

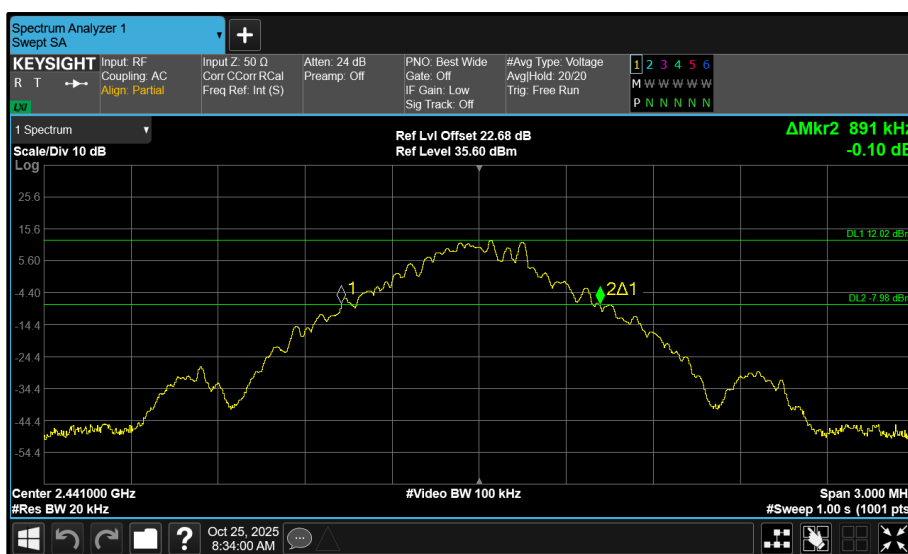


Figure 78 - Core 0 (A) 2441 MHz (CH39) 20 dB Bandwidth

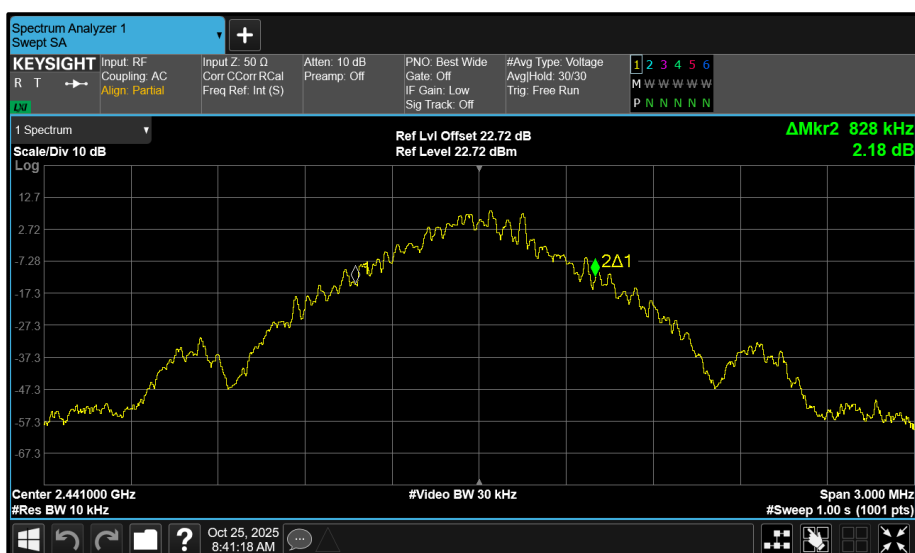


Figure 79 - Core 1 (B) 2441 MHz (CH39) 99% Bandwidth

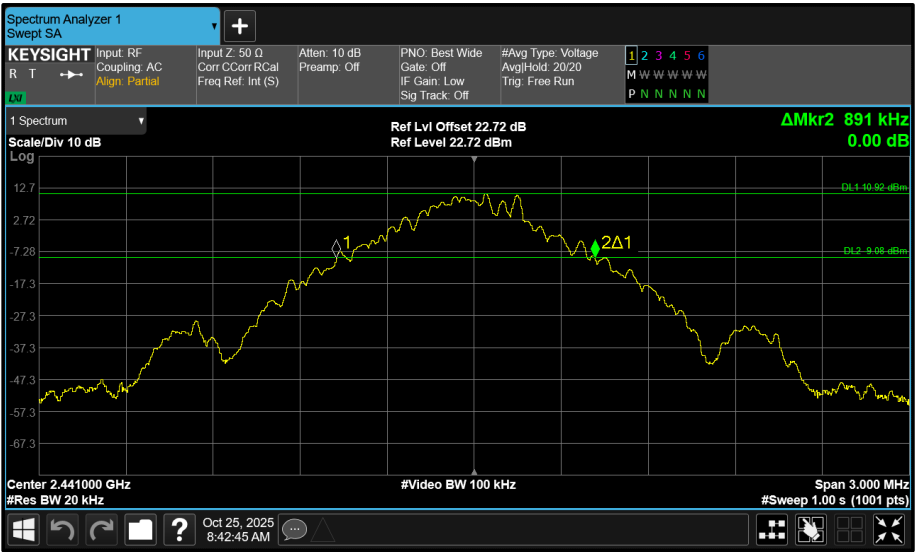


Figure 80 - Core 1 (B) 2441 MHz (CH39) 20 dB Bandwidth

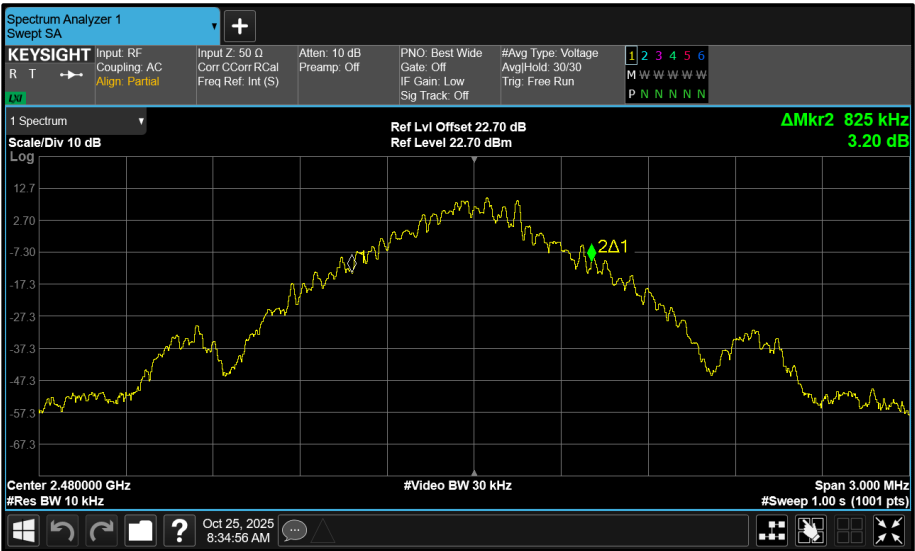


Figure 81 - Core 0 (A) 2480 MHz (CH78) 99% Bandwidth

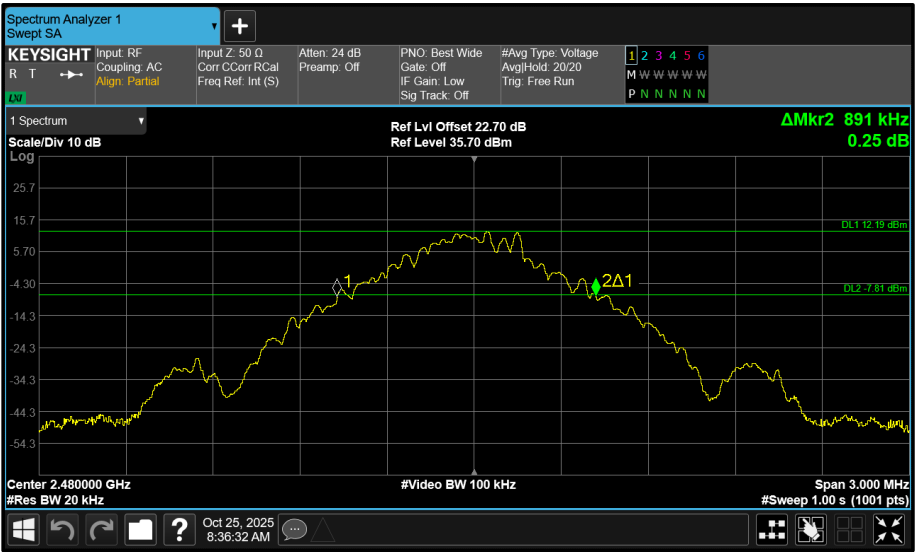


Figure 82 - Core 0 (A) 2480 MHz (CH78) 20 dB Bandwidth

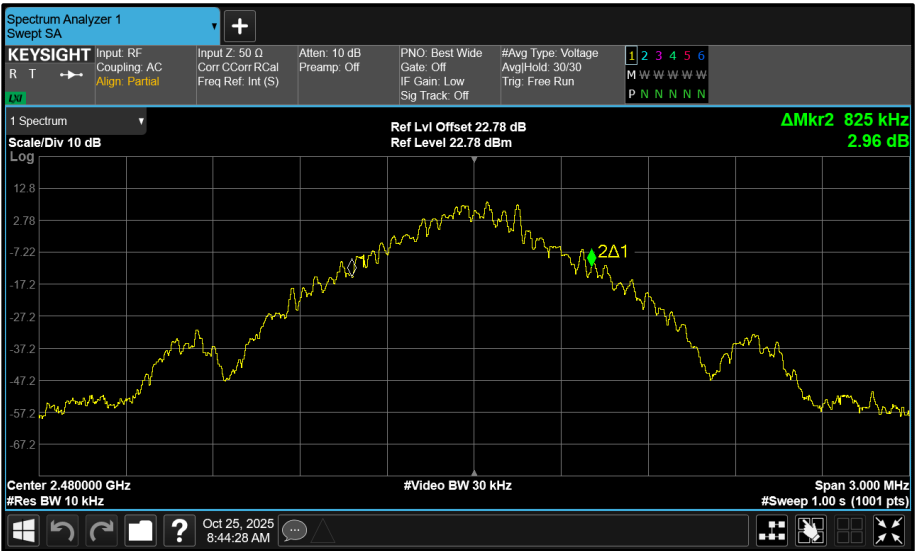


Figure 83 - Core 1 (B) 2480 MHz (CH78) 99% Bandwidth

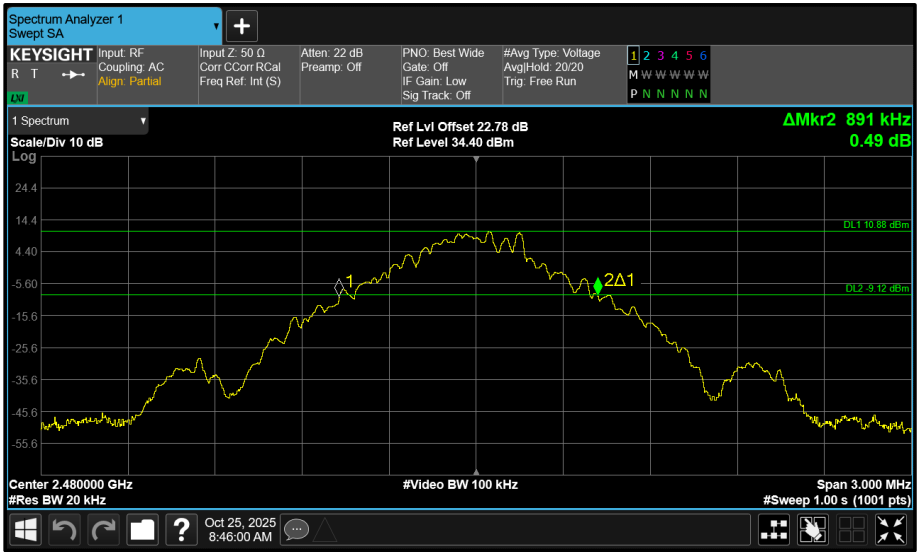


Figure 84 - Core 1 (B) 2480 MHz (CH78) 20 dB Bandwidth

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

None specified.



2.5.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 14 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
MXA Signal Analyser	Keysight Technologies	N9020B	6417	24	14-Oct-2027
MXA Signal Analyser	Keysight Technologies	N9020B	6419	24	17-Mar-2027
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6517	12	27-Feb-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6518	12	23-Feb-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6526	12	27-Feb-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6527	12	27-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
AC Programmable Power Supply	iTech	IT7324	6662	-	O/P Mon
AC Programmable Power Supply	iTech	IT7324	6665	-	O/P Mon
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

A3449, S/N: DGVHQ7WVQ5 - Modification State 0
A3449, S/N: C2H6P52Q4K - Modification State 0

2.6.3 Date of Test

18-October-2025 to 06-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	20.4 - 23.1 °C
Relative Humidity	55.7 - 59.4 %



2.6.6 Test Results

2.4 GHz Bluetooth FHSS BDR

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):	4.40

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	9.31	-	-	-	-	30.00	-20.69
2441	9.31	-	-	-	-	30.00	-20.69
2480	9.32	-	-	-	-	30.00	-20.68

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	9.31	-	-	-	-	30.00	-20.69	12.11	36.00	-23.89
2441	9.31	-	-	-	-	30.00	-20.69	13.11	36.00	-22.89
2480	9.32	-	-	-	-	30.00	-20.68	13.72	36.00	-22.28

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):	5.20

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	-	9.10	-	-	-	30.00	-20.90
2441	-	9.26	-	-	-	30.00	-20.74
2480	-	9.20	-	-	-	30.00	-20.80

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	-	9.10	-	-	-	30.00	-20.90	13.80	36.00	-22.20
2441	-	9.26	-	-	-	30.00	-20.74	14.46	36.00	-21.54
2480	-	9.20	-	-	-	30.00	-20.80	13.70	36.00	-22.30

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):	4.40

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	15.54	-	-	-	-	30.00	-14.46
2441	15.63	-	-	-	-	30.00	-14.37
2480	15.71	-	-	-	-	30.00	-14.29

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	15.54	-	-	-	-	30.00	-14.46	18.34	36.00	-17.66
2441	15.63	-	-	-	-	30.00	-14.37	19.43	36.00	-16.57
2480	15.71	-	-	-	-	30.00	-14.29	20.11	36.00	-15.89

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 (%):	76.4
Antenna Configuration:	SISO	DCCF (dB):	-
