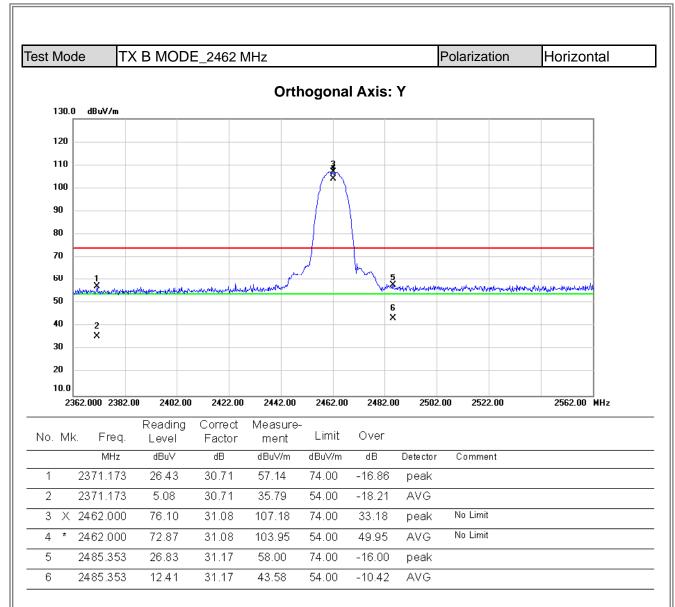
REMARKS:

(1) Both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.

Report No.: BTL-FCCP-3-1710T083D

Page 120 of 174 Report Version: R02



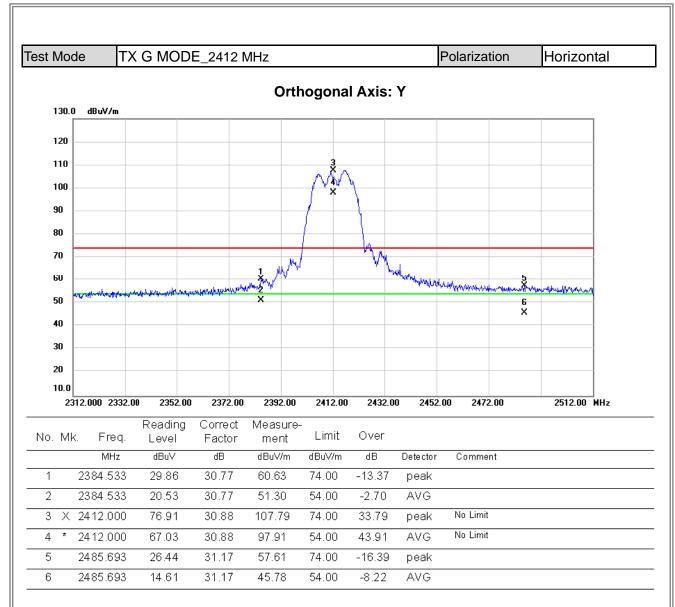


(1) Both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.

Report No.: BTL-FCCP-3-1710T083D

Page 121 of 174 Report Version: R02



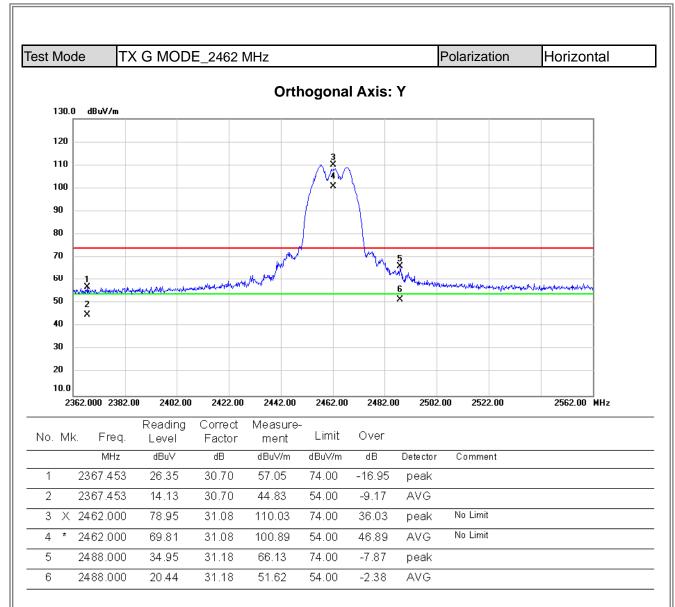


(1) Both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.

Report No.: BTL-FCCP-3-1710T083D

Page 122 of 174 Report Version: R02



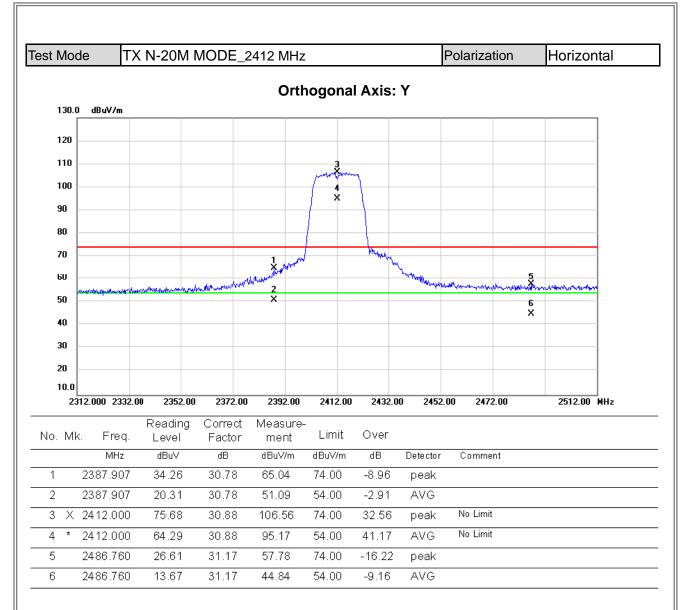


(1) Both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.

Report No.: BTL-FCCP-3-1710T083D

Page 123 of 174 Report Version: R02



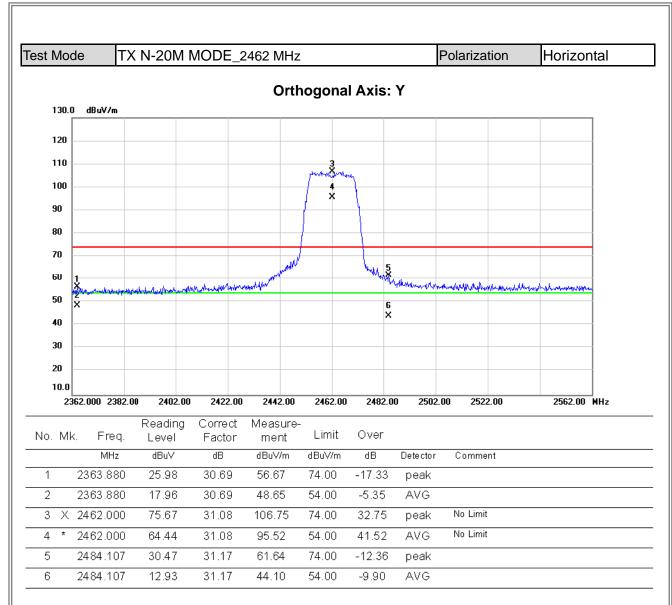


(1) Both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.

