



Spot Check Evaluation

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REVISION HISTORY

VERSION	DESCRIPTION	ISSUED DATE
Rev. 01	Initial issue of report	Jul. 25, 2017



1. Introduction Section

The original model (FCC ID: PY7-02885J) and the variant model (FCC ID: PY7-76476N) has identical PCB layout, antenna, SW implementation for Bluetooth/Wi-Fi/NFC/GPS. Based on their similarity, the FCC Part 15C (equipment class: DTS, DSS, DXX) .Part 15E (equipment class: NII) test data issued test data of PY7-76476N references the test data of PY7-02885J

The original model (FCC ID: PY7-98591H) and the variant model (FCC ID: PY7-76476N) has identical PCB layout, antenna, SW implementation for GSM/WCDMA/LTE. Based on their similarity, the FCC Part 22, 24, 27 (equipment class: PCE) test data issued test data of PY7-76476N references the test data of PY7-98591H

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID (FCC ID: PY7-76476N).



2. Difference Section

The original model (FCC ID: PY7-02885J) and the variant model (FCC ID: PY7-76476N) has identical PCB layout, antenna, SW implementation for Bluetooth/Wi-Fi/NFC/GPS. The details of similarity and difference can be found in the Operating Description.

The original model (FCC ID: PY7-98591H) and the variant model (FCC ID: PY7-76476N) has identical PCB layout, antenna, SW implementation for GSM/WCDMA/LTE. The details of similarity and difference can be found in the Operating Description.

Cellular transmitter RF components are different in PY7-76476N, to support capability for different cellular bands.

The product specification is outlined in the following table:

FCC ID			PY7-02885J	PY7-98591H	PY7-76476N
Wireless Tech	Mode		Frequency (MHz)		
GSM	GSM Voice GPRS (GMSK) EDGE (8PSK)	Multi-Slot Class 12 DTM: No	850/1900	850/1900	850/1900
UMTS	AMR/RCM12.2Kbps HSDPA/HSUPA/DC-HSDPA		B5/B2	B5/B2/B4	B5/B2/B4
LTE (FDD)	QPSK 16QAM		B5/B2/B7	B2/B4/B5/B7/ B12/B13/B17/ B66	B2/B4/B5/B7/ B12/B13/B17/ B66
Wi-Fi	11b/11g/11n(HT20)		2412-2462		
	11a/11n(HT20)/11n(HT40)		5180-5240 5260-5320 5500-5720 5745-5825 *5600-5650 notched		
Bluetooth	V4.2 LE		2402-2480 MHz		
NFC	ASK		13.56 MHz		



3. Spot Check Verification Data Section

Summary of the spot check:

Test Item	Mode	PY7-02885J Worst Result	PY7-76476N Worst Result	Difference (dB)
Average Conducted Power (dBm)	802.11b	15.49	15.16	0.33
	802.11g	13.90	13.80	0.1
	802.11n HT20	13.33	13.06	0.27
	BT (1Mbps)	7.22	6.85	0.37
	BT (2Mbps)	4.89	4.53	0.36
	BT (3Mbps)	4.91	4.53	0.38
	BT-LE	-0.26	-0.55	0.29
	11a, 5.2GHz	14.99	14.93	0.06
	11n HT20, 5.2GHz	14.99	14.91	0.08
	11n HT40, 5.2GHz	12.30	11.96	0.34
	11a, 5.3GHz	14.97	14.78	0.19
	11n HT20, 5.3GHz	14.98	14.74	0.24
	11n HT40, 5.3GHz	12.19	11.92	0.27
	11a, 5.5GHz	14.77	14.68	0.09
	11n HT20, 5.5GHz	14.81	14.75	0.06
	11n HT40, 5.5GHz	12.48	12.42	0.06
	11a, 5.8GHz	14.97	14.96	0.01
	11n HT20, 5.8GHz	14.99	14.91	0.08
	11n HT40, 5.8GHz	11.43	11.36	0.07
	S/N of test sample	RQ3004QXCU	RQ3004WLDF	
	Test date	2017/05/16~2017/06/03	2017/05/16~2017/06/03	
	Mode	PY7-98591H Worst Result	PY7-76476N Worst Result	Difference (dB)
	GSM 850 (GPRS)	33.34	33.24	0.1
	GSM 850 (EDGE)	26.30	27.23	-0.93
	GSM1900(GPRS)	30.40	30.31	0.09
	GSM1900(EDGE)	24.59	25.55	-0.96
	UMTS B2 (RMC 12.2Kbps)	23.89	23.94	-0.05
	UMTS B4 (RMC 12.2Kbps)	23.50	23.30	0.2
	UMTS B5 (RMC 12.2Kbps)	24.41	24.30	0.11
	LTE B2 (FDD - QPSK)	23.92	23.91	0.01
	LTE B4 (FDD - QPSK)	24.35	23.99	0.36
	LTE B5 (FDD - QPSK)	24.20	23.93	0.27
	LTE B7 (FDD - QPSK)	23.33	21.74	1.59
	LTE B12 (FDD - QPSK)	24.17	24.50	-0.33
	LTE B13 (FDD - QPSK)	24.19	24.40	-0.21
	LTE B17 (FDD - QPSK)	24.20	24.41	-0.21
	LTE B66 (FDD - QPSK)	23.50	23.47	0.03
	S/N of test sample	RQ3002L5TA	RQ3004U10C	
	Test date	2016/10/15~2016/11/10	2017/05/11	
Test Item	Mode	PY7-02885J Worst Result	PY7-76476N Worst Result	Difference (dB)
Peak Radiated Spurious Emission (Band Edge) (dBuV/m)	802.11b	52.53	52.66	-0.13
	802.11n HT20	63.25	62.17	1.08
	BT (1Mbps)	42.89	42.70	0.19
	BT-LE	52.29	53.30	-1.01
	11n HT40, 5.2GHz	59.74	57.06	2.68
	11n HT40, 5.3GHz	58.30	56.84	1.46
	11n HT20, 5.5GHz	62.09	59.72	2.37
	11a, 5.8GHz	52.02	50.16	1.86
	S/N of test sample	RQ3004QXE8	RQ3004WLDF	
	Test date	2017/05/19~2017/05/31	2017/06/02~2017/06/04	



Average Radiated Spurious Emission (Band Edge) (dBuV/m)	802.11b	41.71	41.70	0.01
	802.11n HT20	49.59	49.12	0.47
	BT (1Mbps)	18.07	17.88	0.19
	BT-LE	43.48	43.73	-0.25
	11n HT40, 5.2GHz	49.17	49.68	-0.51
	11n HT40, 5.3GHz	48.85	47.79	1.06
	S/N of test sample	RQ3004QXE8	RQ3004WLDF	
	Test date	2017/05/19~2017/05/31	2017/06/02~2017/06/04	
Peak Radiated Spurious Emission (Harmonic) (dBuV/m)	802.11b	44.40	45.42	-1.02
	802.11n HT20	47.11	47.39	-0.28
	BT (1Mbps)	46.56	44.55	2.01
	BT-LE	44.44	45.07	-0.63
	11n HT40, 5.2GHz	47.74	48.10	-0.36
	11n HT40, 5.3GHz	47.11	46.28	0.83
	11n HT20, 5.5GHz	46.84	46.67	0.17
	11a, 5.8GHz	48.89	49.49	-0.6
	S/N of test sample	RQ3004QXE8	RQ3004WLDF	
	Test date	2017/05/19~2017/05/31	2017/06/02~2017/06/04	
NFC (dBuV/m)	RSE (30MHz to 1GHz)	33.88	35.78	-1.9
	S/N of test sample	RQ3004QXBV	RQ3004WLD3	
	Test date	2017/05/29	2017/05/29	

Conclusion:

Radiated spurious emission test against the variant model for non-cellular part based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

The spot check test result is within the tune up range. Since output powers in the variant are within manufacture tolerance, the original model results represent a worst case with respect to spurious emissions, bandwidth. Peak: average ration is a function of the modulation as that is unchanged between original model and variant model the PAR measured on original model represents both devices.