Active Port(s):	B (Core 1)	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	-	-	-	30.00	-14.94
2441	-	14.87	-	-	-	30.00	-15.13
2480	-	14.85	-	-	-	30.00	-15.15

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	-	15.06	-	-	-	30.00	-14.94	19.76	36.00	-16.24
2441	-	14.87	-	-	-	30.00	-15.13	20.07	36.00	-15.93
2480	-	14.85	-	-	-	30.00	-15.15	19.35	36.00	-16.65

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):	7.54

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	8.49	9.16	-	-	11.85	29.19	-17.34
2441	8.51	9.30	-	-	11.93	28.46	-16.53
2480	9.30	9.32	-	-	12.32	28.54	-16.22

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	8.49	9.16	-	-	11.85	30.00	-18.15	18.66	36.00	-17.34
2441	8.51	9.30	-	-	11.93	30.00	-18.07	19.47	36.00	-16.53
2480	9.30	9.32	-	-	12.32	30.00	-17.68	19.78	36.00	-16.22

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):	-		
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):	7.54

Test Frequency (MHz)	Maximum Conducted Output Power (dBm)					Limit (dBm)	Margin (dB)
	A	B	C	D	Σ		
2402	15.56	14.61	-	-	18.12	29.19	-11.07
2441	15.60	14.56	-	-	18.12	28.46	-10.34
2480	15.69	14.38	-	-	18.10	28.54	-10.44

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	15.56	14.61	-	-	18.12	30.00	-11.88	24.93	36.00	-11.07
2441	15.60	14.56	-	-	18.12	30.00	-11.88	25.66	36.00	-10.34
2480	15.69	14.38	-	-	18.10	30.00	-11.90	25.56	36.00	-10.44

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

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

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

ISED RSS-247, Limit Clause 6.2.3.2

For FHSs operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channel; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channel. The e.i.r.p. shall not exceed 4 W except as provided in sections 6.5(a) and (b) of the specification.



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
AC Programmable Power Supply	iTech	IT7324	5225	-	O/P Mon
USB Power Sensor	Boonton	RTP5008	5820	12	12-Feb-2026
USB Power Sensor	Boonton	RTP5008	5821	12	12-Feb-2026
Humidity & Temperature meter	R.S Components	1364	6148	12	28-Aug-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6426	12	12-Feb-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6517	12	27-Feb-2026
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6518	12	23-Feb-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6526	12	27-Feb-2026
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6527	12	27-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	6586	12	27-Feb-2026
USB Wideband Power Sensor	Boonton	RTP5008	6587	12	23-Feb-2026
USB Wideband Power Sensor	Boonton	RTP5008	6588	12	23-Feb-2026
AC Programmable Power Supply	iTech	IT7324	6662	-	O/P Mon
AC Programmable Power Supply	iTech	IT7324	6665	-	O/P Mon
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 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

A3449, S/N: CQLXTWKHC2 - Modification State 0

2.7.3 Date of Test

28-August-2025 to 31-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	21.3 - 23.5 °C
Relative Humidity	41.5 - 45.2 %

2.7.6 Test Results

2.4 GHz Bluetooth FHSS BDR

iPA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-56.97
Hopping	DH5	2402-2480	2400	-60.57

