

Annex L

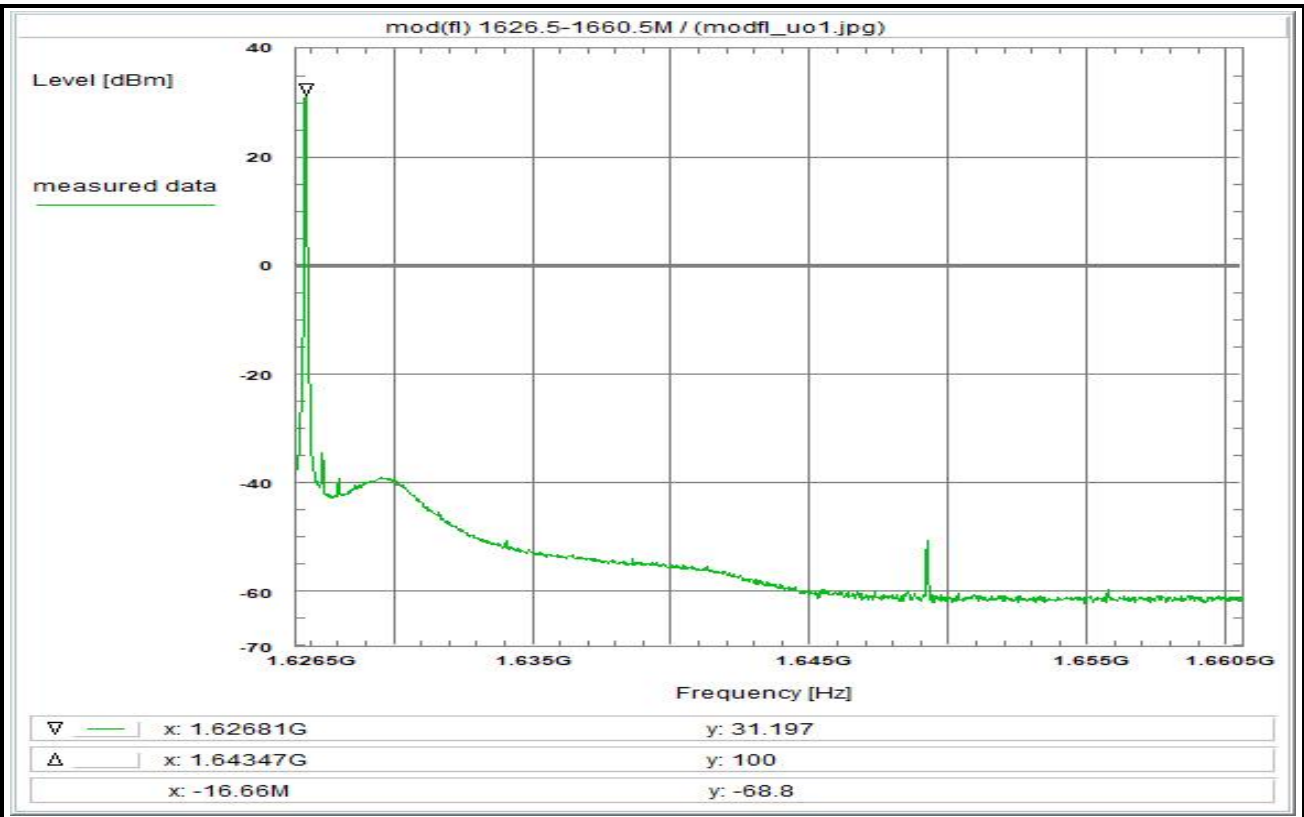


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Test report annex authorized:

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Lab Manager
Radio Communications & EMC

Plot No. 1 (70)



Subclause: -/- Function test
Modulated rf-carrier at the lower edge of the band (fl)
Measurement within the band

Limit:
no limits defined

This test serves to verify the general function of the EUT and for orientation regarding to the spurious emissions which are expected within the band, furthermore for comparison of the actual power with the rated value at modulated carrier adjusted as close to the lower edge of the operating frequency band.

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fl, see test report, operating conditions modulation scheme R20T05Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

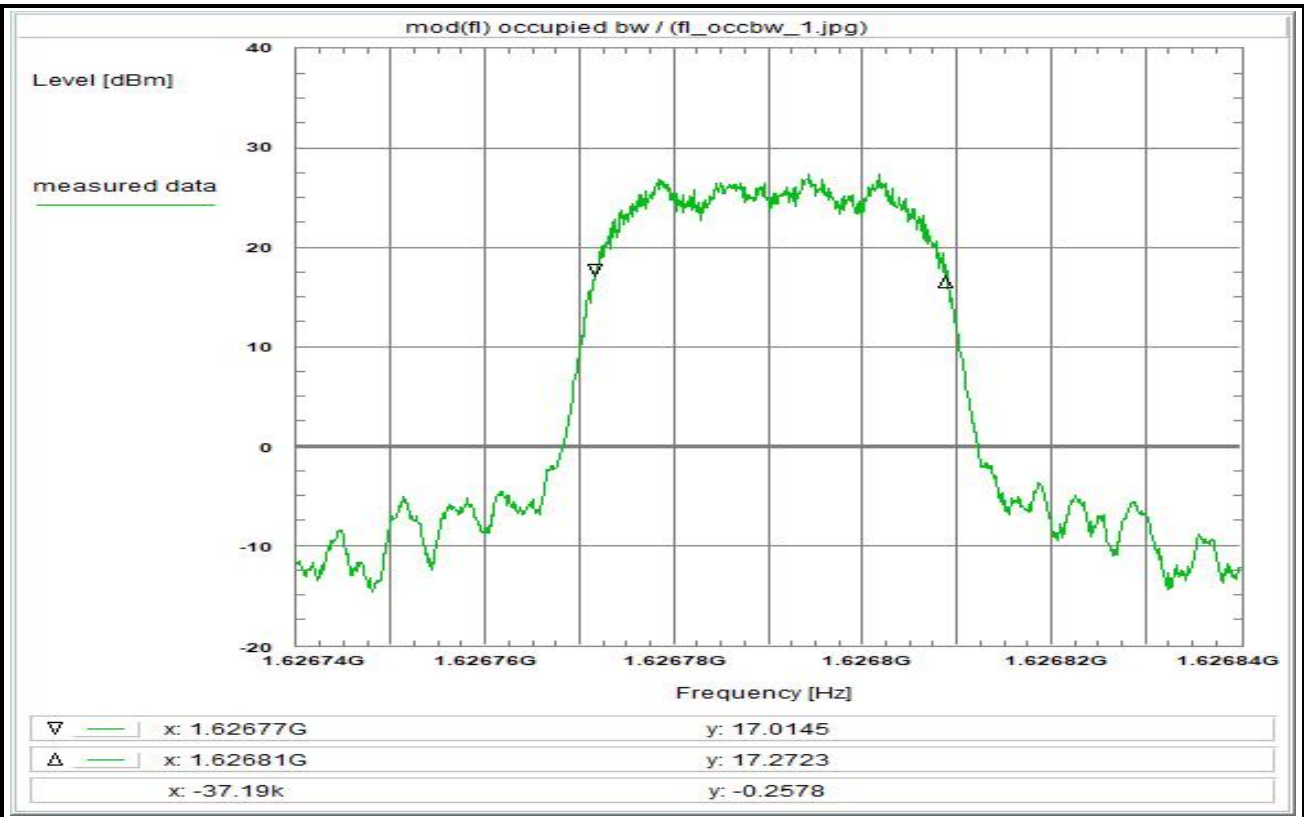
Environment condition:
Date & Time: Thu 28/Nov/2019 11:44:07
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.6265 GHz
Stop frequency: 1.6605 GHz
Center frequency: 1.6435 GHz
Frequency span: 34 MHz
Resolution-BW: 30 kHz
Video-BW: 100 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor + 0.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
TOTAL CORRECTION: + 27.1 dB

Remarks:
Test of general function of the EUT and measurement for orientation.

Plot No. 2 (70)



Subclause: -/- Function test
Modulated rf-carrier at the lower edge of the band (fl)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fl, see test report, operating conditions
modulation scheme R5T1X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

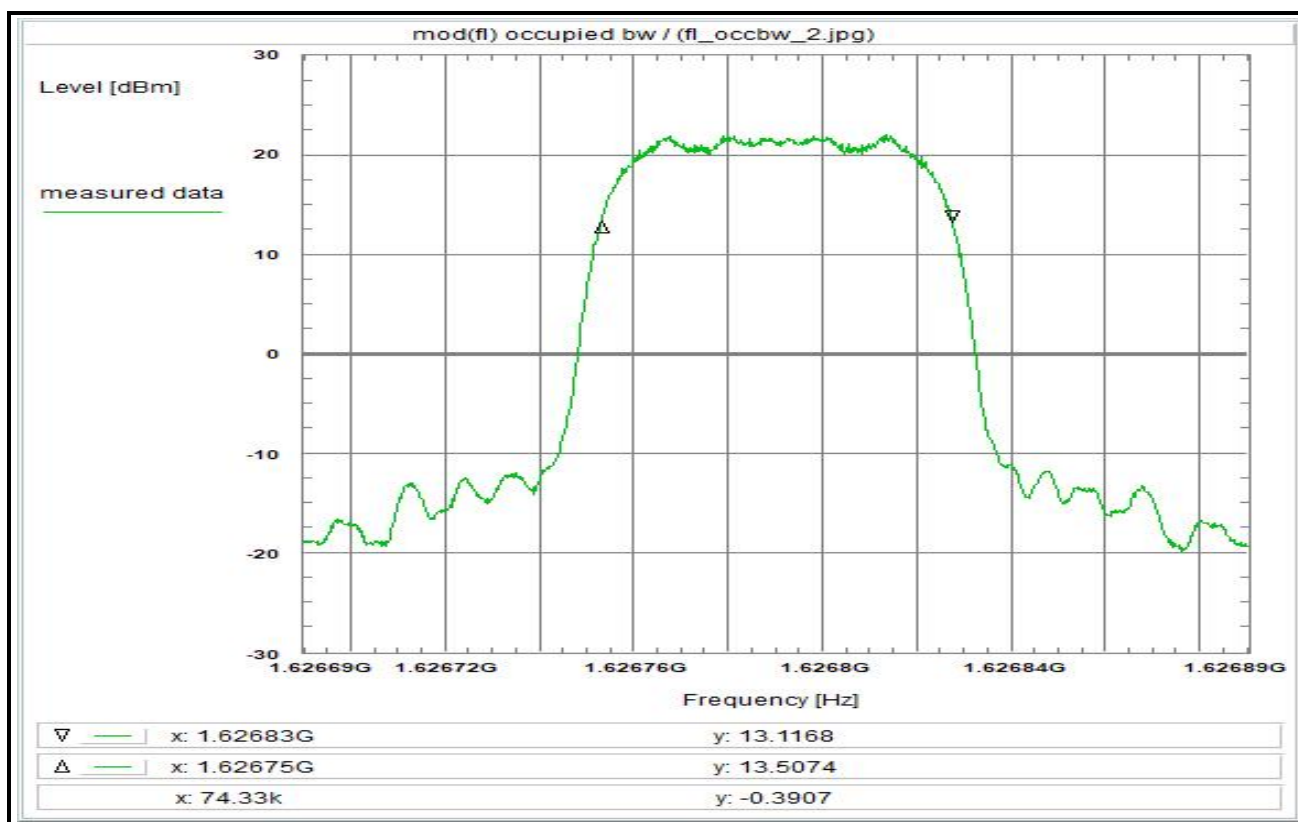
Environment condition:
Date & Time: Thu 28/Nov/2019 17:42:54
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.62674 GHz
Stop frequency: 1.62684 GHz
Center frequency: 1.62679 GHz
Frequency span: 100 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fl:
The measured value is about 37.2 kHz (delta marker)

Plot No. 3 (70)



Subclause: -/- Function test
 Modulated rf-carrier at the lower edge of the band (fl)
 Determination of the 'occupied bandwidth'

Limit:
 The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
 see plot (an explicit table was not generated)

Operating condition of DUT:
 operating condition 1, fl, see test report, operating conditions
 modulation scheme R5T2X

Test setup:
 see test report chapter 6.x: hgj

Test equipment:
 see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 08:54:56
 Location: CTC advanced GmbH, Laboratory RCE-Sat
 Temperature: 22 °C
 Humidity: 45 %
 Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.62669 GHz
 Stop frequency: 1.62689 GHz
 Center frequency: 1.62679 GHz
 Frequency span: 200 kHz
 Resolution-BW: 3 kHz
 Video-BW: 10 kHz
 Input attenuation: 20 dB
 Trace-Mode: Max-Hold
 Detector-Mode: AVG

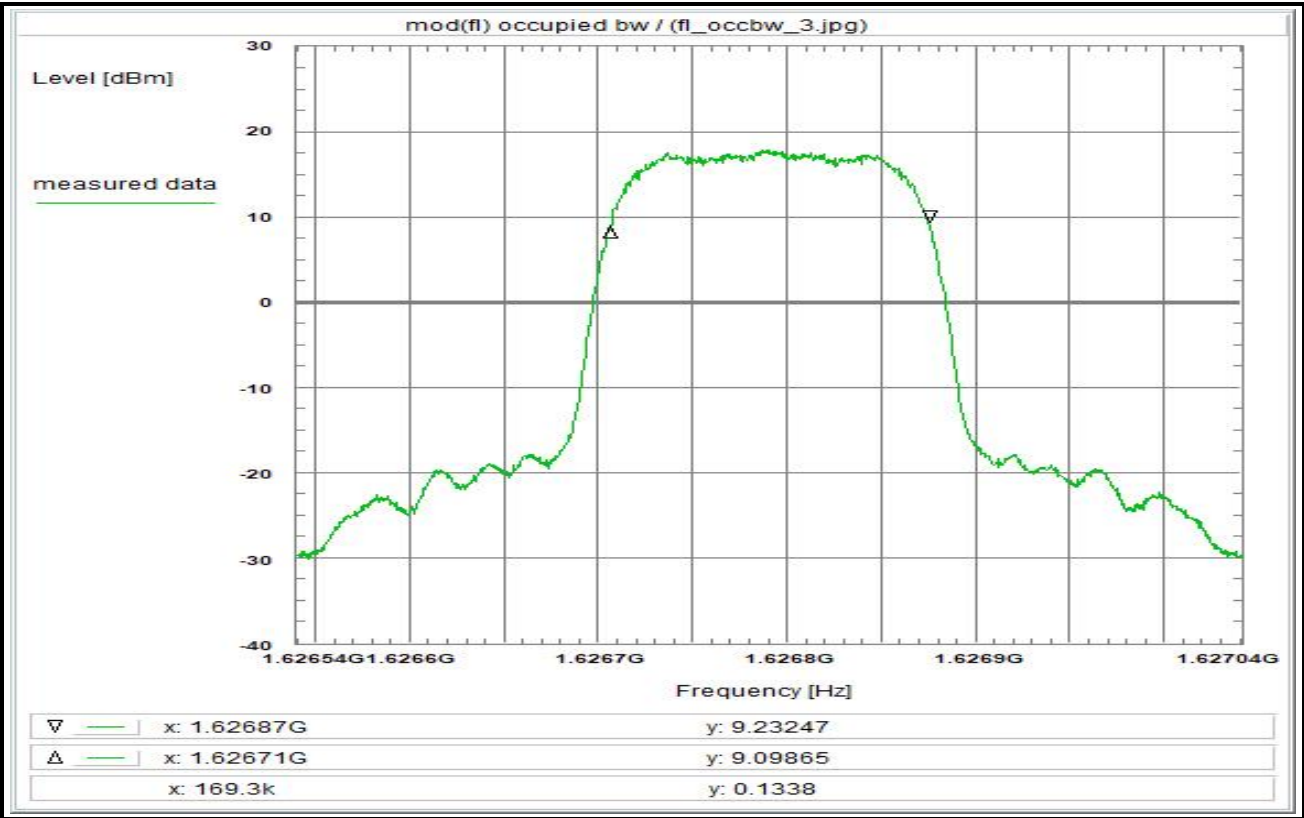
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor	+ 0.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 27.1 dB

Remarks:

Determination of the 'occupied bandwidth' at fl:
 The measured value is about 74.3 kHz (delta marker)

Plot No. 4 (70)



Subclause: -/- Function test
Modulated rf-carrier at the lower edge of the band (fl)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fl, see test report, operating conditions
modulation scheme R5T45X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

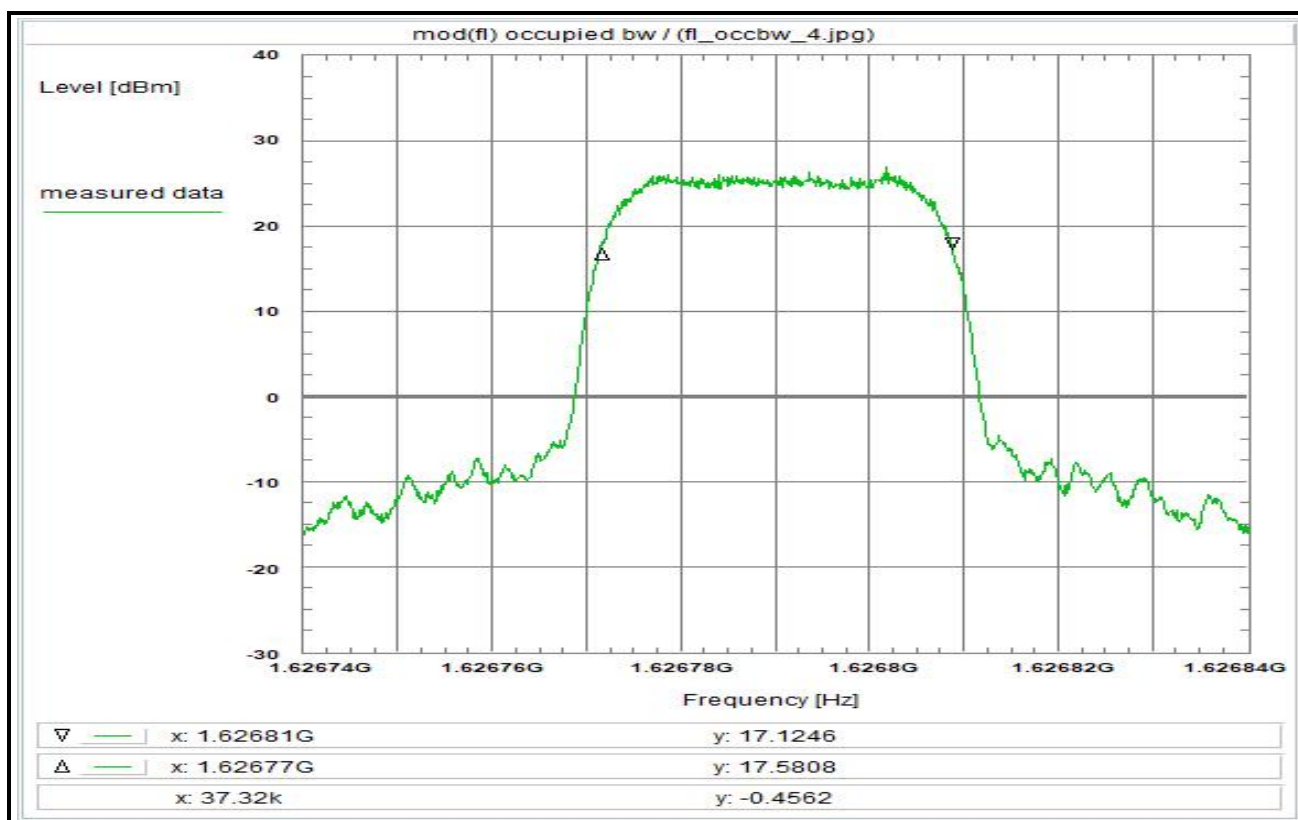
Environment condition:
Date & Time: Fri 29/Nov/2019 08:58:07
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.62654 GHz
Stop frequency: 1.62704 GHz
Center frequency: 1.62679 GHz
Frequency span: 500 kHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 3k) - 5.2 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 21.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fl:
The measured value is about 169.3 kHz (delta marker)

Plot No. 5 (70)



Subclause: -/- Function test
 Modulated rf-carrier at the lower edge of the band (fl)
 Determination of the 'occupied bandwidth'

Limit:

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions modulation scheme R20T1X

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 09:10:05
 Location: CTC advanced GmbH, Laboratory RCE-Sat
 Temperature: 22 °C
 Humidity: 45 %
 Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.62674 GHz
 Stop frequency: 1.62684 GHz
 Center frequency: 1.62679 GHz
 Frequency span: 100 kHz
 Resolution-BW: 1 kHz
 Video-BW: 3 kHz
 Input attenuation: 20 dB
 Trace-Mode: Max-Hold
 Detector-Mode: AVG

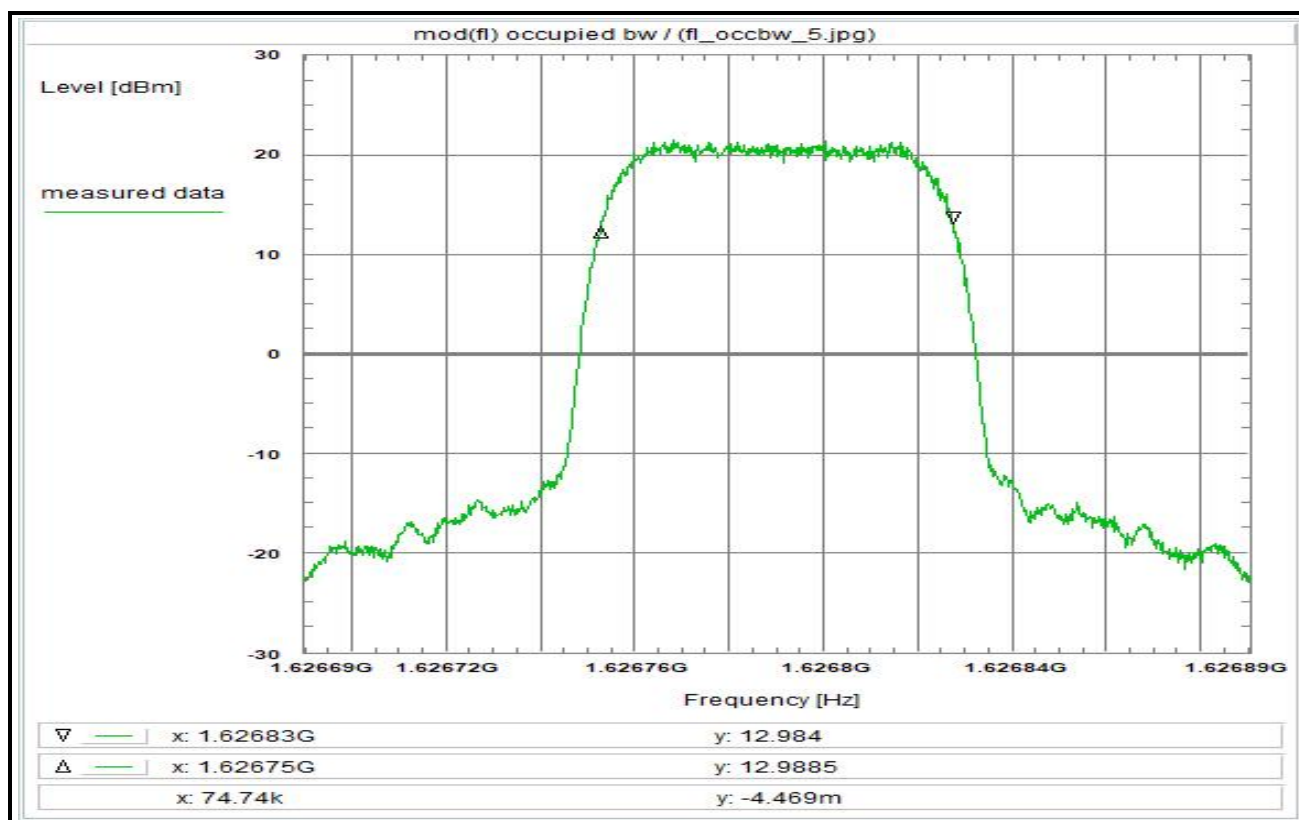
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (1k -> 3k)	+ 4.8 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 31.9 dB

Remarks:Determination of the 'occupied bandwidth' at fl:

The measured value is about 37.3 kHz (delta marker)

Plot No. 6 (70)



Subclause: -/- Function test
 Modulated rf-carrier at the lower edge of the band (fl)
 Determination of the 'occupied bandwidth'

Limit:
 The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
 see plot (an explicit table was not generated)

Operating condition of DUT:
 operating condition 1, fl, see test report, operating conditions
 modulation scheme R20T2X

Test setup:
 see test report chapter 6.x: hgj

Test equipment:
 see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 09:15:22
 Location: CTC advanced GmbH, Laboratory RCE-Sat
 Temperature: 22 °C
 Humidity: 45 %
 Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.62669 GHz
 Stop frequency: 1.62689 GHz
 Center frequency: 1.62679 GHz
 Frequency span: 200 kHz
 Resolution-BW: 3 kHz
 Video-BW: 10 kHz
 Input attenuation: 20 dB
 Trace-Mode: Max-Hold
 Detector-Mode: AVG

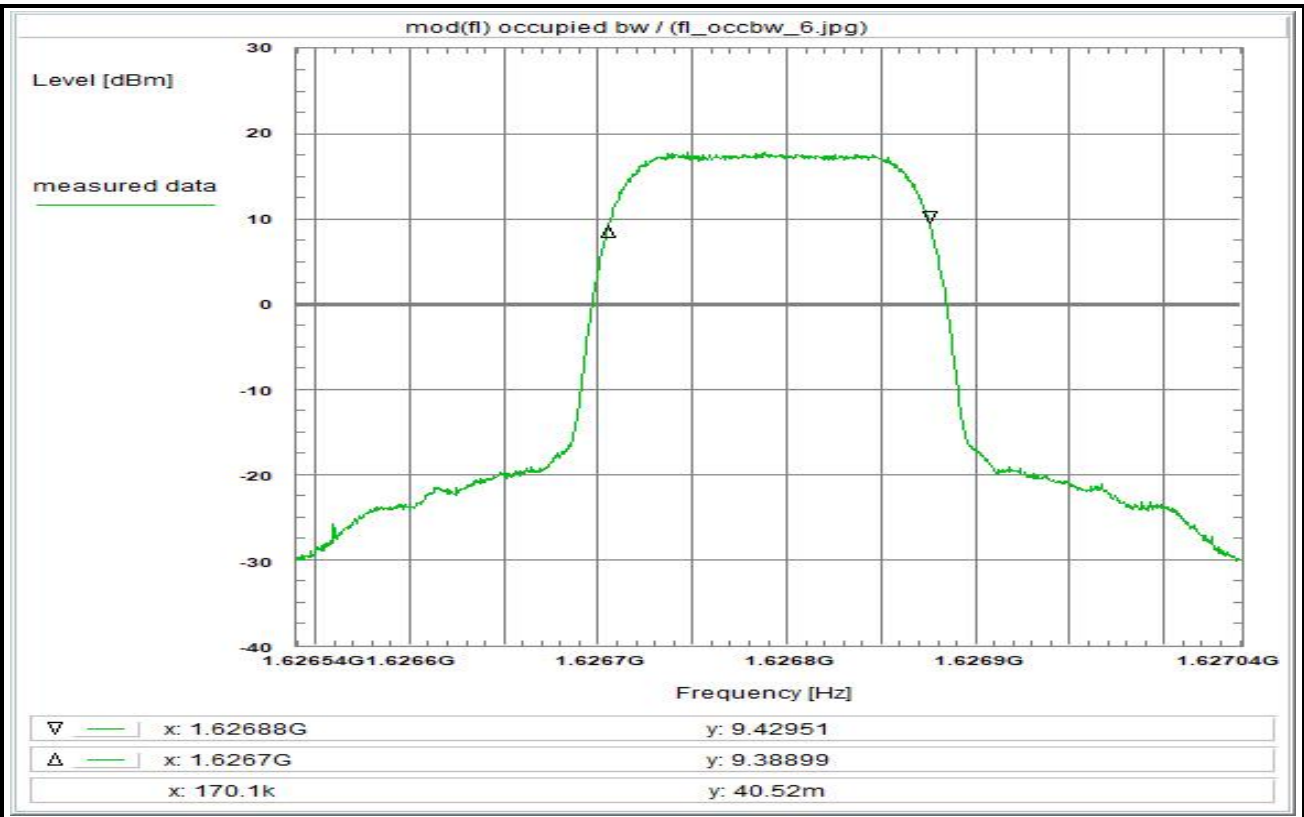
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor	+ 0.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 27.1 dB

Remarks:

Determination of the 'occupied bandwidth' at fl:
 The measured value is about 74.7 kHz (delta marker)

Plot No. 7 (70)



Subclause: -/-
Function test
Modulated rf-carrier at the lower edge of the band (fl)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fl, see test report, operating conditions
modulation scheme R20T45X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

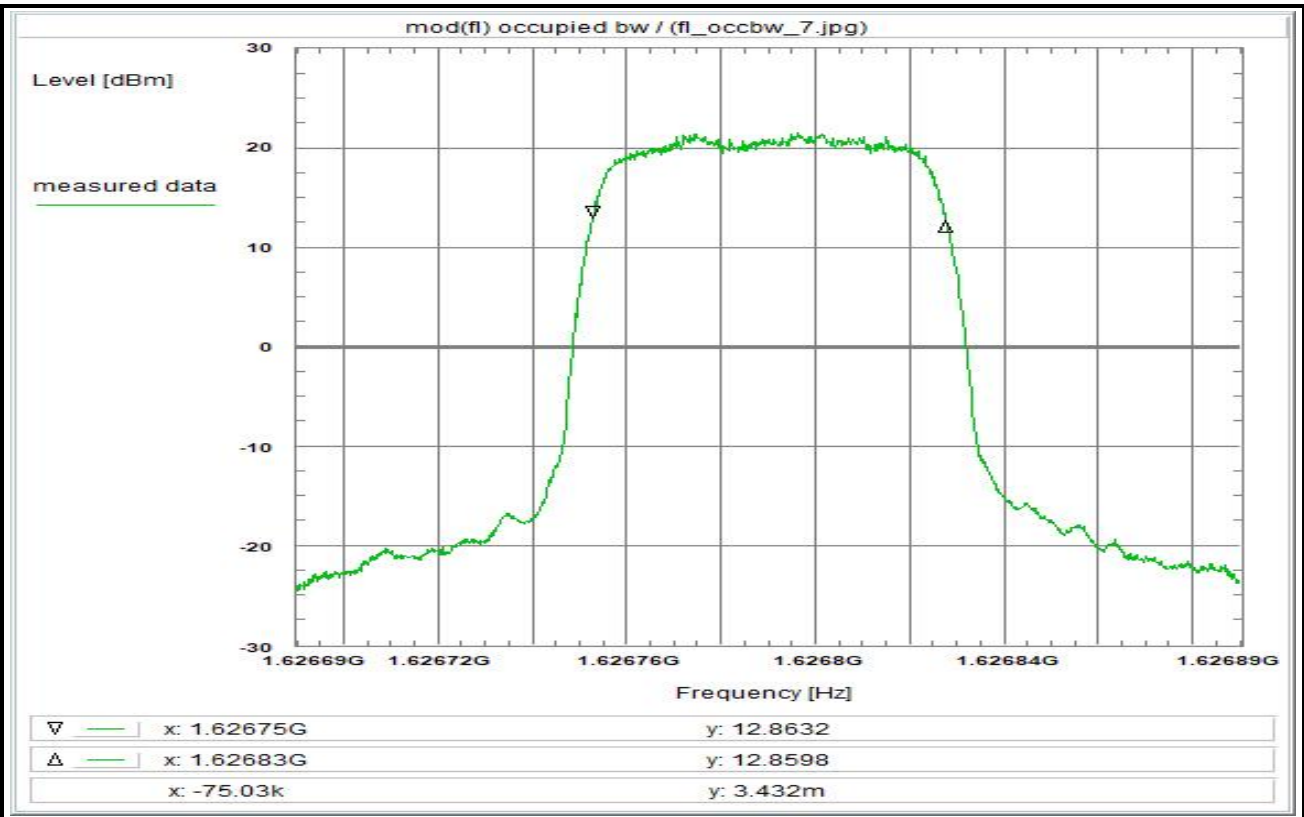
Environment condition:
Date & Time: Fri 29/Nov/2019 09:18:20
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.62654 GHz
Stop frequency: 1.62704 GHz
Center frequency: 1.62679 GHz
Frequency span: 500 kHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 3k) - 5.2 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 21.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fl:
The measured value is about 170.1 kHz (delta marker)

Plot No. 8 (70)



Subclause: -/- Function test
Modulated rf-carrier at the lower edge of the band (fl)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fl, see test report, operating conditions
modulation scheme R5T2Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

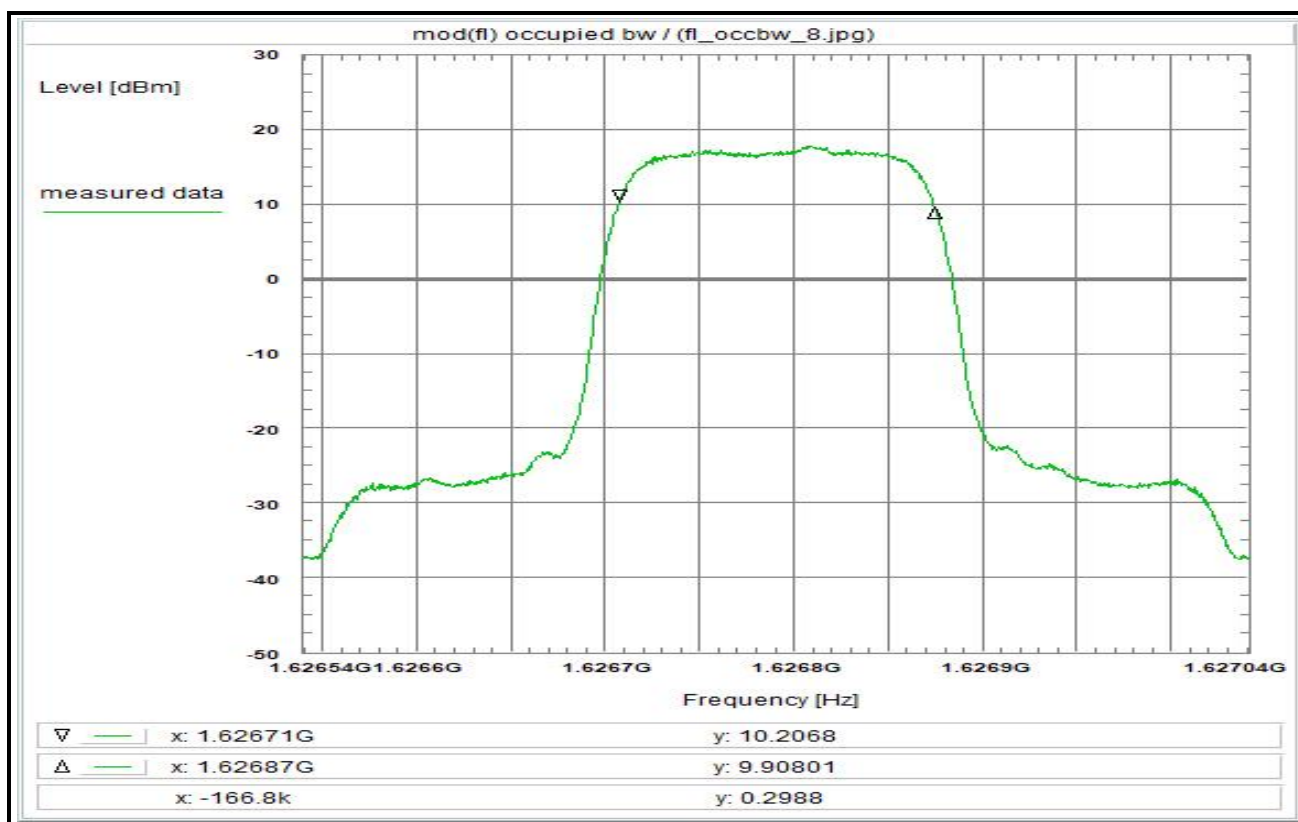
Environment condition:
Date & Time: Fri 29/Nov/2019 09:43:14
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.62669 GHz
Stop frequency: 1.62689 GHz
Center frequency: 1.62679 GHz
Frequency span: 200 kHz
Resolution-BW: 3 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor + 0.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 27.1 dB

