TUV SUD Limited Digitally signed by TUV SUD Limited Date: 2024.10.14 14:35:12 +01'00'

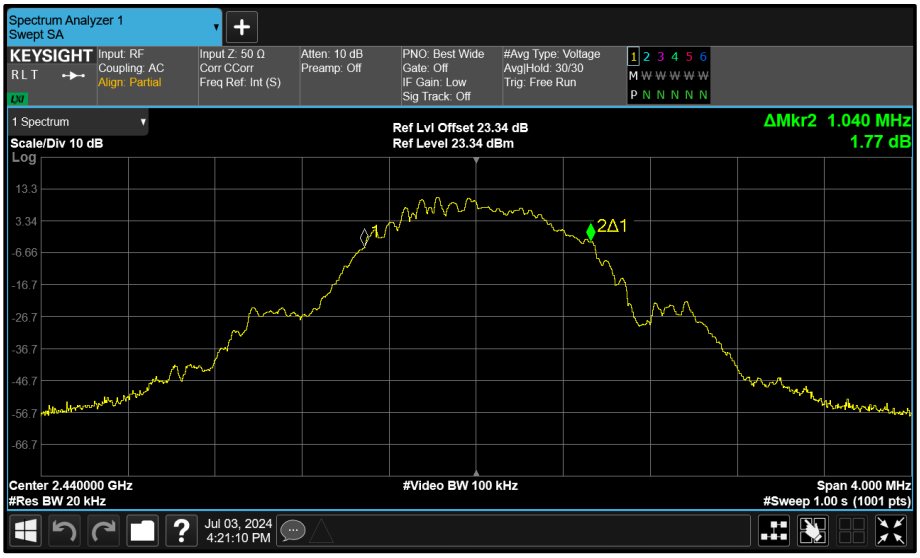

Figure 231 - Core 0 (A) 2440 MHz (CH17) 99% Bandwidth

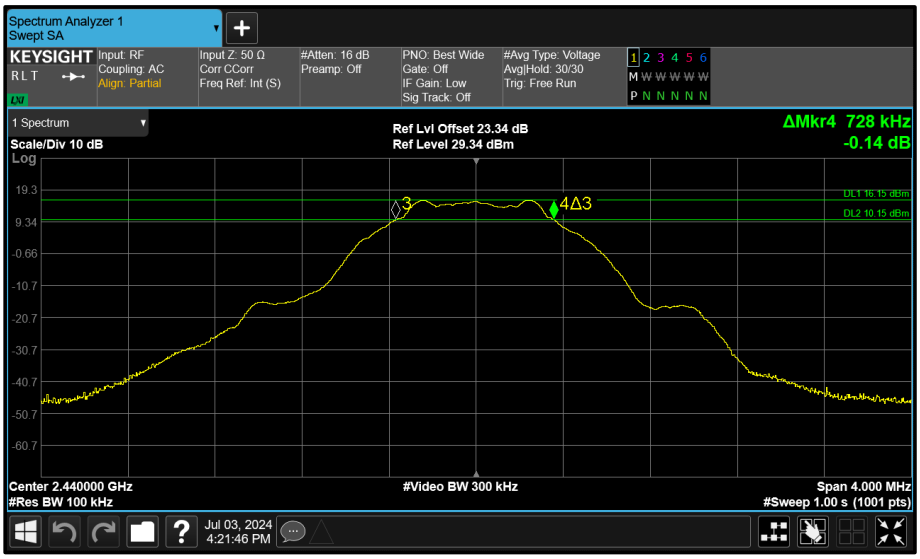

Figure 232 - Core 0 (A) 2440 MHz (CH17) 6 dB Bandwidth

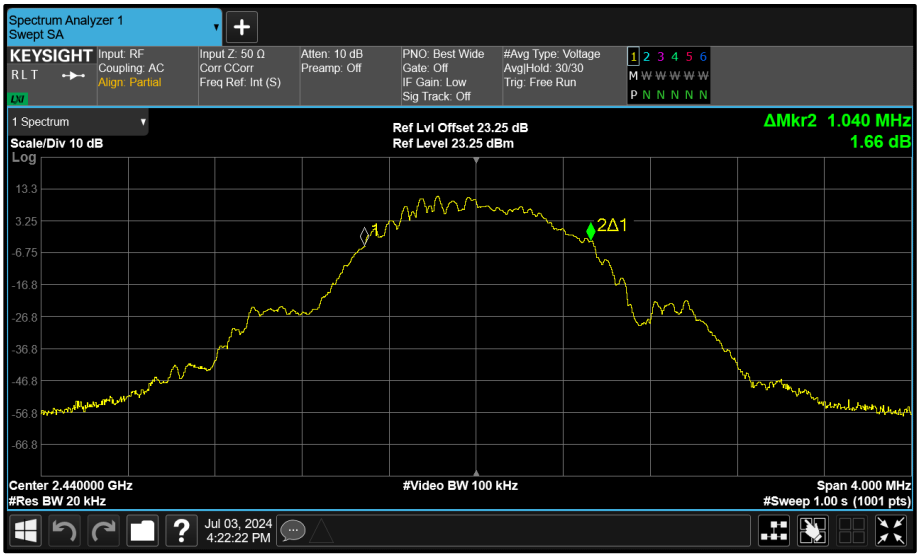

Figure 233 - Core 1 (B) 2440 MHz (CH17) 99% Bandwidth

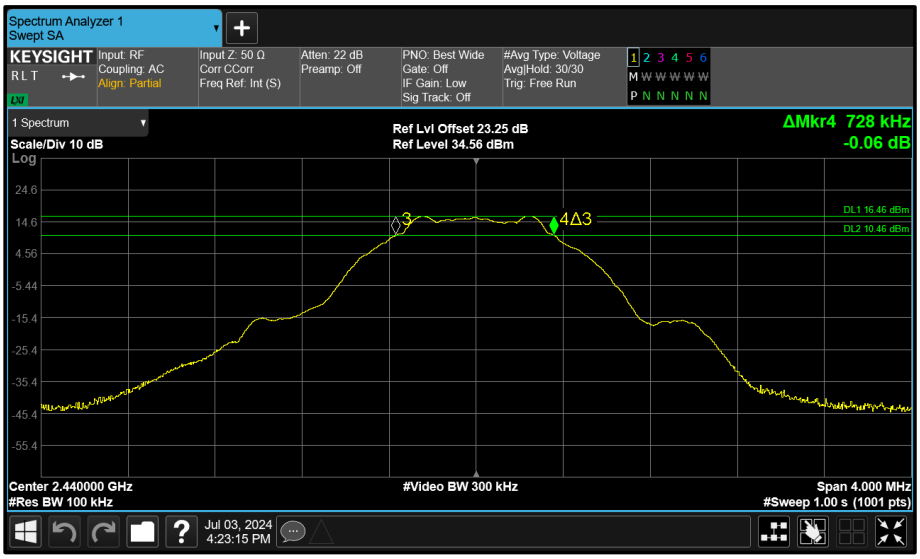

Figure 234 - Core 1 (B) 2440 MHz (CH17) 6 dB Bandwidth

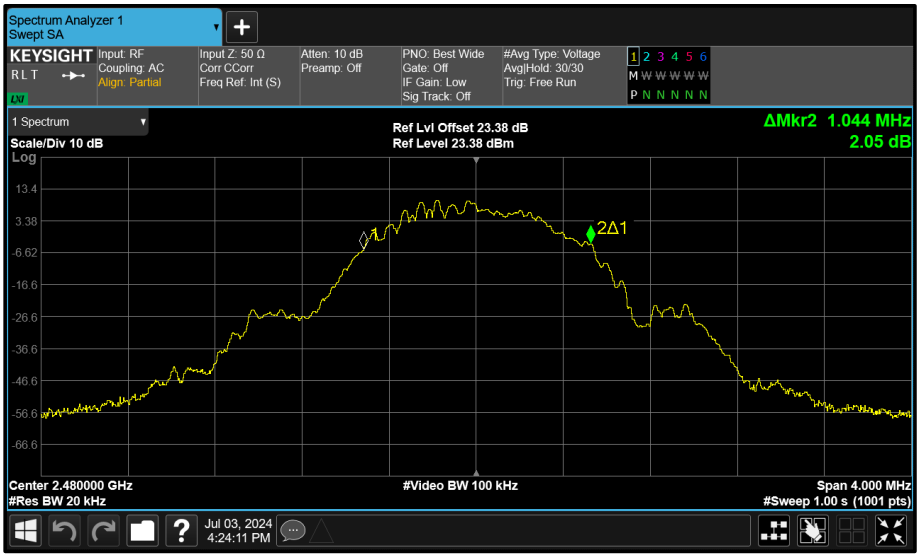

Figure 235 - Core 0 (A) 2480 MHz (CH39) 99% Bandwidth

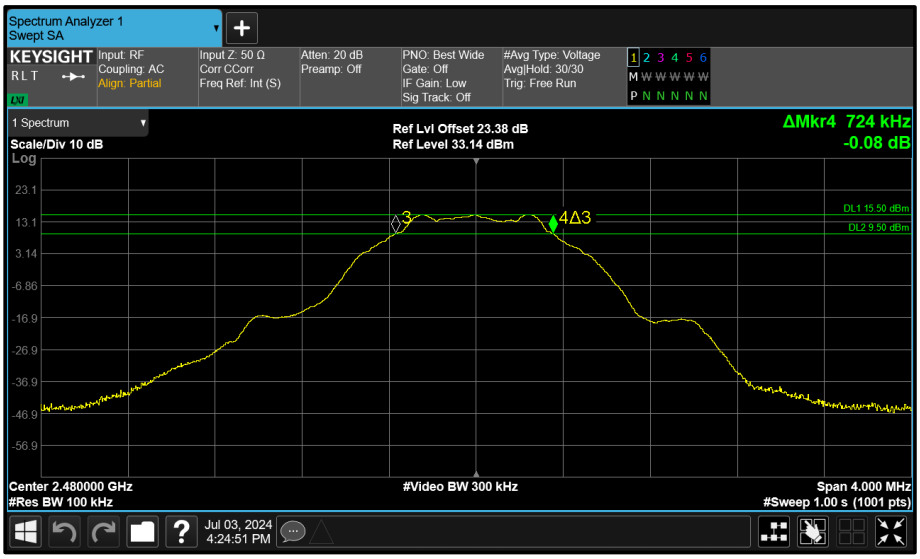

Figure 236 - Core 0 (A) 2480 MHz (CH39) 6 dB Bandwidth

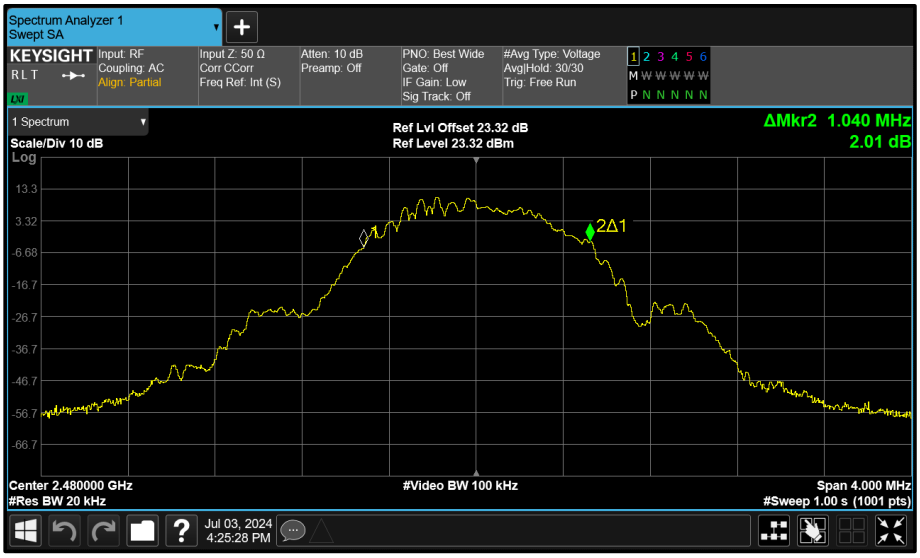

Figure 237 - Core 1 (B) 2480 MHz (CH39) 99% Bandwidth

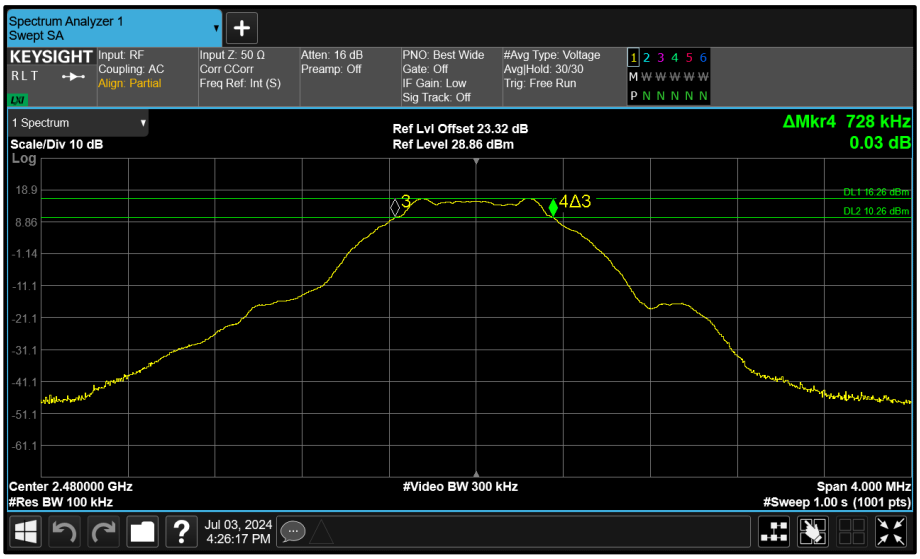

Figure 238 - Core 1 (B) 2480 MHz (CH39) 6 dB Bandwidth

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

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

Test Frequency (MHz)	6 dB Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	1.272	1.136	-	-	≥500.0
2440	1.264	1.264	-	-	≥500.0
2480	1.264	1.384	-	-	≥500.0

