

Test Report

REP156253

Date of issue: March 20, 2026

Applicant:

Andrew Wireless Systems GmbH
Industriering, 10
86675 Buchdorf – Germany

Product:

Industrial Booster

Model:

CAP H2 34T/37T F-AC-F1

FCC ID:

XS5-H23437HP

Specifications:

◆ **FCC 47 CFR Part 27**

Miscellaneous Wireless Communications Services

Lab locations

Company name	Nemko Spa
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City	Biassono
Province	MB
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Country	Italy
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Facsimile	+39 039 220 12 21
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Tested by	P. Barbieri
Test engineer signature	 Firmato digitalmente da Barbieri Paolo
Reviewed by	R. Giampaglia
Reviewer signature	 Roberto Giampaglia

Limits of responsibility

Note that the results contained in this report relate only to the items tested and were obtained in the period between the date of initial receipt of samples and the date of issue of the report. This test report has been completed in accordance with the requirements of ISO/IEC 17025. All results contained in this report are within Nemko S.p.A. ISO/IEC 17025 accreditation.

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Section 1 Report summary

1.1 Applicant and manufacturer

Company name	Andrew Wireless Systems GmbH
Address	Industriering, 10
City	Buchdorf
Province/State	--
Postal/Zip code	86675
Country	Germany

1.2 Test specifications

FCC 47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
FCC 47 CFR Part 27	Miscellaneous wireless communications services

1.3 Test methods

ANSI C63.26-2015	American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services
KDB 935210 D05	Indus Booster Basic Meas v01r04
KDB 662911 D01	Multiple Transmitter Output v02r01
KDB 662911 D02	MIMO with Cross-Polarized Antennas v01

1.4 Statement of compliance

In the configuration tested, the EUT was found compliant.

Testing was performed against all relevant requirements of the test standard except as noted in section 1.3 above. Results obtained indicate that the product under test complies in full with the requirements tested. The test results relate only to the items tested.

See "Summary of test results" for full details.

1.5 Exclusions

None

1.6 Test report revision history

Table 1.6-1: Test report revision history

Revision #	Date of issue	Details of changes made to test report
REP156253	March 20, 2026	Original report issued

Section 2 Summary of test results

2.1 Testing location

Test location (s)	Nemko Spa Via del Carroccio, 4 – 20853 Biassono (MB) - Italy
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2.2 Testing period

Test start date	March 9, 2026	Test end date	March 20, 2026
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2.3 Sample information

Receipt date	March 9, 2026	Nemko sample ID number(s)	PRJ00986820001
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2.4 FCC Part 27 test requirements results

Table 2.4-1: FCC requirements results

Part	Method (clause)	Test description	Verdict
FCC 27.53(l) FCC 2.1053	KDB935210 (3.8)	Spurious emissions radiated measurements	Pass

Notes:

Section 3 Equipment under test (EUT) details

3.1 Sample information

Receipt date	March 10, 2026
Nemko sample ID number	PRJ00986820001

3.2 EUT information

Product name	Industrial Booster
Model	CAP H2 34T/37T F-AC-F1
Model variant	--
Serial number	BGH2AA2610001

3.3 Technical information

Frequency band	3700 to 3980 MHz	3450 to 3550 MHz
Frequency Min (MHz)	3750 MHz	3500 MHz
Frequency Max (MHz)	3930 MHz	3500 MHz
RF power (W), Conducted	31.6 W (45 dBm) (nominal)	20 W (43 dBm) (nominal)
Type of modulation	5G NR	
Emission classification (F1D, G1D, D1D)	W7D	
Power requirements	100 – 240 Vac 50 – 60 Hz 6 A	
Antenna information	RF connector available (antenna not provided)	

3.4 Product description and theory of operation

The Era product is a digital distribution system with focus on flexibility, easy installing, commissioning, and reliable operation.

The Era system comprises of two main parts. A base station interface (Master or Head End Unit) that receives RF signals as well as digital signals from the base stations, conditions the signals for the given application and assigns them to the coverage zones.

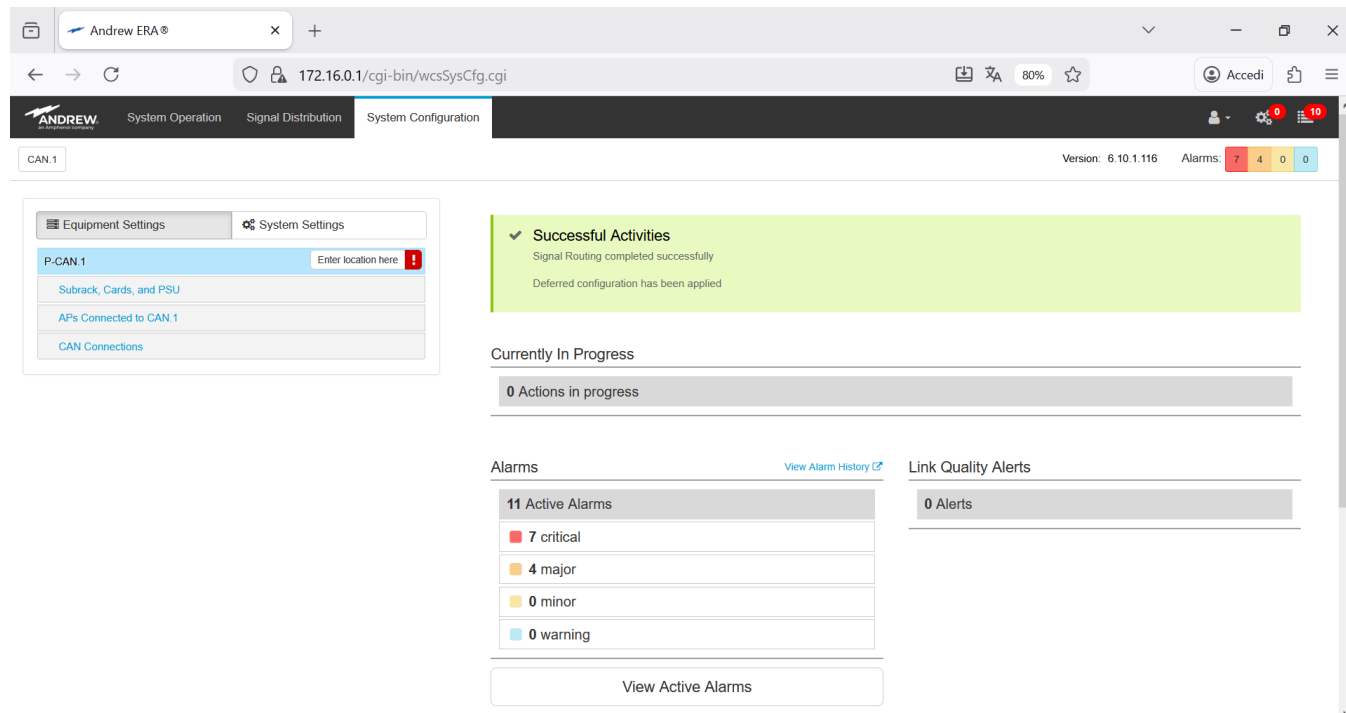
The coverage side is built of one or more Remote Units/Access Points. The Rus / Aps are connected to the ERA Head End Unit via a 10GBASE-T or 25GBASE-T fiber optical link.

