

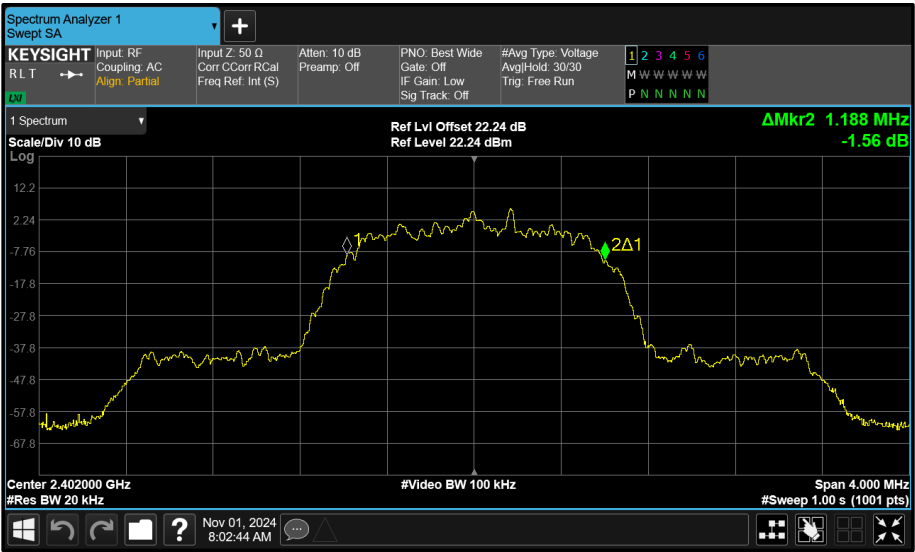


Figure 151 - Core 0 (A) 2402 MHz (CH0) 99% Bandwidth

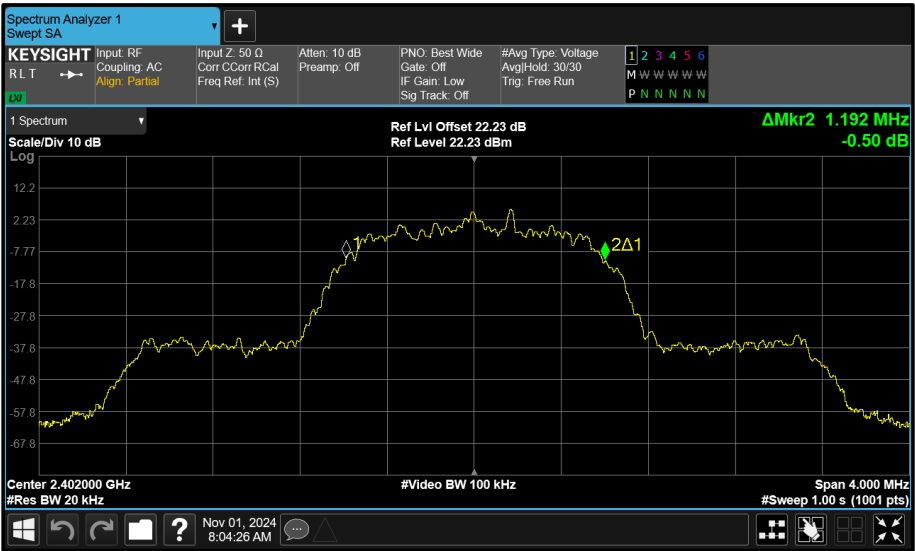


Figure 152 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

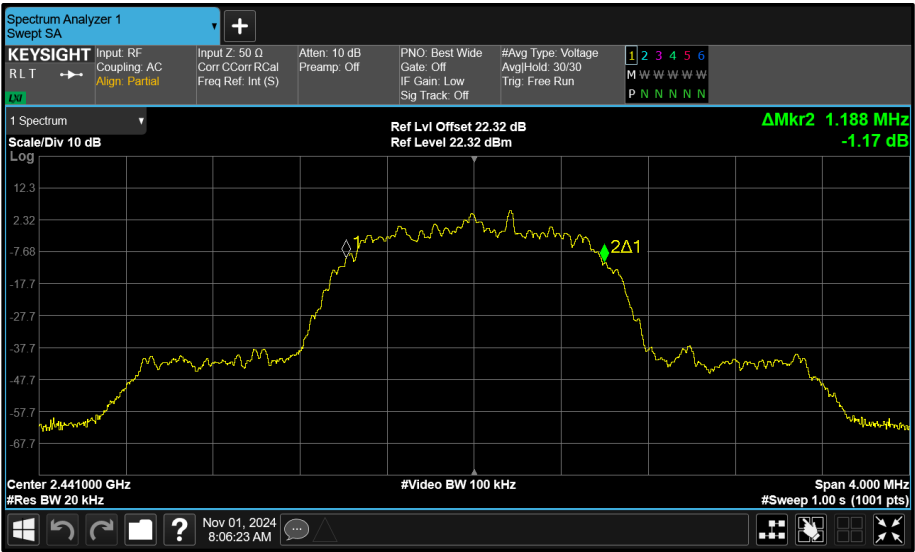


Figure 153 - Core 0 (A) 2441 MHz (CH39) 99% Bandwidth

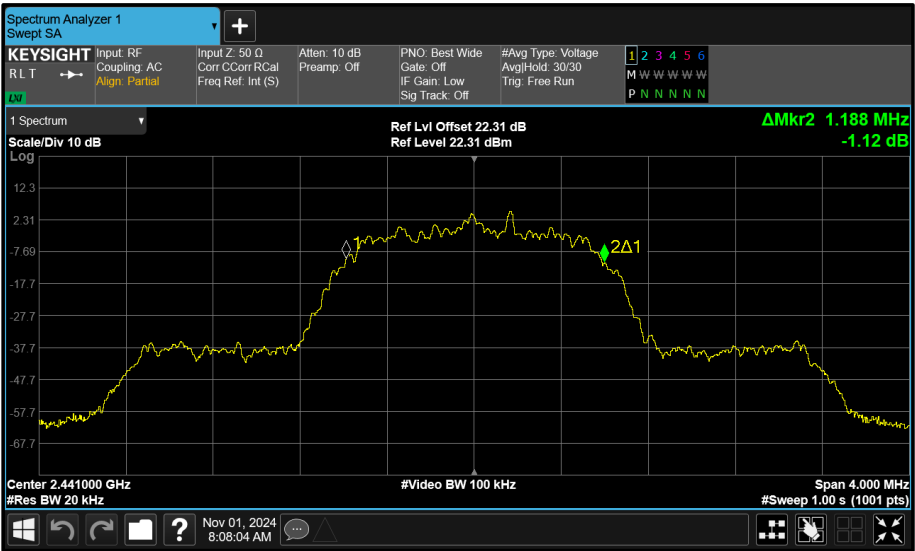


Figure 154 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

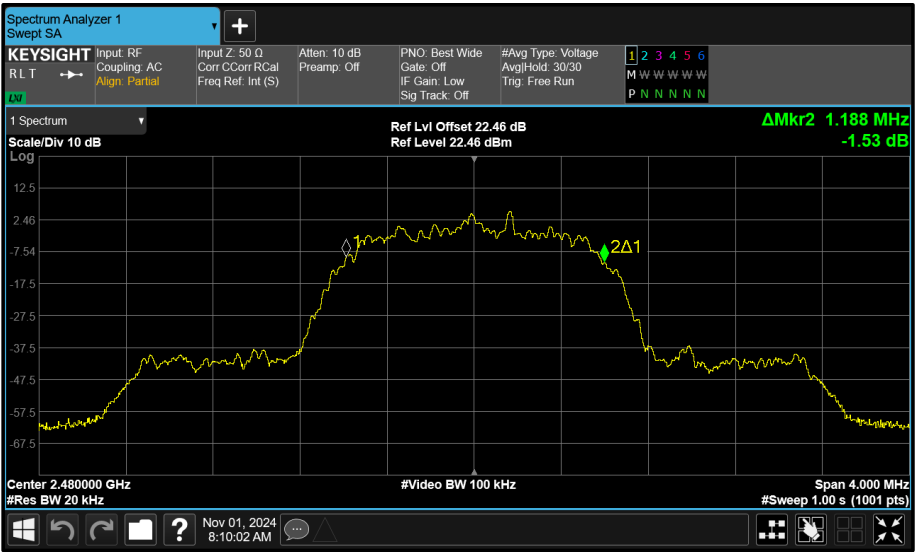


Figure 155 - Core 0 (A) 2480 MHz (CH78) 99% Bandwidth

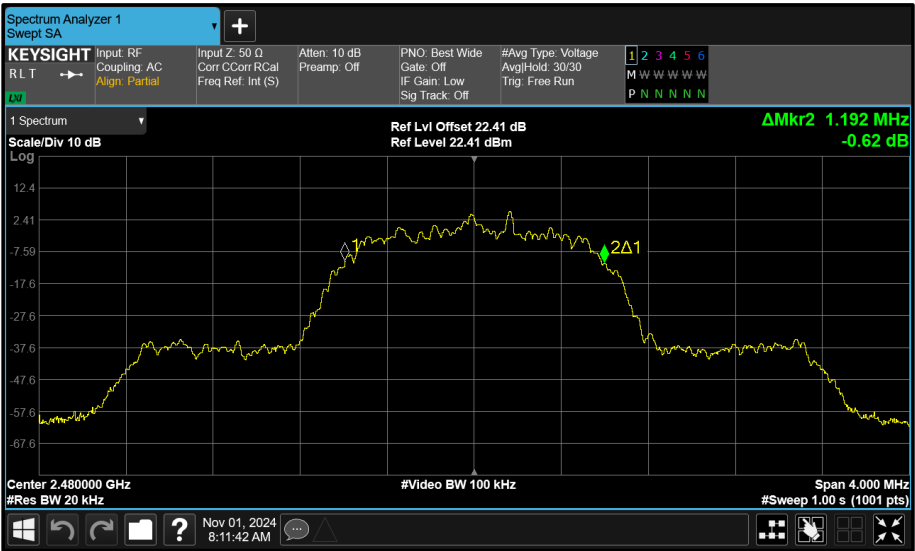


Figure 156 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth



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:	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	1.260	1.260	-	-
2441	1.260	1.260	-	-
2480	1.260	1.265	-	-

