RF TEST REPORT

FCC ID: 2BMVR-K12E

Test Report No……..:	RF250328006-01-001
Product(s) Name……...:	Tablet
Model(s)……..:	K12E, K11E
Trade Mark……....:	N/A
Applicant……..:	Shenzhen Tuohai Times Technology Co., Ltd.
Address……..……...:	Room 401, Building B, Xinghui Technology Park, Gushu 2nd Road, Guxing Community, Xixiang Street, Bao'an District, Shenzhen, China
Receipt Date……..:	2025.04.07
Test Date……....:	2025.04.07~2025.04.17
Issued Date……..:	2025.04.18
Standards……..:	47 CFR FCC Part 15, Subpart C(Section 15.247); ANSI C63.10:2013
Testing Laboratory……:	Shenzhen Haiyun Standard Technical Co., Ltd.

Prepared By:	Checked By:	Approved By:	
Jason Huang	Black Ding	Tim Zhang	
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History of this test report

Original Report Issue Date: 2025.04.18

● No additional attachment

○ Additional attachments were issued following record

Attachment No.	Issue Date	Description

1. General Information

1.1 Applicant

Shenzhen Tuohai Times Technology Co., Ltd.

Room 401, Building B, Xinghui Technology Park, Gushu 2nd Road, Guxing Community, Xixiang Street, Bao'an District, Shenzhen, China

1.2 Manufacturer

Shenzhen Tuohai Times Technology Co., Ltd.

Room 401, Building B, Xinghui Technology Park, Gushu 2nd Road, Guxing Community, Xixiang Street, Bao'an District, Shenzhen, China

1.3 Basic Description of Equipment Under Test

Sample No.	POC250328006-S001, POC250328006-S002	
Equipment Name	Tablet	
Model Name	K12E, K11E	
Model difference	Only the camera location, horn location and appearance color are different	
Trade Mark	N/A	
Power Supply	DC 5V from Type-C Port or DC 3.8V from battery	
Operate temperature	0℃-45℃	
EUT Stage	○ Product Unit	● Final-Sample
Operating Band and Conducted Output Power (Max power)	2400MHz ~ 2483.5MHz	●IEEE 802.11b:4.17dBm(0.0026W)
Product Type	IEEE 802.11b/g/n: WLAN (SISO)	
Nominal Bandwidth	20MHz / 40MHz	
Modulation	IEEE 802.11b: DSSS IEEE 802.11g: OFDM IEEE 802.11n: OFDM	
Data Rate (Mbps)	IEEE 802.11b mode : 1/2/5.5/11 IEEE 802.11g mode : 6/9/12/18/24/36/48/54 IEEE 802.11n mode : up to 150	
Antenna gain	1.46dBi	
Antenna type	FPC Antenna	

Eleven channels are provided for 802.11b, 802.11g, 802.11n (20MHz):

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400MHz ~ 2483.5 MHz	01	2412MHz	07	2442MHz
	02	2417MHz	08	2447MHz
	03	2422MHz	09	2452MHz
	04	2427MHz	10	2457MHz
	05	2432MHz	11	2462MHz
	06	2437MHz	/	/

Seven channels are provided for 802.11n (40MHz):

Frequency Band	Channel No.	Frequency	Channel No.	Frequency
2400MHz ~ 2483.5 MHz	03	2422 MHz	07	2442MHz
	04	2427MHz	08	2447MHz
	05	2432MHz	09	2452MHz
	06	2437MHz	/	/

1.4 Transmit Operating Mode

Transmit Operating Mode							Transmit Multiple Antennas					
●	Operating mode 1 (single antenna)						●	1TX				
○	Operating mode 2 (multiple antenna, no beam forming)						○	2TX	○	3TX	○	4TX
○	Operating mode 3 (multiple antenna, with beam forming)						○	2TX	○	3TX	○	4TX
●	802.11b	Operating mode	●	1TX	○	2TX	○	3TX				
●	802.11g	Operating mode	●	1TX	○	2TX	○	3TX				
●	802.11n(20MHz)	Operating mode	●	1TX	○	2TX	○	3TX				
●	802.11n(40MHz)	Operating mode	●	1TX	○	2TX	○	3TX				

2. Summary of Test Results

2.1 Summary of Test Items

47 CFR FCC Part 15, Subpart C (Section 15.247)			
Test item	FCC Clause	Results	Remarks
AC Power Conducted Emission	15.207	Pass	Meet the requirement of the limit
Radiated Emission and Band Edge Measurement	15.205/15.209 /15.247(d)	Pass	Meet the requirement of the limit
Spurious Emission at Antenna Port	15.247(d)	Pass	Meet the requirement of the limit
6dB Bandwidth	15.247(a)(2)	Pass	Meet the requirement of the limit
Maximum Conducted Power	15.247(b)	Pass	Meet the requirement of the limit
Power Spectral Density	15.247(e)	Pass	Meet the requirement of the limit
Antenna Requirements	15.203	Compliance	Note
Note: The EUT has one FPC antenna arrangement which was permanently attached.			

2.2 Application of Standard

47 CFR FCC Part 15, Subpart C (Section 15.247)

KDB 558074 D01 15.247 Meas Guidance v05r02

ANSI C63.10:2013

2.3 Test Instruments

Radiated Emissions							
No.	Equipment	Manufacturer	Type No.	Serial No.	Inventory No.	Cal. date (yyyy/mm/dd)	Cal. Due date (yyyy/mm/dd)
1	Test receiver	Rohde&Schwarz	ESU	100184	JLE011	2024/4/24	2025/4/23
2	Log periodic antenna	Schwarzbeck	VULB 9168	1151	JLE012	2024/4/20	2025/4/19
3	Low frequency amplifier	/	LNA 0920N	2014	JLE023	2024/4/24	2025/4/23
4	High frequency amplifier	Schwarzbeck	BBV 9718	9718-284	JLE024	2024/4/24	2025/4/23
5	Horn Antenna	SCHWARZBECK	BBHA 9120 D	02670	JLE028	2024/4/20	2025/4/19
6	Temp&Humidity Recorder	Meideshi	JR900	/	JLE021	2024/4/24	2025/4/23
7	Horn Antenna	SCHWARZBECK	BBHA 9170	9170#685	JLE029	2024/7/15	2025/7/14
8	Loop Antenna	SCHWARZBECK	FMZB1519B	00029	JLE030	2024/7/15	2025/7/14
9	Broadband preamplifier	Schwarzbeck	BBV9721	9721-019	JLE025	2024/4/24	2025/4/23
10	Test software	Farad Technology Co., Ltd	EZ-EMC Ver.TW-03A2				
Conducted Emission							
1	LISN	Rohde&Schwarz	ENV216	100075	JLE002	2024/4/24	2025/4/23
2	ISN	Schwarzbeck	CATE 5 8158	#171	JLE003	2024/4/24	2025/4/23
3	Test receiver	Rohde&Schwarz	ESCI	100718	JLE010	2024/4/24	2025/4/23
4	Pulse limiter	Rohde&Schwarz	ESH3-Z2	102299	JLE047	2024/4/24	2025/4/23
5	Temp&Humidity Recorder	Meideshi	JR900	/	JLE020	2024/4/24	2025/4/23
6	Test software	Farad Technology Co., Ltd	EZ-EMC Ver.TW-03A2				
RF Conducted Emission							
1	MXA Signal Analyzer	Keysight	N9021B	MY60080169	JLE050	2024/4/20	2025/4/19
2	RF Control Unit	dsusoft	JS0806-2	21G8060449	JLE053	2024/4/20	2025/4/19
3	power supply unit	dsusoft	JS0806-4ADC	N/A	JLE055	2024/4/20	2025/4/19
4	VXG Signal Generator	Keysight	M9384B	MY61270787	JLE051	2024/4/20	2025/4/19
5	EXG Analog Signal Generator	Keysight	N5173B	MY59101282	JLE052	2024/4/20	2025/4/19
6	Wideband Radio Communication Tester	Rohde&Schwarz	CMW500	1201.0002K50-116064-Dt	JLE054	2024/4/20	2025/4/19
7	Test software	dsusoft	JS1120-3 Ver.3.2.22.0				

2.4 Test Mode

Test Items	Mode	Data Rate	Channel
AC Power Conducted Emission	802.11b	1Mbps	01
Radiated Emission and Band Edge Measurement	802.11b	1Mbps	01/06/11
	802.11g	6Mbps	01/06/11
	802.11n20SISO	MCS0	01/06/11
	802.11N40SISO	MCS0	03/06/09
Spurious Emission at Antenna Port	802.11b	1Mbps	01/06/11
	802.11g	6Mbps	01/06/11
	802.11n20SISO	MCS0	01/06/11
	802.11N40SISO	MCS0	03/06/09
6dB Bandwidth	802.11b	1Mbps	01/06/11
	802.11g	6Mbps	01/06/11
	802.11n20SISO	MCS0	01/06/11
	802.11N40SISO	MCS0	03/06/09
Maximum Conducted Power	802.11b	1Mbps	01/06/11
	802.11g	6Mbps	01/06/11
	802.11n20SISO	MCS0	01/06/11
	802.11N40SISO	MCS0	03/06/09
Power Spectral Density	802.11b	1Mbps	01/06/11
	802.11g	6Mbps	01/06/11
	802.11n20SISO	MCS0	01/06/11
	802.11N40SISO	MCS0	03/06/09

Note: For AC Power Conducted Emission and Radiated Emission below 1GHz, only worst case was recorded.

2.5 Test Condition

Applicable to	Environmental conditions	Input Power	Tested by
AC Power Conducted Emission	23.3°C, 50% RH	AC 120V/60Hz	Freedom Zhuo
Radiated Emission and Band Edge Measurement	23.1°C, 51% RH	AC 120V/60Hz	Lemon He
Spurious Emission at Antenna Port	23.6°C, 54% RH	DC 3.8V	Albert Fan
6dB Bandwidth	23.6°C, 54% RH	DC 3.8V	Albert Fan
Maximum Conducted Power	23.6°C, 54% RH	DC 3.8V	Albert Fan
Power Spectral Density	23.6°C, 54% RH	DC 3.8V	Albert Fan

Note: Adapter supply voltage AC 120V/60Hz.
The applicant declare the operating environment of EUT as below:
Normal conditions: DC 3.8V, 0~45°C

2.6 Duty Cycle of Test Signal

If duty cycle is ⩾ 98 %, duty factor is not required.

If duty cycle is < 98 %, duty factor shall be considered.

All the duty factor of other test mode have been considered.

Test Mode	Frequency[MHz]	Transmission Duration [ms]	Transmission Period [ms]	Duty Cycle [%]
11B	2412	8.35	8.40	99.40
11G	2412	0.15	0.20	75.00
11N20SISO	2412	0.17	0.22	77.27
11N40SISO	2422	0.18	0.23	78.26

11B_Ant1_2412

11G_Ant1_2412

11N20SISO_Ant1_2412

11N40SISO_Ant1_2422

2.7 Measurement Uncertainty

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

Uncertainty	
Parameter	Uncertainty
Occupied Channel Bandwidth	±102kHz
RF power conducted	±0.377dB
Power Spectral Density	±0.743dB
Conducted Spurious Emission	±1.328dB
Conducted emission(9kHz~30MHz) AC main	±2.68dB
Radiated emission(9kHz~30MHz)	±2.74dB
Radiated emission (30MHz~1GHz)	±4.22dB
Radiated emission (1GHz~18GHz)	±5.06dB
Radiated emission (18GHz~40GHz)	±4.98dB

2.8 Test Location

Company:	Shenzhen Haiyun Standard Technical CO., Ltd.
Address:	No. 110-113, 115, 116, Block B, Jinyuan Business Building, Bao'an District, Shenzhen, China
CNAS Registration Number:	CNAS L18252
CAB identifier	CN0145
A2LA Certificate Number	6823.01
Telephone:	0755-26024411

2.9 Description of Support Units

No.	Equipment	Model	Manufacturer	Series No
1	TF Card	4GB	Kingston	/
2	Adapter	HW-100400C00	Huawei	/
3	Earphone	/	Xiaomi	/

3. Test Procedure And Results

3.1 AC Power Line Conducted Emission

3.1.1 Limit

Frequency	Maximum RF Line Voltage	
	Quasi-Peak Level dB(μV)	Average Level dB(μV)
150kHz ~ 500kHz	66 ~ 56*	56 ~ 46*
500kHz ~ 5MHz	56	46
5MHz ~ 30MHz	60	50

Notes: 1. * Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

3.1.2 Test Procedure

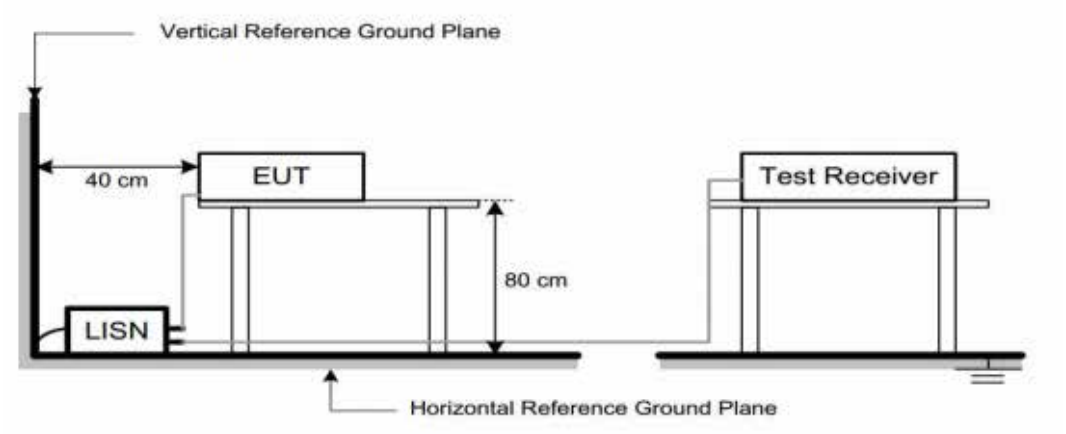
Test Method	
●Conducted Measurement	○Radiated Measurement
Test Channels	
○Lowest, Middle and Highest Channel	○Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

a) The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

b) Both lines of the power mains connected to the EUT were checked for maximum conducted interference.

c) The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

3.1.3 Test Setup



3.1.4 Test Result

Note:

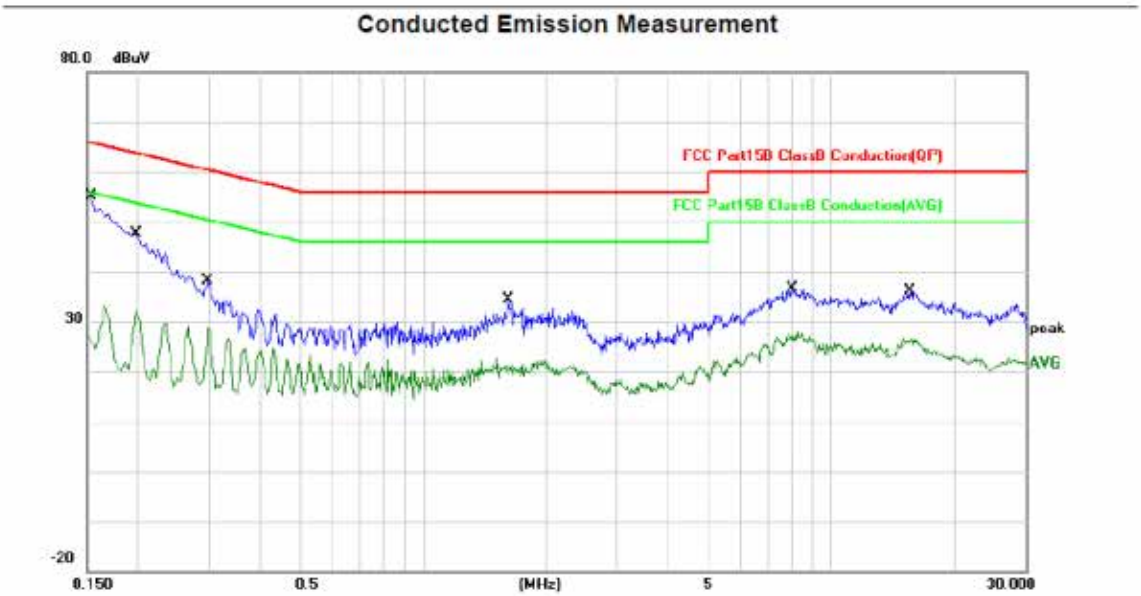
1. Correct Factor = LISN Factor + Cable Loss + Pulse Limiter Factor, the value was added to Original Receiver Reading by the software automatically.
2. Measurement = Reading + Correct Factor.
3. Over = Measurement – Limit

We only recorded the data of the worst mode. Please see the following:

For K12E

150kHz~30MHz	Worst Case Operating Mode: 11B Channel 01

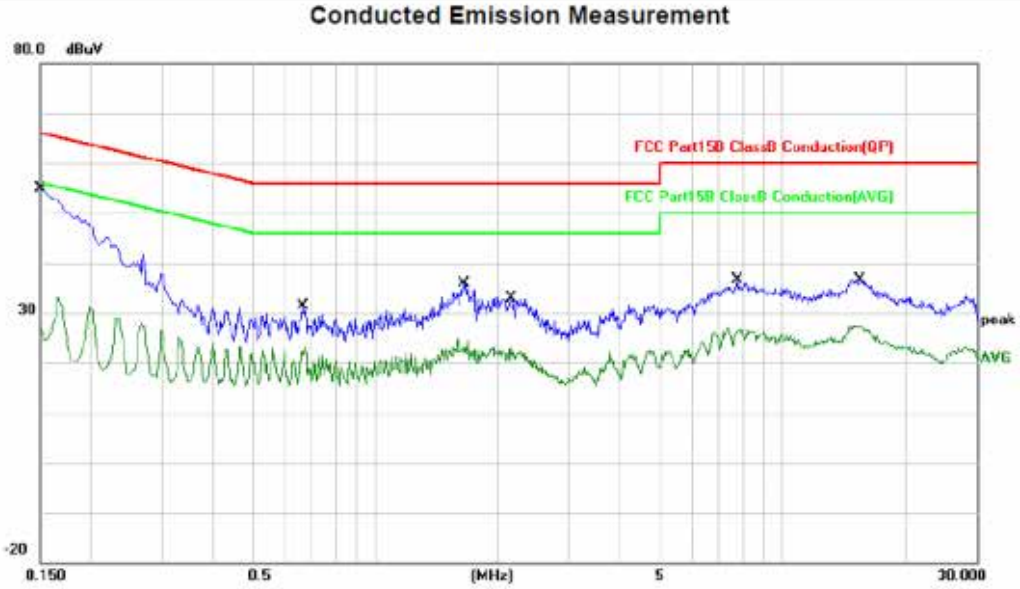
Line



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1540	27.11	20.09	47.20	65.78	-18.58	QP	
2		0.1540	3.92	20.09	24.01	55.78	-31.77	AVG	
3		0.1980	19.92	20.04	39.96	63.69	-23.73	QP	
4		0.1980	11.29	20.04	31.33	53.69	-22.36	AVG	
5		0.2980	11.42	20.09	31.51	60.30	-28.79	QP	
6		0.2980	7.76	20.09	27.85	50.30	-22.45	AVG	
7		1.6260	7.38	20.01	27.39	56.00	-28.61	QP	
8		1.6260	1.01	20.01	21.02	46.00	-24.98	AVG	
9		8.0260	11.23	20.22	31.45	60.00	-28.55	QP	
10		8.0260	5.75	20.22	25.97	50.00	-24.03	AVG	
11		15.6180	10.68	20.38	31.06	60.00	-28.94	QP	
12		15.6180	4.68	20.38	25.06	50.00	-24.94	AVG	

150kHz~30MHz	Worst Case Operating Mode: 11B Channel 01

Neutral

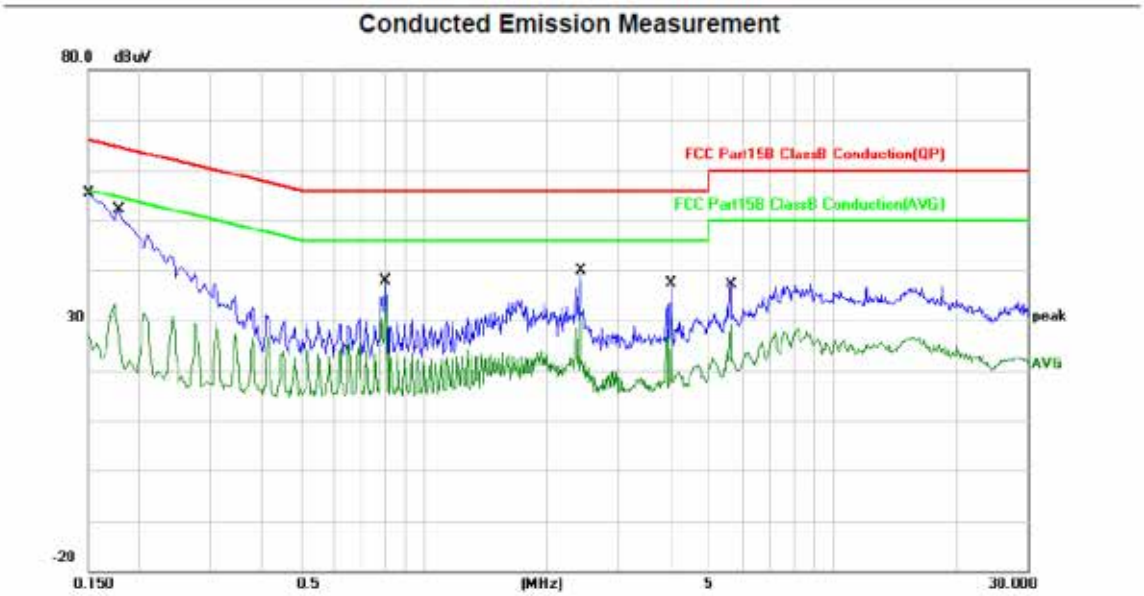


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1500	27.80	20.34	48.14	66.00	-17.86	QP	
2		0.1500	7.02	20.34	27.36	56.00	-28.64	AVG	
3		0.6620	6.88	20.15	27.03	56.00	-28.97	QP	
4		0.6620	3.18	20.15	23.33	46.00	-22.67	AVG	
5		1.6620	9.71	20.30	30.01	56.00	-25.99	QP	
6		1.6620	2.44	20.30	22.74	46.00	-23.26	AVG	
7		2.1580	6.90	20.29	27.19	56.00	-28.81	QP	
8		2.1580	1.29	20.29	21.58	46.00	-24.42	AVG	
9		7.7620	10.35	20.41	30.76	60.00	-29.24	QP	
10		7.7620	4.33	20.41	24.74	50.00	-25.26	AVG	
11		15.4900	10.77	20.54	31.31	60.00	-28.69	QP	
12		15.4900	5.02	20.54	25.56	50.00	-24.44	AVG	

