



Spot Check Evaluation

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Approved by: Jones Tsai / Manager



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History of this test report

Version	Description	Issued Date
01	Initial issue of report	Apr. 08, 2019



1. Introduction Section

The original model (FCC ID: PY7-80422E) and the variant model (FCC ID: PY7-80422D) 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 PY7-80422D references the test data of PY7-80422E

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID (FCC ID: PY7-80422D).



2. Difference Section

The original model (FCC ID: PY7-80422E) and the variant model (FCC ID: PY7-80422D) 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 PY7-80422D, to support capability for different cellular bands.

The product specification is outlined in the following table:

FCC ID			PY7-80422E	PY7-80422D
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	B4/B2
LTE (FDD/TDD)	QPSK/16QAM/64QAM		B4/B5/B7/B12/B13/B17 /B41	B2/B4/B12/B17/B41
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 MHz	
NFC	ASK		13.56 MHz	



3. Spot Check Verification Data Section

Summary of the spot check:

Test Item	MIMO Mode	PY7-80422E Worst Result	PY7-80422D Worst Result	Difference (dB)
Average Conducted Power (dBm)	802.11b	17.16	17.27	-0.11
	802.11g	17.71	17.66	0.05
	11n HT20	17.76	17.71	0.05
	BT (1Mbps)	11.21	10.78	0.43
	BT (2Mbps)	7.41	7.34	0.07
	BT (3Mbps)	7.42	7.35	0.07
	BT-LE(1Mbps)	5.1	5.1	0
	BT-LE(2Mbps)	5.0	5.1	-0.1
	11a, 5.2GHz	16.02	16.06	-0.04
	11n HT20, 5.2GHz	16.09	16.07	0.02
	11n HT40, 5.2GHz	16.12	16.01	0.11
	11ac VHT20, 5.2GHz	16.01	15.97	0.04
	11ac VHT40, 5.2GHz	16.02	15.96	0.06
	11ac VHT80, 5.2GHz	15.91	15.72	0.19
	11a, 5.3GHz	15.89	15.96	-0.07
	11n HT20, 5.3GHz	15.99	15.96	0.03
	11n HT40, 5.3GHz	16.06	15.94	0.12
	11ac VHT20, 5.3GHz	15.89	15.9	-0.01
	11ac VHT40, 5.3GHz	16.02	15.9	0.12
	11ac VHT80, 5.3GHz	15.87	15.89	-0.02
	11a, 5.5GHz	15.91	16	-0.09
	11n HT20, 5.5GHz	16.12	16.01	0.11
	11n HT40, 5.5GHz	15.97	16.06	-0.09
	11ac VHT20, 5.5GHz	16.05	16	0.05
	11ac VHT40, 5.5GHz	15.94	15.96	-0.02
	11ac VHT80, 5.5GHz	16.12	15.72	0.4
	11a, 5.8GHz	16.00	16	0
	11n HT20, 5.8GHz	15.94	16.02	-0.08
	11n HT40, 5.8GHz	15.89	16.02	-0.13
	11ac VHT20, 5.8GHz	15.84	15.8	0.04
	11ac VHT40, 5.8GHz	15.72	15.92	-0.2
	11ac VHT80, 5.8GHz	16.12	15.82	0.3
	S/N of test sample	BH9700EHFT	BH97004JFY	
	Test date	2019/02/17~2019/03/14	2019/03/04~2019/03/18	



Test Item	Mode	PY7-80422E Worst Result	PY7-80422D Worst Result	Difference (dB)
Peak Radiated Spurious Emission (Band Edge) (dBuV/m)	802.11b	54.91	57.85	-2.94
	802.11n HT20	66.30	67.17	-0.87
	BT (1Mbps)	47.78	46.79	0.99
	BT-LE(2Mbps)	51.95	52.88	-0.93
	802.11ac VHT80 5.2GHz	51.49	54.03	-2.54
	802.11n HT40, 5.3GHz	61.03	59.56	1.47
	802.11n HT20, 5.5GHz	64.14	65.00	-0.86
	802.11n HT40, 5.8GHz	55.69	54.15	1.54
	S/N of test sample	BH970052FT	BH9700C6FY	
	Test date	2019/02/22~2019/03/04	2019/03/12~2019/03/14	
Average Radiated Spurious Emission (Band Edge) (dBuV/m)	802.11b	45.37	46.98	-1.61
	802.11n HT20	50.91	50.83	0.08
	BT (1Mbps)	22.99	22.03	0.96
	BT-LE(2Mbps)	42.21	42.21	0
	802.11ac VHT80 5.2GHz	45.08	45.24	-0.16
	802.11n HT40, 5.3GHz	49.03	46.21	2.82
	S/N of test sample	BH970052FT	BH9700C6FY	
	Test date	2019/02/22~2019/03/04	2019/03/12~2019/03/14	
Radiated Spurious Emission (Harmonic) (dBuV/m)	802.11b	41.07	42.90	-1.83
	802.11n HT20	40.88	41.35	-0.47
	BT (1Mbps)	42.32	42.82	-0.5
	BT-LE(2Mbps)	41.07	41.77	-0.7
	802.11ac VHT80 5.2GHz	43.53	44.80	-1.27
	802.11n HT40, 5.3GHz	41.70	42.97	-1.27
	802.11n HT20, 5.5GHz	43.07	45.84	-2.77
	802.11n HT40, 5.8GHz	43.11	45.68	-2.57
	S/N of test sample	BH970052FT	BH9700C6FY	
	Test date	2019/02/22~2019/03/04	2019/03/12~2019/03/14	
NFC (dBuV/m)	RSE (30MHz to1GHz)	33.36	35.15	-1.79
	S/N of test sample	BH9700EJFT	BH970098FY	
	Test date	2019/02/22	2019/03/13	

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	PY7-80422E	Original Grant	FCC RF Test Report	PY7-80422D	Part 15C (FR802423-02B, FR802423-02C)
	DSS	Bluetooth	2400~2483.5	PY7-80422E	Original Grant	FCC RF Test Report	PY7-80422D	Part 15C (FR802423-02A)
	DXX	NFC	13.56	PY7-80422E	Original Grant	FCC RF Test Report	PY7-80422D	Part 15C (FR802423-02D)
15E	NII	Wi-Fi	5150~5250 5250~5350 5470~5725 5725~5850	PY7-80422E	Original Grant	FCC RF Test Report	PY7-80422D	Part 15E (FR802423-02E, FR802423-02F)

Appendix A. Spot Check Test Result

1.1 Conducted power

<2.4GHz WLAN>

2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	FCC ID PY7-80422E Average power (dBm)	FCC ID PY7-80422D Average power (dBm)
	802.11b	CH 1	2412	1Mbps	17.12	17.27
		CH 6	2437		17.07	17.12
		CH 11	2462		17.07	17.27
		CH12	2467		17.16	17.22
		CH13	2472		14.59	14.56
	802.11g	CH 1	2412	6Mbps	12.64	12.64
		CH 6	2437		17.71	17.66
		CH 11	2462		17.56	17.51
		CH12	2467		13.70	13.77
		CH13	2472		7.31	7.51
	802.11n-HT20	CH 1	2412	MCS0	6.32	6.42
		CH 6	2437		17.76	17.71
		CH 11	2462		17.11	17.07
		CH12	2467		12.87	12.97
		CH13	2472		4.91	4.81