Table 63 - SISO Authorised Band Edge Results

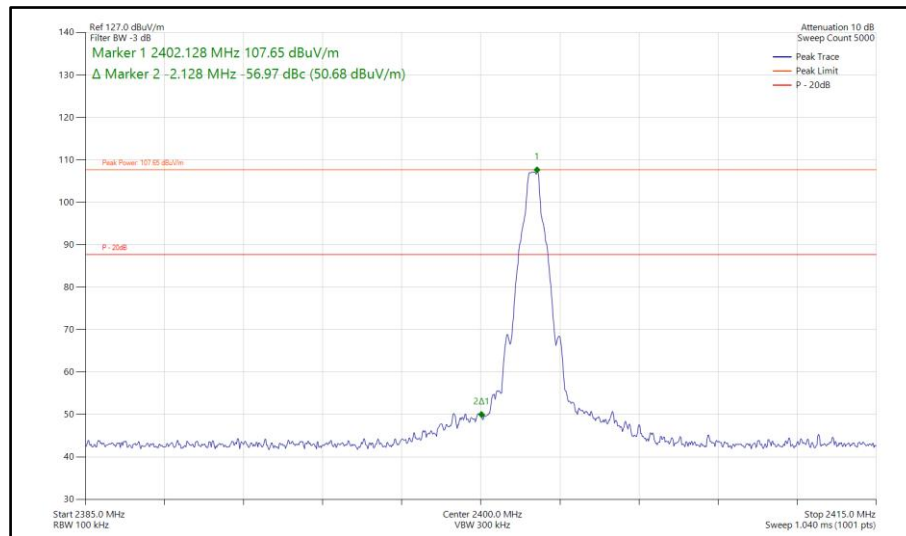


**Figure 85 - Bluetooth DH5, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz**

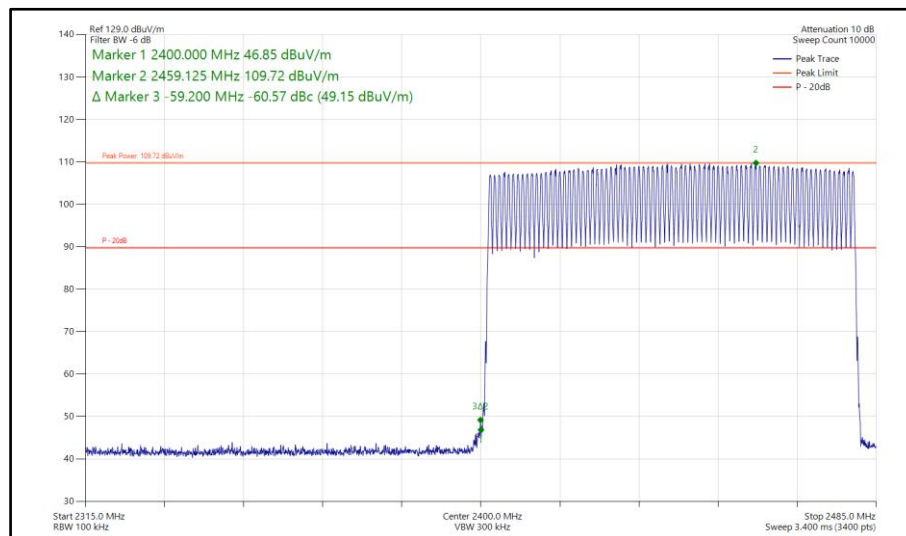


**Figure 86 - Bluetooth DH5, SISO, Core 0 - 2402-2480 MHz
Band Edge Frequency 2400 MHz**

iPA - Core 1 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-58.08
Hopping	DH5	2402-2480	2400	-60.91

Table 64 - SISO Authorised Band Edge Results

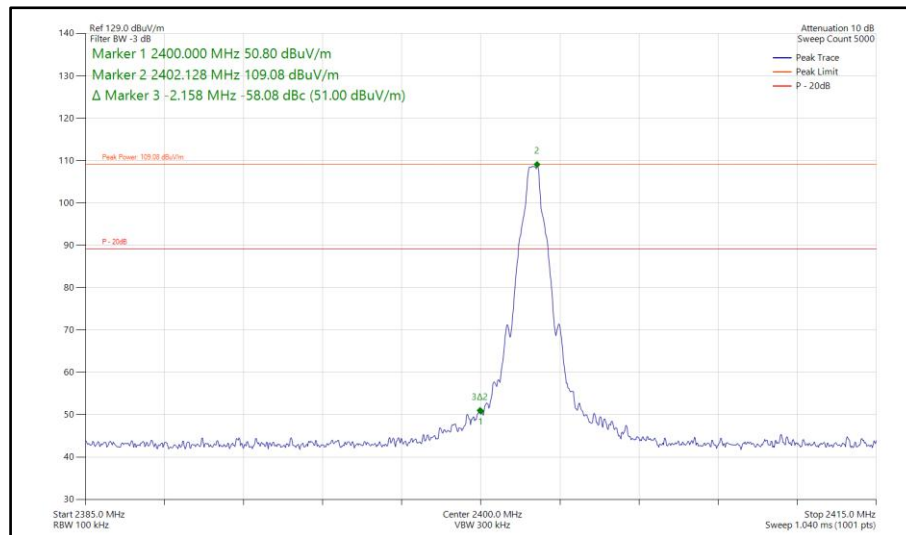


Figure 87 - Bluetooth DH5, SISO, Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

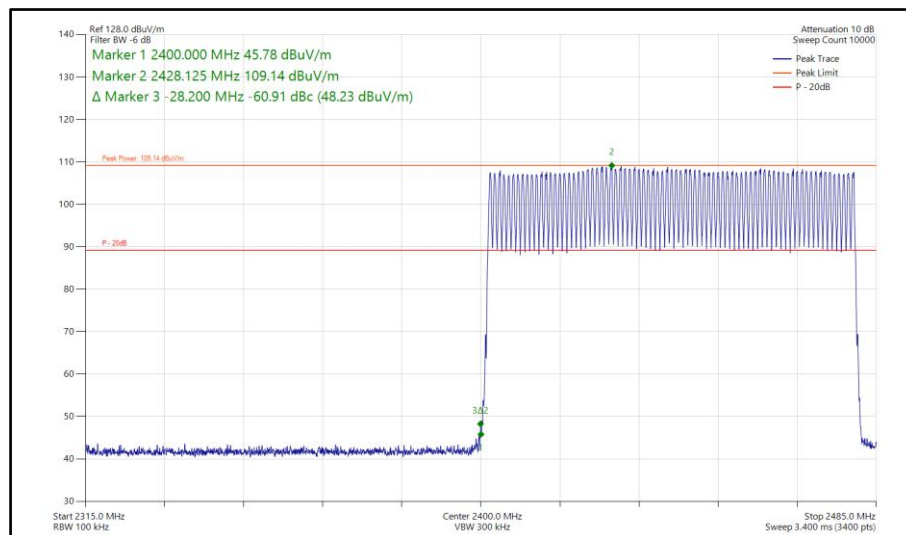


Figure 88 - Bluetooth DH5, SISO, Core 1 - 2402-2480 MHz
Band Edge Frequency 2400 MHz

iPA - Core 0-1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-57.95
Hopping	DH5	2402-2480	2400	-65.31

Table 65 - MIMO Authorised Band Edge Results

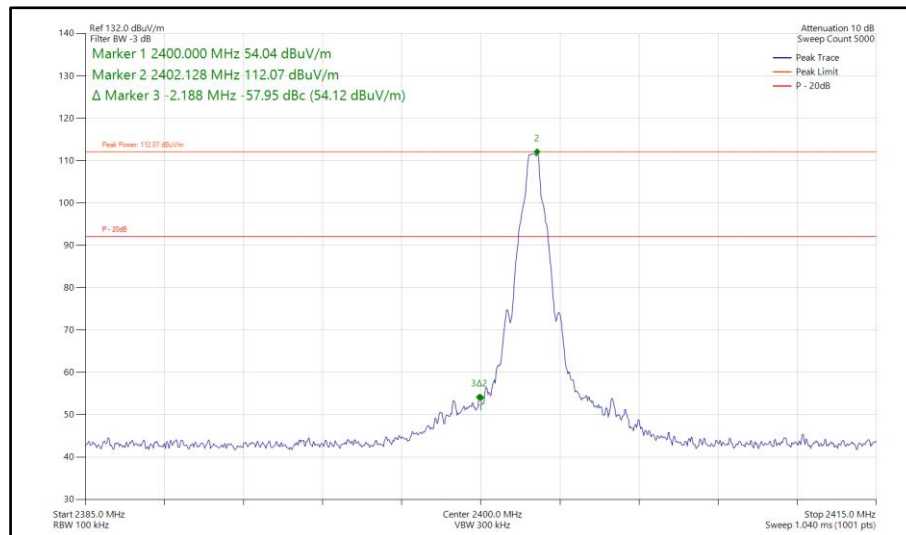


Figure 89 - Bluetooth DH5, MIMO, Core 0-1 - 2402 MHz
Band Edge Frequency 2400 MHz

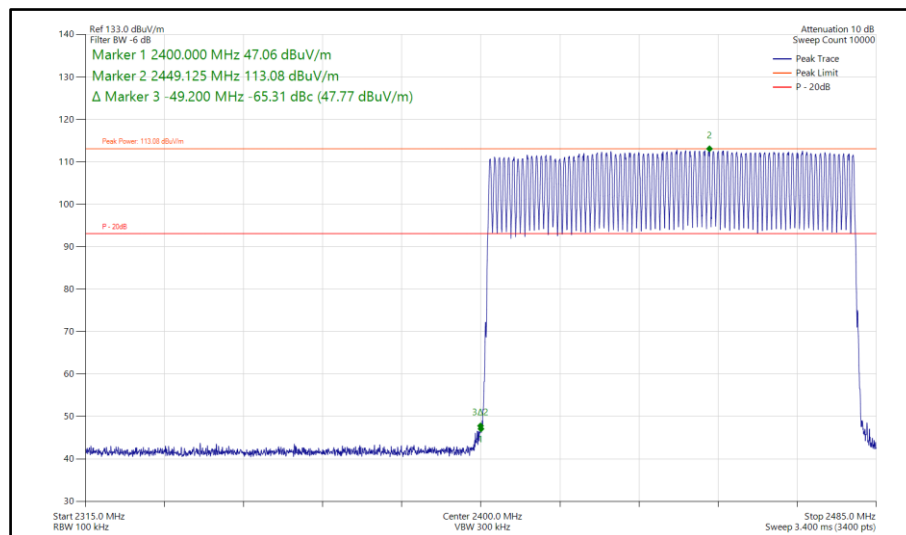


Figure 90 - Bluetooth DH5, MIMO, Core 0-1 - 2402-2480 MHz
Band Edge Frequency 2400 MHz

ePA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-66.66
Hopping	DH5	2402-2480	2400	-70.14

