FCC Radio Test Report

FCC ID: M82-AIM58W

Project No. Equipment Test Model Series Model Applicant Address	 1710T083D Computer AIM 10W AIM-58, AIM-58XXXXXXXXXXXXXXXX, AIM 10WXXXXXXXXXXXXXXXXXXXX, AIM 10WXXXXXXXXXXXXXXXXXXXXXX, and alphanumeric character , blank or "-".) Advantech Co., Ltd. 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
Date of Test	: 2017/11/13 ~ 2018/2/27

2020/12/16 ~ 2021/4/16

: 2021/10/15

: BTL Inc.

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Issued Date

Tested by

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.

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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.



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REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date
BTL-FCCP-2-1710T083D	R00	Original Report.	2021/4/27
BTL-FCCP-2-1710T083D		Revised report to address TCB's comments.	2021/9/8
BTL-FCCP-2-1710T083D	R02	Revised typo.	2021/10/15



1. CERTIFICATION

Equipment : Brand Name : Test Model : Series Model :	ADVANTECH
Selles Model .	(where X may be any alphanumeric character , blank or "-".)
Applicant :	Advantech Co., Ltd.
Manufacturer :	Advantech Co., Ltd.
Address :	No.1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei 11491, Taiwan,
	R.O.C.
Factory :	N/A
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-2-1710T083D) 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 Bluetooth LE part.

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 to this device.

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.

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<u> </u>	0005			

⊠ SR05

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 U_{cispr} 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)
	0.03 GHz ~ 0.2 GHz	4.17
	0.2 GHz ~ 1 GHz	4.72
CB15	1 GHz ~ 6 GHz	5.21
CD15	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.

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	Computer	
Brand Name	ADVANTECH	
Test Model	AIM 10W	
Series Model	AIM-58, AIM-58XXXXXXXXXXXXXXXX, AIM 10WXXXXXXXXXXXXXXXXXXXXXX, where X may be any alphanumeric character , blank or "-".)	
Model Difference	The market distribution is	different only.
	Operation Frequency	2402~2480 MHz
	Modulation Technology	
Output Power (Max.)	Bit Rate of Transmitter	- GFSK(1Mbps)
	Output Power (Max.)	1.74 dBm (1Mbps)
	Output Power (Max.) Spot check test	1.24 dBm (1Mbps)
Power Source	DC Voltage supplied from	AC/DC adapter.
Power Rating	I/P: AC 100-240V~, 1.5A, O/P: DC 19V=3.42A	50~60Hz, 1.5A
Products Covered	2* Dock:	RA / XEW1934N FSP065-DBCM1 g: ADVANTECH/AIM-OFD-0000
		g: ADVANTECH/AIM-OPD-0000

NOTE:

- (1) For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- (2) In this report, the test results of below items refer to BTL-FCCP-2-1710083 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:

Channel	Frequency	Channel	Frequency
Charmer	(MHz)	Channel	(MHz)
00	2402	20	2442
01	2404	21	2444
02	2406	22	2446
03	2408	23	2448
04	2410	24	2450
05	2412	25	2452
06	2414	26	2454
07	2416	27	2456
08	2418	28	2458
09	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

(4) Table for Filed Antenna

Ant.	Brand	Model	Antenna Type	Connector	Gain (dBi)
1	INPAQ	WA-F-LB-02-113	PIFA	I-pex	0.65

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 Mode NOTE (1)

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 1	TX Mode	

For Radiated Test		
Final Test Mode	Description	
Mode 1	TX Mode NOTE (1)	

Note:

- (1) The measurements are performed at the high, middle, low available channels.
- (2) Orthogonal axis X is found to be the worst case and recorded.

3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

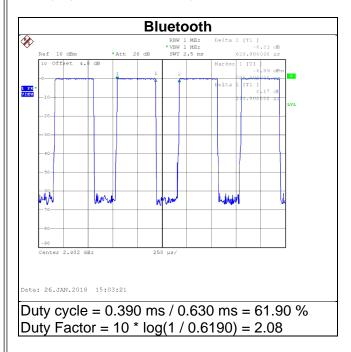
During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final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

Test Software Version		DOC	
Frequency (MHz)	2402	2440	2480
BT LE	Default	Default	Default



3.3 DUTY CYCLE

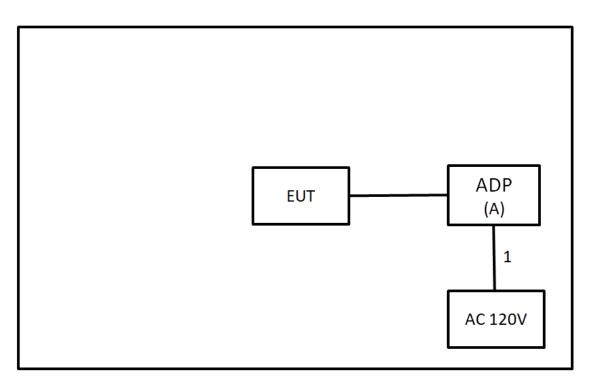
If duty cycle is \geq 98 %, duty factor is not required. If duty cycle is < 98 %, duty factor shall be considered.



Note:

For radiated emissions frequency above 1 GHz, the resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 kHz (Duty cycle < 98%).

3.4 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
А	Adapter	FSP GROUP INC	FSP065-DBCM1	N/A	Supplied by test requester
Item	Shielded	Ferrite Core	Length	Cable Type	Remarks
1	N/A	N/A	1.1m	Power Cord	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)		
Frequency of Emission (MHz)	Quasi-peak	Average	
0.15 -0 5	66 to 56*	56 to 46*	
0.50 -5.0	56	46	
5.0 -30.0	0	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

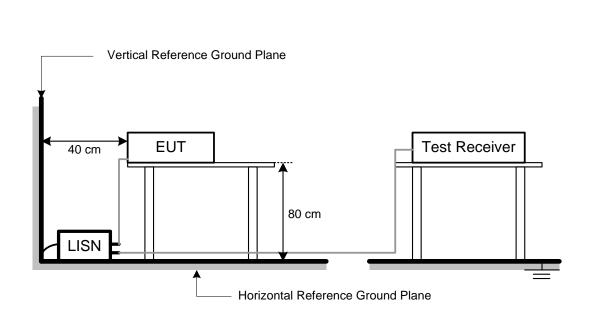
4.1.2 TEST PROCEDURE

- 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

4.1.4 TEST SETUP



4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

4.1.6 EUT TEST CONDITIONS

Temperature: 24°C, 19°C Relative Humidity: 60%, 61% Test Voltage: AC 120V/60Hz

4.1.7 TEST RESULTS

Please refer to the Appendix A.

Remark:

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform. In this case, a "*" marked in AVG Mode column of Interference Voltage Measured.
- (2) Measuring frequency range from 150KHz to 30MHz.
- (3) " N/A" denotes test is not applicable to this device.

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)		
	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



Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW	RBW 1MHz VBW 3MHz peak detector for Pk value
(Emission in restricted band)	RMS detector for AV value

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

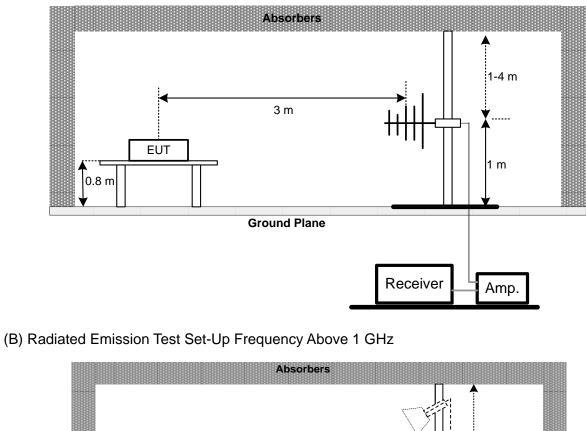
- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance 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.

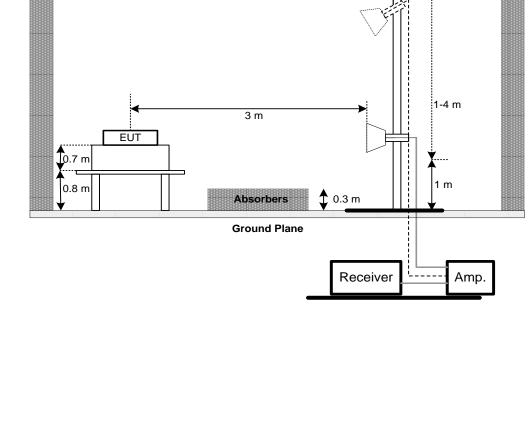
4.2.3 DEVIATION FROM TEST STANDARD

No deviation

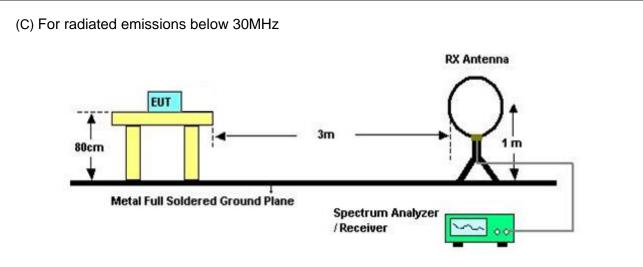
4.2.4 TEST SETUP

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









4.2.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.2.6 EUT TEST CONDITIONS

Temperature: 22°C, 21°C Relative Humidity: 56%, 70% Test Voltage: AC 120V/60Hz

4.2.7TEST 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.

4.2.8TEST RESULTS (30MHZ TO 1000 MHZ)

Please refer to the Appendix C.

4.2.9TEST 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 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247), Subpart C					
Section	Test Item	Limit	Frequency Range (MHz)	Result	
15.247(a)(2)	Bandwidth	>= 500KHz (6dB 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



5.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 unless otherwise a special operating condition is specified in the follows during the testing.

5.1.5 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

5.1.6 TEST RESULTS

Please refer to the Appendix E.

6. MAXIMUM 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



6.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 unless otherwise a special operating condition is specified in the follows during the testing.

6.1.5 EUT TEST CONDITIONS

Temperature: 24°C, 22.5°C Relative Humidity: 60%, 51% Test Voltage: AC 120V/60Hz

6.1.6 TEST RESULTS

Please refer to the Appendix F.

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 = 10 ms.
- c. Offset=antenna gain+cable loss

7.1.2 DEVIATION FROM STANDARD

No deviation.

7.1.3 TEST SETUP



7.1.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.5 unless otherwise a special operating condition is specified in the follows during the testing.

7.1.5 EUT OPERATION CONDITIONS

Temperature: 24°C Relative Humidity: 60% Test Voltage: AC 120V/60Hz

7.1.6 TEST RESULTS

Please refer to the Appendix G.

8. POWER SPECTRAL DENSITY TEST

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247), Subpart C						
Section	Test Item	Limit	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=10 KHz, 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 tested system was configured as the statements of 4.1.5 unless otherwise a special operating condition is specified in the follows during the testing.

8.1.5 EUT TEST CONDITIONS

Temperature: 24°C Relative Humidity: 60% 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	Kind of Equipment	Manufacturer	Type No.	Serial 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	MY55420127	Jan. 08, 2019			
8	Signal Analyzer	Agilent	N9010A	MY52220990	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	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					
Item	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.