**<Bluetooth>**

Mode	Channel	Frequency (MHz)	FCC ID PY7-80422E Average power (dBm)	FCC ID PY7-80422D Average power (dBm)
Bluetooth (1Mbps)	CH 00	2402	10.91	10.38
	CH 39	2441	11.21	10.78
	CH 78	2480	10.18	9.48
Bluetooth (2Mbps)	CH 00	2402	7.23	6.97
	CH 39	2441	7.41	7.34
	CH 78	2480	6.34	6.28
Bluetooth (3Mbps)	CH 00	2402	7.26	6.98
	CH 39	2441	7.42	7.35
	CH 78	2480	6.37	6.30
BLE (GFSK) (1Mbps)	CH 00	2402	4.50	4.80
	CH 19	2440	5.10	5.10
	CH 39	2480	3.80	4.00
BLE (GFSK) (2Mbps)	CH 00	2402	4.40	4.70
	CH 19	2440	5.00	5.10
	CH 39	2480	3.70	3.90

**<5GHz WLAN>**

5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	FCC ID PY7-80422E Average power (dBm)	FCC ID PY7-80422D Average power (dBm)
	802.11a	CH 36	5180	6Mbps	15.95	16.06
		CH 44	5220		15.78	16.01
		CH 48	5240		16.02	15.96
	802.11n-HT20	CH 36	5180	MCS0	16.09	15.88
		CH 44	5220		16.05	16.07
		CH 48	5240		16.06	15.84
	802.11n-HT40	CH 38	5190	MCS0	16.12	16.00
		CH 46	5230		15.94	16.01
	802.11ac-VHT20	CH 36	5180	MCS0	15.99	15.78
		CH 44	5220		16.01	15.97
		CH 48	5240		15.96	15.86
	802.11ac-VHT40	CH 38	5190	MCS0	16.02	15.96
		CH 46	5230		15.84	15.85
	802.11ac-VHT80	CH 42	5210	MCS0	15.91	15.72



5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	FCC ID PY7-80422E Average power (dBm)	FCC ID PY7-80422D Average power (dBm)
	802.11a	CH 52	5260	6Mbps	15.81	15.94
		CH 60	5300		15.89	15.96
		CH 64	5320		15.85	15.86
	802.11n-HT20	CH 52	5260	MCS0	15.79	15.82
		CH 60	5300		15.82	15.94
		CH 64	5320		15.99	15.96
	802.11n-HT40	CH 54	5270	MCS0	16.06	15.94
		CH 62	5310		15.89	15.94
	802.11ac-VHT20	CH 52	5260	MCS0	15.69	15.67
		CH 60	5300		15.72	15.90
		CH 64	5320		15.89	15.86
	802.11ac-VHT40	CH 54	5270	MCS0	16.02	15.78
		CH 62	5310		15.79	15.90
	802.11ac-VHT80	CH58	5290	MCS0	15.87	15.89

**FCC TEST REPORT**

5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	FCC ID PY7-80422E Average power (dBm)	FCC ID PY7-80422D Average power (dBm)
	802.11a	CH 100	5500	6Mbps	15.91	16.00
		CH 116	5580		15.69	15.94
		CH 140	5700		14.62	14.61
		CH144	5720		15.90	15.86
	802.11n-HT20	CH 100	5500	MCS0	16.09	15.99
		CH 116	5580		16.12	16.01
		CH 140	5700		15.13	14.97
		CH144	5720		15.95	15.91
	802.11n-HT40	CH 102	5510	MCS0	15.96	16.06
		CH 110	5550		15.89	16.00
		CH 134	5670		15.97	15.90
		CH142	5710		15.97	15.92
	802.11ac-VHT20	CH 100	5500	MCS0	16.00	16.00
		CH 116	5580		16.05	15.90
		CH 140	5700		14.98	14.96
		CH144	5720		15.90	15.80
	802.11ac-VHT40	CH 102	5510	MCS0	15.92	15.78
		CH 110	5550		15.91	15.96
		CH 134	5670		15.94	15.74
		CH142	5710		15.81	15.82
	802.11ac-VHT80	CH106	5530	MCS0	16.12	15.64
		CH122	5610		16.09	15.72
		CH138	5690		16.09	15.64



5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	FCC ID PY7-80422E Average power (dBm)	FCC ID PY7-80422D Average power (dBm)
	802.11a	CH 149	5745	MCS0	15.89	15.82
		CH 157	5785		15.94	16.00
		CH 165	5825		16.00	15.64
	802.11n-HT20	CH 149	5745	MCS0	15.82	15.82
		CH 157	5785		15.85	16.02
		CH 165	5825		15.94	15.70
	802.11n-HT40	CH 151	5755	MCS0	15.82	15.80
		CH 159	5795		15.89	16.02
	802.11ac-VHT20	CH 149	5745	MCS0	15.79	15.78
		CH 157	5785		15.62	15.80
		CH 165	5825		15.84	15.60
	802.11ac-VHT40	CH 151	5755	MCS0	15.72	15.76
		CH 159	5795		15.72	15.92
	802.11ac-VHT80	CH155	5775	MCS0	16.12	15.82



1.2 Radiated Spurious Emission

2.4GHz BT/WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-80422E						FCC ID PY7-80422D					
				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	2483.5	47.78	74	7440	42.32	74	2483.56	46.79	74	7440	42.82	74
			A	2483.5	22.99	54	7440	17.53	54	2483.56	22.03	54	7440	18.06	54
BLE(2Mbps)	CH 19	2440	P	2364.72	51.95	74	7320	41.07	74	2495.6	52.88	74	7320	41.77	74
			A	2330.32	42.21	54	-	-	-	2489.52	42.21	54	-	-	-
802.11b	CH 13	2472	P	2486.88	54.91	74	7416	41.07	74	2485	57.85	74	7416	42.9	74
			A	2483.52	45.37	54	-	-	-	2483.52	46.98	54	-	-	-
802.11n HT20	CH 13	2472	P	2483.52	66.3	74	7416	40.88	74	2483.6	67.17	74	7416	41.35	74
			A	2483.52	50.91	54	-	-	-	2483.52	50.83	54	-	-	-

5.2GHz WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-80422E						FCC ID PY7-80422D					
				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)
802.11ac VHT80	CH 42	5270	P	5147.22	51.49	74	10420	43.53	68.2	5133.96	54.03	74	10420	44.8	68.2
			A	5149.26	45.08	54	-	-	-	5148.58	45.24	54			

**5.3GHz WLAN**

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID						FCC ID					
				PY7-80422E						PY7-80422D					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)
802.11n HT40	CH 62	5310	P	5353.44	61.03	74	10620	41.7	74	5355.84	59.56	74	10620	42.97	74
			A	5350.32	49.03	54	-	-	-	5413.92	46.21	54	-	-	-

5.5GHz WLAN

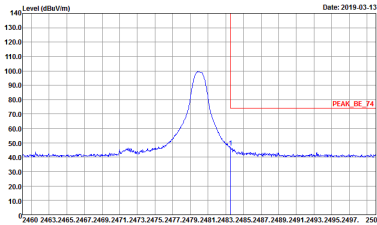
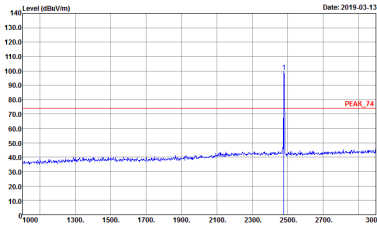
Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID						FCC ID					
				PY7-80422E						PY7-80422D					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)
802.11n HT20	CH 140	5700	P	5727	64.14	68.2	17100	43.07	68.2	5725.48	65	68.2	17100	45.84	68.2

5.8GHz WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID						FCC ID					
				PY7-80422E						PY7-80422D					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)
802.11n HT40	CH 151	5755	P	5649.25	55.69	68.2	17265	43.11	68.2	5647.25	54.15	68.2	17265	45.68	68.2



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

BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Horizontal	Fundamental
Peak	 Site : 03CHI1-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03	 Site : 03CHI1-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03



