



Test Configuration					
Frequency Range:		2400-2483.5 MHz		Band:	2.4 GHz
Limit Clause(s):		FCC 15.247(a)(1) RSS-247 5.1 b)		Test Method(s):	C63.10 7.8.2
Additional Reference(s):		-			

DUT Configuration			
Mode:	ePA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)	Carrier Frequency Separation (MHz)			Limit (kHz)
		F1C	F2C	FHS	
2441	1.333	2441.006	2442.007	1.001	≥888.8

Table 43 - Carrier Frequency Separation Results

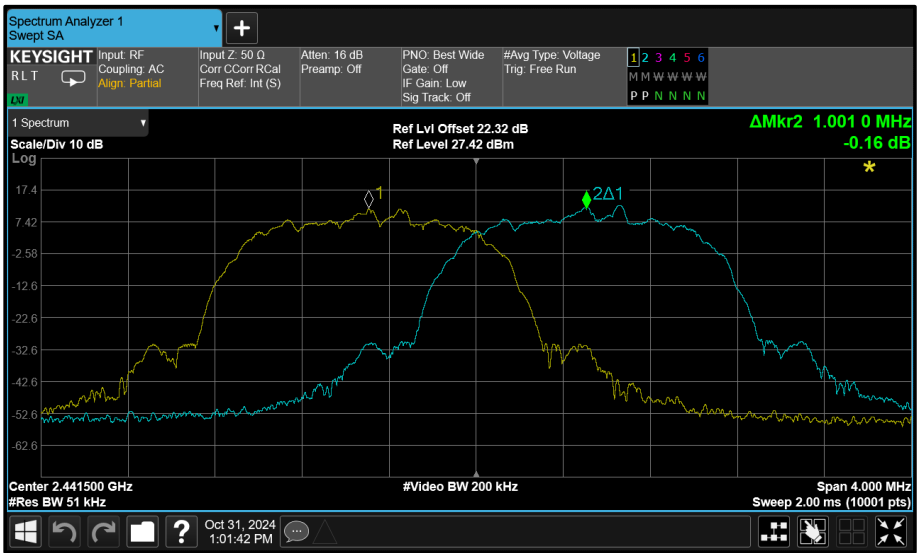


Figure 62 - 8-DPSK - 2441 MHz (CH39)



FCC 47 CFR Part 15, Limit Clause 15.247 (a)(1)

Frequency Hopping systems shall have Hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the Hopping channel, whichever is greater.

Alternatively, frequency Hopping systems operating in the band 2400-2483.5 MHz may have Hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the Hopping channel, whichever is greater, provided the systems operate with an output power no greater than 0.125 W.

ISED RSS-247, Limit Clause 5.1 (b)

FHSs shall have Hopping channel carrier frequencies separated by a minimum of 25 kHz or the -20 dB bandwidth of the Hopping channel, whichever is greater. Alternatively, FHSs operating in the band 2400-2483.5 MHz may have Hopping channel carrier frequencies that are separated by 25 kHz or two thirds of the 20 dB bandwidth of the Hopping channel, whichever is greater, provided that the systems operate with an output power no greater than 0.125 W.

2.3.7 Test Location and Test Equipment Used

This test was carried out in 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
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

Table 44

O/P Mon - Output Monitored using calibrated equipment



2.4 Frequency Hopping Systems - Number of Hopping Channels

2.4.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (a)(1)
ISED RSS-247, Clause 5.1

2.4.2 Equipment Under Test and Modification State

A3389, S/N: MGC29YC7F7 - Modification State 0

2.4.3 Date of Test

30-October-2024

2.4.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 7.8.3.

2.4.5 Environmental Conditions

Ambient Temperature	21.0 °C
Relative Humidity	57.0 %



2.4.6 Test Results

2.4 GHz Bluetooth BDR/EDR

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies		Limit
79		≥15.0

Table 45 - Number of Hopping Frequencies Results

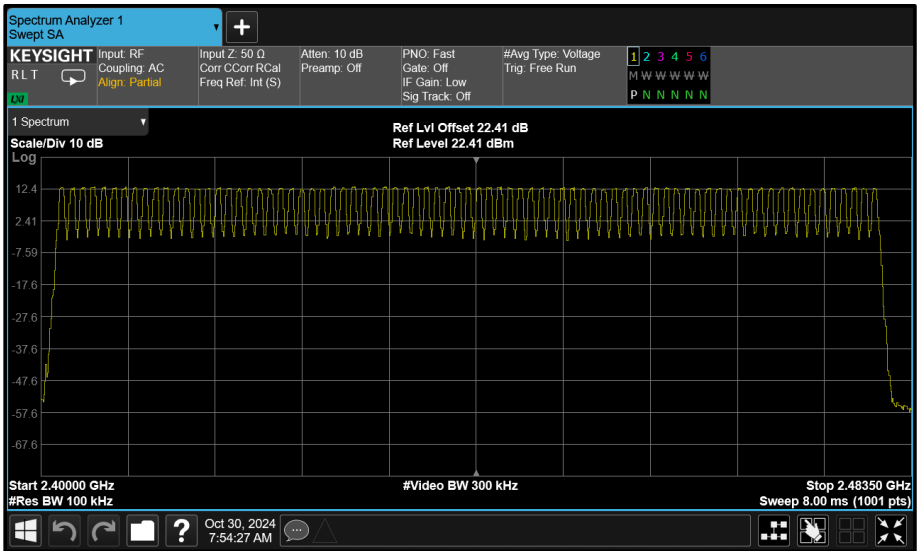


Figure 63 - GFSK (DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥ 15.0

Table 46 - Number of Hopping Frequencies Results

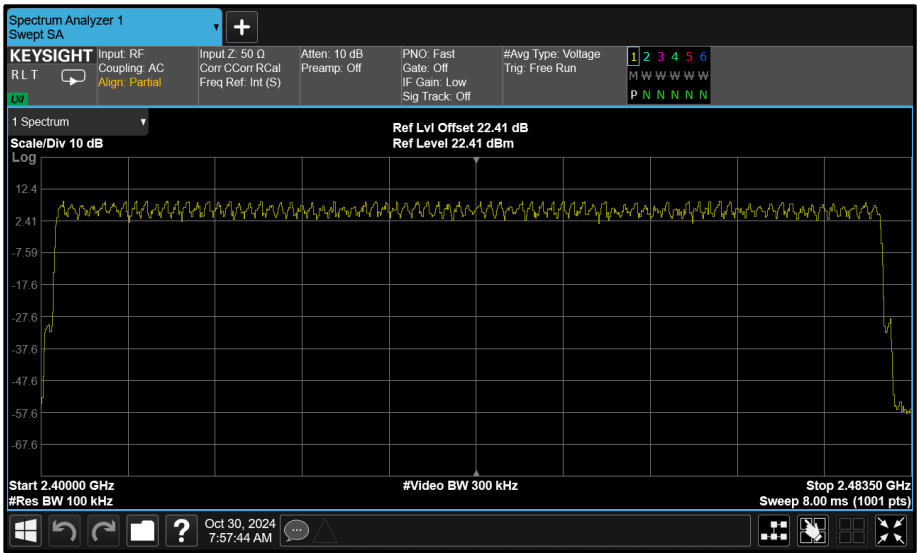


Figure 64 - $\pi/4$ DQPSK (2-DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥15.0

Table 47 - Number of Hopping Frequencies Results

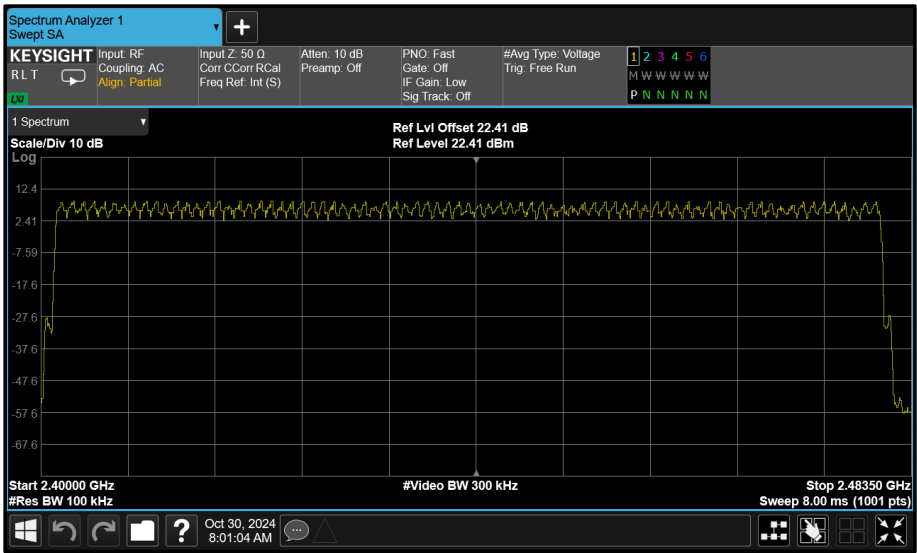


Figure 65 - 8-DPSK (3-DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥15.0

Table 48 - Number of Hopping Frequencies Results

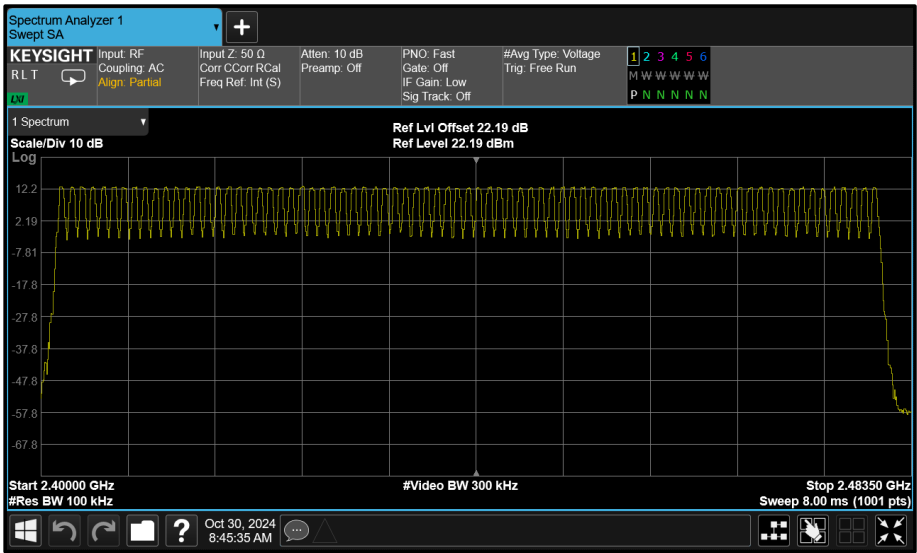


Figure 66 - GFSK (DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥ 15.0

Table 49 - Number of Hopping Frequencies Results

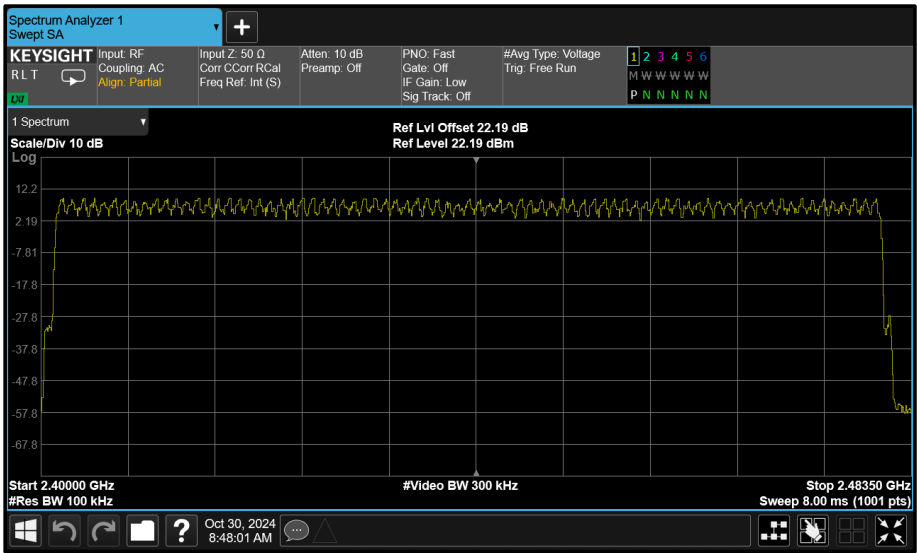


Figure 67 - $\pi/4$ DQPSK (2-DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies		Limit
79		≥15.0

Table 50 - Number of Hopping Frequencies Results

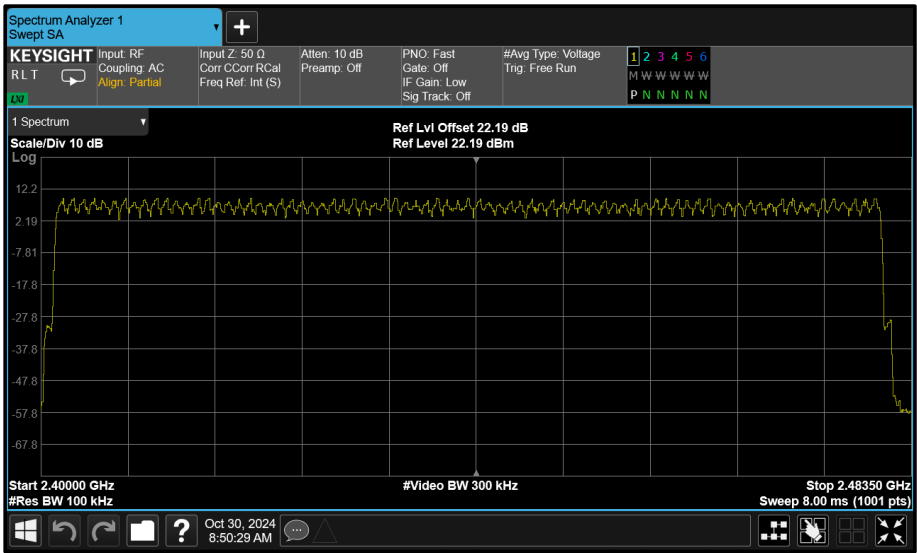


Figure 68 - 8-DPSK (3-DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥ 15.0

Table 51 - Number of Hopping Frequencies Results

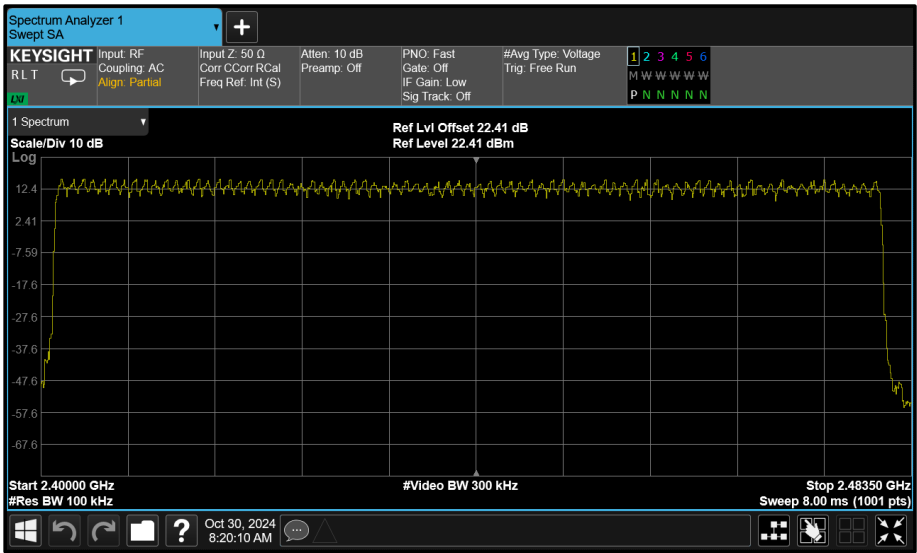


Figure 69 - $\pi/4$ DQPSK (2-DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies		Limit
79		≥15.0

Table 52 - Number of Hopping Frequencies Results

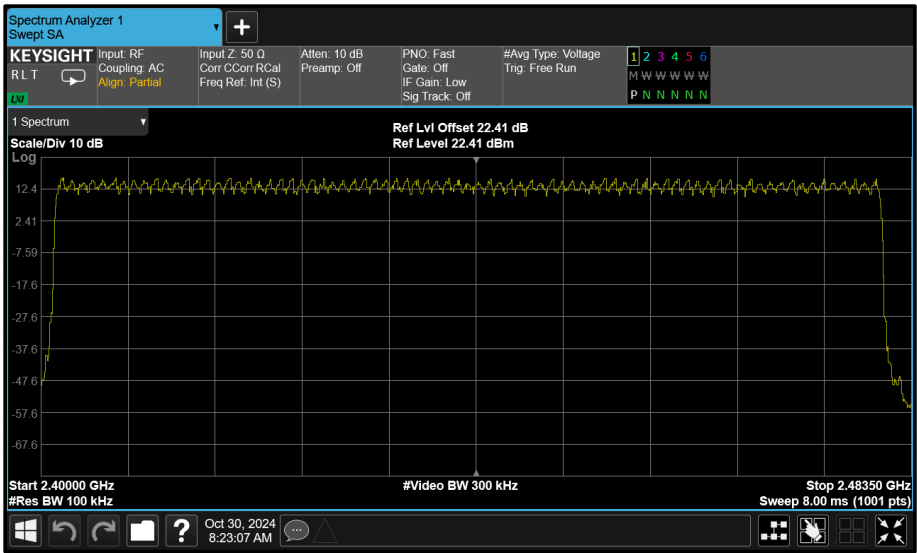


Figure 70 - 8-DPSK (3-DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥15.0