Remarks:
Determination of the 'occupied bandwidth' at fl:
The measured value is about 75 kHz (delta marker)

Plot No. 9 (70)



Subclause: -/- Function test
 Modulated rf-carrier at the lower edge of the band (fl)
 Determination of the 'occupied bandwidth'

Limit:

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions modulation scheme R5T45Q

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 09:53:52
 Location: CTC advanced GmbH, Laboratory RCE-Sat
 Temperature: 22 °C
 Humidity: 45 %
 Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.62654 GHz
 Stop frequency: 1.62704 GHz
 Center frequency: 1.62679 GHz
 Frequency span: 500 kHz
 Resolution-BW: 10 kHz
 Video-BW: 10 kHz
 Input attenuation: 20 dB
 Trace-Mode: Max-Hold
 Detector-Mode: AVG

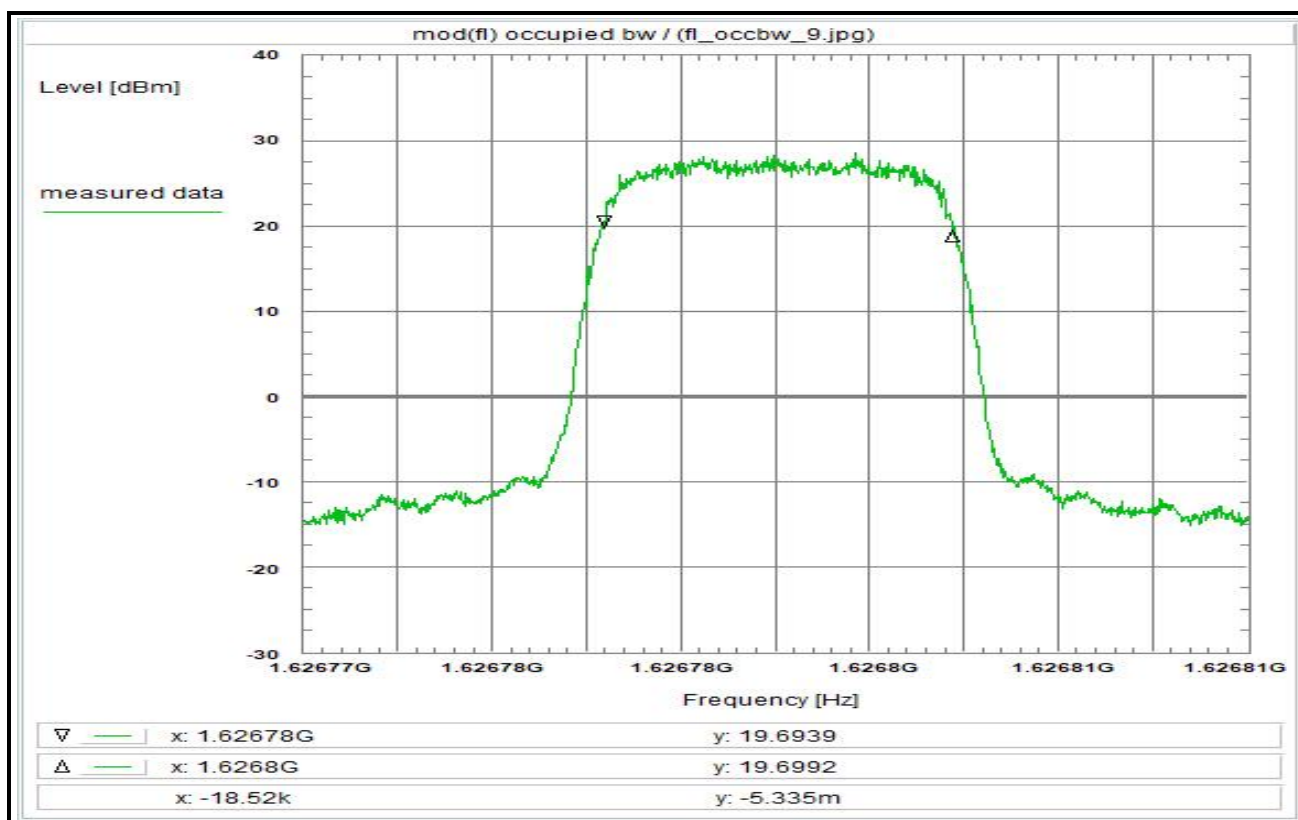
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (10k -> 3k)	- 5.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 21.9 dB

Remarks:Determination of the 'occupied bandwidth' at fl:

The measured value is about 166.8 kHz (delta marker)

Plot No. 10 (70)



Subclause: -/- Function test
 Modulated rf-carrier at the lower edge of the band (fl)
 Determination of the 'occupied bandwidth'

Limit:
 The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
 see plot (an explicit table was not generated)

Operating condition of DUT:
 operating condition 1, fl, see test report, operating conditions
 modulation scheme R20T05Q

Test setup:
 see test report chapter 6.x: hgj

Test equipment:
 see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

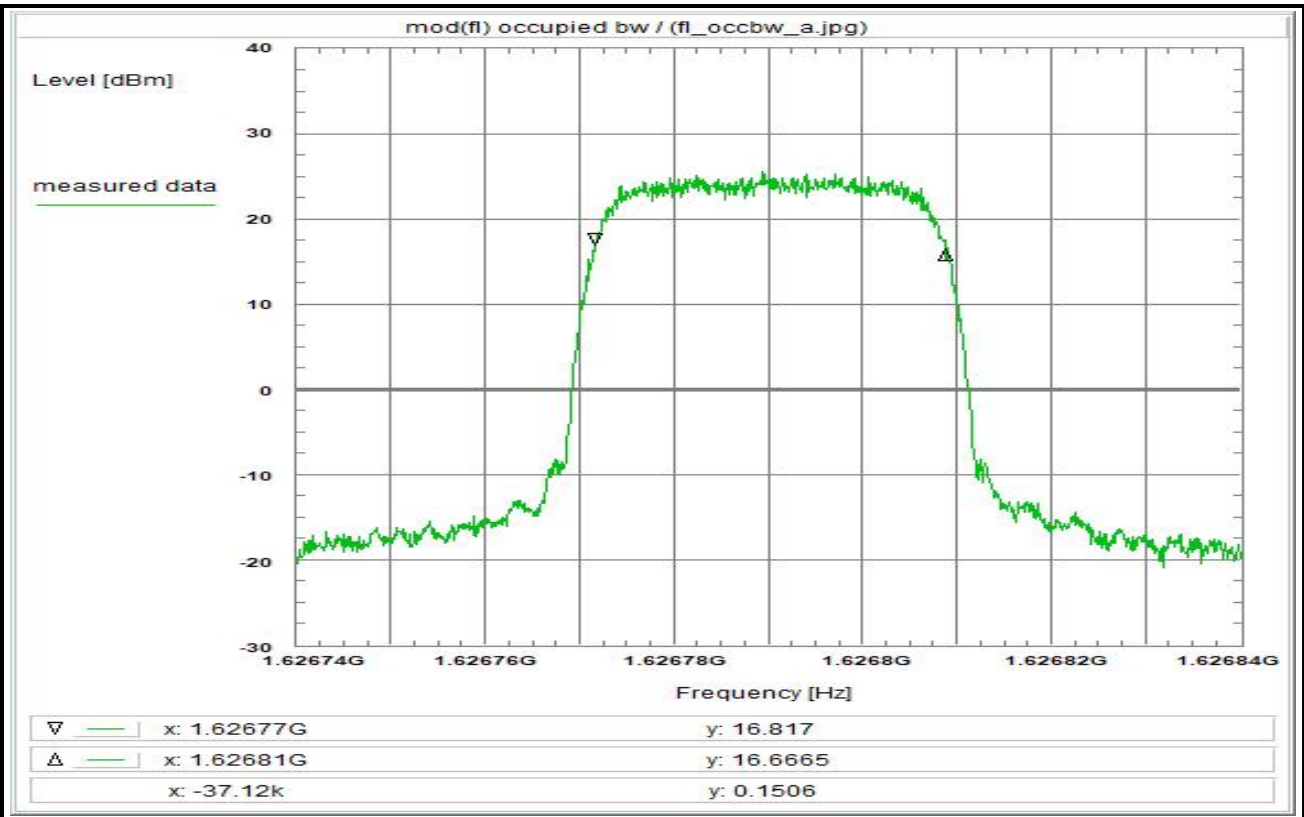
Environment condition:
 Date & Time: Fri 29/Nov/2019 09:59:08
 Location: CTC advanced GmbH, Laboratory RCE-Sat
 Temperature: 22 °C
 Humidity: 45 %
 Voltage: 24 Vdc

Setup of measurement equipment:
 Start frequency: 1.626765 GHz
 Stop frequency: 1.626815 GHz
 Center frequency: 1.62679 GHz
 Frequency span: 50 kHz
 Resolution-BW: 1 kHz
 Video-BW: 10 kHz
 Input attenuation: 20 dB
 Trace-Mode: Max-Hold
 Detector-Mode: AVG

Correction:
 Directional coupler + 0.0 dB
 Coaxial cable (C220) + 0.9 dB
 DUT-Antenna + 0.0 dBi
 Test antenna + 0.0 dB
 BW correction factor (1k -> 3k) + 4.8 dB
 Atten. between HPA and feedhorn - 0.0 dB
 Attenuation (U312) + 19.5 dB
 Power Splitter + Cable + 6.7 dB
 TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fl:
 The measured value is about 18.5 kHz (delta marker)

Plot No. 11 (70)



Subclause: -/- Function test
Modulated rf-carrier at the lower edge of the band (fl)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fl, see test report, operating conditions
modulation scheme R20T1Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

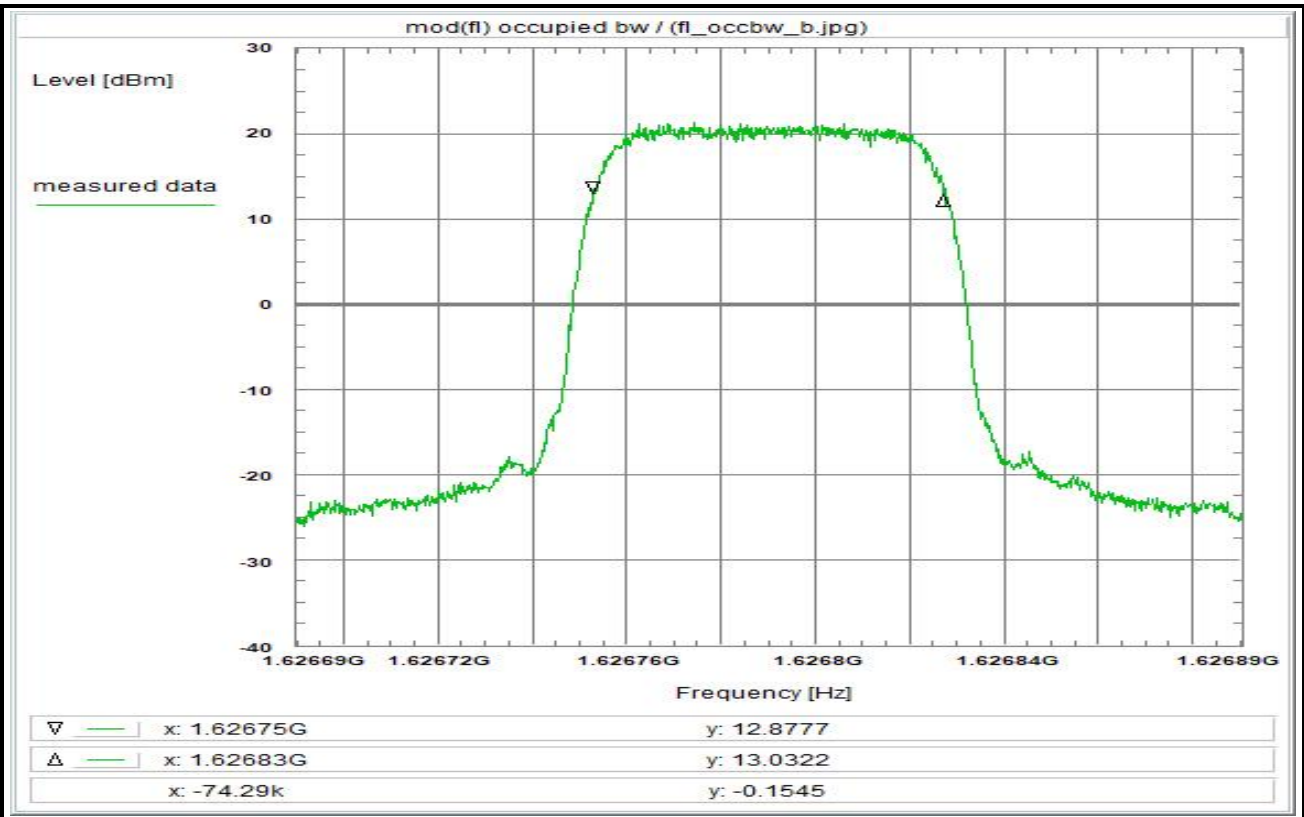
Environment condition:
Date & Time: Fri 29/Nov/2019 10:01:53
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.62674 GHz
Stop frequency: 1.62684 GHz
Center frequency: 1.62679 GHz
Frequency span: 100 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fl:
The measured value is about 37.1 kHz (delta marker)

Plot No. 12 (70)



Subclause: -/- Function test
Modulated rf-carrier at the lower edge of the band (fl)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fl, see test report, operating conditions
modulation scheme R20T2Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

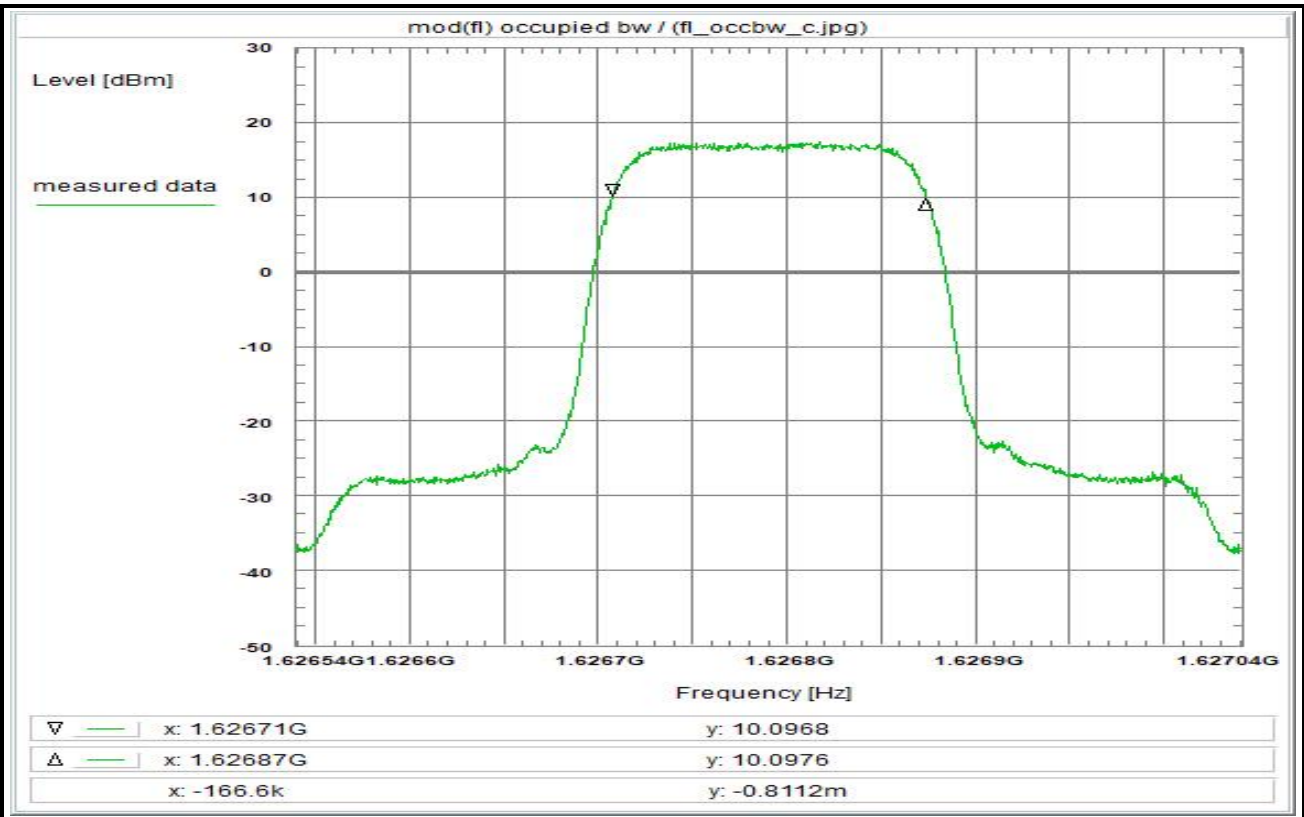
Environment condition:
Date & Time: Fri 29/Nov/2019 10:05:27
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.62669 GHz
Stop frequency: 1.62689 GHz
Center frequency: 1.62679 GHz
Frequency span: 200 kHz
Resolution-BW: 3 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor + 0.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 27.1 dB

Remarks:
Determination of the 'occupied bandwidth' at fl:
The measured value is about 74.3 kHz (delta marker)

Plot No. 13 (70)



Subclause: -/- Function test
Modulated rf-carrier at the lower edge of the band (fl)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fl, see test report, operating conditions
modulation scheme R20T45Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

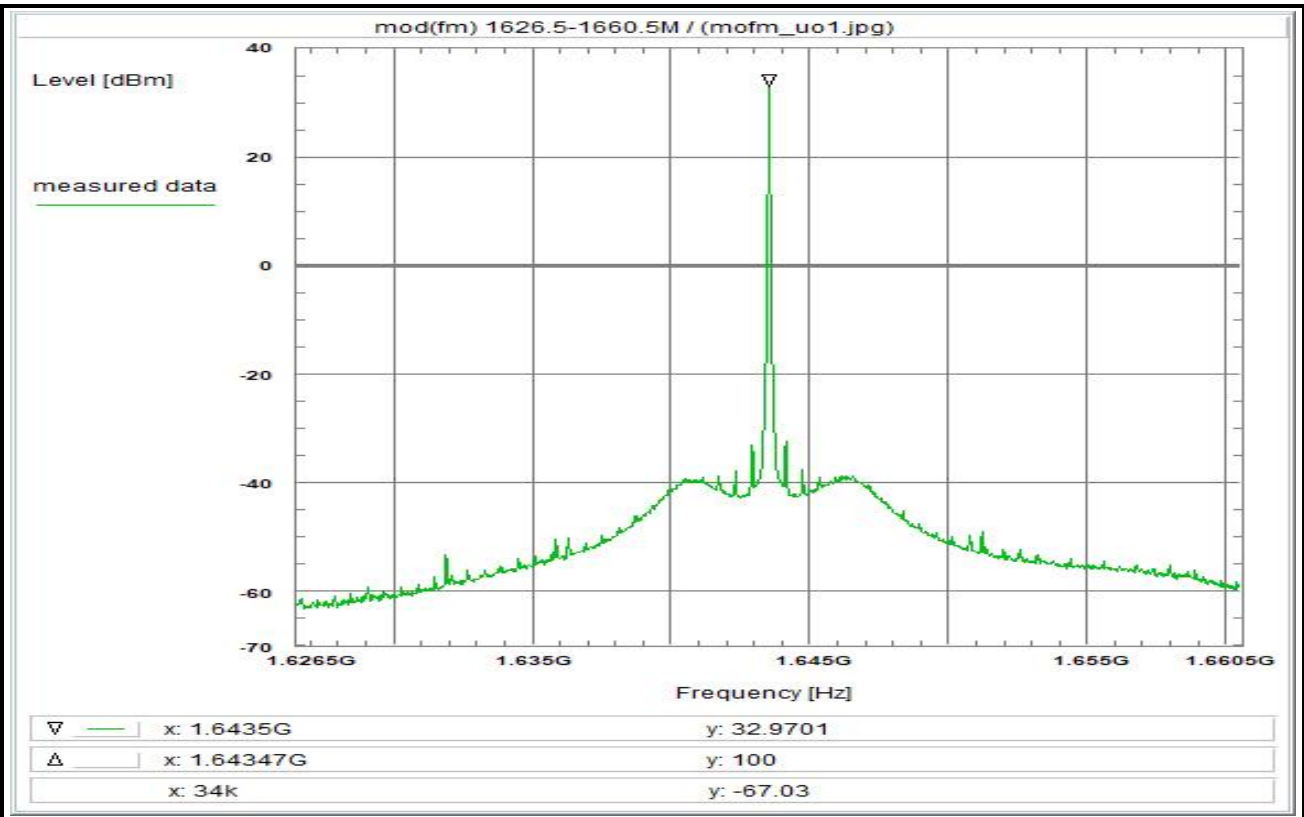
Environment condition:
Date & Time: Fri 29/Nov/2019 10:09:50
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.62654 GHz
Stop frequency: 1.62704 GHz
Center frequency: 1.62679 GHz
Frequency span: 500 kHz
Resolution-BW: 10 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 3k) - 5.2 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 21.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fl:
The measured value is about 166.6 kHz (delta marker)

Plot No. 14 (70)



Subclause: -/- Function test
Modulated rf-carrier in the middle of the band (fm)
Measurement within the band

Limit:
no limits defined

This test serves to verify the general function of the EUT and for orientation regarding to the spurious emissions which are expected within the band, furthermore for comparison of the actual power with the rated value at modulated carrier adjusted in the middle of the band (EIRP).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R20T05Q

Test setup:
see test report chapter 6.x: hfgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

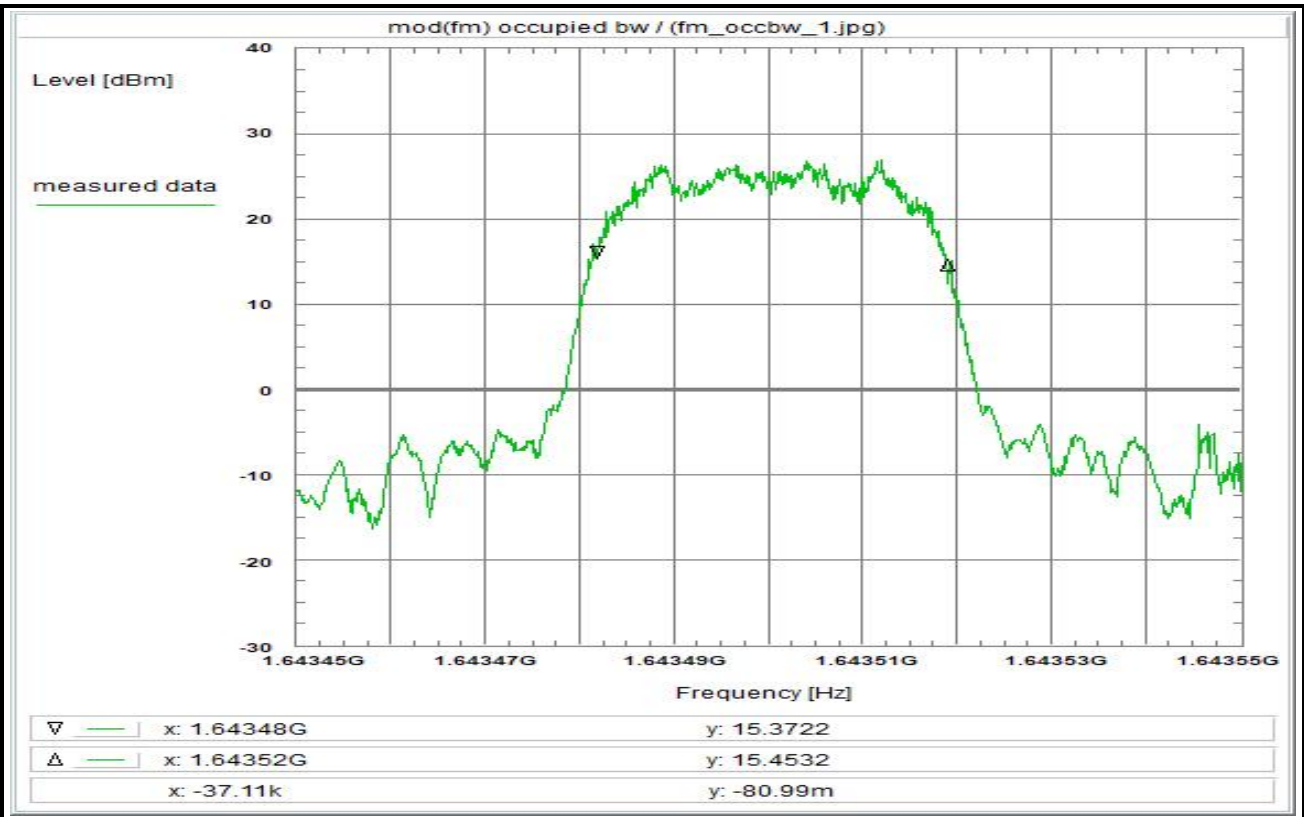
Environment condition:
Date & Time: Thu 28/Nov/2019 11:42:30
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.6265 GHz
Stop frequency: 1.6605 GHz
Center frequency: 1.6435 GHz
Frequency span: 34 MHz
Resolution-BW: 30 kHz
Video-BW: 100 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor + 0.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
TOTAL CORRECTION: + 27.1 dB

Remarks:
Test of general function of the EUT and measurement for orientation.

Plot No. 15 (70)



Subclause: -/-
Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R5T1X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

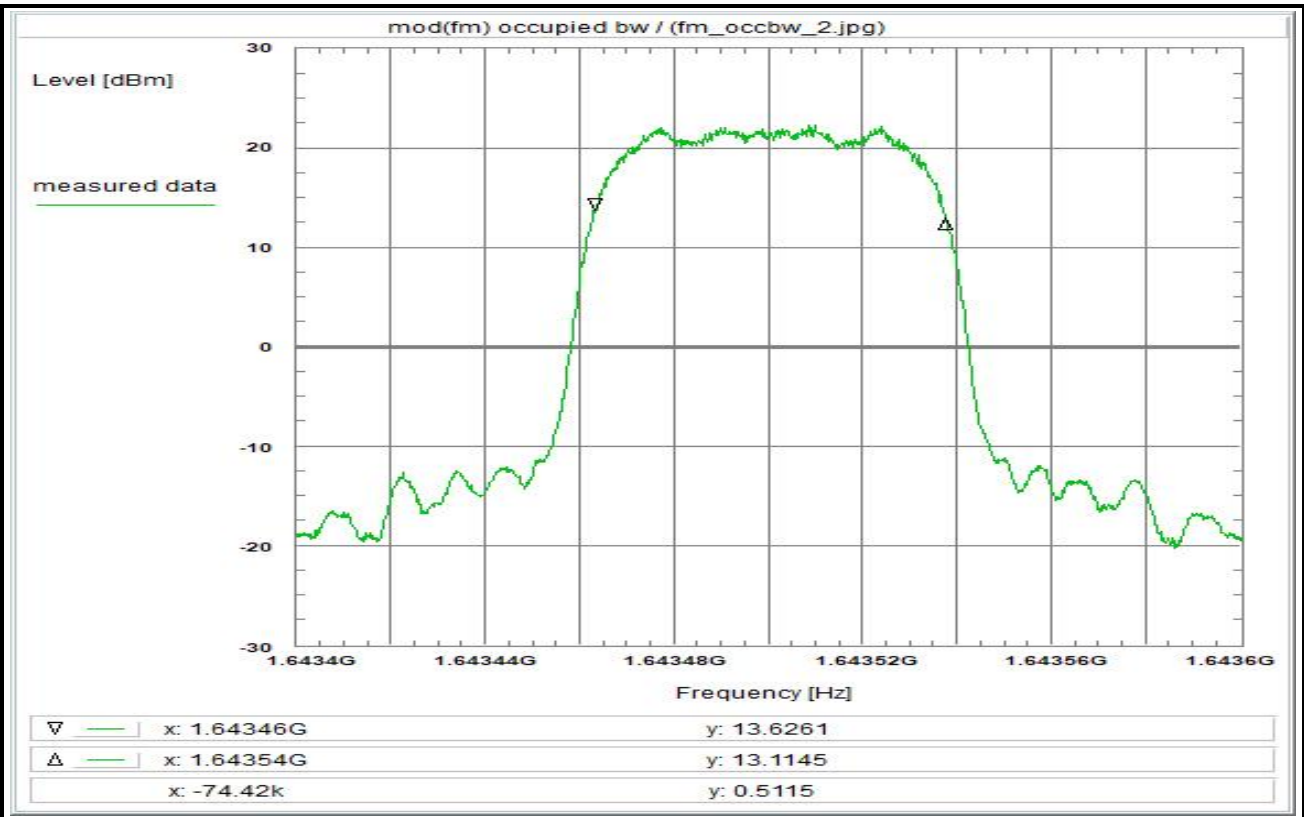
Environment condition:
Date & Time: Thu 28/Nov/2019 15:59:46
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.64345 GHz
Stop frequency: 1.64355 GHz
Center frequency: 1.6435 GHz
Frequency span: 100 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 37.1 kHz (delta marker)

Plot No. 16 (70)



Subclause: -/- Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R5T2X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

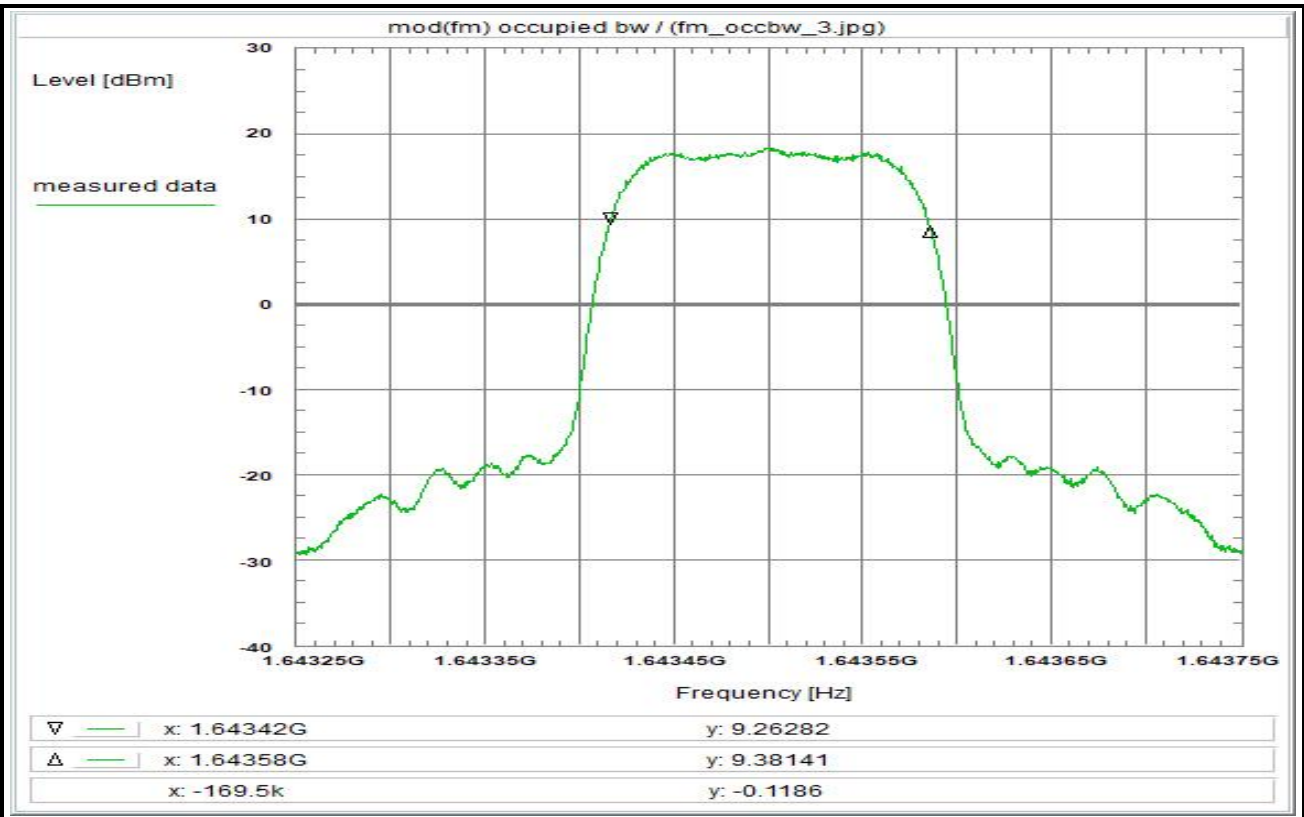
Environment condition:
Date & Time: Thu 28/Nov/2019 16:08:12
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.6434 GHz
Stop frequency: 1.6436 GHz
Center frequency: 1.6435 GHz
Frequency span: 200 kHz
Resolution-BW: 3 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor + 0.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 27.1 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 74.4 kHz (delta marker)

Plot No. 17 (70)



Subclause: -/-
Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R5T45X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

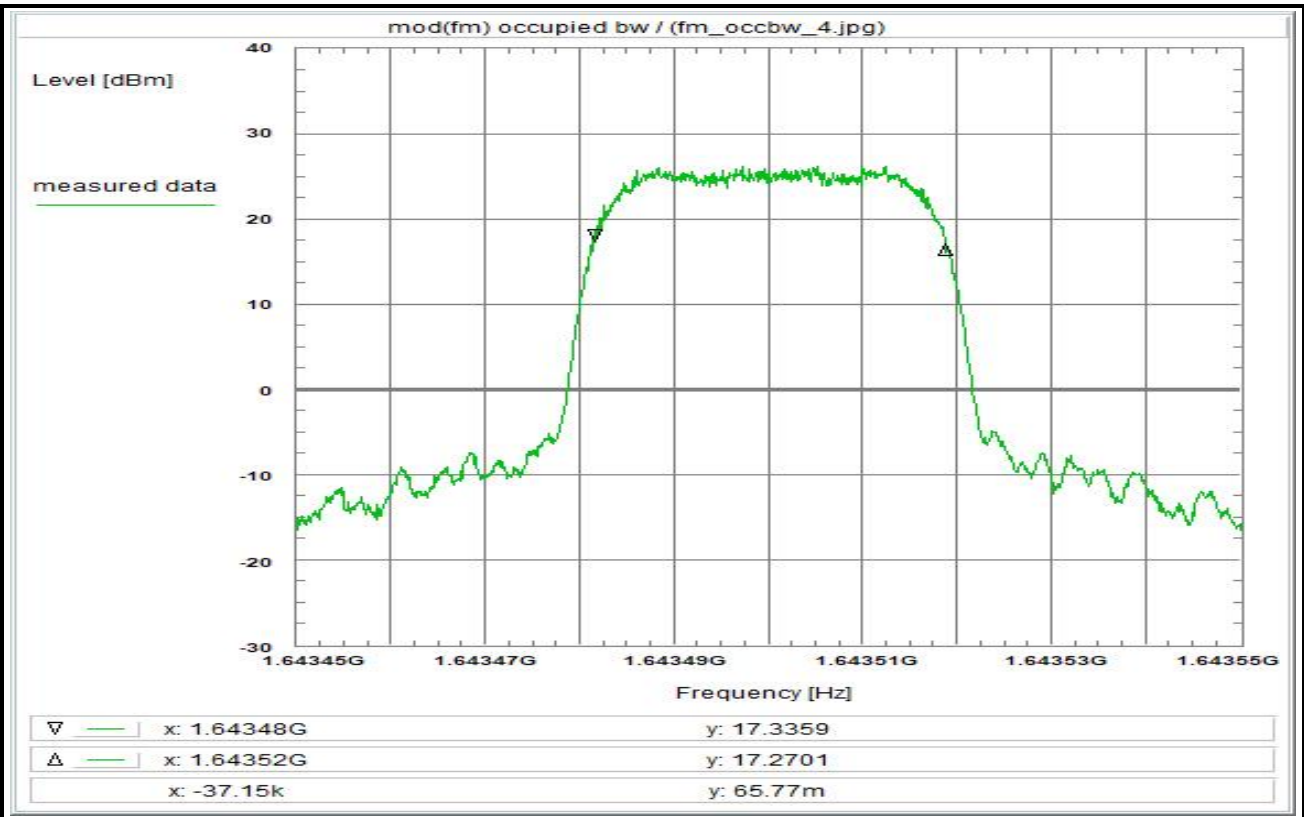
Environment condition:
Date & Time: Thu 28/Nov/2019 16:12:23
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.64325 GHz
Stop frequency: 1.64375 GHz
Center frequency: 1.6435 GHz
Frequency span: 500 kHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 3k) - 5.2 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 21.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 169.5 kHz (delta marker)
Measurement with 10 kHz resolution filter and RMS detector.

