



Spot Check Evaluation

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History of this test report

Version	Description	Issued Date
01	Initial issue of report	Dec. 20, 2018
02	Revising the unit.	Dec. 24, 2018



1. Introduction Section

The original model (FCC ID: PY7-57442Y) and the variant model (FCC ID: PY7-72473T) 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) and Part 15E (equipment class: NII) test data issued test data of PY7-72473T references the test data of PY7-57442Y

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID (FCC ID: PY7-72473T).



2. Difference Section

The original model (FCC ID: PY7-57442Y) and the variant model (FCC ID: PY7-72473T) 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.

Cellular transmitter RF components are different in PY7-72473T, to support capability for different cellular bands.

The product specification is outlined in the following table:

FCC ID			PY7-57442Y	PY7-72473T
Wireless Tech	Mode		Frequency (MHz)	
GSM	GSM Voice GPRS (GMSK) EDGE (8PSK)	Multi-Slot Class 12 DTM: No	850/1900	850/1900
UMTS	AMR/RCM12.2Kbps HSDPA/HSUPA/DC-HSDPA		B5/B2	B5/B2
LTE (FDD/TDD)	QPSK/16QAM/64QAM		B2/B5/B7/B41	B2/B5/B7
Wi-Fi	11b/11g/11n(HT20)		2412-2472	
	11a/11n(HT20)/11n(HT40)/		5180-5240	
	11ac(VHT20)/ 11ac(VHT40)/		5260-5320	
	11ac(VHT80)		5500-5720 5745-5825	
Bluetooth	V5.0 LE		2402-2480	
NFC	ASK		13.56	



3. Spot Check Verification Data Section

Summary of the spot check:

Test Item	Mode	PY7-57442Y Worst Result (dBm)	PY7-72473T Worst Result (dBm)	Difference (dB)
Average Conducted Power	802.11b	16.81	16.94	-0.13
	802.11g	15.80	15.98	-0.18
	11n HT20	15.86	15.96	-0.1
	BT (1Mbps)	11.17	10.30	0.87
	BT (2Mbps)	8.70	7.93	0.77
	BT (3Mbps)	8.74	7.95	0.79
	BT-LE(1Mbps)	1.72	1.99	-0.27
	BT-LE(2Mbps)	1.66	1.98	-0.32
	11a, 5.2GHz	15.30	15.47	-0.17
	11n HT20, 5.2GHz	14.82	14.99	-0.17
	11n HT40, 5.2GHz	14.38	14.44	-0.06
	11ac VHT20, 5.2GHz	14.80	14.96	-0.16
	11ac VHT40, 5.2GHz	14.36	14.42	-0.06
	11ac VHT80, 5.2GHz	13.94	13.69	0.25
	11a, 5.3GHz	15.47	15.47	0.00
	11n HT20, 5.3GHz	14.96	14.97	-0.01
	11n HT40, 5.3GHz	14.49	14.50	-0.01
	11ac VHT20, 5.3GHz	14.94	14.93	0.01
	11ac VHT40, 5.3GHz	14.46	14.50	-0.04
	11ac VHT80, 5.3GHz	13.65	13.88	-0.23
	11a, 5.5GHz	15.48	15.49	-0.01
	11n HT20, 5.5GHz	14.99	14.96	0.03
	11n HT40, 5.5GHz	14.48	14.49	-0.01
	11ac VHT20, 5.5GHz	14.97	14.91	0.06
	11ac VHT40, 5.5GHz	14.44	14.45	-0.01
	11ac VHT80, 5.5GHz	13.92	13.97	-0.05
	11a, 5.8GHz	15.48	15.41	0.07
	11n HT20, 5.8GHz	14.98	14.96	0.02
	11n HT40, 5.8GHz	14.47	14.47	0.00
	11ac VHT20, 5.8GHz	14.97	14.94	0.03
	11ac VHT40, 5.8GHz	14.44	14.40	0.04
	11ac VHT80, 5.8GHz	13.70	13.81	-0.11
	S/N of test sample	CQ30015WW8	CQ30015SPR	
	Test date	2018/9/13~2018/9/22	2018/9/20~2018/11/23	



Test Item	Mode	PY7-57442Y Worst Result (dBuV/m)	PY7-72473T Worst Result (dBuV/m)	Difference (dB)
Radiated Spurious Emission (Band Edge)	802.11b	48.93	45.95	2.98
	11n HT20	50.98	49.36	1.62
	BT (1Mbps)	56.15	54.58	1.57
	BT-LE(2Mbps)	45.35	45.01	0.34
	11n HT40, 5.2GHz	49.95	50.77	-0.82
	11n HT40, 5.3GHz	50.77	50.99	-0.22
	11a, 5.5GHz	50.63	50.51	0.12
	11n HT20, 5.8GHz	56.00	55.84	0.16
	S/N of test sample	CQ3001BNCD	CQ30015PNH CQ30015PAM	
	Test date	2018/9/17~2018/11/21	2018/09/30~2018/11/30	
Radiated Spurious Emission (Harmonic)	802.11b	50.27	47.49	2.78
	11n HT20	41.76	42.72	-0.96
	BT (1Mbps)	52.37	52.67	-0.30
	BT-LE(2Mbps)	41.08	41.98	-0.90
	11n HT40, 5.2GHz	45.77	45.94	-0.17
	11n HT40, 5.3GHz	45.80	43.60	2.20
	11a, 5.5GHz	47.62	49.12	-2.46
	11n HT20, 5.8GHz	47.15	49.82	-2.67
	S/N of test sample	CQ3001BNCD	CQ30015PNH CQ30015PAM	
	Test date	2018/9/17~2018/11/21	2018/09/30~2018/11/30	
NFC	RSE (30MHz to1GHz)	36.71	38.79	-2.08
	S/N of test sample	CQ3001BNCD	CQ30015PAM	
	Test date	2018/11/8	2018/9/29	

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.

Based on the spot check test result (power levels measured are within 1dB, and the worst case of RSE spot check verification based on the worst condition from the original model is within 3dB, and are compliance with the limits), the test data from the original model is representative for the variant model.

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

The detail test results can be found in this document, Appendix A, hereafter.



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	PY7-57442Y	Original Grant	FCC RF Test Report	PY7-72473T	Part 15C (FR882920-01B, FR882920-01C)
	DSS	Bluetooth	2400~2483.5	PY7-57442Y	Original Grant	FCC RF Test Report	PY7-72473T	Part 15C (FR882920-01A)
	DXX	NFC	13.56	PY7-57442Y	Original Grant	FCC RF Test Report	PY7-72473T	Part 15C (FR882920-01D)
15E	NII	Wi-Fi	5150~5250 5250~5350 5470~5725 5725~5850	PY7-57442Y	Original Grant	FCC RF Test Report	PY7-72473T	Part 15E (FR882920-01E, FR882920-01F)
		DFS	5470~5725	PY7-57442Y	Original Grant	FCC RF Test Report	PY7-72473T	Part 15E (FZ882920-01)

Appendix A. Spot Check Test Result

1.1 Conducted power

<2.4GHz WLAN>

	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-57442Y Average power (dBm)	FCC ID PY7-72473T Average power (dBm)
2.4GHz WLAN	802.11b	CH 1	2412	1Mbps	17	16.81	16.87
		CH 6	2437			16.76	16.68
		CH 11	2462			16.80	16.94
		CH 12	2467		14.5	14.06	13.91
		CH 13	2472		13.5	13.40	13.37
	802.11g	CH 1	2412	6Mbps	16	15.70	15.96
		CH 6	2437			15.80	15.98
		CH 11	2462			15.51	15.97
		CH 12	2467		10	9.62	9.47
		CH 13	2472		-2	-2.37	-2.65
	802.11n-HT20	CH 1	2412	MCS0	16	15.56	15.79
		CH 6	2437			15.61	15.96
		CH 11	2462			15.86	15.87
		CH 12	2467		10	9.59	9.19
		CH 13	2472		-2.5	-2.98	-3.26



