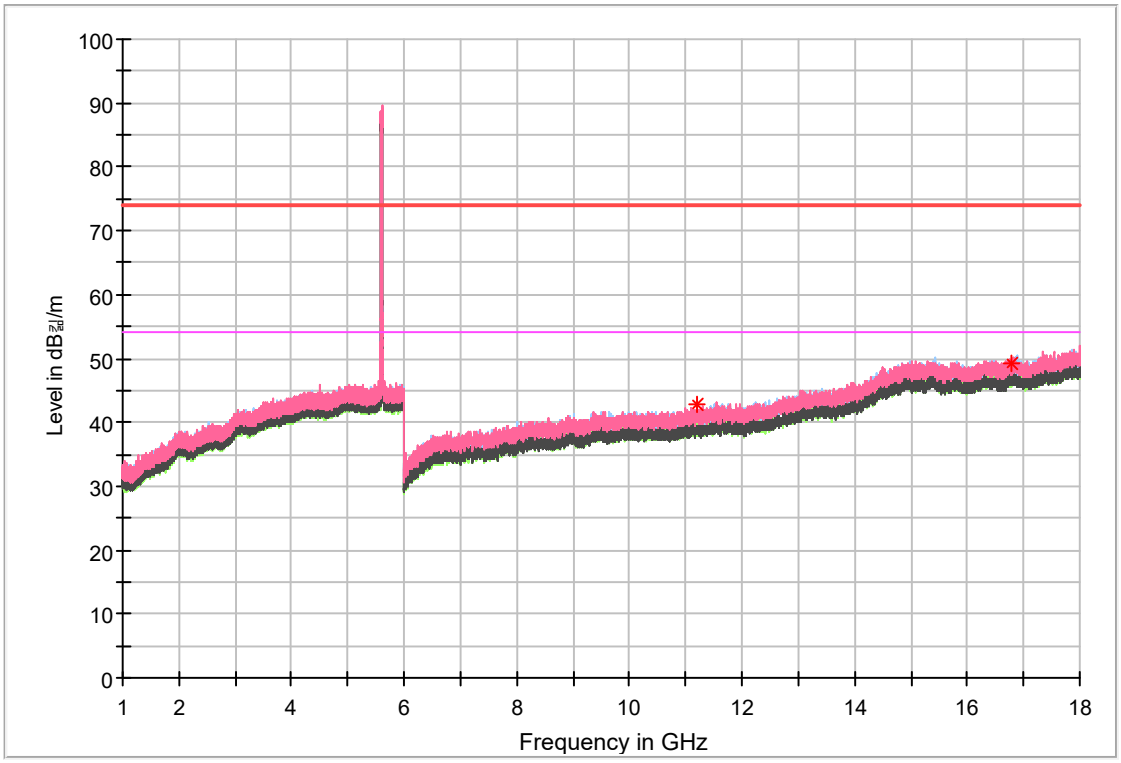
RSE_U-NII-2C_802.11n(HT20)_5600

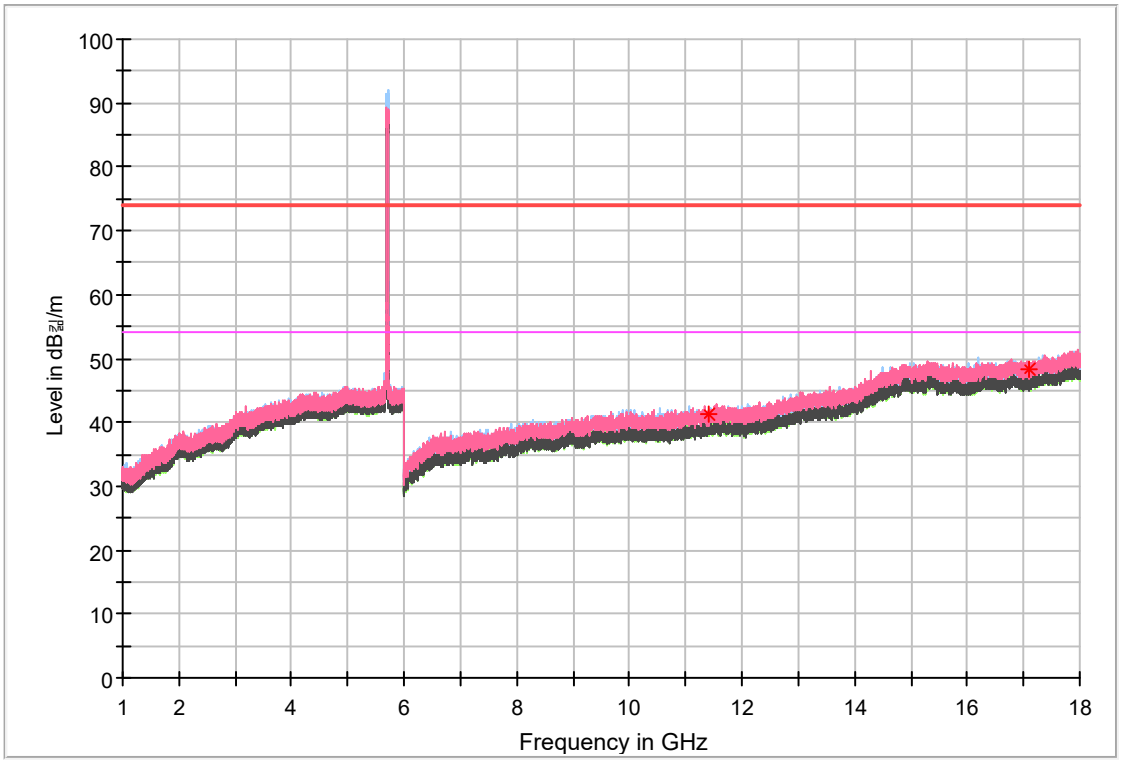


	Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
*	11 211.75	29.47	42.67	---	---	---	300	H	127	13.20	31.33	74.00	---	54.00
	16 800.00	28.07	49.37	---	---	---	300	H	30	21.30	24.63	74.00	---	54.00

Remarks

1. Peak Result(dBµV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Average Result(dBµV/m) = Average Reading Value(dBµV/m) + DCCF + Correction Factor(dB)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/Average) Result (dBµV/m) – (Peak/Average) Limit (dBµV/m)
6. 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
7. * - indicates frequency in CFR Pt 15 / IC RSS-Restricted Band.

RSE_U-NII-2C_802.11n(HT20)_5700

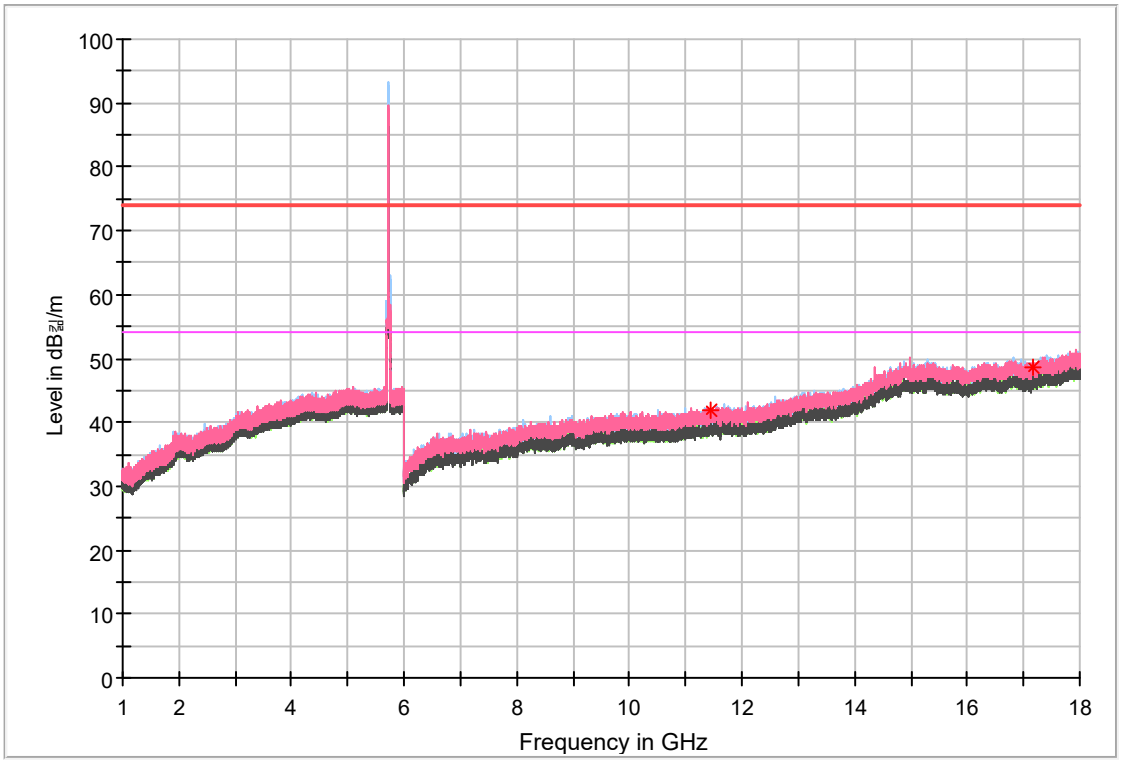


	Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
*	11 399.63	27.76	41.16	---	---	---	300	H	180	13.40	32.84	74.00	---	54.00
	17 100.38	27.32	48.42	---	---	---	300	V	9	21.10	25.58	74.00	---	54.00

Remarks

1. Peak Result(dBµV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Average Result(dBµV/m) = Average Reading Value(dBµV/m) + DCCF + Correction Factor(dB)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/Average) Result (dBµV/m) – (Peak/Average) Limit (dBµV/m)
6. 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
7. * - indicates frequency in CFR Pt 15 / IC RSS-Restricted Band.

RSE_Straddle_802.11n(HT20)_5720

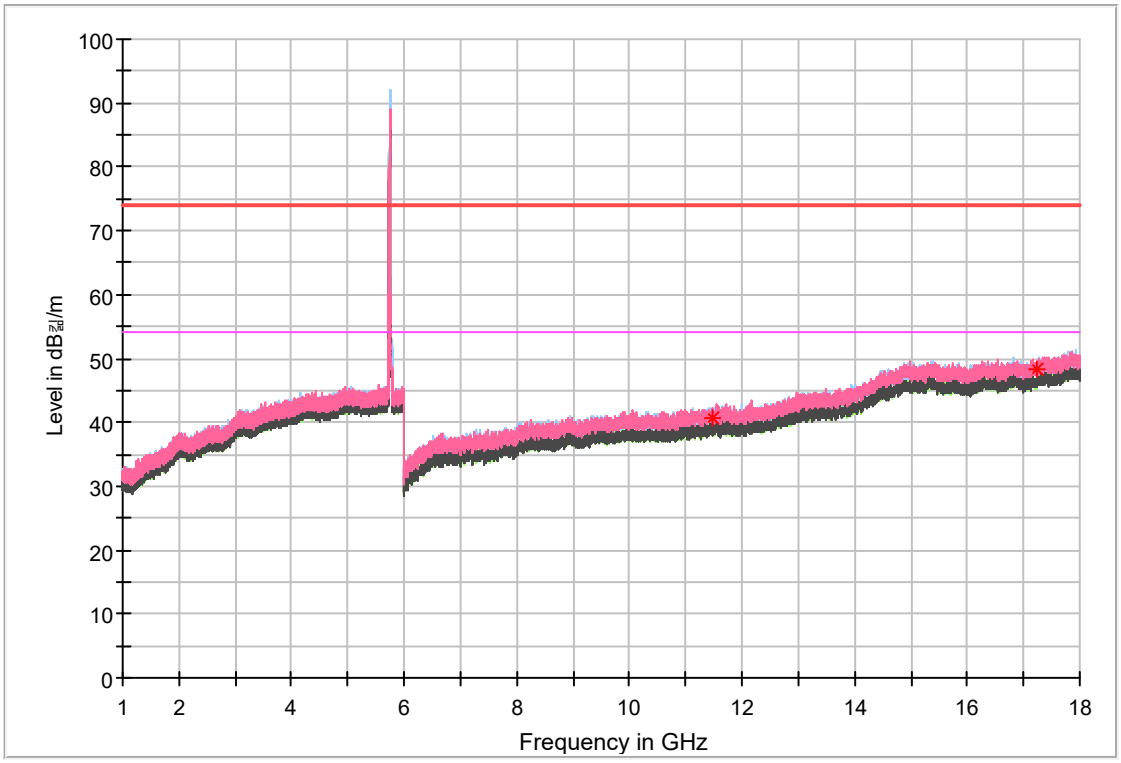


	Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
*	11 440.88	28.42	41.82	---	---	---	200	V	252	13.40	32.18	74.00	---	54.00
	17 160.00	27.39	48.49	---	---	---	200	H	6	21.10	25.51	74.00	---	54.00

Remarks

1. Peak Result(dBµV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Average Result(dBµV/m) = Average Reading Value(dBµV/m) + DCCF + Correction Factor(dB)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/Average) Result (dBµV/m) – (Peak/Average) Limit (dBµV/m)
6. 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
7. * - indicates frequency in CFR Pt 15 / IC RSS-Restricted Band.