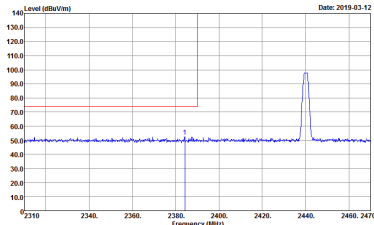
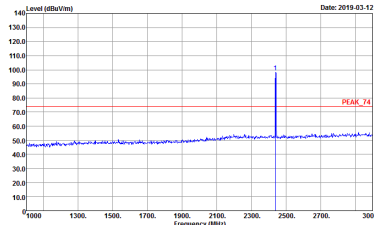
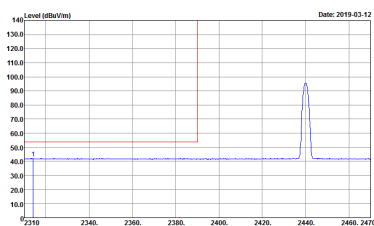
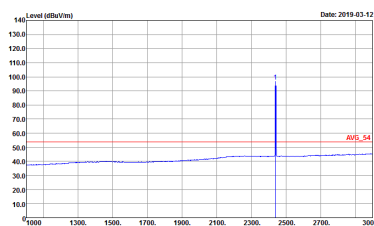
FCC TEST REPORT

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 : 802425-03	Site : 03CHI1-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03



BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
BT	BT CH78 2480MHz	
	Horizontal	Vertical
Peak Avg.	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03

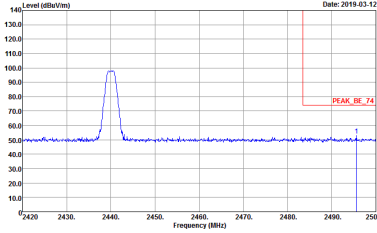
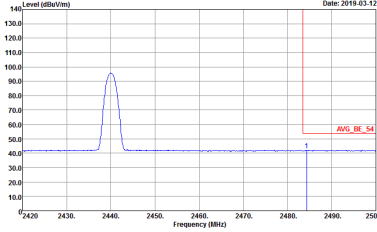
**2.4GHz 2400~2483.5MHz
BLE 2Mbps (Band Edge @ 3m)**

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH19 2440MHz - L	
	Horizontal	Fundamental
Peak	 Site : 03CH11-HV Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03	 Site : 03CH11-HV Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03
Avg.	 Site : 03CH11-HV Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03	 Site : 03CH11-HV Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m
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FCC TEST REPORT

	BLE CH19 2440MHz - R	
	Horizontal	Fundamental
Peak	 Site : 03CH11-I-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 802425-03	Left blank
Avg.	 Site : 03CH11-I-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 802425-03	Left blank

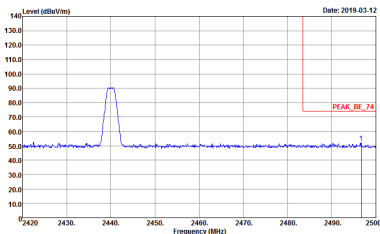
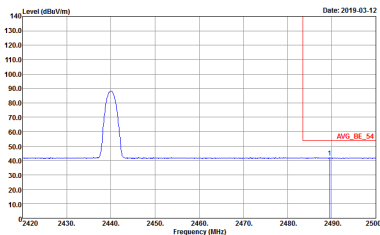


FCC TEST REPORT

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 Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 802425-03	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 802425-03
Avg.	Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : 802425-03	Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:1.000KHz SWT:Auto Project : 802425-03



FCC TEST REPORT

BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH19 2440MHz - R	
	Vertical	Fundamental
Peak	 Site : 03CH11-14Y Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03	Left blank
Avg.	 Site : 03CH11-14Y Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 802425-03	Left blank

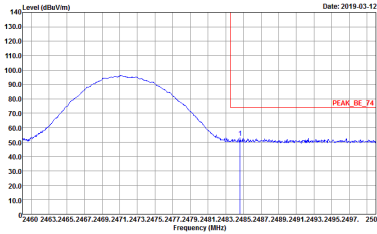
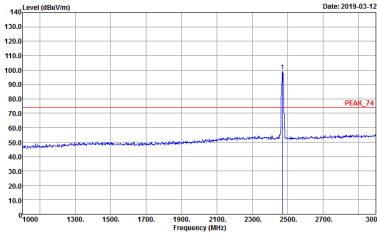
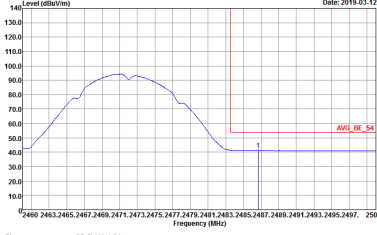
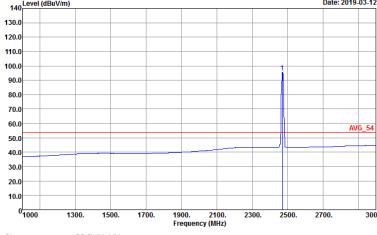


2.4GHz 2400~2483.5MHz
BLE 2Mbps (Harmonic @ 3m)

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 : 802425-03	Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03



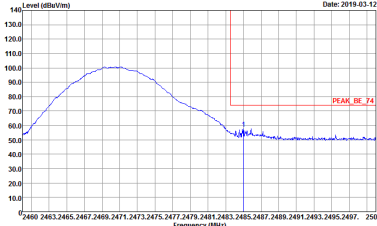
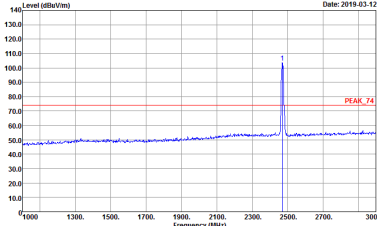
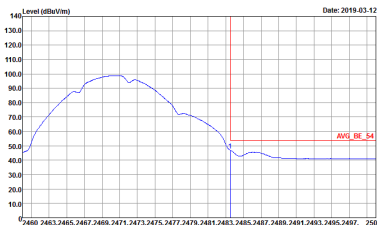
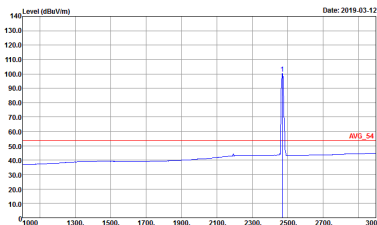
**2.4GHz 2400~2483.5MHz
WIFI 802.11b (Band Edge @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH13 2472MHz	
1+2	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 : 802425-03 Setting : 0 X 1C	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 1C
	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 1C	 Site : 03CH11-HY Condition : AVG_54 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 1C

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m
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FCC TEST REPORT

ANT	802.11b CH13 2472MHz	
1+2	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 : 802425-03 Setting : 0 X 1C	 Site : 03CH11-HY Condition : PEAK_FA 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 1C
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 1C	 Site : 03CH11-HY Condition : AVG_FA 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 1C

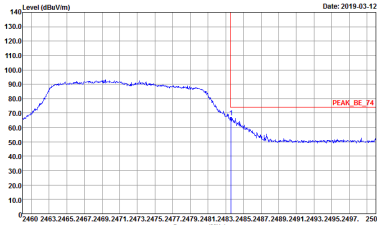
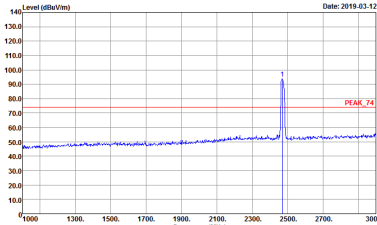
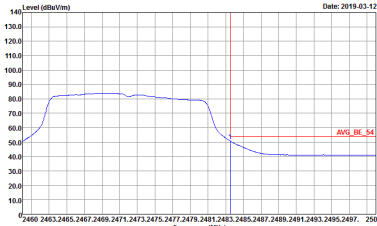
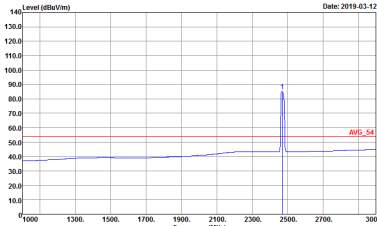


