

FCC RADIO TEST REPORT

FCC ID: 2BBDD-3007

Product: ONYX DISPLAY

Trade Mark:  **PACE**
TECHNOLOGY

Model No.: 100-3007

Family Model: N/A

Report No.: N25062702332E

Issue Date: Aug. 07, 2025

Prepared for

Textron Specialized Vehicles Inc.

1451 Marvin Griffin Road Augusta Georgia 30906

Prepared by

Shenzhen NTEK Testing Technology Co., Ltd.

No. 24 Xinfu East Road, Xiangshan Community, Xinqiao Street,
Baoan District, Shenzhen, Guangdong, People's Republic of China

Tel. 0755-23200050 Website: <http://www.ntek.org.cn>

TEST RESULT CERTIFICATION

Applicant's name : Textron Specialized Vehicles Inc.
Address : 1451 Marvin Griffin Road Augusta Georgia 30906
Manufacturer's Name : Shenzhen Yitao Digital Technology Co.,Ltd
Address : 401, 101, Building#1, Jiancang Science Park,
Tantou Community, Songgang, Baoan District, Shenzhen

Product description

Product name : ONYX DISPLAY

Trademark : 

Model and/or type reference : 100-3007

Family Model : N/A

Test Sample Number : S2507030081-1#

Standards : FCC Part15.407

Test procedure : ANSI C63.10-2020+Cor 1-2023
KDB 789033 D02 General UNII Test Procedures New Rules v02r01
KDB 905462 D03 Client Without DFS New Rules v01r02
KDB 905462 D02 UNII DFS Compliance Procedures New Rules v02

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test

Date (s) of performance of tests Jun. 27, 2025 ~ Aug. 07, 2025

Date of Issue Aug. 07, 2025

Test Result **Pass**

Prepared By : 
Allen Liu
(Project Engineer)

Reviewed By : 
Aaron Cheng
(Supervisor)

Approved By : 
Alex Li
(Manager)

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Revision History

Report No.	Version	Description	Issued Date
N25062702332E	Rev.01	Initial issue of report	Aug. 07, 2025

1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.407) , Subpart E			
Standard Section	Test Item	Judgment	Remark
15.207	AC Power Line Conducted Emissions	PASS	
15.209(a), 15.407 (b)(1) 15.407 (b)(2) 15.407 (b)(3) 15.407 (b)(4) 15.407(b)(8)(9)	Spurious Radiated Emissions	PASS	
15.407 (a)	26 dB and 99% Emission Bandwidth	PASS	
15.407(e)	Minimum 6 dB bandwidth	PASS	
15.407 (a)	Maximum Conducted Output Power	PASS	
15.407 (b)(1) 15.407 (b)(2) 15.407 (b)(3) 15.407 (b)(4)	Band Edge	PASS	
15.407 (a)	Power Spectral Density	PASS	
15.407(b)	Spurious Emissions at Antenna Terminals	PASS	
15.407(g)	Frequency Stability Measurement	PASS	
15.407(h)	Dynamic Frequency Selection(DFS)	PASS	
15.203	Antenna Requirement	PASS	
15.407(c)	Automatically discontinue transmission	PASS	(Note 3)

NOTE:

- (1) "N/A" denotes test is not applicable in this Test Report
- (2) This device operates with a duty cycle greater than 99%
- (3) The product is a client device, and the data transmission is limited by the AP. When the information to be sent is missing or the operation fails, the device will automatically stop sending and directly connect to the AP correctly again.

1.1 FACILITIES AND ACCREDITATIONS

FACILITIES

All measurement facilities used to collect the measurement data are located at
No. 24 Xinfu East Road, Xiangshan Community, Xinqiao Street, Baoan District, Shenzhen, Guangdong,
People's Republic of China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.10 and CISPR Publication 22.

LABORATORY ACCREDITATIONS AND LISTINGS

Site Description

CNAS-Lab. : The Certificate Registration Number is L5516.

IC-Registration : The Certificate Registration Number is 9270A.
CAB identifier: CN0074

FCC- Accredited : Test Firm Registration Number: 463705.
Designation Number: CN1184

A2LA-Lab. : The Certificate Registration Number is 4298.01

Name of Firm : Shenzhen NTEK Testing Technology Co., Ltd.

Site Location : No. 24 Xinfu East Road, Xiangshan Community, Xinqiao Street, Baoan District,
Shenzhen, Guangdong, People's Republic of China

1.2 MEASUREMENT UNCERTAINTY

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

No.	Item	Uncertainty
1	Conducted Emission Test	$\pm 2.80\text{dB}$
2	RF power, conducted	$\pm 0.16\text{dB}$
3	Spurious emissions, conducted	$\pm 0.21\text{dB}$
4	All emissions, radiated(9KHz~30MHz)	$\pm 6\text{dB}$
5	All emissions, radiated(30MHz~1GHz)	$\pm 2.64\text{dB}$
6	All emissions, radiated(1GHz~6GHz)	$\pm 2.40\text{dB}$
7	All emissions, radiated(> 6GHz)	$\pm 2.52\text{dB}$
8	Temperature	$\pm 0.5^\circ\text{C}$
9	Humidity	$\pm 2\%$
10	Radio Frequency	$\pm 0.2\text{ppm}$
11	Occupied bandwidth	$\pm 3.7\%$

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Equipment	ONYX DISPLAY																		
Trade Mark																			
Model Name	100-3007																		
Family Model	N/A																		
Model Difference	N/A																		
FCC ID	2BBDD-3007																		
Product Description	<table border="1"> <tr> <td>Mode Supported</td><td> ☒ 802.11a ☒ 802.11n(HT20) ☒ 802.11n(HT40) ☒ 802.11ac(HT20) ☒ 802.11ac(HT40) ☒ 802.11ac(HT80) </td></tr> <tr> <td>Data Rate</td><td> 802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20): NSS1, MCS0-MCS8 802.11ac(VHT40/VHT80):NSS1, MCS0-MCS9 </td></tr> <tr> <td>Modulation</td><td>OFDM with BPSK/QPSK/16QAM/64QAM/256QAM</td></tr> <tr> <td>Operating Frequency Range</td><td> ☒ U-NII-1: 5150 MHz ~5250MHz ☒ U-NII-2A: 5250MHz~5350MHz ☒ U-NII-2C: 5470MHz~5725MHz ☒ U-NII-3: 5725 MHz ~5850 MHz </td></tr> <tr> <td>Function:</td><td> ☐ Outdoor AP ☐ Indoor AP ☐ Fixed P2P ☒ Client </td></tr> <tr> <td>DFS type:</td><td> ☐ master devices ☐ Slave devices with radar detection ☒ Slave devices without radar detection </td></tr> <tr> <td>Support TPC</td><td> ☐ YES ☒ NO </td></tr> <tr> <td>Antenna Type</td><td>FPC Antenna</td></tr> <tr> <td>Antenna Gain</td><td>2.71 dBi</td></tr> </table> Based on the application, features, or specification exhibited in User's Manual, More details of EUT technical specification, please refer to the User's Manual.	Mode Supported	☒ 802.11a ☒ 802.11n(HT20) ☒ 802.11n(HT40) ☒ 802.11ac(HT20) ☒ 802.11ac(HT40) ☒ 802.11ac(HT80)	Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20): NSS1, MCS0-MCS8 802.11ac(VHT40/VHT80):NSS1, MCS0-MCS9	Modulation	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM	Operating Frequency Range	☒ U-NII-1: 5150 MHz ~5250MHz ☒ U-NII-2A: 5250MHz~5350MHz ☒ U-NII-2C: 5470MHz~5725MHz ☒ U-NII-3: 5725 MHz ~5850 MHz	Function:	☐ Outdoor AP ☐ Indoor AP ☐ Fixed P2P ☒ Client	DFS type:	☐ master devices ☐ Slave devices with radar detection ☒ Slave devices without radar detection	Support TPC	☐ YES ☒ NO	Antenna Type	FPC Antenna	Antenna Gain	2.71 dBi
Mode Supported	☒ 802.11a ☒ 802.11n(HT20) ☒ 802.11n(HT40) ☒ 802.11ac(HT20) ☒ 802.11ac(HT40) ☒ 802.11ac(HT80)																		
Data Rate	802.11a: 6,9,12,18,24,36,48,54Mbps; 802.11n(HT20/HT40):MCS0-MCS15; 802.11ac(VHT20): NSS1, MCS0-MCS8 802.11ac(VHT40/VHT80):NSS1, MCS0-MCS9																		
Modulation	OFDM with BPSK/QPSK/16QAM/64QAM/256QAM																		
Operating Frequency Range	☒ U-NII-1: 5150 MHz ~5250MHz ☒ U-NII-2A: 5250MHz~5350MHz ☒ U-NII-2C: 5470MHz~5725MHz ☒ U-NII-3: 5725 MHz ~5850 MHz																		
Function:	☐ Outdoor AP ☐ Indoor AP ☐ Fixed P2P ☒ Client																		
DFS type:	☐ master devices ☐ Slave devices with radar detection ☒ Slave devices without radar detection																		
Support TPC	☐ YES ☒ NO																		
Antenna Type	FPC Antenna																		
Antenna Gain	2.71 dBi																		
Adapter	N/A																		
Battery	12.8V, 3000mAh,38.4Wh																		
Rating	DC 12.8V from battery or DC 12V																		
Connecting I/O Port(s)	Please refer to the User's Manual																		
HW Version	N/A																		
FW version:	N/A																		
SW Version	N/A																		

Note:

- For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- Frequency and Channel list:

Band	20MHz		40MHz		80MHz	
	Channel	Frequency	Channel	Frequency	Channel	Frequency
U-NII-1	36	5180 MHz	38	5190 MHz	42	5210 MHz
	40	5200 MHz	46	5230 MHz	-	-
	44	5220 MHz				
	48	5240 MHz				
U-NII-2A	52	5260 MHz	54	5270 MHz	58	5290 MHz
	56	5280 MHz	62	5310 MHz		
	60	5300 MHz				
	64	5320 MHz				
U-NII-2C	100	5500 MHz	102	5510 MHz	106	5530 MHz
	104	5520 MHz	110	5550 MHz	122	5610 MHz
	108	5540 MHz	118	5590 MHz		
	112	5560 MHz	126	5630 MHz		
	116	5580 MHz	134	5670 MHz		
	120	5600 MHz				
	124	5620 MHz				
	128	5640 MHz				
	132	5660 MHz				
	136	5680 MHz				
	140	5700 MHz				
U-NII-3	149	5745 MHz	151	5755 MHz	155	5775 MHz
	153	5765 MHz	159	5795 MHz		
	157	5785 MHz				
	161	5805 MHz				
	165	5825 MHz				

2.2 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.

For Radiated Emission	
Final Test Mode	Description
Mode 1	Normal Link Mode
Mode 2	802.11a / n/ ac 20 CH36/ CH40/ CH48/CH52/CH56/CH64/CH100/CH120/CH140/CH149/ CH157/CH165
Mode 3	802.11n40/ac40 CH38/CH46/CH54/CH62/CH102/CH118/CH134/CH151/ CH159
Mode 4	802.11ac80 CH42/CH58/CH106/CH122/CH155

For Conducted Emission	
Final Test Mode	Description
Mode 1	Normal Link Mode
Mode 2	802.11a / n/ ac 20 CH36/ CH40/ CH48/CH52/CH56/CH64/CH100/CH120/CH140/CH149/ CH157/CH165
Mode 3	802.11n40/ac40 CH38/CH46/CH54/CH62/CH102/CH118/CH134/CH151/ CH159
Mode 4	802.11ac80 CH42/CH58/CH106/CH122/CH155

Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

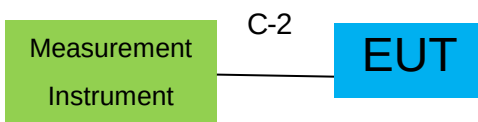
For AC Conducted Emission Mode



For Radiated Test Cases



For Conducted Test Cases



Note:1.The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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	Model/Type No.	Series No.	Note
AE-1	ONYX DISPLAY	100-3007	N/A	EUT
AE-2	Adapter	N/A	N/A	Peripherals

Item	Cable Type	Shielded Type	Ferrite Core	Length
C-1	DC Cable	YES	NO	1.0m
C-2	RF Cable	YES	NO	0.1m

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation& Conducted Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Spectrum Analyzer	Agilent	E4440A	MY41000130	2025.04.24	2026.04.23	1 year
2	Spectrum Analyzer	Agilent	N9020A	MY49100060	2025.04.17	2026.04.16	1 year
3	Spectrum Analyzer	R&S	FSV40	101417	2025.04.17	2026.04.16	1 year
4	Test Receiver	R&S	ESPI7	101318	2025.04.17	2026.04.16	1 year
5	Bilog Antenna	TESEQ	CBL6111D	31216	2025.04.17	2026.04.16	1 year
6	50Ω Coaxial Switch	Anritsu	MP59B	6200983705	2024.04.26	2027.04.25	3 year
7	Horn Antenna	EM	EM-AH-10180	2011071402	2024.05.12	2027.05.11	3 year
8	Broadband Horn Antenna	SCHWARZBECK	BBHA 9170	803	2024.05.12	2027.05.11	3 year
9	Amplifier	EMC	EMC051835SE	980246	2025.04.17	2026.04.16	1 year
10	Active Loop Antenna	SCHWARZBECK	FMZB 1519B	055	2024.05.17	2027.05.16	3 year
11	Power Meter	DARE	RPR3006W	15I00041SN084	2025.04.17	2026.04.16	1 year
12	Test Cable (9KHz-30MHz)	N/A	R-01	N/A	2023.05.06	2026.05.05	3 year
13	Test Cable (30MHz-1GHz)	N/A	R-02	N/A	2023.05.06	2026.05.05	3 year
14	High Test Cable(1G-40GHz)	N/A	R-03	N/A	2023.05.06	2026.05.05	3 year
15	Filter	TRILTHIC	2400MHz	29	2024.04.26	2027.04.25	3 year
16	temporary antenna connector (Note)	NTS	R001	N/A	N/A	N/A	N/A

Note:

We will use the temporary antenna connector (soldered on the PCB board) When conducted test
And this temporary antenna connector is listed within the instrument list

AC Conduction Test equipment

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Test Receiver	R&S	ESCI	101160	2025.04.17	2026.04.16	1 year
2	LISN	R&S	ENV216	101313	2025.04.16	2026.04.15	1 year
3	LISN	SCHWARZBECK	NNLK 8129	8129245	2025.04.16	2026.04.15	1 year
4	50Ω Coaxial Switch	ANRITSU CORP	MP59B	6200983704	2024.04.26	2027.04.25	3 year
5	Test Cable (9KHz-30MHz)	N/A	C01	N/A	2023.05.06	2026.05.05	3 year
6	Test Cable (9KHz-30MHz)	N/A	C02	N/A	2023.05.06	2026.05.05	3 year
7	Test Cable (9KHz-30MHz)	N/A	C03	N/A	2023.05.06	2026.05.05	3 year

Note: Each piece of equipment is scheduled for calibration once a year except the Aux Equipment & Test Cable which is scheduled for calibration every 2 or 3 years.

Measurement Software

Item	Manufacturer	Software Name	Software Version	Description
1	MWRFtest	MTS 8310 2.4GHz/5GHz	2.0	RF Conducted Test
2	Farad	EZ-EMC_RE	AIT-03A	RadiatedTest
3	Farad	EZ-EMC_CE	AIT-03A	AC Conducted Test

3. EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 APPLICABLE STANDARD

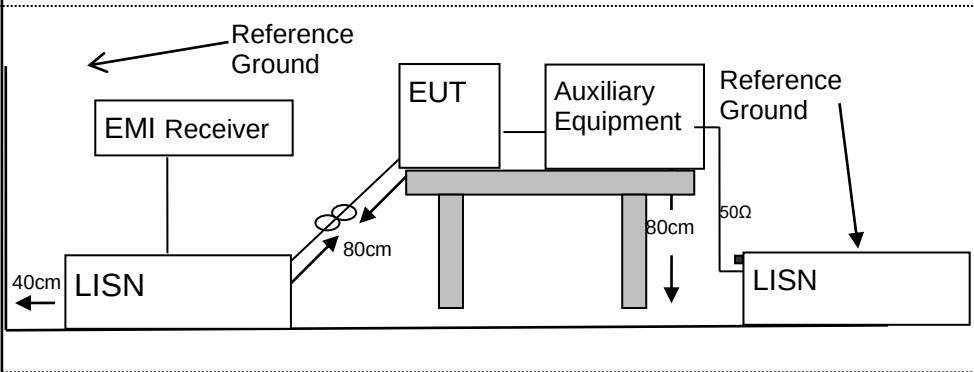
According to FCC Part 15.207(a)

3.1.2 CONFORMANCE LIMIT

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

Note: 1. *Decreases with the logarithm of the frequency
 2. The lower limit shall apply at the transition frequencies
 3. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

3.1.3 TEST CONFIGURATION



3.1.4 TEST PROCEDURE

According to the requirements in Section 13.1.4.1 of ANSI C63.10 Conducted emissions the EUT measured in the frequency range between 0.15 MHz and 30 MHz using CISPR Quasi-Peak and average detector mode.

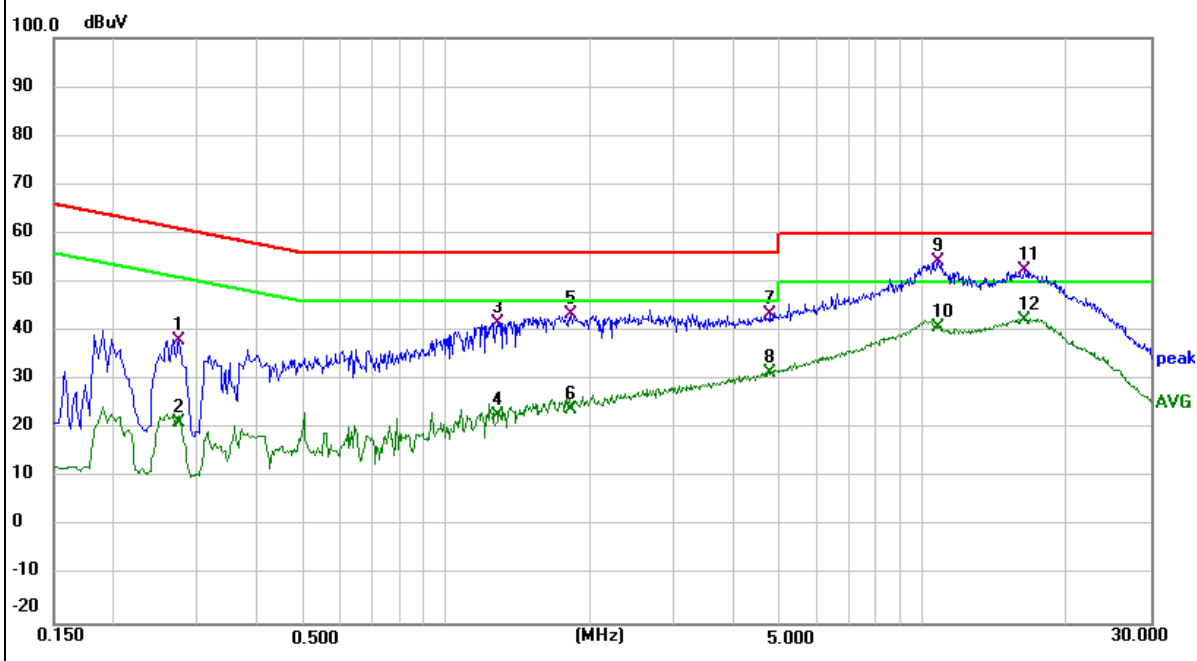
1. The EUT was placed 0.4 meter from the conducting wall of the shielding room.
2. The EUT was placed on a table which is 0.8m above ground plane.
3. Connect EUT to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
4. 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 40cm long.
5. 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.
6. LISN at least 80 cm from nearest part of EUT chassis.
7. The frequency range from 150KHz to 30MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth(IF bandwidth=9KHz) with Maximum Hold Mode
9. For the actual test configuration, please refer to the related Item –EUT Test Photos.

EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	24.1℃	Relative Humidity :	64.3%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.2G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.2740	28.00	10.19	38.19	61.00	-22.81	QP
0.2740	11.16	10.19	21.35	51.00	-29.65	AVG
1.2860	29.44	12.28	41.72	56.00	-14.28	QP
1.2860	10.40	12.28	22.68	46.00	-23.32	AVG
1.8260	29.98	13.35	43.33	56.00	-12.67	QP
1.8260	10.60	13.35	23.95	46.00	-22.05	AVG
4.7819	33.59	9.75	43.34	56.00	-12.66	QP
4.7819	21.66	9.75	31.41	46.00	-14.59	AVG
10.7420	44.35	9.85	54.20	60.00	-5.80	QP
10.7420	30.80	9.85	40.65	50.00	-9.35	AVG
16.3420	42.43	9.99	52.42	60.00	-7.58	QP
16.3420	32.36	9.99	42.35	50.00	-7.65	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

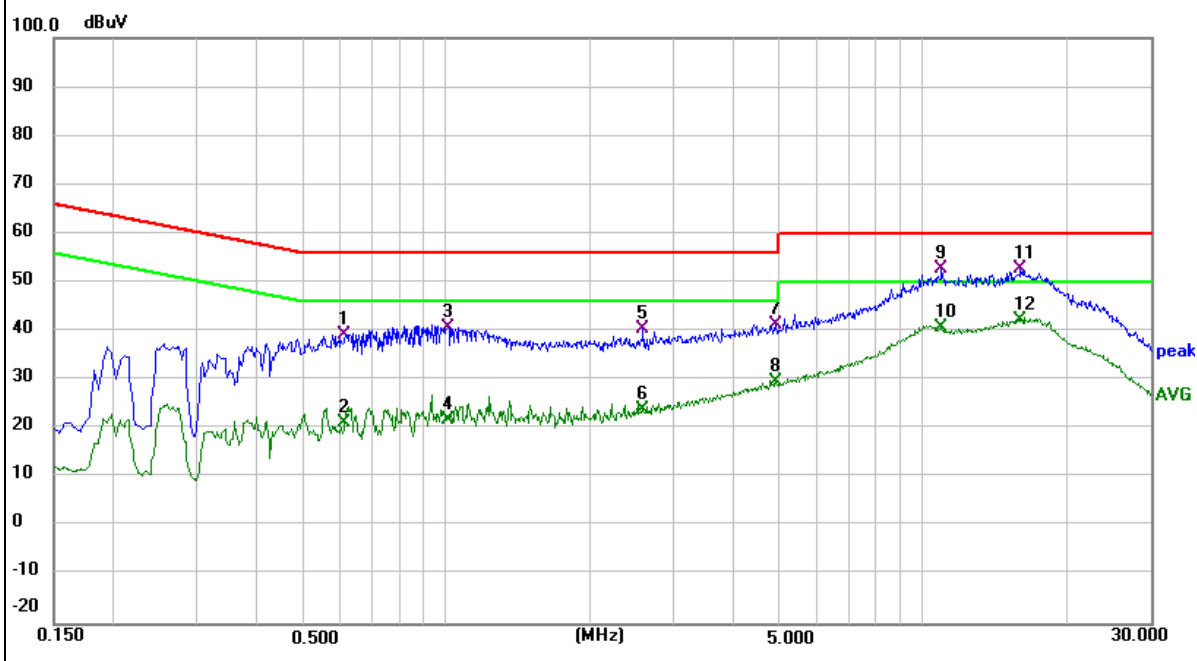


EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	24.4℃	Relative Humidity :	64.3%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.2G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.6100	28.54	10.86	39.40	56.00	-16.60	QP
0.6100	10.26	10.86	21.12	46.00	-24.88	AVG
1.0060	29.07	11.70	40.77	56.00	-15.23	QP
1.0060	10.11	11.70	21.81	46.00	-24.19	AVG
2.5860	25.47	14.88	40.35	56.00	-15.65	QP
2.5860	9.21	14.88	24.09	46.00	-21.91	AVG
4.9100	31.66	9.73	41.39	56.00	-14.61	QP
4.9100	19.97	9.73	29.70	46.00	-16.30	AVG
10.9420	42.80	9.86	52.66	60.00	-7.34	QP
10.9420	30.94	9.86	40.80	50.00	-9.20	AVG
15.9700	42.63	10.02	52.65	60.00	-7.35	QP
15.9700	32.24	10.02	42.26	50.00	-7.74	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

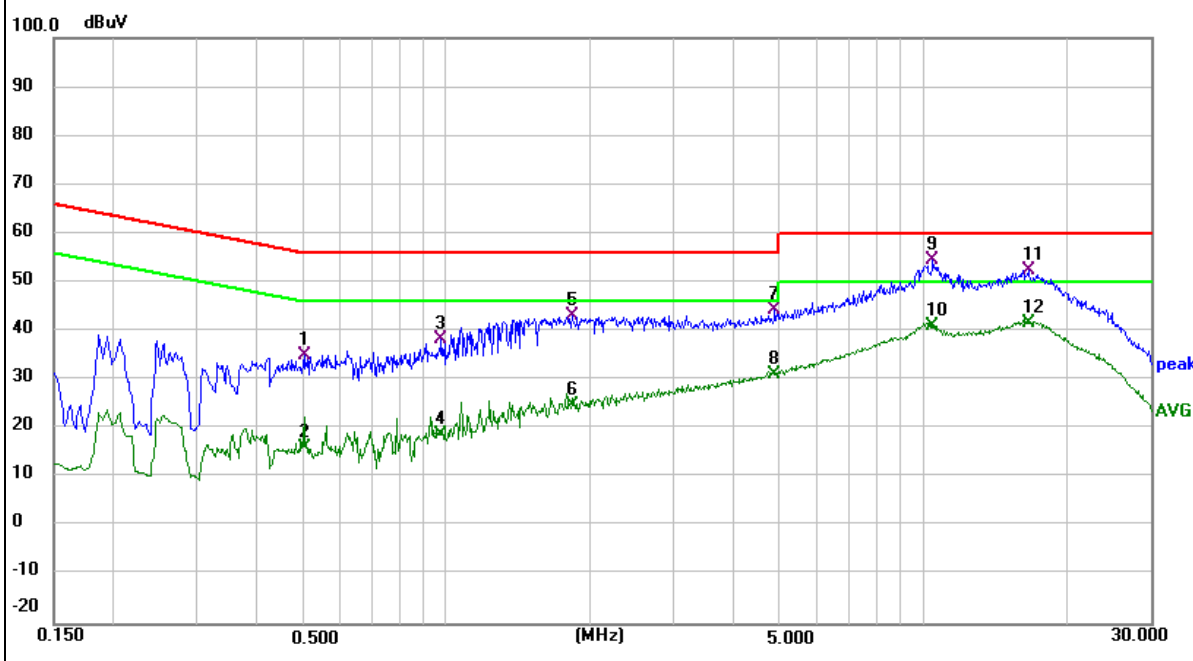


EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	24.1℃	Relative Humidity :	64.3%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.3G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.5020	24.45	10.64	35.09	56.00	-20.91	QP
0.5020	5.57	10.64	16.21	46.00	-29.79	AVG
0.9740	26.72	11.64	38.36	56.00	-17.64	QP
0.9740	7.18	11.64	18.82	46.00	-27.18	AVG
1.8300	29.69	13.35	43.04	56.00	-12.96	QP
1.8300	11.41	13.35	24.76	46.00	-21.24	AVG
4.8859	34.63	9.75	44.38	56.00	-11.62	QP
4.8859	21.34	9.75	31.09	46.00	-14.91	AVG
10.4780	44.79	9.84	54.63	60.00	-5.37	QP
10.4780	31.19	9.84	41.03	50.00	-8.97	AVG
16.6340	42.58	10.00	52.58	60.00	-7.42	QP
16.6340	31.78	10.00	41.78	50.00	-8.22	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

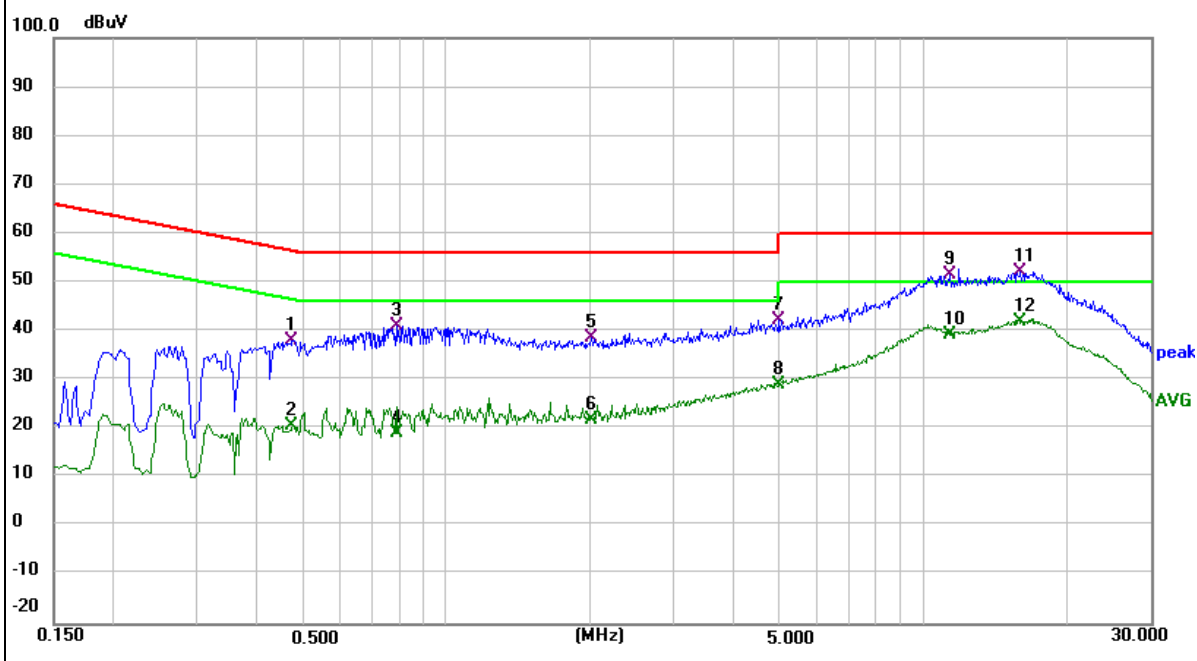


EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	24.1℃	Relative Humidity :	64.3%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.3G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.4740	27.54	10.57	38.11	56.44	-18.33	QP
0.4740	9.97	10.57	20.54	46.44	-25.90	AVG
0.7860	29.80	11.24	41.04	56.00	-14.96	QP
0.7860	8.03	11.24	19.27	46.00	-26.73	AVG
2.0140	24.95	13.71	38.66	56.00	-17.34	QP
2.0140	8.15	13.71	21.86	46.00	-24.14	AVG
4.9860	32.61	9.73	42.34	56.00	-13.66	QP
4.9860	19.24	9.73	28.97	46.00	-17.03	AVG
11.4180	41.53	9.88	51.41	60.00	-8.59	QP
11.4180	29.52	9.88	39.40	50.00	-10.60	AVG
15.9740	42.04	10.02	52.06	60.00	-7.94	QP
15.9740	31.97	10.02	41.99	50.00	-8.01	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

