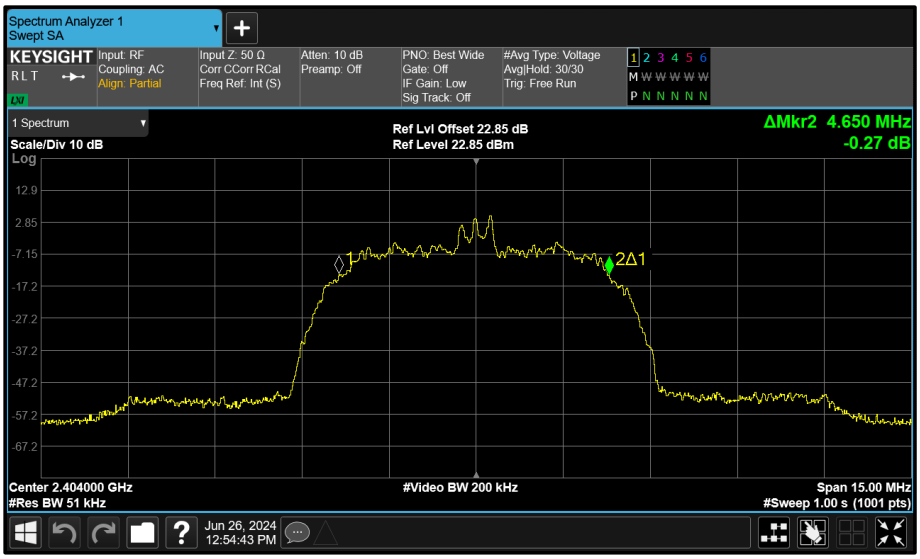

Figure 153 - Core 0 (A) 2404 MHz (CH2) 99% Bandwidth

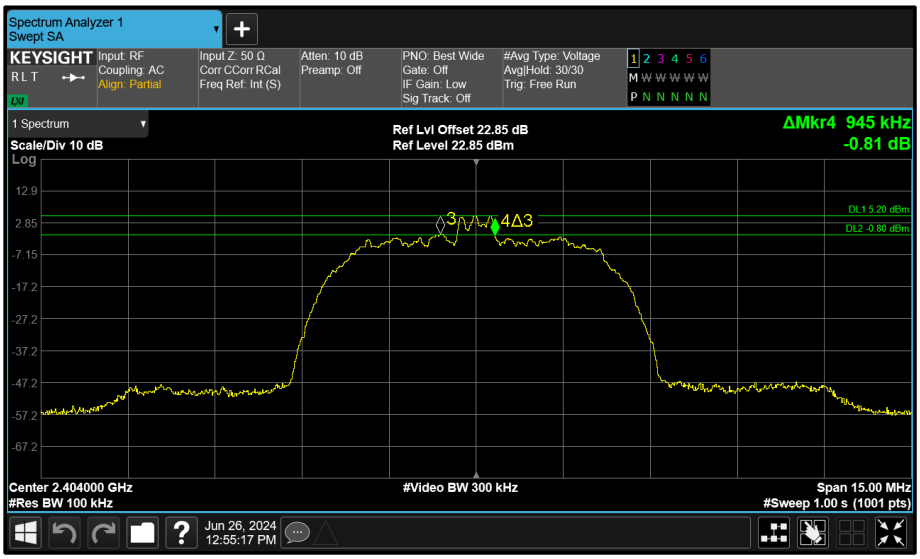

Figure 154 - Core 0 (A) 2404 MHz (CH2) 6 dB Bandwidth

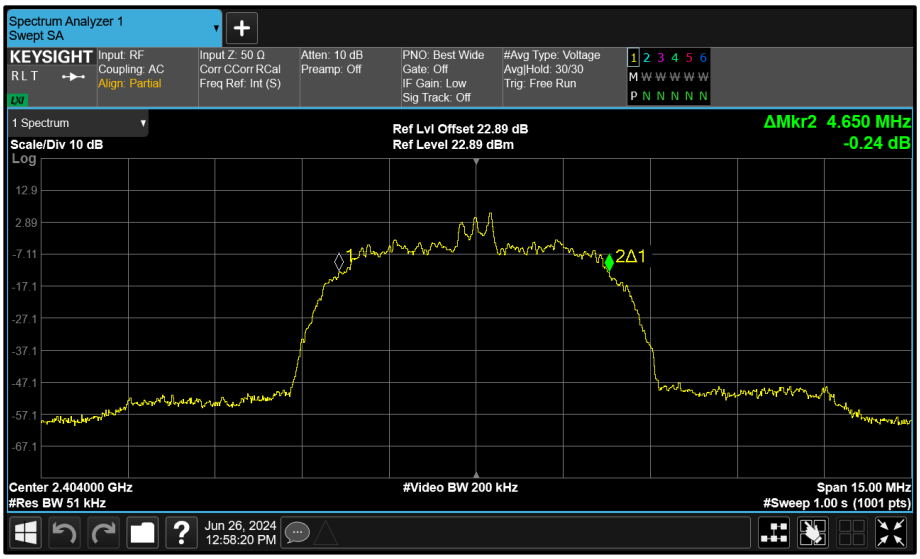

Figure 155 - Core 1 (B) 2404 MHz (CH2) 99% Bandwidth

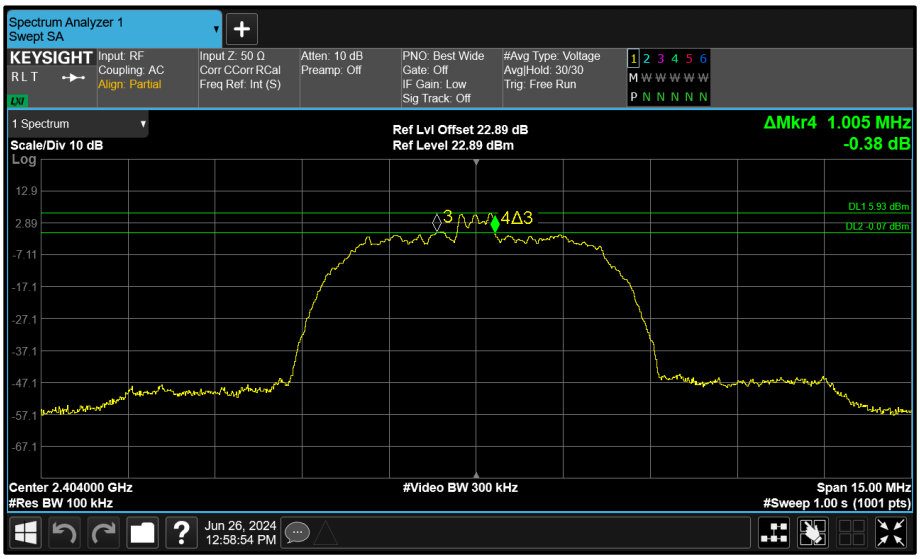

Figure 156 - Core 1 (B) 2404 MHz (CH2) 6 dB Bandwidth

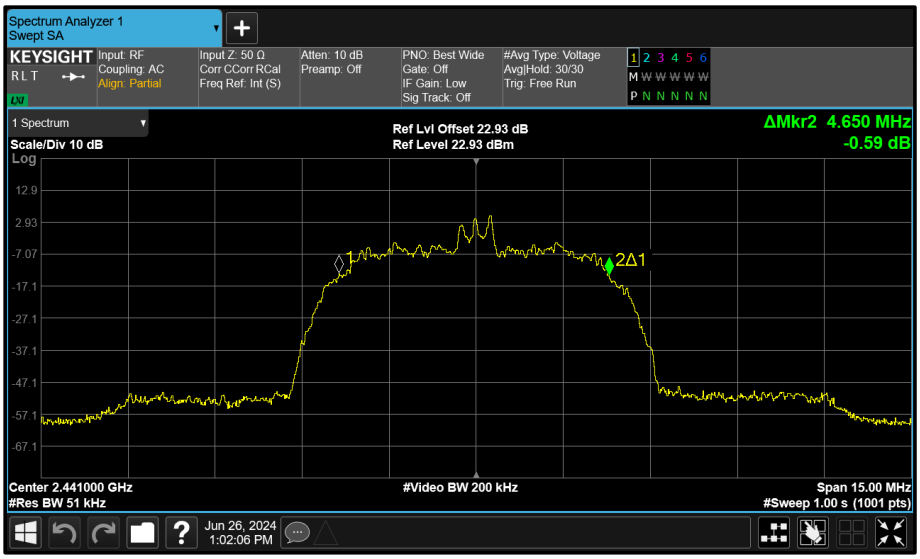

Figure 157 - Core 0 (A) 2441 MHz (CH39) 99% Bandwidth

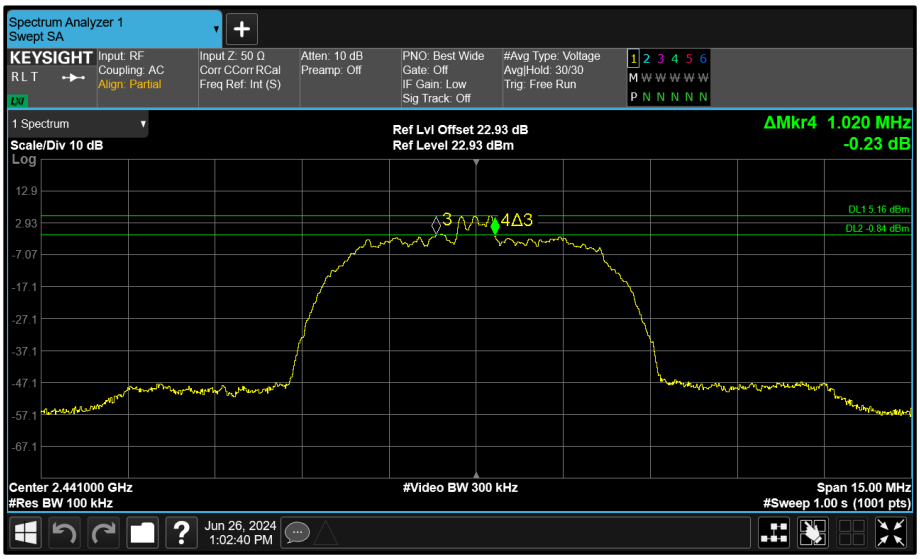

Figure 158 - Core 0 (A) 2441 MHz (CH39) 6 dB Bandwidth

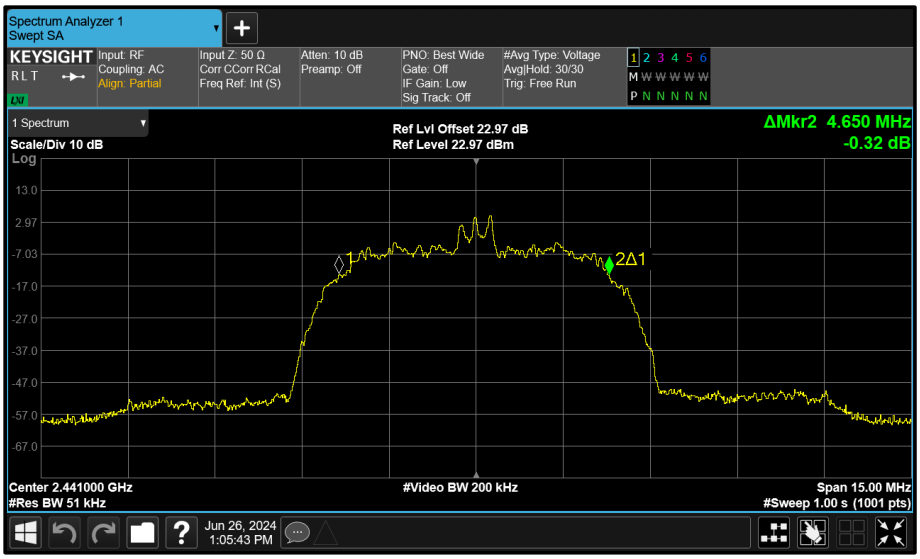

Figure 159 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

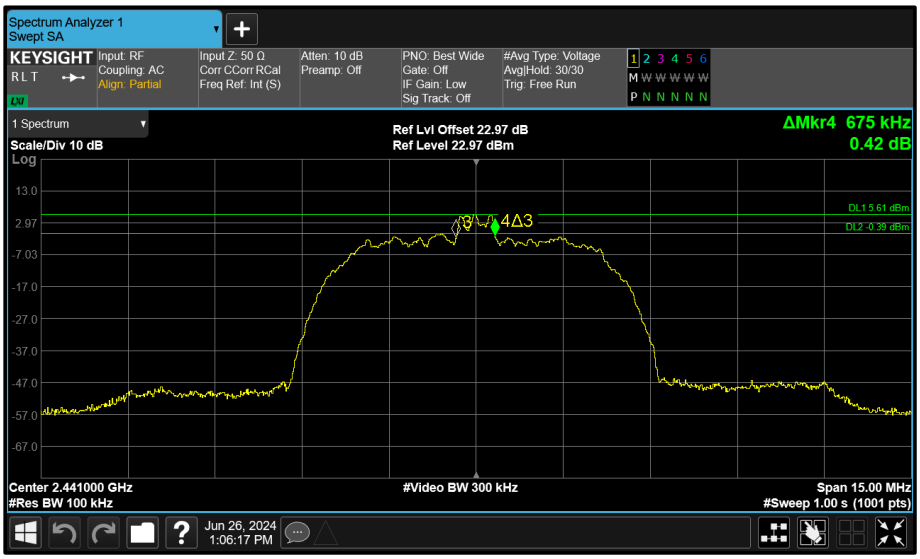

Figure 160 - Core 1 (B) 2441 MHz (CH39) 6 dB Bandwidth

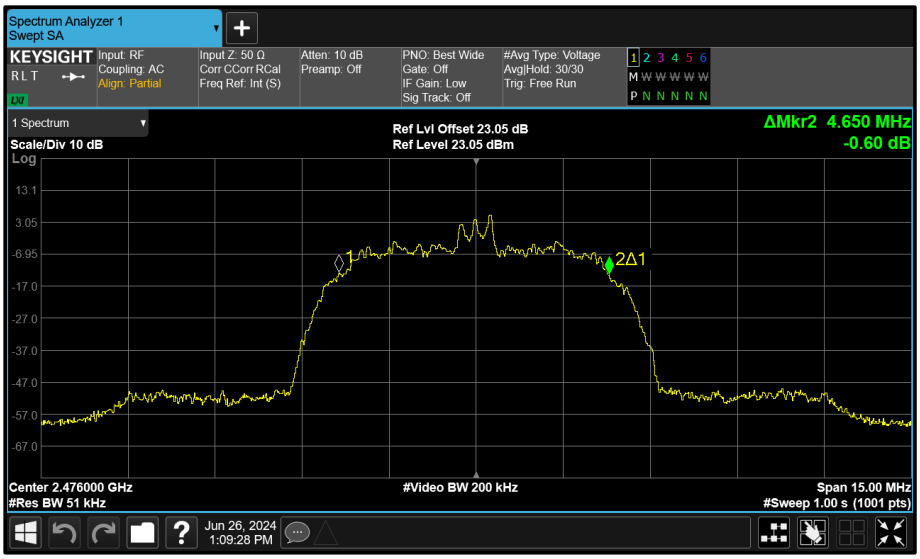

Figure 161 - Core 0 (A) 2476 MHz (CH74) 99% Bandwidth

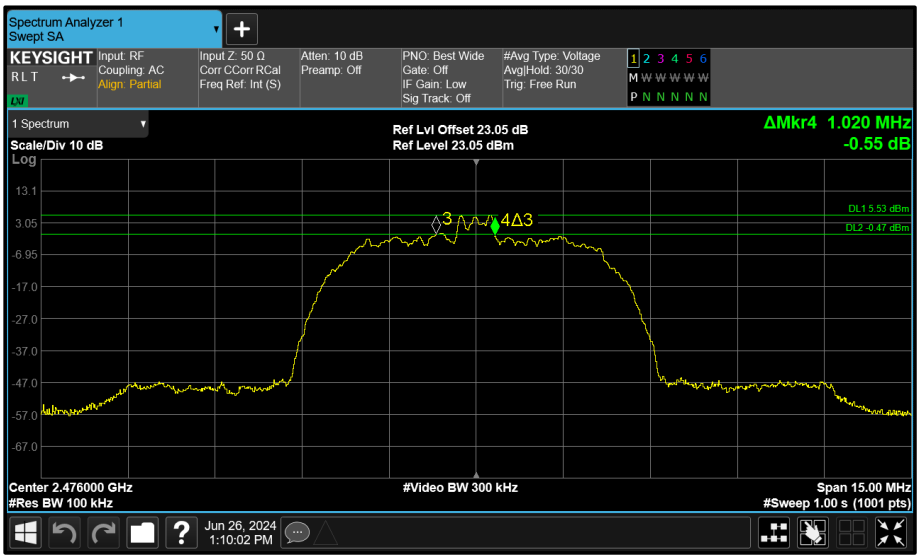

Figure 162 - Core 0 (A) 2476 MHz (CH74) 6 dB Bandwidth

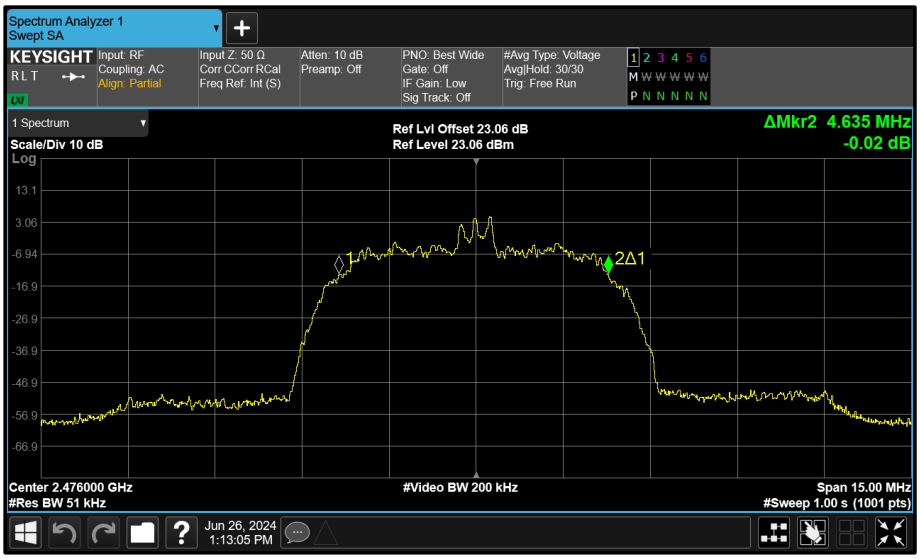

Figure 163 - Core 1 (B) 2476 MHz (CH74) 99% Bandwidth

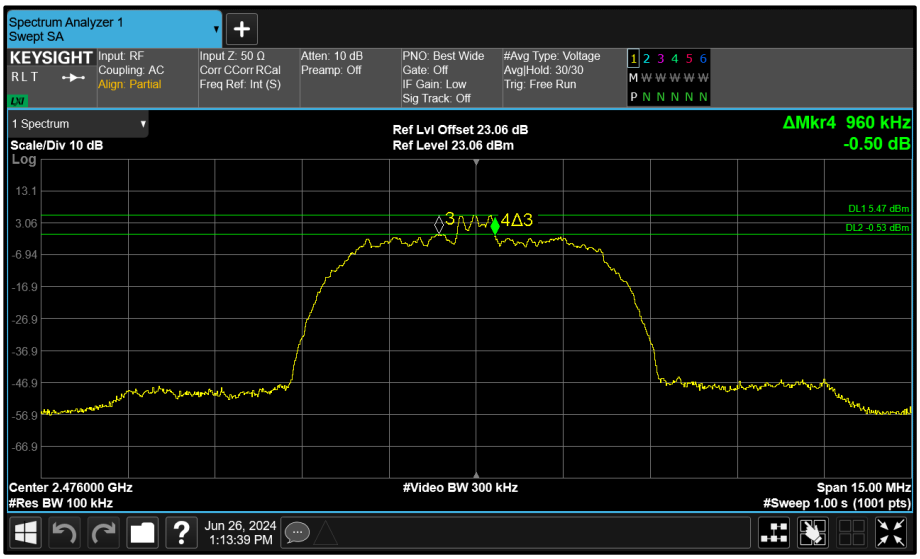

Figure 164 - Core 1 (B) 2476 MHz (CH74) 6 dB Bandwidth

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (LE 1M)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	0.728	0.728	-	-	≥500.0
2440	0.728	0.680	-	-	≥500.0
2480	0.728	0.692	-	-	≥500.0

