



Test report

REP169125-1R2TRFWL

Date of issue: September 11, 2026

Applicant:

Airspan Networks Inc.

Product description:

Remote Unit

Model:

N3RU-35

Variant(s):

None

FCC ID:

OJFE62-N3-35

Specifications:

- ◆ FCC 47 CFR Part 96 – Citizens Broadband Radio Service

Lab and test locations

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Website	www.nemko.com
FCC Site Number	Test Firm Registration Number: 392943; Designation Number: US3165
ISED Test Site	2040B
Tested by	Lan Sayasane, EMC Test Engineer
Reviewed by	James Cunningham, EMC/WL Manager
Review date	September 11, 2026
Reviewer signature	James.Cunningham  Digitally signed by James.Cunningham DN: cn=James.Cunningham, email=James.Cunningham@nemko.com Reason: I am approving this document Date: 2026.09.11 08:57:49 -0700

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 contain in this report are within Nemko USA's ISO/IEC 17025 accreditation.

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Section 1 Report summary

1.1 Test specifications

FCC 47 CFR Part 96

Citizens Broadband Radio Service

1.2 Test methods

ANSI C63.26 – 2015

FCC KDB 935210 D05 v01r04

American National Standard for Compliance Testing of Transmitters Used in Licensed Services;
Section 7 – RF Repeaters, amplifiers, and boosters testing
Measurements Guidance for Industrial, and Non-Consumer Signal Booster, Repeater, and
Amplifier Devices

1.3 Exclusions

None.

1.4 Statement of compliance

Testing was performed against all relevant requirements of the test standard(s).

Results obtained indicate that the product under test complies in full with the tested requirements.

The test results relate only to the item(s) tested.

See “Section 2 Summary of test results” for full details.

1.5 Test report revision history

Table 1.5-1: Test report revision history

Revision #	Issue Date	Details of changes made to test report
REP169125-1TRFWL	August 10, 2026	Original report issued
REP169125-1R1TRFWL	August 14, 2026	Minor correction
REP169125-1R2TRFWL	September 8, 2026	Additional output power measurements added per TCB recommendation

Section 2 Summary of test results

2.1 Sample information

Receipt date	09-Jun-26
Nemko sample ID number	PRJ0100169

2.2 Testing period

Test start date	09-Jun-26
Test end date	26-Jun-26

2.3 Test results

Table 2.3-1: Summary of results

FCC Part	Test method	Test description	Verdict
FCC Part 2.1049	KDB 935210 D05V01r04 (3.2) ANSI C63.26 7.2.2.1	AGC threshold	Pass
	KDB 935210 D05v01r04 (3.3) ANSI C63.26 7.2.2.2	Out of band rejection	Pass
	KDB 935210 D05v01r04 (3.4) ANSI C63.26 7.2.2.3	Occupied bandwidth / Input-versus-output spectrum	Pass
	KDB 935210 D05v01r04 (3.5) ANSI C63.26 7.2.2.4	Input/output power and amplifier/booster gain	Pass
FCC Part 96.41(b) (Band 48 operation)	KDB 935210 D05v01r04 (3.6) ANSI C63.26 7.2.2.5	Spurious emissions at RF antenna connector	Pass
FCC Part 96.41(e) (Band 48 operation)	KDB 935210 D05v01r04 (3.7) ANSI C63.26 7.2.2.6	Frequency stability	Pass
	KDB 935210 D05v01r04 (3.8) ANSI C63.26 7.2.2.7	Radiated spurious emissions	Pass

Section 3 Equipment under test (EUT) details

3.1 Disclaimer

This section contains information provided by the applicant and has been utilized to support the test plan. Inaccurate information provided by the applicant can affect the validity of the results within this test report. Nemko accepts no responsibility for the information contained within this section and the impact it may have on the test plan and resulting measurements.

3.2 Applicant

Company name	Airspan Networks Inc.
Address	6652 Pinecrest Drive, Suite 200
City	Plano
State	TX
Postal/Zip code	75074
Country	USA

3.3 Manufacturer

Company name	Airspan Networks Inc.
Address	6652 Pinecrest Drive, Suite 200
City	Plano
State	TX
Postal/Zip code	75074
Country	USA

3.4 EUT information

Product name	Remote Unit
Model	N3RU-35
Variant(s)	None
Serial number	N/A
Part number	N/A
Power requirements	48 VDC; Maximum Power Consumption 85 W
Description/theory of operation	Low-power Distributed Antenna System remote unit ideal for multi-operator multiband static-capacity distribution across small-to- coverage areas. Supports up to eight frequency bands per unit.
Operational frequencies	3550-3700 MHz
Software details	Integrated DAS OMT

3.5 Transmitter Information

Frequency band(s)	3550 – 3700 MHz
Antenna information	Integrated omni-directional antenna type covering 3300–4200 MHz
	Gain: 3 dBi
	Four antenna ports: 4T4R MIMO, 2T2R MIMO, SISO (For MIMO operation, the output signals are considered uncorrelated)

3.6 EUT setup details

Table 3.6-1: EUT sub assemblies

Description	Brand name	Model/Part number	Serial number	Rev.
None	N/A	N/A	N/A	N/A

Table 3.6-2: EUT interface ports

Description	Qty.
DC Power	1
Fiber	2
Ethernet (Service Port)	1

Table 3.6-3: Support equipment

Description	Brand name	Model/Part number	Serial number	Rev.
DC Power Supply	Hewlett Packard	6554A	N/A	--
Mobile Edge 1000	DELL EMC	E73S	N/A	--
A3 Access Unit	Airspan	E62-A3	3626180099	--
Laptop	Hewlett Packard	EliteBook	N/A	--
Ethernet Switch, 6-Port 2.5G	NICGIGA	S25-0402-N	202604000625	--
PoE, Single Port	PHIHONG	POE36U-1AT-R	N/A	--
External Antenna, GNSS	Microchip	IGM-1100x	SJC204700050	--

Table 3.6-4: Inter-connection cables

Cable description	From	To	Length (m)
Ethernet, RJ45	Laptop	Ethernet Switch, 6-Port 2.5G	2
Ethernet, RJ45	Mobile Edge 1000	Ethernet Switch, 6-Port 2.5G	2
Ethernet, RJ45	A3 Access Unit	Ethernet Switch, 6-Port 2.5G	2
Ethernet, RJ45	External Antenna, GNSS	PoE, Single Port	30
Ethernet, RJ45	PoE, Single Port	Mobile Edge 1000	2
Fiber	Mobile Edge 1000	A3 Access Unit	9
Fiber	A3 Access Unit	PA-35 (EUT)	9
DC Power	DC Power Supply	PA-35 (EUT)	2

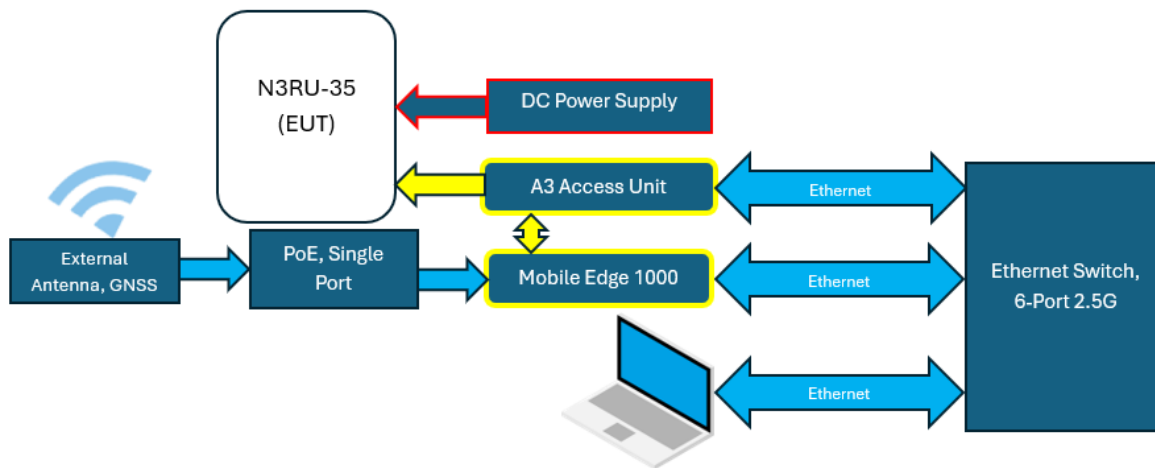


Figure 3.6-1: Test setup diagram

Section 4 Engineering considerations

4.1 Modifications incorporated in the EUT

None.

4.2 Technical judgement

None.

4.3 Deviations from laboratory test procedures

None.

Section 5 Test conditions

5.1 Atmospheric conditions

Temperature	15–30 °C
Relative humidity	20–75 %
Air pressure	86–106 kPa

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.

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 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

Nemko USA Inc. has calculated measurement uncertainty and is documented in EMC/MUC/001 "Uncertainty in EMC measurements." Measurement uncertainty was calculated using the methods described in CISPR 16-4-2 Specification for radio disturbance and immunity measuring apparatus and methods – Part 4-2: Uncertainties, statistics, and limit modelling – Measurement instrumentation uncertainty. The expression of Uncertainty in EMC testing. Measurement uncertainty calculations assume a coverage factor of K=2 with 95% certainty.

Table 6.1-1: Measurement uncertainty calculations

Measurement		U_{cispr} dB	U_{lab} dB
Conducted disturbance at AC mains and other port power using a V-AMN	9 kHz to 150 kHz	3.8	2.9
	150 kHz to 30 MHz	3.4	2.3
Conducted disturbance at telecommunication port using AAN	150 kHz to 30 MHz	5.0	4.3
Conducted disturbance at telecommunication port using CVP	150 kHz to 30 MHz	3.9	2.9
Conducted disturbance at telecommunication port using CP	150 kHz to 30 MHz	2.9	1.4
Conducted disturbance at telecommunication port using CP and CVP	150 kHz to 30 MHz	4.0	3.1
Radiated disturbance (electric field strength in a SAC)	30 MHz to 1 GHz	6.3	5.5
Radiated disturbance (electric field strength in a FAR)	1 GHz to 6 GHz	5.2	4.7
Radiated disturbance (electric field strength in a FAR)	6 GHz to 18 GHz	5.5	5.0

- Notes:
- Compliance assessment:
 - If U_{lab} is less than or equal to U_{cispr} then:
 - compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit.
 - non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit
 - If U_{lab} is greater than U_{cispr} then:
 - compliance is deemed to occur if no measured disturbance level, increased by $(U_{\text{lab}} - U_{\text{cispr}})$, exceeds the disturbance limit.
 - non-compliance is deemed to occur if any measured disturbance level, increased by $(U_{\text{lab}} - U_{\text{cispr}})$, exceeds the disturbance limit

V-AMN: V type artificial mains network
 AAN: Asymmetric artificial network
 CP: Current probe
 CVP: Capacitive voltage probe
 SAC: Semi-anechoic chamber
 FAR: Fully anechoic room

Section 7 Test equipment

7.1 Test equipment list

Table 7.1-1: Test Equipment List

Equipment	Manufacturer	Model no.	Asset no.	Cal cycle	Next cal.
EMI Test Receiver	Rohde & Schwarz	ESU40	E1121	1 year	07-Jan-2027
Preamplifier	Sonoma	310N	E1155	1 year	18-Jul-2026
System Controller	Sunol Sciences	SC104V	E1129	NCR	NCR
Antenna, Biconilog	ETS-Lindgren	3142E	E1371	2 years	20-Aug-2026
Antenna, DRG Horn	ETS-Lindgren	3117-PA	E1139	2 years	22-Jan-2028
DC Power Supply	Hewlett Packard	6554A	E1283	NCR	NCR
EMI Test Receiver	Rohde & Schwarz	ESW44	ATEC-Rental	1 year	08-Apr-2027
System Controller	Sunol Sciences	SC104V	E1191	NCR	NCR
Antenna, Bilog	Schaffner	CBL 6111D	1763	2 years	16-Jul-2027
Antenna, DRG Horn	ETS-Lindgren	3117-PA	E1160	2 years	17-Jul-2026
Antenna, Gain Horn, 18-26.5 GHz	Eravant	SAZ-2410-42-S1	EW107	NCR	NCR
Antenna, Gain Horn, 26.5-40 GHz	Eravant	SAZ-2410-2-S1	EW108	NCR	NCR
Waveguide to Coax Adapter	Eravant	SWC-28KM-R1	EW101	NCR	NCR
Low Noise Amplifier	Sage Millimeter, Inc.	SBL-1834034030-KFKF	EW111	VBU	VBU
Band Reject Filter	Micro-Tronics	BRM50711	EW102	NCR	NCR
Vector Signal Generator	Rohde & Schwarz	SMW200A	E1156	3 years	02-Oct-2027
Signal & Spectrum Analyzer	Rohde & Schwarz	FSW43	E1302	1 year	19-Jun-2027
Attenuator, 10dB	Mini-Circuits	VAT-10W2+	N/A	VBU	VBU
Power Divider	Midwest Microwave	2532	E1216	VBU	VBU
Temperature Chamber	TestEquity	115A	E1162	1 year	25-Aug-2026
CMW500 wideband radiocommunications test set	Rohde & Schwarz	CMW500	E1161	VBU	VBU
Preamplifier	HP	8449A	0317	VBU	VBU
Signal and spectrum analyzer	Rohde & Schwarz	FSV40	E1120	2 years	27-Aug-2028
10 dB attenuator	Pasternack	N/A	N/A	VBU	VBU

Notes: NCR: no calibration required
VBU: verify before use

7.2 Test software list

Table 7.2-1: Test Software

Manufacturer	Details
Rohde & Schwarz	EMC 32 V10.60.15 (radiated emissions)

Section 8 Testing data

8.1 AGC Threshold

8.1.1 References and limits

- ANSI C63.26 Section 7.2.2.1
- KDB 935210 D05v01r04 Clause 3.2

8.1.2 Test summary

Verdict	Pass		
Test date	June 15, 2026 June 22, 2026	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1008 mbar
Test location	☐ 10m semi anechoic chamber ☐ 3m semi anechoic chamber ☒ Wireless bench	Relative humidity	56 %

8.1.3 Notes

Per KDB 935210 D05 v01r04, Clause 3.1 and ANSI C63.26 Clause 7.2.2.1, testing was performed with a narrowband test signal (MSK modulated, gaussian filter of 0.3 and data rate 270 kbps) and a broadband signal (AWGN, 4.1 MHz 99% occupied bandwidth).

The EUT can be configured to operate in one of two sub-bands: 3550 – 3650 MHz and 3650 – 3700 MHz. Each sub-band was measured separately. All antenna port were confirmed to be identical in performance. Measurements were performed on 1 antenna port and the results are representative of the other antenna ports.

8.1.4 Setup details

EUT power input during test	48 VDC
EUT setup configuration	☒ Table-top ☐ Floor standing
Measurement details	The automatic gain control (AGC) threshold is determined as follows: - Connect a signal generator to the input of the EUT. - Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation. - The signal generator must be set to either of the required modulation signals. - Set the frequency to the middle frequency of the EUT operating band. - While monitoring the output of the EUT using the method of ANSI C63.26 7.2.2.4.2 or 7.2.2.4.3, increase the input level until a 1 dB increase in the input signal no longer causes a 1 dB increase in the output signal. - This is the AGC threshold level of the EUT. - Repeat for the other modulation signal.

8.1.5 Test data

Table 8.1-1: AGC Threshold results

Operating frequency band	Input signal type	AGC Threshold Level (dBm)
SISO - Band 48: 3550 – 3650 MHz	Narrowband	8
	Broadband	8

Table 8.1-2: AGC Threshold results

Operating frequency band	Input signal type	AGC Threshold Level (dBm)
SISO - Band 48: 3650 – 3700 MHz	Narrowband	4
	Broadband	4

8.2 Out of band rejection

8.2.1 References and limits

- ANSI C63.26 Section 7.2.2.2
- KDB 935210 D05v01r04 Clause 3.3

8.2.2 Test summary

Verdict	Pass		
Test date	June 15, 2026 June 22, 2026	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1008 mbar
Test location	☐ 10m semi anechoic chamber ☐ 3m semi anechoic chamber ☒ Wireless bench ☐ Other:	Relative humidity	56 %

8.2.3 Notes

The EUT can be configured to operate in one of two sub-bands: 3550 – 3650 MHz and 3650 – 3700 MHz. Each sub-band was measured separately. Measurements were performed on 1 antenna port and the results are representative of the other antenna ports.

8.2.4 Setup details

EUT power input during test	48 VDC
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:
Measurement details	The out-of-band rejection is measured as follows: - Connect a signal generator to the input of the EUT. - Configure a swept CW signal with the following parameters: - Frequency range = ± 250 % of the passband from the center of the passband, for each applicable operating frequency band. - Level = a sufficient level to affirm that the out-of-band rejection is > 20 dB above the noise floor and will not engage the AGC during the entire sweep. - Dwell time = approximately 10 ms. - Number of points = $\text{SPAN}/(\text{RBW}/2)$. - Connect a spectrum analyzer to the output of the EUT using appropriate attenuation. - Set the span of the spectrum analyzer to the same frequency range of the signal generator. - Set the RBW of the spectrum analyzer to be 1% to 5% of the EUT passband and the VBW shall be set to $\geq 3 \times \text{RBW}$. - Set the detector to Peak Max-Hold and wait for the spectrum analyzer's display to fill. - Capture the frequency response of the EUT. - Place a marker to the peak of the frequency response and record this frequency as f_0. - Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the -20 dB down amplitude to determine the 20 dB bandwidth. - Repeat for all frequency bands applicable for use by the EUT.

