International Certification Corp.
No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan Hsiang, Tao Yuan Hsien 333, Taiwan, R.O.C.
Tel: 886-3-271-8666 Fax: 886-3-318-0155

FCC Test Report

FCC ID	:	**NKR03T8726**
Equipment	:	**802.11 a/b/g/n 2x2 USB Dongle**
Model No.	:	**03T8726**
Brand Name	:	**lenovo**
Applicant	:	**Wistron NeWeb Corp.**
Address	:	**20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan, R.O.C.**
Manufacturer		**Wistron Neweb (KunShan) Corp**
Address		**No. 789, Yujinxiang Road, Comprehensive Free Trade Zone, Kunshan, Jiangsu Province 215300, China**
Standard	:	**47 CFR FCC Part 15.407**
Received Date	:	**Jul. 14, 2013**
Tested Date	:	**Jul. 15 ~ Aug. 09, 2013**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Approved & Reviewed by:

Gary Chang / Manager

Testing Laboratory
2732

Table of Contents

Release Record

Report No.	Version	Description	Issued Date
FR371401AN	Rev. 01	Initial issue	Sep. 04, 2013

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.449MHz 39.07 (Margin -7.82dB) - AV	Pass
15.407(b) 15.209	Radiated Emissions	[dBuV/m at 3m]: 10640.00MHz 53.00 (Margin -1.00dB) - AV	Pass
15.407(a)	Emission Bandwidth	Meet the requirement of limit	Pass
15.407(a)	RF Output Power	Power [dBm]: 5150~5250 MHz : 16.62 5250~5350 MHz : 19.85 5470~5725 MHz : 18.82	Pass
15.407(a)	Peak Power Spectral Density	Meet the requirement of limit	Pass
15.407(a)	Peak Excursion	Meet the requirement of limit	Pass
15.407(g)	Frequency Stability	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
5150-5250 5250-5350 5470-5725	a	5180-5240 5260-5320 5500-5700	36-48 [4] 52-64 [4] 100-140 [8]	2	6-54 Mbps
5150-5250 5250-5350 5470-5725	n (HT20)	5180-5240 5260-5320 5500-5700	36-48 [4] 52-64 [4] 100-140 [8]	2	MCS 0-15
5150-5250 5250-5350 5470-5725	n (HT40)	5190-5230 5270-5310 5510-5670	38-46 [2] 54-62 [2] 102-134 [3]	2	MCS 0-15
Note 1: RF output power specifies that Maximum Conducted Output Power. Note 2: 802.11a/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.					

1.1.2 Antenna Details

Ant. No.	Type	Operating Frequency (MHz) / Gain (dBi)					Connector
		2400~2483.5	5150~5250	5250~5350	5470~5725	5725~5850	
1	Printed	3.34	3.72	2.89	3.64	2.81	---
2	Printed	3.41	2.54	3.52	3.07	2.6	---

1.1.3 EUT Operational Condition

Supply Voltage	☐ AC mains	☒ DC (5Vdc)	
Type of DC Source	☐ Internal DC supply	☐ External DC adapter	☒ From Host

1.1.4 Accessories

N/A

1.1.5 Channel List

Frequency band (MHz)		5150~5725	
802.11 a / n HT20		802.11n HT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	54	5270
48	5240	62	5310
52	5260	102	5510
56	5280	110	5550
60	5300	134	5670
64	5320	---	---
100	5500	---	---
104	5520	---	---
108	5540	---	---
112	5560	---	---
116	5580	---	---
132	5660	---	---
136	5680	---	---
140	5700	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	Ralink UI ,V3.3.3.29
Duty Cycle Of Test Signal (%)	88.24% - IEEE 802.11a 87.50% - IEEE 802.11n (HT20) 77.95% - IEEE 802.11n (HT40)
Duty Factor	0.54 - IEEE 802.11a 0.58 - IEEE 802.11n (HT20) 1.08 - IEEE 802.11n (HT40)

1.1.7 Power Setting

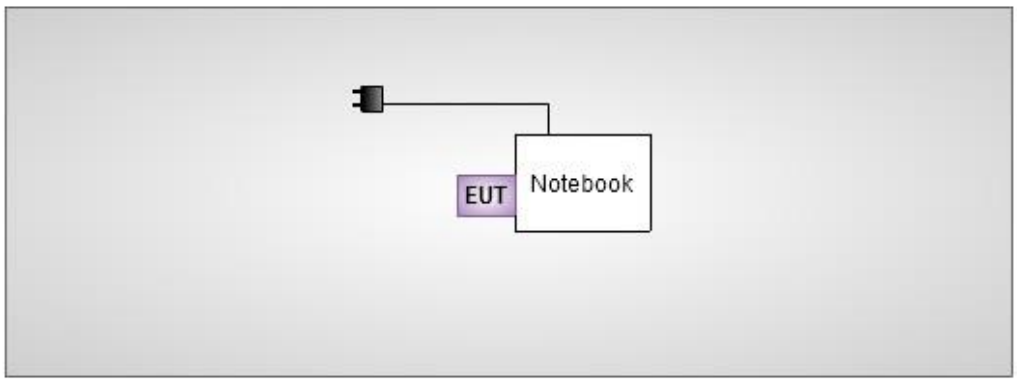
Channel	Frequency(MHz)	Modulation Mode		
		11a	HT20	HT40
CH 36	5180	14/14	15/14	---
CH 40	5200	15/14	16/15	---
CH 48	5240	17/15	17/16	---
CH 52	5260	22/22	21/20	---
CH 60	5300	22/22	21/21	---
CH 64	5320	20/20	21/20	---
CH 100	5500	15/16	15/16	---
CH 116	5580	19/20	19/21	---
CH 140	5700	19/18	18/18	---
CH 38	5190	---	---	15/14
CH 46	5230	---	---	18/18
CH 54	5270	---	---	23/22
CH 62	5310	---	---	18/18
CH 102	5510	---	---	8/10
CH 110	5550	---	---	19/20
CH 134	5670	---	---	25/26

1.2 Local Support Equipment List

Support Equipment List						
No.	**Equipment**	**Brand**	**Model**	**S/N**	**FCC ID**	**Signal cable / Length (m)**
1	Notebook	DELL	E6430	---	DoC	---

1.3 Test Setup Chart

Test Setup Diagram



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
EMC Receiver	R&S	ESCS 30	100169	Oct. 02, 2012	Oct. 01, 2013
LISN	SCHWARZBECK MESS-ELEKTRONIK	Schwarzbeck 8127	8127-667	Dec. 04, 2012	Dec. 03, 2013
LISN (Support Unit)	SCHWARZBECK MESS-ELEKTRONIK	Schwarzbeck 8127	8127-666	Dec. 04, 2012	Dec. 03, 2013
ISN	TESEQ	ISN T800	34406	Apr. 08, 2013	Apr. 07, 2014
ISN	TESEQ	ISN T200A	30494	Apr. 09, 2013	Apr. 08, 2014
ISN	TESEQ	ISN T8-Cat6	27262	Sep. 17, 2012	Sep. 16, 2013
ISN	TESEQ	ISN ST08	22589	Jan. 24, 2013	Jan. 23, 2014
RF Current Probe	FCC	F-33-4	121630	Dec. 04, 2012	Dec. 03, 2013
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Dec. 25, 2012	Dec. 24, 2013
ESH3-Z6 V-Network(+)	R&S	ESH3-Z6	100920	Nov. 21, 2012	Nov. 20, 2013
ESH3-Z6 V-Network(-)	R&S	ESH3-Z6	100951	Jan. 30, 2013	Jan. 29, 2014
Two-Line V-Network	R&S	ENV216	101579	Jan. 07, 2013	Jan. 06, 2014
50 ohm terminal	NA	50	01	Apr. 22, 2013	Apr. 21, 2014
50 ohm terminal	NA	50	02	Apr. 22, 2013	Apr. 21, 2014
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV 40	101063	Feb. 18, 2013	Feb. 17, 2014
TEMP&HUMIDITY CHAMBER	GIANT FORCE	GCT-225-40-SP-SD	MAF1212-002	Nov. 29, 2012	Nov. 28, 2013
Power Meter	Anritsu	ML2495A	1241002	Oct. 15, 2012	Oct. 14, 2013
Power Sensor	Anritsu	MA2411B	1027366	Oct. 24, 2012	Oct. 23, 2013
Signal Generator	R&S	SMB100A	175727	Jan. 14, 2013	Jan. 13, 2014
Radio Communication Analyzer	Anritsu	MT8820C	6201240341	Mar. 13, 2013	Mar. 12, 2014
Wideband Radio Communication Tester	R&S	CMW500	106070	Jan. 29, 2013	Jan. 28, 2014
Bluetooth Tester	R&S	CBT	100959	Jan. 09, 2013	Jan. 08, 2014
MXG-B RF Vector Signal Generator	Agilent	N5182B	MY53050081	Apr. 19, 2013	Apr. 18, 2014
Mobile WiMAX test set	Agilent	E6651A	MY47310158	Oct. 09 ,2012	Oct .09 , 2013
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission above 1GHz				
Test Site	966 chamber1 / (03CH01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
3m semi-anechoic chamber	CHAMPRO	SAC-03	03CH01-WS	Jan. 04, 2013	Jan. 03, 2014
Spectrum Analyzer	R&S	FSV40	101498	Jan. 24, 2013	Jan. 23, 2014
Receiver	ROHDE&SCHWARZ	ESR3	101658	Jan. 28, 2013	Jan. 27, 2014
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jan. 11, 2013	Jan. 10, 2014
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Feb. 18, 2013	Feb. 17, 2014
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Jan. 14, 2013	Jan. 13, 2014
Amplifier	Burgeon	BPA-530	100219	Nov. 28, 2012	Nov. 27, 2013
Amplifier	Agilent	83017A	MY39501308	Dec. 18, 2012	Dec. 17, 2013
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 25, 2012	Dec. 24, 2013
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 25, 2012	Dec. 24, 2013
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 25, 2012	Dec. 24, 2013
RF Cable-R03m	Woken	CFD400NL-LW	CFD400NL-001	Dec. 25, 2012	Dec. 24, 2013
RF Cable-R10m	Woken	CFD400NL-LW	CFD400NL-002	Dec. 25, 2012	Dec. 24, 2013
control	EM Electronics	EM1000	60612	N/A	N/A
Note: Calibration Interval of instruments listed above is one year.					

Loop Antenna	R&S	HFH2-Z2	100330	Nov. 15, 2012	Nov. 14, 2014
Amplifier	MITEQ	AMF-6F-260400	9121372	Apr. 19, 2013	Apr. 18, 2015
Note: Calibration Interval of instruments listed above is two year.					

1.5 Testing Applied Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.407
ANSI C63.10-2009
FCC KDB 789033 D01 General UNII Test procedures v01r03

Note: The EUT has been tested and complied with FCC part 15B requirement. FCC Part 15B test results are issued to another report.

1.6 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)

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±74.147 Hz
Conducted power	±0.717 dB
Power density	±2.687 dB
Frequency error	±74.147 Hz
Temperature	±0.3 ^{o}C
AC conducted emission	±2.43 dB
Radiated emission	±2.49 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	22°C / 66%	Skys Huang
Radiated Emissions	03CH01-WS	24°C / 63%	Aska Huang Haru Yang Mark Liao
RF Conducted	TH01-WS	23°C / 64%	Felix Sung

- FCC site registration No.: 657002
- IC site registration No.: 10807A-1

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data rate (Mbps) / MCS	Test Configuration
Conducted Emissions	11a	5260	6	---
Radiated Emissions (below 1GHz)	11a	5260	6	---
Radiated Emissions >1GHz	11a	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	6	---
RF Output Power Emission Bandwidth Peak Power Spectral Density	HT20	5180 / 5200 / 5240 / 5260 / 5300 5320 / 5500 / 5580 / 5700	MCS 0	---
	HT40	5190 / 5230/ 5270 / 5310 / 5510 5550 / 5670	MCS 0	---
Peak Excursion	11a	5240 / 5260 / 5700	6	---
	HT20	5200 / 5300 / 5700	MCS 0	---
	HT40	5230 / 5270 / 5670	MCS 0	---
Frequency Stability	Un-modulation	5320	---	---

3 Transmitter Test Results

3.1 Conducted Emissions

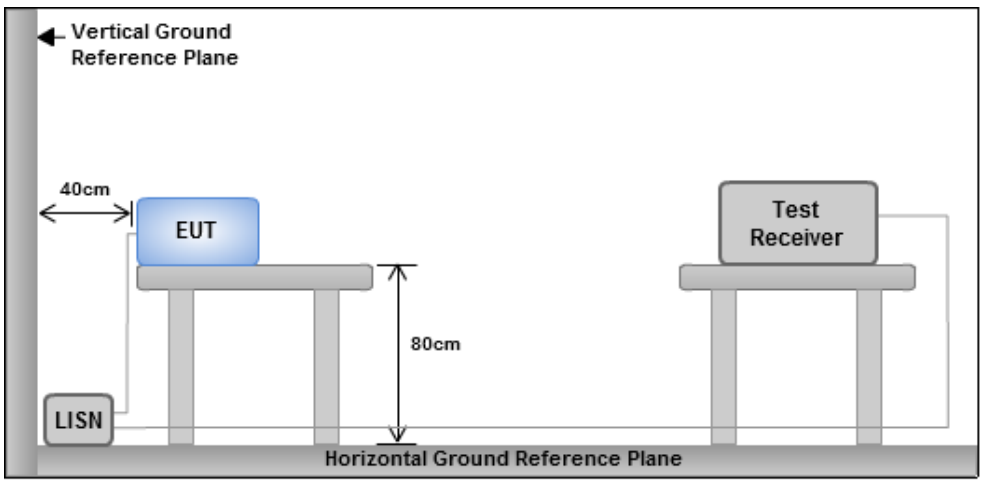
3.1.1 Limit of Conducted Emissions

Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

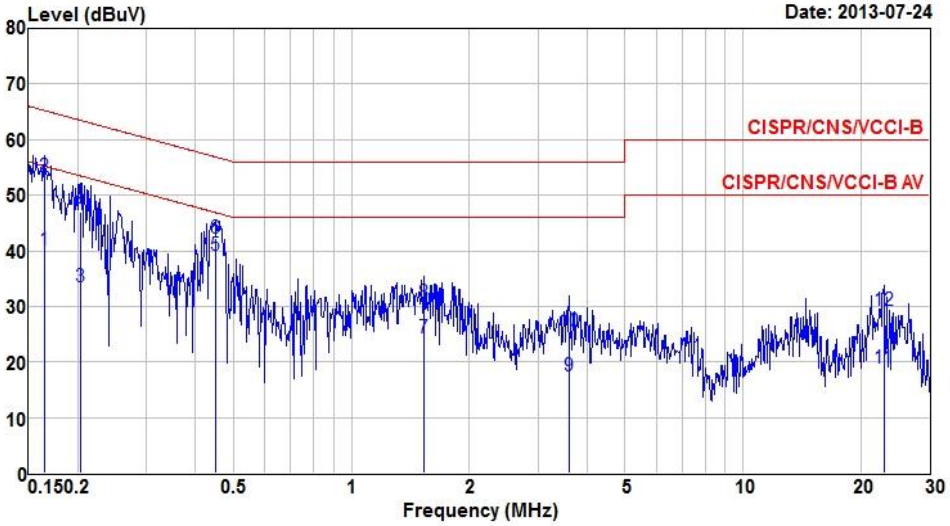
3.1.3 Test Setup



Note: 1. Support units were connected to second LISN.
2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

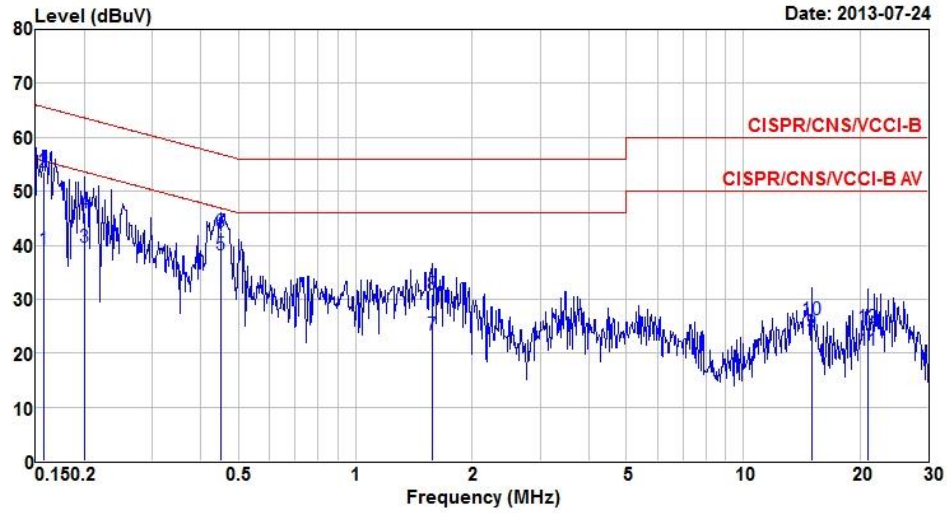
Modulation Mode	11a	Test Freq. (MHz)	5260
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.164	40.08	55.25	-15.17	39.95	0.03	0.10	Average
2	0.164	53.38	65.25	-11.87	53.25	0.03	0.10	QP
3	0.204	33.61	53.45	-19.84	33.40	0.03	0.18	Average
4	0.204	46.94	63.45	-16.51	46.73	0.03	0.18	QP
5	0.449	39.07	46.89	-7.82	38.99	0.03	0.05	Average
6	0.449	42.32	56.89	-14.57	42.24	0.03	0.05	QP
7	1.535	24.25	46.00	-21.75	24.10	0.04	0.11	Average
8	1.535	30.59	56.00	-25.41	30.44	0.04	0.11	QP
9	3.603	17.36	46.00	-28.64	17.07	0.06	0.23	Average
10	3.603	25.60	56.00	-30.40	25.31	0.06	0.23	QP
11	22.896	18.79	50.00	-31.21	18.27	0.14	0.38	Average
12	22.896	29.19	60.00	-30.81	28.67	0.14	0.38	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
2: Over Limit (dBuV) = Limit Line (dBuV) – Level (dBuV).

Modulation Mode	11a	Test Freq. (MHz)	5260
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.157	39.15	55.60	-16.45	39.05	0.02	0.08	Average
2	0.157	53.61	65.60	-11.99	53.51	0.02	0.08	QP
3	0.200	39.60	53.62	-14.02	39.40	0.02	0.18	Average
4	0.200	46.08	63.62	-17.54	45.88	0.02	0.18	QP
5	0.449	38.24	46.89	-8.65	38.17	0.02	0.05	Average
6	0.449	42.43	56.89	-14.46	42.36	0.02	0.05	QP
7	1.577	23.38	46.00	-22.62	23.23	0.03	0.12	Average
8	1.577	30.88	56.00	-25.12	30.73	0.03	0.12	QP
9	14.986	23.73	50.00	-26.27	23.49	0.11	0.13	Average
10	14.986	26.23	60.00	-33.77	25.99	0.11	0.13	QP
11	21.035	20.63	50.00	-29.37	20.24	0.13	0.26	Average
12	21.035	24.72	60.00	-35.28	24.33	0.13	0.26	QP

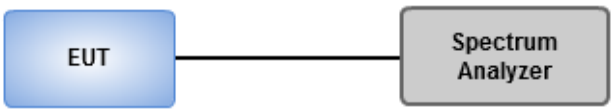
Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
2: Over Limit (dBuV) = Limit Line (dBuV) – Level (dBuV).

