



Test Configuration			
Frequency Range:	5.725-5.850 GHz	Band:	U-NII-3
Limit Clause(s):	15.407 (a)(3) RSS-247 6.2.4.1	Test Method(s):	C63.10 12.4.2.4 C63.10 12.6
Additional Reference(s):	662911 D01 v02r01 E)2)b)		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	ePA $\pi/4$ DQPSK (4-DH5)	Duty Cycle (%):	79.1
Antenna Configuration:	Beamforming	DCCF (dB):	1.02
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	8.18

Test Frequency (MHz)	PSD (dBm/MHz)					Limit (dBm / 500 kHz)	Margin (dB)
	A	B	C	D	Σ		
5733	9.44	9.03	-	-	12.25	27.82	-15.57
5789	9.64	9.44	-	-	12.55	27.82	-15.27
5844	9.97	9.44	-	-	12.72	27.82	-15.10

Table 97 - Maximum Power Spectral Density Results

Test Configuration			
Frequency Range:	5.725-5.850 GHz	Band:	U-NII-3
Limit Clause(s):	15.407 (a)(3) RSS-247 6.2.4.1	Test Method(s):	C63.10 12.4.2.4 C63.10 12.6
Additional Reference(s):	662911 D01 v02r01 E)2)b)		
Note(s):	DCCF was added to the spectrum analyser reference level offset.		

DUT Configuration			
Mode:	ePA $\pi/4$ DQPSK (8-DH5)	Duty Cycle (%):	78.8
Antenna Configuration:	Beamforming	DCCF (dB):	1.04
Active Port(s):	A+B (Core 0 + Core 1)	Peak Antenna Gain (dBi):	8.18

Test Frequency (MHz)	PSD (dBm/MHz)					Limit (dBm / 500 kHz)	Margin (dB)
	A	B	C	D	Σ		
5733	7.07	5.89	-	-	9.53	27.82	-18.29
5789	6.38	6.59	-	-	9.50	27.82	-18.32
5844	6.42	5.66	-	-	9.07	27.82	-18.75

Table 98 - Maximum Power Spectral Density Results



FCC 47 CFR Part 15E, Limit Clause 15.407(a)

Condition of Operation	Frequency Range (MHz)			
	5150-5250	5250-5350	5470-5725	5725-5850
Max Conducted Power Spectral Density	17 dBm/MHz for master device 11 dBm/MHz for mobile/portable client device	11 dBm/MHz		30 dBm/500 kHz

Table 99

ISED RSS-247, Limit Clause 6.2.1.1, 6.2.2.1, 6.2.3.1, 6.2.4.1 and 6.2.5.2

Device	Frequency Range (MHz)				
	5150-5250	5250-5350	5470-5725	5725-5850	5850-5895
OEM installed in vehicles	-	-	-	-	-
Other	≤10 dBm/MHz*	≤11 dBm/MHz	≤11 dBm/MHz	≤30 dBm/500kHz	Fixed Outdoor Access Point: 23 dBm/MHz* Fixed Outdoor Client: 17 dBm/MHz Indoor Access Point: 20 dBm/MHz Indoor Subordinate: 20 dBm/MHz Indoor Client: 14 dBm/MHz

Table 100

*Maximum power spectral density specified as EIRP.



2.4.7 Test Location and Test Equipment Used

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

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Hygrometer	Rotronic	I-1000	3068	12	07-Nov-2024
Digital Multimeter	Fluke	115	6145	12	06-Jun-2025
MXA Signal Analyser	Keysight Technologies	N9020B	6417	24	26-Feb-2025
MXA Signal Analyser	Keysight Technologies	N9020B	6419	24	28-Feb-2025
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6517	12	22-Feb-2025
Signal Conditioning Unit	TUV SUD	SPECTRUM_SCU001	6518	12	16-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6526	12	22-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6527	12	05-Mar-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6529	12	16-Feb-2025
SCU Cable Assembly	TUV SUD	SPECTRUM_SCU_CA	6530	12	16-Feb-2025
USB Wideband Power Sensor	Boonton	RTP5008	6585	12	20-Feb-2025
USB Wideband Power Sensor	Boonton	RTP5008	6586	12	20-Feb-2025
USB Wideband Power Sensor	Boonton	RTP5008	6587	12	13-Feb-2025
USB Wideband Power Sensor	Boonton	RTP5008	6588	12	13-Feb-2025
AC Programmable Power Supply	iTech	IT7324	6662	-	O/P Mon
AC Programmable Power Supply	iTech	IT7324	6665	-	O/P Mon

Table 101

O/P Mon - Output Monitored using calibrated equipment



2.5 Authorised Band Edges

2.5.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.407 (b)
ISED RSS-247, Clause 6.2

2.5.2 Equipment Under Test and Modification State

A3112, S/N: K67X45QH3Q - Modification State 0
A3112, S/N: MNV254CLPF - Modification State 0

2.5.3 Date of Test

10-June-2024 to 11-June-2024

2.5.4 Test Method

The test was performed in accordance with ANSI C63.10, clause 6.6.

Field Strength (dB μ V/m at 3 m) = EIRP (dBm) + 95.2 dB

Authorised band edge measurements were performed, with the device operating in SISO and MIMO configurations, across the various modes supported by the device.

The measurements displayed within this report, have been limited to those modes which have been shown to be worst case.

Further measurements are held on file by TÜV SÜD and are available if required.

2.5.5 Environmental Conditions

Ambient Temperature	22.8 - 23.1 °C
Relative Humidity	40.8 - 42.7 %

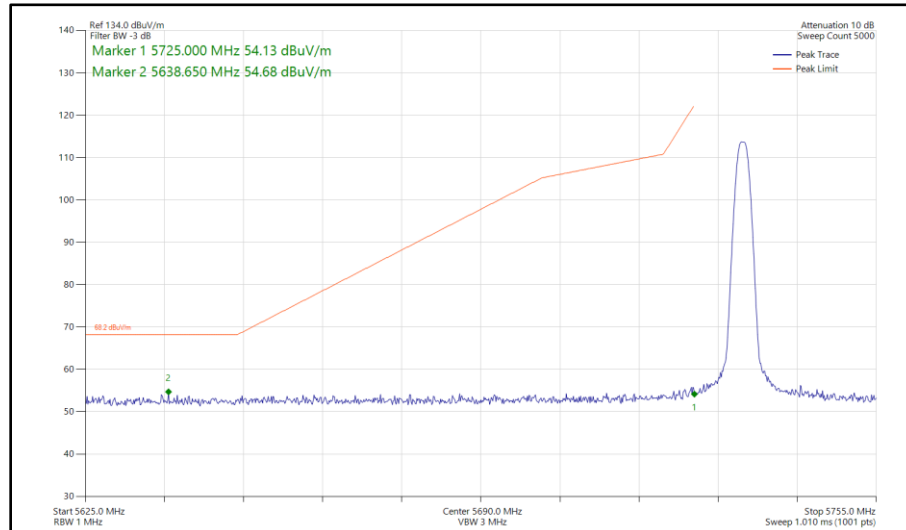
2.5.6 Test Results

Narrowband

iPA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)
Static	DH5	5733	5725	54.68
Static	HDR4	5733	5725	53.85
Static	HDR8	5733	5725	53.97
Hopping	DH5	5733-5811	5725	54.70
Hopping	HDR4	5733-5811	5725	54.18
Hopping	HDR8	5733-5811	5725	54.57
Static	DH5	5844	5850	54.47
Static	HDR4	5844	5850	54.41
Static	HDR8	5844	5850	54.52
Hopping	DH5	5766-5844	5850	54.95
Hopping	HDR4	5766-5844	5850	54.11
Hopping	HDR8	5766-5844	5850	54.32

Table 102 - SISO Authorised Band Edge Results



**Figure 166 - Bluetooth DH5, SISO, Core 0 - 5733 MHz
Band Edge Frequency 5725 MHz**

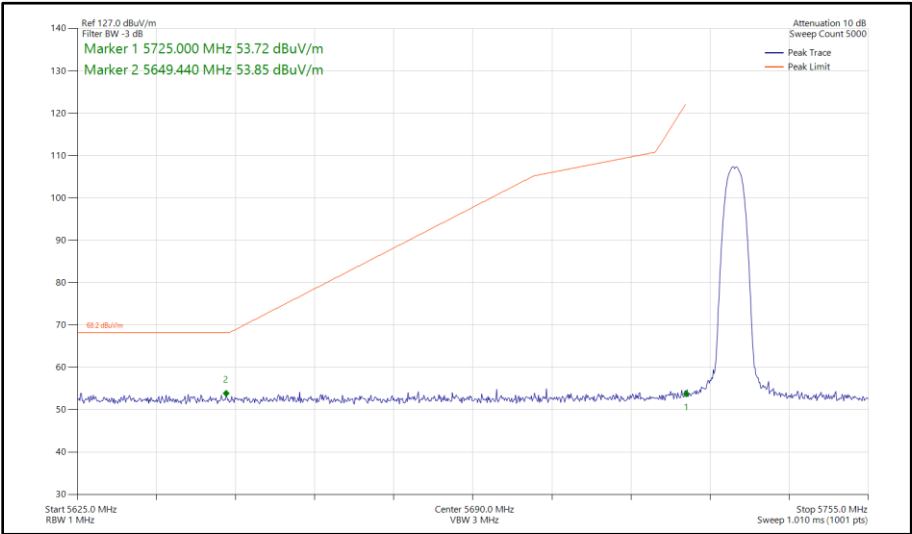


Figure 167 - Bluetooth HDR4, SISO, Core 0 - 5733 MHz
Band Edge Frequency 5725 MHz

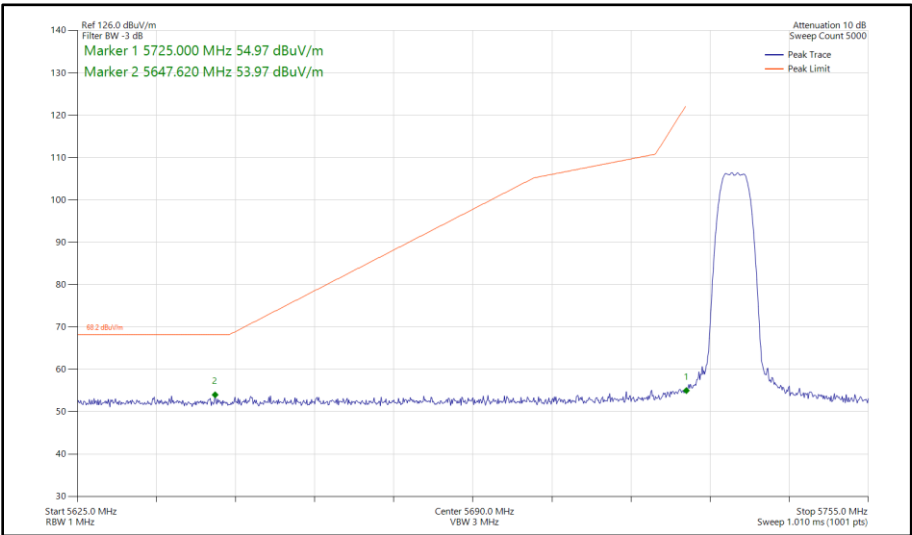


Figure 168 - Bluetooth HDR8, SISO, Core 0 - 5733 MHz
Band Edge Frequency 5725 MHz

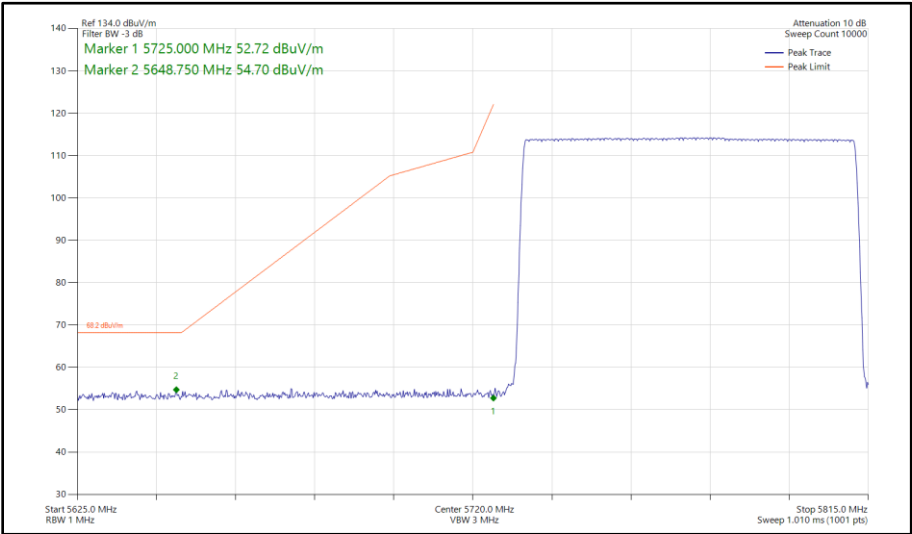


Figure 169 - Bluetooth DH5, SISO, Core 0 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

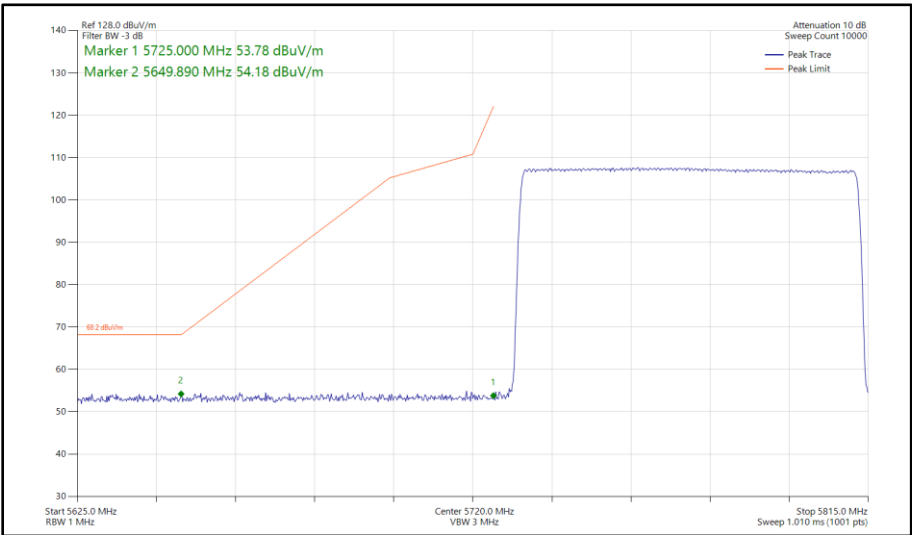


Figure 170 - Bluetooth HDR4, SISO, Core 0 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

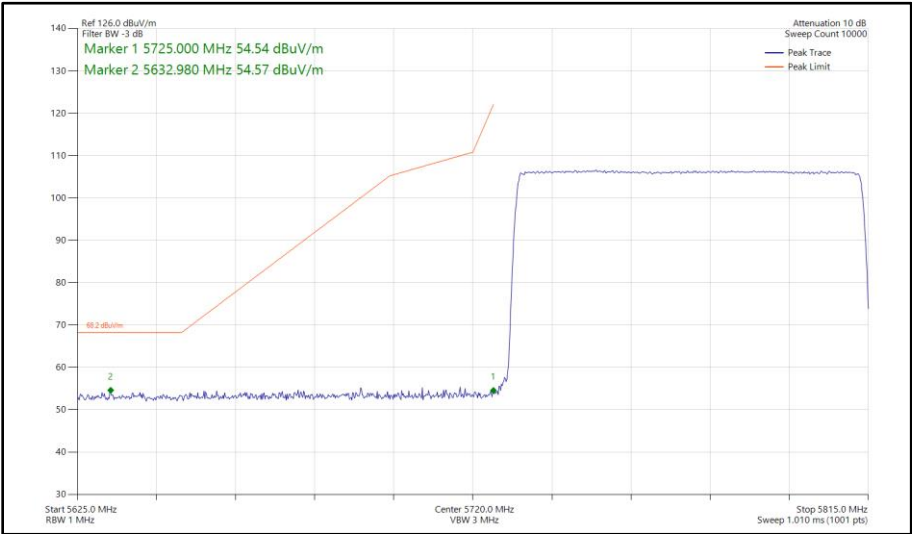


Figure 171 - Bluetooth HDR8, SISO, Core 0 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

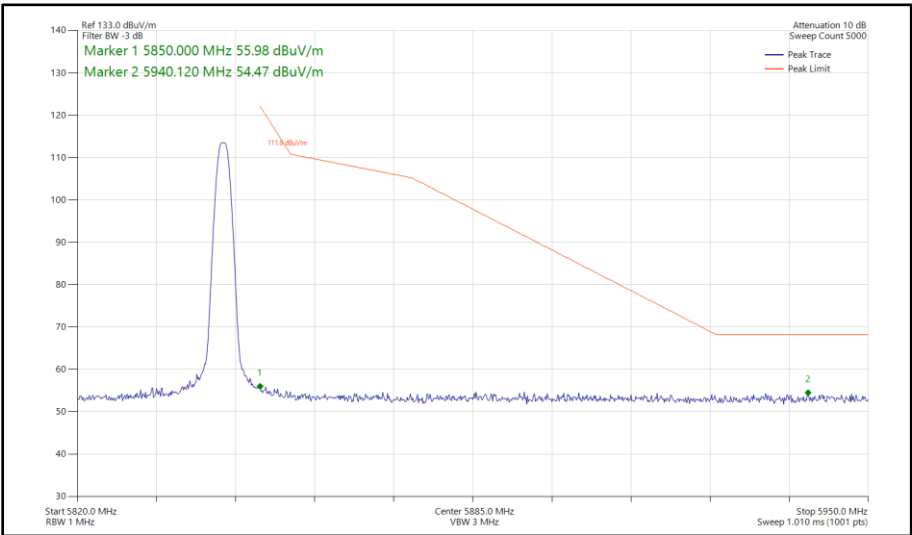


Figure 172 - Bluetooth DH5, SISO, Core 0 - 5844 MHz
Band Edge Frequency 5850 MHz

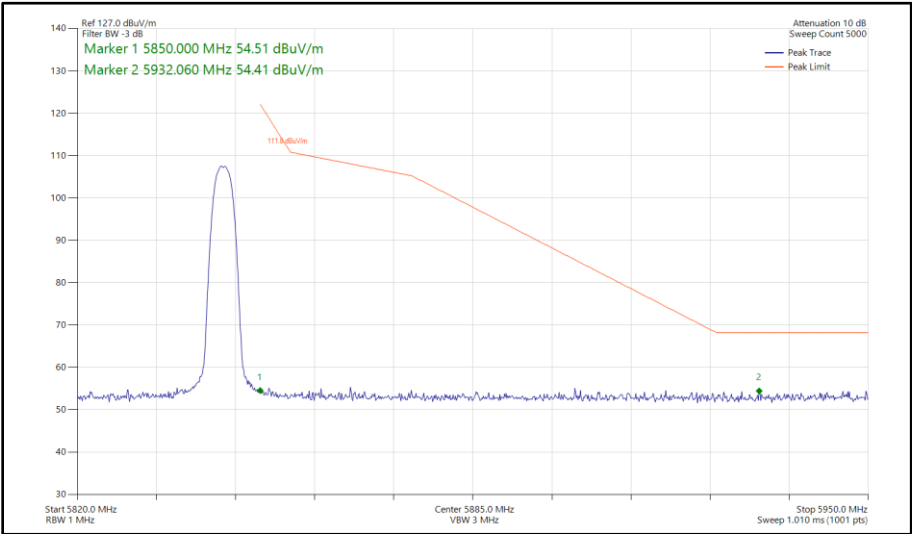


Figure 173 - Bluetooth HDR4, SISO, Core 0 - 5844 MHz
Band Edge Frequency 5850 MHz