2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1+2	Horizontal	Fundamental
Peak	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal Peak. The plot shows a blue line representing the spectrum with a red vertical line at 2472 MHz labeled 'PEAK_BE_74'. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2400 to 2500 MHz. The date is 2019-03-12. Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 03	Level (dBuV/m) vs Frequency (MHz) plot for Fundamental Peak. The plot shows a blue line representing the spectrum with a red vertical line at 2472 MHz labeled 'PEAK_74'. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1600 to 3000 MHz. The date is 2019-03-12. Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 03
Avg.	Level (dBuV/m) vs Frequency (MHz) plot for Horizontal Average. The plot shows a blue line representing the spectrum with a red vertical line at 2472 MHz labeled 'AVG_BE_54'. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 2400 to 2500 MHz. The date is 2019-03-12. Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 03	Level (dBuV/m) vs Frequency (MHz) plot for Fundamental Average. The plot shows a blue line representing the spectrum with a red vertical line at 2472 MHz labeled 'AVG_54'. The y-axis ranges from 10.0 to 140.0 dBuV/m, and the x-axis ranges from 1600 to 3000 MHz. The date is 2019-03-12. Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 03



FCC TEST REPORT

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1+2	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 : 802425-03 Setting : 0 X 03	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 03
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 03	 Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 03

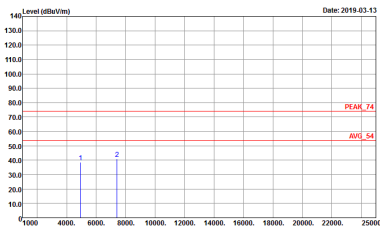
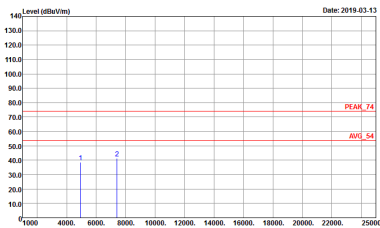


2.4GHz 2400~2483.5MHz
WIFI 802.11b (Harmonic @ 3m)

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH13 2472MHz	
1+2	Horizontal	Vertical
Peak Avg.	Site : 03CHI1-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03 Setting : 0 X 1C	Site : 03CHI1-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03 Setting : 0 X 1C

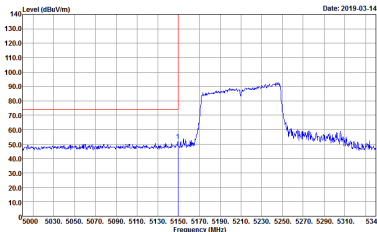
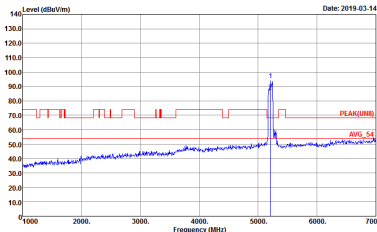
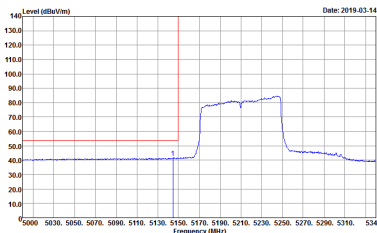


**2.4GHz 2400~2483.5MHz
WIFI 802.11n HT20 (Harmonic @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11n HT20 CH13 2472MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03 Setting : 0 X 03	 Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03 Setting : 0 X 03

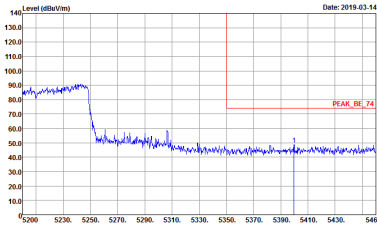
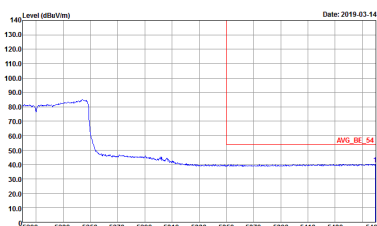


Band 1 - 5150~5250MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1+2	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 : 802425-03 Setting : 0 X IE	 Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X IE
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X IE	Left blank

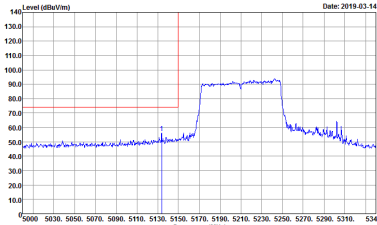
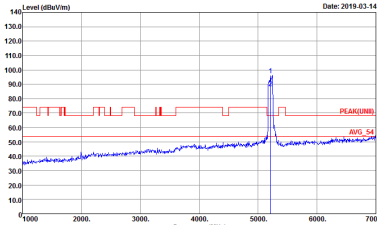
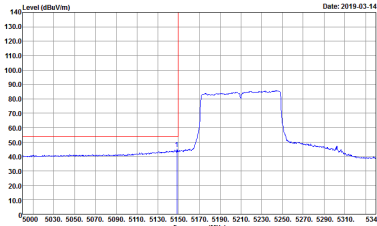


FCC TEST REPORT

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 802425-03 Setting : 0 X IE	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 802425-03 Setting : 0 X IE	Left blank

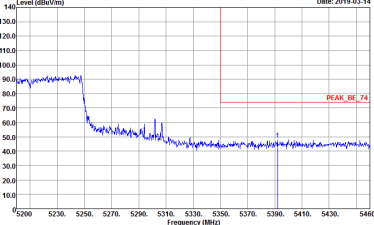
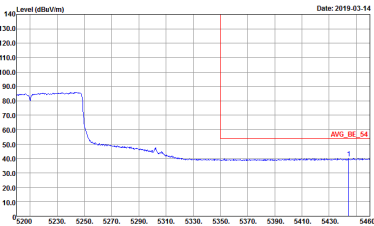


FCC TEST REPORT

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1+2	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 : 802425-03 Setting : 0 X IE	 Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X IE
Avg.	 Site : 03CHI1-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X IE	Left blank

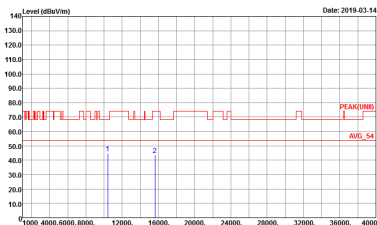
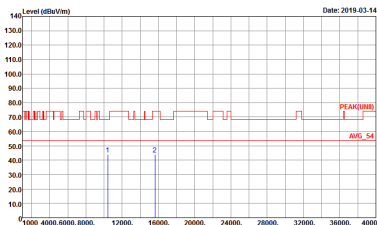


FCC TEST REPORT

WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1+2	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 : 802425-03 Setting : 0 X IE	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 : 802425-03 Setting : 0 X IE	Left blank

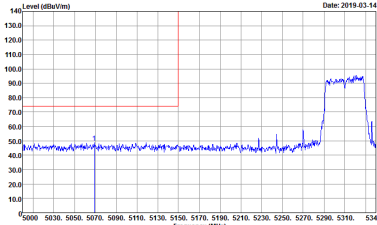
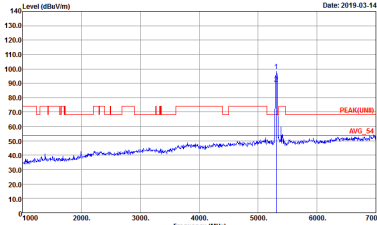
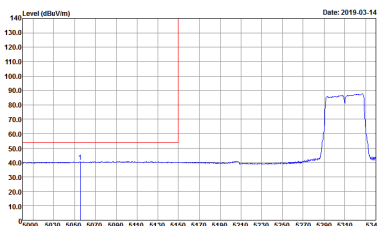