Table 55 - 6 dB Bandwidth Results

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

Table 56 - 99% Bandwidth Results

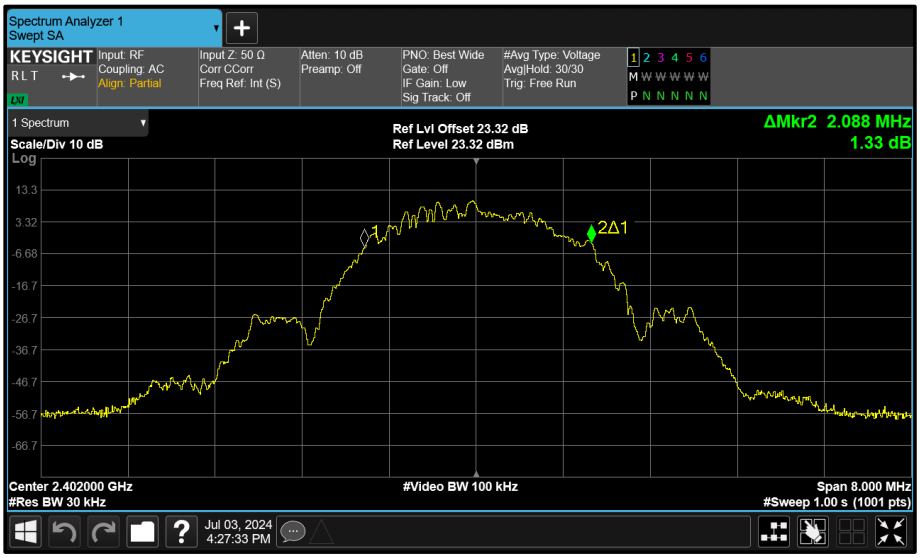

Figure 239 - Core 0 (A) 2402 MHz (CH37) 99% Bandwidth

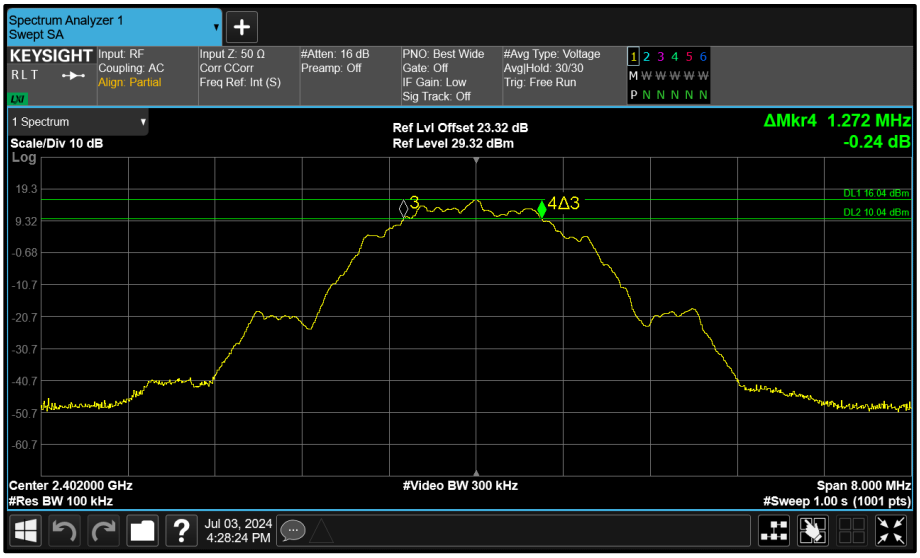

Figure 240 - Core 0 (A) 2402 MHz (CH37) 6 dB Bandwidth

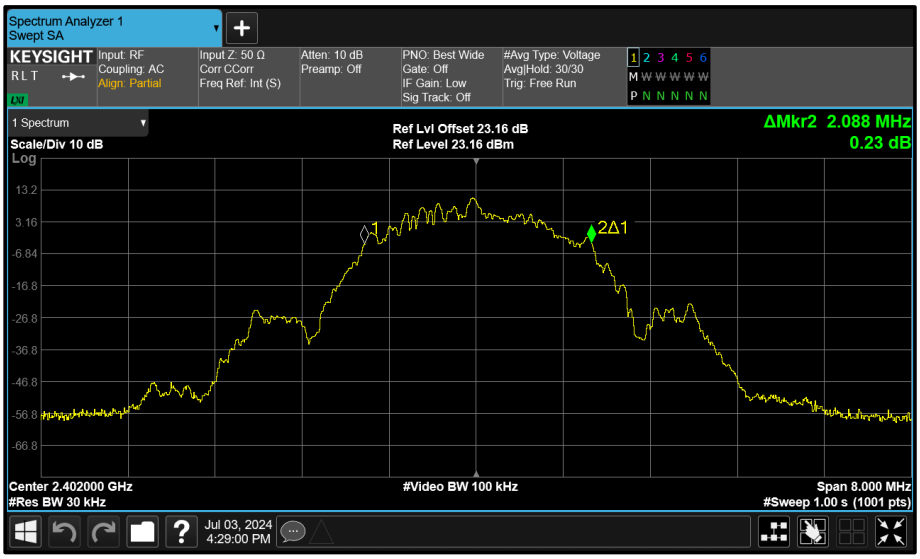

Figure 241 - Core 1 (B) 2402 MHz (CH37) 99% Bandwidth

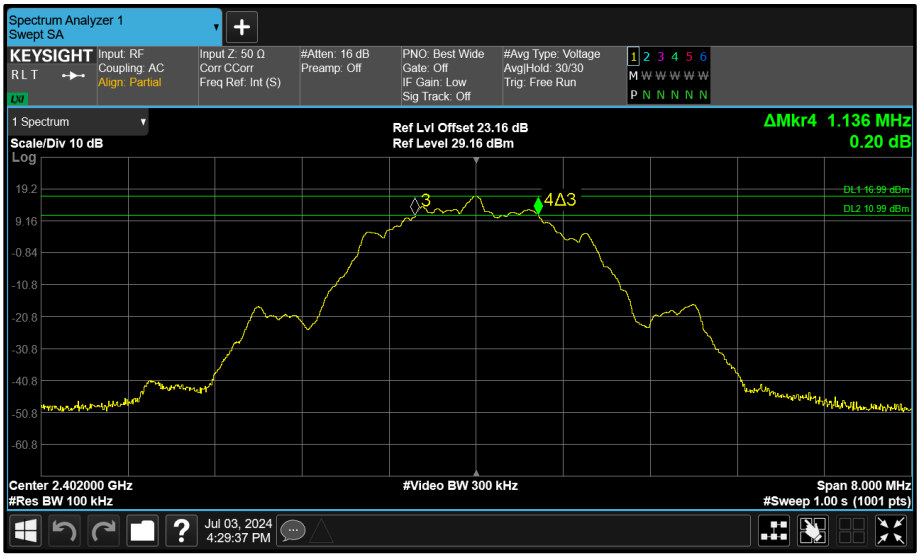

Figure 242 - Core 1 (B) 2402 MHz (CH37) 6 dB Bandwidth

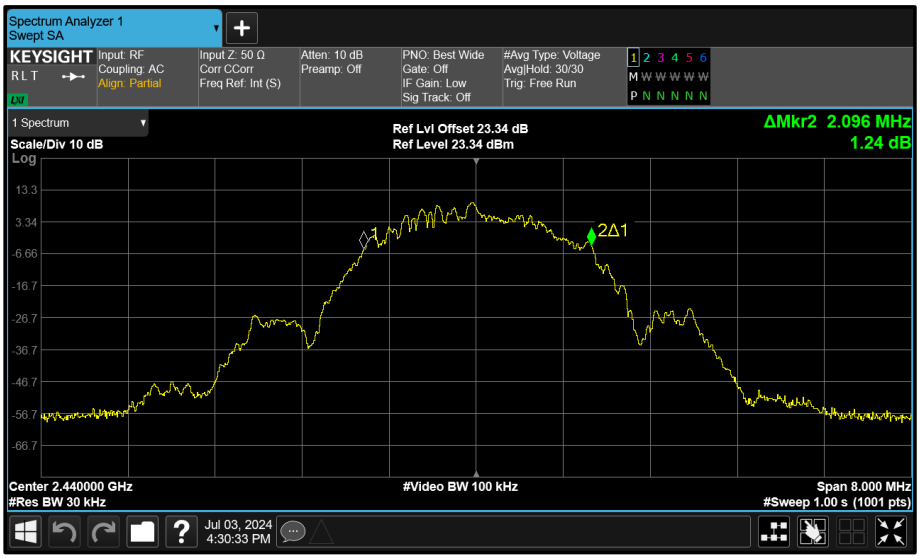

Figure 243 - Core 0 (A) 2440 MHz (CH17) 99% Bandwidth

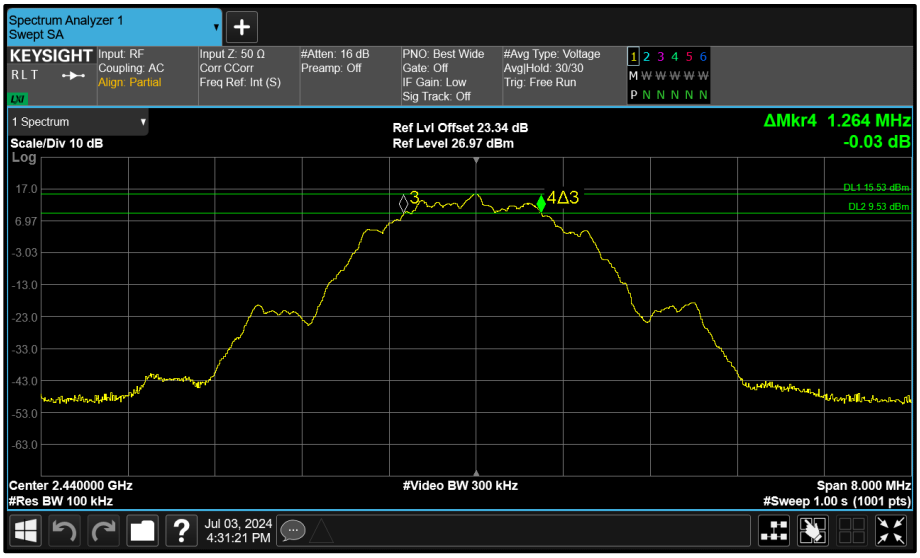

Figure 244 - Core 0 (A) 2440 MHz (CH17) 6 dB Bandwidth

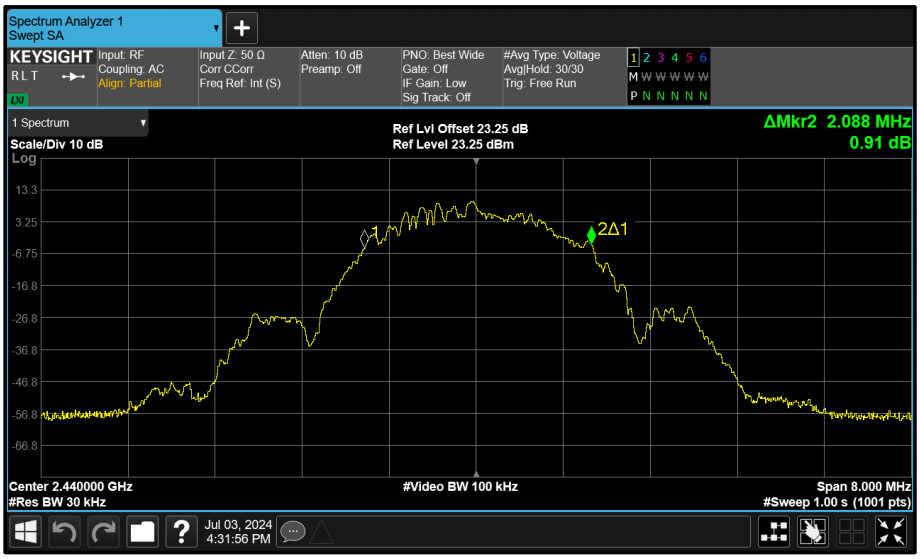

Figure 245 - Core 1 (B) 2440 MHz (CH17) 99% Bandwidth

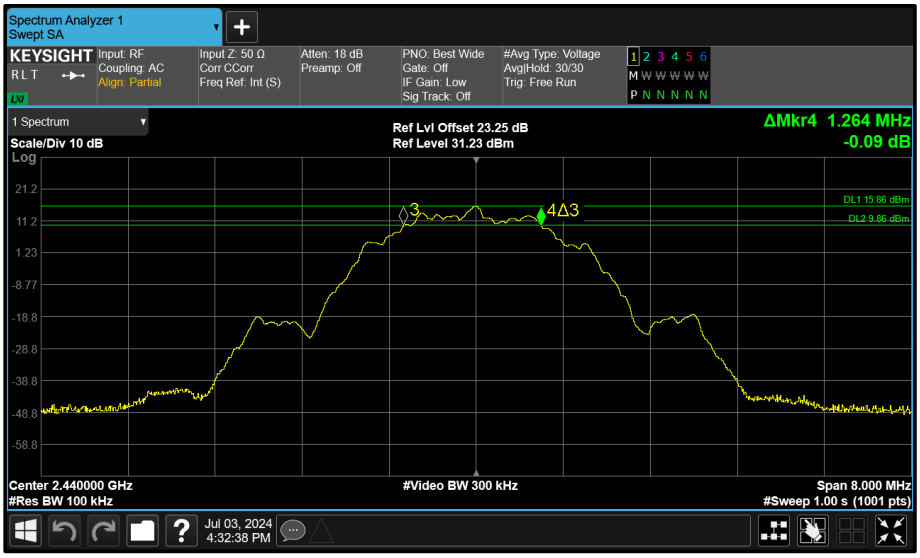

Figure 246 - Core 1 (B) 2440 MHz (CH17) 6 dB Bandwidth

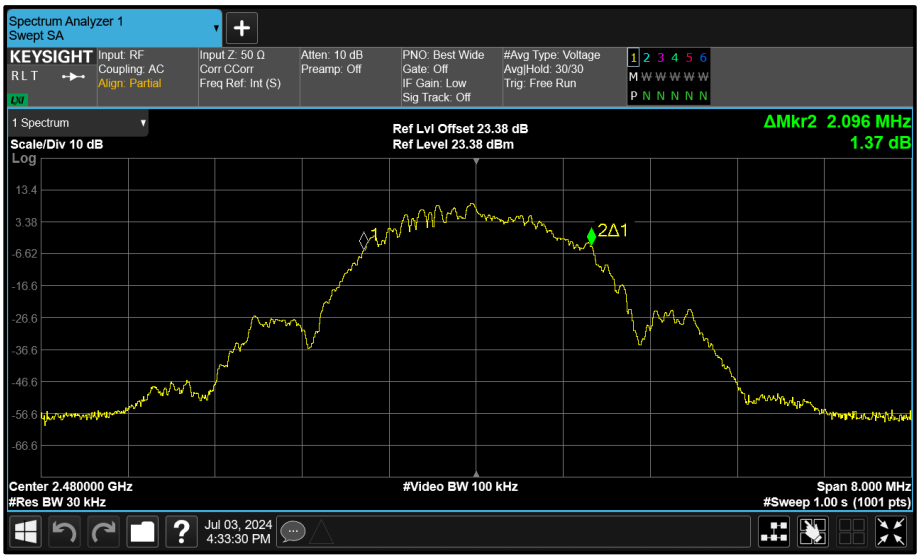

Figure 247 - Core 0 (A) 2480 MHz (CH39) 99% Bandwidth

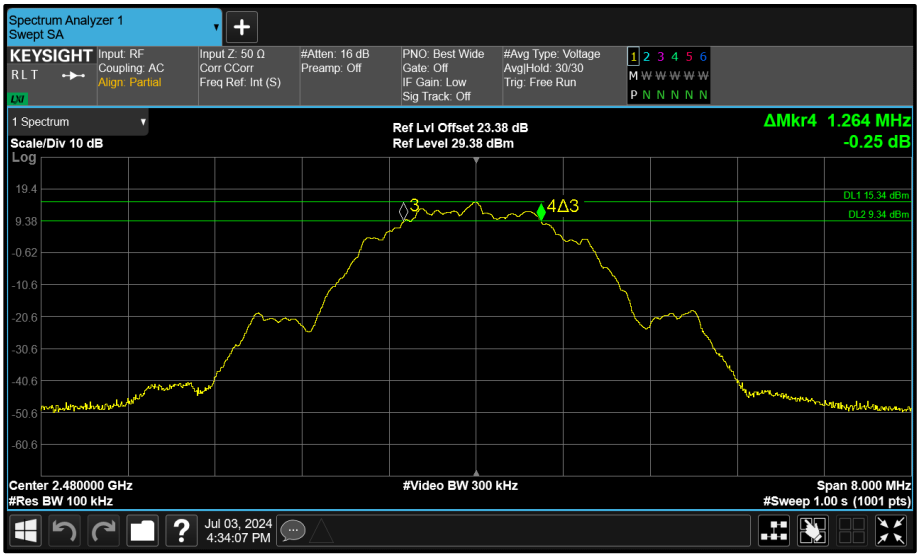

Figure 248 - Core 0 (A) 2480 MHz (CH39) 6 dB Bandwidth

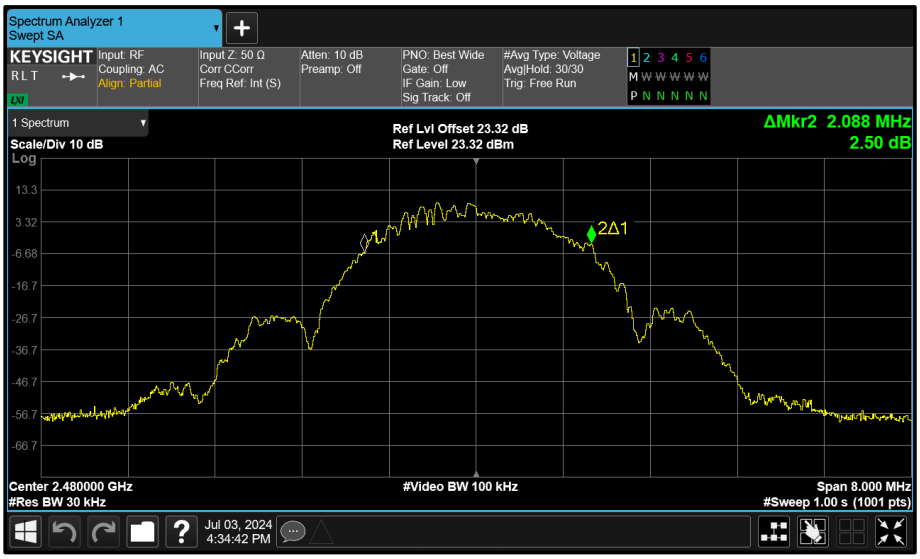

Figure 249 - Core 1 (B) 2480 MHz (CH39) 99% Bandwidth

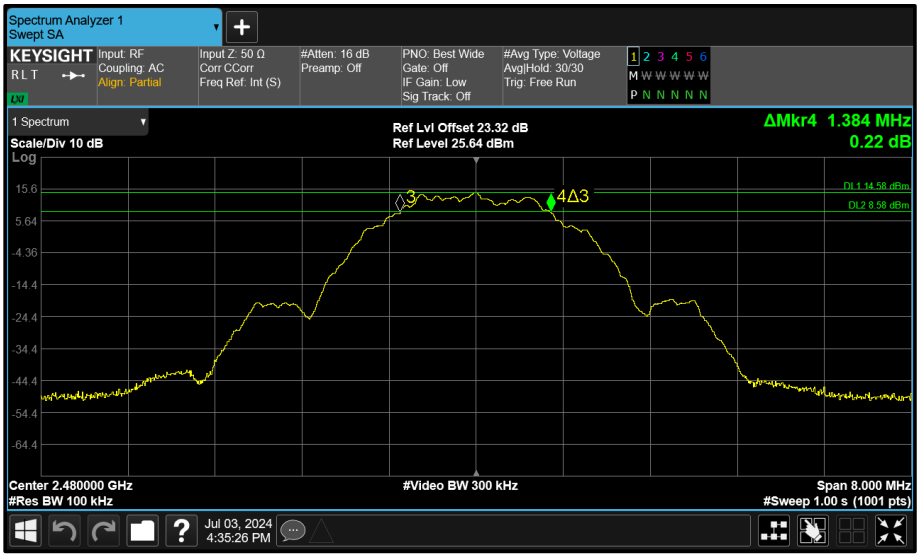

Figure 250 - Core 1 (B) 2480 MHz (CH39) 6 dB Bandwidth

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

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

2.2.7 Test Location and Test Equipment Used

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

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Hygrometer	Rotronic	I-1000	3068	12	07-Nov-2024
AC Programmable Power Supply	iTech	IT7324	5225	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5529	24	13-Dec-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	6426	12	07-Feb-2025
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6519	12	08-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6520	12	09-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6521	12	09-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6522	12	09-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6752	12	06-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6753	12	06-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6754	0	06-Feb-2025

Table 57

O/P Mon - Output Monitored using calibrated equipment

2.3 Maximum Conducted Output Power

2.3.1 Specification Reference

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

2.3.2 Equipment Under Test and Modification State

A3247, S/N: CFK34L4W7N - Modification State 0
A3247, S/N: CMVW5QCY3C - Modification State 0

2.3.3 Date of Test

15-June-2024 to 08-August-2024

2.3.4 Test Method

The test was performed in accordance with ANSI C63.10 clause 11.9.2.3.2 using a power meter.

