# Appendix B. Radiated Spurious Emission

Test Engineer :	Bill Chang, Ken Wu, and JC Liang	Temperature :	20~23°C
rest Engineer.		Relative Humidity :	54~56%

#### Band 1 - 5150~5250MHz

## WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB/m )	( dB )	(dB)	( cm )	(deg)	(P/A)	(H/V)
		5132.45	48.82	-25.18	74	41.78	31.56	8.95	33.47	155	351	Р	Н
		5127.05	39.31	-14.69	54	32.27	31.56	8.95	33.47	155	351	Α	Н
	*	5180	100.68	-	-	93.56	31.62	8.97	33.47	155	351	Р	Н
	*	5180	93.14	-	-	86.02	31.62	8.97	33.47	155	351	Α	Н
802.11a													Н
CH 36													Н
5180MHz		5052.5	47.39	-26.61	74	40.51	31.46	8.89	33.47	165	9	Р	V
3100M112		5078	38.5	-15.5	54	31.58	31.5	8.89	33.47	165	9	Α	V
	*	5180	93.79	1	-	86.67	31.62	8.97	33.47	165	9	Р	V
	*	5180	86.23	-	-	79.11	31.62	8.97	33.47	165	9	Α	V
													V
													V
		5088.35	47.04	-26.96	74	40.09	31.5	8.92	33.47	167	0	Р	Н
		5119.7	38.47	-15.53	54	31.48	31.54	8.92	33.47	167	0	Α	Н
	*	5220	101.28	1	-	94.11	31.66	8.98	33.47	167	0	Р	Н
	*	5220	92.98	-	-	85.81	31.66	8.98	33.47	167	0	Α	Н
000 44		5449.11	48.74	-25.26	74	41.06	31.94	9.22	33.48	167	0	Р	Н
802.11a CH 44		5429.86	39.66	-14.34	54	32.05	31.92	9.17	33.48	167	0	Α	Н
5220MHz		5094.65	46.88	-27.12	74	39.91	31.52	8.92	33.47	152	39	Р	٧
JZZUWII IZ		5106.8	38.41	-15.59	54	31.42	31.54	8.92	33.47	152	39	Α	V
	*	5220	93.72	-	-	86.55	31.66	8.98	33.47	152	39	Р	V
	*	5220	85.39	1	-	78.22	31.66	8.98	33.47	152	39	Α	V
		5416.77	46.82	-27.18	74	39.23	31.9	9.17	33.48	152	39	Р	V
		5442.62	37.83	-16.17	54	30.17	31.92	9.22	33.48	152	39	Α	٧

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		5109.8	47.94	-26.06	74	40.95	31.54	8.92	33.47	194	66	Р	Н
		5085.8	38.6	-15.4	54	31.65	31.5	8.92	33.47	194	66	Α	Н
	*	5240	102.51	-	-	95.32	31.68	8.98	33.47	194	66	Р	Н
	*	5240	95.1	-	-	87.91	31.68	8.98	33.47	194	66	Α	Н
		5459.23	46.98	-27.02	74	39.3	31.94	9.22	33.48	194	66	Р	Н
2.11a		5450.98	39.58	-14.42	54	31.9	31.94	9.22	33.48	194	66	Α	Н
H 48 10MHz		5111.3	47.07	-26.93	74	40.08	31.54	8.92	33.47	199	16	Р	V
+UIVIMZ		5096.3	38.4	-15.6	54	31.43	31.52	8.92	33.47	199	16	Α	V
	*	5240	91.99	-	-	84.8	31.68	8.98	33.47	199	16	Р	V
	*	5240	83.61	-	-	76.42	31.68	8.98	33.47	199	16	Α	V
		5385.42	47.48	-26.52	74	39.97	31.86	9.13	33.48	199	16	Р	V
		5451.75	37.68	-16.32	54	30	31.94	9.22	33.48	199	16	Α	V

