10 DUAL CLIENT TEST/ CLIENT DEVICE - POWER ADJUSTMENT

LIMITS

FCC §15.407(a) (7), (8)

(7) For client devices, except for fixed client devices as defined in this subpart, operating under the control of a standard power access point in 5.925–6.425 GHz and 6.525–6.875 GHz bands, the maximum power spectral density must not exceed 17 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 30 dBm and the device must limit its power to no more than 6 dB below its associated standard power access point's authorized transmit power.

(8) For client devices operating under the control of an indoor access point in the 5.925–7.125 GHz bands, the maximum power spectral density must not exceed −1 dBm e.i.r.p. in any 1-megahertz band, and the maximum e.i.r.p. over the frequency band of operation must not exceed 24 dBm.

(II) (K) . Dual Client Test, Demonstration of Proper Power Adjustment based on Associated AP
A client device may connect to a Standard Power AP with a maximum power level of 30 dBm EIRP. A client may also connect to a Low Power indoor AP, but the power level is limited to a maximum of 24 dBm EIRP. If a client has the flexibility to connect to both APs, verification is needed to show that it can distinguish between the two configurations, and then control the power levels accordingly.

(II) (L). Proper Power Adjustment, Client Devices Connected to a Standard Power Access Point
A client device that connects to a Standard Power AP must limit its power to a minimum of 6 dB lower than its associated Standard Power access point's authorized transmit power. The term "authorized" means the AFC-approved power level for the AP to use on a particular channel.

TEST PROCEDURE

Per KDB 987594 D02 (II) (K) and (II) (L)

SET UP

The following setup was used as an alternate method to meet requirements for sections (II)(K) and (II)(L) for a dual client device. It verifies EUT ability to distinguish between an LPI AP and SP AP and operate at the power level permitted for each.

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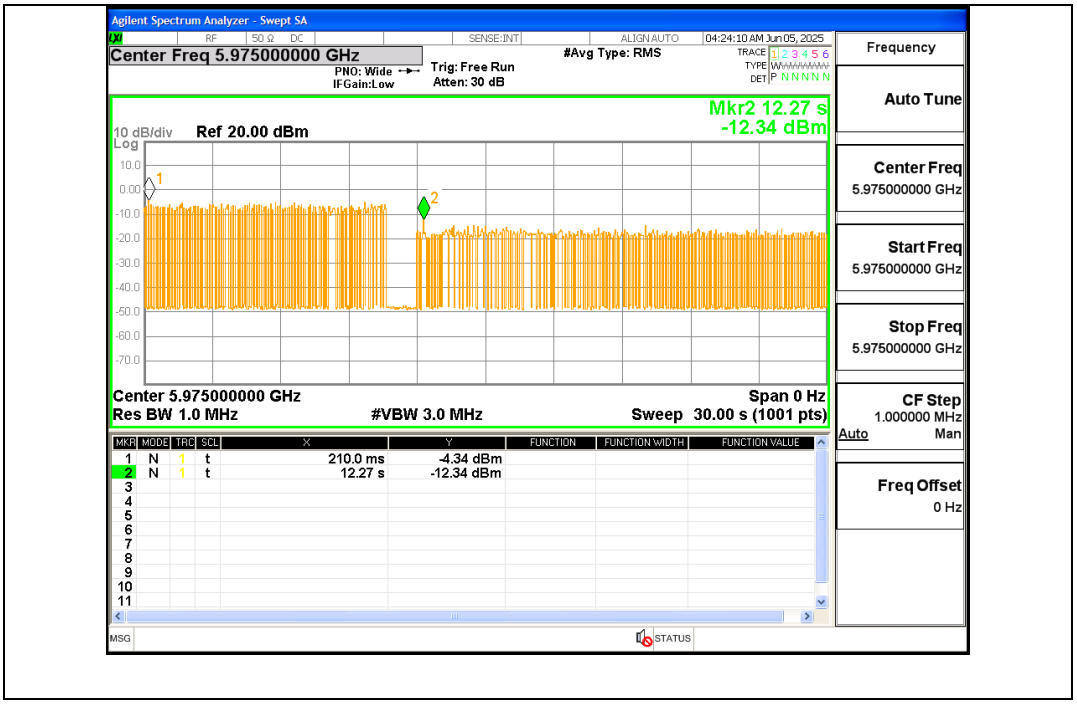
RESULTS FOR DUAL CLIENT TEST

Tested By:	GA 12485
Date:	2025-05-30

EUT Frequency (MHz)	AFC Authorized EIRP Power for AP (dBm)	Dual Client MIMO EIRP (dBm)	Results (Pass/Fail) (EUT-AFC Authorized AP Power <= -6dB)
5975	36	18.80	Pass
	28	18.67	Pass
	21	14.73	Pass

The plot below demonstrates the EUT's ability to distinguish between SP mode and LP mode connections, and to reduce power when transitioning from standard client mode to LPI client mode.