Report No.: BTL-FCCP-3-1710T083D

Page 124 of 174 Report Version: R02



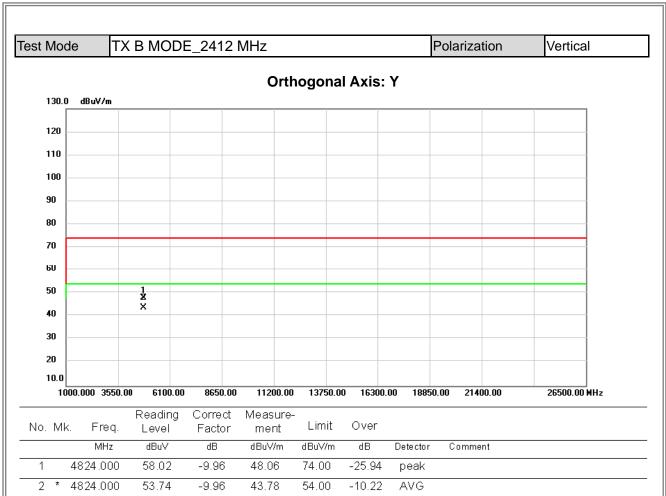


(1) Both Vertical and Horizontal are evaluated, but only the worst case (Horizontal) is recorded.

