FCC Radio Test Report

FCC ID: RWO-RC21019901

This report concerns: Original Grant

Project No.	:	2204E012
Equipment	:	Wireless Charging Dock
Brand Name	:	RAZER,
Test Model	:	RC21-019901
Series Model	:	RC21-019901XX-XXXX(X can be 0-9 or A-Z)
Applicant	:	Razer Inc.
Address	:	9 Pasteur, Suite 100, Irvine, CA92618, USA
Manufacturer	:	Razer (Asia-Pacific) Pte.,Ltd.
Address	:	1 one-north Crescent, #02-01 Singapore 138538
Factory	:	RAZER TECHNOLOGY AND DEVELOPMENT (SHENZHEN) CO., LTD
Address	:	East Wing, 3rd Floor, Block 2, Phase 1 of Vision Shenzhen Business Park Keji South Road, Hi-Tech Industrial Park, Shenzhen 518057, China
Date of Receipt	:	Apr. 14, 2022
Date of Test	:	Apr. 15, 2022 ~ Jun. 28, 2022
Issued Date	:	Jul. 13, 2022
Report Version	:	R00
Test Sample	:	Sample No.: DG2022041493 & DG2022051282 for radiated, DG2022051281 for conducted.
Standard(s)	:	FCC CFR Title 47, Part 15, Subpart C ANSI C63.10-2013

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

Vincent. Tan

Prepared by : Vincent Tan

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TESTING CERT #5123.02

BTL Inc.

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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.

The report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, A2LA, or any agency of the U.S. Government.

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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	Note
BTL-FCCP-1-2204E012	R00	Original Report.	Jul. 13, 2022	Valid

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standard(s):

FCC CFR Title 47, Part 15, Subpart C				
Standard(s) Section	**Test Item**	**Test Result**	**Judgment**	**Remark**
15.207(a)	AC Power Line Conducted Emissions	APPENDIX A	PASS	------
15.209 15.249(a)	Radiated Emissions	APPENDIX B APPENDIX C APPENDIX D	PASS	------
15.215(c)	Bandwidth	APPENDIX E	PASS	------
15.203	Antenna Requirement	------	PASS	Note(2)

Note:

(1) “N/A” denotes test is not applicable to this device.

(2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

1.1 TEST FACILITY

The test facilities used to collect the test data in this report is at the location of No. 3 Jinshagang 1st Rd. Shixia, Dalang Town Dongguan City, Guangdong 523792 People's Republic of China.
BTL's Registration Number for FCC: 357015
BTL's Designation Number for FCC: CN1240

1.2 MEASUREMENT UNCERTAINTY

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))
The BTL measurement uncertainty as below table:

A. AC power line conducted emissions test:

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-C02	CISPR	150kHz ~ 30MHz	2.60

B. Radiated emissions test:

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB01	CISPR	9kHz ~ 30MHz	2.36

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

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

Test Site	Method	Measurement Frequency Range	U,(dB)
DG-CB03 (1m)	CISPR	18 ~ 26.5 GHz	3.62
		26.5 ~ 40 GHz	4.00

C. Other Measurement:

Test Item	Uncertainty
Bandwidth	±3.8 %
Temperature	±0.08 °C
Humidity	±1.5%

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

1.3 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage	Tested By
AC Power Line Conducted Emissions	25°C	58%	AC 120V/60Hz	Rod Tang
Radiated Emissions-9 kHz to 30 MHz	20°C	55%	DC 5V	Torocat Yuan
Radiated Emissions-30 MHz to 1000 MHz	23°C	53%	DC 5V	Meers Zhang
Radiated Emissions-Above 1000 MHz	23°C	53%	DC 5V	Chen Mo
Bandwidth	25°C	48%	DC 5V	Nicole Chen

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	Wireless Charging Dock
Brand Name	RAZER,
Test Model	RC21-019901
Series Model	RC21-019901XX-XXXX(X can be 0-9 or A-Z)
Model Difference(s)	The system's model name is RZ81-0199XXXX-XXXX (X: Can be 0-9, A-Z), and the system contains a Wireless Charging Dock (Model name: RC21-019901) and Wireless Charging Puck (Model name: RC21-019902).
Power Source	Wireless Charging Dock: Supplied from USB Port. Wireless Charging Puck: Supplied from Wireless Charging Dock.
Power Rating	Wireless Charging Dock: 5V⎓1.5A Wireless Charging Puck: 5V⎓500mA
Operation Frequency	2402-2480MHz
Modulation Technology	GFSK
Bit Rate of Transmitter	2Mbps
Max. Field Strength	63.78 dBuV/m(AVG) 100.97 dBuV/m(Peak)
Max. Output Power	-31.52 dBm (0.0000007W) (AVG) 5.67 dBm (0.0037W) (Peak)

Note:

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

2. Channel List:

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

3. Table for Filed Antenna:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	PCB	N/A	4.07

Note:
The antenna gain is provided by the manufacturer.

2.2 DESCRIPTION OF TEST MODES

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

Pretest Mode	Description
Mode 1	TX Mode Channel 00/39/78
Mode 2	TX Mode Channel 00

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

AC Power Line Conducted Emissions	
Final Test Mode	Description
Mode 2	TX Mode Channel 00

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 2	TX Mode Channel 00

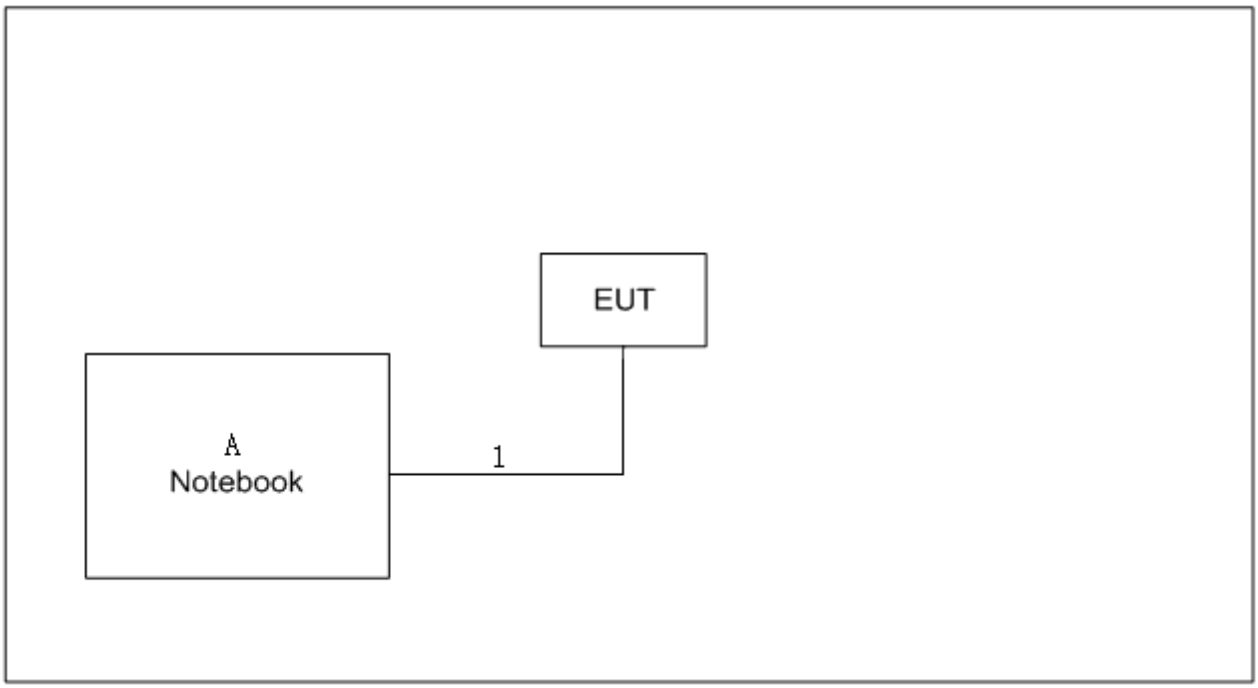
Radiated emissions test - Above 1GHz	
Final Test Mode	Description
Mode 1	TX Mode Channel 00/39/78

Bandwidth test	
Final Test Mode	Description
Mode 1	TX Mode Channel 00/39/78

Note:

(1) For AC Power Line Conducted Emissions and Radiated Emission Below 1GHz test, the TX Mode Channel 00 was found to be the worst case and recorded.

2.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



2.4 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.
A	Notebook	Honor	14SER5 3500	N/A

Item	Cable Type	Shielded Type	Ferrite Core	Length
1	USB Cable	NO	NO	1.5m

3. AC POWER LINE CONDUCTED EMISSIONS

3.1 LIMIT

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

Note:

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

3.2 TEST PROCEDURE

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

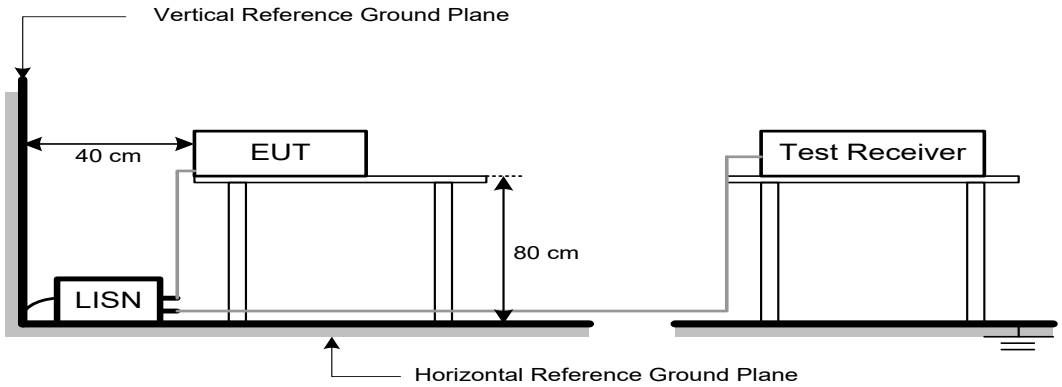
The following table is the setting of the receiver:

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

3.3 DEVIATION FROM TEST STANDARD

No deviation.

3.4 TEST SETUP



3.5 EUT OPERATING CONDITIONS

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

3.6 TEST RESULTS

Please refer to the APPENDIX A.

Remark:

(1) All readings are QP Mode value unless otherwise stated AVG in column of『Note』. If the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform in this case, a "*" marked in AVG Mode column of Interference Voltage Measured.

(2) Measuring frequency range from 150 kHz to 30 MHz.

4. RADIATED EMISSION TEST

4.1 LIMIT

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

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

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000 MHz)

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

LIMITS OF FIELD STRENGTH OF FUNDAMENTAL

Frequency (MHz)	(dBuV/m at 3 m)	
	Peak	Average
2400 to 2483.5	114	94

Note:

(1) The limit for radiated test was performed according to FCC CFR Title 47, Part 15, Subpart C.

(2) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in 15.209, whichever is the lesser attenuation.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

DWELL TIME OF PERIODIC OPERATION MEASURMENT

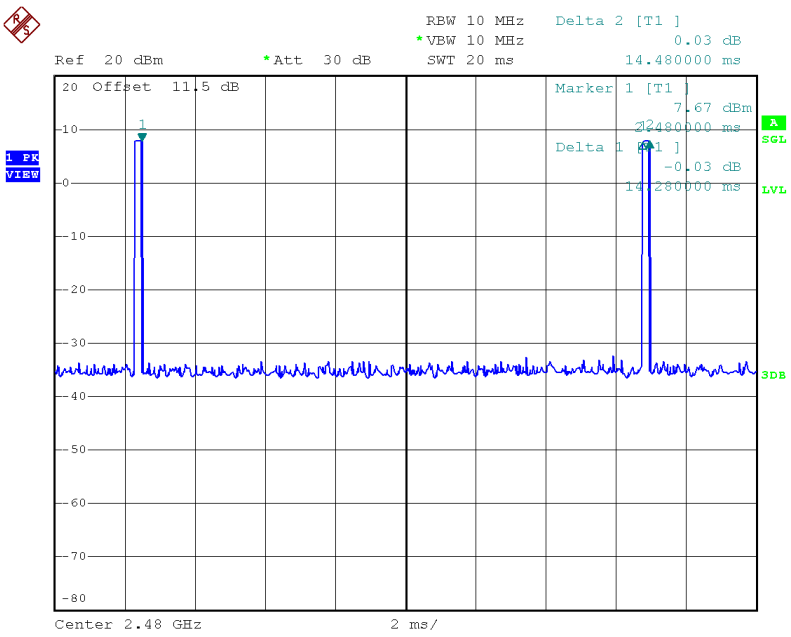
Duty Cycle = On Time / Total Time

T_{ON}: = Total Time- T_{OFF}=14.48-14.28=0.2ms

Total Time:14.48 ms

Duty Cycle: 1.38%

Average Reading = Peak value+20log(Duty Cycle), AV= Peak-37.19



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4.2 TEST PROCEDURE

a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1 GHz)
b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1 GHz)
c. The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.
f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1 GHz)
h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1 GHz)
i. For the actual test configuration, please refer to the related Item –EUT Test Photos.

The following table is the setting of the receiver:

Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~150 kHz for RBW 200 Hz
Start ~ Stop Frequency	0.15 MHz~30 MHz for RBW 9 kHz
Start ~ Stop Frequency	30 MHz~1000 MHz for RBW 100 kHz

Spectrum Parameters	Setting
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	1 MHz / 3 MHz for PK value 1 MHz / 1/T Hz for AVG value

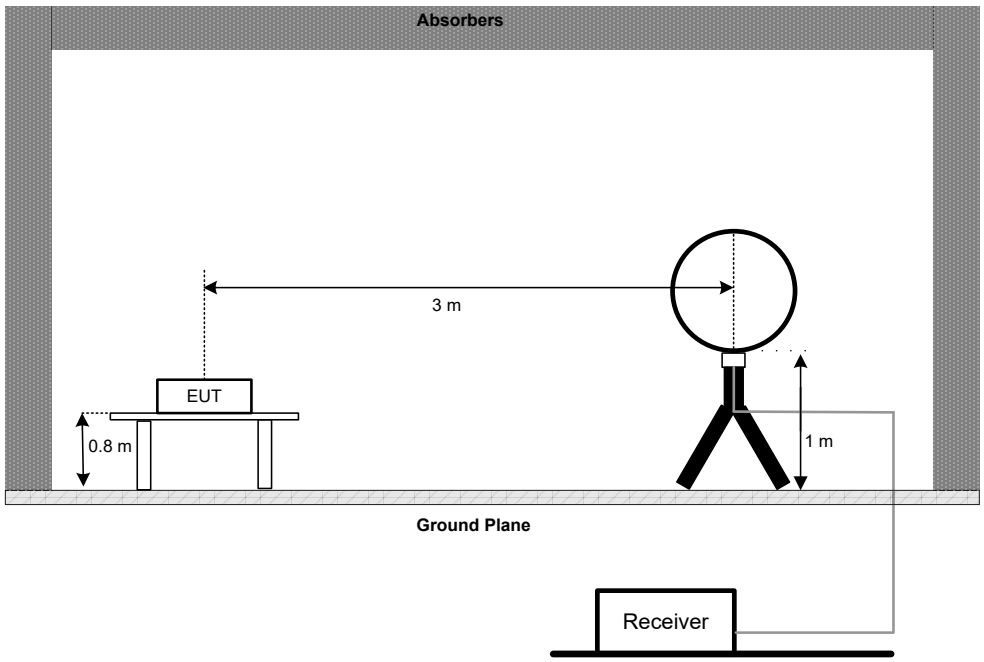
Spectrum Parameters	Setting
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30 MHz~1000 MHz for QP detector
Start ~ Stop Frequency	Above 1GHz for PK/AVG detector

4.3 DEVIATION FROM TEST STANDARD

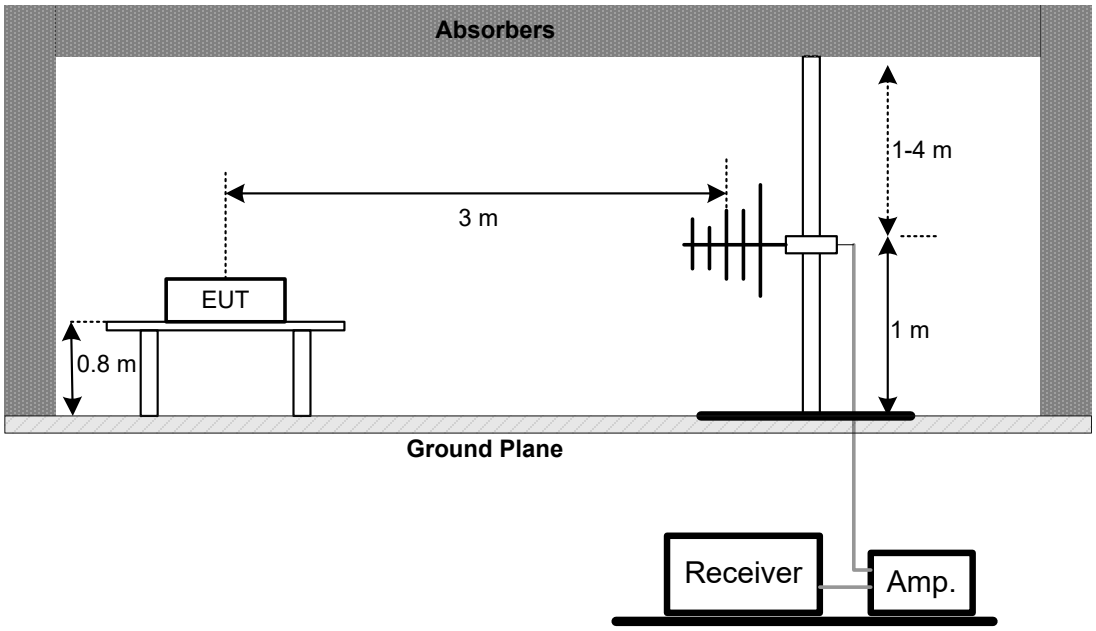
No deviation

4.4 TEST SETUP

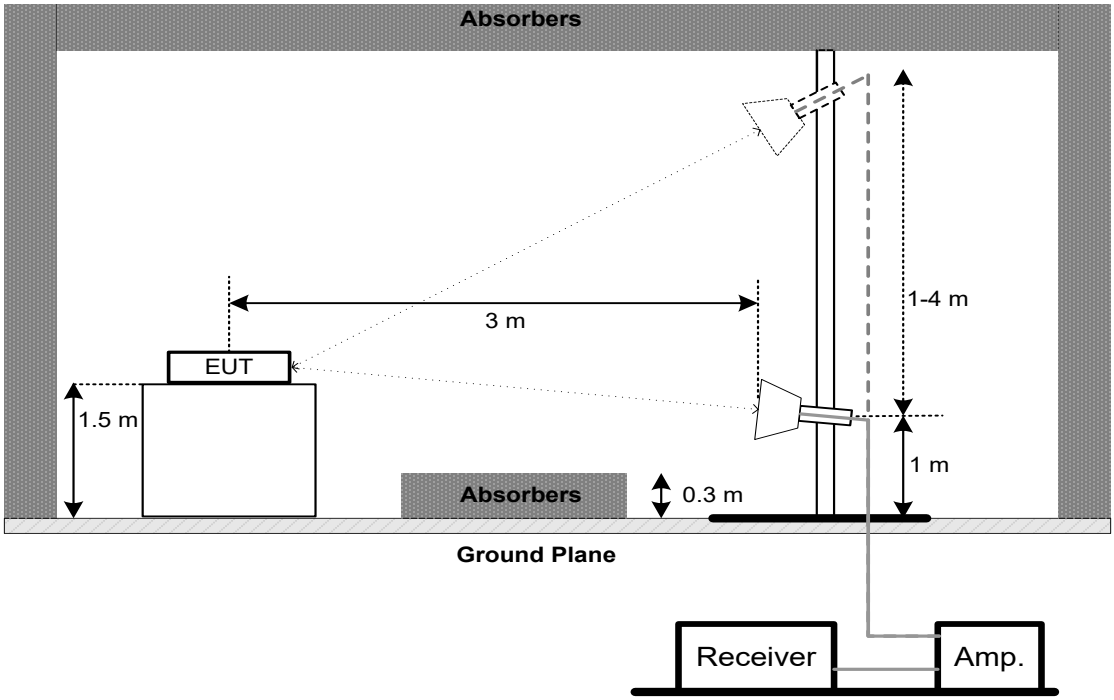
9 kHz-30 MHz



30 MHz to 1 GHz



Above 1 GHz



4.5 EUT OPERATING CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

4.6 TEST RESULT - 9 kHz TO 30 MHz

Please refer to the APPENDIX B.

Remark:

(1) Distance extrapolation factor = 40 log (specific distance / test distance) (dB).
(2) Limit line = specific limits (dBuV) + distance extrapolation factor.

4.7 TEST RESULT - 30 MHz TO 1000 MHz

Please refer to the APPENDIX C.

4.8 TEST RESULT - ABOVE 1000 MHz

Please refer to the APPENDIX D.

Remark:

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

5. BANDWIDTH TEST

5.1 LIMIT

Section	Test Item	Limit
15.215(c)	20 dB Bandwidth	-

5.2 TEST PROCEDURE

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

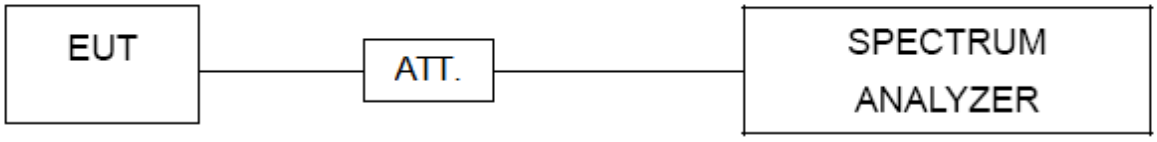
b. The following table is the setting of the spectrum analyzer.

Spectrum Parameters	Setting
Span Frequency	Between 2 times and 5 times the BW
RBW	Range of 1% to 5% of the BW
VBW	Approximately 3 times RBW
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS

Please refer to the APPENDIX E.

6. MEASUREMENT INSTRUMENTS LIST

AC Power Line Conducted Emissions					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	100382	Jan. 22, 2023
2	LISN	EMCO	3816/2	52765	Jan. 23, 2023
3	TWO-LINE V-NETWORK	R&S	ENV216	101447	Jan. 23, 2023
4	50Ω Terminator	SHX	TF5-3	15041305	N/A
5	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
6	Cable	N/A	RG223	12m	Mar. 08, 2023
7	643 Shield Room	ETS	6*4*3	N/A	N/A

Radiated Emissions - 9 kHz to 30 MHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	MXE EMI Receiver	Keysight	N9038A	MY56400091	Jan. 22, 2023
2*	Active Loop Antenna	R&S	HFH2-Z2	830749/020	Aug. 23, 2024
3	Cable	N/A	RG 213/U(9kHz~1GHz)	N/A	Jul. 09, 2022
4	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
5	966 Chamber Room	ETS	9*6*6	N/A	Jul. 17, 2022

Radiated Emissions - 30 MHz to 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Antenna	Schwarzbeck	VULB9160	9160-3232	Mar. 03, 2023
2	Amplifier	HP	8447D	2944A08742	Jan. 22, 2023
3	Cable	emci	LMR-400	N/A	Nov. 30, 2022
4	Controller	CT	SC100	N/A	N/A
5	Controller	MF	MF-7802	MF780208416	N/A
6	Receiver	Agilent	N9038A	MY52130039	Jan. 22, 2023
7	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
8	966 Chamber Room	RM	9*6*6	N/A	Jul. 24, 2022

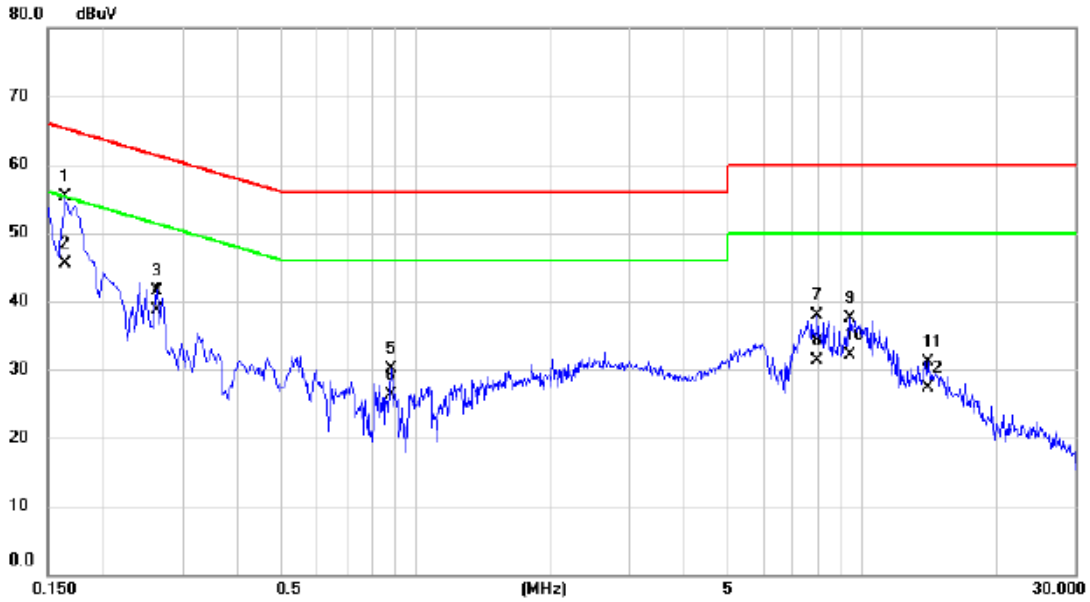
Radiated Emissions - Above 1 GHz					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Double Ridged Horn Antenna	ARA	DRG-118A	16554	Apr. 18, 2023
2	Broad-Band Horn Antenna	Schwarzbeck	BBHA 9170	9170319	Jun. 30, 2022
3	Amplifier	Agilent	8449B	3008A02584	Jul. 10, 2022
4	Controller	CT	SC100	N/A	N/A
5	Controller	MF	MF-7802	MF780208416	N/A
6	Receiver	Agilent	N9038A	MY52130039	Jan. 22, 2023
7	EXA Spectrum Analyzer	Keysight	N9010A	MY56480488	Jan. 22, 2023
8	Low Noise Amplifier	CONNPHY	CLN-18G40G-4330 -K	619413	Jul. 16, 2022
9	Cable	Talent microwave	A81-SMAMSMAM-12.5M	N/A	Oct. 15, 2022
10	Cable	Talent microwave	A40-2.92M2.92M-2.5M	N/A	Nov. 30, 2022
11	Filter	STI	STI15-9912	N/A	Jul. 10, 2022
12	Measurement Software	Farad	EZ-EMC Ver.NB-03A1-01	N/A	N/A
13	966 Chamber Room	RM	9*6*6	N/A	Jul. 24, 2022

Bandwidth					
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum Analyzer	R&S	FSP40	100185	Jul. 10, 2022
2	Attenuator	WOKEN	6SM3502	VAS1214NL	N/A
3	RF Cable	Tongkaichuan	N/A	N/A	N/A
4	DC Block	Mini	N/A	N/A	N/A

Remark "N/A" denotes no model name, serial no. or calibration specified.
"*" calibration period of equipment list is three year.
Except * item, all calibration period of equipment list is one year.

APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

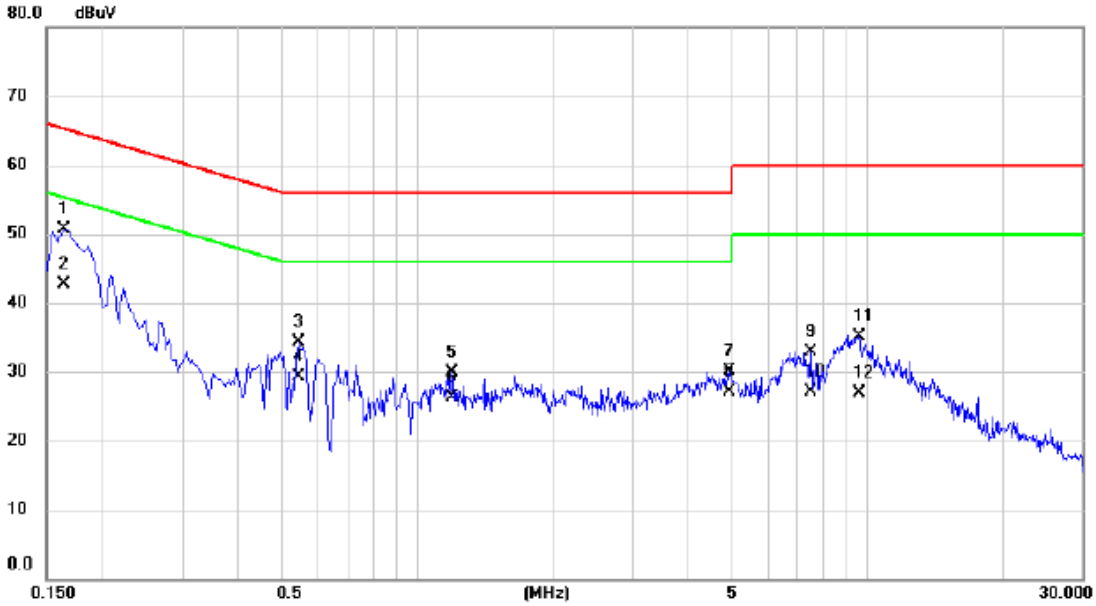
Test Mode	TX Mode_Channel 00	Phase	Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1635	45.67	9.67	55.34	65.28	-9.94	QP	
2	*	0.1635	35.90	9.67	45.57	55.28	-9.71	AVG	
3		0.2625	31.89	9.71	41.60	61.35	-19.75	QP	
4		0.2625	28.90	9.71	38.61	51.35	-12.74	AVG	
5		0.8790	20.35	9.81	30.16	56.00	-25.84	QP	
6		0.8790	16.40	9.81	26.21	46.00	-19.79	AVG	
7		7.9440	27.54	10.35	37.89	60.00	-22.11	QP	
8		7.9440	20.90	10.35	31.25	50.00	-18.75	AVG	
9		9.3570	27.06	10.44	37.50	60.00	-22.50	QP	
10		9.3570	21.60	10.44	32.04	50.00	-17.96	AVG	
11		14.0730	20.47	10.58	31.05	60.00	-28.95	QP	
12		14.0730	16.80	10.58	27.38	50.00	-22.62	AVG	

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

Test Mode	TX Mode_Channel 00	Phase	Neutral

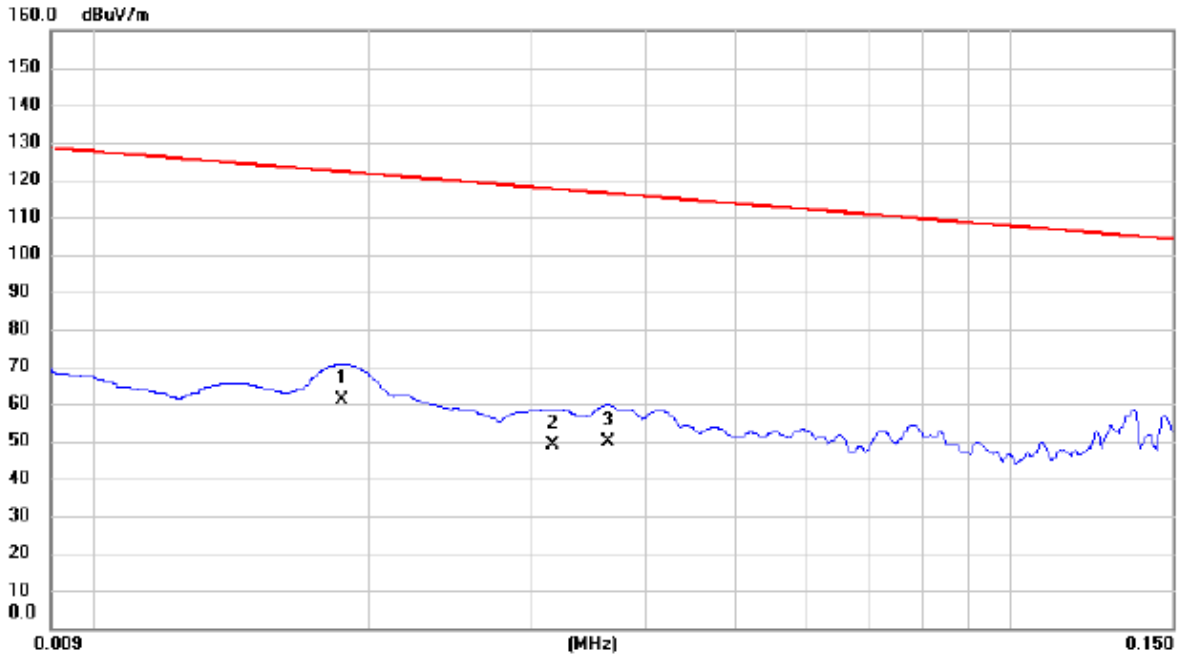


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1635	41.00	9.71	50.71	65.28	-14.57	QP	
2	*	0.1635	32.90	9.71	42.61	55.28	-12.67	AVG	
3		0.5460	24.42	9.80	34.22	56.00	-21.78	QP	
4		0.5460	19.50	9.80	29.30	46.00	-16.70	AVG	
5		1.1940	20.04	9.87	29.91	56.00	-26.09	QP	
6		1.1940	16.40	9.87	26.27	46.00	-19.73	AVG	
7		4.9425	19.92	10.15	30.07	56.00	-25.93	QP	
8		4.9425	16.90	10.15	27.05	46.00	-18.95	AVG	
9		7.4625	22.64	10.34	32.98	60.00	-27.02	QP	
10		7.4625	16.80	10.34	27.14	50.00	-22.86	AVG	
11		9.5864	24.75	10.45	35.20	60.00	-24.80	QP	
12		9.5864	16.50	10.45	26.95	50.00	-23.05	AVG	

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

APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

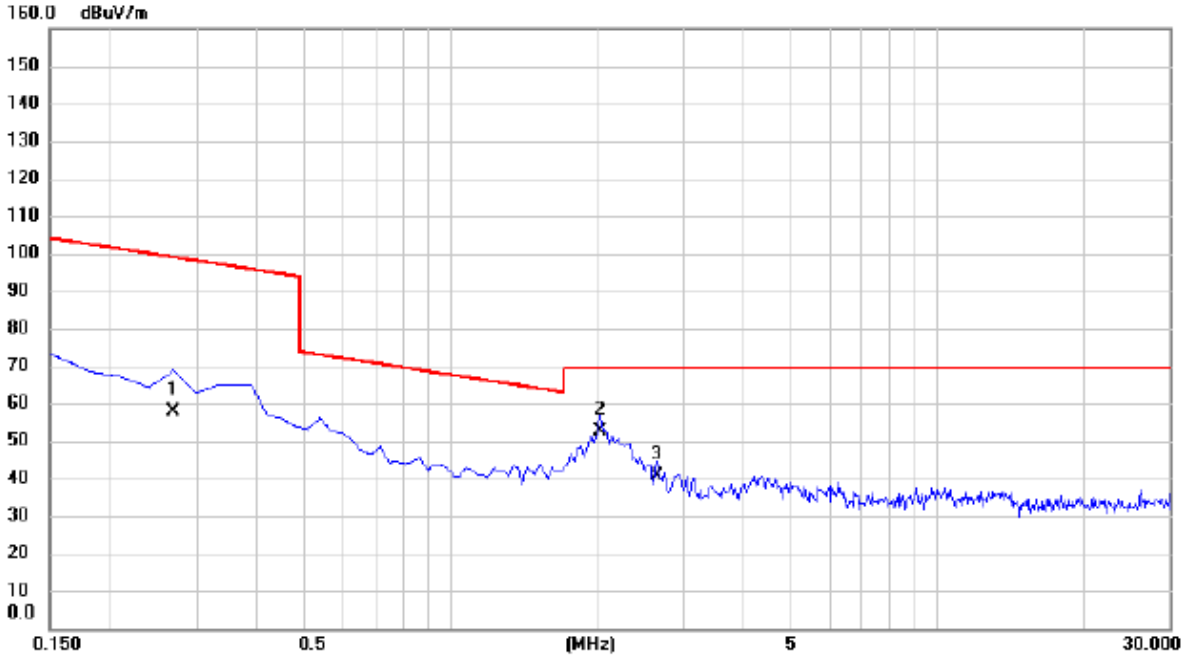
Test Mode	TX Mode_Channel 00	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0187	46.22	14.70	60.92	122.17	-61.25	AVG	
2		0.0317	34.85	14.02	48.87	117.58	-68.71	AVG	
3		0.0364	35.96	13.91	49.87	116.38	-66.51	AVG	

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

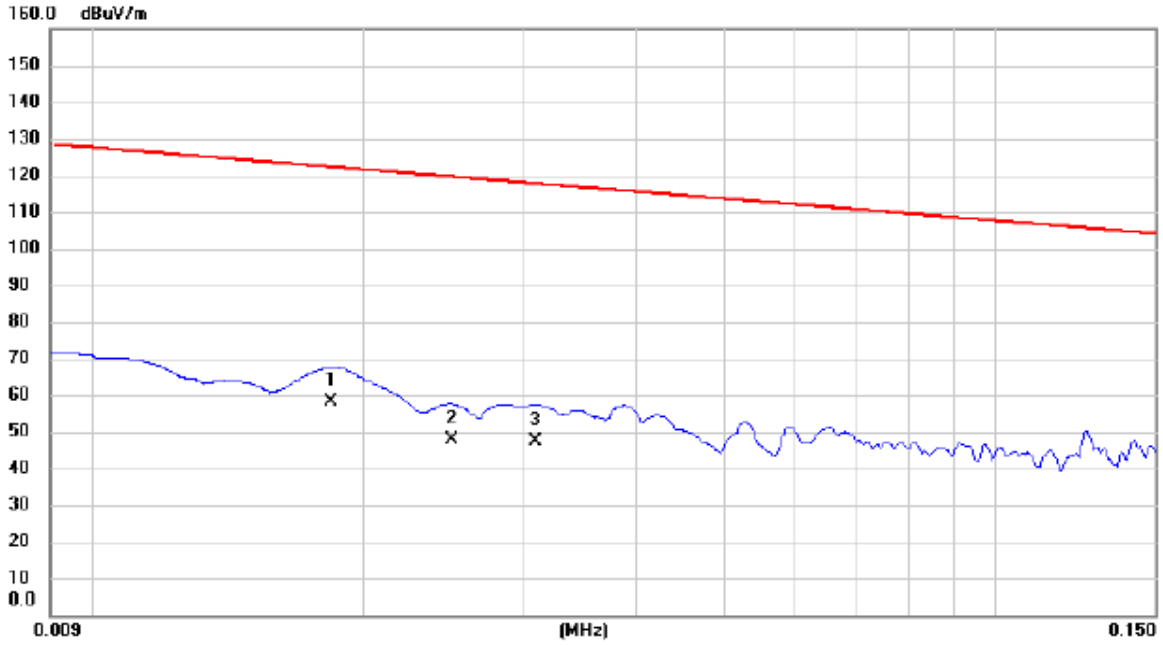
Test Mode	TX Mode_Channel 00	Polarization	Ant 0°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.2694	44.36	13.58	57.94	99.00	-41.06	AVG	
2	*	2.0305	40.33	12.08	52.41	69.54	-17.13	QP	
3		2.6574	28.69	11.84	40.53	69.54	-29.01	QP	

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

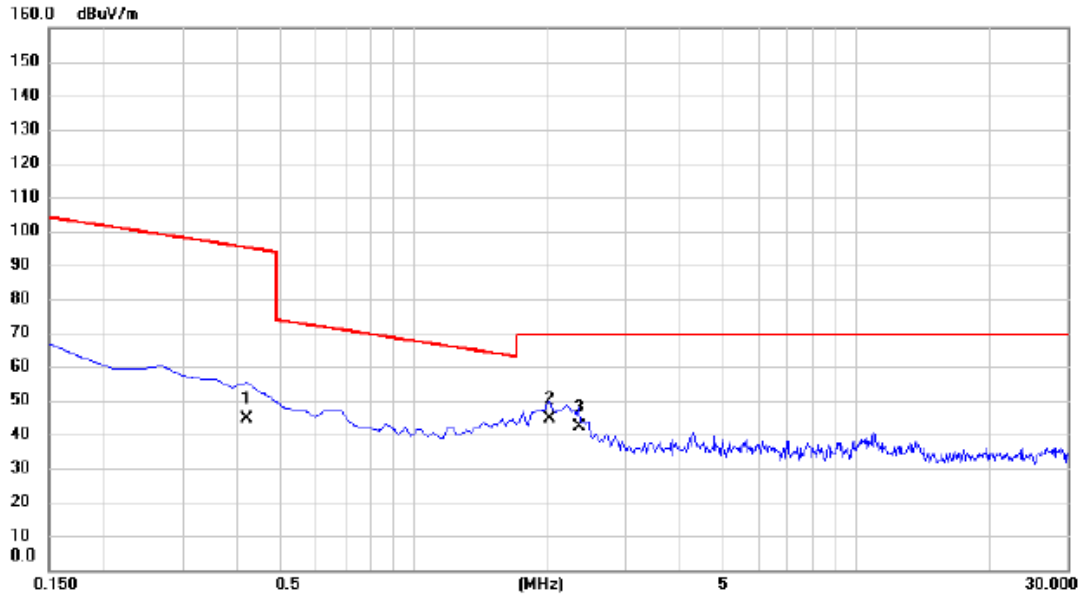
Test Mode	TX Mode_Channel 00	Polarization	Ant 90°



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	0.0184	43.22	14.79	58.01	122.31	-64.30	AVG	
2		0.0250	33.70	14.17	47.87	119.65	-71.78	AVG	
3		0.0310	33.25	14.04	47.29	117.78	-70.49	AVG	

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

Test Mode	TX Mode_Channel 00	Polarization	Ant 90°

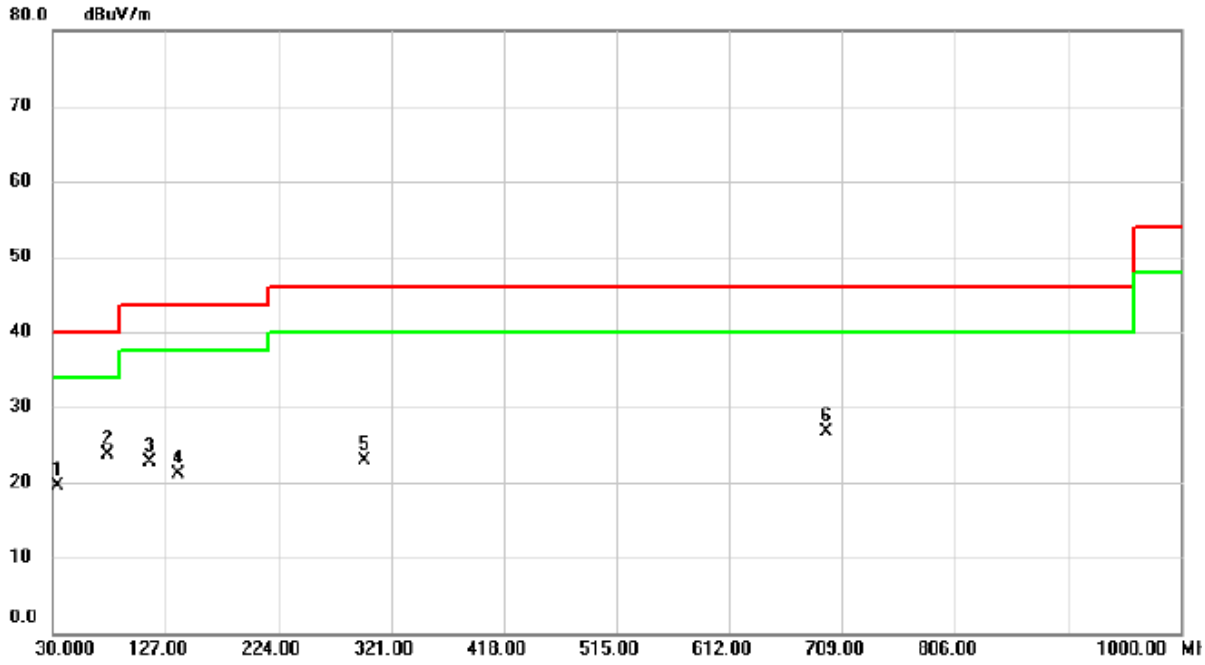


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		0.4187	31.25	13.43	44.68	95.17	-50.49	AVG	
2	*	2.0305	32.36	12.08	44.44	69.54	-25.10	QP	
3		2.3590	30.11	11.95	42.06	69.54	-27.48	QP	

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

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

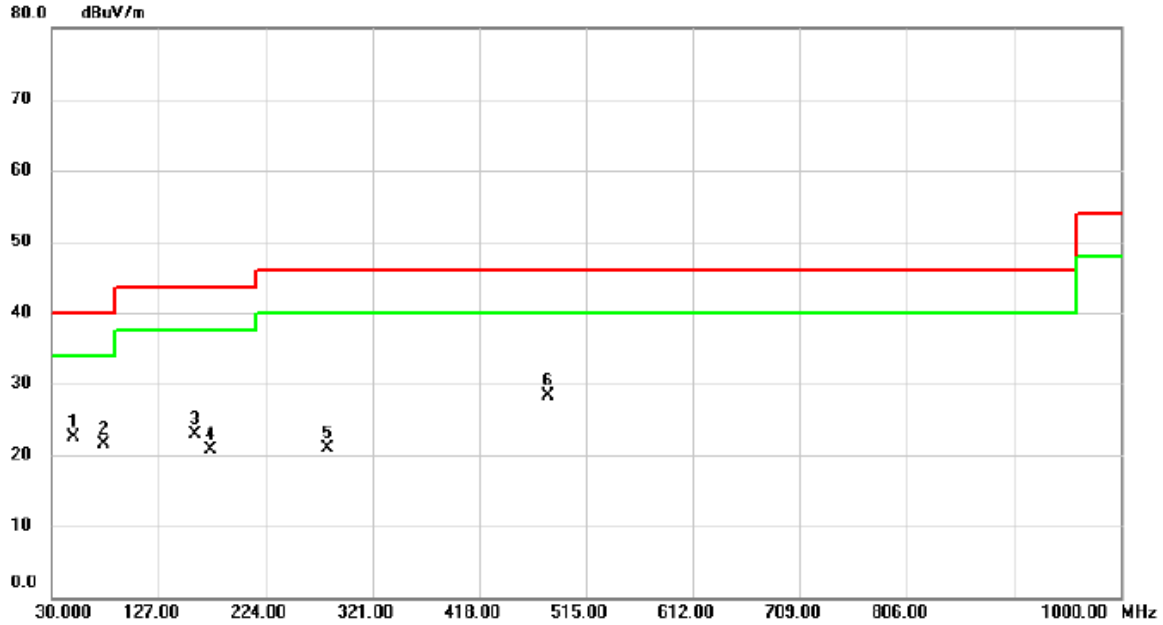
Test Mode	TX Mode_Channel 00	Polarization	Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1		33.8800	35.06	-15.60	19.46	40.00	-20.54	peak	
2	*	77.5300	41.73	-18.05	23.68	40.00	-16.32	peak	
3		113.4200	38.03	-15.26	22.77	43.50	-20.73	peak	
4		138.6400	34.42	-13.29	21.13	43.50	-22.37	peak	
5		297.7200	34.51	-11.52	22.99	46.00	-23.01	peak	
6		695.4200	30.05	-3.40	26.65	46.00	-19.35	peak	

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

Test Mode	TX Mode_Channel 00	Polarization	Horizontal

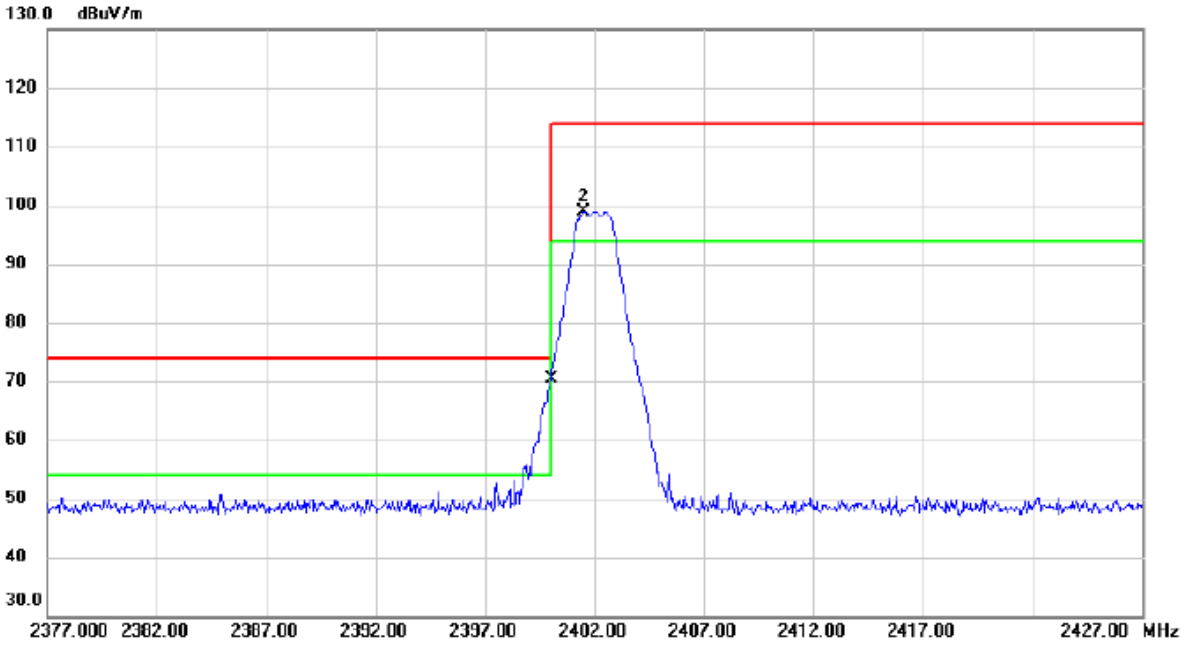


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	49.4000	36.86	-14.38	22.48	40.00	-17.52	peak	
2		77.5300	39.56	-18.05	21.51	40.00	-18.49	peak	
3		159.9800	35.80	-12.90	22.90	43.50	-20.60	peak	
4		174.5300	34.34	-13.59	20.75	43.50	-22.75	peak	
5		280.2600	32.84	-11.92	20.92	46.00	-25.08	peak	
6		480.0800	35.79	-7.42	28.37	46.00	-17.63	peak	

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

APPENDIX D - RADIATED EMISSION - ABOVE 1000 MHZ

Test Mode	TX 2402 MHz _CH00	Polarization	Vertical

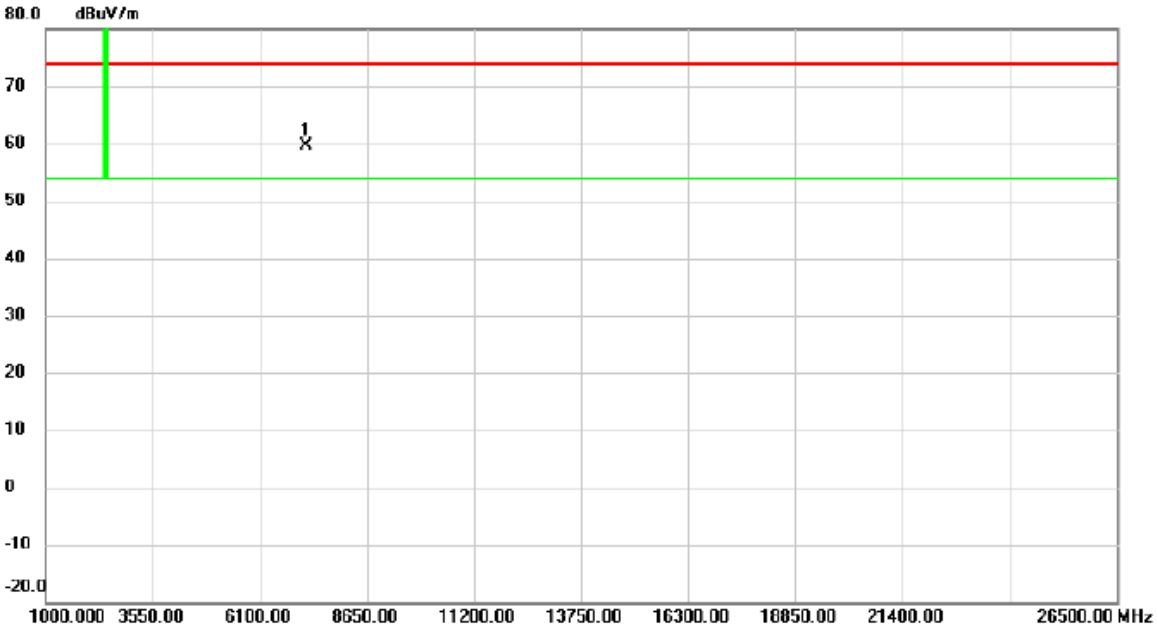


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2400.000	62.38	8.00	70.38	74.00	-3.62	peak	
2		2401.500	90.98	8.00	98.98	114.00	-15.02	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
2400.000	70.38	33.19	54.00	PASS
2401.500	98.98	61.79	94.00	PASS

Test Mode	TX 2402 MHz _CH00	Polarization	Vertical

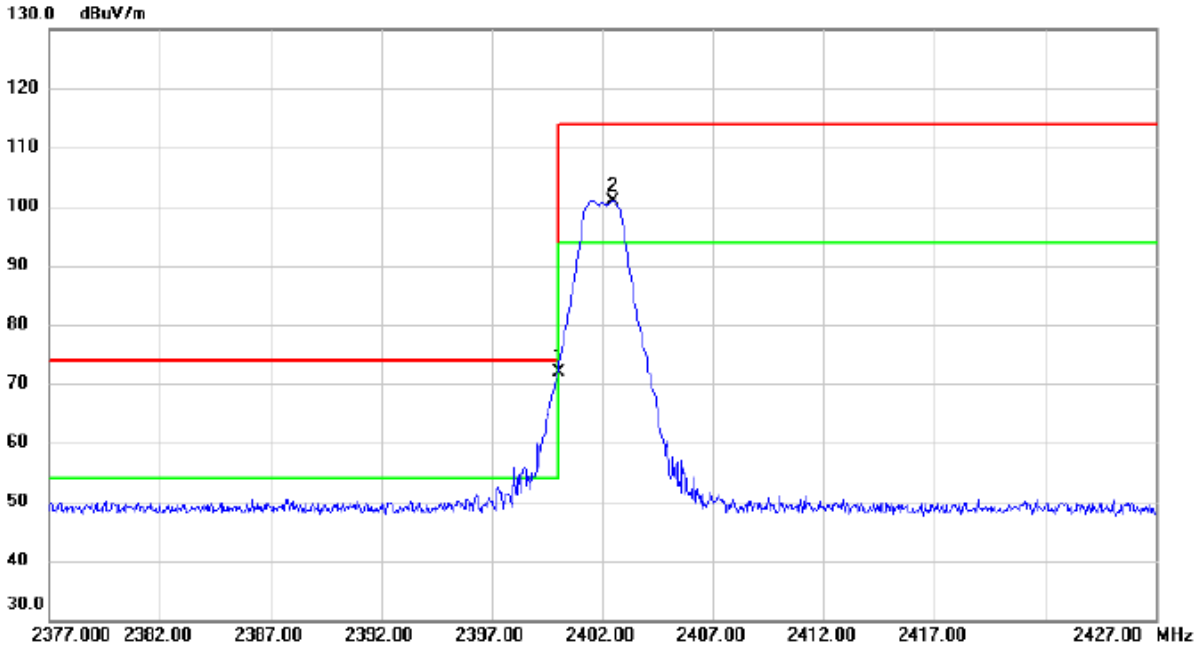


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7204.480	49.43	10.24	59.67	74.00	-14.33	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
7204.480	59.67	22.48	54.00	PASS

Test Mode	TX 2402 MHz _CH00	Polarization	Horizontal

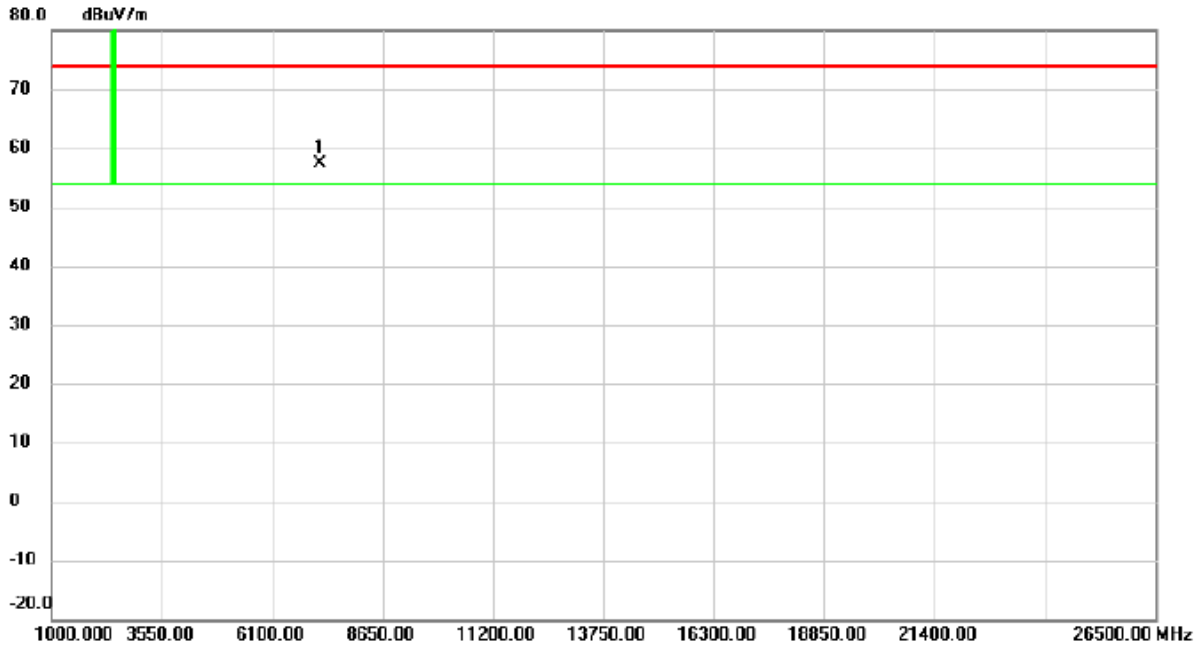


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2400.000	63.97	8.00	71.97	74.00	-2.03	peak	
2		2402.500	92.97	8.00	100.97	114.00	-13.03	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
2400.000	71.97	34.78	54.00	PASS
2402.500	100.97	63.78	94.00	PASS

Test Mode	TX 2402 MHz _CH00	Polarization	Horizontal

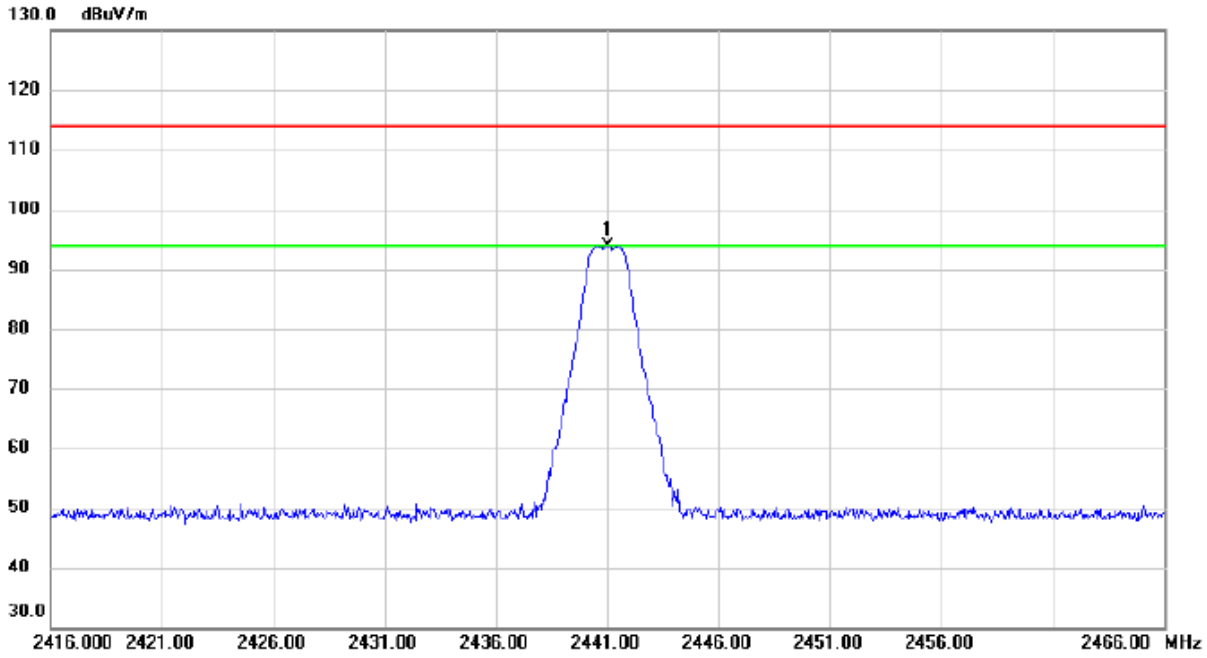


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7205.940	47.21	10.24	57.45	74.00	-16.55	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
7205.940	57.45	20.26	54.00	PASS

Test Mode	TX 2441 MHz _CH39	Polarization	Vertical

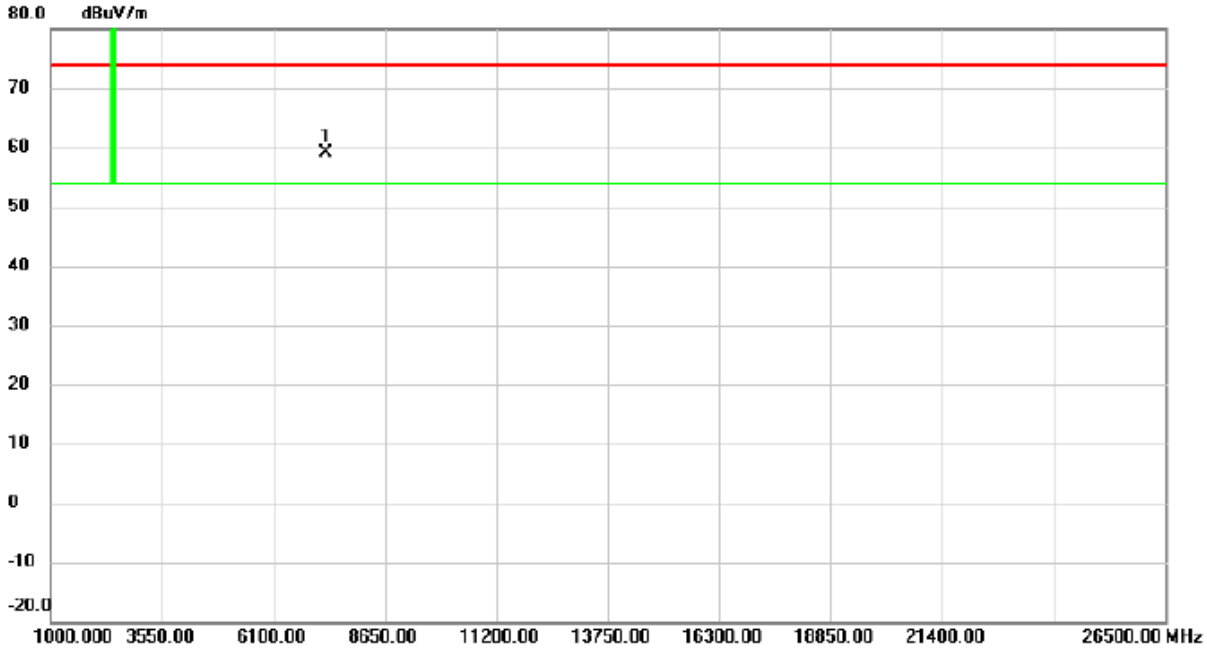


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2441.000	85.88	8.06	93.94	114.00	-20.06	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
2441.000	93.94	56.75	94.00	PASS

Test Mode	TX 2441 MHz _CH39	Polarization	Vertical

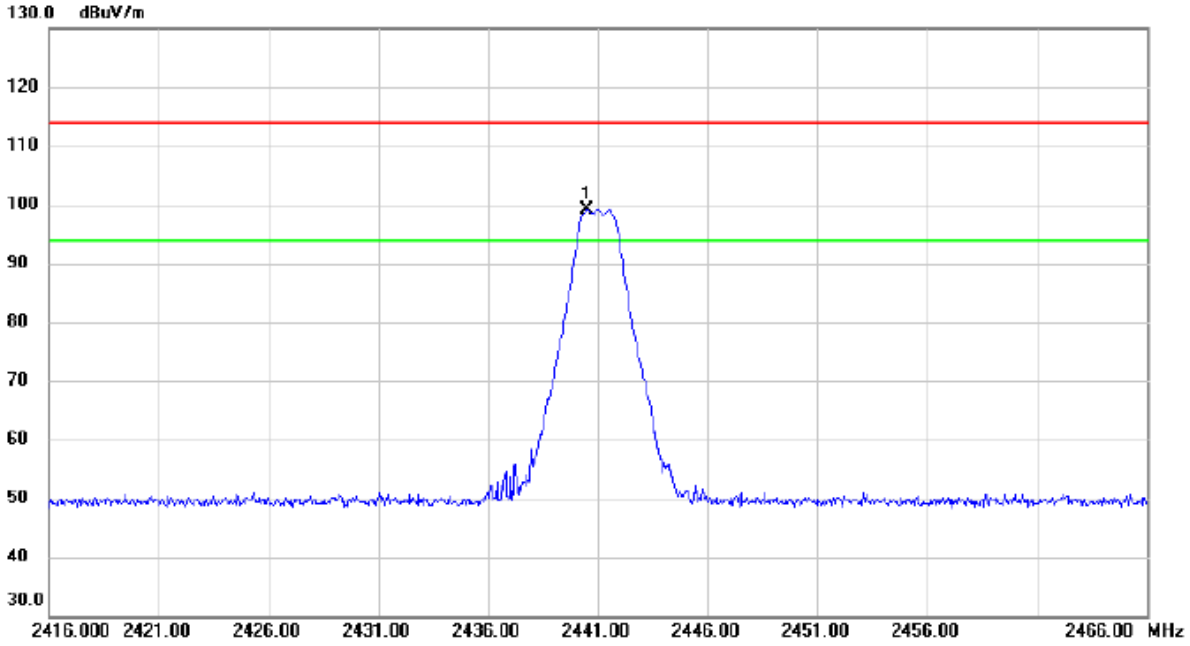


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7321.560	48.75	10.40	59.15	74.00	-14.85	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
7321.560	59.15	21.96	54.00	PASS

Test Mode	TX 2441 MHz _CH39	Polarization	Horizontal

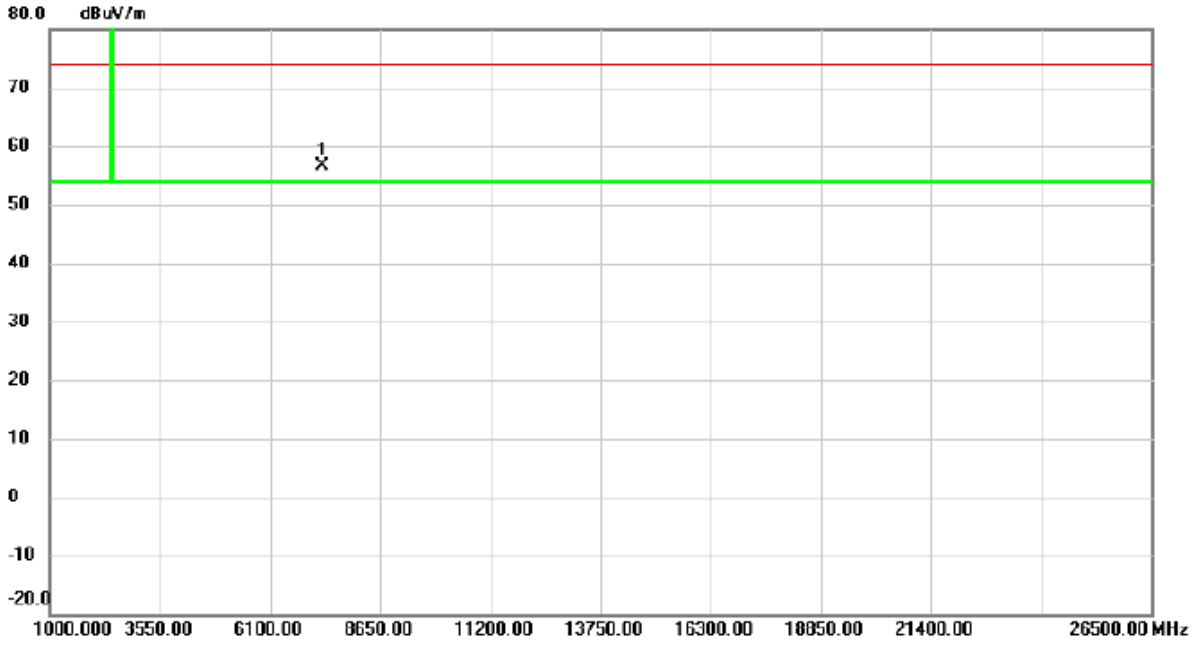


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2440.500	91.04	8.06	99.10	114.00	-14.90	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
2440.500	99.10	61.91	94.00	PASS

Test Mode	TX 2441 MHz _CH39	Polarization	Horizontal

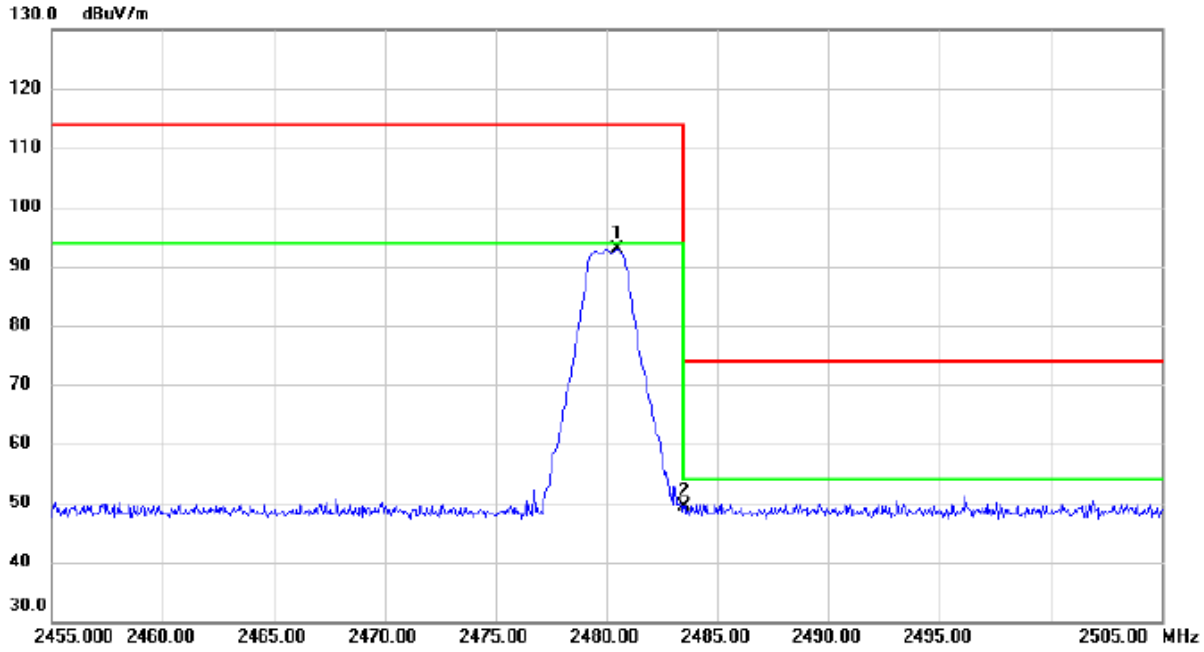


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7321.500	46.29	10.40	56.69	74.00	-17.31	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
7321.500	56.69	19.50	54.00	PASS

Test Mode	TX 2480 MHz _CH78	Polarization	Vertical

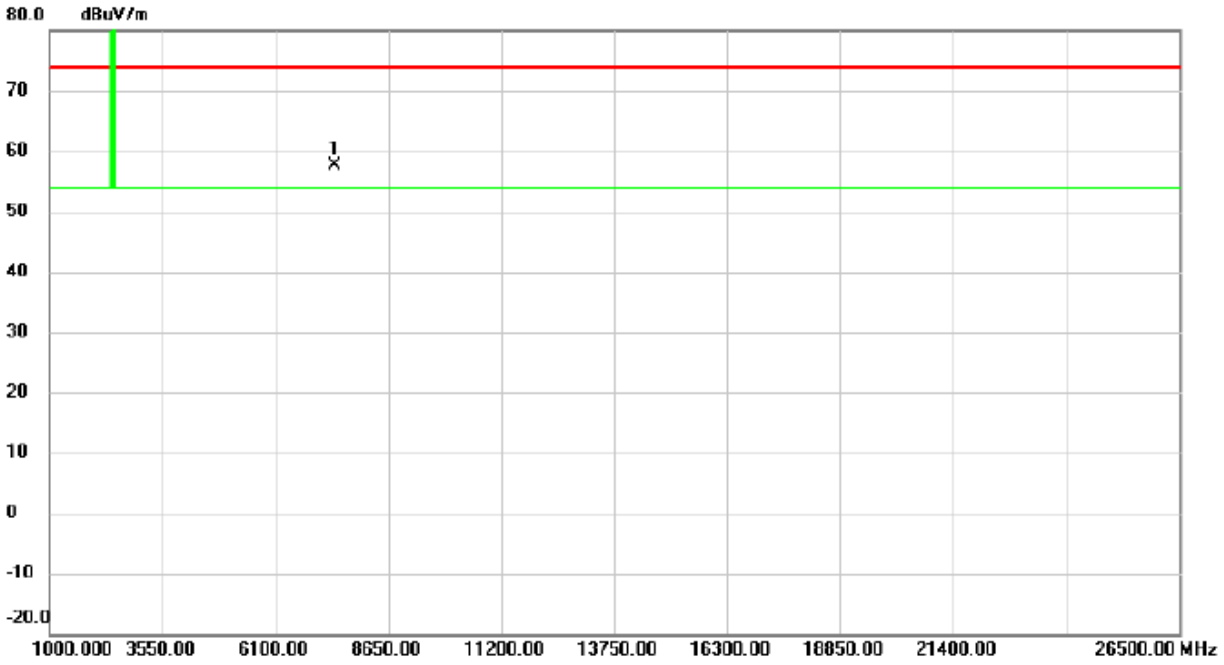


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2480.500	84.84	8.14	92.98	114.00	-21.02	peak	
2		2483.500	41.31	8.14	49.45	74.00	-24.55	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
2480.500	92.98	55.79	94.00	PASS
2483.500	49.45	12.26	54.00	PASS

Test Mode	TX 2480 MHz _CH78	Polarization	Vertical

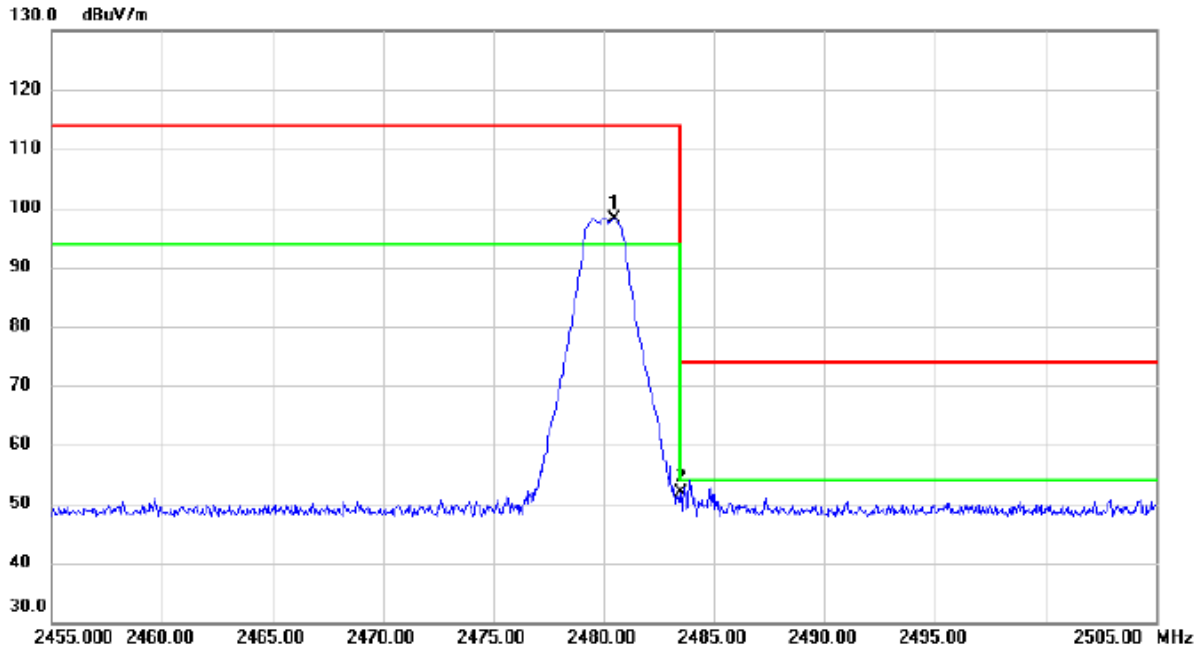


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7441.620	47.08	10.57	57.65	74.00	-16.35	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
7441.620	57.65	20.46	54.00	PASS

Test Mode	TX 2480 MHz _CH78	Polarization	Horizontal

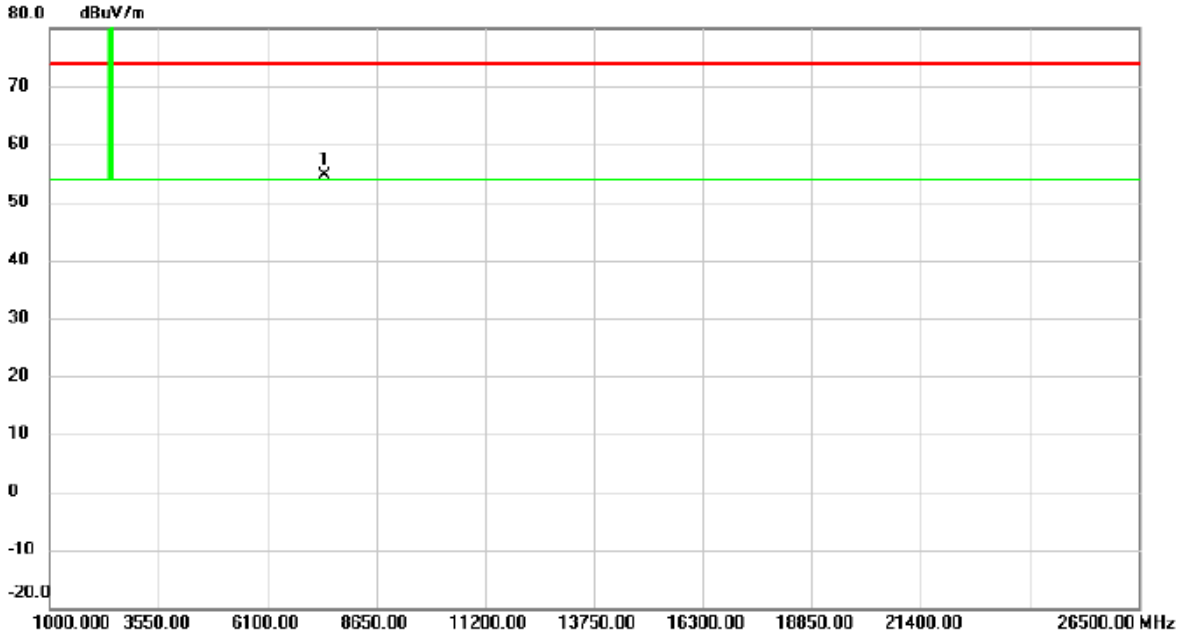


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	2480.500	90.09	8.14	98.23	114.00	-15.77	peak	
2		2483.500	43.69	8.14	51.83	74.00	-22.17	peak	

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

Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
2480.500	98.23	61.04	94.00	PASS
2483.500	51.83	14.64	54.00	PASS

Test Mode	TX 2480 MHz _CH78	Polarization	Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Margin		
		MHz	dBuV	dB	dBuV/m	dBuV/m	dB	Detector	Comment
1	*	7441.400	44.13	10.57	54.70	74.00	-19.30	peak	

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

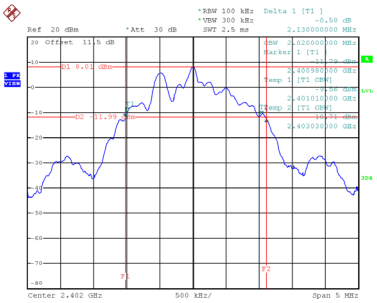
Frequency(MHz)	Peak Value(dBuV/m)	AV Value(dBuV/m)	AV Limit (dBuV/m)	Result
7441.400	54.70	17.51	54.00	PASS

APPENDIX E - BANDWIDTH

Test Mode	TX Mode

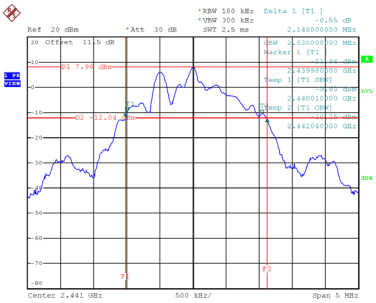
Channel	Frequency (MHz)	20 dB Bandwidth (MHz)	Result
00	2402	2.130	Complies
39	2441	2.140	Complies
78	2480	2.140	Complies

CH00



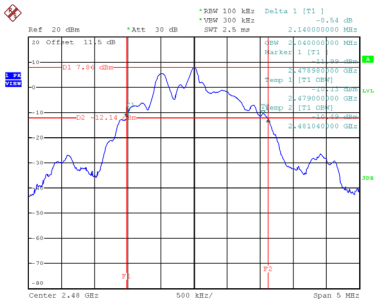
Date: 27.JUN.2022 12:50:52

CH39



Date: 27.JUN.2022 12:51:55

CH78



Date: 27.JUN.2022 12:53:06

End of Test Report