Beamforming output port summing was performed in accordance with KDB 662911 D01 v02r01 F)2)f)(ii) and 662911 D01 v02r01 E)1).

2.3.5 Environmental Conditions

Ambient Temperature	20.5 - 22.5 °C
Relative Humidity	43.6 - 55.8 %

2.3.6 Test Results

2.4 GHz Bluetooth LE/HDR

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

DUT Configuration			
Mode:	iPA π/4 DQPSK (4-DH5)	Duty Cycle (%):	78.1
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	9.63	-	-	-	-	30.00	-20.37
2441	9.28	-	-	-	-	30.00	-20.72
2476	9.64	-	-	-	-	30.00	-20.36

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

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	9.63	-	-	-	-	30.00	-20.37	12.23	36.00	-23.77
2441	9.28	-	-	-	-	30.00	-20.72	11.88	36.00	-24.12
2476	9.64	-	-	-	-	30.00	-20.36	12.24	36.00	-23.76

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

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

DUT Configuration			
Mode:	iPA π/4 DQPSK (8-DH5)	Duty Cycle (%):	78.5
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	9.45	-	-	-	-	30.00	-20.55
2441	9.64	-	-	-	-	30.00	-20.36
2476	9.73	-	-	-	-	30.00	-20.27

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

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	9.45	-	-	-	-	30.00	-20.55	12.05	36.00	-23.95
2441	9.64	-	-	-	-	30.00	-20.36	12.24	36.00	-23.76
2476	9.73	-	-	-	-	30.00	-20.27	12.33	36.00	-23.67

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

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

DUT Configuration			
Mode:	iPA π/4 DQPSK (4-DH5)	Duty Cycle (%):	78.8
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	1.40

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	-	-	11.86	-	-	30.00	-18.14
2441	-	-	11.95	-	-	30.00	-18.05
2476	-	-	12.02	-	-	30.00	-17.98

Table 62 - FCC Maximum Conducted (peak) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	-	-	11.86	-	-	30.00	-18.14	13.26	36.00	-22.74
2441	-	-	11.95	-	-	30.00	-18.05	13.35	36.00	-22.65
2476	-	-	12.02	-	-	30.00	-17.98	13.42	36.00	-22.58

Table 63 - ISED Maximum Conducted (peak) Output Power Results

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

DUT Configuration			
Mode:	iPA π/4 DQPSK (8-DH5)	Duty Cycle (%):	78.9
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	1.40

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	-	-	11.92	-	-	30.00	-18.08
2441	-	-	12.03	-	-	30.00	-17.97
2476	-	-	12.05	-	-	30.00	-17.95

Table 64 - FCC Maximum Conducted (peak) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	-	-	11.92	-	-	30.00	-18.08	13.32	36.00	-22.68
2441	-	-	12.03	-	-	30.00	-17.97	13.43	36.00	-22.57
2476	-	-	12.05	-	-	30.00	-17.95	13.45	36.00	-22.55

Table 65 - ISED Maximum Conducted (peak) Output Power Results

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

DUT Configuration			
Mode:	iPA GFSK (LE 1M)	Duty Cycle (%):	60.4
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	8.47	-	-	-	-	30.00	-21.53
2440	8.52	-	-	-	-	30.00	-21.48
2480	8.46	-	-	-	-	30.00	-21.54

Table 66 - 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	∑					
2402	8.47	-	-	-	-	30.00	-21.53	11.07	36.00	-24.93
2440	8.52	-	-	-	-	30.00	-21.48	11.12	36.00	-24.88
2480	8.46	-	-	-	-	30.00	-21.54	11.06	36.00	-24.94

Table 67 - ISED Maximum Conducted (peak) Output Power Results

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

DUT Configuration			
Mode:	iPA GFSK (LE 2M)	Duty Cycle (%):	31.2
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	8.71	-	-	-	-	30.00	-21.29
2440	8.43	-	-	-	-	30.00	-21.57
2480	8.49	-	-	-	-	30.00	-21.51

Table 68 - 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	∑					
2402	8.71	-	-	-	-	30.00	-21.29	11.31	36.00	-24.69
2440	8.43	-	-	-	-	30.00	-21.57	11.03	36.00	-24.97
2480	8.49	-	-	-	-	30.00	-21.51	11.09	36.00	-24.91

Table 69 - ISED Maximum Conducted (peak) Output Power Results

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

DUT Configuration			
Mode:	iPA GFSK (LE 1M)	Duty Cycle (%):	63.0
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	1.40

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	-	-	12.76	-	-	30.00	-17.24
2440	-	-	12.81	-	-	30.00	-17.19
2480	-	-	12.95	-	-	30.00	-17.05

Table 70 - 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	∑					
2402	-	-	12.76	-	-	30.00	-17.24	14.16	36.00	-21.84
2440	-	-	12.81	-	-	30.00	-17.19	14.21	36.00	-21.79
2480	-	-	12.95	-	-	30.00	-17.05	14.35	36.00	-21.65

Table 71 - ISED Maximum Conducted (peak) Output Power Results

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

DUT Configuration			
Mode:	iPA GFSK (LE 2M)	Duty Cycle (%):	34.7
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	C (Core 2)	Peak Antenna Gain (dBi):	1.40

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	-	-	12.80	-	-	30.00	-17.20
2440	-	-	12.90	-	-	30.00	-17.10
2480	-	-	13.05	-	-	30.00	-16.95

Table 72 - 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	∑					
2402	-	-	12.80	-	-	30.00	-17.20	14.20	36.00	-21.80
2440	-	-	12.90	-	-	30.00	-17.10	14.30	36.00	-21.70
2480	-	-	13.05	-	-	30.00	-16.95	14.45	36.00	-21.55

Table 73 - ISED Maximum Conducted (peak) Output Power Results

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

DUT Configuration			
Mode:	ePA π/4 DQPSK (4-DH5)	Duty Cycle (%):	78.1
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	17.38	-	-	-	-	30.00	-12.62
2441	17.18	-	-	-	-	30.00	-12.82
2476	17.48	-	-	-	-	30.00	-12.52

Table 74 - FCC Maximum Conducted (peak) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	17.38	-	-	-	-	30.00	-12.62	19.98	36.00	-16.02
2441	17.18	-	-	-	-	30.00	-12.82	19.78	36.00	-16.22
2476	17.48	-	-	-	-	30.00	-12.52	20.08	36.00	-15.92

Table 75 - ISED Maximum Conducted (peak) Output Power Results

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

DUT Configuration			
Mode:	ePA π/4 DQPSK (8-DH5)	Duty Cycle (%):	78.2
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	16.13	-	-	-	-	30.00	-13.87
2441	15.95	-	-	-	-	30.00	-14.05
2476	16.08	-	-	-	-	30.00	-13.92

Table 76 - FCC Maximum Conducted (peak) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	16.13	-	-	-	-	30.00	-13.87	18.73	36.00	-17.27
2441	15.95	-	-	-	-	30.00	-14.05	18.55	36.00	-17.45
2476	16.08	-	-	-	-	30.00	-13.92	18.68	36.00	-17.32

Table 77 - ISED Maximum Conducted (peak) Output Power Results

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

DUT Configuration			
Mode:	ePA GFSK (LE 1M)	Duty Cycle (%):	60.5
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	17.65	-	-	-	-	30.00	-12.35
2440	18.14	-	-	-	-	30.00	-11.86
2480	17.86	-	-	-	-	30.00	-12.14

Table 78 - 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	∑					
2402	17.65	-	-	-	-	30.00	-12.35	20.25	36.00	-15.75
2440	18.14	-	-	-	-	30.00	-11.86	20.74	36.00	-15.26
2480	17.86	-	-	-	-	30.00	-12.14	20.46	36.00	-15.54

Table 79 - ISED Maximum Conducted (peak) Output Power Results

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

DUT Configuration			
Mode:	ePA GFSK (LE 2M)	Duty Cycle (%):	31.3
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	2.60

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	18.15	-	-	-	-	30.00	-11.85
2440	18.13	-	-	-	-	30.00	-11.87
2480	17.67	-	-	-	-	30.00	-12.33

Table 80 - 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	∑					
2402	18.15	-	-	-	-	30.00	-11.85	20.75	36.00	-15.25
2440	18.13	-	-	-	-	30.00	-11.87	20.73	36.00	-15.27
2480	17.67	-	-	-	-	30.00	-12.33	20.27	36.00	-15.73

Table 81 - ISED Maximum Conducted (peak) Output Power Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	iPA π/4 DQPSK (4-DH5)	Duty Cycle (%):	78.1
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	5.46

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	9.14	9.41	-	-	12.29	30.00	-17.71
2441	9.37	8.97	-	-	12.19	30.00	-17.81
2476	9.67	8.78	-	-	12.26	30.00	-17.74

Table 82 - FCC Maximum Conducted (peak) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	9.14	9.41	-	-	12.29	30.00	-17.71	17.75	36.00	-18.25
2441	9.37	8.97	-	-	12.19	30.00	-17.81	17.65	36.00	-18.35
2476	9.67	8.78	-	-	12.26	30.00	-17.74	17.72	36.00	-18.28

Table 83 - ISED Maximum Conducted (peak) Output Power Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	iPA π/4 DQPSK (8-DH5)	Duty Cycle (%):	78.2
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	5.46

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	9.52	9.22	-	-	12.38	30.00	-17.62
2441	9.62	8.78	-	-	12.23	30.00	-17.77
2476	9.47	8.49	-	-	12.02	30.00	-17.98

Table 84 - FCC Maximum Conducted (peak) Output Power Results

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)	EIRP (dBm)	EIRP Limit (dBm)	EIRP Margin (dB)
	A	B	C	D	∑					
2404	9.52	9.22	-	-	12.38	30.00	-17.62	17.84	36.00	-18.16
2441	9.62	8.78	-	-	12.23	30.00	-17.77	17.69	36.00	-18.31
2476	9.47	8.49	-	-	12.02	30.00	-17.98	17.48	36.00	-18.52

Table 85 - ISED Maximum Conducted (peak) Output Power Results

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	iPA GFSK (LE 1M)	Duty Cycle (%):	60.4
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	5.46

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	8.19	8.47	-	-	11.35	30.00	-18.65
2440	8.13	8.59	-	-	11.38	30.00	-18.62
2480	8.33	8.08	-	-	11.22	30.00	-18.78

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	∑					
2402	8.19	8.47	-	-	11.35	30.00	-18.65	16.81	36.00	-19.19
2440	8.13	8.59	-	-	11.38	30.00	-18.62	16.84	36.00	-19.16
2480	8.33	8.08	-	-	11.22	30.00	-18.78	16.68	36.00	-19.32

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)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	iPA GFSK (LE 2M)	Duty Cycle (%):	31.2
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	5.46

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	7.99	8.47	-	-	11.22	30.00	-18.78
2440	8.47	8.59	-	-	11.54	30.00	-18.46
2480	8.40	7.99	-	-	11.21	30.00	-18.79

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	∑					
2402	7.99	8.47	-	-	11.22	30.00	-18.78	16.68	36.00	-19.32
2440	8.47	8.59	-	-	11.54	30.00	-18.46	17.01	36.00	-18.99
2480	8.40	7.99	-	-	11.21	30.00	-18.79	16.67	36.00	-19.33

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

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	ePA π/4 DQPSK (4-DH5)	Duty Cycle (%):	78.1
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	5.46

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	17.61	17.08	-	-	20.36	30.00	-9.64
2441	16.72	17.36	-	-	20.06	30.00	-9.94
2476	17.14	17.50	-	-	20.34	30.00	-9.66

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	∑					
2404	17.61	17.08	-	-	20.36	30.00	-9.64	25.83	36.00	-10.17
2441	16.72	17.36	-	-	20.06	30.00	-9.94	25.52	36.00	-10.48
2476	17.14	17.50	-	-	20.34	30.00	-9.66	25.80	36.00	-10.20

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

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(3) RSS-247 5.4 d)	Test Method(s):	C63.10 11.9.1.2
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		

DUT Configuration			
Mode:	ePA π/4 DQPSK (8-DH5)	Duty Cycle (%):	78.2
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	5.46

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2404	15.99	15.98	-	-	19.00	30.00	-11.00
2441	15.23	15.75	-	-	18.50	30.00	-11.50
2476	16.10	16.01	-	-	19.07	30.00	-10.93

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	∑					
2404	15.99	15.98	-	-	19.00	30.00	-11.00	24.46	36.00	-11.54
2441	15.23	15.75	-	-	18.50	30.00	-11.50	23.97	36.00	-12.03
2476	16.10	16.01	-	-	19.07	30.00	-10.93	24.53	36.00	-11.47

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

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

DUT Configuration			
Mode:	ePA GFSK (LE 1M)	Duty Cycle (%):	60.5
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	5.46

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	17.51	17.73	-	-	20.63	30.00	-9.36
2440	17.51	17.45	-	-	20.49	30.00	-9.50
2480	17.56	17.45	-	-	20.51	30.00	-9.48

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	∑					
2402	17.51	17.73	-	-	20.63	30.00	-9.36	26.09	36.00	-9.90
2440	17.51	17.45	-	-	20.49	30.00	-9.50	25.95	36.00	-10.04
2480	17.56	17.45	-	-	20.51	30.00	-9.48	25.97	36.00	-10.02

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

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

DUT Configuration			
Mode:	ePA GFSK (LE 2M)	Duty Cycle (%):	31.3
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	5.46

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	∑		
2402	17.92	17.69	-	-	20.81	30.00	-9.18
2440	17.92	17.28	-	-	20.62	30.00	-9.37
2480	17.73	17.53	-	-	20.64	30.00	-9.35

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	∑					
2402	17.92	17.69	-	-	20.81	30.00	-9.18	26.27	36.00	-9.72
2440	17.92	17.28	-	-	20.62	30.00	-9.37	26.08	36.00	-9.91
2480	17.73	17.53	-	-	20.64	30.00	-9.35	26.10	36.00	-9.89

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

FCC 47 CFR Part 15, Limit Clause 15.247 (b)(3)

For systems using digital modulation in the 902–928 MHz, 2400–2483.5 MHz, and 5725–5850 MHz bands: 1 Watt.

ISED RSS-247, Limit Clause 5.4 (d)

For DTSs employing digital modulation techniques operating in the bands 902-928 MHz and 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1 W. The e.i.r.p. shall not exceed 4 W, except as provided in section 5.4(e) of the specification.

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
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	6518	12	16-Feb-2025
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6519	12	08-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6520	12	09-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6521	12	09-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6522	12	09-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6529	12	16-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6530	12	16-Feb-2025
USB Wideband Power Sensor	Boonton	RTP5008	6587	12	13-Feb-2025
USB Wideband Power Sensor	Boonton	RTP5008	6588	12	13-Feb-2025
AC Programmable Power Supply	iTech	IT7324	6662	-	O/P Mon

Table 98

O/P Mon - Output Monitored using calibrated equipment

2.4 Authorised Band Edges

2.4.1 Specification Reference

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

2.4.2 Equipment Under Test and Modification State

A3247, S/N: KN47NTDQRY - Modification State 0

2.4.3 Date of Test

15-April-2024 to 31-May-2024

2.4.4 Test Method

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

2.4.5 Environmental Conditions

Ambient Temperature	22.1 - 23.7 °C
Relative Humidity	41.0 - 43.7 %

2.4.6 Test Results

2.4 GHz Bluetooth LE/HDR

iPA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	HDR4	2404	2400	-57.06
Static	HDR8	2404	2400	-44.32
Static	LE1M	2402	2400	-64.83
Static	LE2M	2402	2400	-31.50
Hopping	HDR4	Hopping	2400	-54.91
Hopping	HDR8	Hopping	2400	-53.85

Table 99 - SISO Authorised Band Edge Results

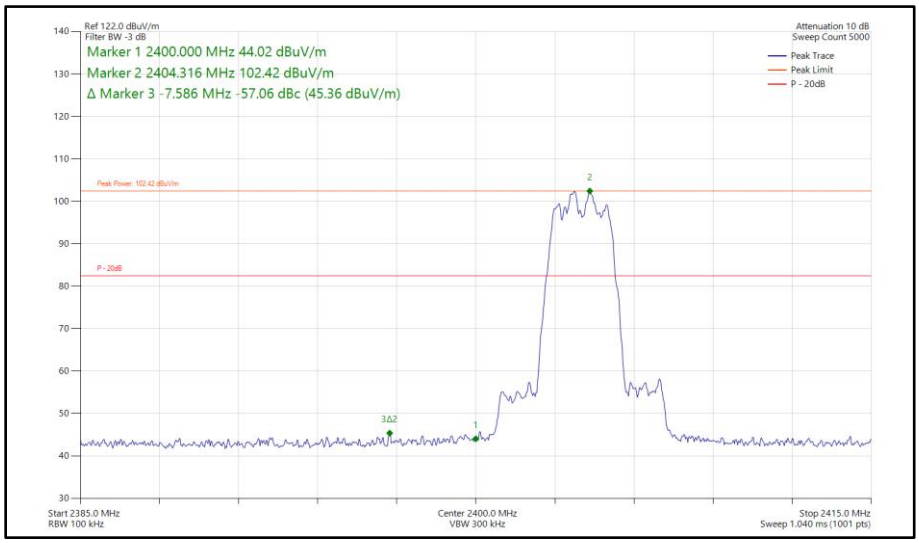

Figure 251 - Bluetooth HDR4, SISO, Core 0 - 2404 MHz
Band Edge Frequency 2400 MHz