Band 1 - 5150~5250MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03 Setting : 0 X 1E	 Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03 Setting : 0 X 1E

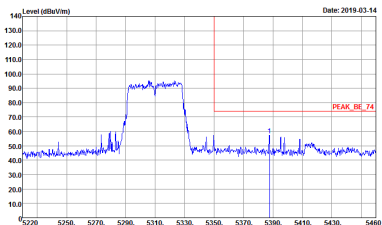
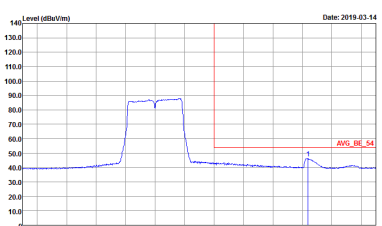


Band 2 5250~5350MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - L	
1+2	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 : 802425-03 Setting : 0 X IE	 Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X IE
Avg.	 Site : 03CH11-HY Condition : AV6_BE_54 3m HORN 91200-HF HORIZONTAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X IE	Left blank

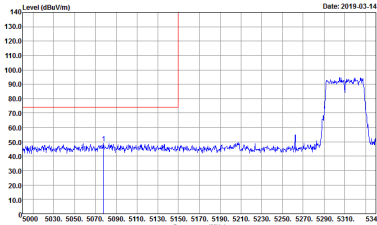
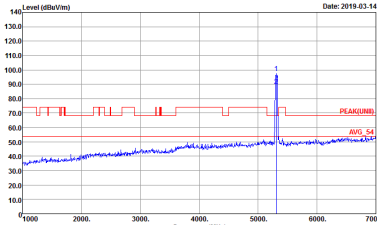
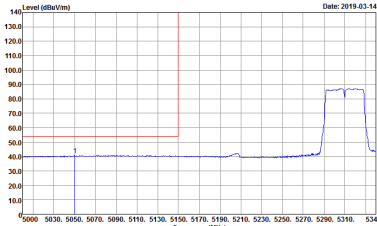


FCC TEST REPORT

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - R	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 802425-03 Setting : 0 X IE	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 802425-03 Setting : 0 X IE	Left blank

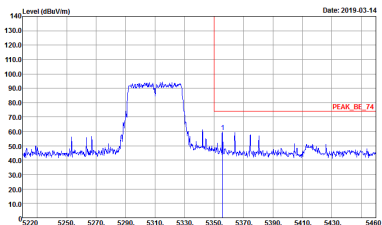
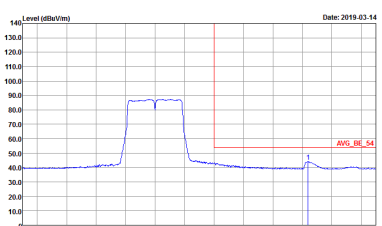


FCC TEST REPORT

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - L	
1+2	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 : 802425-03 Setting : 0 X IE	 Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X IE
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL RBW:1000.000KHz VBW:1000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X IE	Left blank

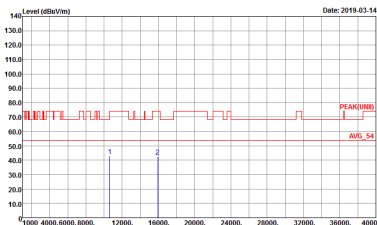
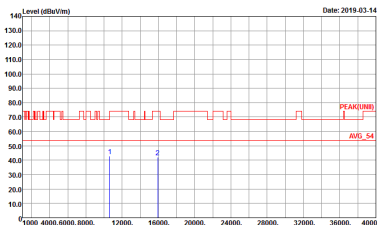


FCC TEST REPORT

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11n HT40 CH62 5310 MHz - R	
1+2	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 : 802425-03 Setting : 0 X IE	Left blank
Avg.	 Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:1.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X IE	Left blank

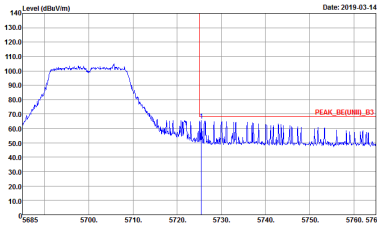
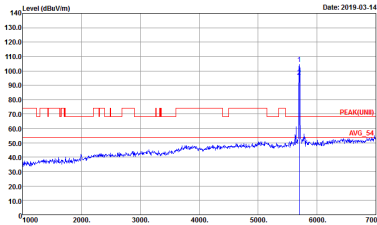


Band 2 5250~5350MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11n HT40 CH62 5310	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03 Setting : 0 X 1E	 Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03 Setting : 0 X 1E

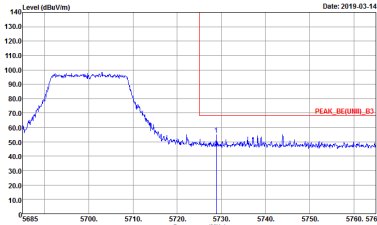
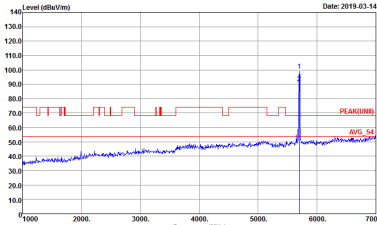


Band 3 - 5470~5725MHz
WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT20 CH140 5700MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CHI1-HY Condition : PEAK_BE(UNIT)_B3 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 1B	 Site : 03CHI1-HY Condition : PEAK(UNIT)_B3 3m HORN 9120D-HF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 802425-03 Setting : 0 X 1B

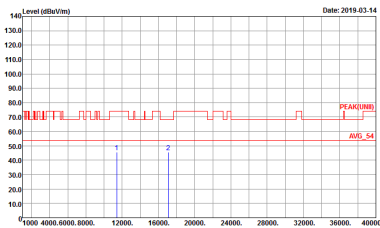
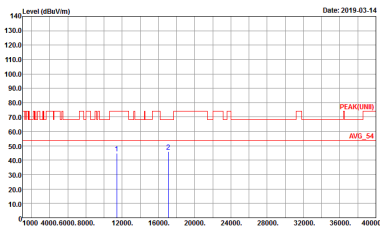


FCC TEST REPORT

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11n HT20 CH140 5700MHz	
1+2	Vertical	Fundamental
Peak.	 Site : 03CHI1-HY Condition : PEAK_BE(UNIT)_B3 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 802425-03 Setting : 0 X 1B	 Site : 03CHI1-HY Condition : PEAK(UNIT)_B3 3m HORN 9120D-HF VERTICAL Detector : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Project : 802425-03 Setting : 0 X 1B

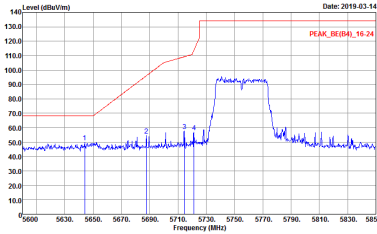
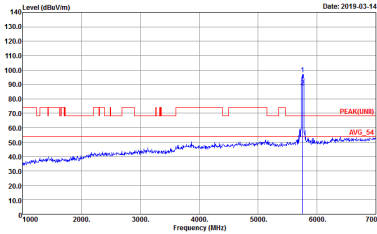
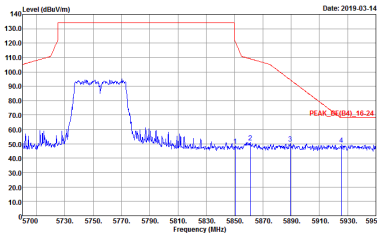