Table 79 - 20 dB Bandwidth Results

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

Table 80 - 99% Bandwidth Results

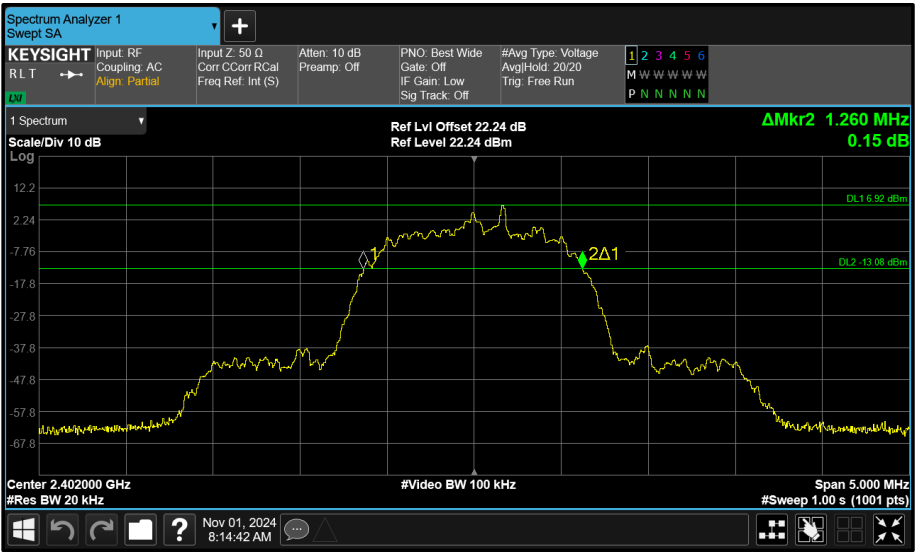


Figure 157 - Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

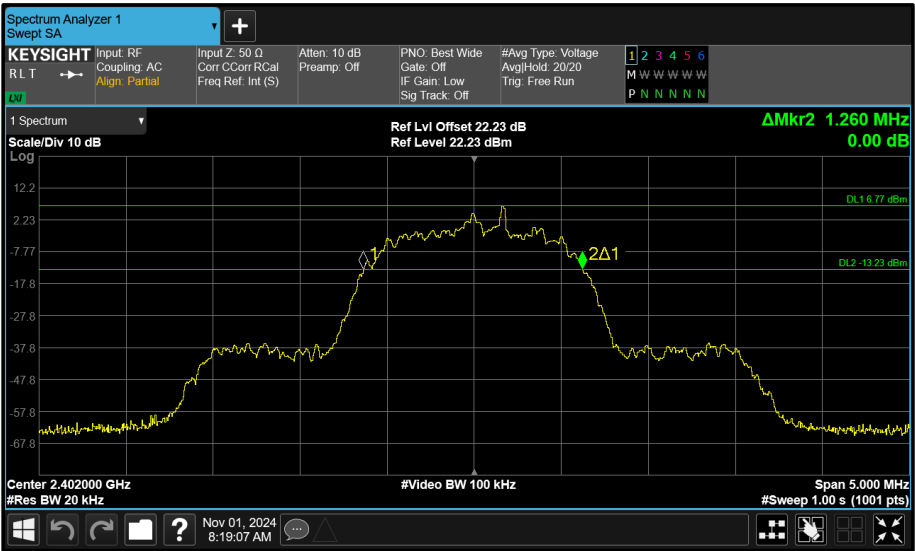


Figure 158 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth



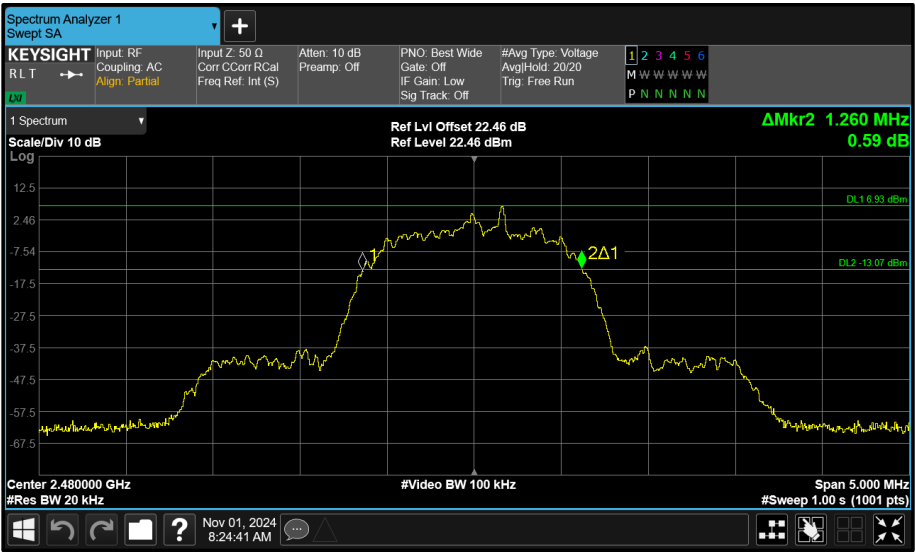


Figure 161 - Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

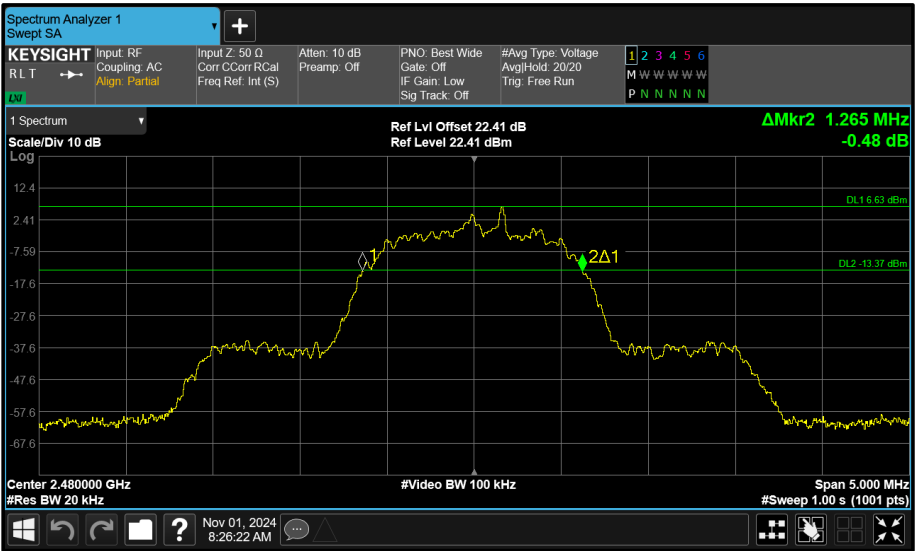
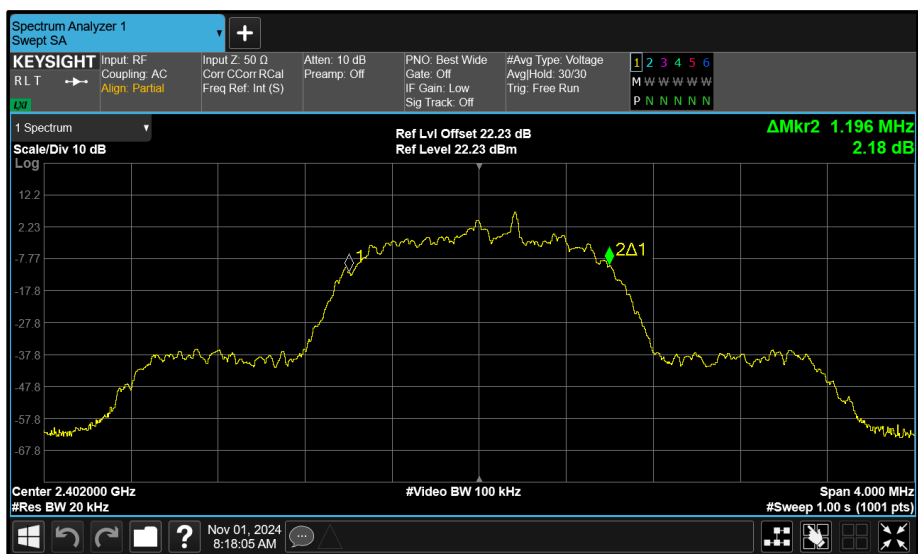
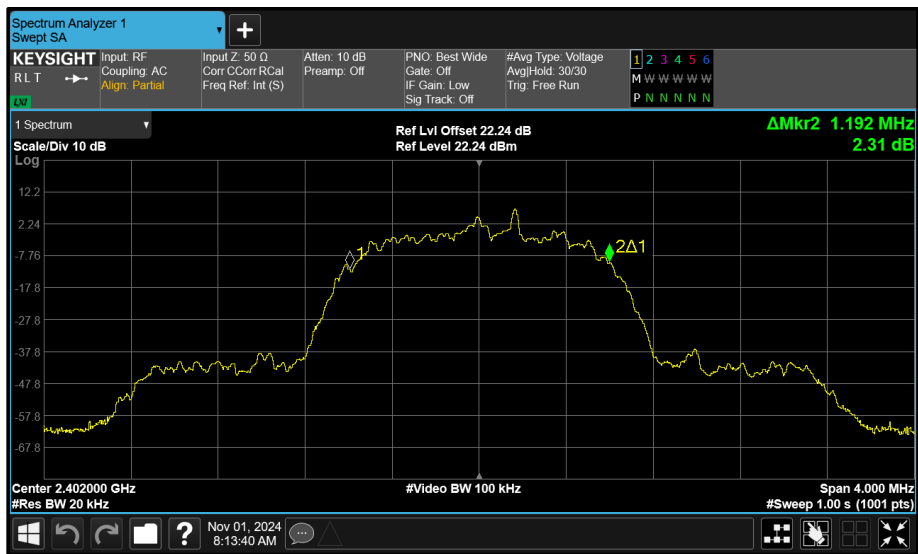
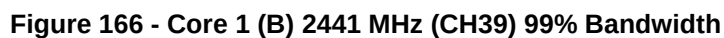
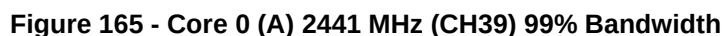


Figure 162 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth





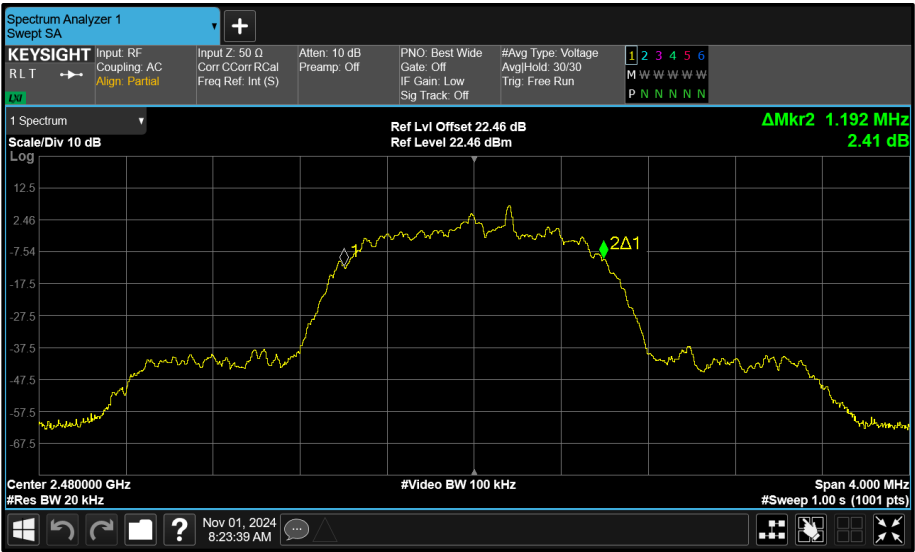


Figure 167 - Core 0 (A) 2480 MHz (CH78) 99% Bandwidth

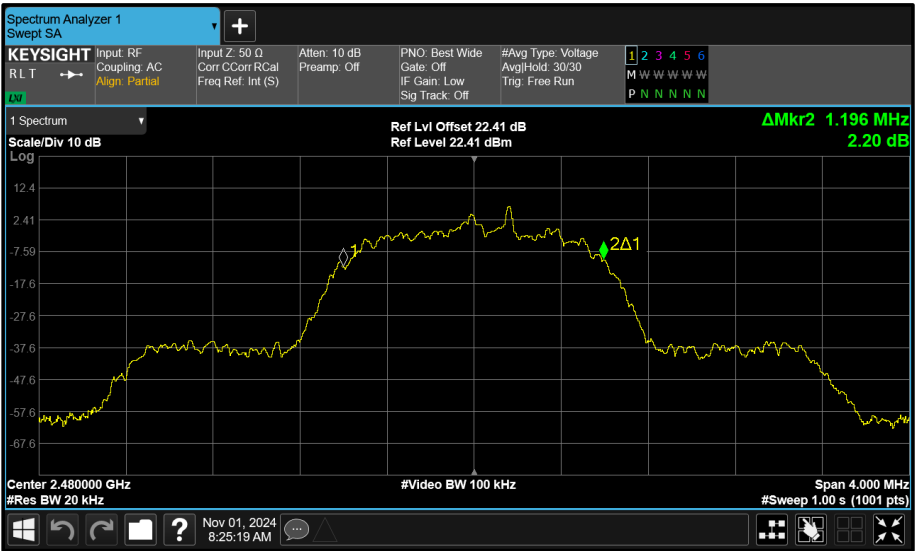


Figure 168 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth



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):	-		

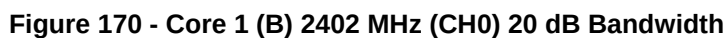
DUT Configuration			
Mode:	ePA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	-
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	-

