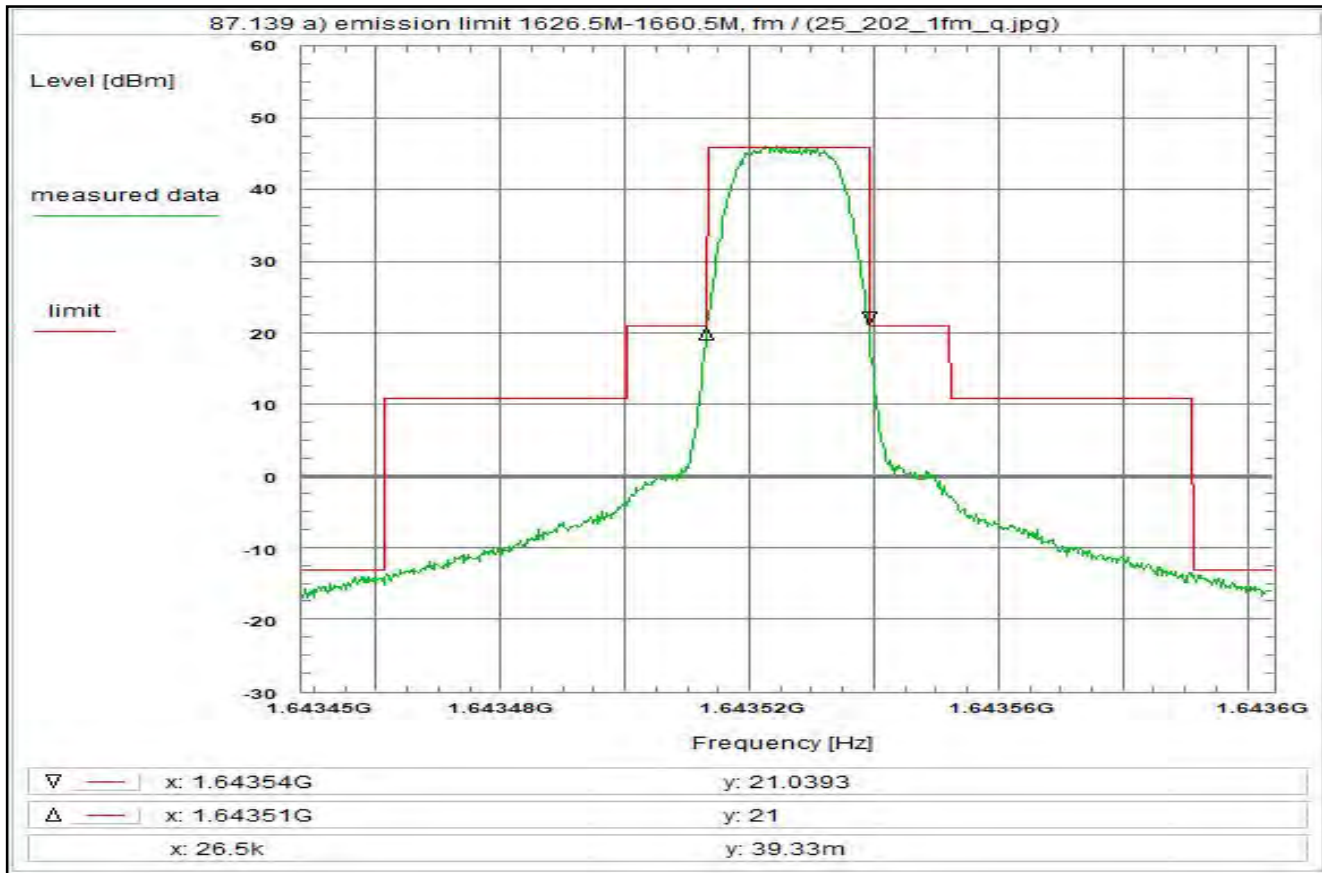


Plot No. 169



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T05QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 15:09:49  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643448 GHz  
Stop frequency: 1.643604 GHz  
Center frequency: 1.643526 GHz  
Frequency span: 156 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

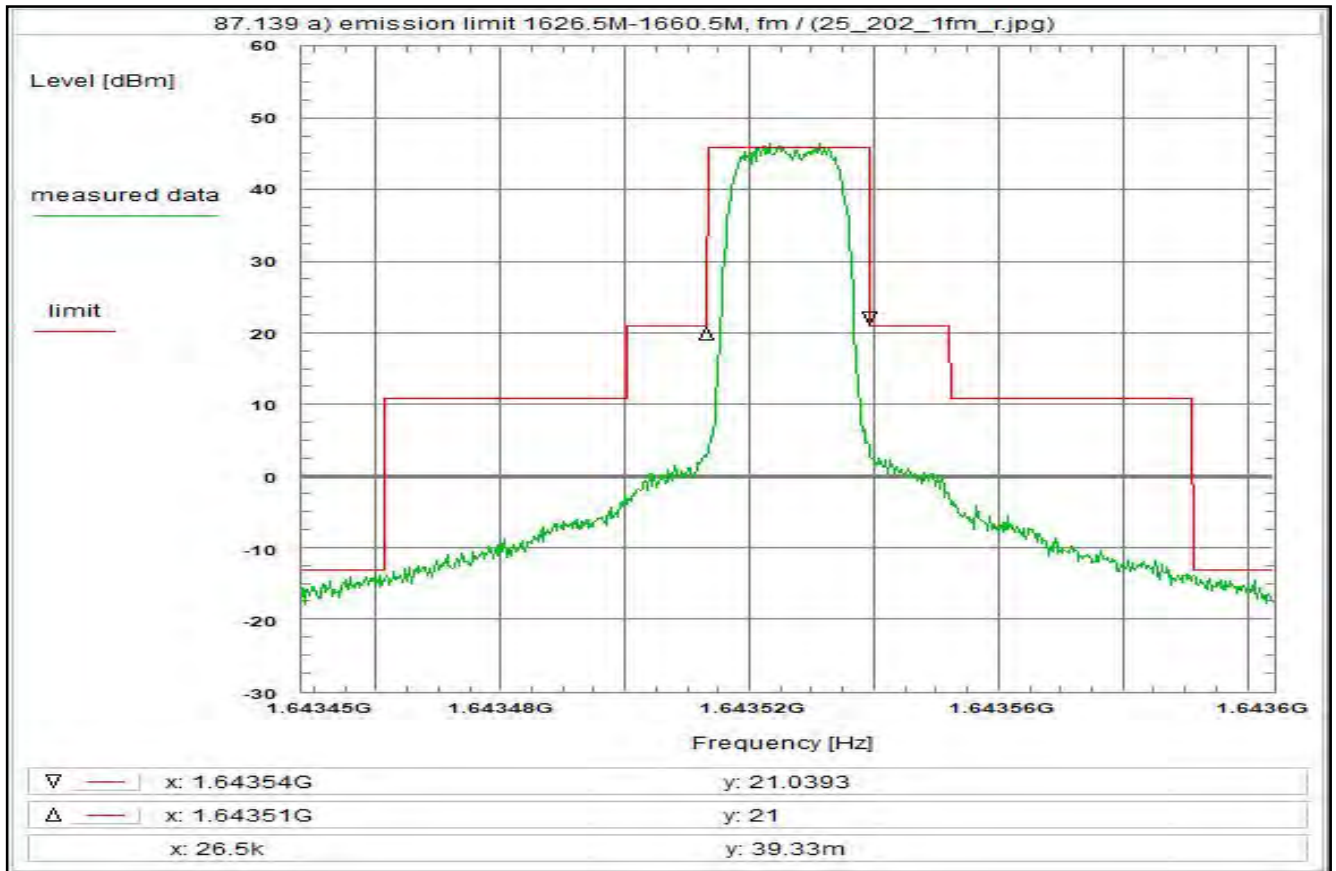
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 170



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T05QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 15:11:28  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643448 GHz  
Stop frequency: 1.643604 GHz  
Center frequency: 1.643526 GHz  
Frequency span: 156 kHz  
Resolution-BW: 1 kHz  
Video-BW: 3 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

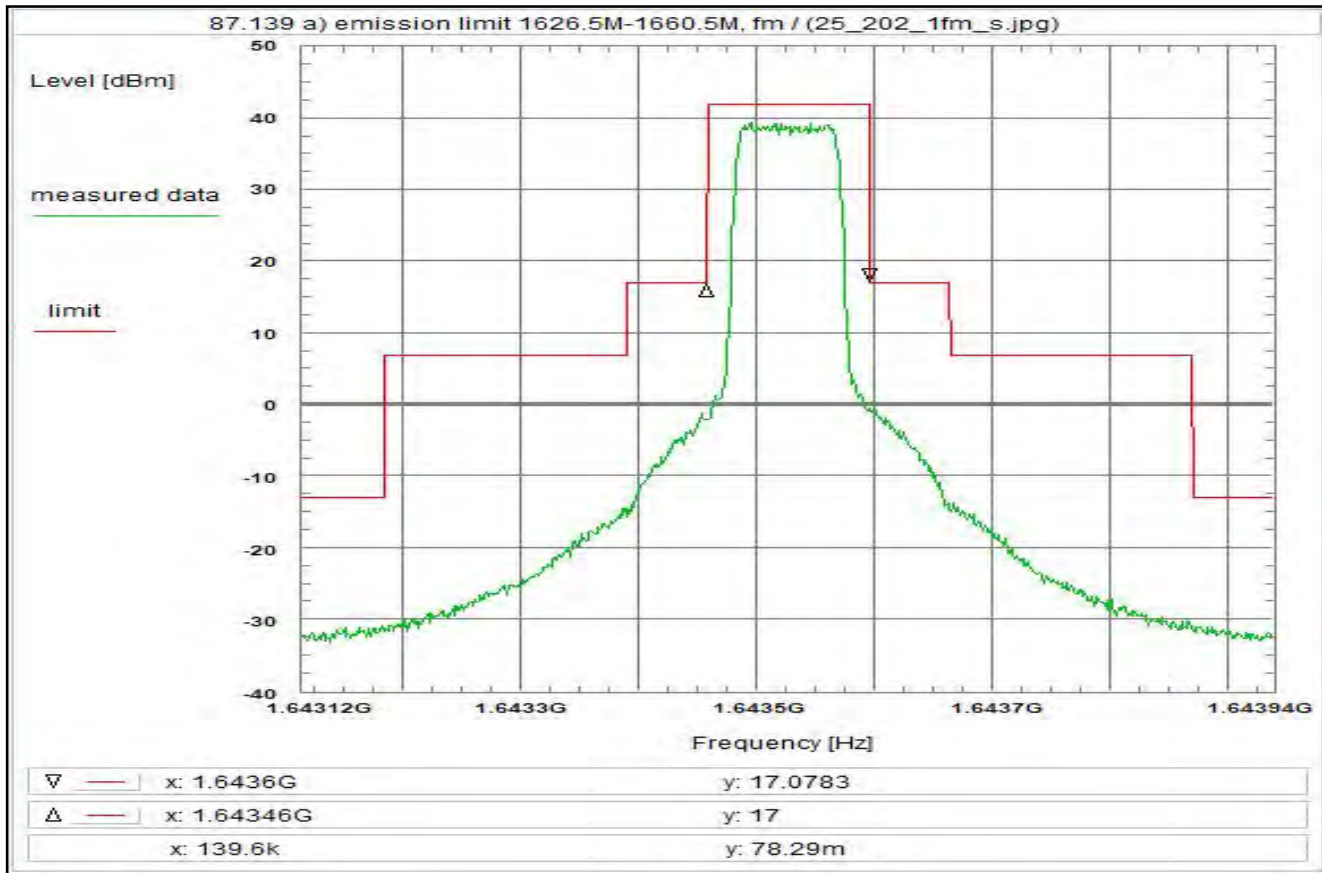
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (1k -> 4k)	+ 6.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 54.8 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 171



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T2.5X16

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 15:16:50  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643115 GHz  
Stop frequency: 1.643937 GHz  
Center frequency: 1.643526 GHz  
Frequency span: 822 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

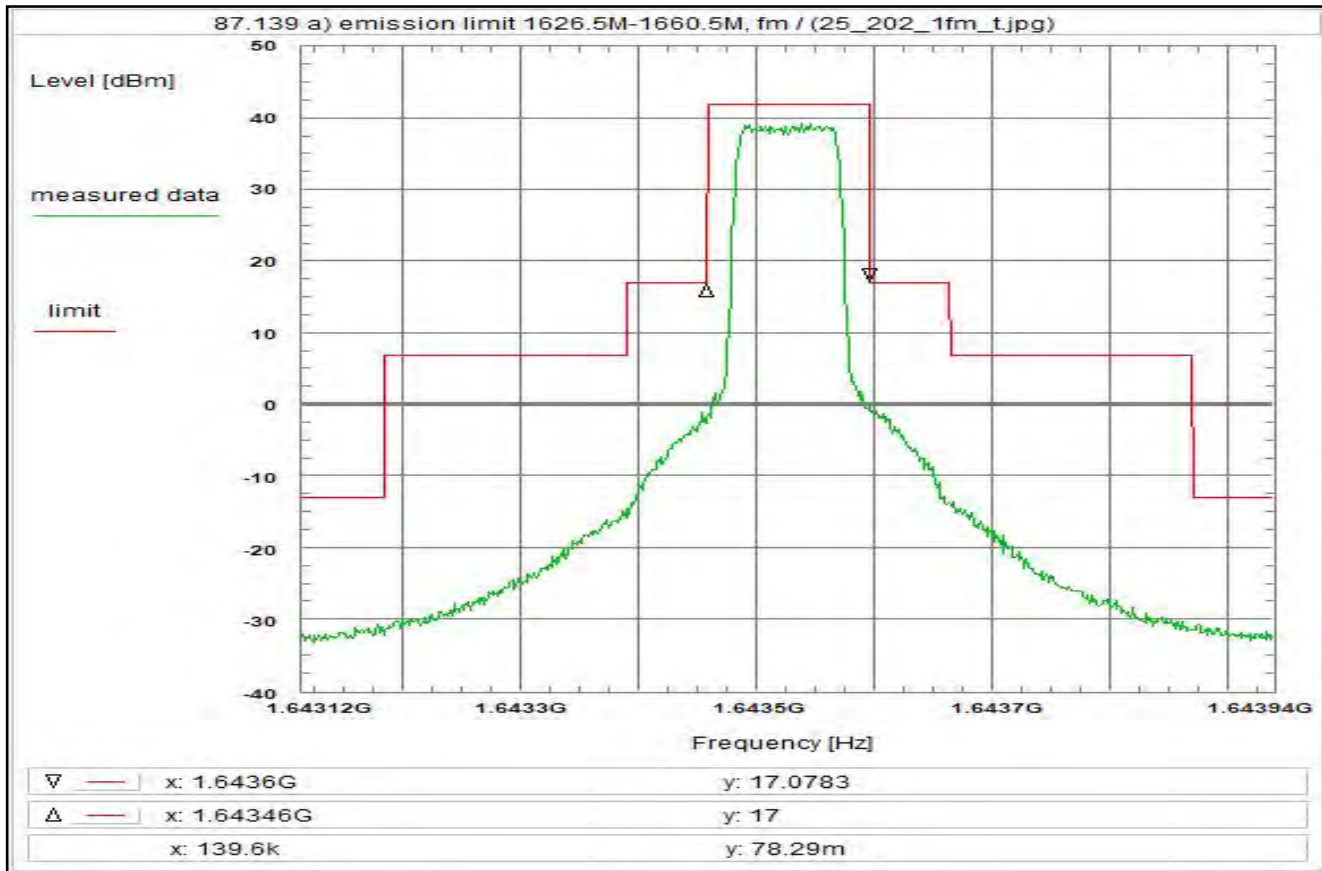
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 172



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T2.5X32

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 15:19:41  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643115 GHz  
Stop frequency: 1.643937 GHz  
Center frequency: 1.643526 GHz  
Frequency span: 822 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