<Bluetooth>					
Mode	Channel	Frequency (MHz)	Tune-Up Limit	FCC ID PY7-57442Y Average power (dBm)	FCC ID PY7-72473T Average power (dBm)
Bluetooth (1Mbps)	CH 00	2402	11.5	11.11	10.26
	CH 39	2441		10.37	9.66
	CH 78	2480		11.17	10.30
Bluetooth (2Mbps)	CH 00	2402	9.5	8.62	7.93
	CH 39	2441		7.44	6.91
	CH 78	2480		8.70	7.90
Bluetooth (3Mbps)	CH 00	2402	9.5	8.64	7.95
	CH 39	2441		7.46	6.92
	CH 78	2480		8.74	7.92
BLE (GFSK) (1Mbps)	CH 00	2402	2	0.53	0.98
	CH 19	2440		-0.06	-0.10
	CH 39	2480		1.72	1.99
BLE (GFSK) (2Mbps)	CH 00	2402	2	0.44	0.89
	CH 19	2440		-0.15	-0.13
	CH 39	2480		1.66	1.98

**<5GHz WLAN>**

5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-57442Y Average power (dBm)	FCC ID PY7-72473T Average power (dBm)
	802.11a	CH 36	5180	6Mbps	15.5	15.30	15.20
		CH 44	5220			15.24	15.47
		CH 48	5240			15.21	15.45
	802.11n HT20	CH 36	5180	MCS0	15	14.82	14.99
		CH 44	5220			14.79	14.96
		CH 48	5240			14.75	14.80
	802.11n HT40	CH 38	5190	MCS0	14.5	14.38	14.44
		CH 46	5230			14.36	14.41
	802.11ac VHT20	CH 36	5180	MCS0	15	14.80	14.96
		CH 44	5220			14.78	14.93
		CH 48	5240			14.73	14.77
	802.11ac VHT40	CH 38	5190	MCS0	14.5	14.36	14.42
		CH 46	5230			14.33	14.39
	802.11ac VHT80	CH 42	5210	MCS0	14	13.94	13.69



5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-57442Y Average power (dBm)	FCC ID PY7-72473T Average power (dBm)
	802.11a	CH 52	5260	6Mbps	15.5	15.32	15.47
		CH 60	5300			15.47	15.45
		CH 64	5320			15.45	15.43
	802.11n HT20	CH 52	5260	MCS0	15	14.84	14.86
		CH 60	5300			14.90	14.92
		CH 64	5320			14.96	14.97
	802.11n HT40	CH 54	5270	MCS0	14.5	14.40	14.24
		CH 62	5310			14.49	14.50
	802.11ac VHT20	CH 52	5260	MCS0	15	14.82	14.84
		CH 60	5300			14.86	14.89
		CH 64	5320			14.94	14.93
	802.11ac VHT40	CH 54	5270	MCS0	14.5	14.38	14.21
		CH 62	5310			14.46	14.50
	802.11ac VHT80	CH58	5290	MCS0	14	13.65	13.88



	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-57442Y Average power (dBm)	FCC ID PY7-72473T Average power (dBm)
5.5GHz WLAN	802.11a	CH 100	5500	6Mbps	15.5	15.48	15.20
		CH 116	5580			15.36	15.47
		CH 140	5700			15.42	15.49
		CH 144	5720			15.28	15.22
	802.11n HT20	CH 100	5500	MCS0	15	14.97	14.87
		CH 116	5580			14.89	14.72
		CH 140	5700			14.99	14.66
		CH 144	5720			14.72	14.96
	802.11n HT40	CH 102	5510	MCS0	14.5	14.43	14.37
		CH 126	5630			14.48	14.49
		CH 134	5670			14.47	14.31
		CH 142	5710			14.22	14.33
	802.11ac VHT20	CH 100	5500	MCS0	15	14.95	14.83
		CH 116	5580			14.83	14.71
		CH 140	5700			14.97	14.63
		CH 144	5720			14.69	14.91
	802.11ac VHT40	CH 102	5510	MCS0	14.5	14.40	14.34
		CH 126	5630			14.38	14.45
		CH 134	5670			14.44	14.28
		CH 142	5710			14.18	14.31
	802.11ac VHT80	CH 106	5530	MCS0	14	13.92	13.97
		CH 122	5610			13.88	13.53
		CH 138	5690			13.91	13.87



5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-57442Y Average power (dBm)	FCC ID PY7-72473T Average power (dBm)
	802.11a	CH 149	5745	MCS0	15.5	15.48	15.30
		CH 157	5785			15.42	15.41
		CH 165	5825			15.45	15.10
	802.11n HT20	CH 149	5745	MCS0	15	14.98	14.96
		CH 157	5785			14.96	14.80
		CH 165	5825			14.97	14.75
	802.11n HT40	CH 151	5755	MCS0	14.5	14.47	14.30
		CH 159	5795			14.41	14.47
	802.11ac VHT20	CH 149	5745	MCS0	15	14.97	14.94
		CH 157	5785			14.94	14.75
		CH 165	5825			14.96	14.71
	802.11ac VHT40	CH 151	5755	MCS0	14.5	14.44	14.28
		CH 159	5795			14.39	14.40
	802.11ac VHT80	CH155	5775	MCS0	14	13.70	13.81



1.2 Radiated Spurious Emission

2.4GHz BT/WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-57442Y						FCC ID PY7-72473T					
				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	2483.56	56.15	74	4960	52.37	74	2483.52	54.58	74	4960	52.67	74
			A	2483.56	31.36	54	4960	27.58	54	2483.52	29.79	54	4960	27.88	54
BLE(2Mbps)	CH 19	2440	P	2493.91	53.11	74	7320	41.08	74	2489.15	53.01	74	4880	41.98	74
			A	2495.17	45.35	54	-	-	-	2499.37	45.01	54	-	-	-
802.11b	CH 13	2472	P	2483.56	56.59	74	4944	51.88	74	2483.6	53.71	74	4944	49.49	74
			A	2483.52	48.93	54	4944	50.27	54	2483.52	45.95	54	4944	47.49	54
802.11n HT20	CH 13	2472	P	2483.64	61.01	74	7416	41.76	74	2483.52	58.96	74	7416	42.72	74
			A	2483.52	50.98	54	-	-	-	2483.52	49.36	54	-	-	-

5.2GHz WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-57442Y						FCC ID PY7-72473T					
				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	5148.72	62.8	74	10380	45.77	68.2	5147.94	63.23	74	10380	45.94	68.2
			A	5150	49.95	54	-	-	-	5150	50.77	54	-	-	-

**5.3GHz WLAN**

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-57442Y						FCC ID PY7-72473T					
				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)		(MHz)	(dBuV/m)	
802.11n HT40	CH 62	5310	P	5350.56	61.94	74	10620	45.8	74	5351.28	62.07	74	10620	43.6	74
			A	5350.08	50.77	54	-	-	-	5351.28	50.99	54	-	-	-

5.5GHz WLAN

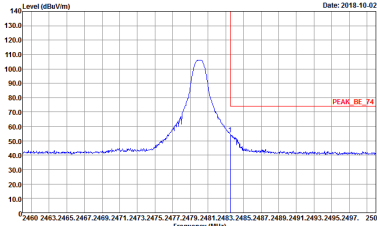
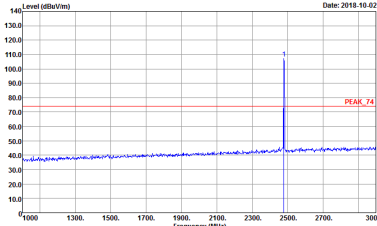
Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-57442Y						FCC ID PY7-72473T					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit	Frequency	Level	Limit
				(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)	(dBuV/m)	(MHz)	(dBuV/m)		(MHz)	(dBuV/m)	(dBuV/m)
802.11a	CH 140	5700	P	5726.255	67.22	74	17100	47.62	68.2	5725	67.51	74	17100	49.12	68.2
			A	5725.31	50.63	54	-	-	-	5725	50.51	54	-	-	-