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#### WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	(dB)	( cm )	( deg )	(P/A)	(H/V)
		10360	43.5	-30.5	74	58.12	39.79	13.09	67.5	100	0	Р	Н
		15540	45.31	-28.69	74	55.55	38.6	16.55	65.39	100	0	Р	Н
902 44 6													Н
802.11a													Н
CH 36 5180MHz		10360	41.67	-32.33	74	56.29	39.79	13.09	67.5	100	0	Р	٧
3 I OUIVITIZ		15540	41.78	-32.22	74	52.02	38.6	16.55	65.39	100	0	Р	V
													٧
													V
		10440	42.22	-31.78	74	56.72	39.89	13.11	67.5	100	0	Р	Н
		15660	46.19	-27.81	74	56.77	38.23	16.56	65.37	100	0	Р	Н
													Н
802.11a													Н
CH 44		10440	41.04	-32.96	74	55.54	39.89	13.11	67.5	100	0	Р	V
5220MHz		15660	40.07	-33.93	74	50.65	38.23	16.56	65.37	100	0	Р	٧
													V
													V
		10480	41.32	-32.68	74	55.74	39.97	13.11	67.5	100	0	Р	Н
		15720	45.28	-28.72	74	56.04	38.03	16.57	65.36	100	0	Р	Н
													Н
802.11a													Н
CH 48		10480	41.43	-32.57	74	55.85	39.97	13.11	67.5	100	0	Р	V
5240MHz		15720	42.12	-31.88	74	52.88	38.03	16.57	65.36	100	0	Р	V
													V
													V
				1					]				

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#### **Emission below 1GHz**

# WIFI 802.11a (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V
		74.01	28.29	-11.71	40	46.17	12.87	1.04	31.79			Р	Н
		102.9	30.6	-12.9	43.5	44.67	16.43	1.28	31.78			Р	Н
		199.83	37.28	-6.22	43.5	51.42	16	1.64	31.78	150	81	Р	Н
		323.1	30.92	-15.08	46	40.23	20.35	2.11	31.77			Р	Н
		631.8	27.45	-18.55	46	30.52	26.01	2.96	32.04			Р	Н
		957.3	33.36	-12.64	46	30.08	30.58	3.68	30.98			Р	Н
													Н
													Н
													Н
													Н
													Н
802.11a													Н
LF		43.77	35.78	-4.22	40	48.86	18.06	0.67	31.81	188	72	Р	V
		81.03	24.36	-15.64	40	41.29	13.82	1.04	31.79			Р	٧
		201.45	33.73	-9.77	43.5	47.83	16.04	1.64	31.78			Р	٧
		317.5	28.02	-17.98	46	37.5	20.18	2.11	31.77			Р	V
		692	28.86	-17.14	46	31.15	26.61	3.14	32.04			Р	V
		956.6	33.49	-12.51	46	30.2	30.59	3.68	30.98			Р	V
													V
													V
													V
													V
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													V

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# WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V)
		5081.6	46.8	-27.2	74	39.88	31.5	8.89	33.47	283	17	Р	Н
		5081	38.83	-15.17	54	31.91	31.5	8.89	33.47	283	17	Α	Н
	*	5180	98.21	-	-	91.09	31.62	8.97	33.47	283	17	Р	Н
	*	5180	90.62	-	-	83.5	31.62	8.97	33.47	283	17	Α	Н
802.11a													Н
CH 36													Н
5180MHz		5132.6	46.79	-27.21	74	39.75	31.56	8.95	33.47	237	331	Р	V
010011112		5140.55	39.58	-14.42	54	32.52	31.58	8.95	33.47	237	331	Α	V
	*	5180	100.22	-	-	93.1	31.62	8.97	33.47	237	331	Р	V
	*	5180	92.63	-	-	85.51	31.62	8.97	33.47	237	331	Α	V
													V
													V
		5032.4	47.19	-26.81	74	40.36	31.44	8.86	33.47	249	18	Р	Н
		5112.8	38.3	-15.7	54	31.31	31.54	8.92	33.47	249	18	Α	Н
	*	5220	96.31	-	-	89.14	31.66	8.98	33.47	249	18	Р	Н
	*	5220	88.24	-	-	81.07	31.66	8.98	33.47	249	18	Α	Н
000.44		5414.57	46.48	-27.52	74	38.89	31.9	9.17	33.48	249	18	Р	Н
802.11a CH 44		5453.18	37.52	-16.48	54	29.84	31.94	9.22	33.48	249	18	Α	Н
5220MHz		5005.7	47.18	-26.82	74	40.37	31.42	8.86	33.47	210	333	Р	V
OZZVIVII IZ		5114.15	38.36	-15.64	54	31.37	31.54	8.92	33.47	210	333	Α	V
	*	5220	97.05	-	-	89.88	31.66	8.98	33.47	210	333	Р	V
	*	5220	89.26	-	-	82.09	31.66	8.98	33.47	210	333	Α	V
		5425.24	47.49	-26.51	74	39.9	31.9	9.17	33.48	210	333	Р	V
		5436.79	37.65	-16.35	54	30.04	31.92	9.17	33.48	210	333	Α	V