10. EUT TEST PHOTO

Conducted Measurement Photos





Report No.: BTL-FCCP-2-1710T083D

Conducted Measurement Photos Desk Docking





Conducted Measurement Photos VESA Docking







Conducted Measurement Photos Adapter: FSP / FSP065-DBCM1

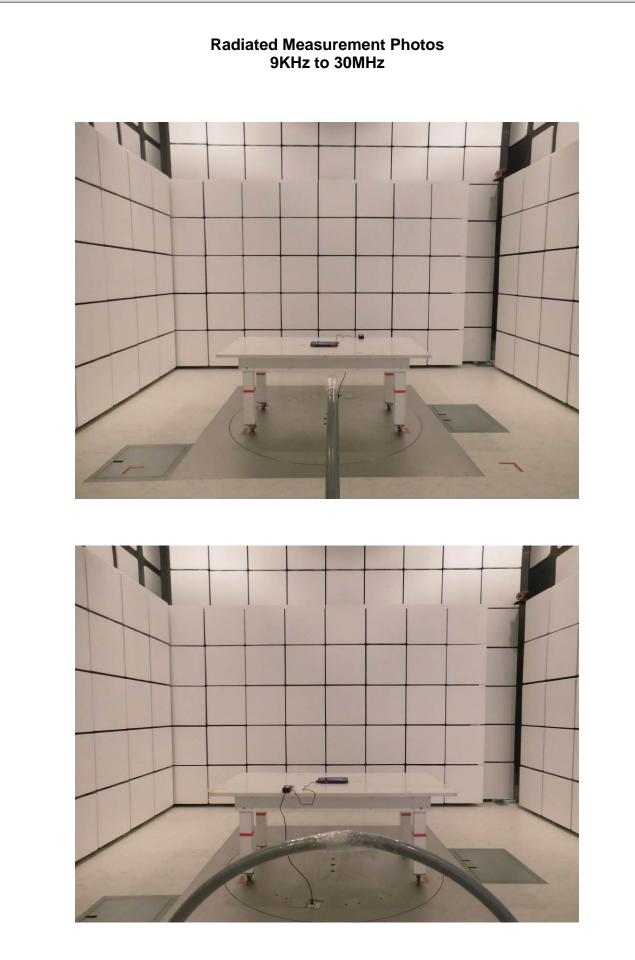




Conducted Measurement Photos Adapter: FSP / FSP065-DBCM1+ VESA Docking



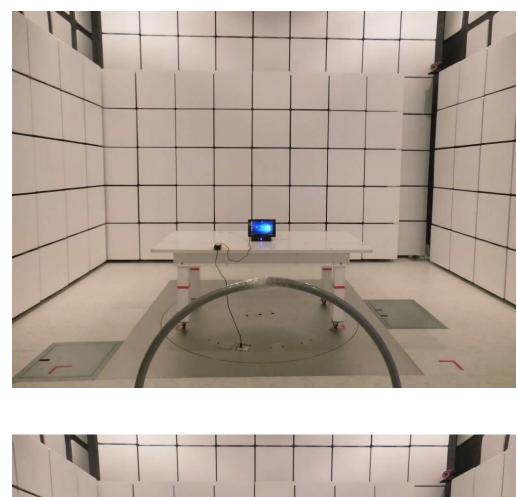


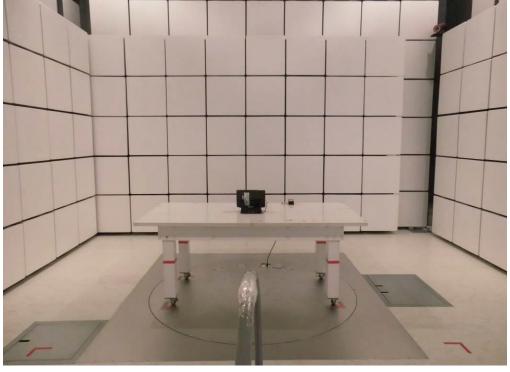


Report No.: BTL-FCCP-2-1710T083D

Radiated Measurement Photos 9KHz to 30MHz

Desk Docking

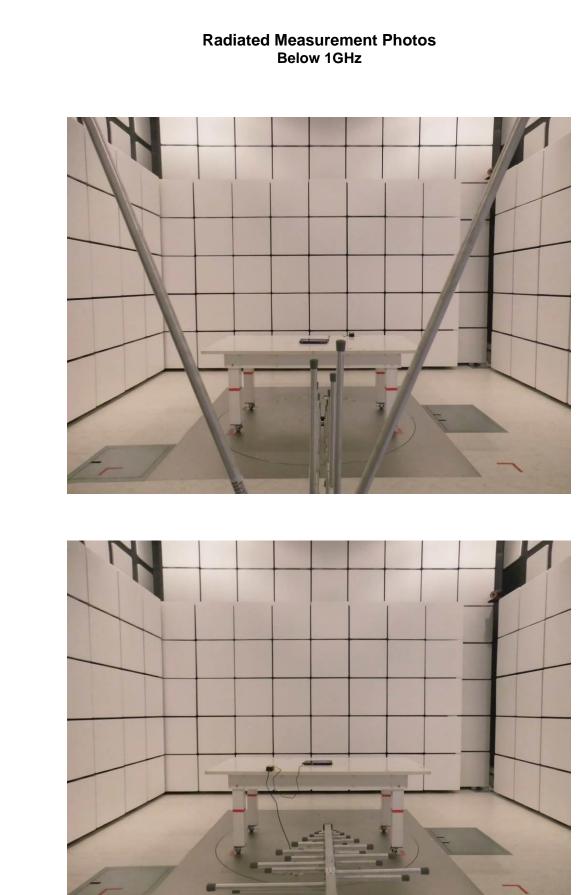




Report No.: BTL-FCCP-2-1710T083D

Radiated Measurement Photos 9KHz to 30MHz **VESA** Docking

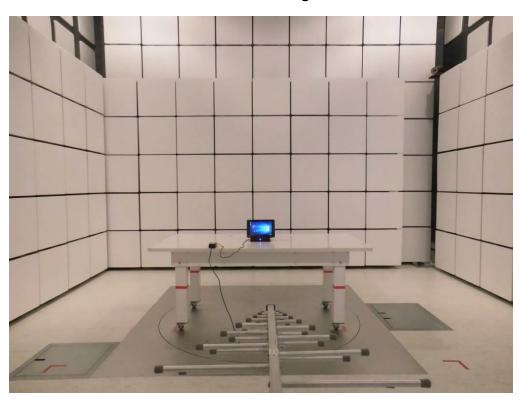
Report No.: BTL-FCCP-2-1710T083D



Report No.: BTL-FCCP-2-1710T083D

Radiated Measurement Photos Below 1GHz

Desk Docking





Report No.: BTL-FCCP-2-1710T083D

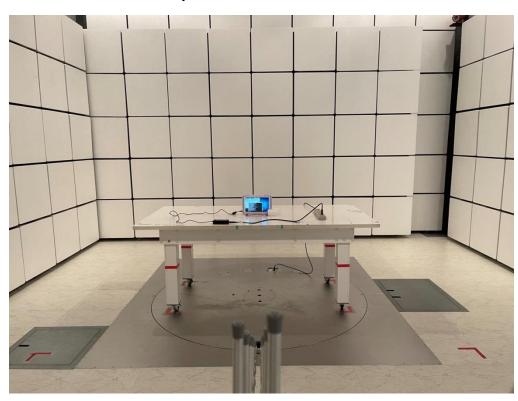
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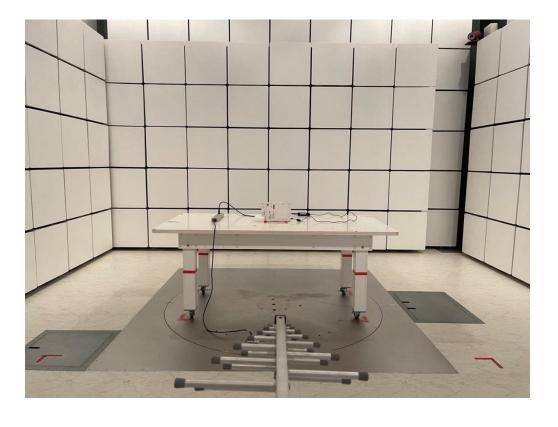


Report No.: BTL-FCCP-2-1710T083D

Radiated Measurement Photos Below 1GHz

Adapter: FSP / FSP065-DBCM1

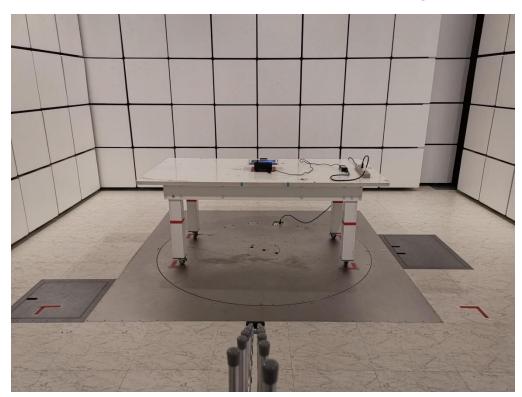


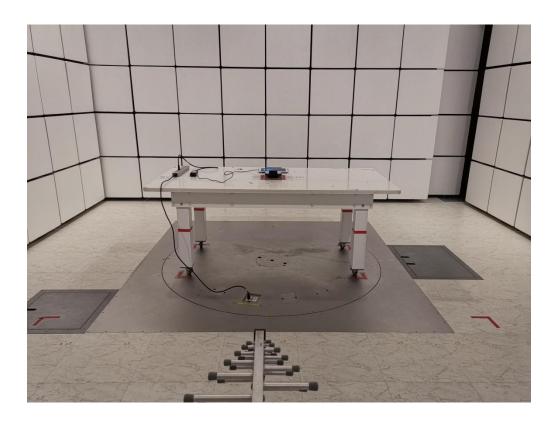


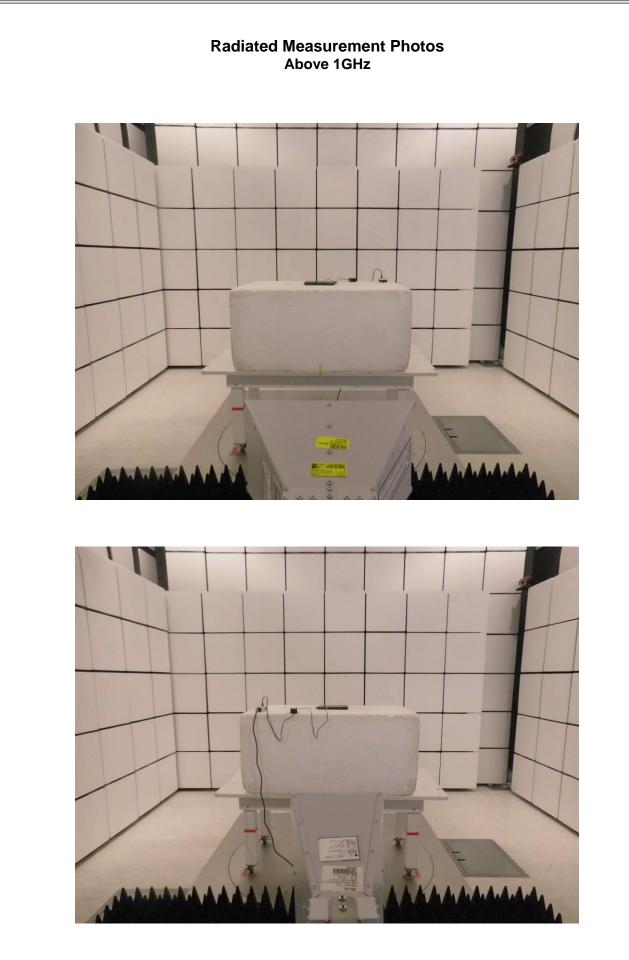
Report No.: BTL-FCCP-2-1710T083D

Radiated Measurement Photos Below 1GHz

Adapter: FSP / FSP065-DBCM1+ VESA Docking



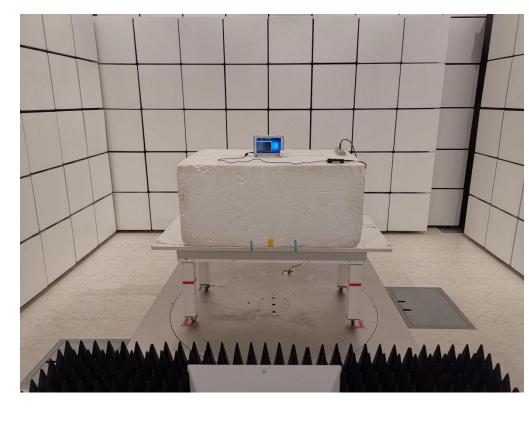




Report No.: BTL-FCCP-2-1710T083D

Radiated Measurement Photos Above 1GHz

Spot check test

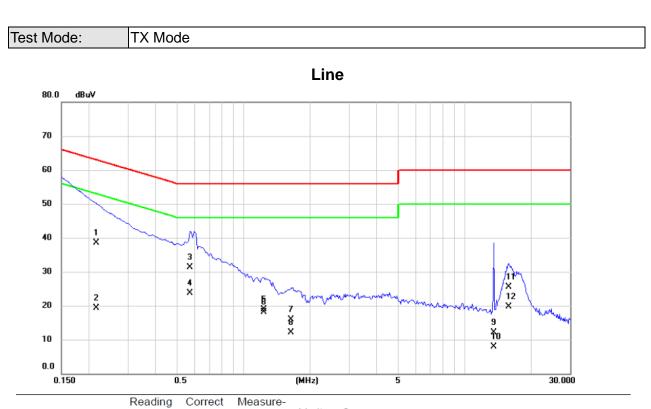






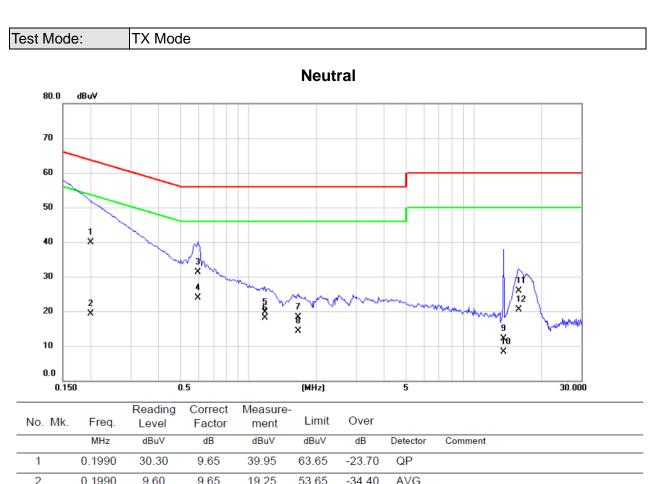
APPENDIX A - CONDUCTED EMISSION

BL



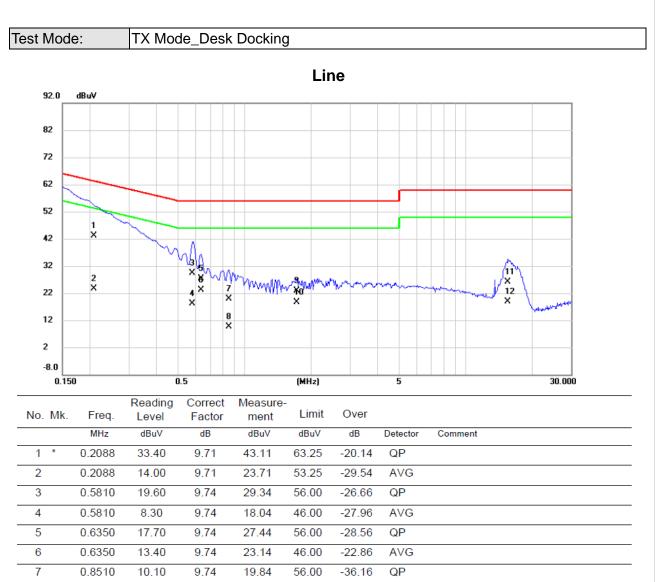
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.2151	28.70	9.71	38.41	63.01	-24.60	QP	
2		0.2151	9.60	9.71	19.31	53.01	-33.70	AVG	
3		0.5720	21.50	9.74	31.24	56.00	-24.76	QP	
4	*	0.5720	14.00	9.74	23.74	46.00	-22.26	AVG	
5		1.2380	9.10	9.74	18.84	56.00	-37.16	QP	
6		1.2380	8.40	9.74	18.14	46.00	-27.86	AVG	
7		1.6430	6.10	9.76	15.86	56.00	-40.14	QP	
8		1.6430	2.30	9.76	12.06	46.00	-33.94	AVG	
9		13.5500	2.10	9.98	12.08	60.00	-47.92	QP	
10		13.5500	-2.00	9.98	7.98	50.00	-42.02	AVG	
11		15.8500	15.50	9.98	25.48	60.00	-34.52	QP	
12		15.8500	9.80	9.98	19.78	50.00	-30.22	AVG	