8.2.5 Test data

Operating frequency band: SISO - Band 48: 3550 – 3650 MHz

Table 8.2-1: Out of band rejection results

Parameter	Value
f_0	3600.000
f_l	3547.632
f_h	3652.368
20 dB bandwidth	104.736

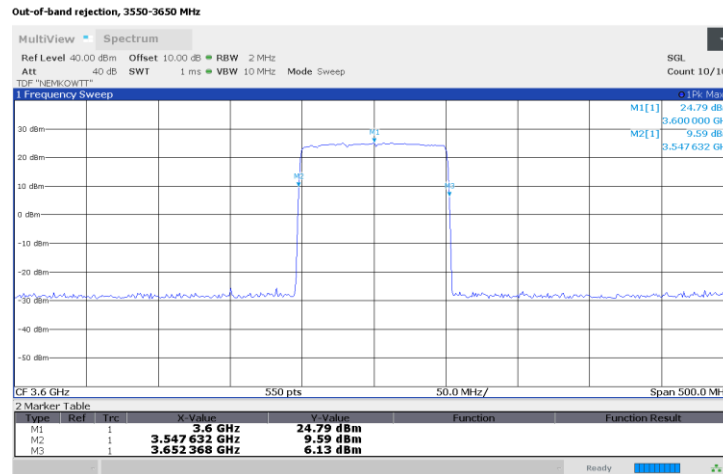


Figure 8.2-1: Out of band rejection results

Operating frequency band: SISO - Band 48: 3650 – 3700 MHz

Table 8.2-2: Out of band rejection results

Parameter	Value
f_0	3675.000
f_l	3649.271
f_h	3700.729
20 dB bandwidth	51.458

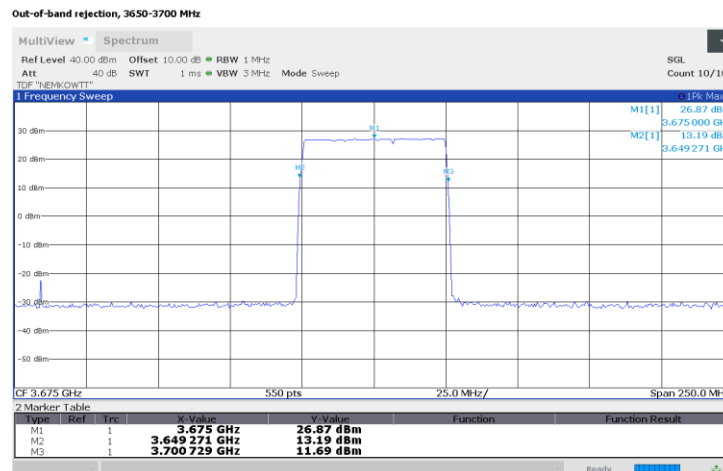


Figure 8.2-2: Out of band rejection results

8.3 Occupied bandwidth / Input Versus Output Comparison

8.3.1 References and limits

- FCC 47 CFR Part 2.1049
- ANSI C63.26 Clause 7.2.2.4
- KDB 935210 D05v01r04 Clause 3.4

8.3.2 Test summary

Verdict	Pass		
Test date	June 15, 2026 June 22, 2026	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1008 mbar
Test location	☐ 10m semi anechoic chamber ☐ 3m semi anechoic chamber ☒ Wireless bench ☐ Other:	Relative humidity	56 %

8.3.3 Notes

Per KDB 935210 D05 v01r04, Clause 3.3 and ANSI C63.26 Clause 7.2.2.3, testing was performed with a narrowband test signal (MSK modulated, gaussian filter of 0.3 and data rate 270 kbps) and a broadband signal (AWGN, 4.1 MHz 99% occupied bandwidth).

The EUT can be configured to operate in one of two sub-bands: 3550 – 3650 MHz and 3650 – 3700 MHz. Each sub-band was measured separately. Measurements were performed on 1 antenna port and the results are representative of the other antenna ports.

8.3.4 Setup details

EUT power input during test	48 VDC
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:
Measurement details	A 26 dB bandwidth measurement shall be performed on the input and the output signal. a. Connect a signal generator to the EUT. b. Configure the signal generator to transmit the AWGN signal. c. Configure the signal level to be just below the AGC threshold, but not more than 015 dB below. d. Connect a spectrum analyzer to the output of the EUT using appropriate attenuation. e. Set the spectrum analyzer center frequency to the nominal EUT channel center frequency. The span range of the spectrum analyzer shall be between 2 x OBW and 5 x OBW. f. The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW and the VBW shall be $\geq 3 \times$ RBW. g. Set the reference level of the instrument as required, to prevent the signal from exceeding the maximum spectrum analyzer input mixer level for linear operation. In general, the peak of the spectral envelope must be more than $[10 \log (OBW / RBW)]$ below the reference level. Step f) and step g) can require iteration to enable adjustments within the specified tolerances. h. The noise floor of the spectrum analyzer at the selected RBW shall be at least 36 dB below the reference level. i. Set spectrum analyzer detection mode to peak, and the trace mode to max hold. j. Determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference level). k. Determine the -26 dB down amplitude by placing two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below the -26 dB down amplitude. If a marker is below the -26 dB down value, it should be as close as possible to this value. The OBW is the positive frequency difference between the two markers. l. Repeat step 3) to step k) to measure the input signal to the EUT (i.e., signal generator output). Compare the 26 dB bandwidths to affirm they are similar. m. Repeat step e) to step l) with the input signal to the EUT set to 3 dB above the AGC threshold. n. Repeat step e) to step m) with the signal generator set to the narrowband signal. o. Repeat step e) to step n) for all bands used by the EUT.

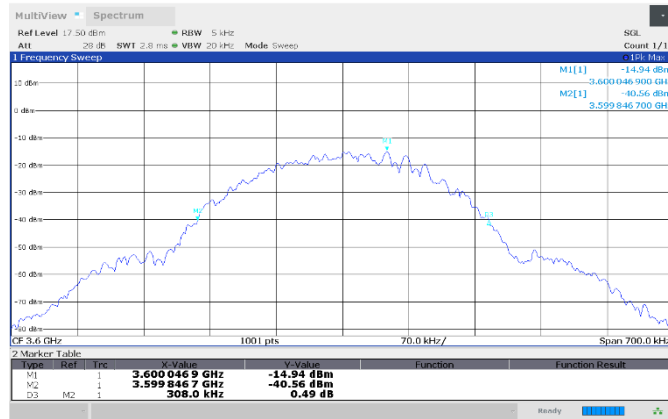
8.3.5 Test data

Operating frequency band: Band 48: 3550 – 3650 MHz

Table 8.3-1: Occupied bandwidth / Input Versus Output Comparison results, 26 dB bandwidth

Condition	Test Frequency (MHz)	26 dB Bandwidth (Input Signal) (MHz)	26 dB Bandwidth (Output Signal) (MHz)
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband	3600	0.308	0.309
Input Level = AGC Threshold + 3 dB Input signal = narrowband	3600	0.307	0.308
Input Level = AGC Threshold - 0.5 dB Input signal = broadband	3600	4.672	4.690
Input Level = AGC Threshold + 3 dB Input signal = broadband	3600	4.655	4.690

Occupied bandwidth (input) (26 dB), TX: 3600 MHz, BW: 20MHz, SIG: GSM (MSK) AGC-0.5dB



Occupied bandwidth (output) (26 dB), TX: 3600 MHz, BW: 20MHz, SIG: GSM (MSK) AGC-0.5dB

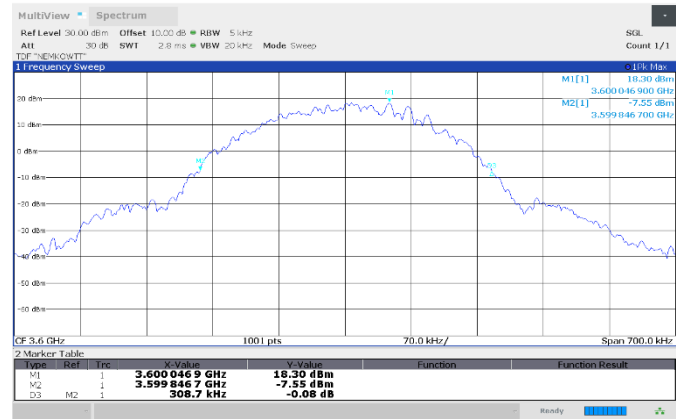
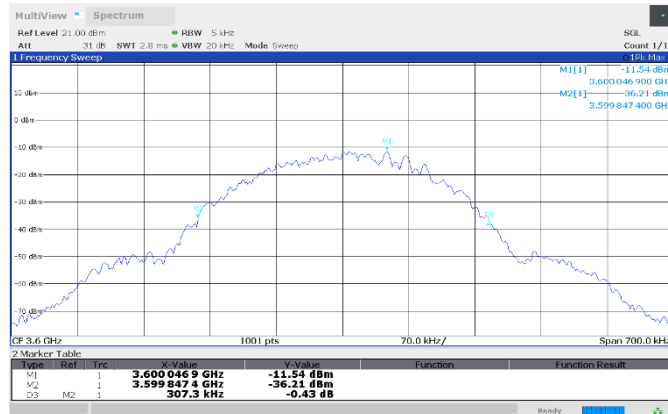


Figure 8.3-1: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 0.5 dB below AGC threshold, input and output signal respectively

Occupied bandwidth (input) (26 dB), TX: 3600 MHz, BW: 20MHz, SIG: GSM (MSK) AGC+3dB



Occupied bandwidth (output) (26 dB), TX: 3600 MHz, BW: 20MHz, SIG: GSM (MSK) AGC+3dB

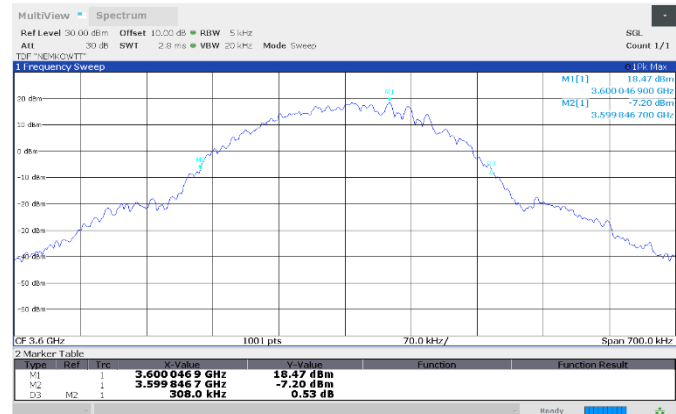
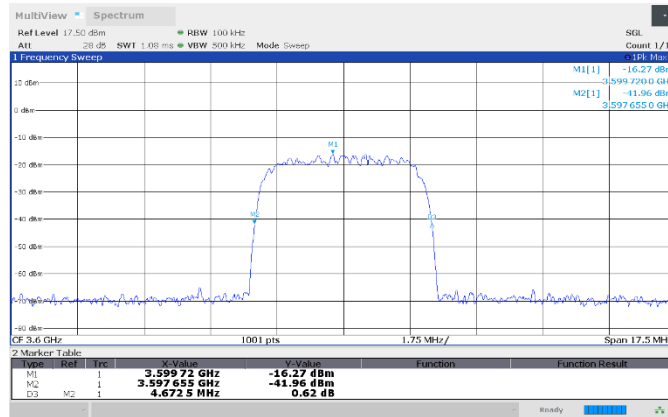


Figure 8.3-2: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 3.0 dB above AGC threshold, input and output signal respectively

Occupied bandwidth (input) (26 dB), TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC-0.5dB



Occupied bandwidth (output) (26 dB), TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC-0.5dB

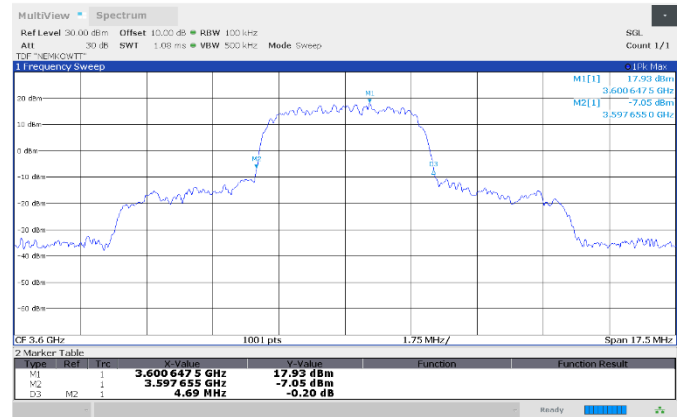
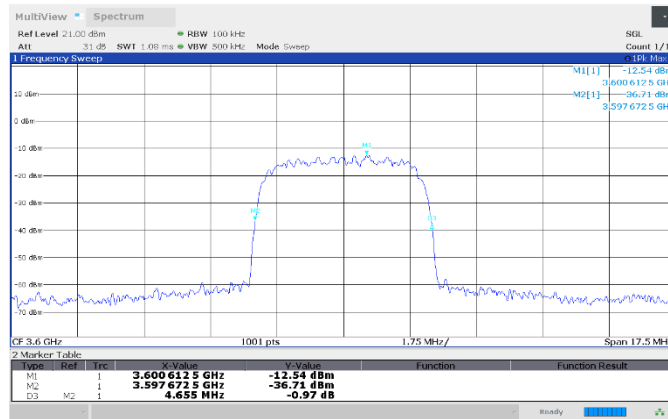


Figure 8.3-3: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 0.5 dB below AGC threshold, input and output signal respectively

Occupied bandwidth (input) (26 dB), TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC+3dB



Occupied bandwidth (output) (26 dB), TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC+3dB

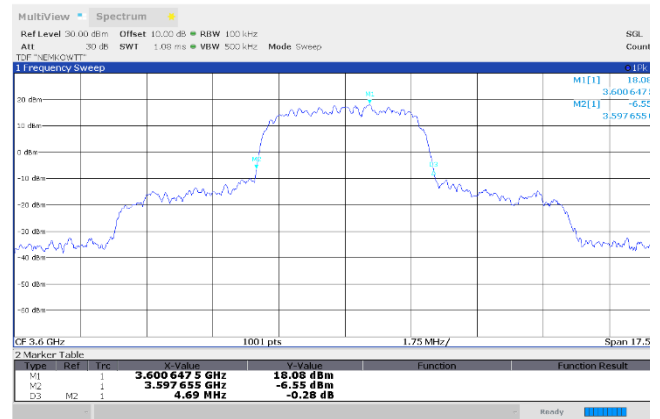
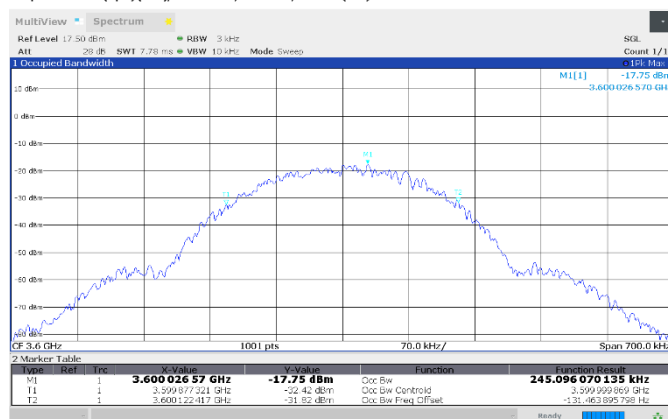


Figure 8.3-4: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 3.0 dB above AGC threshold, input and output signal respectively

Table 8.3-2: Occupied bandwidth / Input Versus Output Comparison results, 99% bandwidth

Condition	Test Frequency (MHz)	99% Bandwidth (Input Signal) (MHz)	99% Bandwidth (Output Signal) (MHz)
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband	3600	0.245	0.246
Input Level = AGC Threshold + 3 dB Input signal = narrowband	3600	0.246	0.246
Input Level = AGC Threshold - 0.5 dB Input signal = broadband	3600	4.167	4.196
Input Level = AGC Threshold + 3 dB Input signal = broadband	3600	4.169	4.199

Occupied bandwidth (input) (99%), TX: 3600 MHz, BW: 20MHz, SIG: GSM (MSK) AGC-0.5dB



Occupied bandwidth (output) (99%), TX: 3600 MHz, BW: 20MHz, SIG: GSM (MSK) AGC-0.5dB

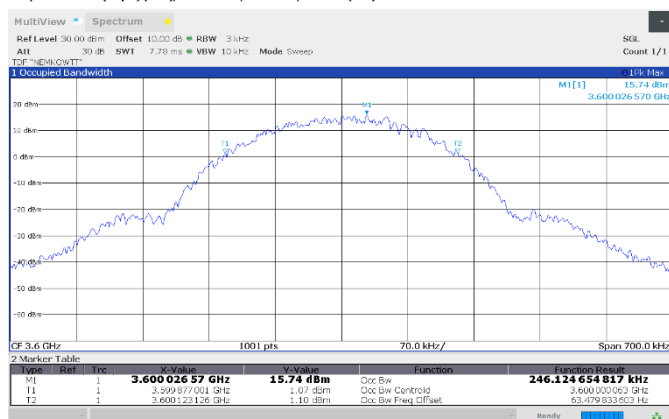
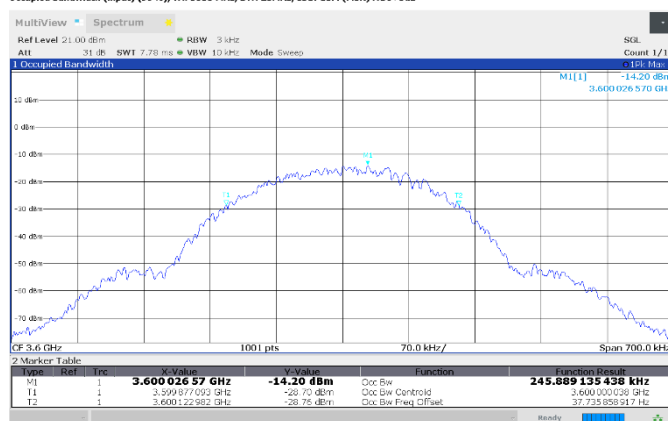


Figure 8.3-5: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 0.5 dB below AGC threshold, input and output signal respectively

Occupied bandwidth (input) (99%), TX: 3600 MHz, BW: 20MHz, SIG: GSM (MSK) AGC+3dB



Occupied bandwidth (output) (99%), TX: 3600 MHz, BW: 20MHz, SIG: GSM (MSK) AGC+3dB