Plot No. 18 (70)



Subclause: -/- Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R20T1X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

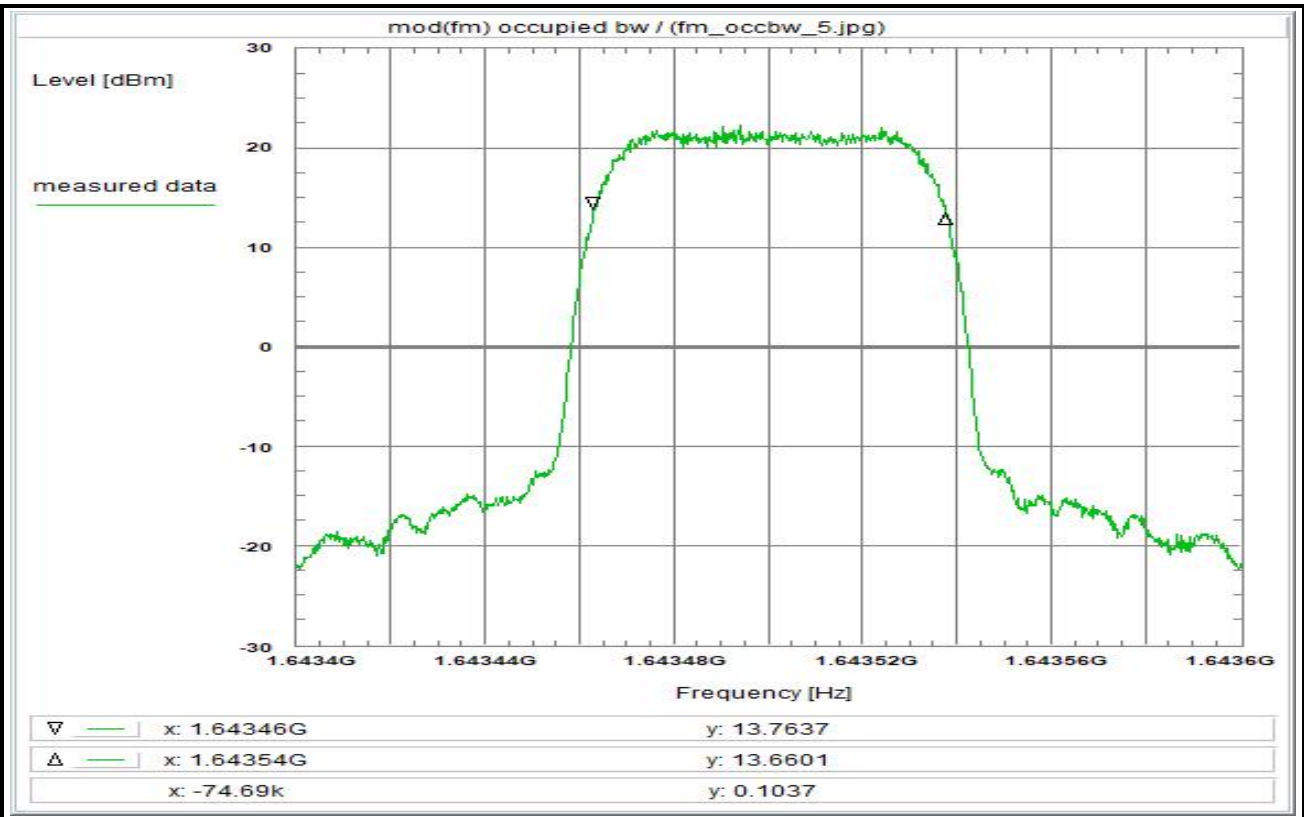
Environment condition:
Date & Time: Thu 28/Nov/2019 16:18:07
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.64345 GHz
Stop frequency: 1.64355 GHz
Center frequency: 1.6435 GHz
Frequency span: 100 kHz
Resolution-BW: 1 kHz
Video-BW: 3 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 37.2 kHz (delta marker)

Plot No. 19 (70)



Subclause: -/-
Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R20T2X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

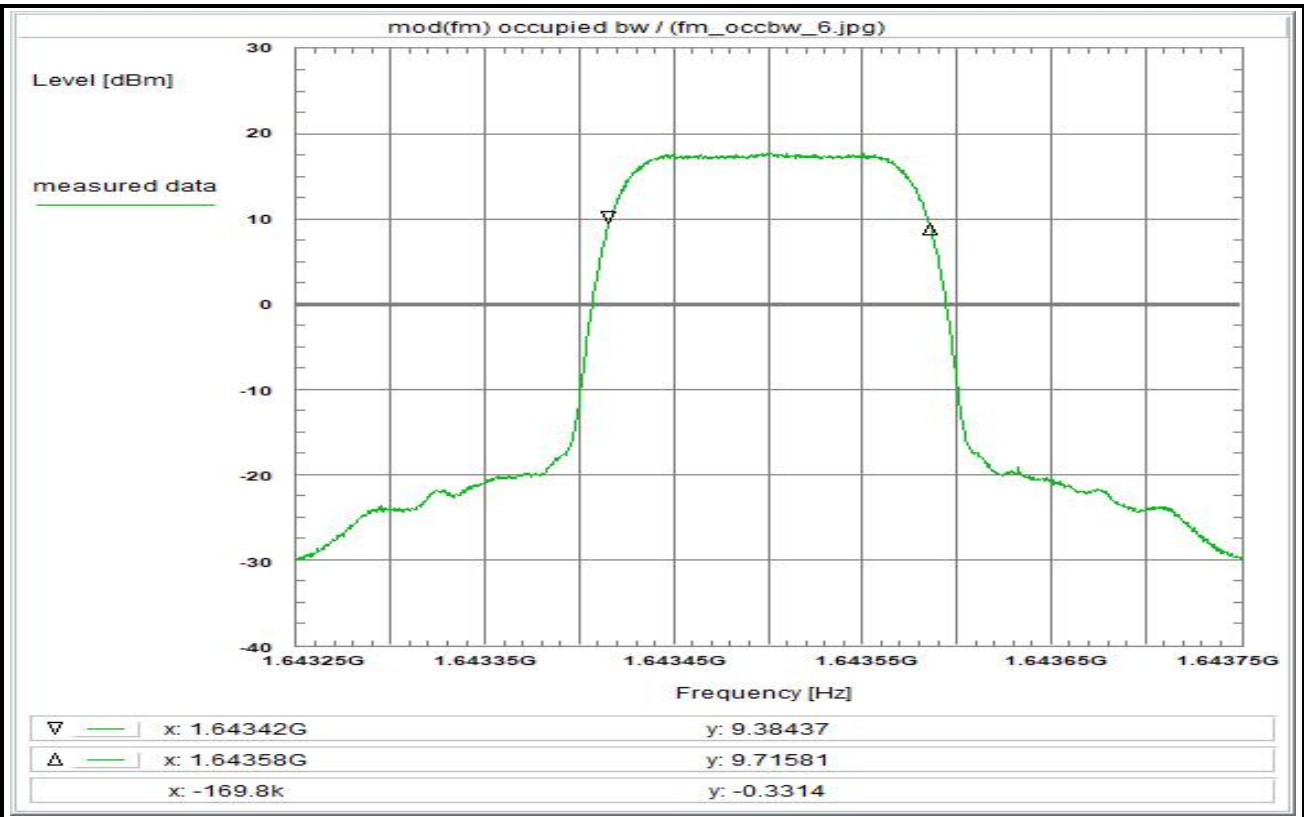
Environment condition:
Date & Time: Thu 28/Nov/2019 16:27:08
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.6434 GHz
Stop frequency: 1.6436 GHz
Center frequency: 1.6435 GHz
Frequency span: 200 kHz
Resolution-BW: 3 kHz
Video-BW: 3 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor + 0.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 27.1 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 74.7 kHz (delta marker)

Plot No. 20 (70)



Subclause: -/-
Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

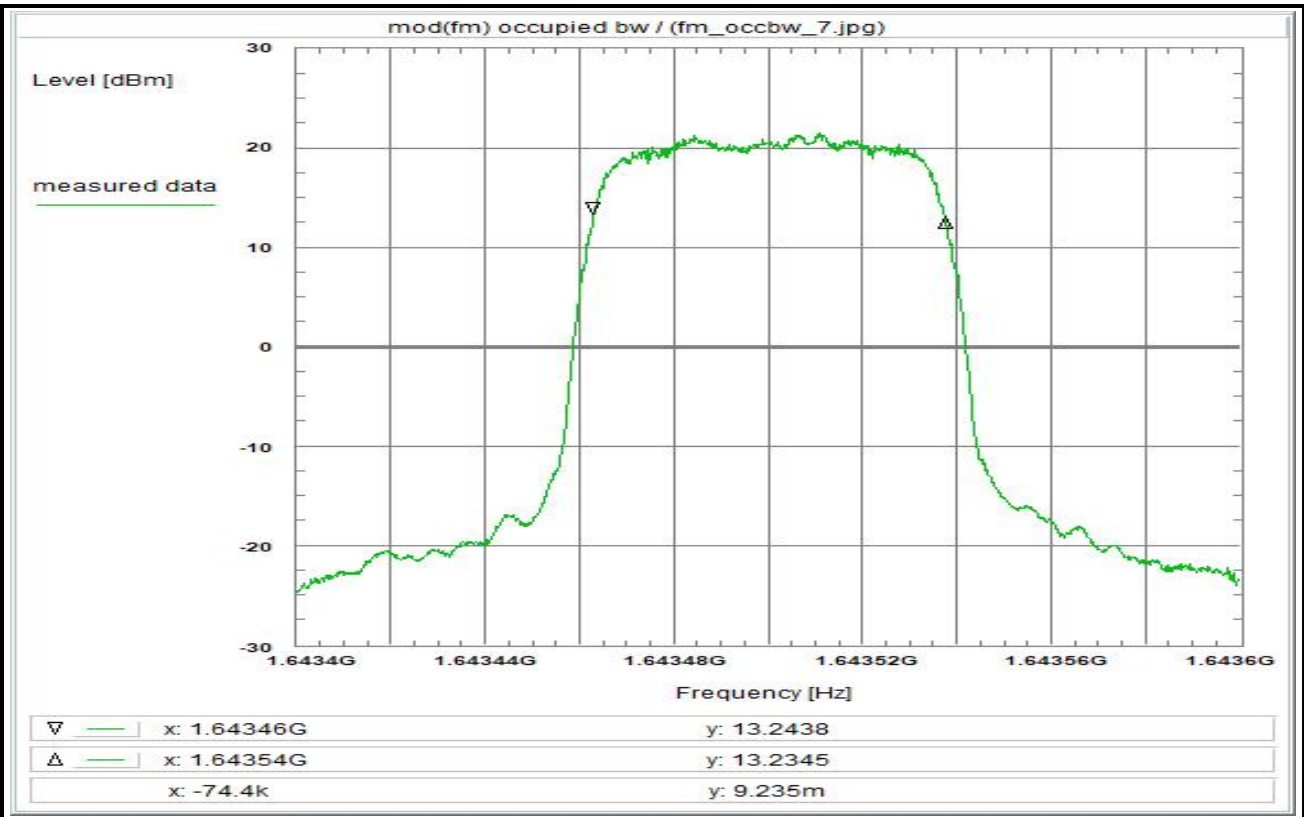
Environment condition:
Date & Time: Thu 28/Nov/2019 16:38:53
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.64325 GHz
Stop frequency: 1.64375 GHz
Center frequency: 1.6435 GHz
Frequency span: 500 kHz
Resolution-BW: 10 kHz
Video-BW: 1 kHz
Input attenuation: 20 dB
Trace-Mode: Average
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 3k) - 5.2 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 21.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 169.8 kHz (delta marker)

Plot No. 21 (70)



Subclause: -/- Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R5T2Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

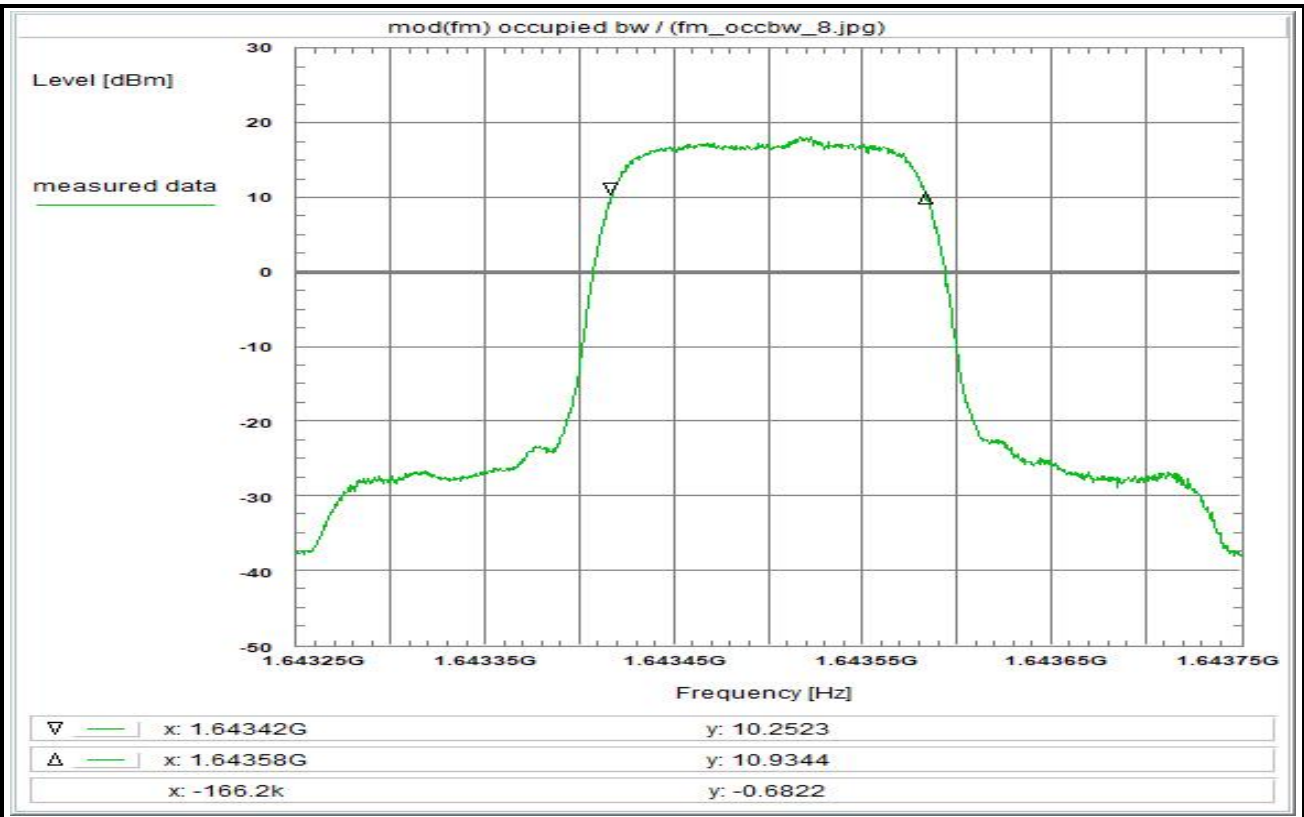
Environment condition:
Date & Time: Thu 28/Nov/2019 16:46:10
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.6434 GHz
Stop frequency: 1.6436 GHz
Center frequency: 1.6435 GHz
Frequency span: 200 kHz
Resolution-BW: 3 kHz
Video-BW: 300 Hz
Input attenuation: 20 dB
Trace-Mode: Average
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor + 0.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 27.1 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 74.4 kHz (delta marker)

Plot No. 22 (70)



Subclause: -/-
Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R5T45Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

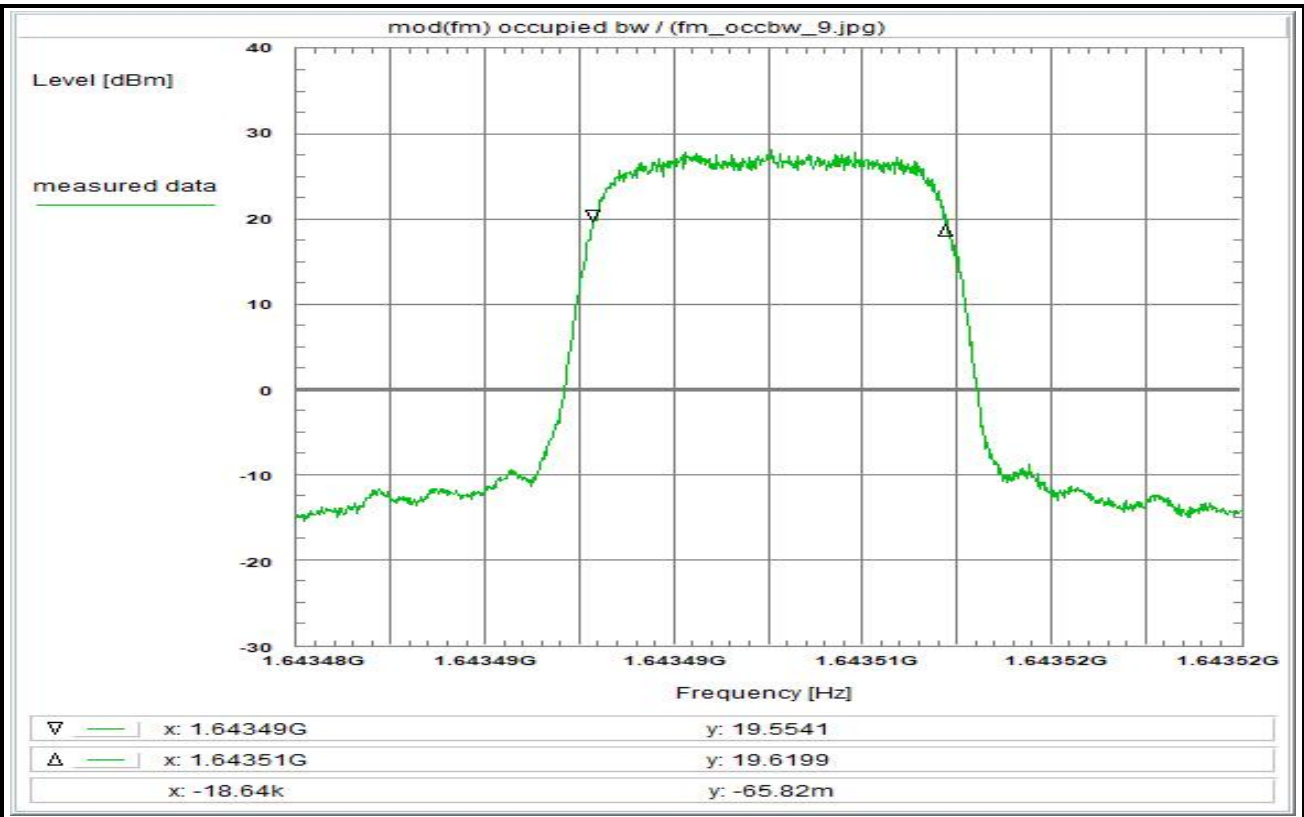
Environment condition:
Date & Time: Thu 28/Nov/2019 16:50:00
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.64325 GHz
Stop frequency: 1.64375 GHz
Center frequency: 1.6435 GHz
Frequency span: 500 kHz
Resolution-BW: 10 kHz
Video-BW: 1 kHz
Input attenuation: 20 dB
Trace-Mode: Average
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 3k) - 5.2 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 21.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 166.2 kHz (delta marker)

Plot No. 23 (70)



Subclause: -/-
Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R20T05Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

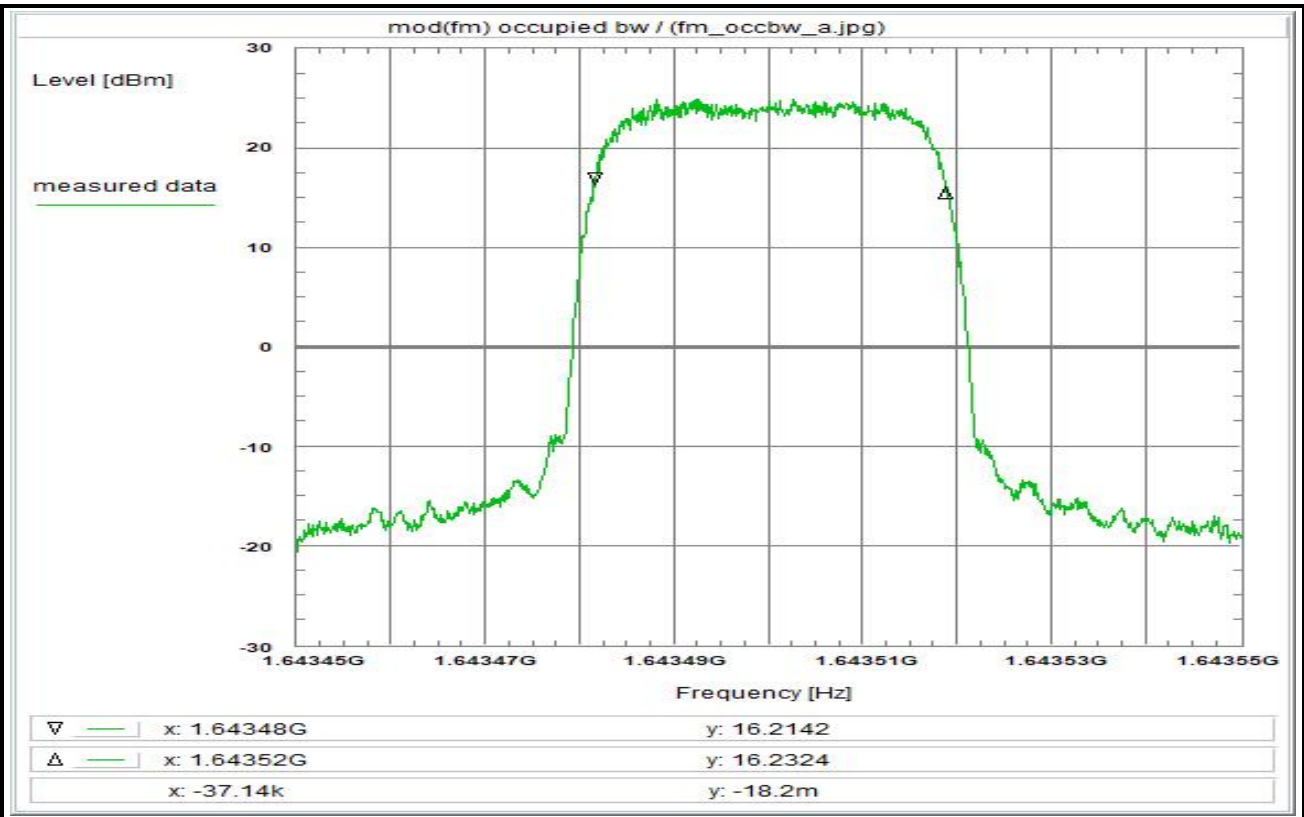
Environment condition:
Date & Time: Thu 28/Nov/2019 16:56:31
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.643475 GHz
Stop frequency: 1.643525 GHz
Center frequency: 1.6435 GHz
Frequency span: 50 kHz
Resolution-BW: 1 kHz
Video-BW: 100 Hz
Input attenuation: 20 dB
Trace-Mode: Average
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 18.6 kHz (delta marker)

Plot No. 24 (70)



Subclause: -/- Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R20T1Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

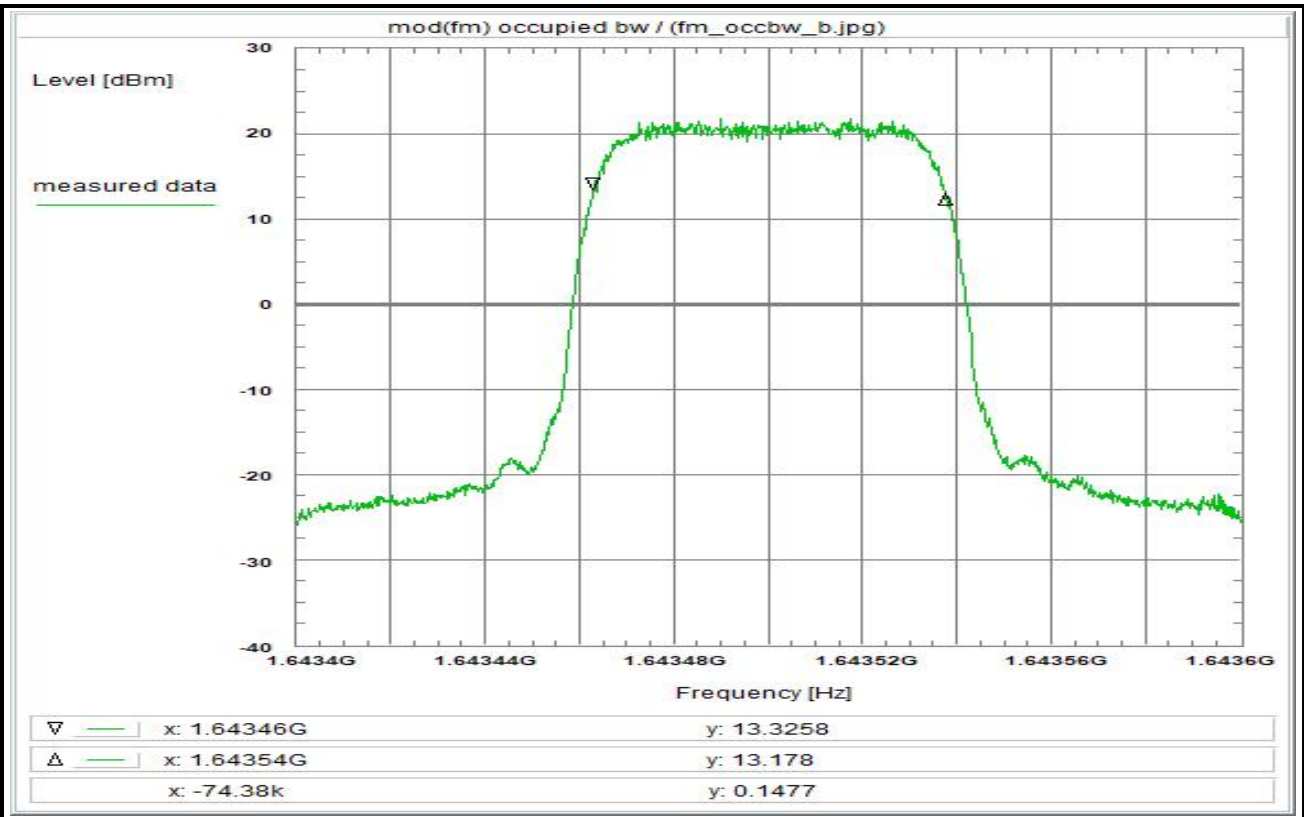
Environment condition:
Date & Time: Thu 28/Nov/2019 17:00:27
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.64345 GHz
Stop frequency: 1.64355 GHz
Center frequency: 1.6435 GHz
Frequency span: 100 kHz
Resolution-BW: 1 kHz
Video-BW: 100 Hz
Input attenuation: 20 dB
Trace-Mode: Average
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 37.1 kHz (delta marker)

Plot No. 25 (70)



Subclause: -/- Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R20T2Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

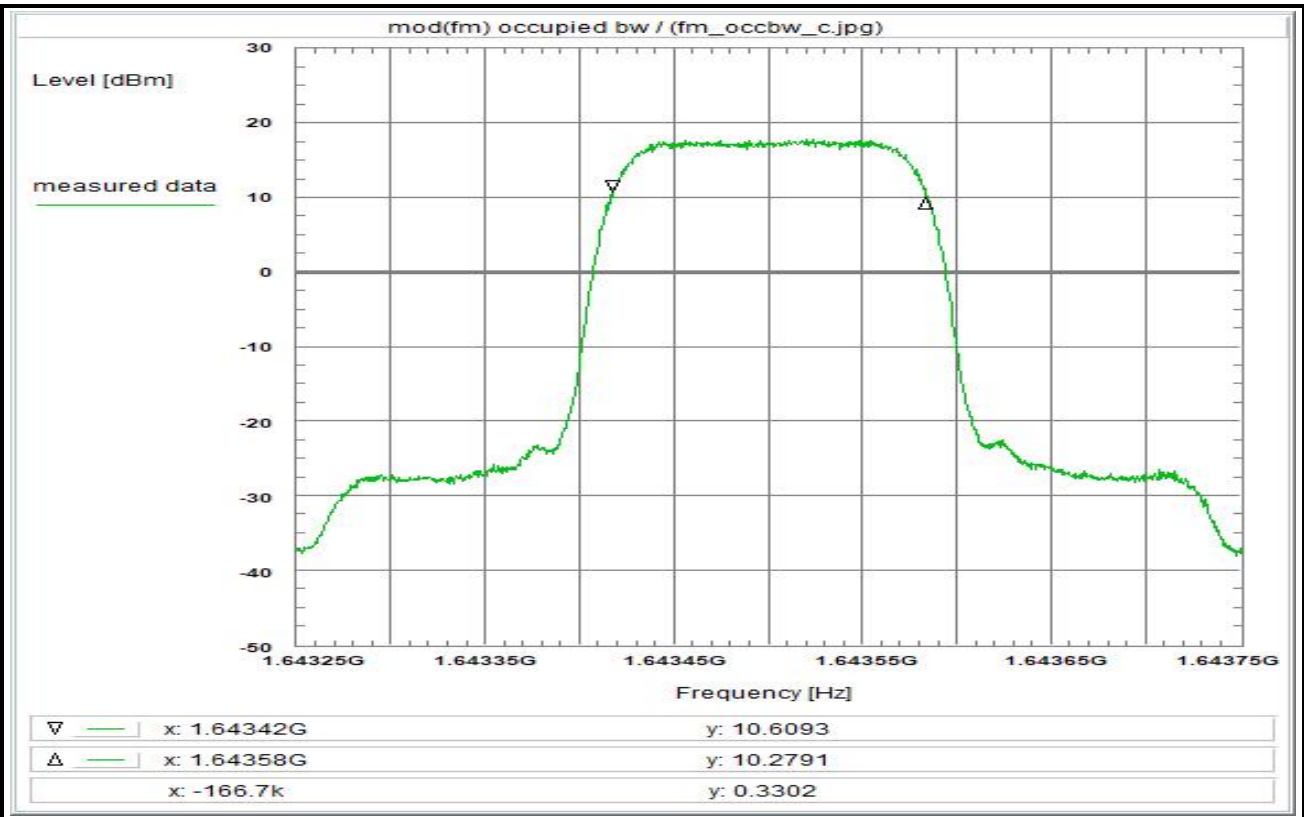
Environment condition:
Date & Time: Thu 28/Nov/2019 17:04:22
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.6434 GHz
Stop frequency: 1.6436 GHz
Center frequency: 1.6435 GHz
Frequency span: 200 kHz
Resolution-BW: 3 kHz
Video-BW: 300 Hz
Input attenuation: 20 dB
Trace-Mode: Average
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor + 0.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 27.1 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 74.4 kHz (delta marker)

Plot No. 26 (70)



Subclause: -/-
Function test
Modulated rf-carrier in the middle of the band (fm)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

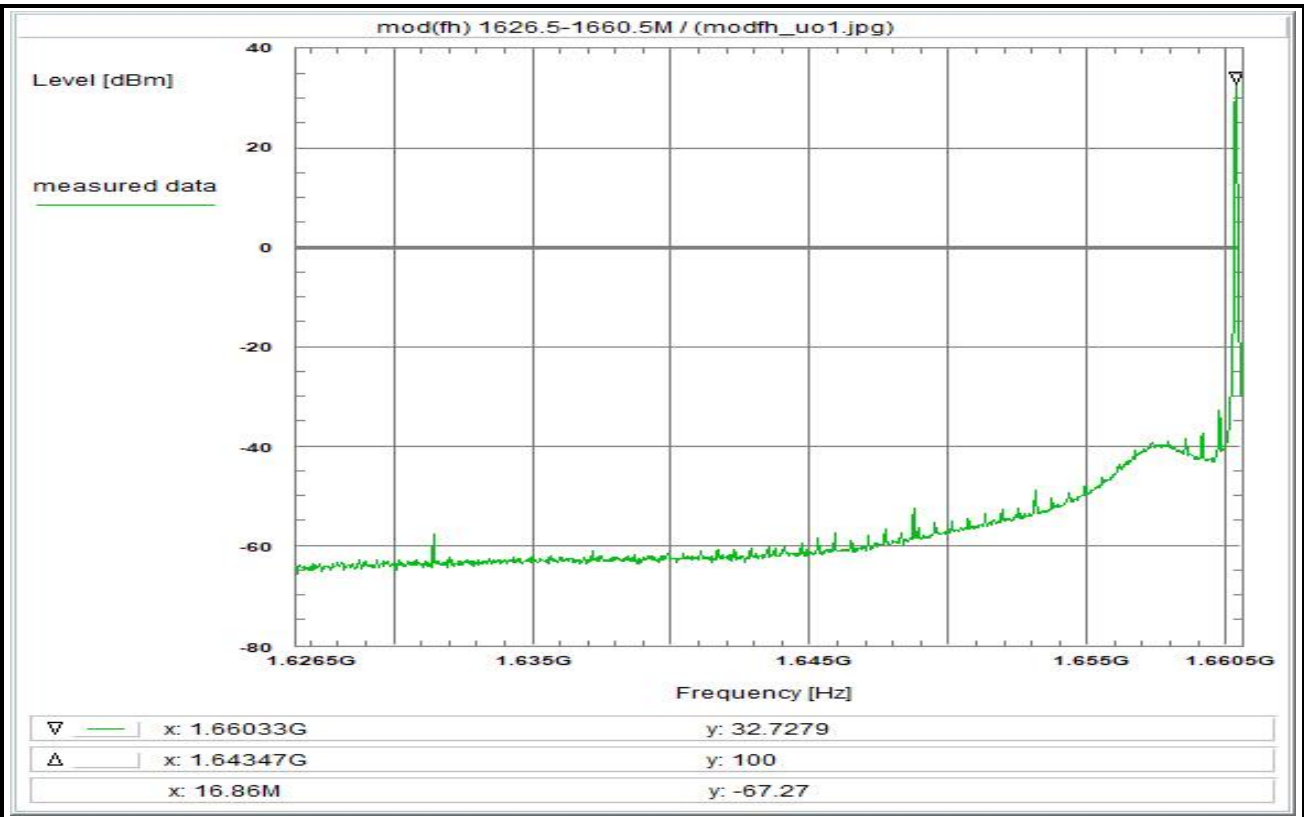
Environment condition:
Date & Time: Thu 28/Nov/2019 17:09:56
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.64325 GHz
Stop frequency: 1.64375 GHz
Center frequency: 1.6435 GHz
Frequency span: 500 kHz
Resolution-BW: 10 kHz
Video-BW: 1 kHz
Input attenuation: 20 dB
Trace-Mode: Average
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 3k) - 5.2 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 21.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fm:
The measured value is about 166.7 kHz (delta marker)

Plot No. 27 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Measurement within the band

Limit:
no limits defined

This test serves to verify the general function of the EUT and for orientation regarding to the spurious emissions which are expected within the band, furthermore for comparison of the actual power with the rated value at modulated carrier adjusted as close to the upper edge of the operating frequency band.