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5080.1 5240 5240 5424.8 5447.46 5019.95	38.35 93.54 84.59 46.81 37.83 47.49	-15.65 - - -27.19 -16.17 -26.51	54 - - 74 54	31.43 86.35 77.4 39.22 30.15	31.5 31.68 31.68 31.9 31.94	8.89 8.98 8.98 9.17 9.22	33.47 33.47 33.47 33.48	282 282 282 282 282	338 338 338 338 338	A P A A	H H H
5240 5424.8 5447.46	84.59 46.81 37.83	- -27.19 -16.17	- 74 54	77.4 39.22	31.68 31.9	8.98 9.17	33.47 33.48	282 282	338 338	A P	Н
5424.8 5447.46	46.81 37.83	-27.19 -16.17	74 54	39.22	31.9	9.17	33.48	282	338	Р	Н
5447.46	37.83	-16.17	54								
				30.15	31.94	9.22	33.48	282	338	Δ	
5019.95	47.49	-26.51	74					_	000		Н
			74	40.68	31.42	8.86	33.47	270	10	Р	V
5091.8	38.54	-15.46	54	31.57	31.52	8.92	33.47	270	10	Α	V
5240	95.87	-	-	88.68	31.68	8.98	33.47	270	10	Р	V
5240	87.31	-	-	80.12	31.68	8.98	33.47	270	10	Α	V
5444.38	46.74	-27.26	74	39.08	31.92	9.22	33.48	270	10	Р	V
5396.86	37.98	-16.02	54	30.45	31.88	9.13	33.48	270	10	Α	V
	5240 5444.38 5396.86 er spurious t	5240 87.31 5444.38 46.74 5396.86 37.98 er spurious found.	5240 87.31 - 6444.38 46.74 -27.26 6396.86 37.98 -16.02  er spurious found.	5240 87.31 5444.38 46.74 -27.26 74 5396.86 37.98 -16.02 54  er spurious found.	5240     87.31     -     -     80.12       5444.38     46.74     -27.26     74     39.08       5396.86     37.98     -16.02     54     30.45	5240     87.31     -     -     80.12     31.68       5444.38     46.74     -27.26     74     39.08     31.92       5396.86     37.98     -16.02     54     30.45     31.88       er spurious found.	5240     87.31     -     -     80.12     31.68     8.98       5444.38     46.74     -27.26     74     39.08     31.92     9.22       5396.86     37.98     -16.02     54     30.45     31.88     9.13	5240     87.31     -     -     80.12     31.68     8.98     33.47       5444.38     46.74     -27.26     74     39.08     31.92     9.22     33.48       5396.86     37.98     -16.02     54     30.45     31.88     9.13     33.48       er spurious found.	5240     87.31     -     -     80.12     31.68     8.98     33.47     270       5444.38     46.74     -27.26     74     39.08     31.92     9.22     33.48     270       5396.86     37.98     -16.02     54     30.45     31.88     9.13     33.48     270       er spurious found.	5240     87.31     -     -     80.12     31.68     8.98     33.47     270     10       5444.38     46.74     -27.26     74     39.08     31.92     9.22     33.48     270     10       5396.86     37.98     -16.02     54     30.45     31.88     9.13     33.48     270     10       er spurious found.	5240     87.31     -     -     80.12     31.68     8.98     33.47     270     10     A       5444.38     46.74     -27.26     74     39.08     31.92     9.22     33.48     270     10     P       5396.86     37.98     -16.02     54     30.45     31.88     9.13     33.48     270     10     A