3.2 Emission Bandwidth

3.2.1 Test Procedures

1. Set RBW = approximately 1% of the emission bandwidth.
2. Set the VBW > RBW, Detector = Peak.
3. Trace mode = max hold.
4. Measure the maximum width of the emission that is 26 dB down from the peak of the emission.

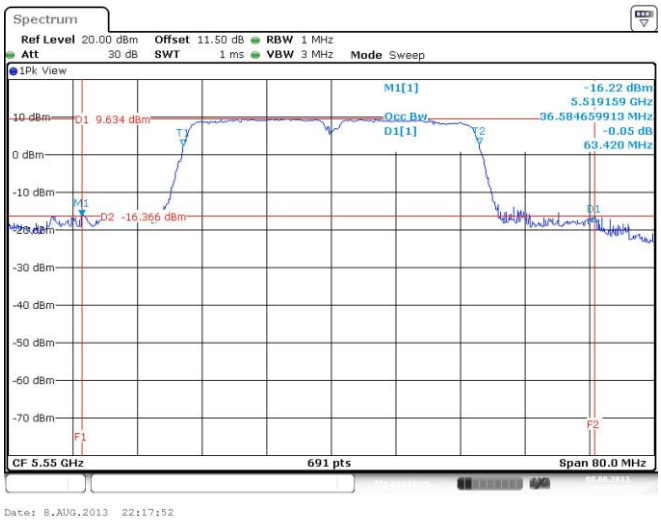
3.2.2 Test Setup



3.2.3 Test Result of Emission Bandwidth

Modulation Mode	N_{TX}	Freq. (MHz)	26dB Bandwidth (MHz)				99% Bandwidth (MHz)				Limit (dBm)	
			Chain 0	Chain 1	Chain 2	Chain 3	Chain 0	Chain 1	Chain 2	Chain 3	26dB BW	99% BW
11a	2	5180	21.45	22.38	---	---	16.61	16.73	---	---	17.00	16.20
11a	2	5200	22.26	22.49	---	---	16.73	16.67	---	---	17.00	16.22
11a	2	5240	24.52	22.49	---	---	16.73	16.73	---	---	17.00	16.23
11a	2	5260	27.94	29.51	---	---	16.85	16.90	---	---	24.00	23.27
11a	2	5300	27.07	29.45	---	---	16.79	16.90	---	---	24.00	23.25
11a	2	5320	24.93	27.01	---	---	16.73	16.79	---	---	24.00	23.23
11a	2	5500	22.43	22.43	---	---	16.73	16.67	---	---	24.00	23.22
11a	2	5580	25.39	25.86	---	---	16.73	16.73	---	---	24.00	23.23
11a	2	5700	26.96	25.10	---	---	16.79	16.79	---	---	24.00	23.25
HT20	2	5180	20.52	20.12	---	---	17.48	17.48	---	---	17.00	16.43
HT20	2	5200	22.43	20.70	---	---	17.48	17.48	---	---	17.00	16.43
HT20	2	5240	21.22	24.35	---	---	17.60	17.60	---	---	17.00	16.46
HT20	2	5260	26.61	31.19	---	---	17.71	17.77	---	---	24.00	23.48
HT20	2	5300	26.96	30.03	---	---	17.66	17.77	---	---	24.00	23.47
HT20	2	5320	26.26	28.93	---	---	17.54	17.71	---	---	24.00	23.44
HT20	2	5500	20.99	28.23	---	---	17.54	17.60	---	---	24.00	23.44
HT20	2	5580	24.52	27.78	---	---	17.60	17.66	---	---	24.00	23.46
HT20	2	5700	26.67	25.51	---	---	17.66	17.60	---	---	24.00	23.46
HT40	2	5190	41.16	41.51	---	---	36.35	36.35	---	---	17.00	17.00
HT40	2	5230	41.28	44.99	---	---	36.35	36.35	---	---	17.00	17.00
HT40	2	5270	62.73	47.07	---	---	36.47	36.47	---	---	24.00	24.00
HT40	2	5310	43.36	46.03	---	---	36.24	36.35	---	---	24.00	24.00
HT40	2	5510	41.74	41.97	---	---	36.35	36.35	---	---	24.00	24.00
HT40	2	5550	63.42	59.01	---	---	36.58	36.58	---	---	24.00	24.00
HT40	2	5670	42.55	57.62	---	---	36.47	36.47	---	---	24.00	24.00

Worst Plots


Spectrum
Ref Level 20.00 dBm Offset 11.50 dB RBW 1 MHz
Att 30 dB SWT 1 ms VBW 3 MHz Mode Sweep
1Pk View
M1[1] -16.22 dBm
5.519159 GHz
Occ Bw 36.584659913 MHz
D1[1] -0.05 dB
63.420 MHz
D1 9.634 dBm
D2 -16.366 dBm
10 dBm
0 dBm
-10 dBm
-20 dBm
-30 dBm
-40 dBm
-50 dBm
-60 dBm
-70 dBm
CF 5.55 GHz
691 pts
Span 80.0 MHz
Date: 8.AUG.2013 22:17:52

3.3 RF Output Power

3.3.1 Limit of RF Output Power

	Frequency Band (GHz)	Limit
☒	5.15~5.25	50mW or 4dBm+10 log B
☒	5.25~5.35	250mW or 11dBm+10 log B
☒	5.47~5.725	250mW or 11dBm+10 log B
Note: “B” is the 26dB emission bandwidth in MHz.		

3.3.2 Test Procedures

☒ **Method PM-G (Measurement using a gated RF average power meter)**

☒ Measurements may is 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. Since the measurement is made only during the ON time of the transmitter, no duty cycle correction factor is required.

3.3.3 Test Setup

3.3.4 Test Result of Maximum Conducted Output Power

Modulation Mode	N_{TX}	Freq. (MHz)	Average Power (dBm)				Total Power (mW)	Total Power (dBm)	Limit (dBm)
			Chain 0	Chain 1	Chain 2	Chain 3			
11a	2	5180	13.34	13.16	---	---	42.279	16.26	17.00
11a	2	5200	13.23	13.08	---	---	41.361	16.17	17.00
11a	2	5240	13.49	13.35	---	---	43.963	16.43	17.00
11a	2	5260	16.66	17.02	---	---	96.695	19.85	24.00
11a	2	5300	16.48	16.59	---	---	90.067	19.55	24.00
11a	2	5320	15.53	15.64	---	---	72.371	18.60	24.00
11a	2	5500	14.51	14.65	---	---	57.423	17.59	24.00
11a	2	5580	15.36	15.32	---	---	68.397	18.35	24.00
11a	2	5700	15.85	15.76	---	---	76.130	18.82	24.00
HT20	2	5180	13.46	13.31	---	---	43.611	16.40	17.00
HT20	2	5200	13.51	13.14	---	---	43.045	16.34	17.00
HT20	2	5240	13.45	13.36	---	---	43.808	16.42	17.00
HT20	2	5260	16.45	16.46	---	---	88.416	19.47	24.00
HT20	2	5300	15.96	16.62	---	---	85.366	19.31	24.00
HT20	2	5320	15.36	15.53	---	---	70.083	18.46	24.00
HT20	2	5500	14.48	14.59	---	---	56.828	17.55	24.00
HT20	2	5580	15.31	15.24	---	---	67.382	18.29	24.00
HT20	2	5700	15.77	15.60	---	---	74.065	18.70	24.00
HT40	2	5190	12.29	12.88	---	---	36.352	15.61	17.00
HT40	2	5230	13.35	13.86	---	---	45.949	16.62	17.00
HT40	2	5270	16.71	16.94	---	---	96.312	19.84	24.00
HT40	2	5310	13.43	13.79	---	---	45.962	16.62	24.00
HT40	2	5510	9.89	10.53	---	---	21.048	13.23	24.00
HT40	2	5550	15.20	15.15	---	---	65.847	18.19	24.00
HT40	2	5670	15.61	15.48	---	---	71.710	18.56	24.00

3.4 Peak Power Spectral Density

3.4.1 Limit of Peak Power Spectral Density

	Frequency Band (GHz)	Limit (dBm)
☒	5.15~5.25	4
☒	5.25~5.35	11
☒	5.47~5.725	11

3.4.2 Test Procedures

☐ Method SA-1

1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average 100 traces.
3. Use the peak marker function to determine the maximum amplitude level.

☐ Method SA-2

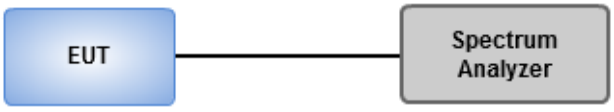
1. Set RBW = 1 MHz, VBW = 3 MHz, Sweep time = auto, Detector = RMS.
2. Trace average at 100 traces
3. Use the peak marker function to determine the maximum amplitude level.
4. Add 10 log(1/x), where x is the duty cycle

☒ Method SA-2 Alternative

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = RMS.
2. Set sweep time ≥ 10 * (number of points in sweep) * (total on/off period of the transmitted signal).
3. Perform a single sweep.
4. Use the peak marker function to determine the maximum amplitude level.
5. Add 10 log(1/x), where x is the duty cycle.

Note: 11a and HT20 uses Method SA-1, HT40 uses Method SA-2 Alternative.

3.4.3 Test Setup

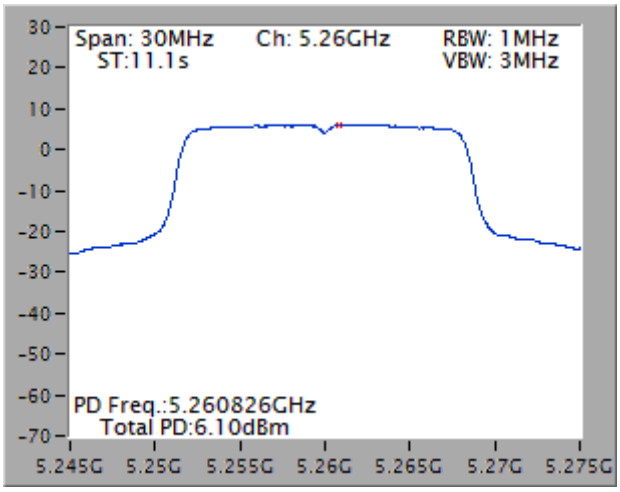


3.4.4 Test Result of Peak Power Spectral Density

Modulation Mode	N_{TX}	Freq. (MHz)	PSD (dBm)	Duty Factor	Total PSD (dBm)	Limit (dBm)
11a	2	5180	2.87	0.54	3.41	3.84
11a	2	5200	2.73	0.54	3.27	3.84
11a	2	5240	3.20	0.54	3.74	3.84
11a	2	5260	6.10	0.54	6.64	10.78
11a	2	5300	5.84	0.54	6.38	10.78
11a	2	5320	4.52	0.54	5.06	10.78
11a	2	5500	4.05	0.54	4.59	10.63
11a	2	5580	4.84	0.54	5.38	10.63
11a	2	5700	5.99	0.54	6.53	10.63
HT20	2	5180	2.97	0.58	3.55	3.84
HT20	2	5200	2.98	0.58	3.56	3.84
HT20	2	5240	2.97	0.58	3.55	3.84
HT20	2	5260	5.70	0.58	6.28	10.78
HT20	2	5300	5.31	0.58	5.89	10.78
HT20	2	5320	4.79	0.58	5.37	10.78
HT20	2	5500	3.88	0.58	4.46	10.63
HT20	2	5580	5.07	0.58	5.65	10.63
HT20	2	5700	6.00	0.58	6.58	10.63
HT40	2	5190	-1.62	1.08	-0.54	3.84
HT40	2	5230	-0.90	1.08	0.18	3.84
HT40	2	5270	3.35	1.08	4.43	10.78
HT40	2	5310	-0.65	1.08	0.43	10.78
HT40	2	5510	-3.86	1.08	-2.78	10.63
HT40	2	5550	1.44	1.08	2.52	10.63
HT40	2	5670	0.39	1.08	1.47	10.63

Note:
1. Test result is bin-by-bin summing measured value of each TX port
2. For 5150~5250 MHz band , Directional gain = $10 * \log((10^{3.72/20}+10^{2.54/20})^2/2)$ = 6.16 dBi > 6dBi
   Limit shall be reduced to 4 dBm – (6.16 dBi - 6 dBi) = 3.84 dBm
3. For 5250~5350 MHz band , Directional gain = $10 * \log((10^{2.89/20}+10^{3.52/20})^2/2)$ = 6.22 dBi > 6dBi
   Limit shall be reduced to 11 dBm – (6.22 dBi - 6 dBi) = 10.78 dBm
4. For 5470~5725 MHz band , Directional gain = $10 * \log((10^{3.64/20}+10^{3.07/20})^2/2)$ = 6.37 dBi > 6dBi
   Limit shall be reduced to 11 dBm – (6.37 dBi – 6 dBi) = 10.63 dBm

Worst Plots


Span: 30MHz
ST:11.1s
Ch: 5.26GHz
RBW: 1MHz
VBW: 3MHz
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
PD Freq.:5.260826GHz
Total PD:6.10dBm
5.245G
5.25G
5.255G
5.26G
5.265G
5.27G
5.275G

3.5 Peak Excursion

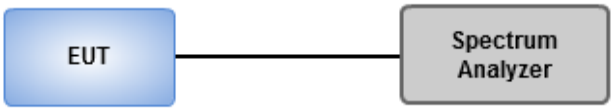
3.5.1 Peak Excursion Limit

Peak excursion of the modulation envelope shall not exceed 13 dB across any 1 MHz bandwidth.

3.5.2 Test Procedures

1. Set RBW = 1 MHz, VBW = 3 MHz, Detector = peak.
2. Trace mode = max-hold. Allow the sweeps to continue until the trace stabilizes.
3. Use the peak search function to find the peak of the spectrum.
4. Use the procedure of section 3.4.2 to measure the PPSD.
5. Compute the ratio of the maximum of the peak-max-hold spectrum to the PPSD

3.5.3 Test Setup



3.5.4 Test Result of Peak Excursion

Mode	Modulation Mode	N_{TX}	Freq. (MHz)	Measured value(dB)	Duty factor (dB)	Peak Excursion (dB)	Limit
11a	BPSK	2	5240	9.36	0.54	8.82	13
11a	QPSK	2	5240	9.63	0.98	8.65	13
11a	16QAM	2	5240	10.93	1.86	9.07	13
11a	64QAM	2	5240	11.94	3.03	8.91	13
HT20	BPSK	2	5200	8.47	0.58	7.89	13
HT20	QPSK	2	5200	9.62	1.07	8.55	13
HT20	16QAM	2	5200	10.56	1.88	8.68	13
HT20	64QAM	2	5200	12.02	2.94	9.08	13
HT40	BPSK	2	5230	9.24	1.08	8.16	13
HT40	QPSK	2	5230	10.41	1.92	8.49	13
HT40	16QAM	2	5230	11.32	2.99	8.33	13
HT40	64QAM	2	5230	13.77	4.25	9.52	13

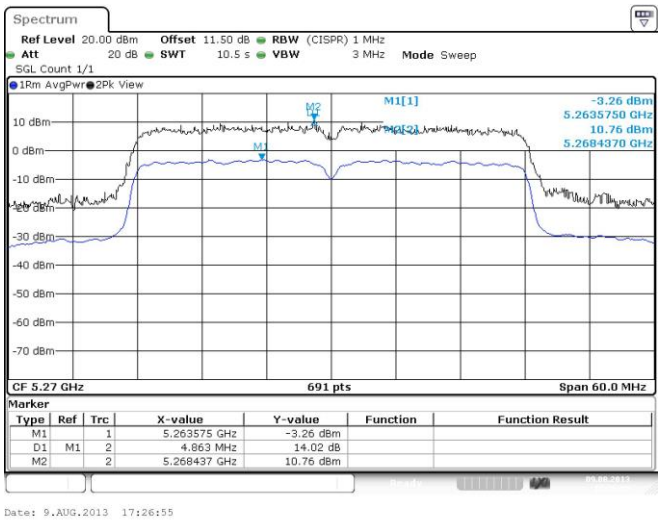
Mode	Modulation Mode	N_{TX}	Freq. (MHz)	Measured value(dB)	Duty factor (dB)	Peak Excursion (dB)	Limit
11a	BPSK	2	5260	9.16	0.54	8.62	13
11a	QPSK	2	5260	9.14	0.98	8.16	13
11a	16QAM	2	5260	10.42	1.86	8.56	13
11a	64QAM	2	5260	11.83	3.03	8.80	13
HT20	BPSK	2	5300	9.08	0.58	8.50	13
HT20	QPSK	2	5300	10.06	1.07	8.99	13
HT20	16QAM	2	5300	10.3	1.88	8.42	13
HT20	64QAM	2	5300	11.47	2.94	8.53	13
HT40	BPSK	2	5270	8.75	1.08	7.67	13
HT40	QPSK	2	5270	10.32	1.92	8.40	13
HT40	16QAM	2	5270	12.02	2.99	9.03	13
HT40	64QAM	2	5270	14.02	4.25	9.77	13

Note: Measured value = Peak-max-hold spectrum to the maximum of the average spectrum for continuous transmission. Since the duty cycle is < 98 %, duty factor is required to average spectrum
Peak exclusion = Measured value – duty factor

Mode	Modulation Mode	N_{TX}	Freq. (MHz)	Measured value(dB)	Duty factor (dB)	Peak Excursion (dB)	Limit
11a	BPSK	2	5700	9.5	0.54	8.96	13
11a	QPSK	2	5700	9.5	0.98	8.52	13
11a	16QAM	2	5700	10.05	1.86	8.19	13
11a	64QAM	2	5700	11.72	3.03	8.69	13
HT20	BPSK	2	5700	8.32	0.58	7.74	13
HT20	QPSK	2	5700	10.09	1.07	9.02	13
HT20	16QAM	2	5700	10.92	1.88	9.04	13
HT20	64QAM	2	5700	12.61	2.94	9.67	13
HT40	BPSK	2	5670	9.17	1.08	8.09	13
HT40	QPSK	2	5670	10.57	1.92	8.65	13
HT40	16QAM	2	5670	11.4	2.99	8.41	13
HT40	64QAM	2	5670	13.19	4.25	8.94	13

Note: Measured value = Peak-max-hold spectrum to the maximum of the average spectrum for continuous transmission. Since the duty cycle is < 98 %, duty factor is required to average spectrum
Peak exclusion = Measured value – duty factor

Worst Plots



Note: Measured value

= Peak-max-hold spectrum to the maximum of the average spectrum for continuous transmission

= Mark 2 – Mark 1

3.6 Transmitter Radiated and Band Edge Emissions

3.6.1 Limit of Transmitter Radiated and Band Edge Emissions

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit
Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

