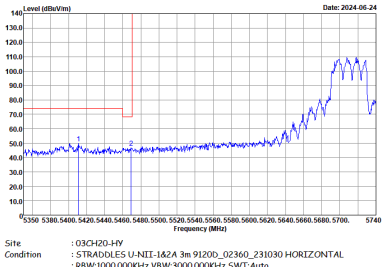
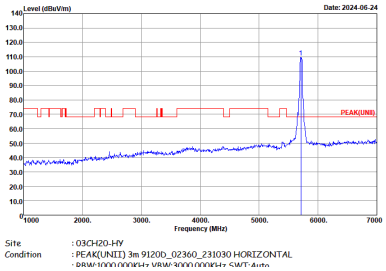
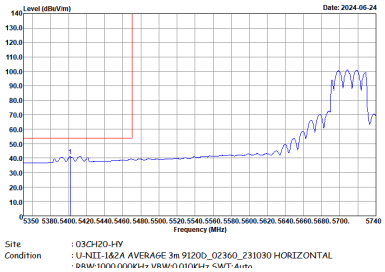
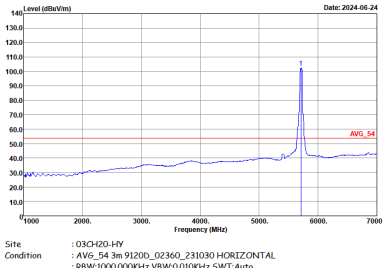
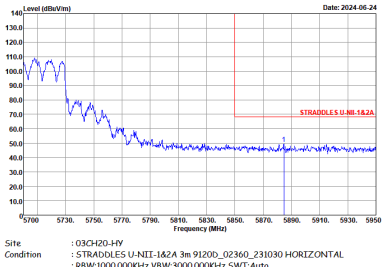
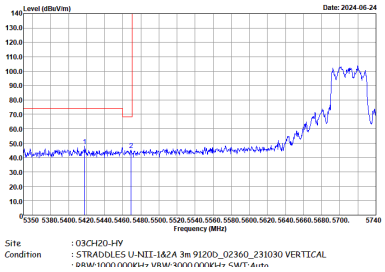
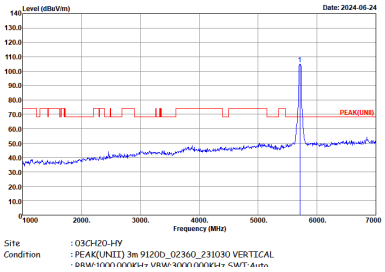
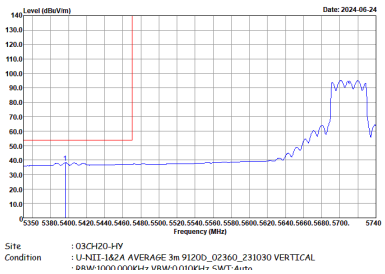
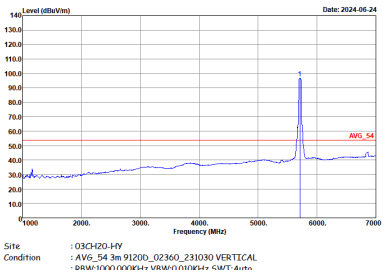
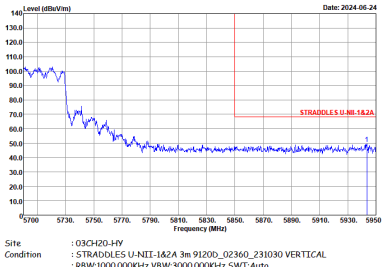
Band 3 – Straddle Channel

WIFI 802.11ax HE40 Full (Band Edge @ 3m)

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ax HE40 Full CH142 5710MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		

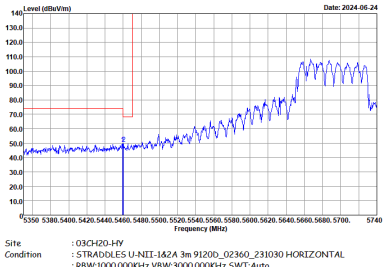
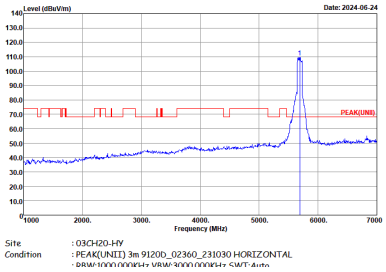
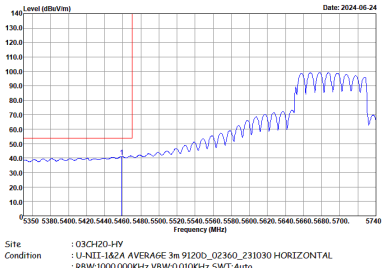
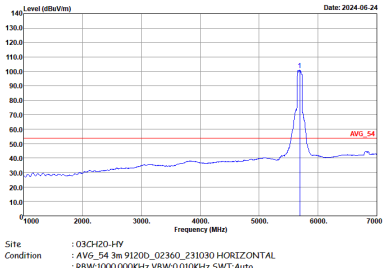
WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ax HE40 Full CH142 5710MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank

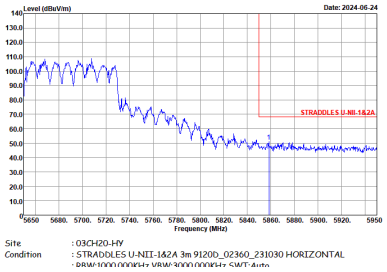
WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ax HE40 Full CH142 5710MHz - L	
1+2	Vertical	Fundamental
Peak		
Avg.		