Report No.: BTL-FCCP-3-1710T083D

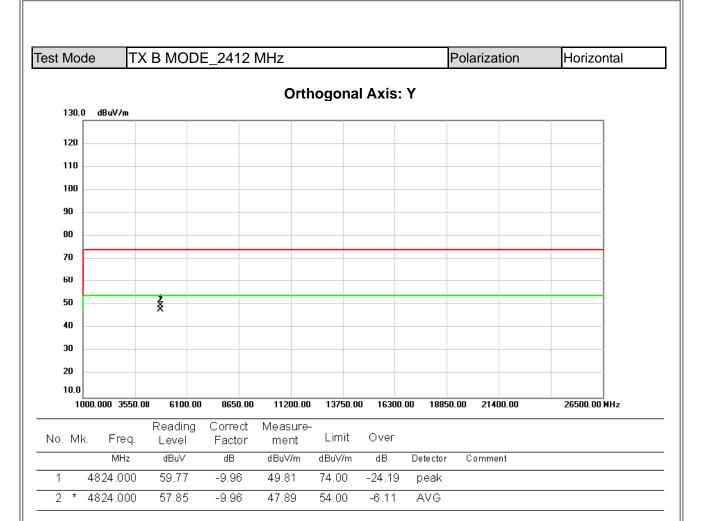
Page 125 of 174 Report Version: R02



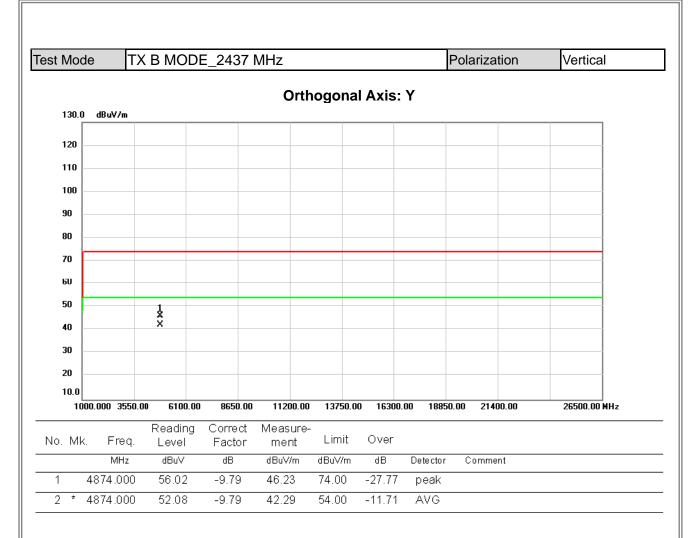


Page 126 of 174 Report Version: R02



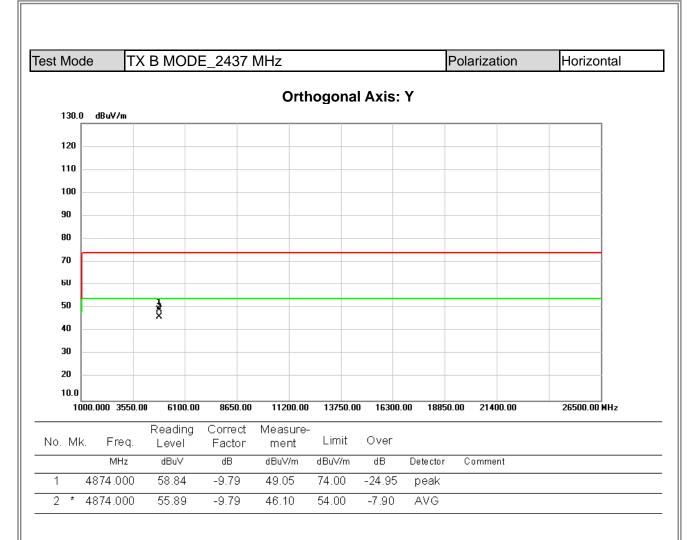




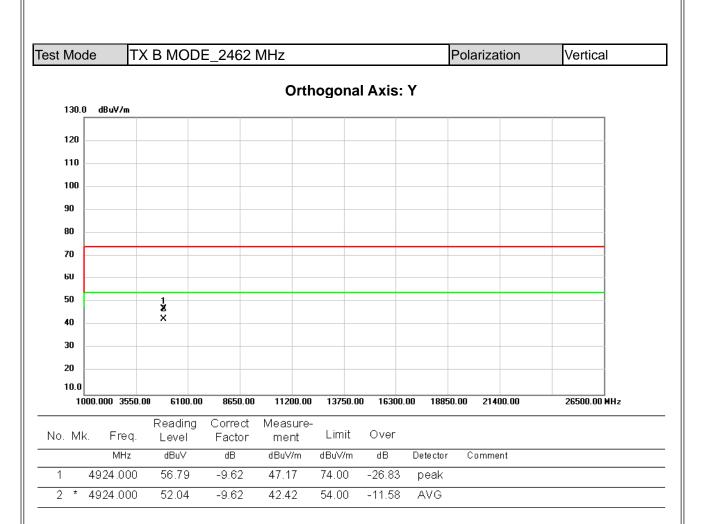


Page 128 of 174 Report Version: R02

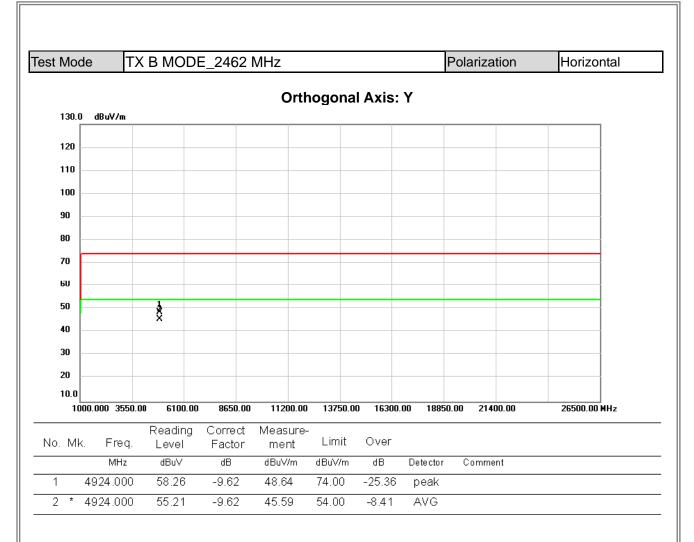






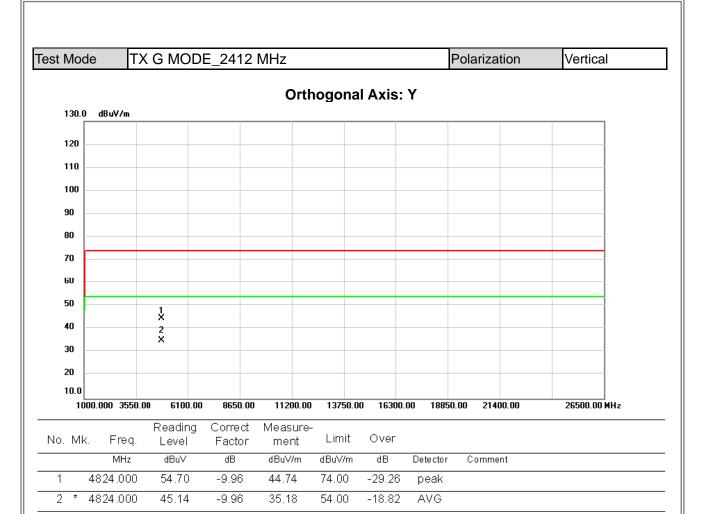






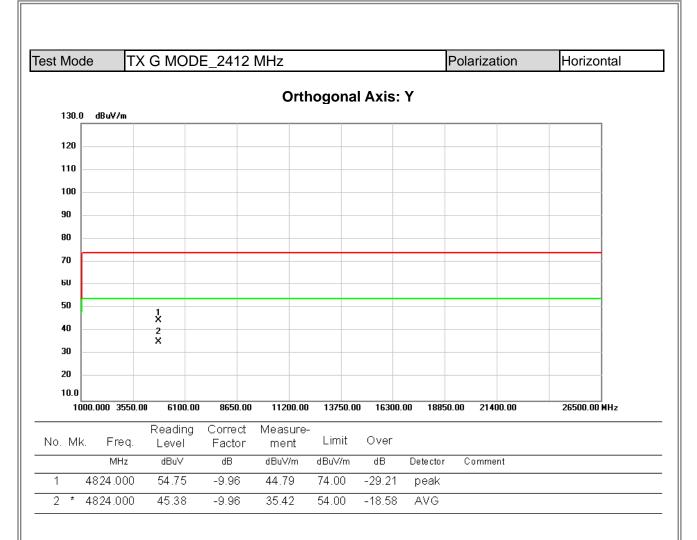
Page 131 of 174 Report Version: R02



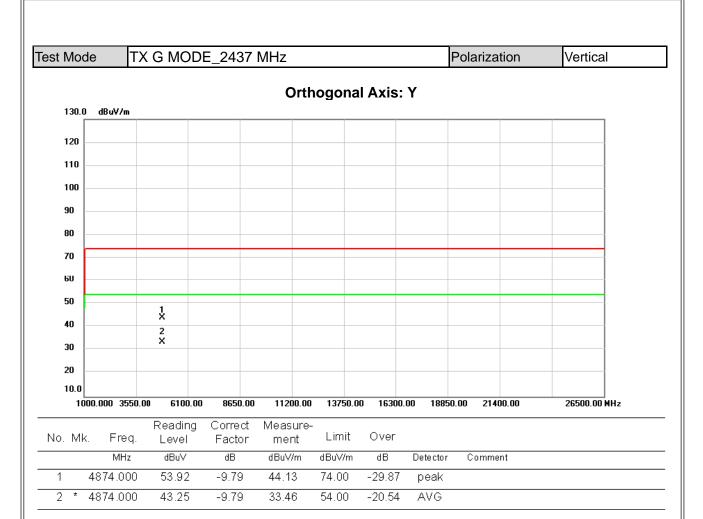


Page 132 of 174 Report Version: R02



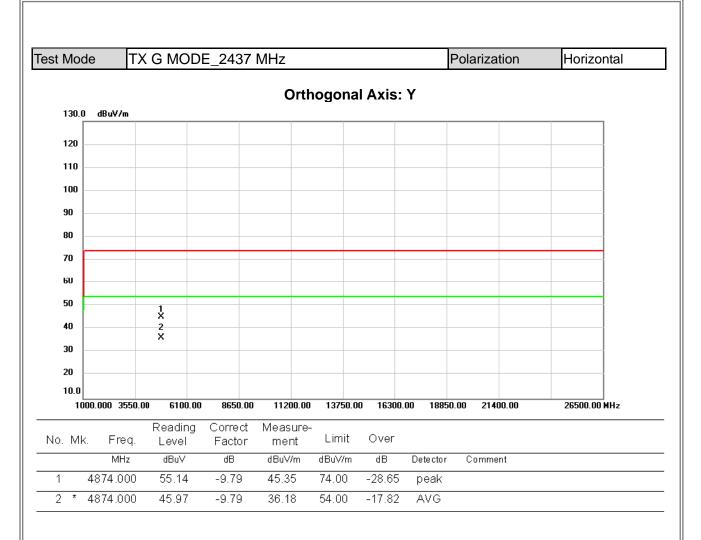




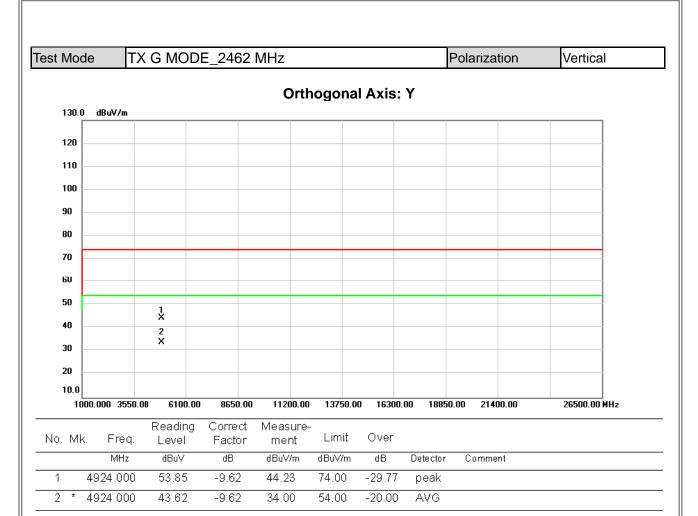


Page 134 of 174 Report Version: R02

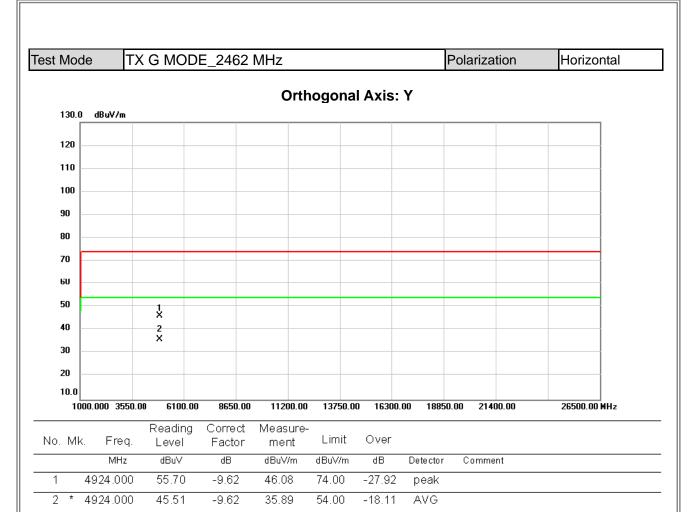




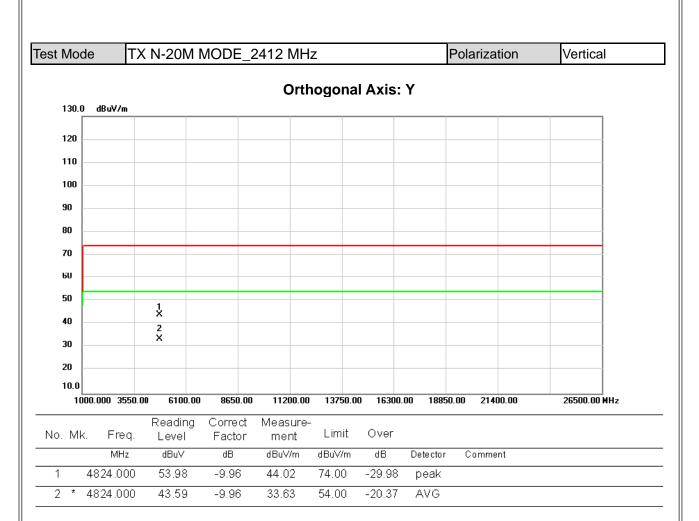






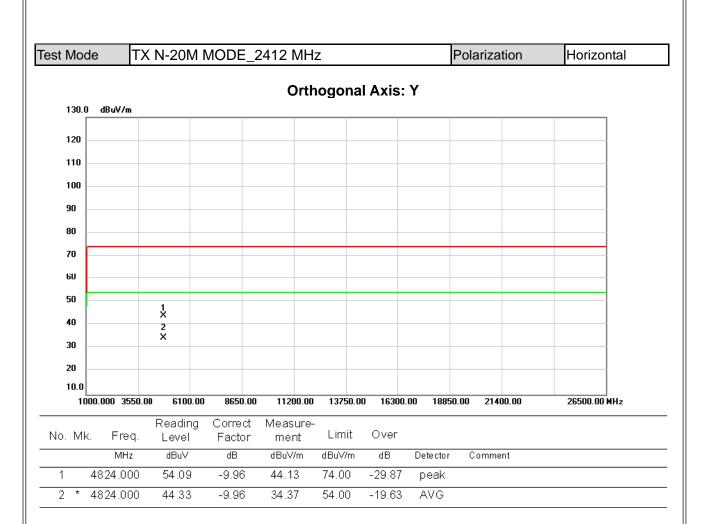




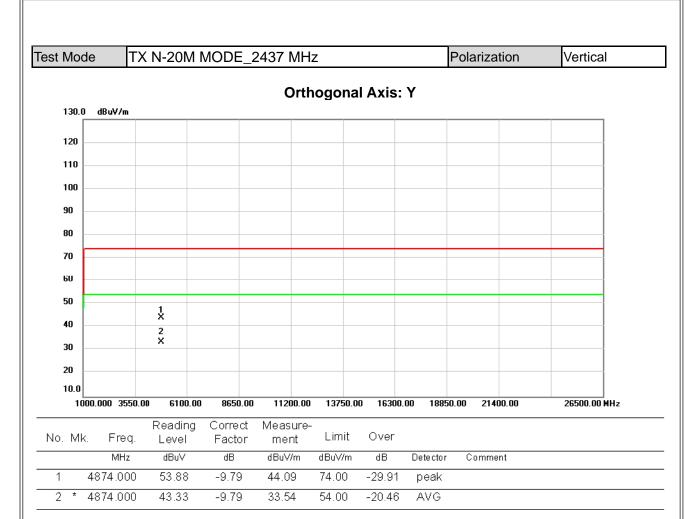


Page 138 of 174 Report Version: R02

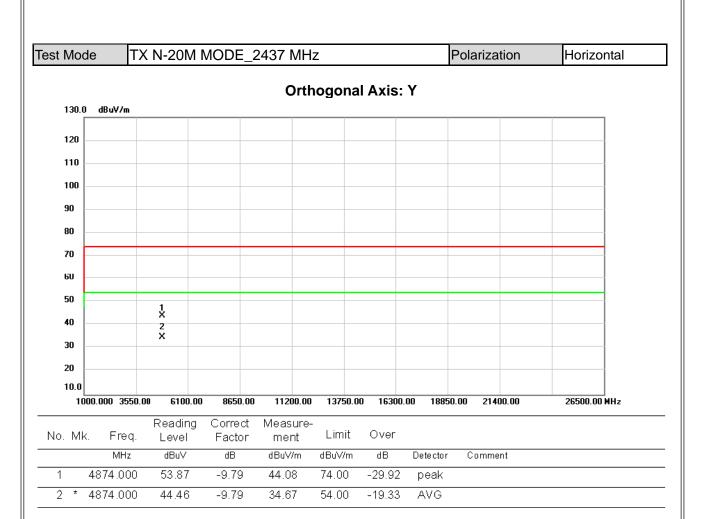






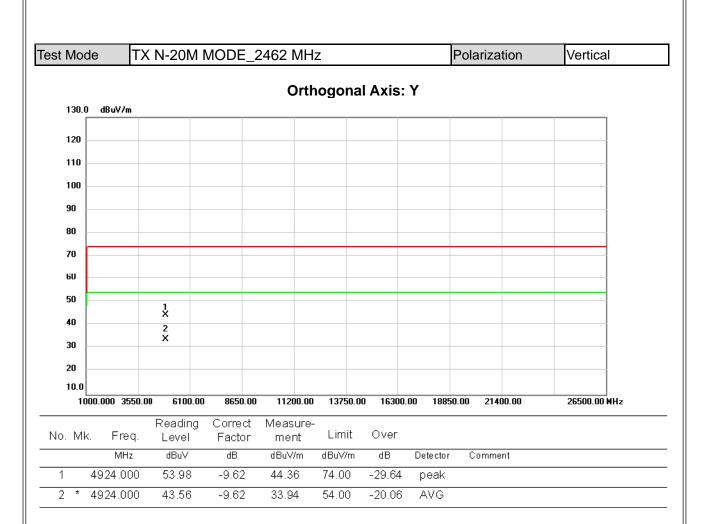




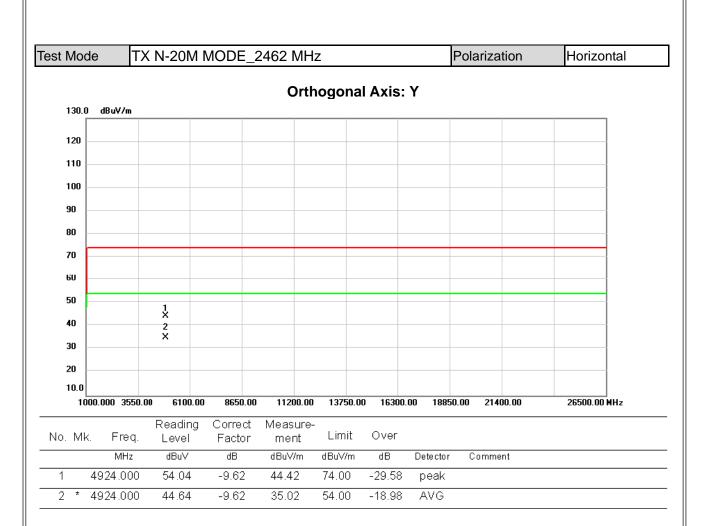


Page 141 of 174 Report Version: R02











APPENDIX E - BANDWIDTH	



Test Mode: TX B Mode_CH01/06/11_ANT 1

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	8.58	11.68	500	Complies
2437	9.10	10.60	500	Complies
2462	8.61	10.80	500	Complies





Test Mode: TX B Mode_CH01/06/11_ANT 2

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	8.64	11.88	500	Complies
2437	8.64	11.68	500	Complies
2462	9.06	11.72	500	Complies





Test Mode: TX G Mode_CH01/06/11_ANT 1

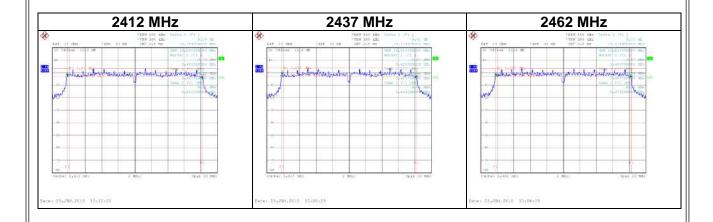
Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.38	16.56	500	Complies
2437	16.44	16.56	500	Complies
2462	16.40	16.56	500	Complies





Test Mode: TX G Mode_CH01/06/11_ANT 2

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	16.36	16.56	500	Complies
2437	16.34	16.48	500	Complies
2462	16.44	16.56	500	Complies





Test Mode: TX N-20MHz Mode_CH01/06/11_ANT 1

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.66	17.72	500	Complies
2437	17.62	17.76	500	Complies
2462	17.63	17.72	500	Complies





Test Mode: TX N-20MHz Mode_CH01/06/11_ANT 2

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2412	17.58	17.72	500	Complies
2437	17.64	17.72	500	Complies
2462	17.66	17.68	500	Complies





R



Test Mode :TX B Mode_CH01/06/11_ANT 1						
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult	
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result	
2412	18.73	0.0746	30.00	1.00	Complies	
2437	18.96	0.0787	30.00	1.00	Complies	
2462	19.08	0.0809	30.00	1.00	Complies	

Test Mode :TX B Mode_CH01/06/11_ANT 2						
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result	
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Resuit	
2412	17.90	0.0617	30.00	1.00	Complies	
2437	18.78	0.0755	30.00	1.00	Complies	
2462	19.03	0.0800	30.00	1.00	Complies	

Test Mode :TX B Mode_CH01/06/11_Total						
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result	
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result	
2412	21.35	0.1363	30.00	1.00	Complies	
2437	21.88	0.1542	30.00	1.00	Complies	
2462	22.07	0.1609	30.00	1.00	Complies	