The CAP H 2 is the Second Generation of ERA high power access points supporting up to 6 RF paths. A composite output power per band of 43/45 dBm, supporting DPD and CFR.

RF signals between Master Unit and Remote Units are sent digitally over the fiber optical link. At the receiver side these signals are converted back to analog and amplified to appropriate transmitter power levels.

3.5 EUT exercise details

The EUT has been tested connected to a dedicated server. The following software has been used to configure the EUT:



The screenshot displays the Andrew ERA web interface. The browser address bar shows the URL `172.16.0.1/cgi-bin/wcsSysCfg.cgi`. The interface includes a navigation menu with tabs for System Operation, Signal Distribution, and System Configuration. The main content area shows the following sections:

- Equipment Settings:** Includes a tab for P-CAN 1 with a subtab for Subrack, Cards, and PSU. A button "Enter location here" with a red exclamation mark is visible.
- Successful Activities:** A green box indicating "Signal Routing completed successfully" and "Deferred configuration has been applied".
- Currently In Progress:** A section showing "0 Actions in progress".
- Alarms:** A section showing "11 Active Alarms" with a breakdown: 7 critical, 4 major, 0 minor, and 0 warning. A button "View Active Alarms" is present.
- Link Quality Alerts:** A section showing "0 Alerts".

The top right corner of the interface displays the version "6.10.1.116" and a status bar with "Alarms: 7 4 0 0".

A signal generator with an AWGN signal with 95 MHz 99% OBW representative of a 100 MHz 5G NR channel has been connected to the RF input of the server. The RF output of the EUT was connected to a spectrum analyzer or a dummy load.