BL



_	2	0.1990	9.60	9.65	19.25	53.65	-34.40	AVG
_	3	0.5990	21.70	9.68	31.38	56.00	-24.62	QP
_	4 *	0.5990	14.30	9.68	23.98	46.00	-22.02	AVG
	5	1.1840	10.00	9.69	19.69	56.00	-36.31	QP
	6	1.1840	8.50	9.69	18.19	46.00	-27.81	AVG
	7	1.6610	8.50	9.71	18.21	56.00	-37.79	QP
	8	1.6610	4.60	9.71	14.31	46.00	-31.69	AVG
	9	13.5500	2.10	9.98	12.08	60.00	-47.92	QP
	10	13.5500	-1.70	9.98	8.28	50.00	-41.72	AVG
	11	15.8500	15.90	9.99	25.89	60.00	-34.11	QP
_	12	15.8500	10.50	9.99	20.49	50.00	-29.51	AVG

JIL



0.8510

1.7240

1.7240

15.5500

15.5500

8

9

10

11 12 -0.10

13.20

8.80

16.20

9.00

9.74

9.76

9.76

9.98

9.98

9.64

22.96

18.56

26.18

18.98

46.00

56.00

46.00

60.00

50.00

-36.36

-33.04

-27.44

-33.82

-31.02

AVG

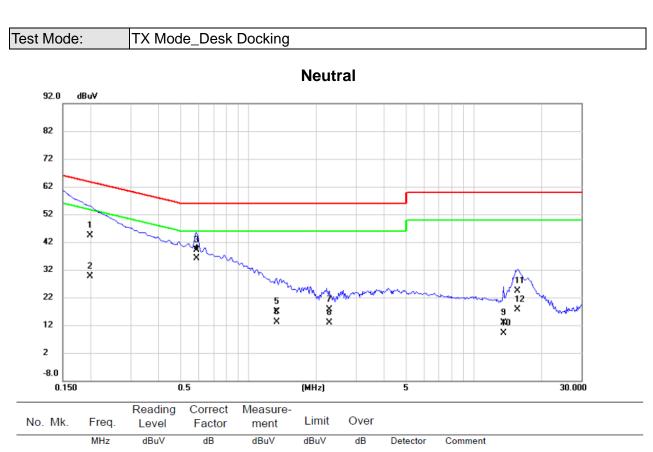
QP

AVG

QP

AVG

BL



No.	Mk.	Freq.	Level	Factor	ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1976	34.70	9.65	44.35	63.71	-19.36	QP	
2		0.1976	20.10	9.65	29.75	53.71	-23.96	AVG	
3		0.5900	29.50	9.68	39.18	56.00	-16.82	QP	
4	*	0.5900	26.50	9.68	36.18	46.00	-9.82	AVG	
5		1.3370	7.10	9.69	16.79	56.00	-39.21	QP	
6		1.3370	3.50	9.69	13.19	46.00	-32.81	AVG	
7		2.2820	8.00	9.72	17.72	56.00	-38.28	QP	
8		2.2820	3.10	9.72	12.82	46.00	-33.18	AVG	
9		13.5500	3.00	9.98	12.98	60.00	-47.02	QP	
10		13.5500	-0.90	9.98	9.08	50.00	-40.92	AVG	
11		15.6500	14.50	9.99	24.49	60.00	-35.51	QP	
12		15.6500	7.70	9.99	17.69	50.00	-32.31	AVG	

BIL

3

4

5

6 7

8

9

10

11 12 0.4713

0.6080

0.6080

0.7700

0.7700

1.2830

1.2830

15.9500

15.9500

-1.50

26.40

18.90

15.80

-4.30

12.20

7.40

13.60

7.10

9.74

9.74

9.74

9.74

9.74

9.75

9.75

9.98

9.98

8.24

36.14

28.64

25.54

5.44

21.95

17.15

23.58

17.08

46.49

56.00

46.00

56.00

46.00

56.00

46.00

60.00

50.00

-38.25

-19.86

-17.36

-30.46

-40.56

-34.05

-28.85

-36.42

-32.92

AVG

QP

QP

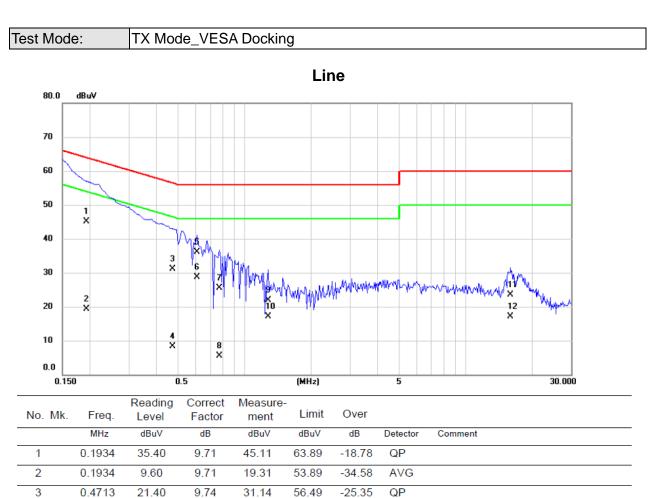
AVG

QP AVG

QP

AVG

AVG



2

3

4

5

6

7

0.1900

0.5270

0.5270

0.6800

0.6800

0.9050

9.10

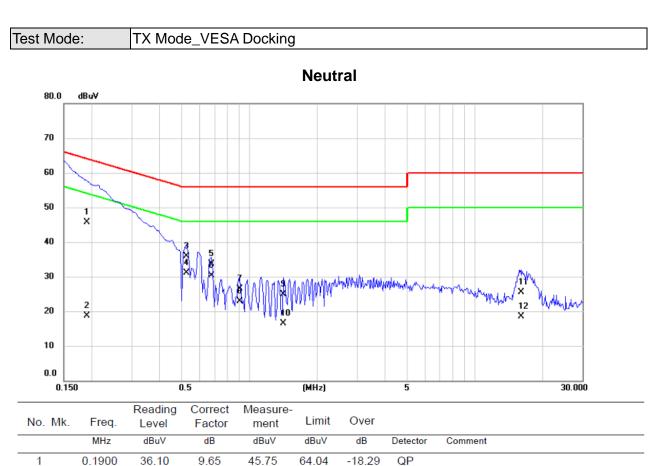
26.30

21.50

24.00

20.60

16.80



8	0.9050	13.30	9.69	22.99	46.00	-23.01	AVG		
9	1.4180	15.20	9.69	24.89	56.00	-31.11	QP		
10	1.4180	6.90	9.69	16.59	46.00	-29.41	AVG	 	
11	16.0000	15.60	9.99	25.59	60.00	-34.41	QP		
12	16.0000	8.50	9.99	18.49	50.00	-31.51	AVG		

18.75

35.98

31.18

33.68

30.28

26.49

54.04

56.00

46.00

56.00

46.00

56.00

-35.29

-20.02

-14.82

-22.32

-15.72

-29.51

AVG QP

AVG

QP

AVG QP

9.65

9.68

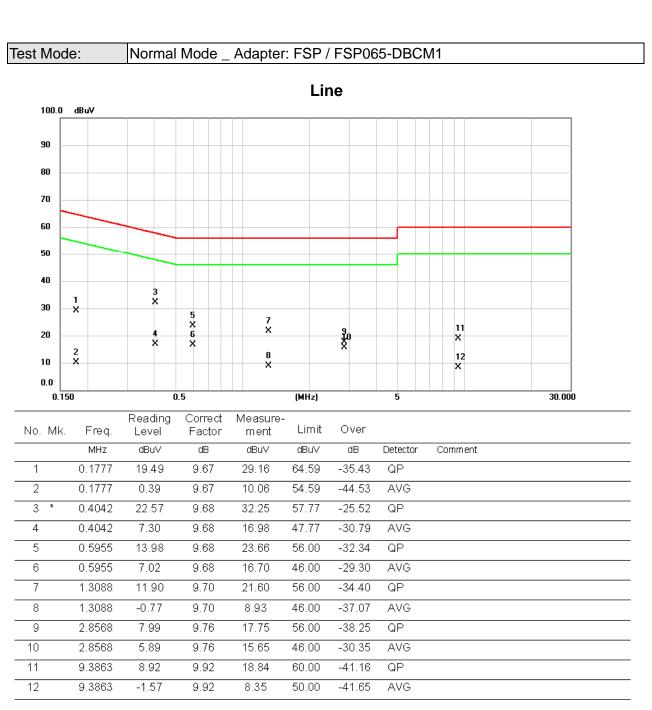
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9.68

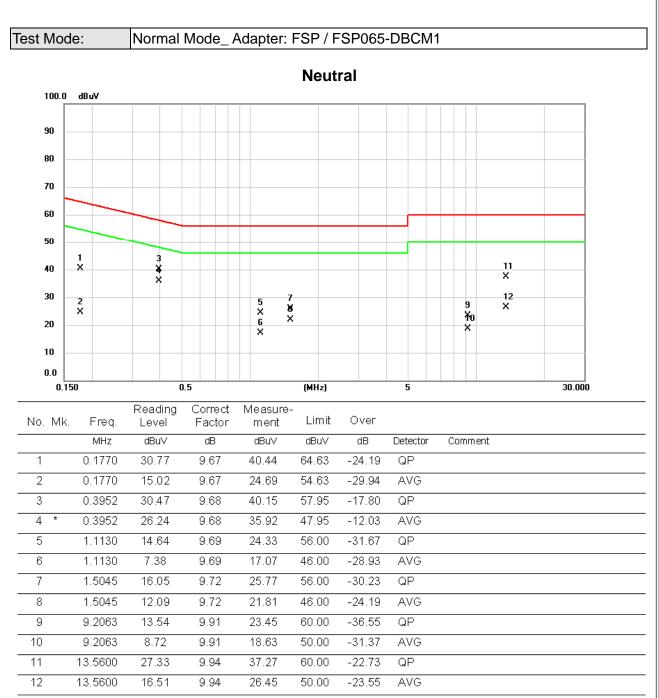
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9.69