For K11E

150kHz~30MHz	Worst Case Operating Mode: 11B Channel 01

Line

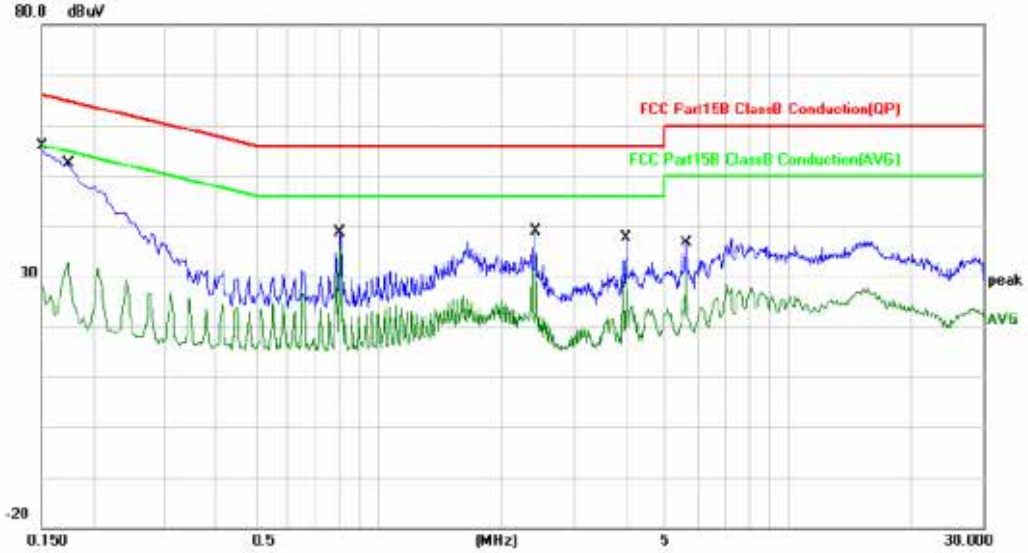


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	28.81	20.07	48.88	66.00	-17.12	QP	
2		0.1500	7.22	20.07	27.29	56.00	-28.71	AVG	
3		0.1780	23.77	20.12	43.89	64.58	-20.69	QP	
4		0.1780	5.50	20.12	25.62	54.58	-28.96	AVG	
5		0.8060	16.35	20.28	36.63	56.00	-19.37	QP	
6	*	0.8060	15.40	20.28	35.68	46.00	-10.32	AVG	
7		2.4140	16.01	20.04	36.05	56.00	-19.95	QP	
8		2.4140	11.50	20.04	31.54	46.00	-14.46	AVG	
9		4.0260	13.75	20.06	33.81	56.00	-22.19	QP	
10		4.0260	7.12	20.06	27.18	46.00	-18.82	AVG	
11		5.6340	11.70	20.08	31.78	60.00	-28.22	QP	
12		5.6340	4.31	20.08	24.39	50.00	-25.61	AVG	

150kHz~30MHz	Worst Case Operating Mode: 11B Channel 01

Neutral

Conducted Emission Measurement



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1		0.1500	28.62	20.34	48.96	66.00	-17.04	QP	
2		0.1500	7.17	20.34	27.51	56.00	-28.49	AVG	
3		0.1750	24.26	20.28	44.54	64.72	-20.18	QP	
4		0.1750	10.35	20.28	30.63	54.72	-24.09	AVG	
5		0.8060	16.35	20.02	36.37	56.00	-19.63	QP	
6	*	0.8060	14.97	20.02	34.99	46.00	-11.01	AVG	
7		2.4220	16.58	20.23	36.81	56.00	-19.19	QP	
8		2.4220	13.18	20.23	33.41	46.00	-12.59	AVG	
9		4.0420	14.87	20.23	35.10	56.00	-20.90	QP	
10		4.0420	10.70	20.23	30.93	46.00	-15.07	AVG	
11		5.6500	12.40	20.36	32.76	60.00	-27.24	QP	
12		5.6500	5.05	20.36	25.41	50.00	-24.59	AVG	

3.2 Radiated Emission and Band Edge

3.2.1 Limit

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency (MHz)	Distance Meters(m)	Field Strength Limit	
		μV/m	dB(μV)/m
0.009 – 0.49	300	2400/F(kHz)	-
0.490 – 1.705	30	24000/F(kHz)	-
1.705 – 30	30	30	-
30~88	3	100	40.0
88~216	3	150	43.5
216~960	3	200	46.0
960~1000	3	500	54.0
Above 1000	3	74.0 dB(μV)/m (Peak) 54.0 dB(μV)/m (Average)	

Note: (1) Emission level dBμV = 20 log Emission level μV/m

(2) The smaller limit shall apply at the cross point between two frequency bands.

(3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

3.2.2 Test Procedure

Test Method	
○Conducted Measurement	●Radiated Measurement
Test Channels	
●Lowest, Middle and Highest Channel	○ Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

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

b) The measuring distance of 3 m or 1.5m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)

c) The height of the equipment or of the substitution antenna shall be 0.8m or 1.5m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d) For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).

e) The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz.

f) The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

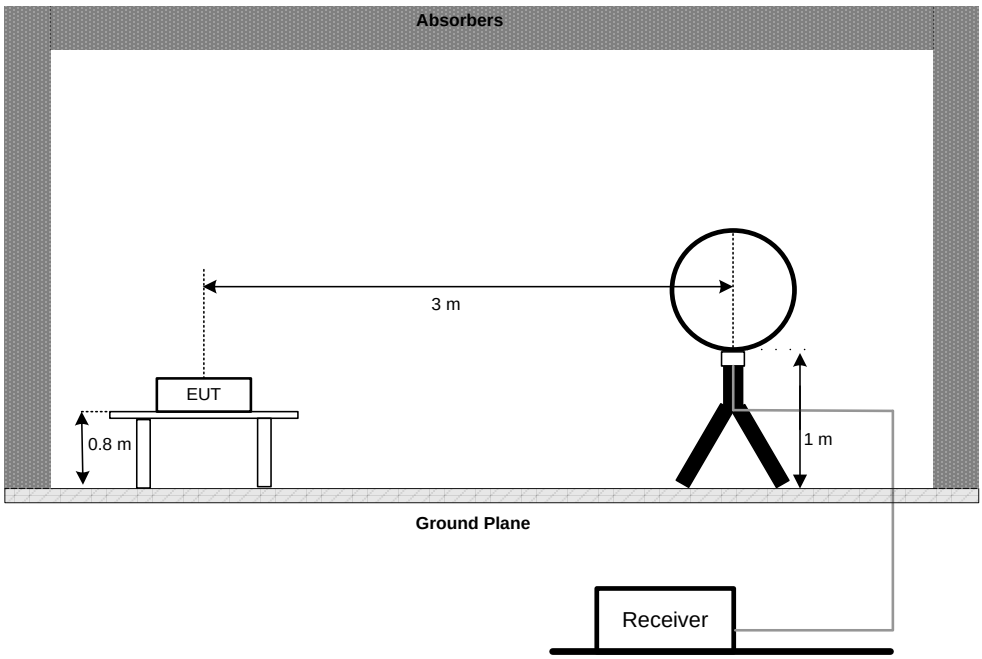
g) All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn‘t perform. (below 1 GHz)

h) All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn‘t perform. (above 1 GHz)

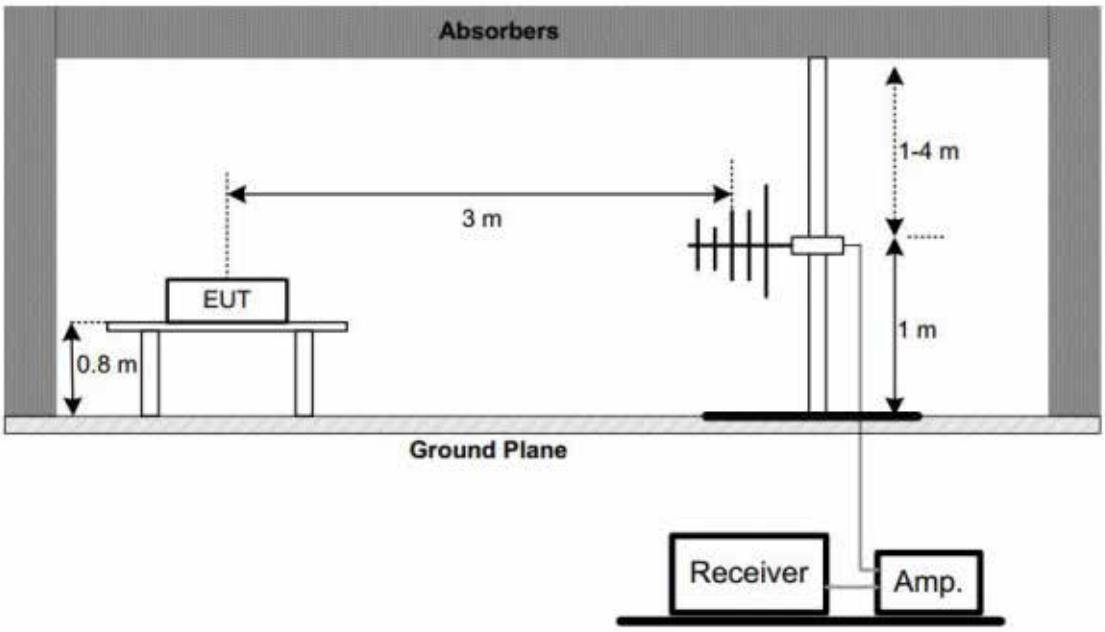
i) For the actual test configuration, please refer to the related Item -EUT Test Photos.

3.2.3 Test Setup

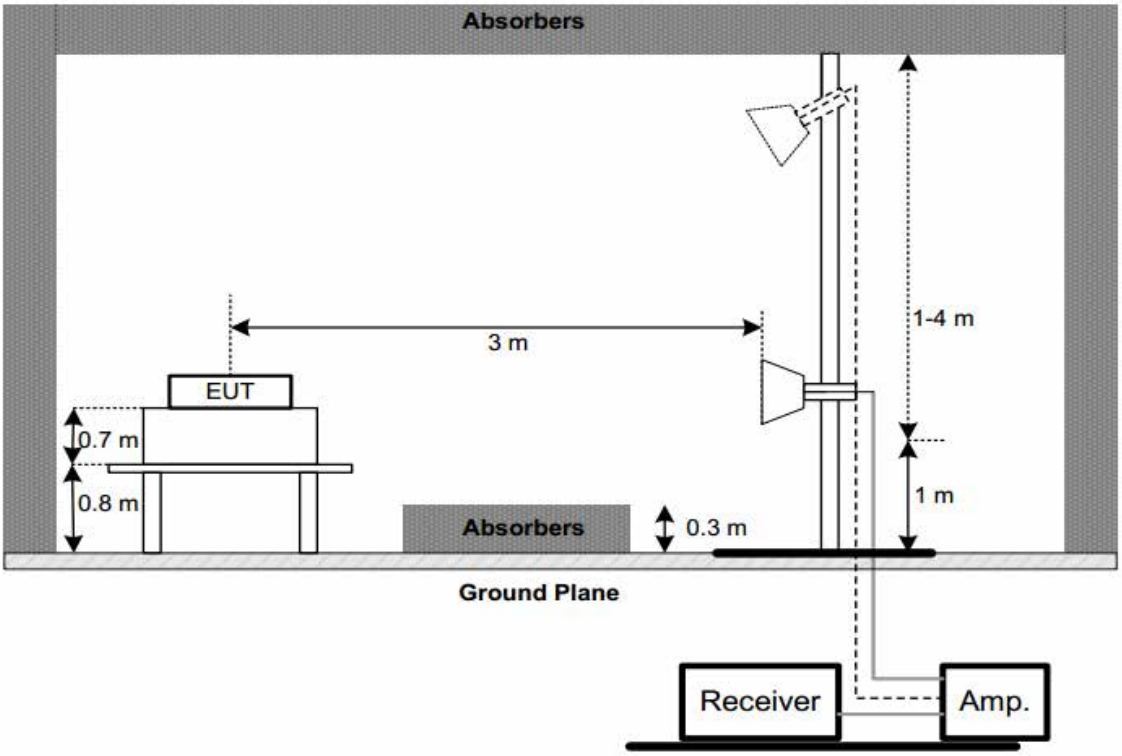
(A) Radiated Emission Test Set-Up Frequency Below 30 MHz



(B) Radiated Emission Test Set-Up Frequency 30 MHz-1000 MHz



(C) Radiated Emission Test Set-Up Frequency Above 1 GHz



3.2.4 Test Result

1) Radiated emission: 9kHz-30MHz

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not recorded in this report.

2) Radiated emission: 30MHz-1G

Note:

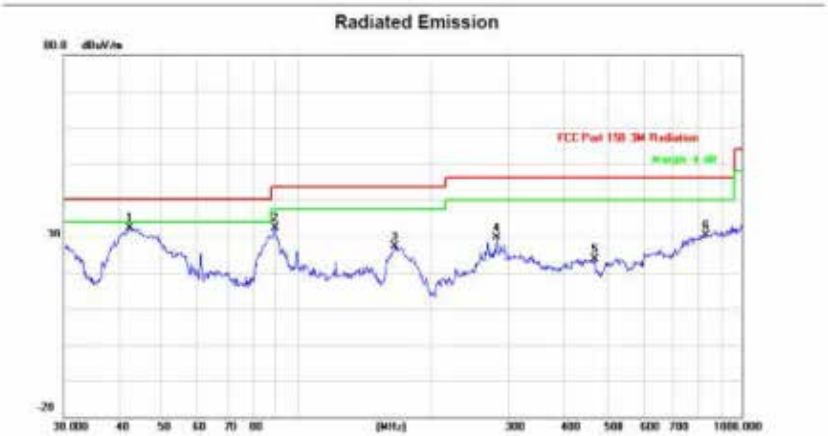
1. Measurement = Reading + Correct Factor.
2. Over = Measurement – Limit

We only recorded the data of the worst mode. Please see the following:

For K12E

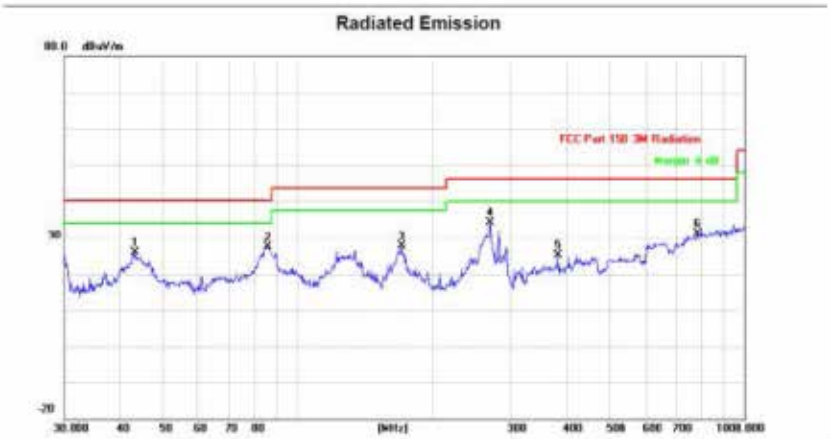
Below 1G (30MHz~1GHz)	Worst Case Operating Mode: 11B Channel 01

VERTICAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	42.3021	42.37	-9.95	32.42	40.00	-7.58	peak			
2		89.5900	46.75	-14.47	32.28	43.50	-11.22	peak			
3		166.6511	36.98	-9.82	27.16	43.50	-16.34	peak			
4		281.0074	38.80	-9.17	29.63	46.00	-16.37	peak			
5		467.2350	30.74	-7.12	23.62	46.00	-22.38	peak			
6		830.4000	27.37	3.01	30.38	46.00	-15.62	peak			

HORIZONTAL

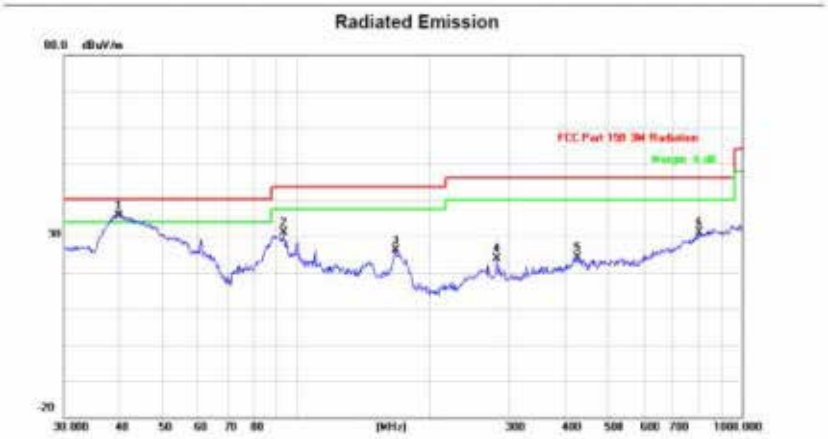


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		43.2014	35.99	-10.03	25.96	40.00	-14.04	peak			
2		85.5973	41.68	-14.25	27.43	40.00	-12.57	peak			
3		170.7923	37.75	-10.06	27.69	43.50	-15.81	peak			
4	*	269.4282	43.86	-9.79	34.07	46.00	-11.93	peak			
5		382.5878	32.01	-6.84	25.17	46.00	-20.83	peak			
6		782.3451	29.07	1.98	31.05	46.00	-14.95	peak			

For K11E

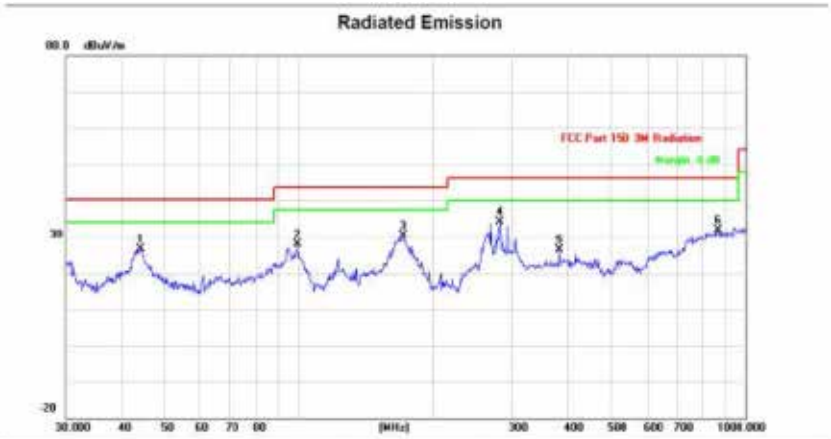
Below 1G (30MHz~1GHz)	Worst Case Operating Mode: 11B Channel 01

VERTICAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	39.9941	45.76	-10.06	35.70	40.00	-4.30	QP			
2		93.7681	45.25	-14.18	31.07	43.50	-12.43	peak			
3		167.2366	35.98	-9.80	26.18	43.50	-17.32	peak			
4		281.0074	32.94	-9.17	23.77	46.00	-22.23	peak			
5		426.5210	29.47	-5.23	24.24	46.00	-21.76	peak			
6		796.9796	28.86	2.33	31.19	46.00	-14.81	peak			

HORIZONTAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		44.1200	36.75	-10.12	26.63	40.00	-13.37	peak			
2		99.1795	41.58	-13.68	27.90	43.50	-15.60	peak			
3		170.7923	40.51	-10.06	30.45	43.50	-13.05	peak			
4	*	281.0074	43.41	-9.17	34.24	46.00	-11.76	peak			
5		382.5878	33.10	-6.84	26.26	46.00	-19.74	peak			
6		866.0880	28.40	3.56	31.96	46.00	-14.04	peak			

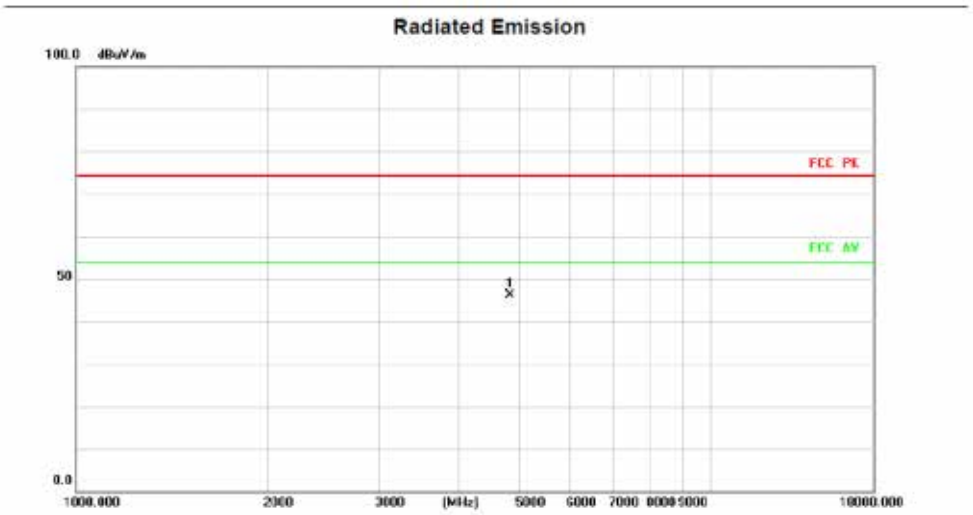
3) Radiated emission: Above 1G

Note:

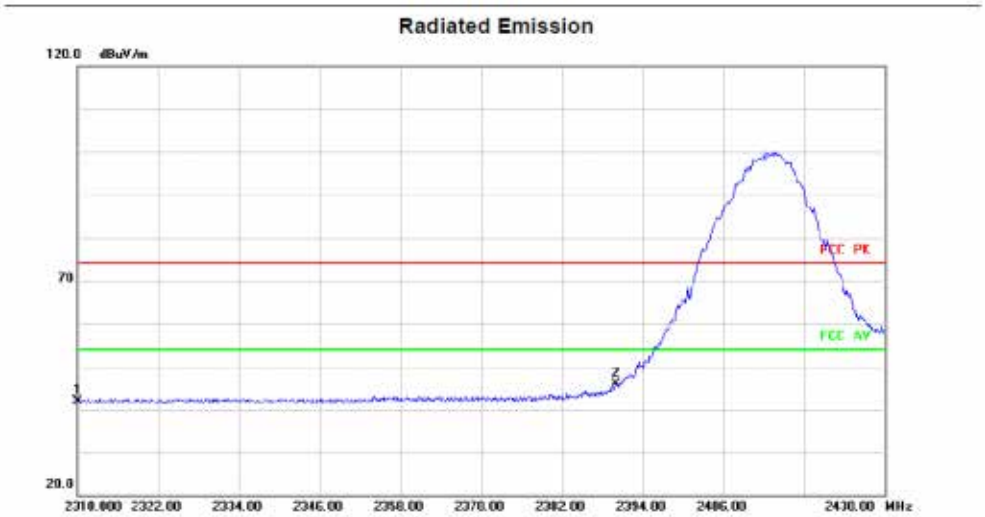
1. Measurement = Reading + Correct Factor.
2. Over = Measurement – Limit

Above 1G (1GHz~18GHz)	Test mode:11B	Test Channel:1

VERTICAL



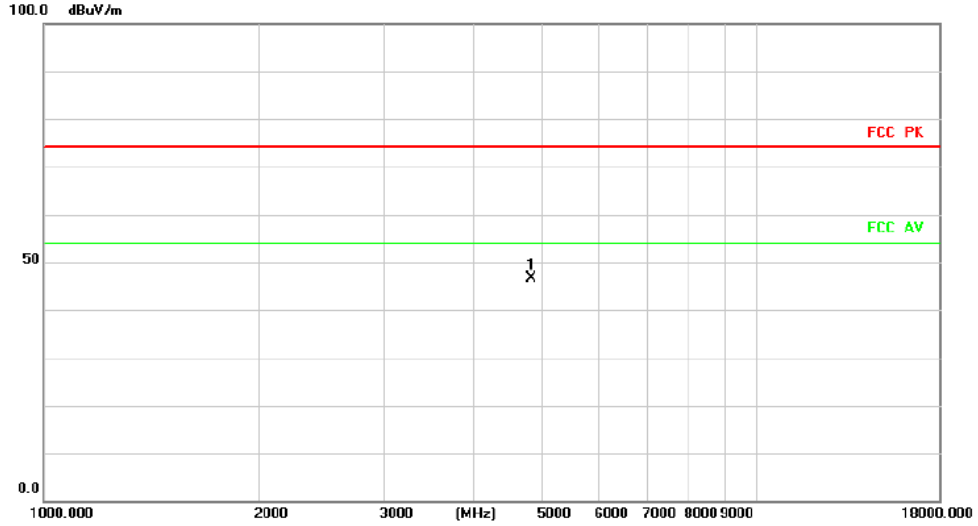
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4824.000	50.11	-4.08	46.03	74.00	-27.97	peak			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	44.40	-2.53	41.87	74.00	-32.13	peak			
2	*	2390.000	48.05	-2.27	45.78	74.00	-28.22	peak			

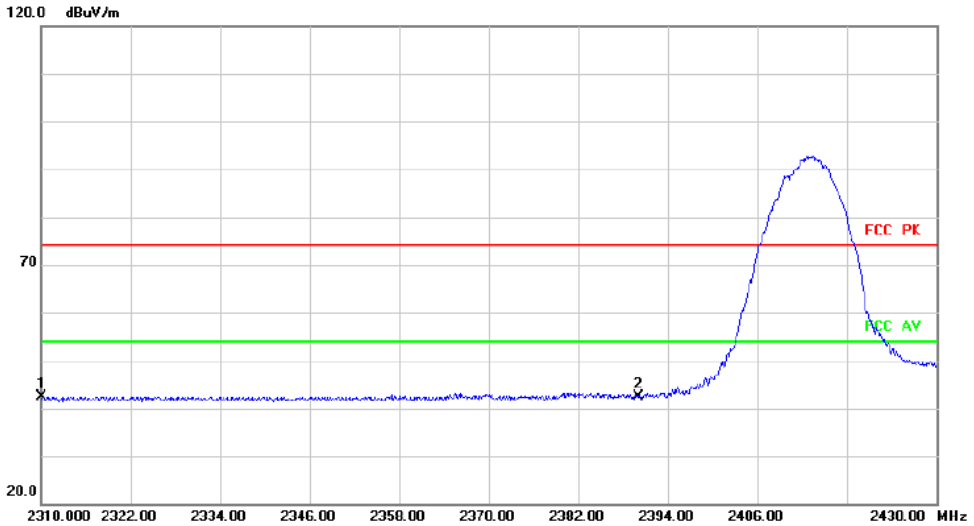
HORIZONTA

Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4824.000	50.67	-4.08	46.59	74.00	-27.41	peak			

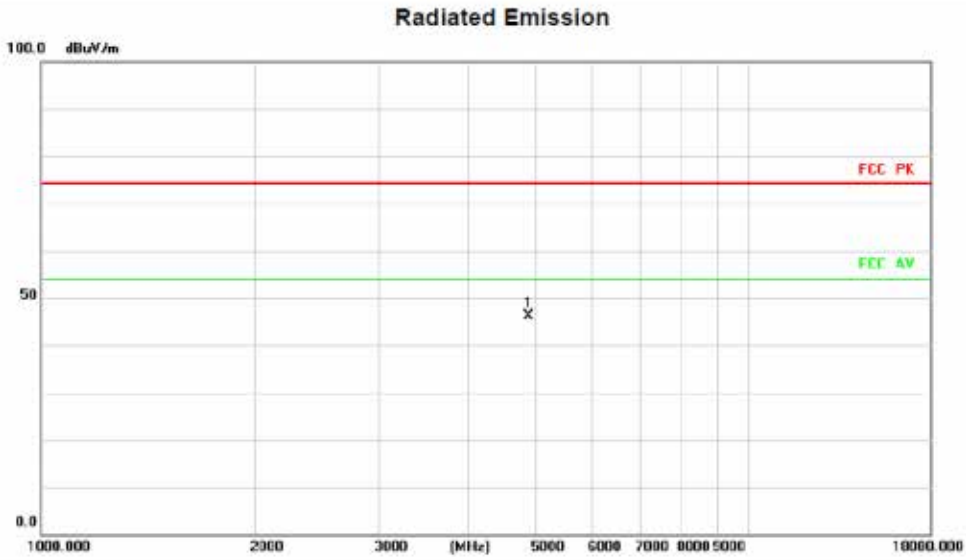
Radiated Emission



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2310.000	44.98	-2.53	42.45	74.00	-31.55	peak			
2		2390.000	44.66	-2.27	42.39	74.00	-31.61	peak			

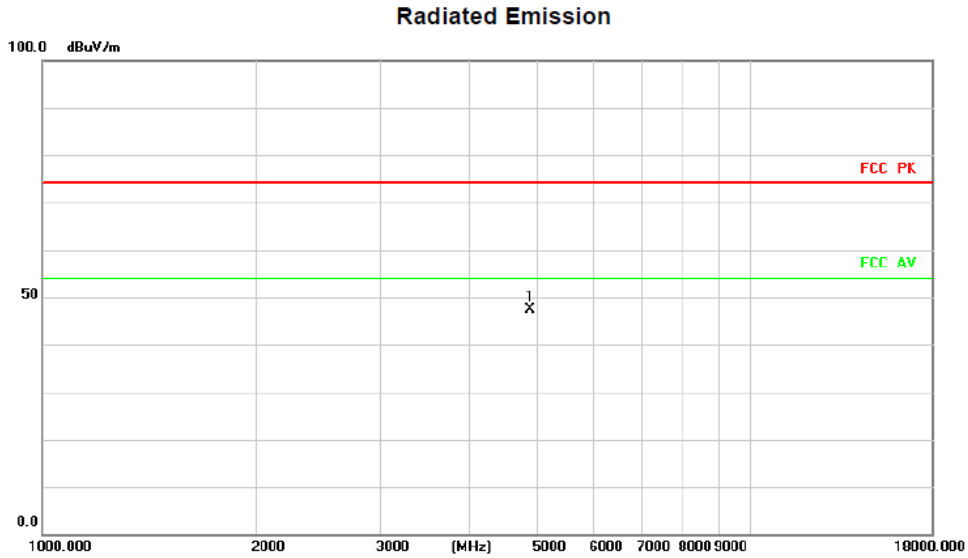
Above 1G (1GHz~18GHz)	Test mode:11B	Test Channel:6

VERTICAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	50.58	-4.46	46.12	74.00	-27.88	peak			

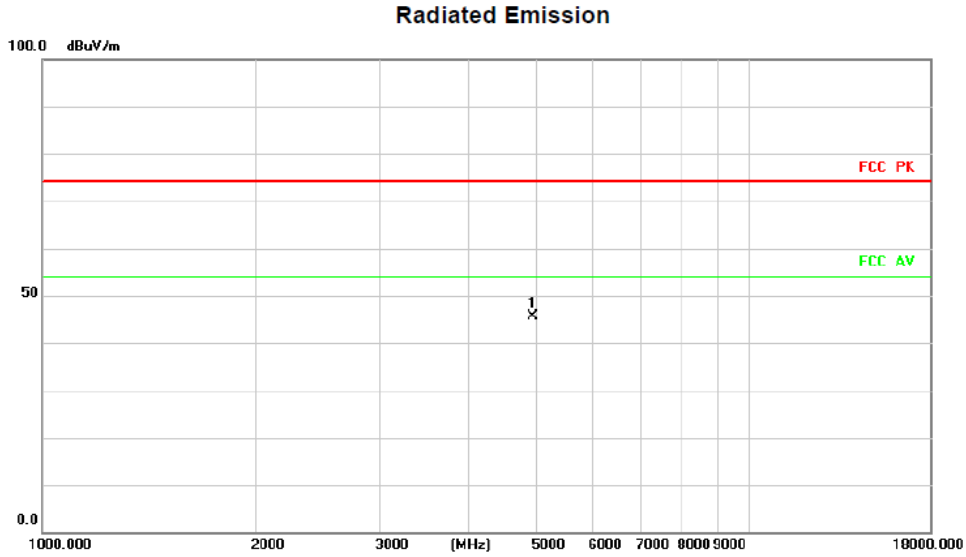
HORIZONTA



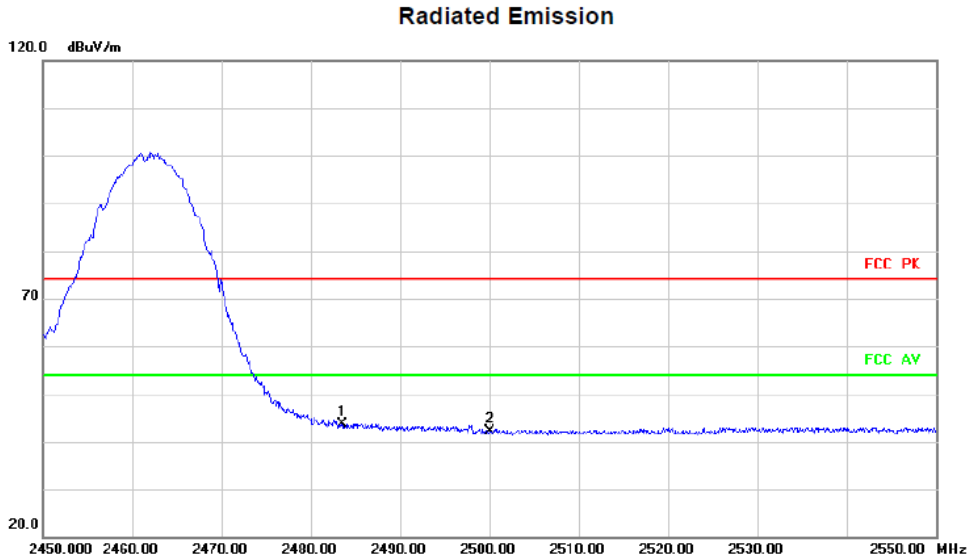
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	51.83	-4.46	47.37	74.00	-26.63	peak			

Above 1G (1GHz~18GHz)	Test mode: 11B	Test Channel:11

VERTICAL

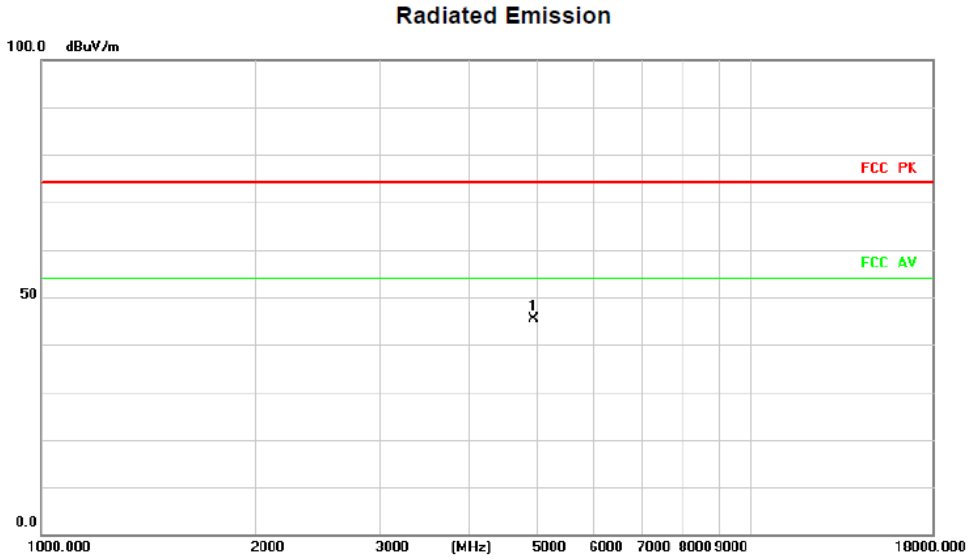


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4924.000	50.18	-4.56	45.62	74.00	-28.38	peak			

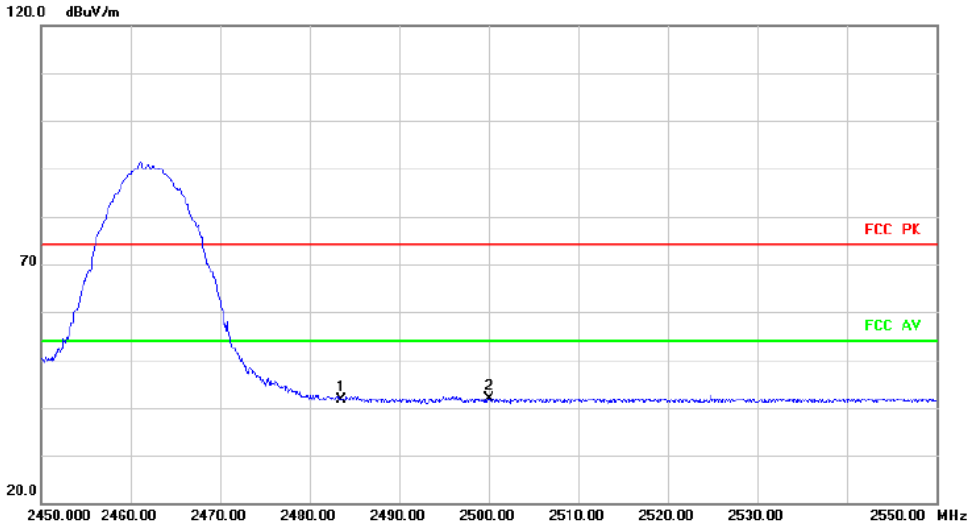


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2483.500	45.05	-1.38	43.67	74.00	-30.33	peak			
2		2500.000	43.30	-1.17	42.13	74.00	-31.87	peak			

HORIZONTA



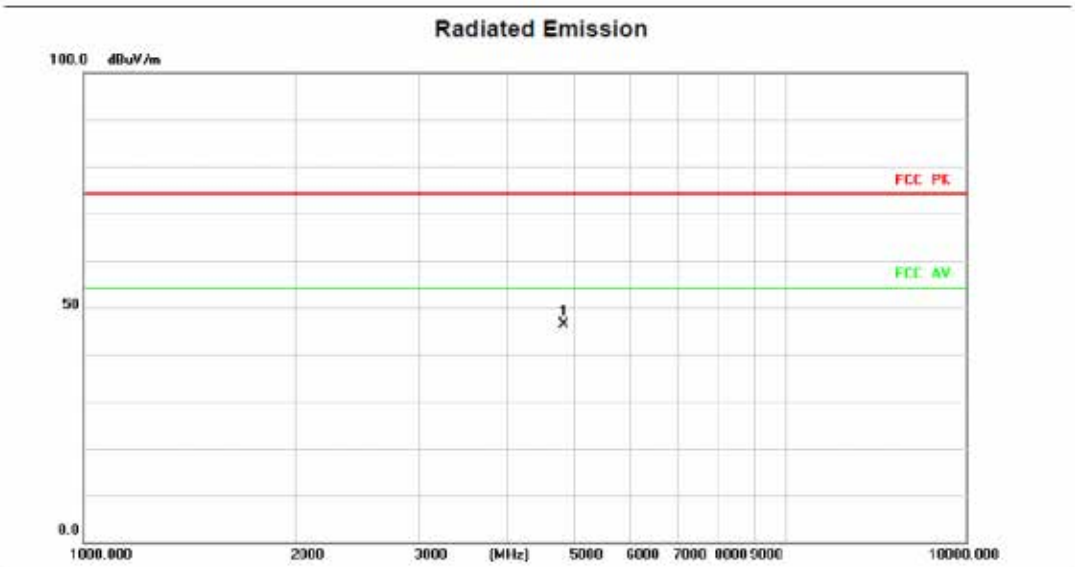
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4924.000	49.87	-4.56	45.31	74.00	-28.69	peak			



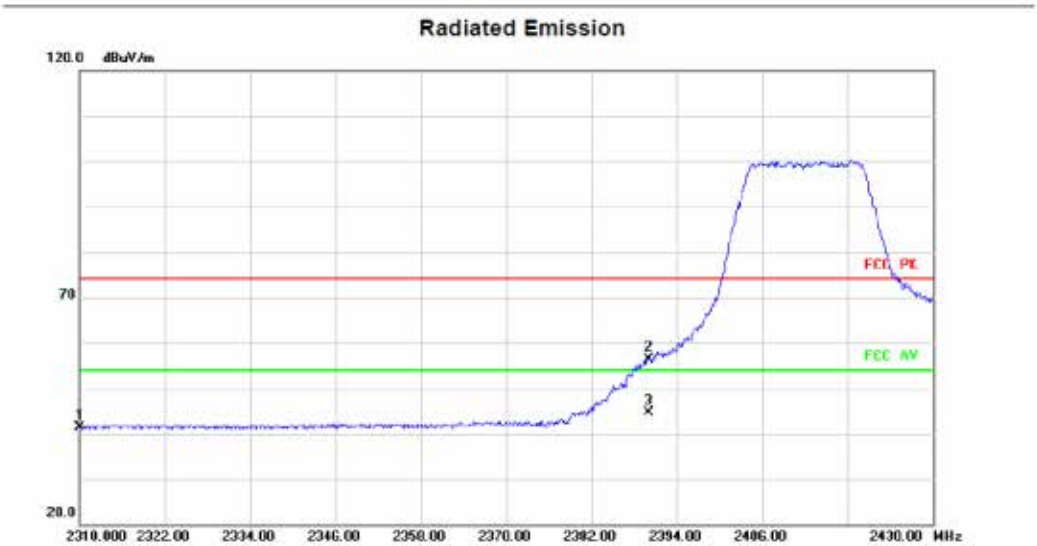
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	42.90	-1.38	41.52	74.00	-32.48	peak			
2	*	2500.000	43.08	-1.17	41.91	74.00	-32.09	peak			

Above 1G (1GHz~18GHz)	Test mode:11G	Test Channel:1

VERTICAL

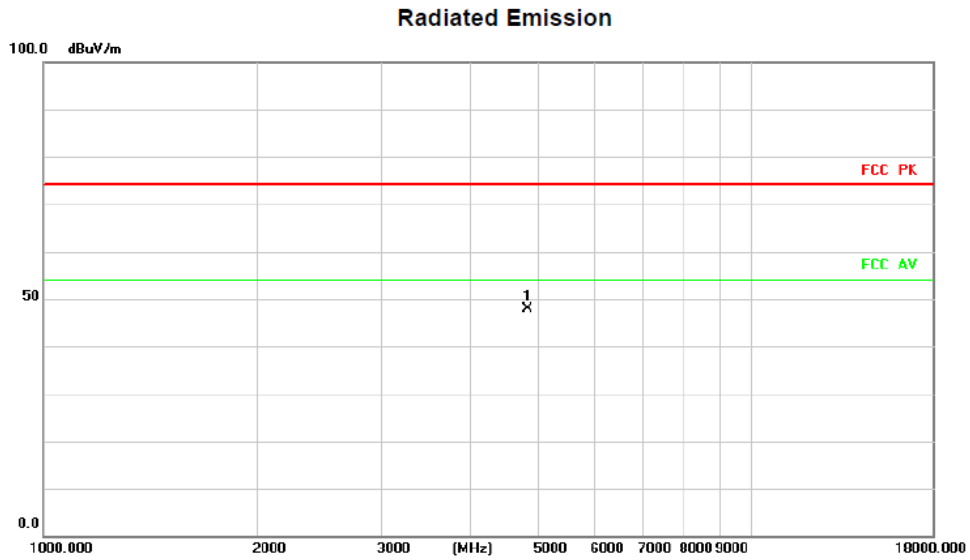


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4824.000	50.58	-4.08	46.50	74.00	-27.50	peak			

