



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

Table 87 - 2402 MHz (CH0), 2DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz

*No emissions found within 10 dB of the limit.

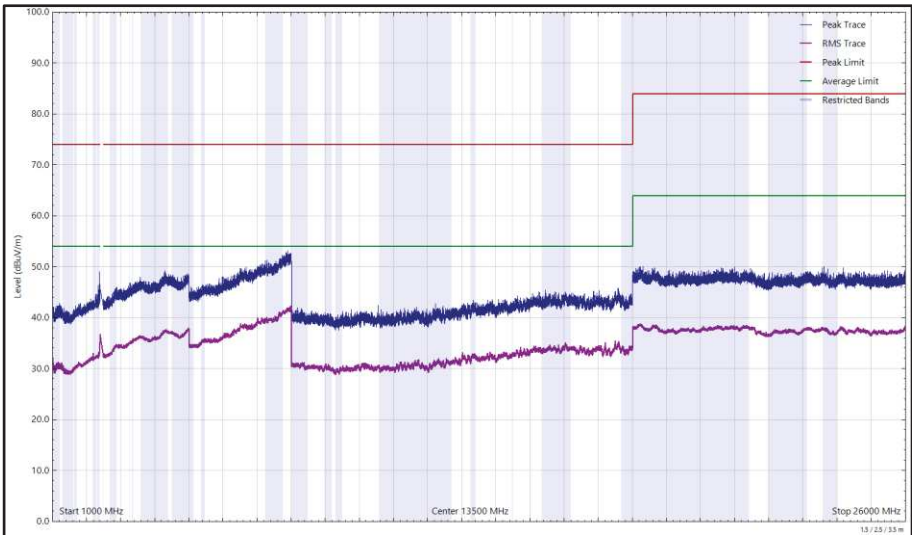


Figure 126 - 2402 MHz (CH0), 2DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

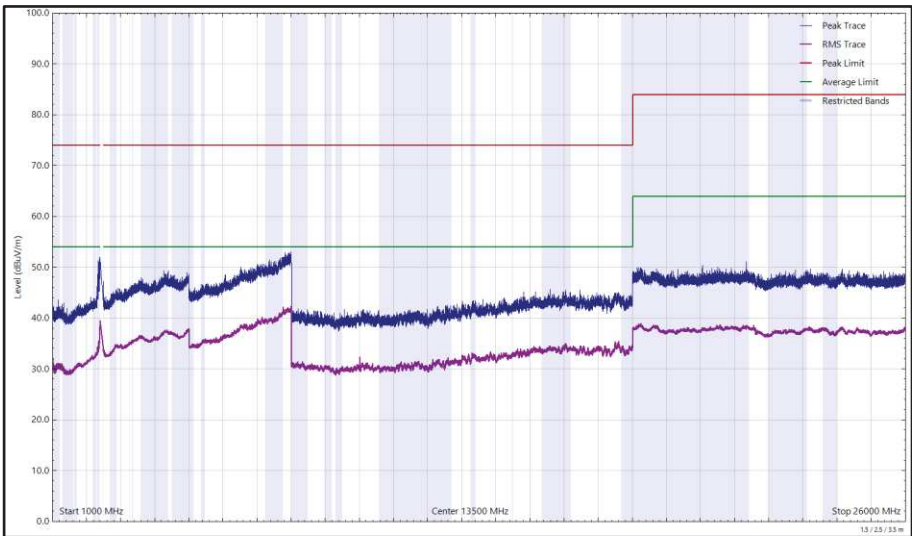


Figure 127 - 2402 MHz (CH0), 2DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



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

Table 88 - 2480 MHz (CH78), 2DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz

*No emissions found within 10 dB of the limit.

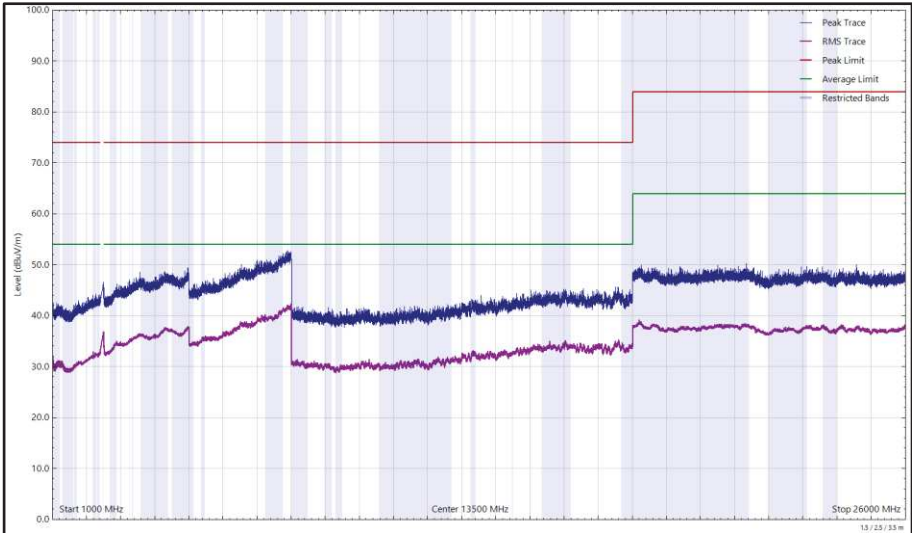


Figure 128 - 2480 MHz (CH78), 2DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

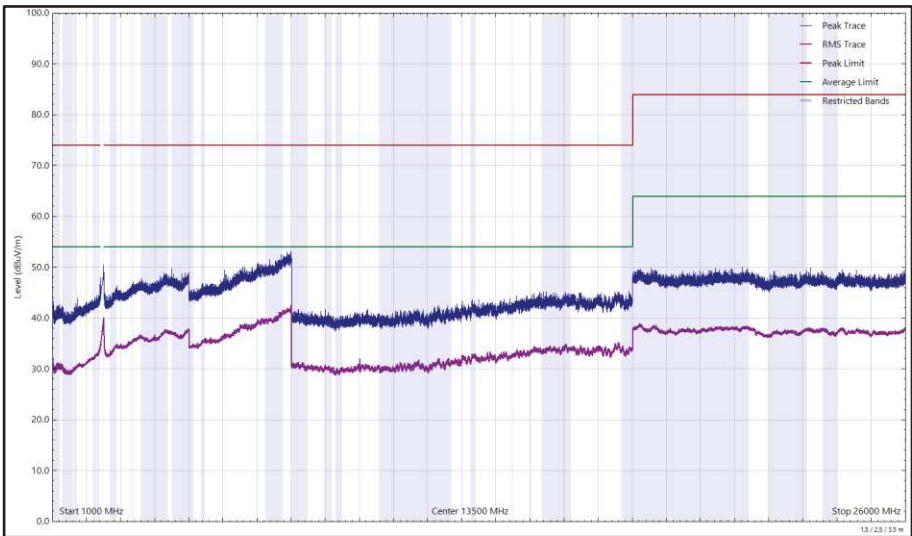


Figure 129 - 2480 MHz (CH78), 2DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical



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

Table 89 - 2402 MHz (CH0), DH5, iPA, Core 2, 1 GHz to 26 GHz

*No emissions found within 10 dB of the limit.