Table 66 - SISO Authorised Band Edge Results

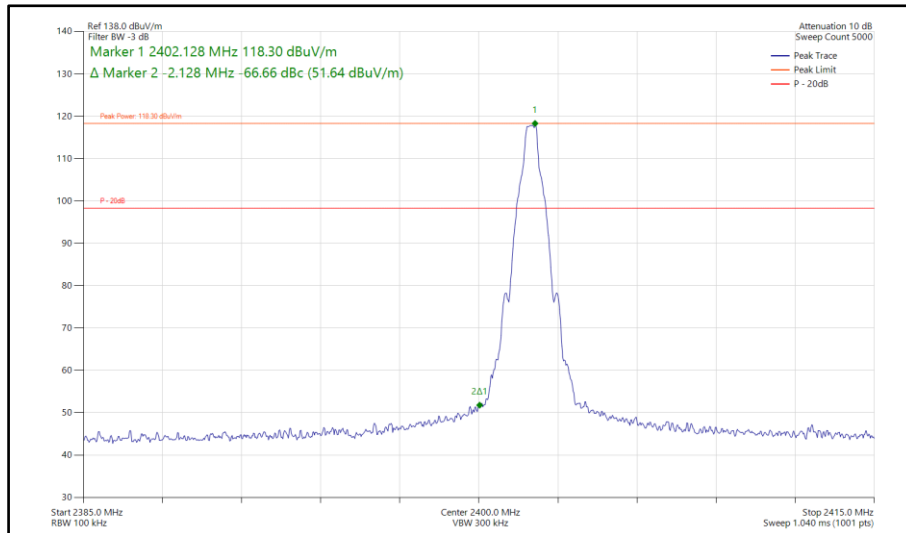


Figure 91 - Bluetooth DH5, SISO, Core 0 - 2402 MHz
Band Edge Frequency 2400 MHz

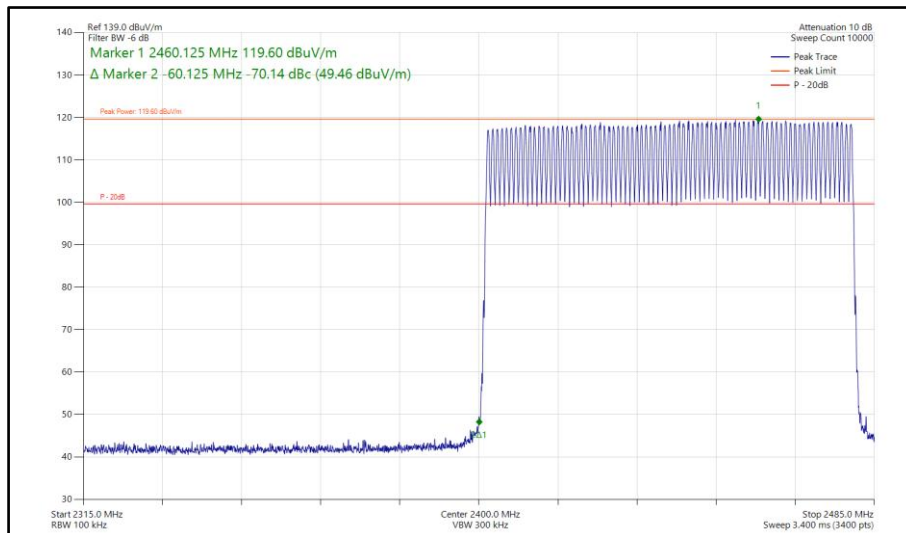


Figure 92 - Bluetooth DH5, SISO, Core 0 - 2402-2480 MHz
Band Edge Frequency 2400 MHz

ePA - Core 1 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-67.43
Hopping	DH5	2402-2480	2400	-69.01

Table 67 - SISO Authorised Band Edge Results

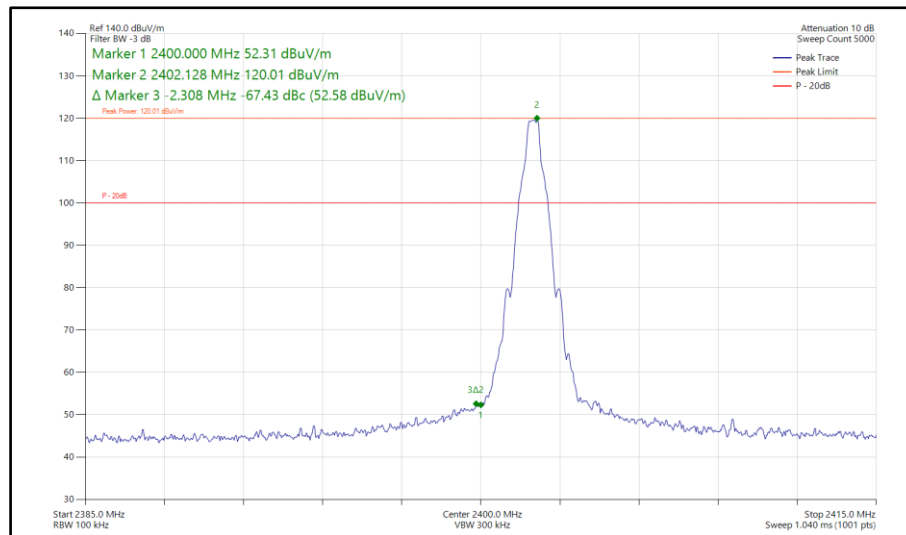


Figure 93 - Bluetooth DH5, SISO, Core 1 - 2402 MHz
Band Edge Frequency 2400 MHz

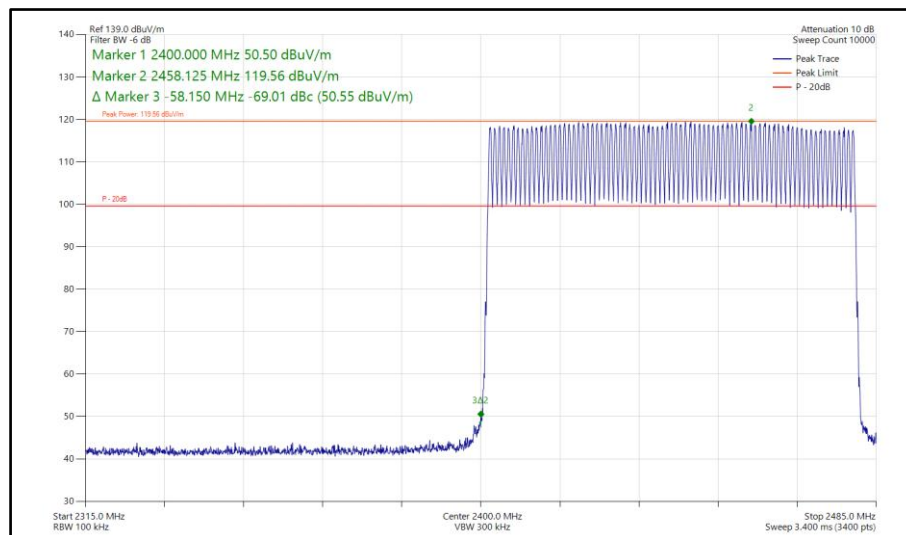


Figure 94 - Bluetooth DH5, SISO, Core 1 - 2402-2480 MHz
Band Edge Frequency 2400 MHz

ePA - Core 0-1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	DH5	2402	2400	-66.60
Hopping	DH5	2402-2480	2400	-70.03

Table 68 - MIMO Authorised Band Edge Results

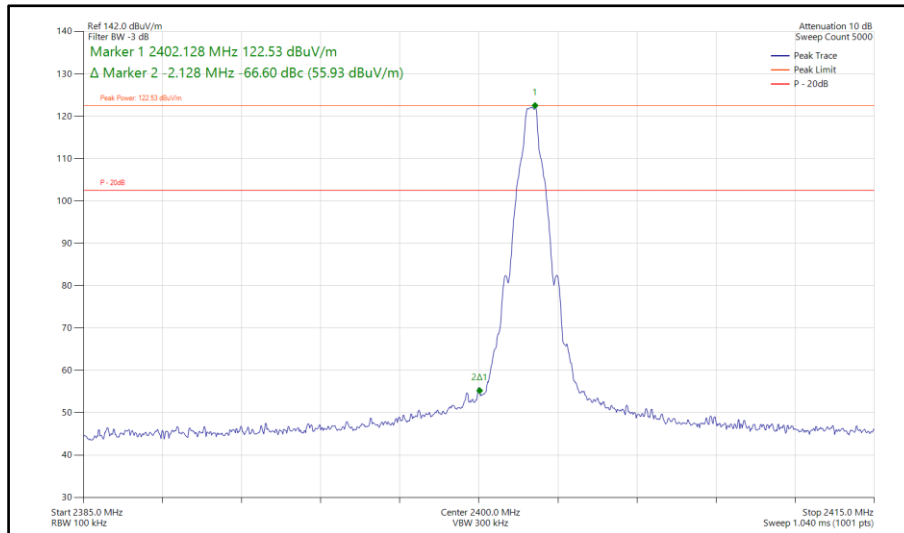


Figure 95 - Bluetooth DH5, MIMO, Core 0-1 - 2402 MHz
Band Edge Frequency 2400 MHz