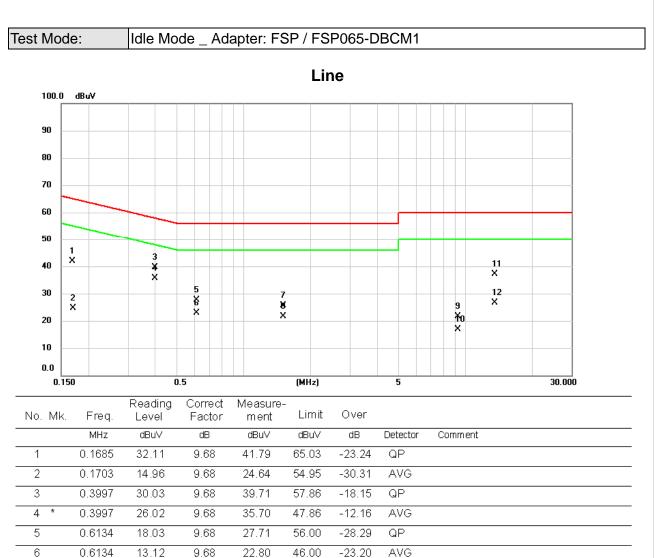
JĪL



BĨL



JI



1.5023

1.5023

9.2220

9.2220

13.5600

13.5600

7

8

9

10

11

12

15.95

11.99

11.83

7.07

27.10

16.60

9.72

9.72

9.91

9.91

9.94

9.94

25.67

21.71

21.74

16.98

37.04

26.54

56.00

46.00

60.00

50.00

60.00

50.00

QΡ

AVG

QP

AVG

QP

AVG

-30.33

-24.29

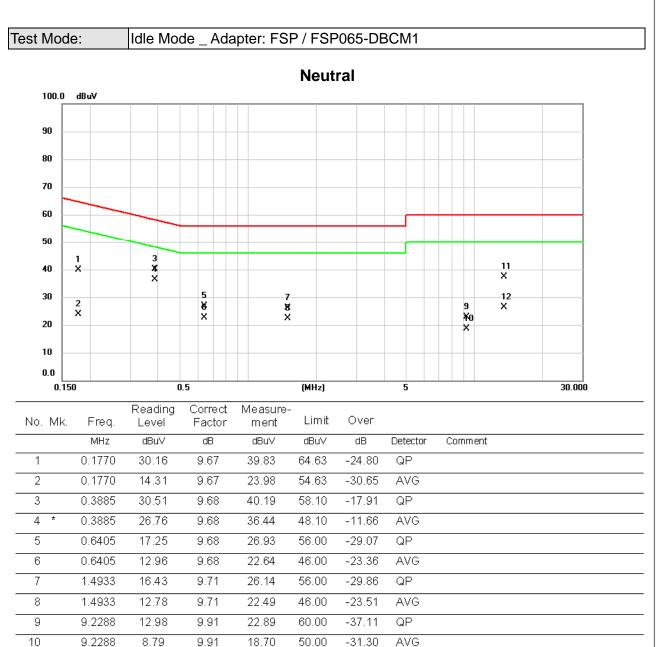
-38.26

-33.02

-22.96

-23.46

BĨL



13.5600

13.5600

11

12

27.50

16.45

37.44

26.39

9.94

9.94

60.00

50.00

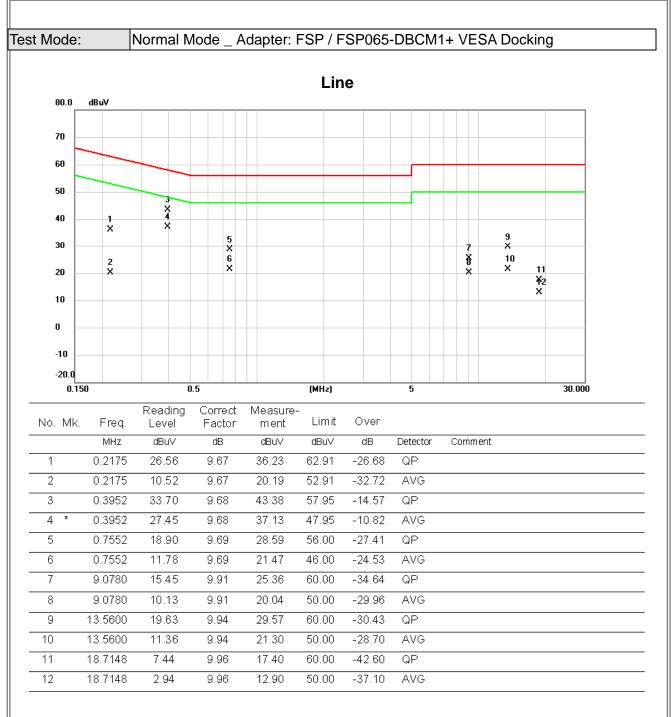
-22.56

-23.61

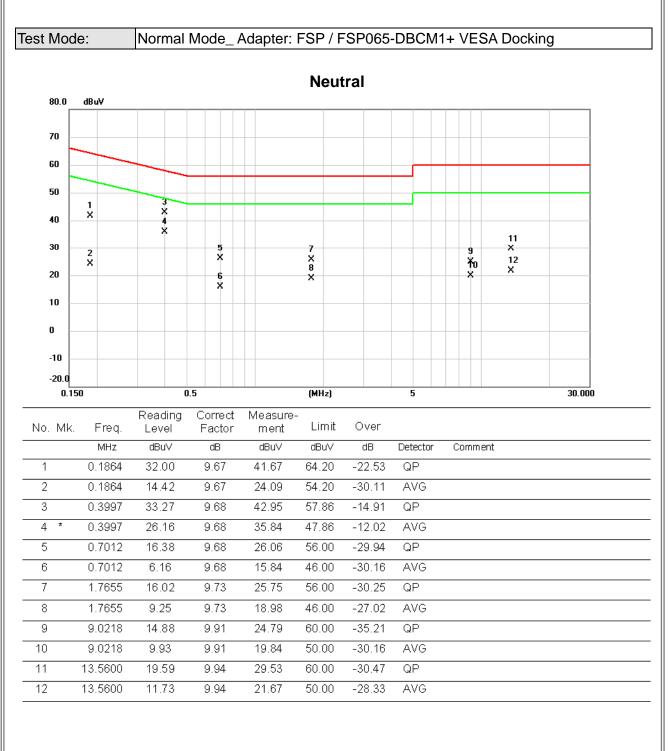
QΡ

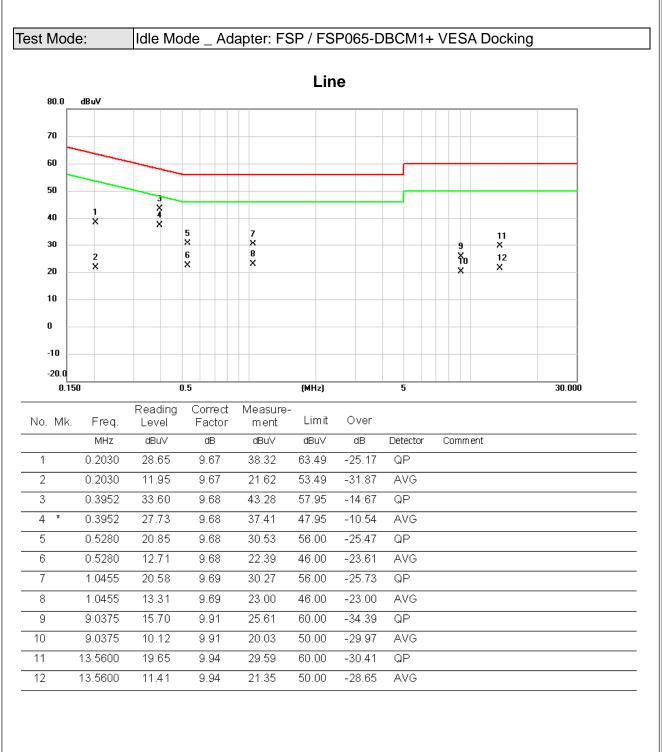
AVG

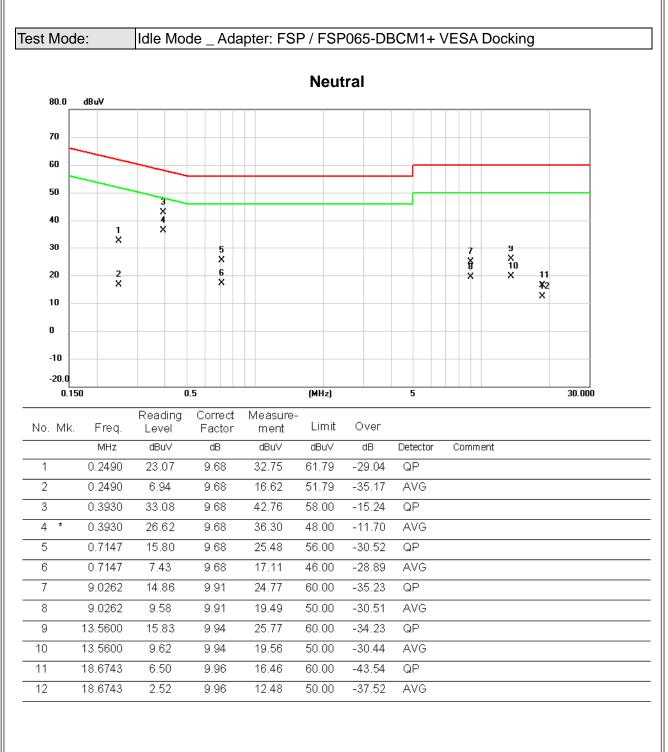
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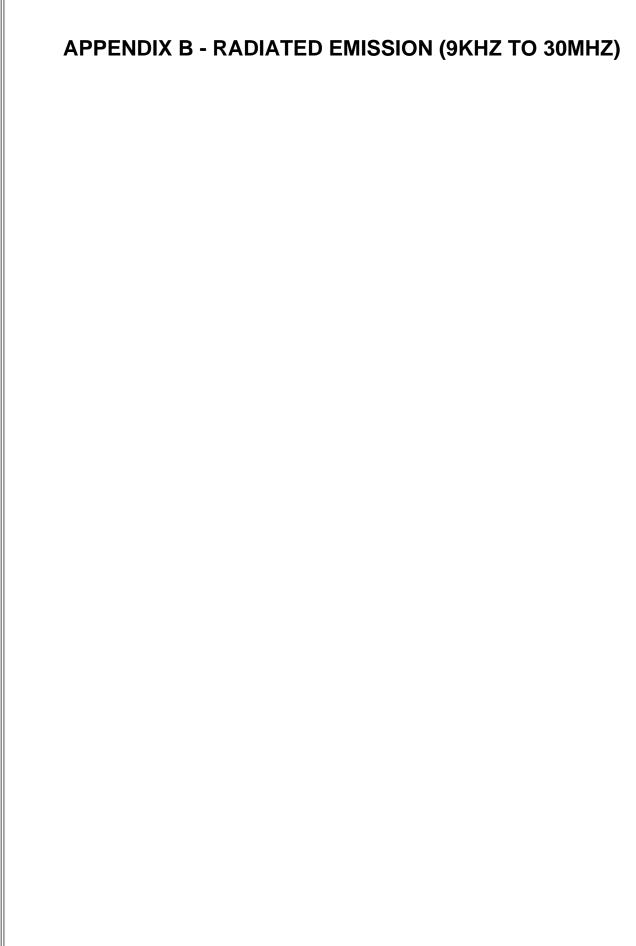


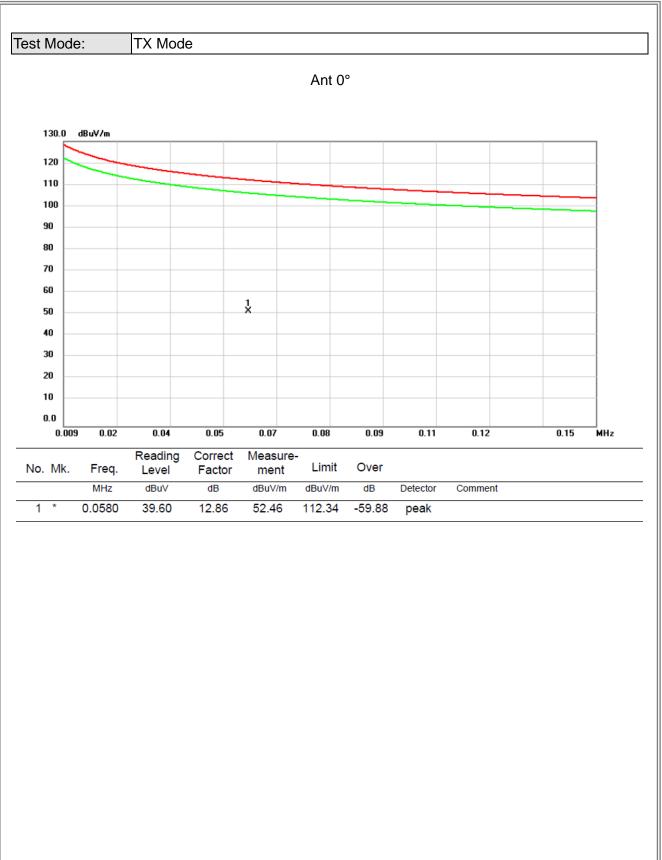
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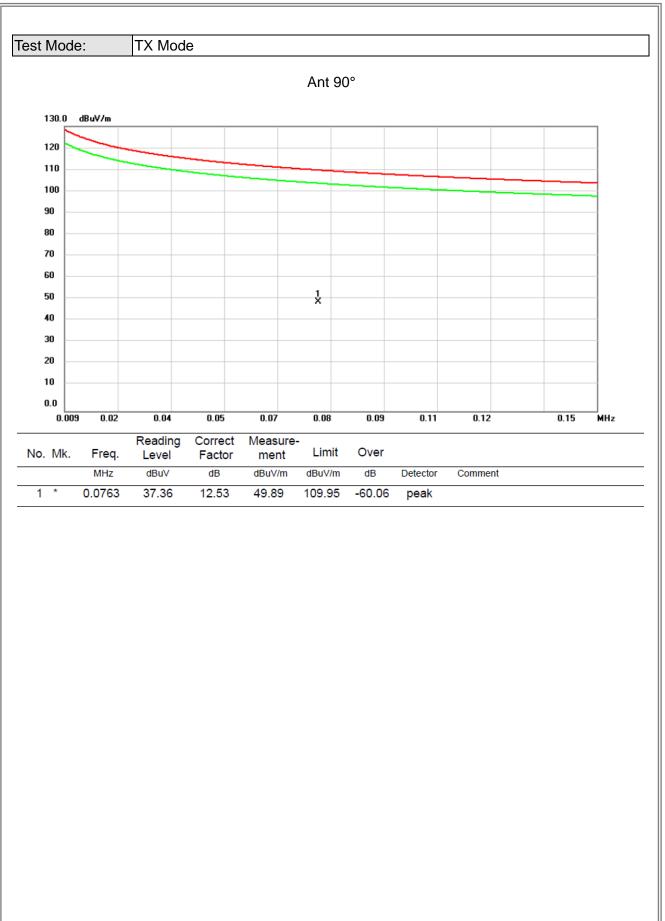