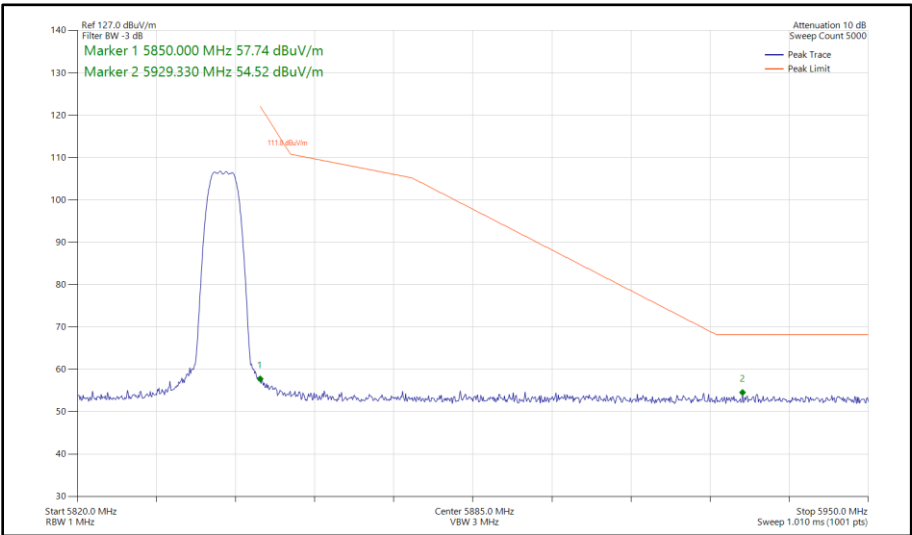


Figure 174 - Bluetooth HDR8, SISO, Core 0 - 5844 MHz
Band Edge Frequency 5850 MHz

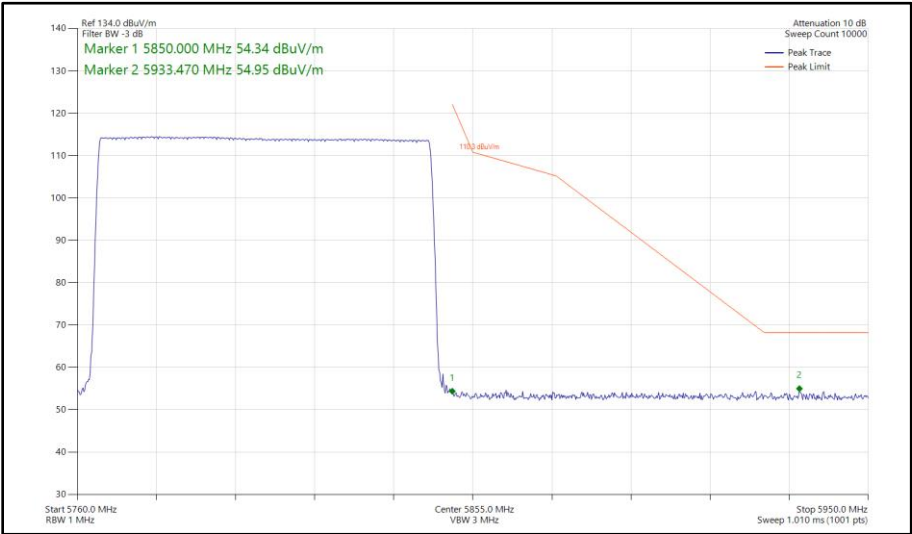


Figure 175 - Bluetooth DH5, SISO, Core 0 - 5766-5844 MHz
Band Edge Frequency 5850 MHz

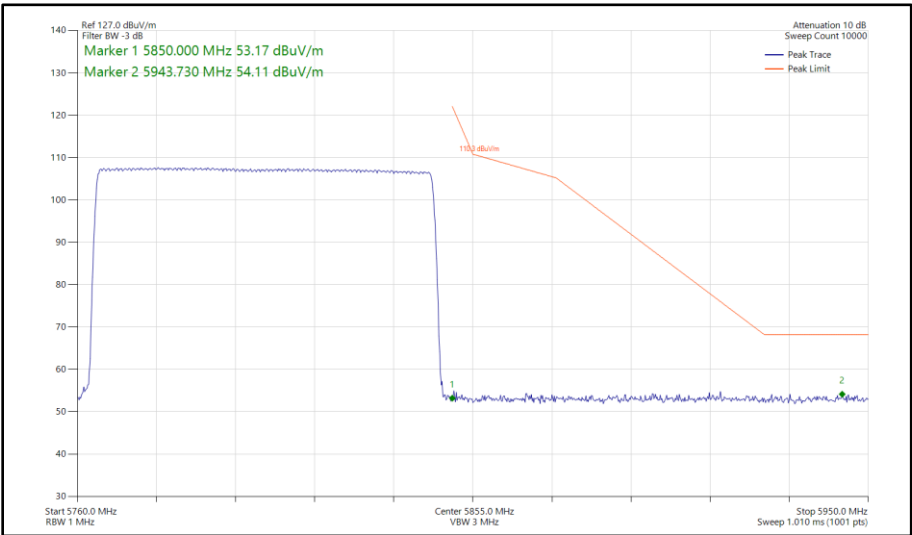


Figure 176 - Bluetooth HDR4, SISO, Core 0 - 5766-5844 MHz
Band Edge Frequency 5850 MHz

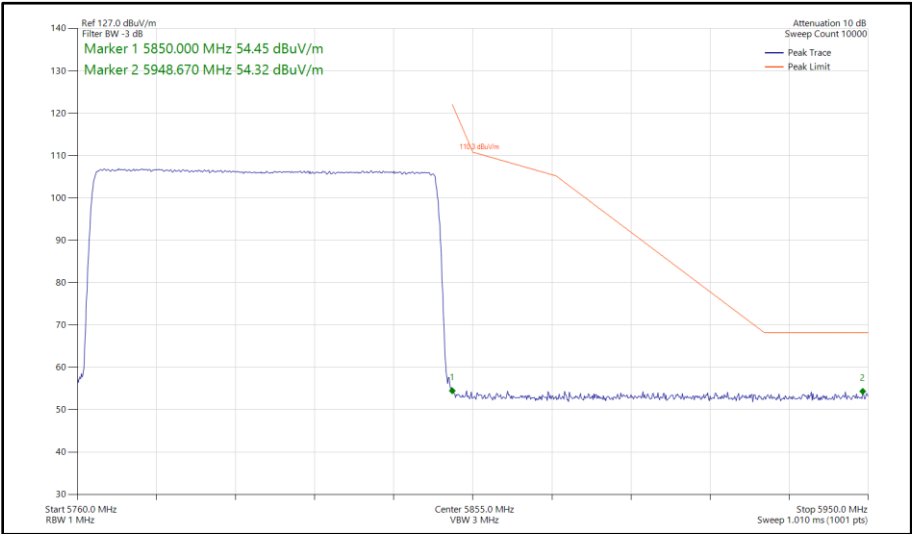


Figure 177 - Bluetooth HDR8, SISO, Core 0 - 5766-5844 MHz
Band Edge Frequency 5850 MHz



iPA - Core 1 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)
Static	DH5	5733	5725	54.86
Static	HDR4	5733	5725	54.03
Static	HDR8	5733	5725	54.29
Hopping	DH5	5733-5811	5725	55.32
Hopping	HDR4	5733-5811	5725	54.73
Hopping	HDR8	5733-5811	5725	54.13
Static	DH5	5844	5850	55.32
Static	HDR4	5844	5850	53.79
Static	HDR8	5844	5850	54.83
Hopping	DH5	5766-5844	5850	54.22
Hopping	HDR4	5766-5844	5850	54.27
Hopping	HDR8	5766-5844	5850	54.86

Table 103 - SISO Authorised Band Edge Results

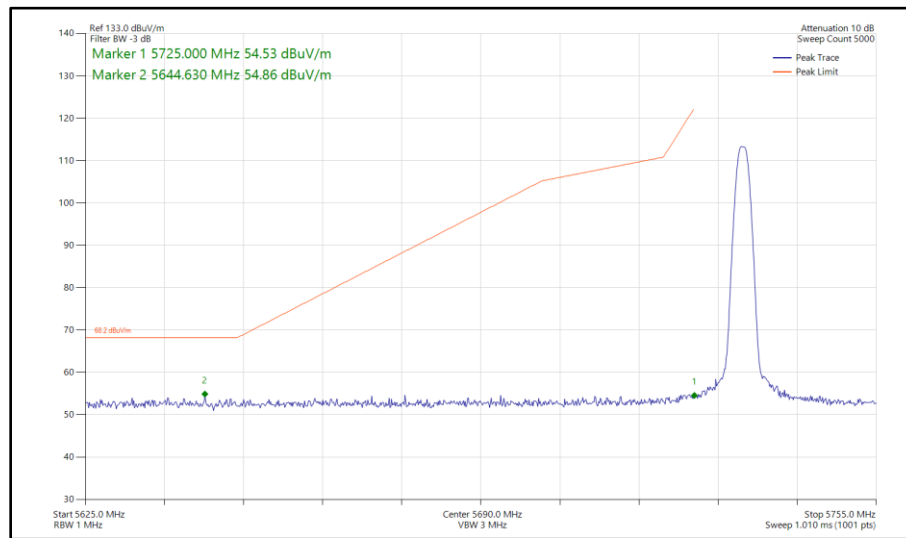


Figure 178 - Bluetooth DH5, SISO, Core 1 - 5733 MHz
Band Edge Frequency 5725 MHz

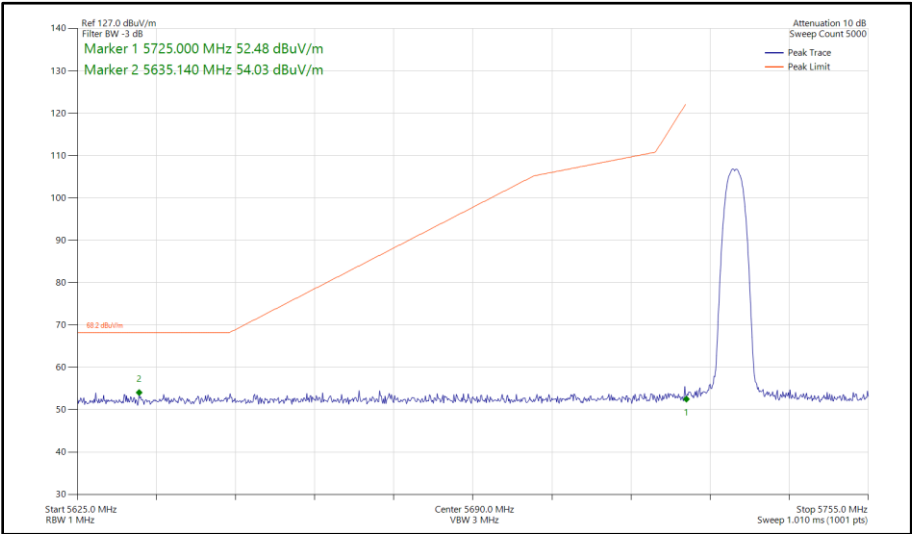


Figure 179 - Bluetooth HDR4, SISO, Core 1 - 5733 MHz
Band Edge Frequency 5725 MHz

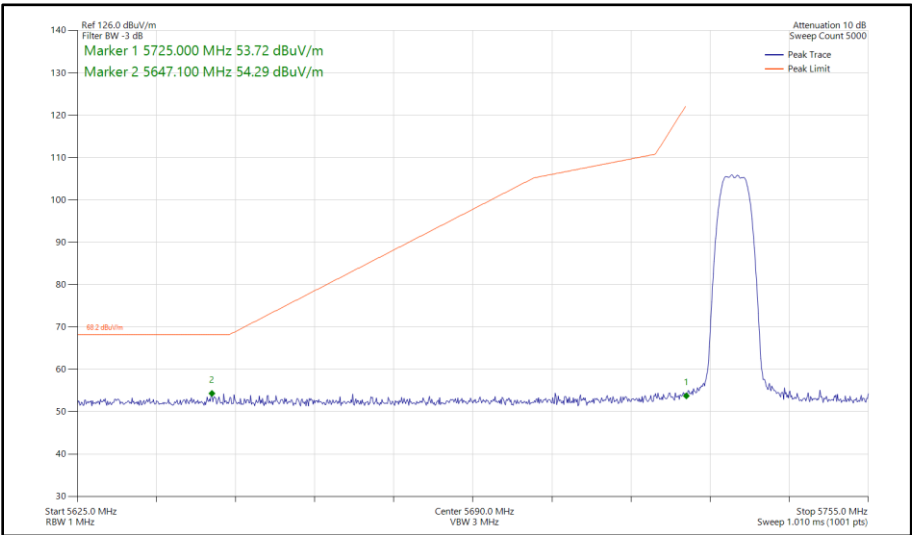


Figure 180 - Bluetooth HDR8, SISO, Core 1 - 5733 MHz
Band Edge Frequency 5725 MHz

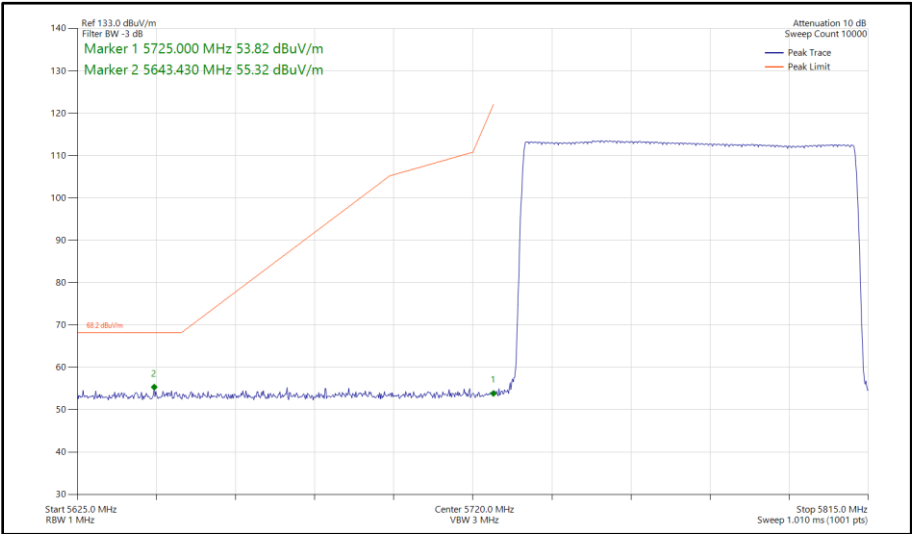


Figure 181 - Bluetooth DH5, SISO, Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

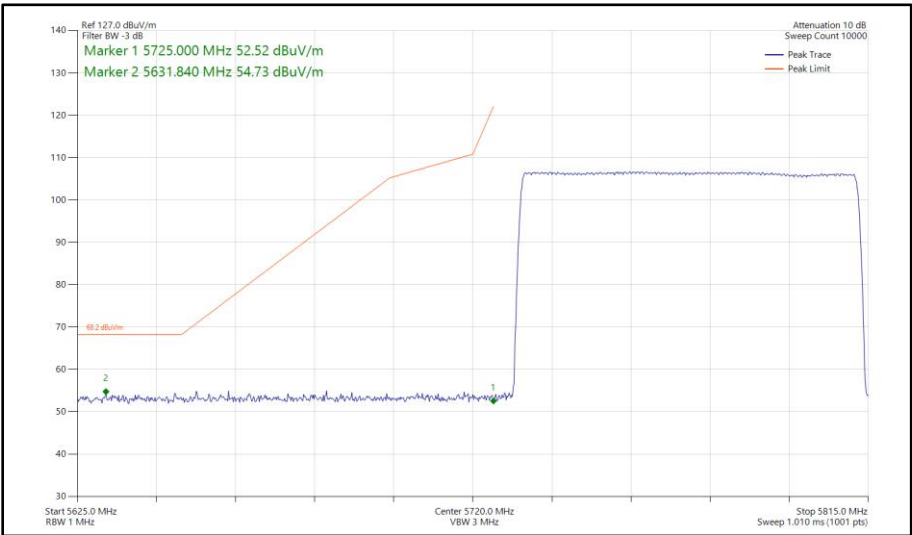


Figure 182 - Bluetooth HDR4, SISO, Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

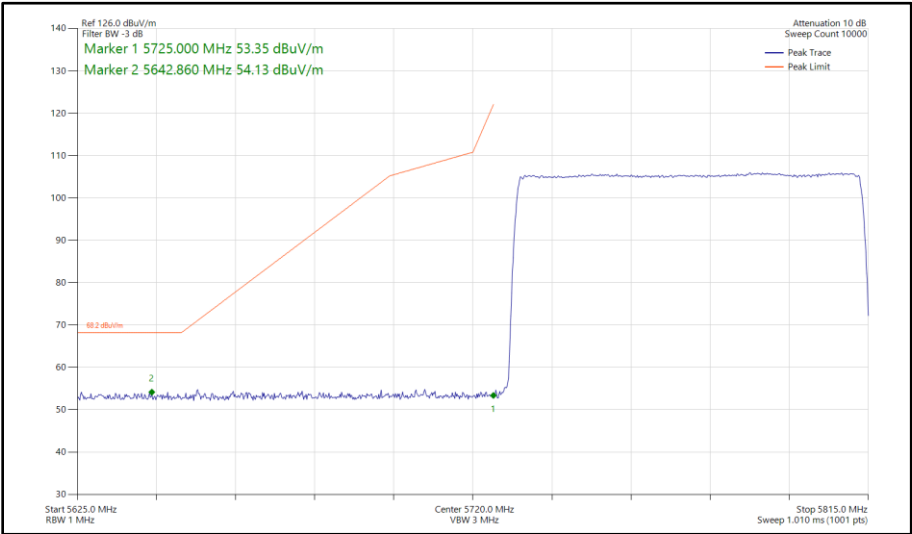


Figure 183 - Bluetooth HDR8, SISO, Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

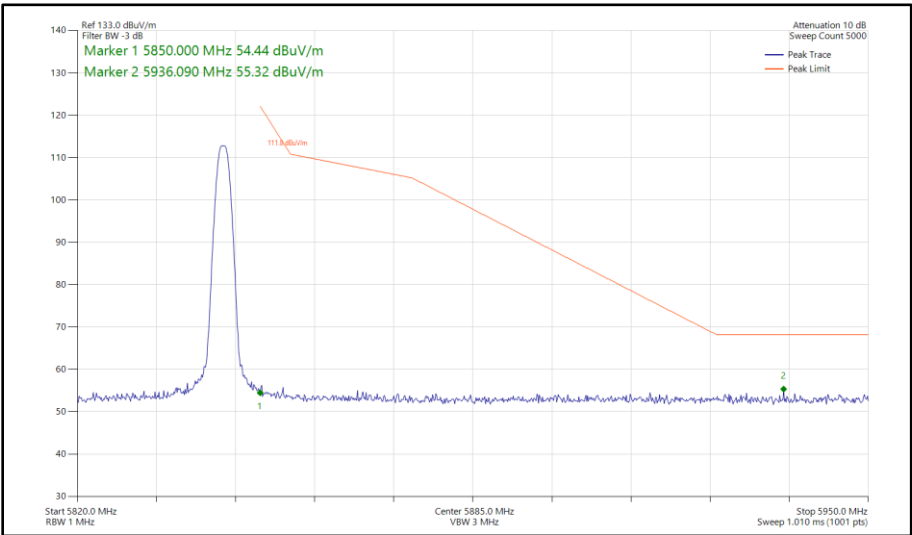


Figure 184 - Bluetooth DH5, SISO, Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz

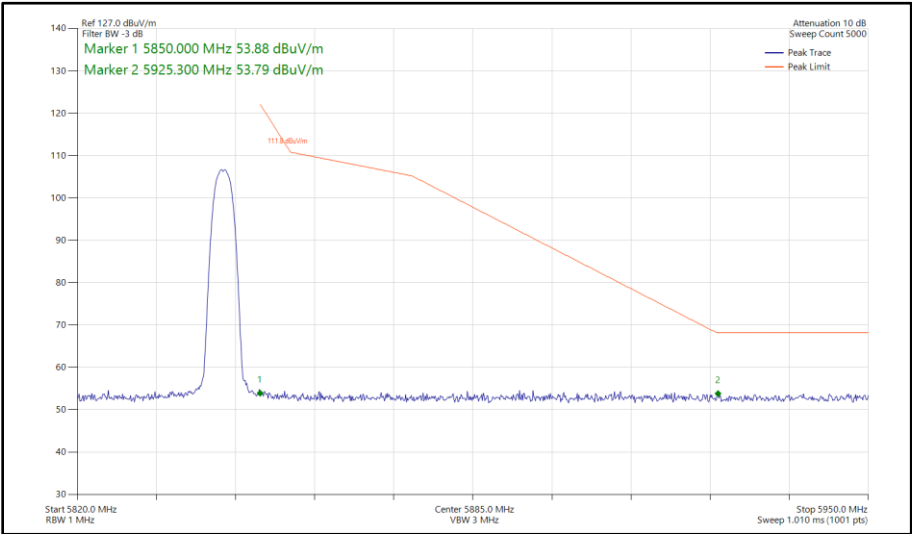


Figure 185 - Bluetooth HDR4, SISO, Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz

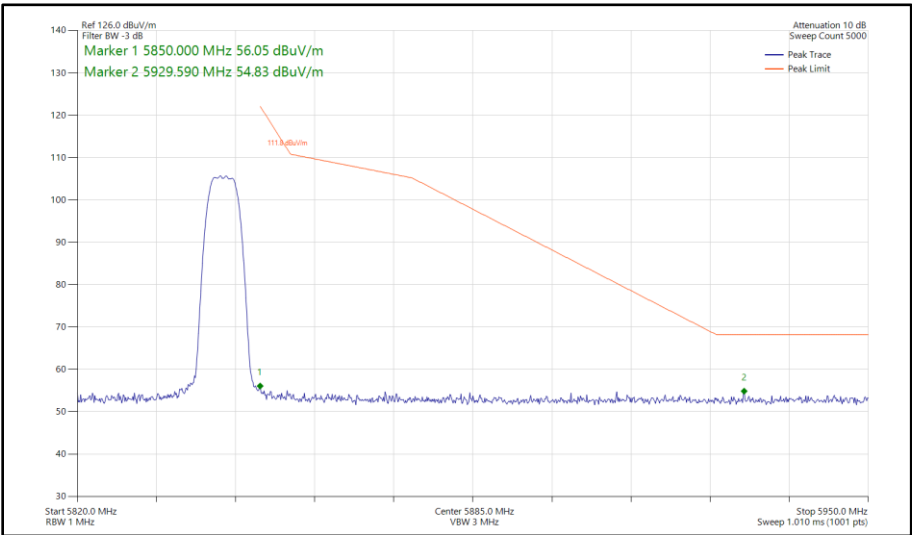


Figure 186 - Bluetooth HDR8, SISO, Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz

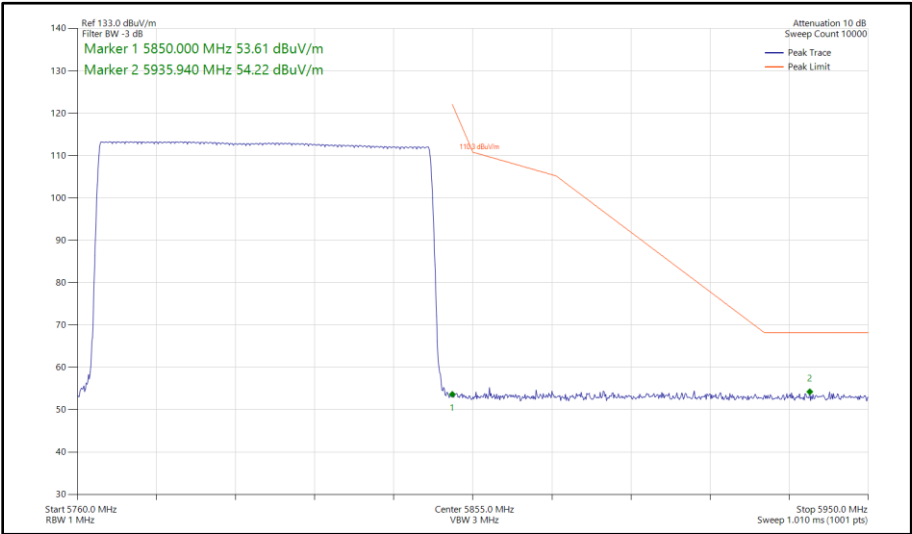


Figure 187 - Bluetooth DH5, SISO, Core 1 - 5766-5844 MHz
Band Edge Frequency 5850 MHz

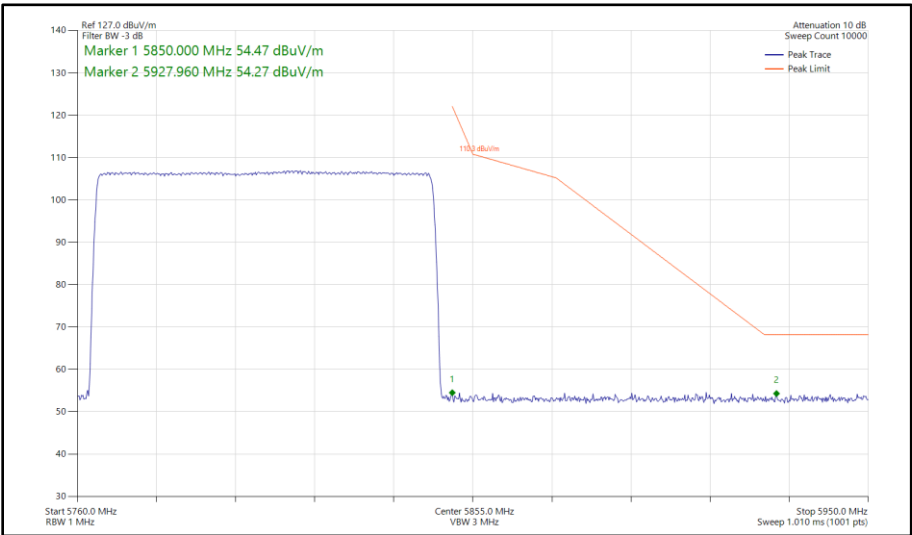
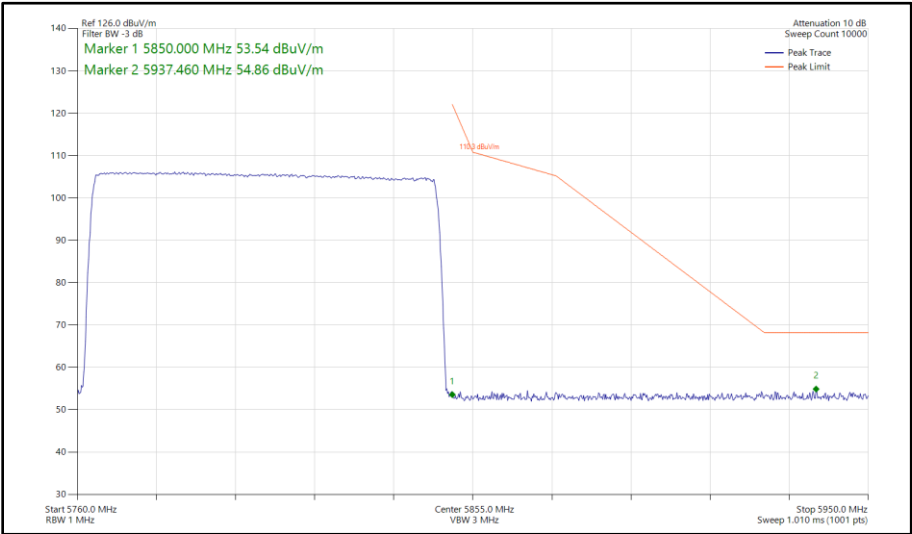


Figure 188 - Bluetooth HDR4, SISO, Core 1 - 5766-5844 MHz
Band Edge Frequency 5850 MHz



**Figure 189 - Bluetooth HDR8, SISO, Core 1 - 5766-5844 MHz
Band Edge Frequency 5850 MHz**



iPA - Core 0 - Core 1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)
Static	DH5	5733	5725	54.25
Static	HDR4	5733	5725	54.01
Static	HDR8	5733	5725	53.88
Hopping	DH5	5733-5811	5725	55.48
Hopping	HDR4	5733-5811	5725	55.05
Hopping	HDR8	5733-5811	5725	54.11
Static	DH5	5844	5850	54.70
Static	HDR4	5844	5850	54.82
Static	HDR8	5844	5850	55.17
Hopping	DH5	5766-5844	5850	54.76
Hopping	HDR4	5766-5844	5850	54.34
Hopping	HDR8	5766-5844	5850	54.67

Table 104 - MIMO Authorised Band Edge Results

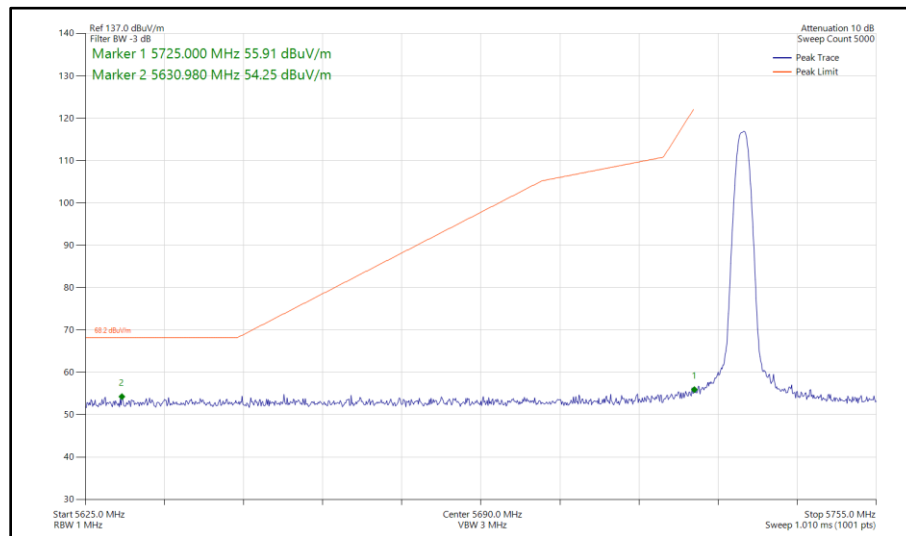


Figure 190 - Bluetooth DH5, MIMO, Core 0 - Core 1 - 5733 MHz
Band Edge Frequency 5725 MHz

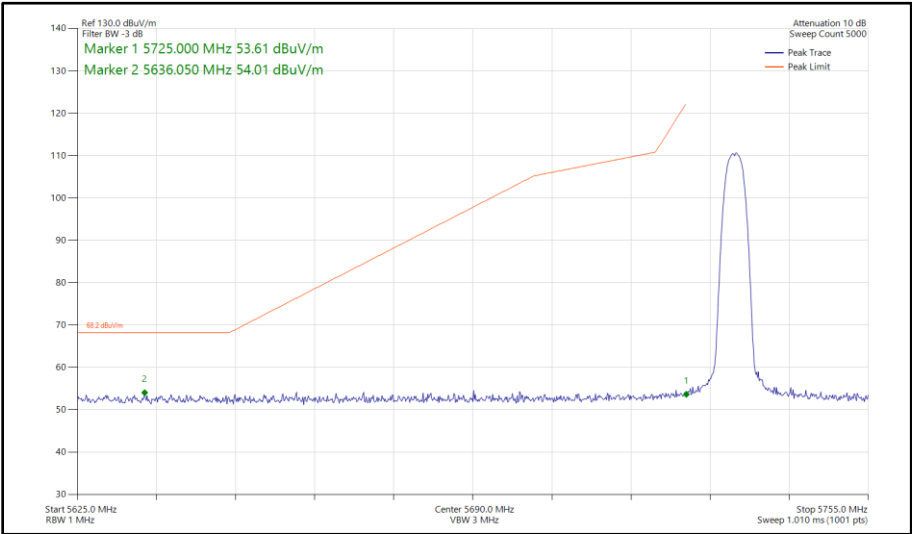


Figure 191 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 5733 MHz
Band Edge Frequency 5725 MHz

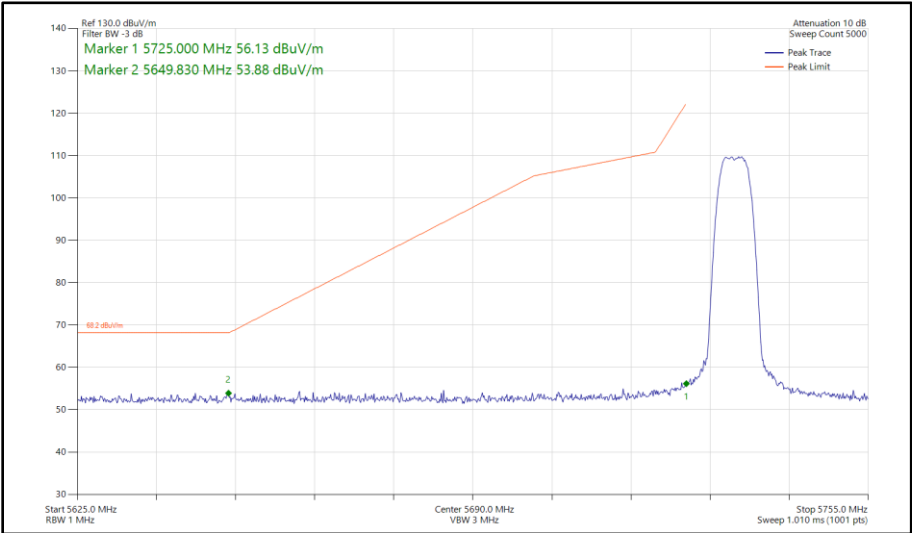


Figure 192 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 5733 MHz
Band Edge Frequency 5725 MHz

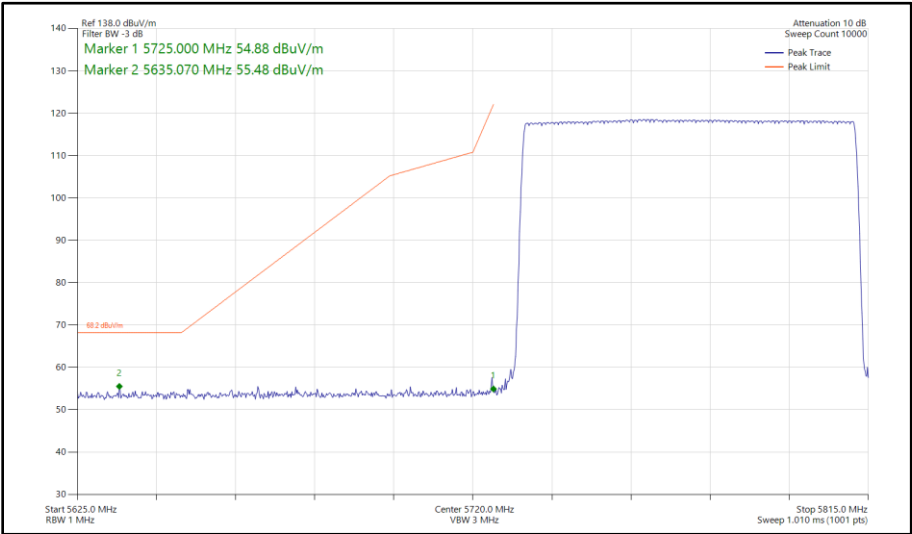


Figure 193 - Bluetooth DH5, MIMO, Core 0 - Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

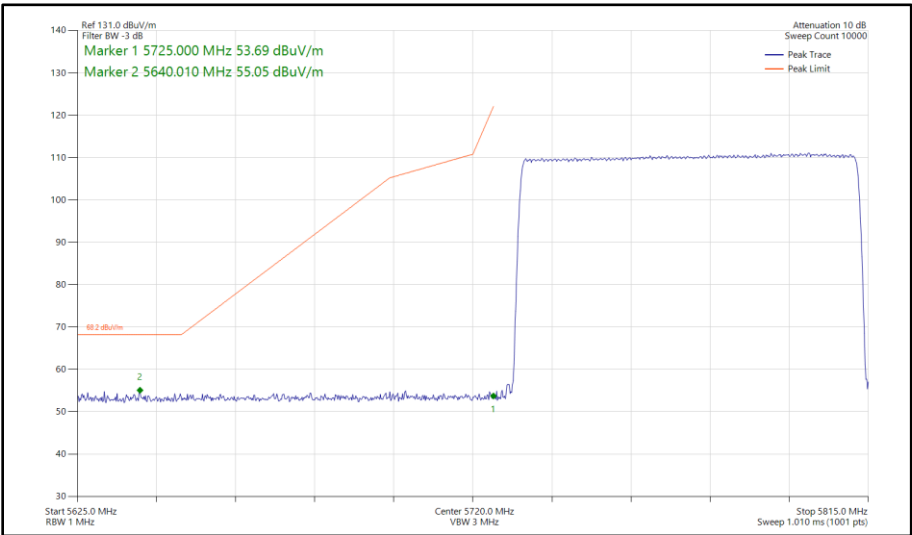


Figure 194 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

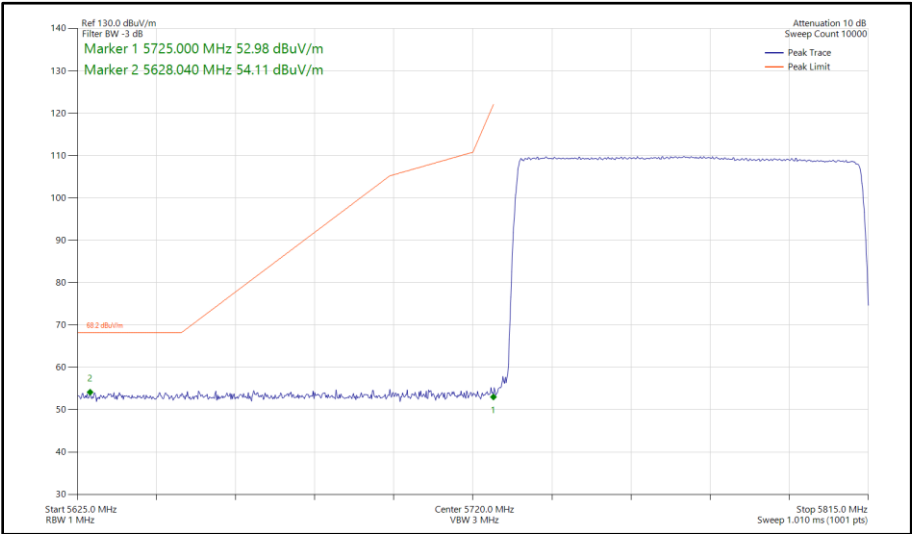


Figure 195 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

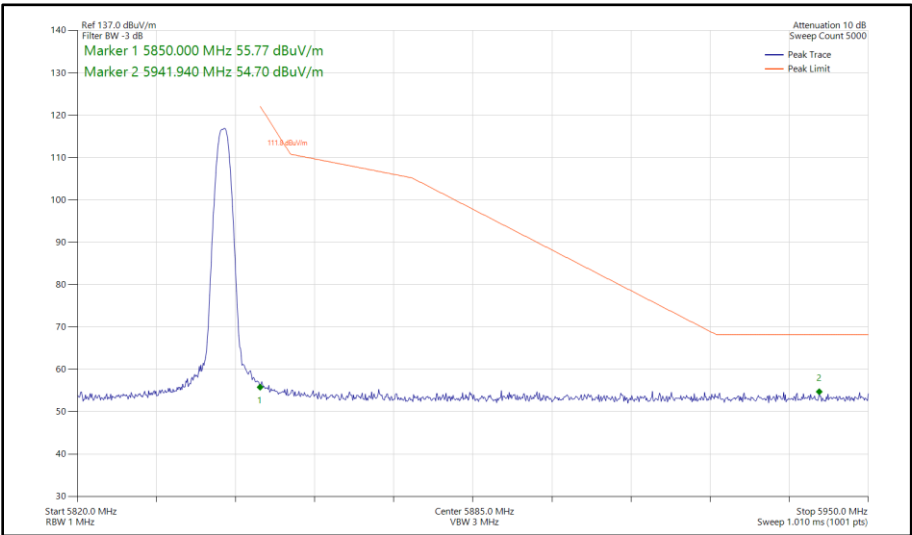


Figure 196 - Bluetooth DH5, MIMO, Core 0 - Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz

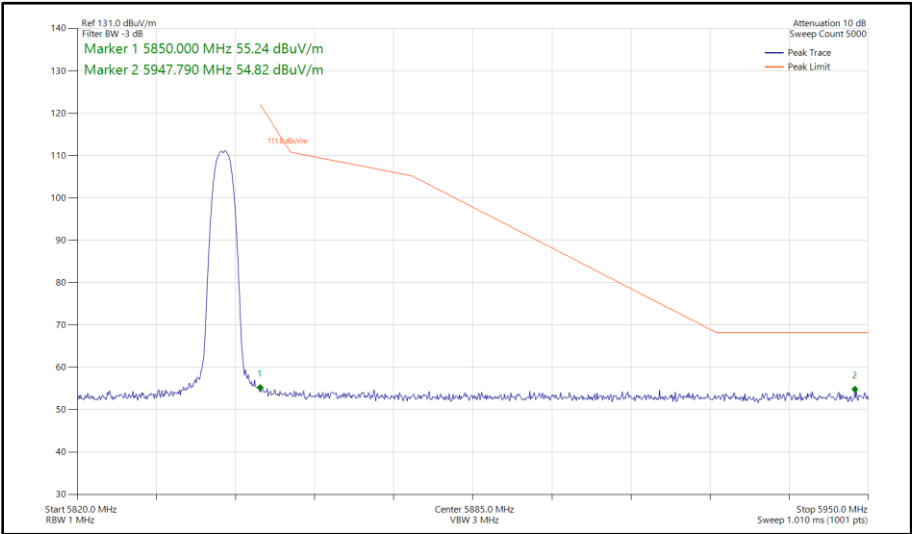


Figure 197 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz

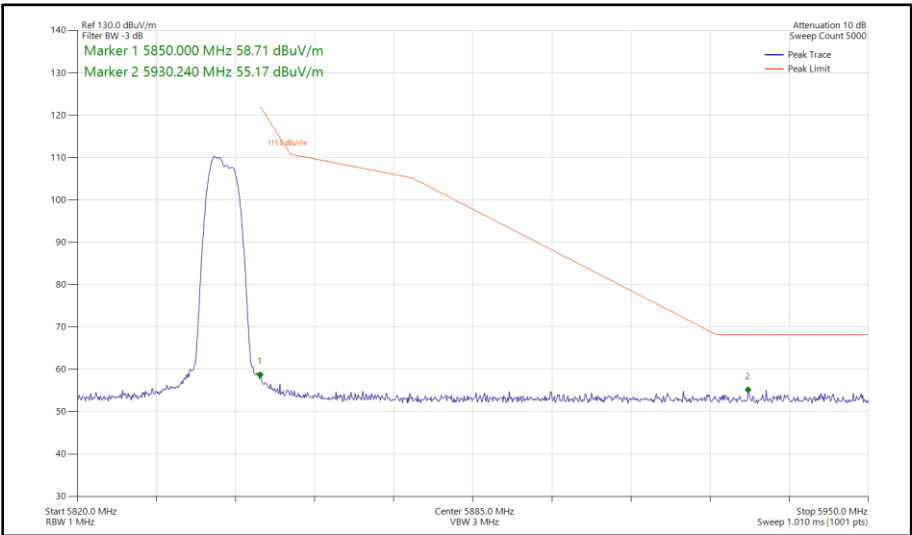


Figure 198 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz

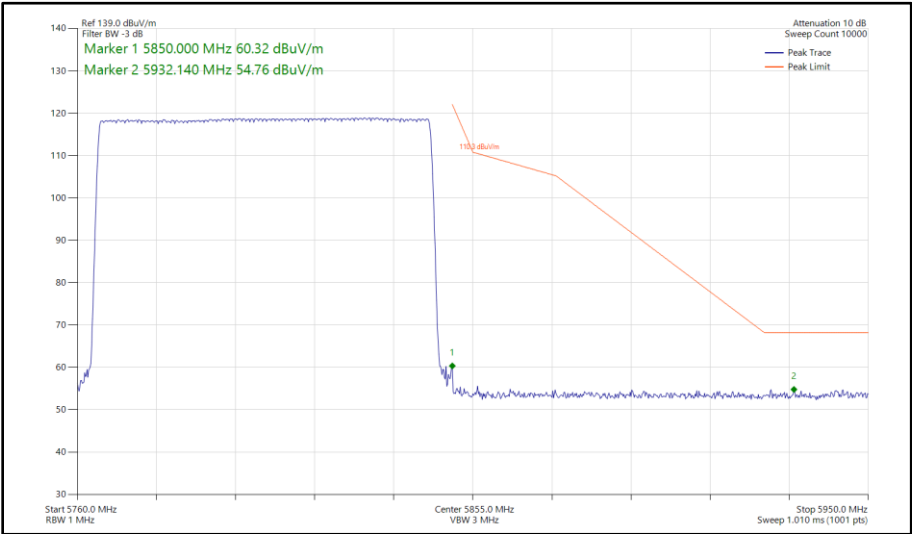


Figure 199 - Bluetooth DH5, MIMO, Core 0 - Core 1 - 5766-5844 MHz
Band Edge Frequency 5850 MHz

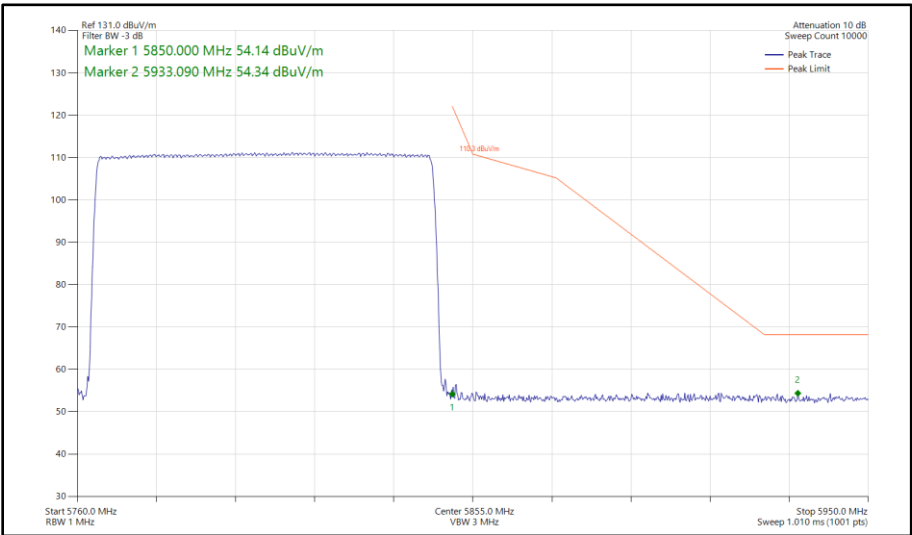


Figure 200 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 5766-5844 MHz
Band Edge Frequency 5850 MHz

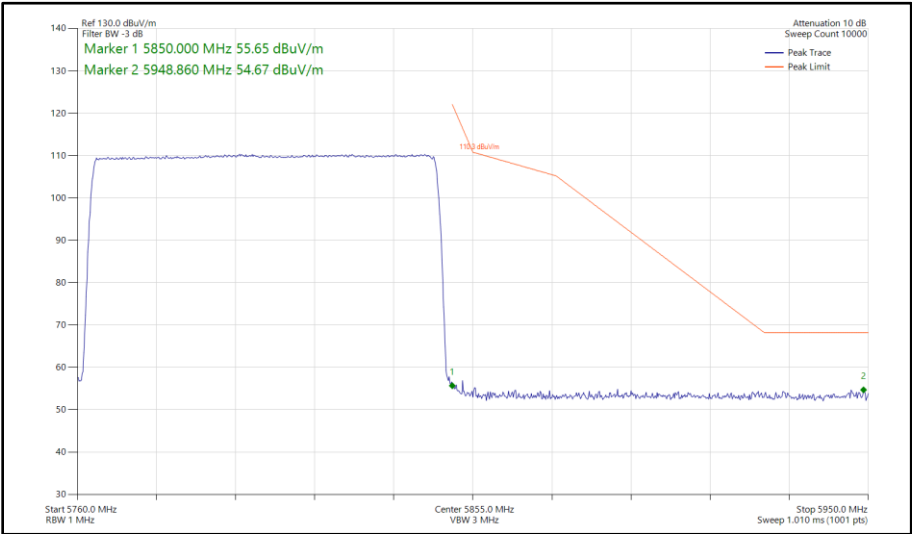


Figure 201 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 5766-5844 MHz Band Edge Frequency
5850 MHz



ePA - Core 0 (SISO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)
Static	HDR4	5733	5725	54.80
Static	HDR8	5733	5725	54.53
Hopping	HDR4	5733-5811	5725	55.32
Hopping	HDR8	5733-5811	5725	55.70
Static	HDR4	5844	5850	54.48
Static	HDR8	5844	5850	54.94
Hopping	HDR4	5766-5844	5850	54.55
Hopping	HDR8	5766-5844	5850	55.07

Table 105 - SISO Authorised Band Edge Results

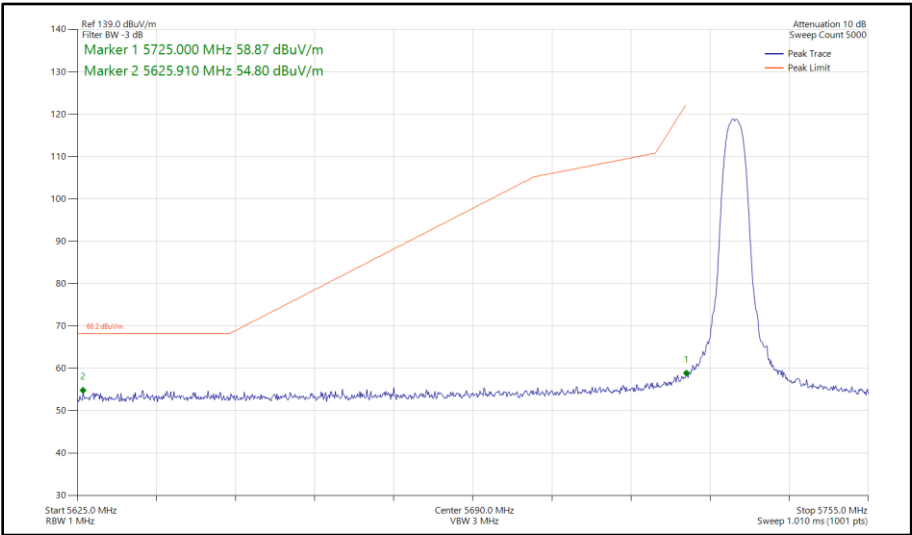


Figure 202 - Bluetooth HDR4, SISO, Core 0 - 5733 MHz
Band Edge Frequency 5725 MHz

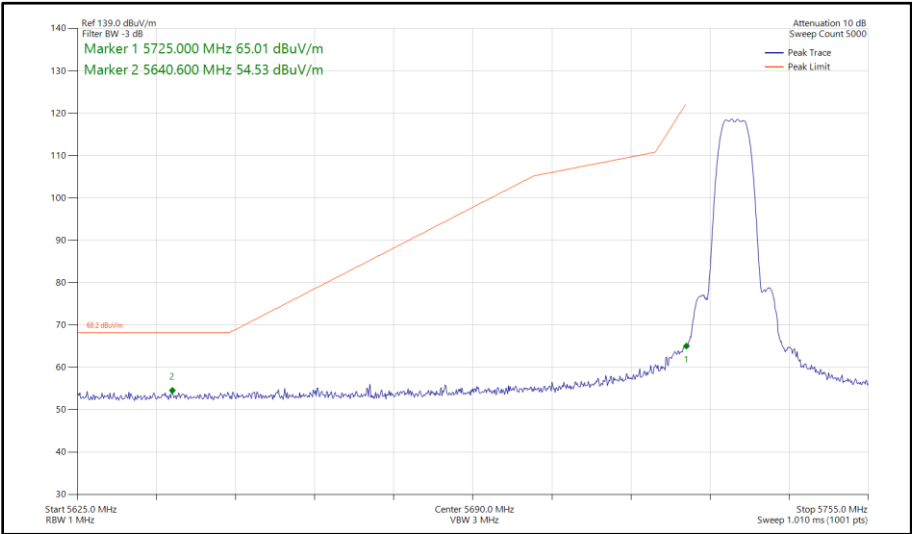


Figure 203 - Bluetooth HDR8, SISO, Core 0 - 5733 MHz
Band Edge Frequency 5725 MHz

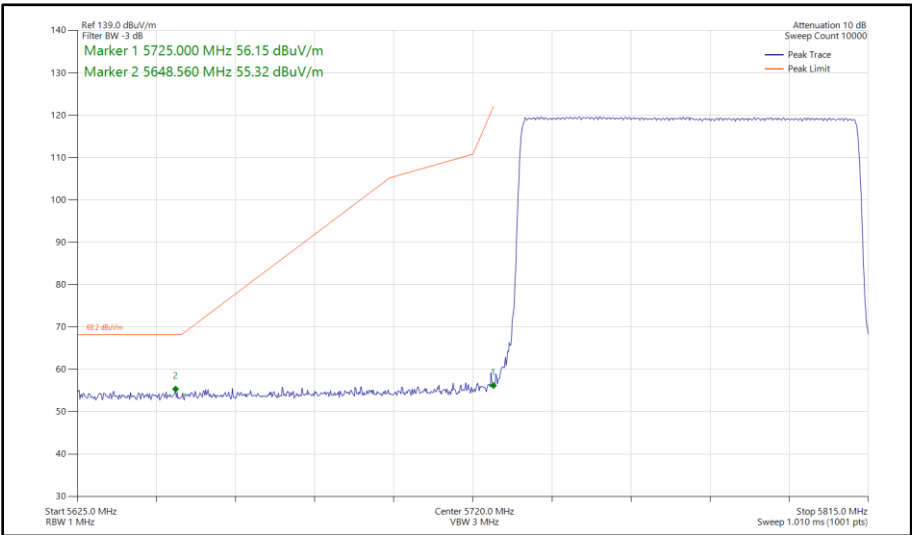


Figure 204 - Bluetooth HDR4, SISO, Core 0 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

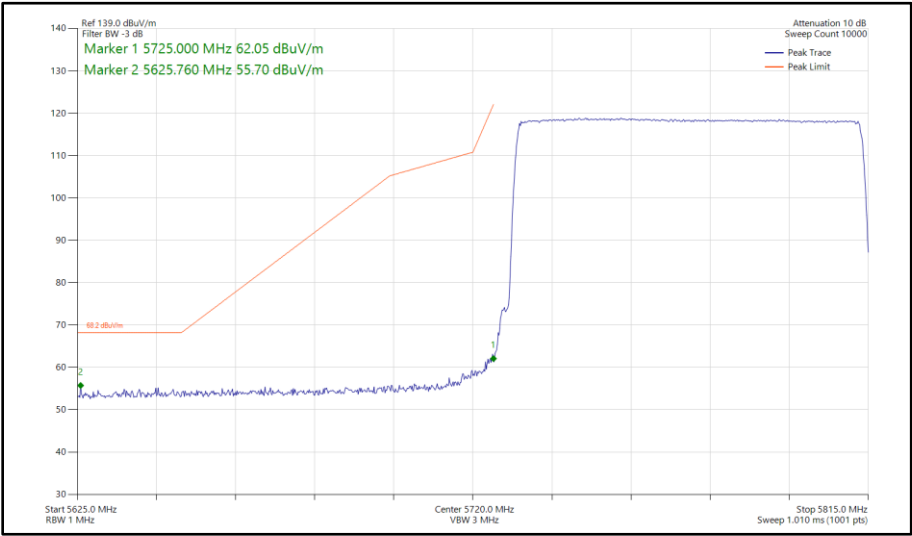


Figure 205 - Bluetooth HDR8, SISO, Core 0 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

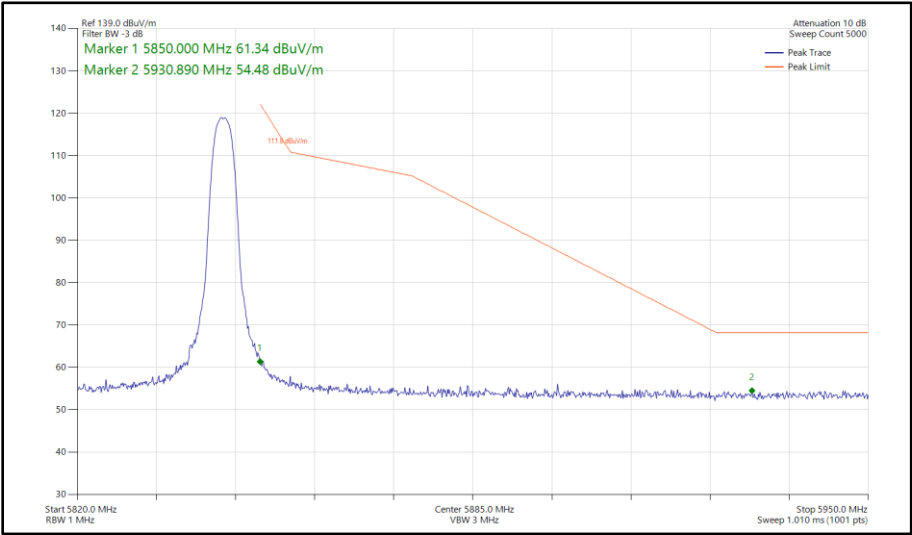


Figure 206 - Bluetooth HDR4, SISO, Core 0 - 5844 MHz
Band Edge Frequency 5850 MHz