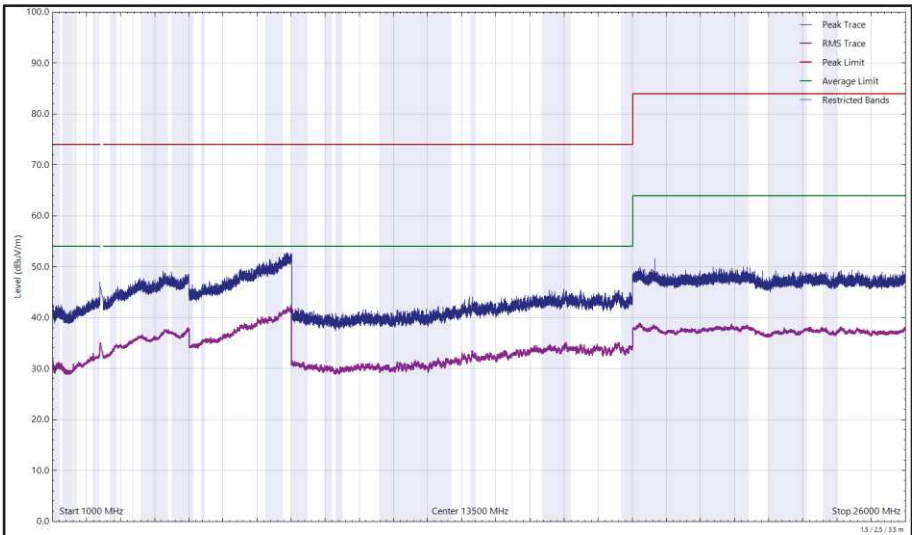


Figure 130 - 2402 MHz (CH0), DH5, iPA, Core 2, 1 GHz to 26 GHz, Horizontal

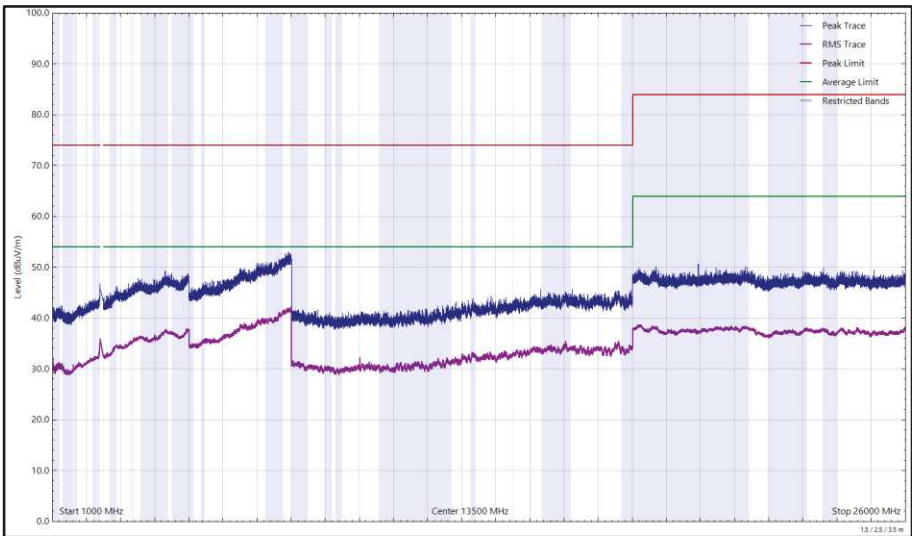


Figure 131 - 2402 MHz (CH0), DH5, iPA, Core 2, 1 GHz to 26 GHz, Vertical



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

Table 90 - 2480 MHz (CH78), DH5, iPA, Core 2, 1 GHz to 26 GHz

*No emissions found within 10 dB of the limit.

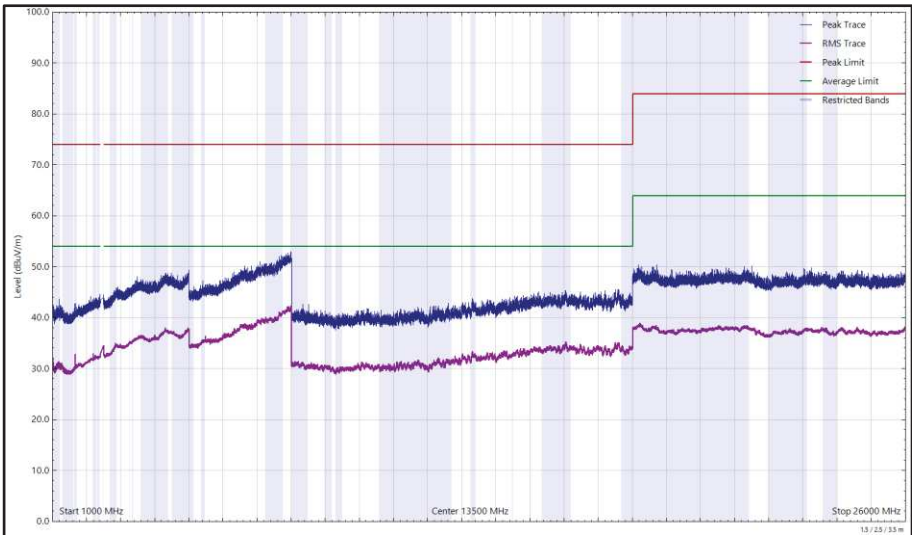


Figure 132 - 2480 MHz (CH78), DH5, iPA, Core 2, 1 GHz to 26 GHz, Horizontal

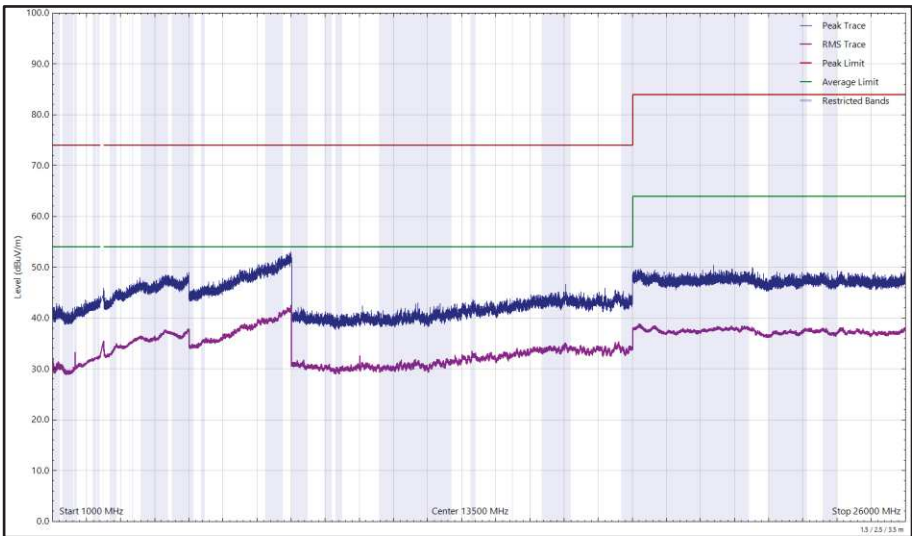


Figure 133 - 2480 MHz (CH78), DH5, iPA, Core 2, 1 GHz to 26 GHz, Vertical



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

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

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

ISED RSS-247, Limit Clause 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.

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

2.7.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 15.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
EMI Test Receiver	Rohde & Schwarz	ESW44	5911	12	24-Feb-2023
Cable (K Type 2m)	Junkosha	MWX241-01000KMSKMS/B	5937	12	14-May-2023
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5939	12	29-May-2023
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5941	12	29-May-2023
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5944	24	03-Feb-2024
1500W (300V 12A) AC Power Supply	iTech	IT7324	5956	-	O/P Mon
5m Semi-Anechoic Chamber (Dual-Axis)	Albatross Projects	RF Chamber 15	5963	36	28-Apr-2025
Compact Antenna Mast	Maturo Gmbh	CAM4.0-P	5964	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5967	-	TU



Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Cable (SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5996	12	06-Jun-2023
Cable (N to N 1m)	Junkosha	MWX221-01000NMSNMS/B	5999	12	05-Jun-2023
Cable (N to N 7m)	Junkosha	MWX221-07000NMSNMS/B	6005	12	05-Jun-2023
Cable (N to N 8m)	Junkosha	MWX221-08000NMSNMS/A	6006	12	05-Jun-2023
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	6007	12	06-Jun-2023
Cable (SMA to SMA 6.5m)	Junkosha	MWX221-06500AMSAMS/B	6014	12	07-Jun-2023
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/B	6019	12	07-Jun-2023
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6140	12	21-Jun-2023
Digital Multimeter	Fluke	115	6147	12	16-Jun-2023
Humidity & Temperature meter	R.S Components	1364	6150	12	17-Jun-2023
Double Ridge Active Horn Antenna (18-40 GHz)	Com-Power	AHA-840	6188	24	02-Jun-2024
SAC Switch Unit	TUV SUD	SSU003	6191	12	15-Jul-2023
8GHz Highpass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6194	12	15-Jul-2023
8GHz Highpass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6195	12	15-Jul-2023
Pre Amp 8 - 18 GHz	Wright Technologies	APS06 0061	6198	12	19-Jul-2023
Pre Amp 8 - 18 GHz	Wright Technologies	APS06 0061	6199	12	19-Jul-2023
Attenuator 4dB	Pasternack	PE7074-4	6203	24	16-Jul-2024
Cable (SMA to SMA 20cm)	TUV SUD	MH-FH 8-18	6214	12	25-Jul-2023
Cable (SMA to SMA 20cm)	TUV SUD	MH-FH 8-18	6215	12	25-Jul-2023

Table 91

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



2.8 Authorised Band Edges

2.8.1 Specification Reference

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

2.8.2 Equipment Under Test and Modification State

A2779, S/N: JM67M9K770 - Modification State 0

2.8.3 Date of Test

10-August-2022 to 11-August-2022

2.8.4 Test Method

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

2.8.5 Environmental Conditions

Ambient Temperature	21.9 - 22.5 °C
Relative Humidity	44.8 - 47.7 %

2.8.6 Test Results

2.4 GHz Bluetooth (FHSS)

iPA

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	GFSK	2	DH5	2402	2400.0	-63.97
Static	$\pi/4$ DQPSK	2	2-DH5	2402	2400.0	-60.71
Static	8-DPSK	2	3-DH5	2402	2400.0	-60.09
Hopping	GFSK	2	DH5	2402	2400.0	-68.74
Hopping	$\pi/4$ DQPSK	2	2-DH5	2402	2400.0	-64.22
Hopping	8-DPSK	2	3-DH5	2402	2400.0	-66.38

