2.3.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
EMI Test Receiver	Rohde & Schwarz	ESW44	5084	12	28-Nov-2020
EmX Emissions Software	TUV SUD	EmX	5125	-	Software
Screened Room (11)	Rainford	Rainford	5136	36	01-Nov-2021
Mast	Maturo	TAM 4.0-P	5158	-	TU
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU
Turntable	Maturo	TT 15WF	5160	-	TU
Horn Antenna (1-10GHz)	Schwarzbeck	BBHA 9120 B	5215	12	10-Mar-2021
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5475	12	17-Mar-2021
Attenuator 5W 10dB DC-18GHz	Aaren	AT40A-4041-D18-10	5494	12	14-Apr-2021
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/A	5518	12	01-Apr-2021
8m N Type Cable	Junkosha	MWX221-08000NMSNMS/B	5522	12	24-Mar-2021

Table 77

TU - Traceability Unscheduled

2.4 Restricted Band Edges

2.4.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.205
ISED RSS-GEN, Clause 8.10

2.4.2 Equipment Under Test and Modification State

A2337, S/N: C02D200EQ9MQ - Modification State 0

2.4.3 Date of Test

04-August-2020 to 22-August-2020

2.4.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 6.10.5 and 11.12.1.

Plots for average measurements were taken in accordance with ANSI C63.10, clause 11.12.2.5.2.

2.4.5 Environmental Conditions

Ambient Temperature	20.7-23.2 °C
Relative Humidity	48.1-56.8 %

2.4.6 Test Results

2.4 GHz Bluetooth Low Energy (DTS)

LE1M

iPA

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	0	2390.0	54.30	42.01
GFSK / DH1	2480	0	2483.5	54.94	42.22

Table 78 - Restricted Band Edge Results

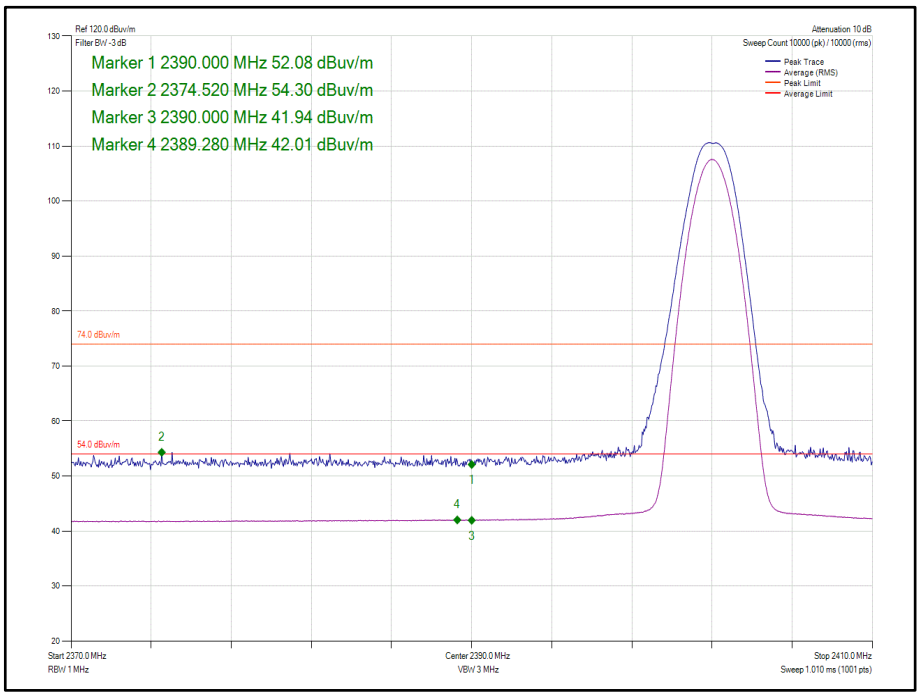

Figure 94 - Core 0 – GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

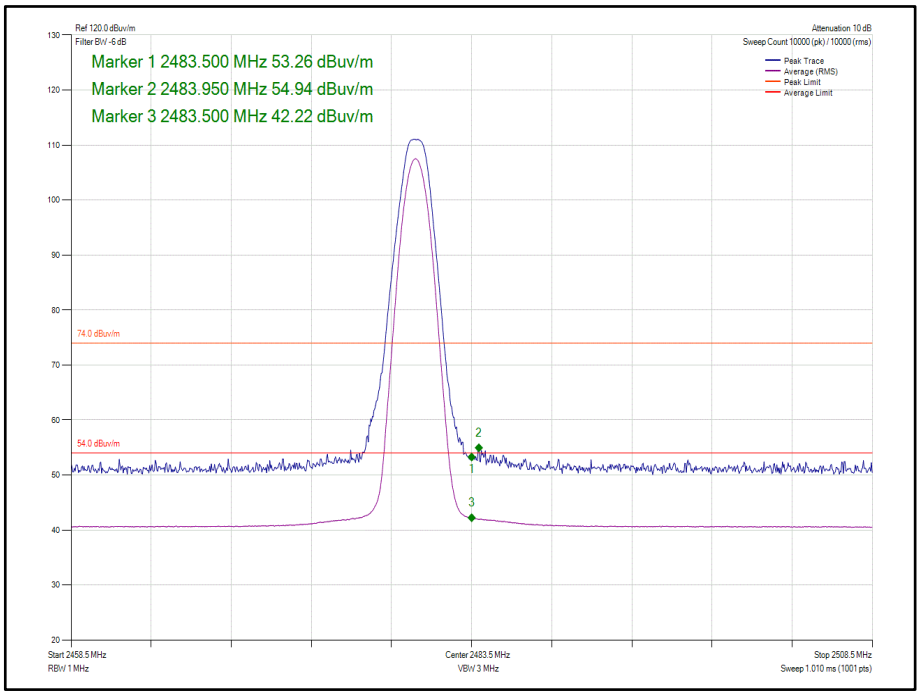

Figure 95 - Core 0 – GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	1	2390.0	54.08	42.02
GFSK / DH1	2480	1	2483.5	55.23	42.49

Table 79 - Restricted Band Edge Results

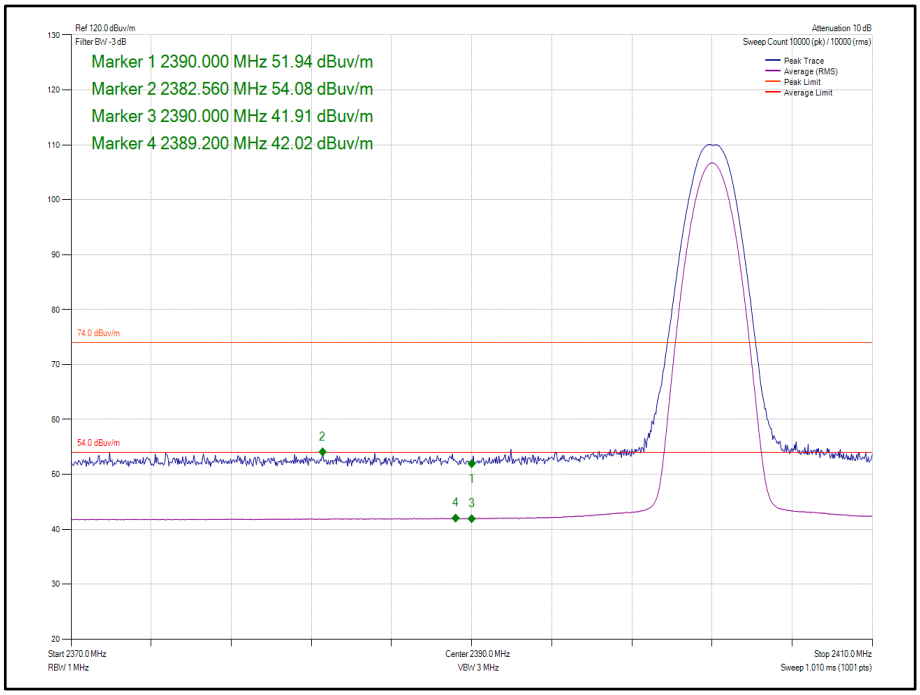

Figure 96 - Core 1 – GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

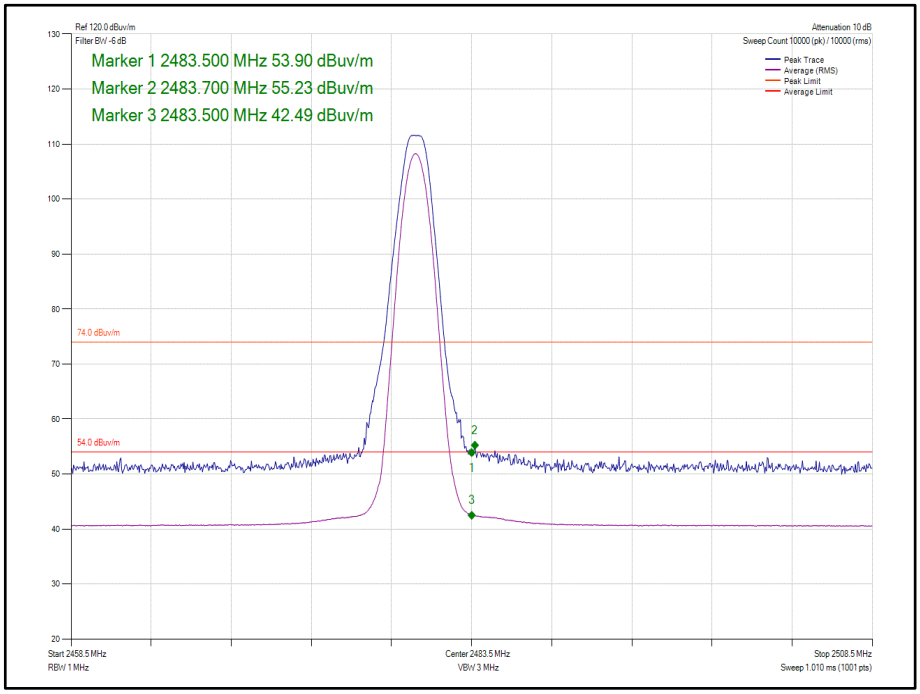

Figure 97 - Core 1 – GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MH

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	0-1	2390.0	54.81	42.23
GFSK / DH1	2480	0-1	2483.5	56.74	44.54

Table 80 - Restricted Band Edge Results

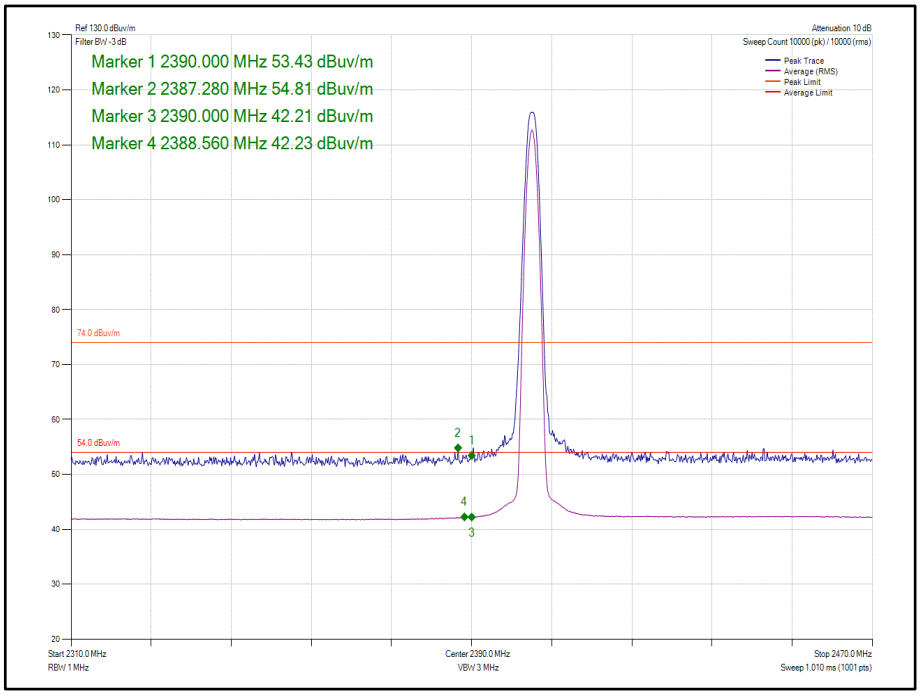

Figure 98 - Core 0-1– GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

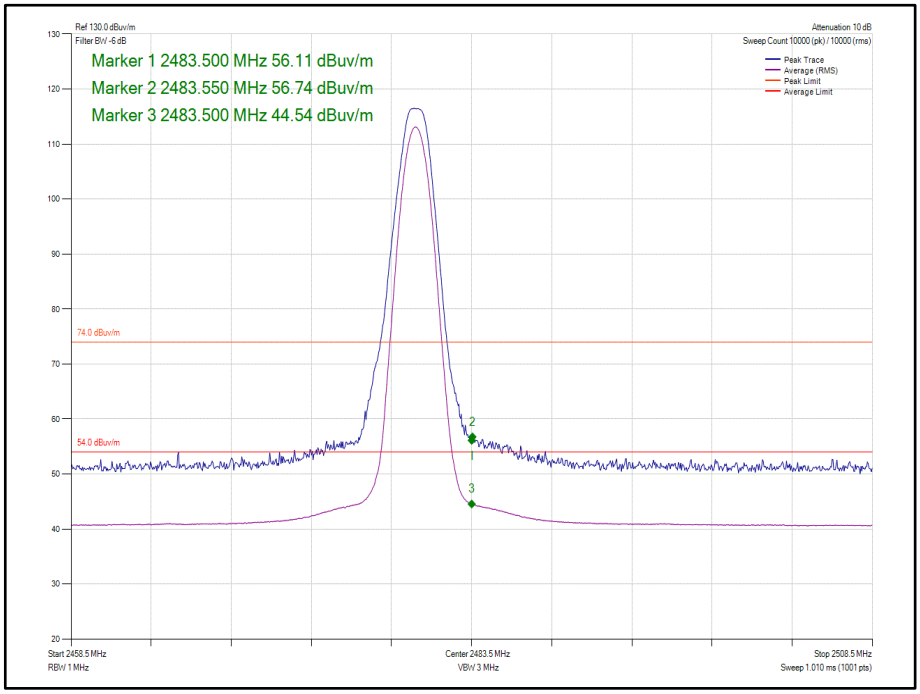

Figure 99 - Core 0-1 – GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

ePA

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	0	2390.0	53.98	52.01
GFSK / DH1	2480	0	2483.5	53.97	42.13

Table 81 - Restricted Band Edge Results

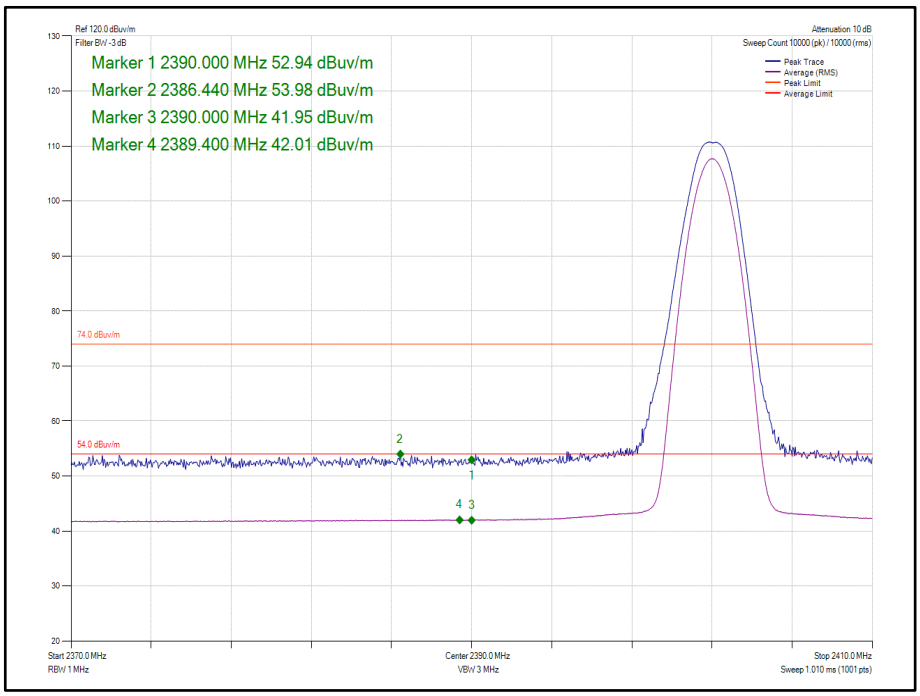

Figure 100 – Core 0 - GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

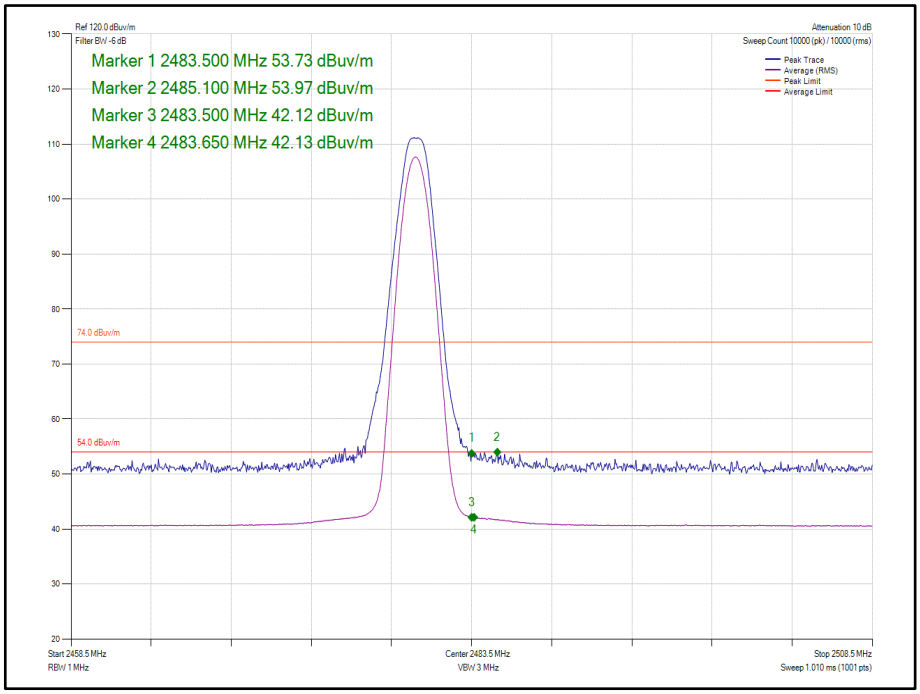

Figure 101 – Core 0 - GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	1	2390.0	54.81	42.01
GFSK / DH1	2480	1	2483.5	55.27	42.66

Table 82 - Restricted Band Edge Results

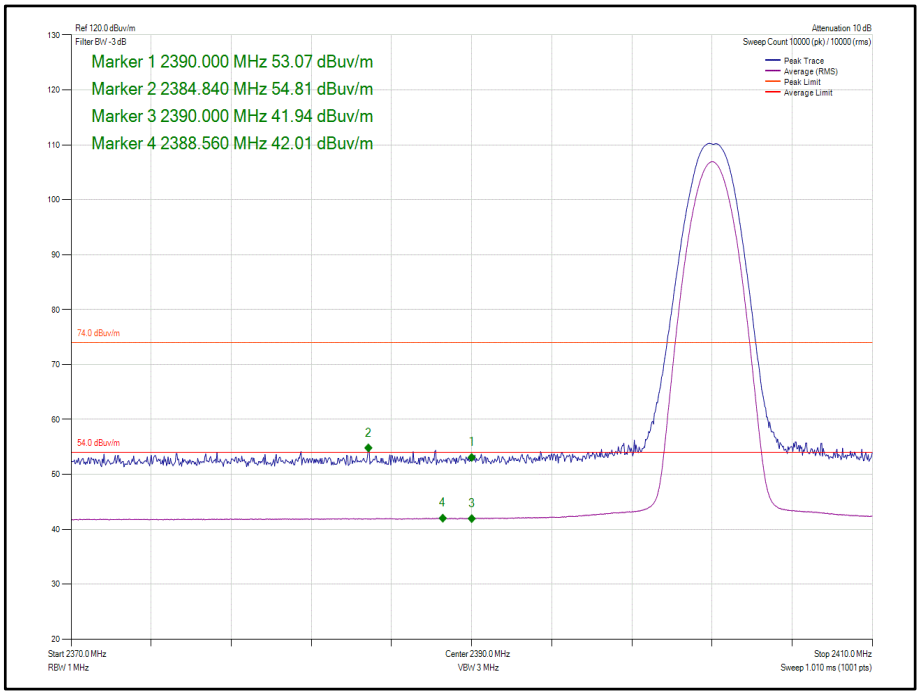

Figure 102 – Core 1 - GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

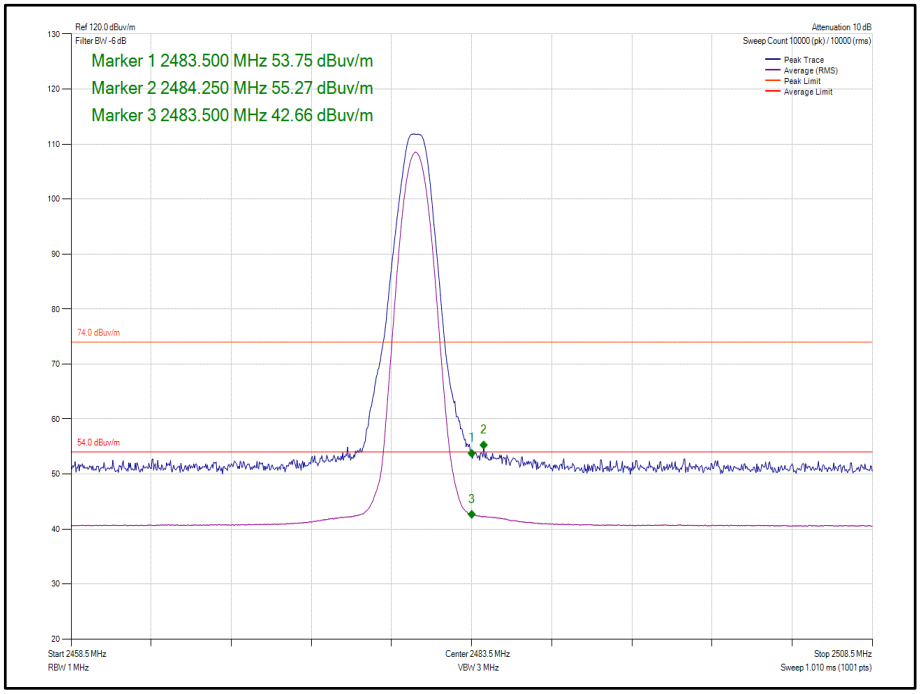

Figure 103 – Core 1 - GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	0-1	2390.0	54.39	42.26
GFSK / DH1	2480	0-1	2483.5	57.30	45.05

Table 83 - Restricted Band Edge Results

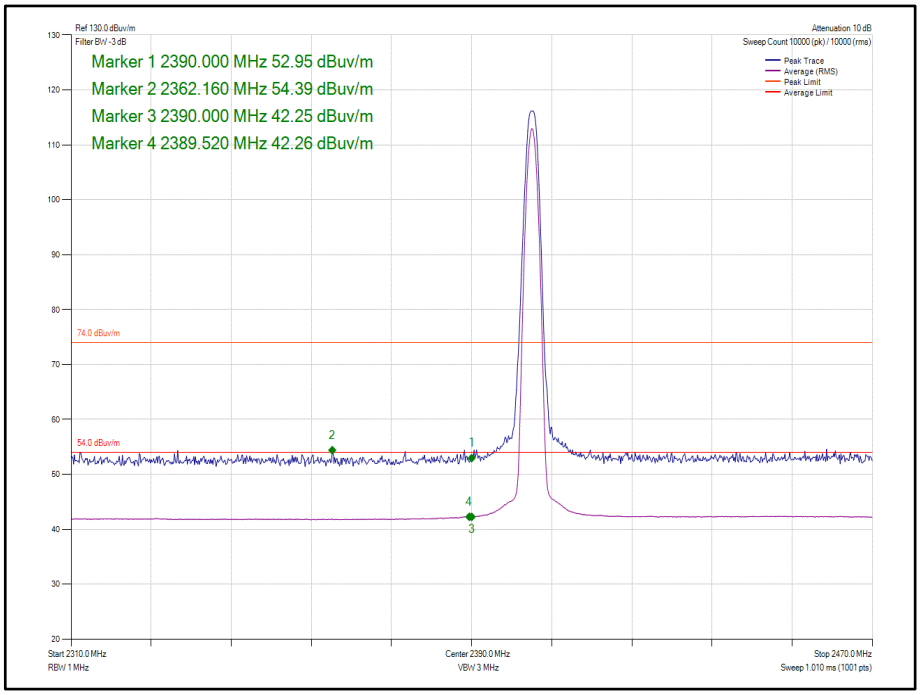

Figure 104 – Core 0-1 - GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

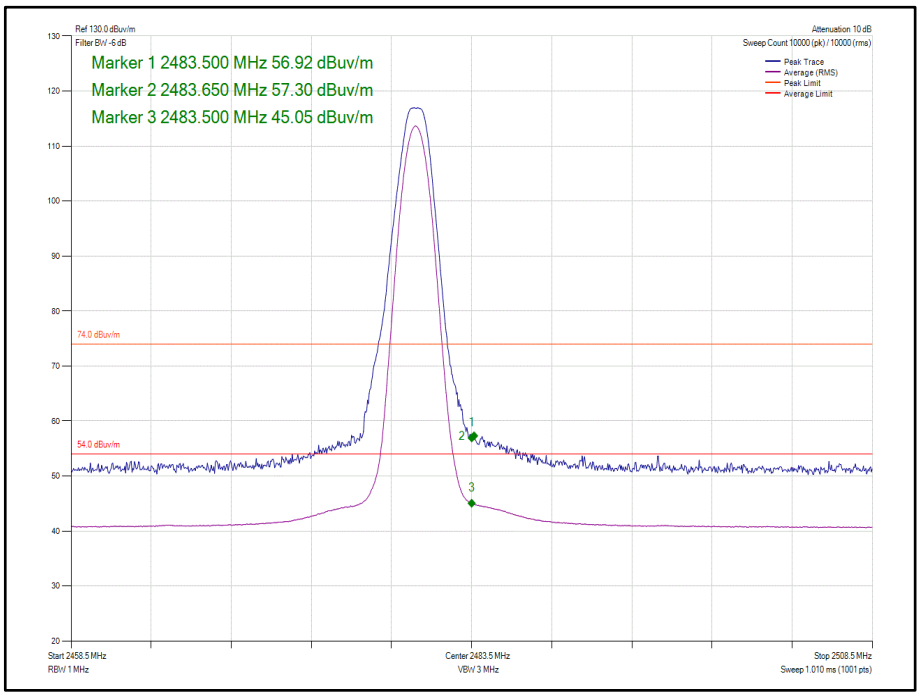

Figure 105 – Core 0-1 - GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

LE2M

iPA

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	0	2390.0	55.20	41.95
GFSK / DH1	2480	0	2483.5	62.54	50.21

Table 84 - Restricted Band Edge Results

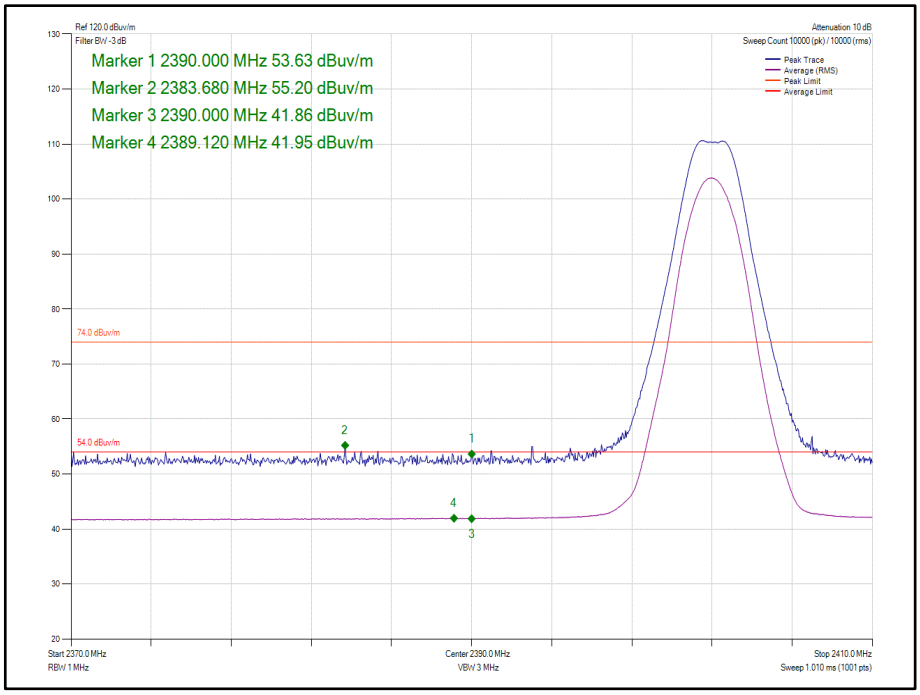

Figure 106 - Core 0– GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

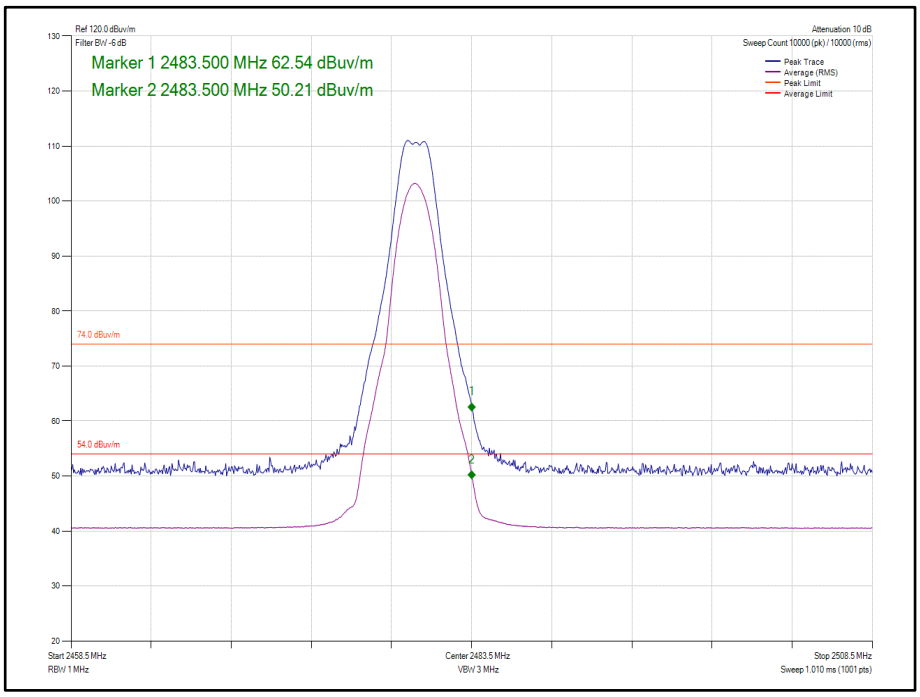

Figure 107 - Core 0– GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	1	2390.0	54.39	41.97
GFSK / DH1	2480	1	2483.5	63.51	51.35

Table 85 - Restricted Band Edge Results

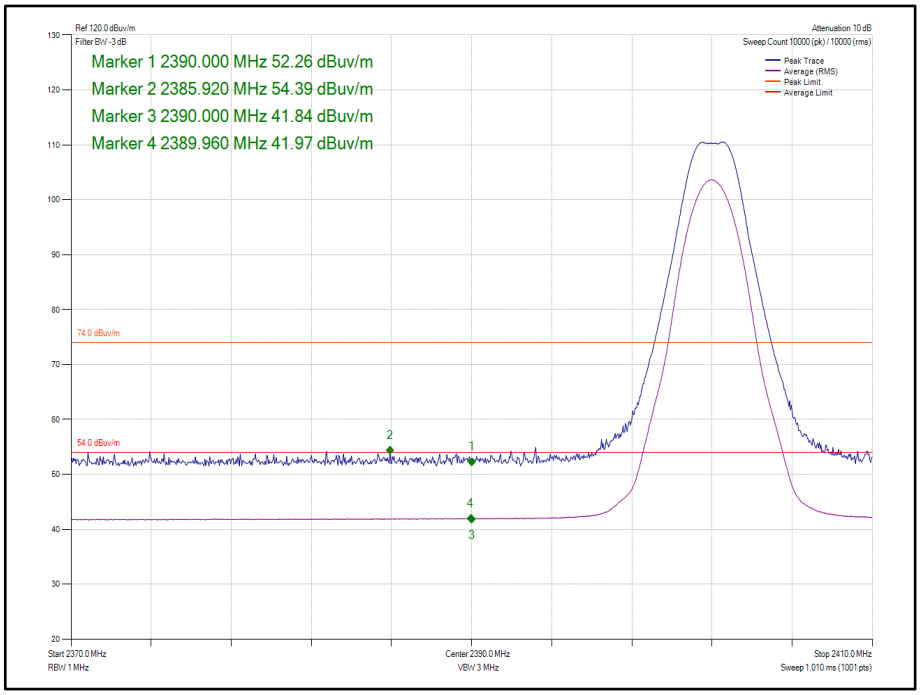

Figure 108 - Core 1 – GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

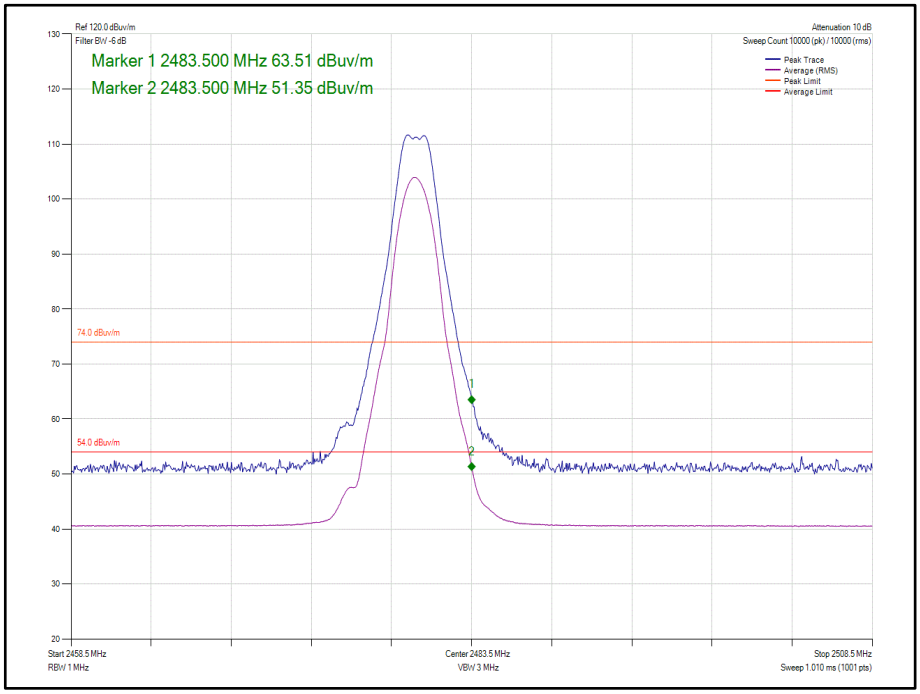

Figure 109 - Core 1 – GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	0-1	2390.0	54.05	42.03
GFSK / DH1	2480	0-1	2483.5	66.87	54.60

Table 86 - Restricted Band Edge Results

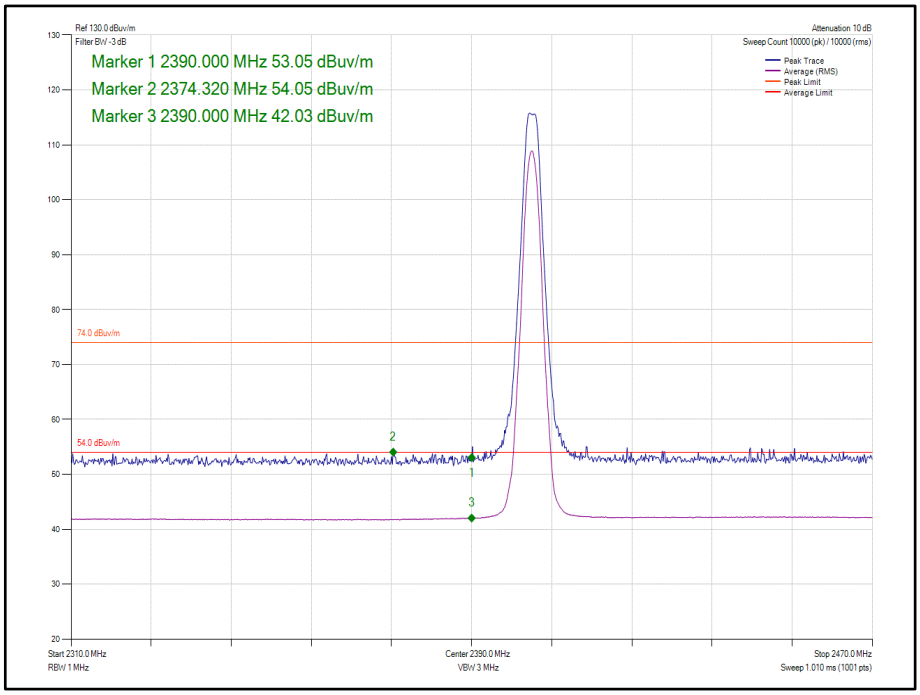

Figure 110 - Core 0-1 – GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

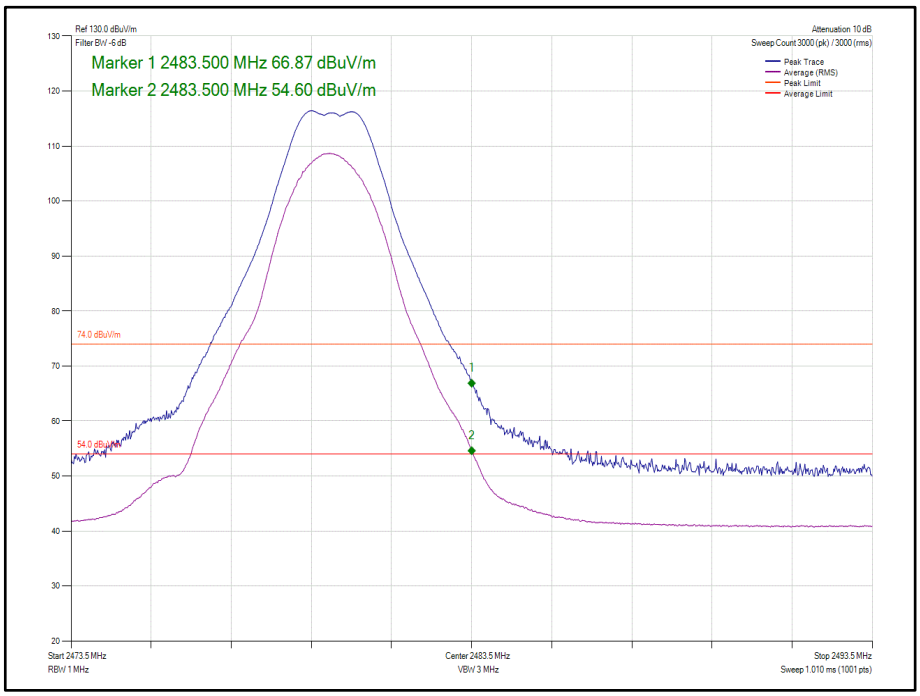

Figure 111 - Core 0-1 – GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

ePA

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	0	2390.0	54.47	41.95
GFSK / DH1	2480	0	2483.5	63.54	50.41

Table 87 - Restricted Band Edge Results

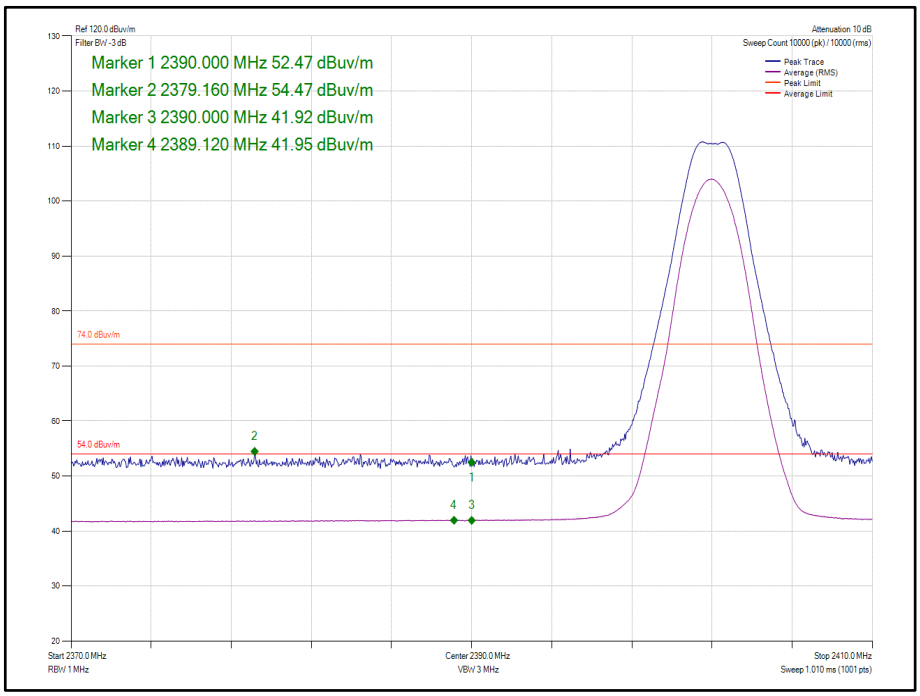

Figure 112 – Core 0 - GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

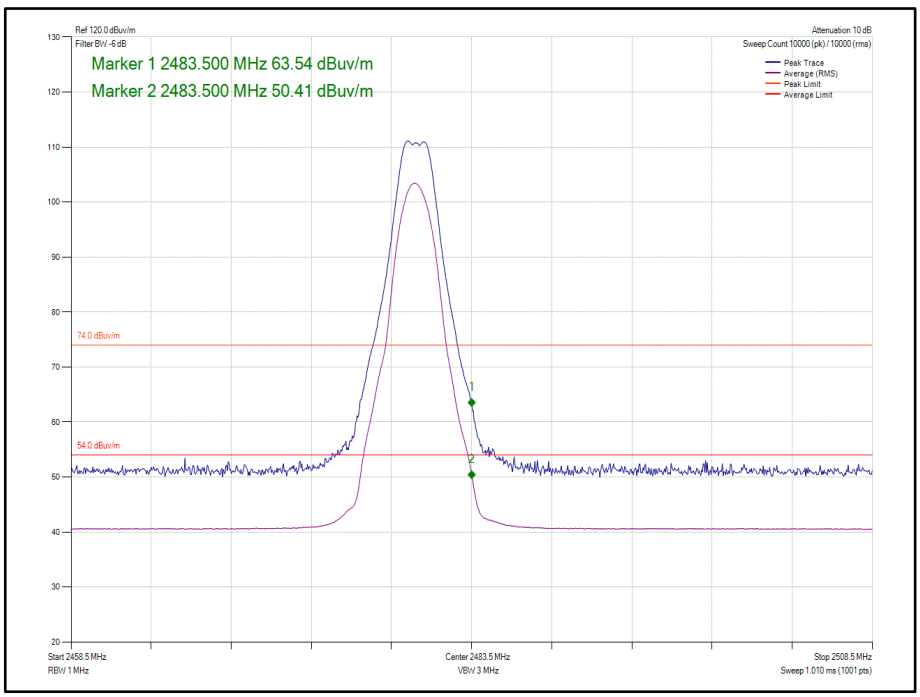

Figure 113 – Core 0 - GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	1	2390.0	54.62	41.94
GFSK / DH1	2480	1	2483.5	62.92	50.80

Table 88 - Restricted Band Edge Results

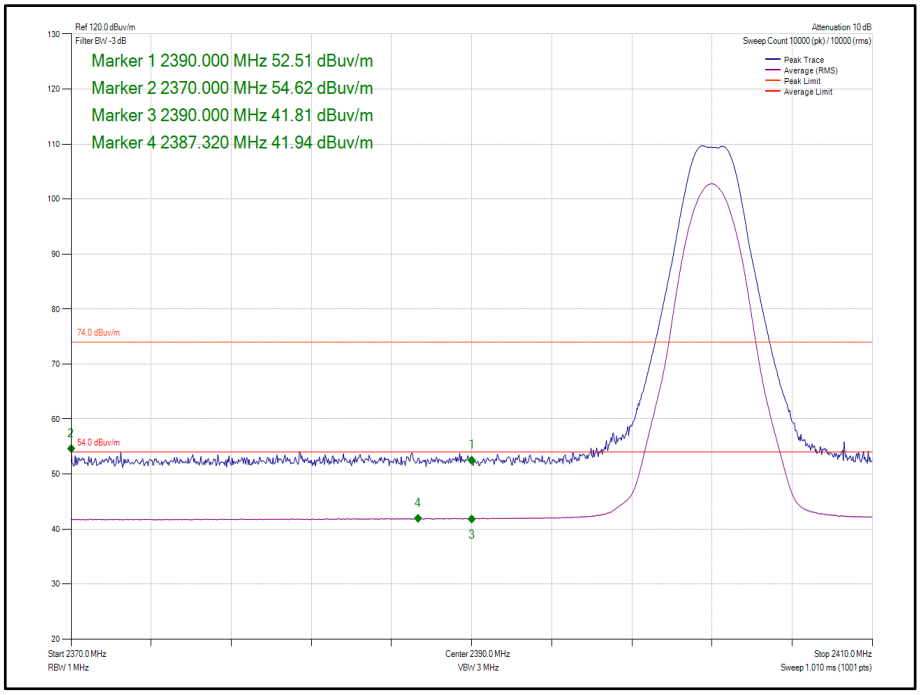

Figure 114 – Core 1 - GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

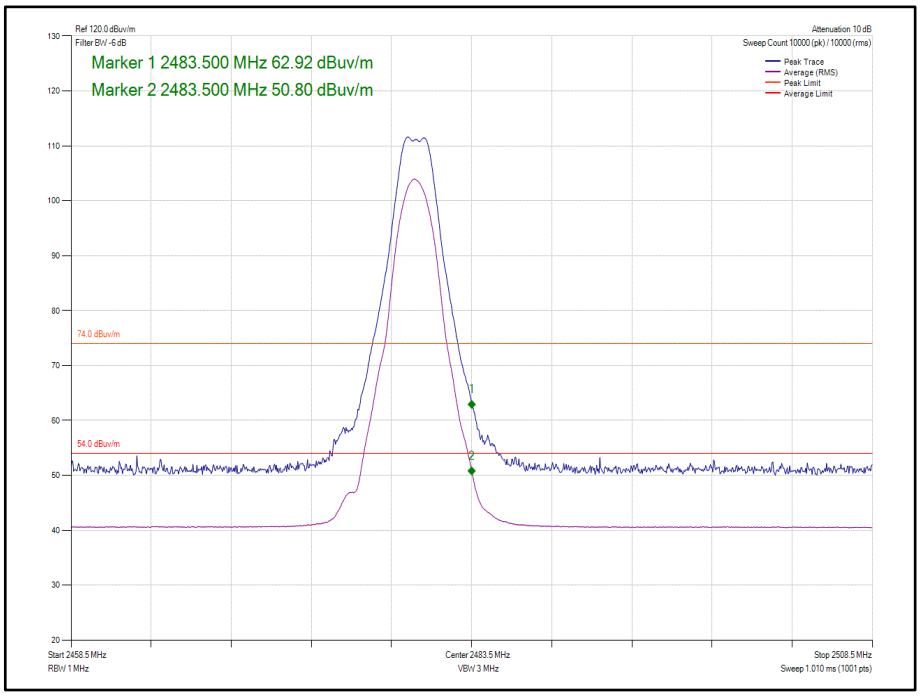

Figure 115 – Core 1 - GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

Modulation	Tx Frequency (MHz)	Core	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
GFSK / DH1	2402	0-1	2390.0	54.80	42.05
GFSK / DH1	2480	0-1	2483.5	67.60	55.54

Table 89 - Restricted Band Edge Results

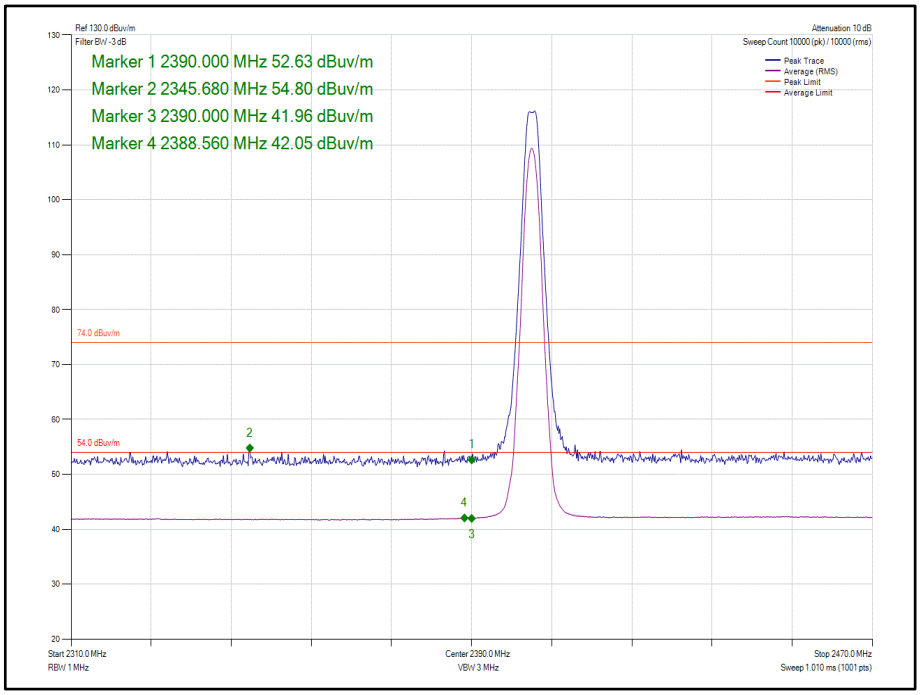

Figure 116 – Core 0-1 - GFSK / DH1 - 2402 MHz - Band Edge Frequency 2390.0 MHz

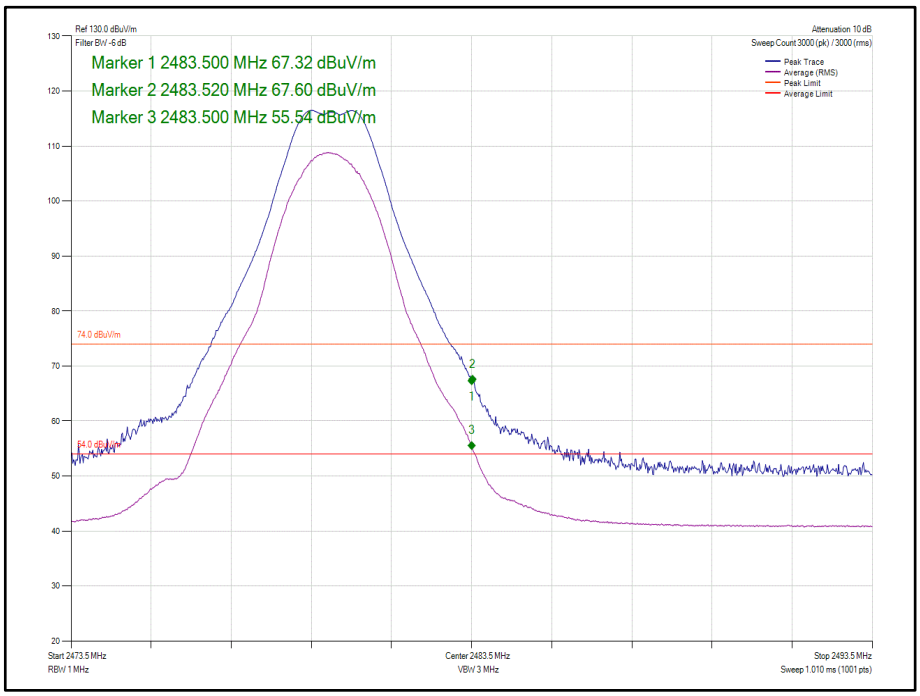

Figure 117 – Core 0-1 - GFSK / DH1 - 2480 MHz - Band Edge Frequency 2483.5 MHz

HDR4

iPA

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	0	HDR4	2404	2390.0	54.42	42.08
Static	π/4 DQPSK	0	HDR4	2478	2483.5	53.07	40.88

Table 90 - Restricted Band Edge Results

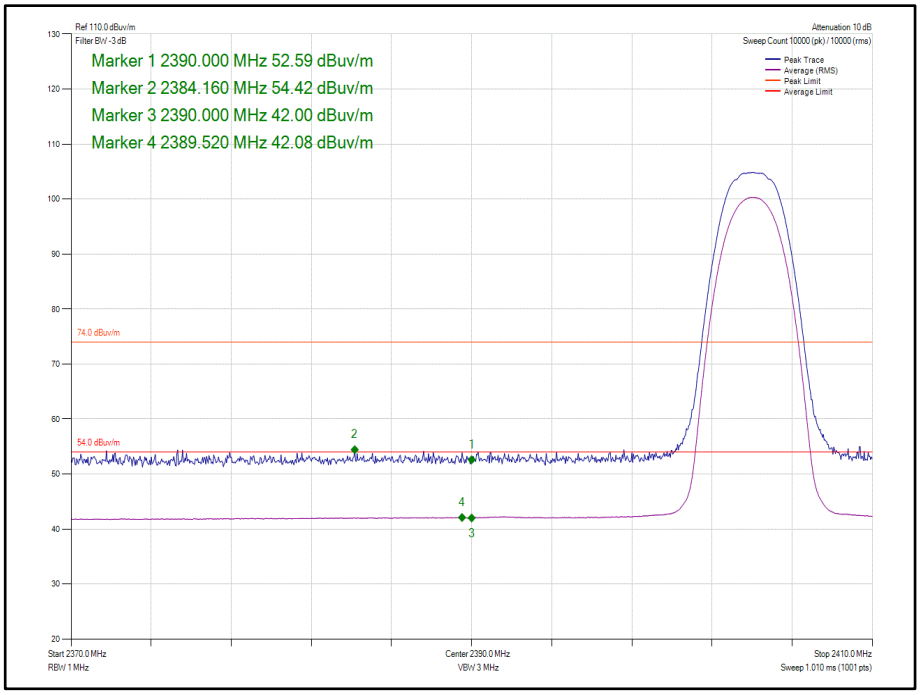

Figure 118 - Core 0 - π/4 DQPSK / HDR4 - 2404 MHz - Band Edge Frequency 2390.0 MHz

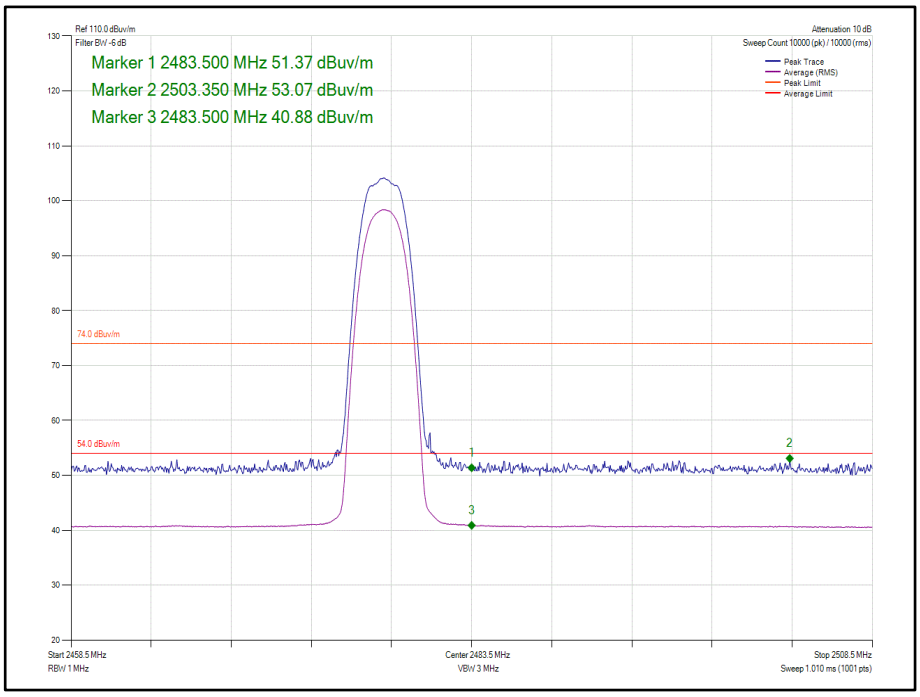

Figure 119 - Core 0 - π/4 DQPSK / HDR4 - 2478 MHz - Band Edge Frequency 2483.5 MHz

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	1	HDR4	2404	2390.0	54.02	42.01
Static	π/4 DQPSK	1	HDR4	2478	2483.5	52.79	41.04

Table 91 - Restricted Band Edge Results

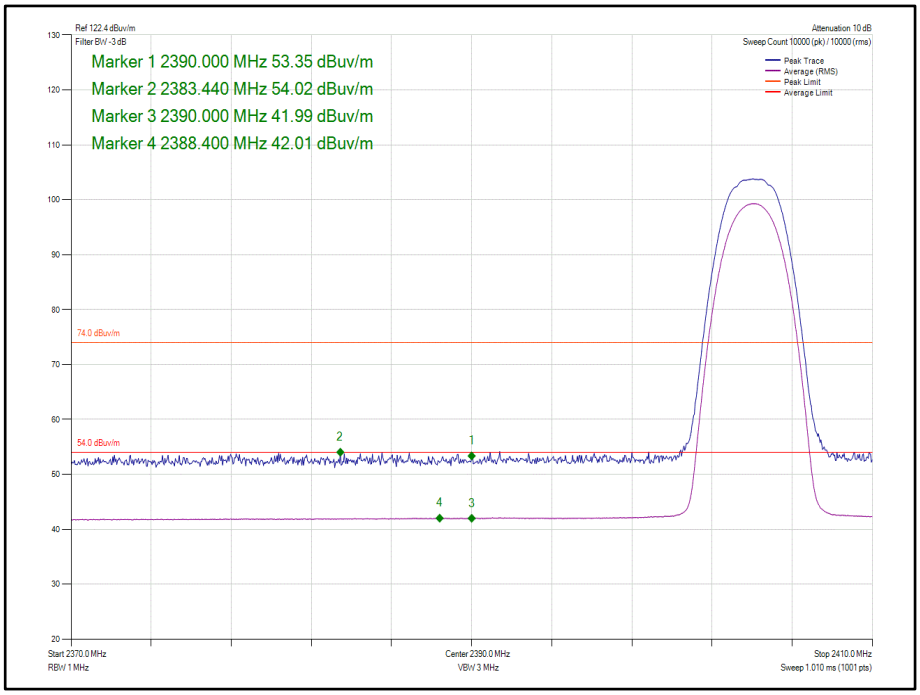

Figure 120 - Core 1 - π/4 DQPSK / HDR4 - 2404 MHz - Band Edge Frequency 2390.0 MHz

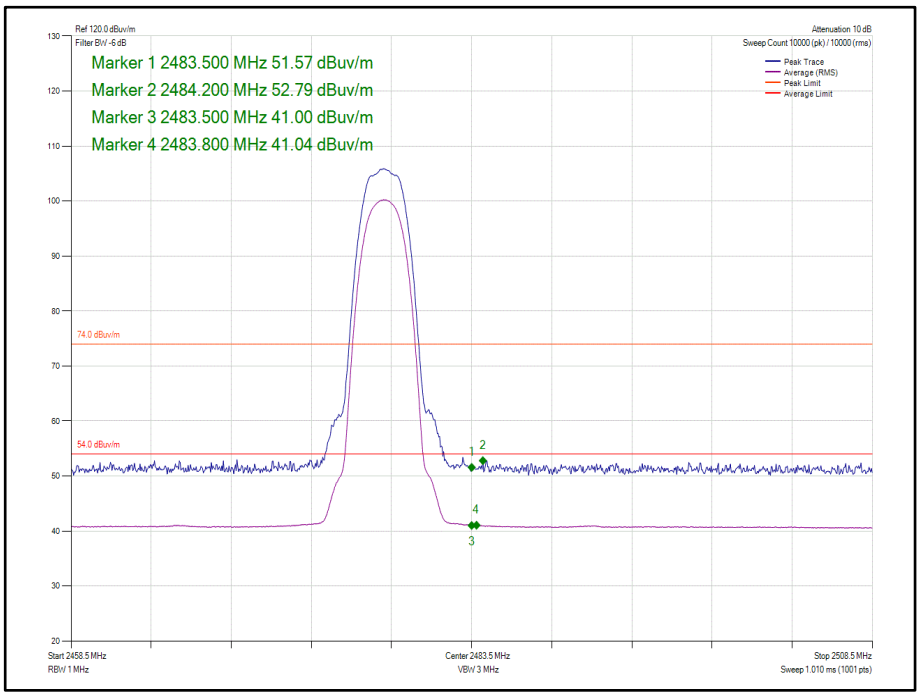

Figure 121 - Core 1 - π/4 DQPSK / HDR4 - 2478 MHz - Band Edge Frequency 2483.5 MHz

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	0-1	HDR4	2404	2390.0	54.74	42.16
Static	π/4 DQPSK	0-1	HDR4	2478	2483.5	53.10	41.32

Table 92 - Restricted Band Edge Results

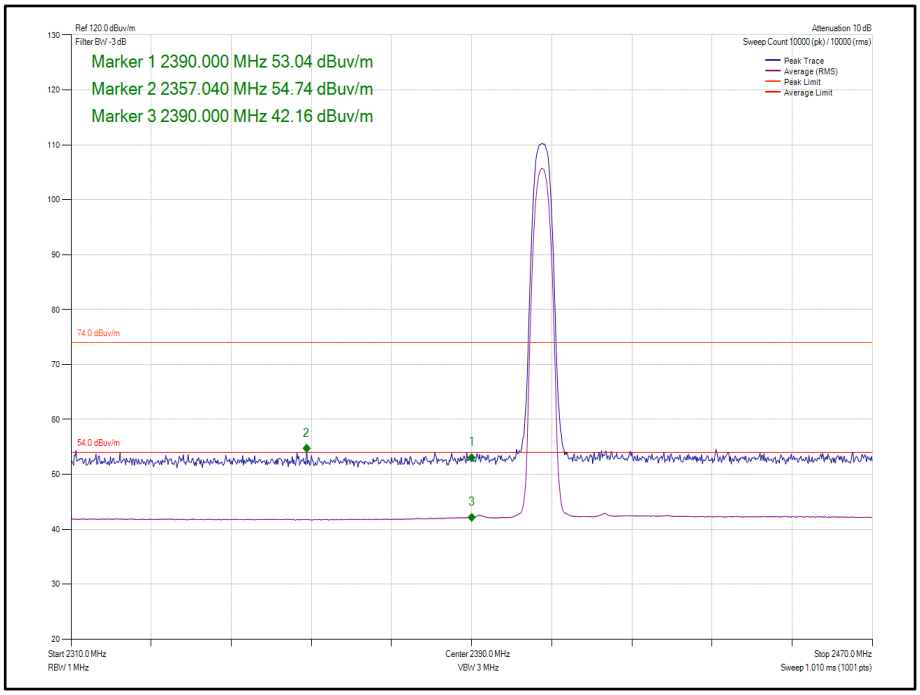

Figure 122 - Core 0-1 - π/4 DQPSK / HDR4 - 2404 MHz - Band Edge Frequency 2390.0 MHz

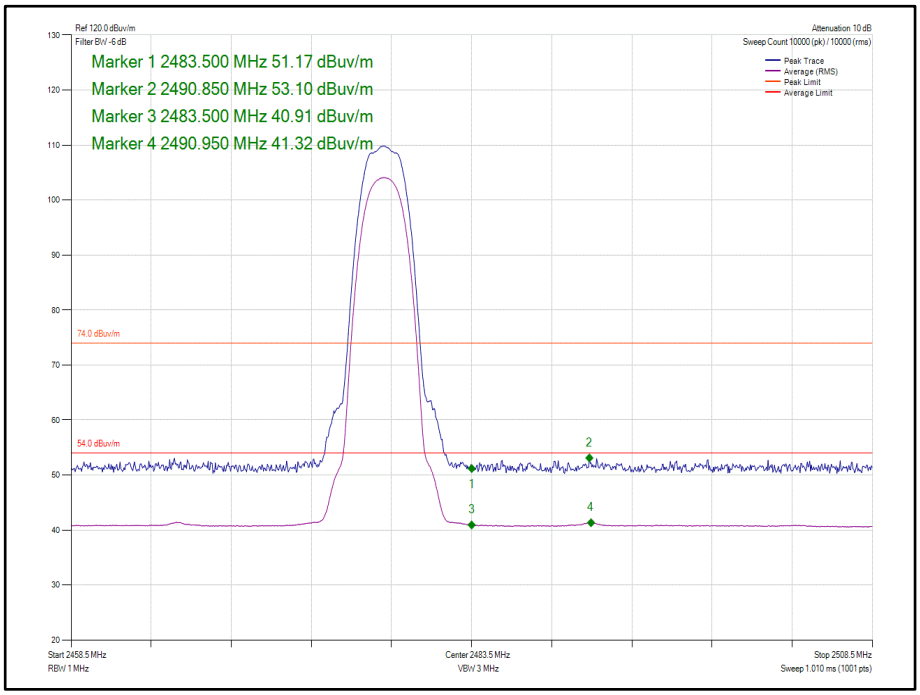

Figure 123 - Core 0-1 - π/4 DQPSK / HDR4 - 2478 MHz - Band Edge Frequency 2483.5 MHz

ePA

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	0	HDR4	2404	2390.0	55.05	42.52
Static	π/4 DQPSK	0	HDR4	2478	2483.5	55.94	42.56

Table 93 - Restricted Band Edge Results

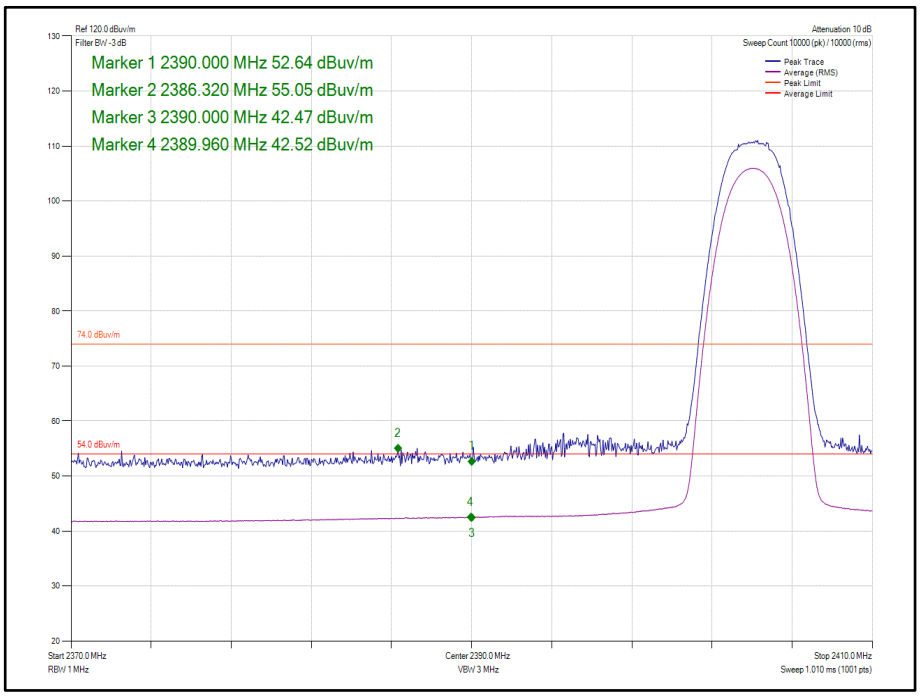

Figure 124 - Core 0 - π/4 DQPSK / HDR4 - 2404 MHz - Band Edge Frequency 2390.0 MHz

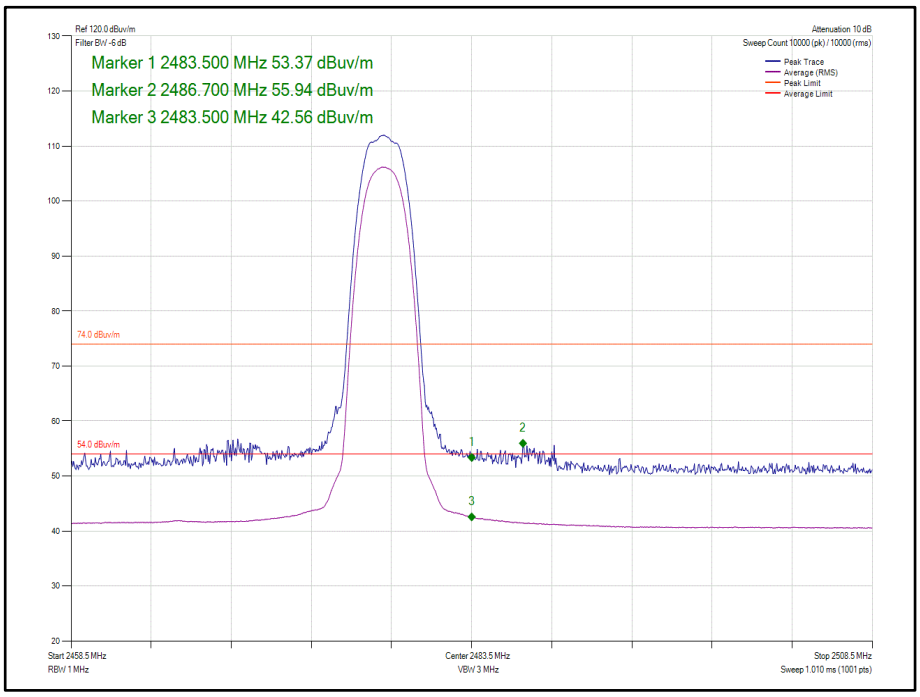

Figure 125 - Core 0 - π/4 DQPSK / HDR4 - 2478 MHz - Band Edge Frequency 2483.5 MHz

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	1	HDR4	2404	2390.0	55.56	42.71
Static	π/4 DQPSK	1	HDR4	2478	2483.5	57.35	42.82

Table 94 - Restricted Band Edge Results

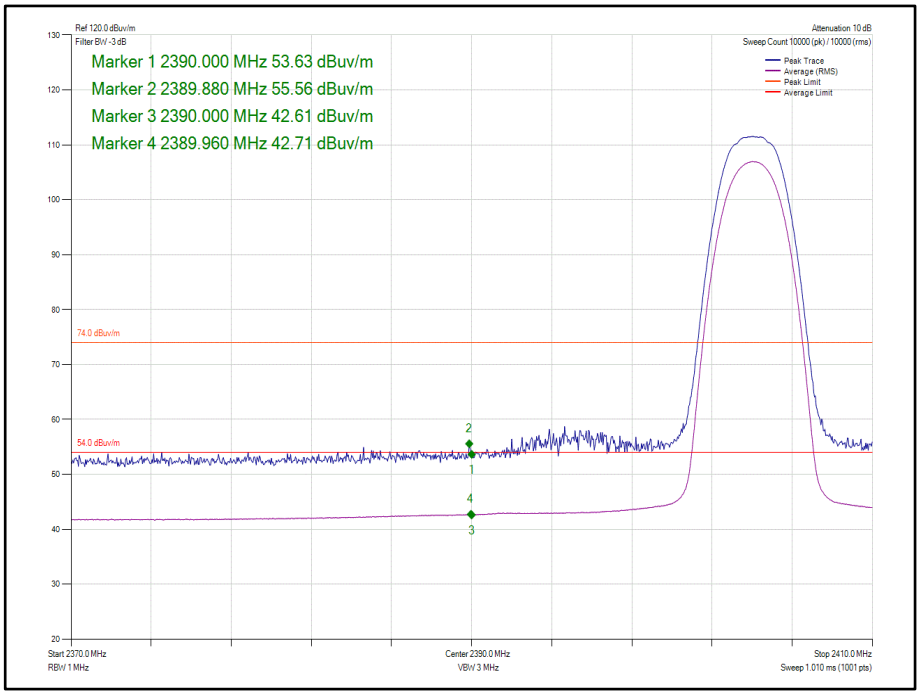

Figure 126 - Core 1 - π/4 DQPSK / HDR4 - 2404 MHz - Band Edge Frequency 2390.0 MHz

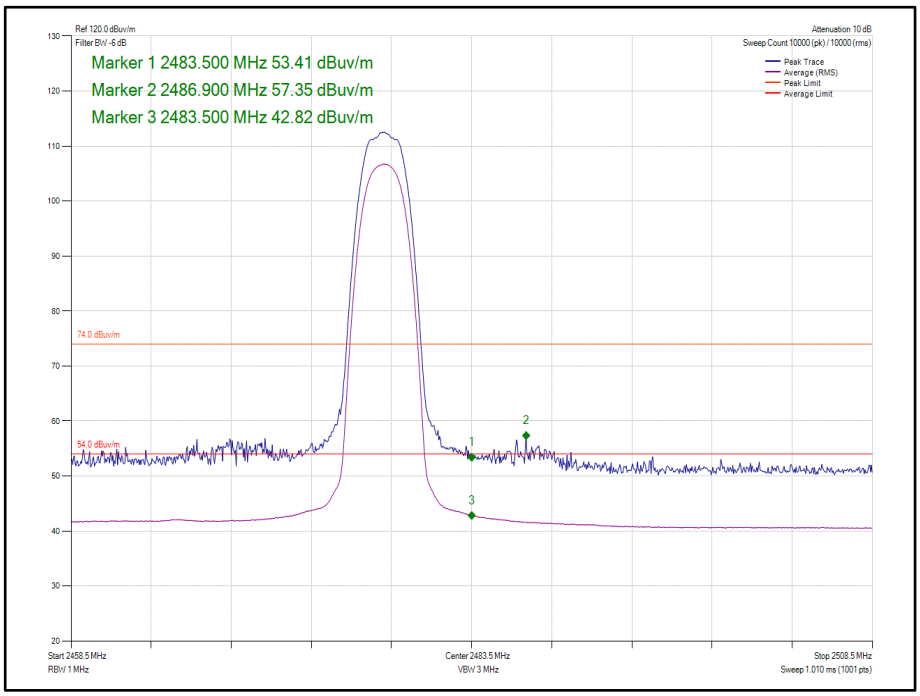

Figure 127 - Core 1 - π/4 DQPSK / HDR4 - 2478 MHz - Band Edge Frequency 2483.5 MHz

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	0-1	HDR4	2404	2390.0	59.28	43.33
Static	π/4 DQPSK	0-1	HDR4	2478	2483.5	59.76	43.20

Table 95 - Restricted Band Edge Results

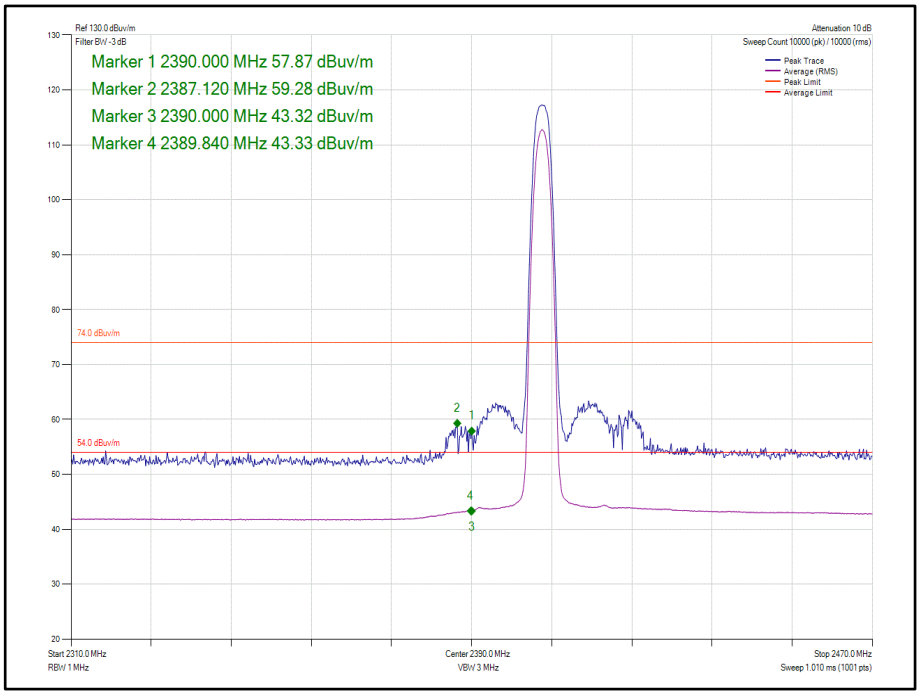

Figure 128 - Core 0-1 - π/4 DQPSK / HDR4 - 2404 MHz - Band Edge Frequency 2390.0 MHz

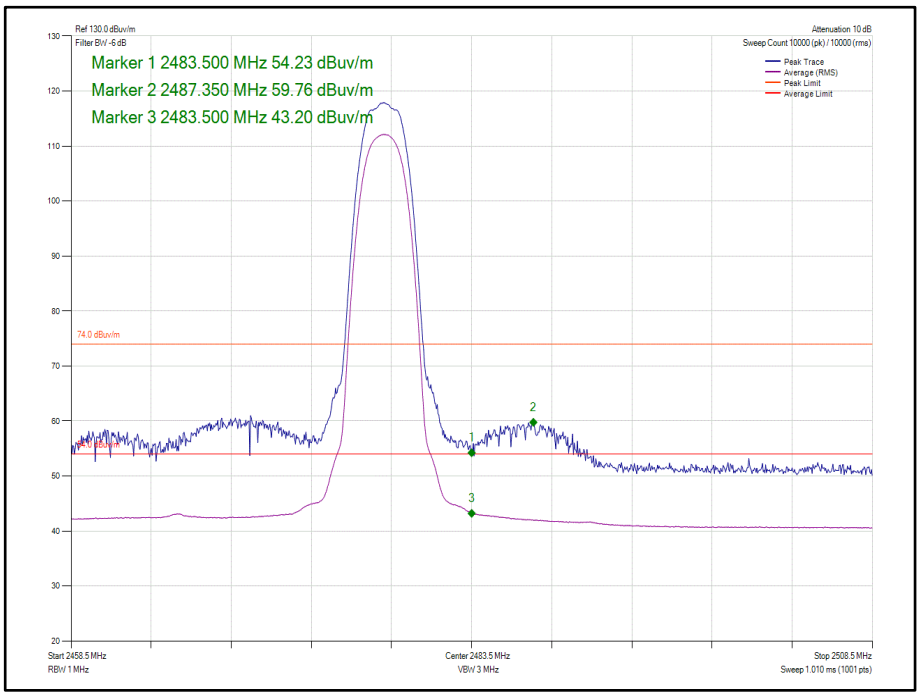

Figure 129 - Core 0-1 - π/4 DQPSK / HDR4 - 2478 MHz - Band Edge Frequency 2483.5 MHz

HDR8

iPA

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	0	HDR8	2404	2390.0	54.29	42.12
Static	π/4 DQPSK	0	HDR8	2478	2483.5	54.98	41.99

Table 96 - Restricted Band Edge Results

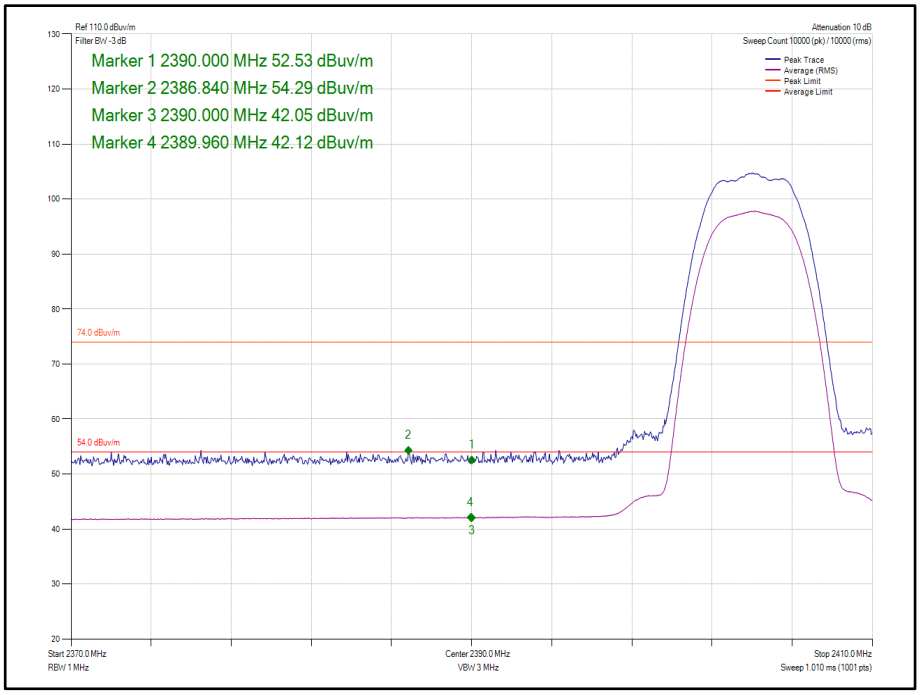

Figure 130- Core 0 - π/4 DQPSK / HDR8 - 2404 MHz - Band Edge Frequency 2390.0 MHz

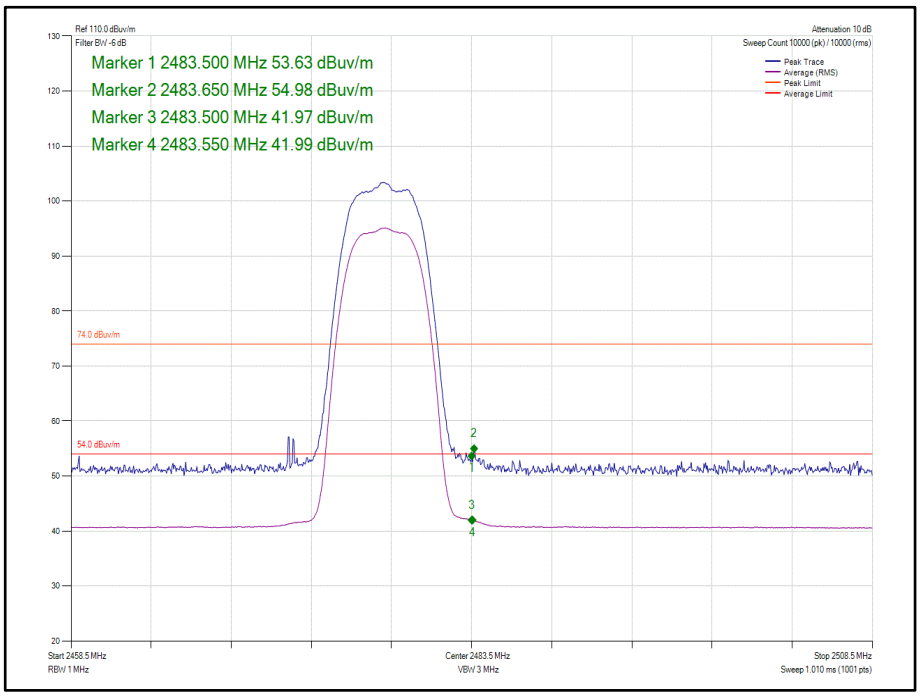

Figure 131 - Core 0 - π/4 DQPSK / HDR8 - 2478 MHz - Band Edge Frequency 2483.5 MHz

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	1	HDR8	2404	2390.0	54.21	42.04
Static	π/4 DQPSK	1	HDR8	2478	2483.5	60.27	47.96

Table 97 - Restricted Band Edge Results

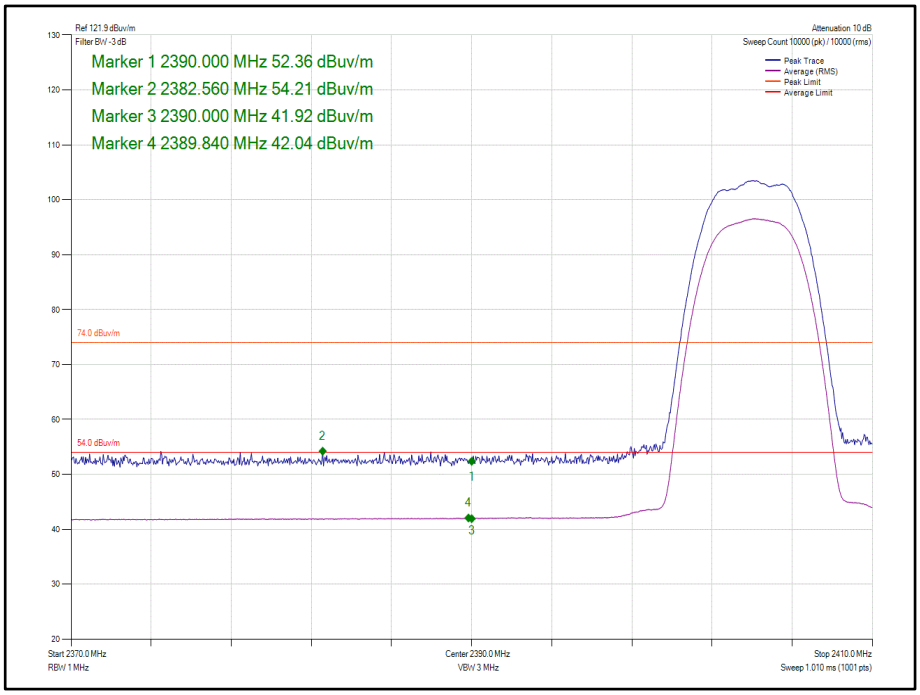

Figure 132 - Core 1 - π/4 DQPSK / HDR8 - 2404 MHz - Band Edge Frequency 2390.0 MHz

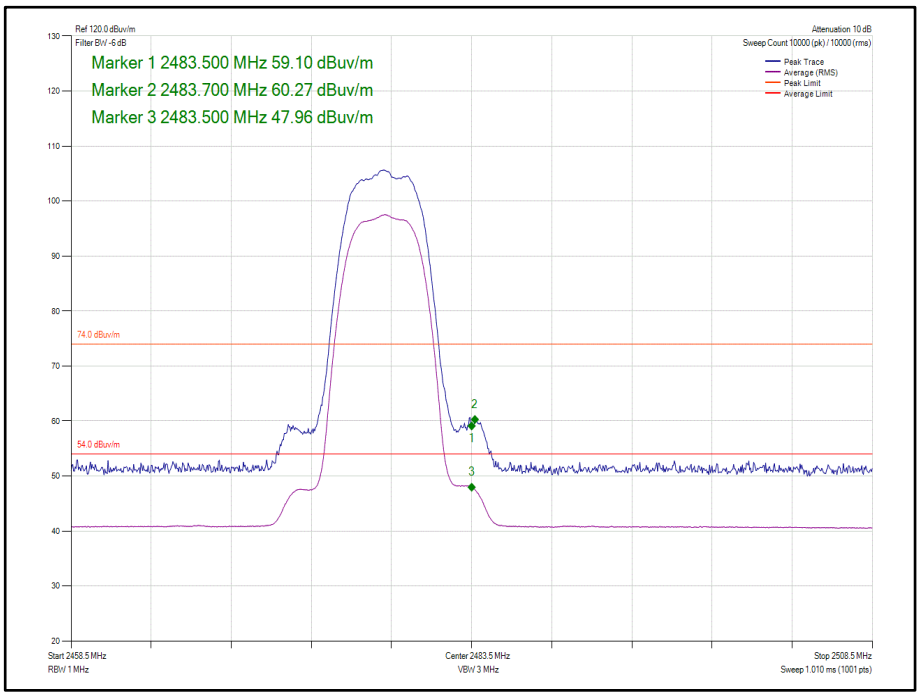

Figure 133 - Core 1 - π/4 DQPSK / HDR8 - 2478 MHz - Band Edge Frequency 2483.5 MHz

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	0-1	HDR8	2404	2390.0	54.39	42.20
Static	π/4 DQPSK	0-1	HDR8	2478	2483.5	62.42	50.16

Table 98 - Restricted Band Edge Results

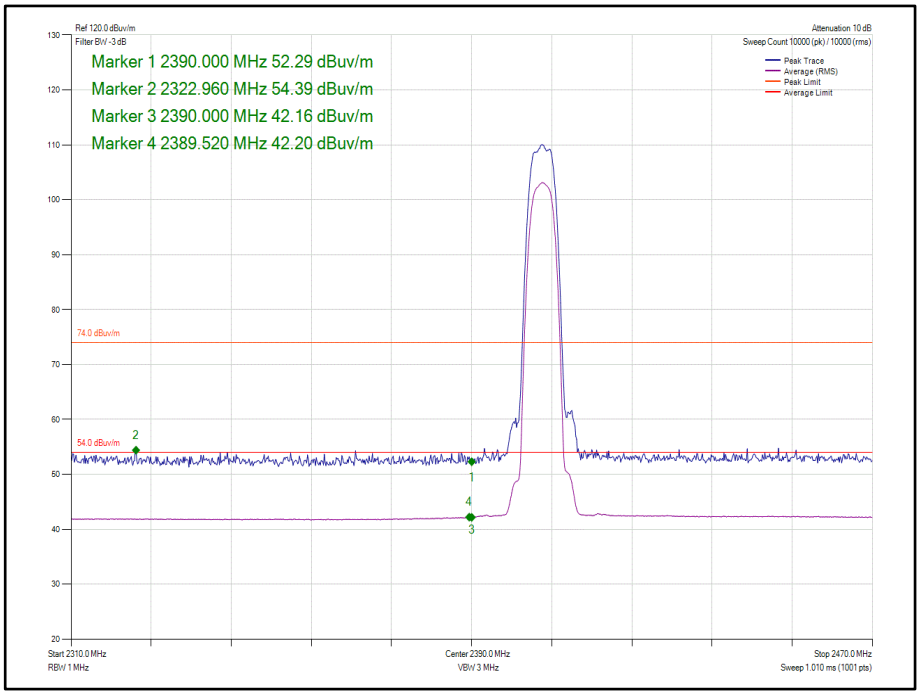

Figure 134 - Core 0-1 - π/4 DQPSK / HDR8 - 2404 MHz - Band Edge Frequency 2390.0 MHz

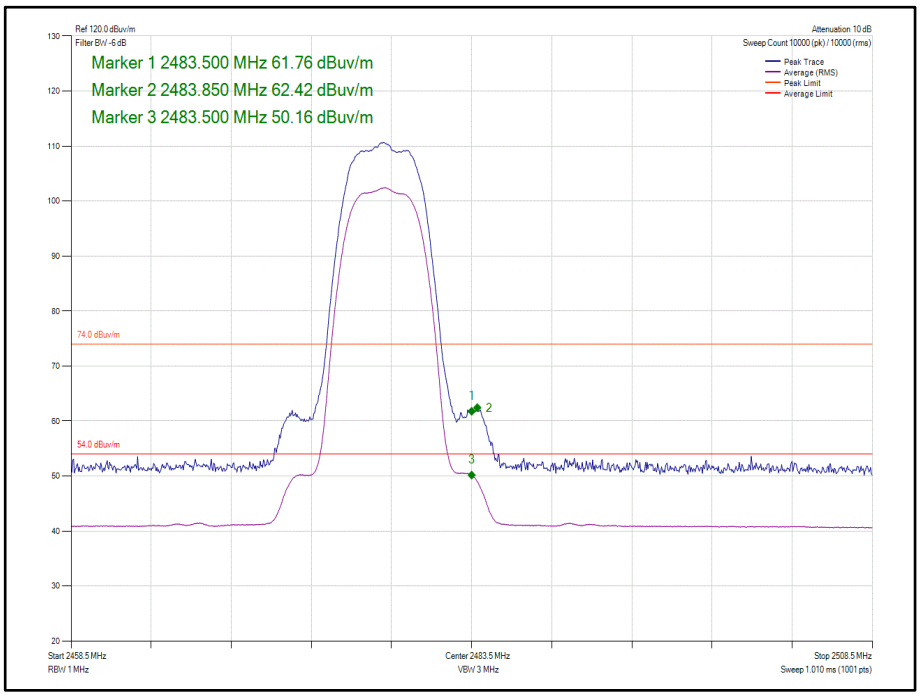

Figure 135 - Core 0-1 - π/4 DQPSK / HDR8 - 2478 MHz - Band Edge Frequency 2483.5 MHz

ePA

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	0	HDR8	2404	2390.0	55.00	42.48
Static	π/4 DQPSK	0	HDR8	2478	2483.5	59.46	46.56

Table 99 - Restricted Band Edge Results

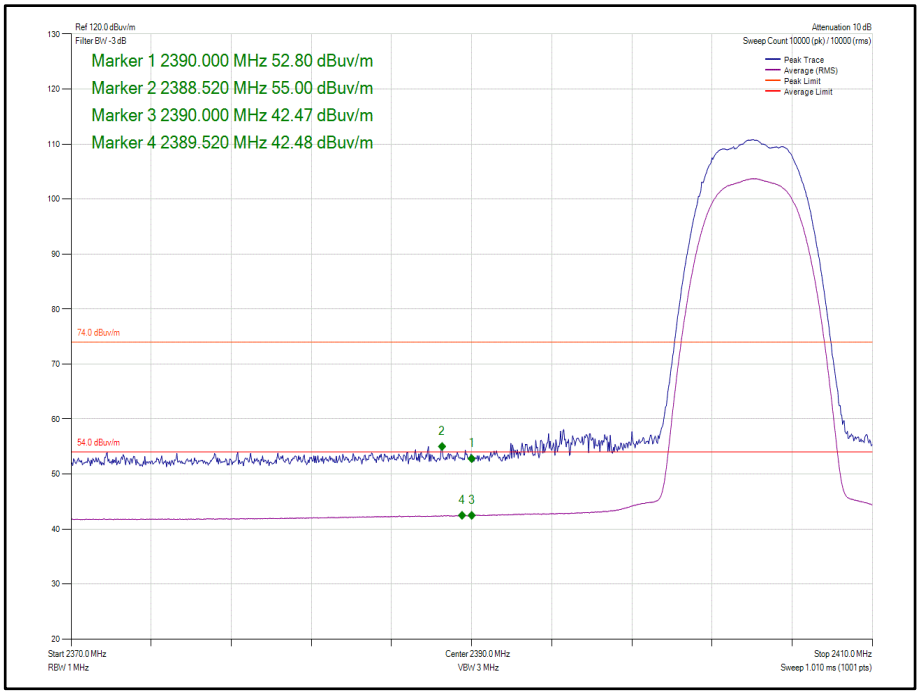

Figure 136- Core 0 - π/4 DQPSK / HDR8 - 2404 MHz - Band Edge Frequency 2390.0 MHz

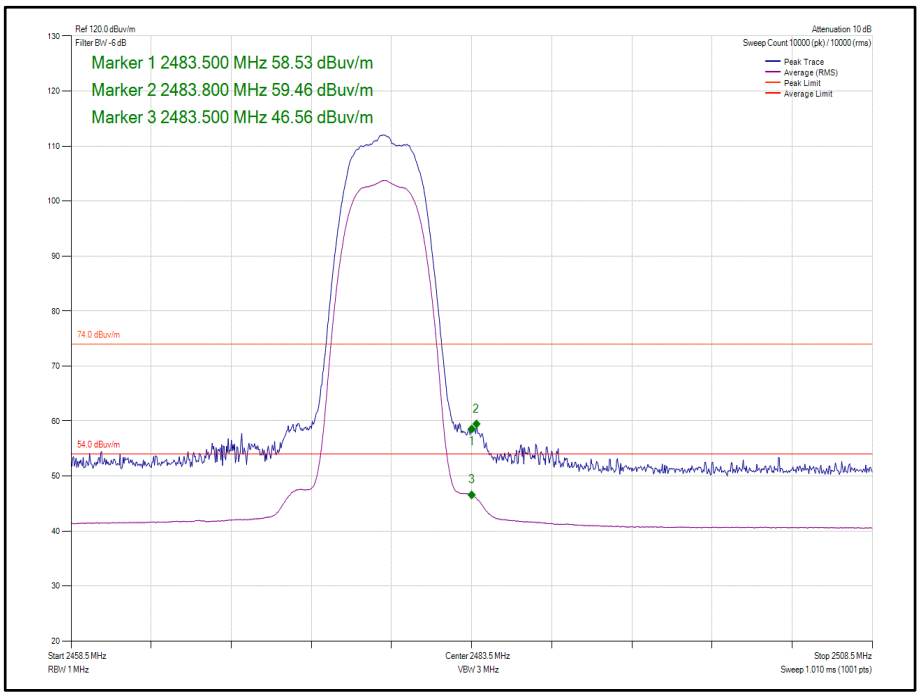

Figure 137 - Core 0 - π/4 DQPSK / HDR8 - 2478 MHz - Band Edge Frequency 2483.5 MHz

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	1	HDR8	2404	2390.0	55.92	42.74
Static	π/4 DQPSK	1	HDR8	2478	2483.5	56.64	44.38

Table 100 - Restricted Band Edge Results

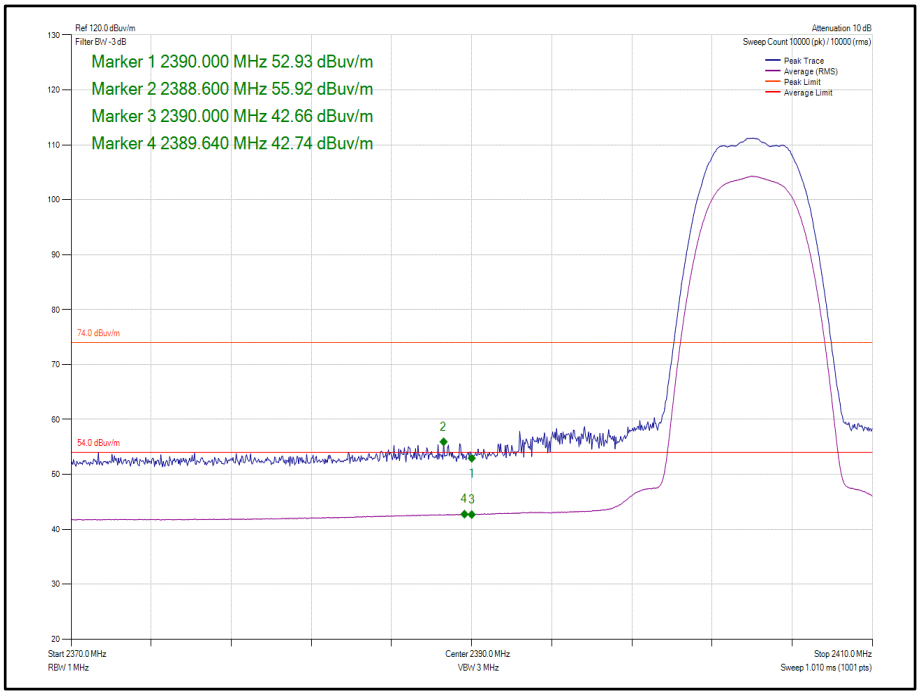

Figure 138- Core 1 - π/4 DQPSK / HDR8 - 2404 MHz - Band Edge Frequency 2390.0 MHz

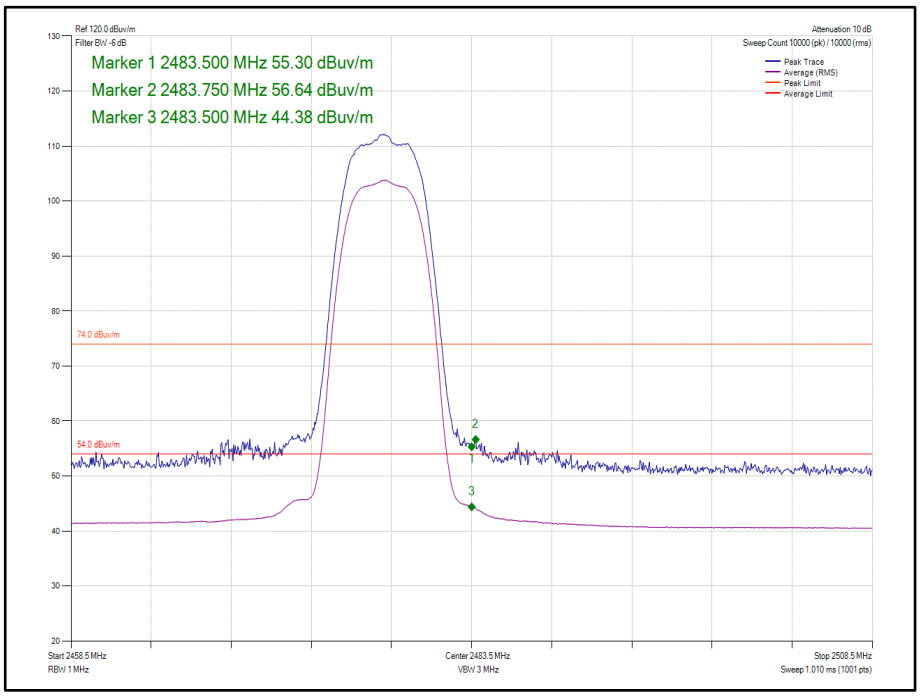

Figure 139 - Core 0 - π/4 DQPSK / HDR8 - 2478 MHz - Band Edge Frequency 2483.5 MHz

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBµV/m)	Average Level (dBµV/m)
Static	π/4 DQPSK	0-1	HDR8	2404	2390.0	59.21	43.43
Static	π/4 DQPSK	0-1	HDR8	2478	2483.5	63.14	50.89

Table 101 - Restricted Band Edge Results

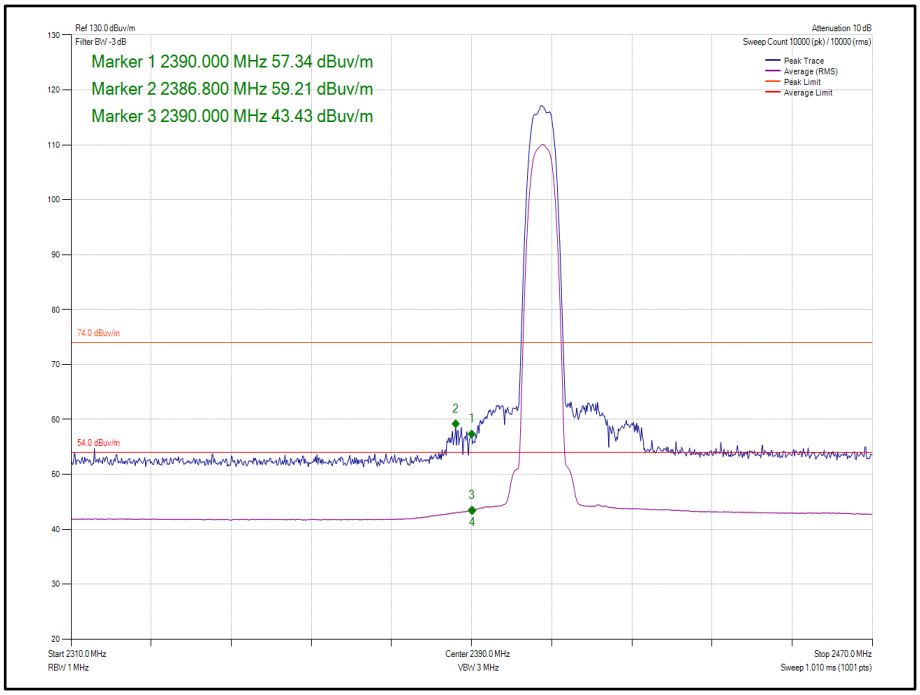

Figure 140- Core 0-1- π/4 DQPSK / HDR8 - 2404 MHz - Band Edge Frequency 2390.0 MHz

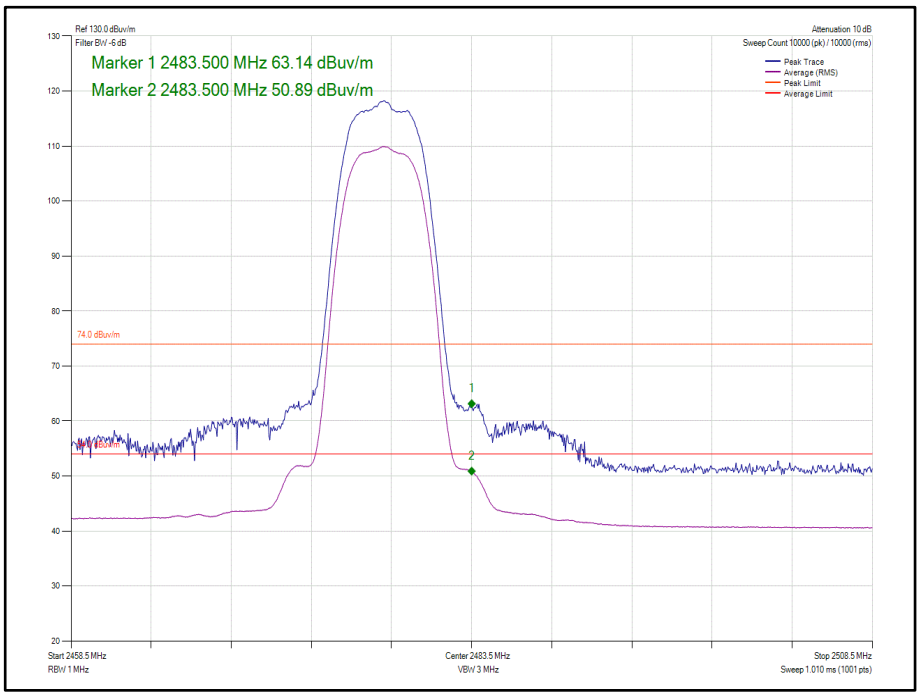

Figure 141 - Core 0-1 - π/4 DQPSK / HDR8 - 2478 MHz - Band Edge Frequency 2483.5 MHz

FCC 47 CFR Part 15, Limit Clause 15.209

Frequency (MHz)	Field Strength (µV/m at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960	500

Table 102

ISED RSS-GEN, Limit Clause 8.9

Frequency (MHz)	Field Strength (µV/m at 3 m)
30 to 88	100
88 to 216	150
216 to 960	200
Above 960*	500

Table 103

*Unless otherwise specified, for all frequencies greater than 1 GHz, the radiated emission limits for licence-exempt radio apparatus stated in applicable RSSs (including RSS-Gen) are based on measurements using a linear average detector function having a minimum resolution bandwidth of 1 MHz. If an average limit is specified for the EUT, then the peak emission shall also be measured with instrumentation properly adjusted for such factors as pulse desensitization to ensure the peak emission is less than 20 dB above the average limit.

2.4.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
EMI Test Receiver	Rohde & Schwarz	ESW44	5084	12	28-Nov-2020
EmX Emissions Software	TUV SUD	EmX	5125	-	Software
Screened Room (11)	Rainford	Rainford	5136	36	01-Nov-2021
Mast	Maturo	TAM 4.0-P	5158	-	TU
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU
Turntable	Maturo	TT 15WF	5160	-	TU
Horn Antenna (1-10GHz)	Schwarzbeck	BBHA 9120 B	5215	12	10-Mar-2021
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5475	12	17-Mar-2021
Attenuator 5W 10dB DC-18GHz	Aaren	AT40A-4041-D18-10	5494	12	14-Apr-2021
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/A	5518	12	01-Apr-2021
8m N Type Cable	Junkosha	MWX221-08000NMSNMS/B	5522	12	24-Mar-2021

Table 104

TU - Traceability Unscheduled

2.5 Spurious Radiated Emissions

2.5.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (d) and 15.205
ISED RSS-247, Clause 5.5
ISED RSS-GEN, Clause 6.13

2.5.2 Equipment Under Test and Modification State

A2337, S/N: C02D200EQ9MQ - Modification State 0

2.5.3 Date of Test

30-August-2020 to 09-September-2020

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

For frequencies > 1 GHz, plots for average measurements were taken in accordance with ANSI C63.10, clause 11.12.2.5.2.

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

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

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*LOG(3/1) = 9.54 dB.

Representative noise floor plots are presented in the plot section of the report for one operating channel only.

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

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

2.5.5 Example Test Setup Diagram

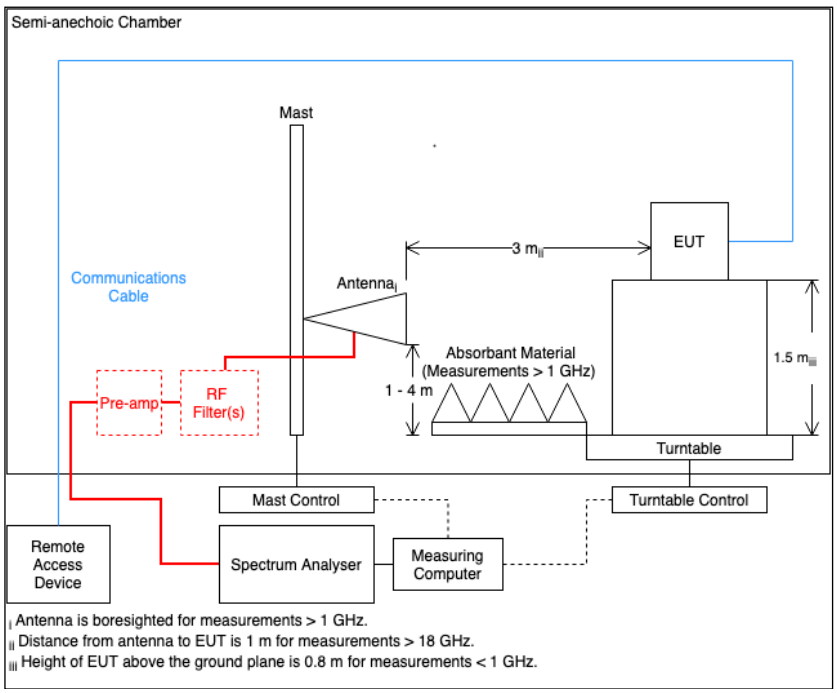

Figure 142

2.5.6 Environmental Conditions

Ambient Temperature	21.4 - 28.1 °C
Relative Humidity	43.1 - 53.9 %

2.5.7 Test Results

2.4 GHz Bluetooth Low Energy (DTS)

iPA

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4803.836	35.5	54.0	-18.5	RMS	328	381	Vertical

Table 105 - 2402 MHz (CH0), LE1M, iPA, Core 0, 1 GHz to 26 GHz

No other emissions found within 6 dB of the limit.

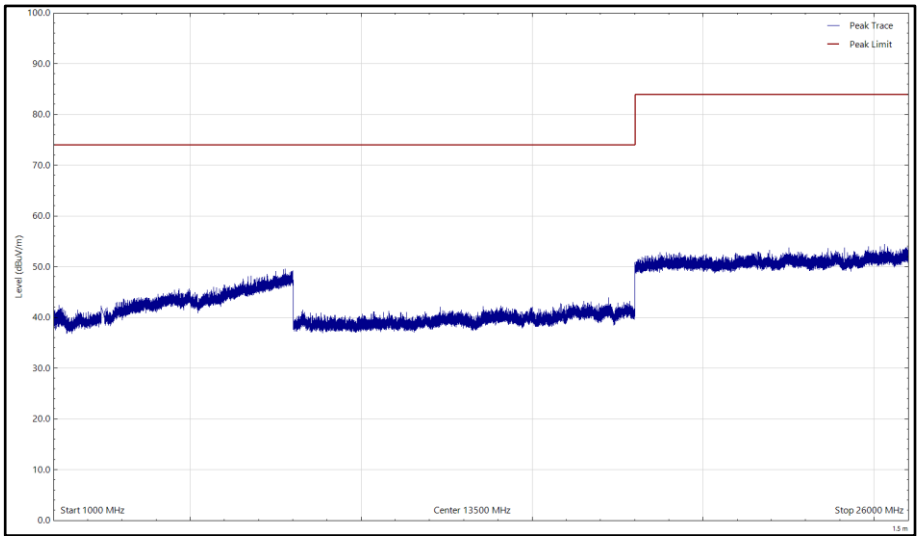

Figure 143 - 2402 MHz (CH0), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Horizontal (Peak)

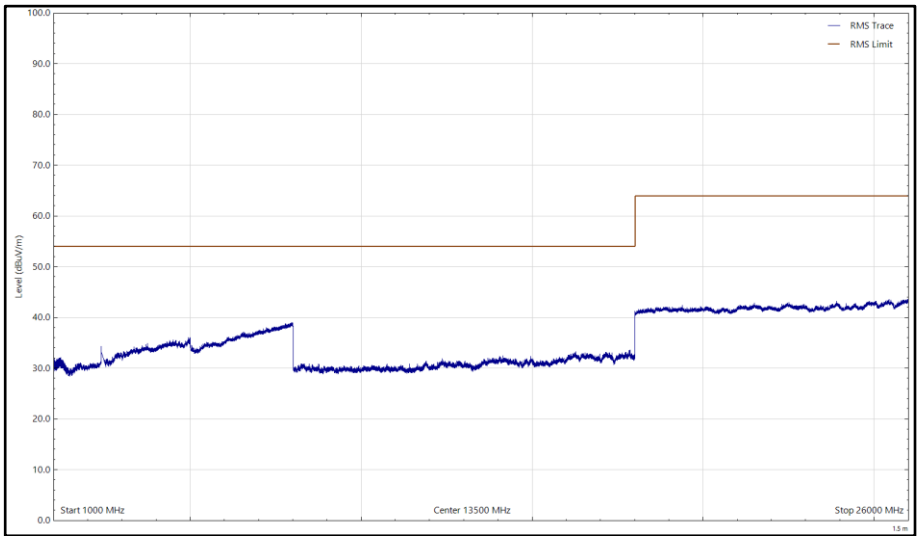

Figure 144 - 2402 MHz (CH0), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Horizontal (RMS)

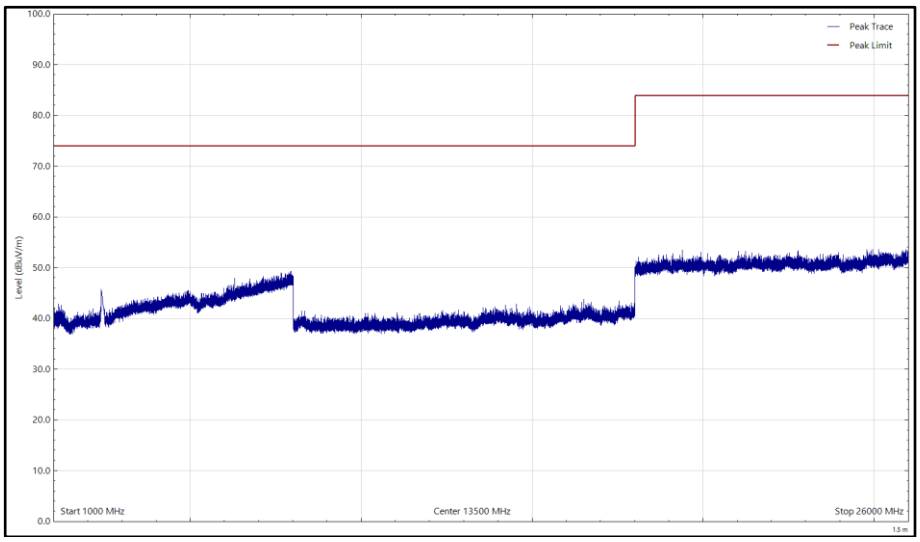

Figure 145 - 2402 MHz (CH0), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Vertical (Peak)

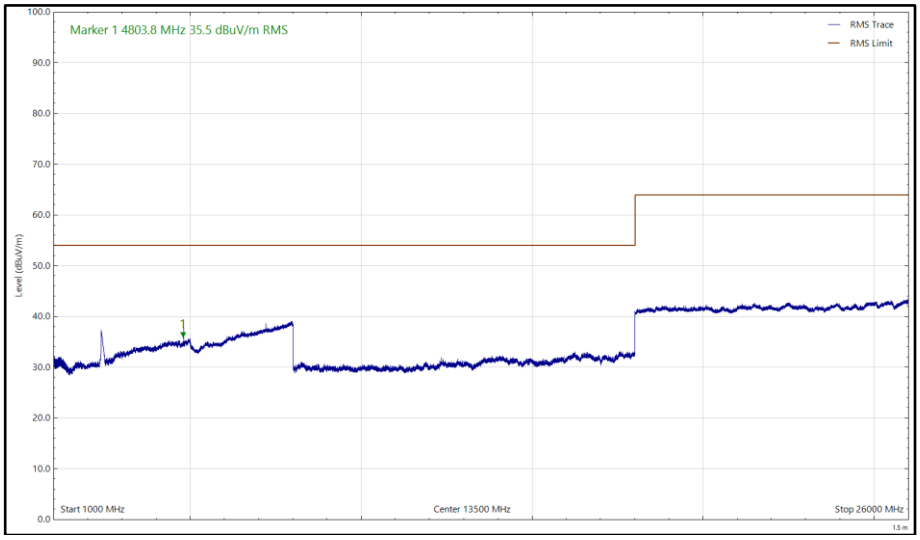

Figure 146 - 2402 MHz (CH0), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Vertical (RMS)

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
30.270	27.6	40.0	-12.4	Q-Peak	0	110	Vertical
188.540	30.3	43.5	-13.2	Q-Peak	58	100	Vertical
192.890	31.5	43.5	-12.0	Q-Peak	313	155	Horizontal
4879.943	41.0	54.0	-13.0	RMS	39	325	Vertical

Table 106 - 2440 MHz (CH17), LE1M, iPA, Core 0, 30 MHz to 26 GHz

No other emissions found within 6 dB of the limit.

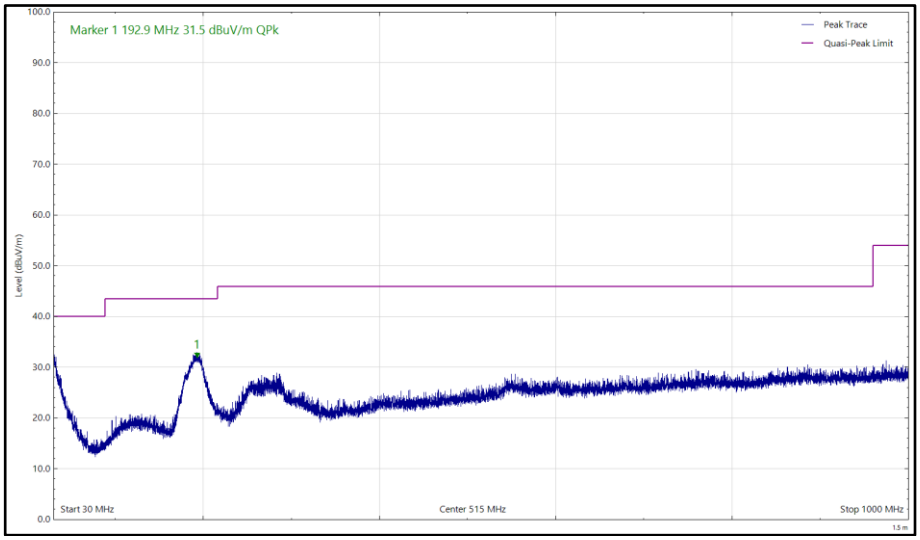

Figure 147 - 2440 MHz (CH17), LE1M, iPA, Core 0, 30 MHz to 1 GHz, Horizontal (Peak)

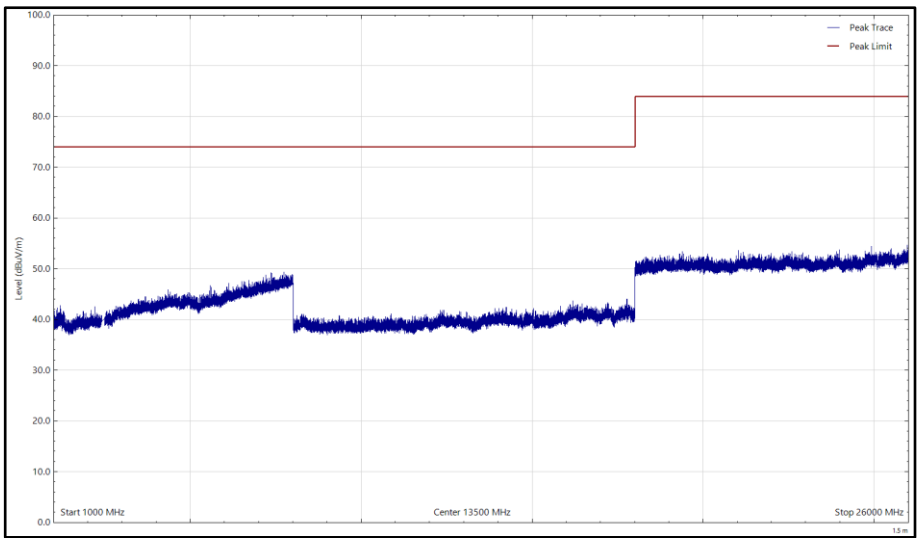

Figure 148 - 2440 MHz (CH17), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Horizontal (Peak)

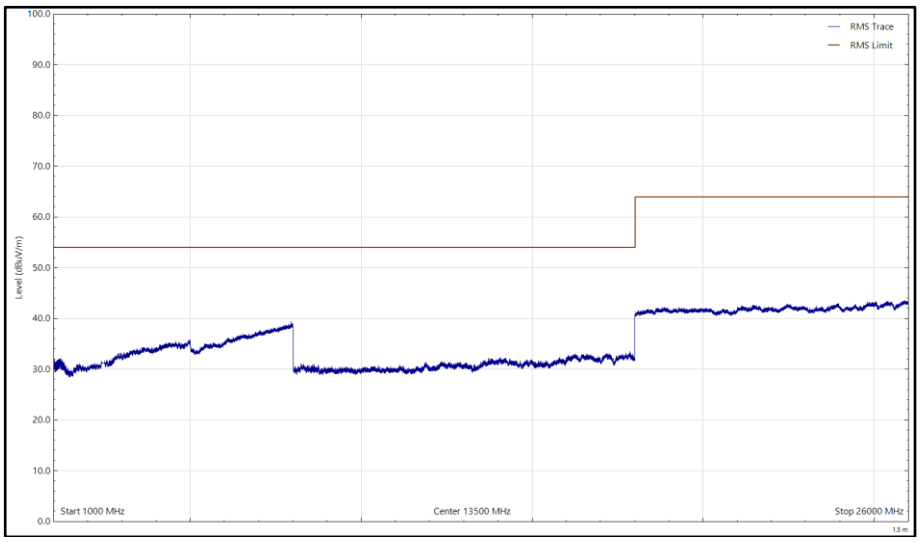

Figure 149 - 2440 MHz (CH17), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Horizontal (RMS)

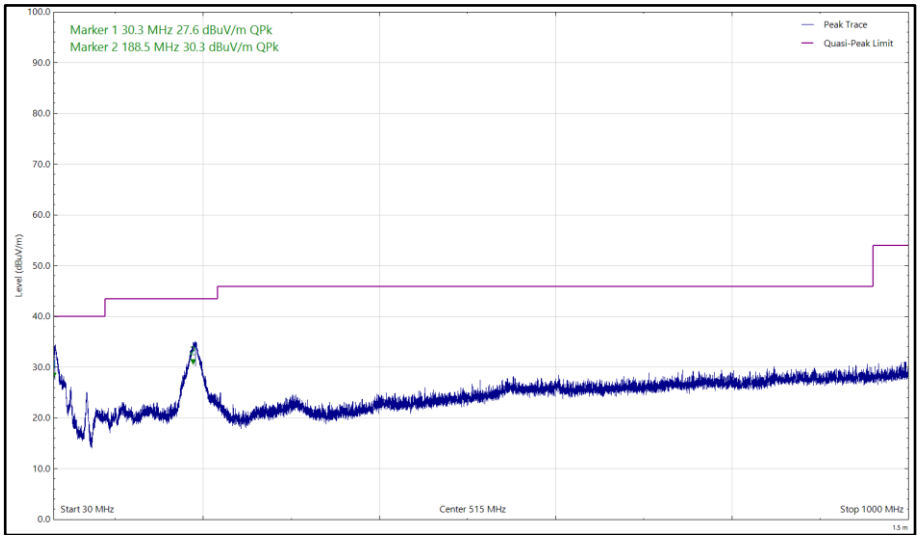

Figure 150 - 2440 MHz (CH17), LE1M, iPA, Core 0, 30 MHz to 1 GHz, Vertical (Peak)

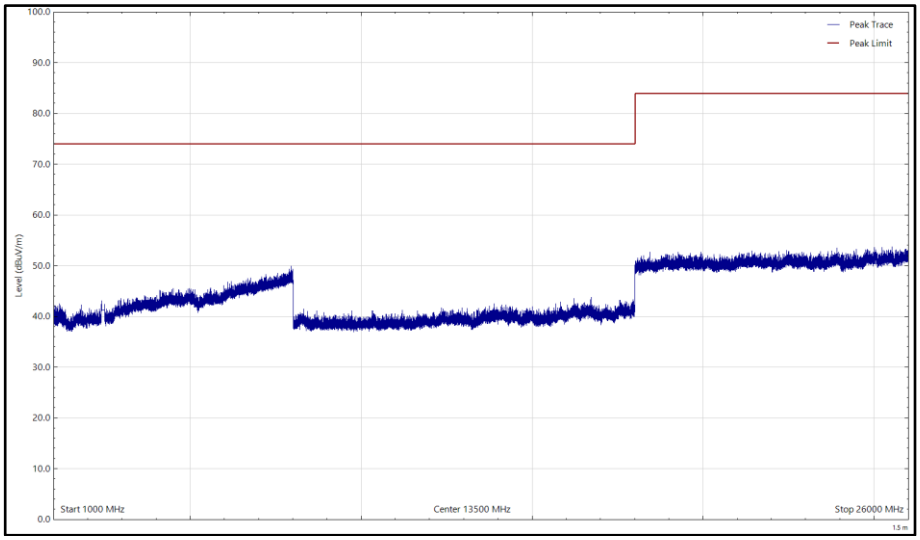

Figure 151 - 2440 MHz (CH17), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Vertical (Peak)

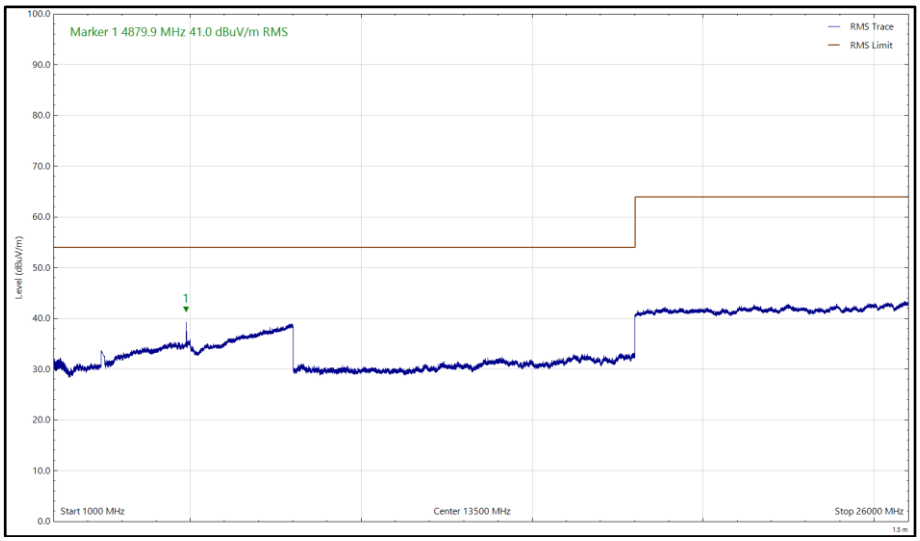

Figure 152 - 2440 MHz (CH17), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Vertical (RMS)

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4959.657	40.6	54.0	-13.4	RMS	37	312	Vertical

Table 107 - 2480 MHz (CH39), LE1M, iPA, Core 0, 1 GHz to 26 GHz

No other emissions found within 6 dB of the limit.

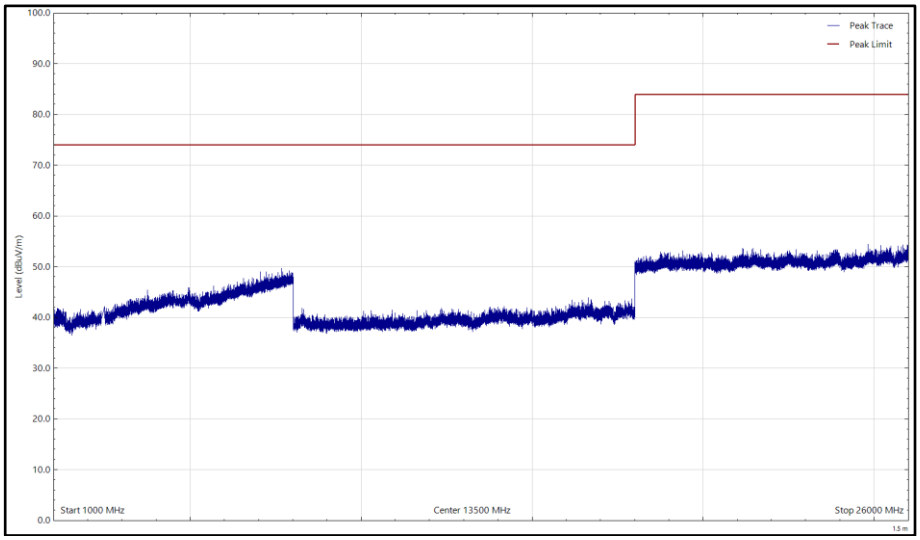

Figure 153 - 2480 MHz (CH39), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Horizontal (Peak)

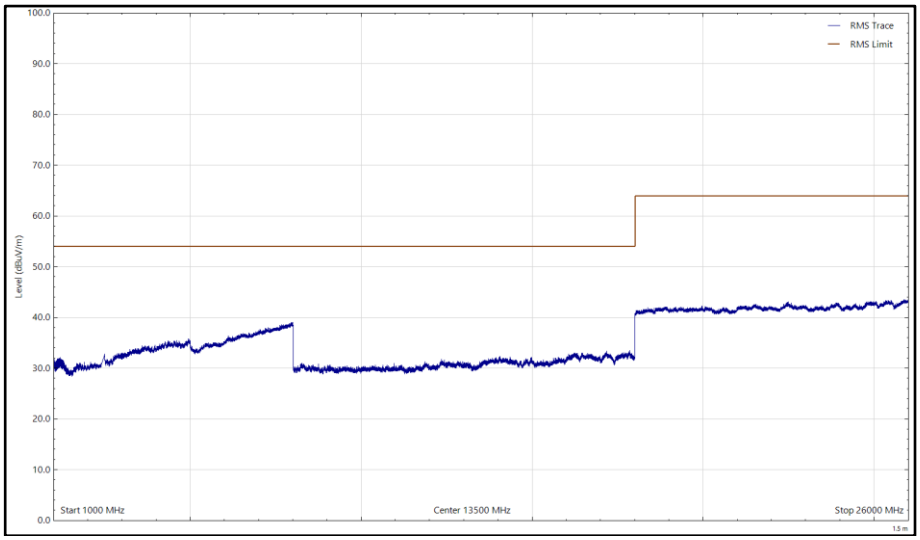

Figure 154 - 2480 MHz (CH39), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Horizontal (RMS)

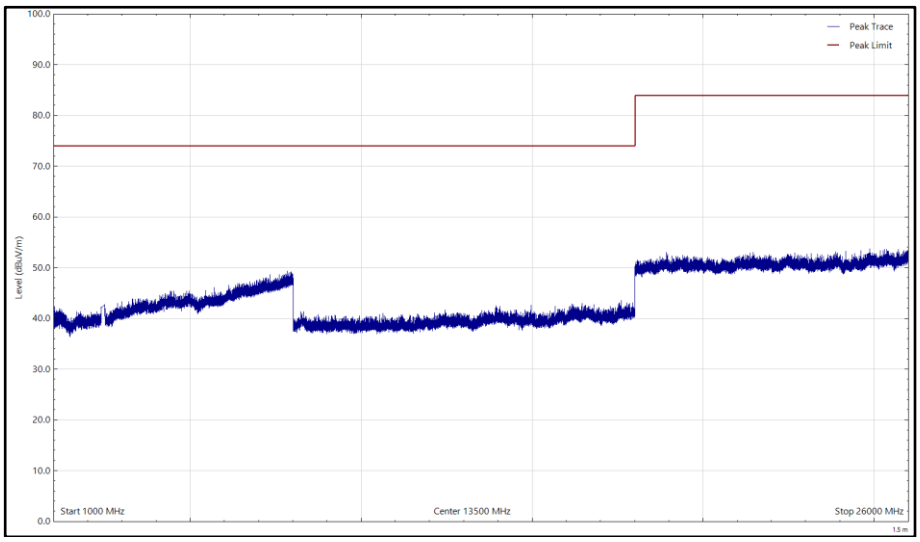

Figure 155 - 2480 MHz (CH39), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Vertical (Peak)

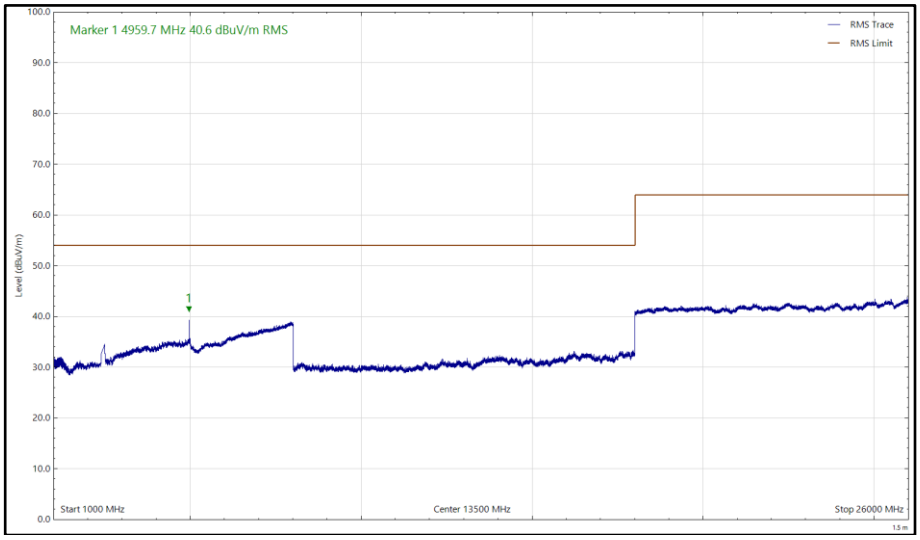

Figure 156 - 2480 MHz (CH39), LE1M, iPA, Core 0, 1 GHz to 26 GHz, Vertical (RMS)

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

Table 108 - 2402 MHz (CH0), LE1M, iPA, Core 1, 1 GHz to 26 GHz

*No emissions found within 6 dB of the limit.

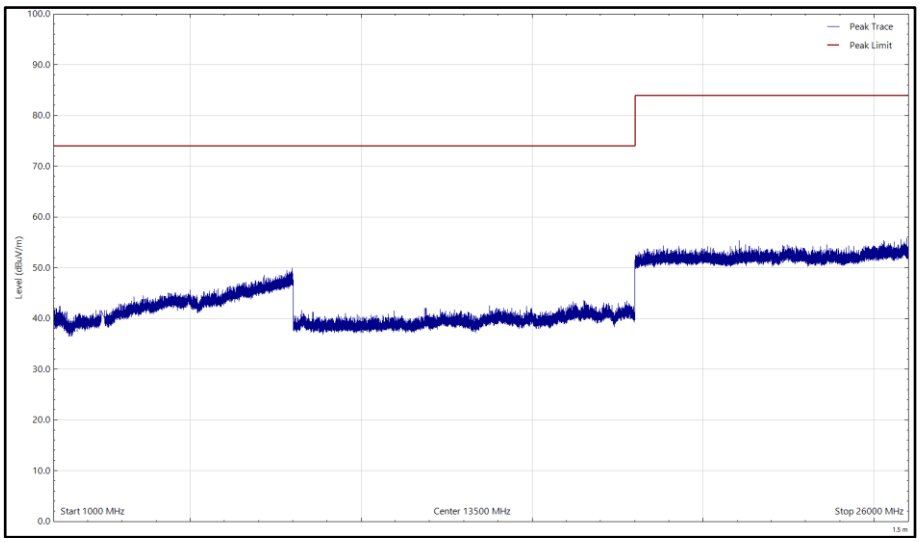

Figure 157 - 2402 MHz (CH0), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Horizontal (Peak)

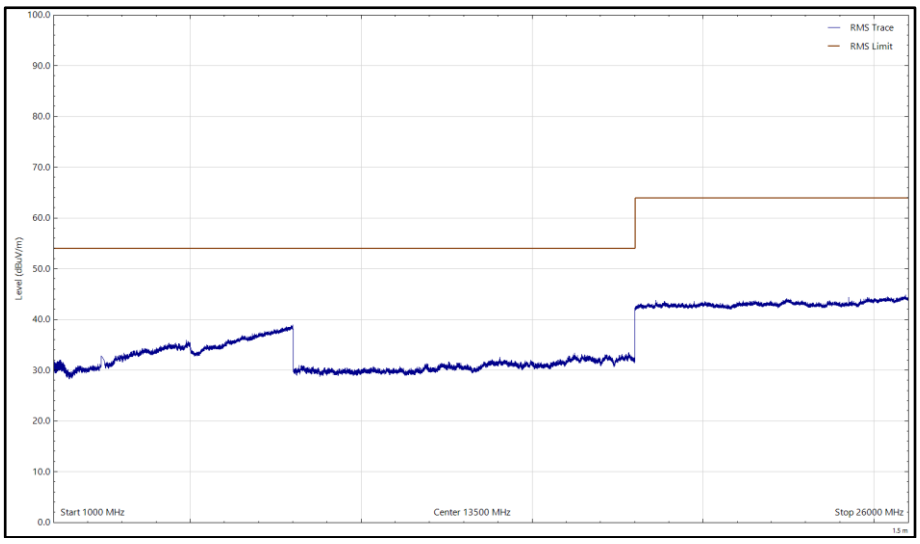

Figure 158 - 2402 MHz (CH0), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Horizontal (RMS)

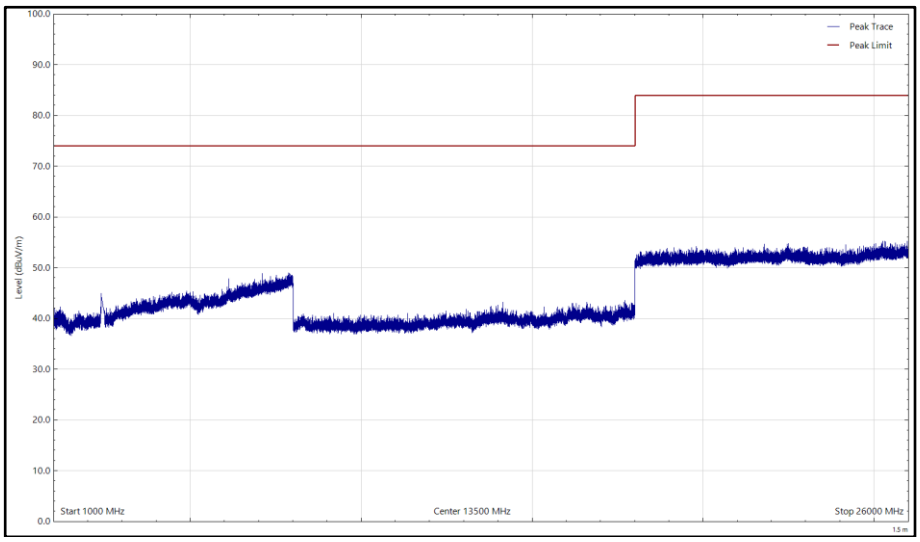

Figure 159 - 2402 MHz (CH0), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Vertical (Peak)

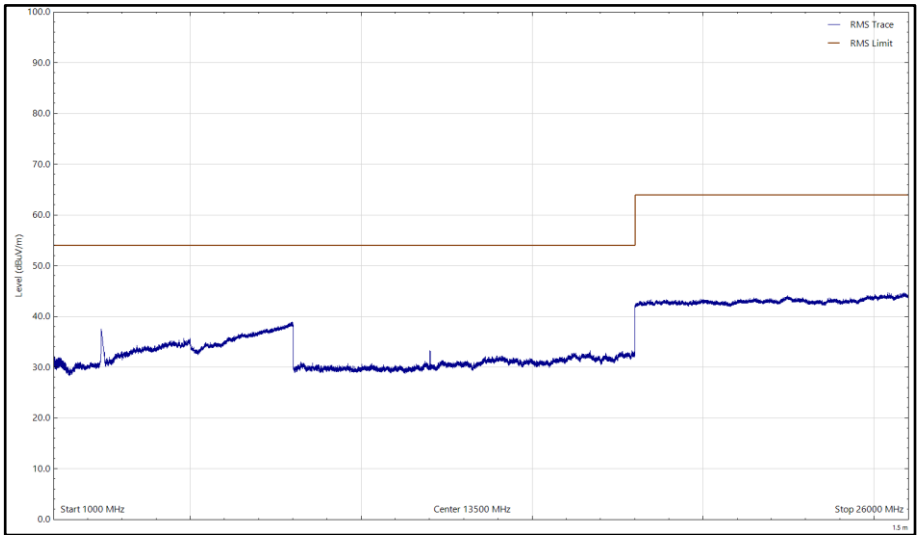

Figure 160 - 2402 MHz (CH0), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Vertical (RMS)

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
31.559	31.4	40.0	-8.6	Q-Peak	67	107	Vertical
68.177	32.4	40.0	-7.7	Q-Peak	299	106	Vertical
186.968	32.3	43.5	-11.2	Q-Peak	63	100	Vertical
192.157	31.1	43.5	-12.4	Q-Peak	315	101	Horizontal
291.517	35.3	46.0	-10.7	Q-Peak	207	107	Horizontal
300.841	32.2	46.0	-13.9	Q-Peak	316	100	Vertical
4879.801	40.2	54.0	-13.8	RMS	318	314	Vertical

Table 109 - 2440 MHz (CH17), LE1M, iPA, Core 1, 30 MHz to 26 GHz

No other emissions found within 6 dB of the limit.

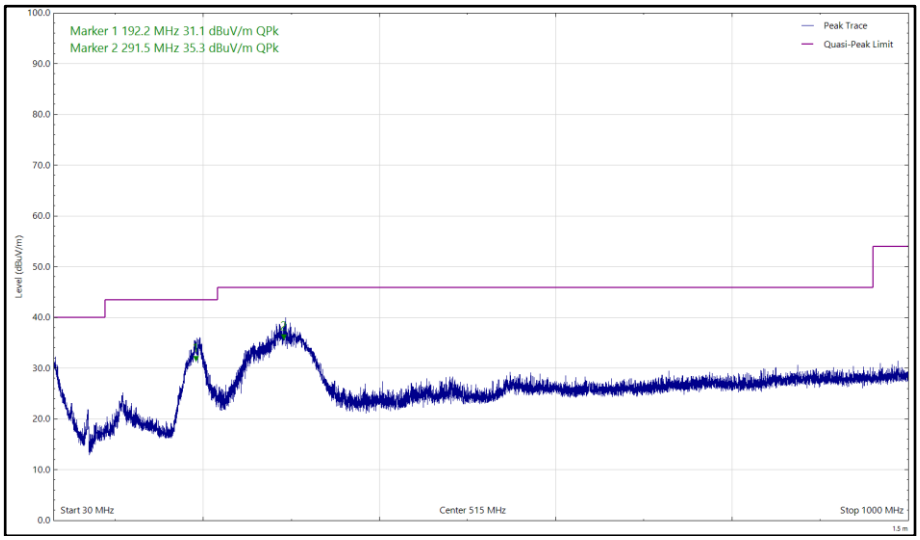

Figure 161 - 2440 MHz (CH17), LE1M, iPA, Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

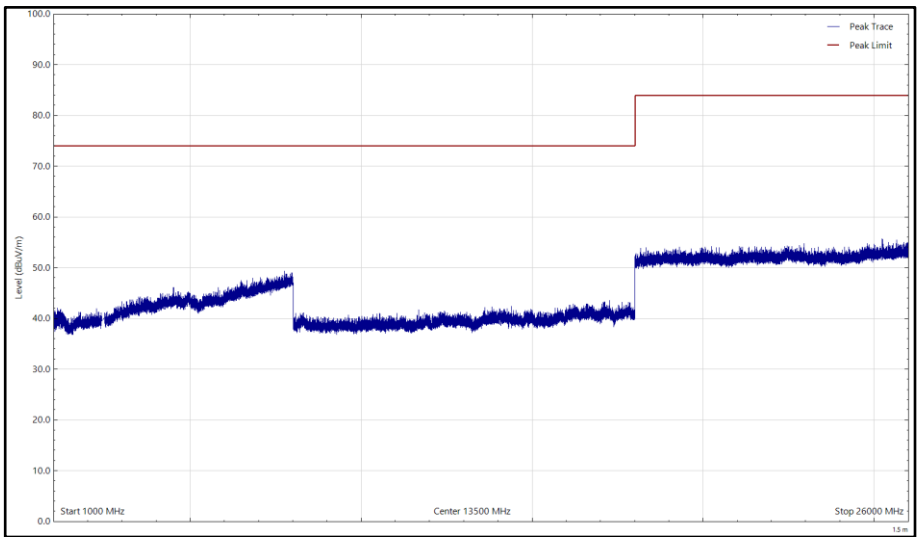

Figure 162 - 2440 MHz (CH17), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Horizontal (Peak)

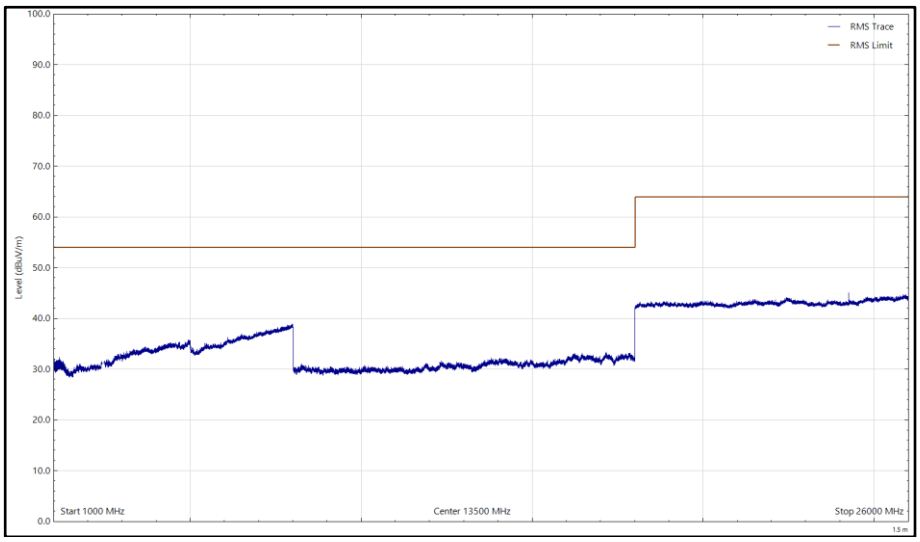

Figure 163 - 2440 MHz (CH17), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Horizontal (RMS)

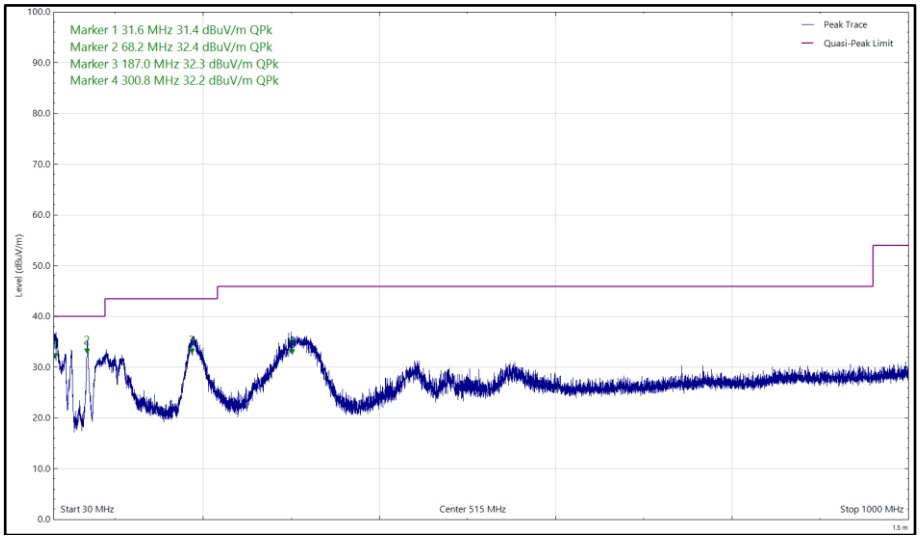

Figure 164 - 2440 MHz (CH17), LE1M, iPA, Core 1, 30 MHz to 1 GHz, Vertical (Peak)

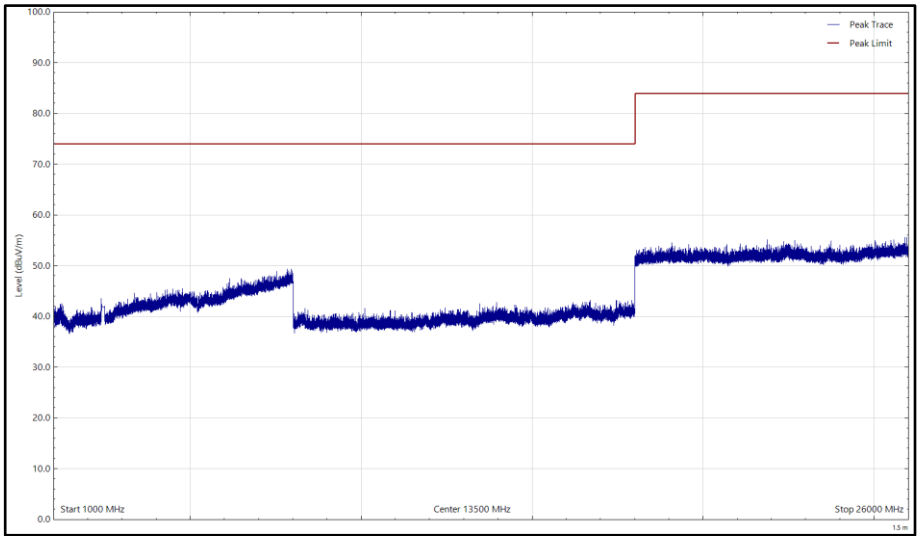

Figure 165 - 2440 MHz (CH17), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Vertical (Peak)

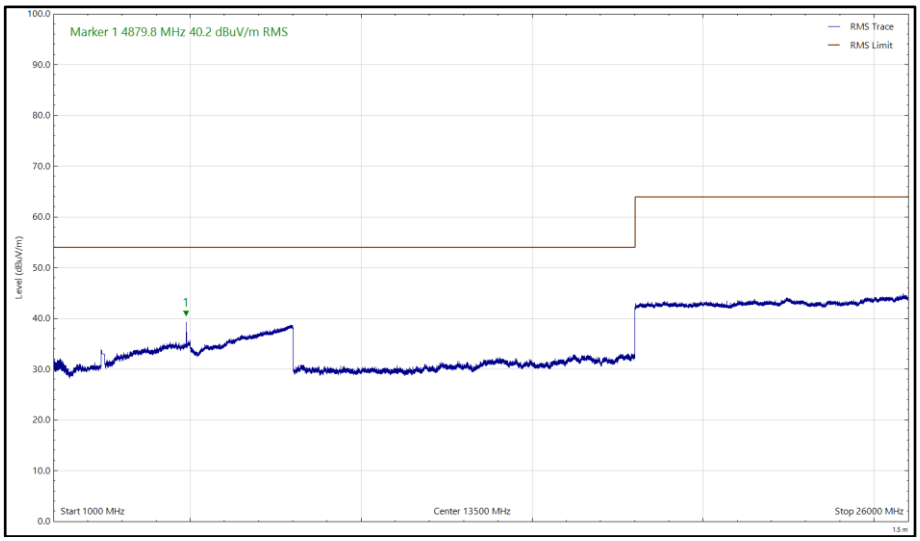

Figure 166 - 2440 MHz (CH17), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Vertical (RMS)

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4959.767	44.1	54.0	-9.9	RMS	318	298	Vertical

Table 110 - 2480 MHz (CH39), LE1M, iPA, Core 1, 1 GHz to 26 GHz

No other emissions found within 6 dB of the limit.

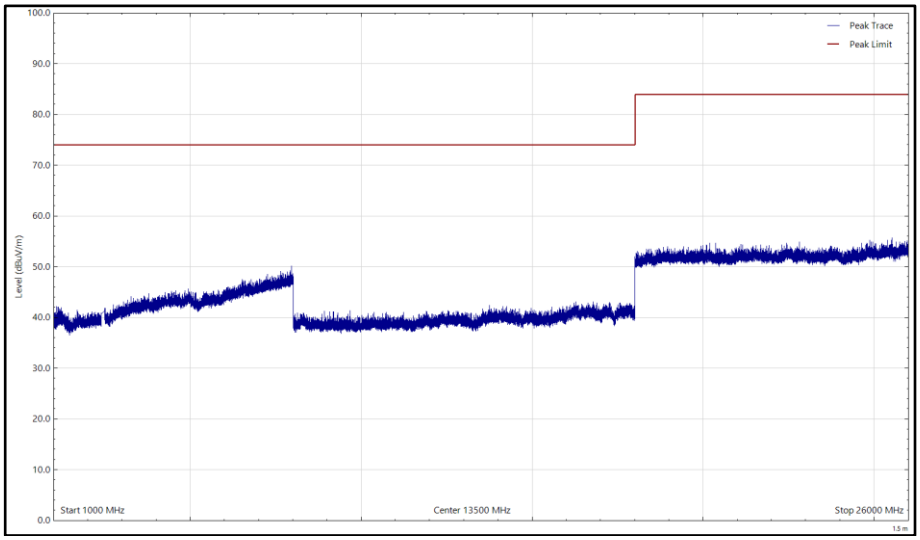

Figure 167 - 2480 MHz (CH39), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Horizontal (Peak)

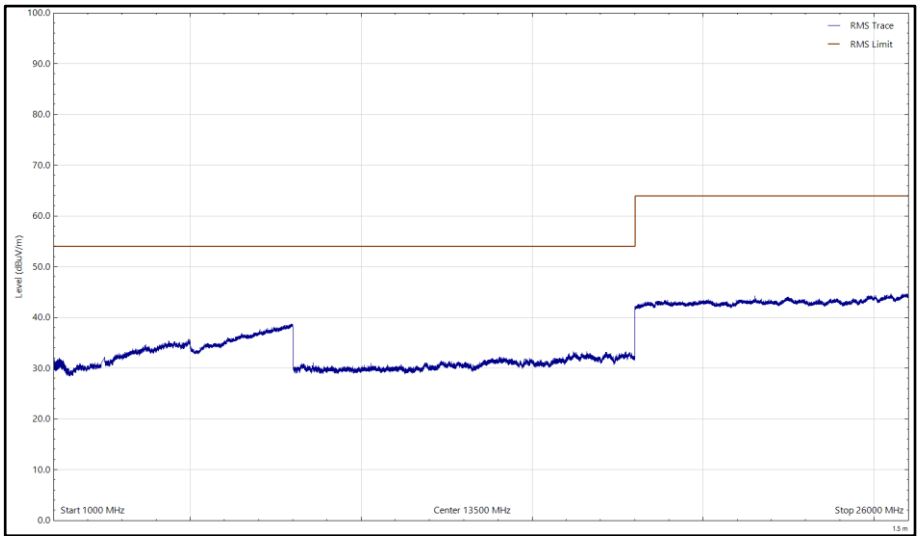

Figure 168 - 2480 MHz (CH39), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Horizontal (RMS)

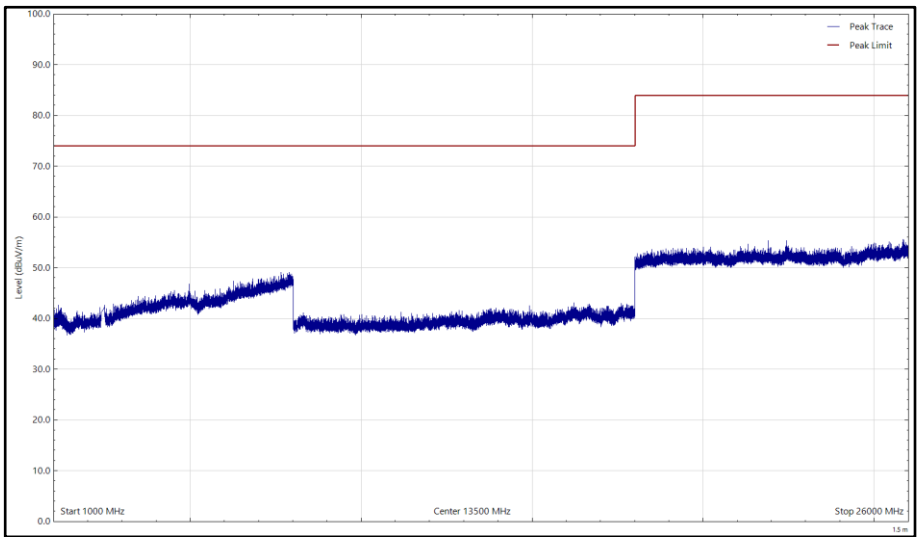

Figure 169 - 2480 MHz (CH39), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Vertical (Peak)

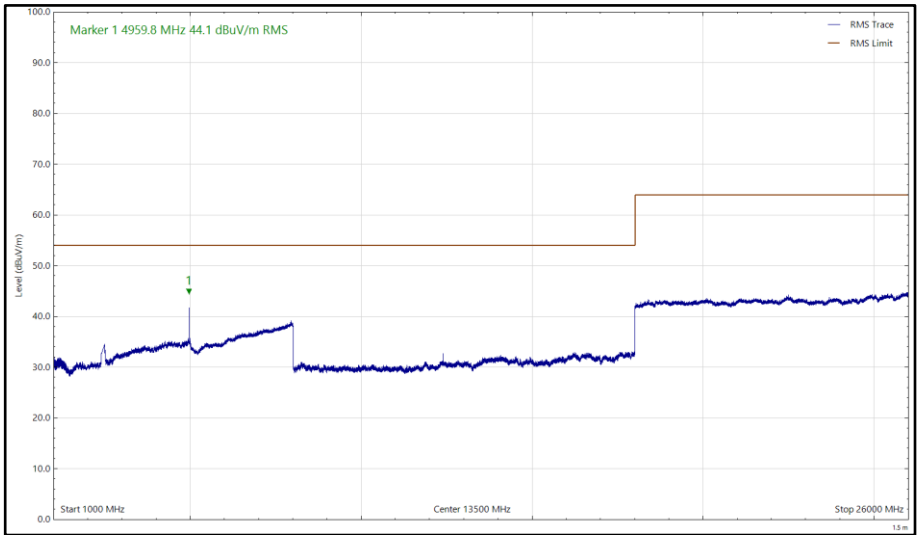

Figure 170 - 2480 MHz (CH39), LE1M, iPA, Core 1, 1 GHz to 26 GHz, Vertical (RMS)

ePA

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4803.791	39.9	54.0	-14.1	RMS	43	329	Vertical

Table 111 - 2402 MHz (CH0), LE1M, ePA, Core 0, 1 GHz to 26 GHz

No other emissions found within 6 dB of the limit.

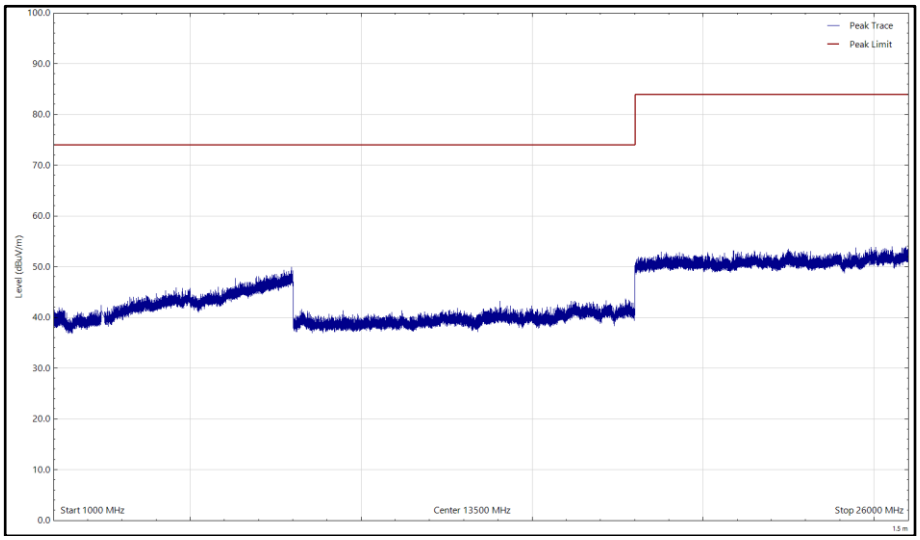

Figure 171 - 2402 MHz (CH0), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Horizontal (Peak)

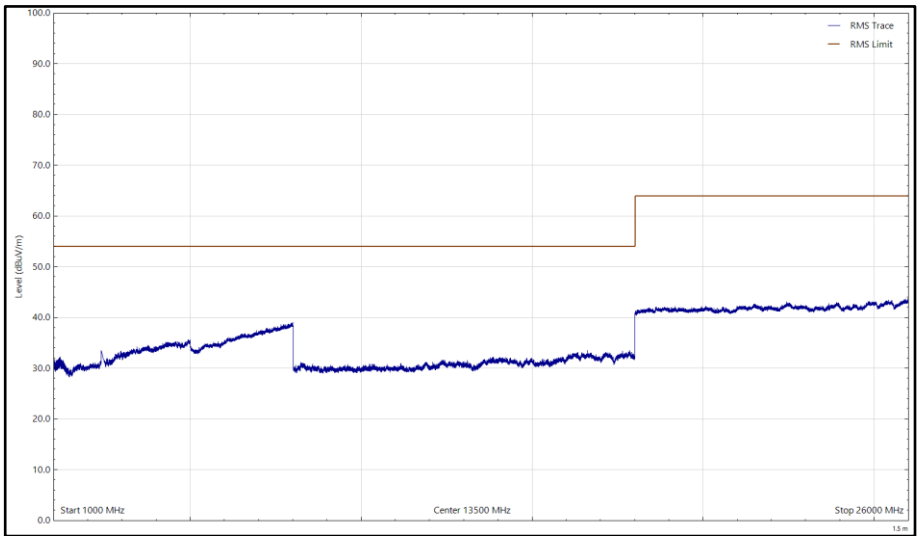

Figure 172 - 2402 MHz (CH0), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Horizontal (RMS)

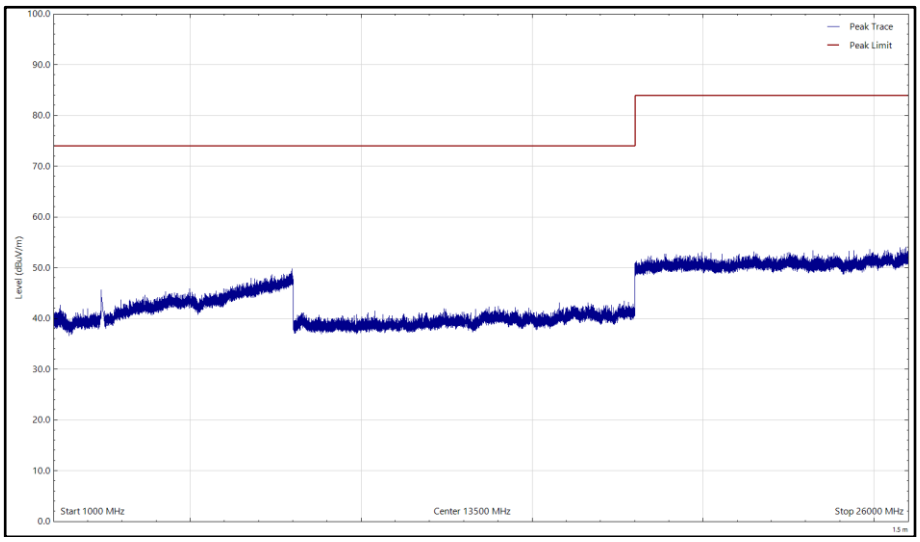

Figure 173 - 2402 MHz (CH0), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Vertical (Peak)

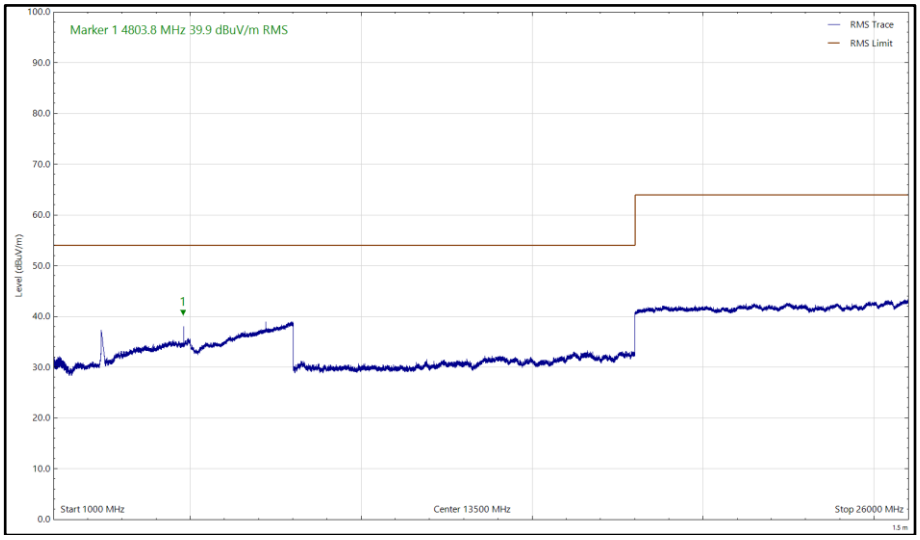

Figure 174 - 2402 MHz (CH0), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Vertical (RMS)

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
30.011	24.6	40.0	-15.4	Q-Peak	214	100	Vertical
30.843	23.2	40.0	-16.8	Q-Peak	307	100	Horizontal
68.550	28.7	40.0	-11.3	Q-Peak	289	101	Vertical
192.655	28.5	43.5	-15.0	Q-Peak	261	107	Horizontal
193.373	25.7	43.5	-17.8	Q-Peak	22	100	Vertical
303.387	27.2	46.0	-18.9	Q-Peak	173	110	Vertical
305.169	28.3	46.0	-17.7	Q-Peak	194	108	Horizontal
4879.851	40.8	54.0	-13.2	Peak	40	326	Vertical
7320.580	36.6	54.0	-17.4	RMS	112	100	Vertical

Table 112 - 2440 MHz (CH17), LE1M, ePA, Core 0, 30 MHz to 26 GHz

No other emissions found within 6 dB of the limit.

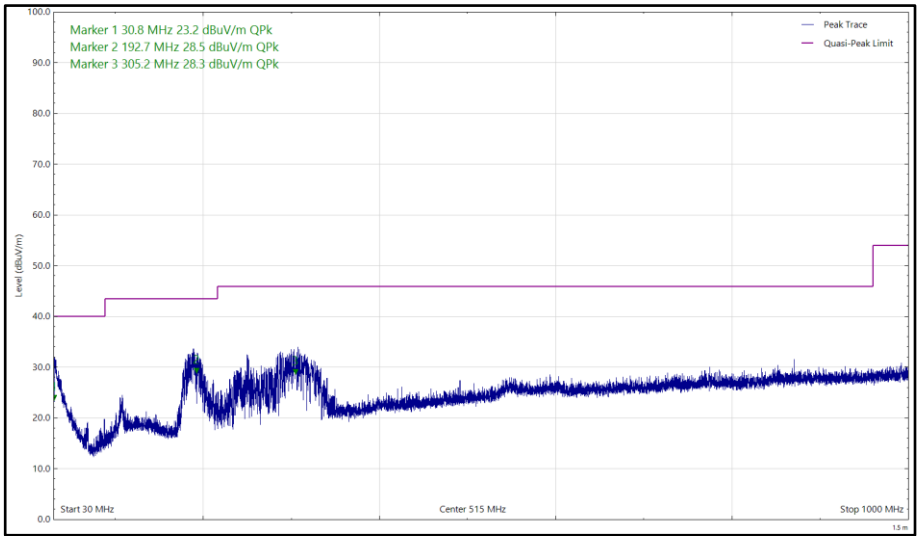

Figure 175 - 2440 MHz (CH17), LE1M, ePA, Core 0, 30 MHz to 1 GHz, Horizontal (Peak)

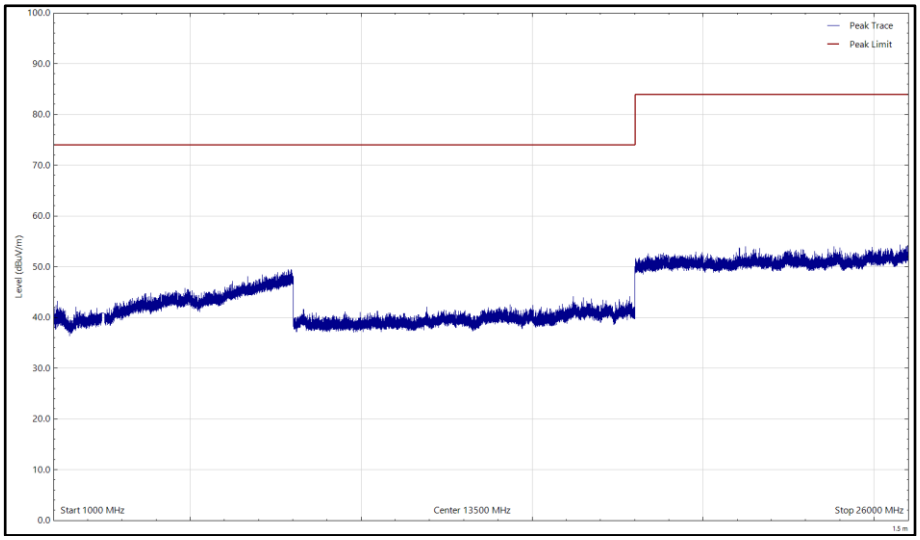

Figure 176 - 2440 MHz (CH17), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Horizontal (Peak)

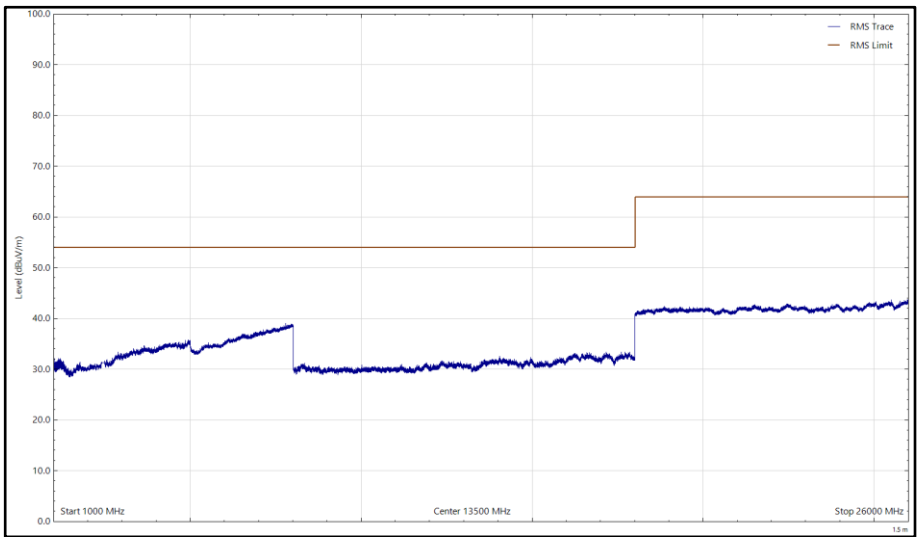

Figure 177 - 2440 MHz (CH17), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Horizontal (RMS)

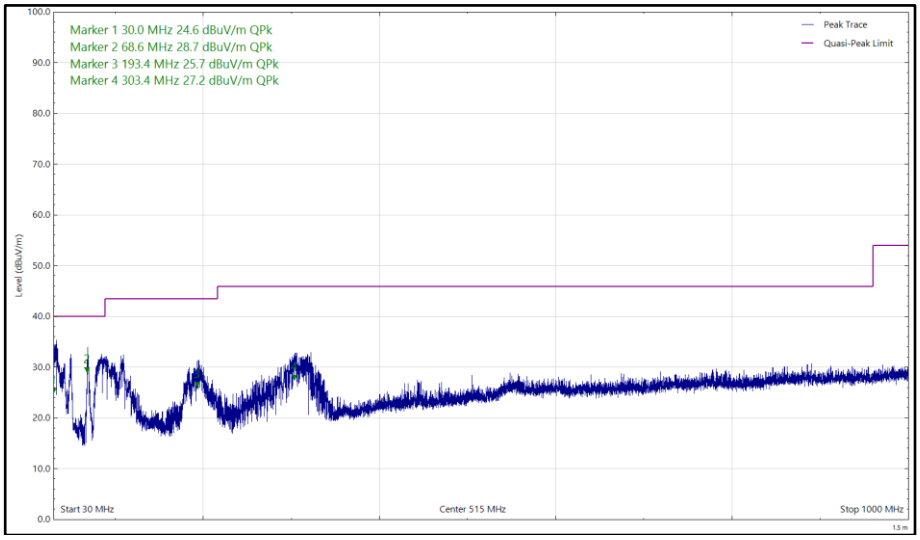

Figure 178 - 2440 MHz (CH17), LE1M, ePA, Core 0, 30 MHz to 1 GHz, Vertical (Peak)

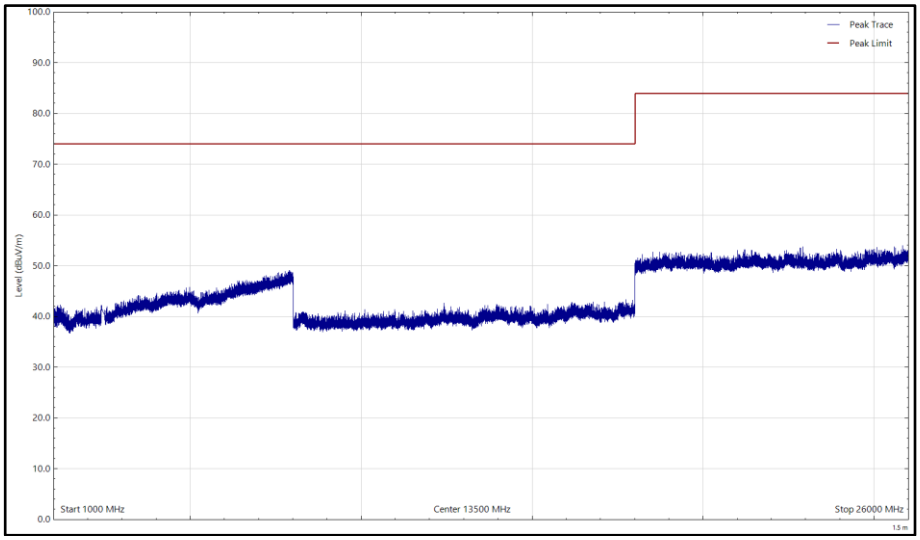

Figure 179 - 2440 MHz (CH17), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Vertical (Peak)

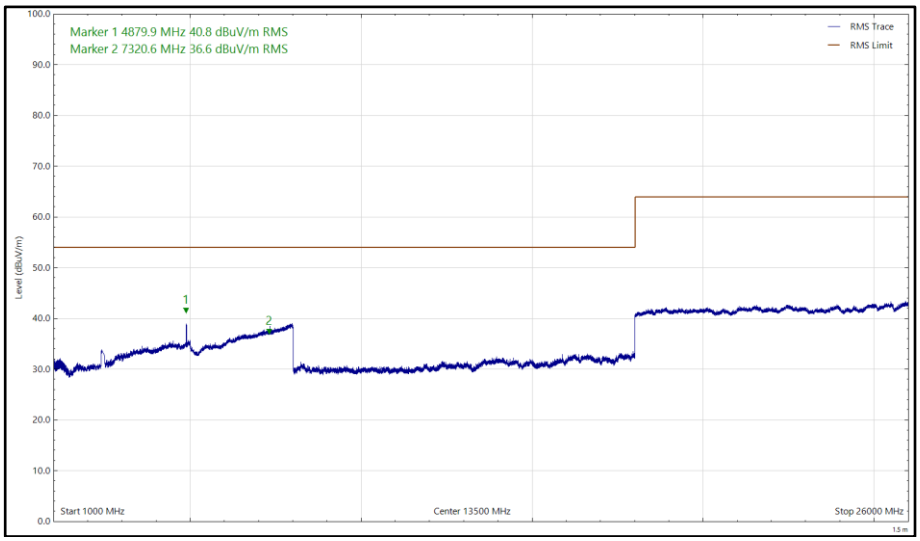

Figure 180 - 2440 MHz (CH17), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Vertical (RMS)

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4959.957	40.1	54.0	-13.9	RMS	41	332	Vertical

Table 113 - 2480 MHz (CH39), LE1M, ePA, Core 0, 1 GHz to 26 GHz

No other emissions found within 6 dB of the limit.

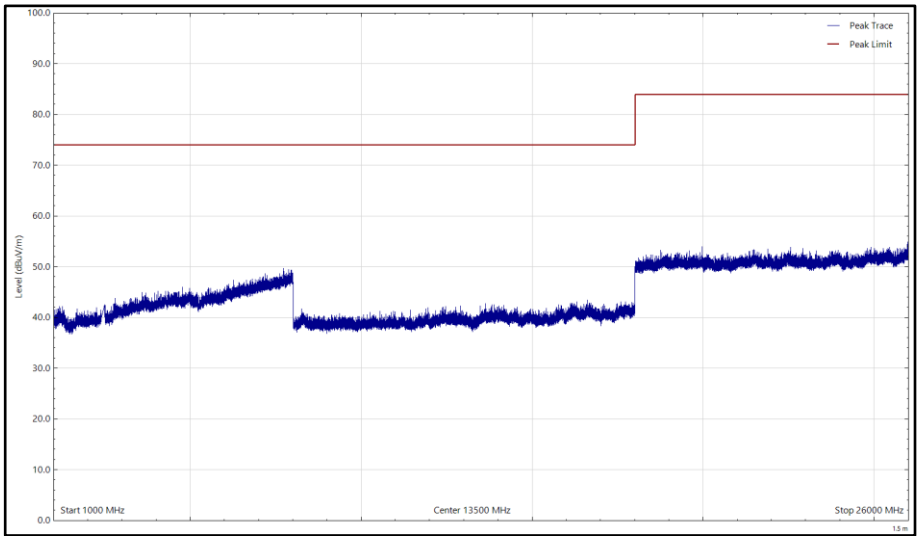

Figure 181 - 2480 MHz (CH39), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Horizontal (Peak)

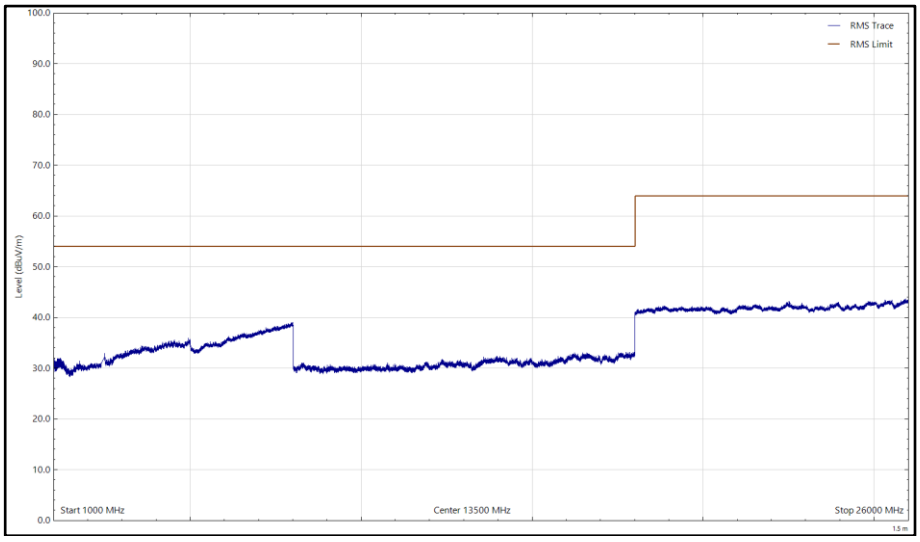

Figure 182 - 2480 MHz (CH39), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Horizontal (RMS)

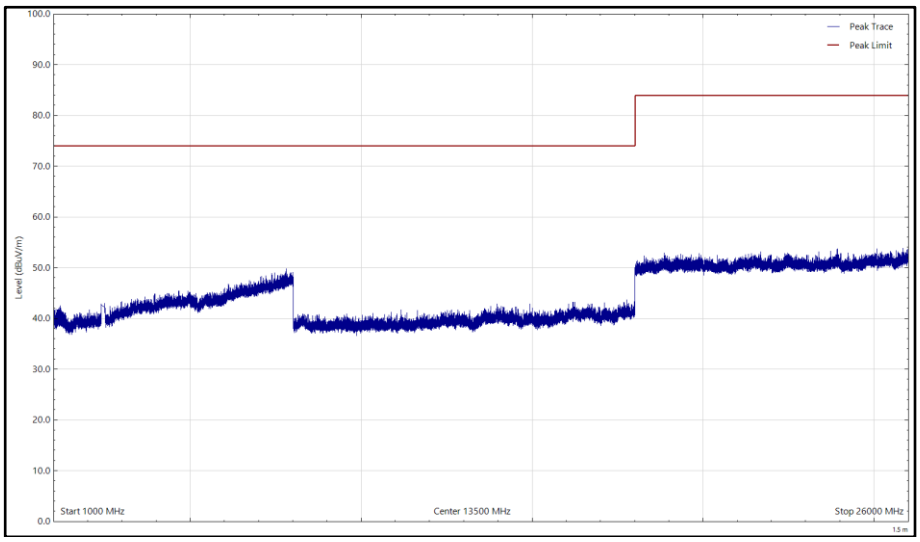

Figure 183 - 2480 MHz (CH39), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Vertical (Peak)

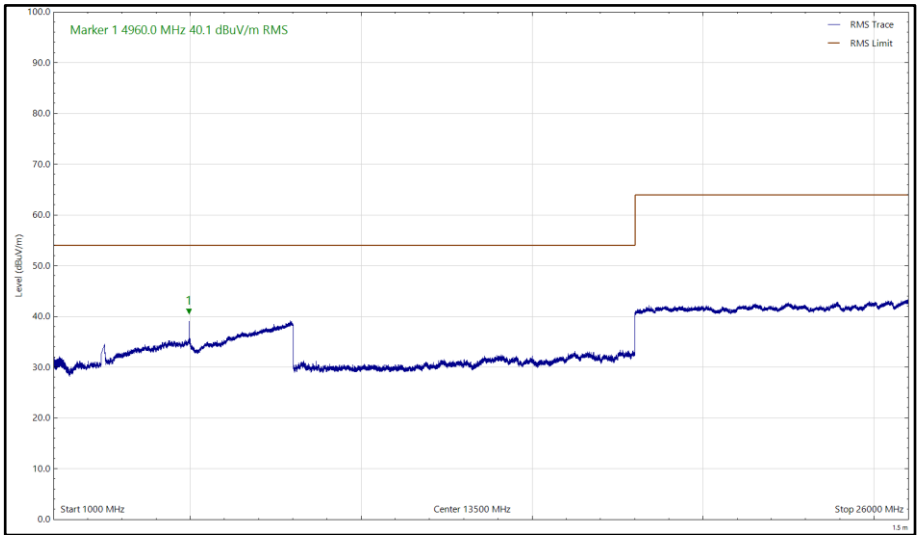

Figure 184 - 2480 MHz (CH39), LE1M, ePA, Core 0, 1 GHz to 26 GHz, Vertical (RMS)

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

Table 114 - 2402 MHz (CH0), LE1M, ePA, Core 1, 1 GHz to 26 GHz

*No emissions found within 6 dB of the limit.

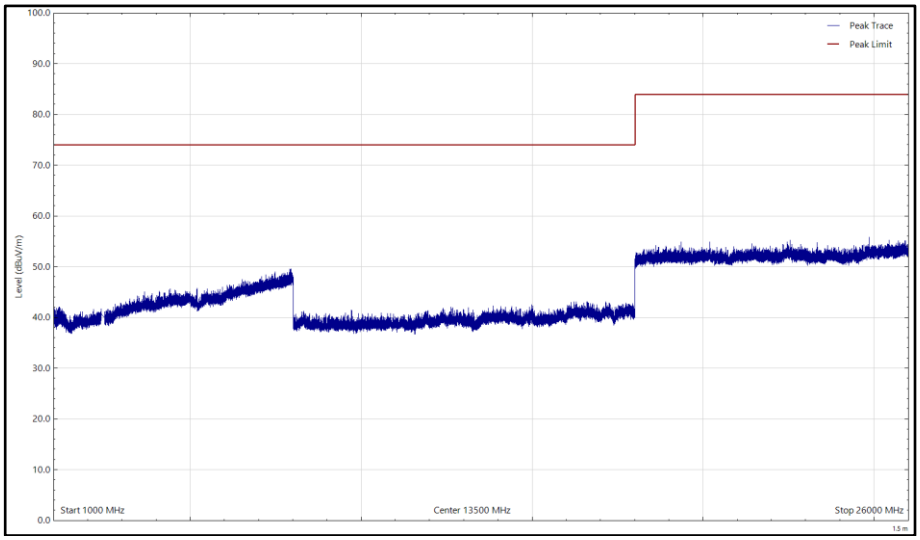

Figure 185 - 2402 MHz (CH0), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Horizontal (Peak)

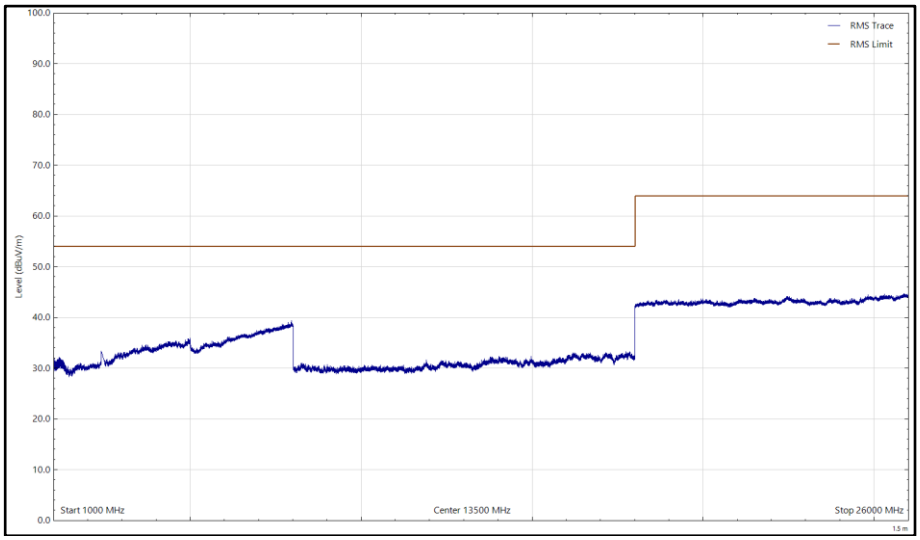

Figure 186 - 2402 MHz (CH0), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Horizontal (RMS)

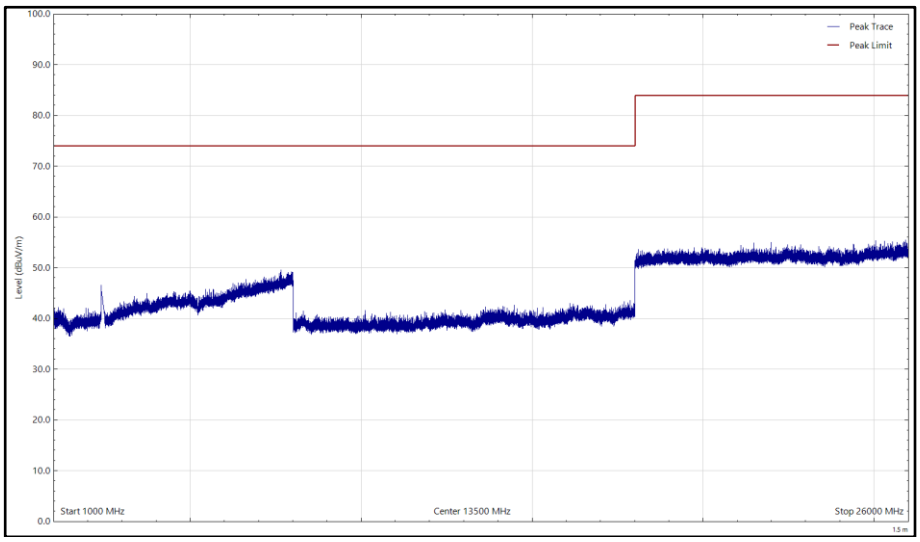

Figure 187 - 2402 MHz (CH0), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Vertical (Peak)

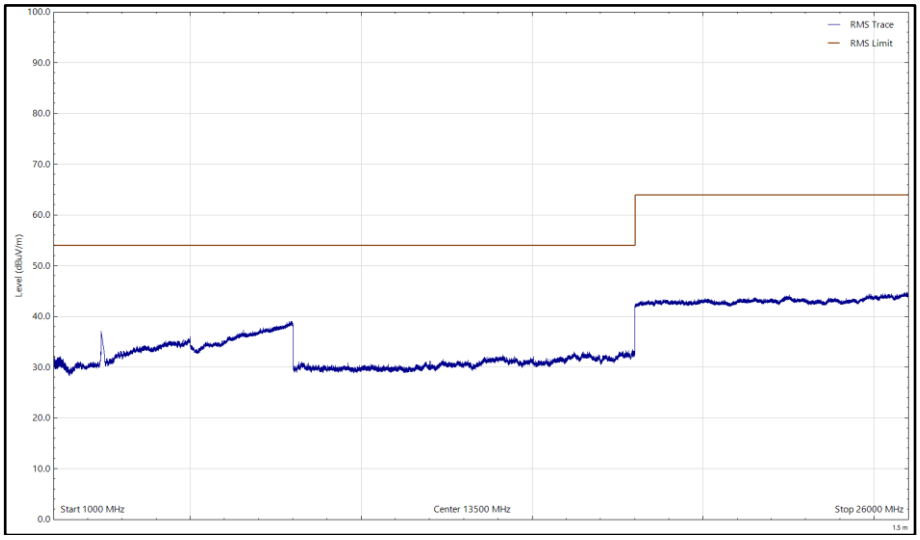

Figure 188 - 2402 MHz (CH0), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Vertical (RMS)

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
31.248	30.7	40.0	-9.3	Q-Peak	8	104	Vertical
32.369	31.6	40.0	-8.4	Q-Peak	66	100	Vertical
68.245	32.7	40.0	-7.3	Q-Peak	271	100	Vertical
186.977	31.6	43.5	-11.9	Q-Peak	72	100	Vertical
192.562	31.1	43.5	-12.4	Q-Peak	313	110	Horizontal
287.138	35.0	46.0	-11.0	Q-Peak	208	111	Horizontal
315.148	32.2	46.0	-13.8	Q-Peak	175	110	Vertical
4879.861	40.3	54.0	-13.7	RMS	311	295	Vertical

Table 115 - 2440 MHz (CH17), LE1M, ePA, Core 1, 30 MHz to 26 GHz

No other emissions found within 6 dB of the limit.

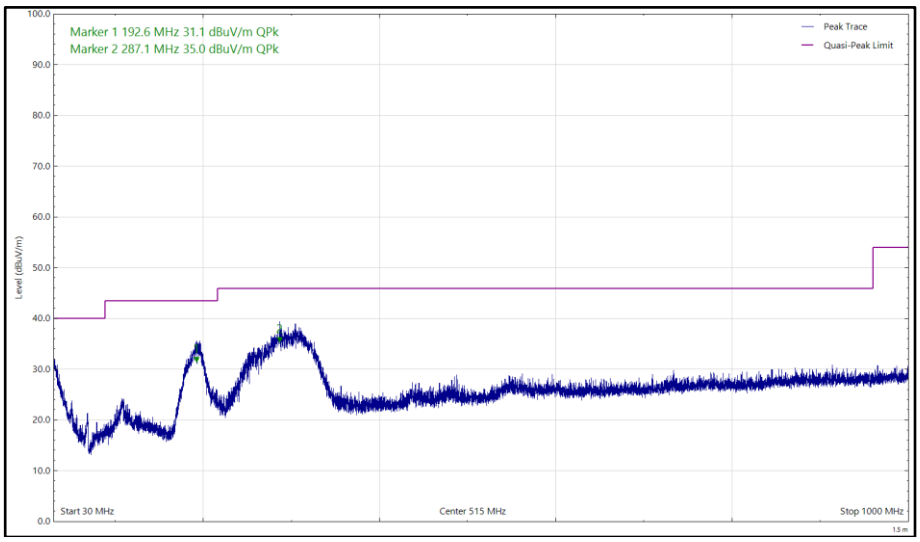

Figure 189 - 2440 MHz (CH17), LE1M, ePA, Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

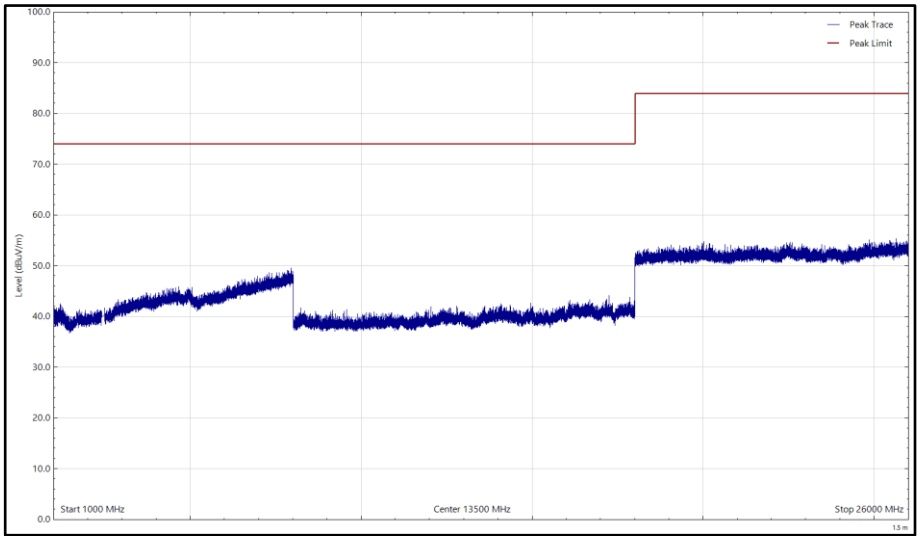

Figure 190 - 2440 MHz (CH17), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Horizontal (Peak)

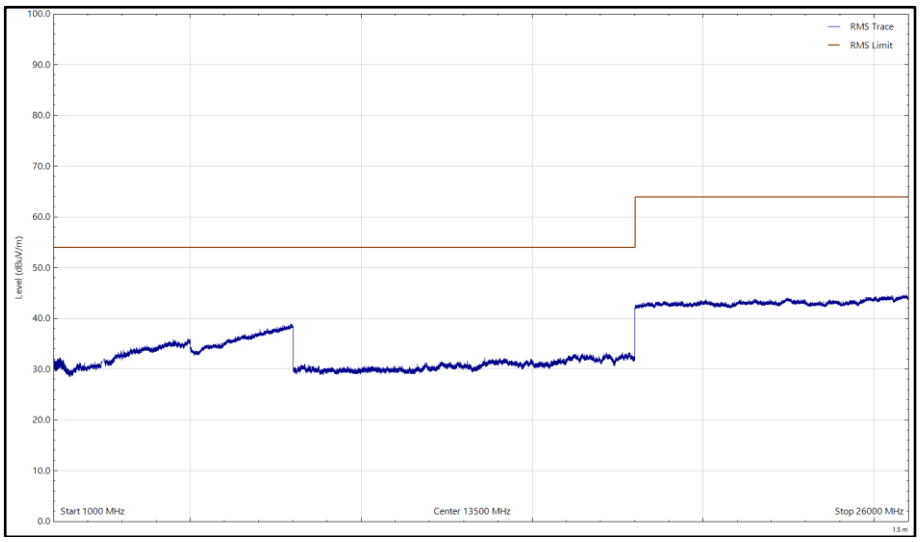

Figure 191 - 2440 MHz (CH17), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Horizontal (RMS)

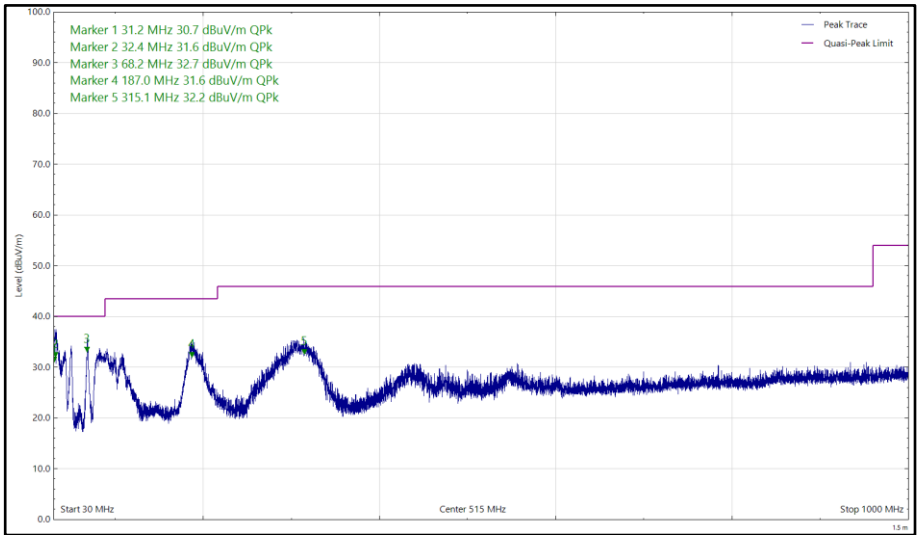

Figure 192 - 2440 MHz (CH17), LE1M, ePA, Core 1, 30 MHz to 1 GHz, Vertical (Peak)

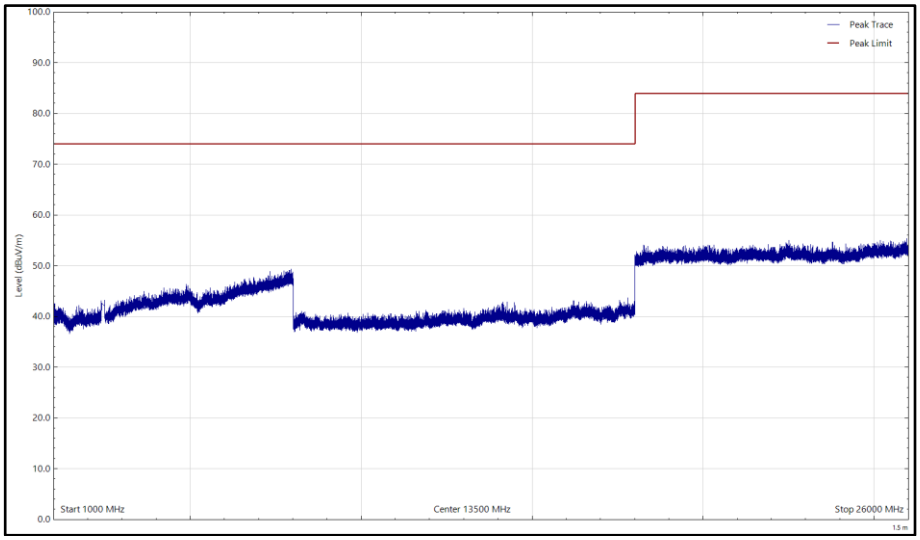

Figure 193 - 2440 MHz (CH17), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Vertical (Peak)

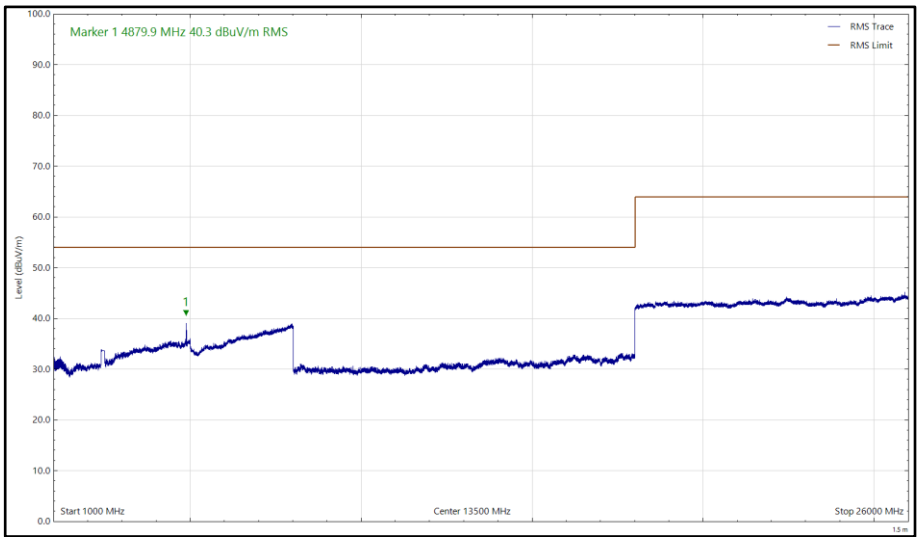

Figure 194 - 2440 MHz (CH17), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Vertical (RMS)

Frequency (MHz)	Level (dBuv/m)	Limit (dBuv/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4959.917	44.6	54.0	-9.4	RMS	316	300	Vertical

Table 116 - 2480 MHz (CH39), LE1M, ePA, Core 1, 1 GHz to 26 GHz

No other emissions found within 6 dB of the limit.

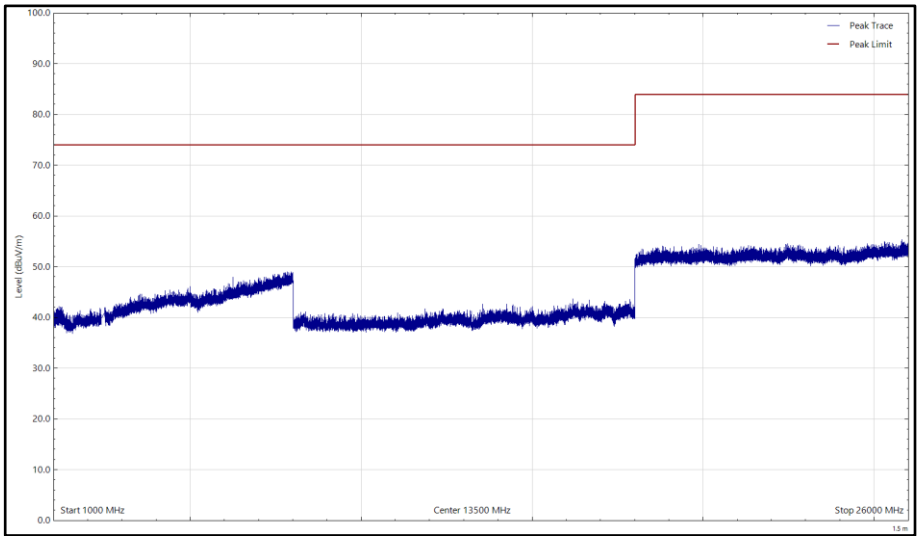

Figure 195 - 2480 MHz (CH39), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Horizontal (Peak)

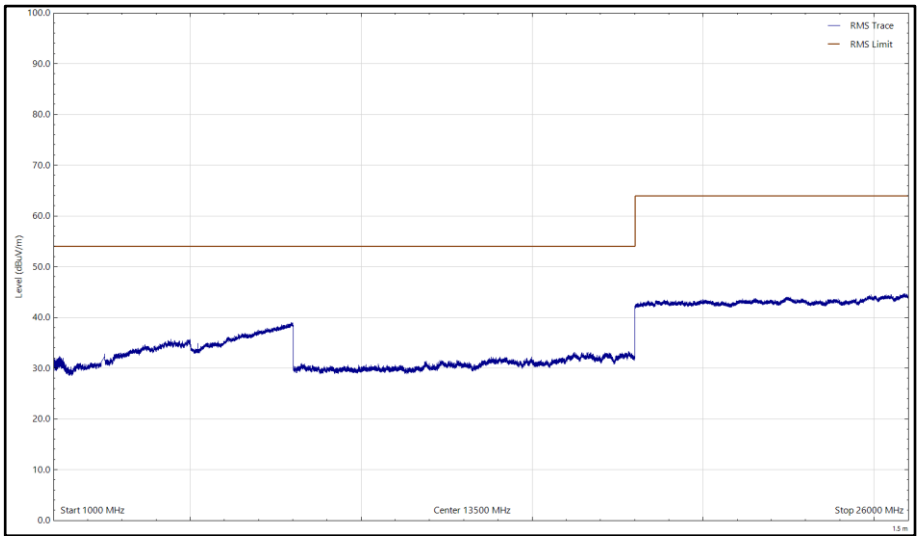

Figure 196 - 2480 MHz (CH39), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Horizontal (RMS)

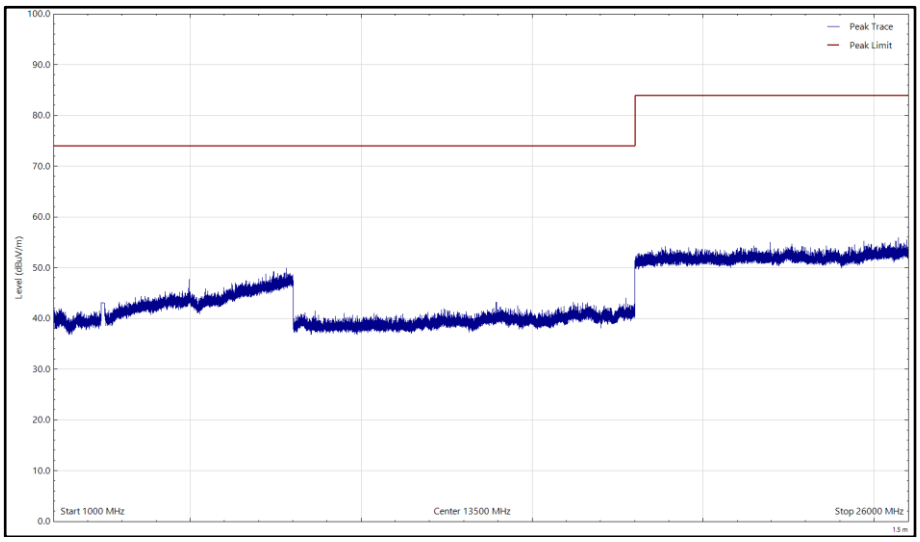

Figure 197 - 2480 MHz (CH39), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Vertical (Peak)

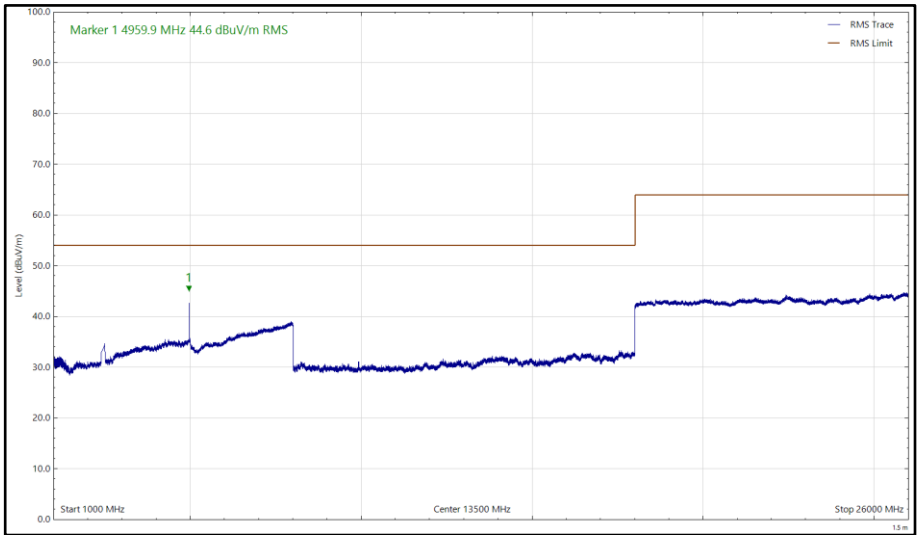

Figure 198 - 2480 MHz (CH39), LE1M, ePA, Core 1, 1 GHz to 26 GHz, Vertical (RMS)

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 5.5

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

2.5.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 11.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Power Supply Unit	Farnell	LB30-4	158	12	O/P Mon
Screened Room (11)	Rainford	Rainford	5136	36	01-Nov-2021
Antenna 18-40GHz (Double Ridge Guide)	Link Microtek Ltd	AM180HA-K-TU2	230	24	27-Jul-2022
Antenna 18-40GHz (Double Ridge Guide)	Q-Par Angus Ltd	QSH 180K	1511	24	02-Oct-2021
18GHz – 40GHz Pre-Amplifier	Phase One	PS04-0087	1534	12	18-Feb-2021
Multimeter	Iso-tech	IDM101	2419	12	28-Nov-2020
Antenna with permanent attenuator (Bilog)	Schaffner	CBL6143	2904	24	28-Nov-2021
8 - 18 GHz pre amp	Wright Technologies	PS06-0061/PS06-0060	4971	6	05-Nov-2020
Band Reject Filter - 2.425 GHz	Wainwright	WRCGV14-2390-2400-2450-2460-50SS	5066	12	01-Oct-2020
Band Reject Filter - 2.4585 GHz	Wainwright	WRCGV14-2423.5-2433.5-2483.5-2493.5-50SS	5068	12	01-Oct-2020
EMI Test Receiver	Rohde & Schwarz	ESW44	5084	12	28-Nov-2020
Cable (18 GHz)	Rosenberger	LU7-071-1000	5102	12	06-Oct-2020
Cable (18 GHz)	Rosenberger	LU7-071-1000	5103	12	06-Oct-2020
Cable (18 GHz)	Rosenberger	LU7-071-1000	5104	12	09-Dec-2020
Cable (18 GHz)	Rosenberger	LU7-071-1000	5105	12	06-Oct-2020
EmX Emissions Software	TUV SUD	EmX	5125	-	Software
Mast	Maturo	TAM 4.0-P	5158	-	TU
Mast and Turntable Controller	Maturo	Maturo NCD	5159	-	TU
Turntable	Maturo	TT 15WF	5160	-	TU
Horn Antenna (1-10GHz)	Schwarzbeck	BBHA 9120 B	5215	12	10-Mar-2021
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5216	12	10-Mar-2021
3 GHz High pass filter	Wainwright	WHKX12-2580-3000-18000-80SS	5220	12	25-Mar-2021
Pre-Amp 1 - 26.5 GHz	Agilent Technologies	8449B	5445	12	06-May-2021
Thermo-Hygro-Barometer	PCE Instruments	PCE-THB-40	5475	12	17-Mar-2021
Attenuator 5W 10dB DC-18GHz	Aaren	AT40A-4041-D18-10	5494	12	14-Apr-2021
1m K-Type Cable	Junkosha	MWX241-01000KMSKMS/A	5512	12	03-Apr-2021
2m SMA Cable	Junkosha	MWX221-02000AMSAMS/A	5518	12	01-Apr-2021

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
8m N Type Cable	Junkosha	MWX221-08000NMSNMS/B	5522	12	24-Mar-2021
2m K Type Cable	Junkosha	MWX241-02000KMSKMS/A	5524	12	03-Apr-2021
1200 MHz Low Pass Filter (02)	Mini-Circuits	VLF-1200+	5560	12	23-May-2021
8 - 18 GHz Amplifier	Wright Technologies	APS06-0061	5595	12	25-Aug-2021

Table 117

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

2.6 Power Spectral Density

2.6.1 Specification Reference

FCC 47 CFR Part 15C, Clause 15.247 (e)
ISED RSS-247, Clause 5.2
ISED RSS-GEN, Clause 6.12

2.6.2 Equipment Under Test and Modification State

A2337, S/N: C02D1009Q9MQ - Modification State 0

2.6.3 Date of Test

15-September-2020

2.6.4 Test Method

This test was performed in accordance with ANSI C63.10, clause 11.10.5.

For beamforming configurations, MIMO output port summing was performed in accordance with KDB 662911 D01, E)2)b.

2.6.5 Environmental Conditions

Ambient Temperature	22.9 - 25.2 °C
Relative Humidity	52.9 - 57.8 %

2.6.6 Test Results

2.4 GHz Bluetooth Low Energy (DTS)

iPA

Antenna Port Configuration: SISO

Modulation: π/4 DQPSK (HDR4)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)
		Core 1
2404	51.0	4.9
2441	51.0	4.8
2478	30.0	2.0

Table 118 - Maximum Power Spectral Density Results

Modulation: π/4 DQPSK (HDR8)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)
		Core 1
2404	100.0	4.9
2441	100.0	4.8
2478	100.0	4.9

Table 119 - Maximum Power Spectral Density Results

Modulation: GFSK (LE 1M)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)
		Core 1
2402	10.0	2.5
2440	10.0	2.6
2480	10.0	2.6

Table 120 - Maximum Power Spectral Density Results

Modulation: GFSK (LE 2M)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)
		Core 1
2402	10.0	0.5
2440	10.0	0.5
2480	10.0	0.7

Table 121 - Maximum Power Spectral Density Results

Antenna Port Configuration: Beamforming

Modulation: π/4 DQPSK (HDR4)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)		
		Core 1	Core 0	∑
2404	3.0	-11.0	-10.9	-7.9
2441	3.0	-11.1	-10.8	-7.9
2478	3.0	-10.9	-11.0	-7.9

Table 122 - Maximum Power Spectral Density Results

Modulation: π/4 DQPSK (HDR8)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)		
		Core 1	Core 0	∑
2404	3.0	-13.1	-12.1	-9.6
2441	3.0	-12.0	-12.0	-9.0
2478	3.0	-11.9	-12.5	-9.2

Table 123 - Maximum Power Spectral Density Results

Modulation: GFSK (LE 1M)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)		
		Core 1	Core 0	∑
2402	3.0	-2.7	-2.9	0.2
2440	3.0	-2.7	-3.1	0.1
2480	3.0	-2.5	-3.2	0.2

Table 124 - Maximum Power Spectral Density Results

Modulation: GFSK (LE 2M)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)		
		Core 1	Core 0	∑
2402	3.0	-4.8	-4.9	-1.8
2440	3.0	-4.8	-5.2	-2.0
2480	3.0	-5.1	-5.6	-2.3

Table 125 - Maximum Power Spectral Density Results

ePA

Antenna Port Configuration: SISO

Modulation: π/4 DQPSK (HDR4)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)
		Core 1
2404	10.0	4.3
2441	10.0	4.2
2478	10.0	4.3

Table 126 - Maximum Power Spectral Density Results

Modulation: π/4 DQPSK (HDR8)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)
		Core 1
2404	10.0	4.4
2441	10.0	4.3
2478	10.0	4.4

Table 127 - Maximum Power Spectral Density Results

Modulation: GFSK (LE 1M)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)
		Core 1
2402	10.0	2.4
2440	10.0	2.4
2480	10.0	2.6

Table 128 - Maximum Power Spectral Density Results

Modulation: GFSK (LE 2M)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)
		Core 1
2402	10.0	0.5
2440	10.0	0.5
2480	10.0	0.4

Table 129 - Maximum Power Spectral Density Results

Antenna Port Configuration: Beamforming

Modulation: π/4 DQPSK (HDR4)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)		
		Core 1	Core 0	∑
2404	3.0	-3.9	-4.0	-0.9
2441	3.0	-3.8	-4.0	-0.9
2478	3.0	-3.8	-4.2	-1.0

Table 130 - Maximum Power Spectral Density Results

Modulation: π/4 DQPSK (HDR8)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)		
		Core 1	Core 0	∑
2404	3.0	-3.3	-3.5	-0.4
2441	3.0	-3.4	-3.6	-0.5
2478	3.0	-3.4	-3.8	-0.6

Table 131 - Maximum Power Spectral Density Results

Modulation: GFSK (LE 1M)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)		
		Core 1	Core 0	∑
2402	3.0	-2.6	-2.9	0.3
2440	3.0	-2.7	-3.1	0.1
2480	3.0	-2.4	-3.2	0.2

Table 132 - Maximum Power Spectral Density Results

Modulation: GFSK (LE 2M)

Test Frequency (MHz)	RBW (kHz)	PSD (dBm)		
		Core 1	Core 0	∑
2402	3.0	-5.2	-5.2	-2.2
2440	3.0	-5.2	-5.5	-2.3
2480	3.0	-5.0	-5.6	-2.3

Table 133 - Maximum Power Spectral Density Results

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

The power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

ISED RSS-247, Limit Clause 5.2(b)

The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission

2.6.7 Test Location and Test Equipment Used

This test was carried out in RF Laboratory 1.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Due
Rubidium Standard	Rohde & Schwarz	XSRM	1316	6	08-Nov-2020
Multimeter	Iso-tech	IDM101	2424	12	12-Dec-2020
Hygrometer	Rotronic	I-1000	3220	12	25-Sep-2020
Frequency Standard	Spectracom	SecureSync 1200-0408-0601	4393	6	08-Nov-2020
AC Programmable Power Supply	iTech	IT7324	5225	-	O/P Mon
MXA Signal Analyser	Keysight Technologies	N9020B	5528	24	04-Mar-2022
Signal Commissioning Unit	TUV SUD	SCU001	5546	12	15-Apr-2021

Table 134

O/P Mon – Output Monitored using calibrated equipment

3 Measurement Uncertainty

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

Test Name	Measurement Uncertainty
Maximum Conducted Output Power	± 3.2 dB
Power Spectral Density	± 3.2 dB
Emission Bandwidth	± 25.354 kHz
Authorised Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Restricted 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 135

Measurement Uncertainty Decision Rule

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115: 2007, clause 4.4.3 and 4.5.1.