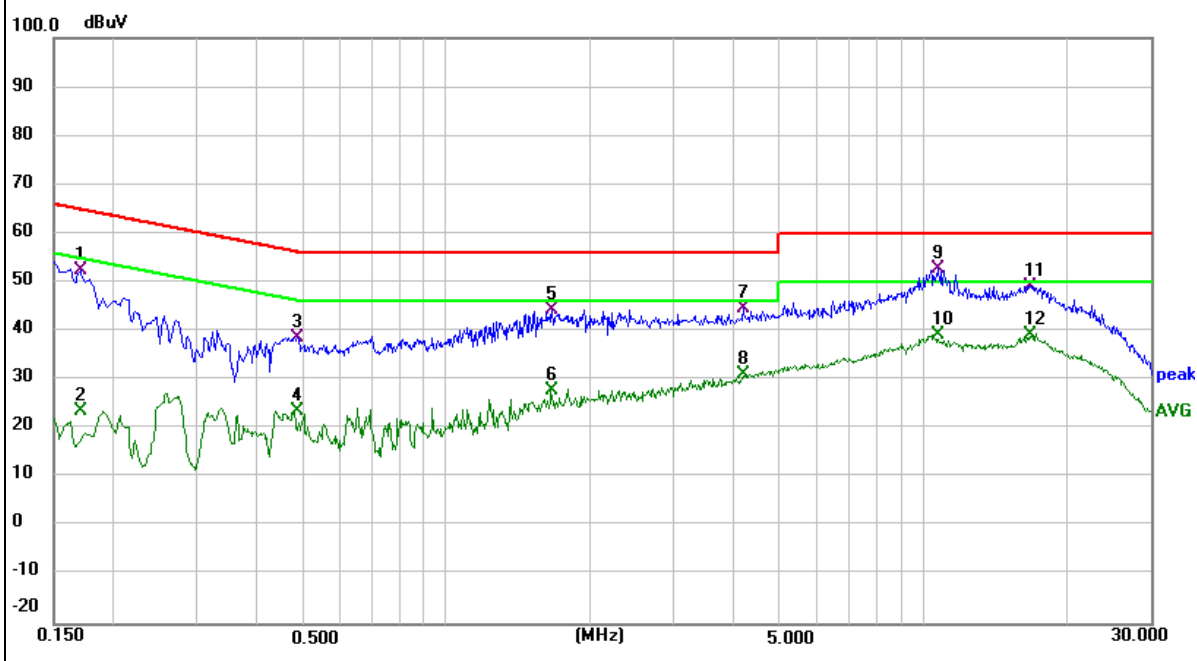


EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	24.1℃	Relative Humidity :	64.3%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.6G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.1700	42.55	9.98	52.53	64.96	-12.43	QP
0.1700	13.74	9.98	23.72	54.96	-31.24	AVG
0.4860	28.08	10.62	38.70	56.24	-17.54	QP
0.4860	13.17	10.62	23.79	46.24	-22.45	AVG
1.6700	31.23	13.03	44.26	56.00	-11.74	QP
1.6700	14.82	13.03	27.85	46.00	-18.15	AVG
4.1820	34.88	9.74	44.62	56.00	-11.38	QP
4.1820	21.30	9.74	31.04	46.00	-14.96	AVG
10.7460	42.82	9.85	52.67	60.00	-7.33	QP
10.7460	29.29	9.85	39.14	50.00	-10.86	AVG
16.8340	39.23	10.00	49.23	60.00	-10.77	QP
16.8340	29.37	10.00	39.37	50.00	-10.63	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

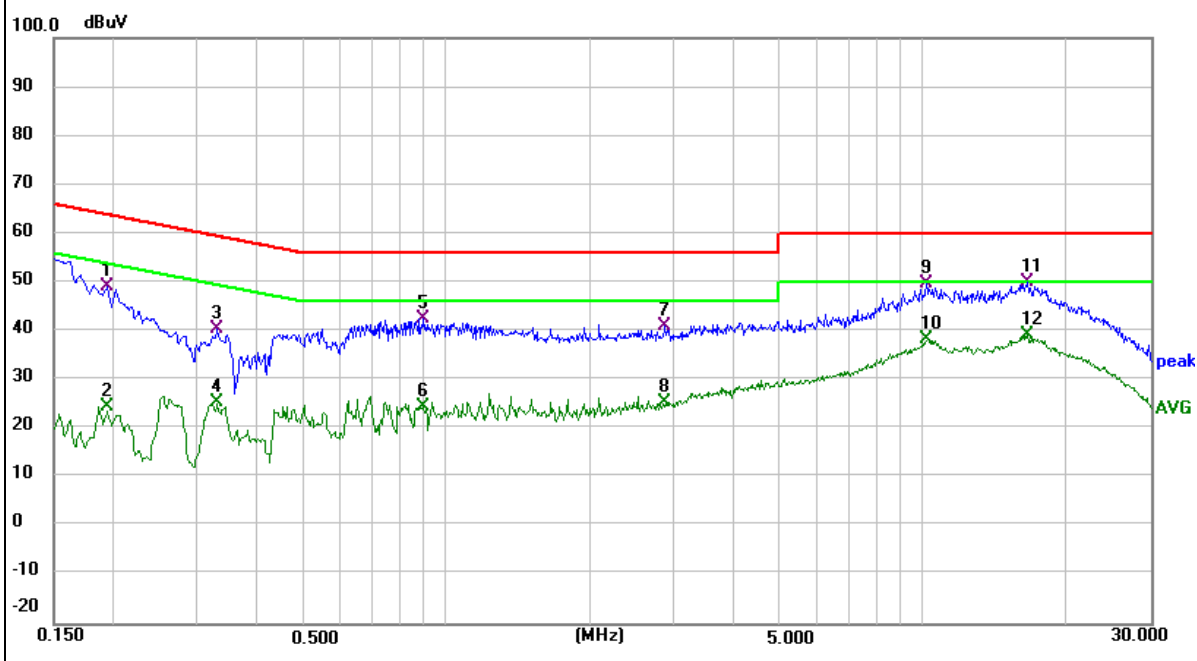


EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	24.1℃	Relative Humidity :	64.3%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.6G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.1940	39.16	10.00	49.16	63.86	-14.70	QP
0.1940	14.69	10.00	24.69	53.86	-29.17	AVG
0.3300	30.29	10.29	40.58	59.45	-18.87	QP
0.3300	15.22	10.29	25.51	49.45	-23.94	AVG
0.8980	31.03	11.47	42.50	56.00	-13.50	QP
0.8980	13.09	11.47	24.56	46.00	-21.44	AVG
2.8780	25.55	15.47	41.02	56.00	-14.98	QP
2.8780	9.84	15.47	25.31	46.00	-20.69	AVG
10.1300	50.06	-0.30	49.76	60.00	-10.24	QP
10.1300	38.70	-0.30	38.40	50.00	-11.60	AVG
16.4860	40.06	10.02	50.08	60.00	-9.92	QP
16.4860	29.32	10.02	39.34	50.00	-10.66	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

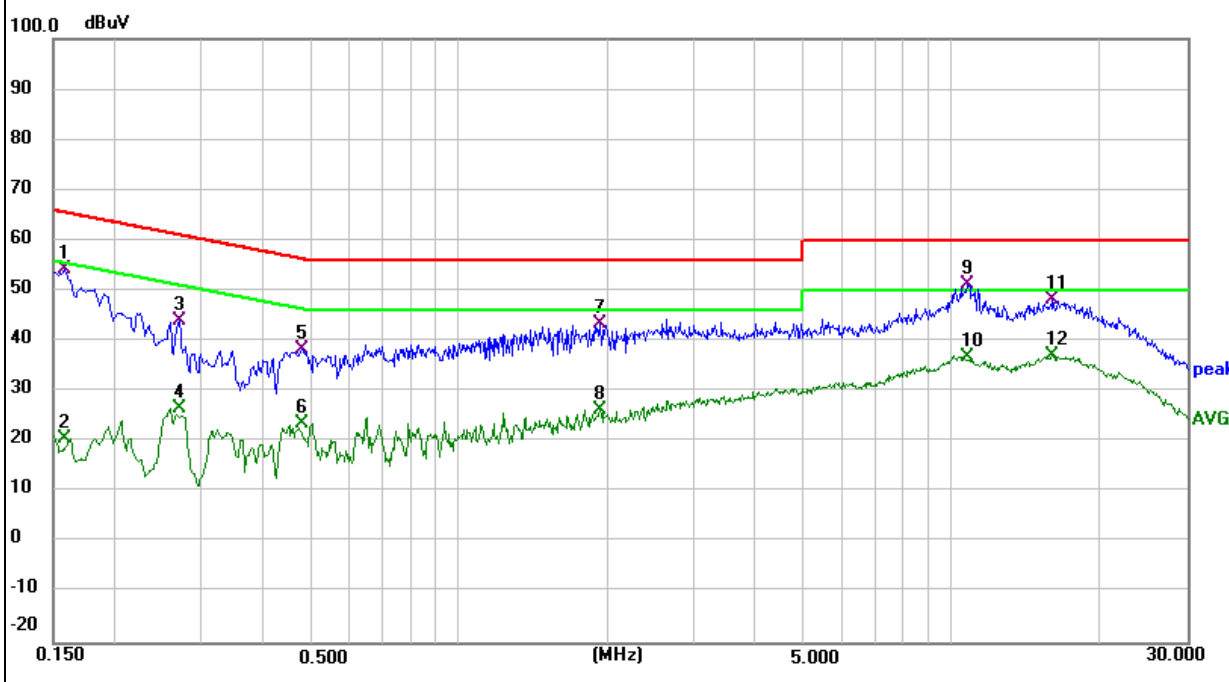


EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	24.1 °C	Relative Humidity :	64.3%
Pressure :	1010hPa	Phase :	L
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.8G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.1580	44.17	9.96	54.13	65.57	-11.44	QP
0.1580	10.72	9.96	20.68	55.57	-34.89	AVG
0.2700	33.73	10.19	43.92	61.12	-17.20	QP
0.2700	16.35	10.19	26.54	51.12	-24.58	AVG
0.4780	27.84	10.60	38.44	56.37	-17.93	QP
0.4780	13.18	10.60	23.78	46.37	-22.59	AVG
1.9380	29.79	13.57	43.36	56.00	-12.64	QP
1.9380	12.74	13.57	26.31	46.00	-19.69	AVG
10.7820	41.52	9.85	51.37	60.00	-8.63	QP
10.7820	27.02	9.85	36.87	50.00	-13.13	AVG
16.0260	38.19	9.99	48.18	60.00	-11.82	QP
16.0260	27.12	9.99	37.11	50.00	-12.89	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

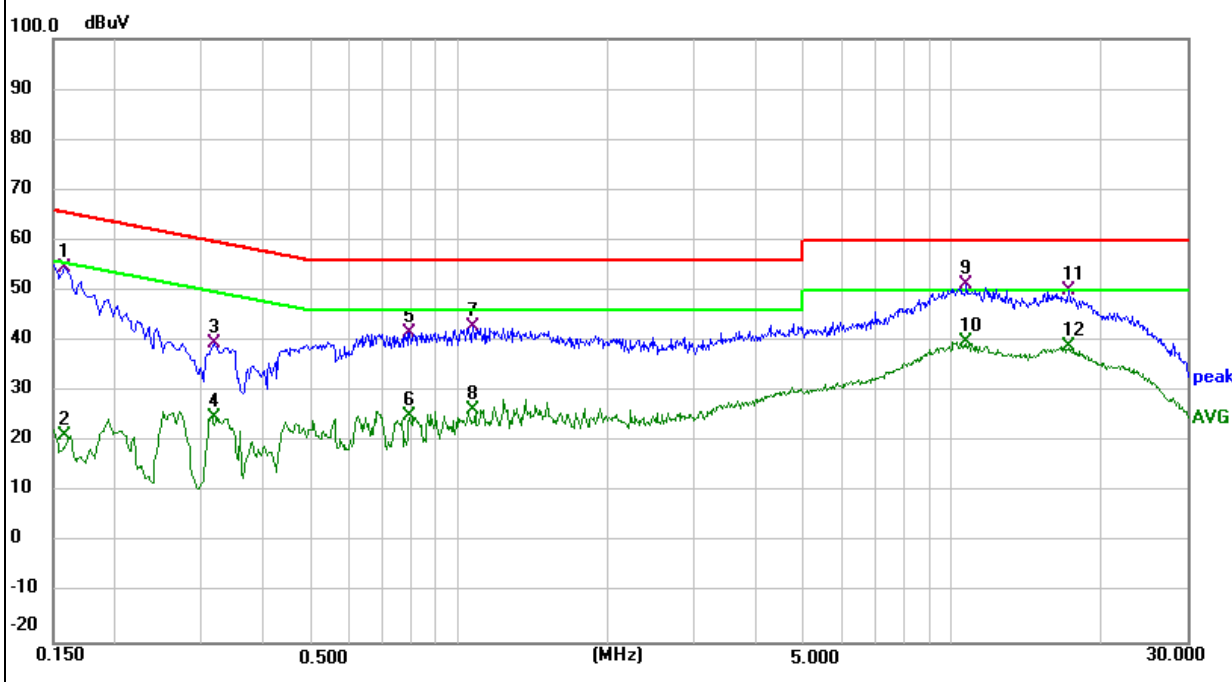


EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	24.1 °C	Relative Humidity :	64.3%
Pressure :	1010hPa	Phase :	N
Test Voltage :	DC 12V from Adapter AC 120V/60Hz	Test Mode :	Mode 1(5.8G)

Frequency (MHz)	Reading Level (dBμV)	Correct Factor (dB)	Measure-ment (dBμV)	Limits (dBμV)	Margin (dB)	Remark
0.1580	44.65	9.94	54.59	65.57	-10.98	QP
0.1580	11.37	9.94	21.31	55.57	-34.26	AVG
0.3180	29.30	10.27	39.57	59.76	-20.19	QP
0.3180	14.67	10.27	24.94	49.76	-24.82	AVG
0.7940	30.38	11.24	41.62	56.00	-14.38	QP
0.7940	13.99	11.24	25.23	46.00	-20.77	AVG
1.0700	31.07	11.82	42.89	56.00	-13.11	QP
1.0700	14.47	11.82	26.29	46.00	-19.71	AVG
10.6780	41.35	9.85	51.20	60.00	-8.80	QP
10.6780	30.15	9.85	40.00	50.00	-10.00	AVG
17.2540	39.92	10.03	49.95	60.00	-10.05	QP
17.2540	28.78	10.03	38.81	50.00	-11.19	AVG

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 APPLICABLE STANDARD

According to FCC Part 15.407 and 15.209

3.2.2 CONFORMANCE LIMIT

According to FCC Part 15.407: radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

According to FCC Part 15.205, Restricted bands

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	(2)
13.36-13.41			

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.

Restricted Frequency(MHz)	Field Strength (μV/m)	Field Strength (dBμV/m)	Measurement Distance
0.009~0.490	2400/F(KHz)	20 log (uV/m)	300
0.490~1.705	24000/F(KHz)	20 log (uV/m)	30
1.705~30.0	30	29.5	30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

Limits of Radiated Emission Measurement(Above 1000MHz)

Frequency(MHz)	Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Remark :1. Emission level in dBuV/m=20 log (uV/m)

2. Measurement was performed at an antenna to the closed point of EUT distance of meters.

3. For Frequency 9kHz~30MHz:

Distance extrapolation factor =40log(Specific distance/ test distance)(dB);

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

For Frequency above 30MHz:

Distance extrapolation factor =20log(Specific distance/ test distance)(dB);

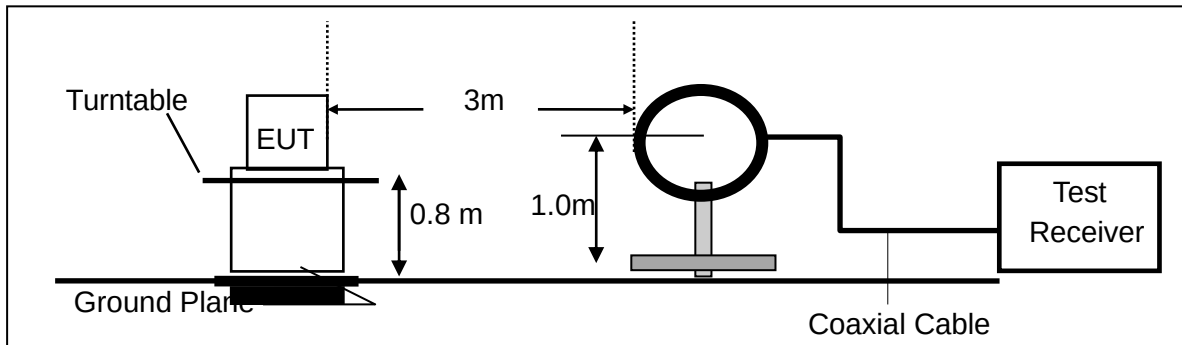
Limit line=Specific limits(dBuV) + distance extrapolation factor.

3.2.3 MEASURING INSTRUMENTS

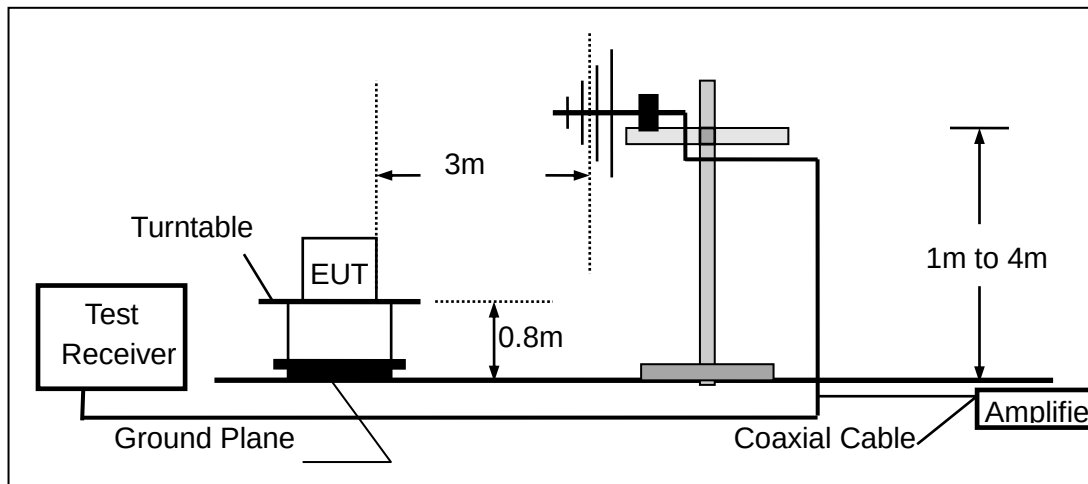
The Measuring equipment is listed in the section 6.3 of this test report.

3.2.4 TEST CONFIGURATION

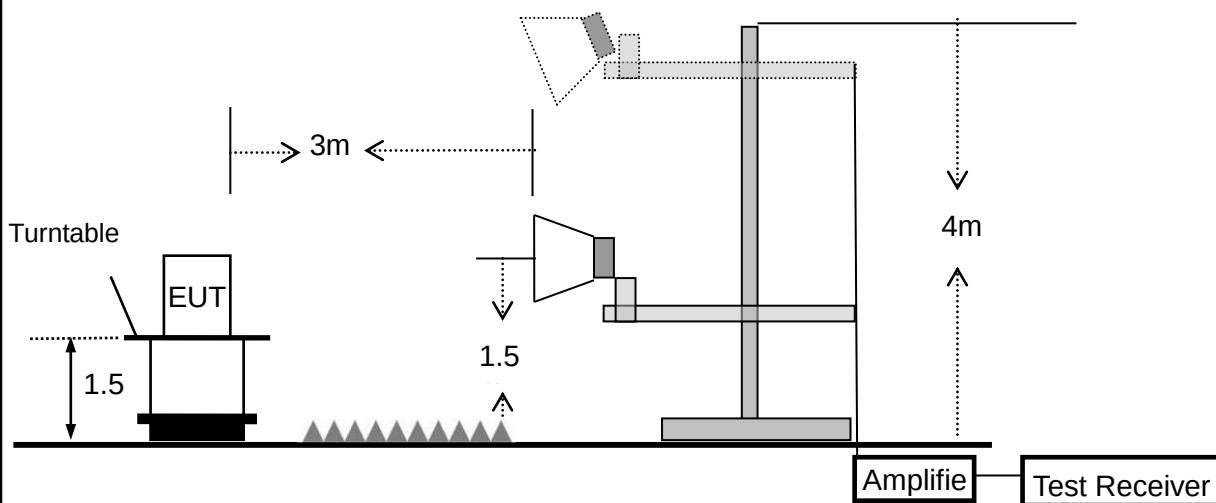
(a) For radiated emissions below 30MHz



(b) For radiated emissions from 30MHz to 1000MHz



(c) For radiated emissions above 1000MHz



3.2.5 TEST PROCEDURE

The test site semi-anechoic chamber has met the requirement of NSA tolerance 4 dB according to the standards: ANSI C63.10. The test distance is 3m. The setup is according to the requirements in Section 13.1.4.1 of ANSI C63.10 and CAN/CSA-CEI/IEC CISPR 22.

This test is required for any spurious emission that falls in a Restricted Band, as defined in Section 15.205. It must be performed with the highest gain of each type of antenna proposed for use with the EUT.

Use the following spectrum analyzer settings:

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RB / VB (emission in restricted band)	1 MHz / 1 MHz for Peak, 1 MHz / 10Hz for Average

Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9kHz~150kHz / RB 200Hz for QP
Start ~ Stop Frequency	150kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 m for below 1GHz and 1.5m for above 1GHz the ground at a 3 meter. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m for below 1GHz and 1.5m for above 1GHz; 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.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

Frequency Band (MHz)	Function	Resolution bandwidth	Video Bandwidth
30 to 1000	QP	120 kHz	300 kHz
Above 1000	Peak	1 MHz	1 MHz
	Average	1 MHz	10 Hz

Note: for the frequency ranges below 30 MHz, a narrower RBW is used for these ranges but the measured value should add a RBW correction factor (RBWCF) where $RBWCF [dB] = 10 \cdot \lg(100 [kHz] / \text{narrower RBW [kHz]})$. , the narrower RBW is 1 kHz and RBWCF is 20 dB for the frequency 9 kHz to 150 kHz, and the narrower RBW is 10 kHz and RBWCF is 10 dB for the frequency 150 kHz to 30 MHz.

3.2.6 TEST RESULTS (9KHZ – 30 MHZ)

EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	26 °C	Relative Humidity :	54%
Pressure:	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX	Polarization :	--

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	N/A
--	--	--	--	N/A

NOTE:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

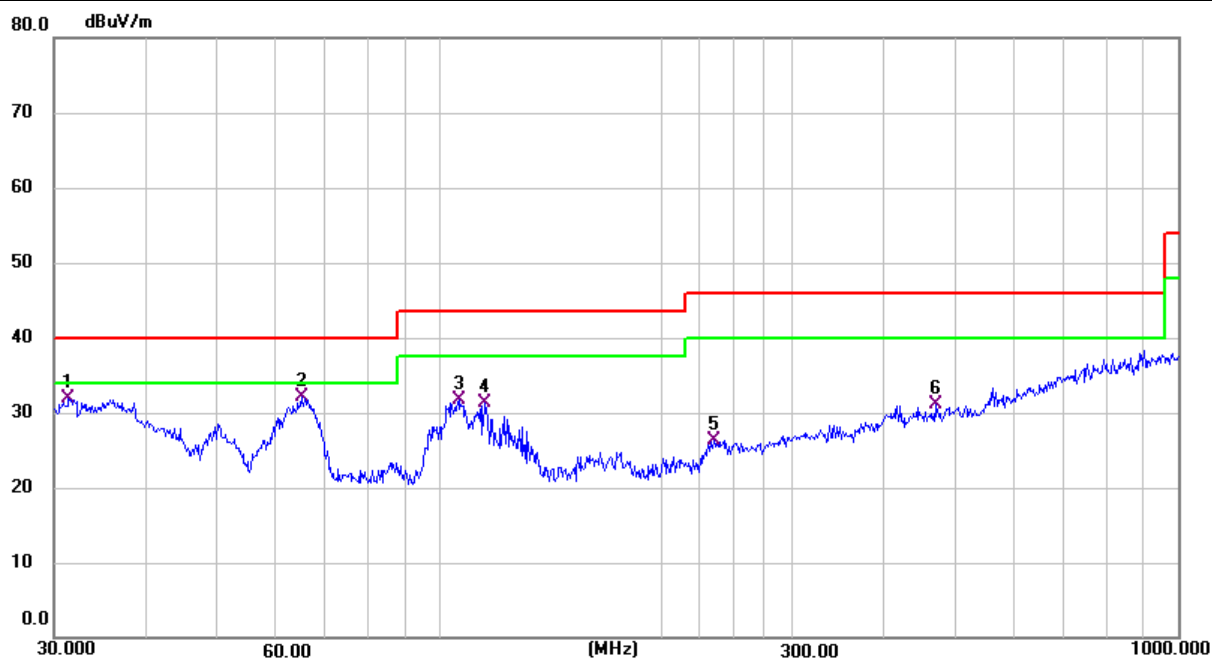
3.2.7 TEST RESULTS (30MHZ – 1GHZ)

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.6℃	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX(5.2G)- 802.11a (Mid CH)		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	31.3992	15.28	16.63	31.91	40.00	-8.09	QP
V	64.8864	14.18	17.87	32.05	40.00	-7.95	QP
V	106.3850	13.10	18.52	31.62	43.50	-11.88	QP
V	114.9167	14.00	17.24	31.24	43.50	-12.26	QP
V	234.9910	7.65	18.69	26.34	46.00	-19.66	QP
V	468.8761	7.41	23.70	31.11	46.00	-14.89	QP

Remark:

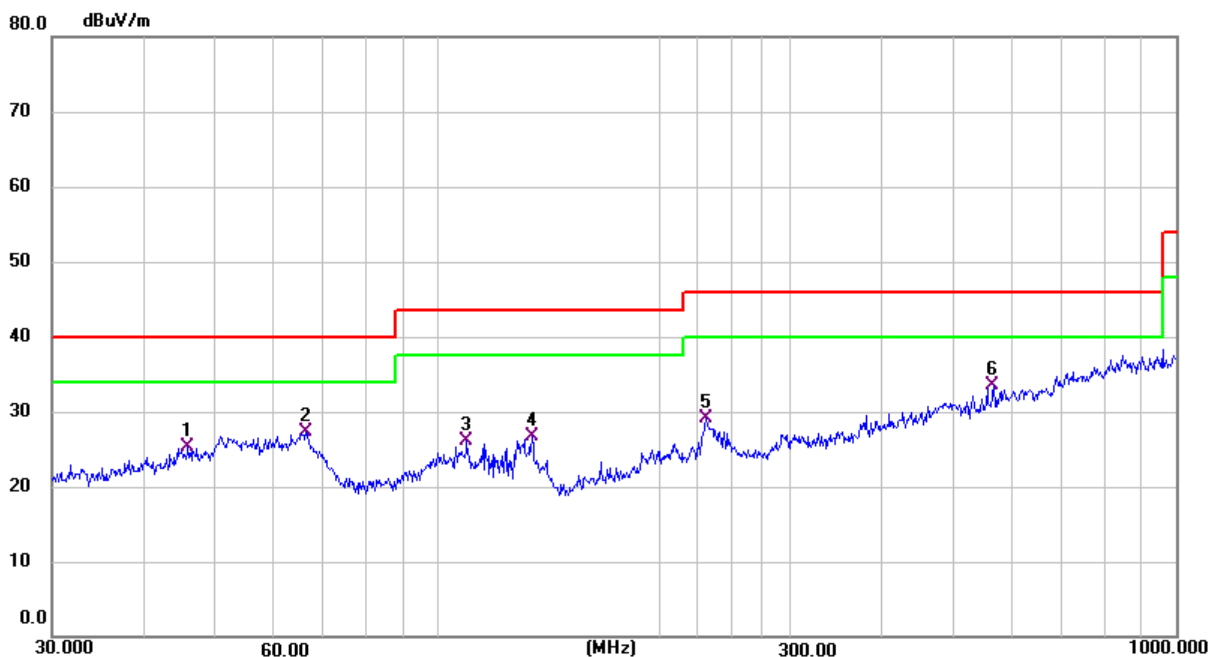
Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	45.8551	5.71	19.52	25.23	40.00	-14.77	QP
H	66.2660	9.72	17.60	27.32	40.00	-12.68	QP
H	109.4116	7.60	18.45	26.05	43.50	-17.45	QP
H	134.0880	11.86	14.76	26.62	43.50	-16.88	QP
H	230.9067	10.38	18.68	29.06	46.00	-16.94	QP
H	566.6221	8.16	25.43	33.59	46.00	-12.41	QP

Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Note(1)“802.11a” mode is the worst mode.