Table 53 - Number of Hopping Frequencies Results

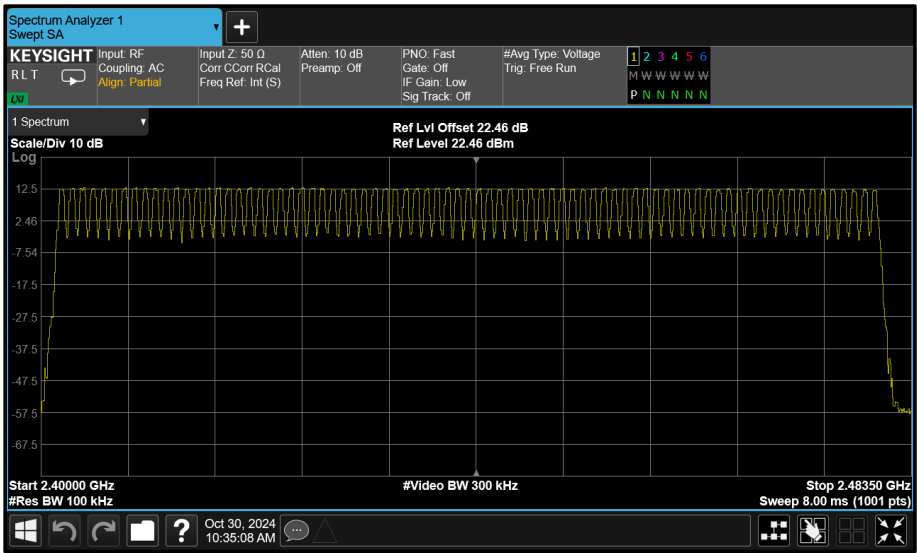


Figure 71 - GFSK (DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥ 15.0

Table 54 - Number of Hopping Frequencies Results

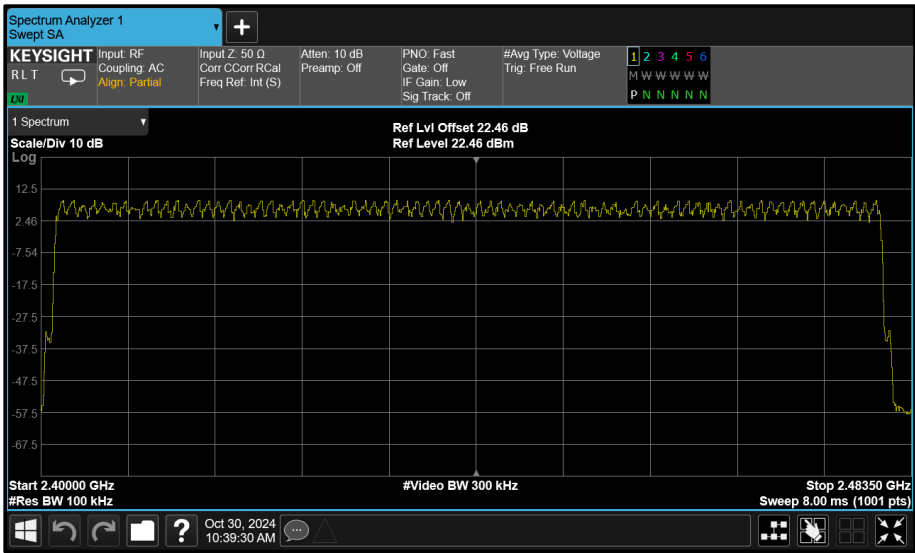


Figure 72 - $\pi/4$ DQPSK (2-DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥15.0

Table 55 - Number of Hopping Frequencies Results

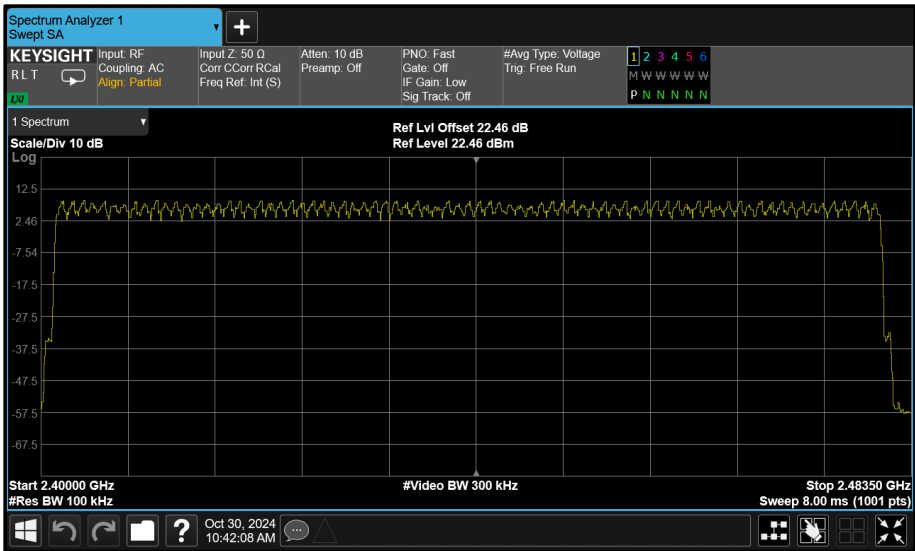


Figure 73 - 8-DPSK (3-DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥ 15.0

Table 56 - Number of Hopping Frequencies Results

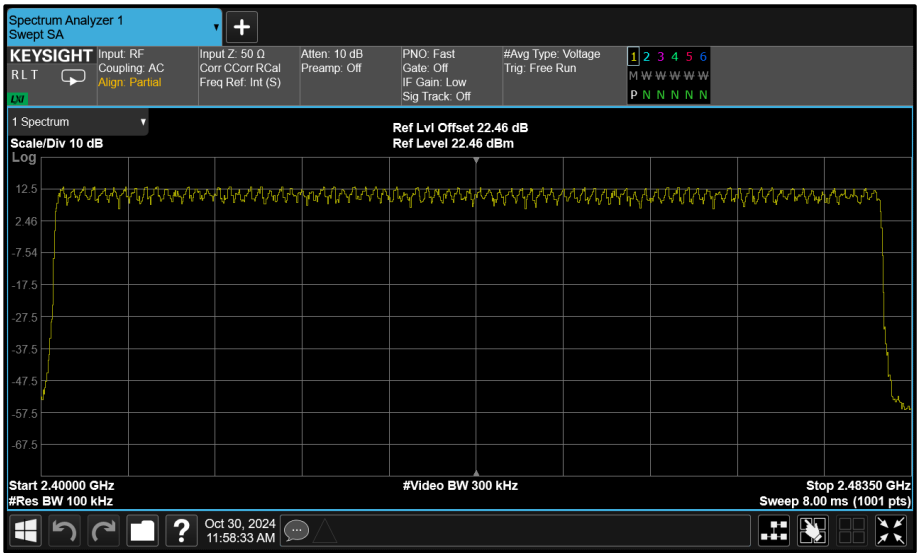


Figure 74 - $\pi/4$ DQPSK (2-DH5) - Number of Hopping Channels



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247(a)(1)(iii) RSS-247 5.1 d)	Test Method(s):	C63.10 7.8.3
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥15.0

Table 57 - Number of Hopping Frequencies Results

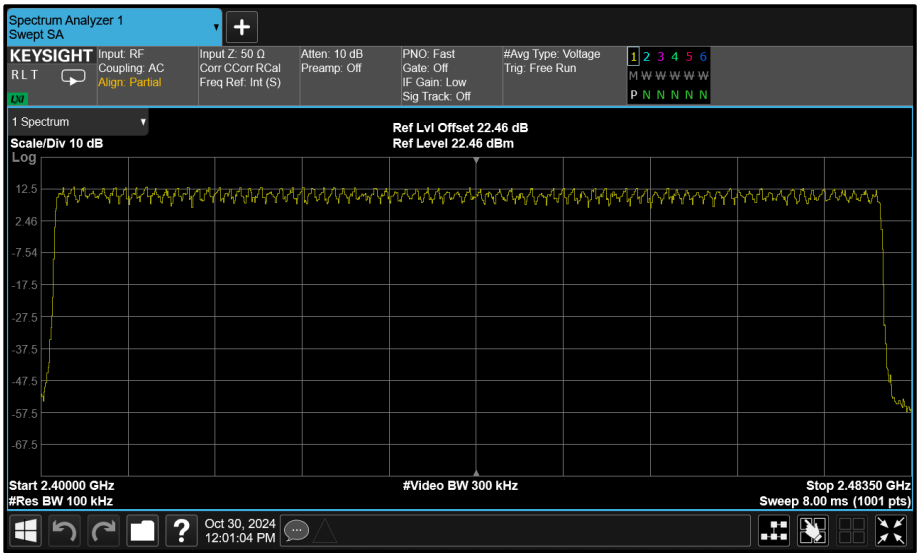


Figure 75 - 8-DPSK (3-DH5) - Number of Hopping Channels

FCC 47 CFR Part 15, Limit Clause 15.247 (a)(1)(iii)

≥ 15 channels

ISED RSS-247, Limit Clause 5.1 (d)

FHSSs operating in the band 2400-2483.5 MHz shall use at least 15 hopping channels.



2.4.7 Test Location and Test Equipment Used

This test was carried out in 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
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

Table 58

O/P Mon - Output Monitored using calibrated equipment



2.5 Frequency Hopping Systems - 99% & 20 dB Bandwidth

2.5.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (a)(1)
ISED RSS-247, Clause 5.1
ISED RSS-GEN, Clause 6.7

2.5.2 Equipment Under Test and Modification State

A3389, S/N: MGC29YC7F7 - Modification State 0

2.5.3 Date of Test

30-October-2024 to 01-November-2024

2.5.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.9.2 for 20 dB Bandwidth and ANSI C63.10, clause 6.9.3 for 99% Bandwidth

2.5.5 Environmental Conditions

Ambient Temperature	21.0 - 21.4 °C
Relative Humidity	51.6 - 57.0 %



2.5.6 Test Results

2.4 GHz Bluetooth BDR/EDR

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	0.855	-	-
2441	-	0.855	-	-
2480	-	0.855	-	-

Table 59 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	-	0.852	-	-	-
2441	-	0.855	-	-	-
2480	-	0.855	-	-	-

