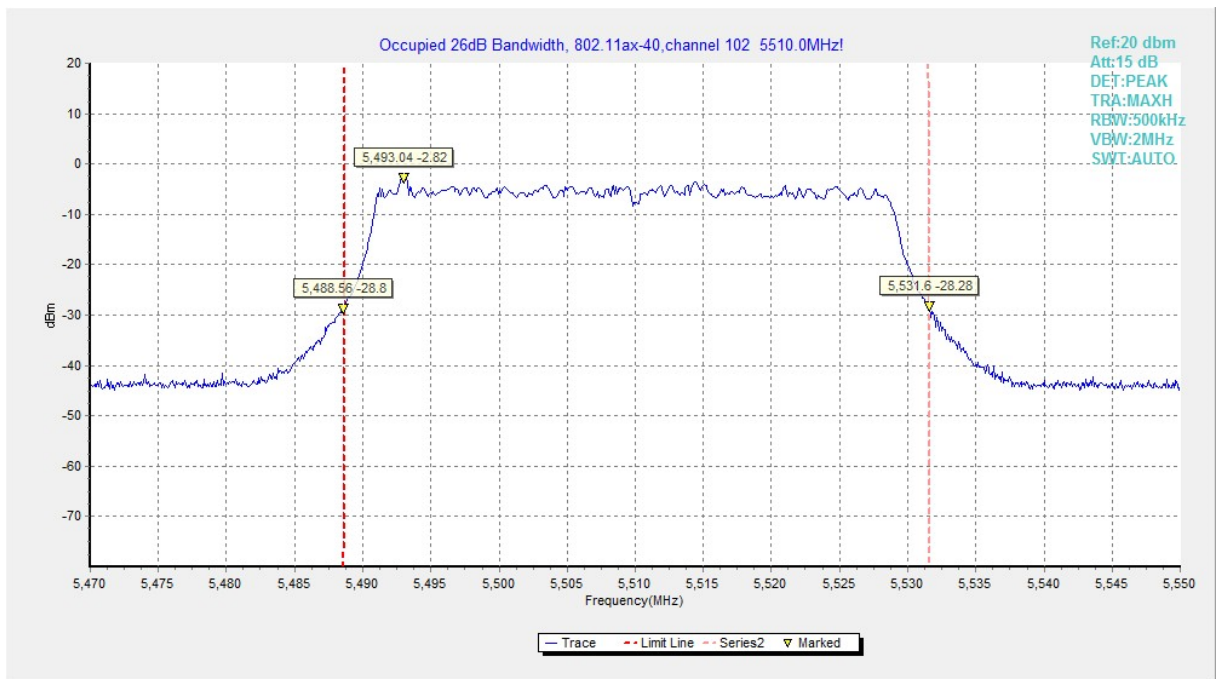
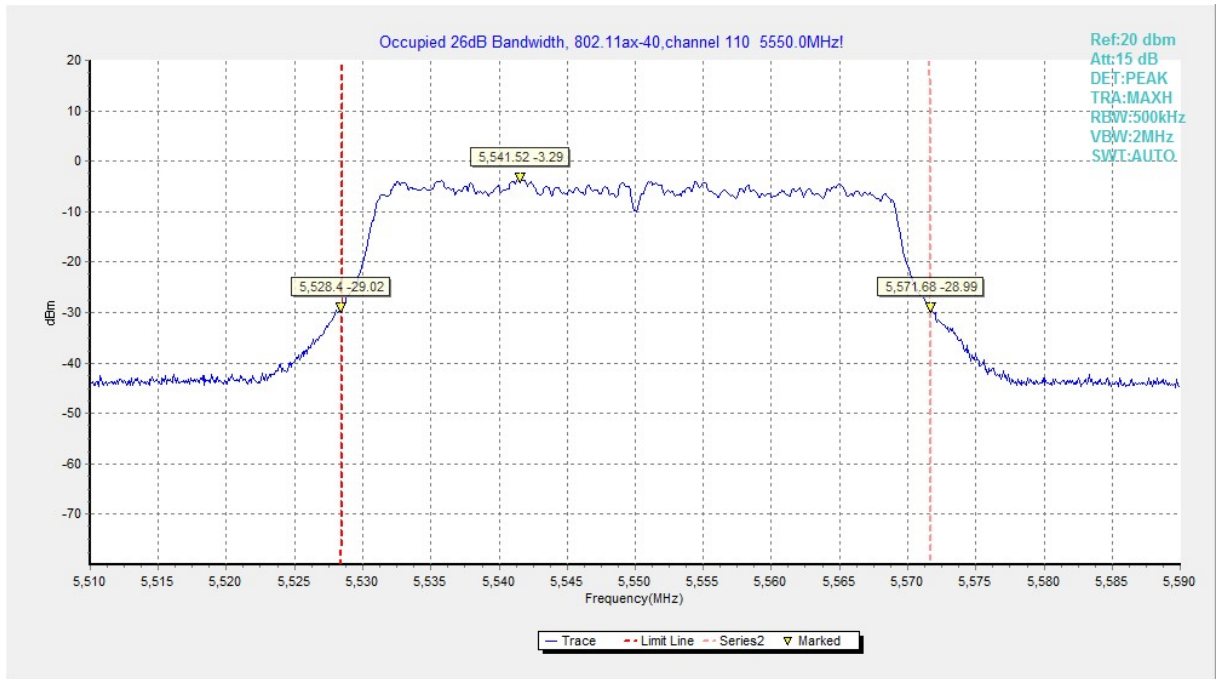


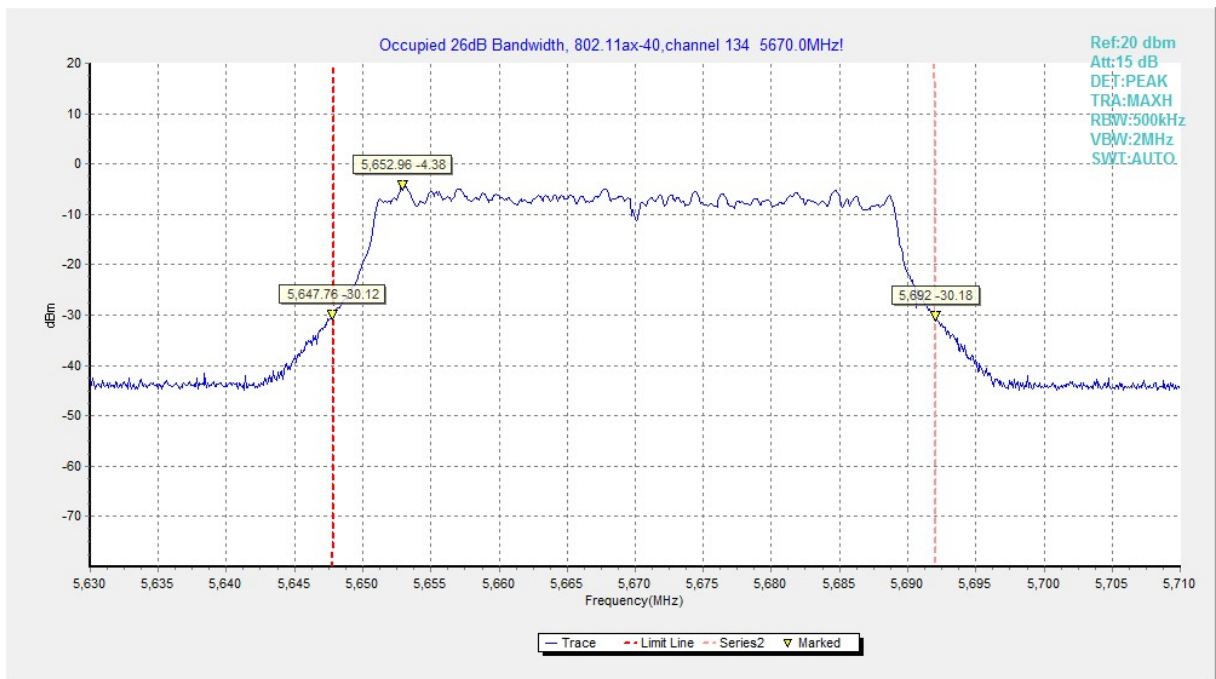
**Fig.24 Occupied 26dB Bandwidth (802.11ax-HE40, 5310MHz)**



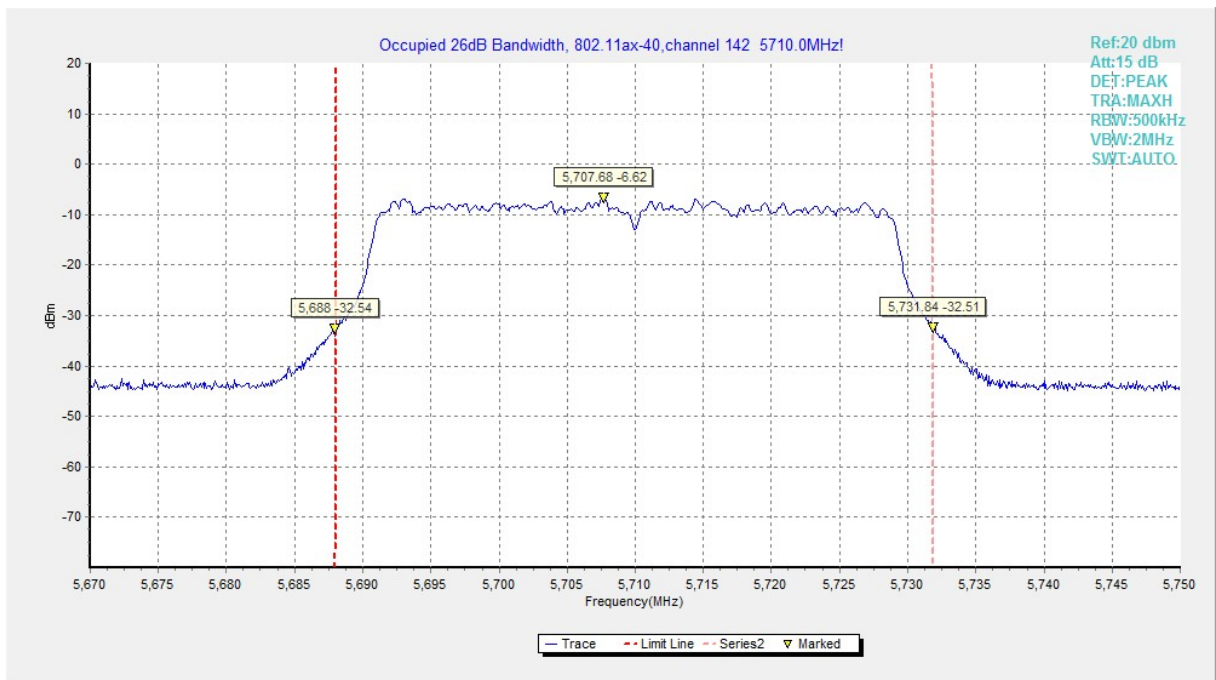
**Fig.25 Occupied 26dB Bandwidth (802.11ax-HE40, 5510MHz)**



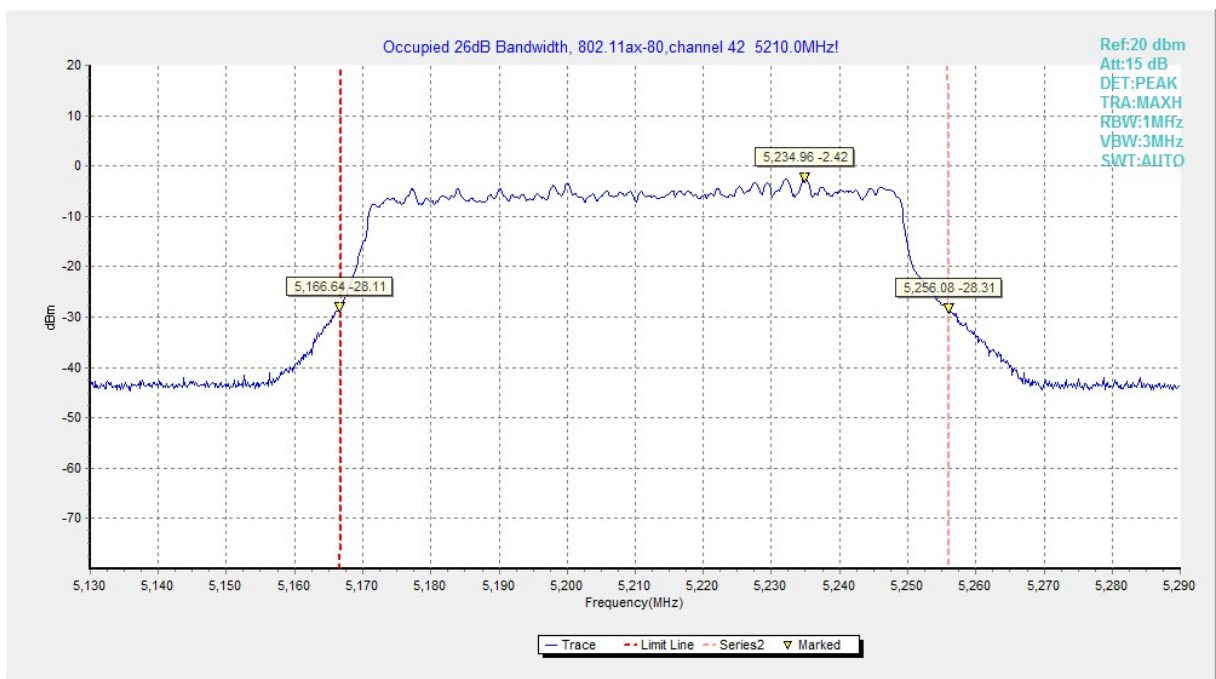
**Fig.26 Occupied 26dB Bandwidth (802.11ax-HE40, 5590MHz)**



**Fig.27 Occupied 26dB Bandwidth (802.11ax-HE40, 5670MHz)**



**Fig.28 Occupied 26dB Bandwidth (802.11ax-HE40, 5710MHz)**



**Fig.29 Occupied 26dB Bandwidth (802.11ax-HE80, 5210MHz)**

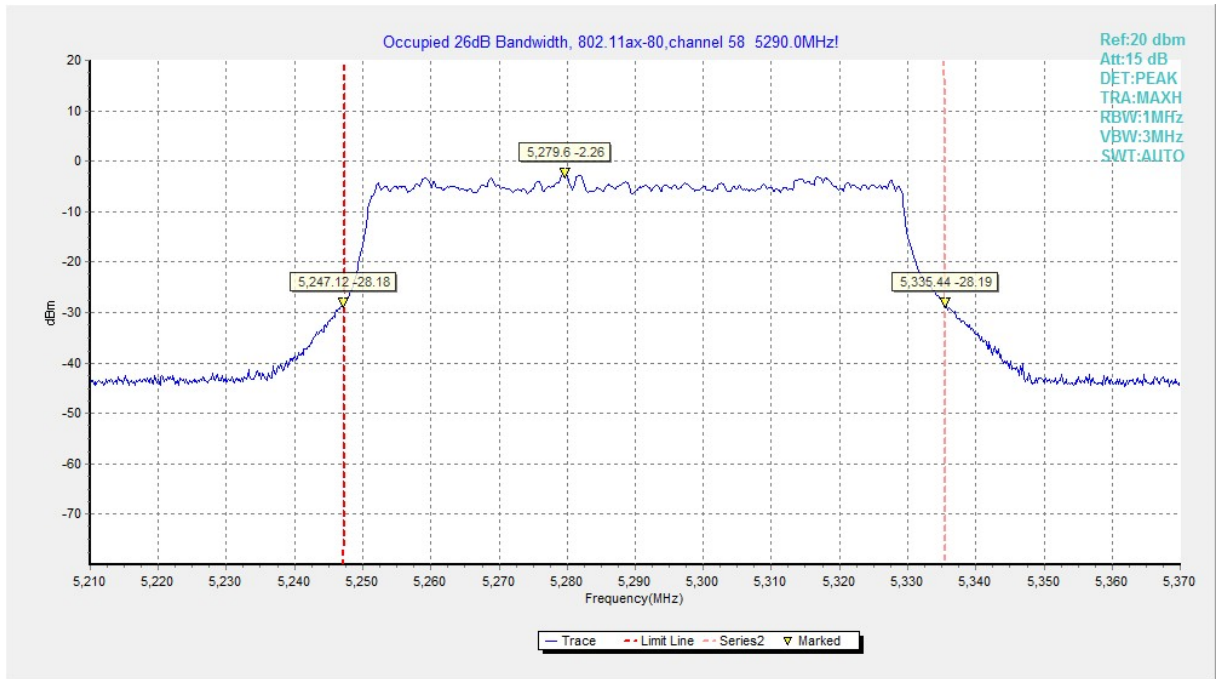


Fig.30 Occupied 26dB Bandwidth (802. 11ax-HE80, 5290MHz)