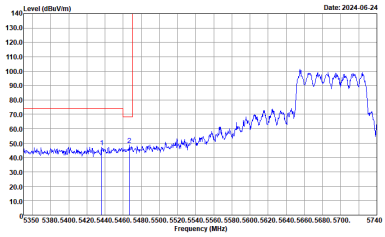
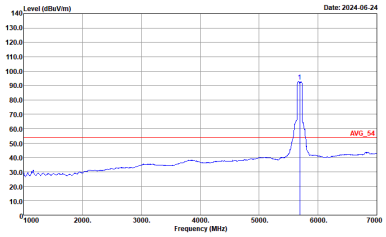
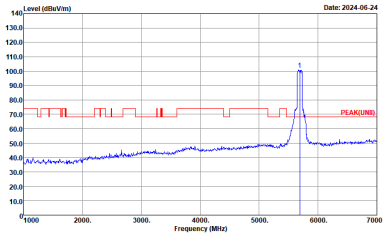
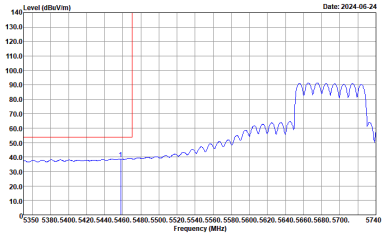
WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ax HE40 Full CH142 5710MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank

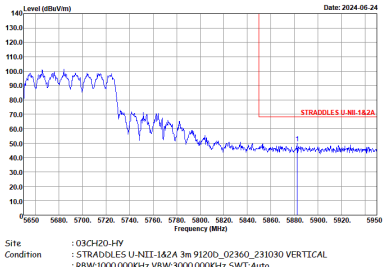
Band 3 – Straddle Channel

WIFI 802.11ax HE80 Full (Band Edge @ 3m)

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ax HE80 Full CH138 5690MHz - L	
1+2	Horizontal	Fundamental
Peak		
Avg.		

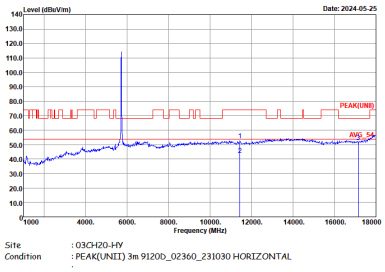
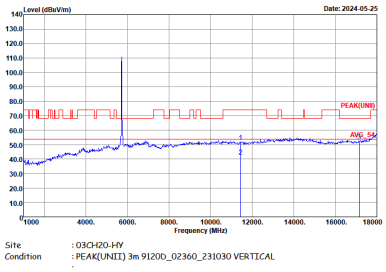
WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ax HE80 Full CH138 5690MHz - R	
1+2	Horizontal	Fundamental
Peak		Left blank

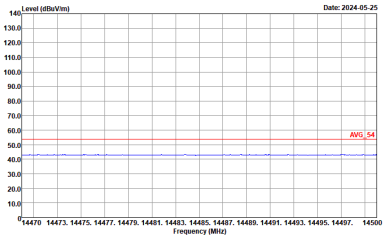
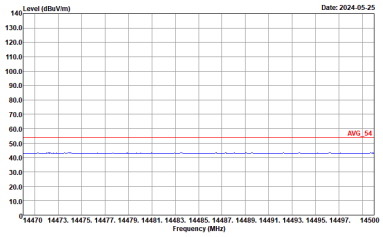
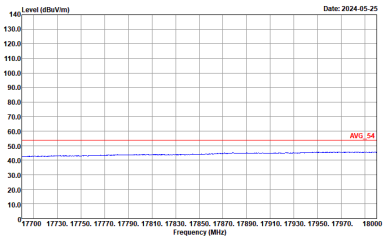
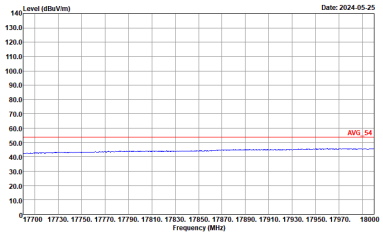
WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ax HE80 Full CH138 5690MHz - L	
1+2	Vertical	Fundamental
Peak	 Site : 03CH20-HY Condition : STRADDLES U-NII-1&2A 3m 9120D_02360_231030 VERTICAL : RBW:1000.000000Hz VBW:3000.000000Hz SWT:Auto	 Site : 03CH20-HY Condition : AVG_54 3m 9120D_02360_231030 VERTICAL : RBW:1000.000000Hz VBW:0.010000Hz SWT:Auto  Site : 03CH20-HY Condition : PEAK(UNII) 3m 9120D_02360_231030 VERTICAL : RBW:1000.000000Hz VBW:3000.000000Hz SWT:Auto
Avg.	 Site : 03CH20-HY Condition : U-NII-1&2A AVERAGE 3m 9120D_02360_231030 VERTICAL : RBW:1000.000000Hz VBW:0.010000Hz SWT:Auto	