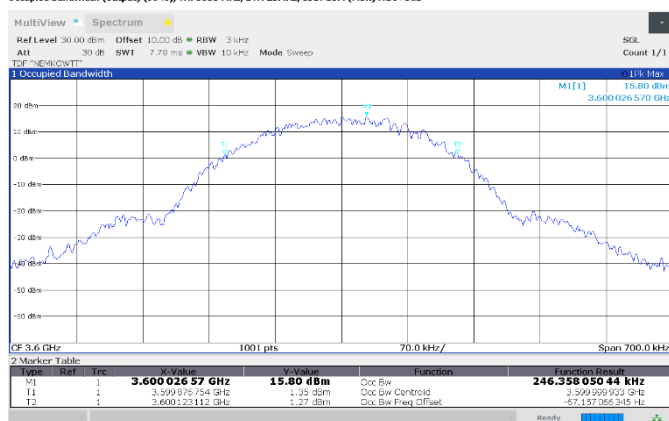
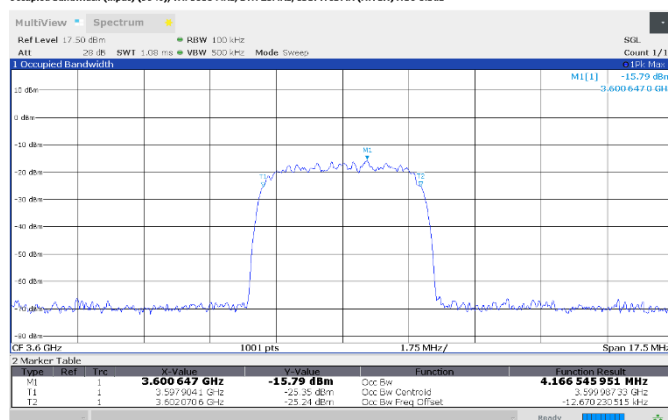


Figure 8.3-6: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 3.0 dB above AGC threshold, input and output signal respectively

Occupied bandwidth (input) (99%), TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC-0.5dB



Occupied bandwidth (output) (99%), TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC-0.5dB

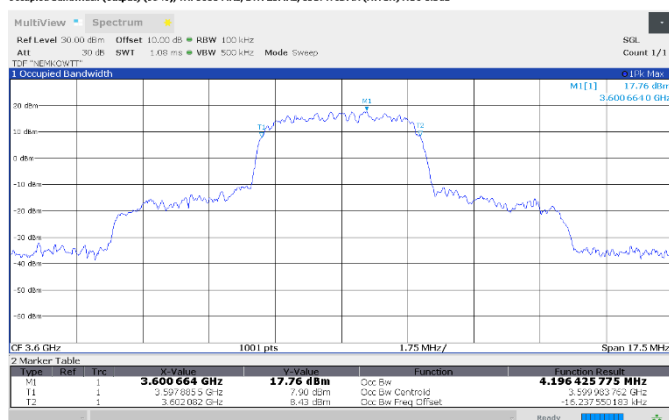
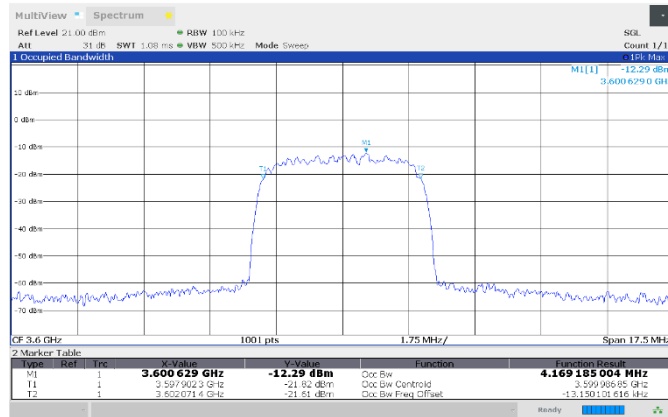


Figure 8.3-7: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 0.5 dB below AGC threshold, input and output signal respectively

Occupied bandwidth (input) (99%), TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC+3dB



Occupied bandwidth (output) (99%), TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC+3dB

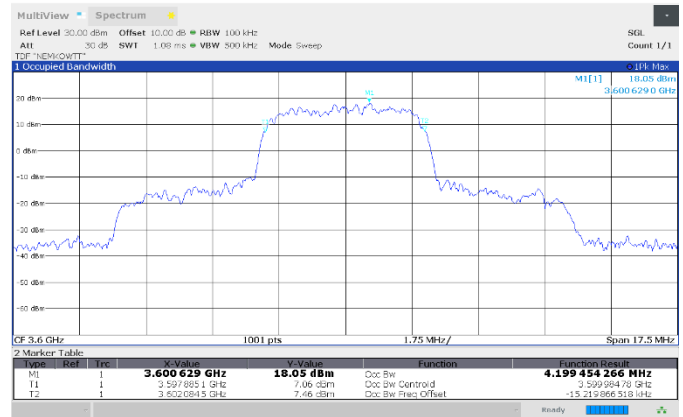


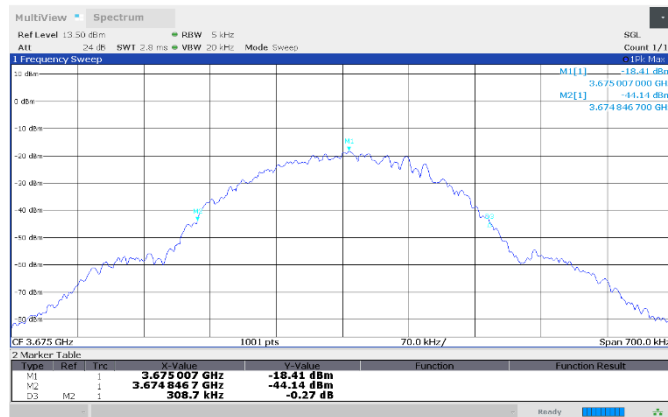
Figure 8.3-8: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 3.0 dB above AGC threshold, input and output signal respectively

Operating frequency band: Band 48: 3650 – 3700 MHz

Table 8.3-3: Occupied bandwidth / Input Versus Output Comparison results, 26 dB bandwidth

Condition	Test Frequency (MHz)	26 dB Bandwidth (Input Signal) (MHz)	26 dB Bandwidth (Output Signal) (MHz)
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband	3675	0.309	0.309
Input Level = AGC Threshold + 3 dB Input signal = narrowband	3675	0.307	0.312
Input Level = AGC Threshold - 0.5 dB Input signal = broadband	3675	4.655	4.690
Input Level = AGC Threshold + 3 dB Input signal = broadband	3675	4.655	5.197

Occupied bandwidth (input) (26 dB), TX: 3675 MHz, BW: 4.169MHz, SIG: GSM (MSK) AGC-0.5dB



Occupied bandwidth (output) (26 dB), TX: 3675 MHz, BW: 4.169MHz, SIG: GSM (MSK) AGC-0.5dB

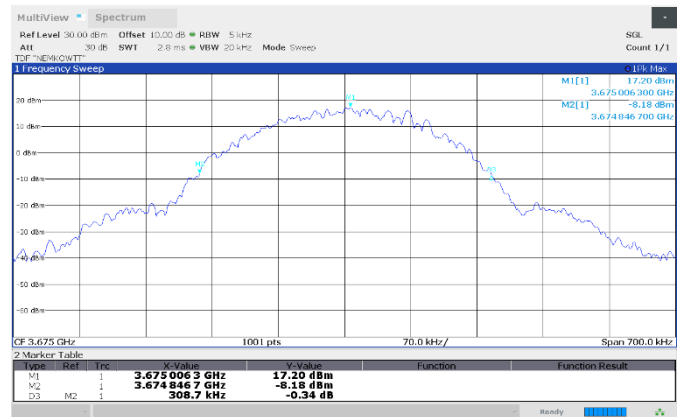
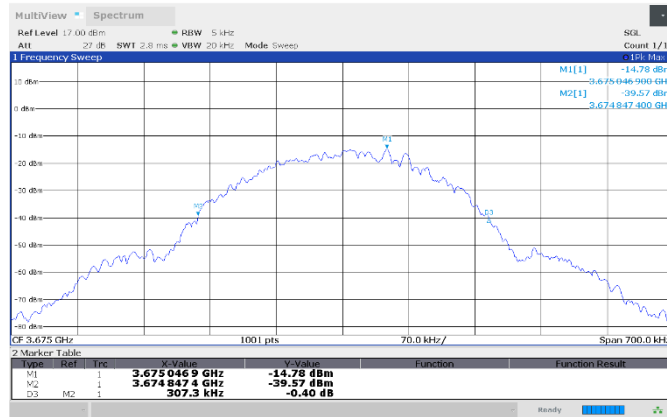


Figure 8.3-9: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 0.5 dB below AGC threshold, input and output signal respectively

Occupied bandwidth (input) (26 dB), TX: 3675 MHz, BW: 4.169MHz, SIG: GSM (MSK) AGC+3dB



Occupied bandwidth (output) (26 dB), TX: 3675 MHz, BW: 4.169MHz, SIG: GSM (MSK) AGC+3dB

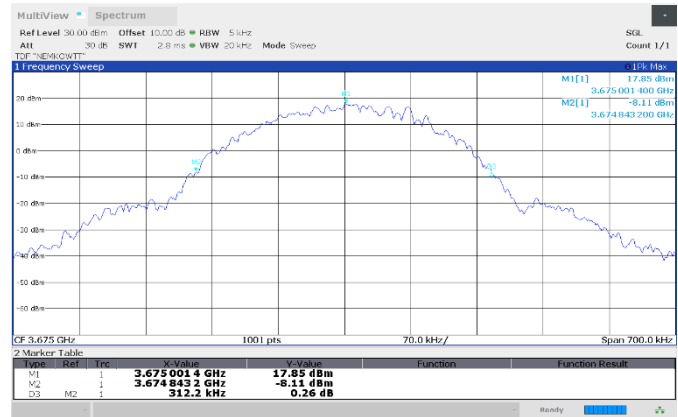
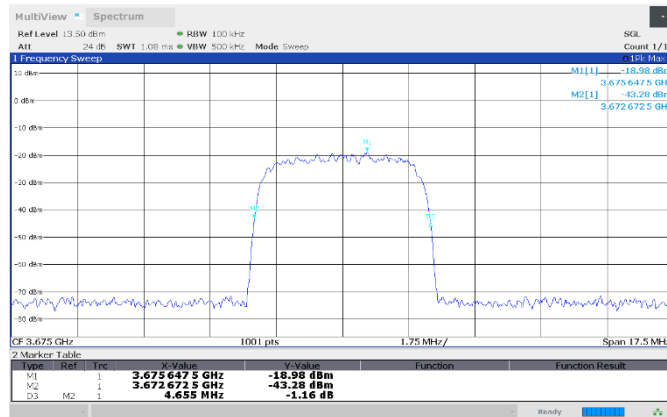


Figure 8.3-10: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 3.0 dB above AGC threshold, input and output signal respectively

Occupied bandwidth (input) (26 dB), TX: 3675 MHz, BW: 4.169MHz, SIG: WCDMA (AWGN) AGC-0.5dB



Occupied bandwidth (output) (26 dB), TX: 3675 MHz, BW: 4.169MHz, SIG: WCDMA (AWGN) AGC-0.5dB

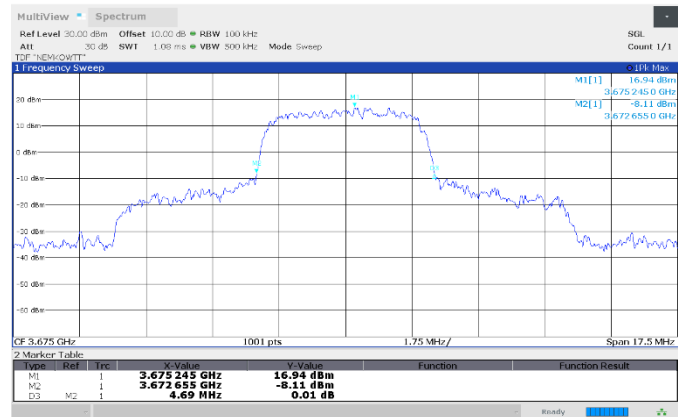
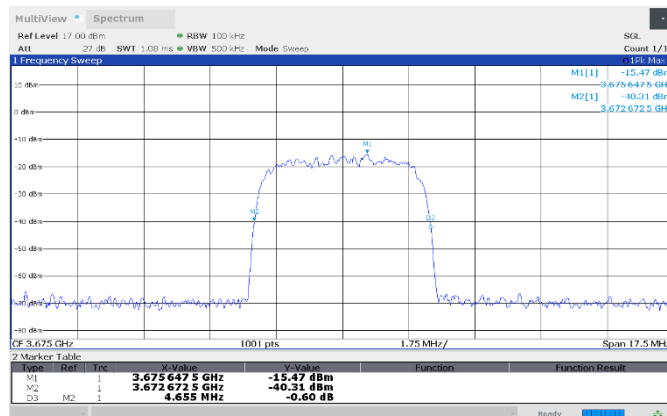


Figure 8.3-11: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 0.5 dB below AGC threshold, input and output signal respectively

Occupied bandwidth (input) (26 dB), TX: 3675 MHz, BW: 4.169MHz, SIG: WCDMA (AWGN) AGC+3dB



Occupied bandwidth (output) (26 dB), TX: 3675 MHz, BW: 4.169MHz, SIG: WCDMA (AWGN) AGC+3dB

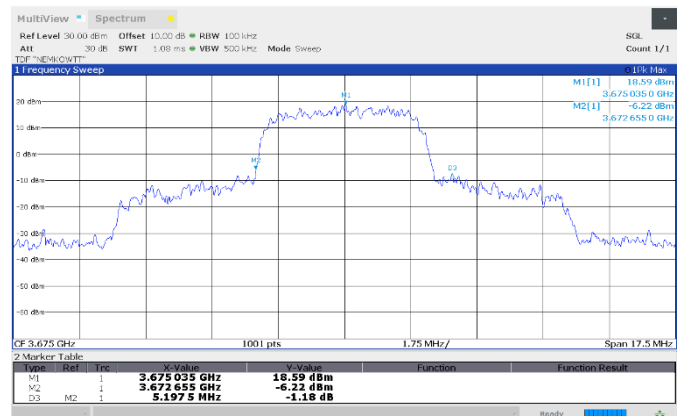
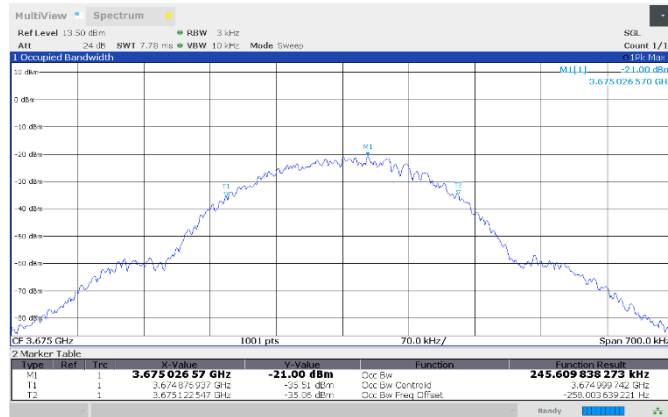


Figure 8.3-12: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 3.0 dB above AGC threshold, input and output signal respectively

Table 8.3-4: Occupied bandwidth / Input Versus Output Comparison results, 99% bandwidth

Condition	Test Frequency (MHz)	99% Bandwidth (Input Signal) (MHz)	99% Bandwidth (Output Signal) (MHz)
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband	3675	0.246	0.246
Input Level = AGC Threshold + 3 dB Input signal = narrowband	3675	0.245	0.246
Input Level = AGC Threshold - 0.5 dB Input signal = broadband	3675	4.168	4.191
Input Level = AGC Threshold + 3 dB Input signal = broadband	3675	4.171	4.201

Occupied bandwidth (input) (99%), TX: 3675 MHz, BW: 4.169MHz, SIG: GSM (MSK) AGC-0.5dB



Occupied bandwidth (output) (99%), TX: 3675 MHz, BW: 4.169MHz, SIG: GSM (MSK) AGC-0.5dB

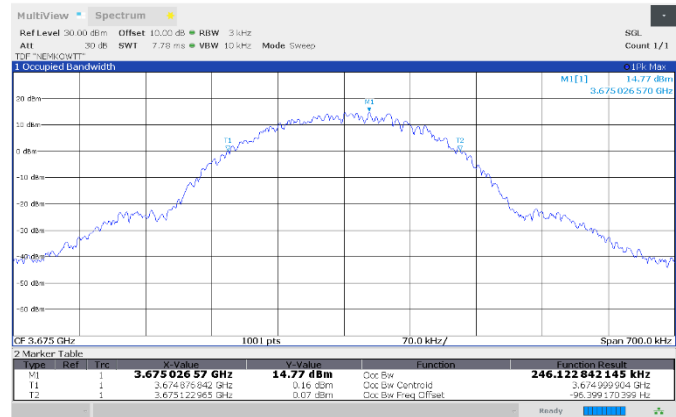
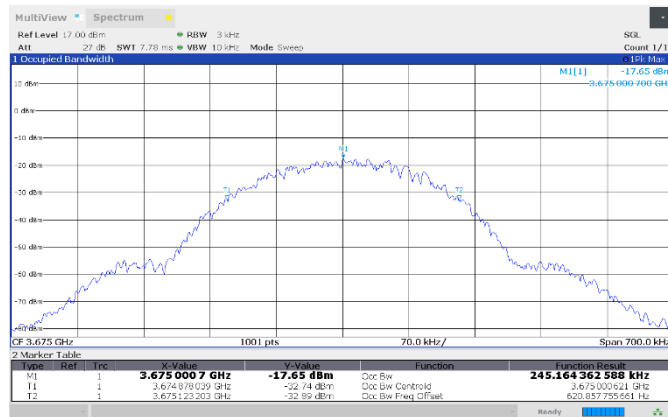


Figure 8.3-13: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 0.5 dB below AGC threshold, input and output signal respectively