The unwanted, harmonics, radiated spurious emission is reported peak measurement only due to spurious lower than 20dB than the limit, 74dBuV/m, without further reporting the average measurement



4. Reference detail Section

Rule Part	Equipment Class	Wireless Technology	Frequency Band (MHz)	Reference FCC ID	Type Grant/ Permissive Change	Reference Report Title	Reference Application	Reference Report Sections
15C	DTS	Bluetooth – LE Wii-Fi	2400~2483.5	PY7-02885J	Original Grant	FCC RF Test Report	PY7-76476N	Part 15C (FR742206-01B, FR742206-01C)
	DSS	Bluetooth	2400~2483.5	PY7-02885J	Original Grant	FCC RF Test Report	PY7-76476N	Part 15C (FR742206-01A)
	DXX	NFC	13.56	PY7-02885J	Original Grant	FCC RF Test Report	PY7-76476N	Part 15C (FR742206-01D)
15E	NII	Wi-Fi	5150~5250 5250~5350 5470~5725 5725~5850	PY7-02885J	Original Grant	FCC RF Test Report	PY7-76476N	Part 15E (FR742206-01E, FR742206-01F, FZ742206-01)
Part 22.24.27	PCE	GSM WCDMA	GSM/GPRS(EDGE)850 GSM/GPRS(EDGE)1900 WCDMA B2 WCDMA B4 WCDMA B5	PY7-98591H	Original Grant	FCC RF Test Report	PY7-76476N	Part 22.24.27 (FG692213-01A)
Part 22.24.27	PCE	LTE	LTE B2/B4/B5/B7/B12/ B13/B17/B66	PY7-98591H			PY7-76476N	Part 22.24.27 (FG692213-01B)

Appendix A. Spot Check Test Result

1.1 Conducted power

<2.4GHz WLAN>

	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-02885J Average power (dBm)	FCC ID PY7-76476N Average power (dBm)
2.4GHz WLAN	802.11b	CH 1	2412	1Mbps	15.5	15.49	15.16
		CH 6	2437			15.45	15.05
		CH 11	2462			15.20	15.02
	802.11g	CH 1	2412	6Mbps	14.0	13.78	13.54
		CH 6	2437			13.90	13.57
		CH 11	2462			13.82	13.80
	802.11n-HT20	CH 1	2412	MCS0	13.5	13.30	13.01
		CH 6	2437			13.33	13.06
		CH 11	2462			13.32	12.91

<Bluetooth>

Mode	Channel	Frequency (MHz)	Tune-Up Limit	FCC ID PY7-02885J Average power (dBm)	FCC ID PY7-76476N Average power (dBm)
Bluetooth (1Mbps)	CH 00	2402	7.5	5.82	5.49
	CH 39	2441		7.22	6.85
	CH 78	2480		4.21	4.17
Bluetooth (2Mbps)	CH 00	2402	7.5	3.36	3.04
	CH 39	2441		4.89	4.56
	CH 78	2480		1.89	1.97
Bluetooth (3Mbps)	CH 00	2402	7.5	3.39	3.08
	CH 39	2441		4.91	4.56
	CH 78	2480		1.93	2.00
BLE (GFSK)	CH 00	2402	0	-1.82	-2.11
	CH 19	2440		-0.26	-0.55
	CH 39	2480		-3.41	-3.24


<5GHz WLAN>

5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-02885J Average power (dBm)	FCC ID PY7-76476N Average power (dBm)
	802.11a	CH 36	5180	6Mbps	15	14.99	14.93
		CH 44	5220			14.67	14.40
		CH 48	5240			14.60	14.29
	802.11n-HT20	CH 36	5180	MCS0	15	14.99	14.91
		CH 44	5220			14.98	14.82
		CH 48	5240			14.48	14.35
	802.11n-HT40	CH 38	5190	MCS0	12.5	12.30	11.96
		CH 46	5230			12.28	11.95
	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-02885J Average power (dBm)	FCC ID PY7-76476N Average power (dBm)
5.3GHz WLAN	802.11a	CH 52	5260	6Mbps	15	14.94	14.70
		CH 60	5300			14.96	14.67
		CH 64	5320			14.97	14.78
	802.11n-HT20	CH 52	5260	MCS0	15	14.49	14.20
		CH 60	5300			14.97	14.71
		CH 64	5320			14.98	14.74
	802.11n-HT40	CH 54	5270	MCS0	12.5	12.19	11.92
		CH 62	5310		11.5	10.78	10.51
	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-02885J Average power (dBm)	FCC ID PY7-76476N Average power (dBm)
5.5GHz WLAN	802.11a	CH 100	5500	6Mbps	15	14.77	14.45
		CH 116	5580			14.72	14.38
		CH 140	5700			14.69	14.68
		CH144	5720			14.67	14.66
	802.11n-HT20	CH 100	5500	MCS0	15	14.73	14.50
		CH 116	5580			14.71	14.45
		CH 140	5700			14.65	14.64
		CH144	5720			14.81	14.75



	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-02885J Average power (dBm)	FCC ID PY7-76476N Average power (dBm)
5.5GHz WLAN	802.11n-HT40	CH 102	5510	MCS0	12.5	12.48	12.42
		CH 126	5630			12.46	12.40
		CH 134	5670			12.31	12.29
		CH142	5710			12.19	12.05
5.8GHz WLAN	802.11a	CH 149	5745	MCS0	15	14.97	14.96
		CH 157	5785			14.92	14.75
		CH 165	5825			14.71	14.70
	802.11n-HT20	CH 149	5745	MCS0	15	14.99	14.91
		CH 157	5785			14.92	14.85
		CH 165	5825		14.5	14.48	14.50
	802.11n-HT40	CH 151	5755	MCS0	11.5	11.43	11.36
		CH 159	5795			11.00	11.29



1.2 Radiated Spurious Emission

2.4GHz BT/WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-02885J						FCC ID PY7-76476N					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit
				(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)
BT(1Mbps)	CH 78	2480	P	2497.2	42.89	74	7440	46.56	74	2484.92	42.7	74	7440	44.55	74
			A	2497.2	18.07	54	X	X	X	2484.92	17.88	54	X	X	X
BLE	CH 39	2480	P	2489.48	52.29	74	7440	44.44	74	2494.32	53.3	74	7440	45.07	74
			A	2495.44	43.48	54	X	X	X	2498.4	43.73	54	X	X	X
802.11b	CH 6	2437	P	2379.86	52.53	74	7311	44.4	74	2497.97	52.66	74	7311	45.42	74
			A	2487.12	41.71	54	X	X	X	2483.55	41.7	54	X	X	X
802.11n-HT20	CH 1	2412	P	2389.8	63.25	74	4824	47.11	74	2389.17	62.17	74	4824	47.39	74
			A	2390	49.59	54	X	X	X	2390	49.12	54	X	X	X