Table 92 - Authorised Band Edge Results

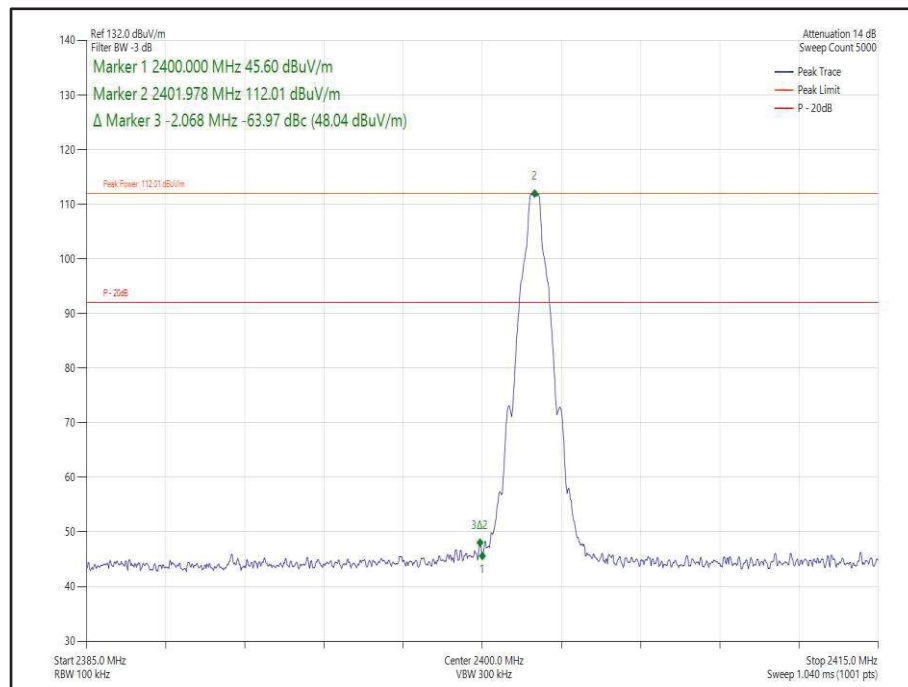
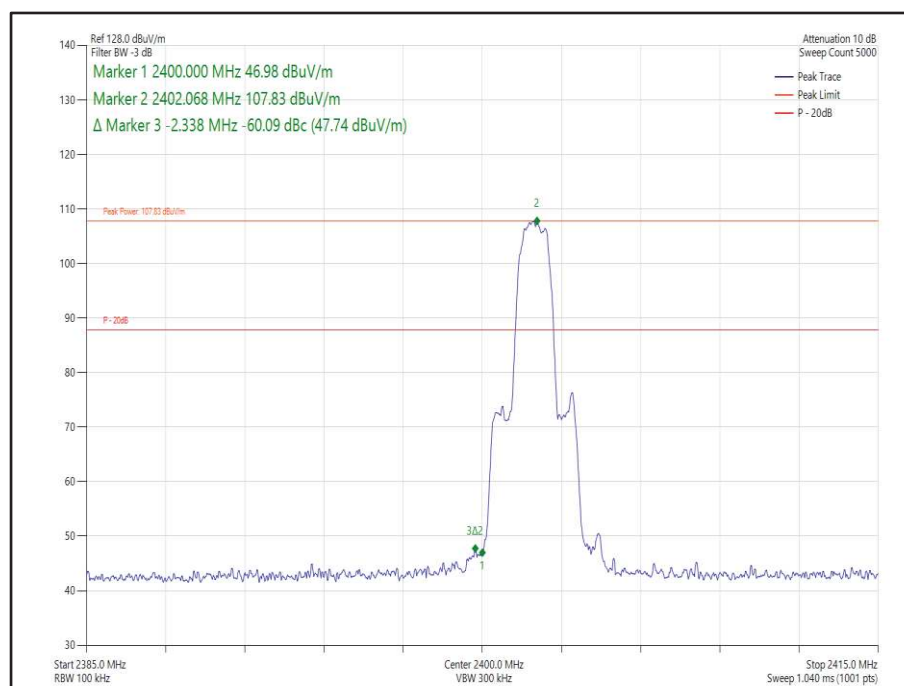
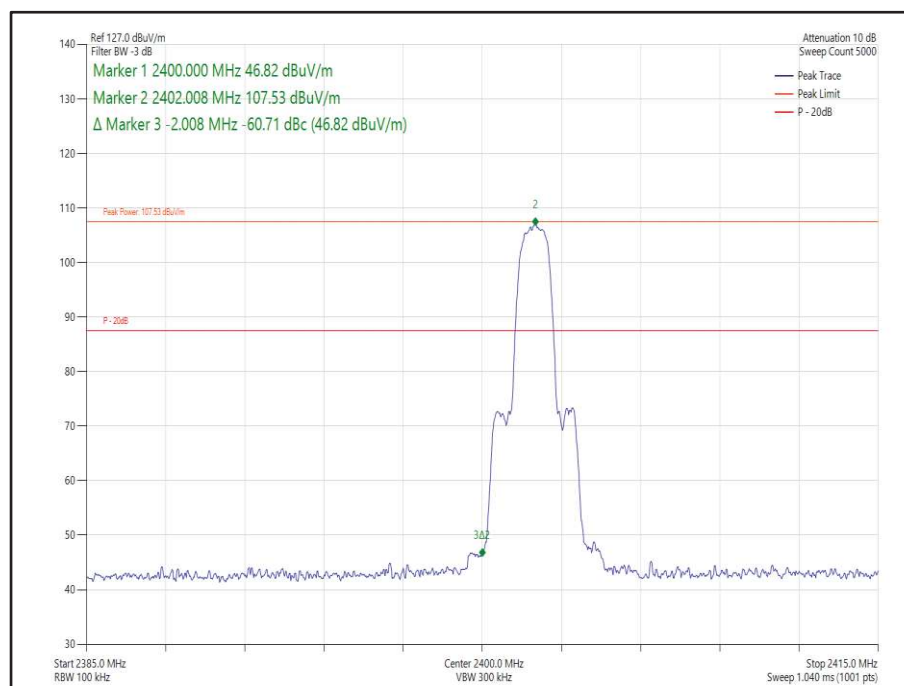


Figure 134 - Static - GFSK/DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz



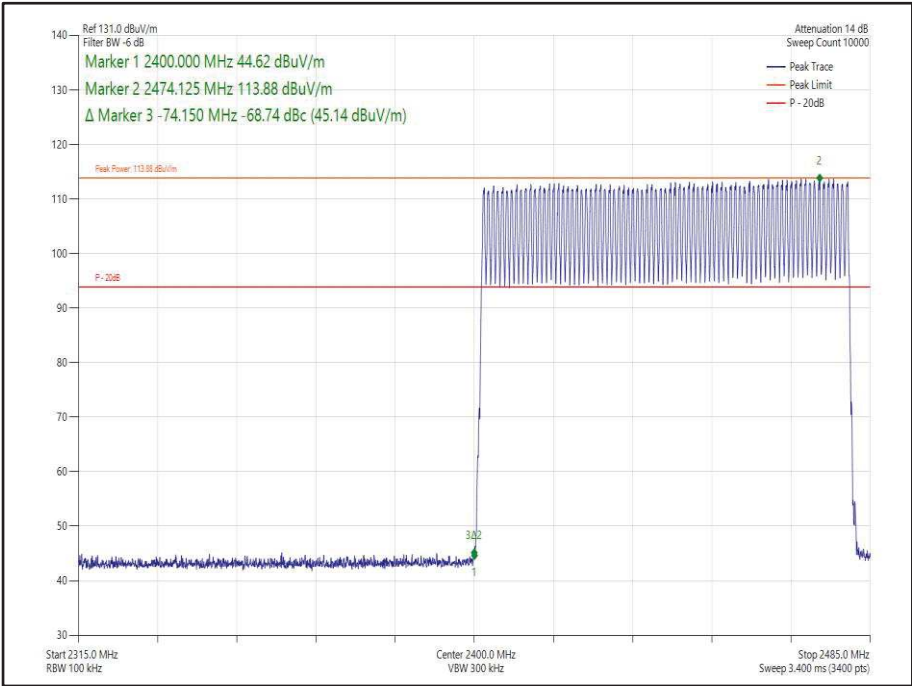


Figure 137 - Hopping - GFSK/DH5 - Band Edge Frequency 2400.0 MHz

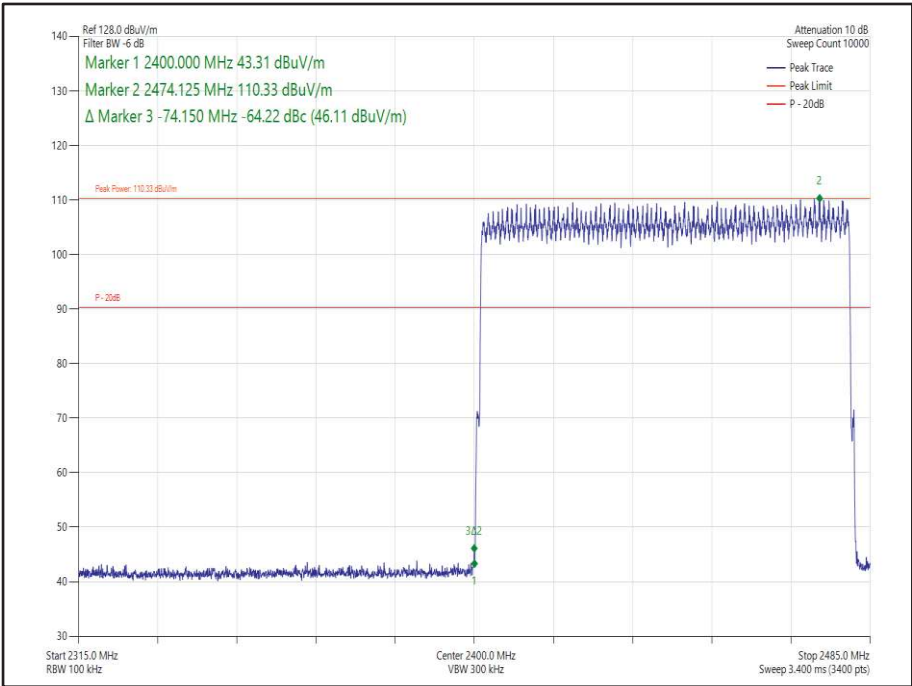


Figure 138 - Hopping - $\pi/4$ DQPSK/2-DH5 - Band Edge Frequency 2400.0 MHz





2.4 GHz Bluetooth (FHSS)

iPA

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	GFSK	1	DH5	2402	2400.0	-62.39
Static	$\pi/4$ DQPSK	1	2-DH5	2402	2400.0	-58.89
Static	8-DPSK	1	3-DH5	2402	2400.0	-58.75
Hopping	GFSK	1	DH5	2402	2400.0	-67.24
Hopping	$\pi/4$ DQPSK	1	2-DH5	2402	2400.0	-64.29
Hopping	8-DPSK	1	3-DH5	2402	2400.0	-64.02