3.6 EUT setup diagram

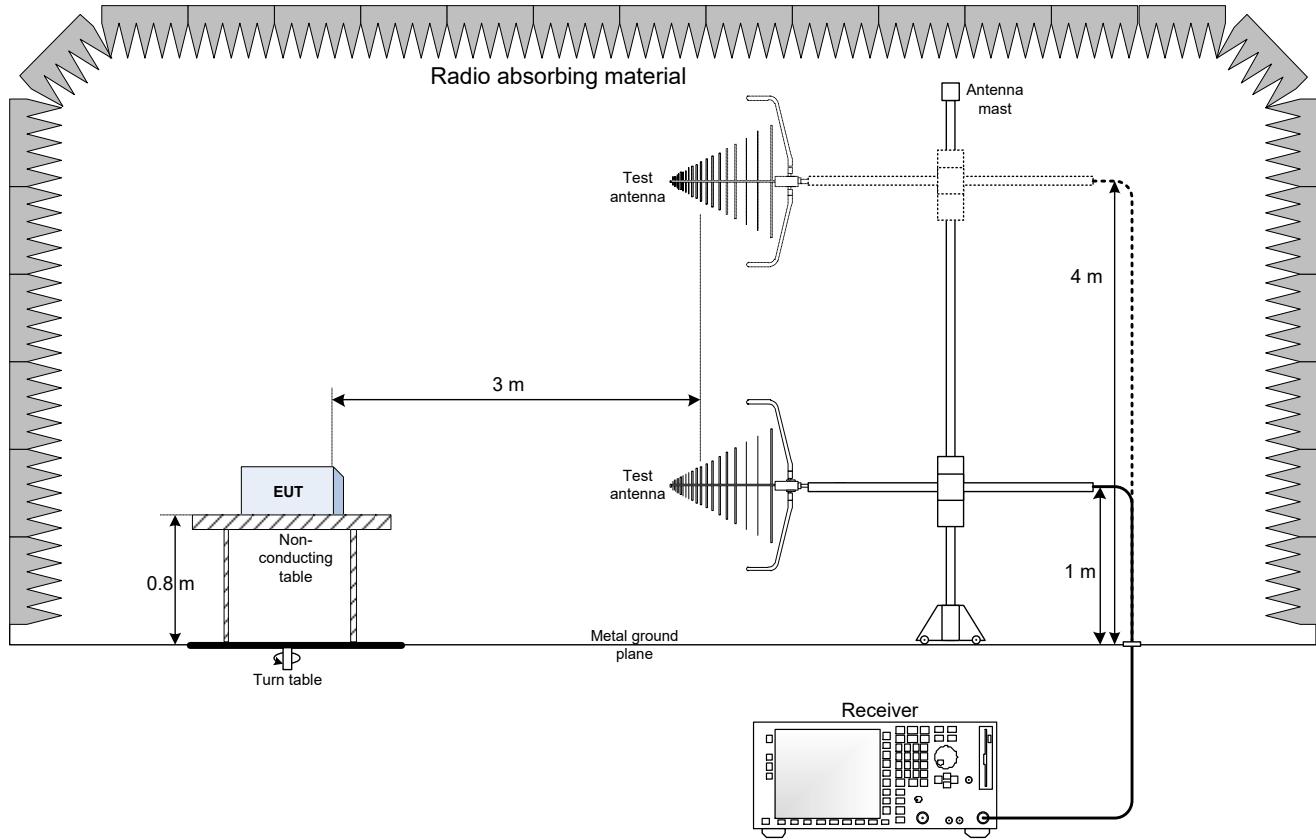


Figure 3.6-1: Radiated emissions set-up for frequencies below 1 GHz

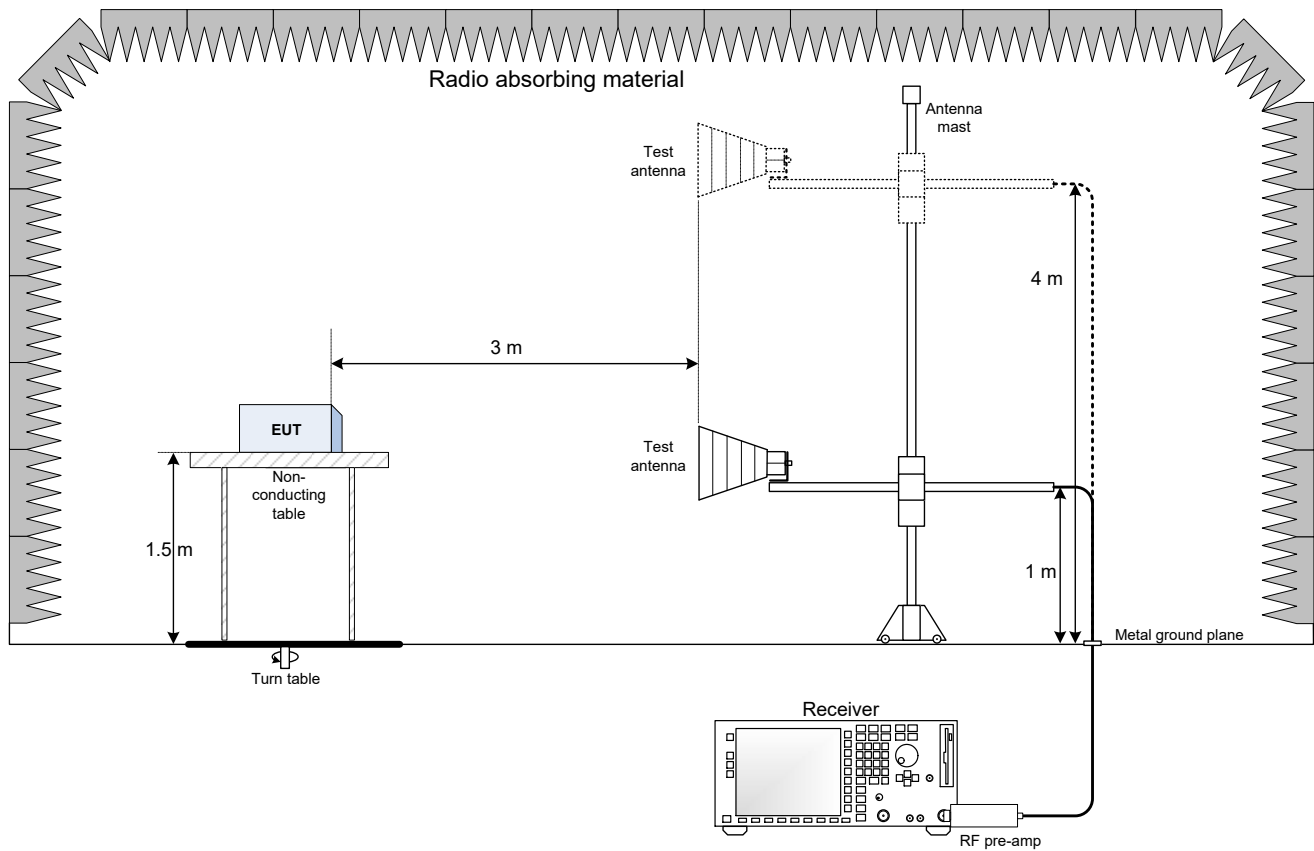


Figure 3.6-2: Radiated emissions set-up for frequencies above 1 GHz

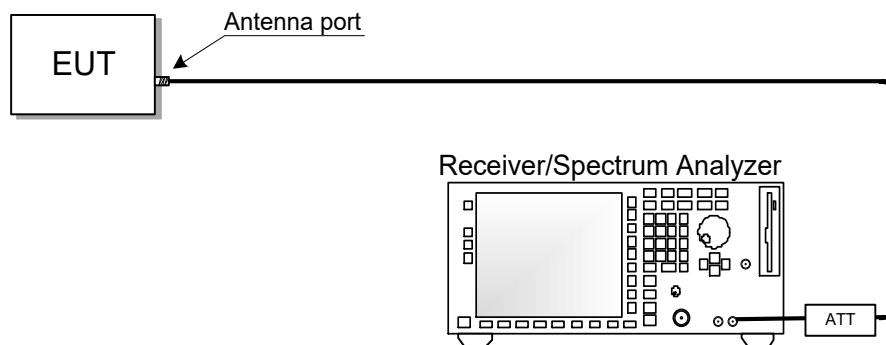


Figure 3.6-3: Antenna port testing set-up

Section 4 Engineering considerations

4.1 Modifications incorporated in the EUT

There were no modifications performed to the EUT during this assessment.

4.2 Technical judgment

None

4.3 Deviations from laboratory tests procedures

No deviations were made from laboratory procedures.

Section 5 Test conditions

5.1 Atmospheric conditions

Temperature	18–33 °C
Relative humidity	20–70 %
Air pressure	860–1060 mbar

When it is impracticable to carry out tests under these conditions, a note to this effect stating the ambient temperature and relative humidity during the tests shall be recorded and stated.

The following instruments are used to monitor the environmental conditions:

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
Thermo-hygrometer	Testo	175-H2	20012380/305	2025-01	2027-01
Thermo-hygrometer	Testo	175-H2	20013013/305	2025-01	2027-01
Barometer	Castle	GPB 3300	072015	2025-03	2026-03

5.2 Power supply range

The normal test voltage for equipment to be connected to the mains shall be the nominal mains voltage. For the purpose of the present document, the nominal voltage shall be the declared voltage, or any of the declared voltages $\pm 5\%$, for which the equipment was designed.

Section 6 Measurement uncertainty

6.1 Uncertainty of measurement

The measurement uncertainty was calculated for each test and quantity listed in this test report, according to CISPR 16-4-2, ETSI TR 100 028-1, ETSI TR 100 028-2 and other specific test standards and is documented in Nemko Spa working manuals WML1002 and WML0078.

The assessment of conformity for each test performed on the equipment is performed not taking into account the measurement uncertainty. The two following possible verdicts are stated in the report:

P (Pass) - The measured values of the equipment respect the specification limit at the points tested. The specific risk of false accept is up to 50% when the measured result is close to the limit.

F (Fail) - One or more measured values of the equipment do not respect the specification limit at the points tested. The specific risk of false reject is up to 50% when the measured result is close to the limit.

Hereafter Nemko's measurement uncertainties are reported:

EUT	Type	Test	Range	Measurement Uncertainty	Notes
Transmitter	Conducted	Frequency error	0.001 MHz ÷ 40 GHz	0.08 ppm	(1)
		Carrier power RF Output Power	0.009 MHz ÷ 30 MHz	1.1 dB	(1)
			30 MHz ÷ 18 GHz	1.5 dB	(1)
			18 MHz ÷ 40 GHz	3.0 dB	(1)
			40 MHz ÷ 140 GHz	5.0 dB	(1)
		Adjacent channel power	1 MHz ÷ 18 GHz	1.4 dB	(1)
		Conducted spurious emissions	0.009 MHz ÷ 18 GHz	3.0 dB	(1)
			18 GHz ÷ 40 GHz	4.2 dB	(1)
			40 GHz ÷ 220 GHz	6.0 dB	(1)
		Intermodulation attenuation	1 MHz ÷ 18 GHz	2.2 dB	(1)
		Attack time – frequency behaviour	1 MHz ÷ 18 GHz	2.0 ms	(1)
		Attack time – power behaviour	1 MHz ÷ 18 GHz	2.5 ms	(1)
		Release time – frequency behaviour	1 MHz ÷ 18 GHz	2.0 ms	(1)
		Release time – power behaviour	1 MHz ÷ 18 GHz	2.5 ms	(1)
		Transient behaviour of the transmitter– Transient frequency behaviour	1 MHz ÷ 18 GHz	0.2 kHz	(1)
		Transient behaviour of the transmitter – Power level slope	1 MHz ÷ 18 GHz	9%	(1)
		Frequency deviation - Maximum permissible frequency deviation	0.001 MHz ÷ 18 GHz	1.3%	(1)
		Frequency deviation - Response of the transmitter to modulation frequencies above 3 kHz	0.001 MHz ÷ 18 GHz	0.5 dB	(1)
		Dwell time	-	3%	(1)
		Hopping Frequency Separation	0.01 MHz ÷ 18 GHz	1%	(1)
		Occupied Channel Bandwidth	0.01 MHz ÷ 18 GHz	2%	(1)
		Modulation Bandwidth	0.01 MHz ÷ 18 GHz	2%	(1)
	Radiated	Radiated spurious emissions	0.009 MHz ÷ 26.5 GHz	6.0 dB	(1)
			26.5 GHz ÷ 66 GHz	8.0 dB	(1)
			66 GHz ÷ 220 GHz	10 dB	(1)
		Effective radiated power transmitter	10 kHz ÷ 26.5 GHz	6.0 dB	(1)
			26.5 GHz ÷ 66 GHz	8.0 dB	(1)
			66 GHz ÷ 220 GHz	10 dB	(1)