5.2GHz WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-02885J						FCC ID PY7-76476N					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit
				(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)
802.11n-HT40	CH 38	5190	P	5144.3	59.74	74	10380	47.74	74	5148.72	57.06	74	15570	48.1	74
			A	5150	49.17	54	X	X	X	5150	49.68	54	X	X	X

**5.3GHz WLAN**

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-02885J						FCC ID PY7-76476N					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit
				(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)
802.11n-HT40	CH 62	5310	P	5354.4	58.3	74	10620	47.11	74	5351.04	56.84	74	10620	46.28	74
			A	5350.08	48.85	54	X	X	X	5350.56	47.79	54	X	X	X

5.5GHz WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-02885J						FCC ID PY7-76476N					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit
				(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)
802.11n-HT40	CH 102	5510	P	5466.16	62.09	68.2	16530	46.84	68.2	5469.68	59.72	68.2	16530	46.67	68.2

5.8GHz WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-02885J						FCC ID PY7-76476N					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit
				(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)
802.11a	CH 157	5785	P	5926.2	52.02	68.2	17355	48.89	68.2	5611.4	50.16	68.2	17355	49.49	68.2



2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

BLE	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
BLE CH 39 2480MHz	*	2480	90.74	-	-	79.22	27.64	4.92	30.97	106	12	P	H
	*	2480	90.16	-	-	78.64	27.64	4.92	30.97	106	12	A	H
		2494.32	53.3	-20.7	74	41.7	27.7	4.93	30.96	106	12	P	H
		2498.4	43.73	-10.27	54	32.13	27.7	4.93	30.96	106	12	A	H
													H
	*	2480	84.67	-	-	73.15	27.64	4.92	30.97	323	255	P	V
	*	2480	83.8	-	-	72.28	27.64	4.92	30.97	323	255	A	V
		2490.24	52.32	-21.68	74	40.72	27.7	4.93	30.96	323	255	P	V
		2487.44	43.4	-10.6	54	31.87	27.64	4.93	30.97	323	255	A	V
													V

2.4GHz 2400~2483.5MHz

BLE (Harmonic @ 3m)

BLE	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
BLE CH 39 2480MHz		4960	39.58	-34.42	74	56.51	32.04	7.59	57.05	100	0	P	H
		7440	45.07	-28.93	74	55.28	37.56	9.21	57.44	100	0	P	H
													H
													H
		4960	39.21	-34.79	74	56.14	32.04	7.59	57.05	100	0	P	V
		7440	44.19	-29.81	74	54.4	37.56	9.21	57.44	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

BT (1M) (Band Edge @ 3m)

BT	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
BT CH 78 2480MHz	*	2480	98.31	-	-	96.72	27.64	4.92	30.97	400	56	P	H
	*	2480	73.49	-	-	-	-	-	-	-	-	A	H
		2497.36	41.75	-32.25	74	40.08	27.7	4.93	30.96			P	H
		2497.36	16.93	-37.07	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	94.4	-	-	92.81	27.64	4.92	30.97	379	301	P	V
	*	2480	69.58	-	-	-	-	-	-	-	-	A	V
		2484.92	42.7	-31.3	74	41.1	27.64	4.93	30.97	379	301	P	V
		2484.92	17.88	-36.12	54	-	-	-	-	-	-	A	V
													V
													V

2.4GHz 2400~2483.5MHz

BT (1M) (Harmonic @ 3m)

BT	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
BT CH 78 2480MHz		4960	41.3	-32.7	74	58.23	32.04	7.59	57.05	100	0	P	H
		4960	16.48	-37.52	54	-	-	-	-	-	-	A	H
		7440	44.55	-29.45	74	54.76	37.56	9.21	57.44	100	0	P	H
		7440	19.73	-34.27	54	-	-	-	-	-	-	A	H
		4960	41.02	-32.98	74	57.95	32.04	7.59	57.05	100	0	P	V
		4960	16.2	-37.8	54	-	-	-	-	-	-	A	V
		7440	44	-30	74	54.21	37.56	9.21	57.44	100	0	P	V
		7440	19.18	-34.82	54	-	-	-	-	-	-	A	V

Remark

1. No other spurious found.
2. All results are PASS against Peak and Average limit line.



2.4GHz 2400~2483.5MHz

WIFI 802.11b (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11b CH 06 2437MHz		2339.82	52.21	-21.79	74	41.3	27.2	4.78	31	143	18	P	H
		2388.96	41.05	-12.95	54	29.91	27.37	4.83	30.99	143	18	A	H
	*	2437	101.56	-	-	90.2	27.53	4.88	30.98	143	18	P	H
	*	2437	98.42	-	-	87.06	27.53	4.88	30.98	143	18	A	H
		2498.11	52.45	-21.55	74	40.85	27.7	4.93	30.96	143	18	P	H
		2483.55	41.7	-12.3	54	30.17	27.64	4.93	30.97	143	18	A	H
		2331.98	52.05	-21.95	74	41.22	27.15	4.76	31.01	385	360	P	V
		2388.26	40.99	-13.01	54	29.85	27.37	4.83	30.99	385	360	A	V
	*	2437	97.76	-	-	86.4	27.53	4.88	30.98	385	360	P	V
	*	2437	94.65	-	-	83.29	27.53	4.88	30.98	385	360	A	V
		2497.97	52.66	-21.34	74	41.06	27.7	4.93	30.96	385	360	P	V
		2495.66	41.53	-12.47	54	29.93	27.7	4.93	30.96	385	360	A	V

2.4GHz 2400~2483.5MHz

WIFI 802.11b (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
1													
802.11b CH 06 2437MHz		4874	41.17	-32.83	74	58.52	31.88	7.44	57.17	100	0	P	H
		7311	44.7	-29.3	74	55.21	37.17	9.13	57.27	100	0	P	H
													H
													H
		4874	40.9	-33.1	74	58.25	31.88	7.44	57.17	100	0	P	V
		7311	45.42	-28.58	74	55.93	37.17	9.13	57.27	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11n HT20 CH 01 2412MHz		2389.17	62.17	-11.83	74	51.03	27.37	4.83	30.99	149	19	P	H
		2390	49.12	-4.88	54	37.98	27.37	4.83	30.99	149	19	A	H
	*	2412	103.41	-	-	92.18	27.42	4.87	30.99	149	19	P	H
	*	2412	95.74	-	-	84.51	27.42	4.87	30.99	149	19	A	H
													H
													H
		2389.905	61.57	-12.43	74	50.43	27.37	4.83	30.99	400	360	P	V
		2389.8	46.95	-7.05	54	35.81	27.37	4.83	30.99	400	360	A	V
	*	2412	100.26	-	-	89.03	27.42	4.87	30.99	400	360	P	V
	*	2412	92.85	-	-	81.62	27.42	4.87	30.99	400	360	A	V
													V
													V

