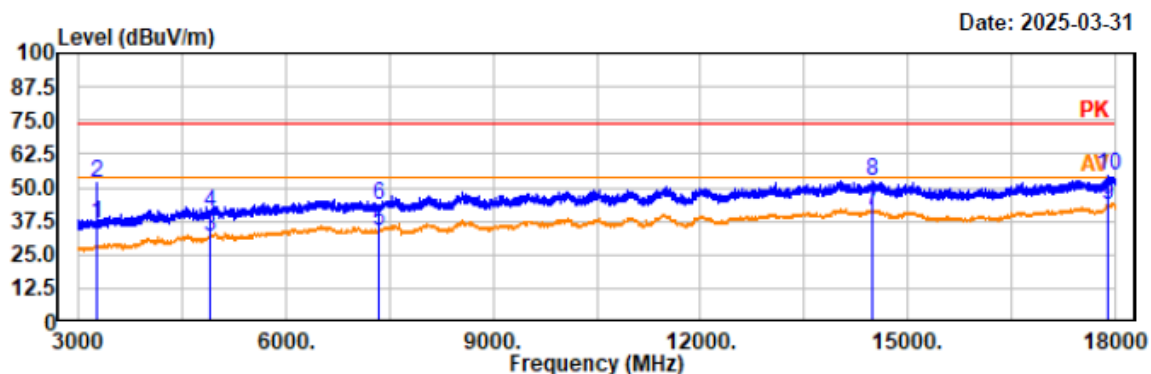


Project No.: 2507R30441E-RF
Test Mode: 802.11n40 2452MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Trace: 1

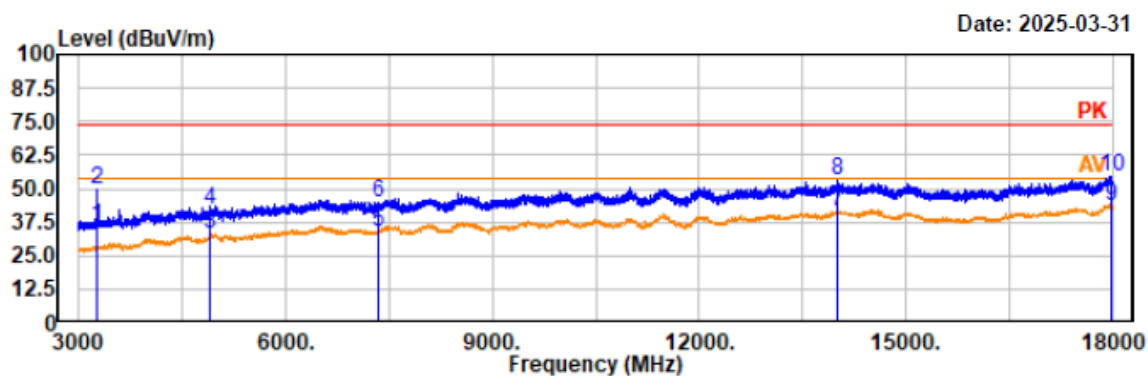
Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
3268.00	47.93	-8.28	39.65	54.00	14.35	horizontal	Average
3268.00	59.91	-8.28	51.63	74.00	22.37	horizontal	Peak
4904.00	37.11	-5.30	31.81	54.00	22.19	horizontal	Average
4904.00	45.91	-5.30	40.61	74.00	33.39	horizontal	Peak
7356.00	35.75	-2.17	33.58	54.00	20.42	horizontal	Average
7356.00	45.42	-2.17	43.25	74.00	30.75	horizontal	Peak
14490.00	36.36	5.08	41.44	54.00	12.56	horizontal	Average
14490.00	47.24	5.08	52.32	74.00	21.68	horizontal	Peak
17910.00	36.60	6.81	43.41	54.00	10.59	horizontal	Average
17910.00	47.63	6.81	54.44	74.00	19.56	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n40 2452MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto

AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
3268.00	46.97	-8.28	38.69	54.00	15.31	vertical	Average
3268.00	57.96	-8.28	49.68	74.00	24.32	vertical	Peak
4904.00	38.47	-5.30	33.17	54.00	20.83	vertical	Average
4904.00	47.33	-5.30	42.03	74.00	31.97	vertical	Peak
7356.00	36.31	-2.17	34.14	54.00	19.86	vertical	Average
7356.00	46.95	-2.17	44.78	74.00	29.22	vertical	Peak
13995.00	36.01	5.20	41.21	54.00	12.79	vertical	Average
13995.00	47.94	5.20	53.14	74.00	20.86	vertical	Peak
17989.50	36.46	6.90	43.36	54.00	10.64	vertical	Average
17989.50	47.90	6.90	54.80	74.00	19.20	vertical	Peak

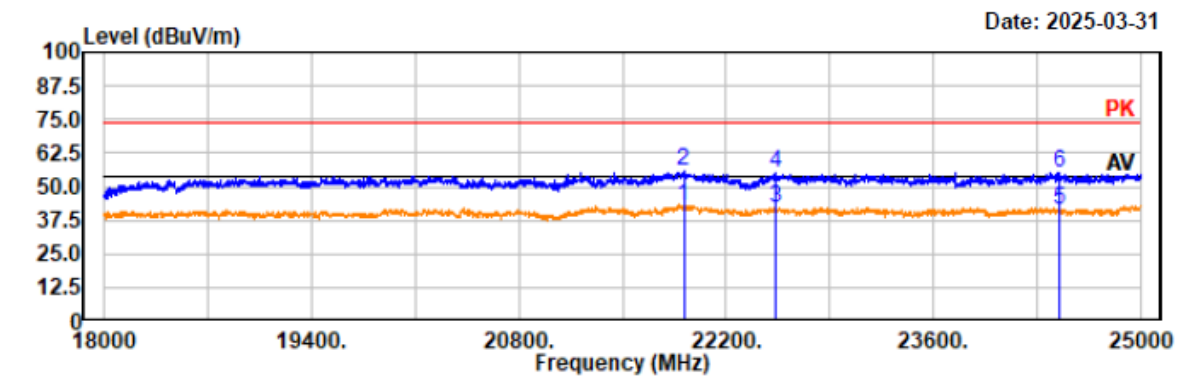
5) 18GHz~25GHz

For BLE:

Note: The maximum output power mode: BLE 1Mbps Low channel was tested.

Project No.: 2507R30441E-RF
Test Mode: BLE 1M 2402MHz
EUT Model: KPP-01SS
Test distance: 1.5m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

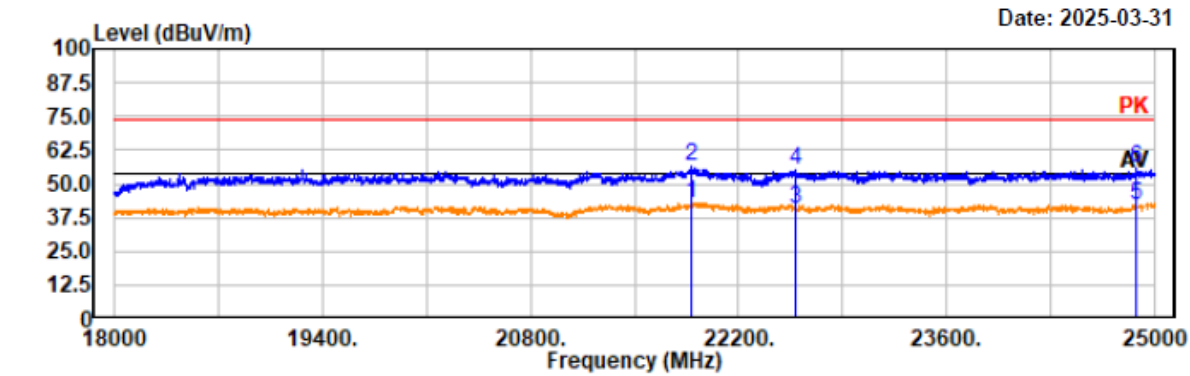


Trace: 1
Condition: PK RBW:1MHz VBW:3MHz SWT:auto
 AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
21913.80	37.82	5.19	43.01	54.00	10.99	horizontal	Average
21913.80	50.48	5.19	55.67	74.00	18.33	horizontal	Peak
22538.60	37.12	5.08	42.20	54.00	11.80	horizontal	Average
22538.60	50.08	5.08	55.16	74.00	18.84	horizontal	Peak
24457.00	35.01	6.16	41.17	54.00	12.83	horizontal	Average
24457.00	49.30	6.16	55.46	74.00	18.54	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: BLE 1M 2402MHz
EUT Model: KPP-01SS
Test distance: 1.5m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

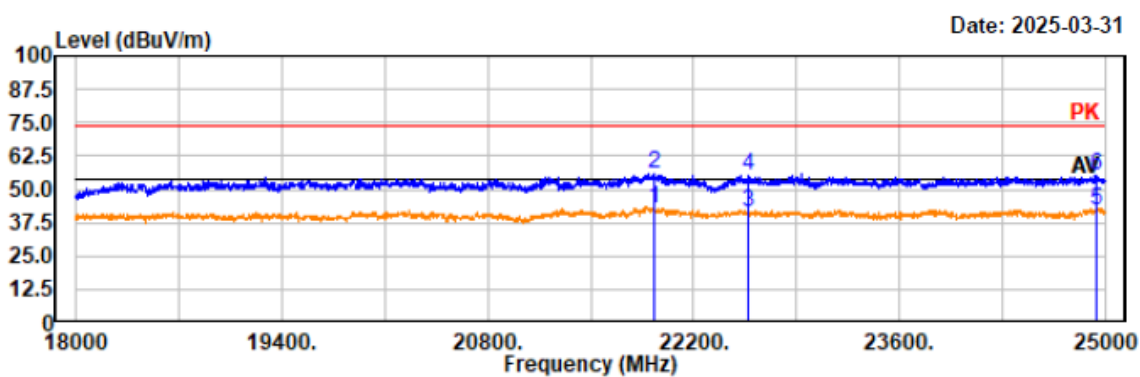
Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
21885.20	37.23	5.22	42.45	54.00	11.55	vertical	Average
21885.20	51.15	5.22	56.37	74.00	17.63	vertical	Peak
22587.00	35.56	5.07	40.63	54.00	13.37	vertical	Average
22587.00	49.87	5.07	54.94	74.00	19.06	vertical	Peak
24872.80	36.08	6.30	42.38	54.00	11.62	vertical	Average
24872.80	49.41	6.30	55.71	74.00	18.29	vertical	Peak

For 2.4G WIFI:

Note: The maximum output power mode: Wifi 802.11n20 Low channel was tested.

Project No.: 2507R30441E-RF
Test Mode: 802.11n20 2412MHz
EUT Model: KPP-01SS
Test distance: 1.5m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



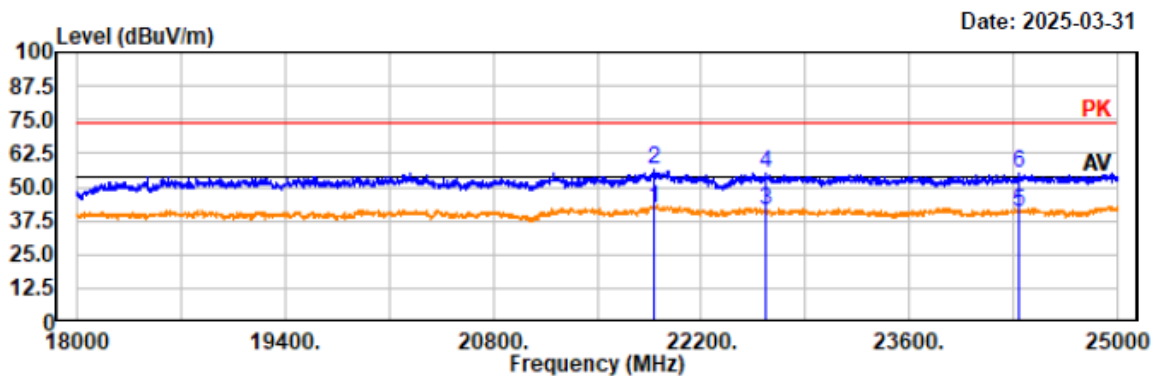
Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
21927.00	37.67	5.19	42.86	54.00	11.14	horizontal	Average
21927.00	50.98	5.19	56.17	74.00	17.83	horizontal	Peak
22571.60	36.06	5.07	41.13	54.00	12.87	horizontal	Average
22571.60	50.24	5.07	55.31	74.00	18.69	horizontal	Peak
24943.20	35.63	6.32	41.95	54.00	12.05	horizontal	Average
24943.20	49.04	6.32	55.36	74.00	18.64	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n20 2412MHz
EUT Model: KPP-01SS
Test distance: 1.5m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Trace: 1