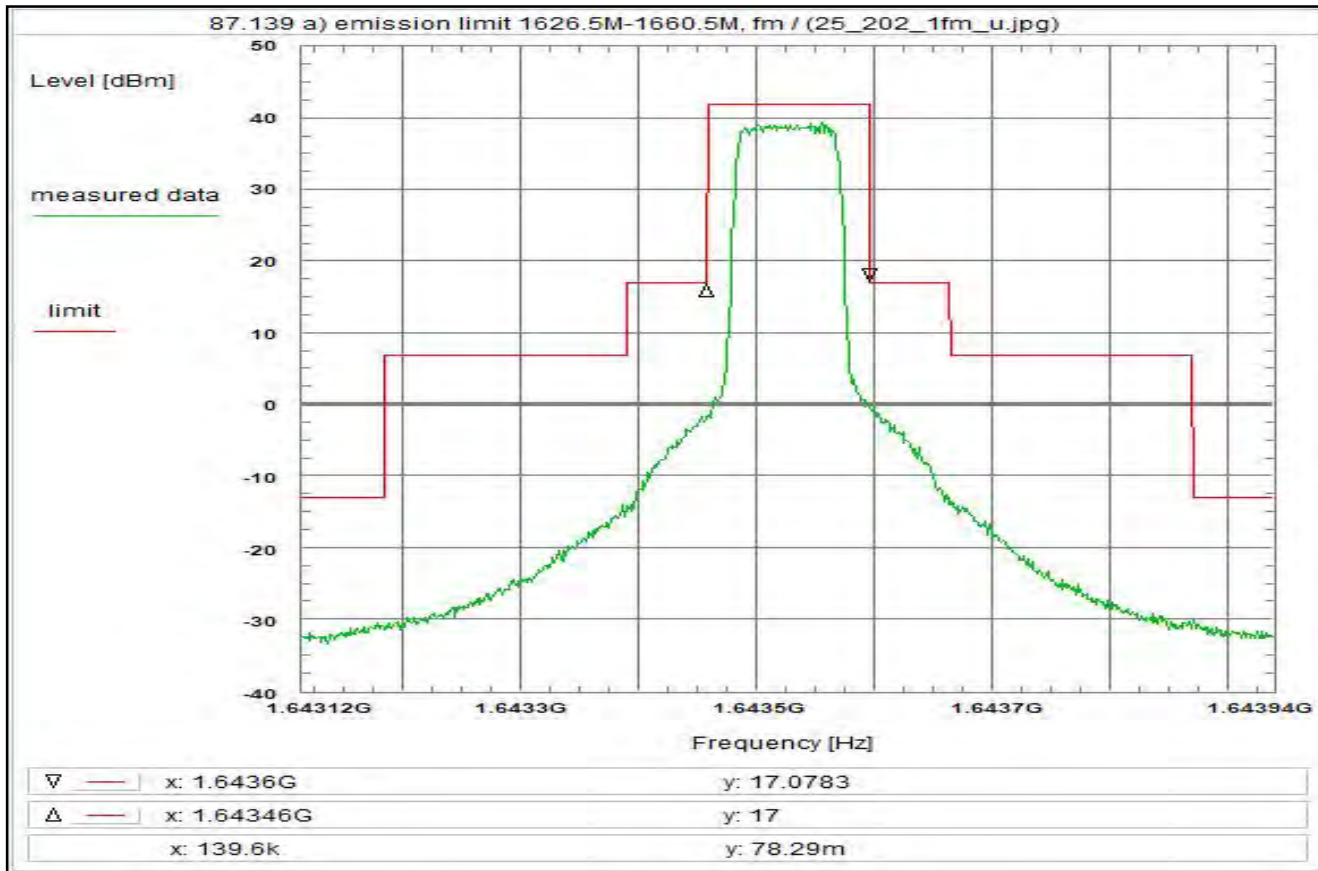
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 173



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T2.5X64

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 15:21:21  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643115 GHz  
Stop frequency: 1.643937 GHz  
Center frequency: 1.643526 GHz  
Frequency span: 822 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

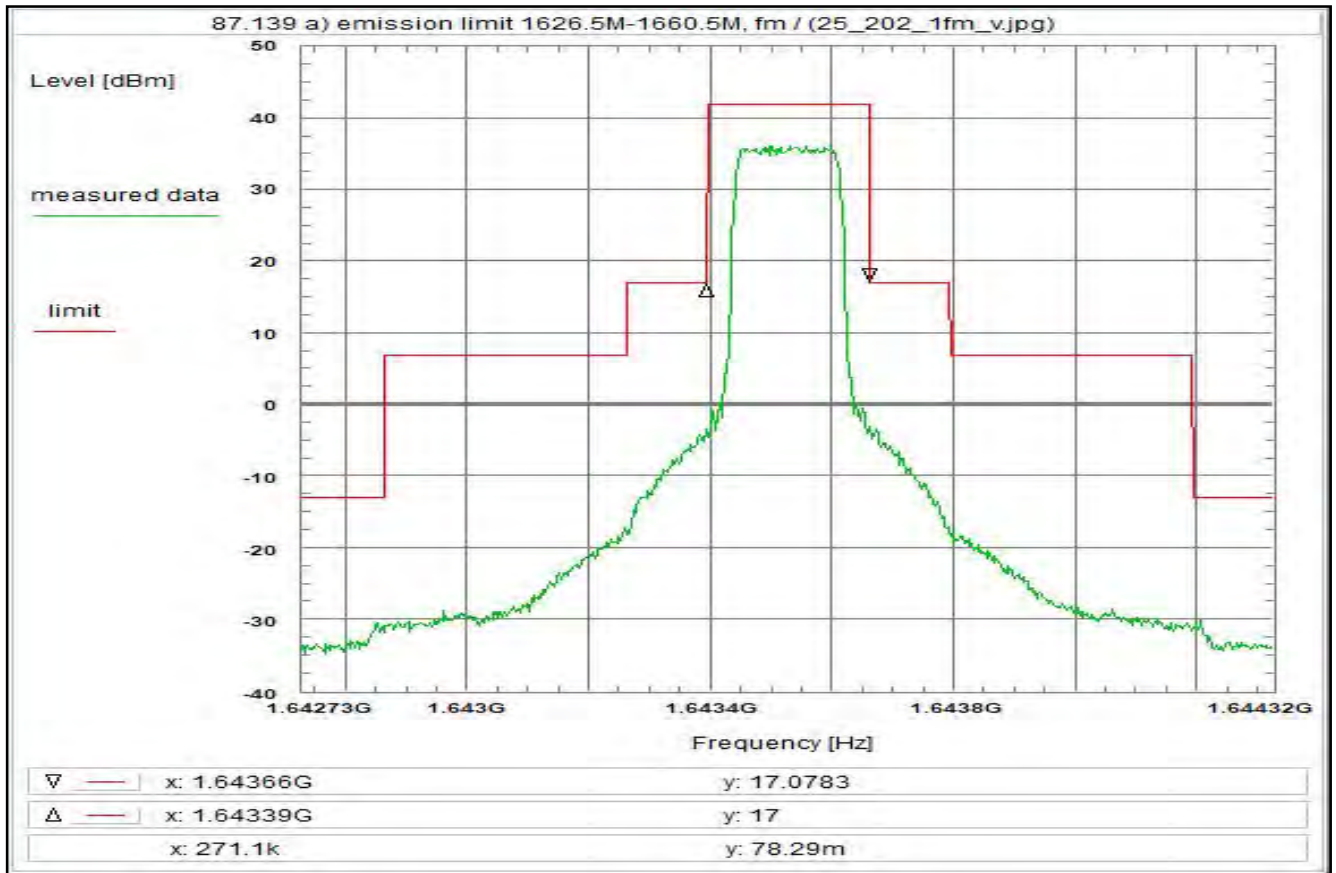
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth



Plot No. 174



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T5X16

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 15:29:07  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642728 GHz  
Stop frequency: 1.644324 GHz  
Center frequency: 1.643526 GHz  
Frequency span: 1.596 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

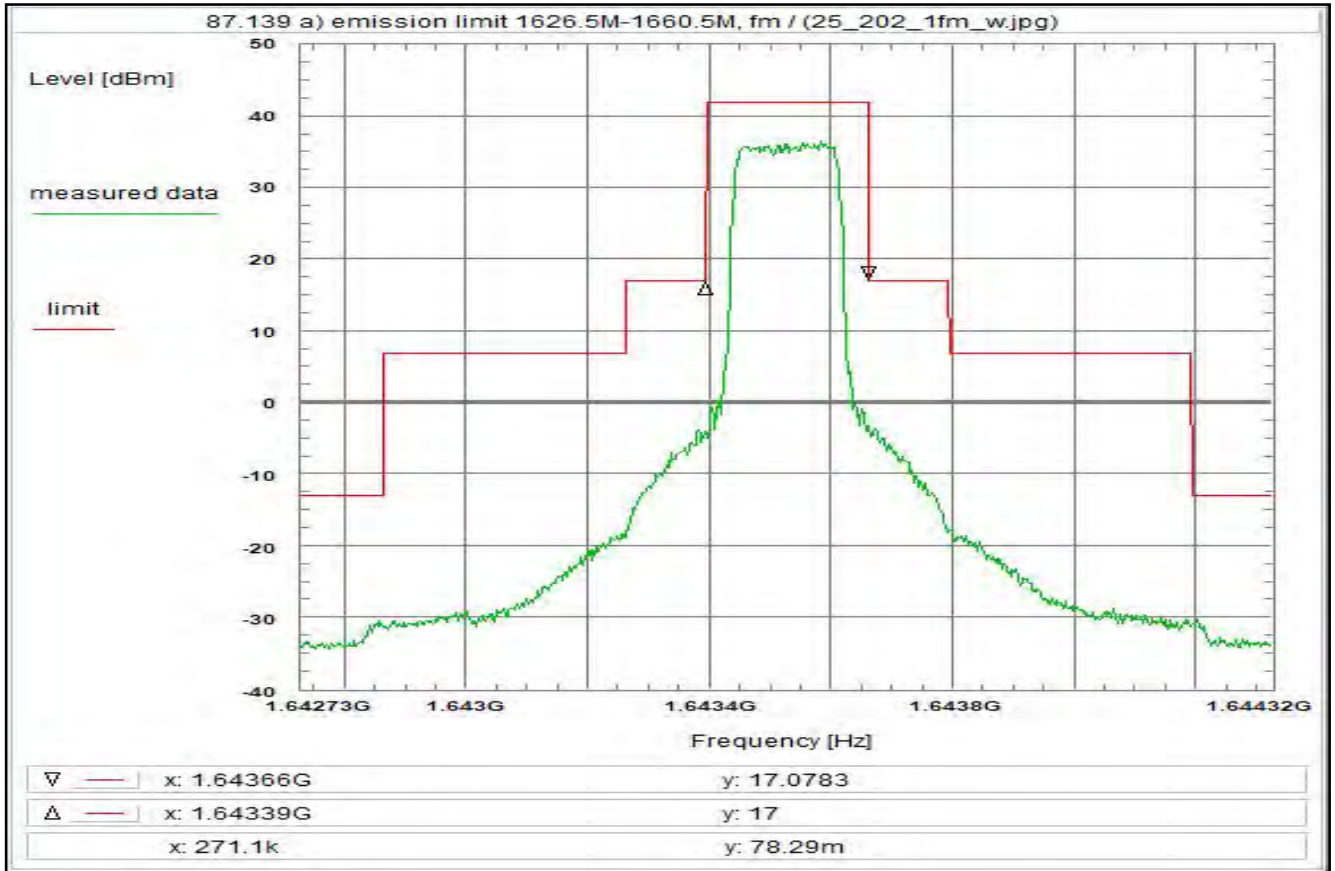
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 175



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T5X32

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30Jun/2020 15:30:42  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642728 GHz  
Stop frequency: 1.644324 GHz  
Center frequency: 1.643526 GHz  
Frequency span: 1.596 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

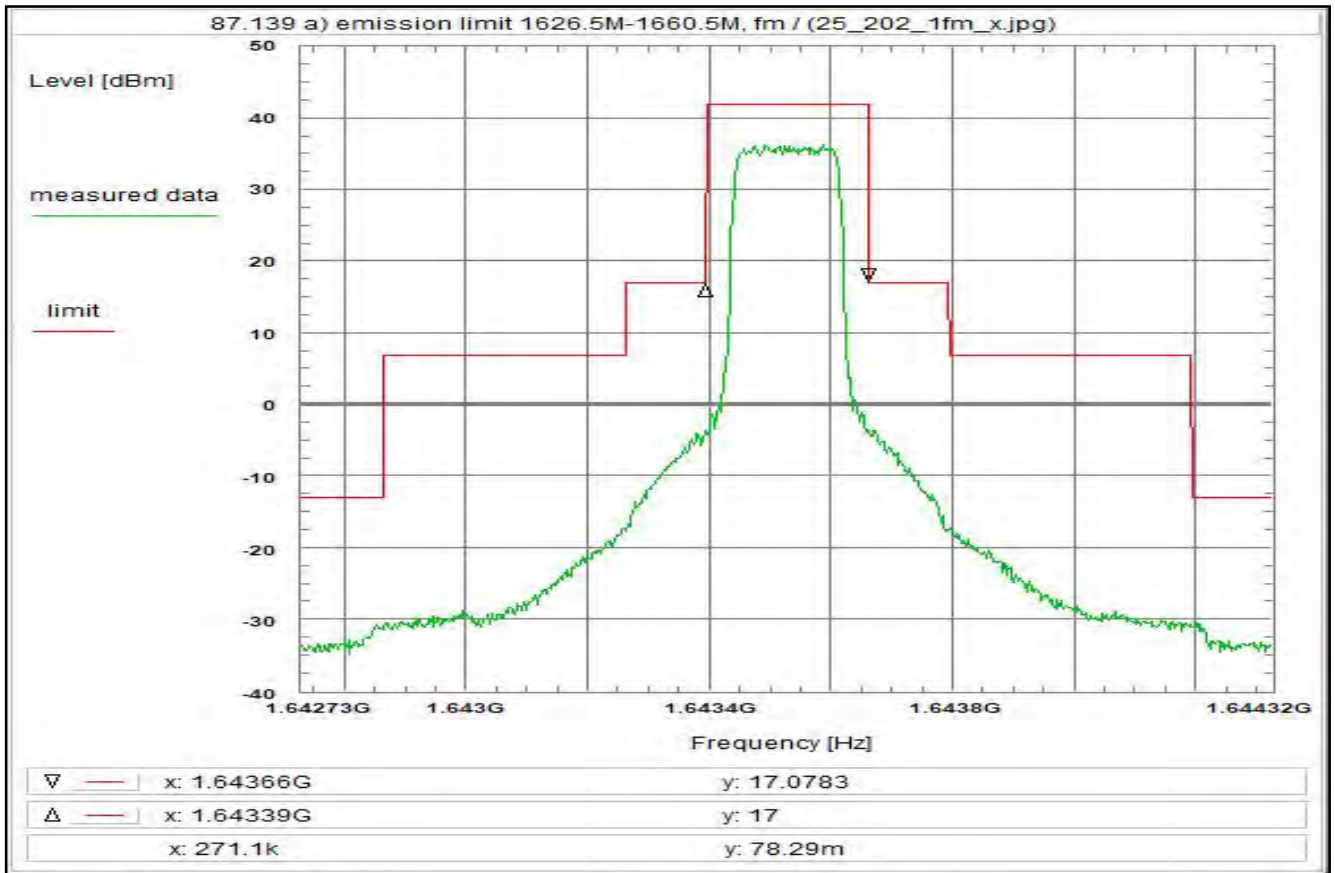
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 176



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T5X64

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30Jun/2020 15:31:26  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642728 GHz  
Stop frequency: 1.644324 GHz  
Center frequency: 1.643526 GHz  
Frequency span: 1.596 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

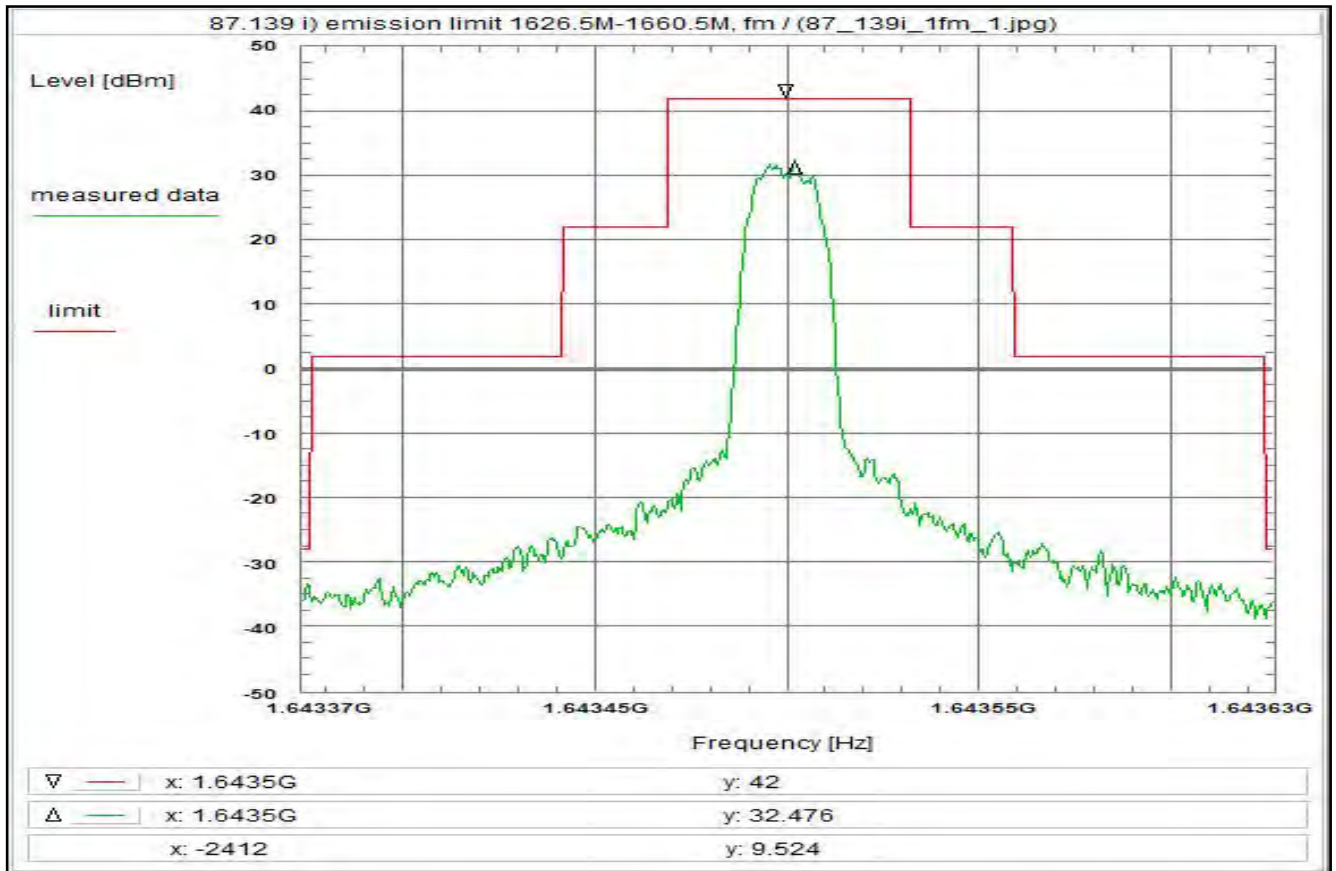
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth



Plot No. 177



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T0.5QD, 16.8 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U312, U311

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:11:54  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643374 GHz  
Stop frequency: 1.643626 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 252 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dB  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

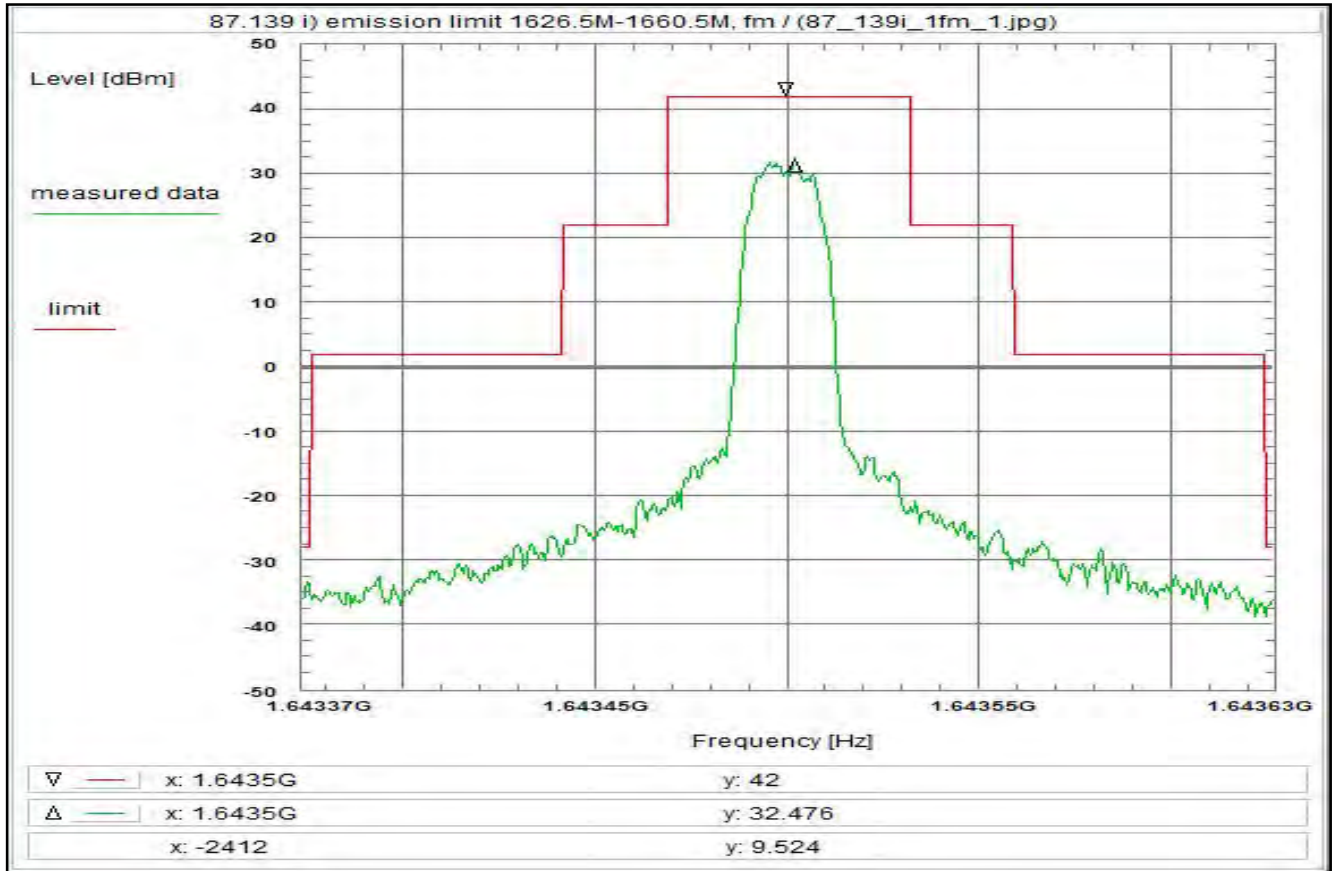
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 178



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T0.5QD, 16.8 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:11:54  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643374 GHz  
Stop frequency: 1.643626 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 252 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dB  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

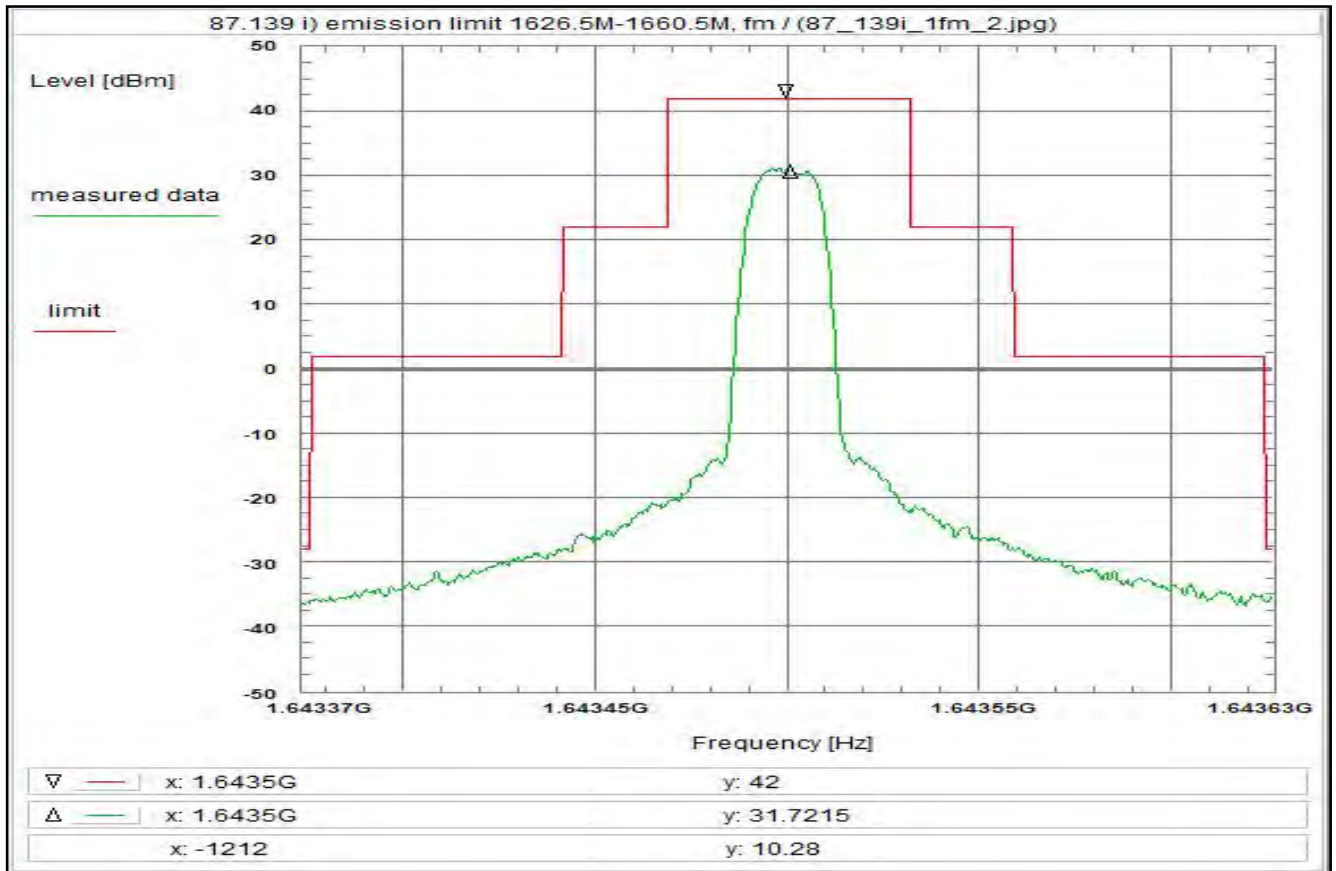
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 179



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T0.5QD, 16.8 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:15:50  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643374 GHz  
Stop frequency: 1.643626 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 252 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: Sample

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dB  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

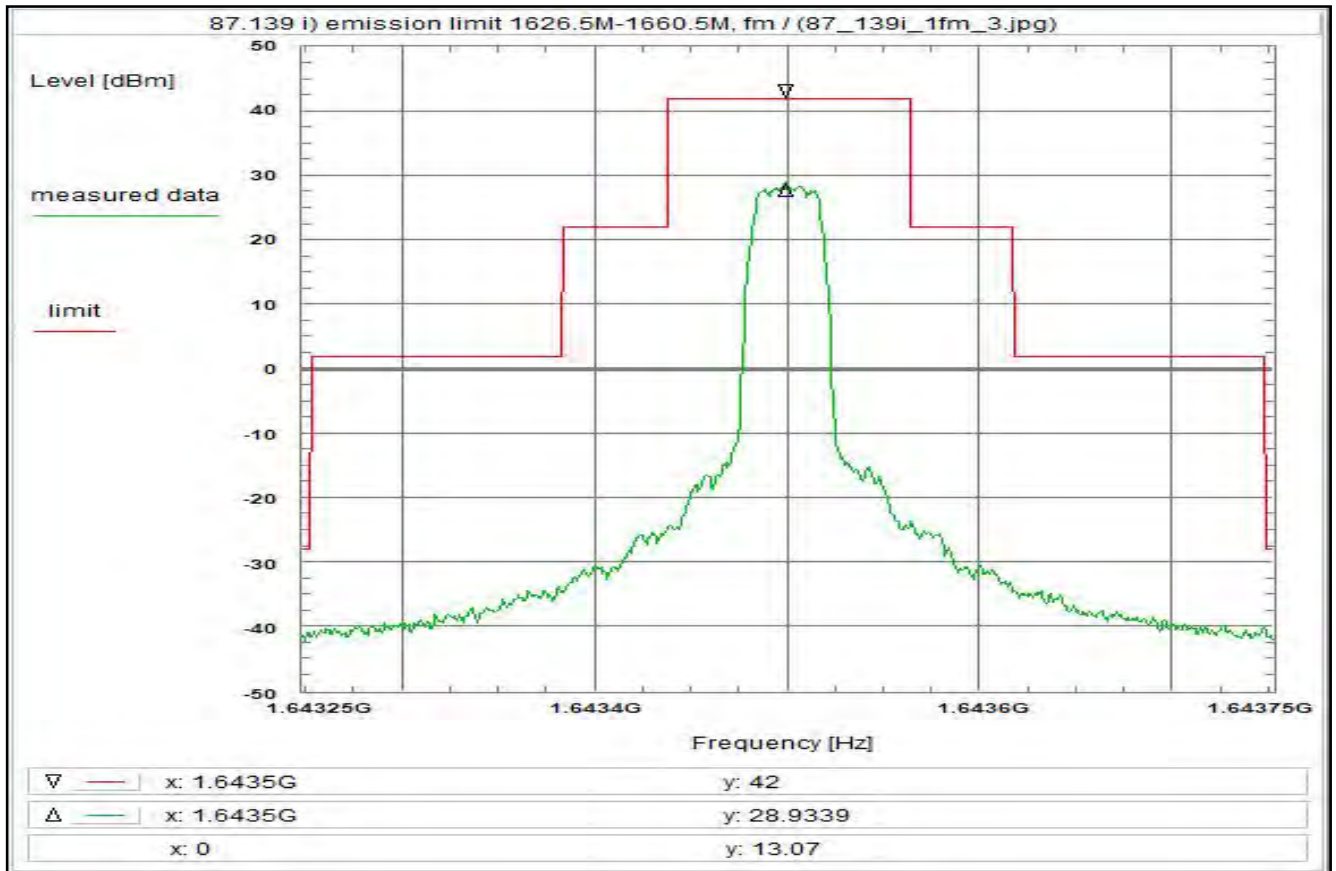
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 180



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T1XD/R20T1QD, 33.6 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:19:14  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643248 GHz  
Stop frequency: 1.643752 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 504 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

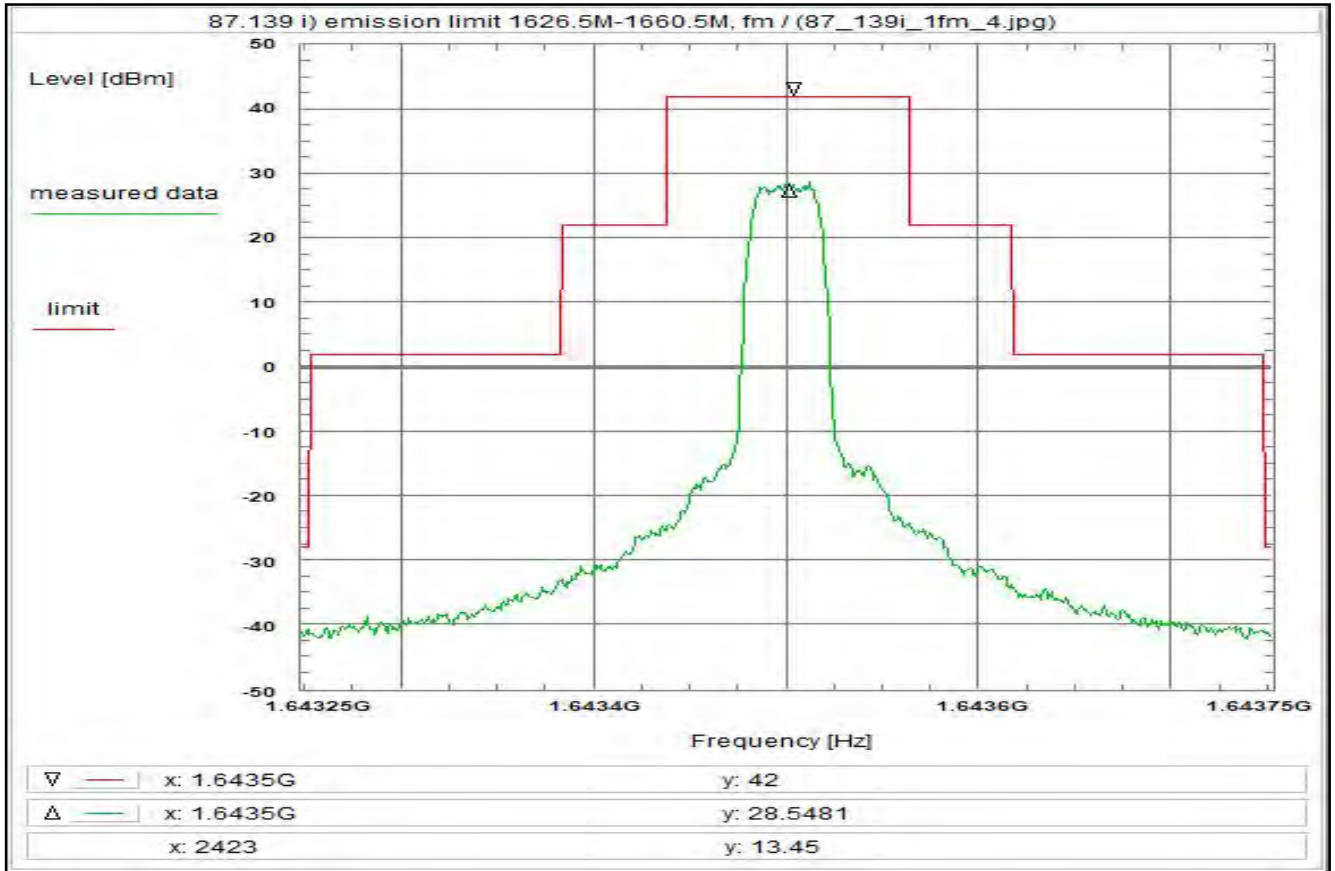
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 181