2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 01 2412MHz		4824	47.39	-26.61	74	65	31.79	7.33	57.24	100	0	P	H
													H
													H
													H
		4824	46.54	-27.46	74	64.15	31.79	7.33	57.24	100	0	P	V
													V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5148.72	57.06	-16.94	74	47.93	32.34	7.35	30.56	100	299	P	H
		5150	49.68	-4.32	54	40.55	32.34	7.35	30.56	100	299	A	H
	*	5190	99.67	-	-	90.48	32.39	7.37	30.57	100	299	P	H
	*	5190	92.8	-	-	83.61	32.39	7.37	30.57	100	299	A	H
		5439.28	49.24	-24.76	74	39.53	32.79	7.52	30.6	100	299	P	H
		5458.04	41.75	-12.25	54	31.99	32.82	7.54	30.6	100	299	A	H
		5149.76	53.08	-20.92	74	43.95	32.34	7.35	30.56	230	6	P	V
		5150	46.26	-7.74	54	37.13	32.34	7.35	30.56	230	6	A	V
	*	5190	97.2	-	-	88.01	32.39	7.37	30.57	230	6	P	V
	*	5190	90.16	-	-	80.97	32.39	7.37	30.57	230	6	A	V
		5404	49.04	-24.96	74	39.41	32.74	7.49	30.6	230	6	P	V
		5453.56	41.28	-12.72	54	31.52	32.82	7.54	30.6	230	6	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 1 5150~5250MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		10380	45.75	-28.25	74	52.89	38.58	10.76	57.02	100	0	P	H
		15570	48.1	-25.9	74	52.24	38.55	13.02	56.46	100	0	P	H
													H
													H
		10380	45.83	-28.17	74	52.97	38.58	10.76	57.02	100	0	P	V
		15570	47.61	-26.39	74	51.75	38.55	13.02	56.46	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												


Band 2 5250~5350MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11n HT40 CH 62 5310MHz		5001.02	49.8	-24.2	74	40.97	32.1	7.27	30.54	100	300	P	H
		5109.48	42.47	-11.53	54	33.4	32.29	7.33	30.55	100	300	A	H
	*	5310	97.98	-	-	88.51	32.61	7.44	30.58	100	300	P	H
	*	5310	90.95	-	-	81.48	32.61	7.44	30.58	100	300	A	H
		5353.2	56.48	-17.52	74	46.95	32.66	7.46	30.59	100	300	P	H
		5350.56	47.79	-6.21	54	38.26	32.66	7.46	30.59	100	300	A	H
		5069.02	50.15	-23.85	74	41.19	32.21	7.3	30.55	328	2	P	V
		5076.5	42.22	-11.78	54	33.23	32.23	7.31	30.55	328	2	A	V
	*	5310	94.88	-	-	85.41	32.61	7.44	30.58	328	2	P	V
	*	5310	87.9	-	-	78.43	32.61	7.44	30.58	328	2	A	V
		5351.04	56.84	-17.16	74	47.31	32.66	7.46	30.59	328	2	P	V
		5351.04	45.05	-8.95	54	35.52	32.66	7.46	30.59	328	2	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 2 5250~5350MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11n HT40 CH 62 5310MHz		10620	46.13	-27.87	74	52.69	38.89	10.92	56.9	100	0	P	H
		15930	44.65	-29.35	74	49.69	37.25	13.22	56.24	100	0	P	H
													H
													H
		10620	46.28	-27.72	74	52.84	38.89	10.92	56.9	100	0	P	V
		15930	43.9	-30.1	74	48.94	37.25	13.22	56.24	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		5459.92	54.56	-19.44	74	44.8	32.82	7.54	30.6	190	294	P	H
		5469.68	59.72	-8.48	68.2	49.92	32.85	7.56	30.61	190	240	P	H
		5460	46.34	-7.66	54	36.58	32.82	7.54	30.6	190	294	A	H
	*	5510	99.86	-	-	89.98	32.9	7.59	30.61	190	294	P	H
	*	5510	92.03	-	-	82.15	32.9	7.59	30.61	190	294	A	H
		5741.06	48.95	-19.25	68.2	39	32.85	7.83	30.73	190	294	P	H
		5458.32	51.48	-22.52	74	41.72	32.82	7.54	30.6	368	344	P	V
		5469.36	58.4	-9.8	68.2	48.6	32.85	7.56	30.61	368	344	P	V
		5458.96	43.45	-10.55	54	33.69	32.82	7.54	30.6	368	344	A	V
	*	5510	94.89	-	-	85.01	32.9	7.59	30.61	368	344	P	V
	*	5510	87.7	-	-	77.82	32.9	7.59	30.61	368	344	A	V
		5727.2	50.06	-18.14	68.2	40.1	32.86	7.81	30.71	368	344	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11n HT40 CH 102 5510MHz		11020	47.24	-26.76	74	52.32	39.82	11.17	56.59	100	0	P	H
		16530	46.67	-21.53	68.2	50.39	38.02	13.28	55.71	100	0	P	H
													H
													H
		11020	46.78	-27.22	74	51.86	39.82	11.17	56.59	100	0	P	V
		16530	45.78	-22.42	68.2	49.5	38.02	13.28	55.71	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 - 5725~5850MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11a CH 157 5785MHz		5639.4	50.07	-18.13	68.2	40.16	32.87	7.72	30.68	100	153	P	H
		5685.2	51.8	-42.48	94.28	41.86	32.86	7.77	30.69	100	153	P	H
		5713.8	53.33	-55.74	109.07	43.39	32.86	7.79	30.71	100	153	P	H
		5720.6	51.41	-60.76	112.17	41.45	32.86	7.81	30.71	100	153	P	H
	*	5785	105.34	-	-	95.38	32.84	7.86	30.74	100	153	P	H
	*	5785	98.28	-	-	88.32	32.84	7.86	30.74	100	153	A	H
		5853.6	51.24	-62.75	113.99	41.3	32.83	7.88	30.77	100	153	P	H
		5867.4	52.54	-54.79	107.33	42.61	32.83	7.88	30.78	100	153	P	H
		5878	51.37	-51.6	102.97	41.45	32.82	7.88	30.78	100	153	P	H
		5948.2	49.7	-18.5	68.2	39.82	32.81	7.89	30.82	100	153	P	H
		5611.4	50.16	-18.04	68.2	40.24	32.88	7.7	30.66	100	358	P	V
		5651.2	50.13	-18.96	69.09	40.21	32.87	7.73	30.68	100	358	P	V
		5709.6	51.37	-56.52	107.89	41.42	32.86	7.79	30.7	100	358	P	V
		5723.2	52.52	-65.58	118.1	42.56	32.86	7.81	30.71	100	358	P	V
	*	5785	104.49	-	-	94.53	32.84	7.86	30.74	100	358	P	V
	*	5785	96.84	-	-	86.88	32.84	7.86	30.74	100	358	A	V
		5853.4	49.85	-64.6	114.45	39.91	32.83	7.88	30.77	100	358	P	V
		5864	51.71	-56.57	108.28	41.78	32.83	7.88	30.78	100	358	P	V
		5880	50.16	-51.33	101.49	40.24	32.82	7.88	30.78	100	358	P	V
		5941.8	49.6	-18.6	68.2	39.72	32.81	7.89	30.82	100	358	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 4 5725~5850MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	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)	Pol. (H/V)
802.11a CH 157 5785MHz		11570	45.41	-28.59	74	49.74	40.29	11.31	56.44	100	0	P	H
		17355	48.62	-19.58	68.2	48.53	42.4	13.52	56.46	100	0	P	H
													H
													H
		11570	45.09	-28.91	74	49.42	40.29	11.31	56.44	100	0	P	V
		17355	49.49	-18.71	68.2	49.4	42.4	13.52	56.46	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Note symbol