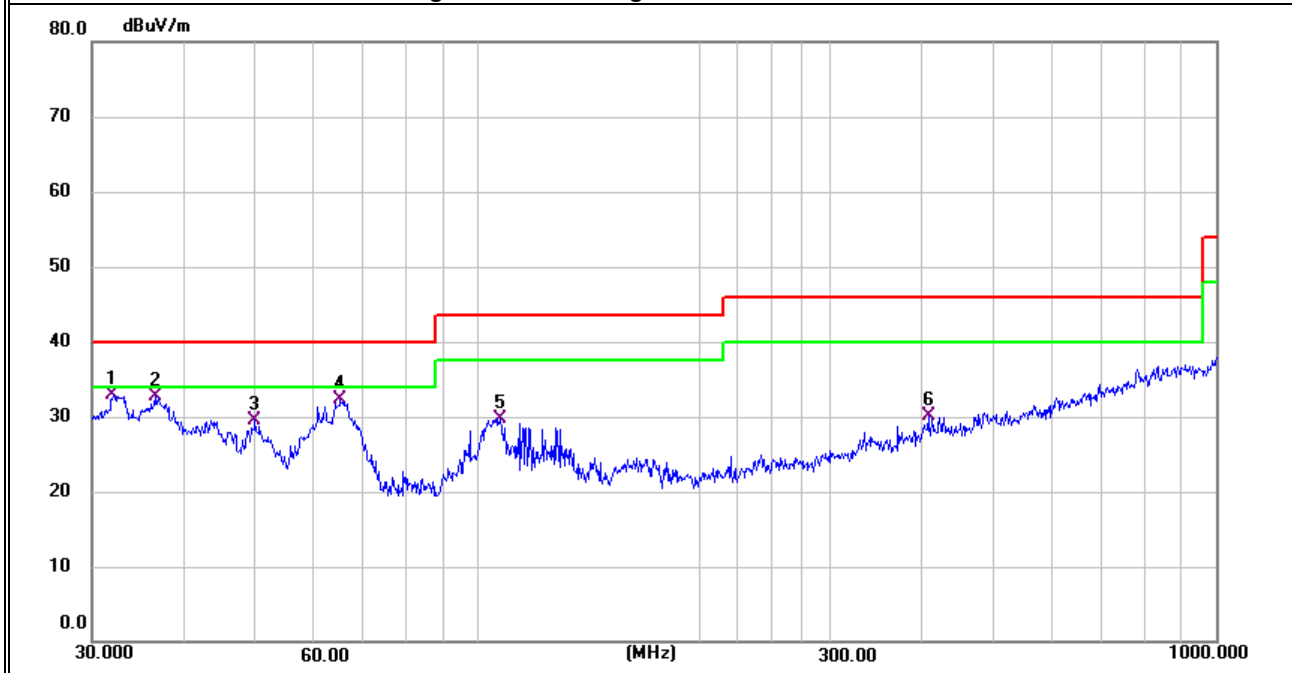
(2)Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.6℃	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX(5.3G)- 802.11n20 (Mid CH)		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	32.0667	16.14	16.70	32.84	40.00	-7.16	QP
V	36.5090	14.62	18.01	32.63	40.00	-7.37	QP
V	49.8813	9.18	20.40	29.58	40.00	-10.42	QP
V	65.1144	14.44	17.85	32.29	40.00	-7.71	QP
V	107.1337	11.34	18.44	29.78	43.50	-13.72	QP
V	407.5144	7.21	22.84	30.05	46.00	-15.95	QP

Remark:

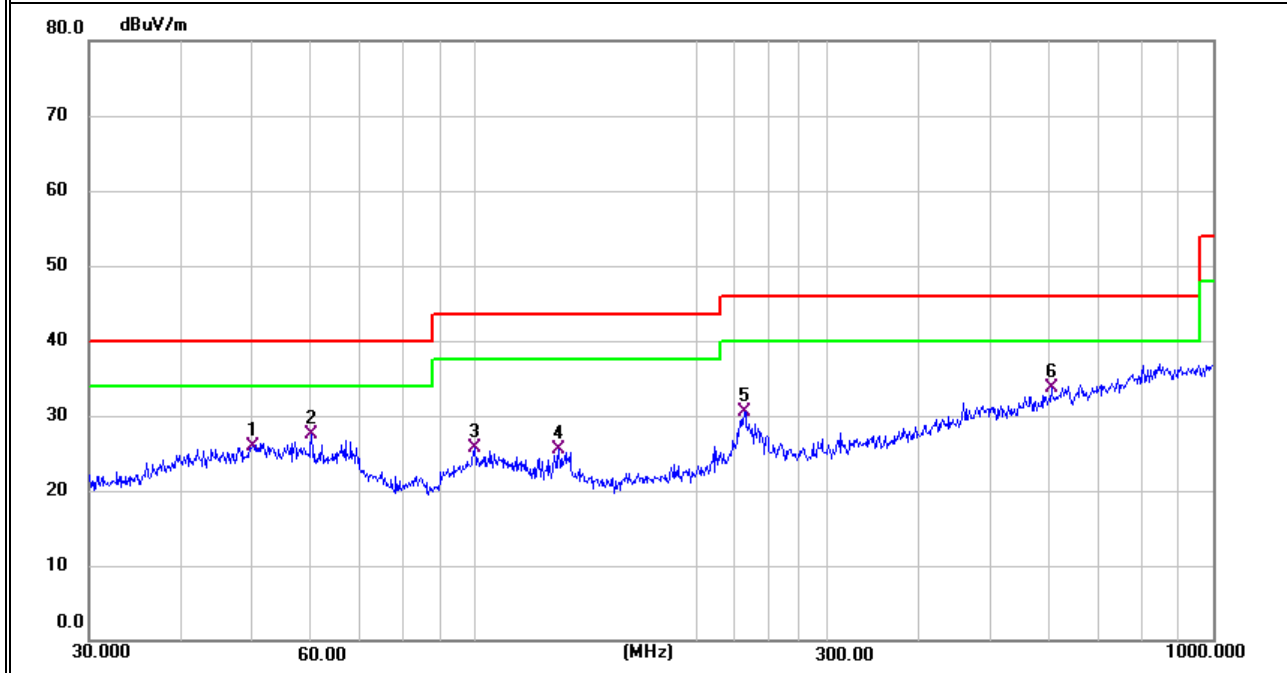
Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	50.0566	5.45	20.46	25.91	40.00	-14.09	QP
H	60.0690	8.19	19.31	27.50	40.00	-12.50	QP
H	99.8777	7.45	18.25	25.70	43.50	-17.80	QP
H	129.9225	10.10	15.43	25.53	43.50	-17.97	QP
H	231.7178	11.86	18.68	30.54	46.00	-15.46	QP
H	603.5390	7.33	26.31	33.64	46.00	-12.36	QP

Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Note(1)“802.11n20” mode is the worst mode.

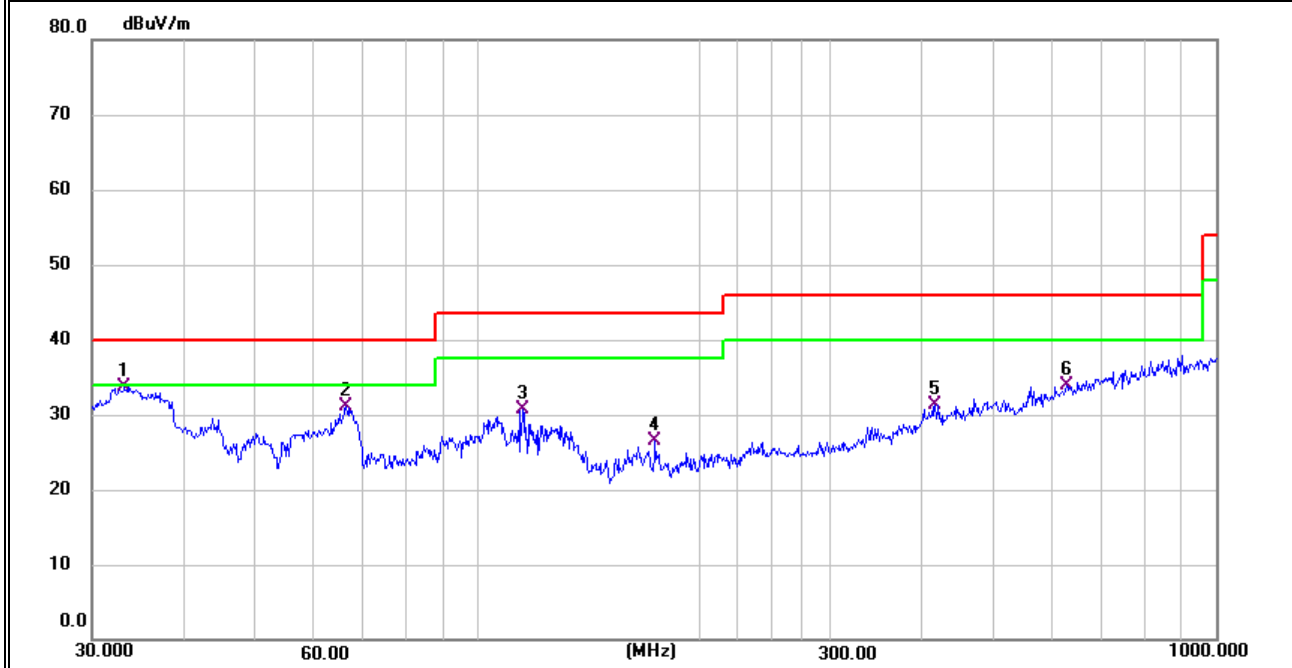
(2)Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.6°C	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX(5.6G)- 802.11n20 (Mid CH)		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	33.2111	16.90	16.80	33.70	40.00	-6.30	QP
V	66.2660	13.60	17.60	31.20	40.00	-8.80	QP
V	114.9167	13.50	17.24	30.74	43.50	-12.76	QP
V	173.8135	10.72	15.81	26.53	43.50	-16.97	QP
V	416.1791	8.52	22.86	31.38	46.00	-14.62	QP
V	627.2735	6.97	26.85	33.82	46.00	-12.18	QP

Remark:

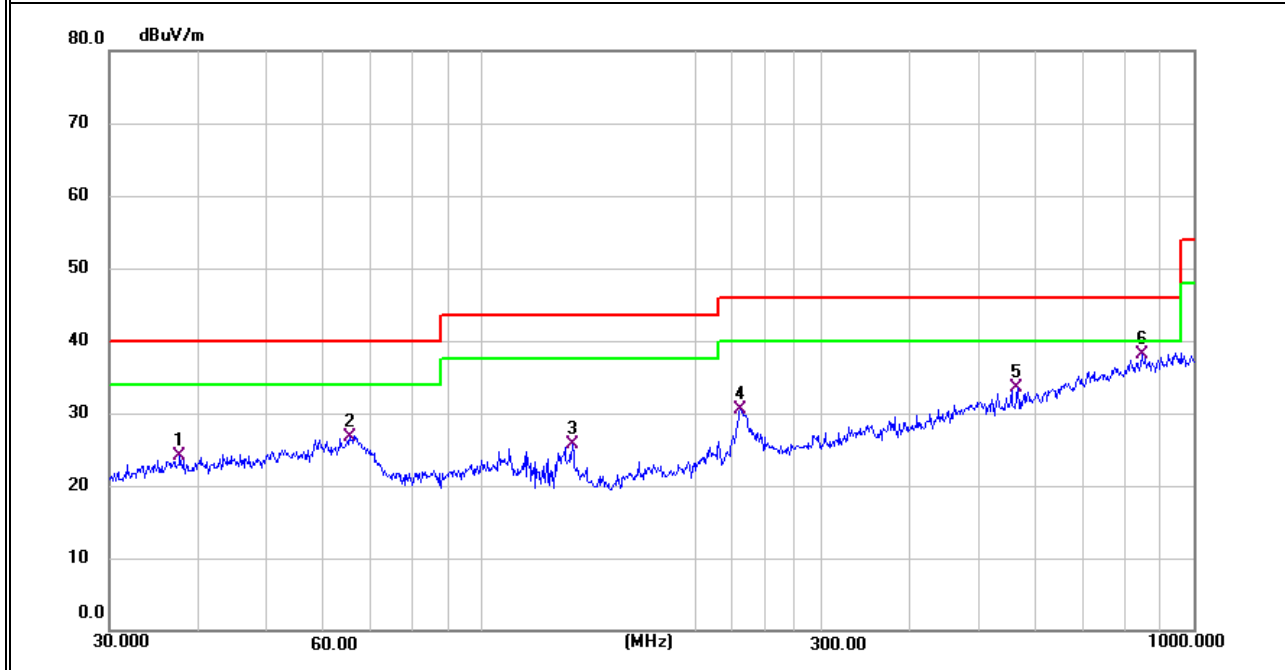
Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	37.6796	5.70	18.49	24.19	40.00	-15.81	QP
H	65.3431	8.90	17.80	26.70	40.00	-13.30	QP
H	134.0880	10.86	14.76	25.62	43.50	-17.88	QP
H	230.9067	11.88	18.68	30.56	46.00	-15.44	QP
H	566.6221	8.16	25.43	33.59	46.00	-12.41	QP
H	845.0877	7.65	30.42	38.07	46.00	-7.93	QP

Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Note(1)“802.11n20” mode is the worst mode.

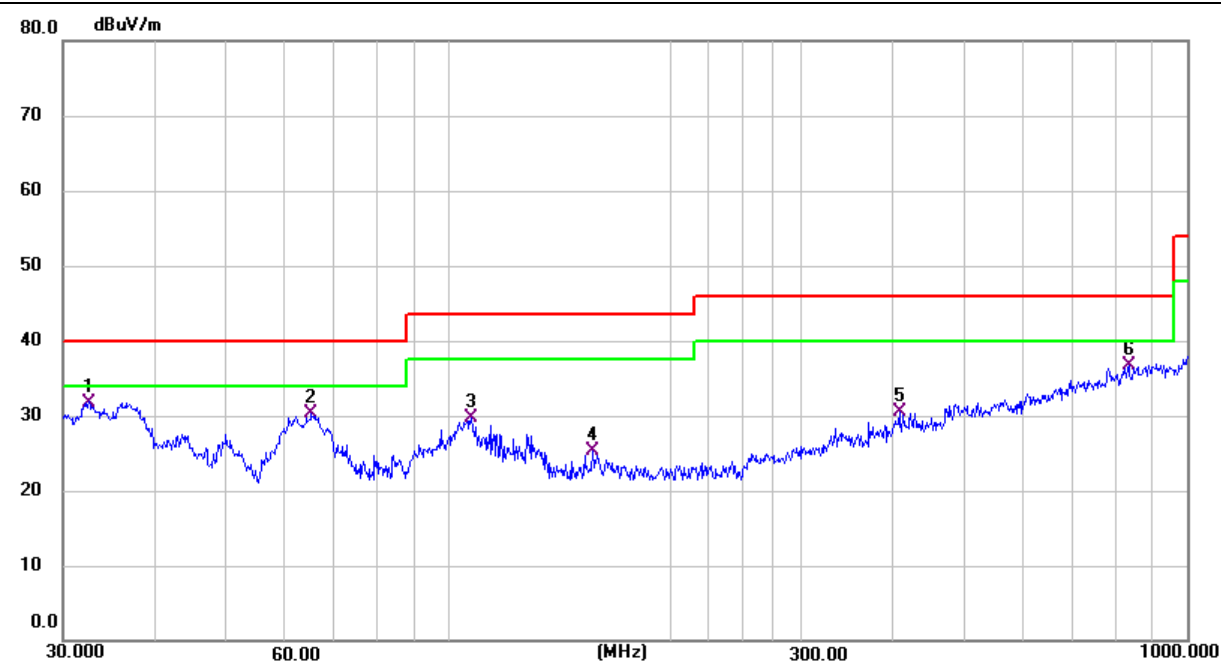
(2)Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.6℃	Relative Humidity :	55%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX(5.8G)- 802.11a (Mid CH)		

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	32.5197	15.06	16.74	31.80	40.00	-8.20	QP
V	65.1144	12.44	17.85	30.29	40.00	-9.71	QP
V	107.1337	11.34	18.44	29.78	43.50	-13.72	QP
V	156.4576	10.48	14.90	25.38	43.50	-18.12	QP
V	407.5144	7.71	22.84	30.55	46.00	-15.45	QP
V	833.3170	7.01	29.67	36.68	46.00	-9.32	QP

Remark:

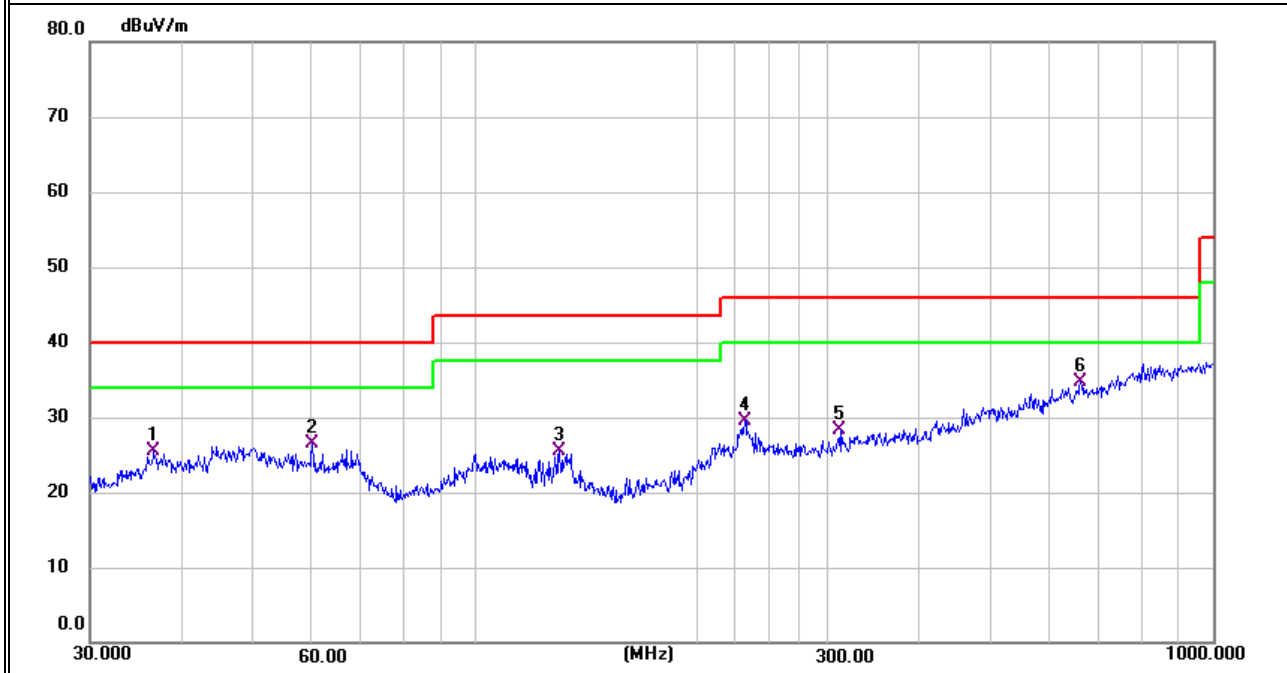
Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	36.6372	7.40	18.06	25.46	40.00	-14.54	QP
H	60.0690	7.19	19.31	26.50	40.00	-13.50	QP
H	129.9225	10.10	15.43	25.53	43.50	-17.97	QP
H	231.7178	10.86	18.68	29.54	46.00	-16.46	QP
H	312.1792	7.64	20.57	28.21	46.00	-17.79	QP
H	661.1503	7.43	27.23	34.66	46.00	-11.34	QP

Remark:

Emission Level = Meter Reading + Factor, Margin= Emission Level - Limit



Note(1)“802.11a” mode is the worst mode.

(2)Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

3.2.8 TEST RESULTS (1GHz-18GHz)

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.3 °C	Relative Humidity :	46.9%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V,
Test Mode :	TX(5.2G) - 802.11a mode		

5180

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	1386.325	60.72	-17.99	42.73	74.00	-31.27	peak
V	1393.125	49.65	-17.98	31.67	54.00	-22.33	AVG
V	2122.000	55.56	-12.61	42.95	68.20	-25.25	peak
V	3585.275	52.72	-9.35	43.37	68.20	-24.83	peak
V	5484.175	50.20	-5.54	44.66	68.20	-23.54	peak
V	10122.625	47.15	1.93	49.08	68.20	-19.12	peak
V	13477.150	45.78	5.44	51.22	68.20	-16.98	peak

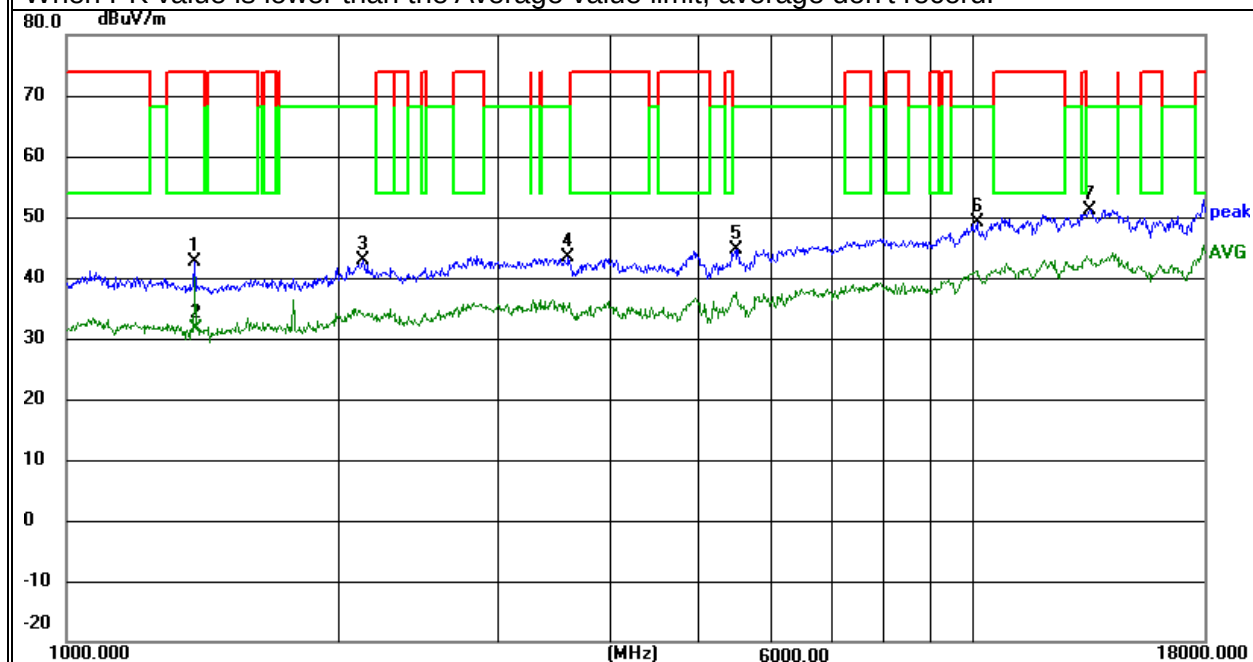
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1386.325	63.59	-17.99	45.60	74.00	-28.40	peak
H	1386.325	62.70	-17.99	44.71	54.00	-9.29	AVG
H	2046.350	55.53	-12.94	42.59	68.20	-25.61	peak
H	2973.700	52.61	-9.78	42.83	68.20	-25.37	peak
H	4904.900	44.41	-7.32	37.09	54.00	-16.91	AVG
H	4967.800	51.26	-6.14	45.12	74.00	-28.88	peak
H	7935.575	49.89	-1.37	48.52	68.20	-19.68	peak
H	14536.675	45.18	4.88	50.06	68.20	-18.14	peak

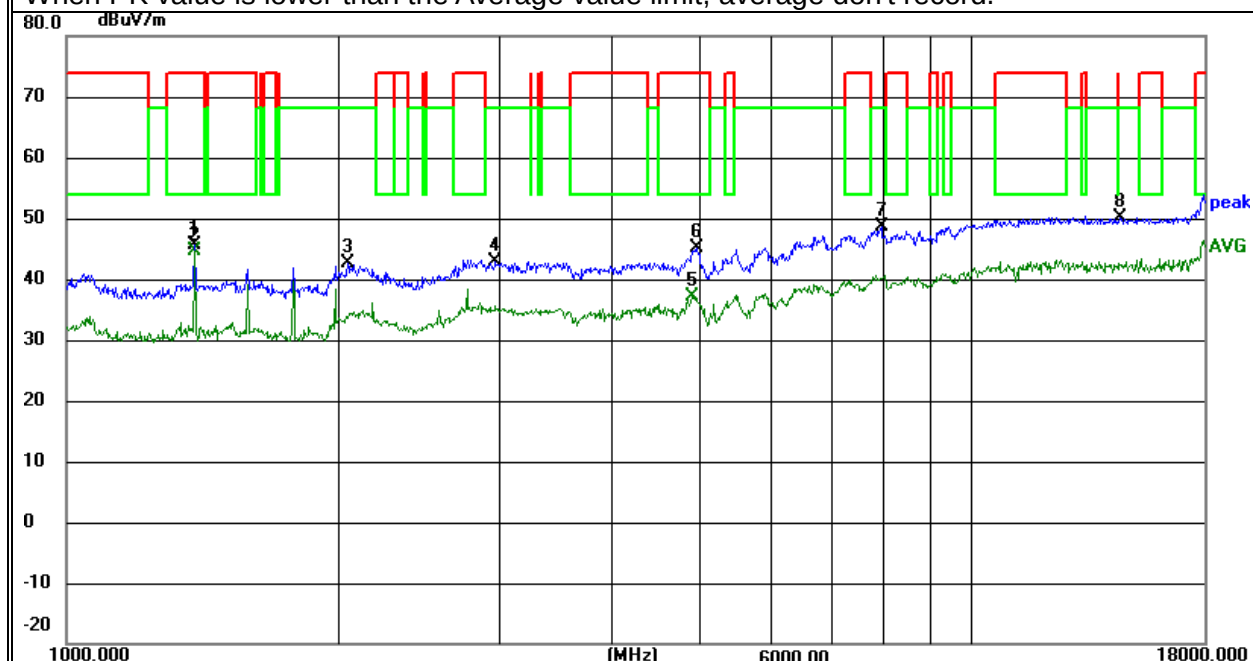
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



5200

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	2154.300	55.35	-12.85	42.50	68.20	-25.70	peak
V	4445.475	50.75	-7.64	43.11	68.20	-25.09	peak
V	6374.975	50.68	-4.00	46.68	68.20	-21.52	peak
V	7900.300	49.65	-1.60	48.05	68.20	-20.15	peak
V	10571.850	46.17	2.53	48.70	68.20	-19.50	peak
V	13912.775	44.63	5.33	49.96	68.20	-18.24	peak

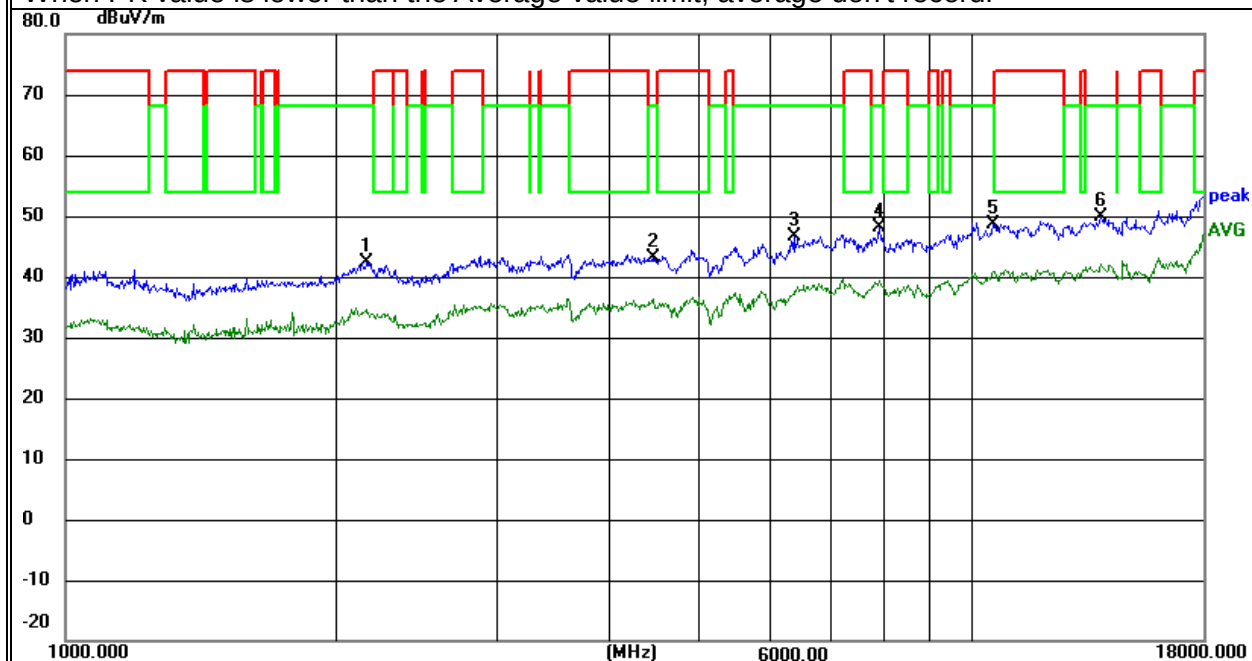
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1056.950	51.82	-18.40	33.42	54.00	-20.58	AVG
H	1062.050	59.90	-18.35	41.55	74.00	-32.45	peak
H	1274.975	56.93	-17.86	39.07	68.20	-29.13	peak
H	3484.550	54.24	-9.55	44.69	68.20	-23.51	peak
H	4882.375	53.82	-7.25	46.57	74.00	-27.43	peak
H	4911.275	45.69	-7.14	38.55	54.00	-15.45	AVG
H	9691.250	47.82	0.99	48.81	68.20	-19.39	peak
H	14237.475	46.25	5.74	51.99	68.20	-16.21	peak

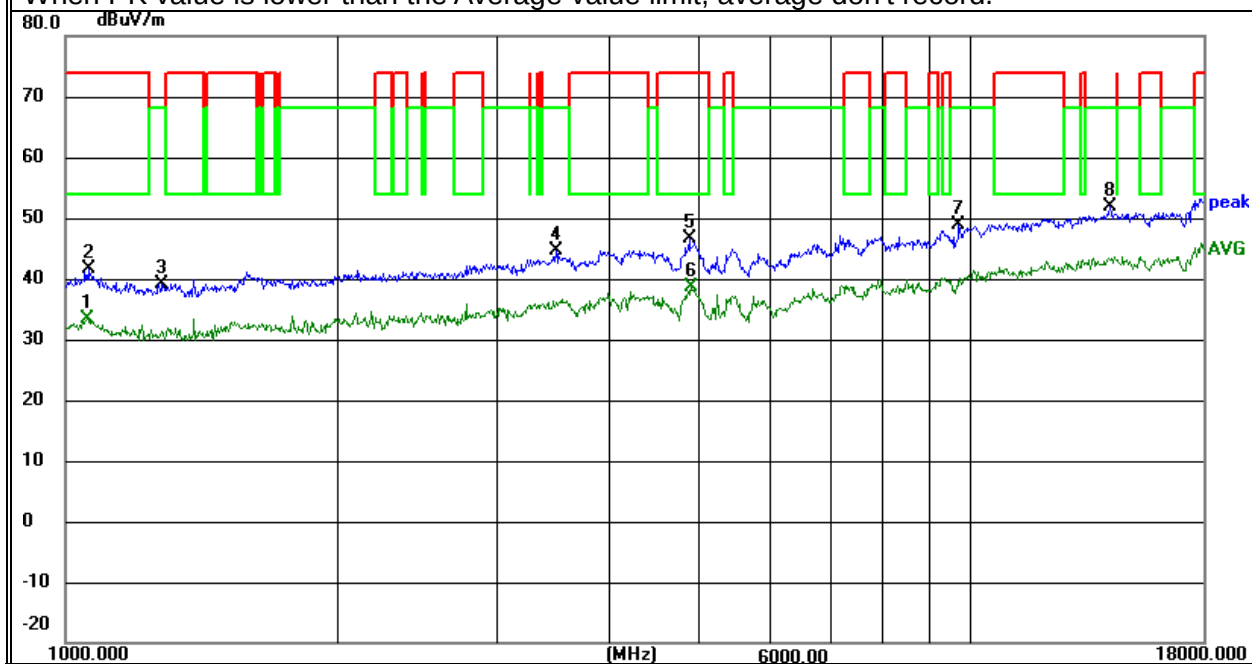
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



