2.8.5 Example Test Setup Diagram

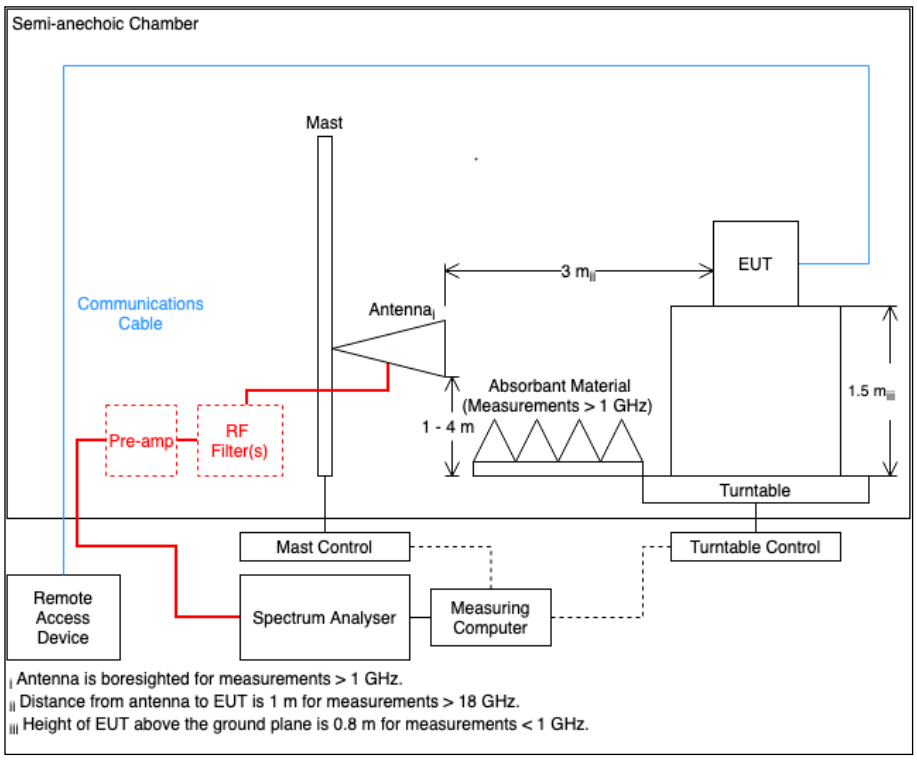

Figure 220

2.8.6 Environmental Conditions

Ambient Temperature	22.1 - 23.1 °C
Relative Humidity	46.0 - 53.6 %

2.8.7 Test Results

2.4 GHz Bluetooth BDR/EDR

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2389.232	36.86	54.00	-17.14	CISPR Avg	15	387	Vertical
2484.494	36.80	54.00	-17.20	CISPR Avg	24	395	Vertical

Table 108 - 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 26 GHz

No other emissions found within 10 dB of the limit.