Un-restricted band emissions above 1GHz Limit	
Operating Band	**Limit**
5.15 - 5.25 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.25 - 5.35 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.47 - 5.725 GHz	e.i.r.p. -27 dBm [68.2 dBuV/m@3m]
5.725 - 5.825 GHz	5.715 5.725 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] 5.825 5.835 GHz: e.i.r.p. -17 dBm [78.2 dBuV/m@3m] Other un-restricted band: e.i.r.p. -27 dBm [68.2 dBuV/m@3m]

Note 1: Measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

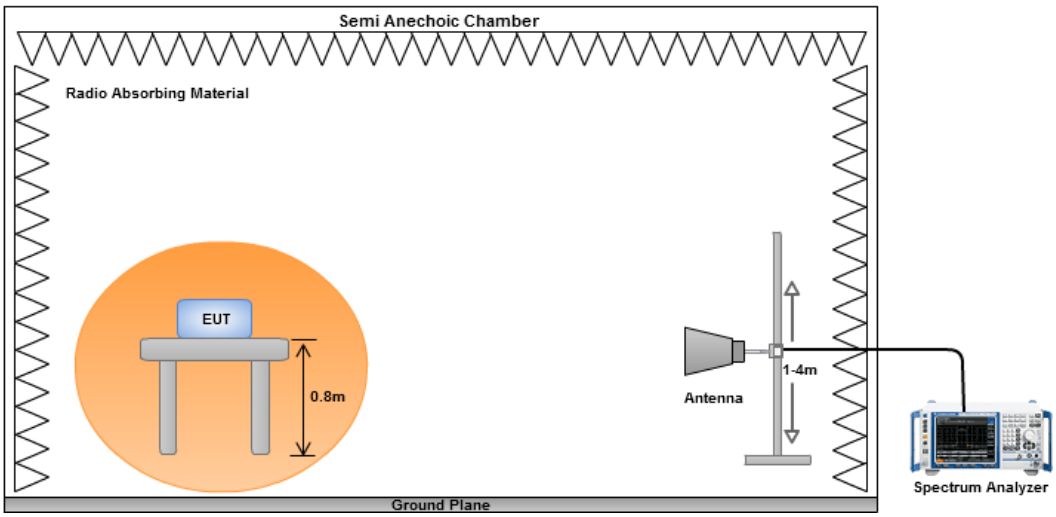
3.6.2 Test Procedures

1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at a height of 0.8 m test table above the ground plane.
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

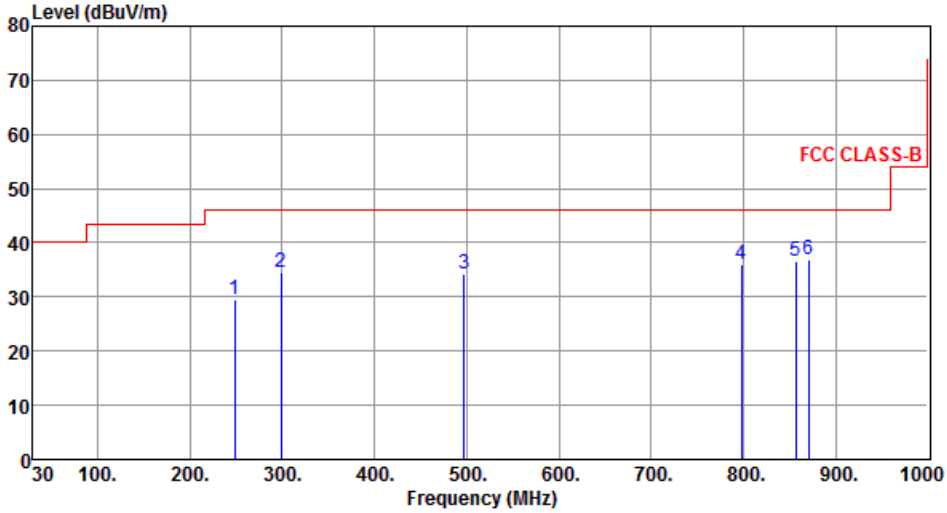
3.6.3 Test Setup



Note: Distance between EUT and antenna is 3 m

3.6.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

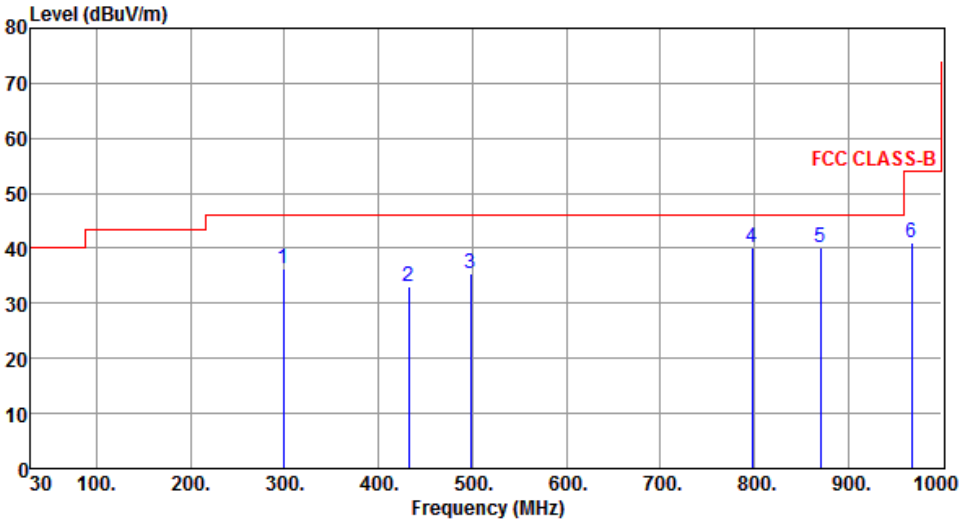
Modulation Mode	11a	Test Freq. (MHz)	5260
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	248.25	29.52	46.00	-16.48	47.44	-17.92	Peak	---	---
2	298.69	34.62	46.00	-11.38	50.88	-16.26	Peak	---	---
3	497.54	34.28	46.00	-11.72	45.99	-11.71	Peak	---	---
4	798.24	36.05	46.00	-9.95	42.82	-6.77	Peak	---	---
5	856.44	36.49	46.00	-9.51	42.54	-6.05	Peak	---	---
6	870.99	36.99	46.00	-9.01	42.86	-5.87	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation Mode	11a	Test Freq. (MHz)	5260
Polarization	Vertical		

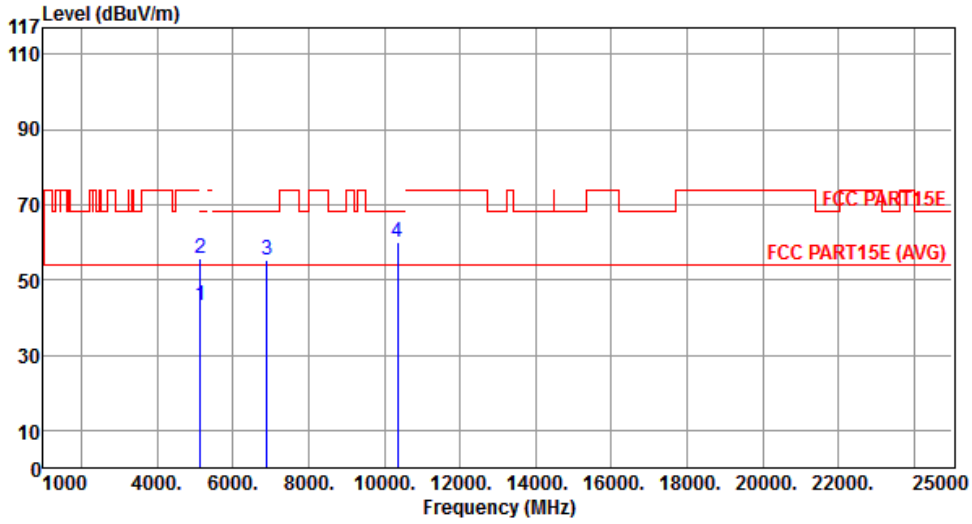


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	298.69	36.39	46.00	-9.61	52.65	-16.26	Peak	---	---
2	432.55	33.07	46.00	-12.93	45.93	-12.86	Peak	---	---
3	498.51	35.52	46.00	-10.48	47.22	-11.70	Peak	---	---
4	798.24	40.27	46.00	-5.73	47.04	-6.77	Peak	---	---
5	870.99	40.13	46.00	-5.87	46.00	-5.87	Peak	---	---
6	967.99	41.06	54.00	-12.94	45.76	-4.70	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.6.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11a

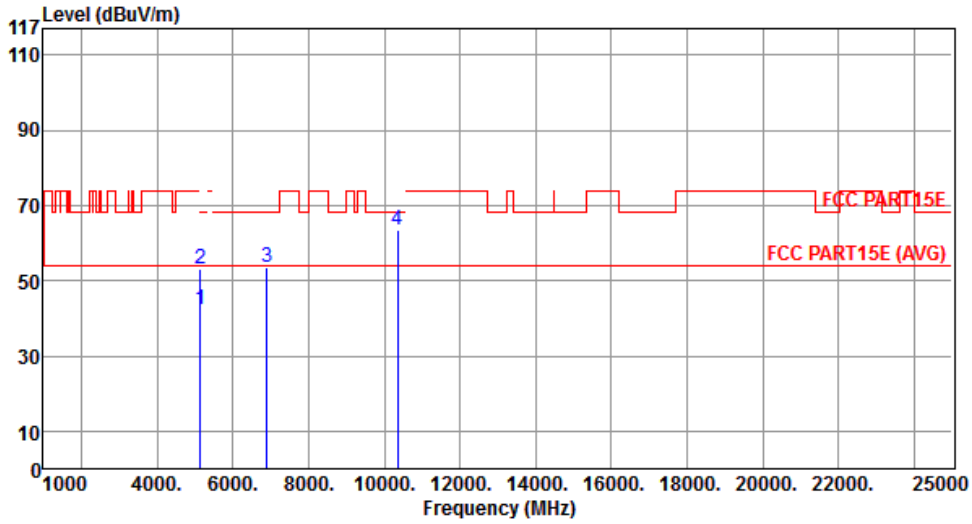
Polarization	Horizontal	Test Freq. (MHz)	5180



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.32	54.00	-10.68	38.38	4.94	Average	---	---
2	5150.00	55.80	74.00	-18.20	50.86	4.94	Peak	---	---
3	6906.66	55.13	68.30	-13.17	46.82	8.31	Peak	---	---
4	10360.00	59.87	68.30	-8.43	45.16	14.71	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

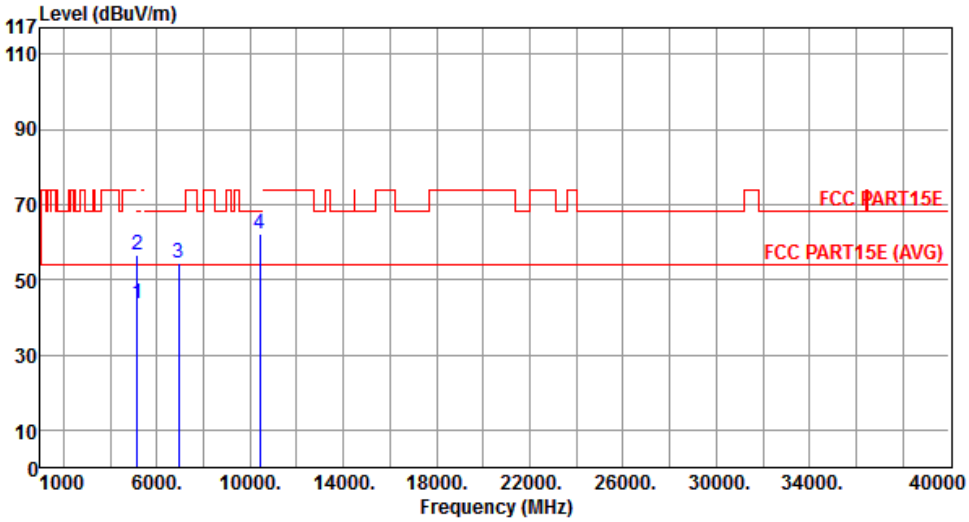
Polarization	Vertical	Test Freq. (MHz)	5180



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	42.43	54.00	-11.57	37.49	4.94	Average	---	---
2	5150.00	53.12	74.00	-20.88	48.18	4.94	Peak	---	---
3	6906.66	53.60	68.30	-14.70	45.29	8.31	Peak	---	---
4	10360.00	63.44	68.30	-4.86	48.73	14.71	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

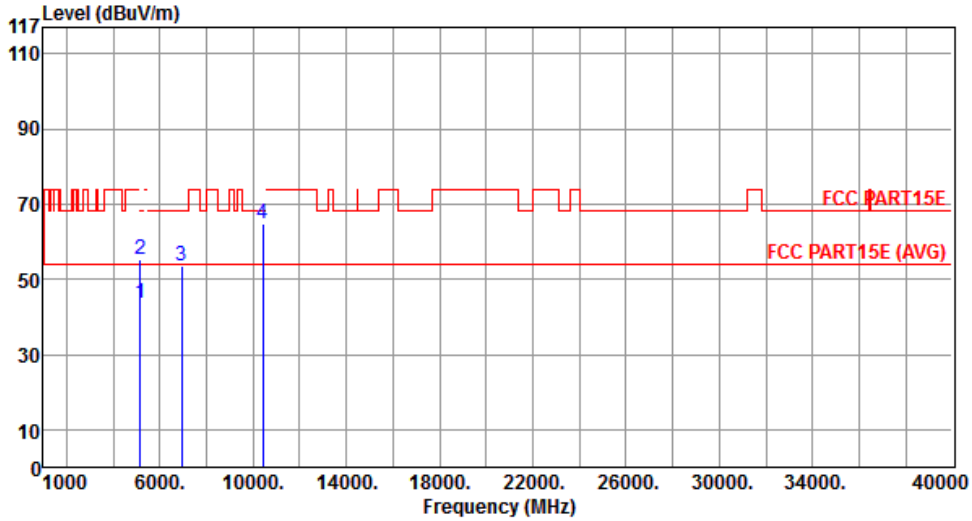
Polarization	Horizontal	Test Freq. (MHz)	5200



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.51	54.00	-10.49	38.57	4.94	Average	---	---
2	5150.00	56.43	74.00	-17.57	51.49	4.94	Peak	---	---
3	6933.33	54.60	68.30	-13.70	46.26	8.34	Peak	---	---
4	10400.00	62.03	68.30	-6.27	47.28	14.75	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

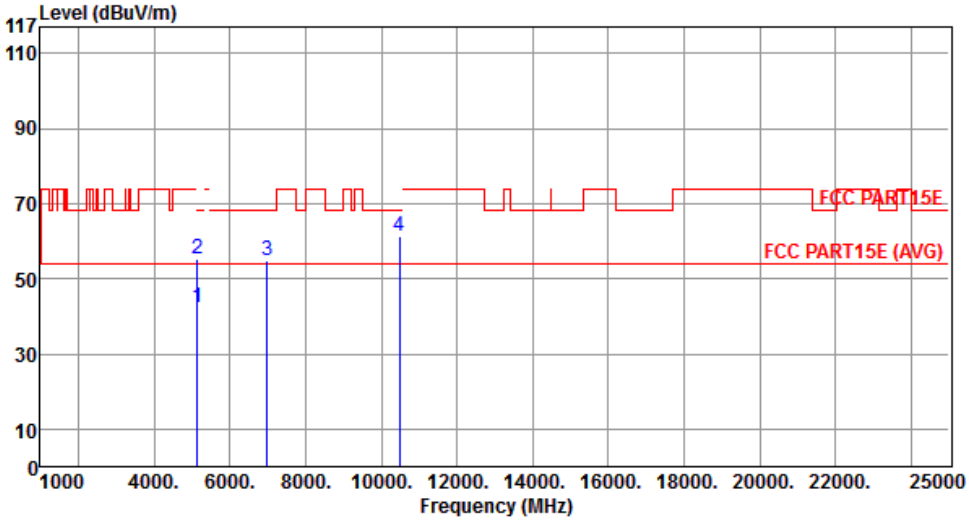
Polarization	Vertical	Test Freq. (MHz)	5200



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.49	54.00	-10.51	38.55	4.94	Average	---	---
2	5150.00	55.35	74.00	-18.65	50.41	4.94	Peak	---	---
3	6933.33	53.47	68.30	-14.83	45.13	8.34	Peak	---	---
4	10400.00	64.88	68.30	-3.42	50.13	14.75	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

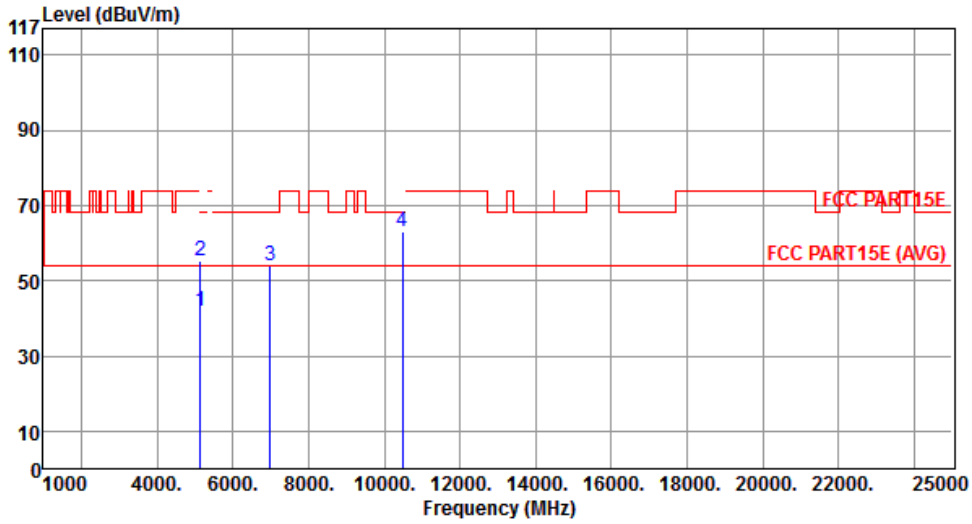
Polarization	Horizontal	Test Freq. (MHz)	5240



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	42.38	54.00	-11.62	37.44	4.94	Average	---	---
2	5150.00	55.17	74.00	-18.83	50.23	4.94	Peak	---	---
3	6986.66	54.96	68.30	-13.34	46.57	8.39	Peak	---	---
4	10480.00	61.42	68.30	-6.88	46.58	14.84	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