RSE_U-NII-3_802.11n(HT20)_5745

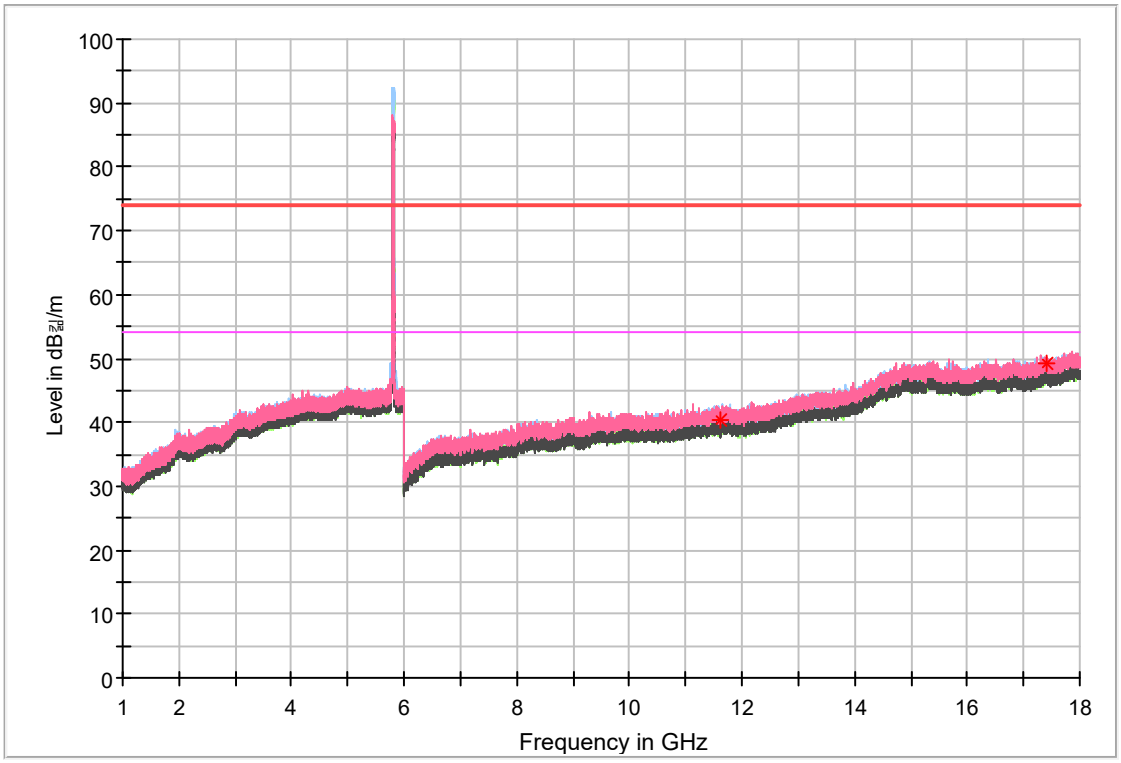


	Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
*	11 490.00	27.10	40.60	---	---	---	300	V	8	13.50	33.40	74.00	---	54.00
	17 235.00	27.09	48.19	---	---	---	300	V	87	21.10	25.81	74.00	---	54.00

Remarks

1. Peak Result(dBµV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Average Result(dBµV/m) = Average Reading Value(dBµV/m) + DCCF + Correction Factor(dB)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/Average) Result (dBµV/m) – (Peak/Average) Limit (dBµV/m)
6. 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
7. * - indicates frequency in CFR Pt 15 / IC RSS-Restricted Band.

RSE_U-NII-2C_802.11n(HT20)_5805

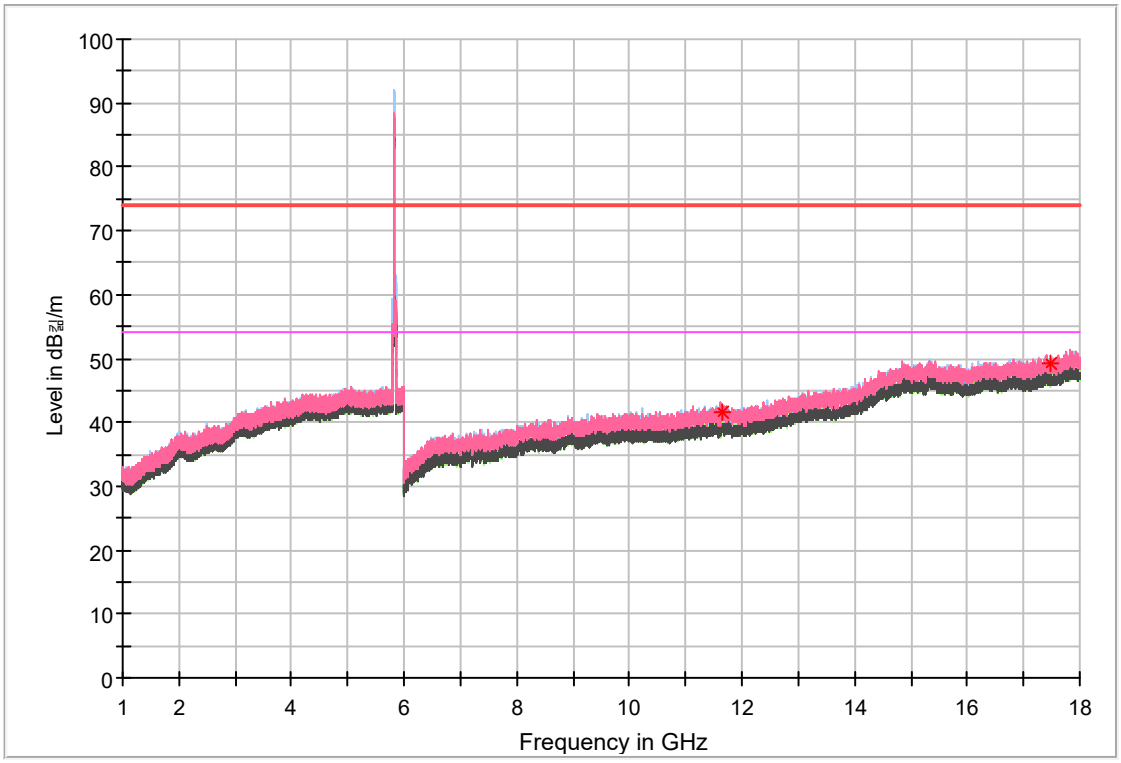


	Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
*	11 610.00	26.68	40.28	---	---	---	300	H	333	13.60	33.72	74.00	---	54.00
	17 415.00	27.51	49.21	---	---	---	200	V	337	21.70	24.79	74.00	---	54.00

Remarks

1. Peak Result(dBµV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Average Result(dBµV/m) = Average Reading Value(dBµV/m) + DCCF + Correction Factor(dB)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/Average) Result (dBµV/m) – (Peak/Average) Limit (dBµV/m)
6. 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
7. * - indicates frequency in CFR Pt 15 / IC RSS-Restricted Band.

RSE_U-NII-2C_802.11n(HT20)_5825



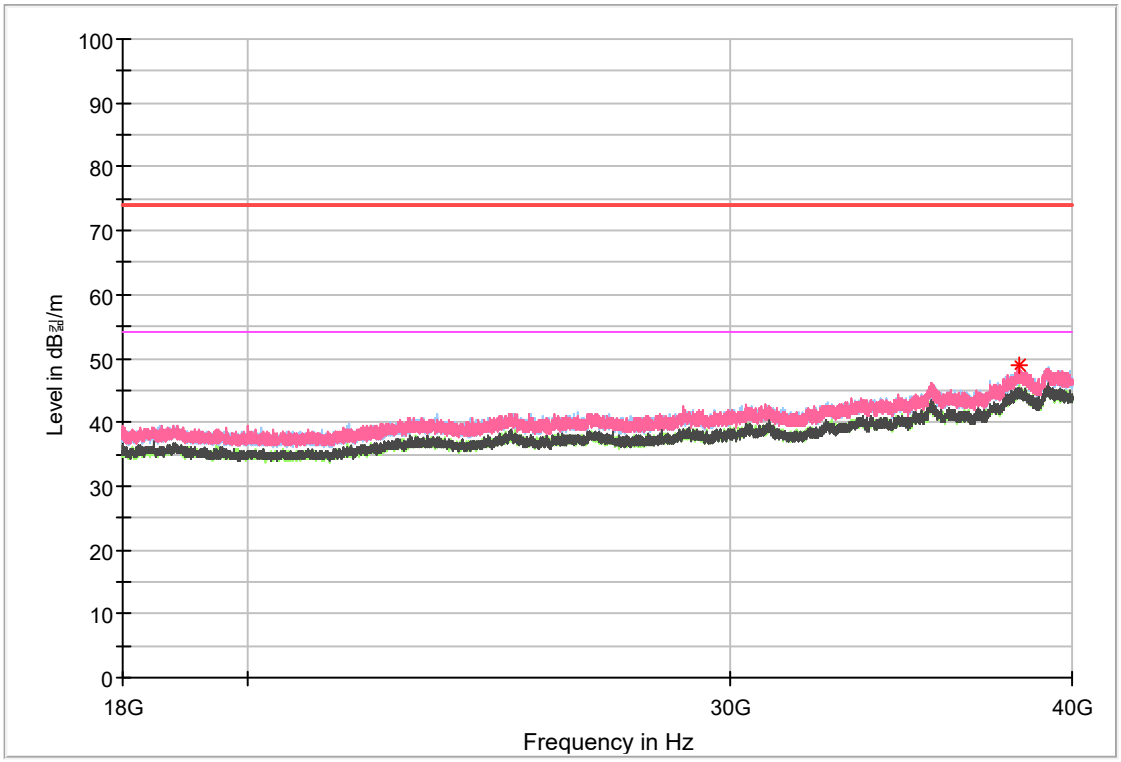
	Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
*	11 650.13	28.18	41.68	---	---	---	200	H	210	13.50	32.32	74.00	---	54.00
	17 475.00	27.30	49.10	---	---	---	300	H	46	21.80	24.90	74.00	---	54.00

Remarks

1. Peak Result(dBµV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Average Result(dBµV/m) = Average Reading Value(dBµV/m) + DCCF + Correction Factor(dB)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/Average) Result (dBµV/m) – (Peak/Average) Limit (dBµV/m)
6. 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
7. * - indicates frequency in CFR Pt 15 / IC RSS-Restricted Band.

3.5.5.4 Radiated Emissions (Above 18 GHz)

RSE(Below 18 GHz)_ U-NII-2A_802.11a_5300



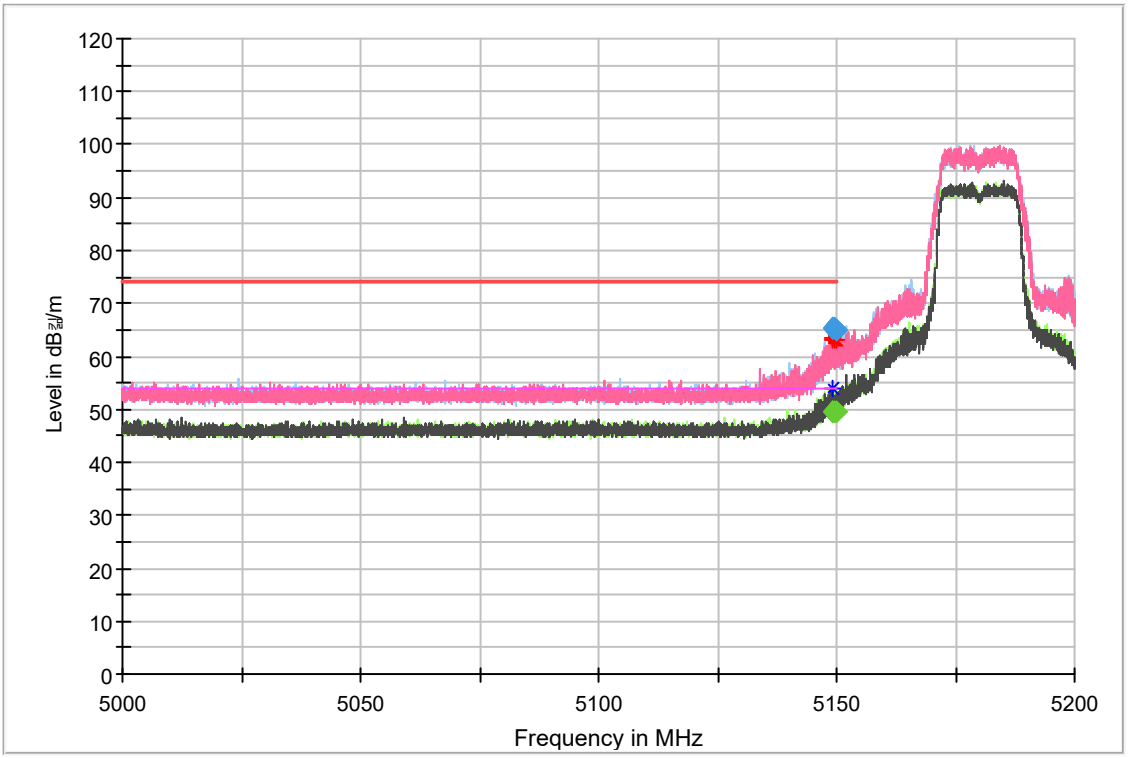
Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
38 257.88	40.40	49.00	-	-	-	300	H	357	8.60	19.20	68.20	-	-

Remarks

1. Peak Result(dBµV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Average Result(dBµV/m) = Average Reading Value(dBµV/m) + DCCF + Correction Factor(dB)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/Average) Result (dBµV/m) – (Peak/Average) Limit (dBµV/m)
6. 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
7. * - indicates frequency in CFR Pt 15 / IC RSS-Restricted Band.