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

Table 81 - 20 dB Bandwidth Results

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

Table 82 - 99% Bandwidth Results



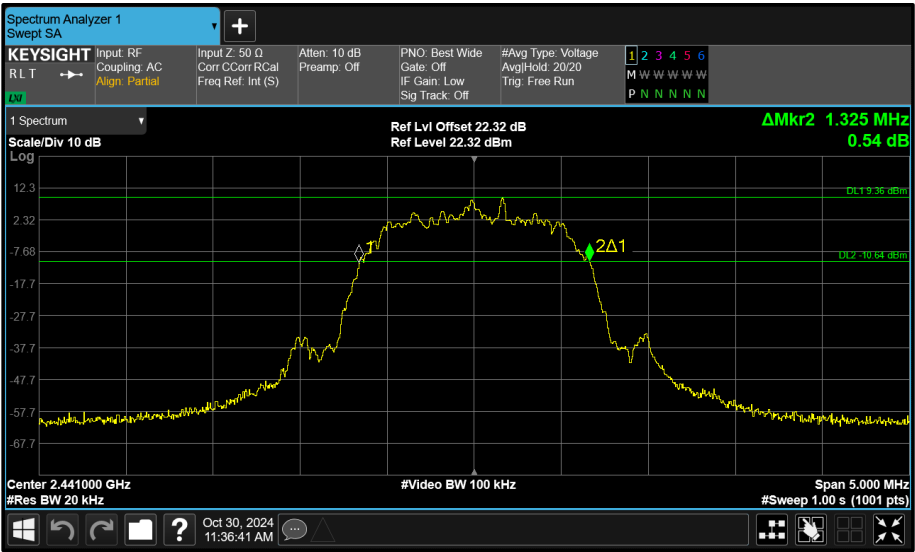


Figure 171 - Core 0 (A) 2441 MHz (CH39) 20 dB Bandwidth

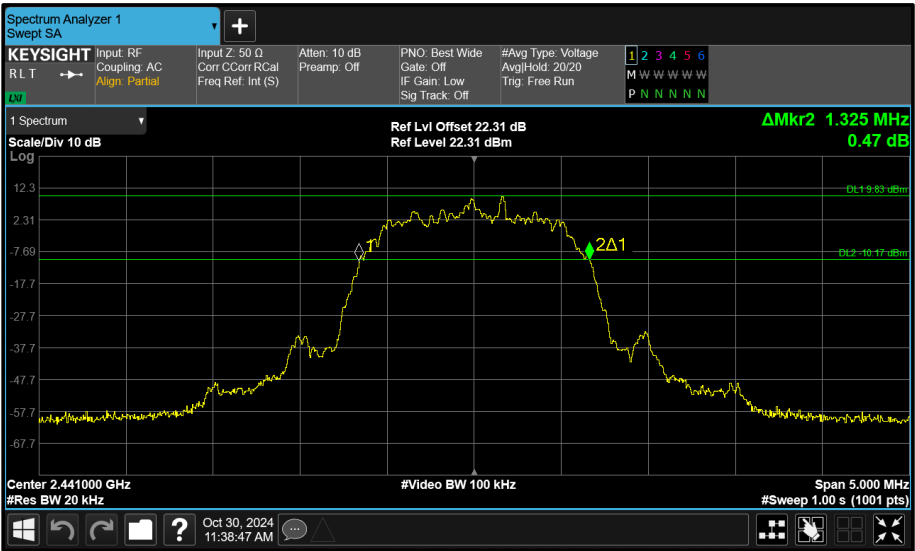


Figure 172 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

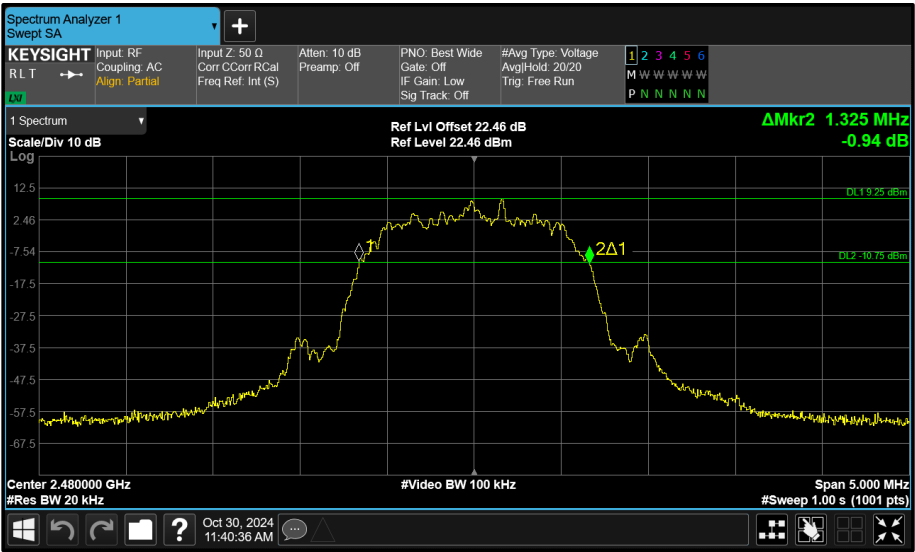


Figure 173 - Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

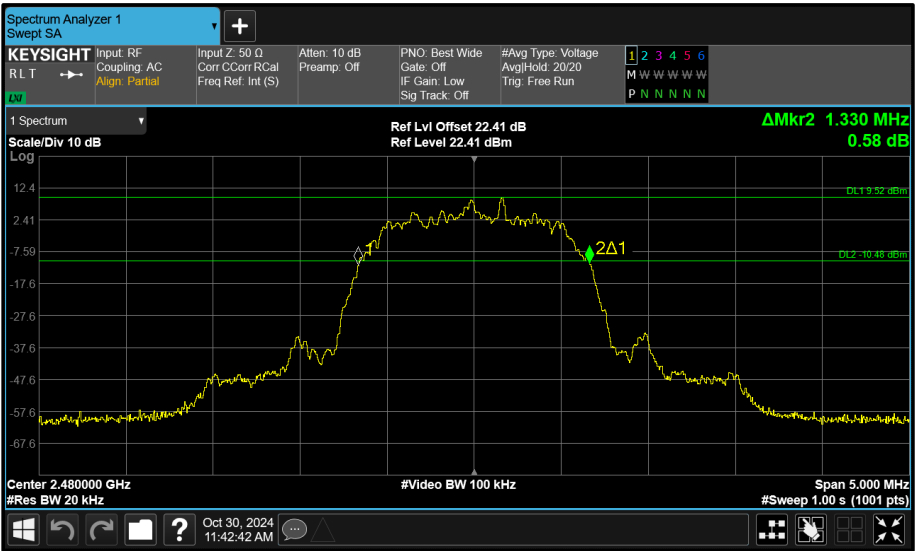


Figure 174 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

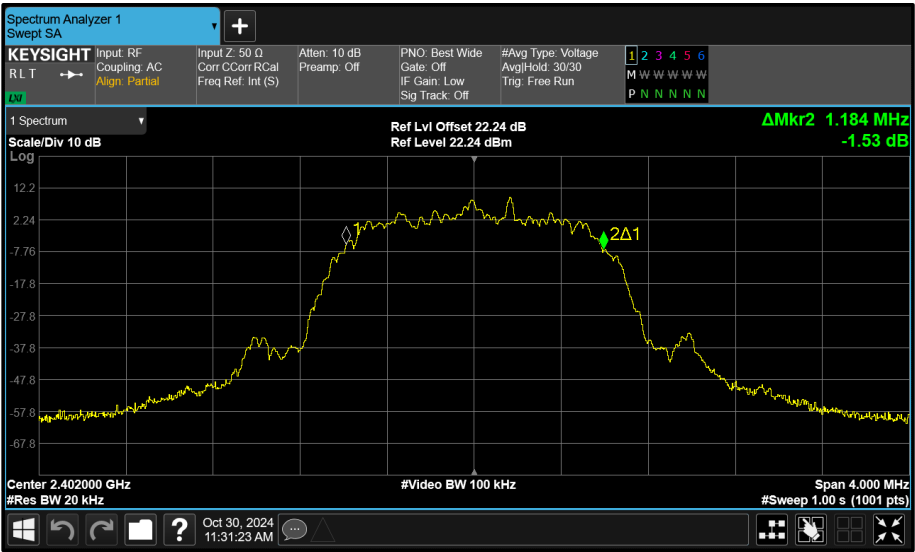


Figure 175 - Core 0 (A) 2402 MHz (CH0) 99% Bandwidth

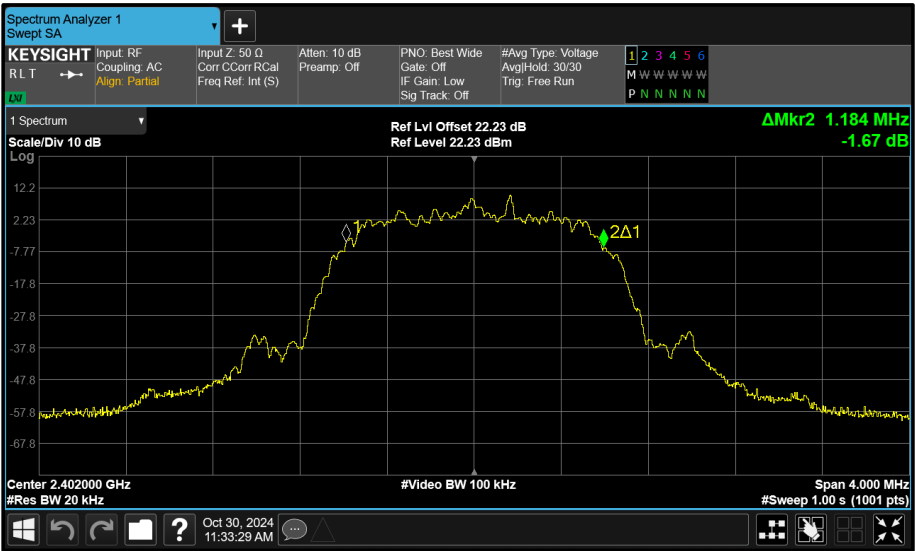


Figure 176 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

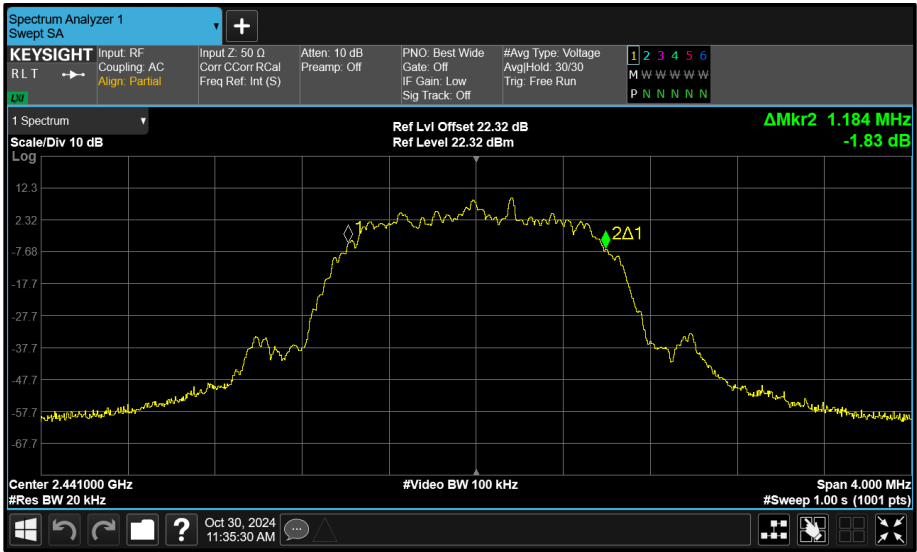


Figure 177 - Core 0 (A) 2441 MHz (CH39) 99% Bandwidth

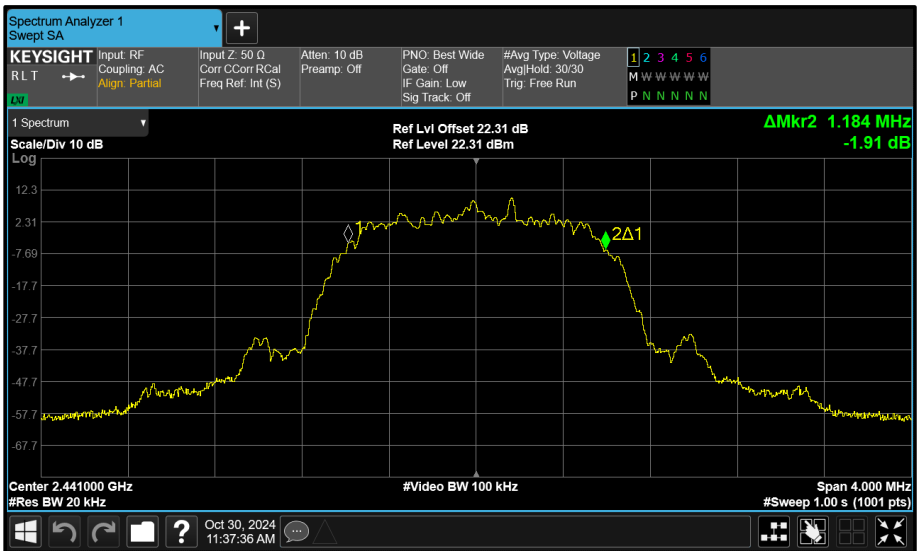


Figure 178 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth





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:	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	1.260	1.260	-	-
2441	1.260	1.260	-	-
2480	1.260	1.260	-	-

