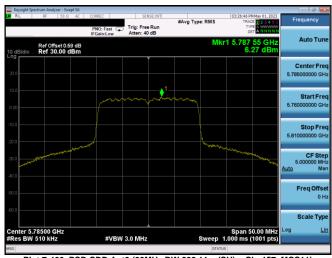
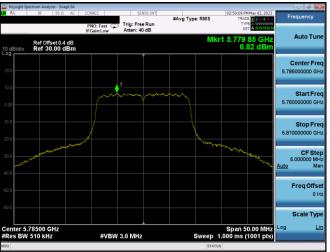


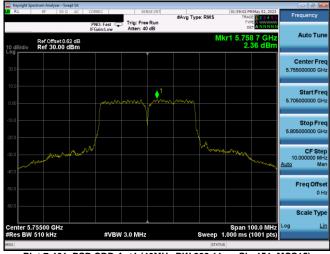
Plot 7-457. PSD CDD Ant1 (20MHz BW 802.11n - Ch. 157, MCS15)



Plot 7-460. PSD CDD Ant2 (20MHz BW 802.11ax(SU) - Ch. 157, MCS11)



Plot 7-458. PSD CDD Ant2 (20MHz BW 802.11n - Ch. 157, MCS15)



Plot 7-461. PSD CDD Ant1 (40MHz BW 802.11n - Ch. 151, MCS15)



Plot 7-459. PSD CDD Ant1 (20MHz BW 802.11ax(SU) - Ch. 157, MCS11)



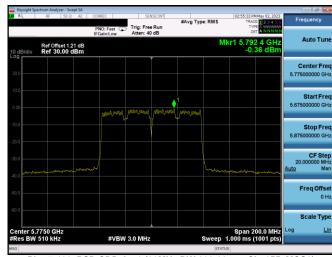
Plot 7-462. PSD CDD Ant2 (40MHz BW 802.11n - Ch. 151, MCS15)

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 151 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 151 01 322





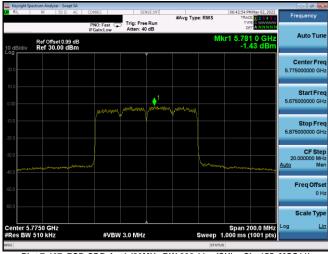
Plot 7-463. PSD CDD Ant1 (40MHz BW 802.11ax(SU) - Ch. 151, MCS11)



Plot 7-466. PSD CDD Ant2 (80MHz BW 802.11ac - Ch. 155, MCS8)



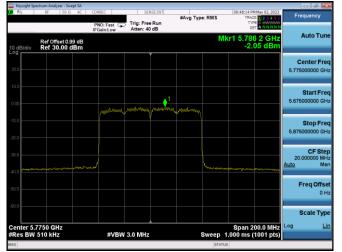
Plot 7-464. PSD CDD Ant2 (40MHz BW 802.11ax(SU) - Ch. 151, MCS11)



Plot 7-467. PSD CDD Ant1 (80MHz BW 802.11ax(SU) - Ch. 155, MCS11)



Plot 7-465. PSD CDD Ant1 (80MHz BW 802.11ac - Ch. 155, MCS8)



Plot 7-468. PSD CDD Ant2 (80MHz BW 802.11ax(SU) - Ch. 155, MCS11)

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 450 of 202
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 152 of 322



	Frequency [MHz]	Channel No.	802.11 Mode	Mode	Data Rate [Mbps]	Ant1 Power Density [dBm/MHz]	Ant2 Power Density [dBm/MHz]	Summed Power Density [dBm/MHz]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
	5180	36	n (20MHz)	SDM	39/43.3 (MCS10)	3.33	2.82	6.09	2.92	9.01	10.0	-0.99
	5200	40	n (20MHz)	SDM	39/43.3 (MCS10)	3.27	3.29	6.29	2.92	9.21	10.0	-0.79
	5240	48	n (20MHz)	SDM	39/43.3 (MCS10)	3.10	3.25	6.18	2.92	9.10	10.0	-0.90
	5180	36	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	1.81	1.30	4.57	2.92	7.49	10.0	-2.51
_	5200	40	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	1.98	1.87	4.94	2.92	7.85	10.0	-2.15
- 5	5240	48	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	1.66	1.95	4.81	2.92	7.73	10.0	-2.27
Ban	5190	38	n (40MHz)	SDM	81/90 (MCS10)	3.45	3.26	6.37	2.92	9.28	10.0	-0.72
	5230	46	n (40MHz)	SDM	81/90 (MCS10)	3.03	3.07	6.06	2.92	8.98	10.0	-1.02
	5190	38	ax (SU) (40MHz)	SDM	98/103.2 (MCS2)	0.61	-0.06	3.30	2.92	6.22	10.0	-3.78
	5230	46	ax (SU) (40MHz)	SDM	98/103.2 (MCS2)	1.61	1.58	4.60	2.92	7.52	10.0	-2.48
	5210	42	ac (80MHz)	SDM	175.5/195 (MCS2)	-2.54	-2.37	0.56	2.92	3.48	10.0	-6.52
	5210	42	ax (SU) (80MHz)	SDM	204/216.2 (MCS2)	-4.77	-4.98	-1.86	2.92	1.05	10.0	-8.95

Table 7-116. ISED Band 1 e.i.r.p. Power Spectral Density Measurements SDM (Low Data Rate)