5240

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	1269.025	56.37	-17.86	38.51	68.20	-29.69	peak
V	2957.125	53.14	-10.00	43.14	68.20	-25.06	peak
V	4417.425	52.55	-7.74	44.81	68.20	-23.39	peak
V	7945.775	50.19	-1.31	48.88	68.20	-19.32	peak
V	10574.825	46.70	2.55	49.25	68.20	-18.95	peak
V	12831.150	45.95	4.06	50.01	68.20	-18.19	peak

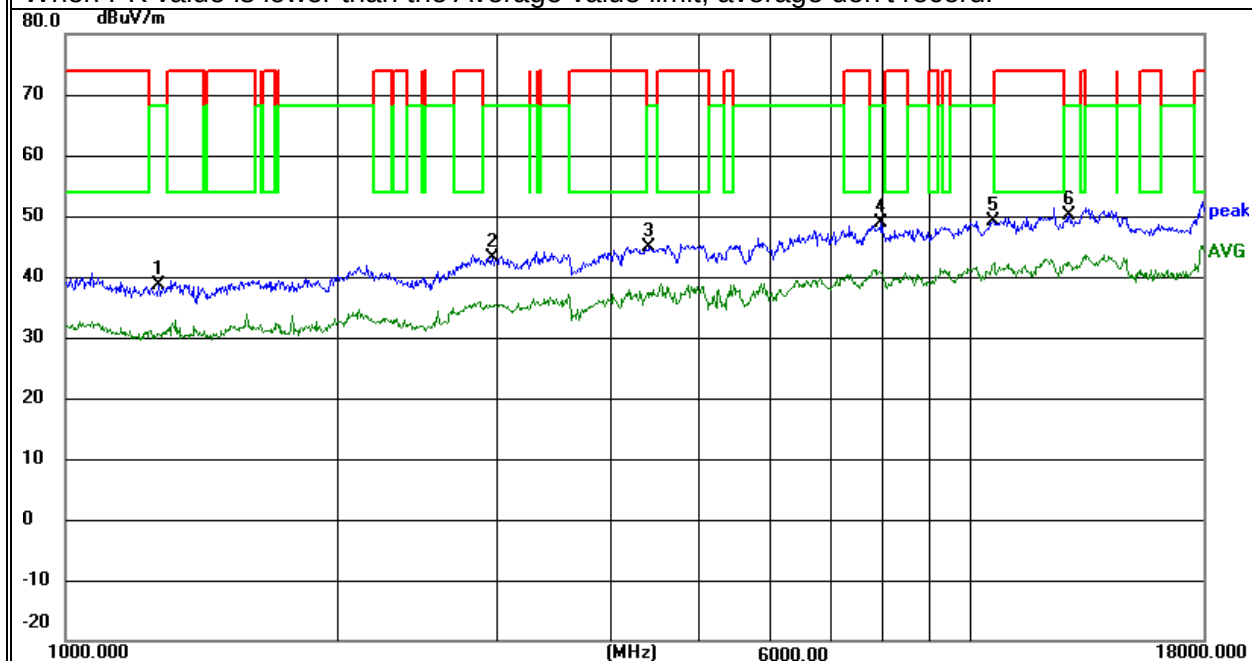
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	2080.775	54.86	-12.63	42.23	68.20	-25.97	peak
H	2974.975	53.61	-9.77	43.84	68.20	-24.36	peak
H	6869.675	50.78	-3.72	47.06	68.20	-21.14	peak
H	10041.875	48.34	1.57	49.91	68.20	-18.29	peak
H	13027.500	45.13	4.46	49.59	68.20	-18.61	peak
H	16589.000	42.84	6.52	49.36	68.20	-18.84	peak

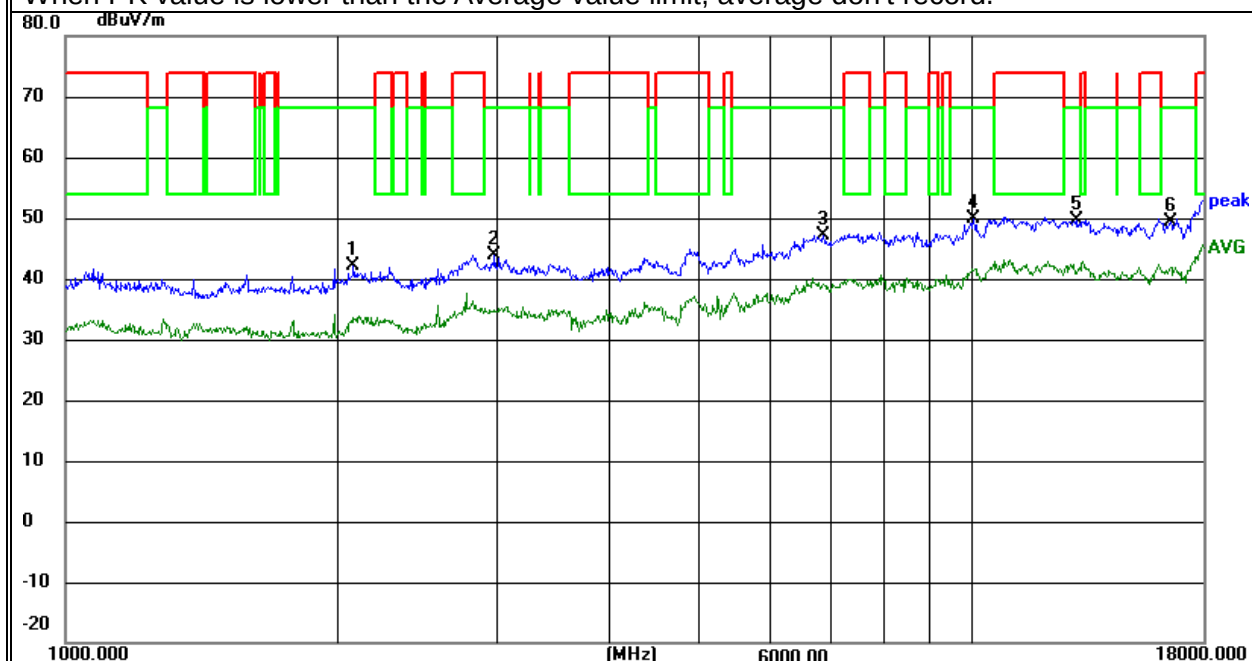
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.3 °C	Relative Humidity :	46.9%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V,
Test Mode :	TX(5.3G) - 802.11n20 mode		

5260

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	1635.375	57.20	-16.67	40.53	68.20	-27.67	peak
V	2909.950	52.20	-10.01	42.19	68.20	-26.01	peak
V	5208.775	50.87	-6.31	44.56	68.20	-23.64	peak
V	7930.475	48.63	-1.40	47.23	68.20	-20.97	peak
V	9975.150	48.17	1.06	49.23	68.20	-18.97	peak
V	13262.525	45.05	4.98	50.03	74.00	-23.97	peak
V	13262.525	36.89	4.98	41.87	54.00	-12.13	AVG

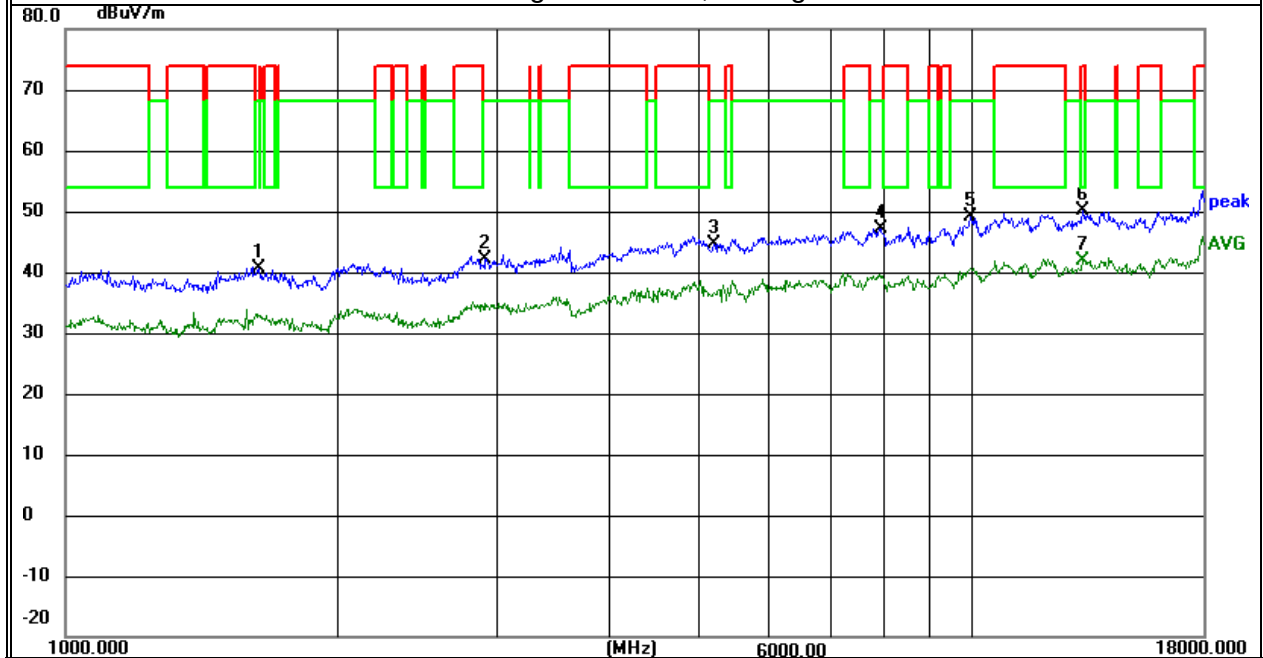
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

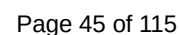
All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



When PK value is lower than the Average value limit, average don't record.



5280

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	1065.450	50.75	-18.31	32.44	54.00	-21.56	AVG
V	1071.825	59.19	-18.25	40.94	74.00	-33.06	peak
V	2153.875	54.23	-12.85	41.38	68.20	-26.82	peak
V	2923.550	52.86	-10.03	42.83	68.20	-25.37	peak
V	4922.750	51.28	-6.80	44.48	74.00	-29.52	peak
V	4922.750	43.48	-6.80	36.68	54.00	-17.32	AVG
V	10009.575	46.82	1.24	48.06	68.20	-20.14	peak
V	17997.450	40.01	13.60	53.61	74.00	-20.39	peak
V	17997.450	31.97	13.60	45.57	54.00	-8.43	AVG

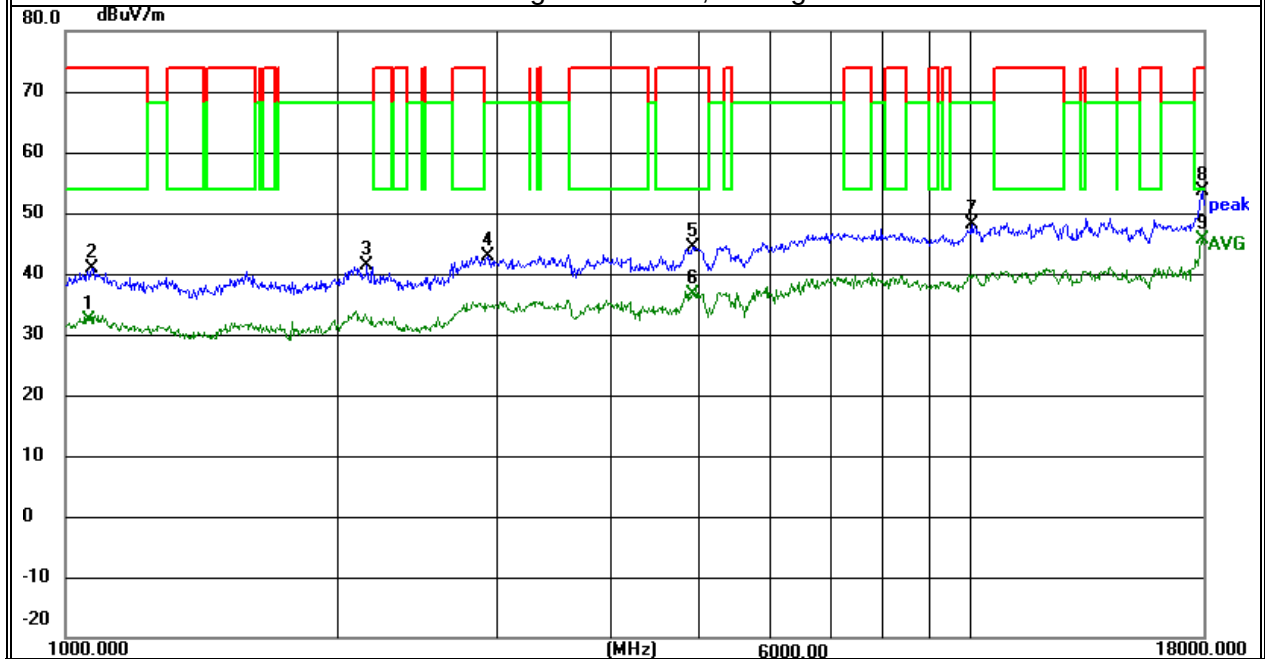
Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1100.725	58.74	-17.97	40.77	74.00	-33.23	peak
H	1100.725	50.03	-17.97	32.06	54.00	-21.94	AVG
H	2090.975	55.43	-12.55	42.88	68.20	-25.32	peak
H	3328.150	52.51	-9.37	43.14	68.20	-25.06	peak
H	5361.350	51.61	-6.75	44.86	74.00	-29.14	peak
H	5365.175	41.72	-6.74	34.98	54.00	-19.02	AVG
H	7936.425	48.80	-1.36	47.44	68.20	-20.76	peak
H	12030.450	37.68	5.13	42.81	54.00	-11.19	AVG
H	12084.425	45.70	4.86	50.56	74.00	-23.44	peak
H	14218.775	46.02	5.72	51.74	68.20	-16.46	peak

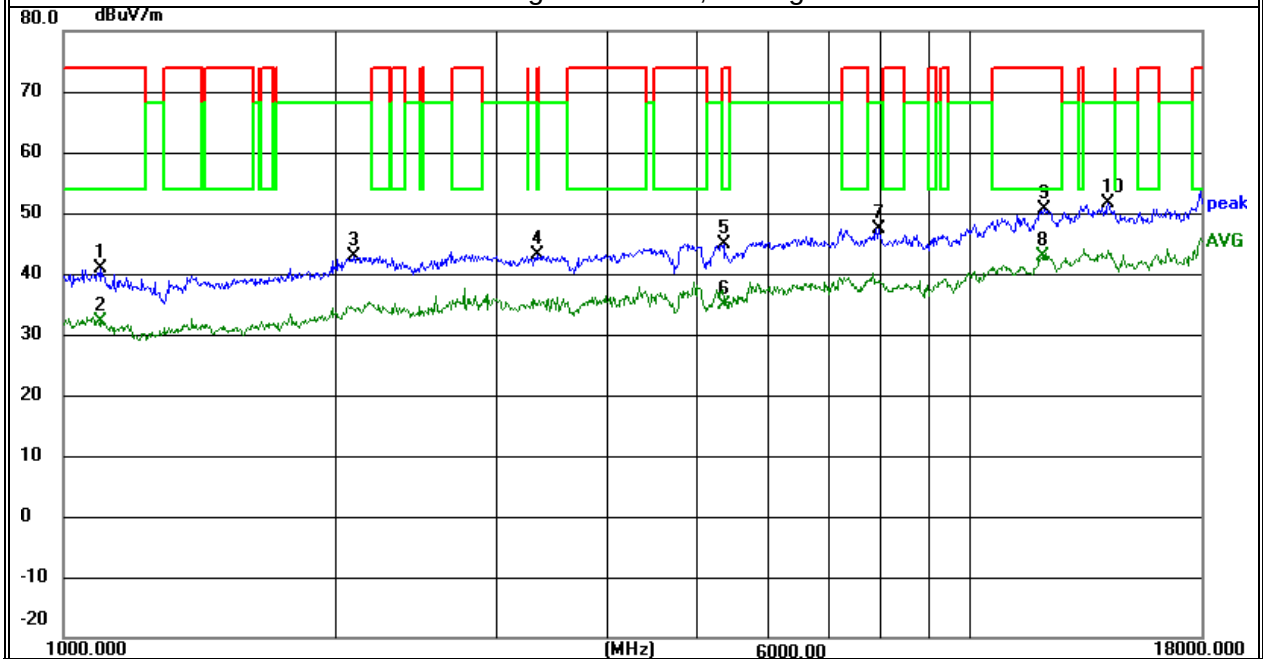
Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



5320

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	1065.025	60.82	-18.31	42.51	74.00	-31.49	peak
V	1065.025	52.00	-18.31	33.69	54.00	-20.31	AVG
V	2812.200	55.06	-10.36	44.70	74.00	-29.30	peak
V	2820.275	45.96	-10.33	35.63	54.00	-18.37	AVG
V	4912.550	52.91	-7.10	45.81	74.00	-28.19	peak
V	4912.550	45.01	-7.10	37.91	54.00	-16.09	AVG
V	7198.625	49.91	-2.00	47.91	68.20	-20.29	peak
V	7873.950	50.69	-1.88	48.81	68.20	-19.39	peak
V	11899.550	45.49	5.15	50.64	74.00	-23.36	peak
V	11968.825	36.75	5.24	41.99	54.00	-12.01	AVG

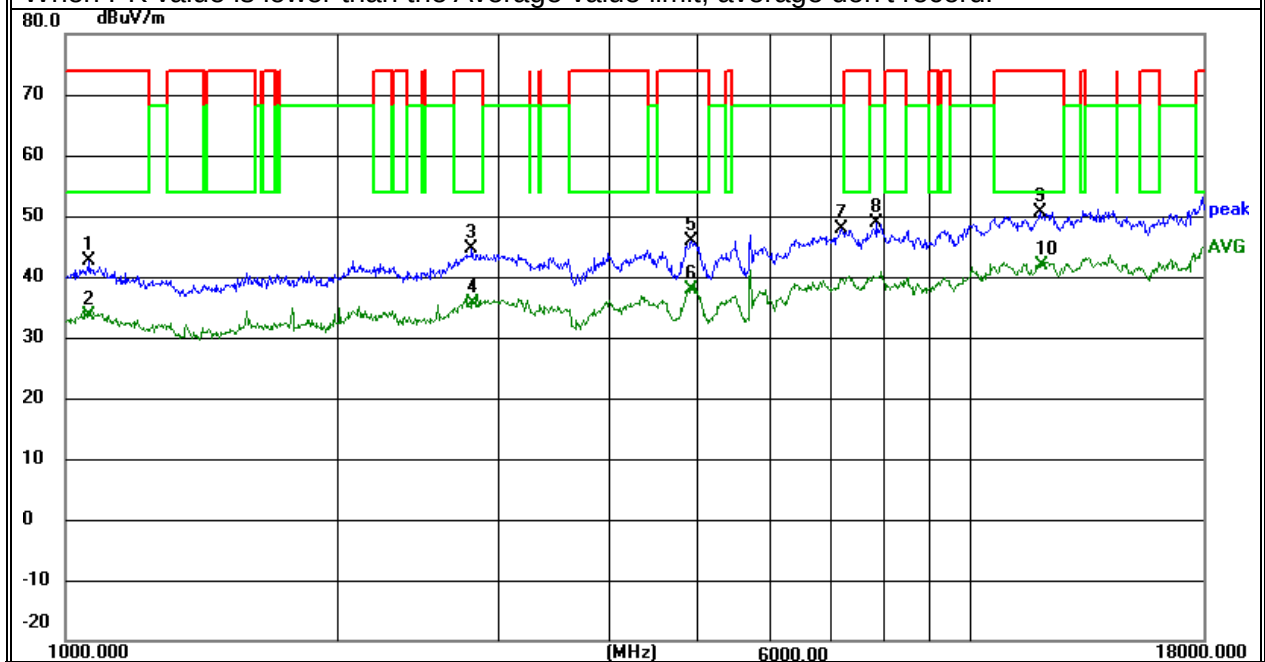
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1279.650	58.41	-17.86	40.55	68.20	-27.65	peak
H	2973.275	52.18	-9.79	42.39	68.20	-25.81	peak
H	4471.825	50.99	-7.66	43.33	68.20	-24.87	peak
H	5897.700	51.03	-4.88	46.15	68.20	-22.05	peak
H	7831.875	50.61	-1.88	48.73	68.20	-19.47	peak
H	12819.250	45.17	4.11	49.28	68.20	-18.92	peak

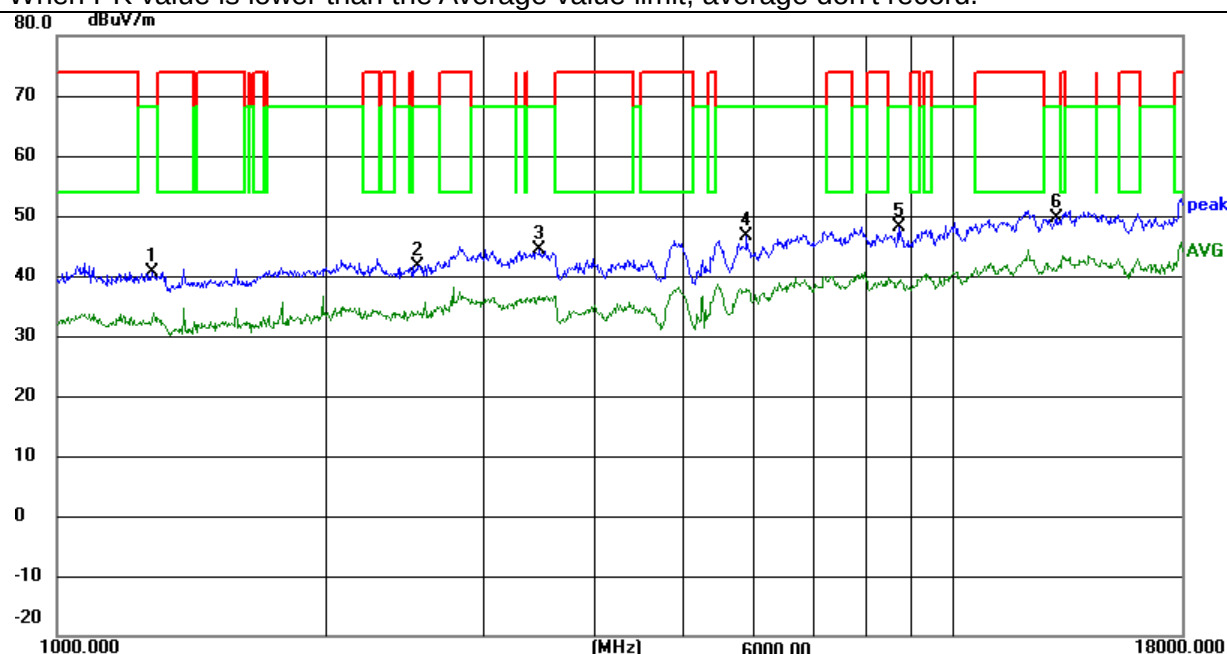
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.3 °C	Relative Humidity :	46.9%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V,
Test Mode :	TX(5.6G) - 802.11n20 mode		

5500

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	2079.500	55.15	-12.65	42.50	68.20	-25.70	peak
V	3327.725	51.25	-9.37	41.88	68.20	-26.32	peak
V	4934.650	51.22	-6.45	44.77	74.00	-29.23	peak
V	4946.975	42.79	-6.08	36.71	54.00	-17.29	AVG
V	5509.675	49.71	-5.37	44.34	68.20	-23.86	peak
V	7951.300	46.81	-1.29	45.52	68.20	-22.68	peak
V	12140.525	43.66	4.67	48.33	74.00	-25.67	peak
V	12180.050	36.29	4.55	40.84	54.00	-13.16	AVG

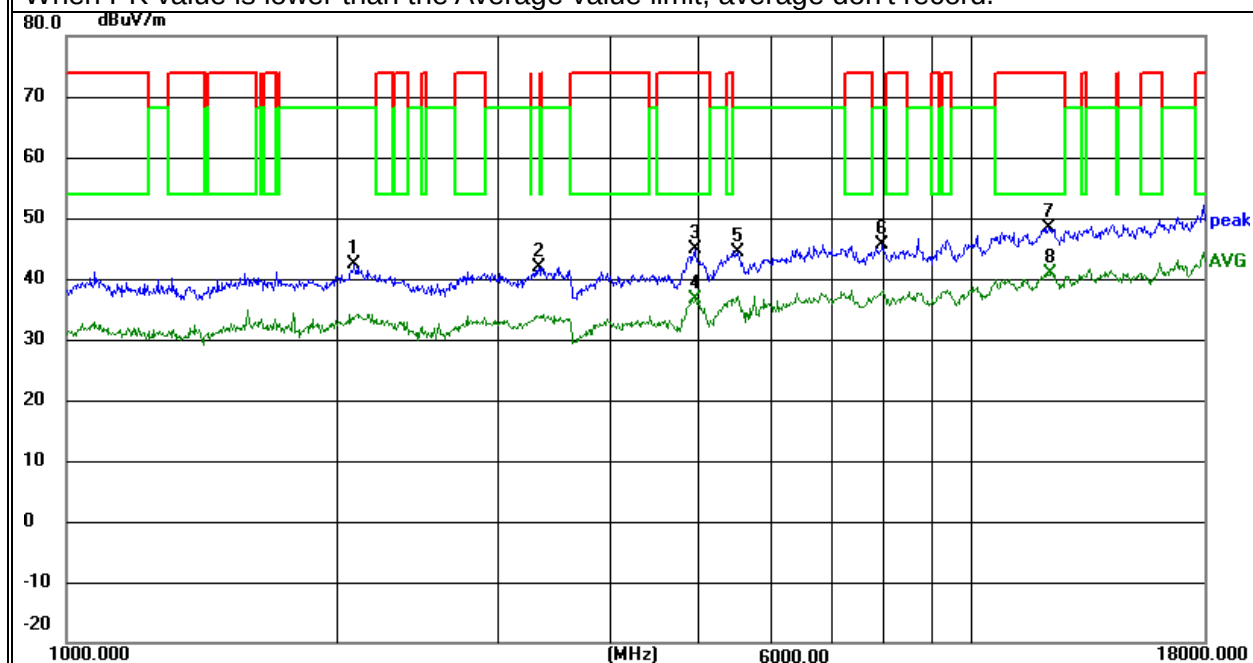
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1385.900	59.05	-17.98	41.07	74.00	-32.93	peak
H	1385.900	50.78	-17.98	32.80	54.00	-21.20	AVG
H	2149.625	53.87	-12.77	41.10	68.20	-27.10	peak
H	3483.275	54.03	-9.55	44.48	68.20	-23.72	peak
H	5900.675	49.64	-4.86	44.78	68.20	-23.42	peak
H	7195.650	49.28	-2.07	47.21	68.20	-20.99	peak
H	10757.150	39.10	2.79	41.89	54.00	-12.11	AVG
H	11007.900	46.77	3.63	50.40	74.00	-23.60	peak

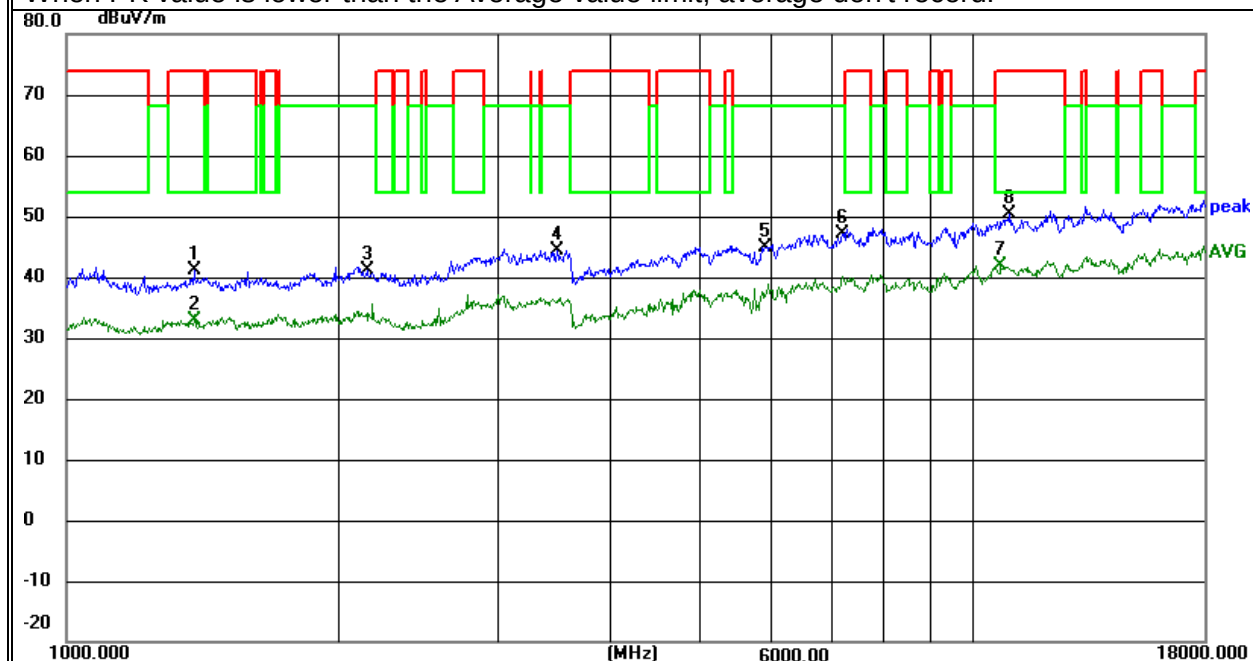
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