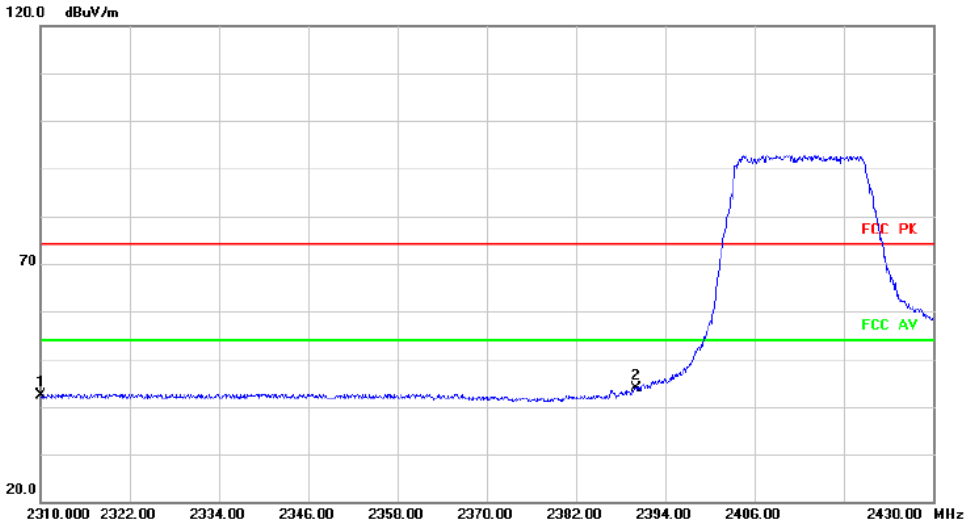


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	43.96	-2.53	41.43	74.00	-32.57	peak			
2		2390.000	58.69	-2.27	56.42	74.00	-17.58	peak			
3	*	2390.000	46.98	-2.27	44.71	54.00	-9.29	AVG			

HORIZONTA



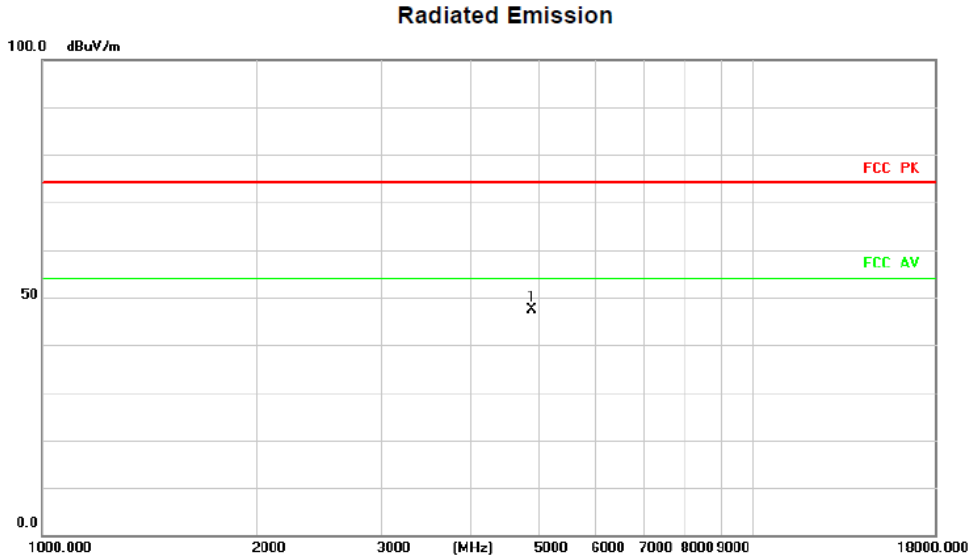
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4824.000	51.90	-4.08	47.82	74.00	-26.18	peak			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	45.00	-2.53	42.47	74.00	-31.53	peak			
2	*	2390.000	46.25	-2.27	43.98	74.00	-30.02	peak			

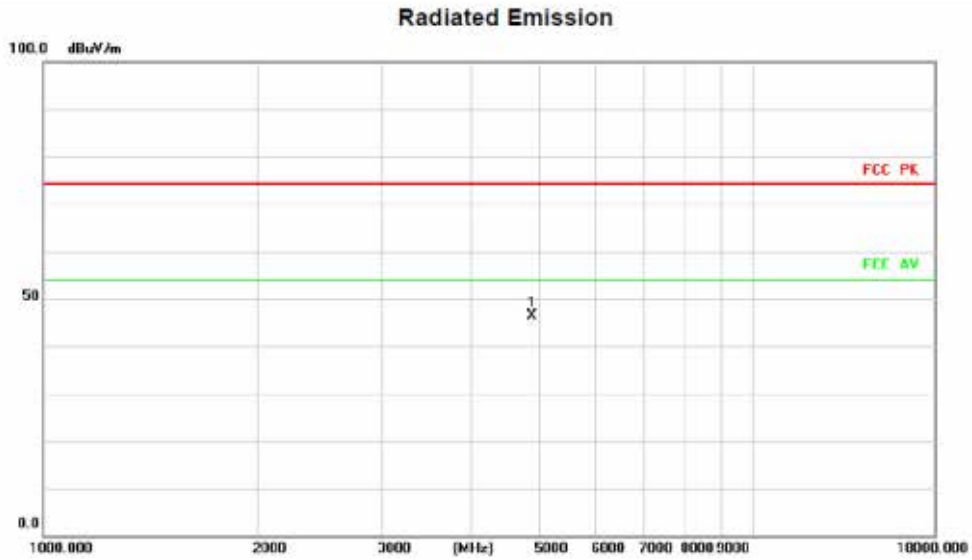
Above 1G (1GHz~18GHz)	Test mode:11G	Test Channel:6

VERTICAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	51.92	-4.46	47.46	74.00	-26.54	peak			

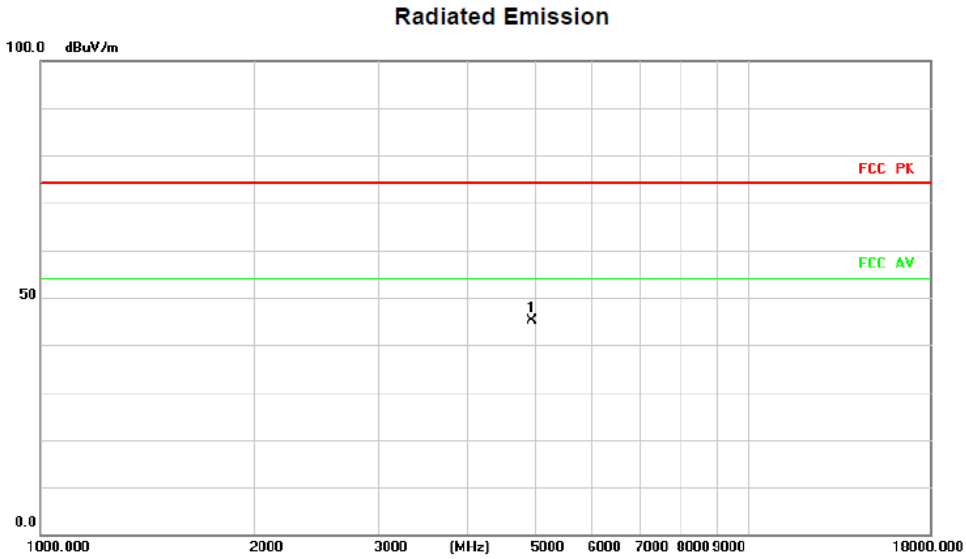
HORIZONTA



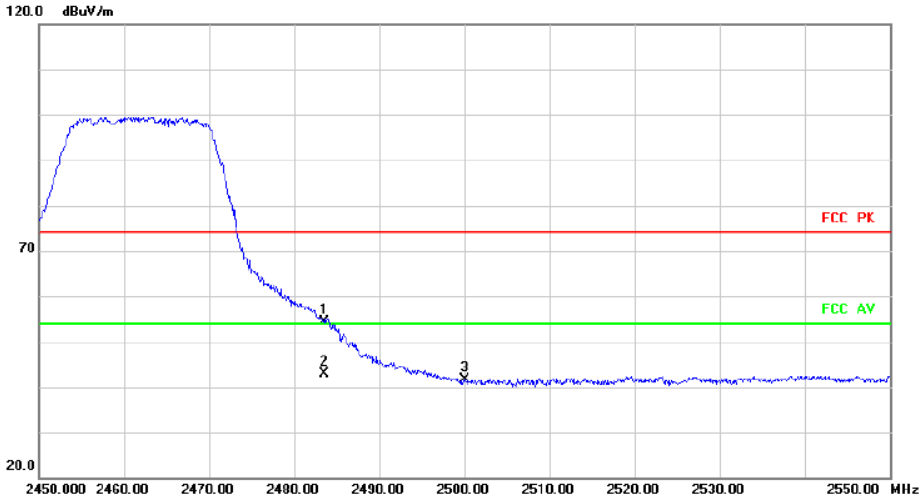
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	50.75	-4.46	46.29	74.00	-27.71	peak			

Above 1G (1GHz~18GHz)	Test mode: 11G	Test Channel:11

VERTICAL

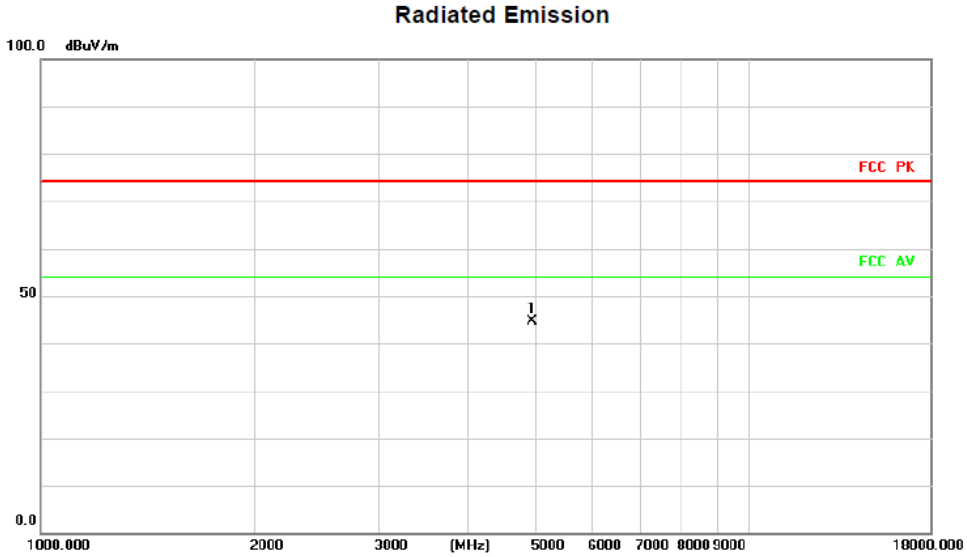


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4924.000	49.79	-4.56	45.23	74.00	-28.77	peak			

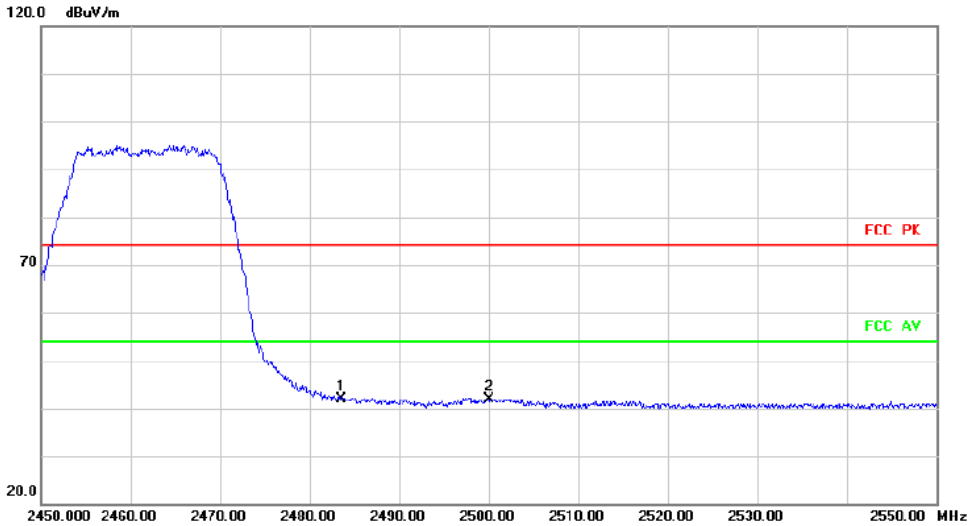


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	55.64	-1.38	54.26	74.00	-19.74	peak			
2	*	2483.500	44.19	-1.38	42.81	54.00	-11.19	AVG			
3		2500.000	42.85	-1.17	41.68	74.00	-32.32	peak			

HORIZONTA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4924.000	49.22	-4.56	44.66	74.00	-29.34	peak			

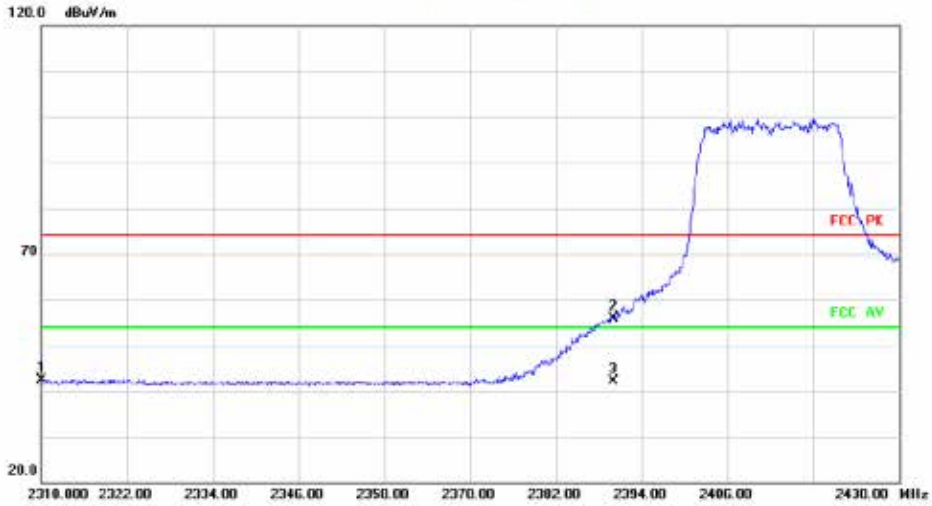


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2483.500	43.36	-1.38	41.98	74.00	-32.02	peak			
2		2500.000	42.93	-1.17	41.76	74.00	-32.24	peak			

Above 1G (1GHz~18GHz)	Test mode: 11N20SISO	Test Channel:1

VERTICAL

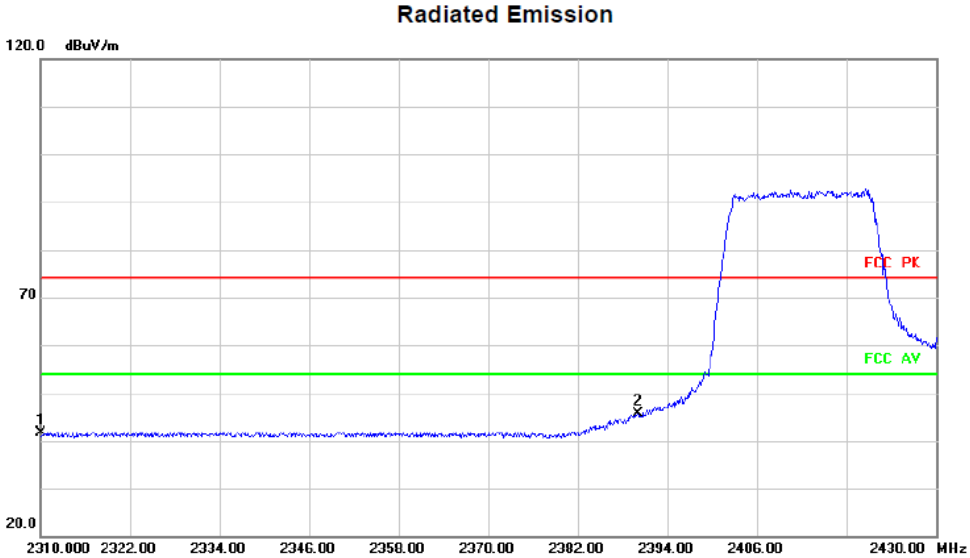
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4824.000	51.14	-4.08	47.06	74.00	-26.94	peak			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	44.97	-2.53	42.44	74.00	-31.56	peak			
2		2390.000	58.19	-2.27	55.92	74.00	-18.08	peak			
3	*	2390.000	44.40	-2.27	42.13	54.00	-11.87	AVG			

HORIZONTA

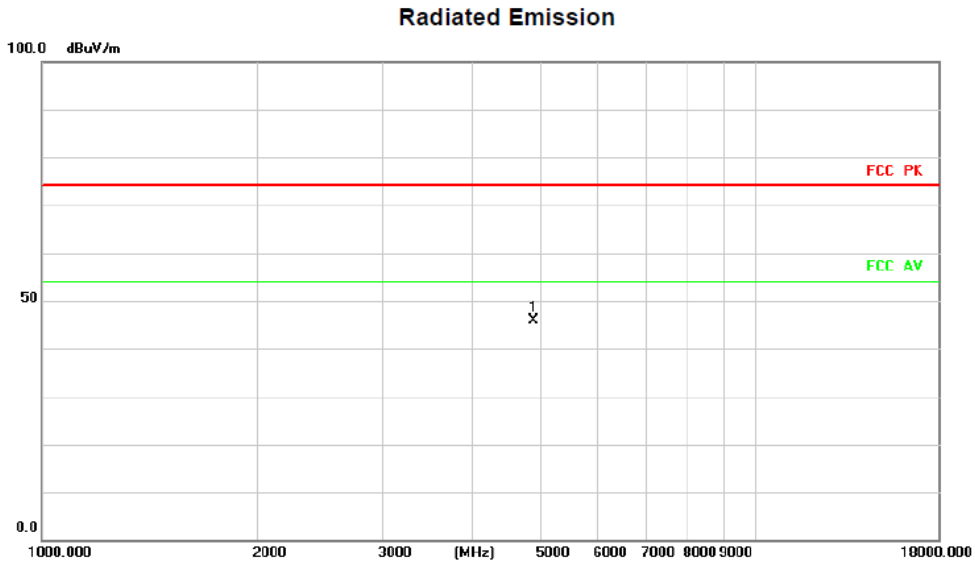
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4824.000	51.47	-4.08	47.39	74.00	-26.61	peak			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	44.20	-2.53	41.67	74.00	-32.33	peak			
2	*	2390.000	47.99	-2.27	45.72	74.00	-28.28	peak			

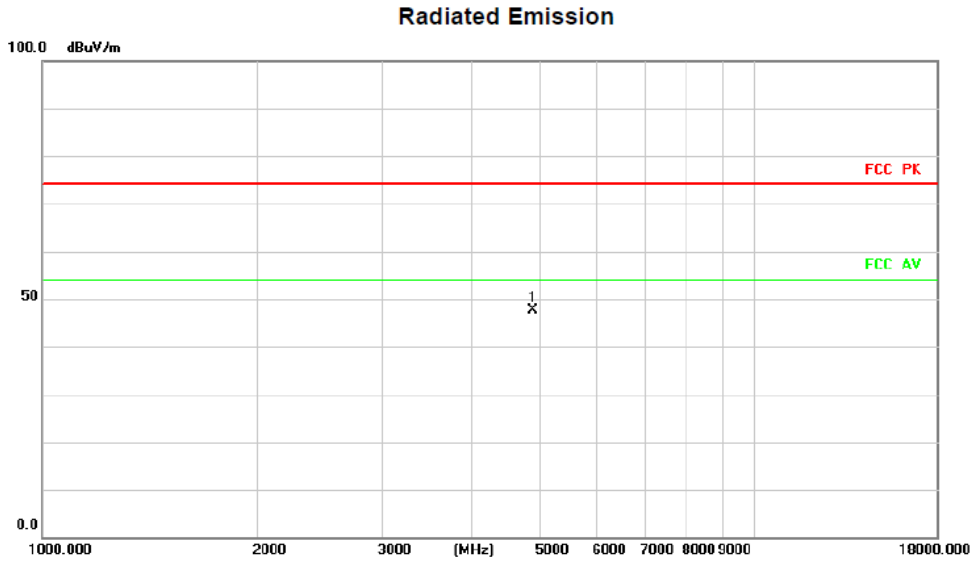
Above 1G (1GHz~18GHz)	Test mode:11N20SISO	Test Channel:6

VERTICAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	50.37	-4.46	45.91	74.00	-28.09	peak			

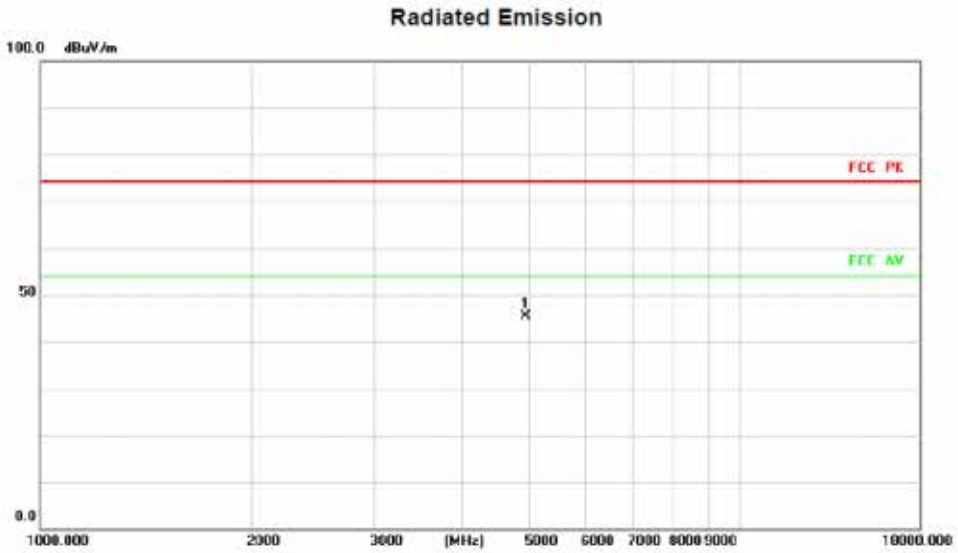
HORIZONTA



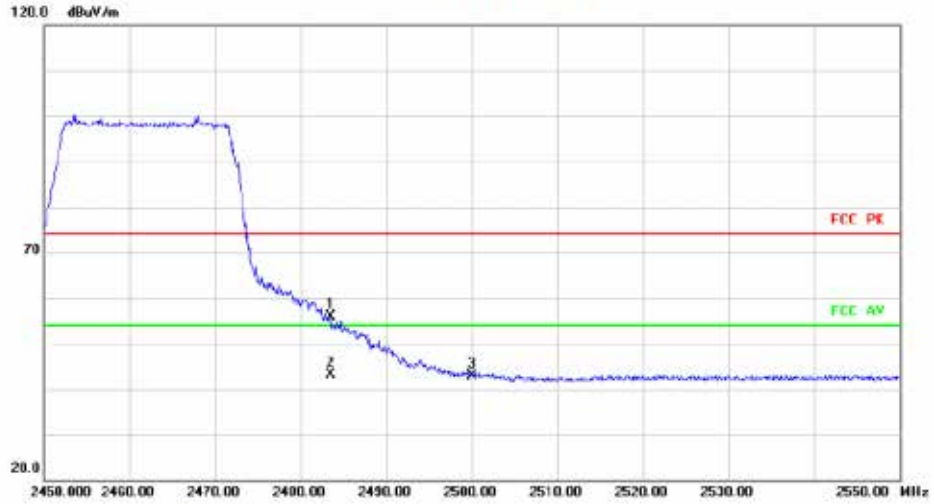
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	52.13	-4.46	47.67	74.00	-26.33	peak			