5.8GHz WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-57442Y						FCC ID PY7-72473T					
				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 HT20	CH 165	5825	P	5949.2	56	68.2	17475	47.15	68.2	5931.4	55.84	68.2	17475	49.82	68.2

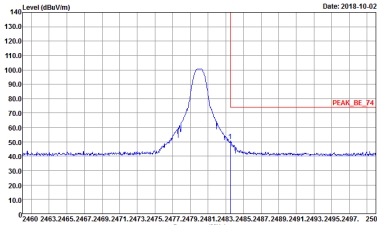
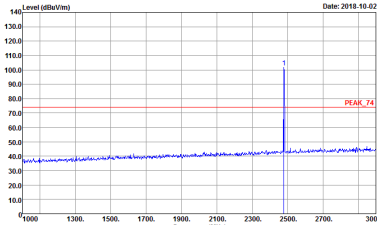


2.4GHz 2400~2483.5MHz
BT 1Mbps (Band Edge @ 3m)

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-JF HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-JF HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01



FCC TEST REPORT

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Vertical	Fundamental
Peak	 Site : 03CHI1-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01	 Site : 03CHI1-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01

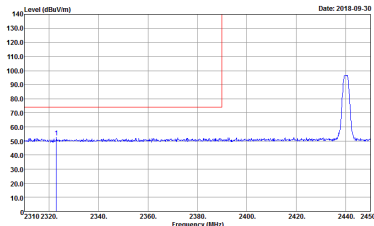
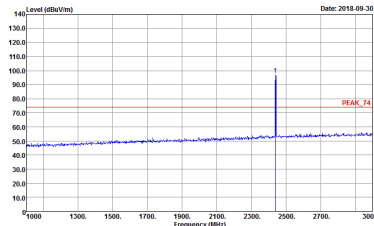
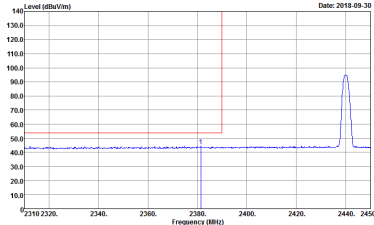
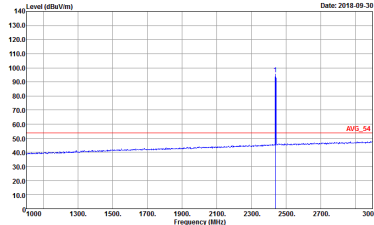


2.4GHz 2400~2483.5MHz
BT 1Mbps (Harmonic @ 3m)

BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH78 2480MHz	
	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 882921-01

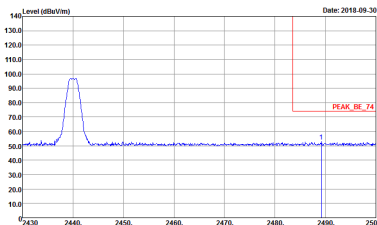
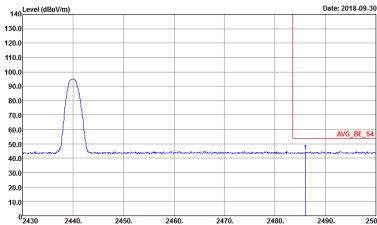


2.4GHz 2400~2483.5MHz
BLE 2Mbps (Band Edge @ 3m)

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH19 2440MHz - L	
	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:10.000KHz SWT:Auto Detector : Peak Project : 882921-01	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:10.000KHz SWT:Auto Detector : Peak Project : 882921-01

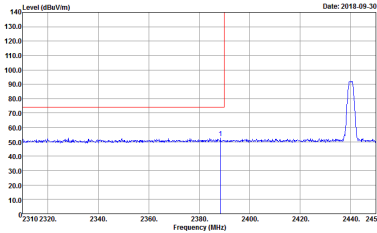
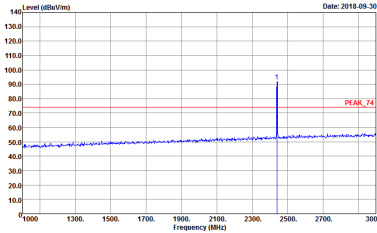
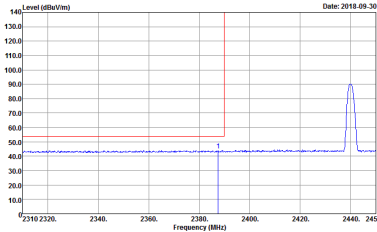
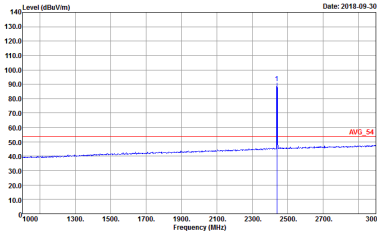


FCC TEST REPORT

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH19 2440MHz - R	
	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01	Left blank

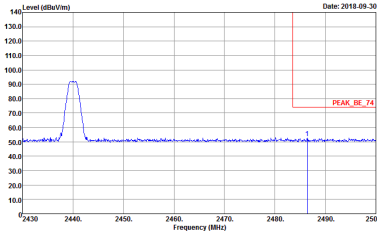
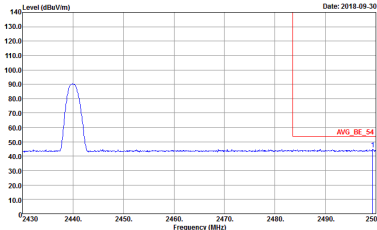


FCC TEST REPORT

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH19 2440MHz - L	
	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:10.000KHz SWT:Auto Detector : Peak Project : 882921-01	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:10.000KHz SWT:Auto Detector : Peak Project : 882921-01



FCC TEST REPORT

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH19 2440MHz - R	
	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01	Left blank

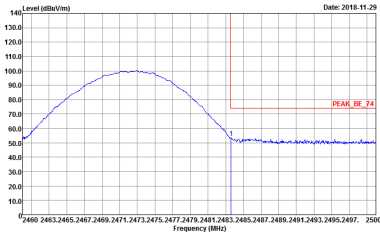
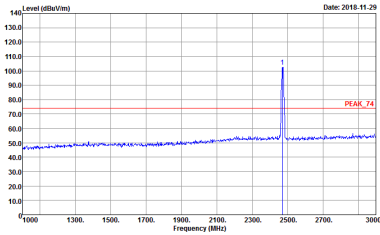
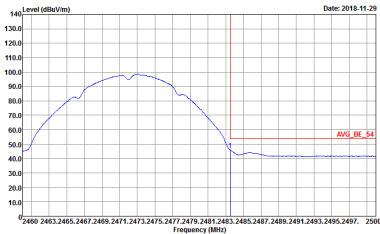
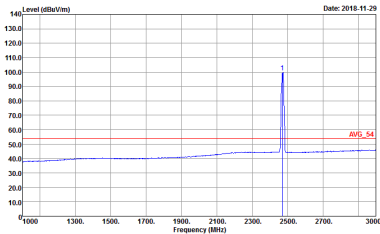


2.4GHz 2400~2483.5MHz
BLE 2Mbps (Harmonic @ 3m)

BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BLE CH19 2440MHz	
	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 882921-01

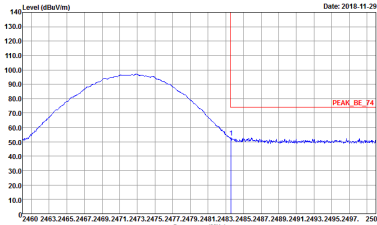
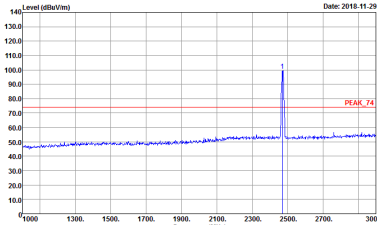
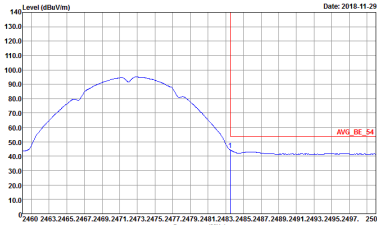
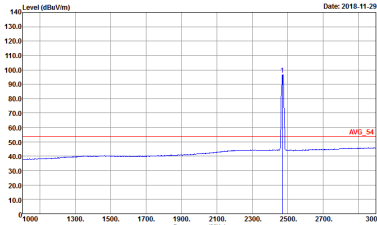


2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH13 2472MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : 7 Dac Gain : 5 PA CFG : 0	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : 7 Dac Gain : 5 PA CFG : 0
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : 7 Dac Gain : 5 PA CFG : 0	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : 7 Dac Gain : 5 PA CFG : 0

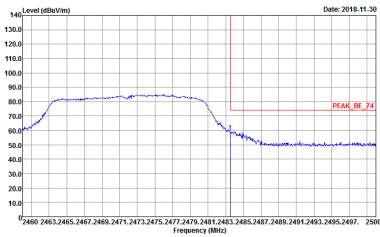
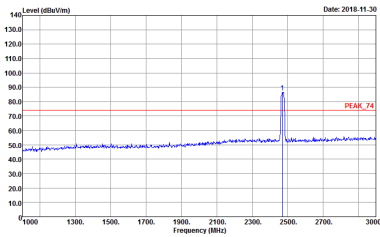
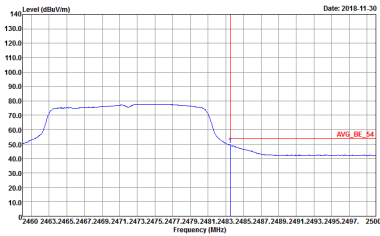
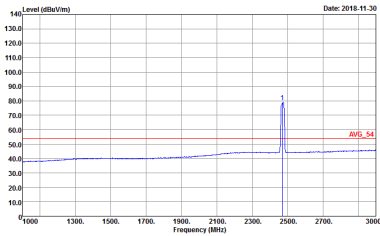


FCC TEST REPORT

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH13 2472MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Setting : 0 Gain Index : 7 Dac Gain : 5 PA CFG : 0	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Setting : 0 Gain Index : 7 Dac Gain : 5 PA CFG : 0
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Project : 882921-01 Setting : 0 Gain Index : 7 Dac Gain : 5 PA CFG : 0	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:0.010KHz SWT:Auto Project : 882921-01 Setting : 0 Gain Index : 7 Dac Gain : 5 PA CFG : 0

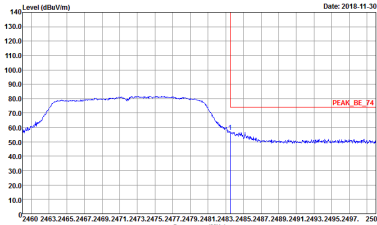
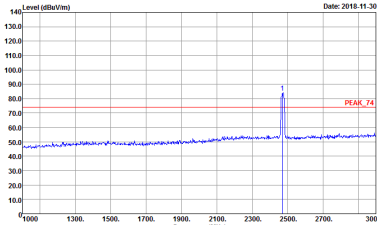
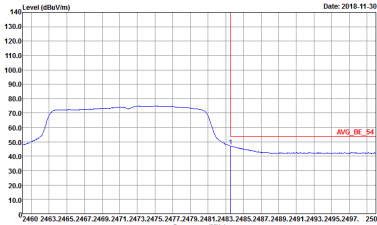
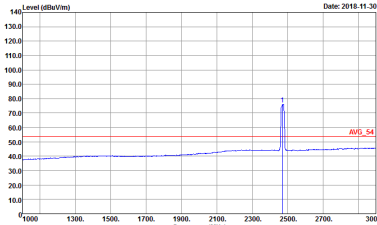


2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : 0 Dac Gain : -10 PA CFG : 0	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : 0 Dac Gain : -10 PA CFG : 0
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : 0 Dac Gain : -10 PA CFG : 0	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : 0 Dac Gain : -10 PA CFG : 0



FCC TEST REPORT

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Setting : 0 Gain Index : 0 Dac Gain : -10 PA CFG : 0	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Setting : 0 Gain Index : 0 Dac Gain : -10 PA CFG : 0
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:1000KHz SWT:Auto Project : 882921-01 Setting : 0 Gain Index : 0 Dac Gain : -10 PA CFG : 0	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:1000KHz SWT:Auto Project : 882921-01 Setting : 0 Gain Index : 0 Dac Gain : -10 PA CFG : 0



2.4GHz 2400~2483.5MHz
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH13 2472MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : Use Forced Desired Gain Dac Gain : 7 PA CFG : 5 PA CFG : 0	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : Use Forced Desired Gain Dac Gain : 7 PA CFG : 5 PA CFG : 0



2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : Use Forced Desired Gain Dac Gain : -10 PA CFG : 0	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 882921-01 Setting : 0 Gain Index : Use Forced Desired Gain Dac Gain : -10 PA CFG : 0

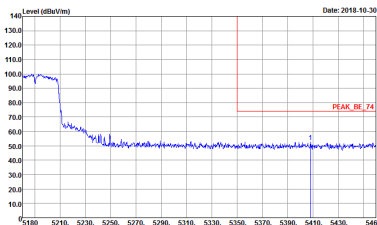
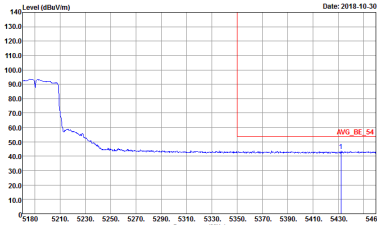


Band 1 5150~5250MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL Detector : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank

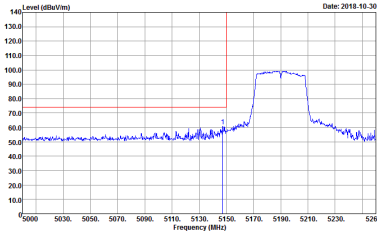
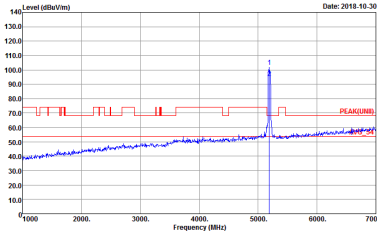
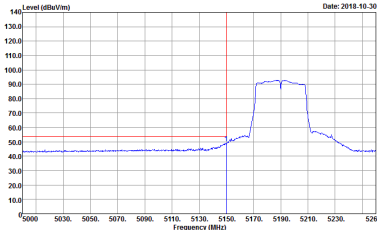