Table 93 - Authorised Band Edge Results

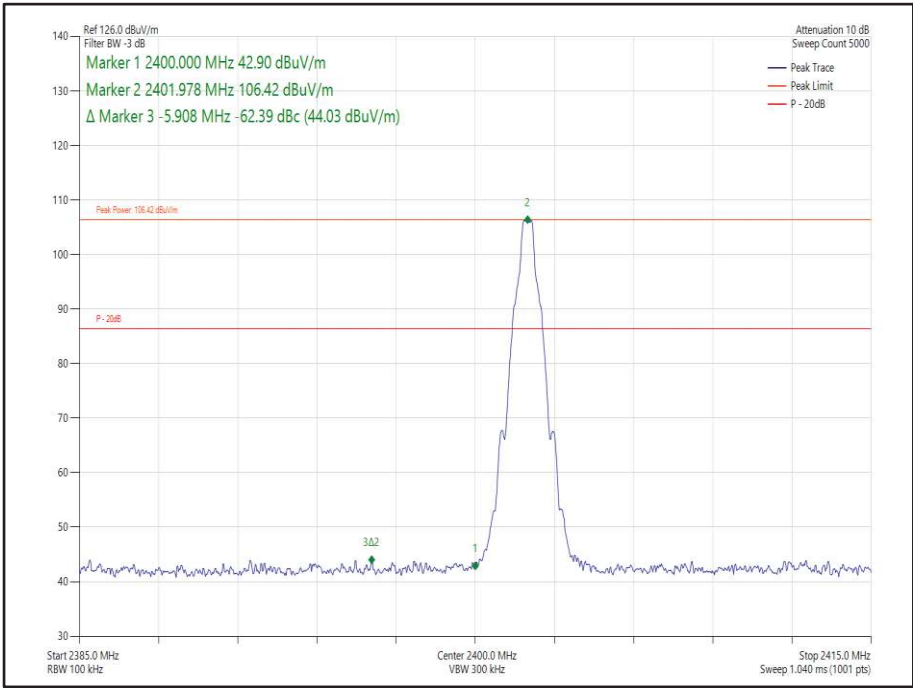


Figure 140 - Static - GFSK/DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

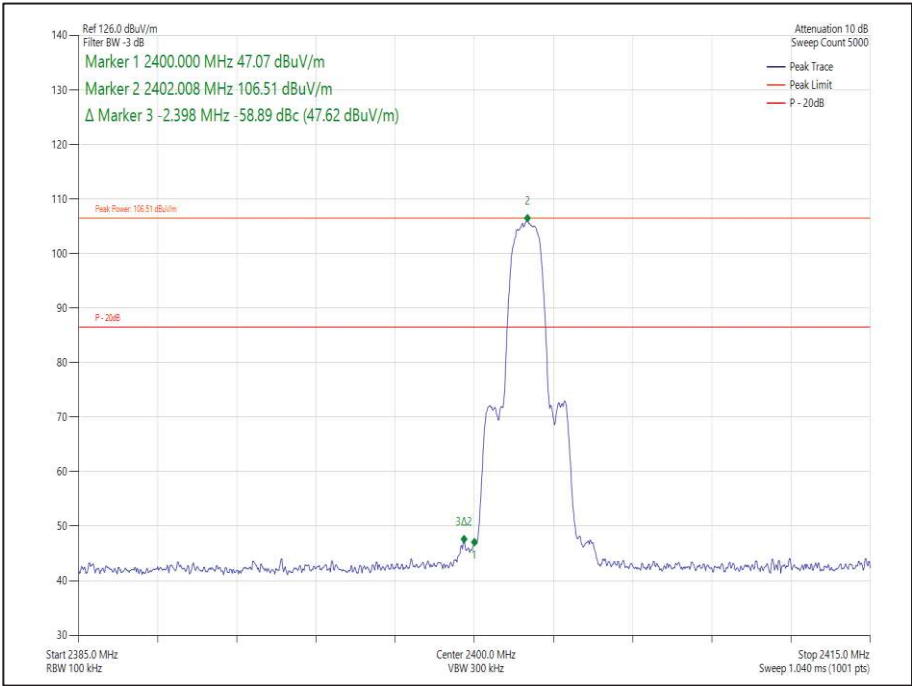


Figure 141 - Static - $\pi/4$ DQPSK/2-DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

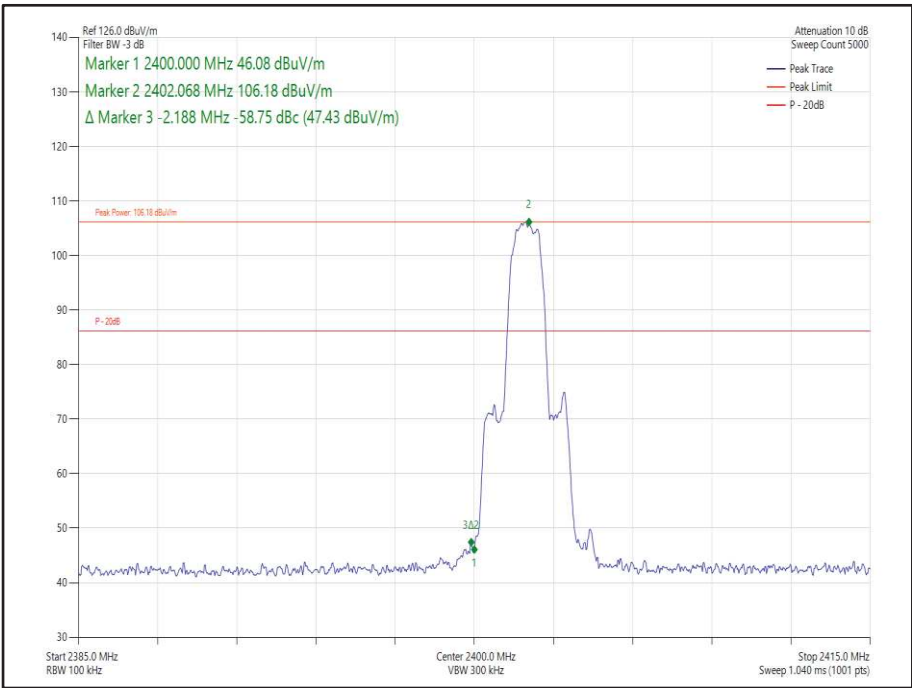


Figure 142 - Static - 8-DPSK/3-DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