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T1XD/R20T1QD, 33.6 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:25:02  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643248 GHz  
Stop frequency: 1.643752 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 504 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:

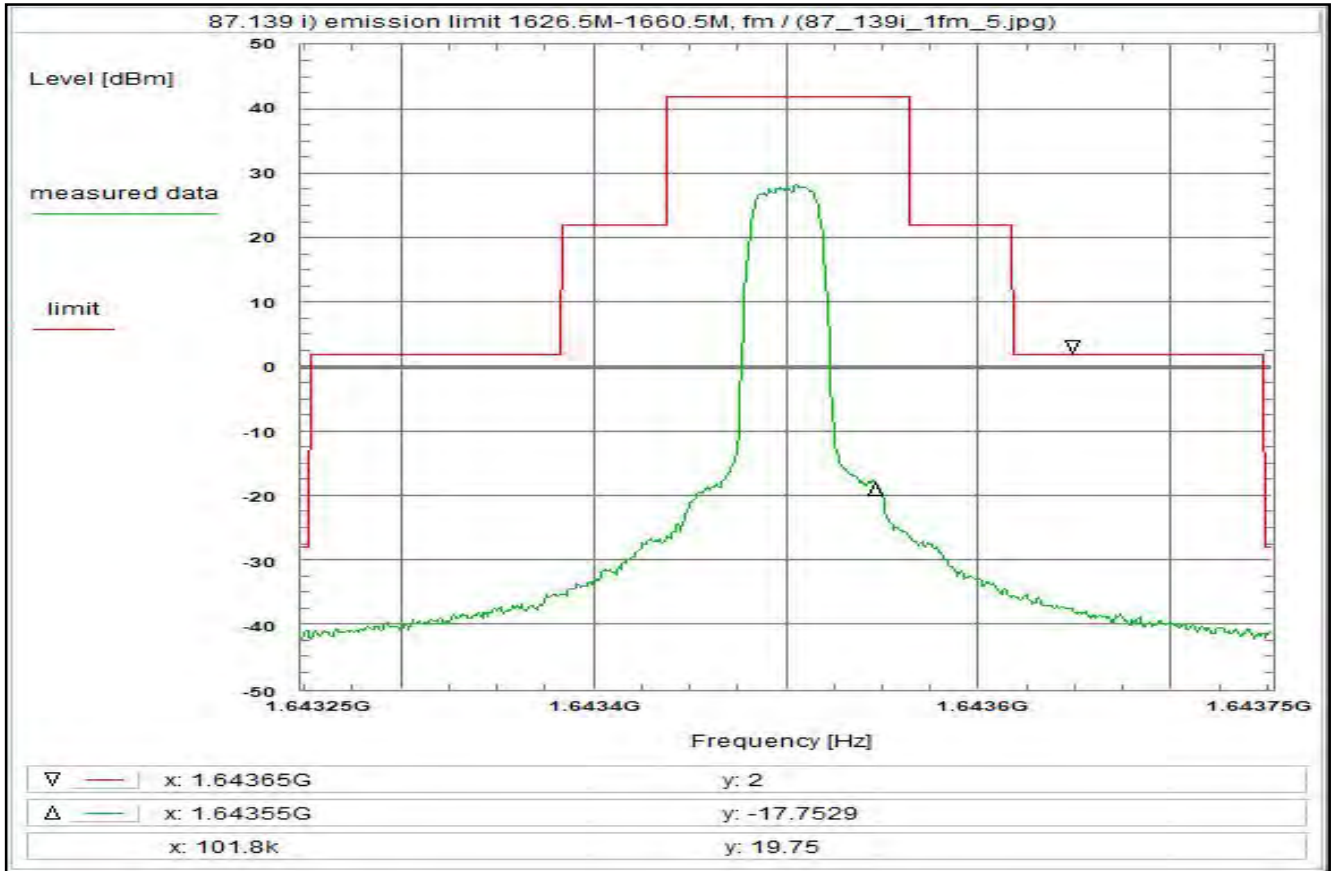
Carrier-on state / Carrier in the middle of the band (fm)

For EIRP calculation:

'worst-case' = maximum antenna gain



Plot No. 182



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T1QD/R80T1Q, 33.6 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:28:09  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643248 GHz  
Stop frequency: 1.643752 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 504 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

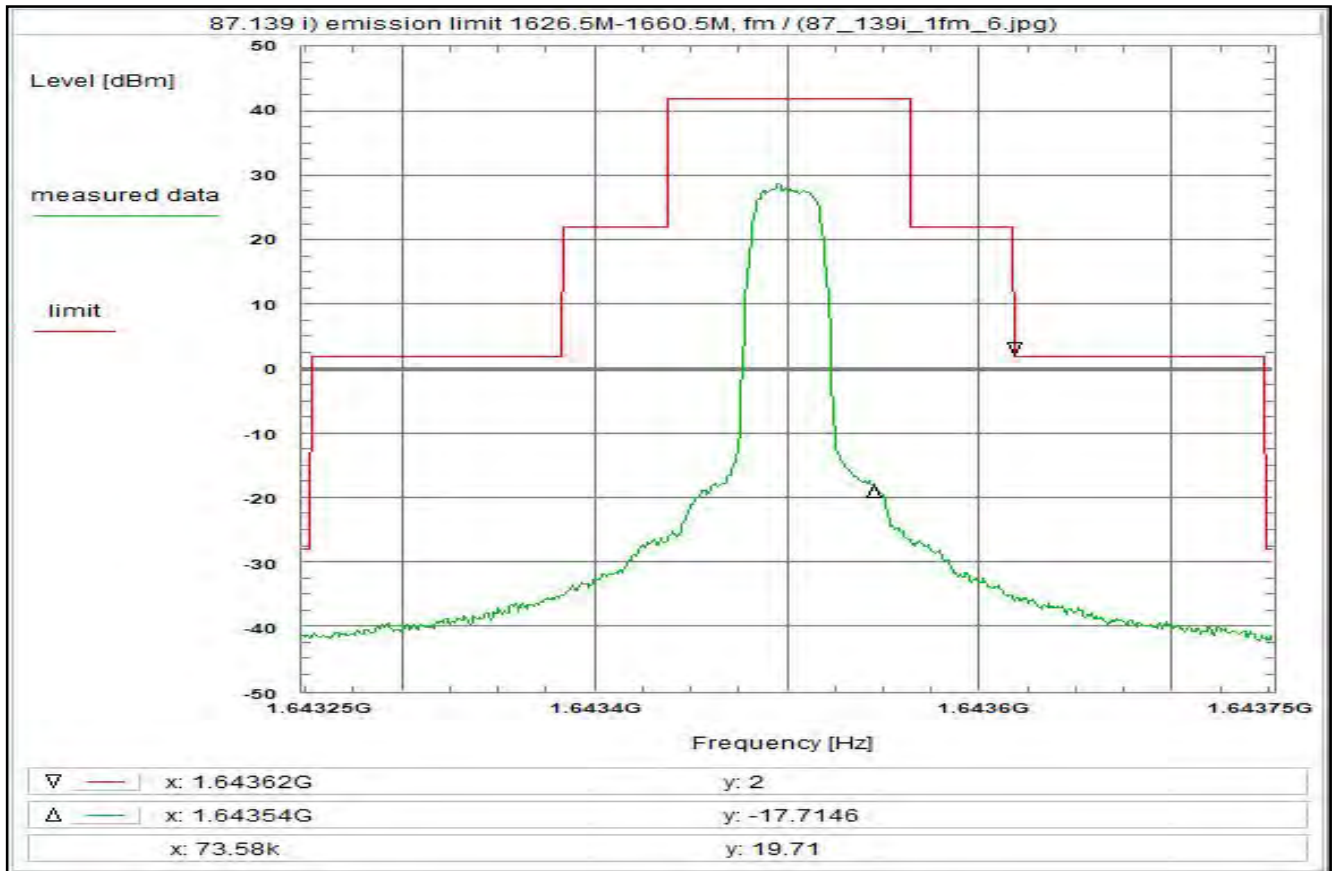
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 183



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T1QD/R80T1Q, 33.6 ksym/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:31:01  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643248 GHz  
Stop frequency: 1.643752 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 504 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

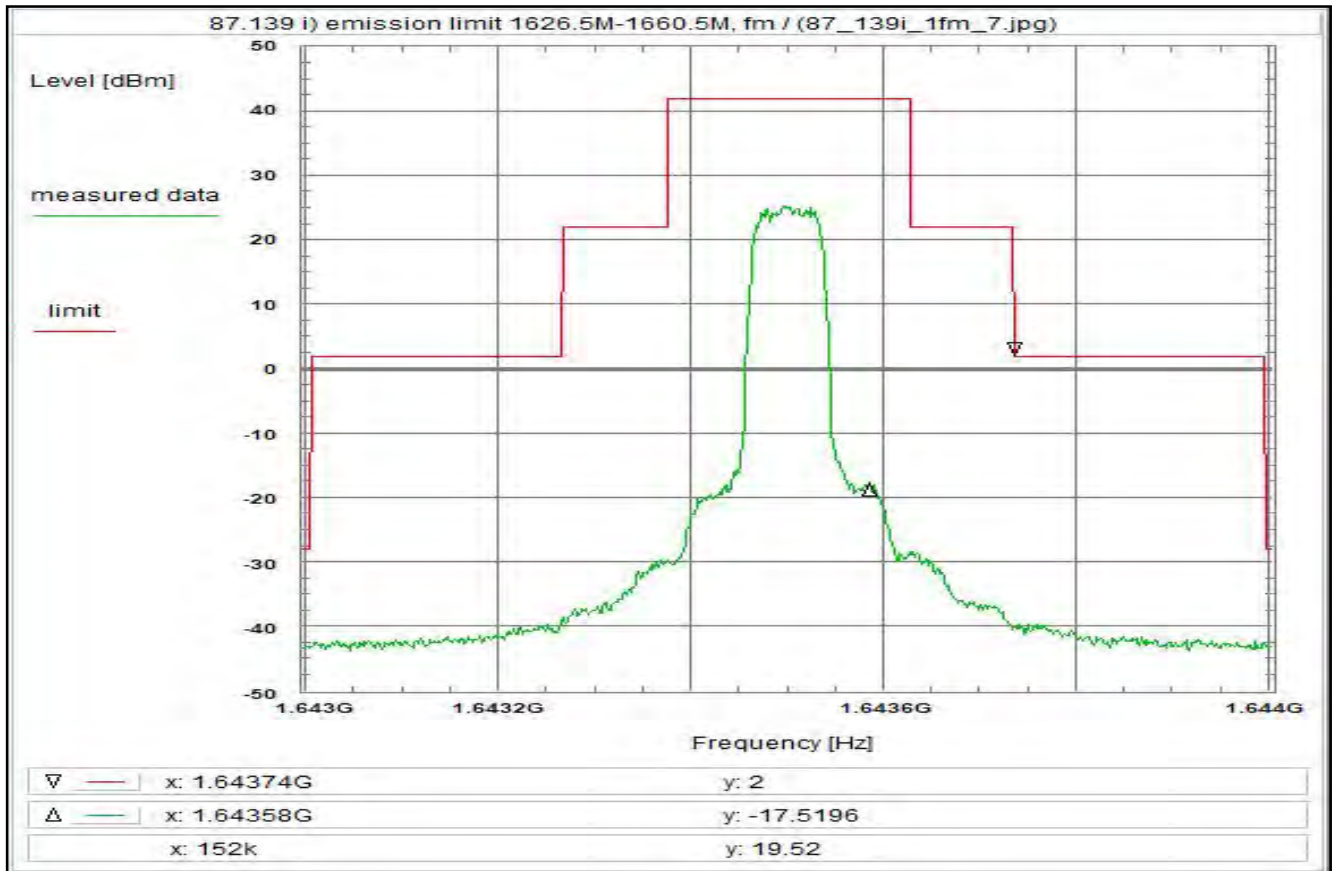
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 184



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T2XD/R20T2XD, 67.2 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:35:48  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642996 GHz  
Stop frequency: 1.644004 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 1.008 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

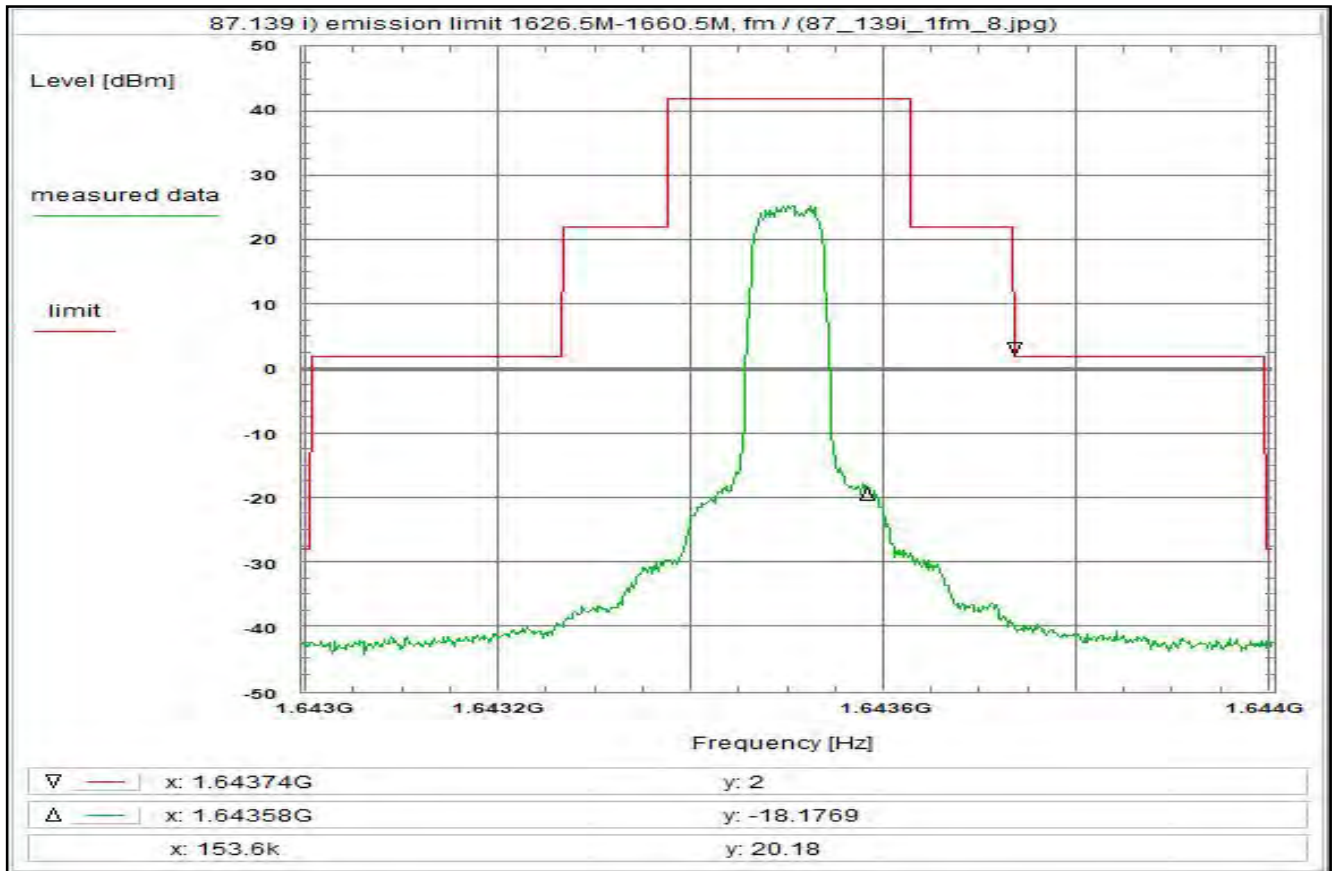
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 185



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T2XD/R20T2XD, 67.2 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:39:02  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642996 GHz  
Stop frequency: 1.644004 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 1.008 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