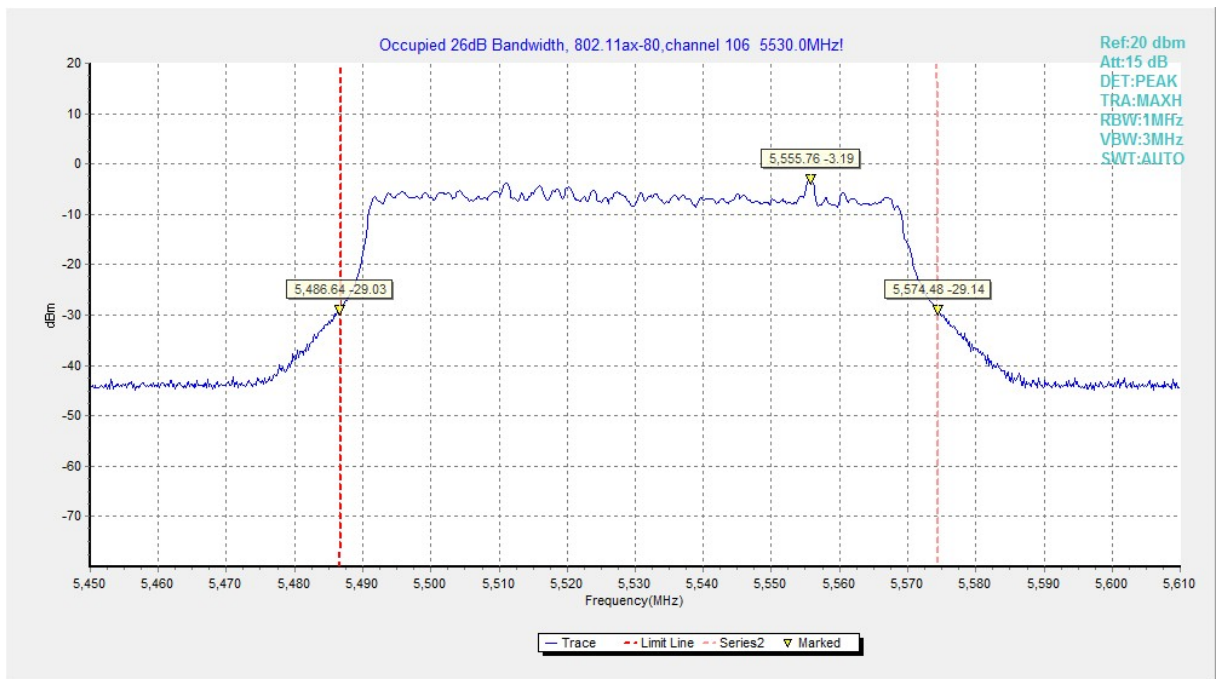
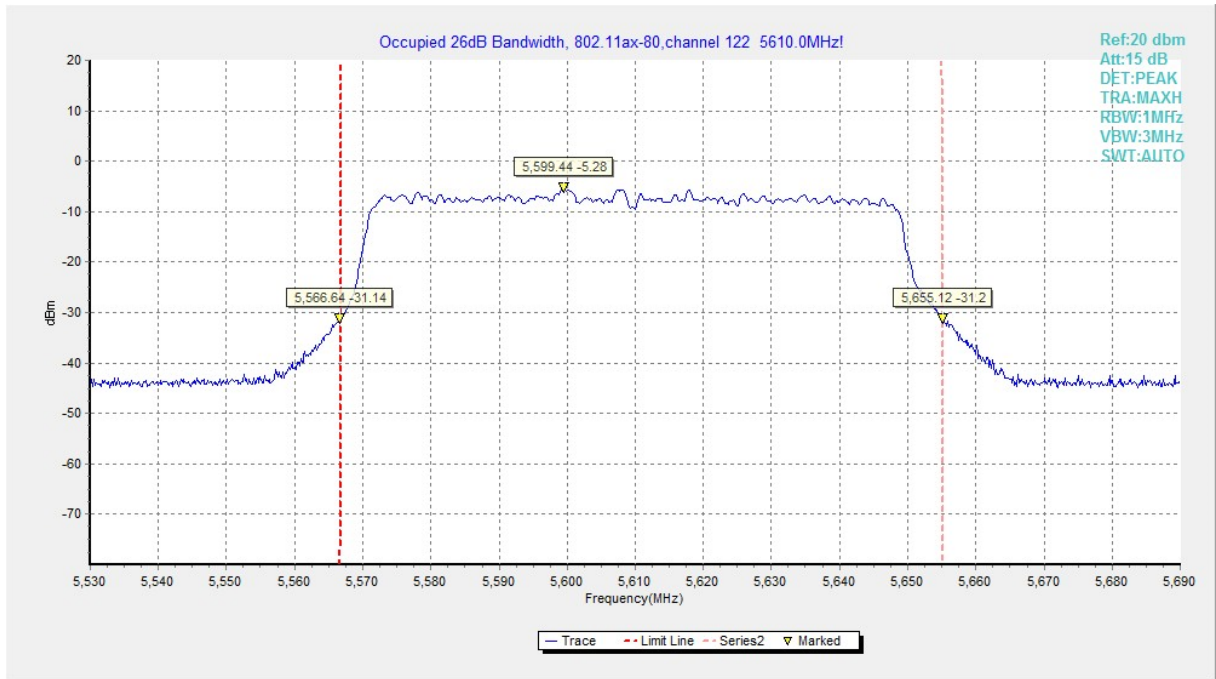
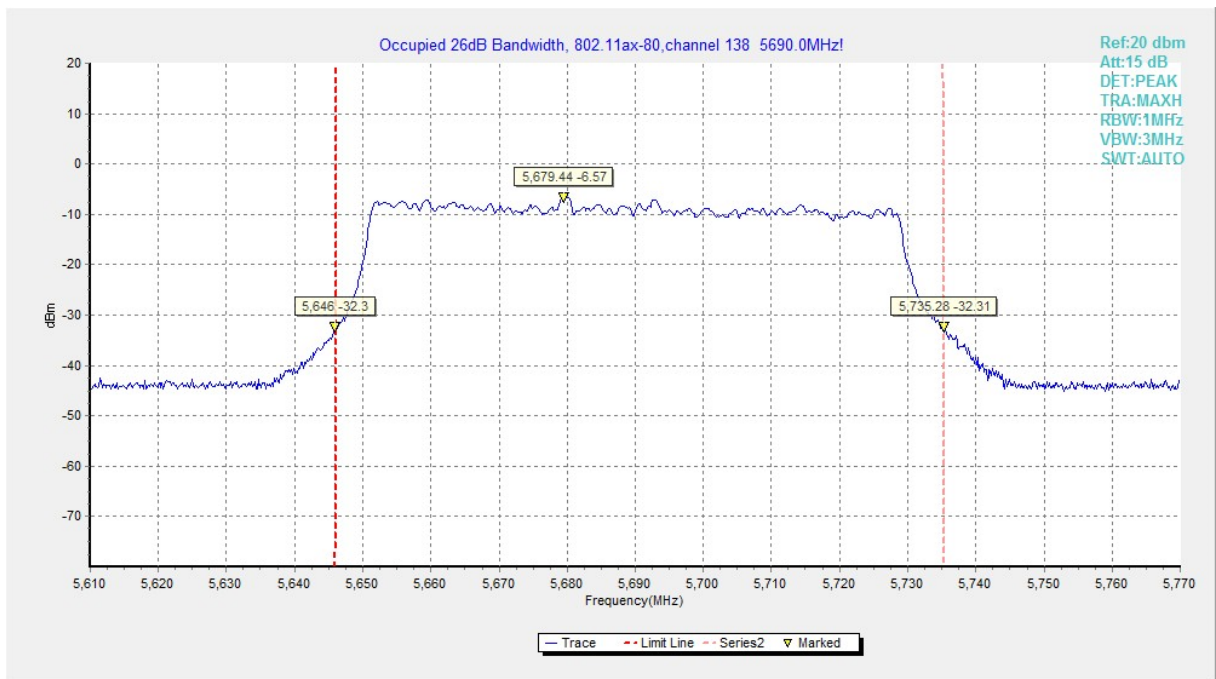


Fig.31 Occupied 26dB Bandwidth (802. 11ax-HE80, 5530MHz)





**Fig.32 Occupied 26dB Bandwidth (802.11ax-HE80, 5610MHz)**



**Fig.33 Occupied 26dB Bandwidth (802.11ax-HE80, 5690MHz)**

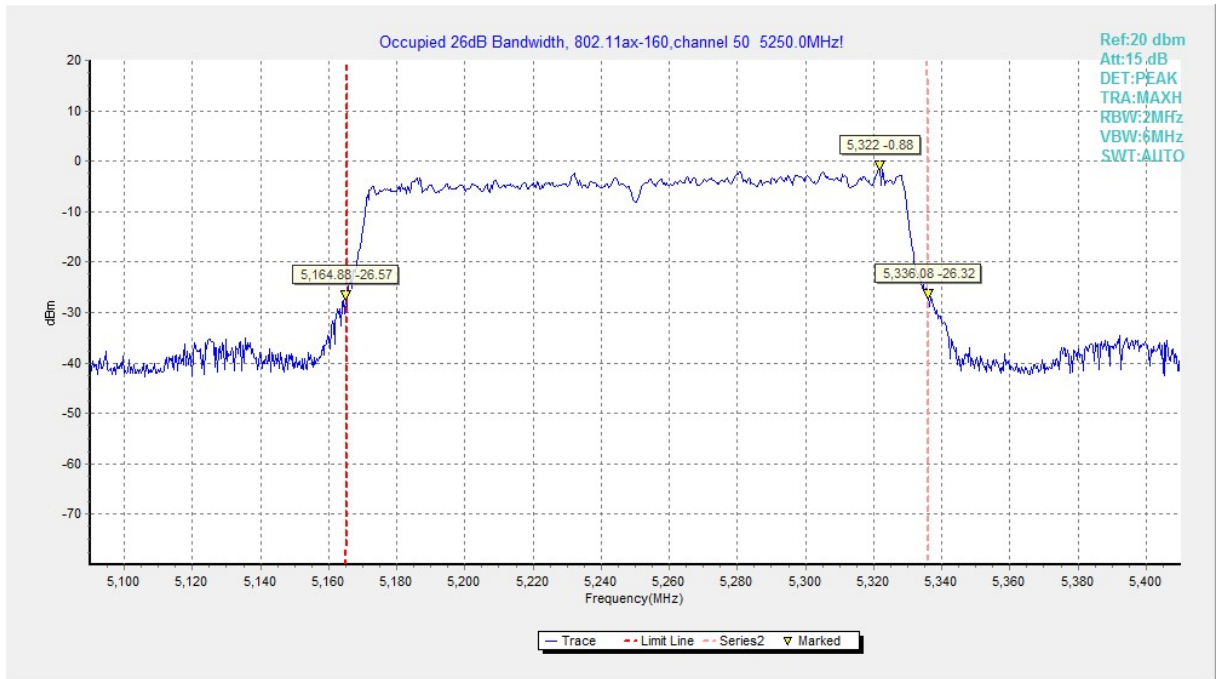


Fig.34 Occupied 26dB Bandwidth (802.11ax-HE160, 5250MHz)

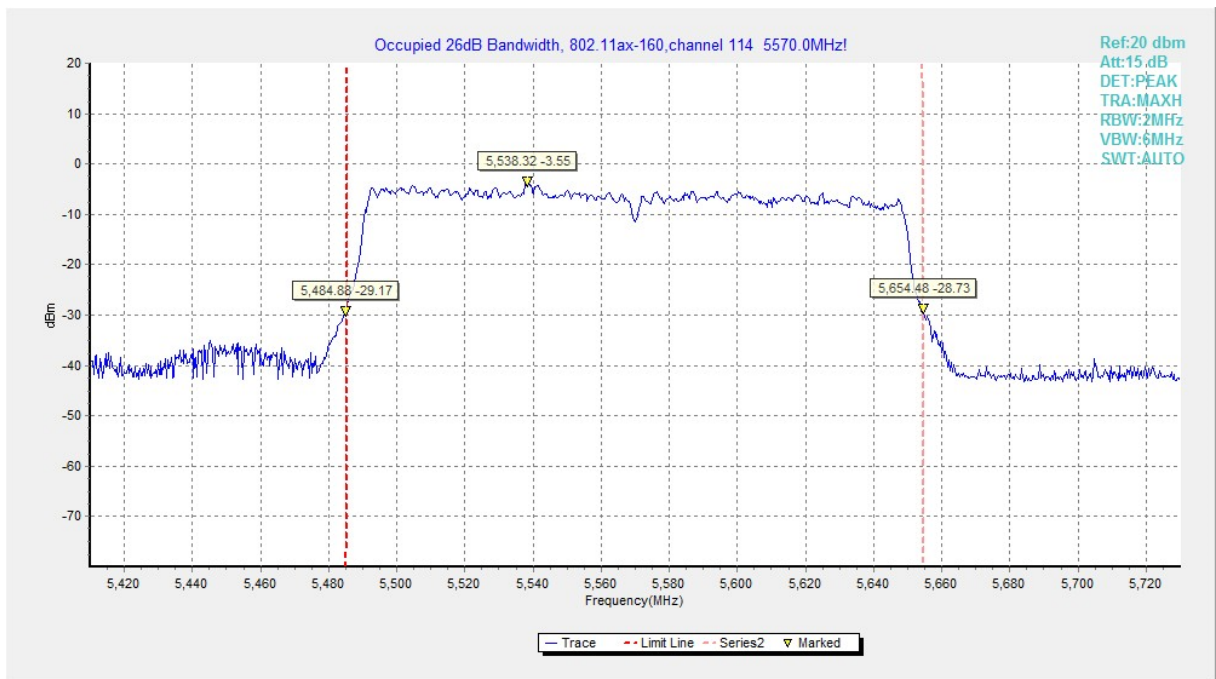


Fig.35 Occupied 26dB Bandwidth (802.11ax-HE160, 5570MHz)

## A.5. Band Edges Compliance

### A5.1 Band Edges - Radiated

#### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

#### Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)	Measurement distance(m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The measurement is made according to ANSI C63.10-2013 and KDB 789033