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions modulation scheme R20T05Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

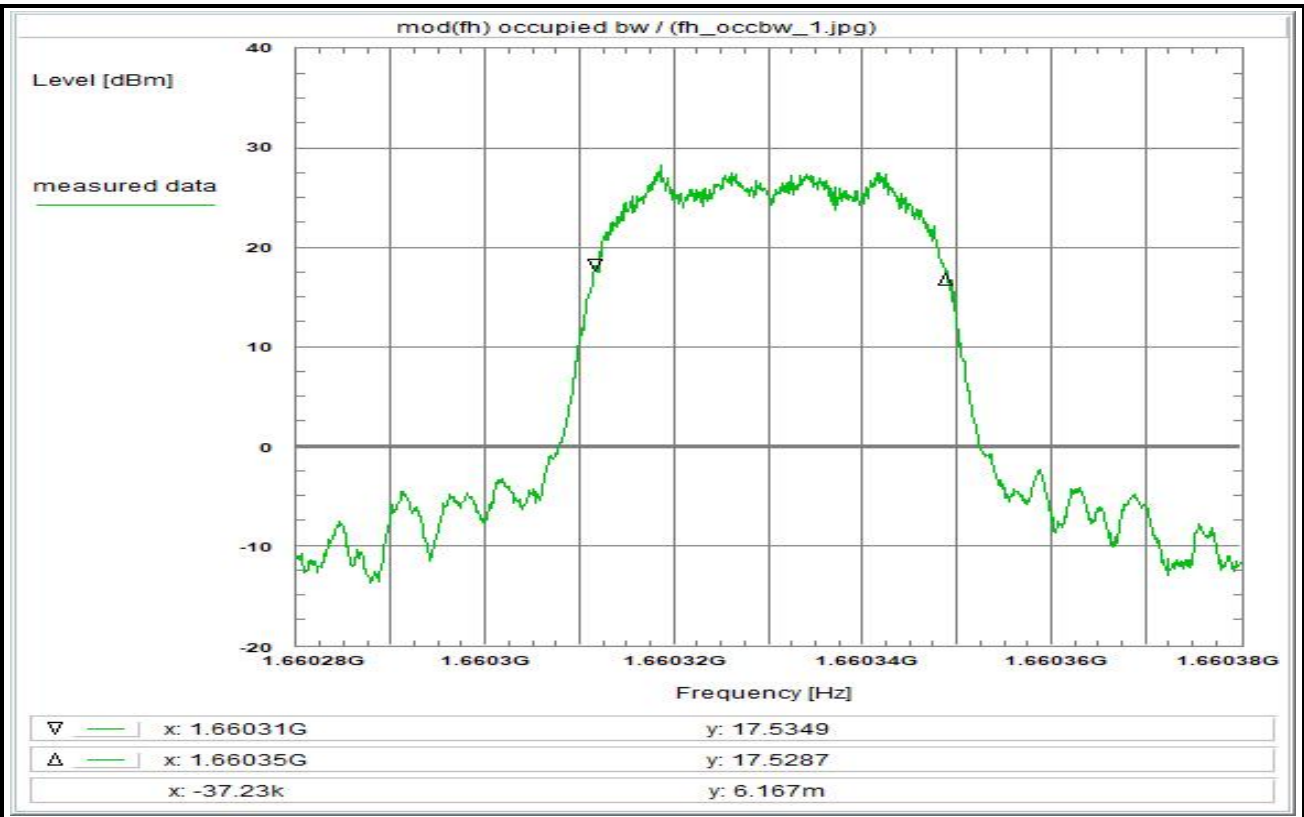
Environment condition:
Date & Time: Thu 28/Nov/2019 11:46:50
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.6265 GHz
Stop frequency: 1.6605 GHz
Center frequency: 1.6435 GHz
Frequency span: 34 MHz
Resolution-BW: 30 kHz
Video-BW: 100 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor + 0.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
TOTAL CORRECTION: + 27.1 dB

Remarks:
Test of general function of the EUT and measurement for orientation.

Plot No. 28 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R5T1X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

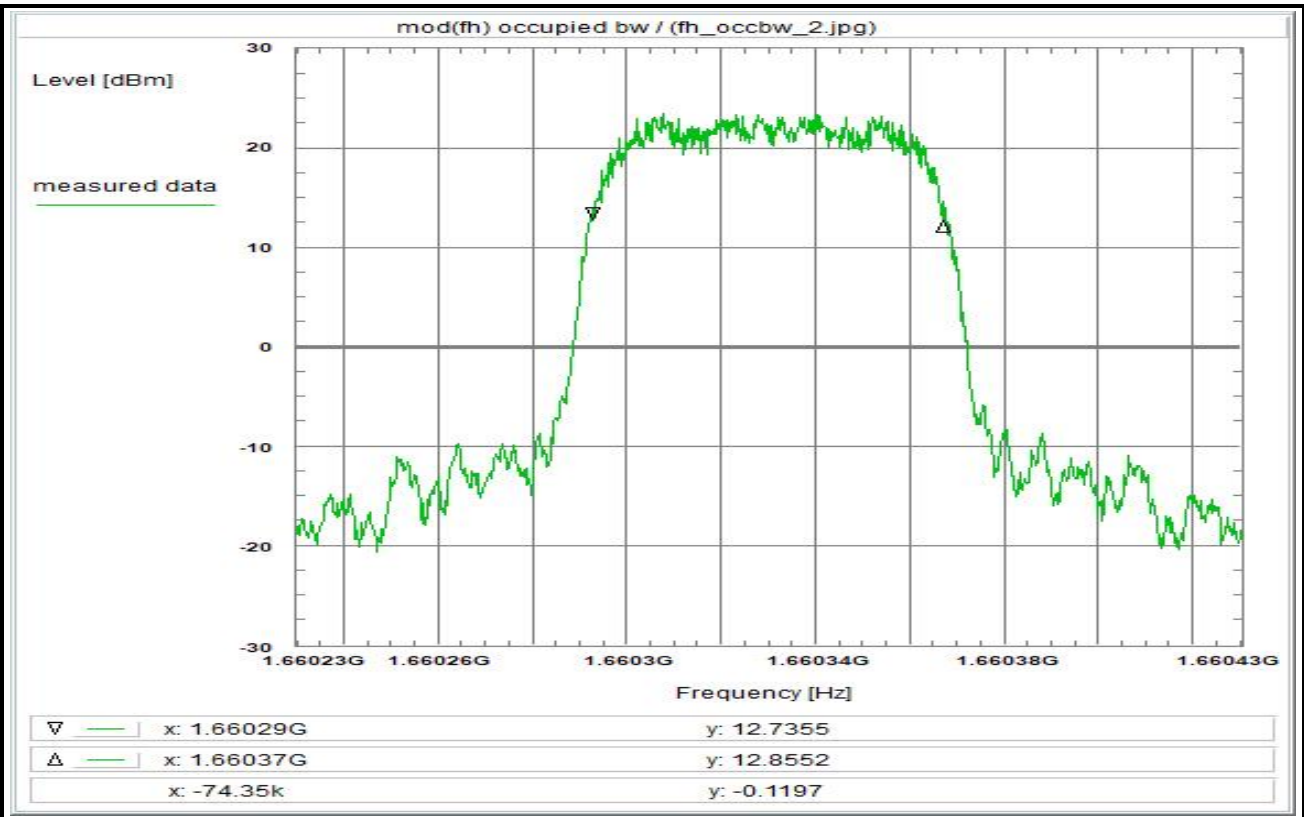
Environment condition:
Date & Time: Fri 29/Nov/2019 10:21:26
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.66028 GHz
Stop frequency: 1.66038 GHz
Center frequency: 1.66033 GHz
Frequency span: 100 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 37.2 kHz (delta marker)

Plot No. 29 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R5T2X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

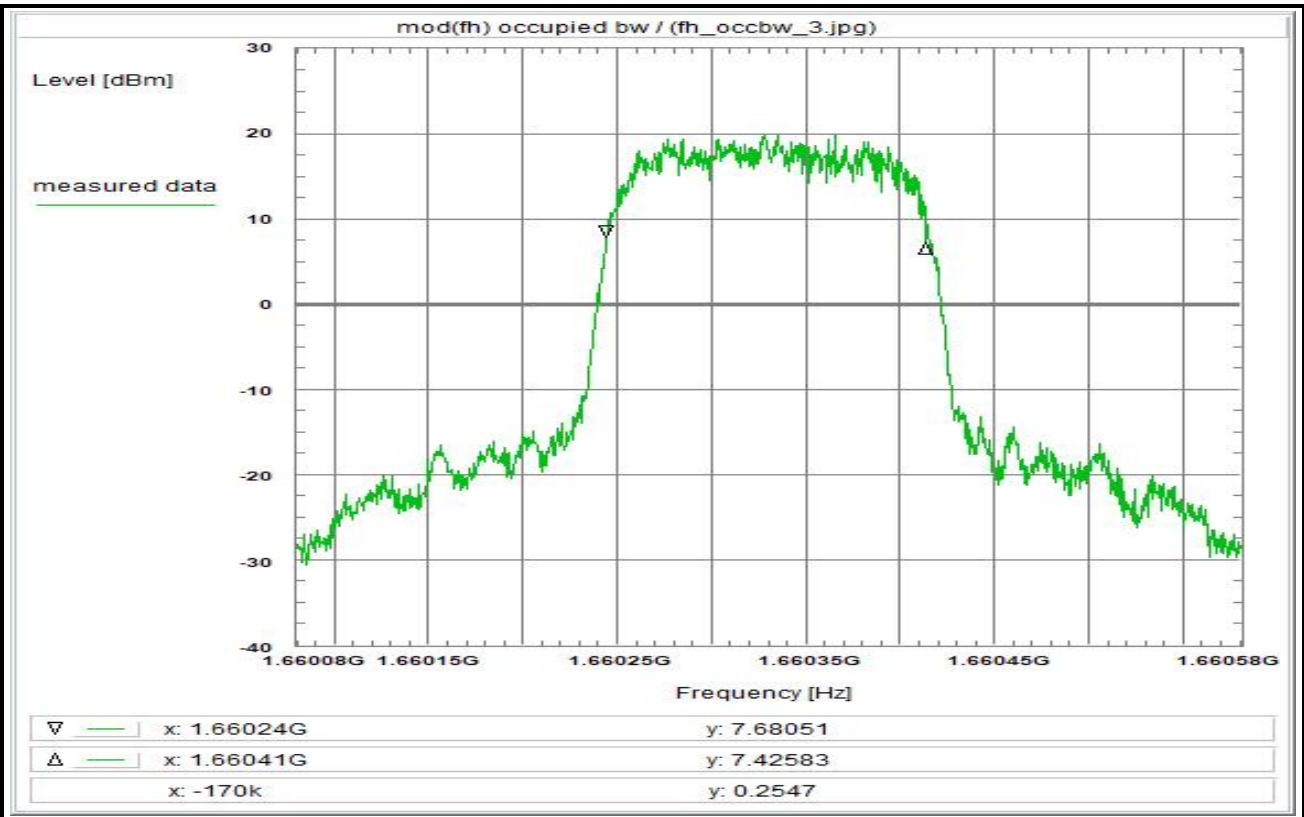
Environment condition:
Date & Time: Fri 29/Nov/2019 10:34:04
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.66023 GHz
Stop frequency: 1.66043 GHz
Center frequency: 1.66033 GHz
Frequency span: 200 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 74.4 kHz (delta marker)

Plot No. 30 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R5T45X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

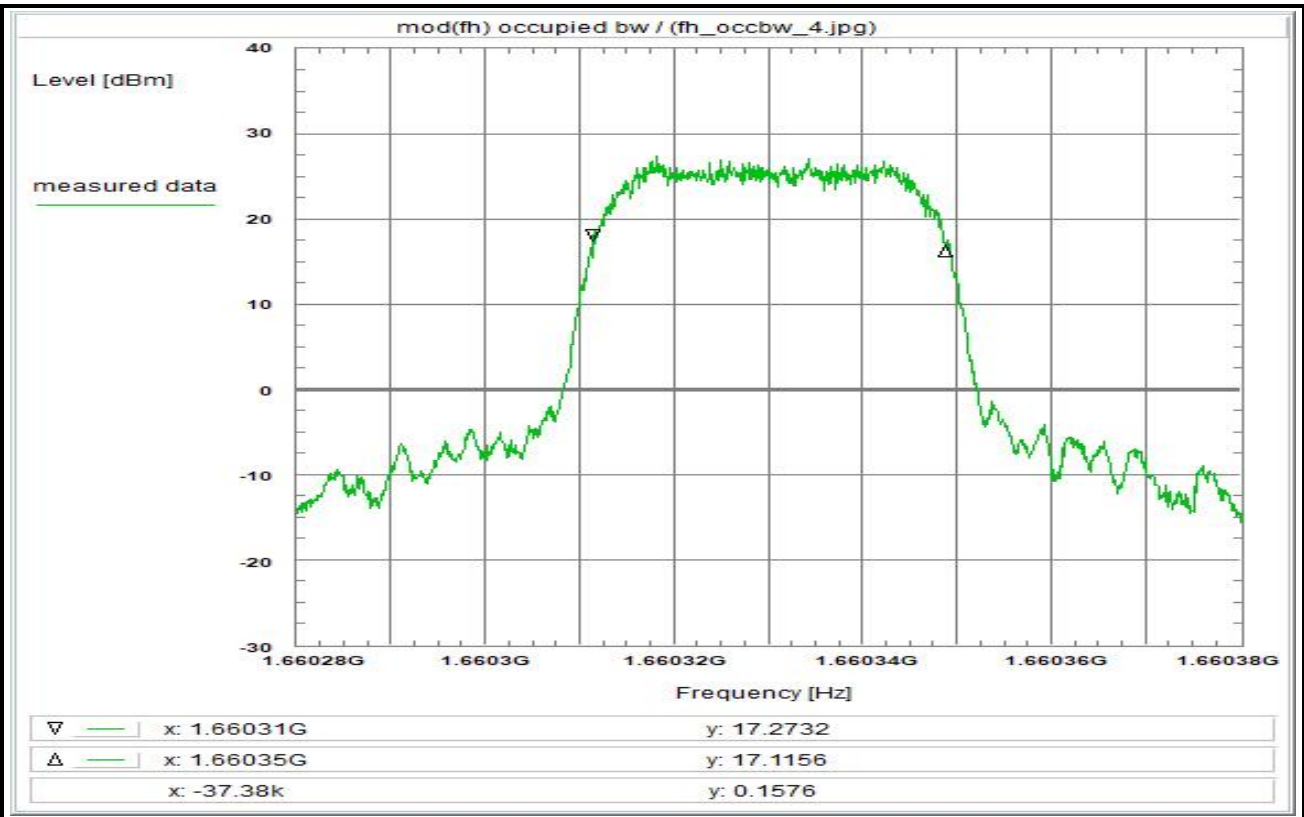
Environment condition:
Date & Time: Fri 29/Nov/2019 10:39:02
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.66008 GHz
Stop frequency: 1.66058 GHz
Center frequency: 1.66033 GHz
Frequency span: 500 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 169.5 kHz (delta marker)

Plot No. 31 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R20T1X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

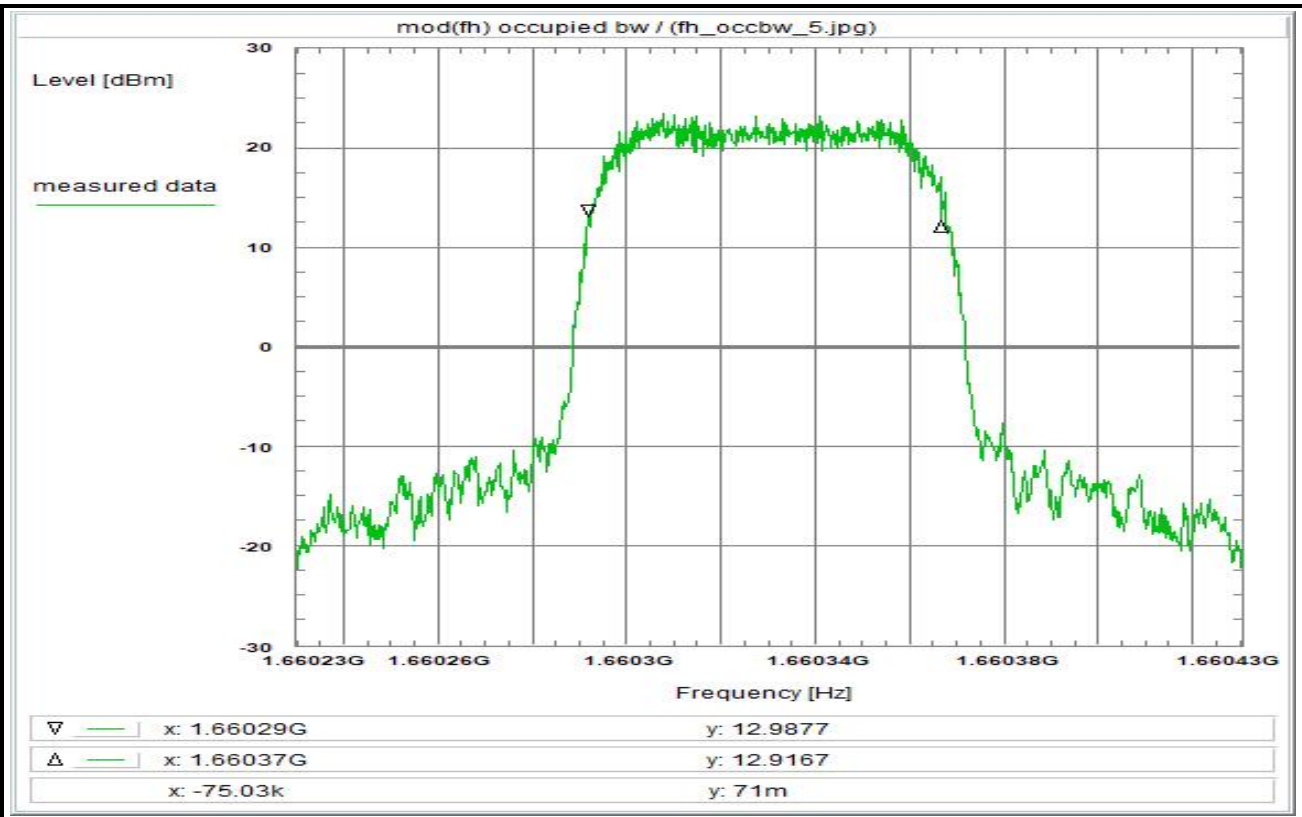
Environment condition:
Date & Time: Fri 29/Nov/2019 10:43:48
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.66028 GHz
Stop frequency: 1.66038 GHz
Center frequency: 1.66033 GHz
Frequency span: 100 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 37.3 kHz (delta marker)

Plot No. 32 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R20T2X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

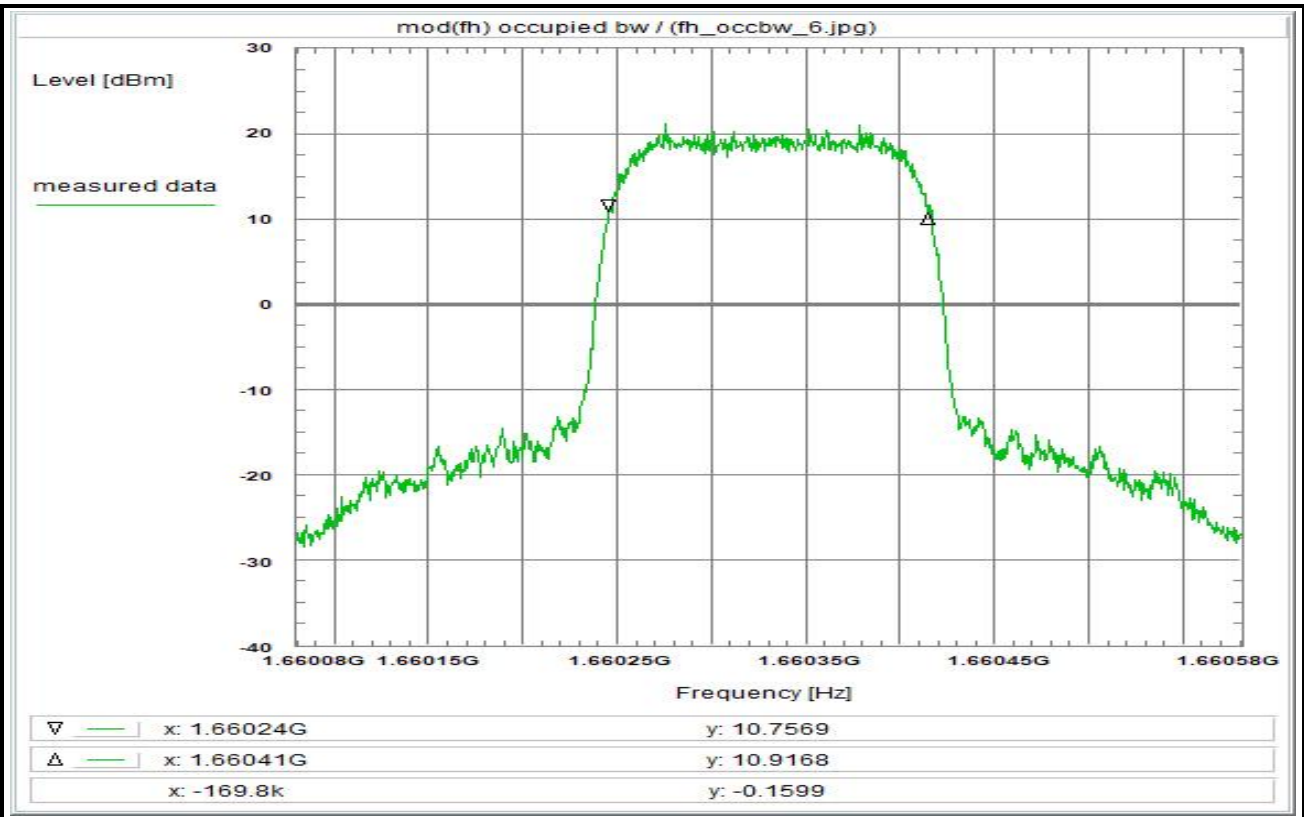
Environment condition:
Date & Time: Fri 29/Nov/2019 10:48:06
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.66023 GHz
Stop frequency: 1.66043 GHz
Center frequency: 1.66033 GHz
Frequency span: 200 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 74.8 kHz (delta marker)

Plot No. 33 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

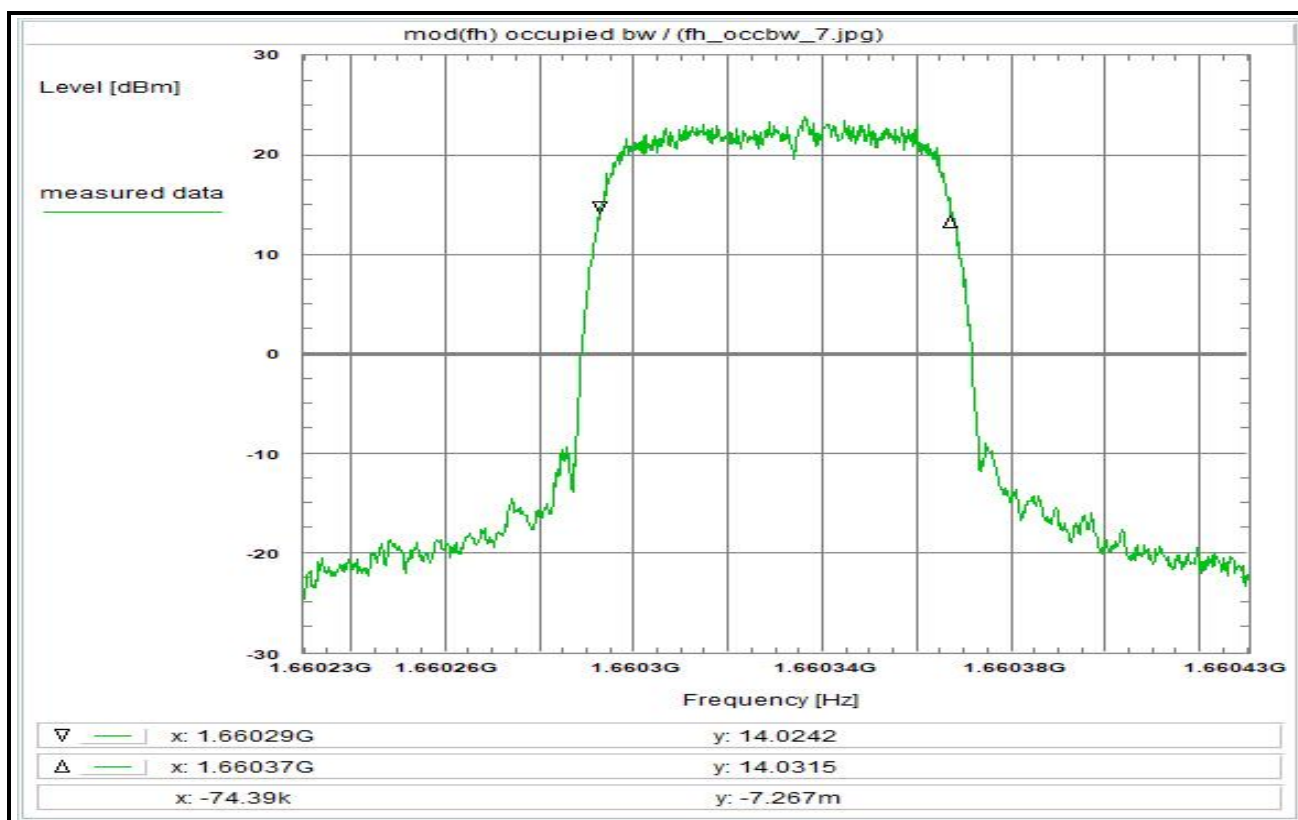
Environment condition:
Date & Time: Fri 29/Nov/2019 10:54:16
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.66008 GHz
Stop frequency: 1.66058 GHz
Center frequency: 1.66033 GHz
Frequency span: 500 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 169.7 kHz (delta marker)

Plot No. 34 (70)



Subclause: -/- Function test
 Modulated rf-carrier at the upper edge of the band (fh)
 Determination of the 'occupied bandwidth'

Limit:

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
 modulation scheme R5T2Q

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 11:05:36
 Location: CTC advanced GmbH, Laboratory RCE-Sat
 Temperature: 22 °C
 Humidity: 45 %
 Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.66023 GHz
 Stop frequency: 1.66043 GHz
 Center frequency: 1.66033 GHz
 Frequency span: 200 kHz
 Resolution-BW: 1 kHz
 Video-BW: 10 kHz
 Input attenuation: 20 dB
 Trace-Mode: Max-Hold
 Detector-Mode: AVG

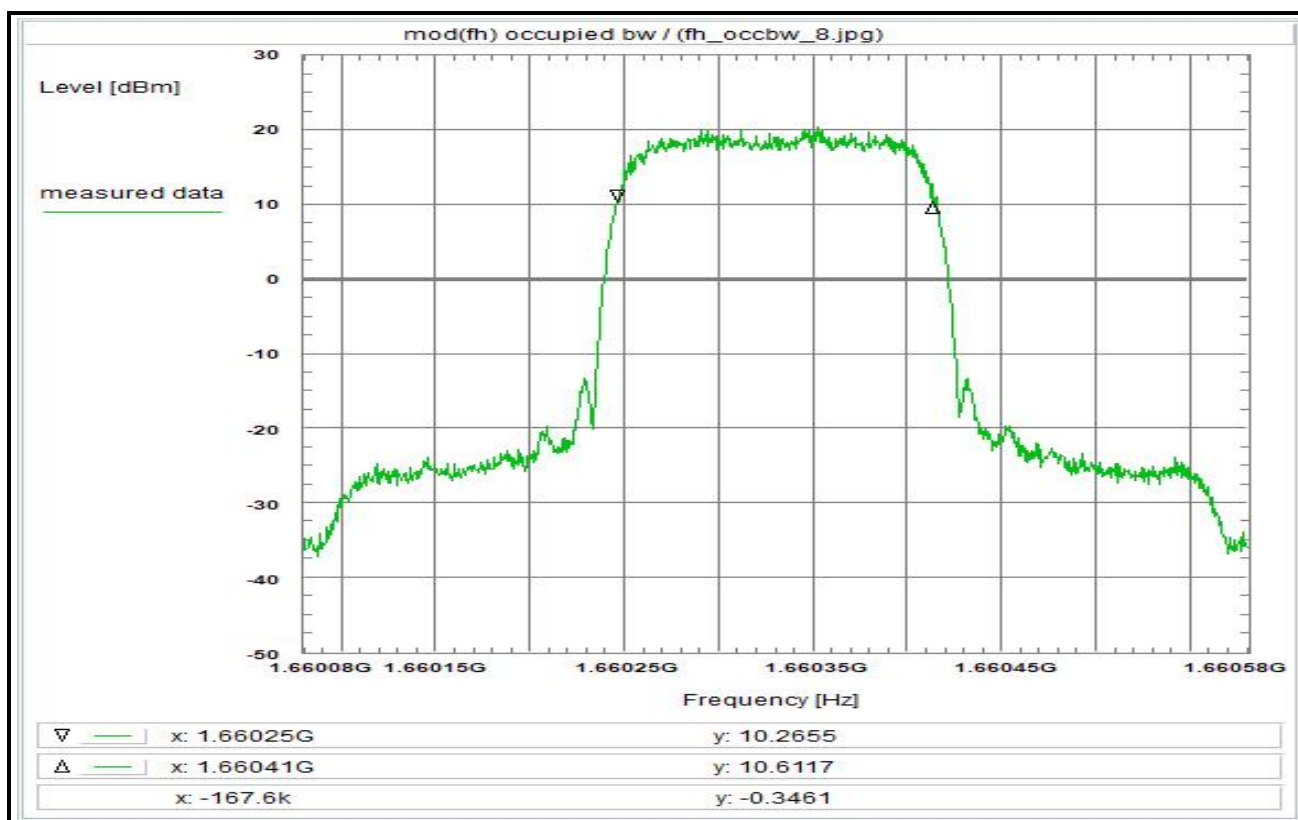
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (1k -> 3k)	+ 4.8 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 31.9 dB

Remarks:Determination of the 'occupied bandwidth' at fh:

The measured value is about 74.5 kHz (delta marker)

Plot No. 35 (70)



Subclause: -/- Function test
 Modulated rf-carrier at the upper edge of the band (fh)
 Determination of the 'occupied bandwidth'

Limit:

The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
 modulation scheme R5T45Q

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 11:13:29
 Location: CTC advanced GmbH, Laboratory RCE-Sat
 Temperature: 22 °C
 Humidity: 45 %
 Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.66008 GHz
 Stop frequency: 1.66058 GHz
 Center frequency: 1.66033 GHz
 Frequency span: 500 kHz
 Resolution-BW: 1 kHz
 Video-BW: 10 kHz
 Input attenuation: 20 dB
 Trace-Mode: Max-Hold
 Detector-Mode: AVG