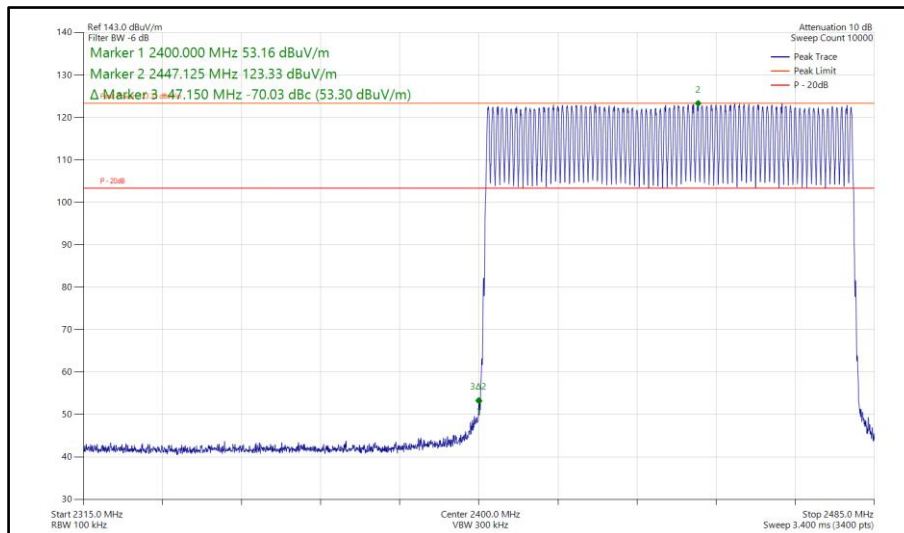


Figure 96 - Bluetooth DH5, MIMO, Core 0-1 - 2402-2480 MHz
Band Edge Frequency 2400 MHz



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	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

A3449, S/N: CFJ2CK94XL - Modification State 0
A3449, S/N: CRW6MH595K - Modification State 0

2.8.3 Date of Test

16-November-2025 to 19-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 range pre-scans were only performed on the mid channel (2441 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 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 dBuV/m to uV/m:
 $10^{(\text{Field Strength in dBuV/m}/20)}$

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

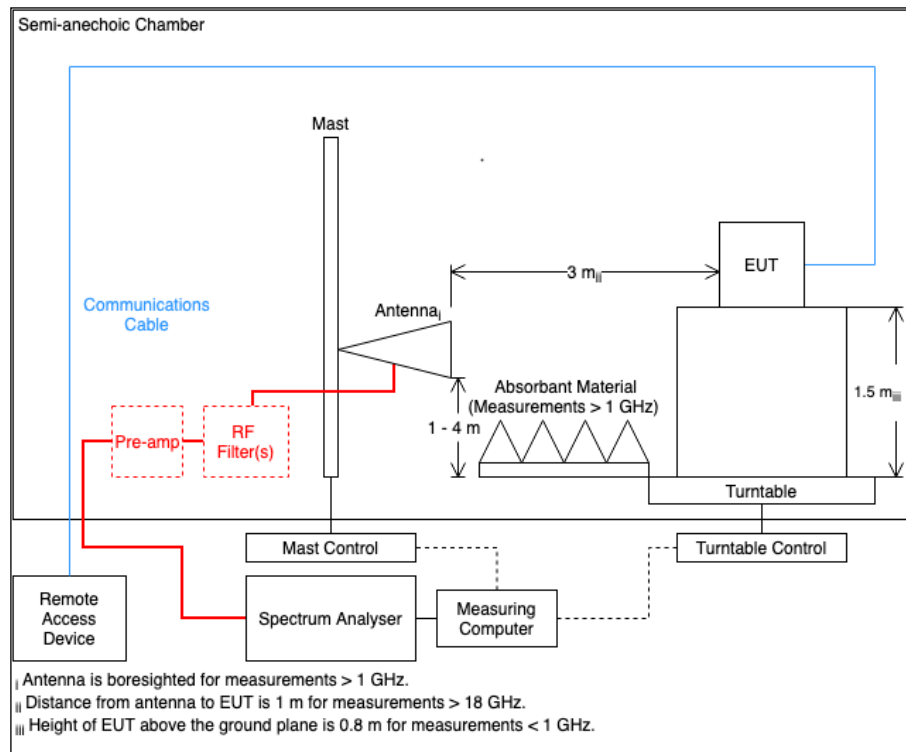


Figure 97

2.8.6 Environmental Conditions

Ambient Temperature	21.3 - 24.8 °C
Relative Humidity	33.3 - 51.2 %



2.8.7 Test Results

2.4 GHz Bluetooth FHSS BDR

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

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

*No emissions found within 20 dB of the limit.

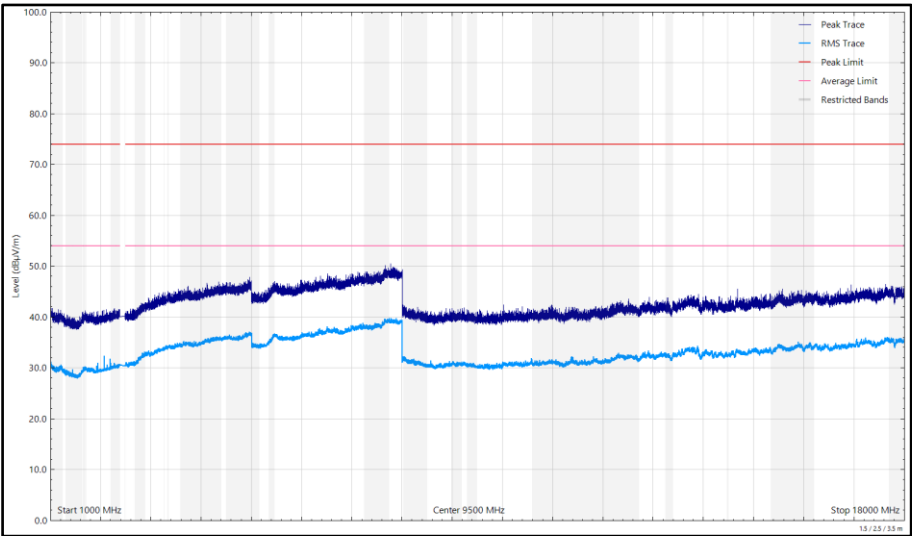


Figure 98 - 2402 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz, Horizontal

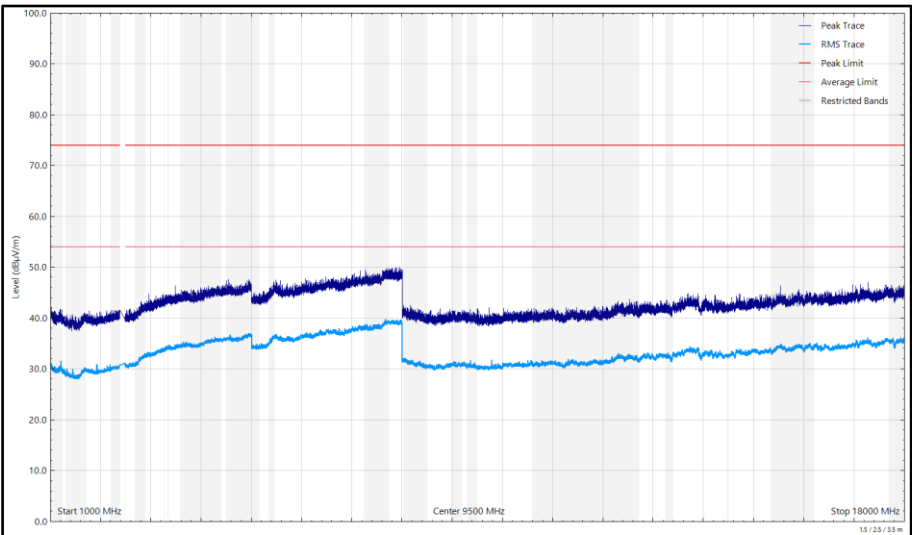


Figure 99 - 2402 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
108.720	21.93	43.50	-21.57	Q-Peak	96	100	Vertical
111.344	22.03	43.50	-21.47	Q-Peak	204	251	Horizontal
156.891	20.68	43.50	-22.82	Q-Peak	100	210	Vertical
169.483	20.87	43.50	-22.63	Q-Peak	341	357	Horizontal
240.591	21.76	46.00	-24.24	Q-Peak	338	134	Horizontal

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

No other emissions found within 20 dB of the limit.