Test Mode :TX G Mode_CH01/06/11_ANT 1						
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result	
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Resuit	
2412	21.24	0.1330	30.00	1.00	Complies	
2437	21.52	0.1419	30.00	1.00	Complies	
2462	21.81	0.1517	30.00	1.00	Complies	

Test Mode :TX G Mode_CH01/06/11_ANT 2						
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result	
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result	
2412	20.90	0.1230	30.00	1.00	Complies	
2437	21.13	0.1297	30.00	1.00	Complies	
2462	21.22	0.1324	30.00	1.00	Complies	

Test Mode :TX G Mode_CH01/06/11_Total							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Resuit		
2412	24.08	0.2561	30.00	1.00	Complies		
2437	24.34	0.2716	30.00	1.00	Complies		
2462	24.54	0.2841	30.00	1.00	Complies		

Page 153 of 174 Report Version: R02



Test Mode :TX N20 Mode_CH01/06/11_ANT 1								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2412	20.69	0.1172	30.00	1.00	Complies			
2437	20.42	0.1102	30.00	1.00	Complies			
2462	20.79	0.1199	30.00	1.00	Complies			

Test Mode :TX N20 Mode_CH01/06/11_ANT 2							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	20.06	0.1014	30.00	1.00	Complies		
2437	20.35	0.1084	30.00	1.00	Complies		
2462	20.41	0.1099	30.00	1.00	Complies		

Test Mode :TX N20 Mode_CH01/06/11_Total							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Pocult		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	23.40	0.2186	30.00	1.00	Complies		
2437	23.40	0.2185	30.00	1.00	Complies		
2462	23.61	0.2299	30.00	1.00	Complies		



Spot check test:

Test Mode :TX B Mode_CH01/06/11_ANT 1							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	18.71	0.0743	30.00	1.00	Complies		
2437	18.34	0.0682	30.00	1.00	Complies		
2462	18.22	0.0664	30.00	1.00	Complies		

Test Mode :TX B Mode_CH01/06/11_ANT 2							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	17.89	0.0615	30.00	1.00	Complies		
2437	18.02	0.0634	30.00	1.00	Complies		
2462	18.12	0.0649	30.00	1.00	Complies		

Test Mode :TX B Mode_CH01/06/11_Total								
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result			
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result			
2412	21.33	0.1358	30.00	1.00	Complies			
2437	21.19	0.1316	30.00	1.00	Complies			
2462	21.18	0.1312	30.00	1.00	Complies			



Test Mode :TX G Mode_CH01/06/11_ANT 1							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Resuit		
2412	21.21	0.1321	30.00	1.00	Complies		
2437	20.94	0.1242	30.00	1.00	Complies		
2462	20.60	0.1148	30.00	1.00	Complies		

Test Mode :TX G Mode_CH01/06/11_ANT 2							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	20.81	0.1205	30.00	1.00	Complies		
2437	20.34	0.1081	30.00	1.00	Complies		
2462	21.06	0.1276	30.00	1.00	Complies		

Test Mode :TX G Mode_CH01/06/11_Total							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	24.02	0.2526	30.00	1.00	Complies		
2437	23.66	0.2323	30.00	1.00	Complies		
2462	23.85	0.2425	30.00	1.00	Complies		



Test Mode :TX N20 Mode_CH01/06/11_ANT 1							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Result		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Resuit		
2412	20.61	0.1151	30.00	1.00	Complies		
2437	20.31	0.1074	30.00	1.00	Complies		
2462	20.69	0.1172	30.00	1.00	Complies		

Test Mode :TX N20 Mode_CH01/06/11_ANT 2							
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult		
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result		
2412	19.97	0.0993	30.00	1.00	Complies		
2437	20.31	0.1074	30.00	1.00	Complies		
2462	20.33	0.1079	30.00	1.00	Complies		

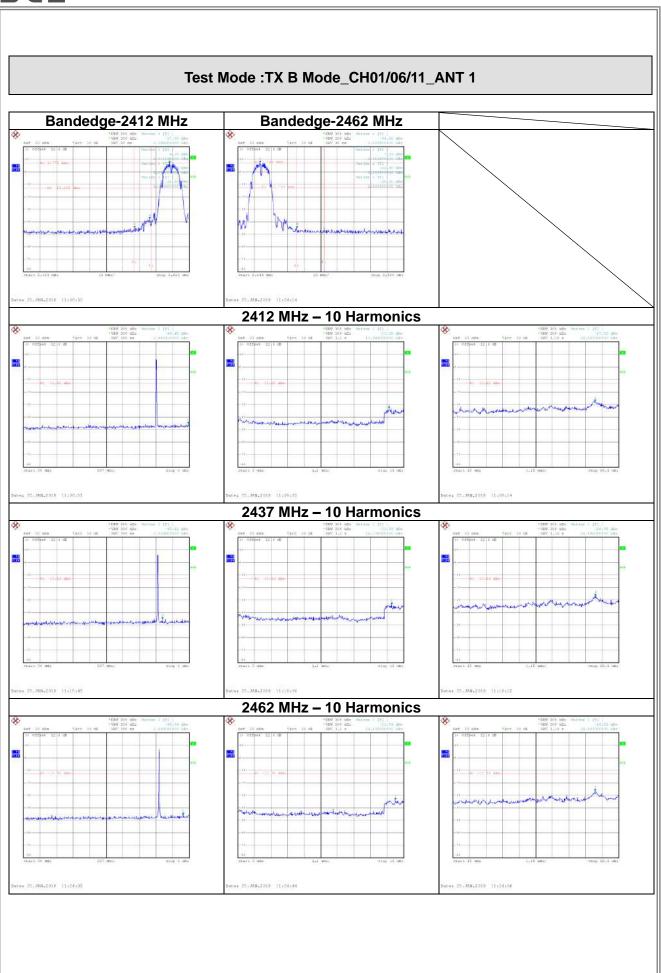
Test Mode :TX N20 Mode_CH01/06/11_Total						
Frequency	Conducted	Conducted	Max. Limit	Max. Limit	Popult	
(MHz)	Power (dBm)	Power (W)	(dBm)	(W)	Result	
2412	23.31	0.2144	30.00	1.00	Complies	
2437	23.32	0.2148	30.00	1.00	Complies	
2462	23.52	0.2251	30.00	1.00	Complies	