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#### WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
2		(MHz)	( dBµV/m )	( dB )	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	
		10360	48.55	-25.45	74	63.17	39.79	13.09	67.5	100	0	Р	Н
		15540	42.3	-31.7	74	52.54	38.6	16.55	65.39	100	0	Р	Н
802.11a													Н
CH 36													Н
5180MHz		10360	47.84	-26.16	74	62.46	39.79	13.09	67.5	100	0	Р	٧
3100WIF12		15540	41.03	-32.97	74	51.27	38.6	16.55	65.39	100	0	Р	٧
													V
													V
		10440	47.83	-26.17	74	62.33	39.89	13.11	67.5	100	0	Р	Н
		15660	41.94	-32.06	74	52.52	38.23	16.56	65.37	100	0	Р	Н
222.44													Н
802.11a													Н
CH 44 5220MHz		10440	45.35	-28.65	74	59.85	39.89	13.11	67.5	100	0	Р	V
3220WITZ		15660	40.38	-33.62	74	50.96	38.23	16.56	65.37	100	0	Р	٧
													٧
													٧
		10480	48.71	-25.29	74	63.13	39.97	13.11	67.5	100	0	Р	Н
		15720	41.47	-32.53	74	52.23	38.03	16.57	65.36	100	0	Р	Н
													Н
802.11a													Н
CH 48		10480	45.45	-28.55	74	59.87	39.97	13.11	67.5	100	0	Р	٧
5240MHz		15720	39.65	-34.35	74	50.41	38.03	16.57	65.36	100	0	Р	٧
													V
													V

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#### **Emission below 1GHz**

# WIFI 802.11a (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos		Avg.	
2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )		(H/V
		71.04	25.65	-14.35	40	43.88	12.52	1.04	31.79			Р	Н
		99.93	30.43	-13.07	43.5	44.83	16.1	1.28	31.78			Р	Н
		213.06	35.49	-8.01	43.5	49.28	16.2	1.79	31.78	212	300	Р	Н
		313.3	27.38	-18.62	46	36.96	20.08	2.11	31.77			Р	Н
		731.2	29.13	-16.87	46	30.55	27.33	3.25	32			Р	Н
		997.2	33.32	-20.68	54	29.69	30.51	3.78	30.66			Р	Н
													Н
													Н
													Н
													Н
													Н
802.11a													Н
LF		42.96	35.45	-4.55	40	47.97	18.62	0.67	31.81	146	215	Р	V
		202.8	32.92	-10.58	43.5	47.01	16.05	1.64	31.78			Р	V
		272.46	29.69	-16.31	46	40.25	19.27	1.94	31.77			Р	V
		309.8	26.35	-19.65	46	36.03	19.97	2.11	31.76			Р	V
		687.1	27.73	-18.27	46	30.06	26.57	3.14	32.04			Р	V
		963.6	33.1	-20.9	54	29.77	30.57	3.68	30.92			Р	V
													V
													V
													V
													V
													V
													V

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# Band 1 5150~5250MHz WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.		, <b></b> .		Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	(dB)	( dB )	( cm )	( deg )		
		5028.2	47.35	-26.65	74	40.52	31.44	8.86	33.47	250	13	Р	Н
		5144.9	39.15	-14.85	54	32.09	31.58	8.95	33.47	250	13	Α	Н
	*	5180	100.46	-	-	93.34	31.62	8.97	33.47	250	13	Р	Н
	*	5180	93.77	-	-	86.65	31.62	8.97	33.47	250	13	Α	Н
802.11n													Н
HT20													Н
CH 36		5015.45	48.29	-25.71	74	41.48	31.42	8.86	33.47	207	8	Р	V
5180MHz		5148.65	40.45	-13.55	54	33.39	31.58	8.95	33.47	207	8	Α	V
	*	5180	104.04	-	-	96.92	31.62	8.97	33.47	207	8	Р	V
	*	5180	97.19	-	-	90.07	31.62	8.97	33.47	207	8	Α	V
													٧
													V
		5015.75	47.87	-26.13	74	41.06	31.42	8.86	33.47	215	0	Р	Н
		5117.9	38.84	-15.16	54	31.85	31.54	8.92	33.47	215	0	Α	Н
	*	5220	99.22	-	-	92.05	31.66	8.98	33.47	215	0	Р	Н
	*	5220	91.58	-	-	84.41	31.66	8.98	33.47	215	0	Α	Н
802.11n		5444.82	47.78	-26.22	74	40.12	31.92	9.22	33.48	215	0	Р	Н
HT20		5433.05	38.54	-15.46	54	30.93	31.92	9.17	33.48	215	0	Α	Н
CH 44		5018	47.8	-26.2	74	40.99	31.42	8.86	33.47	192	9	Р	V
5220MHz		5147	39.12	-14.88	54	32.06	31.58	8.95	33.47	192	9	Α	V
	*	5220	104.25	-	-	97.08	31.66	8.98	33.47	192	9	Р	V
	*	5220	97.21	-	-	90.04	31.66	8.98	33.47	192	9	Α	V
		5434.37	48.54	-25.46	74	40.93	31.92	9.17	33.48	192	9	Р	V
		5429.86	41.29	-12.71	54	33.68	31.92	9.17	33.48	192	9	Α	V