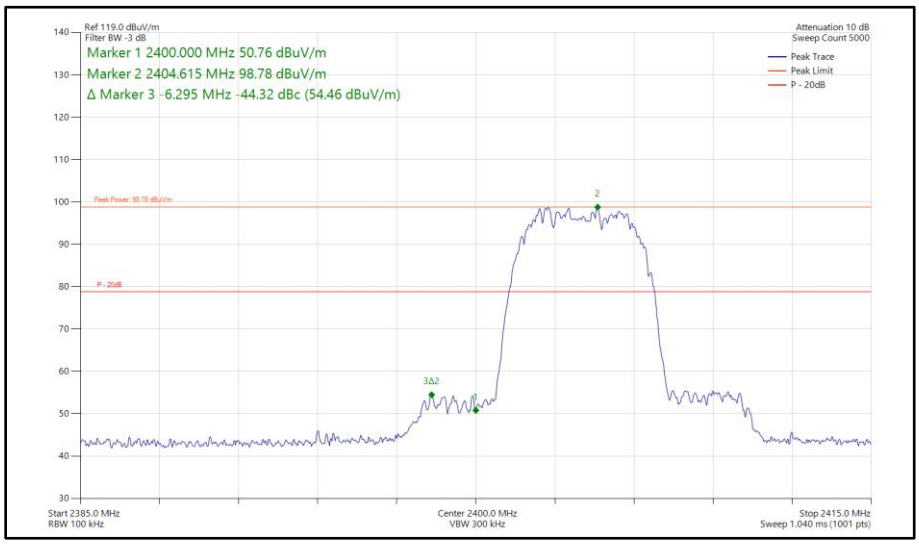

Figure 252 - Bluetooth HDR8, SISO, Core 0 - 2404 MHz
Band Edge Frequency 2400 MHz

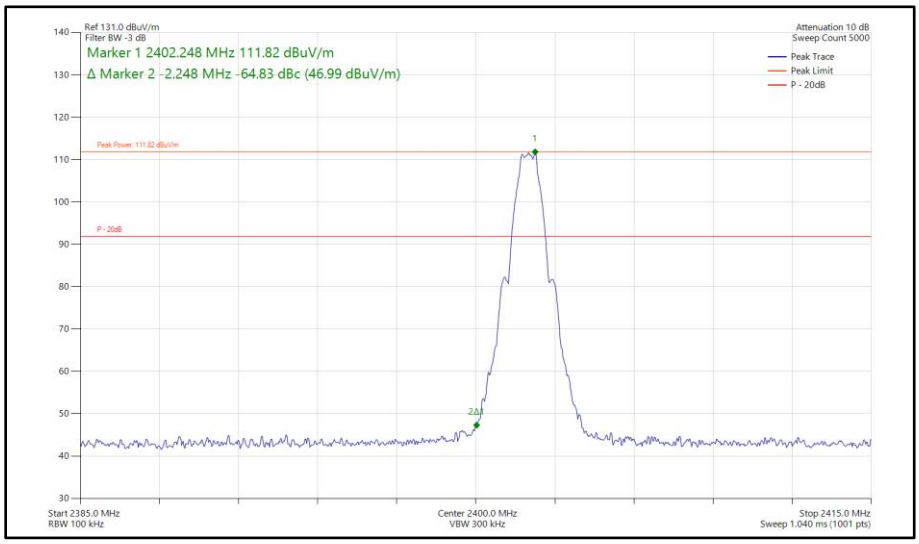

Figure 253 - Bluetooth LE1M, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz

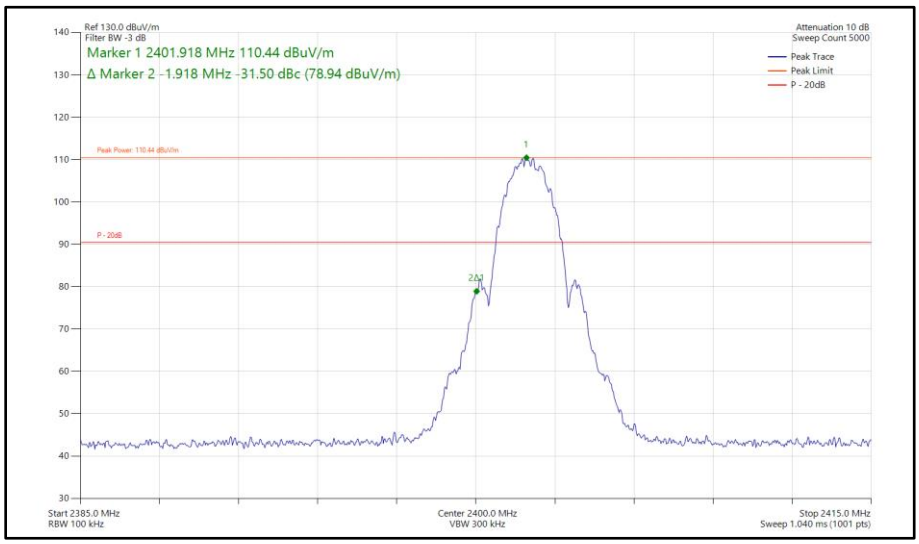

Figure 254 - Bluetooth LE2M, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz

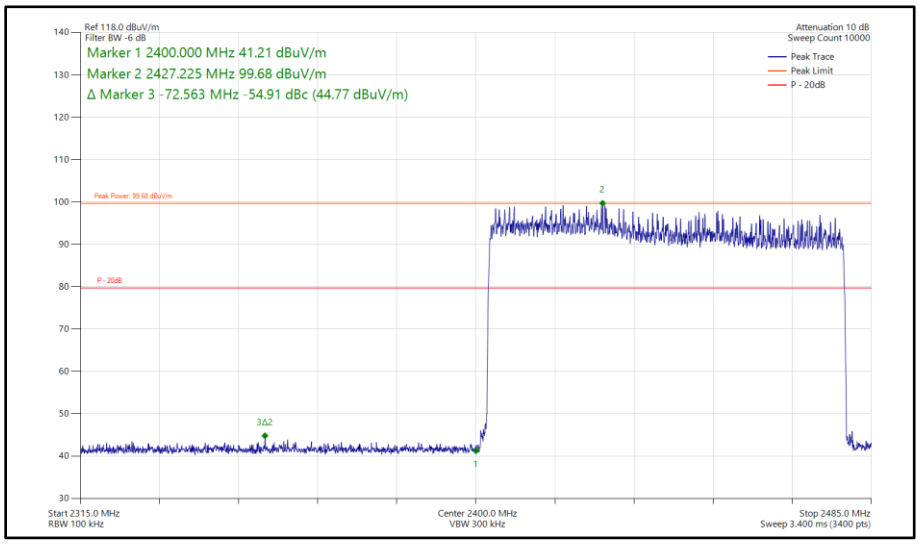

Figure 255 - Bluetooth HDR4, SISO, Core 0 - Hopping
Band Edge Frequency 2400 MHz

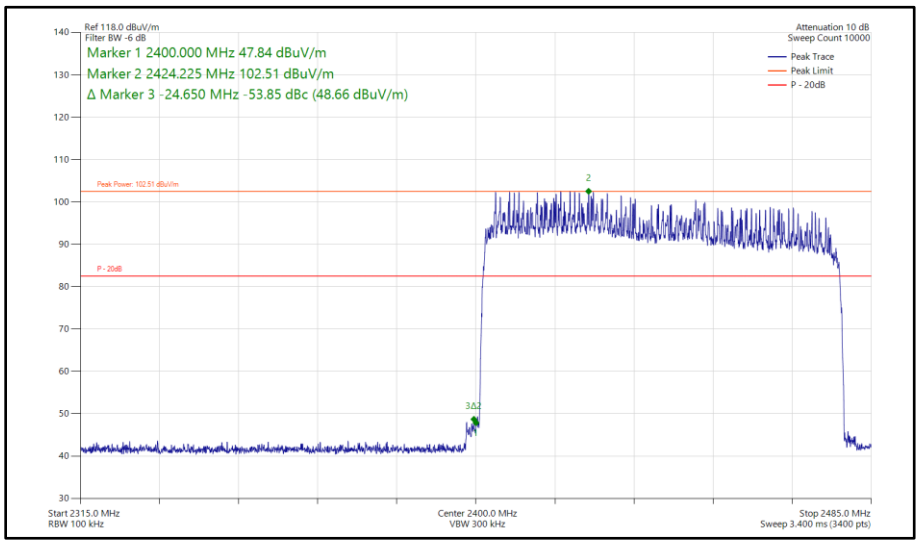

Figure 256 - Bluetooth HDR8, SISO, Core 0 – Hopping Band Edge Frequency 2400 MHz

iPA - Core 1 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	HDR4	2404	2400	-55.12
Static	HDR8	2404	2400	-40.43
Static	LE1M	2402	2400	-63.29
Static	LE2M	2402	2400	-34.78
Hopping	HDR4	Hopping	2400	-59.55
Hopping	HDR8	Hopping	2400	-50.32

Table 100 - SISO Authorised Band Edge Results

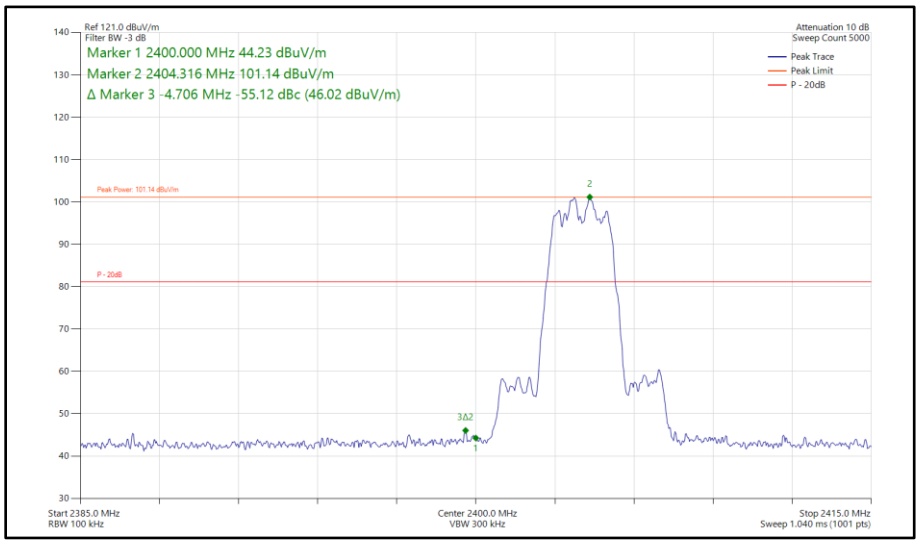

Figure 257 - Bluetooth HDR4, SISO, Core 1 - 2404 MHz Band Edge Frequency 2400 MHz

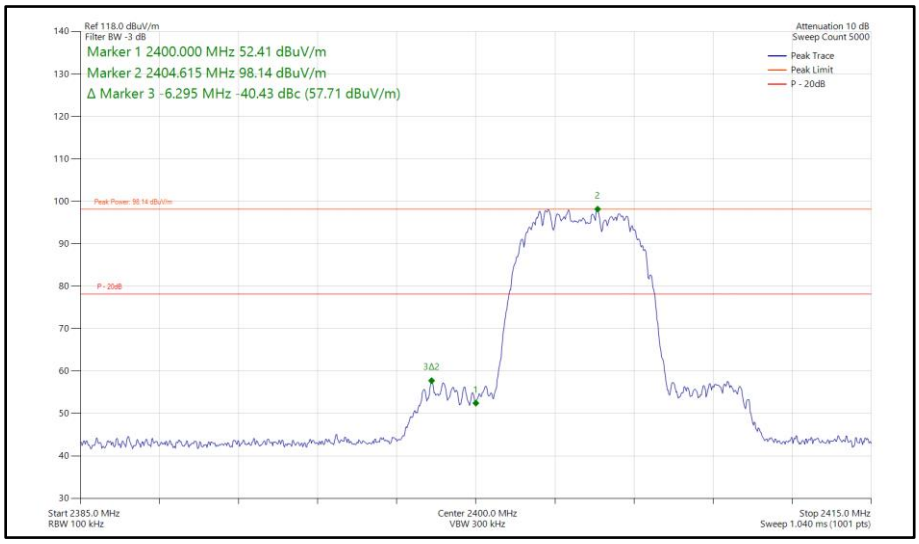

Figure 258 - Bluetooth HDR8, SISO, Core 1 - 2404 MHz Band Edge Frequency 2400 MHz

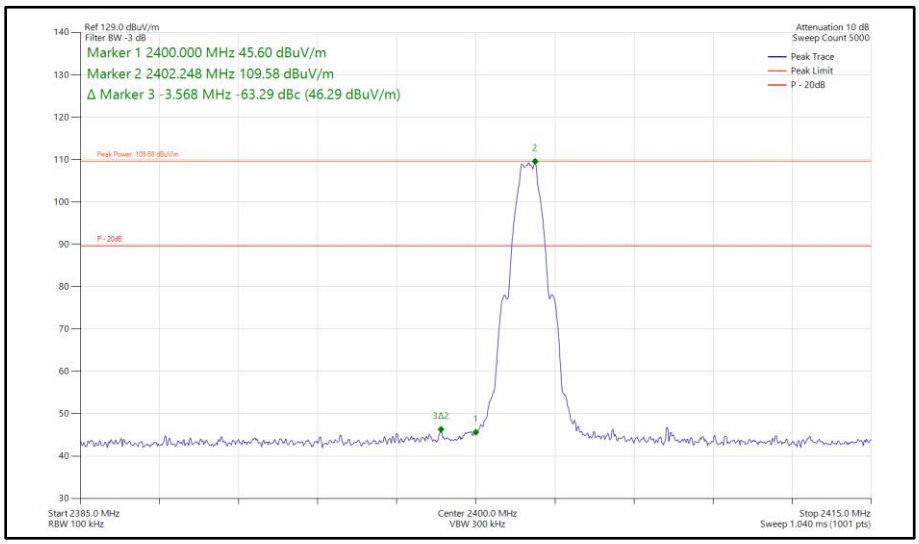

Figure 259 - Bluetooth LE1M, SISO, Core 1 - 2402 MHz Band Edge Frequency 2400 MHz

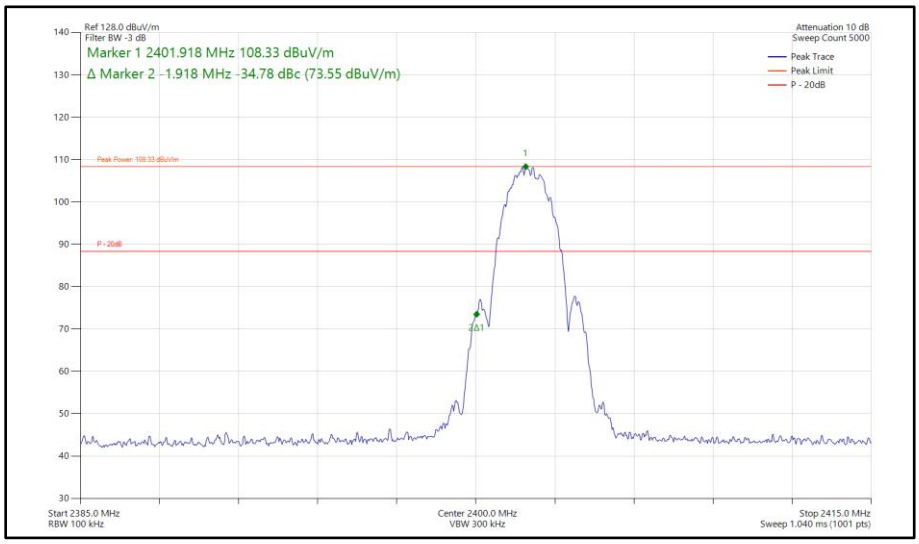

Figure 260 - Bluetooth LE2M, SISO, Core 1 - 2402 MHz Band Edge Frequency 2400 MHz