Band 3 5470~5725MHz
WIFI 802.11n HT20 (Harmonic @ 3m)

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11n HT20 CH140 5700MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03 Setting : 0 X 18	 Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03 Setting : 0 X 18

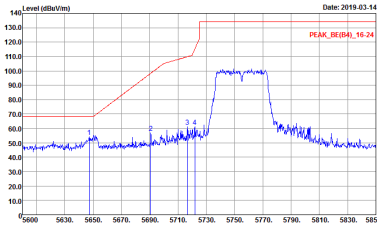
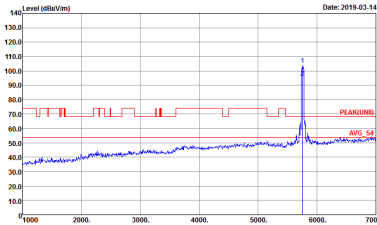
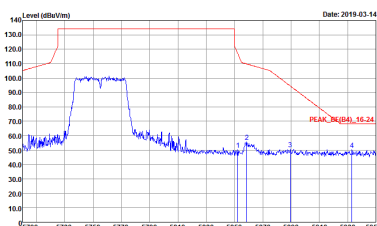


Band 4 - 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Horizontal	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF HORIZONTAL Detector : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto Project : 802425-03	 Site : 03CH11-HY Condition : PEAK_FUND(B4)_16-24 3m HORN 9120D-HF HORIZONTAL Detector : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto Project : 802425-03
Peak	 Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF HORIZONTAL Detector : RBW:3000.000KHz VBW:3000.000KHz SWT:Auto Project : 802425-03	Left blank

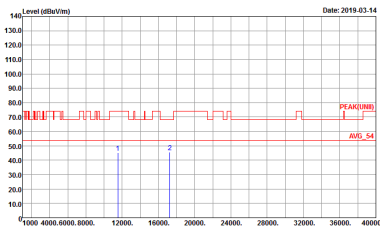
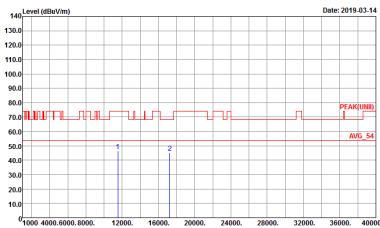


FCC TEST REPORT

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Vertical	Fundamental
Peak	 Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03	 Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03
Peak	 Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03	Left blank



Band 4 - 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11n HT40 CH151 5755MHz	
1+2	Horizontal	Vertical
Peak Avg.	 Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 802425-03	 Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 802425-03



2.4GHz 2400~2483.5MHz

BT (Band Edge @ 3m)

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH 78 2480MHz	*	2480	99.89	-	-	99.54	27.3	6.65	33.6	110	341	P	H
	*	2480	75.13	-	-	-	-	-	-	-	-	A	H
		2483.56	46.79	-27.21	74	46.43	27.3	6.66	33.6	110	341	P	H
		2483.56	22.03	-31.97	54	-	-	-	-	-	-	A	H
													H
													H
	*	2480	92.4	-	-	92.05	27.3	6.65	33.6	285	27	P	V
	*	2480	67.64	-	-	-	-	-	-	-	-	A	V
		2483.56	45.16	-28.84	74	44.8	27.3	6.66	33.6	285	27	P	V
		2483.56	20.4	-33.6	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 (Harmonic @ 3m)

BT	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BT CH 78 2480MHz		4960	38.67	-35.33	74	55.64	31.32	10.22	58.51	100	0	P	H
		4960	13.91	-40.09	54	-	-	-	-	-	-	A	H
		7440	42.82	-31.18	74	52.53	36.48	12.47	58.66	100	0	P	H
		7440	18.06	-35.94	54	-	-	-	-	-	-	A	H
		4960	38.62	-35.38	74	55.59	31.32	10.22	58.51	100	0	P	V
		4960	13.86	-40.14	54	-	-	-	-	-	-	A	V
		7440	41.99	-32.01	74	51.7	36.48	12.47	58.66	100	0	P	V
		7440	17.23	-36.77	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	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 19 2440MHz		2384.24	52.51	-21.49	74	42.18	27.46	16.5	33.63	147	342	P	H
		2314.16	42.1	-11.9	54	31.63	27.74	16.39	33.66	147	342	A	H
	*	2440	98.29	-	-	88.03	27.32	16.55	33.61	147	342	P	H
	*	2440	96.54	-	-	86.28	27.32	16.55	33.61	147	342	A	H
		2495.6	52.88	-21.12	74	42.57	27.3	16.6	33.59	147	342	P	H
		2484.32	42.1	-11.9	54	31.81	27.3	16.59	33.6	147	342	A	H
		2388.72	52.22	-21.78	74	41.9	27.45	16.5	33.63	300	97	P	V
		2374.8	42.2	-11.8	54	31.86	27.5	16.48	33.64	300	97	A	V
	*	2440	90.67	-	-	80.41	27.32	16.55	33.61	300	97	P	V
	*	2440	88.39	-	-	78.13	27.32	16.55	33.61	300	97	A	V
		2496.64	52.09	-21.91	74	41.78	27.3	16.6	33.59	300	97	P	V
		2489.52	42.21	-11.79	54	31.91	27.3	16.59	33.59	300	97	A	V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



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

BLE	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
BLE CH 19 2440MHz		4880	38.05	-35.95	74	55.41	31.04	10.15	58.55	100	0	P	H
		7320	40.97	-33.03	74	50.76	36.54	12.48	58.81	100	0	P	H
													H
													H
		4880	37.38	-36.62	74	54.74	31.04	10.15	58.55	100	0	P	V
		7320	41.77	-32.23	74	51.56	36.54	12.48	58.81	100	0	P	V
													V
													V
Remark	3. No other spurious found. 4. All results are PASS against Peak and Average limit line.												



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

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 13 2472MHz	*	2472	98.88	-	-	88.6	27.3	16.58	33.6	288	297	P	H
	*	2472	95.64	-	-	85.36	27.3	16.58	33.6	288	297	A	H
		2484.64	52.89	-21.11	74	42.6	27.3	16.59	33.6	288	297	P	H
		2486.68	41.54	-12.46	54	31.24	27.3	16.59	33.59	288	297	A	H
													H
													H
	*	2472	103.67	-	-	93.39	27.3	16.58	33.6	296	85	P	V
	*	2472	100.34	-	-	90.06	27.3	16.58	33.6	296	85	A	V
		2485	57.85	-16.15	74	47.56	27.3	16.59	33.6	296	85	P	V
		2483.52	46.98	-7.02	54	36.69	27.3	16.59	33.6	296	85	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	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11b CH 13 2472MHz		4944	39.03	-34.97	74	56.08	31.26	10.21	58.52	100	0	P	H
		7416	42.83	-31.17	74	52.66	36.43	12.44	58.7	100	0	P	H
													H
													H
		4944	38.98	-35.02	74	56.03	31.26	10.21	58.52	100	0	P	V
		7416	42.9	-31.1	74	52.73	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.												