FCC TEST REPORT

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank

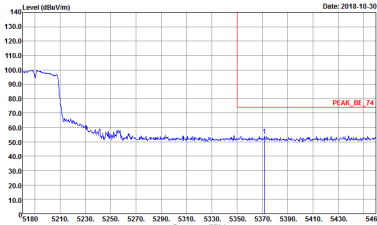
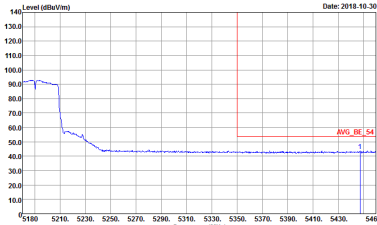


FCC TEST REPORT

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Sample : #10 Setting : 13	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Sample : #10 Setting : 13
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank

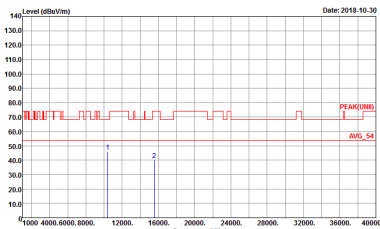
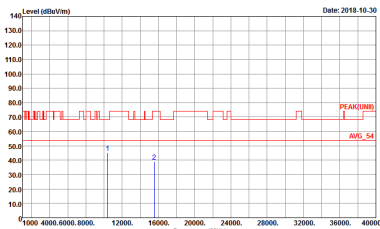


FCC TEST REPORT

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11n HT40 CH38 5190MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank

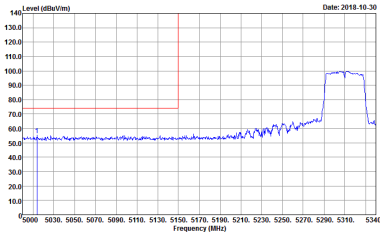
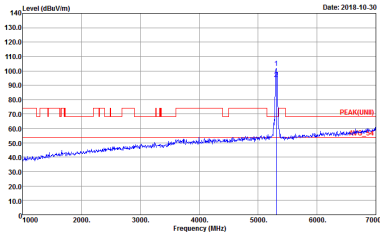
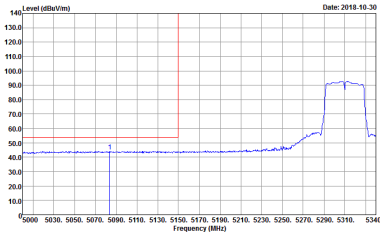


Band 1 5150~5250MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

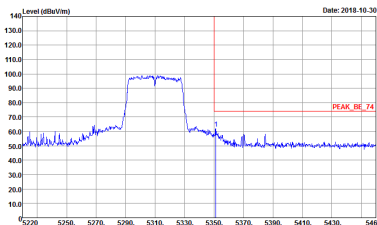
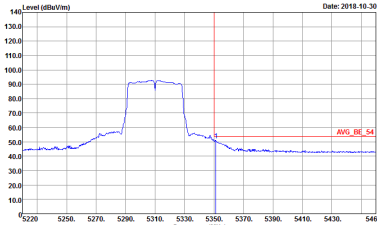
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11n HT40 CH38 5190MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 882921-01 Sample : #10	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 VERTICAL Detector : Peak Project : 882921-01 Sample : #10



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

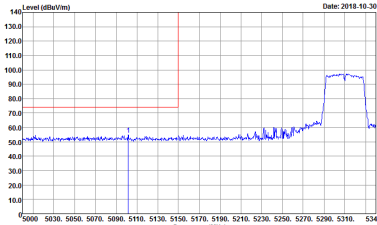
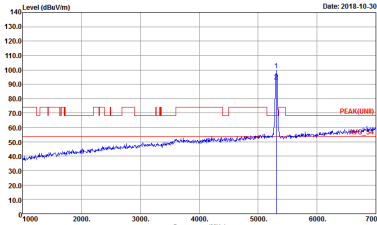
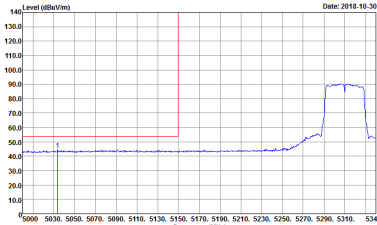
WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - L	
1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3.000kHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - R	
1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank

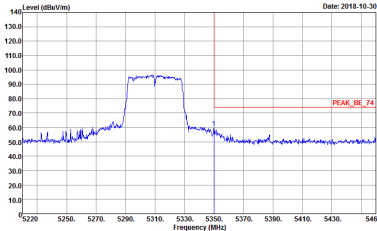
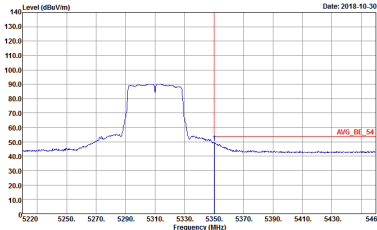


FCC TEST REPORT

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - L	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Sample : #10 Setting : 13	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Sample : #10 Setting : 13
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank

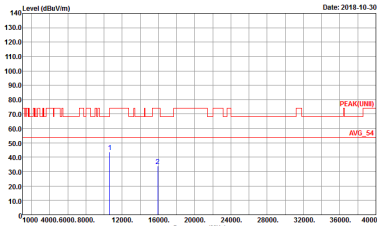
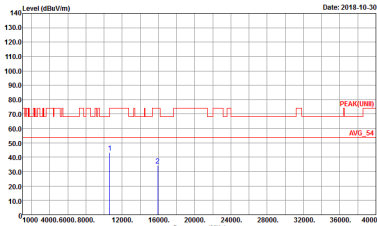


FCC TEST REPORT

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	Left blank
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 13	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 : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 882921-01 Sample : #10	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 VERTICAL Detector : Peak Project : 882921-01 Sample : #10

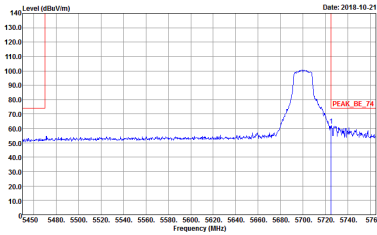
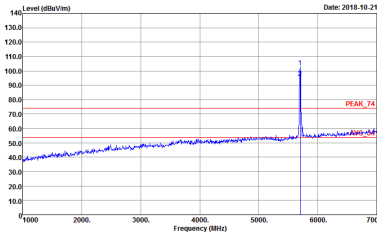
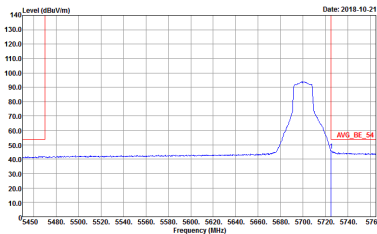


Band 3 - 5470~5725MHz
WIFI 802.11a (Band Edge @ 3m)

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11a CH140 5700MHz	
1	Horizontal	Fundamental
Peak	Site : 03CH16-HY Condition : PEAK_BE_74 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #F10 Setting : 15.5	Site : 03CH16-HY Condition : PEAK_F4 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #F10 Setting : 15.5
Avg.	Site : 03CH16-HY Condition : AVG_BE_54 3m 91200_1522 HORIZONTAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #F10 Setting : 15.5	

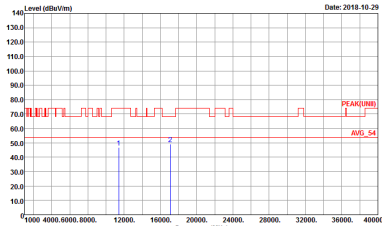
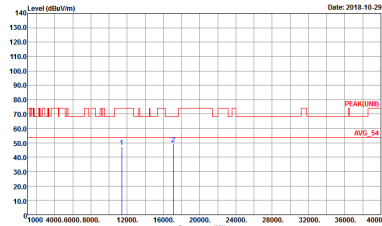