The EUT is connected to an AP simulator as an SP client. After ~11 seconds, the simulator switches to LP AP mode. The EUT's power is measured in SP client mode at Marker 1, and again after transitioning to LP client mode at Marker 2. The delta between Marker 2 and Marker 1 is ≥ -6 dB, demonstrating the EUT's ability to reduce power when switching from SP mode to LP mode.



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11 VERY LOW POWER TRANSMIT POWER CONTROL (TPC)

LIMITS

FCC §15.407 (d) (10)

(10) Very low power devices operating in the 5.925-7.125 GHz band shall employ a transmit power control (TPC) mechanism. A very low power device is required to have the capability to operate at least 6 dB below the maximum EIRP PSD value of -5 dBm/ MHz.

TEST PROCEDURE

1. Configure EUT and companion device for peer-to-peer communication (refer to block diagram in section 6.6)
2. Set variable attenuator to 0dB (noise free spectral environment, low RSSI simulation)
3. Establish a link and start communication between EUT and companion device
4. Capture PSD spectrum analyzer trace (2)
5. Set variable attenuator to 40dB (noisy spectral environment, high RSSI simulation)
6. Capture PSD spectrum analyzer trace (1)
7. For MIMO operations use the sum of the highest PSD from each individual antenna

SA Settings: 1MHz RBW/ 3MHz VBW
Span: 240MHz
Sweep: 1ms, trace averaging enabled for 100 sweeps with RMS detector enabled.

Set Up: See section 6.6

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RESULTS

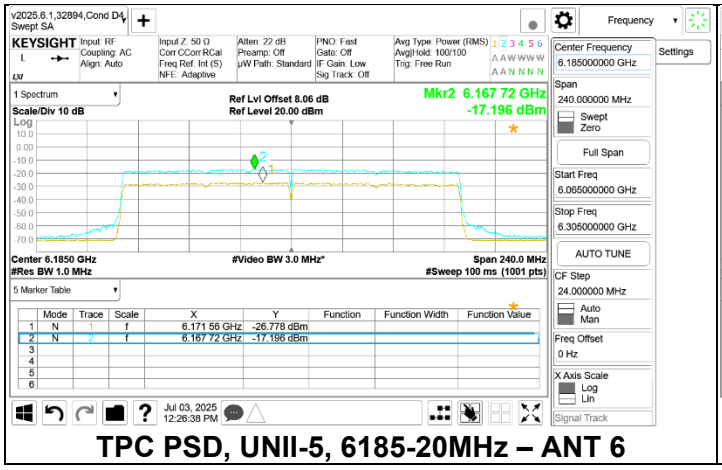
Test Engineer:	GA 12485
Test Date:	2025-06-03

2TX	UNII-5 band
Correlated Chains Directional Gain (dBi)	2.48
DCCF (dB)	0

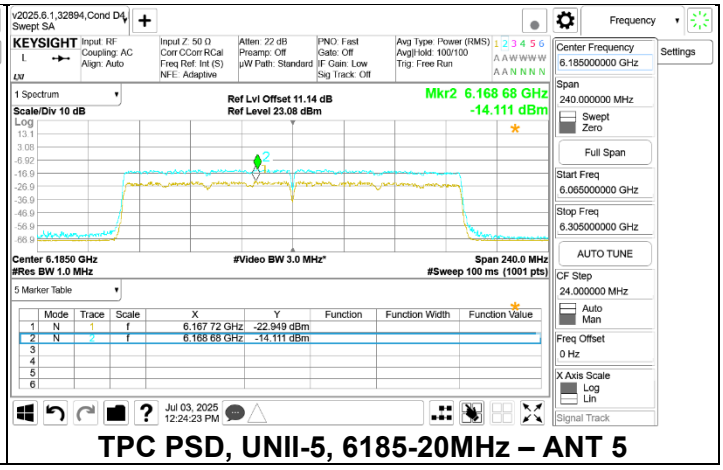
BW (MHz)	Frequency (MHz)	ANT 6		ANT 5		ANT 6+ANT 5	
		Trace 2 Low RSSI PSD (dBm/MHz)	Trace 1 High RSSI PSD (dBm/MHz)	Trace Low RSSI PSD (dBm/MHz)	Trace 1 High RSSI PSD (dBm/MHz)	2Tx Low RSSI EIRP PSD (dBm/MHz)	2Tx High RSSI EIRP PSD (dBm/MHz)
160	6185 (CH47)	-17.196	-26.778	-14.111	-22.949	-9.89	-18.96

Device complies because it can operate at a power less than -11dBm/MHz.