3.5.5.5 Restricted Band Edge Measurements

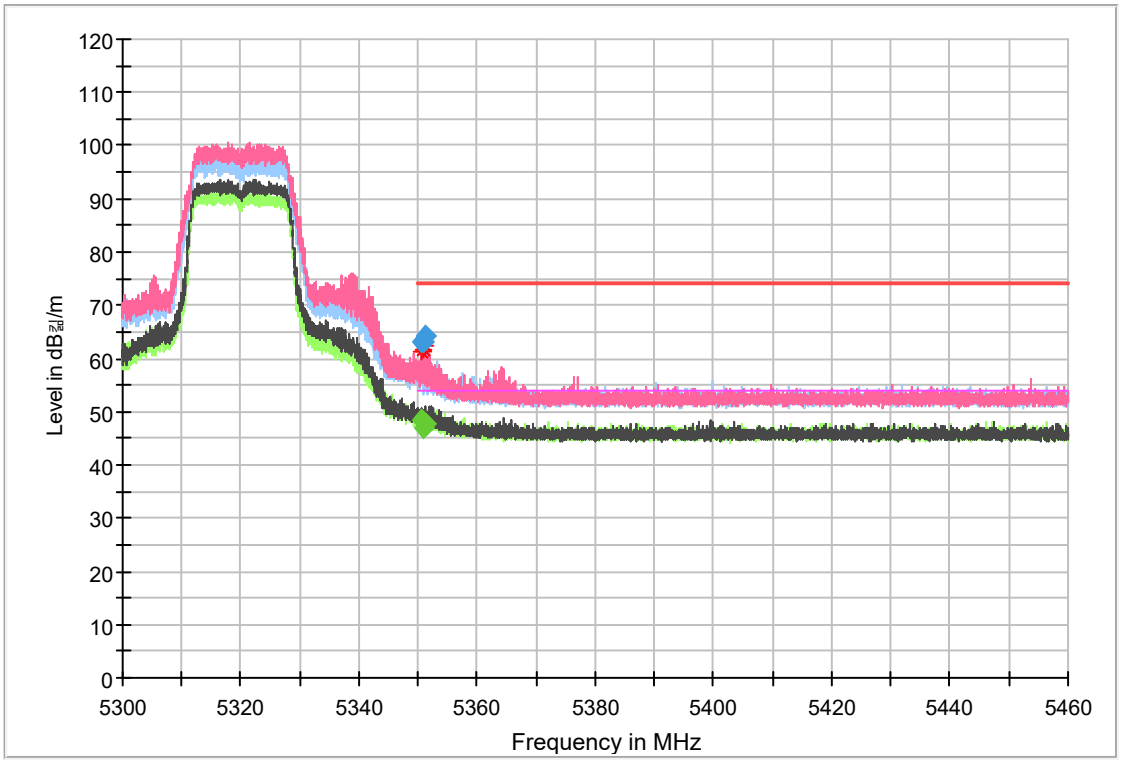
Band Edge_U-NII-1_802.11a_5180



Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 149.10	52.85	65.45	---	---	---	150	V	285	12.60	8.55	74.00	---	54.00
5 149.10	---	---	36.91	49.83	0.32	150	V	285	12.60	---	74.00	4.17	54.00
5 149.18	52.88	65.48	---	---	---	150	V	296	12.60	8.52	74.00	---	54.00
5 149.18	---	---	37.12	50.04	0.32	150	V	296	12.60	---	74.00	3.96	54.00
5 149.42	52.75	65.35	---	---	---	350	H	230	12.60	8.65	74.00	---	54.00
5 149.42	---	---	36.92	49.84	0.32	350	H	230	12.60	---	74.00	4.16	54.00
5 149.98	52.52	65.12	---	---	---	150	H	302	12.60	8.88	74.00	---	54.00
5 149.98	---	---	37.10	50.02	0.32	150	H	302	12.60	---	74.00	3.98	54.00

Remarks
1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-2A_802.11a_5320

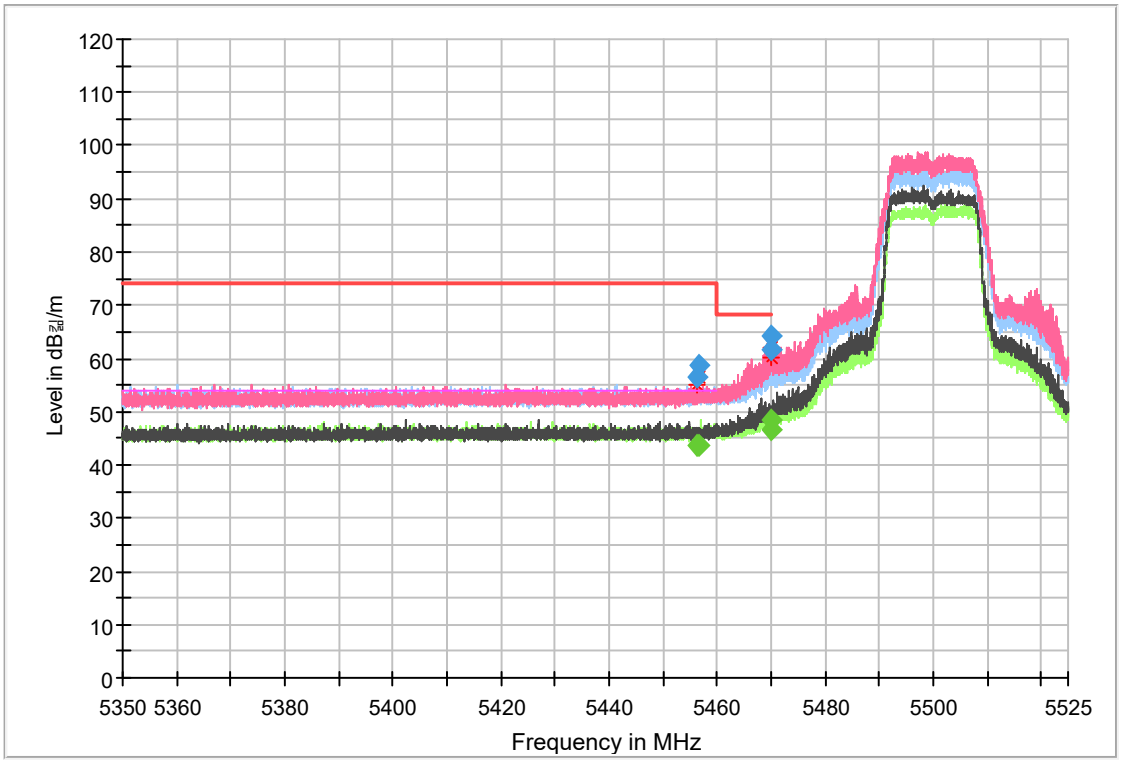


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 350.59	50.69	63.19	---	---	---	252	V	321	12.50	10.81	74.00	---	54.00
5 350.59	---	---	35.90	48.72	0.32	252	V	321	12.50	---	74.00	5.28	54.00
5 351.07	50.47	62.97	---	---	---	240	V	343	12.50	11.03	74.00	---	54.00
5 351.07	---	---	34.49	47.31	0.32	240	V	343	12.50	---	74.00	6.69	54.00
5 351.33	51.81	64.31	---	---	---	150	H	312	12.50	9.69	74.00	---	54.00
5 351.33	---	---	35.03	47.85	0.32	150	H	312	12.50	---	74.00	6.15	54.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-2C_802.11a_5500

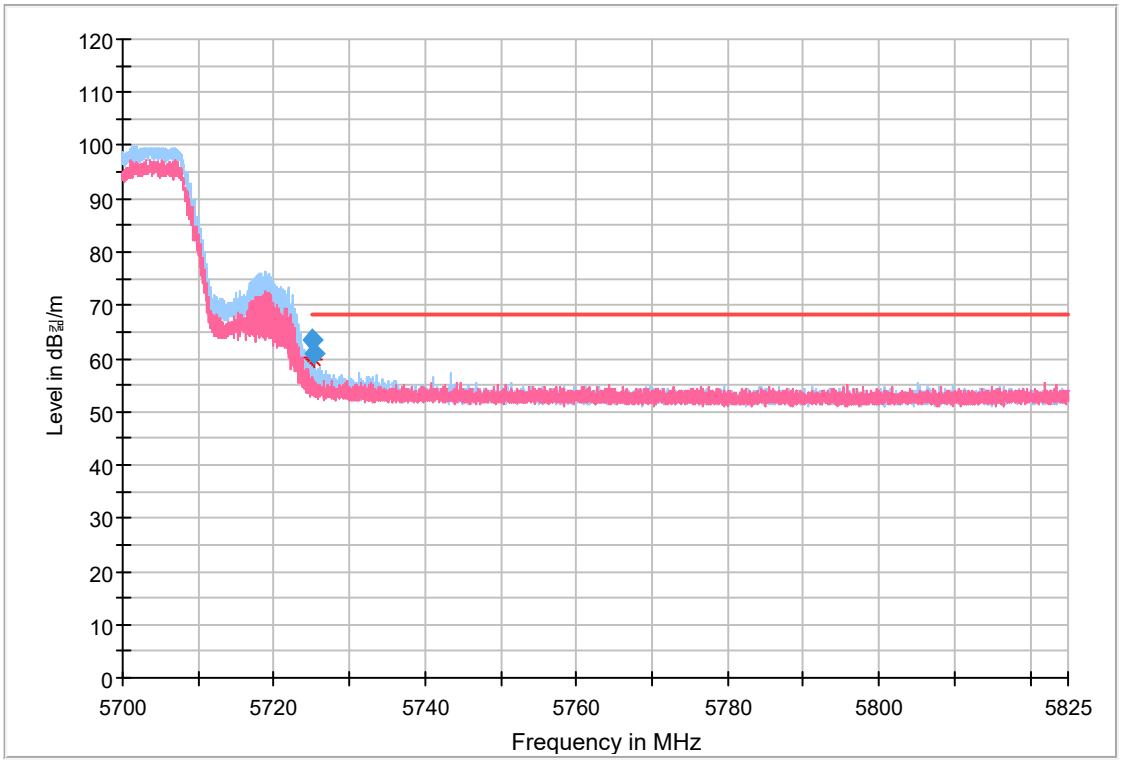


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 456.14	43.68	56.38	---	---	---	150	H	310	12.70	17.62	74.00	---	54.00
5 456.14	---	---	30.81	43.83	0.32	150	H	310	12.70	---	74.00	10.17	54.00
5 456.79	45.89	58.59	---	---	---	251	V	319	12.70	15.41	74.00	---	54.00
5 456.79	---	---	31.14	44.16	0.32	251	V	319	12.70	---	74.00	9.84	54.00
5 469.95	51.37	64.17	---	---	---	250	V	320	12.80	4.03	68.20	---	54.00
5 469.95	---	---	35.71	48.83	0.32	250	V	320	12.80	---	74.00	5.17	54.00
5 470.00	48.72	61.52	---	---	---	342	H	279	12.80	6.68	68.20	---	55.00
5 470.00	---	---	33.67	46.79	0.32	342	H	279	12.80	---	74.00	9.21	56.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-2C_802.11a_5700

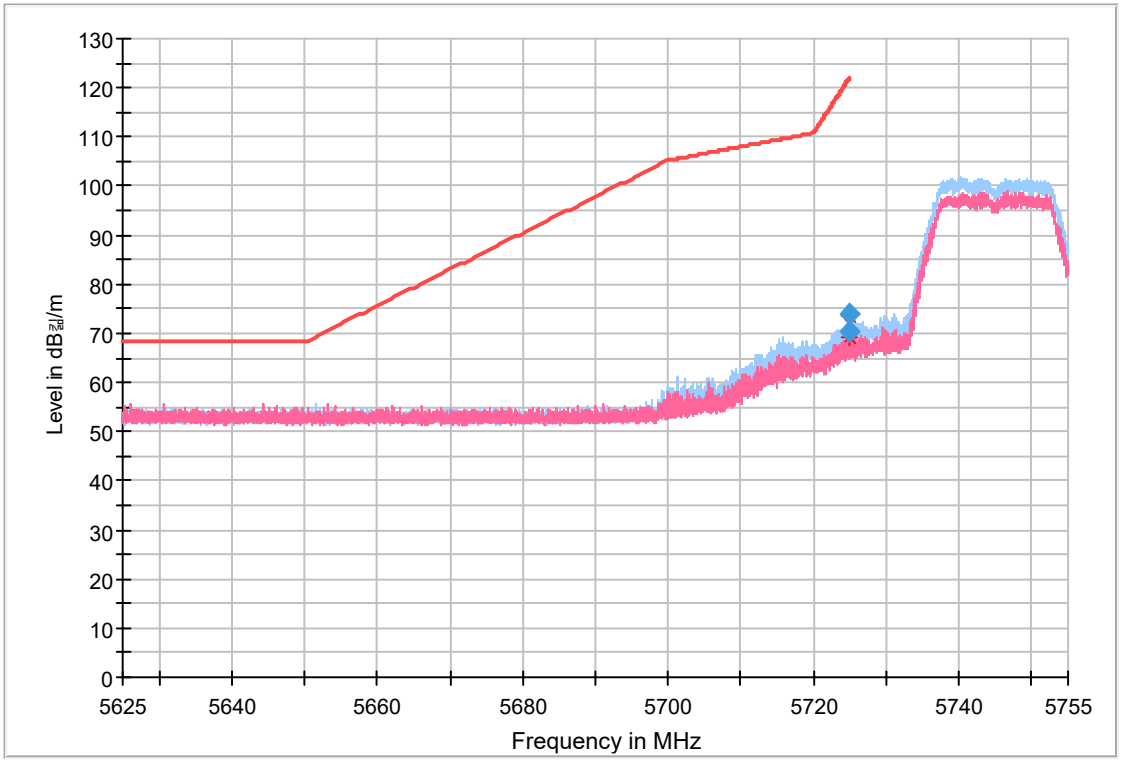


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 725.08	50.11	63.41	---	---	---	250	V	359	13.30	4.79	68.20	---	54.00
5 725.44	47.76	61.06	---	---	---	225	H	306	13.30	7.14	68.20	---	54.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-3_802.11a_5745