Table 83 - 20 dB Bandwidth Results

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

Table 84 - 99% Bandwidth Results

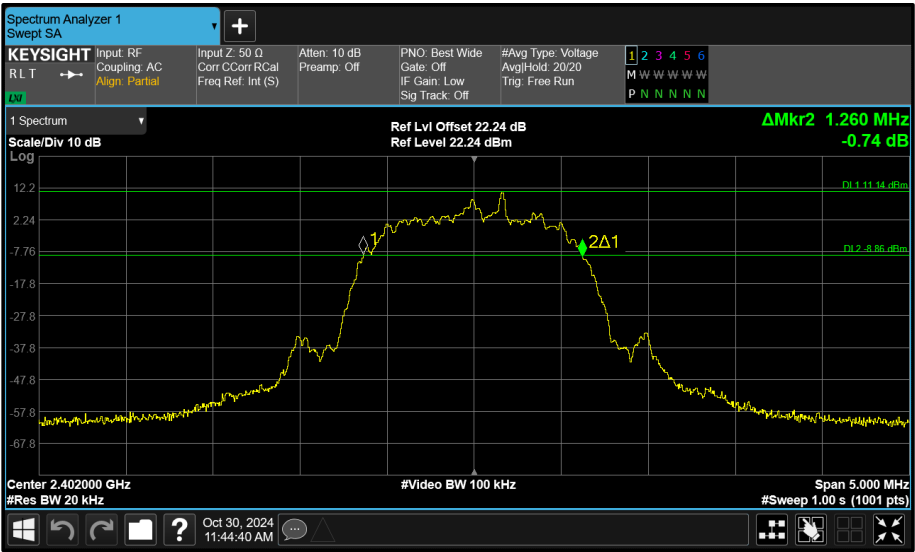


Figure 181 - Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

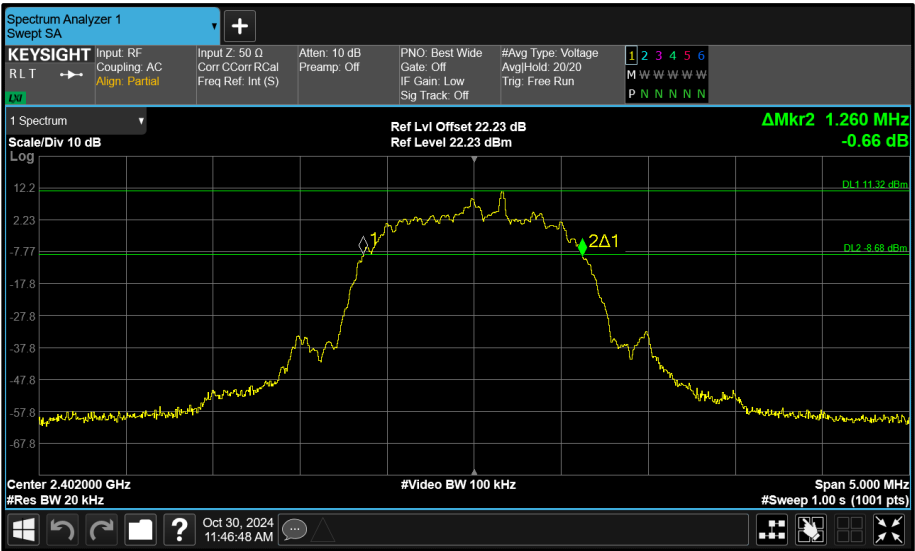


Figure 182 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

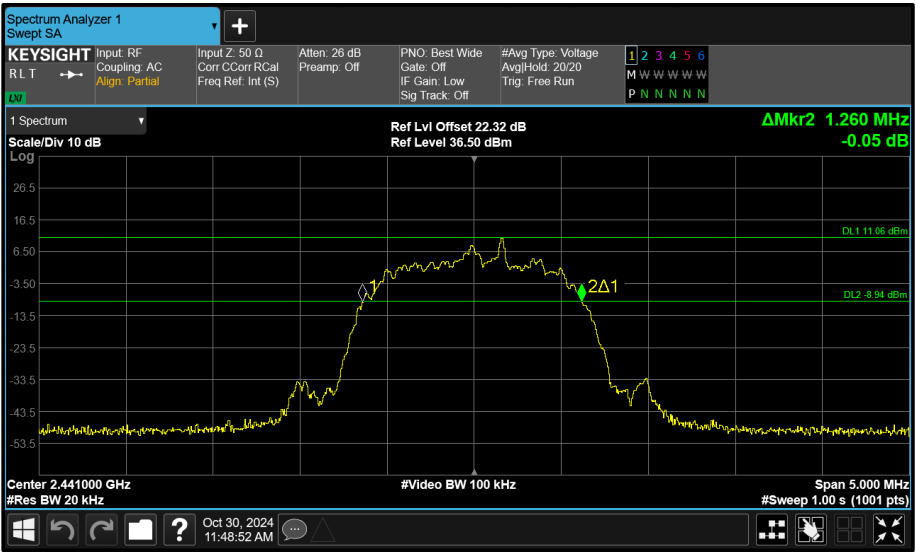


Figure 183 - Core 0 (A) 2441 MHz (CH39) 20 dB Bandwidth

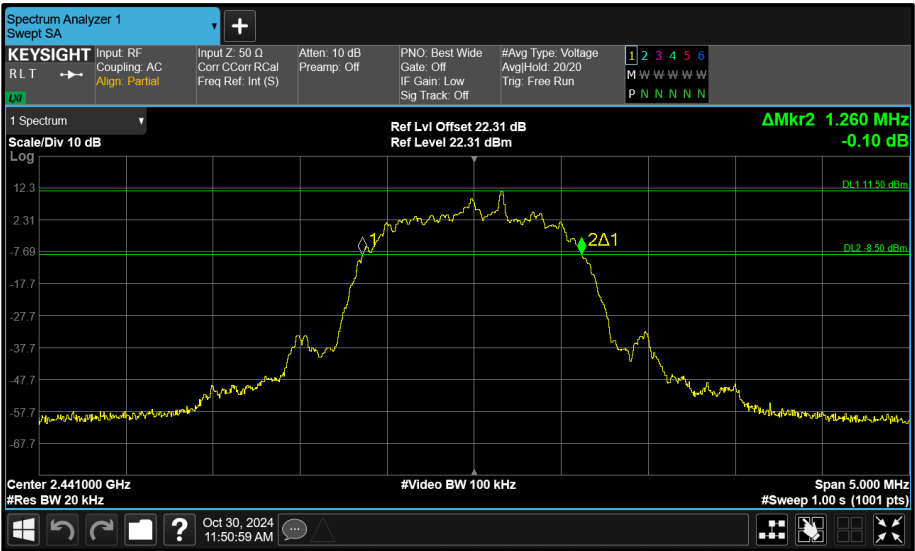


Figure 184 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

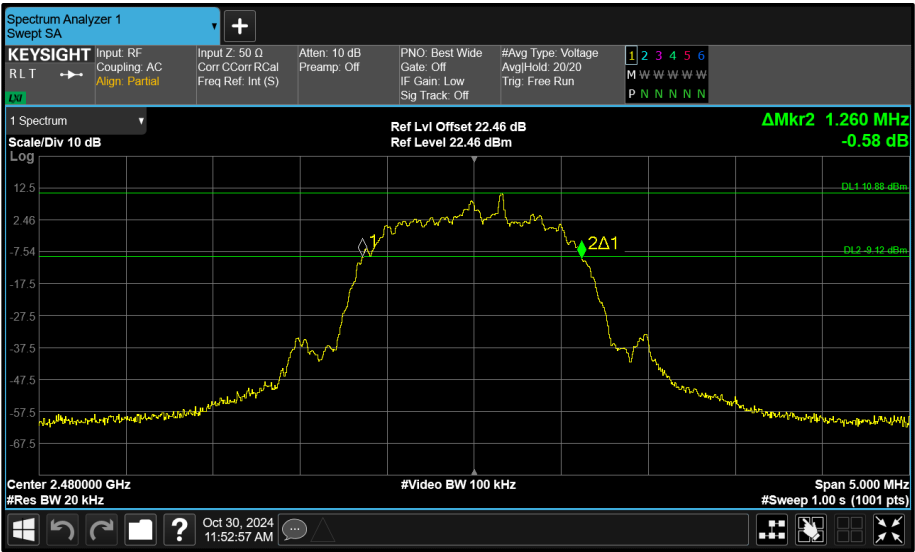


Figure 185 - Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

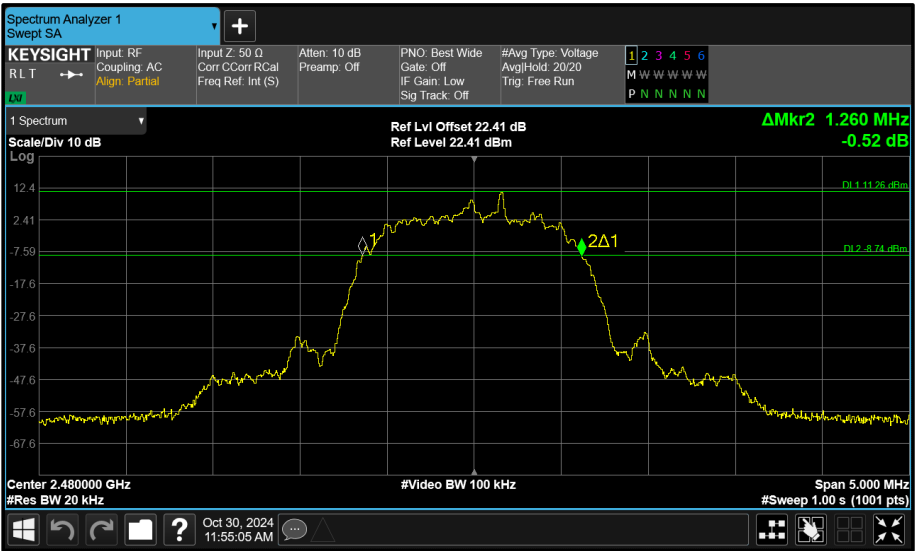


Figure 186 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

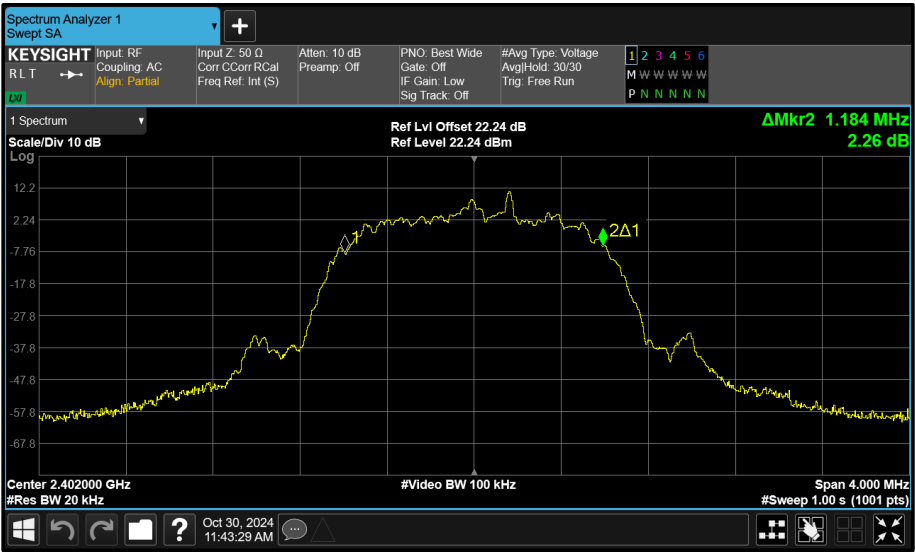


Figure 187 - Core 0 (A) 2402 MHz (CH0) 99% Bandwidth

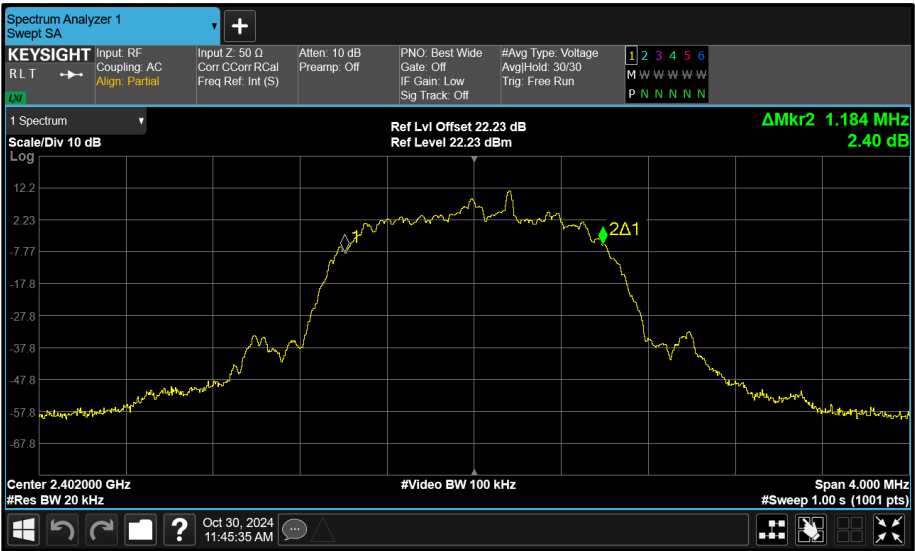


Figure 188 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

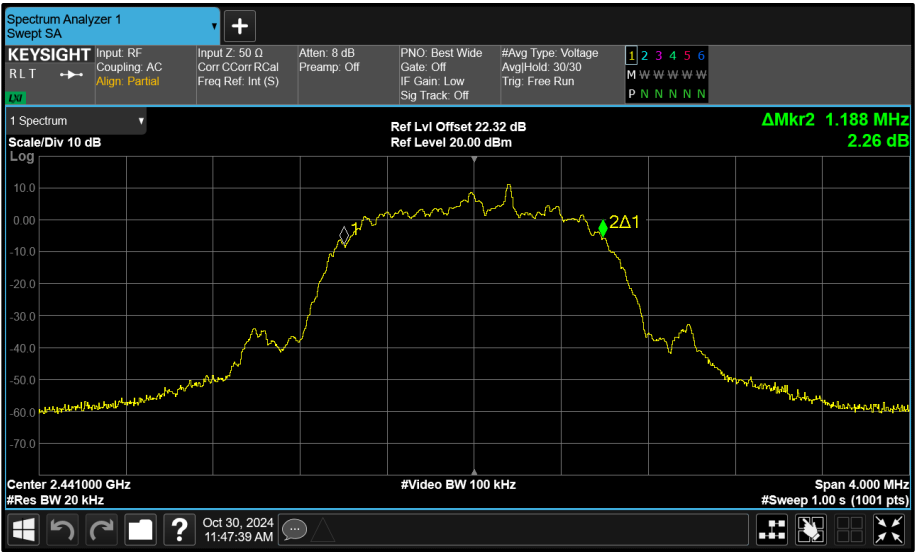


Figure 189 - Core 0 (A) 2441 MHz (CH39) 99% Bandwidth

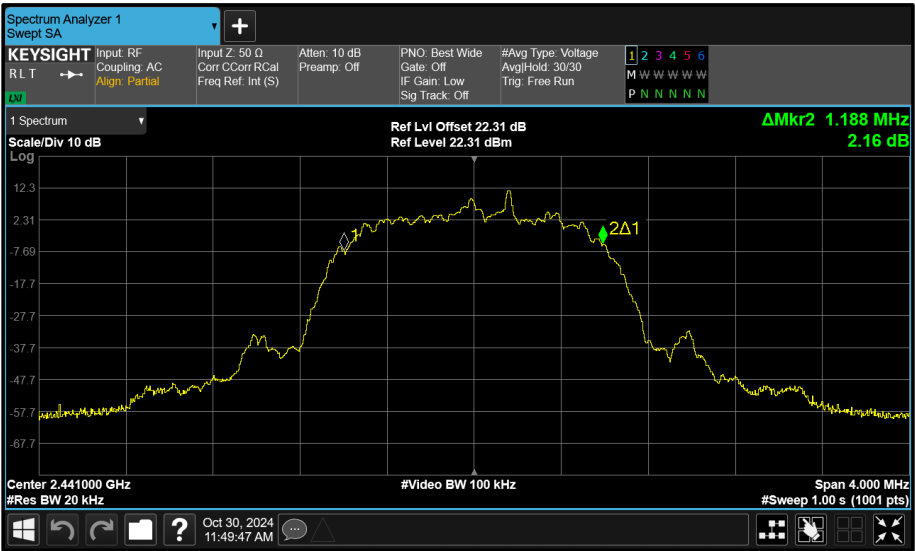


Figure 190 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

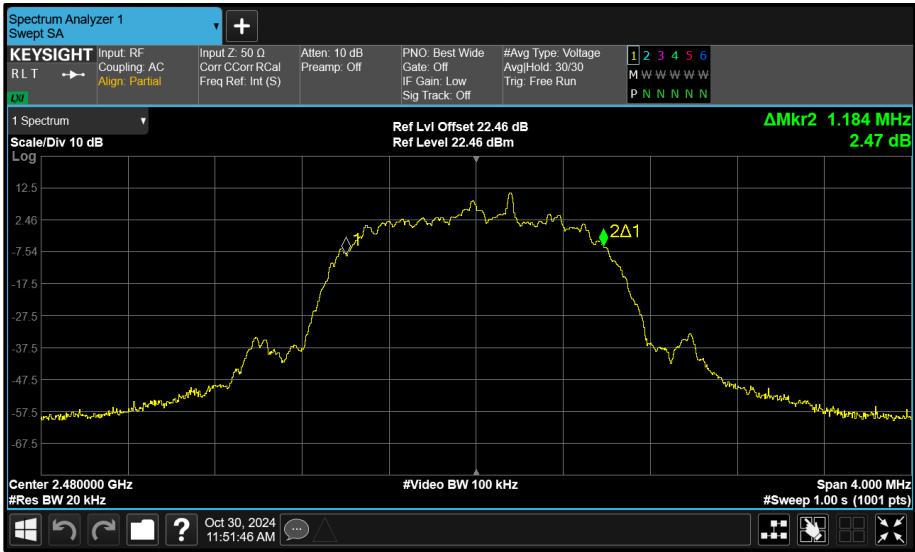


Figure 191 - Core 0 (A) 2480 MHz (CH78) 99% Bandwidth

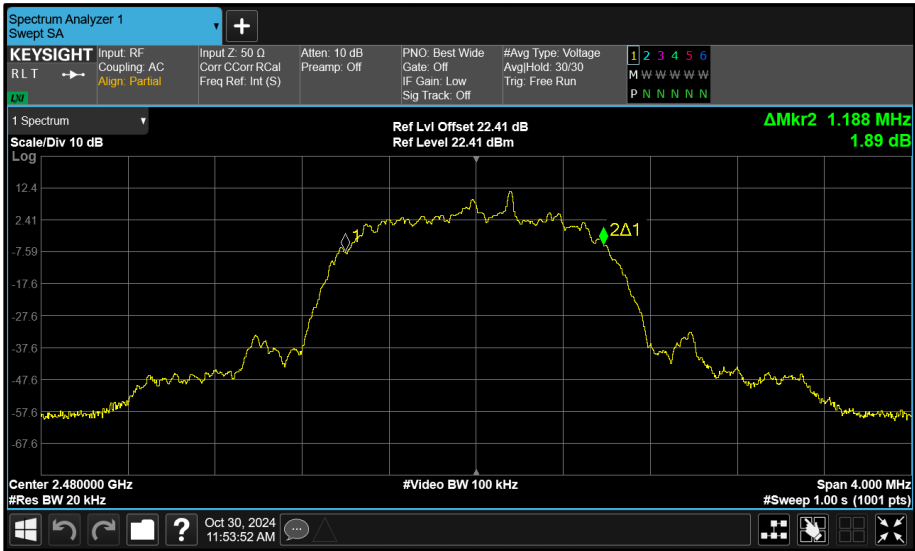


Figure 192 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth

FCC 47 CFR Part 15 and ISED RSS-247 Limit Clause

None specified.



2.5.7 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 85

O/P Mon - Output Monitored using calibrated equipment



2.6 Maximum Conducted Output Power

2.6.1 Specification Reference

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

2.6.2 Equipment Under Test and Modification State

A3389, S/N: MGC29YC7F7 - Modification State 0

2.6.3 Date of Test

30-October-2024 to 31-October-2024

2.6.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 7.8.5 using a power meter.

MIMO output port summing was performed in accordance with KDB 662911 D01. For the CDD results, the 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.

2.6.5 Environmental Conditions

Ambient Temperature	20.7 - 21.0 °C
Relative Humidity	52.4 - 57.0 %



2.6.6 Test Results

2.4 GHz Bluetooth BDR/EDR

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	76.7
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	1.55

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	13.22	-	-	-	30.00	-16.78
2441	-	13.31	-	-	-	30.00	-16.69
2480	-	13.14	-	-	-	30.00	-16.86

Table 86 - 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	Σ					
2402	-	13.22	-	-	-	30.00	-16.78	14.77	36.00	-21.23
2441	-	13.31	-	-	-	30.00	-16.69	14.86	36.00	-21.14
2480	-	13.14	-	-	-	30.00	-16.86	14.69	36.00	-21.31

Table 87 - 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)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	77.1
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	1.55

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	12.18	-	-	-	30.00	-17.82
2441	-	12.13	-	-	-	30.00	-17.87
2480	-	12.33	-	-	-	30.00	-17.67

Table 88 - 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	Σ					
2402	-	12.18	-	-	-	30.00	-17.82	13.73	36.00	-22.27
2441	-	12.13	-	-	-	30.00	-17.87	13.68	36.00	-22.32
2480	-	12.33	-	-	-	30.00	-17.67	13.88	36.00	-22.12

Table 89 - ISSED Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA 8-DPSK (3-DH5)	Duty Cycle (%):	76.9
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	1.55

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	12.62	-	-	-	30.00	-17.38
2441	-	12.58	-	-	-	30.00	-17.42
2480	-	12.69	-	-	-	30.00	-17.31

Table 90 - 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	Σ					
2402	-	12.62	-	-	-	30.00	-17.38	14.17	36.00	-21.83
2441	-	12.58	-	-	-	30.00	-17.42	14.13	36.00	-21.87
2480	-	12.69	-	-	-	30.00	-17.31	14.24	36.00	-21.76

Table 91 - ISSED Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	76.7
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	1.07

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	-	13.32	-	-	30.00	-16.68
2441	-	-	13.45	-	-	30.00	-16.55
2480	-	-	13.47	-	-	30.00	-16.53

Table 92 - 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	Σ					
2402	-	-	13.32	-	-	30.00	-16.68	14.39	36.00	-21.61
2441	-	-	13.45	-	-	30.00	-16.55	14.52	36.00	-21.48
2480	-	-	13.47	-	-	30.00	-16.53	14.54	36.00	-21.46

Table 93 - ISSED Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	77.1
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	1.07

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	-	11.66	-	-	30.00	-18.34
2441	-	-	11.51	-	-	30.00	-18.49
2480	-	-	11.61	-	-	30.00	-18.39

Table 94 - 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	Σ					
2402	-	-	11.66	-	-	30.00	-18.34	12.73	36.00	-23.27
2441	-	-	11.51	-	-	30.00	-18.49	12.58	36.00	-23.42
2480	-	-	11.61	-	-	30.00	-18.39	12.68	36.00	-23.32

Table 95 - ISSED Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA 8-DPSK (3-DH5)	Duty Cycle (%):	77.2
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	1.07

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	-	12.00	-	-	30.00	-18.00
2441	-	-	11.86	-	-	30.00	-18.14
2480	-	-	11.93	-	-	30.00	-18.07

Table 96 - 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	Σ					
2402	-	-	12.00	-	-	30.00	-18.00	13.07	36.00	-22.93
2441	-	-	11.86	-	-	30.00	-18.14	12.93	36.00	-23.07
2480	-	-	11.93	-	-	30.00	-18.07	13.00	36.00	-23.00

Table 97 - ISSED Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	76.8
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	1.55

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	18.87	-	-	-	30.00	-11.13
2441	-	19.07	-	-	-	30.00	-10.93
2480	-	18.85	-	-	-	30.00	-11.15

Table 98 - 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	Σ					
2402	-	18.87	-	-	-	30.00	-11.13	22.72	36.00	-13.28
2441	-	19.07	-	-	-	30.00	-10.93	22.92	36.00	-13.08
2480	-	18.85	-	-	-	30.00	-11.15	20.40	36.00	-15.60

Table 99 - ISSED Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA 8-DPSK (3-DH5)	Duty Cycle (%):	76.9
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	1.55

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	19.49	-	-	-	30.00	-10.51
2441	-	19.40	-	-	-	30.00	-10.60
2480	-	19.28	-	-	-	30.00	-10.72

Table 100 - 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	Σ					
2402	-	19.49	-	-	-	30.00	-10.51	21.04	36.00	-14.96
2441	-	19.40	-	-	-	30.00	-10.60	20.95	36.00	-15.05
2480	-	19.28	-	-	-	30.00	-10.72	20.83	36.00	-15.17

Table 101 - ISSED Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	76.7
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	3.85

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	13.36	12.22	-	-	15.84	30.00	-14.16
2441	13.48	12.17	-	-	15.89	30.00	-14.11
2480	13.28	12.05	-	-	15.72	30.00	-14.28

Table 102 - 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	Σ					
2402	13.36	12.22	-	-	15.84	30.00	-14.16	19.69	36.00	-16.31
2441	13.48	12.17	-	-	15.89	30.00	-14.11	19.74	36.00	-16.26
2480	13.28	12.05	-	-	15.72	30.00	-14.28	19.57	36.00	-16.43

Table 103 - ISD Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	iPA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	77.1
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	3.85

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	11.74	10.61	-	-	14.22	30.00	-15.78
2441	11.74	10.56	-	-	14.20	30.00	-15.80
2480	11.64	10.59	-	-	14.16	30.00	-15.84

Table 104 - 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	Σ					
2402	11.74	10.61	-	-	14.22	30.00	-15.78	18.07	36.00	-17.93
2441	11.74	10.56	-	-	14.20	30.00	-15.80	18.05	36.00	-17.95
2480	11.64	10.59	-	-	14.16	30.00	-15.84	18.01	36.00	-17.99

Table 105 - ISD Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	iPA 8-DPSK (3-DH5)	Duty Cycle (%):	76.9
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	3.85

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	12.09	10.96	-	-	14.57	30.00	-15.43
2441	12.14	10.96	-	-	14.60	30.00	-15.40
2480	12.04	10.89	-	-	14.51	30.00	-15.49

Table 106 - 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	Σ					
2402	12.09	10.96	-	-	14.57	30.00	-15.43	18.42	36.00	-17.58
2441	12.14	10.96	-	-	14.60	30.00	-15.40	18.45	36.00	-17.55
2480	12.04	10.89	-	-	14.51	30.00	-15.49	18.37	36.00	-17.63

Table 107 - ISD Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	ePA $\pi/4$ DQPSK (2-DH5)	Duty Cycle (%):	77.1
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	3.85

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	16.10	15.97	-	-	19.05	30.00	-10.95
2441	16.00	16.24	-	-	19.13	30.00	-10.87
2480	15.90	15.86	-	-	18.89	30.00	-11.11

Table 108 - 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	Σ					
2402	16.10	15.97	-	-	19.05	30.00	-10.95	22.90	36.00	-13.10
2441	16.00	16.24	-	-	19.13	30.00	-10.87	22.98	36.00	-13.02
2480	15.90	15.86	-	-	18.89	30.00	-11.11	22.74	36.00	-13.26

Table 109 - ISSED Maximum Conducted (peak) Output Power Results



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 5.4 b)	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	ePA 8-DPSK (3-DH5)	Duty Cycle (%):	77.2
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	3.85

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	16.60	16.51	-	-	19.57	30.00	-10.43
2441	16.51	16.63	-	-	19.58	30.00	-10.42
2480	16.42	16.37	-	-	19.41	30.00	-10.59

Table 110 - 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	Σ					
2402	16.60	16.51	-	-	19.57	30.00	-10.43	23.42	36.00	-12.58
2441	16.51	16.63	-	-	19.58	30.00	-10.42	23.43	36.00	-12.57
2480	16.42	16.37	-	-	19.41	30.00	-10.59	23.26	36.00	-12.74

Table 111 - ISD Maximum Conducted (peak) Output Power Results



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

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

ISED RSS-247, Limit Clause 5.4 (b)

For FHSs operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channel; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channel. The e.i.r.p. shall not exceed 4 W except as provided in section 5.4(e) of the specification.