FCC TEST REPORT

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT40 CH140 5700MHz - R	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE_74 3m 9120D_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 15.5	 Site : 03CH16-HY Condition : PEAK_74 3m 9120D_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 15.5
Avg.	 Site : 03CH16-HY Condition : AVG_BE_54 3m 9120D_1522 VERTICAL Detector : RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 15.5	Left blank

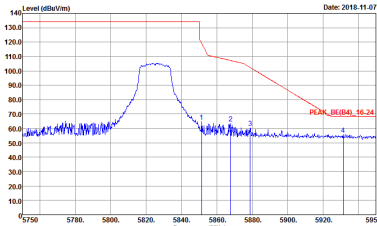
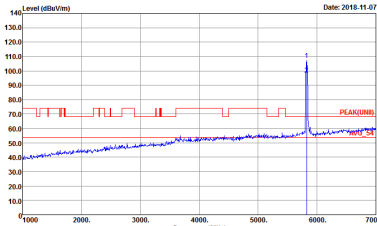


Band 3 5470~5725MHz
WIFI 802.11a (Harmonic @ 3m)

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11a CH140 5700MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 882921-01 Sample : #10	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 VERTICAL Detector : Peak Project : 882921-01 Sample : #10

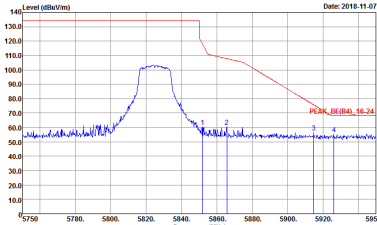
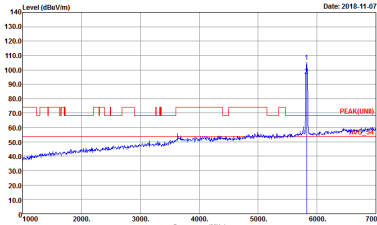


Band 4 5725~5850MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 12	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 882921-01 Sample : #10 Setting : 12

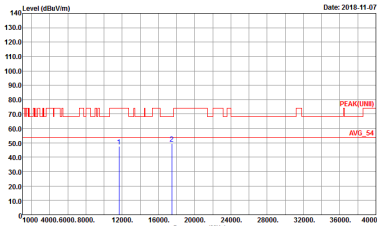
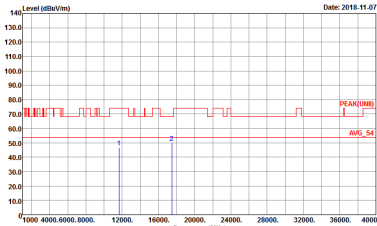


FCC TEST REPORT

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Vertical	Fundamental
Peak	 Site : 03CH16-HY Condition : PEAK_BE(B4)_16-24 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Sample : #10 Setting : 12	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 882921-01 Sample : #10 Setting : 12



Band 4 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT20 CH165 5825MHz	
1	Horizontal	Vertical
Peak Avg.	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 HORIZONTAL Detector : Peak Project : 882921-01 Sample : #10	 Site : 03CH16-HY Condition : PEAK(UNIT) 3m 91200_1522 VERTICAL Detector : Peak Project : 882921-01 Sample : #10



2.4GHz 2400~2483.5MHz
BT 1Mbps (Band Edge @ 3m)

BT	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BT CH 78 2480MHz	*	2480	107.3	-	-	106.87	27.36	6.65	33.58	133	140	P	H
	*	2480	82.51	-	-	-	-	-	-	-	-	A	H
		2483.52	54.58	-19.42	74	54.14	27.36	6.66	33.58	133	140	P	H
		2483.52	29.79	-24.21	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	101.95	-	-	101.52	27.36	6.65	33.58	385	126	P	V
	*	2480	77.16	-	-	-	-	-	-	-	-	A	V
		2483.52	50.51	-23.49	74	50.07	27.36	6.66	33.58	385	126	P	V
		2483.52	25.72	-28.28	54	-	-	-	-	-	-	A	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 1Mbps (Harmonic @ 3m)**

BT	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BT CH 78 2480MHz		4960	52.67	-21.33	74	67.39	31.54	10.25	56.51	100	0	P	H
		4960	27.88	-26.12	54	-	-	-	-	-	-	A	H
		7440	43.5	-30.5	74	50.5	36.59	12.47	56.06	100	0	P	H
		7440	18.71	-35.29	54	-	-	-	-	-	-	A	H
		4960	50.48	-23.52	74	65.2	31.54	10.25	56.51	100	0	P	V
		4960	25.69	-28.31	54	-	-	-	-	-	-	A	V
		7440	44.8	-29.2	74	51.8	36.59	12.47	56.06	100	0	P	V
		7440	20.01	-33.99	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
BLE 2Mbps (Band Edge @ 3m)

BLE	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BLE CH 19 2440MHz		2323.02	52.6	-21.4	74	42.86	26.95	16.4	33.61	140	138	P	H
		2381.4	44.3	-9.7	54	34.32	27.09	16.49	33.6	140	138	A	H
	*	2440	97.05	-	-	86.82	27.27	16.55	33.59	140	138	P	H
	*	2440	95.71	-	-	85.48	27.27	16.55	33.59	140	138	A	H
		2489.15	53.01	-20.99	74	42.6	27.4	16.59	33.58	140	138	P	H
		2486.07	44.62	-9.38	54	34.25	27.36	16.59	33.58	140	138	A	H
		2388.4	52.72	-21.28	74	42.69	27.13	16.5	33.6	391	357	P	V
		2387.56	44.12	-9.88	54	34.09	27.13	16.5	33.6	391	357	A	V
	*	2440	92.18	-	-	81.95	27.27	16.55	33.59	391	357	P	V
	*	2440	90.72	-	-	80.49	27.27	16.55	33.59	391	357	A	V
		2486.42	52.81	-21.19	74	42.44	27.36	16.59	33.58	391	357	P	V
		2499.37	45.01	-8.99	54	34.58	27.4	16.6	33.57	391	357	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**2.4GHz 2400~2483.5MHz
BLE 2Mbps (Harmonic @ 3m)**