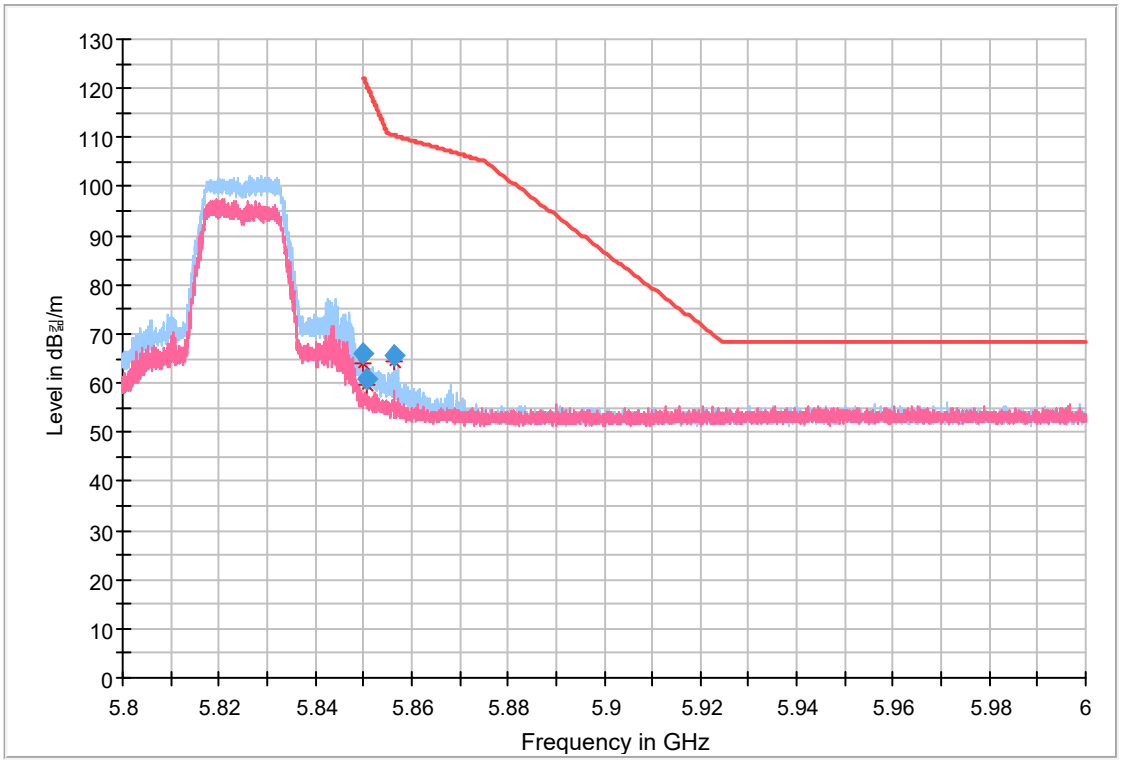


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 724.83	57.06	70.36	---	---	---	250	V	305	13.30	51.45	121.81	---	54.00
5 724.91	60.82	74.12	---	---	---	266	H	301	13.30	47.86	121.98	---	54.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-2C_802.11a_5825

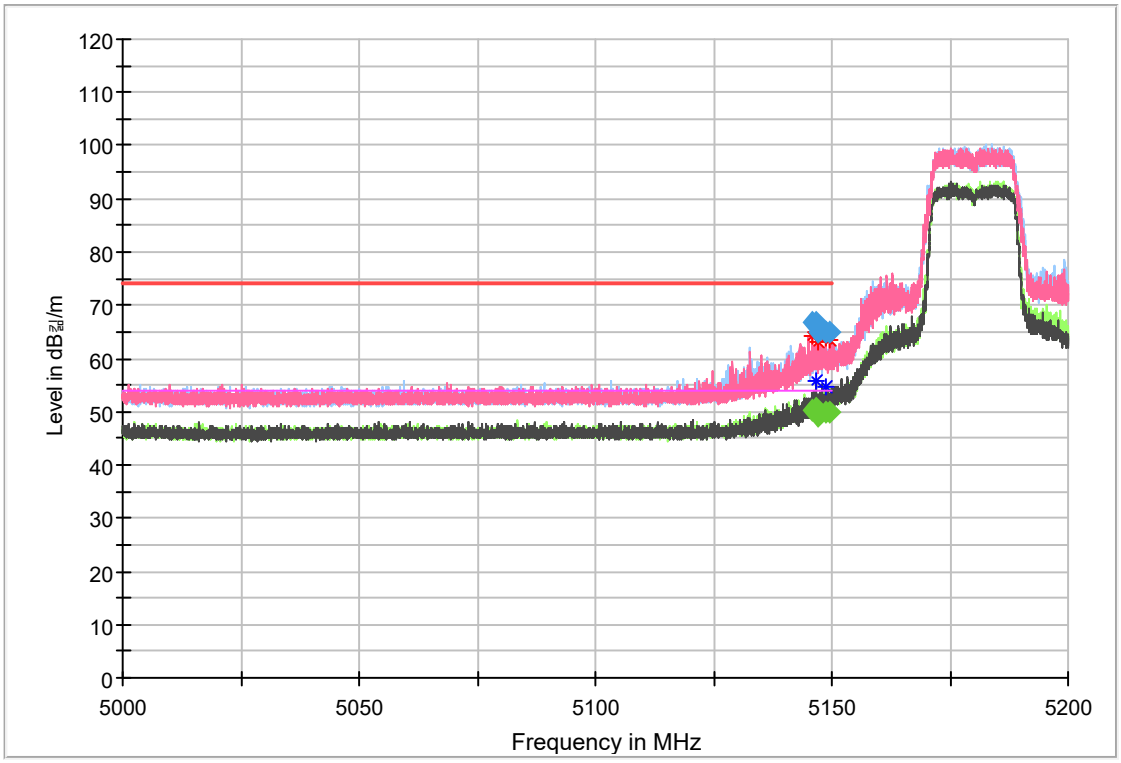


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 850.04	52.61	66.01	---	---	---	260	H	296	13.40	56.10	122.11	---	54.00
5 850.70	47.34	60.74	---	---	---	188	V	10	13.40	59.86	120.60	---	54.00
5 856.46	52.21	65.61	---	---	---	276	H	298	13.40	44.78	110.39	---	54.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-1_802.11n(HT20)_5180

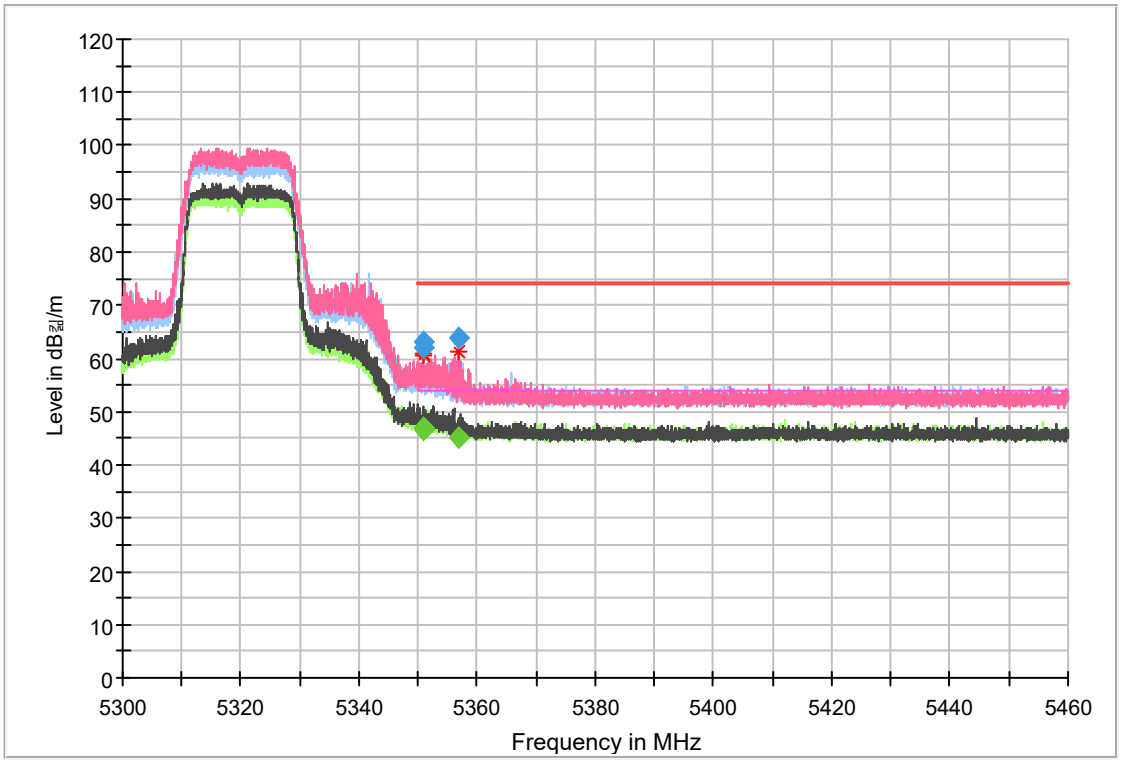


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 145.74	54.21	66.81	---	---	---	150	V	284	12.60	7.19	74.00	---	54.00
5 145.74	---	---	37.70	50.64	0.34	150	V	284	12.60	---	74.00	3.36	54.00
5 146.58	54.01	66.61	---	---	---	150	V	310	12.60	7.39	74.00	---	54.00
5 146.58	---	---	38.07	51.01	0.34	150	V	310	12.60	---	74.00	2.99	54.00
5 147.06	52.42	65.02	---	---	---	317	H	218	12.60	8.98	74.00	---	54.00
5 147.06	---	---	36.45	49.39	0.34	317	H	218	12.60	---	74.00	4.61	54.00
5 148.82	52.26	64.86	---	---	---	173	H	329	12.60	9.14	74.00	---	54.00
5 148.82	---	---	37.29	50.23	0.34	173	H	329	12.60	---	74.00	3.77	54.00
5 149.74	52.29	64.89	---	---	---	260	V	312	12.60	9.11	74.00	---	54.00
5 149.74	---	---	37.37	50.31	0.34	260	V	312	12.60	---	74.00	3.69	54.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-2A_802.11n(HT20)_5320

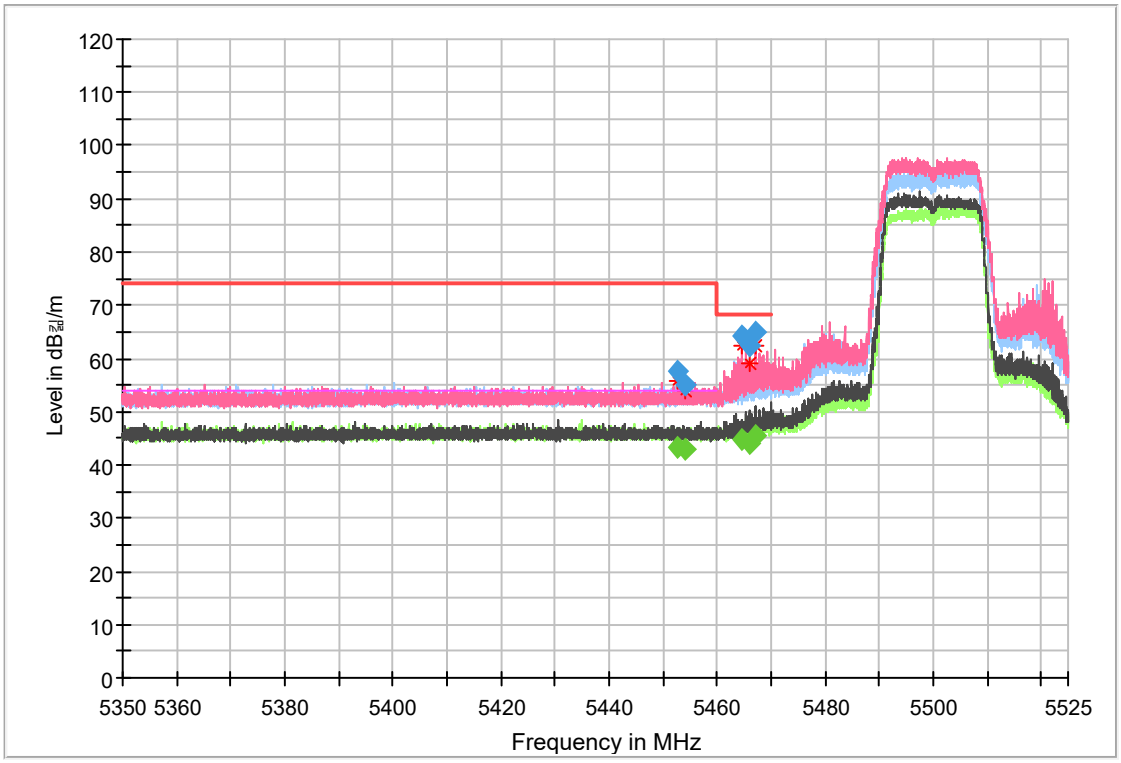


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 350.75	49.46	61.96	---	---	---	250	V	8	12.50	12.04	74.00	---	54.00
5 350.75	---	---	34.22	47.06	0.34	250	V	8	12.50	---	74.00	6.94	54.00
5 350.90	50.47	62.97	---	---	---	150	H	310	12.50	11.03	74.00	---	54.00
5 350.90	---	---	34.34	47.18	0.34	150	H	310	12.50	---	74.00	6.82	54.00
5 356.70	51.38	63.88	---	---	---	250	V	307	12.50	10.12	74.00	---	54.00
5 356.70	---	---	32.69	45.53	0.34	250	V	307	12.50	---	74.00	8.47	54.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-2C_802.11n(HT20)_5500