-L	Low channel location
-R	High channel location

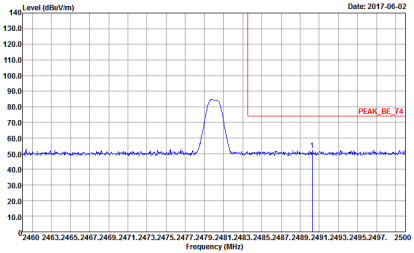
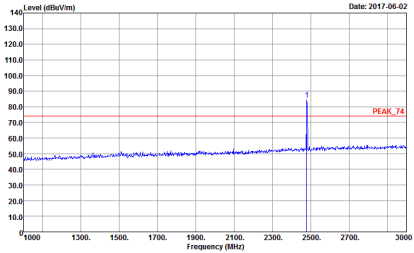
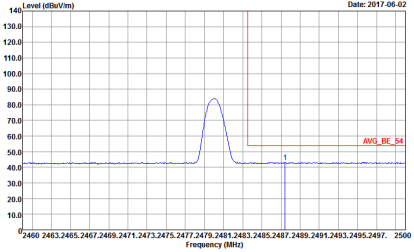
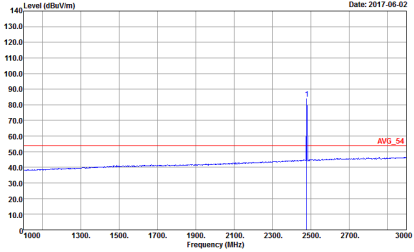


2.4GHz 2400~2483.5MHz

BLE (Band Edge @ 3m)

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH39 2480MHz	
	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : AVG_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto



BLE		2.4GHz 2400~2483.5MHz Band Edge @ 3m	
		BLE CH39 2480MHz	
	Vertical	Fundamental	
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	



2.4GHz 2400~2483.5MHz

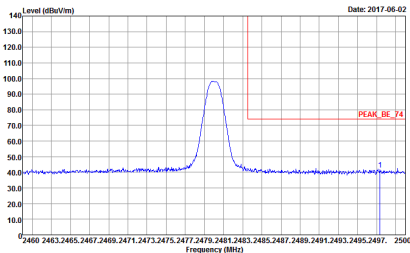
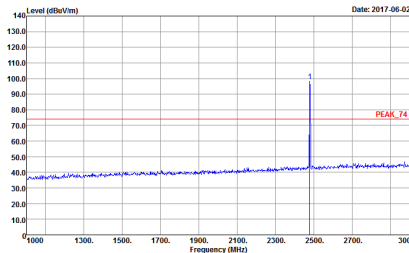
BLE (Harmonic @ 3m)

BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BLE CH39 2480MHz	
	Horizontal	Vertical
Peak	Level (dBuV/m) Date: 2017-06-03 Frequency (MHz) Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak	Level (dBuV/m) Date: 2017-06-03 Frequency (MHz) Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak

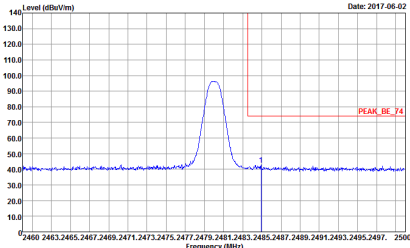
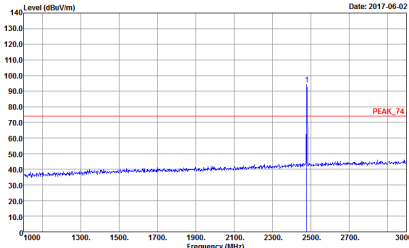


2.4GHz 2400~2483.5MHz

BT (1M) (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_1522 HORIZONTAL Detector : Peak	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_1522 HORIZONTAL Detector : Peak



BT		2.4GHz 2400~2483.5MHz Band Edge @ 3m	
		BT CH78 2480MHz	
	Vertical	Fundamental	
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_1522 VERTICAL Detector : Peak	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_1522 VERTICAL Detector : Peak	



2.4GHz 2400~2483.5MHz

BT (1M) (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH78 2480MHz	
	Horizontal	Vertical
Peak Avg.	Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak	Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak

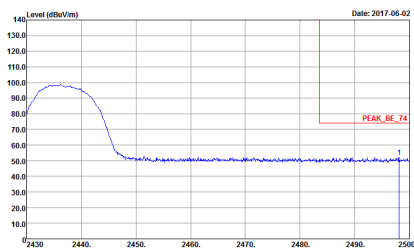
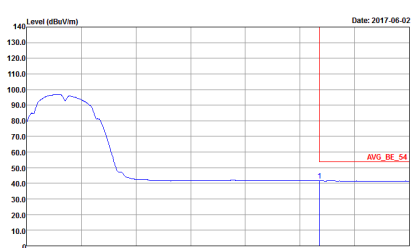


2.4GHz 2400~2483.5MHz

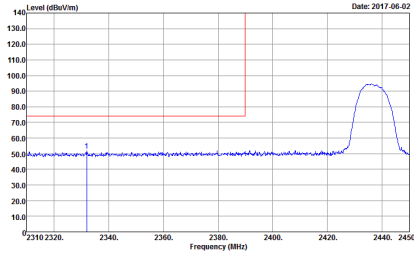
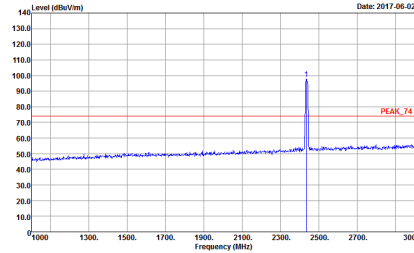
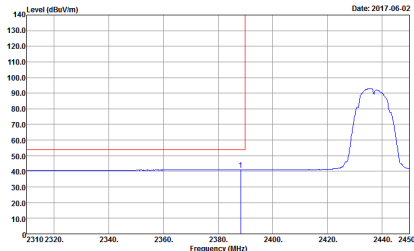
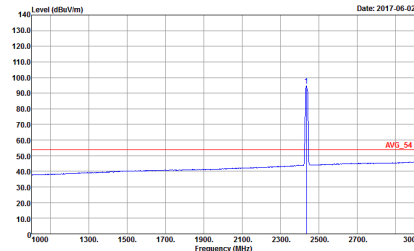
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Site : 03CH13-HY Condition : AVG_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto

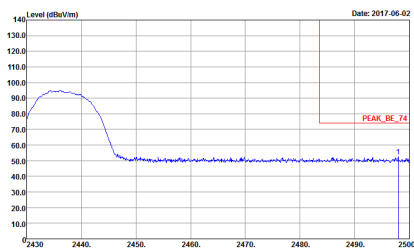
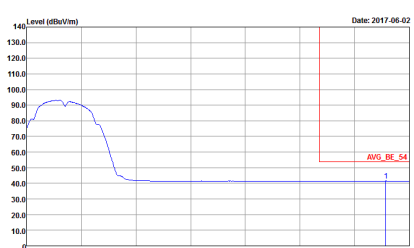


WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	 Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH06 2437MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 VERTICAL : RBW:1000.000KHz VBW:0.010KHz SWT:Auto	Left blank