5600

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	1385.900	58.80	-17.98	40.82	74.00	-33.18	peak
V	1385.900	50.01	-17.98	32.03	54.00	-21.97	AVG
V	2915.050	52.30	-10.02	42.28	68.20	-25.92	peak
V	3946.950	53.04	-8.04	45.00	74.00	-29.00	peak
V	3946.950	45.23	-8.04	37.19	54.00	-16.81	AVG
V	7956.825	49.46	-1.34	48.12	68.20	-20.08	peak
V	10548.900	46.46	2.29	48.75	68.20	-19.45	peak
V	13898.750	43.87	5.28	49.15	68.20	-19.05	peak

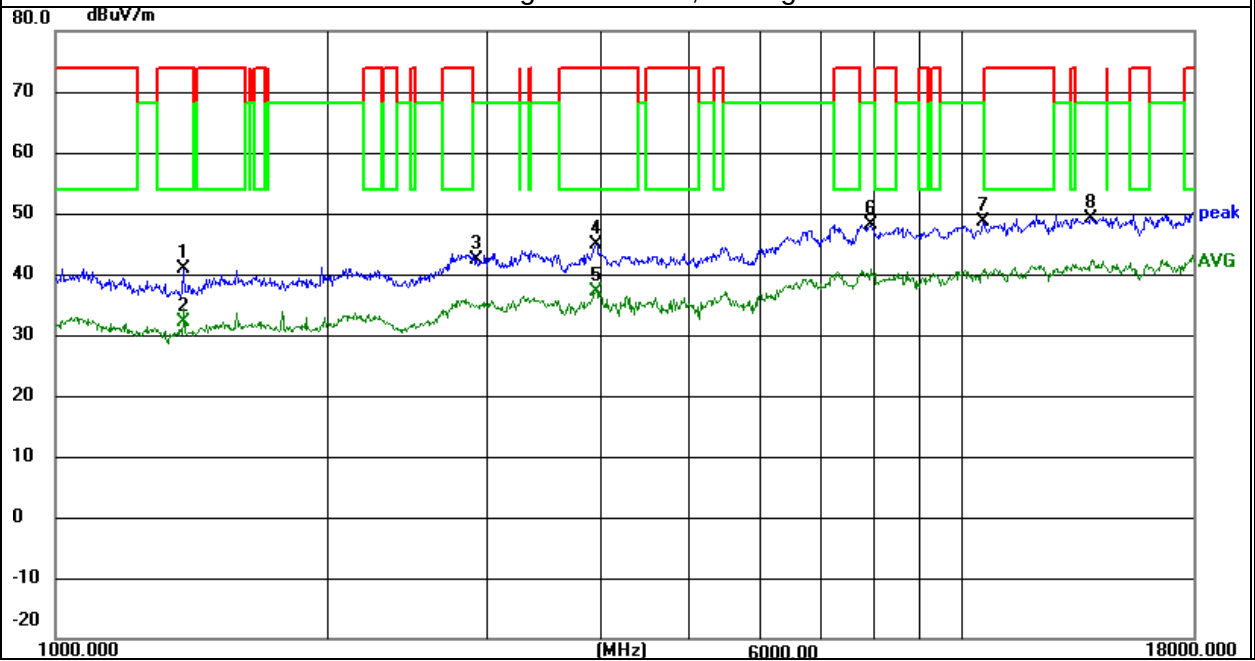
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1385.900	58.85	-17.98	40.87	74.00	-33.13	peak
H	1386.325	52.76	-17.99	34.77	54.00	-19.23	AVG
H	2090.125	54.51	-12.56	41.95	68.20	-26.25	peak
H	3086.750	53.24	-9.57	43.67	68.20	-24.53	peak
H	4935.075	51.99	-6.44	45.55	74.00	-28.45	peak
H	5019.225	44.42	-6.18	38.24	54.00	-15.76	AVG
H	7902.000	48.42	-1.59	46.83	68.20	-21.37	peak
H	13508.175	45.64	5.50	51.14	68.20	-17.06	peak

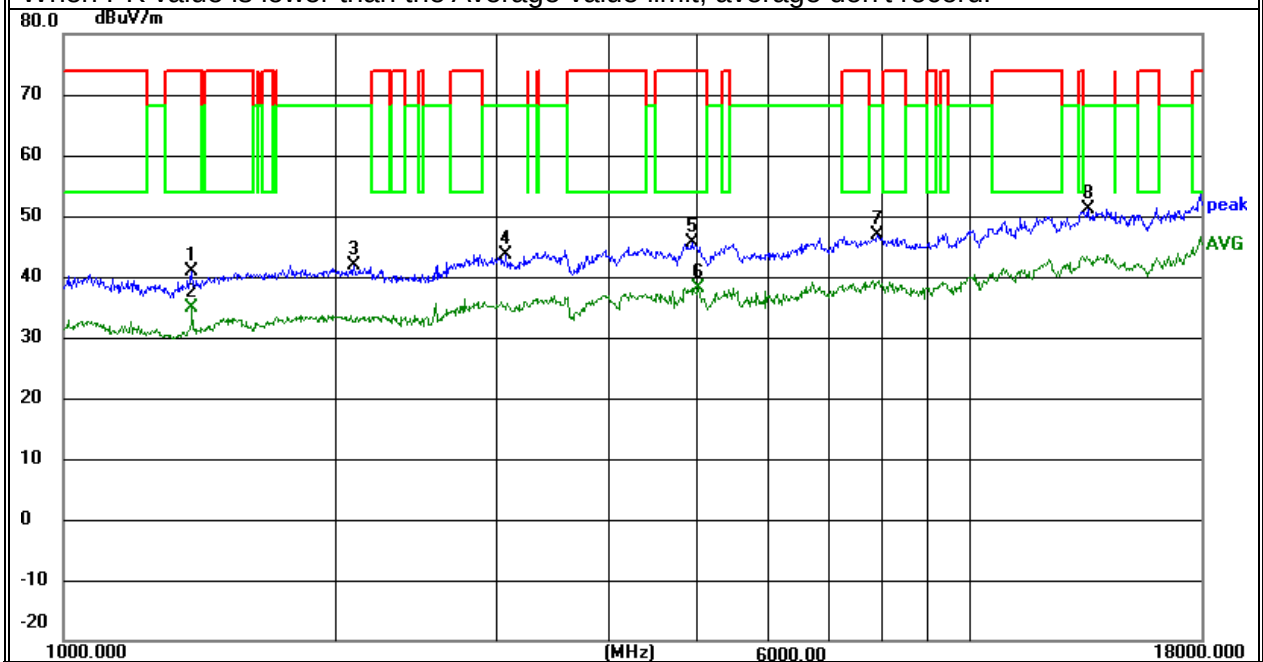
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



5700

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	1385.900	60.90	-17.98	42.92	74.00	-31.08	peak
V	1386.325	57.38	-17.99	39.39	54.00	-14.61	AVG
V	2115.200	54.12	-12.56	41.56	68.20	-26.64	peak
V	3585.275	53.25	-9.35	43.90	68.20	-24.30	peak
V	5922.775	53.14	-4.64	48.50	68.20	-19.70	peak
V	7209.675	51.30	-2.13	49.17	68.20	-19.03	peak
V	12730.425	45.17	4.28	49.45	68.20	-18.75	peak

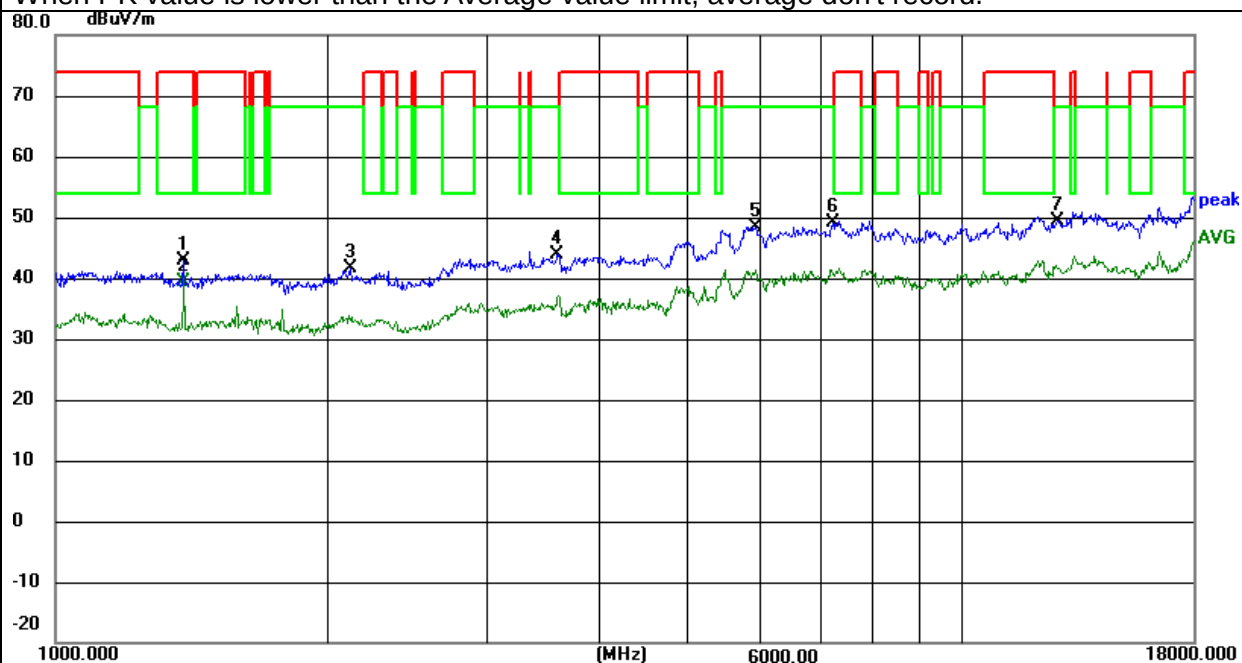
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1385.900	59.93	-17.98	41.95	74.00	-32.05	peak
H	1386.325	51.64	-17.99	33.65	54.00	-20.35	AVG
H	2574.625	55.31	-11.87	43.44	68.20	-24.76	peak
H	4408.500	51.12	-7.78	43.34	68.20	-24.86	peak
H	6797.425	51.40	-3.24	48.16	68.20	-20.04	peak
H	10583.325	46.55	2.65	49.20	68.20	-19.00	peak
H	14254.475	46.20	5.75	51.95	68.20	-16.25	peak

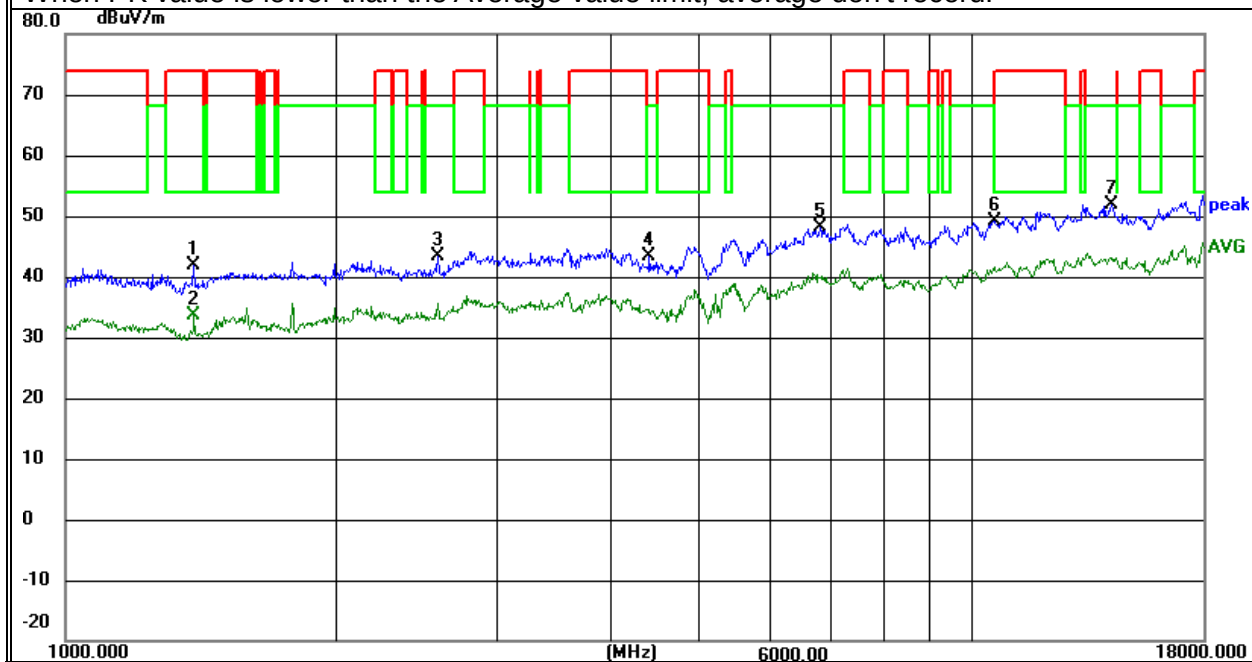
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.3 °C	Relative Humidity :	46.9%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V,
Test Mode :	TX (5.8G) -- 802.11a mode		

5745

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	1385.900	61.11	-17.98	43.13	74.00	-30.87	peak
V	1386.325	58.63	-17.99	40.64	54.00	-13.36	AVG
V	2951.175	52.74	-10.07	42.67	68.20	-25.53	peak
V	4456.525	51.38	-7.63	43.75	68.20	-24.45	peak
V	7915.600	49.60	-1.51	48.09	68.20	-20.11	peak
V	10130.700	46.78	1.83	48.61	68.20	-19.59	peak
V	13505.200	45.07	5.52	50.59	68.20	-17.61	peak

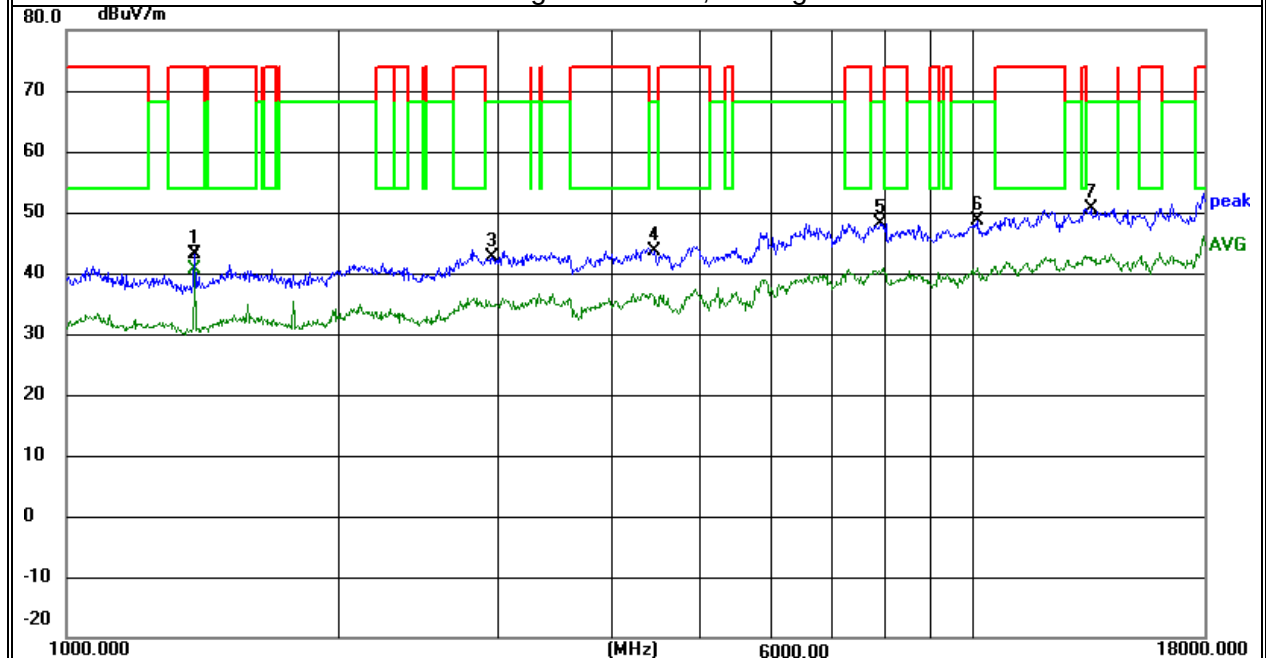
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1385.900	61.36	-17.98	43.38	74.00	-30.62	peak
H	1386.325	54.87	-17.99	36.88	54.00	-17.12	AVG
H	2090.125	55.87	-12.56	43.31	68.20	-24.89	peak
H	3959.275	42.07	-8.01	34.06	54.00	-19.94	AVG
H	3979.250	49.71	-7.99	41.72	74.00	-32.28	peak
H	6624.025	51.08	-3.43	47.65	68.20	-20.55	peak
H	7915.175	49.92	-1.51	48.41	68.20	-19.79	peak
H	12746.575	45.67	4.26	49.93	68.20	-18.27	peak

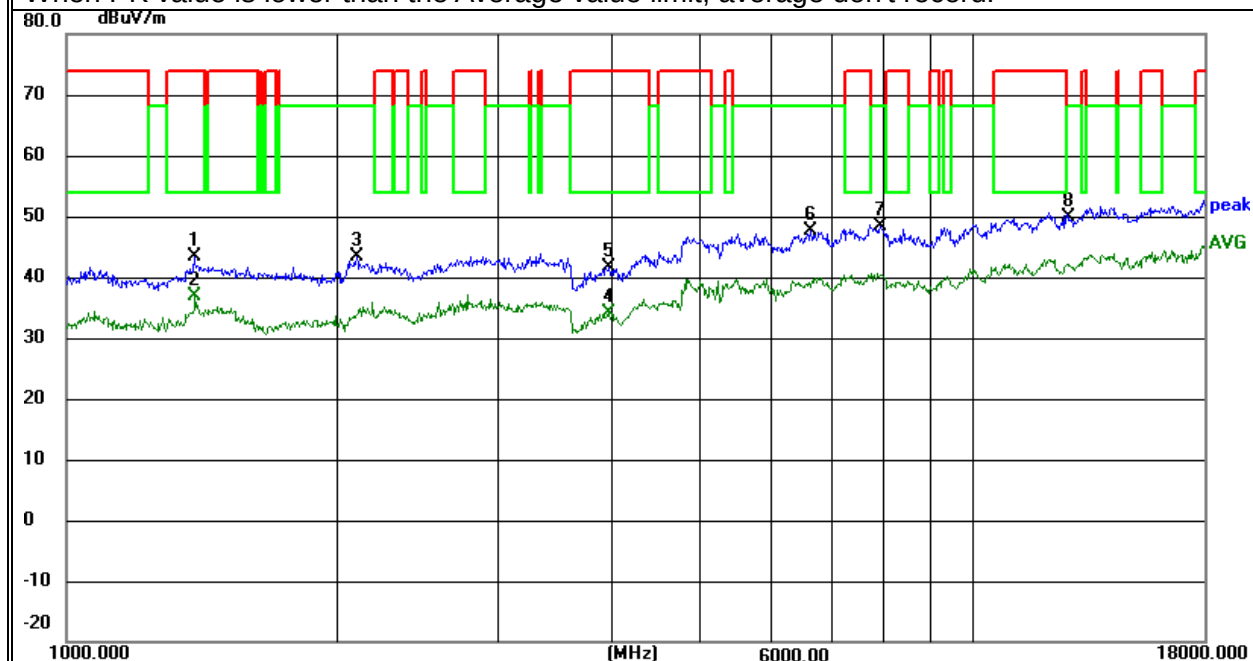
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



5785

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	1385.900	61.33	-17.98	43.35	74.00	-30.65	peak
V	1386.325	57.93	-17.99	39.94	54.00	-14.06	AVG
V	2079.925	55.85	-12.65	43.20	68.20	-25.00	peak
V	3045.525	53.54	-9.60	43.94	68.20	-24.26	peak
V	5892.175	51.79	-4.93	46.86	68.20	-21.34	peak
V	10021.475	47.67	1.36	49.03	68.20	-19.17	peak
V	12781.850	45.71	4.23	49.94	68.20	-18.26	peak

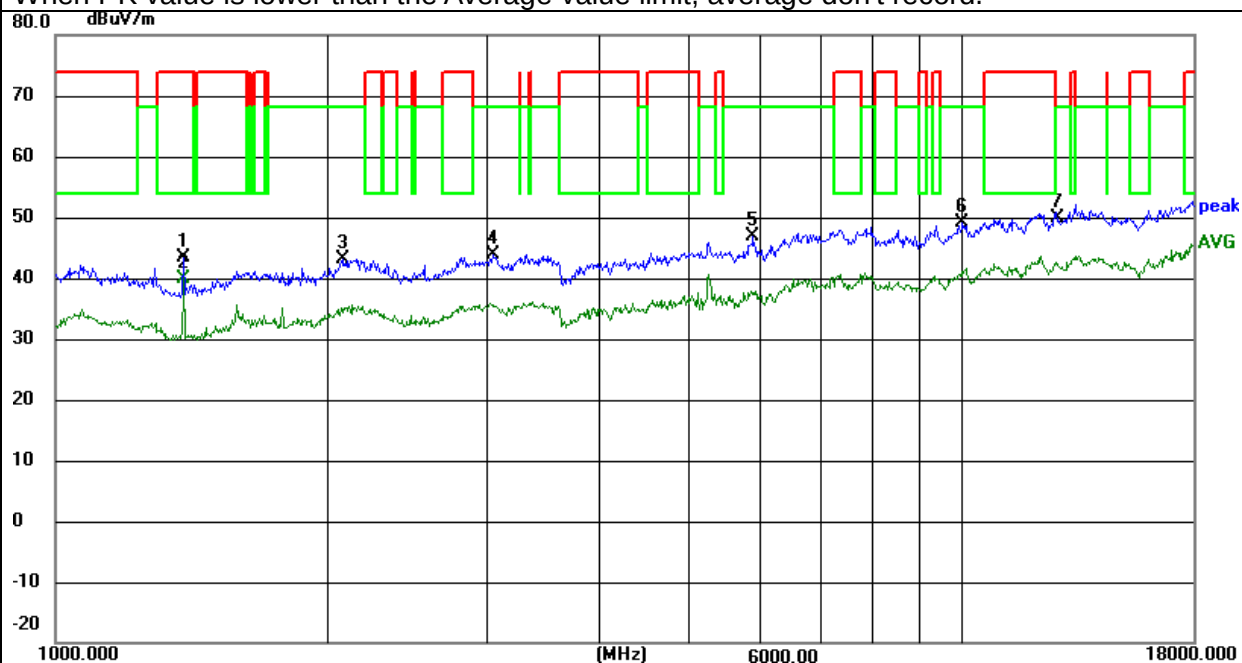
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1386.325	60.67	-17.99	42.68	74.00	-31.32	peak
H	1386.325	53.22	-17.99	35.23	54.00	-18.77	AVG
H	2677.050	53.27	-11.38	41.89	68.20	-26.31	peak
H	3597.175	53.77	-9.10	44.67	68.20	-23.53	peak
H	7171.000	51.24	-2.69	48.55	68.20	-19.65	peak
H	10548.475	46.72	2.29	49.01	68.20	-19.19	peak
H	12128.625	38.30	4.70	43.00	54.00	-11.00	AVG
H	12149.450	46.44	4.64	51.08	74.00	-22.92	peak

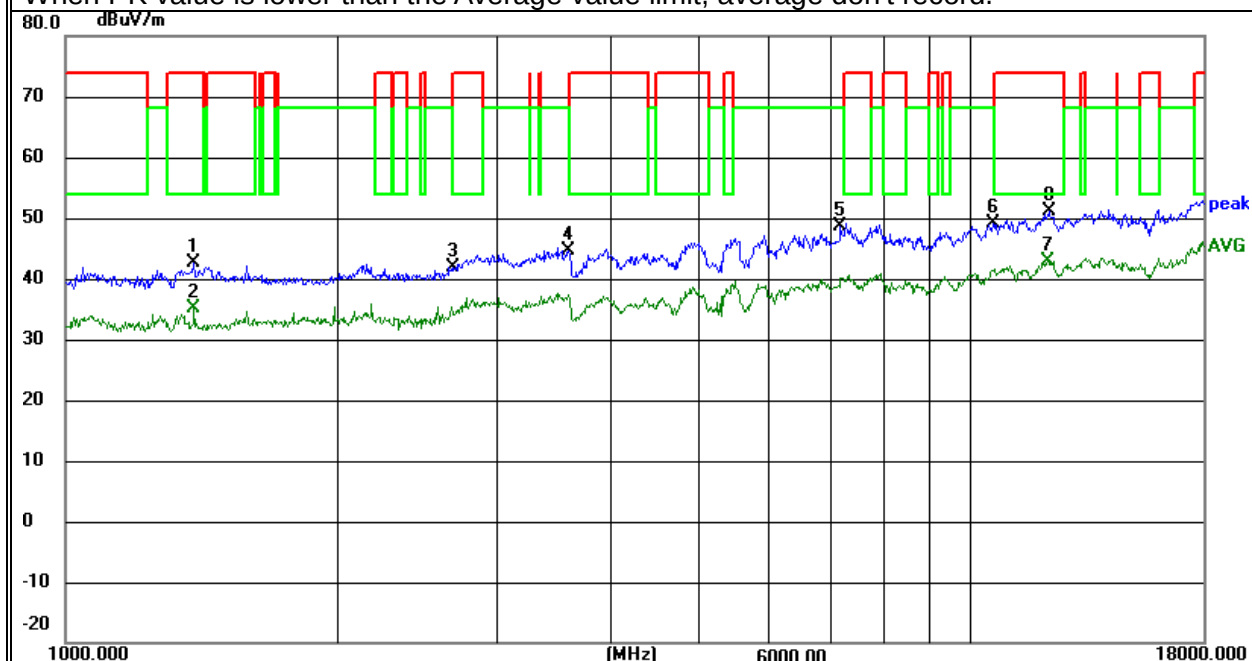
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



5825

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	2081.200	55.16	-12.62	42.54	68.20	-25.66	peak
V	2905.700	54.20	-10.00	44.20	68.20	-24.00	peak
V	4894.700	53.27	-7.42	45.85	74.00	-28.15	peak
V	4894.700	46.22	-7.42	38.80	54.00	-15.20	AVG
V	7911.350	50.29	-1.53	48.76	68.20	-19.44	peak
V	10001.500	48.01	1.15	49.16	68.20	-19.04	peak
V	12037.250	45.61	5.10	50.71	74.00	-23.29	peak
V	12050.000	38.04	5.03	43.07	54.00	-10.93	AVG

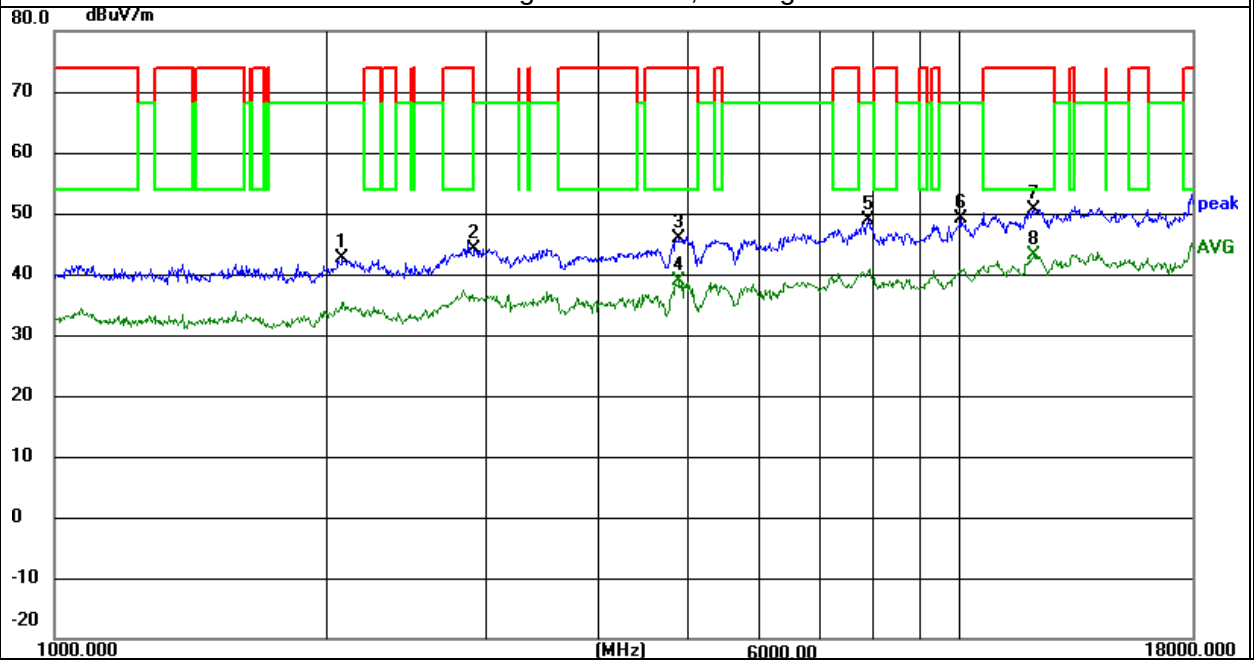
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	1067.150	51.54	-18.29	33.25	54.00	-20.75	AVG
H	1077.775	60.12	-18.19	41.93	74.00	-32.07	peak
H	1980.475	57.02	-14.04	42.98	68.20	-25.22	peak
H	2937.575	53.87	-10.06	43.81	68.20	-24.39	peak
H	5881.125	49.90	-4.99	44.91	68.20	-23.29	peak
H	6791.050	49.84	-3.30	46.54	68.20	-21.66	peak
H	13475.025	45.54	5.43	50.97	68.20	-17.23	peak