WIFI	Band 3 Straddle Channel Band Edge @ 3m	
ANT	802.11ax HE80 Full CH138 5690MHz - R	
1+2	Vertical	Fundamental
Peak		Left blank

Band 3 - Straddle Channel

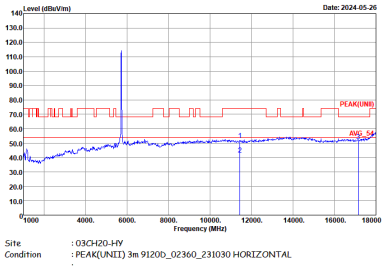
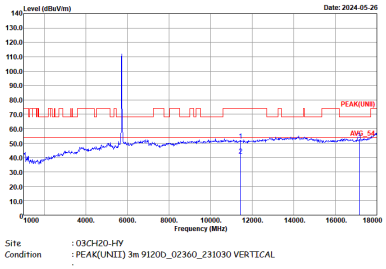
WIFI 802.11a (Harmonic @ 3m)

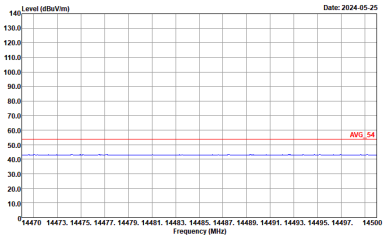
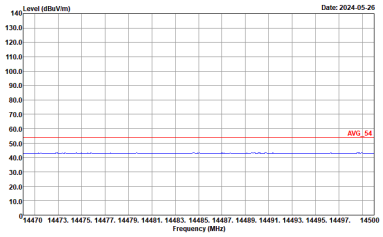
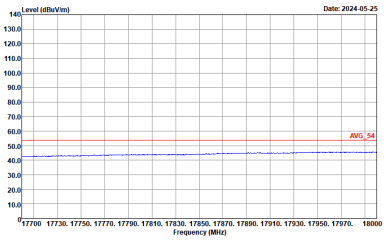
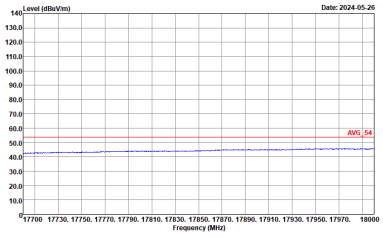
WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11a CH144 5720MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 5470~5725MHz Harmonic @ 3m	
ANT	802.11a CH144 5720MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 HORIZONTAL	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 VERTICAL
17.7G ~18G Avg	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 HORIZONTAL	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 VERTICAL

Band 3 – Straddle Channel

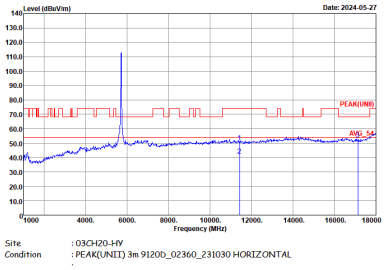
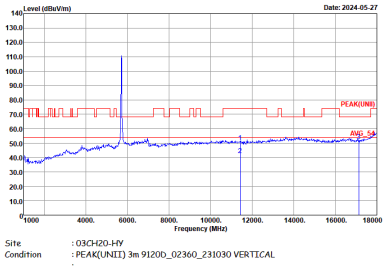
WIFI 802.11ax HE20 Full (Harmonic @ 3m)

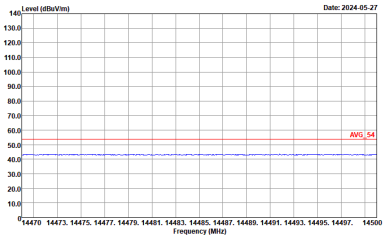
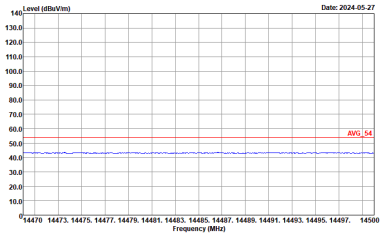
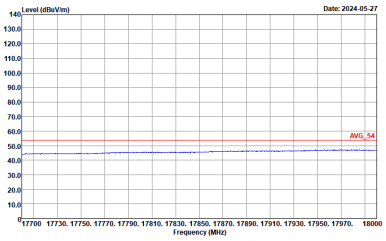
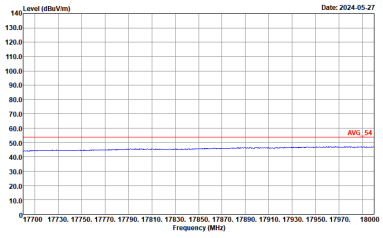
WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ax HE20 Full CH144 5720MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ax HE20 Full CH144 5720MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 HORIZONTAL	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 VERTICAL
17.7G ~18G Avg	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 HORIZONTAL	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 VERTICAL

