

FCC and ISED Test Report

Apple Inc
Model: A3434



In accordance with FCC 47 CFR Part 15, ISED RSS-247, ISED RSS-248 and ISED RSS-GEN (2.4 GHz Bluetooth, 2.4 GHz WLAN, 5 GHz WLAN, 6 GHz WLAN, Narrowband and Thread)

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Document 75963494-20 Issue 02

SIGNATURE			
NAME	JOB TITLE	RESPONSIBLE FOR	ISSUE DATE
Stephen Marshall	Senior Engineer	Authorised Signatory	29 July 2025

Signatures in this approval box have checked this document in line with the requirements of TÜV SÜD document control rules.

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC 47 CFR Part 15, ISED RSS-247, ISED RSS-248 and ISED RSS-GEN. The sample tested was found to comply with the requirements defined in the applied rules.

RESPONSIBLE FOR	NAME	DATE	SIGNATURE
Report Generation	Rachael Watkins	29 July 2025	

FCC Accreditation 553713/UK2026 Concorde Park, Fareham Test Laboratory
ISED Accreditation 28798/UK0003 Concorde Park, Fareham Test Laboratory

EXECUTIVE SUMMARY
A sample of this product was tested and found to be compliant with FCC 47 CFR Part 15: 2023, ISED RSS-247: Issue 3 (2023-08), ISED RSS-248: Issue 3 (2024-10) and ISED RSS-GEN: Issue 5 (2018-04) + A2 (2021-02) for the tests detailed in section 1.3.

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1 Report Summary

1.1 Report Modification Record

Alterations and additions to this report will be issued to the holders of each copy in the form of a complete document.

Issue	Description of Change	Date of Issue
1	First Issue	20-March-2025
2	Added 2.4 GHz WLAN and Thread Configuration and updated report to ISED RSS-248 Issue 3 from Issue 2	29 July 2025

Table 1

1.2 Introduction

Applicant	Apple Inc
Manufacturer	Apple Inc
EUT/Sample Identification	Refer to section 1.6
Test Specification/Issue/Date	FCC 47 CFR Part 15: 2023 ISED RSS-247: Issue 3 (2023-08) ISED RSS-248: Issue 3 (2024-10) ISED RSS-GEN: Issue 5 (2018-04) + A2 (2021-02)
Start of Test	18-February-2025
Finish of Test	03-July-2025
Name of Engineer(s)	Colin Brain, Gridi Bilali, Thomas Randall, Akhil Rajendran Bhaskaran Nair, Ioan-Alexandru Bogatu, Ahmed Al Derdiri, Marius Vasii and Morsalin Hossain.
Related Document(s)	ANSI C63.4 (2014) ANSI C63.10 (2020) KDB 789033 D02 v02r01 KDB 987594 D02 v01r01



1.3 Brief Summary of Results

A brief summary of the tests carried out in accordance with FCC 47 CFR Part 15, ISED RSS-247, ISED RSS-248 and ISED RSS-GEN is shown below.

Section	Specification Clause				Test Description	Result	Comments/Base Standard
	Part 15	RSS-247	RSS-248*	RSS-GEN			
Configuration and Mode: 5 GHz WLAN and 2.4 GHz Bluetooth							
2.1	15.209, 15.247(d) and 15.407(b)	5.5 and 6.2	-	6.13 and 8.9	Radiated Spurious Emissions (Simultaneous Transmission)	Pass	ANSI C63.4 (2014) ANSI C63.10 (2020) KDB 789033 D02 v02r01 KDB 987594 D02 v01r01
Configuration and Mode: 6 GHz WLAN and 2.4 GHz Bluetooth							
2.1	15.209, 15.247(d) and 15.407(b)	5.5	4.6	6.13 and 8.9	Radiated Spurious Emissions (Simultaneous Transmission)	Pass	ANSI C63.4 (2014) ANSI C63.10 (2020) KDB 789033 D02 v02r01 KDB 987594 D02 v01r01
Configuration and Mode: 2.4 GHz WLAN and Narrowband							
2.1	15.209, 15.247(d) and 15.407(b)	5.5 and 6.2	-	6.13 and 8.9	Radiated Spurious Emissions (Simultaneous Transmission)	Pass	ANSI C63.4 (2014) ANSI C63.10 (2020) KDB 789033 D02 v02r01 KDB 987594 D02 v01r01
Configuration and Mode: 2.4 GHz WLAN and Thread							
2.1	15.209 and 15.247(d)	5.5	-	6.13 and 8.9	Radiated Spurious Emissions (Simultaneous Transmission)	Pass	ANSI C63.4 (2014) ANSI C63.10 (2020)



Section	Specification Clause				Test Description	Result	Comments/Base Standard
	Part 15	RSS-247	RSS-248*	RSS-GEN			
Configuration and Mode: 5 GHz WLAN and Thread							
2.1	15.209, 15.247(d) and 15.407(b)	5.5 and 6.2	-	6.13 and 8.9	Radiated Spurious Emissions (Simultaneous Transmission)	Pass	ANSI C63.4 (2014) ANSI C63.10 (2020) KDB 789033 D02 v02r01 KDB 987594 D02 v01r01
Configuration and Mode: 6 GHz WLAN and Thread							
2.1	15.209, 15.247(d) and 15.407(b)	5.5	4.6	6.13 and 8.9	Radiated Spurious Emissions (Simultaneous Transmission)	Pass	ANSI C63.4 (2014) ANSI C63.10 (2020) KDB 789033 D02 v02r01 KDB 987594 D02 v01r01

Table 2

*Any testing that was completed in accordance with ISED RSS-248: Issue 2 (2022-12) as part of Issue 1 of this report, is considered suitable for compliance against ISED RSS-248: Issue 3 (2024-10). This has been confirmed through assessment of both versions of this standard, in order to ensure that there are no technical differences between versions which would impact the Radiated Spurious Emissions testing included within this report.



1.4 Product Information

1.4.1 Technical Description

The equipment under test (EUT) was a portable laptop computer.

1.5 Deviations from the Standard

No deviations from the applicable test standard were made during testing.

1.6 Identification of the EUT

The table below details identification of the EUT(s) that have been used to carry out the testing within this report.

Model: A3434		
Serial Number	Hardware Version	Software Version
F4XG93M94R	REV1.0	24E21570q
FM02PF6GWR	REV1.0	24E21570q
KW6HY7JMQQ	REV1.0	24E21570q
G4G6GDQ52M	REV1.0	24E21570q
FDF7FHJ9R1	REV1.0	24F20202g

Table 3

1.7 EUT Modification Record

The table below details modifications made to the EUT during the test programme.

The modifications incorporated during each test are recorded on the appropriate test pages.

Modification State	Description of Modification still fitted to EUT	Modification Fitted By	Date Modification Fitted
Model: A3434, Serial Number: FM02PF6GWR			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3434, Serial Number: KW6HY7JMQQ			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3434, Serial Number: F4XG93M94R			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3434, Serial Number: G4G6GDQ52M			
0	As supplied by the customer	Not Applicable	Not Applicable
Model: A3434, Serial Number: FDF7FHJ9R1			
0	As supplied by the customer	Not Applicable	Not Applicable

Table 4



1.8 Test Location

TÜV SÜD conducted the following tests at our Concorde Park Test Laboratory.

Test Name	Name of Engineer(s)	Accreditation
Configuration and Mode: 5 GHz WLAN and 2.4 GHz Bluetooth		
Radiated Spurious Emissions (Simultaneous Transmission)	Colin Brain, Gridi Bilali, Thomas Randall, Akhil Rajendran Bhaskaran Nair, Ioan-Alexandru Bogatu and Ahmed Al Derdiri	UKAS
Configuration and Mode: 6 GHz WLAN and 2.4 GHz Bluetooth		
Radiated Spurious Emissions (Simultaneous Transmission)	Akhil Rajendran Bhaskaran Nair, Ahmed Al Derdiri, Ioan-Alexandru Bogatu and Thomas Randall.	UKAS
Configuration and Mode: 2.4 GHz WLAN and Narrowband		
Radiated Spurious Emissions (Simultaneous Transmission)	Akhil Rajendran Bhaskaran Nair, Ahmed Al Derdiri, Thomas Randall and Morsalin Hossain	UKAS
Configuration and Mode: 2.4 GHz WLAN and Thread		
Radiated Spurious Emissions (Simultaneous Transmission)	Akhil Rajendran Bhaskaran Nair and Colin Brain.	UKAS
Configuration and Mode: 5 GHz WLAN and Thread		
Radiated Spurious Emissions (Simultaneous Transmission)	Gridi Bilali, Thomas Randall, Ioan-Alexandru Bogatu, Vineeth Nagaraj, Marius Vasii and Colin Brain	UKAS
Configuration and Mode: 6 GHz WLAN and Thread		
Radiated Spurious Emissions (Simultaneous Transmission)	Ioan-Alexandru Bogatu, Thomas Randall, Marius Vasii, Colin Brain and Ahmed Al Derdiri	UKAS

Table 5

Office Address:

TÜV SÜD
Concorde Park
Concorde Way
Fareham
Hampshire
PO15 5FG
United Kingdom



2 Test Details

2.1 Radiated Spurious Emissions (Simultaneous Transmission)

2.1.1 Specification Reference

FCC 47 CFR Part 15, Clause 15.209, 15.247(d) and 15.407(b)
ISED RSS-247, Clause 5.5 and 6.2
ISED RSS-248, Clause 4.6
ISED RSS-GEN, Clause 6.13 and 8.9

2.1.2 Equipment Under Test and Modification State

A3434, S/N: F4XG93M94R - Modification State 0
A3434, S/N: FM02PF6GWR - Modification State 0
A3434, S/N: KW6HY7JMQQ - Modification State 0
A3434, S/N: G4G6GDQ52M - Modification State 0
A3434, S/N: FDF7FHJ9R1- Modification State 0

2.1.3 Date of Test

18-February-2025 to 03-July-2025

2.1.4 Test Method

Measurements of emissions from the EUT were obtained with the Measurement Antenna in both Horizontal and Vertical Polarisations. The profiling produced a list of the worst-case emissions together with the EUT azimuth and antenna polarisation.

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

Ports on the EUT were terminated with loads as described in ANSI C63.4 clause 6.2.4 for each type of port on the EUT.

For frequencies > 1 GHz, plots for average measurements were taken in accordance with ANSI C63.10, clause 4.1.4.2.5 to characterize the EUT. Where emissions were detected, final average measurements were taken in accordance with ANSI C63.10, clause 4.1.4.2.2, 11.11, 11.12, 12.7.2 or 12.7.3 depending on the nature of the emission measured.

The plots shown are the characterisation of the EUT. The limits on the plots represent the most stringent case for restricted bands, (74/54 dBµV/m) when compared to non-restricted band limits. 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:
 $10^{(\text{Field Strength in dB}\mu\text{V/m}/20)}$

To determine the emission characteristic of the EUT above 18 GHz, the test antenna was swept over all faces of the EUT whilst observing a spectral display. The frequency of any emissions of interest was noted for formal measurement at the correct measurement distance of 1m. This procedure was repeated for all relevant transmit operating channels.

At a measurement distance of 1 meter the limit line was increased by $20 \cdot \text{LOG}(3/1) = 9.54$ dB.

Radiated spurious emissions tests have been conducted in HDR4 (high power) mode for Narrowband technology as this represents the worst case with respect to Power and PSD.

2.1.5 Example Test Setup Diagram

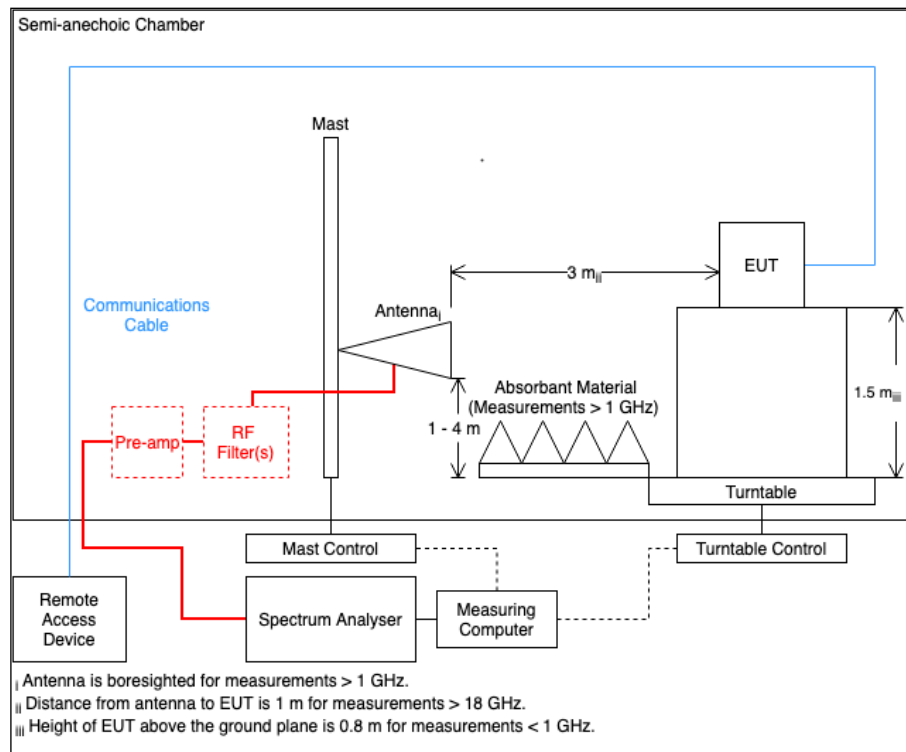


Figure 1

2.1.6 Environmental Conditions

Ambient Temperature	21.2 - 25.6 °C
Relative Humidity	29.0 – 46.6 %

2.1.7 Test Results

5 GHz WLAN and 2.4 GHz Bluetooth

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.013	26.22	46.00	-19.78	Q-Peak	282	110	Horizontal
2387.113	33.31	54.00	-20.69	CISPR Avg	360	396	Vertical
2387.764	56.42	74.00	-17.58	Peak	360	390	Vertical
2485.746	34.00	54.00	-20.00	CISPR Avg	10	400	Vertical
2489.156	29.49	54.00	-24.51	CISPR Avg	310	361	Horizontal
2798.002	32.97	54.00	-21.03	CISPR Avg	0	340	Vertical
4881.413	44.62	54.00	-9.38	CISPR Avg	27	264	Vertical
4882.176	56.03	74.00	-17.97	Peak	28	265	Vertical
4882.357	37.90	54.00	-16.10	CISPR Avg	63	400	Horizontal
5147.122	58.49	74.00	-15.51	Peak	344	291	Vertical
5351.901	59.83	74.00	-14.17	Peak	5	309	Vertical
5520.869	56.63	74.00	-17.37	Peak	3	276	Vertical

Table 6 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

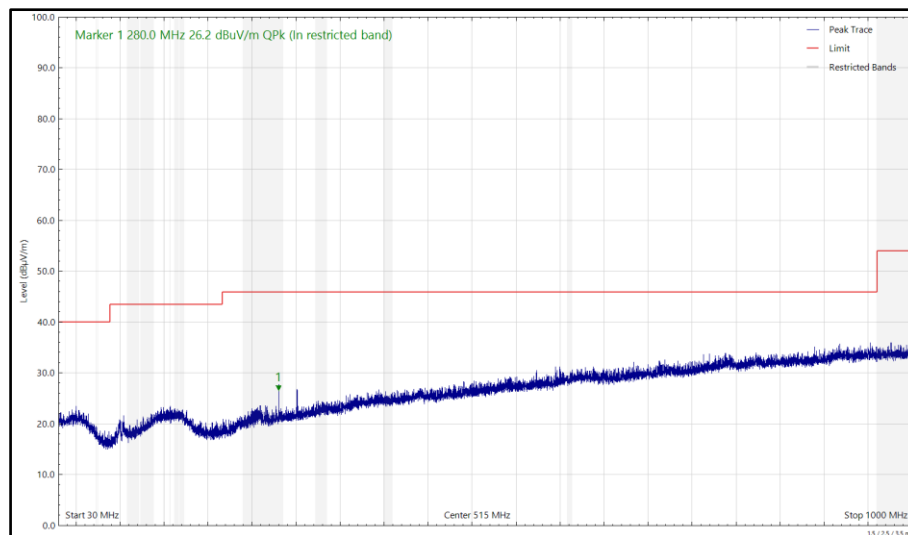


Figure 2 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

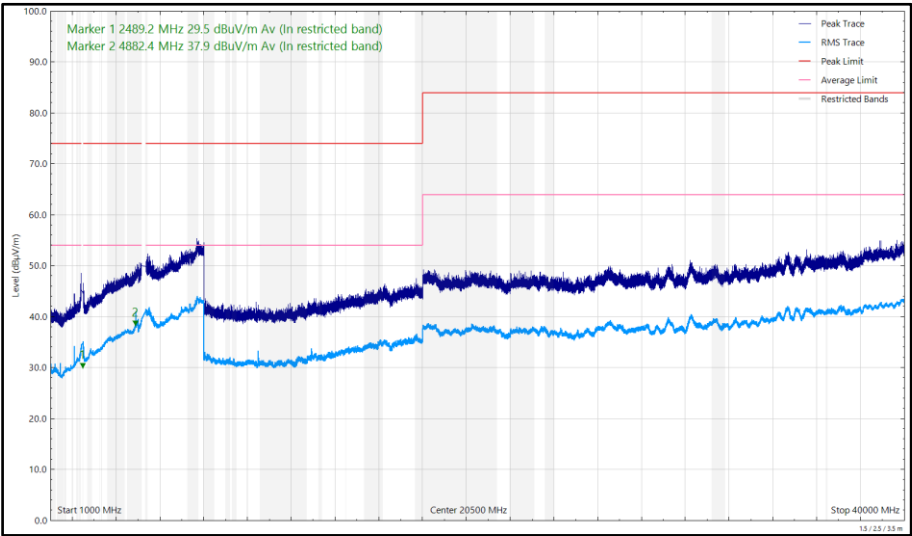


Figure 3 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

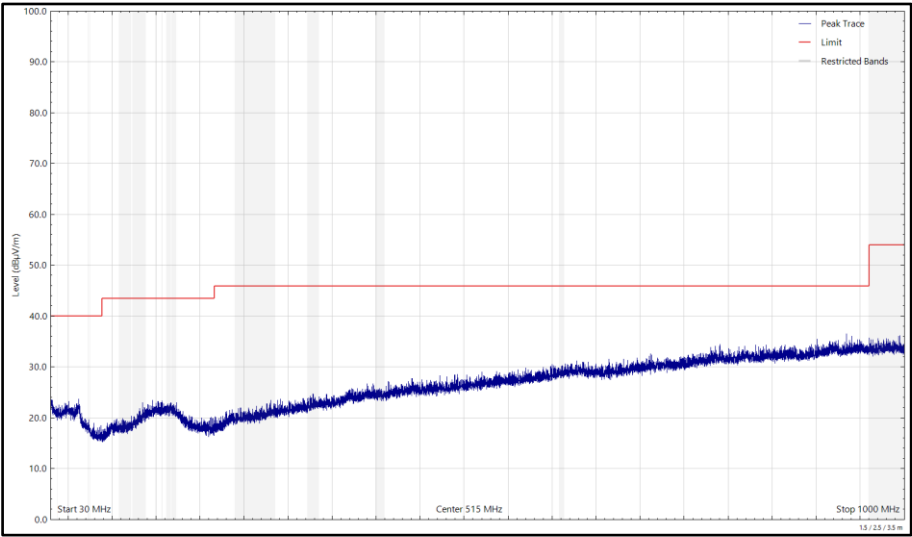


Figure 4 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

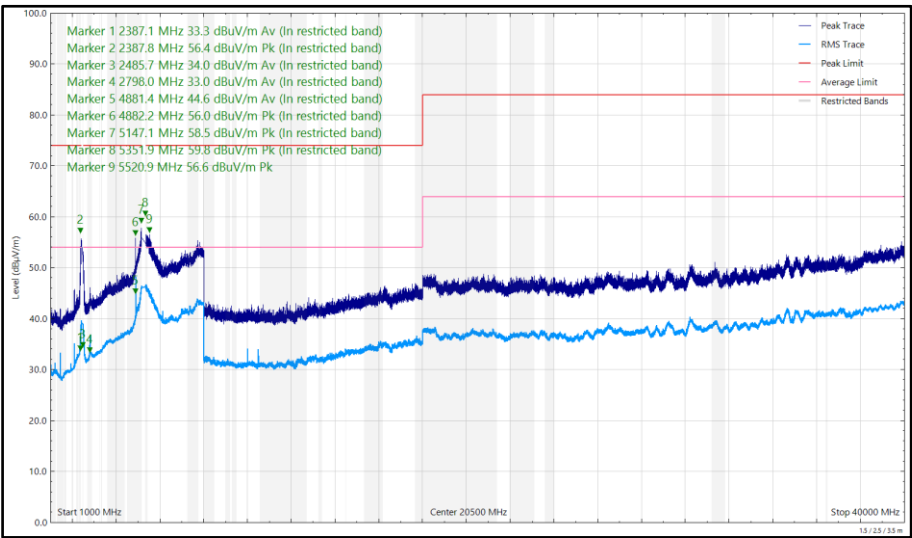


Figure 5 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.017	25.61	46.00	-20.39	Q-Peak	279	100	Horizontal
2378.402	56.22	74.00	-17.78	Peak	357	341	Vertical
2388.239	29.79	54.00	-24.21	CISPR Avg	319	389	Horizontal
2389.905	34.24	54.00	-19.76	CISPR Avg	360	346	Vertical
2483.800	30.52	54.00	-23.48	CISPR Avg	315	356	Horizontal
2485.105	35.19	54.00	-18.81	CISPR Avg	30	351	Vertical
4881.308	36.23	54.00	-17.77	CISPR Avg	59	353	Horizontal
4881.646	55.89	74.00	-18.11	Peak	26	277	Vertical
4882.418	45.27	54.00	-8.73	CISPR Avg	28	280	Vertical
5459.386	58.37	74.00	-15.63	Peak	5	304	Vertical

Table 7 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

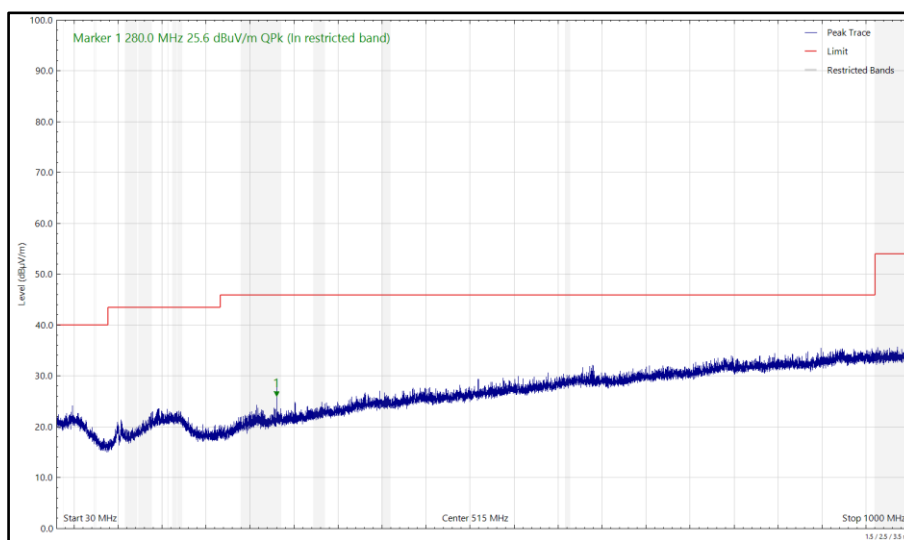


Figure 6 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

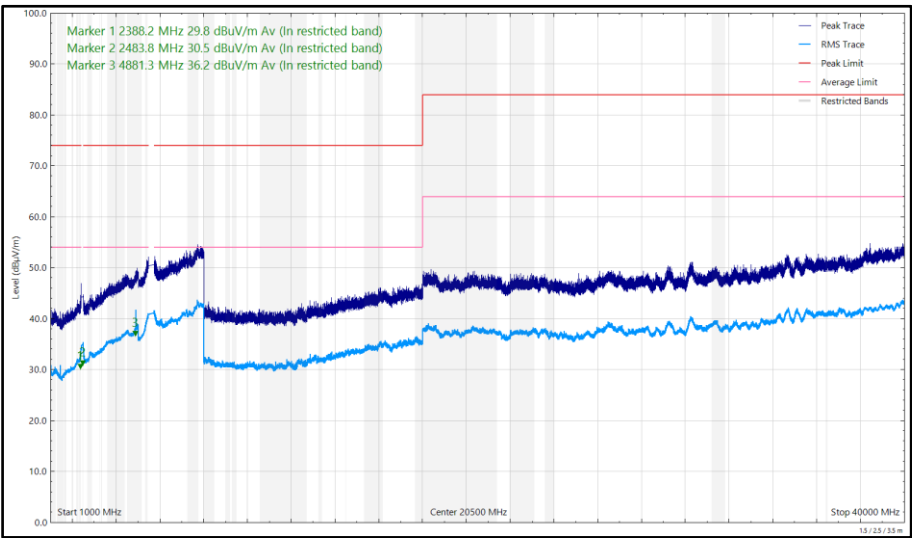


Figure 7 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

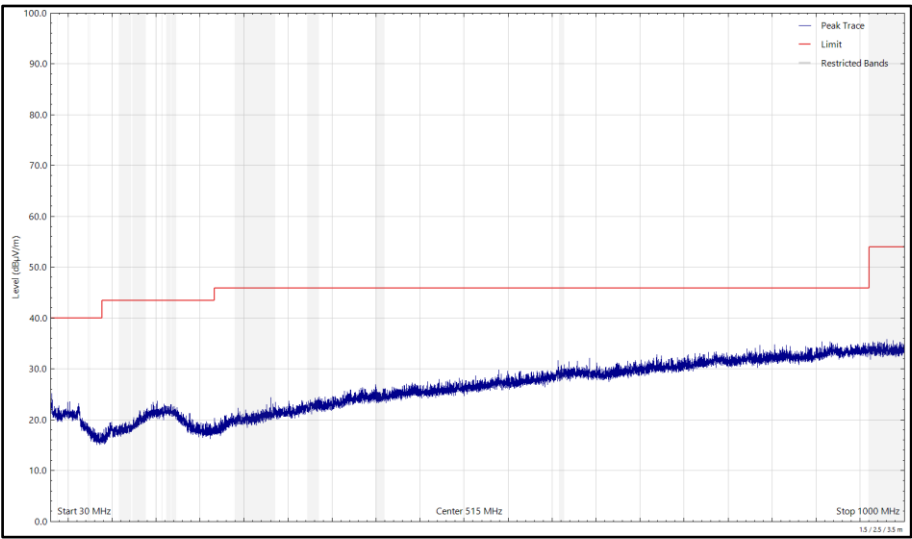


Figure 8 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

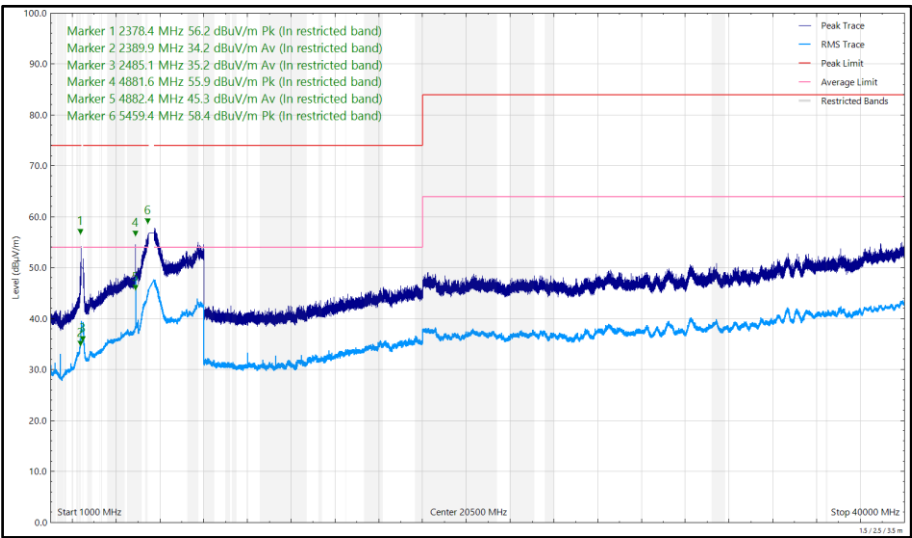


Figure 9 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.000	23.50	46.00	-22.50	Q-Peak	77	173	Horizontal
2382.300	30.59	54.00	-23.41	CISPR Avg	51	381	Horizontal
2385.920	55.97	74.00	-18.03	Peak	0	289	Vertical
2389.653	34.09	54.00	-19.91	CISPR Avg	360	346	Vertical
2491.337	34.04	54.00	-19.96	CISPR Avg	31	390	Vertical
2494.754	29.62	54.00	-24.38	CISPR Avg	310	396	Horizontal
4882.312	46.35	54.00	-7.65	CISPR Avg	27	267	Vertical
4882.325	55.00	74.00	-19.00	Peak	32	241	Vertical
4882.427	37.76	54.00	-16.24	CISPR Avg	65	369	Horizontal
5448.018	55.54	74.00	-18.46	Peak	357	314	Vertical

Table 8 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

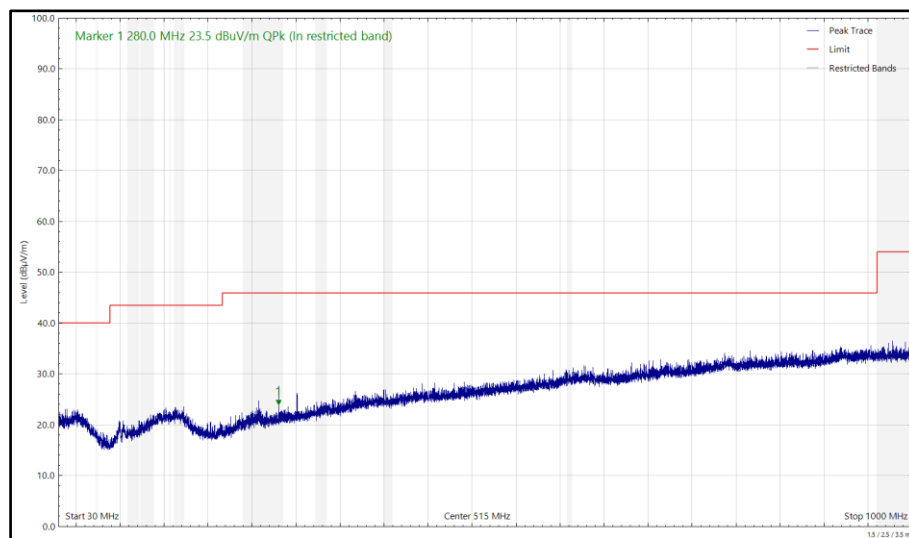


Figure 10 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

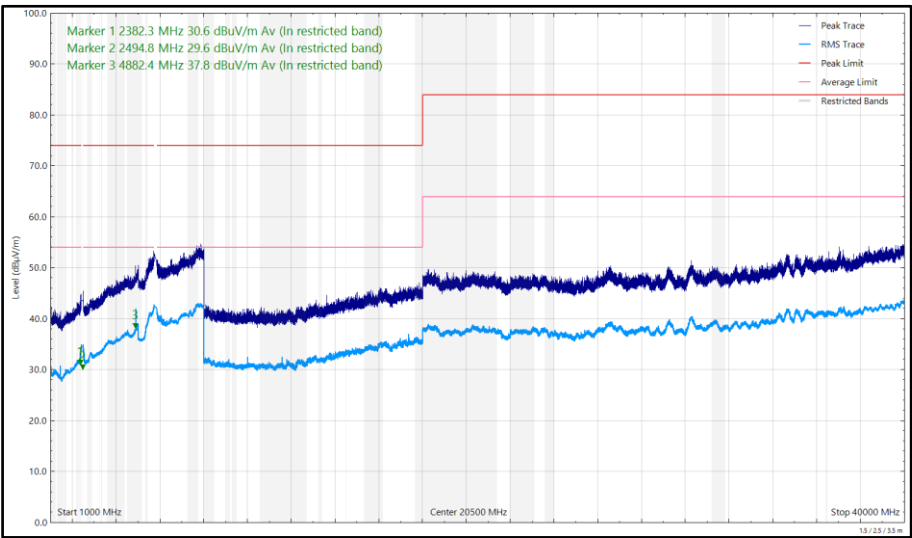


Figure 11 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

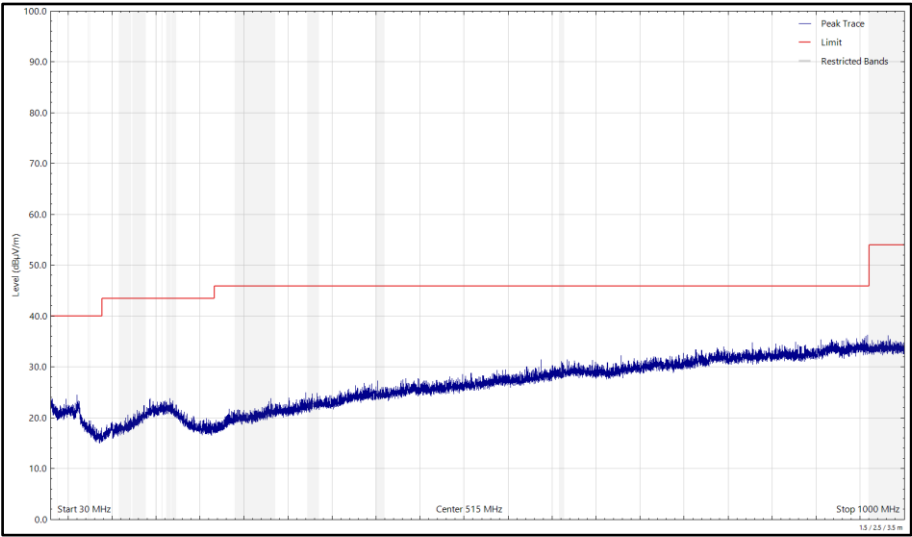


Figure 12 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

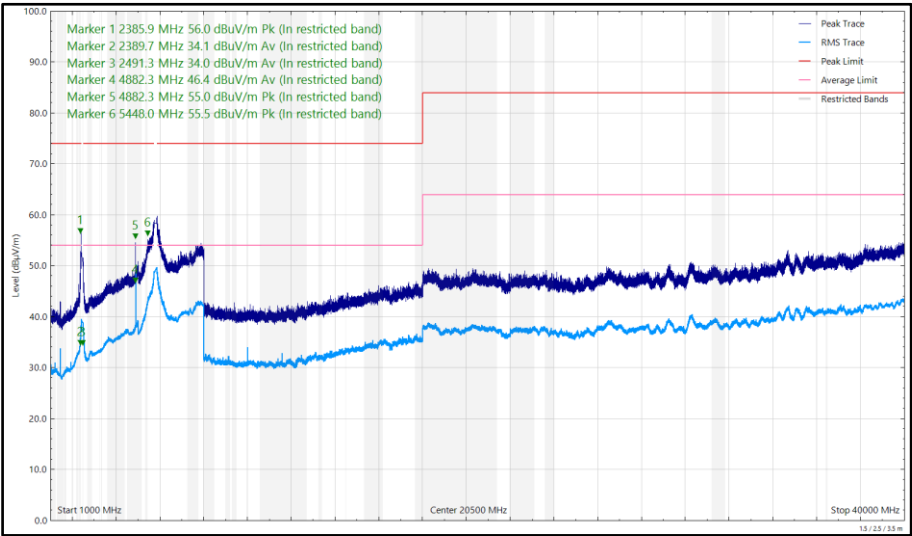


Figure 13 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.013	26.03	46.00	-19.97	Q-Peak	274	119	Horizontal
1440.090	28.45	54.00	-25.55	CISPR Avg	53	238	Vertical
4210.663	32.30	54.00	-21.70	CISPR Avg	7	177	Vertical
4881.498	38.71	54.00	-15.29	CISPR Avg	61	400	Horizontal
4881.696	56.42	74.00	-17.58	Peak	0	282	Vertical
4882.073	37.42	54.00	-16.58	CISPR Avg	0	269	Vertical
5143.719	58.59	74.00	-15.41	Peak	360	297	Vertical
5362.136	59.68	74.00	-14.32	Peak	350	293	Vertical

Table 9 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

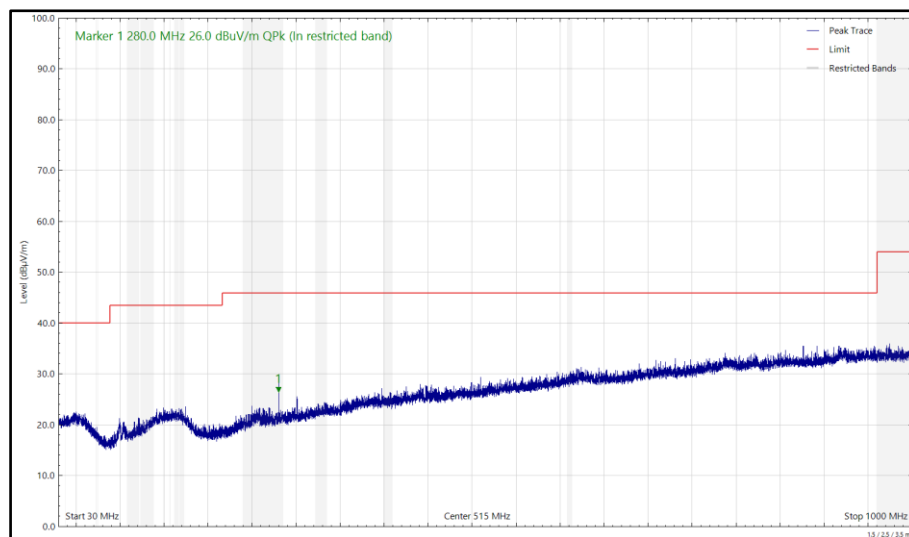


Figure 14 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Horizontal (Peak)

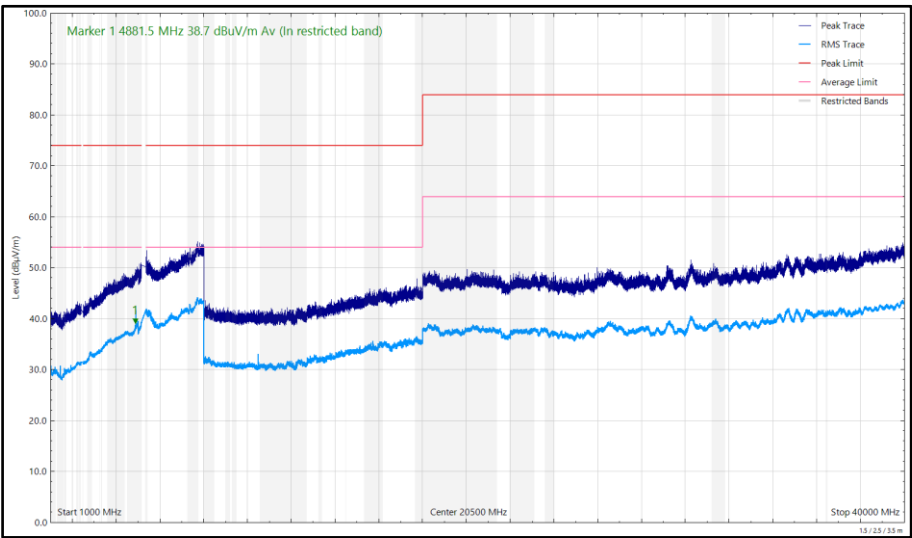


Figure 15 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Horizontal

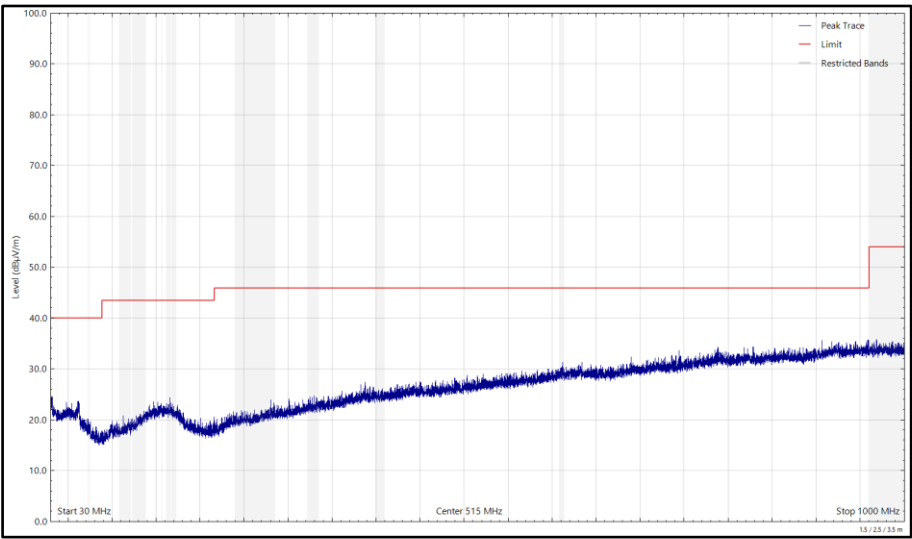


Figure 16 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Vertical (Peak)

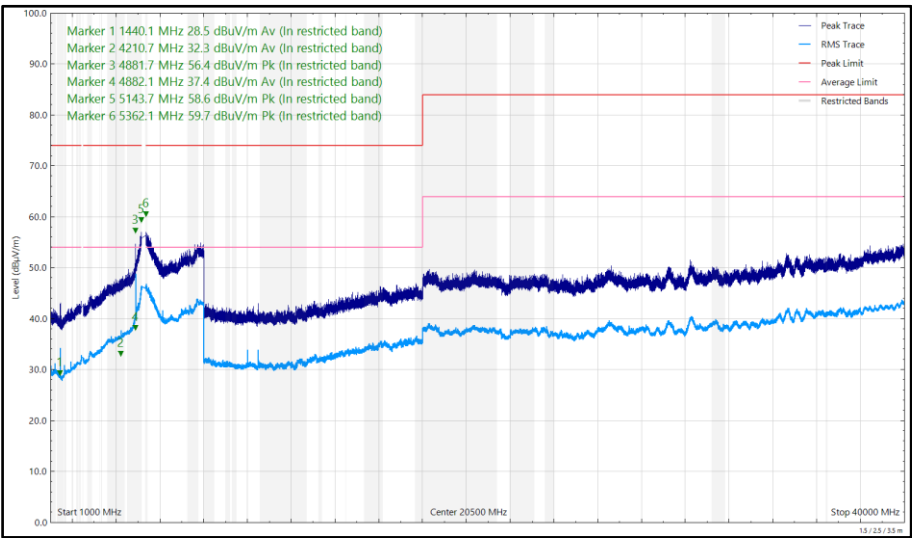


Figure 17 – 5240 MHz (CH48), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.014	26.02	46.00	-19.98	Q-Peak	281	135	Horizontal
4882.188	47.89	54.00	-6.11	CISPR Avg	7	295	Vertical
4882.223	37.11	54.00	-16.89	CISPR Avg	56	269	Horizontal
5441.972	57.32	74.00	-16.68	Peak	356	314	Vertical

Table 10 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

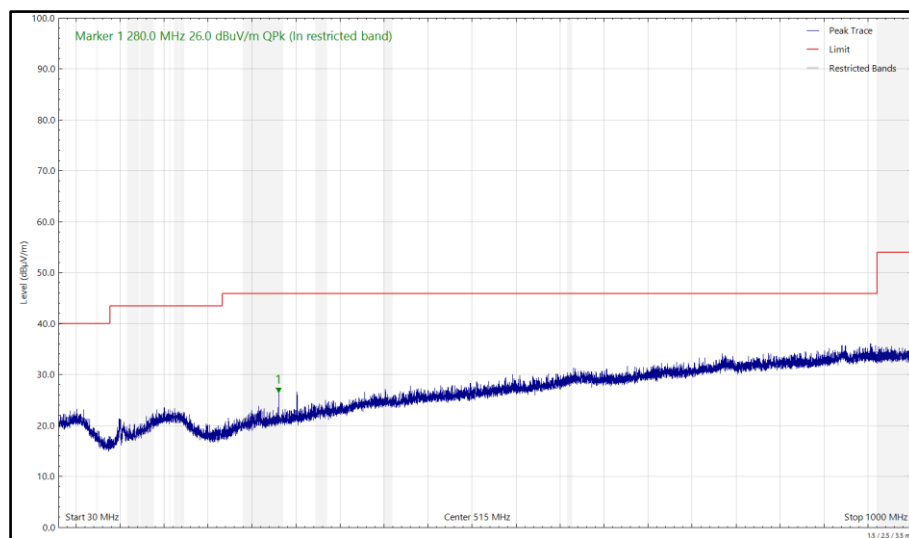


Figure 18 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Horizontal (Peak)

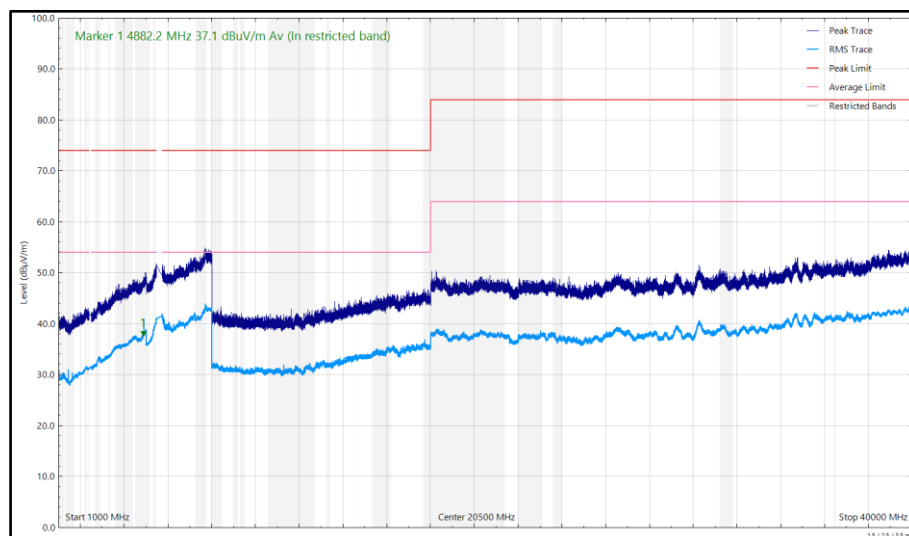


Figure 19 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Horizontal

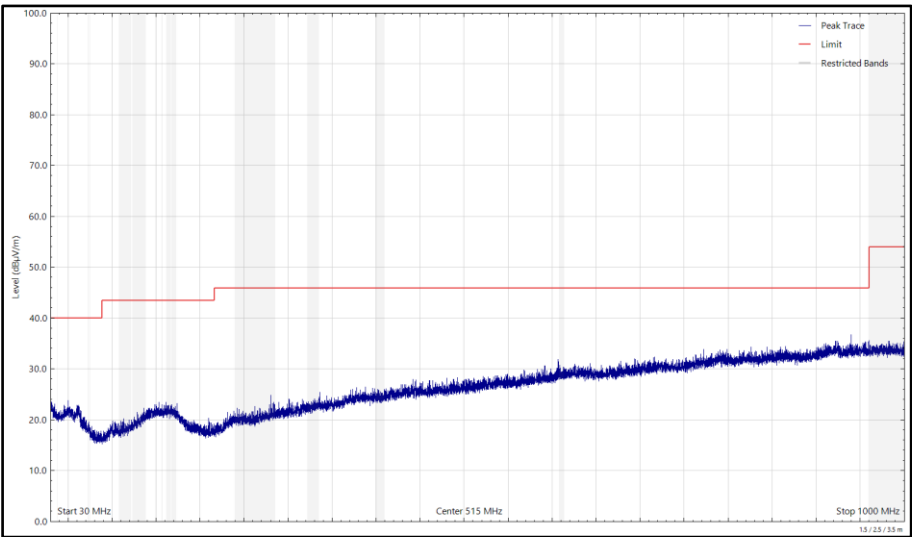


Figure 20 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Vertical (Peak)

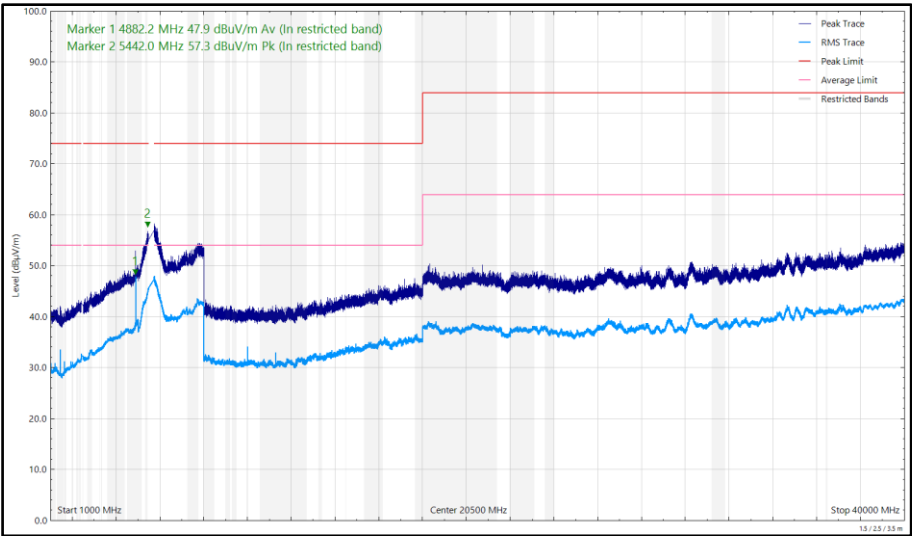


Figure 21 – 5640 MHz (CH128), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.000	26.45	46.00	-19.55	Q-Peak	288	116	Horizontal
4881.797	47.50	54.00	-6.50	CISPR Avg	2	323	Vertical
4882.048	40.12	54.00	-13.88	CISPR Avg	57	397	Horizontal
5444.542	56.16	74.00	-17.84	Peak	8	298	Vertical

Table 11 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

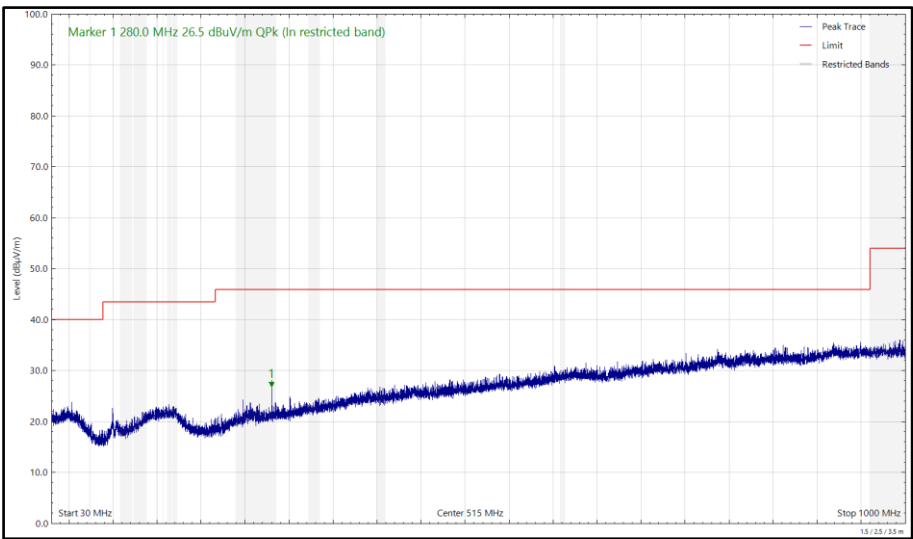


Figure 22 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Horizontal (Peak)

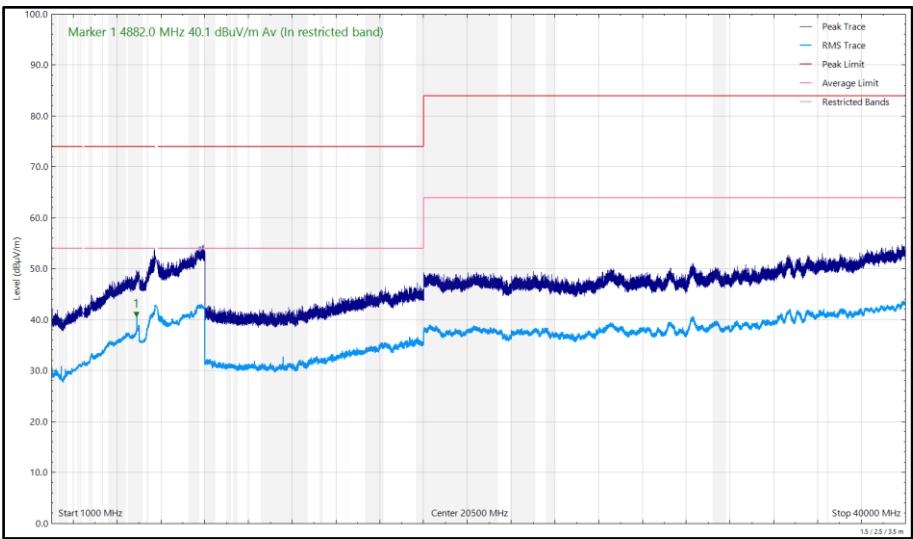


Figure 23 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Horizontal

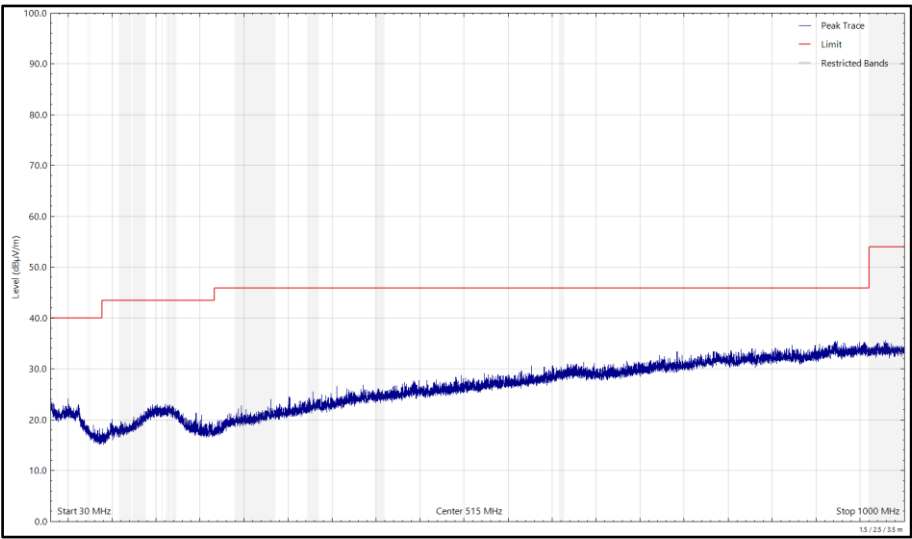


Figure 24 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Vertical (Peak)

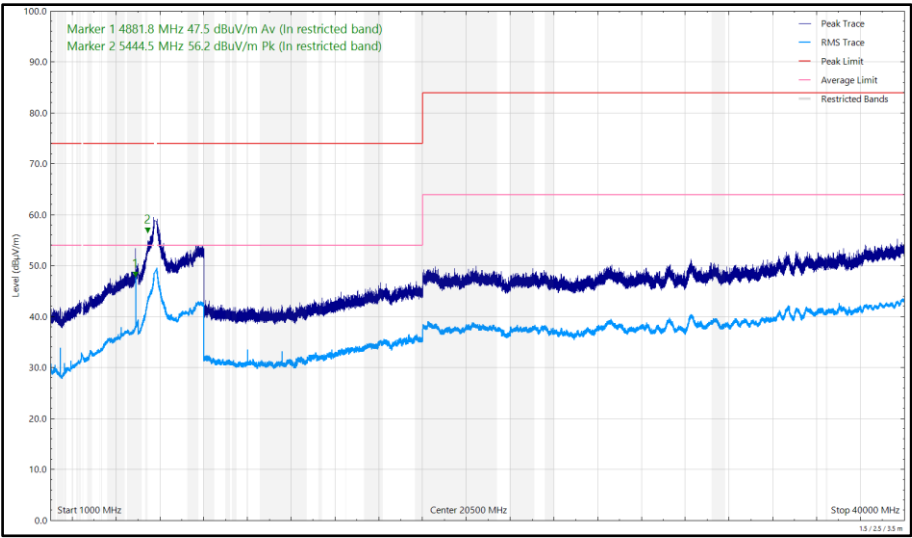


Figure 25 – 5785 MHz (CH157), HT20, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Vertical



FCC 47 CFR Part 15, ISED RSS-247 and ISED RSS-GEN

The least stringent limit from the applicable rule parts was used to determine compliance for Radiated Emissions testing of multiple transmission sources.

The least stringent applicable limit was:

Clause	Limit
Part 15 247 (d) / RSS-247 Clause 5.5	-20 dBc
Part 15.407 (b) / RSS-247 Clause 6.2	-27 dBm e.i.r.p
Part 15.209 / RSS-GEN Clause 8.9	Peak: 74 dBμV/m at 3m, Average 54 dBμV/m at 3m (Restricted bands > 1 GHz)

Table 12

6 GHz WLAN and 2.4 GHz Bluetooth

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.034	24.10	46.00	-21.90	Q-Peak	309	115	Horizontal
2385.401	56.88	74.00	-17.12	Peak	11	257	Vertical
4881.503	35.25	54.00	-18.75	CISPR Avg	35	234	Vertical
7322.086	37.71	54.00	-16.29	CISPR Avg	315	370	Horizontal
7322.611	55.94	74.00	-18.06	Peak	351	207	Vertical
7323.234	45.11	54.00	-8.89	CISPR Avg	347	267	Vertical
8233.130	40.65	54.00	-13.35	CISPR Avg	62	266	Vertical
8233.375	38.50	54.00	-15.50	CISPR Avg	77	399	Horizontal

Table 13 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

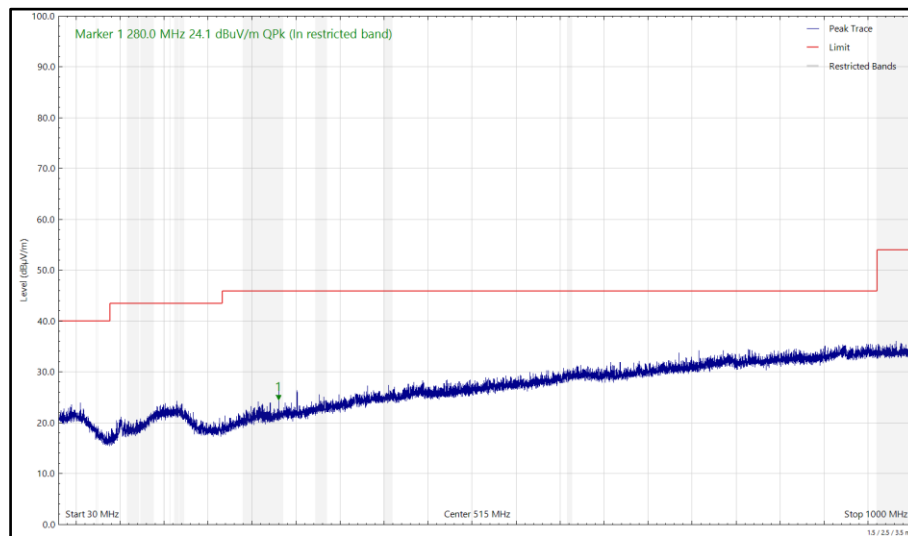


Figure 26 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

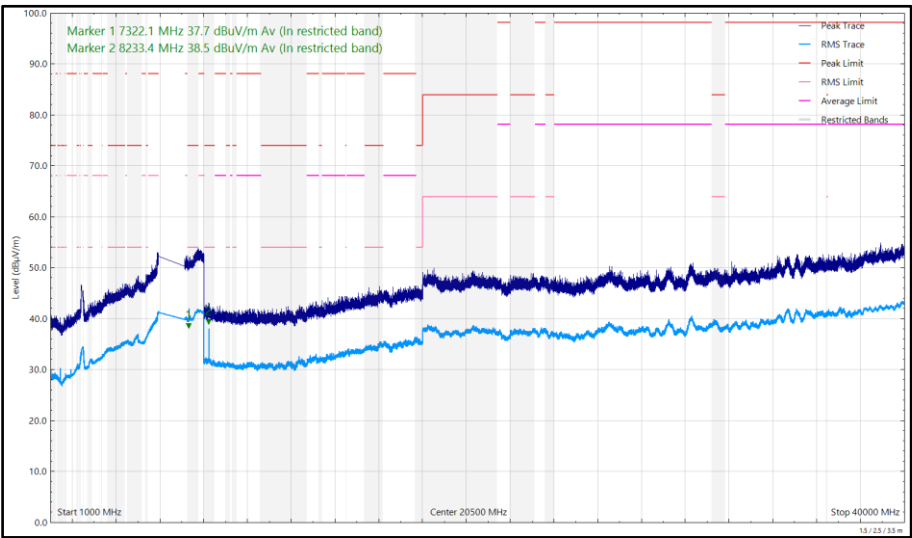


Figure 27 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

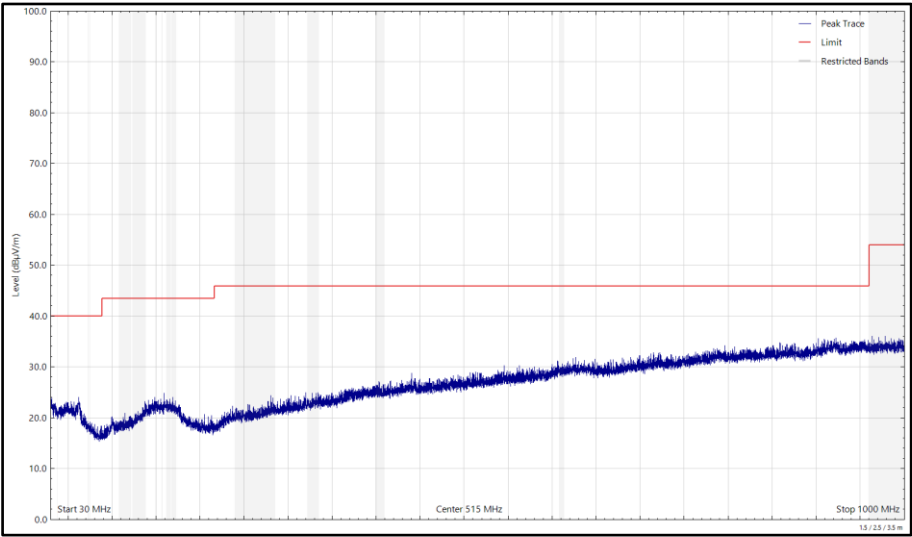


Figure 28 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

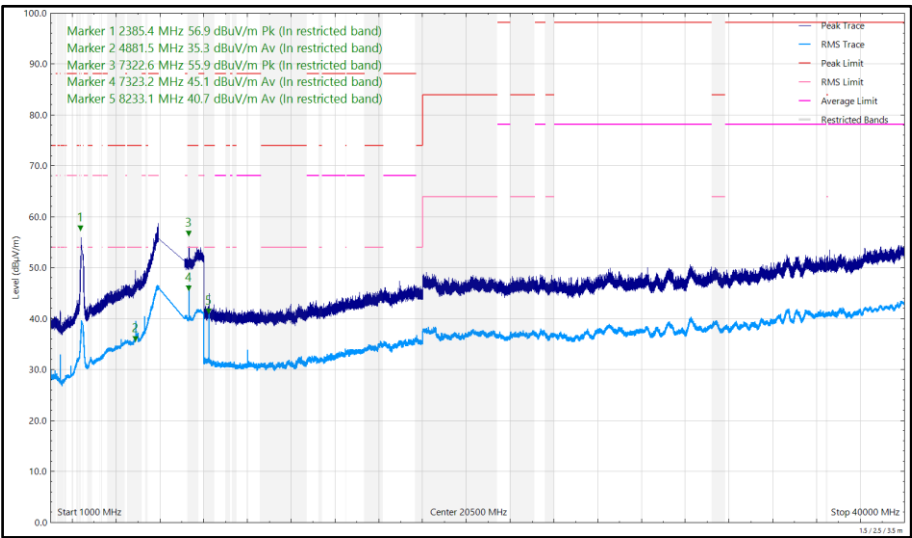


Figure 29 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.014	26.19	46.00	-19.81	Q-Peak	292	129	Horizontal
2389.967	56.85	74.00	-17.15	Peak	359	297	Vertical
4882.872	32.98	54.00	-21.02	CISPR Avg	0	154	Vertical
5249.873	46.54	68.20	-21.66	CISPR Avg	3	289	Vertical
7322.402	45.32	54.00	-8.68	CISPR Avg	349	275	Vertical
7322.641	39.80	54.00	-14.20	CISPR Avg	82	386	Horizontal
7323.538	57.97	74.00	-16.03	Peak	348	273	Vertical

Table 14 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

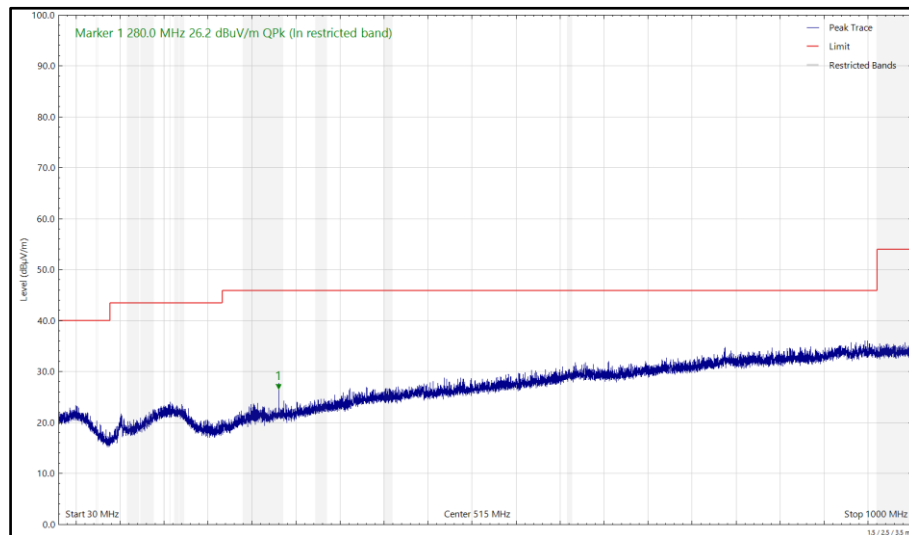


Figure 30 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

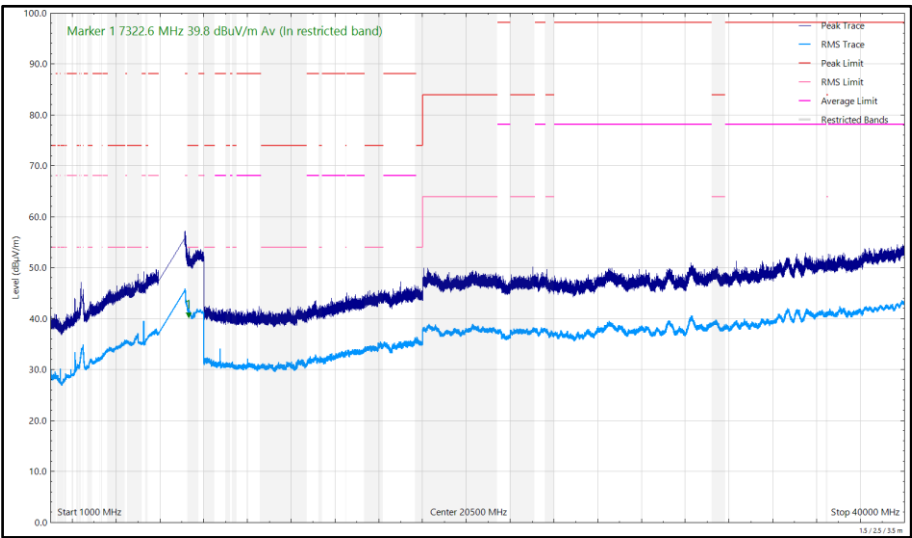


Figure 31 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

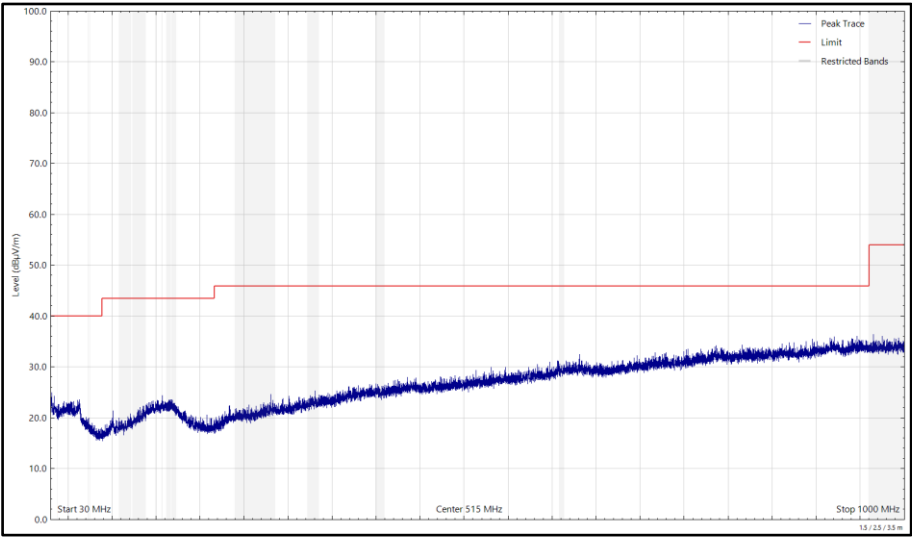


Figure 32 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

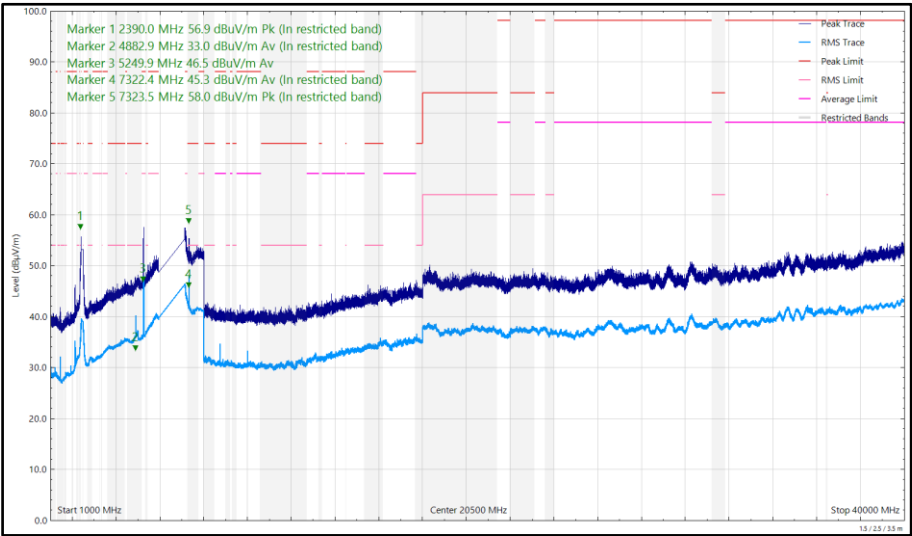


Figure 33 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
279.987	25.90	46.00	-20.10	Q-Peak	296	131	Horizontal
4200.700	30.70	54.00	-23.30	CISPR Avg	273	400	Vertical
4880.138	32.28	54.00	-21.72	CISPR Avg	281	196	Horizontal
4881.648	43.66	54.00	-10.34	CISPR Avg	360	283	Vertical
5454.753	36.53	54.00	-17.47	CISPR Avg	0	269	Vertical
7323.000	43.39	54.00	-10.61	CISPR Avg	54	244	Vertical
7323.080	40.48	54.00	-13.52	CISPR Avg	71	390	Horizontal
8233.390	35.60	54.00	-18.40	CISPR Avg	87	400	Horizontal
8233.505	40.67	54.00	-13.33	CISPR Avg	63	271	Vertical

Table 15 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

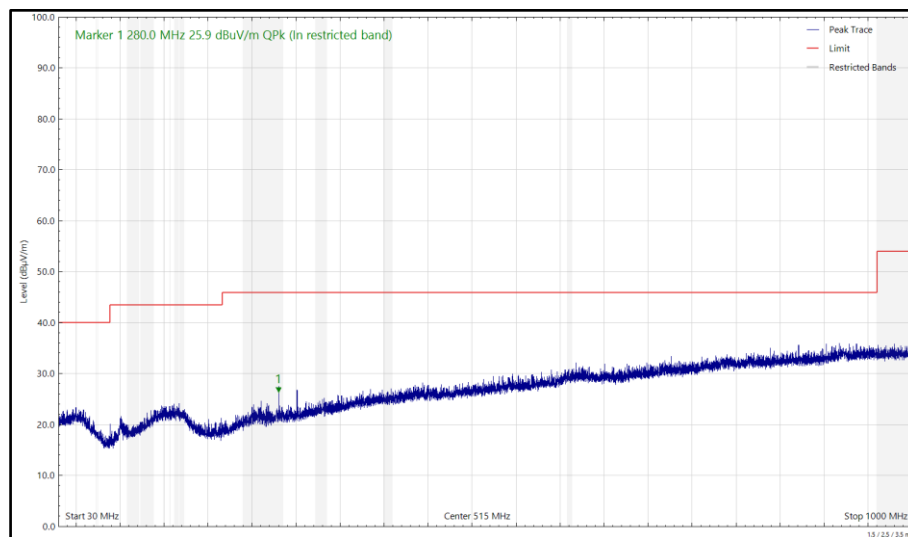


Figure 34 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Horizontal (Peak)

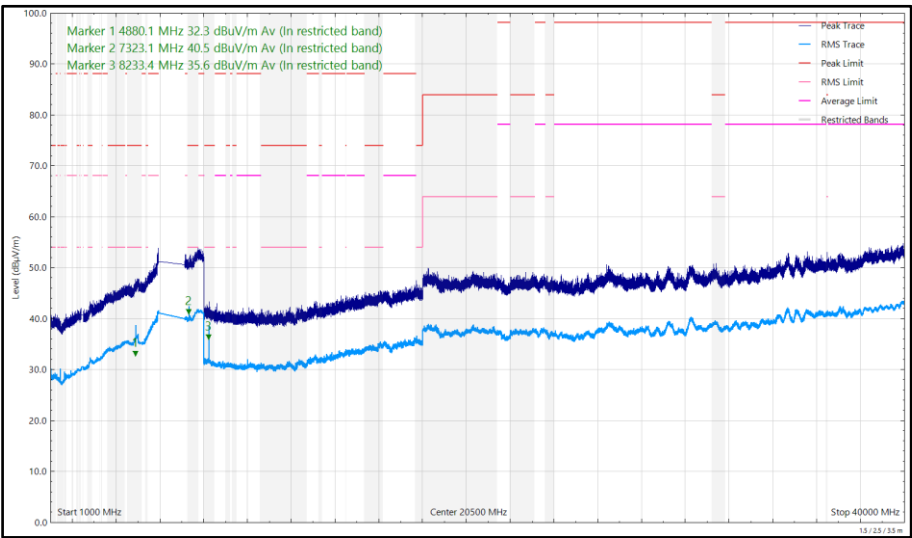


Figure 35 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Horizontal

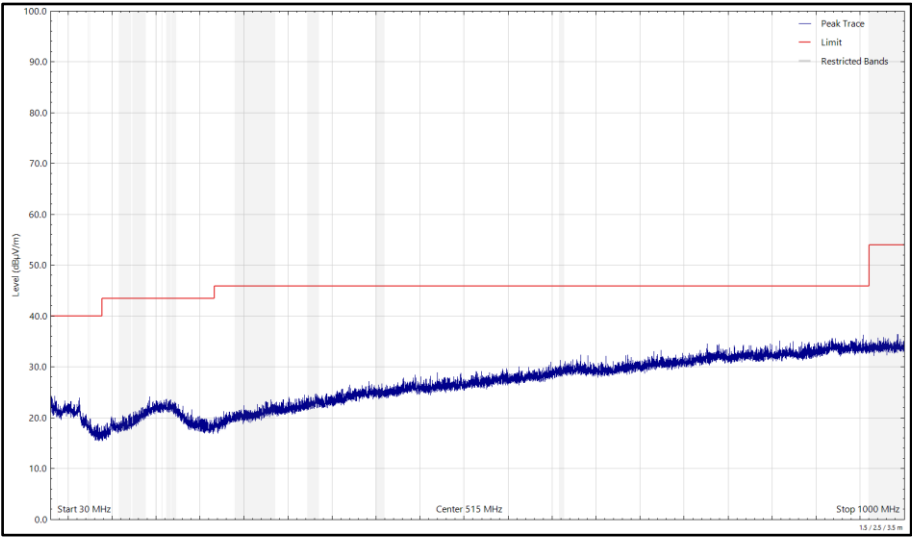


Figure 36 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Vertical (Peak)

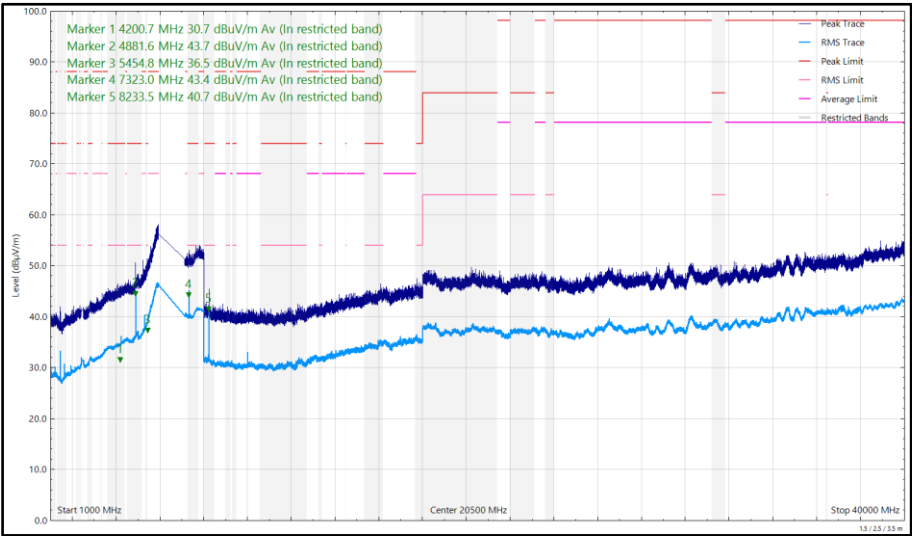


Figure 37 - 6175 MHz (CH45), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Vertical



Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.035	23.26	46.00	-22.74	Q-Peak	44	129	Horizontal
4881.793	45.57	54.00	-8.43	CISPR Avg	360	290	Vertical
4882.233	38.35	54.00	-15.65	CISPR Avg	68	397	Horizontal
7322.533	39.84	54.00	-14.16	CISPR Avg	82	383	Horizontal
7322.860	55.52	74.00	-18.48	Peak	51	247	Vertical
7323.275	43.12	54.00	-10.88	CISPR Avg	55	247	Vertical

Table 16 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

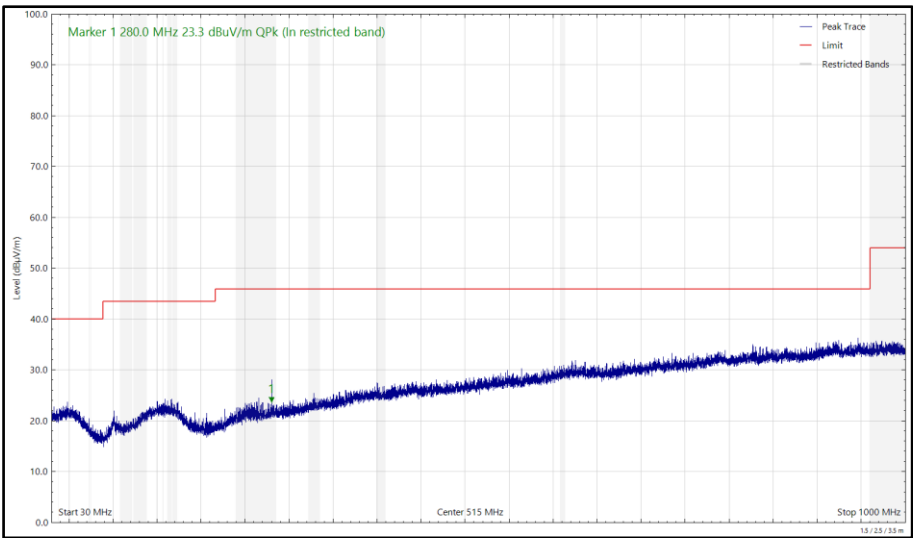


Figure 38 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Horizontal (Peak)

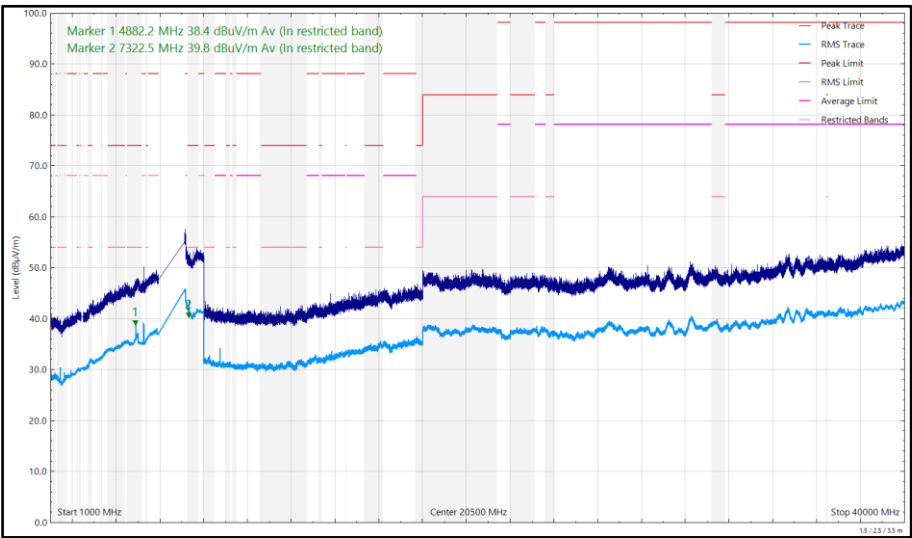


Figure 39 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Horizontal

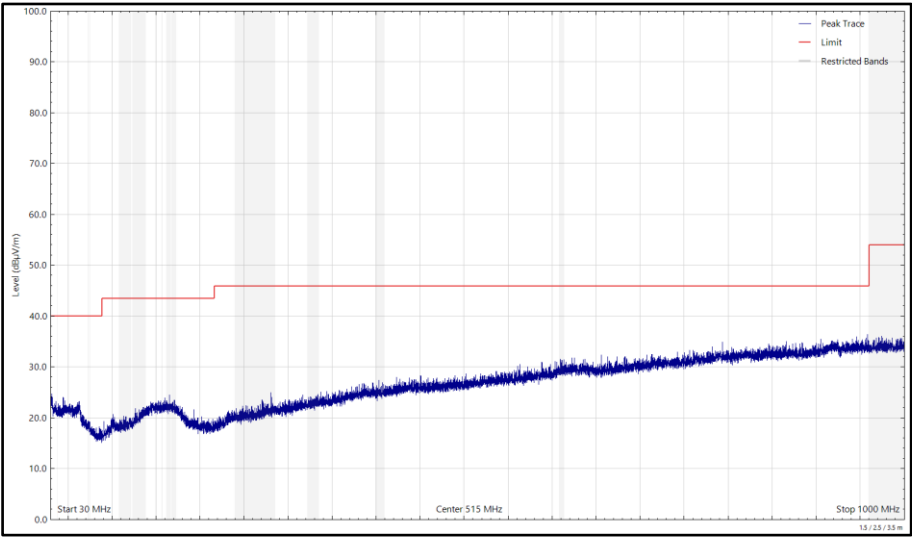


Figure 40 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Vertical (Peak)

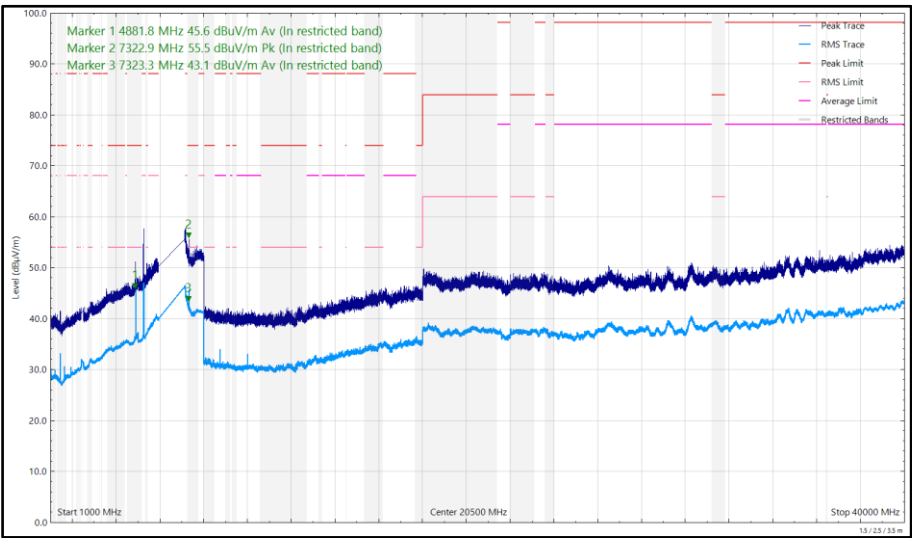


Figure 41 - 6995 MHz (CH209), HE20, SU, CDD, Core 0 + Core 1 and 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 40 GHz, Vertical

FCC 47 CFR Part 15, ISED RSS-247, ISED RSS-248 and ISED RSS-GEN

The least stringent limit from the applicable rule parts was used to determine compliance for Radiated Emissions testing of multiple transmission sources.

The least stringent applicable limit was:

Clause	Limit
Part 15 247 (d) / RSS-247 Clause 5.5	-20 dBc
Part 15.407 (b) / RSS-248 Clause 4.7.2	Peak: -7 dBm/MHz e.i.r.p, Average: -27 dBm/MHz e.i.r.p.
Part 15.209 / RSS-GEN Clause 8.9	Peak: 74 dBuV/m at 3m, Average 54 dBuV/m at 3m (Restricted bands > 1 GHz)

Table 17

2.4 GHz WLAN and Narrowband

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
279.985	24.25	46.00	-21.75	Q-Peak	287	170	Horizontal
1438.952	30.76	54.00	-23.24	RMS	72	249	Vertical
2389.966	40.69	54.00	-13.31	RMS	345	285	Vertical
2389.990	36.86	54.00	-17.14	RMS	314	390	Horizontal
2398.902	59.45	74.00	-14.55	Peak	358	338	Vertical
2483.534	44.15	54.00	-9.85	RMS	23	312	Vertical
2483.544	38.96	54.00	-15.04	RMS	317	394	Horizontal
2485.291	60.36	74.00	-13.64	Peak	21	396	Vertical
4995.680	37.85	54.00	-16.15	RMS	20	396	Horizontal
7690.233	42.65	54.00	-11.35	RMS	350	365	Vertical
7693.605	42.66	54.00	-11.34	RMS	233	105	Horizontal
7725.242	54.11	74.00	-19.89	Peak	327	394	Horizontal

Table 18 – 2442 MHz (CH7), HT20, Core 0 and 5204 MHz, HDR4, ePA, Core 1, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

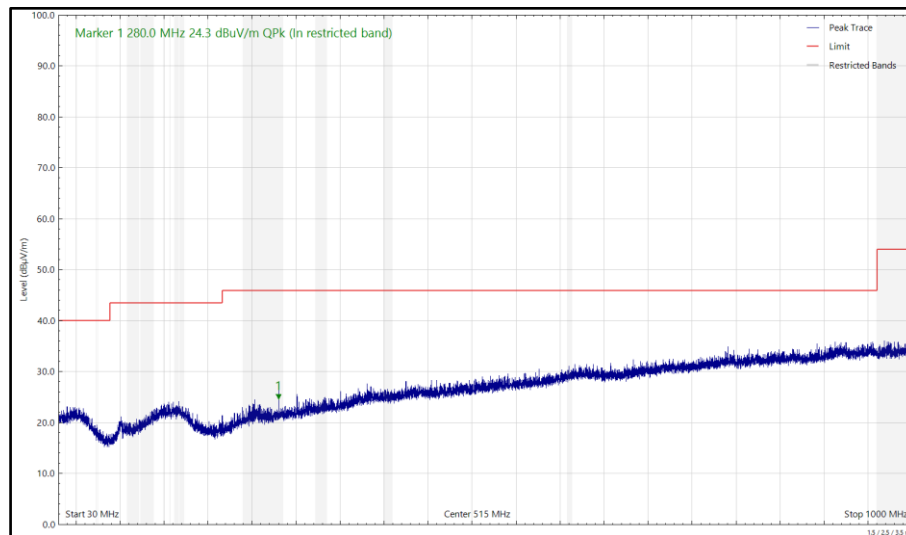


Figure 42 – 2442 MHz (CH7), HT20, Core 0 and 5204 MHz, HDR4, ePA, Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

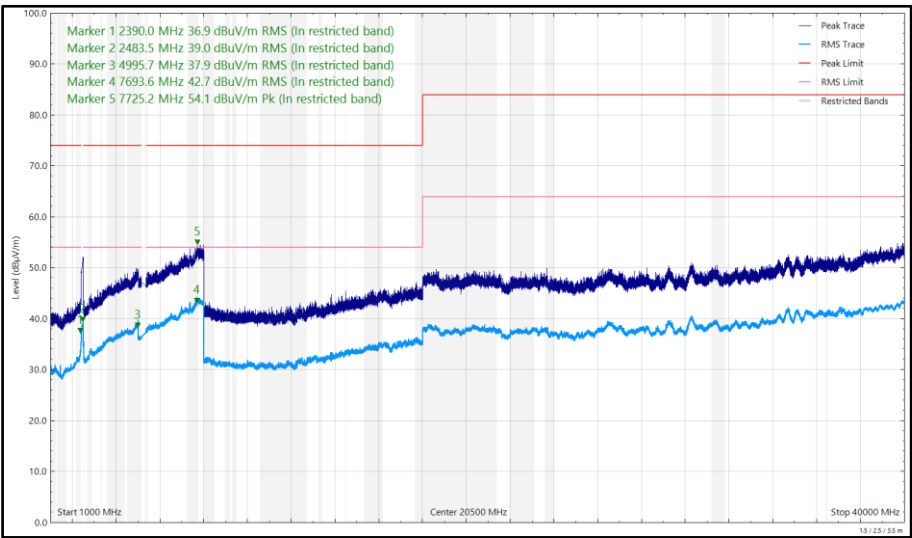


Figure 43 – 2442 MHz (CH7), HT20, Core 0 and 5204 MHz, HDR4, ePA, Core 1, 1 GHz to 40 GHz, Horizontal

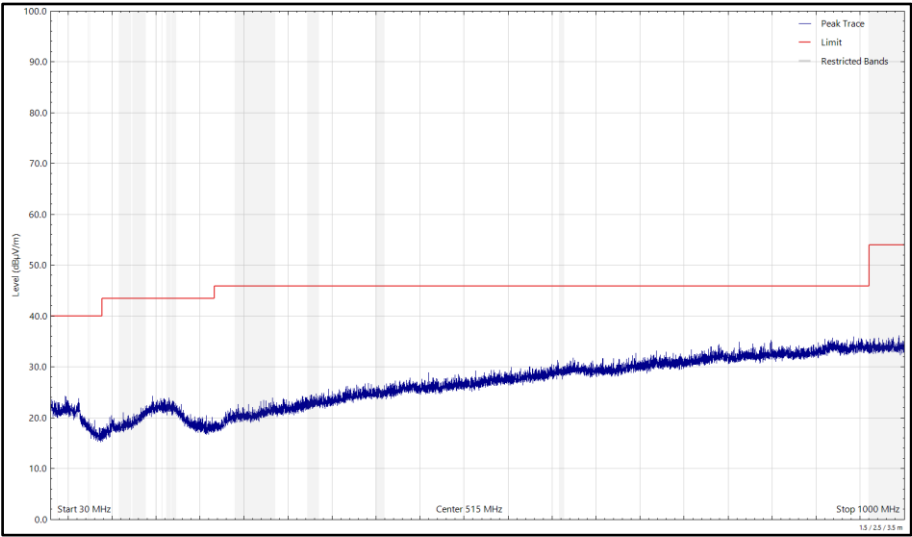


Figure 44 – 2442 MHz (CH7), HT20, Core 0 and 5204 MHz, HDR4, ePA, Core 1, 30 MHz to 1 GHz, Vertical (Peak)

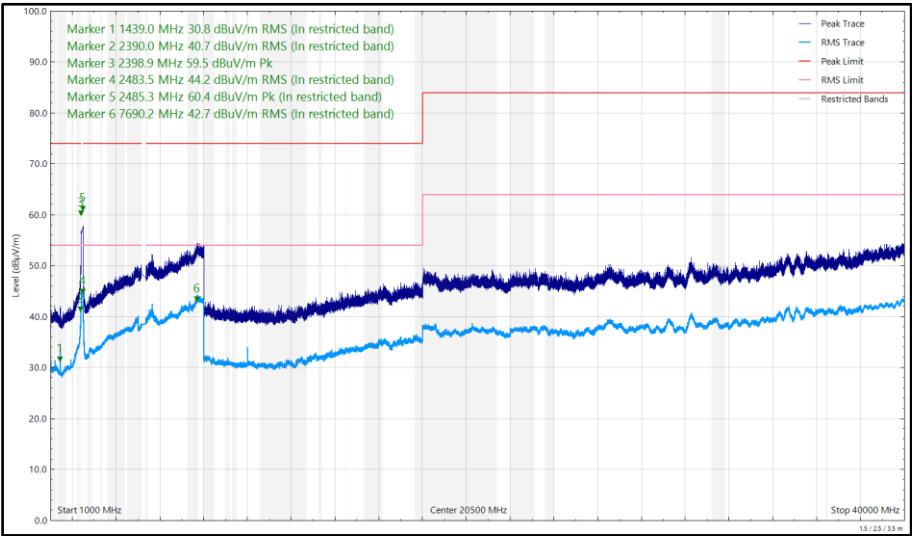


Figure 45 – 2442 MHz (CH7), HT20, Core 0 and 5204 MHz, HDR4, ePA, Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2389.850	36.55	54.00	-17.45	RMS	313	392	Horizontal
2389.990	39.96	54.00	-14.04	Peak	0	379	Vertical
2399.879	58.80	74.00	-15.20	Peak	0	282	Vertical
2483.507	39.17	54.00	-14.83	RMS	56	390	Horizontal
2483.519	43.23	54.00	-10.77	RMS	347	397	Vertical
2484.047	60.22	74.00	-13.78	Peak	4	360	Vertical
5374.490	42.92	54.00	-11.08	RMS	360	336	Vertical
7645.692	41.66	54.00	-12.34	RMS	180	109	Vertical
7728.352	41.62	54.00	-12.38	RMS	287	107	Horizontal

Table 19 – 2442 MHz (CH7), HT20, Core 0 and 5788 MHz, HDR4, ePA, Core 1, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

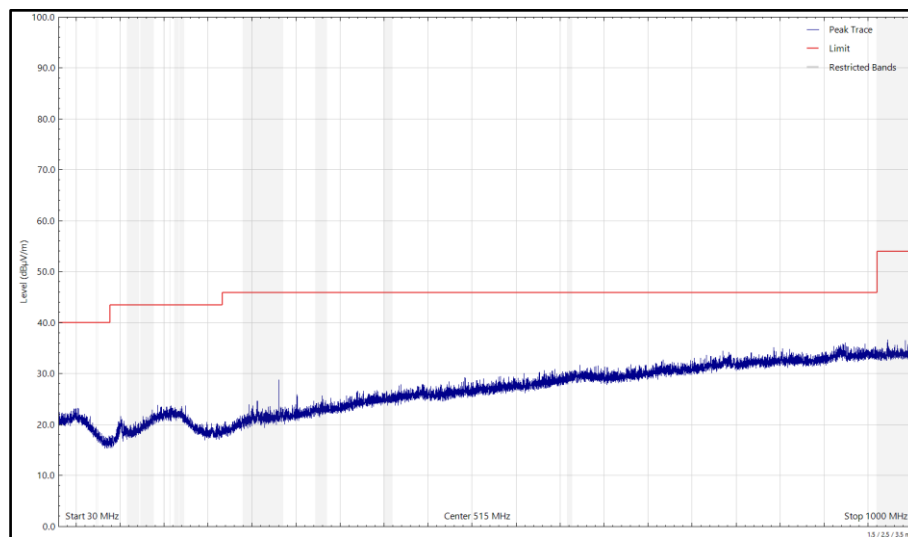


Figure 46 – 2442 MHz (CH7), HT20, Core 0 and 5788 MHz, HDR4, ePA, Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

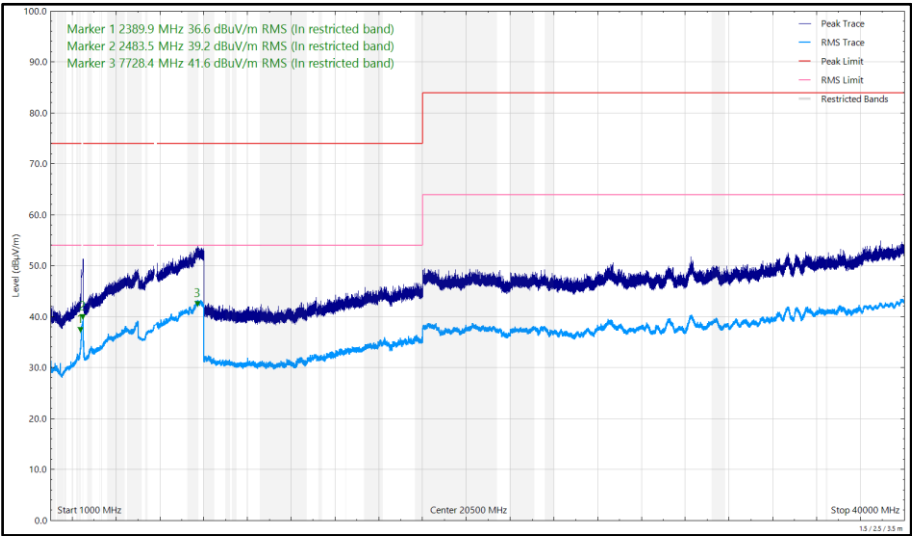


Figure 47 – 2442 MHz (CH7), HT20, Core 0 and 5788 MHz, HDR4, ePA, Core 1, 1 GHz to 40 GHz, Horizontal

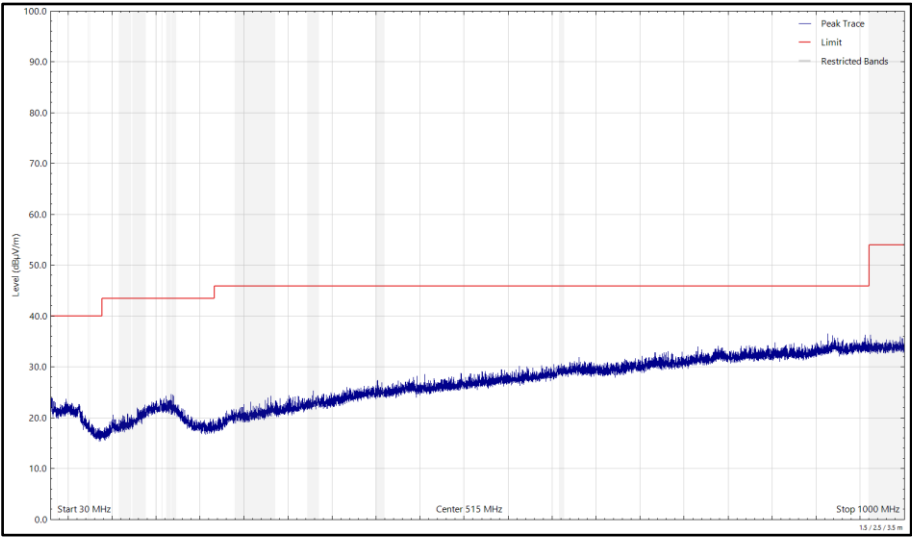


Figure 48 – 2442 MHz (CH7), HT20, Core 0 and 5788 MHz, HDR4, ePA, Core 1, 30 MHz to 1 GHz, Vertical (Peak)

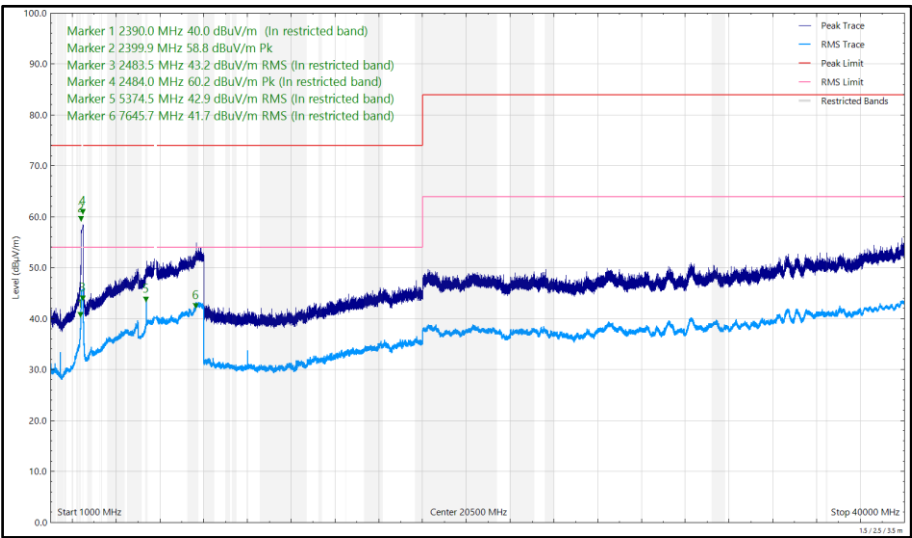


Figure 49 – 2442 MHz (CH7), HT20, Core 0 and 5788 MHz, HDR4, ePA, Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2389.929	37.72	54.00	-16.28	RMS	55	388	Horizontal
2389.945	41.40	54.00	-12.60	RMS	44	389	Vertical
2483.533	40.07	54.00	-13.93	RMS	52	390	Horizontal
2483.598	44.41	54.00	-9.59	RMS	44	400	Vertical
2484.440	60.84	74.00	-13.16	Peak	49	383	Vertical
2484.918	56.72	74.00	-17.28	Peak	61	386	Horizontal
5419.900	39.00	54.00	-15.00	Peak	0	333	Vertical
7692.517	42.73	54.00	-11.27	RMS	128	391	Horizontal
7699.987	54.30	74.00	-19.70	Peak	184	399	Horizontal
7717.214	42.63	54.00	-11.37	RMS	199	161	Vertical

Table 20 – 2442 MHz (CH7), HT20, Core 1 and 5204 MHz, HDR4, ePA, Core 0, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

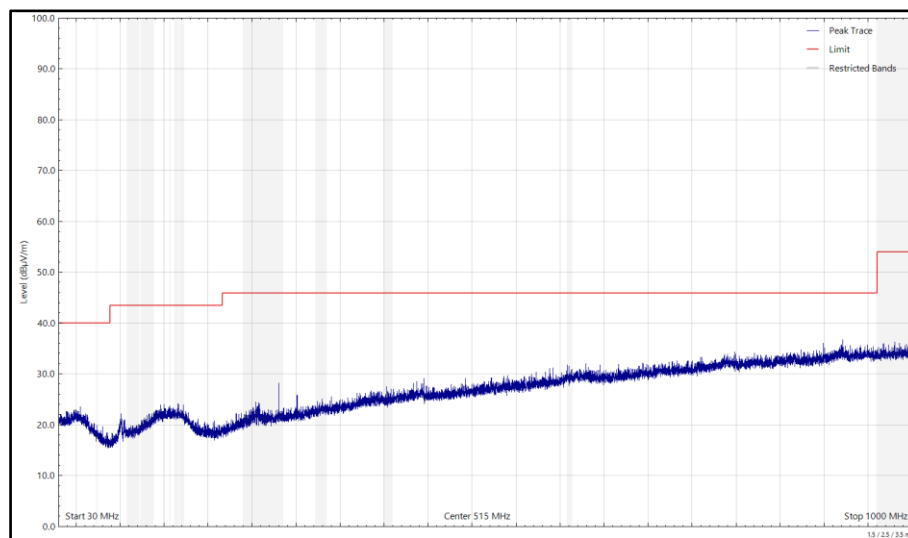


Figure 50 – 2442 MHz (CH7), HT20, Core 1 and 5204 MHz, HDR4, ePA, Core 0, 30 MHz to 1 GHz, Horizontal (Peak)

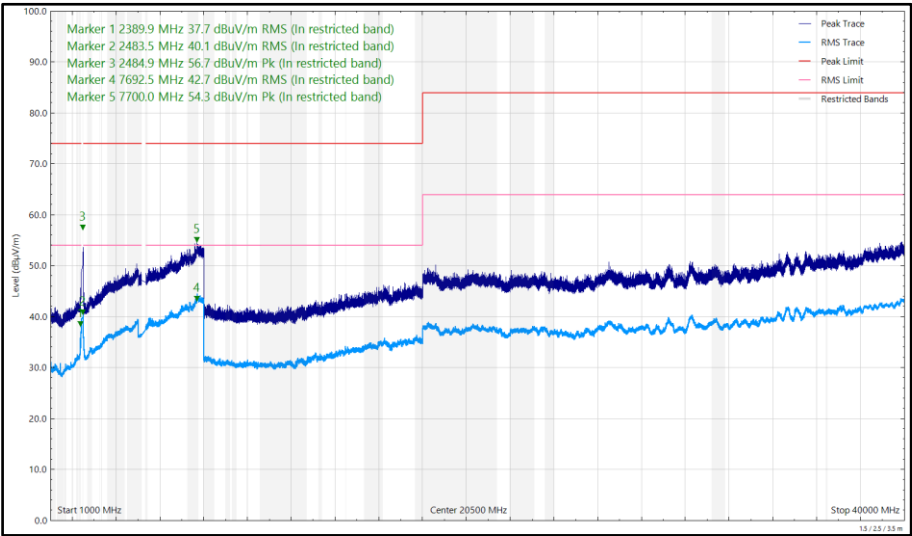


Figure 51 – 2442 MHz (CH7), HT20, Core 1 and 5204 MHz, HDR4, ePA, Core 0, 1 GHz to 40 GHz, Horizontal

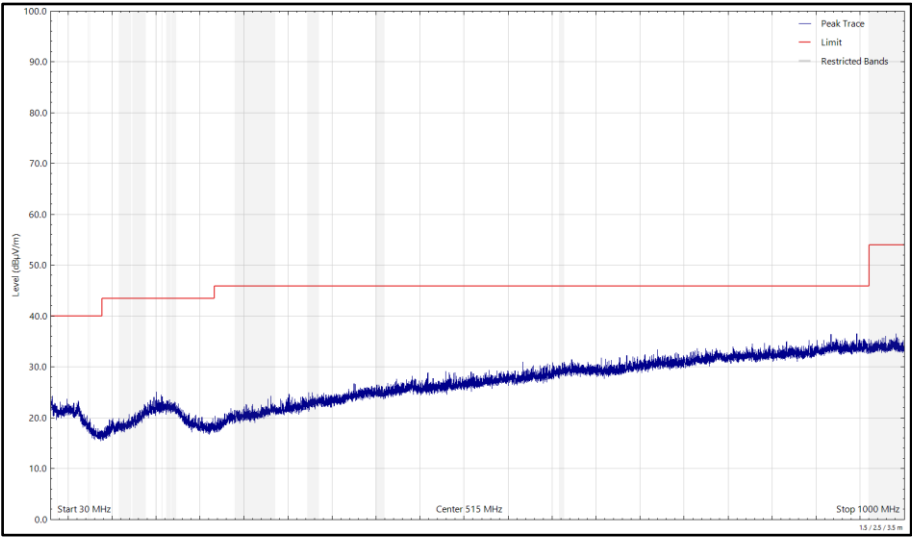


Figure 52 – 2442 MHz (CH7), HT20, Core 1 and 5204 MHz, HDR4, ePA, Core 0, 30 MHz to 1 GHz, Vertical (Peak)

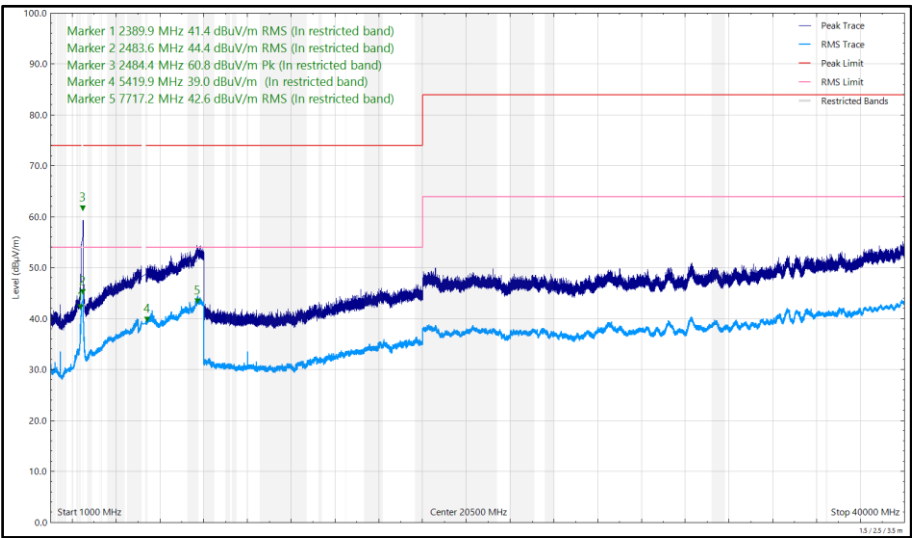


Figure 53 – 2442 MHz (CH7), HT20, Core 1 and 5204 MHz, HDR4, ePA, Core 0, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
279.990	25.08	46.00	-20.92	Q-Peak	60	111	Horizontal
2389.868	36.06	54.00	-17.94	RMS	54	341	Horizontal
2389.962	39.12	54.00	-14.88	RMS	31	390	Vertical
2483.602	44.86	54.00	-9.14	RMS	42	368	Vertical
2483.716	41.08	54.00	-12.92	RMS	57	400	Horizontal
2484.548	62.47	74.00	-11.53	Peak	51	392	Vertical
5374.500	42.77	54.00	-11.23	RMS	0	318	Vertical
5374.670	39.47	54.00	-14.53	RMS	297	390	Horizontal
7650.811	41.65	54.00	-12.35	RMS	10	331	Horizontal
7725.028	41.55	54.00	-12.45	RMS	94	347	Vertical

Table 21 – 2442 MHz (CH7), HT20, Core 1 and 5788 MHz, HDR4, ePA, Core 0, 30 MHz to 40 GHz

No other emissions found within 6 dB of the limit.

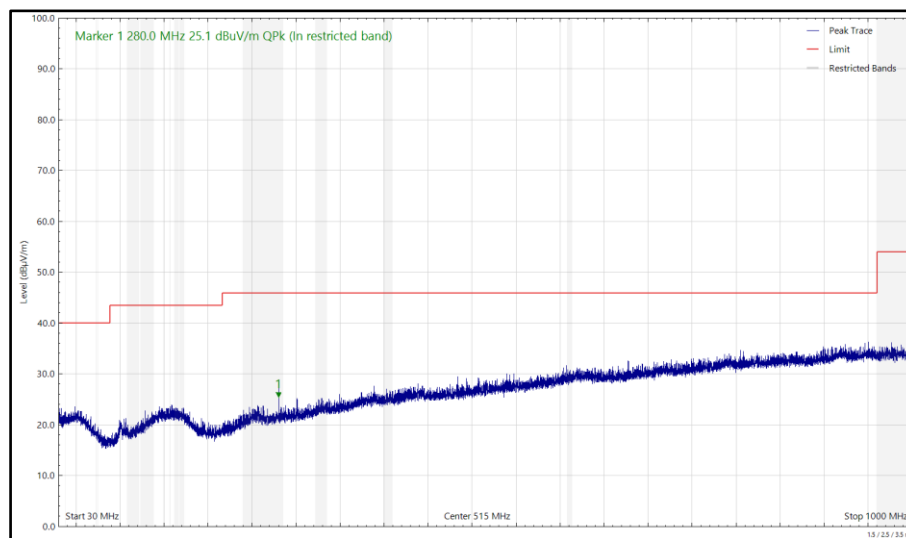


Figure 54 – 2442 MHz (CH7), HT20, Core 1 and 5788 MHz, HDR4, ePA, Core 0, 30 MHz to 1 GHz, Horizontal (Peak)

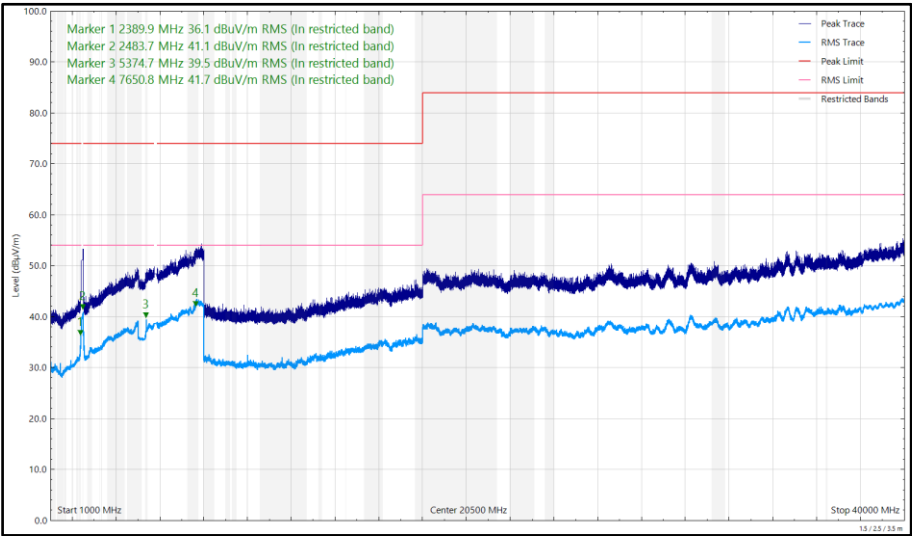


Figure 55 – 2442 MHz (CH7), HT20, Core 1 and 5788 MHz, HDR4, ePA, Core 0, 1 GHz to 40 GHz, Horizontal

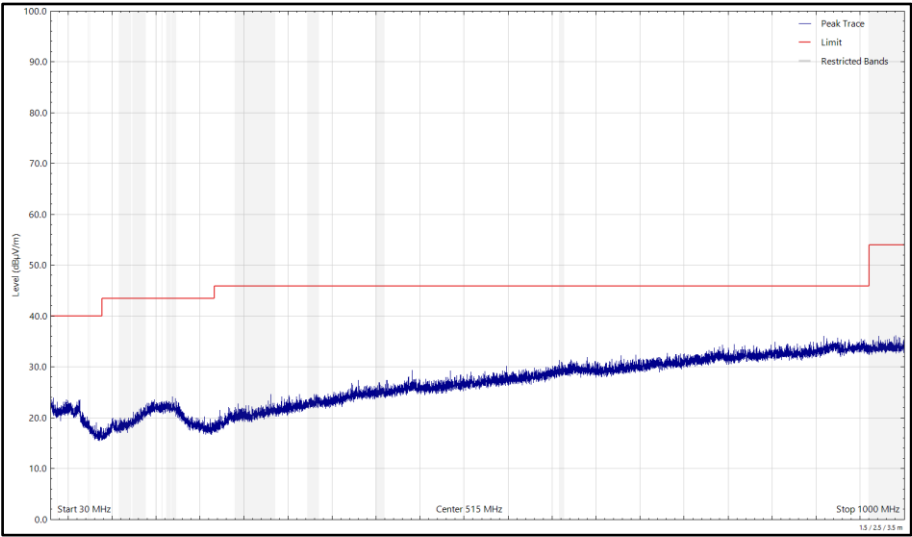


Figure 56 – 2442 MHz (CH7), HT20, Core 1 and 5788 MHz, HDR4, ePA, Core 0, 30 MHz to 1 GHz, Vertical (Peak)

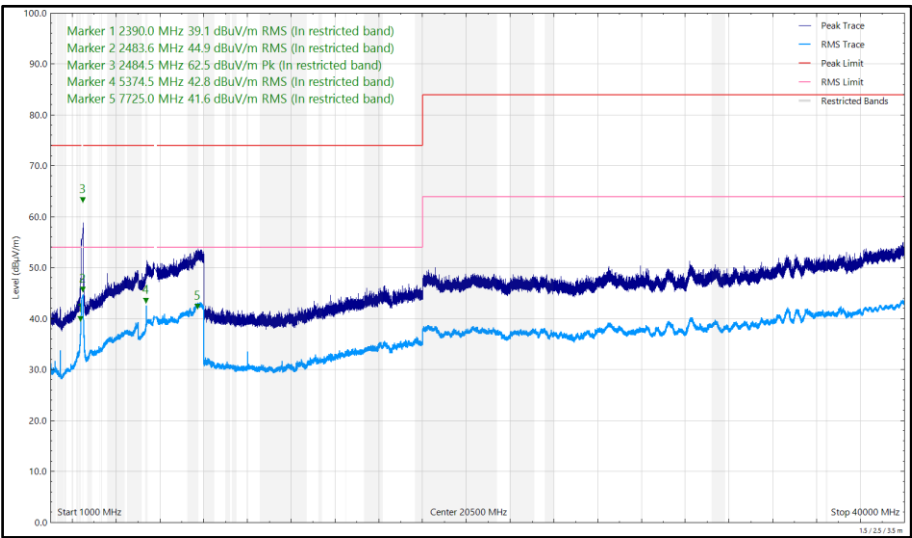


Figure 57 – 2442 MHz (CH7), HT20, Core 1 and 5788 MHz, HDR4, ePA, Core 0, 1 GHz to 40 GHz, Vertical

FCC 47 CFR Part 15, ISED RSS-247 and ISED RSS-GEN

The least stringent limit from the applicable rule parts was used to determine compliance for Radiated Emissions testing of multiple transmission sources.

The least stringent applicable limit was:

Clause	Limit
Part 15 247 (d) / RSS-247 Clause 5.5	30 dBc
Part 15.407 (b) / RSS-247 Clause 4.6.1.2	-27 dBm/MHz e.i.r.p.
Part 15.209 / RSS-GEN Clause 8.9	Peak: 74 dBµV/m at 3m, Average 54 dBµV/m at 3m (Restricted bands > 1 GHz)

Table 22



2.4 GHz WLAN and Thread

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2366.015	61.46	74.00	-12.54	Peak	319	390	Vertical
2367.611	47.16	54.00	-6.84	RMS	310	381	Horizontal
2367.764	50.04	54.00	-3.96	RMS	360	327	Vertical
2483.582	41.68	54.00	-12.32	RMS	44	386	Vertical
2484.760	38.32	54.00	-15.68	RMS	52	385	Horizontal
4205.162	33.24	54.00	-20.76	RMS	8	125	Vertical

Table 23 - 2442 MHz (CH7), HT20, CDD, Core 0 + Core 1 and 2405 MHz (CH11), Thread, iPA, Core 2, 30 MHz to 26 GHz

No other emissions found within 6 dB of the limit.

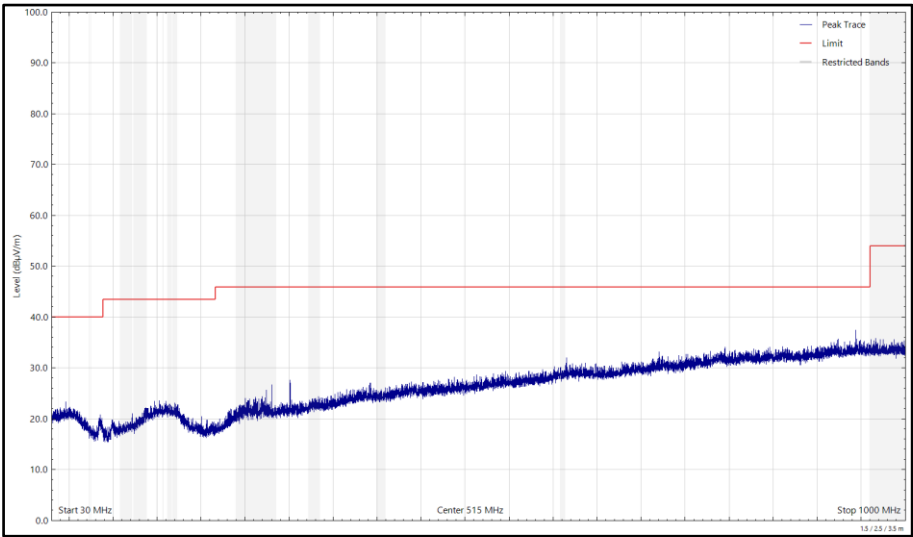


Figure 58 - 2442 MHz (CH7), HT20, CDD, Core 0 + Core 1 and 2405 MHz (CH11), Thread, iPA, Core 2, 30 MHz to 1 GHz, Horizontal (Peak)