



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

A2737, S/N: MW5QG9Q771 - Modification State 0

2.4.3 Date of Test

02-August-2022 to 03-August-2022

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	23.1 - 23.8 °C
Relative Humidity	36.5 - 59.5 %



2.4.6 Test Results

2.4 GHz Bluetooth - FHSS

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

Number of Hopping Frequencies	Limit
79	≥15.0

Table 47 - Number of Hopping Frequencies Results

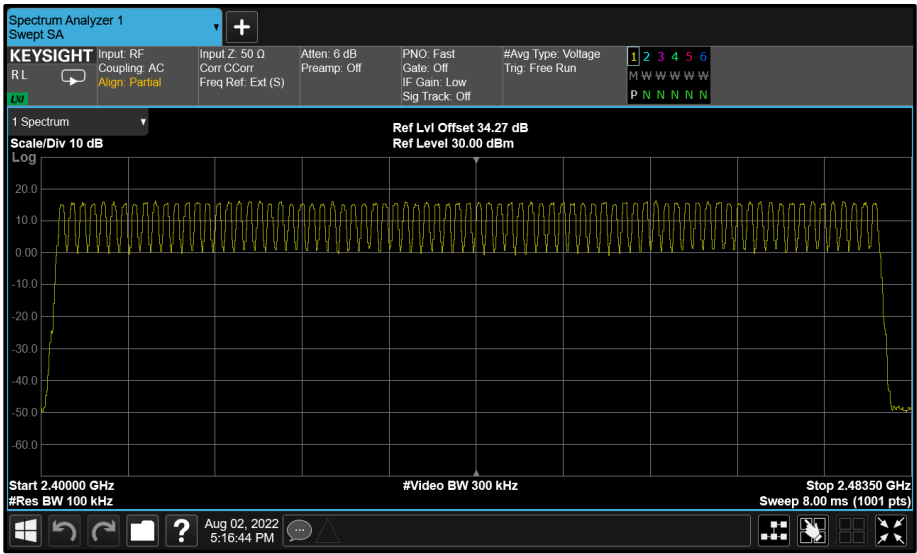


Figure 61 - GFSK (DH5) - Number of Hopping Channels



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

Number of Hopping Frequencies	Limit
79	≥ 15.0

Table 48 - Number of Hopping Frequencies Results

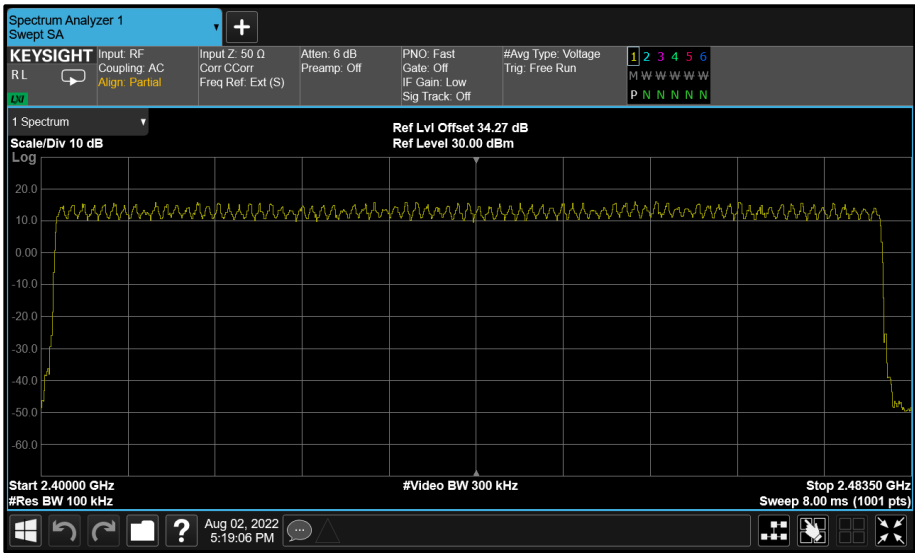


Figure 62 - $\pi/4$ DQPSK (2-DH5) - Number of Hopping Channels



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 (BT Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥15.0

Table 49 - Number of Hopping Frequencies Results

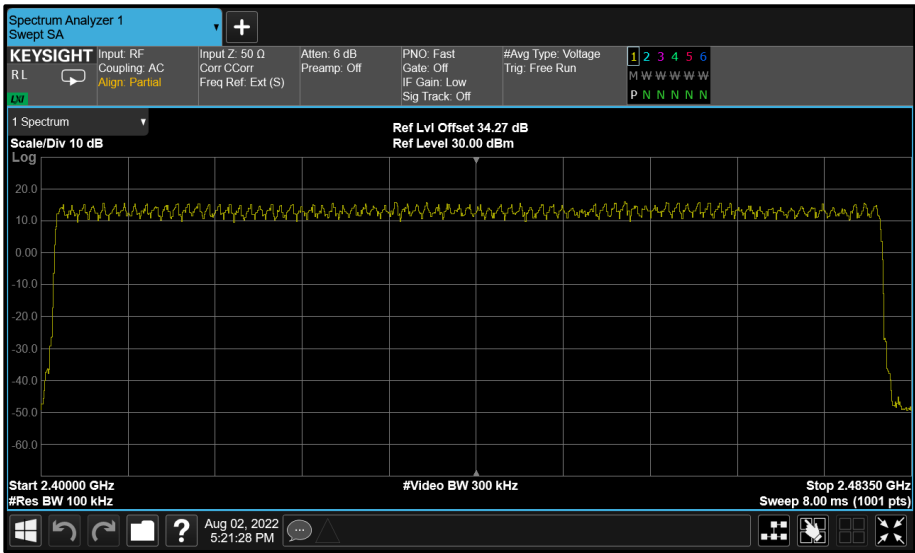


Figure 63 - 8-DPSK (3-DH5) - Number of Hopping Channels



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):	B (BT Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies		Limit
79		≥15.0

Table 50 - Number of Hopping Frequencies Results

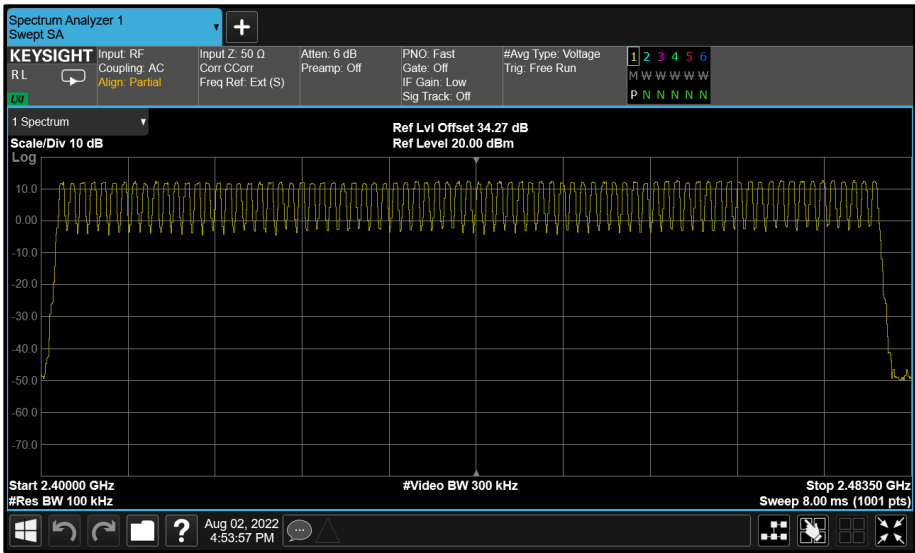


Figure 64 - GFSK (DH5) - Number of Hopping Channels



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 GFSK (DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (BT Core2)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥15.0

Table 51 - Number of Hopping Frequencies Results

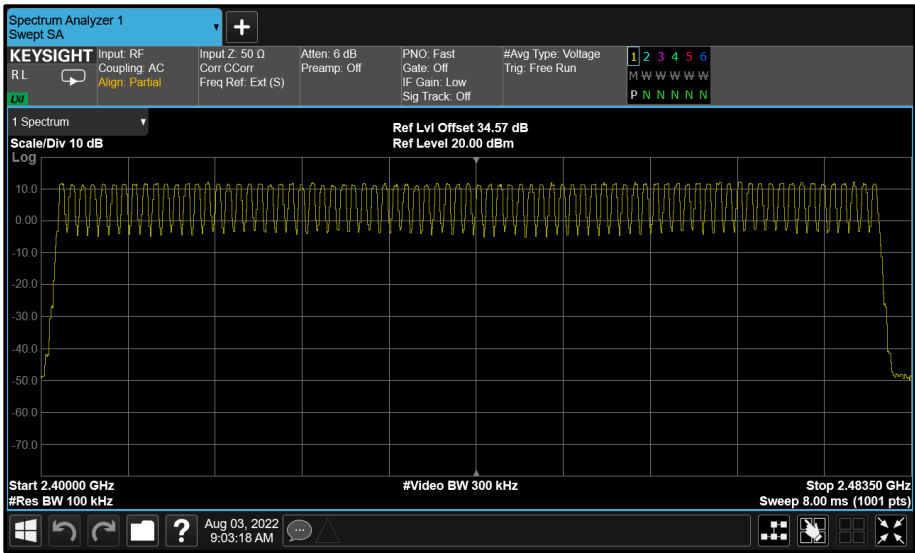


Figure 65 - GFSK (DH5) - Number of Hopping Channels



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 (BT Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥ 15.0

Table 52 - Number of Hopping Frequencies Results

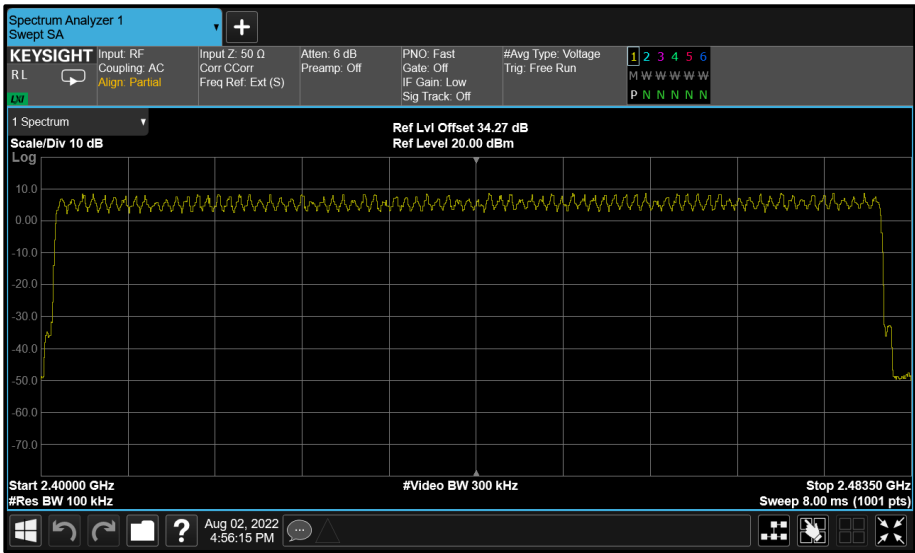


Figure 66 - $\pi/4$ DQPSK (2-DH5) - Number of Hopping Channels



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 (BT Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies		Limit
79		≥15.0

Table 53 - Number of Hopping Frequencies Results

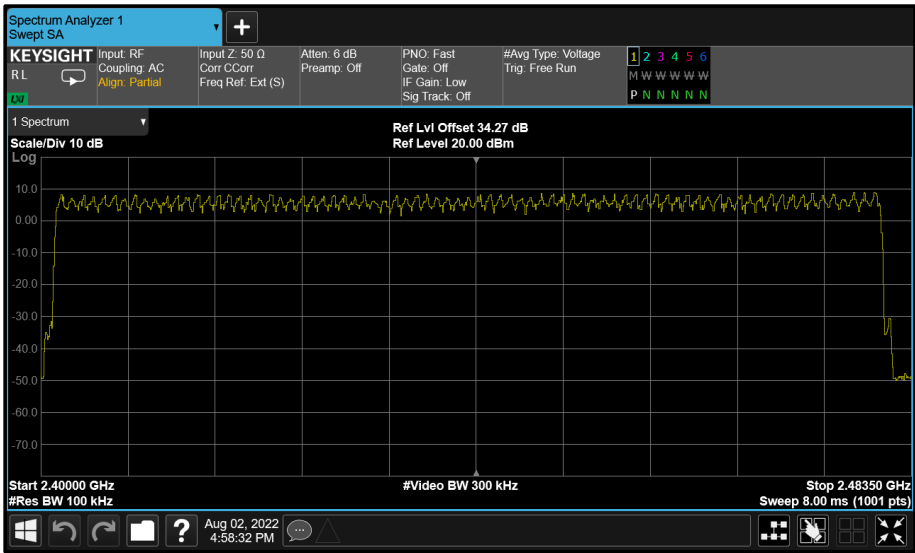
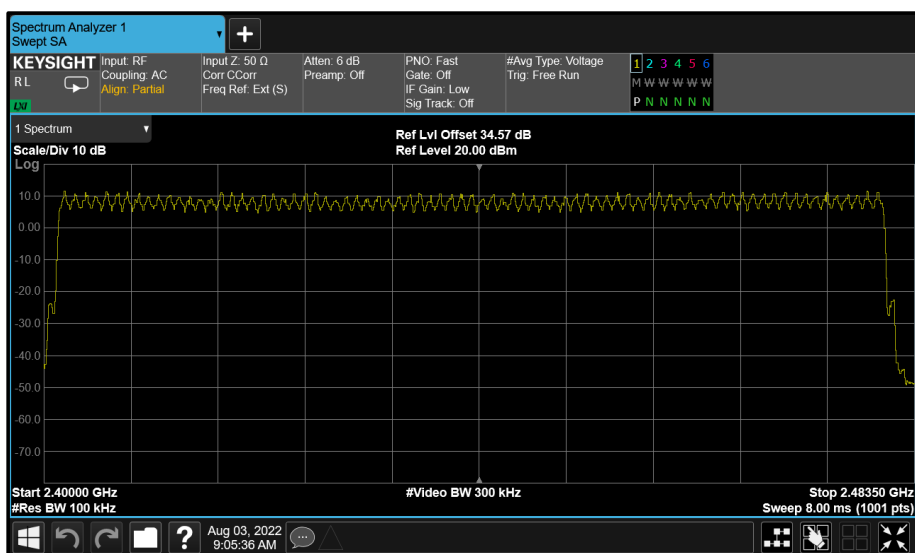