2.4GHz 2400~2483.5MHz

WIFI 802.11n HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 13 2472MHz	*	2472	86.41	-	-	76.13	27.3	16.58	33.6	292	192	P	H
	*	2472	77.51	-	-	67.23	27.3	16.58	33.6	292	192	A	H
		2483.52	58.24	-15.76	74	47.95	27.3	16.59	33.6	292	192	P	H
		2483.52	44.08	-9.92	54	33.79	27.3	16.59	33.6	292	192	A	H
													H
													H
	*	2472	94.15	-	-	83.87	27.3	16.58	33.6	295	27	P	V
	*	2472	85.39	-	-	75.11	27.3	16.58	33.6	295	27	A	V
		2483.6	67.17	-6.83	74	56.88	27.3	16.59	33.6	295	27	P	V
		2483.52	50.83	-3.17	54	40.54	27.3	16.59	33.6	295	27	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	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 13 2472MHz		4944	38.43	-35.57	74	55.48	31.26	10.21	58.52	100	0	P	H
		7416	41	-33	74	50.83	36.43	12.44	58.7	100	0	P	H
													H
													H
		4944	38.41	-35.59	74	55.46	31.26	10.21	58.52	100	0	P	V
		7416	41.35	-32.65	74	51.18	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 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		5149.6	52.45	-21.55	74	43.99	31.9	9.68	33.12	135	358	P	H
		5144.84	41.66	-12.34	54	33.21	31.89	9.68	33.12	135	358	A	H
	*	5210	94.41	-	-	86.21	31.56	9.76	33.12	135	358	P	H
	*	5210	86.51	-	-	78.31	31.56	9.76	33.12	135	358	A	H
		5399.68	48.87	-25.13	74	40.54	31.6	9.84	33.11	135	358	P	H
		5459.48	40.22	-13.78	54	31.7	31.74	9.89	33.11	135	358	A	H
		5133.96	54.03	-19.97	74	45.62	31.87	9.66	33.12	204	333	P	V
		5148.58	45.24	-8.76	54	36.78	31.9	9.68	33.12	204	333	A	V
	*	5210	96.48	-	-	88.28	31.56	9.76	33.12	204	333	P	V
	*	5210	87.31	-	-	79.11	31.56	9.76	33.12	204	333	A	V
		5392.14	48.09	-25.91	74	39.81	31.55	9.84	33.11	204	333	P	V
		5444.4	40.21	-13.79	54	31.75	31.69	9.88	33.11	204	333	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

**Band 1 5150~5250MHz****WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11ac VHT80 CH 42 5210MHz		10420	44.8	-23.4	68.2	50.65	39.7	15.3	60.85	100	0	P	H
		15630	43.86	-30.14	74	47.56	37.85	18.94	60.49	100	0	P	H
													H
													H
		10420	44.21	-23.99	68.2	50.06	39.7	15.3	60.85	100	0	P	V
		15630	44.12	-29.88	74	47.82	37.85	18.94	60.49	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	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 62 5310MHz		5069.02	48.91	-25.09	74	40.79	31.68	9.56	33.12	135	360	P	H
		5055.42	40.67	-13.33	54	32.63	31.62	9.54	33.12	135	360	A	H
	*	5310	98.52	-	-	90.53	31.3	9.8	33.11	135	360	P	H
	*	5310	89.65	-	-	81.66	31.3	9.8	33.11	135	360	A	H
		5387.76	58.41	-15.59	74	50.15	31.53	9.84	33.11	135	360	P	H
		5413.92	46.21	-7.79	54	37.84	31.63	9.85	33.11	135	360	A	H
		5077.86	49.1	-24.9	74	40.93	31.71	9.58	33.12	150	341	P	V
		5050.32	40.79	-13.21	54	32.77	31.6	9.54	33.12	150	341	A	V
	*	5310	97.89	-	-	89.9	31.3	9.8	33.11	150	341	P	V
	*	5310	88.89	-	-	80.9	31.3	9.8	33.11	150	341	A	V
		5355.84	59.56	-14.44	74	51.51	31.34	9.82	33.11	150	341	P	V
		5413.92	43.96	-10.04	54	35.59	31.63	9.85	33.11	150	341	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	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 62 5310MHz		10620	42.92	-31.08	74	48.93	39.68	15.41	61.1	100	0	P	H
		15930	42.67	-31.33	74	46.76	37.11	19.06	60.26	100	0	P	H
													H
													H
		10620	42.97	-31.03	74	48.98	39.68	15.41	61.1	100	0	P	V
		15930	42.14	-31.86	74	46.23	37.11	19.06	60.26	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 HT20 (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 140 5700MHz	*	5700	105.06	-	-	96.07	32	10.16	33.17	120	359	P	H
	*	5700	96.09	-	-	87.1	32	10.16	33.17	120	359	A	H
		5725.48	65	-3.2	68.2	55.93	32.05	10.2	33.18	120	359	P	H
													H
													H
													H
	*	5700	99.49	-	-	90.5	32	10.16	33.17	103	11	P	V
	*	5700	90.79	-	-	81.8	32	10.16	33.17	103	11	A	V
		5728.84	54.91	-13.29	68.2	45.83	32.06	10.2	33.18	103	11	P	V
													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 HT20 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT20 CH 140 5700MHz		11400	45.47	-28.53	74	51.31	39.7	15.86	61.4	100	0	P	H
		17100	45.58	-22.62	68.2	43.34	40.1	20.1	57.96	100	0	P	H
													H
													H
		11400	44.77	-29.23	74	50.61	39.7	15.86	61.4	100	0	P	V
		17100	45.84	-22.36	68.2	43.6	40.1	20.1	57.96	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



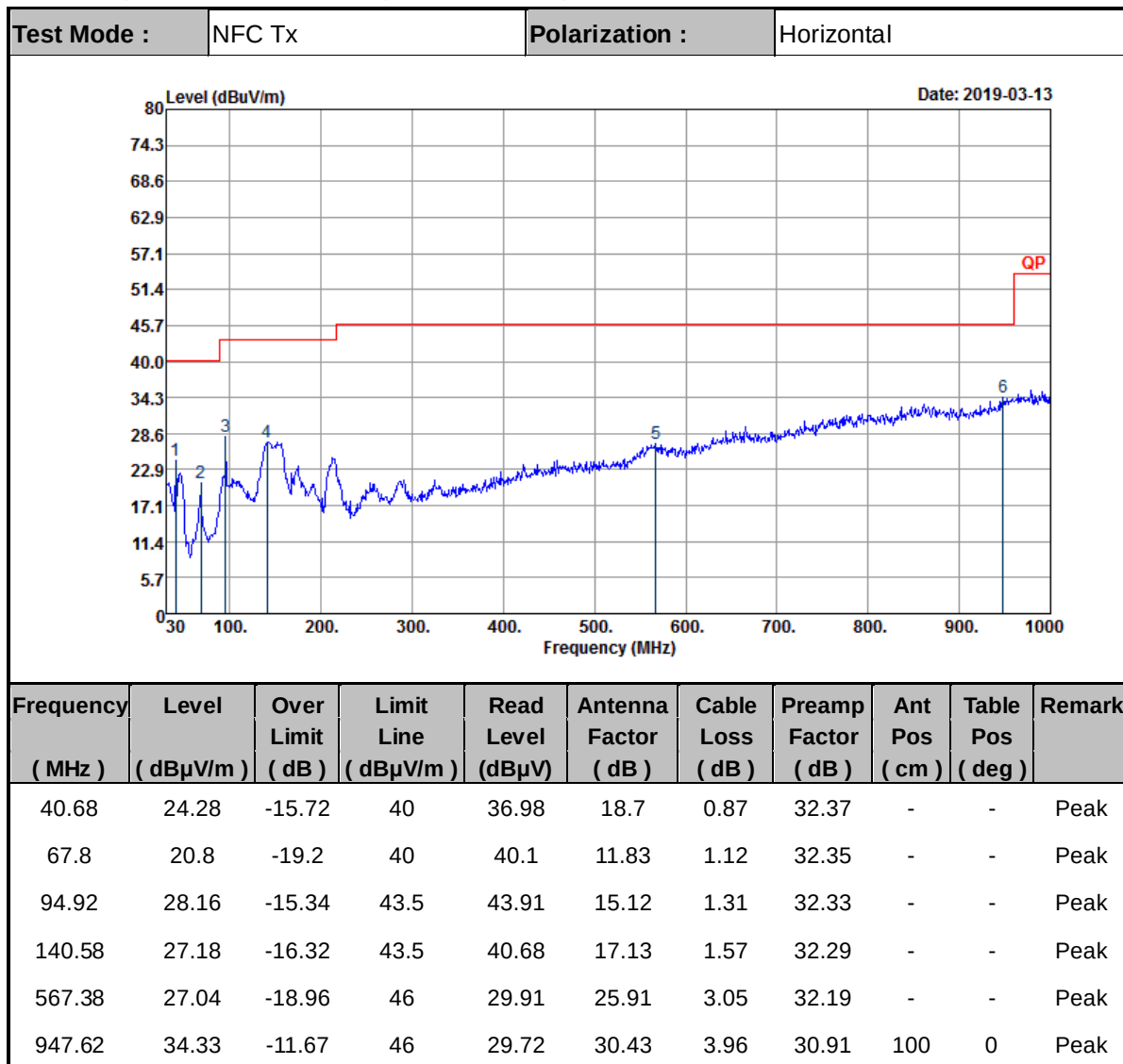
Band 4 - 5725~5850MHz
WIFI 802.11n HT40 (Band Edge @ 3m)