#### Measurement Result:

Mode	Channel	Test Results	Conclusion
802.11a MIMO	5180 MHz	Fig.36	P
	5320 MHz	Fig.37	P
	5500 MHz	Fig.38	P
	5700 MHz	Fig.39	P
802.11n HT20 MIMO	5180 MHz	Fig.40	P
	5320 MHz	Fig.41	P
	5500 MHz	Fig.42	P
	5700 MHz	Fig.43	P
802.11ac HT20 MIMO	5180 MHz	Fig.44	P
	5320 MHz	Fig.45	P
	5500 MHz	Fig.46	P
	5700 MHz	Fig.47	P
802.11n HT40 MIMO	5190 MHz	Fig.48	P
	5310 MHz	Fig.49	P
	5510 MHz	Fig.50	P
	5670 MHz	Fig.51	P
802.11ac HT40 MIMO	5190 MHz	Fig.52	P
	5310 MHz	Fig.53	P
	5510 MHz	Fig.54	P
	5670 MHz	Fig.55	P
802.11ac HT80 MIMO	5210MHz	Fig.56	P
	5290MHz	Fig.57	P
	5530MHz	Fig.58	P

	5610MHz	Fig.59	P
802.11ac HT160 MIMO	5250MHz	Fig.60	P
	5250MHz	Fig.61	P
	5570MHz	Fig.62	P
	5570MHz	Fig.63	P
802.11ax HT20 MIMO	5180 MHz	Fig.64	P
	5320 MHz	Fig.65	P
	5500 MHz	Fig.66	P
	5700 MHz	Fig.67	P
802.11ax HT40 MIMO	5190 MHz	Fig.68	P
	5310 MHz	Fig.69	P
	5510 MHz	Fig.70	P
	5670 MHz	Fig.71	P
802.11ax HT80 MIMO	5210MHz	Fig.72	P
	5290MHz	Fig.73	P
	5530MHz	Fig.74	P
	5610MHz	Fig.75	P
802.11ax HT160 MIMO	5250MHz	Fig.76	P
	5250MHz	Fig.77	P
	5570MHz	Fig.78	P
	5570MHz	Fig.79	P

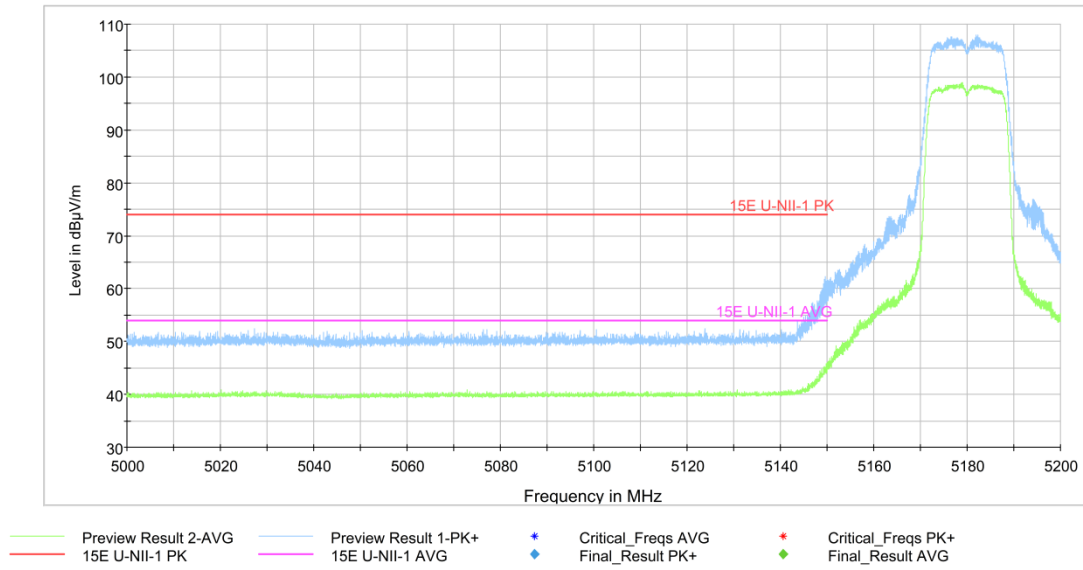
**Measurement Results for UT18a MIMO:**

Mode	Channel	Test Results	Conclusion
802.11ax HT20	5500 MHz	Fig.80	P
	5700 MHz	Fig.81	P

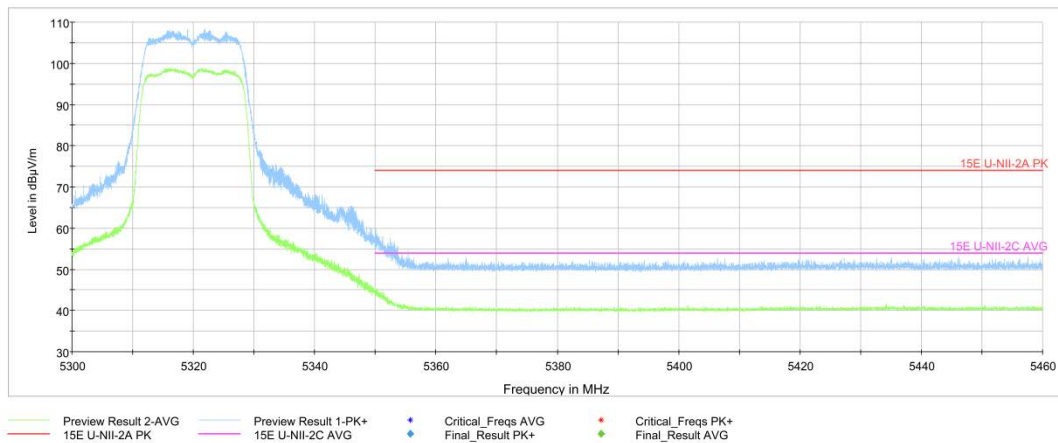
**Conclusion: PASS**

**Test graphs as below:**

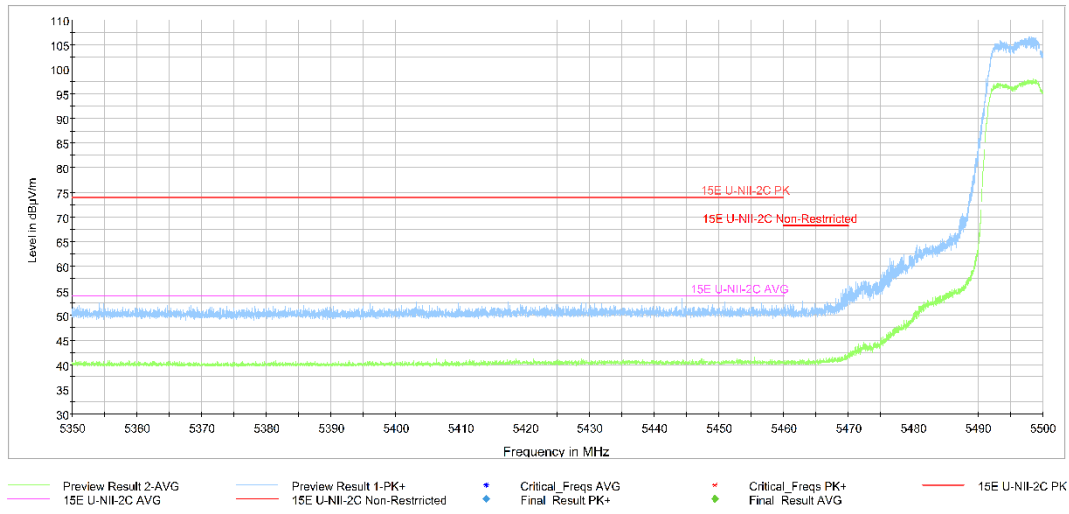




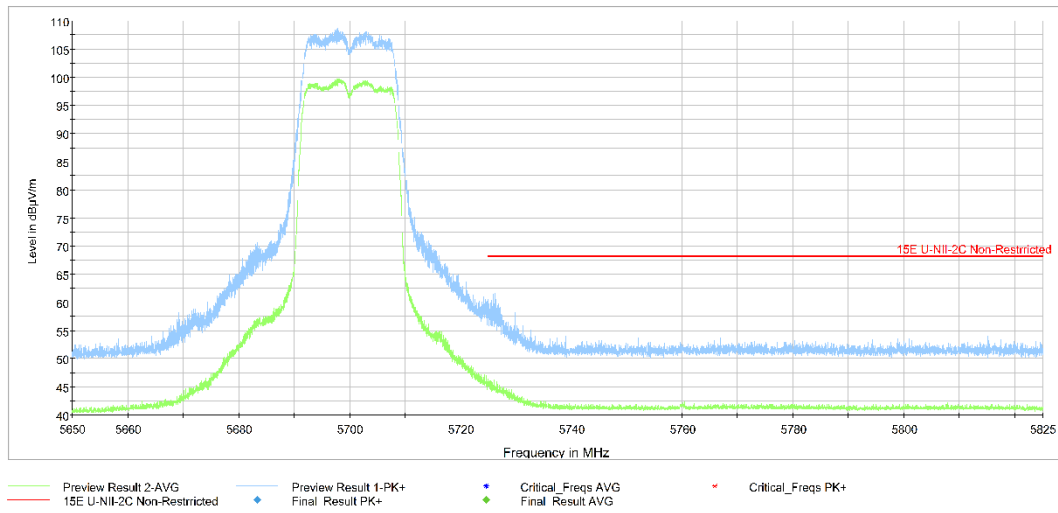
**Fig.36 Band Edges (802.11a Ch36, 5180MHz)**



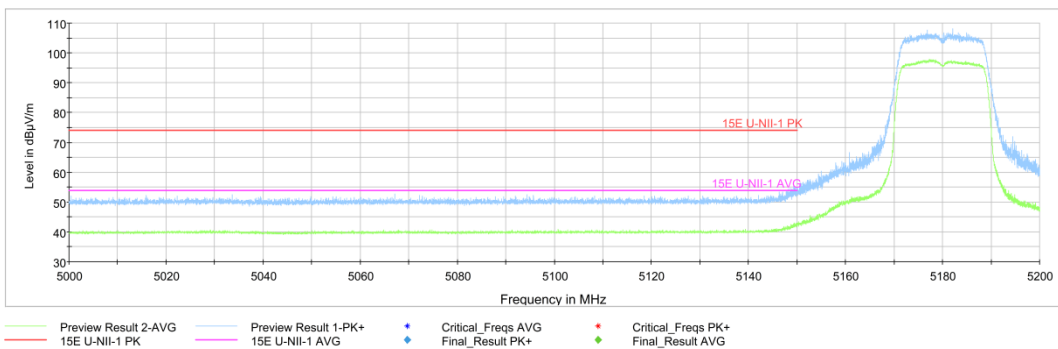
**Fig.37 Band Edges (802.11a Ch64, 5320MHz)**



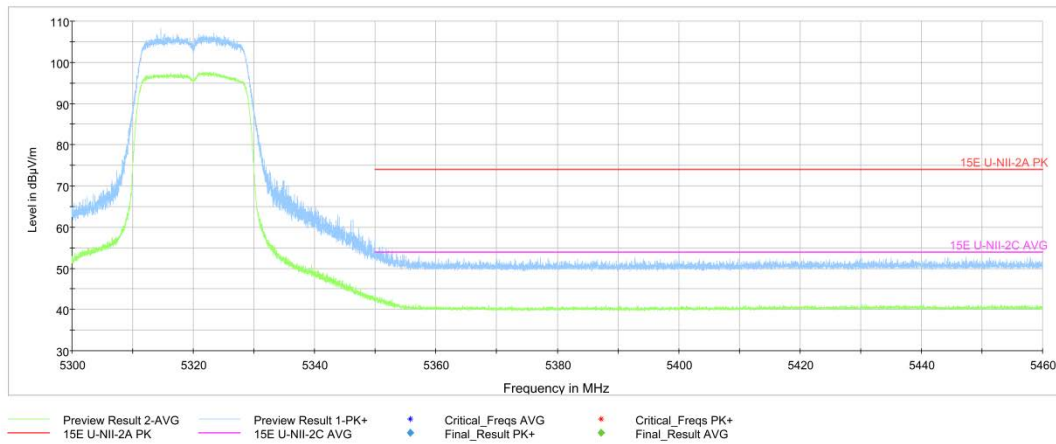
**Fig.38 Band Edges (802.11a Ch100, 5500MHz)**



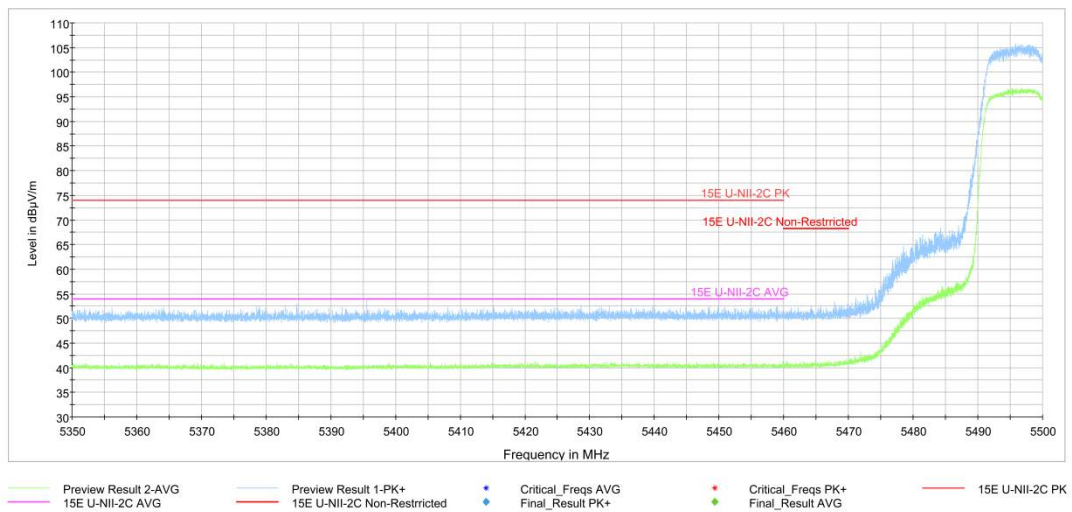
**Fig.39 Band Edges (802.11a Ch140, 5700MHz)**



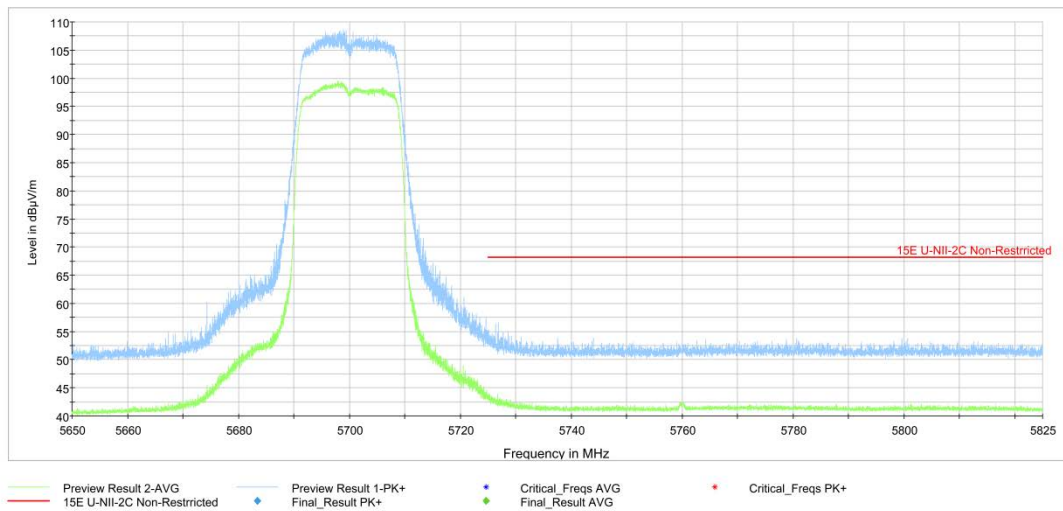
**Fig.40 Band Edges (802.11n-HT20 Ch36, 5180MHz)**



