



Spot Check Evaluation

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History of this test report

Version	Description	Issued Date
01	Initial issue of report	Dec. 04, 2018
02	Revising this report.	Dec. 07, 2018



1. Introduction Section

The original model (FCC ID: PY7-58241M) and the variant model (FCC ID: PY7-67200Y) 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 PY7-67200Y references the test data of PY7-58241M

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID (FCC ID: PY7-67200Y).



2. Difference Section

The original model (FCC ID: PY7-58241M) and the variant model (FCC ID: PY7-67200Y) 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 PY7-67200Y, to support capability for different cellular bands.

The product specification is outlined in the following table:

FCC ID		PY7-58241M	PY7-67200Y
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 (2555-2655) B2/B5/B7
Wi-Fi	11b/11g/11n(HT20)		2412-2472
	11a/11n(HT20)/11n(HT40)/		5150-5250
	11ac(VHT20)/ 11ac(VHT40)/		5250-5350
	11ac(VHT80)		5470-5725 5725-5850
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	Mode	PY7-58241M Worst Result	PY7-67200Y Worst Result	Difference (dB)
Average Conducted Power (dBm)	802.11b	15.98	15.80	0.18
	802.11g	15.98	15.83	0.15
	11n HT20	13.97	13.94	0.03
	BT (1Mbps)	12.16	11.58	0.58
	BT (2Mbps)	10.24	9.48	0.76
	BT (3Mbps)	10.28	9.51	0.77
	BT-LE(1Mbps)	2.04	1.83	0.21
	BT-LE(2Mbps)	1.93	1.84	0.09
	11a, 5.2GHz	13.38	13.48	-0.10
	11n HT20, 5.2GHz	9.43	9.42	0.01
	11n HT40, 5.2GHz	8.48	8.33	0.15
	11ac VHT20, 5.2GHz	9.28	9.48	-0.20
	11ac VHT40, 5.2GHz	9.40	9.40	0.00
	11ac VHT80, 5.2GHz	8.34	8.13	0.21
	11a, 5.3GHz	13.48	13.44	0.04
	11n HT20, 5.3GHz	9.44	9.40	0.04
	11n HT40, 5.3GHz	8.43	8.47	-0.04
	11ac VHT20, 5.3GHz	9.43	9.43	0.00
	11ac VHT40, 5.3GHz	9.41	9.48	-0.07
	11ac VHT80, 5.3GHz	8.49	8.22	0.27
	11a, 5.5GHz	13.48	13.28	0.20
	11n HT20, 5.5GHz	9.34	9.30	0.04
	11n HT40, 5.5GHz	8.47	8.36	0.11
	11ac VHT20, 5.5GHz	9.30	9.49	-0.19
	11ac VHT40, 5.5GHz	9.37	9.40	-0.03
	11ac VHT80, 5.5GHz	8.11	8.33	-0.22
	11a, 5.8GHz	13.42	13.48	-0.06
	11n HT20, 5.8GHz	9.44	9.45	-0.01
	11n HT40, 5.8GHz	8.43	8.46	-0.03
	11ac VHT20, 5.8GHz	9.39	9.49	-0.10
	11ac VHT40, 5.8GHz	9.40	9.48	-0.08
	11ac VHT80, 5.8GHz	8.08	8.15	-0.07
S/N of test sample	CQ30013BRU	CQ30013BMC		
Test date	2018/08/27~2018/11/15	2018/09/07~2018/11/16		



Test Item	Mode	PY7-58241M Worst Result	PY7-67200Y Worst Result	Difference (dB)
Radiated Spurious Emission (Band Edge) (dBuV/m)	802.11b	41.52	41.56	-0.04
	802.11g	50.71	48.39	2.32
	BT (1Mbps)	52.44	52.76	-0.32
	BT-LE(2Mbps)	45.01	44.72	0.29
	802.11ac VHT80,5.2GHz	47.92	45.21	2.71
	802.11ac VHT80,5.3GHz	46.52	48.83	-2.31
	802.11ac VHT80,5.5GHz	61.30	60.31	0.99
	802.11ac VHT80,5.8GHz	51.94	49.80	2.14
	S/N of test sample	CQ300199ZW	CQ300195MX	
Test date	2018/09/02~2018/11/15	2018/09/12~2018/10/31		
Radiated Spurious Emission (Harmonic) (dBuV/m)	802.11b	50.62	48.38	2.24
	802.11g	49.01	46.62	2.39
	BT (1Mbps)	42.86	42.77	0.09
	BT-LE(2Mbps)	43.16	42.57	0.59
	802.11ac VHT80,5.2GHz	44.13	45.2	-1.07
	802.11ac VHT80,5.3GHz	43.18	44.83	-1.65
	802.11ac VHT80,5.5GHz	43.95	45.21	-1.26
	802.11ac VHT80,5.8GHz	44.77	44.59	0.18
	S/N of test sample	CQ300199ZW	CQ300195MX	
Test date	2018/09/02~2018/11/15	2018/09/12~2018/10/31		
NFC (dBuV/m)	RSE (30MHz to1GHz)	35.92	36.68	-0.76
	S/N of test sample	CQ300199ZW	CQ300195MX	
	Test date	2018/09/01	2018/09/11	

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	PY7-58241M	Original Grant	FCC RF Test Report	PY7-67200Y	Part 15C (FR881329-01B, FR881329-01C)
	DSS	Bluetooth	2400~2483.5	PY7-58241M	Original Grant	FCC RF Test Report	PY7-67200Y	Part 15C (FR881329-01A)
	DXX	NFC	13.56	PY7-58241M	Original Grant	FCC RF Test Report	PY7-67200Y	Part 15C (FR881329-01D)
15E	NII	Wi-Fi	5150~5250 5250~5350 5470~5725 5725~5850	PY7-58241M	Original Grant	FCC RF Test Report	PY7-67200Y	Part 15E (FR881329-01E, FR881329-01F)
		DFS	5470~5725	PY7-58241M	Original Grant	FCC RF Test Report	PY7-67200Y	Part 15E (FZ881329-01)



Appendix A. Spot Check Test Result

1.1 Conducted power

<2.4GHz WLAN>

	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-58241M	FCC ID PY7-67200Y
						Average power (dBm)	Average power (dBm)
2.4GHz WLAN	802.11b	CH 1	2412	1Mbps	16	15.84	15.77
		CH 6	2437			15.98	15.80
		CH 11	2462			15.68	15.63
		CH 12	2467			15.86	15.56
		CH 13	2472			15.51	15.32
	802.11g	CH 1	2412	6Mbps	16	15.73	15.83
		CH 6	2437			15.98	15.76
		CH 11	2462			15.32	15.29
		CH 12	2467			14.22	14.18
		CH 13	2472			-1.73	-1.80
	802.11n-HT20	CH 1	2412	MCS0	14	13.90	13.94
		CH 6	2437			13.92	13.82
		CH 11	2462			13.97	13.68
		CH 12	2467			9.85	9.69
		CH 13	2472			-1.97	-2.39