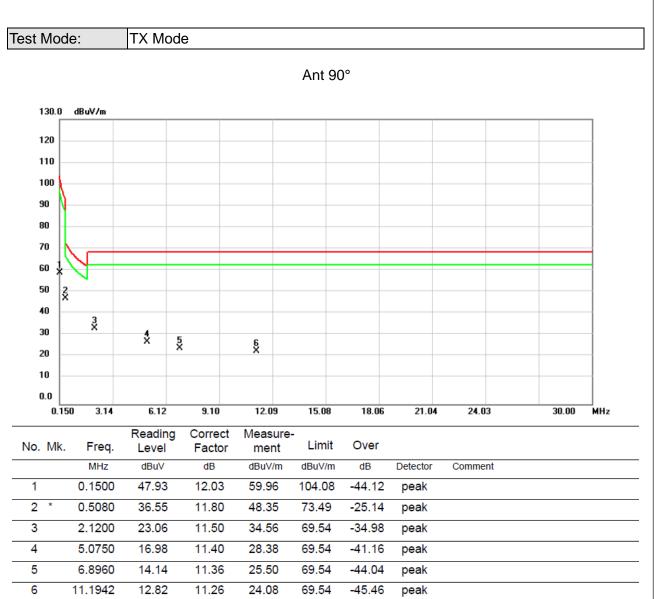




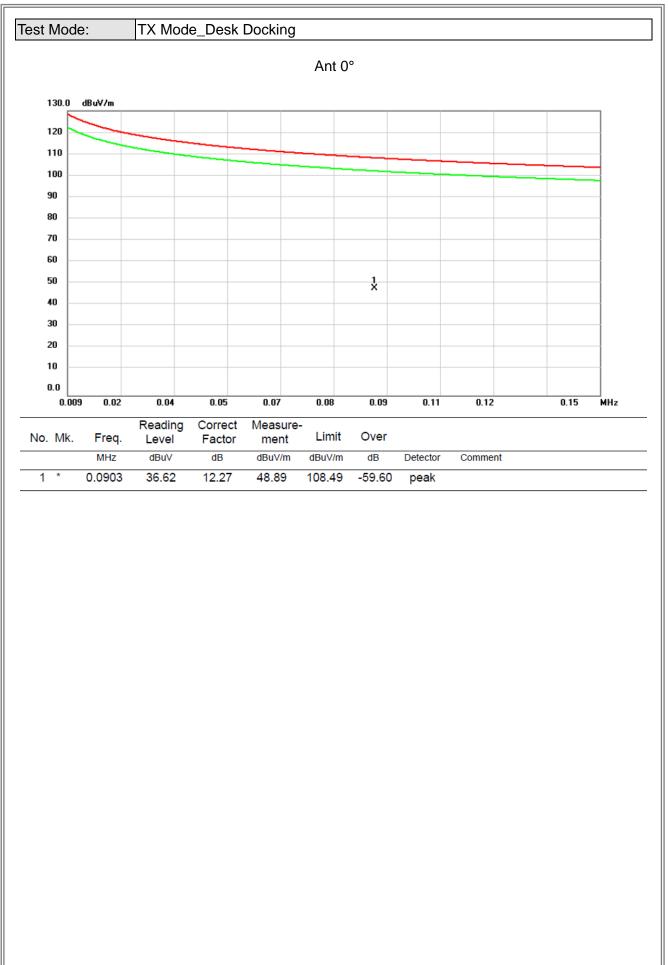


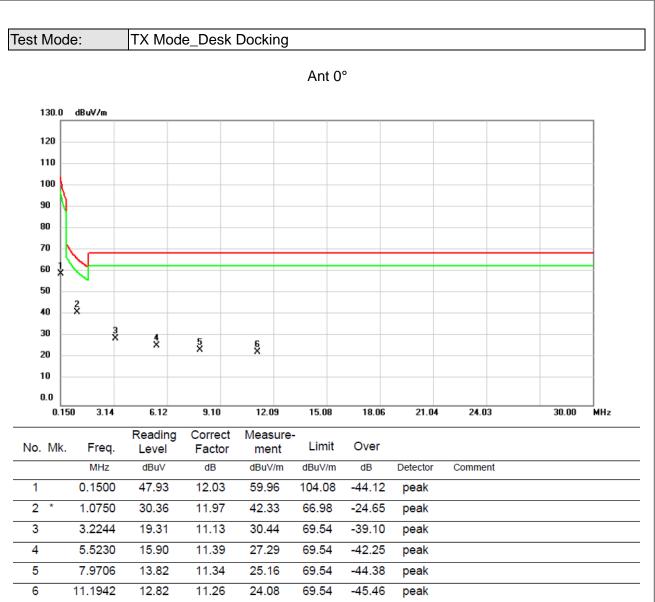


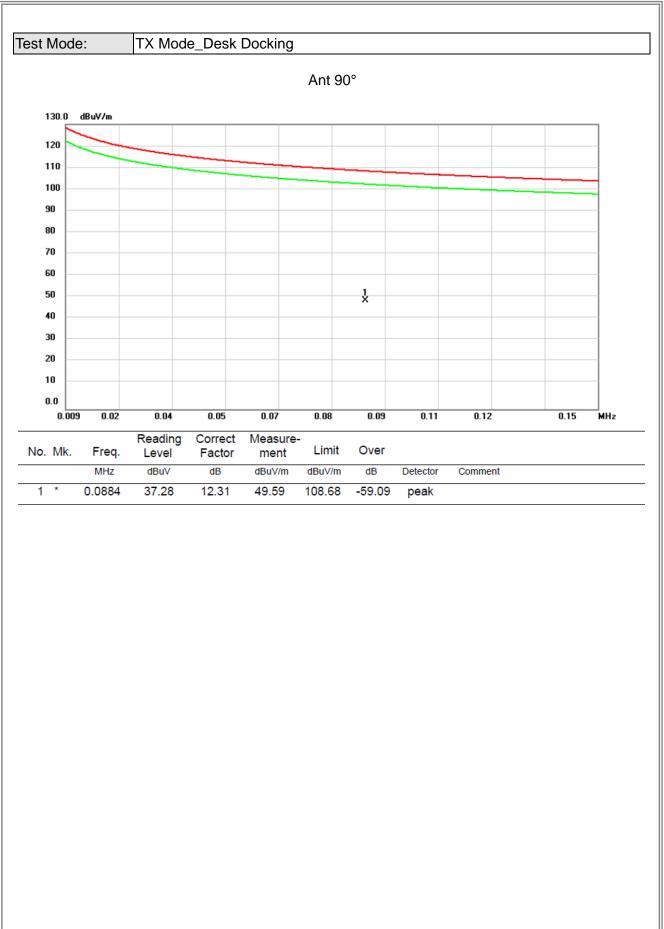


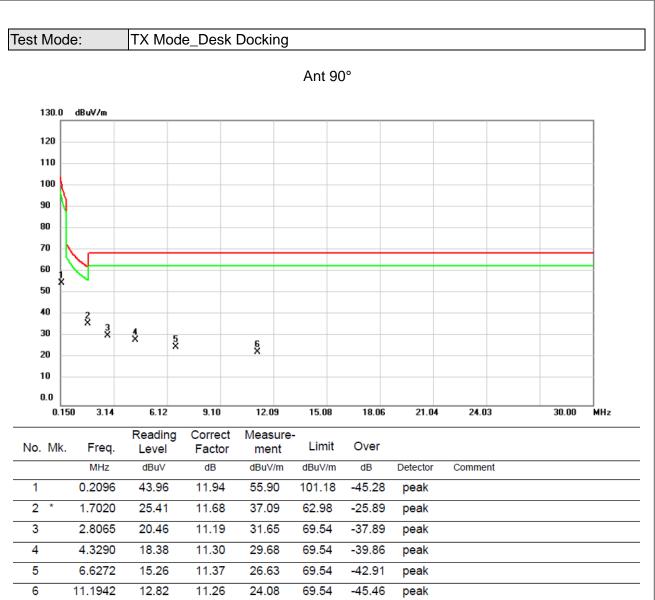




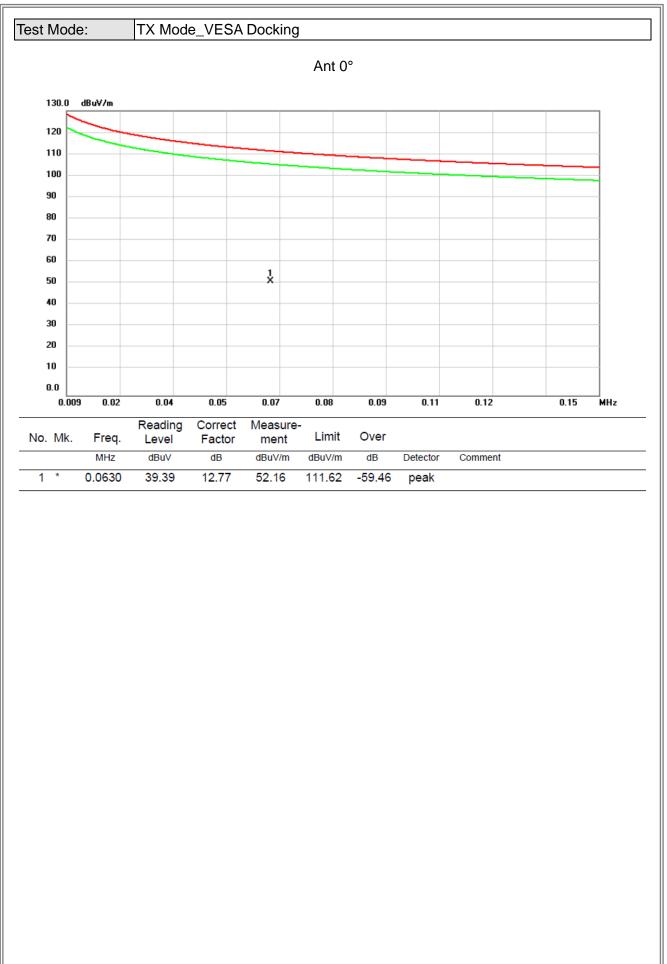




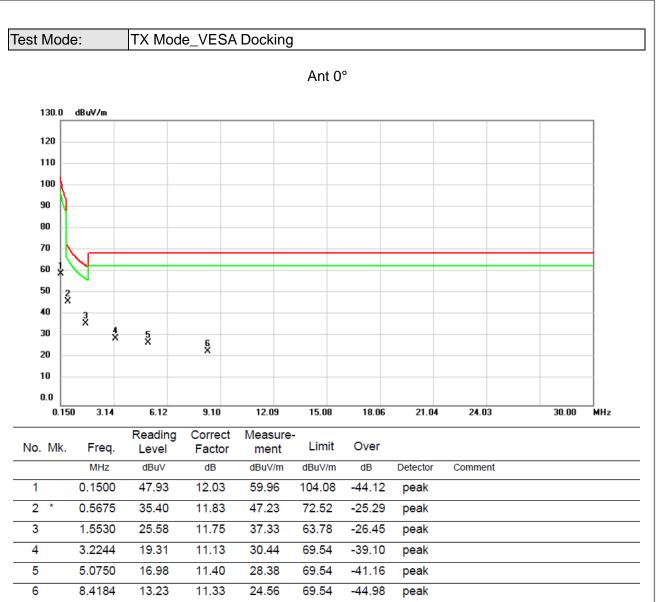


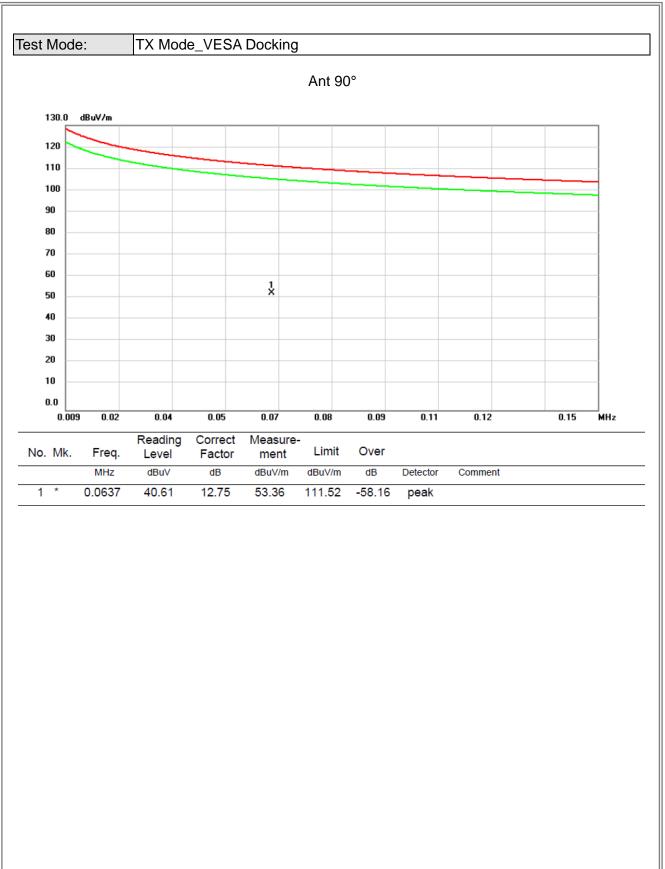






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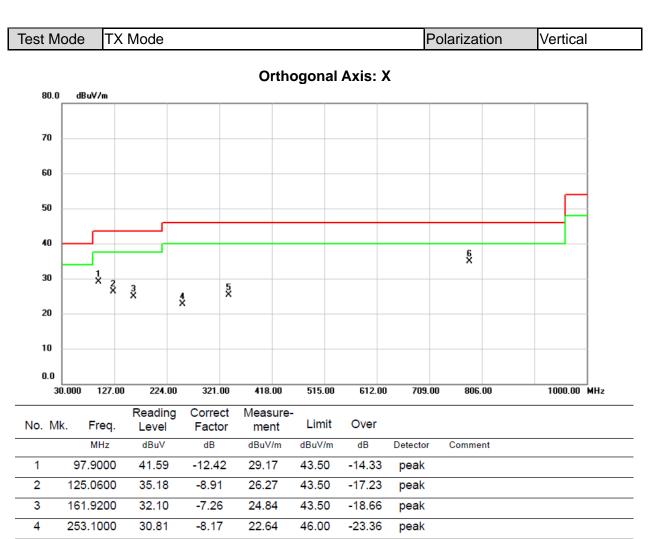