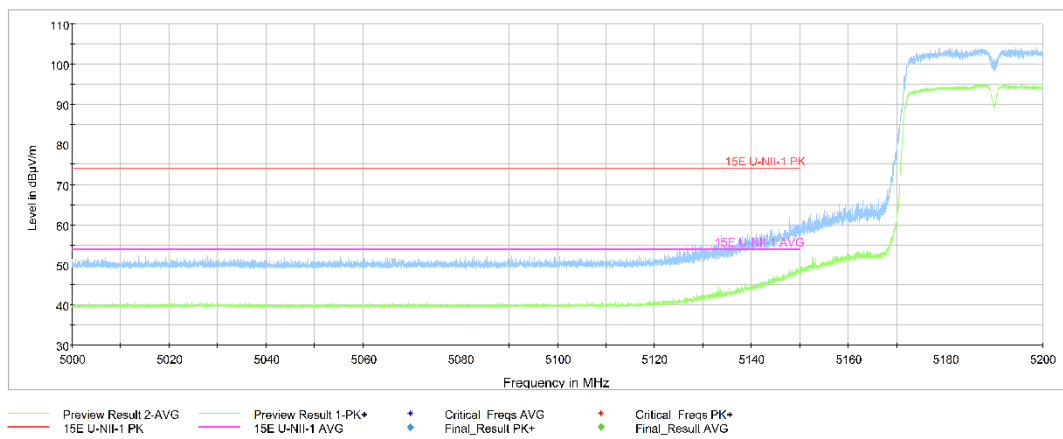
**Fig.41 Band Edges (802.11n-HT20 Ch64, 5320MHz)**



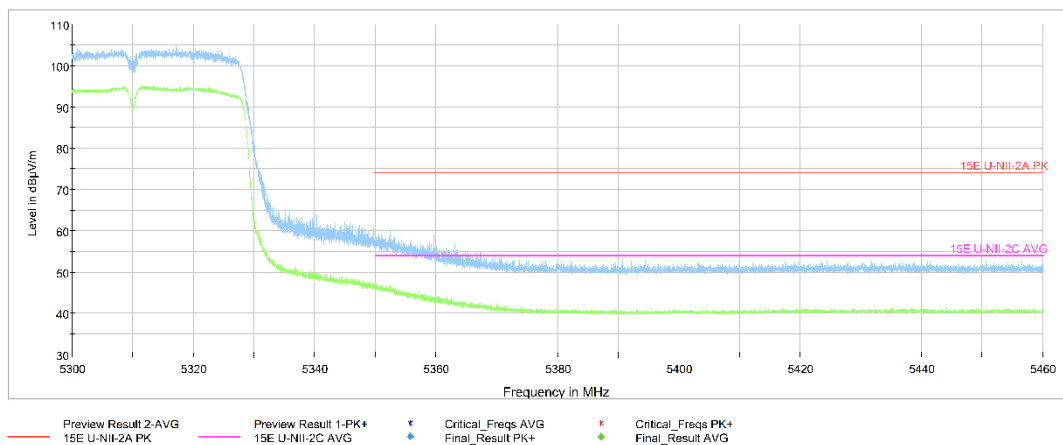
**Fig.42 Band Edges (802.11n-HT20 Ch100, 5500MHz)**



**Fig.43 Band Edges (802.11n-HT20 Ch140, 5700MHz)**



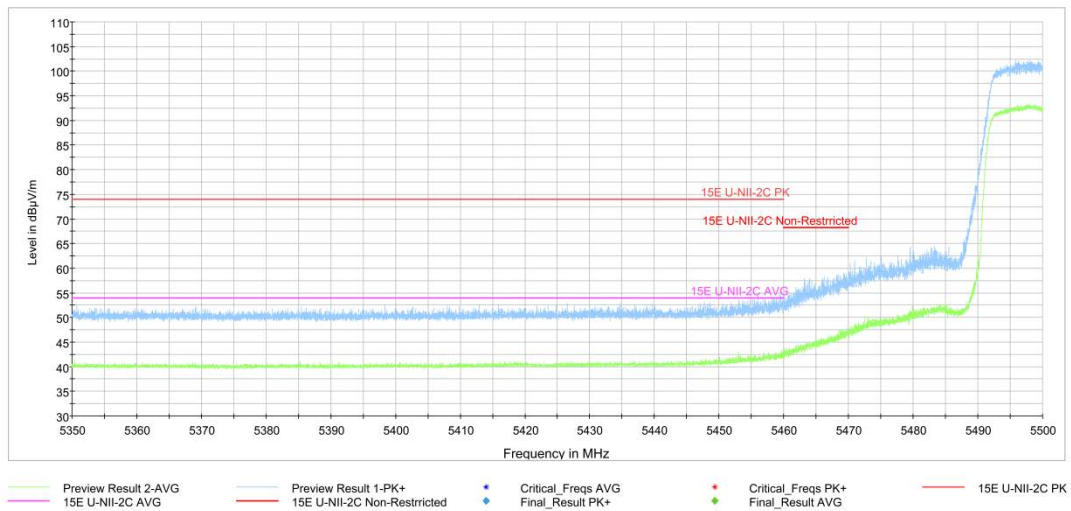
**Fig.44 Band Edges (802.11n-HT40 Ch38, 5190MHz)**



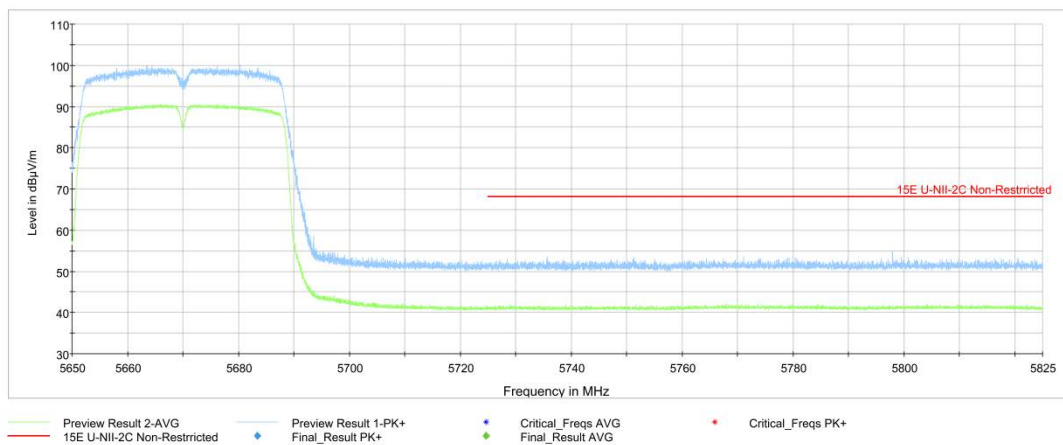


**Fig.45 Band Edges (802.11n-HT40 Ch62, 5310MHz)**

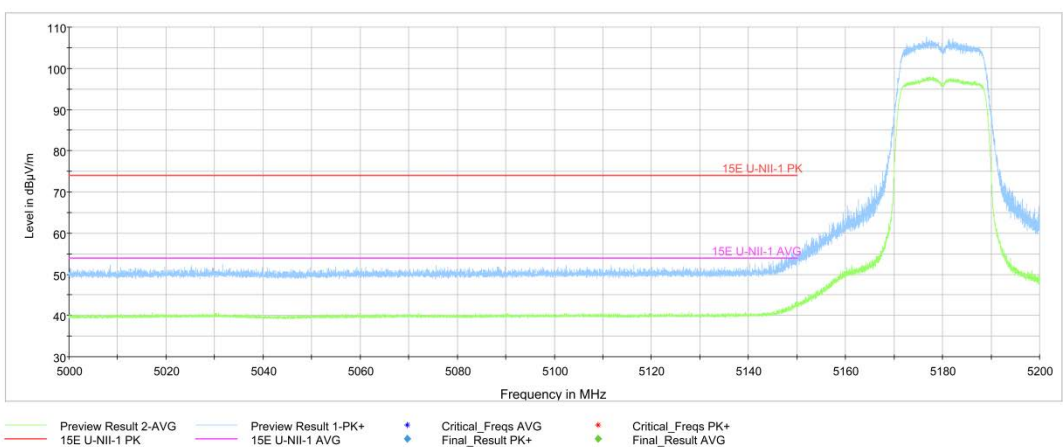




**Fig.46 Band Edges (802.11n-HT40 Ch102, 5510MHz)**

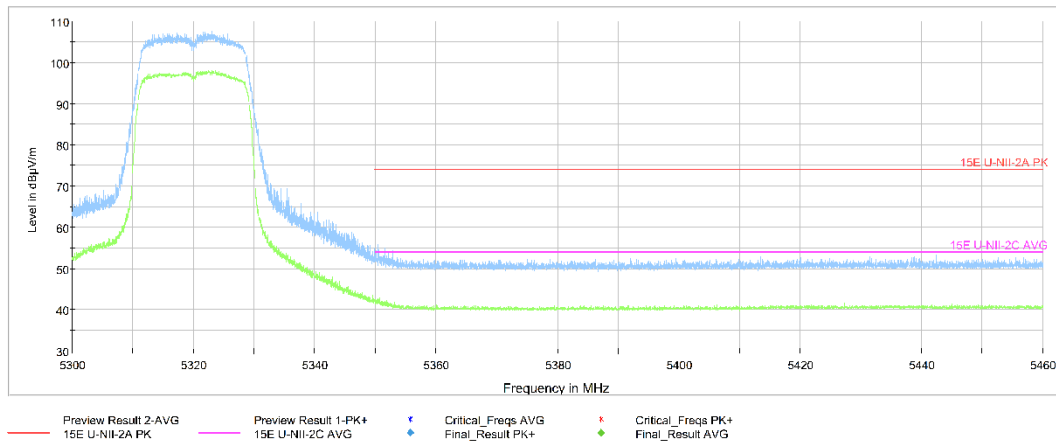


**Fig.47 Band Edges (802.11n-HT40 Ch134, 5670MHz)**

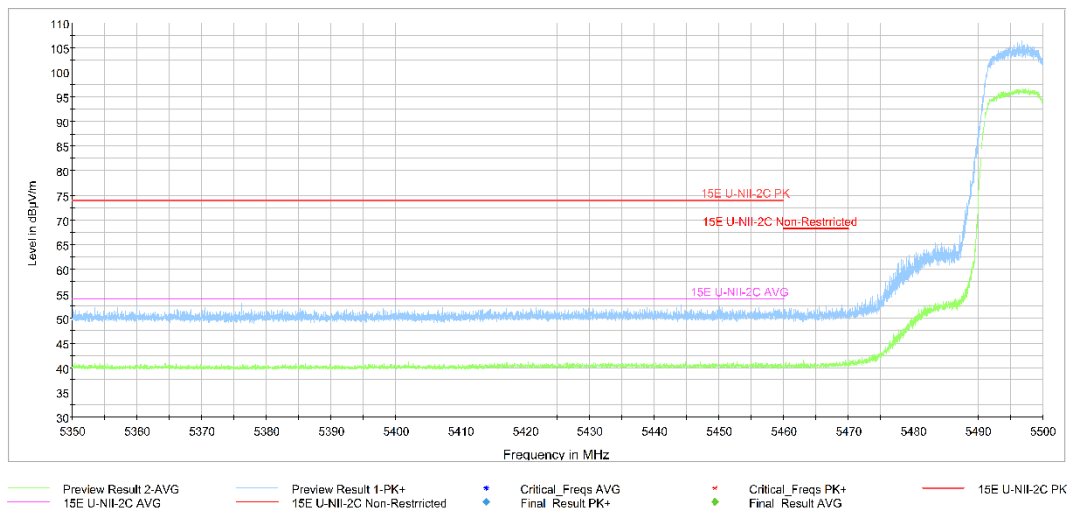


**Fig.48 Band Edges (802.11ac-HT20 Ch36, 5180MHz)**

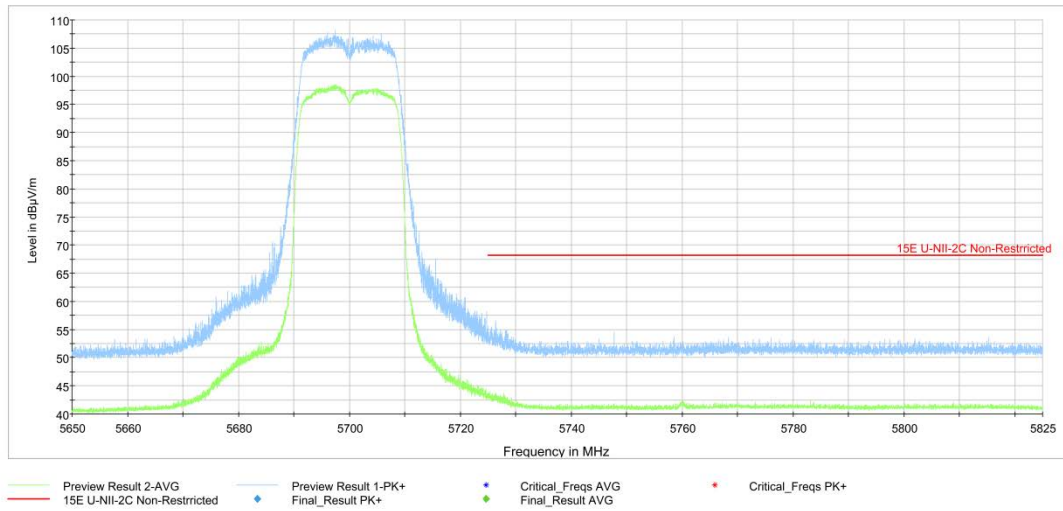




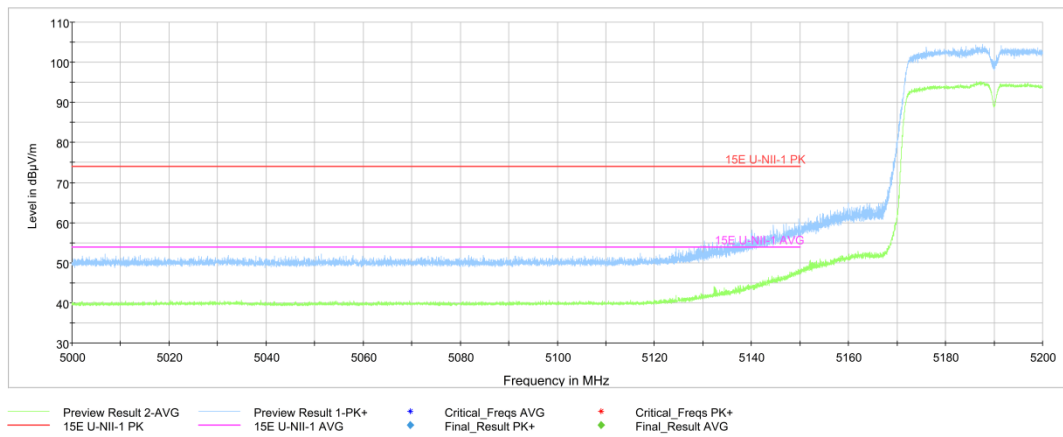
**Fig.49 Band Edges (802.11ac-HT20 Ch64, 5320MHz)**