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		T	T	1				ı	1		1	1	
		5102	49.6	-24.4	74	42.63	31.52	8.92	33.47	213	0	Р	Н
		5097.5	38.75	-15.25	54	31.78	31.52	8.92	33.47	213	0	Α	Н
	*	5240	97.23		-	90.04	31.68	8.98	33.47	213	0	Р	Н
	*	5240	91.23	-	-	84.04	31.68	8.98	33.47	213	0	Α	Н
802.11n		5421.61	46.78	-27.22	74	39.19	31.9	9.17	33.48	213	0	Р	Н
HT20		5454.72	38.53	-15.47	54	30.85	31.94	9.22	33.48	213	0	Α	Н
CH 48		5082.8	48.24	-25.76	74	41.29	31.5	8.92	33.47	219	11	Р	V
5240MHz		5123	38.97	-15.03	54	31.93	31.56	8.95	33.47	219	11	Α	٧
	*	5240	103.94	-	-	96.75	31.68	8.98	33.47	219	11	Р	V
	*	5240	96.44	-	-	89.25	31.68	8.98	33.47	219	11	Α	٧
		5395.32	47.59	-26.41	74	40.06	31.88	9.13	33.48	219	11	Р	V
		5451.42	40.47	-13.53	54	32.79	31.94	9.22	33.48	219	11	Α	٧
						•							

Remark

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<sup>1.</sup> No other spurious found.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

## WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/\
		10360	47.46	-26.54	74	62.08	39.79	13.09	67.5	100	0	Р	Н
		15540	43.11	-30.89	74	53.35	38.6	16.55	65.39	100	0	Р	Н
802.11n													Н
HT20													Н
CH 36		10360	49.26	-24.74	74	63.88	39.79	13.09	67.5	100	0	Р	V
5180MHz		15540	47.25	-26.75	74	57.49	38.6	16.55	65.39	100	0	Р	٧
													V
													V
		10440	47.73	-26.27	74	62.23	39.89	13.11	67.5	100	0	Р	Н
		15660	41.86	-32.14	74	52.44	38.23	16.56	65.37	100	0	Р	Н
802.11n													Н
HT20													Н
CH 44		10440	55.86	-18.14	74	70.36	39.89	13.11	67.5	197	42	Р	V
5220MHz		10440	44.94	-9.06	54	59.44	39.89	13.11	67.5	197	42	Α	V
		15660	46.28	-27.72	74	56.86	38.23	16.56	65.37	100	0	Р	V
													V
		10480	46.54	-27.46	74	60.96	39.97	13.11	67.5	100	0	Р	Н
		15720	41.28	-32.72	74	52.04	38.03	16.57	65.36	100	0	Р	Н
802.11n													Н
HT20													Н
CH 48		10480	49.82	-24.18	74	64.24	39.97	13.11	67.5	100	0	Р	V
5240MHz		15720	45.64	-28.36	74	56.4	38.03	16.57	65.36	100	0	Р	V
													V
													V