VLP TPC POWER LEVEL REDUCTION



TPC PSD, UNII-5, 6185-20MHz – ANT 6



TPC PSD, UNII-5, 6185-20MHz – ANT 5

12 SETUP PHOTOS

Refer to 15496249-EP1V1 FCC IC Setup_Photo for setup photos

APPENDIX A – SPOT CHECK EVALUATION

MODEL DIFFERENCES

The manufacturer hereby declares the following for models A3257, A3525, A3526 and A3527.

These models have the same PCB layout, design, common components, antennas, antenna locations and housing cases, except for the cellular bands that are enabled/disabled by software as shown below.

Model	FCC ID	IC ID	Feature Difference	Sim Support	Reference Model
A3257	BCG-E8950A	579C-E8950A	-With FR2/LTE/5GNR B14/29/71 -No B11/21 -With UL MIMO (n41/48/77)	eSIM	-
A3525	BCG-E8960A	579C-E8960A	-Without FR2 -Added B11/21 -No UL MIMO	eSIM	A3257
A3526	BCG-E8961A	579C-E8961A	-Without FR2 -No LTE/5GNR B14/29/71 -No LTE B11/21 -No UL MIMO	eSIM+pSIM	
A3527	BCG-E8962A	579C-E8962A	-Without FR2 -No LTE/5GNR B14/29/71 -No LTE B11/21 -With UL MIMO (n41/78/79) -No MSS / 5GNR B53	pSIM+pSIM	

Data reuse from the reference model where the variant model data meets the limits and has not changed by more than the criteria from KDB 484596 D01 v03 equation (4).

$$d_{dB} = | V_{dB} - R_{dB} | \quad (1)$$

$$d_{dB} \leq d_{dBmax} \quad (2)$$

$$d_{dBmax}(M_{dB}) = \begin{cases} (3 + M_{dB}/20)\ dB & \text{, for } 0 \leq M_{dB} \leq 60\ dB \\ 6\ dB & \text{, for } M_{dB} > 60\ dB \end{cases} \quad (4)$$

Where d_{dB} is deviation between the variant and the reference model, V_{dB} is variant spot check level, R_{db} is the corresponding reference measurement level, d_{dBmax} is the maximum deviation d_{dB} allowed, and M_{dB} is the margin in dB.

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SPOT CHECK VERIFICATION RESULTS SUMMARY FOR A3525

A3525 SPOT CHECK RESULTS												
Equipment Class	Frequency (GHz)	Mode	Data Rate	Test Item		Channel	Measured Frequency (GHz)	Original Model: A3257 FCC ID : BCG-E8950A IC : 579C-E8950A	Sub Model: A3525 FCC ID : BCG-E8960A IC : 579C-E8960A	Delta (dB)	Margin	Remarks
6CD / 6VL (UNII-5/6/7/8)	5925 - 6425 UNII-5	EHT160 SU (ANT 6)	MCS0	EIRP Power (dBm)	Fundamental LP	47	6.185	18.17	18.07	-0.10	-5.83	Note 1
	5925 - 6425 UNII-5	EHT20 SU (ANT 5+6)	MCS0	EIRP Power (dBm)	Fundamental SP	45	6.175	22.30	22.12	-0.18	-1.70	Note 1
	6875 - 7125 UNII-8	EHT160 SU (ANT 5+6)	MCS0	EIRP Power (dBm)	Fundamental VLP	207	6.985	12.99	12.84	-0.15	-1.01	Note 1
	5925 - 6425 UNII-5	11be EHT40 SU SP (ANT 5+6)	MCS11	Radiated Bandedge (dBm)	Horizontal Low Bandedge	3 (5965MHz)	5.924935	-33.37	-30.47	2.90	-6.37	Note 1
	6875 - 7125 UNII-8	EHT160 SU (ANT 6)	MCS11	Radiated Bandedge (dBm)	Horizontal High Bandedge	211 (6985MHz)	7.133312	-29.79	-30.13	-0.34	-2.79	Note 1
	5925 - 7125	11be EHT20 106T (CDD)	MCS0	RSE (dBuV/m) Avg	1 to 18	1 (5955MHz)	17.872889	46.26	45.81	-0.45	-7.74	Note 1

Note 1: Deviation from reference to variant within the value allowed by equation (4) in KDB 484596. Additional tests not required.
Note 2: Deviation from reference to variant exceeds the value allowed by equation (4) in KDB 484596. Additional tests performed on second channel.