	Frequency [MHz]	Channel No.	802.11 Mode	Mode	Data Rate [Mbps]	Ant1 Power Density [dBm/MHz]	Ant2 Power Density [dBm/MHz]	Summed Power Density [dBm/MHz]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
	5180	36	n (20MHz)	SDM	39/43.3 (MCS10)	3.64	3.19	6.43	2.92	9.35	10.0	-0.65
	5200	40	n (20MHz)	SDM	39/43.3 (MCS10)	3.57	3.21	6.40	2.92	9.32	10.0	-0.68
	5240	48	n (20MHz)	SDM	39/43.3 (MCS10)	3.11	3.35	6.24	2.92	9.16	10.0	-0.84
	5180	36	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	2.49	2.04	5.28	2.92	8.20	10.0	-1.80
	5200	40	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	2.14	1.96	5.06	2.92	7.98	10.0	-2.02
<u>5</u>	5240	48	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	1.97	2.11	5.05	2.92	7.97	10.0	-2.03
Band	5190	38	n (40MHz)	SDM	81/90 (MCS10)	2.78	2.59	5.70	2.92	8.61	10.0	-1.39
	5230	46	n (40MHz)	SDM	81/90 (MCS10)	3.05	3.37	6.22	2.92	9.14	10.0	-0.86
	5190	38	ax (SU) (40MHz)	SDM	98/103.2 (MCS2)	-0.10	-0.17	2.87	2.92	5.79	10.0	-4.21
	5230	46	ax (SU) (40MHz)	SDM	98/103.2 (MCS2)	1.87	2.00	4.94	2.92	7.86	10.0	-2.14
	5210	42	ac (80MHz)	SDM	175.5/195 (MCS2)	-2.41	-2.67	0.47	2.92	3.39	10.0	-6.61
	5210	42	ax (SU) (80MHz)	SDM	204/216.2 (MCS2)	-4.39	-4.70	-1.53	2.92	1.39	10.0	-8.61

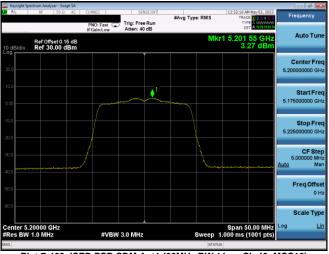
Table 7-117. ISED Band 1 e.i.r.p. Power Spectral Density Measurements SDM (Mid Data Rate)

	Frequency [MHz]	Channel No.	802.11 Mode	Mode	Data Rate [Mbps]	Ant1 Power Density [dBm/MHz]	Ant2 Power Density [dBm/MHz]	Summed Power Density [dBm/MHz]	Directional Antenna Gain [dBi]	e.i.r.p. Power Density [dBm/MHz]	ISED Max e.i.r.p. Power Density [dBm/MHz]	Margin [dB]
	5180	36	n (20MHz)	SDM	39/43.3 (MCS10)	2.36	1.90	5.14	2.92	8.06	10.0	-1.94
	5200	40	n (20MHz)	SDM	39/43.3 (MCS10)	2.17	2.22	5.20	2.92	8.12	10.0	-1.88
	5240	48	n (20MHz)	SDM	39/43.3 (MCS10)	2.02	2.09	5.06	2.92	7.98	10.0	-2.02
	5180	36	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	2.04	2.05	5.06	2.92	7.97	10.0	-2.03
_	5200	40	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	2.30	1.96	5.14	2.92	8.06	10.0	-1.94
	5240	48	ax (SU) (20MHz)	SDM	48/51.6 (MCS2)	1.84	2.25	5.06	2.92	7.98	10.0	-2.02
Band	5190	38	n (40MHz)	SDM	81/90 (MCS10)	1.26	0.87	4.08	2.92	6.99	10.0	-3.01
	5230	46	n (40MHz)	SDM	81/90 (MCS10)	1.71	1.88	4.81	2.92	7.72	10.0	-2.28
	5190	38	ax (SU) (40MHz)	SDM	98/103.2 (MCS2)	-1.23	-0.43	2.20	2.92	5.12	10.0	-4.88
	5230	46	ax (SU) (40MHz)	SDM	98/103.2 (MCS2)	1.05	1.52	4.30	2.92	7.22	10.0	-2.78
	5210	42	ac (80MHz)	SDM	175.5/195 (MCS2)	-4.34	-4.89	-1.60	2.92	1.32	10.0	-8.68
	5210	42	ax (SU) (80MHz)	SDM	204/216.2 (MCS2)	-4.67	-5.14	-1.89	2.92	1.03	10.0	-8.97

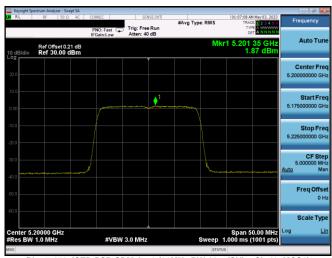
Table 7-118. ISED Band 1 e.i.r.p. Power Spectral Density Measurements SDM (High Data Rate)

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 153 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 153 01 322

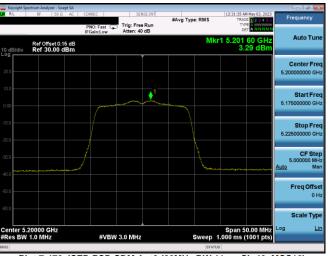




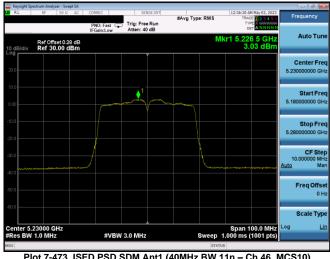
Plot 7-469. ISED PSD SDM Ant1 (20MHz BW 11n - Ch.40, MCS10)