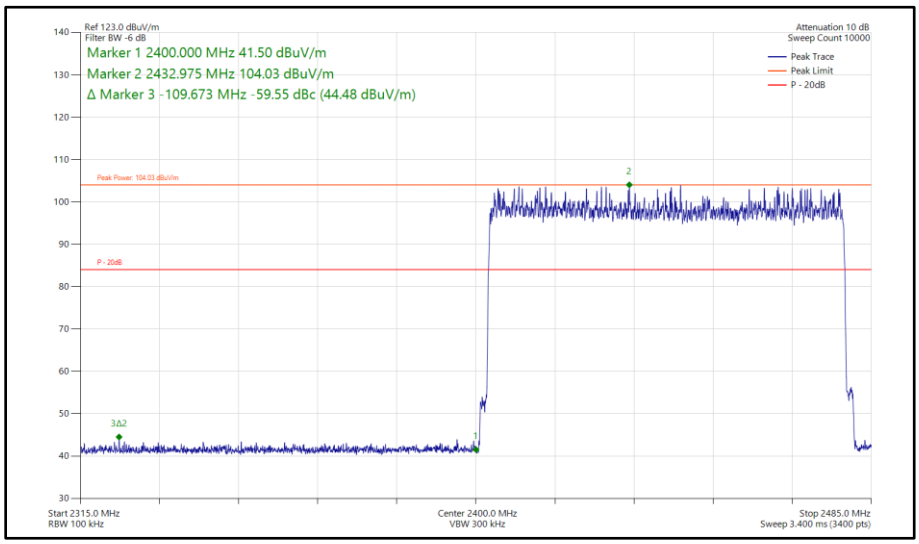

Figure 261 - Bluetooth HDR4, SISO, Core 1 - Hopping Band Edge Frequency 2400 MHz

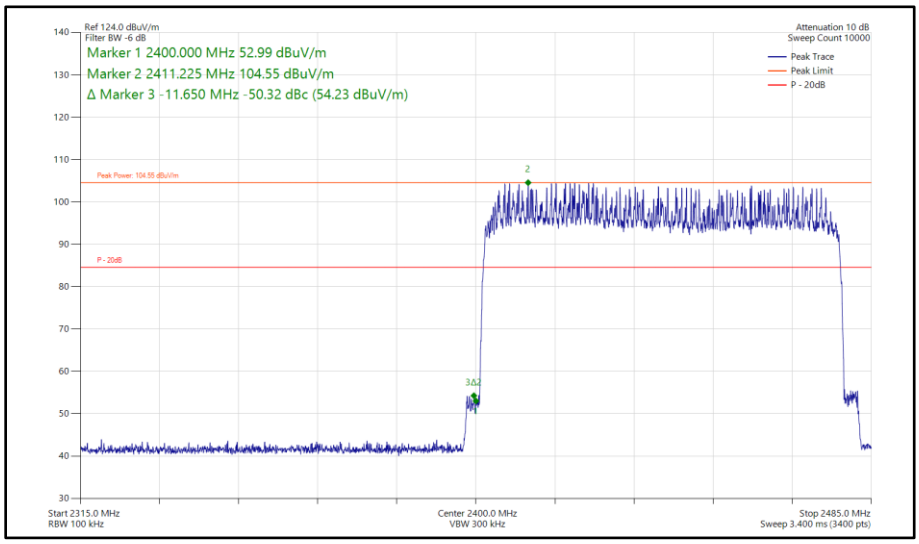

Figure 262 - Bluetooth HDR8, SISO, Core 1 - Hopping Band Edge Frequency 2400 MHz

iPA - Core 2 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	HDR4	2404	2400	-48.21
Static	HDR8	2404	2400	-41.84
Static	LE1M	2402	2400	-58.63
Static	LE2M	2402	2400	-30.93
Hopping	HDR4	Hopping	2400	-55.91
Hopping	HDR8	Hopping	2400	-52.48

Table 101 - SISO Authorised Band Edge Results

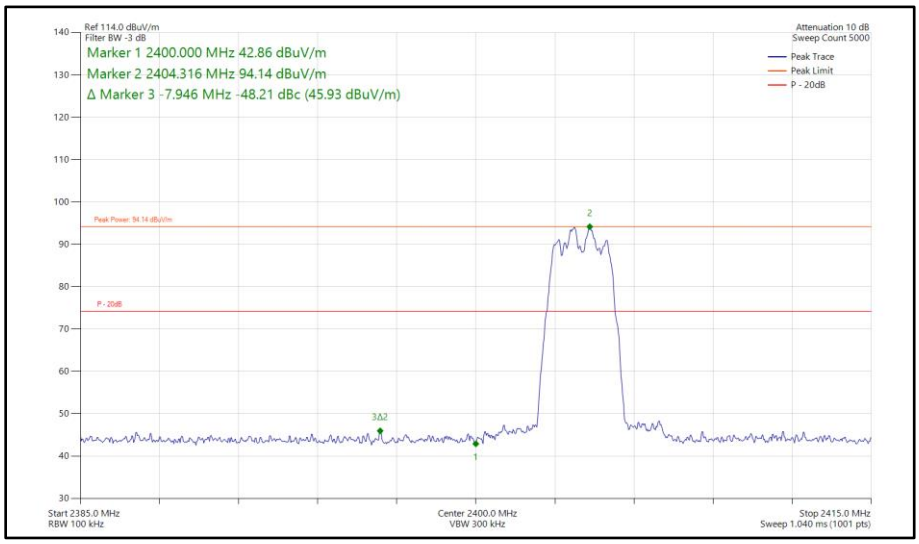

Figure 263 - Bluetooth HDR4, SISO, Core 2 - 2404 MHz Band Edge Frequency 2400 MHz

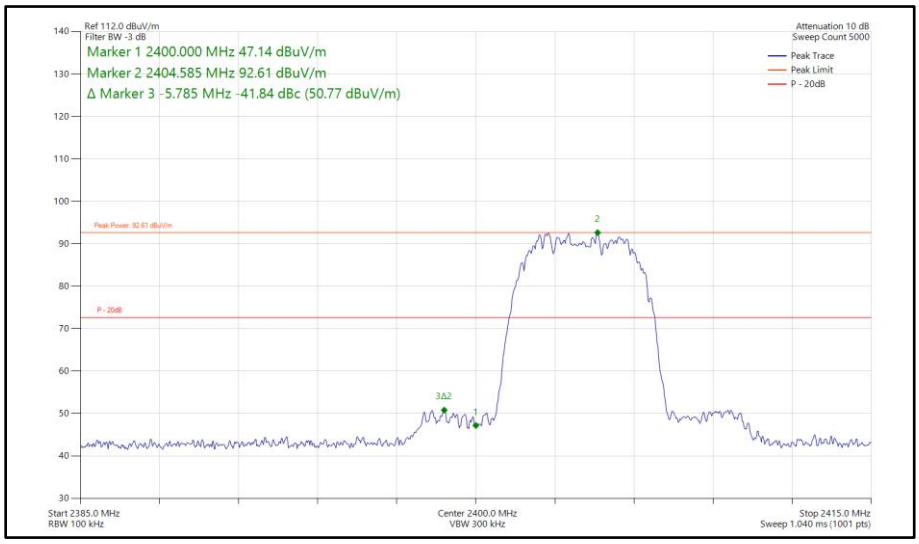

Figure 264 - Bluetooth HDR8, SISO, Core 2 - 2404 MHz Band Edge Frequency 2400 MHz

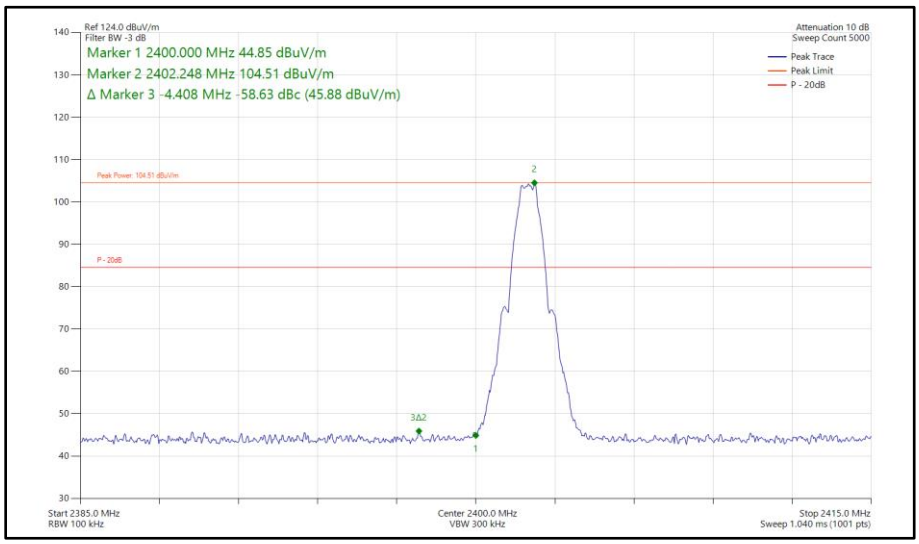

Figure 265 - Bluetooth LE1M, SISO, Core 2 - 2402 MHz Band Edge Frequency 2400 MHz

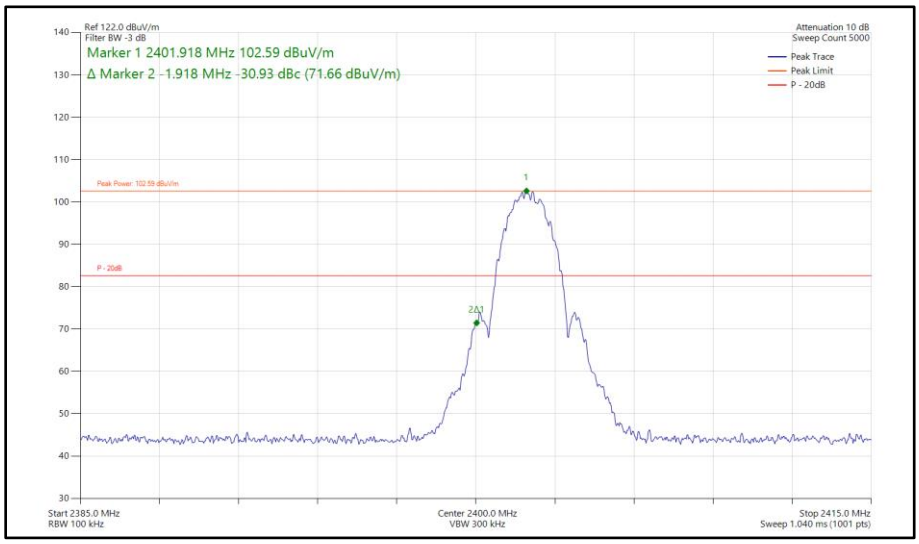

Figure 266 - Bluetooth LE2M, SISO, Core 2 - 2402 MHz Band Edge Frequency 2400 MHz

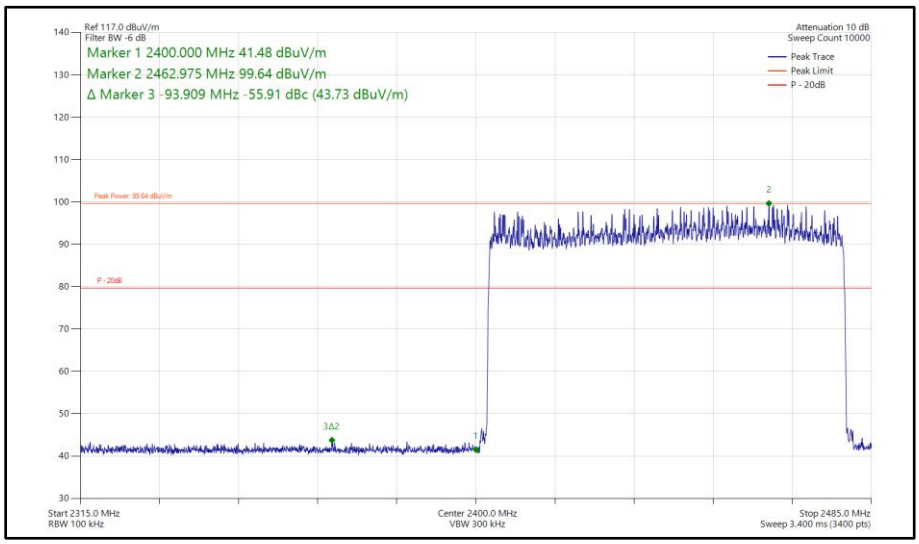

Figure 267 - Bluetooth HDR4, SISO, Core 2 - Hopping Band Edge Frequency 2400 MHz

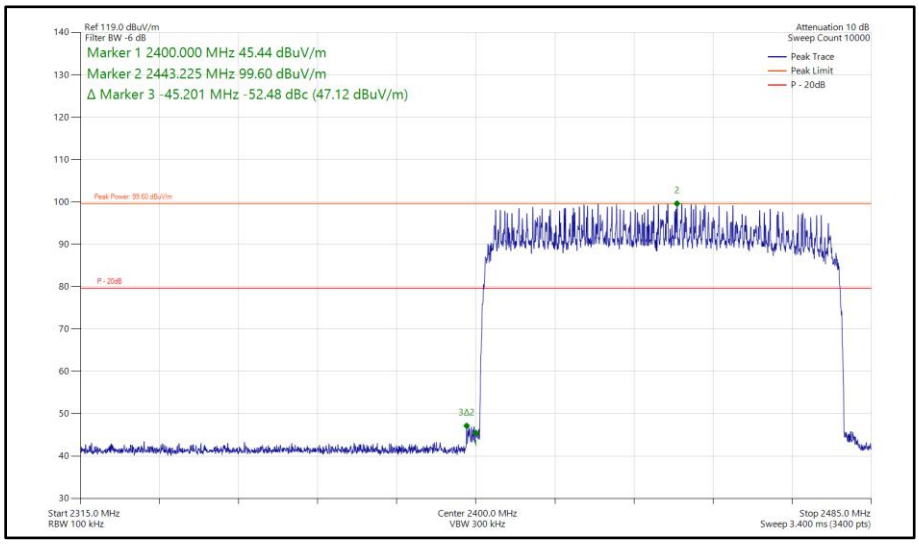

Figure 268 - Bluetooth HDR8, SISO, Core 2 - Hopping Band Edge Frequency 2400 MHz

iPA - Core 0 - Core 1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	HDR4	2404	2400	-56.19
Static	HDR8	2404	2400	-44.06
Static	LE1M	2402	2400	-61.77
Static	LE2M	2402	2400	-30.81
Hopping	HDR4	Hopping	2400	-61.60
Hopping	HDR8	Hopping	2400	-52.03

Table 102 - MIMO Authorised Band Edge Results

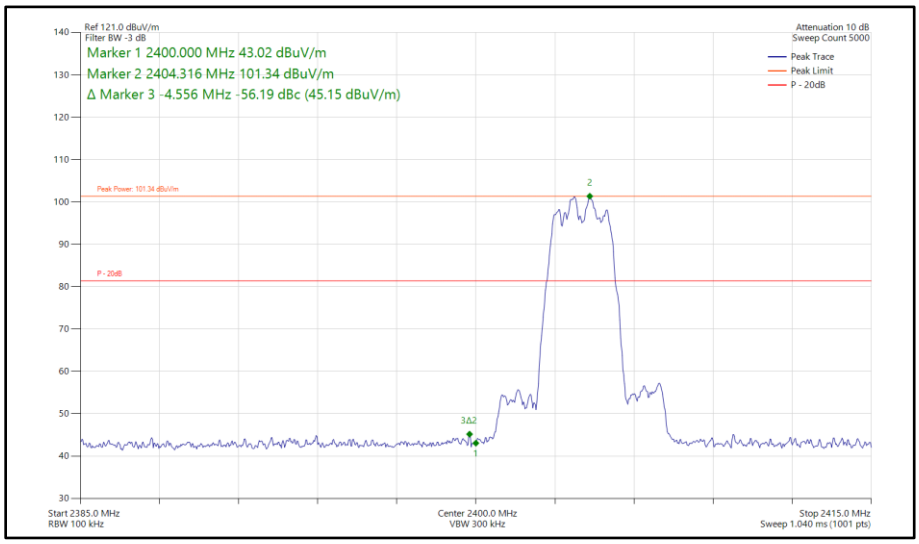

Figure 269 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 2404 MHz Band Edge Frequency 2400 MHz

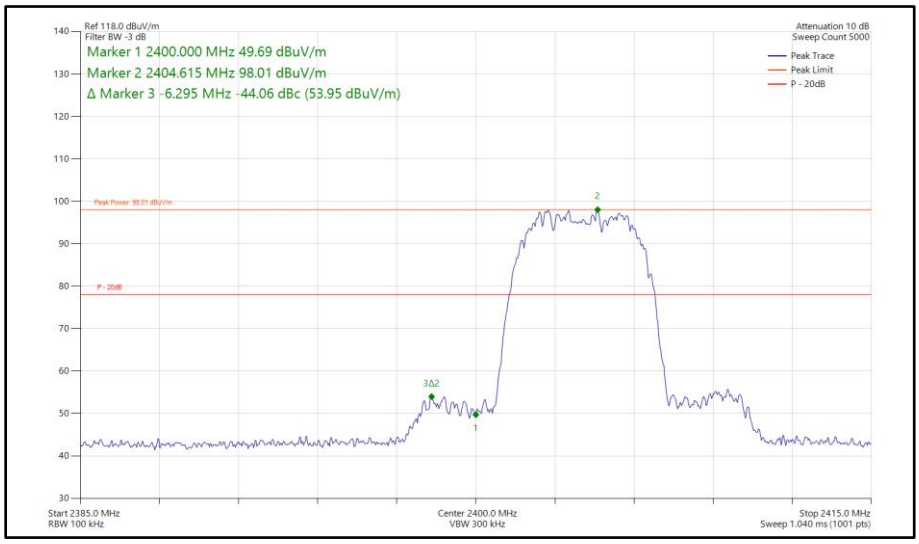

Figure 270 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 2404 MHz Band Edge Frequency 2400 MHz

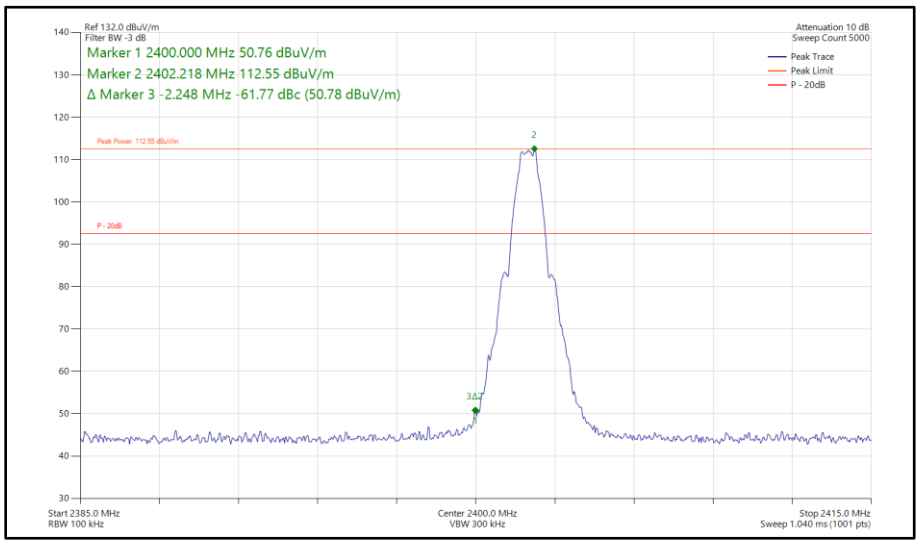

Figure 271 - Bluetooth LE1M, MIMO, Core 0 - Core 1 - 2402 MHz Band Edge Frequency 2400 MHz