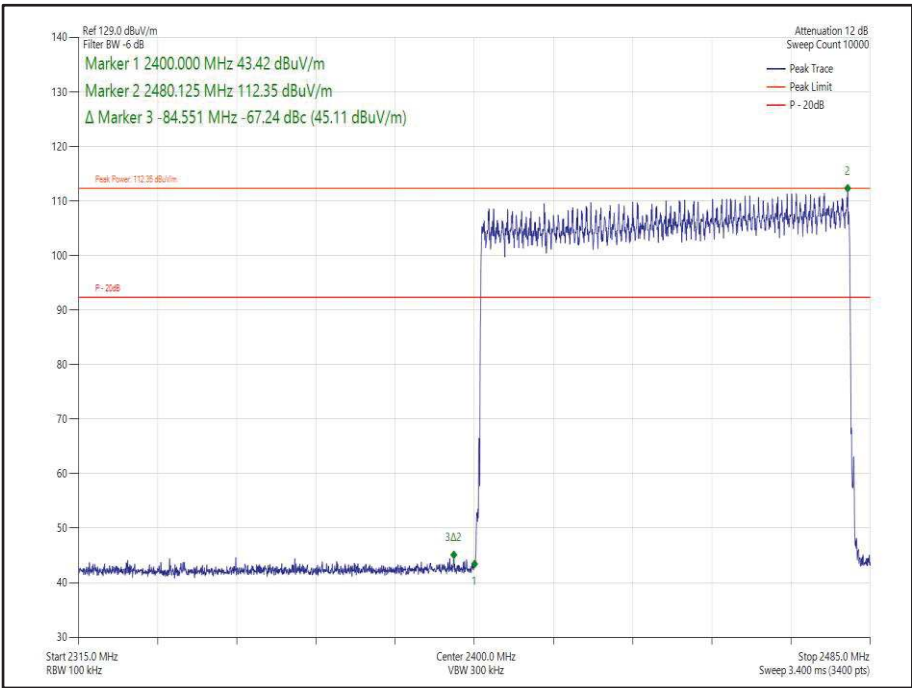


Figure 143 - Hopping - GFSK/DH5 - Band Edge Frequency 2400.0 MHz

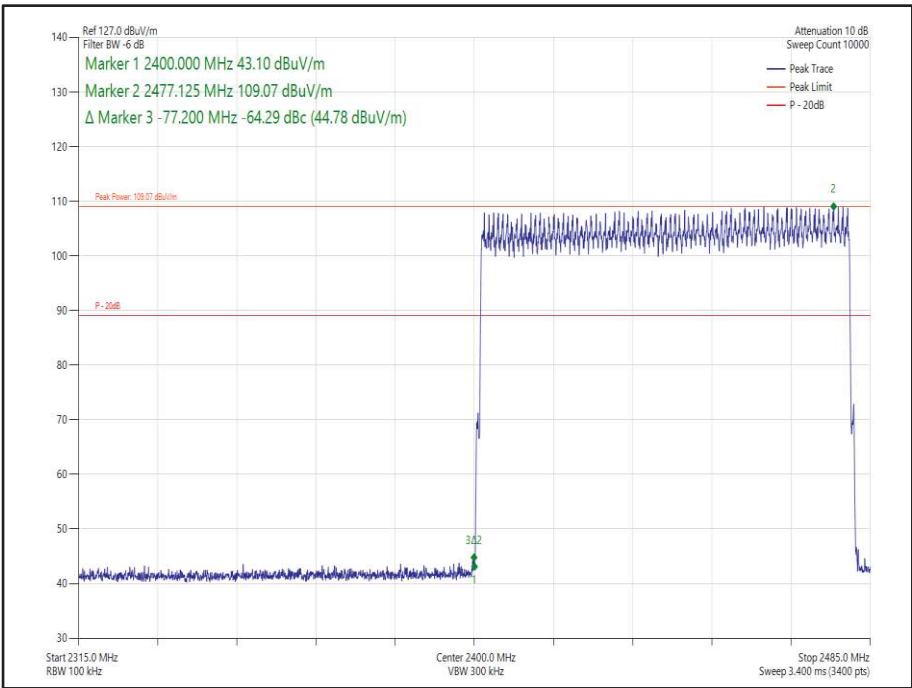


Figure 144 - Hopping - $\pi/4$ DQPSK/2-DH5 - Band Edge Frequency 2400.0 MHz

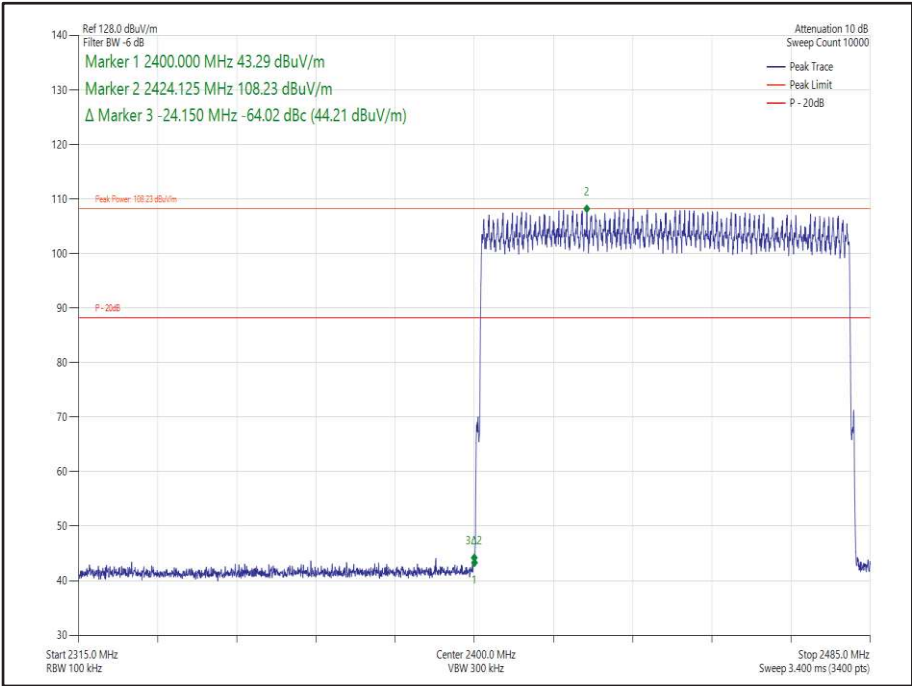


Figure 145 - Hopping - 8-DPSK/3-DH5 - Band Edge Frequency 2400.0 MHz



2.4 GHz Bluetooth (FHSS)

ePA

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	$\pi/4$ DQPSK	1	2-DH5	2402	2400.0	-60.96
Static	8-DPSK	1	3-DH5	2402	2400.0	-59.87
Hopping	$\pi/4$ DQPSK	1	2-DH5	2402	2400.0	-66.25
Hopping	8-DPSK	1	3-DH5	2402	2400.0	-66.75

Table 94 - Authorised Band Edge Results

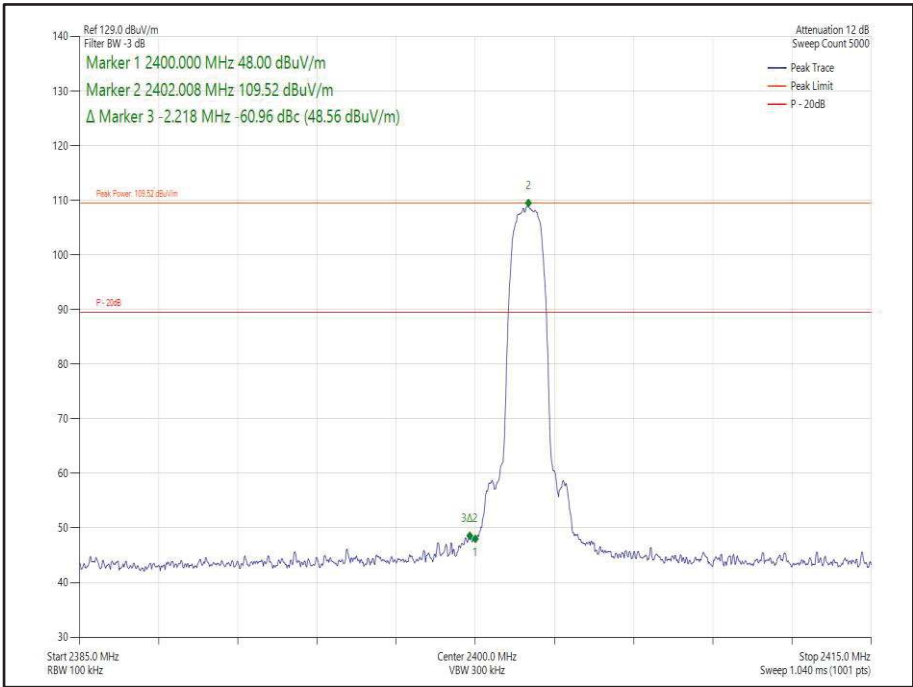


Figure 146 - Static - $\pi/4$ DQPSK/2-DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

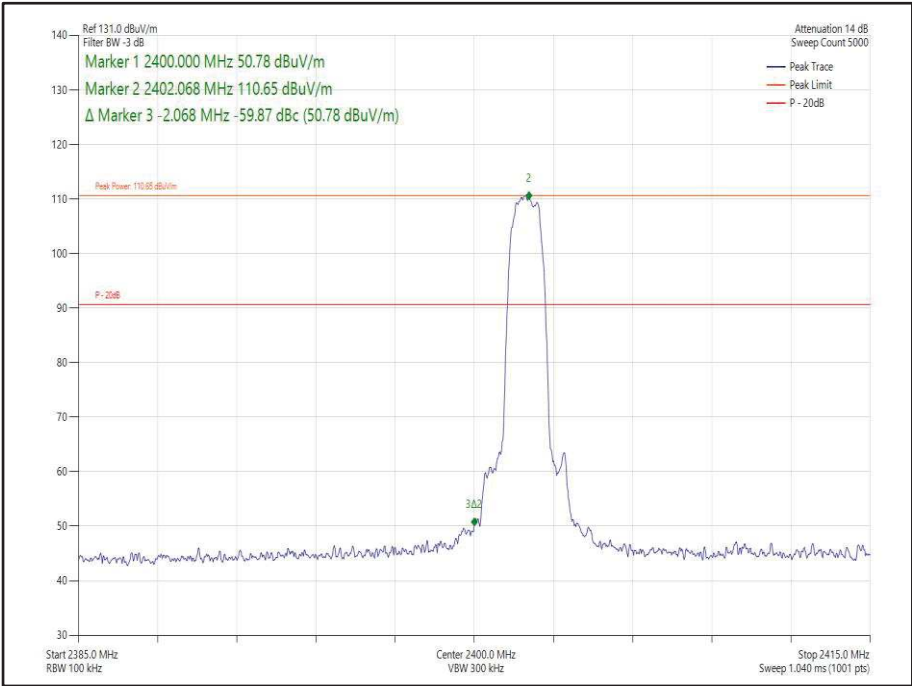


Figure 147 - Static - 8-DPSK/3-DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