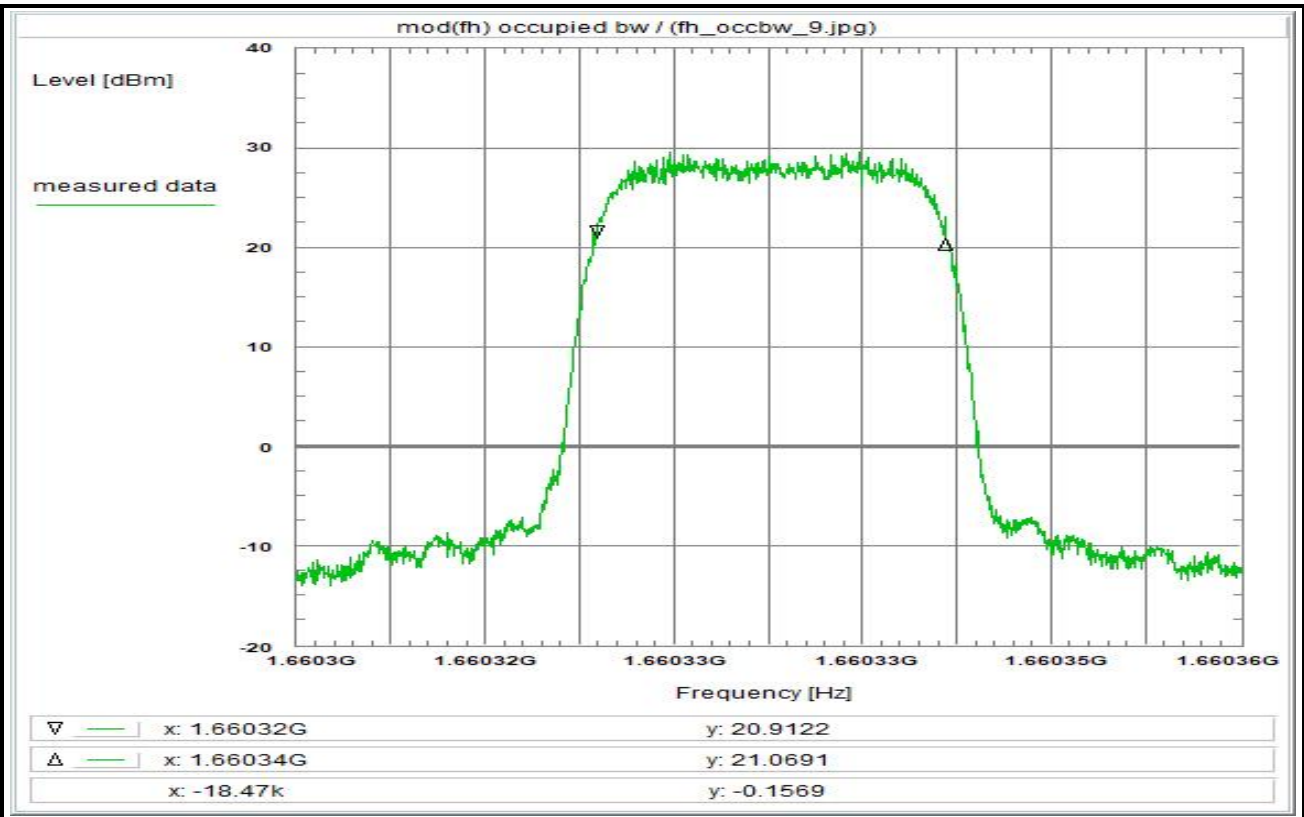
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (1k -> 3k)	+ 4.8 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 31.9 dB

Remarks:Determination of the 'occupied bandwidth' at fh:

The measured value is about 166.6 kHz (delta marker)

Plot No. 36 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R20T05Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

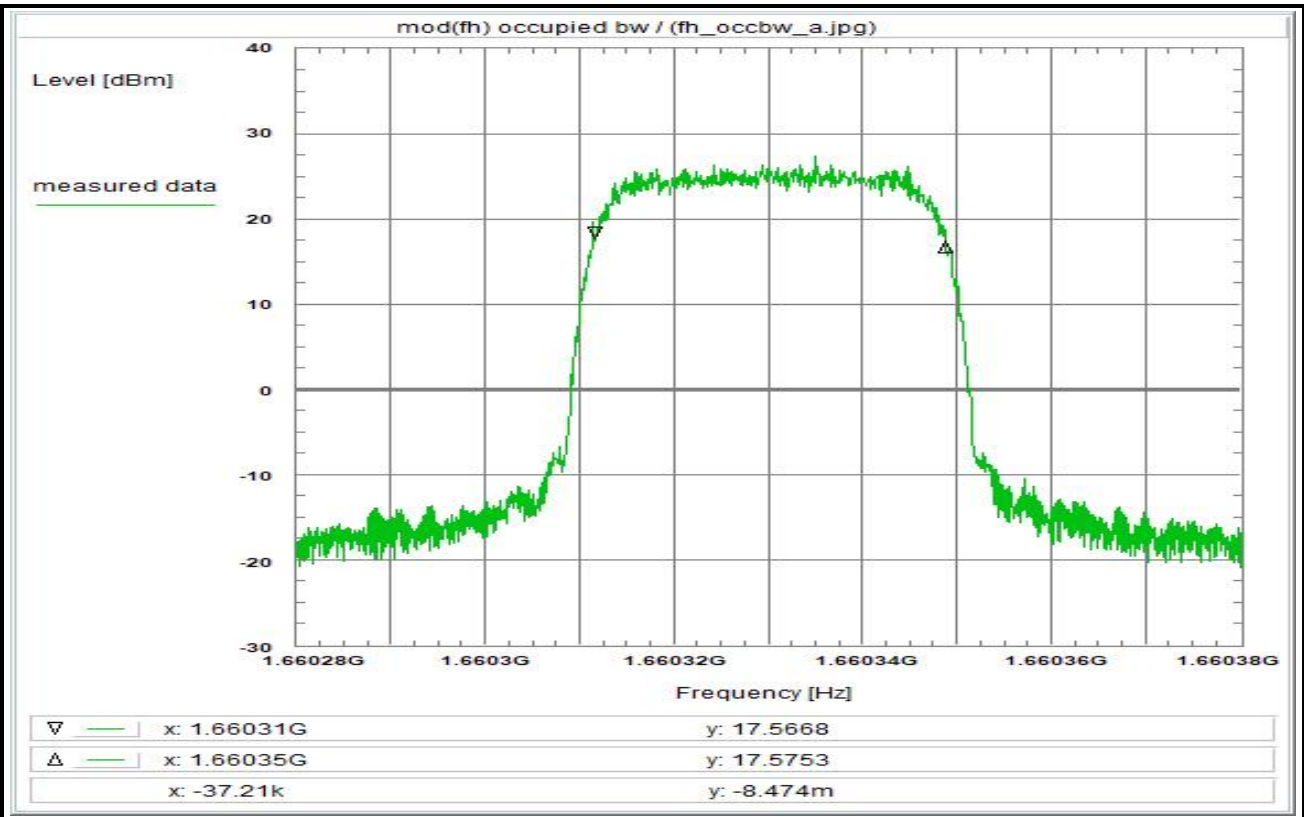
Environment condition:
Date & Time: Fri 29/Nov/2019 11:18:27
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.660305 GHz
Stop frequency: 1.660355 GHz
Center frequency: 1.66033 GHz
Frequency span: 50 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 18.5 kHz (delta marker)

Plot No. 37 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R20T1Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

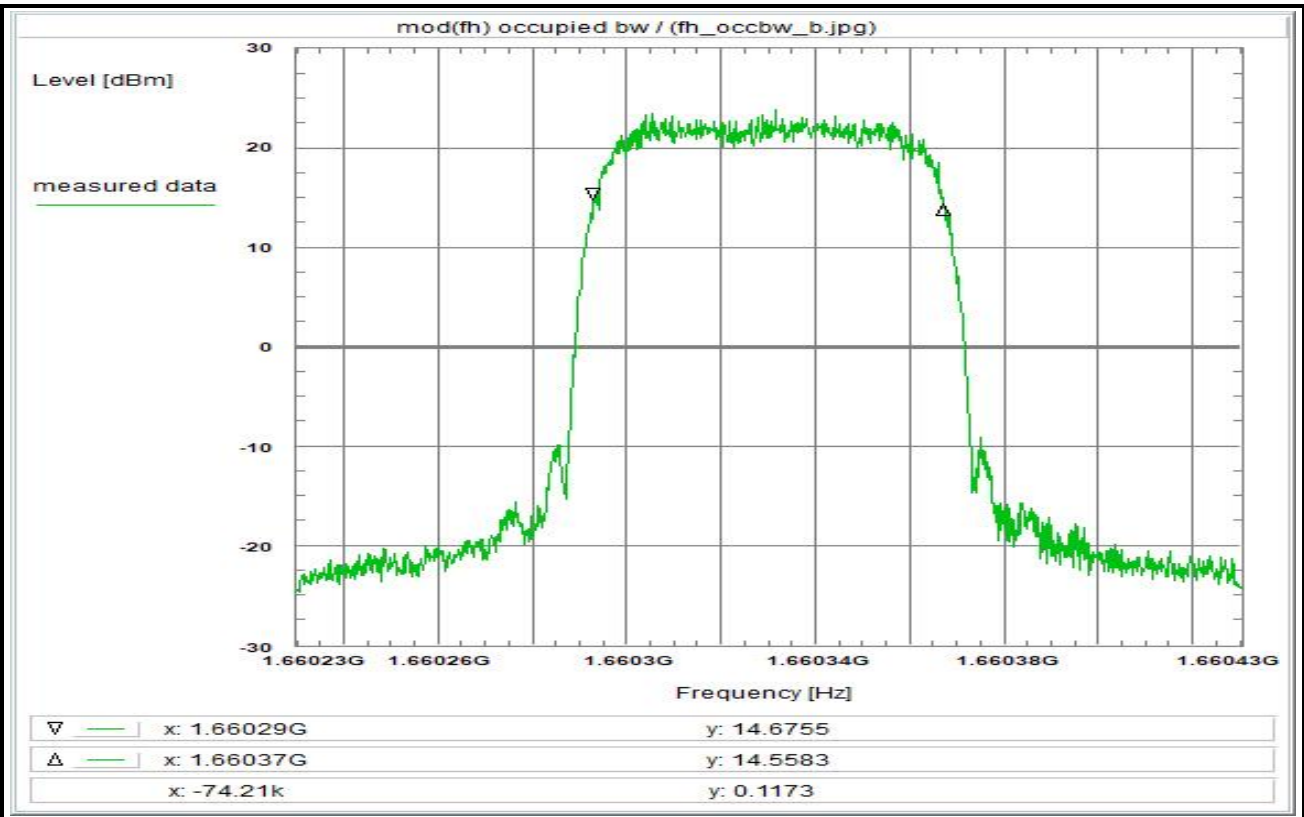
Environment condition:
Date & Time: Fri 29/Nov/2019 11:23:41
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.66028 GHz
Stop frequency: 1.66038 GHz
Center frequency: 1.66033 GHz
Frequency span: 100 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 37.1 kHz (delta marker)

Plot No. 38 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R20T2Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

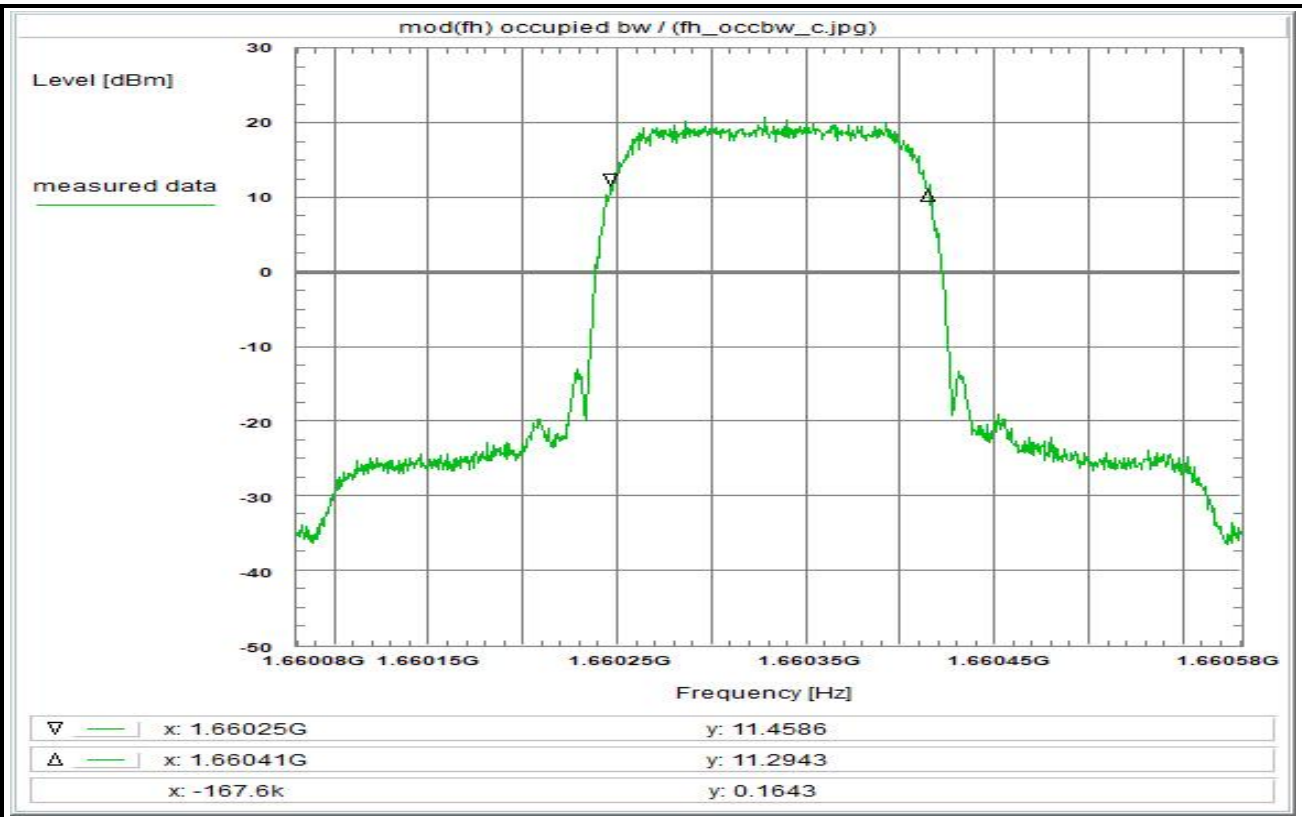
Environment condition:
Date & Time: Fri 29/Nov/2019 11:31:07
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.66023 GHz
Stop frequency: 1.66043 GHz
Center frequency: 1.66033 GHz
Frequency span: 200 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 74.2 kHz (delta marker)

Plot No. 39 (70)



Subclause: -/- Function test
Modulated rf-carrier at the upper edge of the band (fh)
Determination of the 'occupied bandwidth'

Limit:
The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 % of the total mean power radiated by a given emission. (see §2.1049).

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45Q

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

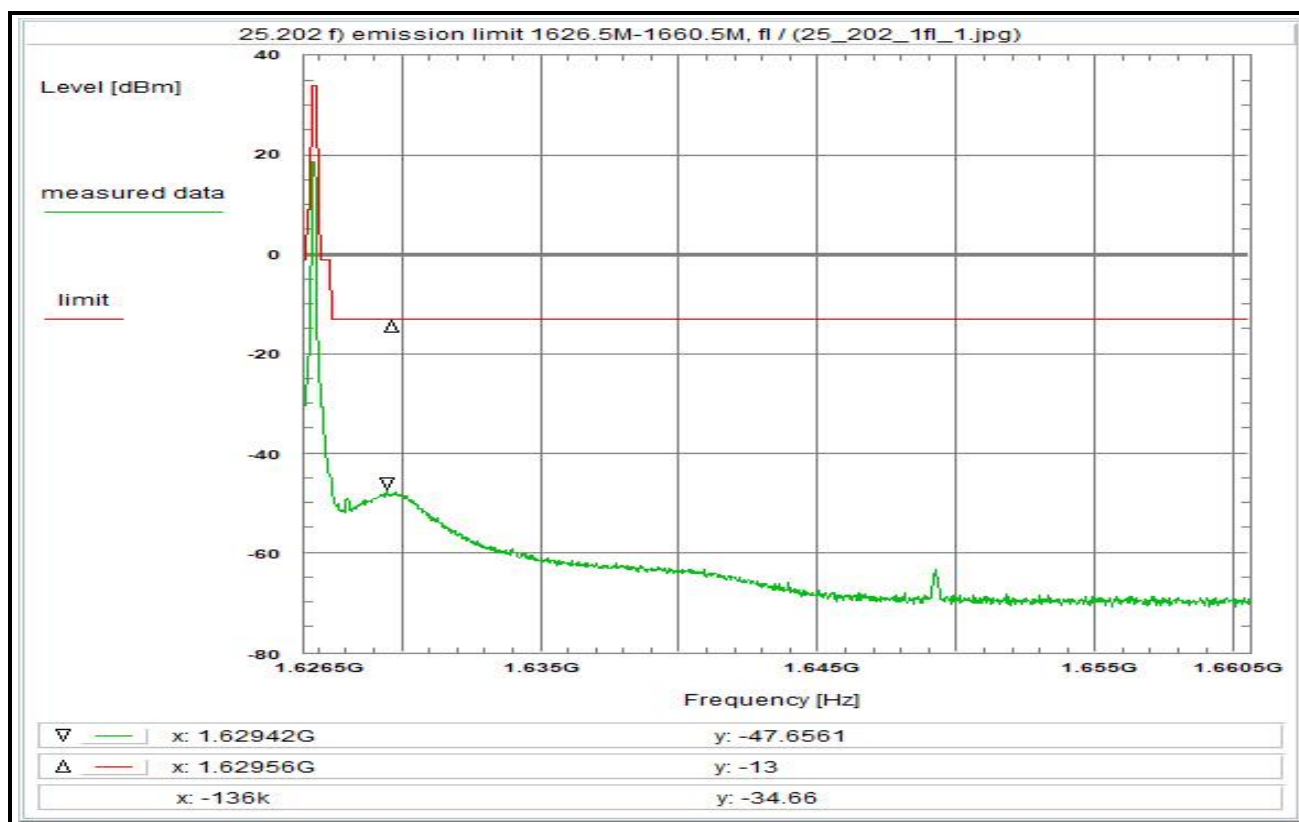
Environment condition:
Date & Time: Fri 29/Nov/2019 11:36:34
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 1.66008 GHz
Stop frequency: 1.66058 GHz
Center frequency: 1.66033 GHz
Frequency span: 500 kHz
Resolution-BW: 1 kHz
Video-BW: 10 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (1k -> 3k) + 4.8 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 31.9 dB

Remarks:
Determination of the 'occupied bandwidth' at fh:
The measured value is about 166.9 kHz (delta marker)

Plot No. 40 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fl)

Limit:Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions
 modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

see next plot

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 12:24:55
 Location: CTC advanced GmbH, Laboratory RCE-Sat
 Temperature: 22 °C
 Humidity: 45 %
 Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6265 GHz
 Stop frequency: 1.6605 GHz
 Center frequency: 1.6435 GHz
 Frequency span: 34 MHz
 Resolution-BW: 10 kHz
 Video-BW: 30 kHz
 Input attenuation: 20 dB
 Trace-Mode: Max-Hold
 Detector-Mode: AVG

Correction:

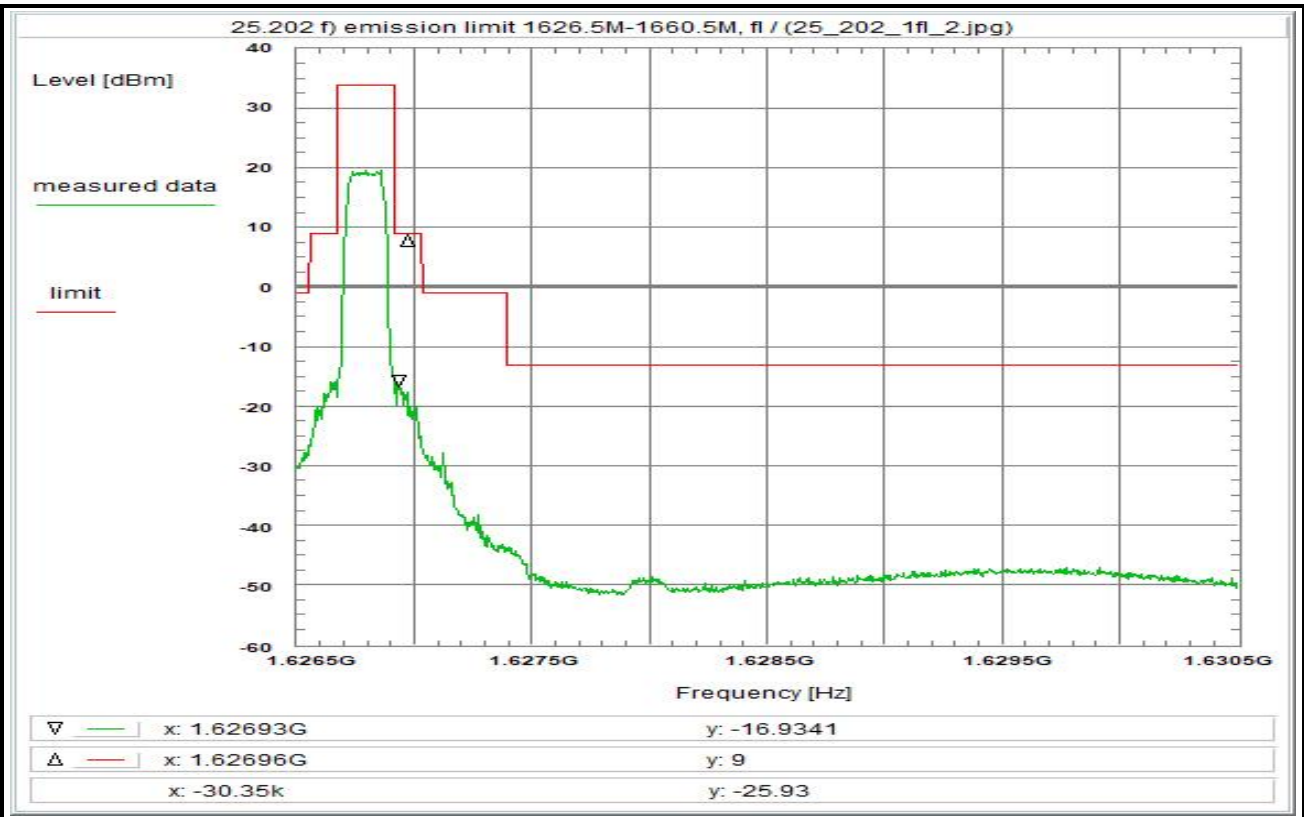
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (10k -> 4k)	- 4.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 23.1 dB

Remarks:

Carrier-on state / Carrier at the lower edge of the band (fl)

Mask based on 240 kHz bandwidth and Pout = 34 dBm.

Plot No. 41 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the lower edge of the band (fl)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 12:26:34

Location: CTC advanced GmbH, Laboratory RCE-Sat

Temperature: 22 °C

Humidity: 45 %

Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6265 GHz

Stop frequency: 1.6305 GHz

Center frequency: 1.6285 GHz

Frequency span: 4 MHz

Resolution-BW: 10 kHz

Video-BW: 30 kHz

Input attenuation: 20 dB

Trace-Mode: Max-Hold

Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB

Coaxial cable (C220) + 0.9 dB

DUT-Antenna + 0.0 dBi

Test antenna + 0.0 dB

BW correction factor (10k -> 4k) - 4.0 dB

Atten. between HPA and feedhorn - 0.0 dB

Attenuation (U312) + 19.5 dB

Power Splitter + Cable + 6.7 dB

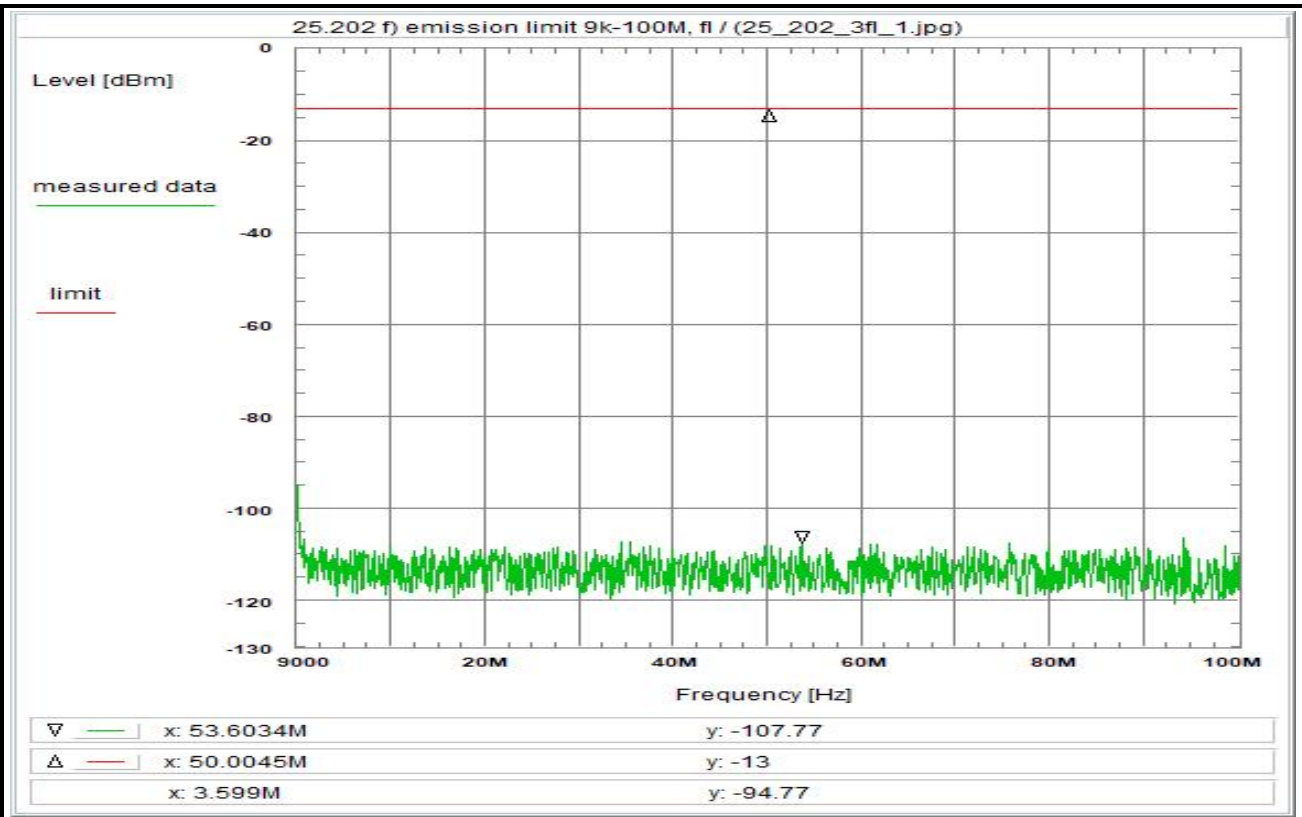
TOTAL CORRECTION: + 23.1 dB

Remarks:

Carrier-on state / Carrier at the lower edge of the band (fl)

Mask based on 240 kHz bandwidth and Pout = 34 dBm.

Plot No. 42 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the lower edge of the band (fl)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: $-43+10\log(P_{max})$ dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Thu 28/Nov/2019 10:38:01
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 9 kHz
Stop frequency: 100 MHz
Center frequency: 50.0045 MHz
Frequency span: 99.991 MHz
Resolution-BW: 1 kHz
Video-BW: 3 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

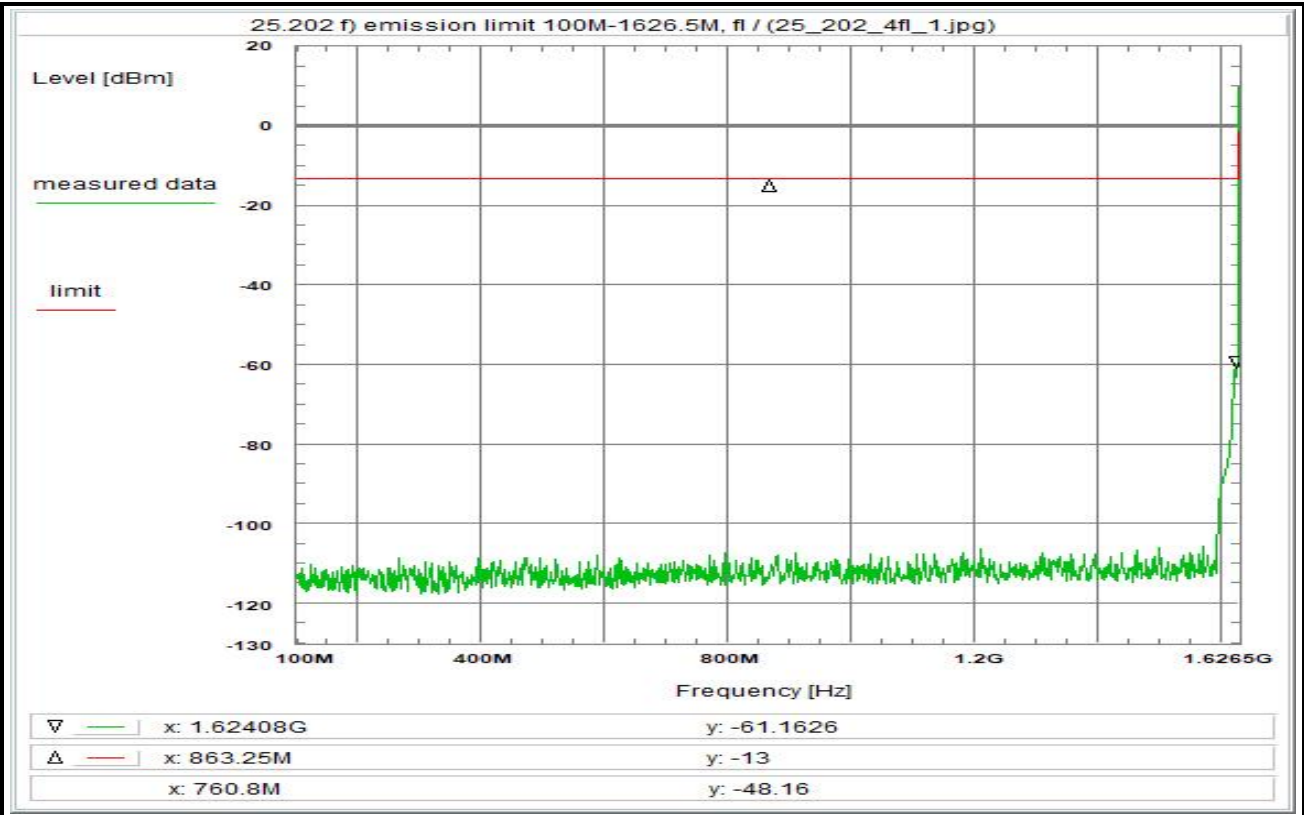
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.2 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (1k -> 4k)	+ 6.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Bandstopfilter + Cable (FCob)	+ 10.1 dB
TOTAL CORRECTION:	+ 16.3 dB

Remarks:

Carrier-on state / Carrier at the lower edge of the band (fl)

Plot No. 43 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the lower edge of the band (fl)

Limit:
Limit according to 25.202 f):
50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: $-43+10\log(P_{max})$ dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule.

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fl, see test report, operating conditions
modulation scheme R20T45X

Test setup:
see test report chapter 6.x: hfgj

Test equipment:
see test report chapter 6.x: C220, FCob, R001

Remark:
see next plot

Test result: Test passed

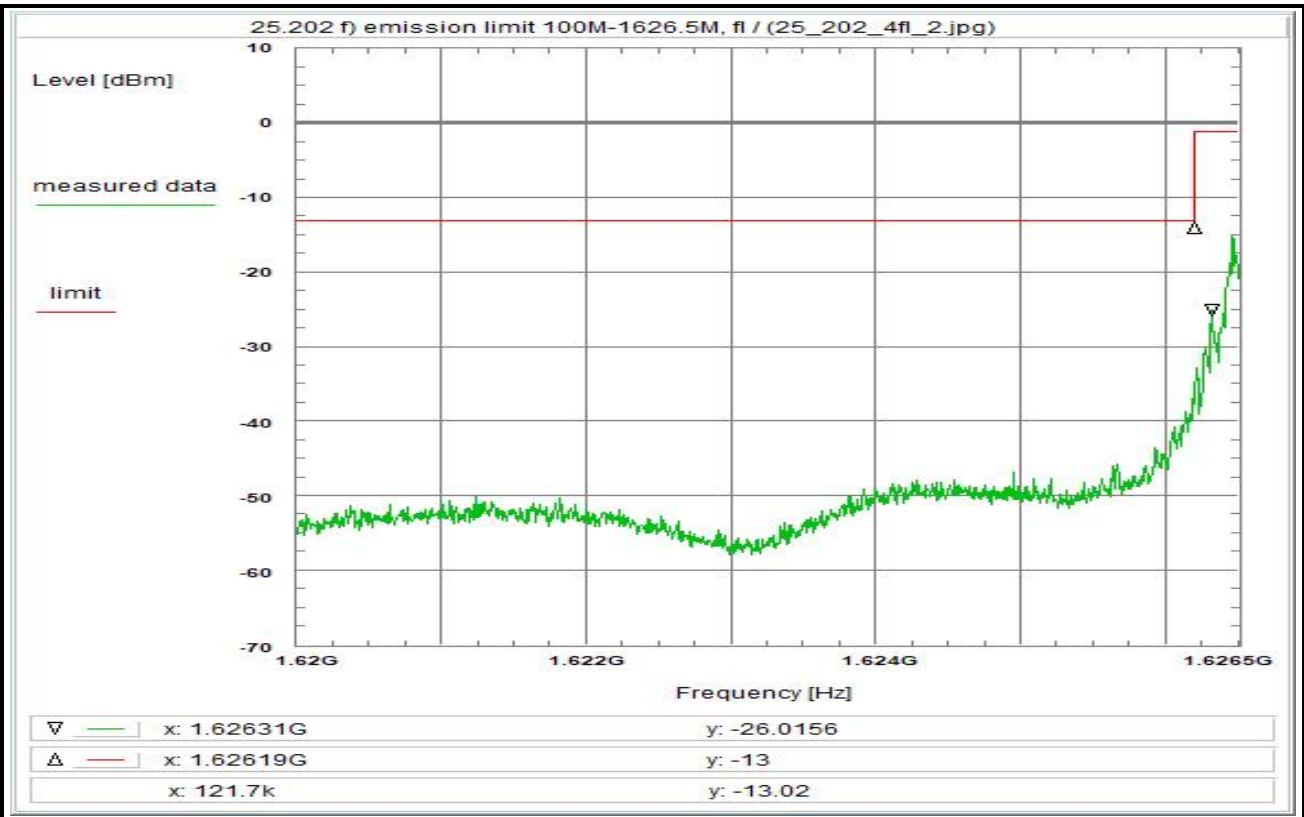
Environment condition:
Date & Time: Thu 28/Nov/2019 10:29:37
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:
Start frequency: 100 MHz
Stop frequency: 1.6265 GHz
Center frequency: 863.25 MHz
Frequency span: 1.5265 GHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.6 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 4k) - 4.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Bandstopfilter + Cable (FCob) + 10.5 dB
TOTAL CORRECTION: + 7.1 dB

Remarks:
Carrier-on state / Carrier at the lower edge of the band (fl)

Plot No. 44 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the lower edge of the band (fl)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: $-43+10\log(P_{max})$ dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Thu 28/Nov/2019 10:35:41
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.62 GHz
Stop frequency: 1.6265 GHz
Center frequency: 1.62325 GHz
Frequency span: 6.5 MHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

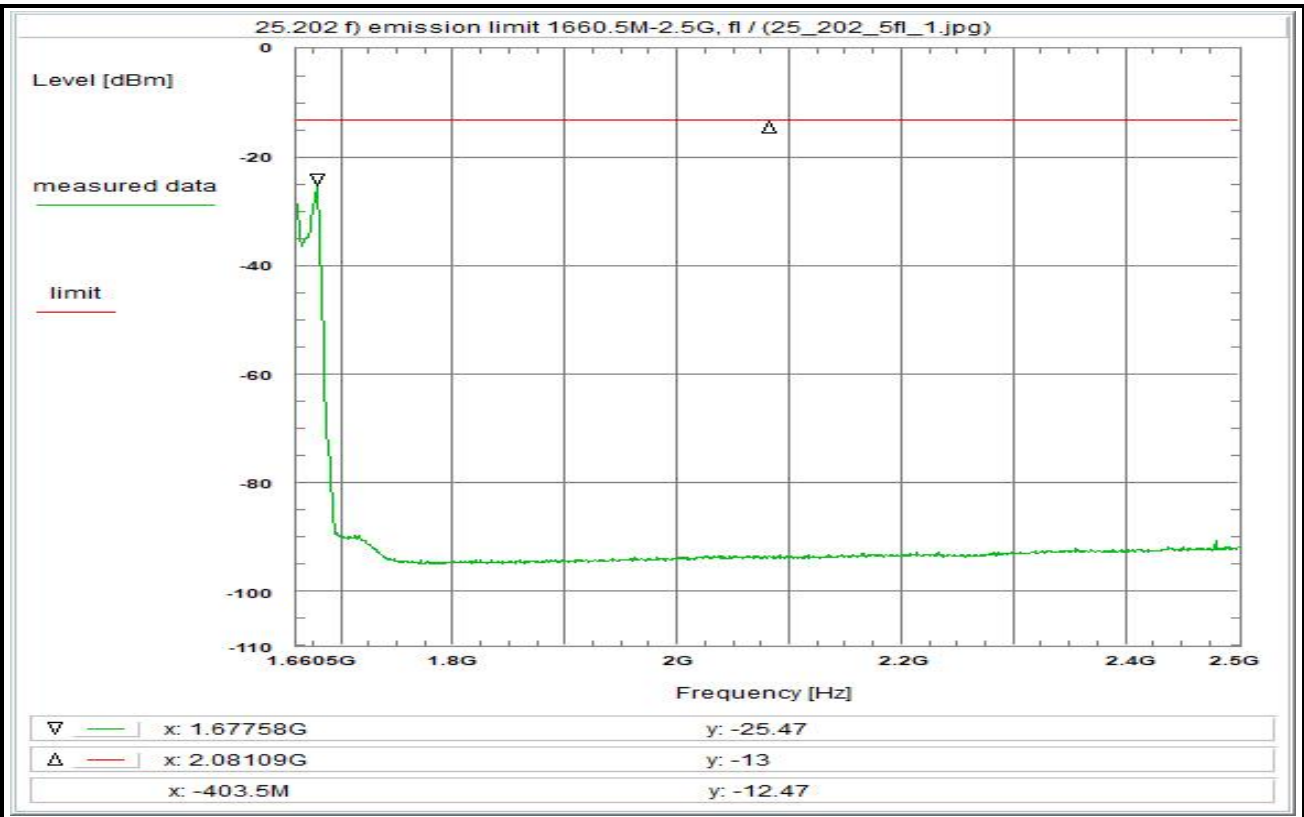
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (10k -> 4k)	- 4.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Bandstopfilter + Cable (FCob)	+ 13.3 dB
TOTAL CORRECTION:	+ 10.2 dB

Remarks:

Carrier-on state / Carrier at the lower edge of the band (fl)

Mask based on 240 kHz bandwidth and Pout = 34 dBm.