Figure 67 - 8-DPSK (3-DH5) - Number of Hopping Channels

Number of Hopping Frequencies	Limit
79	≥15.0





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 (BT Core2)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies		Limit
79		≥15.0

Table 55 - Number of Hopping Frequencies Results

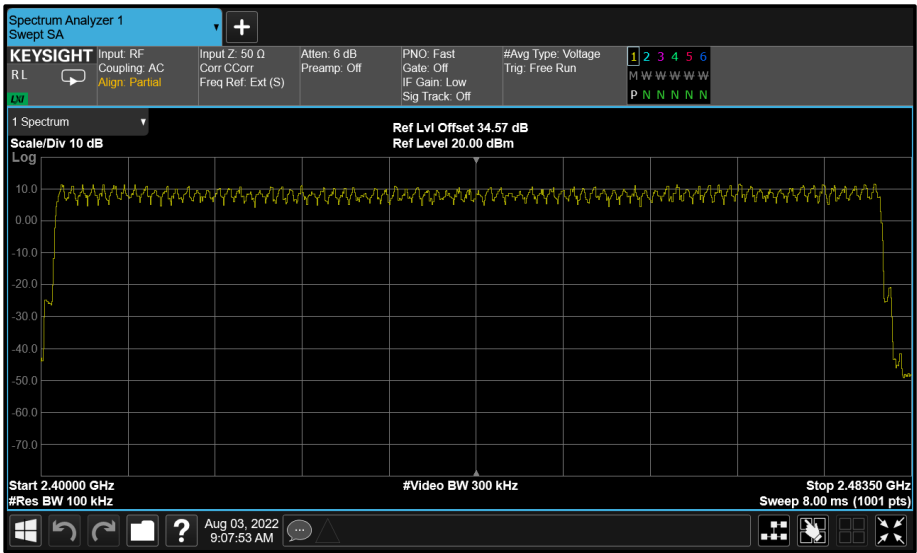


Figure 69 - 8-DPSK (3-DH5) - Number of Hopping Channels



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

Number of Hopping Frequencies	Limit
79	≥15.0

Table 56 - Number of Hopping Frequencies Results

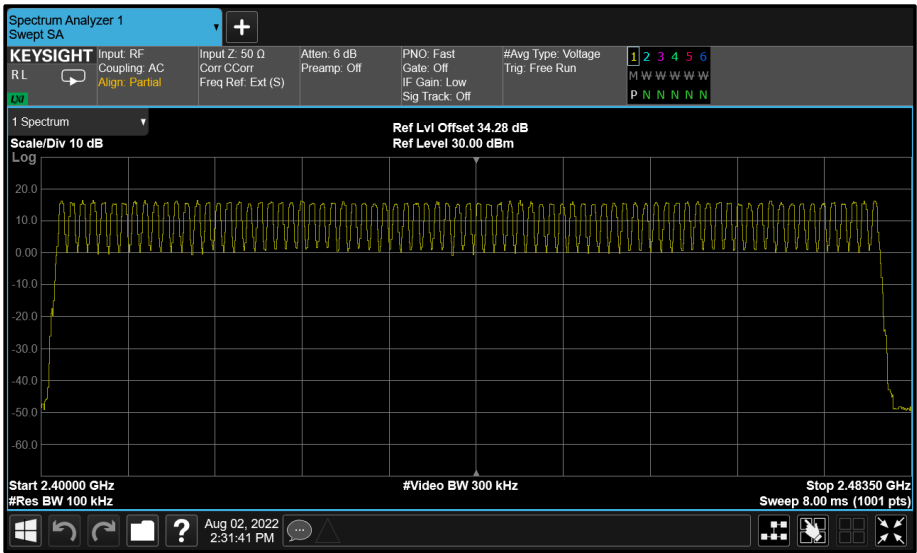


Figure 70 - GFSK (DH5) - Number of Hopping Channels



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

Number of Hopping Frequencies	Limit
79	≥ 15.0

Table 57 - Number of Hopping Frequencies Results

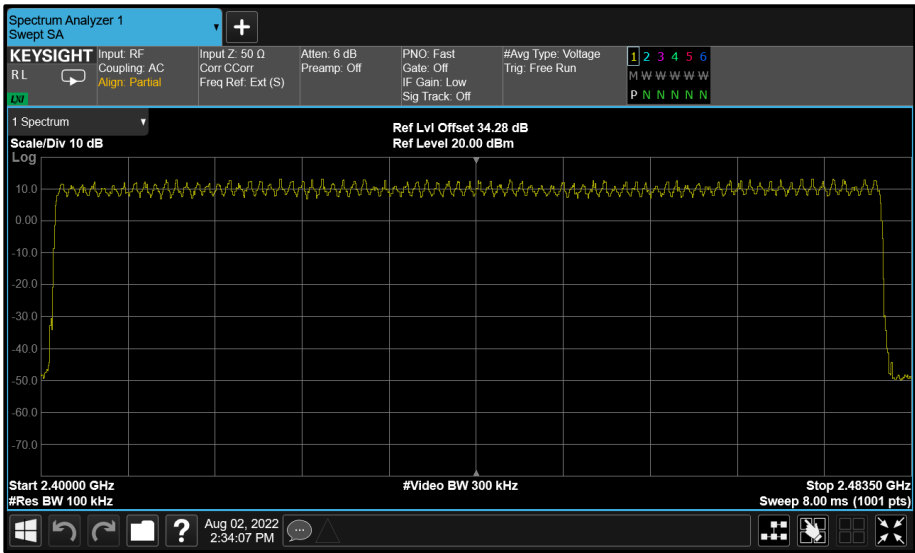


Figure 71 - $\pi/4$ DQPSK (2-DH5) - Number of Hopping Channels



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 (BT Core 0 + BT Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥15.0

Table 58 - Number of Hopping Frequencies Results

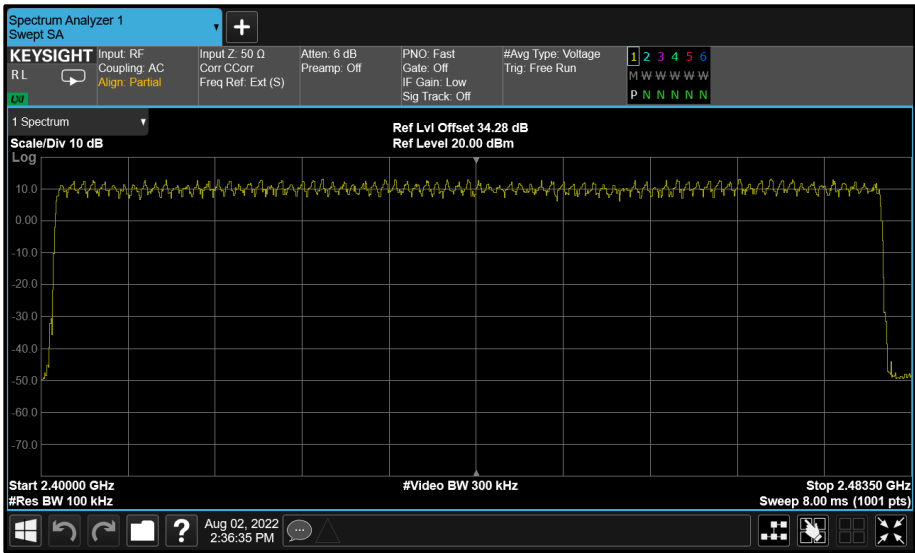


Figure 72 - 8-DPSK (3-DH5) - Number of Hopping Channels



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 (BT Core 0 + BT Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥15.0

Table 59 - Number of Hopping Frequencies Results

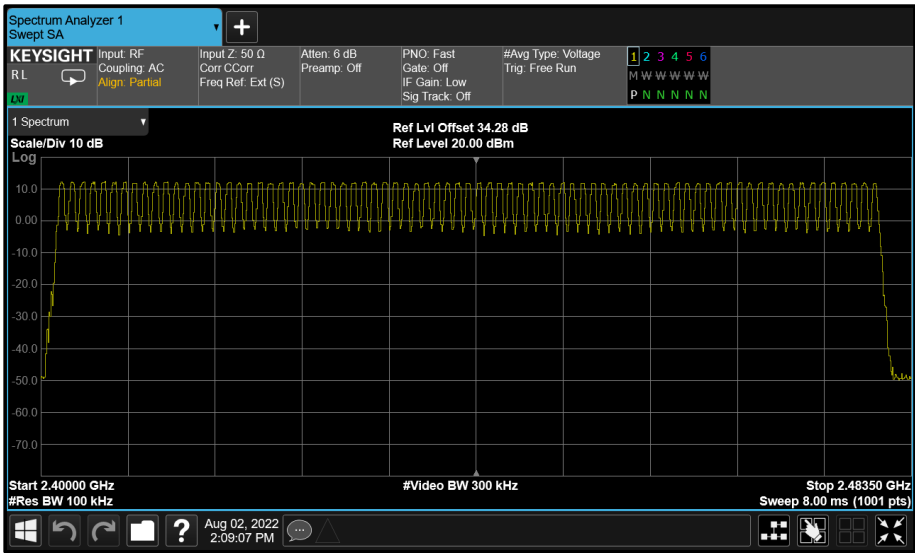


Figure 73 - GFSK (DH5) - Number of Hopping Channels



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 (BT Core 0 + BT Core 1)	Peak Antenna Gain (dBi):	-

Number of Hopping Frequencies	Limit
79	≥ 15.0

Table 60 - Number of Hopping Frequencies Results

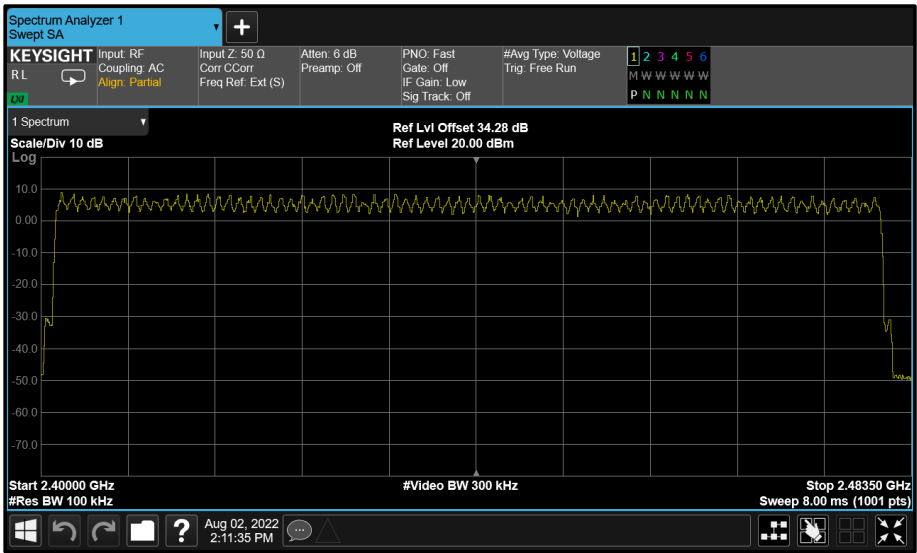


Figure 74 - $\pi/4$ DQPSK (2-DH5) - Number of Hopping Channels



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

Number of Hopping Frequencies	Limit
79	≥15.0

Table 61 - Number of Hopping Frequencies Results

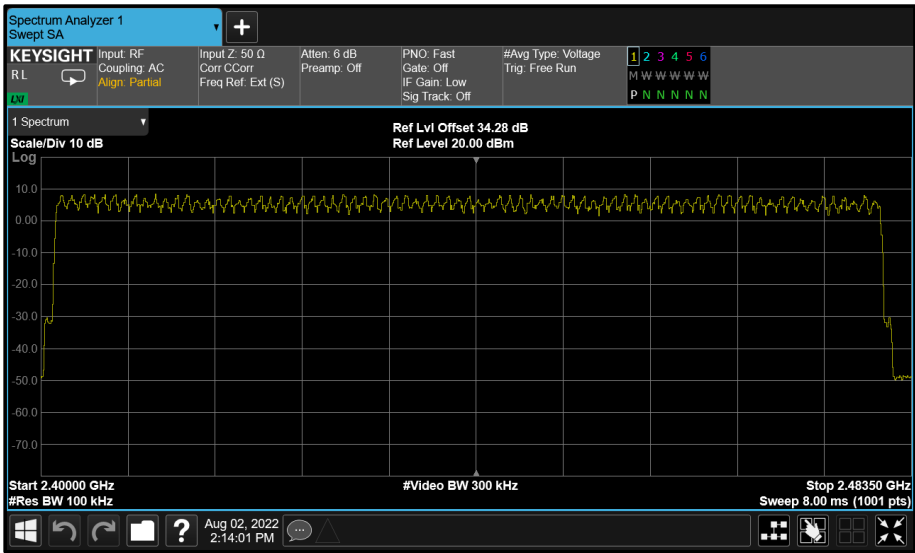


Figure 75 - 8-DPSK (3-DH5) - Number of Hopping Channels

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 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Multimeter	Fluke	79 Series III	611	12	21-Dec-2022
Hygrometer	Rotronic	I-1000	3220	12	05-Nov-2022
Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	01-Feb-2023
AC Programmable Power Supply	iTech	IT7324	5225	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5528	24	21-Mar-2024
Signal Conditioning Unit	TUV SUD	SPECTRUM SCU001	5546	12	06-Apr-2023

Table 62

O/P Mon – Output Monitored using calibrated equipment



2.5 Frequency Hopping Systems - 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

A2737, S/N: MW5QG9Q771 - Modification State 0

2.5.3 Date of Test

02-August-2022 to 03-August-2022

2.5.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.9.2.