NOTES:

(1) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor $k = 2$, which for a normal distribution corresponds to a coverage probability of approximately 95 %

Section 7 Test equipment

7.1 Test equipment list

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
EMI Receiver	Rohde & Schwarz	ESW44	101620	2025-08	2026-08
Spectrum Analyzer	Rohde & Schwarz	FSW43	101767	2025-12	2026-12
EMI Receiver	Rohde & Schwarz	ESU8	100202	2025-08	2026-08
RF Vector Signal Generator	Rohde & Schwarz	SMBV100A	263254	2025-07	2026-07
RF Vector Signal Generator	Rohde & Schwarz	SMBV100A	263397	2026-02	2027-02
Antenna Trilog 25-2000 MHz	Schwarzbeck Mess-Elektronik	VULB9168	9168-242	2024-08	2027-08
Antenna Trilog 25MHz - 8GHz	Schwarzbeck Mess-Elektronik	VULB9162	9162-025	2024-08	2027-08
Antenna 1 - 18 GHz	Schwarzbeck Mess-Elektronik	STLP9148	STLP 9148-152	2024-10	2027-10
Antenna 1 - 18 GHz	Schwarzbeck Mess-Elektronik	STLP9148	STPL 9148-123	2024-08	2027-08
Double Ridge Horn Antenna	RFSpin	DRH40	061106A40	2023-05	2026-05
Broadband Amplifier	Schwarzbeck Mess-Elektronik	BBV9718C	00121	2025-12	2026-12
Broadband Bench Top Amplifier	Sage	STB-1834034030-KFKF-L1	18490-01	2025-07	2026-07
Controller	Maturo	FCU3.0	10041	NCR	NCR
Tilt antenna mast	Maturo	TAM4.0-E	10042	NCR	NCR
Turntable	Maturo	TT4.0-5T	2.527	NCR	NCR
3m Semi anechoic chamber	Comtest	SAC-3	1711-150	2024-09	2026-09
Semi-anechoic chamber	Nemko Spa	10m semi-anechoic chamber	530	2025-10	2027-10
Software turntable and mast	Maturo	mcApp	8.1.0.5410	NCR	NCR
Coaxial cable	Rosenberger+Huber-Suhner	RE01+RE02	1.654+1.655	2026-01	2027-01
Coaxial cable	Huber + Suhner	Sucorex 102 EA	1.507	2025-12	2026-12

Notes: NCR - no calibration required, VOU - verify on use

Section 8 Testing data

8.1 Spurious emissions radiated measurements

8.1.1 References, definitions and limits

FCC §27.53(l)

- (l) 3.7 GHz Service. The following emission limits apply to stations transmitting in the 3700-3980 MHz band:
- (1) For base station operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with this paragraph (l)(1) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1-megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

FCC §27.53(l)

- (n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:
- (1) For base station operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed -13 dBm/MHz. Compliance with the provisions of this paragraph (n)(1) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. Notwithstanding the channel edge requirement of -13 dBm per megahertz, for base station operations in the 3450-3550 MHz band, the conducted power of any emission below 3440 MHz or above 3560 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3430 MHz or above 3570 MHz shall not exceed -40 dBm/MHz.

8.1.2 Test summary

Verdict	Pass		
Tested by	P. Barbieri	Test date	March 13, 2026

Receiver reading (or field strength) P_R , reported at Test Data clause, was achieved adjusting input signal P_{IN} by a correction factor CF, to consider, where applicable, the insertion loss due to cables (CL) and attenuators (AL), the antenna factor (AF), the external preamplifier gain (PG). This correction factor was pre-inserted in the firmware of the receiver and was applied by the instrument during the test. The following relationships apply:

$$CF = CL + AL + AF - PG$$

$$P_R = P_{IN} + CF$$

8.1.3 Observations, settings and special notes

The spectrum was searched from 30 MHz to the 10th harmonic.

All measurements were performed using peak detector according to note 4 of 935210 D05 Indus Booster Basic Meas v01r04 paragraph 3.6.3.

Testing was performed with RF ports terminated with 50 Ohm load.

In the graphics below, no radiated spurious emission found and the limit is exceeded only by the carrier.

The peak at 10.3 GHz is generated by the SFP adapter.

Spectrum analyser settings:

Resolution bandwidth:	100 kHz and 1 MHz
Video bandwidth:	VBW $\geq 3 \times$ RBW
Detector mode:	Peak
Trace mode:	Max Hold

Input signal frequency

Middle channel	3500 MHz and 3840 MHz
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8.1.4 Test equipment used

Equipment	Manufacturer	Model no.	Asset no.
EMI Receiver	Rohde & Schwarz	ESW44	101620
RF Vector Signal Generator	Rohde & Schwarz	SMBV100A	263254
Antenna Trilog 25MHz - 8GHz	Schwarzbeck Mess-Elektronik	VULB9162	9162-025
Antenna 1 - 18 GHz	Schwarzbeck Mess-Elektronik	STLP9148	STLP 9148-152
Double Ridge Horn Antenna	RFSpin	DRH40	061106A40
Broadband Amplifier	Schwarzbeck Mess-Elektronik	BBV9718C	00121
Broadband Bench Top Amplifier	Sage	STB-1834034030-KFKF-L1	18490-01
Semi-anechoic chamber	Nemko Spa	10m semi-anechoic chamber	530
3m Semi anechoic chamber	Comtest	SAC-3	1711-150