Table 60 - 99% Bandwidth Results

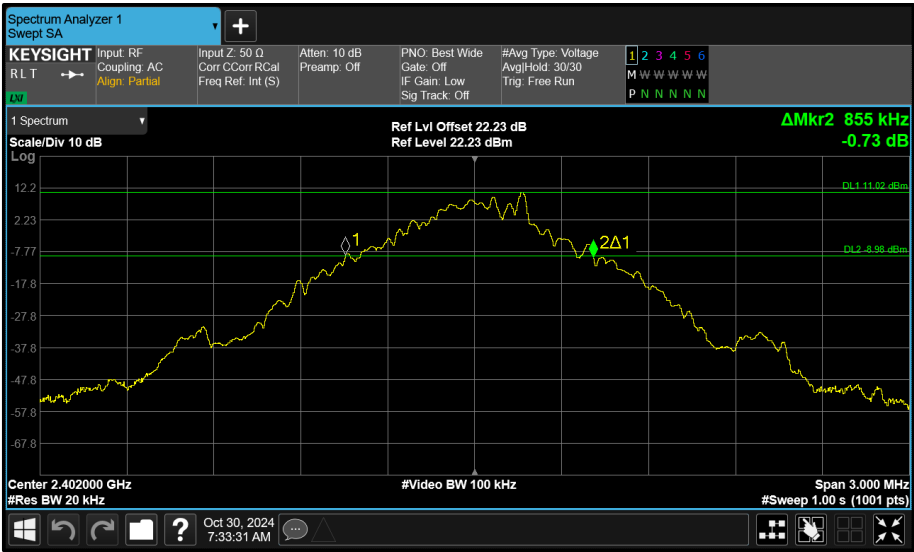


Figure 76 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

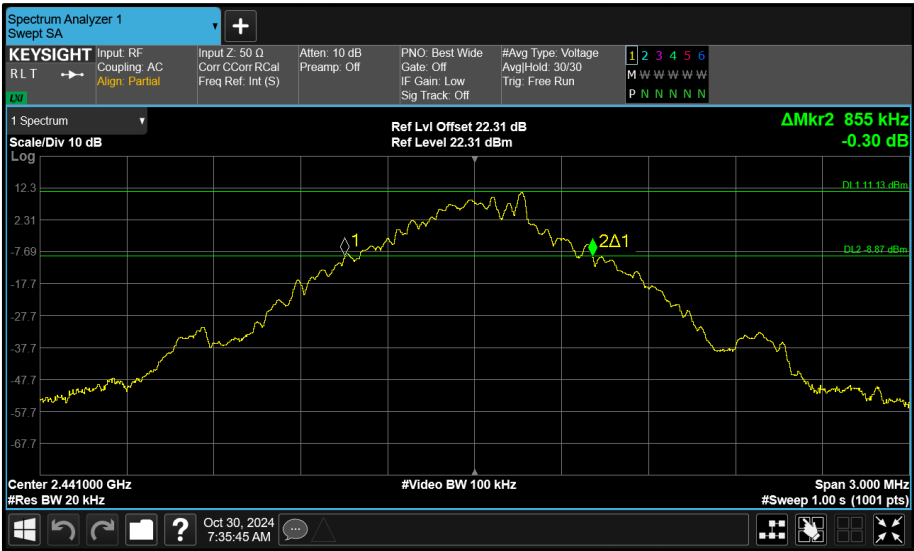


Figure 77 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

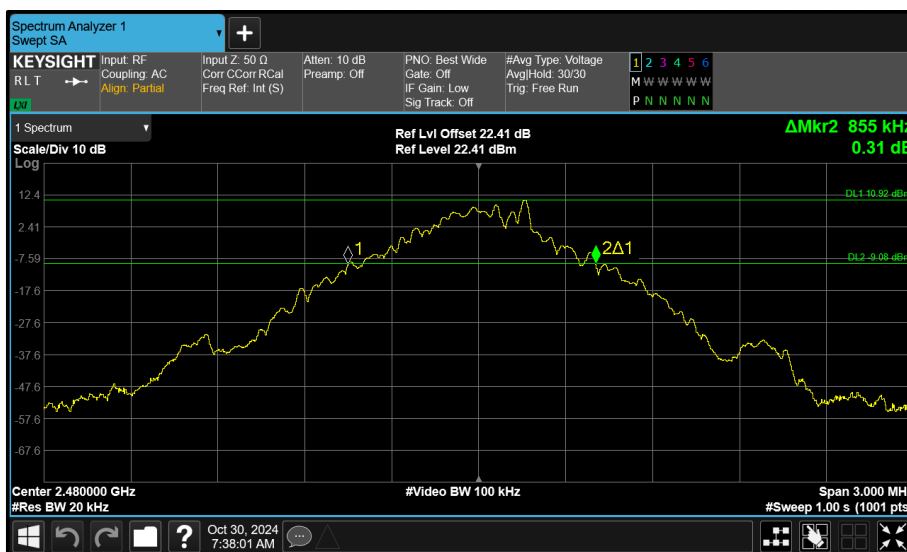


Figure 78 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

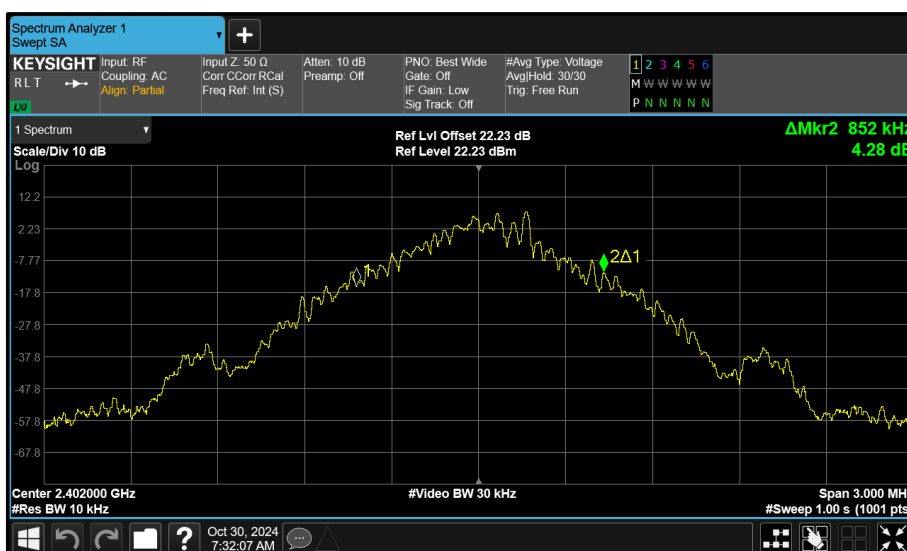


Figure 79 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

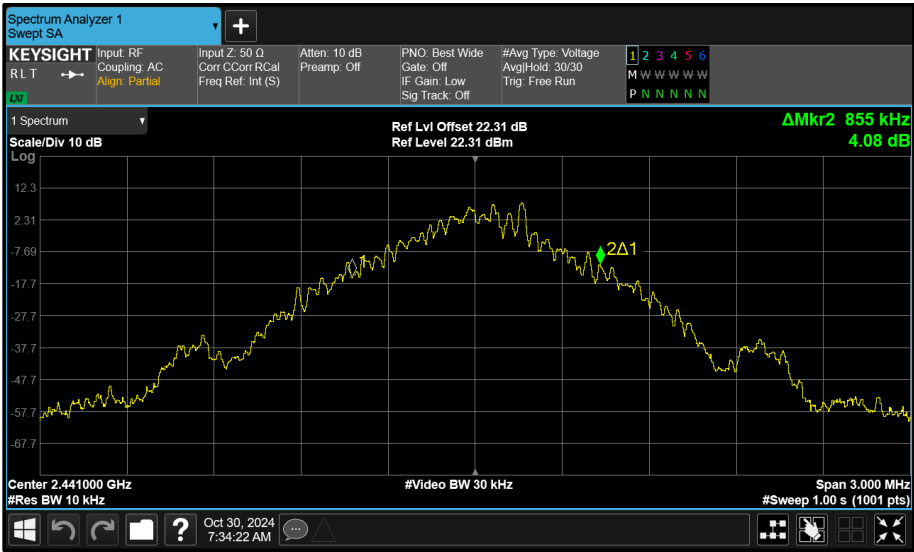


Figure 80 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

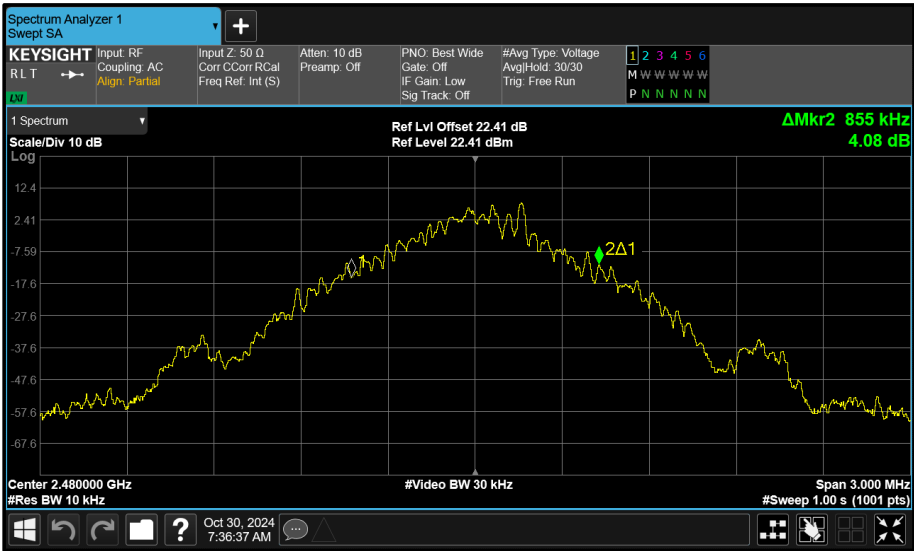


Figure 81 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	1.325	-	-
2441	-	1.330	-	-
2480	-	1.325	-	-

Table 61 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	-	1.184	-	-	-
2441	-	1.184	-	-	-
2480	-	1.184	-	-	-

Table 62 - 99% Bandwidth Results

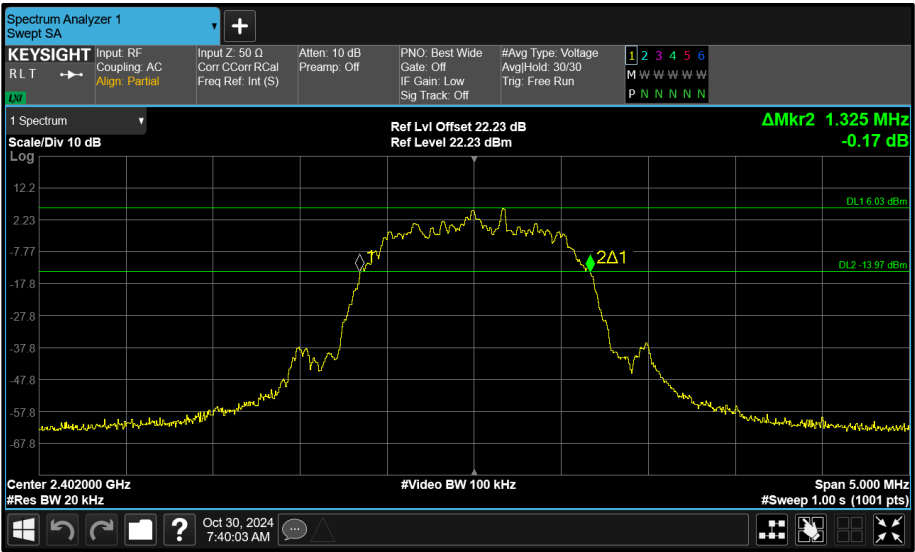


Figure 82 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

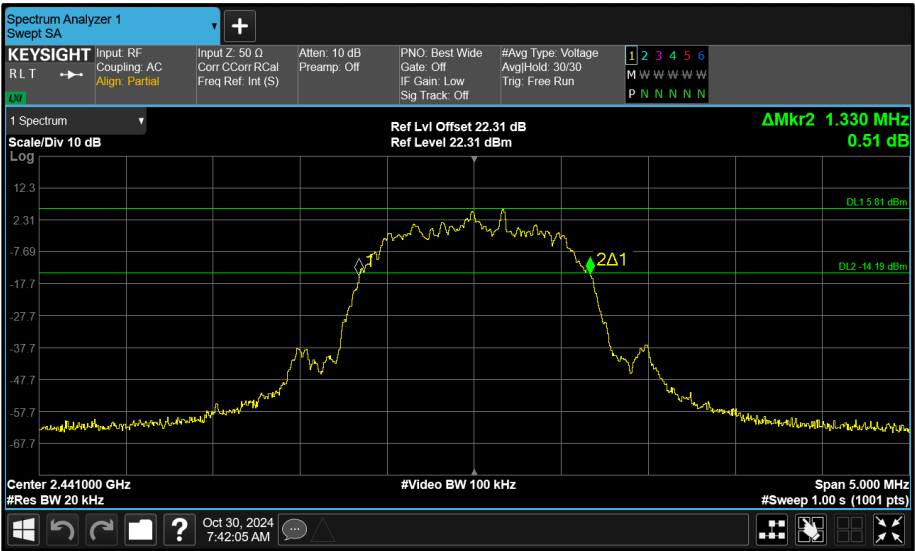


Figure 83 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

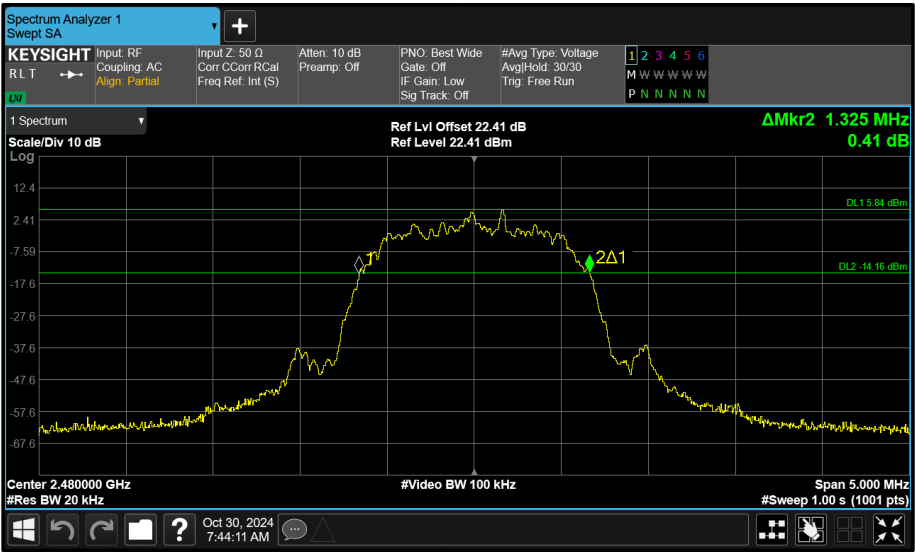


Figure 84 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

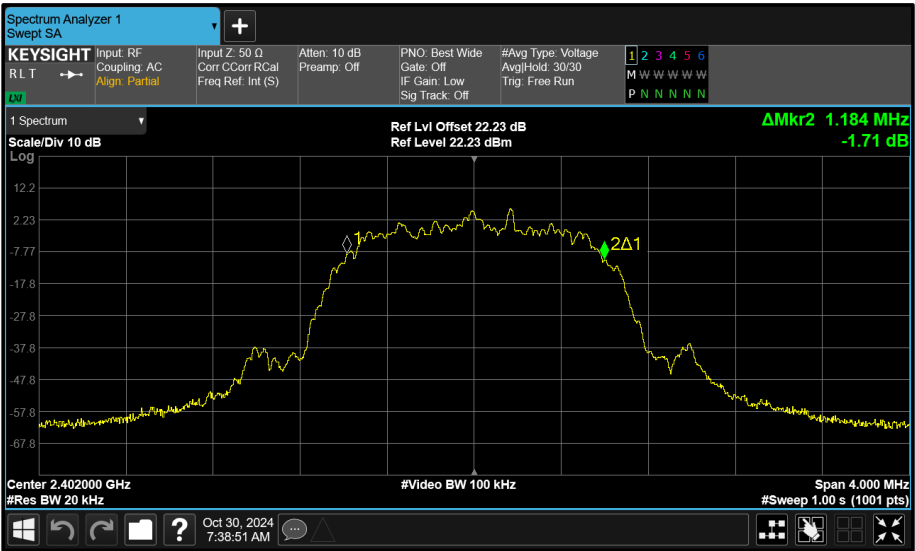


Figure 85 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

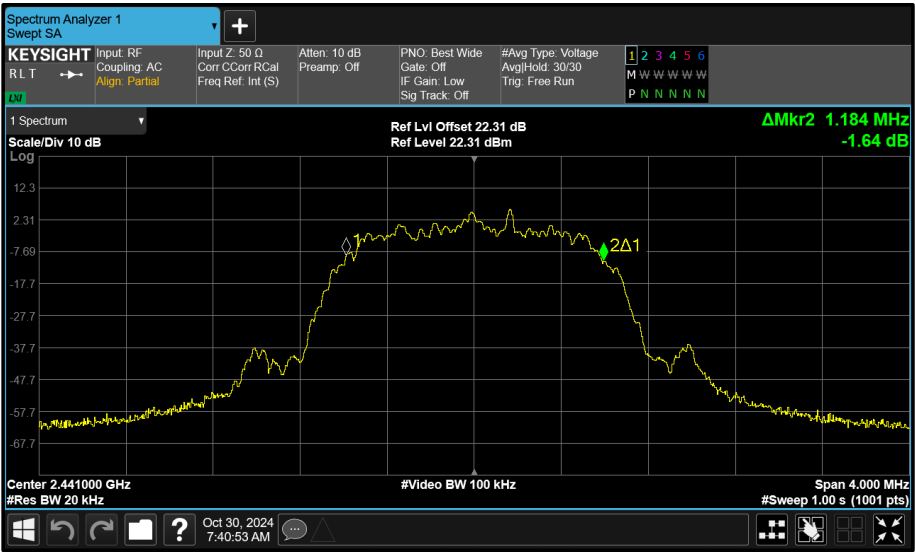


Figure 86 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

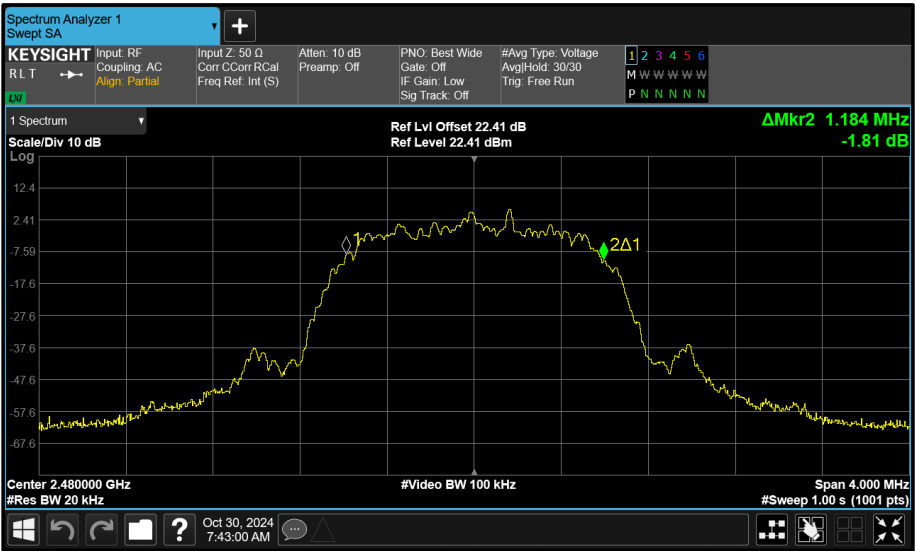


Figure 87 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	1.260	-	-
2441	-	1.260	-	-
2480	-	1.260	-	-

Table 63 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	-	1.188	-	-	-
2441	-	1.184	-	-	-
2480	-	1.188	-	-	-