Plot No. 45 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the lower edge of the band (fl)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Wed 27/Nov/2019 15:00:42
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6605 GHz
Stop frequency: 2.5 GHz
Center frequency: 2.08025 GHz
Frequency span: 839.5 MHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 10 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

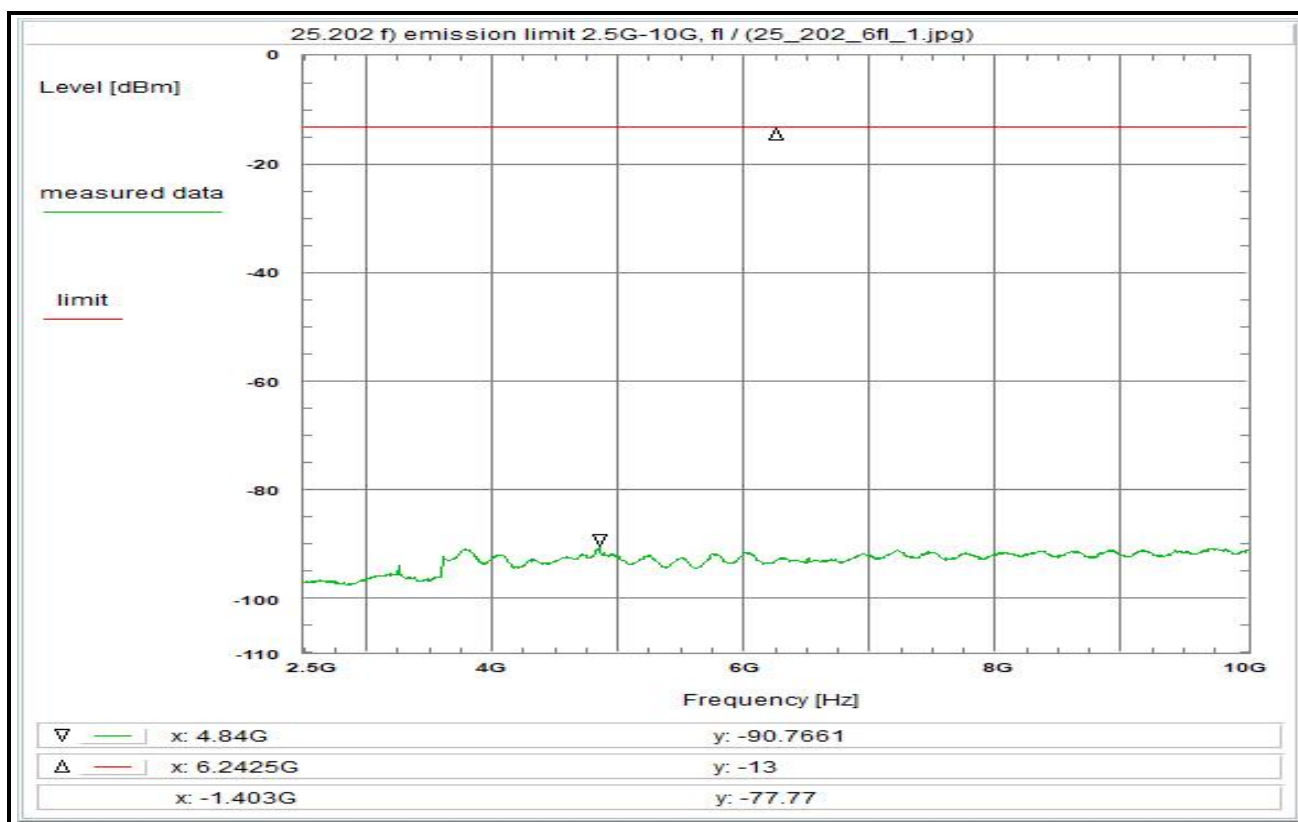
Directional coupler + 0.0 dB
Coaxial cable (C220) + 1.0 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 4k) - 4.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Bandstopfilter + Cable (FCob) + 12.9 dB
TOTAL CORRECTION: + 9.9 dB

Remarks:

Carrier-on state / Carrier at the lower edge of the band (fl)

Graph shows frequency response of bandstop filter

Plot No. 46 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fl)

Limit:Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
 below the mean output power of the transmitter
 in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions
 modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FHPF, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Wed 27/Nov/2019 14:36:16
 Location: CTC advanced GmbH, Laboratory RCE-Sat
 Temperature: 22 °C
 Humidity: 45 %
 Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 2.5 GHz
 Stop frequency: 10 GHz
 Center frequency: 6.25 GHz
 Frequency span: 7.5 GHz
 Resolution-BW: 100 kHz
 Video-BW: 300 kHz
 Input attenuation: 6 dB
 Trace-Mode: Max-Hold
 Detector-Mode: AVG

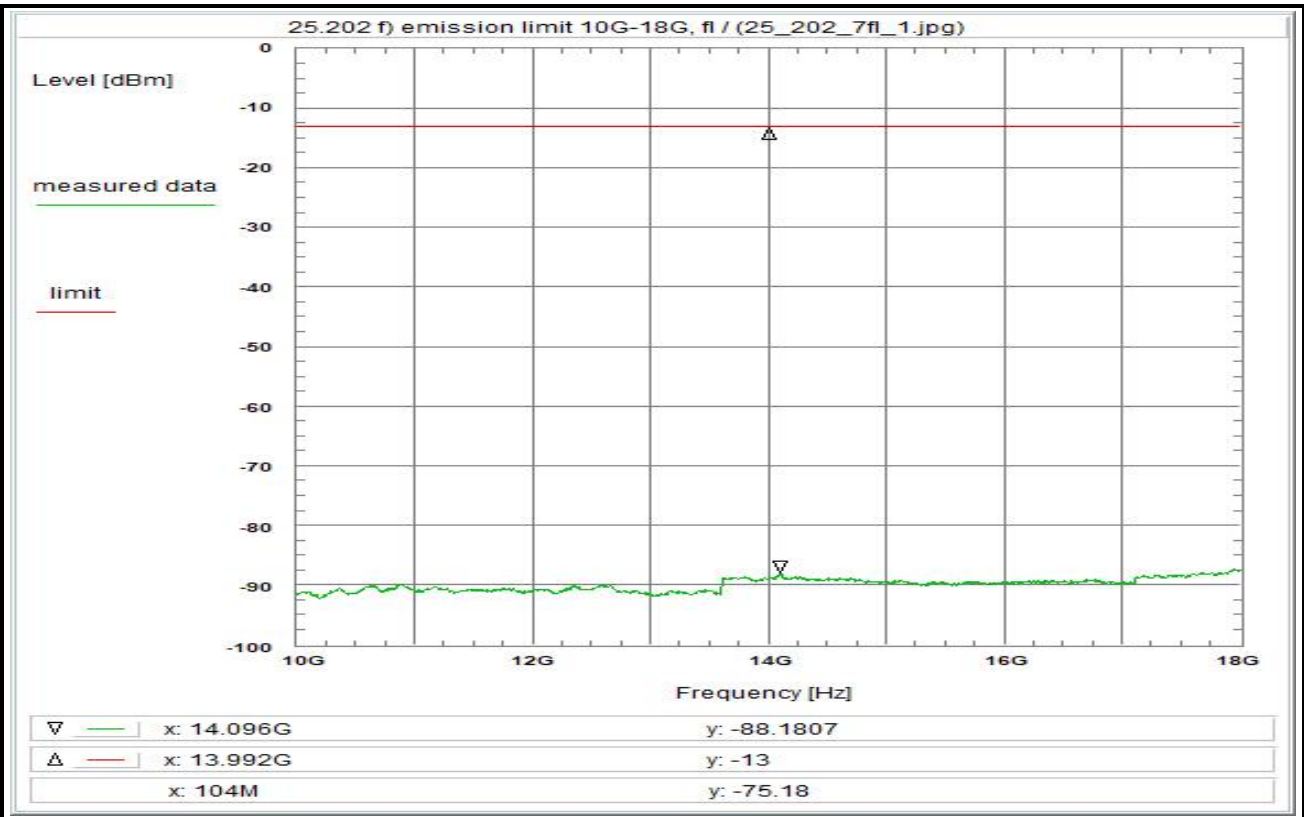
Correction:

Directional coupler + 0.0 dB
 Coaxial cable (C220) + 1.7 dB
 DUT-Antenna + 0.0 dBi
 Test antenna + 0.0 dB
 BW correction factor (100k -> 4k) - 14.0 dB
 Atten. between HPA and feedhorn - 0.0 dB
 Atten. + High Pass + cable(FHPF) + 11.4 dB
 TOTAL CORRECTION: - 0.9 dB

Remarks:

Carrier-on state / Carrier at the lower edge of the band (fl)

Plot No. 47 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the lower edge of the band (fl)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FHPF, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Wed 27/Nov/2019 14:37:41

Location: CTC advanced GmbH, Laboratory RCE-Sat

Temperature: 22 °C

Humidity: 45 %

Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 10 GHz

Stop frequency: 18 GHz

Center frequency: 14 GHz

Frequency span: 8 GHz

Resolution-BW: 100 kHz

Video-BW: 300 kHz

Input attenuation: 6 dB

Trace-Mode: Max-Hold

Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB

Coaxial cable (C220) + 2.7 dB

DUT-Antenna + 0.0 dBi

Test antenna + 0.0 dB

BW correction factor (100k -> 4k) - 14.0 dB

Atten. between HPA and feedhorn - 0.0 dB

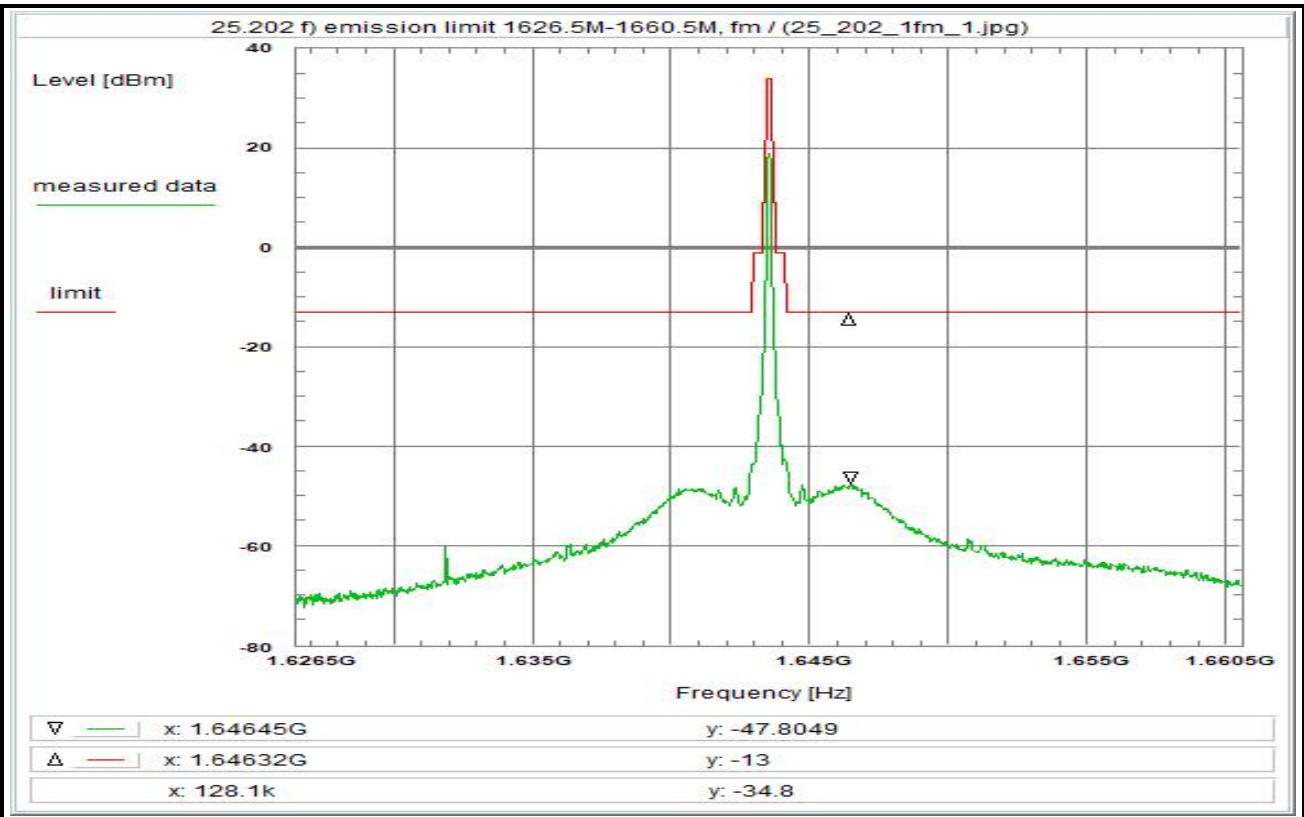
Atten. + High Pass + cable(FHPF) + 12.5 dB

TOTAL CORRECTION: + 1.2 dB

Remarks:

Carrier-on state / Carrier at the lower edge of the band (fl)

Plot No. 48 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

see next plot

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 12:16:32

Location: CTC advanced GmbH, Laboratory RCE-Sat

Temperature: 22 °C

Humidity: 45 %

Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6265 GHz

Stop frequency: 1.6605 GHz

Center frequency: 1.6435 GHz

Frequency span: 34 MHz

Resolution-BW: 10 kHz

Video-BW: 30 kHz

Input attenuation: 20 dB

Trace-Mode: Max-Hold

Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB

Coaxial cable (C220) + 0.9 dB

DUT-Antenna + 0.0 dBi

Test antenna + 0.0 dB

BW correction factor (10k -> 4k) - 4.0 dB

Atten. between HPA and feedhorn - 0.0 dB

Attenuation (U312) + 19.5 dB

Power Splitter + Cable + 6.7 dB

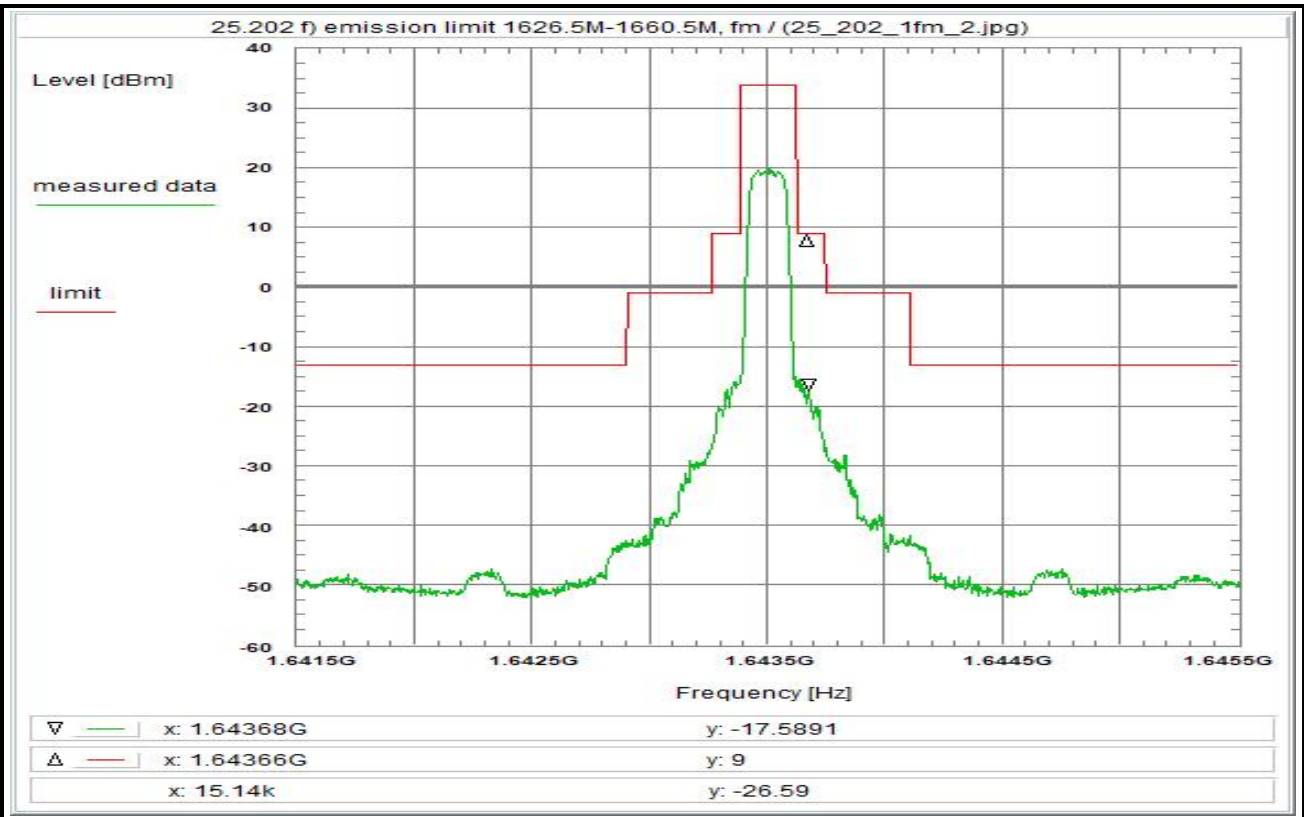
TOTAL CORRECTION: + 23.1 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)

Mask based on 240 kHz bandwidth and Pout = 34 dBm.

Plot No. 49 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hjg

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 12:19:25
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6415 GHz
Stop frequency: 1.6455 GHz
Center frequency: 1.6435 GHz
Frequency span: 4 MHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

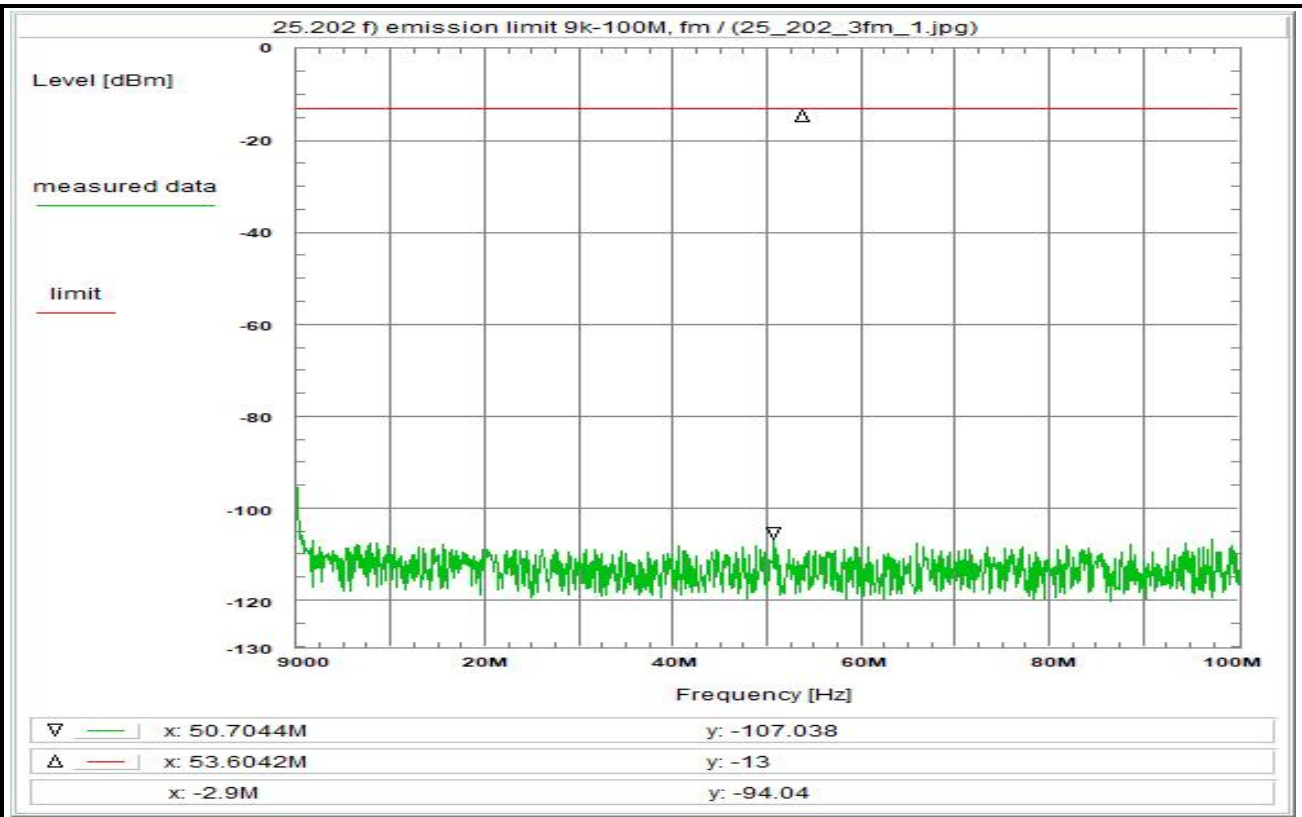
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 4k) - 4.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Attenuation (U312) + 19.5 dB
Power Splitter + Cable + 6.7 dB
TOTAL CORRECTION: + 23.1 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)

Mask based on 240 kHz bandwidth and Pout = 34 dBm.

Plot No. 50 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Thu 28/Nov/2019 10:23:05
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 9 kHz
Stop frequency: 100 MHz
Center frequency: 50.0045 MHz
Frequency span: 99.991 MHz
Resolution-BW: 1 kHz
Video-BW: 3 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

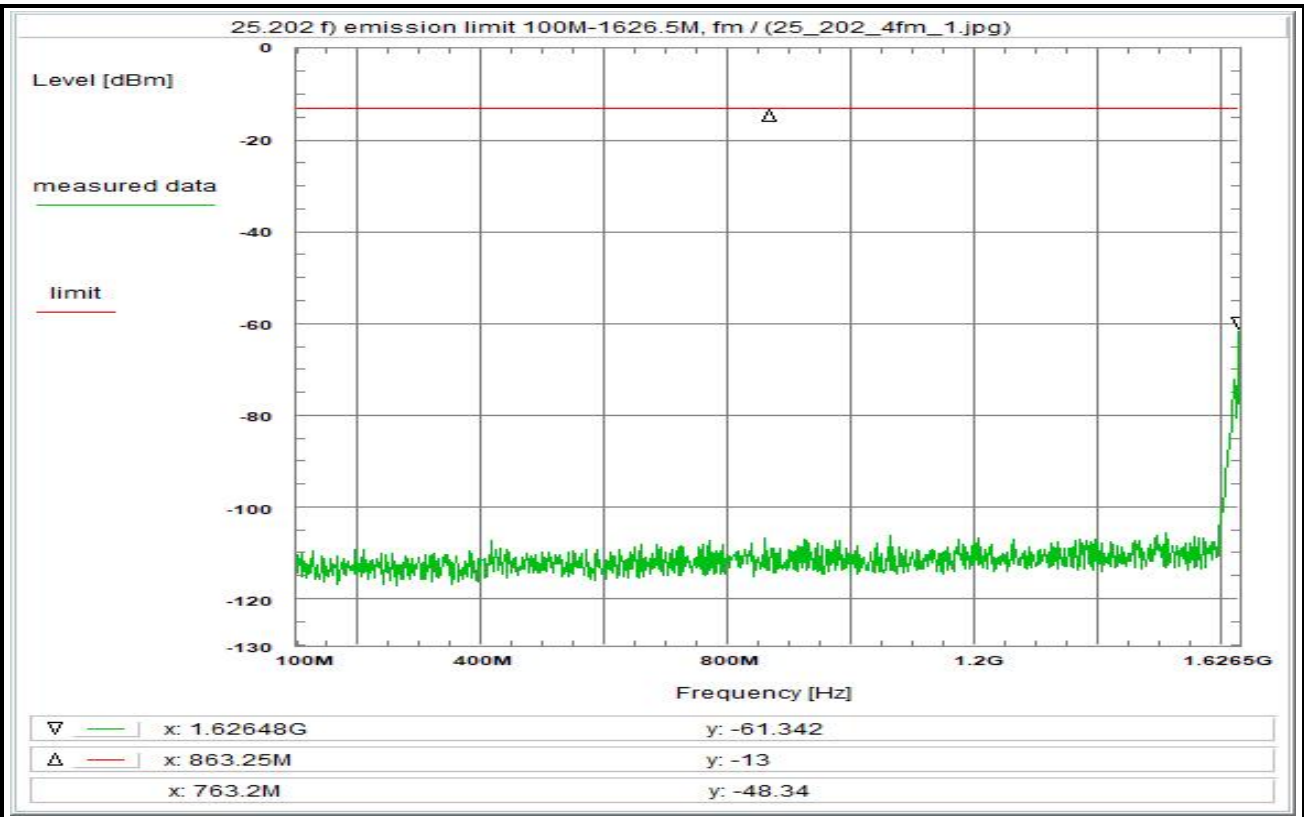
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.2 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (1k -> 4k)	+ 6.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Bandstopfilter + Cable (FCob)	+ 10.1 dB
TOTAL CORRECTION:	+ 16.3 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)

Plot No. 51 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Thu 28/Nov/2019 10:25:32
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 100 MHz
Stop frequency: 1.6265 GHz
Center frequency: 863.25 MHz
Frequency span: 1.5265 GHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

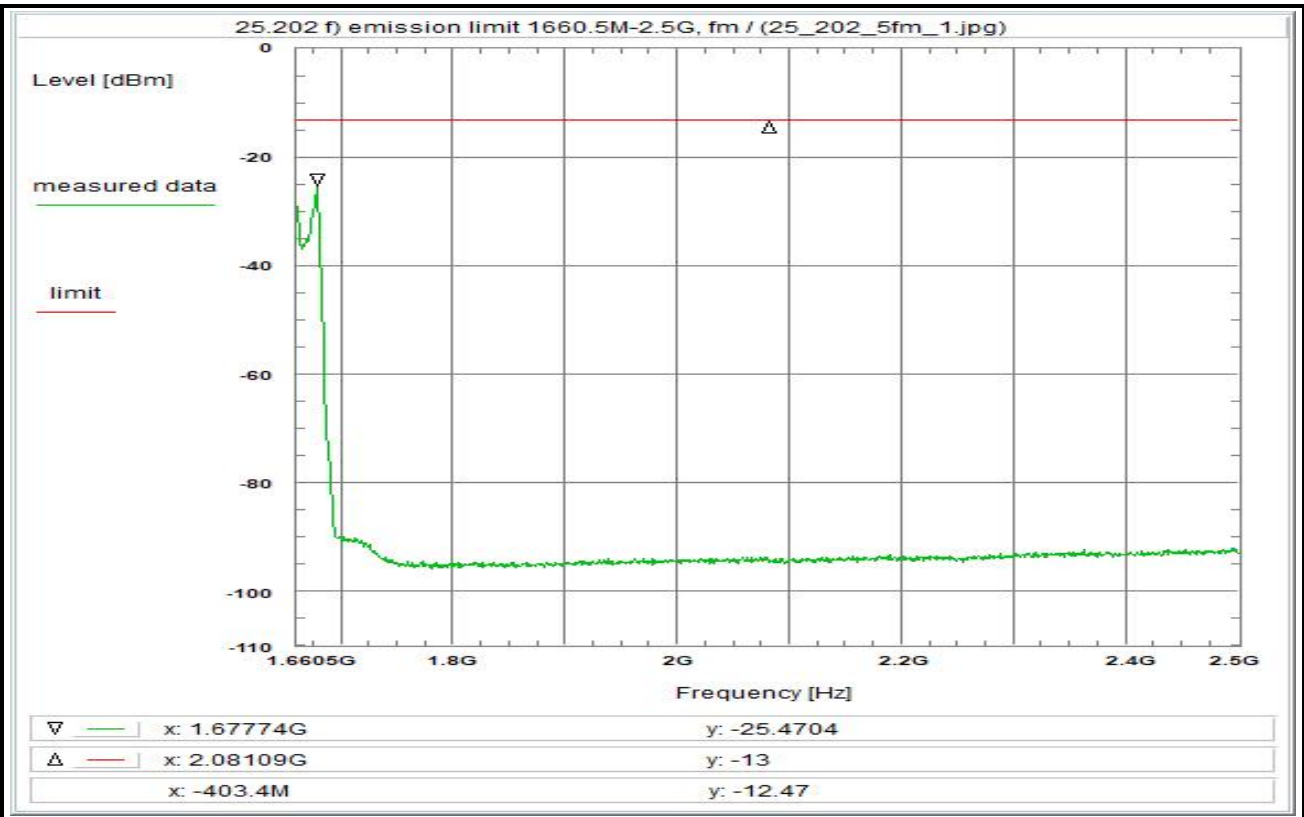
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.6 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (10k -> 4k)	- 4.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Bandstopfilter + Cable (FCob)	+ 10.5 dB
TOTAL CORRECTION:	+ 7.1 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)

Plot No. 52 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Wed 27/Nov/2019 15:01:58
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6605 GHz
Stop frequency: 2.5 GHz
Center frequency: 2.08025 GHz
Frequency span: 839.5 MHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 10 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

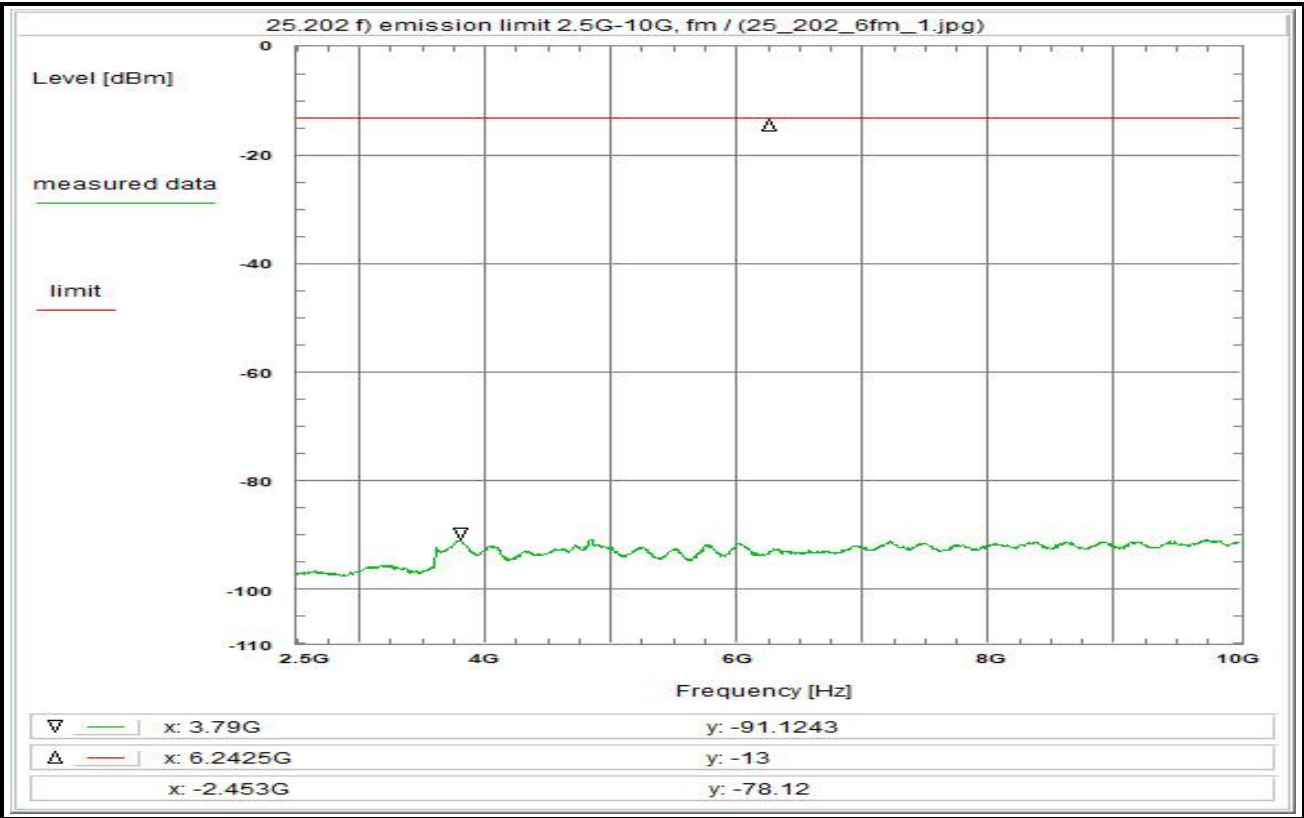
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 1.0 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (10k -> 4k)	- 4.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Bandstopfilter + Cable (FCob)	+ 12.9 dB
TOTAL CORRECTION:	+ 9.9 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)