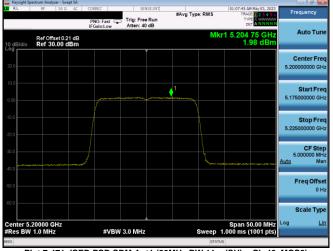
Plot 7-472. ISED PSD SDM Ant2 (20MHz BW 11ax(SU) - Ch.40, MCS2)



Plot 7-470. ISED PSD SDM Ant2 (20MHz BW 11n - Ch.40, MCS10)



Plot 7-473. ISED PSD SDM Ant1 (40MHz BW 11n - Ch.46, MCS10)



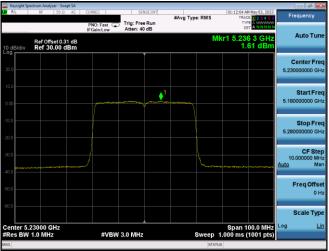
Plot 7-471. ISED PSD SDM Ant1 (20MHz BW 11ax(SU) - Ch.40, MCS2)



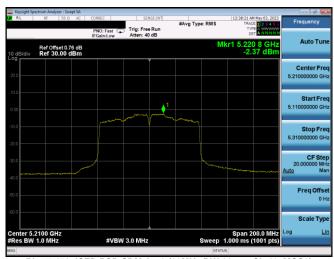
Plot 7-474. ISED PSD SDM Ant2 (40MHz BW 11n - Ch.46, MCS10)

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 454 of 222
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 154 of 322

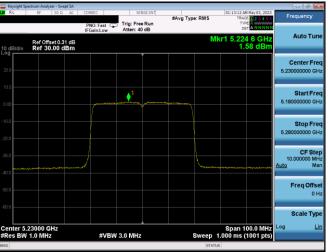




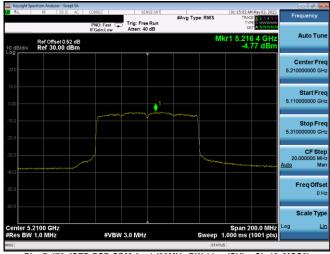
Plot 7-475. ISED PSD SDM Ant1 (40MHz BW 11ax(SU) - Ch.46, MCS2)



Plot 7-478. ISED PSD SDM Ant2 (80MHz BW 11ac - Ch.42, MCS2)



Plot 7-476. ISED SDM PSD Ant2 (40MHz BW 11ax(SU) - Ch.46, MCS2)



Plot 7-479. ISED PSD SDM Ant1 (80MHz BW 11ax (SU) - Ch.42, MCS2)



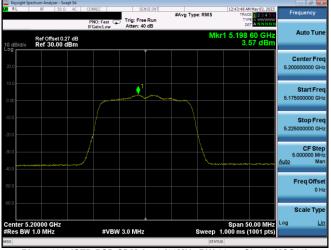
Plot 7-477. ISED PSD SDM Ant1 (80MHz BW 11ac - Ch.42, MCS2)



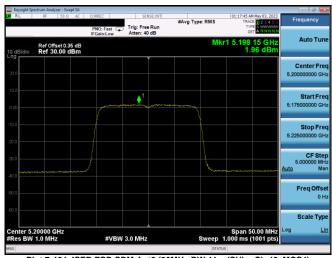
Plot 7-480. ISED PSD SDM Ant2 (80MHz BW 11ax (SU) - Ch.42, MCS2)

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 155 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 155 01 322





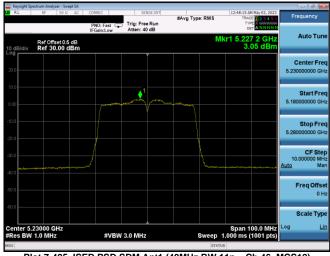
Plot 7-481. ISED PSD SDM Ant1 (20MHz BW 11n - Ch.40, MCS12)



Plot 7-484. ISED PSD SDM Ant2 (20MHz BW 11ax(SU) - Ch.40, MCS4)



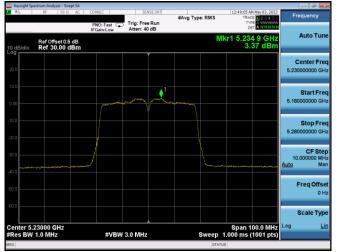
Plot 7-482. ISED PSD SDM Ant2 (20MHz BW 11n - Ch.40, MCS12)



Plot 7-485. ISED PSD SDM Ant1 (40MHz BW 11n - Ch.46, MCS12)



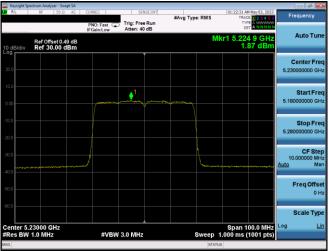
Plot 7-483. ISED PSD SDM Ant1 (20MHz BW 11ax(SU) - Ch.40, MCS4)



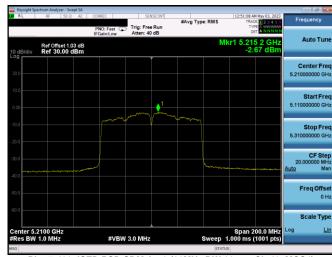
Plot 7-486. ISED PSD SDM Ant2 (40MHz BW 11n - Ch.46, MCS12)

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 156 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 156 01 322