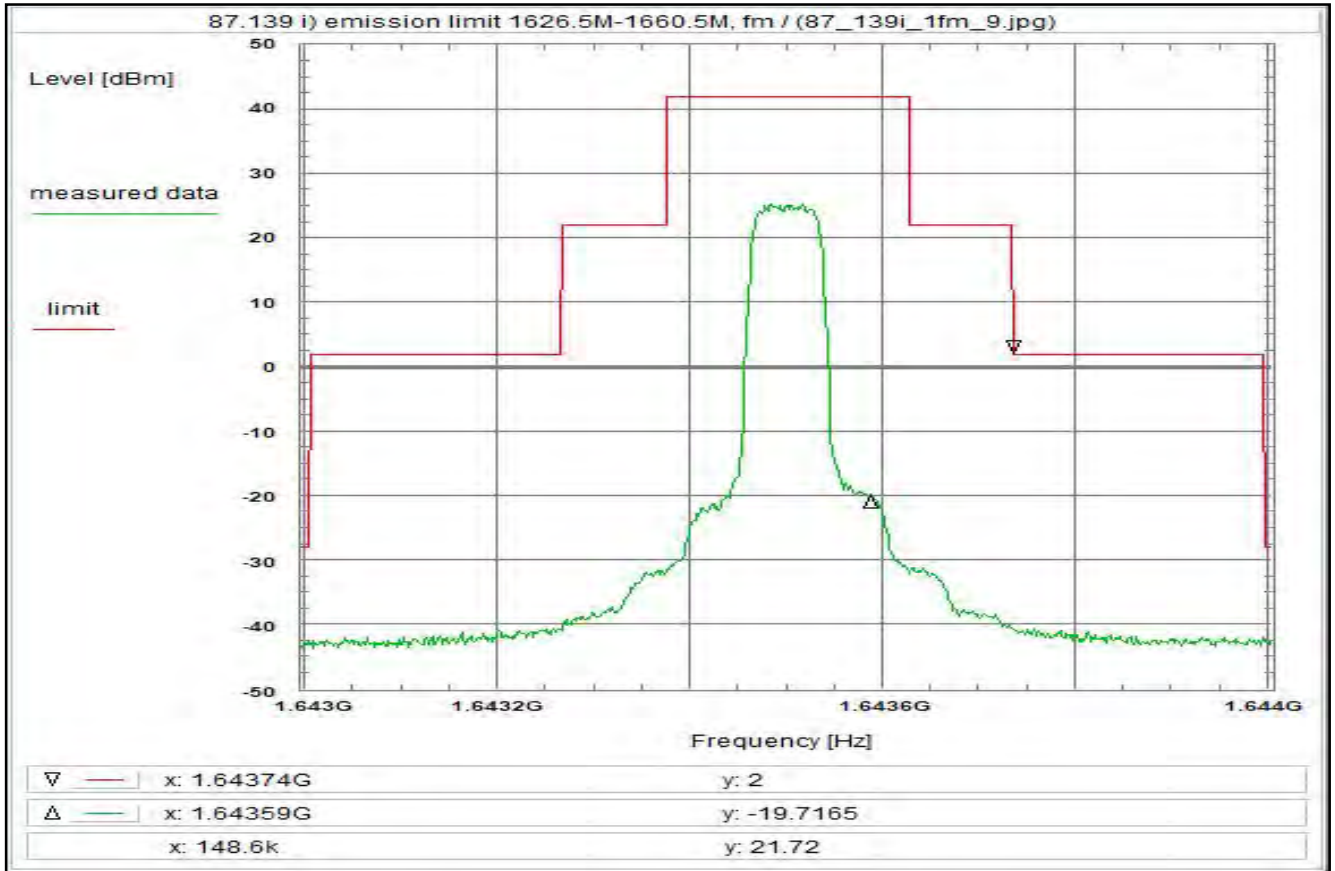
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 186



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T2QD/R20T2QD, 67.2 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:49:22  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642996 GHz  
Stop frequency: 1.644004 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 1.008 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dB  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:

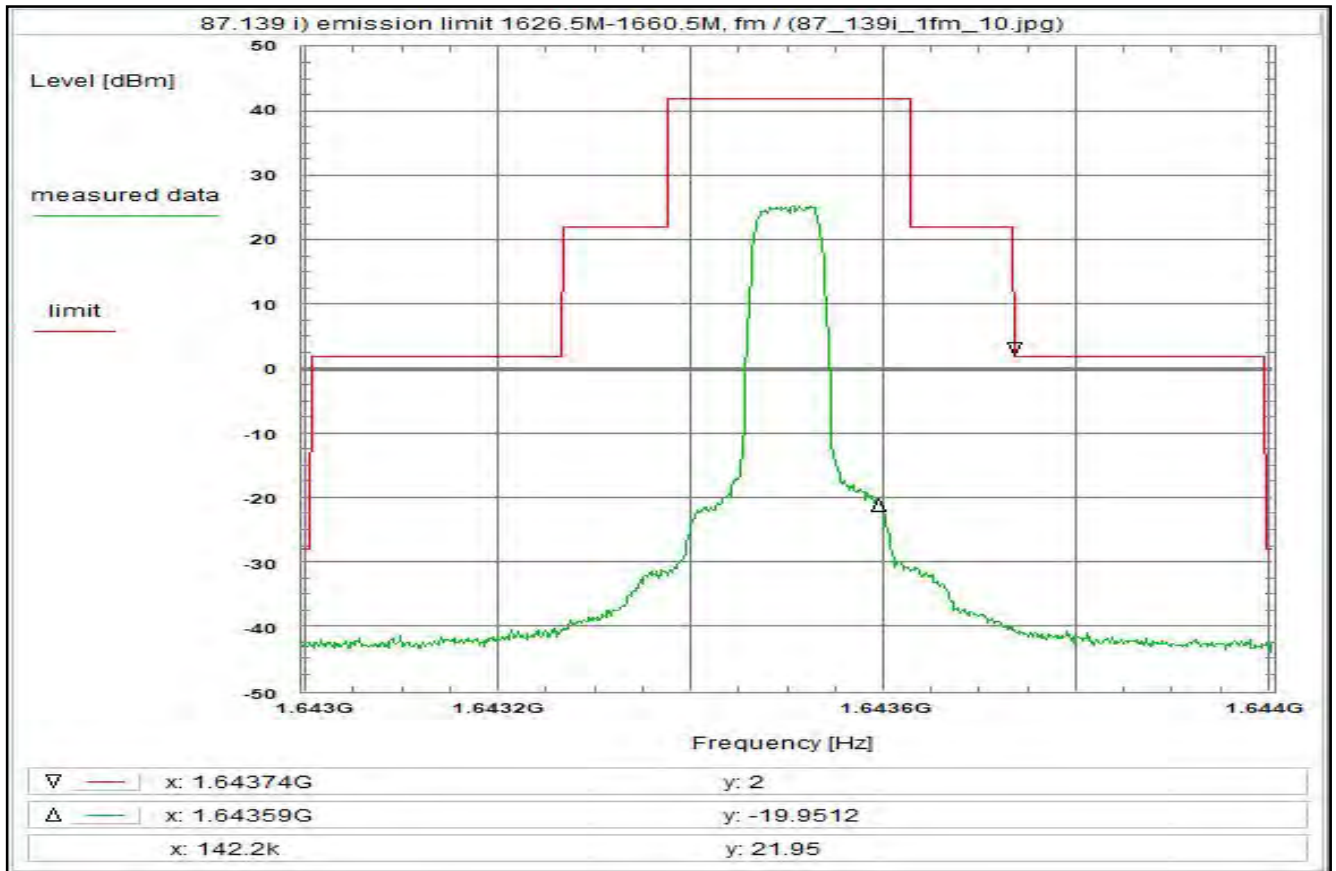
Carrier-on state / Carrier in the middle of the band (fm)

For EIRP calculation:

'worst-case' = maximum antenna gain



Plot No. 187



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T2QD/R20T2QD, 67.2 ksym/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:52:43  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642996 GHz  
Stop frequency: 1.644004 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 1.008 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

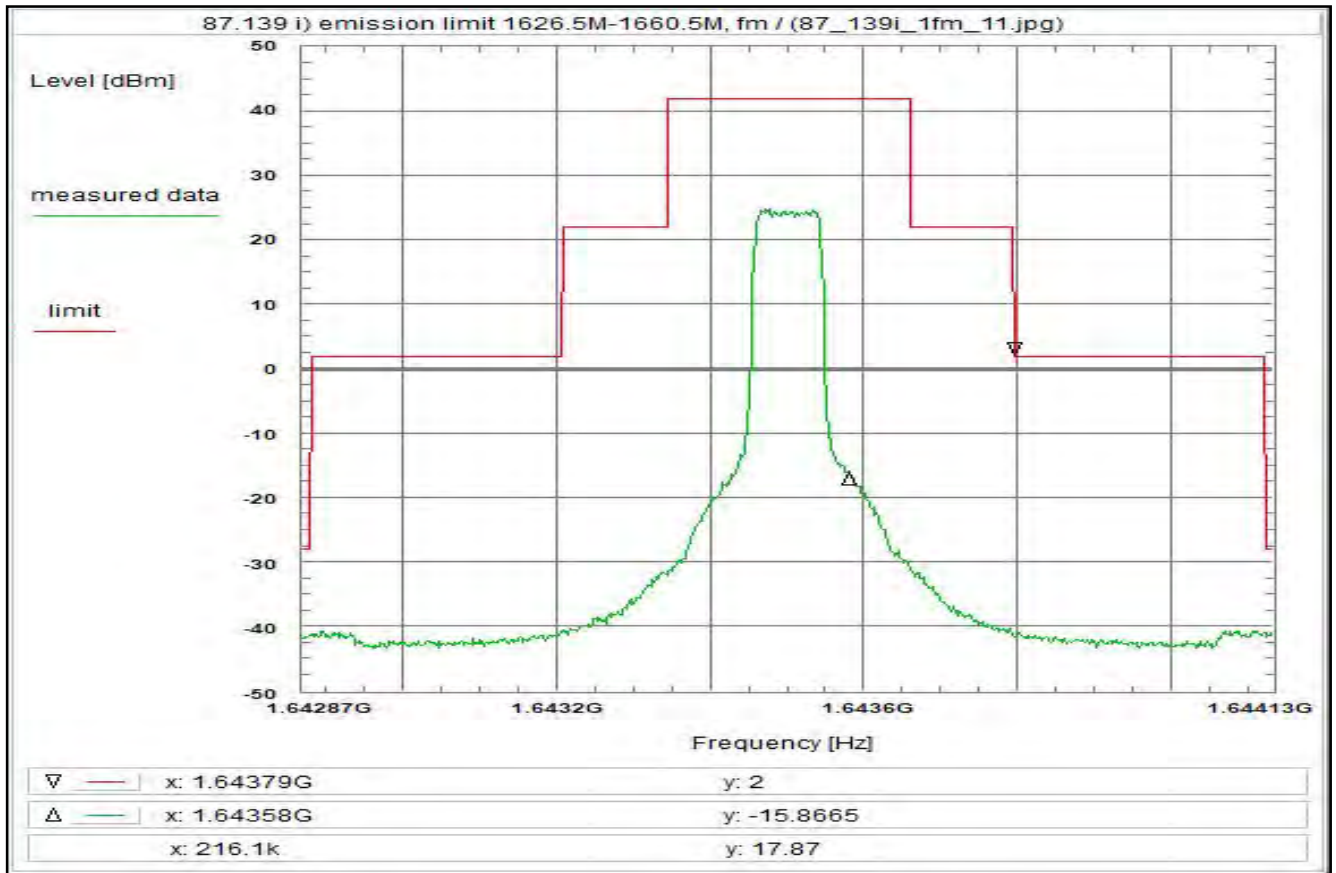
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 188



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T2.5X16, 84 ksymbols/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:58:07  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.64287 GHz  
Stop frequency: 1.64413 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 1.26 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

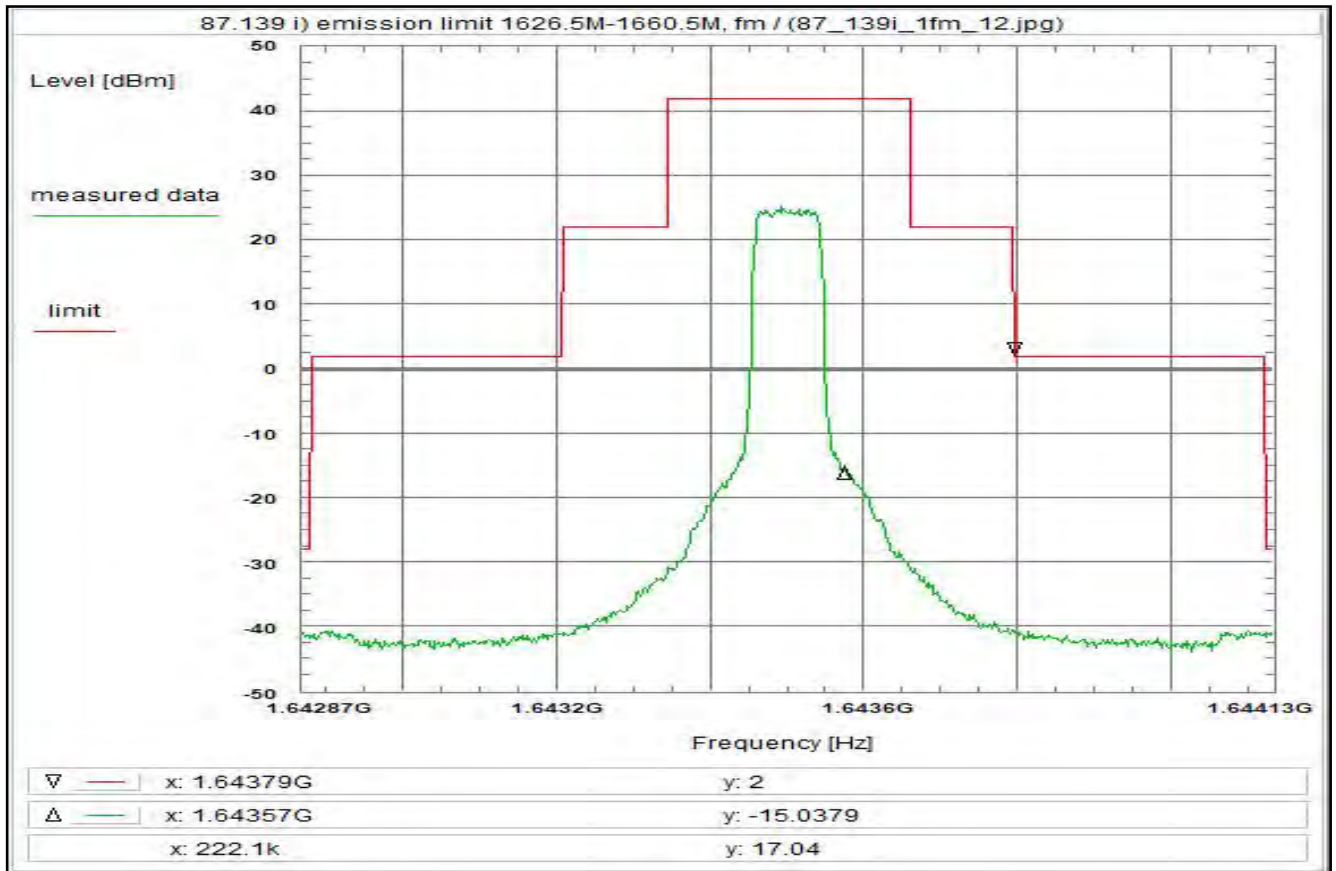
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 189



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T2.5X32, 84 ksymbols/s, 32QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:01:01  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.64287 GHz  
Stop frequency: 1.64413 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 1.26 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

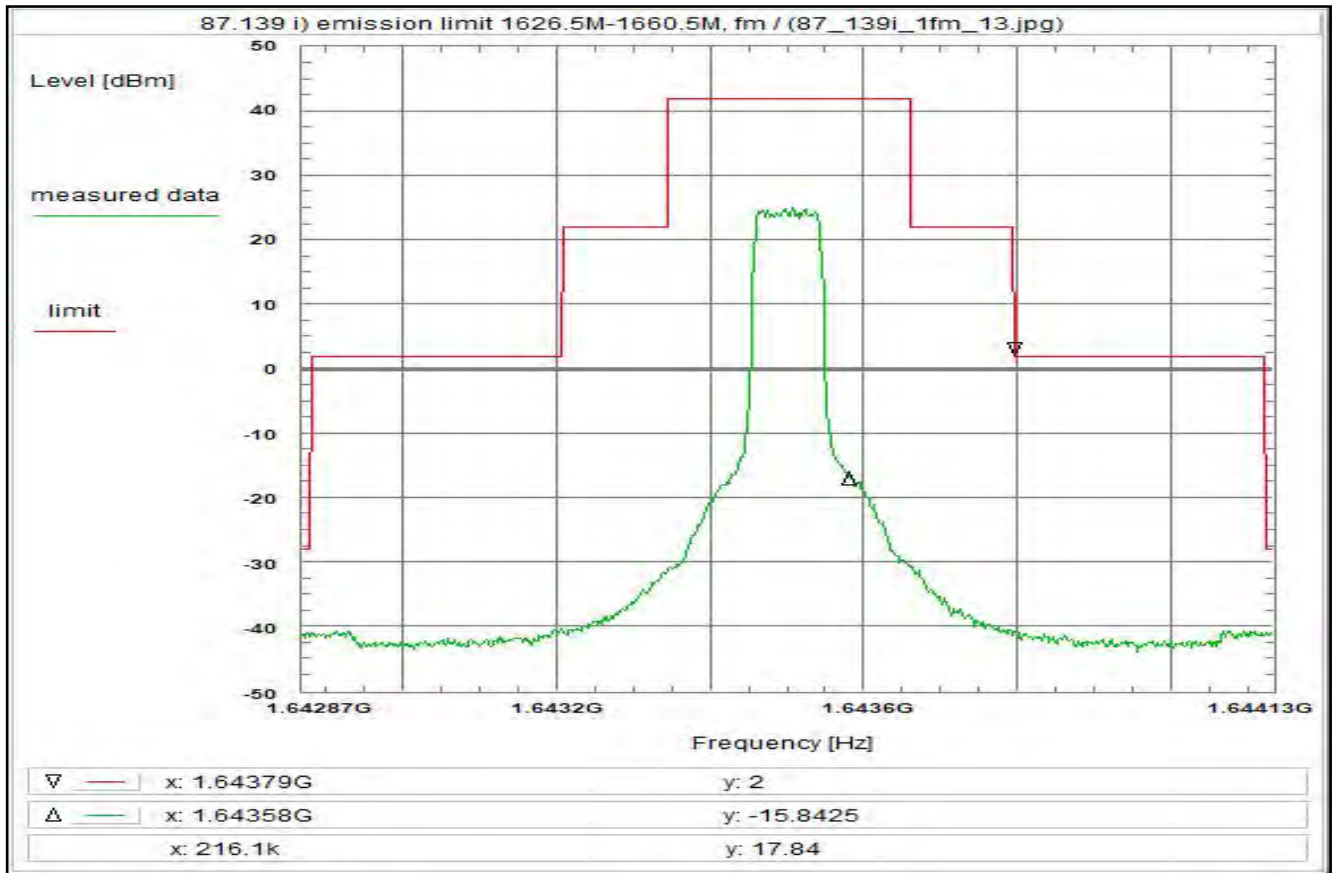
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 190