Band 3 - Straddle Channel

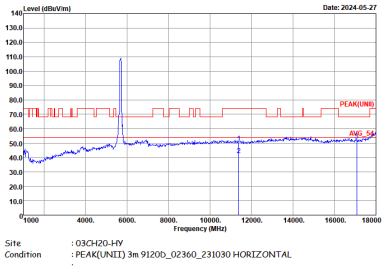
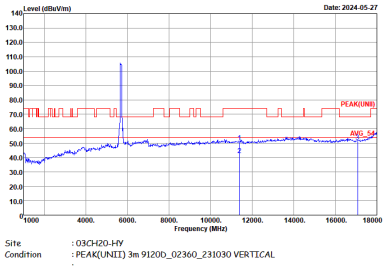
WIFI 802.11ax HE40 Full (Harmonic @ 3m)

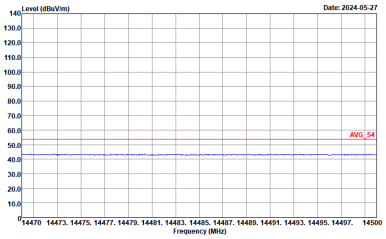
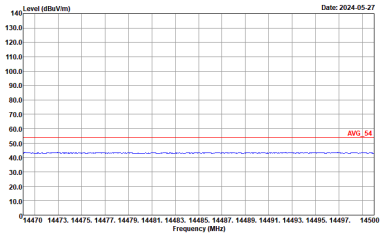
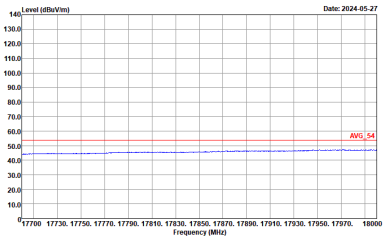
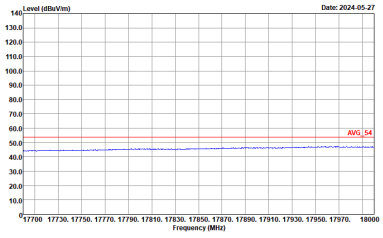
WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ax HE40 Full CH142 5710MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ax HE40 Full CH142 5710MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH20-HY Condition : AVG_54 3m 9120D_02360_231030 HORIZONTAL	 Site : 03CH20-HY Condition : AVG_54 3m 9120D_02360_231030 VERTICAL
17.7G ~18G Avg	 Site : 03CH20-HY Condition : AVG_54 3m 9120D_02360_231030 HORIZONTAL	 Site : 03CH20-HY Condition : AVG_54 3m 9120D_02360_231030 VERTICAL

Band 3 – Straddle Channel

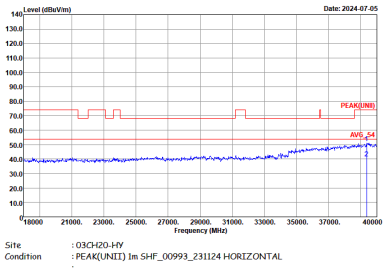
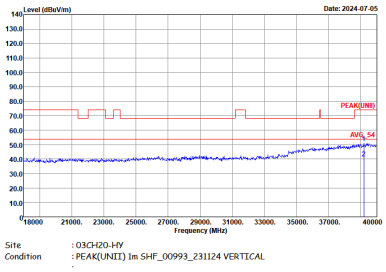
WIFI 802.11ax HE80 Full (Harmonic @ 3m)

WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ax HE80 Full CH138 5690MHz	
1+2	Horizontal	Vertical
Peak Avg.		

WIFI	Band 3 Straddle Channel Harmonic @ 3m	
ANT	802.11ax HE80 Full CH138 5690MHz	
1+2	Horizontal	Vertical
14.47G ~14.5G Avg.	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 HORIZONTAL	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 VERTICAL
17.7G ~18G Avg	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 HORIZONTAL	 Site : 03CH20-HY Condition : AV6_54 3m 9120D_02360_231030 VERTICAL

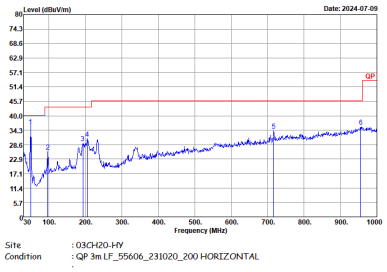
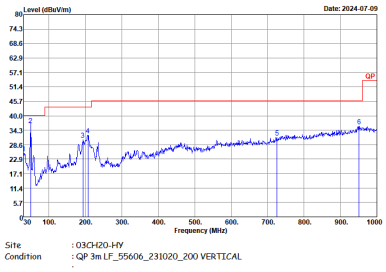
Emission above 18GHz

5GHz WIFI 802.11ax HE40 Full (SHF @ 1m)

WIFI	5GHz WIFI	
ANT	802.11ax HE40 Full SHF	
1+2	Horizontal	Vertical
Peak Avg.		