Condition: PK RBW:1MHz VBW:3MHz SWT:auto
AV RBW:1MHz VBW:5kHz SWT:auto

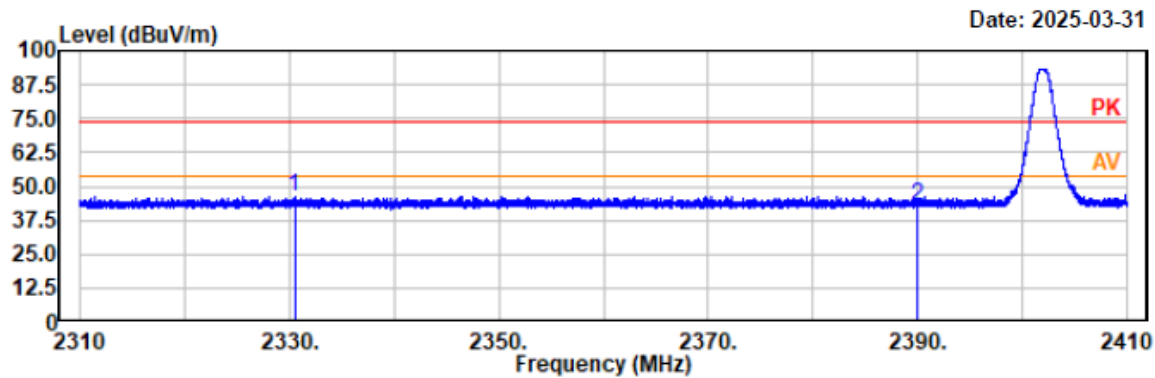
Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
21887.40	37.15	5.21	42.36	54.00	11.64	vertical	Average
21887.40	51.00	5.21	56.21	74.00	17.79	vertical	Peak
22628.80	36.14	5.06	41.20	54.00	12.80	vertical	Average
22628.80	50.28	5.06	55.34	74.00	18.66	vertical	Peak
24336.00	34.72	5.99	40.71	54.00	13.29	vertical	Average
24336.00	48.90	5.99	54.89	74.00	19.11	vertical	Peak

Restricted Bands Emissions:

For BLE:

Project No.: 2507R30441E-RF
Test Mode: BLE 1M 2402MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

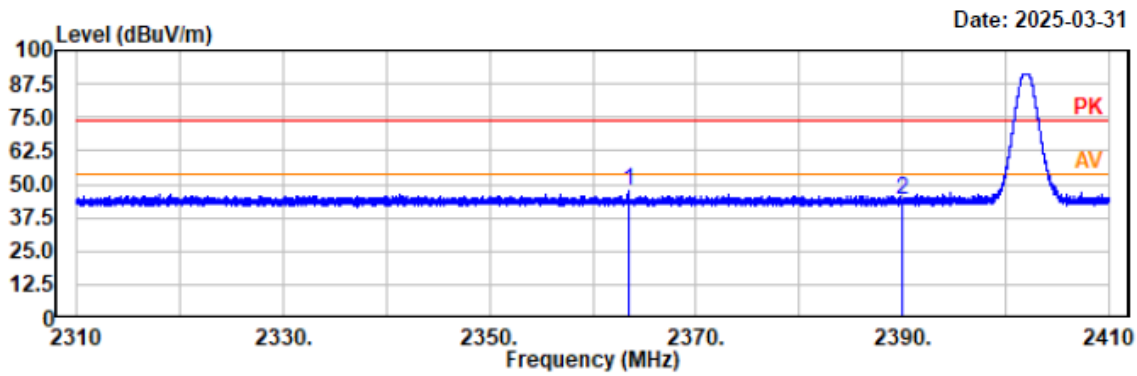


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2330.47	47.66	-1.36	46.30	74.00	27.70	horizontal	Peak
2390.00	43.84	-1.15	42.69	74.00	31.31	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: BLE 1M 2402MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

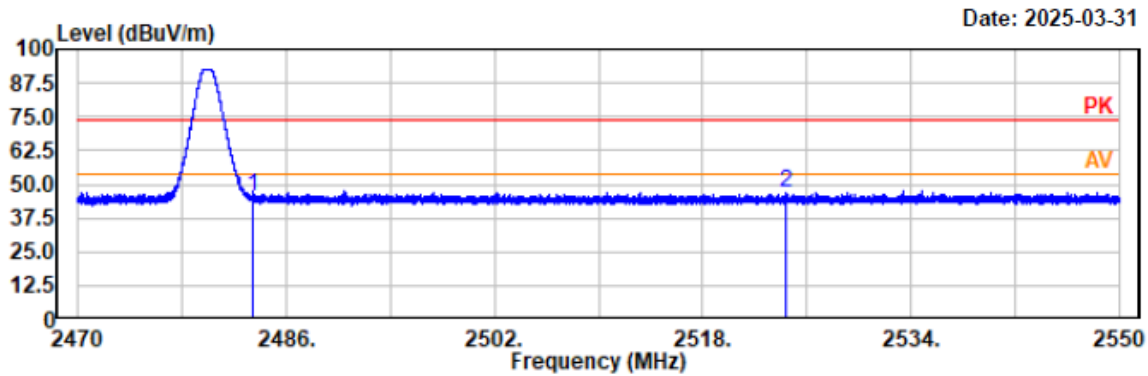


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2363.42	48.57	-1.27	47.30	74.00	26.70	vertical	Peak
2390.00	45.09	-1.15	43.94	74.00	30.06	vertical	Peak

Project No.: 2507R30441E-RF
Test Mode: BLE 1M 2480MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

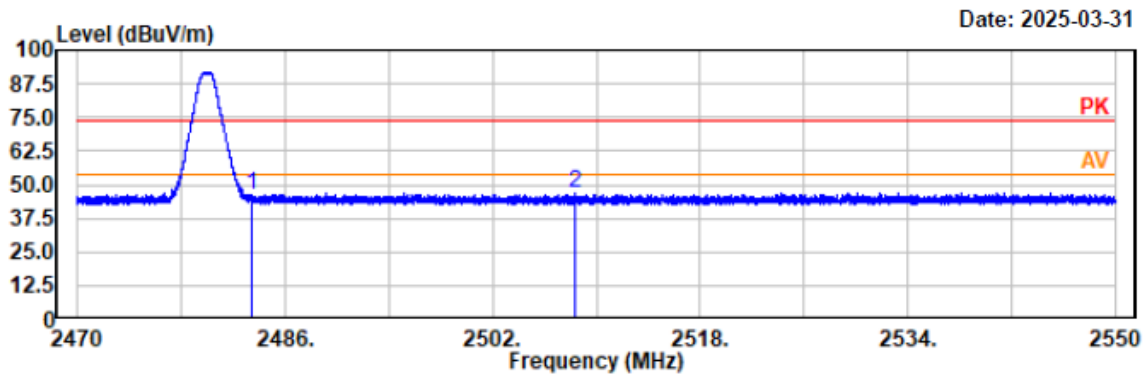


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	46.00	-0.77	45.23	74.00	28.77	horizontal	Peak
2524.46	47.53	-0.65	46.88	74.00	27.12	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: BLE 1M 2480MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	46.85	-0.77	46.08	74.00	27.92	vertical	Peak
2508.42	47.66	-0.68	46.98	74.00	27.02	vertical	Peak

For 2.4G WIFI:

Project No.: 2507R30441E-RF

Test Mode: 802.11b 2412MHz

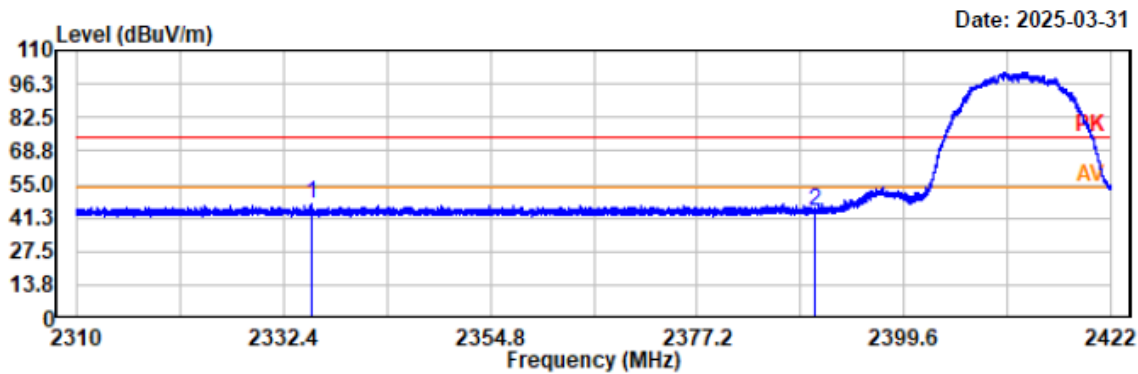
EUT Model: KPP-01SS

Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa

Tested by: Wlif Wu

Power Source: AC 120V/60Hz

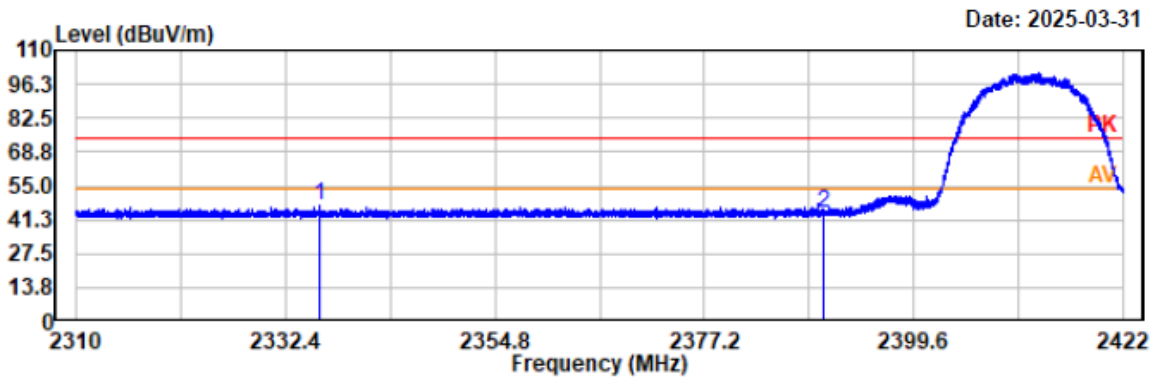


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2335.53	48.02	-1.35	46.67	74.00	27.33	horizontal	Peak
2390.00	45.42	-1.15	44.27	74.00	29.73	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11b 2412MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2335.94	48.51	-1.35	47.16	74.00	26.84	vertical	Peak
2390.00	44.99	-1.16	43.83	74.00	30.17	vertical	Peak

Project No.: 2507R30441E-RF

Test Mode: 802.11b 2462MHz

EUT Model: KPP-01SS

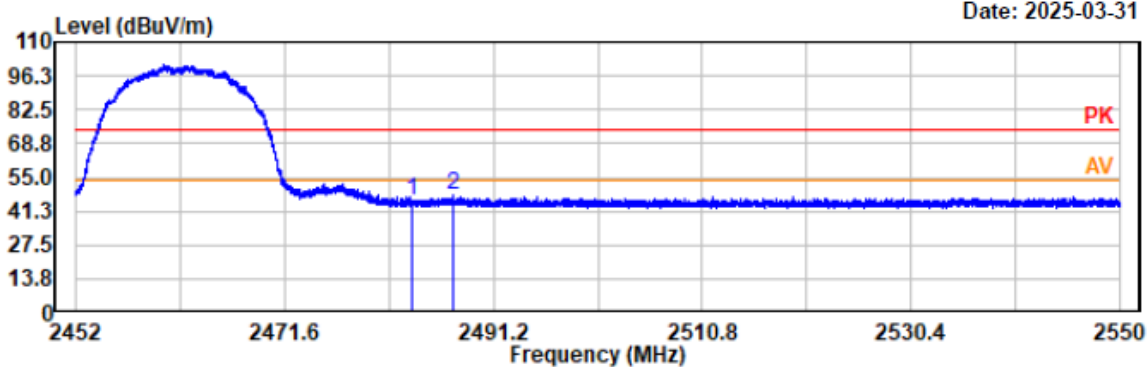
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa

Tested by: Wlif Wu

Power Source: AC 120V/60Hz

Date: 2025-03-31



Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	46.26	-0.77	45.49	74.00	28.51	horizontal	Peak
2487.37	48.19	-0.75	47.44	74.00	26.56	horizontal	Peak

Project No.: 2507R30441E-RF

Test Mode: 802.11b 2462MHz

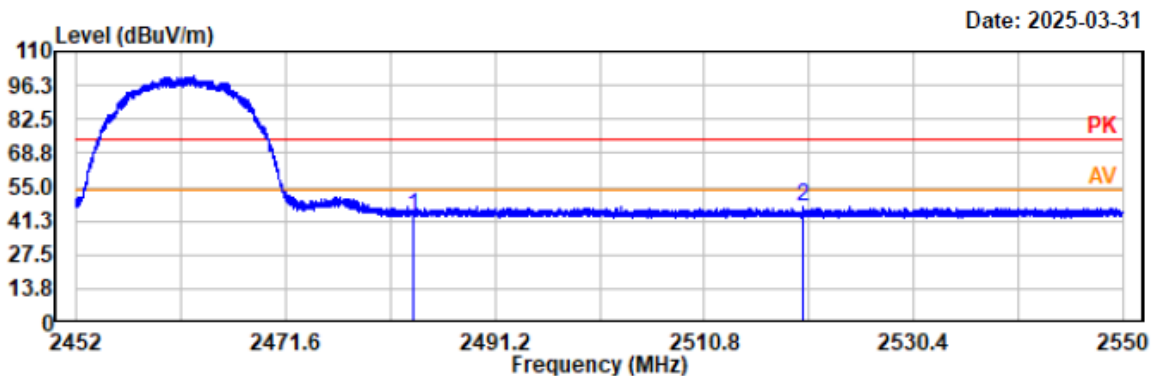
EUT Model: KPP-01SS

Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa

Tested by: Wlif Wu

Power Source: AC 120V/60Hz

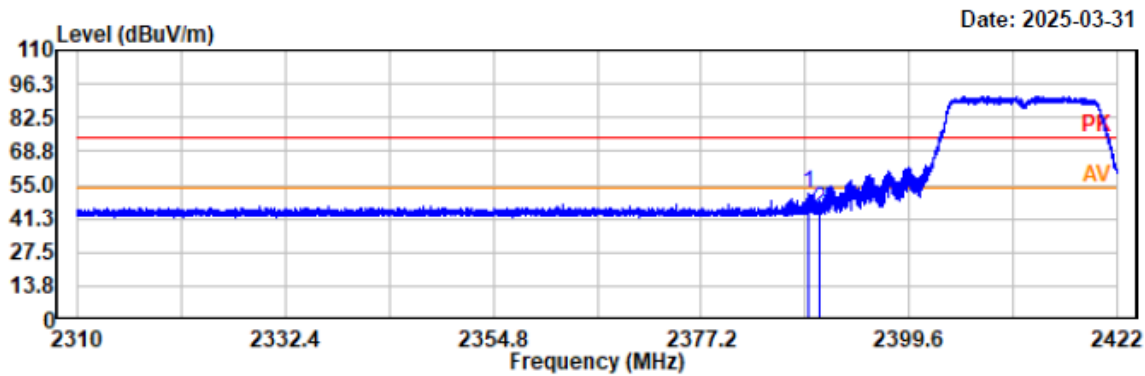


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	43.97	-0.77	43.20	74.00	30.80	vertical	Peak
2520.03	47.83	-0.66	47.17	74.00	26.83	vertical	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11g 2412MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