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T2.5X64, 84 ksym/s, 64QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:04:27  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.64287 GHz  
Stop frequency: 1.64413 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 1.26 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

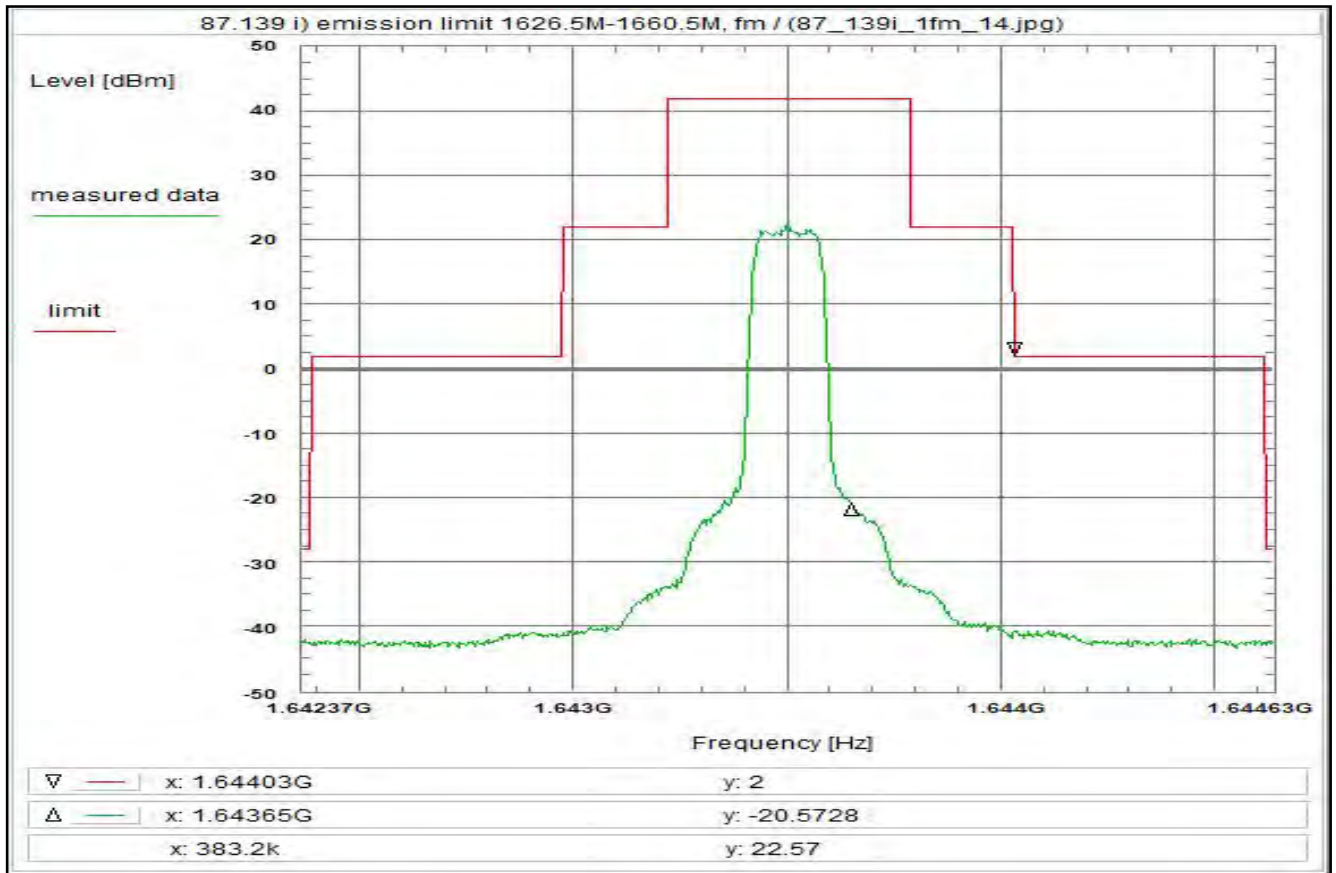
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 191



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T4.5XD/R20T4.5XD, 151.2 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:08:56  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642366 GHz  
Stop frequency: 1.644634 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 2.268 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:

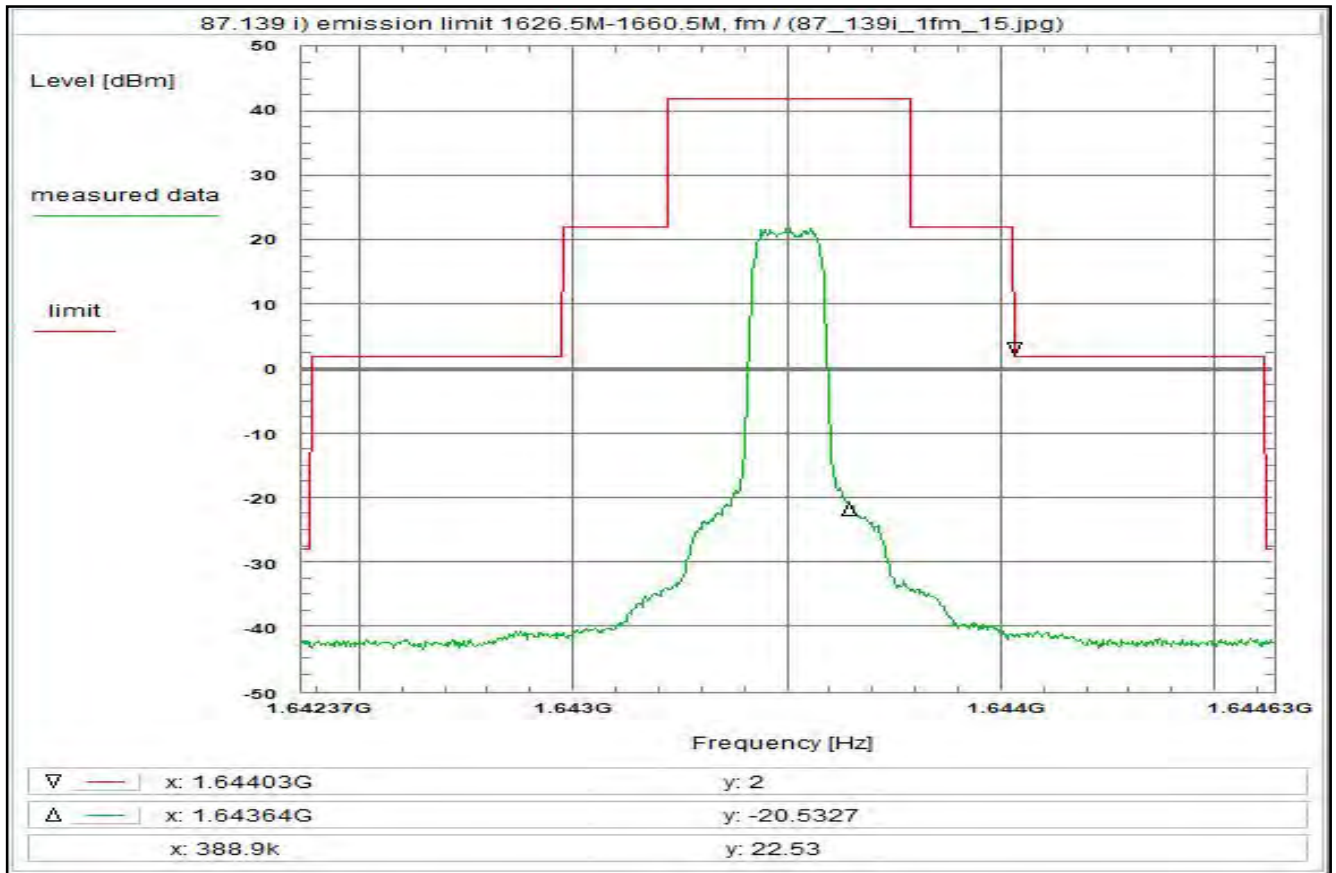
Carrier-on state / Carrier in the middle of the band (fm)

For EIRP calculation:

'worst-case' = maximum antenna gain



Plot No. 192



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T4.5XD/R20T4.5XD, 151.2 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:12:37  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642366 GHz  
Stop frequency: 1.644634 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 2.268 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

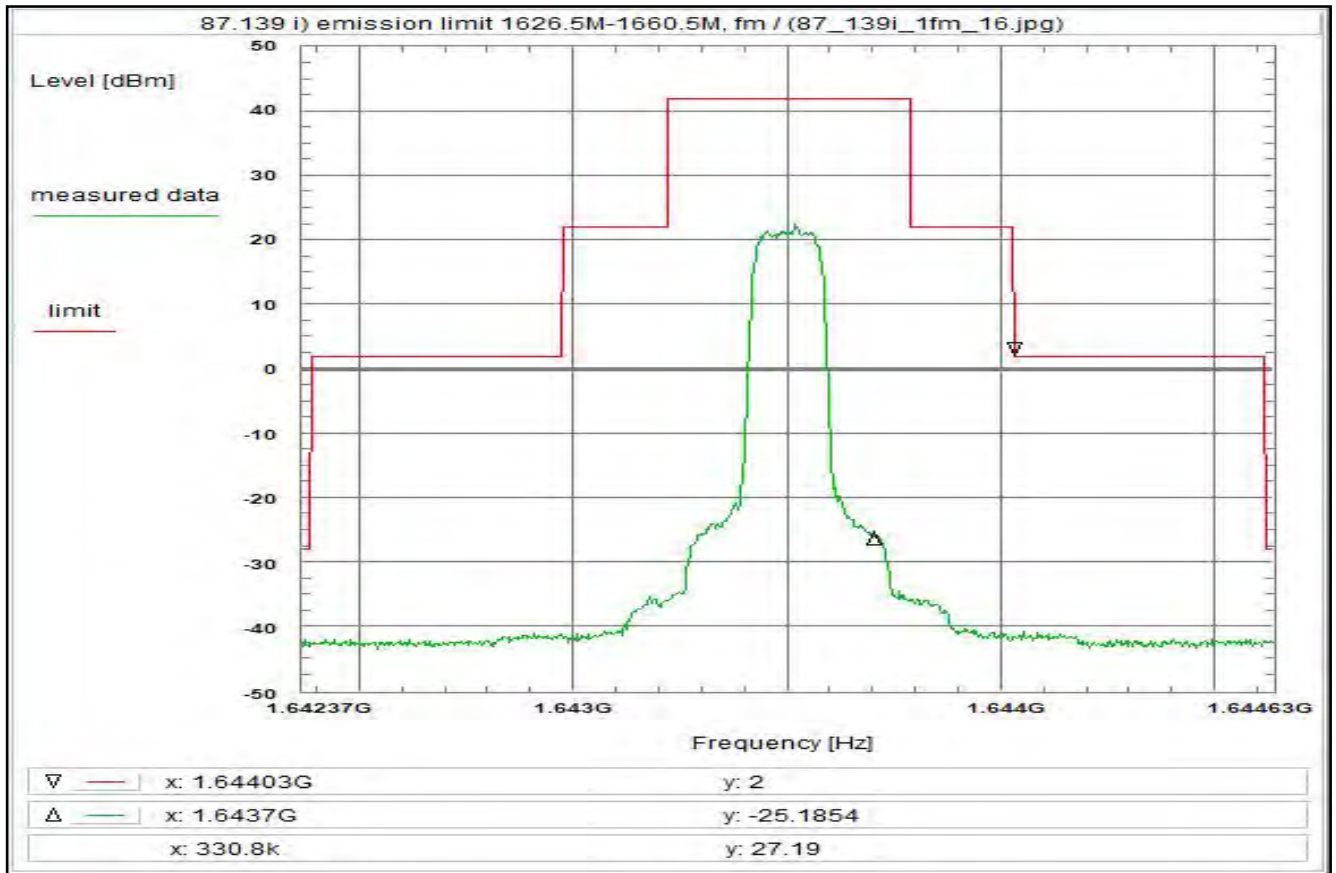
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 193



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T4.5QD/R20T4.5QD, 151.2 ksym/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:17:02  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642366 GHz  
Stop frequency: 1.644634 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 2.268 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

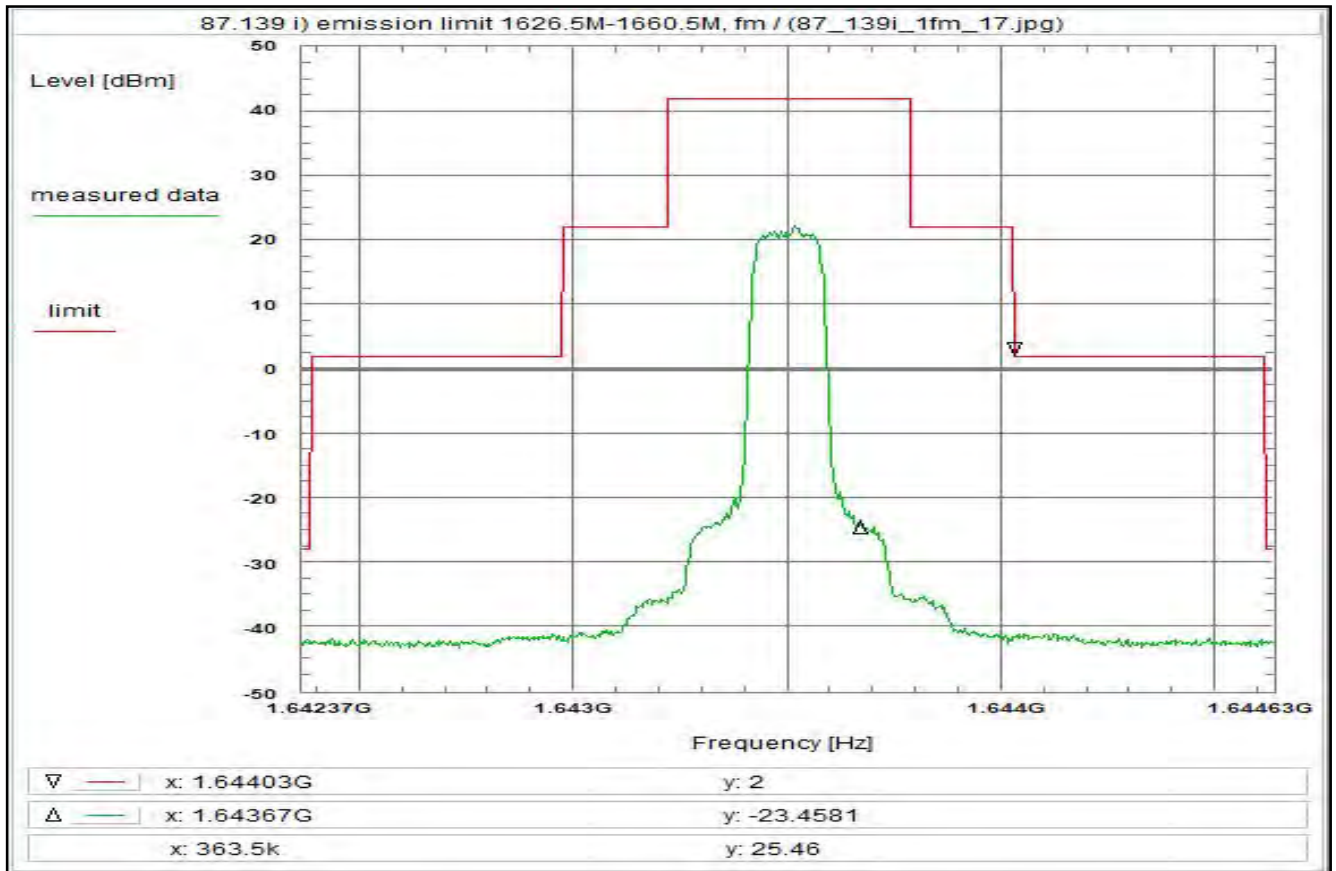
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 194