APPENDIX G - ANTENNA CONDUCTED SPURIOUS EMISSION

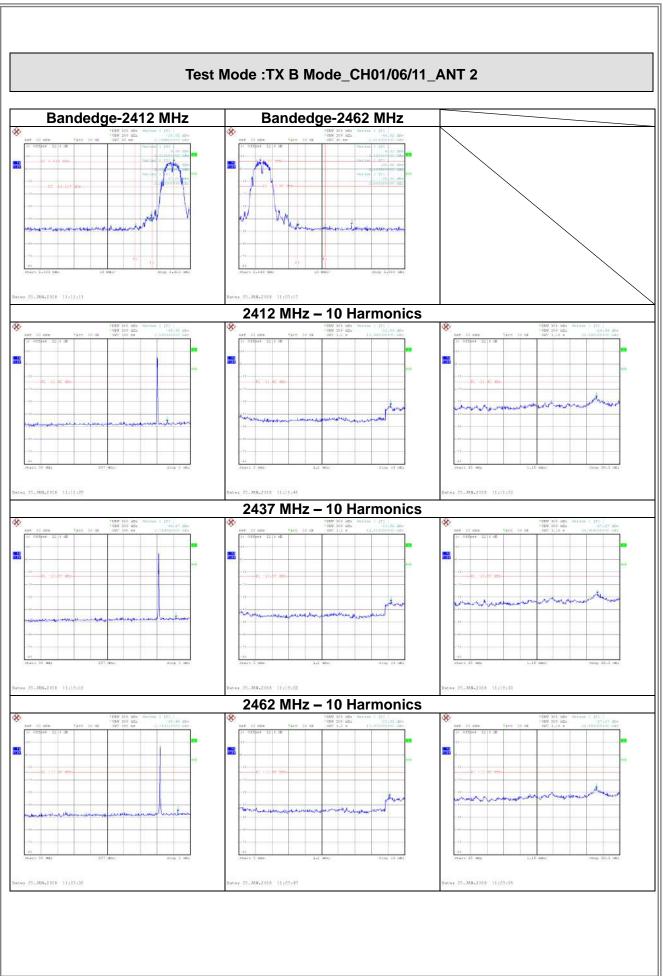
Page 158 of 174 Report Version: R02





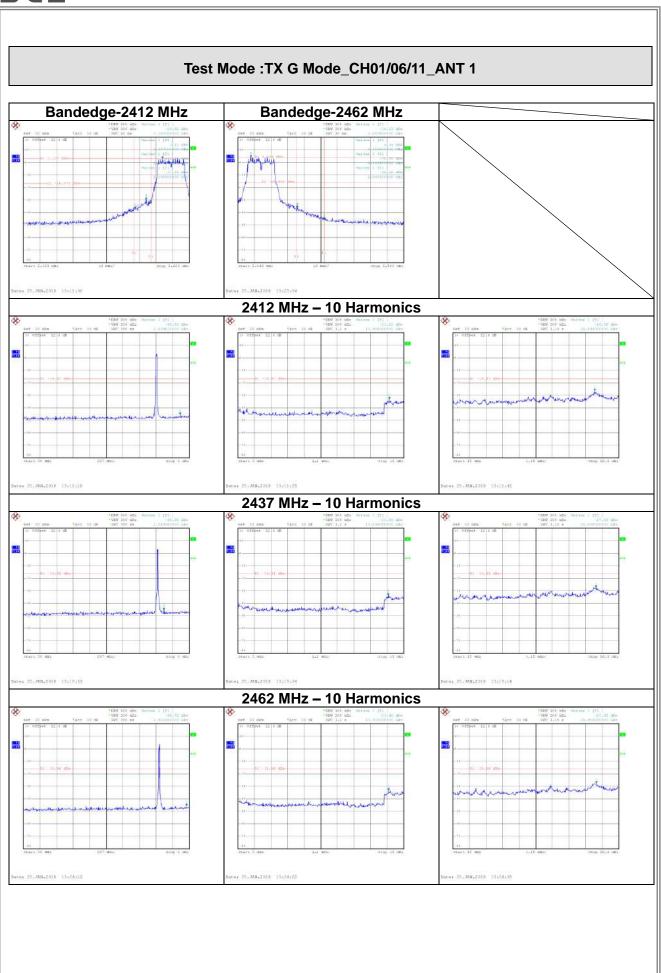
Page 159 of 174 Report Version: R02





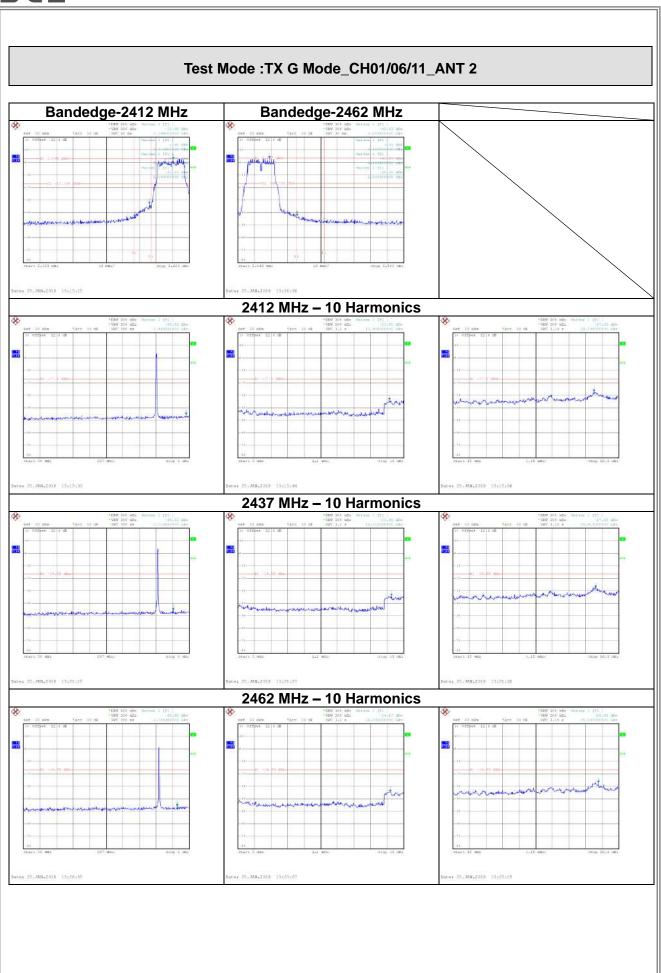
Page 160 of 174 Report Version: R02





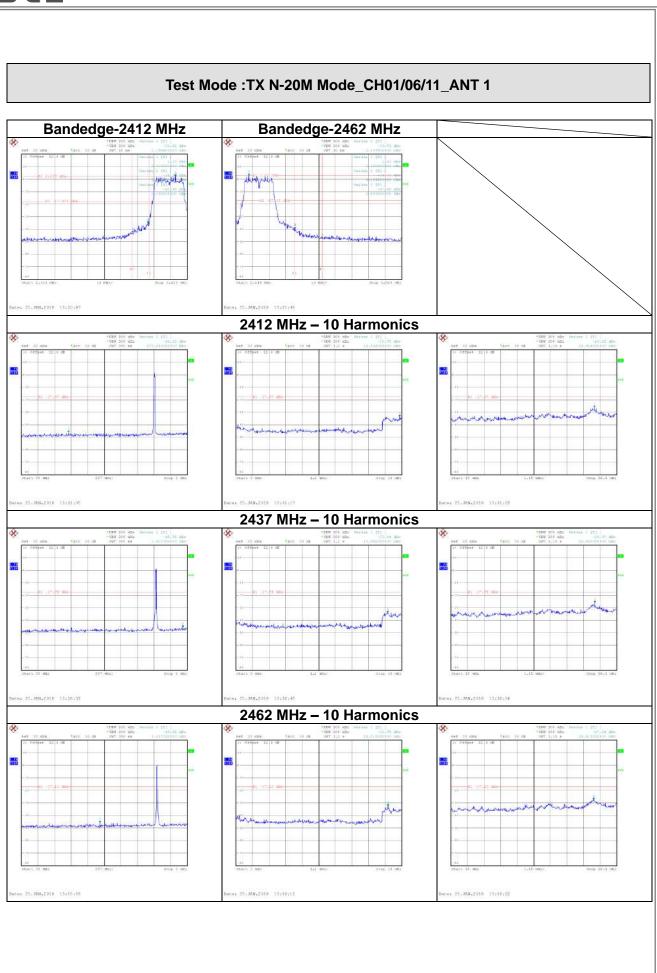
Page 161 of 174 Report Version: R02





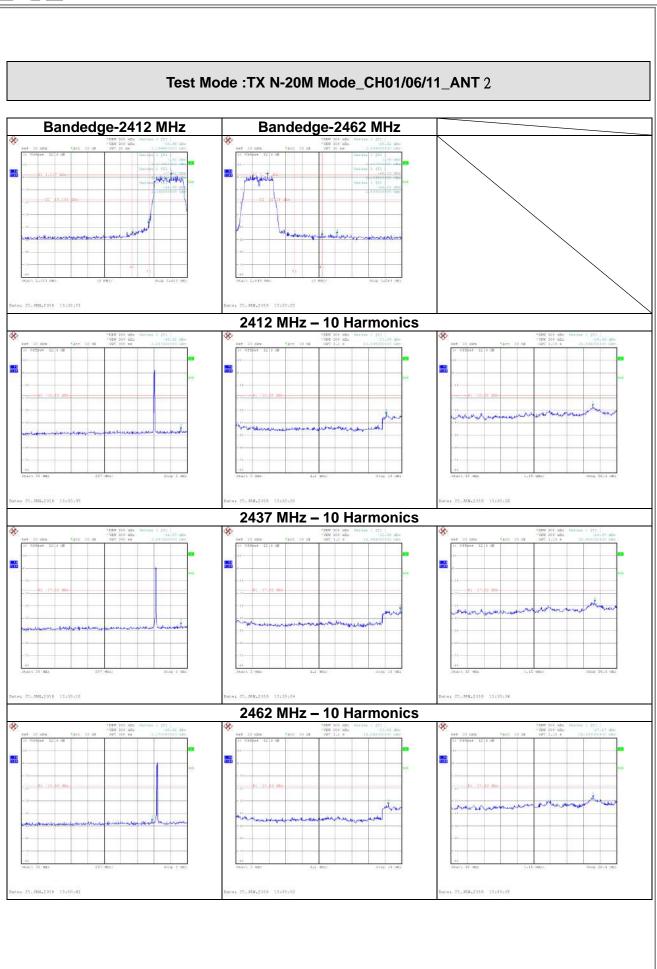
Page 162 of 174 Report Version: R02





Page 163 of 174 Report Version: R02





Page 164 of 174 Report Version: R02



APPENDIX H - POWER SPECTRAL DENSITY

Report No.: BTL-FCCP-3-1710T083D Page 165 of 174

Report Version: R02



Test Mode :TX B Mode_CH01/06/11_ANT 1

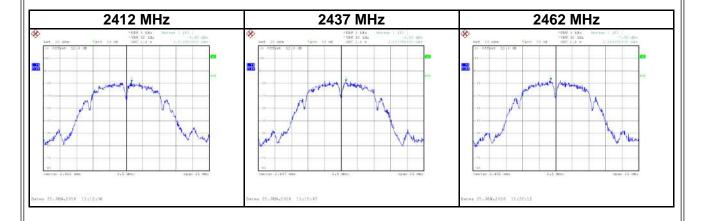
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-7.33	0.18	8.00	Complies
2437	-7.37	0.18	8.00	Complies
2462	-7.34	0.18	8.00	Complies





Test Mode :TX B Mode_CH01/06/11_ANT 2

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-8.90	0.13	8.00	Complies
2437	-8.50	0.14	8.00	Complies
2462	-7.55	0.18	8.00	Complies





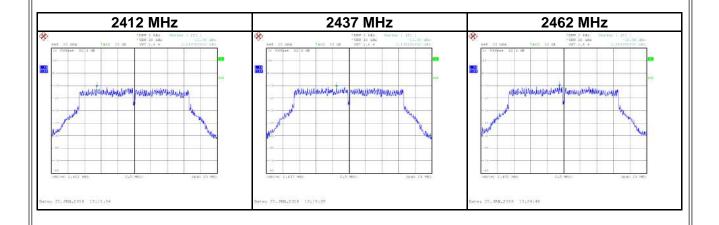
Test Mode :TX B Mode_CH01/06/11_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-5.03	0.31	8.00	Complies
2437	-4.89	0.32	8.00	Complies
2462	-4.43	0.36	8.00	Complies



Test Mode :TX G Mode_CH01/06/11_ANT 1