<Bluetooth>

Mode	Channel	Frequency (MHz)	Tune-Up Limit	FCC ID PY7-58241M Average power (dBm)	FCC ID PY7-67200Y Average power (dBm)
Bluetooth (1Mbps)	CH 00	2402	13	12.16	11.56
	CH 39	2441		11.77	11.46
	CH 78	2480		11.87	11.58
Bluetooth (2Mbps)	CH 00	2402	10.5	10.24	9.48
	CH 39	2441		9.30	8.86
	CH 78	2480		9.90	9.18
Bluetooth (3Mbps)	CH 00	2402	10.5	10.28	9.51
	CH 39	2441		9.31	8.96
	CH 78	2480		9.78	9.38
BLE (GFSK) (1Mbps)	CH 00	2402	2.5	1.94	1.13
	CH 19	2440		1.54	1.07
	CH 39	2480		2.04	1.83
BLE (GFSK) (2Mbps)	CH 00	2402	2.5	1.73	1.00
	CH 19	2440		1.33	0.97
	CH 39	2480		1.93	1.84



<5GHz WLAN>

5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID PY7-58241M Average power (dBm)	FCC ID PY7-67200Y Average power (dBm)
	802.11a	CH 36	5180	6Mbps	13.5	13.38	13.48
		CH 44	5220			13.37	13.46
		CH 48	5240			13.15	13.44
	802.11n-HT20	CH 36	5180	MCS0	9.5	9.43	9.23
		CH 44	5220			9.31	9.35
		CH 48	5240			9.29	9.42
	802.11n-HT40	CH 38	5190	MCS0	8.5	8.48	8.26
		CH 46	5230			8.46	8.33
	802.11ac-VHT20	CH 36	5180	MCS0	9.5	9.28	9.29
CH 44		5220	9.27			9.42	
CH 48		5240	9.26			9.48	
802.11ac-VHT40	CH 38	5190	MCS0	9.5	9.40	9.25	
	CH 46	5230			9.39	9.40	
802.11ac-VHT80	CH 42	5210	MCS0	8.5	8.34	8.13	



	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID	FCC ID
						PY7-58241M Average power (dBm)	PY7-67200Y Average power (dBm)
5.3GHz WLAN	802.11a	CH 52	5260	6Mbps	13.5	13.22	13.41
		CH 60	5300			13.36	13.38
		CH 64	5320			13.48	13.44
	802.11n-HT20	CH 52	5260	MCS0	9.5	9.24	9.36
		CH 60	5300			9.32	9.32
		CH 64	5320			9.44	9.40
	802.11n-HT40	CH 54	5270	MCS0	8.5	8.43	8.47
		CH 62	5310			8.06	8.38
	802.11ac-VHT20	CH 52	5260	MCS0	9.5	9.23	9.42
		CH 60	5300			9.31	9.41
		CH 64	5320			9.43	9.43
	802.11ac-VHT40	CH 54	5270	MCS0	9.5	9.29	9.48
		CH 62	5310			9.41	9.41
	802.11ac-VHT80	CH58	5290	MCS0	8.5	8.49	8.22



	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID	FCC ID
						PY7-58241M Average power (dBm)	PY7-67200Y Average power (dBm)
5.5GHz WLAN	802.11a	CH 100	5500	6Mbps	13.5	13.26	13.22
		CH 116	5580			13.22	13.16
		CH 140	5700			13.48	13.09
		CH144	5720			13.26	13.28
	802.11n-HT20	CH 100	5500	MCS0	9.5	9.34	9.30
		CH 116	5580			9.32	9.14
		CH 140	5700			9.30	9.17
		CH144	5720			9.24	9.20
	802.11n-HT40	CH 102	5510	MCS0	8.5	8.47	8.33
		CH 126	5630			8.44	8.36
		CH 134	5670			8.30	8.23
		CH142	5710			8.08	8.22
	802.11ac-VHT20	CH 100	5500	MCS0	9.5	9.26	9.36
		CH 116	5580			9.30	9.49
		CH 140	5700			9.23	9.24
		CH144	5720			9.19	9.22
	802.11ac-VHT40	CH 102	5510	MCS0	9.5	9.13	9.36
		CH 126	5630			9.09	9.40
		CH 134	5670			9.37	9.34
		CH142	5710			9.21	9.37
	802.11ac-VHT80	CH106	5530	MCS0	8.5	8.10	8.15
		CH122	5610			8.01	8.33
		CH138	5690			8.11	8.31



FCC TEST REPORT

	Mode	Channel	Frequency (MHz)	Data Rate	Tune-Up Limit	FCC ID	FCC ID
						PY7-58241M Average power (dBm)	PY7-67200Y Average power (dBm)
5.8GHz WLAN	802.11a	CH 149	5745	MCS0	13.5	13.25	13.46
		CH 157	5785			13.42	13.43
		CH 165	5825			13.21	13.48
	802.11n-HT20	CH 149	5745	MCS0	9.5	9.09	9.45
		CH 157	5785			9.44	9.25
		CH 165	5825			9.39	9.42
	802.11n-HT40	CH 151	5755	MCS0	8.5	8.43	8.34
		CH 159	5795			8.33	8.46
	802.11ac-VHT20	CH 149	5745	MCS0	9.5	9.00	9.49
		CH 157	5785			9.39	9.40
		CH 165	5825			9.34	9.48
	802.11ac-VHT40	CH 151	5755	MCS0	9.5	9.36	9.48
		CH 159	5795			9.40	9.19
	802.11ac-VHT80	CH155	5775	MCS0	8.5	8.08	8.15



1.2 Radiated Spurious Emission

2.4GHz BT/WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-58241M						FCC ID PY7-67200Y					
				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	2483.68	52.44	74	7440	42.86	74	2483.52	52.76	74	7440	42.77	74
			A	2483.68	27.68	54	7440	18.1	54	2483.52	27.97	54	7440	17.98	54
BLE(2Mbps)	CH 39	2480	P	2495.24	53.04	74	4960	38.7	74	2488.48	53.05	74	4960	38.78	74
			A	2499.92	45.01	54	7440	43.16	74	2488.28	44.72	54	7440	42.57	74
802.11b	CH 1	2412	P	2370.48	52.39	74	4824	52.76	74	2343.18	52.91	74	4824	50.85	74
			A	2390	41.52	54	4824	50.62	54	2390	41.56	54	4824	48.38	54
802.11g	CH 1	2412	P	2389.8	59.61	74	4824	49.01	74	2390	57.66	74	4824	46.62	74
			A	2390	50.71	54	-	-	-	2390	48.39	54	-	-	-