Graph shows frequency response of bandstop filter

Plot No. 53 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FHPF, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Wed 27/Nov/2019 13:57:43
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 2.5 GHz
Stop frequency: 10 GHz
Center frequency: 6.25 GHz
Frequency span: 7.5 GHz
Resolution-BW: 100 kHz
Video-BW: 300 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

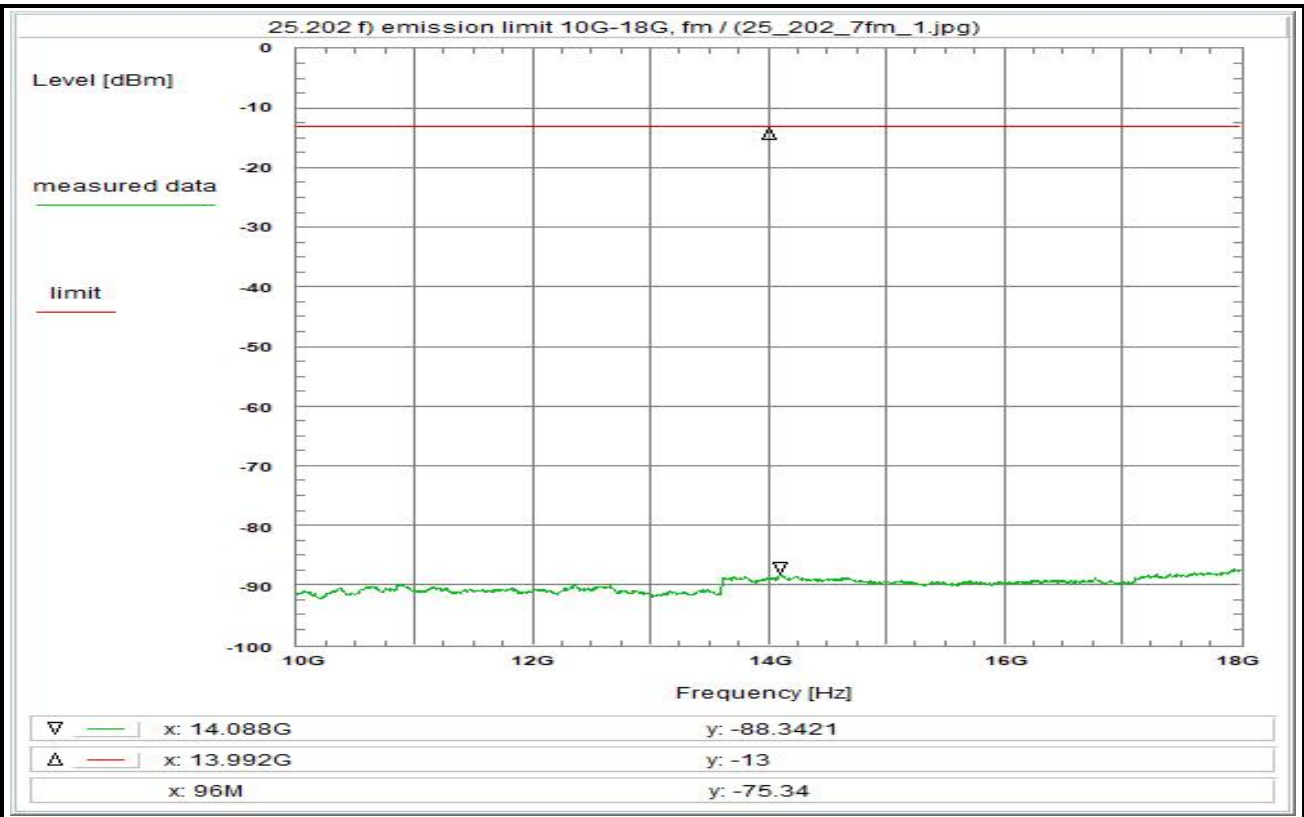
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 1.7 dB
DUT-Antenna (on-axis)	+ 6.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (100k -> 4k)	- 14.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Atten. + High Pass + cable (FHPF)	+ 11.4 dB
TOTAL CORRECTION:	+ 5.1 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)

Plot No. 54 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FHPF, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Wed 27/Nov/2019 14:34:25
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 10 GHz
Stop frequency: 18 GHz
Center frequency: 14 GHz
Frequency span: 8 GHz
Resolution-BW: 100 kHz
Video-BW: 300 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

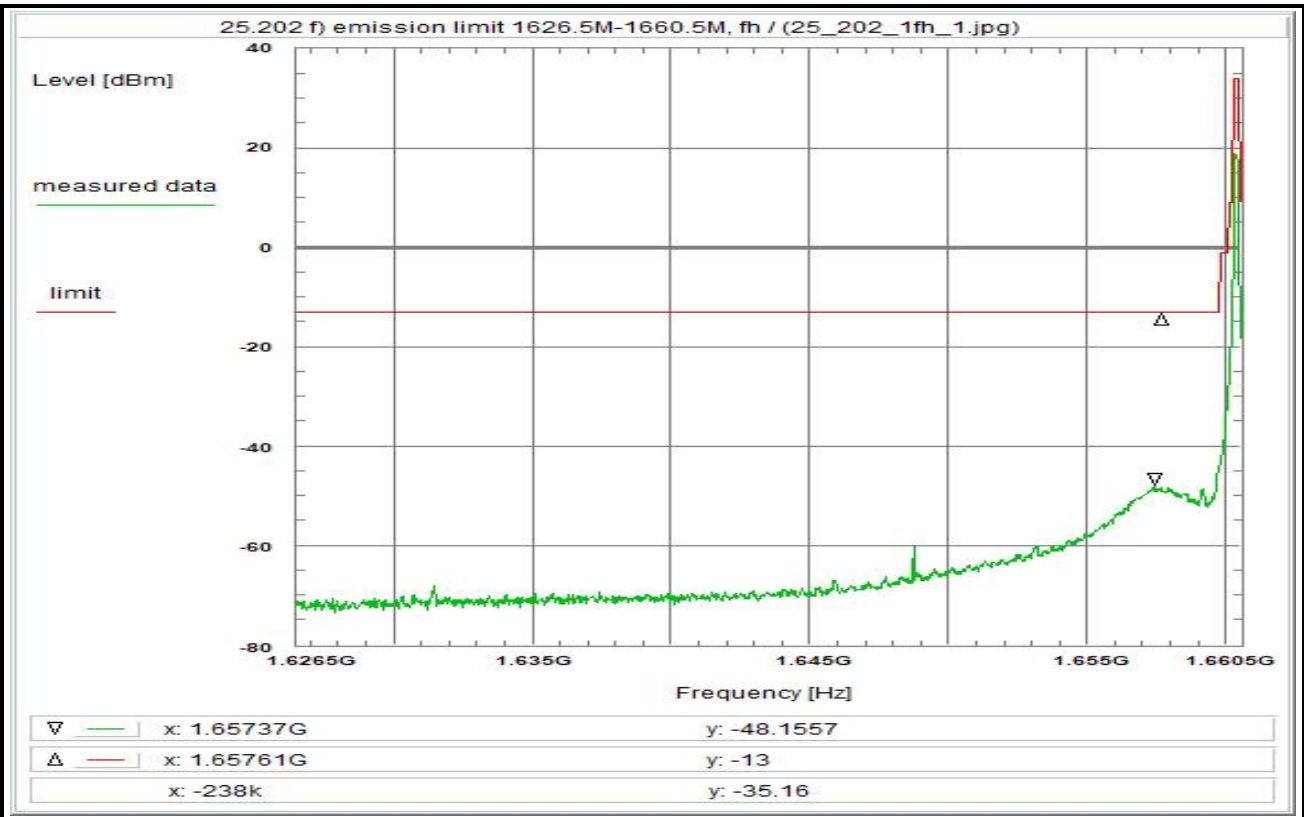
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 2.7 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (100k -> 4k)	- 14.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Atten. + High Pass + cable(FHPF)	+ 12.5 dB
TOTAL CORRECTION:	+ 1.2 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)

Plot No. 55 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the upper edge of the band (fh)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

see next plot

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 12:29:16
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6265 GHz
Stop frequency: 1.6605 GHz
Center frequency: 1.6435 GHz
Frequency span: 34 MHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

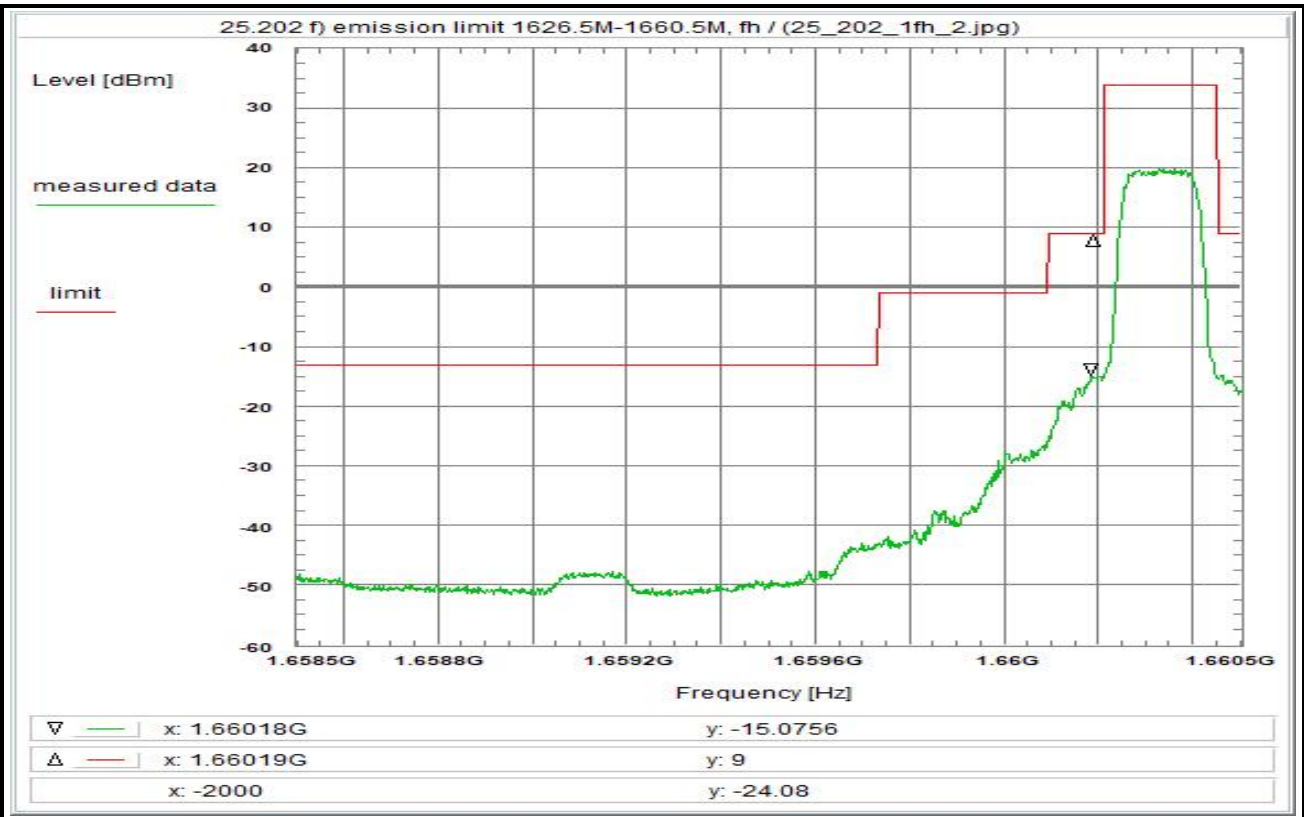
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (10k -> 4k)	- 4.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 23.1 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fh)

Mask based on 240 kHz bandwidth and Pout = 34 dBm.

Plot No. 56 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the upper edge of the band (fh)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 12:14:17
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6585 GHz
Stop frequency: 1.6605 GHz
Center frequency: 1.6595 GHz
Frequency span: 2 MHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 20 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

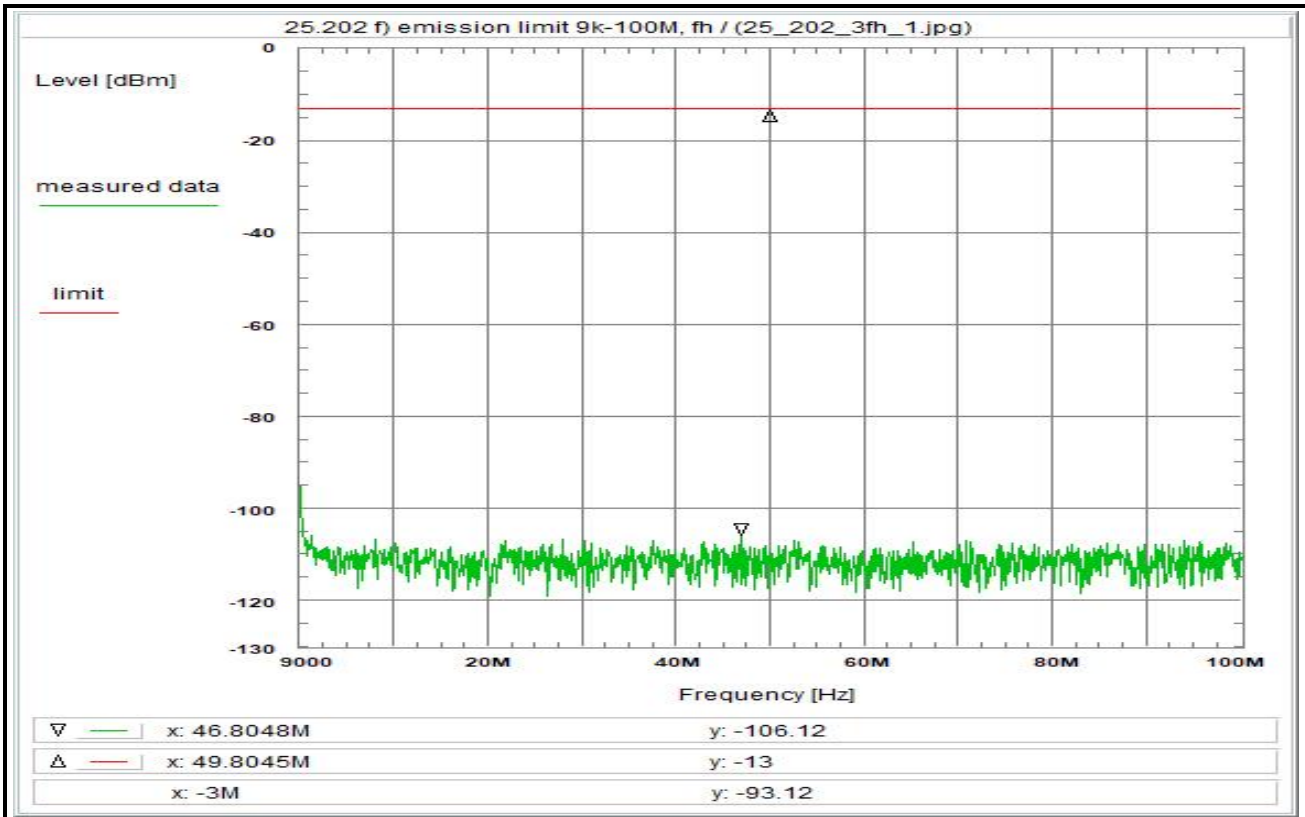
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (10k -> 4k)	- 4.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 23.1 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fh)

Mask based on 240 kHz bandwidth and Pout = 34 dBm.

Plot No. 57 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the upper edge of the band (fh)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Thu 28/Nov/2019 10:16:38
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 9 kHz
Stop frequency: 100 MHz
Center frequency: 50.0045 MHz
Frequency span: 99.991 MHz
Resolution-BW: 1 kHz
Video-BW: 3 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

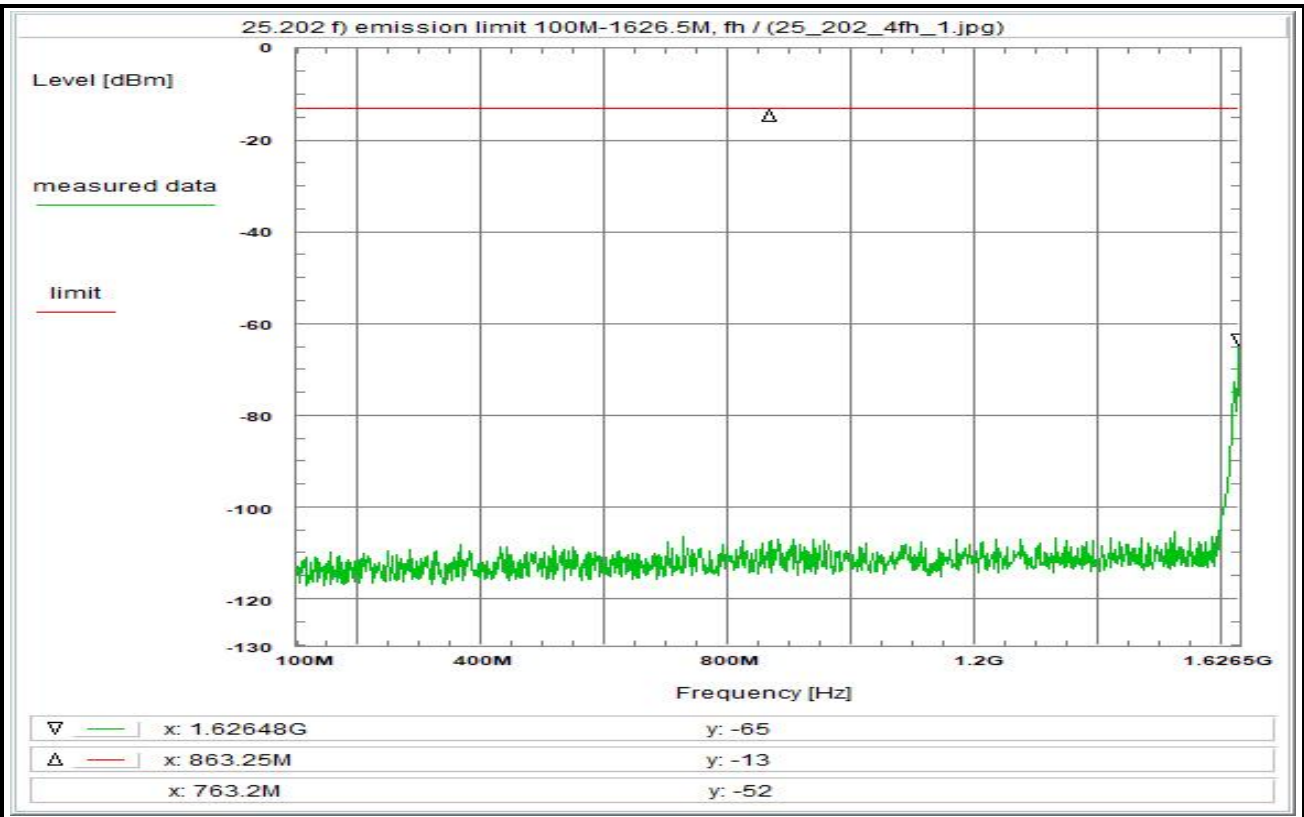
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.2 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (1k -> 4k)	+ 6.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Bandstopfilter + Cable (FCob)	+ 10.1 dB
TOTAL CORRECTION:	+ 16.3 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fh)

Plot No. 58 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the upper edge of the band (fh)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Thu 28/Nov/2019 09:57:55

Location: CTC advanced GmbH, Laboratory RCE-Sat

Temperature: 22 °C

Humidity: 45 %

Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 100 MHz

Stop frequency: 1.6265 GHz

Center frequency: 863.25 MHz

Frequency span: 1.5265 GHz

Resolution-BW: 10 kHz

Video-BW: 30 kHz

Input attenuation: 6 dB

Trace-Mode: Max-Hold

Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB

Coaxial cable (C220) + 0.6 dB

DUT-Antenna + 0.0 dBi

Test antenna + 0.0 dB

BW correction factor (10k -> 4k) - 4.0 dB

Atten. between HPA and feedhorn - 0.0 dB

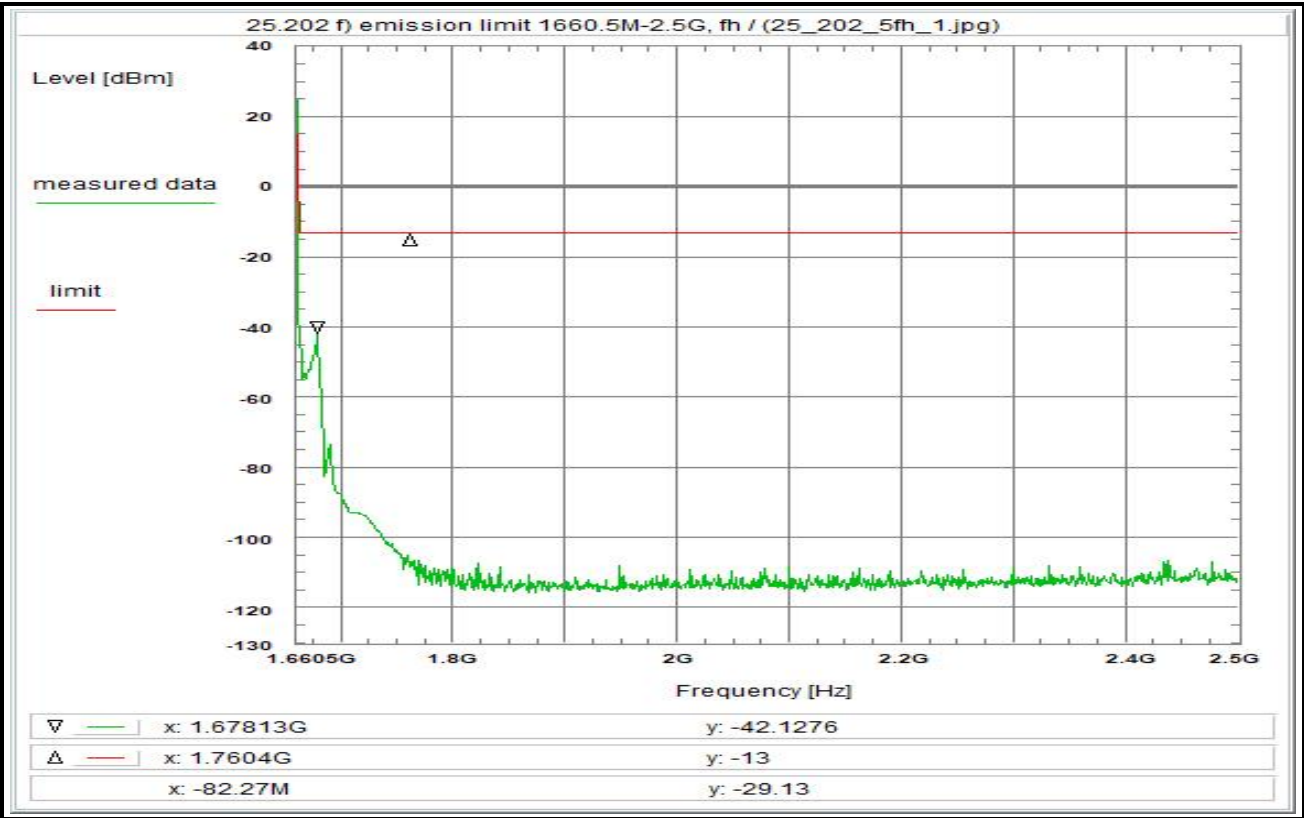
Bandstopfilter + Cable (FCob) + 10.5 dB

TOTAL CORRECTION: + 7.1 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fh)

Plot No. 59 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the upper edge of the band (fh)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

see next plot

Test result: Test passed

Environment condition:

Date & Time: Thu 28/Nov/2019 09:30:02

Location: CTC advanced GmbH, Laboratory RCE-Sat

Temperature: 22 °C

Humidity: 45 %

Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6605 GHz

Stop frequency: 2.5 GHz

Center frequency: 2.08025 GHz

Frequency span: 839.5 MHz

Resolution-BW: 10 kHz

Video-BW: 30 kHz

Input attenuation: 6 dB

Trace-Mode: Max-Hold

Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB

Coaxial cable (C220) + 1.0 dB

DUT-Antenna + 0.0 dBi

Test antenna + 0.0 dB

BW correction factor (10k -> 4k) - 4.0 dB

Atten. between HPA and feedhorn - 0.0 dB

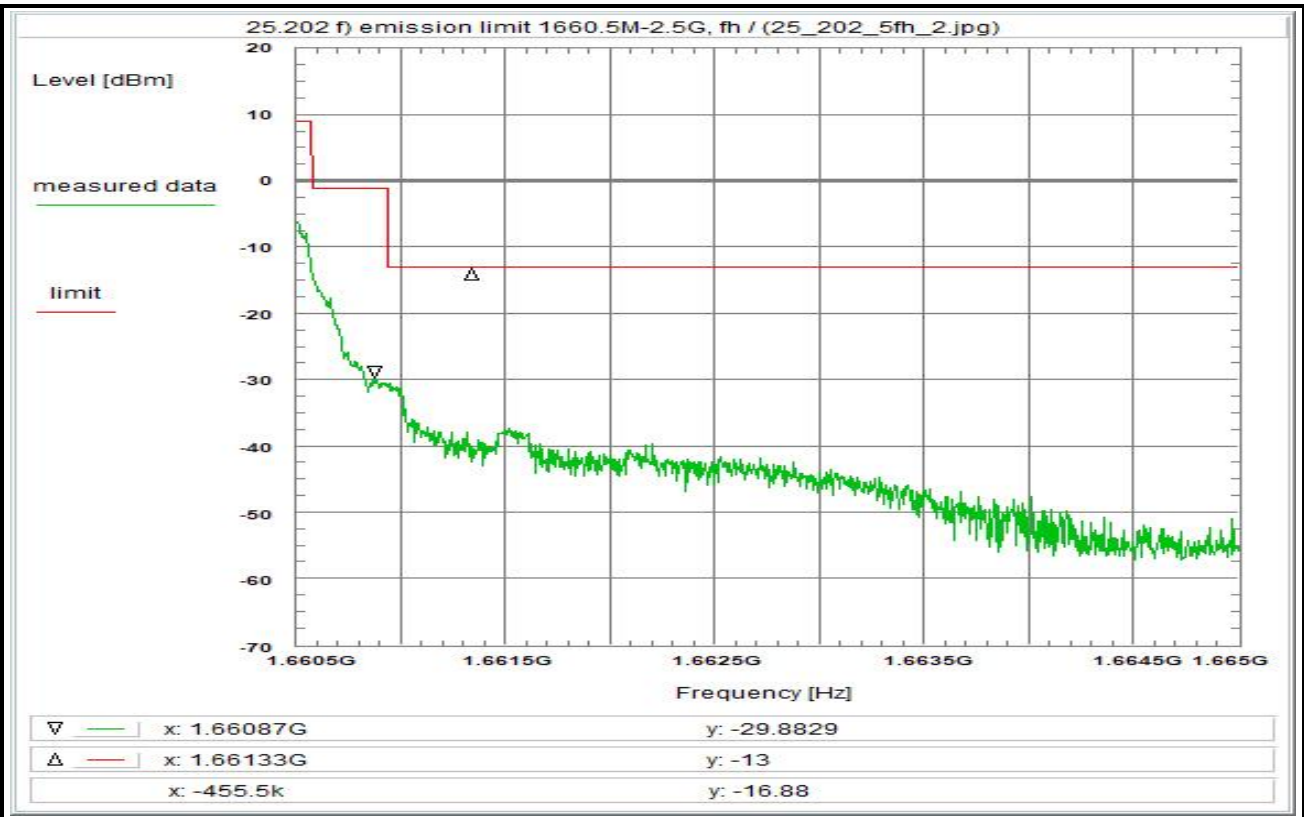
Bandstopfilter + Cable (FCob) + 12.9 dB

TOTAL CORRECTION: + 9.9 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fh)

Plot No. 60 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the upper edge of the band (fh)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FCob, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Thu 28/Nov/2019 09:34:31
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.6605 GHz
Stop frequency: 1.665 GHz
Center frequency: 1.66275 GHz
Frequency span: 4.5 MHz
Resolution-BW: 10 kHz
Video-BW: 30 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

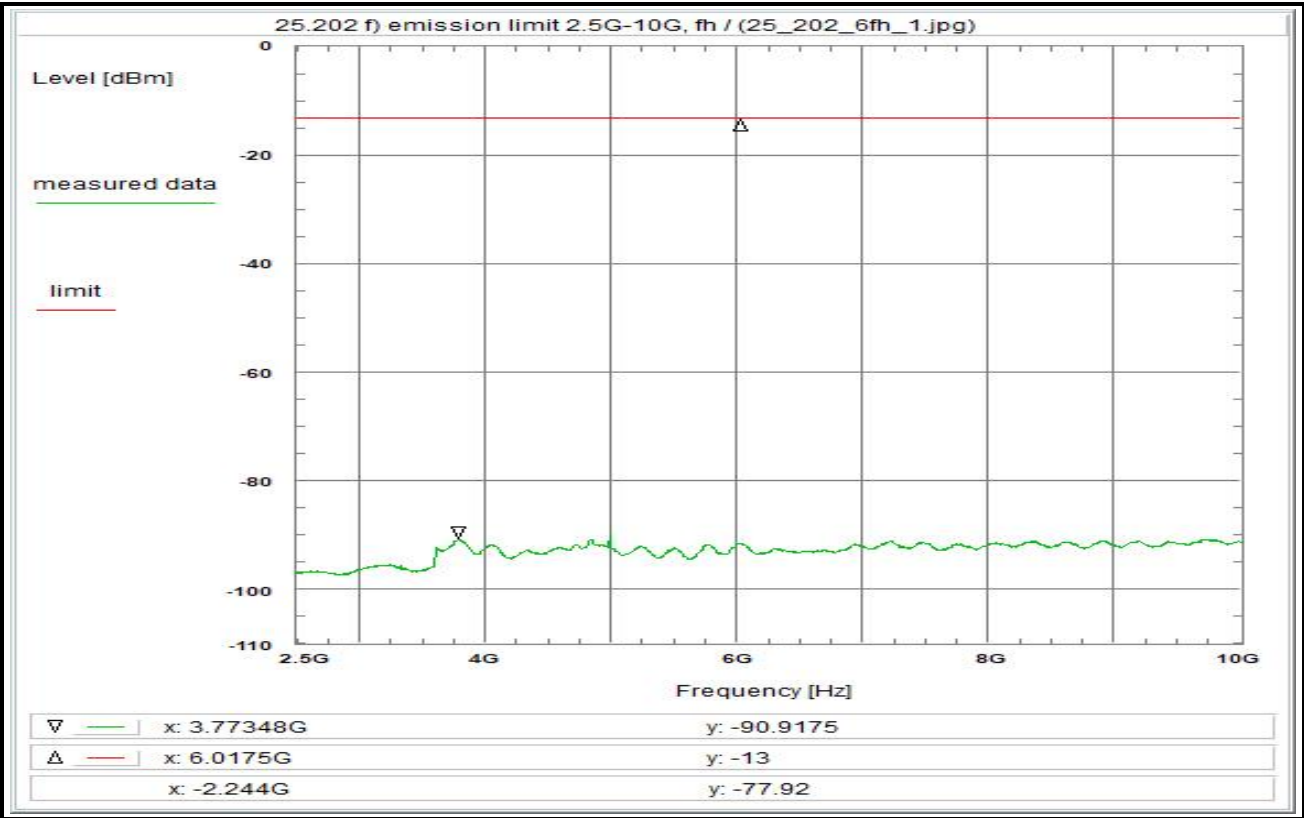
Directional coupler + 0.0 dB
Coaxial cable (C220) + 0.9 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (10k -> 4k) - 4.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Bandstopfilter + Cable (FCob) + 63.2 dB
TOTAL CORRECTION: + 60.1 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fh)

Mask based on 240 kHz bandwidth and Pout = 34 dBm.