Table 45 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	1.040	1.036	-	-	-
2440	1.040	1.040	-	-	-
2480	1.040	1.036	-	-	-

Table 46 - 99% Bandwidth Results

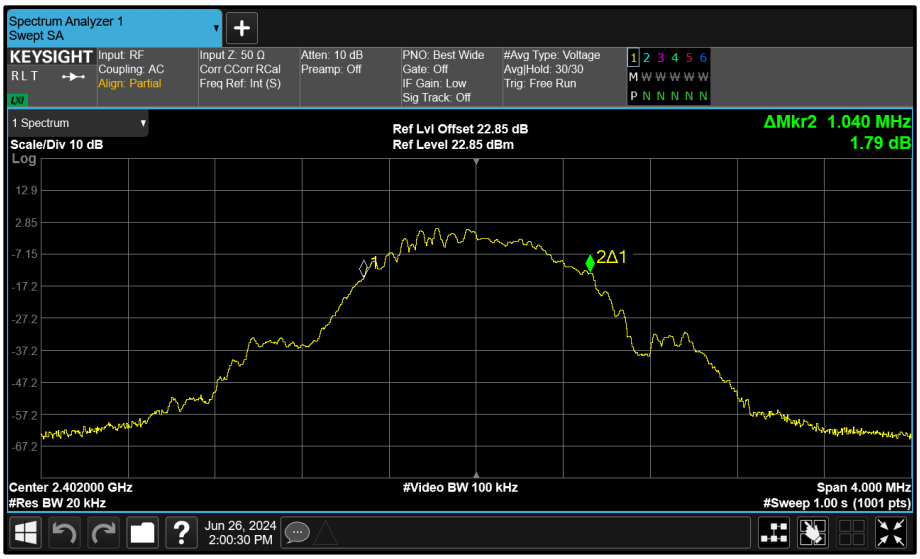

Figure 165 - Core 0 (A) 2402 MHz (CH37) 99% Bandwidth

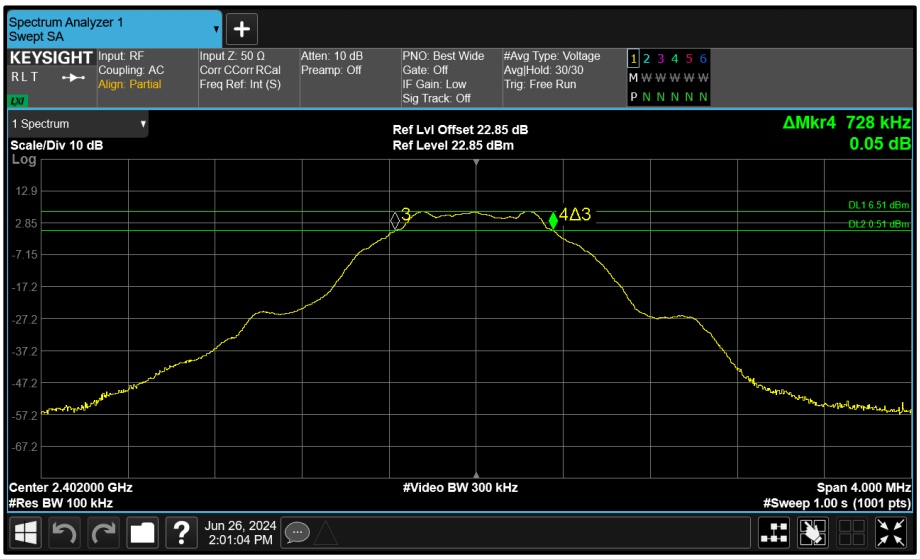

Figure 166 - Core 0 (A) 2402 MHz (CH37) 6 dB Bandwidth

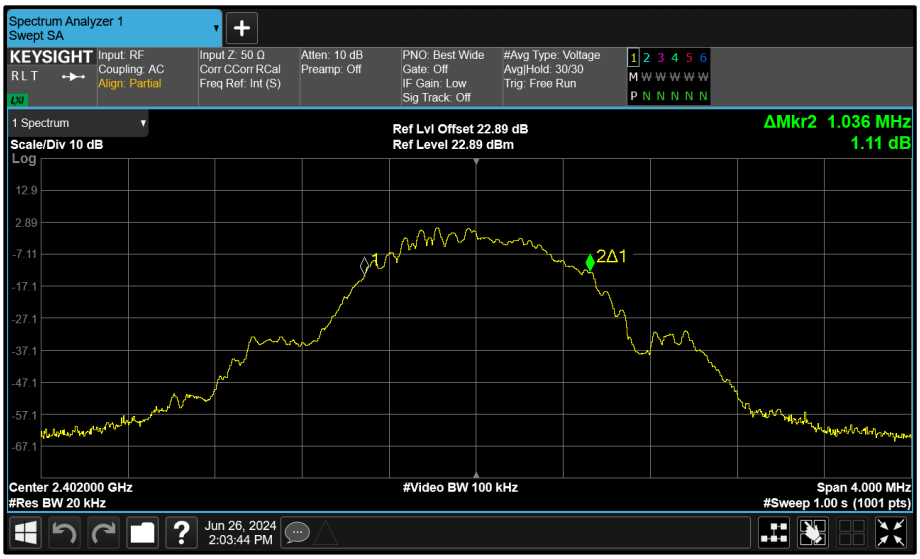

Figure 167 - Core 1 (B) 2402 MHz (CH37) 99% Bandwidth

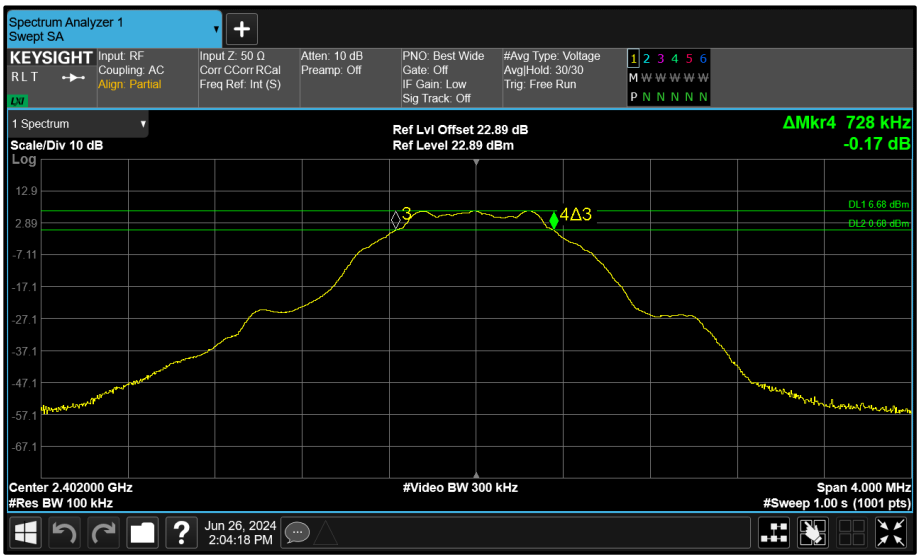

Figure 168 - Core 1 (B) 2402 MHz (CH37) 6 dB Bandwidth

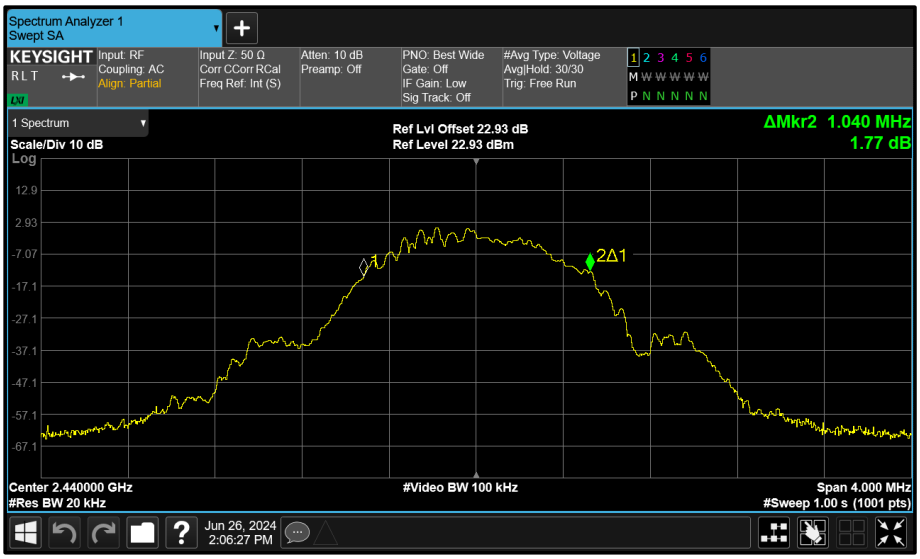

Figure 169 - Core 0 (A) 2440 MHz (CH17) 99% Bandwidth

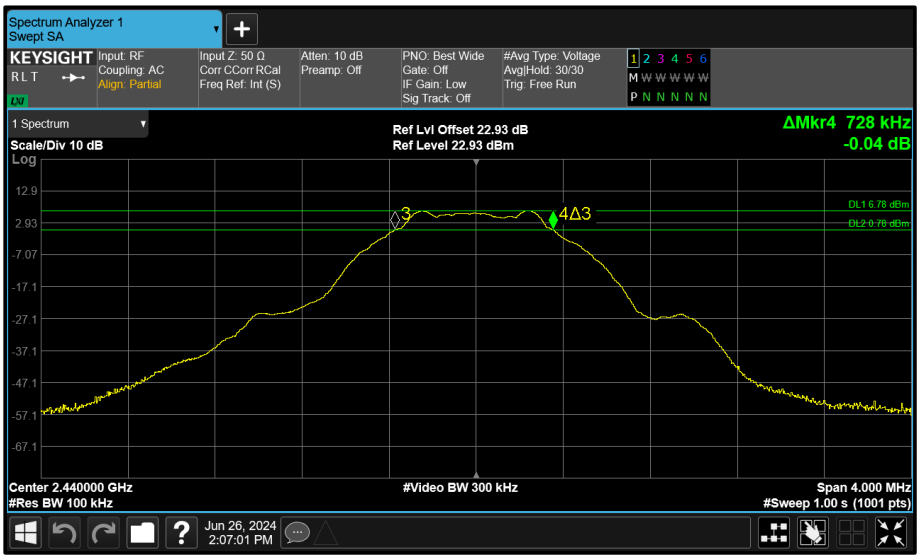

Figure 170 - Core 0 (A) 2440 MHz (CH17) 6 dB Bandwidth

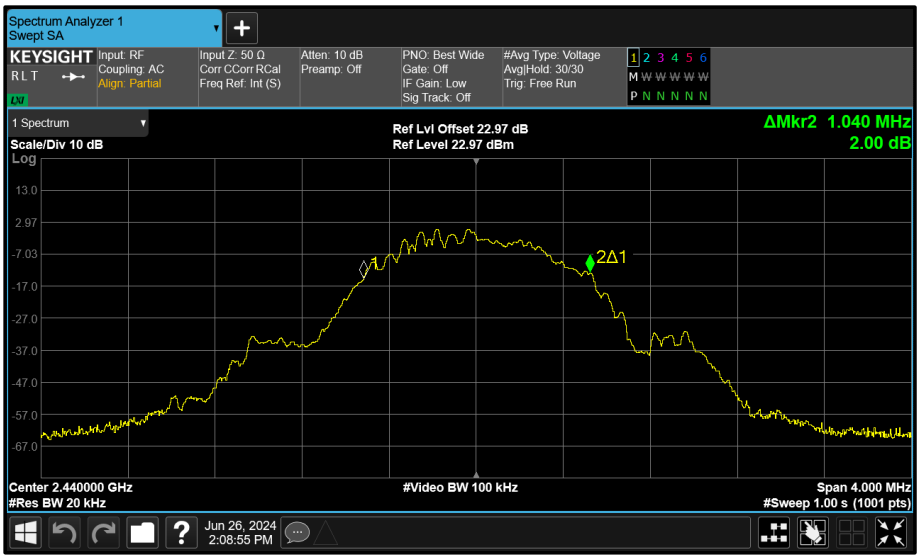

Figure 171 - Core 1 (B) 2440 MHz (CH17) 99% Bandwidth

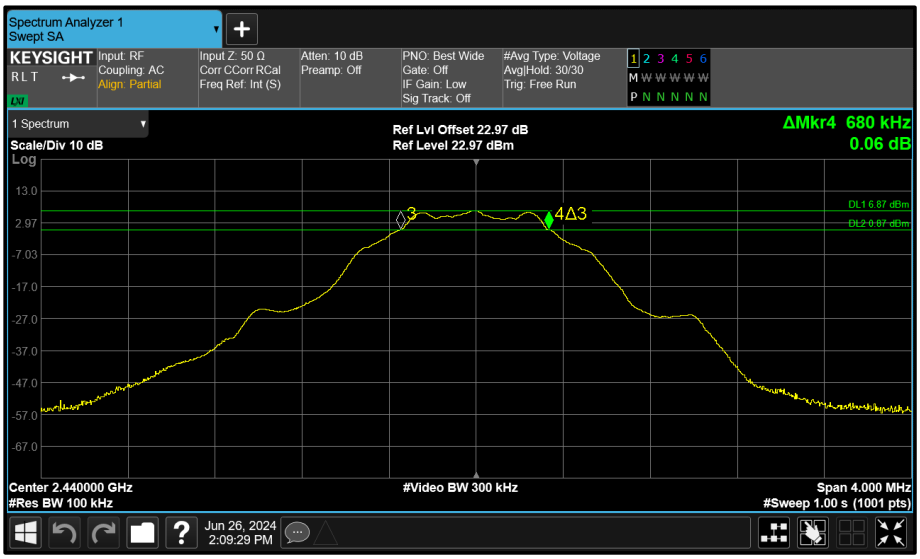

Figure 172 - Core 1 (B) 2440 MHz (CH17) 6 dB Bandwidth

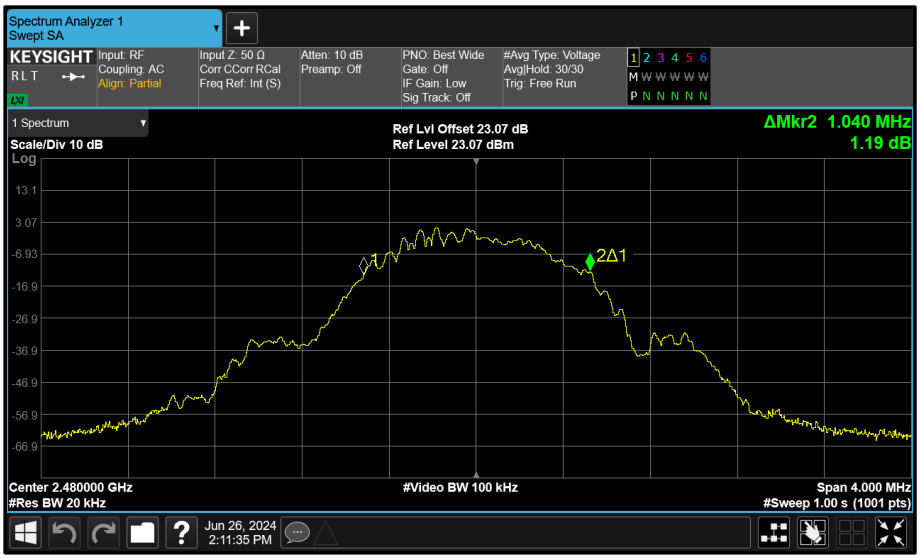

Figure 173 - Core 0 (A) 2480 MHz (CH39) 99% Bandwidth

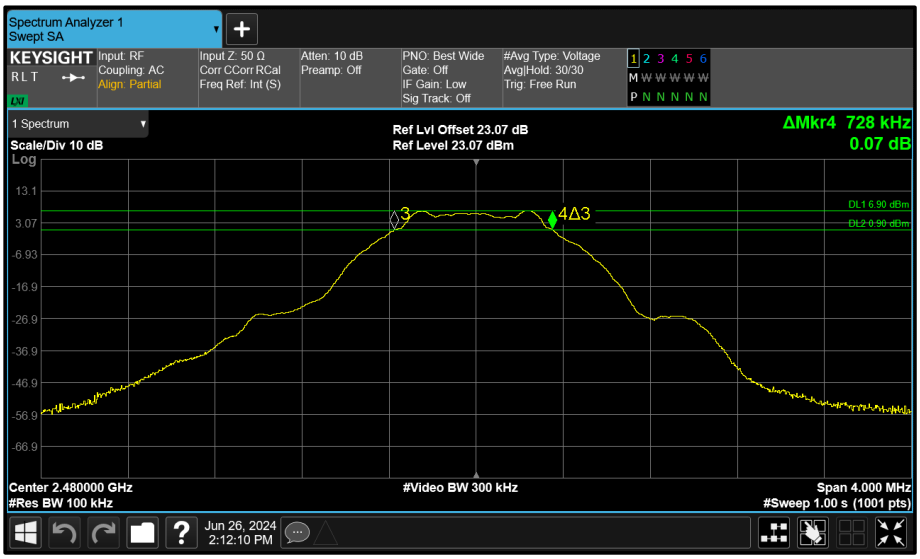

Figure 174 - Core 0 (A) 2480 MHz (CH39) 6 dB Bandwidth

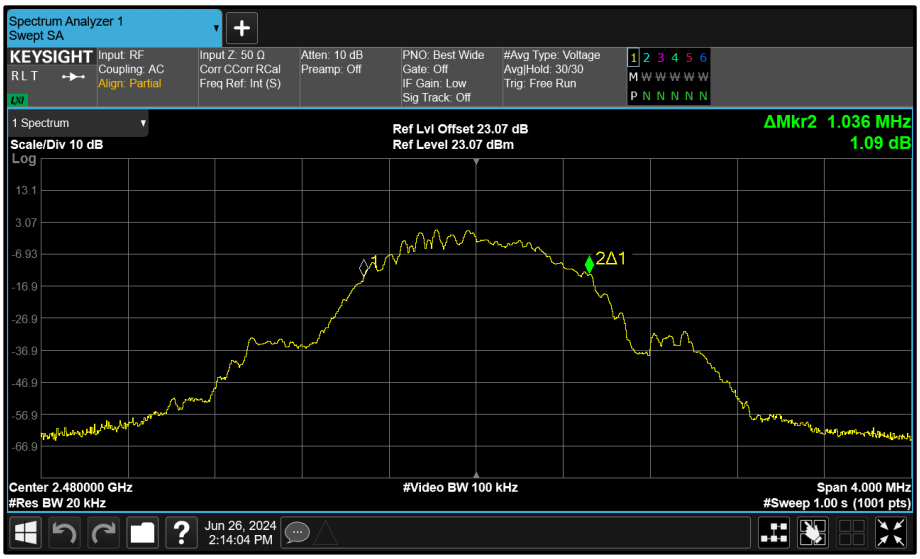

Figure 175 - Core 1 (B) 2480 MHz (CH39) 99% Bandwidth

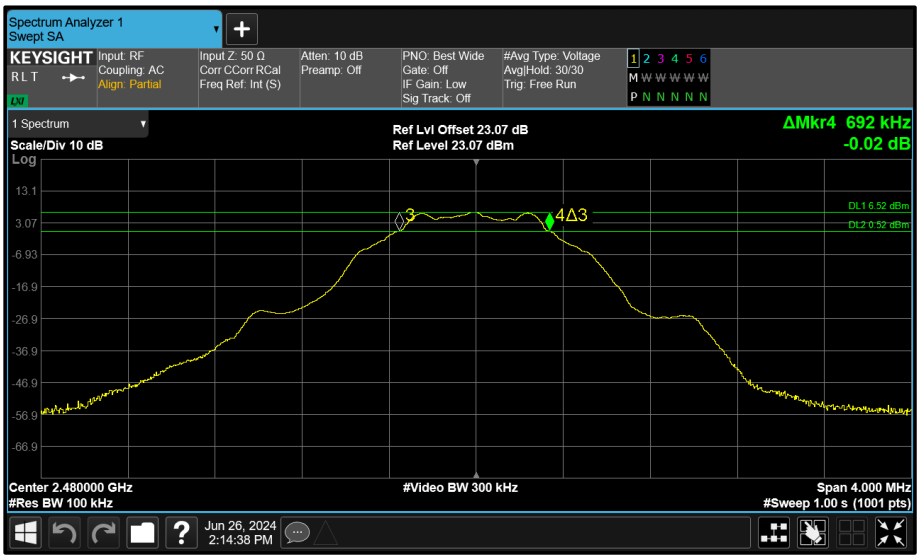

Figure 176 - Core 1 (B) 2480 MHz (CH39) 6 dB Bandwidth

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (LE 2M)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	1.272	1.272	-	-	≥500.0
2440	1.288	1.256	-	-	≥500.0
2480	1.296	1.256	-	-	≥500.0

Table 47 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	2.096	2.088	-	-	-
2440	2.088	2.088	-	-	-
2480	2.088	2.088	-	-	-