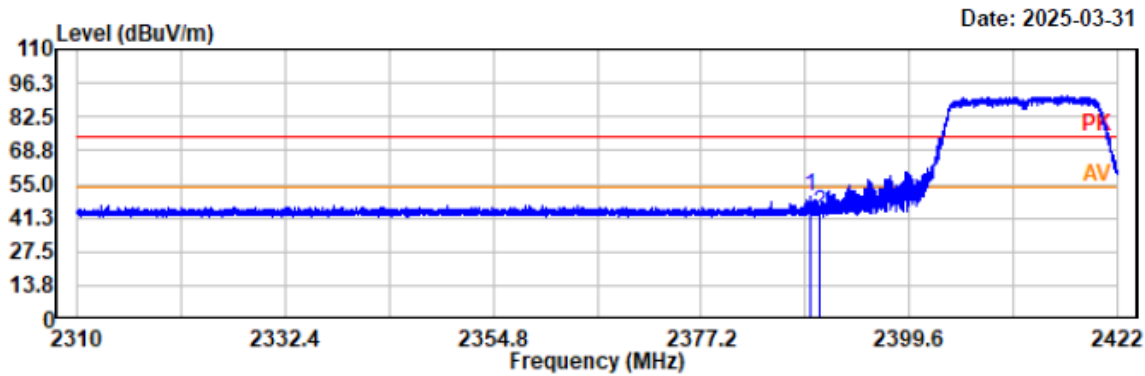


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2388.78	52.61	-1.15	51.46	74.00	22.54	horizontal	Peak
2390.00	46.28	-1.15	45.13	74.00	28.87	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11g 2412MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

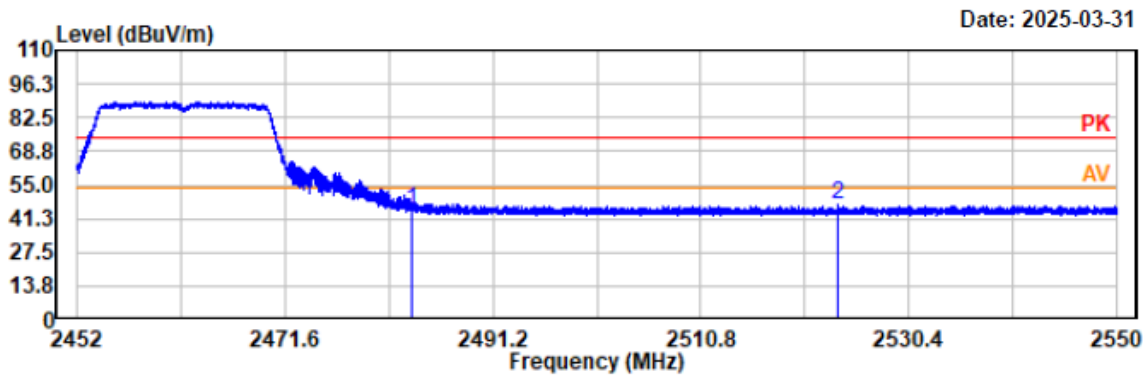


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2389.02	51.45	-1.15	50.30	74.00	23.70	vertical	Peak
2390.00	44.76	-1.16	43.60	74.00	30.40	vertical	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11g 2462MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

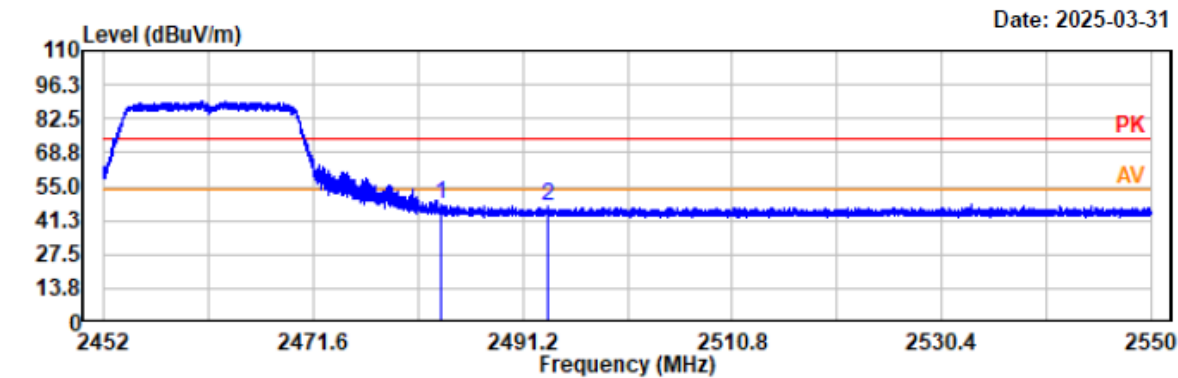


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	45.84	-0.77	45.07	74.00	28.93	horizontal	Peak
2523.69	47.61	-0.65	46.96	74.00	27.04	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11g 2462MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

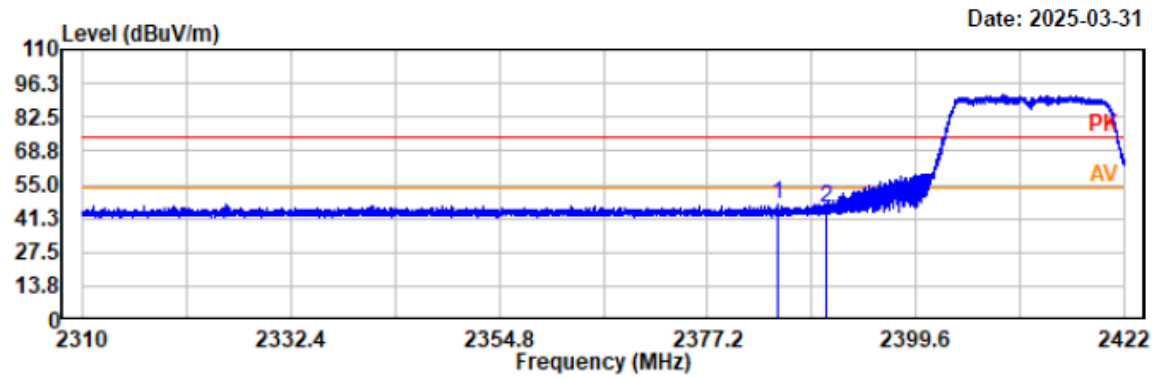


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	48.53	-0.77	47.76	74.00	26.24	vertical	Peak
2493.47	47.61	-0.73	46.88	74.00	27.12	vertical	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n20 2412MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

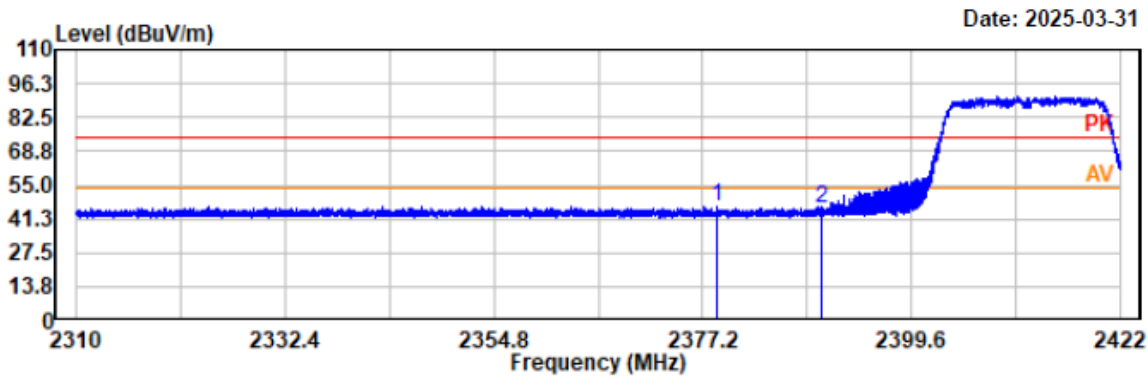


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2384.81	48.37	-1.17	47.20	74.00	26.80	horizontal	Peak
2390.00	46.60	-1.16	45.44	74.00	28.56	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n20 2412MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

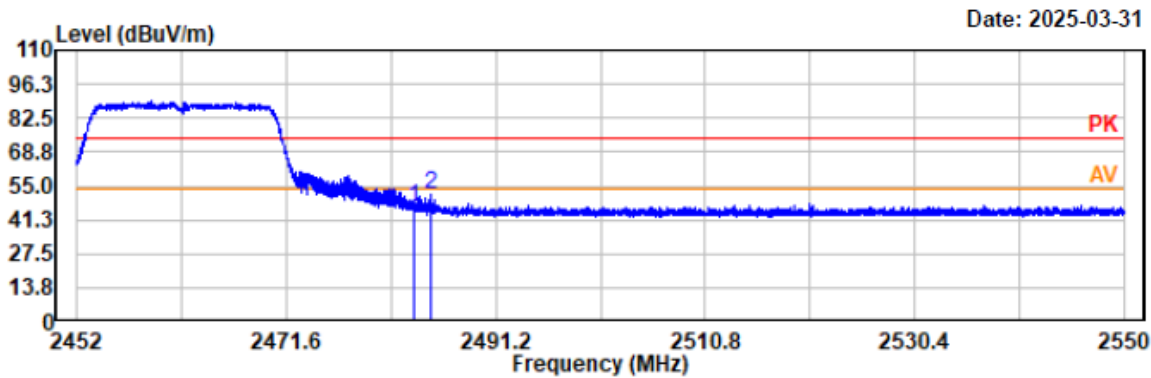


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2378.72	47.86	-1.21	46.65	74.00	27.35	vertical	Peak
2390.00	46.82	-1.15	45.67	74.00	28.33	vertical	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n20 2462MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

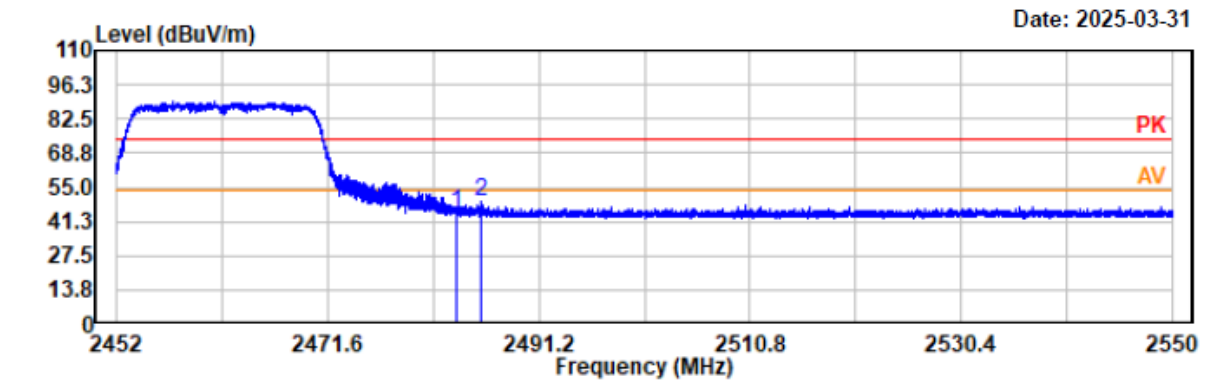


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	47.28	-0.77	46.51	74.00	27.49	horizontal	Peak
2485.08	52.03	-0.76	51.27	74.00	22.73	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n20 2462MHz
EUT Model: KPP-01SS
Test distance: 3m

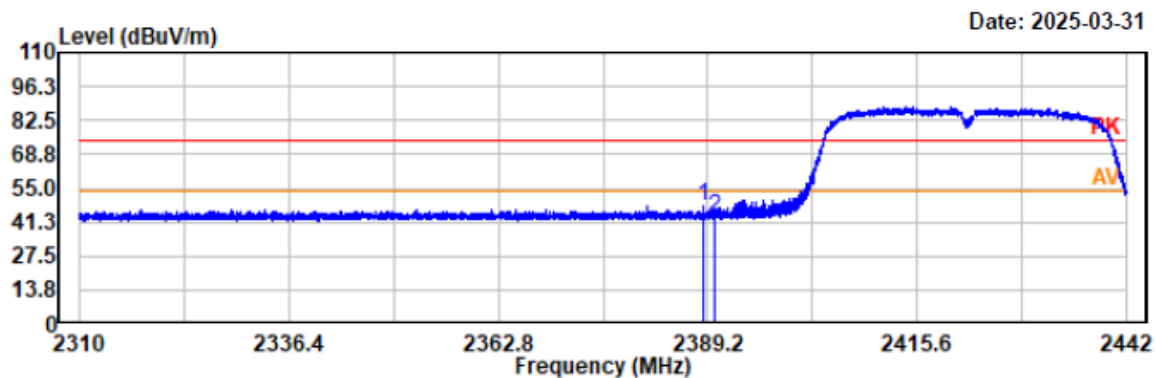
Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz



Condition: PK RBW:1MHz VBW:3MHz SWT:auto							
Freq	Reading	Factor	Result	Limit	Margin	Polarity	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB		
2483.50	45.55	-0.77	44.78	74.00	29.22	vertical	Peak
2485.82	49.90	-0.76	49.14	74.00	24.86	vertical	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n40 2422MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

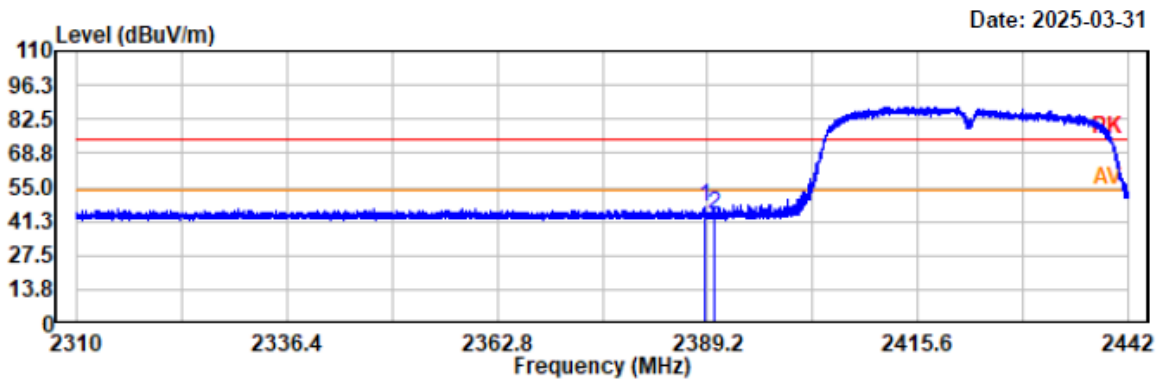


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2388.69	49.21	-1.16	48.05	74.00	25.95	horizontal	Peak
2390.01	44.27	-1.16	43.11	74.00	30.89	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n40 2422MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

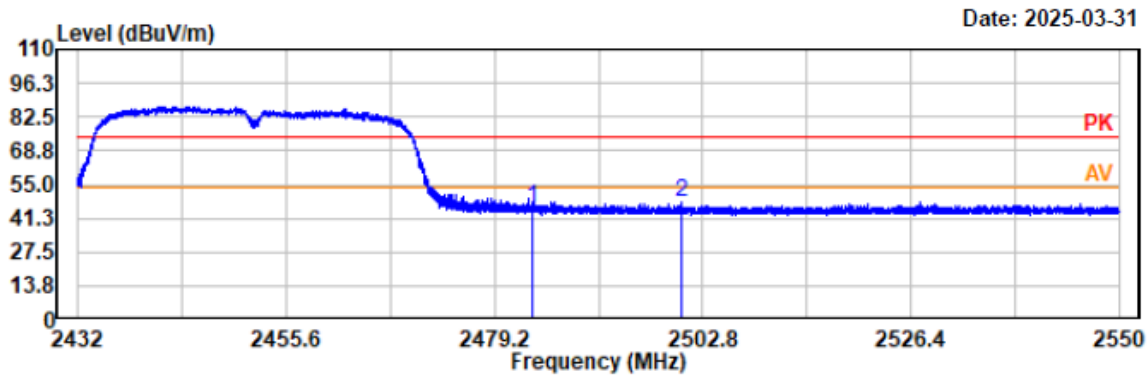


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2388.90	48.20	-1.15	47.05	74.00	26.95	vertical	Peak
2390.00	45.26	-1.15	44.11	74.00	29.89	vertical	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n40 2452MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

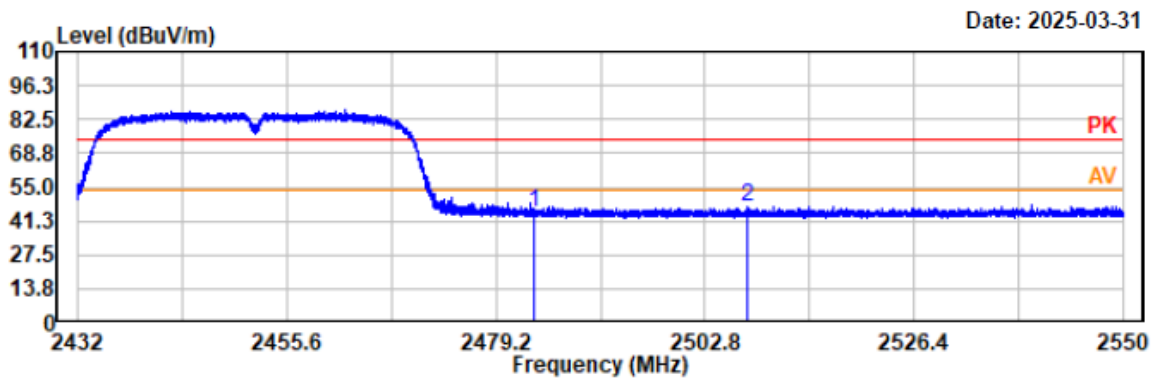


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	46.30	-0.77	45.53	74.00	28.47	horizontal	Peak
2500.42	48.17	-0.70	47.47	74.00	26.53	horizontal	Peak

Project No.: 2507R30441E-RF
Test Mode: 802.11n40 2452MHz
EUT Model: KPP-01SS
Test distance: 3m

Temp/Humi/ATM: 21.3°C/51%/100.1kPa
Tested by: Wlif Wu
Power Source: AC 120V/60Hz

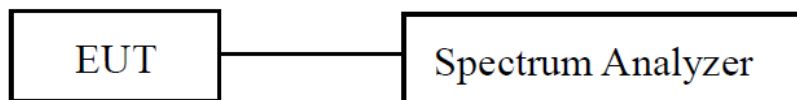


Condition: PK RBW:1MHz VBW:3MHz SWT:auto

Freq MHz	Reading dBuV	Factor dB/m	Result dBuV/m	Limit dBuV/m	Margin dB	Polarity	Remark
2483.50	45.68	-0.77	44.91	74.00	29.09	vertical	Peak
2507.50	47.78	-0.69	47.09	74.00	26.91	vertical	Peak

FCC §15.247(a) (2) – 6 dB EMISSION BANDWIDTH**Applicable Standard**

Systems using digital modulation techniques may operate in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

EUT Setup**Test Procedure**

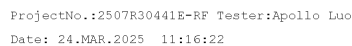
According to ANSI C63.10-2013 Section 11.8

- Set RBW = 100 kHz.
- Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
- Detector = Peak.
- Trace mode = max hold.
- Sweep = auto couple.
- Allow the trace to stabilize.
- Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Data**For BLE:**

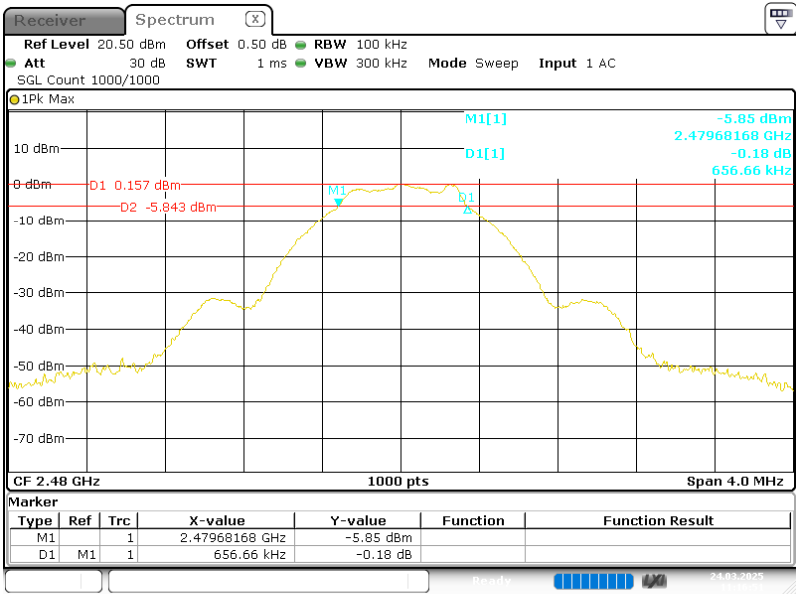
Test Mode:	Transmitting	Test Engineer:	Apollo Luo
Test Date:	2025-03-24	Test Voltage:	AC 120V/60Hz
Test Result:	Compliance	Environment:	Temp.: 21.6°C Humi.: 48% Atm.: 100.2kPa
Test Modes	Test Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)
BLE 1Mbps	2402	0.661	≥ 0.5
	2440	0.661	≥ 0.5
	2480	0.657	≥ 0.5

BLE 1Mbps Low Channel



ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 24.MAR.2025 11:16:37

BLE 1Mbps High Channel



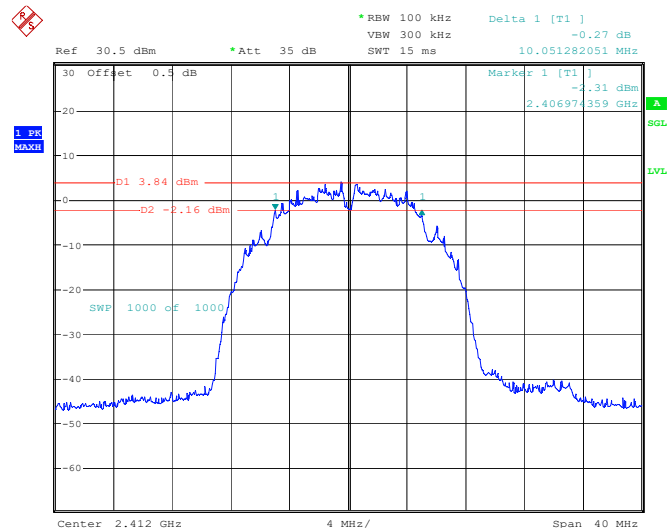
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 24.MAR.2025 11:16:51

For 2.4G WIFI:

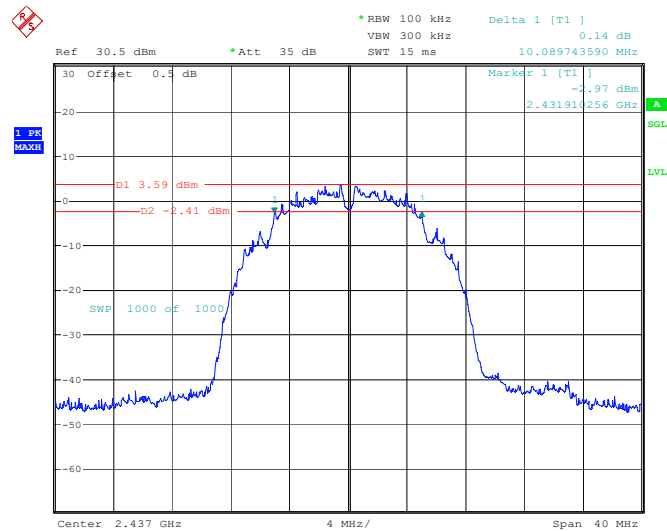
Test Mode:	Transmitting	Test Engineer:	Apollo Luo
Test Date:	2025-03-29	Test Voltage:	AC 120V/60Hz
Test Result:	Compliance	Environment:	Temp.: 21.8°C Humi.: 54% Atm.: 100.1kPa
Test Modes	Test Frequency (MHz)	6 dB Bandwidth (MHz)	Limit (MHz)
802.11b	2412	10.05	0.5
	2437	10.09	0.5
	2462	9.73	0.5
802.11g	2412	16.49	0.5
	2437	16.58	0.5
	2462	16.58	0.5
802.11n ht20	2412	17.51	0.5
	2437	17.58	0.5
	2462	17.41	0.5
802.11n ht40	2422	33.74	0.5
	2437	33.56	0.5
	2452	33.56	0.5

Please refer to below plots:

802.11b Mode Low Channel

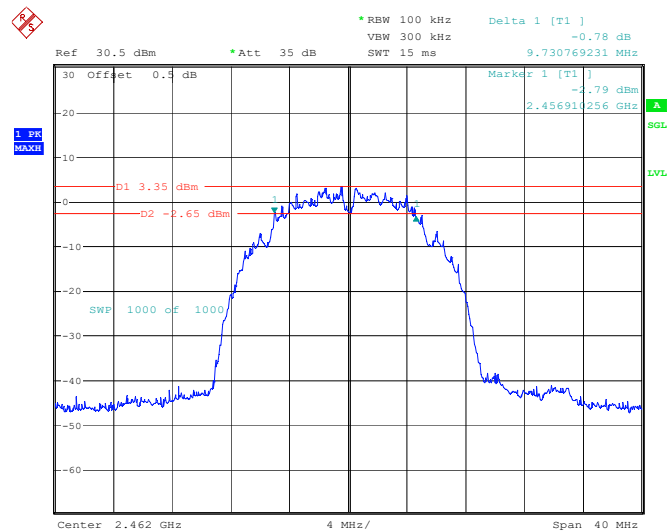


802.11b Mode Middle Channel



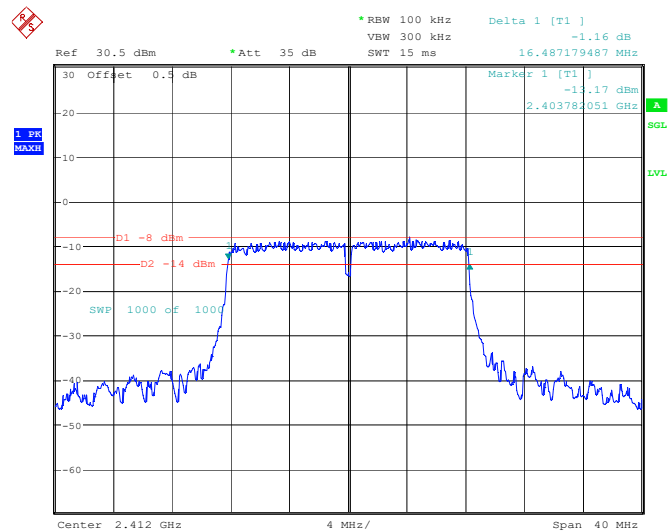
Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:19:48