Table 64 - 99% Bandwidth Results

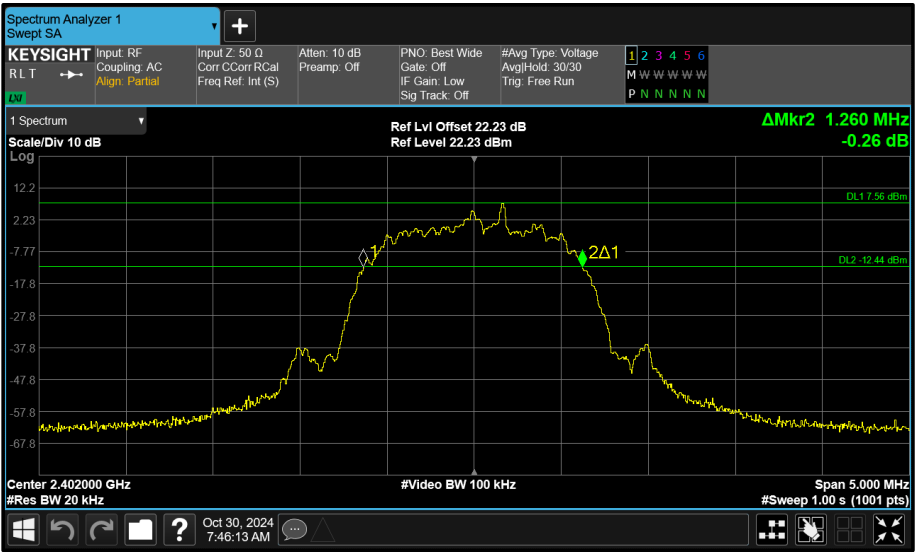


Figure 88 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

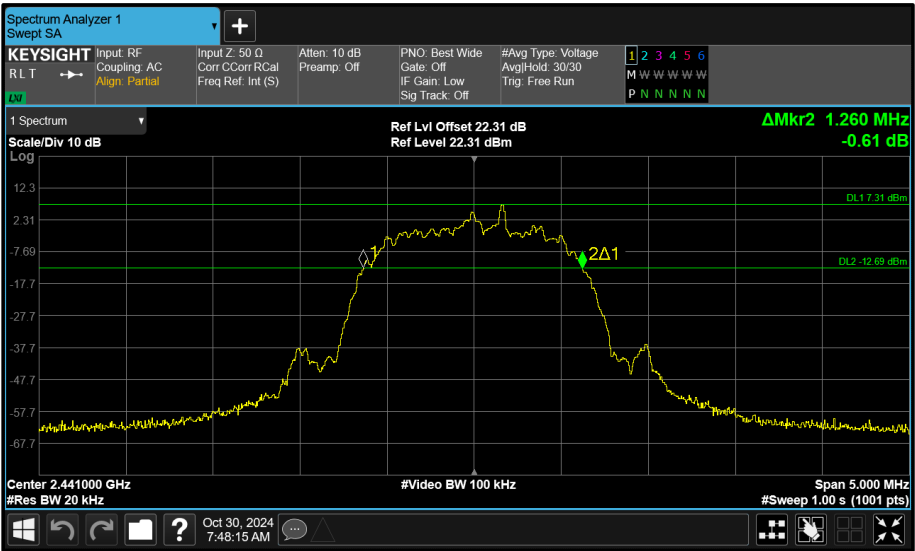


Figure 89 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

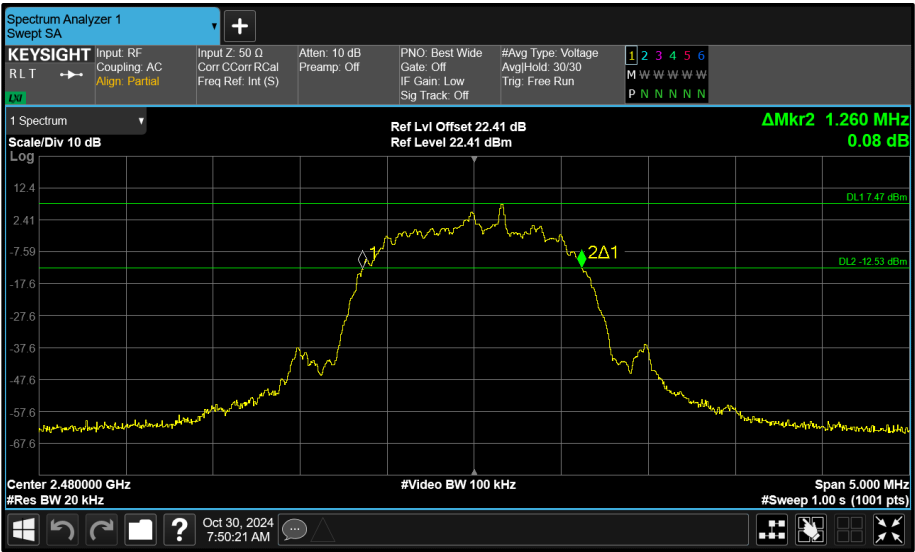


Figure 90 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

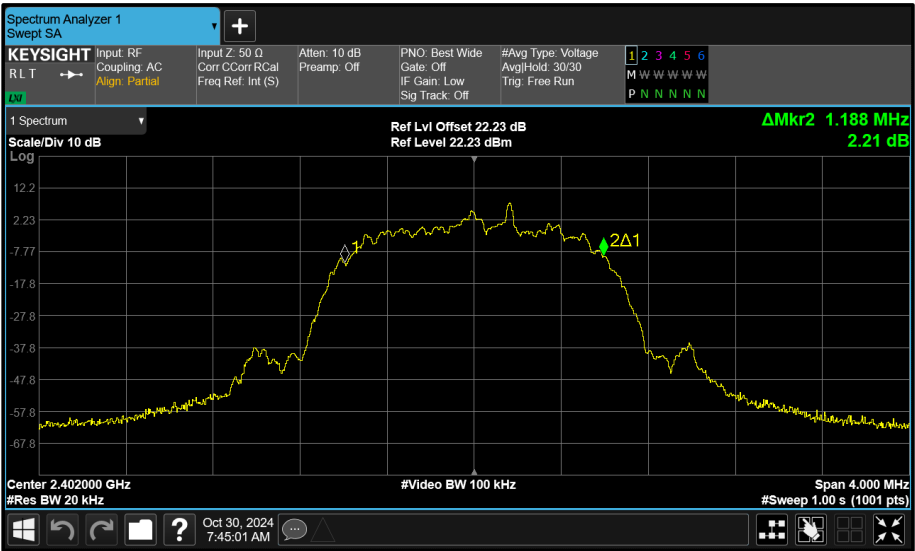


Figure 91 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

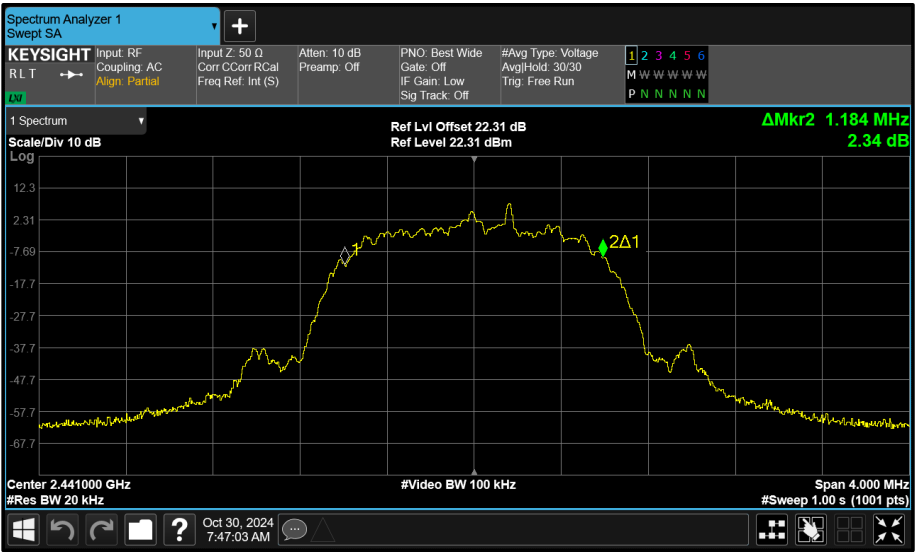


Figure 92 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

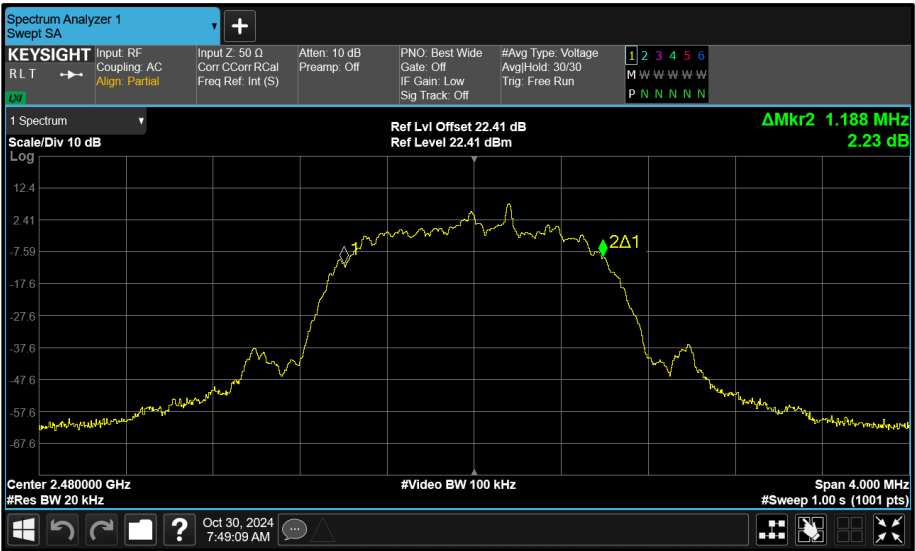


Figure 93 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	-	0.858	-
2441	-	-	0.855	-
2480	-	-	0.855	-

Table 65 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	-	-	0.858	-	-
2441	-	-	0.861	-	-
2480	-	-	0.858	-	-

Table 66 - 99% Bandwidth Results

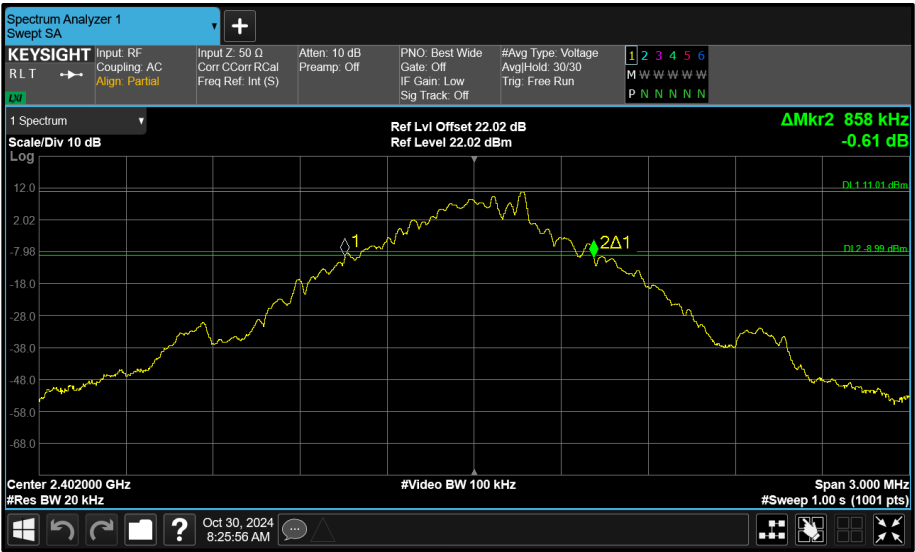


Figure 94 - Core 2 (C) 2402 MHz (CH0) 20 dB Bandwidth

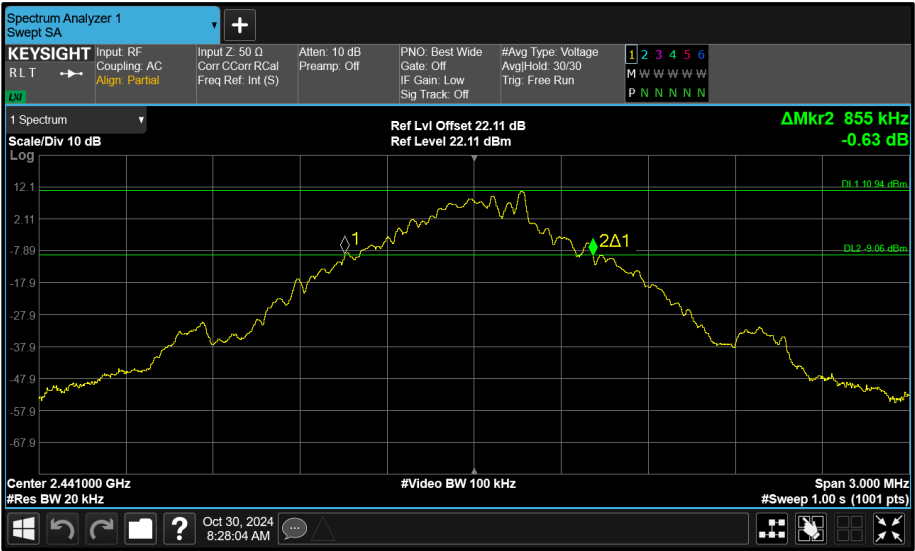


Figure 96 - Core 2 (C) 2441 MHz (CH39) 20 dB Bandwidth

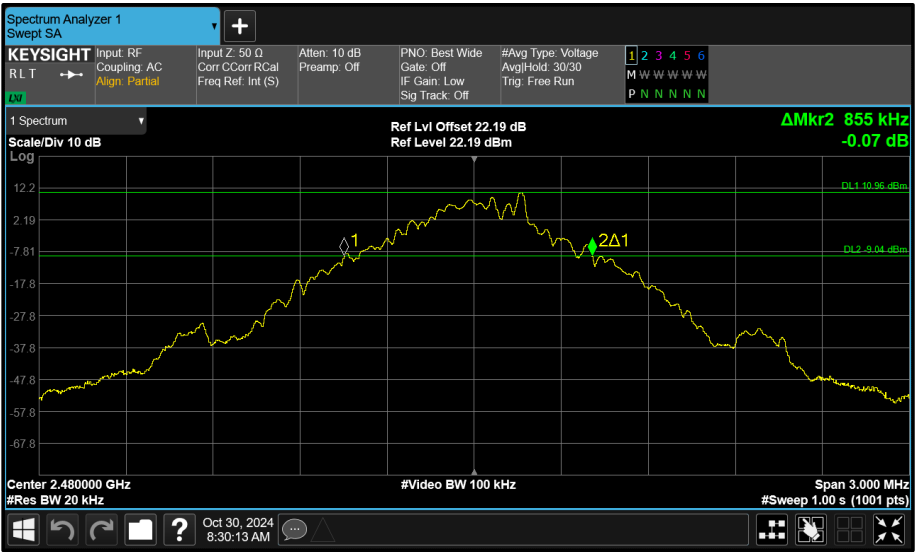


Figure 98 - Core 2 (C) 2480 MHz (CH78) 20 dB Bandwidth

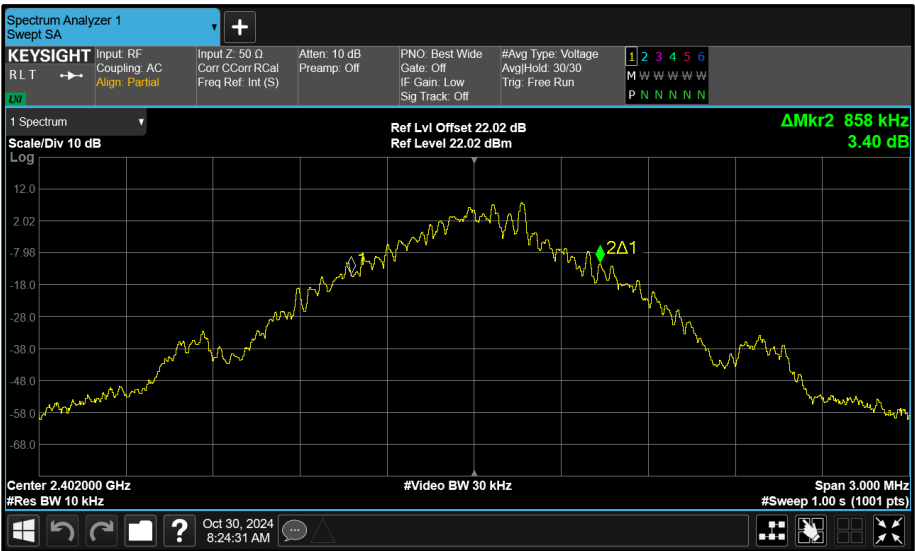


Figure 100 - Core 2 (C) 2402 MHz (CH0) 99% Bandwidth

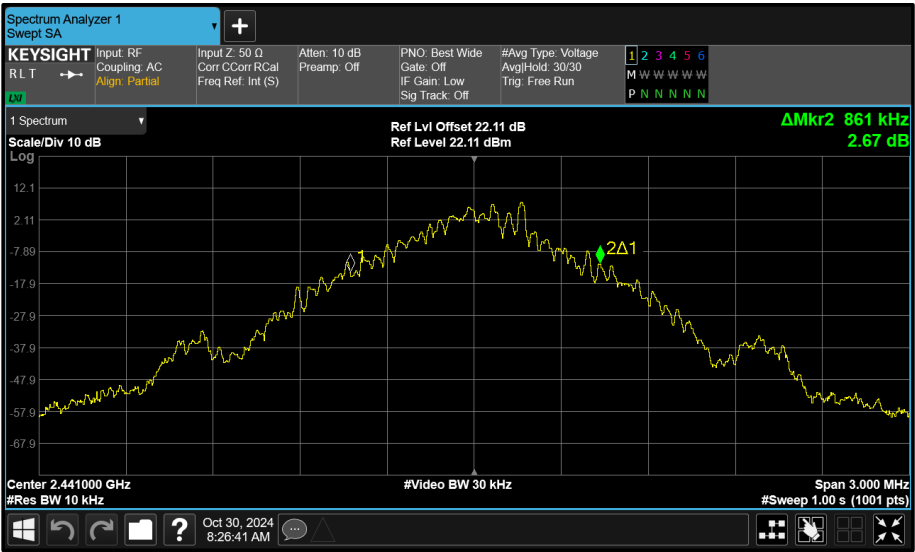


Figure 101 - Core 2 (C) 2441 MHz (CH39) 99% Bandwidth

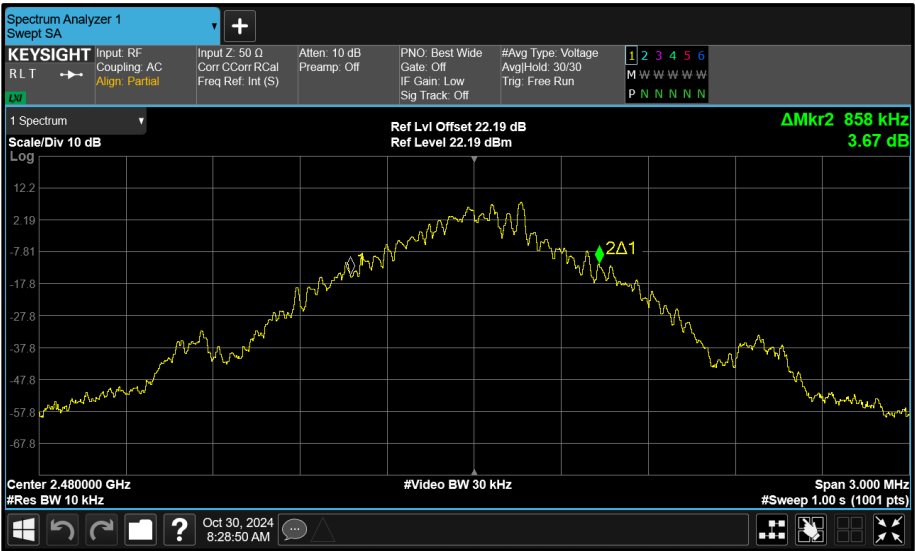


Figure 102 - Core 2 (C) 2480 MHz (CH78) 99% Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	-	1.325	-
2441	-	-	1.325	-
2480	-	-	1.330	-