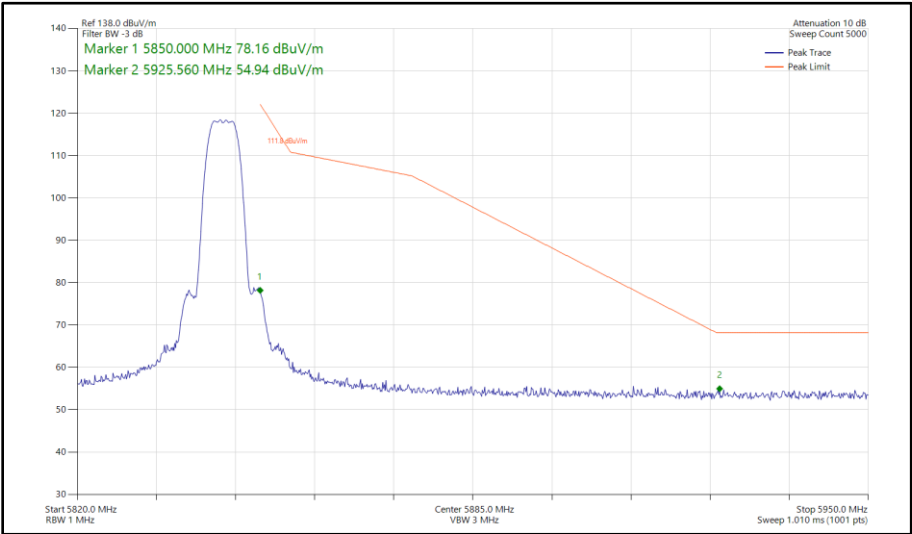


Figure 207 - Bluetooth HDR8, SISO, Core 0 - 5844 MHz
Band Edge Frequency 5850 MHz

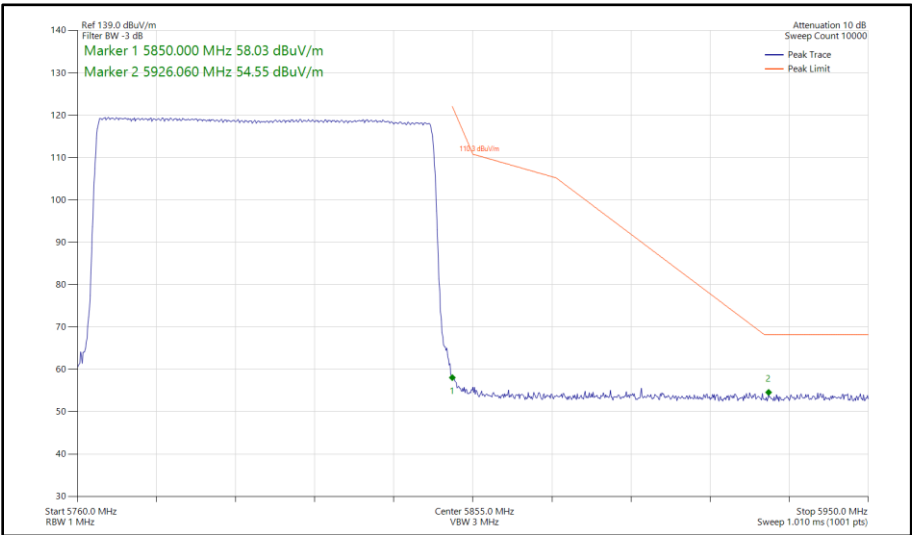


Figure 208 - Bluetooth HDR4, SISO, Core 0 - 5766-5844 MHz
Band Edge Frequency 5850 MHz

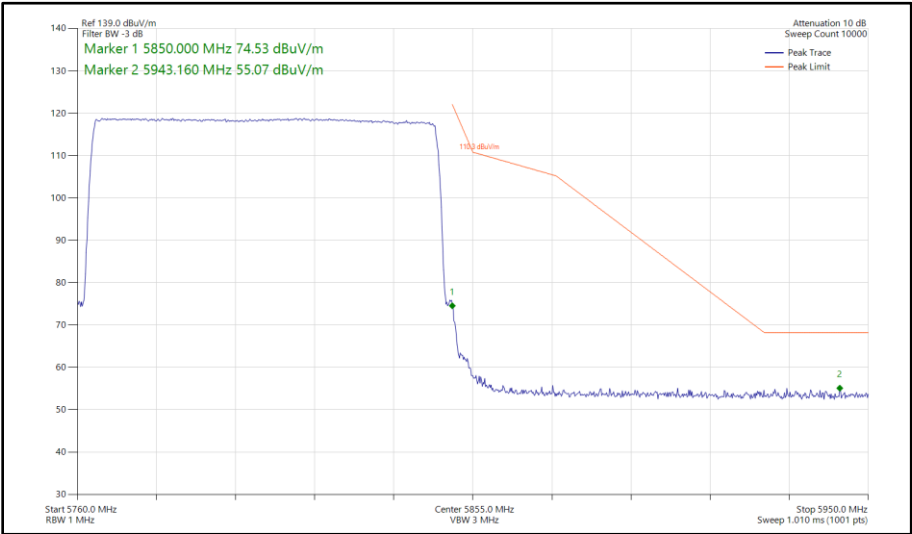


Figure 209 - Bluetooth HDR8, SISO, Core 0 - 5766-5844 MHz
Band Edge Frequency 5850 MHz

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)
Static	HDR4	5733	5725	54.44
Static	HDR8	5733	5725	54.50
Hopping	HDR4	5733-5811	5725	55.56
Hopping	HDR8	5733-5811	5725	55.91
Static	HDR4	5844	5850	55.64
Static	HDR8	5844	5850	55.26
Hopping	HDR4	5766-5844	5850	54.71
Hopping	HDR8	5766-5844	5850	54.61

Ref 138.0 dBuV/m
Filter BW -3 dB
Marker 1 5725.000 MHz 56.93 dBuV/m
Marker 2 5636.570 MHz 54.44 dBuV/m

Attenuation 10 dB
Sweep Count 5000

60.2 dBuV/m

2

1

Start 5625.0 MHz
RBW 1 MHz

Center 5690.0 MHz
VBW 3 MHz

Stop 5755.0 MHz
Sweep 1.010 ms (1001 pts)

Peak Trace
Peak Limit

Page 165 of 201

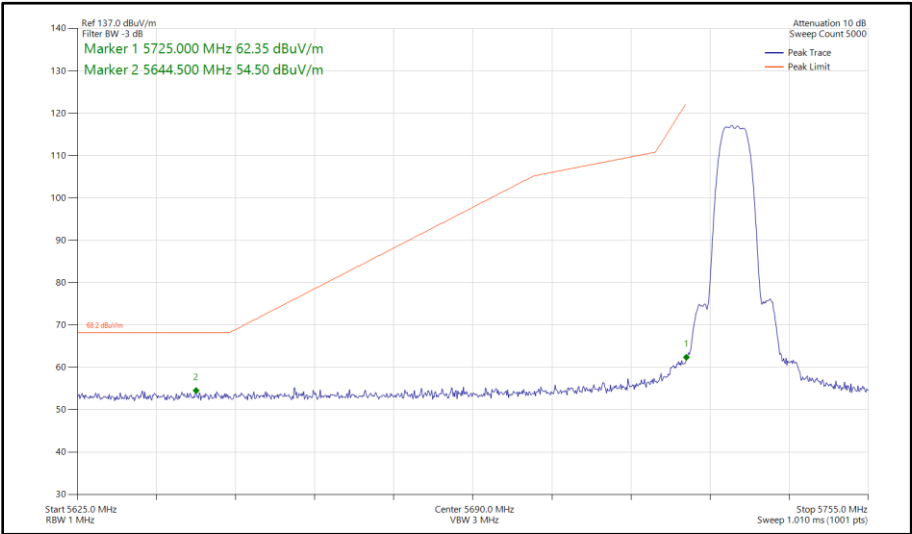


Figure 211 - Bluetooth HDR8, SISO, Core 1 - 5733 MHz
Band Edge Frequency 5725 MHz

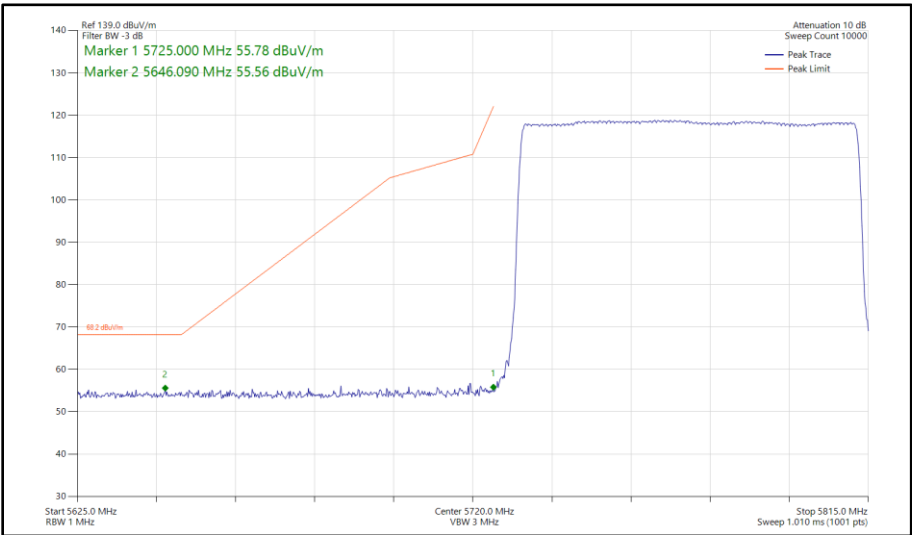


Figure 212 - Bluetooth HDR4, SISO, Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

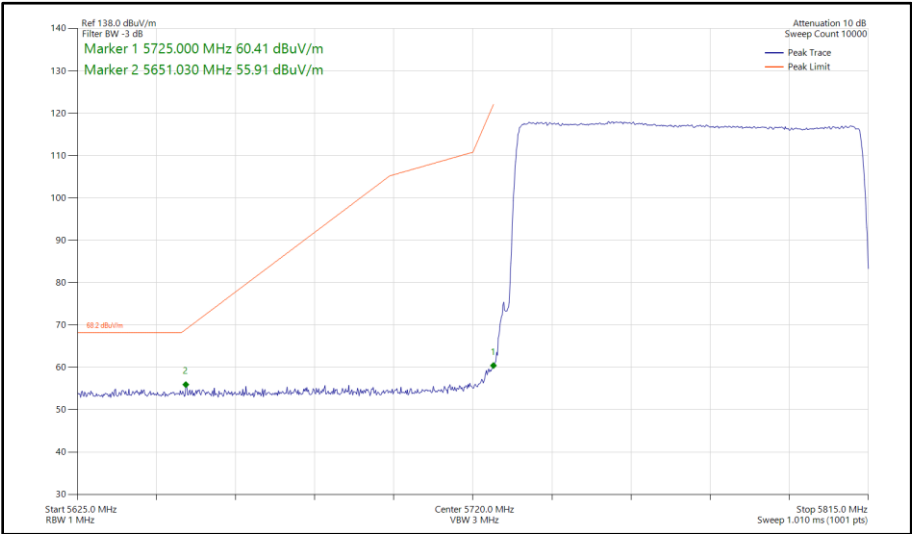


Figure 213 - Bluetooth HDR8, SISO, Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz

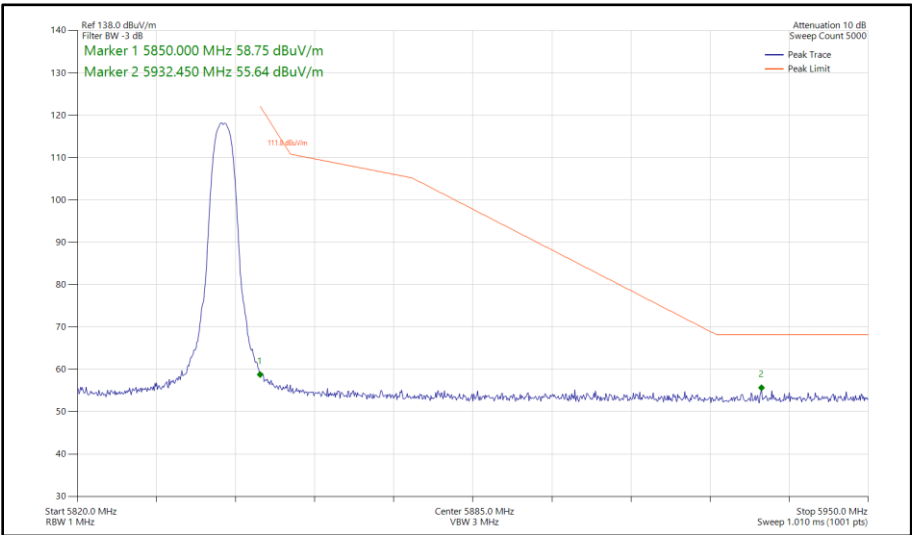


Figure 214 - Bluetooth HDR4, SISO, Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz

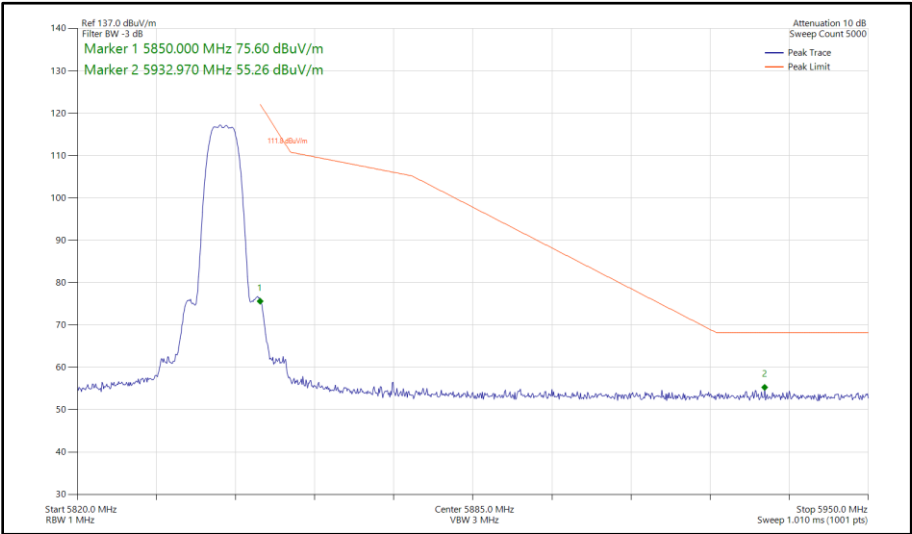


Figure 215 - Bluetooth HDR8, SISO, Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz

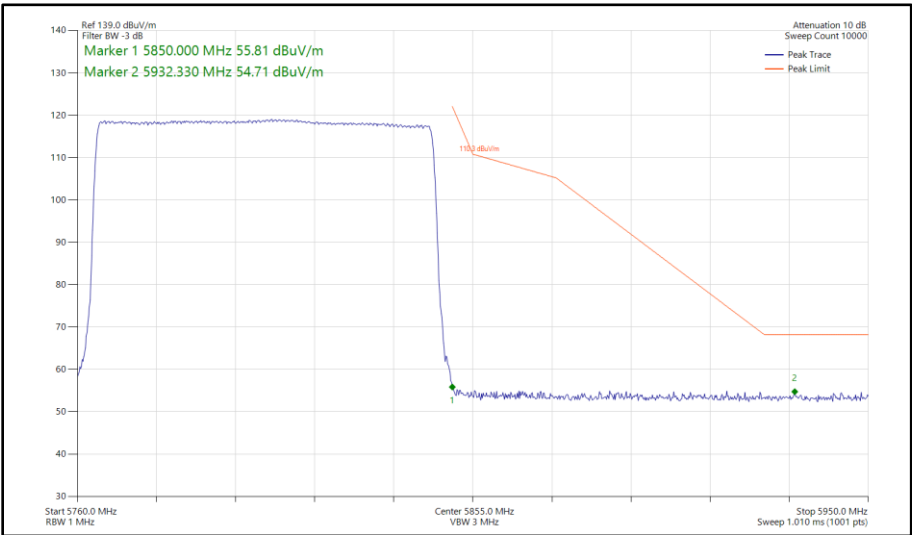
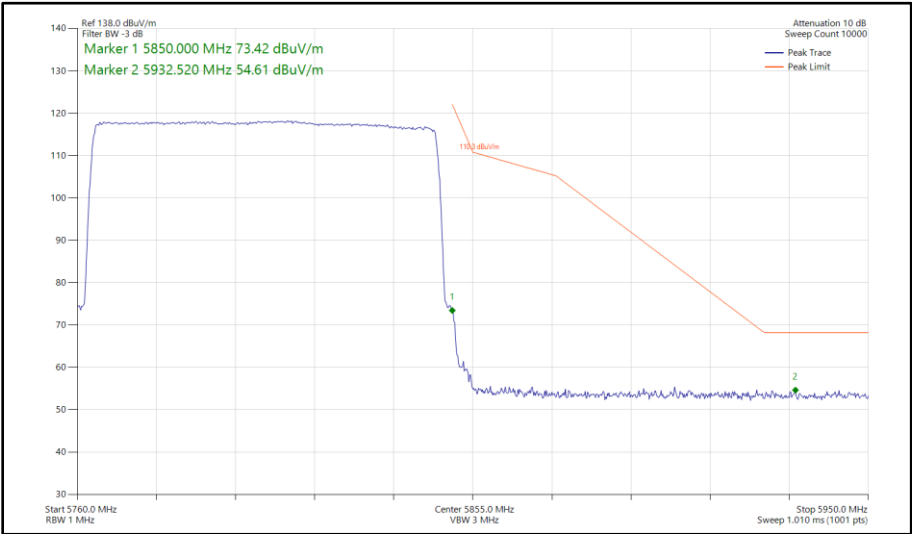


Figure 216 - Bluetooth HDR4, SISO, Core 1 - 5766-5844 MHz
Band Edge Frequency 5850 MHz



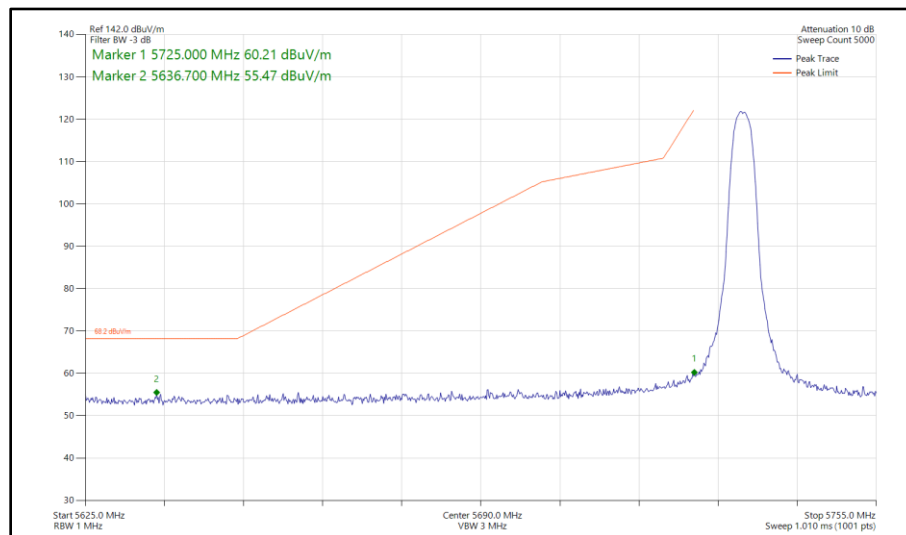
**Figure 217 - Bluetooth HDR8, SISO, Core 1 - 5766-5844 MHz
Band Edge Frequency 5850 MHz**



ePA - Core 0 - Core 1 (MIMO)

Mode	Packet Type	TX Frequency (MHz)	Band Edge Frequency (MHz)	Peak Level (dBμV/m)
Static	HDR4	5733	5725	55.47
Static	HDR8	5733	5725	55.05
Hopping	HDR4	5733-5811	5725	55.52
Hopping	HDR8	5733-5811	5725	55.41
Static	HDR4	5844	5850	55.54
Static	HDR8	5844	5850	55.48
Hopping	HDR4	5766-5844	5850	55.22
Hopping	HDR8	5766-5844	5850	55.64

Table 107 - MIMO Authorised Band Edge Results



**Figure 218 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 5733 MHz
Band Edge Frequency 5725 MHz**

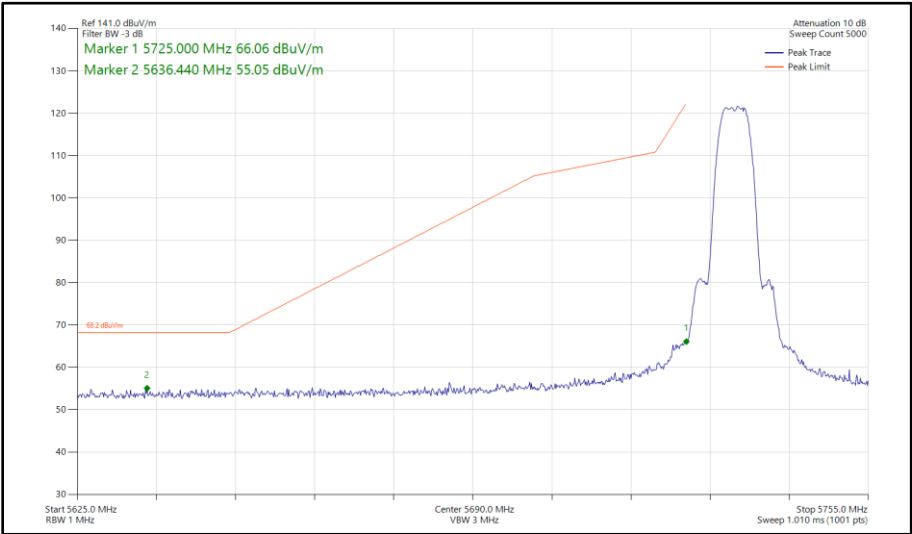


Figure 219 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 5733 MHz
Band Edge Frequency 5725 MHz

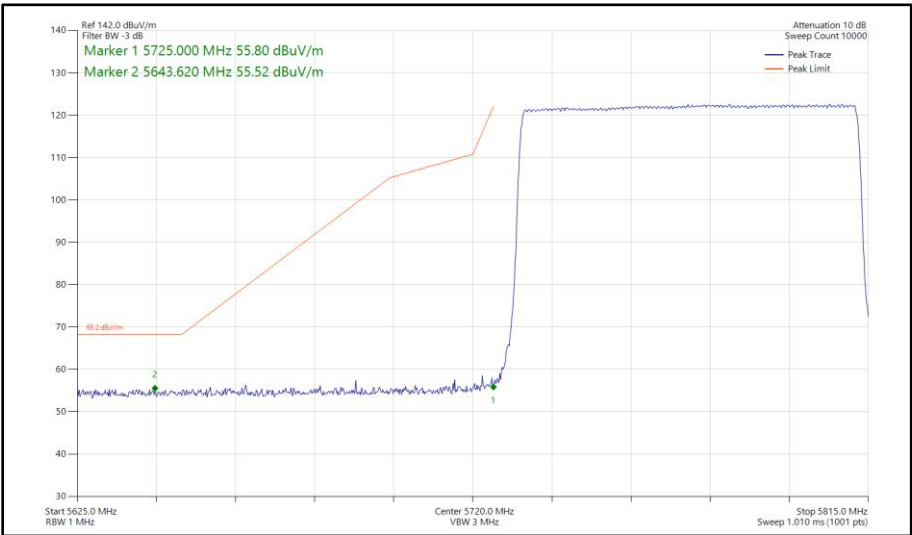
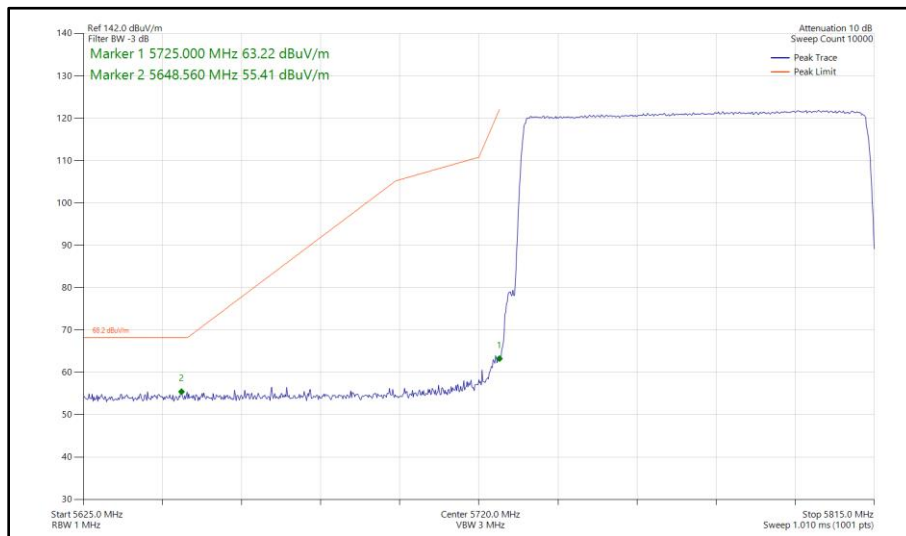
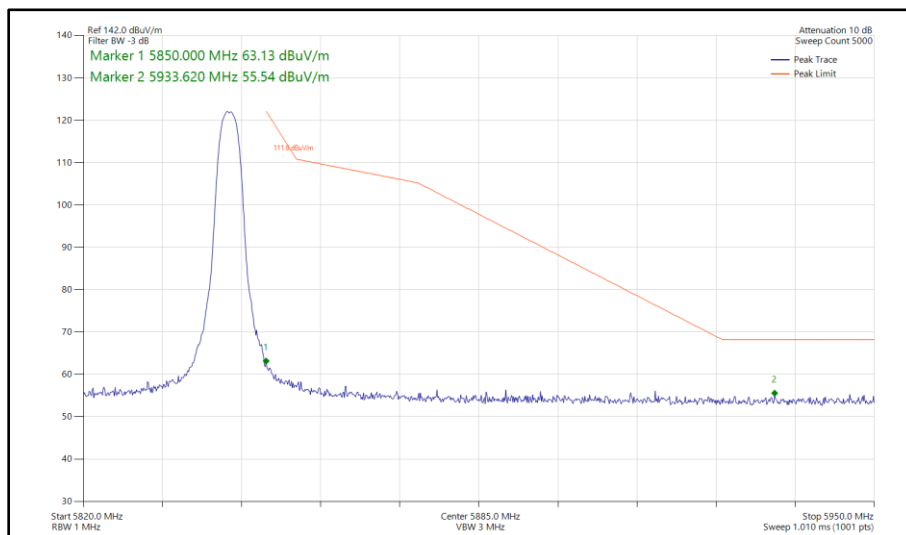


Figure 220 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz



**Figure 221 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 5733-5811 MHz
Band Edge Frequency 5725 MHz**



**Figure 222 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz**

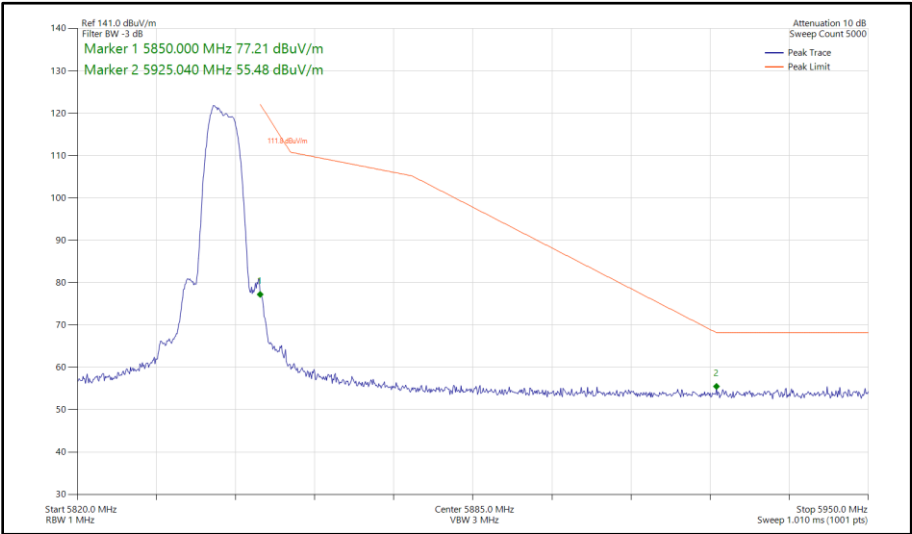


Figure 223 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 5844 MHz
Band Edge Frequency 5850 MHz

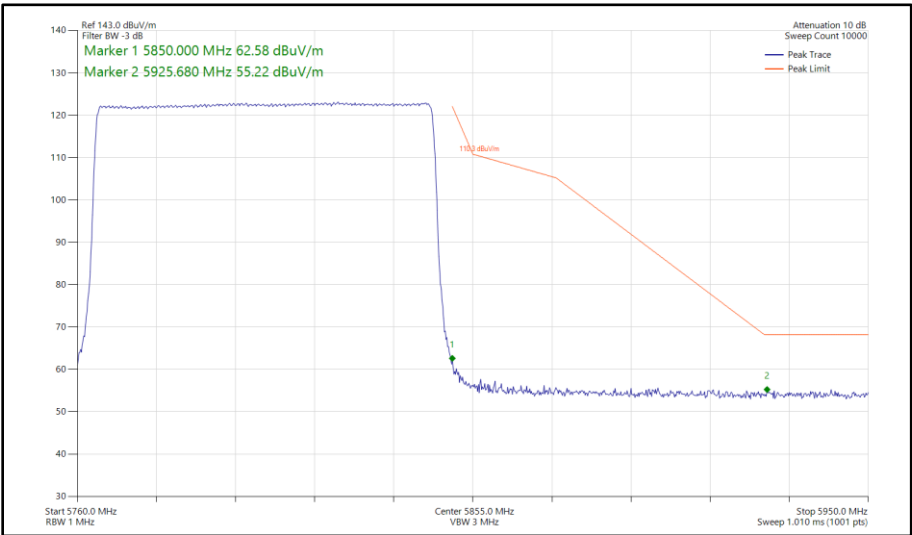


Figure 224 - Bluetooth HDR4, MIMO, Core 0 - Core 1 - 5766-5844 MHz
Band Edge Frequency 5850 MHz

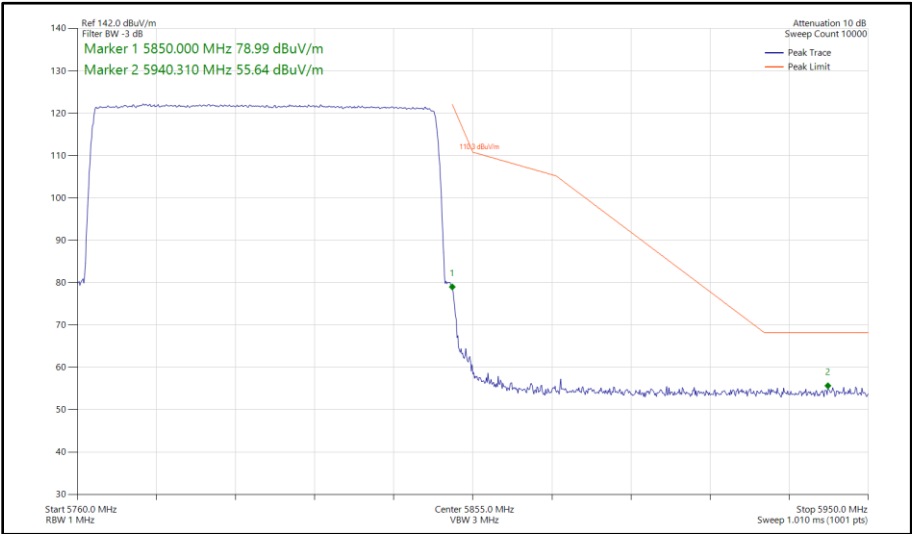


Figure 225 - Bluetooth HDR8, MIMO, Core 0 - Core 1 - 5766-5844 MHz
Band Edge Frequency 5850 MHz



FCC 47 CFR Part 15E, Limit Clause 15.407(b)(1)(2)(3)(4)

For transmitters operating in the 5.15-5.25 GHz band: ≤ -27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.25-5.35 GHz band: ≤ -27 dBm/MHz outside 5150-5350 MHz.

For transmitters operating in the 5.47-5.725 GHz band: ≤ -27 dBm/MHz outside 5470-5725 MHz

For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

ISED RSS-247, Limit Clause 6.2.1.2, 6.2.2.2, 6.2.3.2, 6.2.4.2 and 6.2.5.3

For transmitters with operating frequencies in the band 5150-5250 MHz, all emissions outside the band 5150-5350 MHz shall not exceed -27 dBm/MHz e.i.r.p. Any unwanted emissions that fall into the band 5250-5350 MHz shall be attenuated below the channel power by at least 26 dB.

For transmitters with operating frequencies in the bands 5250-5350 MHz and 5470-5725 MHz, all emissions outside the band 5250-5350 MHz and 5470-5725 MHz shall not exceed -27 dBm/MHz e.i.r.p.

Devices operating in the band 5725-5850 MHz shall have e.i.r.p. of unwanted emissions comply with the following:

- a) 27 dBm/MHz at frequencies from the band edges decreasing linearly to 15.6 dBm/MHz at 5 MHz above or below the band edges;
- b) 15.6 dBm/MHz at 5 MHz above or below the band edges decreasing linearly to 10 dBm/MHz at 25 MHz above or below the band edges;
- c) 10 dBm/MHz at 25 MHz above or below the band edges decreasing linearly to -27 dBm/MHz at 75 MHz above or below the band edges; and
- d) -27 dBm/MHz at frequencies more than 75 MHz above or below the band edges.

For the 5895 MHz band edge and above, all devices shall be measured using average detection and shall comply with the following e.i.r.p. spectral density limits:

Fixed outdoor access points and fixed outdoor client devices shall not exceed -27 dBm/MHz e.i.r.p. spectral density at or above the 5895 MHz band edge.

Indoor access points or indoor subordinate devices shall not exceed 15 dBm/MHz e.i.r.p. spectral density at the 5895 MHz band edge and shall decrease linearly to not exceed -7 dBm/MHz e.i.r.p. spectral density at or above 5925 MHz.

Client devices shall not exceed -5 dBm/MHz e.i.r.p. spectral density at the 5895 MHz band edge and shall decrease linearly to not exceed -27 dBm/MHz e.i.r.p. spectral density at or above 5925 MHz.



2.5.7 Test Location and Test Equipment Used

This test was carried out in RF Chamber 15 and RF Chamber 16.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Cable (18 GHz)	Rosenberger	LU7-071-1000	5102	12	21-Nov-2024
Emissions Software	TUV SUD	EmX V3.2.0	5125	-	Software
EMI Test Receiver	Rohde & Schwarz	ESW44	5911	12	11-Sep-2024
1500W (300V 12A) AC Power Supply	iTech	IT7324	5955	-	O/P Mon
1500W (300V 12A) AC Power Supply	iTech	IT7324	5957	-	O/P Mon
5m Semi-Anechoic Chamber (Dual-Axis), Chamber 15	Albatross Projects	RF Chamber 15	5963	36	28-Apr-2025
Compact Antenna Mast	Maturo Gmbh	CAM4.0-P	5964	-	TU
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5966	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5967	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5968	-	TU
3m Semi-Anechoic Chamber, Chamber16	Albatross Projects	RF Chamber 16	5972	36	24-May-2025
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5973	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5974	-	TU
Turntable	Maturo Gmbh	TT1.5SI	5975	-	TU
Cable (SMA to SMA 1m)	Junkosha	MWX221-01000AMSAMS/A	5997	12	14-Sep-2024
Cable (N to N 1m)	Junkosha	MWX221-01000AMSAMS/B	6009	12	20-May-2025
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6140	12	05-May-2025
Horn Antenna (1-10 GHz)	Schwarzbeck	BBHA9120B	6142	12	05-May-2025
Digital Multimeter	Fluke	115	6146	12	06-Jun-2025
Digital Multimeter	Fluke	115	6147	12	06-Jun-2025
Humidity & Temperature meter	R.S Components	1364	6148	12	21-Jul-2024
SAC Switch Unit	TUV SUD	TUV_SSU_001	6191	12	18-Dec-2024
EMI Test Receiver	Rohde & Schwarz	ESW44	6294	12	06-Jan-2025
Cable (SMA to SMA 8m)	Junkosha	MWX221-08000AMSAMS/B	6319	12	04-Feb-2025
Humidity and Temperature Meter	R.S Components	1364	6486	12	04-Jun-2025
10dB attenuator	RF-Lambda	RFS5G08B10SMF	6732	12	07-Jan-2025
1m Cable	Junkosha	MWX241-01000AMSAMS/B	6740	12	01-Feb-2025
6.5m Cable	Junkosha	MWX221-06500AMSAMS/B	6744	12	01-Feb-2025
Preamplifier	Hewlett Packard	HP8449B	6762	12	28-Feb-2025

Table 108

TU - Traceability Unscheduled

O/P Mon - Output Monitored using calibrated equipment



2.6 Spurious Radiated Emissions

2.6.1 Specification Reference

FCC 47 CFR Part 15E, Clause 15.209 and 15.407 (b)
ISED RSS-247, Clause 6.2
ISED RSS-GEN, Clause 6.13 and 8.9

2.6.2 Equipment Under Test and Modification State

A3112, S/N: D2XW4JQFNK - Modification State 0

2.6.3 Date of Test

17-June-2024 to 28-June-2024

2.6.4 Test Method

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 C63.10 clause 6.2.3.

Measurements were undertaken from 30 MHz to 40 GHz on Channel 5203 (5203 MHz) and Channel 5788 (5788 MHz).

For the purpose of this testing, spurious emissions were limited to 1 GHz to 40 GHz on all other test channels.

The plots shown are the characterization of the EUT. The limits on the plots represent the most stringent case for restricted bands, (54/74 dBuV/m @ 3 m and 64/84 dBuV/m @ 1m) when compared to -27 dBm/MHz EIRP outside restricted bands. The limits shown have been used as a threshold to determine where further measurements are necessary. Where results are within 20dB 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 dBuV/m to uV/m:
 $10^{(\text{Field Strength in dBuV/m}/20)}$

EIRP was converted to field strength at 3m using the following formula:
 $\text{Field Strength (dBuV/m at 3 m)} = \text{EIRP (dBm)} + 95.2 \text{ dB}$

Radiated spurious emissions tests have been conducted in DH5 (high power) mode as this represents worst case with respect to Power and PSD.

2.6.5 Test Setup Diagram

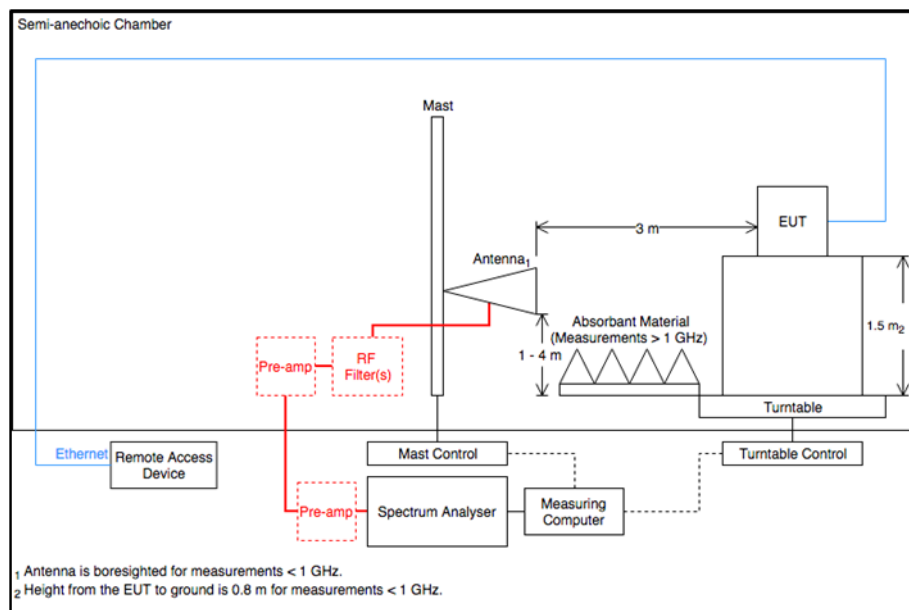


Figure 226 - Radiated Emissions Test Setup Diagram

2.6.6 Environmental Conditions

Ambient Temperature	20.4 - 24.2 °C
Relative Humidity	38.3 - 55.5 %

2.6.7 Test Results

Narrowband

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
5119.894	36.72	54.00	-17.28	RMS	253	100	Vertical

Table 109 - 5162 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

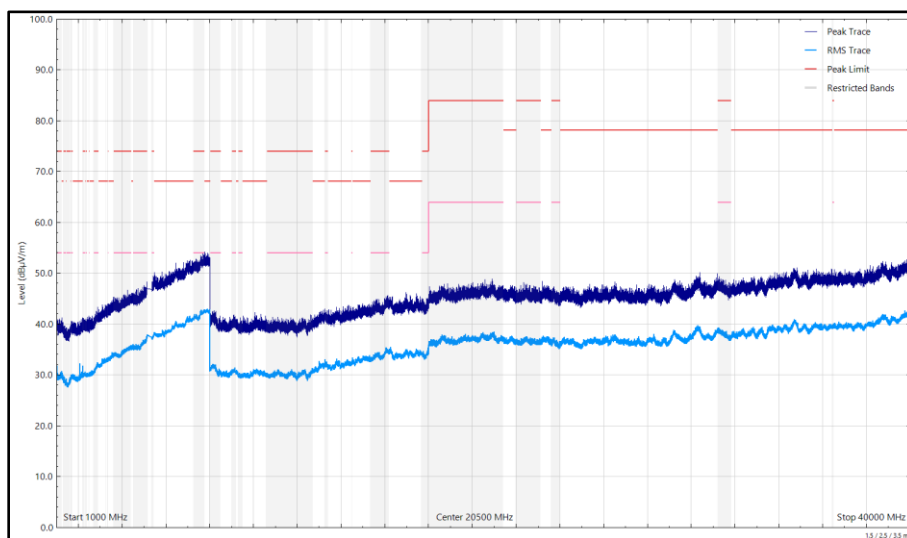


Figure 227 - 5162 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

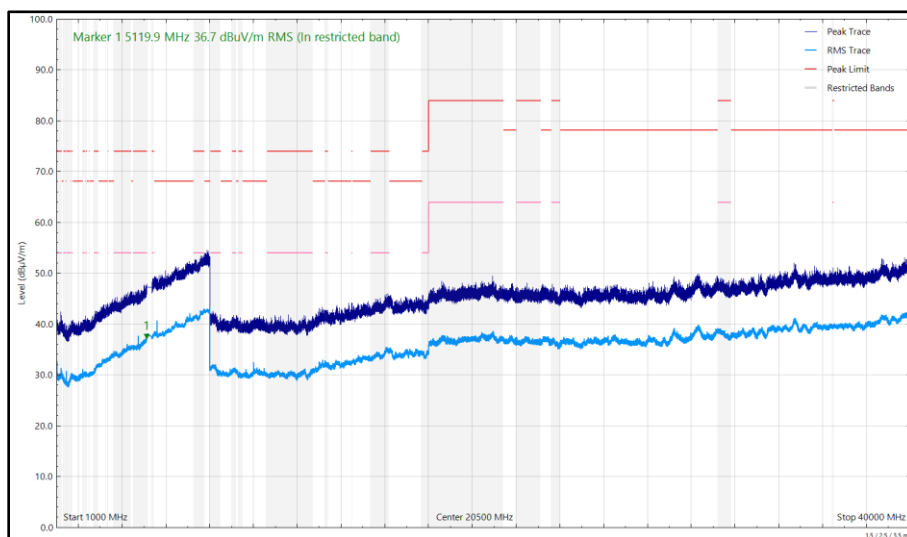


Figure 228 - 5162 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.000	27.17	46.00	-18.83	Q-Peak	67	106	Horizontal

Table 110 - 5203 MHz, DH5, iPA, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

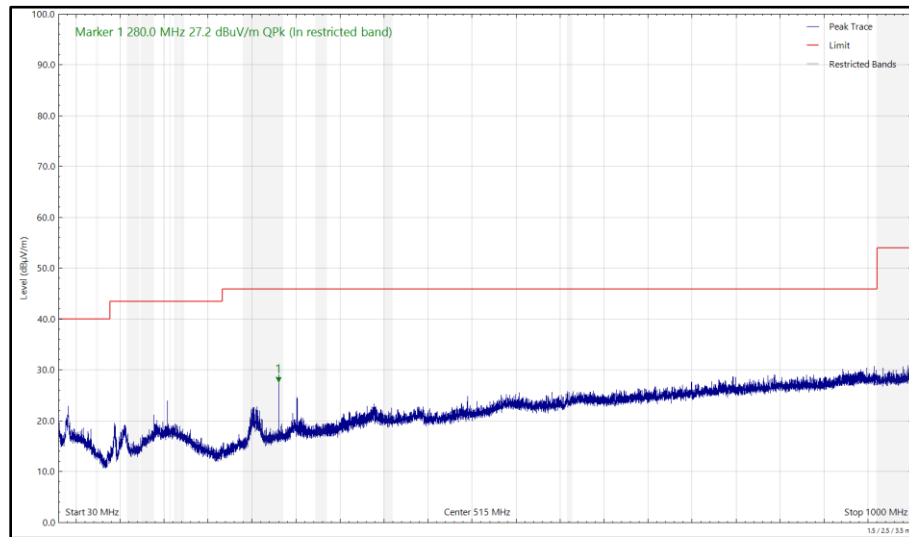


Figure 229 - 5203 MHz, DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

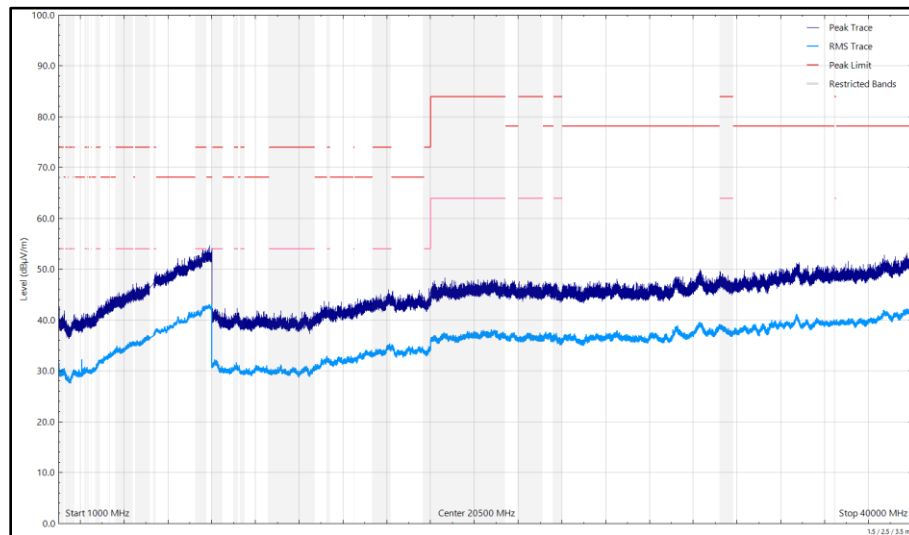


Figure 230 - 5203 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

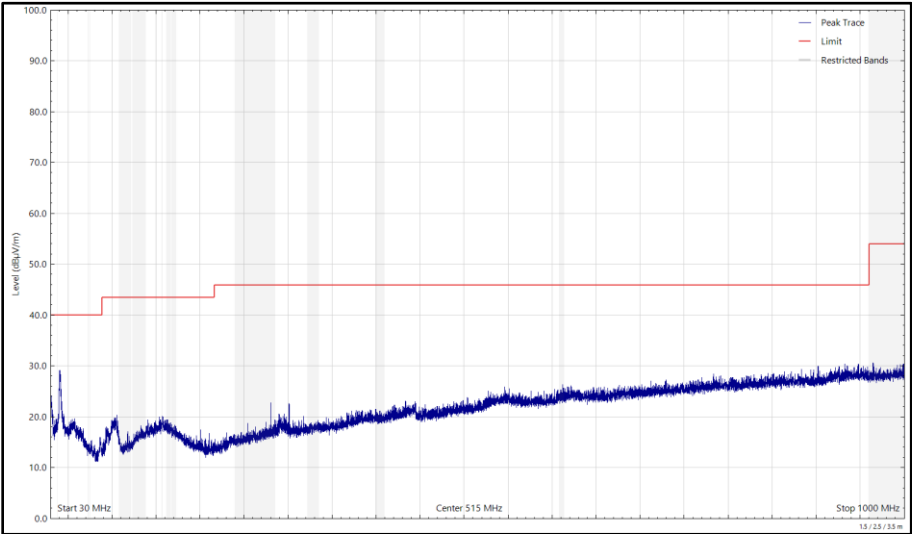


Figure 231 - 5203 MHz, DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

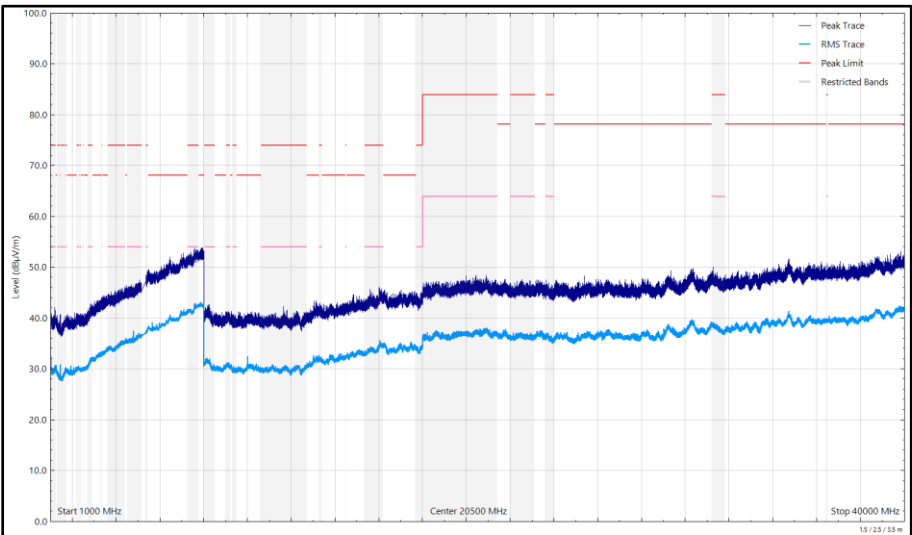


Figure 232 - 5203 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4807.865	37.28	54.00	-16.72	RMS	2	310	Vertical

Table 111 - 5245 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

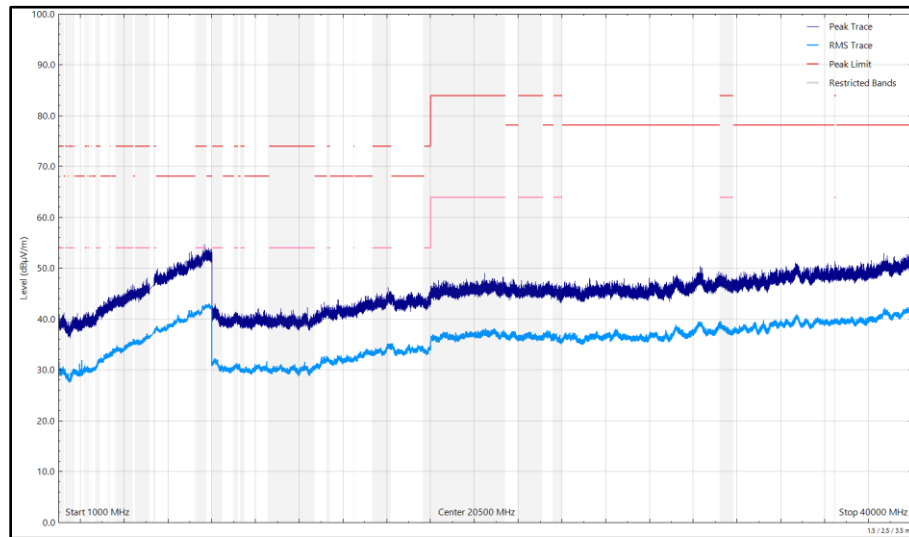


Figure 233 - 5245 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

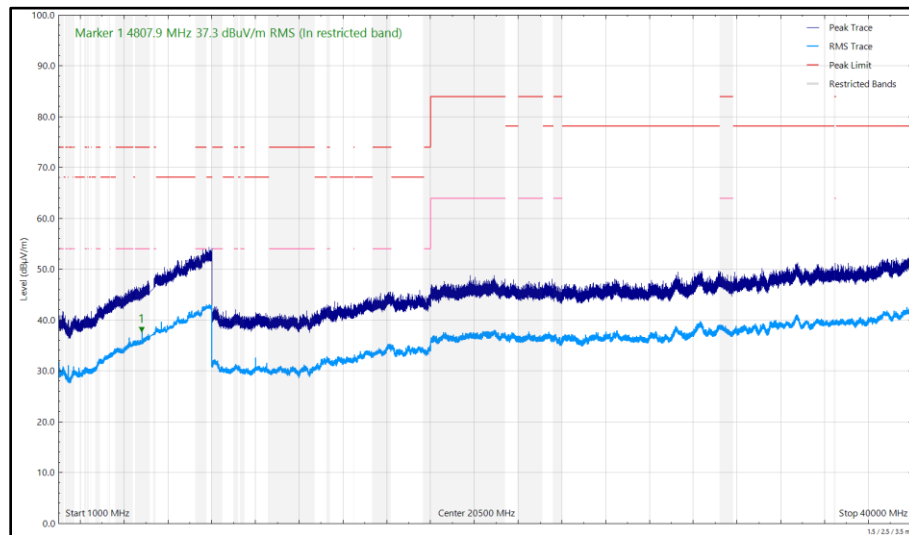


Figure 234 - 5245 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
5458.759	36.88	54.00	-17.12	RMS	107	100	Horizontal
5459.041	36.89	54.00	-17.11	RMS	168	118	Vertical
5603.219	49.17	68.20	-19.03	Peak	18	187	Horizontal
5695.045	50.03	68.20	-18.17	Peak	327	305	Vertical
7698.264	41.48	54.00	-12.52	RMS	328	263	Horizontal
7699.064	41.54	54.00	-12.46	RMS	6	201	Vertical
7857.255	53.74	68.20	-14.46	Peak	183	187	Horizontal
7973.420	53.59	68.20	-14.61	Peak	59	192	Vertical

Table 112 - 5733 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

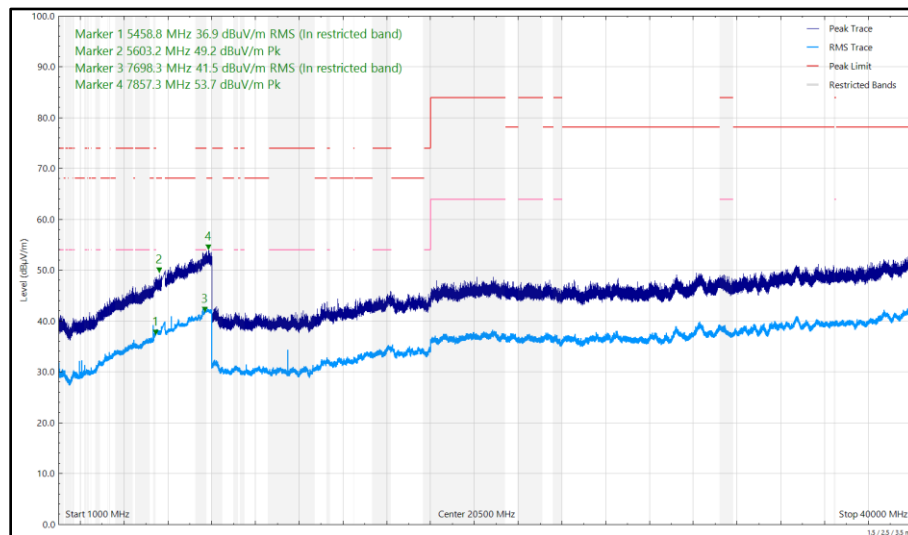


Figure 235 - 5733 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

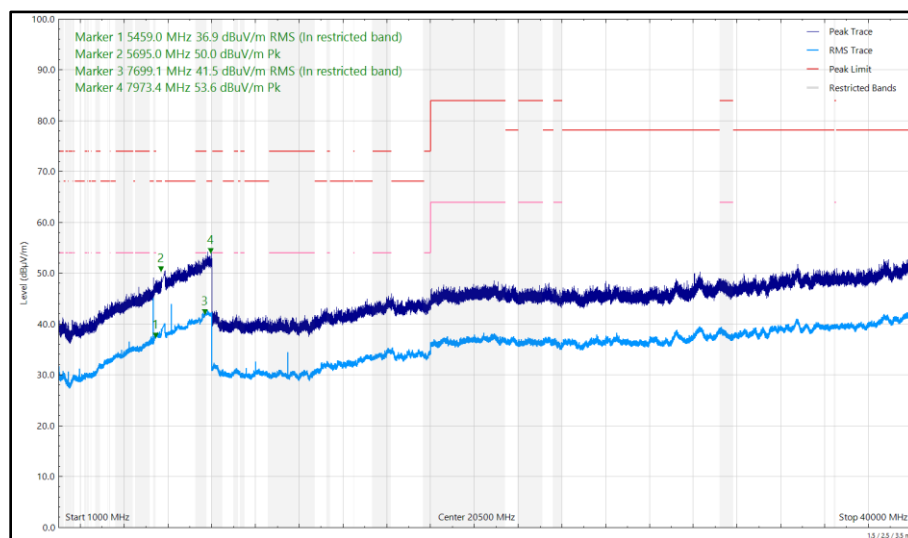


Figure 236 - 5733 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.010	27.19	46.00	-18.81	Q-Peak	83	106	Horizontal
5374.630	45.67	54.00	-8.33	RMS	341	292	Vertical
5397.838	36.51	54.00	-17.49	RMS	244	112	Horizontal
5709.023	49.99	68.20	-18.21	Peak	3	332	Vertical
5719.341	49.70	68.20	-18.50	Peak	137	390	Horizontal
7582.411	41.32	54.00	-12.68	RMS	318	390	Horizontal
7698.249	41.52	54.00	-12.48	RMS	360	232	Vertical
7797.772	53.60	68.20	-14.60	Peak	238	389	Vertical
7836.017	53.75	68.20	-14.45	Peak	16	196	Horizontal

Table 113 - 5788 MHz, DH5, iPA, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

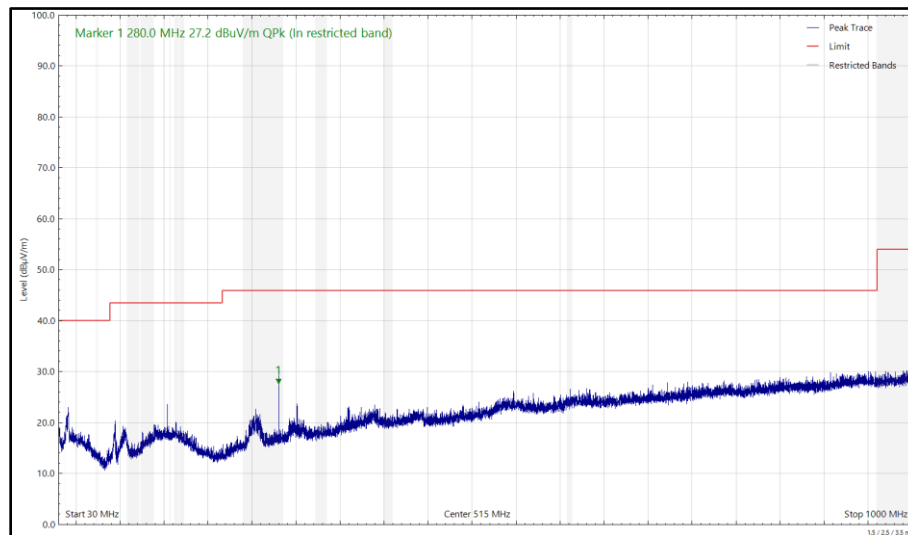


Figure 237 - 5788 MHz, DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

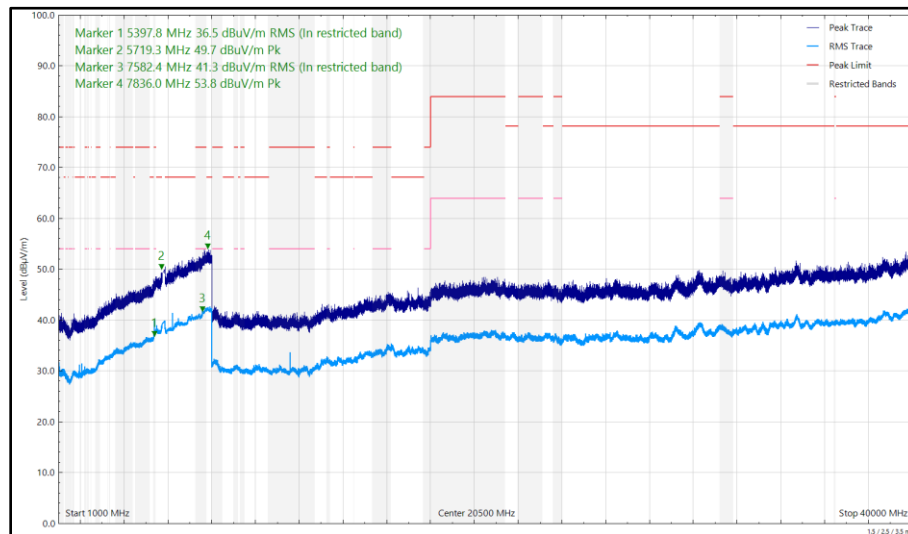


Figure 238 - 5788 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

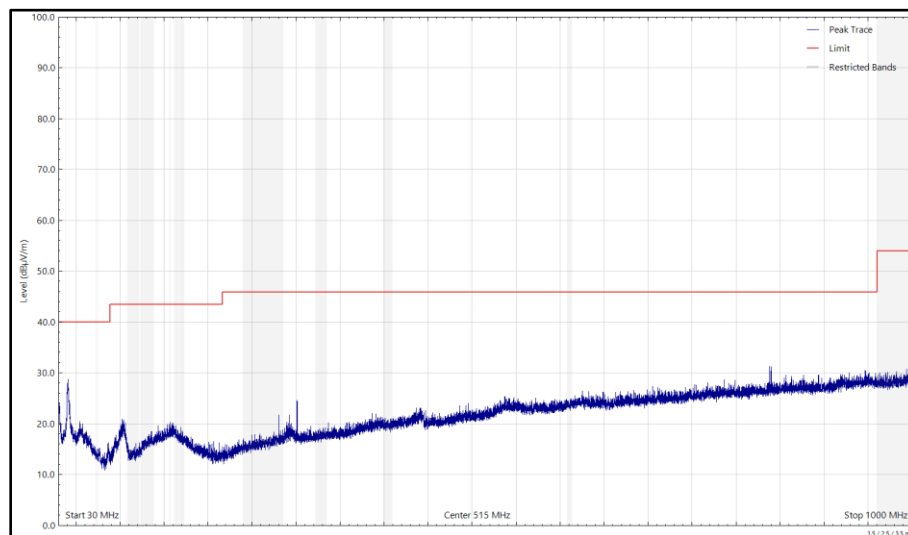


Figure 239 - 5788 MHz, DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

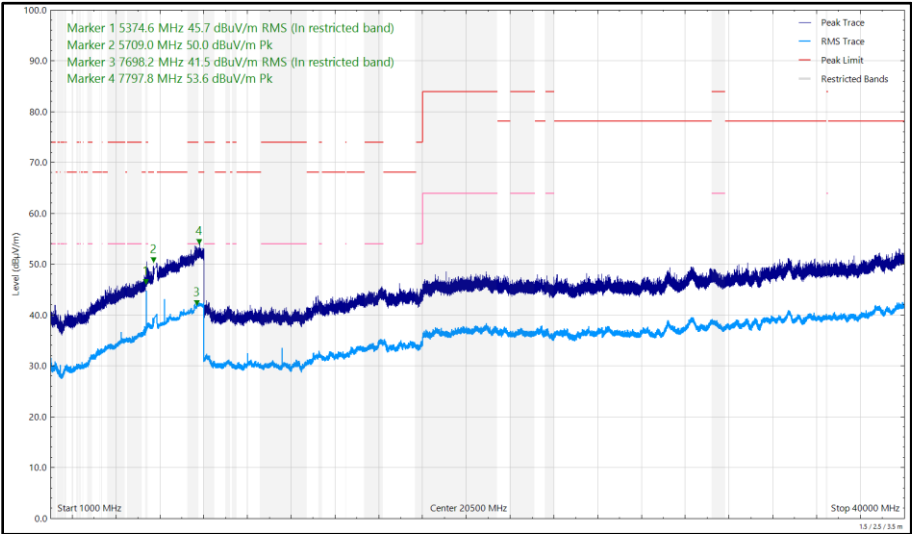


Figure 240 - 5788 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dB μ V/m)	Limit (dB μ V/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
5426.575	47.21	54.00	-6.79	RMS	360	238	Vertical
5446.878	36.78	54.00	-17.22	RMS	74	104	Horizontal
5487.410	49.73	68.20	-18.47	Peak	2	173	Vertical
5709.455	49.67	68.20	-18.53	Peak	160	382	Horizontal
7689.774	41.19	54.00	-12.81	RMS	0	177	Vertical
7749.605	41.27	54.00	-12.73	RMS	271	191	Horizontal
7841.603	53.07	68.20	-15.13	Peak	0	222	Horizontal
7916.438	53.78	68.20	-14.42	Peak	350	390	Vertical

Table 114 - 5844 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

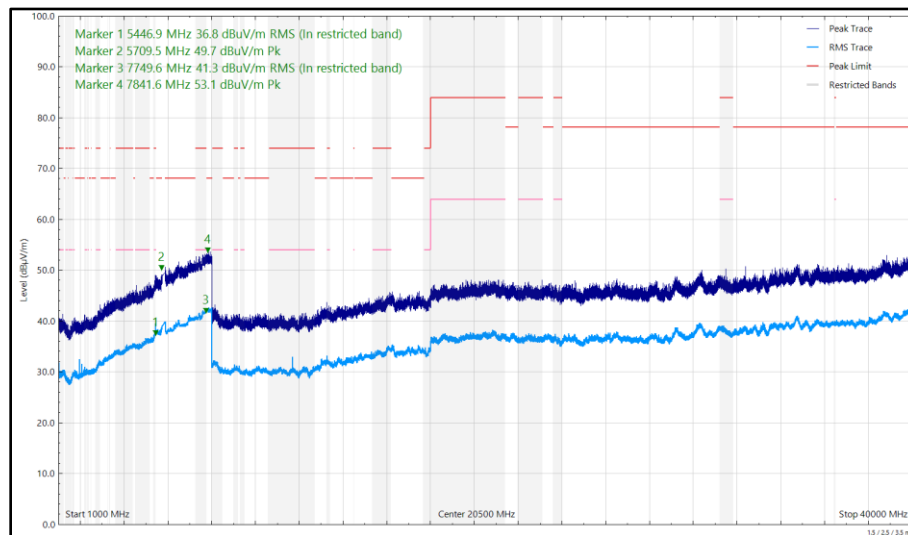


Figure 241 - 5844 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

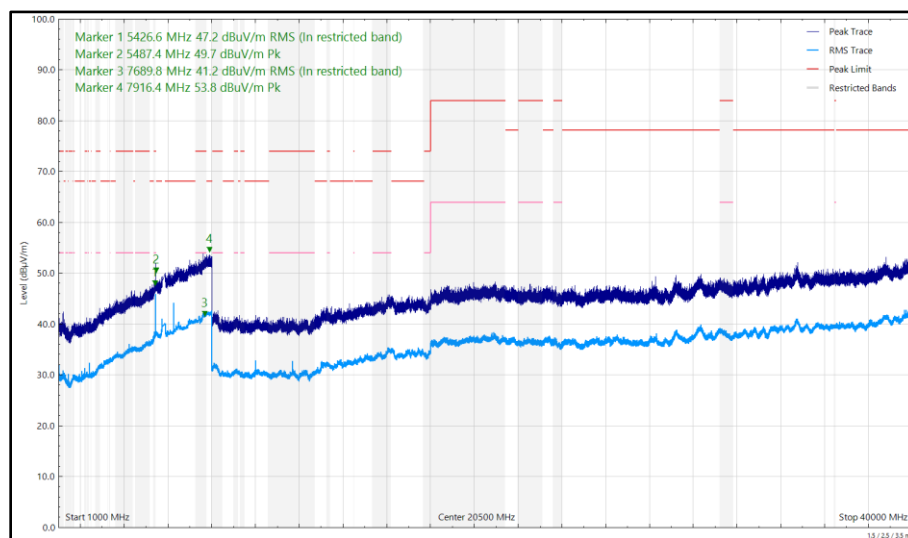


Figure 242 - 5844 MHz, DH5, iPA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
4731.895	41.48	54.00	-12.52	RMS	27	100	Vertical
5119.659	37.22	54.00	-16.78	RMS	270	326	Horizontal
5401.970	39.05	54.00	-14.95	RMS	288	396	Horizontal
5454.261	41.60	54.00	-12.40	RMS	0	334	Vertical
5492.837	52.01	68.20	-16.19	Peak	295	386	Horizontal
5493.580	54.71	68.20	-13.49	Peak	360	310	Vertical

Table 115 - 5162 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz

No other emissions found within 10 dB of the limit.

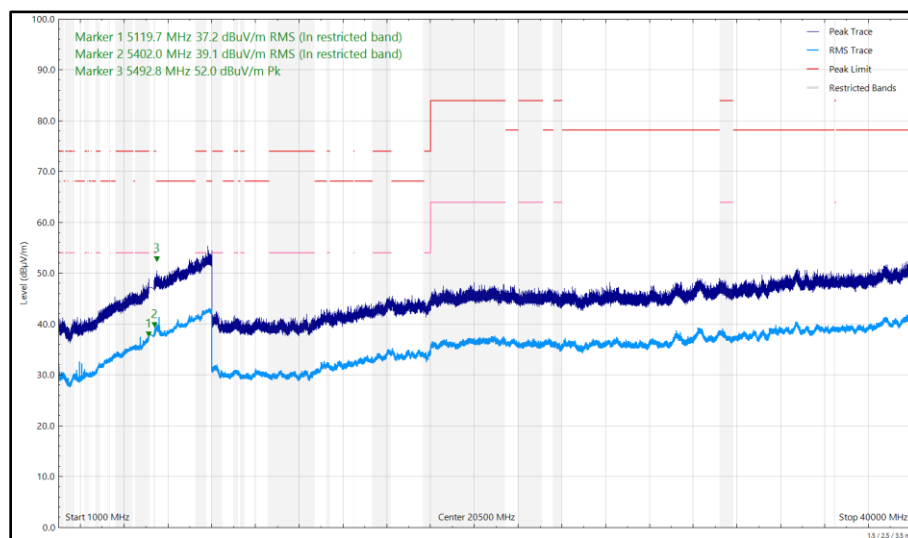


Figure 243 - 5162 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal

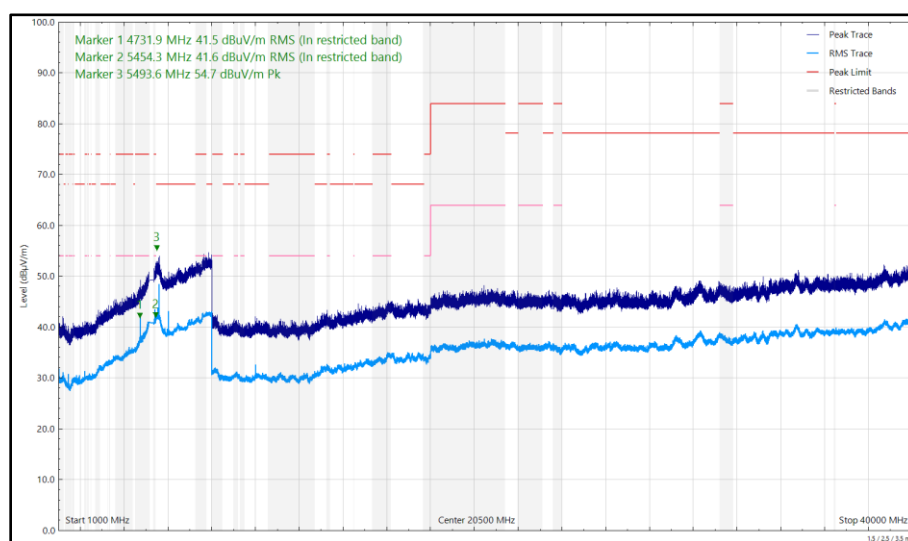


Figure 244 - 5162 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Vertical

Frequency (MHz)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
280.005	27.35	46.00	-18.65	Q-Peak	83	110	Horizontal
4769.370	43.62	54.00	-10.38	RMS	353	297	Vertical
4769.420	37.48	54.00	-16.52	RMS	47	387	Horizontal
5442.800	39.83	54.00	-14.17	RMS	281	378	Horizontal
5442.930	43.55	54.00	-10.45	RMS	349	318	Vertical
5636.755	56.73	68.20	-11.47	Peak	347	262	Vertical
7939.826	54.01	68.20	-14.19	Peak	360	113	Vertical

Table 116 - 5203 MHz, DH5, ePA, Core 0 + Core 1, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

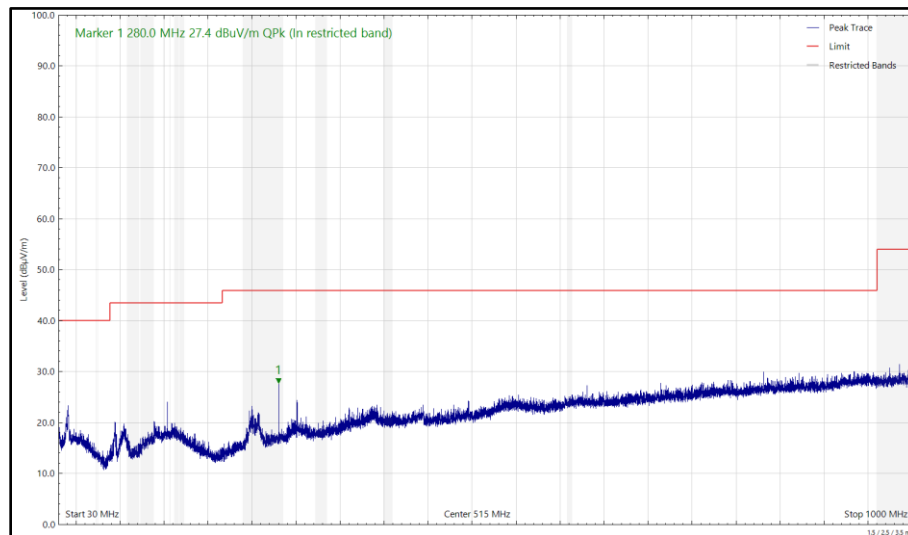


Figure 245 - 5203 MHz, DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

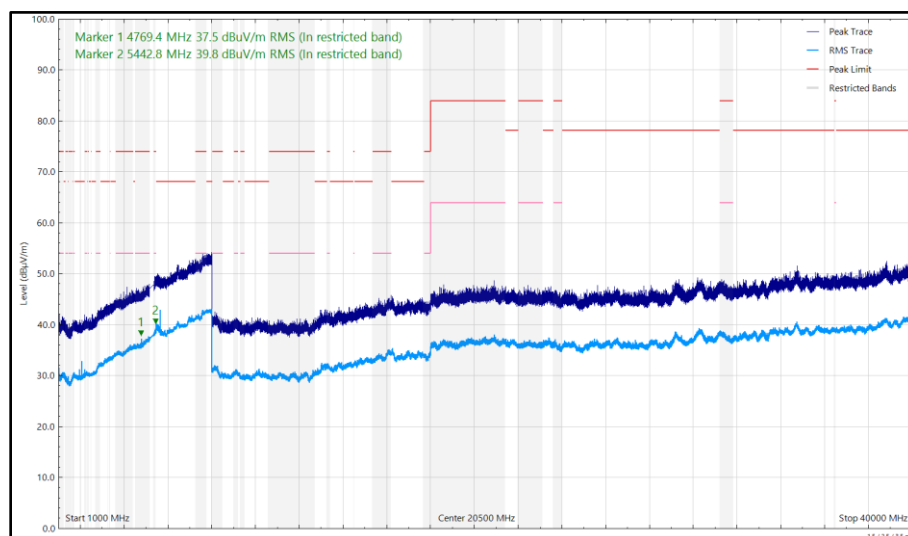


Figure 246 - 5203 MHz, DH5, ePA, Core 0 + Core 1, 1 GHz to 40 GHz, Horizontal