BLE	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
BLE CH 19 2440MHz		4880	41.98	-32.02	74	57	31.38	10.15	56.55	100	0	P	H
		7320	40.77	-33.23	74	48.13	36.32	12.53	56.21	100	0	P	H
													H
													H
		4880	41.28	-32.72	74	56.3	31.38	10.15	56.55	100	0	P	V
		7320	41.14	-32.86	74	48.5	36.32	12.53	56.21	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 802.11b (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 13 2472MHz	*	2472	103.12	-	-	92.84	27.3	16.58	33.6	100	121	P	H
	*	2472	99.64	-	-	89.36	27.3	16.58	33.6	100	121	A	H
		2483.6	53.71	-20.29	74	43.42	27.3	16.59	33.6	100	121	P	H
		2483.52	45.95	-8.05	54	35.66	27.3	16.59	33.6	100	121	A	H
													H
													H
	*	2472	99.56	-	-	89.28	27.3	16.58	33.6	375	4	P	V
	*	2472	96.55	-	-	86.27	27.3	16.58	33.6	375	4	A	V
		2483.6	52.96	-21.04	74	42.67	27.3	16.59	33.6	375	4	P	V
		2483.52	44.39	-9.61	54	34.1	27.3	16.59	33.6	375	4	A	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 802.11b (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11b CH 13 2472MHz		4944	44.09	-29.91	74	61.14	31.26	10.21	58.52	100	0	P	H
		7416	42.54	-31.46	74	52.37	36.43	12.44	58.7	100	0	P	H
													H
													H
		4944	49.49	-24.51	74	66.54	31.26	10.21	58.52	104	244	P	V
		4944	47.49	-6.51	54	64.54	31.26	10.21	58.52	104	244	A	V
		7416	41.5	-32.5	74	51.33	36.43	12.44	58.7	100	0	P	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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 13 2472MHz	*	2472	86.7	-	-	76.42	27.3	16.58	33.6	100	122	P	H
	*	2472	79.21	-	-	68.93	27.3	16.58	33.6	100	122	A	H
		2483.52	58.96	-15.04	74	48.67	27.3	16.59	33.6	100	122	P	H
		2483.52	49.36	-4.64	54	39.07	27.3	16.59	33.6	100	122	A	H
													H
													H
	*	2472	84.19	-	-	73.91	27.3	16.58	33.6	376	4	P	V
	*	2472	76.24	-	-	65.96	27.3	16.58	33.6	376	4	A	V
		2483.52	57.1	-16.9	74	46.81	27.3	16.59	33.6	376	4	P	V
		2483.56	46.94	-7.06	54	36.65	27.3	16.59	33.6	376	4	A	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 (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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 13 2472MHz		4944	39.25	-34.75	74	56.3	31.26	10.21	58.52	100	0	P	H
		7416	42.72	-31.28	74	52.55	36.43	12.44	58.7	100	0	P	H
													H
													H
		4944	39.73	-34.27	74	56.78	31.26	10.21	58.52	100	0	P	V
		7416	42.03	-31.97	74	51.86	36.43	12.44	58.7	100	0	P	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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 38 5190MHz		5147.94	63.23	-10.77	74	47.85	31.56	13.2	29.38	100	159	P	H
		5150	50.77	-3.23	54	35.39	31.56	13.2	29.38	100	159	A	H
	*	5190	103.08	-	-	87.79	31.58	13.1	29.39	100	159	P	H
	*	5190	95.07	-	-	79.78	31.58	13.1	29.39	100	159	A	H
		5408.2	52.82	-21.18	74	37.6	31.66	12.98	29.42	100	159	P	H
		5432.28	43.76	-10.24	54	28.45	31.67	13.06	29.42	100	159	A	H
		5147.16	60.85	-13.15	74	45.46	31.56	13.21	29.38	399	195	P	V
		5150	49	-5	54	33.62	31.56	13.2	29.38	399	195	A	V
	*	5190	102.31	-	-	87.02	31.58	13.1	29.39	399	195	P	V
	*	5190	94.3	-	-	79.01	31.58	13.1	29.39	399	195	A	V
		5371.8	54.12	-19.88	74	38.91	31.65	12.97	29.41	399	195	P	V
		5447.4	43.81	-10.19	54	28.43	31.68	13.12	29.42	399	195	A	V



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)	Path 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	45.94	-22.26	68.2	49.76	39.51	17.5	60.83	100	0	P	H
		15570	40.26	-33.74	74	41.68	37.8	21.52	60.74	100	0	P	H
													H
													H
		10380	45.19	-23.01	68.2	49.01	39.51	17.5	60.83	100	0	P	V
		15570	38.97	-35.03	74	40.39	37.8	21.52	60.74	100	0	P	V
													V
													V



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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT40 CH 62 5310MHz		5013.94	55.31	-18.69	74	39.63	31.51	13.53	29.36	100	160	P	H
		5083.98	44.21	-9.79	54	28.69	31.53	13.36	29.37	100	160	A	H
	*	5310	102.23	-	-	87	31.62	13.01	29.4	100	160	P	H
	*	5310	94.22	-	-	78.99	31.62	13.01	29.4	100	160	A	H
		5351.28	62.07	-11.93	74	46.86	31.64	12.98	29.41	100	160	P	H
		5351.28	50.99	-3.01	54	35.78	31.64	12.98	29.41	100	160	A	H
		5101.66	55.01	-18.99	74	39.52	31.54	13.32	29.37	269	184	P	V
		5033.66	44.33	-9.67	54	28.7	31.51	13.48	29.36	269	184	A	V
	*	5310	99.73	-	-	84.5	31.62	13.01	29.4	269	184	P	V
	*	5310	91.95	-	-	76.72	31.62	13.01	29.4	269	184	A	V
		5350.08	59.5	-14.5	74	44.29	31.64	12.98	29.41	269	184	P	V
		5350.32	49.44	-4.56	54	34.23	31.64	12.98	29.41	269	184	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)	Path 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	43.6	-30.4	74	47.29	39.74	17.69	61.12	100	0	P	H
		15930	34.08	-39.92	74	35.3	37.65	21.59	60.46	100	0	P	H
													H
													H
		10620	43.1	-30.9	74	46.79	39.74	17.69	61.12	100	0	P	V
		15930	34.4	-39.6	74	35.62	37.65	21.59	60.46	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz
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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 140 5700MHz	*	5700	108.38	-	-	91.96	32.02	13.93	29.53	100	341	P	H
	*	5700	100.92	-	-	84.5	32.02	13.93	29.53	100	341	A	H
		5725	67.51	-6.49	74	50.99	32.06	14	29.54	100	341	P	H
		5725	50.51	-3.49	54	33.99	32.06	14	29.54	100	341	A	H
	*	5700	102.6	-	-	86.18	32.02	13.93	29.53	279	21	P	V
	*	5700	95.27	-	-	78.85	32.02	13.93	29.53	279	21	A	V
		5725	62.16	-11.84	74	45.64	32.06	14	29.54	279	21	P	V
		5725	45.92	-8.08	54	29.4	32.06	14	29.54	279	21	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



Band 3 - 5470~5725MHz
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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11a CH 140 5700MHz		11400	46.77	-27.23	74	49.93	39.96	18.3	61.42	100	0	P	H
		17100	49.12	-19.08	68.2	43.09	41.08	23.09	58.14	100	0	P	H
													H
													H
		11400	47.13	-26.87	74	50.29	39.96	18.3	61.42	100	0	P	V
		17100	48.96	-19.24	68.2	42.93	41.08	23.09	58.14	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 802.11n 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)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 165 5825MHz	*	5825	107.6	-	-	90.79	32.28	14.12	29.59	100	307	P	H
	*	5825	97.35	-	-	80.54	32.28	14.12	29.59	100	307	A	H
		5851.4	64.77	-54.24	119.01	48.01	32.33	14.03	29.6	100	307	P	H
		5867.8	63.52	-43.69	107.21	46.81	32.36	13.97	29.62	100	307	P	H
		5878.8	60.26	-42.12	102.38	43.56	32.38	13.94	29.62	100	307	P	H
		5931.4	55.84	-12.36	68.2	39.24	32.48	13.76	29.64	100	307	P	H
													H
													H
	*	5825	105.57	-	-	88.76	32.28	14.12	29.59	319	22	P	V
	*	5825	96	-	-	79.19	32.28	14.12	29.59	319	22	A	V
		5851.8	60.44	-57.66	118.1	43.68	32.33	14.03	29.6	319	22	P	V
		5865.6	60.56	-47.27	107.83	43.84	32.36	13.98	29.62	319	22	P	V
		5914.8	56.6	-19.12	75.72	39.97	32.45	13.82	29.64	319	22	P	V
		5926.2	55.51	-12.69	68.2	38.9	32.47	13.78	29.64	319	22	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