8.1.5 Test data

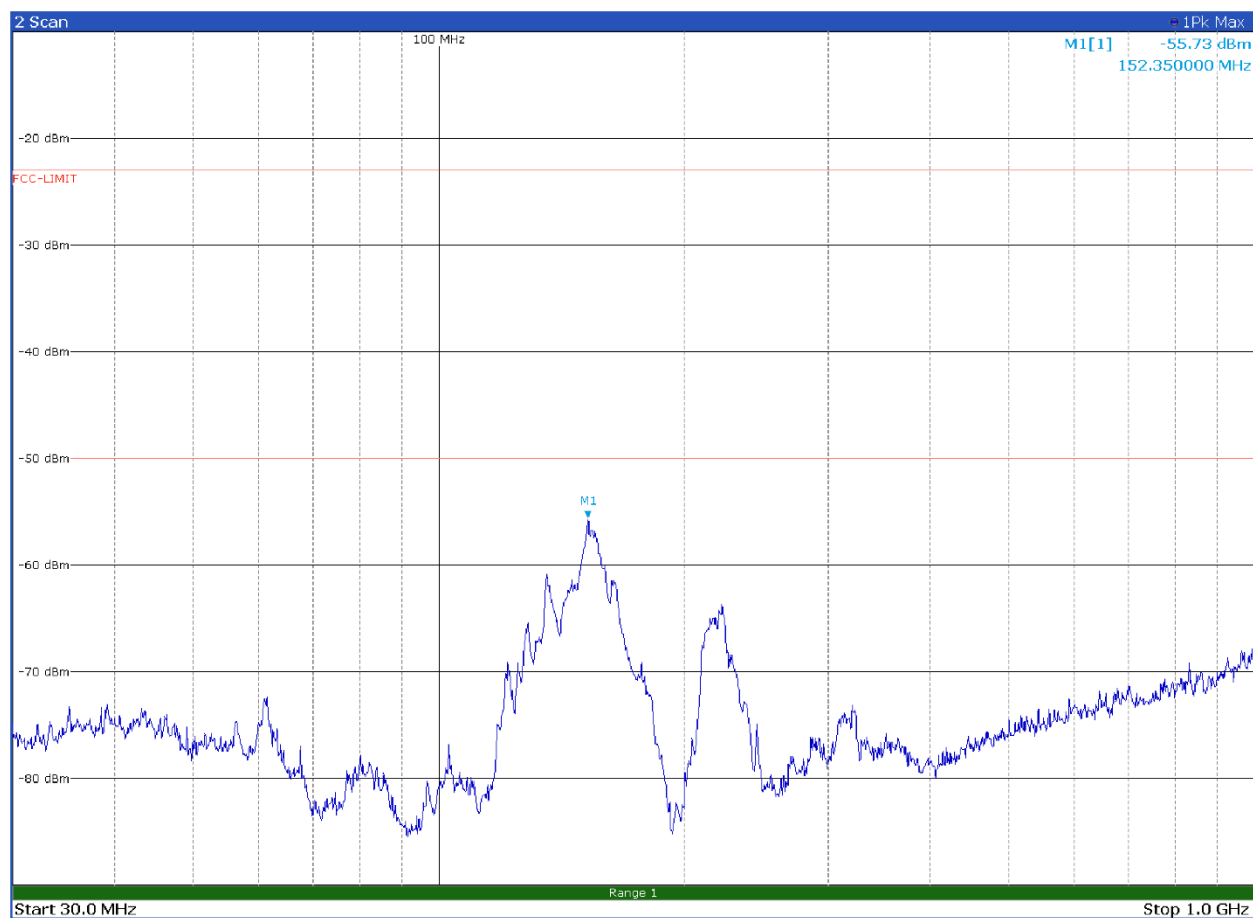


Figure 8.1-1: Radiated spurious emissions below 1 GHz, with antenna in horizontal polarization

Test data, continued

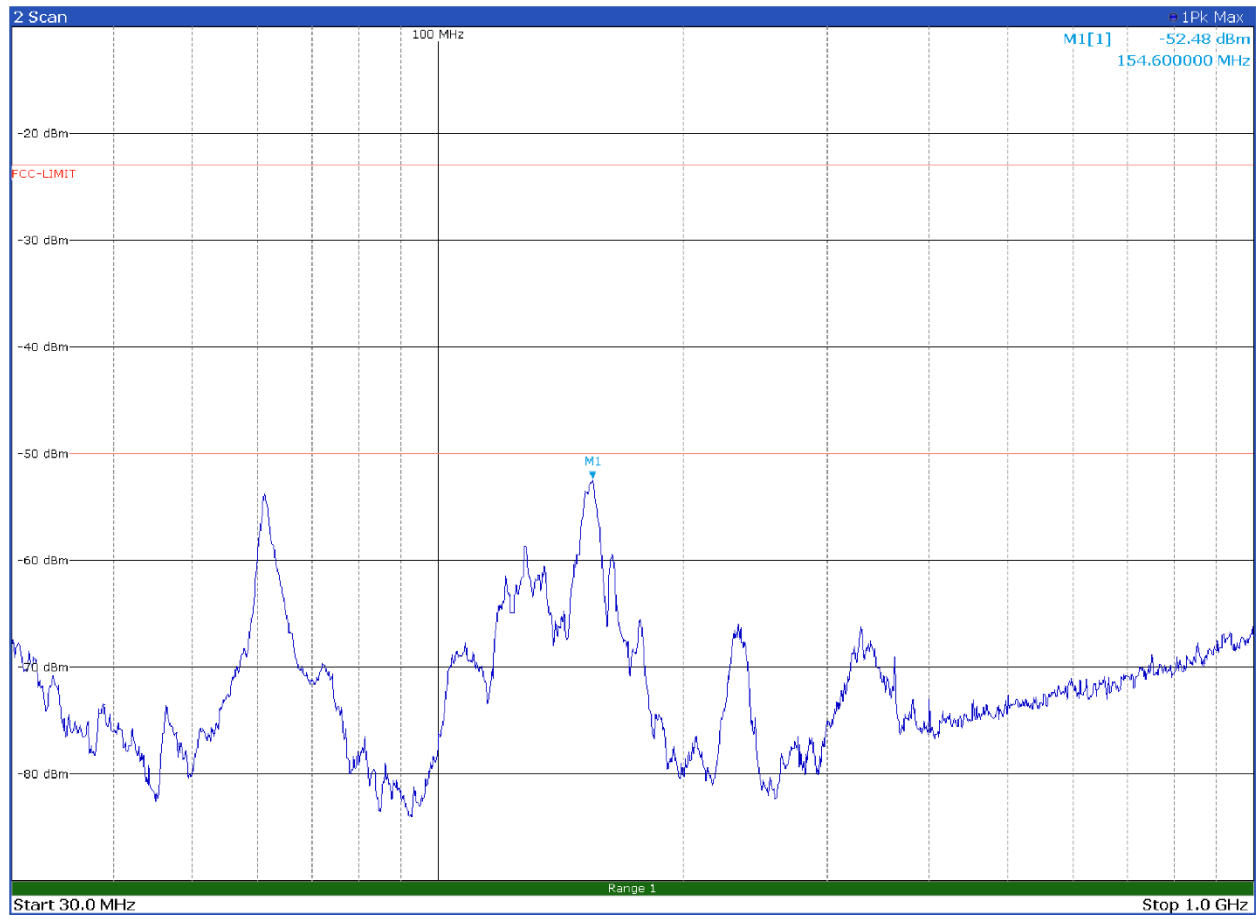


Figure 8.1-2: Radiated spurious emissions below 1 GHz, with antenna in vertical polarization

Test data, continued

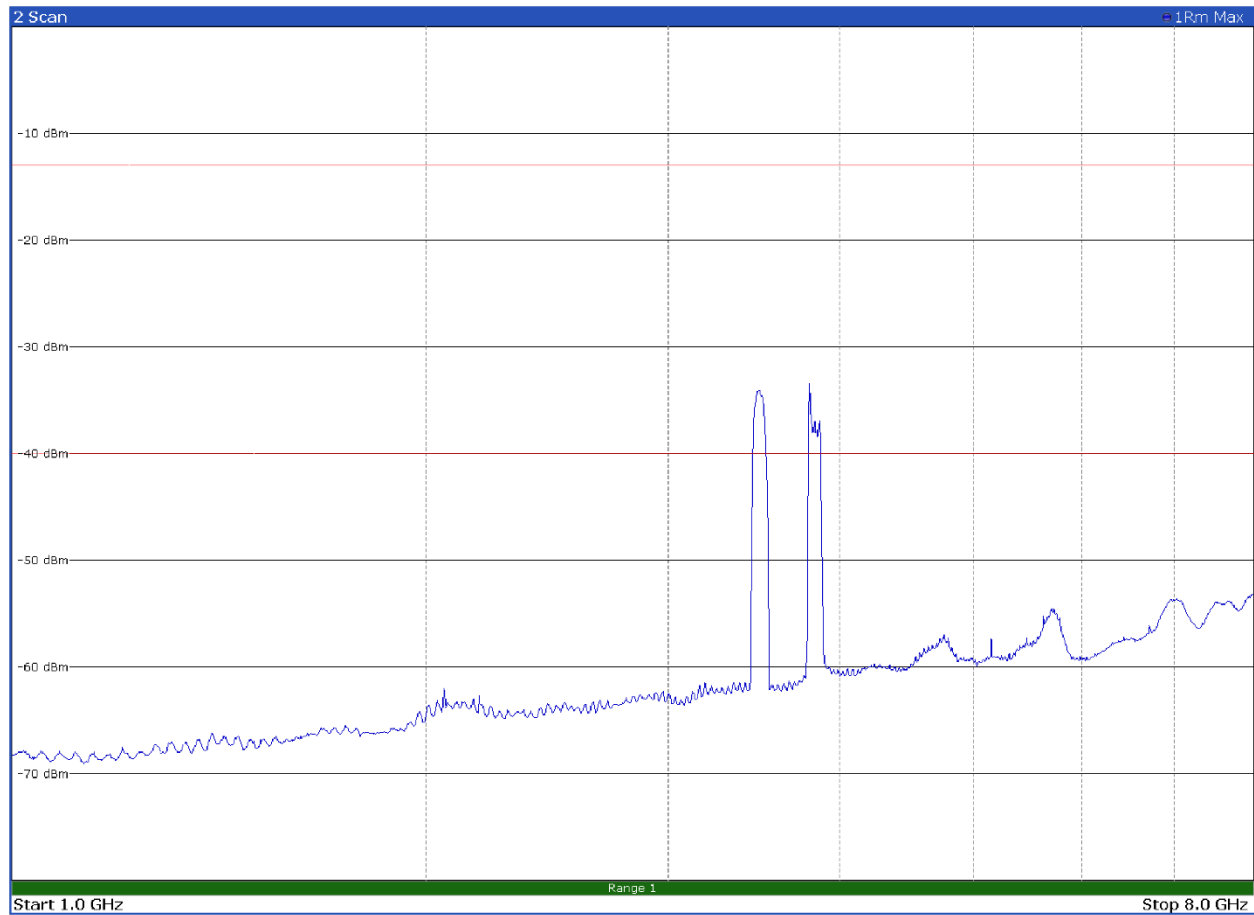


Figure 8.1-3: Radiated spurious emissions from 1 GHz to 8 GHz, with antenna in horizontal polarization

Test data, continued

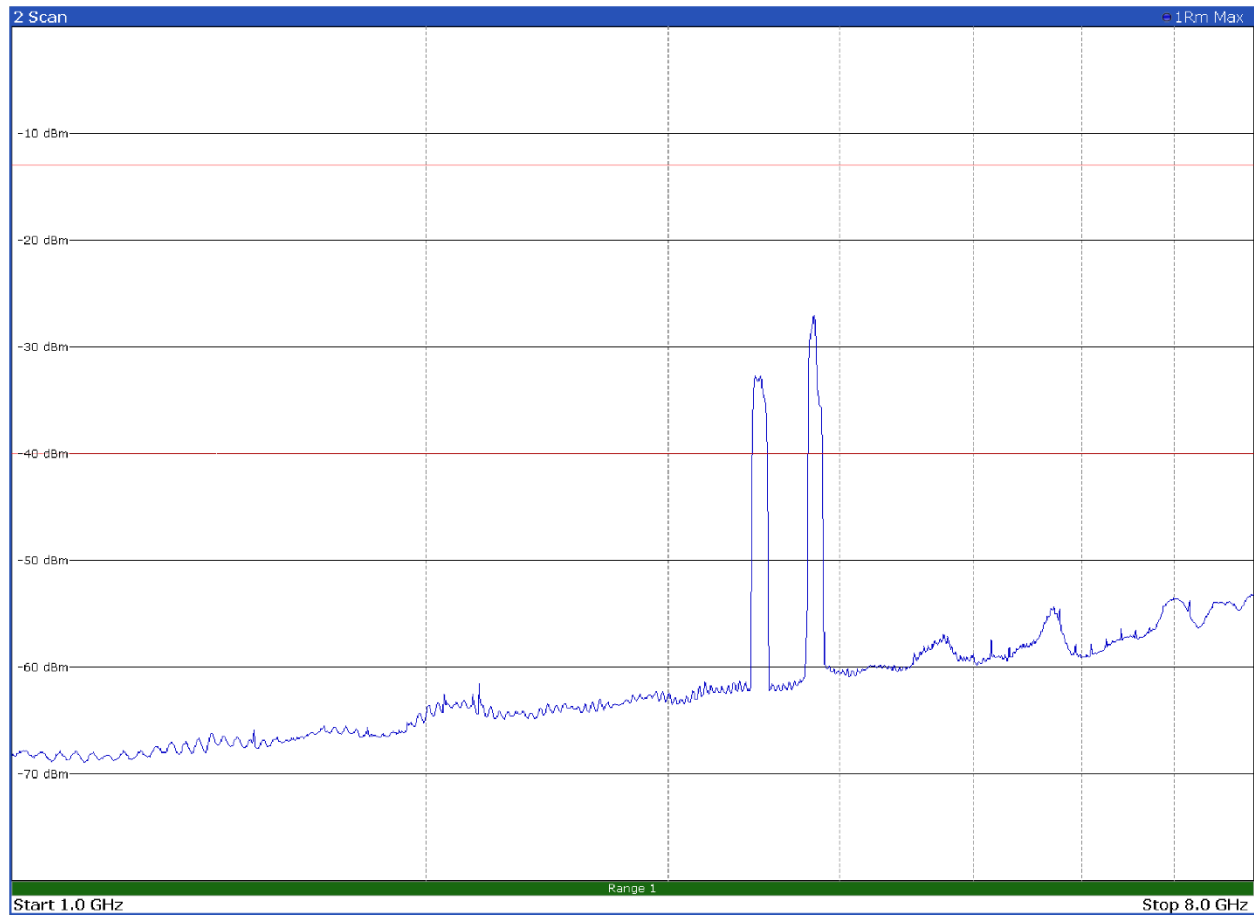


Figure 8.1-4: Radiated spurious emissions from 1 GHz to 8 GHz, with antenna in vertical polarization