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T4.5QD/R20T4.5QD, 151.2 ksym/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:20:55  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642366 GHz  
Stop frequency: 1.644634 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 2.268 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

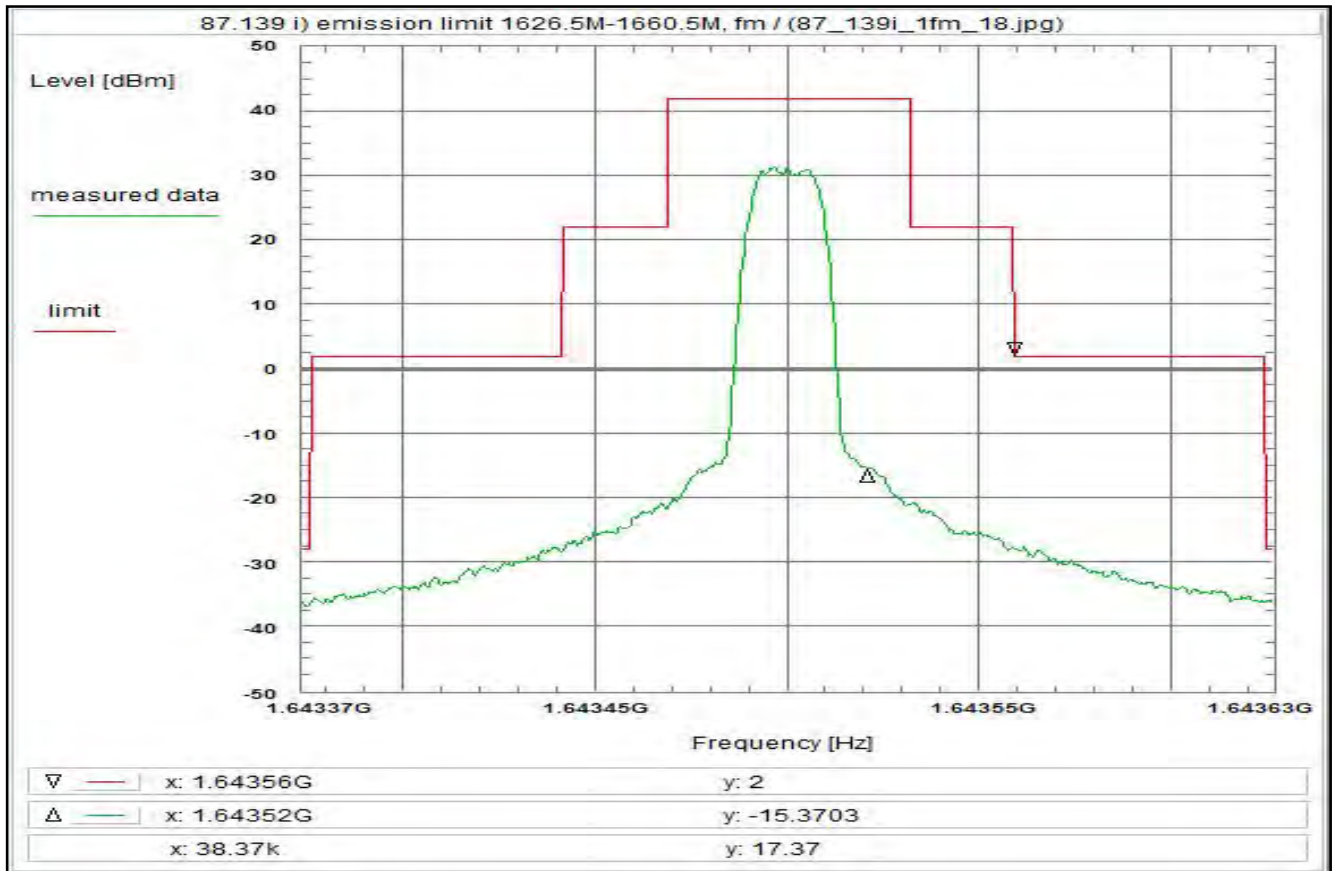
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 195



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T0.5QD, 16.8 ksym/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:27:40  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643374 GHz  
Stop frequency: 1.643626 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 252 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dB  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

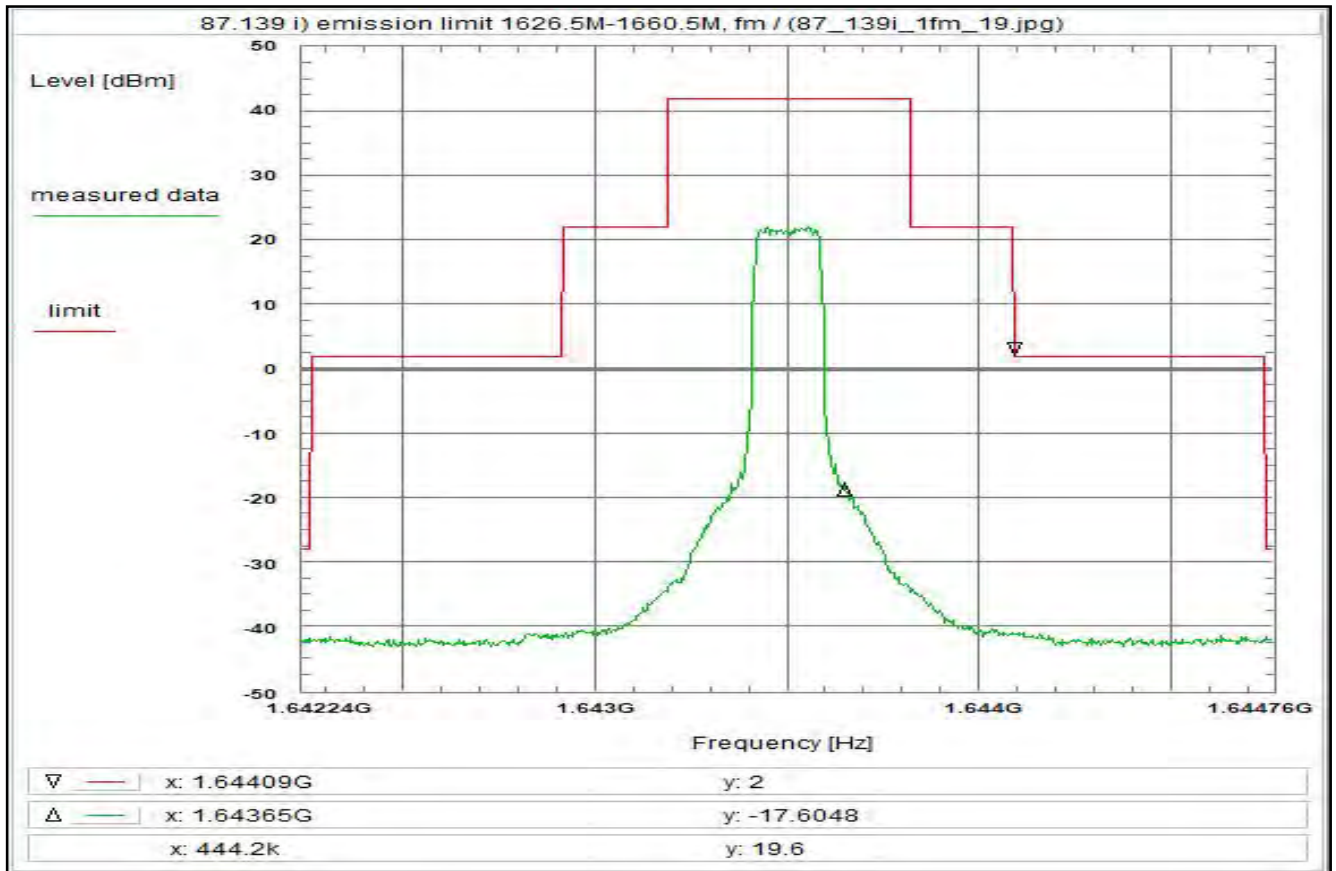
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 196



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T5X16, 168 ksymbols, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:31:54  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.64224 GHz  
Stop frequency: 1.64476 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 2.52 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:

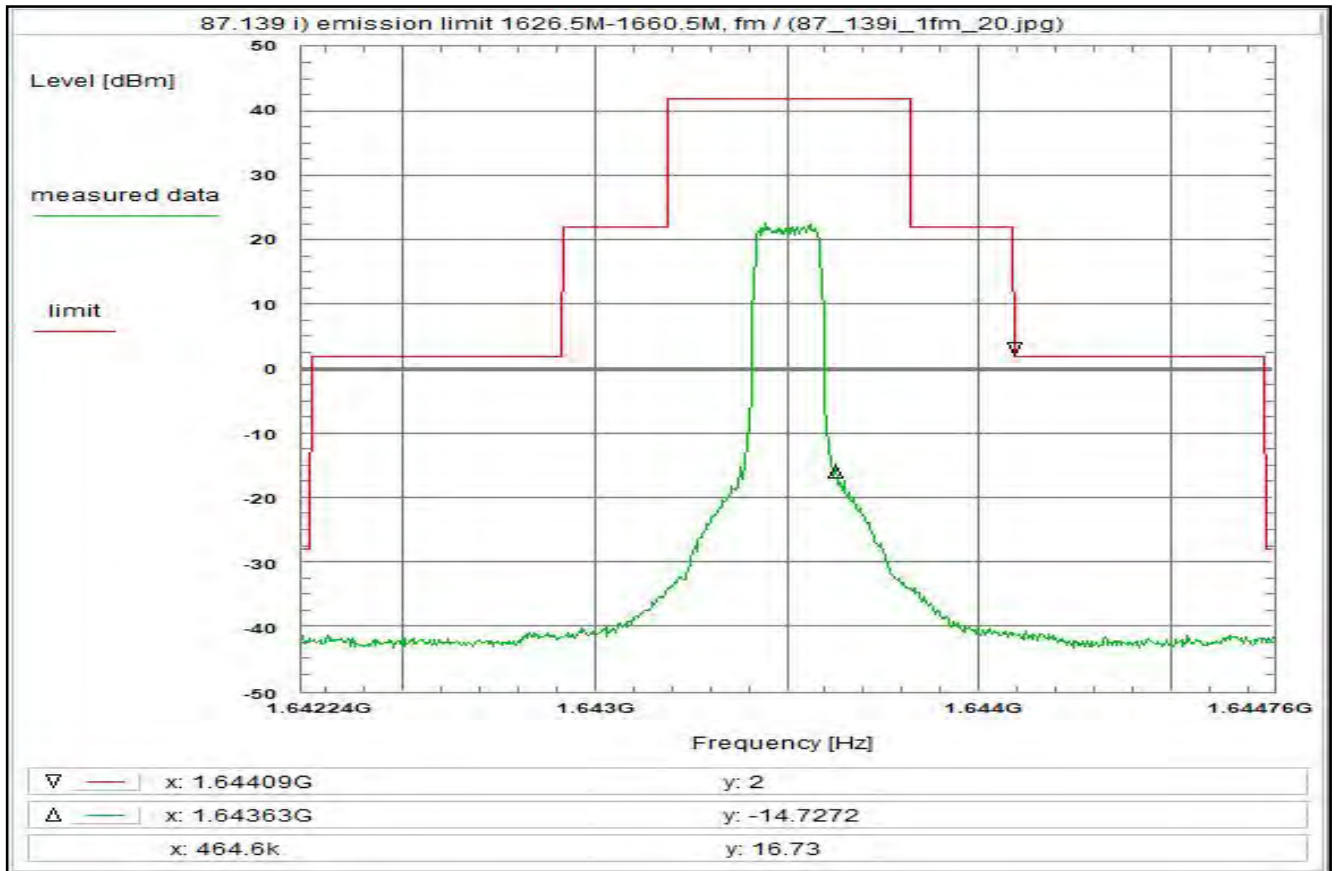
Carrier-on state / Carrier in the middle of the band (fm)

For EIRP calculation:

'worst-case' = maximum antenna gain



Plot No. 197



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T5X32, 168 ksymbols, 32QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:35:05  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.64224 GHz  
Stop frequency: 1.64476 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 2.52 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

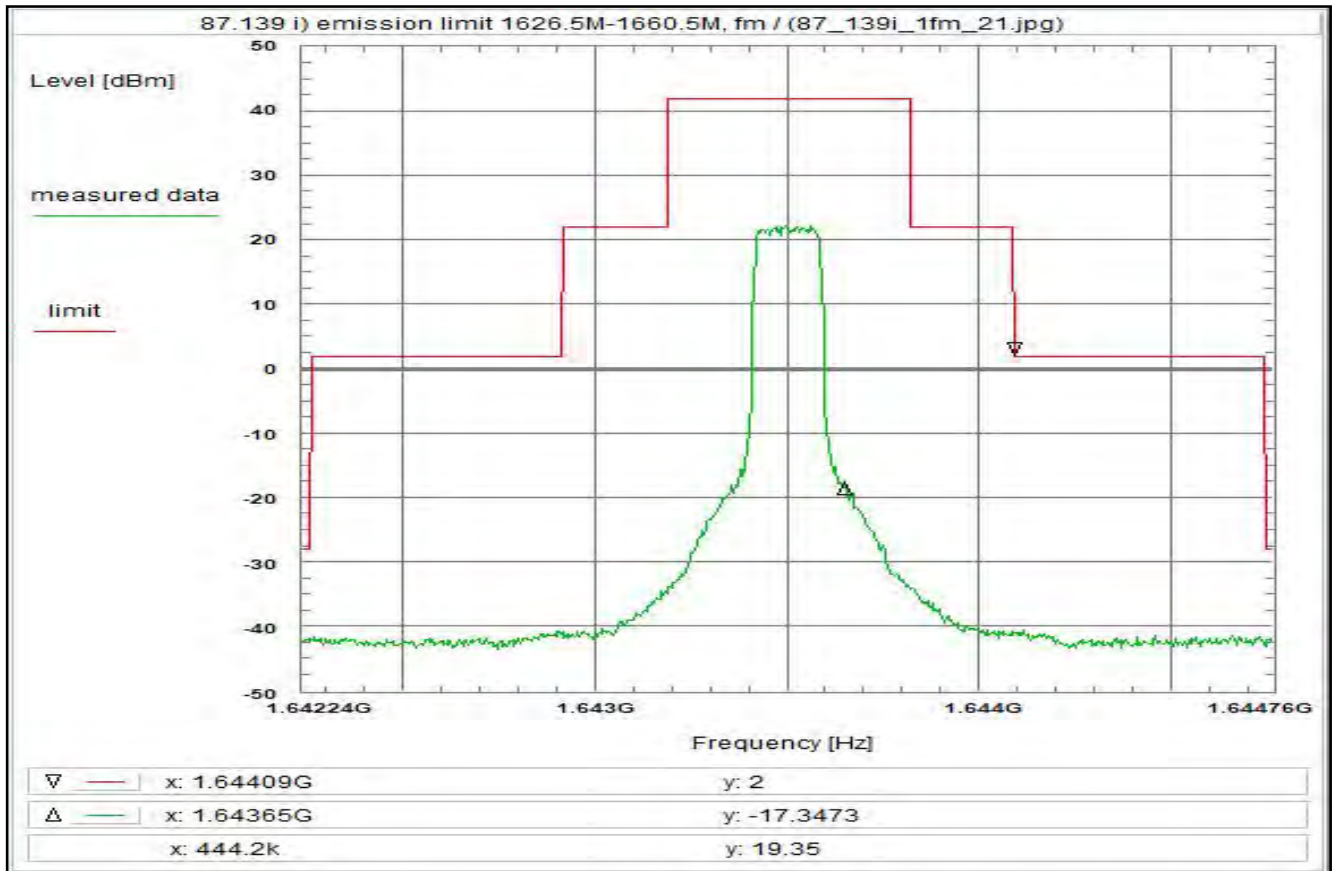
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 198



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T5X64, 168 ksymbols, 64QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:38:00  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.64224 GHz  
Stop frequency: 1.64476 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 2.52 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