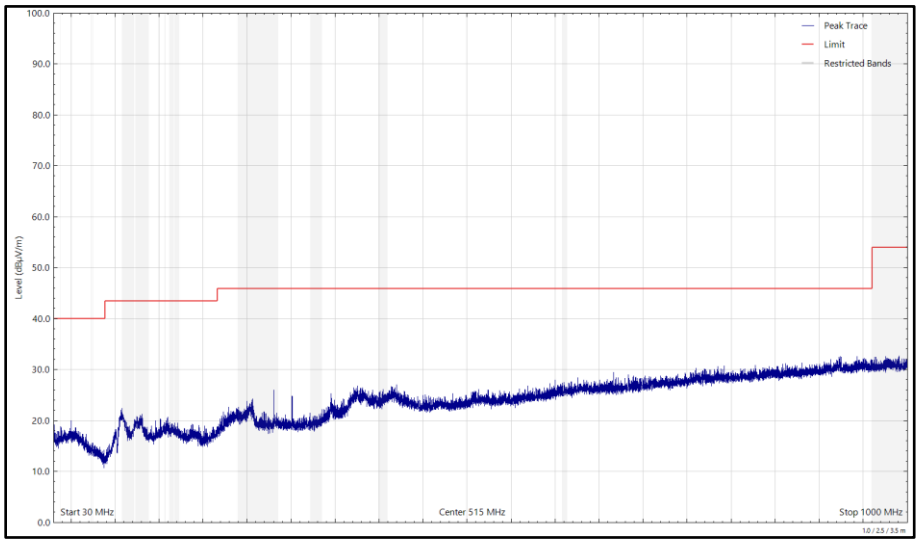

Figure 221 - 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

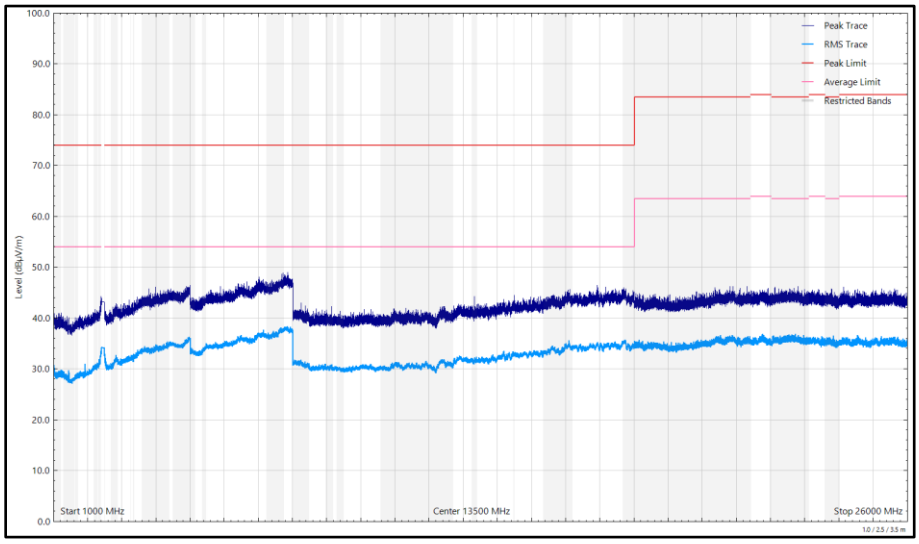

Figure 222 - 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

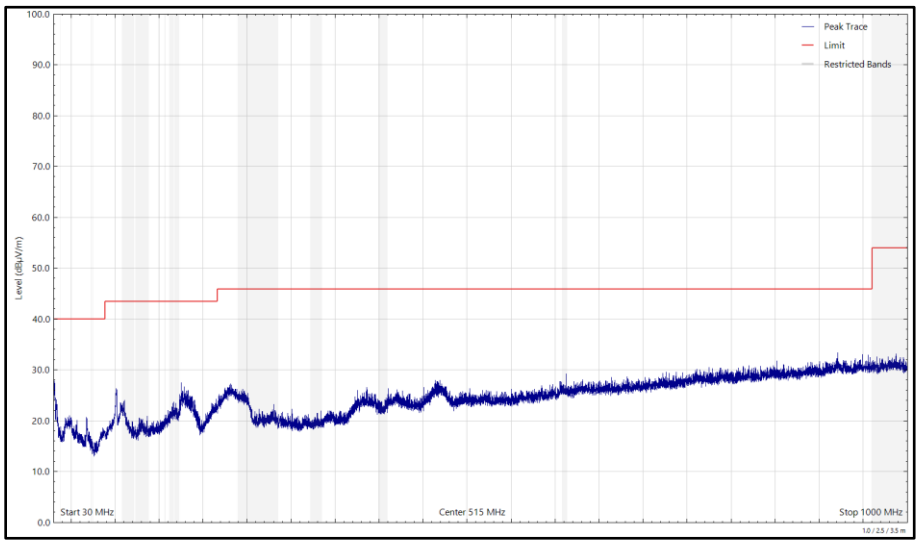

Figure 223 - 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

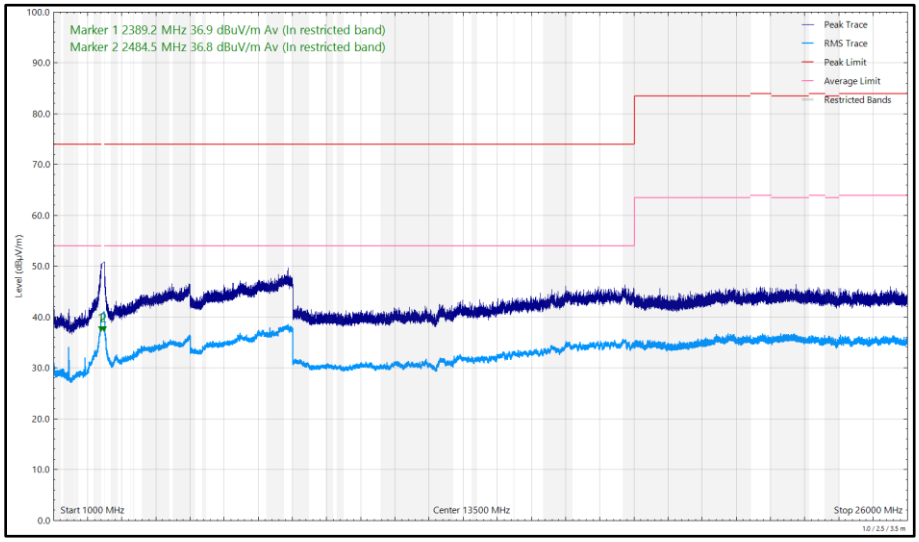

Figure 224 - 2441 MHz (CH39), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

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

Table 109 - 2441 MHz (CH39), DH5, iPA, Core 0 + Core 1, 30 MHz to 26 GHz

*No emissions found within 10 dB of the limit.

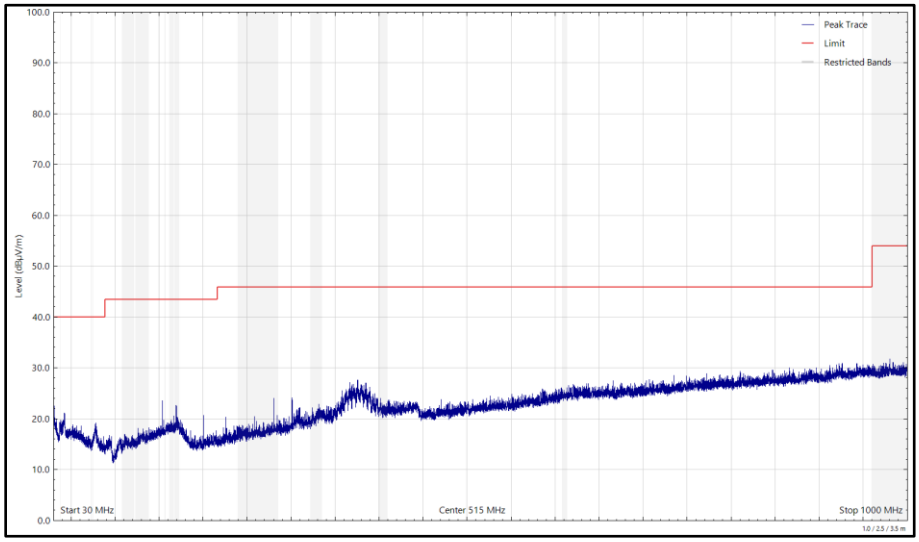

Figure 225 - 2441 MHz (CH39), DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Horizontal (Peak)

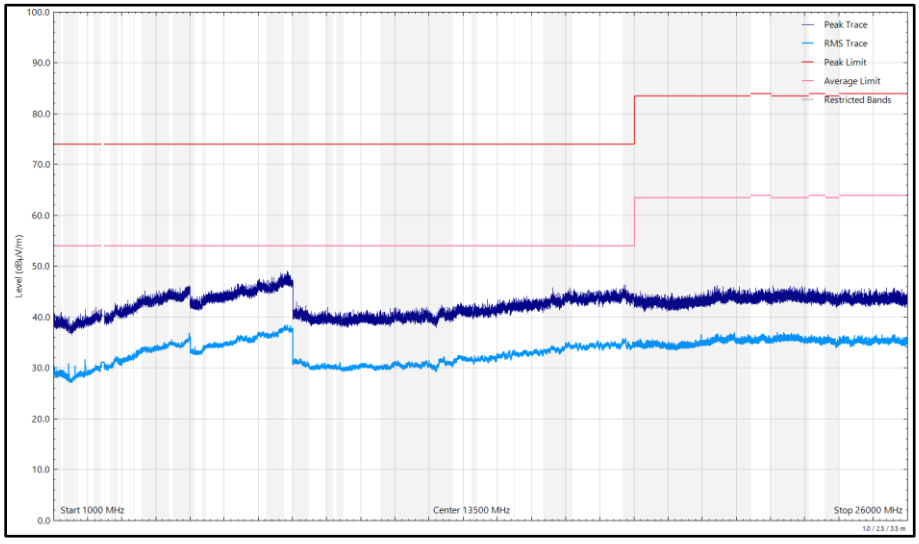

Figure 226 - 2441 MHz (CH39), DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