Test data, continued

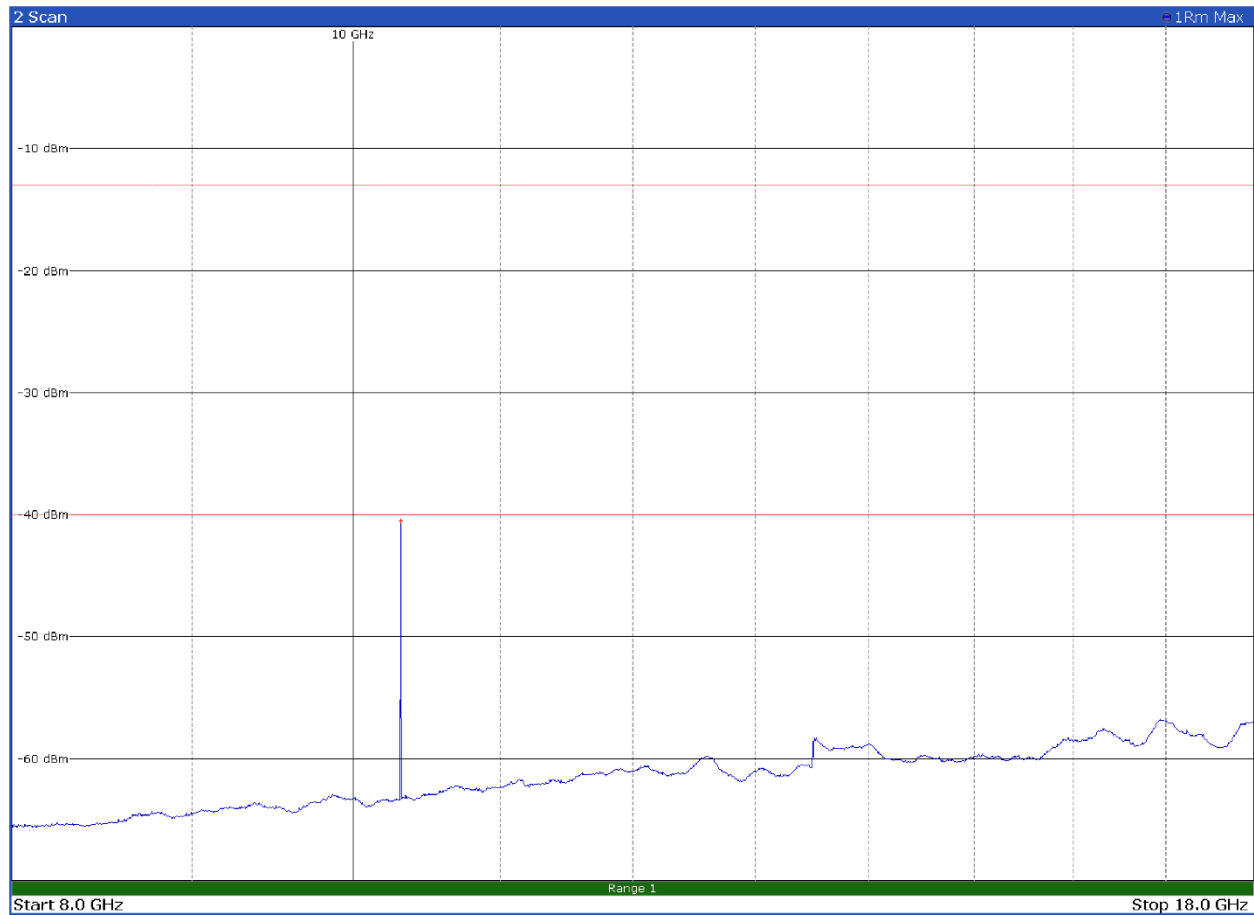


Figure 8.1-5: Radiated spurious emissions from 8 GHz to 18 GHz, with antenna in horizontal polarization

Frequency (GHz)	Level (dBm)	Limit (dBm)	Margin (dB)
10.3125	-40.7	--	--

This peak is generated by the SFP adapter and not by the simultaneous transmission (see the report REP155882)

Test data, continued

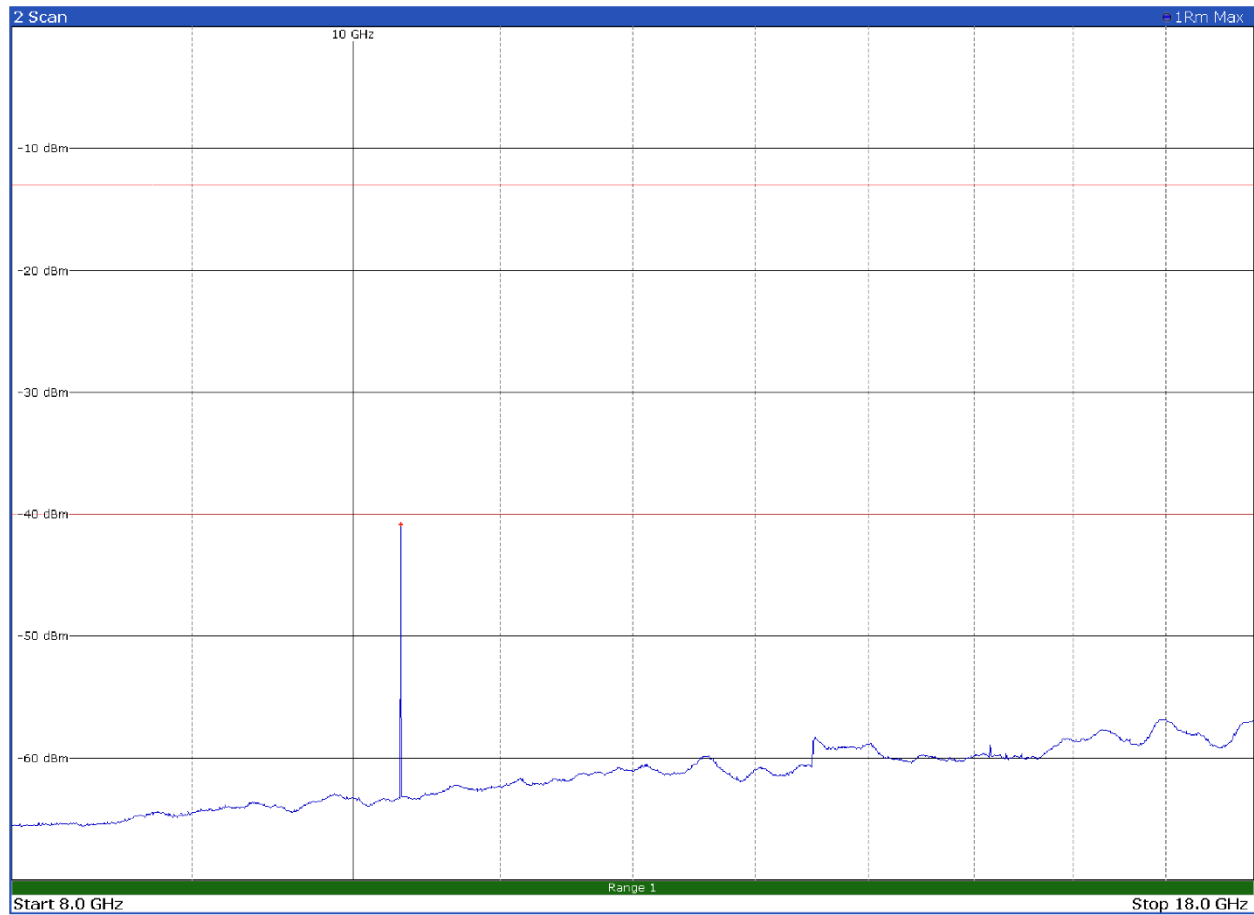


Figure 8.1-6: Radiated spurious emissions from 8 GHz to 18 GHz, with antenna in vertical polarization

Frequency (GHz)	Level (dBm)	Limit (dBm)	Margin (dB)
10.3125	-41.5	--	--

This peak is generated by the SFP adapter and not by the simultaneous transmission (see the report REP155882)