2.6.7 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
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5921	12	05-Feb-2025
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5922	12	05-Feb-2025
USB Power Sensors, 50MHz to 8GHz	Boonton	RTP5008	5923	12	05-Feb-2025
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 112

O/P Mon - Output Monitored using calibrated equipment



2.7 Authorised Band Edges

2.7.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (d)
ISED RSS-247, Clause 5.5

2.7.2 Equipment Under Test and Modification State

A3389, S/N: LVV0X46J3D - Modification State 0

2.7.3 Date of Test

06-October-2024 to 07-October-2024

2.7.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.10.4.

2.7.5 Environmental Conditions

Ambient Temperature	22.3 - 23.7 °C
Relative Humidity	42.3 - 53.9 %

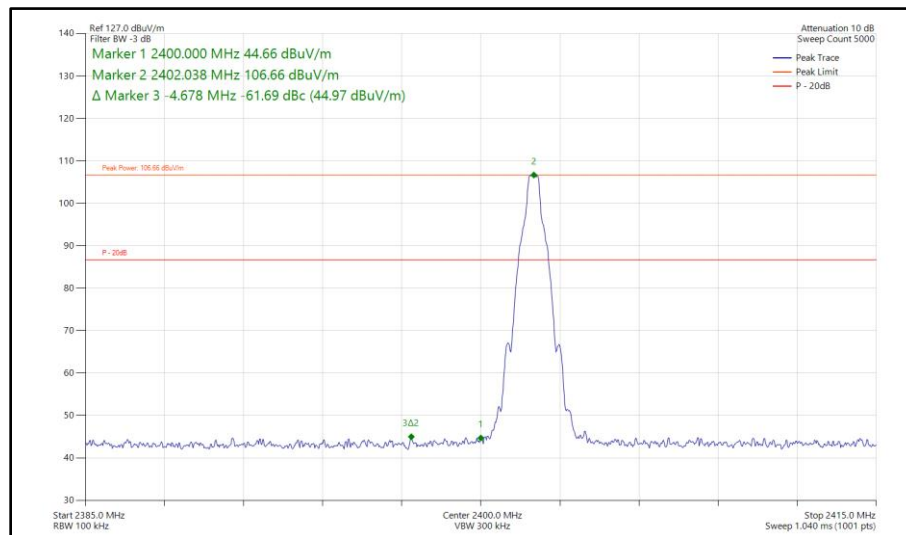
2.7.6 Test Results

2.4 GHz Bluetooth BDR/EDR

iPA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-61.69
Static	2-DH5	2402	2400	-57.28
Static	3-DH5	2402	2400	-57.26
Hopping	DH5	Hopping	2400	-65.22
Hopping	2-DH5	Hopping	2400	-59.41
Hopping	3-DH5	Hopping	2400	-62.06

Table 113 - SISO Authorised Band Edge Results



**Figure 193 - Bluetooth DH5, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz**

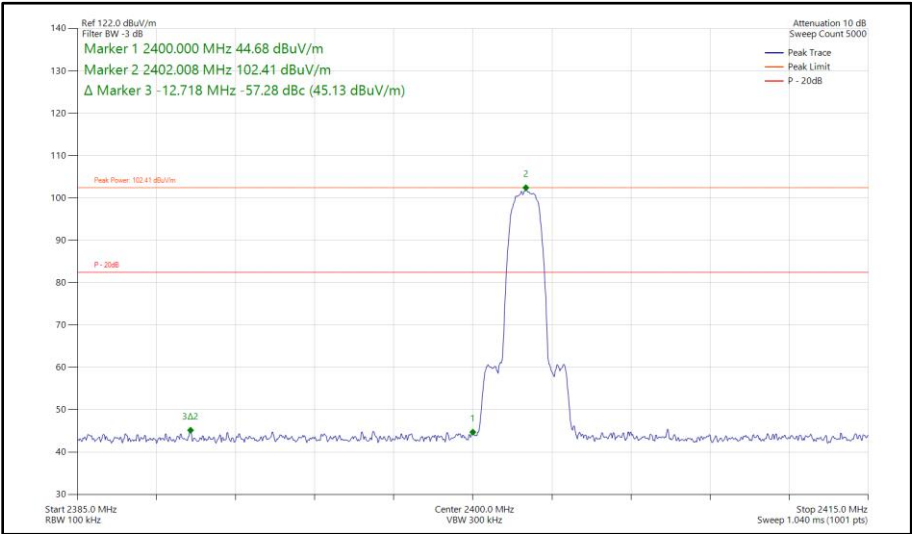


Figure 194 - Bluetooth 2-DH5, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz

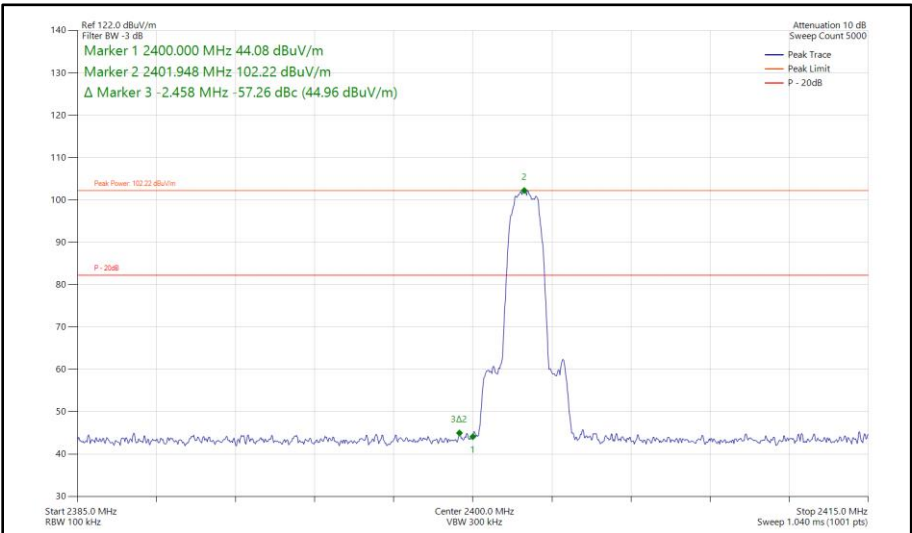


Figure 195 - Bluetooth 3-DH5, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz

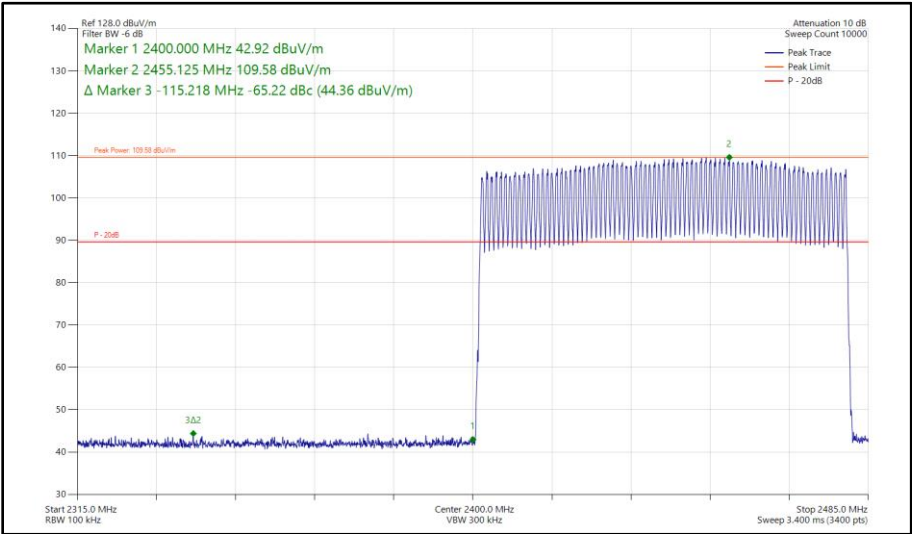


Figure 196 - Bluetooth DH5, SISO, Core 0 - Hopping
Band Edge Frequency 2400 MHz

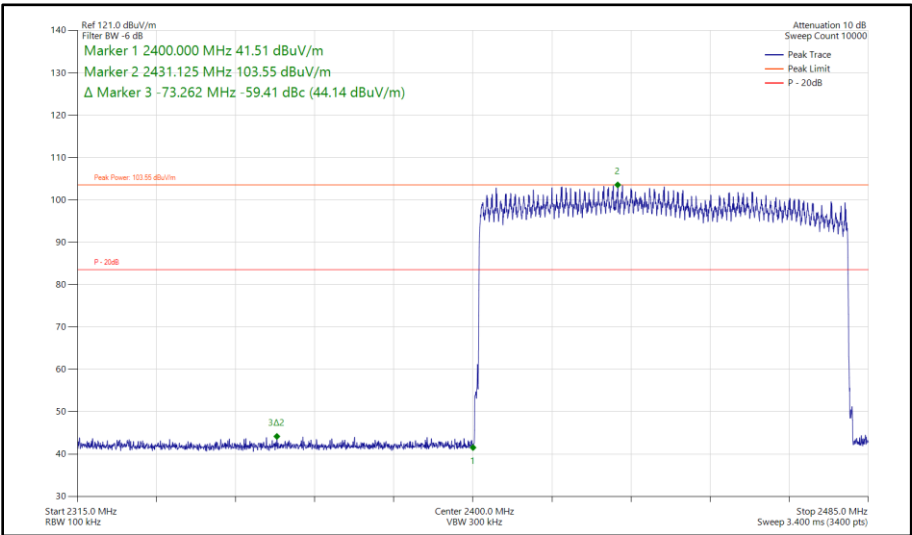
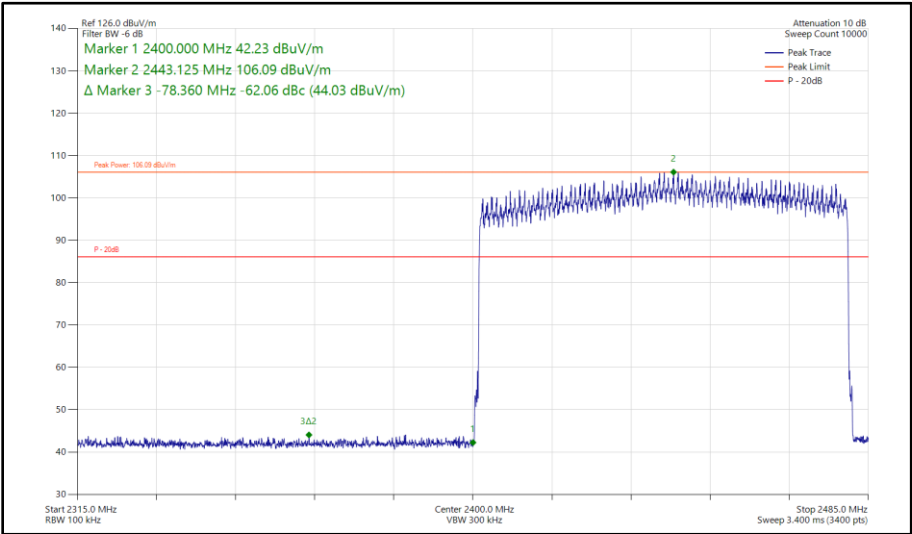


Figure 197 - Bluetooth 2-DH5, SISO, Core 0 - Hopping
Band Edge Frequency 2400 MHz



**Figure 198 - Bluetooth 3-DH5, SISO, Core 0 - Hopping
Band Edge Frequency 2400 MHz**

iPA - Core 1 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-62.40
Static	2-DH5	2402	2400	-57.77
Static	3-DH5	2402	2400	-57.36
Hopping	DH5	Hopping	2400	-63.78
Hopping	2-DH5	Hopping	2400	-61.94
Hopping	3-DH5	Hopping	2400	-60.05

Table 114 - SISO Authorised Band Edge Results

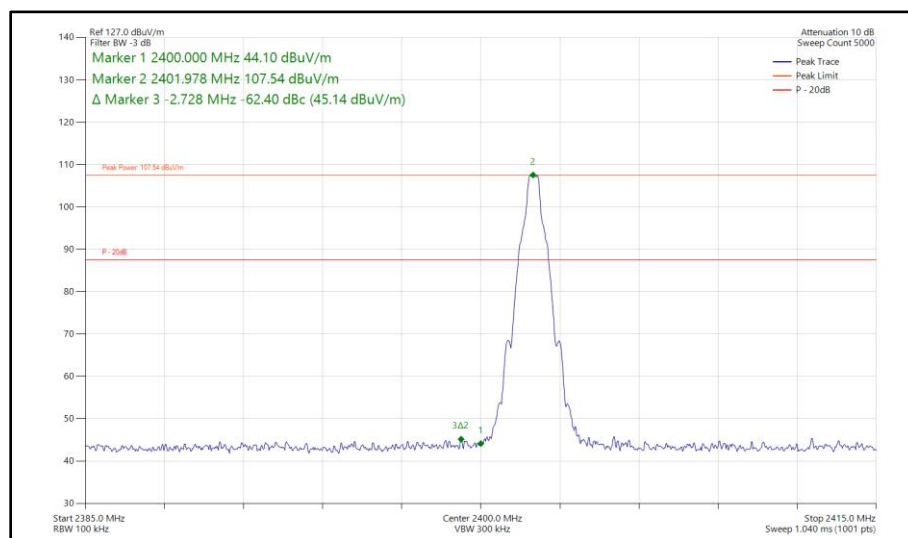


Figure 199 - Bluetooth DH5, SISO, Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

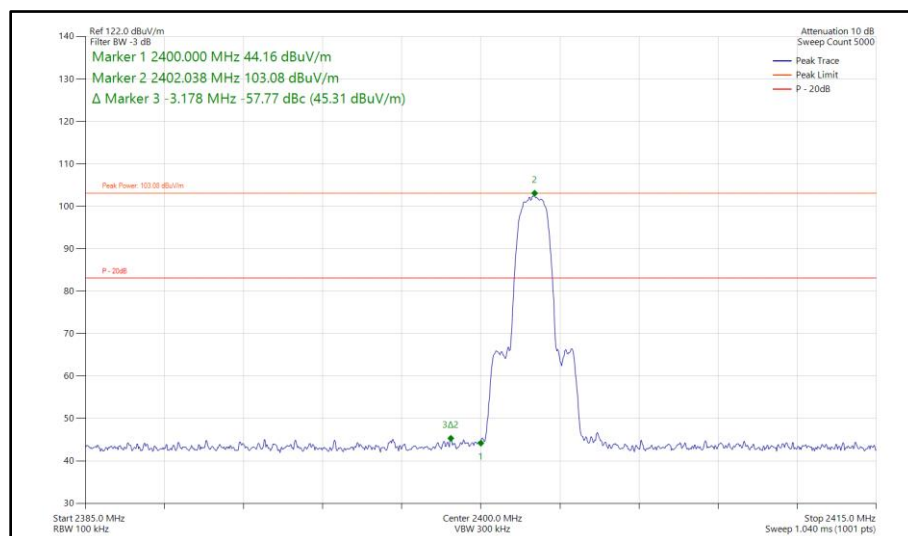


Figure 200 - Bluetooth 2-DH5, SISO, Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