Table 48 - 99% Bandwidth Results

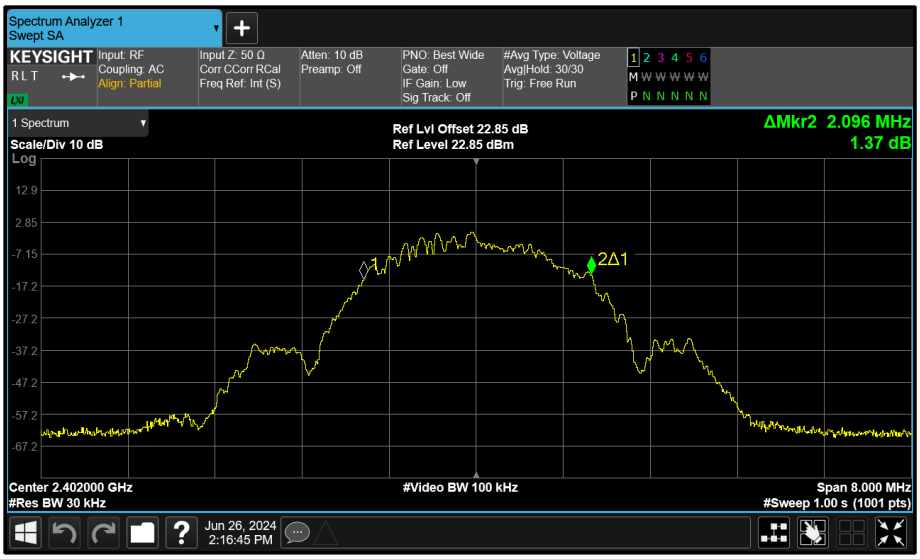

Figure 177 - Core 0 (A) 2402 MHz (CH37) 99% Bandwidth

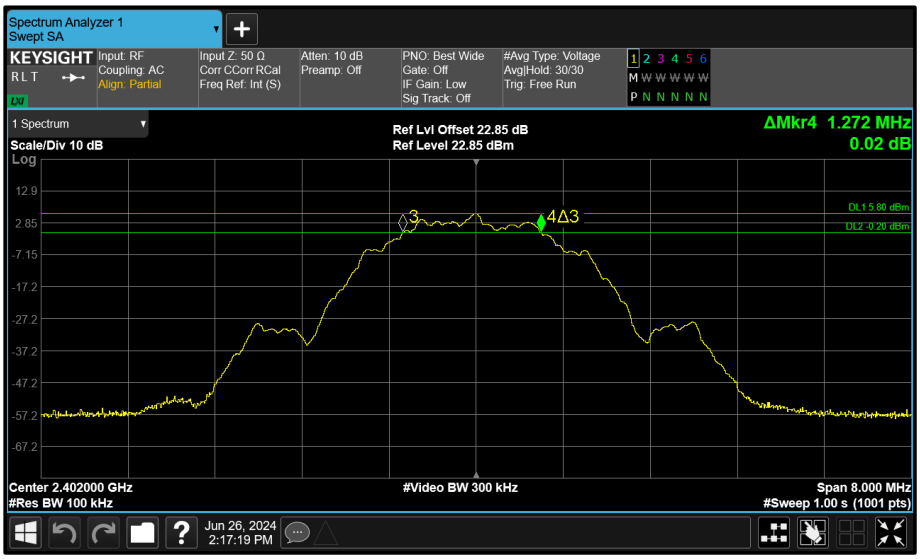

Figure 178 - Core 0 (A) 2402 MHz (CH37) 6 dB Bandwidth

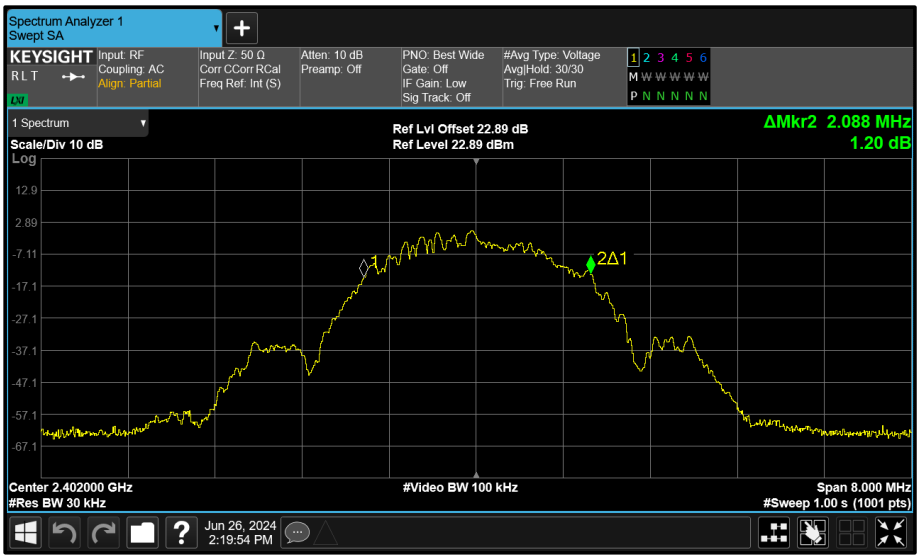

Figure 179 - Core 1 (B) 2402 MHz (CH37) 99% Bandwidth

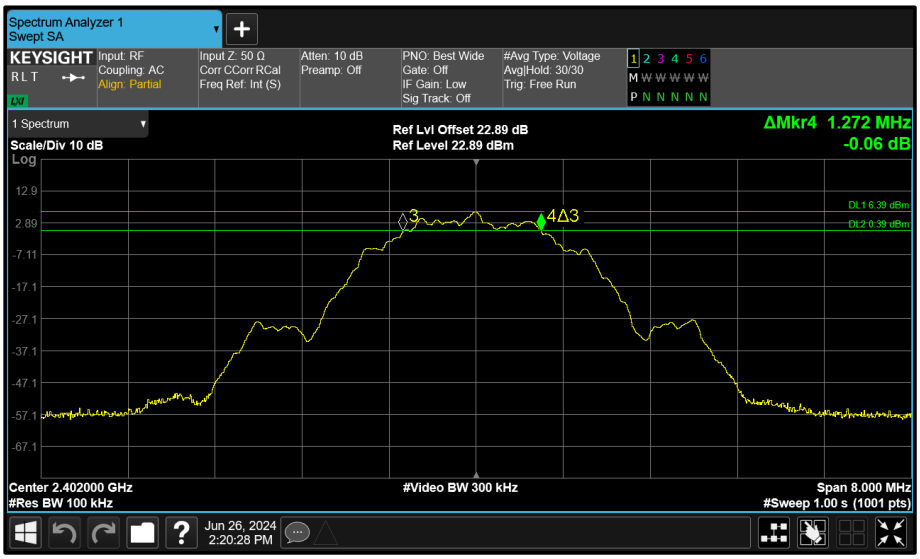

Figure 180 - Core 1 (B) 2402 MHz (CH37) 6 dB Bandwidth

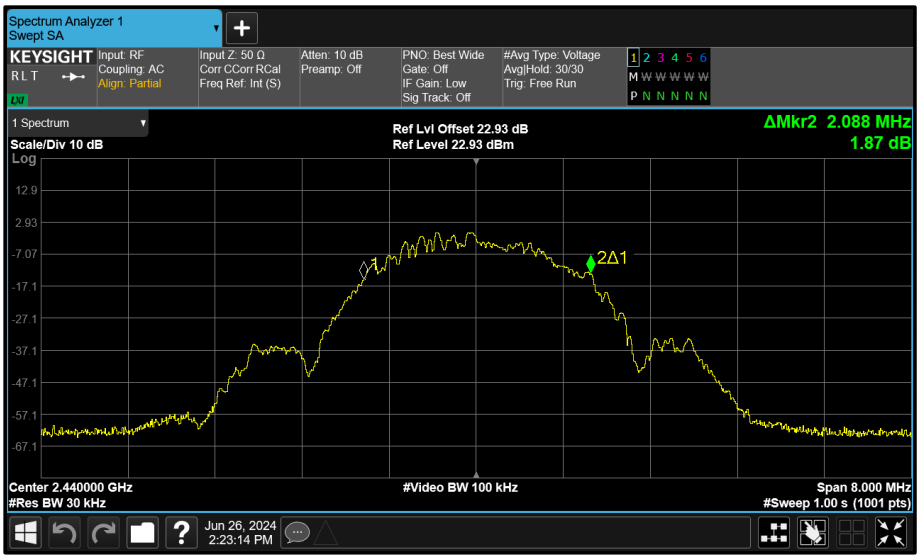

Figure 181 - Core 0 (A) 2440 MHz (CH17) 99% Bandwidth

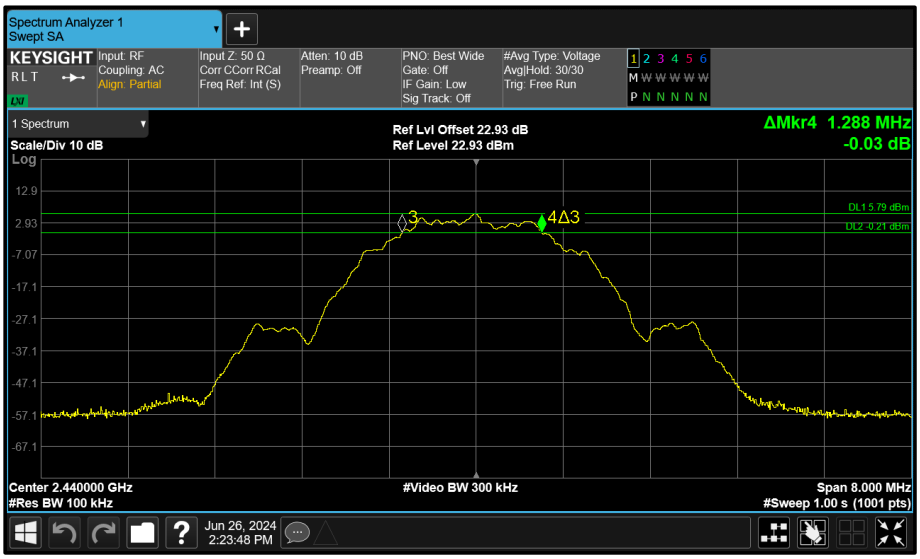

Figure 182 - Core 0 (A) 2440 MHz (CH17) 6 dB Bandwidth

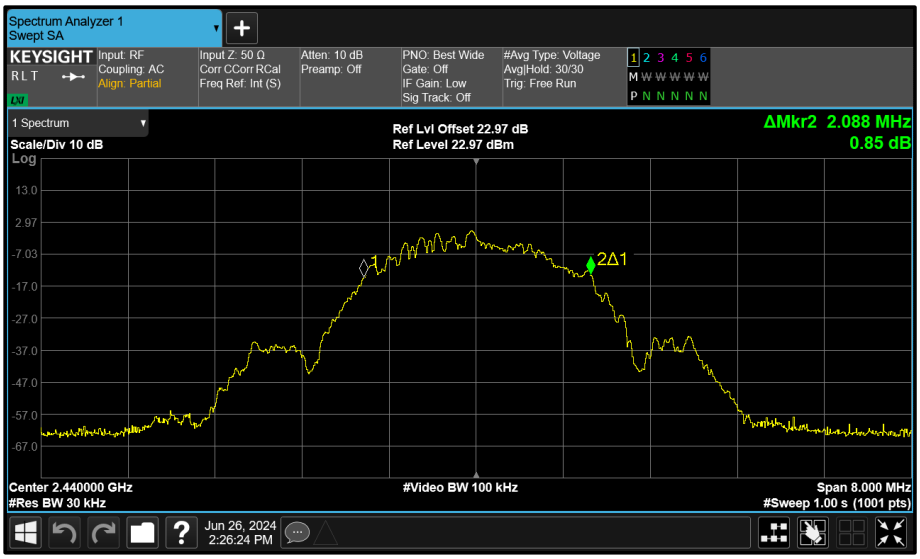

Figure 183 - Core 1 (B) 2440 MHz (CH17) 99% Bandwidth

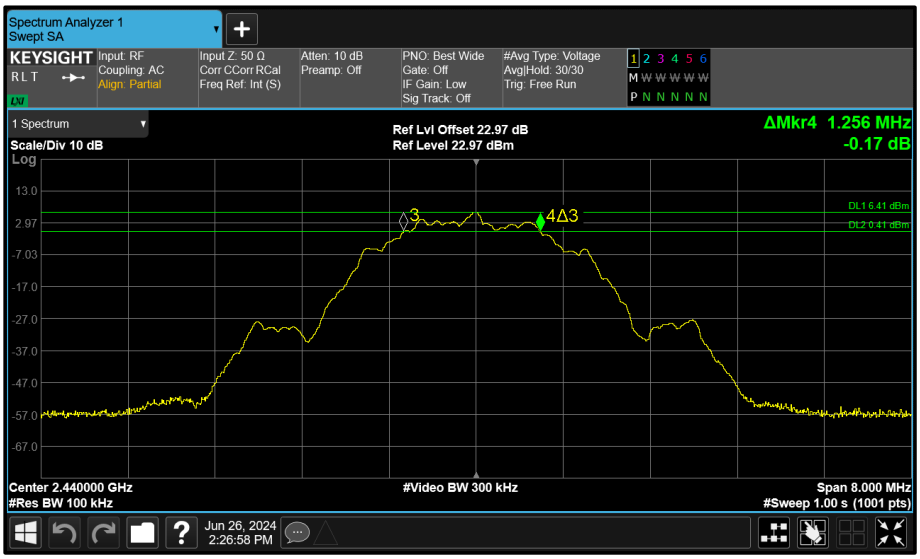

Figure 184 - Core 1 (B) 2440 MHz (CH17) 6 dB Bandwidth

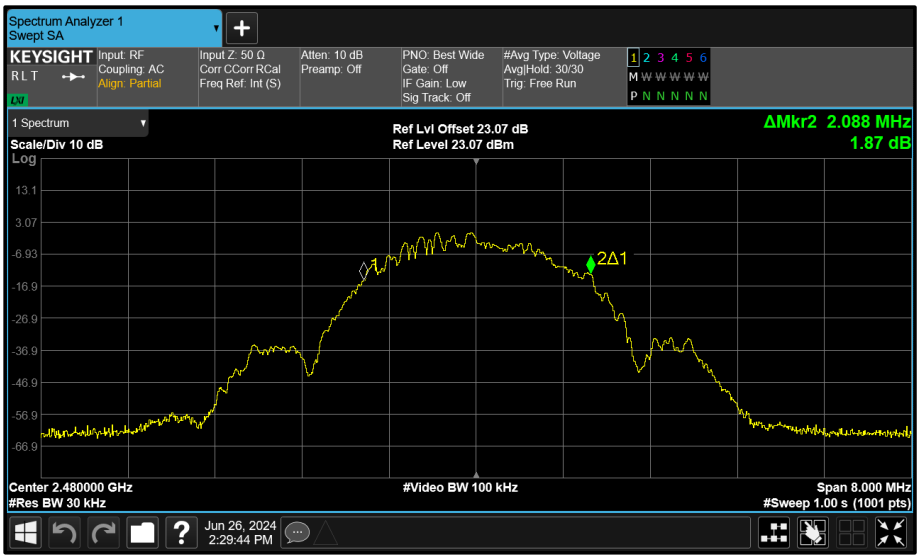

Figure 185 - Core 0 (A) 2480 MHz (CH39) 99% Bandwidth

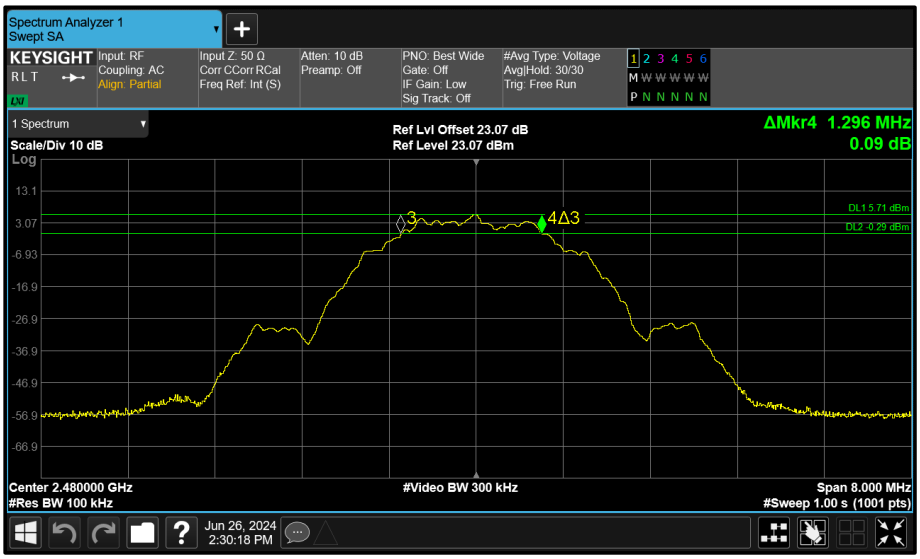

Figure 186 - Core 0 (A) 2480 MHz (CH39) 6 dB Bandwidth

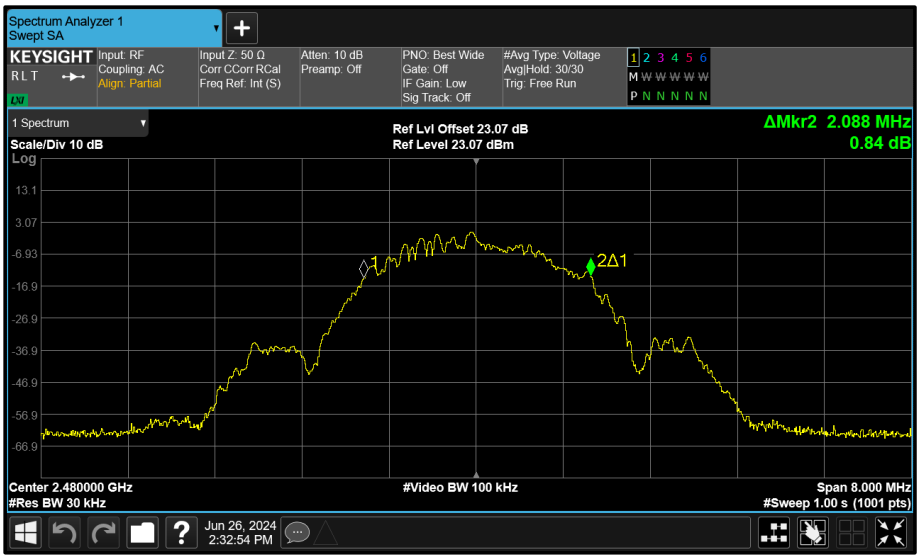

Figure 187 - Core 1 (B) 2480 MHz (CH39) 99% Bandwidth

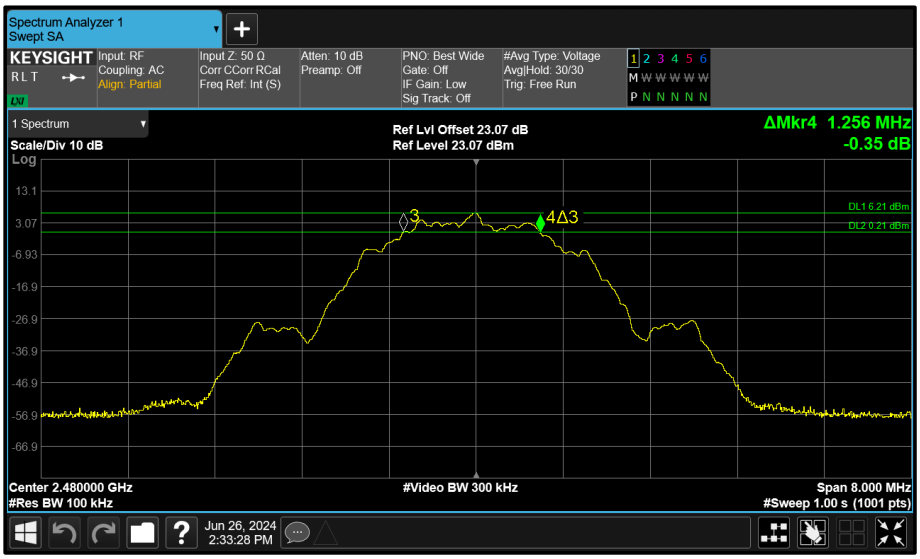

Figure 188 - Core 1 (B) 2480 MHz (CH39) 6 dB Bandwidth

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA π/4 DQPSK (4-DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2404	1.912	1.888	-	-	≥500.0
2441	1.904	1.904	-	-	≥500.0
2476	1.904	1.896	-	-	≥500.0

Table 49 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2404	2.352	2.328	-	-	-
2441	2.344	2.328	-	-	-
2476	2.344	2.336	-	-	-