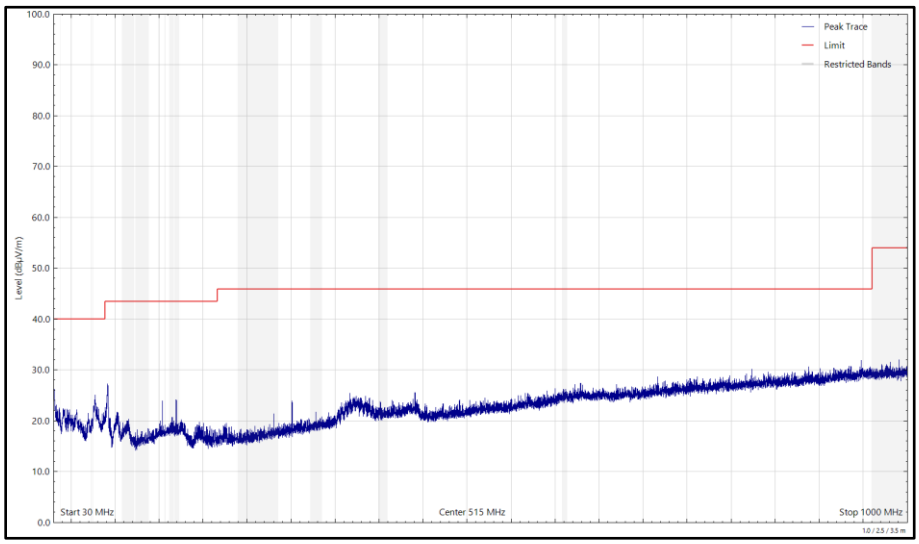

Figure 227 - 2441 MHz (CH39), DH5, iPA, Core 0 + Core 1, 30 MHz to 1 GHz, Vertical (Peak)

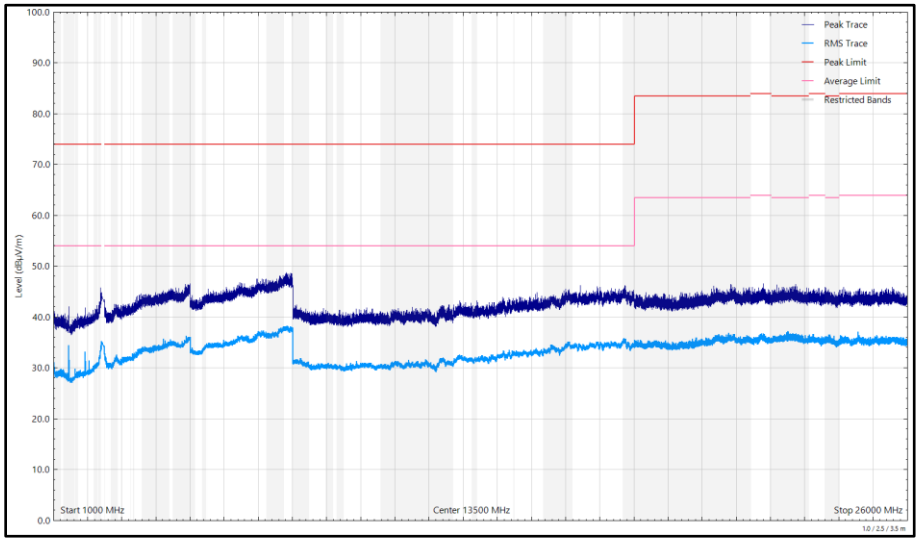

Figure 228 - 2441 MHz (CH39), DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

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

Table 110 - 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 26 GHz

*No emissions found within 10 dB of the limit.

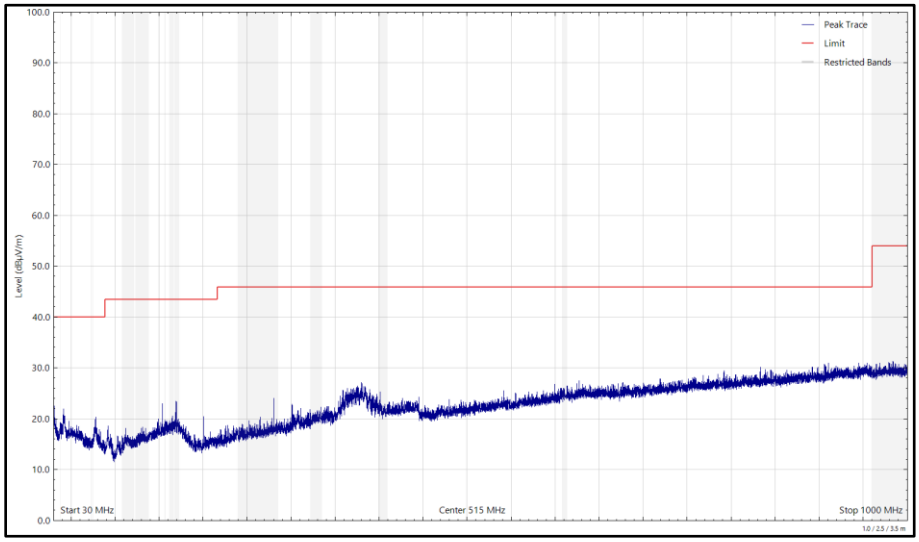

Figure 229 - 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Horizontal (Peak)