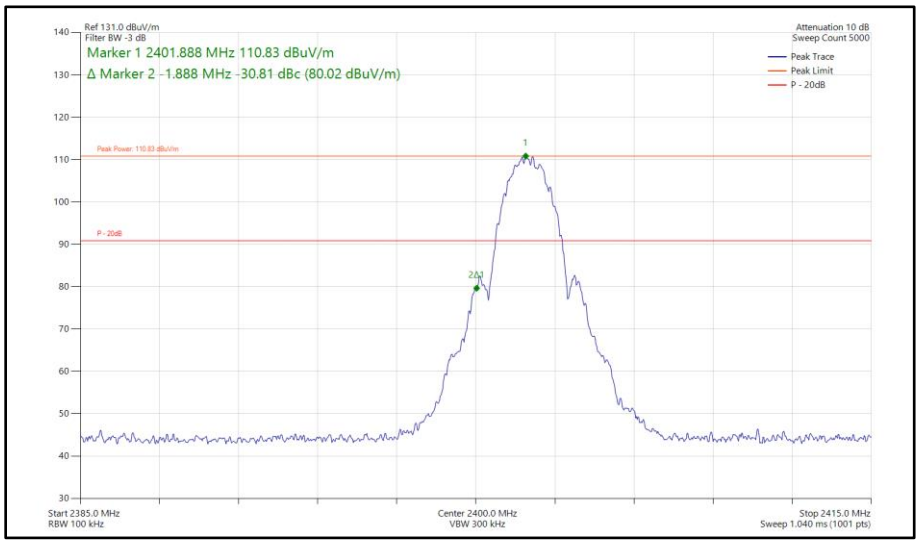

Figure 272 - Bluetooth LE2M, MIMO, Core 0 - Core 1 - 2402 MHz Band Edge Frequency 2400 MHz

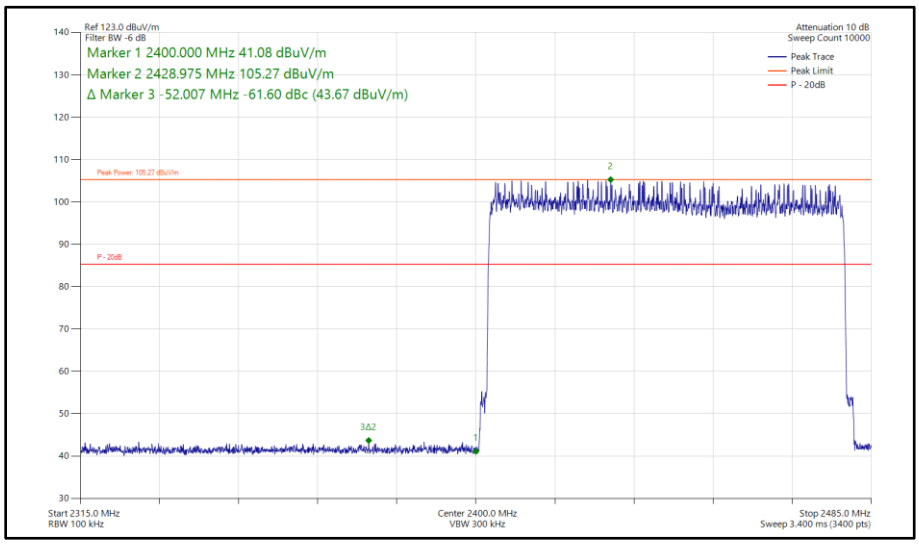

Figure 273 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - Hopping Band Edge Frequency 2400 MHz

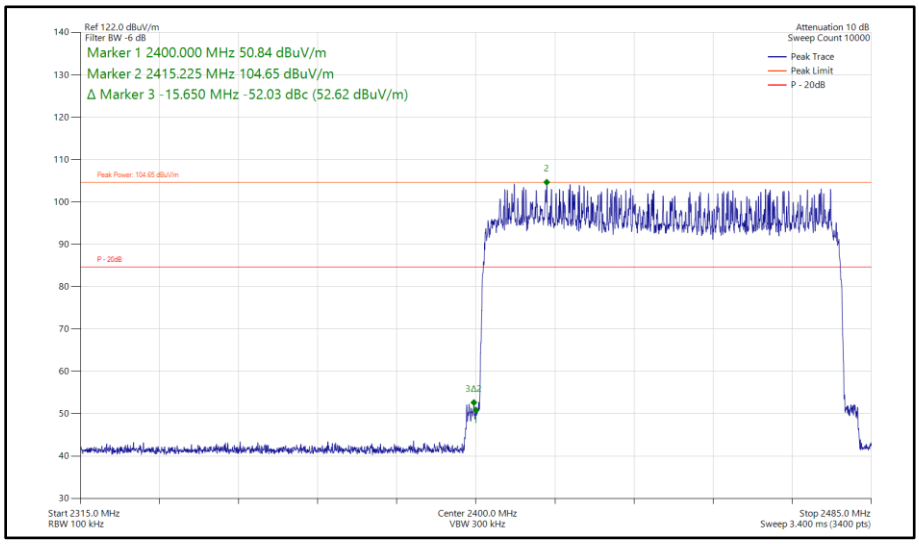

Figure 274 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - Hopping Band Edge Frequency 2400 MHz

ePA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	HDR4	2404	2400	-57.58
Static	HDR8	2404	2400	-46.61
Static	LE1M	2402	2400	-65.52
Static	LE2M	2402	2400	-33.86
Hopping	HDR4	Hopping	2400	-64.05
Hopping	HDR8	Hopping	2400	-59.01

Table 103 - SISO Authorised Band Edge Results

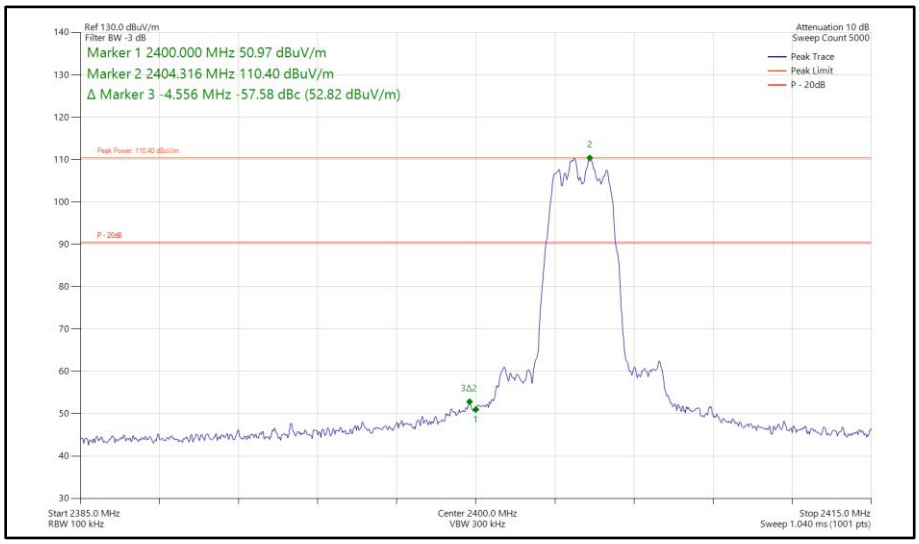

Figure 275 - Bluetooth HDR4, SISO, Core 0 - 2404 MHz Band Edge Frequency 2400 MHz

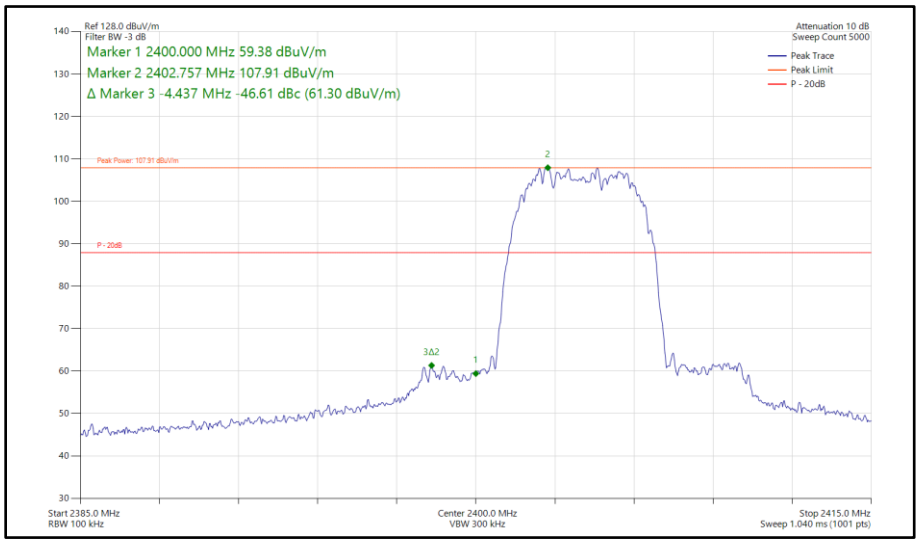

Figure 276 - Bluetooth HDR8, SISO, Core 0 - 2404 MHz Band Edge Frequency 2400 MHz

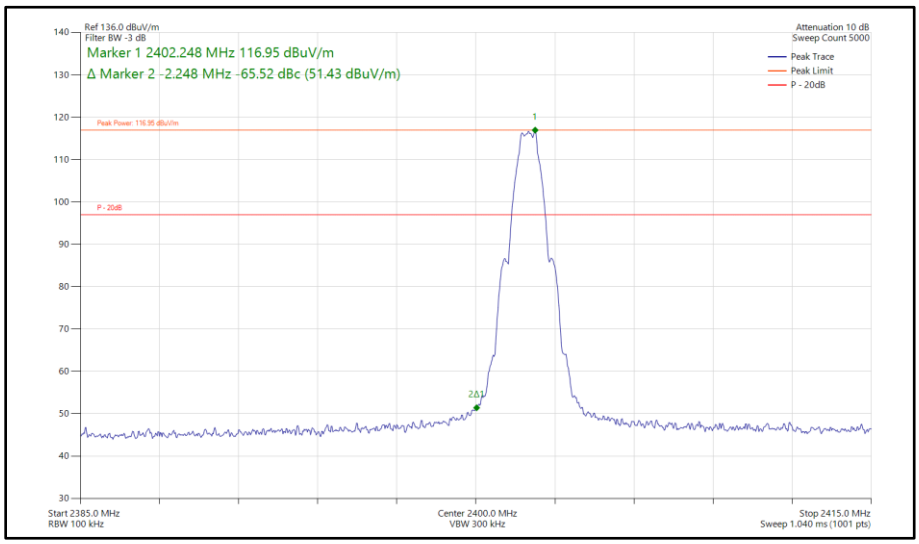

Figure 277 - Bluetooth LE1M, SISO, Core 0 - 2402 MHz Band Edge Frequency 2400 MHz

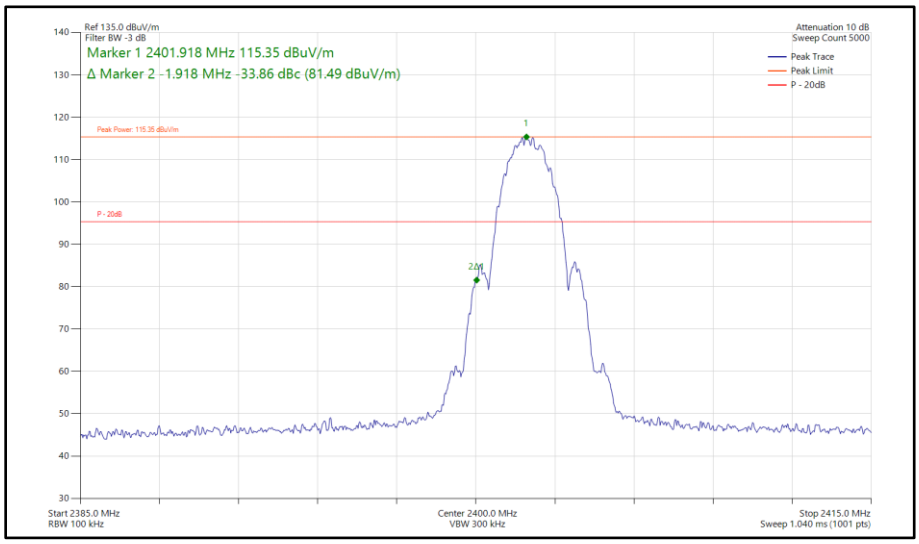

Figure 278 - Bluetooth LE2M, SISO, Core 0 - 2402 MHz Band Edge Frequency 2400 MHz

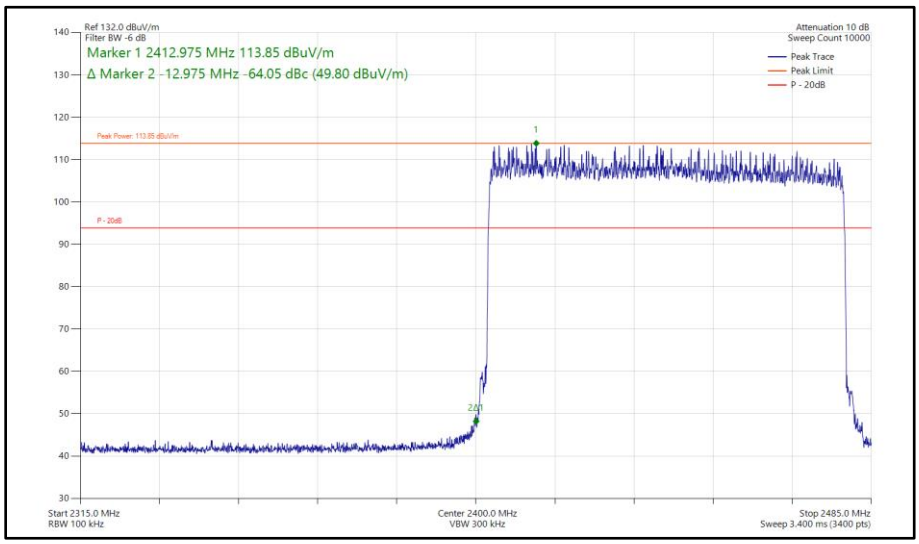

Figure 279 - Bluetooth HDR4, SISO, Core 0 - Hopping Band Edge Frequency 2400 MHz

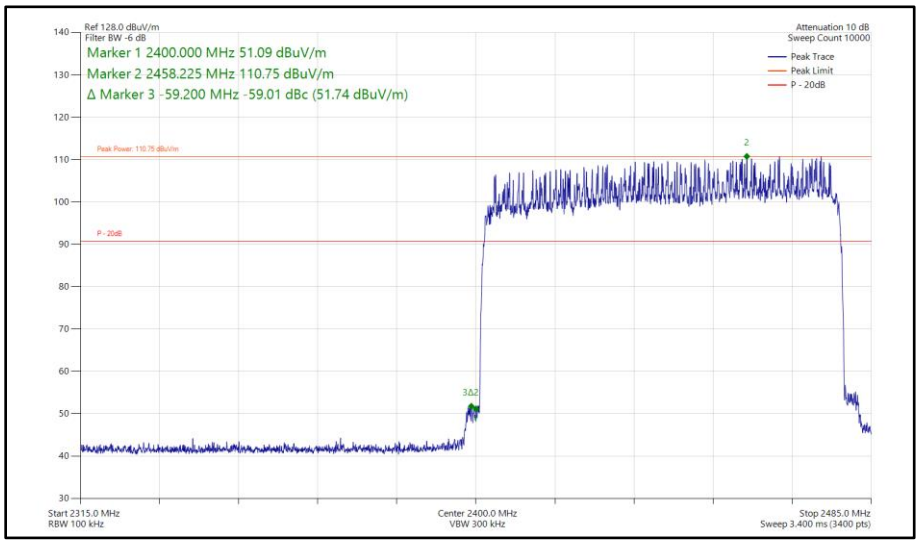

Figure 280 - Bluetooth HDR8, SISO, Core 0 - Hopping Band Edge Frequency 2400 MHz

ePA - Core 1 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	HDR4	2404	2400	-58.99
Static	HDR8	2404	2400	-48.70
Static	LE1M	2402	2400	-65.84
Static	LE2M	2402	2400	-34.24
Hopping	HDR4	Hopping	2400	-67.00
Hopping	HDR8	Hopping	2400	-58.37