Test data, continued

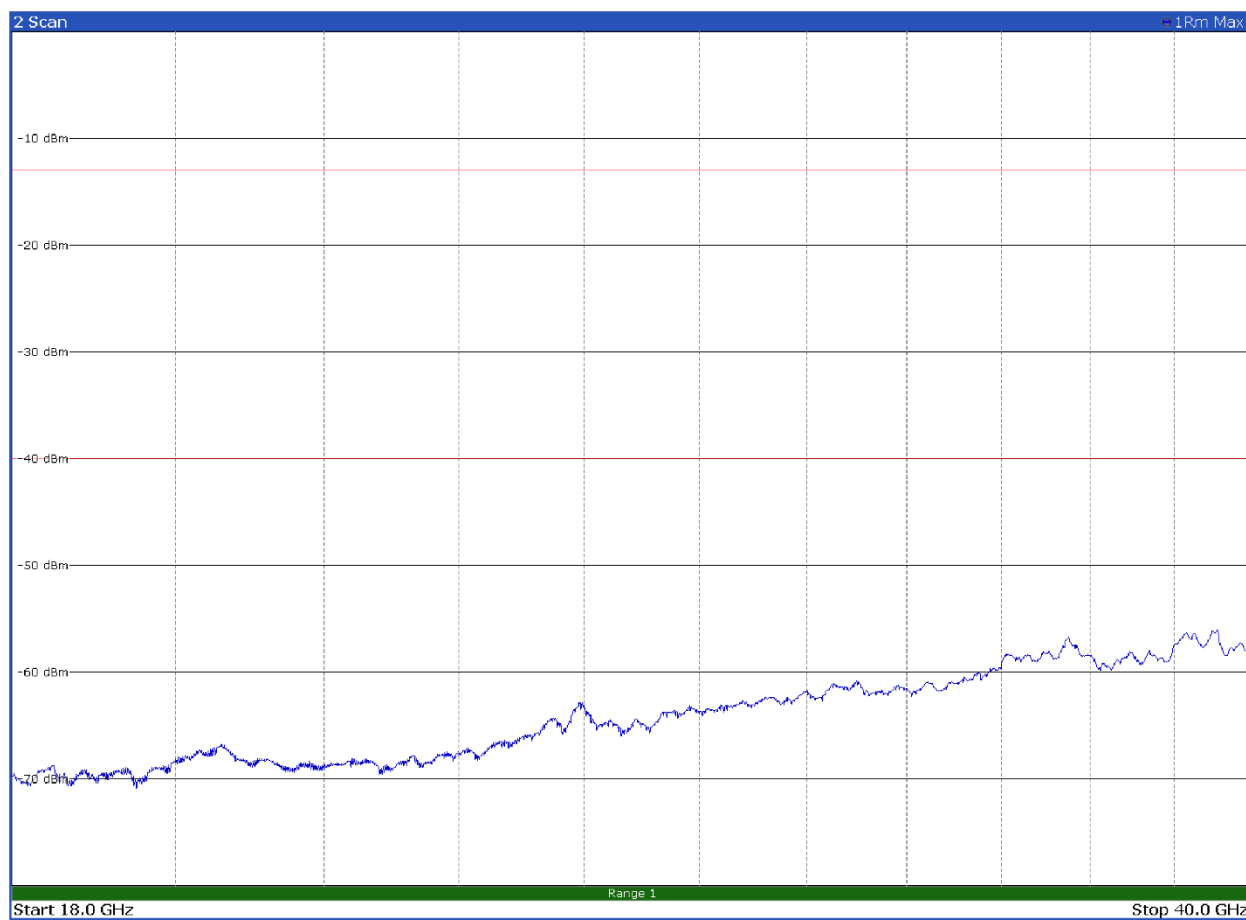


Figure 8.1-7: Radiated spurious emissions from 18 GHz to 40 GHz, with antenna in horizontal polarization

Test data, continued

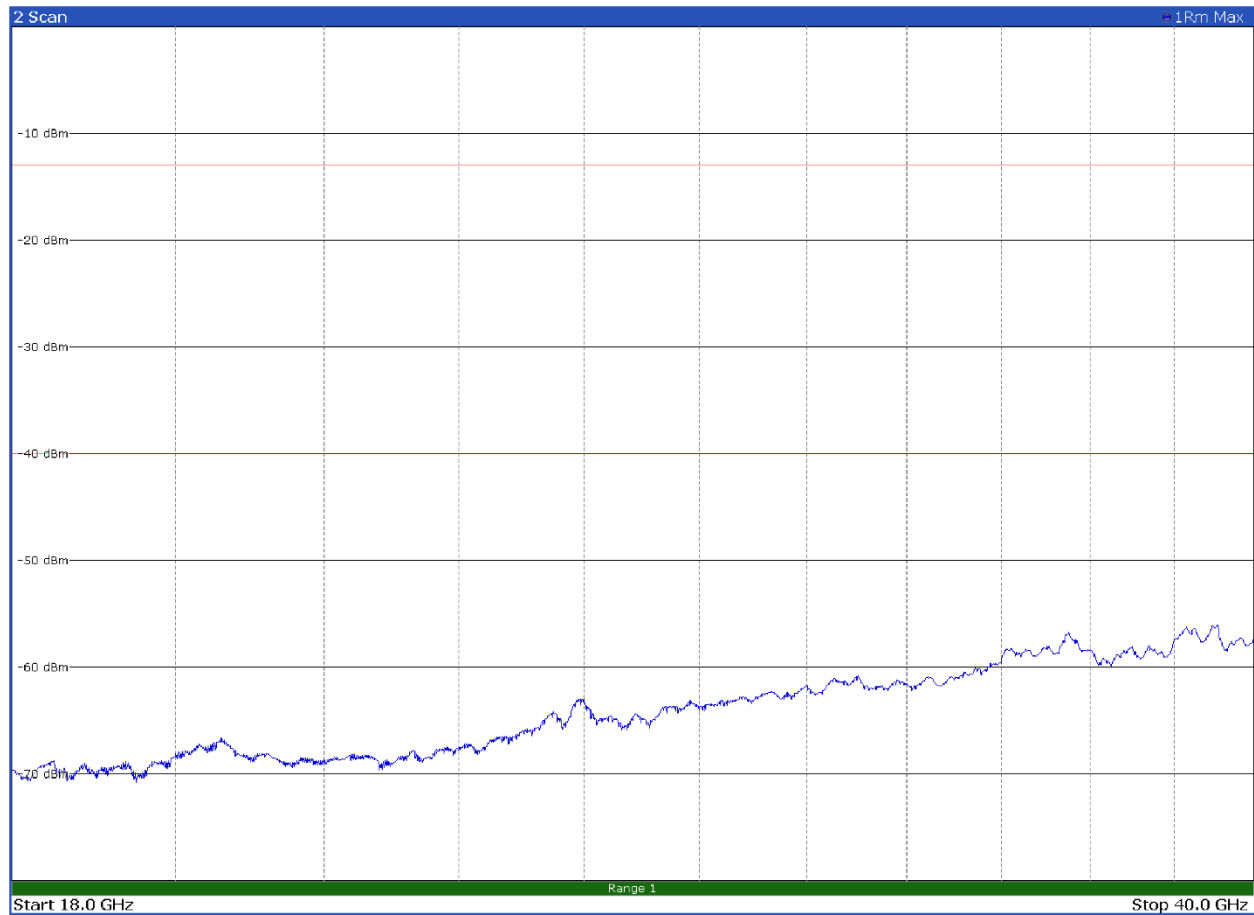


Figure 8.1-8: Radiated spurious emissions from 18 GHz to 40 GHz, with antenna in vertical polarization

Section 9 EUT photos

Annex A_EUT & Test Setup photos

End of the test report