BL







25.25

34.84

46.00

46.00

-20.75

-11.16

peak

peak

-5.64

3.29

338.4600

782.7200

30.89

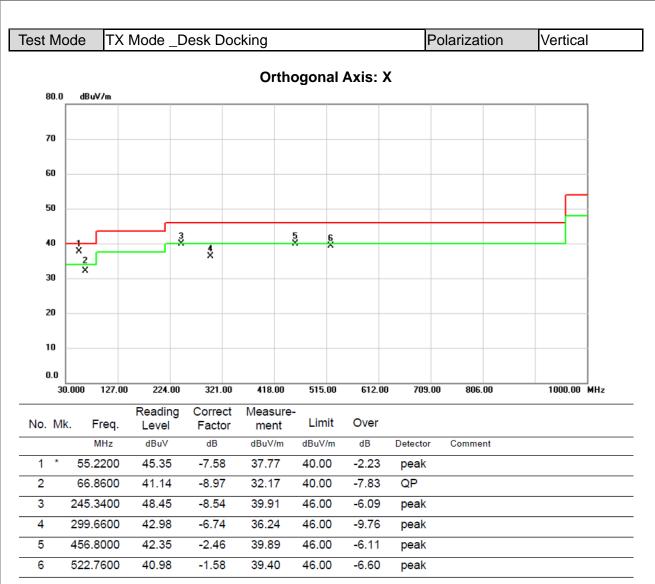
31.55

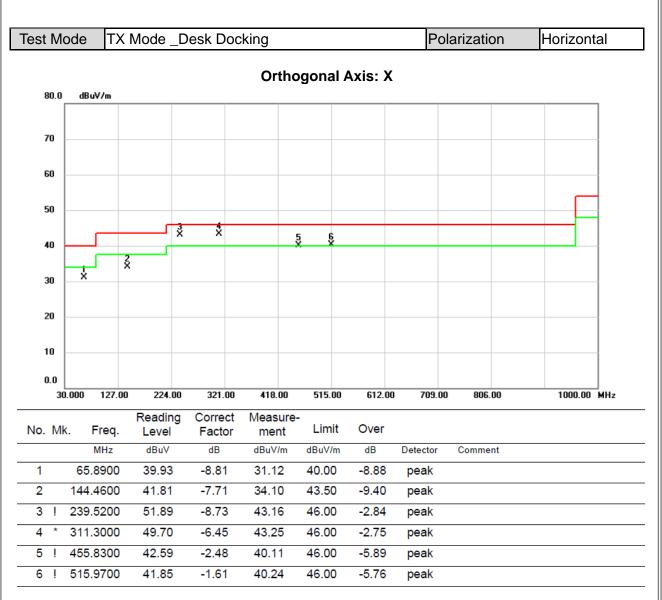
5

6 *

est M	ode	TX	Mode								Pola	arization	Horizont	al
						Ori	tho	gonal	Axis: X	<u> </u>				
80.0	dBuV	/m												1
70														
60														
50														
40	<u> </u>													
30	2 1X X	3 X	4×	5 X	6 X									
20														
10														
0.0 3	0.000	127.00	224.0)0 3	21.00	418.0)0	515.00	612.0	0 70	9.00	806.00	1000.00	MHz
lo. M	k. F	req.	Readin Level		rect ctor	Measu men		Limit	Over					
		Hz	dBuV		В	dBuV/		dBuV/m	dB	Detect	or	Comment		
1	53.2		33.99		.57	26.42		40.00	-13.58					
2 *	67.8		37.83		.27	28.50		40.00	-11.44	peal				
3	127.0		38.42		.72	29.70		43.50	-13.80	peal				
4	159.9		35.96		.16	28.80		43.50	-14.70	peak				
5 6	250.1 342.3		39.54 33.59		.23 .54	31.3 ⁴ 28.05		46.00	-14.69	peal peal				

STL





STL

4

5 *

6

168.7100

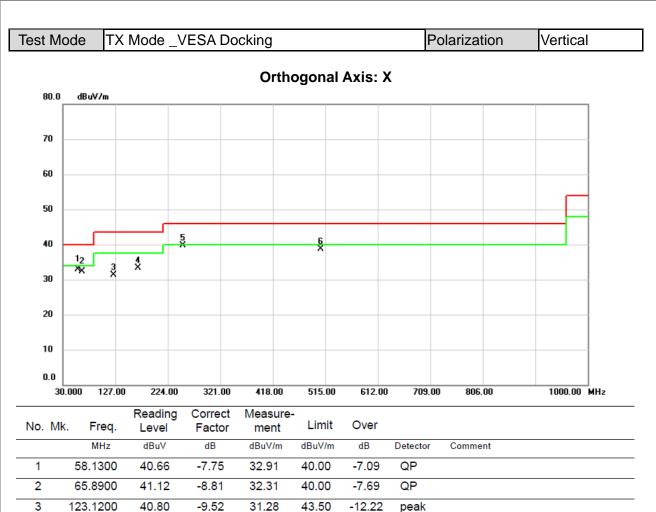
251.1600

506.2700

40.97

48.03

40.40



33.23

39.63

38.74

43.50

46.00

46.00

-10.27

-6.37

-7.26

peak

peak

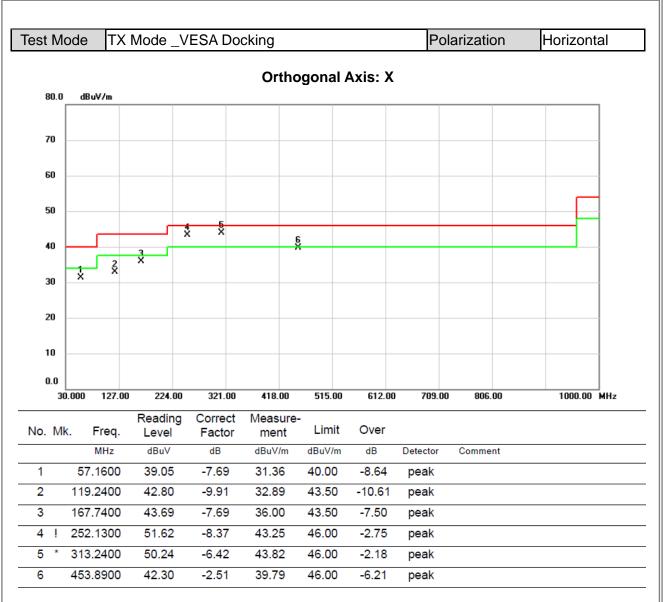
peak

-7.74

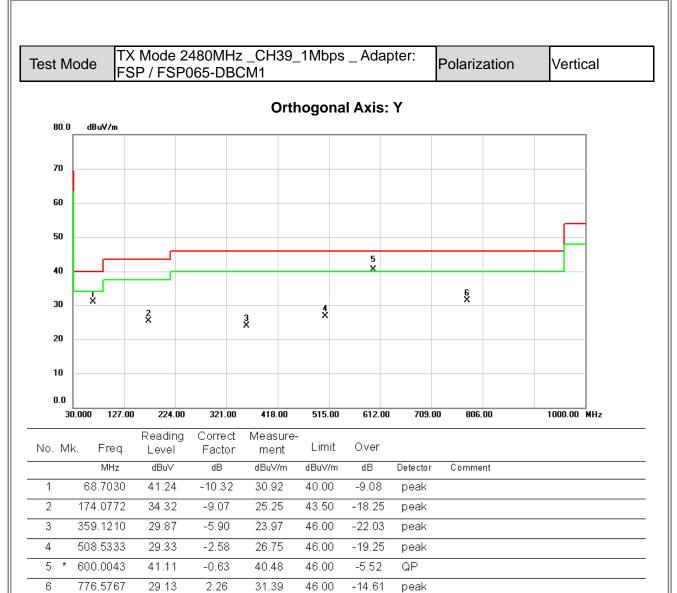
-8.40

-1.66

BIL



STL





est M		Mode 24 P / FSP0		_CH39_ ⁻ M1	1Mbps	_Adap	ter:	Polarization	Horizontal
80.0	dBuV/m			Orth	ogonal	Axis: `	Y		
70									
60									
50									
40						4 ×		5 6 X X	
30	J	1 X	2 X	3 X		~			
20									
10									
0.0 3	0.000 127.00	224.00	321.00	418.00	515.00	612.00	709.0	00 806.00	1000.00 MHz
No. M	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over			
	MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detector	Comment	
1	172.5253	37.02	-8.89	28.13	43.50	-15.37	peak		
2	272.5000 393.2327	37.77 30.32	-8.23 -5.01	29.54 25.31	46.00 46.00	-16.46 -20.69	peak		
3	599.9720	35.85	-0.63	35.22	46.00	-20.09	peak peak		
5	799.9860	33.17	2.56	35.73	46.00	-10.78	peak		
6 *	864.0060	32.40	3.62	36.02	46.00	-9.98	peak		



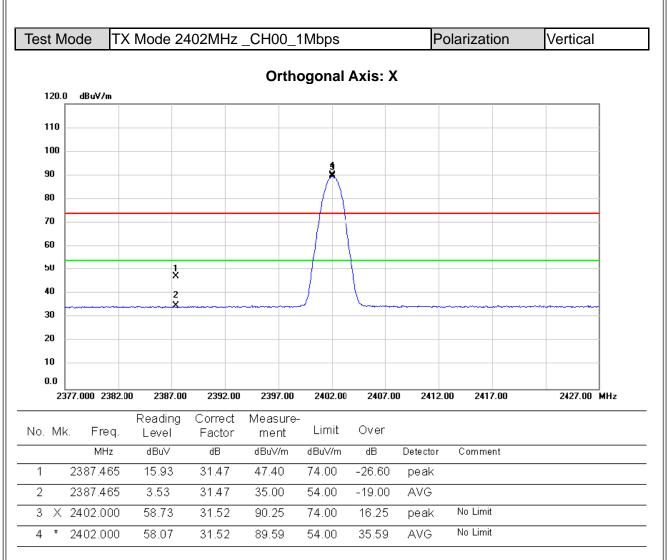
ēst M						2 _CH3 2M1+ \			_ Adap king	oter:	Polari	zation	Ver	tical
80.0	dBuV/m					0	rthog	ona	l Axis:	х				
70														
60														_
50														
40		ş							×				6 X	_
30	×		3 X			* ×								-
20														
10 0.0														
30	0.000 12	7.00	224.0		321.00	418.0		5.00	612.00) 709.0)0 80	6.00	1000.0	0 MHz
No. MI		1 .	Reading Level	r	orrect actor	Measu meni	t Li	mit	Over					
1 *	MHz 72.971		dBuV		dB	dBuV/r		iV/m	dB	Detector	Comm	nent		
1 * 2	147.919		43.09 41.98		1.22 3.53	31.87 33.45			-8.13 -10.05	peak peak				
3	229.335		38.28		0.39	27.89			-18.11	peak				
4	393.459		33.05		5.01	28.04			-17.96	peak				
5	599.972		37.61		0.63	36.98			-9.02	peak				
6	953.019	7	29.12	Ę	5.12	34.24	46	00	-11.76	peak				



est M	ode FS	(Mode 2 SP / FSP(480MHz)65-DBC	: _CH39_ CM1+ VE	1Mbps SA Doo	_ Adap cking	oter:	Polarization	Hori	zontal
80.0	dBuV/m			Orth	ogona	I Axis:	X			
]
70										
60										
										-
50										
40		2								
30	 1	ž		4		5 X			6 X	
				4 ×						
20										
10										
0.0										
30).000 127.0		321.00	418.00	515.00	612.00	709.00	806.00	1000.00	MHz
lo. Mi	k. Freq.	Reading Level	Correct Factor	Measure- ment	Limit	Over				
	MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detector	Comment		
1	92.1122	43.69	-14.48	29.21	43.50	-14.29	peak			
2 *	147.1436	45.78	-8.54	37.24	43.50	-6.26	QP			
3	231.5983	42.77	-10.25	32.52	46.00	-13.48	peak			
4	399.3436 600.0043	32.32 30.42	-4.85	27.47	46.00	-18.53	peak			
5 6	900.2193	29.78	4.15	33.93	46.00	-10.21	peak peak			



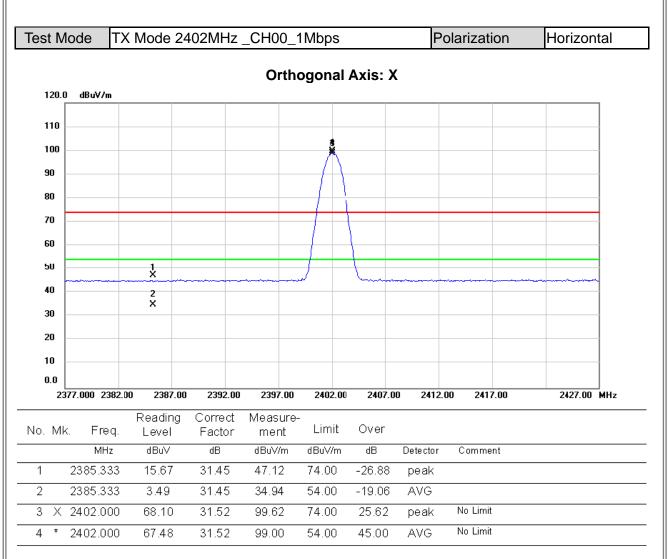






										-
				Ortho	ogonal	Axis: X	K			
120.	0 dBu∀/m									
110										
100										
90										
80										
70										
60										
50		1 X								
40		2 X								
30		×								
20										
10										
0.0 1	000.000 3550.	DO 6100.0	0 8650.00	11200.00	13750.0	D 16300	.00 188	50.00 214	400.00	26500.00 MHz
		Reading		Measure-						
o. M	k. Freq. MHz	Level dBuV	Factor dB	ment dBuV/m	Limit dBuV/m	Over dB	Detecto	r Comm	ont	
1	4804.000	55.79	-10.66	45.13	74.00	-28.87	peak		em	
2 *	4804.000	43.15	-10.66	32.49	54.00	-21.51	AVG			

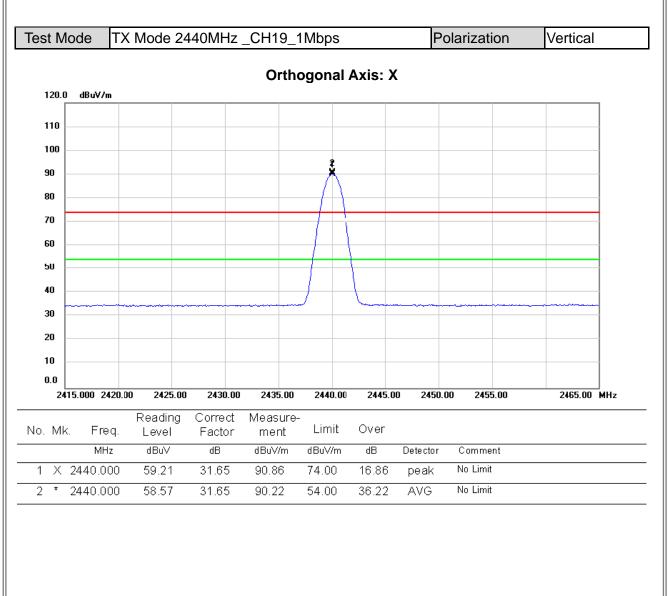






est Mo				:_CH00_1	141043				ization	Horizon	
				Ortho	ogonal	Axis:	x				
120.0	dBu¥/m										1
110											
100											
90 -											
80 -											
70											
60 -											
50		1									
40		1 X 2									
30 -		x									
20											
10											
0.0	10.000 3550.D	0 6100.0)0 8650.0	0 11200.00	13750.0	0 1630	00 10	850.00	21400.00	26500.00	
100	0.000 3330.0	Reading						050.00	21400.00	26300.00	MILZ
o. Mk.	Freq.	Level	Factor	ment	Limit	Over					
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detect		omment		
	4804.000	54.76	-10.66	44.10	74.00	-29.90	-				
2 * •	4804.000	43.23	-10.66	32.57	54.00	-21.43	AVG				

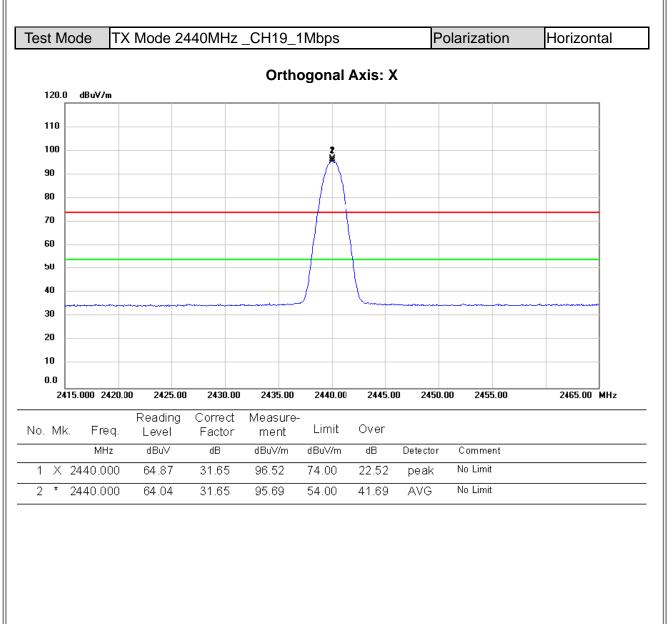






Reading Correct Measure- b. Mk. Freq. Level Factor ment Limit Over MHz dBuV dB dBuV/m dBuV/m dB Detector Comment 1 4880.000 55.28 -10.51 44.77 74.00 -29.23 peak	100 80 V/m 100 <t< th=""><th></th><th>Vertic</th><th>larization</th><th>P</th><th></th><th>Mbps</th><th>_CH19_1</th><th>40MHz</th><th>Mode 24</th><th>ode T></th><th>st M</th></t<>		Vertic	larization	P		Mbps	_CH19_1	40MHz	Mode 24	ode T>	st M
100 dBuV/m 100	100					Axis: X	ogona	Ortho				
100	100 90 <t< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>dBu∀/m</th><th>120./</th></t<>										dBu∀/m	120./
90 90 <td< th=""><th>90 <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>110</th></td<></th></td<>	90 90 <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>110</th></td<>											110
90 90 <td< td=""><td>90 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<></td></td<>	90 90 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>											
80	80											
70 -	70 -											
60	60											
50 1	50 1											
40 ×	40 × Image: Contract or contr											
30 2 X Image: Constant of the second o	30 2 X									1 X		
20 20 <td< td=""><td>20 </td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2 X</td><td></td><td></td></td<>	20									2 X		
10	10											
0.0 0	0.0 0.0 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 Mk. Freq. Level Factor Measure- ment Limit Over 0 MHz dBuV dB dBuV/m dB Detector Comment 4880.000 55.28 -10.51 44.77 74.00 -29.23 peak											
1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 M Reading Correct Measure- . <td< td=""><td>1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.0 Reading Correct Measure- ment Limit Over 0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.0 Reading Correct Measure- ment Limit Over 0											
Mk.Freq.LevelFactormentLimitOverMHzdBuVdBdBuV/mdBDetectorComment4880.00055.28-10.5144.7774.00-29.23peak	Mk.Freq.LevelFactormentLimitOverMHzdBuVdBdBuV/mdBDetectorComment4880.00055.28-10.5144.7774.00-29.23peak	26500.00 MHz) 26500	00 21400.00	0 18850) 16300.	13750	11200.00	8650.00	D 6100.00	00.000 3550.0	
MHz dBuV dB dBuV/m dBuV/m dB Detector Comment 4880.000 55.28 -10.51 44.77 74.00 -29.23 peak	MHz dBuV dB dBuV/m dBuV/m dB Detector Comment 4880.000 55.28 -10.51 44.77 74.00 -29.23 peak											
4880.000 55.28 -10.51 44.77 74.00 -29.23 peak	4880.000 55.28 -10.51 44.77 74.00 -29.23 peak				<u> </u>							M
				Comment								
					AVG				10.01	10.12	1000.000	
					AVG	-21.59						
					AVG	-21.39						
					AVG							
					AVG	-21.39						
					AVG	-21.39						
					AVG	-21.39						
					AVG	-21.39						
					AVG	-21.39						
					AVG	-21.39						
					AVG	-21.39						

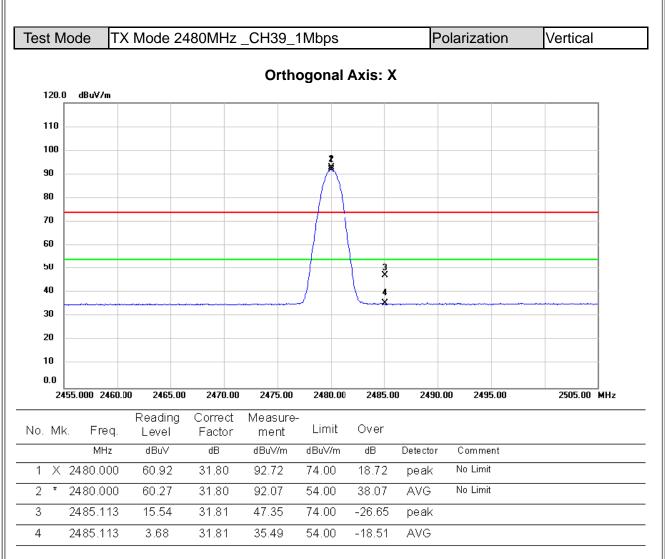






				Orthe			v				
120.	0 dBu∀/m			Ortho	ogona	Axis:	X				
120.											
110											
100											
90											
80											
70											
60											
50		1 X									
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30		×									
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10											
0.0 1	000.000 3550.	00 6100.00	8650.00	11200.00	13750.	00 1630	0.00 188	50.00 214	00.00	26500.00 M	IHz
		Reading	Correct	Measure-							
o. M		Level	Factor	ment	Limit	Over					
4	MHz	dBuV	dB	dBuV/m	dBuV/m		Detector	r Comme	nt		
1	4880.000 4880.000	55.28 42.82	-10.51 -10.51	44.77 32.31	74.00 54.00	-29.23	-				
2	4000.000	42.02	-10.51	52.51	04.00	-21.02					

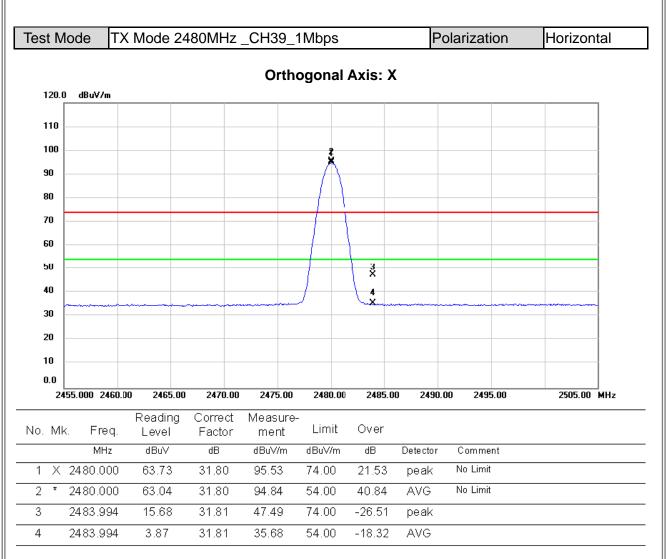






				Orth	ogonal A	Axis: X			
120.0) dBuV/m								
110									
100									
90									
80									
70									
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50		1							
40		1 X							
30		2 X							
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0.0		C100.00		11000.00	10750.00	1000.00	10050.00	21 400 00	20500.00 MI
	00.000 3550.00	6100.00				16300.00	18850.00	21400.00	26500.00 MHz
Mł	k. Freq.	Reading Level	Correct Factor	Measure ment	Limit	Over			
	MHz	dBu∨	dB	dBuV/m	dBuV/m	dB [Detector C	omment	
	4960.000	55.80	-10.36	45.44			peak		
*	4960.000	43.67	-10.36	33.31	54.00	-20.69	AVG		

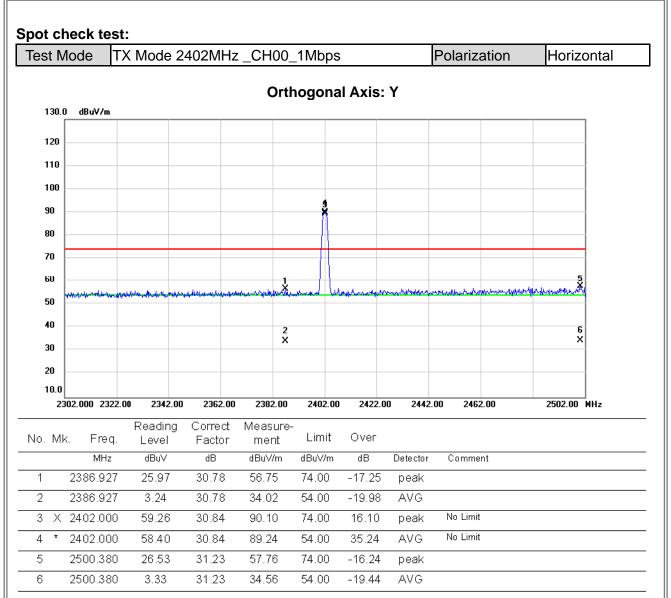






					Ortho	ogonal	Axis:	Х			
120.0) dBu¥/m										
110											
100											
90											
80											
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60											
50		1 X									
40		2									
30		x									
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0.0											
10	00.000 3550.DO	6100.0	0 8650	.00	11200.00	13750.0) 1630	0.00 1	3850.00	21400.00	26500.00 MHz
Mk	. Eraa	Reading	Corre		1easure-	Limit	Over				
IVIP	K. Freq. MHz	Level dBuV	Facto		ment BuV/m	dBuV/m	dB	Detec	tor C	omment	
	4960.000	55.69	-10.3		45.33	74.00	-28.67				
*	4960.000	44.30	-10.3		33.94	54.00	-20.06				

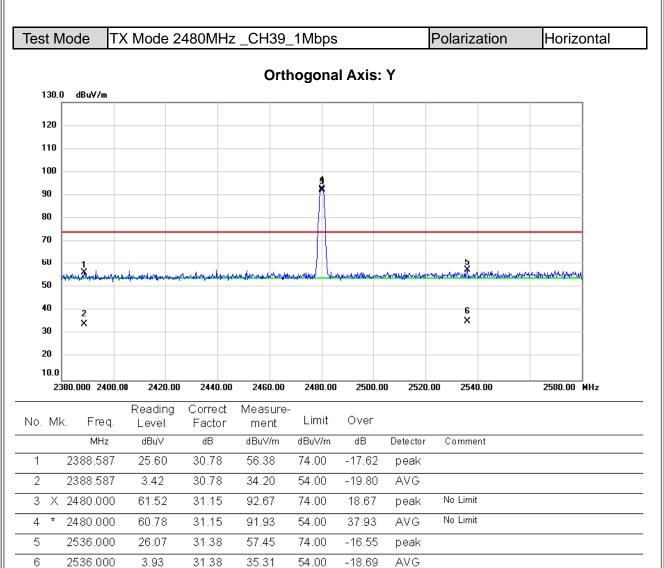
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REMARKS:

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





REMARKS:

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

	de T	X Mode 2	2402MHz	_CH00_	1Mbps			Polar	ization	Vertical
130.	0 dBuV/m			1						
120										
110										
100										
90										
80										
70										
60										
50										
		1 X								
40		2 X								
30										
20 10.0										
	000.000 3550.	.00 6100.0	0 8650.00	11200.00	13750.00	D 16300	.00 1885	50.00	21400.00	26500.00 MHz
		Reading		Measure-	1 :	0				
o. M	k. Freq. MHz	Level dBuV	Factor dB	ment dBuV/m	Limit dBuV/m	Over dB	Detector	Con	nment	
1	4804.000	55.76	-10.03	45.73	74.00	-28.27		CUII	Innent	
2 *		43.89	-10.03	33.86	54.00	-20.14				