Table 50 - 99% Bandwidth Results

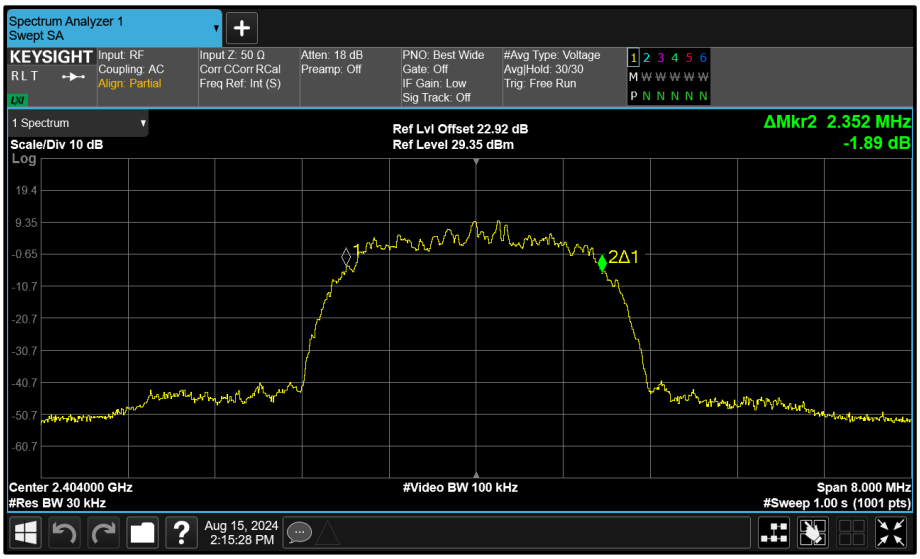

Figure 189 - Core 0 (A) 2404 MHz (CH2) 99% Bandwidth

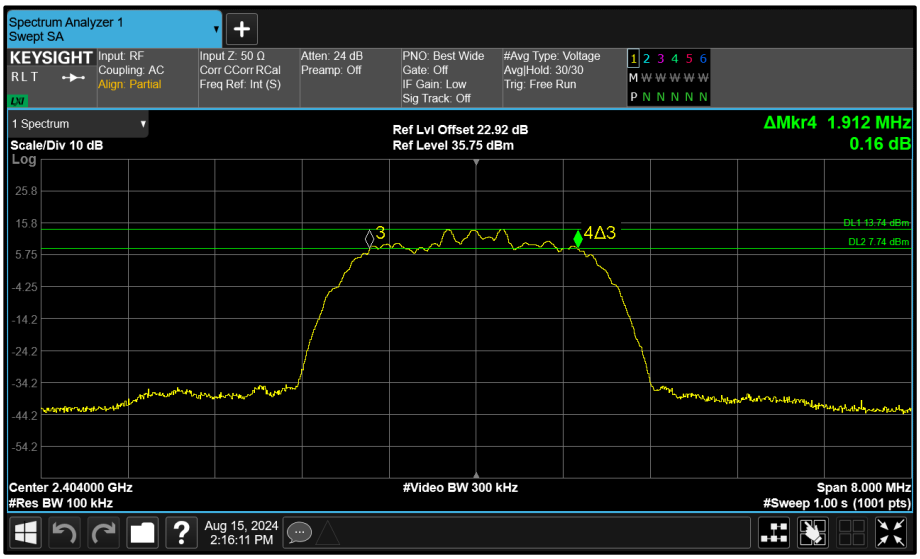

Figure 190 - Core 0 (A) 2404 MHz (CH2) 6 dB Bandwidth

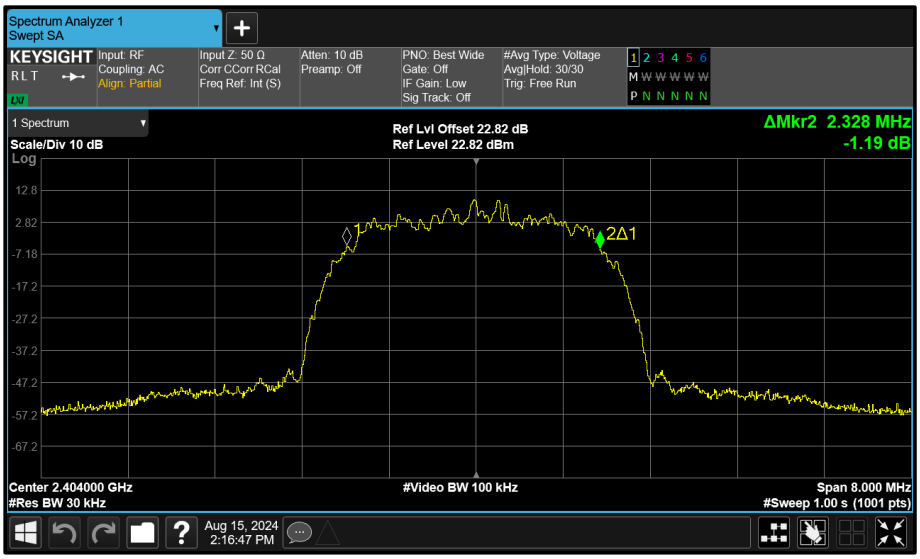

Figure 191 - Core 1 (B) 2404 MHz (CH2) 99% Bandwidth

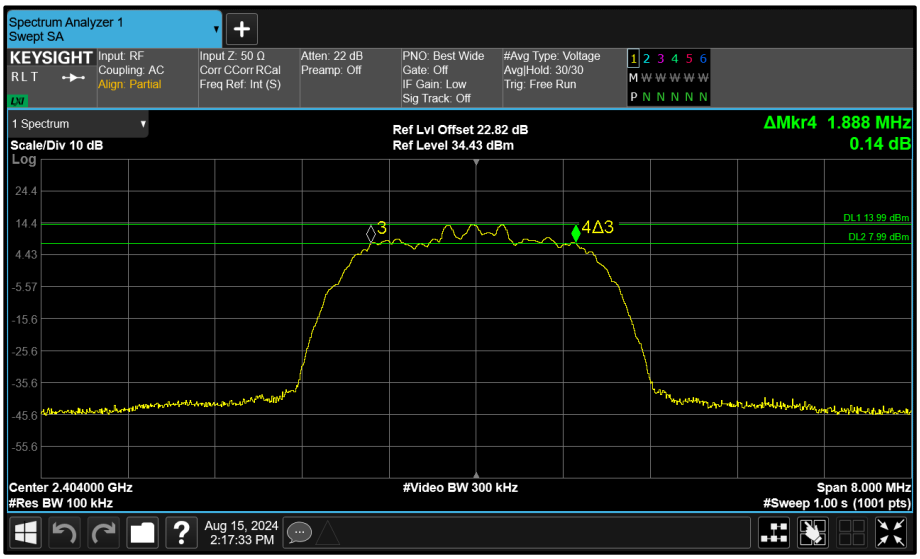

Figure 192 - Core 1 (B) 2404 MHz (CH2) 6 dB Bandwidth

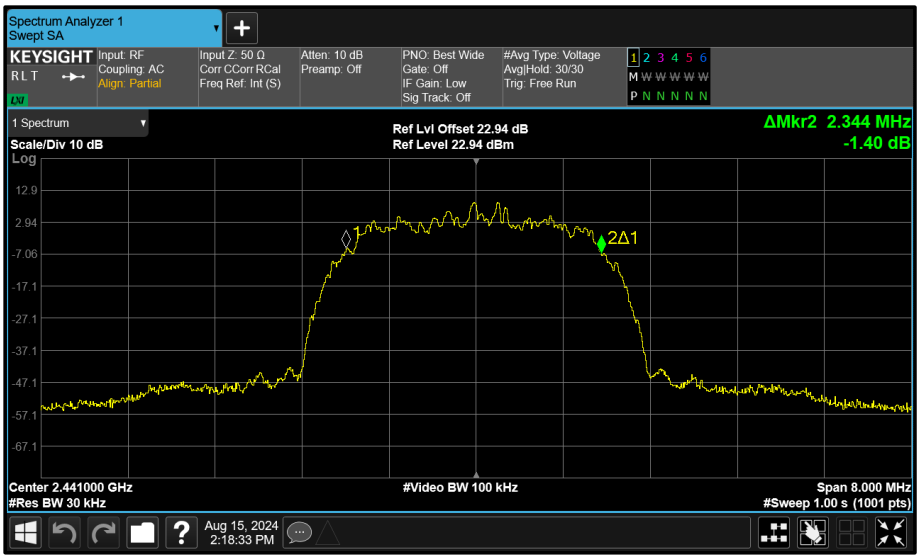

Figure 193 - Core 0 (A) 2441 MHz (CH39) 99% Bandwidth

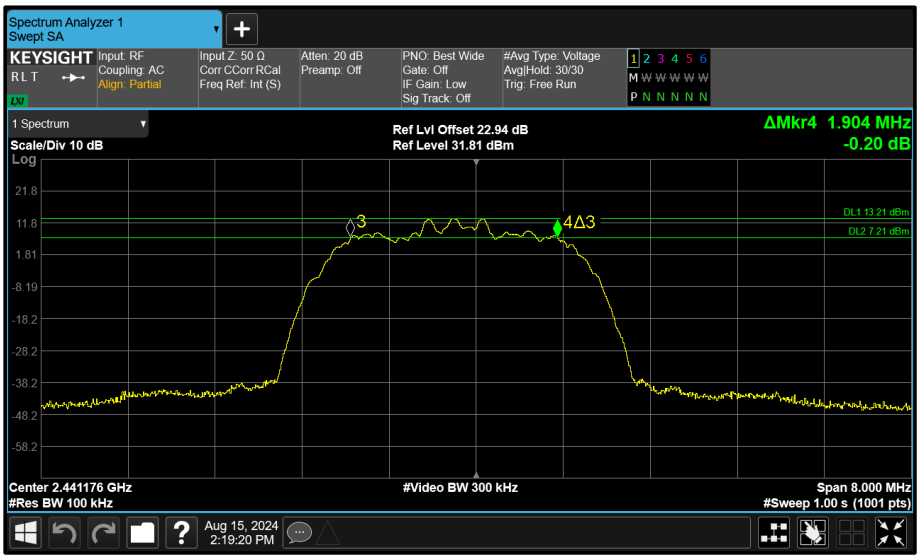

Figure 194 - Core 0 (A) 2441 MHz (CH39) 6 dB Bandwidth

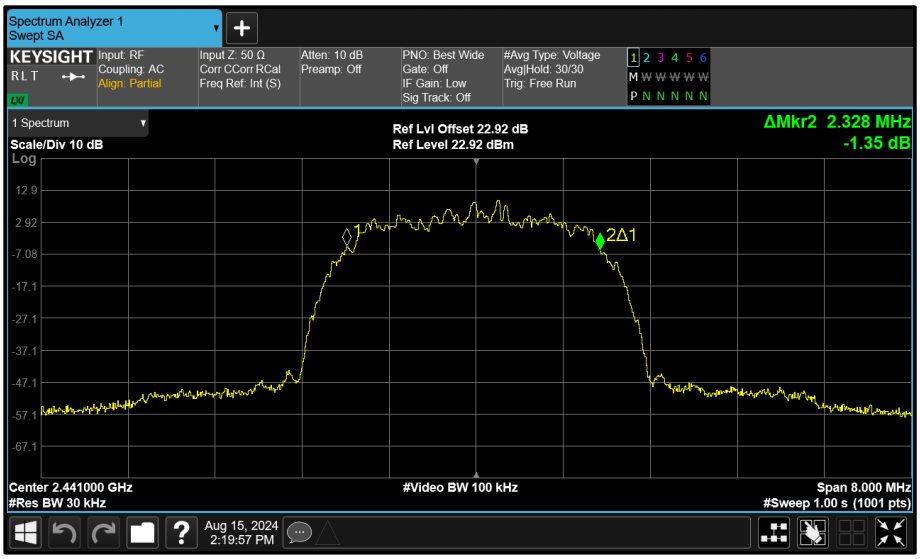

Figure 195 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

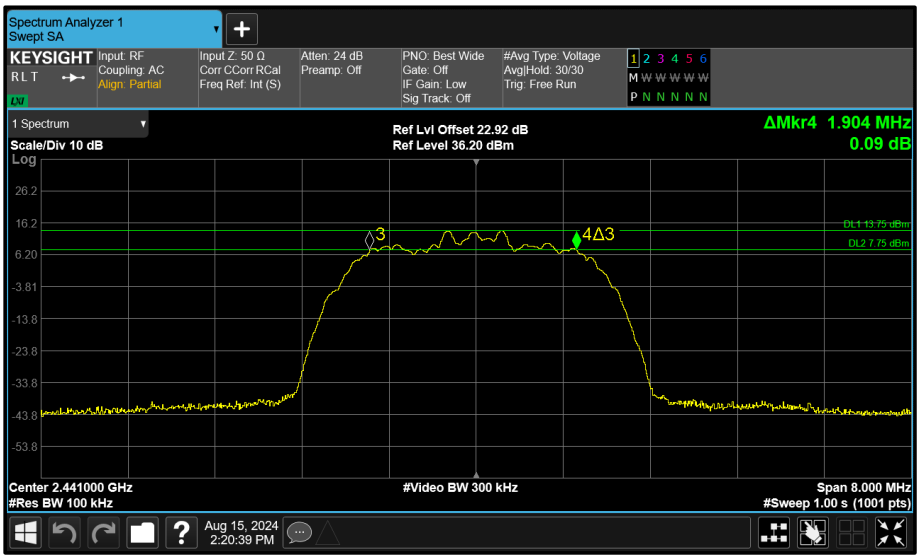

Figure 196 - Core 1 (B) 2441 MHz (CH39) 6 dB Bandwidth

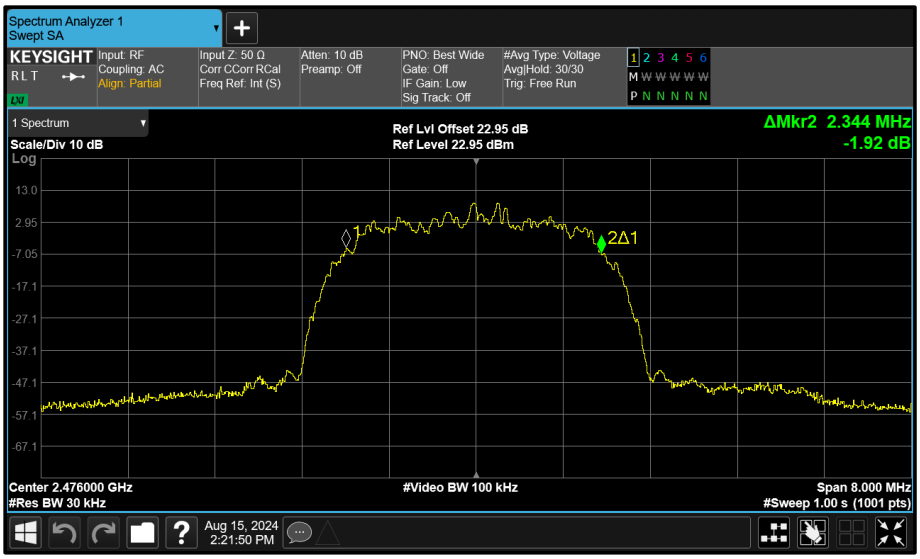

Figure 197 - Core 0 (A) 2476 MHz (CH74) 99% Bandwidth

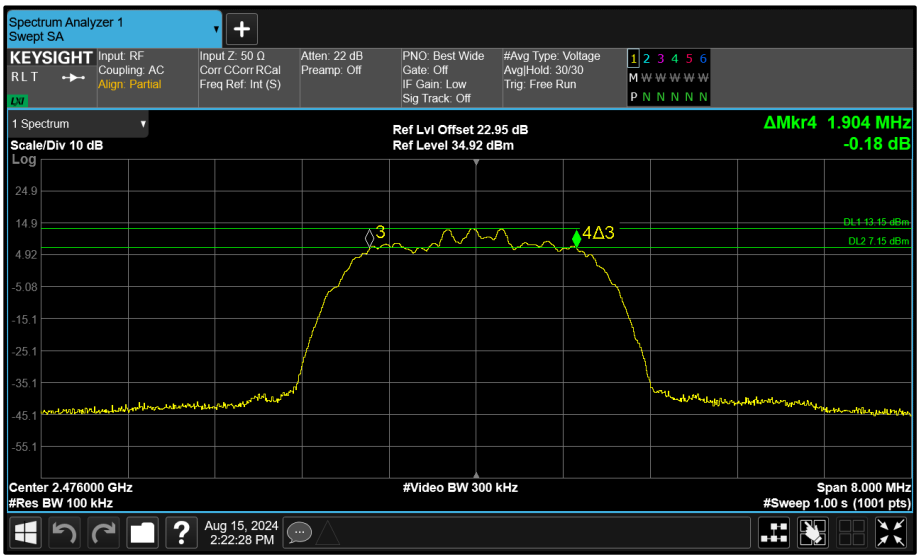

Figure 198 - Core 0 (A) 2476 MHz (CH74) 6 dB Bandwidth

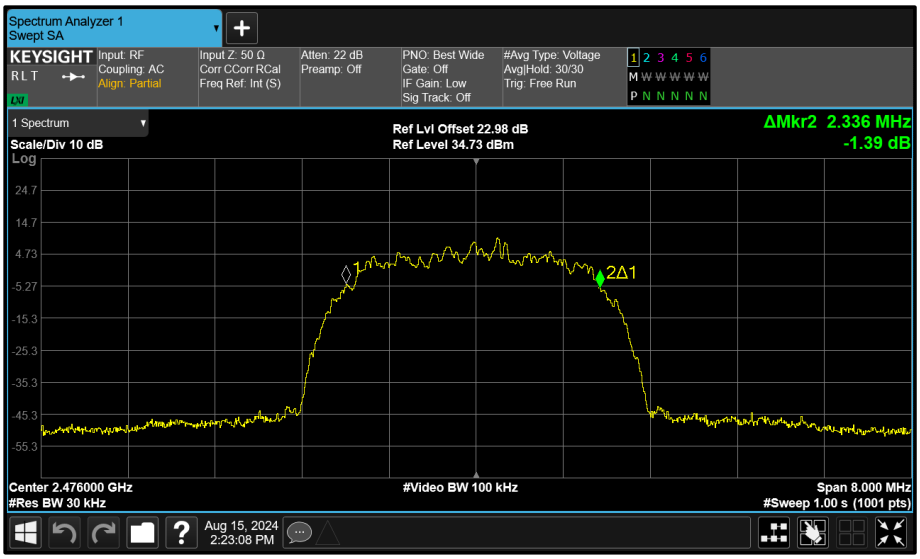

Figure 199 - Core 1 (B) 2476 MHz (CH74) 99% Bandwidth

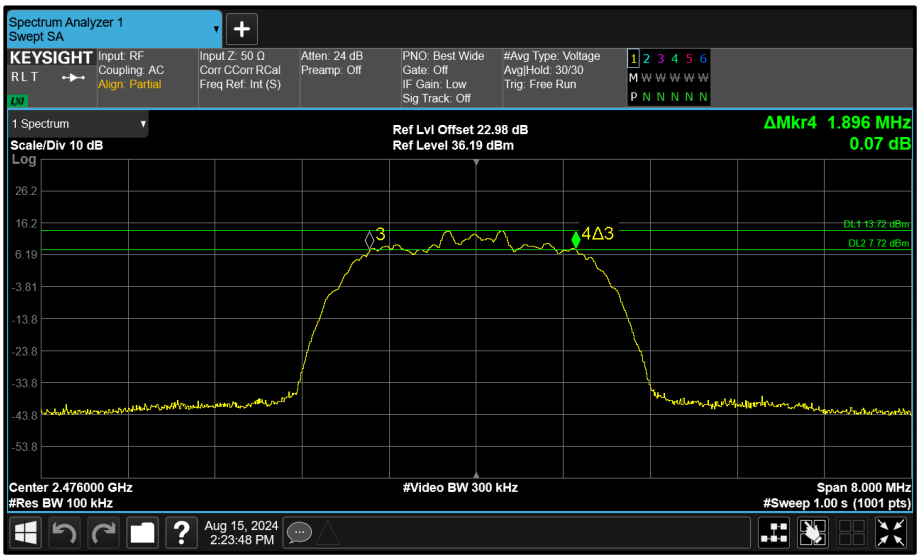

Figure 200 - Core 1 (B) 2476 MHz (CH74) 6 dB Bandwidth

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA π/4 DQPSK (8-DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2404	1.020	1.020	-	-	≥500.0
2441	0.660	1.020	-	-	≥500.0
2476	0.660	1.020	-	-	≥500.0

Table 51 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2404	4.710	4.620	-	-	-
2441	4.695	4.635	-	-	-
2476	4.695	4.650	-	-	-