Occupied bandwidth (input) (99%), TX: 3675 MHz, BW: 4.169MHz, SIG: GSM (MSK) AGC+3dB



Occupied bandwidth (output) (99%), TX: 3675 MHz, BW: 4.169MHz, SIG: GSM (MSK) AGC+3dB

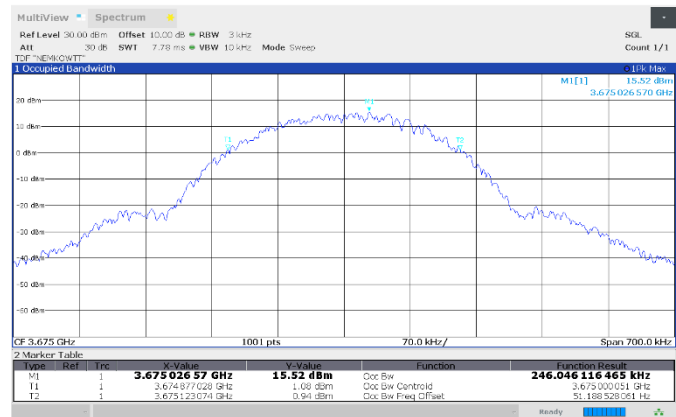
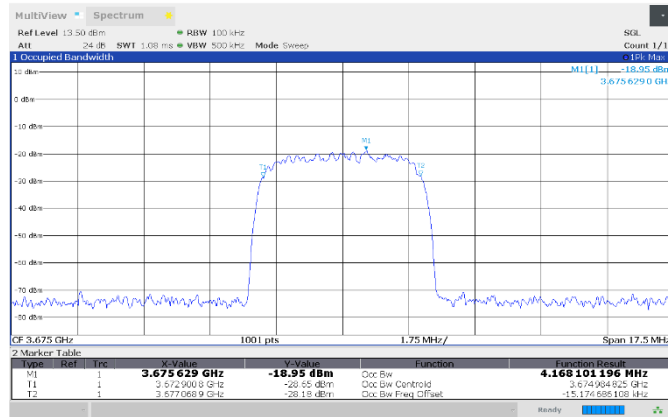


Figure 8.3-14: Occupied bandwidth / Input Versus Output Comparison results, narrowband signal, 3.0 dB above AGC threshold, input and output signal respectively

Occupied bandwidth (input) (99%), TX: 3675 MHz, BW: 4.169MHz, SIG: WCDMA (AWGN) AGC-0.5dB



Occupied bandwidth (output) (99%), TX: 3675 MHz, BW: 4.169MHz, SIG: WCDMA (AWGN) AGC-0.5dB

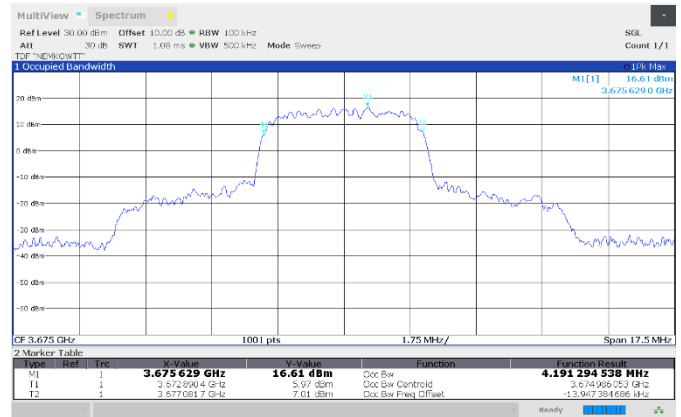
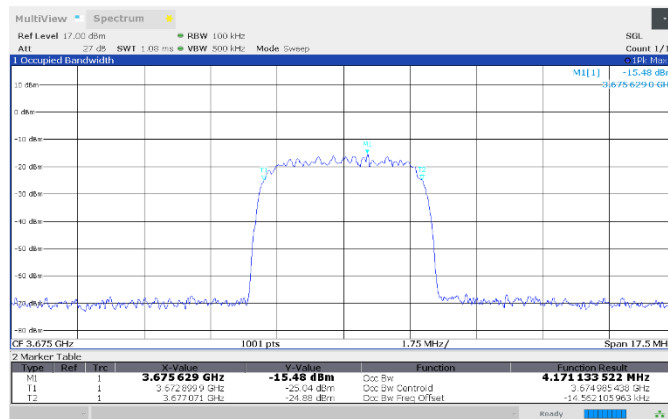


Figure 8.3-15: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 0.5 dB below AGC threshold, input and output signal respectively

Occupied bandwidth (input) (99%), TX: 3675 MHz, BW: 4.169MHz, SIG: WCDMA (AWGN) AGC+3dB



Occupied bandwidth (output) (99%), TX: 3675 MHz, BW: 4.169MHz, SIG: WCDMA (AWGN) AGC+3dB

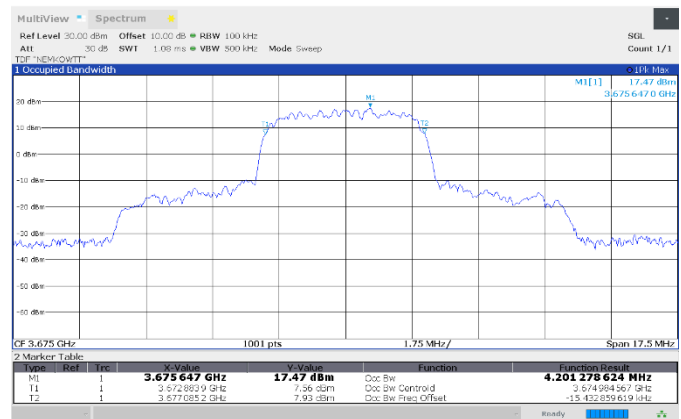


Figure 8.3-16: Occupied bandwidth / Input Versus Output Comparison results, broadband signal, 3.0 dB above AGC threshold, input and output signal respectively

8.4 Output power / Mean output power and amplifier gain

8.4.1 References and limits

- FCC Part 96.41(b) (Band 48 operation)
- ANSI C63.26 Clause 7.2.2.4
- KDB 935210 D05v01r04 Clause 3.5

8.4.2 Test summary

Verdict	Pass		
Test date	June 15, 2026 June 22, 2026	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1008 mbar
Test location	☐ 10m semi anechoic chamber ☐ 3m semi anechoic chamber ☒ Wireless bench ☐ Other:	Relative humidity	56 %

8.4.3 Notes

Per KDB 935210 D05 v01r04, Clause 3.4 and ANSI C63.26 Clause 7.2.2.4, testing was performed with a narrowband test signal (MSK modulated, gaussian filter of 0.3 and data rate 270 kbps) and a broadband signal (AWGN, 4.1 MHz 99% occupied bandwidth).

The EUT can be configured to operate in one of two sub-bands: 3550 – 3650 MHz and 3650 – 3700 MHz. Each sub-band was measured separately.

Note – additional output power measurements were performed and documented below. These additional measurements confirm that the EUT transmitter power is compliant with FCC Part 96.41(b) for a Category A CBSD when operated in it's intended modes (i.e. 20 – 100 MHz bandwidth OFDM signal boost). These measurements are reported in Section 8.5.6 below.

8.4.4 Setup details

EUT power input during test	48 VDC
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:
Measurement details	Adjust the internal gain control of the EUT to the maximum gain for which the equipment certification is sought. Any EUT attenuation settings shall be set to their minimum value. - Connect a signal generator to the input of the EUT. - The modulation shall be set to the AWGN signal. - The frequency of the signal generator shall be set to the frequency f_0 as determined during the out-of-band rejection measurement. - Connect a spectrum analyzer or power meter to the output of the EUT using appropriate attenuation, - Set the level of the signal generator to a level that produces an output just below the AGC threshold, but not more than 015 dB below. - Measure the output power of the EUT. - Remove the EUT from the measurement set-up. Using the same signal generator settings, repeat the power measurement on the input signal to the EUT (i.e., the signal generator output). Calculate the amplifier gain as follows: $\text{Gain (dB)} = \text{output (dBm)} - \text{input (dBm)}.$ - Repeat step f) and g) with the input level set to a level that is 3 dB above the AGC threshold. - Repeat step e) to step h) with the input signal set to narrowband modulation. - Repeat step e) to step i) for all bands used by the EUT.

8.4.5 Test data

Operating frequency band: Band 48: 3550 – 3650 MHz

Table 8.4-1: Output power / Mean output power and amplifier gain test data, SISO operation

Frequency (MHz)	Signal type	Signal level	Input power (dBm / MHz)	Output power (dBm/MHz)	Amplifier gain (dB)	0.1 % PAPR (dB)	EIRP (dBm/MHz)
3600	GMSK	Pre-AGC	-9.24	23.95	33.19	8.44	26.95
3600	GMSK	AGC + 3 dB	-5.70	24.51	30.21	8.42	27.51
3600	AWGN	Pre-AGC	-9.73	24.15	33.88	8.40	24.15
3600	AWGN	AGC + 3 dB	-6.22	24.08	30.30	8.38	24.08

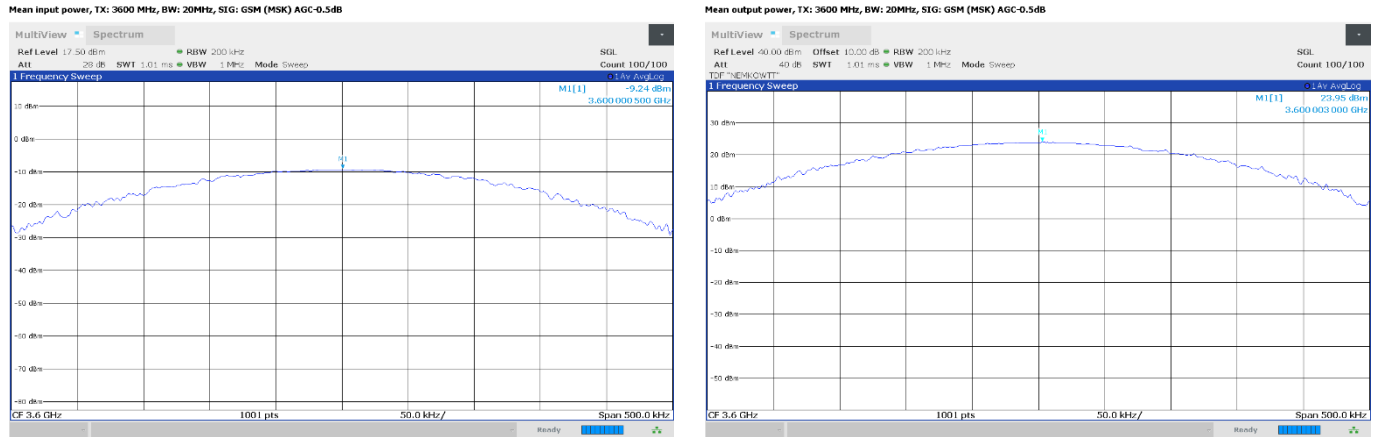


Figure 8.4-1: Output power / Mean output power and amplifier gain results, narrowband signal, 0.5 dB below AGC threshold, input and output signal respectively

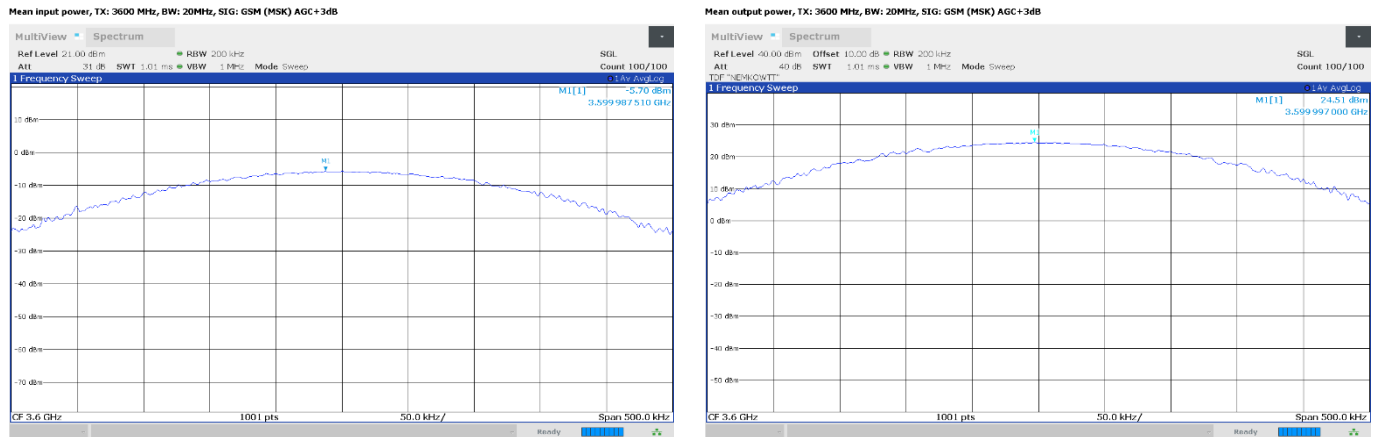
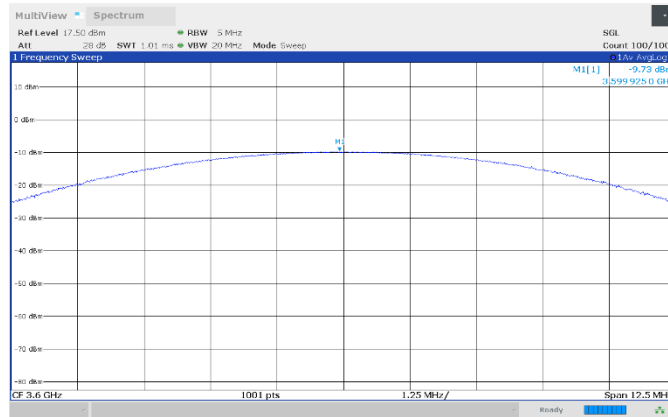


Figure 8.4-2: Output power / Mean output power and amplifier gain results, narrowband signal, 3 dB above AGC threshold, input and output signal respectively

Mean input power, TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC-0.5dB



Mean output power, TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC-0.5dB

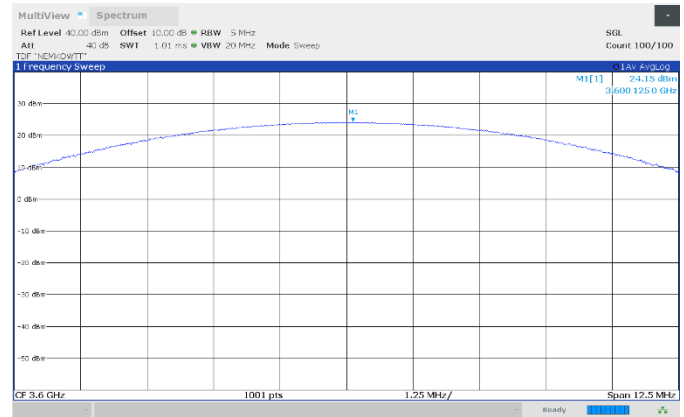
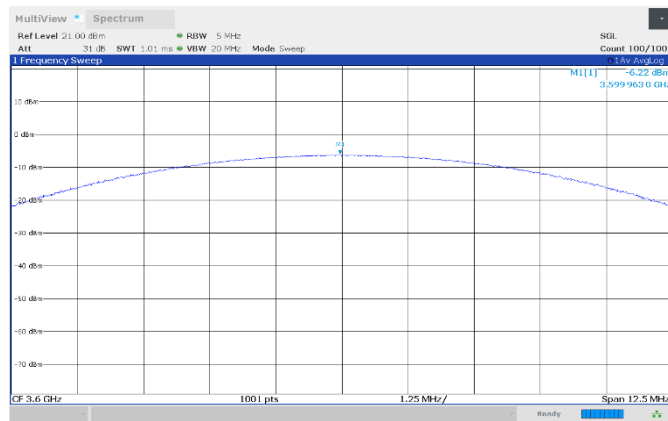


Figure 8.4-3: Output power / Mean output power and amplifier gain results, broadband signal, 0.5 dB below AGC threshold, input and output signal respectively

Mean input power, TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC+3dB



Mean output power, TX: 3600 MHz, BW: 20MHz, SIG: WCDMA (AWGN) AGC+3dB

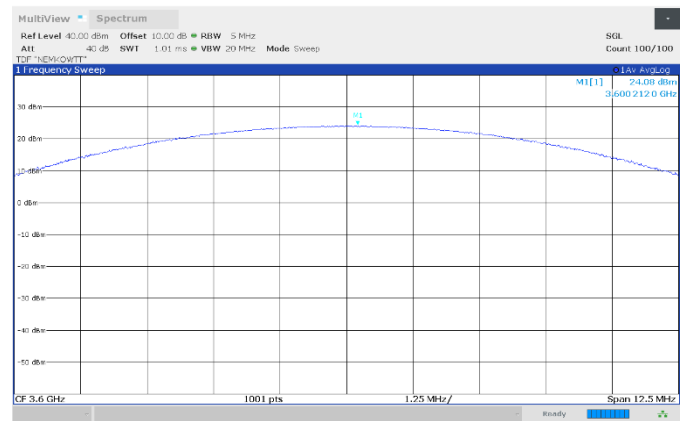


Figure 8.4-4: Output power / Mean output power and amplifier gain results, broadband signal, 3 dB above AGC threshold, input and output signal respectively