Above 1G (1GHz~18GHz)	Test mode: 11N20SISO	Test Channel:11

VERTICAL



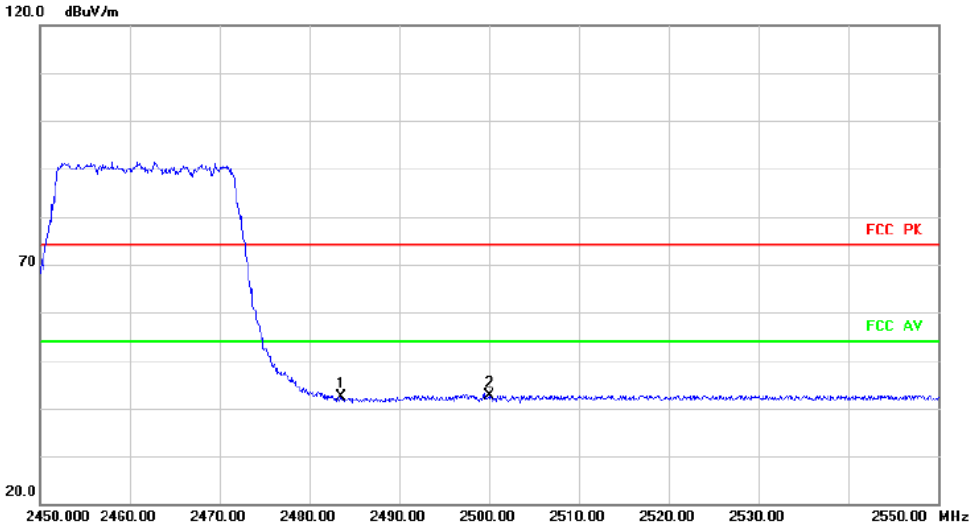
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4924.000	50.00	-4.56	45.44	74.00	-28.56	peak			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	57.19	-1.38	55.81	74.00	-18.19	peak			
2	*	2483.500	44.58	-1.38	43.20	54.00	-10.80	AVG			
3		2500.000	44.08	-1.17	42.91	74.00	-31.09	peak			

HORIZONTA

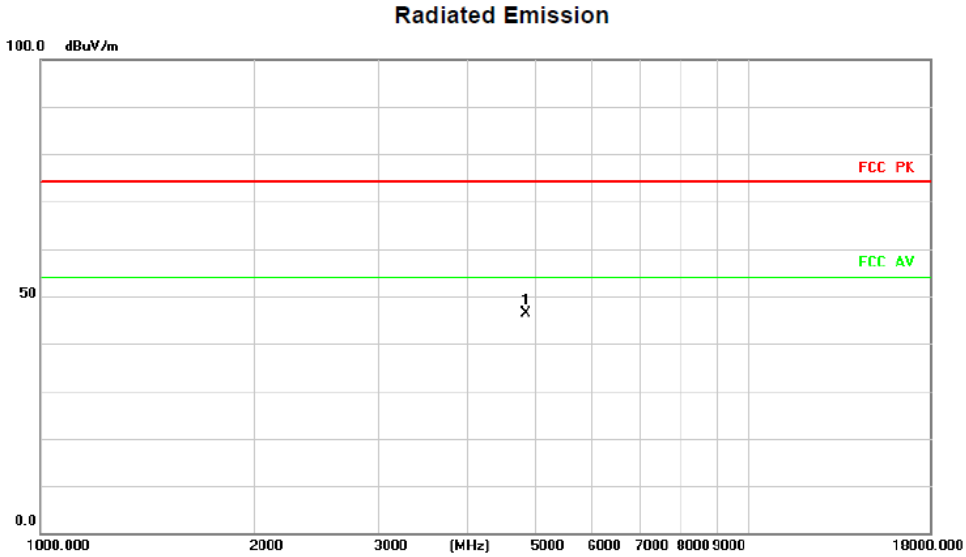
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4924.000	50.01	-4.56	45.45	74.00	-28.55	peak			



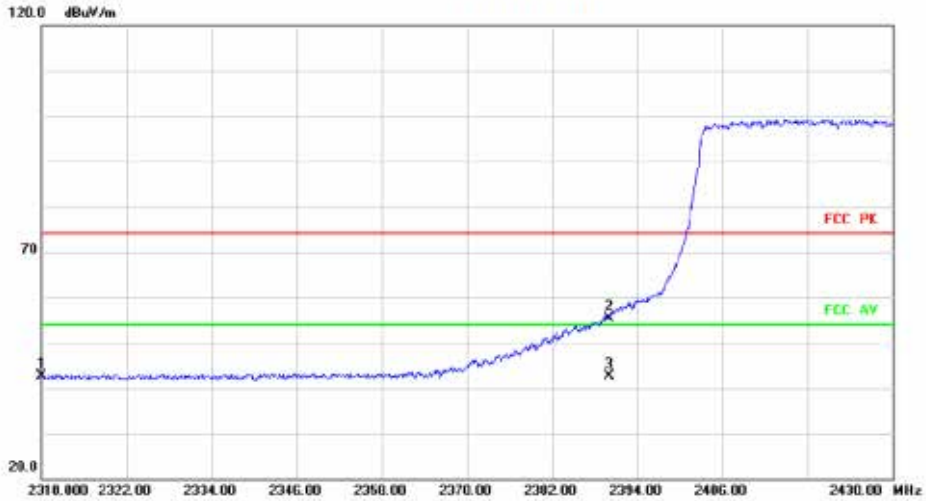
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	43.77	-1.38	42.39	74.00	-31.61	peak			
2	*	2500.000	43.90	-1.17	42.73	74.00	-31.27	peak			

Above 1G (1GHz~18GHz)	Test mode: 11N40SISO	Test Channel:3

VERTICAL

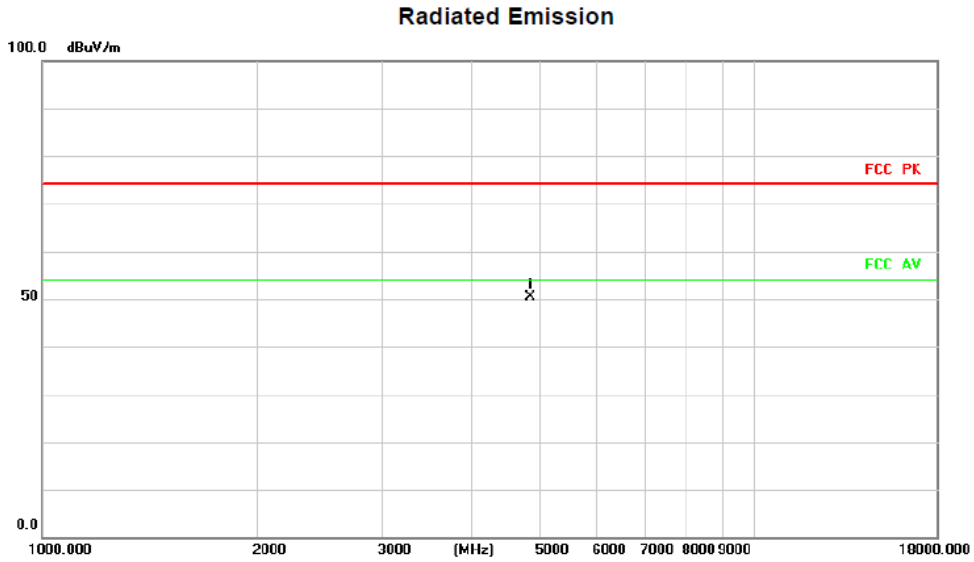


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4844.000	50.60	-4.28	46.32	74.00	-27.68	peak			

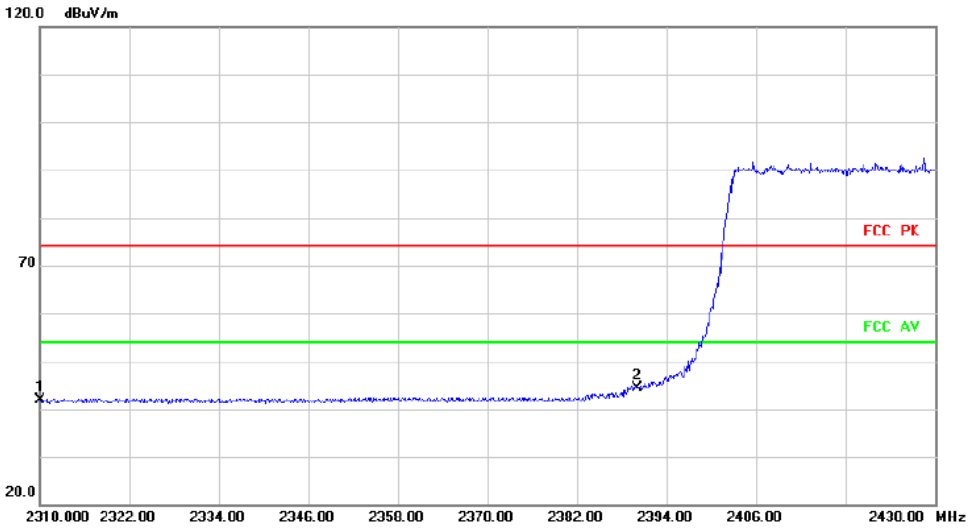


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	45.26	-2.53	42.73	74.00	-31.27	peak			
2		2390.000	57.71	-2.27	55.44	74.00	-18.56	peak			
3	*	2390.000	44.90	-2.27	42.63	54.00	-11.37	AVG			

HORIZONTA



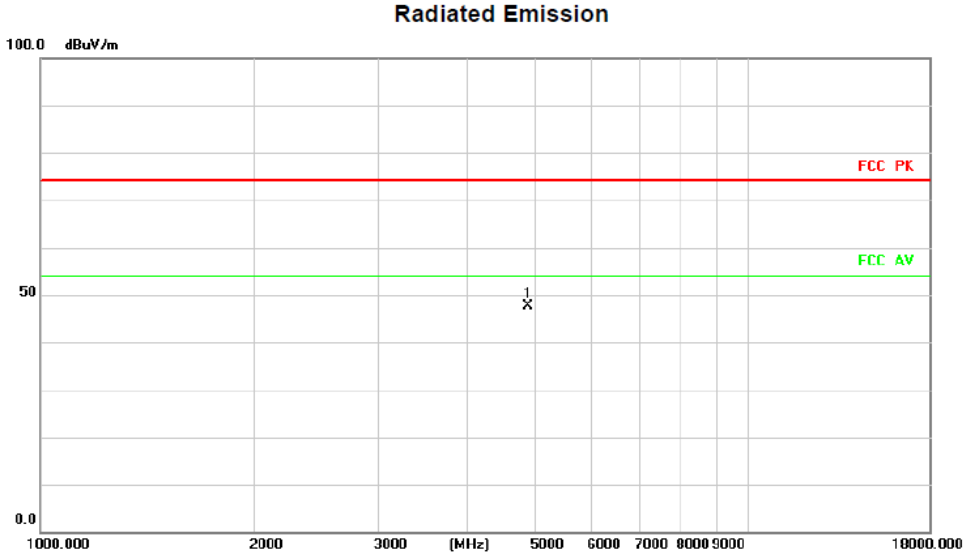
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4844.000	54.69	-4.28	50.41	74.00	-23.59	peak			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2310.000	44.34	-2.53	41.81	74.00	-32.19	peak			
2	*	2390.000	46.73	-2.27	44.46	74.00	-29.54	peak			

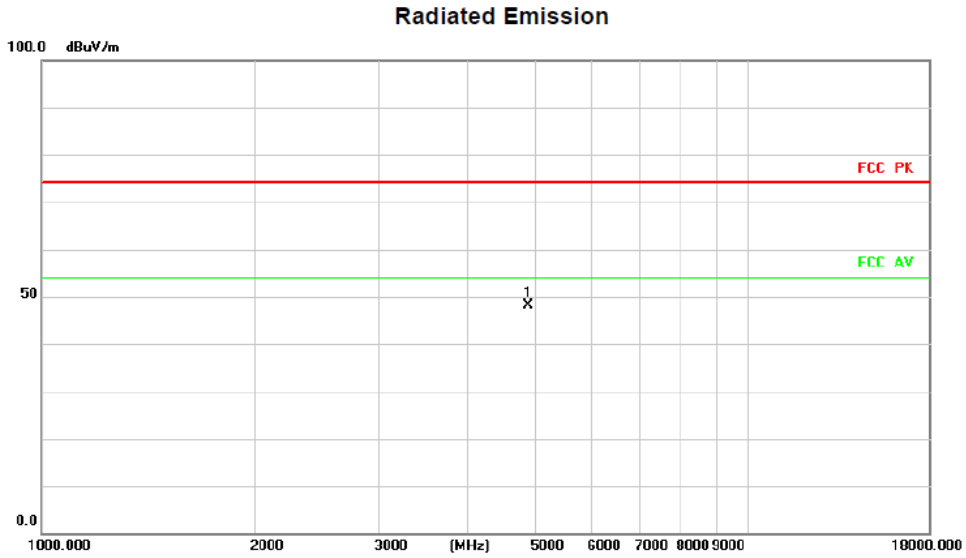
Above 1G (1GHz~18GHz)	Test mode:11N40SISO	Test Channel:6

VERTICAL



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	52.02	-4.46	47.56	74.00	-26.44	peak			

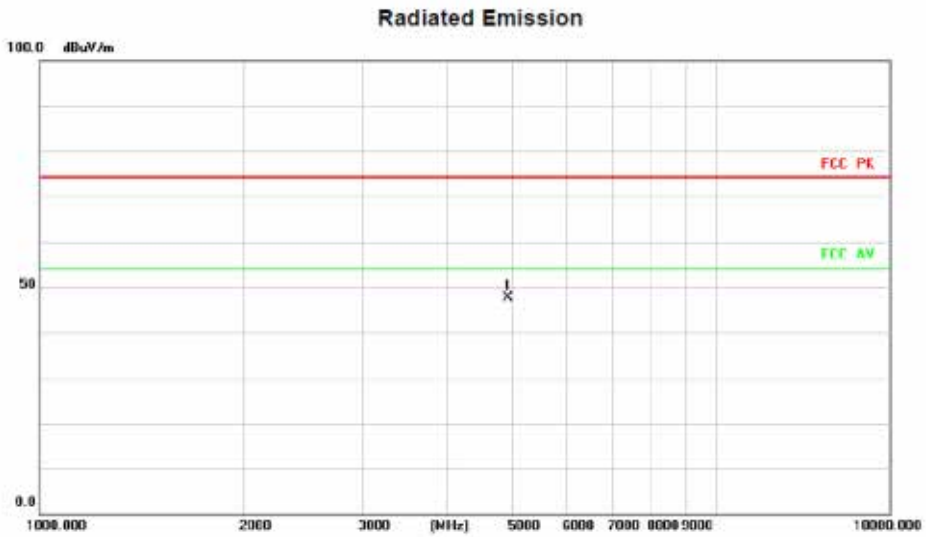
HORIZONTA



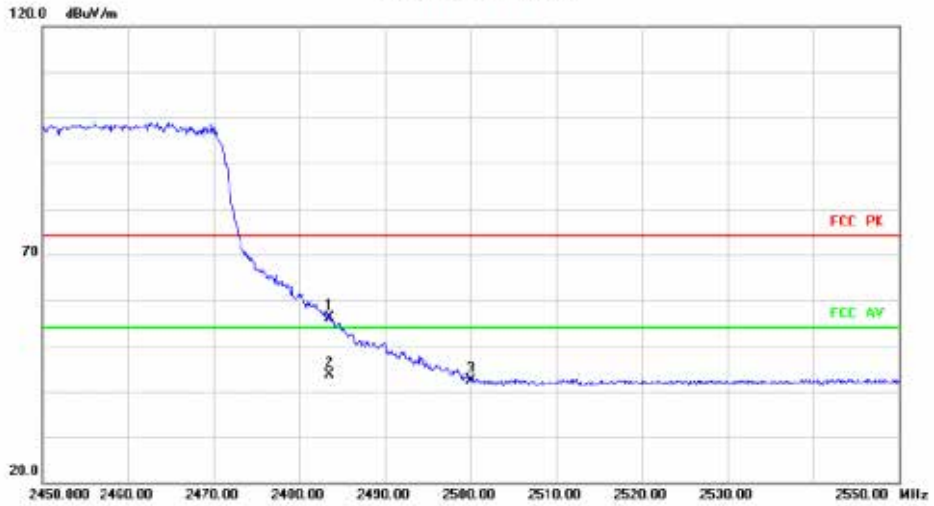
No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4874.000	52.59	-4.46	48.13	74.00	-25.87	peak			

Above 1G (1GHz~18GHz)	Test mode: 11N40SISO	Test Channel:9

VERTICAL

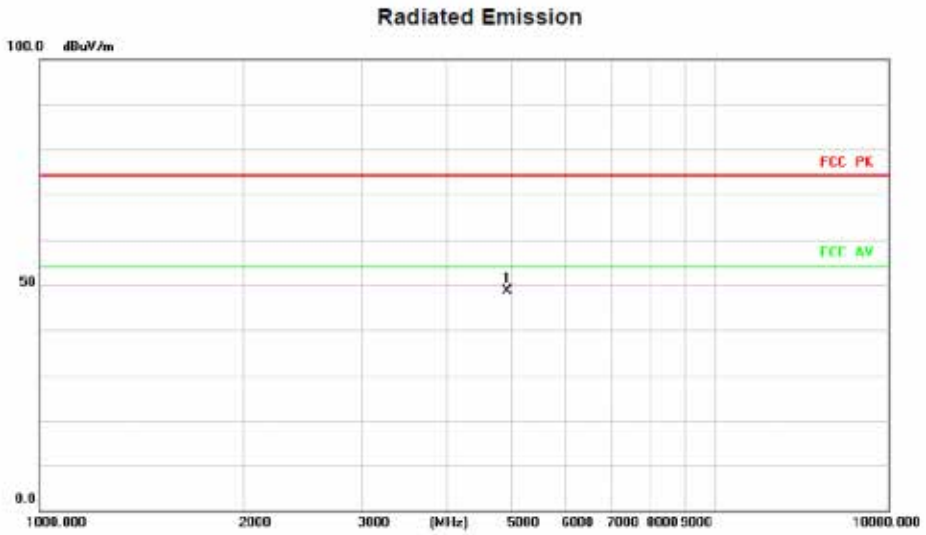


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4904.000	52.22	-4.60	47.62	74.00	-26.38	peak			

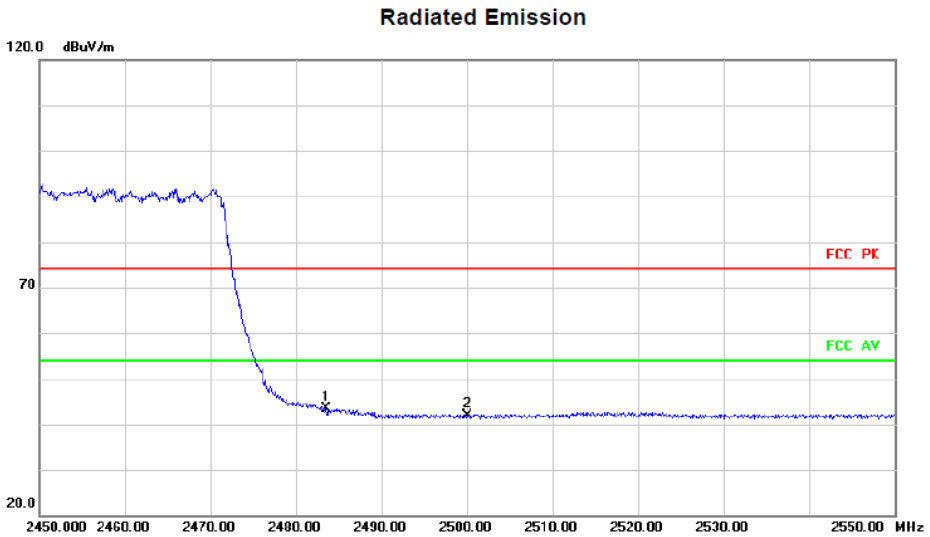


No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1		2483.500	57.46	-1.38	56.08	74.00	-17.92	peak			
2	*	2483.500	44.90	-1.38	43.52	54.00	-10.48	AVG			
3		2500.000	43.51	-1.17	42.34	74.00	-31.66	peak			

HORIZONTA



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	4904.000	53.21	-4.60	48.61	74.00	-25.39	peak			



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over		Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	Detector	cm	degree	Comment
1	*	2483.500	44.69	-1.38	43.31	74.00	-30.69	peak			
2		2500.000	43.10	-1.17	41.93	74.00	-32.07	peak			

The high frequency, which started from 18GHz to 26.5GHz, was pre-scanned and the result which was 20dB lower than the limit line was not recorded in this report.