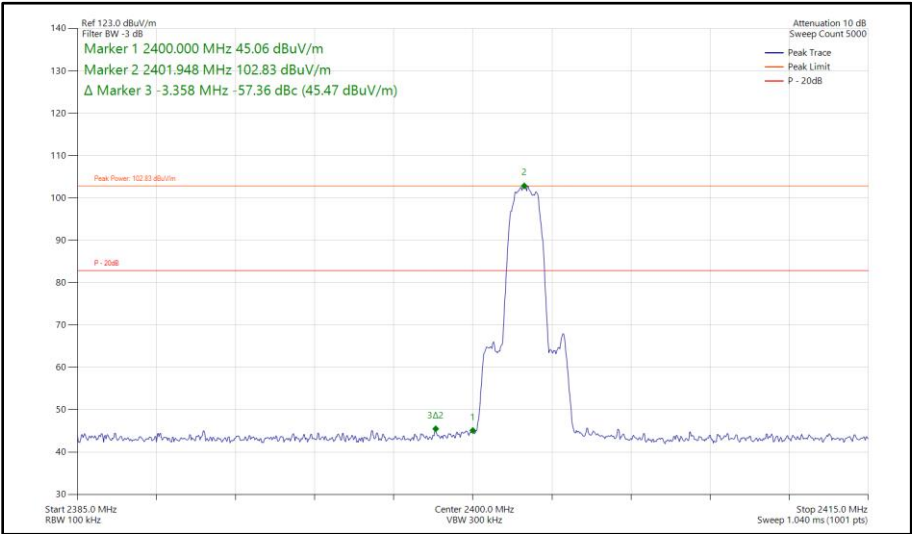


Figure 201 - Bluetooth 3-DH5, SISO, Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

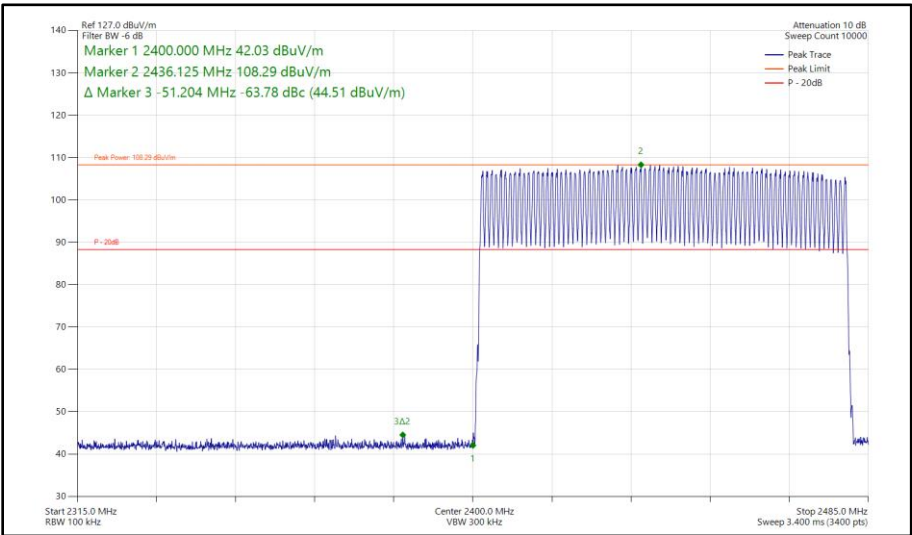


Figure 202 - Bluetooth DH5, SISO, Core 1 - Hopping
Band Edge Frequency 2400 MHz

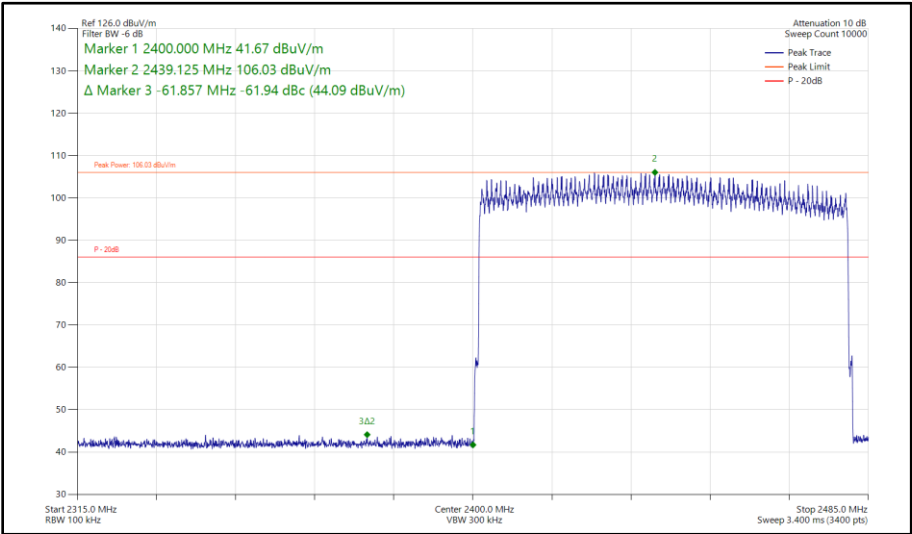


Figure 203 - Bluetooth 2-DH5, SISO, Core 1 - Hopping
Band Edge Frequency 2400 MHz

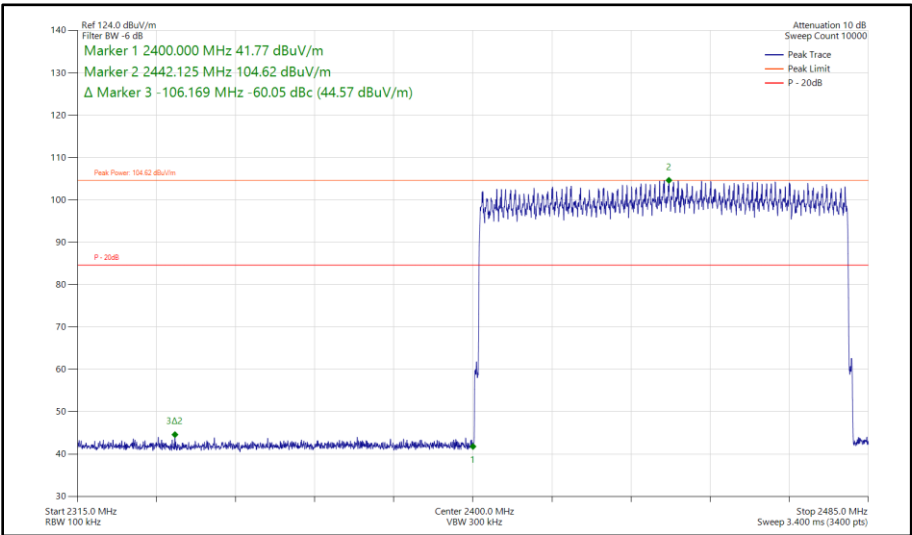


Figure 204 - Bluetooth 3-DH5, SISO, Core 1 - Hopping
Band Edge Frequency 2400 MHz

iPA - Core 2 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-62.64
Static	2-DH5	2402	2400	-57.79
Static	3-DH5	2402	2400	-57.90
Hopping	DH5	Hopping	2400	-65.79
Hopping	2-DH5	Hopping	2400	-63.17
Hopping	3-DH5	Hopping	2400	-59.81

Table 115 - SISO Authorised Band Edge Results

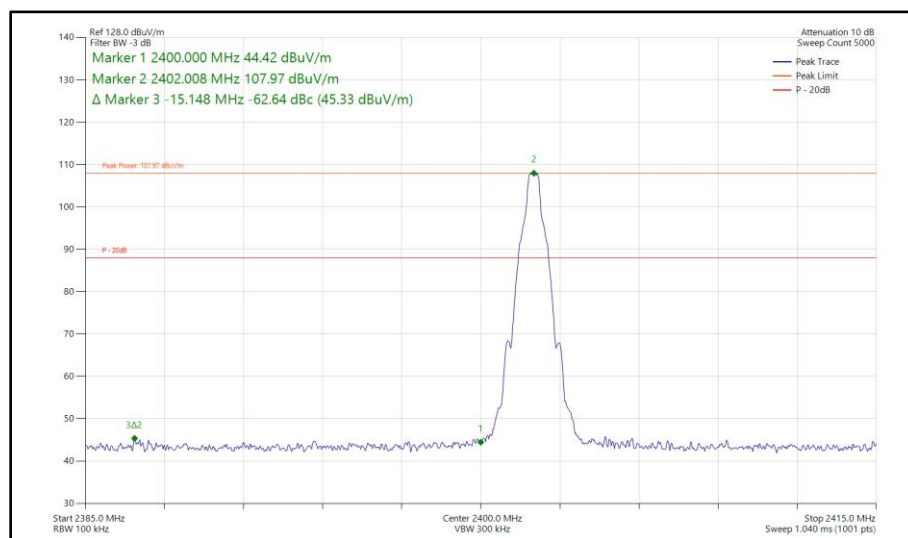


Figure 205 - Bluetooth DH5, SISO, Core 2 - 2402 MHz
Band Edge Frequency 2400 MHz

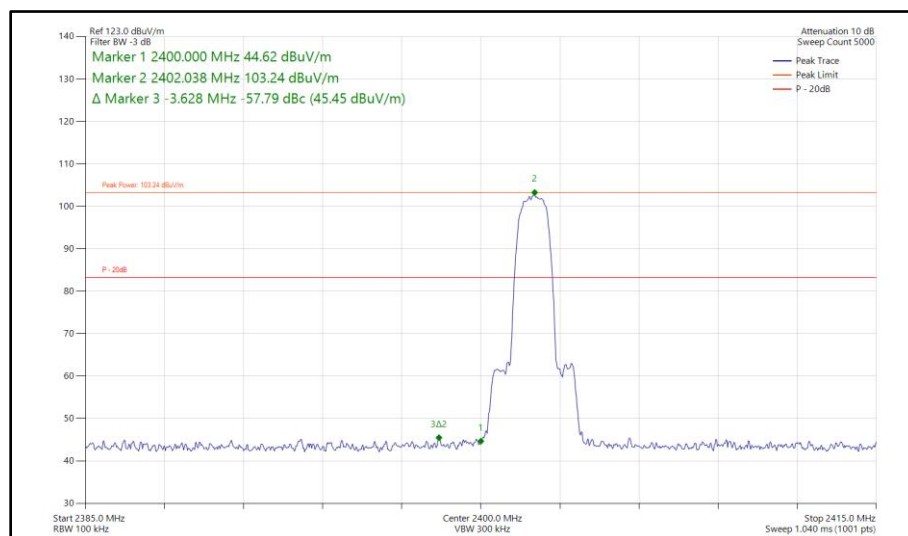


Figure 206 - Bluetooth 2-DH5, SISO, Core 2 - 2402 MHz
Band Edge Frequency 2400 MHz

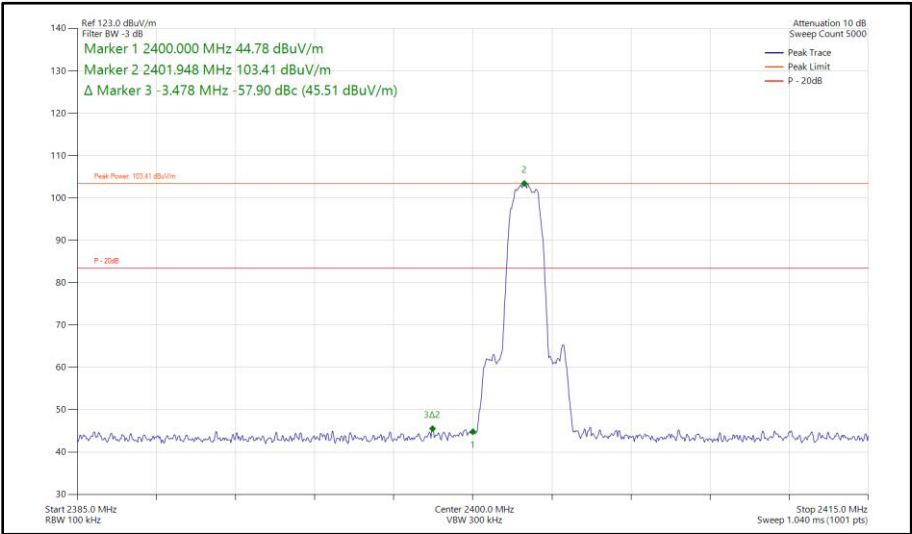


Figure 207 - Bluetooth 3-DH5, SISO, Core 2 - 2402 MHz
Band Edge Frequency 2400 MHz

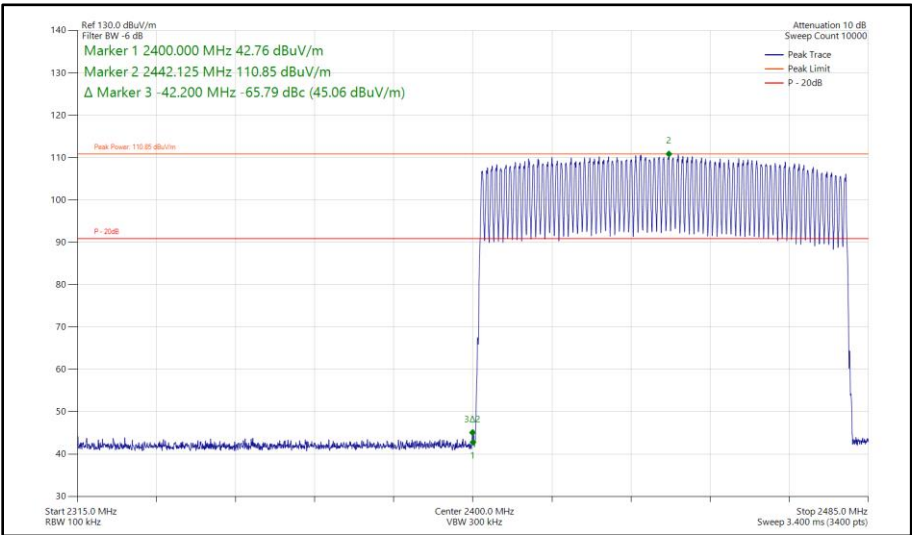


Figure 208 - Bluetooth DH5, SISO, Core 2 - Hopping
Band Edge Frequency 2400 MHz

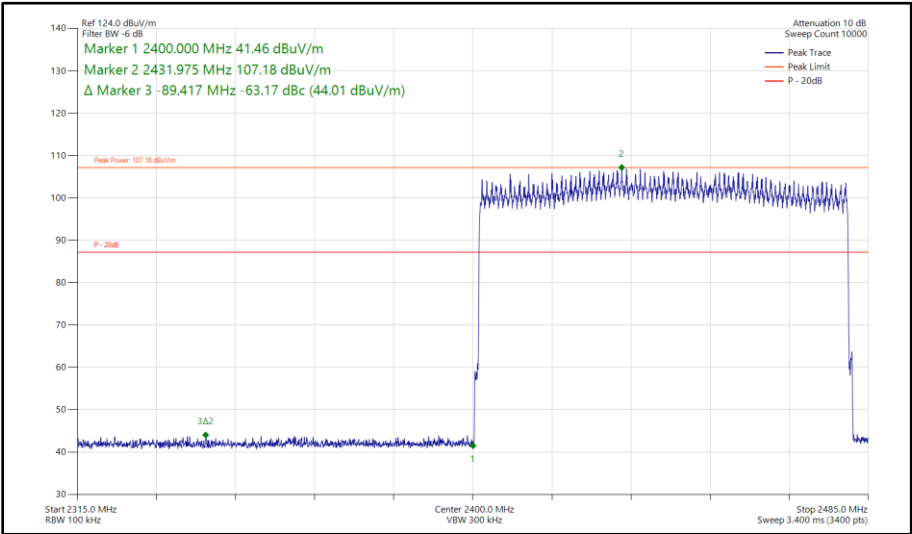


Figure 209 - Bluetooth 2-DH5, SISO, Core 2 - Hopping
Band Edge Frequency 2400 MHz

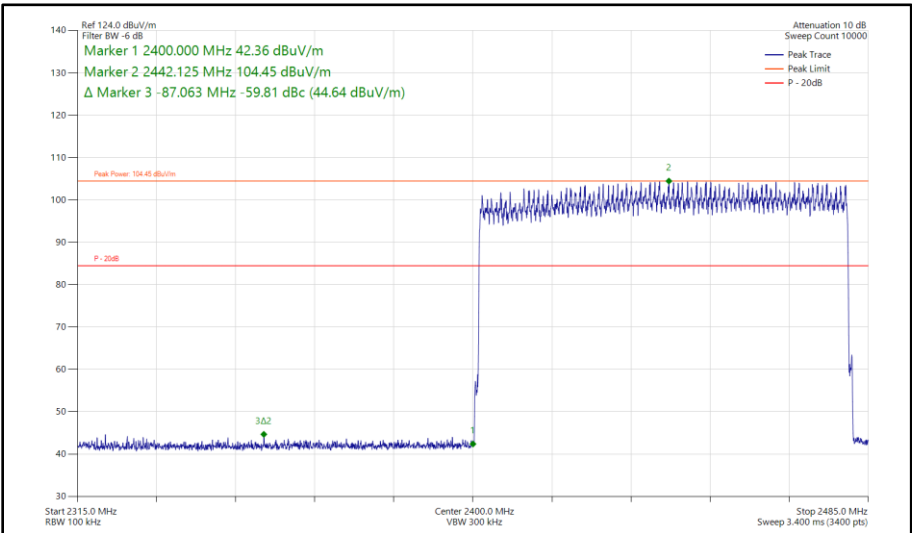


Figure 210 - Bluetooth 3-DH5, SISO, Core 2 - Hopping
Band Edge Frequency 2400 MHz

iPA - Core 0 - Core 1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-62.80
Static	2-DH5	2402	2400	-56.95
Static	3-DH5	2402	2400	-58.82
Hopping	DH5	Hopping	2400	-66.94
Hopping	2-DH5	Hopping	2400	-60.92
Hopping	3-DH5	Hopping	2400	-62.34