Table 67 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	-	-	1.188	-	-
2441	-	-	1.188	-	-
2480	-	-	1.188	-	-

Table 68 - 99% Bandwidth Results

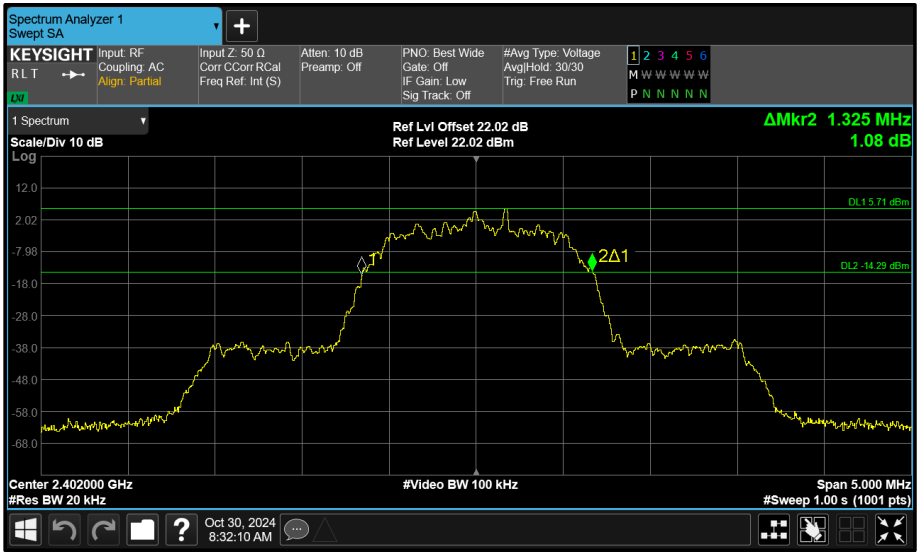


Figure 103 - Core 2 (C) 2402 MHz (CH0) 20 dB Bandwidth

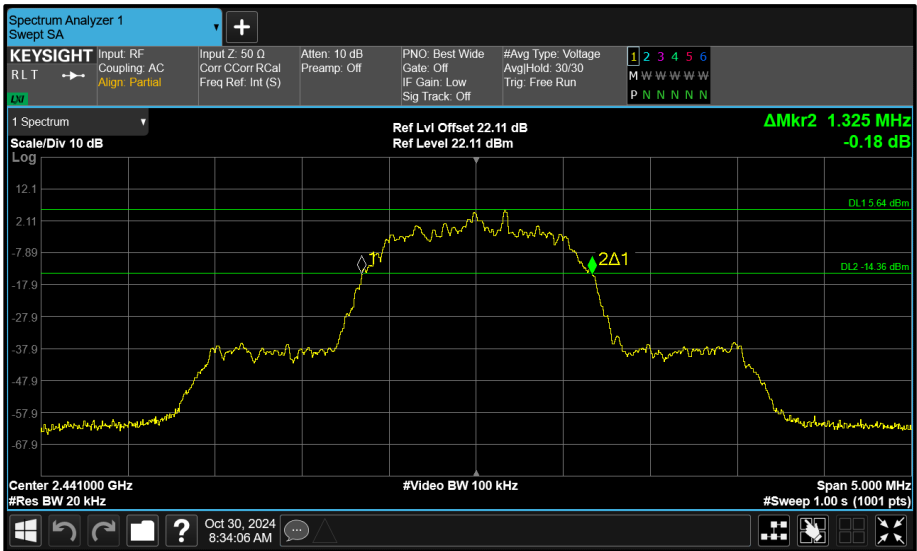


Figure 105 - Core 2 (C) 2441 MHz (CH39) 20 dB Bandwidth

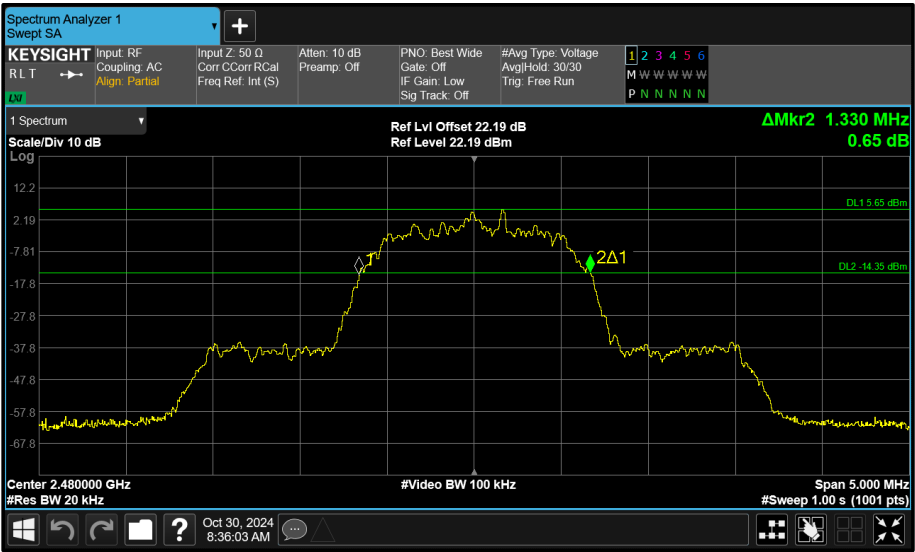


Figure 107 - Core 2 (C) 2480 MHz (CH78) 20 dB Bandwidth

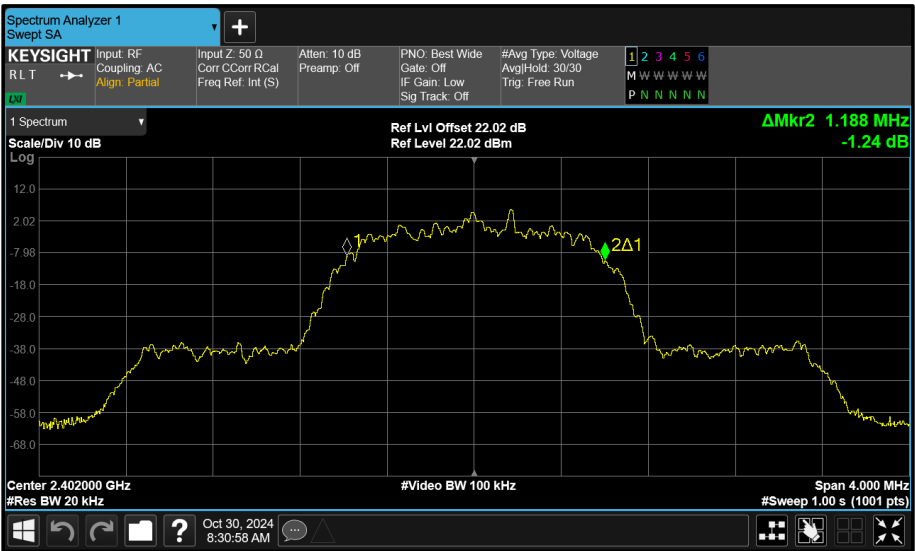


Figure 109 - Core 2 (C) 2402 MHz (CH0) 99% Bandwidth

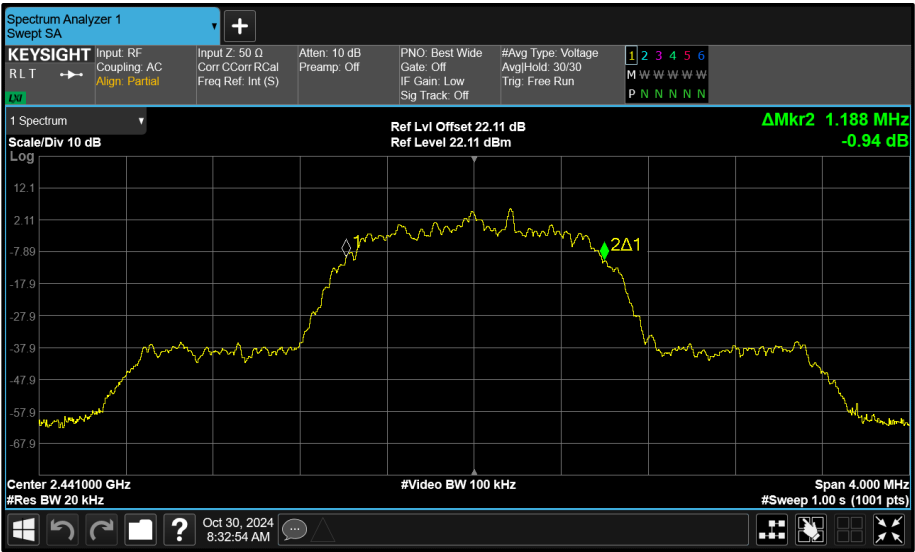


Figure 110 - Core 2 (C) 2441 MHz (CH39) 99% Bandwidth

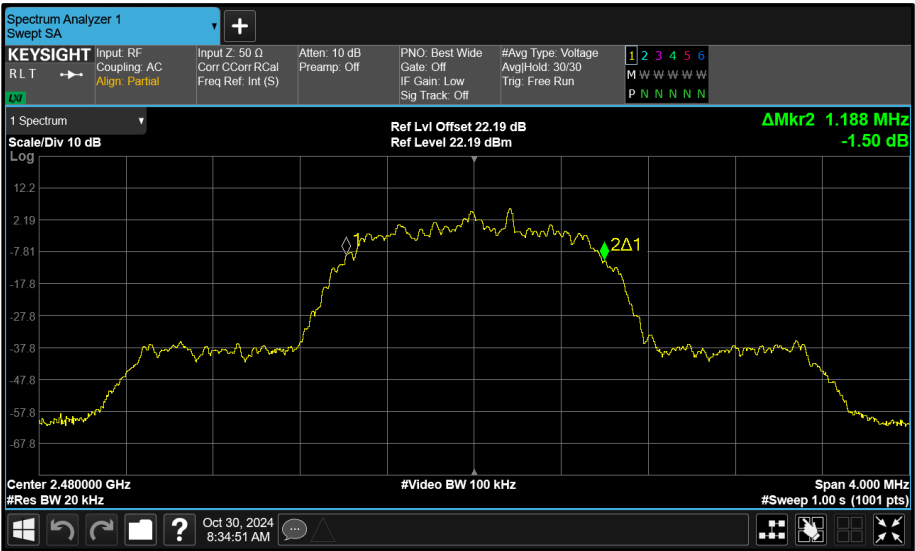


Figure 111 - Core 2 (C) 2480 MHz (CH78) 99% Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

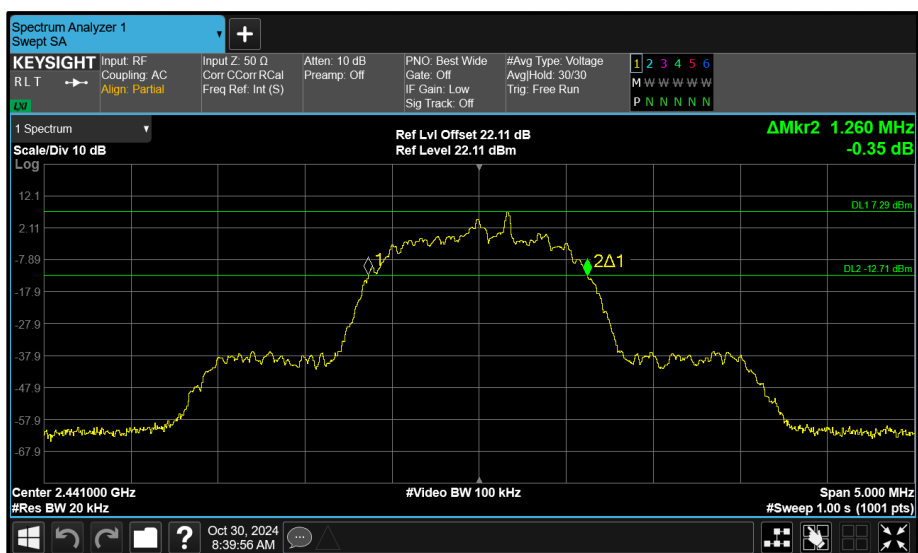
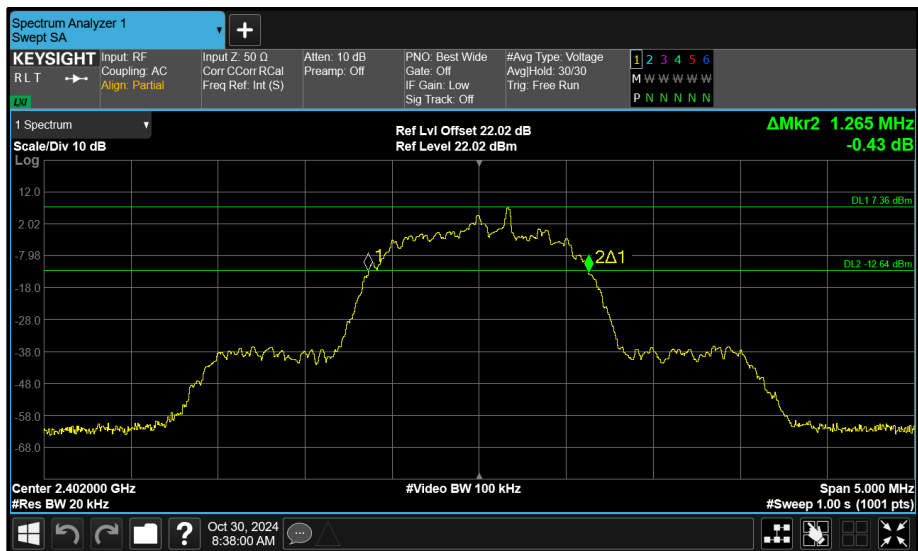
DUT Configuration			
Mode:	iPA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	-	1.265	-
2441	-	-	1.260	-
2480	-	-	1.265	-

Table 69 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	-	-	1.196	-	-
2441	-	-	1.192	-	-
2480	-	-	1.196	-	-