Table 52 - 99% Bandwidth Results

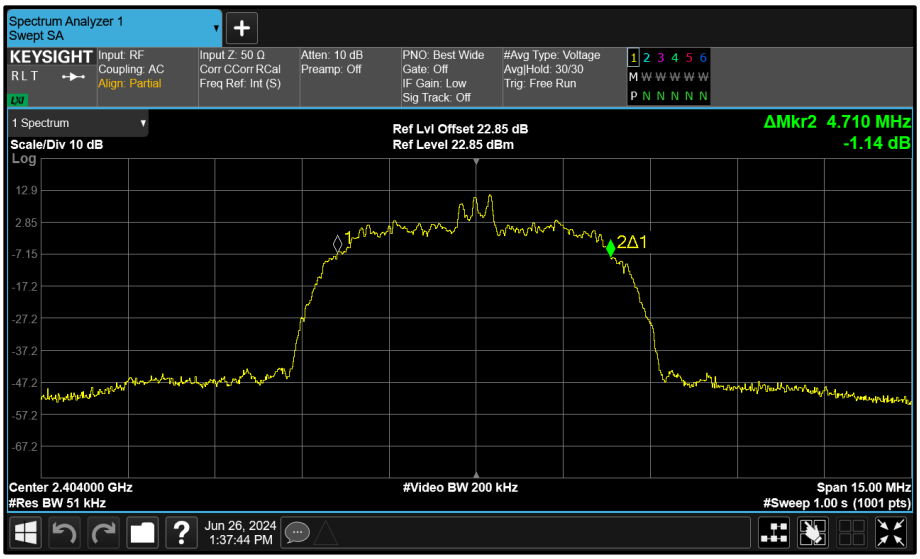

Figure 201 - Core 0 (A) 2404 MHz (CH2) 99% Bandwidth

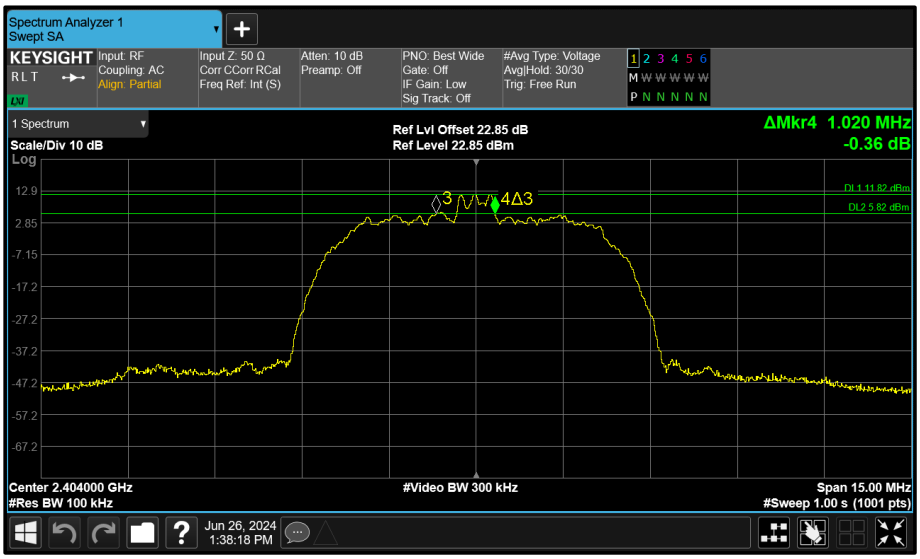

Figure 202 - Core 0 (A) 2404 MHz (CH2) 6 dB Bandwidth

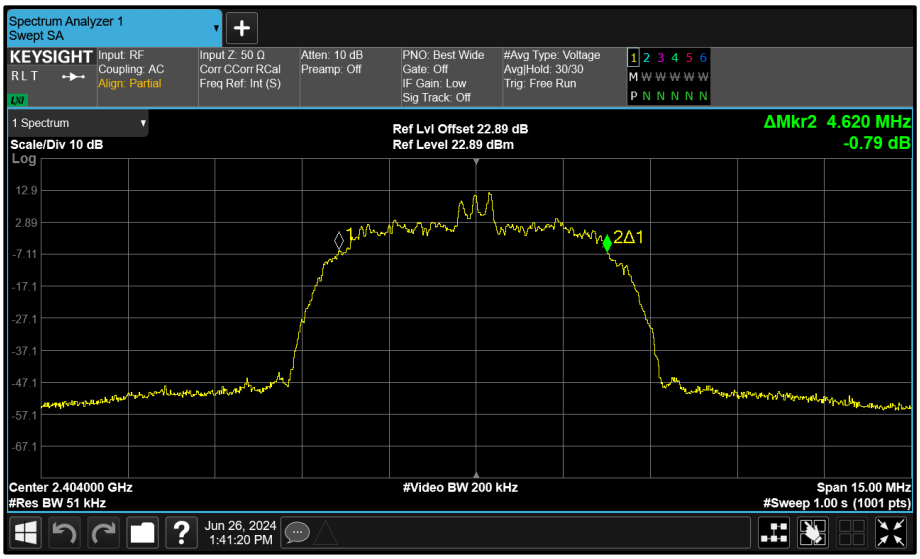

Figure 203 - Core 1 (B) 2404 MHz (CH2) 99% Bandwidth

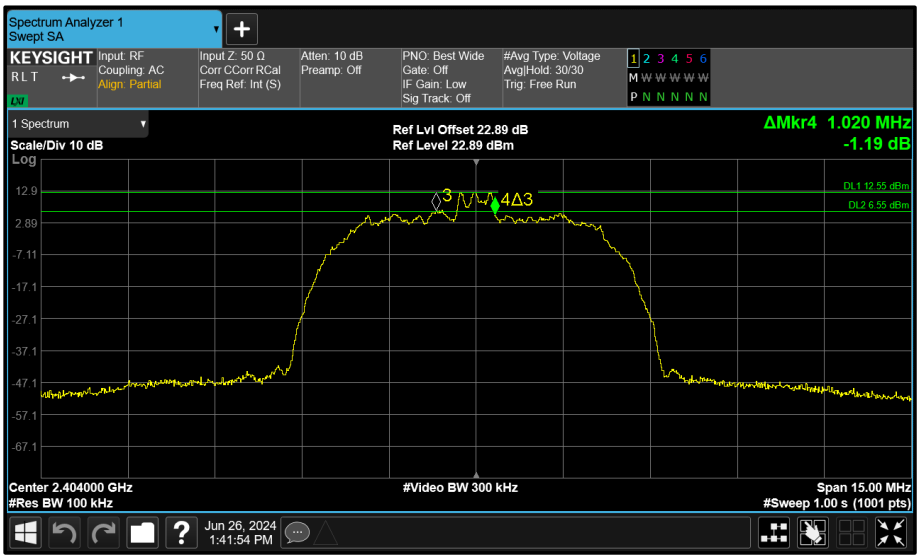

Figure 204 - Core 1 (B) 2404 MHz (CH2) 6 dB Bandwidth

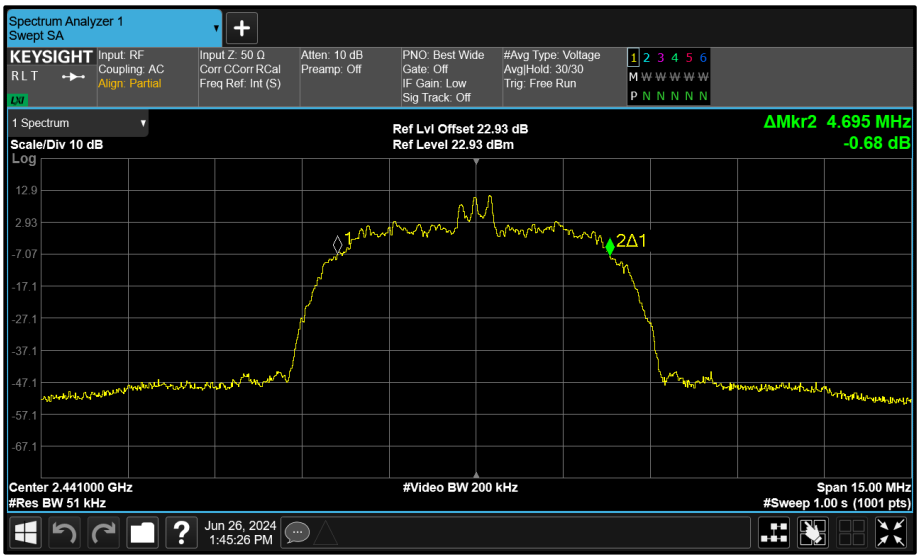

Figure 205 - Core 0 (A) 2441 MHz (CH39) 99% Bandwidth

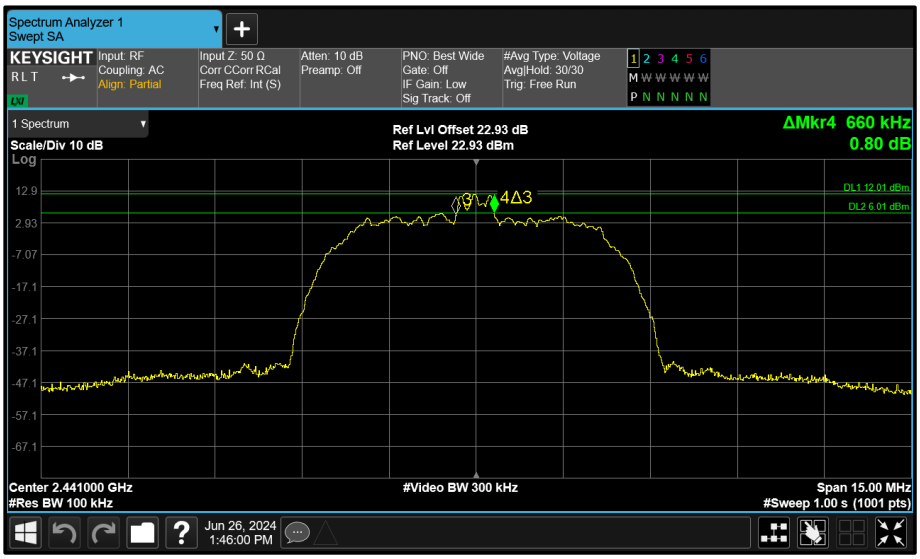

Figure 206 - Core 0 (A) 2441 MHz (CH39) 6 dB Bandwidth

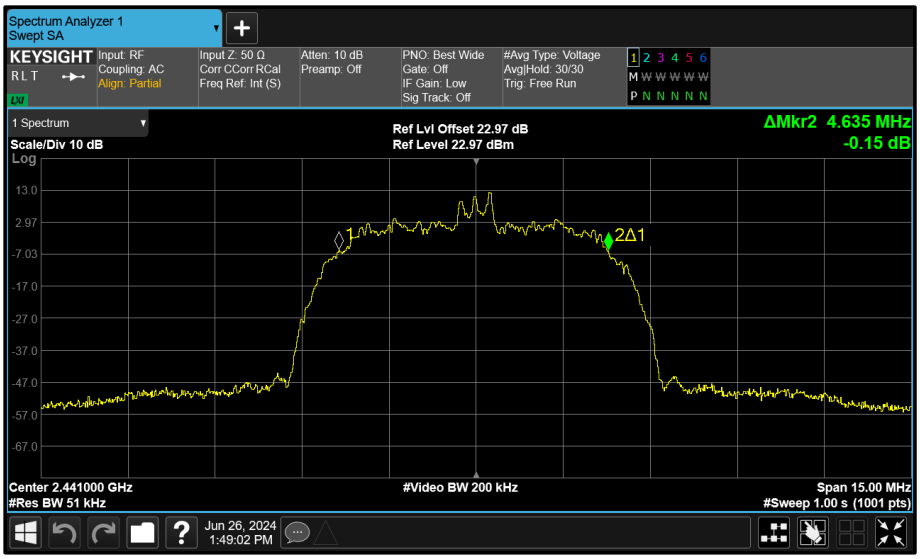

Figure 207 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

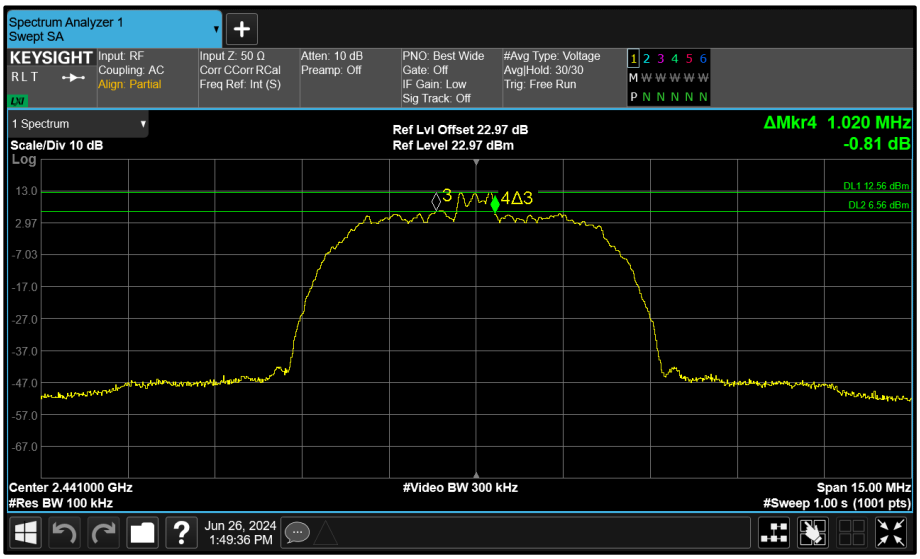

Figure 208 - Core 1 (B) 2441 MHz (CH39) 6 dB Bandwidth

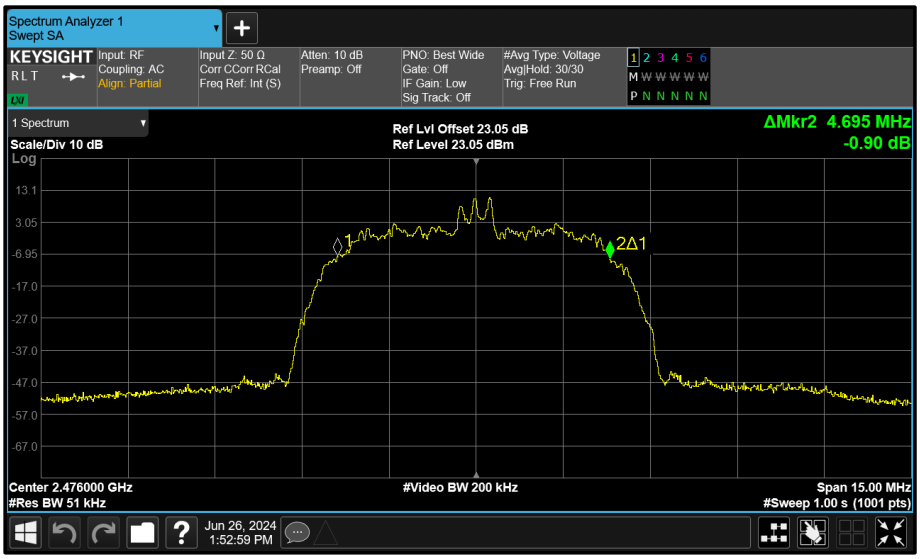

Figure 209 - Core 0 (A) 2476 MHz (CH74) 99% Bandwidth

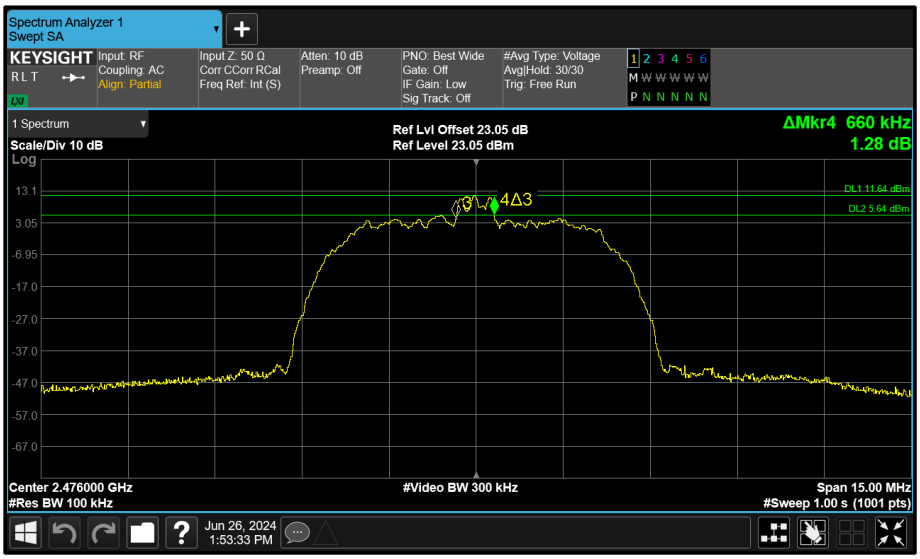

Figure 210 - Core 0 (A) 2476 MHz (CH74) 6 dB Bandwidth

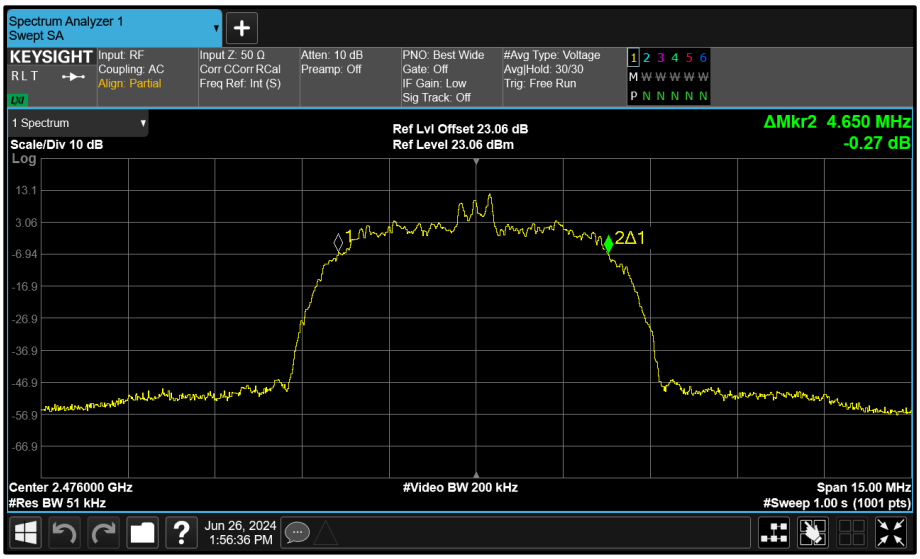

Figure 211 - Core 1 (B) 2476 MHz (CH74) 99% Bandwidth

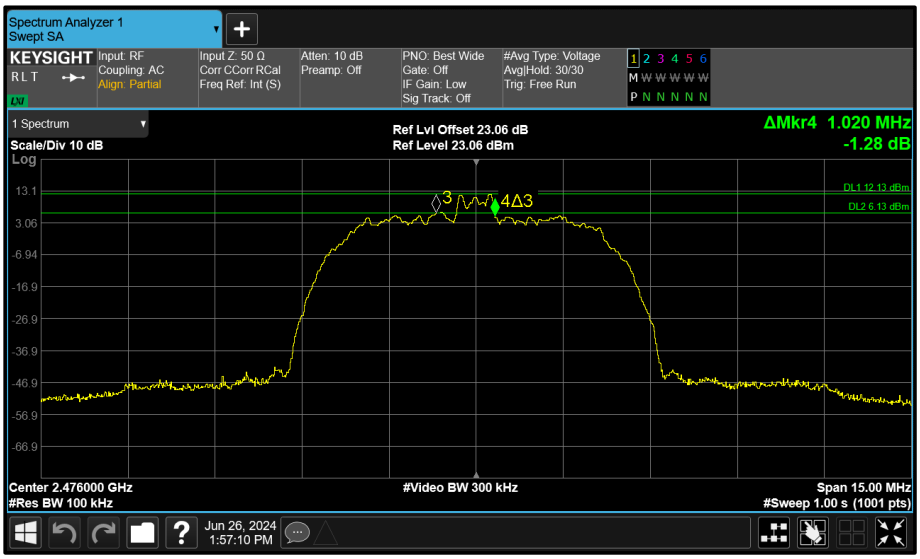

Figure 212 - Core 1 (B) 2476 MHz (CH74) 6 dB Bandwidth

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA GFSK (LE 1M)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	0.728	0.696	-	-	≥500.0
2440	0.720	0.728	-	-	≥500.0
2480	0.732	0.732	-	-	≥500.0

Table 53 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	1.040	1.040	-	-	-
2440	1.036	1.040	-	-	-
2480	1.040	1.044	-	-	-