3.3 Spurious Emission at Antenna Port

3.3.1 Limit

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

3.3.2 Test Procedure

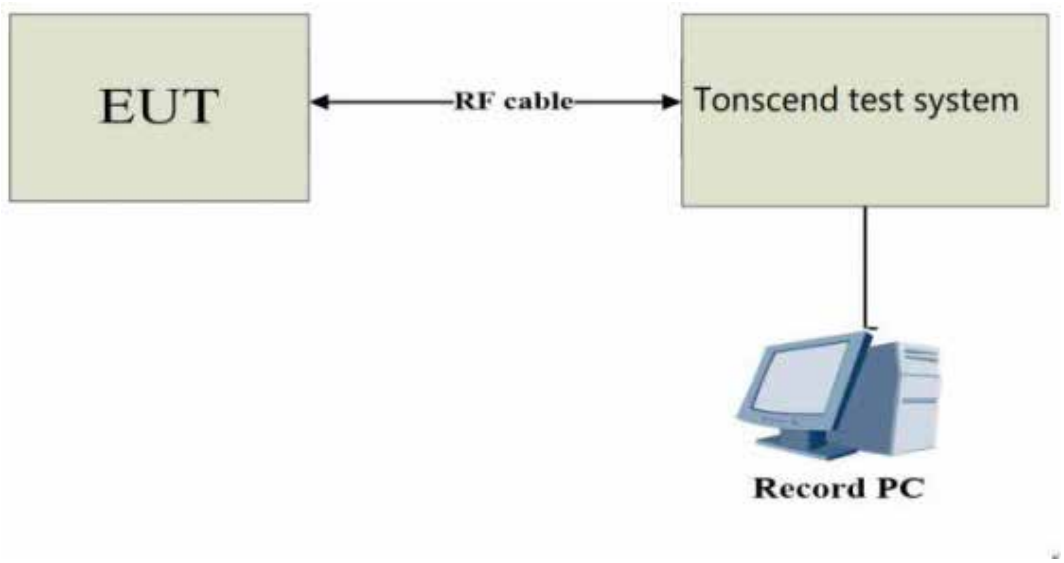
Test Method	
●Conducted Measurement	○Radiated Measurement
Test Channels	
● Lowest, Middle and Highest Channel	○ Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

a) The EUT was directly connected to the tonscend test system and antenna output port as show in the block diagram below.

b) Spectrum Setting as below:

Centre Frequency	The centre frequency of the channel under test
Spectrum Parameters	Setting
Start Frequency	30 MHz
Stop Frequency	26.5 GHz
RBW	100 kHz
VBW	300 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

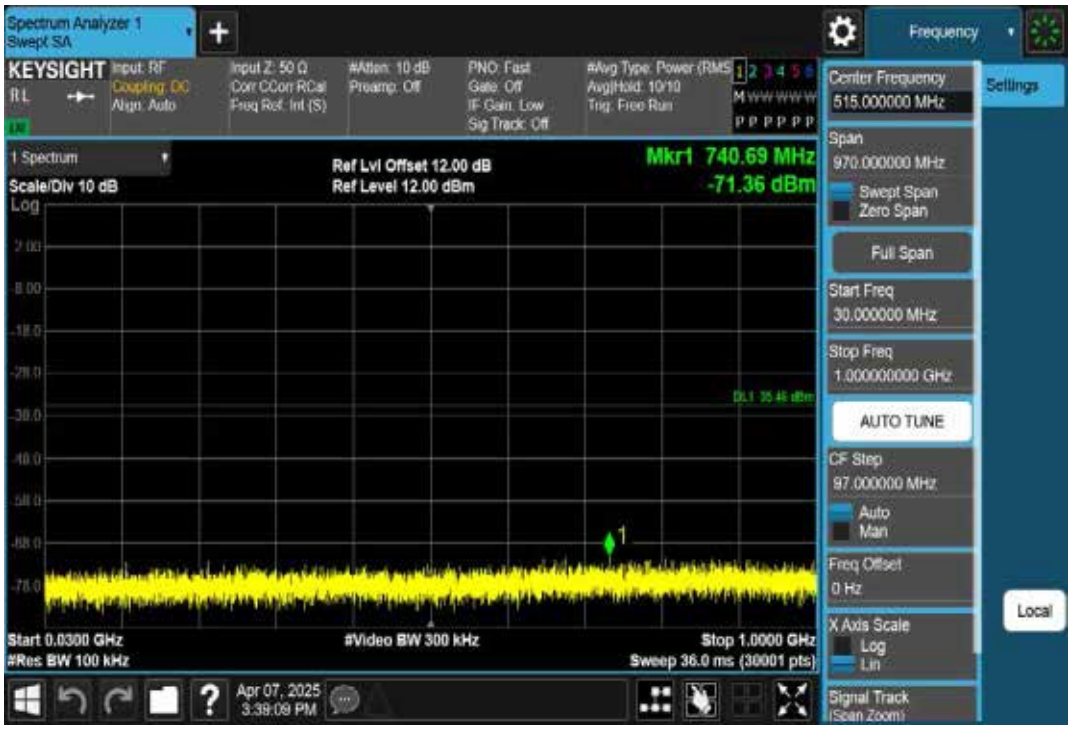
3.3.3 Test Setup



3.3.4 The Result

Conducted Spurious Emission

11B-Ant1-2412-0~Reference-PASS



11B-Ant1-2412-30~1000-PASS

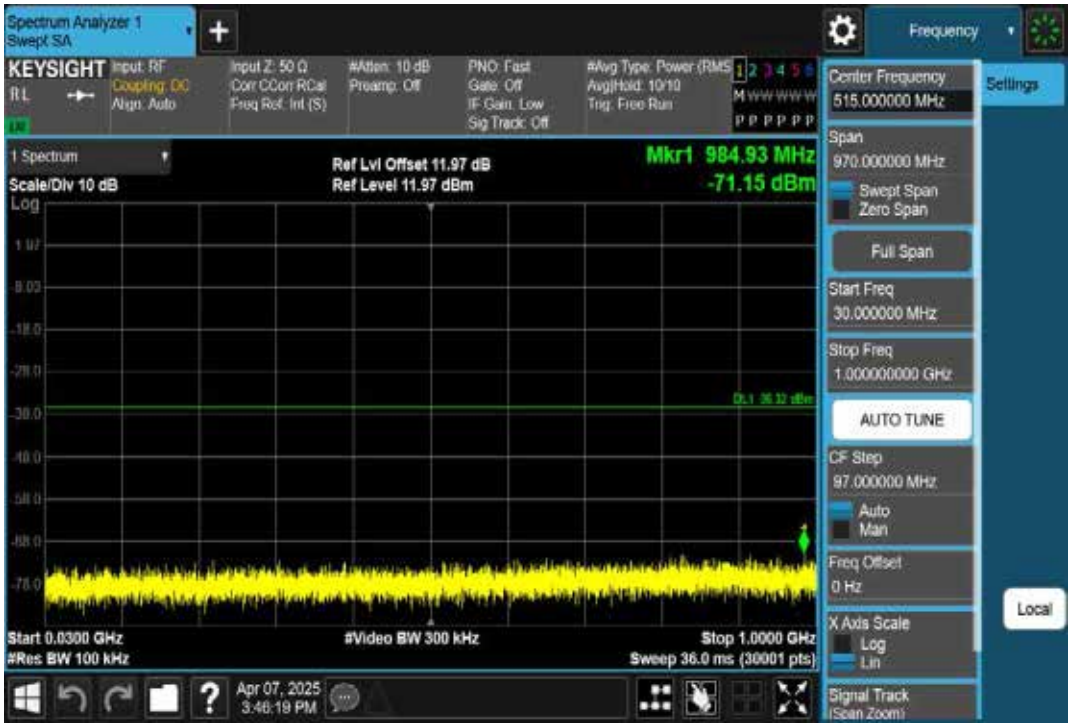
11B-Ant1-2412-1000~26500-PASS

11B-Ant1-2437-0~Reference-PASS

11B-Ant1-2437-30~1000-PASS

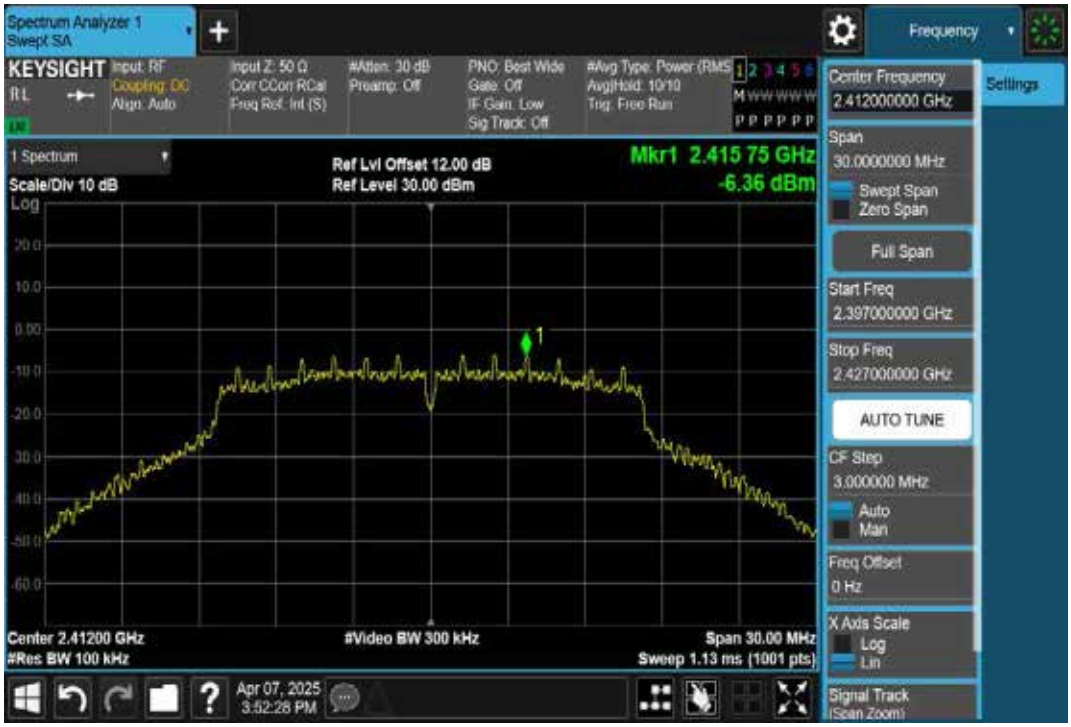
11B-Ant1-2437-1000~26500-PASS

11B-Ant1-2462-0~Reference-PASS



11B-Ant1-2462-30~1000-PASS

11B-Ant1-2462-1000~26500-PASS



11G-Ant1-2412-0~Reference-PASS

11G-Ant1-2412-30~1000-PASS

11G-Ant1-2412-1000~26500-PASS

11G-Ant1-2437-0~Reference-PASS

11G-Ant1-2437-30~1000-PASS

11G-Ant1-2437-1000~26500-PASS

11G-Ant1-2462-0~Reference-PASS

11G-Ant1-2462-30~1000-PASS

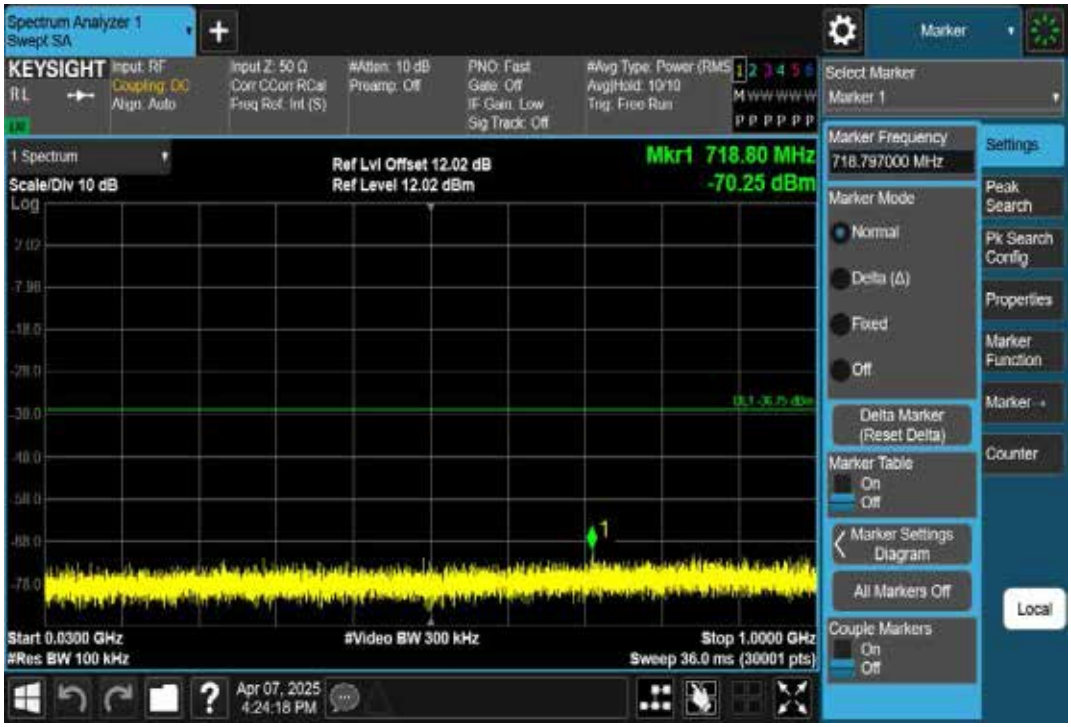
11G-Ant1-2462-1000~26500-PASS

11N20SISO-Ant1-2412-0~Reference-PASS

11N20SISO-Ant1-2412-30~1000-PASS

11N20SISO-Ant1-2412-1000~26500-PASS

11N20SISO-Ant1-2437-0~Reference-PASS



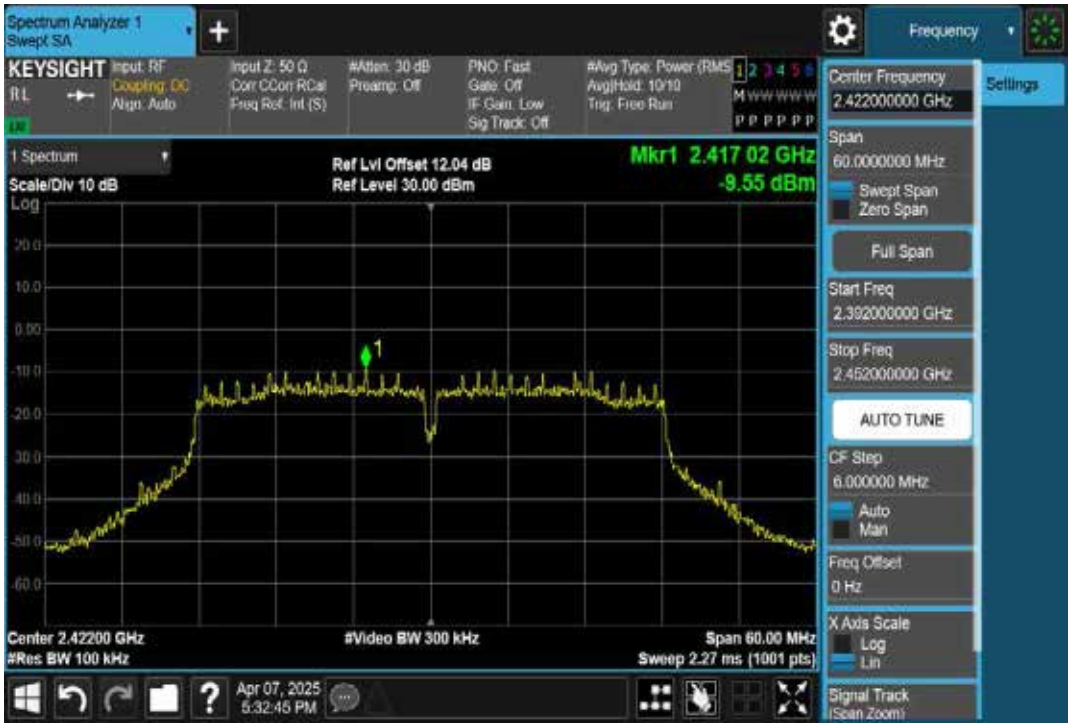
11N20SISO-Ant1-2437-30~1000-PASS

11N20SISO-Ant1-2437-1000~26500-PASS

11N20SISO-Ant1-2462-0~Reference-PASS

11N20SISO-Ant1-2462-30~1000-PASS

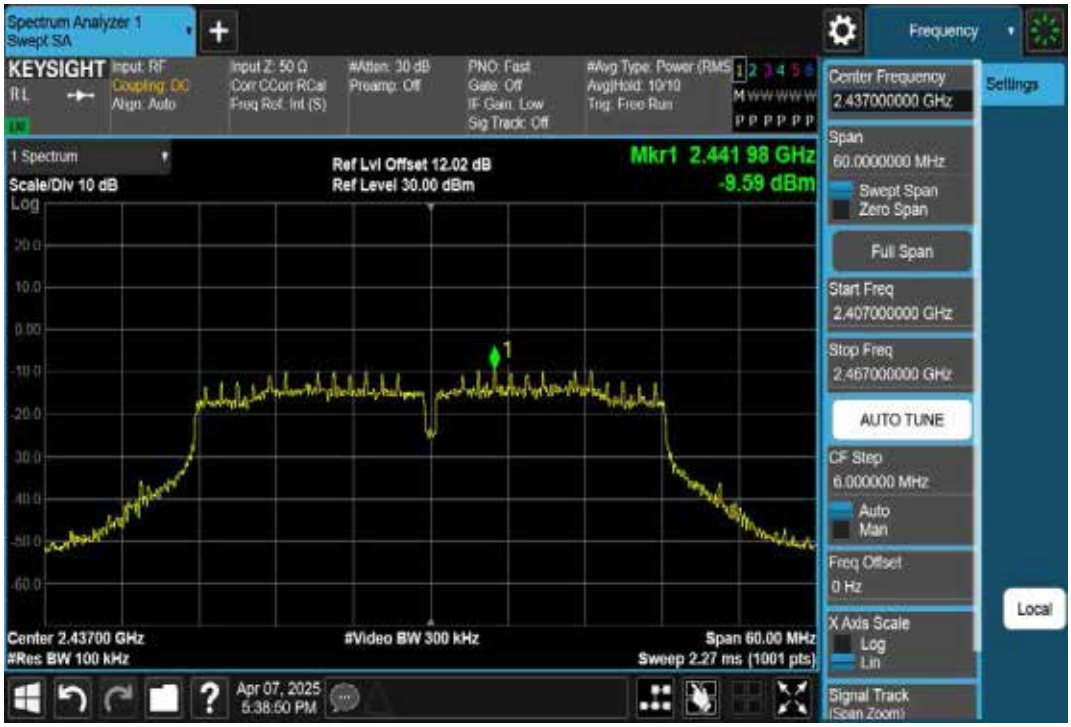
11N20SISO-Ant1-2462-1000~26500-PASS



11N40SISO-Ant1-2422-0~Reference-PASS

11N40SISO-Ant1-2422-30~1000-PASS

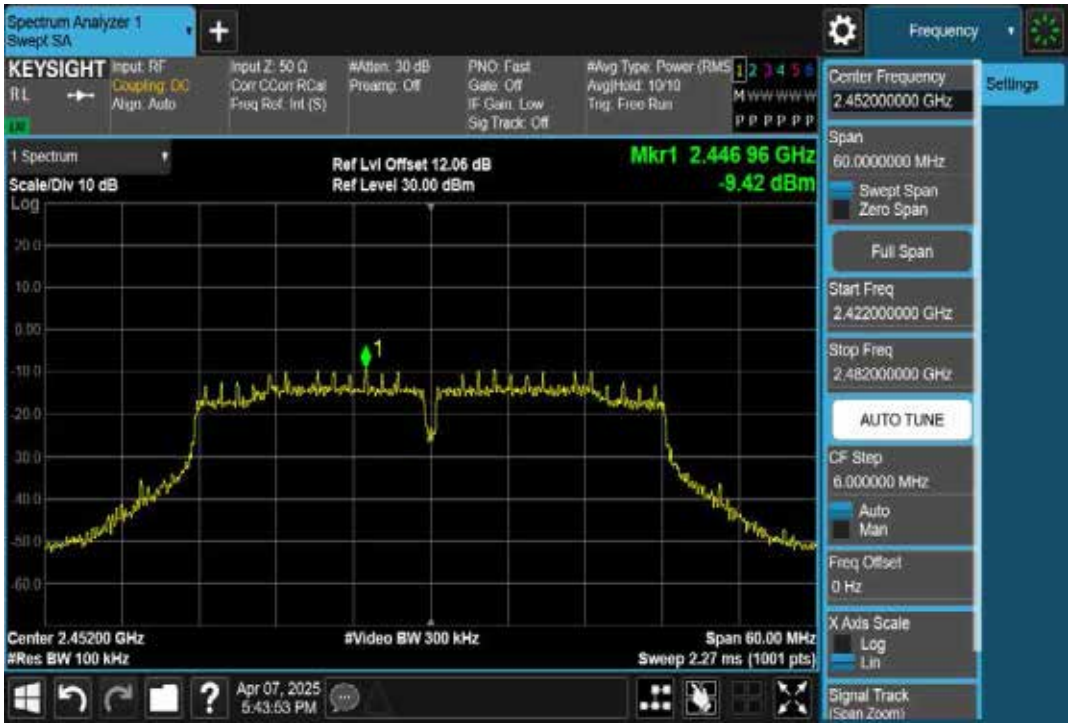
11N40SISO-Ant1-2422-1000~26500-PASS



11N40SISO-Ant1-2437-0~Reference-PASS

11N40SISO-Ant1-2437-30~1000-PASS

11N40SISO-Ant1-2437-1000~26500-PASS



11N40SISO-Ant1-2452-0~Reference-PASS

11N40SISO-Ant1-2452-30~1000-PASS

11N40SISO-Ant1-2452-1000~26500-PASS

Band edge

11B-Ant1-2412-PASS

11B-Ant1-2462-PASS

11G-Ant1-2412-PASS

11G-Ant1-2462-PASS

11N20SISO-Ant1-2412-PASS

11N20SISO-Ant1-2462-PASS

11N40SISO-Ant1-2422-PASS

11N40SISO-Ant1-2452-PASS

3.4 6dB Bandwidth

3.4.1 Limit

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz

3.4.2 Test Procedure

Test Method	
●Conducted Measurement	○Radiated Measurement
Test Channels	
●Lowest, Middle and Highest Channel	○ Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

a) The EUT was connected to the tonscend test system, and the spectrum analyser is set as follow:

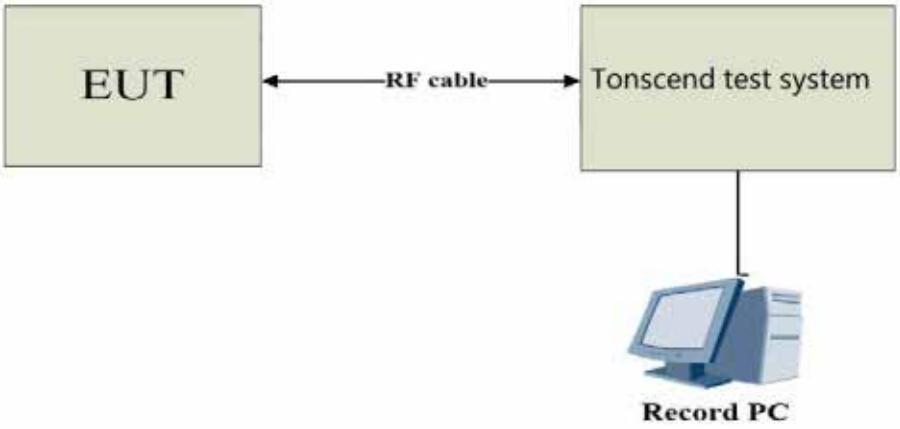
Centre Frequency	The centre frequency of the channel under test
RBW	100kHz
VBW	300kHz
Frequency span	2x Nominal Channel Bandwidth
Detector Mode	Peak
Trace Mode	Max Hold
Sweep Time	Auto Couple

b) Wait for the trace to stabilize then find the peak value of the trace and place the analyser marker on this peak.

c) Use the -6dB bandwidth function of the spectrum analyser to measure the 6dB Bandwidth of the EUT. This value shall be recorded.

d) Make sure that the power envelope is sufficiently above the noise floor of the analyser to avoid the noise signals left and right from the power envelope being taken into account by this measurement.