2.5.5 Environmental Conditions

Ambient Temperature	23.1 - 23.8 °C
Relative Humidity	36.5 - 59.5 %



2.5.6 Test Results

2.4 GHz Bluetooth - FHSS

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 6.9.2
Additional Reference(s):	-		

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

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

Table 63 - 20 dB Bandwidth Results

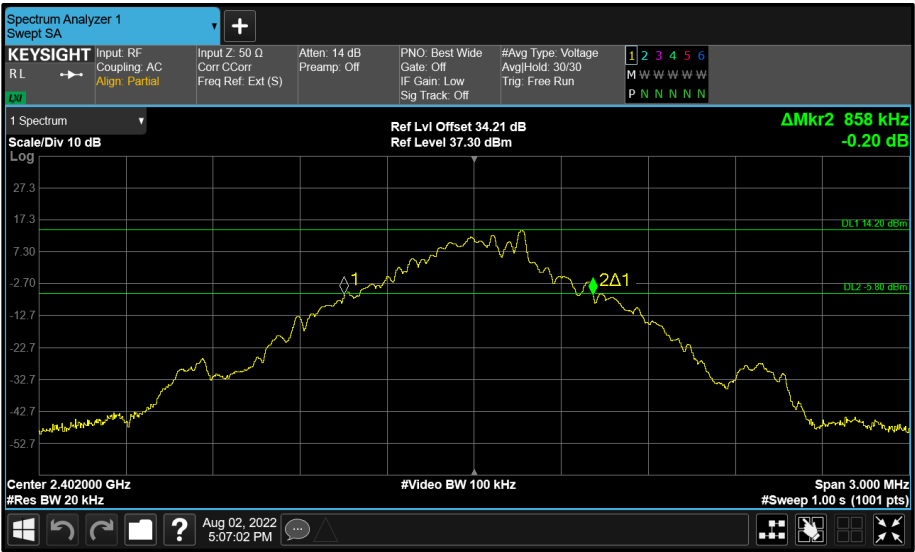


Figure 76 - BT Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

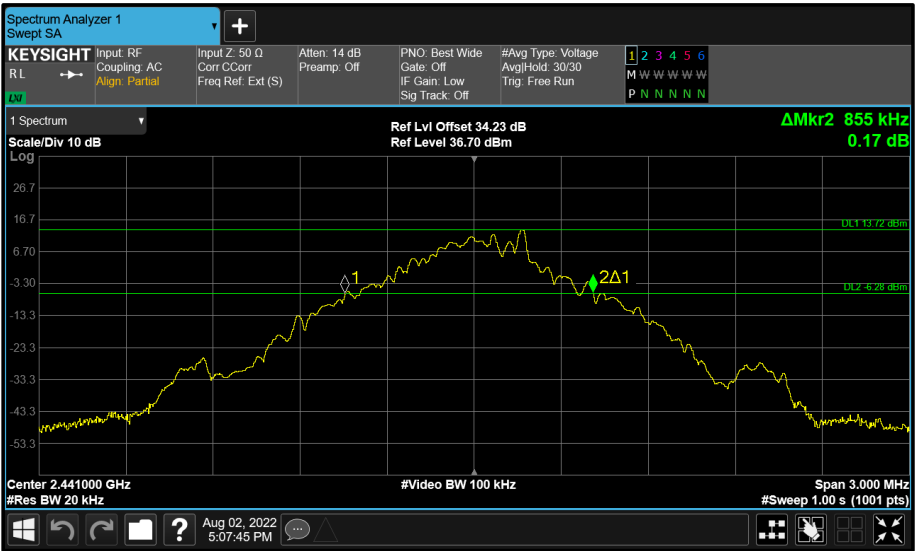


Figure 77 - BT Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

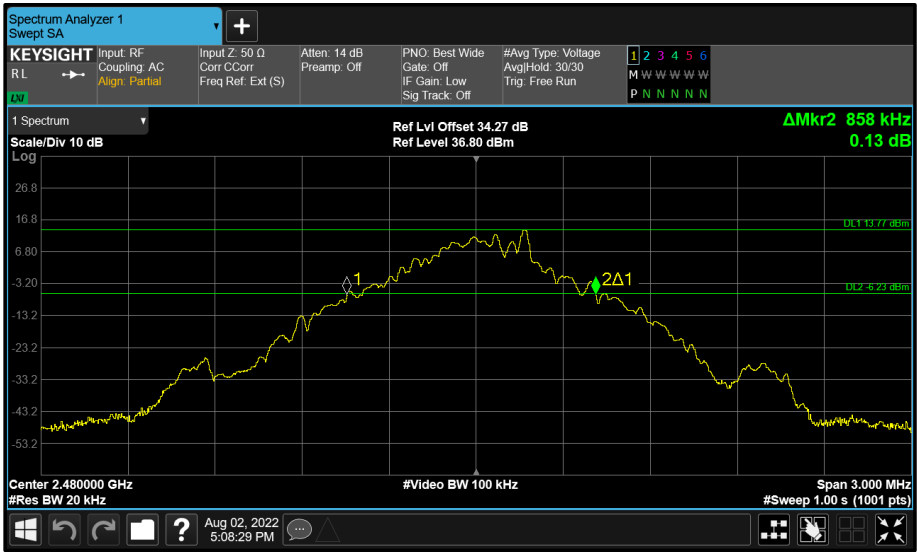


Figure 78 - BT Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

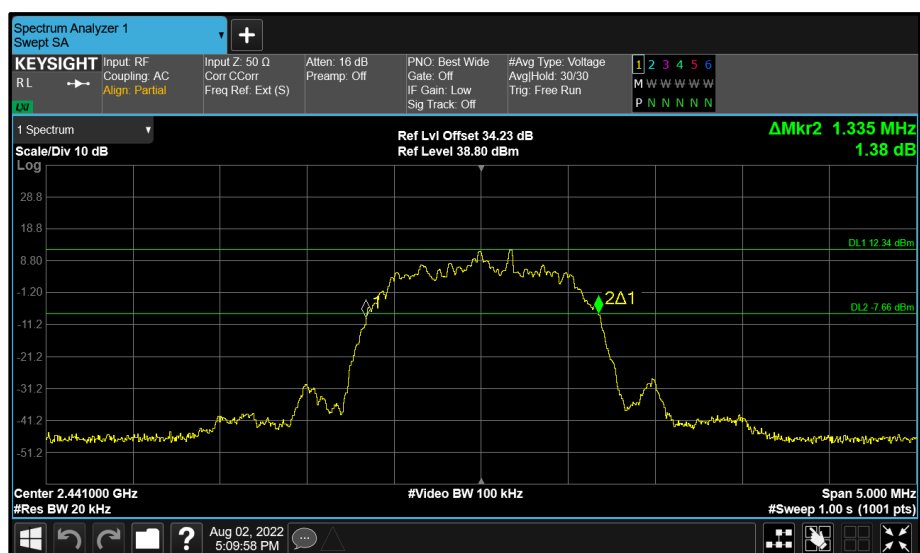


Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	1.335	-	-
2441	-	1.335	-	-
2480	-	1.330	-	-

Table 64 - 20 dB Bandwidth Results







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 6.9.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	1.270	-	-
2441	-	1.270	-	-
2480	-	1.265	-	-

Table 65 - 20 dB Bandwidth Results

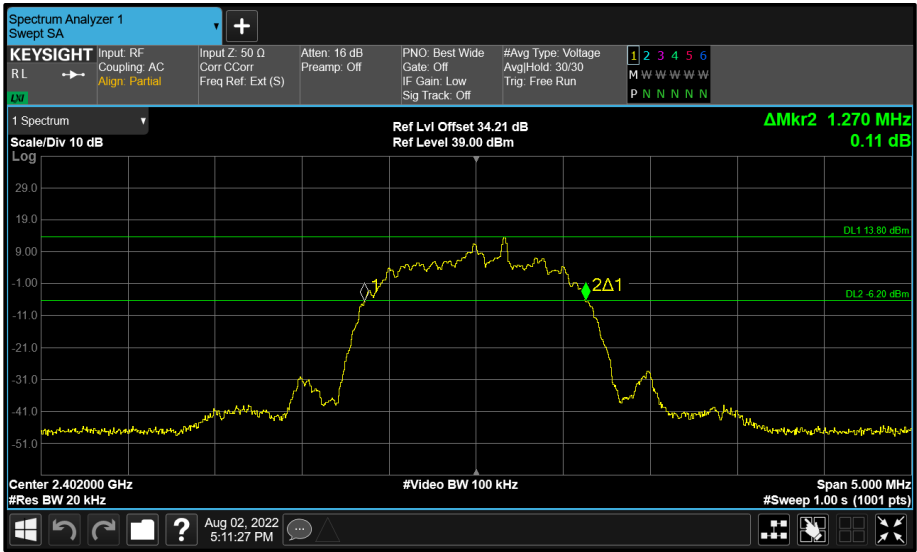


Figure 82 - BT Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

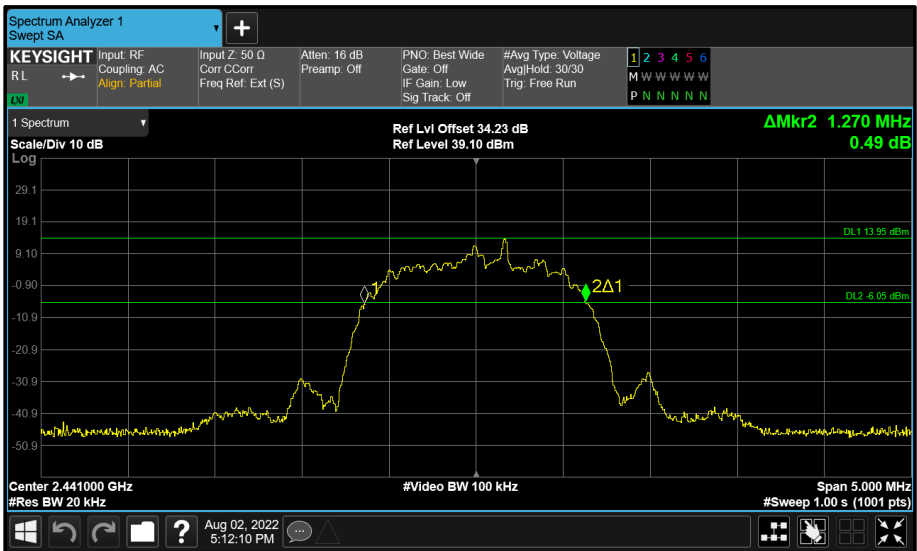


Figure 83 - BT Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

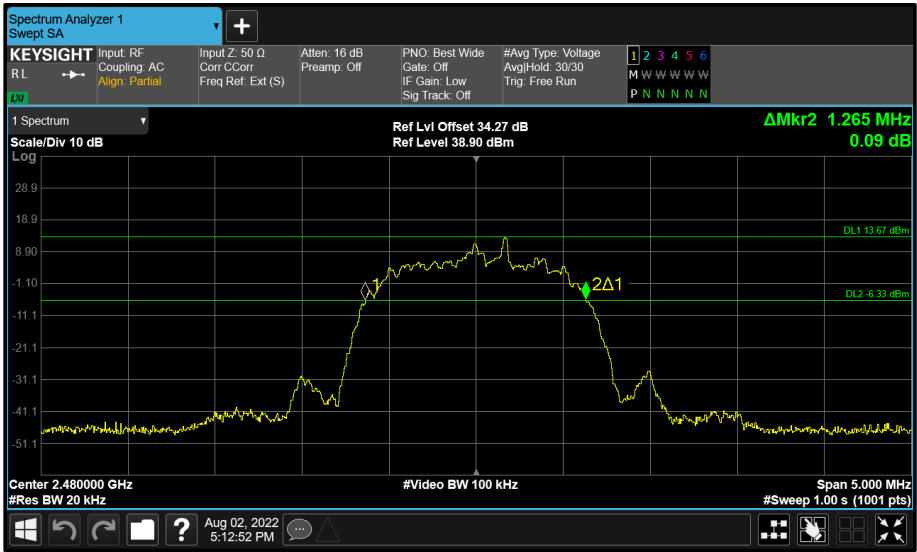


Figure 84 - BT Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

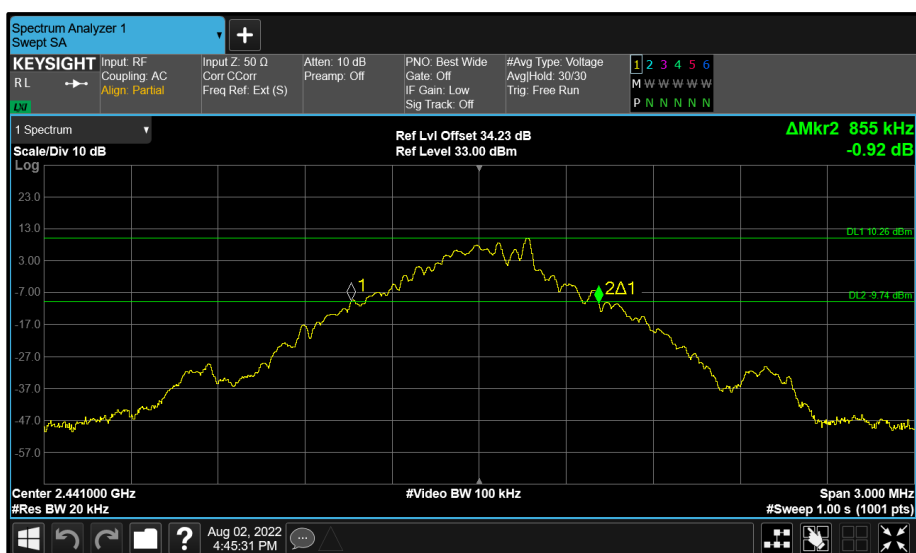
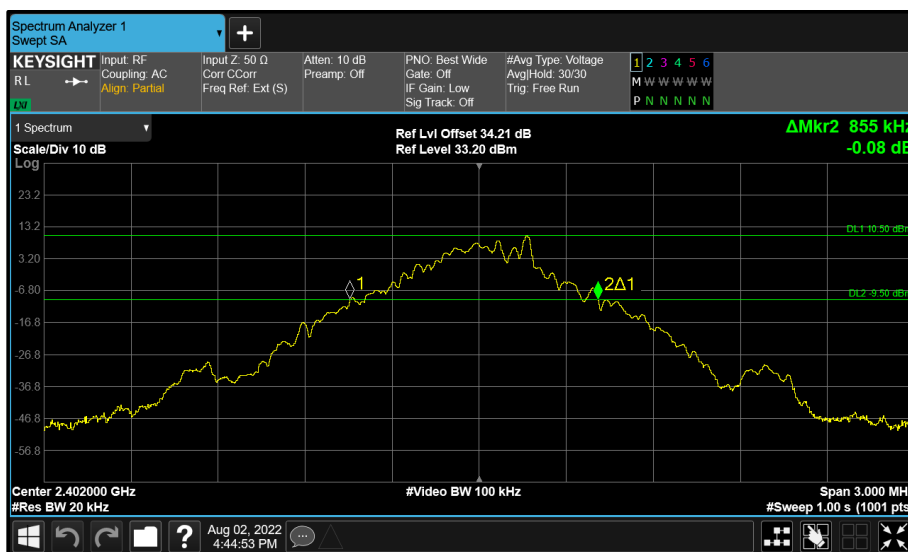


Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (BT 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 66 - 20 dB Bandwidth Results



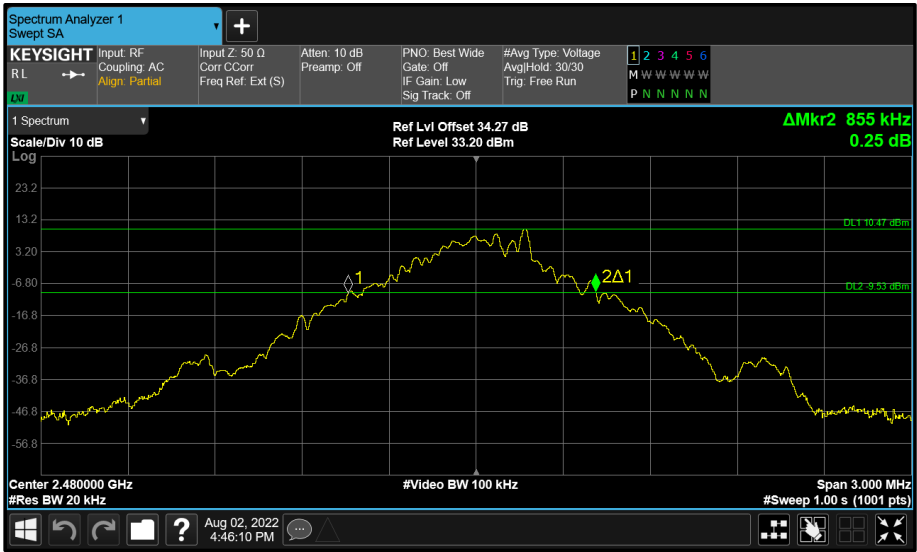


Figure 87 - BT Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth



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 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (BT Core2)	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 67 - 20 dB Bandwidth Results

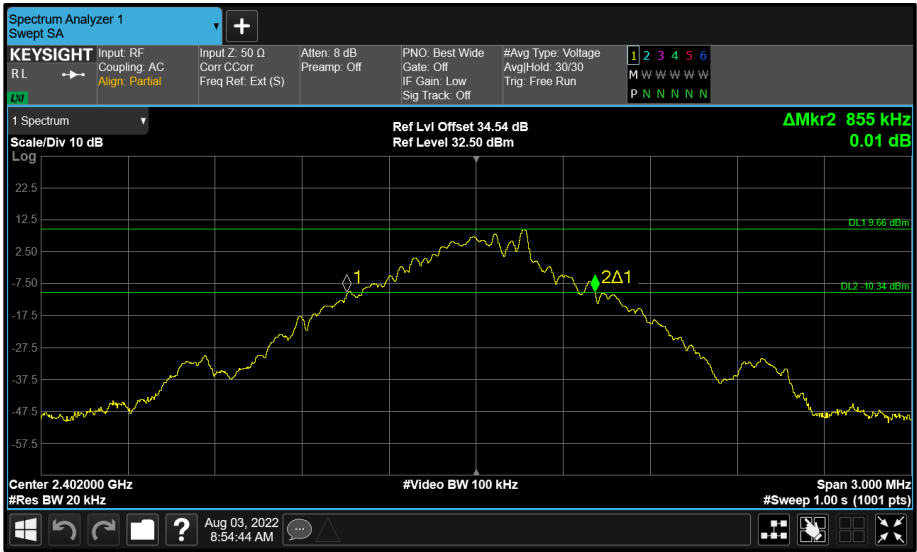


Figure 88 - BT Core2 (C) 2402 MHz (CH0) 20 dB Bandwidth

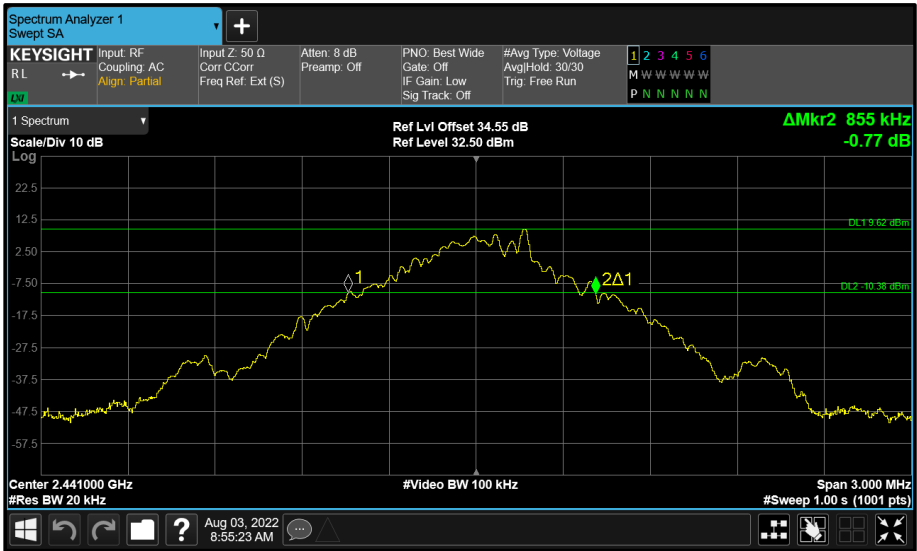


Figure 89 - BT Core2 (C) 2441 MHz (CH39) 20 dB Bandwidth

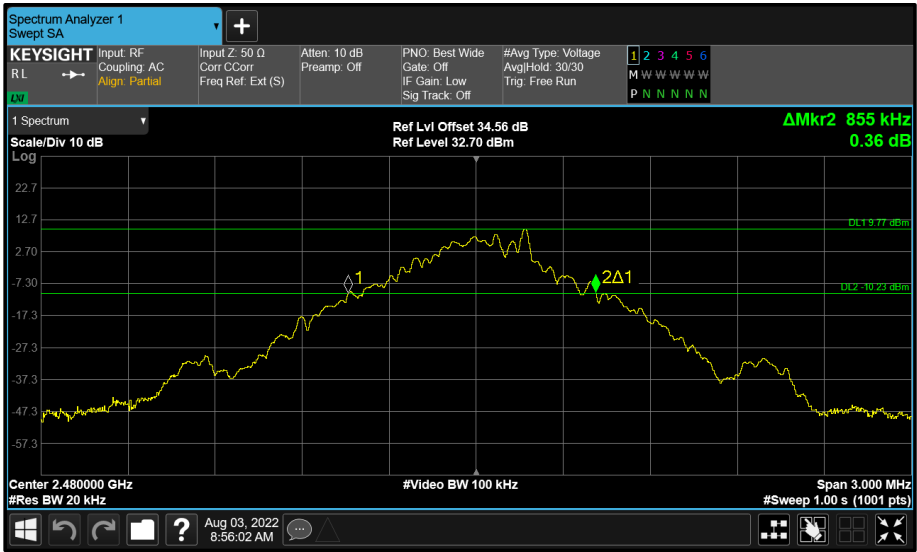


Figure 90 - BT Core2 (C) 2480 MHz (CH78) 20 dB Bandwidth

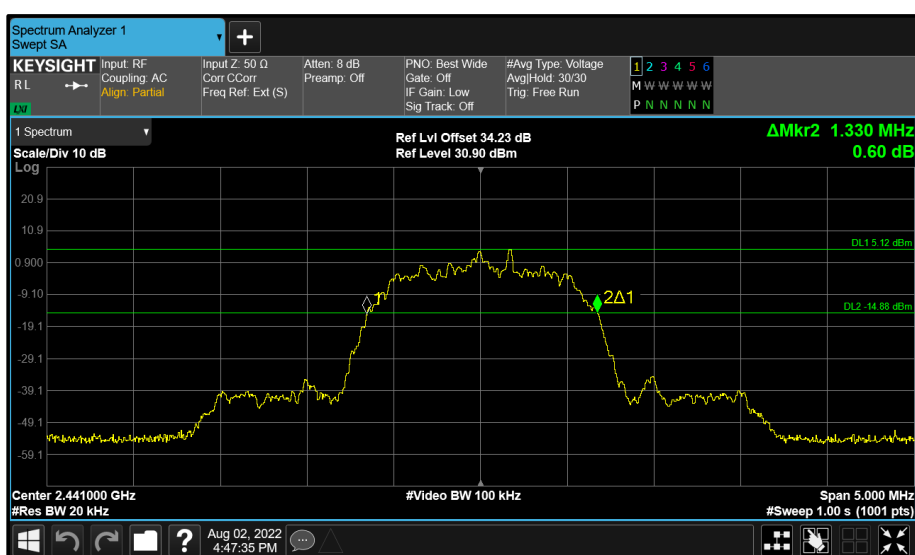
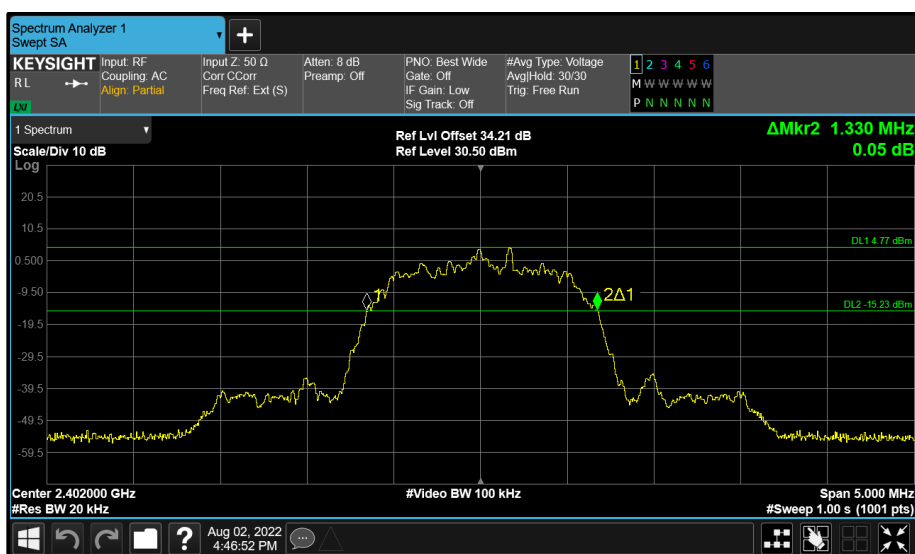


Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.2
Additional Reference(s):	-		