Table 70 - 99% Bandwidth Results



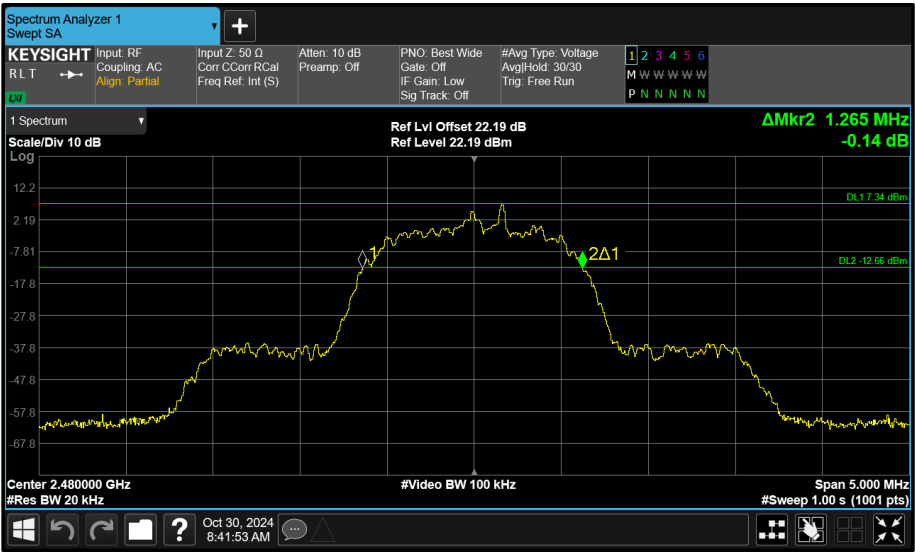


Figure 116 - Core 2 (C) 2480 MHz (CH78) 20 dB Bandwidth

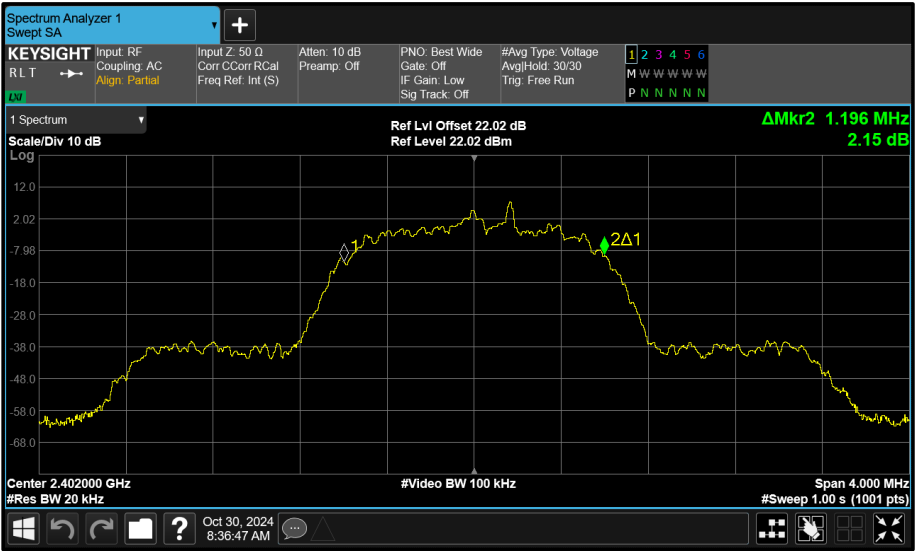


Figure 118 - Core 2 (C) 2402 MHz (CH0) 99% Bandwidth

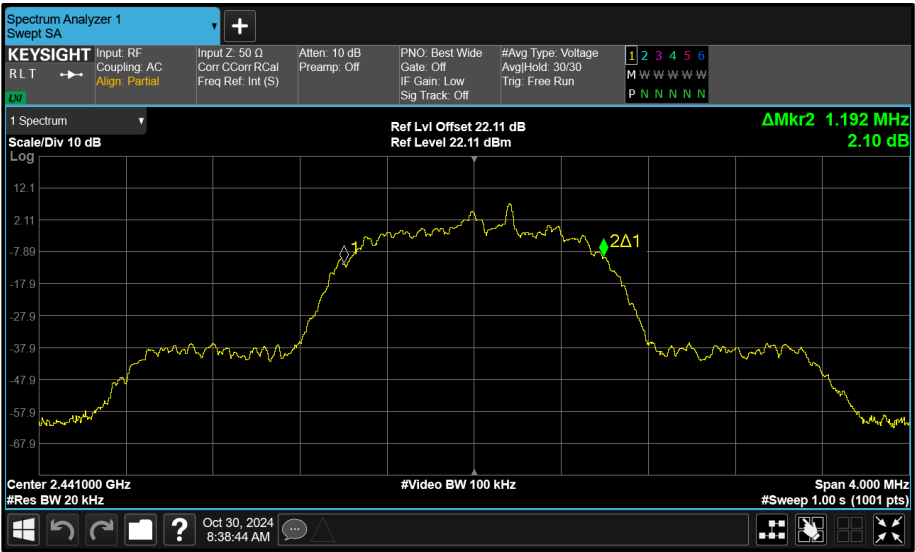


Figure 119 - Core 2 (C) 2441 MHz (CH39) 99% Bandwidth

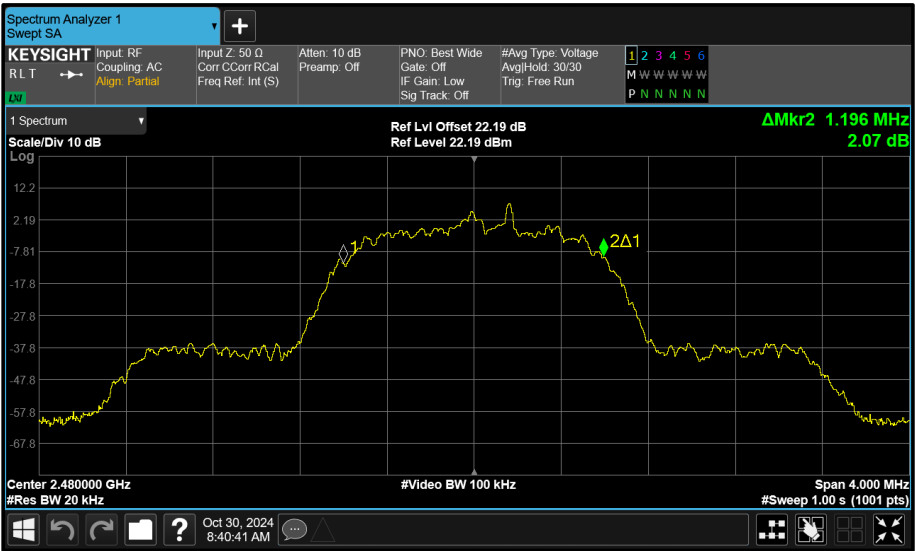


Figure 120 - Core 2 (C) 2480 MHz (CH78) 99% Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	1.325	-	-
2441	-	1.325	-	-
2480	-	1.325	-	-

Table 71 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	-	1.180	-	-	-
2441	-	1.184	-	-	-
2480	-	1.188	-	-	-

Table 72 - 99% Bandwidth Results

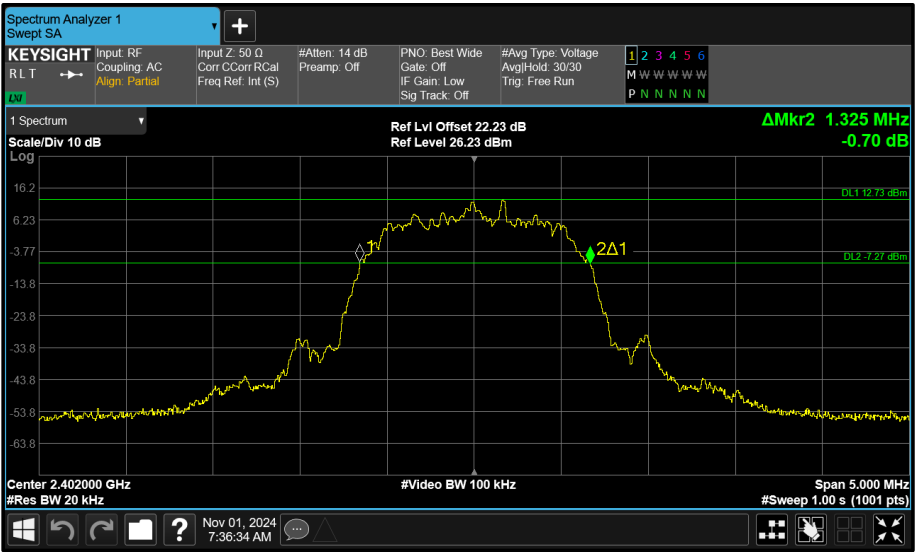


Figure 121 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

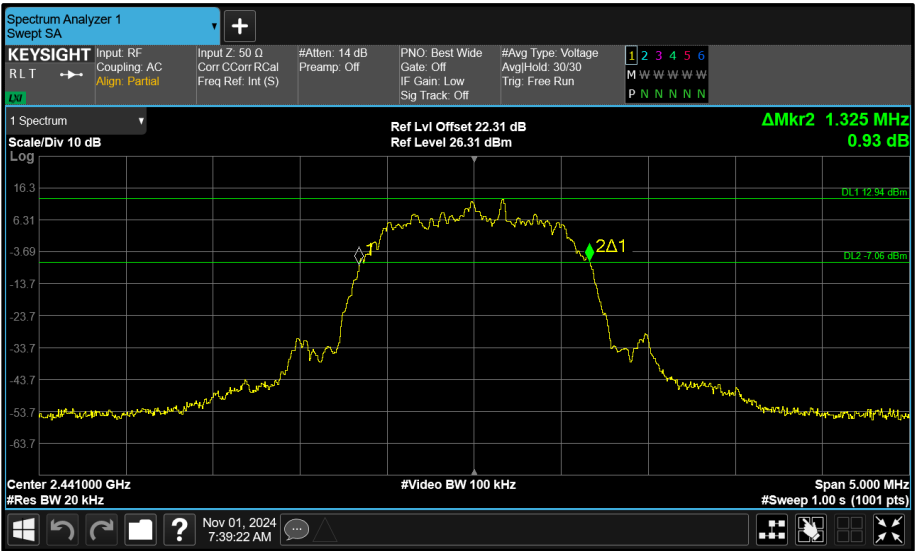


Figure 122 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

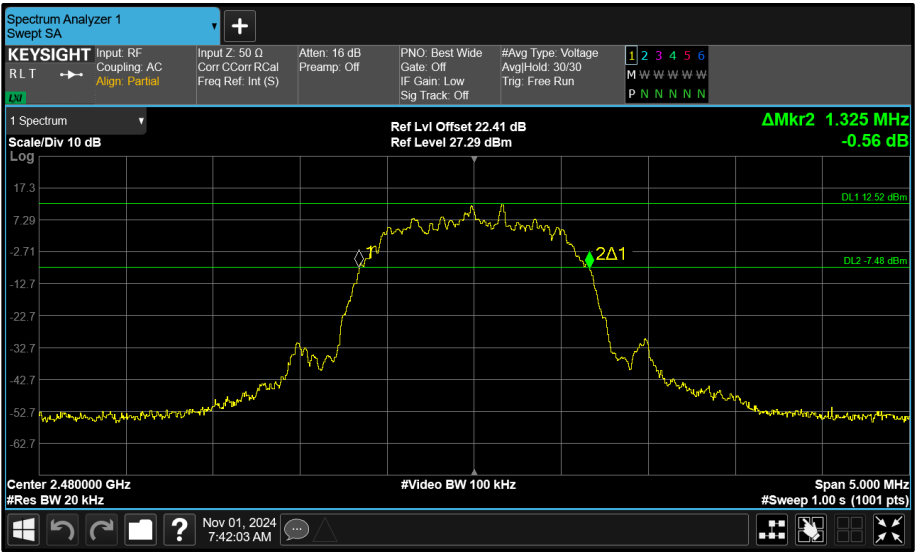


Figure 123 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

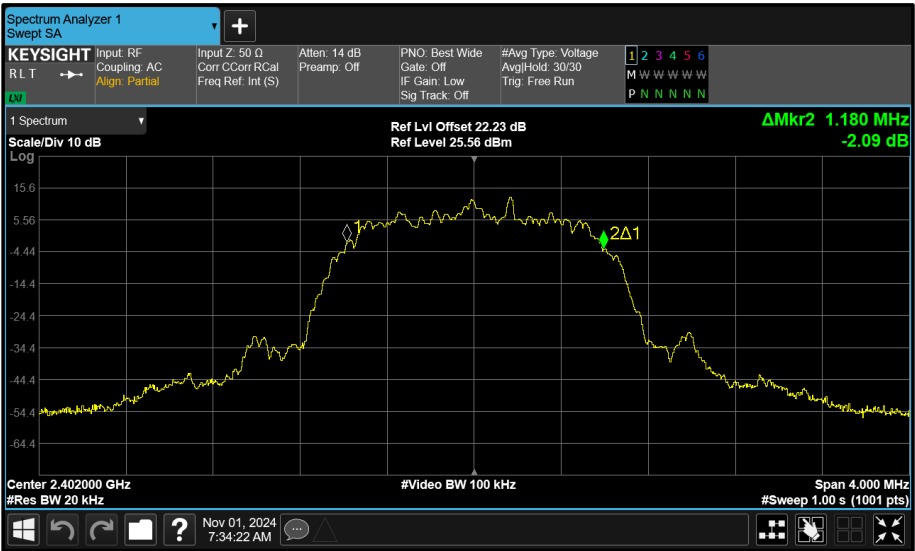


Figure 124 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

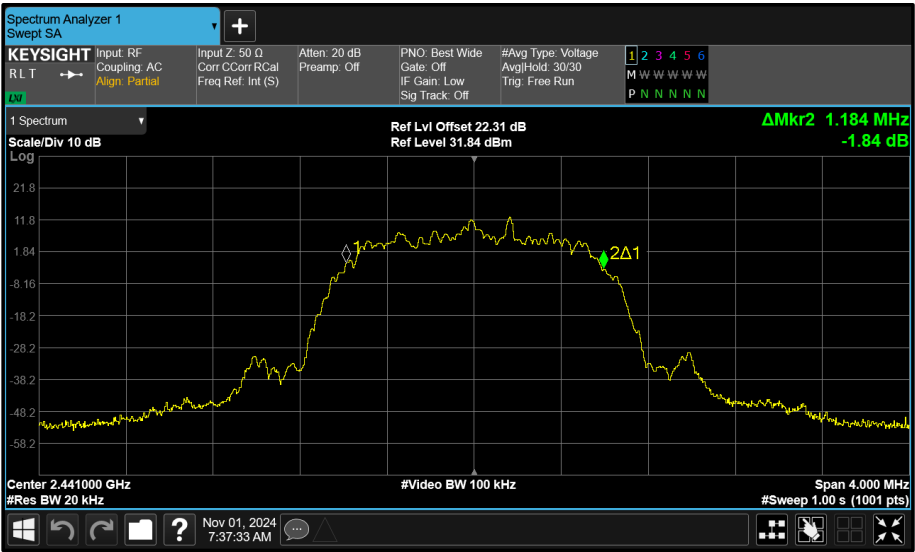


Figure 125 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

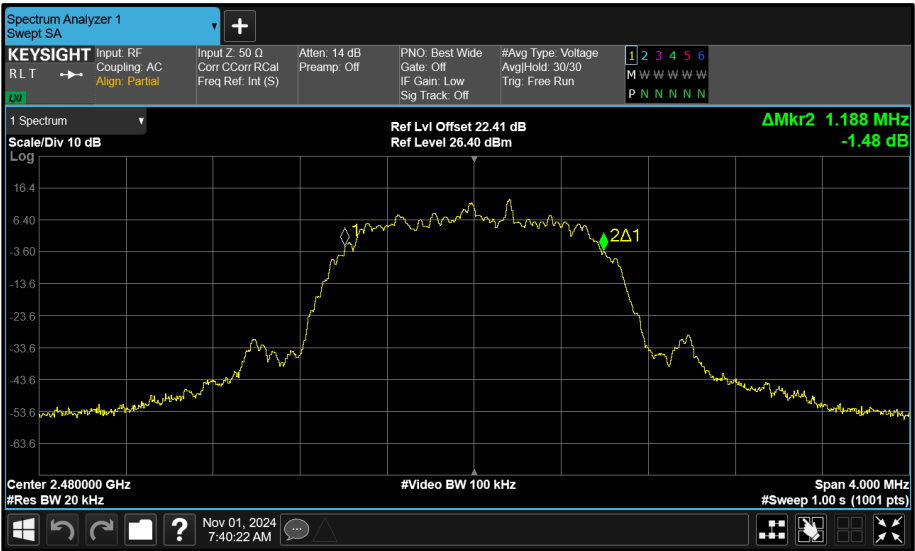


Figure 126 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	1.260	-	-
2441	-	1.255	-	-
2480	-	1.260	-	-

Table 73 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	-	1.184	-	-	-
2441	-	1.184	-	-	-
2480	-	1.188	-	-	-