Emission below 1GHz

5GHz WIFI 802.11ax HE40 Full (LF)

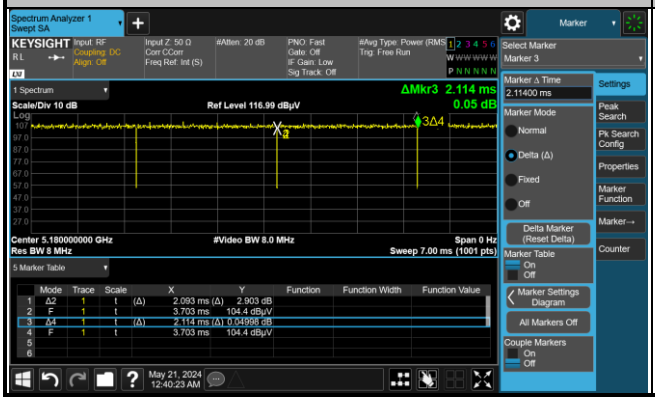
WIFI	5GHz WIFI	
ANT	802.11ax HE40 Full LF	
1+2	Horizontal	Vertical
QP / Peak		

Appendix E. Duty Cycle Plots

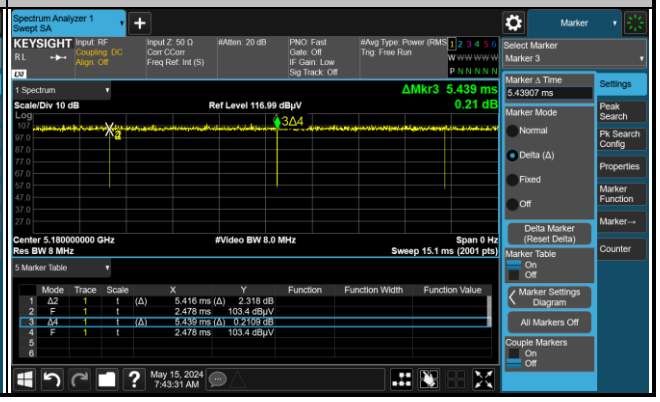
Antenna	Band	Duty Cycle(%)	T(us)	1/T(kHz)	VBW Setting
1+2	802.11a	99.01	-	-	10Hz
1+2	5GHz 802.11ax HE20 Full RU	99.58	-	-	10Hz
1+2	5GHz 802.11ax HE20 106 RU	92.79	9270	0.11	110Hz
1+2	5GHz 802.11ax HE40 Full RU	99.64	-	-	10Hz
1+2	5GHz 802.11ax HE40 242 RU	99.62	-	-	10Hz
1+2	5GHz 802.11ax HE80 Full RU	99.11	-	-	10Hz
1+2	5GHz 802.11ax HE80 484 RU	99.33	-	-	10Hz
1+2	5GHz 802.11ax HE160 Full RU	99.31	-	-	10Hz
1+2	5GHz 802.11ax HE160 996 RU	97.93	711	1.41	1.5kHz