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto	Site : 03CH13-HY Condition : AVG_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:1000KHz SWT:Auto



WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Vertical	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto	Site : 03CH13-HY Condition : AVG_54 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:1.000KHz SWT:Auto



2.4GHz 2400~2483.5MHz

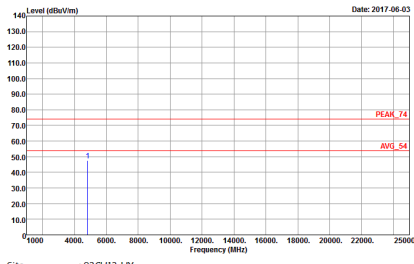
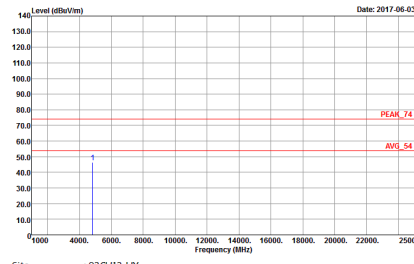
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH06 2437MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak	Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak	 Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak

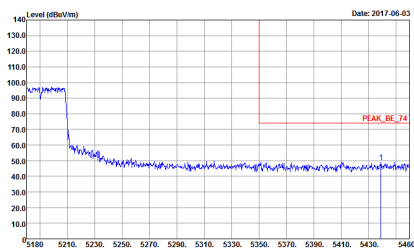
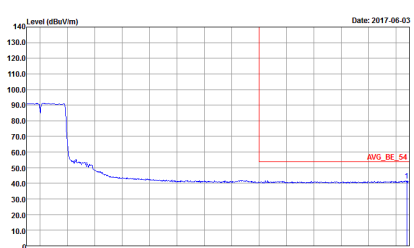


Band 1 5150~5250MHz

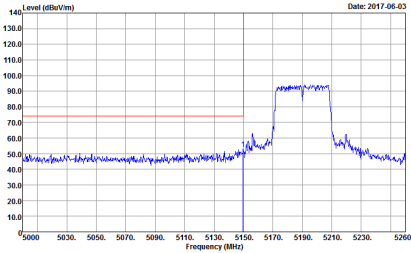
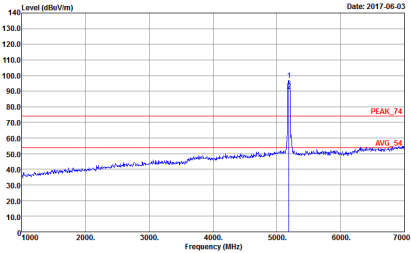
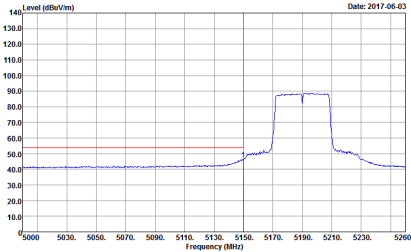
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

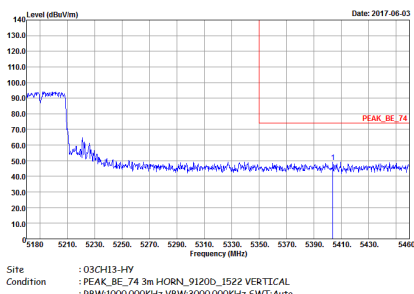
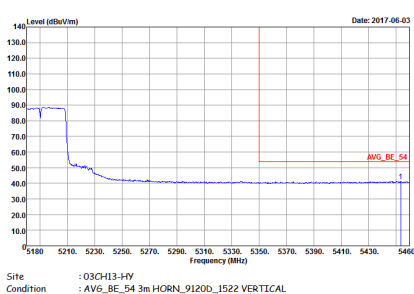


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

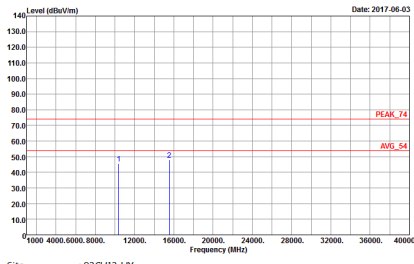
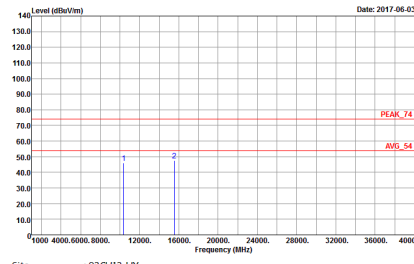


WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



Band 1 5150~5250MHz

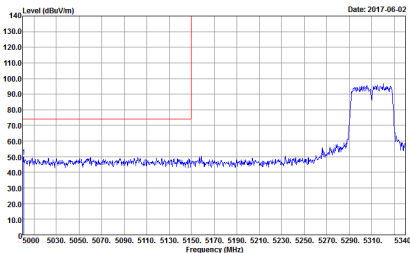
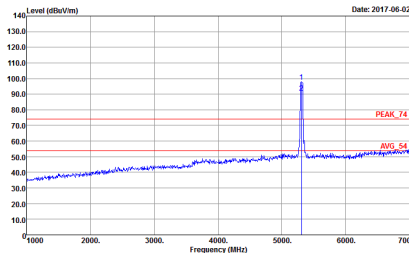
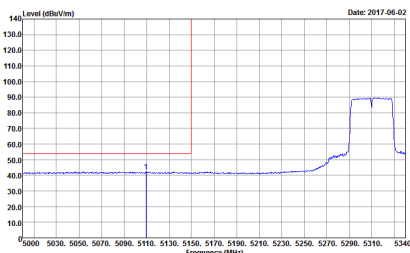
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH38 5190MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak	 Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak

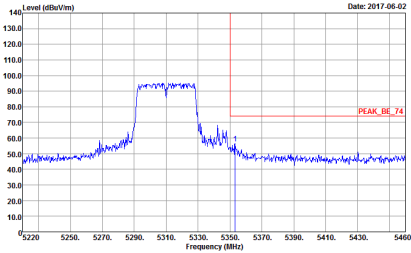
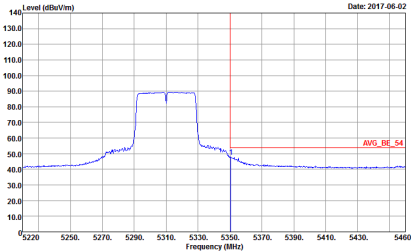


Band 2 5250~5350MHz

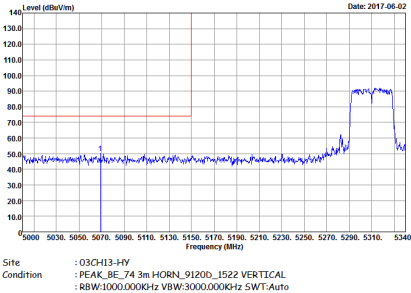
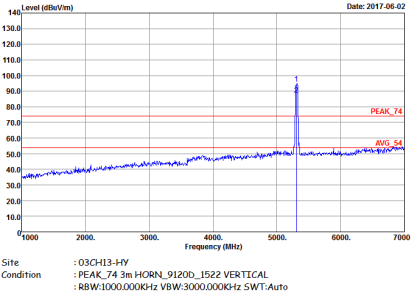
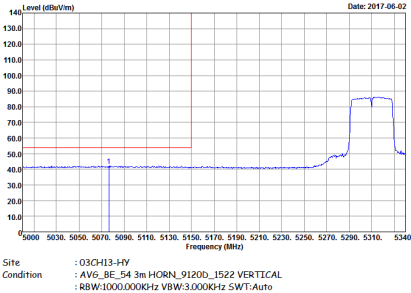
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