Table 54 - 99% Bandwidth Results

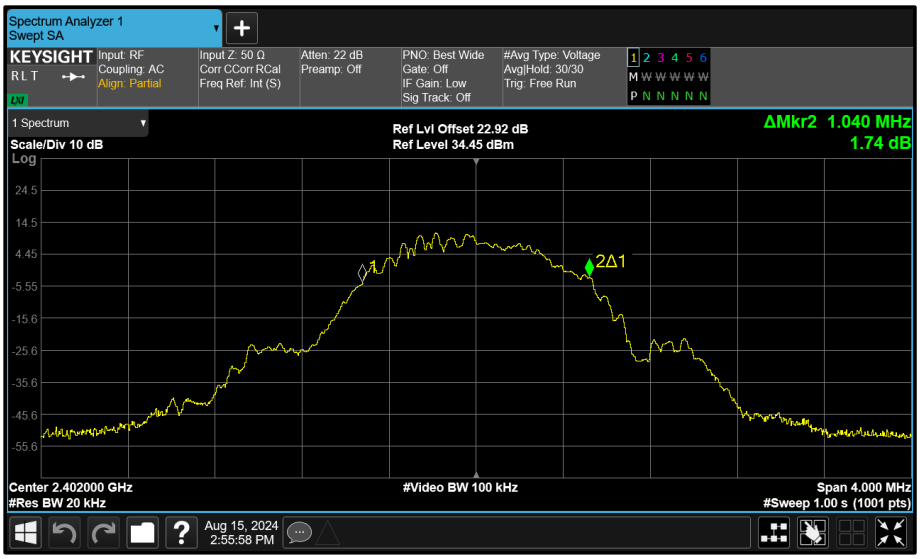

Figure 213 - Core 0 (A) 2402 MHz (CH37) 99% Bandwidth

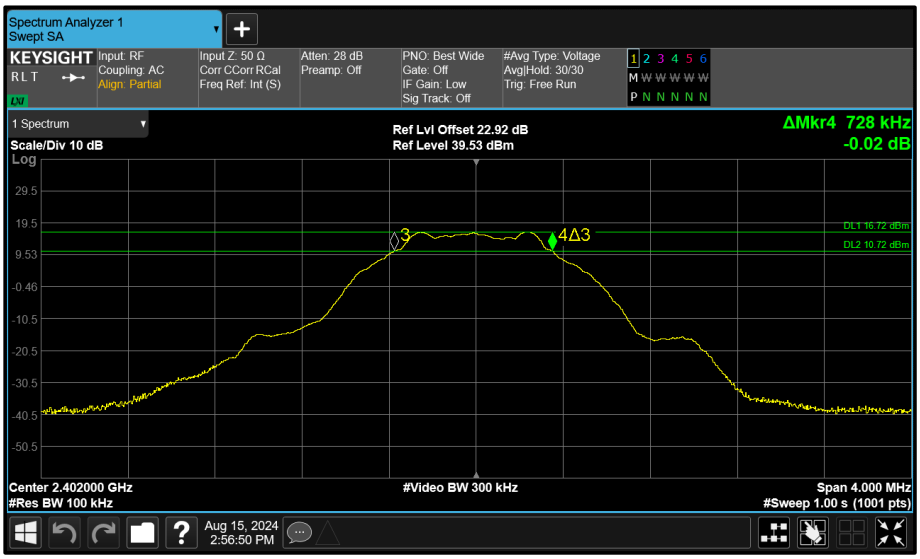

Figure 214 - Core 0 (A) 2402 MHz (CH37) 6 dB Bandwidth

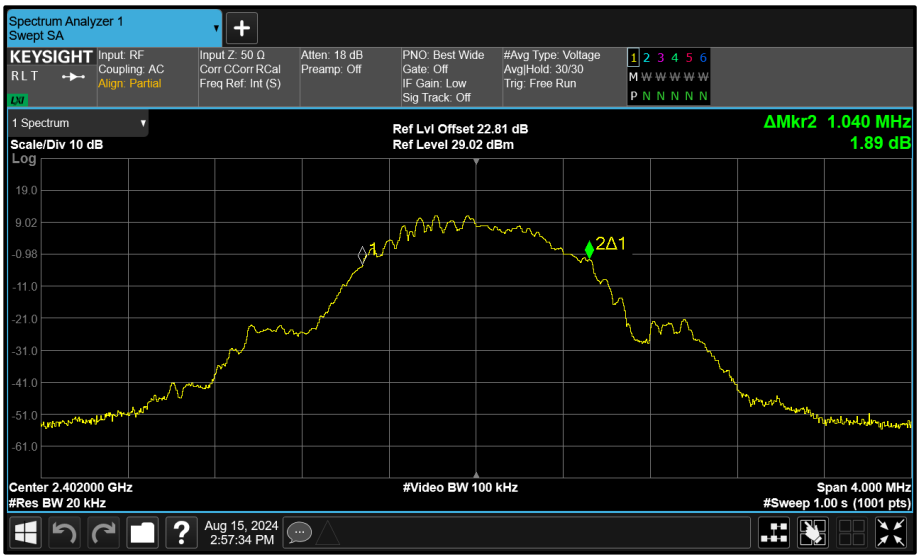

Figure 215 - Core 1 (B) 2402 MHz (CH37) 99% Bandwidth

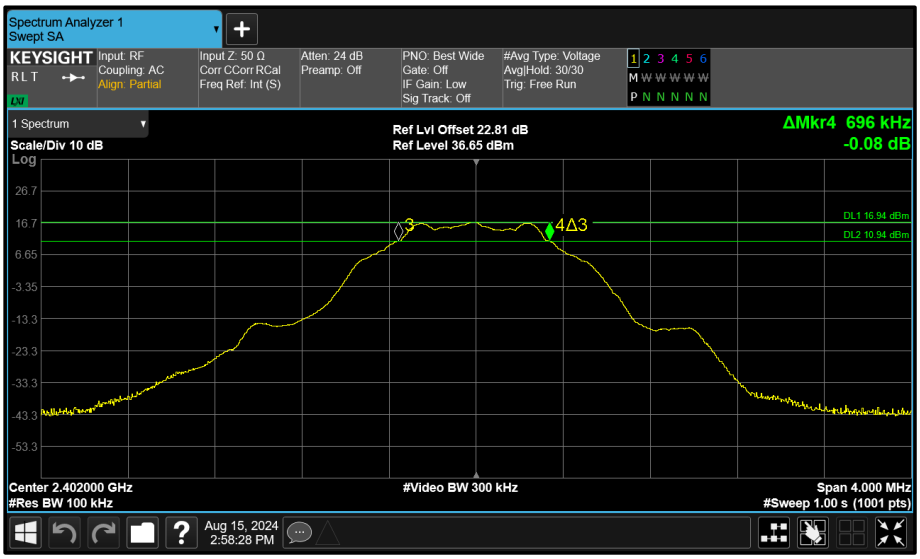

Figure 216 - Core 1 (B) 2402 MHz (CH37) 6 dB Bandwidth

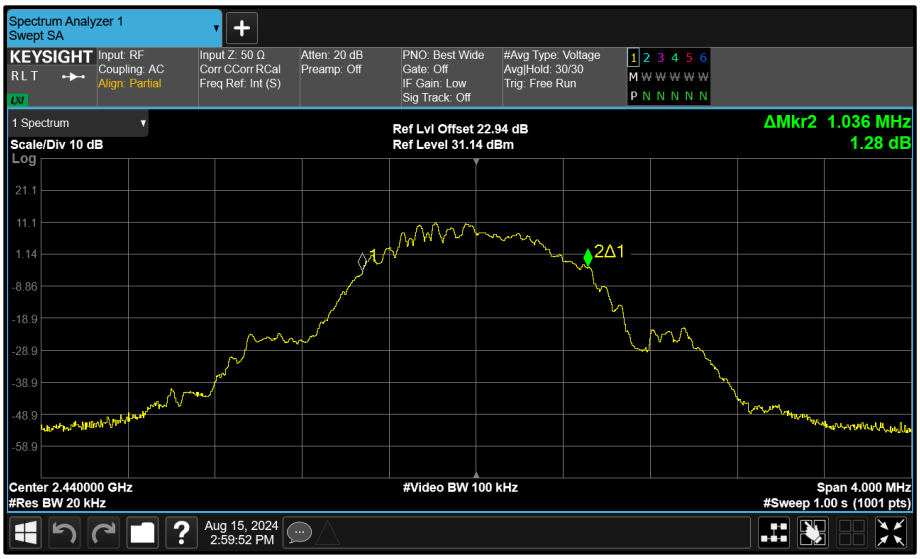

Figure 217 - Core 0 (A) 2440 MHz (CH17) 99% Bandwidth

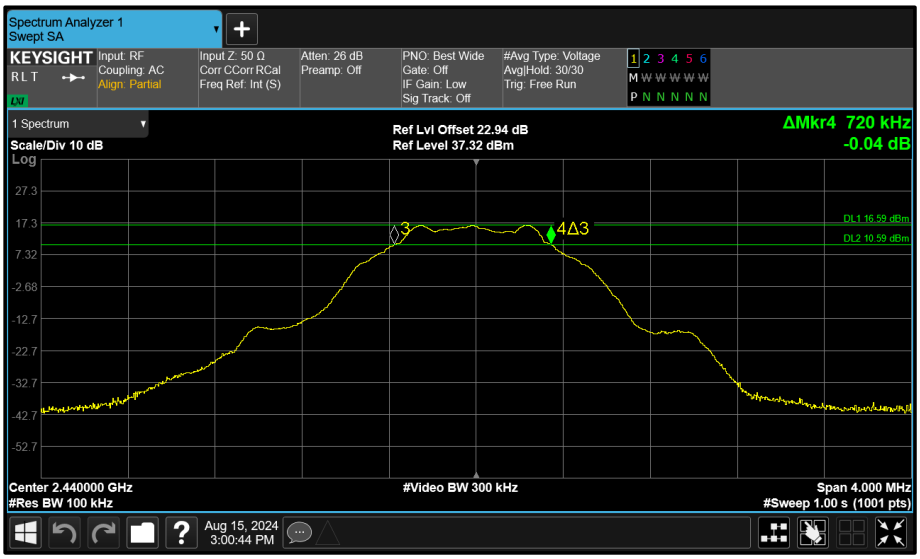

Figure 218 - Core 0 (A) 2440 MHz (CH17) 6 dB Bandwidth

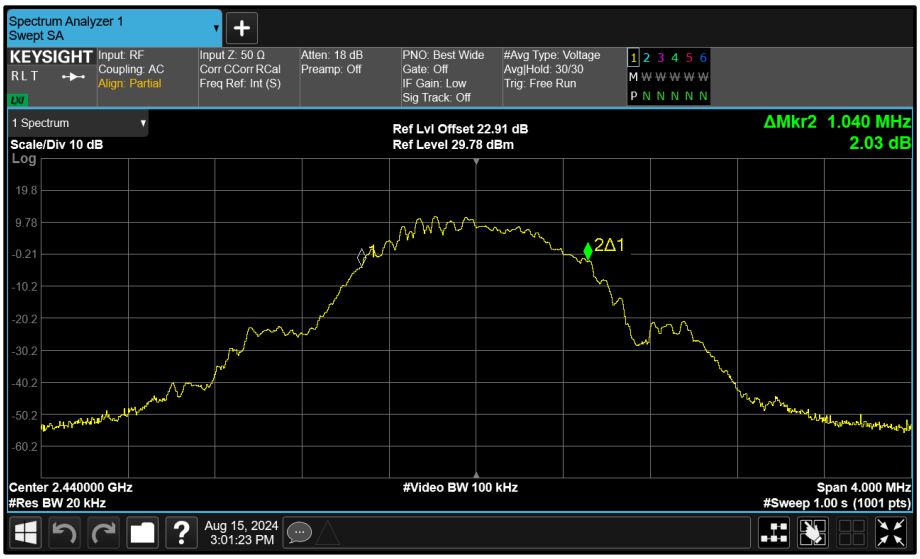

Figure 219 - Core 1 (B) 2440 MHz (CH17) 99% Bandwidth

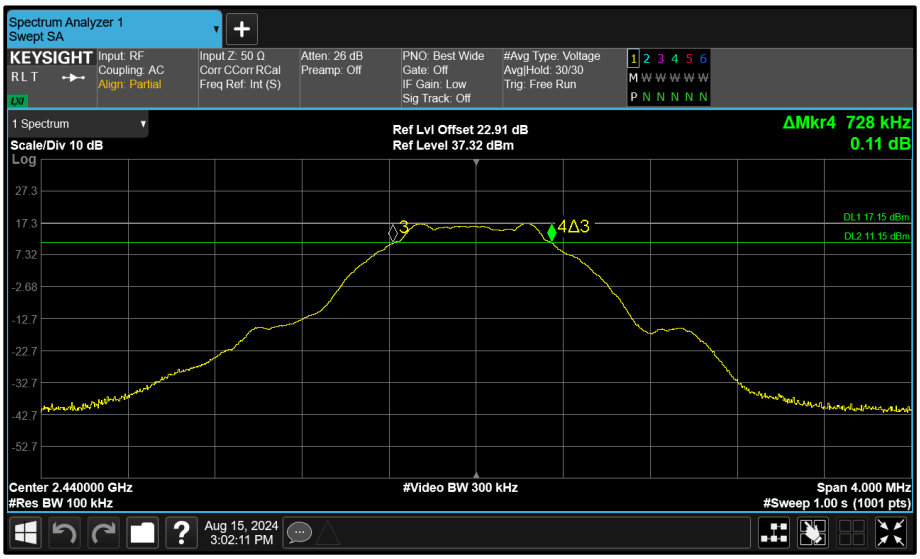

Figure 220 - Core 1 (B) 2440 MHz (CH17) 6 dB Bandwidth

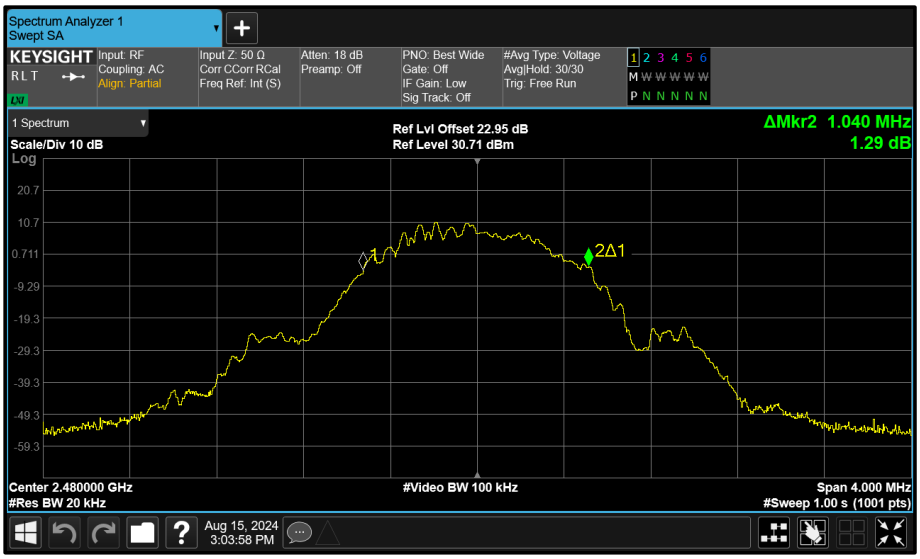

Figure 221 - Core 0 (A) 2480 MHz (CH39) 99% Bandwidth

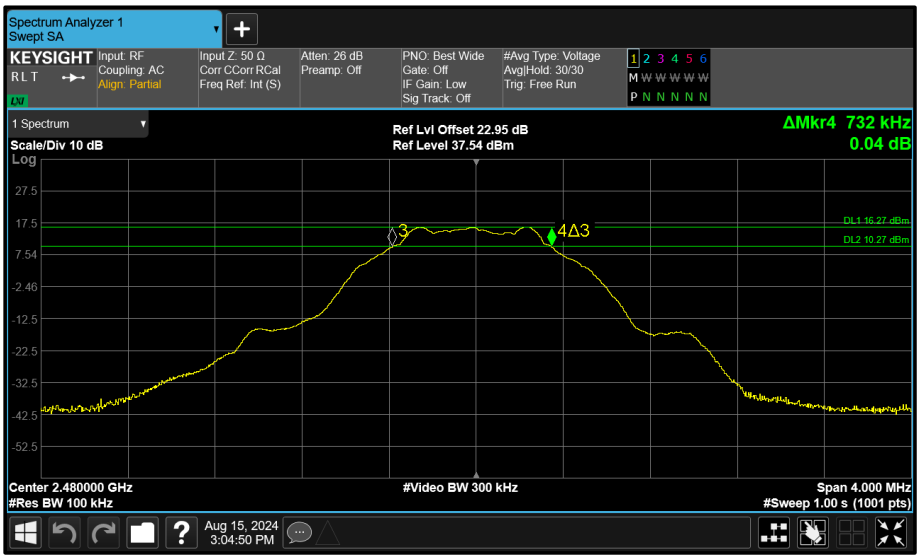

Figure 222 - Core 0 (A) 2480 MHz (CH39) 6 dB Bandwidth

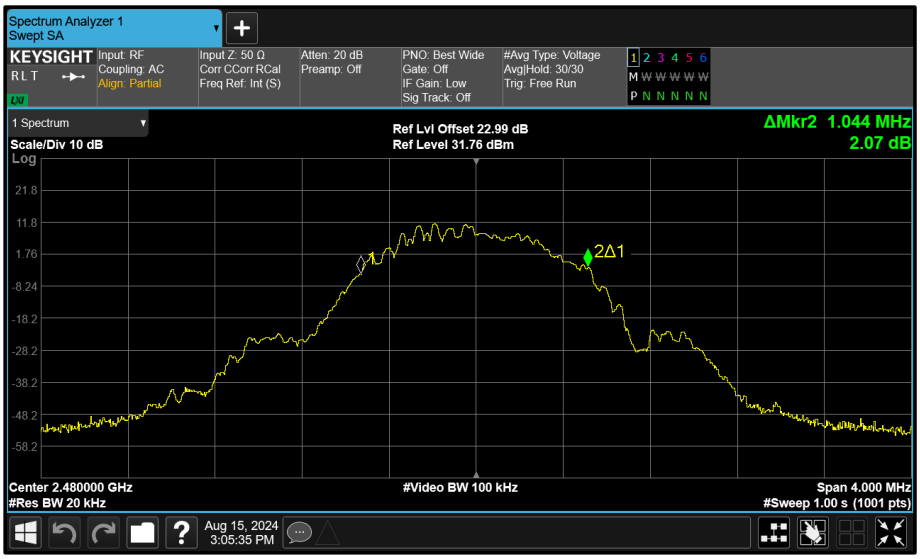

Figure 223 - Core 1 (B) 2480 MHz (CH39) 99% Bandwidth

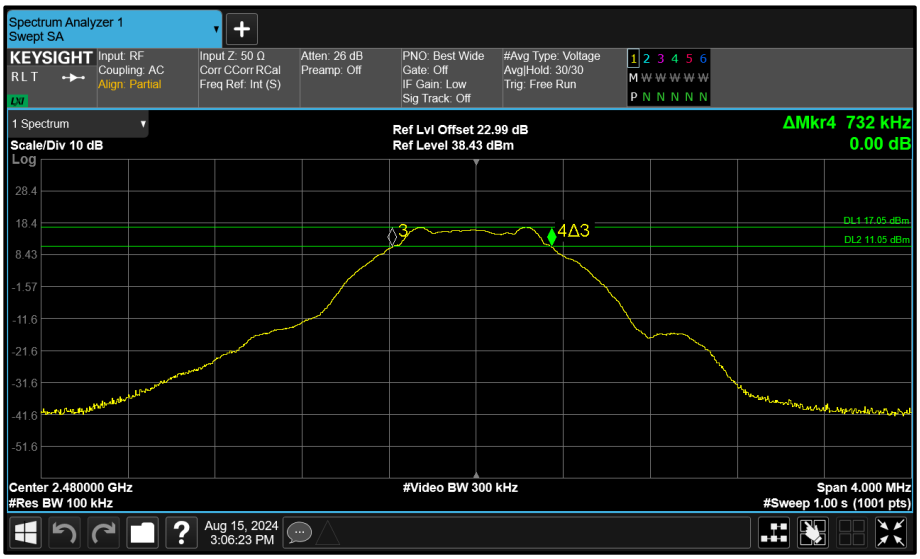

Figure 224 - Core 1 (B) 2480 MHz (CH39) 6 dB Bandwidth

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(2) RSS-247 5.2 a)	Test Method(s):	C63.10 6.9.3 C63.10 11.8.1
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA GFSK (LE 2M)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	1.264	1.160	-	-	≥500.0
2440	1.184	1.272	-	-	≥500.0
2480	1.272	1.448	-	-	≥500.0

Table 55 - 6 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	2.088	2.088	-	-	-
2440	2.096	2.096	-	-	-
2480	2.088	2.096	-	-	-