Plot No. 61 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the upper edge of the band (fh)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$
The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FHPF, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Wed 27/Nov/2019 14:29:38
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 55 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 2.5 GHz
Stop frequency: 10 GHz
Center frequency: 6.25 GHz
Frequency span: 7.5 GHz
Resolution-BW: 100 kHz
Video-BW: 300 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

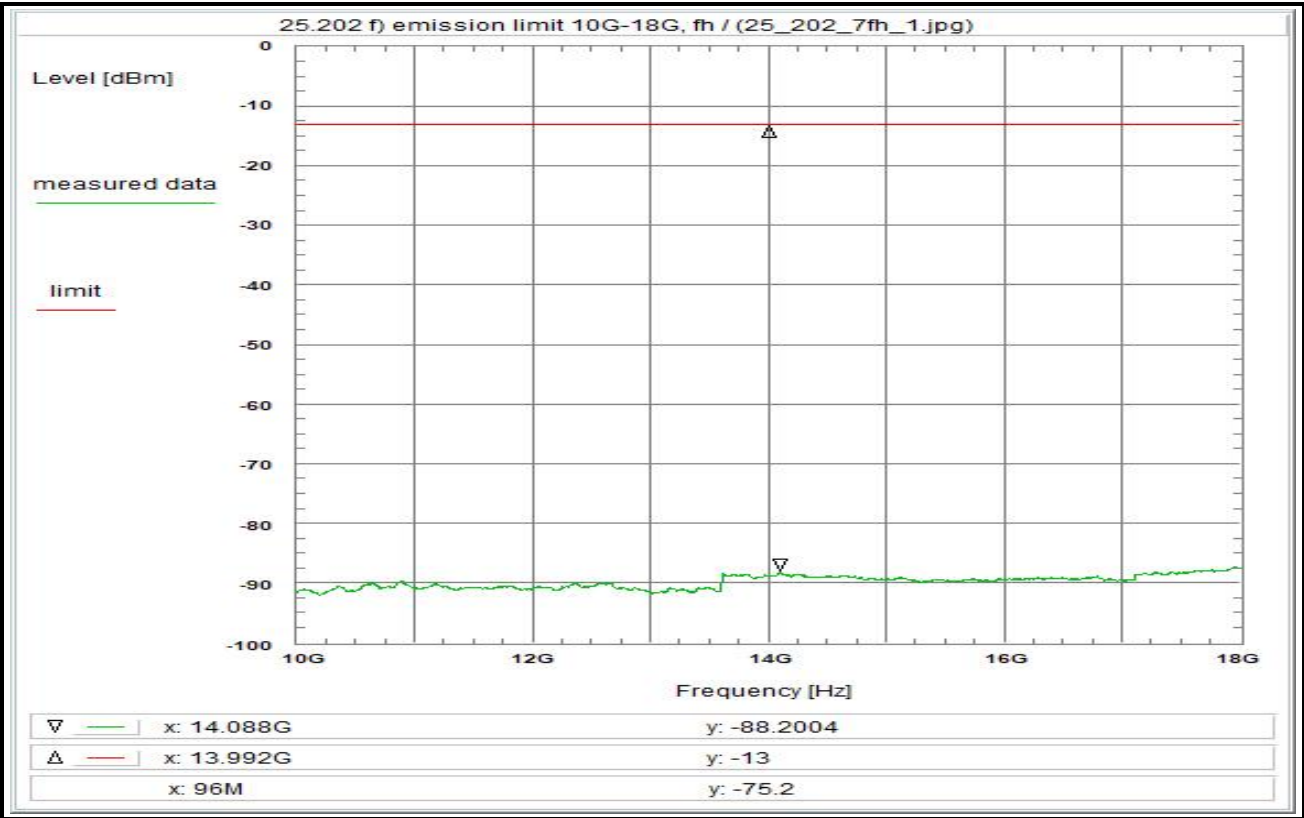
Correction:

Directional coupler + 0.0 dB
Coaxial cable (C220) + 1.7 dB
DUT-Antenna + 0.0 dBi
Test antenna + 0.0 dB
BW correction factor (100k -> 4k) - 14.0 dB
Atten. between HPA and feedhorn - 0.0 dB
Atten. + High Pass + cable (FHPF) + 11.4 dB
TOTAL CORRECTION: - 0.9 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fh)

Plot No. 62 (70)



Subclause: 25.202 f) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier at the upper edge of the band (fh)

Limit:

Limit according to 25.202 f):

50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz

> 250% of assigned bw: $-43+10\log(P_{max})\text{dBc/4kHz} = -43\text{ dBW}$

The mean power of emissions shall be attenuated
below the mean output power of the transmitter
in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hfgj

Test equipment:

see test report chapter 6.x: C220, FHPF, R001

Remark:

Test result: Test passed

Environment condition:

Date & Time: Wed 27/Nov/2019 14:31:44
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 10 GHz
Stop frequency: 18 GHz
Center frequency: 14 GHz
Frequency span: 8 GHz
Resolution-BW: 100 kHz
Video-BW: 300 kHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

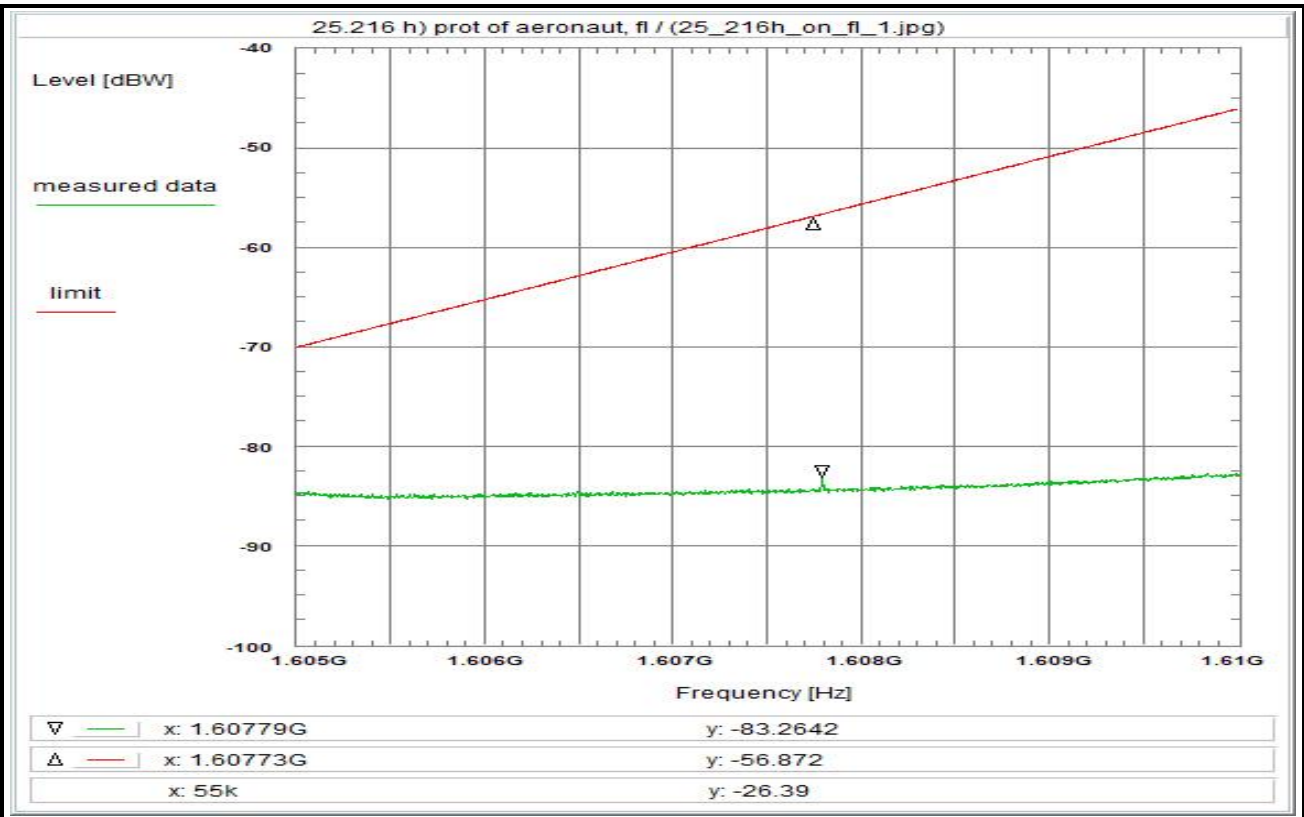
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 2.7 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (100k -> 4k)	- 14.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Atten. + High Pass + cable(FHPF)	+ 12.5 dB
TOTAL CORRECTION:	+ 1.2 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fh)

Plot No. 63 (70)



Subclause: 25.216 h) Protection of aeronautical radionavigation-satellite service
Carrier-on state, modulated carrier at the lower edge of the band (fl)
Conducted measurement at the antenna-connector

Limit:

Limit according to 25.216 h):

1605.0 - 1610MHz: -70 to -46dBW/1MHz (linear interpolated)

The EIRP, averaged over any two-millisecond active transmission interval from the MESs in the carrier-on state shall not exceed the limits above.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, fl, see test report, operating conditions
modulation scheme R20T45X

Test setup:

see test report chapter 6.x: hgj

Test equipment:

see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 13:26:18
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.605 GHz
Stop frequency: 1.61 GHz
Center frequency: 1.6075 GHz
Frequency span: 5 MHz
Resolution-BW: 1 MHz
Video-BW: 3 MHz
Input attenuation: 10 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna (on-axis)	+ 6.0 dBi
Test antenna	+ 0.0 dB
BW correction factor	+ 0.0 dB
Atten. between HPA and feedhorn	+ 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 33.1 dB

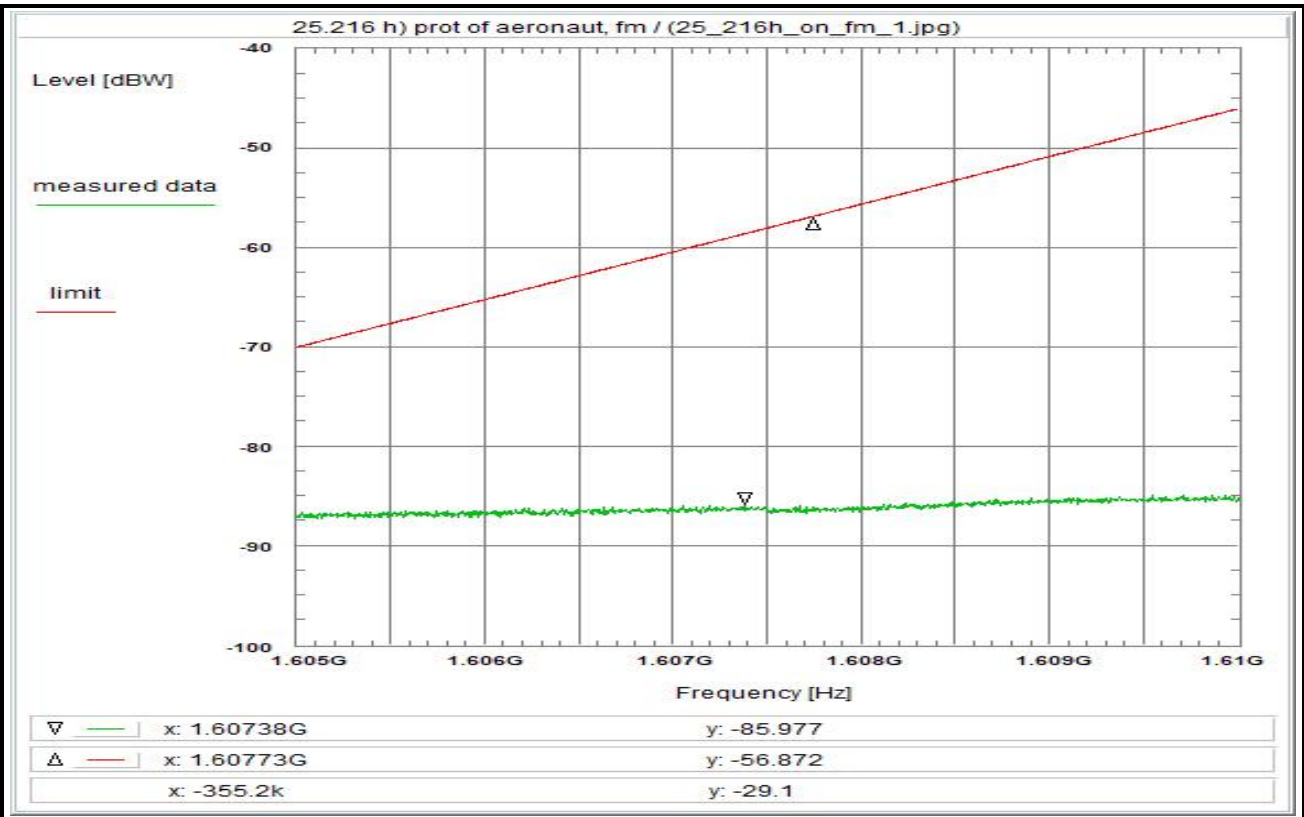
Remarks:

Carrier-on state / Carrier at the lower edge of the band (fl)
Measurement with 1 MHz resolution/video filter and RMS detector.

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 64 (70)



Subclause: 25.216 h) Protection of aeronautical radionavigation-satellite service
Carrier-on state, modulated carrier in the middle of the band (fm)
Conducted measurement at the antenna-connector

Limit:
Limit according to 25.216 h):

1605.0 - 1610MHz: -70 to -46dBW/1MHz (linear interpolated)
The EIRP, averaged over any two-millisecond active transmission interval from the MESSs in the carrier-on state shall not exceed the limits above.

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fm, see test report, operating conditions
modulation scheme R20T45X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 13:24:54
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.605 GHz
Stop frequency: 1.61 GHz
Center frequency: 1.6075 GHz
Frequency span: 5 MHz
Resolution-BW: 1 MHz
Video-BW: 3 MHz
Input attenuation: 10 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna (on-axis)	+ 6.0 dBi
Test antenna	+ 0.0 dB
BW correction factor	+ 0.0 dB
Atten. between HPA and feedhorn	+ 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 33.1 dB

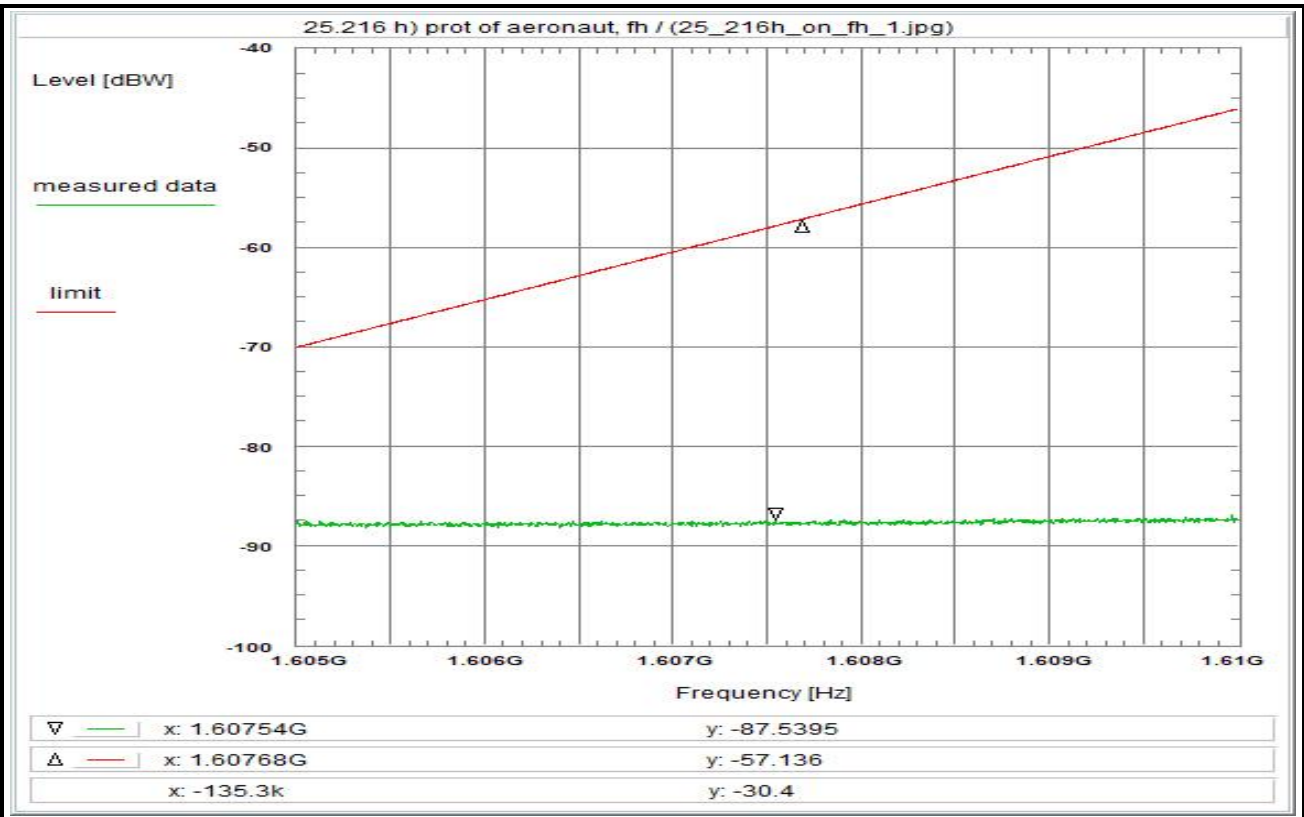
Remarks:

Carrier-on state / Carrier in the middle of the band (fm)
Measurement with 1 MHz resolution/video filter and RMS detector.

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 65 (70)



Subclause: 25.216 h) Protection of aeronautical radionavigation-satellite service
Carrier-on state, modulated carrier at the upper edge of the band (fh)
Conducted measurement at the antenna-connector

Limit:
Limit according to 25.216 h):

1605.0 - 1610MHz: -70 to -46dBW/1MHz (linear interpolated)
The EIRP, averaged over any two-millisecond active transmission interval from the MESSs in the carrier-on state shall not exceed the limits above.

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 1, fh, see test report, operating conditions
modulation scheme R20T45X

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 13:19:15
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.605 GHz
Stop frequency: 1.61 GHz
Center frequency: 1.6075 GHz
Frequency span: 5 MHz
Resolution-BW: 1 MHz
Video-BW: 3 MHz
Input attenuation: 10 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna (on-axis)	+ 6.0 dBi
Test antenna	+ 0.0 dB
BW correction factor	+ 0.0 dB
Atten. between HPA and feedhorn	+ 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 33.1 dB

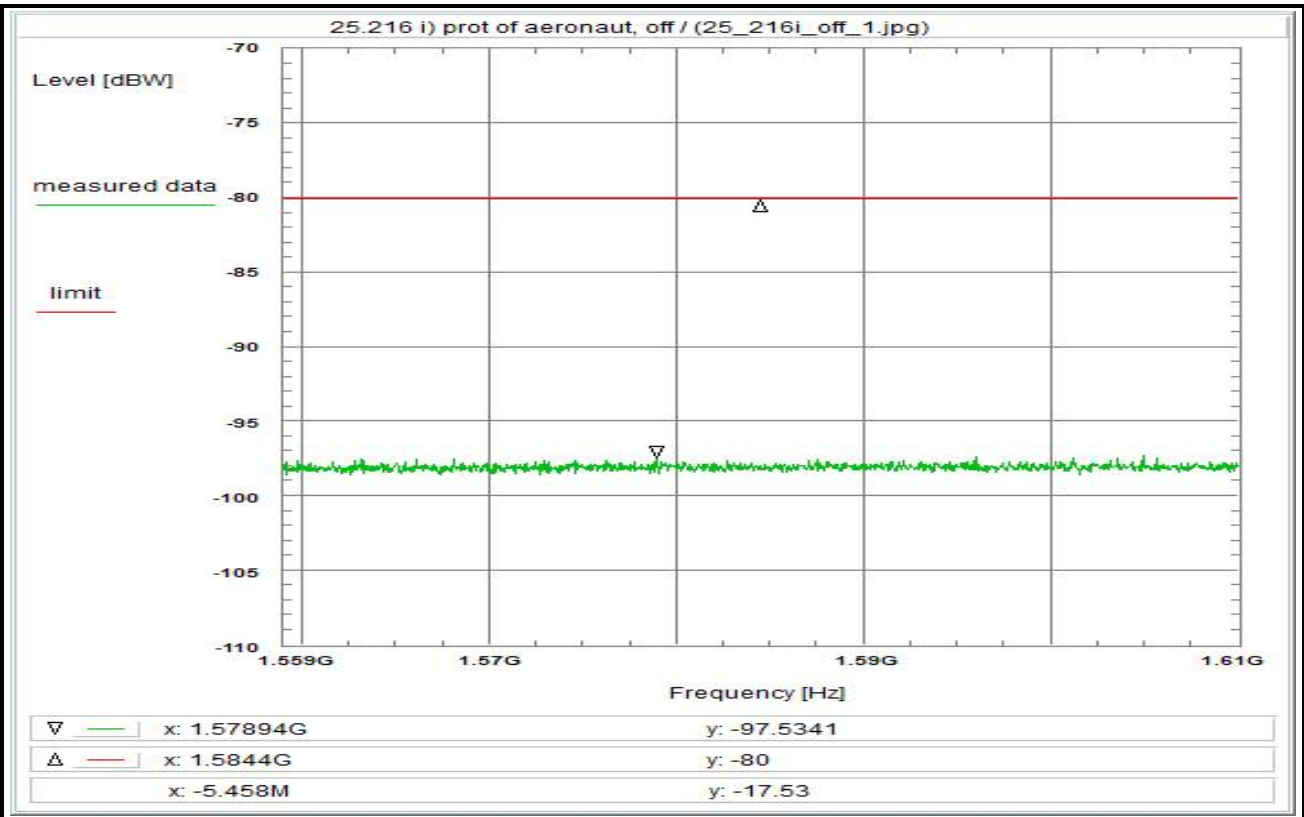
Remarks:

Carrier-on state / Carrier at the upper edge of the band (fh)
Measurement with 1 MHz resolution/video filter and RMS detector.

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 66 (70)



Subclause: 25.216 i) Protection of aeronautical radionavigation-satellite service
Carrier-off state, conducted measurement at the antenna-connector

Limit:
Limit according to 25.216 i): -80dBW/1MHz

The EIRP, averaged over any two-millisecond active transmission interval from the MESs in the carrier-off state shall not exceed the limit above.

Test results:
see plot (an explicit table was not generated)

Operating condition of DUT:
operating condition 2, see test report, operating conditions

Test setup:
see test report chapter 6.x: hgj

Test equipment:
see test report chapter 6.x: C220, R001, U312

Remark:

Test result: Test passed

Environment condition:

Date & Time: Fri 29/Nov/2019 13:27:50
Location: CTC advanced GmbH, Laboratory RCE-Sat
Temperature: 22 °C
Humidity: 45 %
Voltage: 24 Vdc

Setup of measurement equipment:

Start frequency: 1.559 GHz
Stop frequency: 1.61 GHz
Center frequency: 1.5845 GHz
Frequency span: 51 MHz
Resolution-BW: 1 MHz
Video-BW: 3 MHz
Input attenuation: 6 dB
Trace-Mode: Max-Hold
Detector-Mode: AVG

Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna (on-axis)	+ 6.0 dBi
Test antenna	+ 0.0 dB
BW correction factor	+ 0.0 dB
Atten. between HPA and feedhorn	+ 0.0 dB
Attenuation (U312)	+ 19.5 dB
Power Splitter + Cable	+ 6.7 dB
TOTAL CORRECTION:	+ 33.1 dB

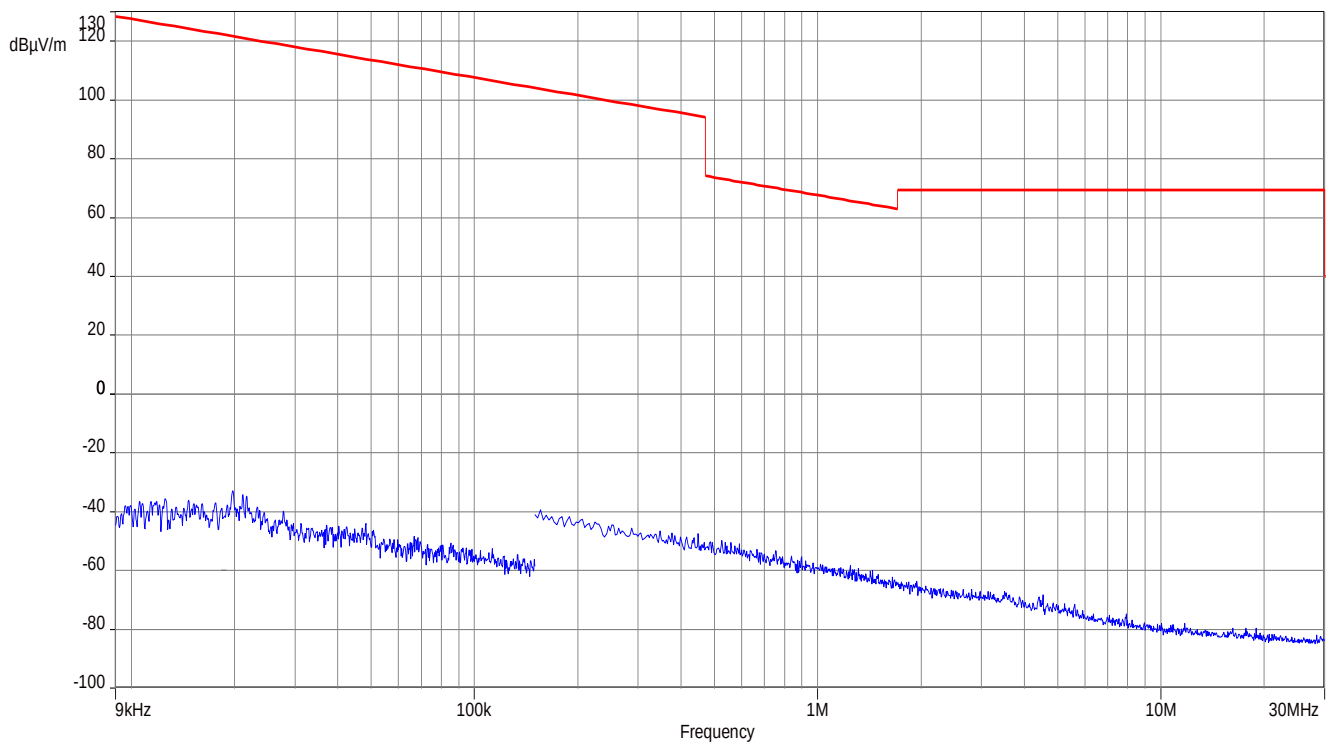
Remarks:

Carrier-off state.
Measurement with 1 MHz resolution filter and RMS detector.

For EIRP calculation:

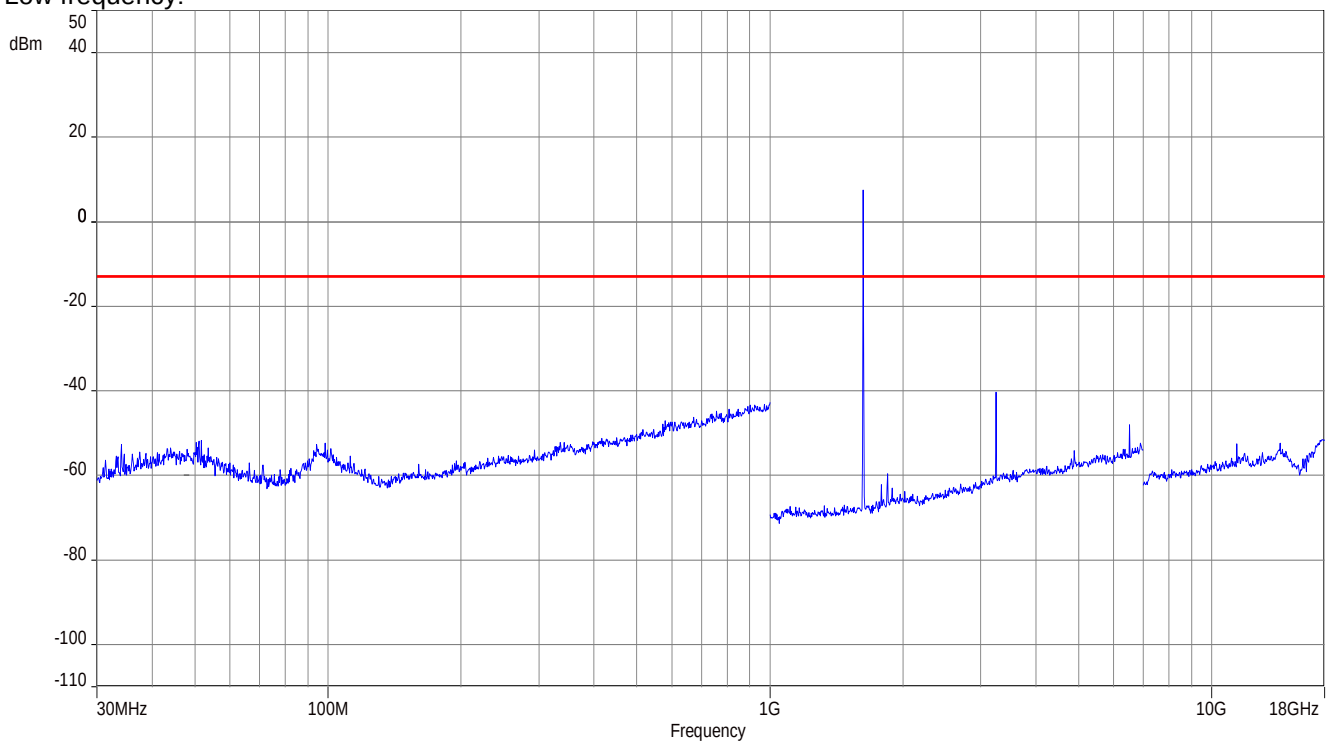
'worst-case' = maximum antenna gain

Plot No. 67 (70)



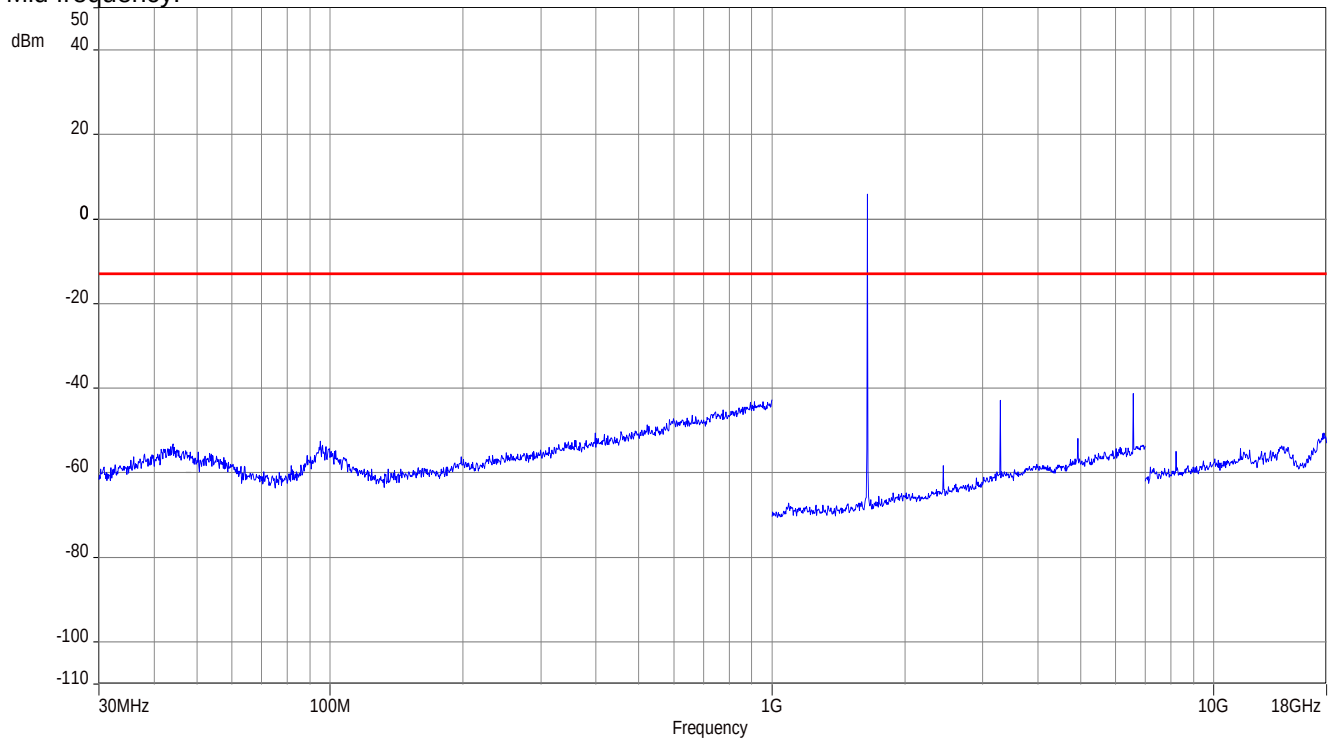
Plot No. 68 (70)

Low frequency:

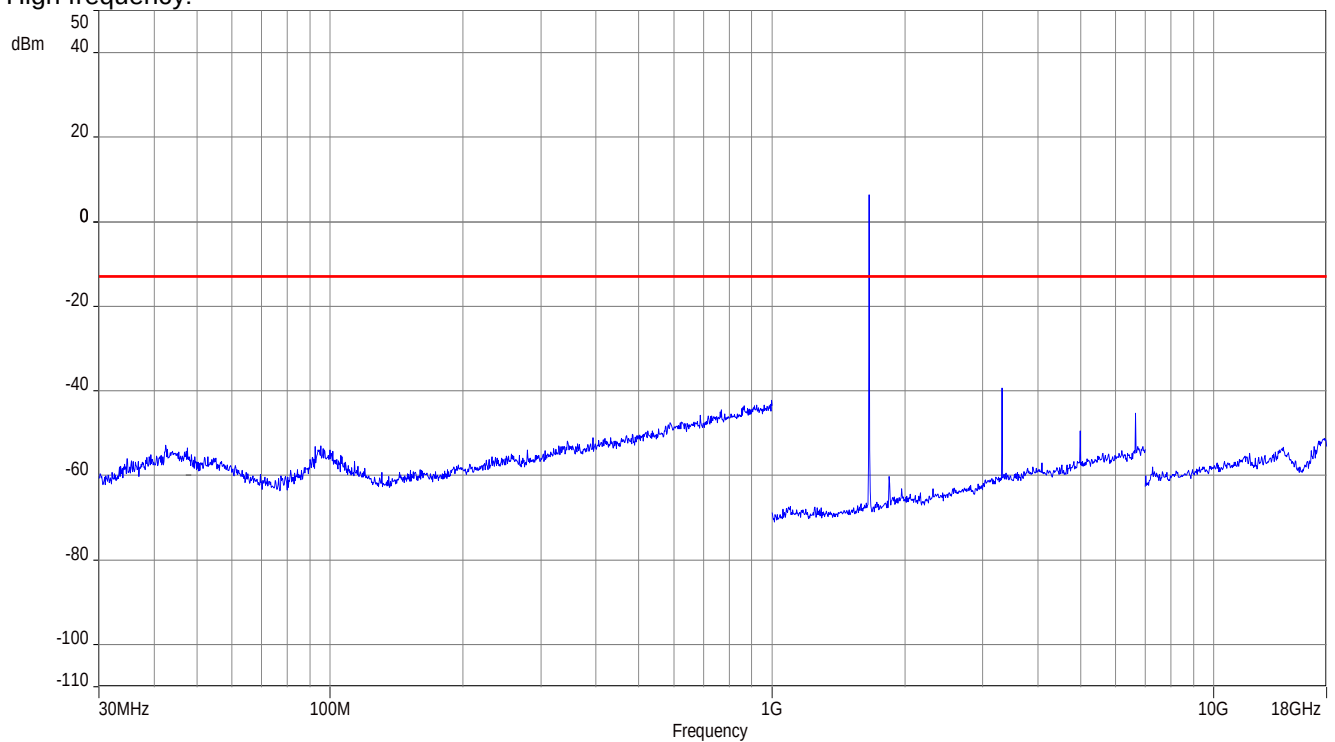


Plot No. 69 (70)

Mid frequency:

**Plot No. 70 (70)**

High frequency:



Document history

Version	Applied changes	Date of release
	Initial release	2020-01-06