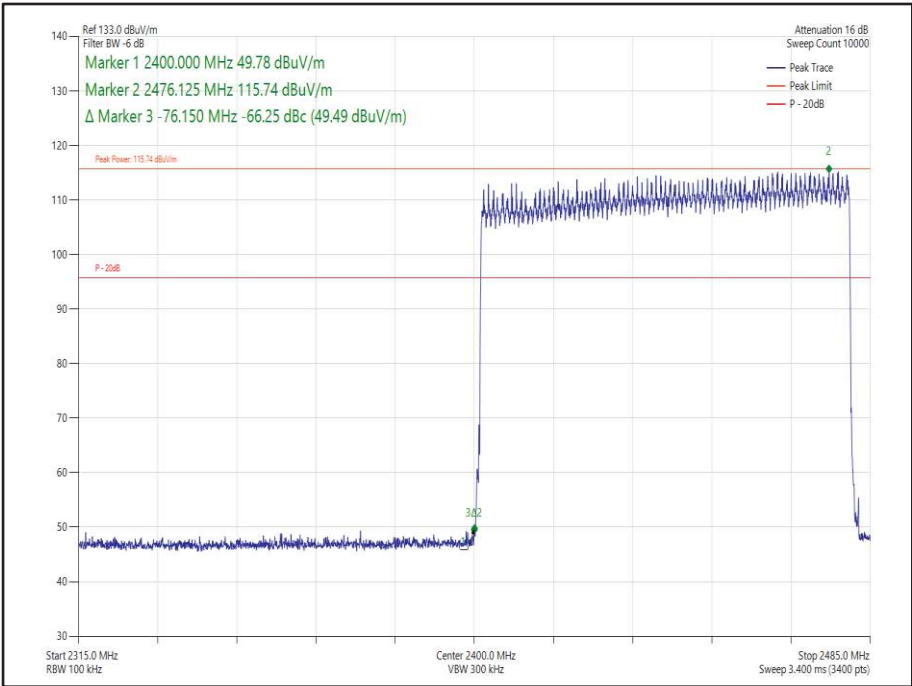


Figure 148 - Hopping - $\pi/4$ DQPSK/2-DH5 - Band Edge Frequency 2400.0 MHz

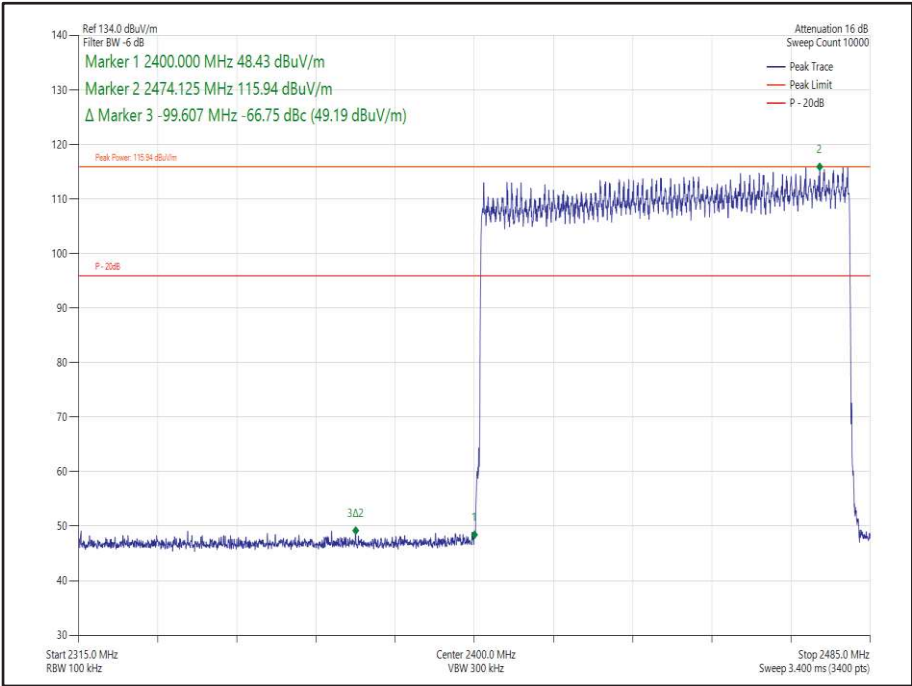


Figure 149 - Hopping - 8-DPSK/3-DH5 - Band Edge Frequency 2400.0 MHz



2.4 GHz Bluetooth (FHSS)

iPA

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	GFSK	0-1	DH5	2402	2400.0	-65.02
Static	$\pi/4$ DQPSK	0-1	2-DH5	2402	2400.0	-62.79
Static	8-DPSK	0-1	3-DH5	2402	2400.0	-62.69
Hopping	GFSK	0-1	DH5	2402	2400.0	-67.56
Hopping	$\pi/4$ DQPSK	0-1	2-DH5	2402	2400.0	-66.65
Hopping	8-DPSK	0-1	3-DH5	2402	2400.0	-68.03

Table 95 - Authorised Band Edge Results

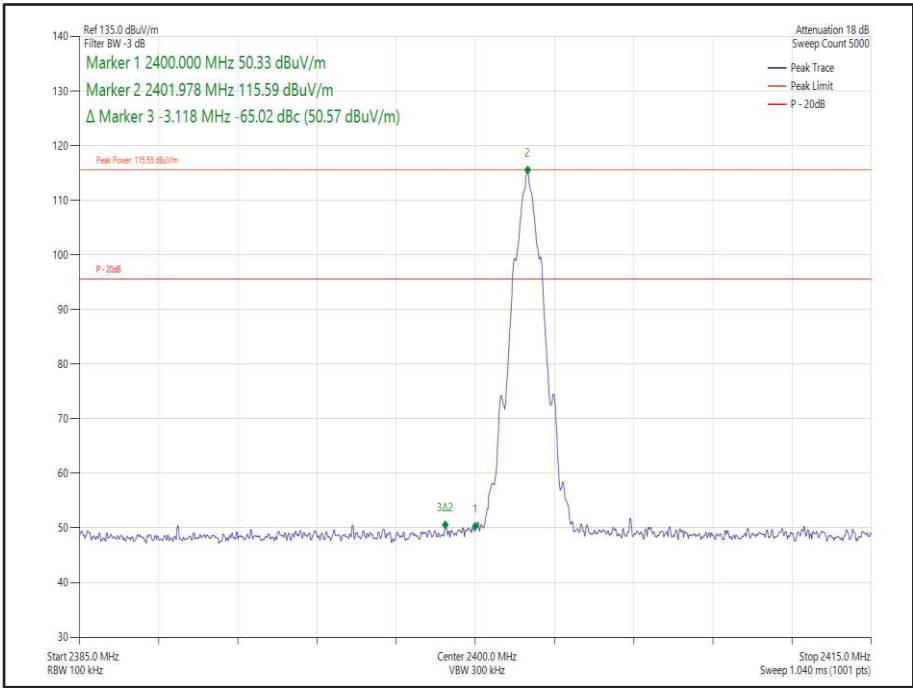


Figure 150 - Static - GFSK/DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

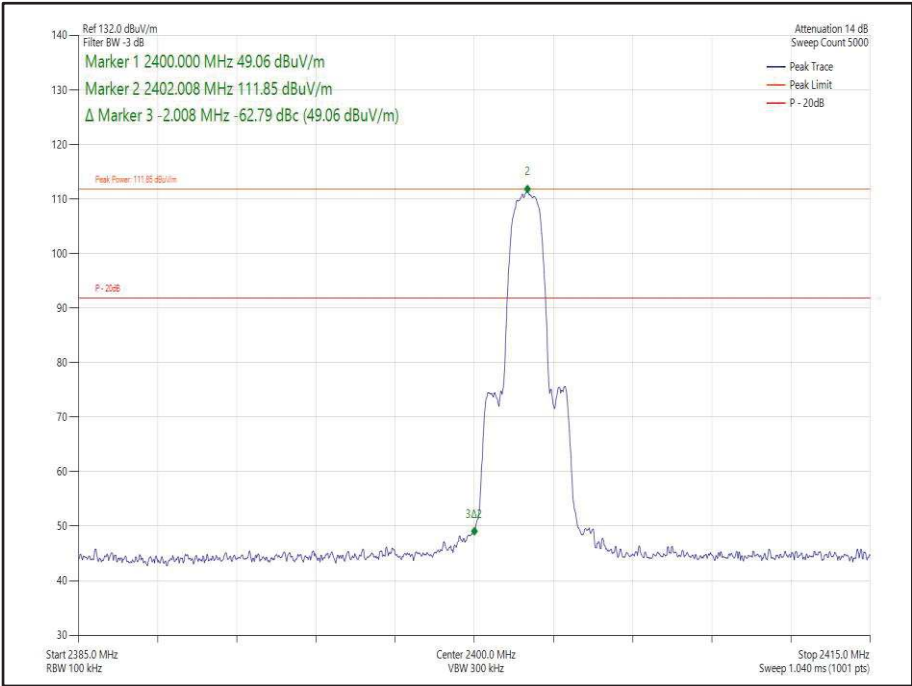


Figure 151 - Static - $\pi/4$ DQPSK/2-DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

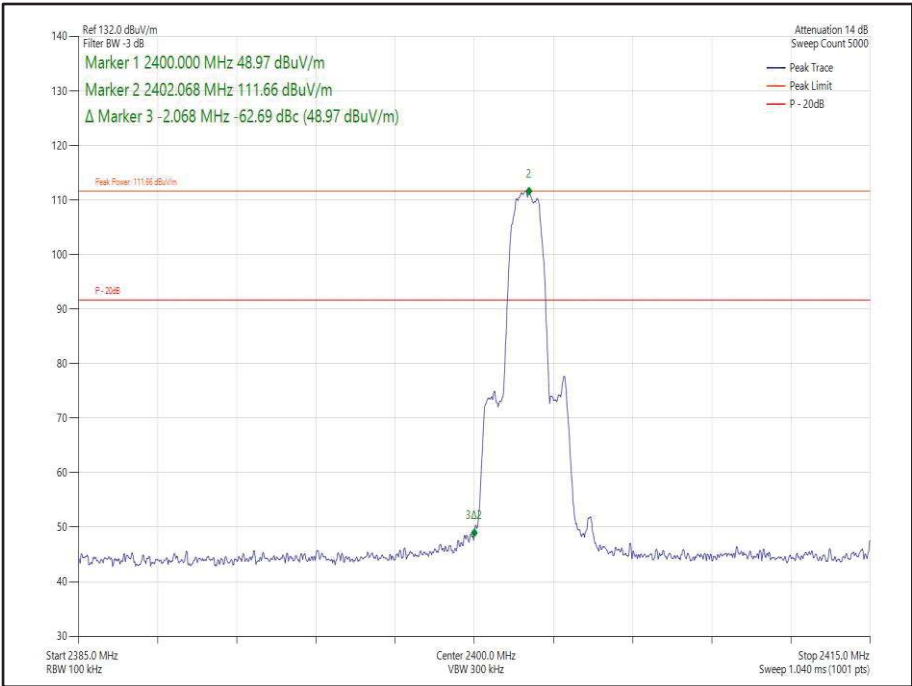


Figure 152 - Static - 8-DPSK/3-DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

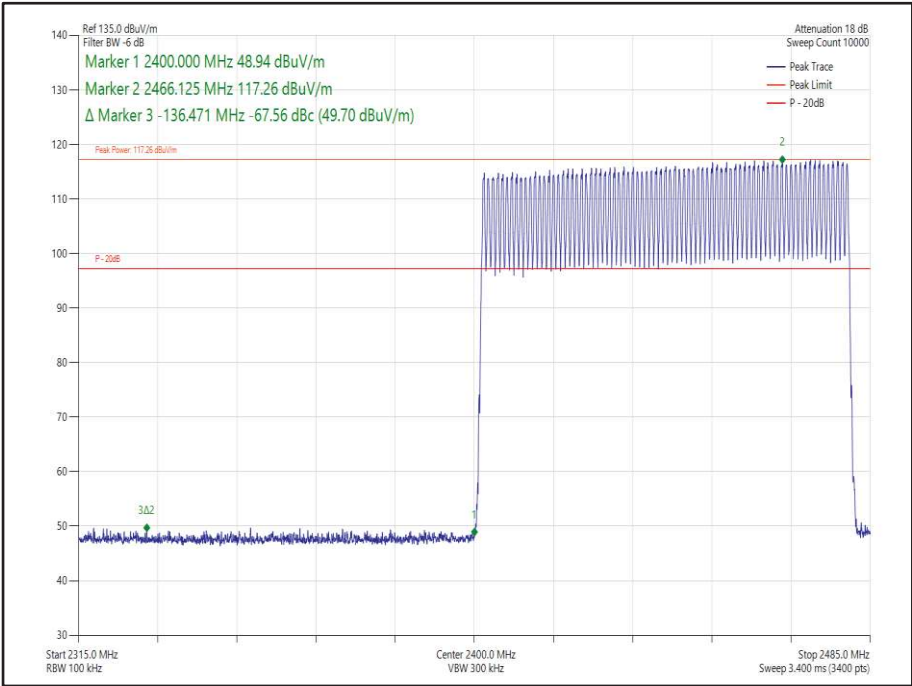


Figure 153 - Hopping - GFSK/DH5 - Band Edge Frequency 2400.0 MHz

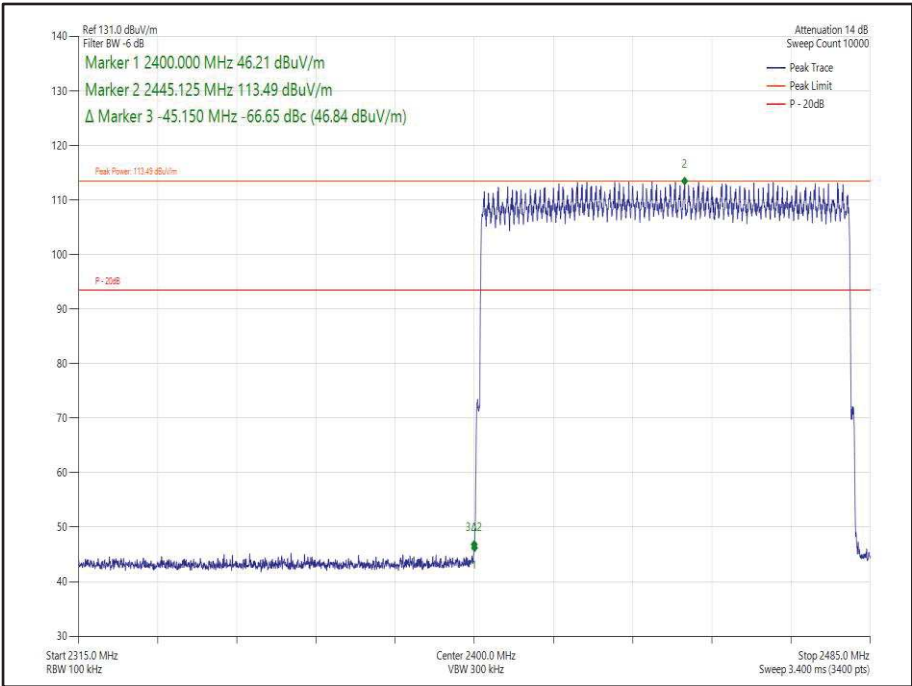


Figure 154 - Hopping - $\pi/4$ DQPSK/2-DH5 - Band Edge Frequency 2400.0 MHz

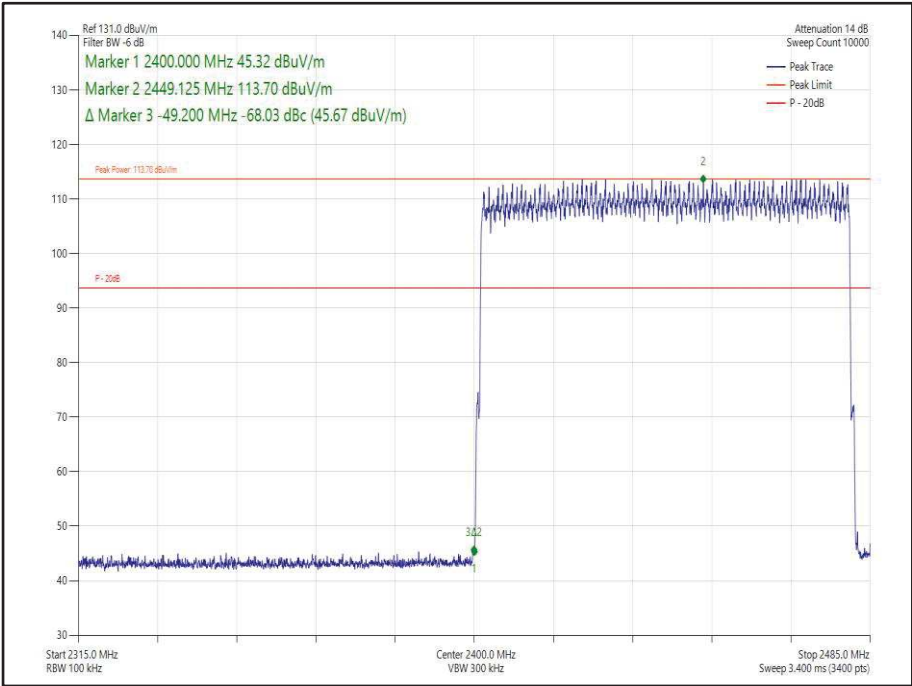


Figure 155 - Hopping - 8-DPSK/3-DH5 - Band Edge Frequency 2400.0 MHz



2.4 GHz Bluetooth (FHSS)

ePA

Mode	Modulation	Core	Packet Type	Tx Frequency (MHz)	Band Edge Frequency (MHz)	Level (dBc)
Static	$\pi/4$ DQPSK	0-1	2-DH5	2402	2400.0	-62.09
Static	8-DPSK	0-1	3-DH5	2402	2400.0	-61.53
Hopping	$\pi/4$ DQPSK	0-1	2-DH5	2402	2400.0	-66.53
Hopping	8-DPSK	0-1	3-DH5	2402	2400.0	-67.90

Table 96 - Authorised Band Edge Results

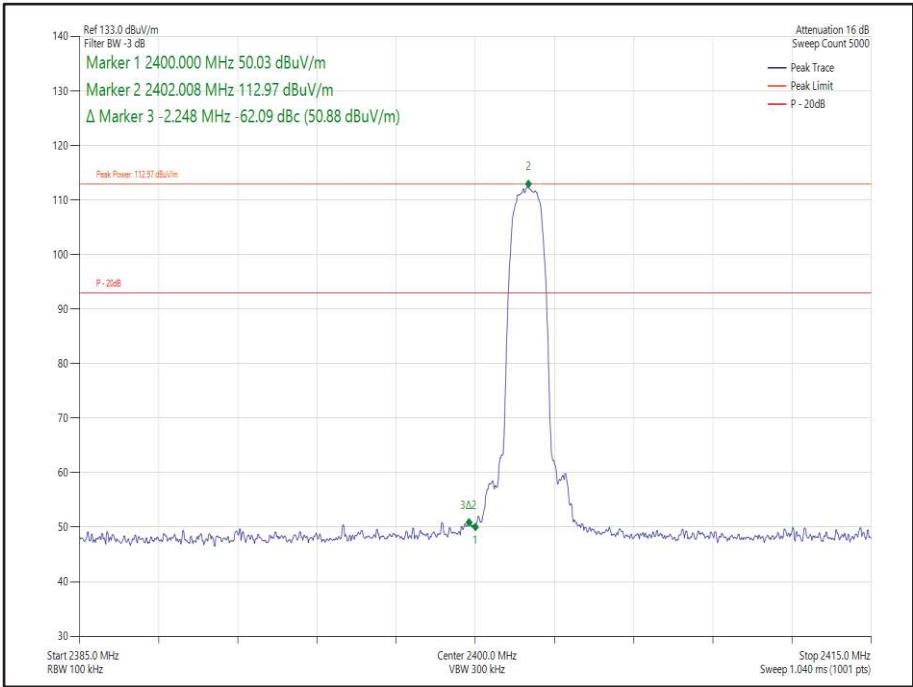


Figure 156 - Static - $\pi/4$ DQPSK/2-DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

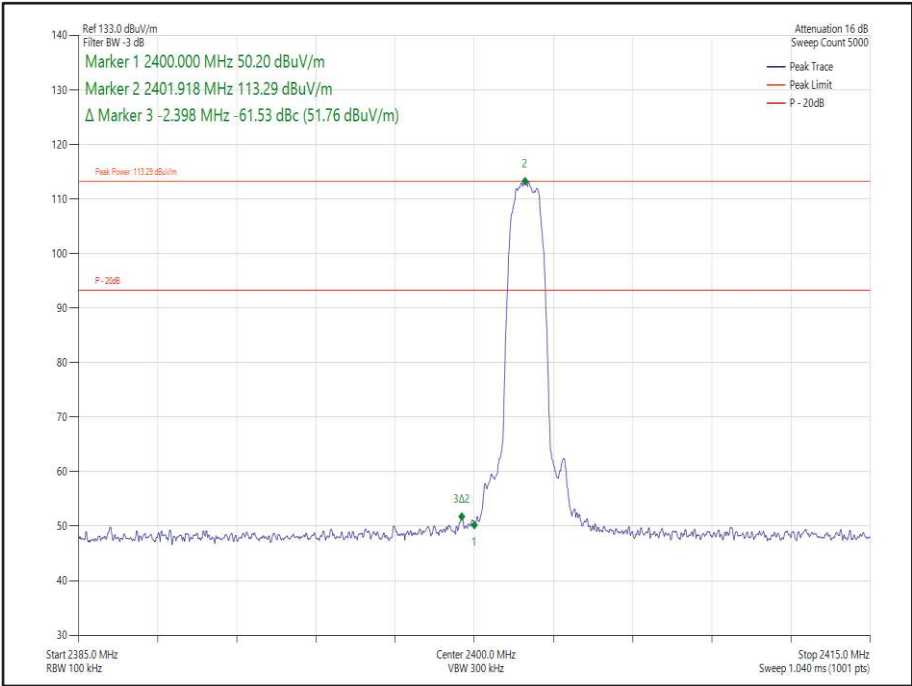


Figure 157 - Static - 8-DPSK/3-DH5 - 2402 MHz - Band Edge Frequency 2400.0 MHz

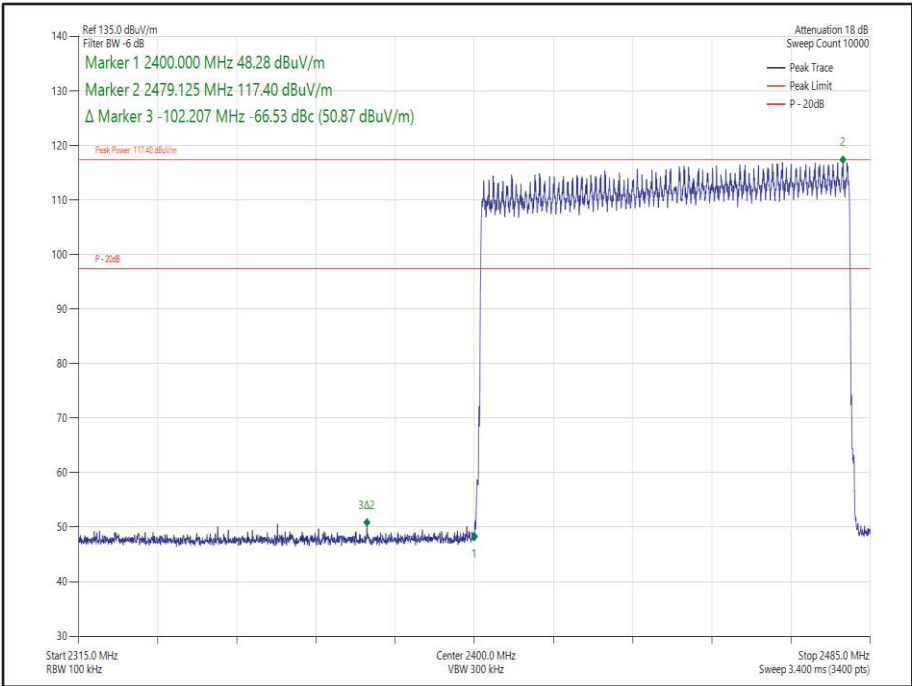


Figure 158 - Hopping - $\pi/4$ DQPSK/2-DH5 - Band Edge Frequency 2400.0 MHz

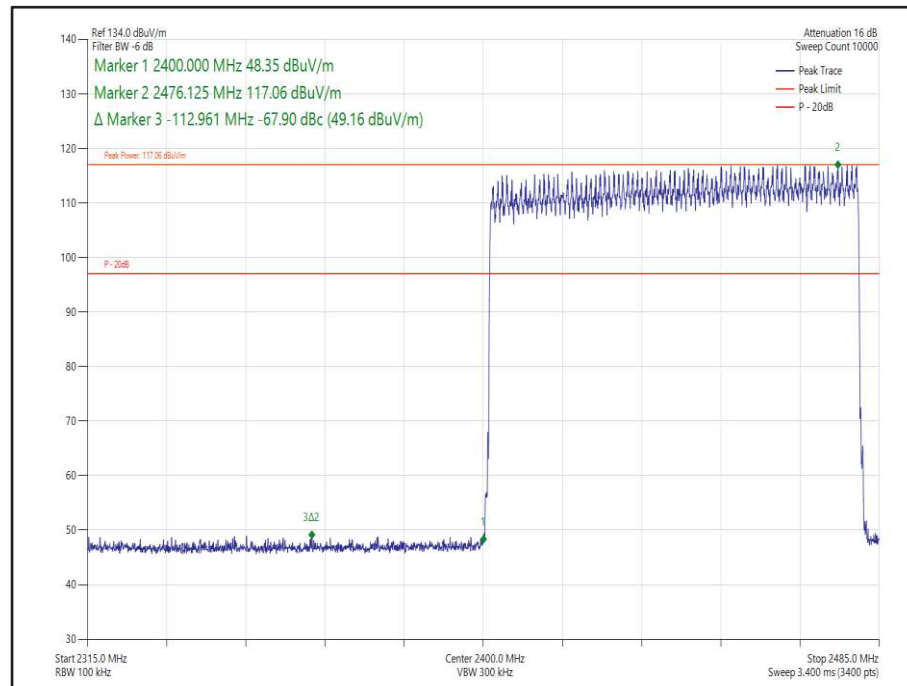


Figure 159 - Hopping - 8-DPSK/3-DH5 - Band Edge Frequency 2400.0 MHz

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

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

ISED RSS-247, Limit Clause 5.5

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



2.8.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 14.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
EMI Test Receiver	Rohde & Schwarz	ESW44	5912	12	17-Feb-2023
5m Semi-Anechoic Chamber (Dual-Axis)	Albatross Projects	RF Chamber 14	5958	36	26-Apr-2025
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5960	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5961	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5962	-	TU
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5997	12	06-Jun-2023
Cable (SMA to SMA 6.5m)	Junkosha	MWX221-06500AMSAMS/B	6003	12	07-Jun-2023
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	6008	12	06-Jun-2023
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6141	12	21-Jun-2023
SAC Switch Unit	TUV SUD	SSU001	6144	12	07-Jul-2023
Humidity & Temperature meter	R.S Components	1364	6150	12	17-Jun-2023

Table 97

TU – Traceability Unscheduled



3 Measurement Uncertainty

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

Test Name	Measurement Uncertainty
Restricted Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Frequency Hopping Systems - Average Time of Occupancy	-
Frequency Hopping Systems - Channel Separation	± 20.51 kHz
Frequency Hopping Systems - Number of Hopping Channels	-
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Frequency Hopping Systems - 20 dB Bandwidth	± 23.512 kHz
Maximum Conducted Output Power	± 3.2 dB
Authorised Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB

Table 98

Measurement Uncertainty Decision Rule – Accuracy Method

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. (Procedure 2). The measurement results are directly compared with the test limit to determine conformance with the requirements of the standard.

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