802.11b Mode High Channel



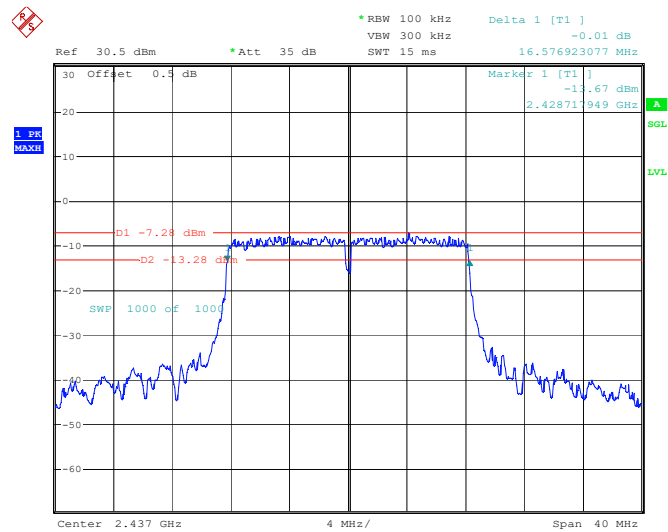
Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:24:15

802.11g Mode Low Channel



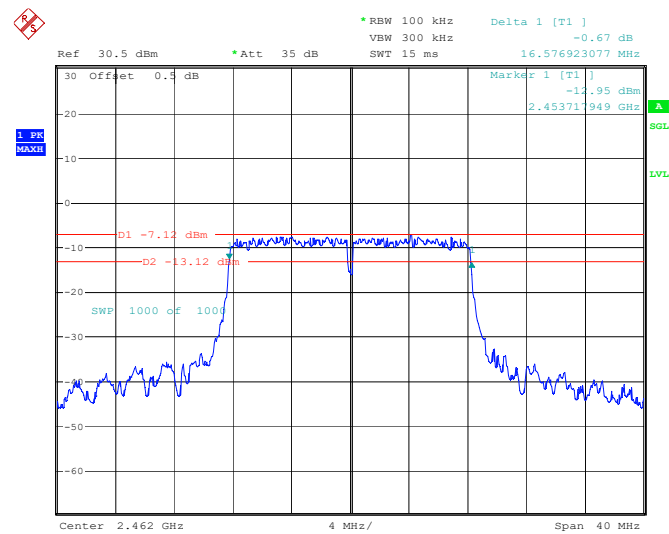
Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:31:04

802.11g Mode Middle Channel



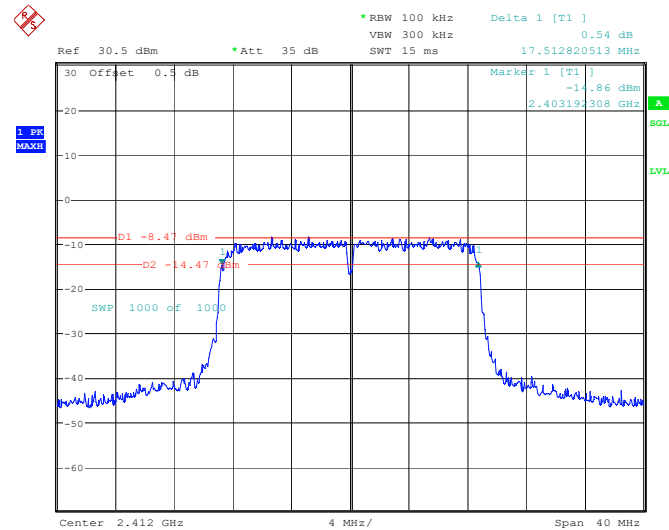
Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:38:48

802.11g Mode High Channel



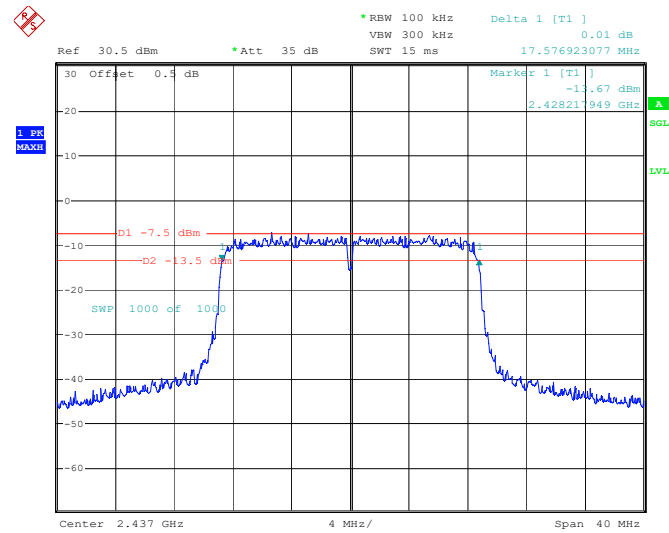
Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:45:25

802.11n-ht20 Mode Low Channel



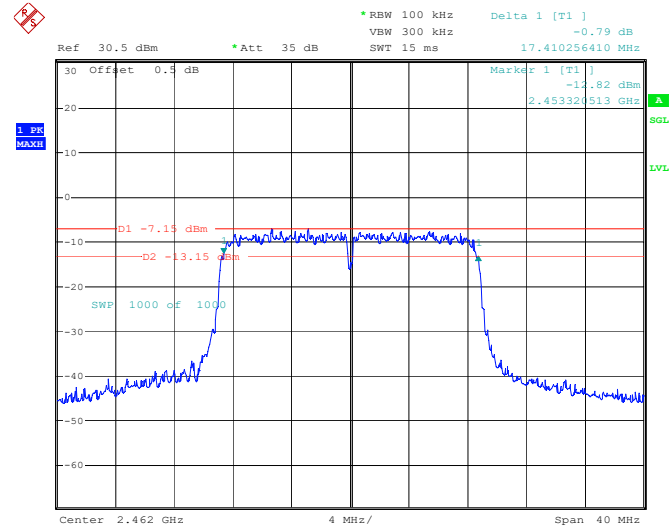
Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:55:03

802.11n-ht20 Mode Middle Channel



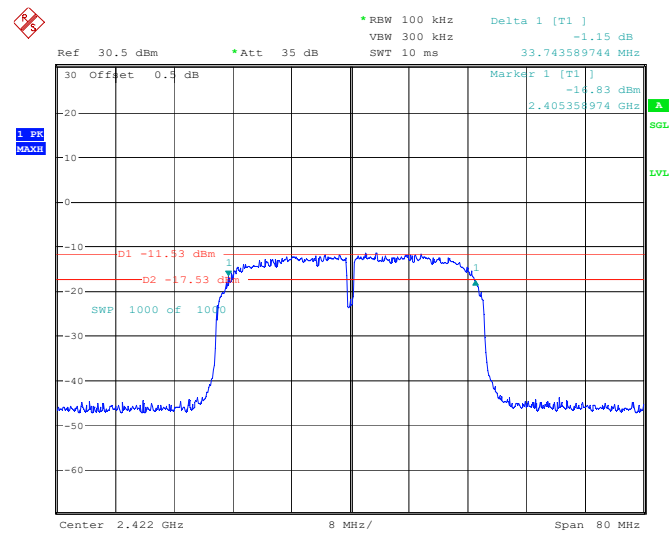
Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:03:34

802.11n-ht20 Mode High Channel



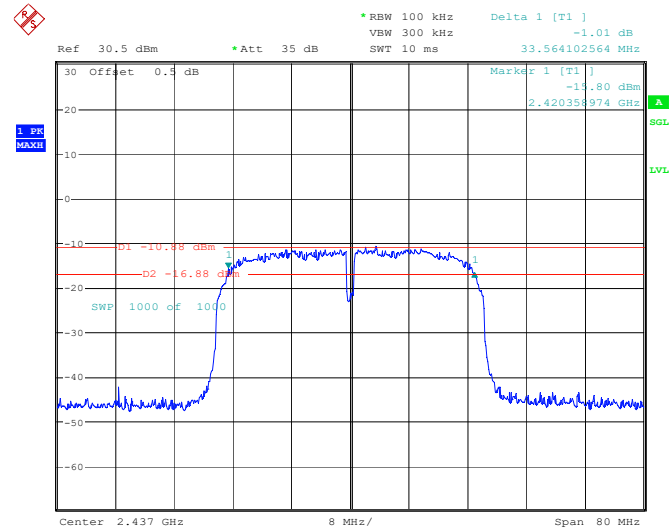
Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:11:15

802.11n-ht40 Mode Low Channel



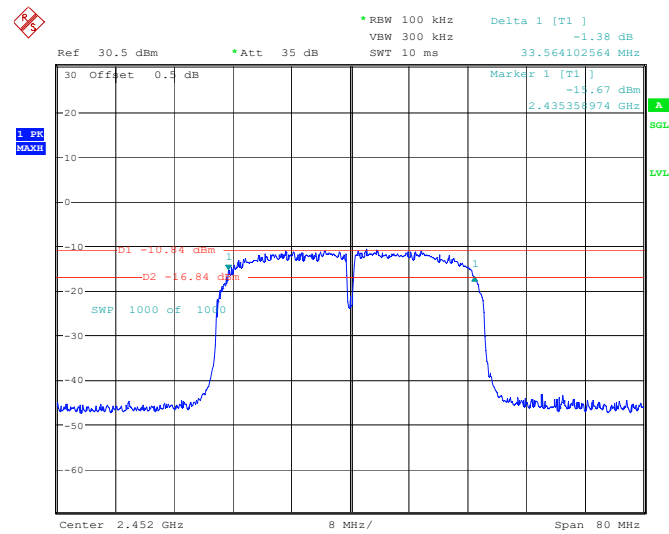
Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:20:44

802.11n-ht40 Mode Middle Channel



Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:38:08

802.11n-ht40 Mode High Channel



Project No.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:51:09

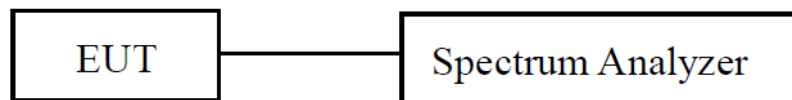
FCC §15.247(b) (3) - MAXIMUM CONDUCTED OUTPUT POWER

Applicable Standard

According to FCC §15.247(b) (3), for systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g., alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

EUT Setup

For BLE:



For 2.4G WIFI:

**Test Procedure****For BLE**

According to ANSI C63.10-2013 11.9.1.1

- a) Set the RBW $\geq$ DTS bandwidth.
- b) Set VBW $\geq [3 \times \text{RBW}]$.
- c) Set span $\geq [3 \times \text{RBW}]$.
- d) Sweep time = auto couple.
- e) Detector = peak.
- f) Trace mode = max hold.
- g) Allow trace to fully stabilize.
- h) Use peak marker function to determine the peak amplitude level.

For 2.4G WIFI

According to ANSI C63.10-2013 11.9.1.2 Peak power meter method

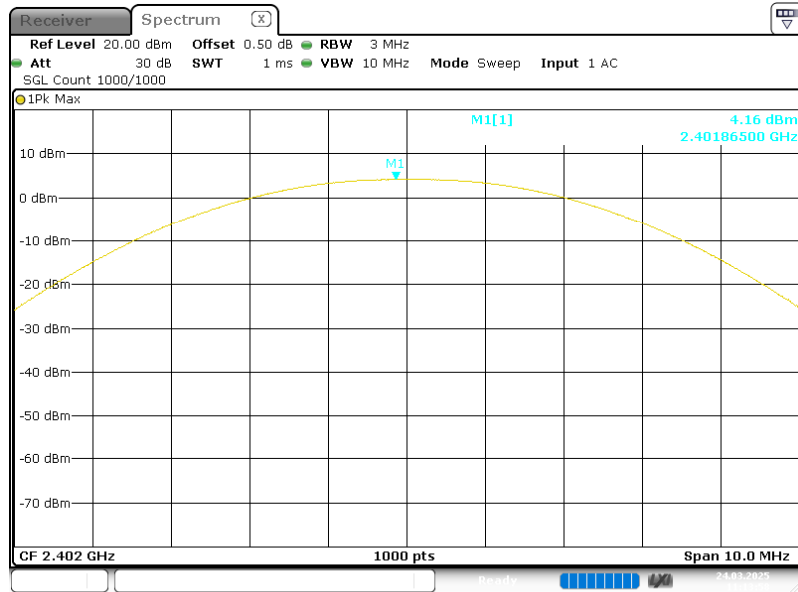
The maximum peak conducted output power may be measured using a broadband peak RF power meter. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall use a fast responding diode detector.