Table 74 - 99% Bandwidth Results

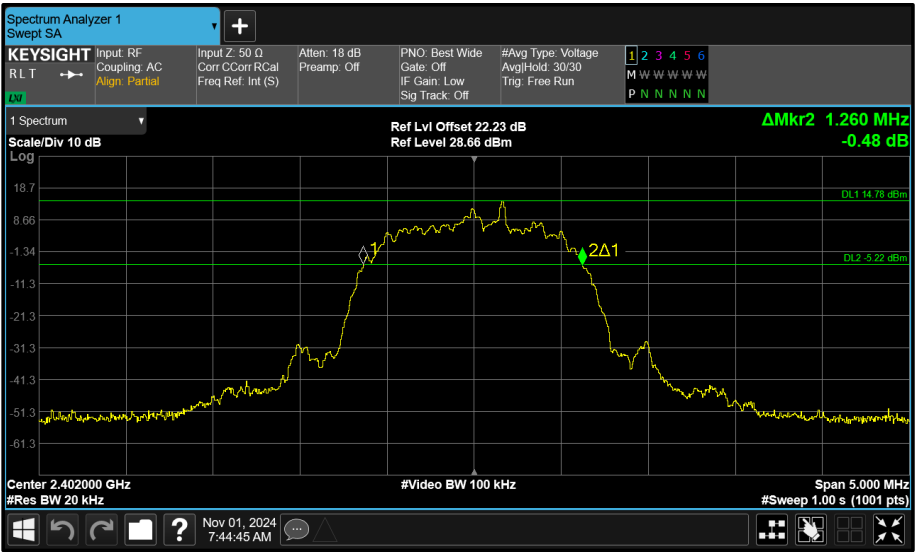


Figure 127 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

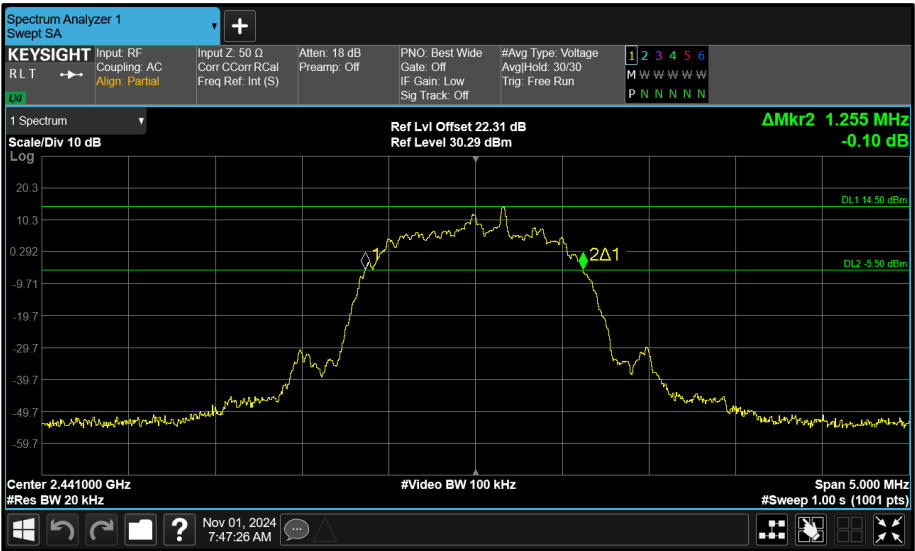


Figure 128 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

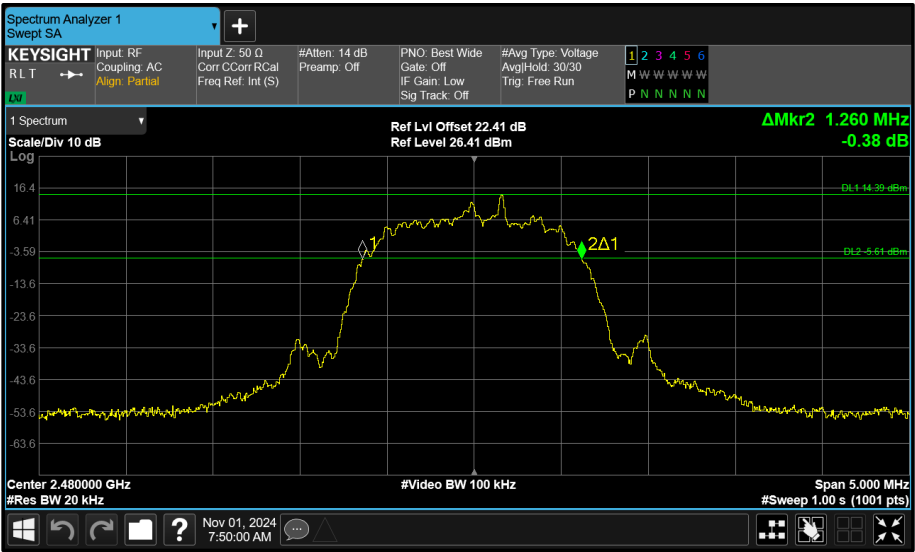


Figure 129 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

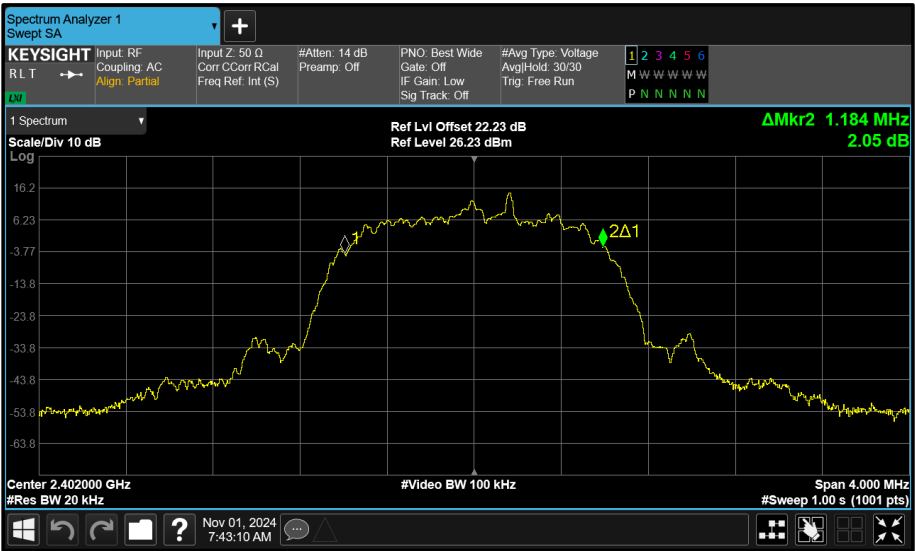


Figure 130 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

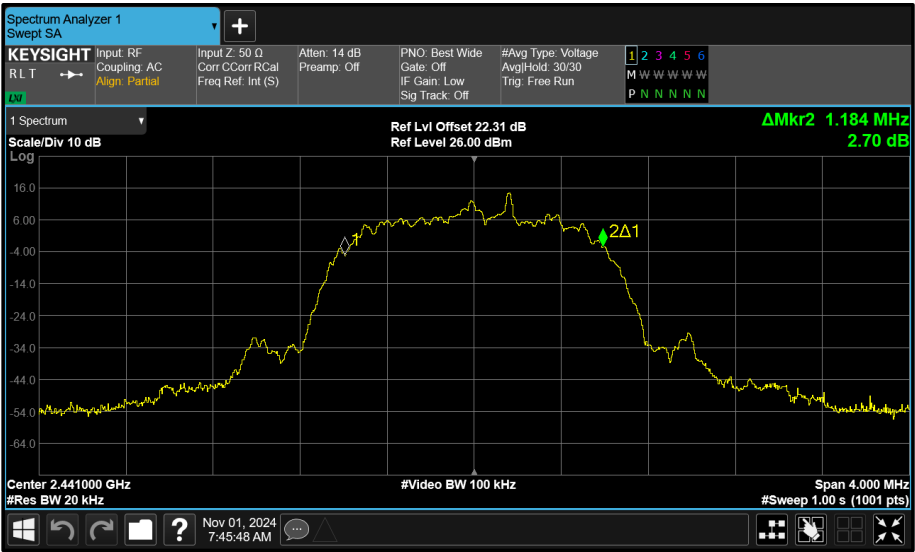


Figure 131 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

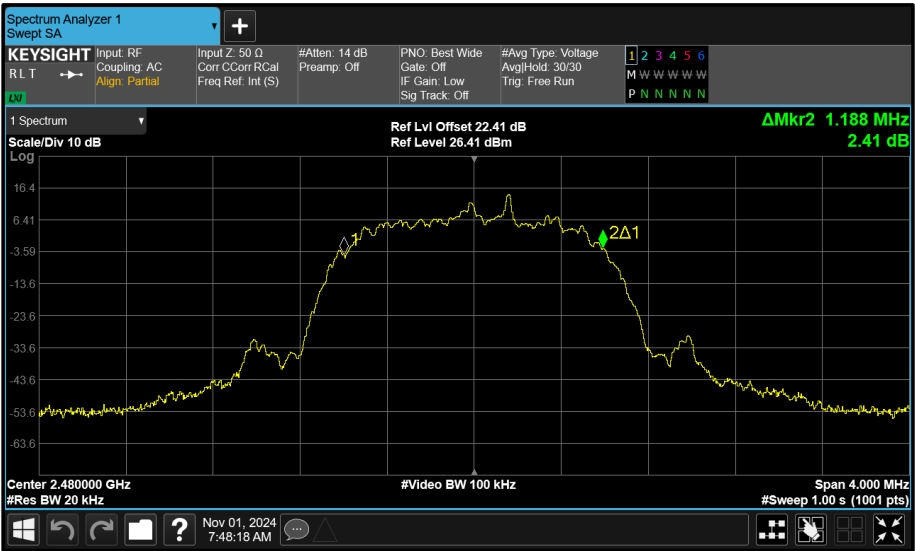


Figure 132 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	0.855	0.855	-	-
2441	0.858	0.855	-	-
2480	0.855	0.855	-	-

Table 75 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	0.855	0.864	-	-	-
2441	0.855	0.858	-	-	-
2480	0.855	0.864	-	-	-