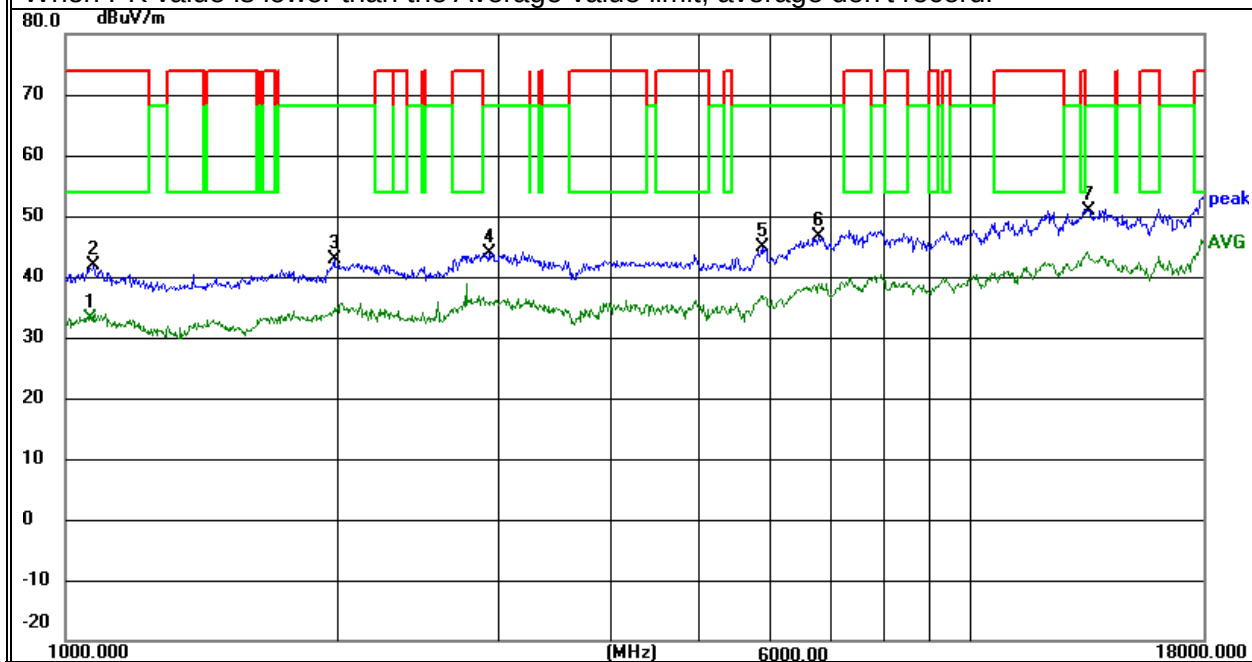
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



3.2.9 TEST RESULTS (18GHz-40GHz)

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.3 °C	Relative Humidity :	52%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX (5.2G)-802.11a ;TX (5.3G)-802.11n20 TX (5.6G)-802.11n20;TX (5.8G)-802.11a		

WIFI 5.2G

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	34418.050	57.76	-4.38	53.38	68.20	-14.82	peak

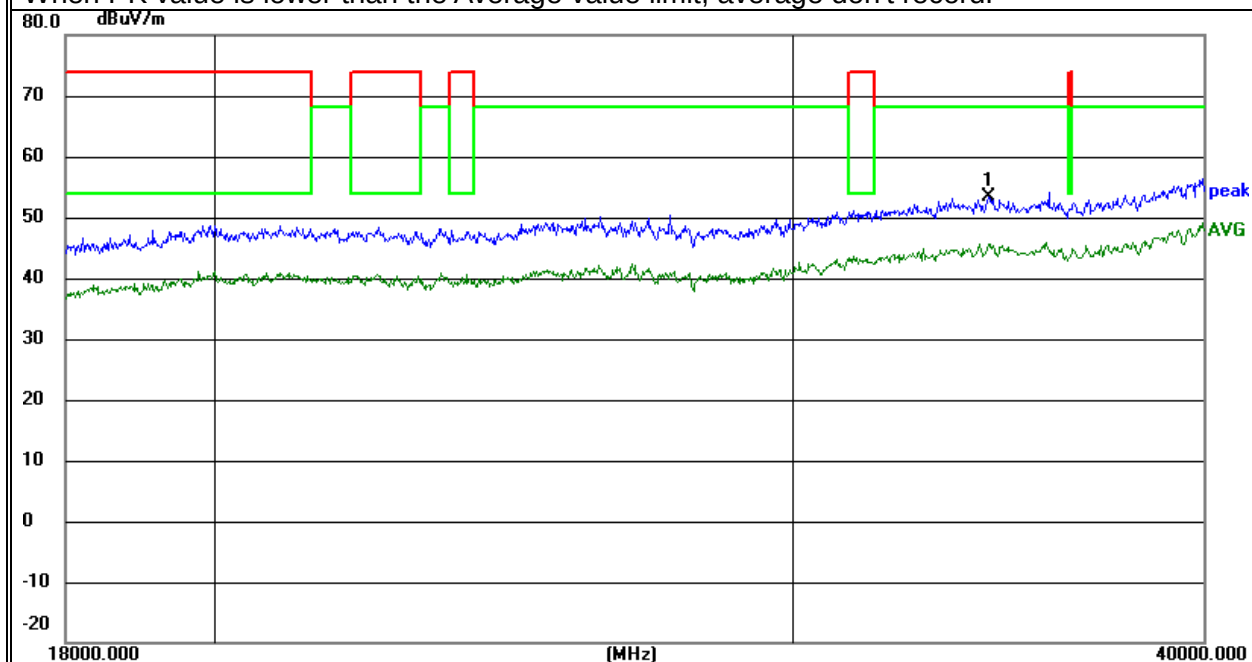
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a 5180MHz. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	33508.900	58.85	-5.38	53.47	68.20	-14.73	peak

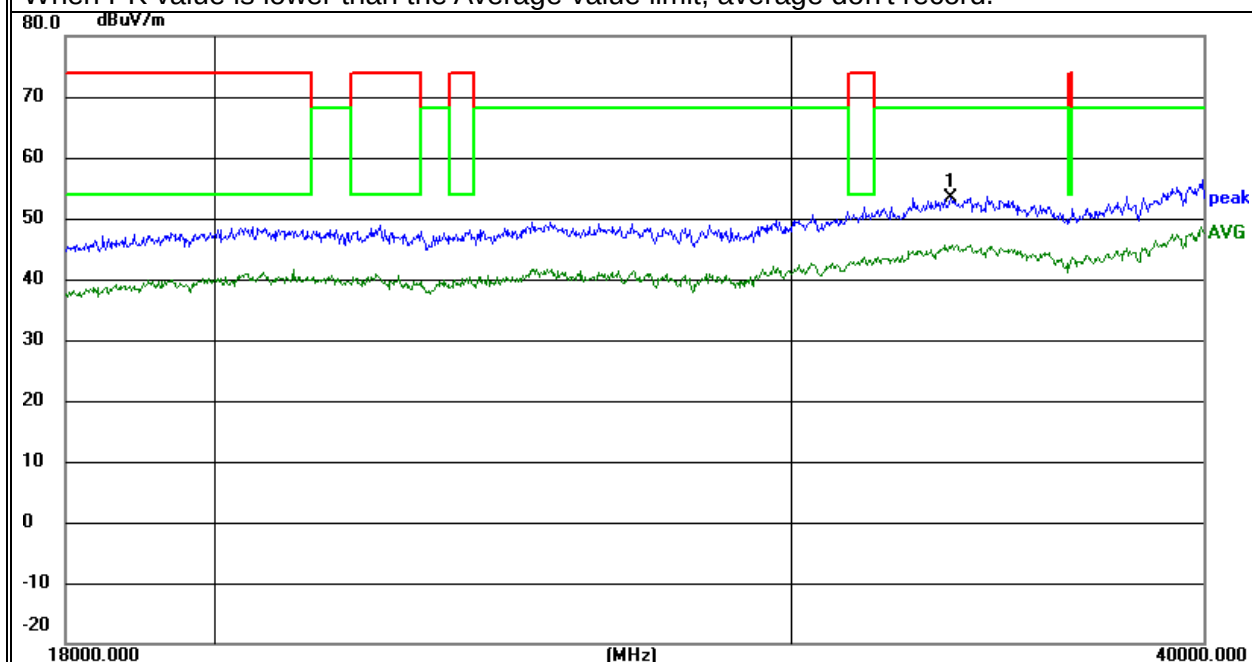
Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a 5180MHz. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



WIFI 5.3G

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	34415.300	57.64	-4.39	53.25	68.20	-14.95	peak

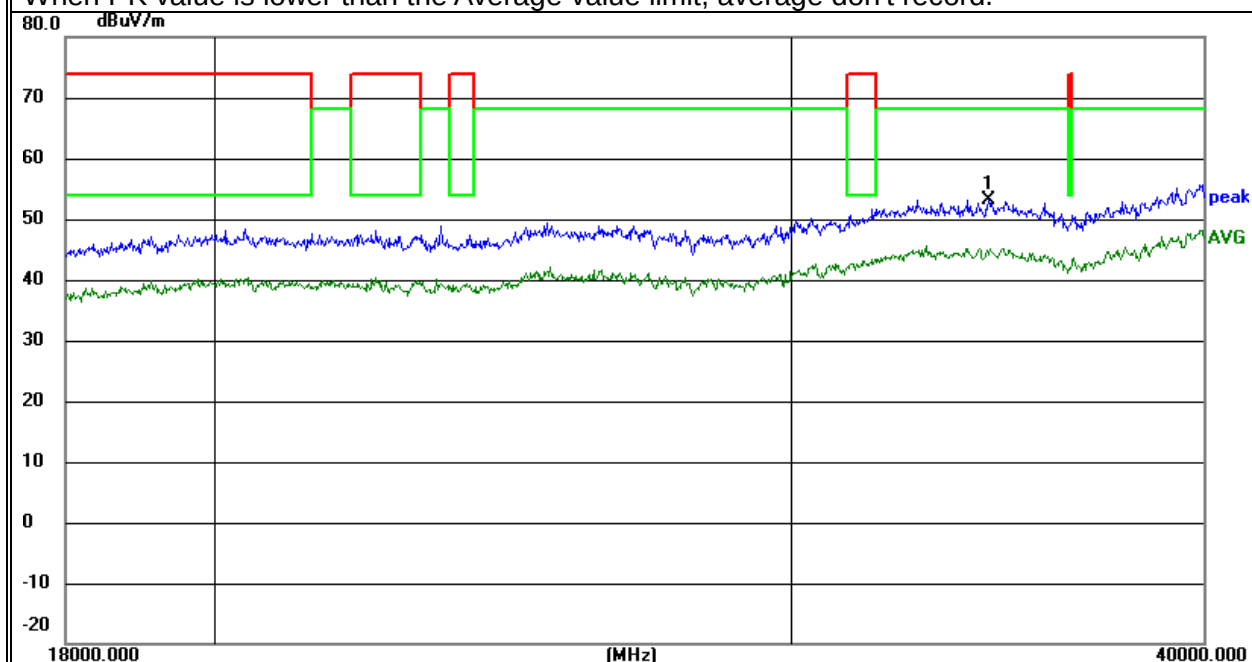
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20 5260MHz. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	33981.350	57.05	-4.98	52.07	68.20	-16.13	peak

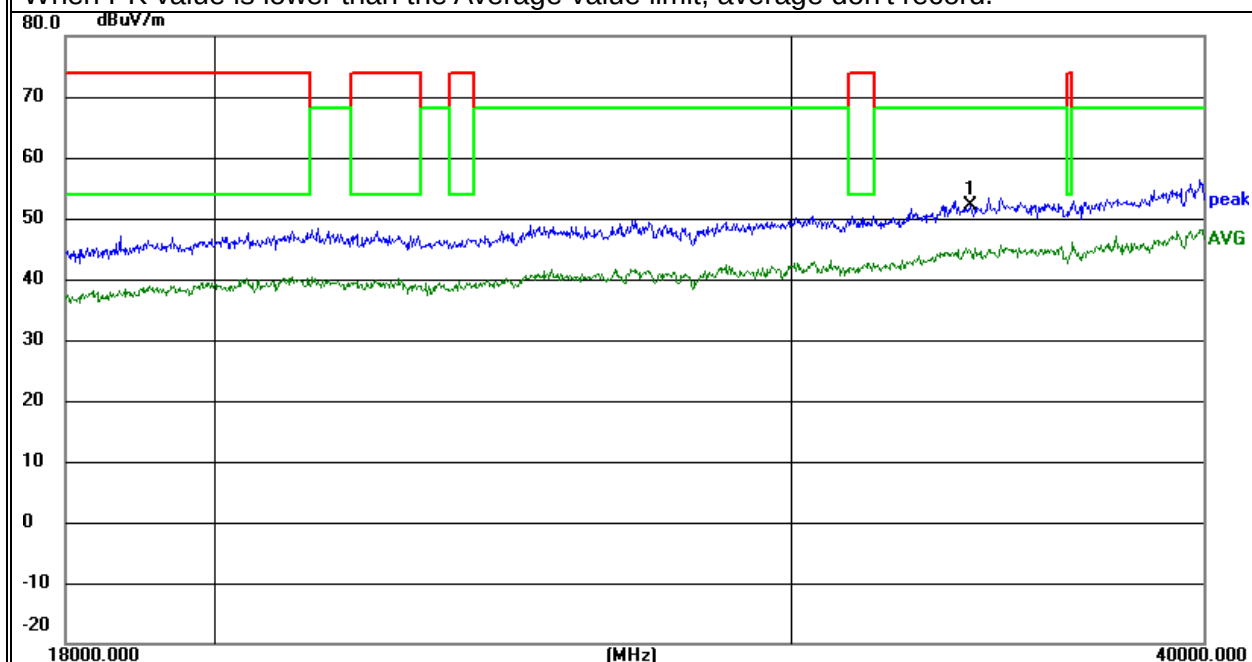
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20 5260MHz. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



WIFI 5.6G

Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	33339.500	58.35	-5.51	52.84	68.20	-15.36	peak

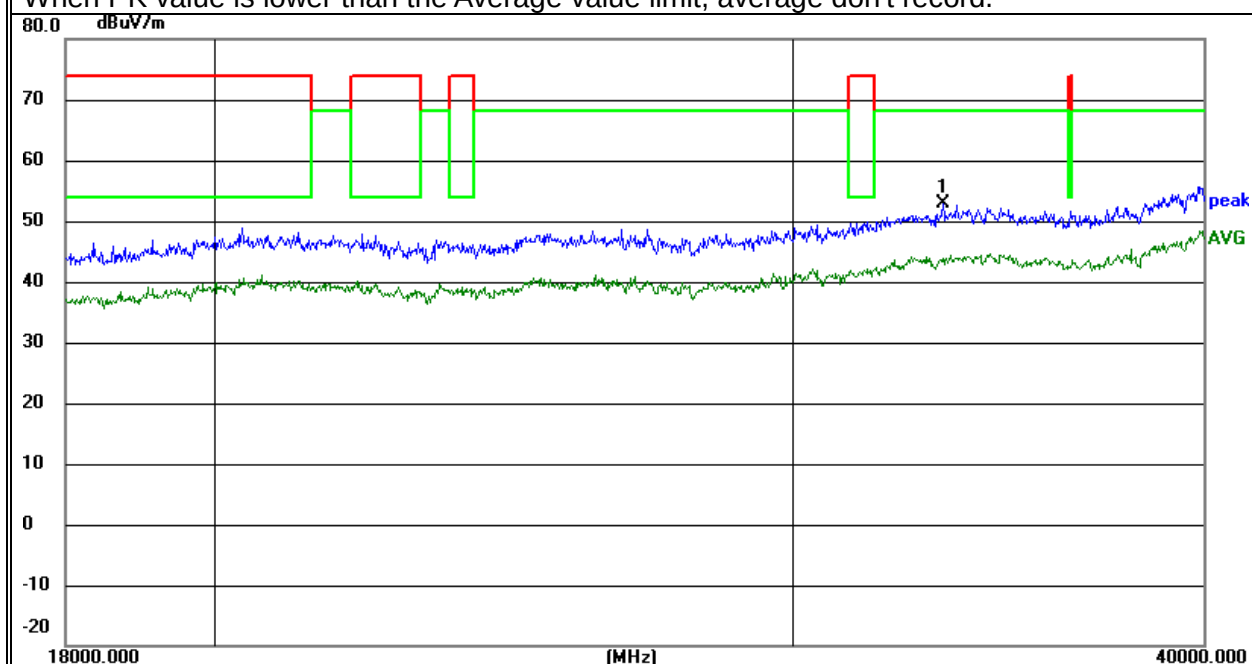
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20 5500MHz. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	34151.300	57.30	-4.83	52.47	68.20	-15.73	peak

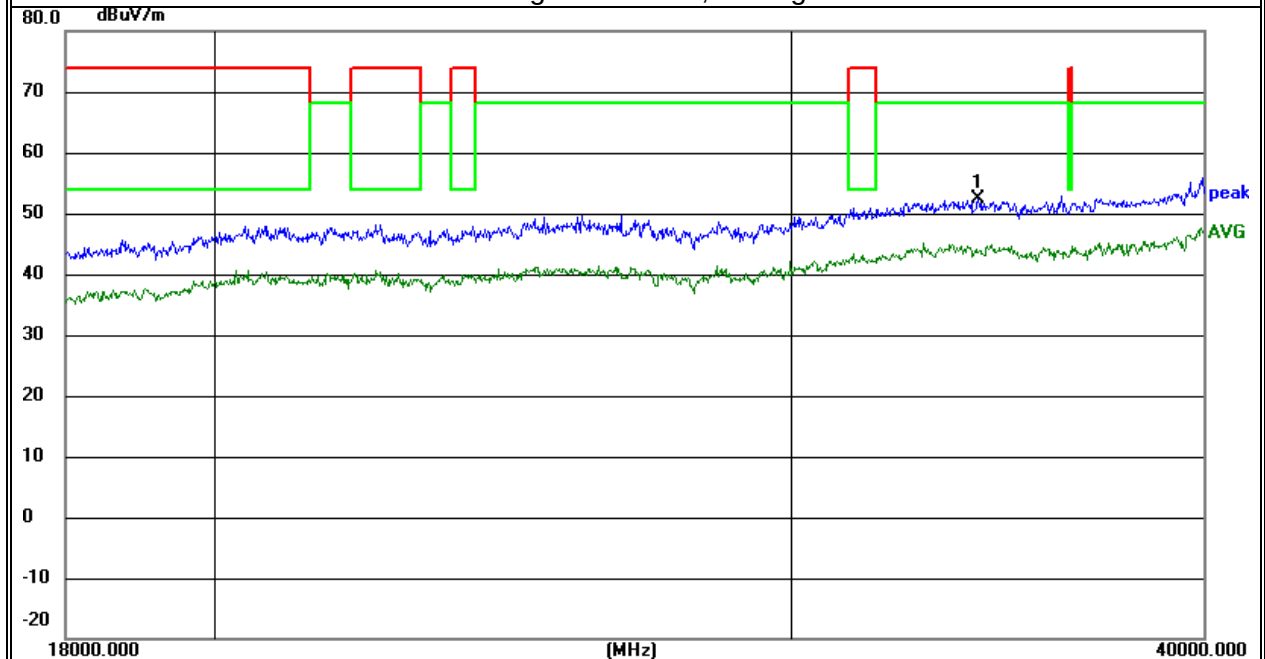
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11n20 5500MHz. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



WIFI 5.8G

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	34302.000	58.68	-4.62	54.06	68.20	-14.14	peak

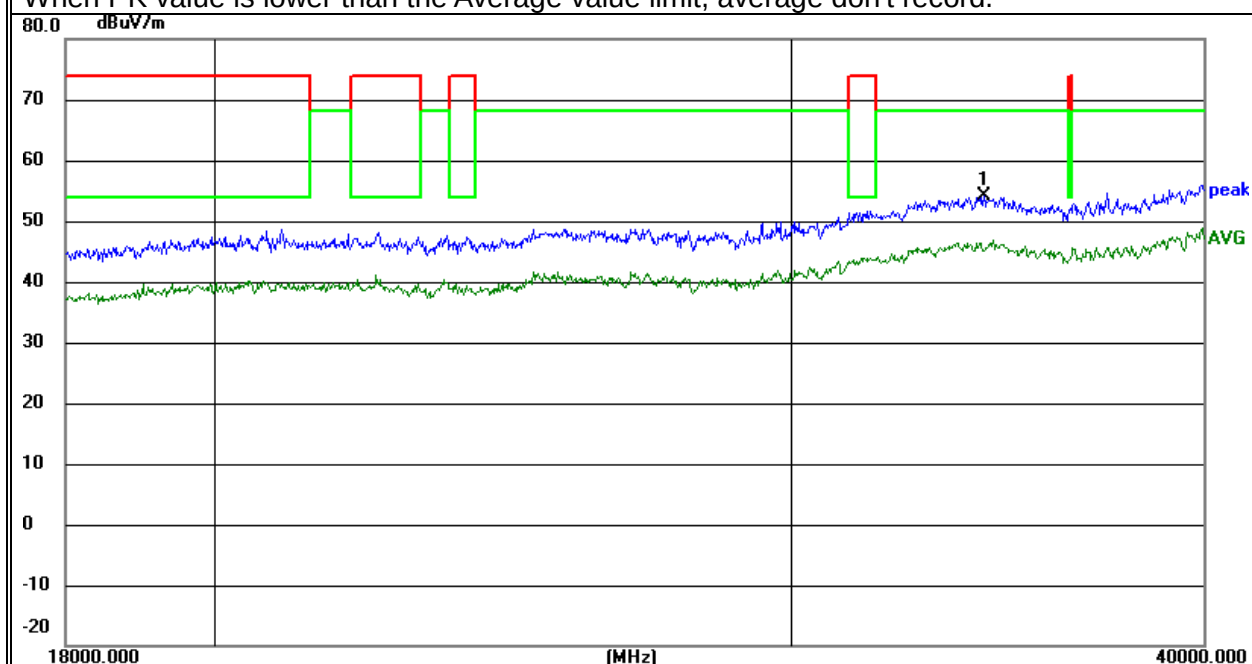
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a 5180MHz. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	33908.750	59.94	-5.05	54.89	68.20	-13.31	peak

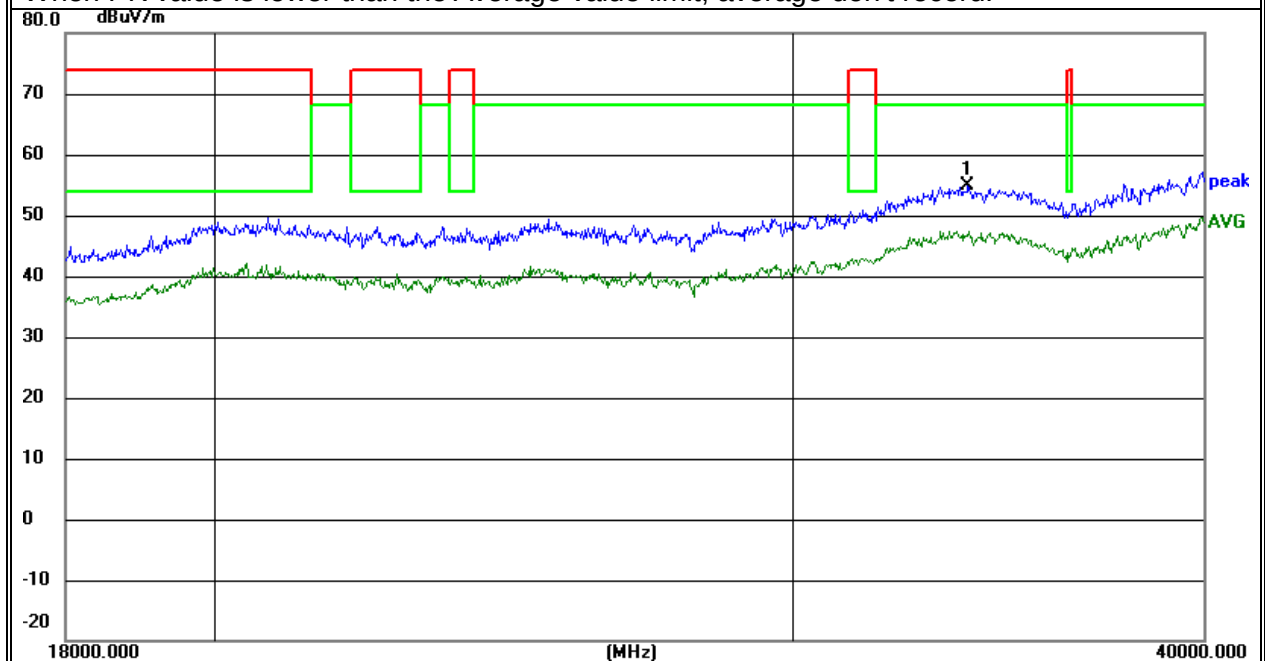
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a 5180MHz. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



3.2.10 Radiated Spurious at Band Edges

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	26.4 °C	Relative Humidity :	53%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX (5.2G)-802.11a		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	5150.000	52.67	0.10	52.77	74.00	-21.23	peak
V	5150.000	40.52	0.10	40.62	54.00	-13.38	AVG

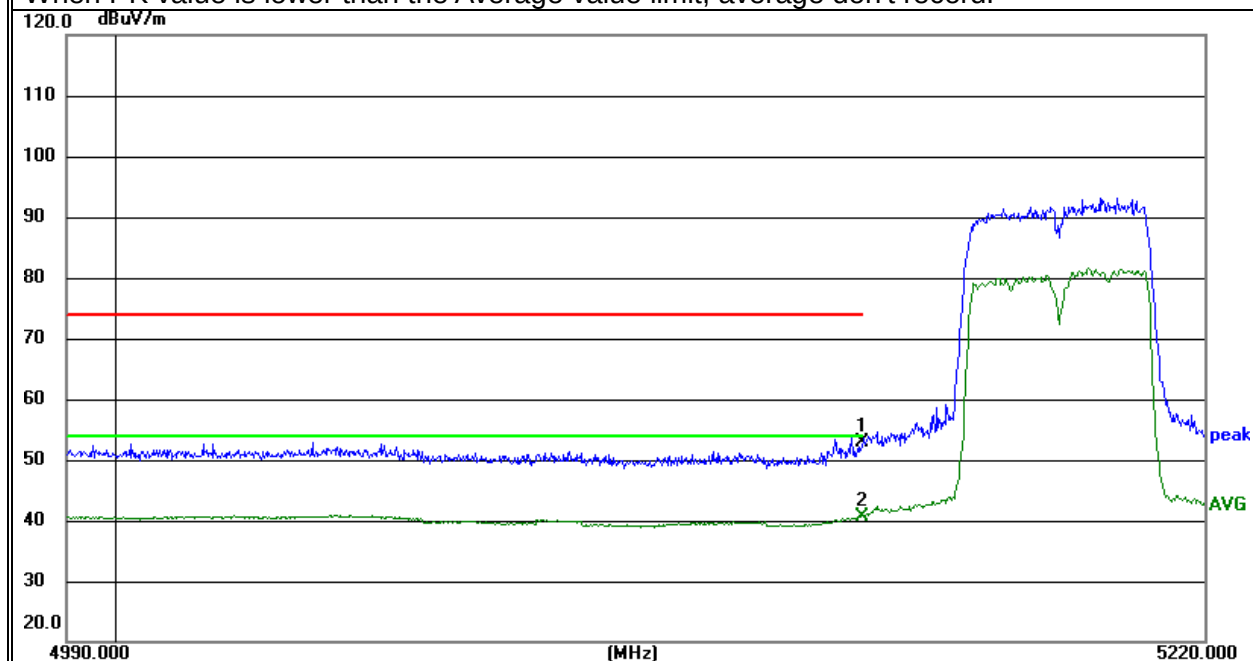
Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	5150.000	63.43	0.10	63.53	74.00	-10.47	peak
H	5150.000	46.78	0.10	46.88	54.00	-7.12	AVG

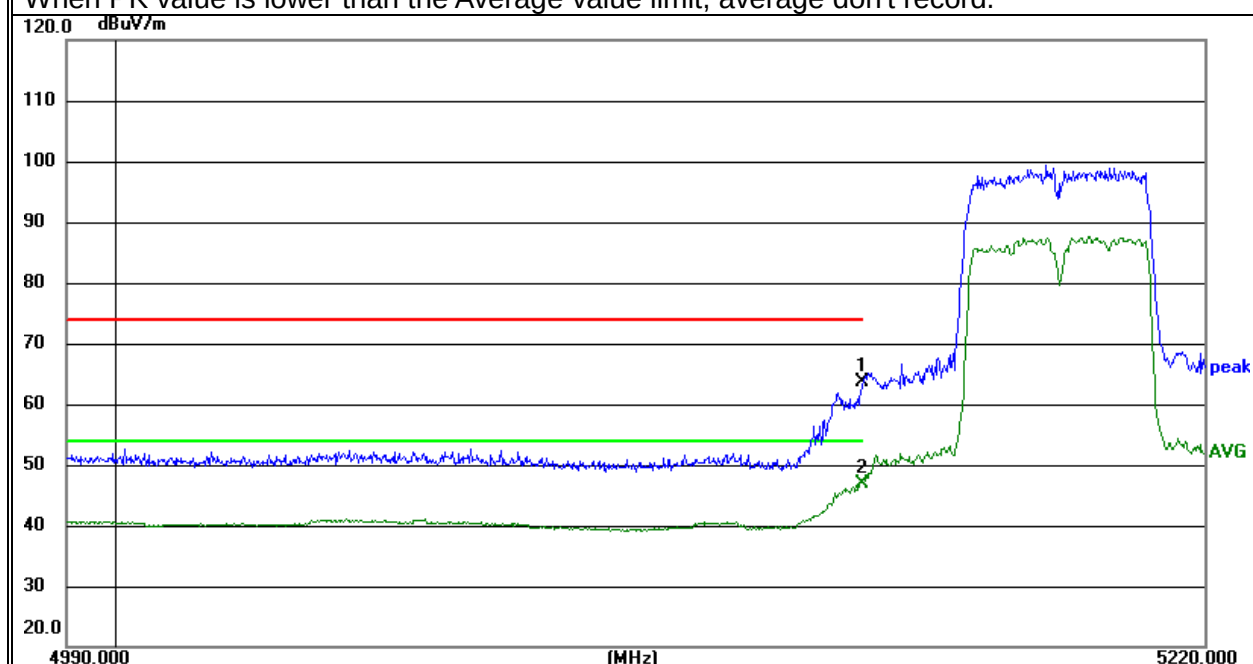
Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	5350.000	51.14	-0.79	50.35	74.00	-23.65	peak
V	5350.000	40.85	-0.79	40.06	54.00	-13.94	AVG