PAPR, TX: 3600 MHz, BW: 0.245MHz, MOD: GSM



PAPR, TX: 3600 MHz, BW: 0.246MHz, MOD: GSM

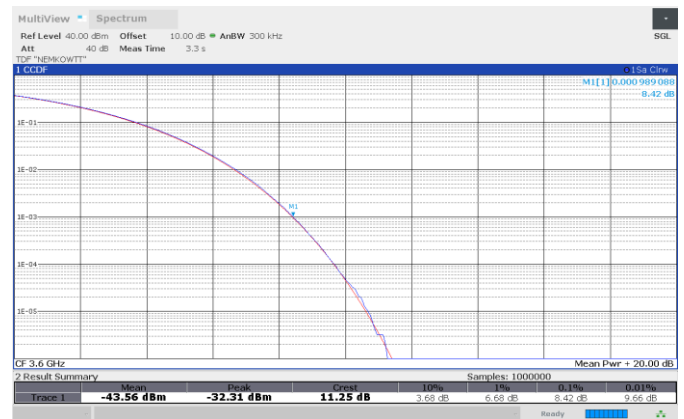


Figure 8.4-5: 0.1% PAPR results, narrowband signal, 0.5 dB below and 3 dB above AGC threshold

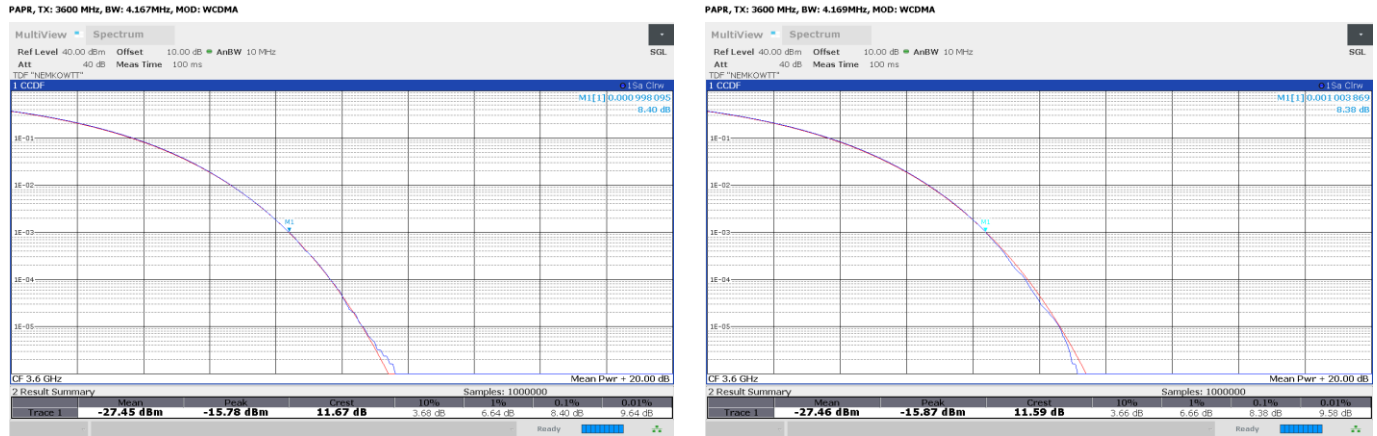


Figure 8.4-6: 0.1% PAPR results, broadband signal, 0.5 dB below and 3 dB above AGC threshold

Operating frequency band: Band 48: 3650 – 3700 MHz

Table 8.4-2: Output power / Mean output power and amplifier gain test data, SISO operation

Frequency (MHz)	Signal type	Signal level	Input power (dBm / MHz)	Output power (dBm/MHz)	Amplifier gain (dB)	0.1 % PAPR (dB)	EIRP (dBm/MHz)
3675	GMSK	Pre-AGC	-12.41	23.09	35.50	8.46	26.09
3675	GMSK	AGC + 3 dB	-8.99	23.77	32.76	8.48	26.77
3675	AWGN	Pre-AGC	-12.90	22.93	35.83	8.32	25.93
3675	AWGN	AGC + 3 dB	-9.43	23.72	33.15	8.30	26.72

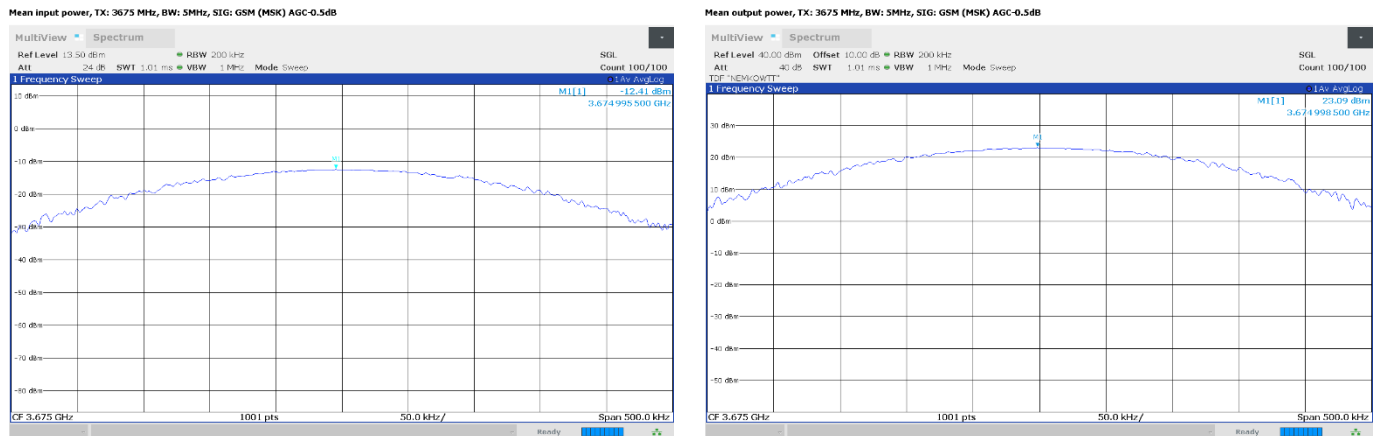
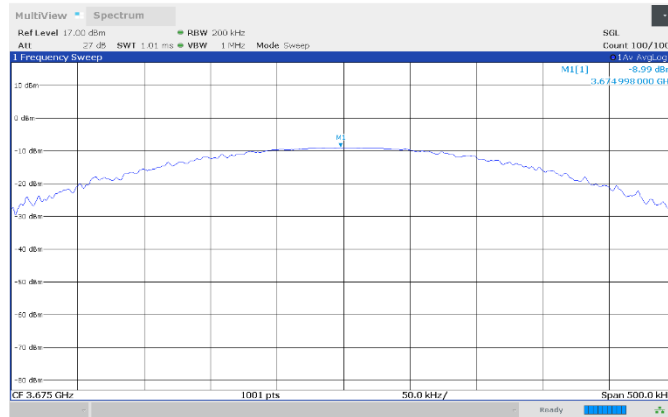


Figure 8.4-7: Output power / Mean output power and amplifier gain results, narrowband signal, 0.5 dB below AGC threshold, input and output signal respectively

Mean input power, TX: 3675 MHz, BW: 5MHz, SIG: GSM (MSK) AGC+3dB



Mean output power, TX: 3675 MHz, BW: 5MHz, SIG: GSM (MSK) AGC+3dB

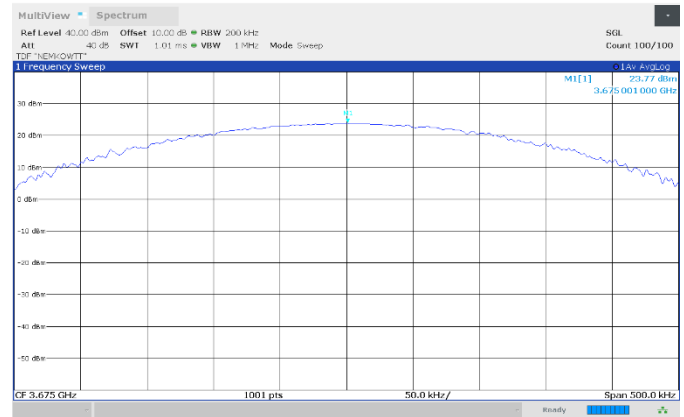
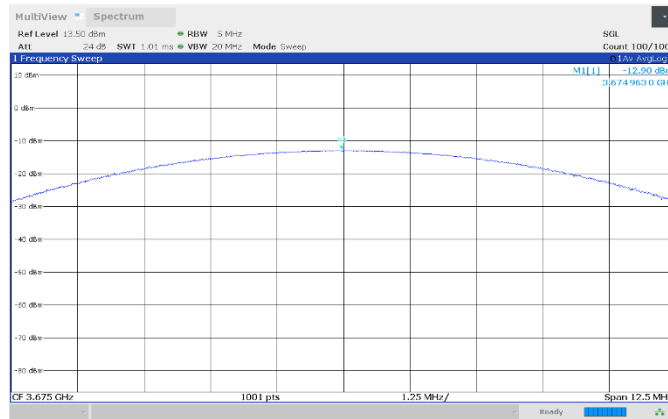


Figure 8.4-8: Output power / Mean output power and amplifier gain results, narrowband signal, 3 dB above AGC threshold, input and output signal respectively

Mean input power, TX: 3675 MHz, BW: 5MHz, SIG: WCDMA (AWGN) AGC-0.5dB



Mean output power, TX: 3675 MHz, BW: 5MHz, SIG: WCDMA (AWGN) AGC-0.5dB

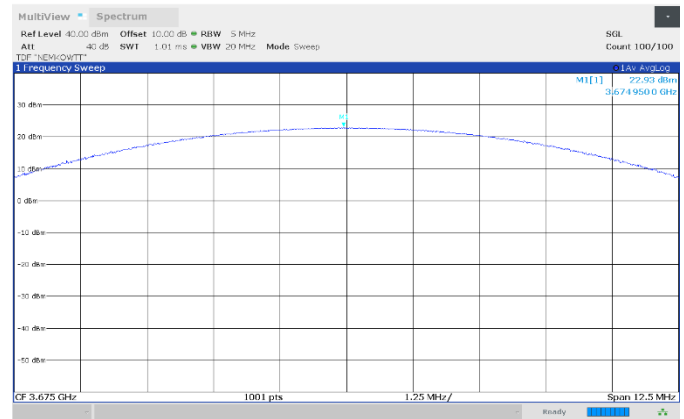
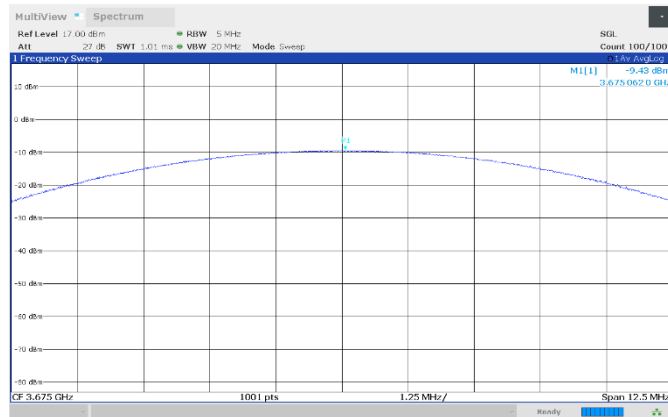


Figure 8.4-9: Output power / Mean output power and amplifier gain results, broadband signal, 0.5 dB below AGC threshold, input and output signal respectively

Mean input power, TX: 3675 MHz, BW: 5MHz, SIG: WCDMA (AWGN) AGC+3dB



Mean output power, TX: 3675 MHz, BW: 5MHz, SIG: WCDMA (AWGN) AGC+3dB

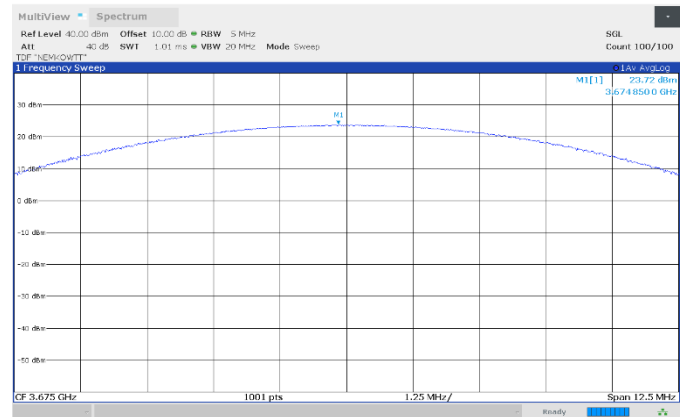


Figure 8.4-10: Output power / Mean output power and amplifier gain results, broadband signal, 3 dB above AGC threshold, input and output signal respectively

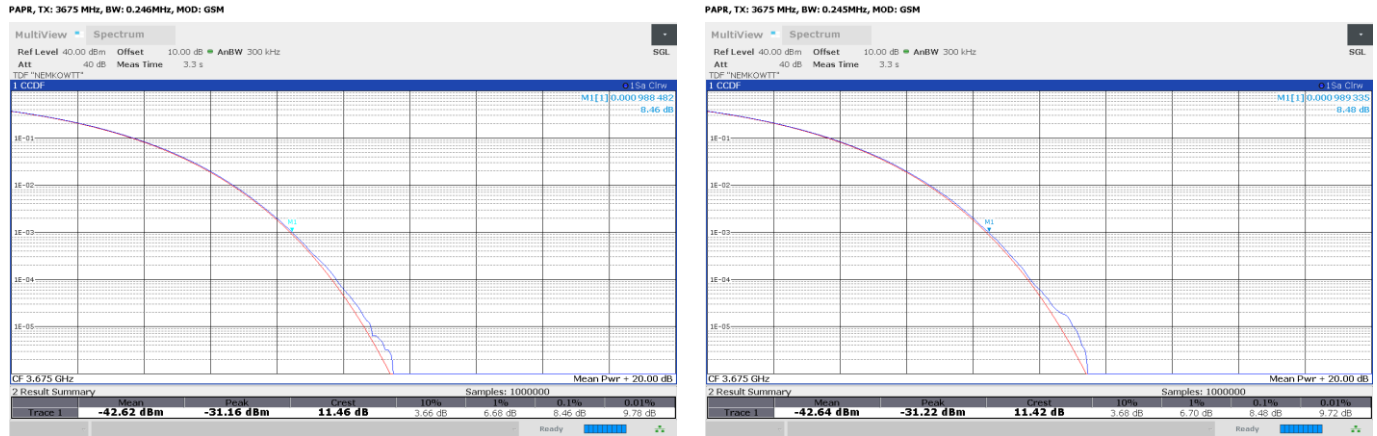


Figure 8.4-11: 0.1% PAPR results, narrowband signal, 0.5 dB below and 3 dB above AGC threshold

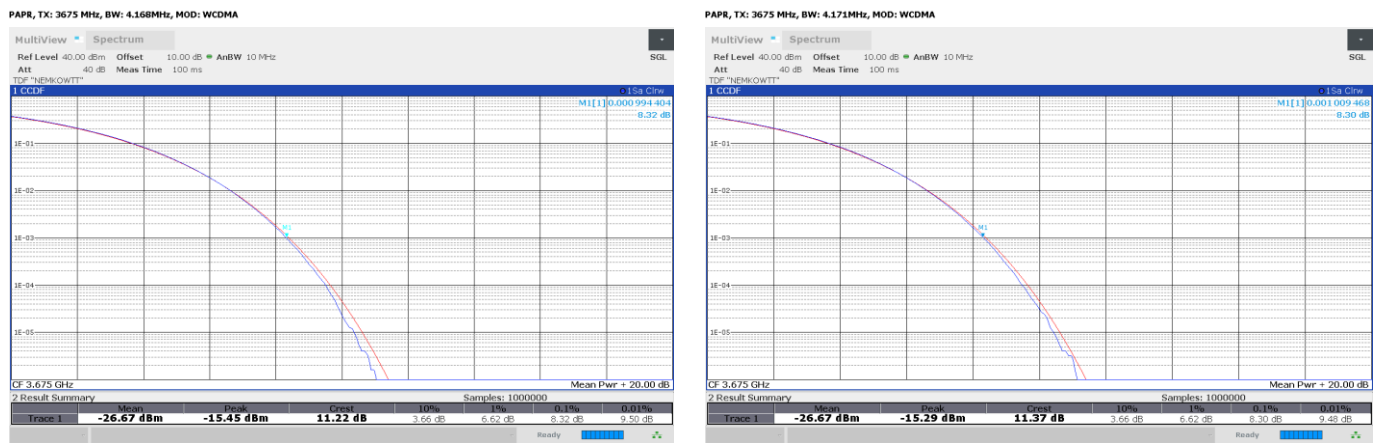


Figure 8.4-12: 0.1% PAPR results, broadband signal, 0.5 dB below and 3 dB above AGC threshold

8.4.6 Supplemental output power/power density test data

Measurements were performed with the EUT transmitting at maximum power with 20 MHz, 50 MHz and 100 MHz LTE TDD downlink signal sources.

Table 8.4-5: Supplemental output power test data, SISO/MIMO operation, upper limit: 30 dBm/10 MHz

Frequency (MHz)	Signal bandwidth	Output power (dBm/10 MHz)			EIRP (dBm/10 MHz)		
		SISO	2x2 MIMO	4x4 MIMO	SISO	2x2 MIMO	4x4 MIMO
3560	20 MHz	18.58	21.59	24.60	21.58	24.59	27.60
3600	20 MHz	18.35	21.36	24.37	21.35	24.36	27.37
3640	20 MHz	18.02	21.03	24.04	21.02	24.03	27.04
3660	20 MHz	16.79	19.80	22.81	19.79	22.80	25.81
3675	20 MHz	16.65	19.66	22.67	19.65	22.66	25.67
3690	20 MHz	16.91	19.92	22.93	19.91	22.92	25.93
3575	50 MHz	14.64	17.65	20.66	17.64	20.65	23.66
3600	50 MHz	14.40	17.41	20.42	17.40	20.41	23.42
3625	50 MHz	14.44	17.45	20.46	17.44	20.45	23.46
3675	50 MHz	12.98	15.99	19.00	15.98	18.99	22.00
3600	100 MHz	11.58	14.59	17.60	14.58	17.59	20.60

Table 8.4-6: Supplemental output power test data, SISO/MIMO operation, upper limit: 20 dBm/MHz

Frequency (MHz)	Signal bandwidth	Output power (dBm/MHz)			EIRP (dBm/MHz)		
		SISO	2x2 MIMO	4x4 MIMO	SISO	2x2 MIMO	4x4 MIMO
3560	20 MHz	9.33	12.34	15.35	12.33	15.34	18.35
3600	20 MHz	9.46	12.47	15.48	12.46	15.47	18.48
3640	20 MHz	9.23	12.24	15.25	12.23	15.24	18.25
3660	20 MHz	7.9	10.91	13.92	10.90	13.91	16.92
3675	20 MHz	7.82	10.83	13.84	10.82	13.83	16.84
3690	20 MHz	7.98	10.99	14.00	10.98	13.99	17.00
3575	50 MHz	4.77	7.78	10.79	7.77	10.78	13.79
3600	50 MHz	5.35	8.36	11.37	8.35	11.36	14.37
3625	50 MHz	5.43	8.44	11.45	8.43	11.44	14.45
3675	50 MHz	3.89	6.90	9.91	6.89	9.90	12.91
3600	100 MHz	2.6	5.61	8.62	5.60	8.61	11.62

Note: MIMO signals are uncorrelated – antenna gain is 3 dBi. MIMO correction factor calculated as $10 \times \log_{10}(\text{Number of antenna})$: 2x2 MIMO = $10 \log_{10} 2 = 3.01$ dB, 4x4 MIMO = $10 \log_{10} 4 = 6.02$ dB.