5.2GHz WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-58241M						FCC ID PY7-67200Y					
				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	5210	P	5141.78	61.95	74	10420	44.13	68.2	5131.92	59.09	74	10420	45.2	68.2
			A	5149.26	47.92	54	-	-	-	5149.94	45.21	54	-	-	-



5.3GHz WLAN

Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-58241M						FCC ID PY7-67200Y					
				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)
802.11ac VHT80	CH 58	5290	P	5357.76	58.89	74	10580	43.18	68.2	5353.68	60.23	74	10580	44.83	68.2
			A	5350.8	46.52	54	-	-	-	5351.04	48.83	54	-	-	-

5.5GHz WLAN

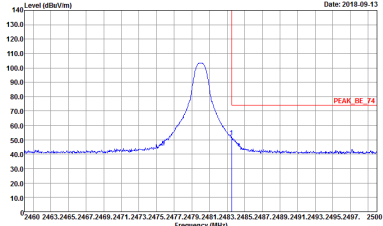
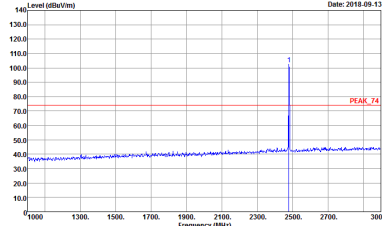
Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-58241M						FCC ID PY7-67200Y					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)
802.11ac VHT80	CH 106	5530	P	5460.88	61.3	68.2	16590	43.95	68.2	5463.28	60.31	68.2	16590	45.21	68.2

5.8GHz WLAN

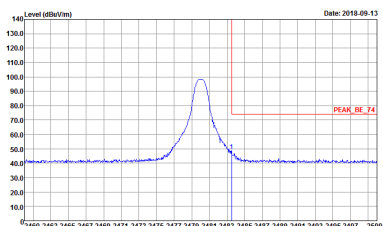
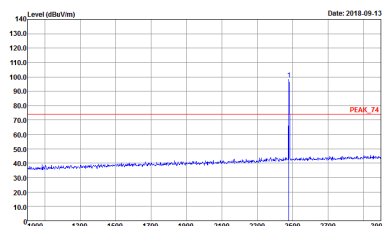
Mode	Ch	Freq. (MHz)	Peak /Avg.	FCC ID PY7-58241M						FCC ID PY7-67200Y					
				Band edge			Harmonic			Band edge			Harmonic		
				Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)	Frequency (MHz)	Level (dBuV/m)	Limit (dBuV/m)
802.11ac VHT80	CH 155	5775	P	5935.25	51.94	68.2	17325	44.77	68.2	5648.25	49.8	68.2	17325	44.59	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
<p>Peak</p>	 <p>Date: 2018-09-13</p> <p>Site : 03CH11-1F Condition : PEAK_BE_74 3m HORN 91200-1F HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>	 <p>Date: 2018-09-13</p> <p>Site : 03CH11-1F Condition : PEAK_74 3m HORN 91200-1F HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>



BT	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BT CH78 2480MHz	
	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CHI1-HY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>	 <p>Site : 03CHI1-HY Condition : PEAK_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>



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

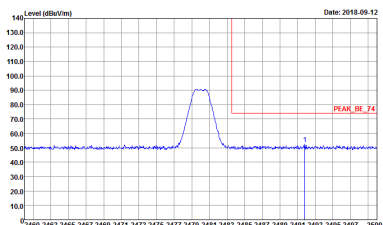
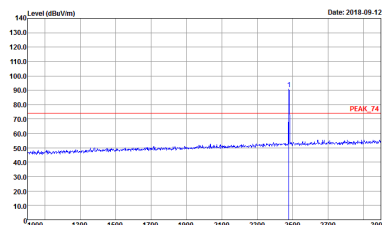
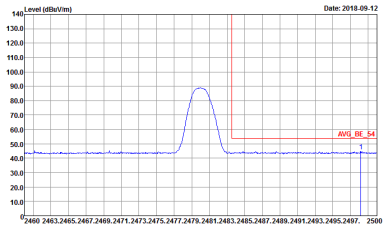
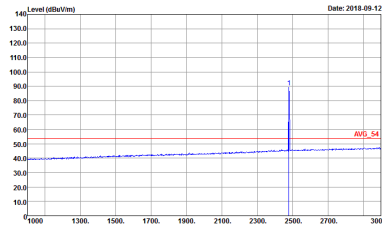
BT	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BT CH78 2480MHz	
	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>



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

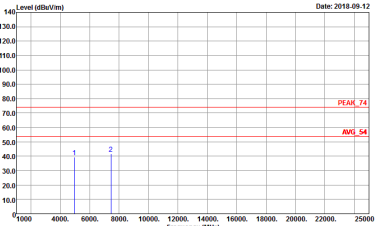
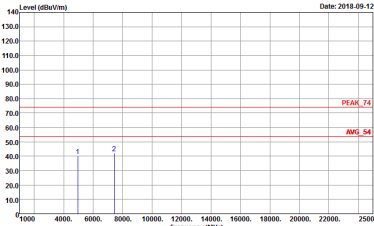
BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
BLE CH39 2480MHz		
Horizontal		Fundamental
<p align="center">Peak</p>	<p align="right">Date: 2018-09-12</p> <p align="right">PEAK_BE_74</p> <p>Site : 03CH11-1FY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>	<p align="right">Date: 2018-09-12</p> <p align="right">PEAK_74</p> <p>Site : 03CH11-1FY Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>
<p align="center">Avg.</p>	<p align="right">Date: 2018-09-12</p> <p align="right">AVG_BE_54</p> <p>Site : 03CH11-1FY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>	<p align="right">Date: 2018-09-12</p> <p align="right">AVG_54</p> <p>Site : 03CH11-1FY Condition : AVG_54 3m HORN 91200-HF HORIZONTAL : RBW:1000.000KHz VBW:10.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>



BLE	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
	BLE CH39 2480MHz	
	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>	 <p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>
<p>Avg.</p>	 <p>Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>	 <p>Site : 03CH11-HY Condition : AVG_54 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>

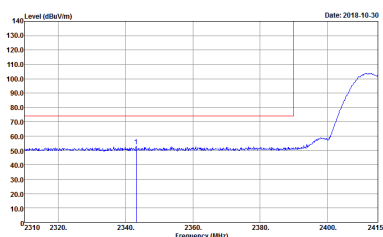
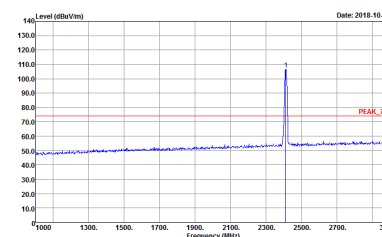
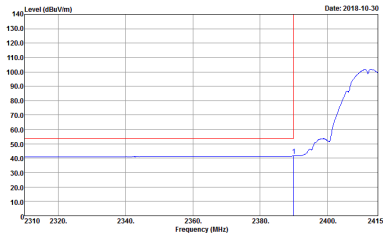
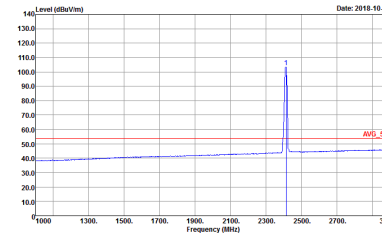