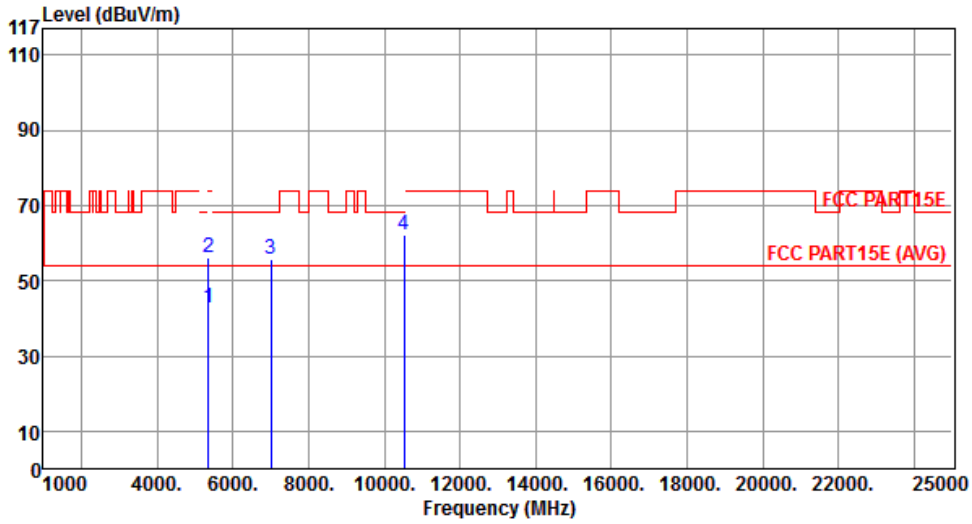
Polarization	Vertical	Test Freq. (MHz)	5240



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	41.71	54.00	-12.29	36.77	4.94	Average	---	---
2	5150.00	55.16	74.00	-18.84	50.22	4.94	Peak	---	---
3	6986.66	53.85	68.30	-14.45	45.46	8.39	Peak	---	---
4	10480.00	63.13	68.30	-5.17	48.29	14.84	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

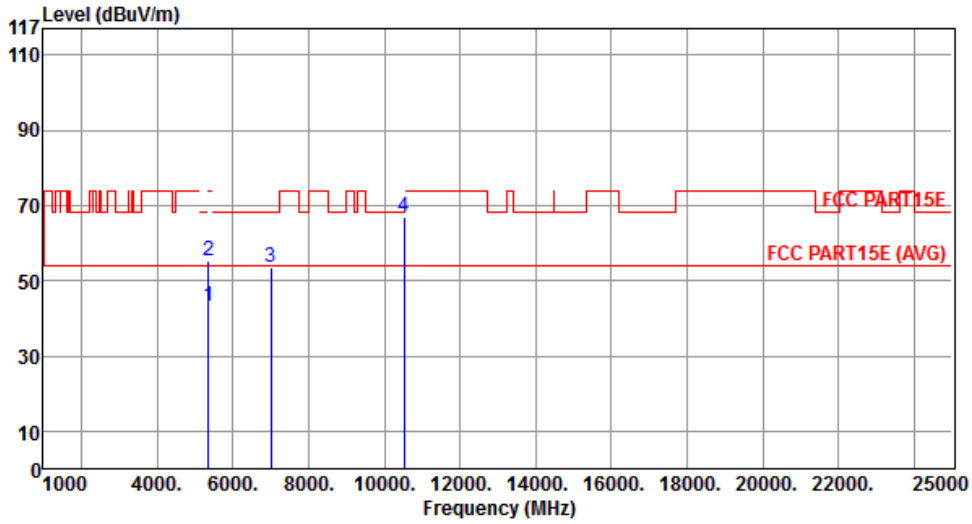
Polarization	Horizontal	Test Freq. (MHz)	5260



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	42.73	54.00	-11.27	37.64	5.09	Average	---	---
2	5350.00	56.25	74.00	-17.75	51.16	5.09	Peak	---	---
3	7013.33	55.64	68.30	-12.66	47.21	8.43	Peak	---	---
4	10520.00	62.13	68.30	-6.17	47.26	14.87	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

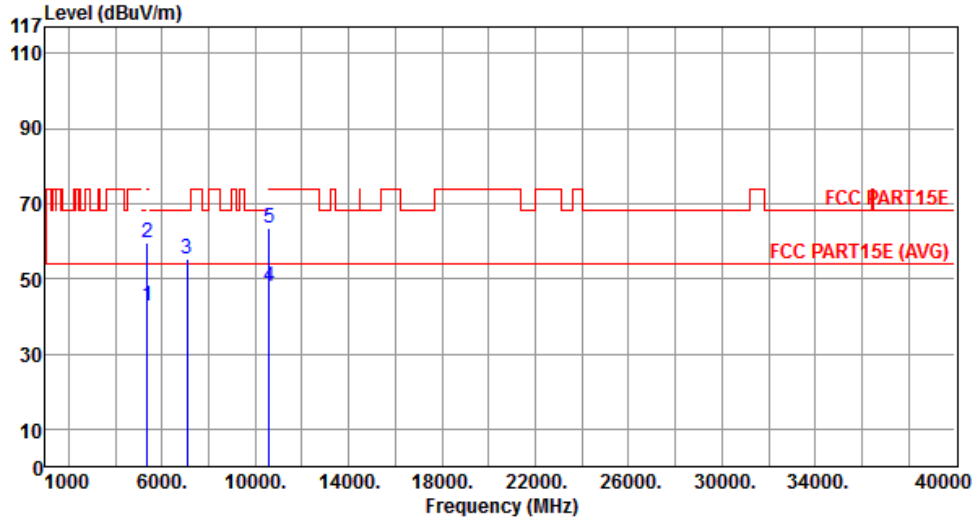
Polarization	Vertical	Test Freq. (MHz)	5260



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	43.02	54.00	-10.98	37.93	5.09	Average	---	---
2	5350.00	55.47	74.00	-18.53	50.38	5.09	Peak	---	---
3	7013.33	53.39	68.30	-14.91	44.96	8.43	Peak	---	---
4	10520.00	66.75	68.30	-1.55	51.88	14.87	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

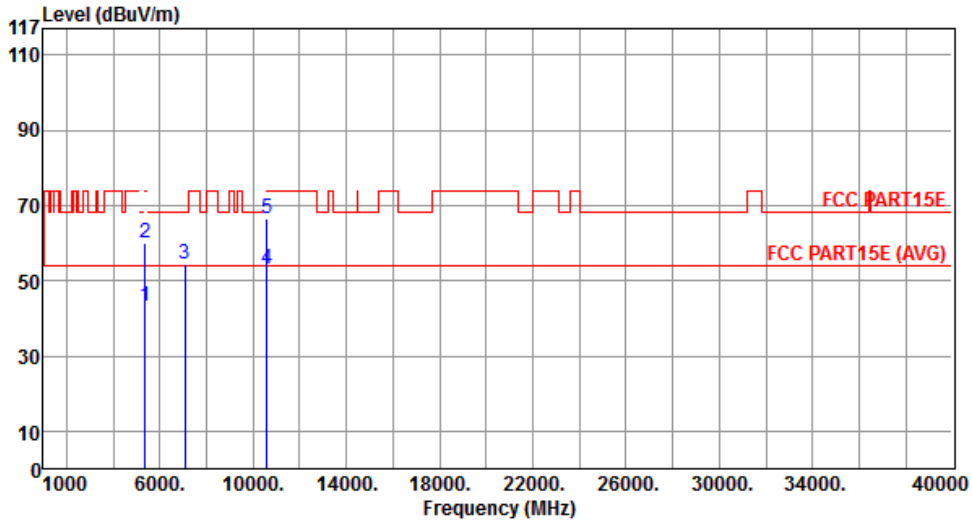
Polarization	Horizontal	**Test Freq. (MHz)**	5300



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	42.84	54.00	-11.16	37.75	5.09	Average	---	---
2	5350.00	59.54	74.00	-14.46	54.45	5.09	Peak	---	---
3	7066.66	55.47	68.30	-12.83	46.93	8.54	Peak	---	---
4	10600.00	47.91	54.00	-6.09	32.97	14.94	Average	---	---
5	10600.00	63.67	74.00	-10.33	48.73	14.94	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

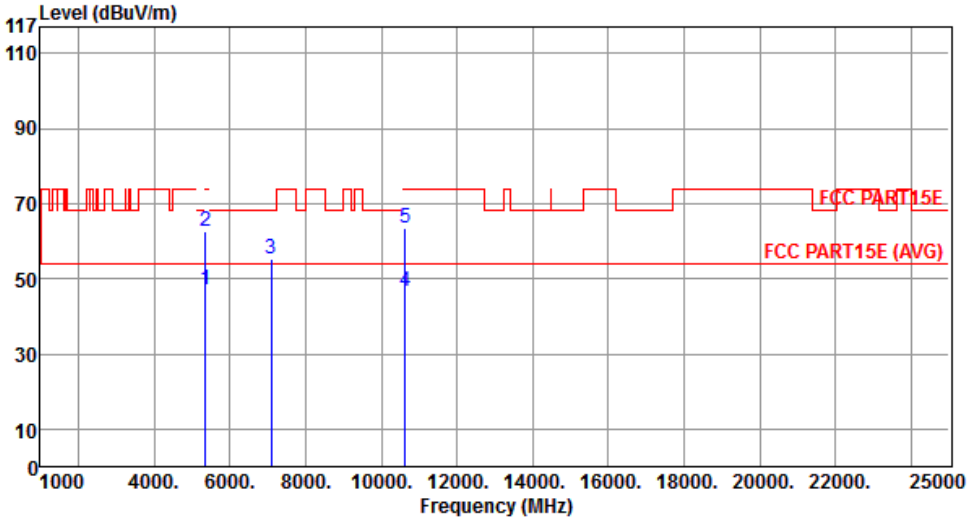
Polarization	Vertical	Test Freq. (MHz)	5300



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	43.23	54.00	-10.77	38.14	5.09	Average	---	---
2	5350.00	60.05	74.00	-13.95	54.96	5.09	Peak	---	---
3	7066.66	54.61	68.30	-13.69	46.07	8.54	Peak	---	---
4	10600.00	52.98	54.00	-1.02	38.04	14.94	Average	---	---
5	10600.00	66.54	74.00	-7.46	51.60	14.94	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

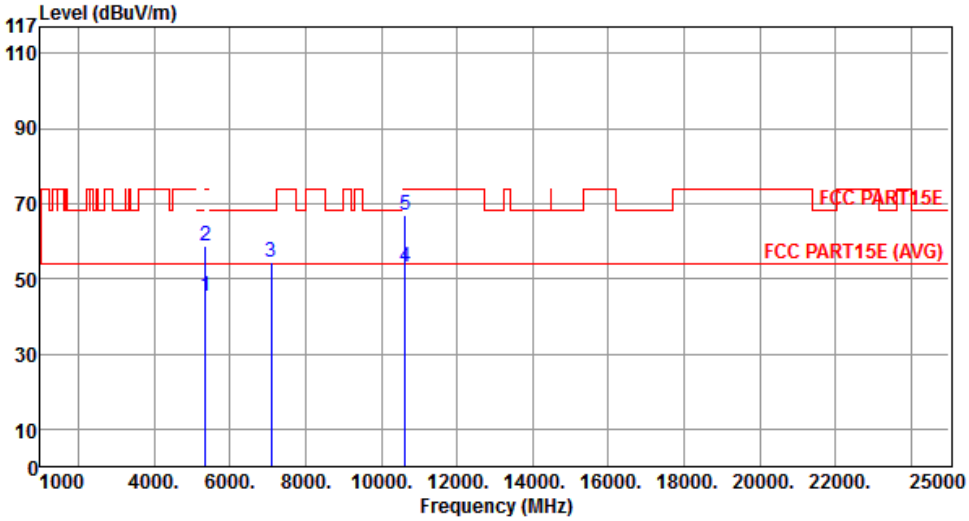
Polarization	Horizontal	Test Freq. (MHz)	5320



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.27	54.00	-6.73	42.18	5.09	Average	---	---
2	5350.00	62.72	74.00	-11.28	57.63	5.09	Peak	---	---
3	7093.33	55.19	68.30	-13.11	46.59	8.60	Peak	---	---
4	10640.00	46.84	54.00	-7.16	31.86	14.98	Average	---	---
5	10640.00	63.59	74.00	-10.41	48.61	14.98	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

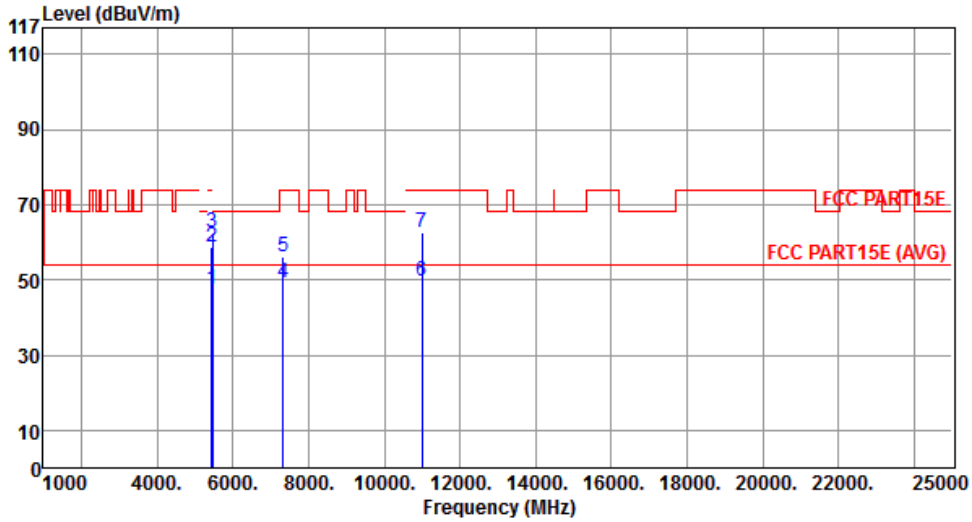
Polarization	Vertical	Test Freq. (MHz)	5320



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	45.26	54.00	-8.74	40.17	5.09	Average	---	---
2	5350.00	58.70	74.00	-15.30	53.61	5.09	Peak	---	---
3	7093.33	54.22	68.30	-14.08	45.62	8.60	Peak	---	---
4	10640.00	53.00	54.00	-1.00	38.02	14.98	Average	---	---
5	10640.00	66.99	74.00	-7.01	52.01	14.98	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

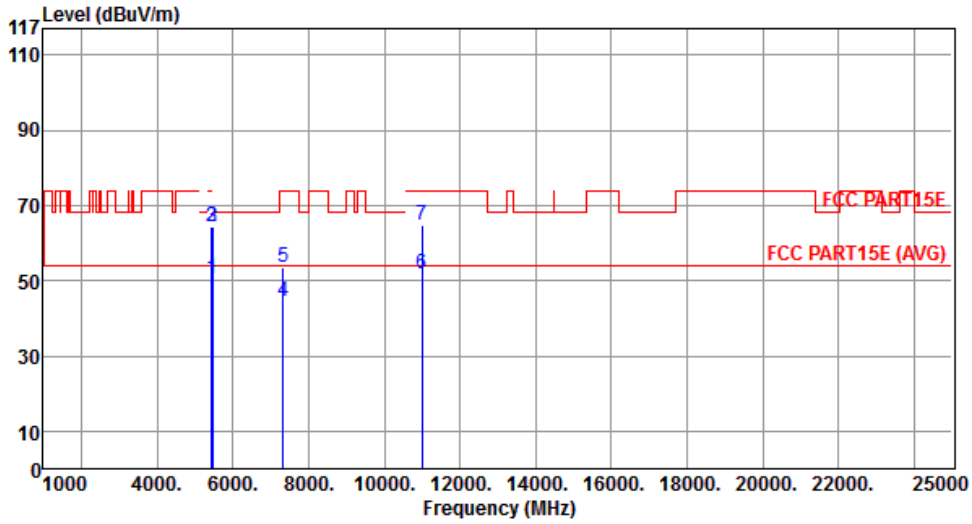
Polarization	Horizontal	**Test Freq. (MHz)**	5500



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5447.00	47.58	54.00	-6.42	42.41	5.17	Average	---	---
2	5447.00	58.51	74.00	-15.49	53.34	5.17	Peak	---	---
3	5470.00	62.71	68.30	-5.59	57.52	5.19	Peak	---	---
4	7333.33	49.18	54.00	-4.82	40.24	8.94	Average	---	---
5	7333.33	55.98	74.00	-18.02	47.04	8.94	Peak	---	---
6	11000.00	49.53	54.00	-4.47	34.25	15.28	Average	---	---
7	11000.00	62.55	74.00	-11.45	47.27	15.28	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

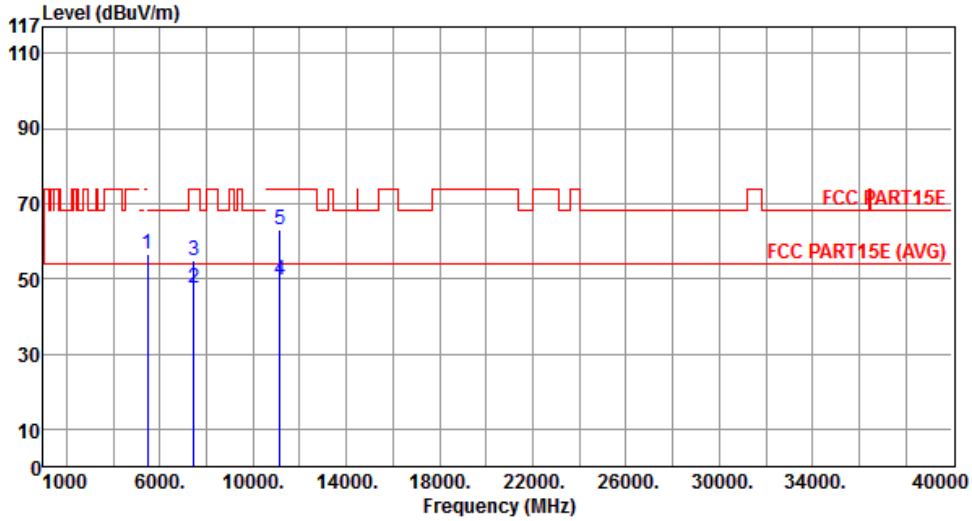
Polarization	Vertical	Test Freq. (MHz)	5500



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5447.00	50.72	54.00	-3.28	45.55	5.17	Average	---	---
2	5447.00	64.35	74.00	-9.65	59.18	5.17	Peak	---	---
3	5470.00	64.30	68.30	-4.00	59.11	5.19	Peak	---	---
4	7333.33	44.46	54.00	-9.54	35.52	8.94	Average	---	---
5	7333.33	53.72	74.00	-20.28	44.78	8.94	Peak	---	---
6	11000.00	52.00	54.00	-2.00	36.72	15.28	Average	---	---
7	11000.00	64.83	74.00	-9.17	49.55	15.28	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