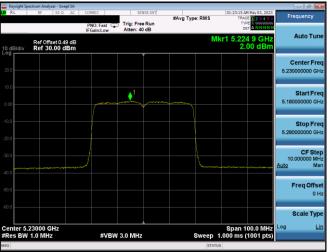




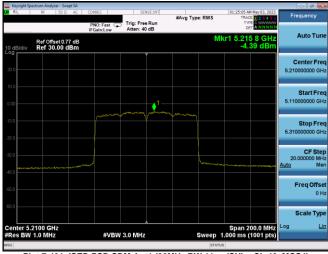
Plot 7-487. ISED PSD SDM Ant1 (40MHz BW 11ax(SU) - Ch.46, MCS4)



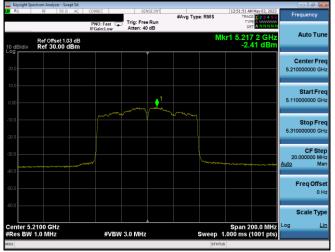
Plot 7-490. ISED PSD SDM Ant2 (80MHz BW 11ac - Ch.42, MCS4)



Plot 7-488. ISED PSD SDM Ant2 (40MHz BW 11ax(SU) - Ch.46, MCS4)



Plot 7-491. ISED PSD SDM Ant1 (80MHz BW 11ax (SU) - Ch.42, MCS4)



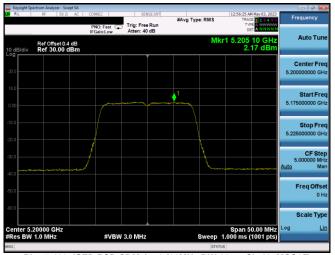
Plot 7-489. ISED PSD SDM Ant1 (80MHz BW 11ac - Ch.42, MCS4)



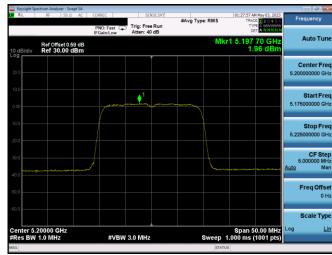
Plot 7-492. ISED PSD SDM Ant2 (80MHz BW 11ax (SU) - Ch.42, MCS4)

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 157 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 157 01 322





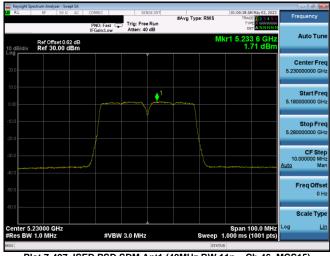
Plot 7-493. ISED PSD SDM Ant1 (20MHz BW 11n - Ch.40, MCS15)



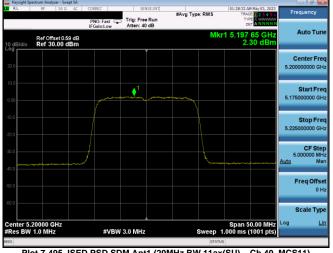
Plot 7-496. ISED PSD SDM Ant2 (20MHz BW 11ax(SU) - Ch.40, MCS11)



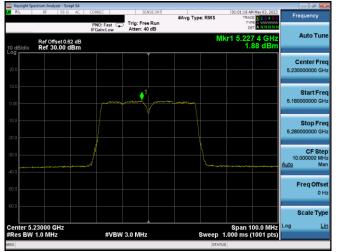
Plot 7-494. ISED PSD SDM Ant2 (20MHz BW 11n - Ch.40, MCS15)



Plot 7-497. ISED PSD SDM Ant1 (40MHz BW 11n - Ch.46, MCS15)



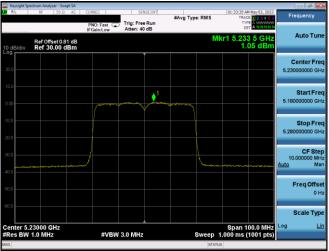
Plot 7-495. ISED PSD SDM Ant1 (20MHz BW 11ax(SU) - Ch.40, MCS11)



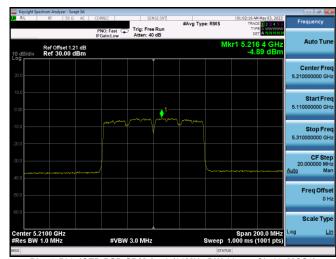
Plot 7-498. ISED PSD SDM Ant2 (40MHz BW 11n - Ch.46, MCS15)

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 158 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 158 01 322

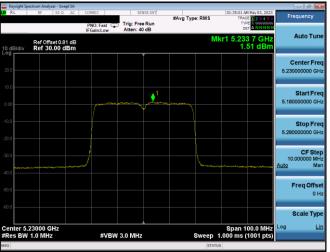




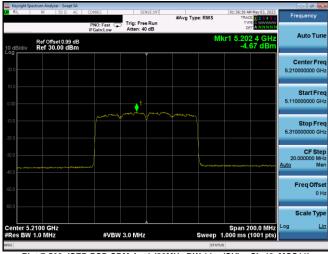
Plot 7-499. ISED PSD SDM Ant1 (40MHz BW 11ax(SU) - Ch.46, MCS11)



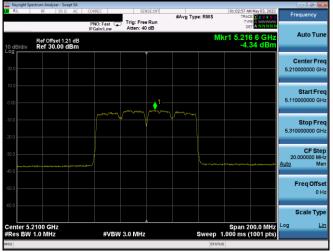
Plot 7-502. ISED PSD SDM Ant2 (80MHz BW 11ac - Ch.42, MCS8)



Plot 7-500. ISED PSD SDM Ant2 (40MHz BW 11ax(SU) - Ch.46, MCS11)



Plot 7-503. ISED PSD SDM Ant1 (80MHz BW 11ax(SU) - Ch.42, MCS11)



Plot 7-501. ISED PSD SDM Ant1 (80MHz BW 11ac - Ch.42, MCS8)



Plot 7-504. ISED PSD SDM Ant1 (80MHz BW 11ax(SU) - Ch.42, MCS11)

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 450 of 222
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 159 of 322



#### Note:

Per ANSI C63.10-2013 Section 14.3.2.2 and KDB 662911 v02r01 Section E)2), the power spectral density at Antenna 1 and Antenna 2 were first measured separately as shown in the section above. The measured values were then summed in linear power units then converted back to dBm.