Table 104 - SISO Authorised Band Edge Results

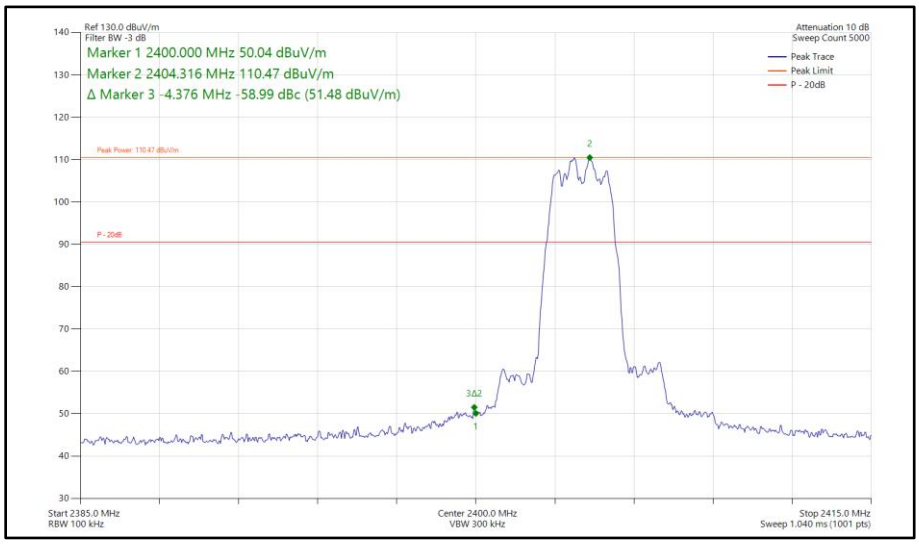

Figure 281 - Bluetooth HDR4, SISO, Core 1 - 2404 MHz Band Edge Frequency 2400 MHz

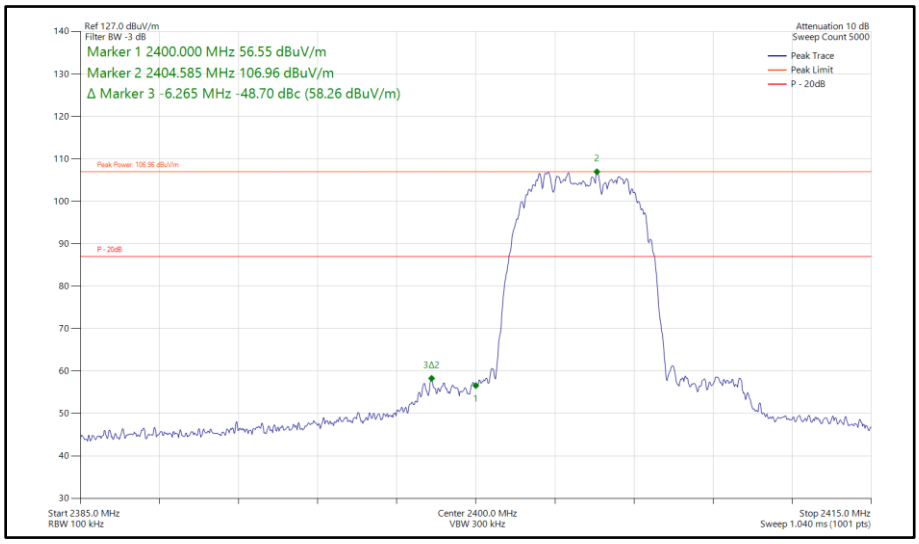

Figure 282 - Bluetooth HDR8, SISO, Core 1 - 2404 MHz Band Edge Frequency 2400 MHz

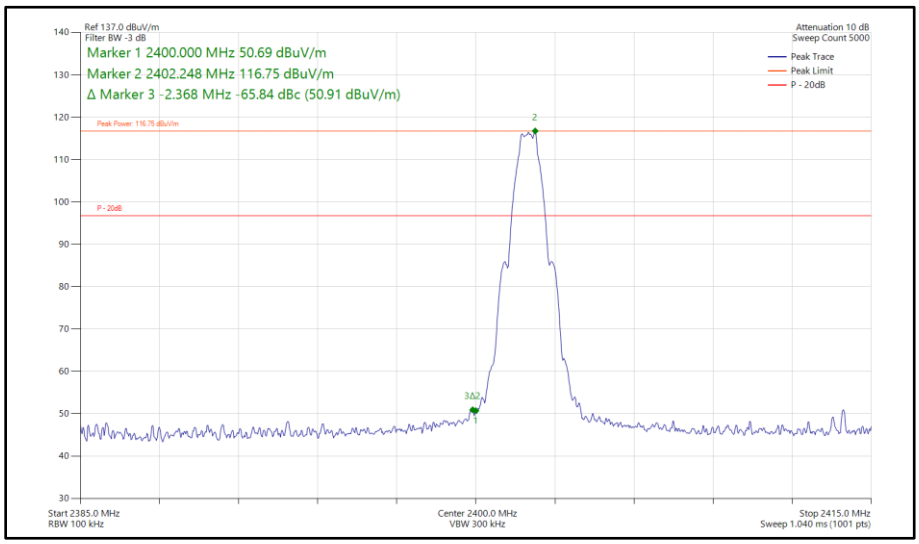

Figure 283 - Bluetooth LE1M, SISO, Core 1 - 2402 MHz Band Edge Frequency 2400 MHz

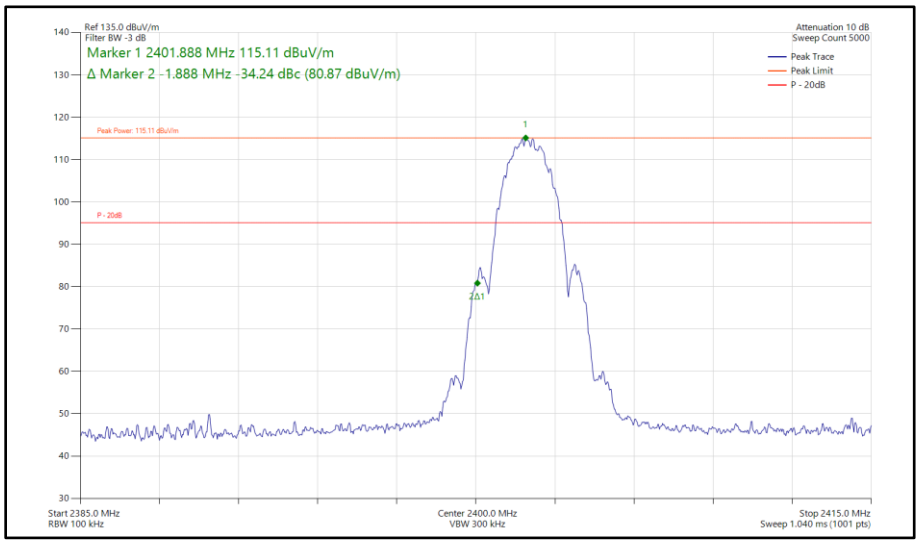

Figure 284 - Bluetooth LE2M, SISO, Core 1 - 2402 MHz Band Edge Frequency 2400 MHz

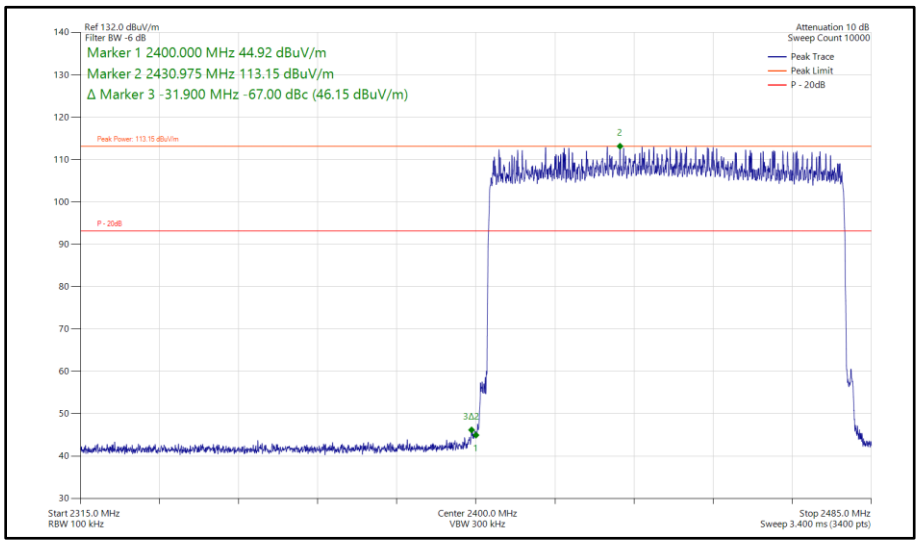

Figure 285 - Bluetooth HDR4, SISO, Core 1 - Hopping Band Edge Frequency 2400 MHz

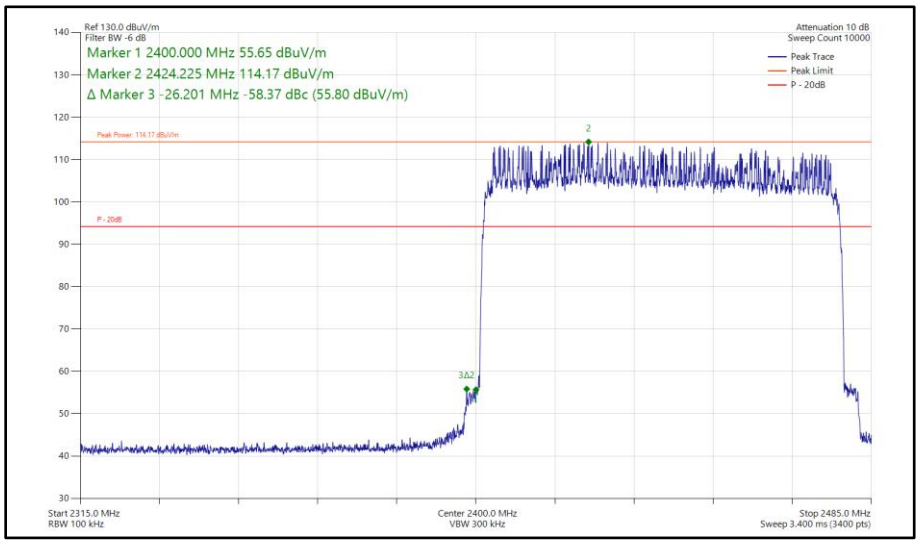

Figure 286 - Bluetooth HDR8, SISO, Core 1 - Hopping Band Edge Frequency 2400 MHz

ePA - Core 0 - Core 1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	HDR4	2404	2400	-59.77
Static	HDR8	2404	2400	-49.65
Static	LE1M	2402	2400	-65.67
Static	LE2M	2402	2400	-34.57
Hopping	HDR4	Hopping	2400	-67.79
Hopping	HDR8	Hopping	2400	-58.30

Table 105 - MIMO Authorised Band Edge Results

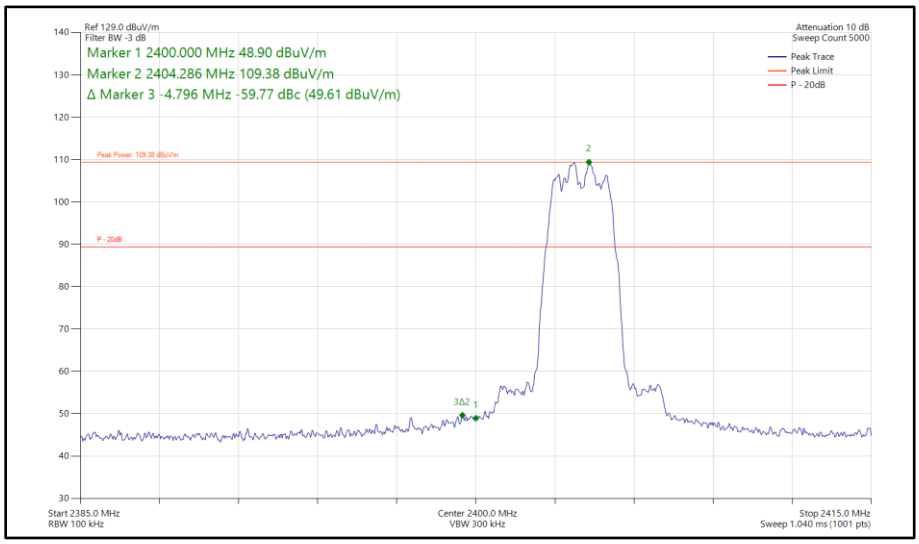

Figure 287 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 2404 MHz Band Edge Frequency 2400 MHz

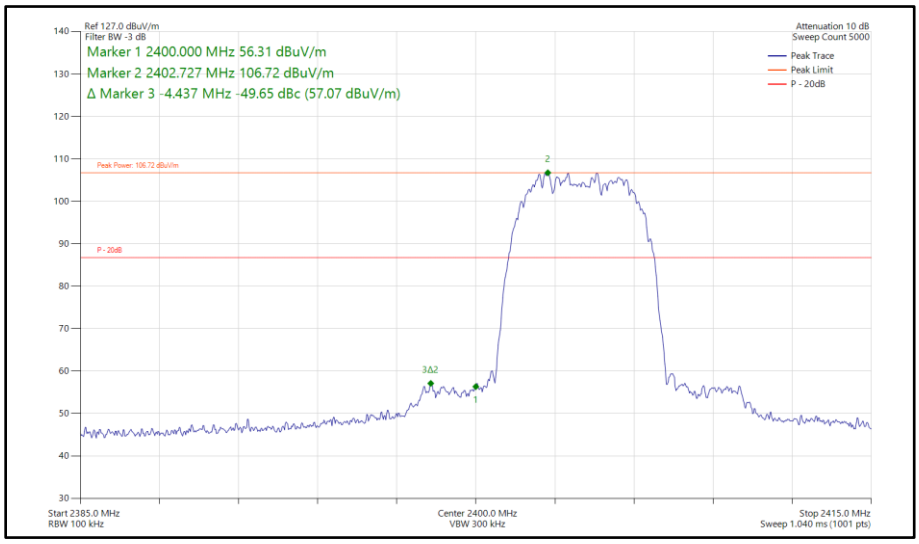

Figure 288 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 2404 MHz Band Edge Frequency 2400 MHz

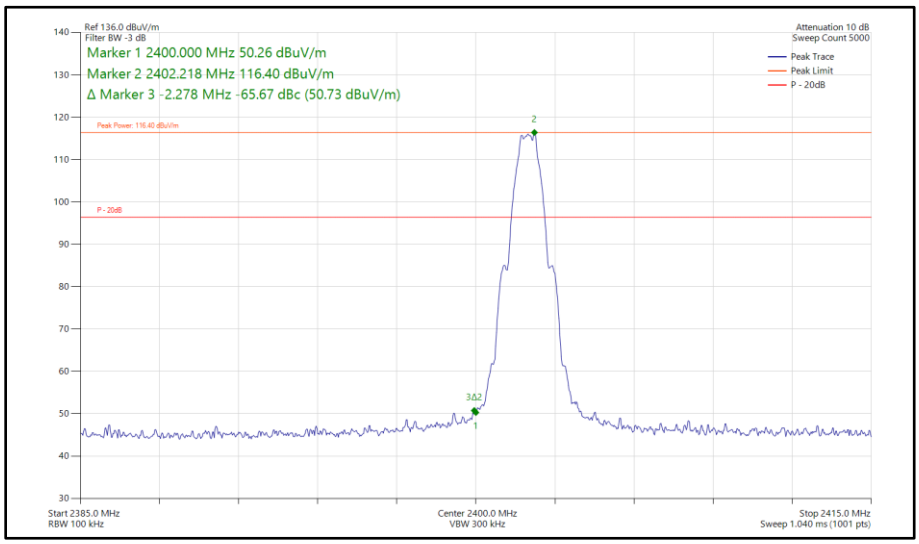

Figure 289 - Bluetooth LE1M, MIMO, Core 0 - Core 1 - 2402 MHz Band Edge Frequency 2400 MHz

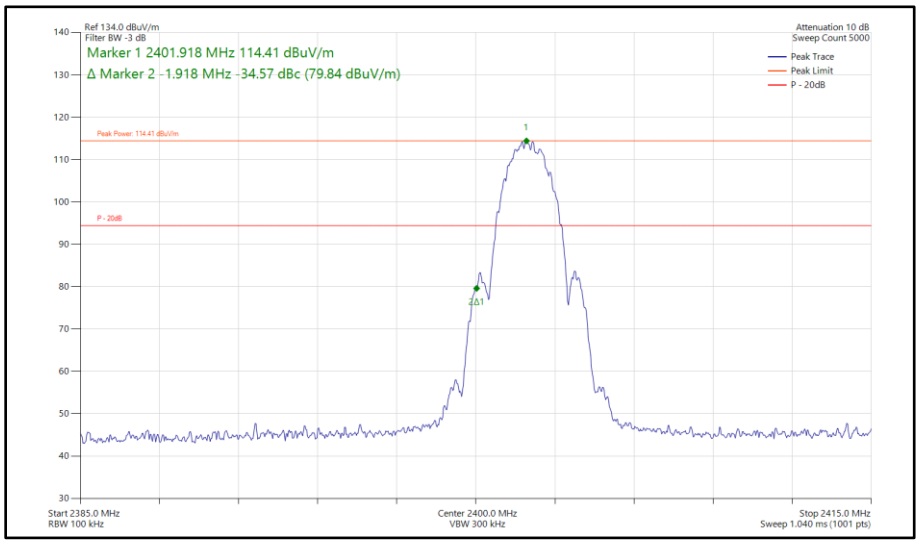

Figure 290 - Bluetooth LE2M, MIMO, Core 0 - Core 1 - 2402 MHz Band Edge Frequency 2400 MHz

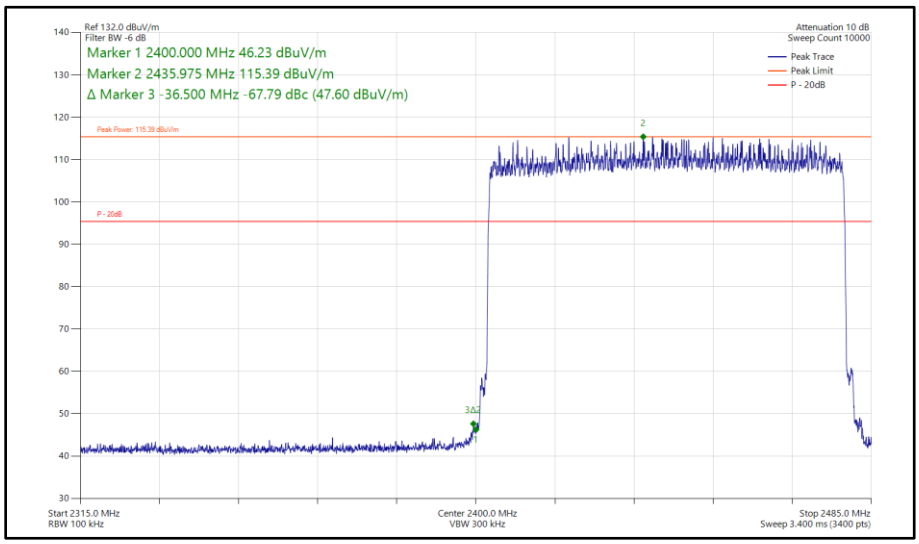

Figure 291 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - Hopping Band Edge Frequency 2400 MHz

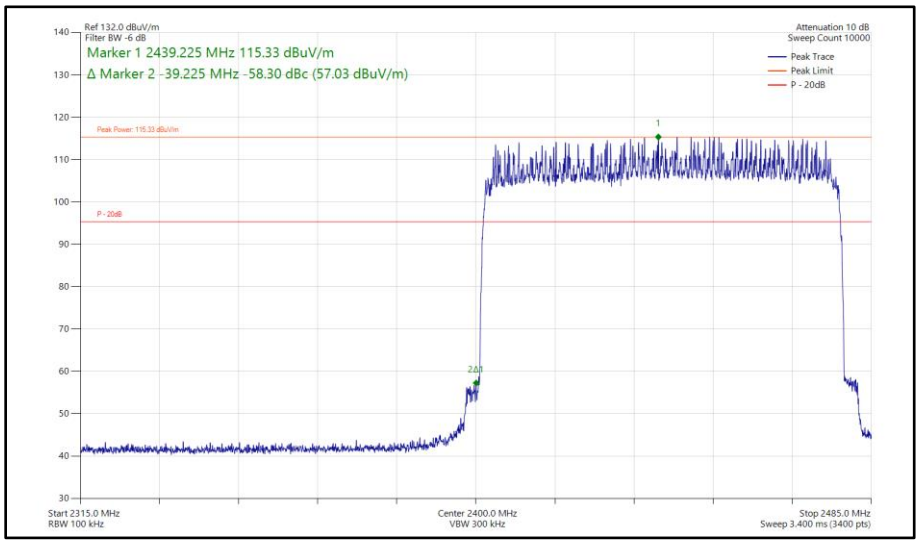

Figure 292 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - Hopping Band Edge Frequency 2400 MHz

FCC 47 CFR Part 15, Limit Clause 15.247 (d)

20 dB below the fundamental measured in a 100 kHz bandwidth using a peak detector. If the transmitter complies with the conducted power limits, based on the use of RMS averaging over a time interval, the attenuation required shall be 30 dB below the fundamental instead of 20 dB.

ISED RSS-247, Limit Clause 5.5

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

2.4.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 14 and RF Chamber 15.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.2.0	5125	-	Software
EMI Test Receiver	Rohde & Schwarz	ESW44	5911	12	11-Sep-2024
EMI Test Receiver	Rohde & Schwarz	ESW44	5912	12	05-Jul-2024
1500W (300V 12A) AC Power Supply	iTech	IT7324	5955	-	O/P Mon
1500W (300V 12A) AC Power Supply	iTech	IT7324	5956	-	O/P Mon
5m Semi-Anechoic Chamber (Dual-Axis)	Albatross Projects	RF Chamber 14	5958	36	26-Apr-2025
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5960	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5961	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5962	-	TU
5m Semi-Anechoic Chamber (Dual-Axis), Chamber 15	Albatross Projects	RF Chamber 15	5963	36	28-Apr-2025
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5966	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5967	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5968	-	TU
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5996	12	05-Jun-2024
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5997	12	14-Sep-2024
Cable (SMA to SMA 6.5m)	Junkosha	MWX221-06500AMSAMS/B	6003	12	05-Jun-2024
Cable (N to N 1m)	Junkosha	MWX221-01000AMSAMS/B	6009	12	05-Jun-2024

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6141	12	26-Aug-2024
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6142	12	26-Aug-2024
Digital Multimeter	Fluke	115	6145	12	15-Jun-2024
Digital Multimeter	Fluke	115	6147	12	16-Jun-2024
Humidity & Temperature meter	R.S Components	1364	6149	12	07-Jul-2024
SAC Switch Unit	TUV SUD	TUV_SSU_001	6191	12	18-Dec-2024
SAC Switch Unit	TUV SUD	TUV_SSU_004 PLC	6349	12	01-May-2024*
SAC Switch Unit	TUV SUD	TUV_SSU_004 PLC	6349	12	02-May-2025*
Humidity and Temperature Meter	R.S Components	1364	6149	12	07-Jul-2024
1m Cable	Junkosha	MWX241-01000AMSAMS/B	6740	12	01-Feb-2025
1m Cable	Junkosha	MWX241-01000AMSAMS/B	6741	12	01-Feb-2025
6.5m Cable	Junkosha	MWX221-06500AMSAMS/B	6744	12	01-Feb-2025

Table 106

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

NOTE: *Only used within calibration period.

2.5 Spurious Radiated Emissions

2.5.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.209 and 15.247 (d)
ISED RSS-247, Clause 3.3 and 5.5
ISED RSS-GEN, Clause 6.13 and 8.9

2.5.2 Equipment Under Test and Modification State

A3247, S/N: KN47NTDQRY - Modification State 0

2.5.3 Date of Test

06-May-2024 to 22-June-2024

2.5.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 6.3, 6.5 and 6.6.

For frequencies > 1 GHz, plots for average measurements were taken in accordance with ANSI C63.10, clause 11.12.2.5.1.

The EUT was placed on the non-conducting platform in a manner typical of a normal installation.

Ports on the EUT were terminated with loads as described in ANSI C63.4 clause 6.2.4. For EUT's with multiple connectors of the same type, additional interconnecting cables were connected, and pre-scans performed to determine whether the level of the emissions were increased by >2 dB.

In the 30 MHz to 1 GHz range pre-scans were only performed on the mid channel (2440 MHz) only.

The plots shown are the characterisation of the EUT. The limits on the plots represent the most stringent case for restricted bands, (74/54 dBuV/m) when compared to 20 dBc outside restricted bands. The limits shown have been used as a threshold to determine where further measurements are necessary. Where results are within 10 dB of the limits shown on the plots, further investigation was carried out and reported in results tables.

The following conversion can be applied to convert from dBµV/m to µV/m:
10^(Field Strength in dBµV/m/20).

Above 18 GHz, the measurement distance was reduced to 1 m. The limit line was increased by 20*LOG(3/1) = 9.54 dB.

Where formal measurements have been necessary, the results have been presented in the emissions table.

2.5.5 Example Test Setup Diagram

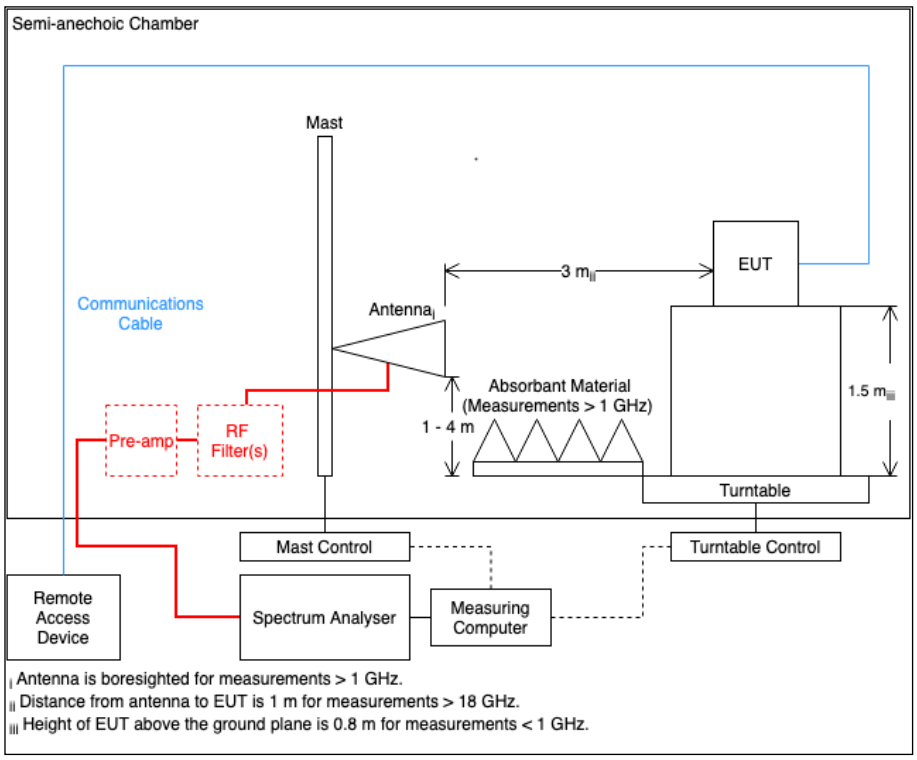

Figure 293

2.5.6 Environmental Conditions

Ambient Temperature	20.4 - 23.1 °C
Relative Humidity	39.2 - 45.7 %

2.5.7 Test Results

2.4 GHz Bluetooth LE/HDR

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2370.562	58.36	74.00	-15.64	Peak	117	104	Horizontal
2374.576	34.03	54.00	-19.97	RMS	254	271	Horizontal
2374.710	34.09	54.00	-19.91	RMS	207	180	Vertical

Table 107 - 2402 MHz (CH37), LE1M, ePA, Core 0 + Core 1, 1 GHz to 26 GHz

No other emissions found within 10 dB of the limit.

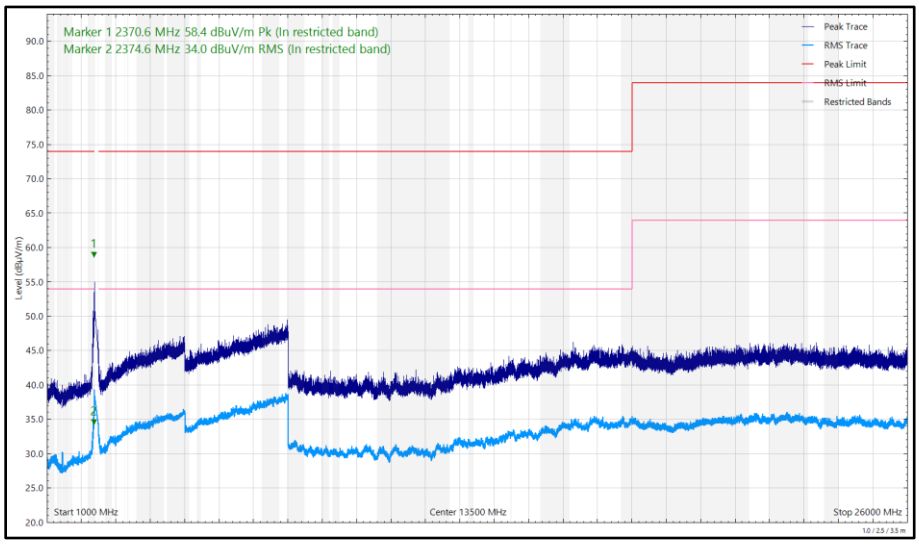

Figure 294 - 2402 MHz (CH37), LE1M, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

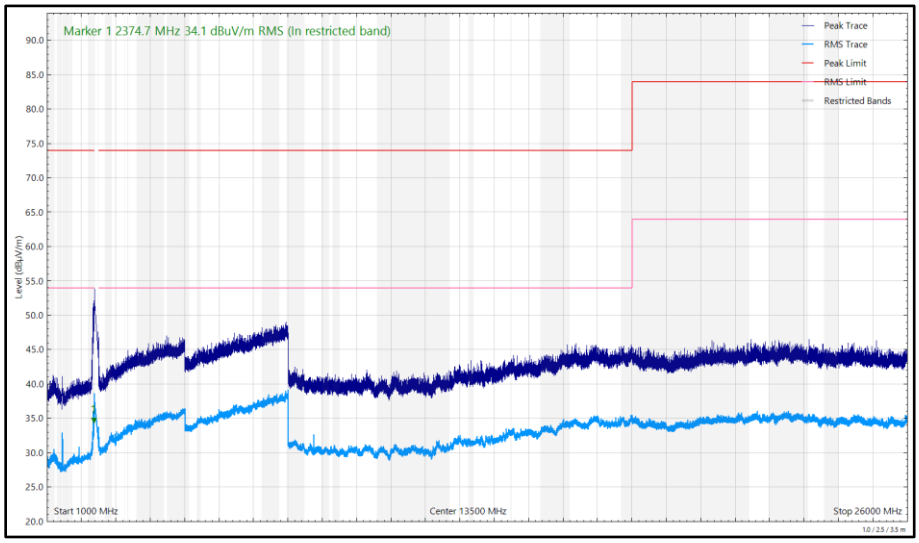

Figure 295 - 2402 MHz (CH37), LE1M, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2375.295	58.19	74.00	-15.81	Peak	121	120	Horizontal
2389.927	34.28	54.00	-19.72	RMS	199	193	Vertical
2483.564	35.34	54.00	-18.66	RMS	115	115	Horizontal
2483.820	34.38	54.00	-19.62	RMS	193	168	Vertical

Table 108 - 2440 MHz (CH17), LE1M, ePA, Core 0 + Core 1, 30 MHz to 26 GHz

No other emissions found within 10 dB of the limit.

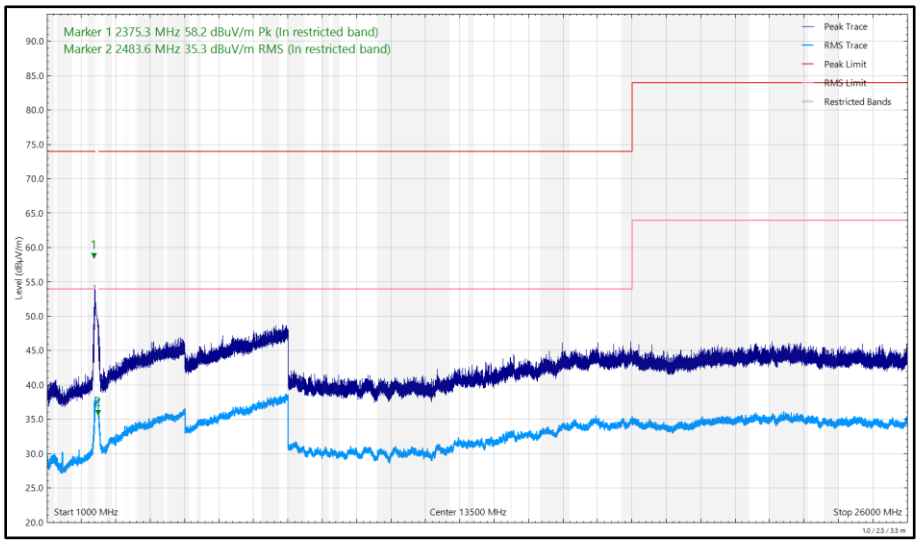

Figure 296 - 2440 MHz (CH17), LE1M, ePA, Core 0 + Core 1, 30 MHz to 26 GHz, Horizontal

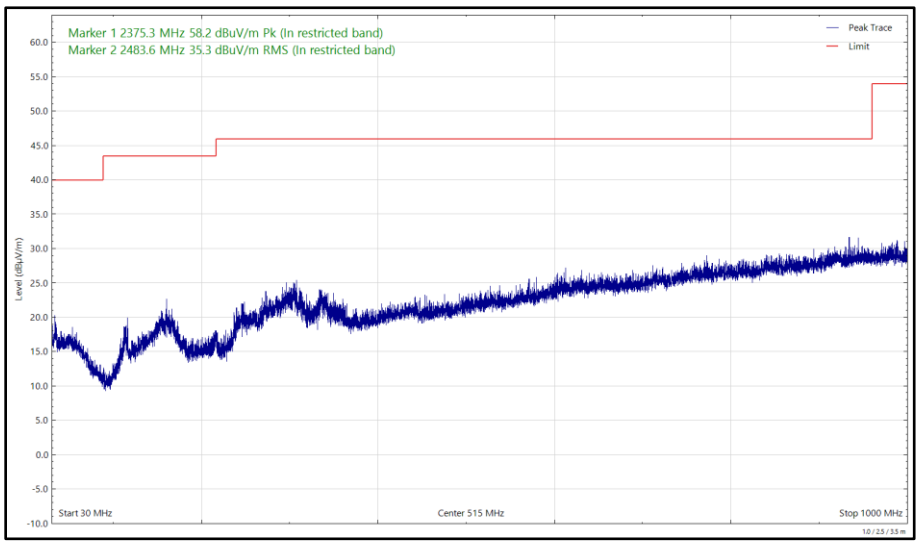

Figure 297 - 2440 MHz (CH17), LE1M, ePA, Core 0 + Core 1, 30 MHz to 26 GHz, Horizontal (Peak)