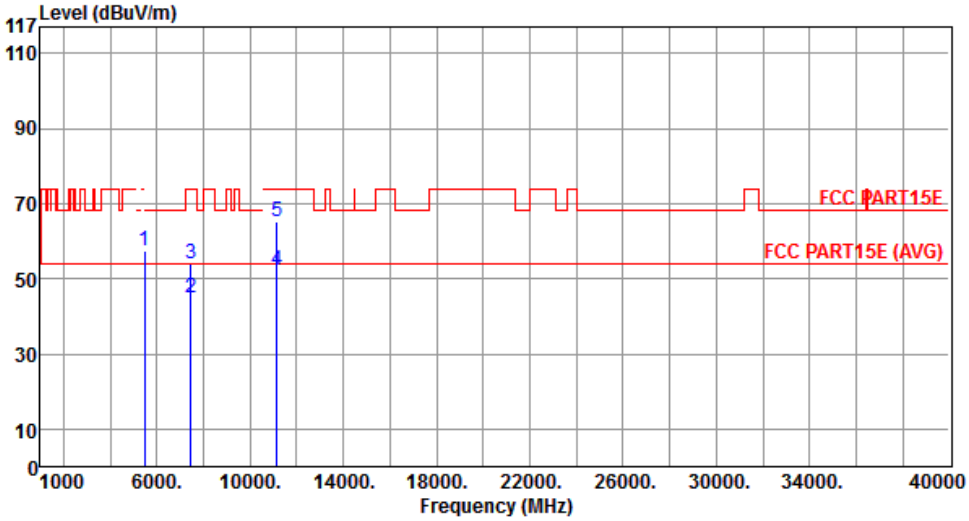
Polarization	Horizontal	Test Freq. (MHz)	5580



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5470.00	56.59	68.30	-11.71	51.40	5.19	Peak	---	---
2	7440.00	47.66	54.00	-6.34	38.54	9.12	Average	---	---
3	7440.00	54.75	74.00	-19.25	45.63	9.12	Peak	---	---
4	11160.00	49.47	54.00	-4.53	34.29	15.18	Average	---	---
5	11160.00	63.03	74.00	-10.97	47.85	15.18	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

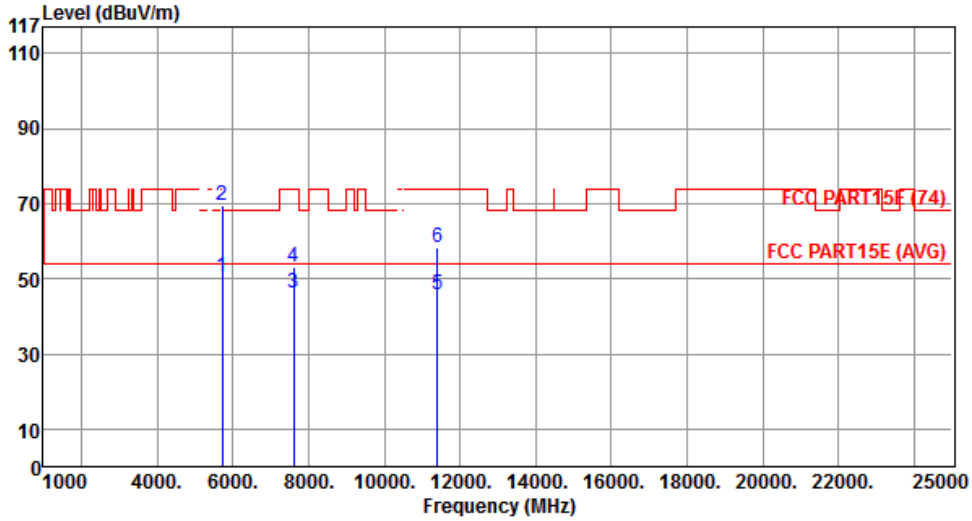
Polarization	Vertical	Test Freq. (MHz)	5580



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5470.00	57.52	68.30	-10.78	52.33	5.19	Peak	---	---
2	7440.00	44.75	54.00	-9.25	35.63	9.12	Average	---	---
3	7440.00	53.94	74.00	-20.06	44.82	9.12	Peak	---	---
4	11160.00	52.44	54.00	-1.56	37.26	15.18	Average	---	---
5	11160.00	65.33	74.00	-8.67	50.15	15.18	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

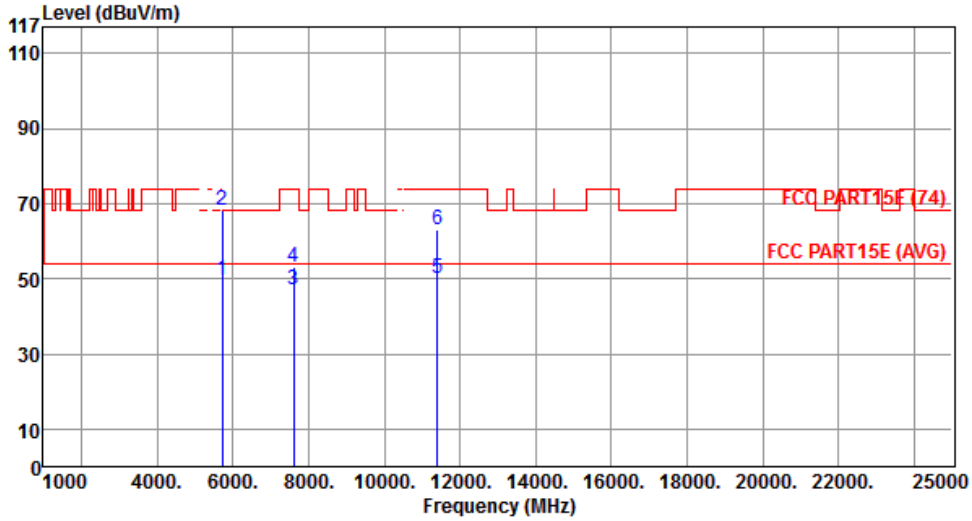
Polarization	Horizontal	Test Freq. (MHz)	5700



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	50.40	54.00	-3.60	44.84	5.56	Average	---	---
2	5725.00	69.46	74.00	-4.54	63.90	5.56	Peak	---	---
3	7600.00	46.41	54.00	-7.59	36.82	9.59	Average	---	---
4	7600.00	52.95	74.00	-21.05	43.36	9.59	Peak	---	---
5	11400.00	45.59	54.00	-8.41	30.56	15.03	Average	---	---
6	11400.00	58.18	74.00	-15.82	43.15	15.03	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Polarization	Vertical	Test Freq. (MHz)	5700

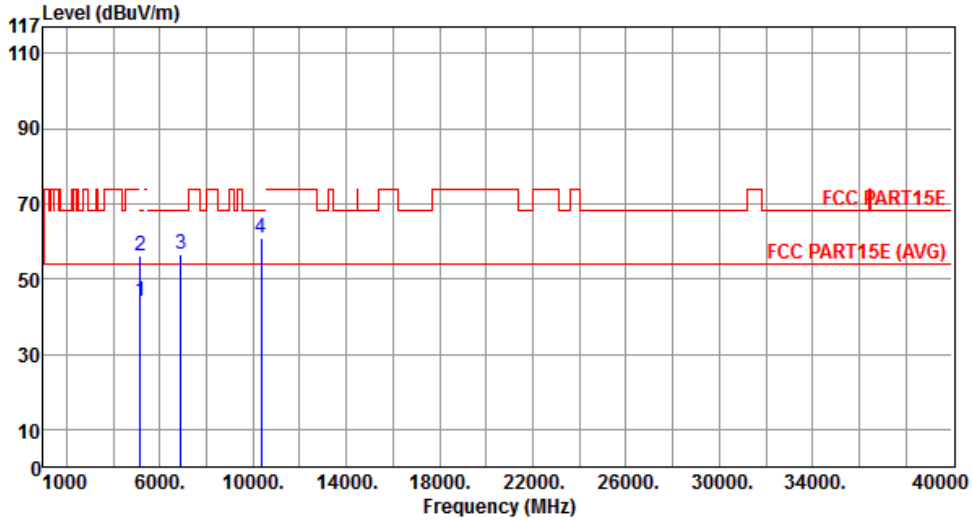


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	49.77	54.00	-4.23	44.21	5.56	Average	---	---
2	5725.00	68.03	74.00	-5.97	62.47	5.56	Peak	---	---
3	7600.00	47.27	54.00	-6.73	37.68	9.59	Average	---	---
4	7600.00	53.28	74.00	-20.72	43.69	9.59	Peak	---	---
5	11400.00	50.19	54.00	-3.81	35.16	15.03	Average	---	---
6	11400.00	63.05	74.00	-10.95	48.02	15.03	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

3.6.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT20

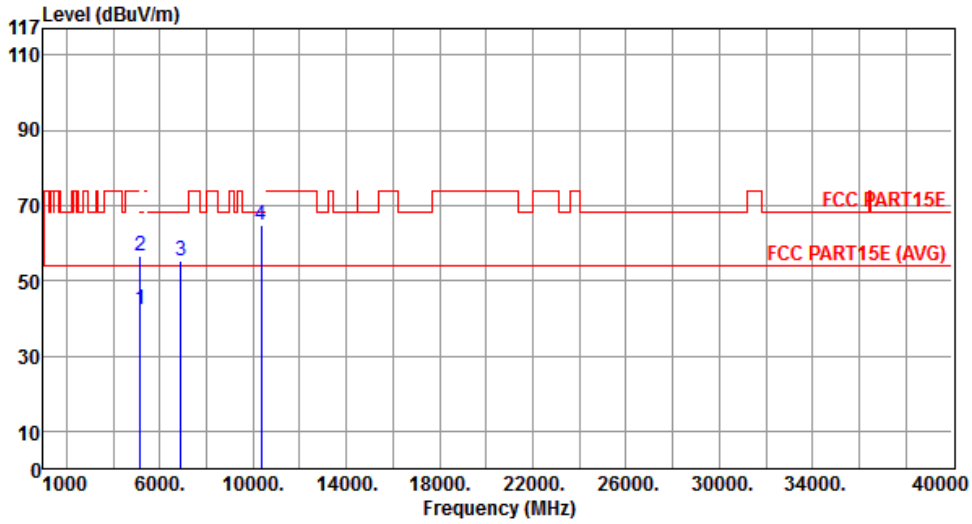
Polarization	Horizontal	Test Freq. (MHz)	5180



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.90	54.00	-10.10	38.96	4.94	Average	---	---
2	5150.00	55.98	74.00	-18.02	51.04	4.94	Peak	---	---
3	6906.66	56.44	68.30	-11.86	48.13	8.31	Peak	---	---
4	10360.00	60.99	68.30	-7.31	46.28	14.71	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

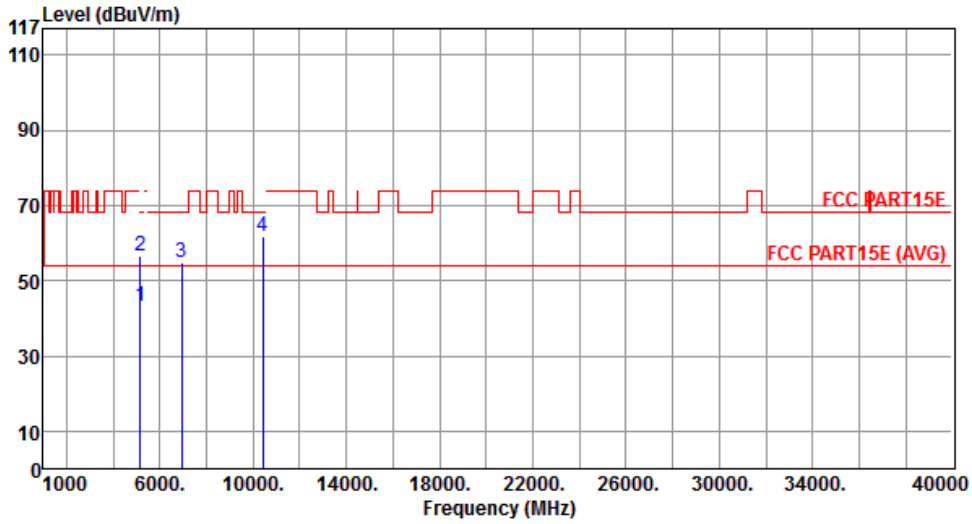
Polarization	Vertical	Test Freq. (MHz)	5180



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	42.18	54.00	-11.82	37.24	4.94	Average	---	---
2	5150.00	56.56	74.00	-17.44	51.62	4.94	Peak	---	---
3	6906.66	55.05	68.30	-13.25	46.74	8.31	Peak	---	---
4	10360.00	64.60	68.30	-3.70	49.89	14.71	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

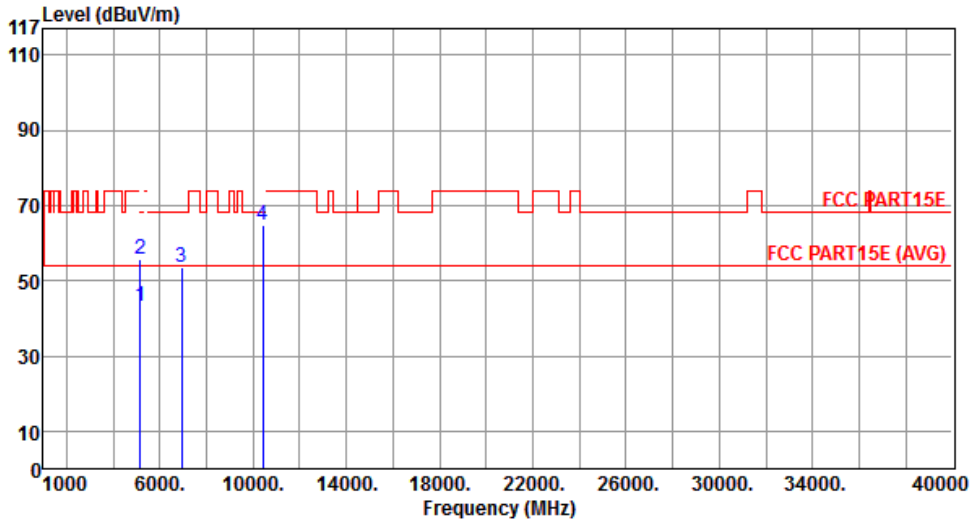
Polarization	Horizontal	Test Freq. (MHz)	5200



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.23	54.00	-10.77	38.29	4.94	Average	---	---
2	5150.00	56.72	74.00	-17.28	51.78	4.94	Peak	---	---
3	6933.33	54.90	68.30	-13.40	46.56	8.34	Peak	---	---
4	10400.00	61.78	68.30	-6.52	47.03	14.75	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

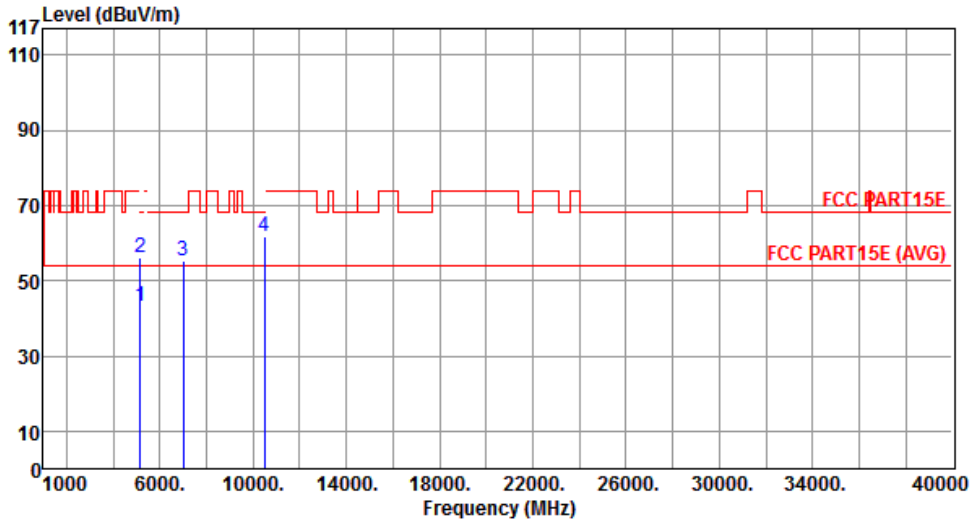
Polarization	Vertical	Test Freq. (MHz)	5200



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.37	54.00	-10.63	38.43	4.94	Average	---	---
2	5150.00	55.76	74.00	-18.24	50.82	4.94	Peak	---	---
3	6933.33	53.60	68.30	-14.70	45.26	8.34	Peak	---	---
4	10400.00	64.59	68.30	-3.71	49.84	14.75	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

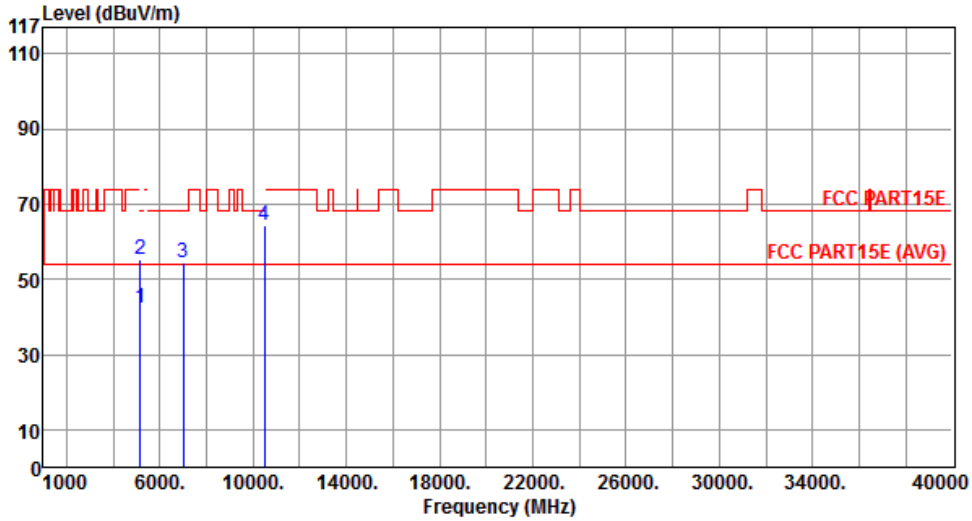
Polarization	Horizontal	**Test Freq. (MHz)**	5240



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	43.17	54.00	-10.83	38.23	4.94	Average	---	---
2	5150.00	56.19	74.00	-17.81	51.25	4.94	Peak	---	---
3	6986.66	55.32	68.30	-12.98	46.93	8.39	Peak	---	---
4	10480.00	61.67	68.30	-6.63	46.83	14.84	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

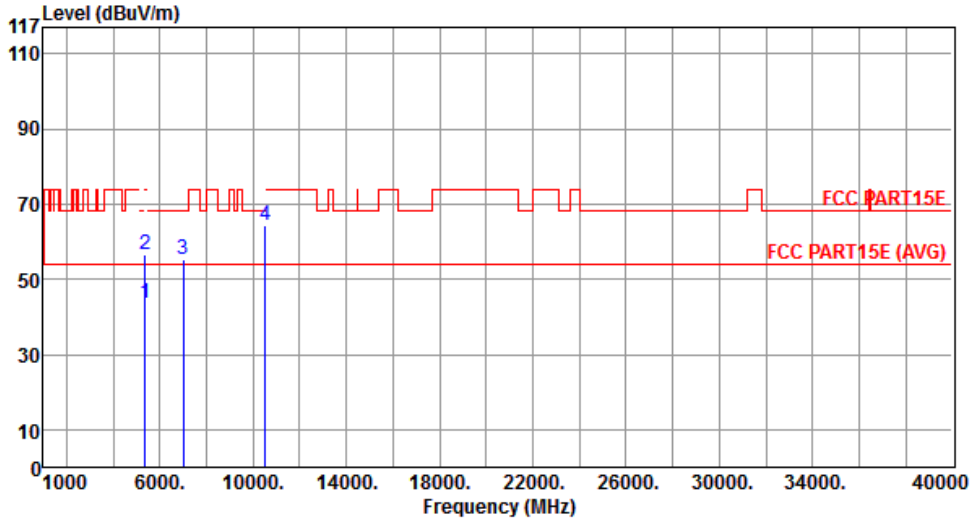
Polarization	Vertical	Test Freq. (MHz)	5240