# **Sample Directional Gain Calculation:**

For correlated signals, assuming the antenna gain is 4.7 dBi for Antenna 1 and 0.6 dBi for Antenna 2.

Directional gain = 
$$10 \log[(10^{G_1/20} + 10^{G_2/20} + ... + 10^{G_N/20})^2 / N_{ANT}] dBi$$
  
=  $10 \log[(10^{4.7/20} + 10^{0.6/20} / 2] dBi$   
=  $5.90 dBi$ 

For uncorrelated signals, assuming the antenna gain is 4.7 dBi for Antenna 1 and 0.6 dBi for Antenna 2.

Directional gain = 
$$10 \log[(10^{G_1/10} + 10^{G_2/10} + ... + 10^{G_N/10}) / N_{ANT}] dBi$$
  
=  $10 \log[(10^{4.7/10} + 10^{0.6/10} / 2] dBi$   
=  $3.12 dBi$ 

### Sample CDD/SDM Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average conducted power spectral density was measured to be 3.33 dBm for Antenna 1 and 2.82 dBm for Antenna 2.

#### Sample e.i.r.p Power Spectral Density Calculation:

At 5180MHz in 802.11n (20MHz BW) mode, the average CDD/SDM power density was calculated to be 6.09 dBm with directional gain of 2.92 dBi.

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dage 460 of 222
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 160 of 322



# 7.6 Radiated Spurious Emissions – Above 1GHz

§15.407(b) §15.205 §15.209; RSS-Gen [8.9]

#### **Test Overview and Limit**

All out of band radiated spurious emissions are measured with a spectrum analyzer connected to a receive antenna while the EUT is operating at its maximum duty cycle, at its maximum power control level, as defined in ANSI C63.10-2013 and KDB 789033 D02 v02r01, and at the appropriate frequencies. All channels, modes (e.g. 802.11a, 802.11n, 802.11ax(SU) (20MHz BW), 802.11n, 802.11ax(SU) (40MHz BW), and 802.11ac, 802.11ax(SU) (80MHz), and modulations/data rates were investigated among all UNII bands. Only the radiated emissions of the configuration that produced the worst case emissions are reported in this section.

For transmitters operating in the 5.15-5.25 GHz and 5.25-5.35 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the 5.47-5.725 GHz band: All emissions outside of the 5.47-5.725 GHz band shall not exceed an EIRP of -27 dBm/MHz.

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

All out of band emissions appearing in a restricted band as specified in Section 15.205 of the Title 47 CFR and Table 7 of RSS-Gen (8.10) must not exceed the limits shown in Table 7-119 per Section 15.209 and RSS-Gen (8.9).

Frequency	Field Strength [µV/m]	Measured Distance [Meters]
Above 960.0 MHz	500	3

Table 7-119. Radiated Limits

#### **Test Procedures Used**

ANSI C63.10-2013 – Sections 12.7.7.2, 12.7.6, 12.7.5 KDB 789033 D02 v02r01 – Section G

### **Test Settings**

#### **Average Field Strength Measurements**

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = power average (RMS)
- Number of measurement points = 1001 (Number of points must be > 2 x span/RBW)
- 6. Averaging type = power (RMS)
- 7. Sweep time = auto couple
- Trace was averaged over 100 sweeps

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 161 of 222
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 161 of 322



# Peak Field Strength Measurements

- 1. Analyzer center frequency was set to the frequency of the radiated spurious emission of interest
- 2. RBW = 1MHz
- 3. VBW = 3MHz
- 4. Detector = peak
- 5. Sweep time = auto couple
- 6. Trace mode = max hold
- 7. Trace was allowed to stabilize

# **Test Setup**

The EUT and measurement equipment were set up as shown in the diagram below.

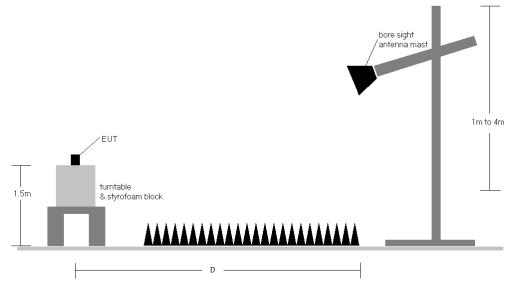


Figure 7-5. Test Instrument & Measurement Setup

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 162 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 162 01 322