2. All results are PASS against Peak and Average limit line.

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# Band 1 5150~5250MHz WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1+2	Note	Frequency ( MHz )	Level	Over Limit ( dB )	Limit Line ( dBµV/m )	Read Level (dBµV)	Antenna Factor ( dB/m )	Cable Loss ( dB )	Preamp Factor ( dB )	Ant Pos ( cm )	Table Pos ( deg )	Peak Avg. (P/A)	
		5115.5	48.39	-25.61	74	41.4	31.54	8.92	33.47	220	7	Р	Н
		5149.4	41.39	-12.61	54	34.33	31.58	8.95	33.47	220	7	Α	Н
	*	5190	94.58	-	-	87.46	31.62	8.97	33.47	220	7	Р	Н
	*	5190	86.6	-	-	79.48	31.62	8.97	33.47	220	7	Α	Н
802.11n		5405.44	47.04	-26.96	74	39.47	31.88	9.17	33.48	220	7	Р	Н
HT40		5414.79	38.76	-15.24	54	31.17	31.9	9.17	33.48	220	7	Α	Н
CH 38		5150	54.56	-19.44	74	47.5	31.58	8.95	33.47	223	10	Р	V
5190MHz		5149.1	45.16	-8.84	54	38.1	31.58	8.95	33.47	223	10	Α	V
	*	5190	99.47	-	-	92.35	31.62	8.97	33.47	223	10	Р	V
	*	5190	91.28	-	-	84.16	31.62	8.97	33.47	223	10	Α	V
		5366.06	47.31	-26.69	74	39.82	31.84	9.13	33.48	223	10	Р	V
		5356.82	39.58	-14.42	54	32.16	31.82	9.08	33.48	223	10	Α	V
		5065.85	47.63	-26.37	74	40.73	31.48	8.89	33.47	218	0	Р	Н
		5105.75	39.35	-14.65	54	32.36	31.54	8.92	33.47	218	0	Α	Н
	*	5230	95.14	-	-	87.95	31.68	8.98	33.47	218	0	Р	Н
	*	5230	86.75	-	-	79.56	31.68	8.98	33.47	218	0	Α	Н
802.11n		5394.11	46.46	-27.54	74	38.95	31.86	9.13	33.48	218	0	Р	Н
HT40		5431.73	38.65	-15.35	54	31.04	31.92	9.17	33.48	218	0	Α	Н
CH 46		5038.85	47.38	-26.62	74	40.53	31.46	8.86	33.47	196	11	Р	V
5230MHz		5107.85	39.71	-14.29	54	32.72	31.54	8.92	33.47	196	11	Α	V
	*	5230	98.57	-	-	91.38	31.68	8.98	33.47	196	11	Р	V
	*	5230	91.01	-	-	83.82	31.68	8.98	33.47	196	11	Α	V
		5376.07	48.35	-25.65	74	40.86	31.84	9.13	33.48	196	11	Р	V
		5377.06	39.98	-14.02	54	32.49	31.84	9.13	33.48	196	11	Α	V

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## WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol
Ant. 1+2		(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	(H/\
		10380	43.66	-30.34	74	58.26	39.81	13.09	67.5	100	0	Р	Н
		15570	42.2	-31.8	74	52.55	38.49	16.55	65.39	100	0	Р	Н
802.11n													Н
HT40													Н
CH 38		10380	47.06	-26.94	74	61.66	39.81	13.09	67.5	100	0	Р	V
5190MHz		15570	44.4	-29.6	74	54.75	38.49	16.55	65.39	100	0	Р	V
													٧
													V
		10460	44.39	-29.61	74	58.86	39.92	13.11	67.5	100	0	Р	Н
		15690	40.96	-33.04	74	51.63	38.13	16.56	65.36	100	0	Р	Н
802.11n													Н
HT40													Н
CH 46		10460	47.81	-26.19	74	62.28	39.92	13.11	67.5	100	0	Р	V
5230MHz		15690	42.88	-31.12	74	53.55	38.13	16.56	65.36	100	0	Р	V
													V
													V

Remark

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<sup>2.</sup> All results are PASS against Peak and Average limit line.

# Band 1 5150~5250MHz WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor (dB)	Pos ( cm )	Pos ( deg )	Avg. (P/A)	(H/V)
		5147.9	50.97	-23.03	74	43.91	31.58	8.95	33.47	216	0	Р	Н
		5117.45	46.99	-7.01	54	40	31.54	8.92	33.47	216	0	Α	Н
	*	5210	92.33	-	-	85.16	31.66	8.98	33.47	216	0	Р	Н
	*	5210	86.57	-	-	79.4	31.66	8.98	33.47	216	0	Α	Н
802.11ac		5417.21	46.49	-27.51	74	38.9	31.9	9.17	33.48	216	0	Р	Н
VHT80		5392.9	39.95	-14.05	54	32.44	31.86	9.13	33.48	216	0	Α	Н
CH 42		5129.75	53.6	-20.4	74	46.56	31.56	8.95	33.47	192	11	Р	V
5210MHz		5113.7	48.51	-5.49	54	41.52	31.54	8.92	33.47	192	11	Α	V
	*	5210	97.92	-	-	90.75	31.66	8.98	33.47	192	11	Р	V
	*	5210	91.78	-	-	84.61	31.66	8.98	33.47	192	11	Α	V
		5375.41	48.04	-25.96	74	40.55	31.84	9.13	33.48	192	11	Р	V
		5354.29	41.65	-12.35	54	34.23	31.82	9.08	33.48	192	11	Α	V

Remark

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<sup>1.</sup> No other spurious found.

<sup>2.</sup> All results are PASS against Peak and Average limit line.

## WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI N	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant. 1+2		(MHz)	( dBµV/m )	Limit (dB)	Line ( dBµV/m )	Level (dBµV)	Factor ( dB/m )	Loss (dB)	Factor ( dB )	Pos ( cm )	Pos ( deg )	Avg. (P/A)	
		10420	42.35	-31.65	74	56.88	39.87	13.1	67.5	100	0	Р	Н
		15630	39.53	-34.47	74	50.06	38.29	16.55	65.37	100	0	Р	Н
802.11ac													Н
VHT80													Н
CH 42		10420	44.56	-29.44	74	59.09	39.87	13.1	67.5	100	0	Р	V
5210MHz		15630	41.7	-32.3	74	52.23	38.29	16.55	65.37	100	0	Р	V
													٧
													٧

2. All results are PASS against Peak and Average limit line.

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#### **Emission below 1GHz**

# WIFI 802.11acV HT80 (LF @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	( dBµV/m )	(dB)	( dBµV/m )	(dBµV)	( dB/m )	( dB )	( dB )	( cm )	( deg )	(P/A)	(H/V
		66.72	29.45	-10.55	40	55.26	4.94	1.04	31.79			Р	Н
		107.22	28.35	-15.15	43.5	47.77	11.08	1.28	31.78			Р	Н
		214.68	33.52	-9.98	43.5	55.67	7.84	1.79	31.78	200	86	Р	Н
		313.3	25.27	-20.73	46	41.5	13.43	2.11	31.77			Р	Н
		547.1	20.27	-25.73	46	30.82	18.64	2.77	31.96			Р	Н
		968.5	22.98	-31.02	54	29.6	20.49	3.78	30.89			Р	Н
													Н
													Н
													Н
													Н
													Н
302.11ac													Н
VHT80 LF		43.5	32.66	-7.34	40	53.13	10.67	0.67	31.81	145	235	Р	V
LF		92.64	25.78	-17.72	43.5	47.35	8.93	1.28	31.78			Р	V
		197.13	29.15	-14.35	43.5	50.75	8.54	1.64	31.78			Р	V
		313.3	24.09	-21.91	46	40.32	13.43	2.11	31.77			Р	V
		552.7	20.48	-25.52	46	31.03	18.65	2.77	31.97			Р	V
		895.7	26.04	-19.96	46	33.84	20.1	3.55	31.45			Р	V
													V
													V
													V
													V
													V
													V

2. All results are PASS against limit line.

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## Note symbol

*	Fundamental Frequency which can be ignored. However, the level of any unwanted emissions
	shall not exceed the level of the fundamental frequency.
!	Test result is <b>over limit</b> line.
P/A	Peak or Average
H/V	Horizontal or Vertical

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#### A calculation example for radiated spurious emission is shown as below:

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Cable	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	( dBµV/m )	(dB)	(dBµV/m)	(dBµV)	( dB/m )	( dB )	(dB)	( cm )	(deg)	(P/A)	(H/V)
802.11b		2390	55.45	-18.55	74	54.51	32.22	4.58	35.86	103	308	Р	Н
CH 01													
2412MHz		2390	43.54	-10.46	54	42.6	32.22	4.58	35.86	103	308	Α	Н

1. Level( $dB\mu V/m$ ) =

Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) - Preamp Factor(dB)

2. Over Limit(dB) = Level(dB $\mu$ V/m) – Limit Line(dB $\mu$ V/m)

#### For Peak Limit @ 2390MHz:

- 1. Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 54.51(dB\mu V) 35.86 (dB)$
- $= 55.45 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level(dBµV/m) Limit Line(dBµV/m)
- $= 55.45(dB\mu V/m) 74(dB\mu V/m)$
- = -18.55(dB)

#### For Average Limit @ 2390MHz:

- Level(dBµV/m)
- = Antenna Factor(dB/m) + Cable Loss(dB) + Read Level(dBµV) Preamp Factor(dB)
- $= 32.22(dB/m) + 4.58(dB) + 42.6(dB\mu V) 35.86 (dB)$
- $= 43.54 (dB\mu V/m)$
- 2. Over Limit(dB)
- = Level( $dB\mu V/m$ ) Limit Line( $dB\mu V/m$ )
- $= 43.54(dB\mu V/m) 54(dB\mu V/m)$
- = -10.46(dB)

Both peak and average measured complies with the limit line, so test result is "PASS".

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