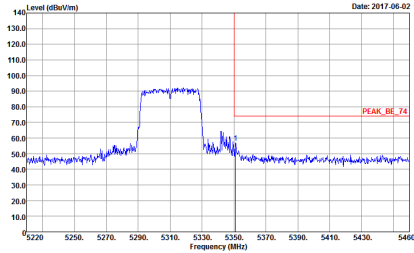
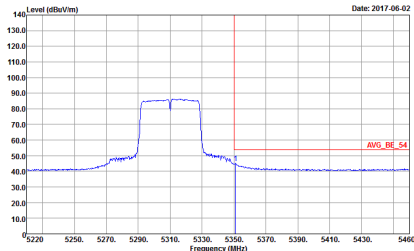


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - L	
1	Vertical	Fundamental
Peak		
Avg.		Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE_74 3m HORN_91200_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank
Avg.	 Site : 03CH13-HY Condition : AVG_BE_54 3m HORN_91200_1522 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank



Band 2 5250~5350MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11n HT40 CH62 5310 MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 HORIZONTAL Detector : Peak	Site : 03CH13-HY Condition : PEAK_74 3m SHF_HORN_584 VERTICAL Detector : Peak

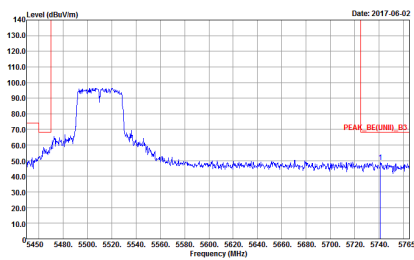


Band 3 5470~5725MHz

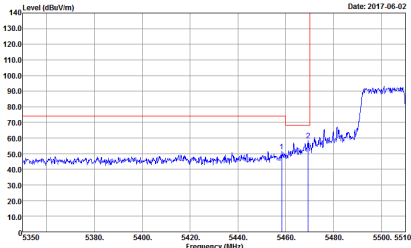
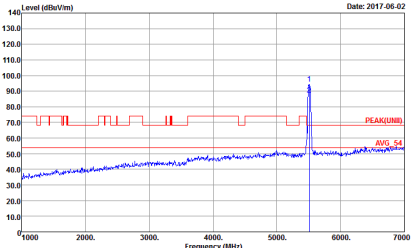
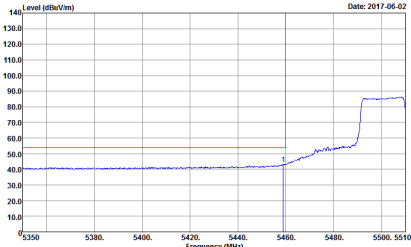
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - L	
1	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK(UNIT) 3m HORN_9120D_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	Site : 03CH13-HY Condition : AVG_BE(UNIT)_B3 3m HORN_9120D_1522 HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

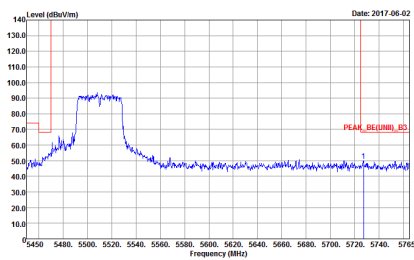


WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1522 HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(UNIT1)_83 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK(UNIT1) 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Avg.	 Site : 03CH13-HY Condition : AVG_BE(UNIT1)_83 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto	Left blank

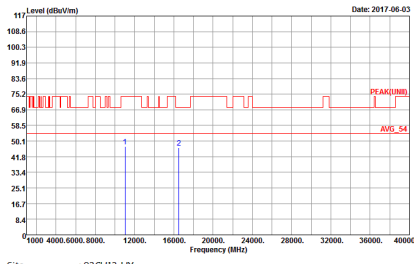
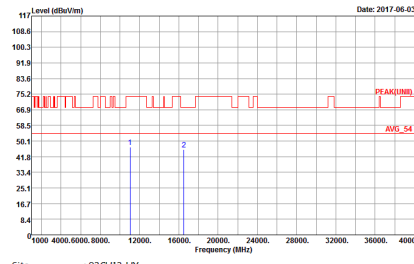


WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH102 5510MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(UNIT)_B3 3m HORN_9120D_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



Band 3 5470~5725MHz

WIFI 802.11n HT40 (Harmonic @ 3m)

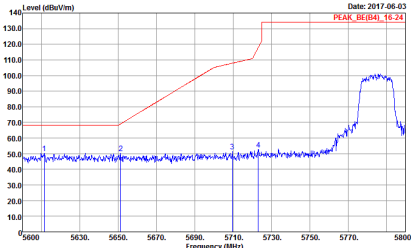
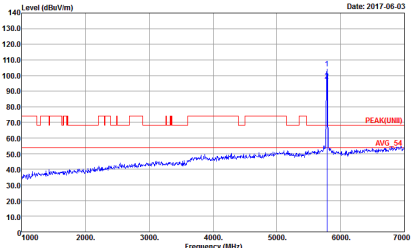
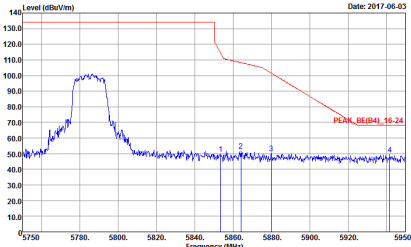
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11n HT40 CH102 5510MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH13-HY Condition : PEAK(UNIT) 3m SHF_HORN_584 HORIZONTAL Detector : Peak	 Site : 03CH13-HY Condition : PEAK(UNIT) 3m SHF_HORN_584 VERTICAL Detector : Peak



Band 4 - 5725~5850MHz
WIFI 802.11a (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Site : 03CH13-HY Condition : PEAK(UMBI) 3m HORN_91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
	Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank

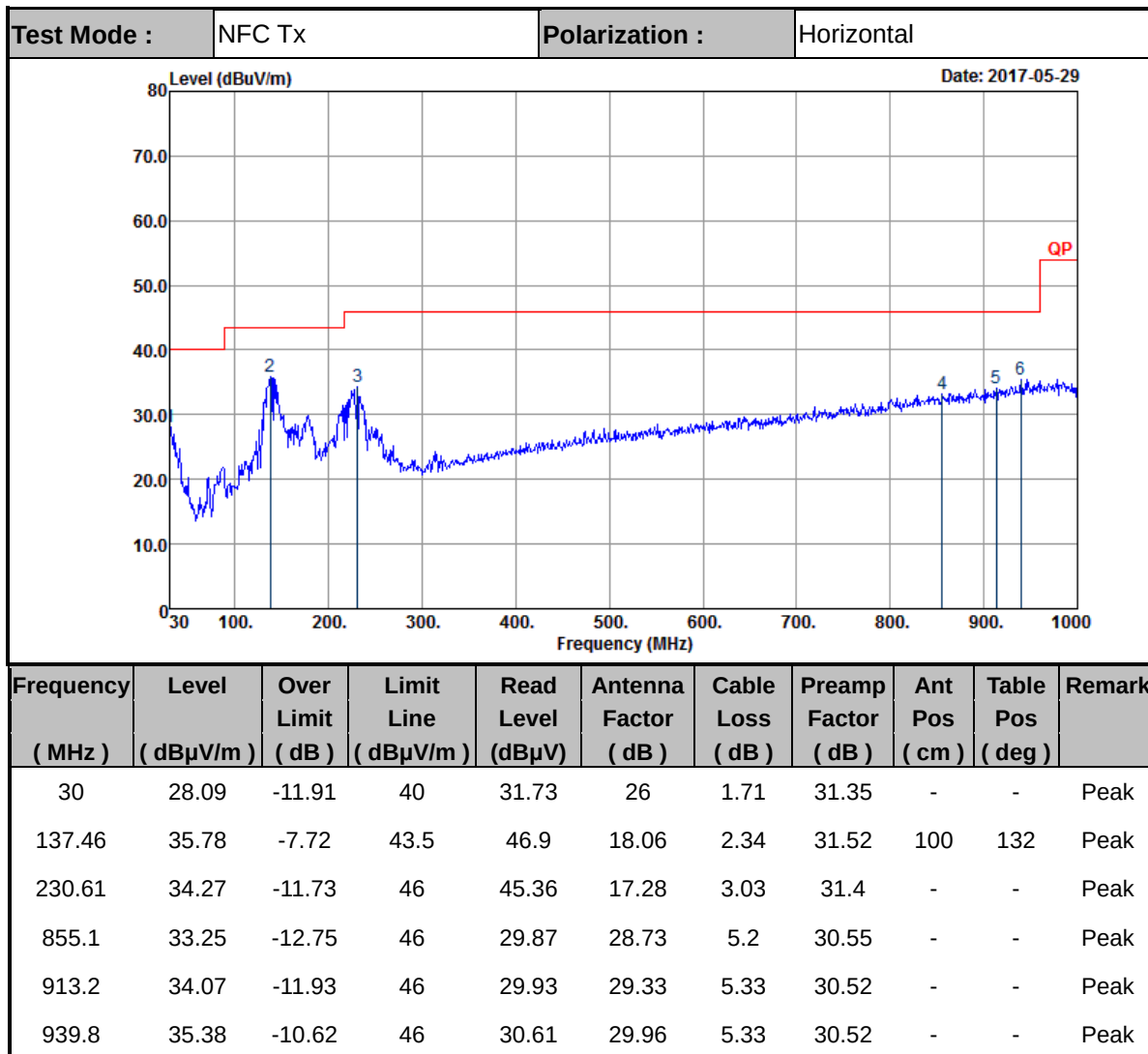


WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11a CH157 5785MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	 Site : 03CH13-HY Condition : PEAK(UNIT) 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto
Peak	 Site : 03CH13-HY Condition : PEAK_BE(B4)_16-24 3m HORN_9120D_1522 VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto	Left blank



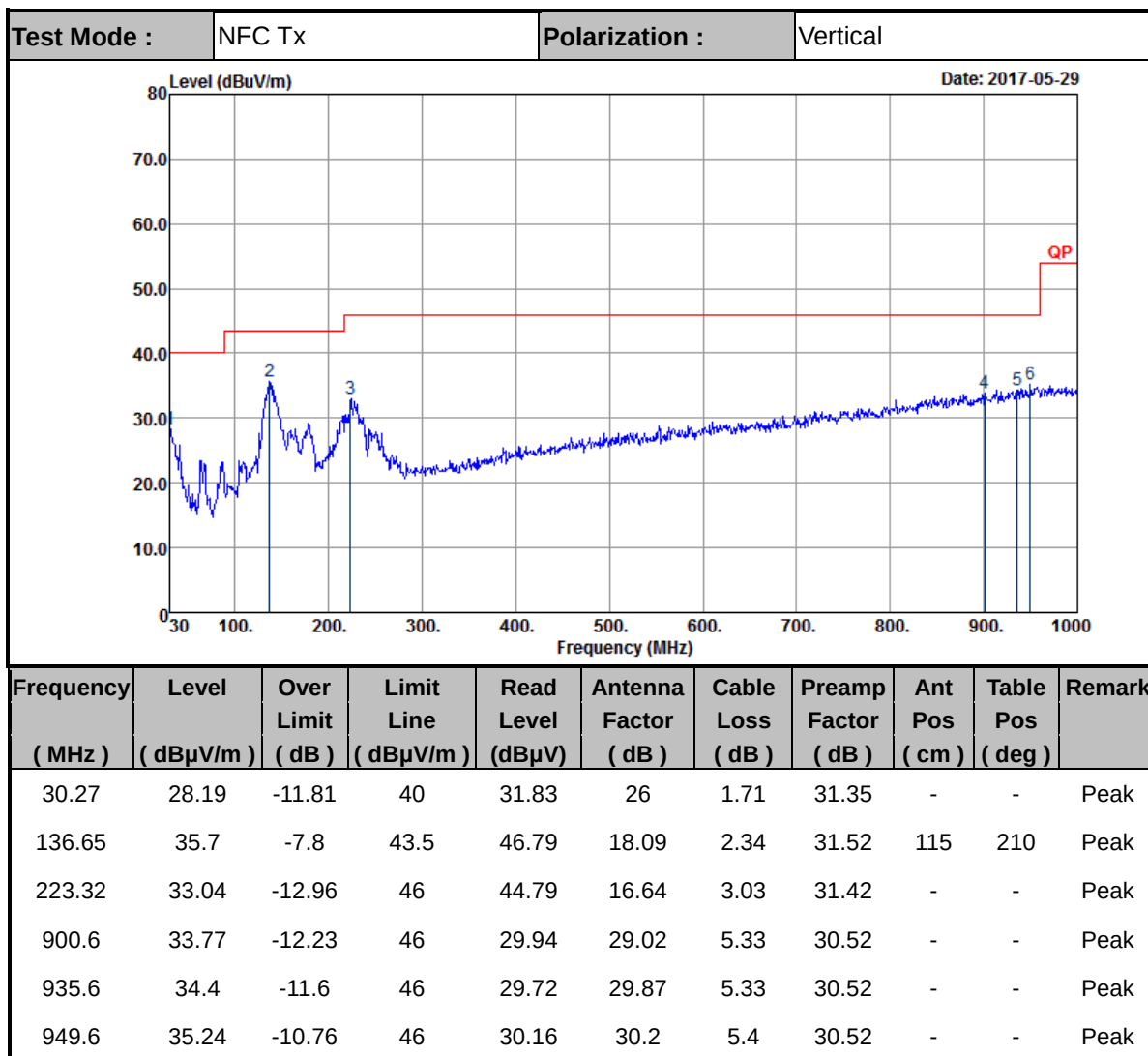
Band 4 - 5725~5850MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11a CH157 5785MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH13-HY Condition : PEAK(UNII) 3m SHF_HORN_584 HORIZONTAL Detector : Peak	Site : 03CH13-HY Condition : PEAK(UNII) 3m SHF_HORN_584 VERTICAL Detector : Peak

Results of Radiated Spurious Emissions (30MHz~1GHz)




FCC Test Report



Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.

End of this report