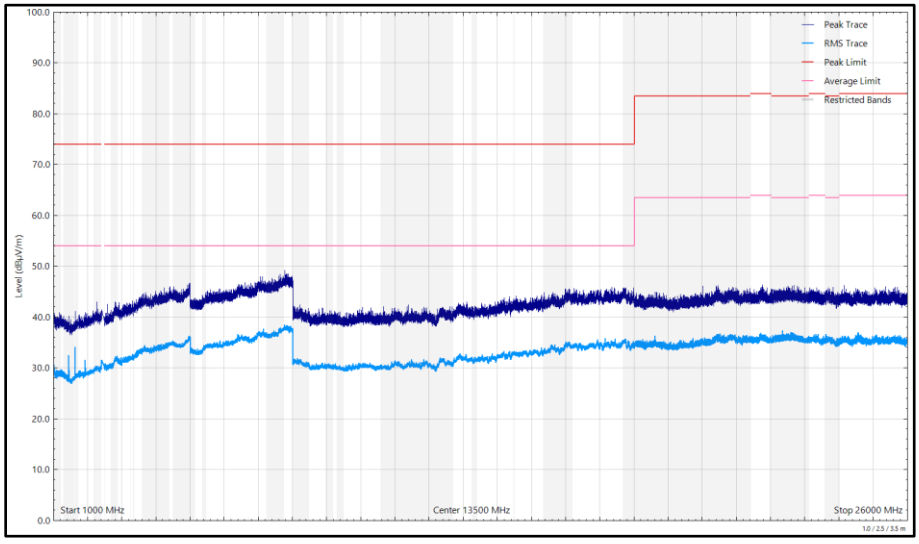

Figure 230 - 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 26 GHz, Horizontal

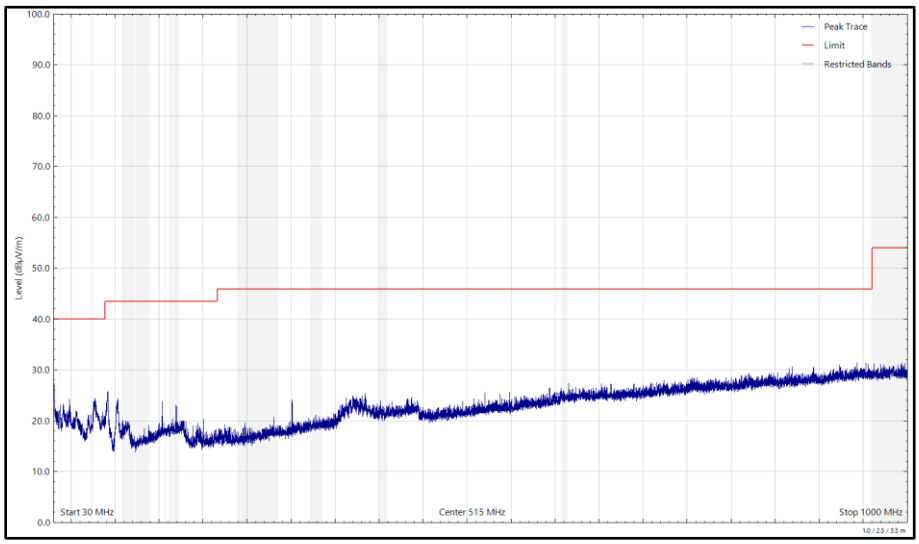

Figure 231 - 2441 MHz (CH39), DH5, iPA, Core 2, 30 MHz to 1 GHz, Vertical (Peak)

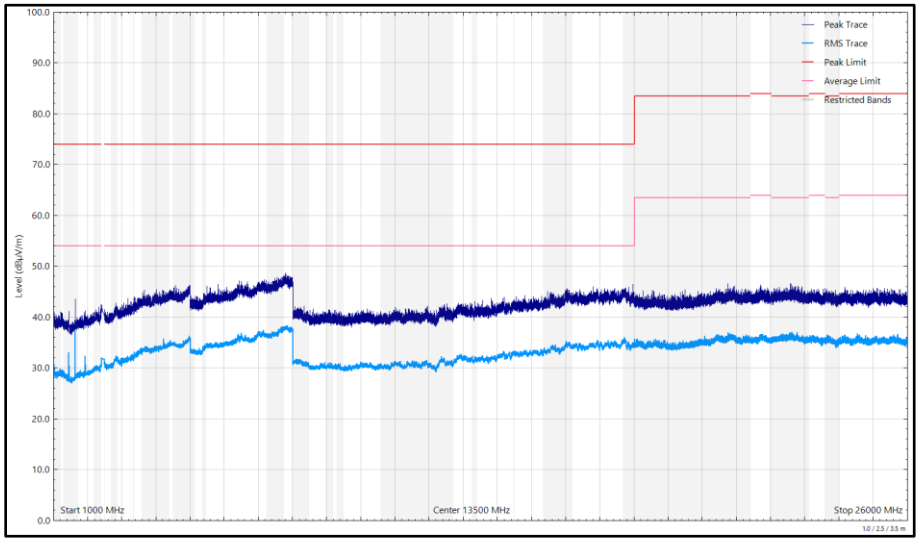

Figure 232 - 2441 MHz (CH39), DH5, iPA, Core 2, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2374.444	39.34	54.00	-14.66	CISPR Avg	21	388	Vertical

Table 111 - 2402 MHz (CH0), 2-DH5, ePA, Core 0 + Core 1, 1 to 26 GHz

No other emissions found within 10 dB of the limit.

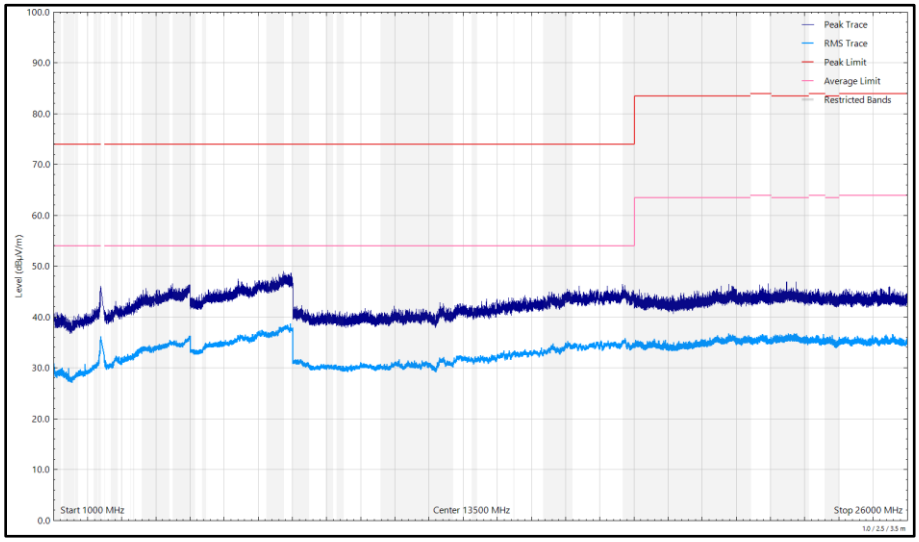

Figure 233 - 2402 MHz (CH0), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

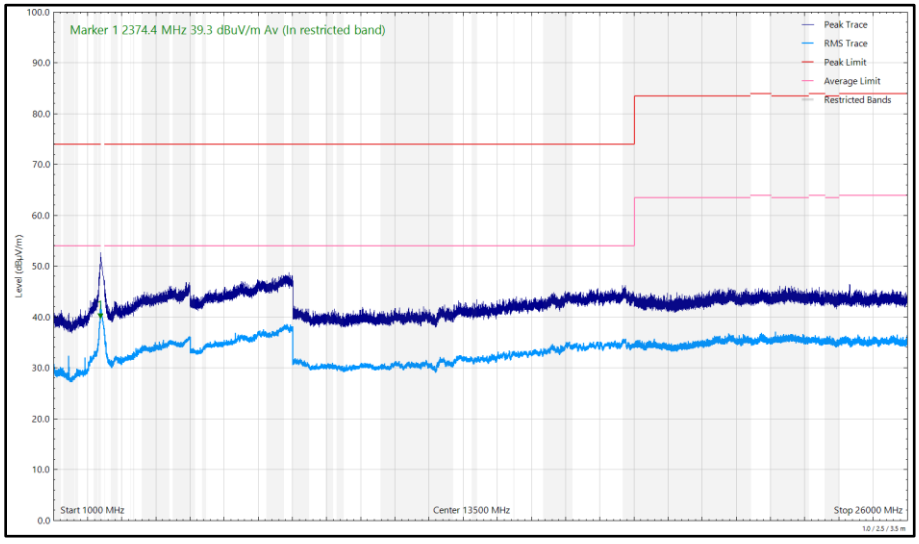

Figure 234 - 2402 MHz (CH0), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
2376.721	34.28	54.00	-19.72	CISPR Avg	20	339	Vertical
2498.844	39.79	54.00	-14.21	CISPR Avg	356	343	Vertical

Table 112 - 2480 MHz (CH78), 2-DH5, ePA, Core 0 + Core 1, 1 to 26 GHz

No other emissions found within 10 dB of the limit.

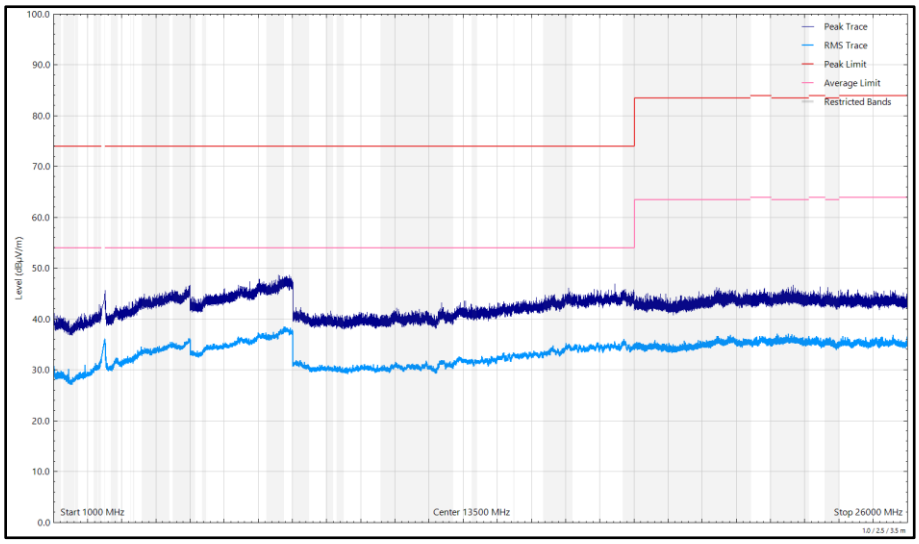

Figure 235 - 2480 MHz (CH78), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

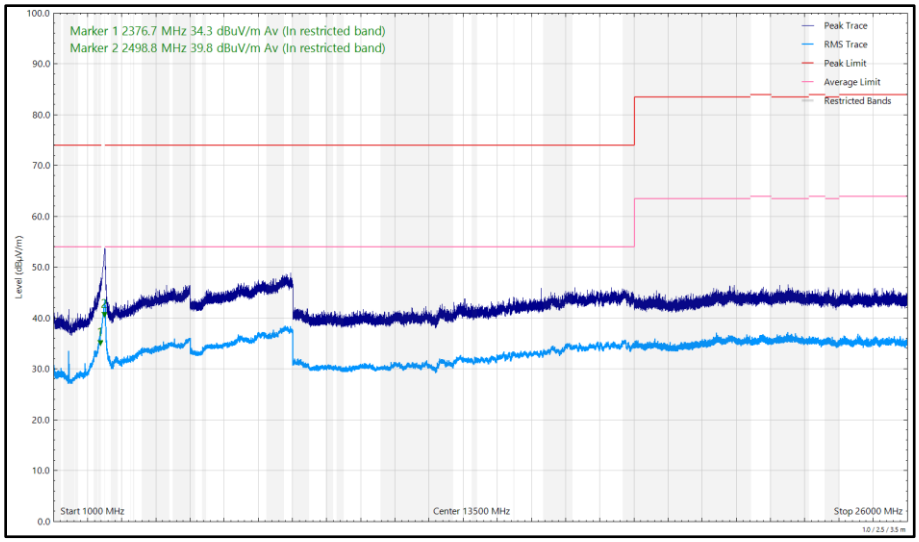

Figure 236 - 2480 MHz (CH78), 2-DH5, ePA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

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

Table 113 - 2402 MHz (CH0), DH5, iPA, Core 0 + Core 1, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

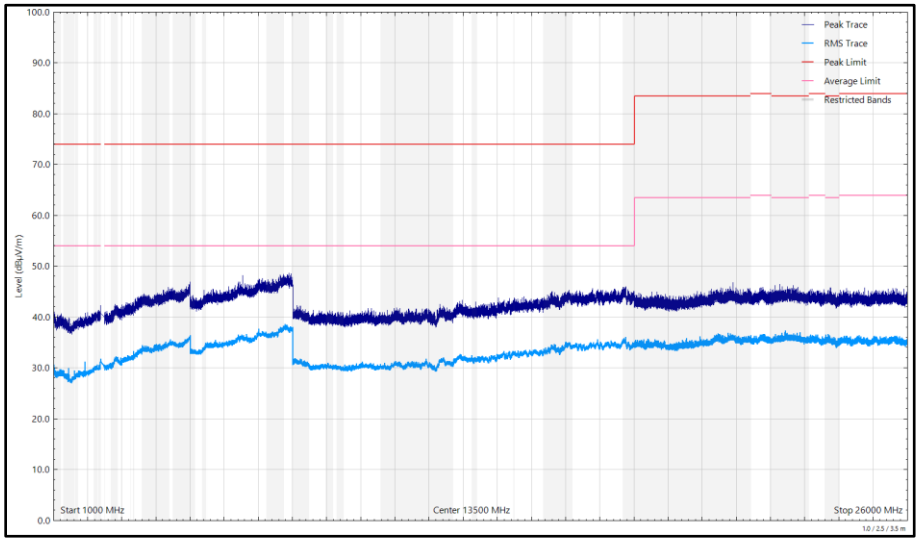

Figure 237 - 2402 MHz (CH0), DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

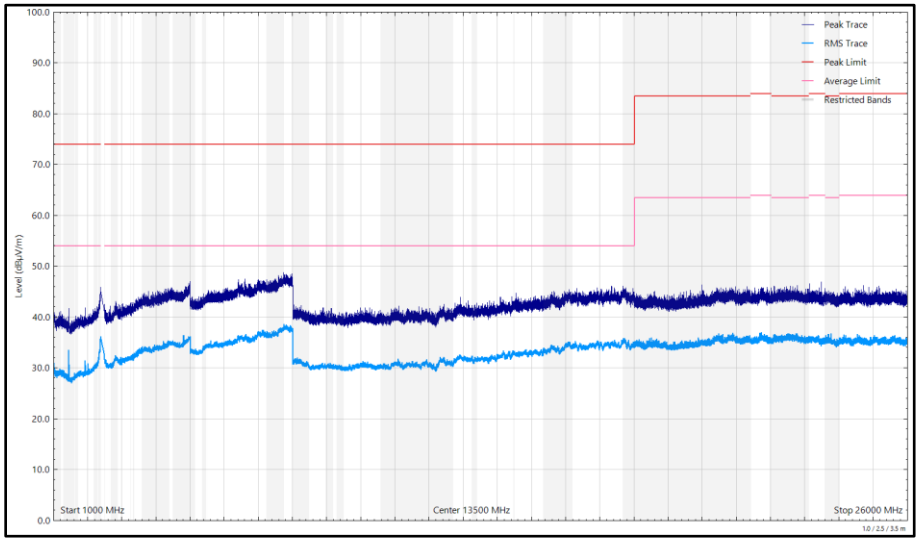

Figure 238 - 2402 MHz (CH0), DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

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

Table 114 - 2480 MHz (CH78), DH5, iPA, Core 0 + Core 1, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

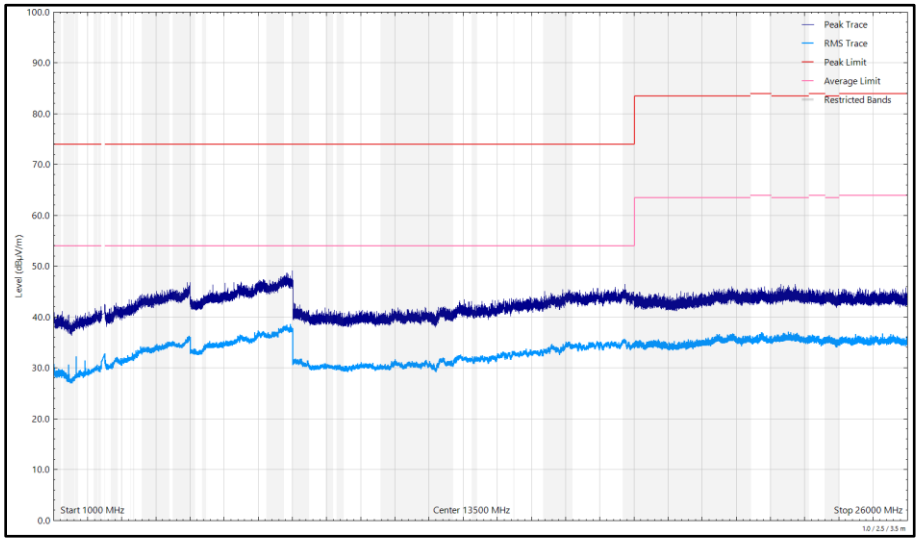

Figure 239 - 2480 MHz (CH78), DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Horizontal

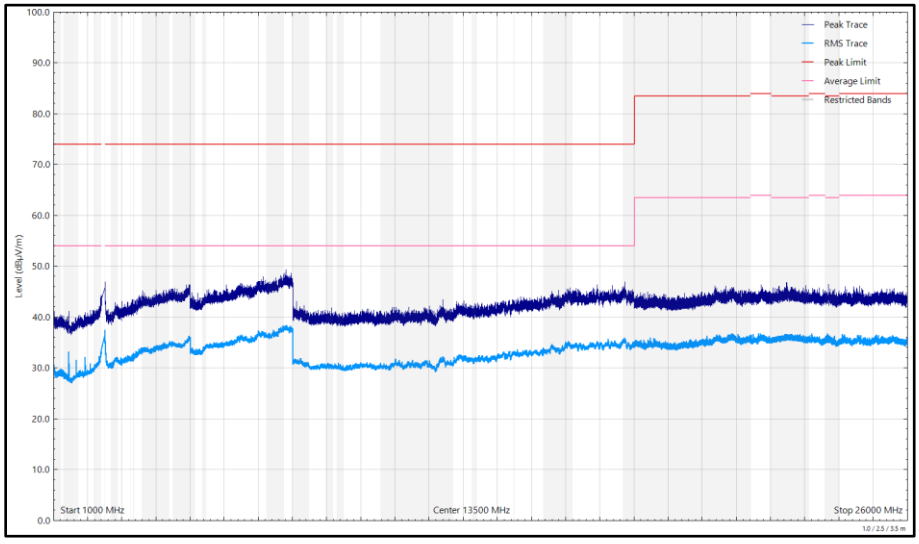

Figure 240 - 2480 MHz (CH78), DH5, iPA, Core 0 + Core 1, 1 GHz to 26 GHz, Vertical

Frequency (MHz)	Level (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Detector	Angle (°)	Height (cm)	Polarisation
1601.455	34.40	54.00	-19.60	CISPR Avg	317	390	Vertical

Table 115 - 2402 MHz (CH0), DH5, iPA, Core 2, 1 to 26 GHz

No other emissions found within 10 dB of the limit.

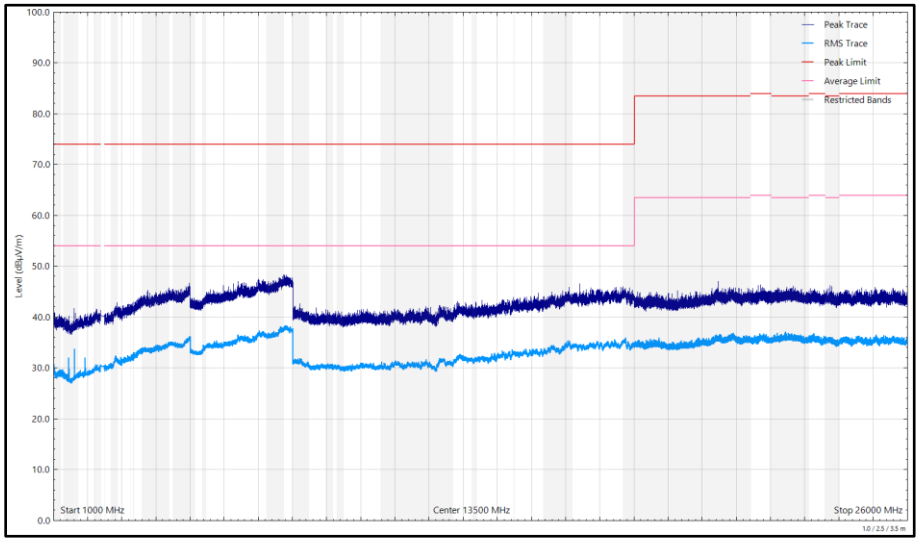

Figure 241 - 2402 MHz (CH0), DH5, iPA, Core 2, 1 GHz to 26 GHz, Horizontal

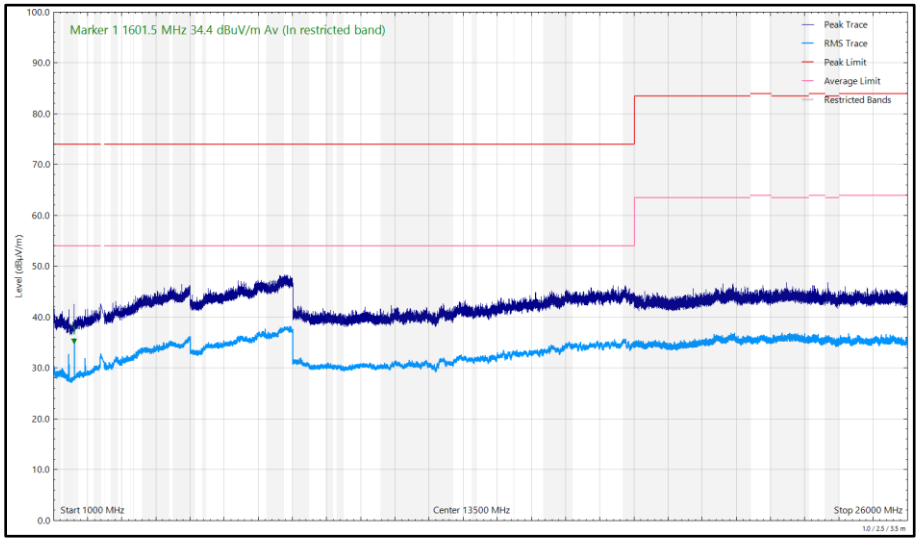

Figure 242 - 2402 MHz (CH0), DH5, iPA, Core 2, 1 GHz to 26 GHz, Vertical

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

Table 116 - 2480 MHz (CH78), DH5, iPA, Core 2, 1 to 26 GHz

*No emissions found within 10 dB of the limit.

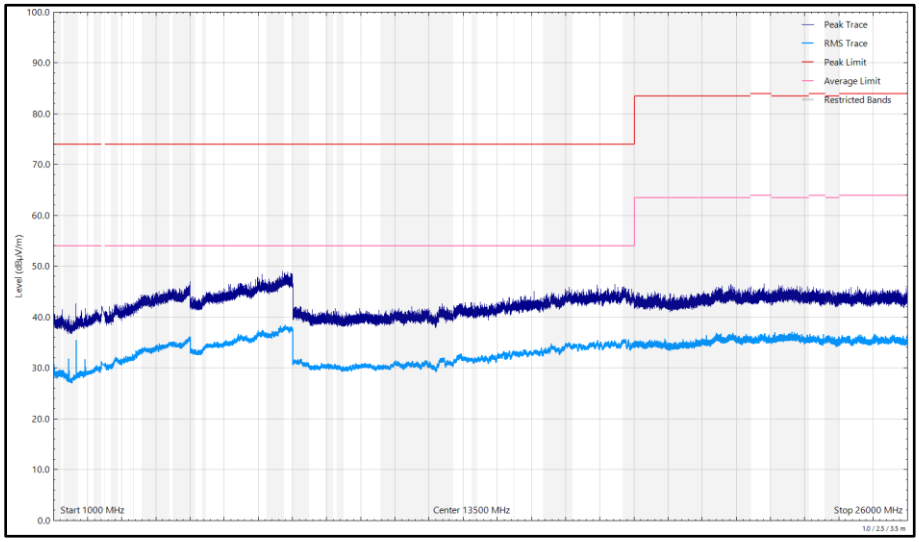

Figure 243 - 2480 MHz (CH78), DH5, iPA, Core 2, 1 GHz to 26 GHz, Horizontal

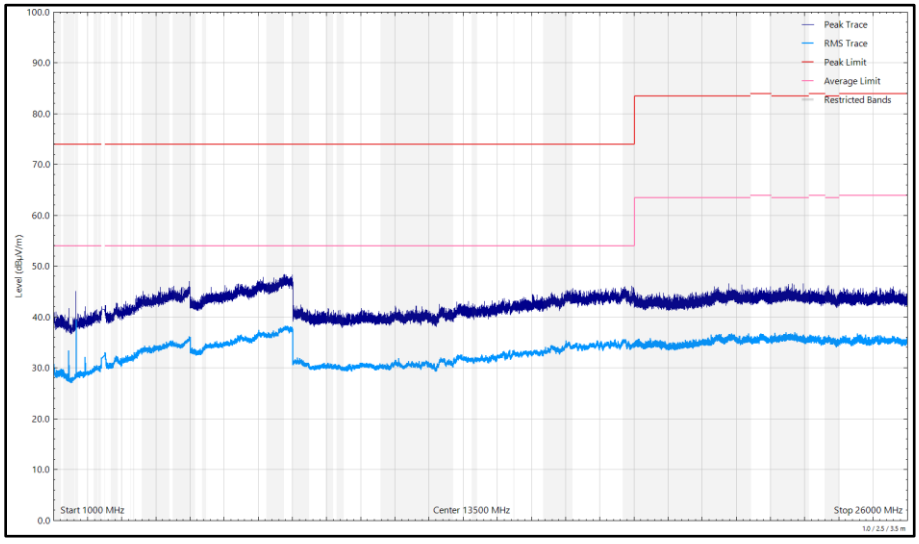

Figure 244 - 2480 MHz (CH78), DH5, iPA, Core 2, 1 GHz to 26 GHz, Vertical

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).

2.8.8 Test Location and Test Equipment Used

This test was carried out in RF Chamber 17 and RF Chamber 18.

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
Emissions Software	TUV SUD	EmX V3.4.2	5125	-	Software
Test Receiver	Rohde & Schwarz	ESW44	5914	12	24-May-2025
DRG Horn Antenna (7.5-18GHz)	Schwarzbeck	HWRD750	5939	12	05-May-2025
TRILOG Super Broadband Test Antenna	Schwarzbeck	VULB 9168	5944	24	24-May-2026
Mast & Turntable Controller	Maturo Gmbh	FCU3.0	5960	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	5961	-	TU
Cable (N to N 1m)	Junkosha	MWX221-01000AMSAMS/B	6009	12	20-May-2025
SAC Switch Unit	TUV SUD	TUV_SSU_001	6144	12	11-Dec-2024
Humidity & Temperature meter	R.S Components	1364	6148	12	29-Jul-2025
Attenuator 4dB	Pasternack	PE7074-4	6204	24	20-Jun-2026
EMI Test Receiver	Rohde & Schwarz	ESW44	6294	12	06-Jan-2025
USB Spectrum Analyser	Signal Hound	SA124B	6295	-	TU
USB Spectrum Analyser	Signal Hound	SA124B	6298	-	TU
Cable (SMA to SMA 8m)	Junkosha	MWX221-08000AMSAMS/B	6318	12	18-Feb-2025
Cable (K Type 2m)	Junkosha	MWX241-02000KMSKMS/B	6324	12	04-Feb-2025
Digital Multimeter	Fluke	115	6345	12	24-Jul-2025
Humidity and Temperature Meter	R.S Components	1364	6346	12	06-Mar-2025
8 GHz High Pass Filter	Wainwright	WHKX 7150 8000 18000 50SS	6427	12	23-Apr-2025
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	6456	24	10-Feb-2025
3m Semi-Anechoic Chamber	Albatross Projects	Chamber 18	6597	36	07-Feb-2026

Instrument	Manufacturer	Type No.	TE No.	Calibration Period (months)	Calibration Expiry Date
AC Power Supply	iTech	IT7324	6657	-	O/P Mon
3m Semi-Anechoic Chamber	Albatross Projects	RF Chamber 17	6658	36	28-Jan-2026
Mast and Turntable Controller	Maturo Gmbh	FCU3.0	6659	-	TU
Tilt Antenna Mast	Maturo Gmbh	BAM4.5-P	6660	-	TU
Turntable	Maturo Gmbh	TT1.5SI	6661	-	TU
8m Cable	Junkosha	MWX221-08000AMSAMS/B	6748	12	1-Feb-2025
Double Ridge Active Horn Antenna (18-40 GHz	Com-Power	AHA-840	6771	24	17-Jan-2025
Pre Amp 8 - 18 GHz	Wright Technologies	APS06-0061	6783	12	23-Apr-2025
Turntable	Maturo Gmbh	TT1.5SI	6797	-	TU
AC Programmable Power Supply	iTech	IT7324	6812	-	O/P Mon
Broad-Band Horn Antenna 1-10GHz N	Schwarzbeck	BBHA9120B	6825	12	18-Jul-2025
Cable Assembly	SpecTech	PE300-60	6859	-	TU
Cable Assembly	SpecTech	PE300-60	6860	-	TU
Cable Assembly	SpecTech	PE300-60	6861	-	TU
Cable Assembly	SpecTech	PE300-60	6862	-	TU
Cable Assembly	SpecTech	PE300-60	6863	-	TU

Table 117

TU - Traceability Unscheduled
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
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	-
Frequency Hopping Systems - 99% & 20 dB Bandwidth	± 23.51 kHz
Maximum Conducted Output Power	± 1.38 dB
Authorised Band Edges	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB

Table 118

Measurement Uncertainty Decision Rule – Accuracy Method

Determination of conformity with the specification limits is based on the decision rule according to IEC Guide 115:2021, Clause 4.4.3 (Procedure 2). The measurement results are directly compared with the test limit to determine conformance with the requirements of the standard.

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