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	42.22	54.00	-11.78	37.28	4.94	Average	---	---
2	5150.00	55.44	74.00	-18.56	50.50	4.94	Peak	---	---
3	6986.66	54.35	68.30	-13.95	45.96	8.39	Peak	---	---
4	10480.00	64.47	68.30	-3.83	49.63	14.84	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

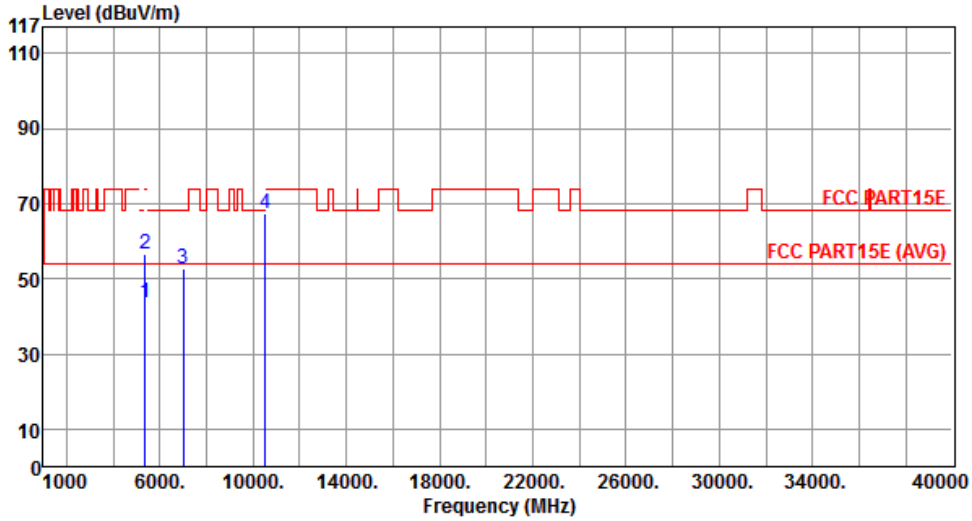
Polarization	Horizontal	Test Freq. (MHz)	5260



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	43.46	54.00	-10.54	38.37	5.09	Average	---	---
2	5350.00	56.72	74.00	-17.28	51.63	5.09	Peak	---	---
3	7013.33	55.15	68.30	-13.15	46.72	8.43	Peak	---	---
4	10520.00	64.12	68.30	-4.18	49.25	14.87	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

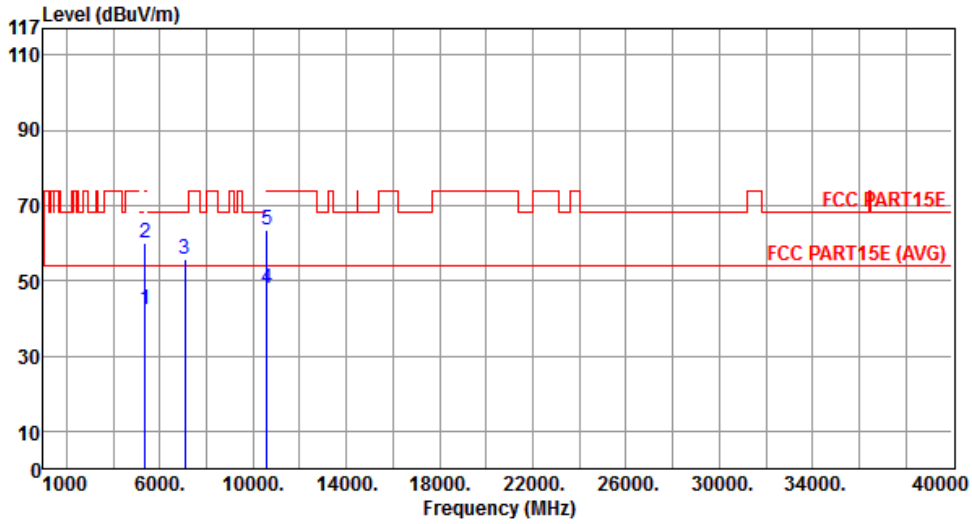
Polarization	Vertical	Test Freq. (MHz)	5260



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	43.65	54.00	-10.35	38.56	5.09	Average	---	---
2	5350.00	56.67	74.00	-17.33	51.58	5.09	Peak	---	---
3	7013.33	52.68	68.30	-15.62	44.25	8.43	Peak	---	---
4	10520.00	67.17	68.30	-1.13	52.30	14.87	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

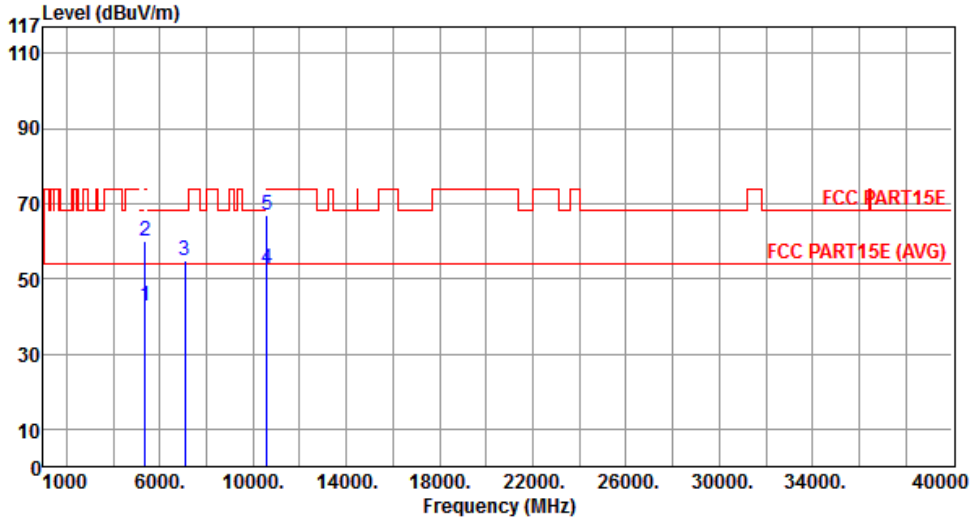
Polarization	Horizontal	Test Freq. (MHz)	5300



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	42.48	54.00	-11.52	37.39	5.09	Average	---	---
2	5350.00	59.95	74.00	-14.05	54.86	5.09	Peak	---	---
3	7066.66	55.78	68.30	-12.52	47.24	8.54	Peak	---	---
4	10600.00	47.83	54.00	-6.17	32.89	14.94	Average	---	---
5	10600.00	63.59	74.00	-10.41	48.65	14.94	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

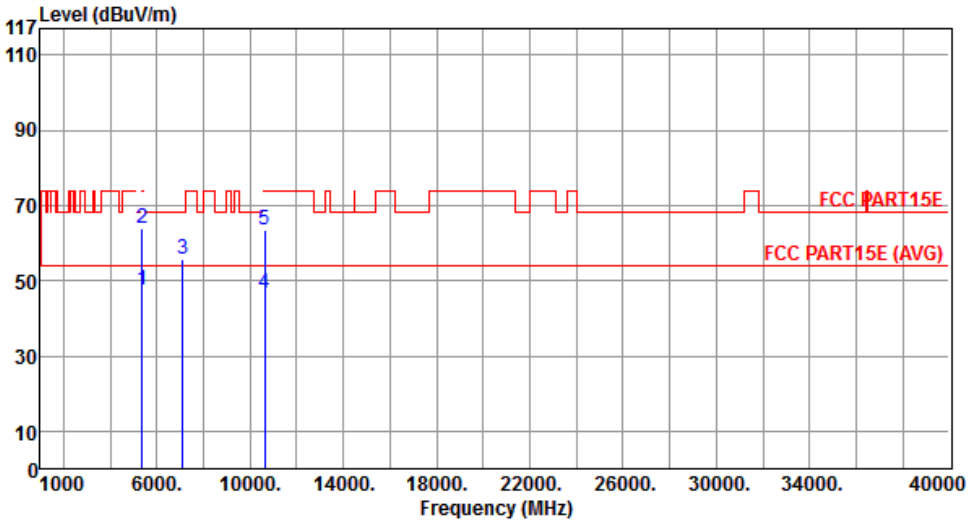
Polarization	Vertical	Test Freq. (MHz)	5300



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	42.71	54.00	-11.29	37.62	5.09	Average	---	---
2	5350.00	60.22	74.00	-13.78	55.13	5.09	Peak	---	---
3	7066.60	54.82	68.30	-13.48	46.28	8.54	Peak	---	---
4	10600.00	52.84	54.00	-1.16	37.90	14.94	Average	---	---
5	10600.00	66.91	74.00	-7.09	51.97	14.94	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

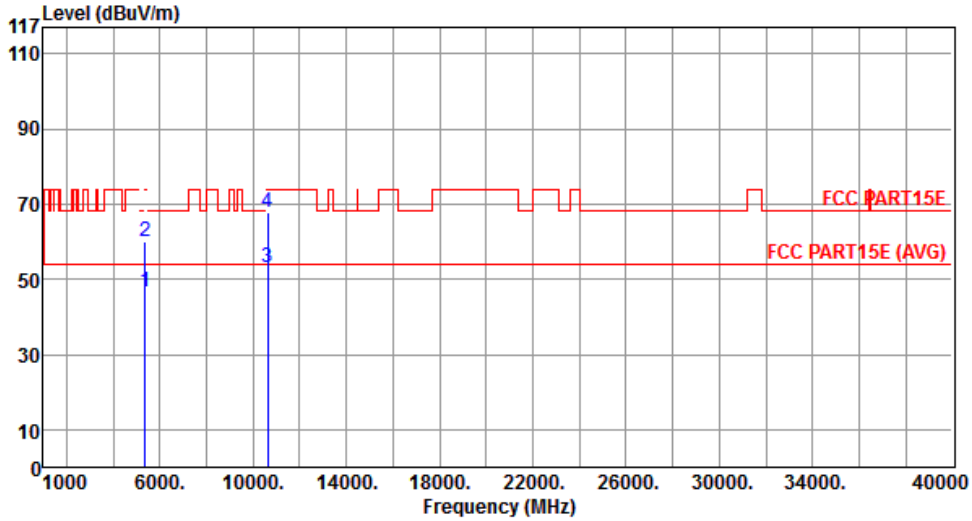
Polarization	Horizontal	Test Freq. (MHz)	5320



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	47.38	54.00	-6.62	42.29	5.09	Average	---	---
2	5350.00	63.95	74.00	-10.05	58.86	5.09	Peak	---	---
3	7093.33	55.83	68.30	-12.47	47.23	8.60	Peak	---	---
4	10640.00	46.63	54.00	-7.37	31.65	14.98	Average	---	---
5	10640.00	63.56	74.00	-10.44	48.58	14.98	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

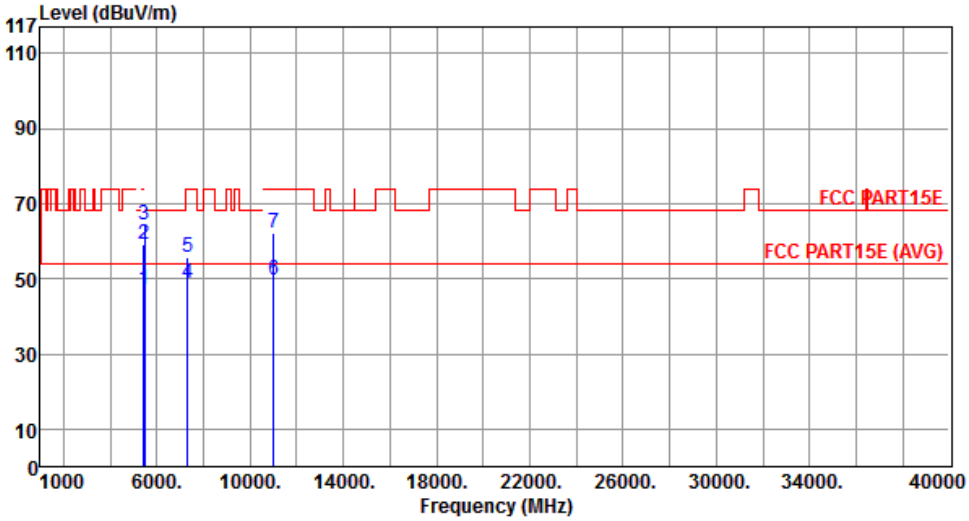
Polarization	Vertical	Test Freq. (MHz)	5320



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	46.79	54.00	-7.21	41.70	5.09	Average	---	---
2	5350.00	59.91	74.00	-14.09	54.82	5.09	Peak	---	---
3	10640.00	52.99	54.00	-1.01	38.01	14.98	Average	---	---
4	10640.00	67.61	74.00	-6.39	52.63	14.98	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

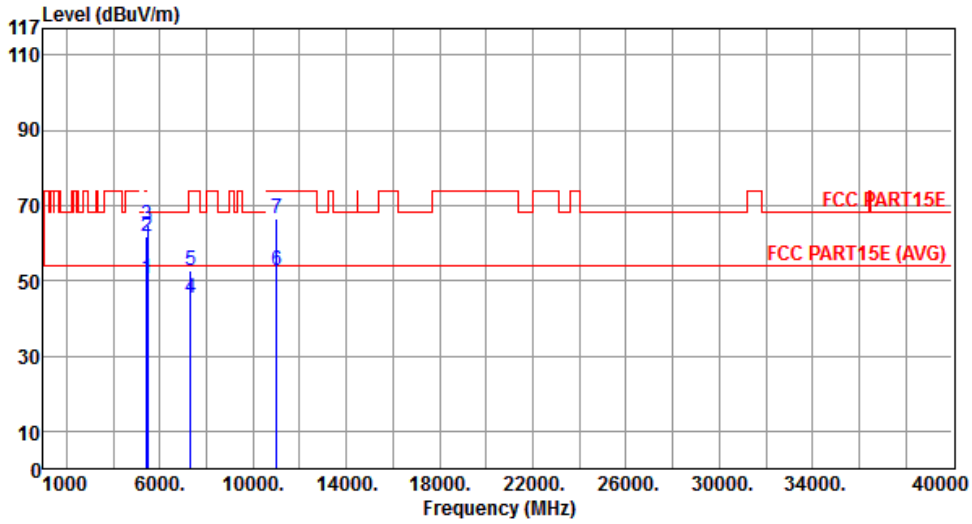
Polarization	Horizontal	Test Freq. (MHz)	5500



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5447.00	47.14	54.00	-6.86	41.97	5.17	Average	---	---
2	5447.00	59.00	74.00	-15.00	53.83	5.17	Peak	---	---
3	5470.00	64.35	68.30	-3.95	59.16	5.19	Peak	---	---
4	7333.33	48.68	54.00	-5.32	39.74	8.94	Average	---	---
5	7333.33	55.79	74.00	-18.21	46.85	8.94	Peak	---	---
6	11000.00	49.79	54.00	-4.21	34.51	15.28	Average	---	---
7	11000.00	62.38	74.00	-11.62	47.10	15.28	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

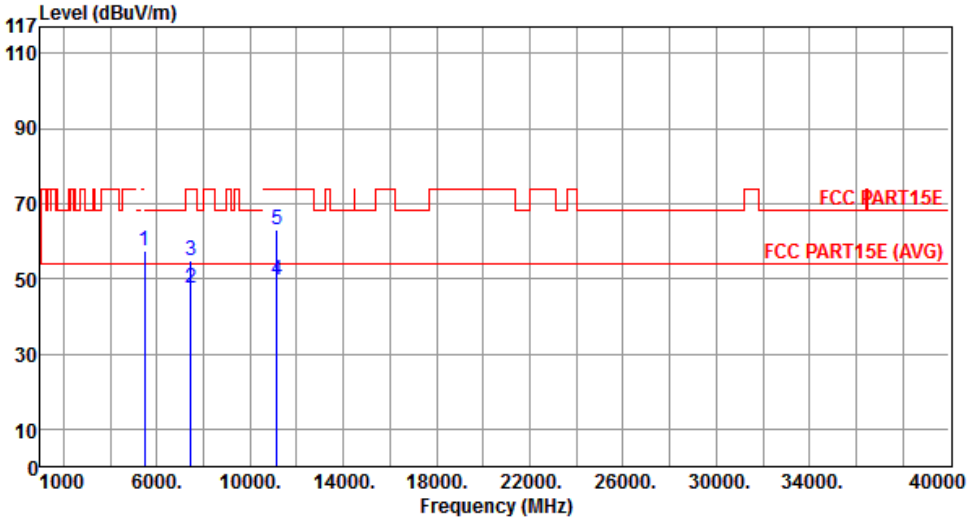
Polarization	Vertical	Test Freq. (MHz)	5500



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5447.00	50.30	54.00	-3.70	45.13	5.17	Average	---	---
2	5447.00	61.91	74.00	-12.09	56.74	5.17	Peak	---	---
3	5470.00	64.92	68.30	-3.38	59.73	5.19	Peak	---	---
4	7333.33	45.29	54.00	-8.71	36.35	8.94	Average	---	---
5	7333.33	52.70	74.00	-21.30	43.76	8.94	Peak	---	---
6	11000.00	52.54	54.00	-1.46	37.26	15.28	Average	---	---
7	11000.00	66.30	74.00	-7.70	51.02	15.28	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

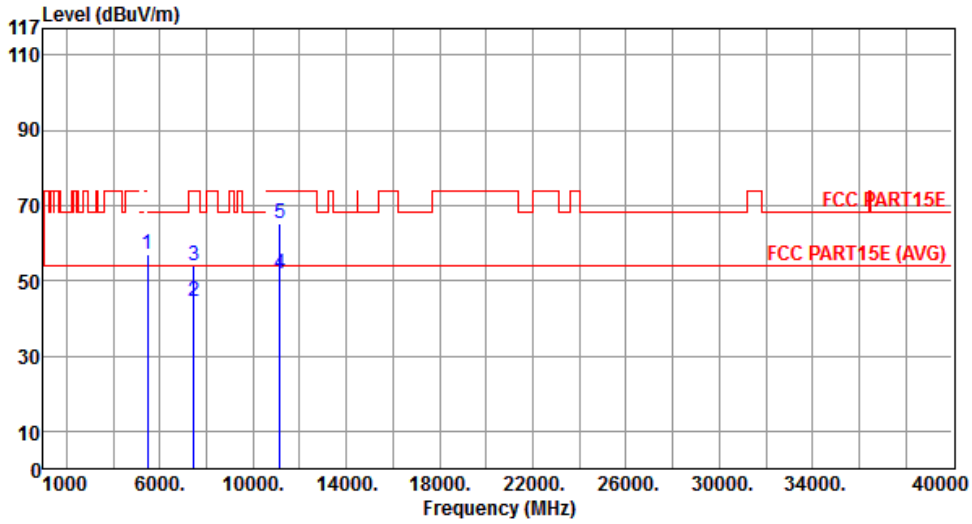
Polarization	Horizontal	Test Freq. (MHz)	5580



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5470.00	57.36	68.30	-10.94	52.17	5.19	Peak	---	---
2	7440.00	47.35	54.00	-6.65	38.23	9.12	Average	---	---
3	7440.00	54.99	74.00	-19.01	45.87	9.12	Peak	---	---
4	11160.00	49.49	54.00	-4.51	34.31	15.18	Average	---	---
5	11160.00	62.89	74.00	-11.11	47.71	15.18	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

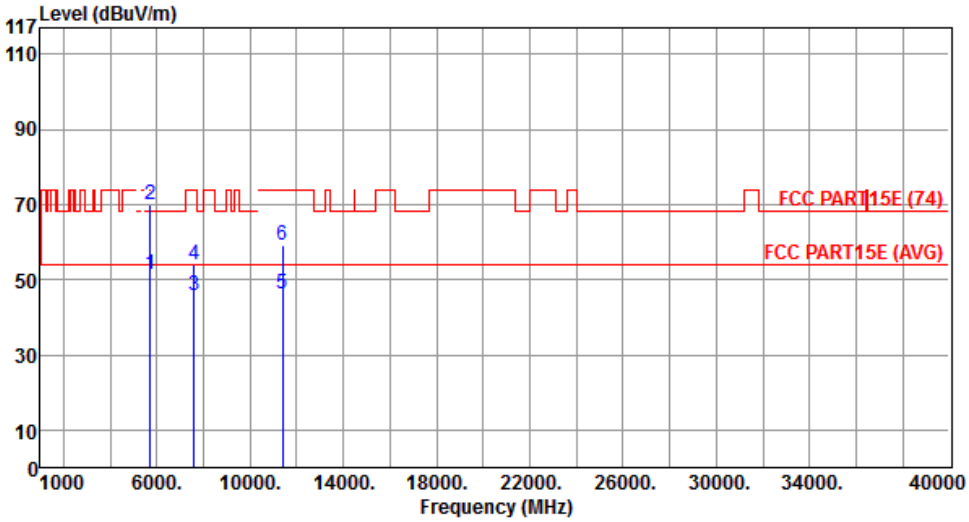
Polarization	Vertical	Test Freq. (MHz)	5580



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5470.00	56.98	68.30	-11.32	51.79	5.19	Peak	---	---
2	7440.00	44.53	54.00	-9.47	35.41	9.12	Average	---	---
3	7440.00	54.08	74.00	-19.92	44.96	9.12	Peak	---	---
4	11160.00	51.85	54.00	-2.15	36.67	15.18	Average	---	---
5	11160.00	65.31	74.00	-8.69	50.13	15.18	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

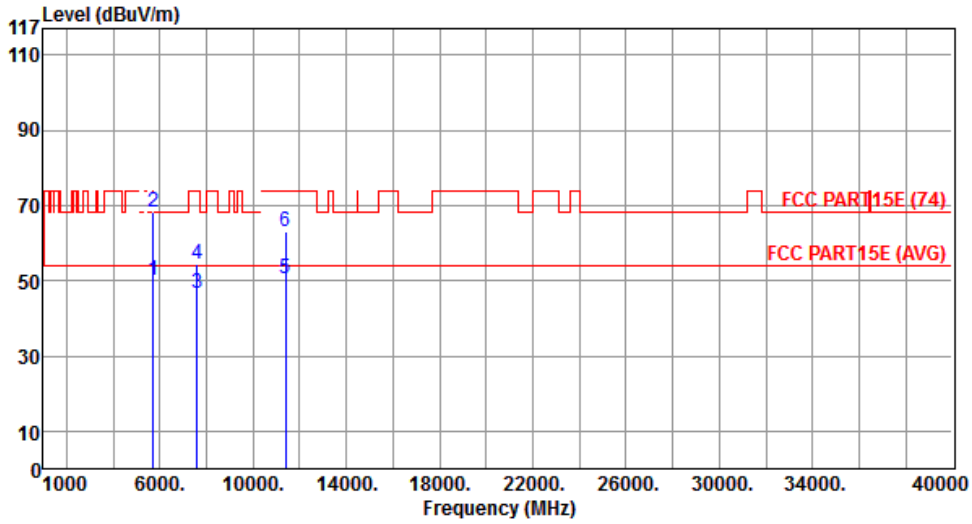
Polarization	Horizontal	**Test Freq. (MHz)**	5700



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	51.25	54.00	-2.75	45.69	5.56	Average	---	---
2	5725.00	69.82	74.00	-4.18	64.26	5.56	Peak	---	---
3	7600.00	45.63	54.00	-8.37	36.04	9.59	Average	---	---
4	7600.00	53.79	74.00	-20.21	44.20	9.59	Peak	---	---
5	11400.00	46.13	54.00	-7.87	31.10	15.03	Average	---	---
6	11400.00	59.20	74.00	-14.80	44.17	15.03	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Polarization	Vertical	Test Freq. (MHz)	5700

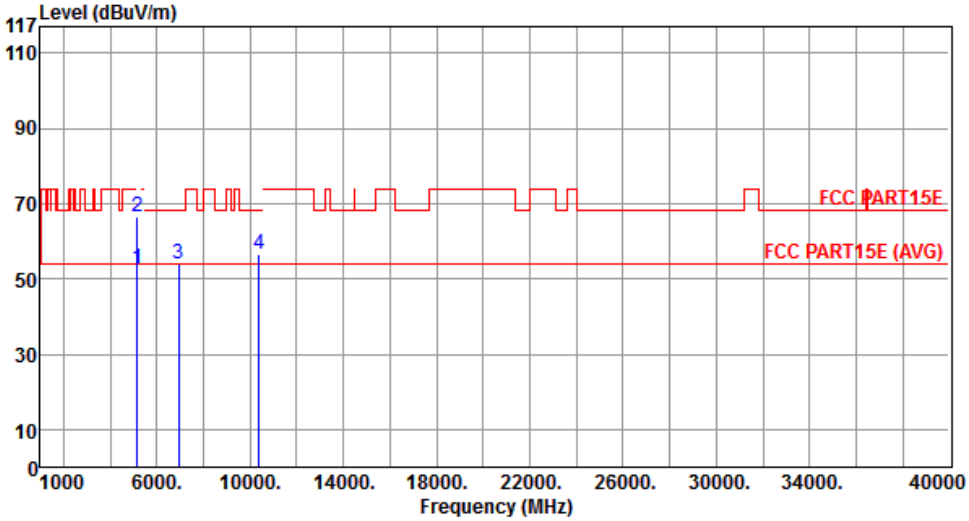


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	50.18	54.00	-3.82	44.62	5.56	Average	---	---
2	5725.00	68.40	74.00	-5.60	62.84	5.56	Peak	---	---
3	7600.00	46.69	54.00	-7.31	37.10	9.59	Average	---	---
4	7600.00	54.51	74.00	-19.49	44.92	9.59	Peak	---	---
5	11400.00	50.32	54.00	-3.68	35.29	15.03	Average	---	---
6	11400.00	62.98	74.00	-11.02	47.95	15.03	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

3.6.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT40

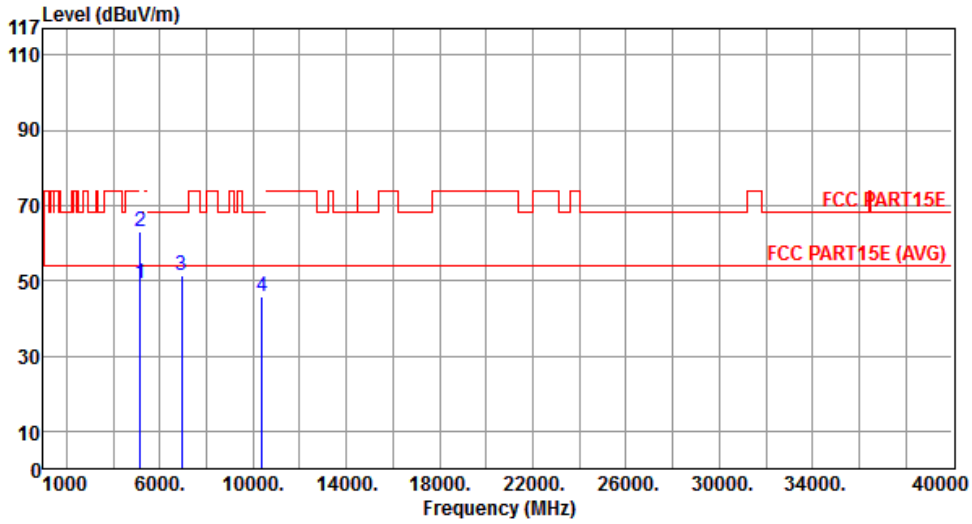
Polarization	Horizontal	Test Freq. (MHz)	5190



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	52.66	54.00	-1.34	47.72	4.94	Average	---	---
2	5150.00	66.42	74.00	-7.58	61.48	4.94	Peak	---	---
3	6920.00	54.05	68.30	-14.25	45.73	8.32	Peak	---	---
4	10380.00	56.57	68.30	-11.73	41.84	14.73	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

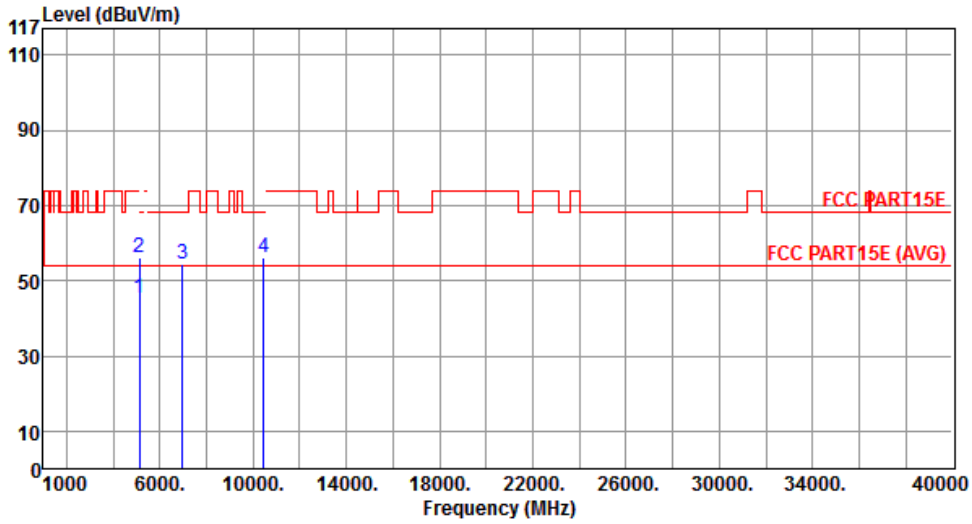
Polarization	Vertical	Test Freq. (MHz)	5190



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5150.00	49.37	54.00	-4.63	44.43	4.94	Average	---	---
2	5150.00	62.84	74.00	-11.16	57.90	4.94	Peak	---	---
3	6920.00	51.16	68.30	-17.14	42.84	8.32	Peak	---	---
4	10380.00	45.59	68.30	-22.71	30.86	14.73	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

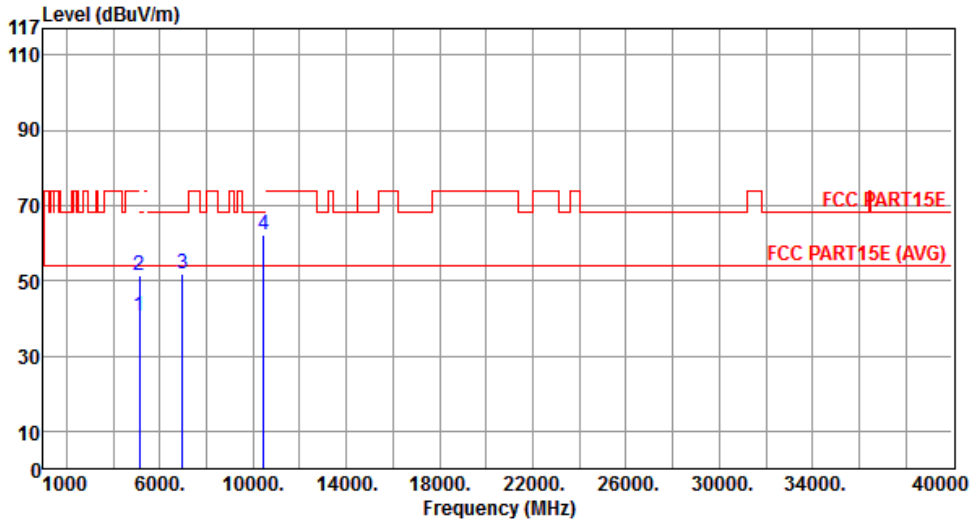
Polarization	Horizontal	**Test Freq. (MHz)**	5230



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5127.00	45.34	54.00	-8.66	40.45	4.89	Average	---	---
2	5127.00	56.06	74.00	-17.94	51.17	4.89	Peak	---	---
3	6973.33	54.45	68.30	-13.85	46.08	8.37	Peak	---	---
4	10460.00	56.30	68.30	-12.00	41.48	14.82	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

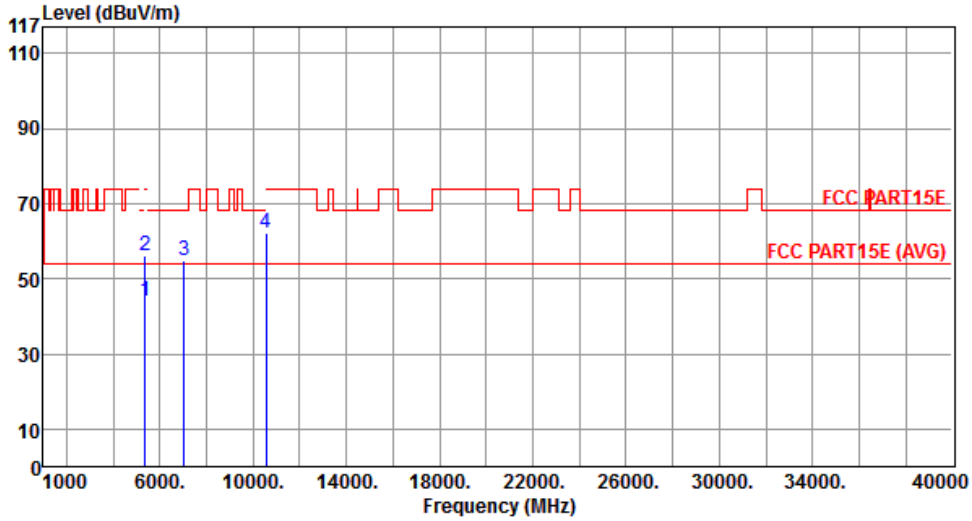
Polarization	Vertical	Test Freq. (MHz)	5230



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5127.00	40.77	54.00	-13.23	35.88	4.89	Average	---	---
2	5127.00	51.23	74.00	-22.77	46.34	4.89	Peak	---	---
3	6973.33	51.68	68.30	-16.62	43.31	8.37	Peak	---	---
4	10460.00	62.17	68.30	-6.13	47.35	14.82	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

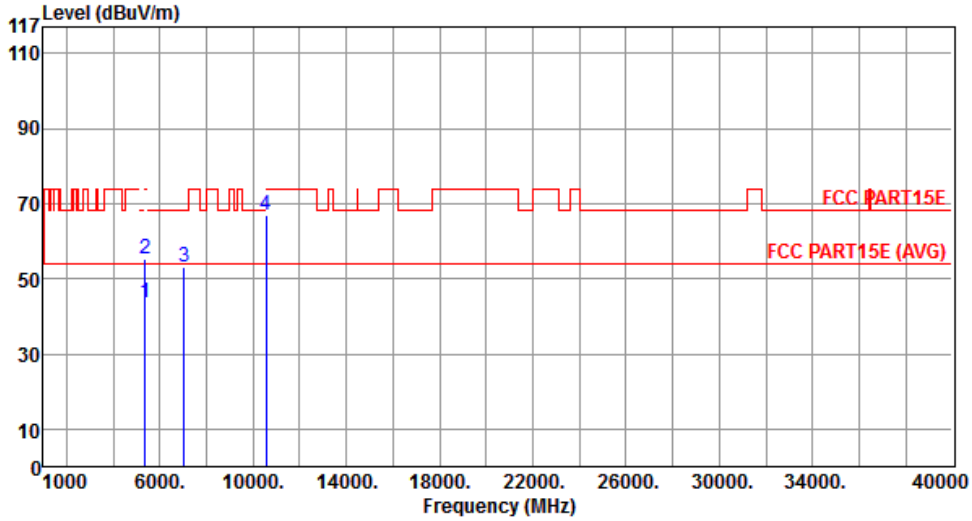
Polarization	Horizontal	Test Freq. (MHz)	5270



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	44.13	54.00	-9.87	39.04	5.09	Average	---	---
2	5350.00	55.97	74.00	-18.03	50.88	5.09	Peak	---	---
3	7026.00	54.93	68.30	-13.37	46.48	8.45	Peak	---	---
4	10540.00	62.00	68.30	-6.30	47.10	14.90	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

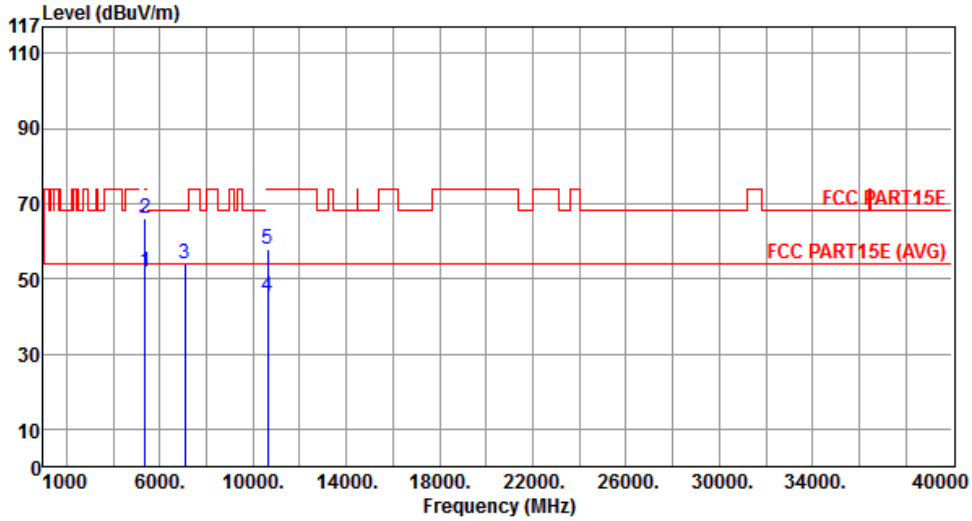
Polarization	Vertical	Test Freq. (MHz)	5270