SPOT CHECK VERIFICATION RESULTS SUMMARY FOR A3526

A3526 SPOT CHECK RESULTS												
Equipment Class	Frequency (GHz)	Mode	Data Rate	Test Item		Channel	Measured Frequency (GHz)	Original Model: A3257 FCC ID : BCG-E8950A IC : 579C-E8950A	Sub Model: A3526 FCC ID : BCG-E8961A IC : 579C-E8961A	Delta (dB)	Margin	Remarks
6CD / 6VL (UNII-5/6/7/8)	5925 - 6425 UNII-5	EHT160 SU (ANT 6)	MCS0	EIRP Power (dBm)	Fundamental LP	47	6.185	18.17	18.11	-0.06	-5.83	Note 1
	5925 - 6425 UNII-5	EHT20 SU (ANT 5+6)	MCS0	EIRP Power (dBm)	Fundamental SP	45	6.175	22.30	22.14	-0.16	-1.70	Note 1
	6875 - 7125 UNII-8	EHT160 SU (ANT 5+6)	MCS0	EIRP Power (dBm)	Fundamental VLP	207	6.985	12.99	12.92	-0.07	-1.01	Note 1
	5925 - 6425 UNII-5	11be EHT40 SU SP (ANT 5+6)	MCS11	Radiated Bandedge (dBm)	Horizontal Low Bandedge	3 (5965MHz)	5.924935	-33.37	-32.98	0.39	-6.37	Note 1
	6875 - 7125 UNII-8	EHT160 SU (ANT 6)	MCS11	Radiated Bandedge (dBm)	Horizontal High Bandedge	211 (6985MHz)	7.133312	-29.79	-30.21	-0.42	-2.79	Note 1
	5925 - 7125	11be EHT20 106T (CDD)	MCS0	RSE (dBuV/m) Avg	1 to 18	1 (5955MHz)	17.872889	46.26	46.02	-0.24	-7.74	Note 1

Note 1: Deviation from reference to variant within the value allowed by equation (4) in KDB 484596. Additional tests not required.
Note 2: Deviation from reference to variant exceeds the value allowed by equation (4) in KDB 484596. Additional tests performed on second channel.

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SPOT CHECK VERIFICATION RESULTS SUMMARY FOR A3527

A3527 SPOT CHECK RESULTS												
Equipment Class	Frequency (GHz)	Mode	Data Rate	Test Item		Channel	Measured Frequency (GHz)	Original Model: A3257 FCC ID : BCG-E8950A IC : 579C-E8950A	Sub Model: A3527 FCC ID : BCG-E8962A IC : 579C-E8962A	Delta (dB)	Margin	Remarks
6CD / 6VL (UNII-5/6/7/8)	5925 - 6425 UNII-5	EHT160 SU (ANT 6)	MCS0	EIRP Power (dBm)	Fundamental LP	47	6.185	18.17	18.15	-0.02	-5.83	Note 1
	5925 - 6425 UNII-5	EHT20 SU (ANT 5+6)	MCS0	EIRP Power (dBm)	Fundamental SP	45	6.175	22.30	22.21	-0.09	-1.70	Note 1
	6875 - 7125 UNII-8	EHT160 SU (ANT 5+6)	MCS0	EIRP Power (dBm)	Fundamental VLP	207	6.985	12.99	12.94	-0.05	-1.01	Note 1
	5925 - 6425 UNII-5	11be EHT40 SU SP (ANT 5+6)	MCS11	Radiated Bandedge (dBm)	Horizontal Low Bandedge	3 (5965MHz)	5.924935	-33.37	-34.61	-1.24	-6.37	Note 1
	6875 - 7125 UNII-8	EHT160 SU (ANT 6)	MCS11	Radiated Bandedge (dBm)	Horizontal High Bandedge	211 (6985MHz)	7.133312	-29.79	-31.32	-1.53	-2.79	Note 1
	5925 - 7125	11be EHT20 106T (CDD)	MCS0	RSE (dBuV/m) Avg	1 to 18	1 (5955MHz)	17.872889	46.26	45.92	-0.34	-7.74	Note 1

Note 1: Deviation from reference to variant within the value allowed by equation (4) in KDB 484596. Additional tests not required.
Note 2: Deviation from reference to variant exceeds the value allowed by equation (4) in KDB 484596. Additional tests performed on second channel.

END OF REPORT

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