MIMO <Ant. 1+2>

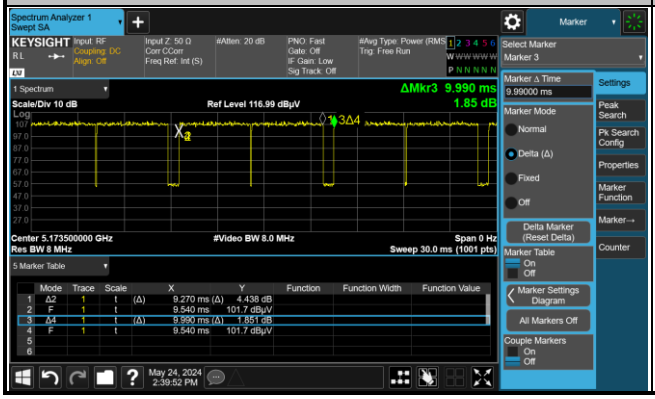
802.11a



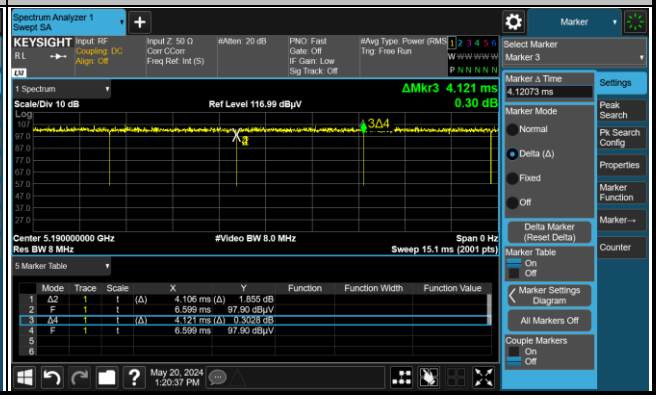
5GHz 802.11ax HE20 Full RU



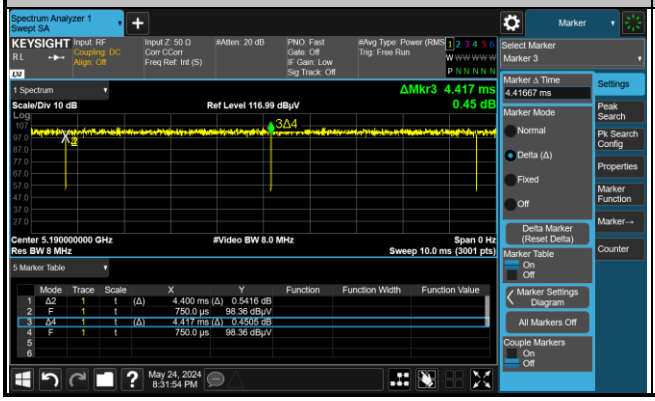
5GHz 802.11ax HE20 106 RU



5GHz 802.11ax HE40 Full RU

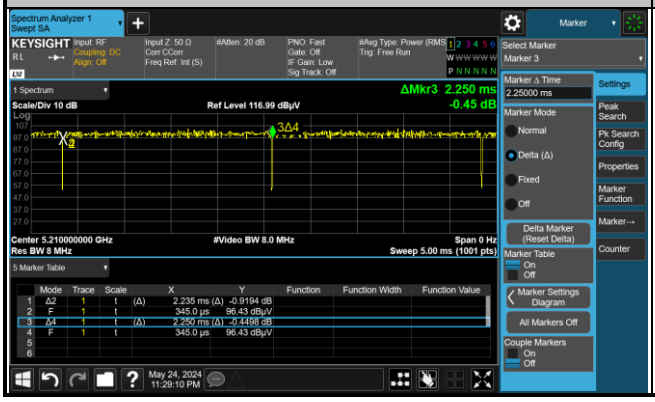


5GHz 802.11ax HE40 242 RU

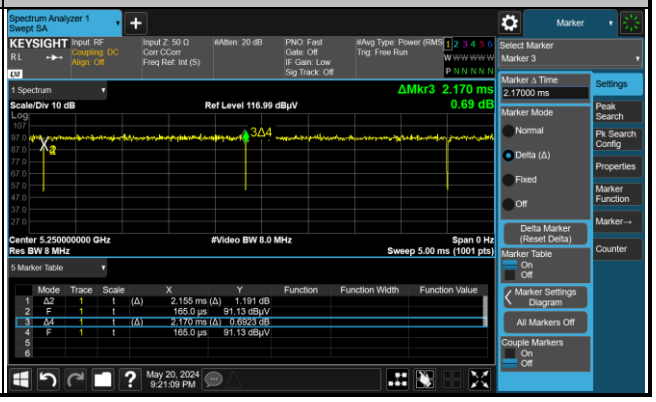


5GHz 802.11ax HE80 Full RU

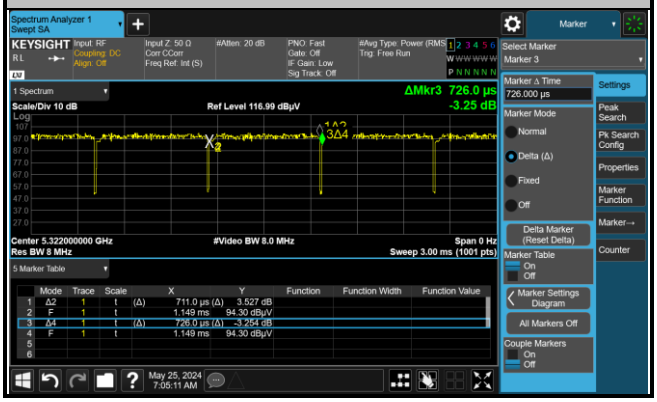
5GHz 802.11ax HE80 484 RU



5GHz 802.11ax HE160 Full RU



5GHz 802.11ax HE160 996 RU



Appendix G. Spot Check Evaluation on KC50E15

Conducted power test and radiated spurious emission test configurations were selected from the worst cases identified in the reference model and tested to demonstrate the test data from reference model remains representative for the variant model.