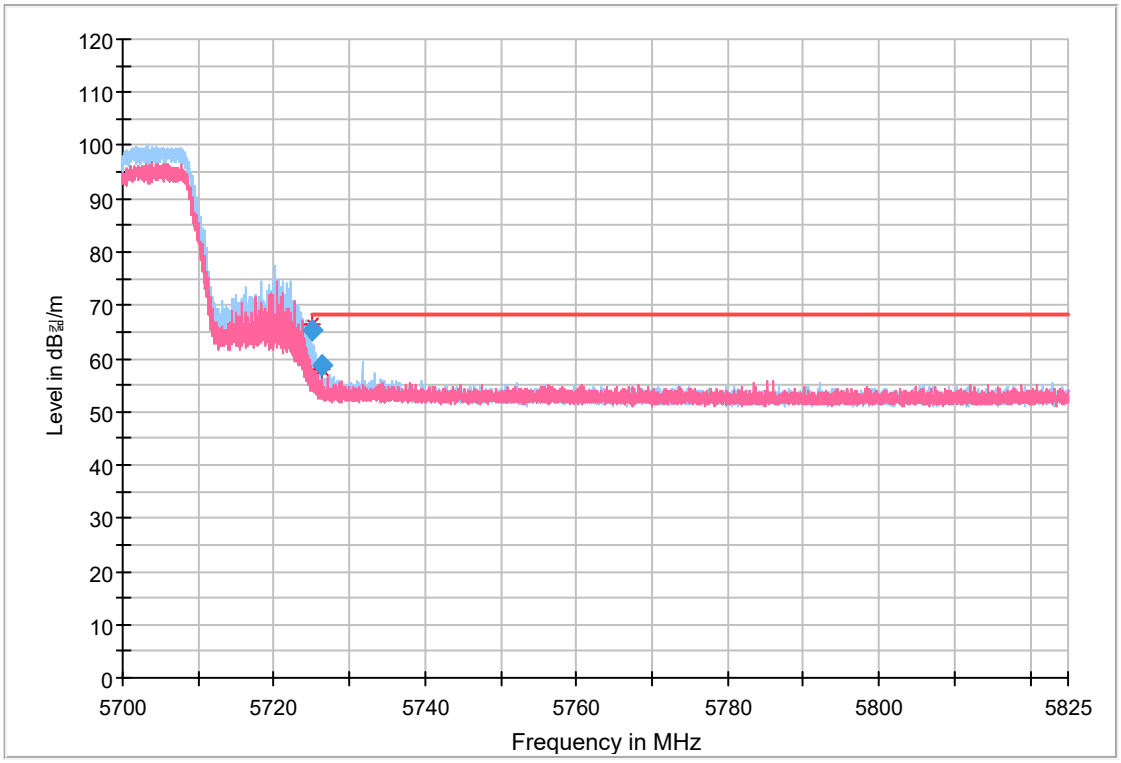


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 452.87	44.97	57.67	---	---	---	250	V	22	12.70	16.33	74.00	---	54.00
5 452.87	---	---	30.47	43.51	0.34	250	V	22	12.70	---	74.00	10.49	54.00
5 454.06	42.41	55.11	---	---	---	250	H	-8	12.70	18.89	74.00	---	54.00
5 454.06	---	---	30.33	43.37	0.34	250	H	-8	12.70	---	74.00	10.63	54.00
5 464.57	51.30	64.10	---	---	---	225	V	315	12.80	4.10	68.20	---	54.00
5 464.57	---	---	31.79	44.93	0.34	225	V	315	12.80	---	74.00	9.07	54.00
5 466.20	49.42	62.22	---	---	---	344	H	342	12.80	5.98	68.20	---	54.00
5 466.20	---	---	31.27	44.41	0.34	344	H	342	12.80	---	74.00	9.59	54.00
5 467.18	52.05	64.85	---	---	---	250	V	332	12.80	3.35	68.20	---	54.00
5 467.18	---	---	32.78	45.92	0.34	250	V	332	12.80	---	74.00	8.08	54.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-2C_802.11n(HT20)_5700

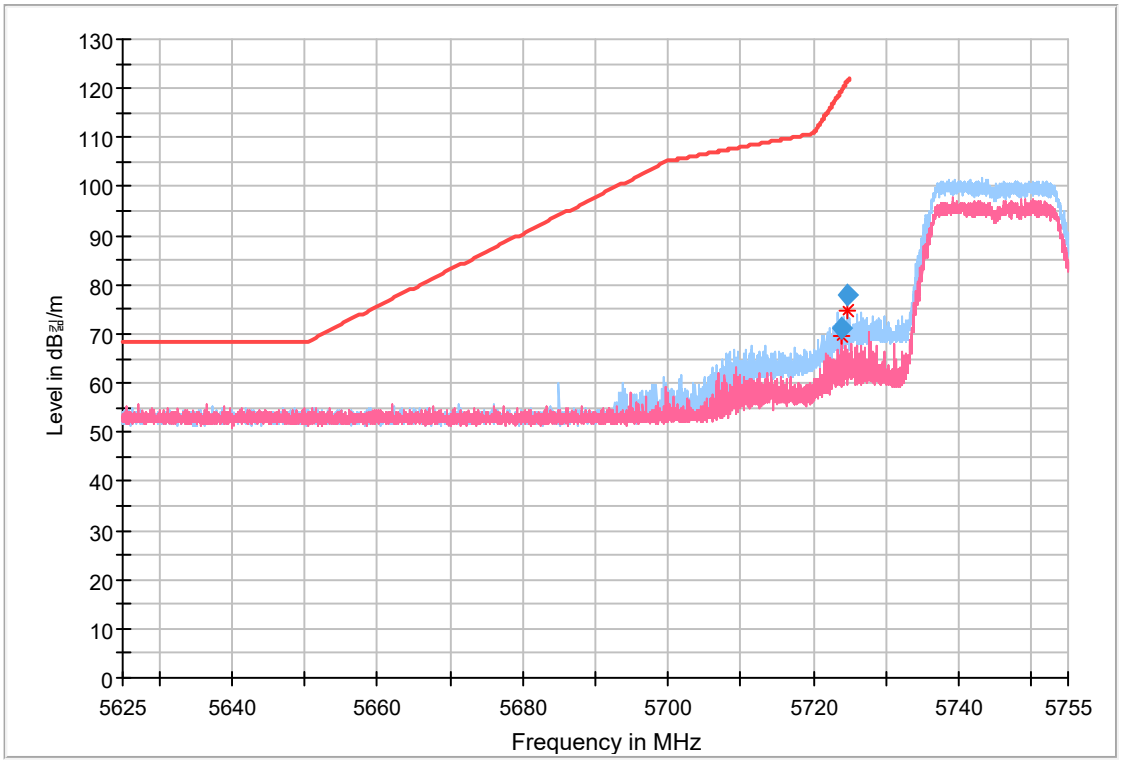


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 725.01	52.15	65.45	---	---	---	250	H	297	13.30	2.75	68.20	---	54.00
5 726.29	45.47	58.77	---	---	---	231	V	8	13.30	9.43	68.20	---	54.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-3_802.11n(HT20)_5745

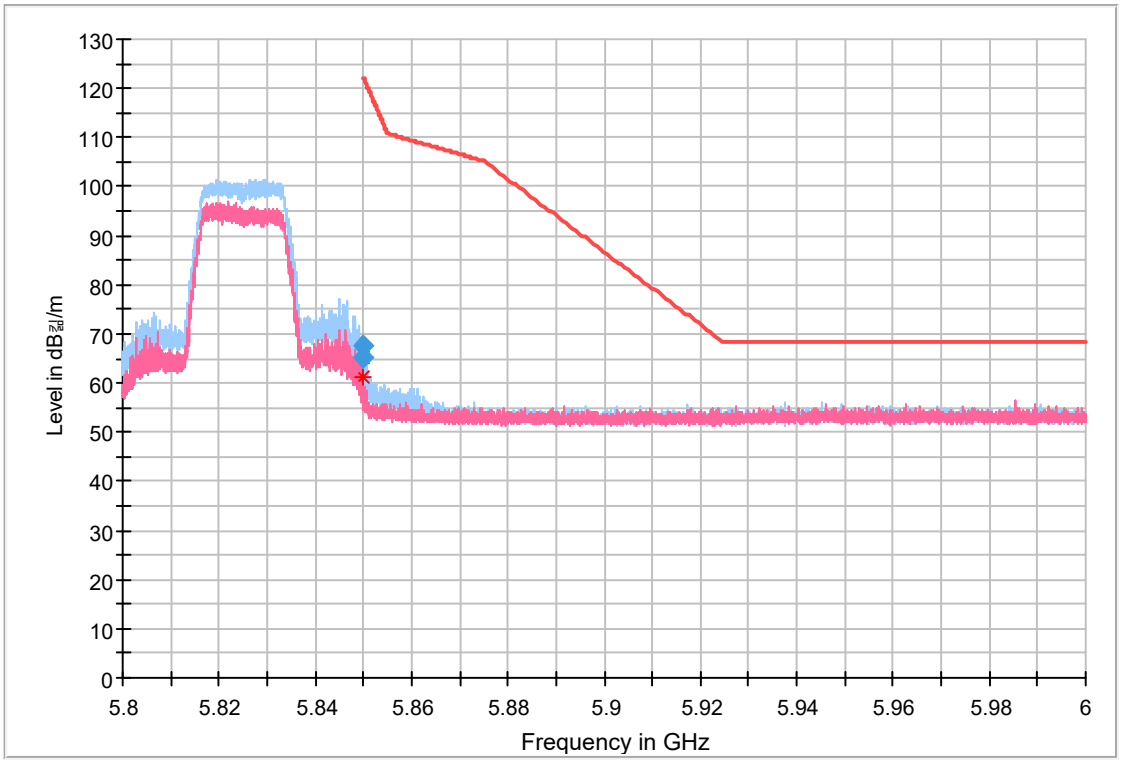


Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5723.75	57.71	71.01	---	---	---	151	V	0	13.30	48.34	119.35	---	54.00
5724.75	64.43	77.73	---	---	---	238	H	315	13.30	43.90	121.63	---	54.00

Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

RSE_U-NII-2C_802.11n(HT20)_5825



Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
5 850.00	54.24	67.64	---	---	---	260	H	277	13.40	54.56	122.20	---	54.00
5 850.08	51.81	65.21	---	---	---	186	V	27	13.40	56.81	122.02	---	54.00

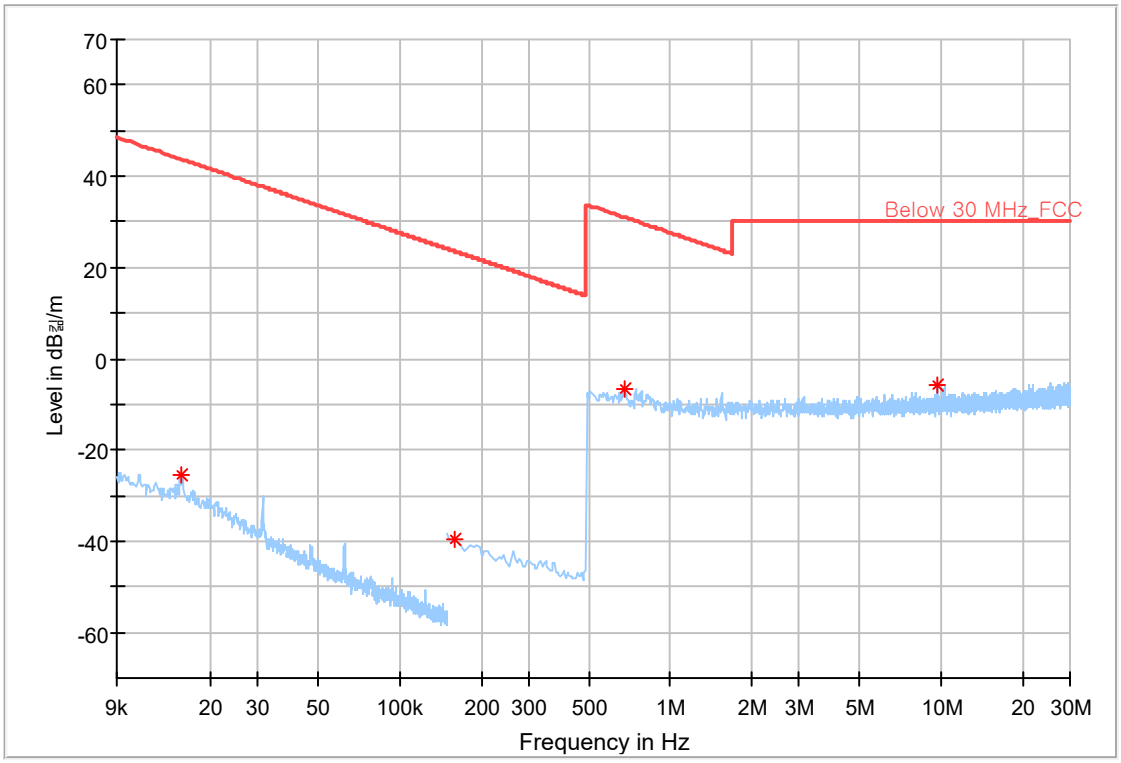
Remarks

1. Peak Result(dBuV/m) = Peak Reading Value(dBuV) + Correction Factor(dB/m)
2. AVG Result(dBuV/m) = AVG Reading Value(dBuV) + DCCF + Correction Factor(dB/m)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/AVG) Result (dBuV/m) – (Peak/AVG) Limit (dBuV/m)

3.5.6 Simultaneous Transmission

3.5.6.1 Radiated Emissions (Below 30 MHz)

Worst case - RSE(Below 30 MHz)_ U-NII-2A_802.11a_5300 + Bluetooth_GFSK_2402_X



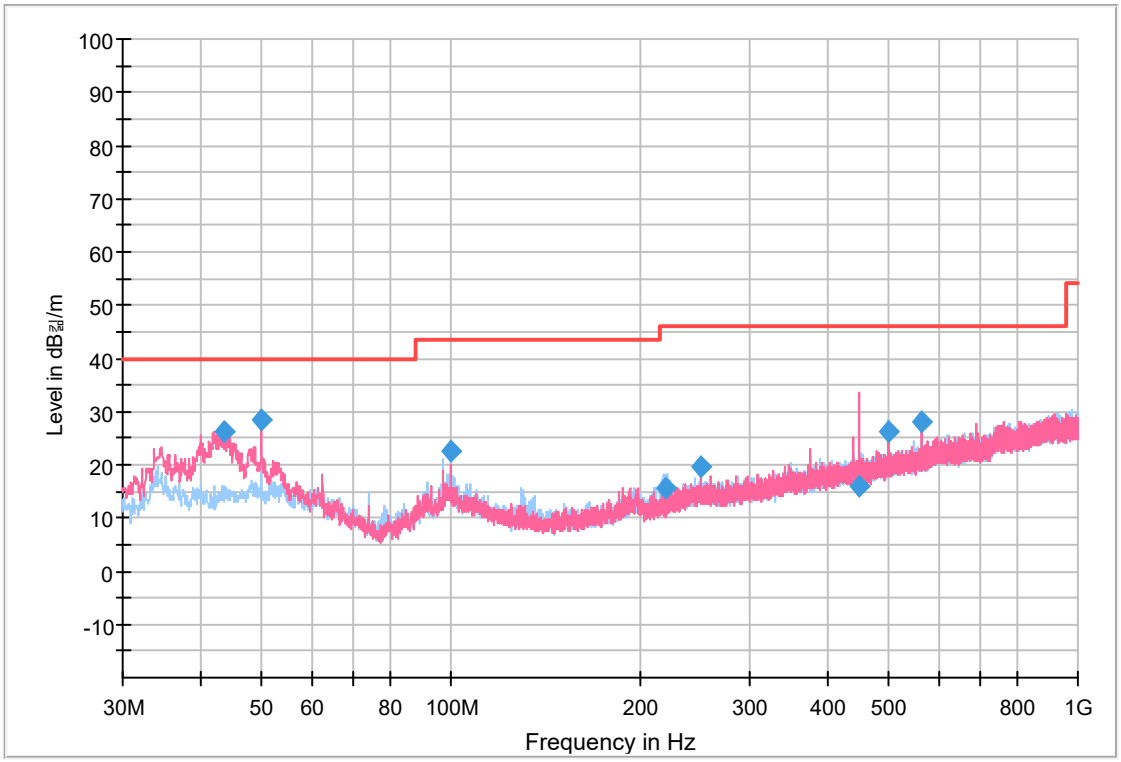
Frequency [MHz]	Peak Reading Value [dBuV]	Peak [dBuV/m]	Distance Correction Factor [dB]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Pol	Azimuth [deg]	Correction Factor [dB/m]
0.02	34.03	-25.47	-80.00	43.67	69.14	100.00	Parallel	251.00	-59.50
0.16	19.69	-39.71	-80.00	23.55	63.26	100.00	Parallel	44.00	-59.40
0.68	12.54	-6.76	-40.00	30.99	37.75	100.00	Parallel	128.00	-19.30
9.73	12.21	-5.89	-40.00	30.00	35.89	100.00	Parallel	22.00	-18.10

Frequency [MHz]	Peak Reading Value [dBuA]	Peak [dBuA/m]	Distance Correction Factor [dB]	Limit [dBuA/m]	Margin [dB]	Height [cm]	Pol	Azimuth [deg]	Correction Factor [dB/m]
0.02	-17.47	-76.97	-80.00	-7.83	69.14	100.00	Parallel	251.00	-59.50
0.16	-31.81	-91.21	-80.00	-27.95	63.26	100.00	Parallel	44.00	-59.40
0.68	-38.96	-58.26	-40.00	-20.51	37.75	100.00	Parallel	128.00	-19.30
9.73	-39.29	-57.39	-40.00	-21.50	35.89	100.00	Parallel	22.00	-18.10

Remarks
1. Peak(dBuV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB) + Distance Factor(dB)
2. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin(dB) = (Peak) Result (dBµV/m) – (Peak) Limit (dBµV/m)

3.5.6.2 Radiated Emissions (Below 1 GHz)

Worst case - RSE(Below 1 GHz)_ U-NII-2A_802.11a_5300 + Bluetooth_GFSK_2402

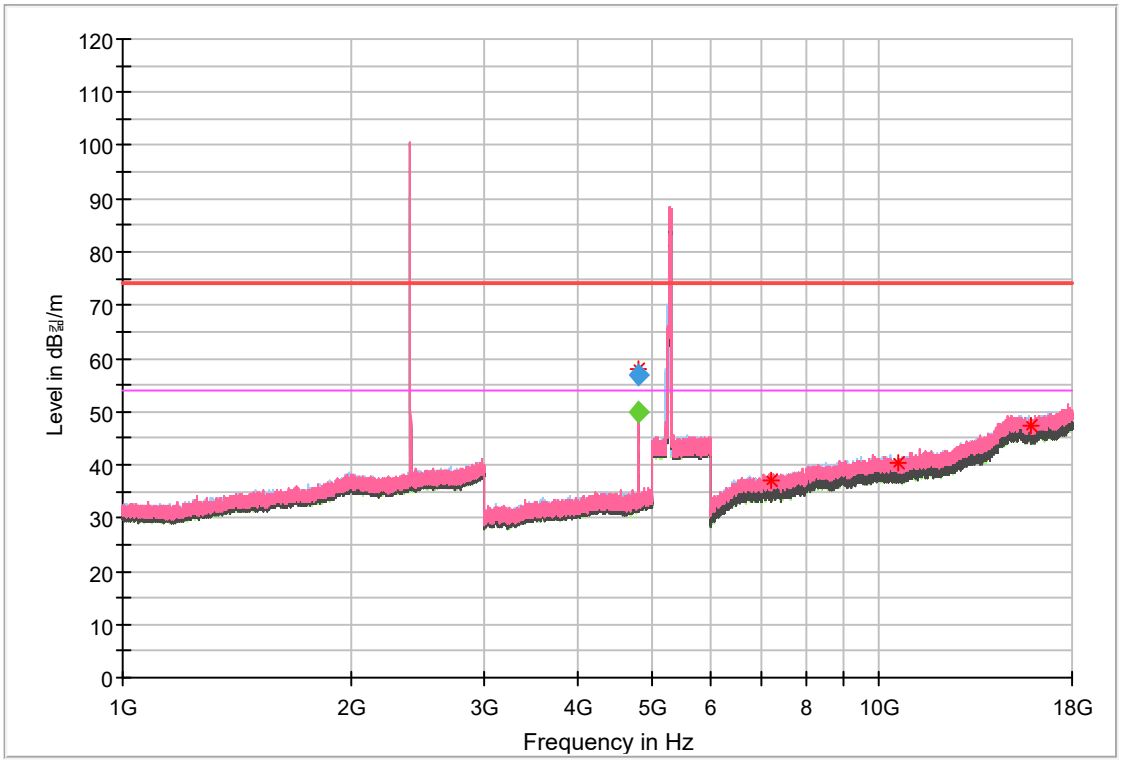


Frequency [MHz]	Quasi Reading Value [dBuV]	Quasi Peak [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Pol	Azimuth [deg]	Correction Factor [dB/m]
43.63	44.93	26.13	40.00	13.87	100	V	143	-18.80
49.98	47.08	28.38	40.00	11.62	150	V	212	-18.70
99.99	43.25	22.65	43.52	20.87	286	H	276	-20.60
220.99	36.14	15.44	46.02	30.58	255	H	331	-20.70
250.00	38.40	19.70	46.02	26.32	250	V	84	-18.70
447.25	30.50	16.00	46.02	30.02	142	V	153	-14.50
500.01	39.66	26.36	46.02	19.66	286	H	137	-13.30
562.53	40.31	28.01	46.02	18.01	285	H	221	-12.30

Remarks
1. Quasi Peak(dBµV/m) = Quasi Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB)
3. Margin(dB) = (Quasi Peak) Result (dBµV/m) – (Quasi Peak) Limit (dBµV/m)

3.5.6.3 Radiated Emissions (Above 1 GHz)

RSE(Above 1 GHz)_ U-NII-2A_802.11a_5300 + Bluetooth_GFSK_2402



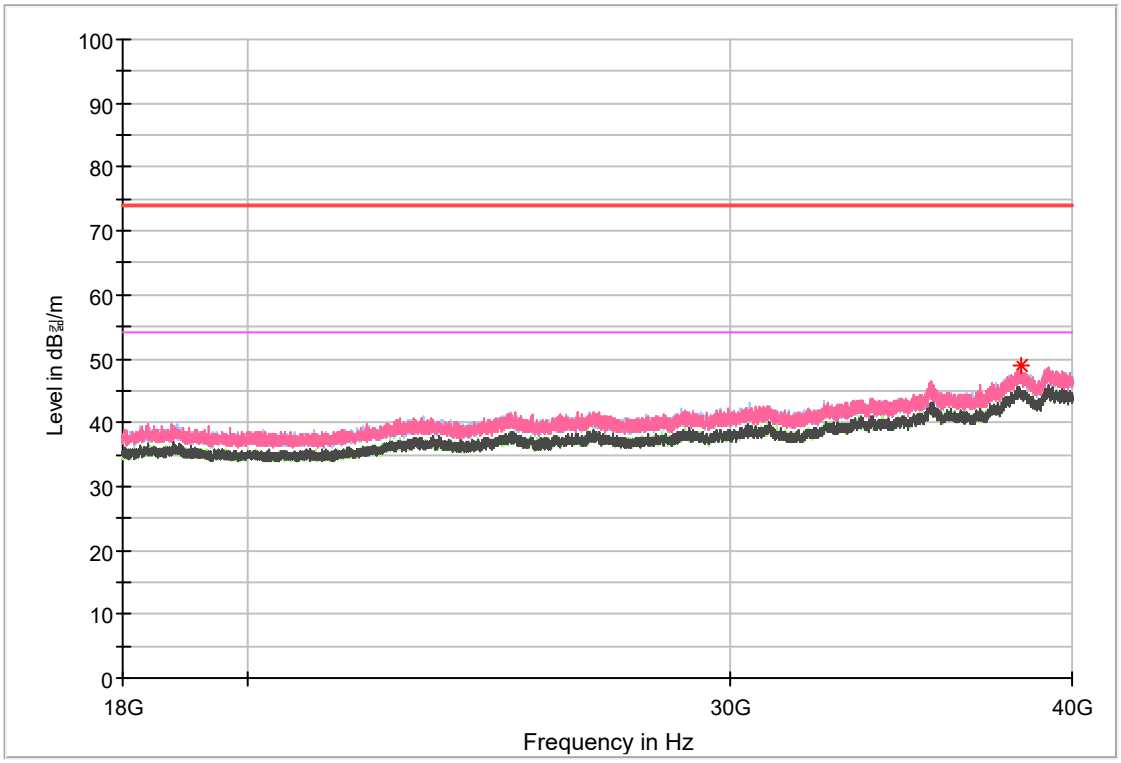
	Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
*	4 804.00	54.46	56.96	---	---	---	236	V	302	2.50	17.04	74.00	---	54.00
*	4 804.00	---	---	24.84	27.34	-22.50	236	V	302	2.50	---	54.00	26.66	54.00
	7 205.25	29.22	37.02	---	---	---	200	V	74	7.80	36.98	74.00	---	54.00
	10 597.88	28.16	40.36	---	---	---	300	H	206	12.20	33.64	74.00	---	54.00
*	15 899.25	27.12	47.42	---	---	---	200	V	358	20.30	26.58	74.00	---	54.00

Remarks

1. Peak Result(dBµV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Average Result(dBµV/m) = Average Reading Value(dBµV/m) + DCCF + Correction Factor(dB)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/Average) Result (dBµV/m) – (Peak/Average) Limit (dBµV/m)
6. 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
7. * - indicates frequency in CFR Pt 15 / IC RSS-Restricted Band.

3.5.6.4 Radiated Emissions (Above 18 GHz)

RSE(Above 18 GHz)_ U-NII-2A_802.11a_5300 + Bluetooth_GFSK_2402



Frequency [MHz]	Peak Reading Value [dBuV]	Peak Result [dBuV/m]	AVG Reading Value [dBuV]	AVG Result [dBuV/m]	DCCF [dB]	Height [cm]	Pol [H/V]	Azimuth [deg]	Correction Factor [dB/m]	Peak Margin [dB]	Peak Limit [dBuV/m]	AVG Margin [dB]	AVG Limit [dBuV/m]
38 332.13	40.07	48.87	-	-	-	200	H	0	8.80	19.33	68.20	-	-

Remarks

1. Peak Result(dBµV/m) = Peak Reading Value(dBµV/m) + Correction Factor(dB)
2. Average Result(dBµV/m) = Average Reading Value(dBµV/m) + DCCF + Correction Factor(dB)
3. DCCF(Duty Cycle Correction Factor) = 10 x Log(1/Duty Cycle)
4. Correction Factor(dB) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + Distance Factor (dB)
5. Margin(dB) = (Peak/Average) Result (dBµV/m) – (Peak/Average) Limit (dBµV/m)
6. 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
7. * - indicates frequency in CFR Pt 15 / IC RSS-Restricted Band.

3.6 AC Conducted Emissions (150 kHz to 30 MHz)

3.6.1 Regulation

§15.207(a) : Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the boundary between the frequency ranges.

	Conducted limit (dBµV)	
Frequency of emission (MHz)	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

3.6.2 Test Procedure

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 / 50 µH of coupling impedance for the measuring instrument.

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

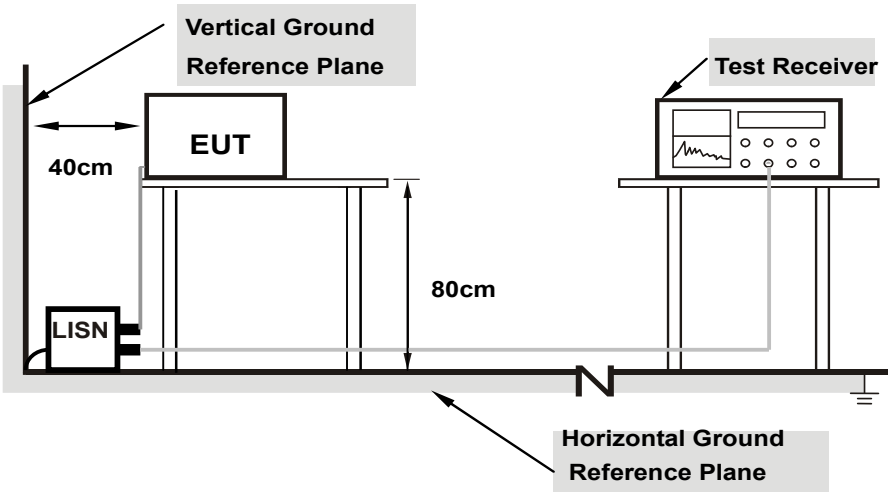
c) The frequency range from 150 kHz to 30 MHz was searched. Emission levels under (Limit – 20 dB) was not recorded.

Remark : The resolution bandwidth and video bandwidth of test receiver is 9 kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15 MHz – 30 MHz.

3.6.3 Deviation from Test Standard

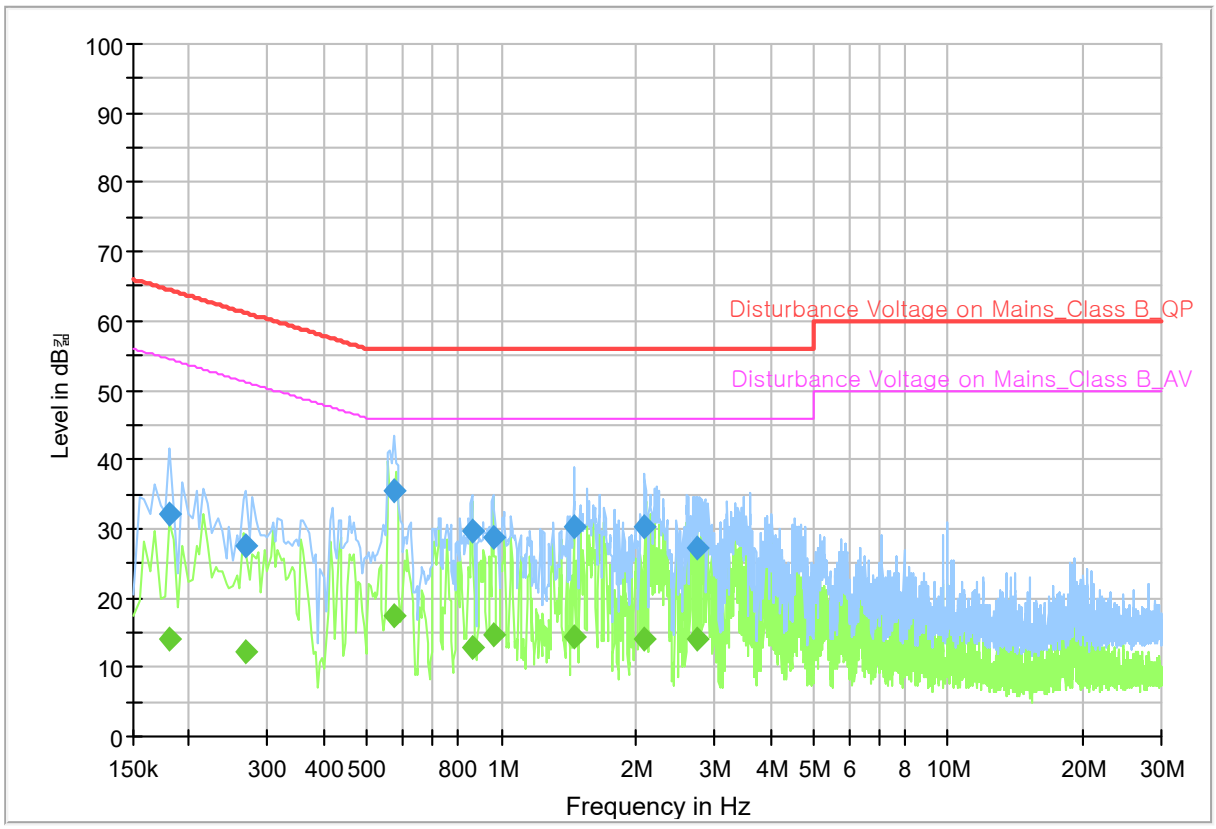
No deviation.

3.6.4 Test Setup



3.6.5 Test Result

Worst Case_U-NII-2A_802.11a_5300



Frequency [MHz]	Quasi Peak Reading Value [dBuV]	Quasi Peak Result [dBuV]	CAV Reading Value [dBuV]	CAV Result [dBuV]	Line	Correction Factor [dB/m]	Quasi Peak Margin [dBuV]	Quasi Peak Limit [dBuV]	CAV Margin [dBuV]	CAV Limit [dBuV]
0.18	22.11	32.21	---	---	L1	10.10	32.24	64.45	---	---
0.18	---	---	3.98	14.08	L1	10.10	---	---	40.37	54.45
0.27	17.73	27.53	---	---	N	9.80	33.63	61.16	---	---
0.27	---	---	2.50	12.30	N	9.80	---	---	38.86	51.16
0.58	25.49	35.49	---	---	L1	10.00	20.51	56.00	---	---
0.58	---	---	7.30	17.30	L1	10.00	---	---	28.70	46.00
0.86	19.85	29.75	---	---	N	9.90	26.25	56.00	---	---
0.86	---	---	3.03	12.93	N	9.90	---	---	33.07	46.00
0.96	18.78	28.68	---	---	N	9.90	27.32	56.00	---	---
0.96	---	---	4.70	14.60	N	9.90	---	---	31.40	46.00
1.46	20.37	30.27	---	---	N	9.90	25.73	56.00	---	---
1.46	---	---	4.40	14.30	N	9.90	---	---	31.70	46.00
2.09	20.32	30.12	---	---	L1	9.80	25.88	56.00	---	---
2.09	---	---	4.40	14.20	L1	9.80	---	---	31.80	46.00
2.75	17.33	27.23	---	---	N	9.90	28.77	56.00	---	---
2.75	---	---	4.25	14.15	N	9.90	---	---	31.85	46.00

Remarks
1. Final Value (QP and/or CAV) = Reading Value (QP and/or CAV) + Corr. (LISN Insertion Loss + Cable Loss)
Margin (QP and/or CAV) = Limit – Final Value (QP and/or CAV)
QP = Quasi-Peak, CAV = CISPR-Average, Corr. = Correction Factor
2. Two graphs measured for both Live (L1) and Neutral (N) of the LISN are combined into one graph.

4 U-NII DFS Rule Requirements

4.1 Regulation

§15.407(h) : Transmit Power Control (TPC) and Dynamic Frequency Selection (DFS).

(1) Transmit power control (TPC). U-NII devices operating in the 5.25-5.35 GHz band and the 5.47-5.725 GHz band shall employ a TPC mechanism. The U-NII device is required to have the capability to operate at least 6 dB below the mean EIRP value of 30 dBm. A TPC mechanism is not required for systems with an e.i.r.p. of less than 500 mW.

(2) Radar Detection Function of Dynamic Frequency Selection (DFS). U-NII devices operating with any part of its 26 dB emission bandwidth in the 5.25-5.35 GHz and 5.47-5.725 GHz bands shall employ a DFS radar detection mechanism to detect the presence of radar systems and to avoid co-channel operation with radar systems. Operators shall only use equipment with a DFS mechanism that is turned on when operating in these bands. The device must sense for radar signals at 100 percent of its emission bandwidth. The minimum DFS detection threshold for devices with a maximum e.i.r.p. of 200 mW to 1 W is −64 dBm. For devices that operate with less than 200 mW e.i.r.p. and a power spectral density of less than 10 dBm in a 1 MHz band, the minimum detection threshold is −62 dBm. The detection threshold is the received power averaged over 1 microsecond referenced to a 0 dBi antenna. For the initial channel setting, the manufacturers shall be permitted to provide for either random channel selection or manual channel selection.

(i) Operational Modes. The DFS requirement applies to the following operational modes:

(A) The requirement for channel availability check time applies in the master operational mode.

(B) The requirement for channel move time applies in both the master and slave operational modes.

(ii) Channel Availability Check Time. A U-NII device shall check if there is a radar system already operating on the channel before it can initiate a transmission on a channel and when it has to move to a new channel. The U-NII device may start using the channel if no radar signal with a power level greater than the interference threshold values listed in paragraph (h)(2) of this section, is detected within 60 seconds.

(iii) Channel Move Time. After a radar's presence is detected, all transmissions shall cease on the operating channel within 10 seconds. Transmissions during this period shall consist of normal traffic for a maximum of 200 ms after detection of the radar signal. In addition, intermittent management and control signals can be sent during the remaining time to facilitate vacating the operating channel.

(iv) Non-occupancy Period. A channel that has been flagged as containing a radar system, either by a channel availability check or in-service monitoring, is subject to a non-occupancy period of at least 30 minutes. The non-occupancy period starts at the time when the radar system is detected.

(i) Device Security. All U-NII devices must contain security features to protect against modification of software by unauthorized parties.

(1) Manufacturers must implement security features in any digitally modulated devices capable of operating in any of the U-NII bands, so that third parties are not able to reprogram the device to operate outside the parameters for which the device was certified. The software must prevent the user from operating the transmitter with operating frequencies, output power, modulation types or other radio frequency parameters outside those that were approved for the device. Manufacturers may use means including, but not limited to the use of a private network

that allows only authenticated users to download software, electronic signatures in software or coding in hardware that is decoded by software to verify that new software can be legally loaded into a device to meet these requirements and must describe the methods in their application for equipment authorization.

(2) Manufacturers must take steps to ensure that DFS functionality cannot be disabled by the operator of the U-NII device.

4.2 DFS Overview

A U-NII network will employ a DFS function to detect signals from radar systems and to avoid co-channel operation with these systems. This applies to the 5250 – 5350 MHz and/or 5470 – 5725 MHz bands.

Within the context of the operation of the DFS function, a U-NII device will operate in either Master Mode or Client Mode. U-NII devices operating in Client Mode can only operate in a network controlled by a U-NII device operating in Master Mode.

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

Requirement	**Operational Mode**	
	Master Device or Client With Radar Detection	**Client With Radar Detection**
DFS Detection Threshold	Yes	Not Required
Channel Closing Transmission Time	Yes	Yes
Channel Move Time	Yes	Yes
U-NII Detection Bandwidth	Yes	Not Required

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

4.3 DFS Detection Threshold

Maximum Transmit Power	Value (See Notes 1, 2 and 3)
EIRP ≥ 200 milliwatt	-64 dBm
EIRP < 200 milliwatt and power spectral density < 10 dBm/MHz	-62 dBm
EIRP < 200 milliwatt that do not meet the power spectral density requirement	-64 dBm
Note 1: This is the level at the input of the receiver assuming a 0 dBi receive antenna. **Note 2**: Throughout these test procedures an additional 1 dB has been added to the amplitude of the test transmission waveforms to account for variations in measurement equipment. This will ensure that the test signal is at or above the detection threshold level to trigger a DFS response. **Note3**: EIRP is based on the highest antenna gain. For MIMO devices refer to KDB Publication 662911 D01.	

4.4 Response Requirements

Parameter	Value
Non-occupancy period	Minimum 30 minutes
Channel Availability Check Time	60 seconds
Channel Move Time	10 seconds See Note 1.
Channel Closing Transmission Time	200 milliseconds + and aggregate of 60 milliseconds over remaining 10 second period. See Notes 1 and 2.
U-NII Detection Bandwidth	Minimum 100 % of the U-NII 99 % transmission power bandwidth. See Note 3.
Note 1: Channel Move Time and the Channel Closing Transmission Time should be performed with Radar Type 0. The measurement timing begins at the end of the Radar Type 0 burst. **Note 2**: The Channel Closing Transmission Time is comprised of 200 milliseconds starting at the beginning of the Channel Move Time plus any additional intermittent control signals required to facilitate a Channel move (an aggregate of 60 milliseconds) during the remainder of the 10 second period. The aggregate duration of control signals will not count quiet periods in between transmissions. **Note 3**: During the U-NII Detection Bandwidth detection test, radar type 0 should be used. For each frequency step the minimum percentage of detection is 90 percent. Measurements are performed with no data traffic.	

4.5 Radar Test Waveforms

- Parameters for Short Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Number of Pulses	Minimum Percentage of Successful Detection	Minimum Number-of Trials
0	1	1428	18	See Note 1	See Note 1
1	1	Test A: 15 unique PRI values randomly selected from the list of 23 PRI values in Table 5a	Roundup $\left\{\left(\frac{1}{360}\right)\cdot\left(\frac{19\cdot 10^6}{\mathrm{PRI}_{\mu\mathrm{sec}}}\right)\right\}$	60%	30
		Test B: 15 unique PRI values randomly selected within the range of 518-3066 µsec, with a minimum increment of 1 µsec, excluding PRI values selected in Test A			
2	1-5	150-230	23-29	60%	30
3	6-10	200-500	16-18	60%	30
4	11-20	200-500	12-16	60%	30
Aggregate (Radar Types 1-4)				80%	120
Note 1: Short Pulse Radar Type 0 should be used for the detection bandwidth test, channel move time, and channel closing time tests.					

- Parameters for Long Pulse Radar Test Waveforms

Radar Type	Pulse Width (µsec)	Chirp Width (MHz)	PRI (µsec)	Number of Pulses per Burst	Number of Bursts	Minimum Percentage of Successful Detection	Minimum Number-of Trials
5	50-100	5-20	1000-2000	1-3	8-20	80%	30

- Parameters for Frequency Hopping Radar Test Waveforms

Radar Type	Pulse Width (µsec)	PRI (µsec)	Pulses per Hop	Hopping Rate (kHz)	Hopping Sequence Length (msec)	Minimum Percentage of Successful Detection	Minimum Number-of Trials
6	1	333	9	0.333	300	70%	30

4.6 Test Procedure

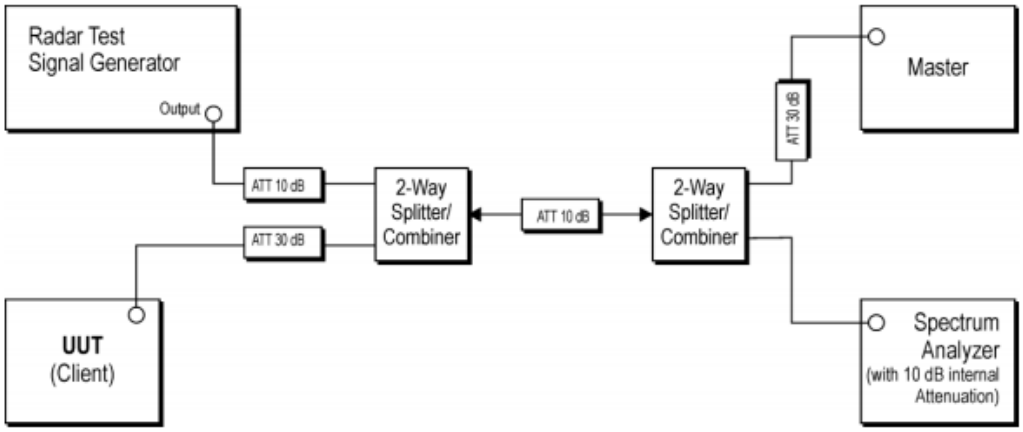
4.6.1 DFS Measurement System

The sections below contain block diagrams that focus on the Radar Waveform injection path for each of the different conducted setups to be used. Each setup consists of a signal generator, analyzer (spectrum analyzer or vector signal analyzer), Master Device, Client Device, plus power combiner/splitters and attenuators. The Client Device is set up to Associate with the Master Device. The designation of the UUT (Master Device or Client Device) and the device into which the Radar Waveform is injected varies among the setups.

Other topologies may be used provided that: (1) the radar and UUT signals can be discriminated from each other on the analyzer and (2) the radar DFS Detection Threshold level at the UUT is stable.

To address point (1), for typical UUT power levels and typical minimum antenna gains, the topologies shown will result in the following relative amplitudes of each signal as displayed on the analyzer: the Radar Waveform level is the highest, the signal from the UUT is the next highest, while the signal from the device that is associated with the UUT is the lowest. Attenuator values may need to be adjusted for particular configurations.

To address point (2), the isolation characteristic between ports 1 and 2 of a power combiner/splitter are extremely sensitive to the impedance presented to the common port, while the insertion loss characteristic between the common port and (port 1, for example) are relatively insensitive to the impedance presented to (port 2, in this example). Thus, the isolation between ports 1 and 2 should never be part of the path that establishes the radar DFS Detection Threshold. The 10 dB attenuator after the signal generator is specified as a precaution; since many of the radar test waveforms will require typical signal generators to operate with their ALC turned off, the source match will generally be degraded from the closed loop specifications.



4.7 Deviation from Test Standard

No deviation.

4.8 Test Results

4.8.1 Radar Waveform and Traffic signal

Test Mode : Device Operating in Client without Radar Detection Mode.

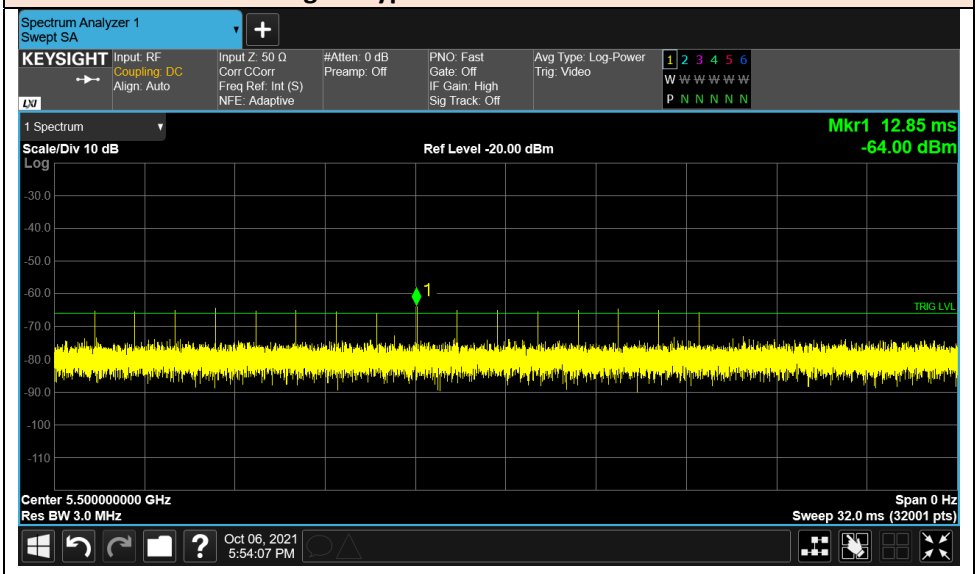
Client with injection at the Master. (The radar test signals are injected into the Master Device),

DFS Detection Threshold

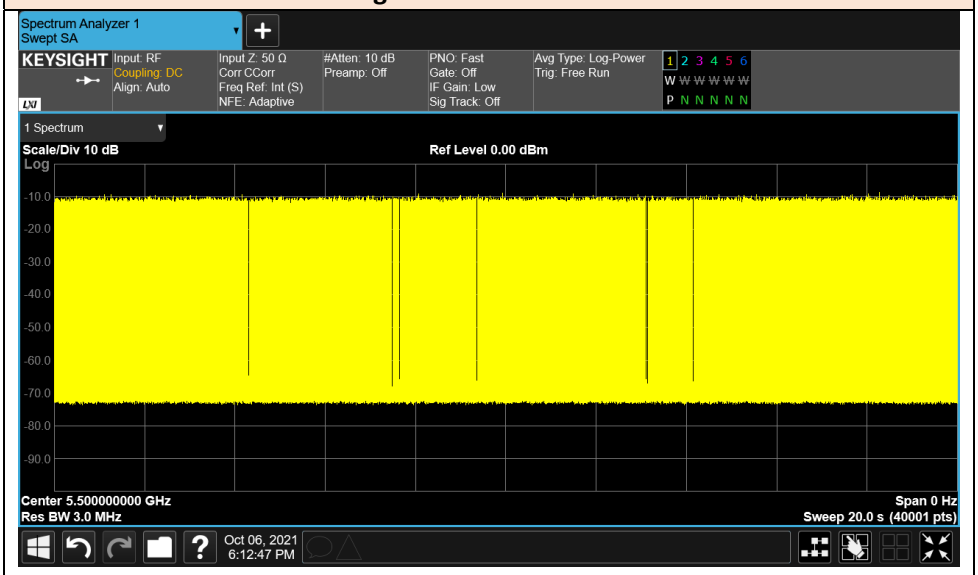
For detection threshold level of -64 dBm, the required signal strength at AP antenna location is -64 dBm.

[20 MHz BW]

Radar Signal Type 0 for 20 MHz Bandwidth

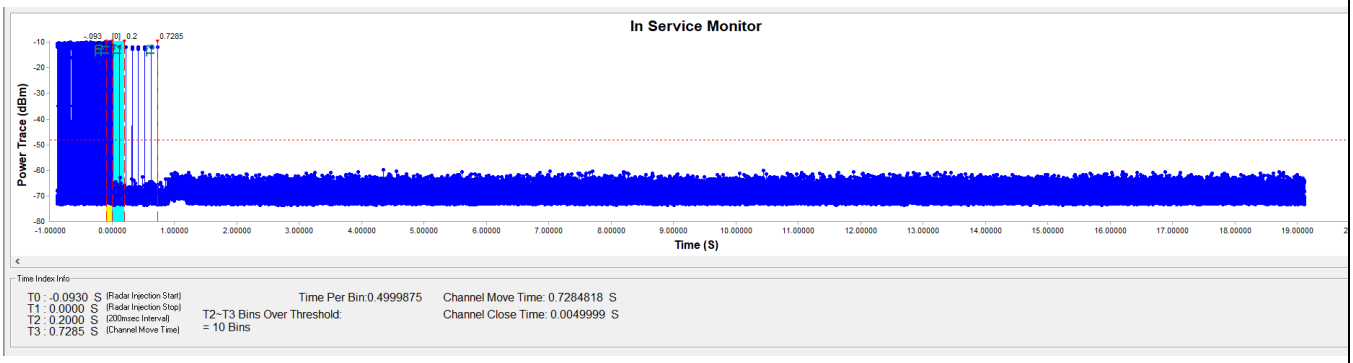


Traffic signal for 20 MHz Bandwidth



4.8.2 Channel Closing Transmission and Channel Move Time

[20 MHz BW]

Channel Move Time for 20 MHz Bandwidth

Channel Closing Transmission Time for 20 MHz Bandwidth

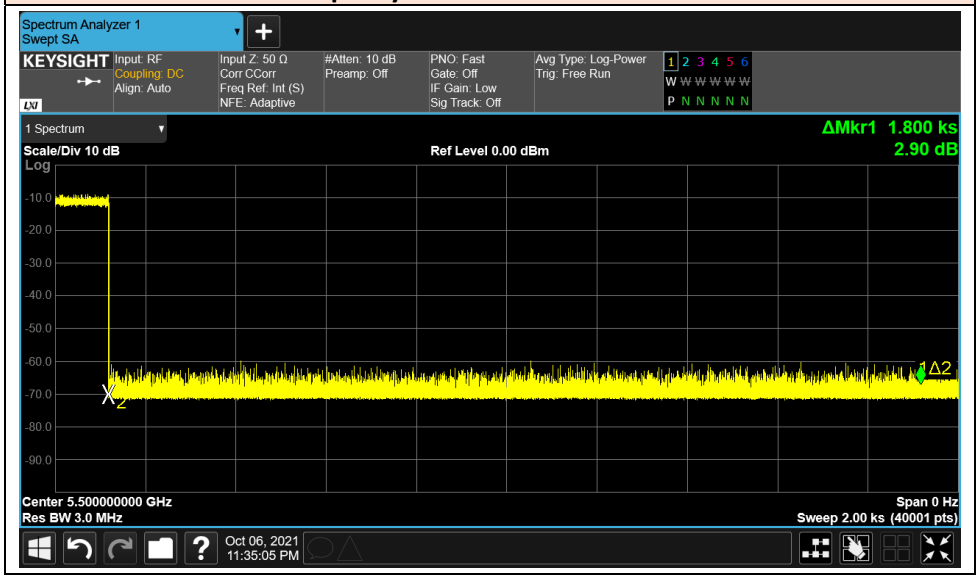

4.8.3 Non-Occupancy Period

Result

No EUT transmissions were observed on the test channel during the 10 minutes observation period.

[20 MHz BW]

Non-Occupancy Period for 20 MHz Bandwidth



Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services Korea. Our laboratories are FCC recognized accredited test firms and accredited and approved according to ISO/IEC 17025.

Test Firm Name : BV CPS ADT Korea Ltd.

Address : Innoplex No.2 106, Sinwon-ro 306, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675 KOREA

FCC

Designation Number : KR0158
Test Firm Registration Number : 666061

ISED

Designation Number : KR0158
Test Firm Registration Number : 25944

If you have any comments, please feel free to contact us at the following:

Email: Meyer.Shin@bureauveritas.com
Web Site: www.bureauveritas.co.kr/cps/eaw

The address and road map of all our labs can be found in our web site also.

- End of report -