3.4.3 Test Setup



3.4.4 Test Result

DTS Bandwidth

Test Mode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	10.080	2406.960	2417.040	0.5	PASS
		2437	10.080	2431.960	2442.040	0.5	PASS
		2462	10.080	2456.960	2467.040	0.5	PASS
11G	Ant1	2412	15.120	2404.440	2419.560	0.5	PASS
		2437	15.120	2429.440	2444.560	0.5	PASS
		2462	15.120	2454.440	2469.560	0.5	PASS
11N20SISO	Ant1	2412	15.120	2404.440	2419.560	0.5	PASS
		2437	15.120	2429.440	2444.560	0.5	PASS
		2462	15.080	2454.480	2469.560	0.5	PASS
11N40SISO	Ant1	2422	35.040	2404.480	2439.520	0.5	PASS
		2437	35.040	2419.480	2454.520	0.5	PASS
		2452	35.040	2434.480	2469.520	0.5	PASS

11B-Ant1-2412-PASS

11B-Ant1-2437-PASS

11B-Ant1-2462-PASS

11G-Ant1-2412-PASS

11G-Ant1-2437-PASS

11G-Ant1-2462-PASS

11N20SISO-Ant1-2412-PASS

11N20SISO-Ant1-2437-PASS

11N20SISO-Ant1-2462-PASS

11N40SISO-Ant1-2422-PASS

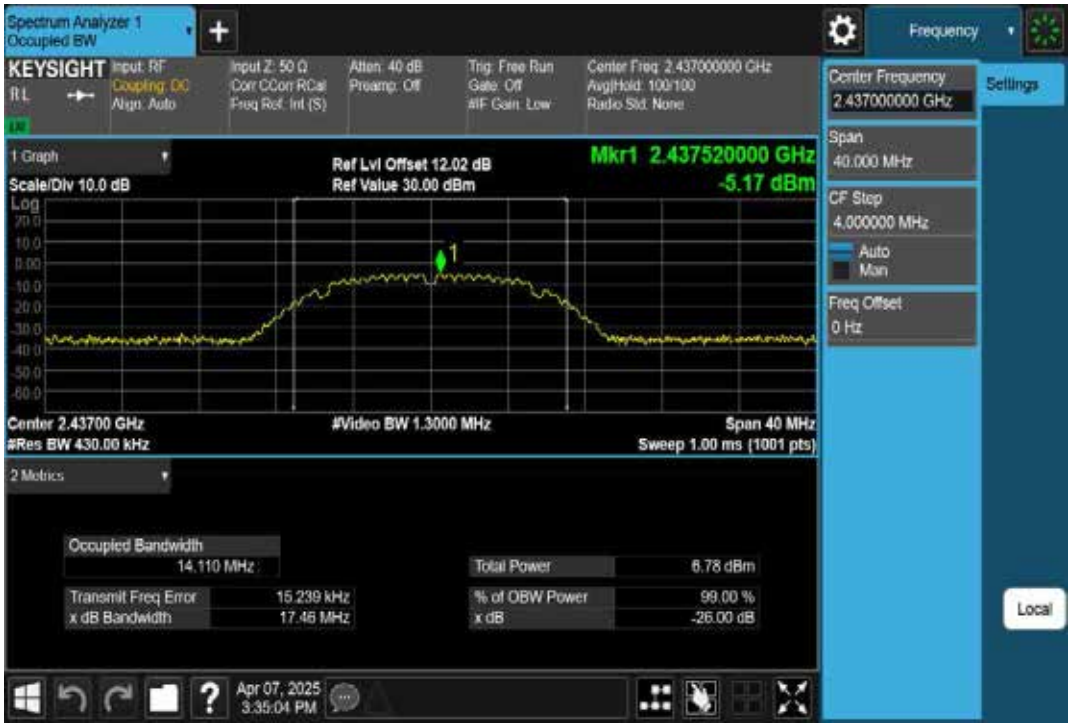
11N40SISO-Ant1-2437-PASS

11N40SISO-Ant1-2452-PASS

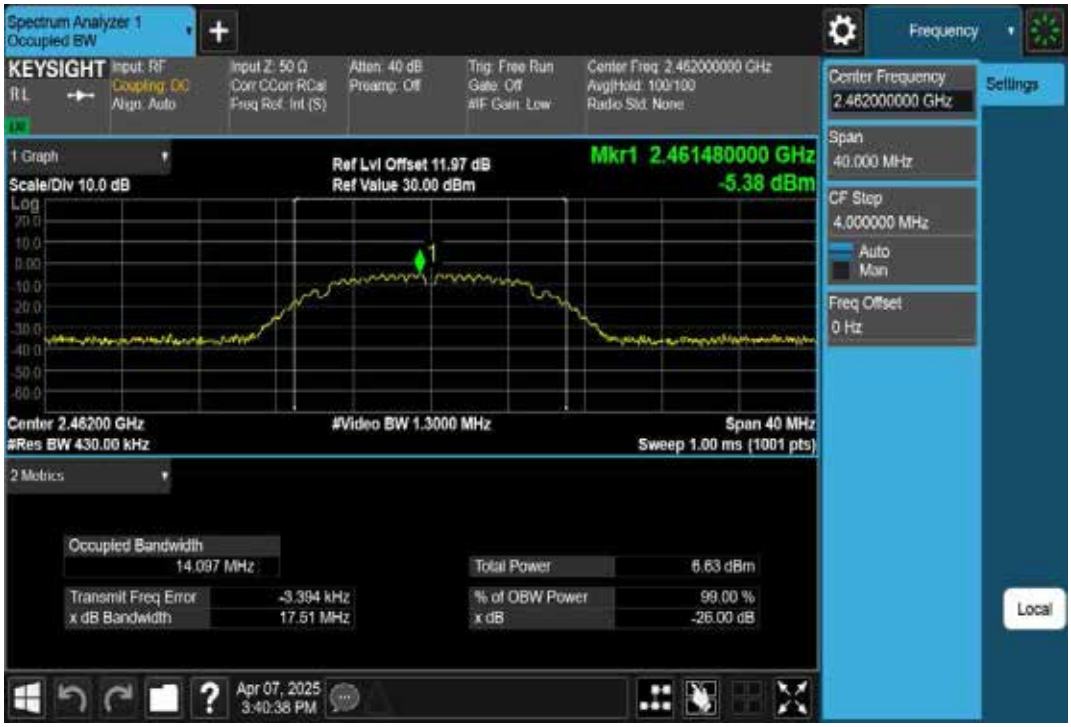
Occupied Channel Bandwidth

Test Mode	Antenna	Channel Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	14.022	2404.9826	2419.0046	---	---
		2437	14.110	2429.9602	2444.0702	---	---
		2462	14.097	2454.9481	2469.0451	---	---
11G	Ant1	2412	16.999	2403.5224	2420.5214	---	---
		2437	17.117	2428.4894	2445.6064	---	---
		2462	17.146	2453.4241	2470.5701	---	---
11N20SISO	Ant1	2412	18.049	2402.8969	2420.9459	---	---
		2437	18.106	2427.9607	2446.0667	---	---
		2462	18.047	2452.9248	2470.9718	---	---
11N40SISO	Ant1	2422	36.503	2403.7272	2440.2302	---	---
		2437	36.503	2418.7325	2455.2355	---	---
		2452	36.444	2433.7626	2470.2066	---	---

11B-Ant1-2412



11B-Ant1-2437



11B-Ant1-2462

11G-Ant1-2412

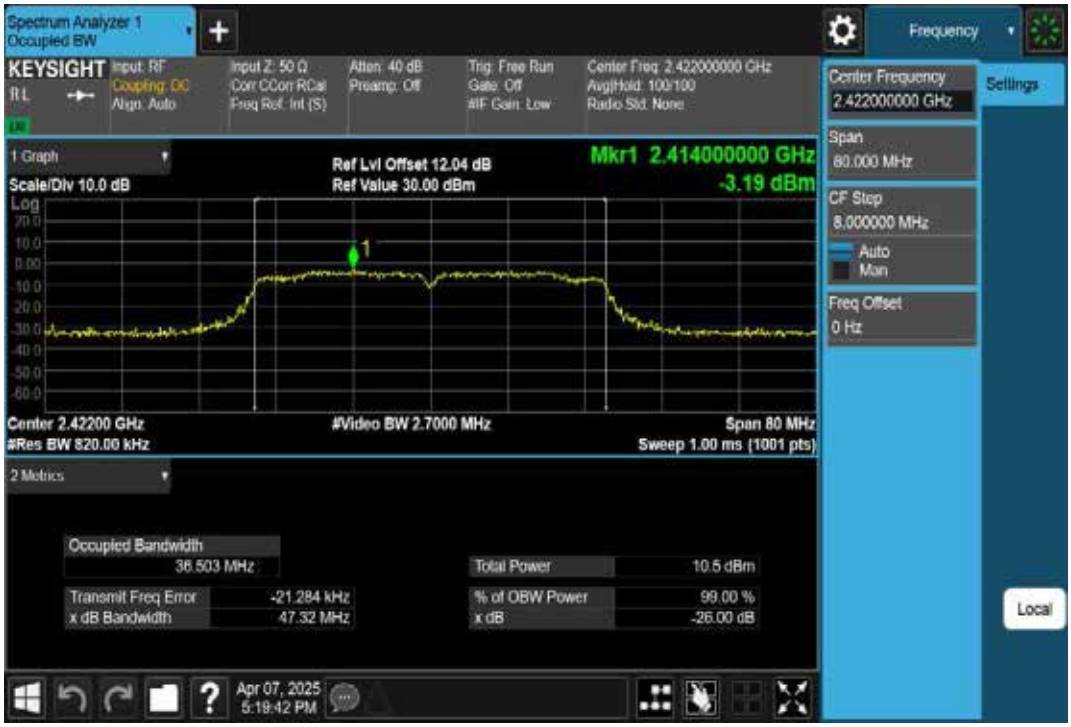
11G-Ant1-2437

11G-Ant1-2462

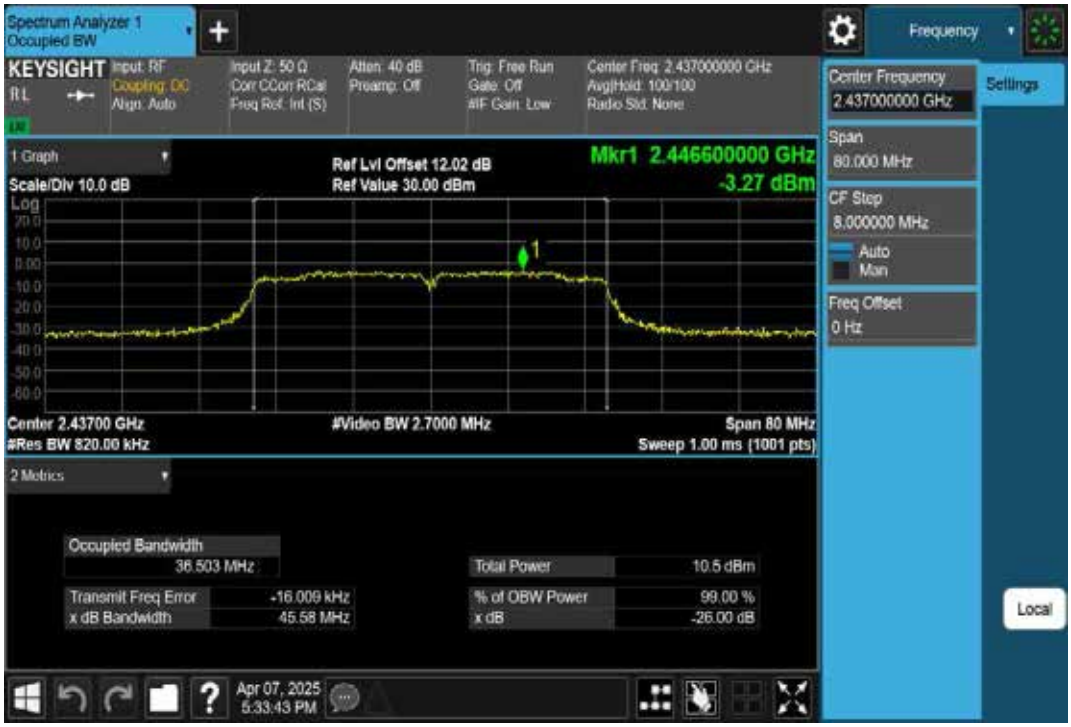
11N20SISO-Ant1-2412

11N20SISO-Ant1-2437

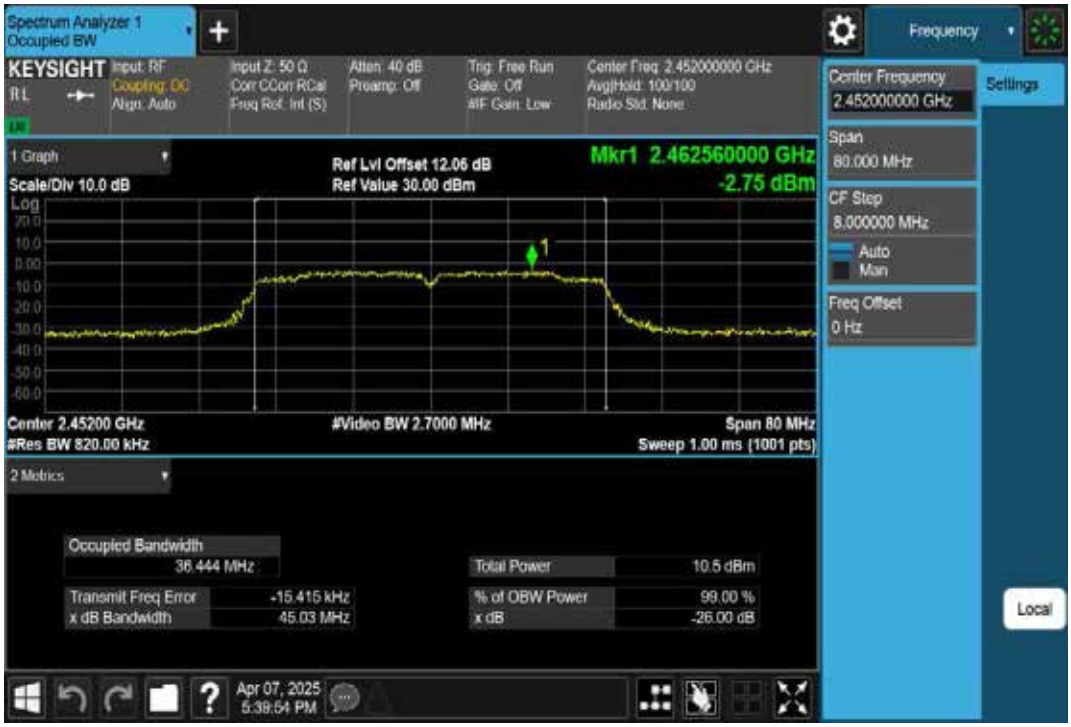
11N20SISO-Ant1-2462



11N40SISO-Ant1-2422



11N40SISO-Ant1-2437



11N40SISO-Ant1-2452

3.5 Maximum conducted output power

3.5.1 Limit

For systems using digital modulation in the 2400~2483.5MHz, The Maximum output Power shall not exceed 1W(30dBm)

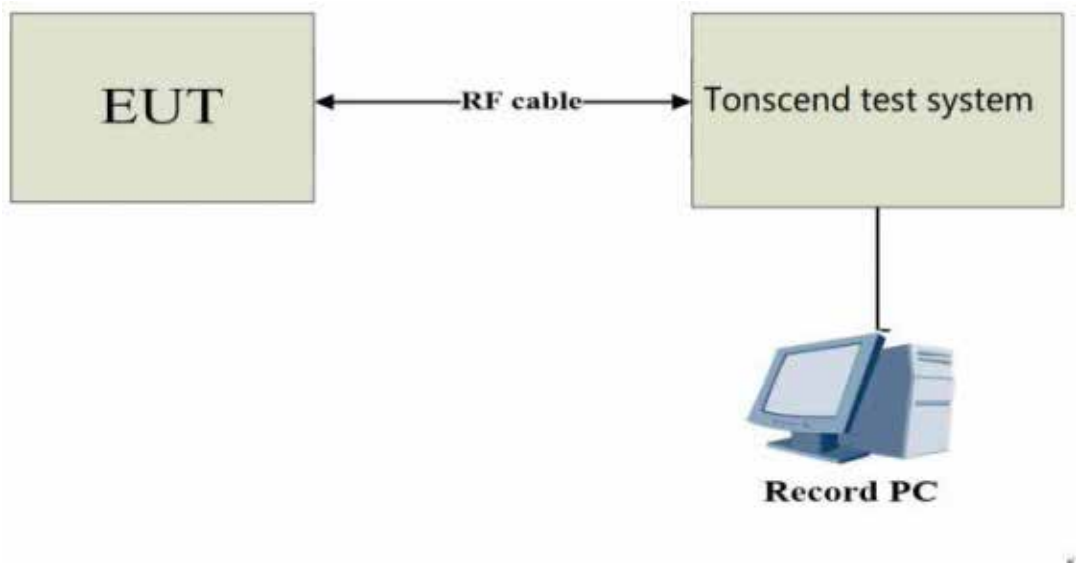
3.5.2 Test Procedure

Test Method	
●Conducted Measurement	○Radiated Measurement
Test Channels	
●Lowest, Middle and Highest Channel	○ Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

a) The EUT was directly connected to the tonscend test system and antenna output port as show in the block diagram below.

b) The maximum conducted output power was performed in accordance with method 11.9.2.3 (for average power) of ANSI C63.10-2013.

3.5.3 Test Setup



3.5.4 Table of Parameters of Text Software Setting

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

For Power setting value

Test Mode	Power Level Setting defined by Manufacturer		
Test Software Version	Engineer Mode		
Frequency (MHz)	2412	2437	2462
IEEE 802.11b	Default	Default	Default
IEEE 802.11g	Default	Default	Default
IEEE 802.11n(20)	Default	Default	Default
Frequency (MHz)	2422	2437	2452
IEEE 802.11n(40)	Default	Default	Default

3.5.5 The Result

Test Mode	Antenna	Frequency[MHz]	Maximum conducted output Power [dBm]	Limit [dBm]	Verdict
11B	Ant1	2412	4.05	≤30.00	PASS
		2437	3.80	≤30.00	PASS
		2462	3.65	≤30.00	PASS
11G	Ant1	2412	3.93	≤30.00	PASS
		2437	3.56	≤30.00	PASS
		2462	3.47	≤30.00	PASS
11N20SISO	Ant1	2412	3.88	≤30.00	PASS
		2437	3.56	≤30.00	PASS
		2462	3.38	≤30.00	PASS
11N40SISO	Ant1	2422	3.69	≤30.00	PASS
		2437	3.65	≤30.00	PASS
		2452	3.74	≤30.00	PASS

Note: The duty cycle factor and line loss are compensated in the average conducted output power.

3.6 Power Spectral Density

3.6.1 Limit

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmitting.