The deviation between the spot check and the referenced values is within 3dB, therefore data referencing is justified according to the guidance in the ECR inquiry

Mode	Test Item	UZ7KC50A15 Reference Worst mode Test Result	UZ7KC50E15 Variant Check Test Result	Deviation	Limit (dB)
Bluetooth	Number of Channels	79	79	0	Within the authorized block
	Hopping Channel Separation	1.298	0.994	0.304	Within the authorized block
	Dwell Time of Each Channel	0.31	0.31	0	Within the authorized block
	20dB Bandwidth	0.895	0.943	0.048	Within the authorized frequency block
	99% Bandwidth	0.829	0.835	0.006	Within the authorized frequency block
	Conducted Band Edges	-40.99	-41.96	0.97	Deviation (ddB) < 3 dB
	Conducted Spurious Emission	-31.60	-31.83	0.23	Deviation (ddB) < 3 dB
	Peak Output Power	5.51	6.55	1.04	Deviation (ddB) < 3 dB
	Radiated Band Edges and Radiated Spurious Emission	29.69	30.55	0.86	Deviation (ddB) < 3 dB
	AC Conducted Emission	40.20	42.89	2.69	Deviation (ddB) < 3 dB
Bluetooth-LE	6dB Bandwidth	1.152	1.145	0.007	Within the authorized frequency block
	99% Bandwidth	2.002	1.998	0.004	Within the authorized frequency block
	Power Spectral Density	-12.50	-12.91	0.41	Deviation (ddB) < 3 dB
	Conducted Band Edges	-41.12	-42.06	0.94	Deviation (ddB) < 3 dB
	Conducted Spurious Emission	-31.67	-31.99	0.32	Deviation (ddB) < 3 dB
	Power Output Measurement	4.9	4.8	0.1	Deviation (ddB) < 3 dB
	Radiated Band Edges and Spurious Emission	35.09	32.18	2.91	Deviation (ddB) < 3 dB
	AC Conducted Emission	40.20	42.89	2.69	Deviation (ddB) < 3 dB
WIFI 2.4G	6dB Bandwidth	8.05	8.08	0.03	Within the authorized frequency block
	99% Bandwidth	19.33	19.33	0	Within the authorized frequency block
	Power Spectral Density	3.48	3.54	0.06	Deviation (ddB) < 3 dB
	Conducted Band Edges	-41.60	-41.47	0.13	Deviation (ddB) < 3 dB
	Conducted Spurious Emission	-42.45	-42.79	0.34	Deviation (ddB) < 3 dB
	Output Power	26.47	26.37	0.1	Deviation (ddB) < 3 dB
	Radiated Band Edges and Spurious Emission	52.42	52.41	0.01	Deviation (ddB) < 3 dB
	AC Conducted Emission	40.20	42.89	2.69	Deviation (ddB) < 3 dB

Mode	Test Item	UZ7KC50A15 Reference Worst mode Test Result	UZ7KC50E15 Variant Check Test Result	Deviation	Limit (dB)
WIFI 5G	26dB Bandwidth	165.46	166.13	0.67	Within the authorized frequency block
	99% Bandwidth	156.56	156.56	0.00	Within the authorized frequency block
	Power Spectral Density	10.06	10.01	0.05	Deviation (ddB) < 3 dB
	Maximum Conducted Output Power	23.14	22.68	0.46	Deviation (ddB) < 3 dB
	Unwanted Emissions	52.91	52.13	0.78	Deviation (ddB) < 3 dB
	AC Conducted Emission	41.22	42.43	1.21	Deviation (ddB) < 3 dB
WIFI 6G (Indoor Client)	26dB Emission Bandwidth	166.37	166.94	0.57	Within the authorized frequency block
	99% Occupied Bandwidth	156.56	156.32	0.24	Within the authorized frequency block
	Contention Based Protocol	-66.39	-63.16	3.23	Within the authorized block
	Fundamental Maximum EIRP	20.18	20.13	0.05	Deviation (ddB) < 3 dB
	Fundamental Power Spectral Density	-1.14	-1.11	0.03	Deviation (ddB) < 3 dB
	In-Band Emissions (Channel Mask)	-43.14	-44.97	1.83	Deviation (ddB) < 3 dB
	Unwanted Emissions	66.75	64.43	2.32	Deviation (ddB) < 3 dB
	AC Conducted Emission	40.50	37.56	2.94	Deviation (ddB) < 3 dB

List of Measuring Equipment

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
AC Power Source	ACPOWER	AFC-11003G	F317040033	N/A	N/A	Jul. 16, 2024	N/A	Conduction (CO07-HY)
Software	Rohde & Schwarz	EMC32 V10.30	N/A	N/A	N/A	Jul. 16, 2024	N/A	Conduction (CO07-HY)
Pulse Limiter	SCHWARZBECK	VTSD 9561-F N	9561-F N00373	9kHz-200MHz	Oct. 20, 2023	Jul. 16, 2024	Oct. 19, 2024	Conduction (CO07-HY)
RF Cable	HUBER + SUHNER	RG 214/U	1358175	9kHz~30MHz	Mar. 14, 2024	Jul. 16, 2024	Mar. 13, 2025	Conduction (CO07-HY)
Two-Line V-Network	TESEQ	NNB 51	45051	N/A	Mar. 10, 2024	Jul. 16, 2024	Mar. 09, 2025	Conduction (CO07-HY)
Four-Line V-Network	TESEQ	NNB 52	36122	N/A	Mar. 07, 2024	Jul. 16, 2024	Mar. 06, 2025	Conduction (CO07-HY)
EMI Test Receiver	Rohde & Schwarz	ESR3	102317	9kHz~3.6GHz	Sep. 20, 2023	Jul. 16, 2024	Sep. 19, 2024	Conduction (CO07-HY)
EMI Test Receiver	Keysight	N9038A(MXE)	MY54130085	N/A	Oct. 06, 2023	Aug. 28, 2024~ Aug. 30, 2024	Oct. 05, 2024	Radiation (03CH20-HY)
Loop Antenna	Rohde & Schwarz	HFH2-Z2	100488	9 kHz~30 MHz	Sep. 12, 2023	Aug. 28, 2024~ Aug. 30, 2024	Sep. 11, 2024	Radiation (03CH20-HY)
Preamplifier	EMEC	EM18G40G	060801	18GHz~40GHz	May 27, 2024	Aug. 28, 2024~ Aug. 30, 2024	May 26, 2025	Radiation (03CH20-HY)
Controller	ChainTek	3000-1	N/A	Control Turn table & Ant Mast	N/A	Aug. 28, 2024~ Aug. 30, 2024	N/A	Radiation (03CH20-HY)
Antenna Mast	ChainTek	MBS-520-1	N/A	1m~4m	N/A	Aug. 28, 2024~ Aug. 30, 2024	N/A	Radiation (03CH20-HY)
Turn Table	ChainTek	T-200-S-1	N/A	0~360 Degree	N/A	Aug. 28, 2024~ Aug. 30, 2024	N/A	Radiation (03CH20-HY)
Signal Analyzer	Keysight	N9010B	MY60240520	N/A	Dec. 12, 2023	Aug. 28, 2024~ Aug. 30, 2024	Dec. 11, 2024	Radiation (03CH20-HY)
Bilog Antenna	TESEQ	CBL 6111D&00802 N1D01N-06	55606 & 08	30MHz~1GHz	Oct. 20, 2023	Aug. 28, 2024~ Aug. 30, 2024	Oct. 19, 2024	Radiation (03CH20-HY)
Horn Antenna	SCHWARZBECK	BBHA 9120 D	02360	1GHz-18GHz	Oct. 30, 2023	Aug. 28, 2024~ Aug. 30, 2024	Oct. 29, 2024	Radiation (03CH20-HY)
SHF-EHF Horn Antenna	SCHWARZBECK	BBHA 9170	1223	18GHz-40GHz	Jun. 24, 2024	Aug. 28, 2024~ Aug. 30, 2024	Jun. 23, 2025	Radiation (03CH20-HY)
Preamplifier	COM-POWER	PAM-103	18020201	1MHz-1000MHz	Jan. 01, 2024	Aug. 28, 2024~ Aug. 30, 2024	Dec. 31, 2024	Radiation (03CH20-HY)
Amplifier	EMCI	EMC118A45SE	980792	N/A	Nov. 13, 2023	Aug. 28, 2024~ Aug. 30, 2024	Nov. 12, 2024	Radiation (03CH20-HY)
RF Cable	HUBER + SUHNER	SUCOFLEX 102	519229/2,804015/2,804027/2	N/A	Jan. 17, 2024	Aug. 28, 2024~ Aug. 30, 2024	Jan. 16, 2025	Radiation (03CH20-HY)
Hygrometer	TECPEL	DTM-303A	TP211382	N/A	Mar. 27, 2024	Aug. 28, 2024~ Aug. 30, 2024	Mar. 26, 2025	Radiation (03CH20-HY)
Software	Audix	N/A	RK-002156	N/A	N/A	Aug. 28, 2024~ Aug. 30, 2024	N/A	Radiation (03CH20-HY)

Instrument	Brand Name	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Hygrometer	TECPEL	DTM-303A	TP201996	N/A	Nov. 07, 2023	Jul. 23, 2024~ Sep. 02, 2024	Nov. 06, 2024	Conducted (TH05-HY)
Power Sensor	DARE	RPR3006W	15I00041SNO 10 (NO:248)	10MHz~6GHz	Jan. 10, 2024	Jul. 23, 2024~ Sep. 02, 2024	Jan. 09, 2025	Conducted (TH05-HY)
Switch Control Mainframe	Burgeon	ETF-058	EC1300485 (BOX4)	N/A	Apr. 08, 2024	Jul. 23, 2024~ Sep. 02, 2024	Apr. 07, 2025	Conducted (TH05-HY)
Signal Analyzer	Rohde & Schwarz	FSV40	101564	10Hz ~ 40GHz	Sep. 12, 2023	Jul. 23, 2024~ Sep. 02, 2024	Sep. 11, 2024	Conducted (TH05-HY)
Software	Sporton	BTWIFI_Final_ version_240411	N/A	Conducted Other Test Item	N/A	Jul. 23, 2024~ Sep. 02, 2024	N/A	Conducted (TH05-HY)

———THE END———