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	43.60	54.00	-10.40	38.51	5.09	Average	---	---
2	5350.00	55.41	74.00	-18.59	50.32	5.09	Peak	---	---
3	7026.66	52.99	68.30	-15.31	44.54	8.45	Peak	---	---
4	10540.00	67.12	68.30	-1.18	52.22	14.90	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

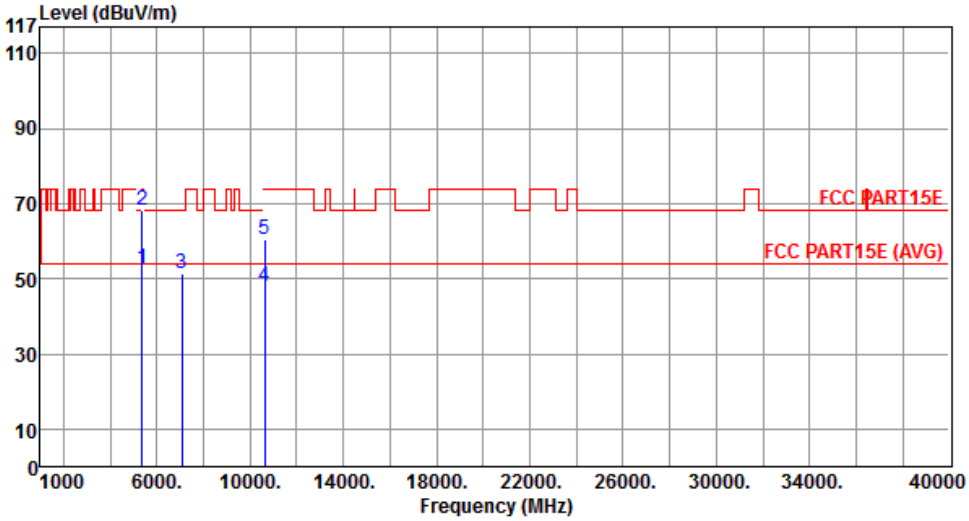
Polarization	Horizontal	Test Freq. (MHz)	5310



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	51.80	54.00	-2.20	46.71	5.09	Average	---	---
2	5350.00	66.00	74.00	-8.00	60.91	5.09	Peak	---	---
3	7080.00	53.76	68.30	-14.54	45.19	8.57	Peak	---	---
4	10620.00	45.30	54.00	-8.70	30.34	14.96	Average	---	---
5	10620.00	57.81	74.00	-16.19	42.85	14.96	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

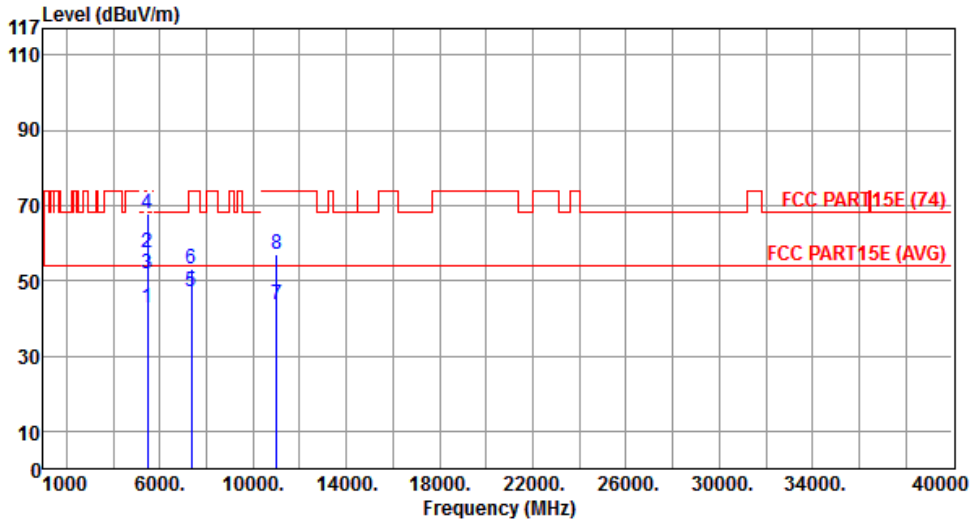
Polarization	Vertical	Test Freq. (MHz)	5310



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5350.00	52.67	54.00	-1.33	47.58	5.09	Average	---	---
2	5350.00	68.28	74.00	-5.72	63.19	5.09	Peak	---	---
3	7080.00	51.52	68.30	-16.78	42.95	8.57	Peak	---	---
4	10620.00	47.90	54.00	-6.10	32.94	14.96	Average	---	---
5	10620.00	60.63	74.00	-13.37	45.67	14.96	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

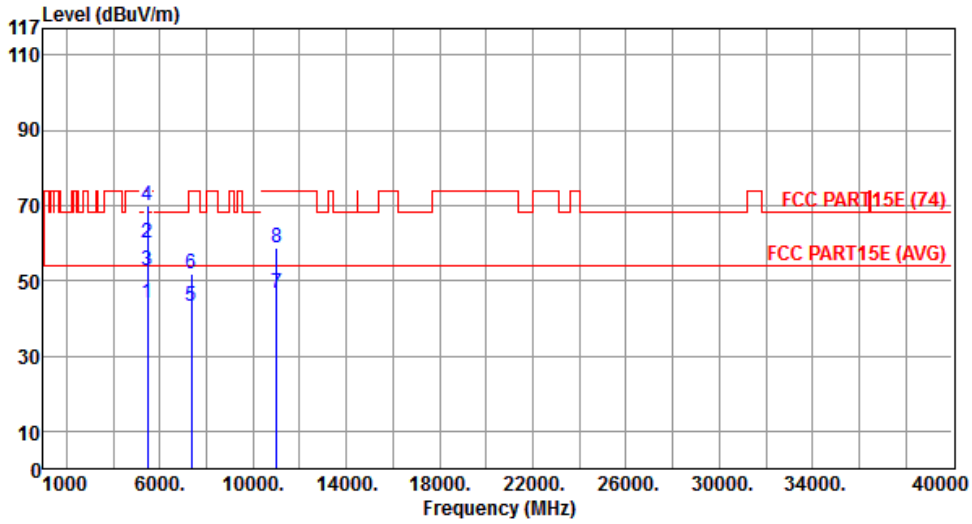
Polarization	Horizontal	**Test Freq. (MHz)**	5510



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	42.75	54.00	-11.25	37.57	5.18	Average	---	---
2	5460.00	57.50	74.00	-16.50	52.32	5.18	Peak	---	---
3	5470.00	51.71	54.00	-2.29	46.52	5.19	Average	---	---
4	5470.00	67.92	74.00	-6.08	62.73	5.19	Peak	---	---
5	7346.66	47.00	54.00	-7.00	38.06	8.94	Average	---	---
6	7346.66	53.03	74.00	-20.97	44.09	8.94	Peak	---	---
7	11020.00	43.66	54.00	-10.34	28.39	15.27	Average	---	---
8	11020.00	56.84	74.00	-17.16	41.57	15.27	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

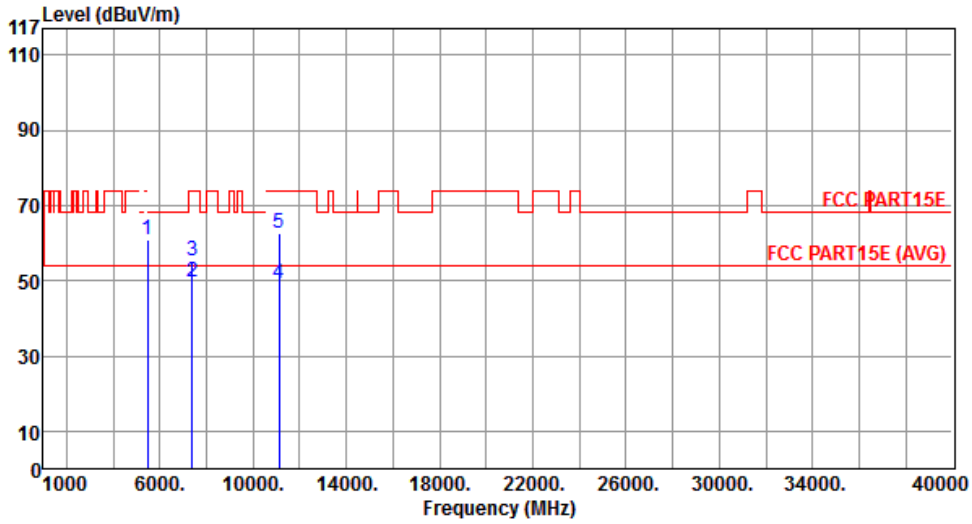
Polarization	Vertical	**Test Freq. (MHz)**	5510



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5460.00	44.01	54.00	-9.99	38.83	5.18	Average	---	---
2	5460.00	60.15	74.00	-13.85	54.97	5.18	Peak	---	---
3	5470.00	52.64	54.00	-1.36	47.45	5.19	Average	---	---
4	5470.00	70.10	74.00	-3.90	64.91	5.19	Peak	---	---
5	7346.66	43.33	54.00	-10.67	34.39	8.94	Average	---	---
6	7346.66	51.74	74.00	-22.26	42.80	8.94	Peak	---	---
7	11020.00	46.48	54.00	-7.52	31.21	15.27	Average	---	---
8	11020.00	58.57	74.00	-15.43	43.30	15.27	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

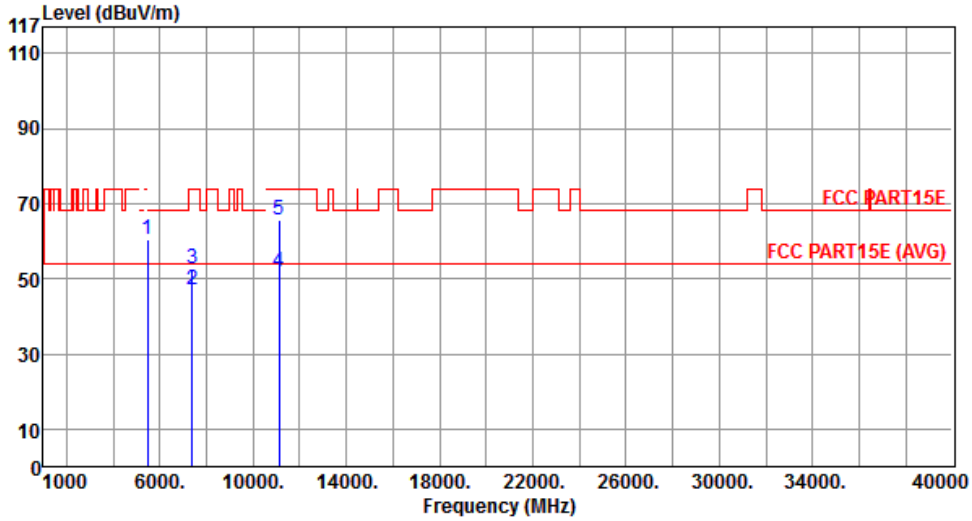
Polarization	Horizontal	Test Freq. (MHz)	5550



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5470.00	61.03	68.30	-7.27	55.84	5.19	Peak	---	---
2	7400.00	49.49	54.00	-4.51	40.50	8.99	Average	---	---
3	7400.00	55.26	74.00	-18.74	46.27	8.99	Peak	---	---
4	11100.00	49.09	54.00	-4.91	33.87	15.22	Average	---	---
5	11100.00	62.50	74.00	-11.50	47.28	15.22	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

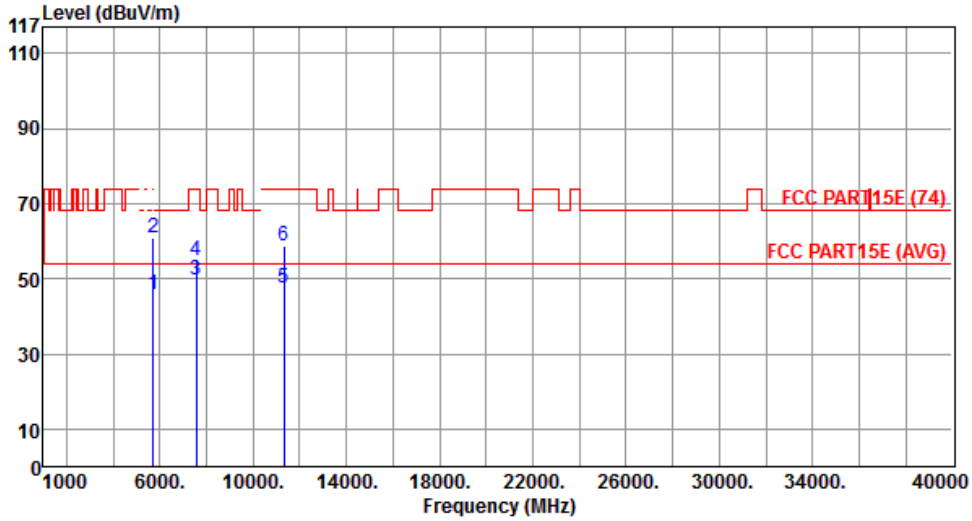
Polarization	Vertical	Test Freq. (MHz)	5550



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5470.00	60.65	68.30	-7.65	55.46	5.19	Peak	---	---
2	7400.00	47.05	54.00	-6.95	38.06	8.99	Average	---	---
3	7400.00	52.63	74.00	-21.37	43.64	8.99	Peak	---	---
4	11100.00	51.94	54.00	-2.06	36.72	15.22	Average	---	---
5	11100.00	65.48	74.00	-8.52	50.26	15.22	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

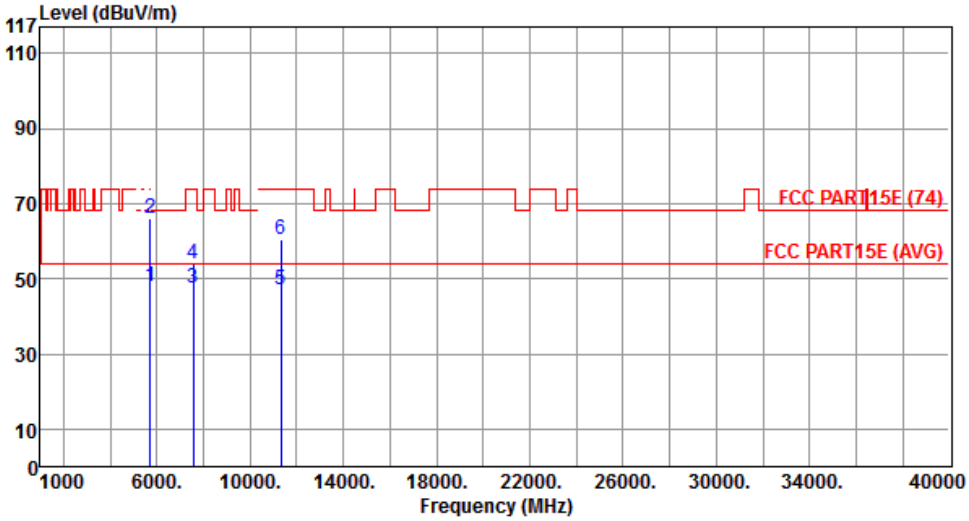
Polarization	Horizontal	**Test Freq. (MHz)**	5670



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	45.77	54.00	-8.23	40.21	5.56	Average	---	---
2	5725.00	60.68	74.00	-13.32	55.12	5.56	Peak	---	---
3	7560.00	49.73	54.00	-4.27	40.25	9.48	Average	---	---
4	7560.00	54.70	74.00	-19.30	45.22	9.48	Peak	---	---
5	11340.00	47.47	54.00	-6.53	32.40	15.07	Average	---	---
6	11340.00	58.87	74.00	-15.13	43.80	15.07	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

Polarization	Vertical	Test Freq. (MHz)	5670



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	5725.00	47.93	54.00	-6.07	42.37	5.56	Average	---	---
2	5725.00	66.14	74.00	-7.86	60.58	5.56	Peak	---	---
3	7560.00	47.40	54.00	-6.60	37.92	9.48	Average	---	---
4	7560.00	53.80	74.00	-20.20	44.32	9.48	Peak	---	---
5	11340.00	47.13	54.00	-6.87	32.06	15.07	Average	---	---
6	11340.00	60.51	74.00	-13.49	45.44	15.07	Peak	---	---

Note 1: “>20dB” means spurious emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: For restricted bands, the peak measurement is fully sufficient, as the max field strength as measured with the Peak-Detector meets the AV-Limit so that the AV level does not need to be reported in addition.

3.7 Frequency Stability

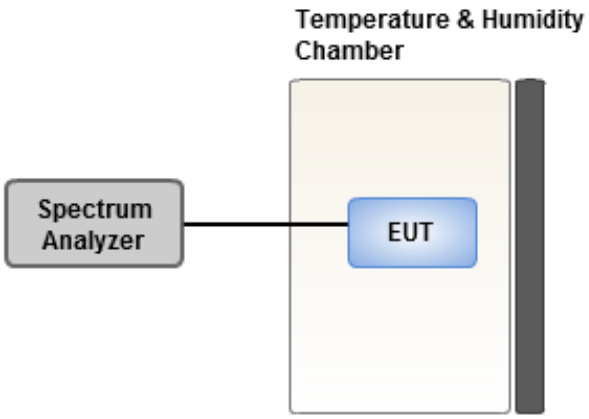
3.7.1 Limit of Frequency Stability

Manufacturers 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.

3.7.2 Test Procedures

1. The EUT is installed in an environment test chamber with external power source.
2. Set the chamber to operate at 50 centigrade and external power source to output at nominal voltage of EUT.
3. A sufficient stabilization period at each temperature is used prior to each frequency measurement.
4. When temperature is stabled, measure the frequency stability.
5. The test shall be performed under -30 to 50 centigrade and 85 to 115 percent of the nominal voltage. Change setting of chamber and external power source to complete all conditions.

3.7.3 Test Setup



3.7.4 Test Result of Frequency Stability

Frequency: 5320 MHz	Frequency Drift (ppm)			
Temperature (°C)	0 minute	2 minutes	5 minutes	10 minutes
T20°CVmax	2.51	2.81	2.65	2.56
T20°CVmin	4.01	3.78	3.96	4.34
T60°CVnom	5.08	4.87	5.25	5.08
T50°CVnom	4.39	4.09	4.60	4.80
T40°CVnom	3.49	3.19	4.07	3.92
T30°CVnom	3.30	3.08	2.79	3.63
T20°CVnom	2.56	2.54	3.11	2.28
T10°CVnom	2.64	1.61	2.53	2.58
T0°CVnom	2.16	2.22	2.45	2.42
T-10°CVnom	1.61	1.62	2.16	1.45
T-20°CVnom	0.37	0.34	0.21	0.11
T-30°CVnom	-1.15	-0.77	-0.64	-1.55
Vnom [V]: 110		Vmax [V]: 126.5		Vmin [V]: 93.5
Tnom [°C]: 20		Tmax [°C]: 60		Tmin [°C]: -30

==END==