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

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

Table 68 - 20 dB Bandwidth Results



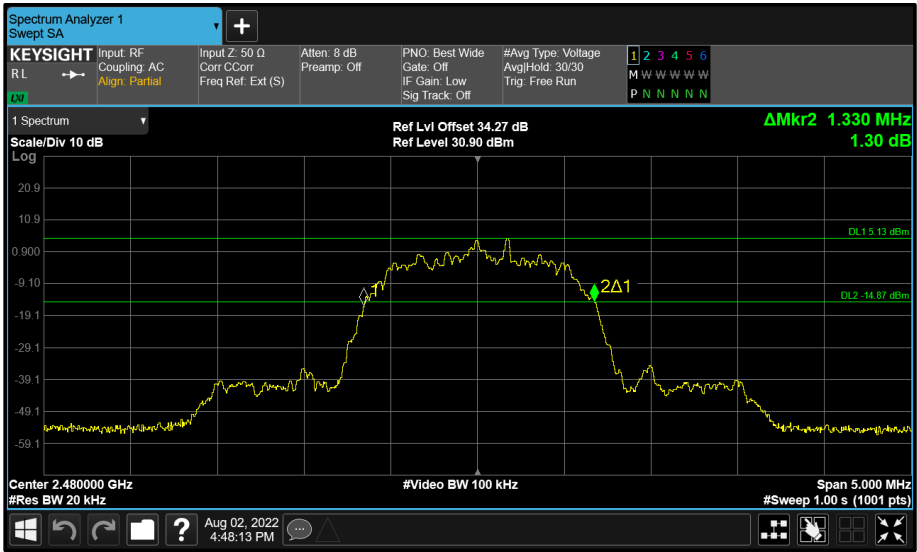


Figure 93 - BT Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

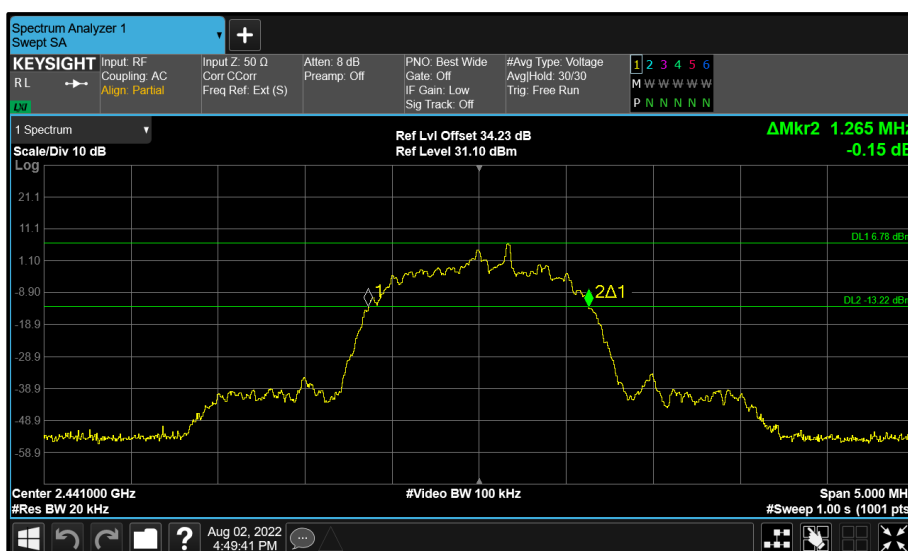
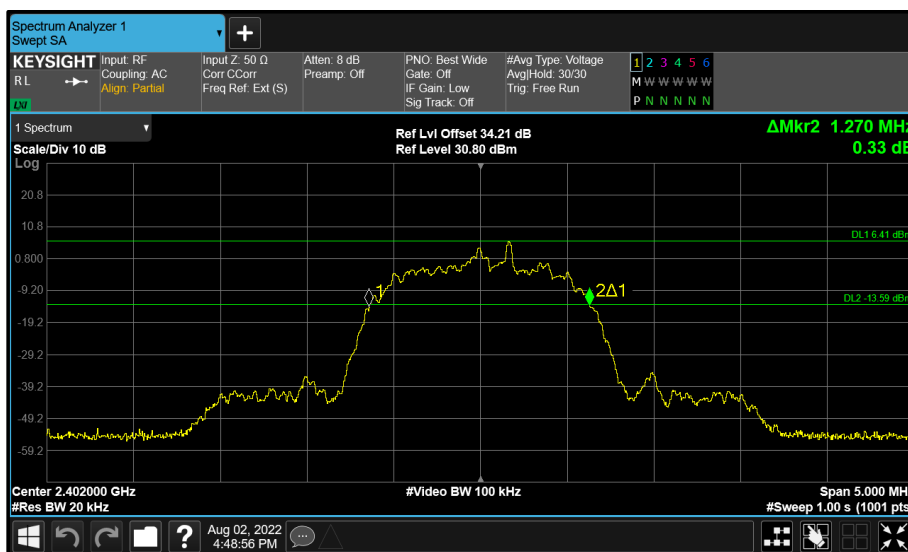


Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	FCC 15.247 (a)(1) RSS-247 5.1	Test Method(s):	C63.10 6.9.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	1.270	-	-
2441	-	1.265	-	-
2480	-	1.265	-	-

Table 69 - 20 dB Bandwidth Results



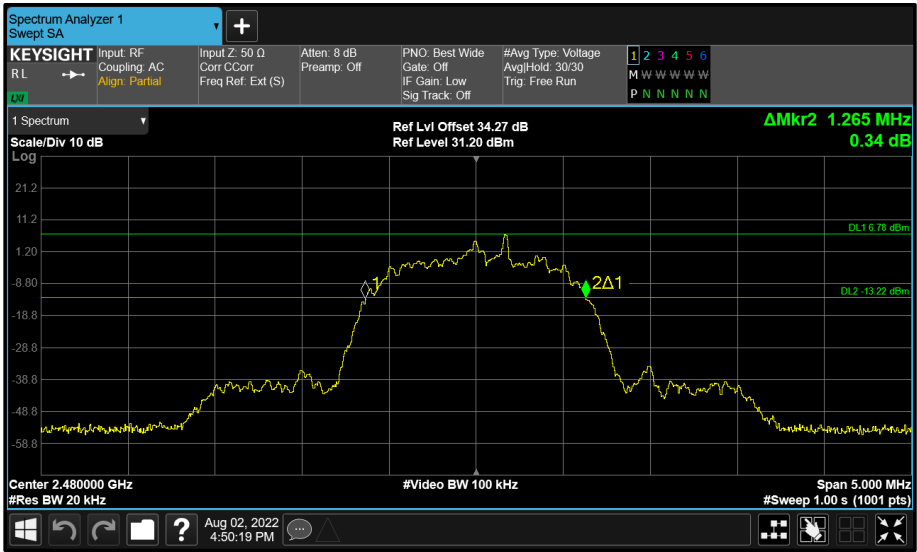


Figure 96 - BT Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth



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 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (BT Core2)	Peak Antenna Gain (dBi):	-

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	-	1.335	-
2441	-	-	1.340	-
2480	-	-	1.340	-

Table 70 - 20 dB Bandwidth Results

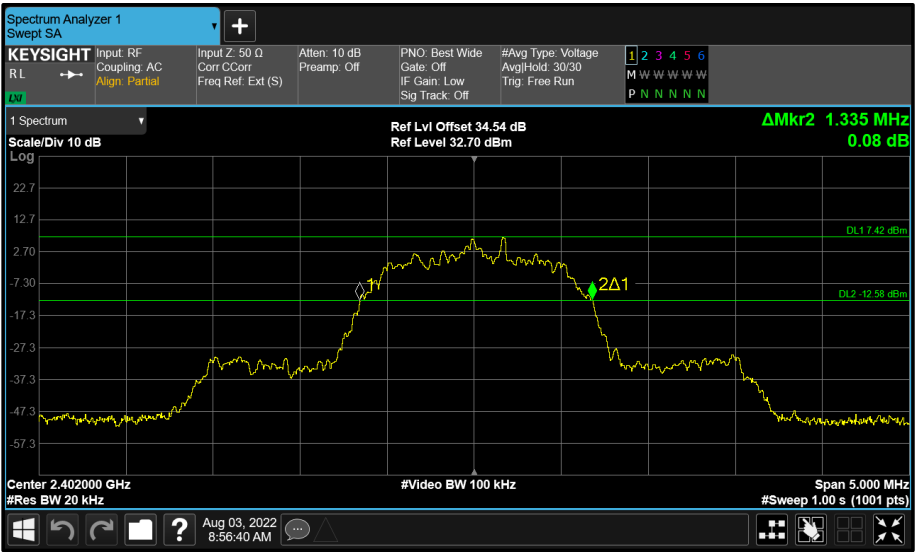


Figure 97 - BT Core2 (C) 2402 MHz (CH0) 20 dB Bandwidth

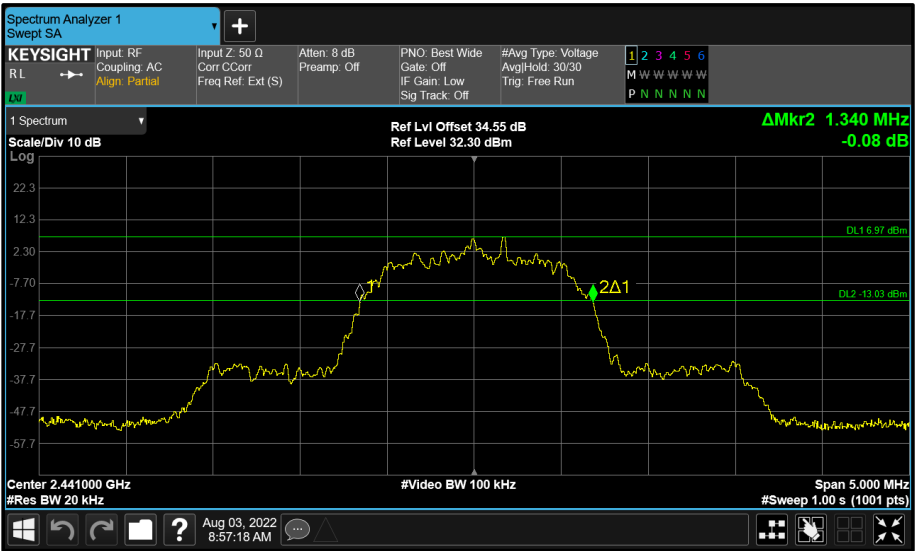


Figure 98 - BT Core2 (C) 2441 MHz (CH39) 20 dB Bandwidth

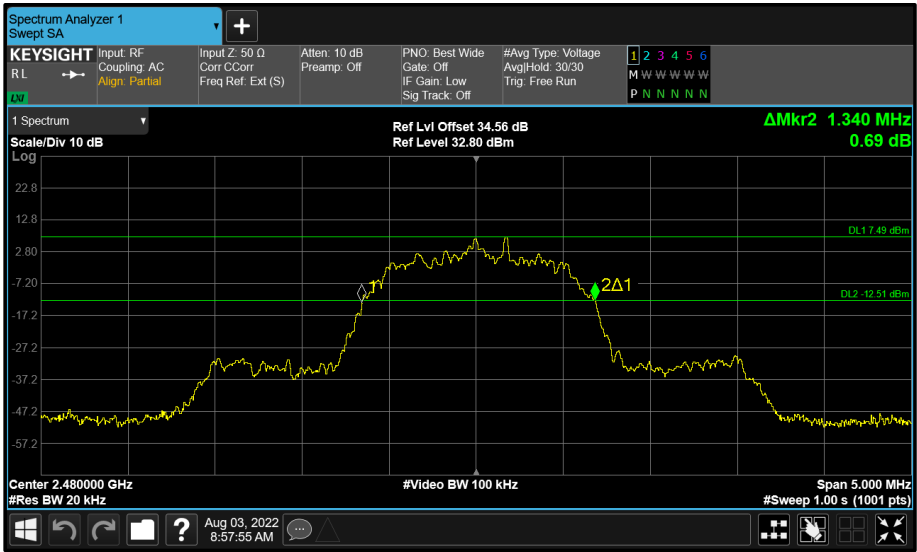


Figure 99 - BT Core2 (C) 2480 MHz (CH78) 20 dB Bandwidth



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 6.9.2
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA 8-DPSK (3-DH5)	Duty Cycle (%):	-
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (BT Core2)	Peak Antenna Gain (dBi):	-

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

Table 71 - 20 dB Bandwidth Results

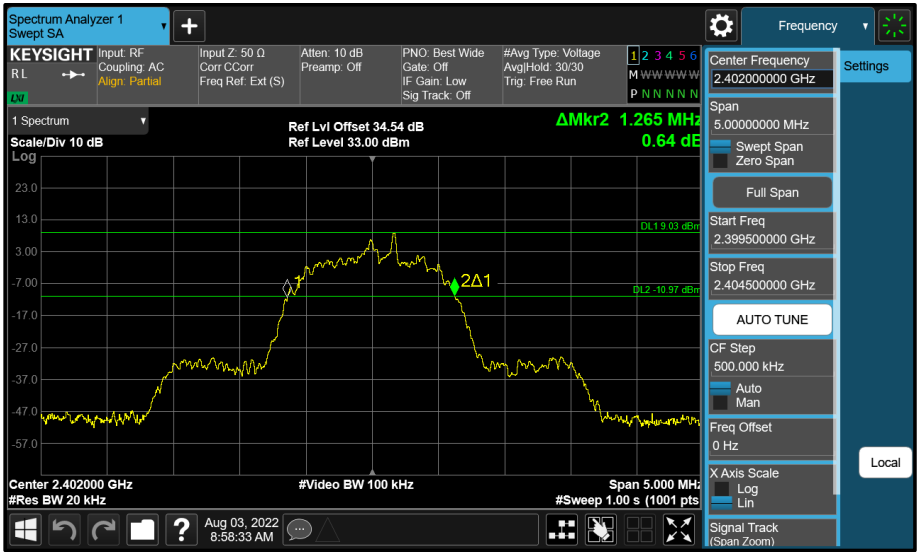


Figure 100 - BT Core2 (C) 2402 MHz (CH0) 20 dB Bandwidth

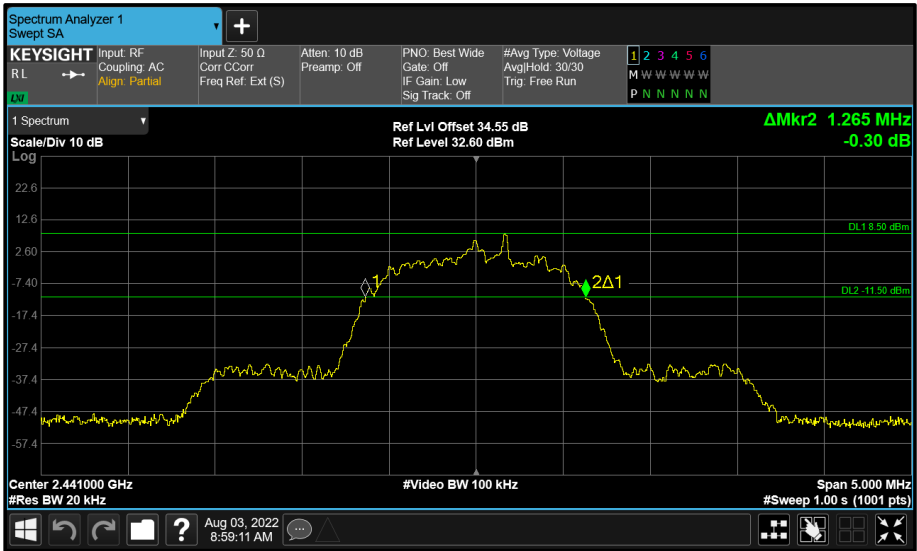


Figure 101 - BT Core2 (C) 2441 MHz (CH39) 20 dB Bandwidth

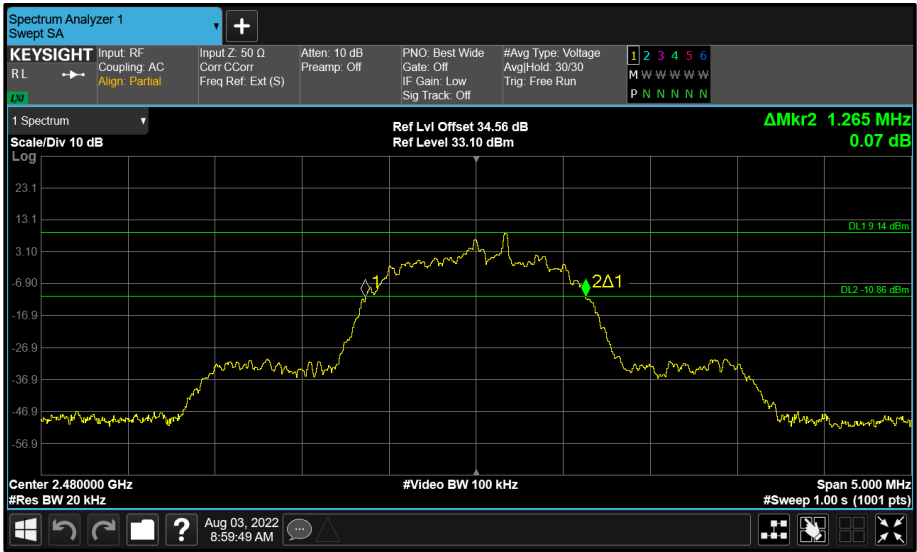


Figure 102 - BT Core2 (C) 2480 MHz (CH78) 20 dB Bandwidth



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 6.9.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	0.858	0.888	-	-
2441	0.855	0.858	-	-
2480	0.855	0.858	-	-