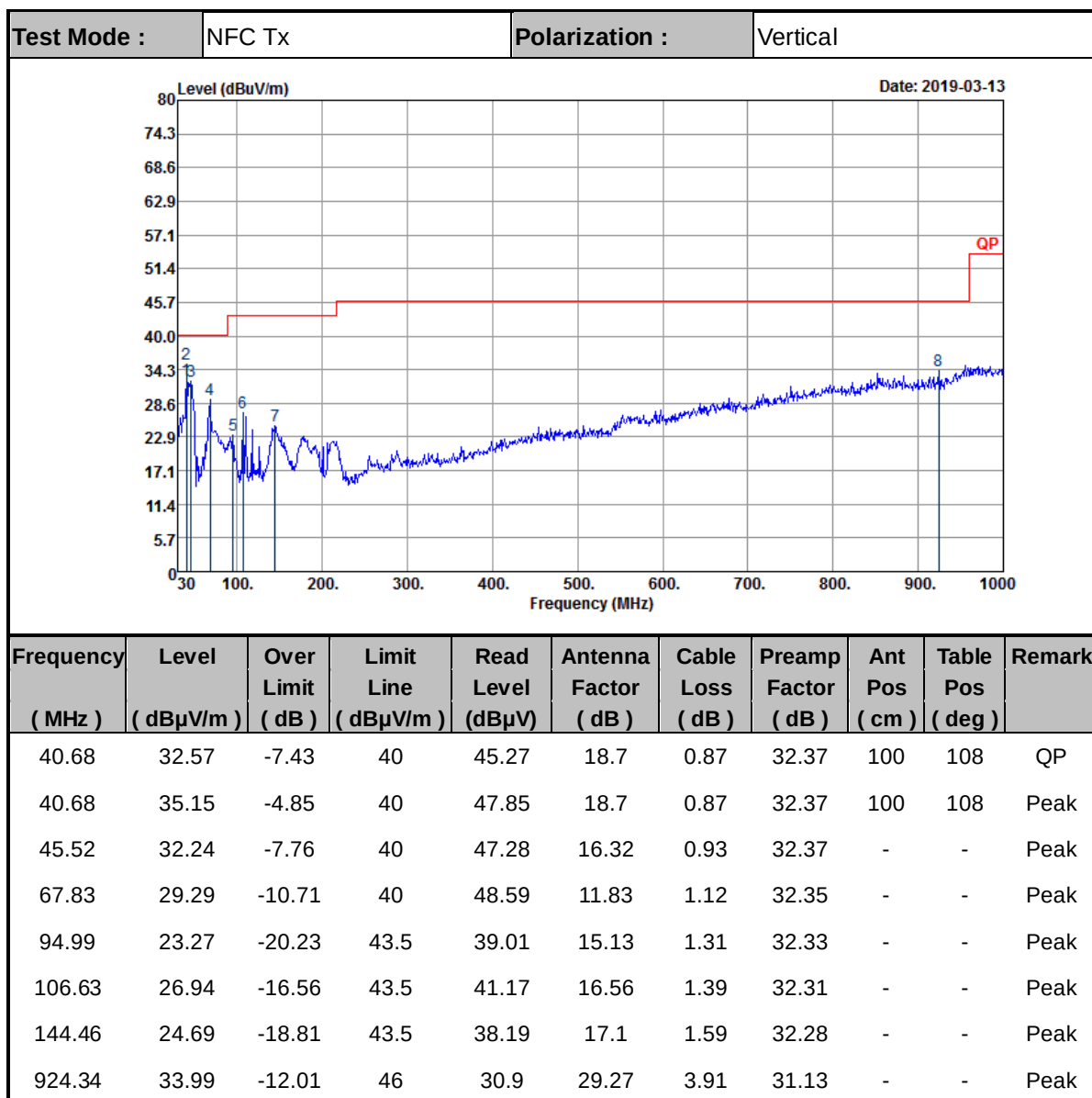
WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 151 5755MHz		5644	49.9	-18.3	68.2	41.27	31.71	10.08	33.16	213	13	P	H
		5687.75	54.52	-41.65	96.17	45.62	31.93	10.14	33.17	213	13	P	H
		5714.5	57.84	-51.42	109.26	48.81	32.03	10.18	33.18	213	13	P	H
		5721.25	57.08	-56.57	113.65	48.03	32.04	10.19	33.18	213	13	P	H
	*	5755	97.22	-	-	88.06	32.11	10.24	33.19	213	13	P	H
	*	5755	87.96	-	-	78.8	32.11	10.24	33.19	213	13	A	H
		5850.5	48.75	-72.31	121.06	39.31	32.3	10.36	33.22	213	13	P	H
		5861.25	51.04	-58.01	109.05	41.55	32.35	10.37	33.23	213	13	P	H
		5889.5	50.21	-44.23	94.44	40.58	32.46	10.4	33.23	213	13	P	H
		5925.75	49.6	-18.6	68.2	39.86	32.55	10.44	33.25	213	13	P	H
													H
													H
		5647.25	54.15	-14.05	68.2	45.51	31.71	10.09	33.16	222	20	P	V
		5690.75	56.79	-41.59	98.38	47.87	31.94	10.15	33.17	222	20	P	V
		5716.75	61.4	-48.49	109.89	52.37	32.03	10.18	33.18	222	20	P	V
		5722	61.33	-54.03	115.36	52.28	32.04	10.19	33.18	222	20	P	V
	*	5755	103.97	-	-	94.81	32.11	10.24	33.19	222	20	P	V
	*	5755	95.15	-	-	85.99	32.11	10.24	33.19	222	20	A	V
		5852.25	50.15	-66.92	117.07	40.7	32.31	10.36	33.22	222	20	P	V
		5858.75	55.74	-54.01	109.75	46.27	32.33	10.36	33.22	222	20	P	V
		5889.5	50.73	-43.71	94.44	41.1	32.46	10.4	33.23	222	20	P	V
		5933	50.33	-17.87	68.2	40.56	32.57	10.45	33.25	222	20	P	V
													V
													V



Band 4 5725~5850MHz
WIFI 802.11n HT40 (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1+2		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11n HT40 CH 151 5755MHz		11510	45.23	-28.77	74	51.04	39.67	15.92	61.4	100	0	P	H
		17265	45.68	-22.52	68.2	42.23	40.6	20.24	57.39	100	0	P	H
													H
													H
		11510	46.59	-27.41	74	52.4	39.67	15.92	61.4	100	0	P	V
		17265	45.4	-22.8	68.2	41.95	40.6	20.24	57.39	100	0	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

NFC Radiated Spurious Emissions (30MHz~1GHz)




End of this report