Table 116 - MIMO Authorised Band Edge Results

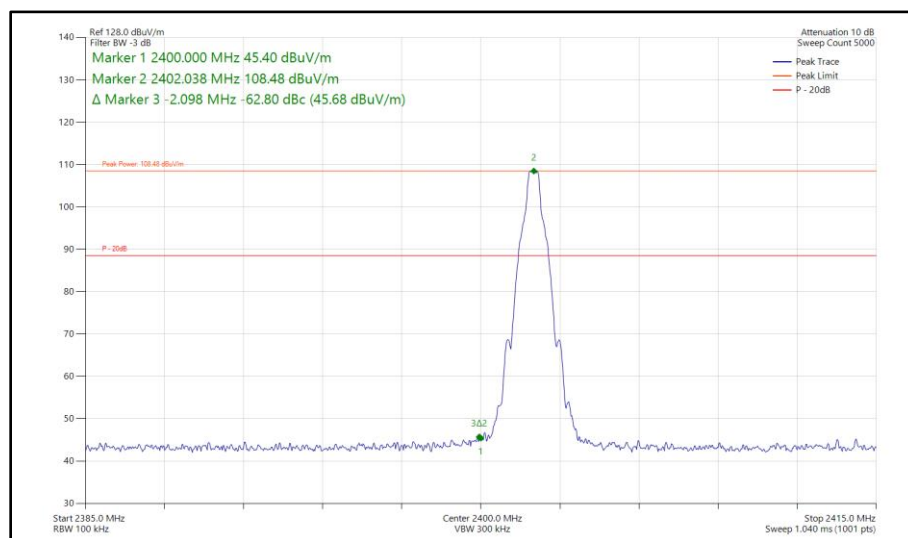


Figure 211 - Bluetooth DH5, MIMO, Core 0 - Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

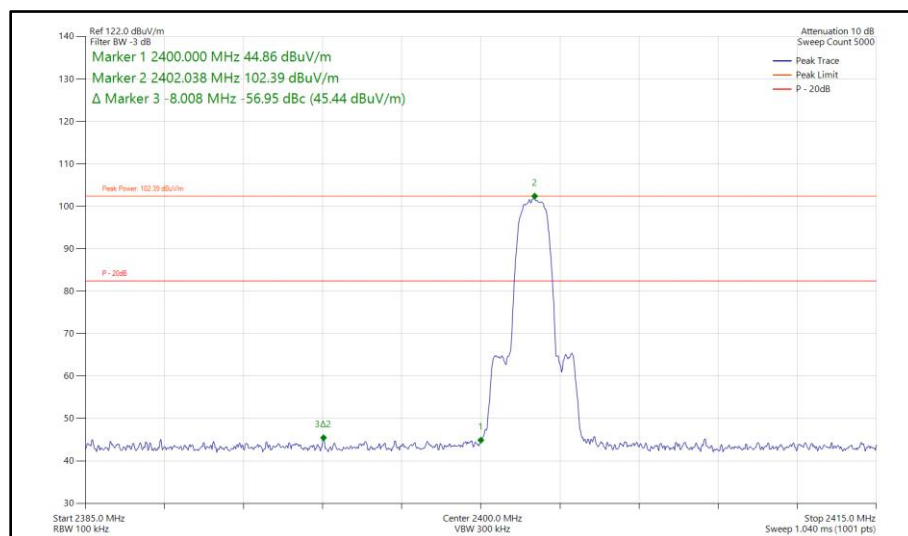
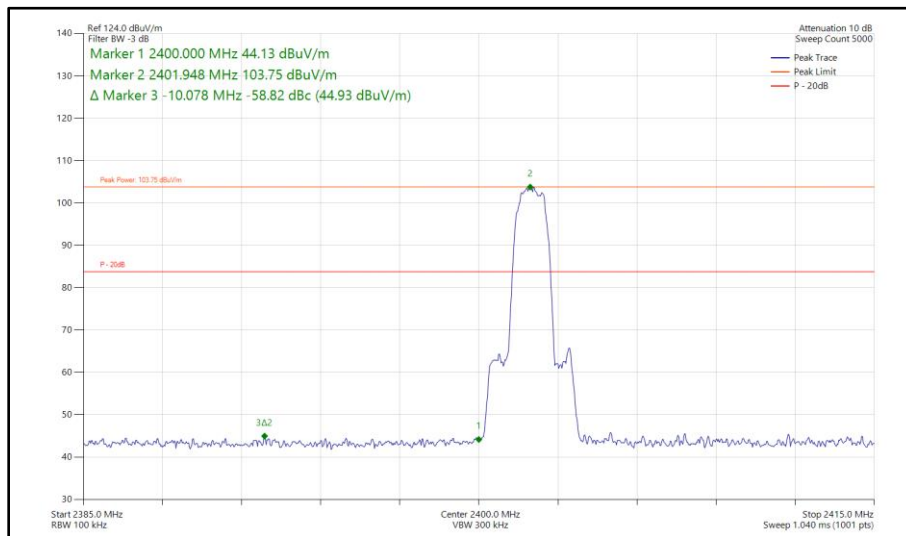
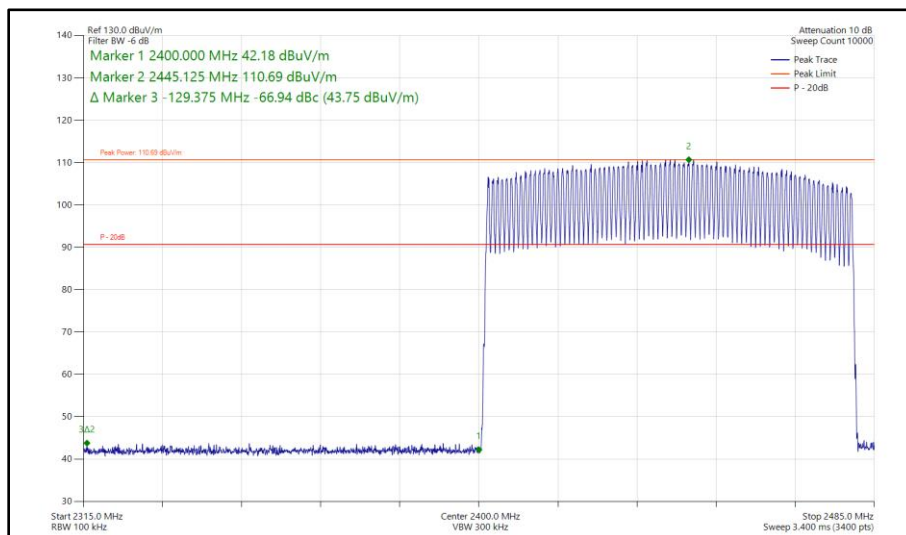


Figure 212 - Bluetooth 2-DH5, MIMO, Core 0 - Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz



**Figure 213 - Bluetooth 3-DH5, MIMO, Core 0 - Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz**



**Figure 214 - Bluetooth DH5, MIMO, Core 0 - Core 1 - Hopping
Band Edge Frequency 2400 MHz**

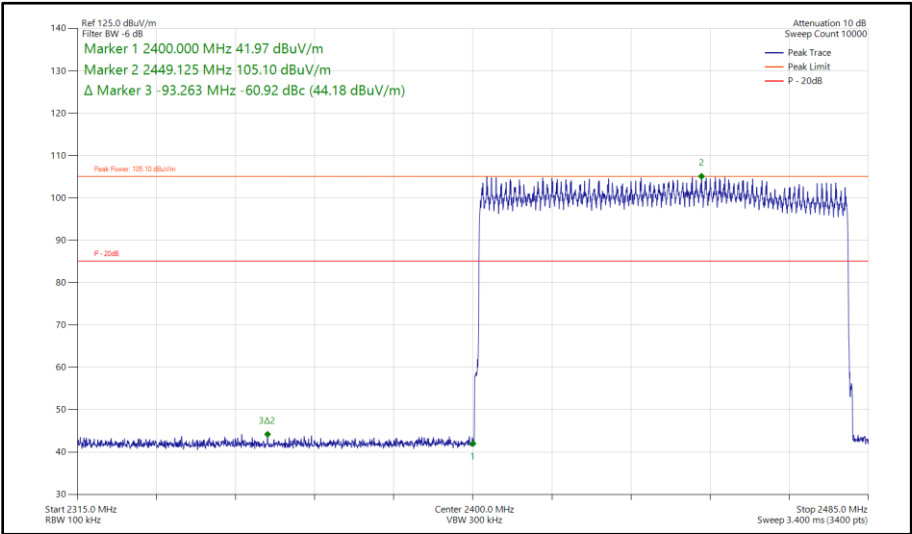


Figure 215 - Bluetooth 2-DH5, MIMO, Core 0 - Core 1 - Hopping Band Edge Frequency 2400 MHz

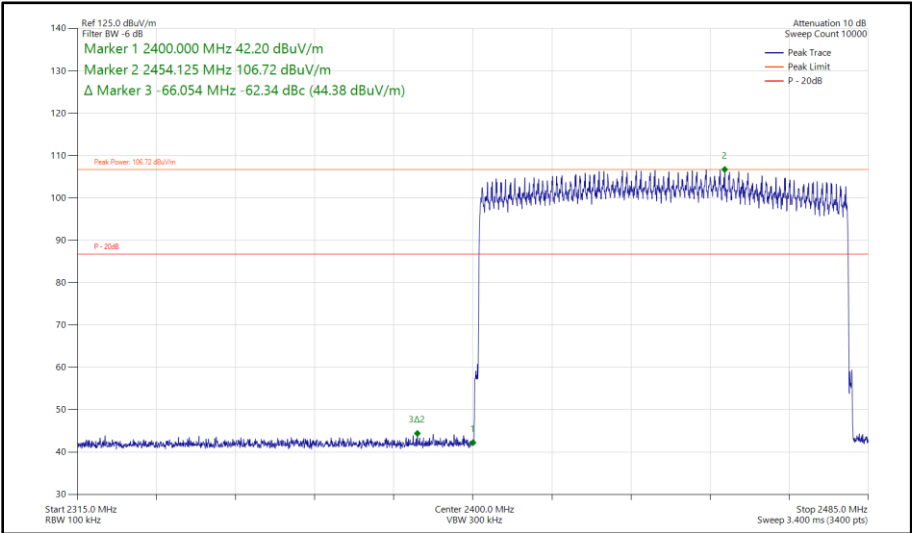


Figure 216 - Bluetooth 3-DH5, MIMO, Core 0 - Core 1 - Hopping Band Edge Frequency 2400 MHz

ePA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	2-DH5	2402	2400	-58.71
Static	3-DH5	2402	2400	-57.49
Hopping	2-DH5	Hopping	2400	-67.10
Hopping	3-DH5	Hopping	2400	-64.78

Table 117 - SISO Authorised Band Edge Results

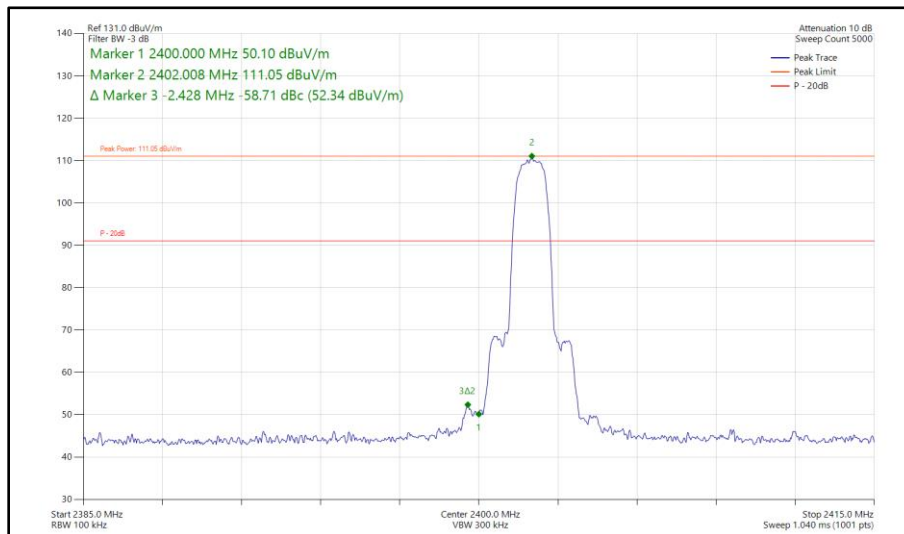


Figure 217 - Bluetooth 2-DH5, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz

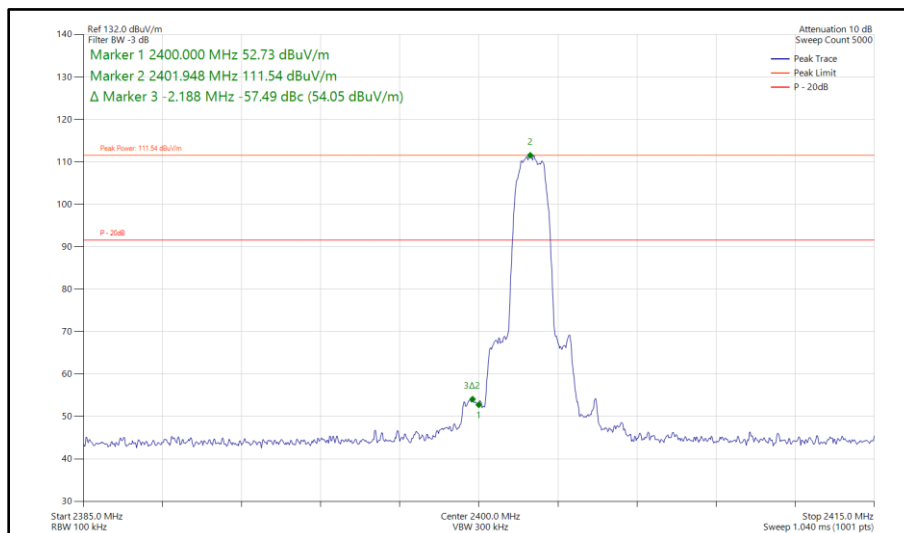


Figure 218 - Bluetooth 3-DH5, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz

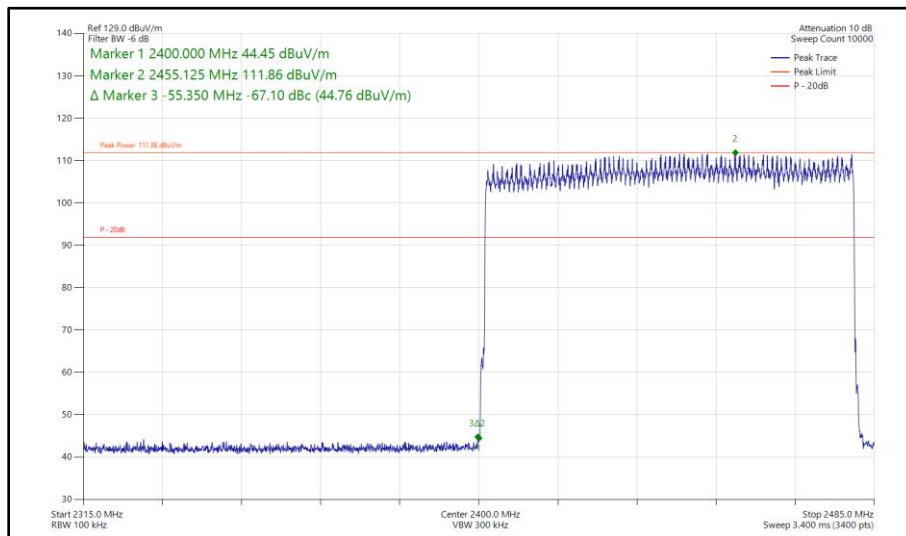


Figure 219 - Bluetooth 2-DH5, SISO, Core 0 - Hopping
Band Edge Frequency 2400 MHz