Table 76 - 99% Bandwidth Results

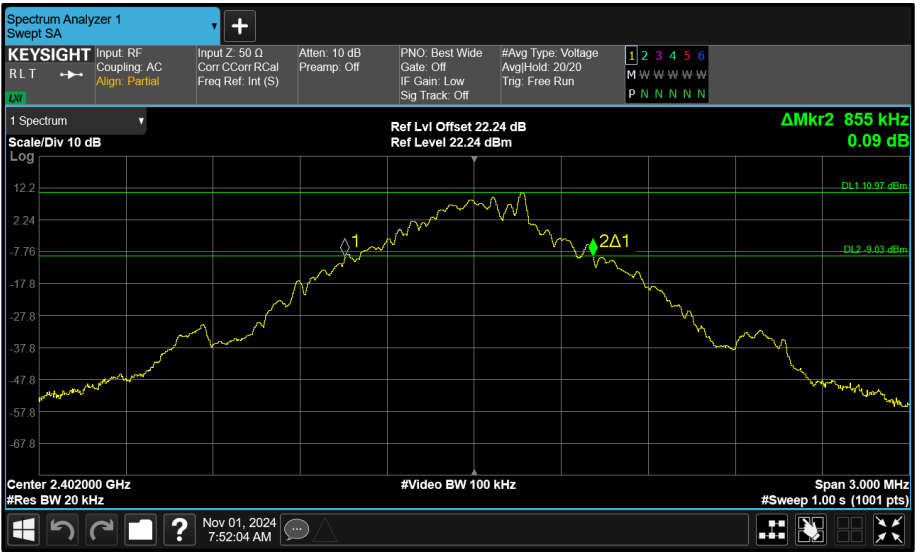


Figure 133 - Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

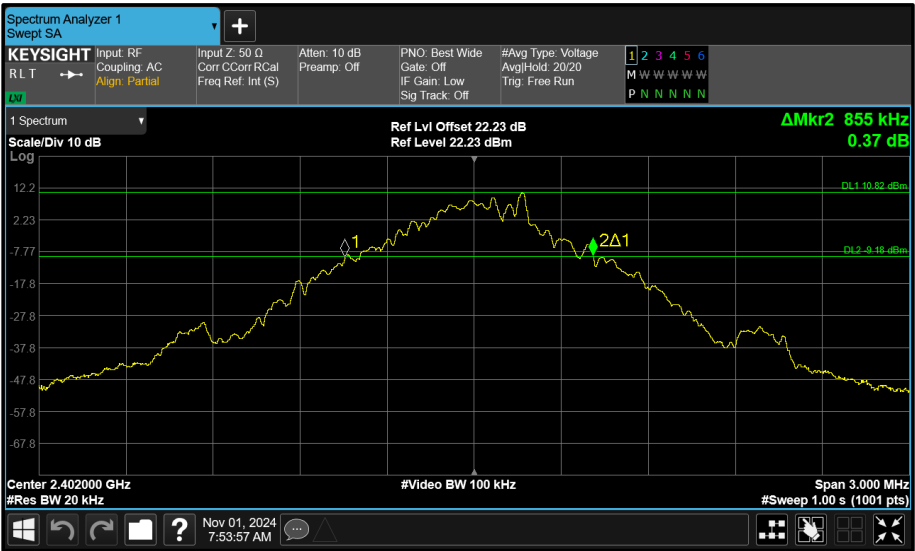


Figure 134 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

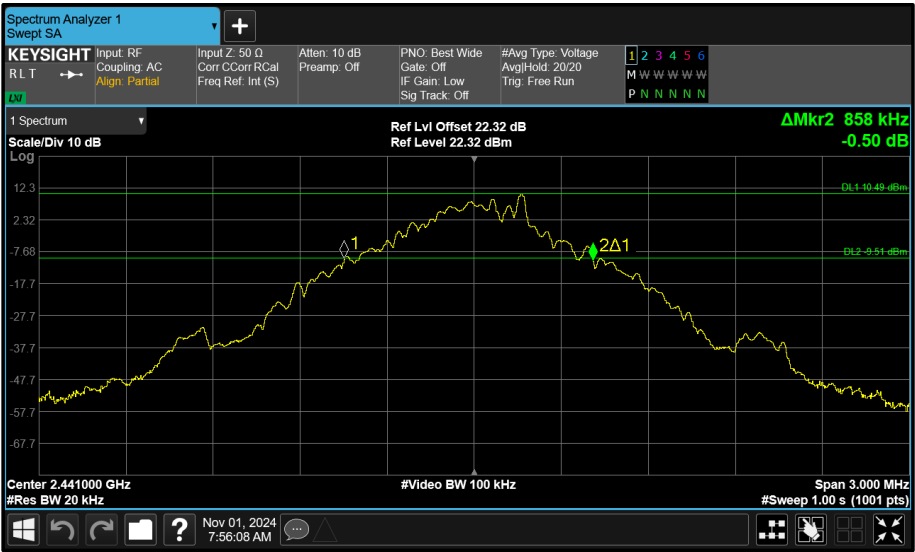


Figure 135 - Core 0 (A) 2441 MHz (CH39) 20 dB Bandwidth

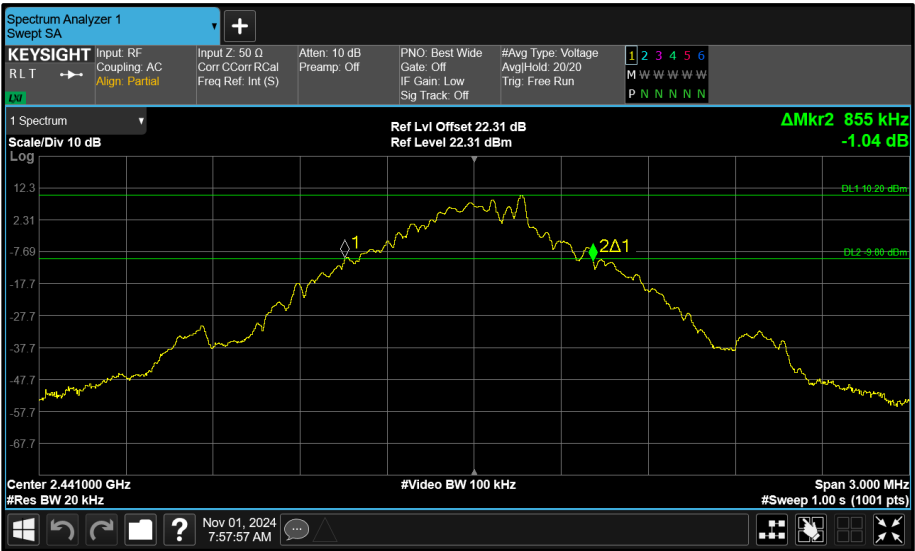


Figure 136 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

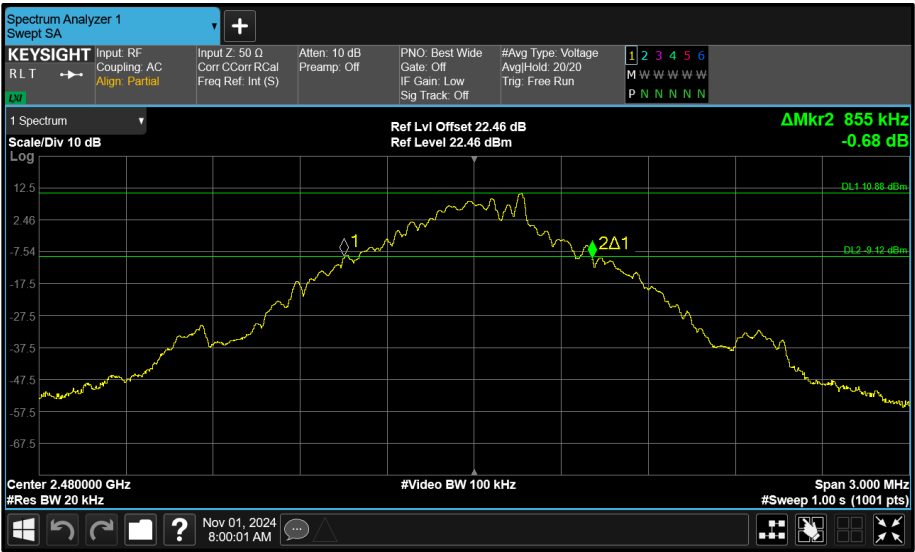


Figure 137 - Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

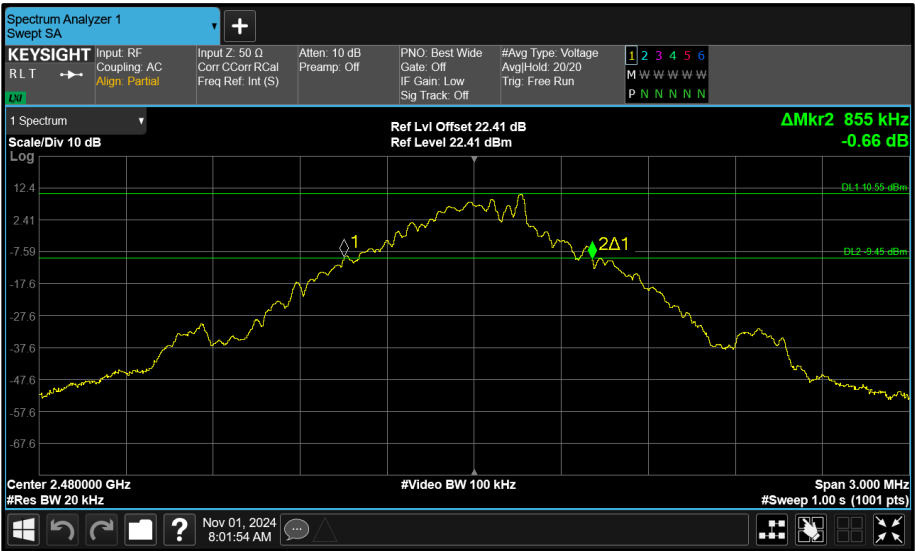


Figure 138 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

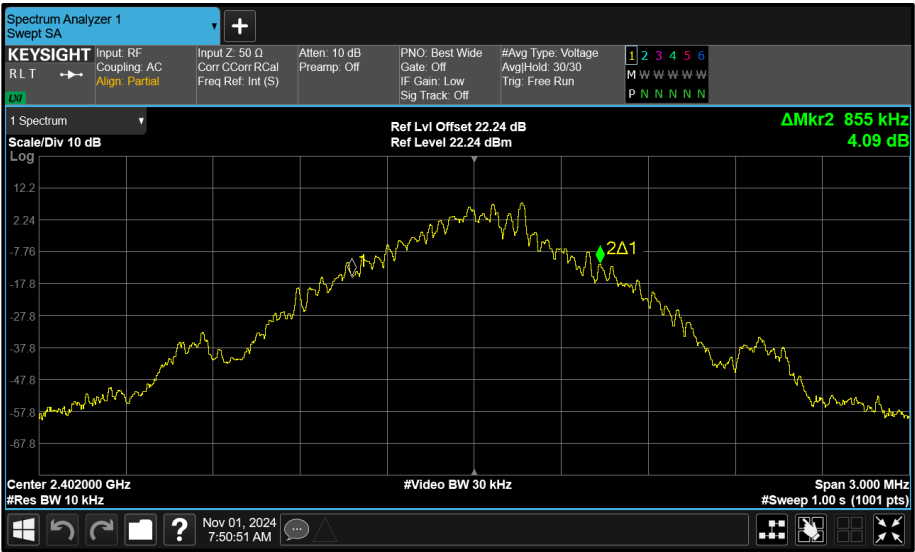


Figure 139 - Core 0 (A) 2402 MHz (CH0) 99% Bandwidth

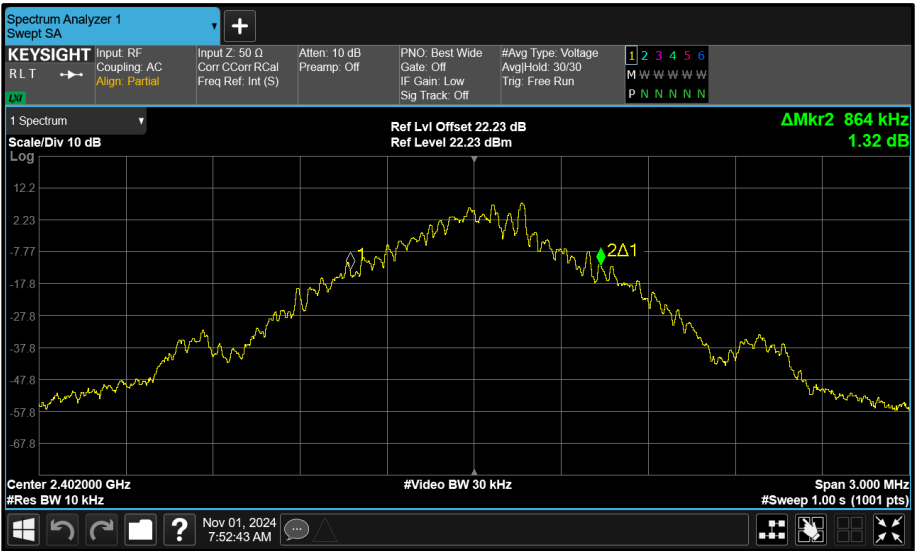


Figure 140 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

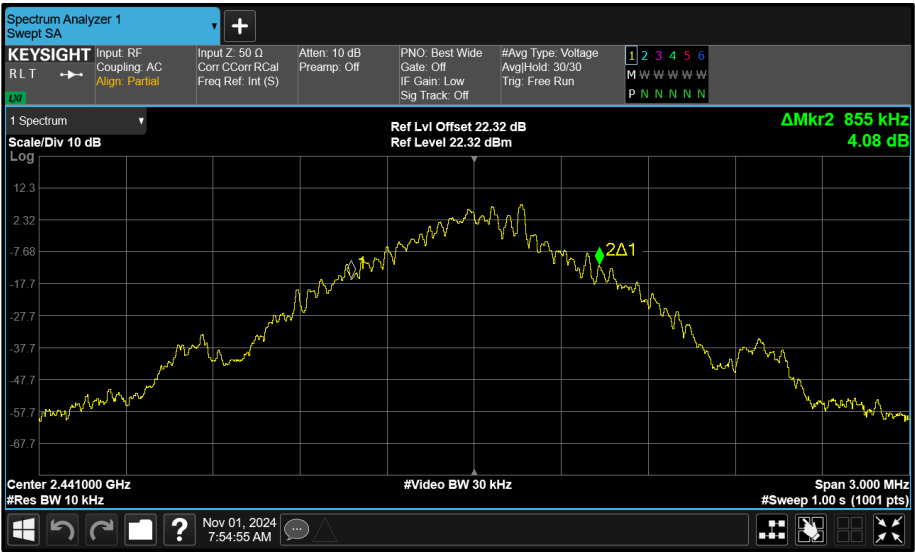


Figure 141 - Core 0 (A) 2441 MHz (CH39) 99% Bandwidth

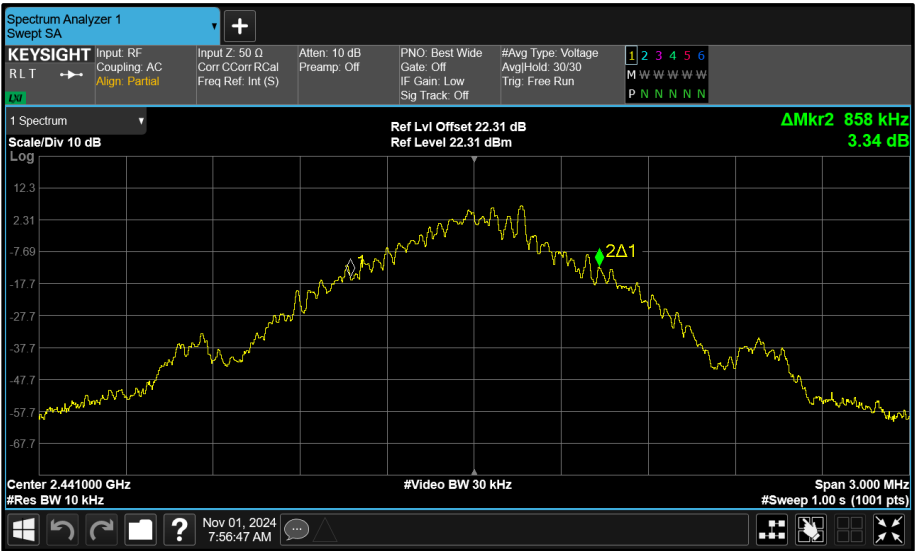


Figure 142 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

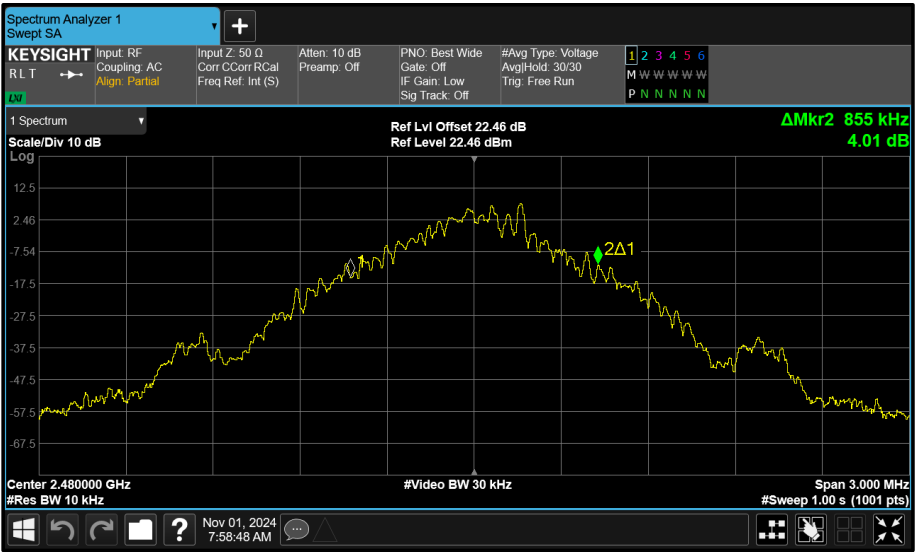


Figure 143 - Core 0 (A) 2480 MHz (CH78) 99% Bandwidth

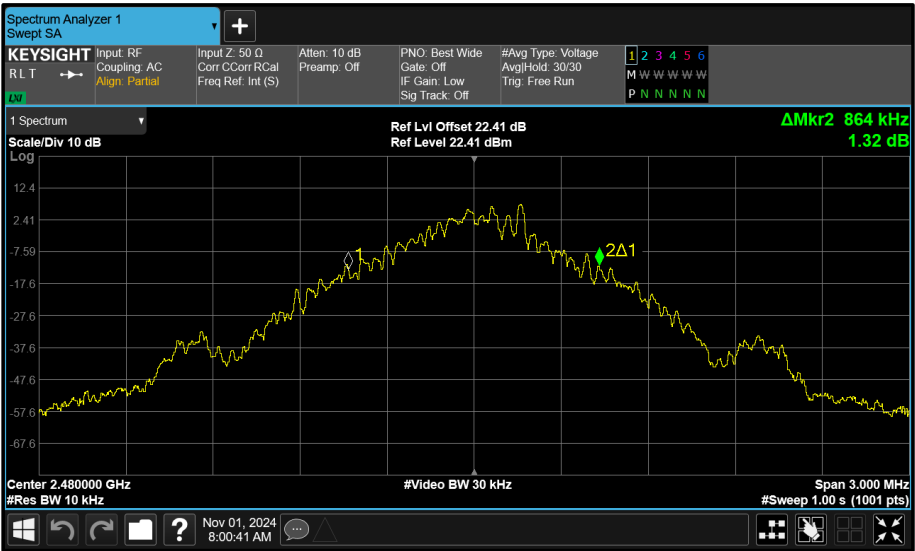


Figure 144 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	1.325	1.325	-	-
2441	1.325	1.330	-	-
2480	1.330	1.325	-	-

Table 77 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	1.188	1.192	-	-	-
2441	1.188	1.188	-	-	-
2480	1.188	1.192	-	-	-

Table 78 - 99% Bandwidth Results



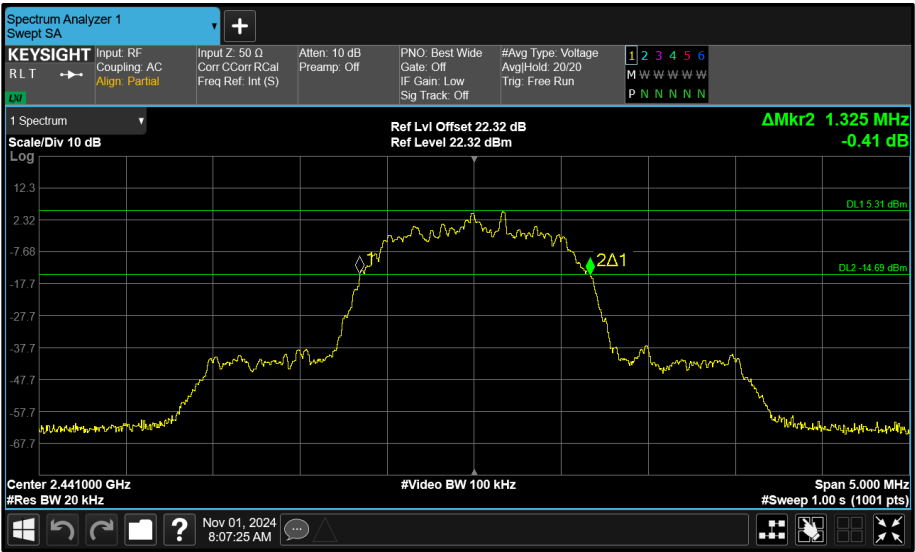


Figure 147 - Core 0 (A) 2441 MHz (CH39) 20 dB Bandwidth

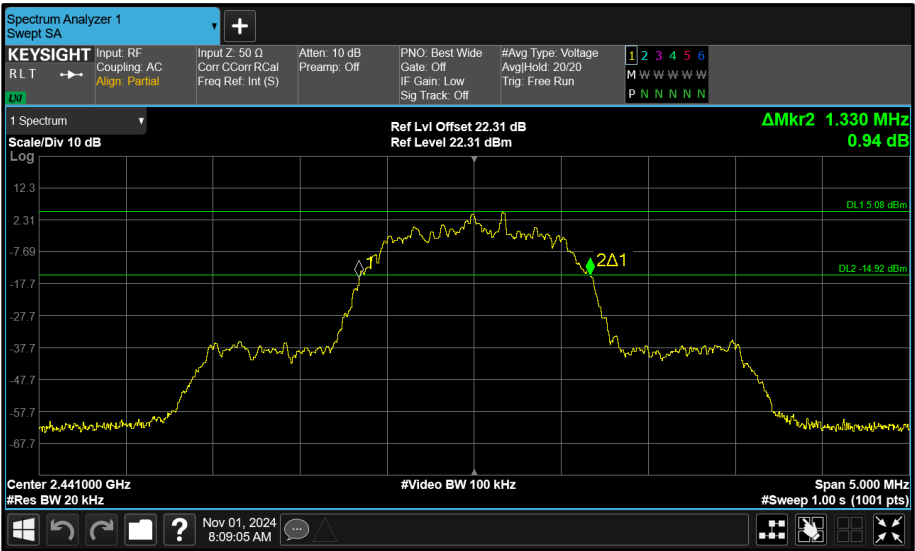


Figure 148 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

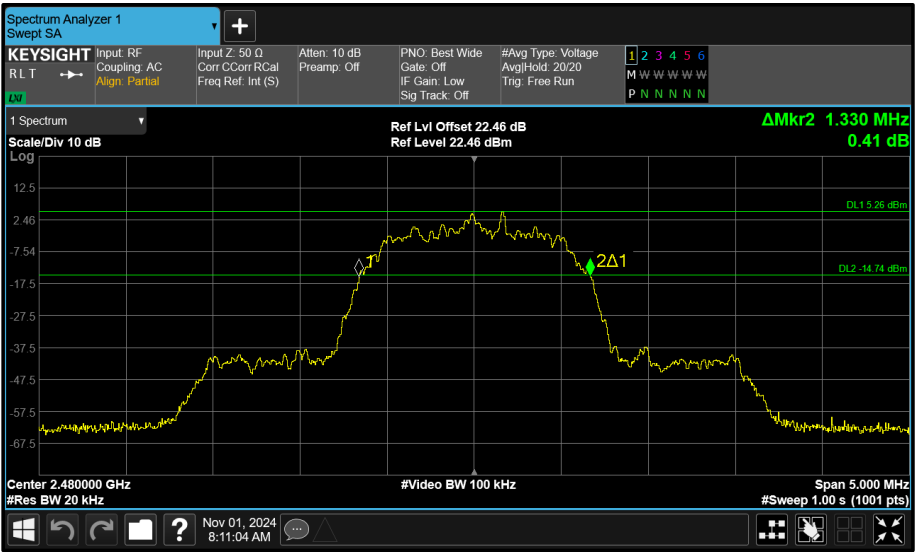


Figure 149 - Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

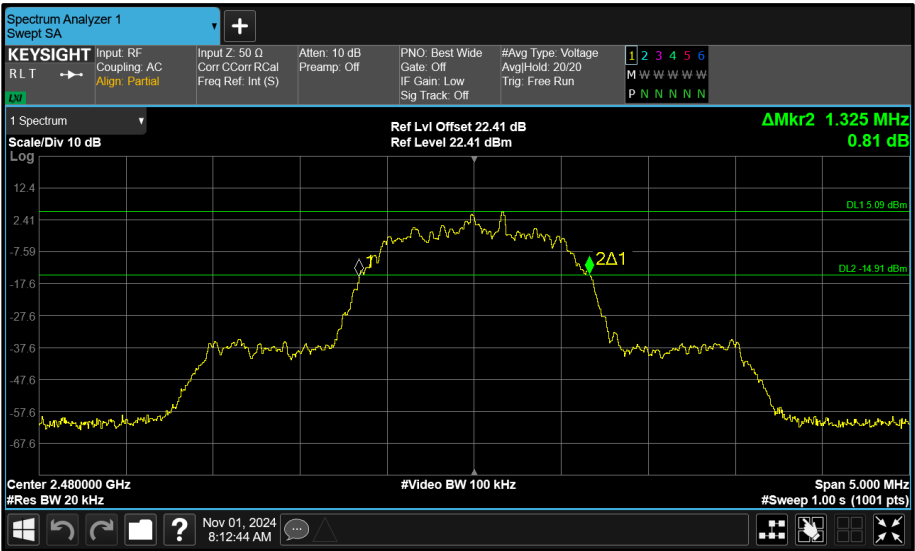


Figure 150 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth