

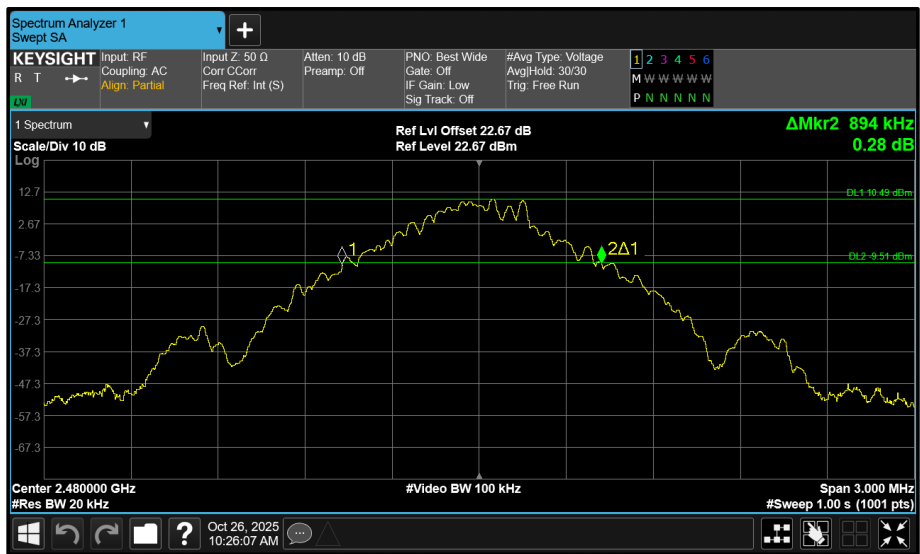


Figure 66 - Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(1) RSS-247 6.2.3.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	-	0.930	-	-
2441	-	0.933	-	-
2480	-	0.933	-	-

Table 43 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	-	0.828	-	-	-
2441	-	0.831	-	-	-
2480	-	0.828	-	-	-

Table 44 - 99% Bandwidth Results

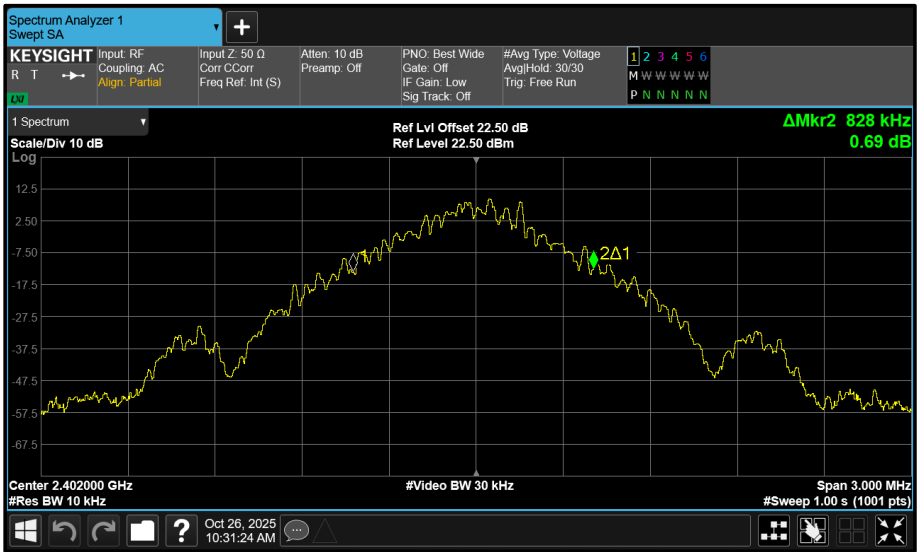


Figure 67 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

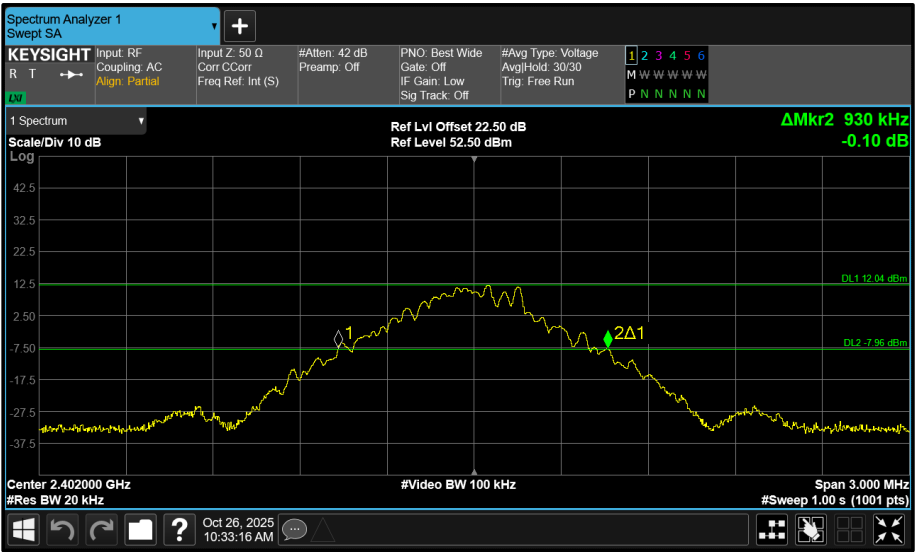


Figure 68 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

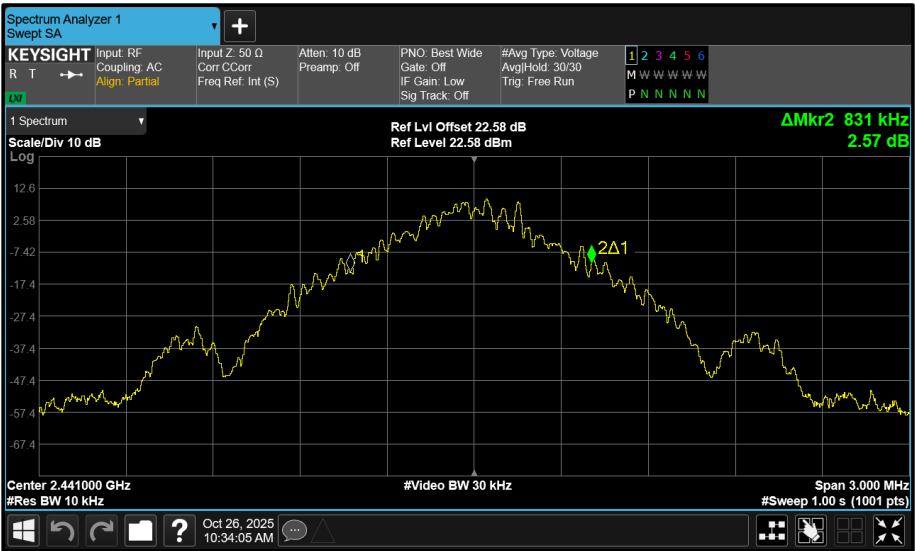


Figure 69 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

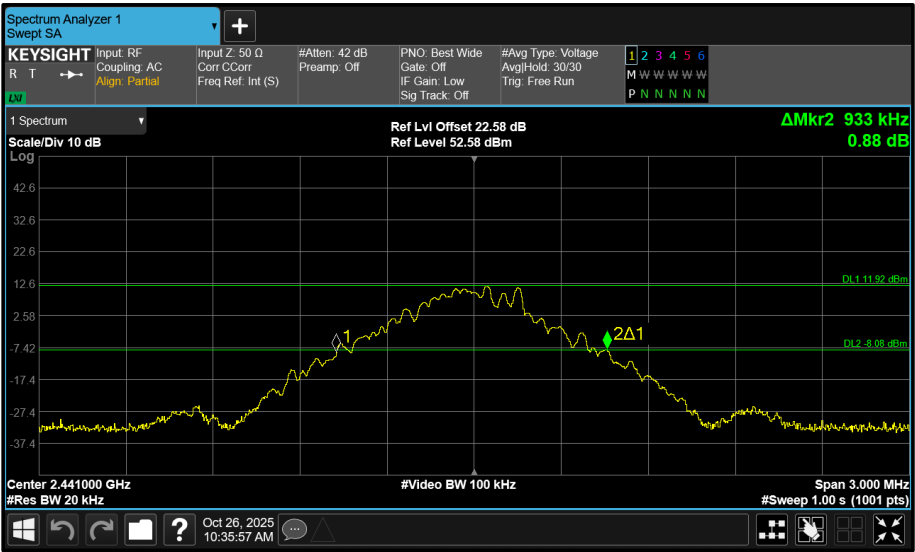


Figure 70 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

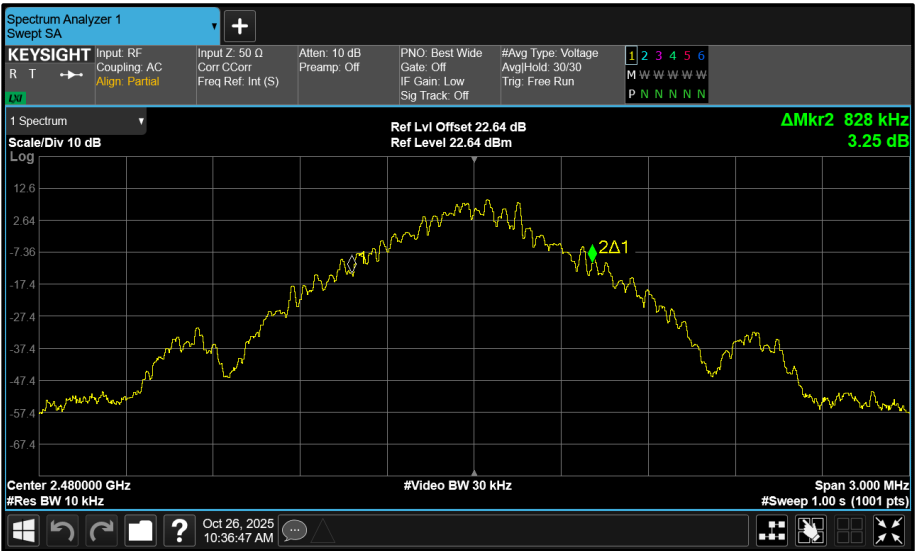


Figure 71 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth





Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(1) RSS-247 6.2.3.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		

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

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	0.894	0.894	-	-
2441	0.891	0.891	-	-
2480	0.894	0.891	-	-

Table 45 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	0.828	0.825	-	-	-
2441	0.831	0.828	-	-	-
2480	0.825	0.828	-	-	-

Table 46 - 99% Bandwidth Results

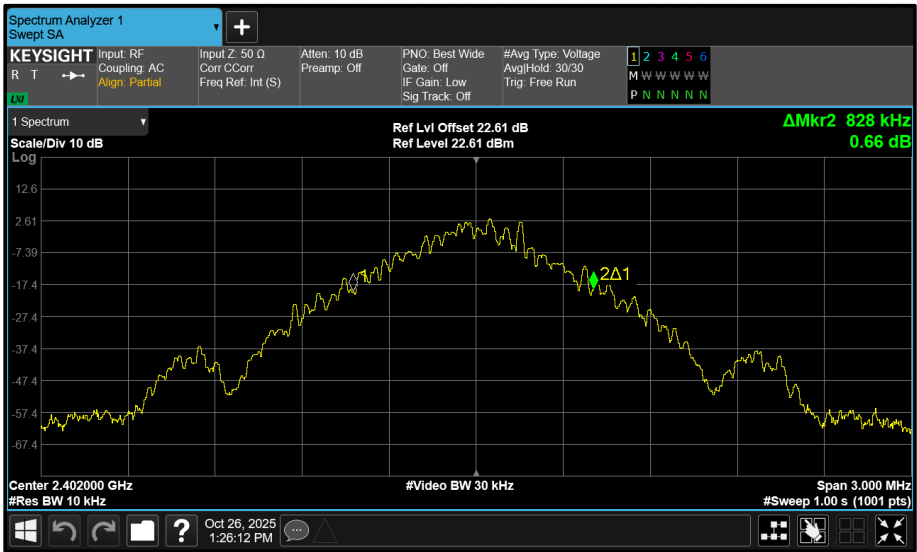


Figure 73 - Core 0 (A) 2402 MHz (CH0) 99% Bandwidth

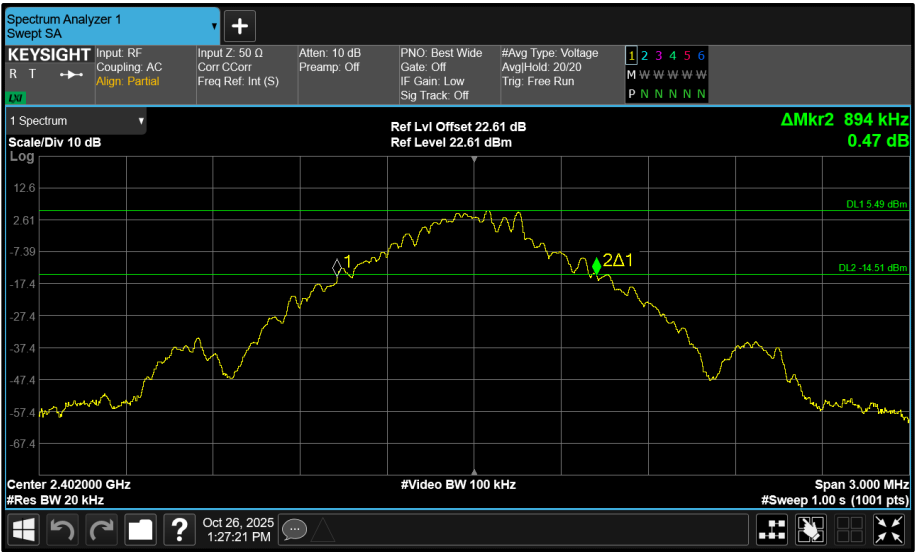


Figure 74 - Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

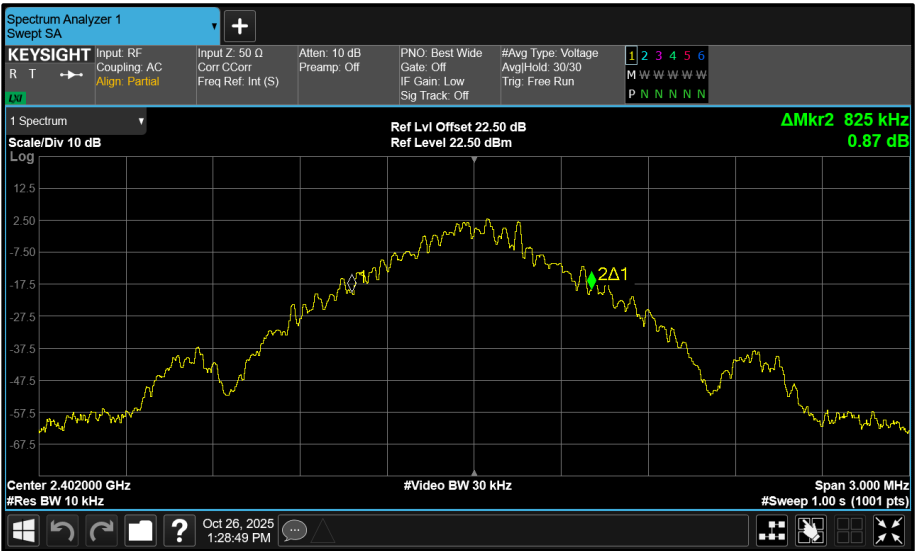


Figure 75 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

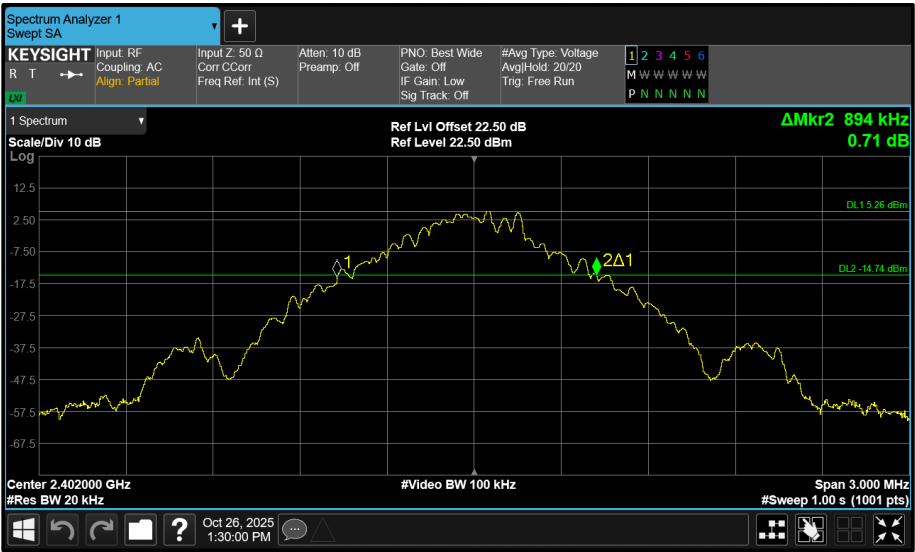


Figure 76 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

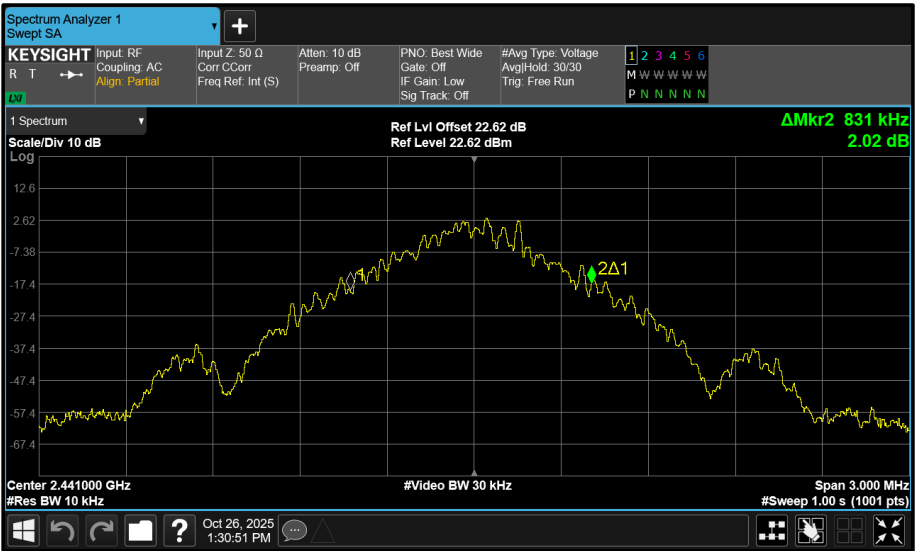


Figure 77 - Core 0 (A) 2441 MHz (CH39) 99% Bandwidth

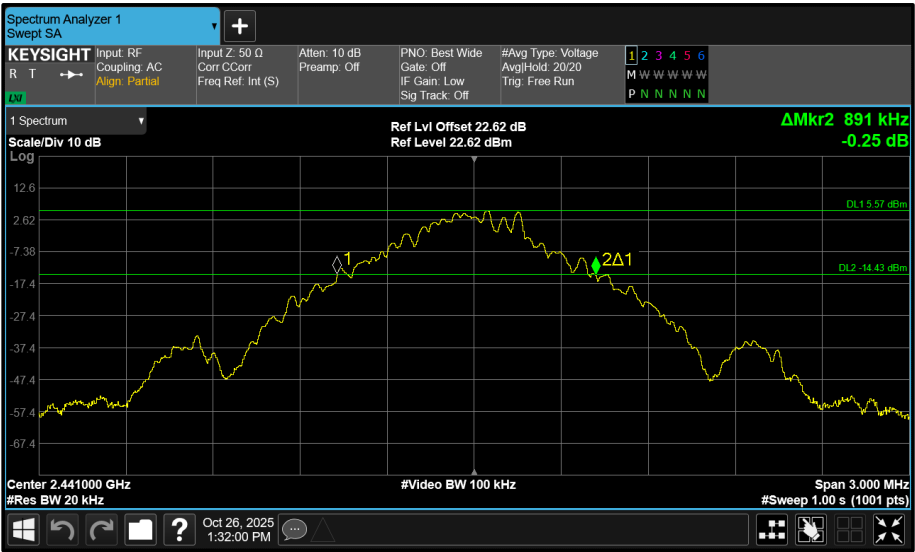


Figure 78 - Core 0 (A) 2441 MHz (CH39) 20 dB Bandwidth

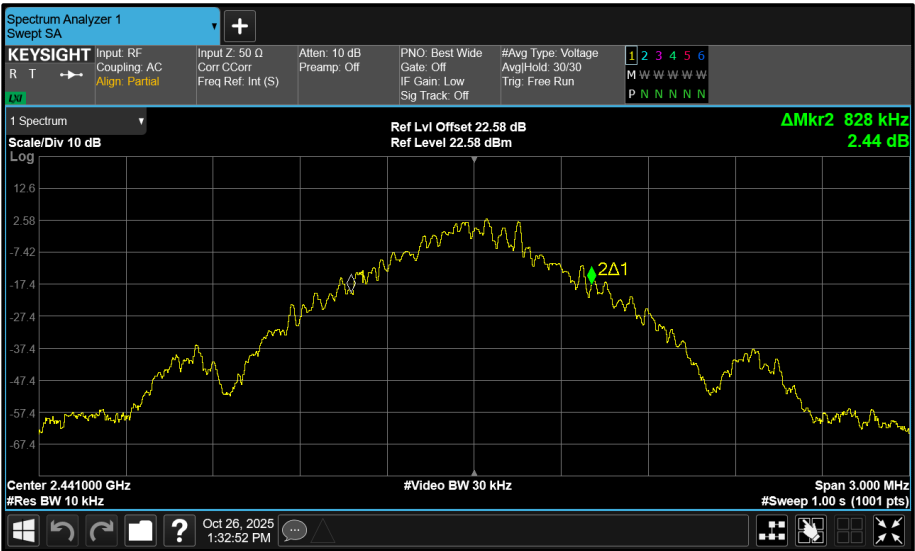


Figure 79 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

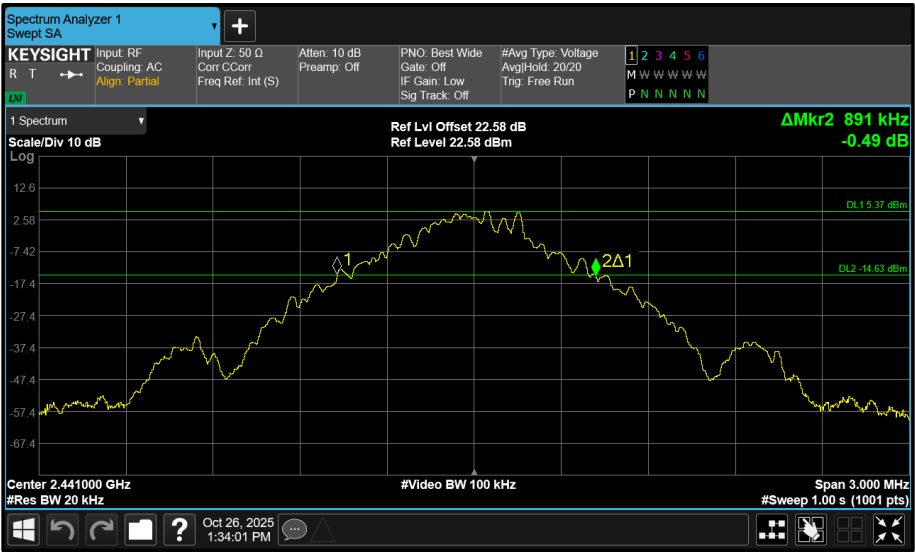


Figure 80 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

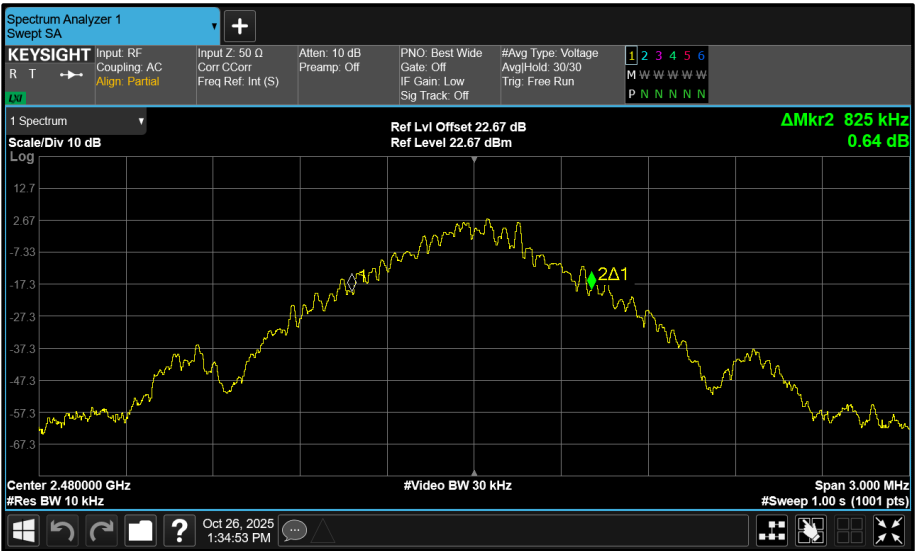


Figure 81 - Core 0 (A) 2480 MHz (CH78) 99% Bandwidth

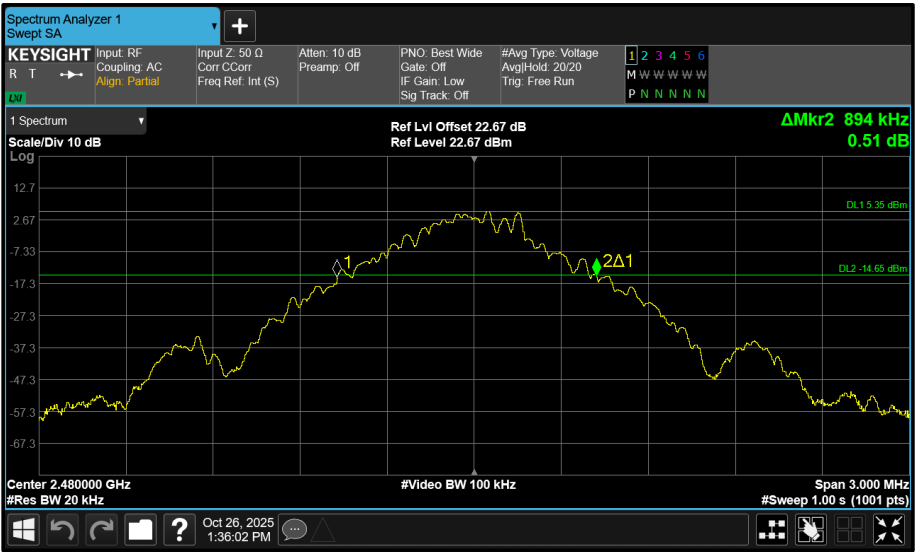


Figure 82 - Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

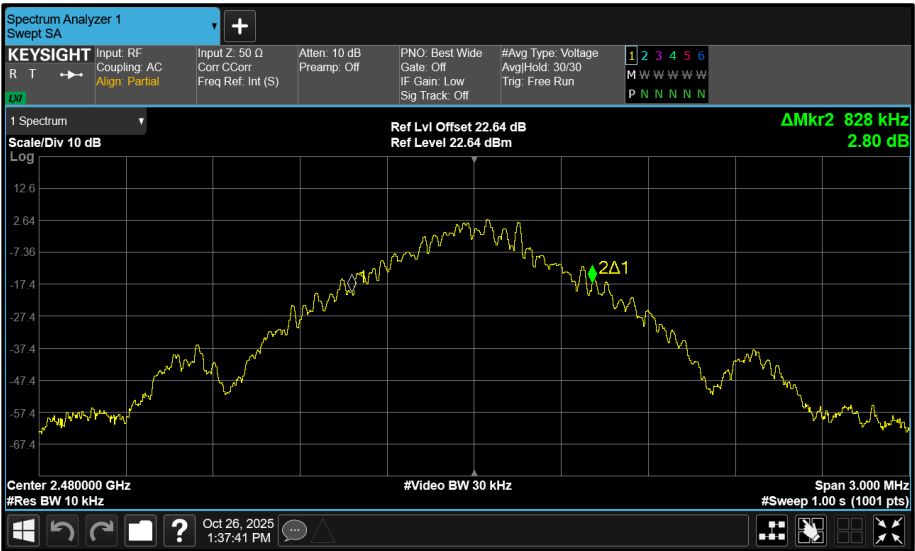


Figure 83 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth

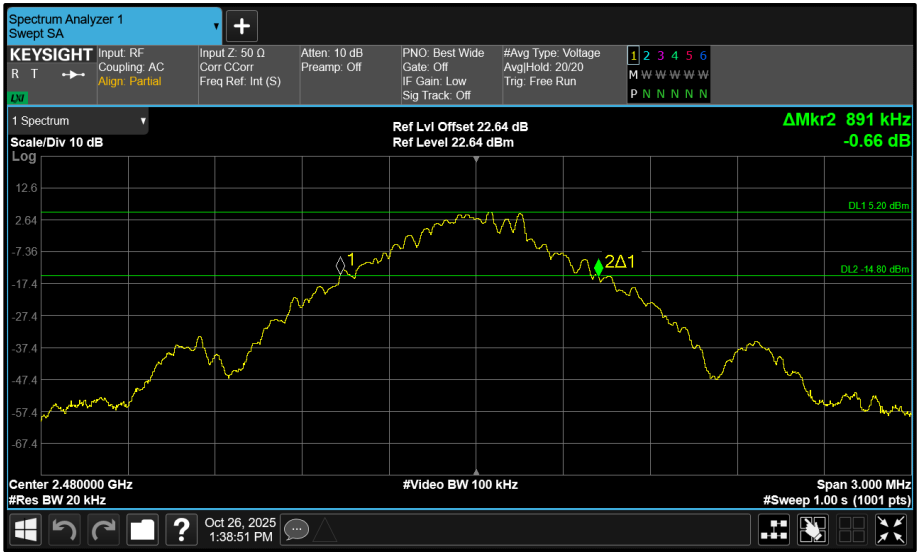


Figure 84 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth



Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (a)(1) RSS-247 6.2.3.1	Test Method(s):	C63.10 6.9.3 C63.10 6.9.2
Additional Reference(s):	-		
Note(s):	TxBF cores were tested independently whilst transmitting at the cores respective powers and summed after test		

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

Test Frequency (MHz)	20 dB Bandwidth (MHz)			
	A	B	C	D
2402	0.891	0.891	-	-
2441	0.891	0.891	-	-
2480	0.891	0.891	-	-

Table 47 - 20 dB Bandwidth Results

Test Frequency (MHz)	99% Bandwidth (MHz)				Limit (kHz)
	A	B	C	D	
2402	0.828	0.828	-	-	-
2441	0.828	0.828	-	-	-
2480	0.828	0.828	-	-	-

Table 48 - 99% Bandwidth Results

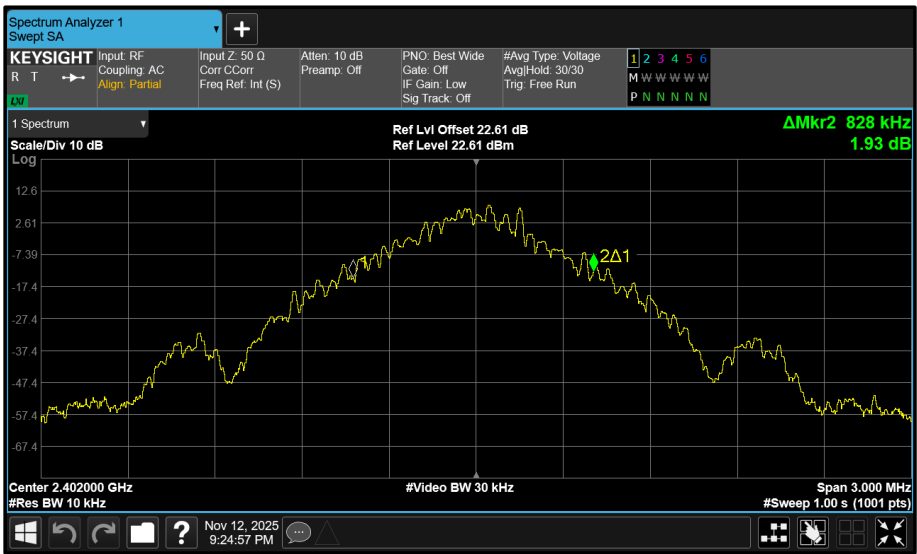


Figure 85 - Core 0 (A) 2402 MHz (CH0) 99% Bandwidth

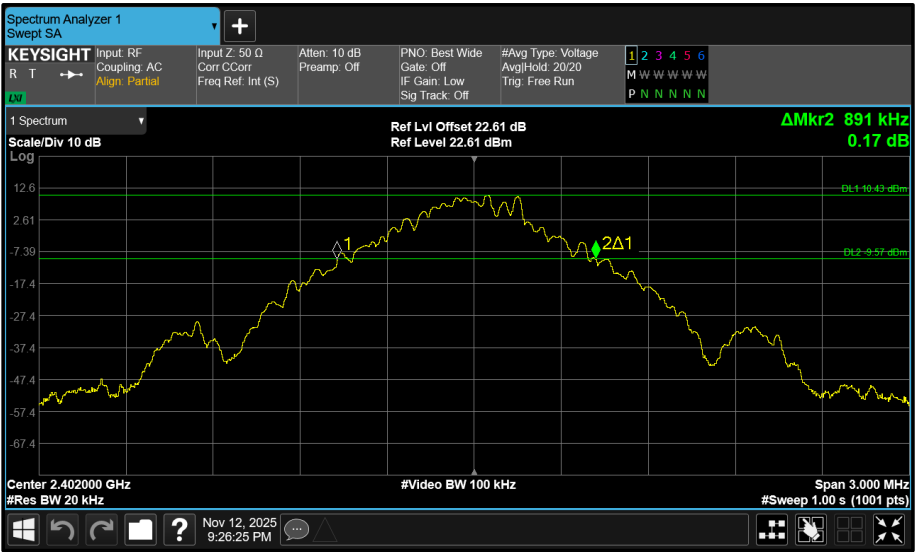


Figure 86 - Core 0 (A) 2402 MHz (CH0) 20 dB Bandwidth

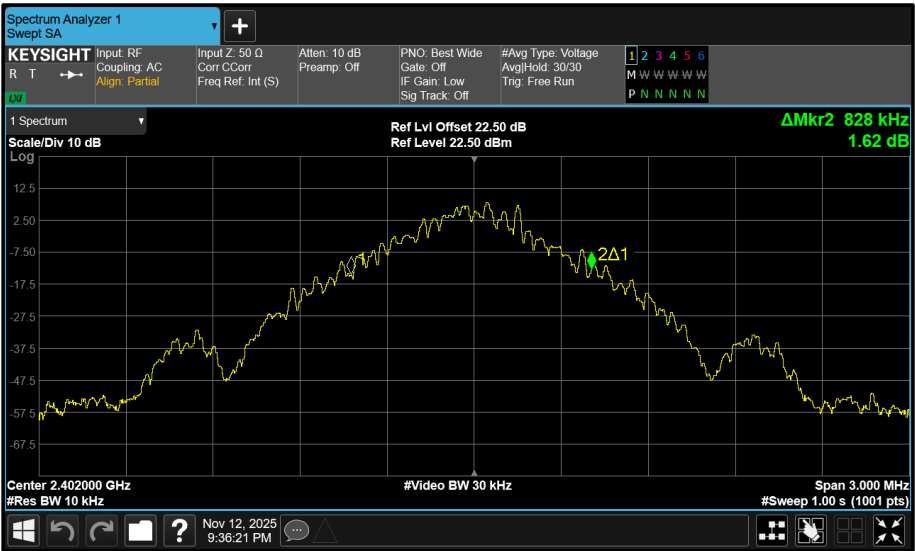


Figure 87 - Core 1 (B) 2402 MHz (CH0) 99% Bandwidth

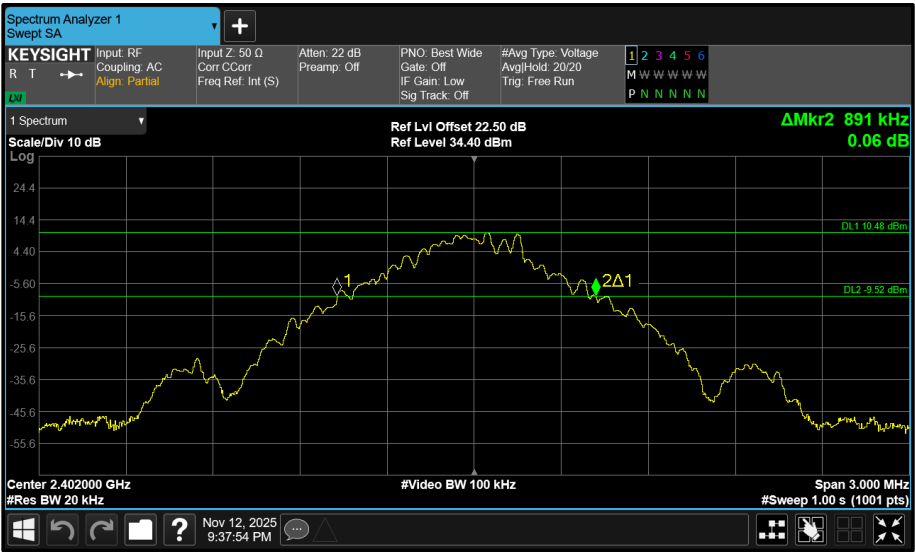


Figure 88 - Core 1 (B) 2402 MHz (CH0) 20 dB Bandwidth

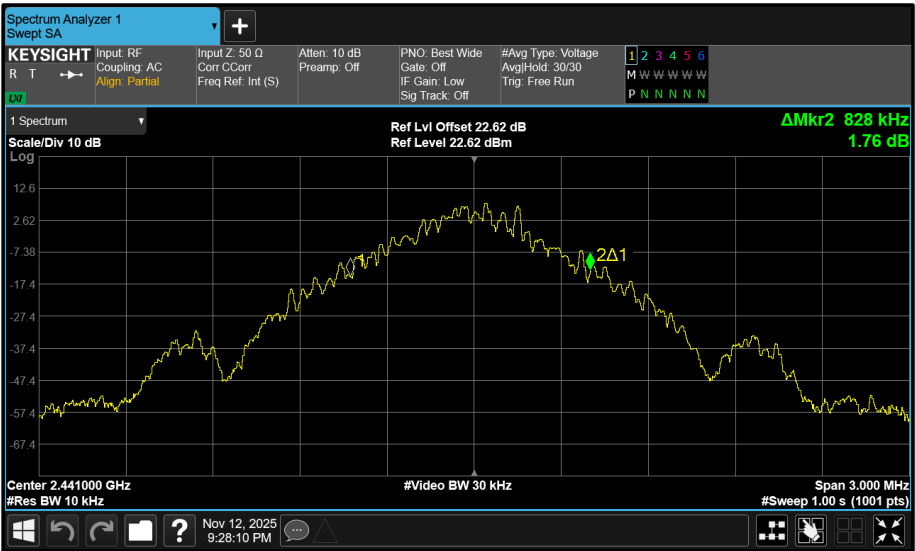


Figure 89 - Core 0 (A) 2441 MHz (CH39) 99% Bandwidth

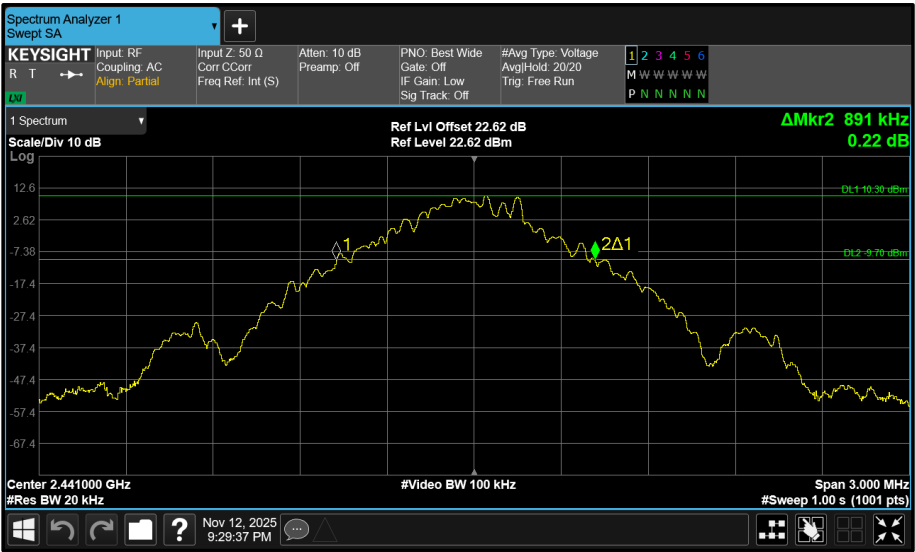


Figure 90 - Core 0 (A) 2441 MHz (CH39) 20 dB Bandwidth

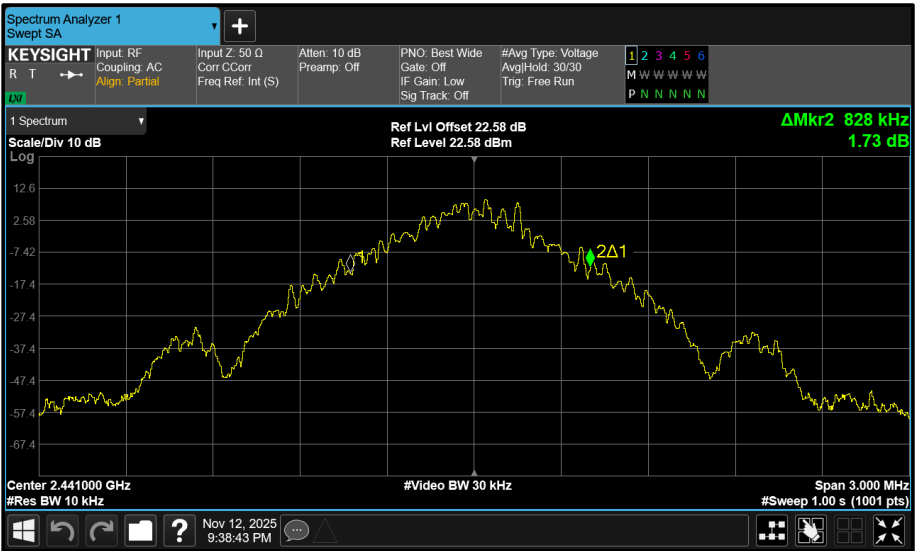


Figure 91 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

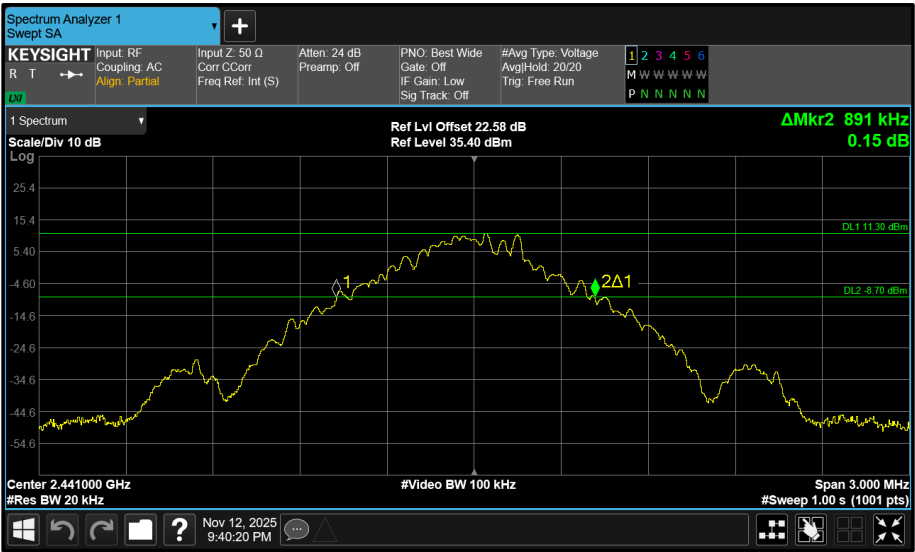


Figure 92 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

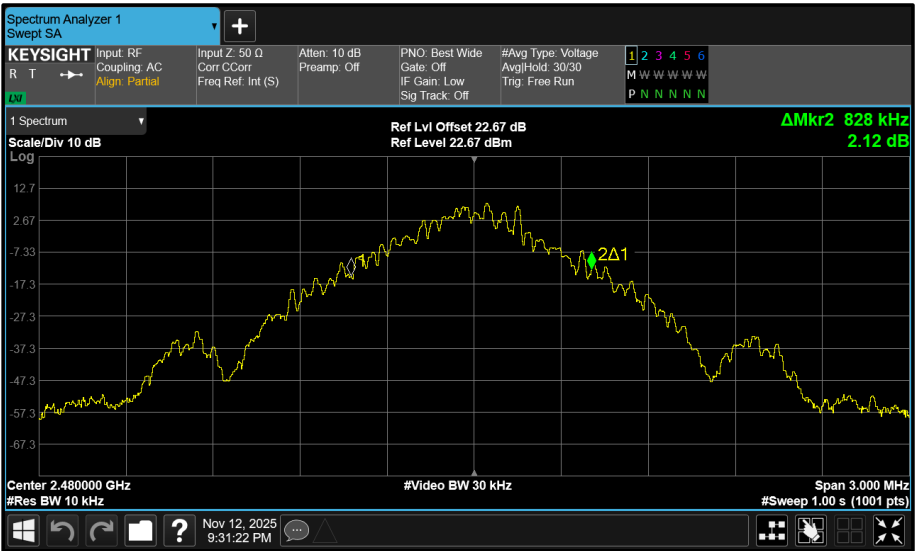


Figure 93 - Core 0 (A) 2480 MHz (CH78) 99% Bandwidth

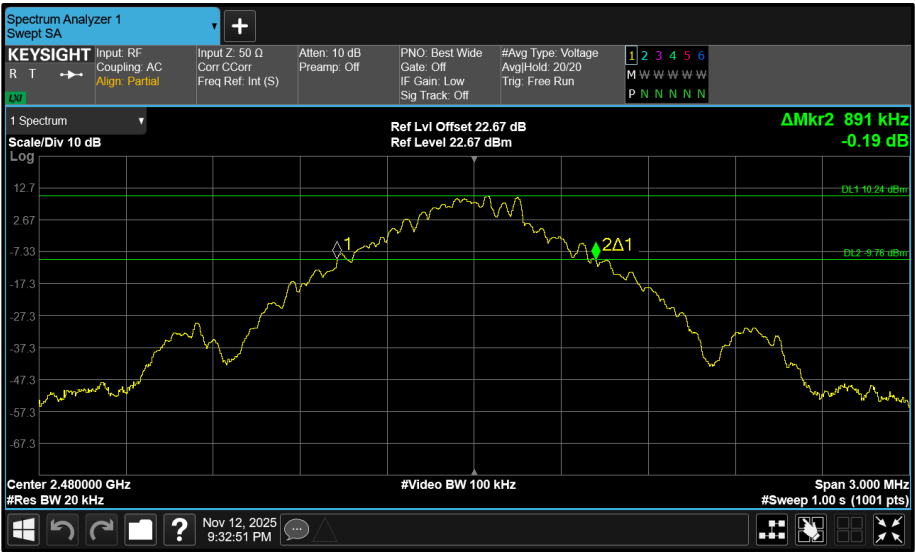


Figure 94 - Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

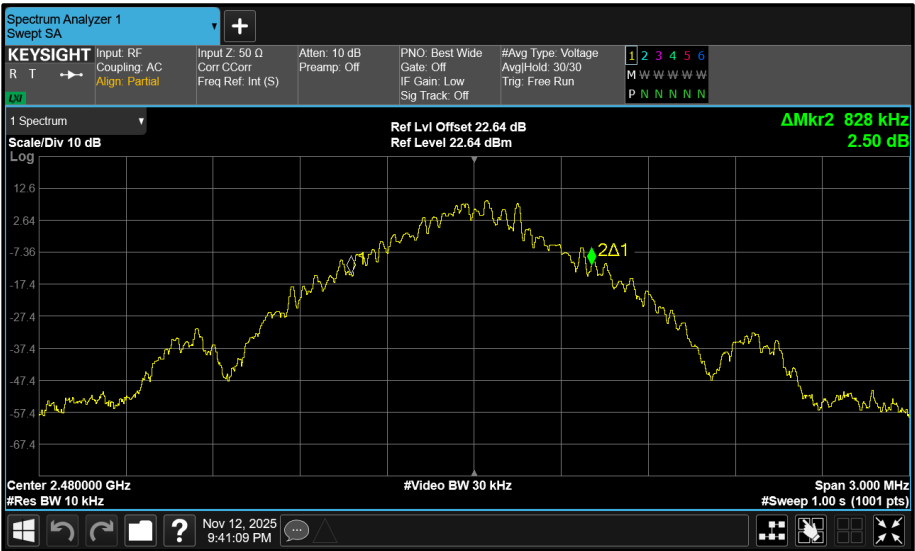


Figure 95 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth

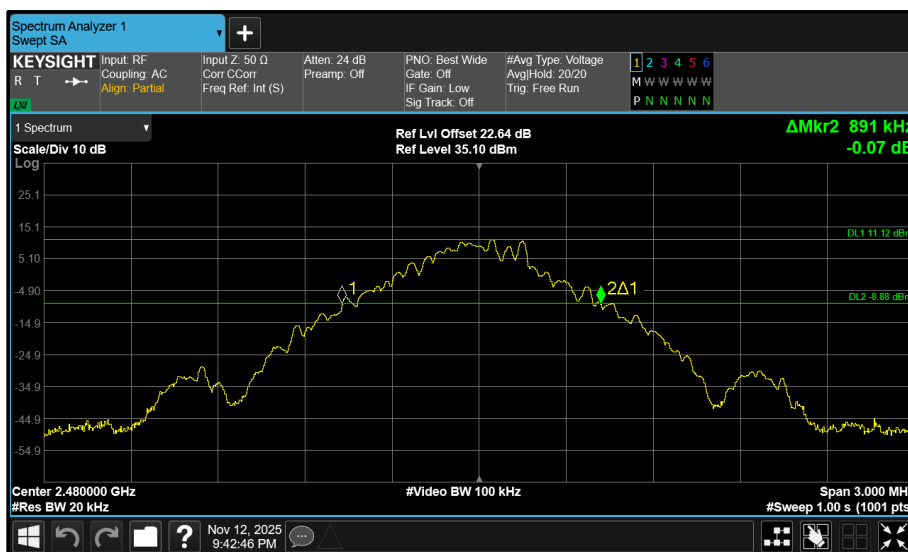


Figure 96 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

FCC 47 CFR Part 15 and ISSED RSS-247 Limit Clause 6.2.3.1

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
AC Programmable Power Supply	iTech	IT7324	5225	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5529	24	02-Jan-2027
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6426	12	12-Feb-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6752	12	12-Feb-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6753	12	12-Feb-2026
Humidity & Temperature meter	Fluke	971	7103	12	05-Aug-2026
Multimeter	Fluke	115	7115	12	13-Aug-2026

Table 49

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 6.2.3.2
ISED RSS-GEN, Clause 6.12

2.6.2 Equipment Under Test and Modification State

A3448, S/N: C9465H6XJV - Modification State 0
A3448, S/N: C6N23Y607Y - Modification State 0

2.6.3 Date of Test

26-October-2025 to 25-November-2025

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, with the Beamforming results Directional Gain being calculated in accordance with clause F)2)d)(i)

2.6.5 Environmental Conditions

Ambient Temperature	22.6 - 23.8 °C
Relative Humidity	36.5 - 53.9 %



2.6.6 Test Results

2.4 GHz Bluetooth FHSS

Test Configuration			
Frequency Range:	2400-2483.5 MHz	Band:	2.4 GHz
Limit Clause(s):	15.247 (b)(1) RSS-247 6.2.3.2	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	76.4
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	5.20

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	9.27	-	-	-	9.27	30.00	-20.73
2441	9.18	-	-	-	9.18	30.00	-20.82
2480	9.13	-	-	-	9.13	30.00	-20.87

Table 50 - 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	9.27	-	-	-	9.27	30.00	-20.73	14.07	36.00	-21.93
2441	9.18	-	-	-	9.18	30.00	-20.82	14.38	36.00	-21.62
2480	9.13	-	-	-	9.13	30.00	-20.87	14.33	36.00	-21.67

Table 51 - 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 6.2.3.2	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	iPA GFSK (DH5)	Duty Cycle (%):	76.4
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	4.80

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	9.03	-	-	9.03	30.00	-20.97
2441	-	9.13	-	-	9.13	30.00	-20.87
2480	-	9.12	-	-	9.12	30.00	-20.88

Table 52 - 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	-	9.03	-	-	9.03	30.00	-20.97	13.63	36.00	-22.37
2441	-	9.13	-	-	9.13	30.00	-20.87	13.83	36.00	-22.17
2480	-	9.12	-	-	9.12	30.00	-20.88	13.92	36.00	-22.08

Table 53 - 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 6.2.3.2	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA GFSK (DH5)	Duty Cycle (%):	76.4
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	A (Core 0)	Peak Antenna Gain (dBi):	5.20

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	15.06	-	-	-	15.06	30.00	-14.94
2441	14.90	-	-	-	14.90	30.00	-15.10
2480	14.99	-	-	-	14.99	30.00	-15.01

Table 54 - 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	15.06	-	-	-	15.06	30.00	-14.94	19.86	36.00	-16.14
2441	14.90	-	-	-	14.90	30.00	-15.10	20.10	36.00	-15.90
2480	14.99	-	-	-	14.99	30.00	-15.01	20.19	36.00	-15.81

Table 55 - 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 6.2.3.2	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	-		

DUT Configuration			
Mode:	ePA GFSK (DH5)	Duty Cycle (%):	76.5
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	Peak Antenna Gain (dBi):	4.80

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	15.45	-	-	15.45	30.00	-14.55
2441	-	15.30	-	-	15.30	30.00	-14.70
2480	-	15.11	-	-	15.11	30.00	-14.89

Table 56 - 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	-	15.45	-	-	15.45	30.00	-14.55	20.05	36.00	-15.95
2441	-	15.30	-	-	15.30	30.00	-14.70	20.00	36.00	-16.00
2480	-	15.11	-	-	15.11	30.00	-14.89	19.91	36.00	-16.09

Table 57 - 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 6.2.3.2	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 (%):	76.4
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0+Core 1)	Peak Antenna Gain (dBi):	8.01

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	9.20	9.04	-	-	12.13	28.29	-16.16
2441	9.18	9.16	-	-	12.18	28.04	-15.86
2480	9.30	9.14	-	-	12.23	27.99	-15.76

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	Σ					
2402	9.20	9.04	-	-	12.13	30.00	-17.87	19.84	36.00	-16.16
2441	9.18	9.16	-	-	12.18	30.00	-17.82	20.14	36.00	-15.86
2480	9.30	9.14	-	-	12.23	30.00	-17.77	20.24	36.00	-15.76

Table 59 - 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 6.2.3.2	Test Method(s):	C63.10 7.8.5
Additional Reference(s):	662911 D01 v02r01 F)2)d)(i), 662911 D01 v02r01 E)1)		
Note(s):	TxBF cores were tested independently whilst transmitting at the cores respective powers and summed after test		

DUT Configuration			
Mode:	ePA GFSK (DH5)	Duty Cycle (%):	76.4
Antenna Configuration:	Beamforming	DCCF (dB):	-
Active Port(s):	A+B (Core 0+Core 1)	Peak Antenna Gain (dBi):	8.01

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	15.07	15.21	-	-	18.15	28.29	-10.14
2441	14.91	15.08	-	-	18.01	28.04	-10.03
2480	14.97	15.12	-	-	18.06	27.99	-9.93

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	Σ					
2402	15.07	15.21	-	-	18.15	30.00	-11.85	25.86	36.00	-10.14
2441	14.91	15.08	-	-	18.01	30.00	-11.99	25.97	36.00	-10.03
2480	14.97	15.12	-	-	18.06	30.00	-11.94	26.07	36.00	-9.93

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



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

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

ISED RSS-247, Limit Clause 6.2.3.2

The following transmitter output power and e.i.r.p. requirements shall apply:

- a) if the hopset uses 75 or more hopping channels, the maximum peak conducted output power shall not exceed 1.0 W.
- b) if the hopset uses less than 75 hopping channels the maximum peak conducted output power shall not exceed 0.125 W.
- c) the e.i.r.p. shall not exceed 4 W, except as provided in sections 6.5 a) and b).

2.6.7 Test Location and Test Equipment Used

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

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Humidity & Temperature meter	R.S Components	1364	6148	12	28-Aug-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6518	12	23-Feb-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6529	12	13-Mar-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6530	12	23-Feb-2026
USB Wideband Power Sensor	Boonton	RTP5008	6585	12	27-Feb-2026
USB Wideband Power Sensor	Boonton	RTP5008	6588	12	23-Feb-2026
AC Programmable Power Supply	iTech	IT7324	6662	-	O/P Mon
Multimeter	Fluke	115	7115	12	13-Aug-2026

Table 62

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 6.6

2.7.2 Equipment Under Test and Modification State

A3448, S/N: C6FYGFCX3L - Modification State 0

2.7.3 Date of Test

20-August-2025 to 27-August-2025

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	22.4 - 24.3 °C
Relative Humidity	39.7 - 47.6 %

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	-56.71
Hopping	DH5	2402-2480	2400	-59.98

Table 63 - SISO Authorised Band Edge Results

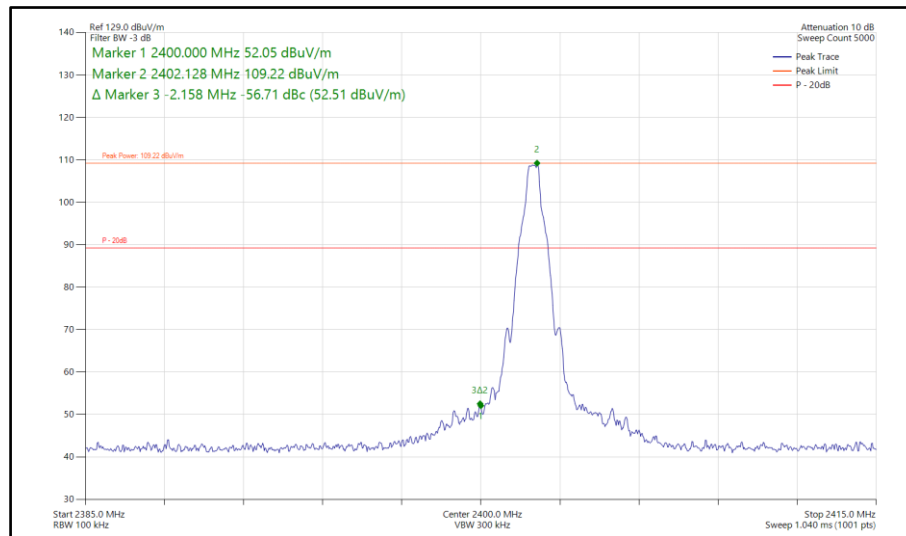


**Figure 97 - Bluetooth DH5, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz**

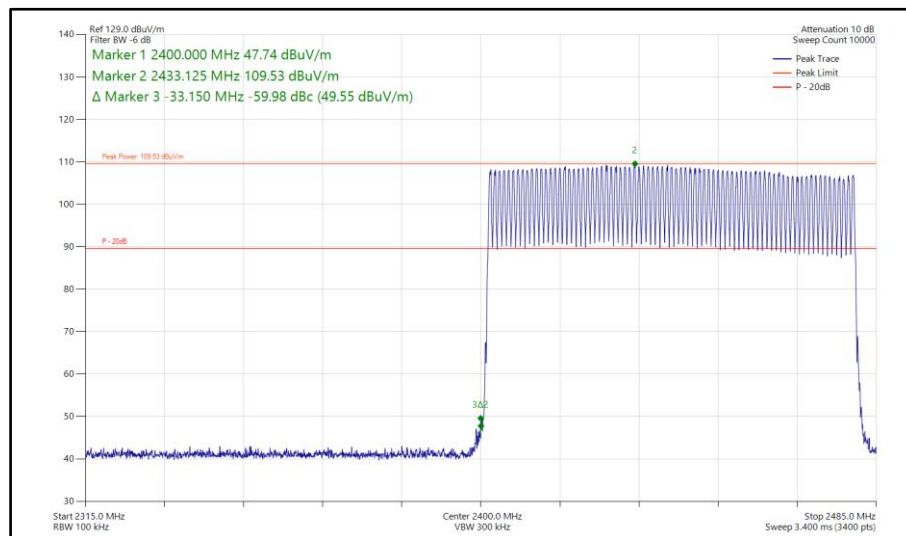


**Figure 98 - Bluetooth DH5, SISO, Core 0 - 2402-2480 MHz
Band Edge Frequency 2400 MHz**

iPA - Core 1 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-55.29
Hopping	DH5	2402-2480	2400	-59.25

Table 64 - SISO Authorised Band Edge Results

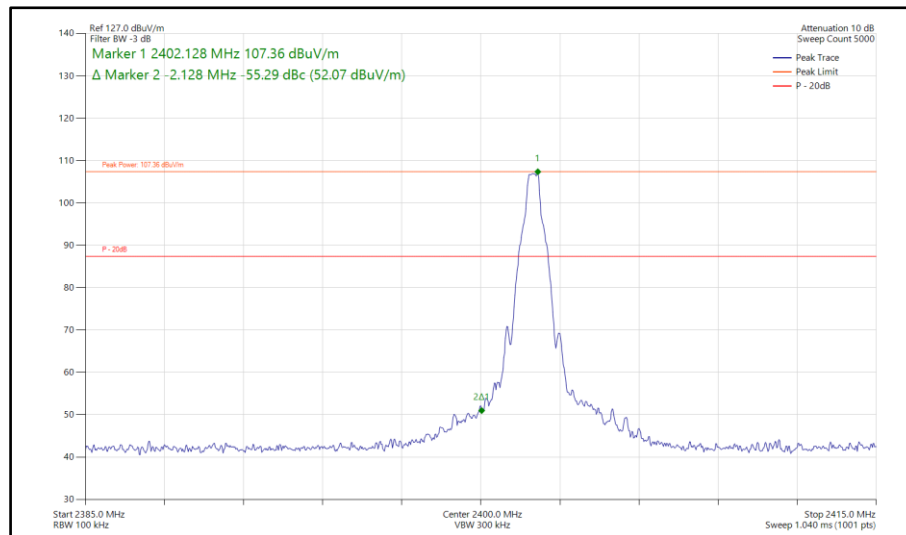


Figure 99 - Bluetooth DH5, SISO, Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

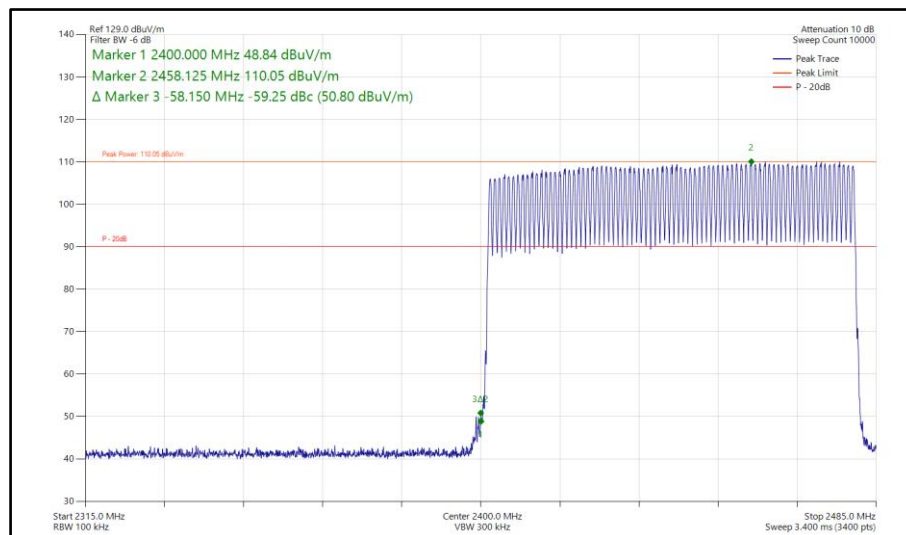


Figure 100 - Bluetooth DH5, SISO, Core 1 - 2402-2480 MHz
Band Edge Frequency 2400 MHz

iPA - Core 0-1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-60.68
Hopping	DH5	2402-2480	2400	-62.02

Table 65 - MIMO Authorised Band Edge Results

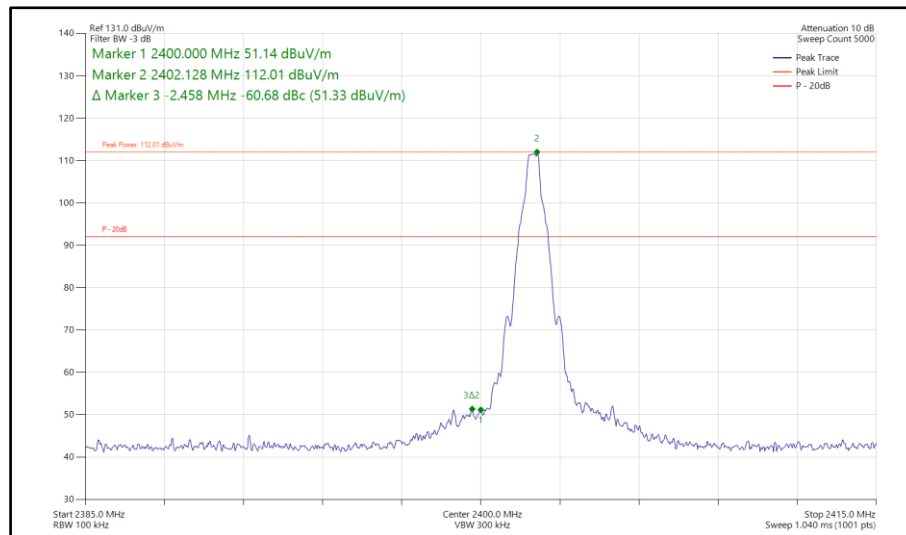


Figure 101 - Bluetooth DH5, MIMO, Core 0-1 - 2402 MHz
Band Edge Frequency 2400 MHz

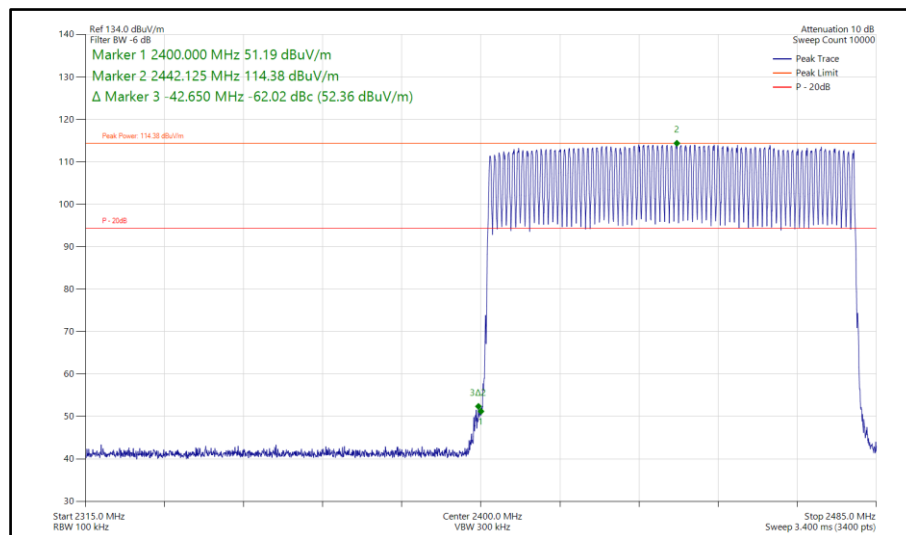


Figure 102 - Bluetooth DH5, MIMO, Core 0-1 - 2402-2480 MHz
Band Edge Frequency 2400 MHz

ePA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-67.11
Hopping	DH5	2402-2480	2400	-68.74

Table 66 - SISO Authorised Band Edge Results

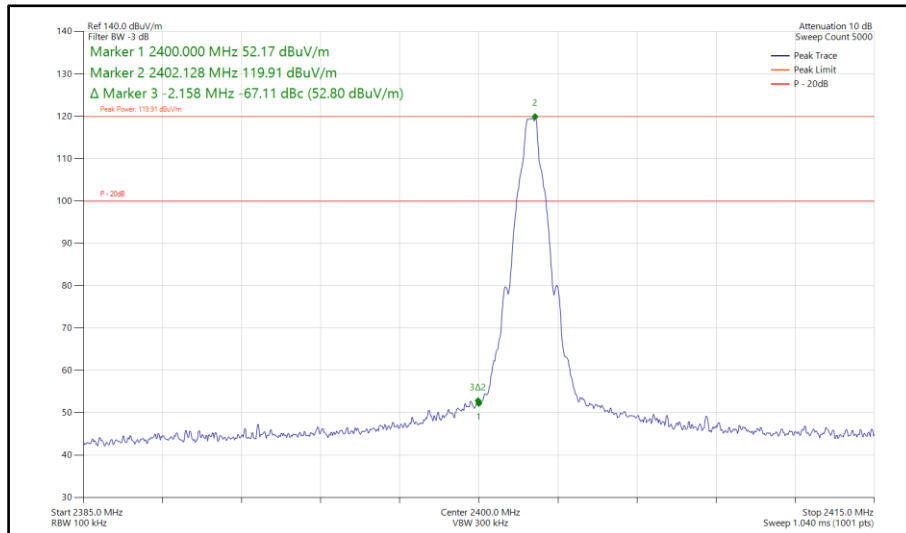


Figure 103 - Bluetooth DH5, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz

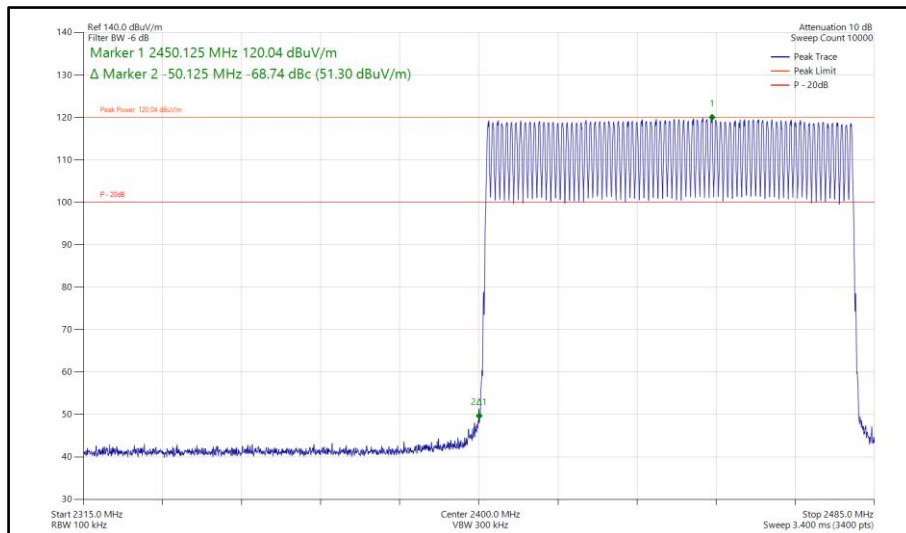


Figure 104 - Bluetooth DH5, SISO, Core 0 - 2402-2480 MHz
Band Edge Frequency 2400 MHz

ePA - Core 1 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-66.73
Hopping	DH5	2402-2480	2400	-69.93

Table 67 - SISO Authorised Band Edge Results

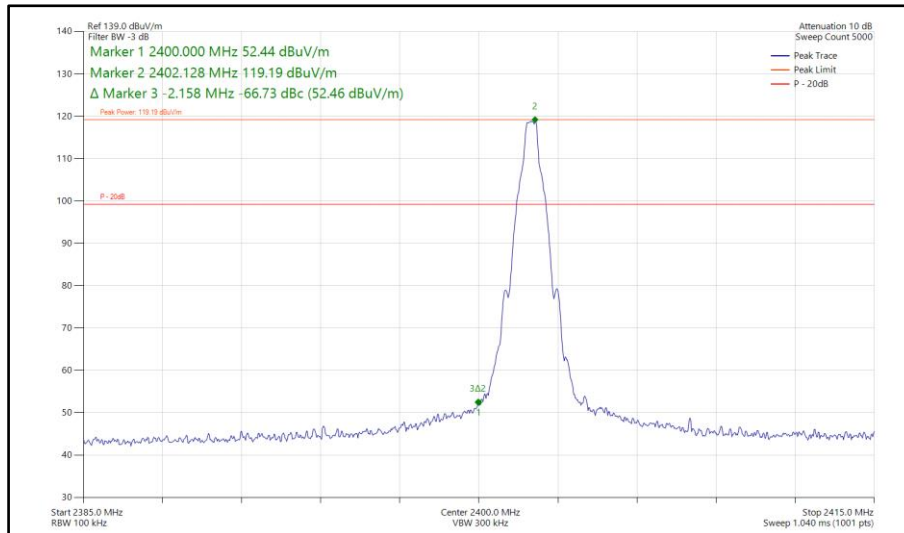


Figure 105 - Bluetooth DH5, SISO, Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

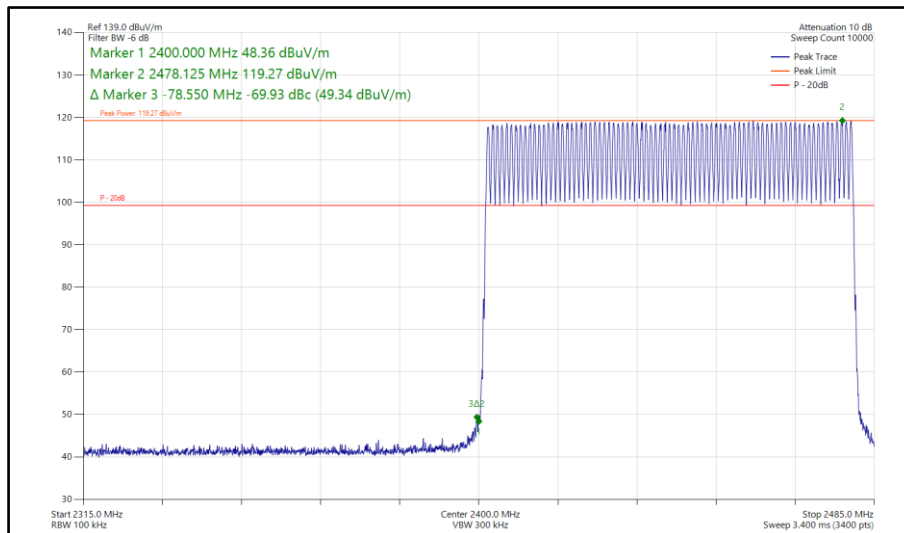


Figure 106 - Bluetooth DH5, SISO, Core 1 - 2402-2480 MHz
Band Edge Frequency 2400 MHz

ePA - Core 0-1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-67.19
Hopping	DH5	2402-2480	2400	-70.76

Table 68 - MIMO Authorised Band Edge Results

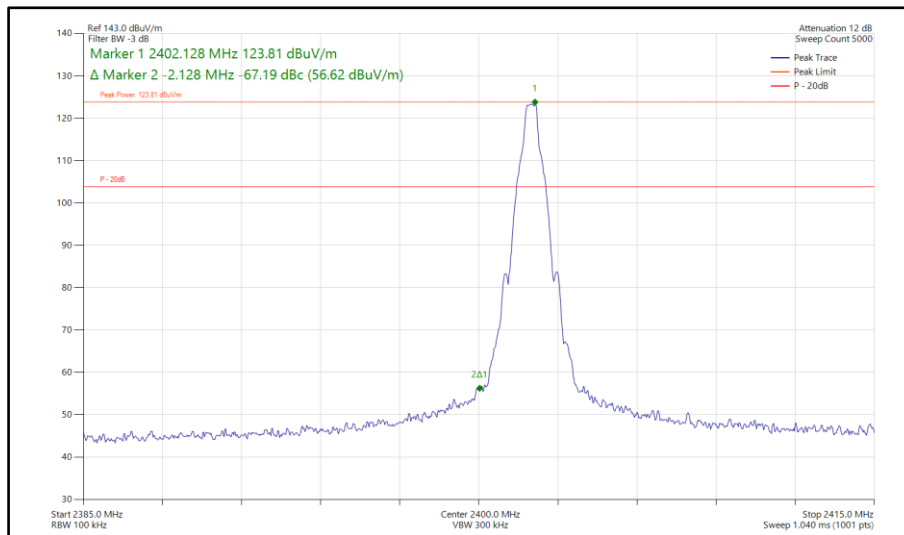


**Figure 107 - Bluetooth DH5, MIMO, Core 0-1 - 2402 MHz
Band Edge Frequency 2400 MHz**

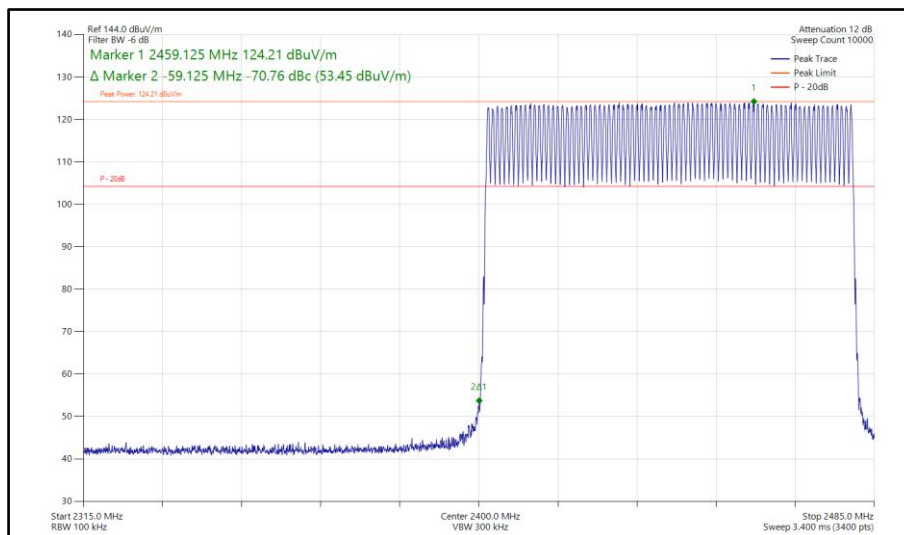


**Figure 108 - Bluetooth DH5, MIMO, Core 0-1 - 2402-2480 MHz
Band Edge Frequency 2400 MHz**



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 6.6

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 6.3.2, 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.



2.7.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 15

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.5.5 V.	5125	-	O/P Mon
Test Receiver	Rohde & Schwarz	ESW44	5914	12	17-Jun-2026
1500W (300V 12A) AC Power Supply	iTech	IT7324	5956	-	O/P Mon
5m Semi-Anechoic Chamber (Dual-Axis), Chamber 15	Albatross Projects	RF Chamber 15	5963	36	23-Apr-2028
Compact Antenna Mast	Maturo Gmbh	CAM4.0-P	5964	-	TU
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
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6141	12	14-Sep-2026
SAC Switch Unit	TUV SUD	TUV_SSU_001	6144	12	11-Dec-2025
Digital Multimeter	Fluke	115	6146	12	05-Jun-2026
USB Spectrum Analyser	Signal Hound	SA124B	6297	-	TU
Humidity and Temperature Meter	R.S Components	1364	6486	12	01-Jul-2026
1m Cable	Junkosha	MWX241-01000AMSAMS/B	6740	12	27-Apr-2026
1M SMA Cable	Junkosha	MWX221-01000AMSAMS/B	6832	12	18-Aug-2026
1m SMA-Type Cable	Junkosha	MWX221-01000AMSAMS/B	6845	12	06-Sep-2026
8m SMA-Type Cable	Junkosha	MWX221-08000AMSAMS/B	6850	12	06-Nov-2025
Cable Assembly	SpecTech	PE300-60	6856	-	TU
Cable Assembly	SpecTech	PE300-60	6862	-	TU
Cable Assembly	SpecTech	PE300-60	6868	-	TU
RF Amplifier BROADBAND AMPL/SMA/RoHS	Mini-Circuits	ZX60-83LN12+	6976	12	05-Apr-2026

Table 69

TU - Traceability Unscheduled

O/P Mon - Output Monitored using calibrated equipment



2.8 Spurious Radiated Emissions

2.8.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.209 and 15.247 (d)
ISED RSS-247, Clause 2.4 and 6.6
ISED RSS-GEN, Clause 6.13 and 8.9

2.8.2 Equipment Under Test and Modification State

A3448, S/N: C6FYGFCX3L - Modification State 0
A3448, S/N: C6YFMQX60V - Modification State 0

2.8.3 Date of Test

16-November-2025 to 20-November-2025

2.8.4 Test Method

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

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

In the 30 MHz to 1 GHz and 18 GHz to 26 GHz range, pre-scans were only performed on middle channel (2441 MHz) only. The tests were conducted in the frequency range and on the channels specified by the customer, ensuring coverage of the worst-case operating modes.

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 20 dB of the limits shown on the plots, further investigation was carried out and reported in results tables.

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. The following conversion can be applied to convert from dBµV/m to µV/m:
 $10^{(\text{Field Strength in dB}\mu\text{V/m}/20)}$

Above 18 GHz, the measurement distance was reduced to 1 m. The limit line was increased by $20 \cdot \text{LOG}(3/1) = 9.54$ dB.

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

2.8.5 Example Test Setup Diagram

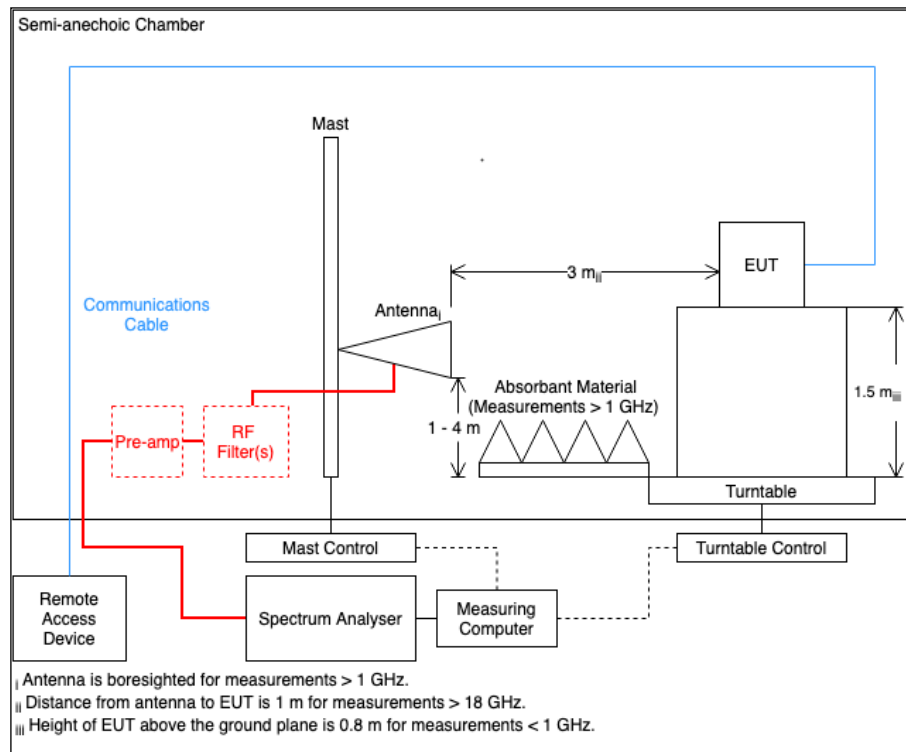


Figure 109

2.8.6 Environmental Conditions

Ambient Temperature	23.4 - 25.8 °C
Relative Humidity	31.2 - 52.7 %



2.8.7 Test Results

2.4 GHz Bluetooth FHSS

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

Table 70 - 2402 MHz (CH2402), DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz

*No emissions found within 20 dB of the limit.

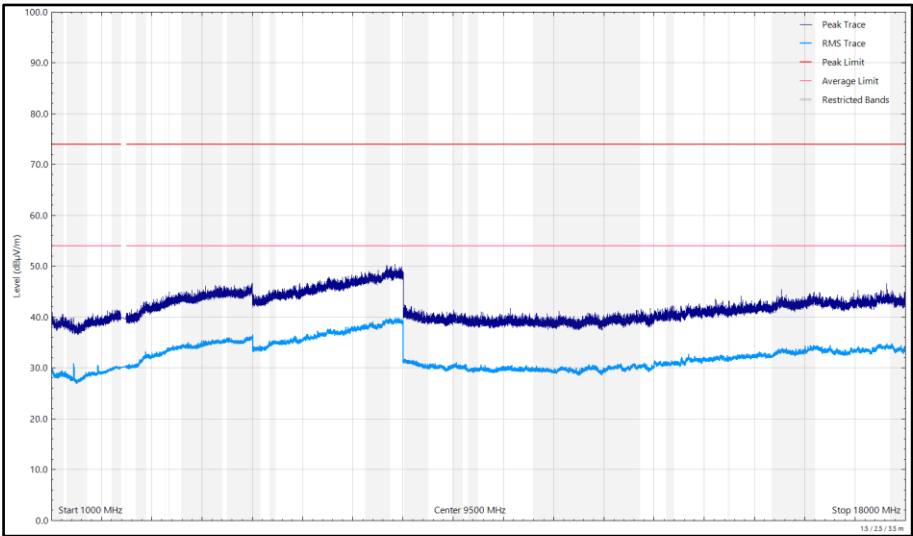


Figure 110 - 2402 MHz (CH2402), DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz, Horizontal

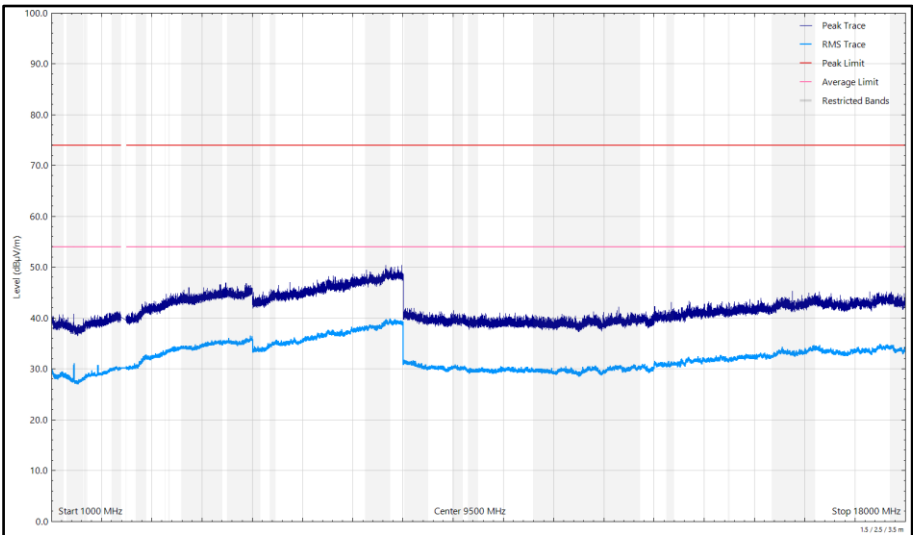


Figure 111 - 2402 MHz (CH2402), DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
37.793	21.32	40.00	-18.68	Q-Peak	246	130	Horizontal
73.448	18.97	40.00	-21.03	Q-Peak	5	385	Horizontal
73.552	21.38	40.00	-18.62	Q-Peak	275	111	Vertical
120.583	18.88	43.50	-24.62	Q-Peak	140	105	Horizontal
171.567	21.02	43.50	-22.48	Q-Peak	344	274	Vertical
263.914	21.00	46.00	-25.00	Q-Peak	304	107	Vertical
265.137	24.24	46.00	-21.76	Q-Peak	4	166	Horizontal
328.745	23.29	46.00	-22.71	Q-Peak	350	116	Horizontal

Table 71 - 2441 MHz (CH2441), DH5, iPA, Core 0 + Core 1, 30 MHz to 26 GHz

No other emissions found within 20 dB of the limit.

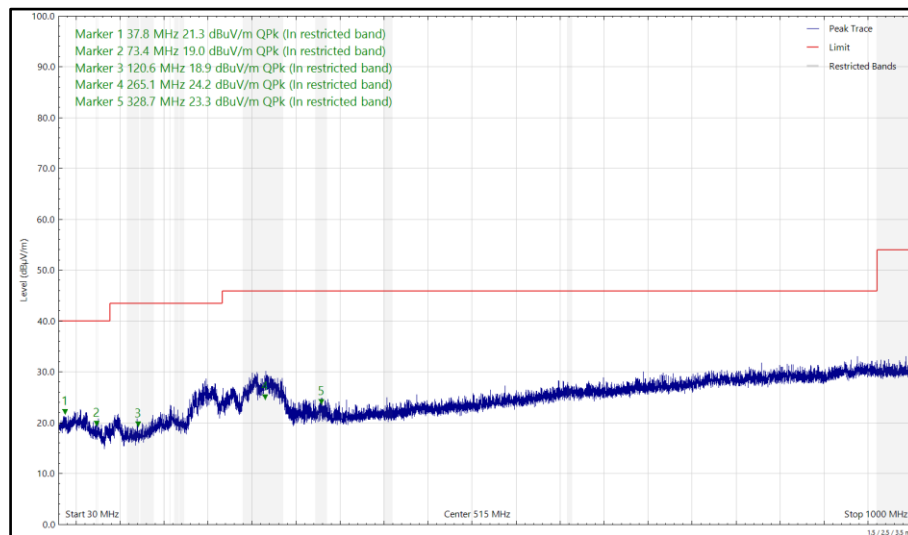


Figure 112 - 2441 MHz (CH2441), DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

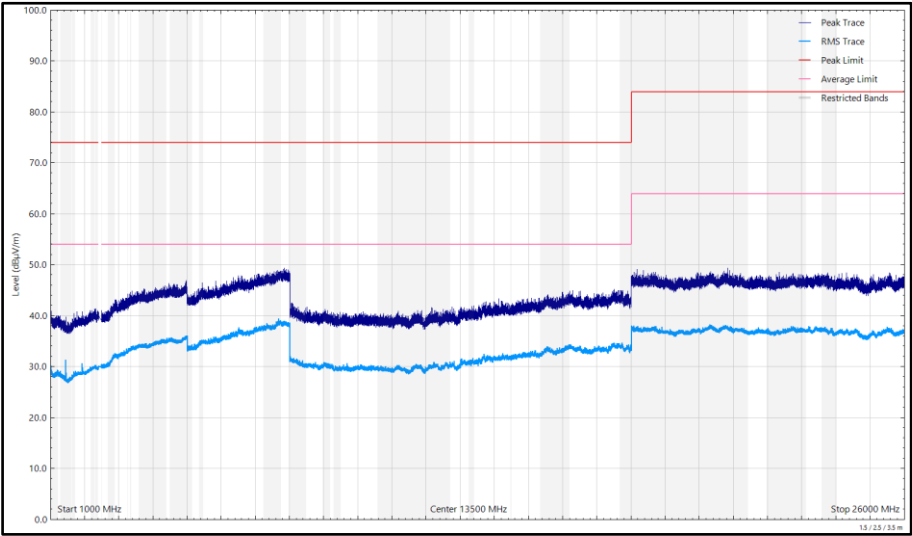


Figure 113 - 2441 MHz (CH2441), DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

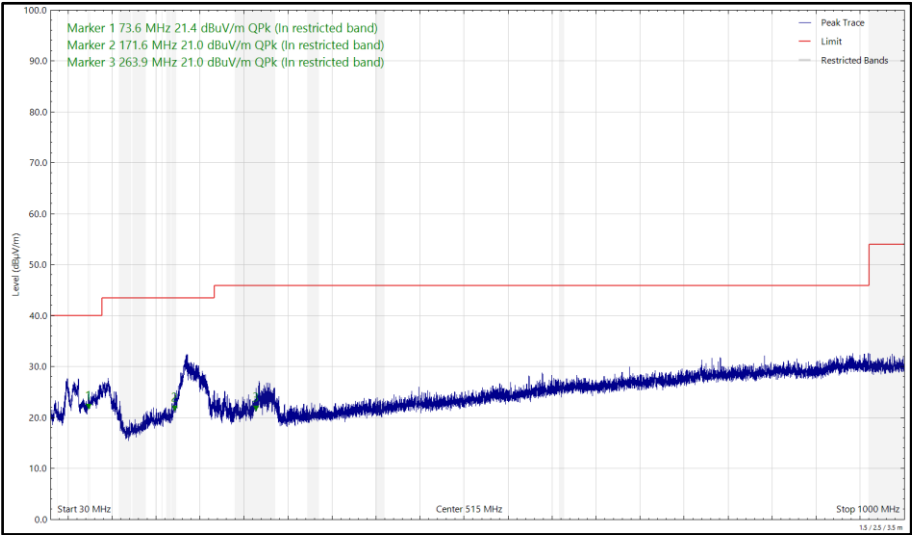


Figure 114 - 2441 MHz (CH2441), DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

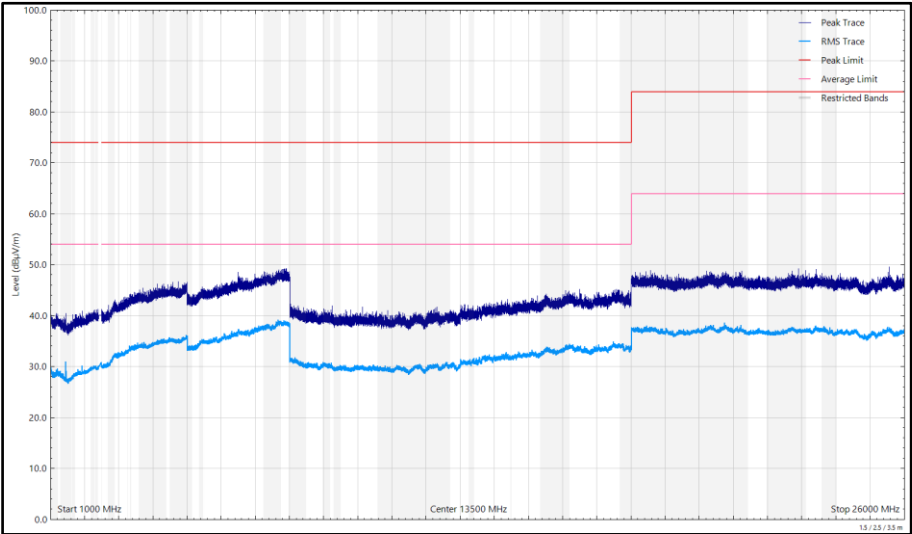


Figure 115 - 2441 MHz (CH2441), DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
*							

Table 72 - 2480 MHz (CH2480), DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz

*No emissions found within 20 dB of the limit.

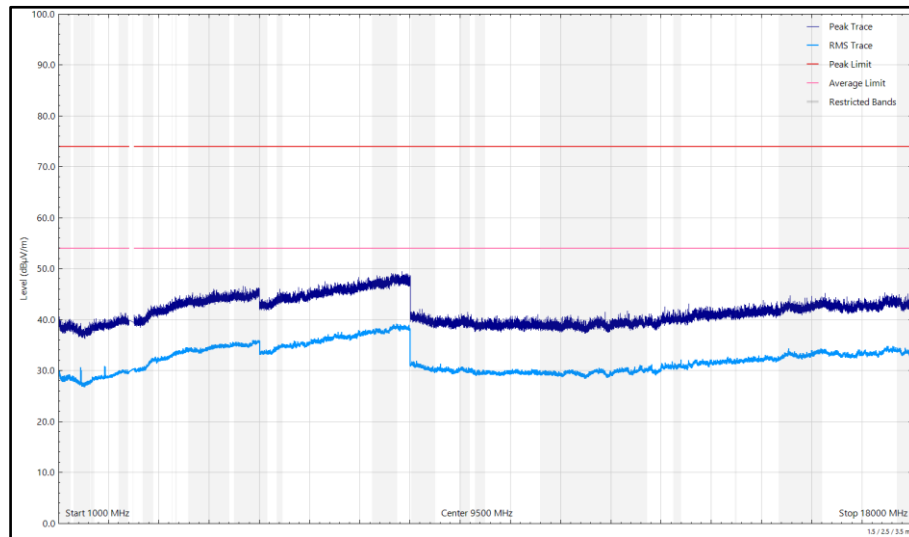


Figure 116 - 2480 MHz (CH2480), DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz, Horizontal

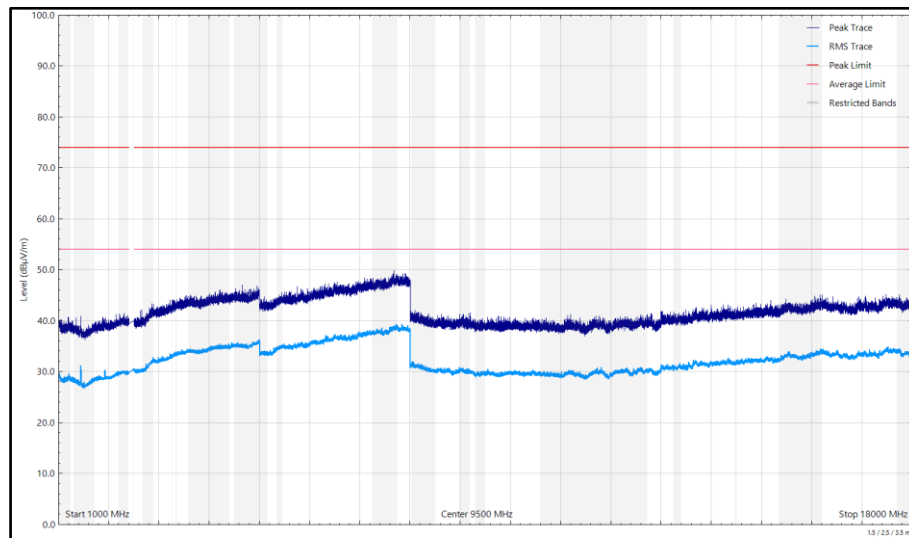


Figure 117 - 2480 MHz (CH2480), DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2484.334	33.87	54.00	-20.13	CISPR Avg	358	370	Vertical

Table 73 - 2402 MHz (CH2402), DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz

No other emissions found within 20 dB of the limit.

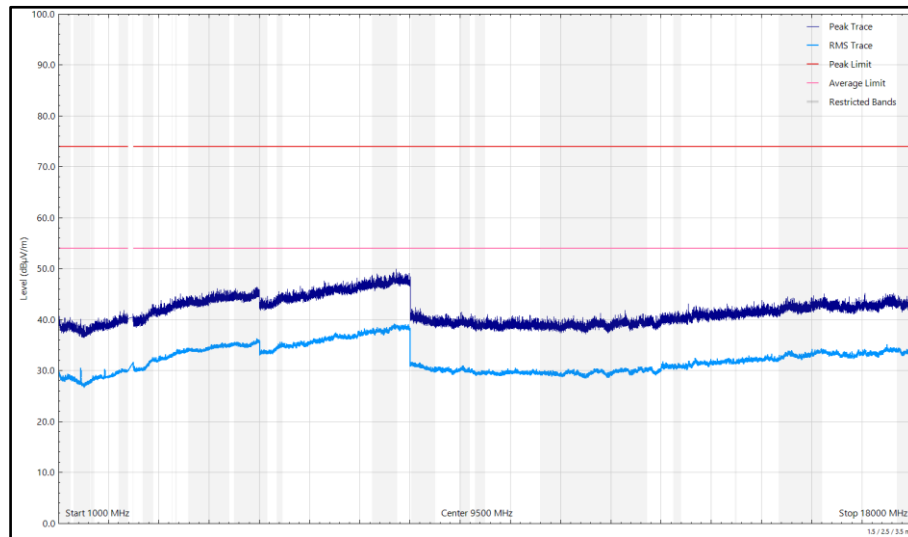


Figure 118 - 2402 MHz (CH2402), DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz, Horizontal

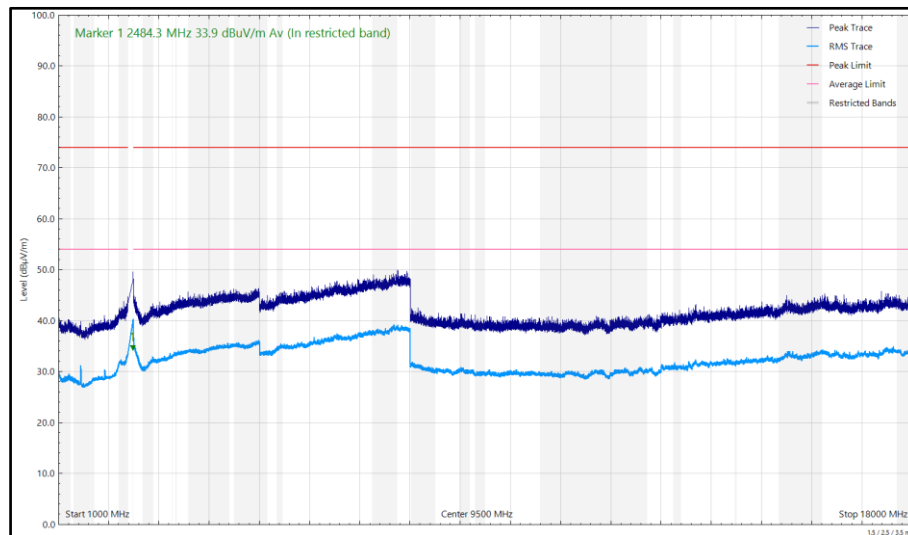


Figure 119 - 2402 MHz (CH2402), DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
37.761	21.35	40.00	-18.65	Q-Peak	222	137	Horizontal
38.007	21.83	40.00	-18.17	Q-Peak	9	117	Vertical
73.179	21.88	40.00	-18.12	Q-Peak	273	106	Vertical
75.108	18.52	40.00	-21.48	Q-Peak	186	400	Horizontal
108.280	22.69	43.50	-20.81	Q-Peak	76	397	Vertical
137.793	20.30	43.50	-23.20	Q-Peak	248	100	Horizontal
170.954	21.11	43.50	-22.39	Q-Peak	351	350	Vertical
268.645	24.47	46.00	-21.53	Q-Peak	329	123	Horizontal
278.023	22.68	46.00	-23.32	Q-Peak	243	100	Vertical
324.902	22.92	46.00	-23.08	Q-Peak	238	148	Horizontal
2388.291	32.12	54.00	-21.88	CISPR Avg	351	291	Vertical
2483.600	35.80	54.00	-18.20	CISPR Avg	351	302	Vertical

Table 74 - 2441 MHz (CH2441), DH5, ePA, Core 0 + Core 1, 30 MHz to 26 GHz

No other emissions found within 20 dB of the limit.

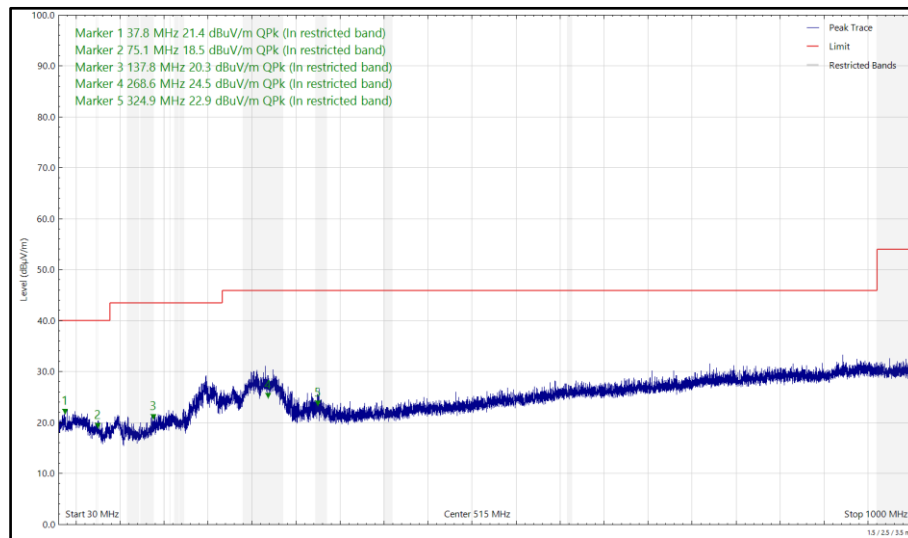


Figure 120 - 2441 MHz (CH2441), DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

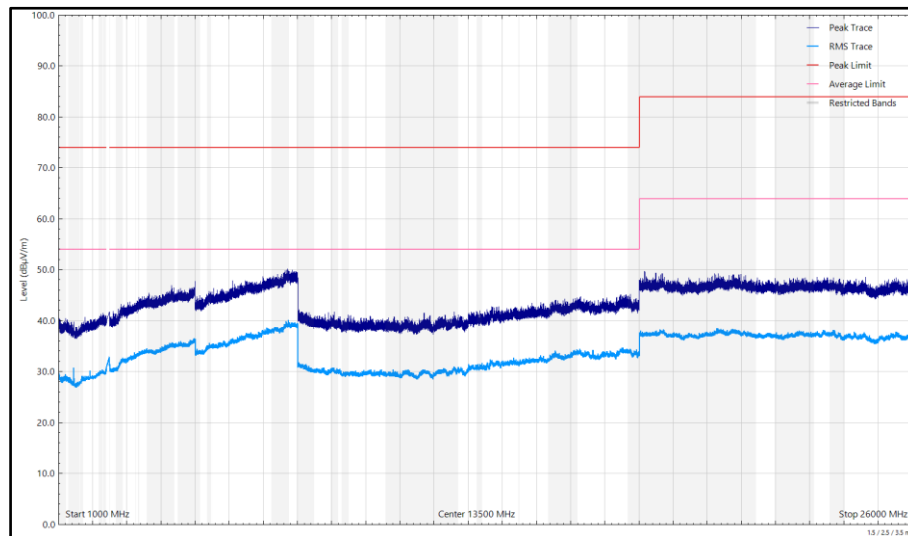


Figure 121 - 2441 MHz (CH2441), DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

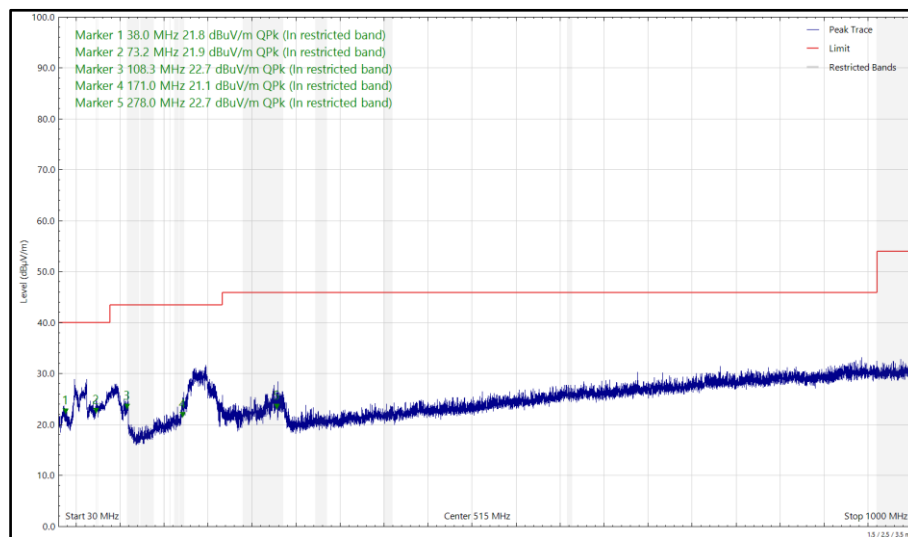


Figure 122 - 2441 MHz (CH2441), DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

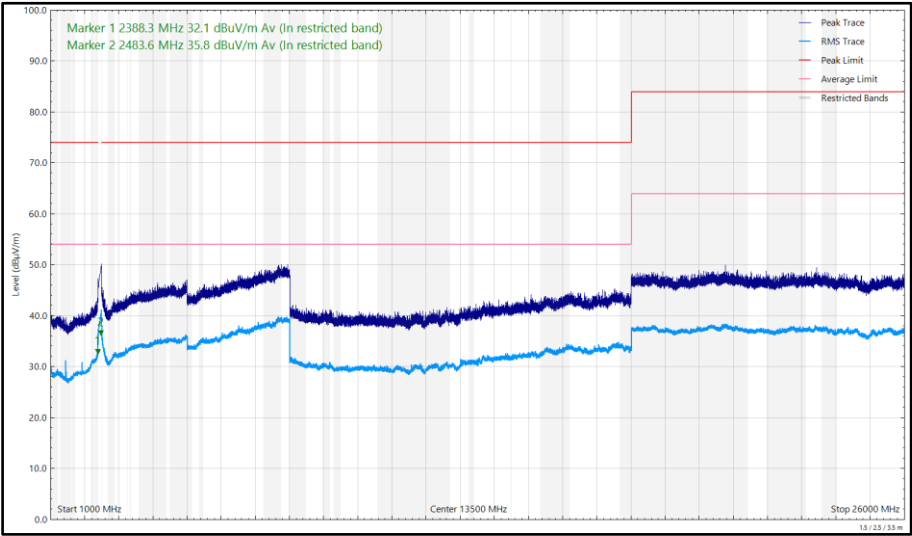


Figure 123 - 2441 MHz (CH2441), DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2388.411	31.13	54.00	-22.87	CISPR Avg	353	335	Vertical
2498.574	31.79	54.00	-22.21	CISPR Avg	0	346	Vertical

Table 75 - 2480 MHz (CH2480), DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz

No other emissions found within 20 dB of the limit.

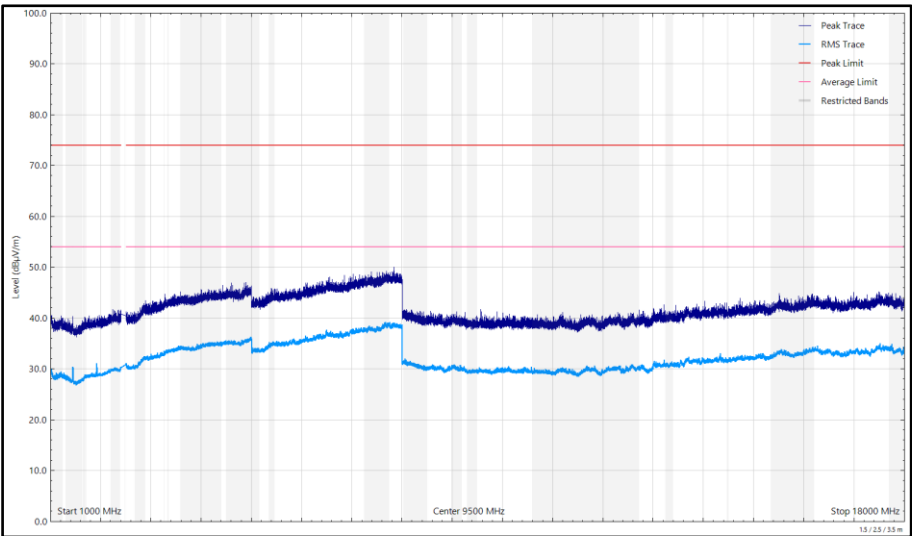


Figure 124 - 2480 MHz (CH2480), DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz, Horizontal

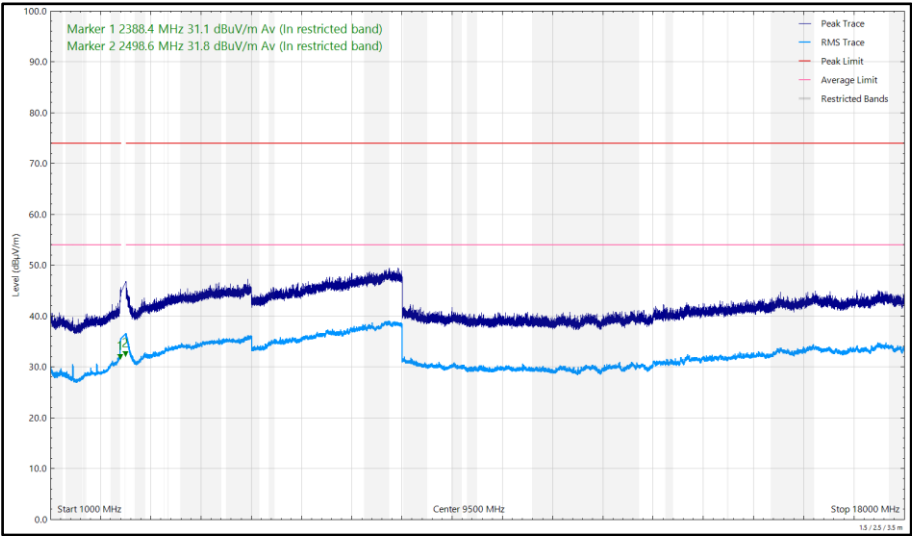


Figure 125 - 2480 MHz (CH2480), DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz, Vertical



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

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator 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 the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.

Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in 15.209(a)

ISED RSS-247, Limit Clause 6.6

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 6.3.2, 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.

In addition, radiated emissions which fall in the restricted bands, as defined in RSS-GEN, clause 8.10, must also comply with the radiated emission limits specified in RSS-GEN clause 8.9.

2.8.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 17 and RF Chamber 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.5.5	5125	-	TU
EMI Test Receiver	Rohde & Schwarz	ESW44	5911	12	29-Oct-2026
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5939	12	18-May-2026
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5942	24	03-Jan-2027
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5960	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5961	-	TU
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	6007	12	06-Jun-2026
Digital Multimeter	Fluke	115	6145	12	06-Jun-2026
Humidity & Temperature meter	R.S Components	1364	6149	12	28-Aug-2026
Double Ridge Active Horn Antenna (18-40 GHz)	Com-Power	AHA-840	6188	24	31-Jul-2026
Attenuator (4 dB)	Pasternack	PE7074-4	6202	24	03-Jan-2027
EMI Test Receiver	Rohde & Schwarz	ESW44	6294	12	24-Feb-2026
USB Spectrum Analyser	Signal Hound	SA124B	6295	-	TU



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
USB Spectrum Analyser	Signal Hound	SA124B	6298	-	TU
Digital Multimeter	Fluke	115	6345	12	24-Jul-2026
Humidity and Temperature Meter	R.S Components	1364	6346	12	13-Mar-2026
1m Coaxial Cable Assy	Junkosha	MWX221-01000AMSAMS/A	6354	12	15-Apr-2026
8 GHz High Pass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6427	12	23-Apr-2026
3m Semi-Anechoic Chamber	Albatross Projects	Chamber 18	6597	36	08-May-2028
Coax cable sma to sma with N-Type adapter	TUV SUD	N/A	6637	12	23-Apr-2026
AC Power Supply	iTech	IT7324	6657	-	TU
3m Semi-Anechoic Chamber	Albatross Projects	RF Chamber 17	6658	36	07-May-2028
Mast and Turntable Controller	Maturo Gmbh	FCU3.0	6659	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	6660	-	TU
Turntable	Maturo Gmbh	TT1.5SI	6661	-	TU
2m Cable	Junkosha	MWX241-02000KMSKMS/B	6742	12	27-Apr-2026
Pre Amp 8 - 18 GHz	Wright Technologies	APS06-0061	6783	12	24-Apr-2026
Turntable	Maturo Gmbh	TT1.5SI	6797	-	TU
AC Programmable Power Supply	iTech	IT7324	6812	-	TU
Broad-Band Horn Antenna 1-10GHz N	Schwarzbeck	BBHA9120B	6825	12	14-Sep-2026
8m SMA-Type Cable	Junkosha	MWX221-08000AMSAMS/B	6850	12	23-Oct-2026
Cable Assembly	SpecTech	PE300-60	6859	-	TU
Cable Assembly	SpecTech	PE300-60	6860	-	TU
Cable Assembly	SpecTech	PE300-60	6861	-	TU
Cable Assembly	SpecTech	PE300-60	6863	-	TU
SAC Switch Unit	TUV SUD	TUV_SSU_004 PLC	6886	12	02-Dec-2025
RF Amplifier BROADBAND AMPL/SMA/RoHS	Mini-Circuits	ZX60-83LN12+	6975	12	05-Apr-2026
RF Amplifier BROADBAND AMPL/SMA/RoHS	Mini-Circuits	ZX60-83LN12+	6979	12	05-Apr-2026

Table 76

TU - Traceability Unscheduled

3 Measurement Uncertainty

For a 95% confidence level, the measurement uncertainties for defined systems are:

Test Name	Measurement Uncertainty
Restricted Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Frequency Hopping Systems - Average Time of Occupancy	-
Frequency Hopping Systems - Channel Separation	± 28.85 kHz
Frequency Hopping Systems - Number of Hopping Channels	-
Frequency Hopping Systems - 99% & 20 dB Bandwidth	± 28.85 kHz
Maximum Conducted Output Power	Method PM: ± 0.65 dB Method SA: ± 1.05 dB
Authorised Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB

Table 77

Measurement Uncertainty Decision Rule – Accuracy Method

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115:2021, Clause 4.4.3 (Procedure 2). The measurement results are directly compared with the test limit to determine conformance with the requirements of the standard.

Risk: The uncertainty of measurement about the measured result is negligible with regard to the final pass/fail decision. The measurement result can be directly compared with the test limit to determine conformance with the requirement (compare IEC Guide 115). The level of risk to falsely accept and falsely reject items is further described in ILAC-G8.