## **Test Notes**

- 1. All emissions that lie in the restricted bands (denoted by a \* next to the frequency) specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-119.
- 2. All spurious emissions lying in restricted bands specified in §15.205 and Section 8.10 of RSS-Gen are below the limit shown in Table 7-119. All spurious emissions that do not lie in a restricted band are subject to a peak limit of -27dBm/MHz. At a distance of 3 meters, the field strength limit in dBμV/m can be determined by adding a "conversion" factor of 95.2dB to the EIRP limit of -27dBm/MHz to obtain the limit for out of band spurious emissions of 68.2dBμV/m.
- 3. The antenna is manipulated through typical positions, polarity and length during the tests. The EUT is manipulated through three orthogonal planes.
- 4. This unit was tested with its standard battery.
- 5. The spectrum is measured from 9kHz to the 10th harmonic of the fundamental frequency of the transmitter using CISPR quasi peak detector below 1GHz. Above 1 GHz, average and peak measurements were taken using linearly polarized horn antennas.
- 6. D is the measurement test distance and emissions 1-18GHz were measured at a 3 meters test distance while emissions above 18GHz were measured at a 1 meter test distance with the application of a distance correction factor.
- 7. The wide spectrum spurious emissions plots shown on the following pages are used only for the purpose of emission identification. Any emissions found to be within 20dB of the limit are fully investigated and the results are shown in this section.
- 8. All data rates were investigated and only the worse case is reported
- 9. The unit was tested with all possible modes and only the highest emission is reported.
- 10. The "-" shown in the following RSE tables are used to denote a noise floor measurement.

#### **Sample Calculations**

## **Determining Spurious Emissions Levels**

- Field Strength Level [dBμV/m] = Analyzer Level [dBm] + 107 + AFCL [dB/m]
- AFCL [dB/m] = Antenna Factor [dB/m] + Cable Loss [dB] Preamplifier Gain [dB]
- Margin [dB] = Field Strength Level [dBμV/m] Limit [dBμV/m]

#### **Radiated Band Edge Measurement Offset**

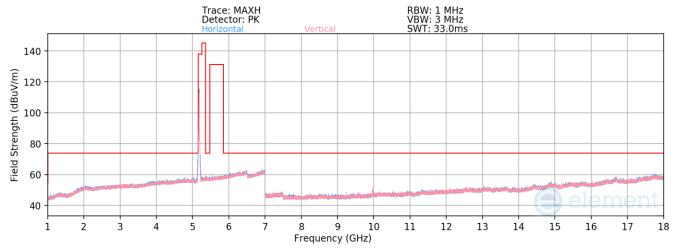
The amplitude offset shown in the radiated restricted band edge plots in Section 7.6 was calculated using the formula:

Offset (dB) = (Antenna Factor + Cable Loss + Attenuator) - Preamplifier Gain

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Dogo 162 of 222
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 163 of 322



# 7.6.1 Ant1 Radiated Spurious Emission



Plot 7-505. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 36)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5180MHz

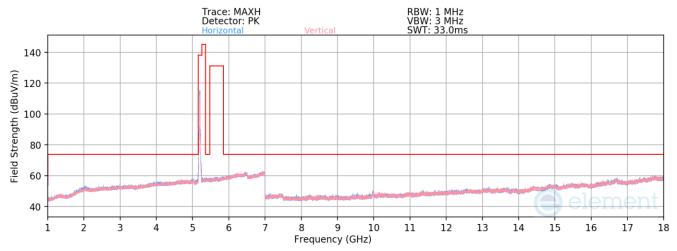
Channel: 36

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	V	167	253	-67.97	11.87	50.90	68.20	-17.30
	10360.00	Peak	-	-	-	-71.64	12.32	47.68	68.20	-20.52
*	15540.00	Average	-	-	-	-86.24	18.12	38.88	53.98	-15.09
*	15540.00	Peak	-	-	-	-75.19	18.12	49.93	73.98	-24.04

Table 7-120. Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 164 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 164 01 322





Plot 7-506. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 40)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5200MHz

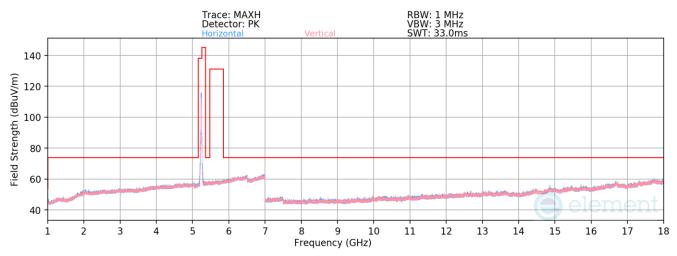
Channel: 40

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	V	167	253	-68.43	11.87	50.44	68.20	-17.76
	10400.00	Peak	-	-	-	-72.12	12.51	47.39	68.20	-20.81
*	15600.00	Average	-	-	-	-86.45	18.21	38.76	53.98	-15.22
*	15600.00	Peak	-	-	-	-75.32	18.21	49.89	73.98	-24.09

Table 7-121, Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 165 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 165 01 322





Plot 7-507. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 48)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5240MHz

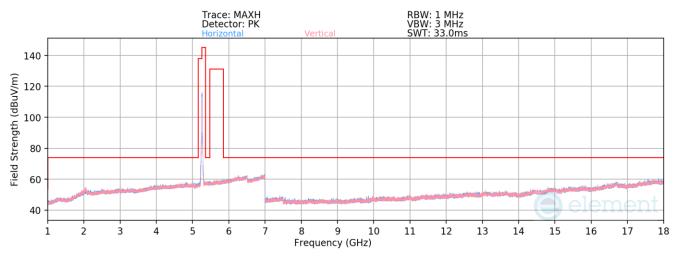
Channel: 48

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	٧	277	149	-68.05	11.87	50.82	68.20	-17.38
	10480.00	Peak	-	-	-	-72.20	12.64	47.44	68.20	-20.76
*	15720.00	Average	-	-	-	-86.13	18.75	39.62	53.98	-14.36
*	15720.00	Peak	-	-	-	-74.73	18.75	51.02	73.98	-22.96

Table 7-122. Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 166 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 166 01 322





Plot 7-508. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 52)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5260MHz

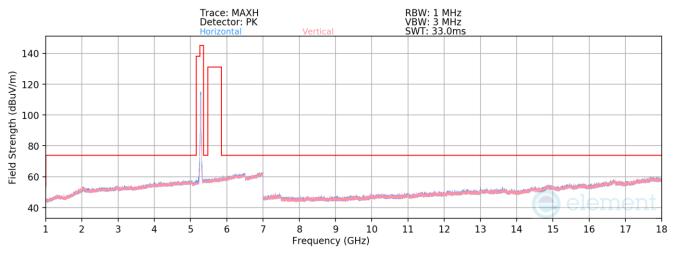
Channel: 52

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	V	280	152	-68.35	11.87	50.52	68.20	-17.68
	10520.00	Peak	-	-	-	-73.01	12.63	46.62	68.20	-21.58
*	15780.00	Average	-	-	-	-86.95	19.20	39.25	53.98	-14.73
*	15780.00	Peak	-	-	-	-74.87	19.20	51.33	73.98	-22.65

Table 7-123. Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 167 of 322	
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Fage 107 01 322	





Plot 7-509. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 56)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5280MHz

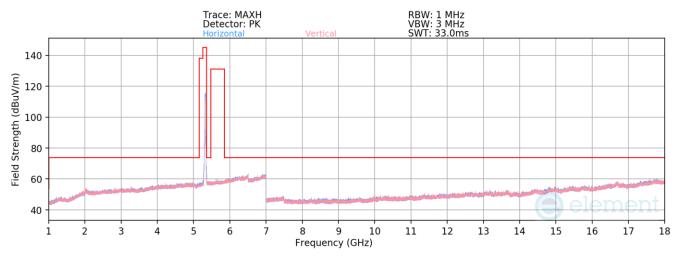
Channel: 56

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	V	265	152	-68.30	11.87	50.57	68.20	-17.63
	10560.00	Peak	-	-	-	-72.10	12.95	47.85	68.20	-20.35
*	15840.00	Average	-	-	-	-86.60	19.24	39.64	53.98	-14.34
*	15840.00	Peak	-	-	-	-74.68	19.24	51.56	73.98	-22.42

Table 7-124. Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 168 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 166 01 322





Plot 7-510. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 64)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5320MHz

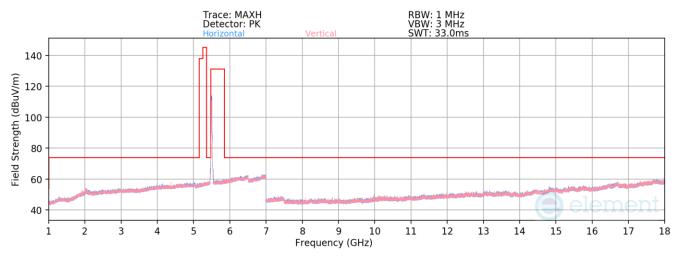
Channel: 64

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	>	264	152	-68.20	11.87	50.67	68.20	-17.53
*	10640.00	Average	-	-	-	-83.75	12.36	35.61	53.98	-18.37
*	10640.00	Peak	-	-	-	-72.25	12.36	47.11	73.98	-26.87
*	15960.00	Average	-	-	-	-86.61	18.82	39.21	53.98	-14.76
*	15960.00	Peak	-	-	-	-75.13	18.82	50.69	73.98	-23.28

Table 7-125. Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 169 of 322	
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Fage 169 01 322	





Plot 7-511. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 100)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5500MHz

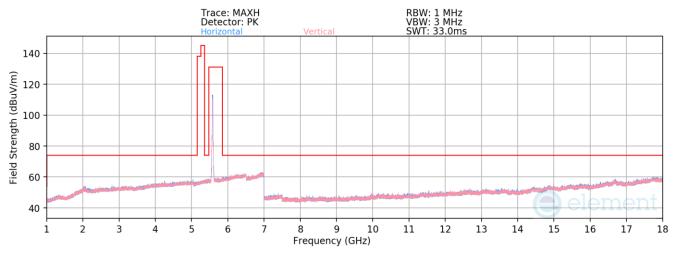
Channel: 100

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	V	273	152	-68.19	11.87	50.68	68.20	-17.52
*	11000.00	Average	-	-	-	-84.27	13.08	35.81	53.98	-18.17
*	11000.00	Peak	-	-	-	-72.32	13.08	47.76	73.98	-26.22
	16500.00	Peak	-	-	-	-73.41	20.23	53.82	68.20	-14.38

Table 7-126. Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 170 of 322	
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Fage 170 01 322	





Plot 7-512. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 116)

 Mode:
 802.11n

 Data Rate:
 MCS2

 Distance of Measurements:
 3 Meters

 Operating Frequency:
 5580Hz

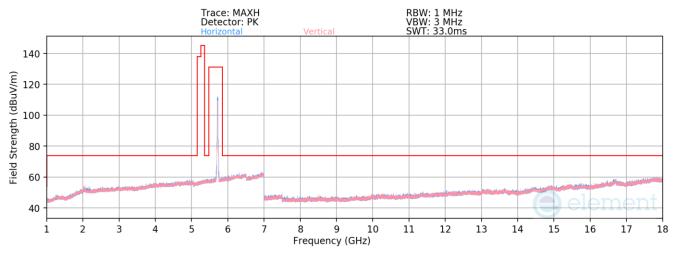
 Channel:
 116

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	V	265	152	-67.62	11.87	51.25	68.20	-16.95
*	11160.00	Average	-	-	-	-83.52	12.65	36.13	53.98	-17.85
*	11160.00	Peak	-	-	-	-72.06	12.65	47.59	73.98	-26.39
	16740.00	Peak	-	-	-	-73.32	21.41	55.09	68.20	-13.11

Table 7-127, Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager
Test Report S/N:	Test Dates:	EUT Type:	Page 171 of 322
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 171 01 322





Plot 7-513. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 144)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5720

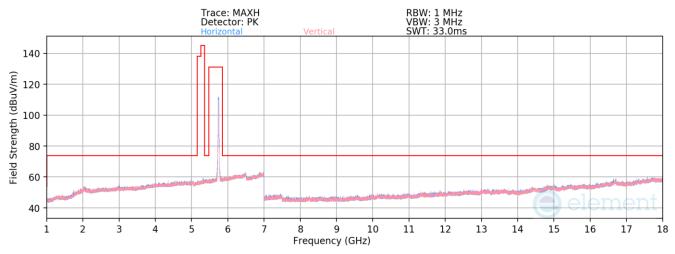
Channel: 144

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	>	264	152	-68.22	11.87	50.65	68.20	-17.55
*	11440.00	Average	-	-	-	-84.04	13.23	36.19	53.98	-17.79
*	11440.00	Peak	-	-	-	-72.38	13.23	47.85	73.98	-26.13
	17160.00	Peak	-	-	-	-72.69	22.21	56.52	68.20	-11.68

Table 7-128. Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 172 of 322	
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Fage 172 01 322	





Plot 7-514. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 149)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5745MHz

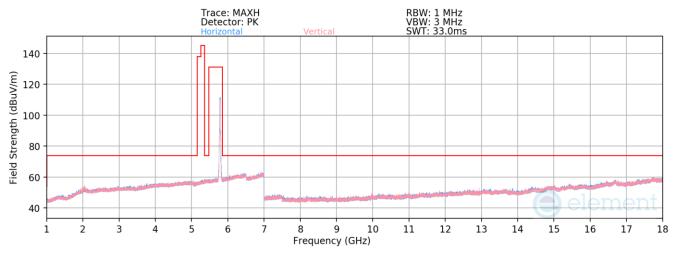
Channel: 149

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	V	264	152	-68.03	11.87	50.84	68.20	-17.36
*	11490.00	Average	-	-	-	-84.39	13.35	35.96	53.98	-18.02
*	11490.00	Peak	-	-	-	-72.74	13.35	47.61	73.98	-26.37
	17235.00	Peak	-	-	-	-73.57	22.33	55.76	68.20	-12.44

Table 7-129. Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 173 of 322	
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Fage 173 01 322	





Plot 7-515. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 157)

 Mode:
 802.11n

 Data Rate:
 MCS2

 Distance of Measurements:
 3 Meters

 Operating Frequency:
 5785MHz

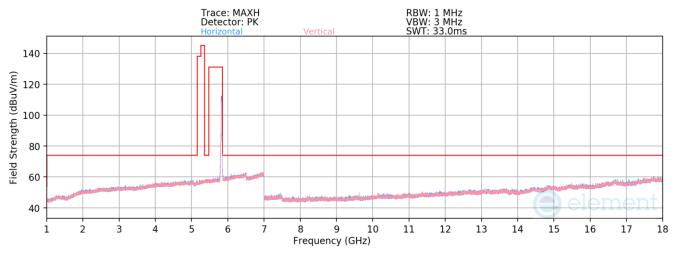
 Channel:
 157

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	٧	264	152	-68.30	11.87	50.57	68.20	-17.63
*	11570.00	Average	-	-	-	-84.36	13.53	36.17	53.98	-17.81
*	11570.00	Peak	-	-	-	-72.96	13.53	47.57	73.98	-26.41
	17355.00	Peak	-	-	-	-72.25	22.91	57.66	68.20	-10.54

Table 7-130. Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 174 of 322	
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 174 01 322	





Plot 7-516. Radiated Spurious Emissions above 1GHz Ant1 (802.11n - Ch. 165)

Mode: 802.11n

Data Rate: MCS2

Distance of Measurements: 3 Meters

Operating Frequency: 5825MHz

Channel: 165

	Frequency [MHz]	Detector	Ant. Pol. [H/V]	Antenna Height [cm]	Turntable Azimuth [degree]	Analyzer Level [dBm]	AFCL [dB/m]	Field Strength [dBµV/m]	Limit [dBµV/m]	Margin [dB]
	10000.00	Peak	٧	264	152	-68.35	11.87	50.52	68.20	-17.68
*	11650.00	Average	-	-	-	-84.23	13.52	36.29	53.98	-17.69
*	11650.00	Peak	-	-	-	-73.32	13.52	47.20	73.98	-26.78
	17475.00	Peak	-	-	-	-74.05	23.62	56.57	68.20	-11.63

Table 7-131, Radiated Measurements Ant1

FCC ID: BCGA2117 IC: 579C-A2117	element	MEASUREMENT REPORT (CERTIFICATION)	Approved by: Technical Manager	
Test Report S/N:	Test Dates:	EUT Type:	Page 175 of 322	
1C2302130007-07.BCG	2/10/2023 - 5/4/2023	Head Mounted Device	Page 175 01 322	