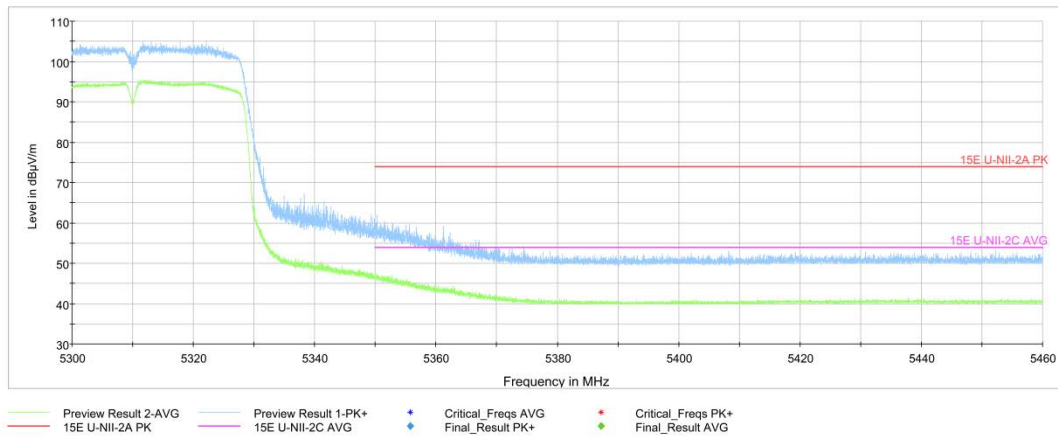
**Fig.50 Band Edges (802.11ac-HT20 Ch100, 5500MHz)**



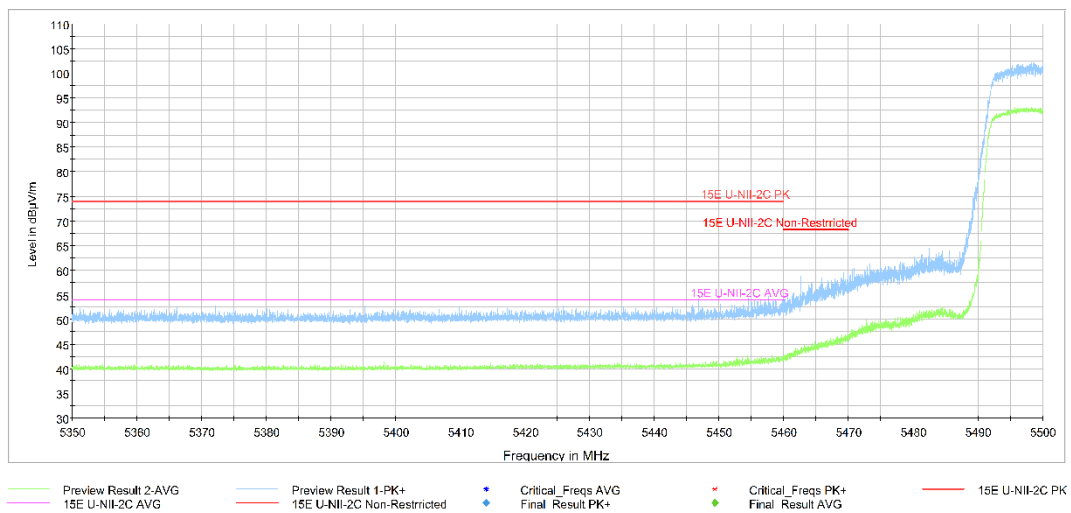
**Fig.51 Band Edges (802.11ac-HT20 Ch140, 5700MHz)**



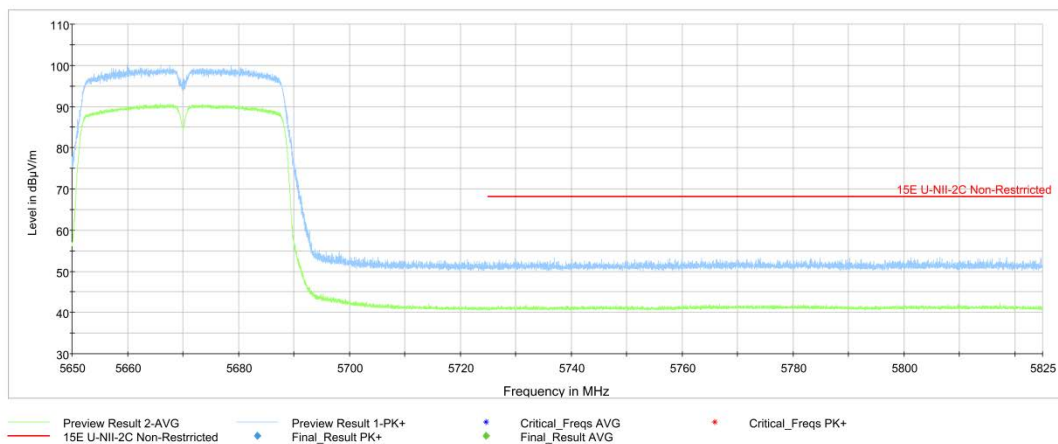
**Fig.52 Band Edges (802.11ac-HT40 Ch38, 5190MHz)**



**Fig.53 Band Edges (802.11ac-HT40 Ch62, 5310MHz)**

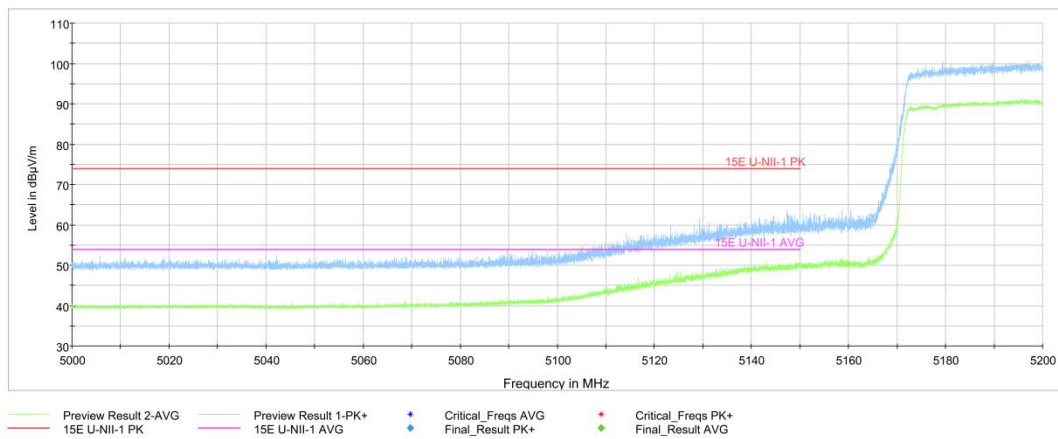


**Fig.54 Band Edges (802.11ac-HT40 Ch102, 5510MHz)**

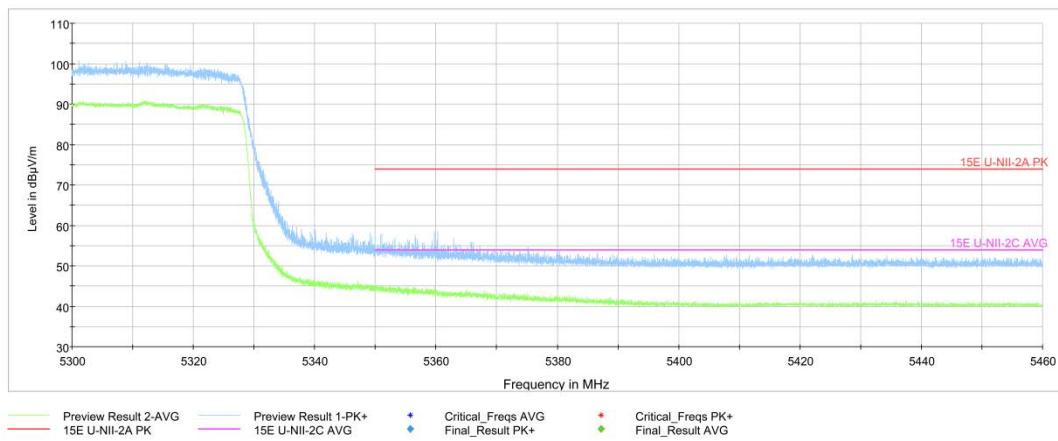


**Fig.55 Band Edges (802.11ac-HT40 Ch134, 5670MHz)**

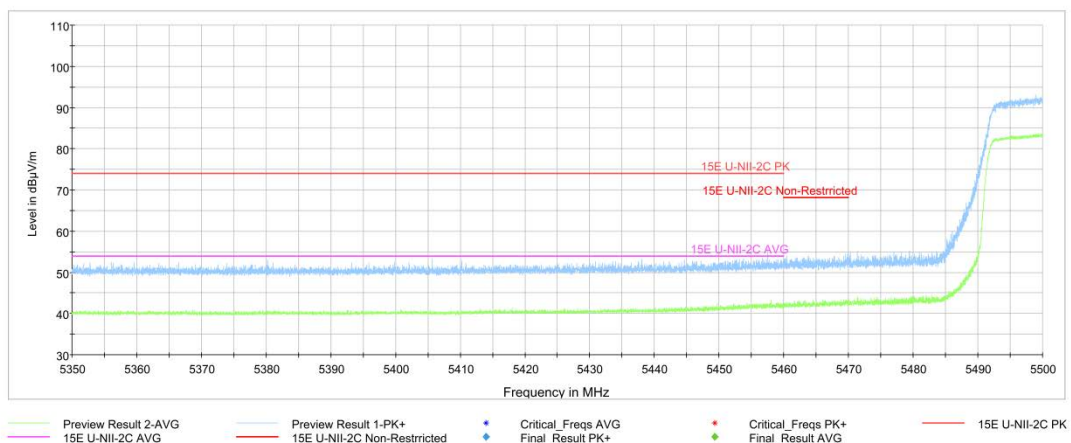




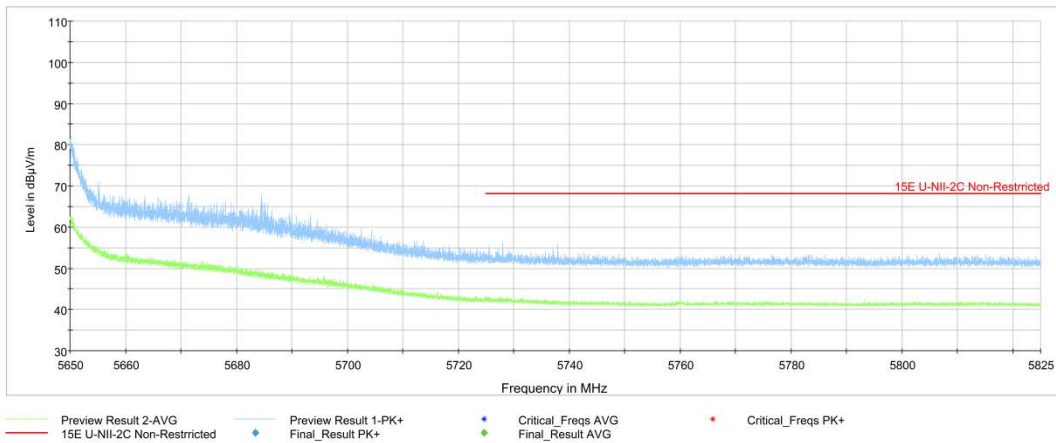
**Fig.56 Band Edges (802.11ac-HT80 Ch42 , 5210MHz)**



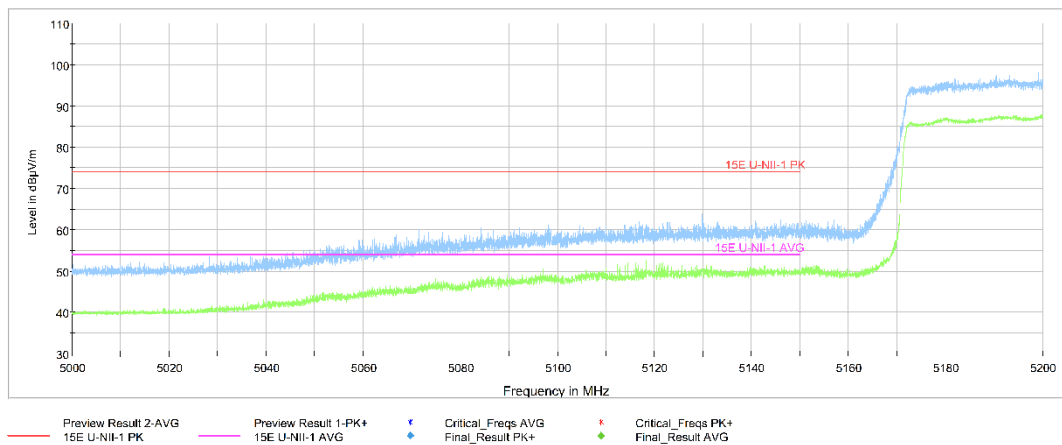
**Fig.57 Band Edges (802.11ac-HT80 Ch58, 5290MHz)**



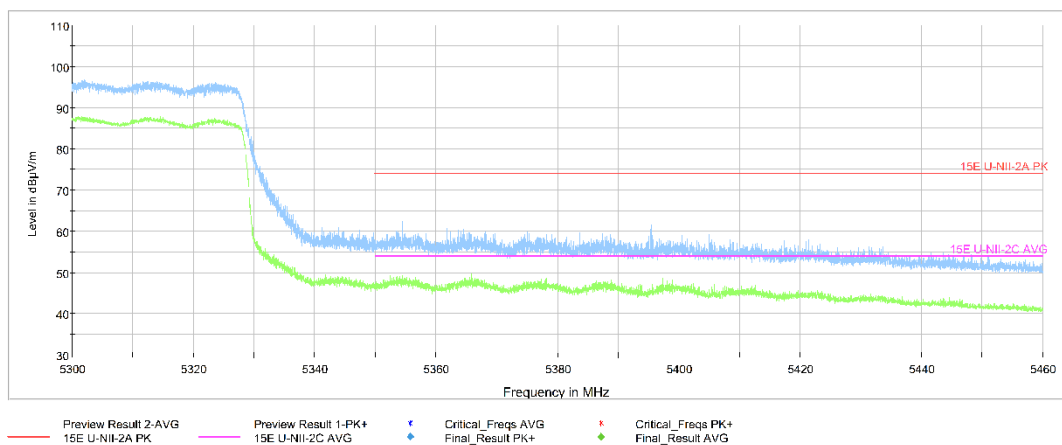
**Fig.58 Band Edges (802.11ac-HT80 Ch106, 5530MHz)**



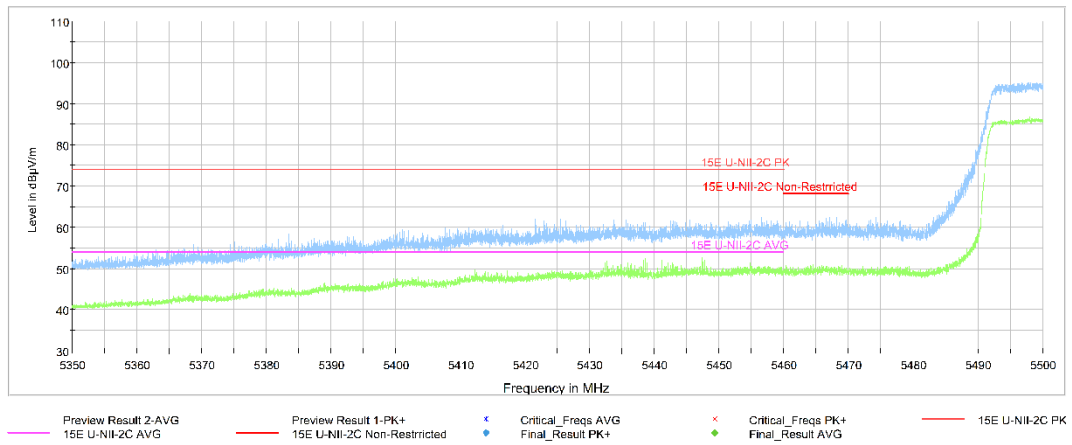
**Fig.59 Band Edges (802.11ac-HT80 Ch122, 5610MHz)**



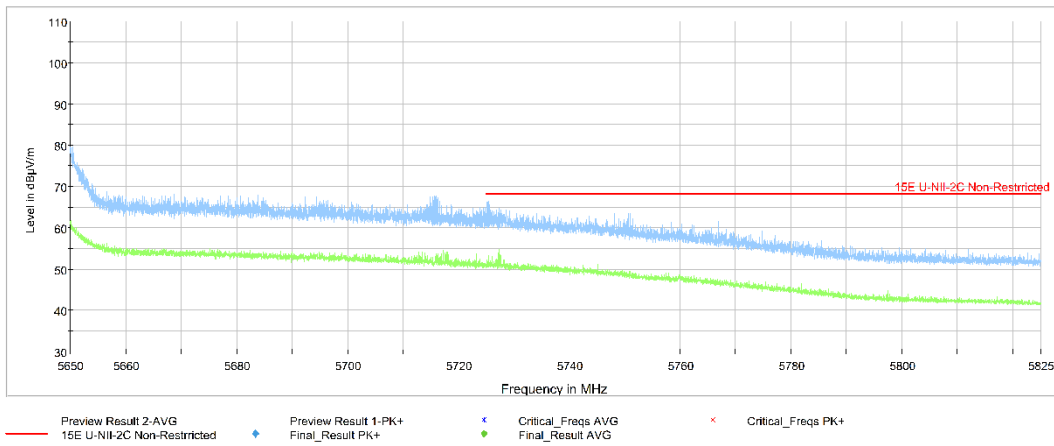
**Fig.60 Band Edges (802.11ac-HT160 Ch50, 5610MHz)**



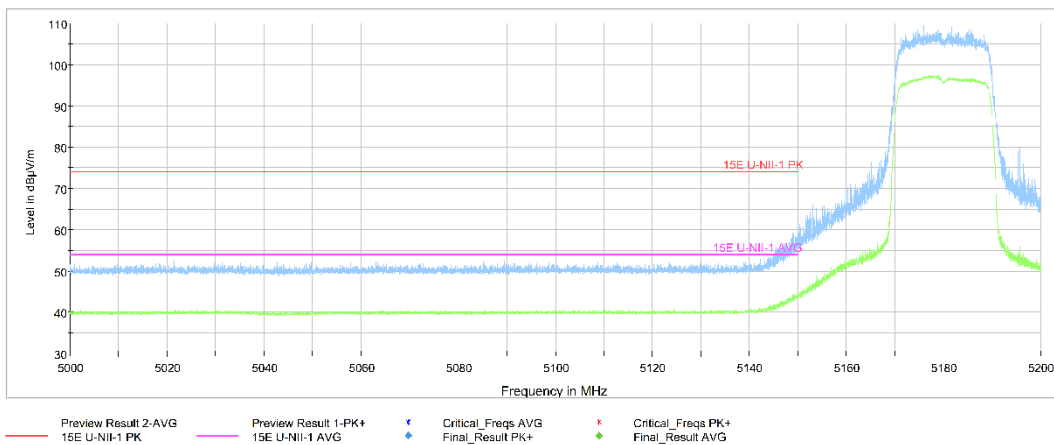
**Fig.61 Band Edges (802.11ac-HT160 Ch50, 5610MHz)**



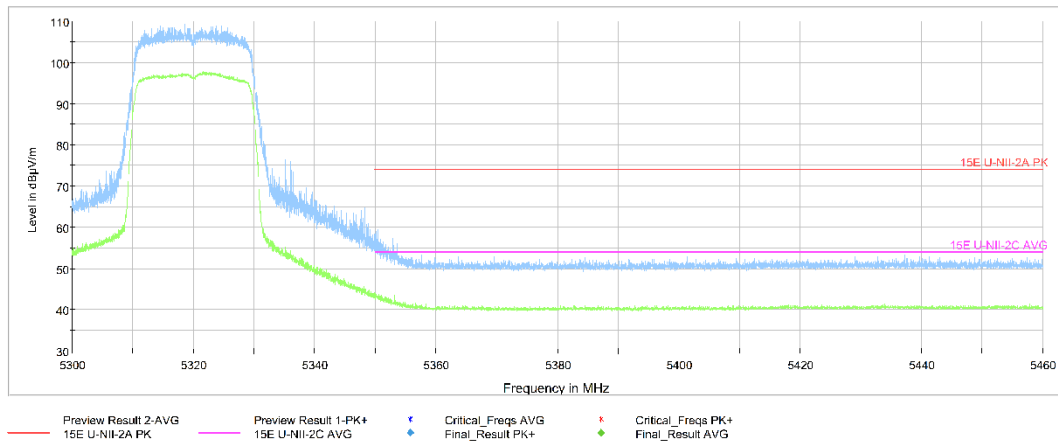
**Fig.62 Band Edges (802.11ac-HT160 Ch114, 5610MHz)**



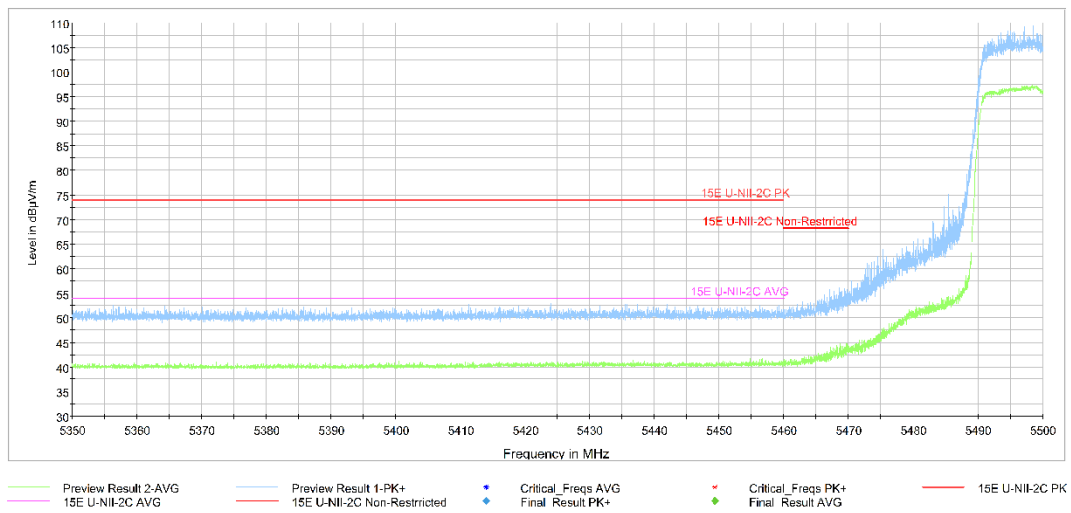
**Fig.63 Band Edges (802.11ac-HT160 Ch114, 5610MHz)**



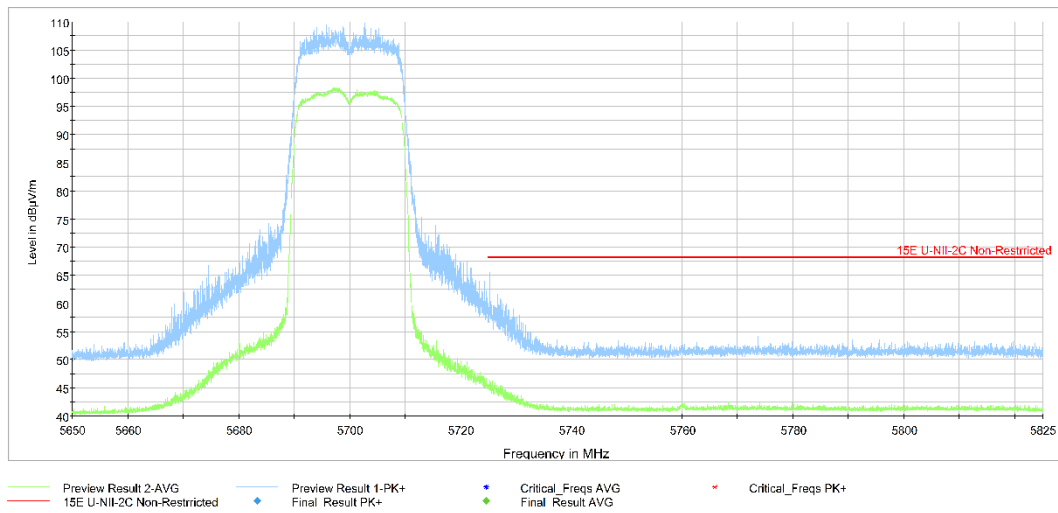
**Fig.64 Band Edges (802.11ax-HT20 Ch36, 5180MHz)**



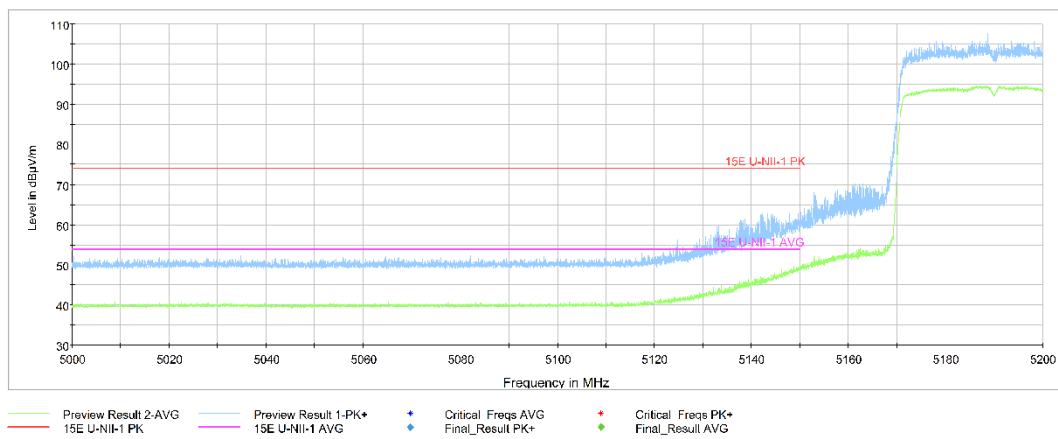
**Fig.65 Band Edges (802.11ax-HT20 Ch64, 5320MHz)**



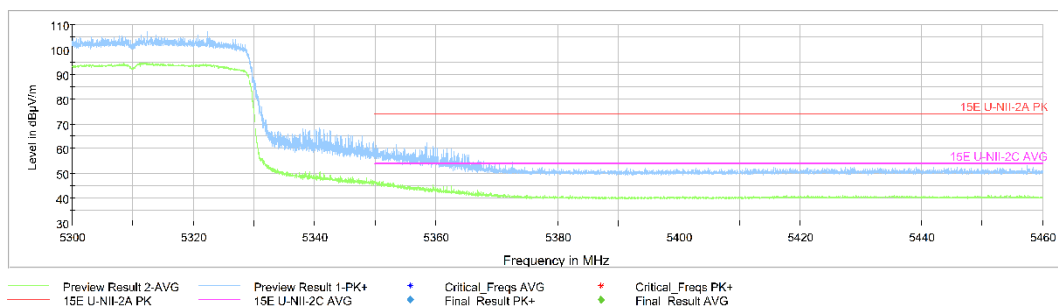
**Fig.66 Band Edges (802.11ax-HT20 Ch100, 5500MHz)**



**Fig.67 Band Edges (802.11ax-HT20 Ch140, 5700MHz)**

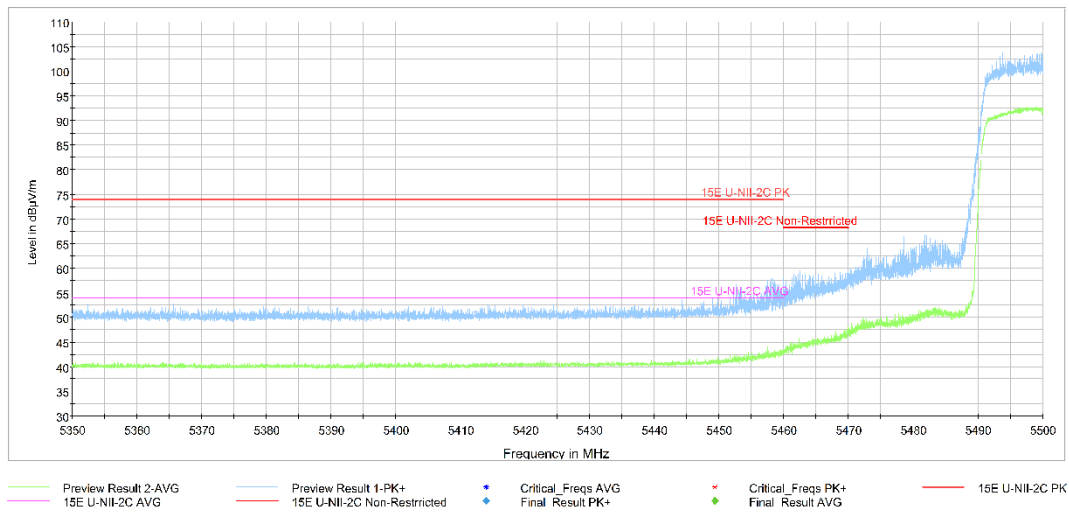


**Fig.68 Band Edges (802.11ax-HT40 Ch38, 5190MHz)**

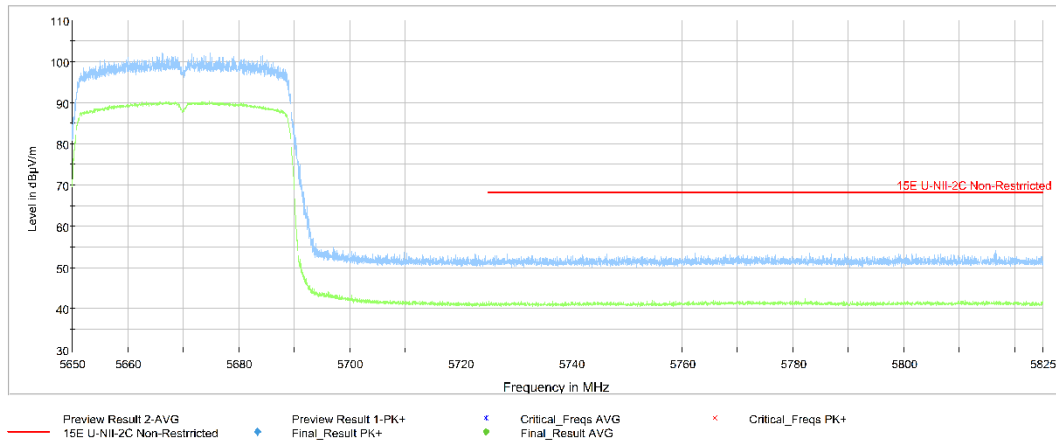


**Fig.69 Band Edges (802.11ax-HT40 Ch62, 5310MHz)**

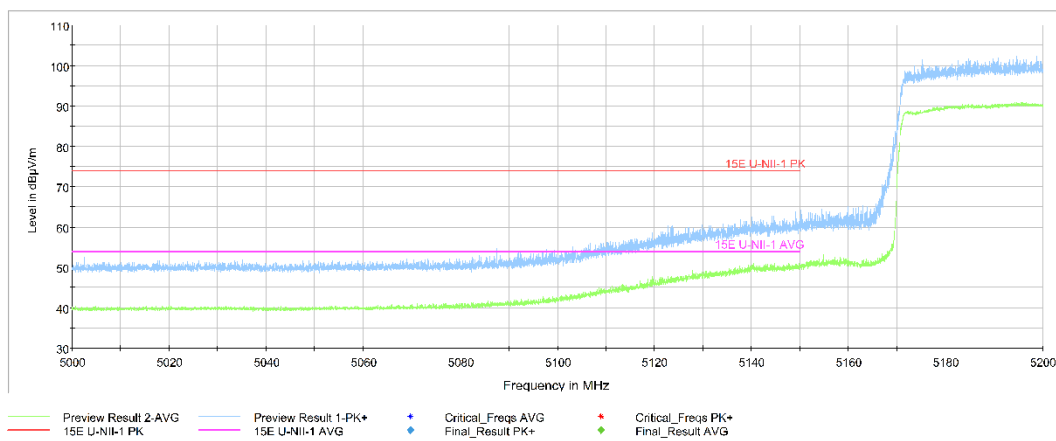




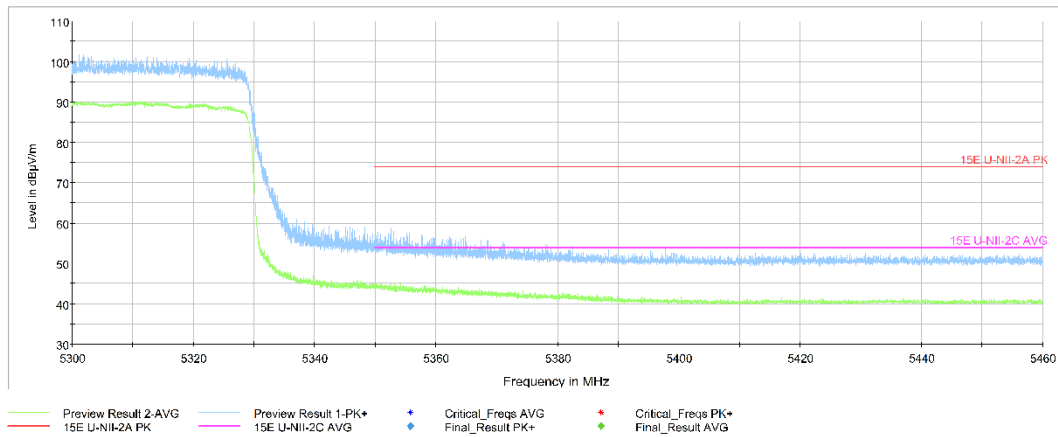
**Fig.70 Band Edges (802.11ac-HT40 Ch102, 5510MHz)**



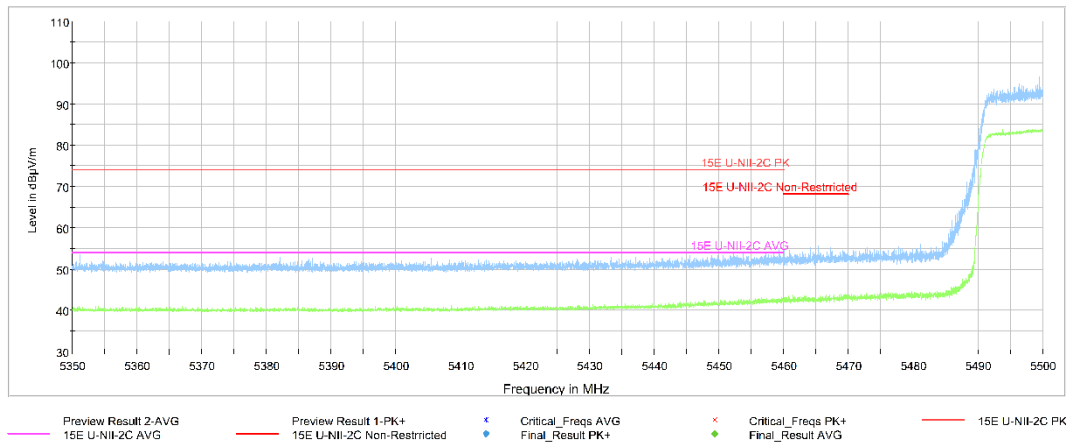
**Fig.71 Band Edges (802.11ax-HT40 Ch134, 5670MHz)**



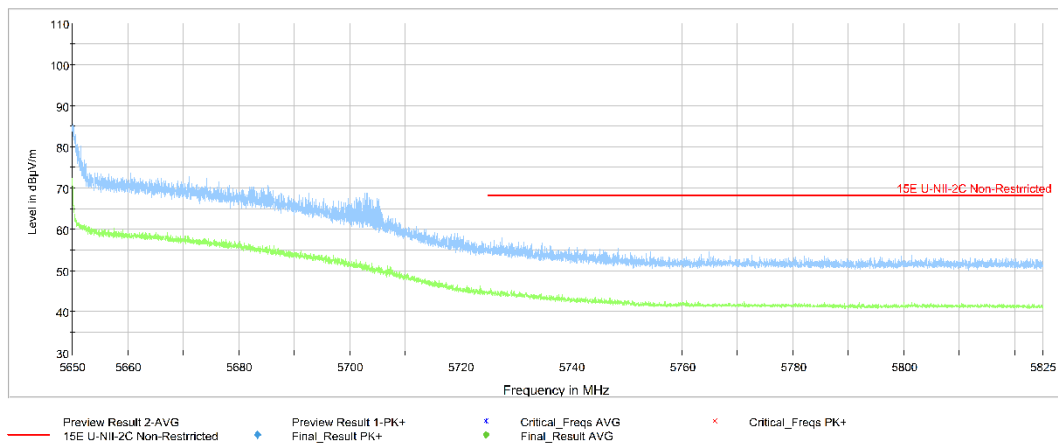
**Fig.72 Band Edges (802.11ax-HT80 Ch42 , 5210MHz)**



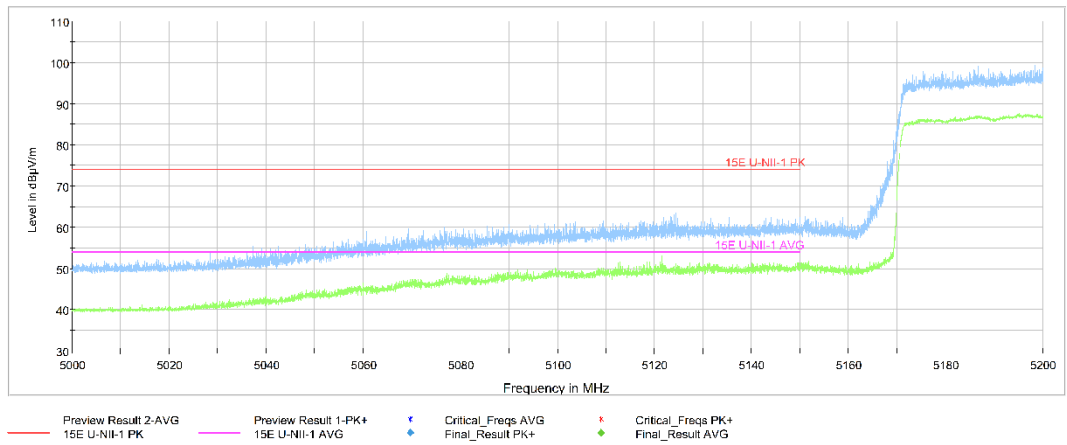
**Fig.73 Band Edges (802.11ax-HT80 Ch58, 5290MHz)**



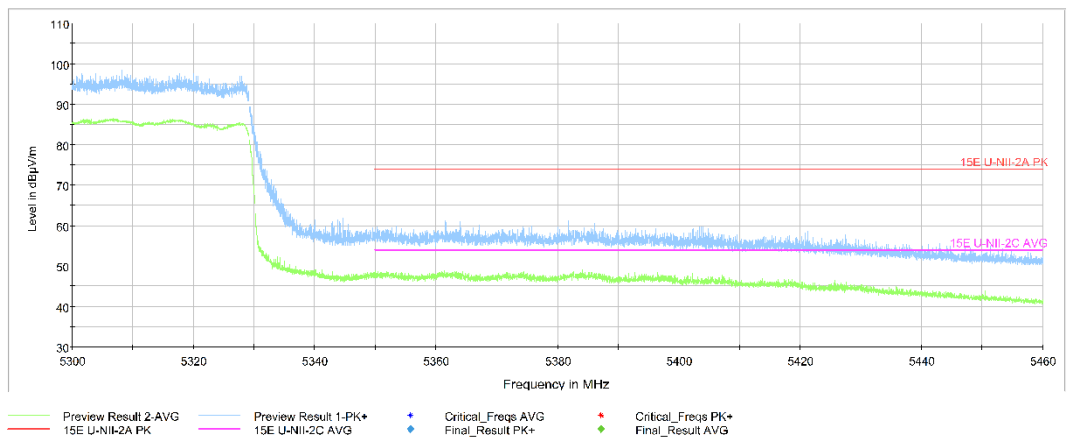
**Fig.74 Band Edges (802.11ax-HT80 Ch106, 5530MHz)**



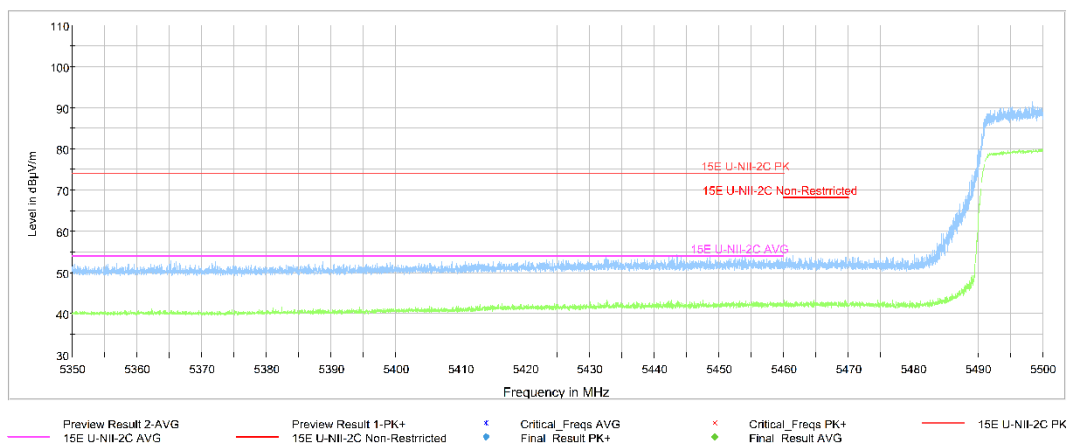
**Fig.75 Band Edges (802.11ax-HT80 Ch122, 5610MHz)**



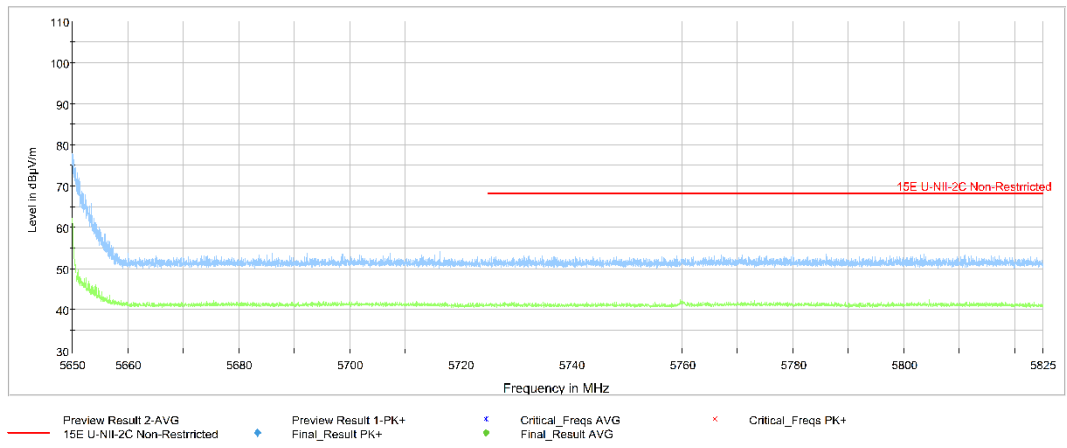
**Fig.76 Band Edges (802.11ax-HT160 Ch50, 5610MHz)**



**Fig.77 Band Edges (802.11ax-HT160 Ch50, 5610MHz)**



**Fig.78 Band Edges (802.11ax-HT160 Ch114, 5610MHz)**



**Fig.79 Band Edges (802.11ax-HT160 Ch114, 5610MHz)**

Measurement Results for UT18a MIMO:

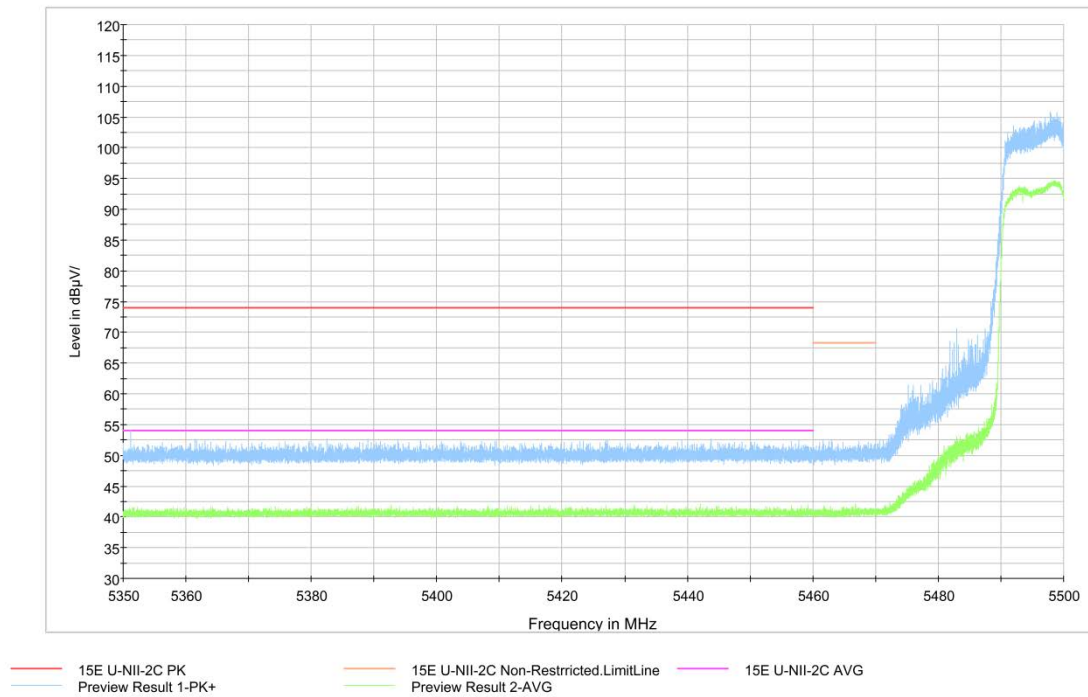


Fig.80 Band Edges (802.11ax-HT20 Ch100, 5500MHz)

Measurement Results for UT18a MIMO:

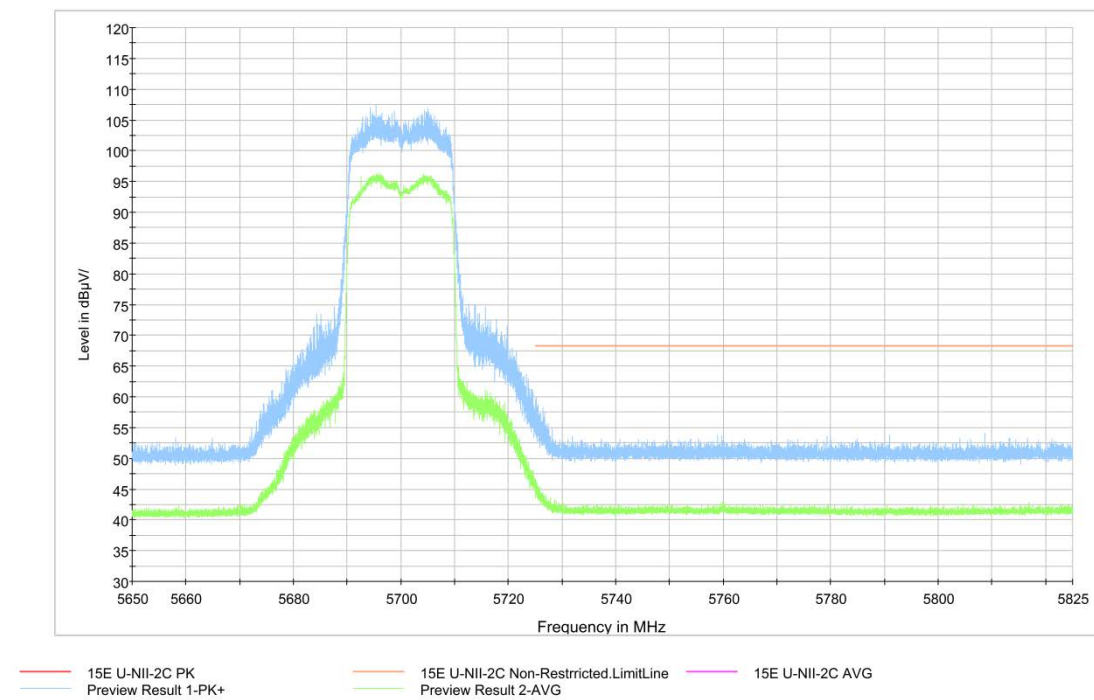


Fig.81 Band Edges (802.11ax-HT20 Ch140, 5700MHz)

## A.6. Transmitter Spurious Emission

### Measurement Limit:

Standard	Limit
FCC 47 CFR Part 15.407	-27 dBm/MHz

In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

### Limit in restricted band:

Frequency of emission (MHz)	Field strength(uV/m)	Field strength(dBuV/m)	Measurement distance(m)
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

The measurement is made according to ANSI C63.10-2013 and KDB 789033

### Measurement Results:

**802.11a mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11a MIMO	36(5180MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	40(5200MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
		48(5240MHz)	1 GHz ~ 3 GHz	---
	3 GHz ~ 7 GHz		---	P
	7 GHz ~ 18 GHz		---	P
	52(5260MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	56(5280MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	64(5320MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	100(5500MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	116(5580MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	140(5700MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P



**802.11n-HT20 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n -HT20 MIMO	36(5180MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	40(5200MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	48(5240MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	52(5260MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	56(5280MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	64(5320MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	100(5500MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	116(5580MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	140(5700MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
7 GHz ~ 18 GHz		---	P	

**802.11n-HT40 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11n HT40 MIMO	38(5190MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	46(5230MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	54(5270MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	62(5310MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	102(5510MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	118(5590MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
134(5670MHz)	30 MHz ~1 GHz	---	P	
	1 GHz ~ 3 GHz	---	P	
	3 GHz ~ 7 GHz	---	P	
	7 GHz ~ 18 GHz	---	P	
	18 GHz ~ 26.5 GHz	---	P	
	26.5 GHz ~ 40 GHz	---	P	

**802.11ac-HT20 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac -HT20 MIMO	36(5180MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	40(5200MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	48(5240MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	52(5260MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	56(5280MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	64(5320MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	100(5500MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	116(5580MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	140(5700MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
7 GHz ~ 18 GHz		---	P	

**802.11ac-HT40 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac HT40 MIMO	38(5190MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	46(5230MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	54(5270MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	62(5310MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	102(5510MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	118(5590MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
134(5670MHz)	30 MHz ~1 GHz	---	P	
	1 GHz ~ 3 GHz	---	P	
	3 GHz ~ 7 GHz	---	P	
	7 GHz ~ 18 GHz	---	P	
	18 GHz ~ 26.5 GHz	---	P	
	26.5 GHz ~ 40 GHz	---	P	

**802.11ac-HT80 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac – HT80 MIMO	42(5210MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	58(5290MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	106(5530MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	122(5610MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

**802.11ac-HT160 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ac – HT160 MIMO	50(5250MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	114(5570MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P

**802.11ax-HT20 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ax -HT20 MIMO	36(5180MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	40(5200MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
		48(5240MHz)	1 GHz ~ 3 GHz	---
	3 GHz ~ 7 GHz		---	P
	7 GHz ~ 18 GHz		---	P
	52(5260MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	56(5280MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	64(5320MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	100(5500MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	116(5580MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	140(5700MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

**802.11ax-HT40 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ax HT40 MIMO	38(5190MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	46(5230MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	54(5270MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	62(5310MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	102(5510MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	118(5590MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
134(5670MHz)	30 MHz ~1 GHz	---	P	
	1 GHz ~ 3 GHz	---	P	
	3 GHz ~ 7 GHz	---	P	
	7 GHz ~ 18 GHz	---	P	
	18 GHz ~ 26.5 GHz	---	P	
	26.5 GHz ~ 40 GHz	---	P	



**802.11ax-HT80 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ax – HT80 MIMO	42(5210MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	58(5290MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	106(5530MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	122(5610MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

**802.11ax-HT160 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ax – HT160 MIMO	50(5250MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	114(5570MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P

**Measurement Results for UT18a MIMO:**
**802.11ax-HT20 mode**

Mode	Channel	Frequency Range	Test Results	Conclusion
802.11ax – HT20 MIMO	100(5500MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
	116(5600MHz)	30 MHz ~1 GHz	---	P
		1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P
		18 GHz ~ 26.5 GHz	---	P
		26.5 GHz ~ 40 GHz	---	P
	140(5700MHz)	1 GHz ~ 3 GHz	---	P
		3 GHz ~ 7 GHz	---	P
		7 GHz ~ 18 GHz	---	P

**Conclusion: PASS**

**Note:**

A "reference path loss" is established and the  $A_{Rpl}$  is the attenuation of "reference path loss", and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

$P_{Mea}$  is the field strength recorded from the instrument.

The measurement results are obtained as described below:

$$\text{Result} = P_{Mea} + A_{Rpl} = P_{Mea} + \text{Cable Loss} + \text{Antenna Factor}$$

**AVERAGE Results:**
**802.11a**

## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17998.900	42.43	-25.50	46.66	21.27	54.00	11.57	V
17987.900	42.19	-25.50	46.66	21.03	54.00	11.81	V
13348.600	38.16	-29.49	39.71	27.94	54.00	15.84	V
13350.300	38.14	-29.49	39.71	27.92	54.00	15.86	V
5149.900	45.93	-27.61	33.67	39.87	54.00	8.07	H
5149.900	45.88	-27.61	33.67	39.82	54.00	8.12	H

## Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17992.300	42.13	-25.50	46.66	20.97	54.00	11.87	H
17996.700	41.86	-25.50	46.66	20.70	54.00	12.14	V
13359.600	37.98	-29.49	39.71	27.76	54.00	16.02	H
13351.400	37.93	-29.49	39.71	27.71	54.00	16.07	H
11537.000	36.28	-32.26	38.84	29.71	54.00	17.72	H
11944.000	36.28	-31.48	39.09	28.67	54.00	17.72	V

## Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17791.000	41.79	-25.50	46.66	20.63	54.00	12.21	V
17965.900	41.66	-25.50	46.66	20.50	54.00	12.34	H
14485.000	37.96	-28.59	42.46	24.09	54.00	16.04	V
13348.100	37.83	-29.49	39.71	27.61	54.00	16.17	H
11933.500	36.36	-31.48	39.09	28.75	54.00	17.64	V
11969.800	36.15	-31.48	39.09	28.54	54.00	17.85	H

## Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17748.100	41.85	-25.50	46.66	20.69	54.00	12.15	V
17995.000	41.58	-25.50	46.66	20.42	54.00	12.42	V
13346.500	37.81	-29.49	39.71	27.59	54.00	16.19	H
14495.400	37.70	-28.59	42.46	23.83	54.00	16.30	V
11992.900	36.20	-31.48	39.09	28.59	54.00	17.80	H
11912.600	36.13	-31.85	39.05	28.93	54.00	17.87	V

## Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17998.300	41.57	-25.50	46.66	20.41	54.00	12.43	H
17818.500	41.56	-25.50	46.66	20.40	54.00	12.44	H
13330.500	38.00	-29.49	39.71	27.78	54.00	16.00	V
14474.000	37.99	-28.59	42.46	24.12	54.00	16.01	V
11911.500	36.10	-31.85	39.05	28.90	54.00	17.90	H
11453.900	36.06	-32.26	38.84	29.49	54.00	17.94	H

## Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17996.200	41.91	-25.50	46.66	20.75	54.00	12.09	H
17704.100	41.68	-25.74	45.95	21.47	54.00	12.32	V
14489.900	37.87	-28.59	42.46	24.00	54.00	16.13	V
13359.100	37.77	-29.49	39.71	27.55	54.00	16.23	V
5350.300	45.47	-27.43	34.01	38.89	54.00	8.53	H
5350.200	45.15	-27.43	34.01	38.57	54.00	8.85	H

## Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17727.800	41.87	-25.74	45.95	21.66	54.00	12.13	H
17983.500	41.63	-25.50	46.66	20.47	54.00	12.37	V
13346.500	37.86	-29.49	39.71	27.64	54.00	16.14	H
14497.000	37.83	-28.59	42.46	23.96	54.00	16.17	V
5455.500	41.52	-27.18	34.17	34.53	54.00	12.48	V
5452.700	41.20	-27.18	34.17	34.21	54.00	12.80	H

## Channel 116

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17815.200	41.75	-25.50	46.66	20.59	54.00	12.25	V
17775.000	41.66	-25.50	46.66	20.50	54.00	12.34	H
14487.700	38.16	-28.59	42.46	24.29	54.00	15.84	V
13355.200	38.02	-29.49	39.71	27.80	54.00	15.98	V
11901.600	36.02	-31.85	39.05	28.82	54.00	17.98	V
11921.400	35.95	-31.48	39.09	28.34	54.00	18.05	V

## Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17765.200	42.85	-25.50	46.66	21.69	54.00	11.15	H
17792.700	42.76	-25.50	46.66	21.60	54.00	11.24	V
13326.600	39.19	-29.49	39.71	28.97	54.00	14.81	V
13350.900	38.99	-29.49	39.71	28.77	54.00	15.01	V
11999.500	37.02	-31.48	39.09	29.41	54.00	16.98	V
11936.200	36.98	-31.48	39.09	29.37	54.00	17.02	H

## Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17945.500	41.81	-25.50	46.66	20.65	54.00	12.19	H
17812.500	41.72	-25.50	46.66	20.56	54.00	12.28	H
14486.600	37.84	-28.59	42.46	23.97	54.00	16.16	V
14479.500	37.67	-28.59	42.46	23.80	54.00	16.33	V
11932.400	36.14	-31.48	39.09	28.53	54.00	17.86	H
11959.400	36.12	-31.48	39.09	28.51	54.00	17.88	H

**802.11n-HT20**

## Channel 36

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17991.800	41.80	-25.50	46.66	20.64	54.00	12.20	V
17805.300	41.75	-25.50	46.66	20.59	54.00	12.25	V
14481.100	37.78	-28.59	42.46	23.91	54.00	16.22	H
14483.300	37.74	-28.59	42.46	23.87	54.00	16.26	V
5149.400	43.07	-27.61	33.67	37.01	54.00	10.93	H
5149.900	42.89	-27.61	33.67	36.83	54.00	11.11	H

## Channel 40

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17957.700	41.81	-25.50	46.66	20.65	54.00	12.19	V
17955.500	41.75	-25.50	46.66	20.59	54.00	12.25	H
14486.000	37.66	-28.59	42.46	23.79	54.00	16.34	V
13354.700	37.65	-29.49	39.71	27.43	54.00	16.35	V
10951.800	36.09	-32.82	38.70	30.21	54.00	17.91	H
11996.800	36.02	-31.48	39.09	28.41	54.00	17.98	H

## Channel 48

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17701.900	41.87	-25.74	45.95	21.66	54.00	12.13	H
17974.700	41.73	-25.50	46.66	20.57	54.00	12.27	V
14492.600	37.95	-28.59	42.46	24.08	54.00	16.05	V
14498.700	37.85	-28.59	42.46	23.98	54.00	16.15	V
10649.800	36.12	-32.76	38.38	30.50	54.00	17.88	H
11048.000	36.01	-32.49	38.72	29.77	54.00	17.99	V

## Channel 52

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17961.500	41.88	-25.50	46.66	20.72	54.00	12.12	V
17997.200	41.84	-25.50	46.66	20.68	54.00	12.16	V
13333.200	37.90	-29.49	39.71	27.68	54.00	16.10	V
13327.200	37.80	-29.49	39.71	27.58	54.00	16.20	V
11837.200	36.09	-31.85	39.05	28.89	54.00	17.91	H
11913.100	36.08	-31.48	39.09	28.47	54.00	17.92	V

## Channel 56

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17948.300	41.73	-25.50	46.66	20.57	54.00	12.27	V
17951.000	41.68	-25.50	46.66	20.52	54.00	12.32	H
14489.900	37.89	-28.59	42.46	24.02	54.00	16.11	H
14488.800	37.83	-28.59	42.46	23.96	54.00	16.17	H
11926.900	36.15	-31.48	39.09	28.54	54.00	17.85	H
11914.200	36.12	-31.48	39.09	28.51	54.00	17.88	V

## Channel 64

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17953.800	41.71	-25.50	46.66	20.55	54.00	12.29	V
17789.900	41.69	-25.50	46.66	20.53	54.00	12.31	V
13347.500	37.96	-29.49	39.71	27.74	54.00	16.04	V
13342.000	37.74	-29.49	39.71	27.52	54.00	16.26	H
5350.200	43.07	-27.43	34.01	36.49	54.00	10.93	H
5350.700	43.05	-27.43	34.01	36.47	54.00	10.95	H

## Channel 100

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17996.200	42.30	-25.50	46.66	21.14	54.00	11.70	V
17918.000	41.79	-25.50	46.66	20.63	54.00	12.21	V
7708.900	37.86	-34.82	36.96	35.72	54.00	16.14	V
13347.000	37.82	-29.49	39.71	27.60	54.00	16.18	H
5459.800	41.21	-27.18	34.17	34.22	54.00	12.79	H



5432.300	41.13	-27.18	34.17	34.14	54.00	12.87	V
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## Channel 116

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17773.400	42.02	-25.50	46.66	20.86	54.00	11.98	H
17946.100	41.75	-25.50	46.66	20.59	54.00	12.25	V
13339.900	37.97	-29.49	39.71	27.75	54.00	16.03	V
13354.100	37.81	-29.49	39.71	27.59	54.00	16.19	H
11993.500	36.41	-31.48	39.09	28.80	54.00	17.59	V
11530.400	36.02	-32.26	38.84	29.45	54.00	17.98	H

## Channel 140

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17792.700	42.61	-25.50	46.66	21.45	54.00	11.39	V
17984.000	42.37	-25.50	46.66	21.21	54.00	11.63	V
14496.000	38.39	-28.59	42.46	24.52	54.00	15.61	H
13354.100	38.26	-29.49	39.71	28.04	54.00	15.74	H
11929.600	36.65	-31.48	39.09	29.04	54.00	17.35	H
11853.200	36.62	-31.85	39.05	29.42	54.00	17.38	H

## Channel 144

Frequency (MHz)	Measurement Result (dBuV/m)	Cable Loss (dB)	Antenna Factor (dB/m)	Receiver Reading (dBuV)	Limit (dBuV/m)	Margin (dB)	Antenna Pol. (H/V)
17828.400	41.78	-25.50	46.66	20.62	54.00	12.22	V
17981.300	41.74	-25.50	46.66	20.58	54.00	12.26	V
14487.700	37.83	-28.59	42.46	23.96	54.00	16.17	V
13349.800	37.76	-29.49	39.71	27.54	54.00	16.24	V
11535.300	36.10	-32.26	38.84	29.53	54.00	17.90	H
11536.400	35.98	-32.26	38.84	29.41	54.00	18.02	V