Test Data**For BLE:**

Test Mode:	Transmitting	Test Engineer:	Apollo Luo
Test Date:	2025-03-24	Test Voltage:	AC120V/60Hz
Test Result:	Compliance	Environment:	Temp.: 21.6°C Humi.: 48% Atm.: 100.2kPa
Test Modes	Test Frequency (MHz)	Maximum Conducted Peak Output Power(dBm)	Limit (dBm)
BLE 1Mbps	2402	4.16	≤30
	2440	2.71	≤30
	2480	0.9	≤30

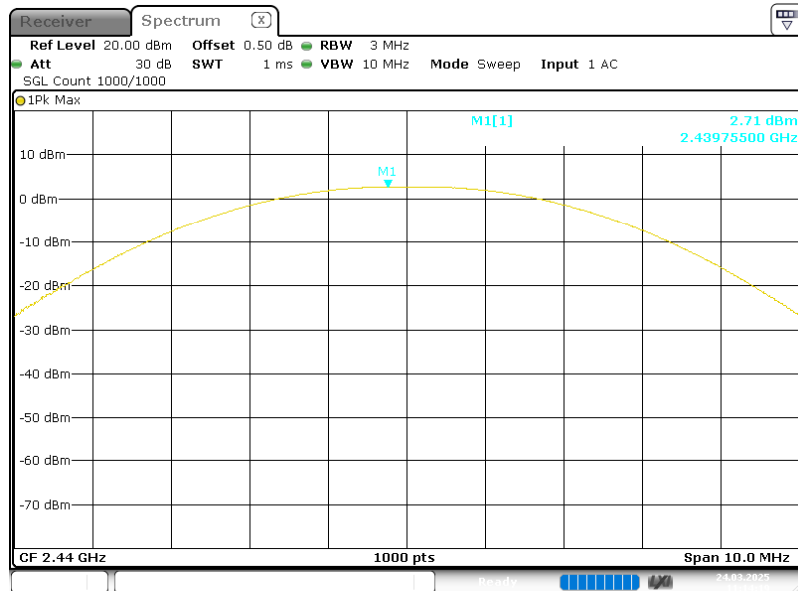
Please refer to below plots:

BLE 1Mbps Low Channel



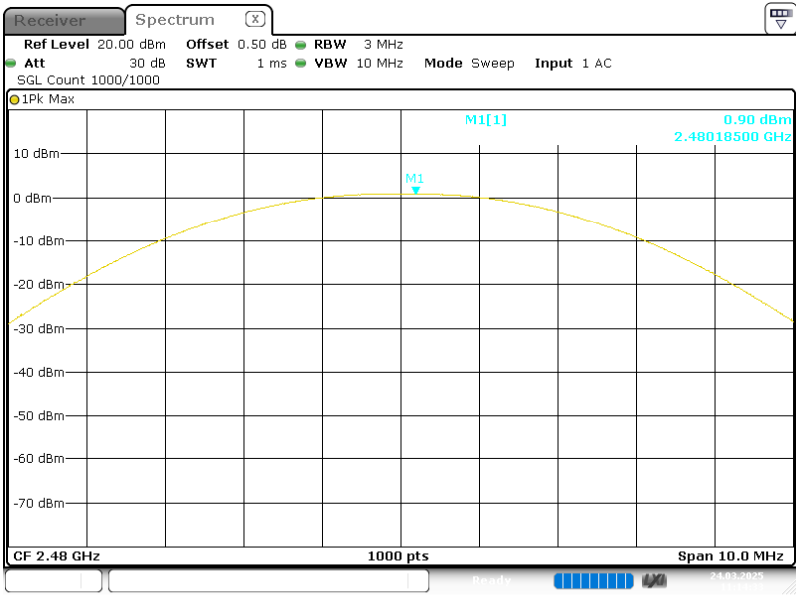
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 24.MAR.2025 11:13:59

BLE 1Mbps Middle Channel



ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 24.MAR.2025 11:14:19

BLE 1Mbps High Channel



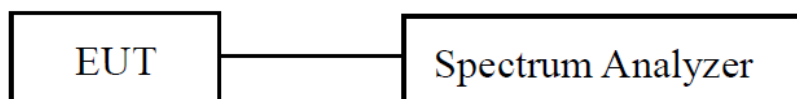
ProjectNo.:2507R30441E-RF Tester: Apollo Luo
Date: 24.MAR.2025 11:14:33

For 2.4G WIFI:

Test Mode:	Transmitting	Test Engineer:	Apollo Luo
Test Date:	2025-03-29	Test Voltage:	AC 120V/60Hz
Test Result:	Compliance	Environment:	Temp.: 21.8℃ Humi.: 54% Atm.: 100.1kPa
Test Modes	Test Frequency (MHz)	Maximum Conducted Peak Output Power (dBm)	Limit (dBm)
802.11b	2412	17.48	30
	2437	16.68	30
	2462	16.25	30
802.11g	2412	17.74	30
	2437	17.39	30
	2462	16.91	30
802.11n ht20	2412	17.95	30
	2437	17.53	30
	2462	17.01	30
802.11n ht40	2422	17.36	30
	2437	17.07	30
	2452	16.83	30

FCC §15.247(d) – 100 kHz BANDWIDTH OF FREQUENCY BAND EDGE**Applicable Standard**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. 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)).

EUT Setup**Test Procedure**

According to ANSI C63.10-2013 Section 11.11

- Set the center frequency and span to encompass frequency range to be measured.
- Set the RBW = 100 kHz.
- Set the VBW $\geq [3 \times \text{RBW}]$.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

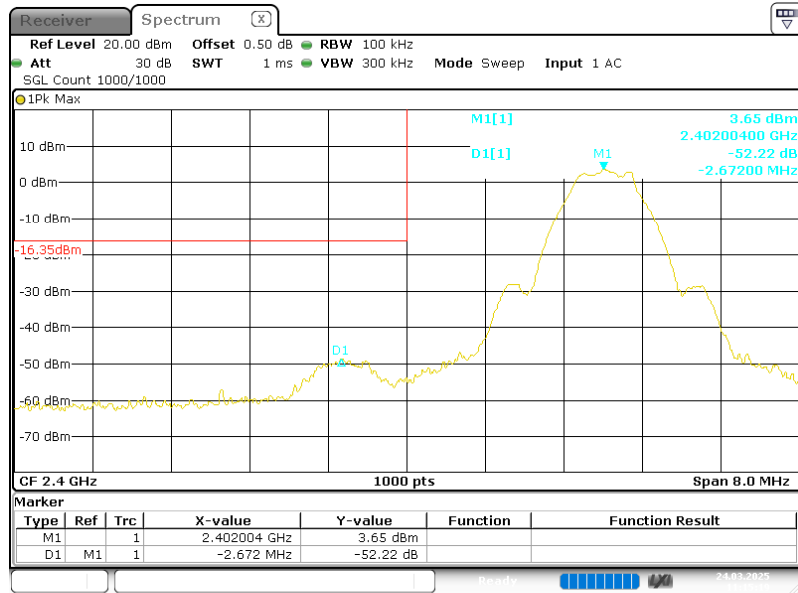
Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

Test Data**For BLE:**

Test Mode:	Transmitting	Test Engineer:	Apollo Luo
Test Date:	2025-03-24	Test Voltage:	AC120V/60Hz
Test Result:	Compliance	Environment:	Temp.: 21.6°C Humi.: 48% Atm.: 100.2kPa

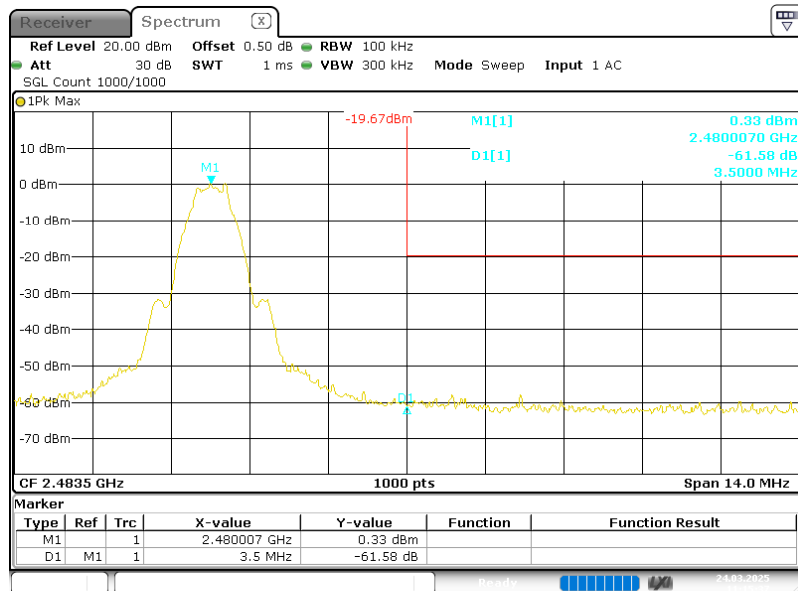
Please refer to below plots:

BLE 1Mbps Low Channel



ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 24.MAR.2025 11:15:19

BLE 1Mbps High Channel



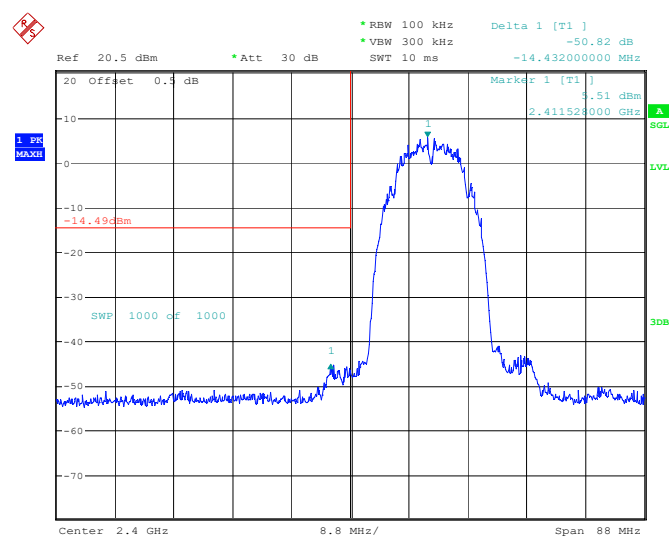
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 24.MAR.2025 11:15:37

For 2.4G WIFI:

Test Mode:	Transmitting	Test Engineer:	Apollo Luo
Test Date:	2025-03-29	Test Voltage:	AC 120V/60Hz
Test Result:	Compliance	Environment:	Temp.: 21.8°C Humi.: 54% Atm.: 100.1kPa

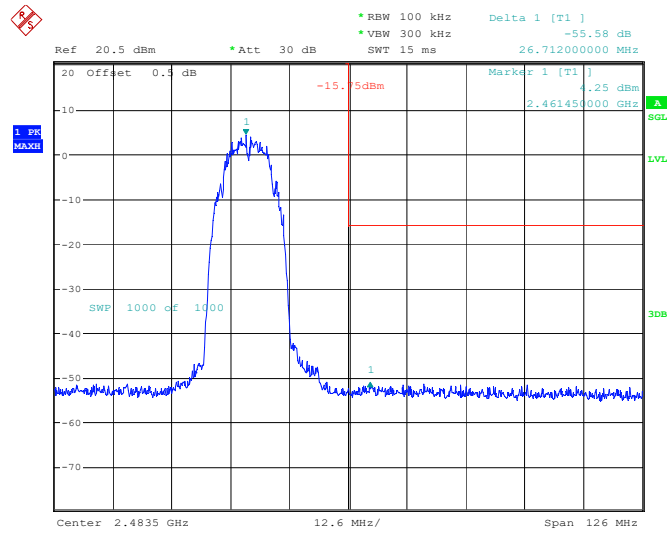
Please refer to below plots:

802.11b Mode Left Side



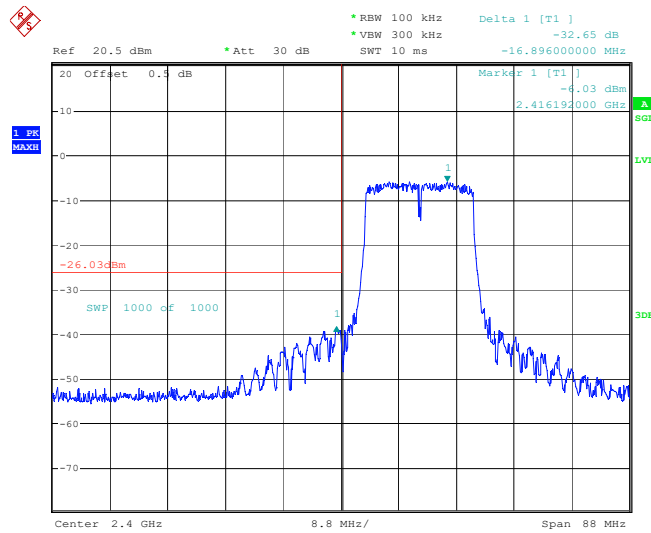
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:14:37

802.11b Mode Right Side



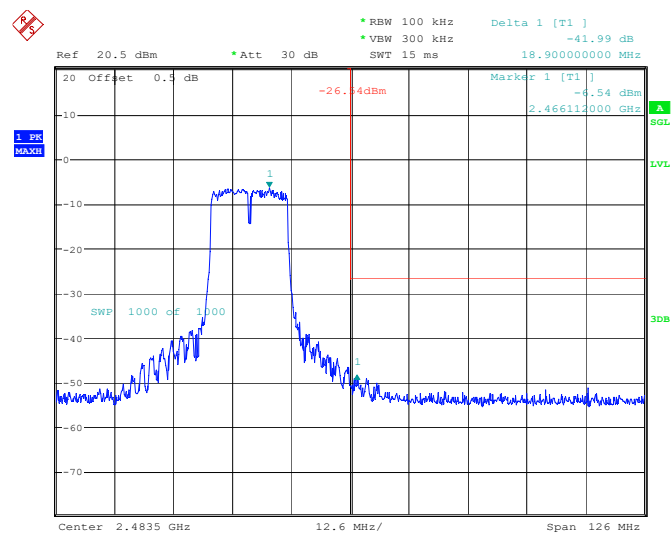
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:24:53