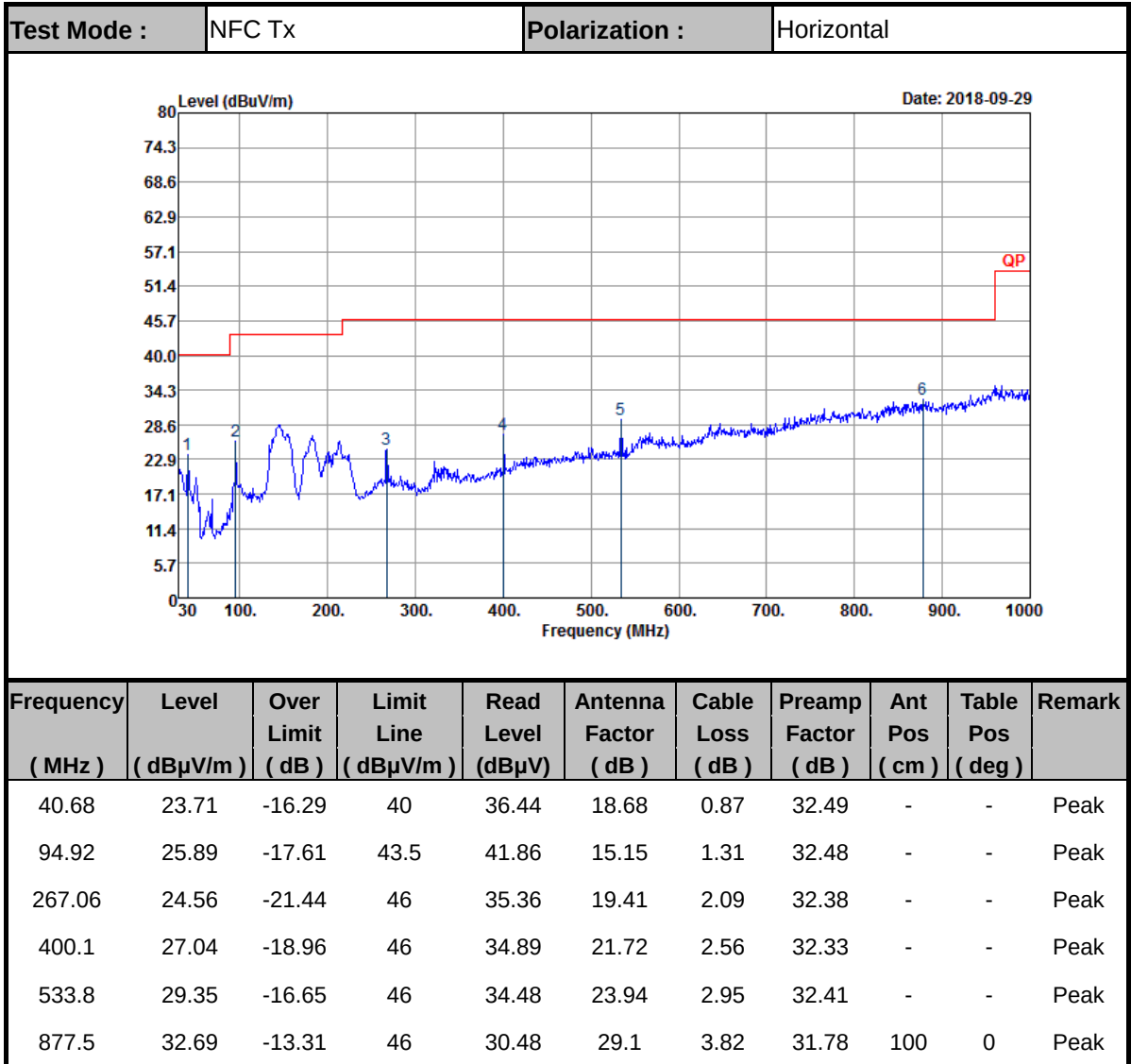
Band 4 5725~5850MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

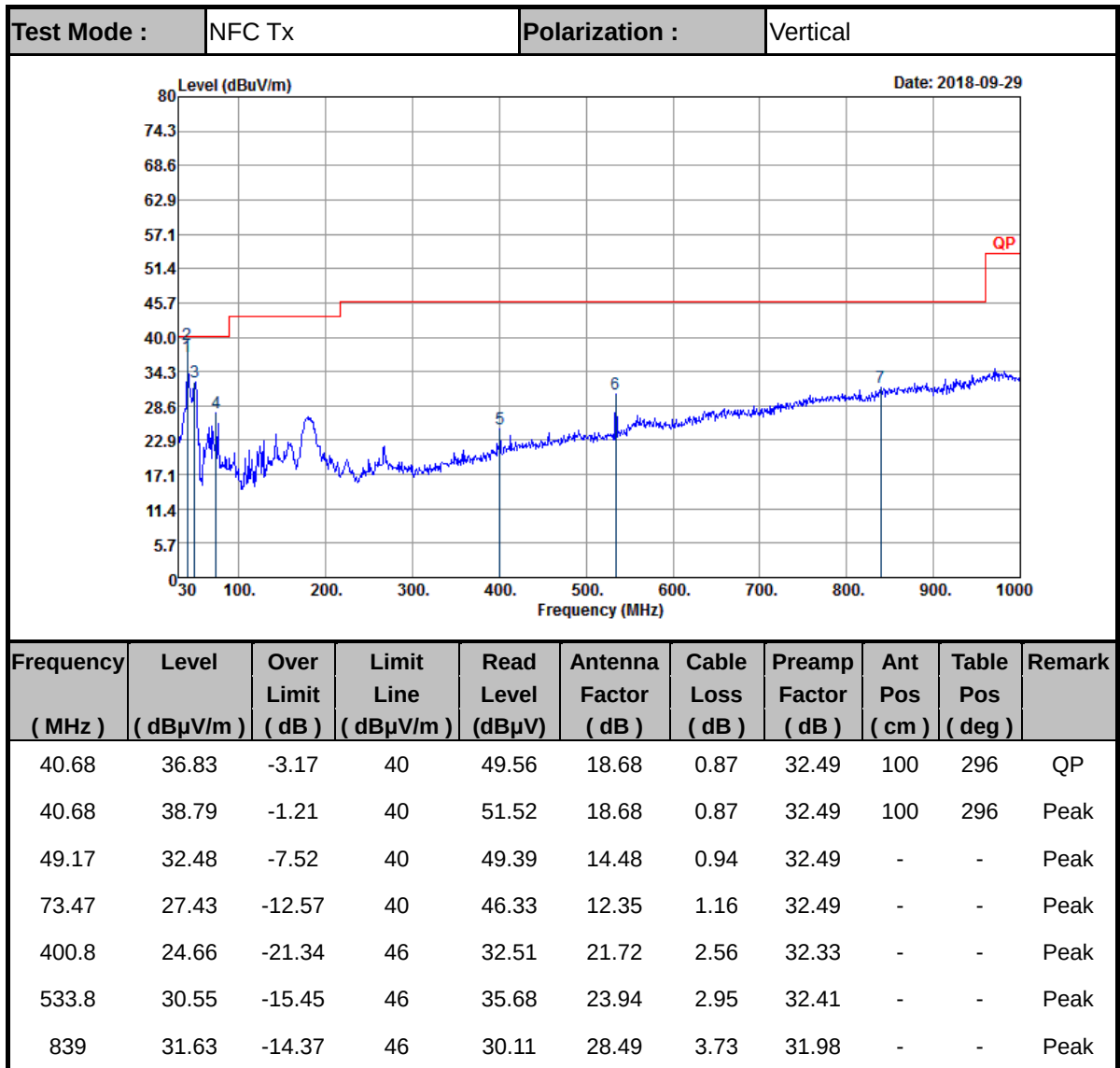
WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11n HT20 CH 165 5825MHz		11650	47.64	-26.36	74	51.21	39.6	18.5	61.67	100	0	P	H
		17475	49.67	-18.53	68.2	40.74	42.5	23.59	57.16	100	0	P	H
													H
													H
		11650	46.61	-27.39	74	50.18	39.6	18.5	61.67	100	0	P	V
		17475	49.82	-18.38	68.2	40.89	42.5	23.59	57.16	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



FCC TEST REPORT

NFC





End of this report