Table 72 - 20 dB Bandwidth Results

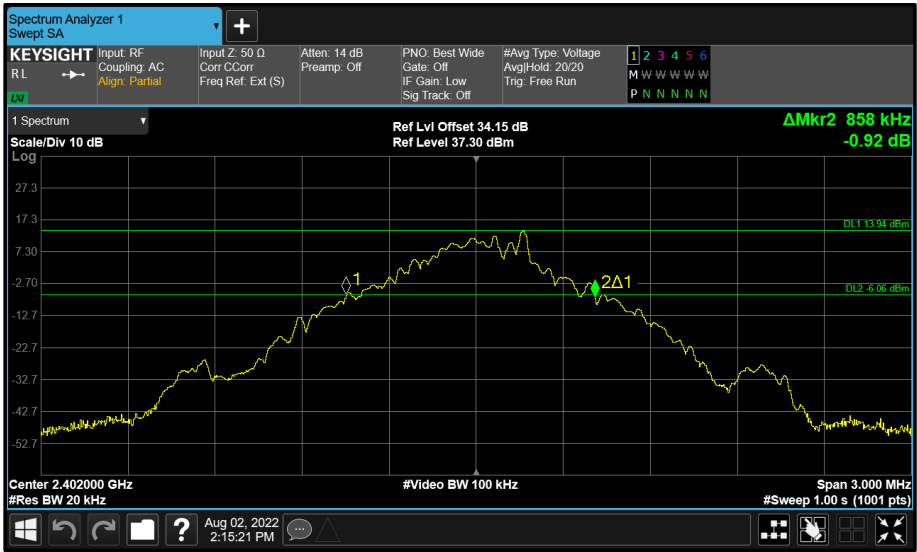


Figure 103 - BT Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

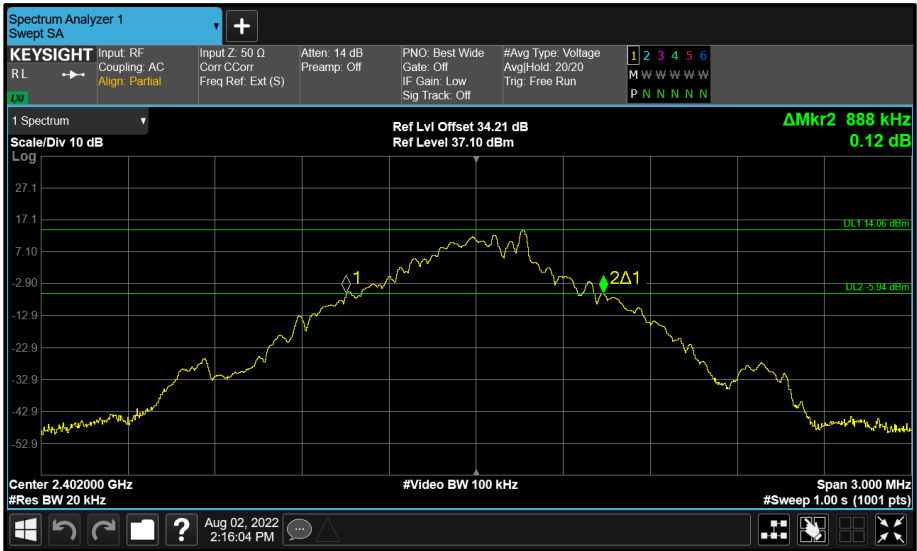


Figure 104 - BT Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

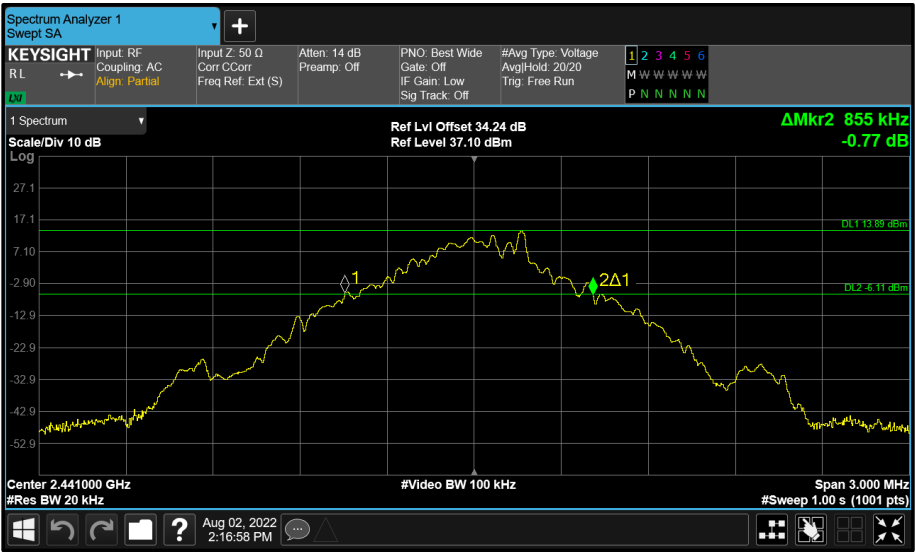


Figure 105 - BT Core 0 (A) 2441 MHz (CH39) 20 dB Bandwidth

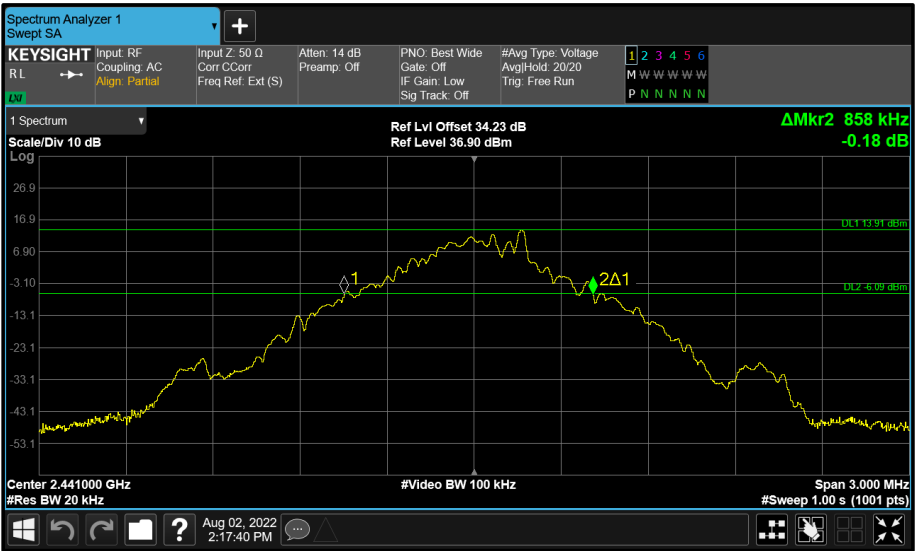


Figure 106 - BT Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

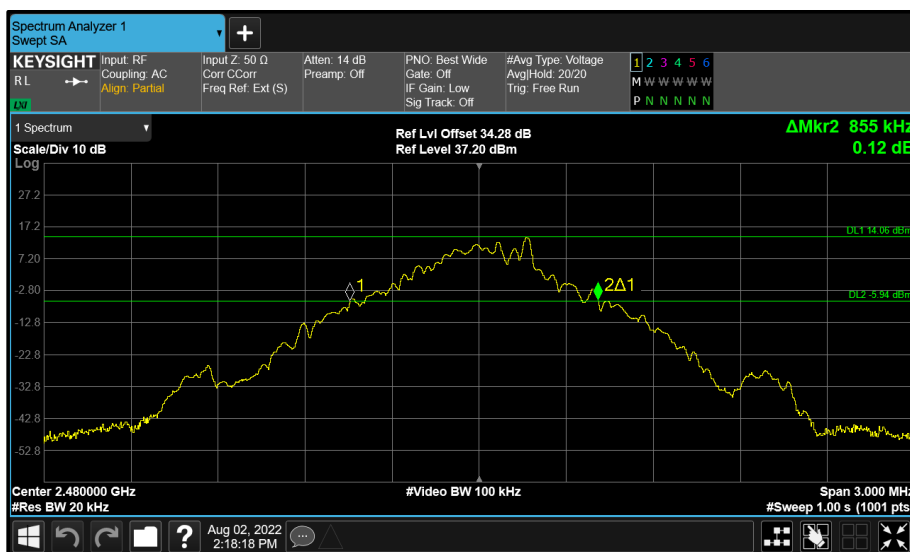


Figure 107 - BT Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

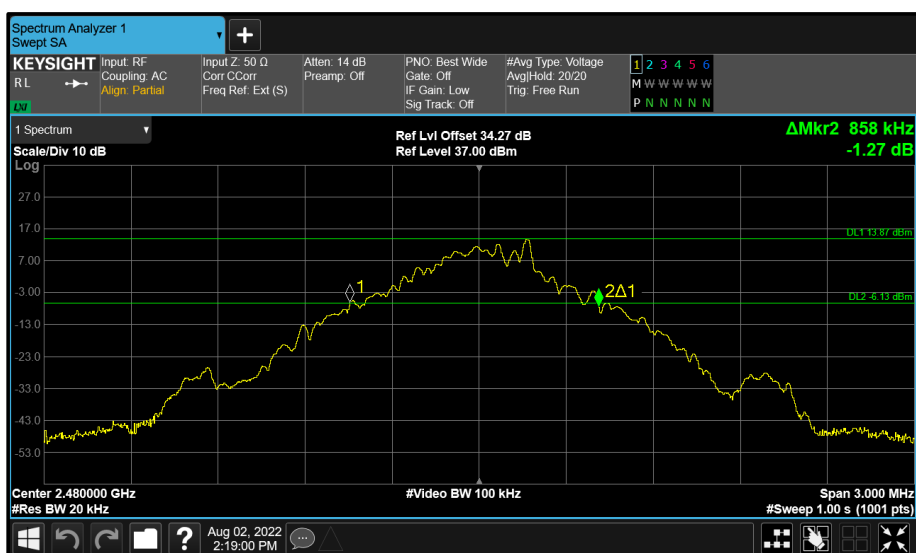


Figure 108 - BT Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth



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 6.9.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	1.330	1.330	-	-
2441	1.330	1.335	-	-
2480	1.330	1.335	-	-