8.5 Spurious emissions at RF connector

8.5.1 References and limits

- FCC Part 96.41(e) (Band 48 operation)
- ANSI C63.26 Clause 7.2.2.5
- KDB 935210 D05v01r04 Clause 3.6

8.5.2 Test summary

Verdict	Pass		
Test date	June 22, 2026	Temperature	22 °C
Test engineer	Lan Sayasane, EMC Test Engineer	Air pressure	1007 mbar
Test location	☐ 10m semi anechoic chamber ☐ 3m semi anechoic chamber ☒ Wireless bench ☐ Other:	Relative humidity	58 %

8.5.3 Notes

Per KDB 935210 D05 v01r04, Clause 3.4 and ANSI C63.26 Clause 7.2.2.4, testing was performed with a narrowband test signal (MSK modulated, gaussian filter of 0.3 and data rate 270 kbps) and a broadband signal (AWGN, 4.1 MHz 99% occupied bandwidth).

For intermodulation products and out-of-channel block tests, testing is performed under the following two conditions (per ANSI C63.26 7.2.2.5.1 and KDB 935210 D05v01r04 Section 3.6):

- a) Two modulated signals set to the lower or upper block edge.
- b) A single modulated signal set to the low or high channel

The EUT can be configured to operate in one of two sub-bands: 3550 – 3650 MHz and 3650 – 3700 MHz. Each sub-band was measured separately.

8.5.4 Setup details

EUT power input during test	48 VDC
EUT setup configuration	☒ Table-top ☐ Floor standing ☐ Other:
Measurement details	Out-of-channel-block and out-of-band emissions: a. Connect a signal generator to the input of the EUT. If the signal generator is not capable of generating two modulated carriers at one time, then it may be replaced by two signal generators connected with an appropriate combining network b. Set the signal generator to produce 2 AWGN signals. c. The frequencies shall be set so that the AWGN signals occupy adjacent channels, as defined by industry standards such as 3GPP or 3GPP2, at the upper block edge of the frequency band under test. d. The composite power levels shall be set so that the signal is just below the AGC threshold, but not more than 0.5 dB below. The composite power can be measured using the methods described in the output power methods, however, it will be necessary to measure the composite power by increasing the band power integration bandwidth to include both transmit channels, or alternatively, this measurement can be performed using an average power meter. e. Connect a spectrum analyzer to the output of the EUT using appropriate attenuation. f. Set the RBW= reference bandwidth in the applicable rule section for the supported frequency band (typically 1% of the EBW or 100 kHz or 1 MHz). g. Set the VBW = 3 x RBW. h. Set the detector to power averaging (rms) detector. i. Set the sweep time = auto couple. j. Set the spectrum analyzer start frequency to the upper block edge frequency and the stop frequency to the upper block edge frequency plus 300 kHz or 3 MHz for frequencies below and above 1 GHz, respectively. k. Trace average at least one hundred traces in power averaging (i.e., rms) mode. l. Use the marker function to find the maximum power level. m. Capture the spectrum analyzer trace of the power level for inclusion in the test report. n. Repeat step k) and step m) with the input level set to 3 dB above the AGC threshold.

- o. Set the frequencies of the input signals to the lower block edge of the frequency band under test.
 - p. Reset the analyzer start frequency to the lower block edge frequency minus 300 kHz or 3 MHz for frequencies below and above 1 GHz, respectively, and the stop frequency to the lower block edge frequency.
 - q. Repeat step k) to step n).
 - r. Repeat step a) to step q) with the signal generator set to only a single signal closest to the block edges.
 - s. Repeat step a) to step r) with the narrowband signal.
 - t. Repeat step a) to step s) for all bands used by the EUT.
- Conducted spurious:
- a. Connect a signal generator to the input of the EUT.
 - b. Set the signal generator to produce the AWGN signal.
 - c. Set the frequency of the signal to the lowest channel within the frequency block.
 - d. The power levels shall be set so that the signal is just below the AGC threshold, but not more than 0.5 dB below.
 - e. Connect a spectrum analyzer to the output of the EUT using appropriate attenuation.
 - f. Set the RBW = reference bandwidth in the applicable rule section for the supported frequency band (typically 100 kHz or 1 MHz).
 - g. Set the VBW = 3 x RBW.
 - h. Set the sweep time = auto-couple.
 - i. Set the spectrum analyzer start frequency to the lowest RF signal generated in the equipment, without going below 9 kHz, and the stop frequency to the lower band/block edge frequency minus 100 kHz to 1 MHz, as specified in the applicable rule part. The number of measurement points in each sweep must be $\geq (2 \times \text{span}/\text{RBW})$, which may require that the measurement range defined by the start and stop frequencies be subdivided depending on the available number of measurement points provided by the spectrum analyzer.
 - j. Trace average at least ten traces in power averaging (i.e., rms) mode.
 - k. Use the peak marker function to identify the highest amplitude level over each of measured frequency range. Record the frequency and amplitude and capture a plot for inclusion in the test report.
 - l. Reset the spectrum analyzer start frequency to the upper band/block edge frequency plus 100 kHz or 1 MHz, as specified in the applicable rule part, and the spectrum analyzer stop frequency to ten times the highest frequency of the fundamental emission. The number of measurement points in each sweep must be $\geq (2 \times \text{span}/\text{RBW})$, which may require that the measurement range defined by the start and stop frequencies be subdivided, depending on the available number of measurement points provided by the spectrum analyzer.
 - m. Trace average at least ten traces in power averaging (i.e., rms) mode.
 - n. Use the peak marker function to identify the highest amplitude level over each of the measured frequency ranges. Record the frequency and amplitude and capture a plot for inclusion in the test report; also provide tabular data, if required.
 - o. Repeat step i) to step n) with the input signal firstly set to a middle channel frequency and then tuned to a high channel frequency.
 - p. Repeat step c) to step o) with the narrowband signal.
 - q. Repeat step b) to step p) for all bands used by the EUT

8.5.5 Test data – out-of-channel block and out-of-band emissions

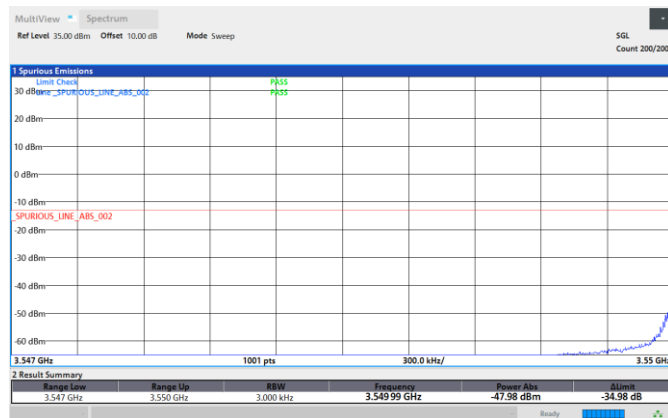
Operating frequency band: Band 48: 3550 – 3650 MHz

Table 8.5-1: Spurious emissions at RF connector test data, narrowband

Condition	Frequency of highest emission (MHz)	Level (dBm) (SISO operation)	Level (dBm) (2x2 MIMO operation)	Level (dBm) (4x4 MIMO operation)	Limit (dBm)
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 2 Low band edge	3549.992507	-47.98	-44.97	-41.96	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 1 Low band edge	3549.998501	-60.64	-57.63	-54.62	-13.00
Input Level = AGC Threshold +3 dB Input signal = narrowband Number of signals: 2 Low band edge	3549.992507	-39.20	-36.19	-33.18	-13.00
Input Level = AGC Threshold + 3 dB Input signal = narrowband Number of signals: 1 Low band edge	3549.998501	-57.06	-54.05	-51.04	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 2 High band edge	3650.001499	-50.07	-47.06	-44.05	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 1 High band edge	3650.013487	-61.30	-58.29	-55.28	-13.00
Input Level = AGC Threshold +3 dB Input signal = narrowband Number of signals: 2 High band edge	3650.007493	-39.15	-36.14	-33.13	-13.00
Input Level = AGC Threshold + 3 dB Input signal = narrowband Number of signals: 1 High band edge	3650.136364	-60.27	-57.26	-54.25	-13.00

MIMO correction factor calculated as $10 \times \log_{10}(\text{Number of antenna})$: 2x2 MIMO = $10 \log 2 = 3.01$ dB, 4x4 MIMO = $10 \log 4 = 6.02$ dB.

Low band edge, 2 signals, total level = 0.5 dB less than AGC threshold



Low band edge, 1 signal, total level = 0.5 dB less than AGC threshold



Section 8
Test name

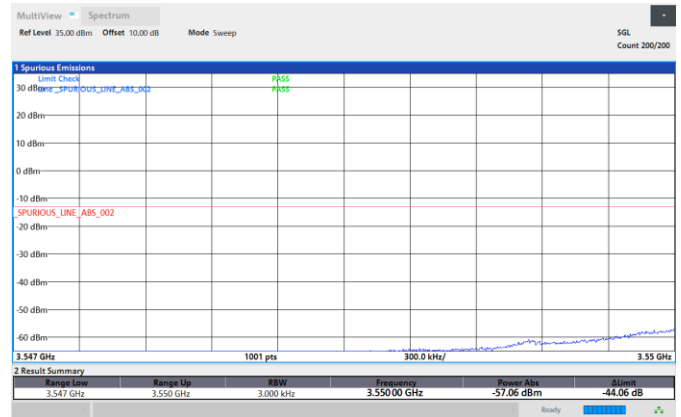
Testing data
Spurious emissions at RF connector



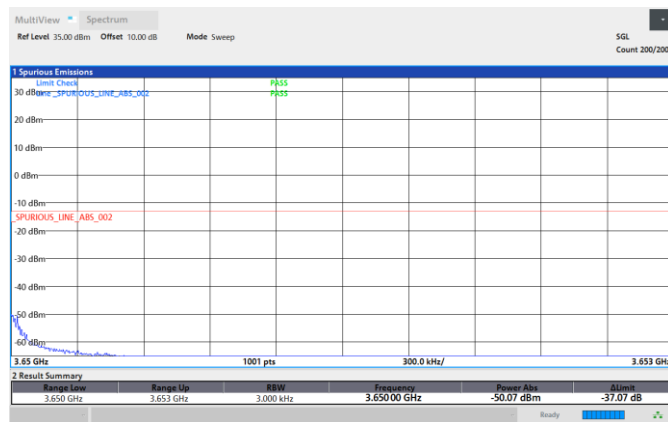
Low band edge, 2 signals, total level = 3 dB more than AGC threshold



Low band edge, 1 signal, total level = 3 dB more than AGC threshold



High band edge, 2 signals, total level = 0.5 dB less than AGC threshold



High band edge, 1 signal, total level = 0.5 dB less than AGC threshold



High band edge, 2 signals, total level = 3 dB more than AGC threshold



High band edge, 1 signal, total level = 3 dB more than AGC threshold

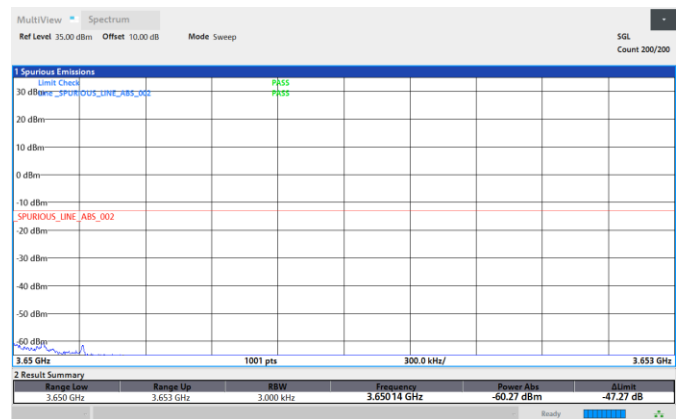


Table 8.5-2: Spurious emissions at RF connector test data, broadband

Condition	Frequency of highest emission (MHz)	Level (dBm) (SISO operation)	Level (dBm) (2x2 MIMO operation)	Level (dBm) (4x4 MIMO operation)	Limit (dBm)
Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 2 Low band edge	3549.956543	-47.73	-44.72	-41.71	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 1 Low band edge	3549.980519	-52.85	-49.84	-46.83	-13.00
Input Level = AGC Threshold +3 dB Input signal = broadband Number of signals: 2 Low band edge	3549.917528	-41.03	-38.02	-35.01	-13.00
Input Level = AGC Threshold + 3 dB Input signal = broadband Number of signals: 1 Low band edge	3549.818681	-46.69	-43.68	-40.67	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 2 High band edge	3650.025475	-48.19	-45.18	-42.17	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 1 High band edge	3650.001499	-52.90	-49.89	-46.88	-13.00
Input Level = AGC Threshold +3 dB Input signal = broadband Number of signals: 2 High band edge	3650.019481	-37.99	-34.98	-31.97	-13.00
Input Level = AGC Threshold + 3 dB Input signal = broadband Number of signals: 1 High band edge	3650.001499	-51.13	-48.12	-45.11	-13.00

MIMO correction factor calculated as $10 \times \log_{10}(\text{Number of antenna})$: 2x2 MIMO = $10 \log 2 = 3.01$ dB, 4x4 MIMO = $10 \log 4 = 6.02$ dB.

Low band edge, 2 signals, total level = 0.5 dB less than AGC threshold



Low band edge, 1 signal, total level = 0.5 dB less than AGC threshold



Section 8
Test name

Testing data
Spurious emissions at RF connector



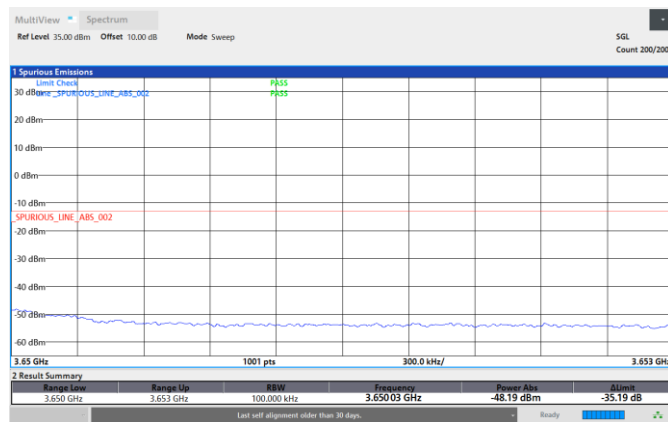
Low band edge, 2 signals, total level = 3 dB more than AGC threshold



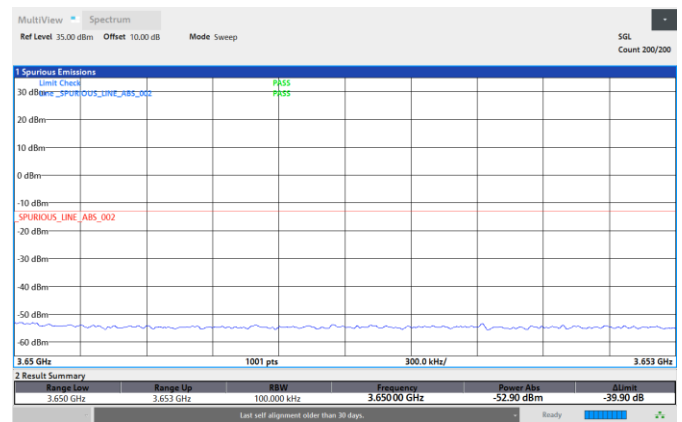
Low band edge, 1 signal, total level = 3 dB more than AGC threshold



High band edge, 2 signals, total level = 0.5 dB less than AGC threshold



High band edge, 1 signal, total level = 0.5 dB less than AGC threshold



High band edge, 2 signals, total level = 3 dB more than AGC threshold



High band edge, 1 signal, total level = 3 dB more than AGC threshold



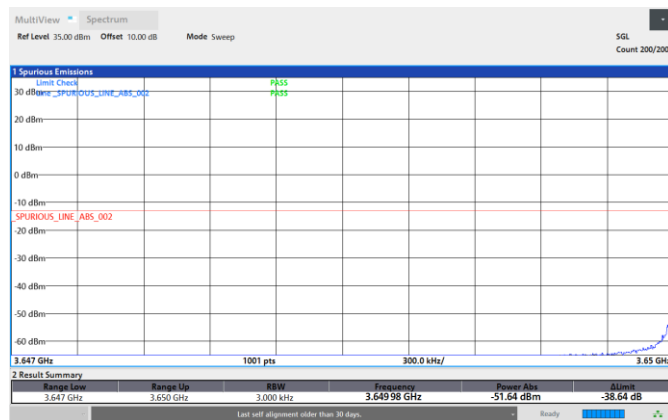
Operating frequency band: and 48: 3650 – 3700 MHz

Table 8.5-3: Spurious emissions at RF connector test data, narrowband

Condition	Frequency of highest emission (MHz)	Level (dBm) (SISO operation)	Level (dBm) (2x2 MIMO operation)	Level (dBm) (4x4 MIMO operation)	Limit (dBm)
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 2 Low band edge	3649.980519	-51.64	-48.63	-45.62	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 1 Low band edge	3649.929570	-67.63	-64.62	-61.61	-13.00
Input Level = AGC Threshold +3 dB Input signal = narrowband Number of signals: 2 Low band edge	3647.855644	-69.53	-66.52	-63.51	-13.00
Input Level = AGC Threshold + 3 dB Input signal = narrowband Number of signals: 1 Low band edge	3647.726773	-69.73	-66.72	-63.71	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 2 High band edge	3702.258242	-69.54	-66.53	-63.52	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = narrowband Number of signals: 1 High band edge	3701.347153	-69.56	-66.55	-63.54	-13.00
Input Level = AGC Threshold +3 dB Input signal = narrowband Number of signals: 2 High band edge	3701.625874	-69.40	-66.39	-63.38	-13.00
Input Level = AGC Threshold + 3 dB Input signal = narrowband Number of signals: 1 High band edge	3700.019481	-56.94	-53.93	-50.92	-13.00

MIMO correction factor calculated as $10 \times \log_{10}(\text{Number of antenna})$: 2x2 MIMO = $10 \log 2 = 3.01$ dB, 4x4 MIMO = $10 \log 4 = 6.02$ dB.