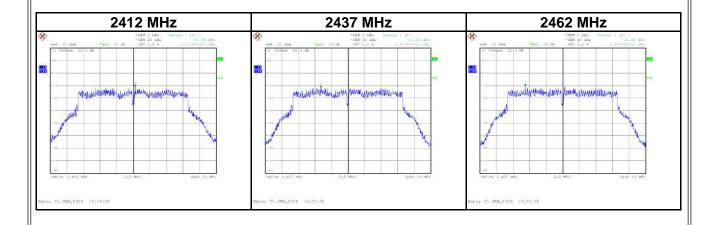
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-11.08	0.08	8.00	Complies
2437	-11.08	0.08	8.00	Complies
2462	-10.56	0.09	8.00	Complies





Test Mode :TX G Mode_CH01/06/11_ANT 2

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-10.76	0.08	8.00	Complies
2437	-11.24	0.08	8.00	Complies
2462	-10.04	0.10	8.00	Complies





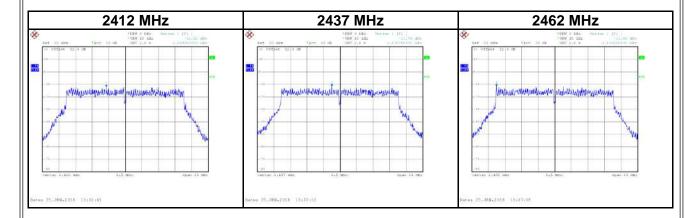
Test Mode :TX G Mode_CH01/06/11_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-7.91	0.16	8.00	Complies
2437	-8.15	0.15	8.00	Complies
2462	-7.28	0.19	8.00	Complies



Test Mode: TX N-20M Mode_CH01/06/11_ANT 1

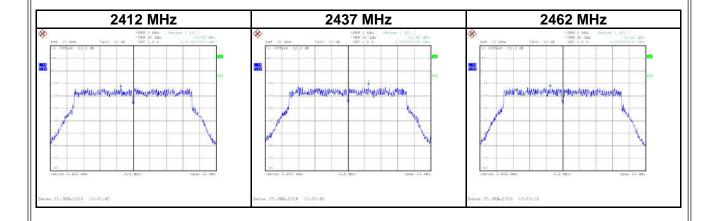
Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-12.10	0.06	8.00	Complies
2437	-11.74	0.07	8.00	Complies
2462	-11.68	0.07	8.00	Complies





Test Mode: TX N-20M Mode_CH01/06/11_ANT 2

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-13.53	0.04	8.00	Complies
2437	-11.48	0.07	8.00	Complies
2462	-13.22	0.05	8.00	Complies





Test Mode: TX N-20M Mode_CH01/06/11_Total

Frequency (MHz)	Power Density (dBm/3kHz)	Power Density (mW/3kHz)	Max. Limit (dBm/3kHz)	Result
2412	-9.75	0.11	8.00	Complies
2437	-8.60	0.14	8.00	Complies
2462	-9.37	0.12	8.00	Complies

End of Test Report

Page 174 of 174 Report No.: BTL-FCCP-3-1710T083D Report Version: R02