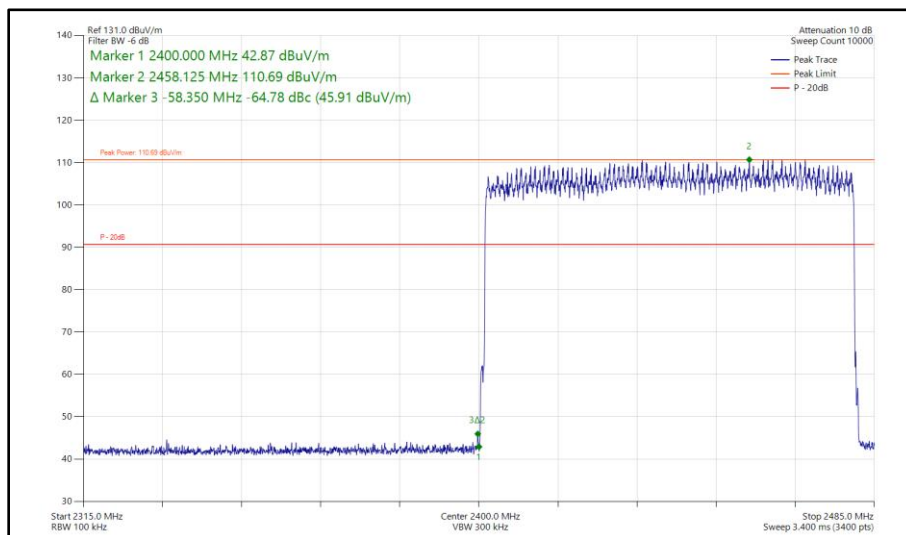


Figure 220 - Bluetooth 3-DH5, SISO, Core 0 - Hopping
Band Edge Frequency 2400 MHz

ePA - Core 1 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	2-DH5	2402	2400	-60.39
Static	3-DH5	2402	2400	-59.43
Hopping	2-DH5	Hopping	2400	-66.40
Hopping	3-DH5	Hopping	2400	-63.92

Table 118 - SISO Authorised Band Edge Results

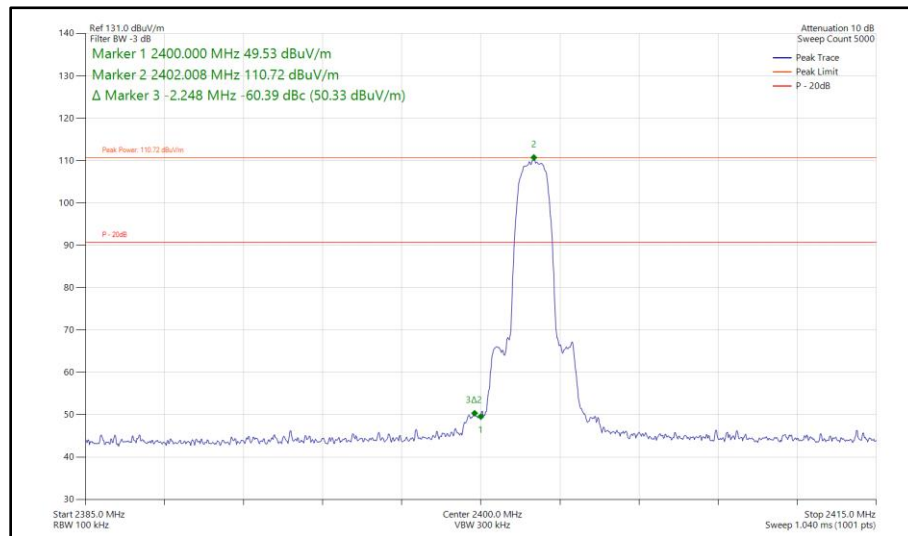


Figure 221 - Bluetooth 2-DH5, SISO, Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

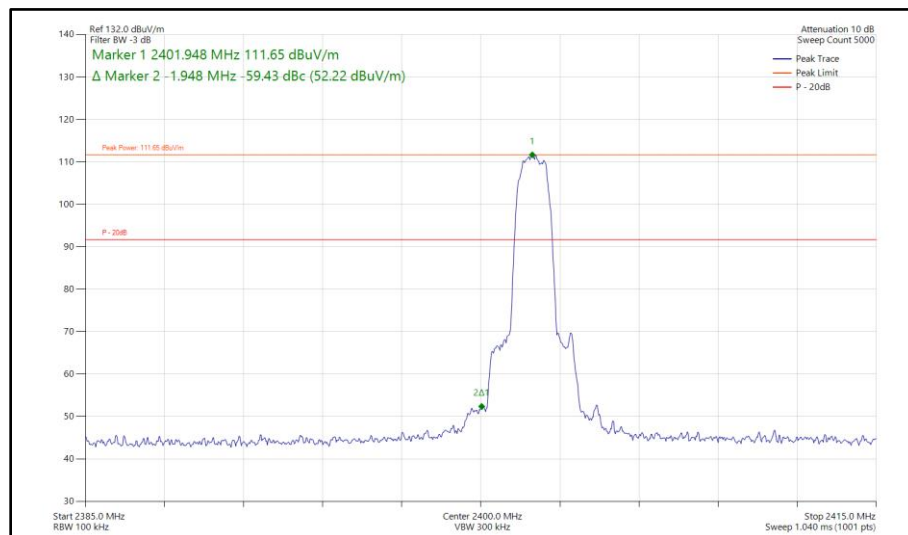


Figure 222 - Bluetooth 3-DH5, SISO, Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

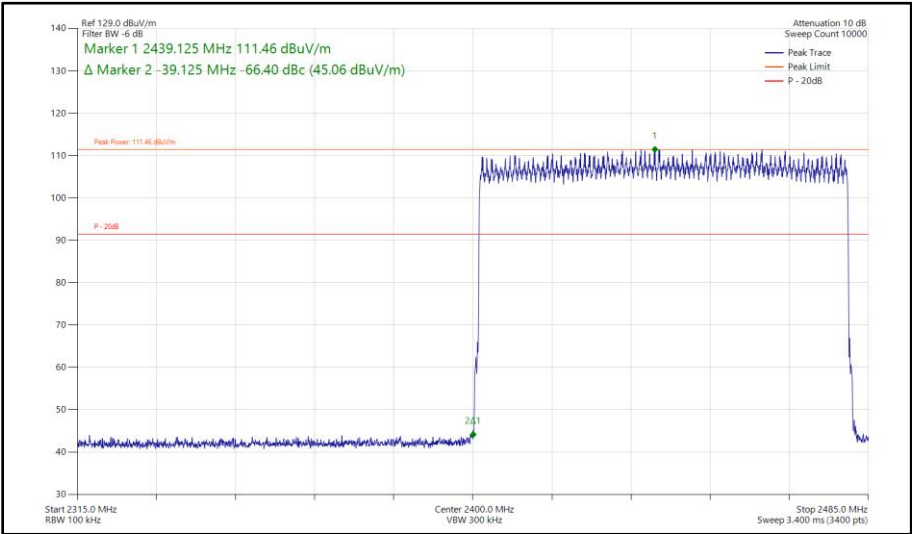


Figure 223 - Bluetooth 2-DH5, SISO, Core 1 - Hopping
Band Edge Frequency 2400 MHz

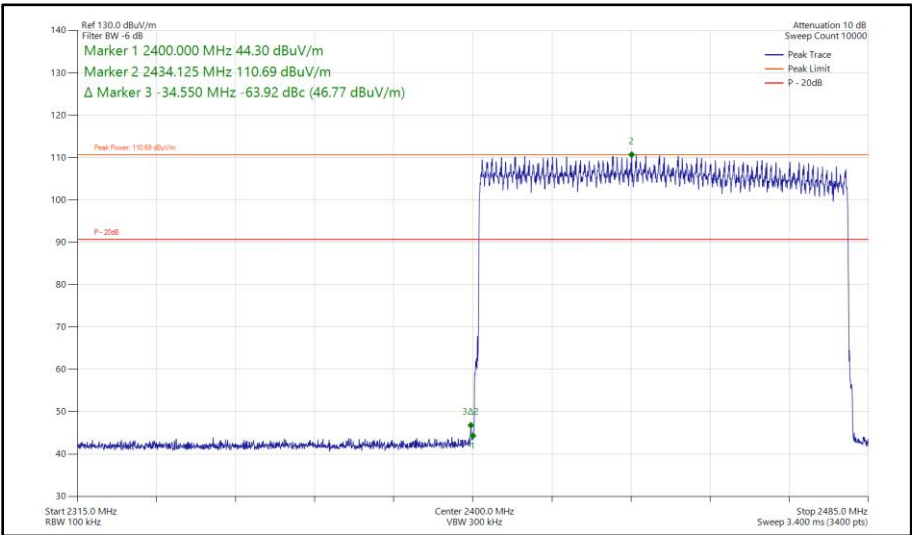


Figure 224 - Bluetooth 3-DH5, SISO, Core 1 - Hopping
Band Edge Frequency 2400 MHz

ePA - Core 0 - Core 1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	2-DH5	2402	2400	-61.07
Static	3-DH5	2402	2400	-59.79
Hopping	2-DH5	Hopping	2400	-63.71
Hopping	3-DH5	Hopping	2400	-63.70

Table 119 - MIMO Authorised Band Edge Results

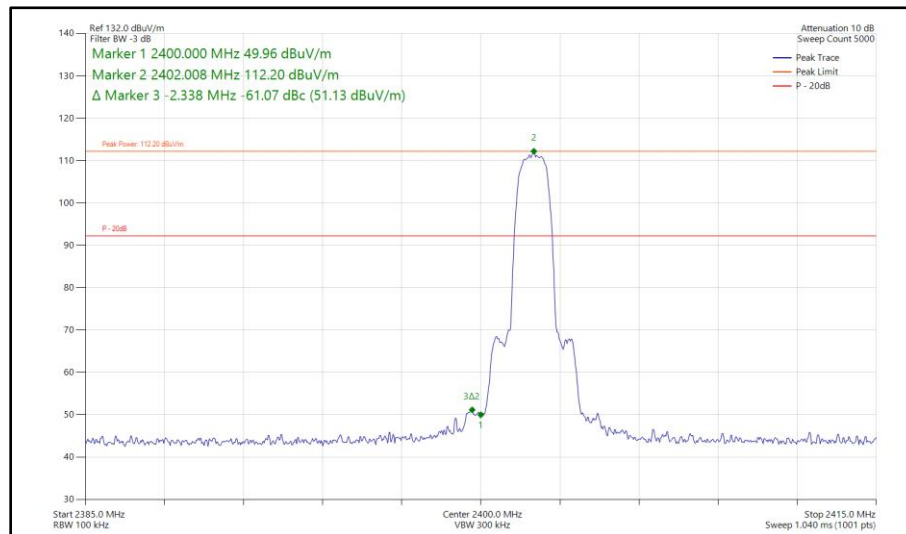


Figure 225 - Bluetooth 2-DH5, MIMO, Core 0 - Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

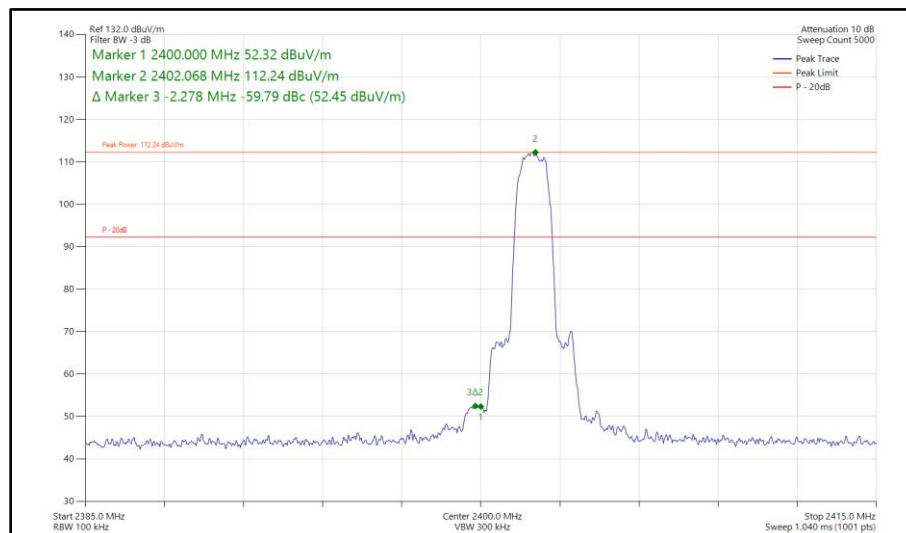


Figure 226 - Bluetooth 3-DH5, MIMO, Core 0 - Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

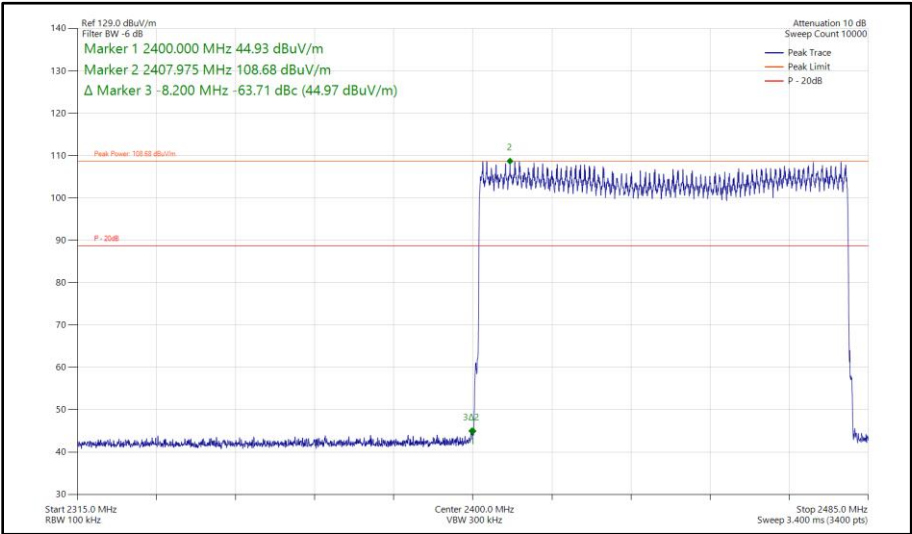


Figure 227 - Bluetooth 2-DH5, MIMO, Core 0 - Core 1 - Hopping Band Edge Frequency 2400 MHz

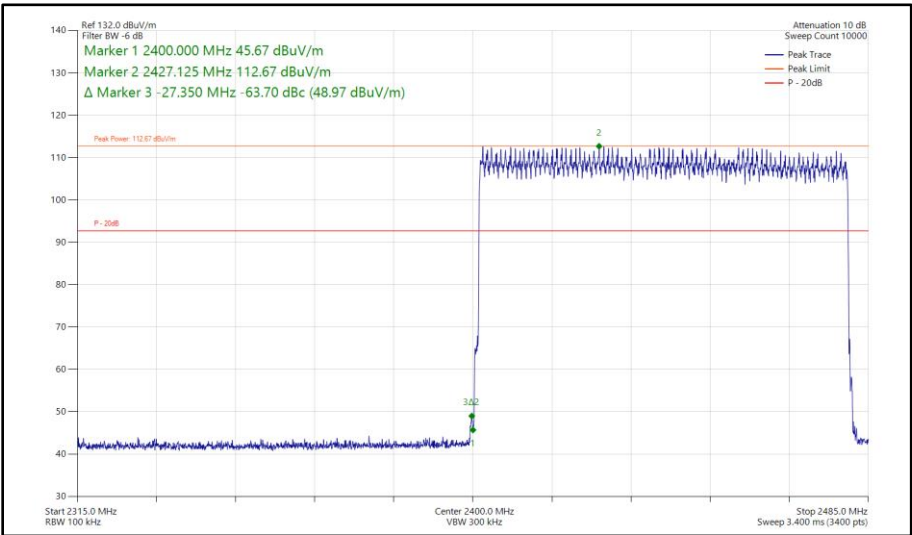


Figure 228 - Bluetooth 3-DH5, MIMO, Core 0 - Core 1 - Hopping Band Edge Frequency 2400 MHz