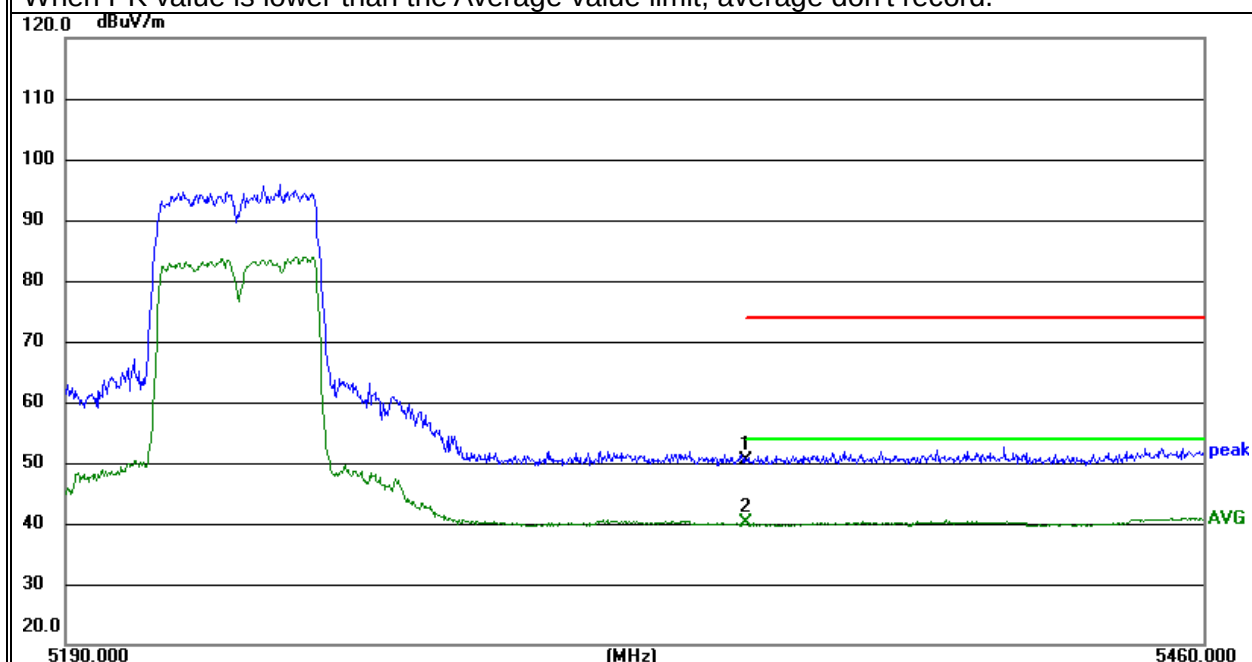
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	5350.000	51.44	-0.79	50.65	74.00	-23.35	peak
H	5350.000	40.95	-0.79	40.16	54.00	-13.84	AVG

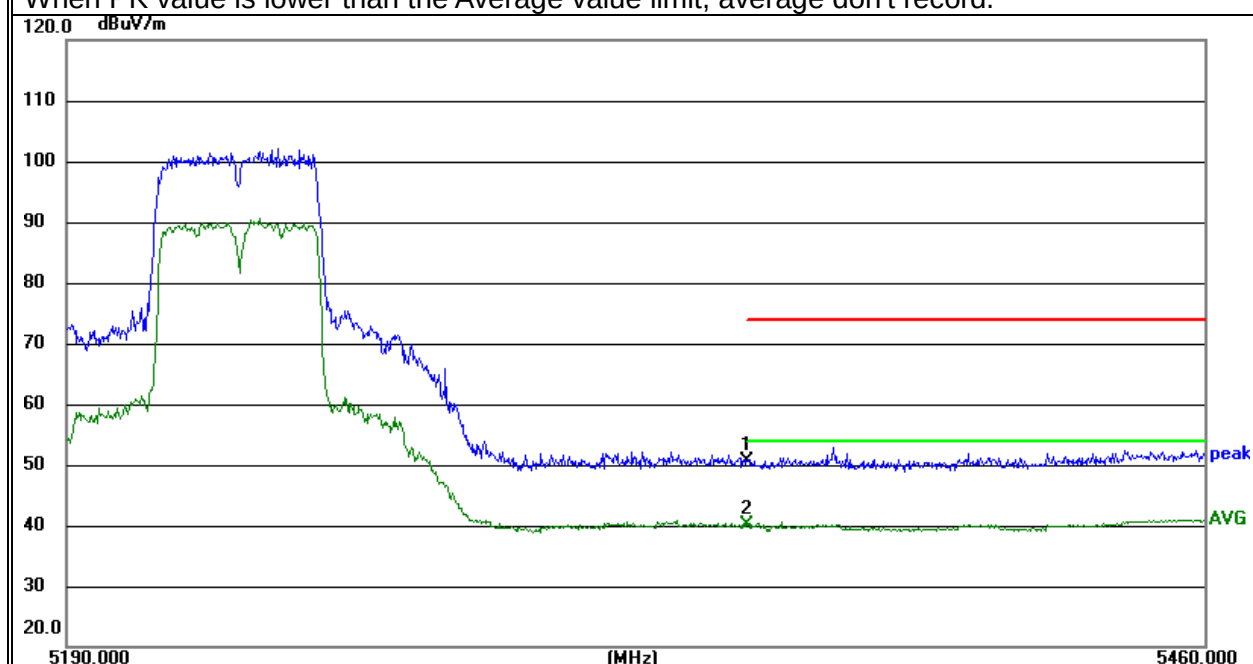
Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	24.5 °C	Relative Humidity :	47.5%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX (5.3G)-802.11n20		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	5150.000	50.53	0.10	50.63	74.00	-23.37	peak
V	5150.000	39.79	0.10	39.89	54.00	-14.11	AVG

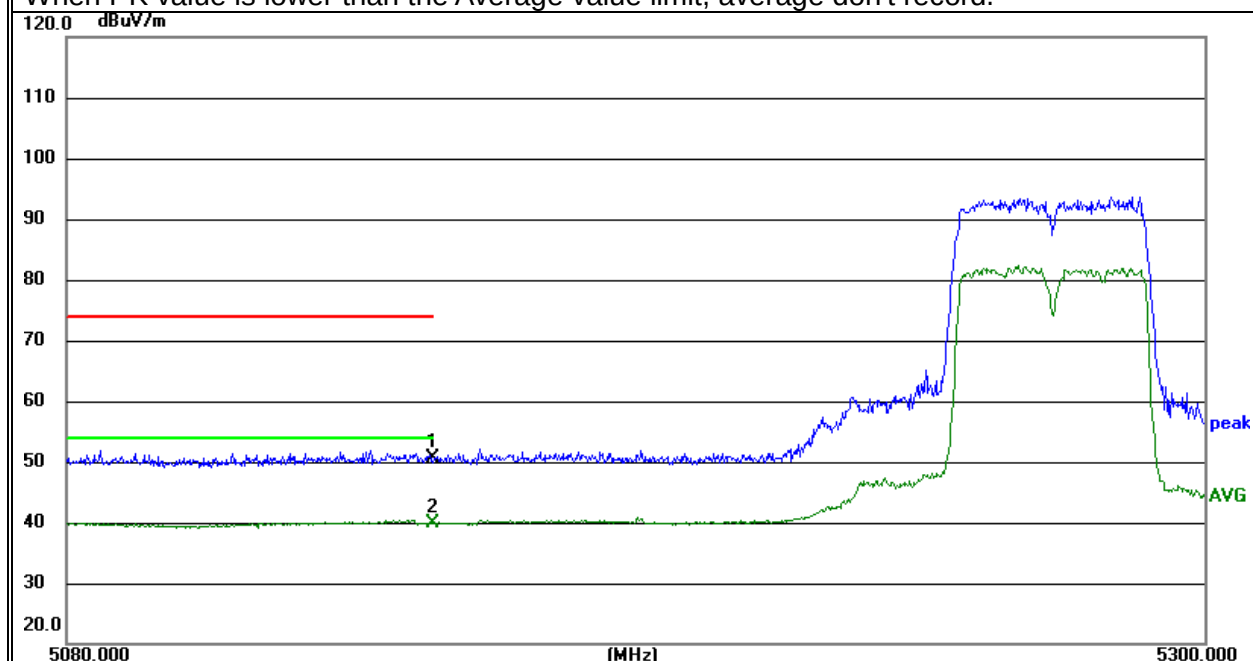
Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	5150.000	49.98	0.10	50.08	74.00	-23.92	peak
H	5150.000	39.53	0.10	39.63	54.00	-14.37	AVG

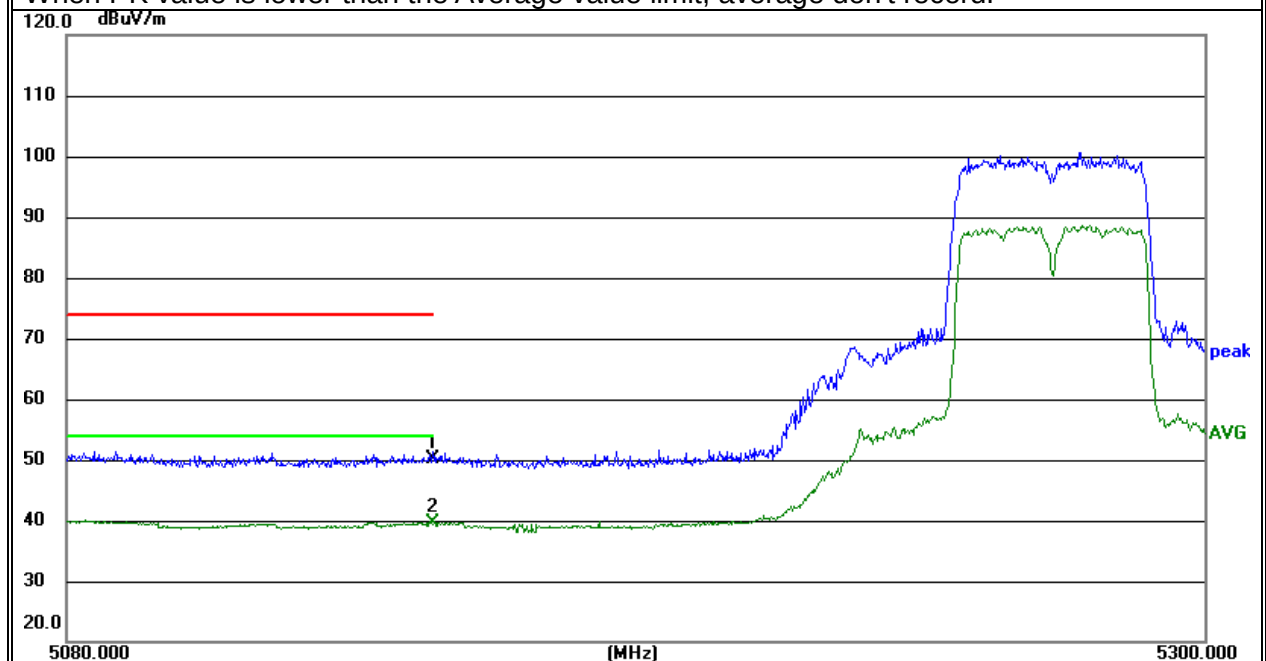
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	5350.000	55.04	-0.79	54.25	74.00	-19.75	peak
V	5350.000	41.89	-0.79	41.10	54.00	-12.90	AVG

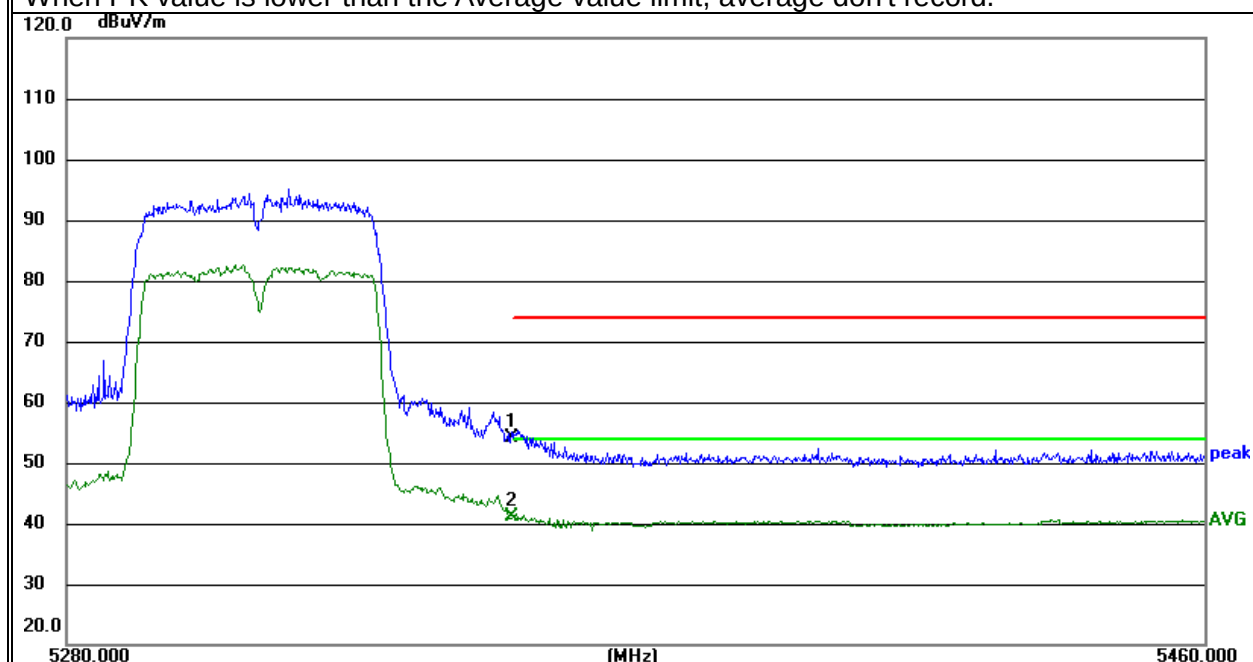
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	5350.000	64.11	-0.79	63.32	74.00	-10.68	peak
H	5350.000	48.99	-0.79	48.20	54.00	-5.80	AVG

Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	26.4 °C	Relative Humidity :	53%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX (5.6G)-802.11n20		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	5460.000	53.29	0.06	53.35	68.20	-14.85	peak
V	5460.000	41.70	0.06	41.76	54.00	-12.24	AVG

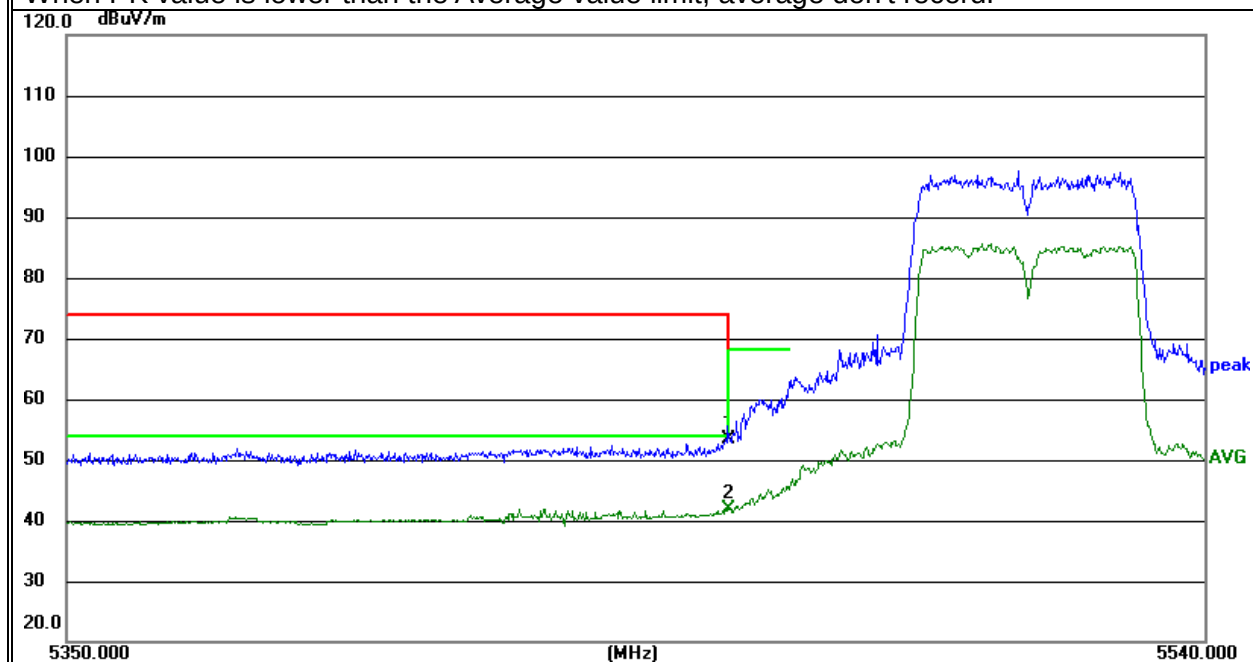
Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	5460.000	60.20	0.06	60.26	68.20	-7.94	peak
H	5460.000	43.45	0.06	43.51	54.00	-10.49	AVG

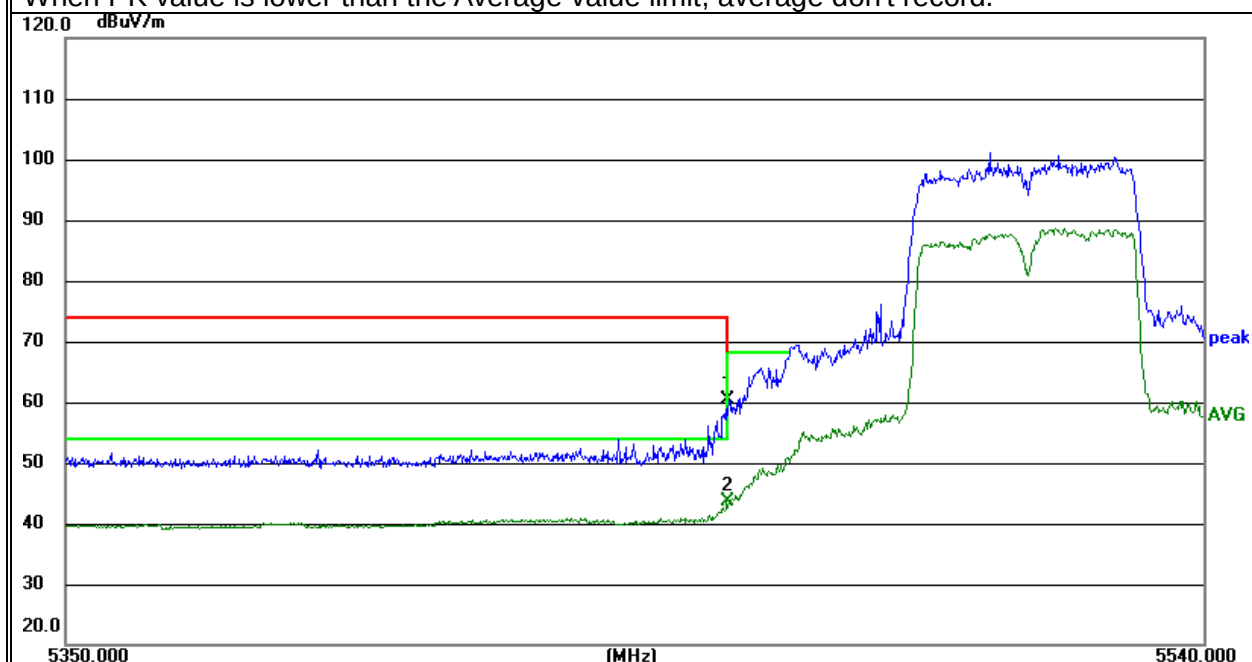
Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11ac40. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25.7 °C	Relative Humidity :	49.7%
Pressure :	1010 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX (5.8G)-802.11a		

Polar (H/V)	Frequency (MHz)	Meter Reading (dBuV)	Factor (dB)	Emission Level (dBuV/m)	Limits (dBuV/m)	Margin (dB)	Remark
V	5607.380	-54.56	11.95	-42.61	-27.00	-15.61	peak

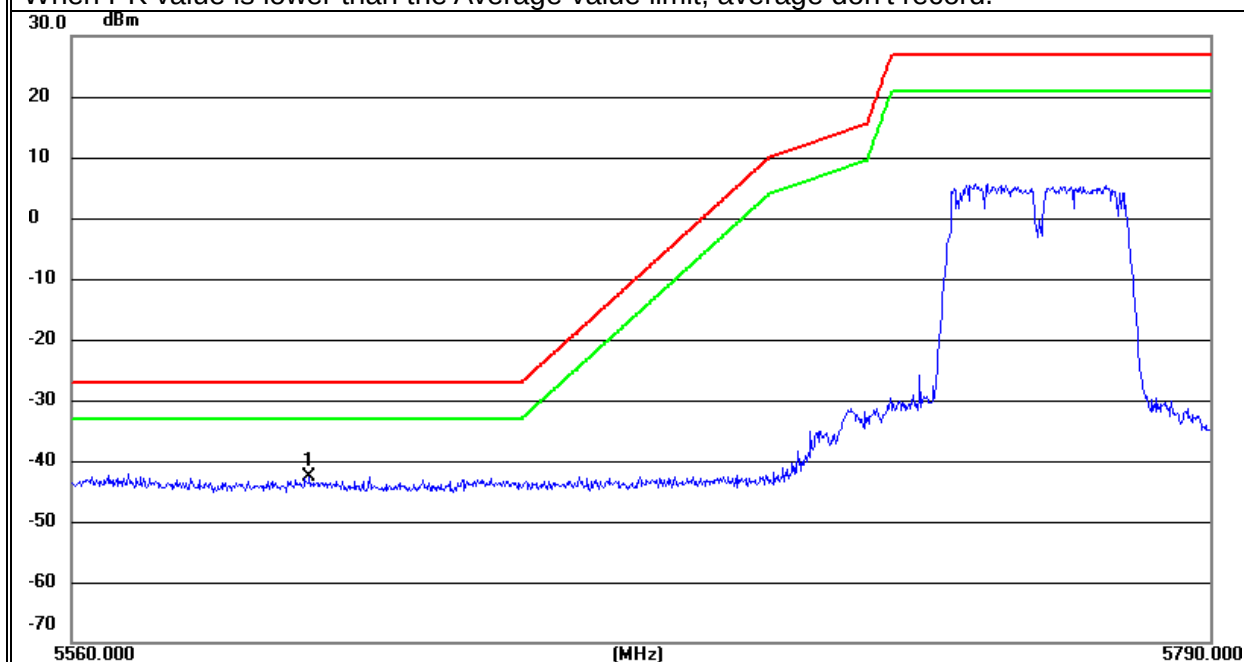
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	5598.870	-53.29	11.91	-41.38	-27.00	-14.38	peak

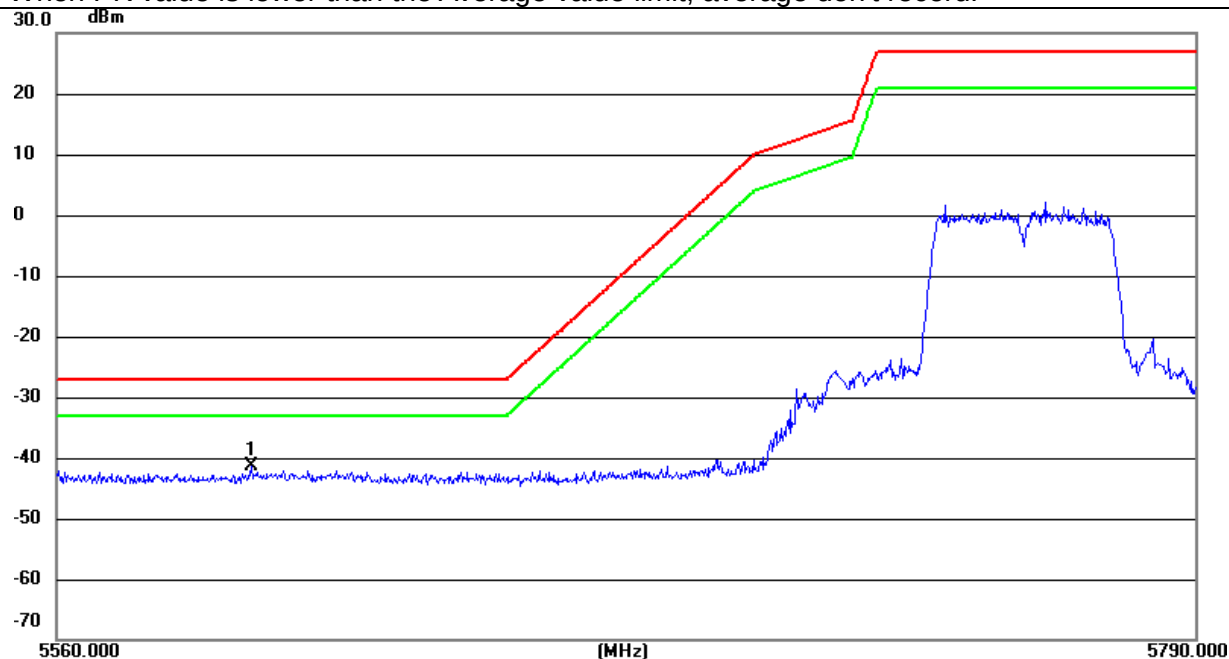
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
V	5951.995	-55.33	13.38	-41.95	-27.00	-14.95	peak

Remark:

Emission Level = Meter Reading + Factor, Margin = Emission Level - Limit, Factor = Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



Polar (H/V)	Frequency	Meter Reading	Factor	Emission Level	Limits	Margin	Remark
	(MHz)	(dBuV)	(dB)	(dBuV/m)	(dBuV/m)	(dB)	
H	5967.975	-54.23	13.07	-41.16	-27.00	-14.16	peak

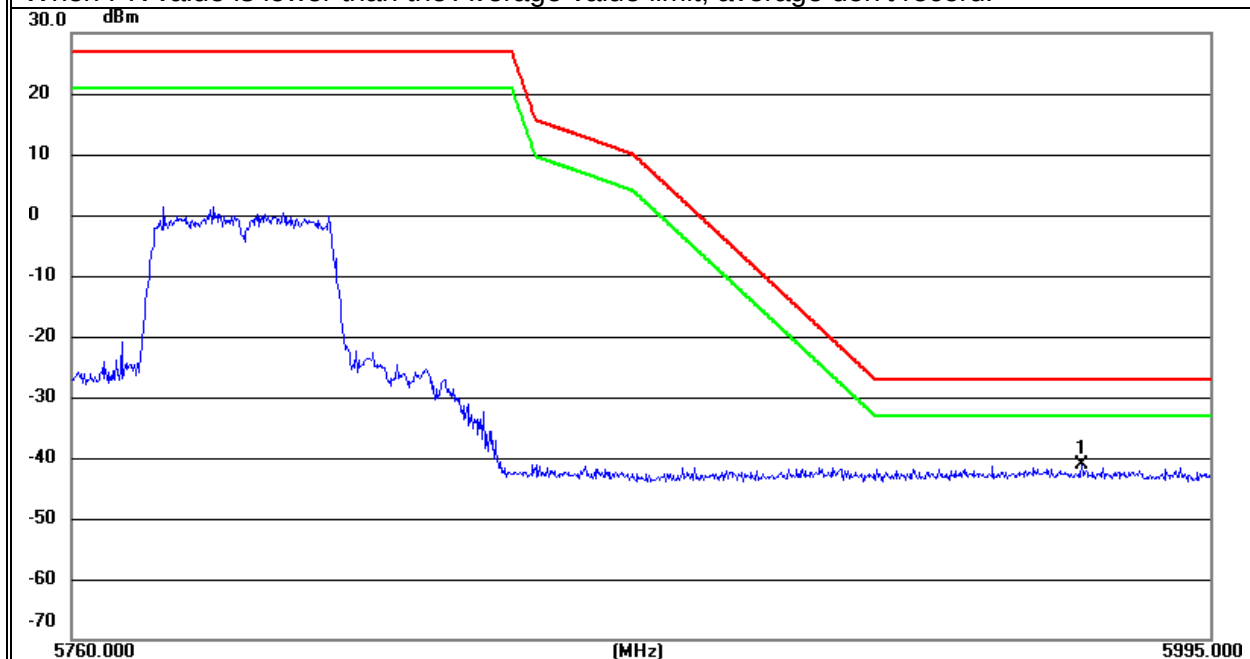
Remark:

Emission Level = Meter Reading+ Factor, Margin= Emission Level- Limit, Factor= Antenna Factor + Cable Loss - Preamp Factor

All the modulation modes have been tested, and the worst-case result was 802.11a. Only the worst-case mode reported.

Other emissions are attenuated more than 20dB below the permissible limits, so it does not recorded in the report.

When PK value is lower than the Average value limit, average don't record.



4 POWER SPECTRAL DENSITY TEST

4.1 APPLIED PROCEDURES / LIMIT

According to FCC §15.407(a)

For the band 5.15-5.25 GHz,

- (i) For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi. The maximum e.i.r.p. at any elevation angle above 30 degrees as measured from the horizon must not exceed 125 mW (21 dBm).
- (ii) For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- (iii) For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. Fixed point-to-point U-NII devices may employ antennas with directional gain up to 23 dBi without any corresponding reduction in the maximum conducted output power or maximum power spectral density. For fixed point-to-point transmitters that employ a directional antenna gain greater than 23 dBi, a 1 dB reduction in maximum conducted output power and maximum power spectral density is required for each 1 dB of antenna gain in excess of 23 dBi. Fixed, point-to-point operations exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple colocated transmitters transmitting the same information. The operator of the U-NII device, or if the equipment is professionally installed, the installer, is responsible for ensuring that systems employing high gain directional antennas are used exclusively for fixed, point-to-point operations.
- (iv) For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. In addition, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz

- (3) For the band 5.725-5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

4.2 TEST PROCEDURE

For devices operating in the bands 5.15-5.25 GHz, 5.25-5.35 GHz, and 5.47-5.725 GHz, the above procedures make use of 1 MHz RBW to satisfy directly the 1 MHz reference bandwidth specified in § 15.407(a)(5). For devices operating in the band 5.725-5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of a RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz). If measurements are performed using a reduced resolution bandwidth (< 1 MHz, or < 500 kHz) and integrated over 1 MHz, or 500 KHz bandwidth, the following adjustments to the procedures apply:

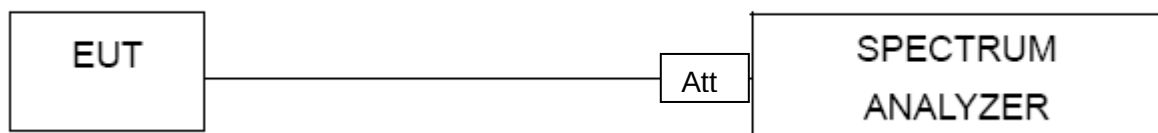
- a) Set $RBW \geq 1/T$, where T is defined in section II.B.I.a).
- b) Set $VBW \geq 3$ RBW.
- c) If measurement bandwidth of Maximum PSD is specified in 500 kHz, add $10\log(500\text{kHz}/RBW)$ to the measured result, whereas $RBW (< 500 \text{ KHz})$ is the reduced resolution bandwidth of the spectrum analyzer set during measurement.
- d) If measurement bandwidth of Maximum PSD is specified in 1 MHz, add $10\log(1\text{MHz}/RBW)$ to the measured result, whereas $RBW (< 1 \text{ MHz})$ is the reduced resolution bandwidth of spectrum analyzer set during measurement.
- e) Care must be taken to ensure that the measurements are performed during a period of continuous transmission or are corrected upward for duty cycle.