Low band edge, 2 signals, total level = 0.5 dB less than AGC threshold



Low band edge, 1 signal, total level = 0.5 dB less than AGC threshold

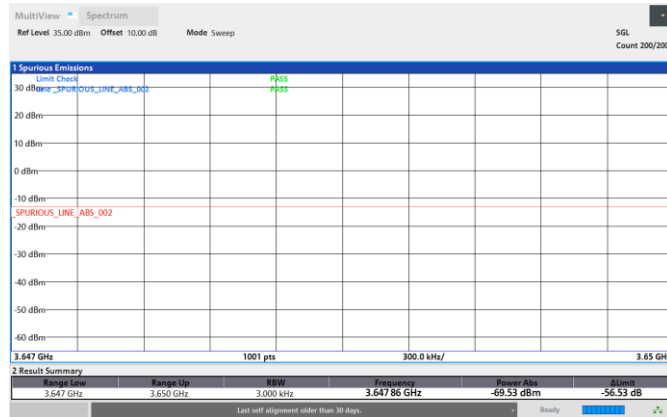


Section 8
Test name

Testing data
Spurious emissions at RF connector



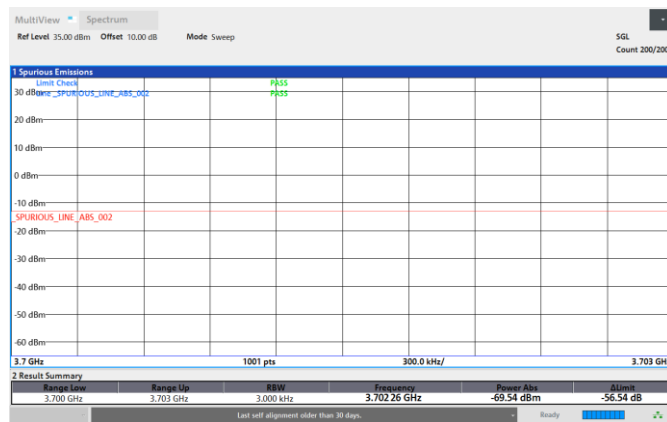
Low band edge, 2 signals, total level = 3 dB more than AGC threshold



Low band edge, 1 signal, total level = 3 dB more than AGC threshold



High band edge, 2 signals, total level = 0.5 dB less than AGC threshold



High band edge, 1 signal, total level = 0.5 dB less than AGC threshold



High band edge, 2 signals, total level = 3 dB more than AGC threshold



High band edge, 1 signal, total level = 3 dB more than AGC threshold



Table 8.5-4: Spurious emissions at RF connector test data, broadband

Condition	Frequency of highest emission (MHz)	Level (dBm) (SISO operation)	Level (dBm) (2x2 MIMO operation)	Level (dBm) (4x4 MIMO operation)	Limit (dBm)
Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 2 Low band edge	3649.773726	-49.57	-46.56	-43.55	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 1 Low band edge	3649.459041	-53.37	-50.36	-47.35	-13.00
Input Level = AGC Threshold +3 dB Input signal = broadband Number of signals: 2 Low band edge	3649.752747	-38.43	-35.42	-32.41	-13.00
Input Level = AGC Threshold + 3 dB Input signal = broadband Number of signals: 1 Low band edge	3649.575924	-53.47	-50.46	-47.45	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 2 High band edge	3700.001499	-50.70	-47.69	-44.68	-13.00
Input Level = AGC Threshold - 0.5 dB Input signal = broadband Number of signals: 1 High band edge	3701.520979	-50.55	-47.54	-44.53	-13.00
Input Level = AGC Threshold +3 dB Input signal = broadband Number of signals: 2 High band edge	3700.001499	-39.13	-36.12	-33.11	-13.00
Input Level = AGC Threshold + 3 dB Input signal = broadband Number of signals: 1 High band edge	3700.894605	-53.15	-50.14	-47.13	-13.00

MIMO correction factor calculated as $10 \times \log_{10}(\text{Number of antenna})$: 2x2 MIMO = $10 \log 2 = 3.01$ dB, 4x4 MIMO = $10 \log 4 = 6.02$ dB.

Low band edge, 2 signals, total level = 0.5 dB less than AGC threshold



Low band edge, 1 signal, total level = 0.5 dB less than AGC threshold



Section 8
Test name

Testing data
Spurious emissions at RF connector



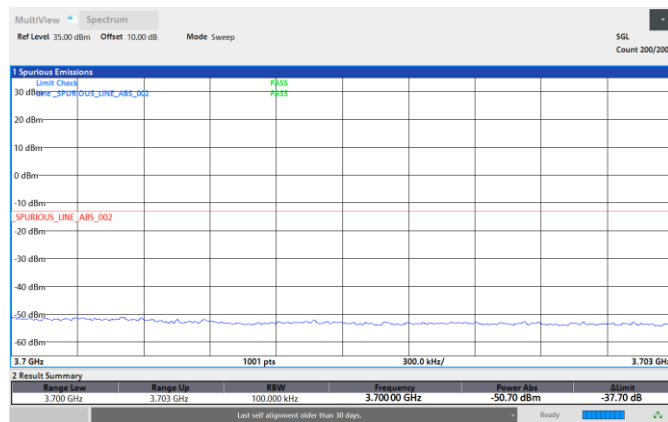
Low band edge, 2 signals, total level = 3 dB more than AGC threshold



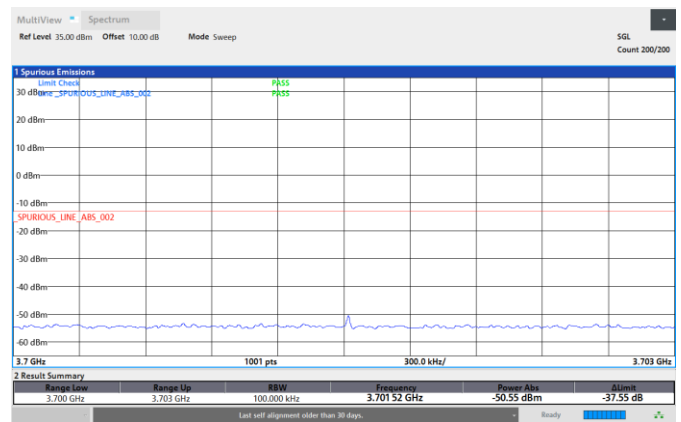
Low band edge, 1 signal, total level = 3 dB more than AGC threshold



High band edge, 2 signals, total level = 0.5 dB less than AGC threshold



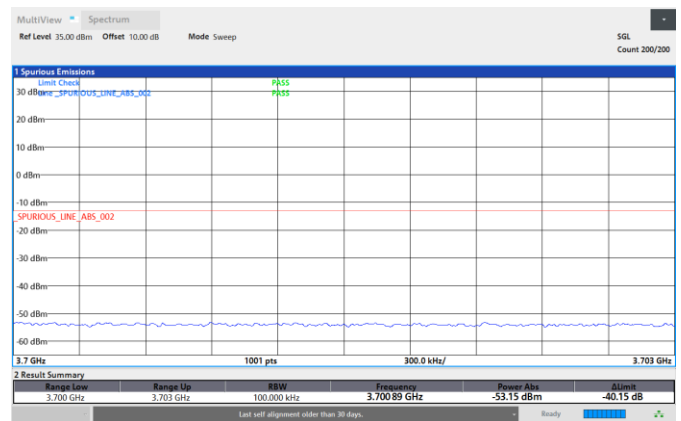
High band edge, 1 signal, total level = 0.5 dB less than AGC threshold



High band edge, 2 signals, total level = 3 dB more than AGC threshold



High band edge, 1 signal, total level = 3 dB more than AGC threshold

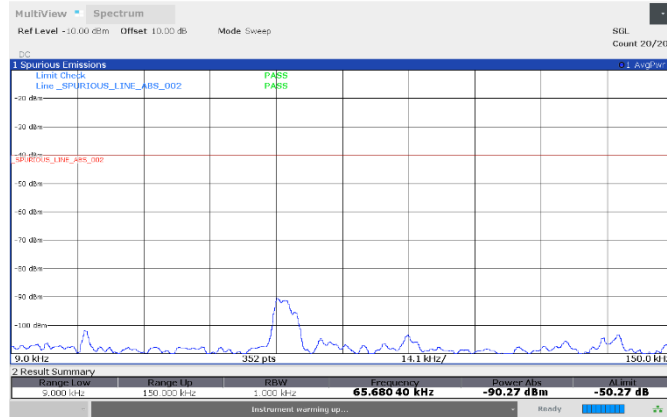


8.5.6 Test data - conducted spurious emissions:

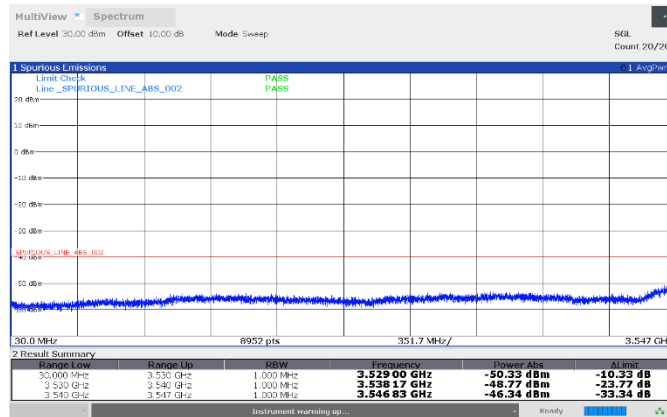
Operating frequency band: Band 48: 3550 – 3650 MHz

Input signal = **lowest channel** within the frequency block; **narrowband**:

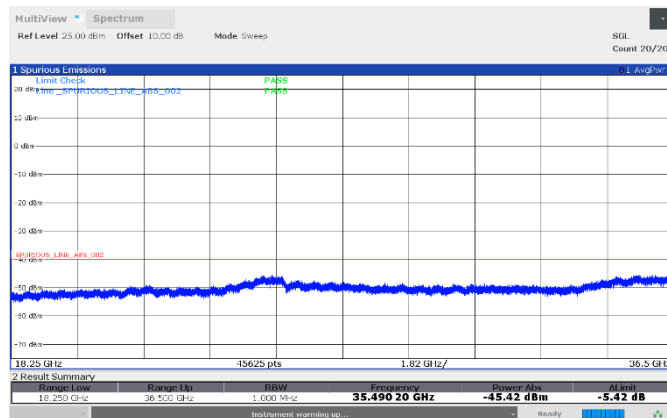
Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, NB



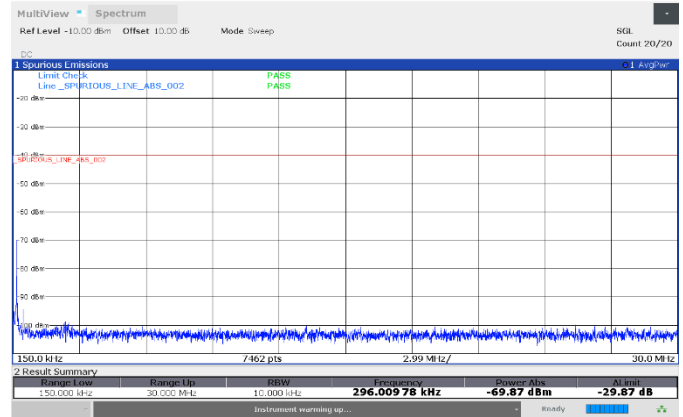
Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, NB



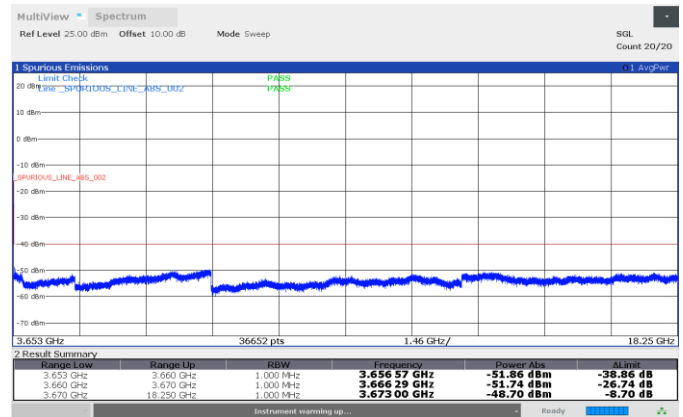
Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, NB



Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, NB

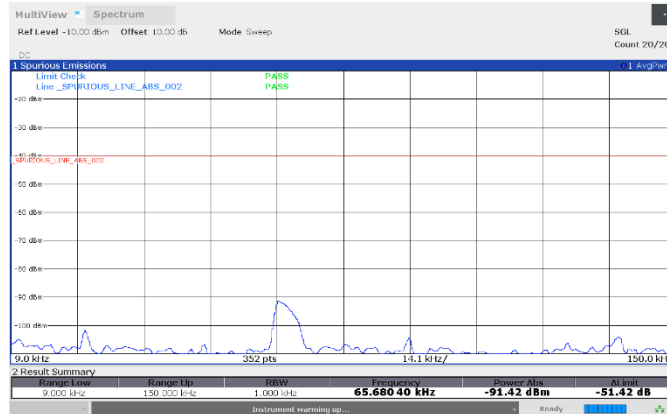


Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, NB

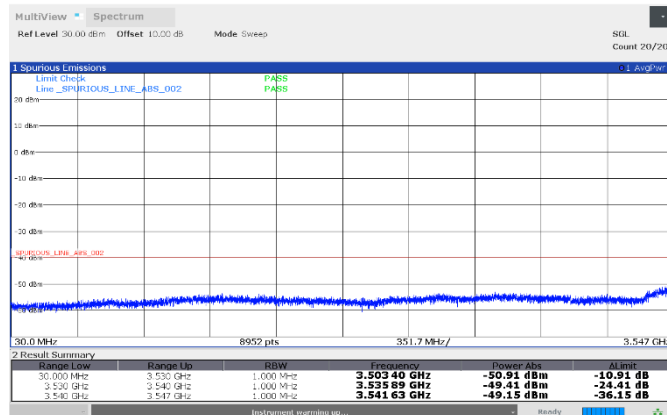


Input signal = middle channel within the frequency block; narrowband:

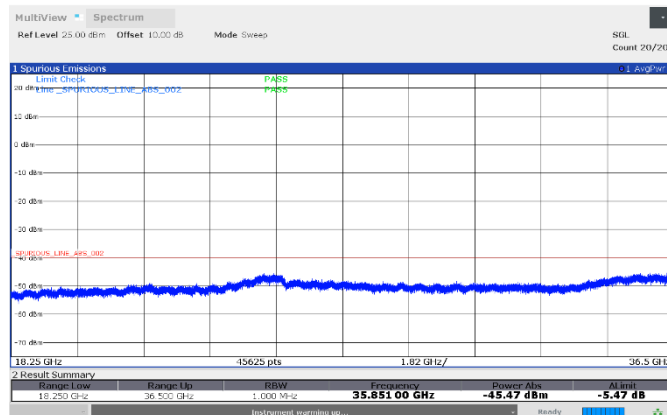
Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, NB



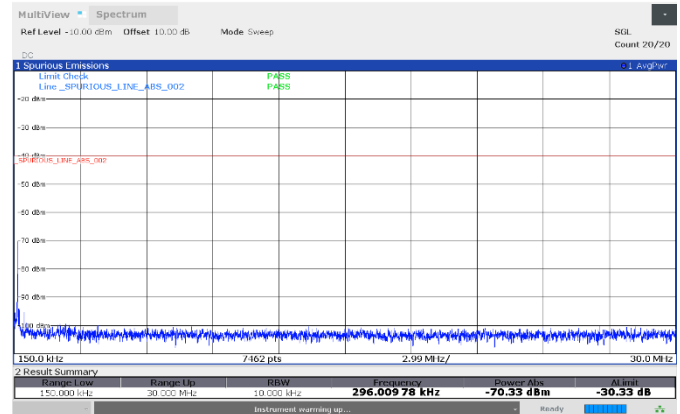
Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, NB



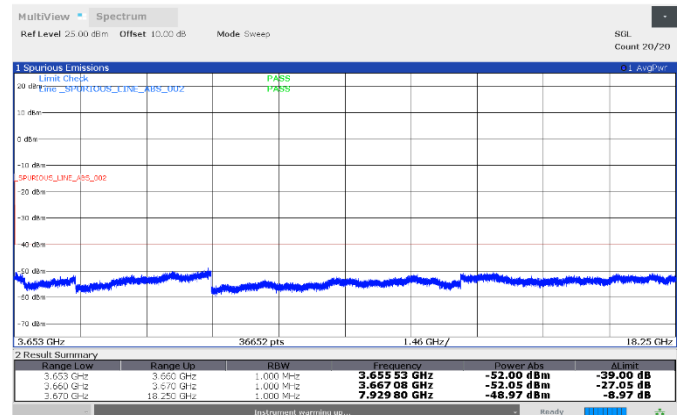
Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, NB



Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, NB

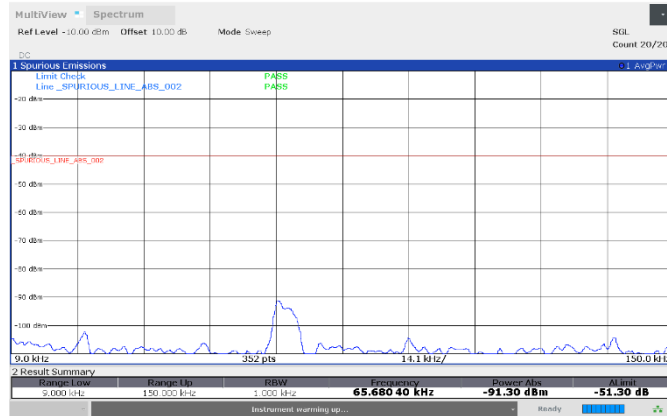


Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, NB

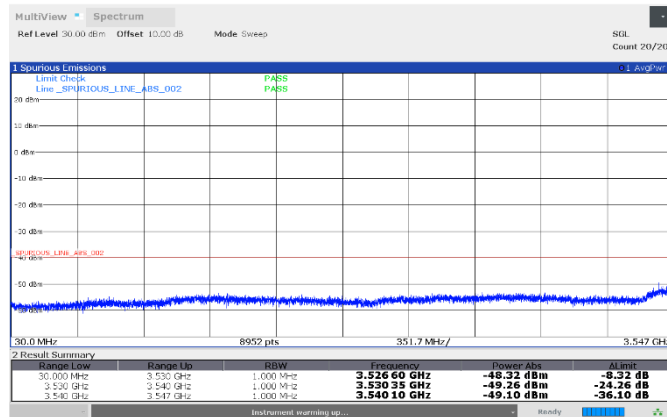


Input signal = highest channel within the frequency block; narrowband:

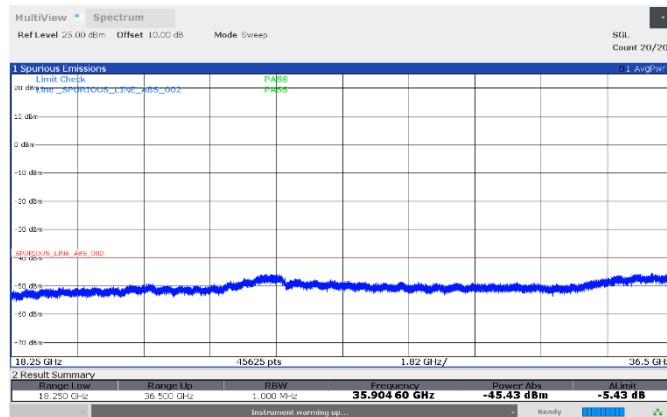
Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, NB



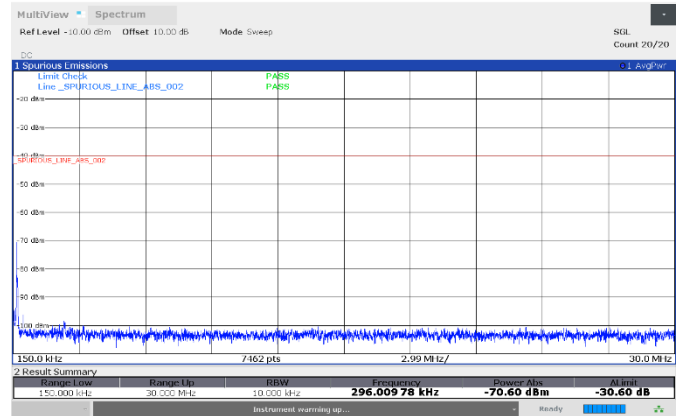
Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, NB



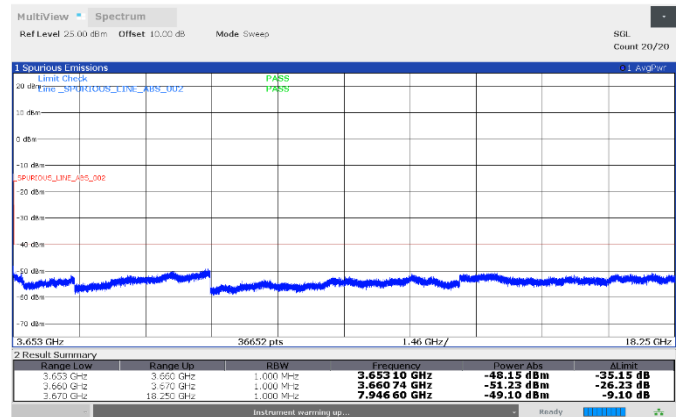
Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, NB



Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, NB

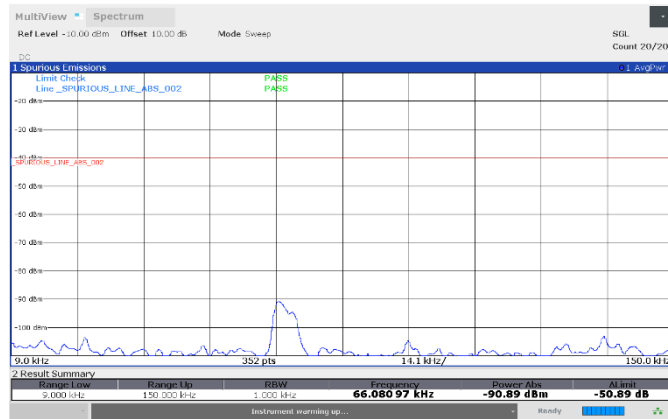


Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, NB

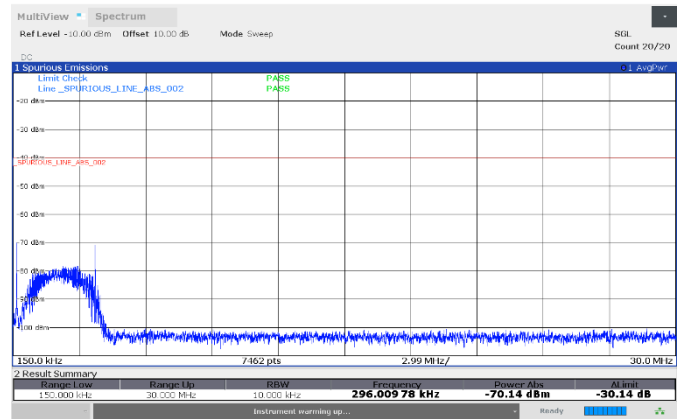


Input signal = **lowest channel** within the frequency block; **broadband**:

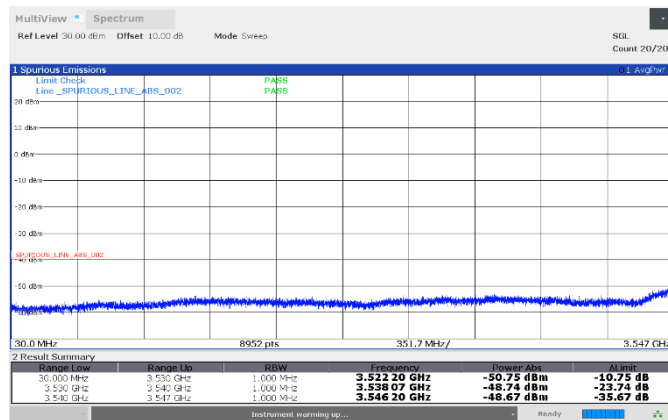
Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, BB



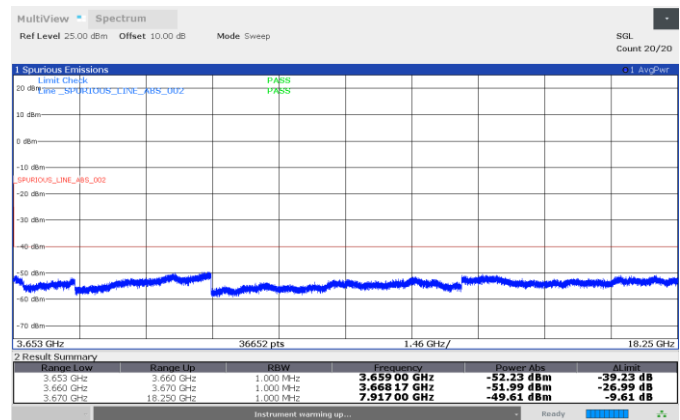
Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, BB



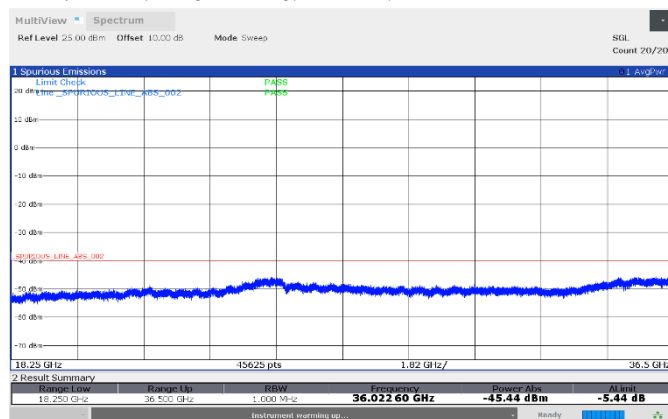
Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, BB



Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, BB

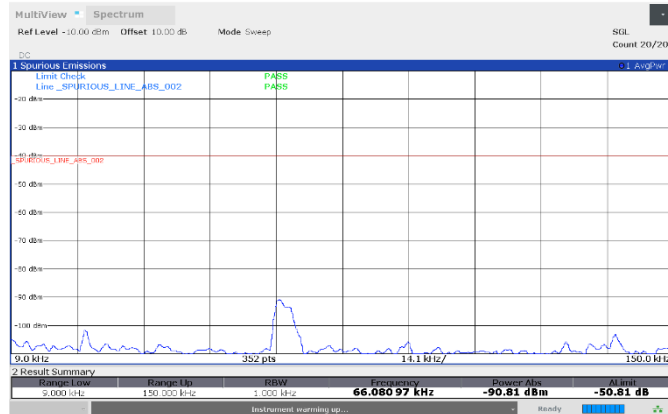


Conducted Spurious Emissions, Wanted signal at low band edge, level = AGC - 0.5 dB, BB

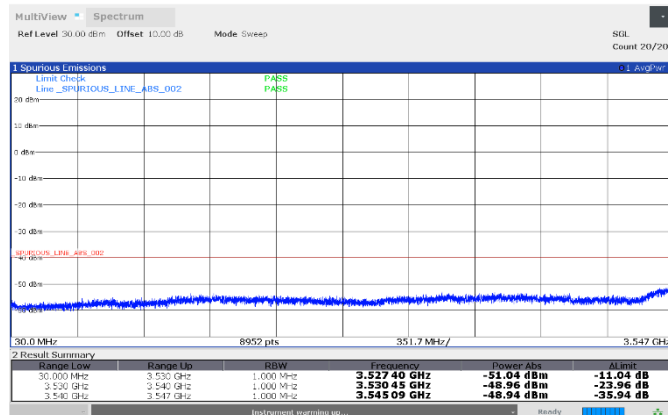


Input signal = middle channel within the frequency block; broadband:

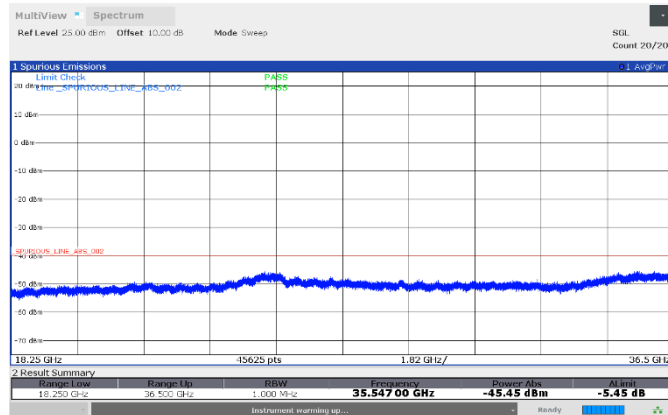
Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, BB



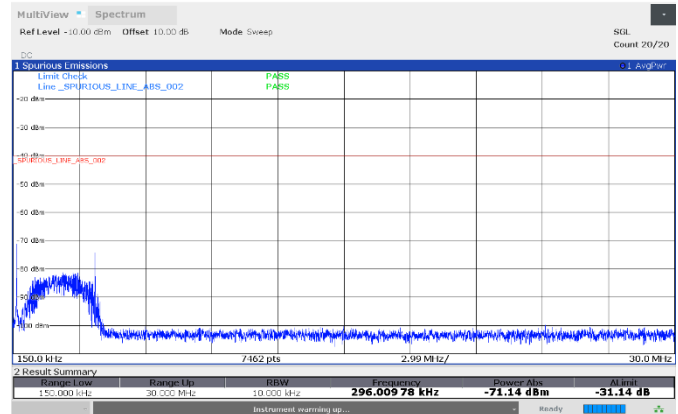
Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, BB



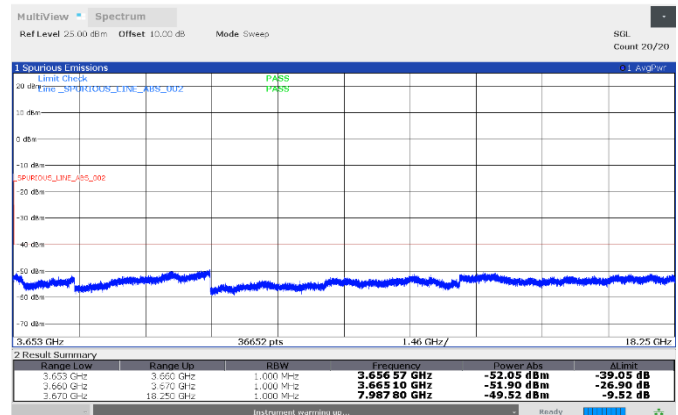
Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, BB



Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, BB

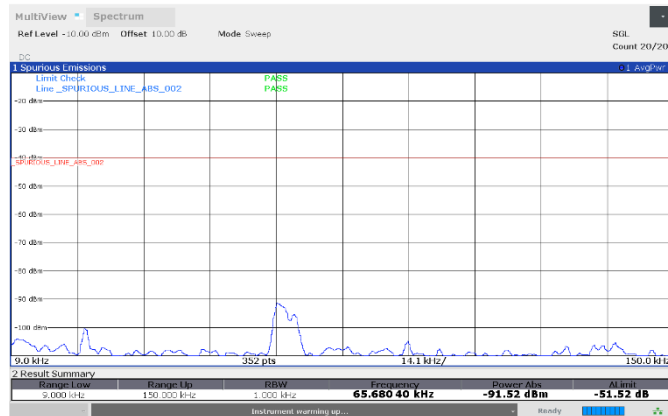


Conducted Spurious Emissions, Wanted signal at middle channel, level = AGC - 0.5 dB, BB

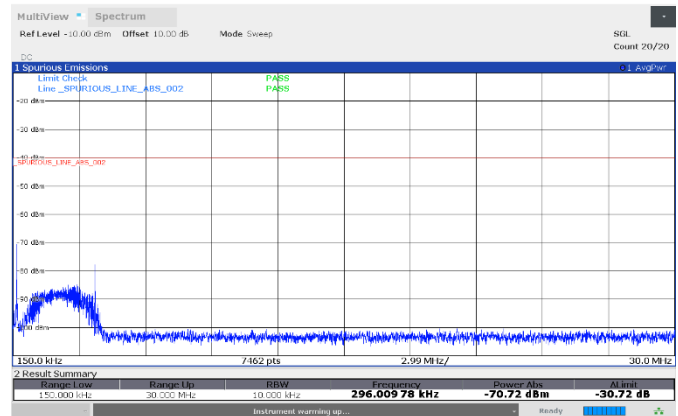


Input signal = highest channel within the frequency block; broadband:

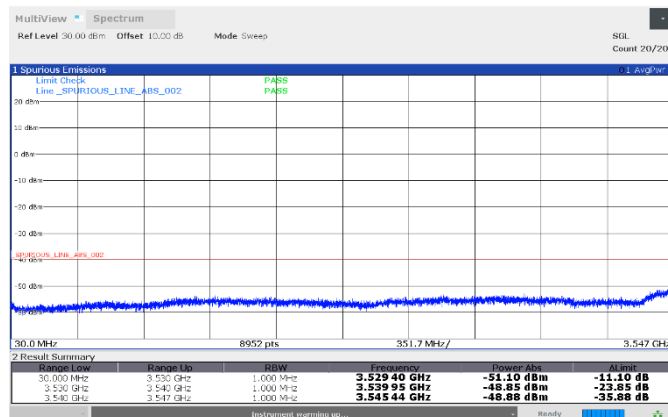
Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, BB



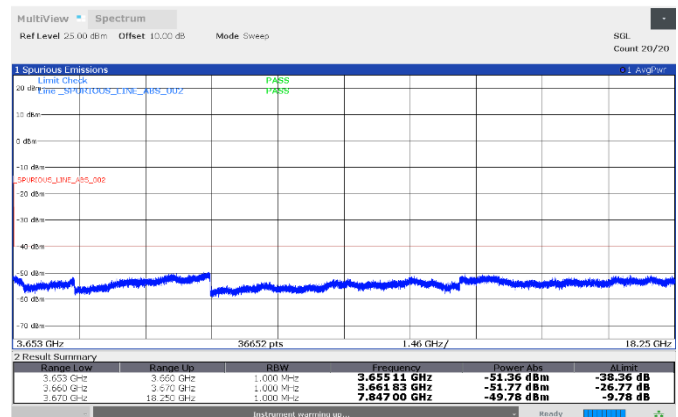
Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, BB



Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, BB



Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, BB



Conducted Spurious Emissions, Wanted signal at high band edge, level = AGC - 0.5 dB, BB