Table 73 - 20 dB Bandwidth Results

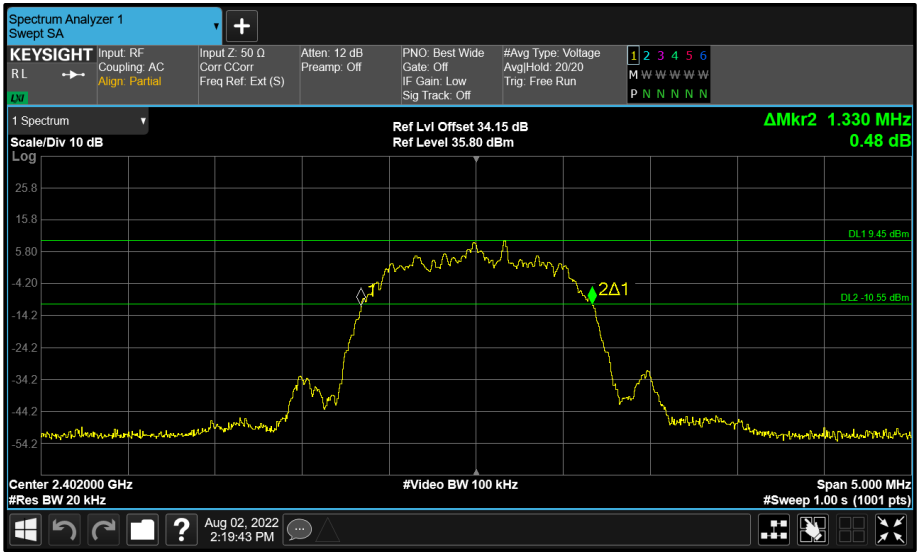


Figure 109 - BT Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

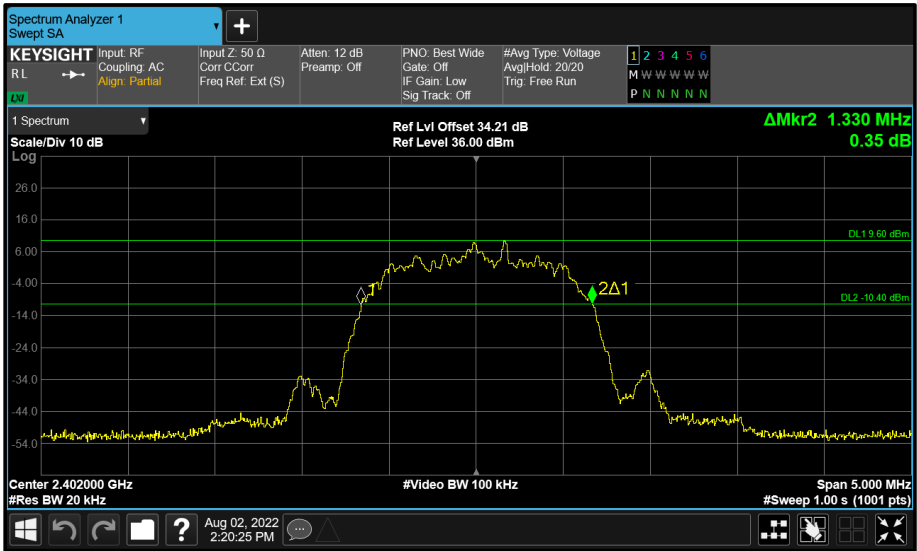


Figure 110 - BT Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

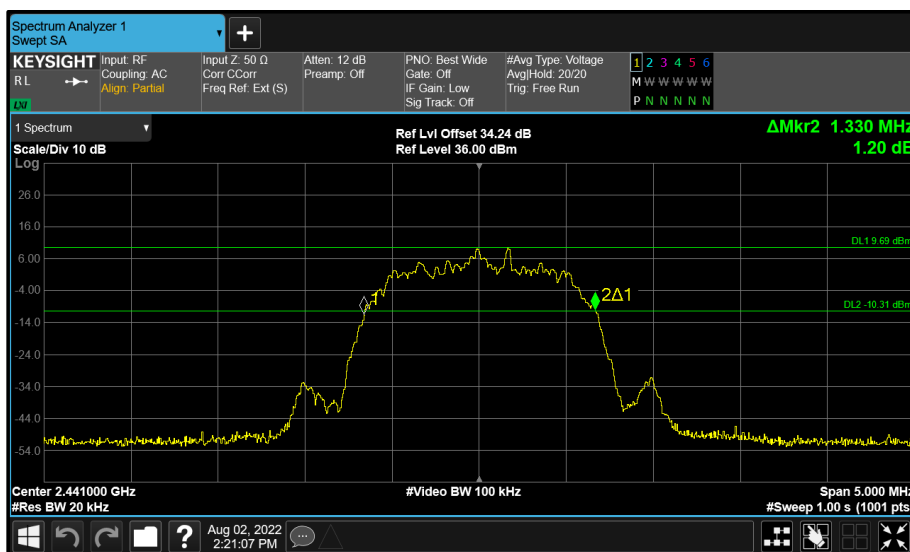


Figure 111 - BT Core 0 (A) 2441 MHz (CH39) 20 dB Bandwidth

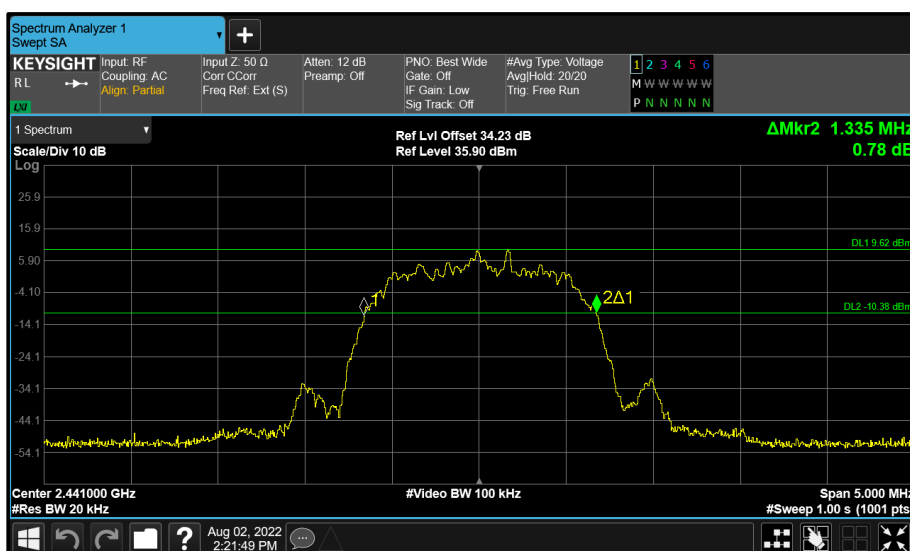


Figure 112 - BT Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

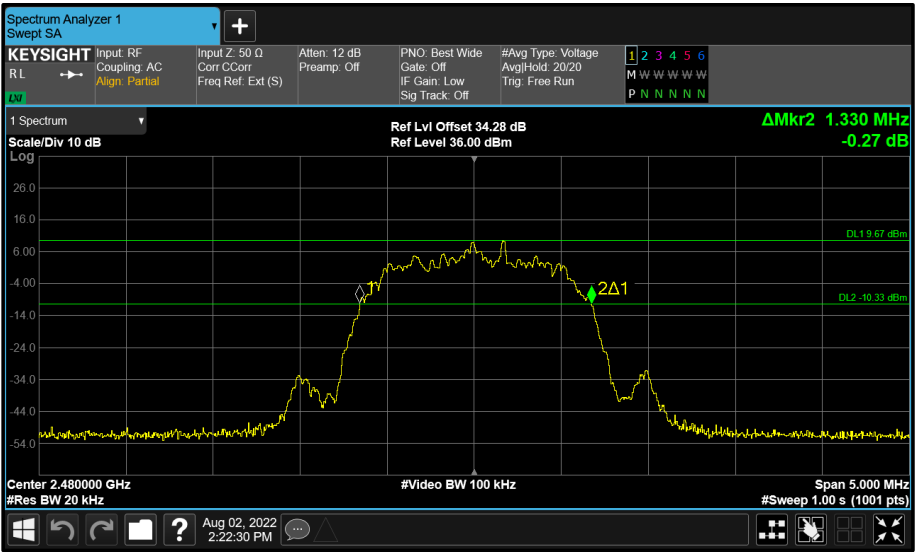


Figure 113 - BT Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

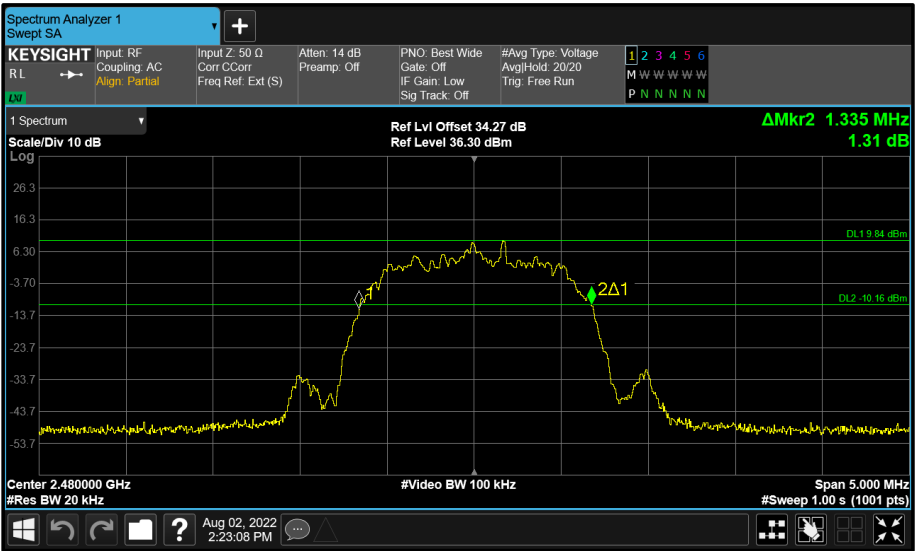


Figure 114 - BT Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth



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 6.9.2
Additional Reference(s):	-		

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

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

Table 74 - 20 dB Bandwidth Results

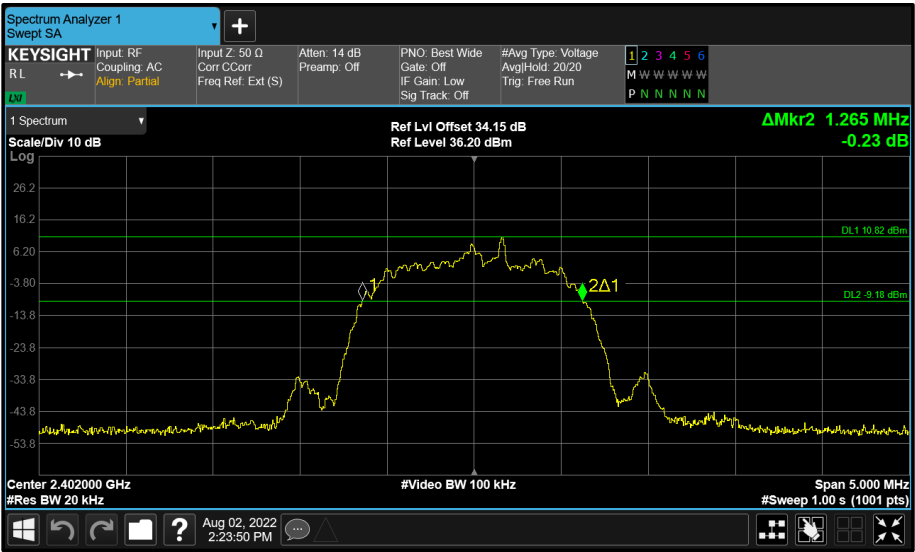


Figure 115 - BT Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

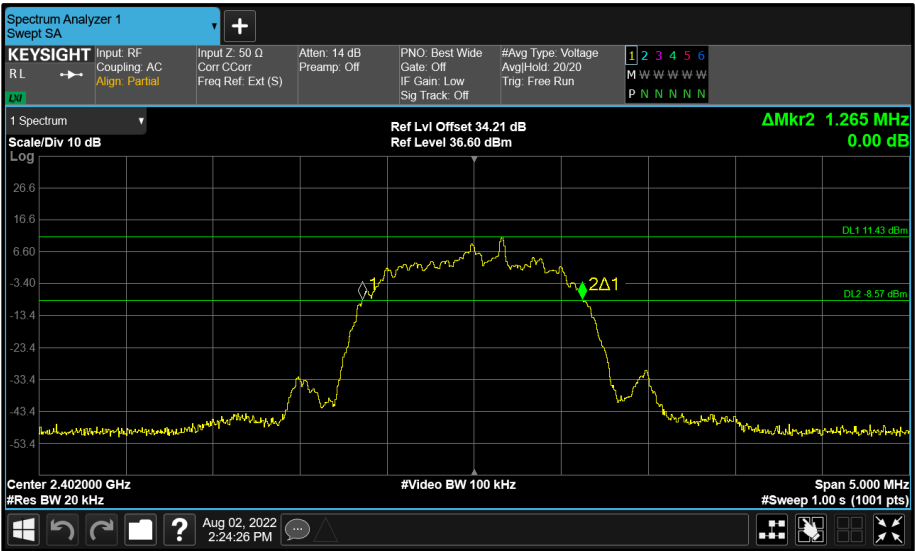
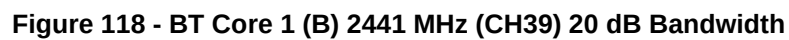
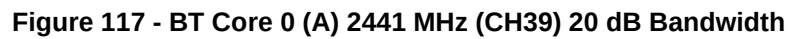


Figure 116 - BT Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth



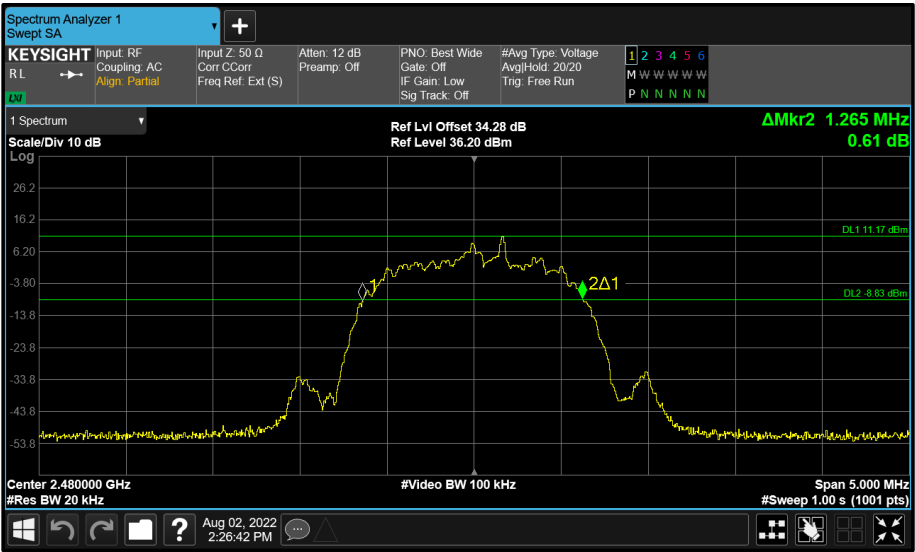


Figure 119 - BT Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

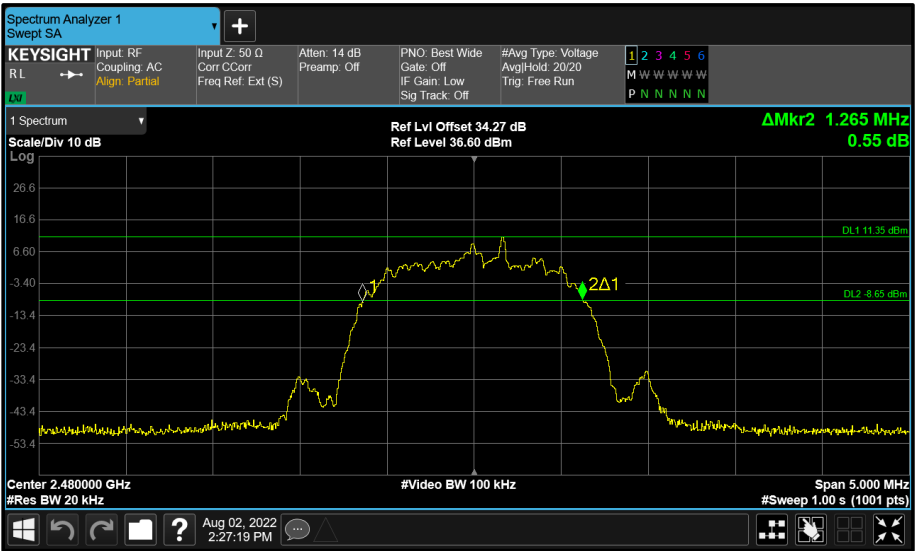


Figure 120 - BT Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth



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 6.9.2
Additional Reference(s):	-		