Table 56 - 99% Bandwidth Results

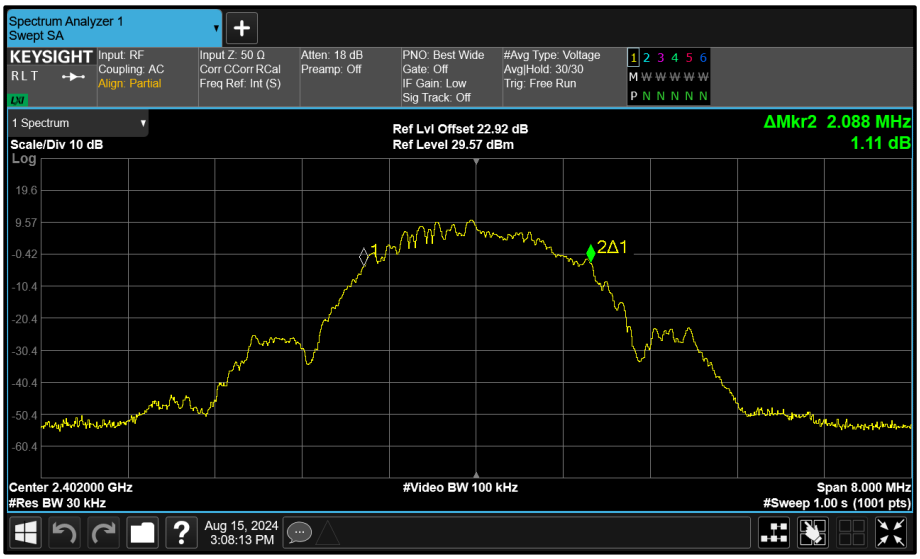

Figure 225 - Core 0 (A) 2402 MHz (CH37) 99% Bandwidth

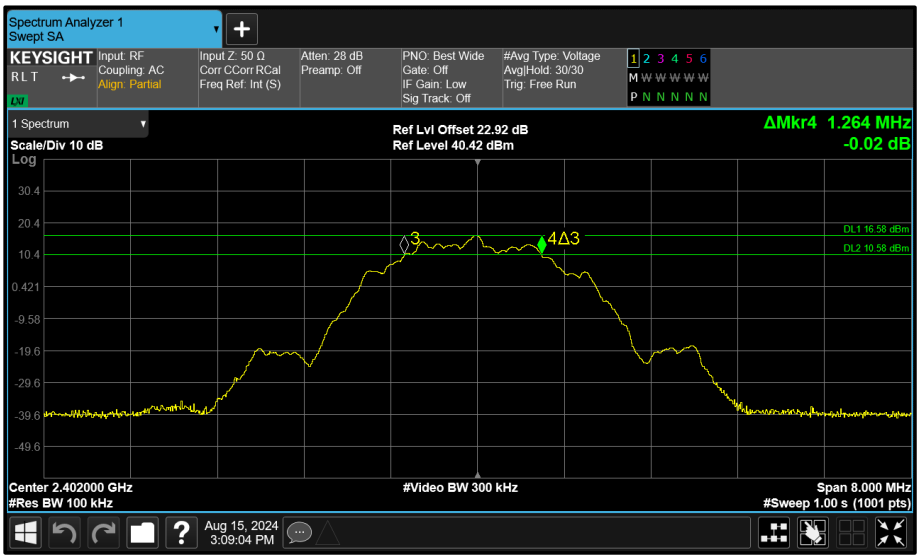

Figure 226 - Core 0 (A) 2402 MHz (CH37) 6 dB Bandwidth

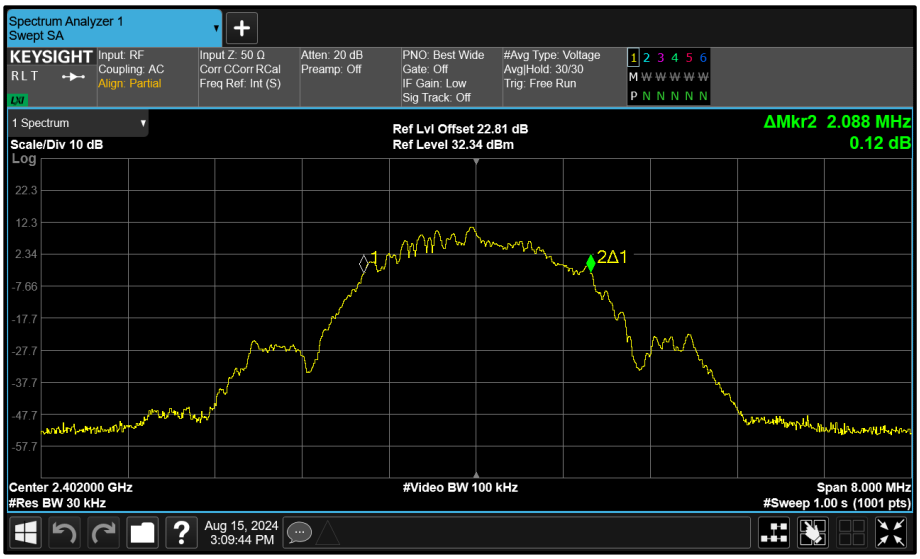

Figure 227 - Core 1 (B) 2402 MHz (CH37) 99% Bandwidth

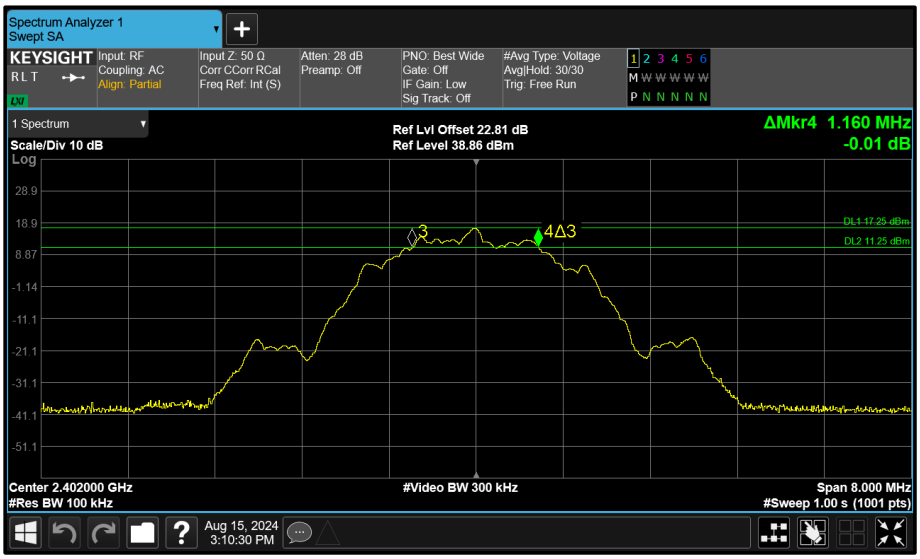

Figure 228 - Core 1 (B) 2402 MHz (CH37) 6 dB Bandwidth

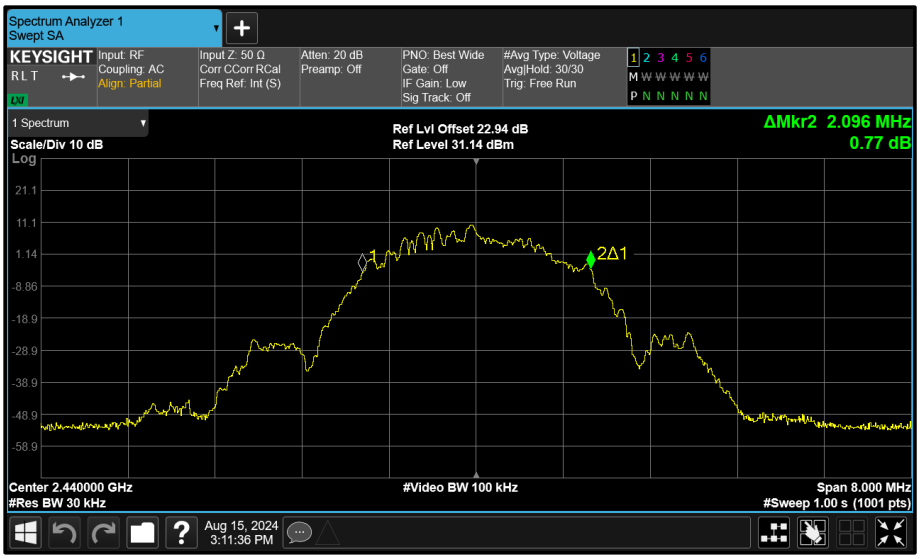

Figure 229 - Core 0 (A) 2440 MHz (CH17) 99% Bandwidth

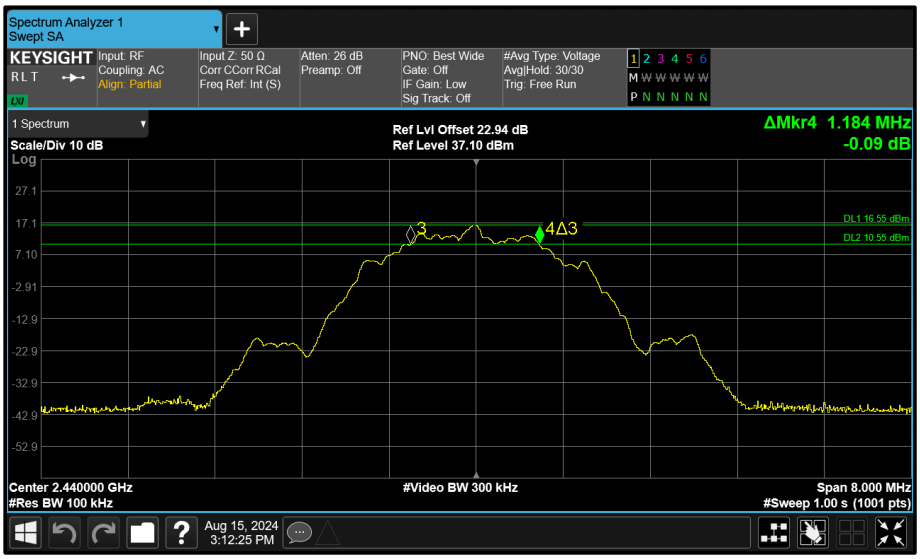

Figure 230 - Core 0 (A) 2440 MHz (CH17) 6 dB Bandwidth

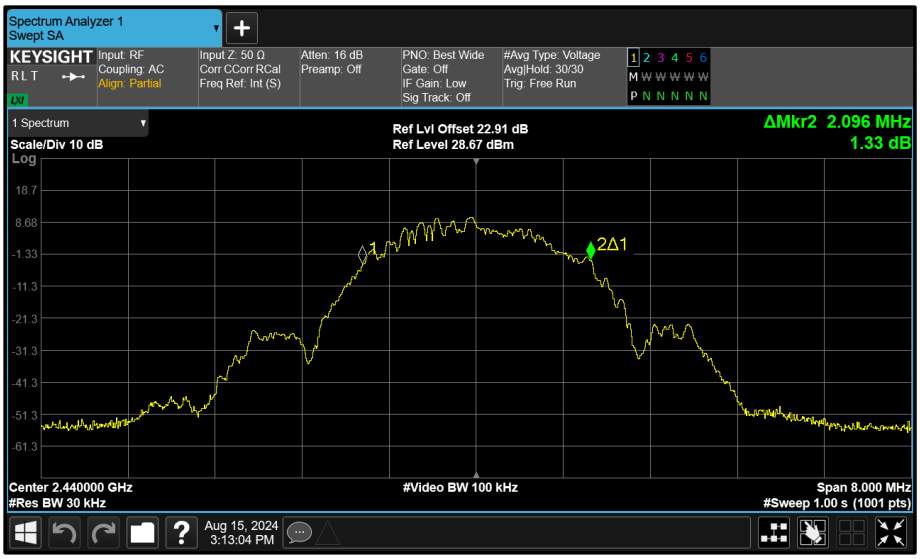

Figure 231 - Core 1 (B) 2440 MHz (CH17) 99% Bandwidth

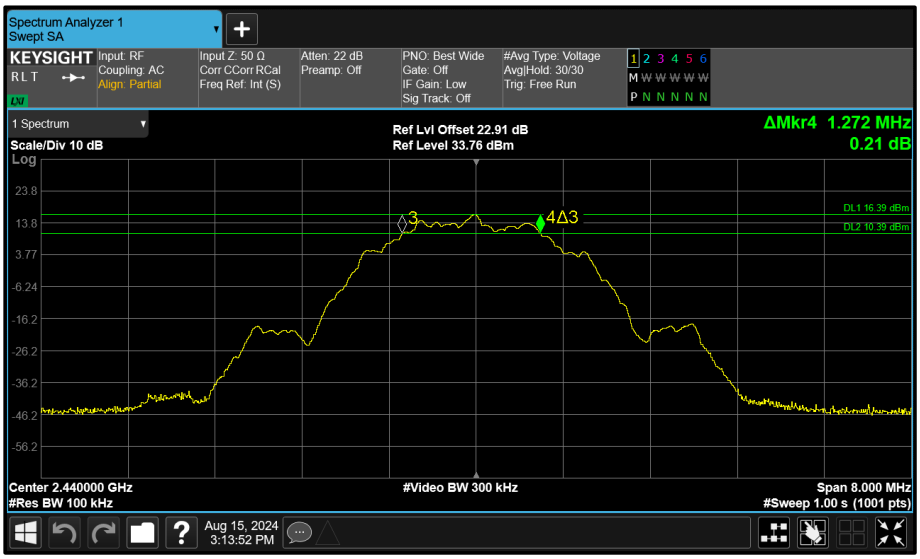

Figure 232 - Core 1 (B) 2440 MHz (CH17) 6 dB Bandwidth

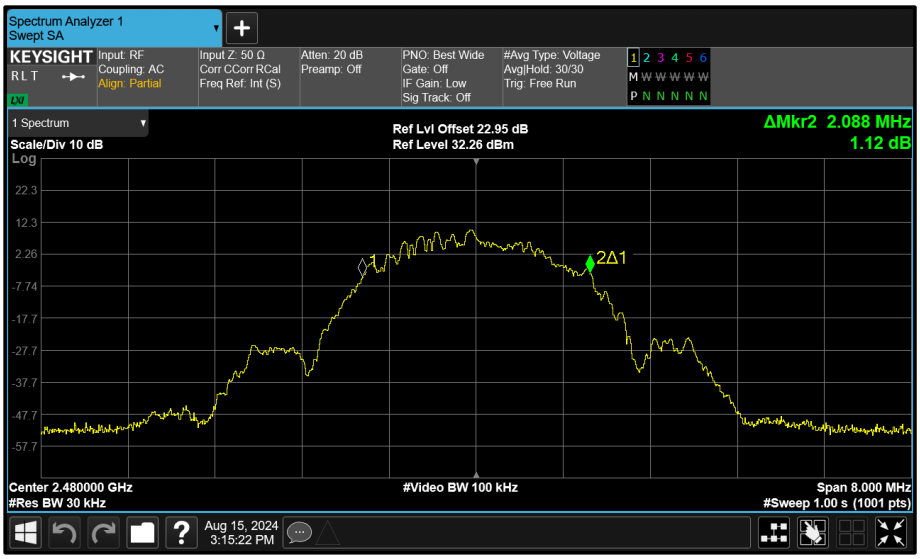

Figure 233 - Core 0 (A) 2480 MHz (CH39) 99% Bandwidth

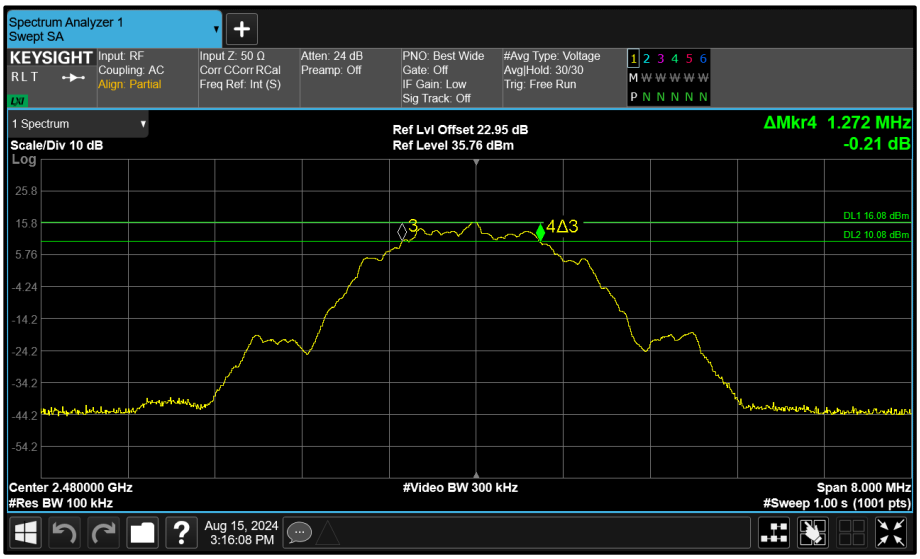

Figure 234 - Core 0 (A) 2480 MHz (CH39) 6 dB Bandwidth

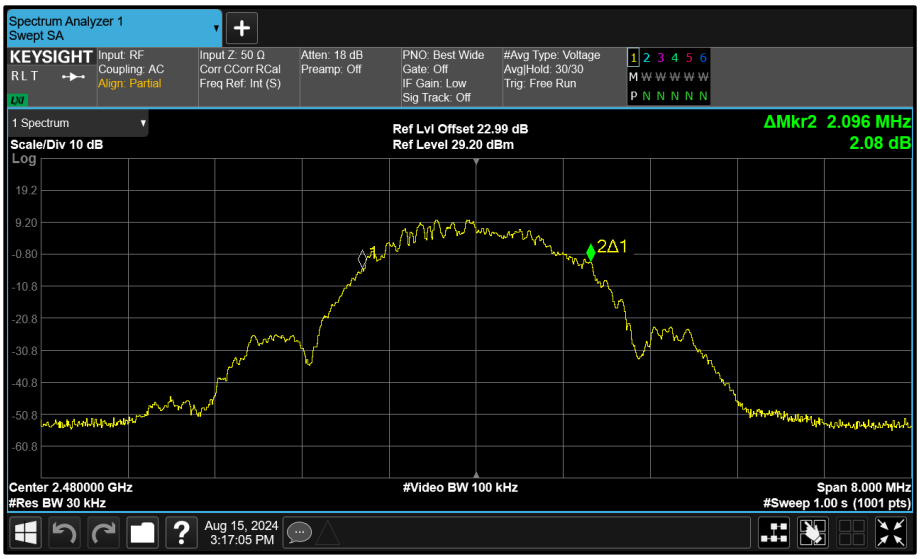

Figure 235 - Core 1 (B) 2480 MHz (CH39) 99% Bandwidth

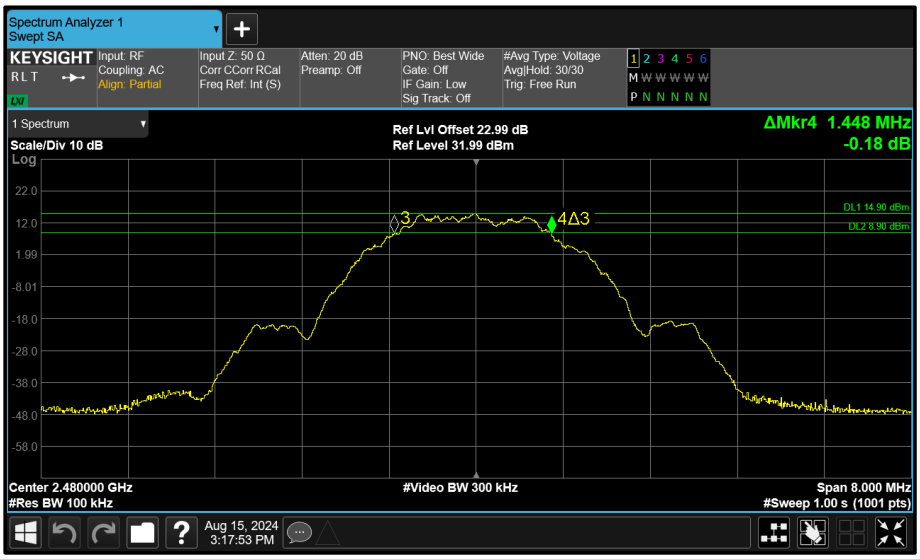

Figure 236 - Core 1 (B) 2480 MHz (CH39) 6 dB Bandwidth

FCC 47 CFR Part 15, Limit Clause 15.247(a)(2) and ISED RSS-247, Clause 5.2(a)

The minimum 6 dB Bandwidth shall be at least 500 kHz.

2.2.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 18 and RF Laboratory 14.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Hygrometer	Rotronic	I-1000	3068	12	07-Nov-2024
1500VA AC Power Supply	iTech	IT7324	5907	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5919	24	18-Mar-2026
Digital Multimeter	Fluke	115	6145	12	06-Jun-2025
MXA Signal Analyser	Keysight Technologies	N9020B	6417	24	26-Feb-2025
MXA Signal Analyser	Keysight Technologies	N9020B	6419	24	28-Feb-2025
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6517	12	22-Feb-2025
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6518	12	16-Feb-2025
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6519	12	08-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6520	12	09-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6521	12	09-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6522	12	09-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6526	12	22-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6527	12	05-Mar-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6528	12	22-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6529	12	16-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6530	12	16-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6531	12	16-Feb-2025
AC Programmable Power Supply	iTech	IT7324	6662	-	O/P Mon
AC Programmable Power Supply	iTech	IT7324	6665	-	O/P Mon

Table 57

TU - Traceability Unscheduled
O/P Mon - Output Monitored using calibrated equipment

2.3 Maximum Conducted Output Power

2.3.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (b)
ISED RSS-247, Clause 5.4
ISED RSS-GEN, Clause 6.12

2.3.2 Equipment Under Test and Modification State

A3137, S/N: H6D001F73D - Modification State 0
A3137, S/N: G5022YM6RR - Modification State 0

2.3.3 Date of Test

26-June-2024 to 15-August-2024

2.3.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 11.9.1.2 Method PKPM1.

MIMO output port summing was performed in accordance with KDB 662911 D01. Directional Gain was calculated in accordance with clause F)2)f)(ii) using the calculations from F)2)f)(i) with worst-case individual gain and an array gain of zero.

2.3.5 Environmental Conditions

Ambient Temperature	21.1 - 24.1 °C
Relative Humidity	45.1 - 60.9 %

2.3.6 Test Results

2.4 GHz Bluetooth LE/HDR

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA π/4 DQPSK (4-DH5)	Duty Cycle (%):	78.1
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	-	9.33	-	-	-	30.00	-20.67
2441	-	9.65	-	-	-	30.00	-20.35
2476	-	9.49	-	-	-	30.00	-20.51

Table 58 - FCC Maximum Conducted (peak) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	-	9.33	-	-	-	30.00	-20.67	11.93	36.00	-24.07
2441	-	9.65	-	-	-	30.00	-20.35	12.25	36.00	-23.75
2476	-	9.49	-	-	-	30.00	-20.51	12.09	36.00	-23.91

Table 59 - ISED Maximum Conducted (peak) Output Power Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA π/4 DQPSK (8-DH5)	Duty Cycle (%):	78.2
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	-	9.42	-	-	-	30.00	-20.58
2441	-	9.07	-	-	-	30.00	-20.93
2476	-	9.50	-	-	-	30.00	-20.50

Table 60 - FCC Maximum Conducted (peak) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	-	9.42	-	-	-	30.00	-20.58	12.02	36.00	-23.98
2441	-	9.07	-	-	-	30.00	-20.93	11.67	36.00	-24.33
2476	-	9.50	-	-	-	30.00	-20.50	12.10	36.00	-23.90

Table 61 - ISED Maximum Conducted (peak) Output Power Results