**2.4GHz 2400~2483.5MHz
BLE 2Mbps (Harmonic @ 3m)**

BLE	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
	BLE CH39 2480MHz	
	Horizontal	Vertical
Peak	 <p>Date: 2018-09-12</p> <p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	 <p>Date: 2018-09-12</p> <p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>



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

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01</p>	 <p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01</p>
Avg.	 <p>Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01</p>	 <p>Site : 03CH11-HY Condition : AVG_54 3m HORN 91200-HF HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01</p>

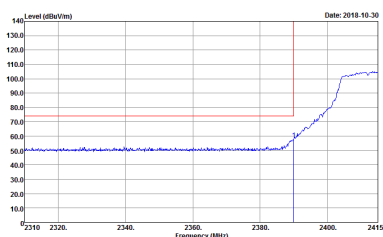
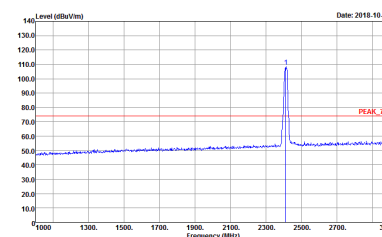
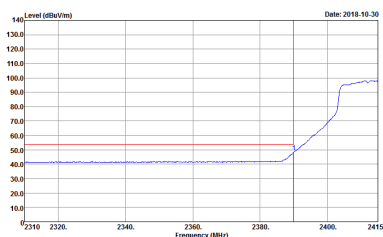
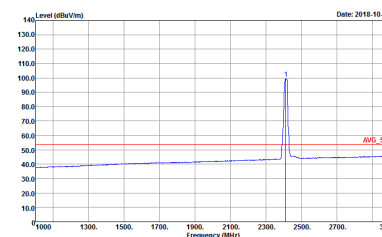


FCC TEST REPORT

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11b CH01 2412MHz	
1	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>
	<p>Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 881330-01</p>	<p>Site : 03CH11-HY Condition : AVG_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:0.010KHz SWT:Auto Detector : Peak Project : 881330-01</p>

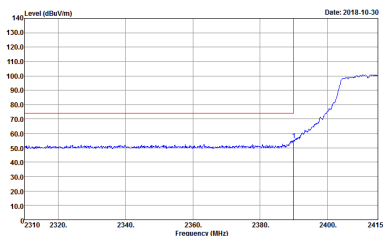
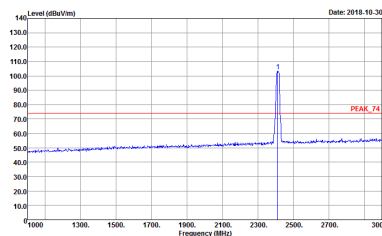
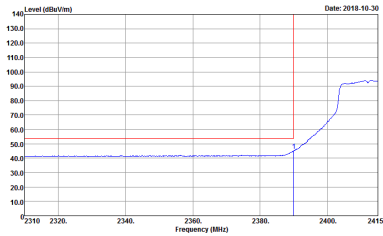
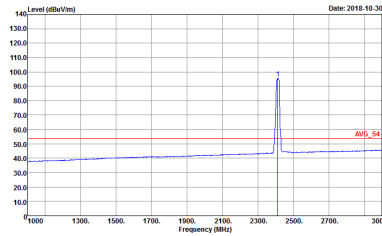


**2.4GHz 2400~2483.5MHz
WIFI 802.11g (Band Edge @ 3m)**

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	 <p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 881330-01</p>
Avg.	 <p>Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	 <p>Site : 03CH11-HY Condition : AVG_54 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 881330-01</p>



FCC TEST REPORT

WIFI	2.4GHz 2400~2483.5MHz Band Edge @ 3m	
ANT	802.11g CH01 2412MHz	
1	Vertical	Fundamental
Peak	 <p>Site : 03CH11-1FY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 881330-01</p>	 <p>Site : 03CH11-1FY Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 881330-01</p>
	 <p>Site : 03CH11-1FY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL Detector : Peak Project : 881330-01</p>	 <p>Site : 03CH11-1FY Condition : AVG_54 3m HORN 91200-HF VERTICAL Detector : Peak Project : 881330-01</p>



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

WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11b CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CHI1-HY Condition : PEAK_74 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	<p>Site : 03CHI1-HY Condition : PEAK_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 881330-01</p>



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

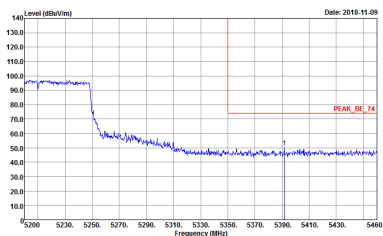
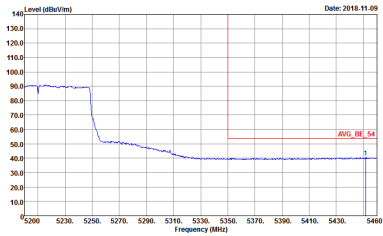
WIFI	2.4GHz 2400~2483.5MHz Harmonic @ 3m	
ANT	802.11g CH01 2412MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-JF HORIZONTAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>	<p>Site : 03CH11-HY Condition : PEAK_74 3m HORN 9120D-JF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01</p>



**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	Horizontal	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01 String : 9</p>	<p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 91200-HF HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01 String : 9</p>
Avg.	<p>Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01 String : 9</p>	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Horizontal	Fundamental
<p>Peak</p>	 <p>Site : 03CH11-4FY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 9</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH11-4FY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 9</p>	<p>Left blank</p>



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - L	
1	Vertical	Fundamental
Peak	<p>Site : 03CHI1-HY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 9</p>	<p>Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 9</p>
Avg.	<p>Site : 03CHI1-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 9</p>	Left blank



WIFI	Band 1 5150~5250MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz - R	
1	Vertical	Fundamental
Peak	<p>Site : 03CH11-4FY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 9</p>	Left blank
Avg.	<p>Site : 03CH11-4FY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 9</p>	Left blank



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

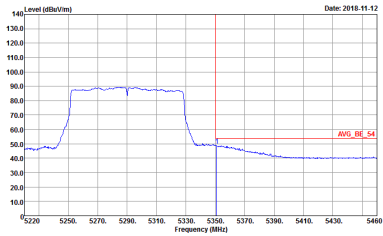
WIFI	Band 1 5150~5250MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH42 5210MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CHI1-HY Condition : PEAK(LINII) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	<p>Site : 03CHI1-HY Condition : PEAK(LINII) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>



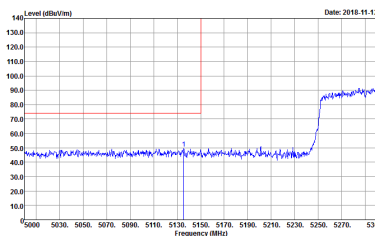
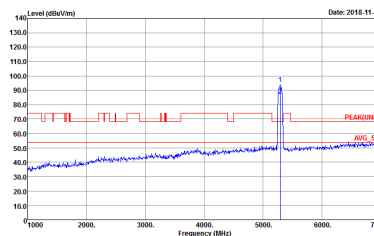
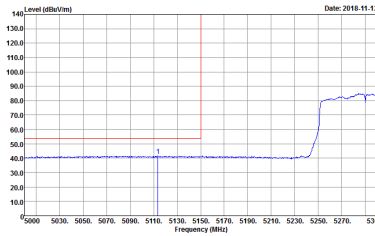
Band 2 - 5250~5350MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1	Horizontal	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01 String : 7.5</p>	<p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 91200-HF HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01 String : 7.5</p>
Avg.	<p>Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL : RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01 String : 7.5</p>	Left blank

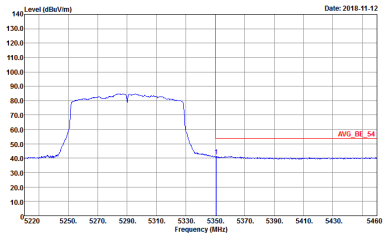


WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1	Horizontal	Fundamental
<p>Peak</p>	 <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF HORIZONTAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 7.5</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF HORIZONTAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 7.5</p>	<p>Left blank</p>



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - L	
1	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CHI1-HY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL Detector : Peak Project : 881330-01 Siting : 7.5</p>	 <p>Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 91200-HF VERTICAL Detector : Peak Project : 881330-01 Siting : 7.5</p>
<p>Avg.</p>	 <p>Site : 03CHI1-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL Detector : Peak Project : 881330-01 Siting : 7.5</p>	<p>Left blank</p>



WIFI	Band 2 5250~5350MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz - R	
1	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH11-HY Condition : PEAK_BE_74 3m HORN 91200-HF VERTICAL : RBW:1000.000KHz VBW:3000.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 7.5</p>	<p>Left blank</p>
<p>Avg.</p>	 <p>Site : 03CH11-HY Condition : AVG_BE_54 3m HORN 91200-HF VERTICAL : RBW:1000.000KHz VBW:3.000KHz SWT:Auto Detector : Peak Project : 881330-01 Siting : 7.5</p>	<p>Left blank</p>

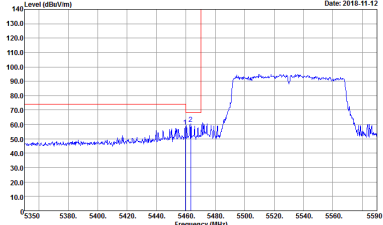
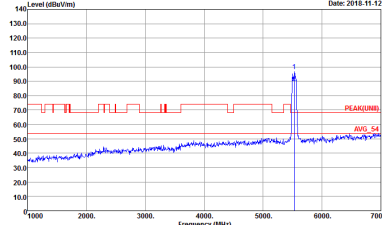
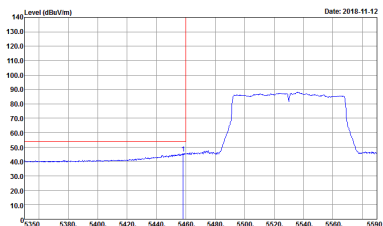


**Band 2 - 5250~5350MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)**

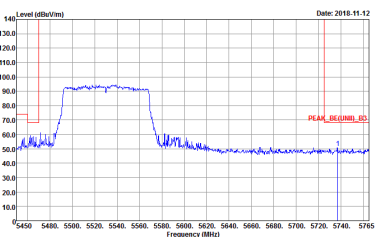
WIFI	Band 2 5250~5350MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH58 5290MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	<p>Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>



**Band 3 - 5470~5725MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)**

WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
1	Horizontal	Fundamental
<p>Peak</p>	 <p>Site : 03CH11-HY Condition : PEAK_BE(UNIT)_B3 3m HORN 9120D-HF HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01 String : 8.5</p>	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01 String : 8.5</p>
<p>Avg.</p>	 <p>Site : 03CH11-HY Condition : AVG_BE(UNIT)_B3 3m HORN 9120D-HF HORIZONTAL RBW:1000.000kHz VBW:3000.000kHz SWT:Auto Detector : Peak Project : 881330-01 String : 8.5</p>	<p>Left blank</p>



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1	Horizontal	Fundamental
Peak	 <p>Site : 03CHI1-HY Condition : PEAK_BE(UNIT1)_B3 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 881330-01 Siting : 85</p>	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - L	
1	Vertical	Fundamental
Peak	<p>Site : 03CH11-HY Condition : PEAK_BE(UNIT1)_B3 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01 Siting : 8.5</p>	<p>Site : 03CH11-HY Condition : PEAK(UNIT1) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01 Siting : 8.5</p>
Avg.	<p>Site : 03CH11-HY Condition : AVG_BE(UNIT1)_B3 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01 Siting : 8.5</p>	Left blank



WIFI	Band 3 5470~5725MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz - R	
1	Vertical	Fundamental
Peak	<p>Site : 03CHI1-HY Condition : PEAK_BE(UNIT1)_B3 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01 Siting : B5</p>	Left blank



**Band 3 - 5470~5725MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)**

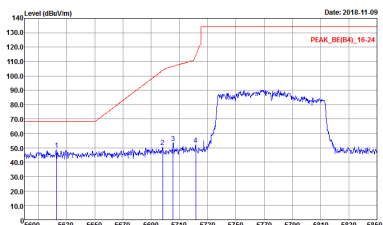
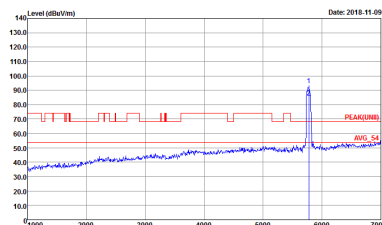
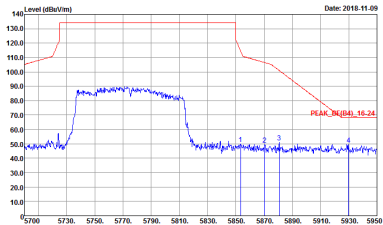
WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH106 5530MHz	
1	Horizontal	Vertical
Peak Avg.	<p>Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	<p>Site : 03CHI1-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>



**Band 4 - 5725~5850MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)**

WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Fundamental
<p>Peak</p>	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	<p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 881330-01</p>
<p>Peak</p>	<p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 91200-HF HORIZONTAL Detector : Peak Project : 881330-01</p>	<p align="center">Left blank</p>



WIFI	Band 4 5725~5850MHz Band Edge @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Vertical	Fundamental
<p>Peak</p>	 <p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>	 <p>Site : 03CH11-HY Condition : PEAK(UNIT) 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>
<p>Peak</p>	 <p>Site : 03CH11-HY Condition : PEAK_BE(B4)_16-24 3m HORN 9120D-HF VERTICAL Detector : Peak Project : 881330-01</p>	<p>Left blank</p>



**Band 4 - 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)**

WIFI	Band 4 5725~5850MHz Harmonic @ 3m	
ANT	802.11ac VHT80 CH155 5775MHz	
1	Horizontal	Vertical
Peak Avg.		



**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	105.2	-	-	104.77	27.36	6.65	33.58	100	288	P	H	
		2480	80.41	-	-	-	-	-	-	-	-	A	H	
		2483.52	52.76	-21.24	74	52.32	27.36	6.66	33.58	100	288	P	H	
		2483.52	27.97	-26.03	54	-	-	-	-	-	-	A	H	
													H	
													H	
	*	2480	100.32	-	-	99.89	27.36	6.65	33.58	394	74	P	V	
		2480	75.53	-	-	-	-	-	-	-	-	-	A	V
		2483.52	50.15	-23.85	74	49.71	27.36	6.66	33.58	394	74	P	V	
		2483.52	25.36	-28.64	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	39.74	-34.26	74	54.46	31.54	9.81	56.51	100	0	P	H
		4960	14.95	-39.05	54	-	-	-	-	-	-	A	H
		7440	42.77	-31.23	74	49.77	36.59	12.09	56.06	100	0	P	H
		7440	17.98	-36.02	54	-	-	-	-	-	-	A	H
		4960	39.07	-34.93	74	53.79	31.54	9.81	56.51	100	0	P	V
		4960	14.28	-39.72	54	-	-	-	-	-	-	A	V
		7440	42.76	-31.24	74	49.76	36.59	12.09	56.06	100	0	P	V
		7440	17.97	-36.03	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 39 2480MHz	*	2480	95.29	-	-	84.93	27.36	6.65	33.58	100	304	P	H
	*	2480	93.81	-	-	83.45	27.36	6.65	33.58	100	304	A	H
		2488.48	53.05	-20.95	74	42.64	27.4	6.66	33.58	100	304	P	H
		2488.28	44.72	-9.28	54	34.31	27.4	6.66	33.58	100	304	A	H
													H
													H
	*	2480	91.15	-	-	80.79	27.36	6.65	33.58	391	77	P	V
	*	2480	89.96	-	-	79.6	27.36	16.58	33.58	391	77	A	V
		2496.64	53.07	-20.93	74	42.64	27.4	16.6	33.57	391	77	P	V
		2484.84	44.52	-9.48	54	34.15	27.36	16.59	33.58	391	77	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
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 39 2480MHz		4960	38.78	-35.22	74	53.5	31.54	10.25	56.51	100	0	P	H
		7440	42.57	-31.43	74	49.57	36.59	12.47	56.06	100	0	P	H
													H
													H
		4960	39.52	-34.48	74	54.24	31.54	10.25	56.51	100	0	P	V
		7440	42.07	-31.93	74	49.07	36.59	12.47	56.06	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 01 2412MHz		2343.18	52.91	-21.09	74	43.06	27.02	6.5	33.6	205	24	P	H	
		2390	41.56	-12.44	54	31.5	27.14	6.58	33.59	205	24	A	H	
	*	2412	106.54	-	-	96.41	27.19	6.6	33.59	205	24	P	H	
	*	2414	103.29	-	-	93.16	27.19	6.6	33.59	205	24	A	H	
													H	
													H	
			2337.405	53.42	-20.58	74	43.59	27.01	6.5	33.61	303	99	P	V
			2389.905	41.31	-12.69	54	31.26	27.14	6.57	33.59	303	99	A	V
	*		2412	102.47	-	-	92.34	27.19	6.6	33.59	303	99	P	V
	*		2412	99.17	-	-	89.04	27.19	6.6	33.59	303	99	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 01 2412MHz		4824	50.85	-23.15	74	66.15	31.18	9.66	56.57	197	327	P	H	
		4824	48.38	-5.62	54	63.68	31.18	9.66	56.57	197	327	A	H	
													H	
													H	
			4824	47.81	-26.19	74	63.11	31.18	9.66	56.57	100	0	P	V
														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 802.11g (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)	
802.11g CH 01 2412MHz		2390	57.66	-16.34	74	47.6	27.14	6.58	33.59	206	23	P	H	
		2390	48.39	-5.61	54	38.33	27.14	6.58	33.59	206	23	A	H	
	*	2412	108.23	-	-	98.1	27.19	6.6	33.59	206	23	P	H	
	*	2412	99.5	-	-	89.37	27.19	6.6	33.59	206	23	A	H	
													H	
													H	
			2390	55.56	-18.44	74	45.5	27.14	6.58	33.59	306	99	P	V
			2390	45.39	-8.61	54	35.33	27.14	6.58	33.59	306	99	A	V
	*		2412	103.47	-	-	93.34	27.19	6.6	33.59	306	99	P	V
	*		2412	95.47	-	-	85.34	27.19	6.6	33.59	306	99	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 802.11g (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)	
802.11g CH 01 2412MHz		4824	46.62	-27.38	74	61.92	31.18	9.66	56.57	100	0	P	H	
												A	H	
													H	
													H	
			4824	44.37	-29.63	74	59.67	31.18	9.66	56.57	100	0	P	V
														V
														V
														V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



**Band 1 - 5150~5250MHz
WIFI 802.11ac VHT80 (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)
802.11ac VHT80 CH 42 5210MHz		5131.92	55.19	-18.81	74	46.7	31.86	9.66	33.03	100	233	P	H
		5149.94	45.21	-8.79	54	36.66	31.9	9.68	33.03	100	233	A	H
	*	5210	99.99	-	-	91.7	31.56	9.76	33.03	100	233	P	H
	*	5210	92.03	-	-	83.74	31.56	9.76	33.03	100	233	A	H
		5391.62	50.11	-23.89	74	41.74	31.55	9.84	33.02	100	233	P	H
		5451.68	40.52	-13.48	54	31.94	31.71	9.89	33.02	100	233	A	H
		5091.12	49.52	-24.48	74	41.2	31.76	9.6	33.04	394	146	P	V
		5132.26	42.09	-11.91	54	33.6	31.86	9.66	33.03	394	146	A	V
	*	5210	93.62	-	-	85.33	31.56	9.76	33.03	394	146	P	V
	*	5210	85.38	-	-	77.09	31.56	9.76	33.03	394	146	A	V
		5397.34	48.57	-25.43	74	40.17	31.58	9.84	33.02	394	146	P	V
	5458.44	40.4	-13.6	54	31.8	31.73	9.89	33.02	394	146	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 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)	
802.11ac VHT80 CH 42 5210MHz		10420	45.2	-23	68.2	50.24	39.7	15.38	60.12	100	0	P	H	
		15630	43.72	-30.28	74	44.96	37.85	18.82	57.91	100	0	P	H	
													H	
													H	
			10420	43.98	-24.22	68.2	49.02	39.7	15.38	60.12	100	0	P	V
			15630	43.53	-30.47	74	44.77	37.85	18.82	57.91	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 802.11ac VHT80 (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)
802.11ac VHT80 CH 58 5290MHz		5144.9	51.69	-22.31	74	43.15	31.89	9.68	33.03	100	233	P	H
		5144.3	41.82	-12.18	54	33.28	31.89	9.68	33.03	100	233	A	H
	*	5290	98.87	-	-	90.78	31.32	9.8	33.03	100	233	P	H
	*	5290	90.61	-	-	82.52	31.32	9.8	33.03	100	233	A	H
		5353.68	60.23	-13.77	74	52.12	31.32	9.82	33.03	100	233	P	H
		5351.04	48.83	-5.17	54	40.73	31.31	9.82	33.03	100	233	A	H
		5135.6	49.45	-24.55	74	40.95	31.87	9.66	33.03	400	173	P	V
		5113.7	41.6	-12.4	54	33.18	31.83	9.63	33.04	400	173	A	V
	*	5290	94.4	-	-	86.31	31.32	9.8	33.03	400	173	P	V
	*	5290	86.03	-	-	77.94	31.32	9.8	33.03	400	173	A	V
		5415.84	49.05	-24.95	74	40.59	31.63	9.85	33.02	400	173	P	V
	5350.8	41.49	-12.51	54	33.4	31.3	9.82	33.03	400	173	A	V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**Band 2 5250~5350MHz
WIFI 802.11ac VHT80 (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)	
802.11ac VHT80 CH 58 5290MHz		10580	43.79	-24.41	68.2	49.13	39.7	15.47	60.51	100	0	P	H	
		15870	43.31	-30.69	74	44.66	37.32	18.9	57.57	100	0	P	H	
													H	
													H	
			10580	44.83	-23.37	68.2	50.17	39.7	15.47	60.51	100	0	P	V
			15870	43.15	-30.85	74	44.5	37.32	18.9	57.57	100	0	P	V
														V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



**Band 3 - 5470~5725MHz
WIFI 802.11ac VHT80 (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)
802.11ac VHT80 CH 106 5530MHz		5459.44	58.55	-15.45	74	49.94	31.74	9.89	33.02	100	241	P	H
		5463.28	60.31	-7.89	68.2	51.68	31.75	9.9	33.02	100	241	P	H
		5458	45.63	-8.37	54	37.03	31.73	9.89	33.02	100	241	A	H
	*	5530	97.19	-	-	88.44	31.84	9.96	33.05	100	241	P	H
	*	5530	89.06	-	-	80.31	31.84	9.96	33.05	100	241	A	H
		5736.965	50.74	-17.46	68.2	41.61	32.07	10.21	33.15	100	241	P	H
		5437.12	49.29	-24.71	74	40.77	31.67	9.87	33.02	385	174	P	V
		5463.76	48.86	-19.34	68.2	40.22	31.76	9.9	33.02	385	174	P	V
		5450.32	41.2	-12.8	54	32.63	31.7	9.89	33.02	385	174	A	V
	*	5530	93.99	-	-	85.24	31.84	9.96	33.05	385	174	P	V
	*	5530	85.36	-	-	76.61	31.84	9.96	33.05	385	174	A	V
		5730.35	50.28	-17.92	68.2	41.17	32.06	10.2	33.15	385	174	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



**Band 3 5470~5725MHz
WIFI 802.11ac VHT80 (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)
802.11ac VHT80		11060	45.99	-28.01	74	52.01	39.76	15.73	61.51	100	0	P	H
		16590	45.21	-22.99	68.2	43.97	38.88	19.49	57.13	100	0	P	H
													H
													H
CH 106 5530MHz		11060	45.43	-28.57	74	51.45	39.76	15.73	61.51	100	0	P	V
		16590	45.06	-23.14	68.2	43.82	38.88	19.49	57.13	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 802.11ac VHT80 (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)
		5648.25	49.8	-18.4	68.2	41.11	31.7	10.09	33.1	100	248	P	H
		5693.75	60.84	-39.75	100.59	51.85	31.96	10.15	33.12	100	248	P	H
		5717.75	57.9	-52.27	110.17	48.81	32.04	10.18	33.13	100	248	P	H
		5723.5	54.73	-64.05	118.78	45.62	32.05	10.19	33.13	100	248	P	H
	*	5775	95.35	-	-	86.09	32.15	10.27	33.16	100	248	P	H
	*	5775	87.11	-	-	77.85	32.15	10.27	33.16	100	248	A	H
		5852.75	50.29	-65.64	115.93	40.81	32.31	10.36	33.19	100	248	P	H
		5859	49.3	-60.38	109.68	39.81	32.34	10.36	33.21	100	248	P	H
		5877.5	49.25	-54.09	103.34	39.66	32.41	10.39	33.21	100	248	P	H
		5926.25	49.37	-18.83	68.2	39.61	32.55	10.44	33.23	100	248	P	H
													H
													H
802.11ac VHT80 CH 155 5775MHz		5622.75	48.94	-19.26	68.2	40.22	31.75	10.05	33.08	383	28	P	V
		5698	50.71	-53.02	103.73	41.68	31.99	10.16	33.12	383	28	P	V
		5705.5	53.56	-53.18	106.74	44.51	32.01	10.17	33.13	383	28	P	V
		5721.5	52.12	-62.1	114.22	43.02	32.04	10.19	33.13	383	28	P	V
	*	5775	93.63	-	-	84.37	32.15	10.27	33.16	383	28	P	V
	*	5775	85.16	-	-	75.9	32.15	10.27	33.16	383	28	A	V
		5853.25	49.92	-64.87	114.79	40.44	32.31	10.36	33.19	383	28	P	V
		5870.25	49.62	-56.91	106.53	40.07	32.38	10.38	33.21	383	28	P	V
		5880.75	51.21	-49.72	100.93	41.61	32.42	10.39	33.21	383	28	P	V
		5929.75	49.57	-18.63	68.2	39.8	32.56	10.44	33.23	383	28	P	V
													V
													V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



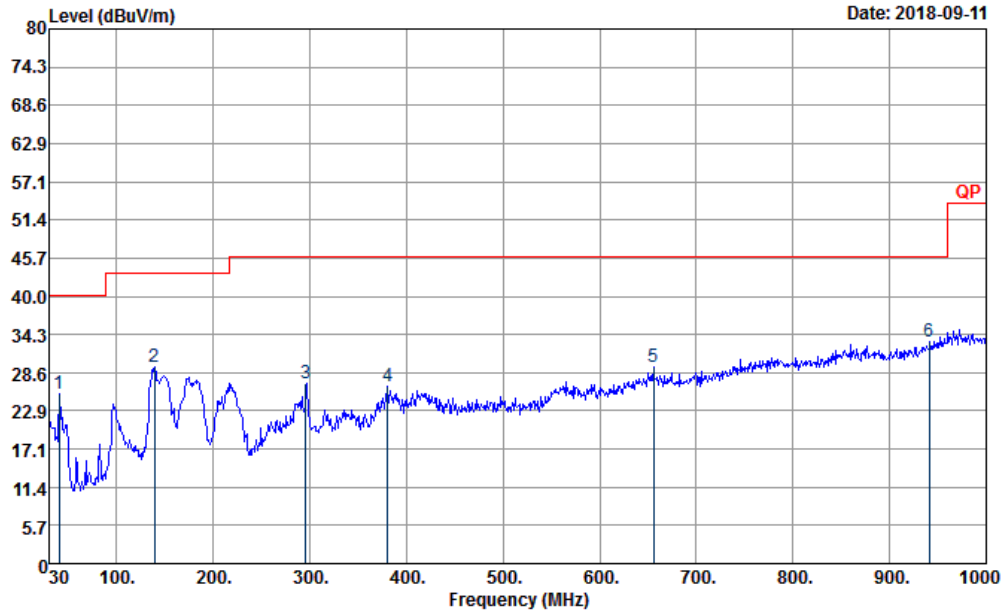
**Band 4 5725~5850MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)**

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)	
802.11ac VHT80 CH 155 5775MHz		11550	45.45	-28.55	74	51.6	39.55	16.01	61.71	100	0	P	H	
		17325	44.29	-23.91	68.2	38.9	40.83	20.16	55.6	100	0	P	H	
													H	
													H	
			11550	45.24	-28.76	74	51.39	39.55	16.01	61.71	100	0	P	V
			17325	44.59	-23.61	68.2	39.2	40.83	20.16	55.6	100	0	P	V
													V	
													V	
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.													



NFC

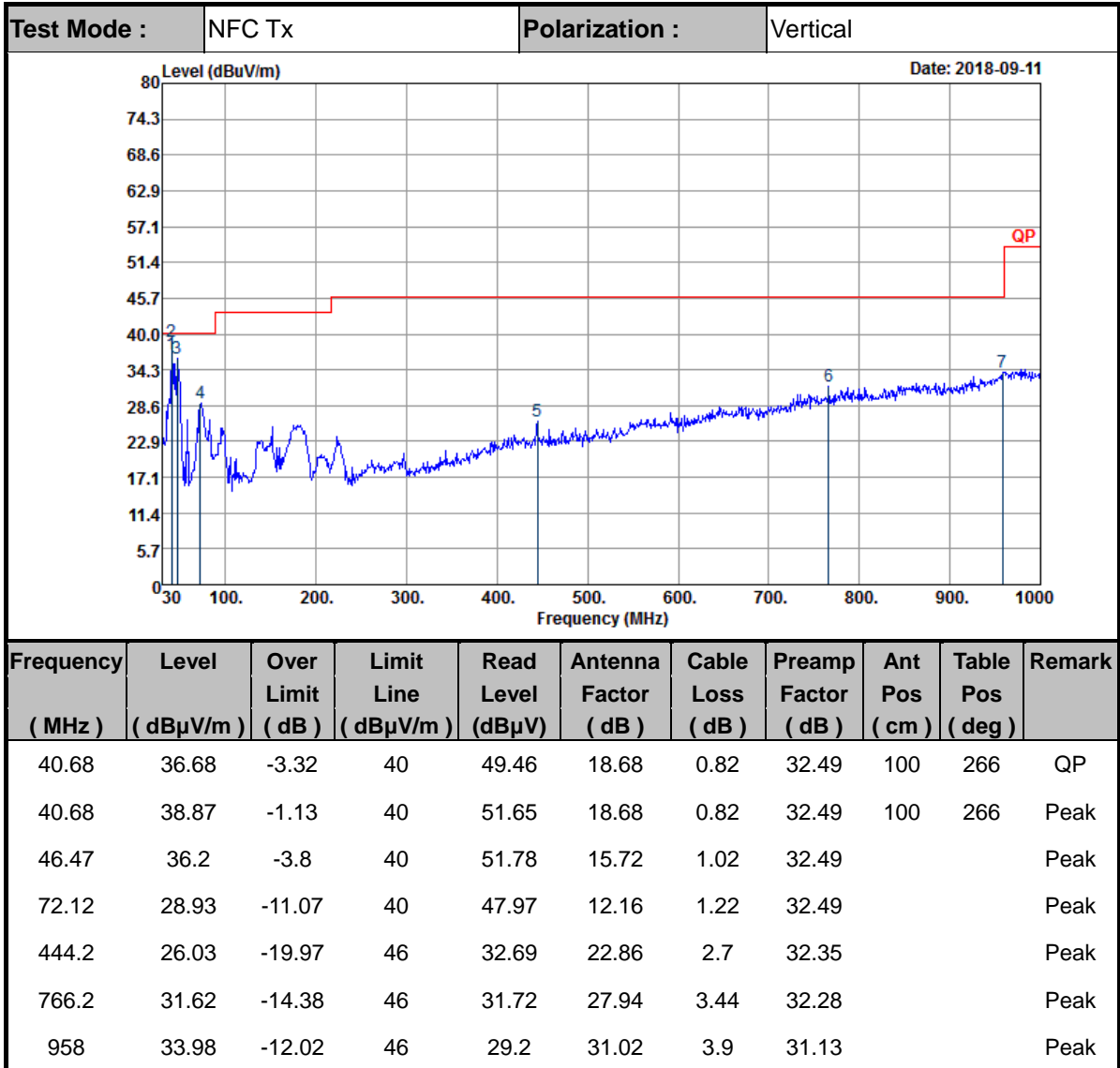
Test Mode :	NFC Tx	Polarization :	Horizontal
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Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
40.68	25.37	-14.63	40	38.15	18.68	0.82	32.49	-	-	Peak
139.08	29.36	-14.14	43.5	42.88	17.21	1.51	32.44	-	-	Peak
295.95	26.86	-19.14	46	37.91	18.99	2.22	32.37	-	-	Peak
380.5	26.56	-19.44	46	35.27	20.9	2.48	32.34	-	-	Peak
655.6	29.31	-16.69	46	31.35	26.25	3.2	32.47	-	-	Peak
941.2	33.2	-12.8	46	29.7	30.1	3.82	31.28	100	0	Peak



FCC TEST REPORT



End of this report