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

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

Table 75 - 20 dB Bandwidth Results

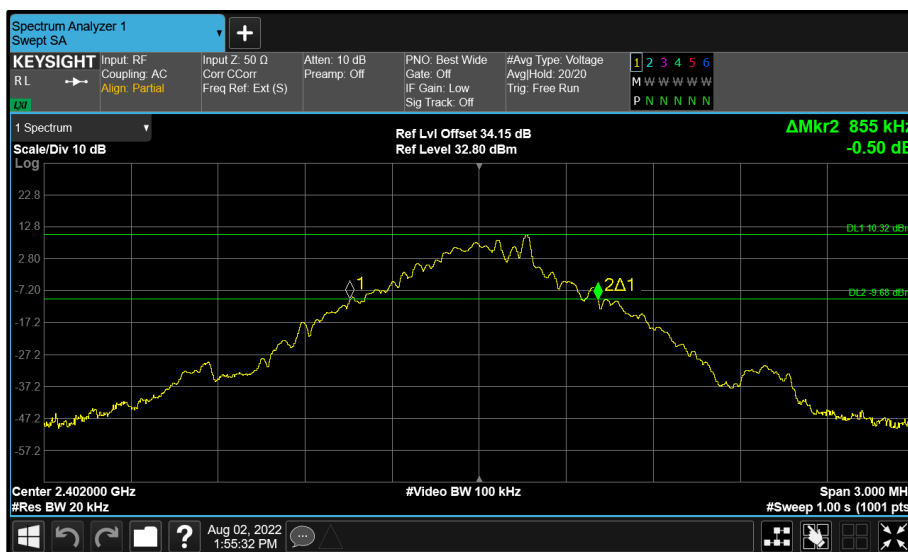


Figure 121 - BT Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

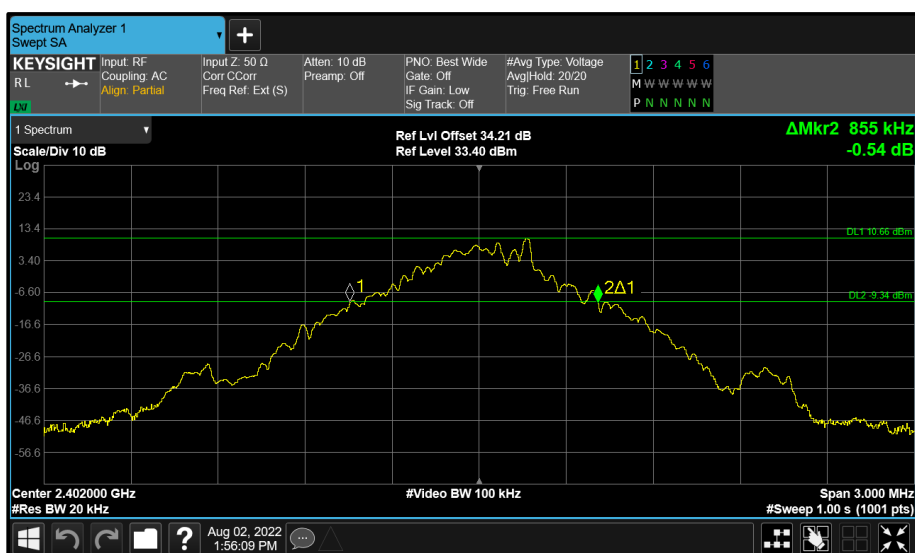
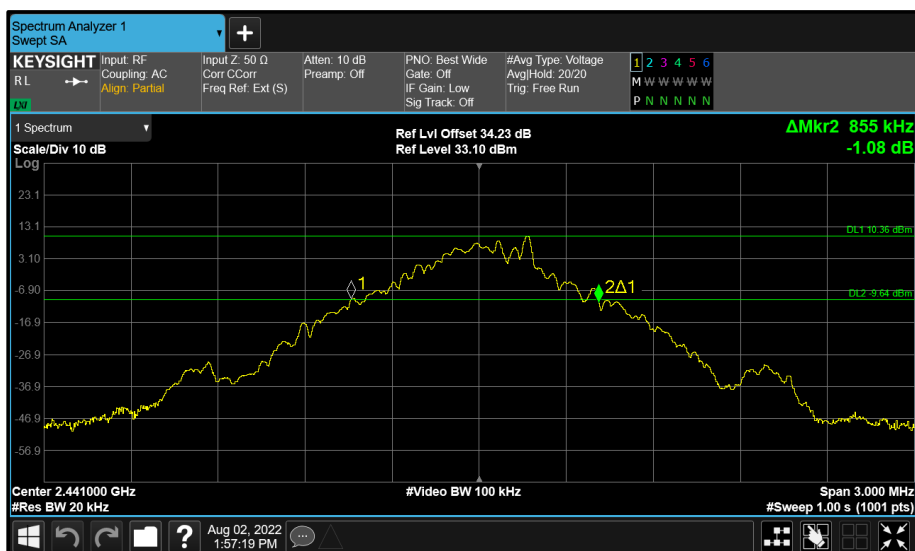
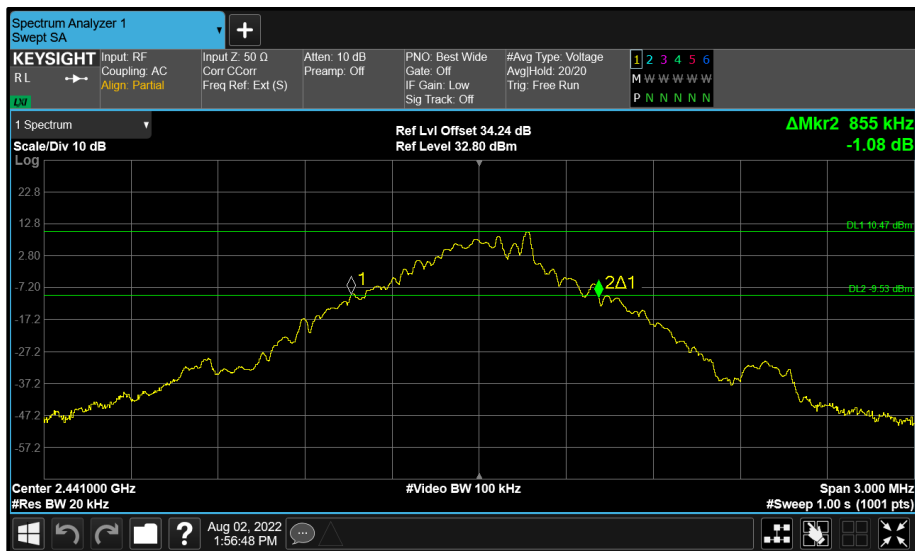


Figure 122 - BT Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth



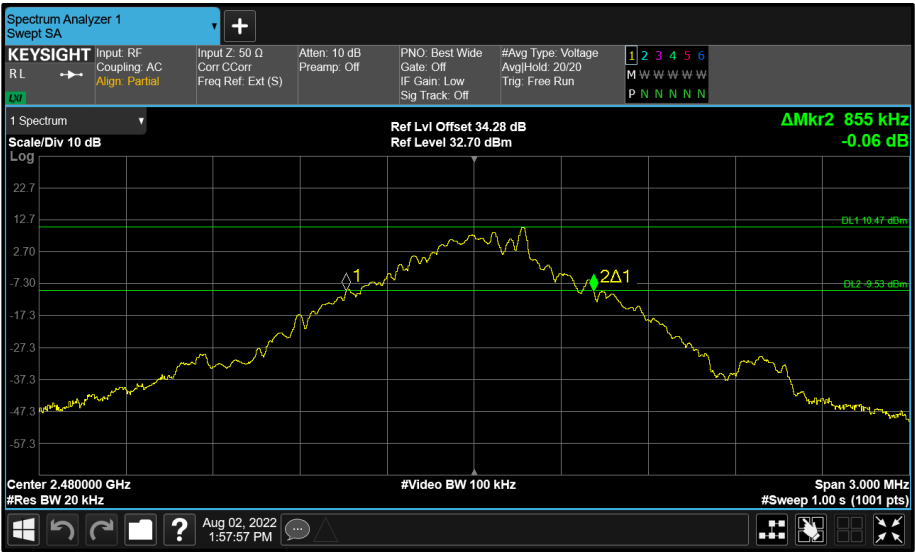


Figure 125 - BT Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

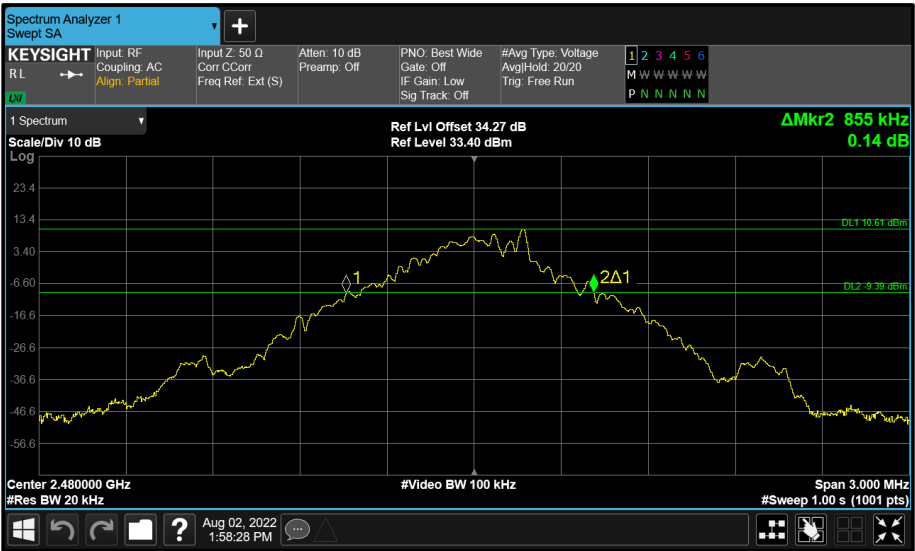


Figure 126 - BT Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth



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 6.9.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	1.330	1.335	-	-
2441	1.330	1.330	-	-
2480	1.330	1.330	-	-

Table 76 - 20 dB Bandwidth Results

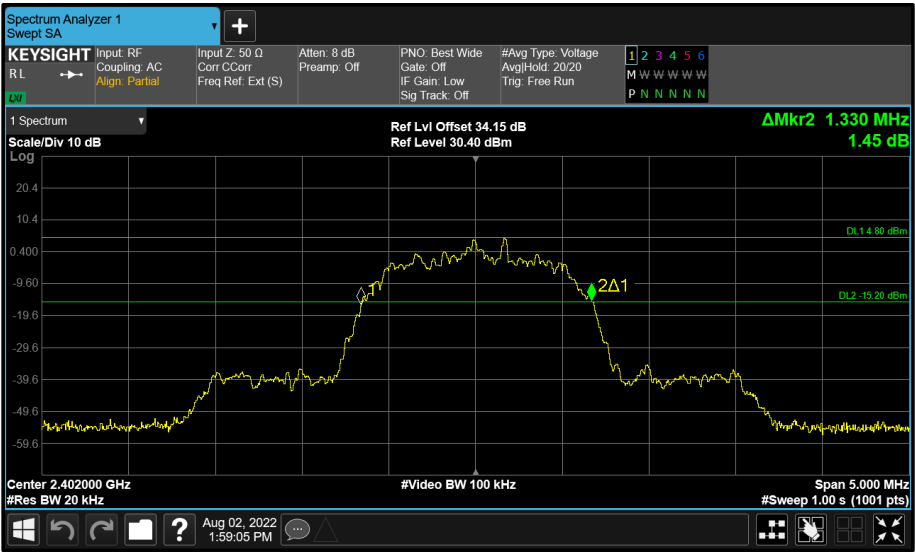


Figure 127 - BT Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

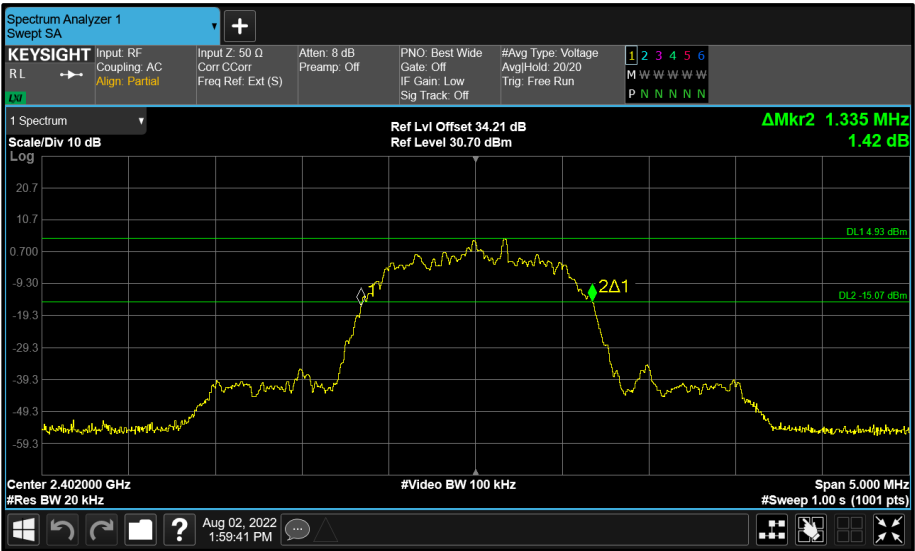


Figure 128 - BT Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth