

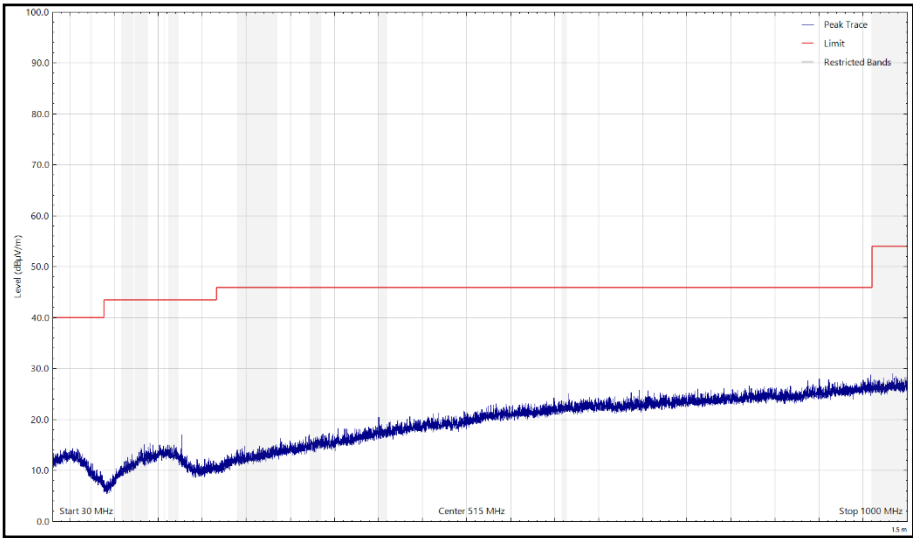


Figure 142 - CH149_HT20_MIMO_MCS8_X, 5745 MHz, 30 MHz to 1 GHz, Vertical (Peak)

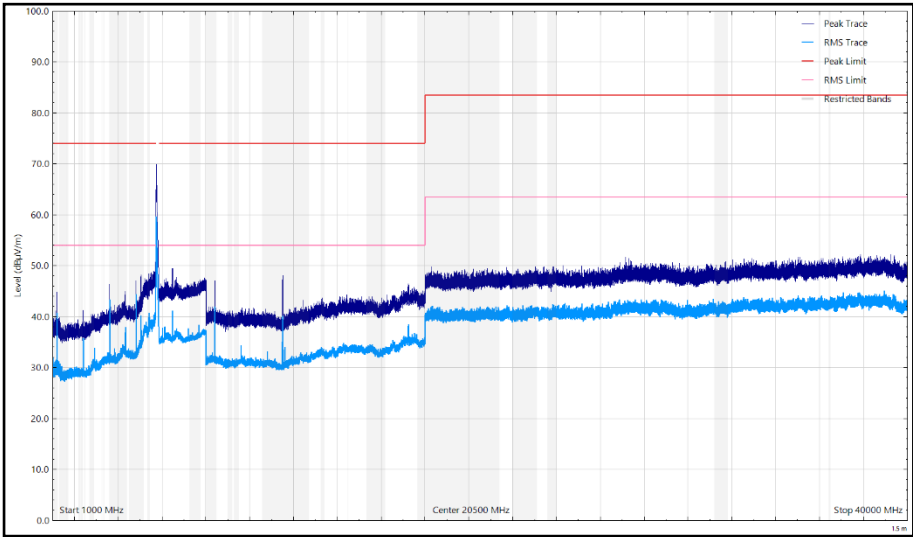


Figure 143 - CH149_HT20_MIMO_MCS8_X, 5745 MHz, 1 GHz to 40 GHz, Vertical



Frequency (MHz)	Level	Limit	Margin (dB)	Detector	Unit	Angle (°)	Height (cm)	Polarisation
8399.700	44.99	54.00	-9.01	RMS	dBuV/m	285	150	Horizontal

Table 95 - CH149_HT20_MIMO_MCS8_Y, 5745 MHz, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

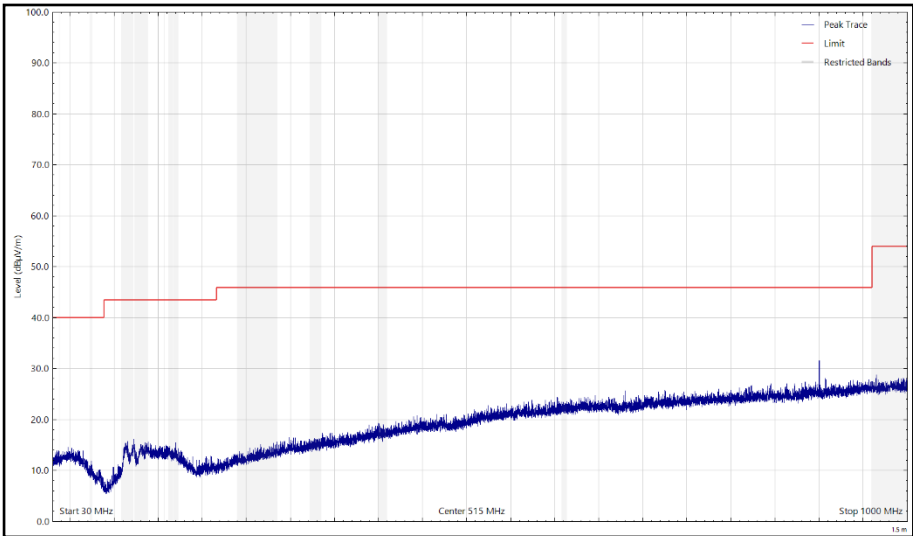


Figure 144 - CH149_HT20_MIMO_MCS8_Y, 5745 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

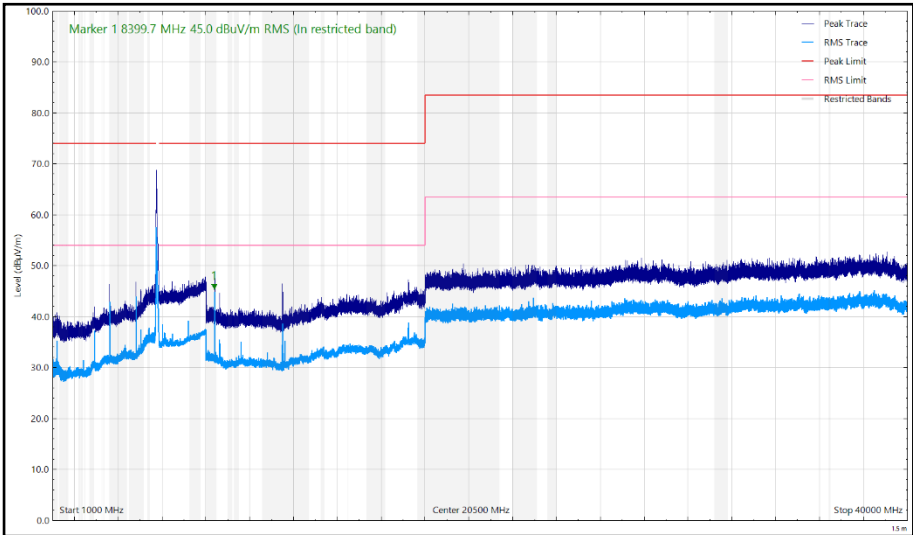


Figure 145 - CH149_HT20_MIMO_MCS8_Y, 5745 MHz, 1 GHz to 40 GHz, Horizontal

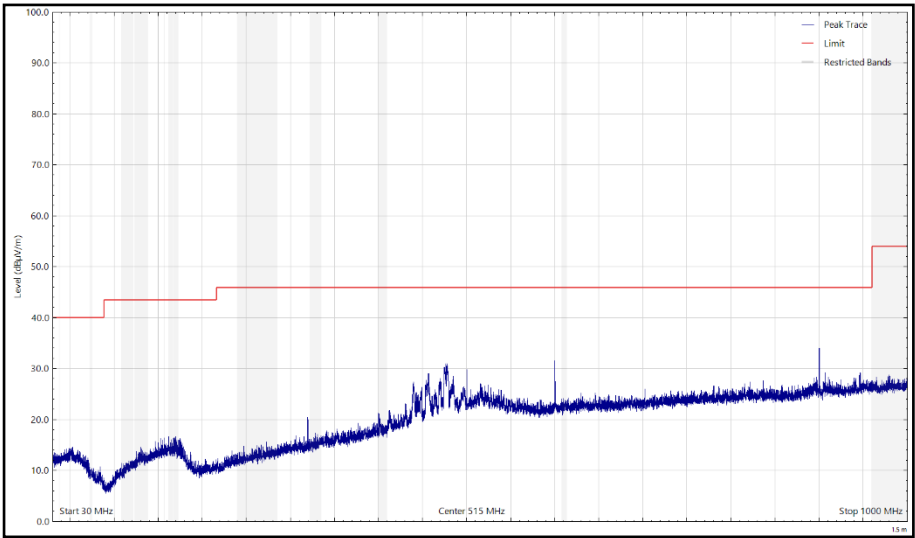


Figure 146 - CH149_HT20_MIMO_MCS8_Y, 5745 MHz, 30 MHz to 1 GHz, Vertical (Peak)

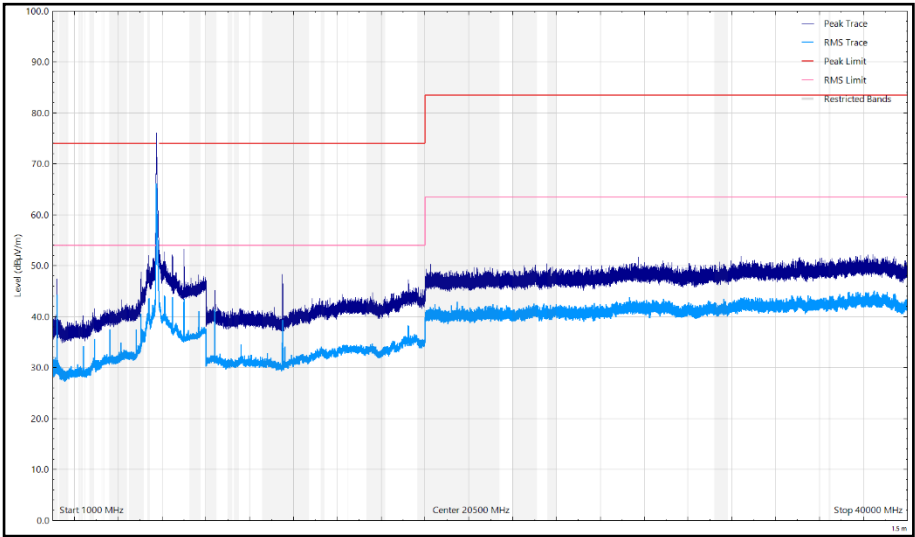


Figure 147 - CH149_HT20_MIMO_MCS8_Y, 5745 MHz, 1 GHz to 40 GHz, Vertical



Frequency (MHz)	Level	Limit	Margin (dB)	Detector	Unit	Angle (°)	Height (cm)	Polarisation
8399.700	45.15	54.00	-8.85	RMS	dBuV/m	289	151	Horizontal

Table 96 - CH149_HT20_MIMO_MCS8_Z, 5745 MHz, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

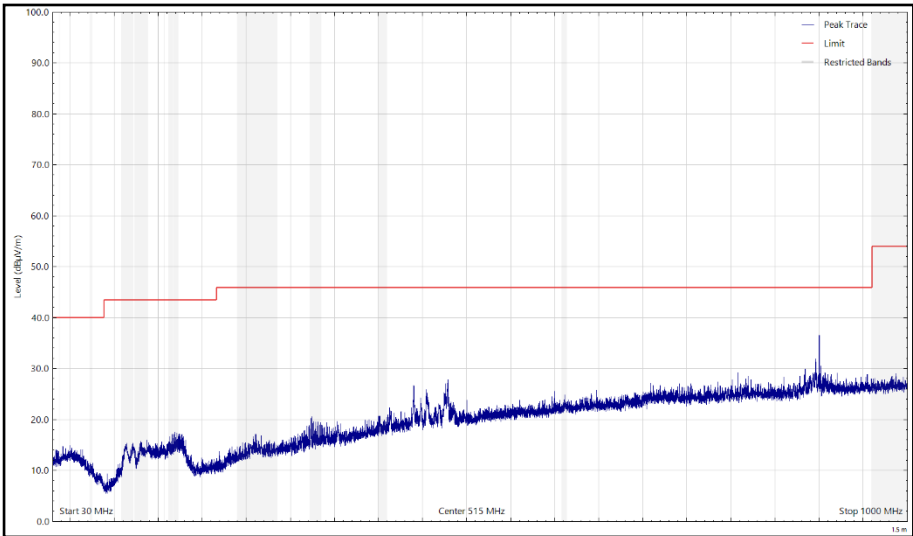


Figure 148 - CH149_HT20_MIMO_MCS8_Z, 5745 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

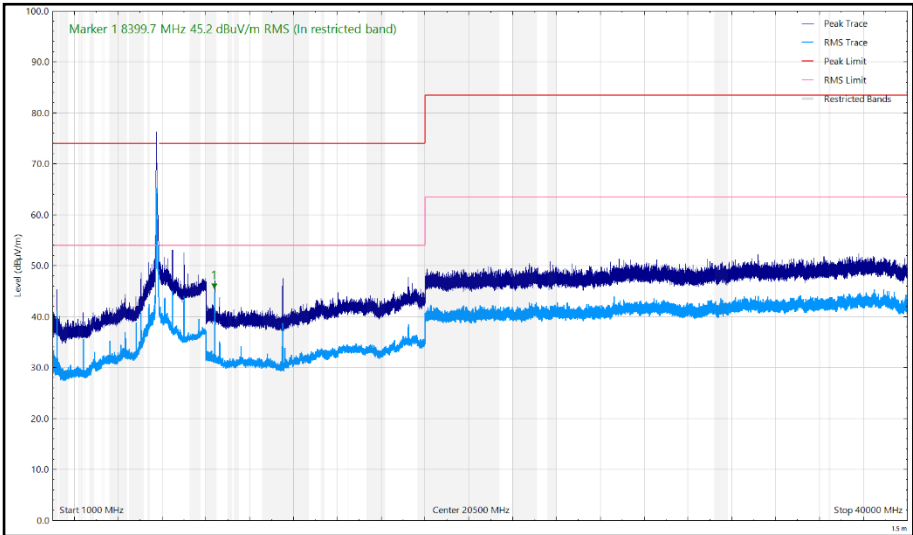


Figure 149 - CH149_HT20_MIMO_MCS8_Z, 5745 MHz, 1 GHz to 40 GHz, Horizontal

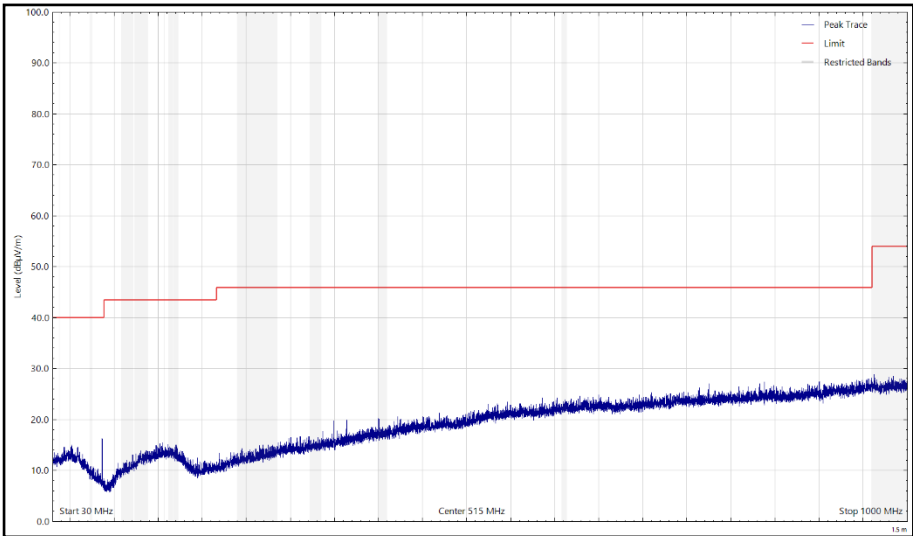


Figure 150 - CH149_HT20_MIMO_MCS8_Z, 5745 MHz, 30 MHz to 1 GHz, Vertical (Peak)

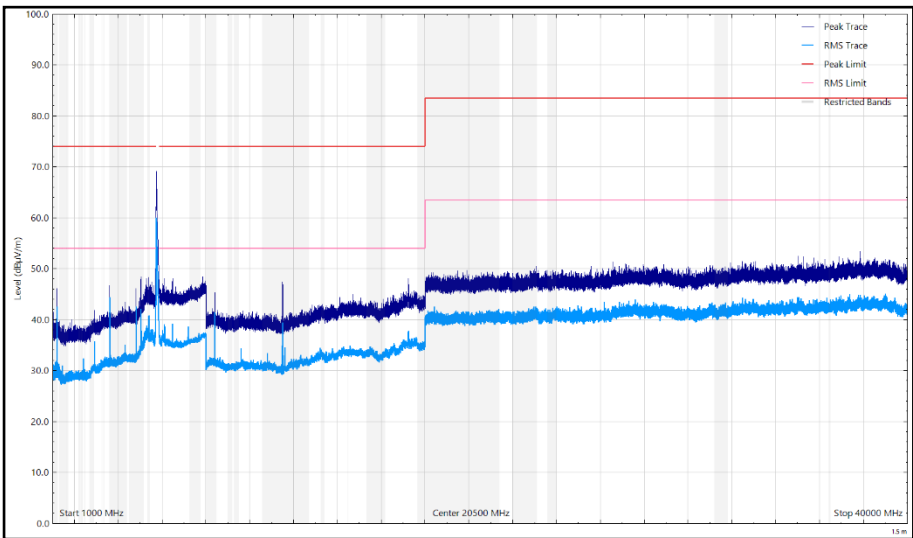


Figure 151 - CH149_HT20_MIMO_MCS8_Z, 5745 MHz, 1 GHz to 40 GHz, Vertical



Frequency (MHz)	Level	Limit	Margin (dB)	Detector	Unit	Angle (°)	Height (cm)	Polarisation
4799.811	44.88	54.00	-9.12	RMS	dBuv/m	267	152	Vertical
8399.700	45.10	54.00	-8.90	RMS	dBuV/m	282	153	Horizontal

Table 97 - CH165_HT20_MIMO_MCS8_X, 5825 MHz, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

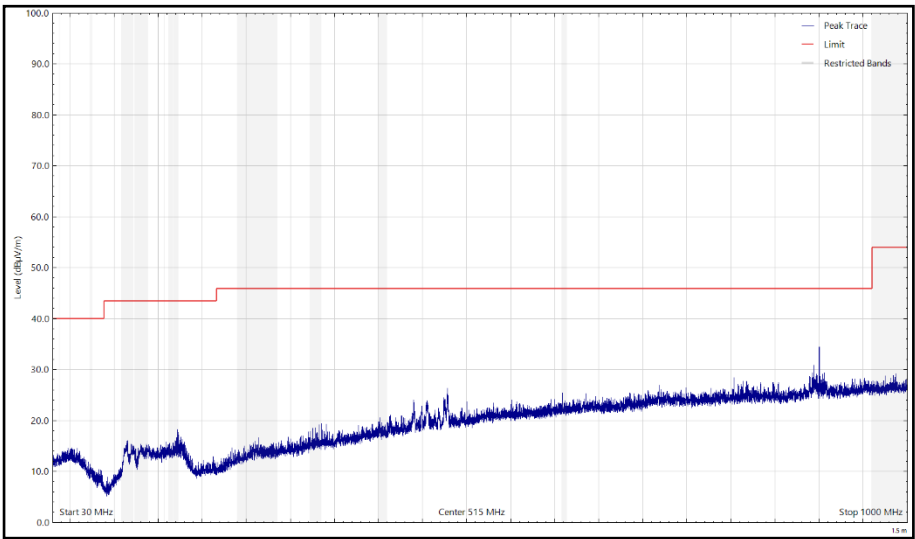


Figure 152 - CH165_HT20_MIMO_MCS8_X, 5825 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

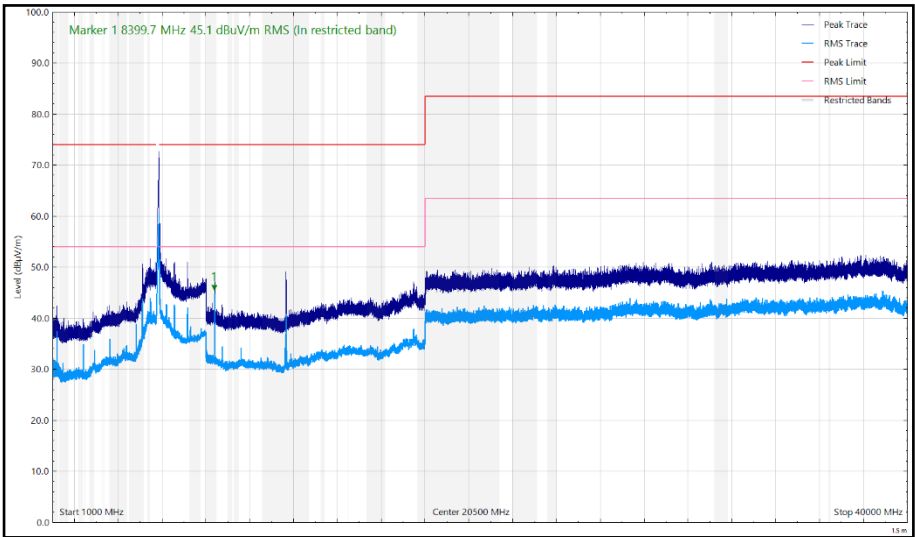


Figure 153 - CH165_HT20_MIMO_MCS8_X, 5825 MHz, 1 GHz to 40 GHz, Horizontal

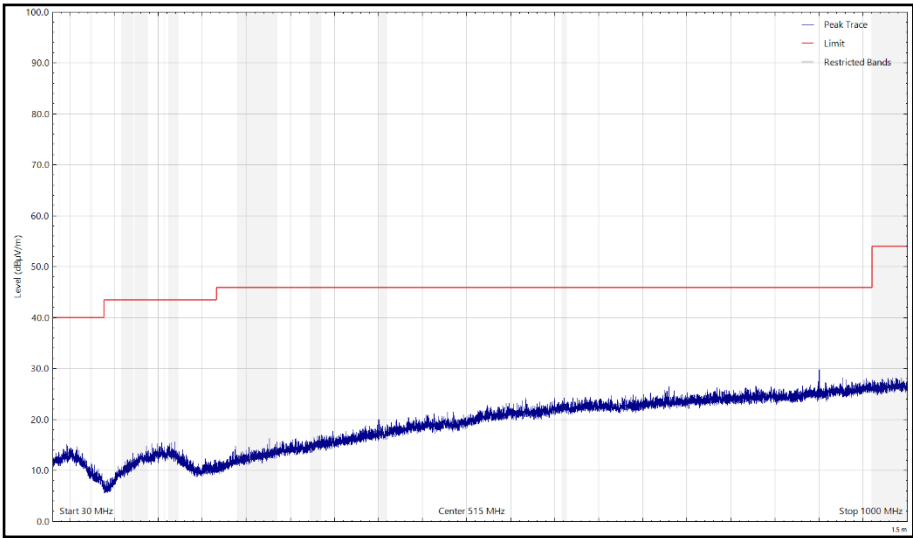


Figure 154 - CH165_HT20_MIMO_MCS8_X, 5825 MHz, 30 MHz to 1 GHz, Vertical (Peak)

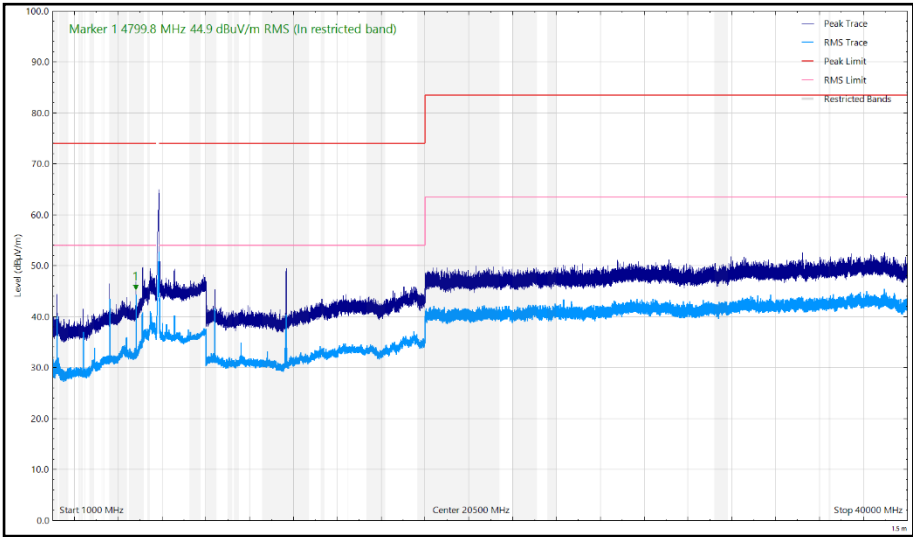


Figure 155 - CH165_HT20_MIMO_MCS8_X, 5825 MHz, 1 GHz to 40 GHz, Vertical



Frequency (MHz)	Level	Limit	Margin (dB)	Detector	Unit	Angle (°)	Height (cm)	Polarisation
1199.972	46.32	54.00	-7.68	RMS	dBuv/m	360	187	Vertical
8399.700	45.08	54.00	-8.92	RMS	dBuV/m	286	151	Horizontal

Table 98 - CH165_HT20_MIMO_MCS8_Y, 5825 MHz, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

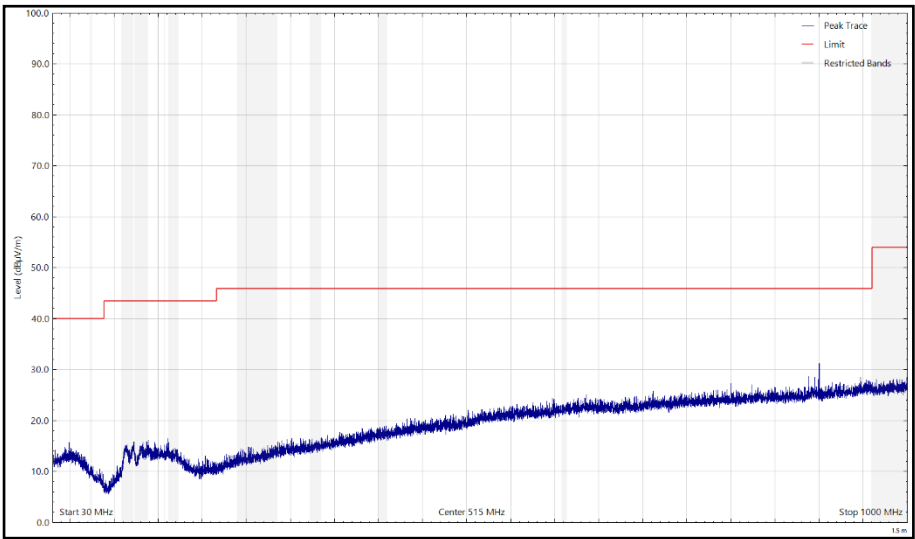


Figure 156 - CH165_HT20_MIMO_MCS8_Y, 5825 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

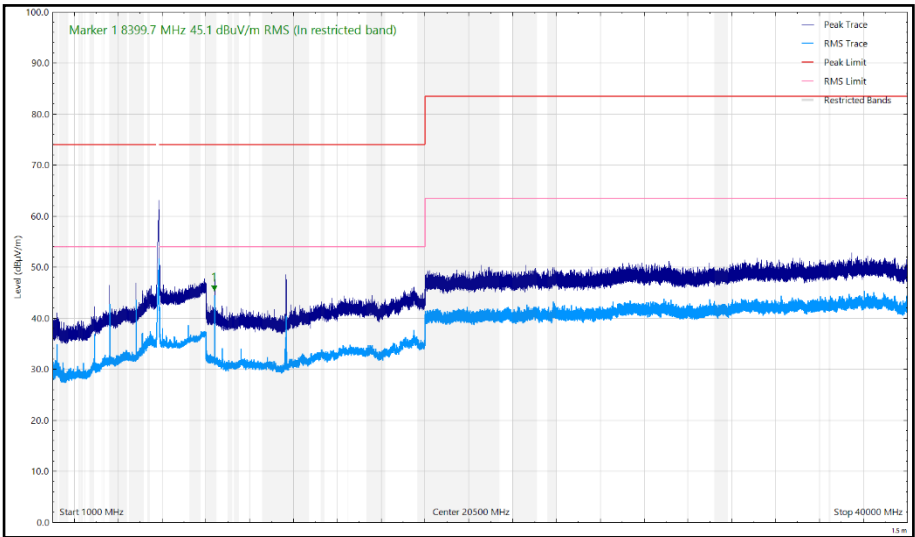


Figure 157 - CH165_HT20_MIMO_MCS8_Y, 5825 MHz, 1 GHz to 40 GHz, Horizontal

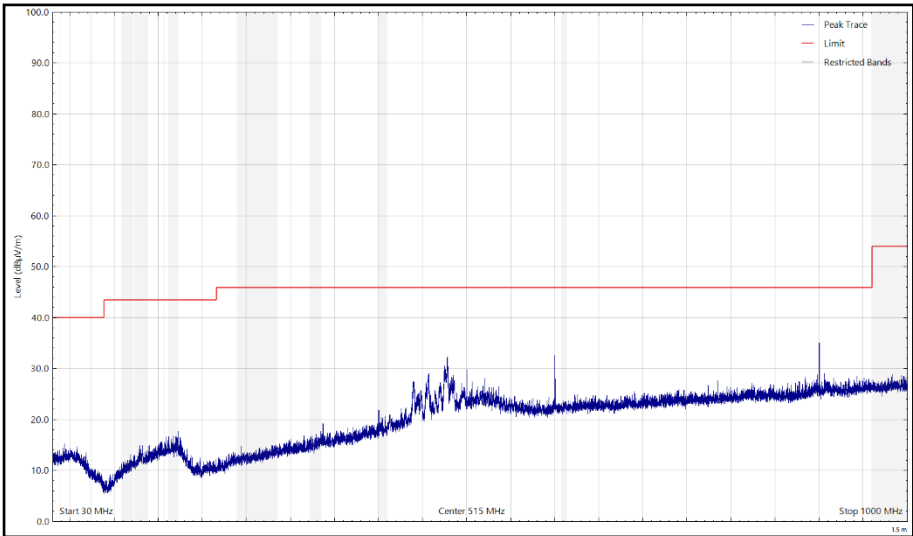


Figure 158 - CH165_HT20_MIMO_MCS8_Y, 5825 MHz, 30 MHz to 1 GHz, Vertical (Peak)

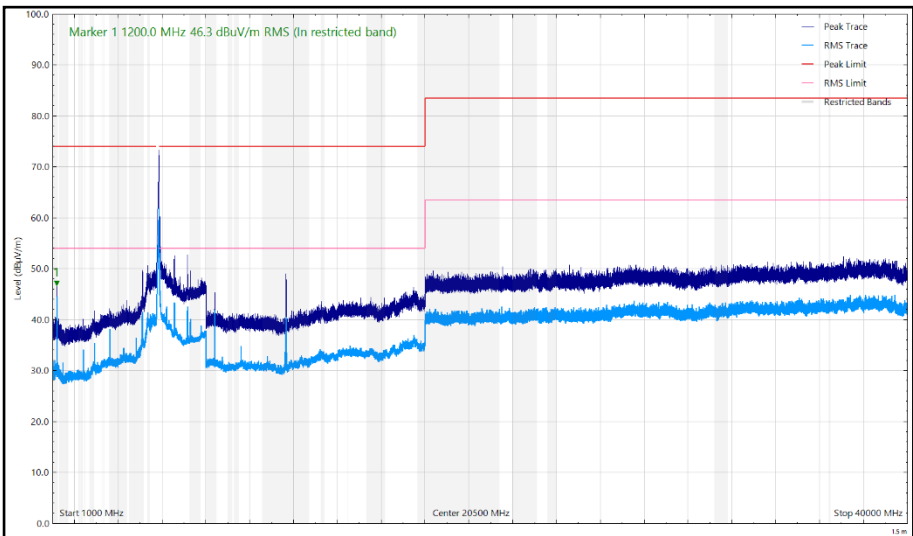


Figure 159 - CH165_HT20_MIMO_MCS8_Y, 5825 MHz, 1 GHz to 40 GHz, Vertical



Frequency (MHz)	Level	Limit	Margin (dB)	Detector	Unit	Angle (°)	Height (cm)	Polarisation
3600.012	43.82	54.00	-10.18	RMS	dBuv/m	350	153	Vertical
8399.619	44.94	54.00	-9.06	RMS	dBuV/m	282	150	Horizontal

Table 99 - CH165_HT20_MIMO_MCS8_Z, 5825 MHz, 30 MHz to 40 GHz

No other emissions found within 10 dB of the limit.

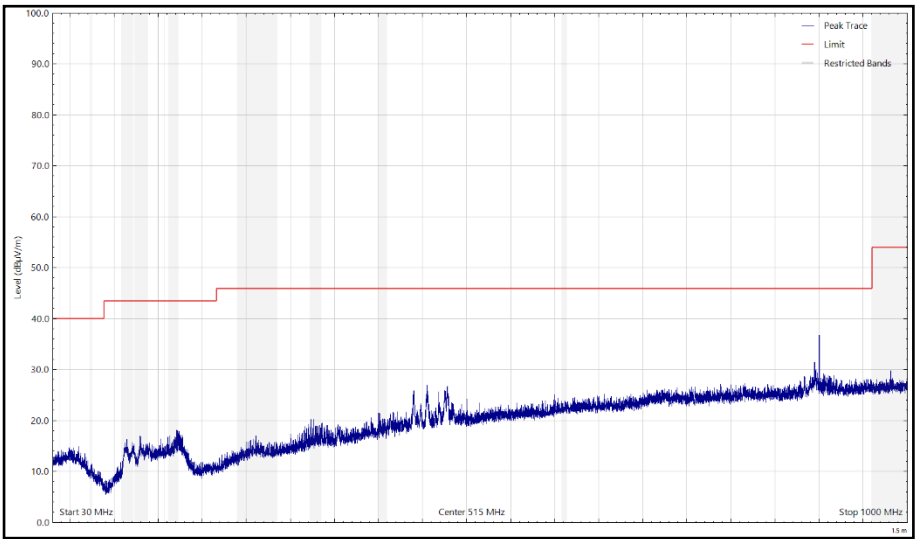


Figure 160 - CH165_HT20_MIMO_MCS8_Z, 5825 MHz, 30 MHz to 1 GHz, Horizontal (Peak)

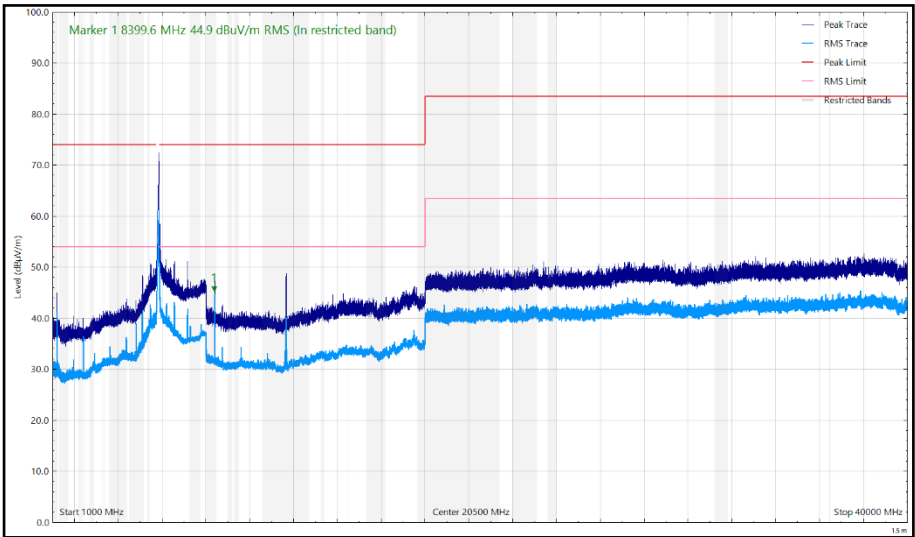


Figure 161 - CH165_HT20_MIMO_MCS8_Z, 5825 MHz, 1 GHz to 40 GHz, Horizontal

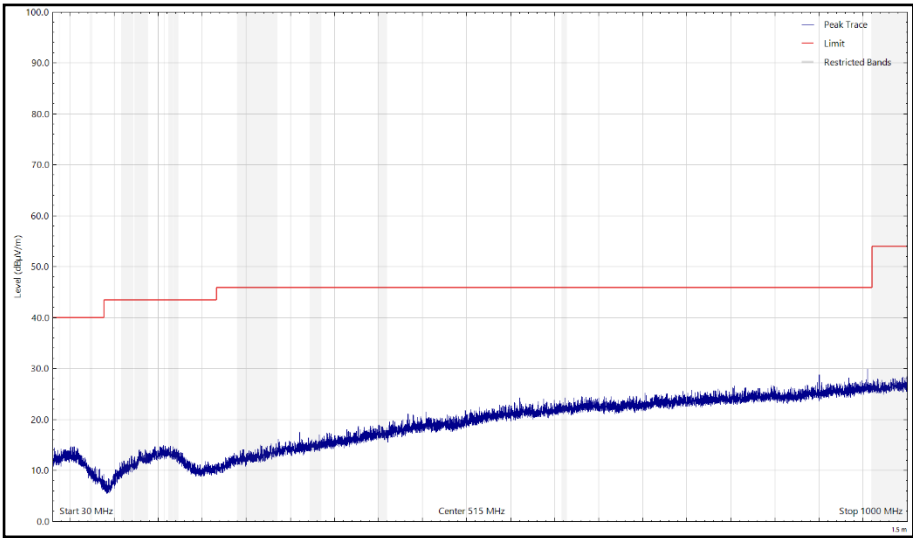


Figure 162 - CH165_HT20_MIMO_MCS8_Z, 5825 MHz, 30 MHz to 1 GHz, Vertical (Peak)

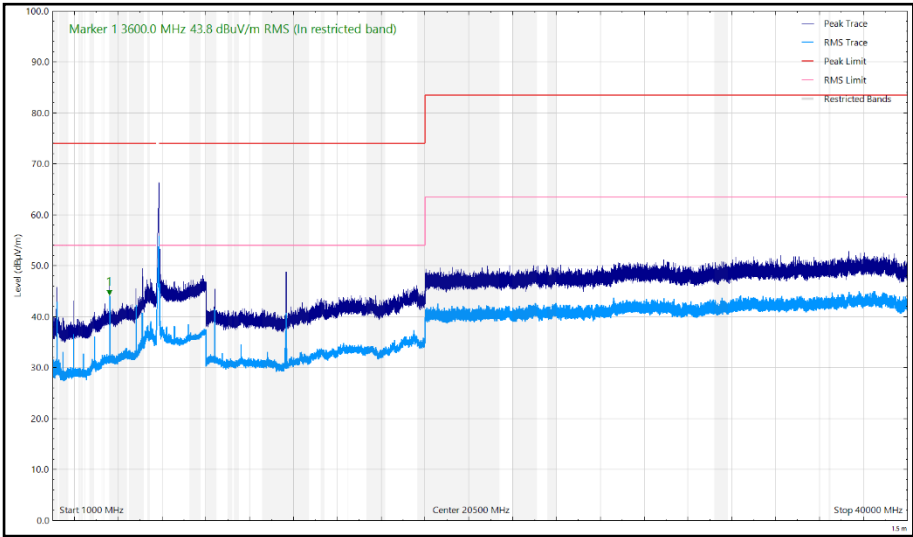


Figure 163 - CH165_HT20_MIMO_MCS8_Z, 5825 MHz, 1 GHz to 40 GHz, Vertical



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

Emissions not falling within the restricted bands listed in FCC 47 CFR Part 15.209:

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.

Emissions within the restricted bands listed in FCC 47 CFR Part 15.209:

Frequency (MHz)	Field Strength (μ V/m) at 3m	Field Strength Limit (dB μ V/m) at 3m
30 to 88	100	40.00
88 to 216	150	43.52
216 to 960	200	46.02
Above 960	500	53.98

Table 100 - Radiated Emissions Limit Table (FCC)



ISED RSS-247, Limit Clause 6.2.1.2, 6.2.2.2, 6.2.3.2 and 6.2.4.2 and ISED RSS-GEN, Limit Clause 8.9

Emissions not falling within the restricted bands listed in ISED RSS-GEN, Clause 8.10:

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.

Emissions falling within the restricted bands listed in ISED RSS-GEN, Clause 8.10:

Frequency (MHz)	Field Strength ($\mu\text{V/m}$) at 3m	Field Strength Limit ($\text{dB}\mu\text{V/m}$) at 3m
30 to 88	100	40.00
88 to 216	150	43.52
216 to 960	200	46.02
Above 960	500	53.98

Table 101 - Radiated Emissions Limit Table (ISED)

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.

2.4.8 Test Location and Test Equipment Used

This test was carried out in EMC Chamber 5.

Instrument	Manufacturer	Type No	TE No	Calibration Period (months)	Calibration Expires
Antenna (DRG, 18 GHz to 40 GHz)	Link Microtek Ltd	AM180HA-K-TU2	230	24	08-Oct-2026
Dual Power Supply Unit	Hewlett Packard	6253A	292	-	O/P Mon
Pre-Amplifier (18 GHz to 40 GHz)	Phase One	PSO4-0087	1534	12	16-Aug-2025
3m Semi-Anechoic Chamber	Rainford	RF Chamber 5	1545	36	23-Apr-2027
Turntable Controller	Inn-Co GmbH	CO 1000	1606	-	TU
Hygrometer	Rotronic	Hygropalm 0	3028	12	12-Aug-2025
Mast Controller	Maturo GmbH	NCD	4810	-	TU
Tilt Antenna Mast	Maturo GmbH	TAM 4.0-P	4811	-	TU
Antenna (DRG, 1 GHz to 10.5 GHz)	Schwarzbeck	BBHA9120B	4848	12	14-Jul-2025
Emissions Software	TUV SUD	EmX V3.4.2	5125	-	Software
Antenna (DRG, 7.5 GHz to 18 GHz)	Schwarzbeck	HWRD750	5216	12	14-Jul-2025
Pre-amplifier (30 dB, 1GHz to 18GHz)	Schwarzbeck	BBV 9718 C	5261	12	09-Apr-2025
Cable (K-Type to K-Type, 1 m)	Junkosha	MWX241-01000KMSKMS/A	5511	12	06-Jun-2025
Cable (SMA to SMA, 2 m)	Junkosha	MWX221-02000AMSAMS/A	5517	12	23-May-2025
EMI Test Receiver	Rohde & Schwarz	ESW44	5527	12	26-Jul-2025
3 GHz High pass Filter	Wainwright	WHKX12-2580-3000-18000-80SS	5548	12	15-Aug-2025
7 GHz High pass Filter	Wainwright	WHKX12-5850-6800-18000-80SS	5550	12	30-May-2025
Pre-Amplifier (8 GHz to 18 GHz)	Wright Technologies	APS06-0061	5596	12	28-Oct-2025
Cable (K-Type to K-Type, 2 m)	Junkosha	MWX241-02000KMSKMS/B	5934	12	20-Jun-2025
Cable (N to N 8m)	Junkosha	MWX221-08000NMSNMS/B	6330	12	17-Feb-2025
Trilog Super Broadband Test Antenna	Schwarzbeck	VULB 9168	6635	24	13-Jun-2025

Table 102

TU - Traceability Unscheduled

O/P Mon – Output Monitored using calibrated equipment

3 Photographs

3.1 Test Setup Photographs



Figure 164 - Test setup - 30 MHz to 1 GHz

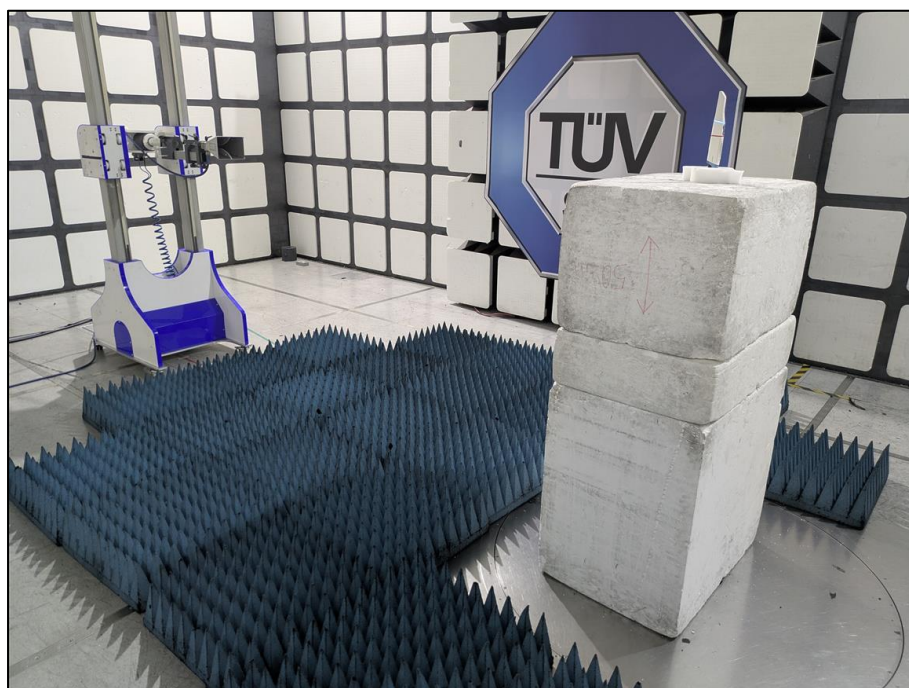


Figure 165 - Test setup - 1 GHz to 18 GHz

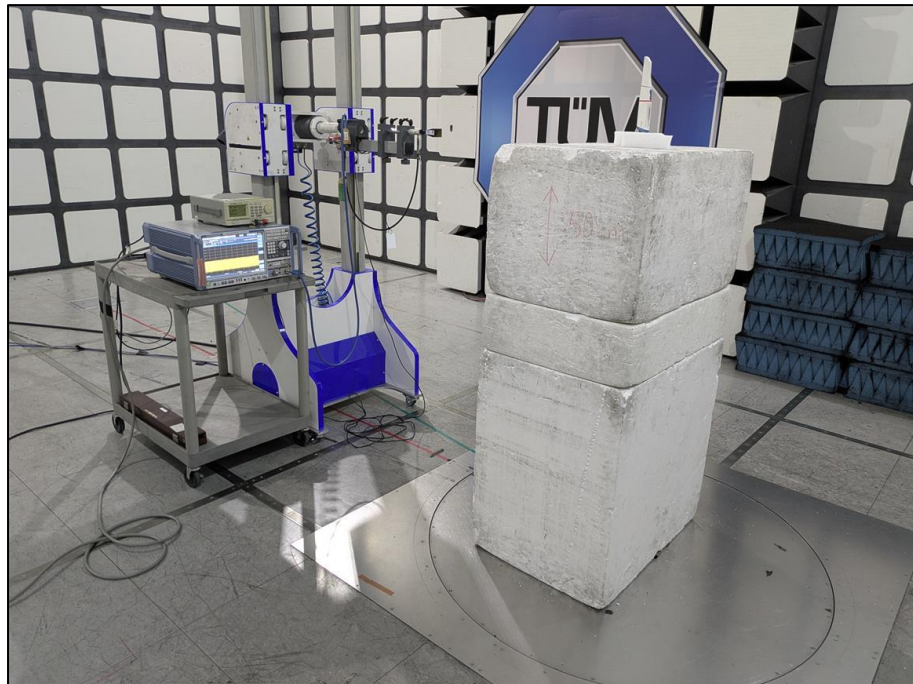


Figure 166 - Test setup - 18 GHz to 40 GHz

4 Measurement Uncertainty

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

Test Name	Measurement Uncertainty
Maximum Conducted Output Power	Method PM: ± 0.65 dB Method SA: ± 1.05 dB
Authorised Band Edges	± 6.3 dB
Restricted Band Edges	± 6.3 dB
Spurious Radiated Emissions	30 MHz to 1 GHz: ± 5.2 dB 1 GHz to 40 GHz: ± 6.3 dB

Table 103

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.