3.6.2 Test Procedure

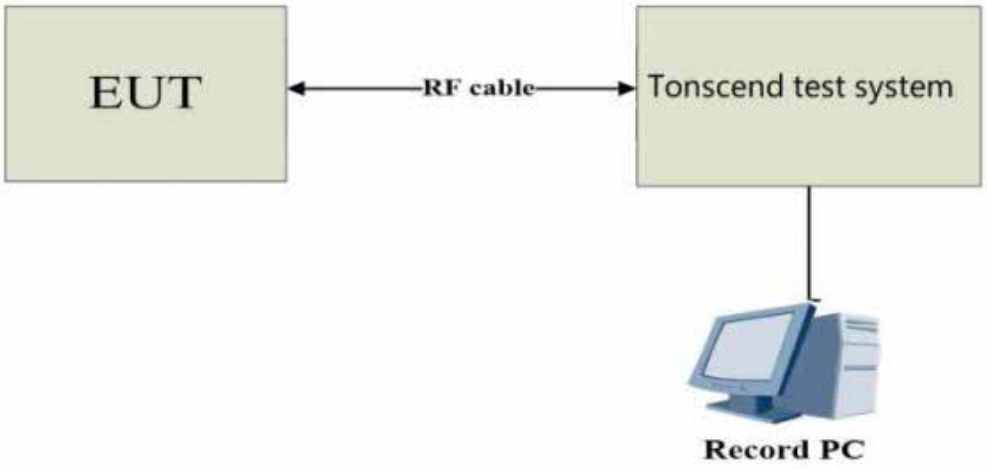
Test Method	
●Conducted Measurement	○Radiated Measurement
Test Channels	
●Lowest, Middle and Highest Channel	○ Lowest and Highest Channel
Environmental conditions	
●Normal	○Normal and Extreme
Note:●:Test ○:No Test	

a) The EUT was directly connected to the tonscend test system and antenna output port as show in the block diagram below.

b) Spectrum analyser settings as following:

Spectrum Parameters	Setting
Span Frequency	1.5 times the DTS bandwidth
RBW	3 kHz
VBW	10 kHz
Detector	Average
Trace	Max Hold
Sweep Time	Auto

3.6.3 Test Setup



3.6.4 The Result

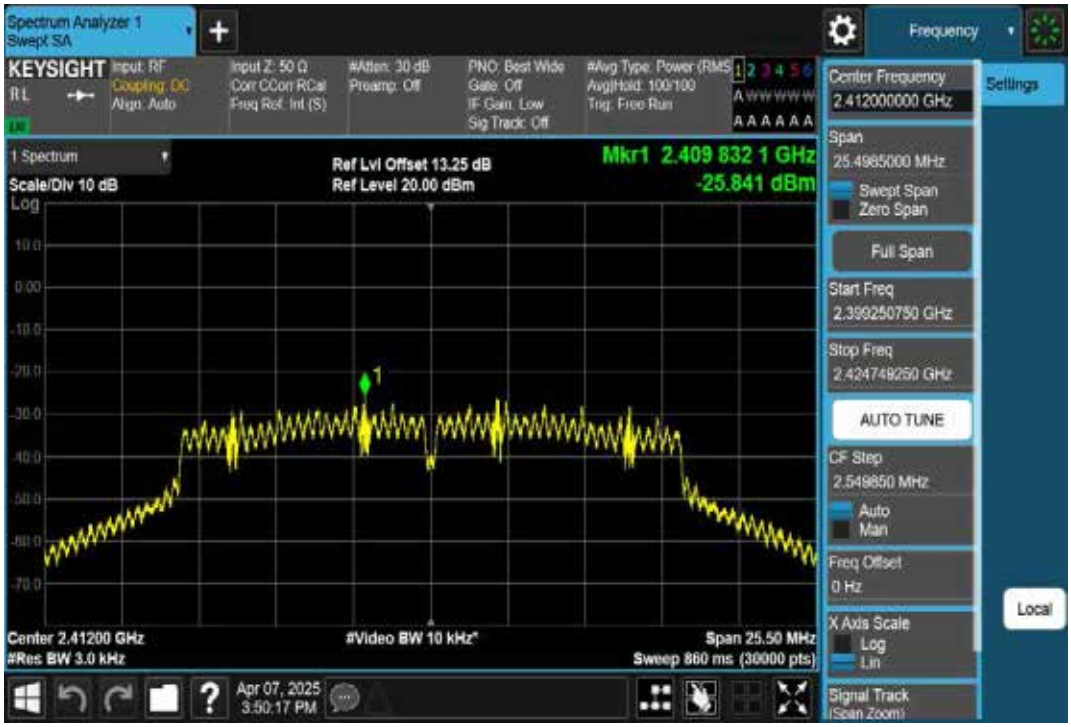
Test Mode	Antenna	Frequency[MHz]	Result[dBm/3kHz]	Limit[dBm/3kHz]	Verdict
11B	Ant1	2412	-26.85	≤8.00	PASS
		2437	-26.86	≤8.00	PASS
		2462	-26.93	≤8.00	PASS
11G	Ant1	2412	-25.84	≤8.00	PASS
		2437	-26.05	≤8.00	PASS
		2462	-26.00	≤8.00	PASS
11N20SISO	Ant1	2412	-25.49	≤8.00	PASS
		2437	-25.83	≤8.00	PASS
		2462	-24.98	≤8.00	PASS
11N40SISO	Ant1	2422	-28.95	≤8.00	PASS
		2437	-29.34	≤8.00	PASS
		2452	-28.87	≤8.00	PASS

Note: The duty cycle factor and line loss are compensated in the test graph.

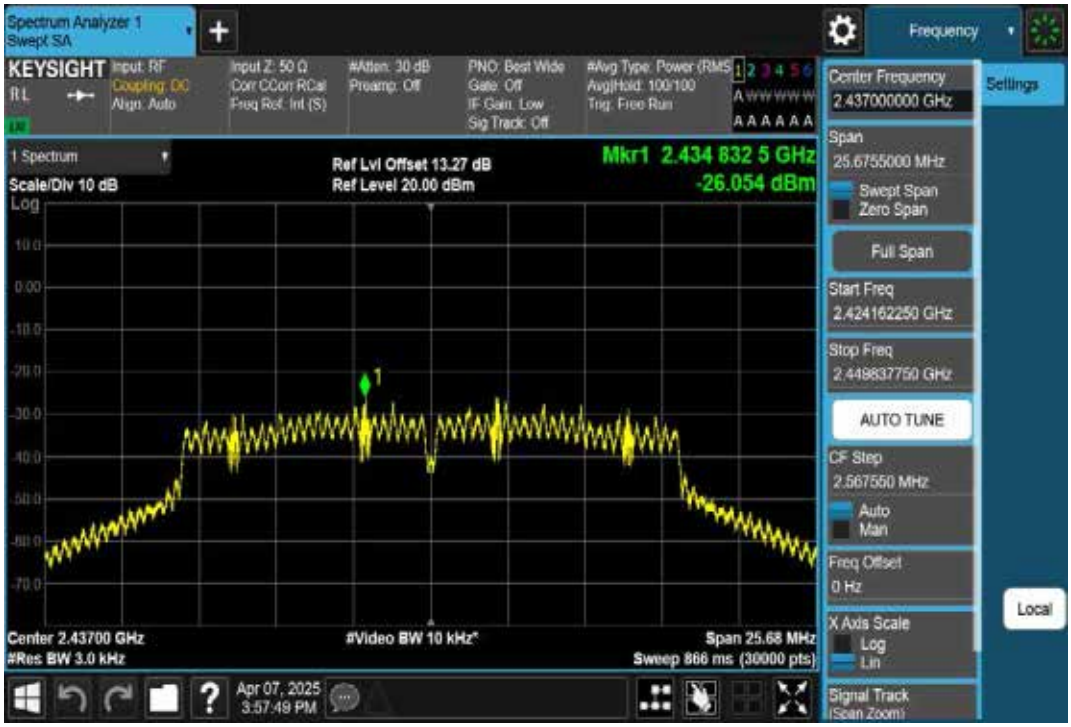
11B-Ant1-2412-PASS

11B-Ant1-2437-PASS

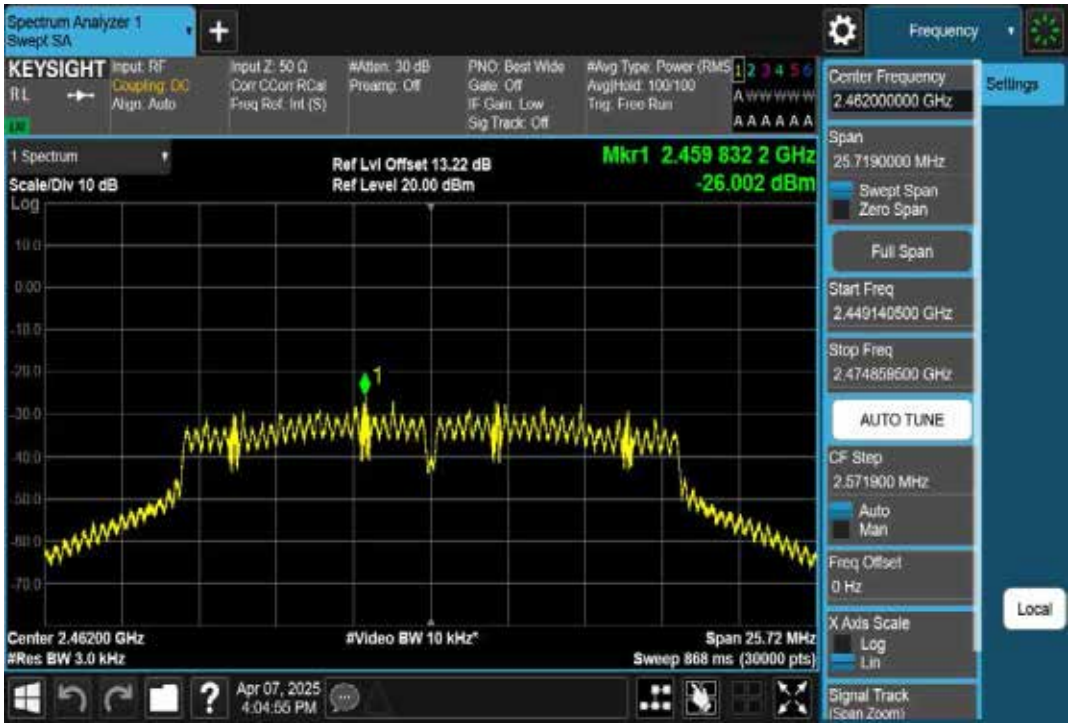
11B-Ant1-2462-PASS



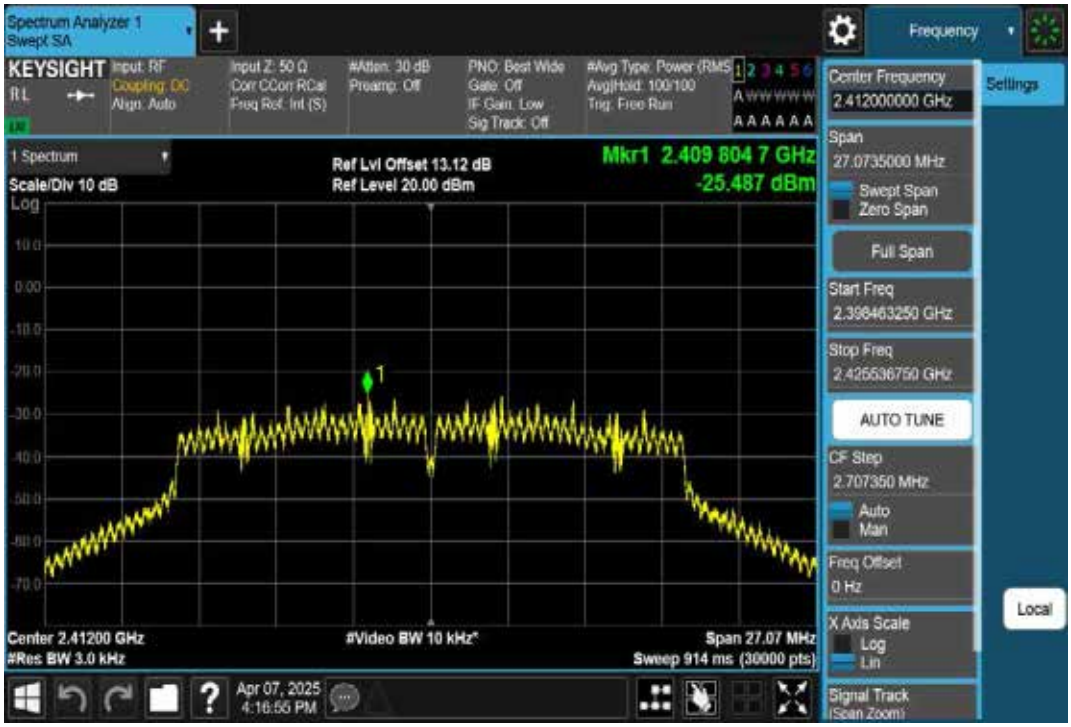
11G-Ant1-2412-PASS



11G-Ant1-2437-PASS

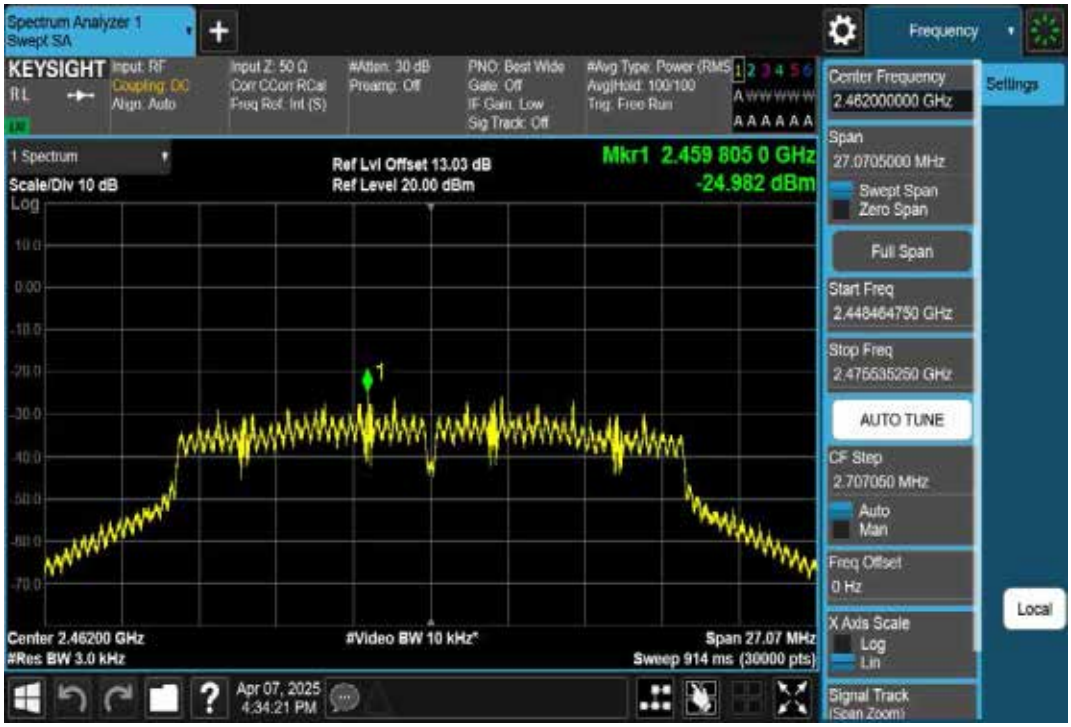


11G-Ant1-2462-PASS

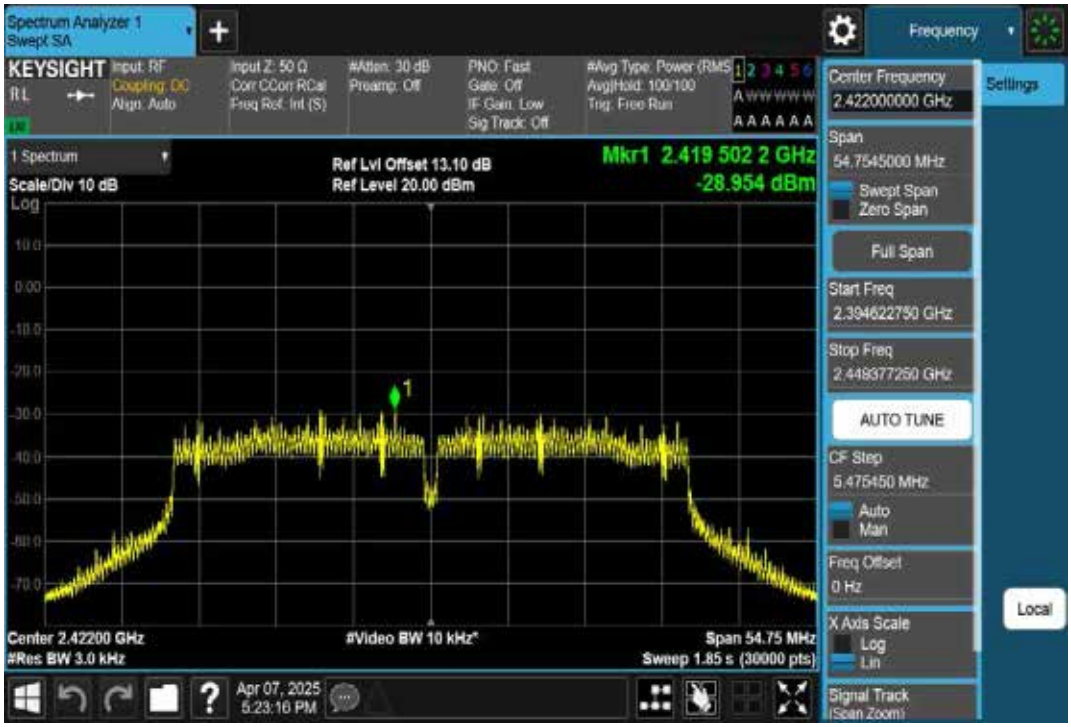


11N20SISO-Ant1-2412-PASS

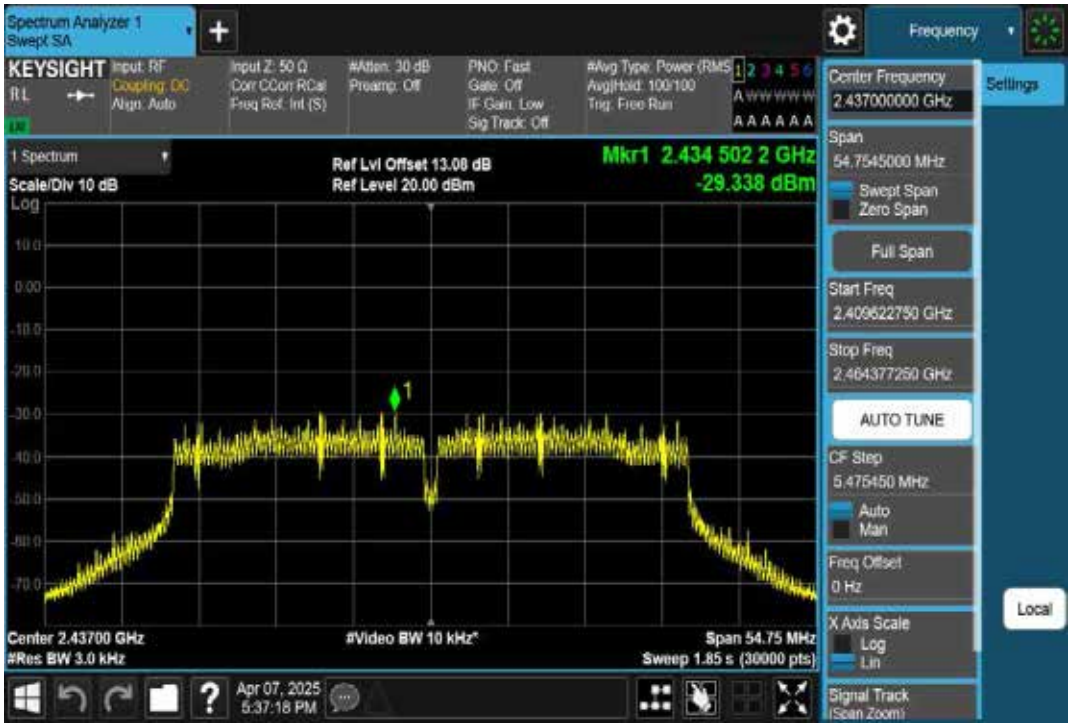
11N20SISO-Ant1-2437-PASS



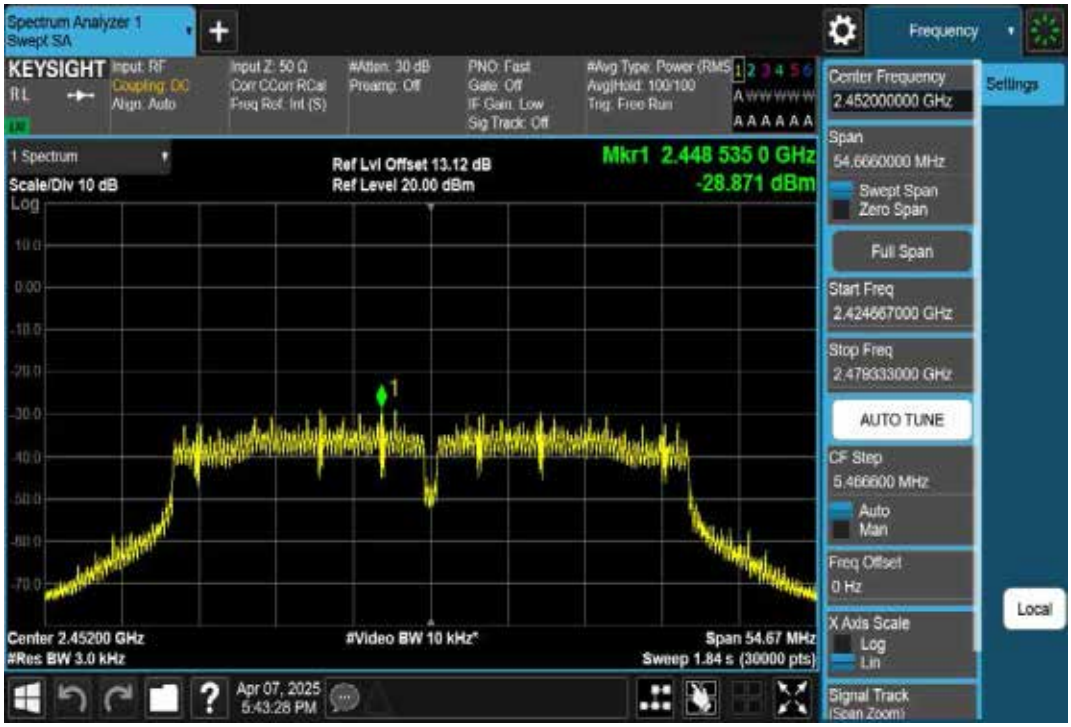
11N20SISO-Ant1-2462-PASS



11N40SISO-Ant1-2422-PASS



11N40SISO-Ant1-2437-PASS



11N40SISO-Ant1-2452-PASS

Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technology Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

Shenzhen Haiyun Standard Technology Co., Ltd.

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Tel: 0755-26024411

Email: service@hy-lab.cn

End of Test Report