Note: As a practical matter, it is recommended to use reduced RBW of 100 KHz for the sections 5.c) and 5.d) above, since $RBW=100 \text{ KHz}$ is available on nearly all spectrum analyzers.

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP



4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.1 Unless otherwise a special operating condition is specified in the follows during the testing.

4.6 TEST RESULTS

EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1015 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX Frequency Band 1 (5150-5250MHz), Band 2A (5250-5350MHz), Band 2C (5470-5725MHz), Band 3 (5745-5825MHz)		

Test data reference attachment.

5. 26DB & 99% EMISSION BANDWIDTH

5.1 APPLIED PROCEDURES / LIMIT

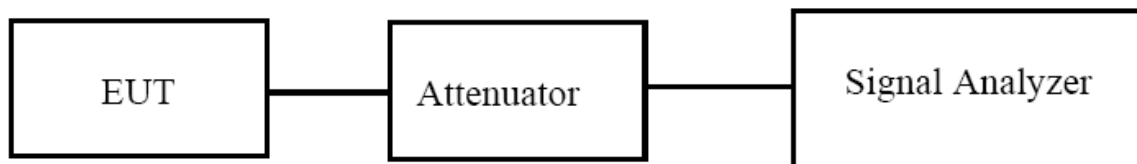
The maximum power spectral density is measured as a conducted emission by direct connection of a calibrated test instrument to the equipment under test. If the device cannot be connected directly, alternative techniques acceptable to the Commission may be used. Measurements in the 5.725-5.85 GHz band are made over a reference bandwidth of 500 kHz or the 26 dB emission bandwidth of the device, whichever is less. Measurements in the 5.15-5.25 GHz, 5.25-5.35 GHz, and the 5.47-5.725 GHz bands are made over a bandwidth of 1 MHz or the 26 dB emission bandwidth of the device, whichever is less. A narrower resolution bandwidth can be used, provided that the measured power is integrated over the full reference bandwidth.

5.2 TEST PROCEDURE

- a) Set RBW = approximately 1% of the emission bandwidth.
- b) Set the VBW > RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Measure the maximum width of the emission that is 26 dB down from the maximum of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%.

The following procedure shall be used for measuring (99 %) power bandwidth:

1. Set center frequency to the nominal EUT channel center frequency.
2. Set span = 1.5 times to 5.0 times the OBW.
3. Set RBW = 1 % to 5 % of the OBW
4. Set VBW $\geq 3 \cdot$ RBW
5. Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.
6. Use the 99 % power bandwidth function of the instrument (if available).
7. If the instrument does not have a 99 % power bandwidth function, the trace data points are recovered and directly summed in power units. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99% occupied bandwidth is the difference between these two frequencies.



5.3 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

5.4 TEST RESULTS

EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1012 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX Frequency Band 1 (5150-5250MHz), Band 2A (5250-5350MHz), Band 2C(5470-5725MHz), Band 3(5725-5850MHz)		

Test data reference attachment.

6. MINIMUM 6 DB BANDWIDTH

6.1 APPLIED PROCEDURES / LIMIT

According to FCC §15.407(e)

(e) Within the 5.725-5.85 GHz band, the minimum 6 dB bandwidth of U-NII devices shall be at least 500 kHz.

6.2 EST PROCEDURE

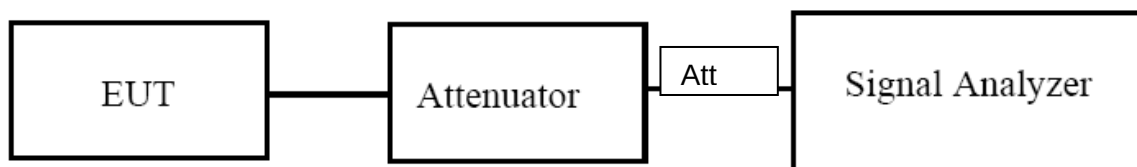
Section 15.407(e) specifies the minimum 6 dB emission bandwidth of at least 500 KHz for the band 5.715-5.85 GHz. The following procedure shall be used for measuring this bandwidth:

- a) Set RBW = 100 kHz.
- b) Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- c) Detector = Peak.
- d) Trace mode = max hold.
- e) Sweep = auto couple.
- f) Allow the trace to stabilize.
- g) Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1012 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX (5G) Mode Frequency Band 3 (5725-5850MHz)		

Test data reference attachment.

7. MAXIMUM CONDUCTED OUTPUT POWER

7.1 PPLIED PROCEDURES / LIMIT

According to FCC §15.407

The maximum conducted output power should not exceed:

Frequency Band(MHz)	Limit
5150~5250	250mW
5250~5350	250 mW or 11 dBm + 10 log B Note: The limit is the smaller of the two, "B" represents -26dB bandwidth.
5470~5725	250 mW or 11 dBm + 10 log B Note: The limit is the smaller of the two, "B" represents -26dB bandwidth.
5725~5850	1W

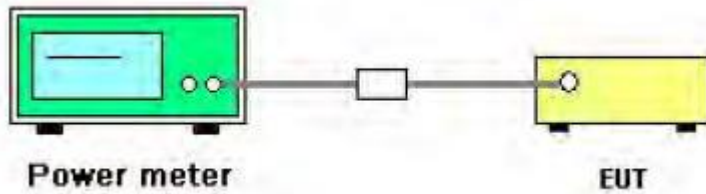
7.2 TEST PROCEDURE

- Method PM-G is measurement using a gated RF average power meter. Measurements may be performed using a wideband gated RF power meter provided that the gate parameters are adjusted such that the power is measured only when the EUT is transmitting at its maximum power control level. Because the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULTS

EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1012 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX (5G) Mode Frequency Band 1 (5150-5250MHz), Band 2A (5250-5350MHz) Band 2C, (5470-5725MHz), Band 3 (5725-5850MHz)		

Test data reference attachment.

8. OUT OF BAND EMISSIONS

8.1 APPLICABLE STANDARD

According to FCC §15.407(b)

Undesirable emission limits. Except as shown in paragraph (b)(10) of this section, the maximum emissions outside of the frequency bands of operation shall be attenuated in accordance with the following limits:

- (1) For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (2) For transmitters operating in the 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (3) For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- (4) For transmitters operating in the 5.725-5.85 GHz band:
 - (i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
 - (ii) Devices certified before March 2, 2017 with antenna gain greater than 10 dBi may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease by March 2, 2018. Devices certified before March 2, 2018 with antenna gain of 10 dBi or less may demonstrate compliance with the emission limits in §15.247(d), but manufacturing, marketing and importing of devices certified under this alternative must cease before March 2, 2020.

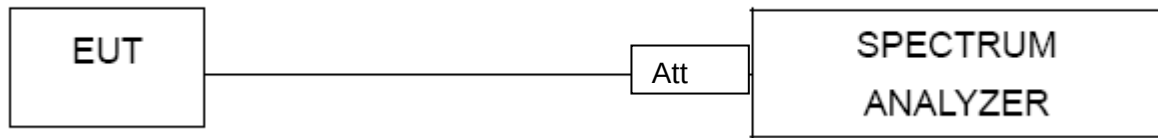
8.2 TEST PROCEDURE

The testing per ANSI C63.10 Section 12.7.4.2

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

8.6 TEST RESULTS

EUT :	ONYX DISPLAY	Model Name :	100-3007
Temperature :	26 °C	Relative Humidity :	54%
Pressure :	1012 hPa	Test Voltage :	DC 12.8V

Test data reference attachment.

9. Frequency Stability Measurement

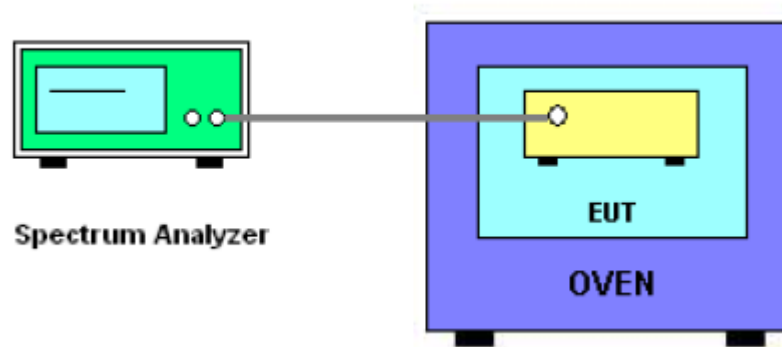
9.1 LIMIT

Manufactures of U-NII devices are responsible for ensuring frequency stability such that an emission is maintained within the band of operation under all conditions of normal operation as specified in the user's manual.

9.2 TEST PROCEDURES

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted absence of modulation signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire absence of modulation emissions bandwidth.
4. Set RBW = 10 kHz, VBW = 10 kHz with peak detector and maxhold settings.
5. f_c is declaring of channel frequency. Then the frequency error formula is $(f_c - f)/f_c \times 10^6$ ppm
- t6. The test extreme voltage is to change the primary supply voltage from 85 to 115 percent of the nominal value
7. Extreme temperature is -20°C~70°C.

9.3 TEST SETUP LAYOUT



9.4 EUT OPERATION DURING TEST

1. The EUT was programmed to be in continuously un-modulation transmitting mode.

9.5 TEST RESULTS

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX Frequency Band I (5150-5250MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5180.0031	5180	0.0031	0.6013
		V max (V)	14.72	5180.0012	5180	0.0012	0.2332
		V min (V)	10.88	5180.0033	5180	0.0033	0.6285
Limits				Within 5150-5250MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5180MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5180.0050	5180	0.0050	0.9686
		T (°C)	-10	5180.0063	5180	0.0063	1.2178
		T (°C)	0	5180.0028	5180	0.0028	0.5387
		T (°C)	10	5180.0087	5180	0.0087	1.6758
		T (°C)	20	5180.0094	5180	0.0094	1.8094
		T (°C)	30	5180.0042	5180	0.0042	0.8132
		T (°C)	40	5180.0074	5180	0.0074	1.4256
		T (°C)	50	5180.0075	5180	0.0075	1.4387
		T (°C)	60	5180.0094	5180	0.0094	1.8207
		T (°C)	70	5180.0006	5180	0.0006	0.1169
Limits				Within 5150-5250MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5200.0002	5200	0.0002	0.0437
		V max (V)	14.72	5200.0039	5200	0.0039	0.7446
		V min (V)	10.88	5200.0029	5200	0.0029	0.5613
Limits				Within 5150-5250MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5200MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5200.0046	5200	0.0046	0.8916
		T (°C)	-10	5200.0023	5200	0.0023	0.4404
		T (°C)	0	5200.0019	5200	0.0019	0.3660
		T (°C)	10	5200.0069	5200	0.0069	1.3355
		T (°C)	20	5200.0033	5200	0.0033	0.6389
		T (°C)	30	5200.0085	5200	0.0085	1.6308
		T (°C)	40	5200.0040	5200	0.0040	0.7755
		T (°C)	50	5200.0038	5200	0.0038	0.7310
		T (°C)	60	5200.0084	5200	0.0084	1.6180
		T (°C)	70	5200.0093	5200	0.0093	1.7963
Limits				Within 5150-5250MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5240.0046	5240	0.0046	0.8786
		V max (V)	14.72	5240.0030	5240	0.0030	0.5650
		V min (V)	10.88	5240.0083	5240	0.0083	1.5830
Limits				Within 5150-5250MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5240MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5240.0076	5240	0.0076	1.4484
		T (°C)	-10	5240.0075	5240	0.0075	1.4401
		T (°C)	0	5240.0038	5240	0.0038	0.7261
		T (°C)	10	5240.0085	5240	0.0085	1.6209
		T (°C)	20	5240.0096	5240	0.0096	1.8402
		T (°C)	30	5240.0033	5240	0.0033	0.6297
		T (°C)	40	5240.0012	5240	0.0012	0.2252
		T (°C)	50	5240.0017	5240	0.0017	0.3297
		T (°C)	60	5240.0073	5240	0.0073	1.4020
		T (°C)	70	5240.0080	5240	0.0080	1.5195
Limits				Within 5150-5250MHz			
Result				Complies			

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX Frequency Band 2A (5250-5350MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5260.0023	5260	0.00228	0.4328
		V max (V)	14.72	5260.0007	5260	0.00073	0.1381
		V min (V)	10.88	5260.0059	5260	0.00589	1.1196
Limits				Within 5250-5350MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5260MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5260.0029	5260	0.00294	0.5590
		T (°C)	-10	5260.0003	5260	0.00027	0.0505
		T (°C)	0	5260.0006	5260	0.00058	0.1104
		T (°C)	10	5260.0087	5260	0.00865	1.6448
		T (°C)	20	5260.0058	5260	0.00577	1.0962
		T (°C)	30	5260.0061	5260	0.00605	1.1508
		T (°C)	40	5260.0067	5260	0.00674	1.2805
		T (°C)	50	5260.0082	5260	0.00824	1.5670
		T (°C)	60	5260.0017	5260	0.00166	0.3147
		T (°C)	70	5260.0006	5260	0.00056	0.1068
Limits				Within 5250-5350MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5280.0040	5280	0.00400	0.7578
		V max (V)	14.72	5280.0032	5280	0.00319	0.6036
		V min (V)	10.88	5280.0050	5280	0.00498	0.9432
Limits				Within 5250-5350MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5280MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5280.0075	5280	0.00747	1.4143
		T (°C)	-10	5280.0080	5280	0.00800	1.5144
		T (°C)	0	5280.0063	5280	0.00625	1.1845
		T (°C)	10	5280.0071	5280	0.00711	1.3470
		T (°C)	20	5280.0034	5280	0.00341	0.6468
		T (°C)	30	5280.0008	5280	0.00078	0.1479
		T (°C)	40	5280.0082	5280	0.00816	1.5454
		T (°C)	50	5280.0090	5280	0.00900	1.7038
		T (°C)	60	5280.0039	5280	0.00386	0.7310
		T (°C)	70	5280.0034	5280	0.00341	0.6459
Limits				Within 5250-5350MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5320.0082	5320	0.00815	1.5325
		V max (V)	14.72	5320.0036	5320	0.00355	0.6680
		V min (V)	10.88	5320.0099	5320	0.00987	1.8561
Limits				Within 5250-5350MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5320MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5320.0004	5320	0.00038	0.0723
		T (°C)	-10	5320.0044	5320	0.00443	0.8328
		T (°C)	0	5320.0056	5320	0.00556	1.0455
		T (°C)	10	5320.0023	5320	0.00232	0.4367
		T (°C)	20	5320.0040	5320	0.00397	0.7468
		T (°C)	30	5320.0081	5320	0.00807	1.5173
		T (°C)	40	5320.0010	5320	0.00097	0.1816
		T (°C)	50	5320.0048	5320	0.00481	0.9036
		T (°C)	60	5320.0043	5320	0.00427	0.8028
		T (°C)	70	5320.0024	5320	0.00242	0.4551
Limits				Within 5250-5350MHz			
Result				Complies			

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX Frequency Band 2C (5470-5725MHz)		

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5500.0094	5500	0.00940	1.7085
		V max (V)	14.72	5500.0006	5500	0.00060	0.1083
		V min (V)	10.88	5500.0041	5500	0.00408	0.7412
Limits				Within 5470-5725MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5500MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5500.0061	5500	0.00610	1.1088
		T (°C)	-10	5500.0054	5500	0.00543	0.9879
		T (°C)	0	5500.0010	5500	0.00098	0.1784
		T (°C)	10	5500.0053	5500	0.00527	0.9590
		T (°C)	20	5500.0003	5500	0.00027	0.0484
		T (°C)	30	5500.0052	5500	0.00518	0.9423
		T (°C)	40	5500.0074	5500	0.00744	1.3535
		T (°C)	50	5500.0054	5500	0.00542	0.9850
		T (°C)	60	5500.0080	5500	0.00797	1.4487
		T (°C)	70	5500.0001	5500	0.00012	0.0221
Limits				Within 5470-5725MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5600MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5600.0084	5600	0.00841	1.5016
		V max (V)	14.72	5600.0083	5600	0.00830	1.4827
		V min (V)	10.88	5600.0083	5600	0.00829	1.4799
Limits				Within 5470-5725MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5600MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5600.0087	5600	0.00868	1.5503
		T (°C)	-10	5600.0046	5600	0.00456	0.8148
		T (°C)	0	5600.0069	5600	0.00693	1.2378
		T (°C)	10	5600.0082	5600	0.00819	1.4619
		T (°C)	20	5600.0083	5600	0.00835	1.4906
		T (°C)	30	5600.0019	5600	0.00189	0.3373
		T (°C)	40	5600.0046	5600	0.00463	0.8264
		T (°C)	50	5600.0075	5600	0.00753	1.3452
		T (°C)	60	5600.0090	5600	0.00897	1.6018
		T (°C)	70	5600.0072	5600	0.00722	1.2888
Limits				Within 5470-5725MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5700.0028	5700	0.00276	0.4850
		V max (V)	14.72	5700.0024	5700	0.00237	0.4153
		V min (V)	10.88	5700.0021	5700	0.00208	0.3645
Limits				Within 5470-5725MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5700MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5700.0021	5700	0.00212	0.3711
		T (°C)	-10	5700.0030	5700	0.00297	0.5206
		T (°C)	0	5700.0069	5700	0.00695	1.2185
		T (°C)	10	5700.0043	5700	0.00428	0.7507
		T (°C)	20	5700.0030	5700	0.00295	0.5179
		T (°C)	30	5700.0021	5700	0.00207	0.3632
		T (°C)	40	5700.0059	5700	0.00586	1.0288
		T (°C)	50	5700.0025	5700	0.00254	0.4453
		T (°C)	60	5700.0039	5700	0.00390	0.6840
		T (°C)	70	5700.0021	5700	0.00211	0.3708
Limits				Within 5470-5725MHz			
Result				Complies			

EUT :	ONYX DISPLAY	Model Name. :	100-3007
Temperature :	25 °C	Relative Humidity :	56%
Pressure :	1012 hPa	Test Voltage :	DC 12.8V
Test Mode :	TX Frequency(5745-5850MHz)		

Voltage vs. Frequency Stability

Page 107 Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5745.0067	5745	0.00671	1.1675
		V max (V)	14.72	5745.0019	5745	0.00190	0.3310
		V min (V)	10.88	5745.0045	5745	0.00447	0.7777
Limits				Within 5745-5850MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5745MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5745.0071	5745	0.00708	1.2326
		T (°C)	-10	5745.0074	5745	0.00744	1.2944
		T (°C)	0	5745.0026	5745	0.00261	0.4548
		T (°C)	10	5745.0030	5745	0.00298	0.5193
		T (°C)	20	5745.0021	5745	0.00207	0.3607
		T (°C)	30	5745.0007	5745	0.00072	0.1252
		T (°C)	40	5745.0048	5745	0.00478	0.8319
		T (°C)	50	5745.0060	5745	0.00598	1.0402
		T (°C)	60	5745.0054	5745	0.00540	0.9399
		T (°C)	70	5745.0021	5745	0.00212	0.3698
Limits				Within 5745-5850MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5785.0015	5785	0.00148	0.2558
		V max (V)	14.72	5785.0036	5785	0.00362	0.6262
		V min (V)	10.88	5785.0077	5785	0.00772	1.3342
Limits				Within 5745-5850MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5785MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5785.0082	5785	0.00818	1.4133
		T (°C)	-10	5785.0044	5785	0.00436	0.7540
		T (°C)	0	5785.0027	5785	0.00271	0.4685
		T (°C)	10	5785.0003	5785	0.00033	0.0566
		T (°C)	20	5785.0044	5785	0.00437	0.7562
		T (°C)	30	5785.0045	5785	0.00452	0.7819
		T (°C)	40	5785.0002	5785	0.00017	0.0296
		T (°C)	50	5785.0079	5785	0.00788	1.3618
		T (°C)	60	5785.0041	5785	0.00414	0.7163
		T (°C)	70	5785.0017	5785	0.00170	0.2944
Limits				Within 5745-5850MHz			
Result				Complies			

Voltage vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
T nom (°C)	20	V nom (V)	12.8	5825.0017	5825	0.00171	0.2937
		V max (V)	14.72	5825.0008	5825	0.00082	0.1403
		V min (V)	10.88	5825.0051	5825	0.00512	0.8786
Limits				Within 5745-5850MHz			
Result				Complies			

Temperature vs. Frequency Stability

TEST CONDITIONS				Reference Frequency: 5825MHz			
				f	fc	Max. Deviation (MHz)	Max. Deviation (ppm)
V nom (V)	12.8	T (°C)	-20	5825.0016	5825	0.00162	0.2774
		T (°C)	-10	5825.0011	5825	0.00107	0.1844
		T (°C)	0	5825.0024	5825	0.00245	0.4199
		T (°C)	10	5825.0099	5825	0.00986	1.6934
		T (°C)	20	5825.0025	5825	0.00252	0.4334
		T (°C)	30	5825.0004	5825	0.00037	0.0631
		T (°C)	40	5825.0052	5825	0.00518	0.8886
		T (°C)	50	5825.0063	5825	0.00630	1.0813
		T (°C)	60	5825.0065	5825	0.00650	1.1151
		T (°C)	70	5825.0035	5825	0.00346	0.5945
Limits				Within 5745-5850MHz			
Result				Complies			

10. DYNAMIC FREQUENCY SELECTION(DFS)

10.1 APPLICABILITY OF DFS REQUIREMENTS

EUT is client and operates as client without radar detection function.

Table 1: Applicability of DFS Requirements Prior to Use of a Channel

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
Non-Occupancy Period	Yes	Not required	Yes
DFS Detection Threshold	Yes	Not required	Yes
Channel Availability Check Time	Yes	Not required	Not required
U-NII Detection Bandwidth	Yes	Not required	Yes

Table 2: Applicability of DFS requirements during normal operation

Requirement	Operational Mode		
	Master	Client Without Radar Detection	Client With Radar Detection
DFS Detection Threshold	Yes	Not required	Yes
Channel Closing Transmission Time	Yes	Yes	Yes
Channel Move Time	Yes	Yes	Yes
U-NII Detection Bandwidth	Yes	Not required	Yes
Client Beacon Test	N/A	Yes	Yes

Additional requirements for devices with multiple bandwidth modes	Operational Mode	
	Master or Client With Radar Detection	Client Without Radar Detection
U-NII Detection Bandwidth and Statistical Performance Check	All BW modes must be tested	Not required
Channel Move Time and Channel Closing Transmission Time	Test using widest BW mode available	Test using the widest BW mode available for the link
All other tests	Any single BW mode	Not required
Note Frequencies selected for statistical performance check (Section 7.8.4) should include several frequencies within the radar detection bandwidth and frequencies near the edge of the radar detection bandwidth. For 802.11 devices it is suggested to select frequencies in each of the bonded 20 MHz channels and the channel center frequency.		

10.2 INTERFERENCE THRESHOLD VALUES, MASTER OR CLIENT INCORPORATING IN-SERVICE NOTEBOOKING

Maximum Transmit Power	Value (see notes 1, 2, and 3)
EIRP $\geq$ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. Note 2: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. Note 3: EIRP is based on the highest antenna gain.	

10.3 DFS RESPONSE REQUIREMENT VALUES

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + an aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100% of the 99% power bandwidth See Note 3.

Note 1: The instant that the Channel Move Time and the Channel Closing Transmission Time begins is as follows:

- For the Short pulse radar Test Signals this instant is the end of the Burst.
- For the Frequency Hopping radar Test Signal, this instant is the end of the last radar Burst generated.
- For the Long Pulse radar Test Signal this instant is the end of the 12 second period defining the radar transmission.

Note 2: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate Channel changes (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions.

Note 3: During the U-NII Detection Bandwidth detection test, radar type 0 is used and for each frequency step the minimum percentage of detection is 90%. Measurements are performed with no data traffic.

10.4 SHORT PULSE RADAR TEST WAVEFORMS

As the EUT is a Client Device with no Radar Detection, only one type radar pulse is required for the testing. Radar Pulse type 0 was used in the evaluation of the Client device for the purpose of measuring the Channel Move Time and the Channel Closing Transmission Time.

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Trials
0	1	1428	18	60%	30
1	1	Test A Test B	$\text{Roundup}\left(\frac{1}{360} \cdot \frac{19 \cdot 10^6}{\text{PRI}_{\text{min}}}\right)$	60%	30
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120

Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a

Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A

A minimum of 30 unique waveforms are required for each of the short pulse radar types 2 through 4. For short pulse radar type 1, the same waveform is used a minimum of 30 times. If more than 30 waveforms are used for short pulse radar types 2 through 4, then each additional waveform must also be unique and not repeated from the previous waveforms.

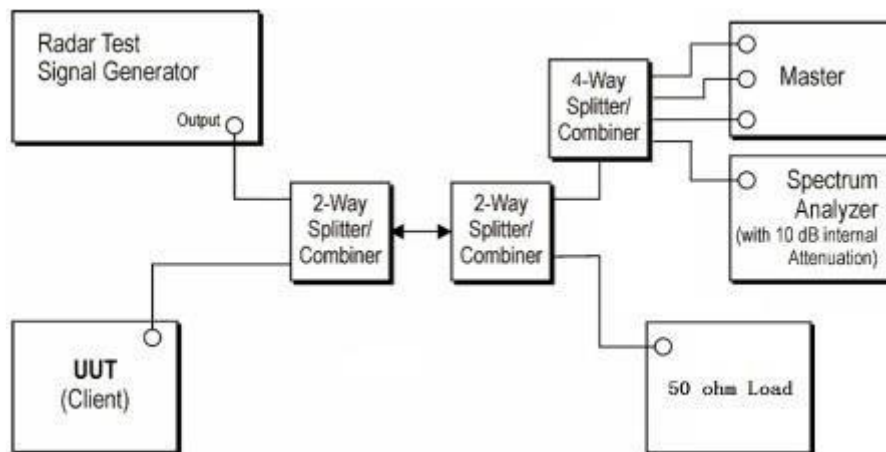
If more than 30 waveforms are used for Short Pulse Radar Type 1, then each additional waveform is generated with Test B and must also be unique and not repeated from the previous waveforms in Tests A or B. The aggregate is the average of the percentage of successful detections of short pulse radar types 1-4.

10.5 CALIBRATION SETUP AND DFS TEST RESULTS

Radar Waveform Calibration Procedure

- 1) A 50 ohm load is connected in place of the spectrum analyzer, and the spectrum analyzer is connected to place of the master
- 2) The interference Radar Detection Threshold Level is $-62\text{dBm} + 3.69\text{dB} = -58.31\text{dBm}$ that had been taken into account the output power range and antenna gain.
- 3) The following equipment setup was used to calibrate the conducted radar waveform. A vector signal generator was utilized to establish the test signal level for radar type 0. During this process there were no transmissions by either the master or client device. The spectrum analyzer was switched to the zero spans (time domain) at the frequency of the radar waveform generator. Peak detection was used. The spectrum analyzer resolution bandwidth (RBW) and video bandwidth (VBW) were set to 3 MHz. The spectrum analyzer had offset -1.0dB to compensate RF cable loss 1.0dB.
- 4) The vector signal generator amplitude was set so that the power level measured at the spectrum analyzer was $-62\text{dBm} + 3.69\text{dB} + 1\text{dB} = -57.31\text{dBm}$. Capture the spectrum analyzer plots on short pulse radar waveform.

10.6 CONDUCTED CALIBRATION SETUP



Wireless AP	Manufacturer	ASUSTek Computer Inc
	Model NO.	AX5400
	FCC ID	MSQ-RTAXJ300

Note:1. The Slave device associated with the EUT during these tests does not have radar detection capability.

2. WLAN traffic is generated by using the iperf software to send packets from the Master IP address to the Slave IP address.

3. The time required for the master and slave devices to fully start up is 120s.

4. EUT does not support TPC.

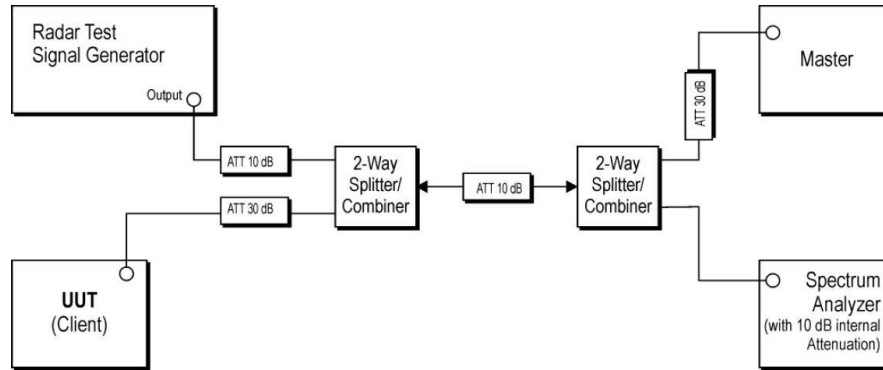
10.7 RADAR WAVEFORM CALIBRATION RESULT

Test data reference attachment.

10.8 IN-SERVICE NOTEBOOKING: CHANNEL MOVE TIME, CHANNEL CLOSING TRANSMISSION TIME AND NON-OCCUPANCY PERIOD

TEST CONFIGURATION:

Setup for Client with injection at the Master



TEST PROCEDURE:

1. The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
2. The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device
3. A trigger is provided from the pulse generator to the DFS Notebooking system in order to capture the traffic and the occurrence of the radar pulse.
4. EUT will associate with the master at channel. The file "iperf.exe" specified by the FCC is Streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
5. When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
6. Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom In 600ms plot of the Short Pulse Radar Type
7. Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (0.3ms) = S (12000ms) / B (4000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
8. Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

TEST MODE:

Mode	Frequency (MHz)
ac80	5290
ac80	5530
n40	5310
n40	5510
a	5320
a	5500

10.9 RESULT OF CHANNEL MOVE TIME, CHANNEL CLOSING TRANSMISSION TIME AND NON-OCCUPANCY PERIOD FOR CLIENT BEACON TEST

Test data reference attachment.

11. ANTENNA REQUIREMENT

11.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

11.2 EUT ANTENNA

The EUT antenna is FPC Antenna. It comply with the standard requirement.

END OF REPORT