MHz dBuV dB dBuV/m dBuV/m dB Detector Comment 1 4804.000 54.96 -10.03 44.93 74.00 -29.07 peak	t Moo	de TX	Mode 24	402MHz	_CH00_	1Mbps			Pola	arization	Horizontal
120											
110	130.0) dBuV/m									
110	120										
100											
80											
70 -	90										
60	80										
50 1	70										
40 ×	60										
40 2 <th2< th=""> <th2< th=""> <th2< th=""></th2<></th2<></th2<>	50		1								
30 20 100 100 100 1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 MHz 0. Mk. Freq. Reading Correct Measure- ment Limit Over 26500.00 MHz MHz dBuV dB dBuV/m dB Detector Comment 1 4804.000 54.96 -10.03 44.93 74.00 -29.07 peak	40										
10.0 10.0 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 MHz 0. Mk. Freq. Reading Level Correct Factor Measure- ment Limit Over Over Image: Correct Comment Correct Correct Comment Correct Correct Comment Correct Correct Comment Correct Co	30		x								
1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 MHz Reading Correct Measure- Measure- Level Factor Ment Limit Over MHz dBuV dB dBuV/m dB Detector Comment 1 4804.000 54.96 -10.03 44.93 74.00 -29.07 peak	20										
Reading Correct Measure- o. Mk. Freq. Level Factor ment Limit Over MHz dBuV dB dBuV/m dB Detector Comment 1 4804.000 54.96 -10.03 44.93 74.00 -29.07 peak	L	00 000 3550 0	0 6100.00	8650.00	11200.00	13750 00	16300.0	10 188	50.00	21400 00	26500.00 MHz
o. Mk. Freq. Level Factor ment Limit Over MHz dBuV dB dBuV/m dBuV/m dB Detector Comment 1 4804.000 54.96 -10.03 44.93 74.00 -29.07 peak											
1 4804.000 54.96 -10.03 44.93 74.00 -29.07 peak	o. Mk		Level	Factor	ment						
	1			dB	dBuV/m	dBuV/m	dB	Liotorto		ommont	
			54.96	-10.03	44 93					omment	
	2 *					74.00	-29.07	peak			

t Moc	le	TX	Mode 2	440MHz	_CH19_	1Mbps			Pola	arization	Vertical
130.0	dBu	¥/m									
120											
110											
100											
90											
80											
70											
6U -											
50			1								
40			1 X 2								
30			2 X								
20											
10.0											
10	00.000	3550.00			11200.00	13750.00	16300.0	0 188	350.00	21400.00	26500.00 MHz
. Mk	F	req.	Reading Level	Correct Factor	Measure- ment	Limit	Over				
	1	MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detecto	or C	omment	
	4880		54.08	-9.77	44.31		-29.69	peak			
*	4880	.000	44.05	-9.77	34.28	54.00	-19.72	AVG			

	le	TX Mode 2	440MHz	_CH19_	1Mbps			Pola	arization	Horizontal
130.0 Г	dBu¥/m									
120										
110										
100										
90										
80										
70										
60										
50		1 X								
40 30		2 X								
30 20										
10.0										
10	00.000 35			11200.00	13750.00	16300.0	00 188	50.00	21400.00	26500.00 MHz
. Mk	. Free	Reading 9. Level	Correct Factor	Measure- ment	Limit	Over				
	MHz		dB	dBuV/m	dBuV/m	dB	Detector	r C	omment	
	4880.00		-9.77	43.33	74.00	-30.67	peak			
2	4880.00	10 43.88		24 44	74.00	20.00				
			-9.77	34.11	74.00	-39.89	peak			
			-9.77	34.11	74.00	-39.89				

	de T	X Mode 2	480MHz	_CH39_	1Mbps			Pola	arization	Vertical
130.	0 dBuV/m									
130.										
120										
110										
100										
90										
80										
70										
6U										
50		1 X								
40		2 X								
30										
20										
10.0 1	000.000 3550	.00 6100.00	8650.00	11200.00	13750.00	16300	0.00 188	50.00	21400.00	26500.00 MHz
		Reading	Correct	Measure-						
. M		Level	Factor	ment	Limit	Over				
	MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detecto	r C	omment	
	4960.000	53.83	0.40							
			-9.49	44.34		-29.66				
2 *	4960.000		-9.49 -9.49	44.34 34.83		-29.66 -19.17				
2 *										

MHz dBuV dB dBuV/m dB Detector Comment 4960.000 54.23 -9.49 44.74 74.00 -29.26 peak	Mode	TX	Mode 2	480MHz	_CH39_	1Mbps			Pola	arization	Horizon
120 10 10 10 1000 1000 <td< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>											
120	100.0										
110		uv/m									
100	120										
90 90 <td< td=""><td>110</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	110										
80	100										
70 -	90										
70 -	80										
60 1											
50 1											
40 2 2 40 2 40 2 40 2 40 2 40 2 40 2 40 2 40 2 40 2 40 2 40 2 40 2 40 2 40 2 40 2 40 <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>											
30 x											
30 20 1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 MH 1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 18850.00 21400.00 26500.00 MH NK. Freq. Level Factor ment Limit Over MHz dBuV dB dBuV/m dB Detector Comment 1 4960.000 54.23 -9.49 44.74 74.00 -29.26 peak			2								
10.0 10.0 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 MH 0. Mk. Freq. Reading Level Correct Factor Measure- ment Limit Over 0	30										
1000.000 3550.00 6100.00 8650.00 11200.00 13750.00 16300.00 18850.00 21400.00 26500.00 MH Reading Correct Measure- . <											
o. Mk. Freq. Level Factor Measure- MHz dBuV dB dBuV/m dBuV/m dB Detector Comment 1 4960.000 54.23 -9.49 44.74 74.00 -29.26 peak		0 3550.00	6100.00	8650.00	11200.00	13750.00	16300	00 18:	850.00	21400.00	26500.00 M
o. Mk. Freq. Level Factor ment Limit Over MHz dBuV dB dBuV/m dBuV/m dB Detector Comment 1 4960.000 54.23 -9.49 44.74 74.00 -29.26 peak											
1 4960.000 54.23 -9.49 44.74 74.00 -29.26 peak	o. Mk.	Freq.				Limit	Over				
		MHz	dBu∨	dB	dBuV/m	dBuV/m	dB	Detecto	or C	omment	
2 * 4960.000 44.66 -9.49 35.17 54.00 -18.83 AVG											
	2 * 496	0.000	44.66	-9.49	35.17	54.00	-18.83	AVG			

APPENDIX E - BANDWIDTH



Test Mode:

TX Mode

Frequency (MHz)	6dB Bandwidth (MHz)	99% Occupied BW (MHz)	Min. Limit (kHz)	Test Result
2402	0.72	1.08	500	Pass
2440	0.72	1.08	500	Pass
2480	0.71	1.09	500	Pass







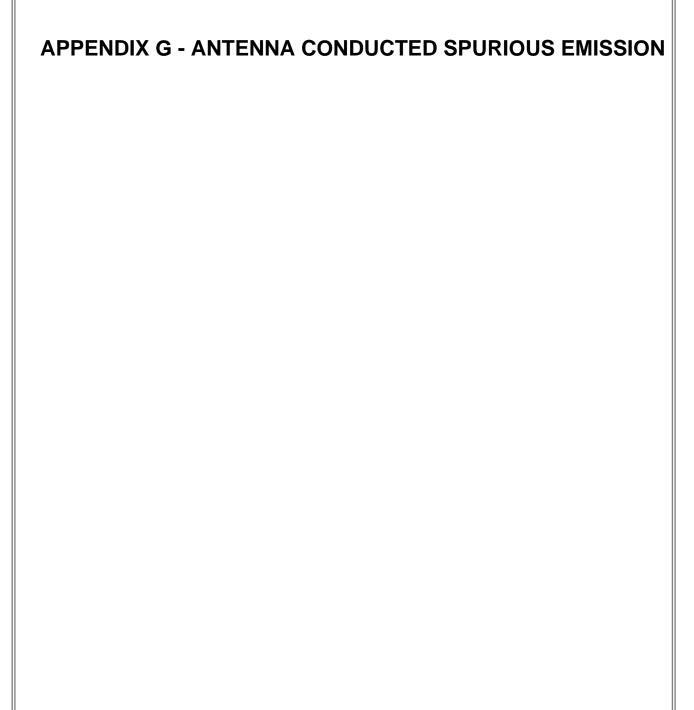
Test Mode : TX Mode 2402MHz/2440MHz/2480MHz_1Mbps

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	0.47	0.0011	30.00	1.00	Pass
2440	1.53	0.0014	30.00	1.00	Pass
2480	1.74	0.0015	30.00	1.00	Pass

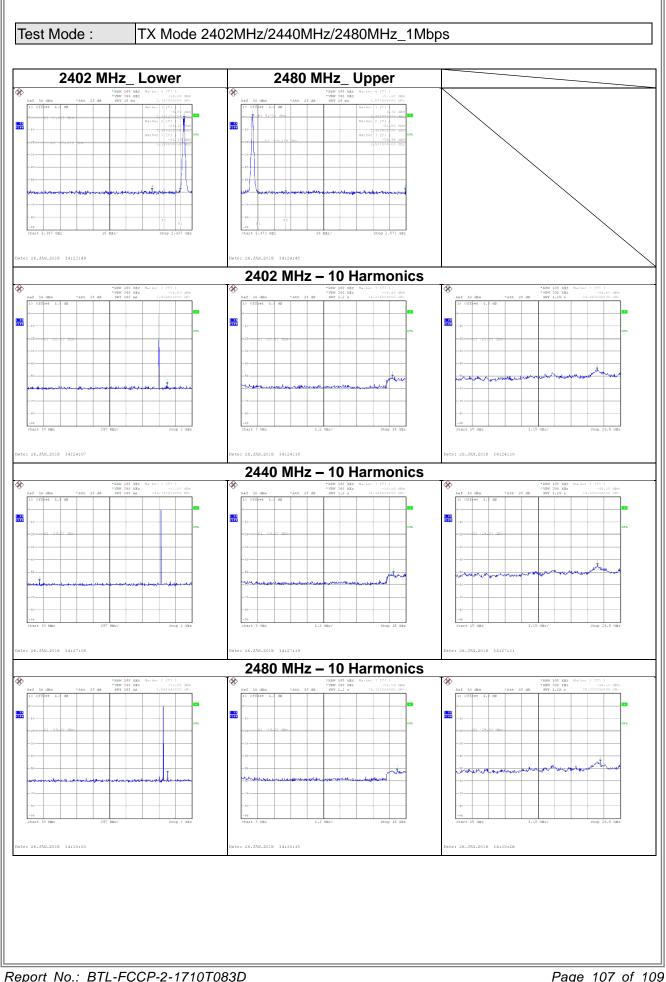
Spot check test:

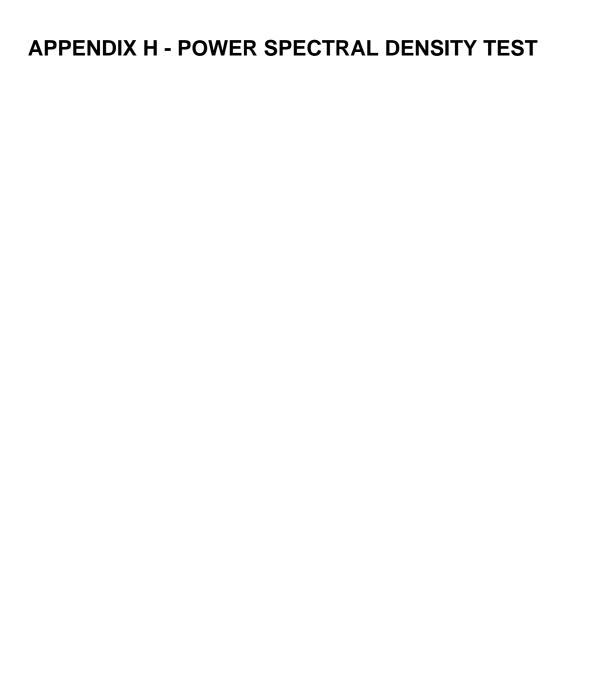
Test Mode : TX Mode 2402MHz/2440MHz/2480MHz_1Mbps

Frequency (MHz)	Conducted Power (dBm)	Conducted Power (W)	Max. Limit (dBm)	Max. Limit (W)	Test Result
2402	-0.34	0.0009	30.00	1.00	Pass
2440	0.82	0.0012	30.00	1.00	Pass
2480	1.24	0.0013	30.00	1.00	Pass











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-	Test Mode:	CH00, CH19 , 0	CH39	- 1Mbps				
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	Frequency	Power Dens	sity	Power Density	Max. Limit	Toot Dooult		
	(MHz)	(dBm/3kH	z)	(mW/3kHz)	(dBm/3kHz)	Test Result		
	2402	-14.56		0.015	8.00	Pass		
	2440	-13.29		0.017	8.00	Pass		
	2480	-13.30		0.018	8.00	Pass		
_								
	2402 MI			2440 MHz		2480 MHz		
¢.				*850 3 kB2 Kurkur 1 [71] *V30 3 kB2 - 1.1.29 dBn *Att 26 dB 407 225 me 2.430076600 GHz dB	Ref 10 dBm *Att 20 dB 10 offert 4.4 dB	*RBW 3 kB2 Karkwr 1 [T1] *VEW 30 kB2 -15.30 dBm 5W7 228 ma 2.479048000 GRu		
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