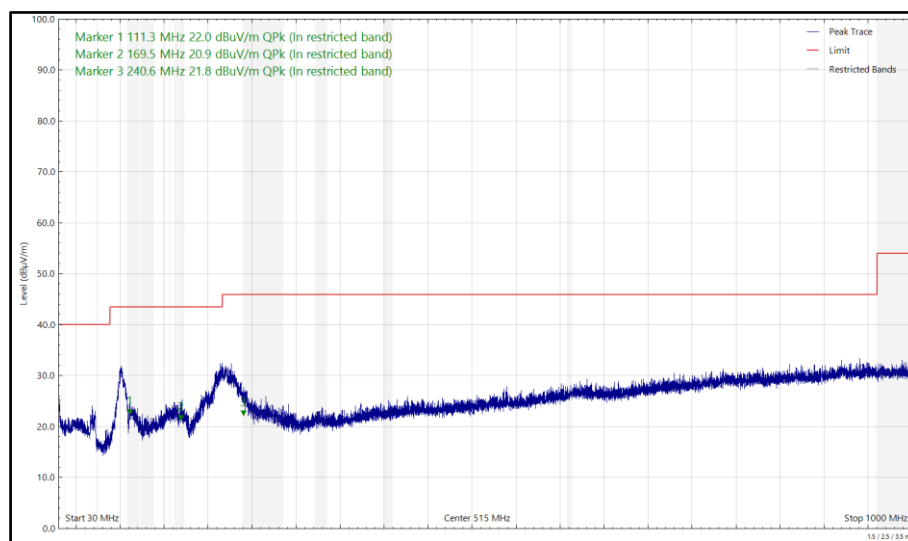


Figure 100 - 2441 MHz, DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

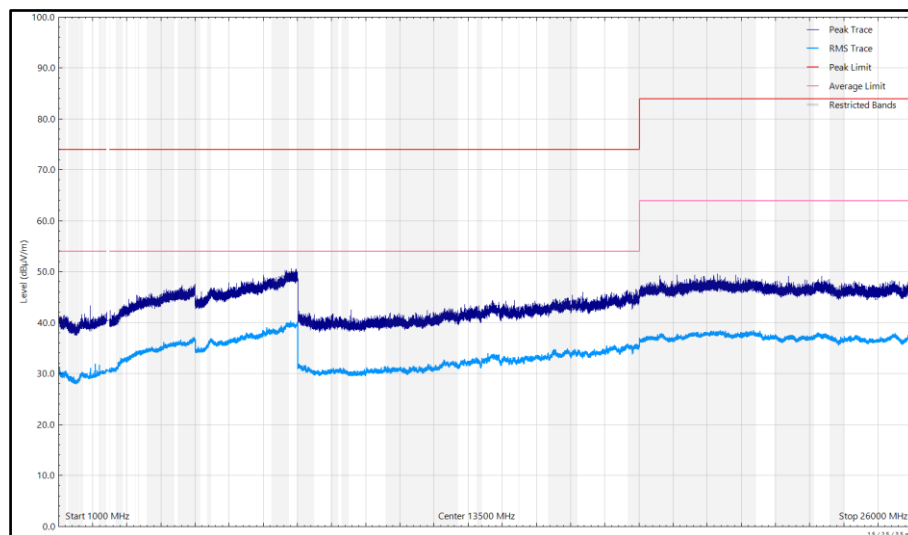


Figure 101 - 2441 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

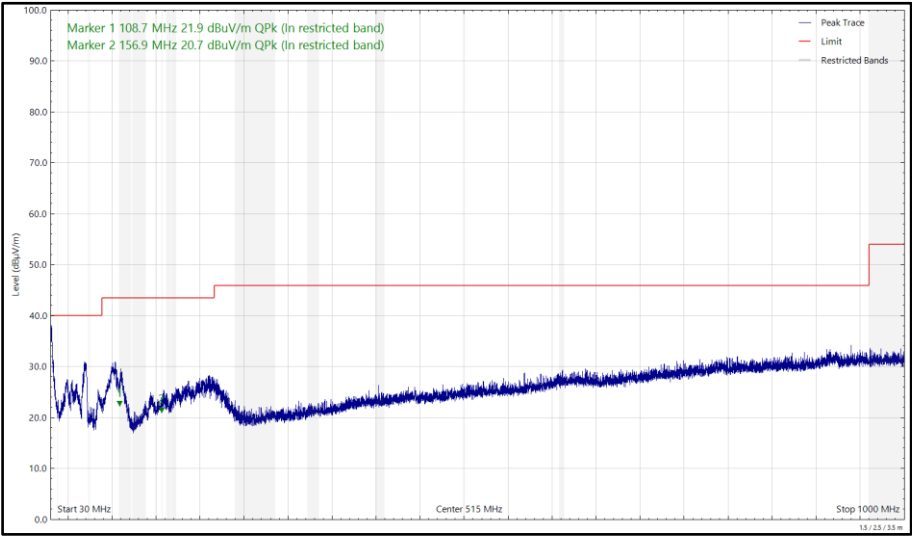


Figure 102 - 2441 MHz, DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

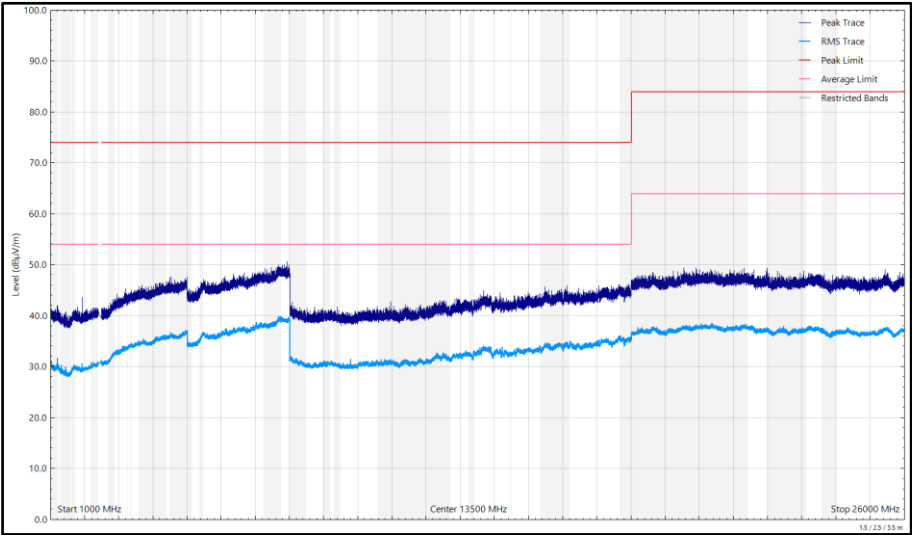


Figure 103 - 2441 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



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

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

*No emissions found within 20 dB of the limit.

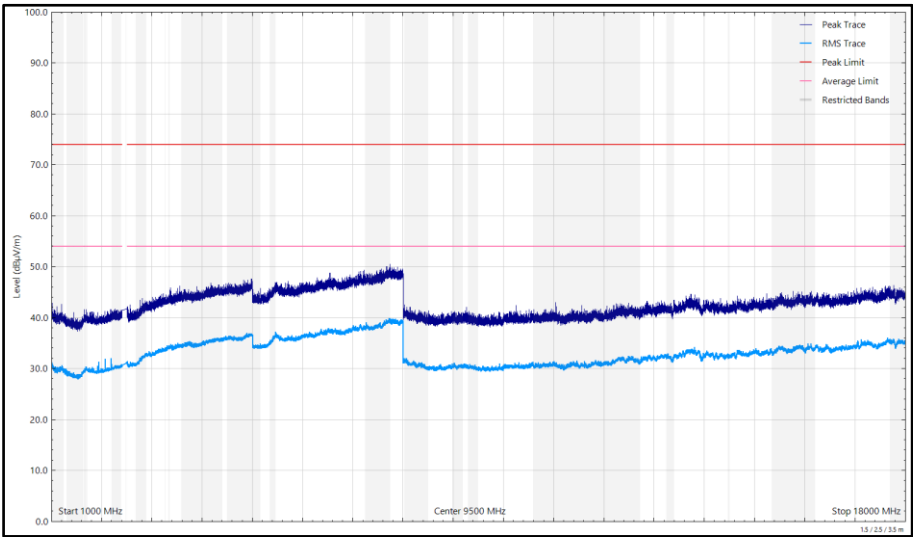


Figure 104 - 2480 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz, Horizontal

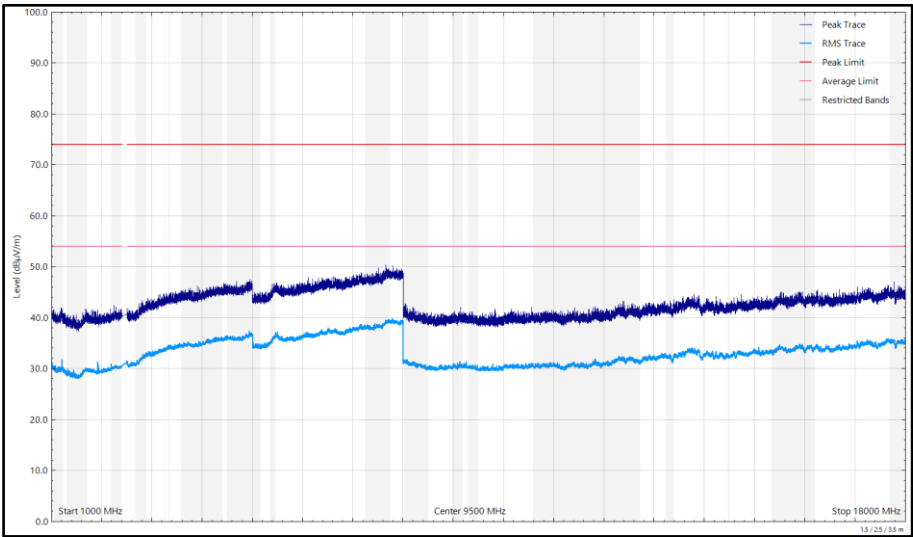


Figure 105 - 2480 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 18 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2364.351	30.19	54.00	-23.81	CISPR Avg	10	346	Vertical
2485.983	32.09	54.00	-21.91	CISPR Avg	348	320	Vertical

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

No other emissions found within 20 dB of the limit.

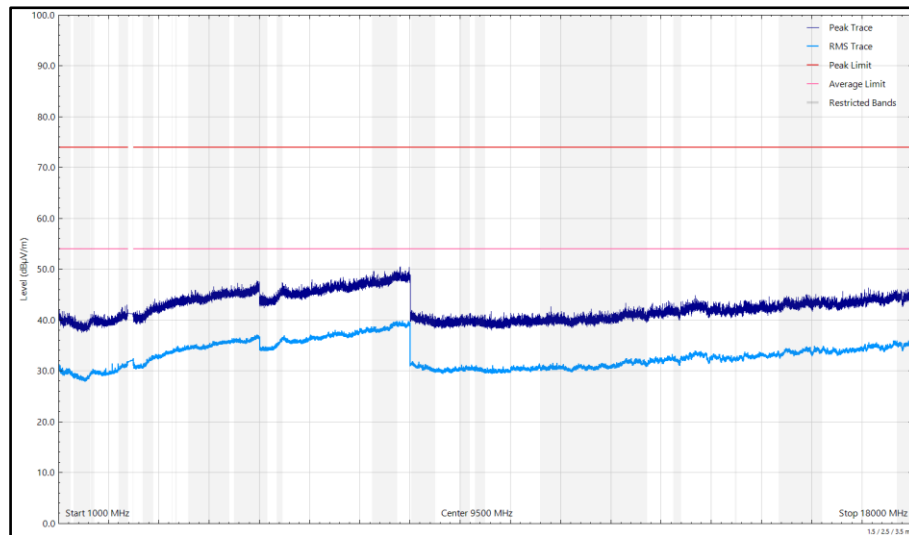


Figure 106 - 2402 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz, Horizontal

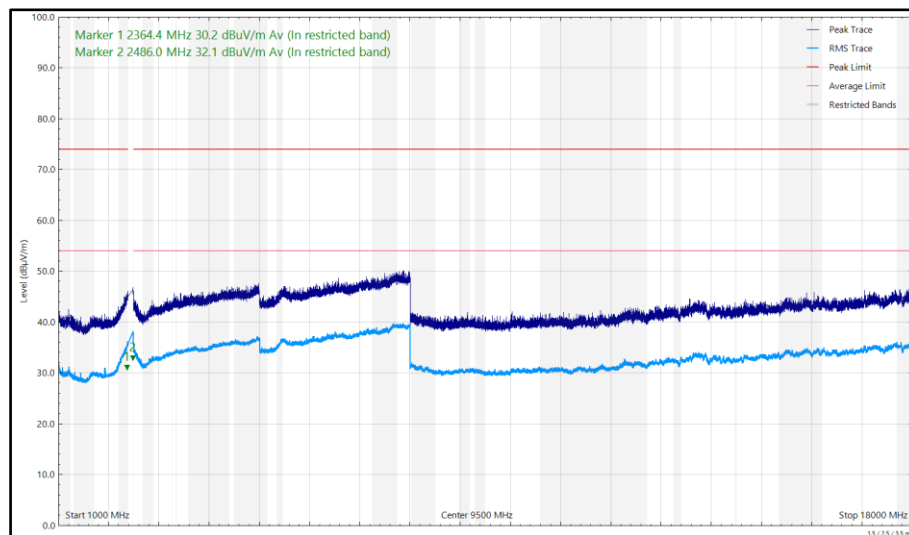


Figure 107 - 2402 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
37.939	19.72	40.00	-20.28	Q-Peak	206	327	Horizontal
109.283	22.42	43.50	-21.08	Q-Peak	274	144	Vertical
111.425	23.44	43.50	-20.06	Q-Peak	346	161	Horizontal
166.527	21.33	43.50	-22.17	Q-Peak	0	133	Horizontal
168.188	20.91	43.50	-22.59	Q-Peak	128	110	Vertical
241.728	22.01	46.00	-23.99	Q-Peak	185	123	Horizontal
2389.179	33.51	54.00	-20.49	CISPR Avg	6	394	Vertical
2484.981	33.75	54.00	-20.25	CISPR Avg	1	364	Vertical

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

No other emissions found within 20 dB of the limit.

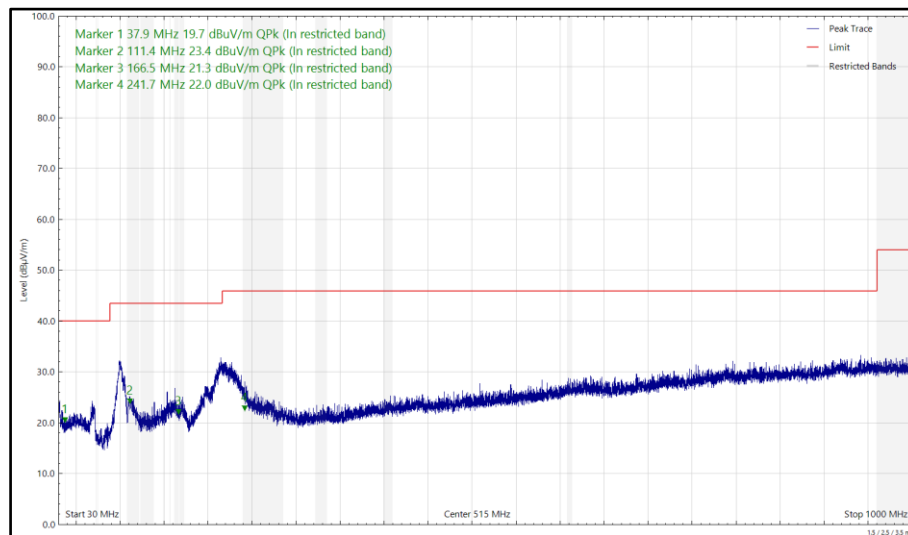


Figure 108 - 2441 MHz, DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

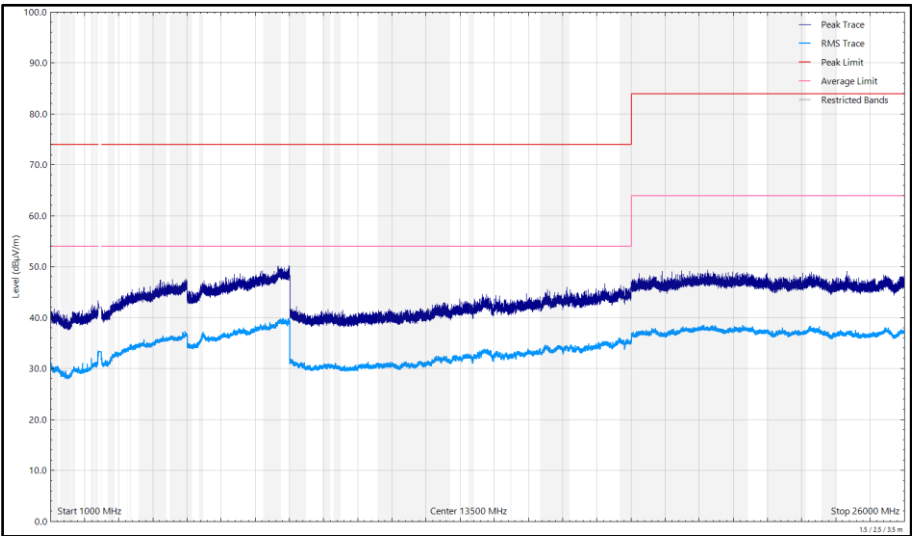


Figure 109 - 2441 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

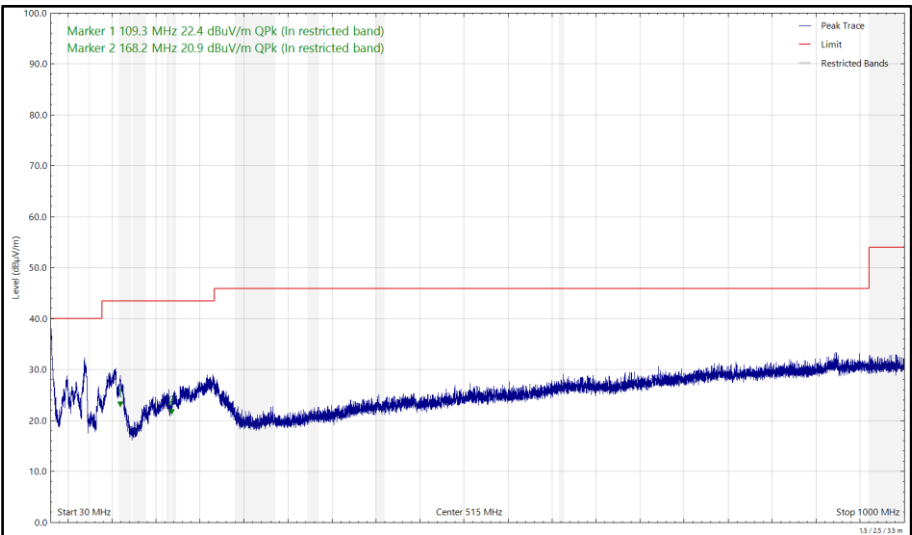


Figure 110 - 2441 MHz, DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

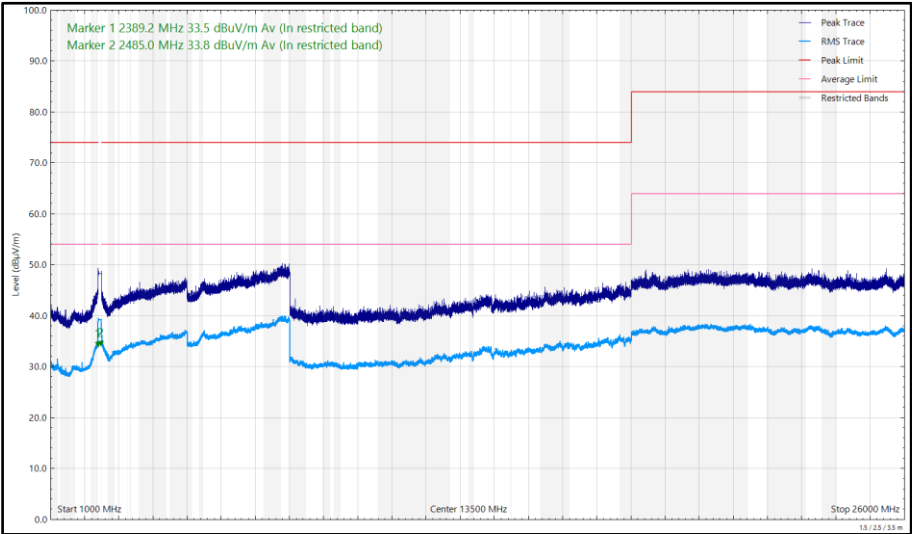


Figure 111 - 2441 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2385.574	32.69	54.00	-21.31	CISPR Avg	358	335	Vertical
2498.803	30.66	54.00	-23.34	CISPR Avg	0	390	Vertical

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

No other emissions found within 20 dB of the limit.

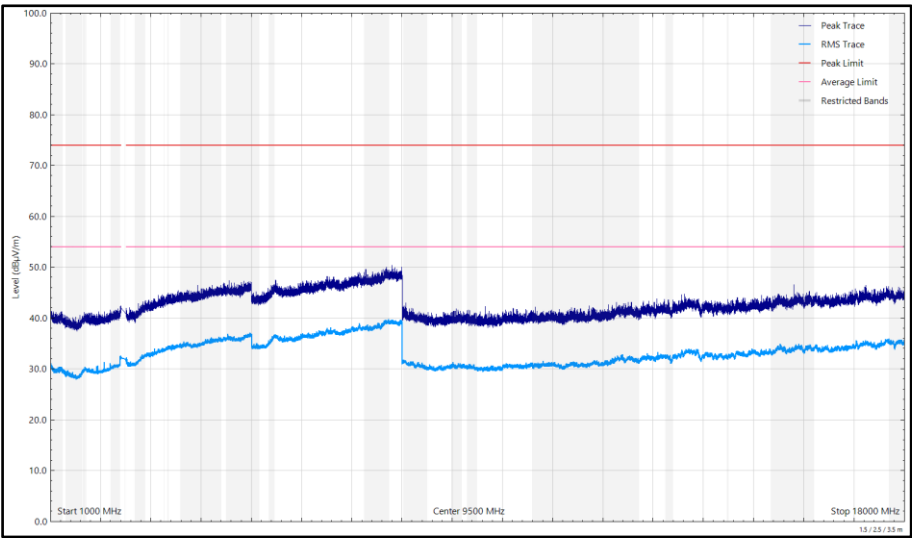


Figure 112 - 2480 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz, Horizontal

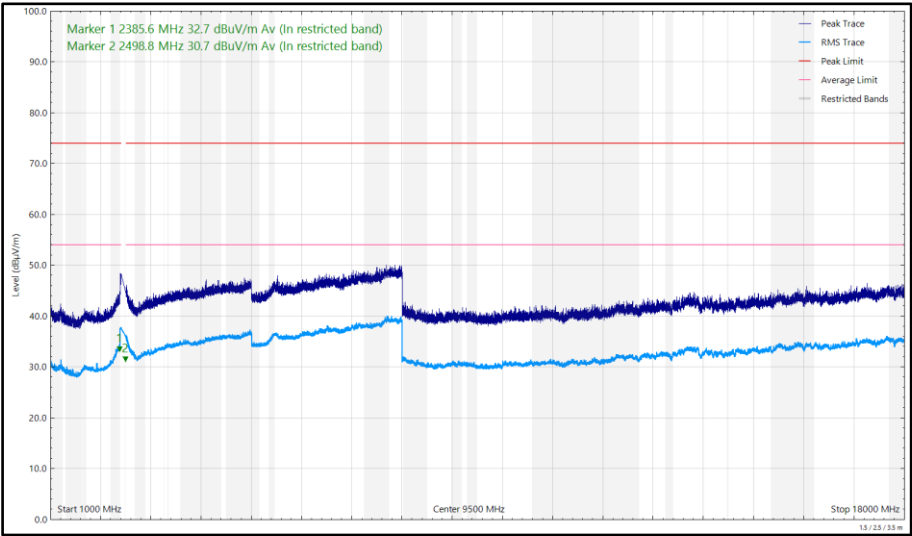


Figure 113 - 2480 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 18 GHz, Vertical



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 15 and RF Chamber 16.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.5.5	5125	-	TU
Cable 2.92m	Junkosha	MWX241-01000KMS	5413	12	23-May-2026
Test Receiver	Rohde & Schwarz	ESW44	5914	12	17-Jun-2026
Cable (K Type 2m)	Junkosha	MWX241-02000KMSKMS/B	5937	12	12-Jun-2026
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5944	24	03-Jan-2027
1500W (300V 12A) AC Power Supply	iTech	IT7324	5956	-	TU
1500W (300V 12A) AC Power Supply	iTech	IT7324	5957	-	TU
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
3m Semi-Anechoic Chamber, Chamber16	Albatross Projects	RF Chamber 16	5972	36	07-May-2028
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5973	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5974	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5975	-	TU
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6142	12	14-Sep-2026
Digital Multimeter	Fluke	115	6145	12	06-Jun-2026
Digital Multimeter	Fluke	115	6146	12	05-Jun-2026
Double Ridge Active Horn Antenna (18-40 GHz)	Com-Power	AHA-840	6189	24	26-Sep-2026
SAC Switch Unit	TUV SUD	TUV_SSU_001	6191	12	20-Dec-2025
8GHz Highpass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6194	12	23-Apr-2026
Pre Amp 8 - 18 GHz	Wright Technologies	APS06 0061	6200	12	24-Apr-2026
Attenuator 4dB	Pasternack	PE7074-4	6203	24	03-Jan-2027
Cable (SMA to SMA 20cm)	TUV SUD	MH-FH 8-18	6215	12	23-Apr-2026
USB Spectrum Analyser	Signal Hound	SA124B	6297	-	TU
USB Spectrum Analyser	Signal Hound	SA124B	6383	-	TU
DRG Horn Antenna (8-18 GHz)	Schwarzbeck	HWRD750	6458	12	18-May-2026
Humidity and Temperature Meter	R.S Components	1364	6486	12	01-Jul-2026



Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
1m Cable	Junkosha	MWX241-01000AMSAMS/B	6741	12	27-Apr-2026
8m Cable	Junkosha	MWX221-08000AMSAMS/B	6748	12	27-Apr-2026
EMI Test Receiver	Rohde & Schwarz	ESW44	6805	12	24-Jul-2026
Handheld Hygrometer	Fluke	971	6837	12	16-Sep-2026
Cable Assembly	SpecTech	PE300-60	6856	-	TU
Cable Assembly	SpecTech	PE300-60	6858	-	TU
Cable Assembly	SpecTech	PE300-60	6862	-	TU
Cable Assembly	SpecTech	PE300-60	6864	-	TU
Cable Assembly	SpecTech	PE300-60	6868	-	TU
RF Amplifier BROADBAND AMPL/SMA/RoHS	Mini-Circuits	ZX60-83LN12+	6976	12	05-Apr-2026
RF Amplifier BROADBAND AMPL/SMA/RoHS	Mini-Circuits	ZX60-83LN12+	6978	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	± 20.41 kHz
Frequency Hopping Systems - Number of Hopping Channels	-
Frequency Hopping Systems - 20 dB Bandwidth	± 20.41 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.