802.11g Mode Left Side



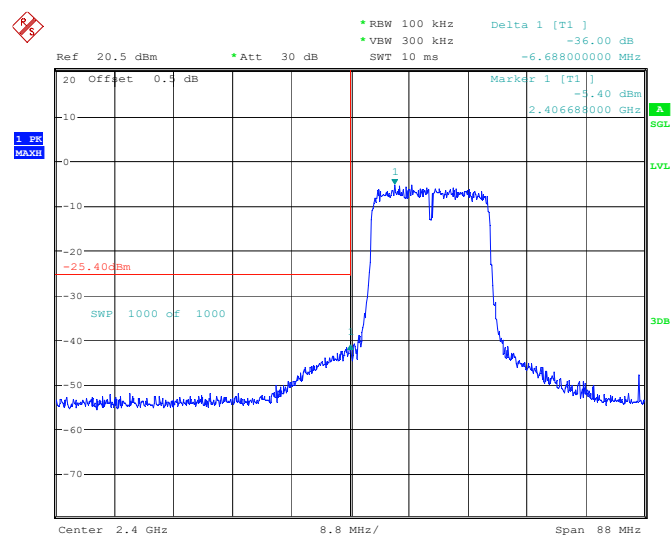
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:30:50

802.11g Mode Right Side



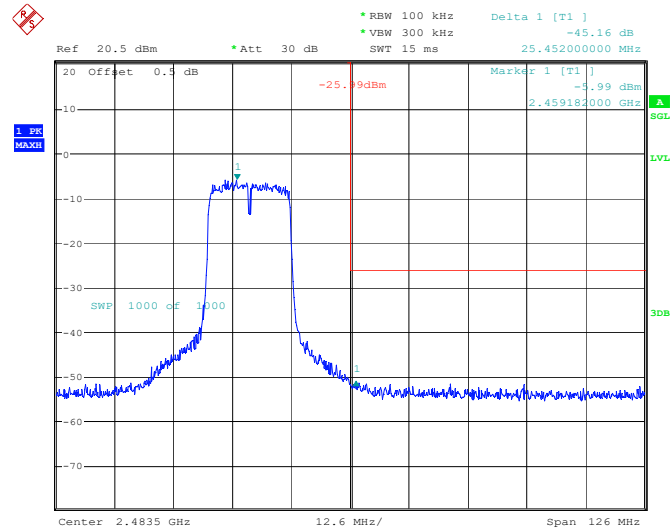
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:46:33

802.11n-ht20 Mode Left Side



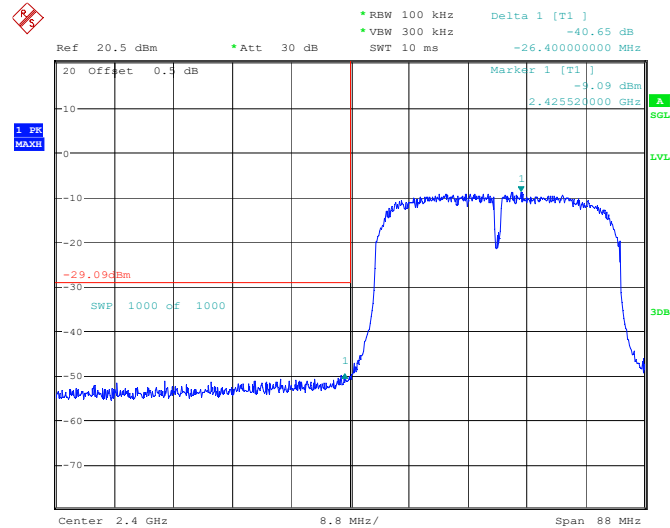
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:55:58

802.11n-ht20 Mode Right Side



ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:12:31

802.11n-ht40 Mode Left Side



ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:21:18

* RBW 100 kHz Delta 1 [T1]
 * VBW 300 kHz -40.46 dB
 SWT 15 ms 32.886000000 MHz

Ref 20.5 dBm * Att 30 dB

20 Offset 0.5 dB
 -29.1 dBm
 Marker 1 [T1]
 -9.41 dBm
 2.454142000 GHz

1 PR
 MAXH

SWP 1000 cF 1000

1

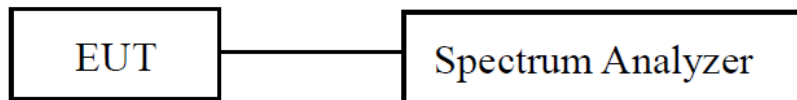
Center 2.4835 GHz 12.6 MHz/ Span 126 MHz

ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:52:03

FCC §15.247(e) - POWER SPECTRAL DENSITY

Applicable Standard

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

EUT Setup**Test Procedure**

According to ANSI C63.10-2013 Section 11.10.2

- a) Set analyzer center frequency to DTS channel center frequency.
- b) Set the span to 1.5 times the DTS bandwidth.
- c) Set the RBW to $3 \text{ kHz} \leq \text{RBW} \leq 100 \text{ kHz}$.
- d) Set the VBW $\geq [3 \times \text{RBW}]$.
- e) Detector = peak.
- f) Sweep time = auto couple.
- g) Trace mode = max hold.
- h) Allow trace to fully stabilize.
- i) Use the peak marker function to determine the maximum amplitude level within the RBW.
- j) If measured value exceeds requirement, then reduce RBW (but no less than 3 kHz) and repeat.

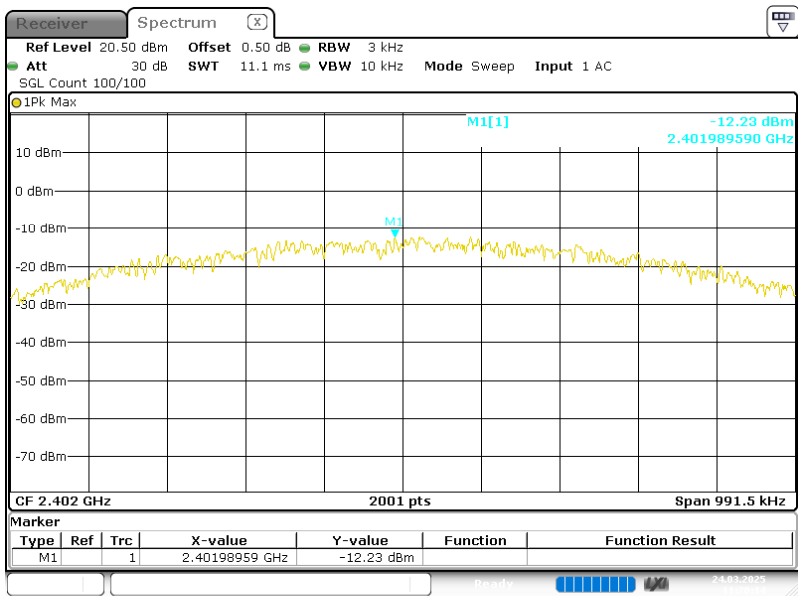
Test Data

For BLE:

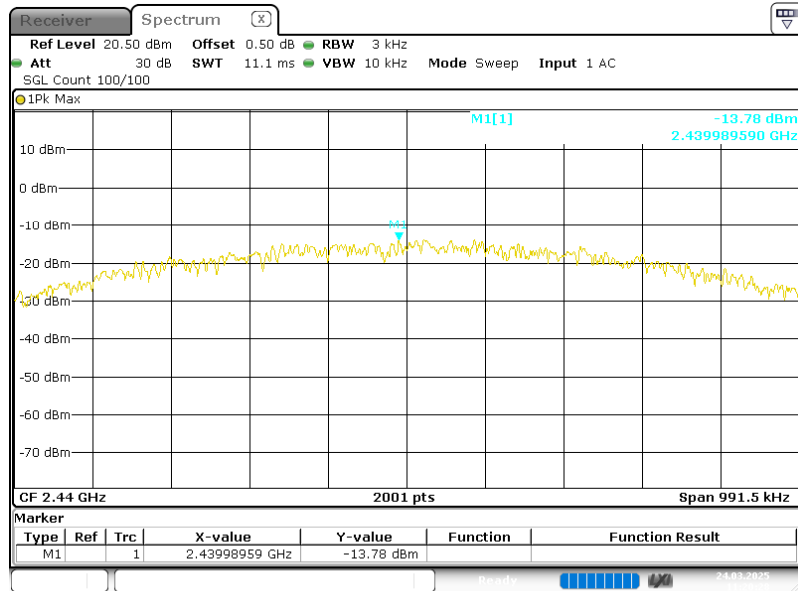
Test Mode:	Transmitting	Test Engineer:	Apollo Luo
Test Date:	2025-03-24	Test Voltage:	AC120V/60Hz
Test Result:	Compliance	Environment:	Temp.: 21.6℃ Humi.: 48% Atm.: 100.2kPa
Test Modes	Test Frequency (MHz)	Power Spectral Density (dBm/3kHz)	Limit (dBm/3kHz)
BLE 1Mbps	2402	-12.23	≤8.00
	2440	-13.78	≤8.00
	2480	-15.62	≤8.00

Please refer to below plots:

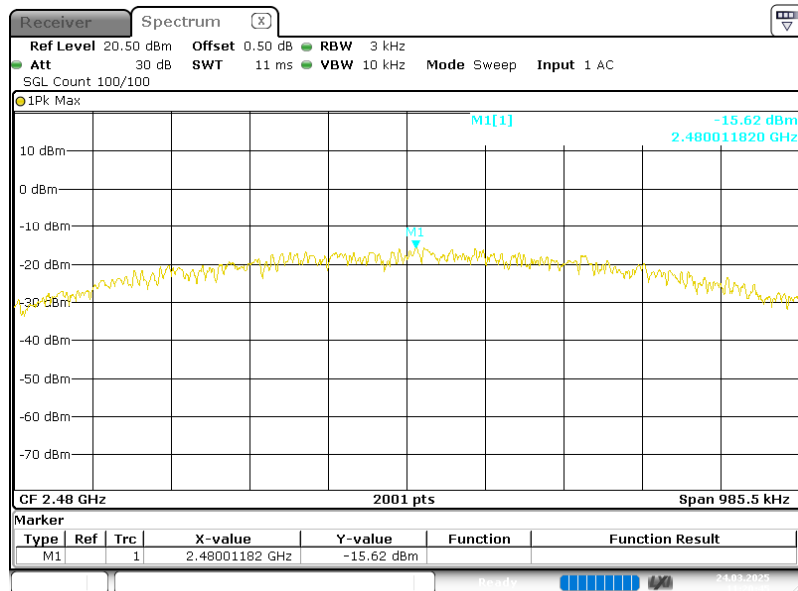
BLE 1Mbps Low Channel



BLE 1Mbps Middle Channel



BLE 1Mbps High Channel

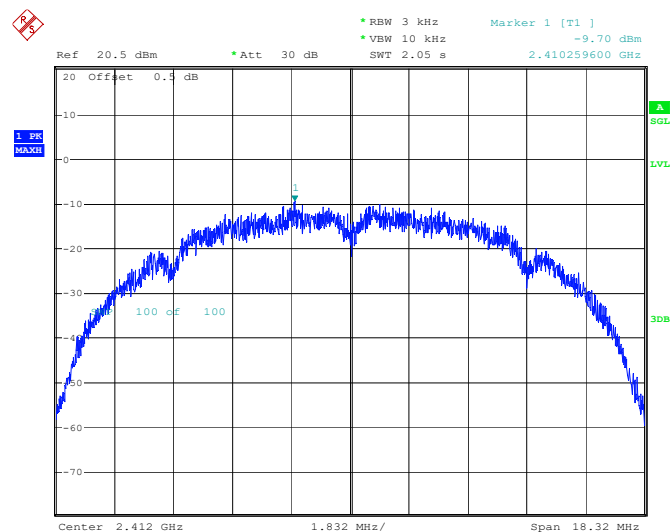


For 2.4G WIFI:

Test Mode:	Transmitting	Test Engineer:	Apollo Luo
Test Date:	2025-03-29	Test Voltage:	AC120V/60Hz
Test Result:	Compliance	Environment:	Temp.: 21.8°C Humi.: 54% Atm.: 100.1kPa
Test Modes	Test Frequency (MHz)	Reading (dBm/3kHz)	Limit (dBm/3kHz)
802.11b	2412	-9.7	8.00
	2437	-10.26	8.00
	2462	-10.76	8.00
802.11g	2412	-19.66	8.00
	2437	-20.1	8.00
	2462	-20.43	8.00
802.11n ht20	2412	-19.48	8.00
	2437	-19.85	8.00
	2462	-20.08	8.00
802.11n ht40	2422	-20.55	8.00
	2437	-20.98	8.00
	2452	-21.09	8.00

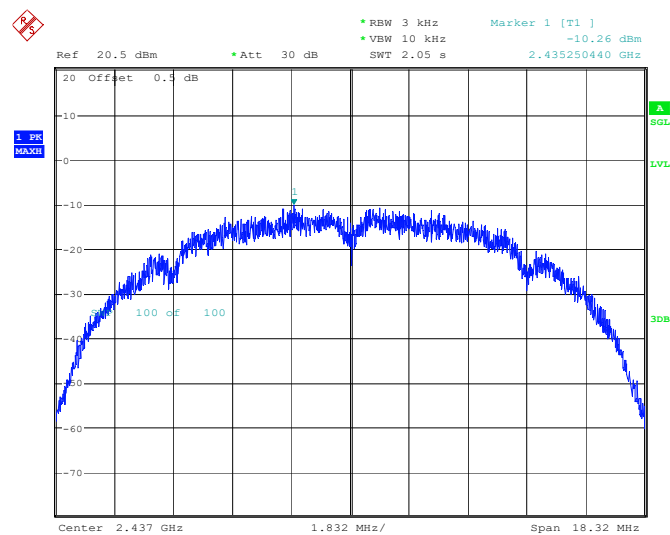
Please refer to below plots:

802.11b Mode Low Channel



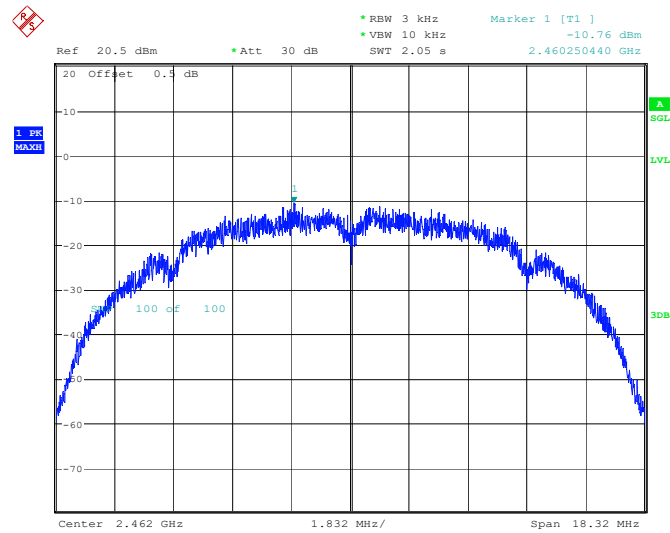
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:18:11

802.11b Mode Middle Channel



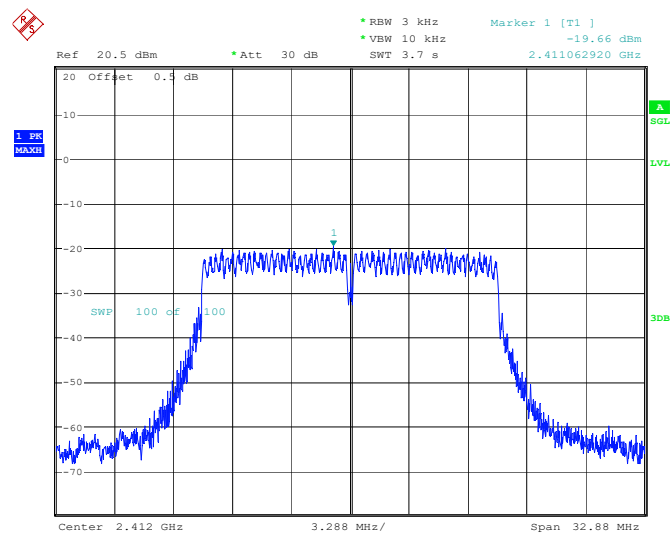
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:22:56

802.11b Mode High Channel



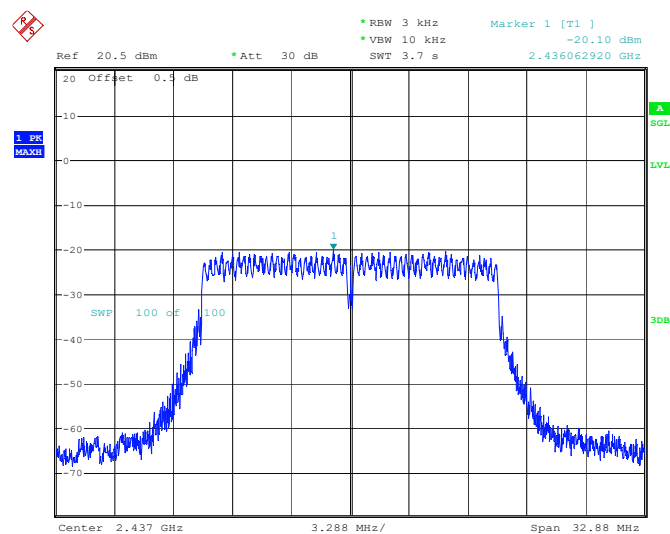
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:28:27

802.11g Mode Low Channel



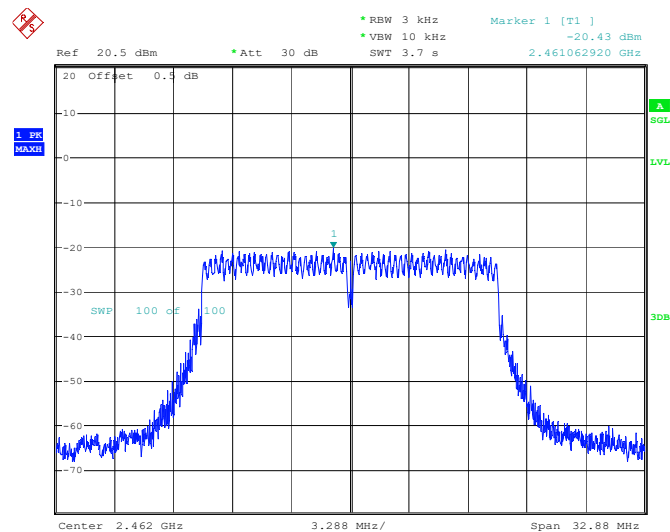
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 08:37:09

802.11g Mode Middle Channel



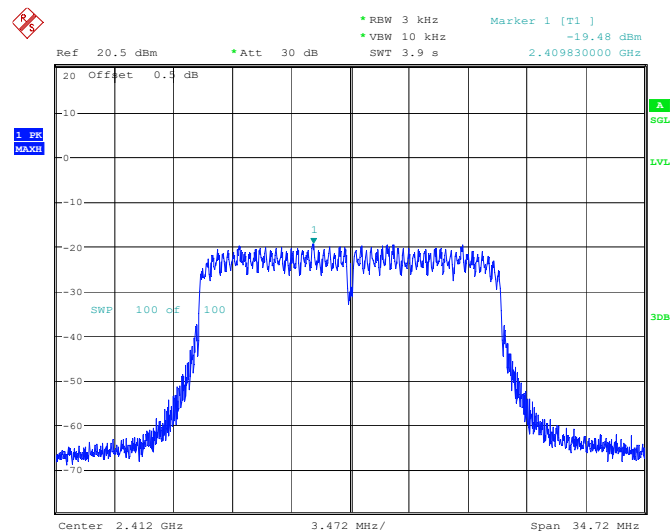
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Date: 29.MAR.2025 08:44:32

802.11g Mode High Channel



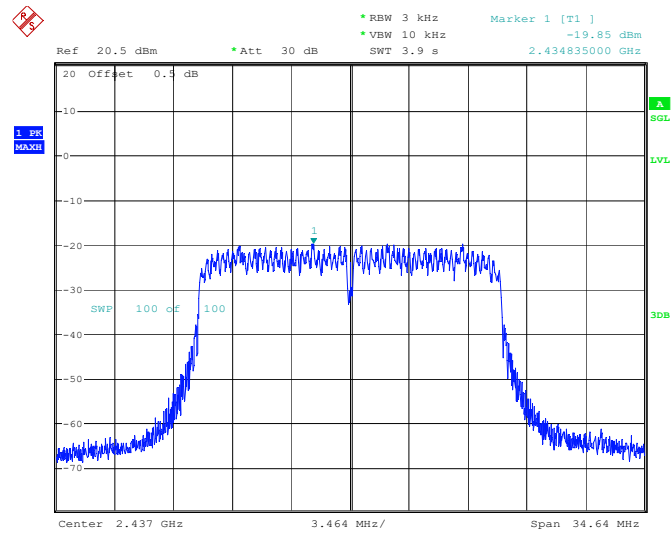
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Date: 29.MAR.2025 08:52:54

802.11n-ht20 Mode Low Channel



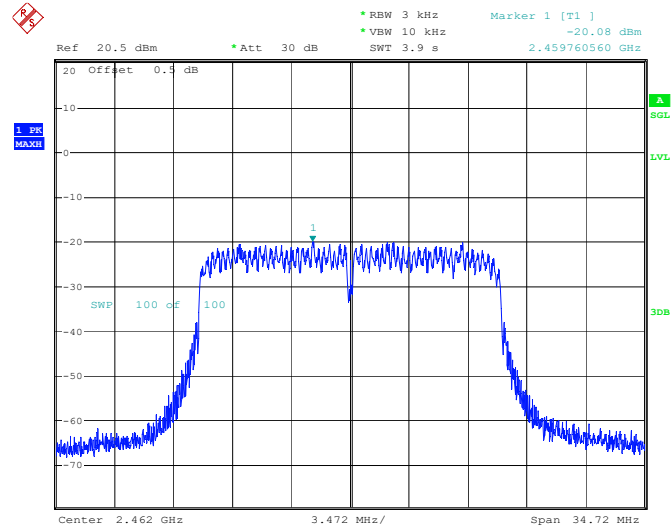
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Date: 29.MAR.2025 09:02:38

802.11n-ht20 Mode Middle Channel



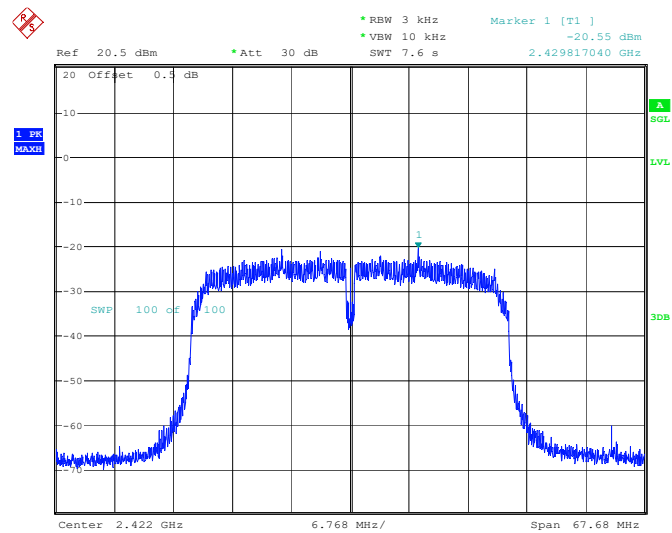
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Date: 29.MAR.2025 09:10:27

802.11n-ht20 Mode High Channel



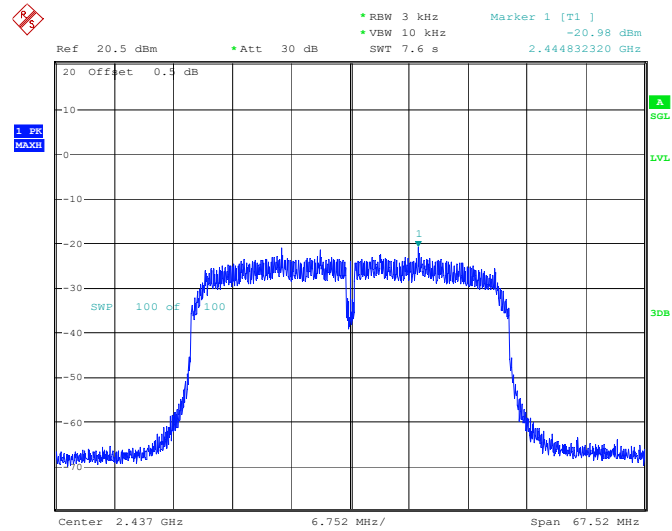
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:19:13

802.11n-ht40 Mode Low Channel



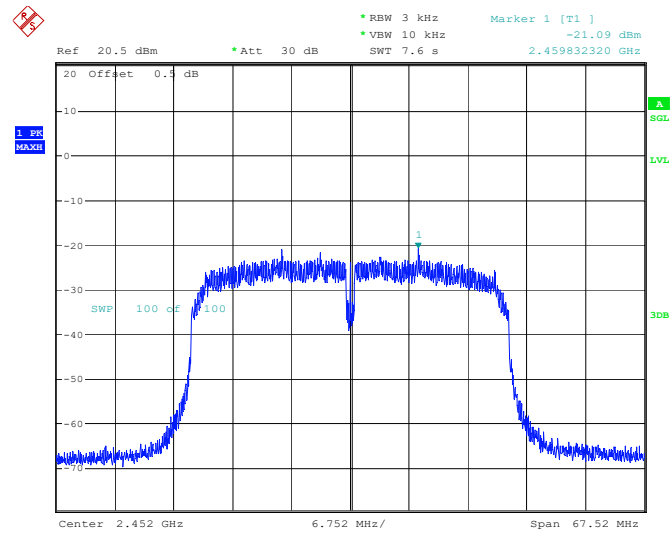
ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:34:10

802.11n-ht40 Mode Middle Channel



ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 09:49:54

802.11n-ht40 Mode High Channel



ProjectNo.:2507R30441E-RF Tester:Apollo Luo
Date: 29.MAR.2025 10:04:56

EUT PHOTOGRAPHS

Please refer to the attachment 2507R30441E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2507R30441E-RF-INP EUT INTERNAL PHOTOGRAPHS.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2507R30441E-RF-TSP SETUP PHOTOGRAPHS.

Declarations

1. Bay Area Compliance Laboratories Corp. (Xiamen) is not responsible for authenticity of any information provided by the applicant. Information from the applicant that may affect test results are marked with an asterisk “★”.
2. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
3. Unless required by the rule provided by the applicant or product regulations, then decision rule in this report did not consider the uncertainty.
4. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $k=2$ with the 95% confidence interval.
5. This report cannot be reproduced except in full, without prior written approval of Bay Area Compliance Laboratories Corp. (Xiamen).
6. This report is valid only with a valid digital signature. The digital signature may be available only under the adobe software above version 7.0.

******* END OF REPORT *******