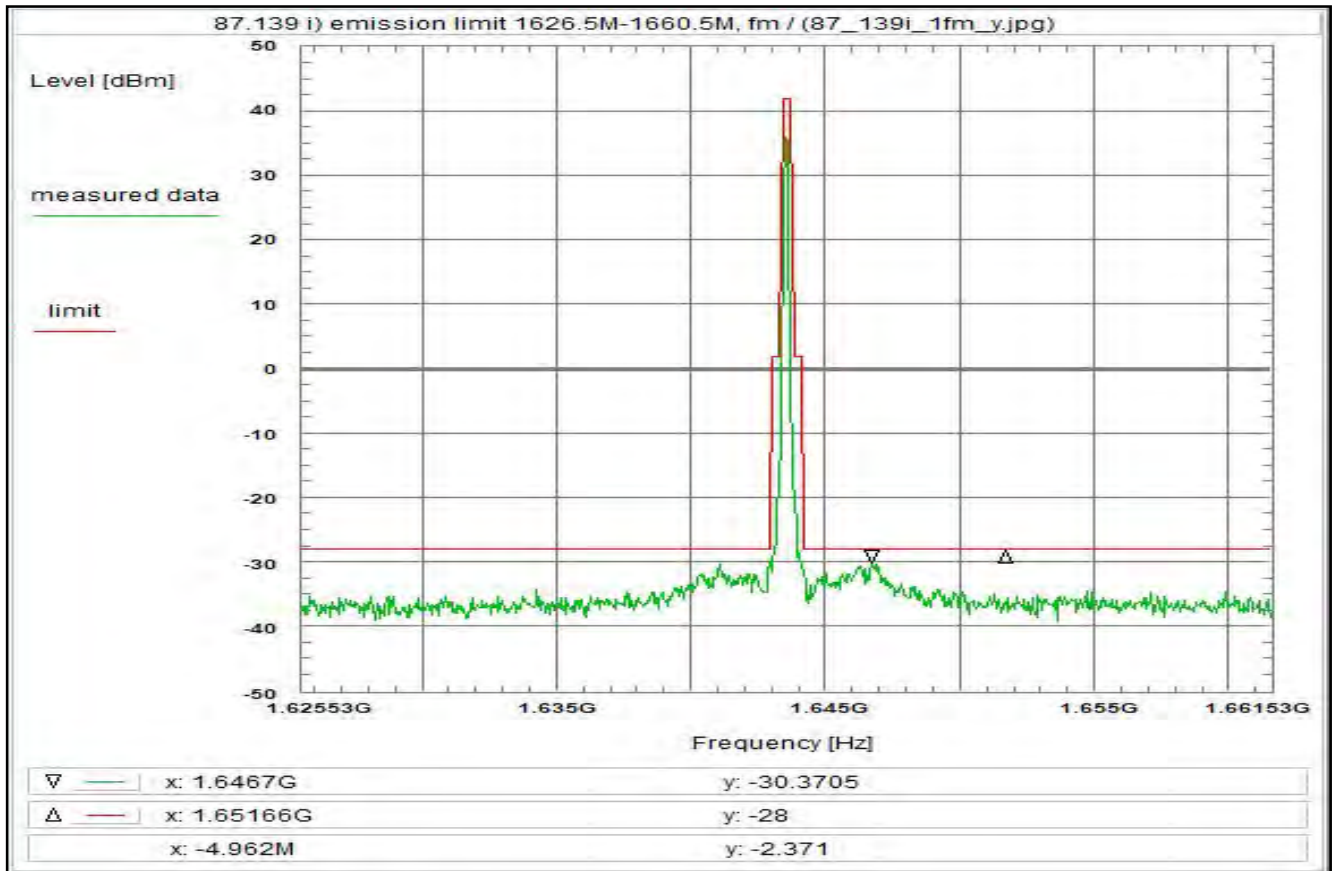
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 199



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
A700S worst case modulation, whole band

Test setup:  
test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 09/Jul/2020 11:31:28  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.625526 GHz  
Stop frequency: 1.661526 GHz  
Center frequency: 1.643526 GHz  
Frequency span: 36 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

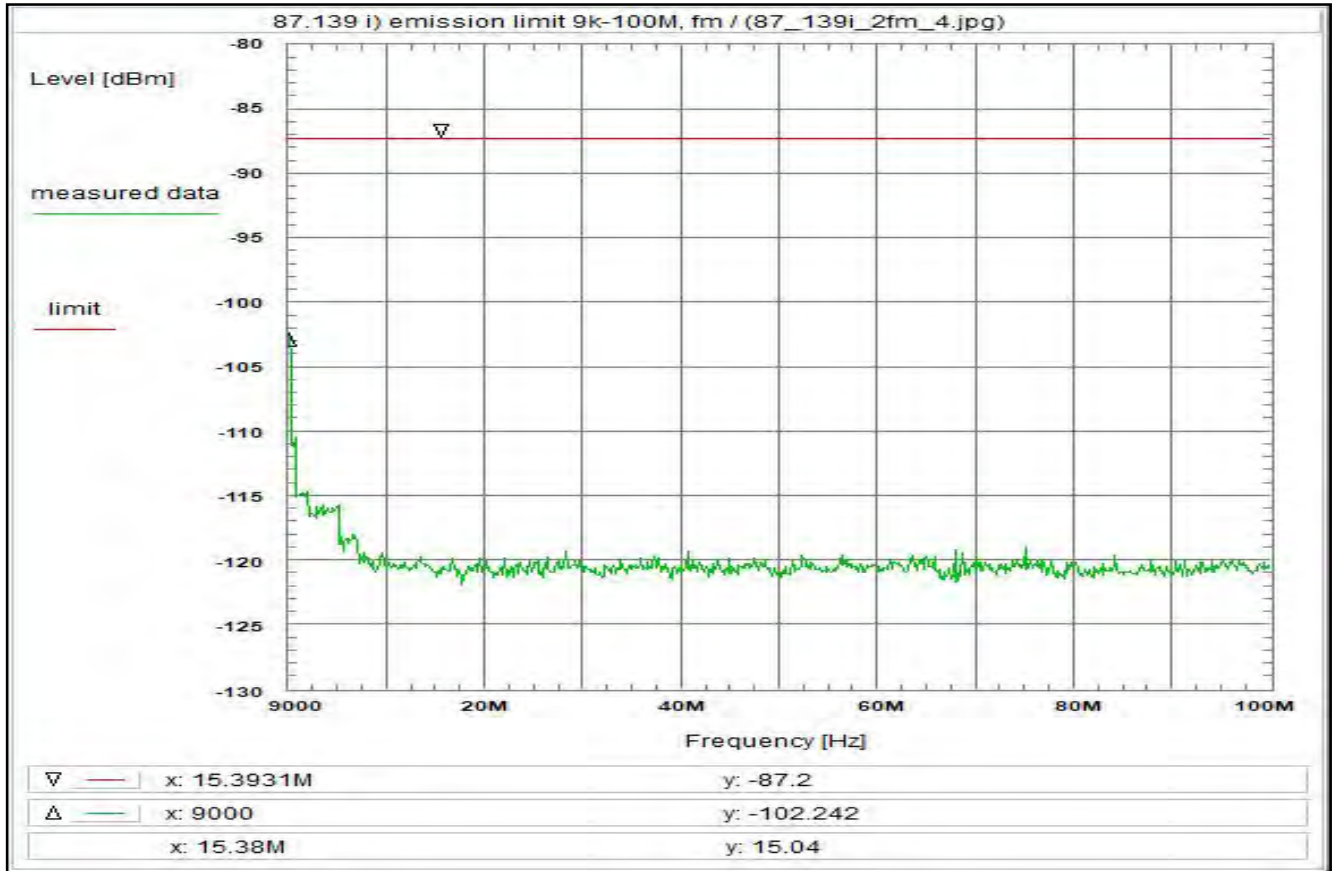
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 200



**Subclause:** 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

**Limit:**  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

**Operating condition of DUT:**  
operating condition 1, see test report chapter 5.4  
CLASS 6 ACD, R20T4.5XD

**Test setup:**  
see test report chapter 7.2 setup 1.1hij

**Test equipment:**  
see test report chapter 7.2: BNCc, C220, R001

**Remark:**

**Test result:** Test passed

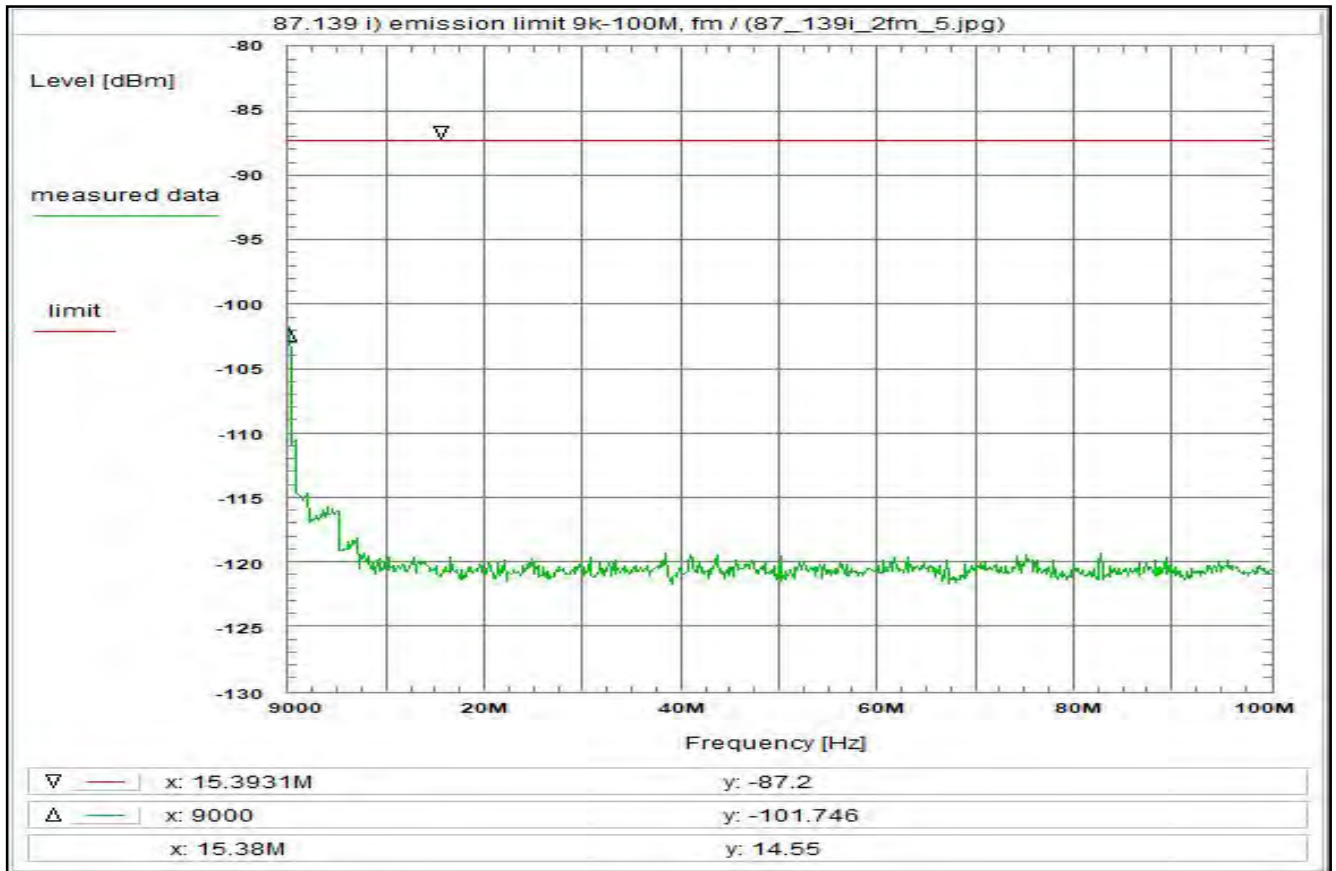
**Environment condition:**  
Date & Time: Fri 29/May/2020 10:16:06  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

**Setup of measurement equipment:**  
Start frequency: 9 kHz  
Stop frequency: 100 MHz  
Center frequency: 50.0045 MHz  
Frequency span: 99.991 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Pos Peak

**Correction:**  
Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.2 dB  
BW correction factor (3k -> 4k) + 1.2 dB  
Atten. between HPA and feedhorn - 0.0 dB  
(BNCc) + 7.8 dB  
TOTAL CORRECTION: + 9.2 dB

**Remarks:**  
Carrier-on state / Carrier in the middle of the band (fm)  
**For EIRP calculation:**  
'worst-case' = maximum antenna gain

Plot No. 201



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
CLASS 6 HDR PIESD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2: BNCc, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Fri 29/May/2020 10:16:55  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 9 kHz  
Stop frequency: 100 MHz  
Center frequency: 50.0045 MHz  
Frequency span: 99.991 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Pos Peak

Correction:

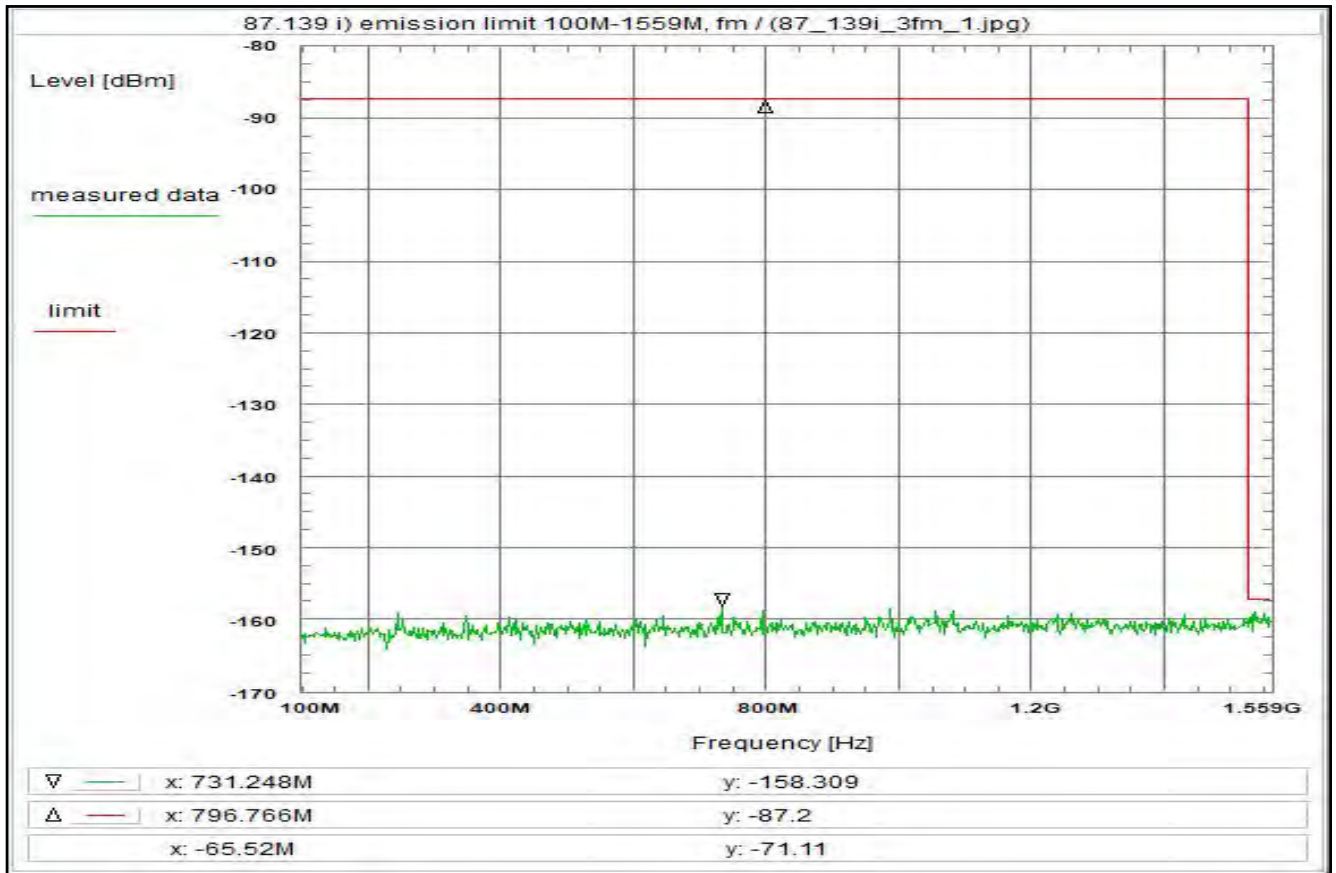
Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.2 dB  
BW correction factor (3k -> 4k) + 1.2 dBi  
Atten. between HPA and feedhorn - 0.0 dB  
(BNCc) + 7.8 dB  
TOTAL CORRECTION: + 9.2 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
For EIRP calculation:  
'worst-case' = maximum antenna gain



Plot No. 202



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1higj

Test equipment:  
see test report chapter 7.2: BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 16:52:31  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 100 MHz  
Stop frequency: 1.559 GHz  
Center frequency: 829.5 MHz  
Frequency span: 1.459 GHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

Correction:

Directional coupler (DPLX)	- 80.0 dB
Coaxial cable (C220)	+ 0.6 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
additional attenuation	+ 0.0 dB
(BNC0)	+ 10.1 dB
<b>TOTAL CORRECTION:</b>	<b>- -68.1 dB</b>

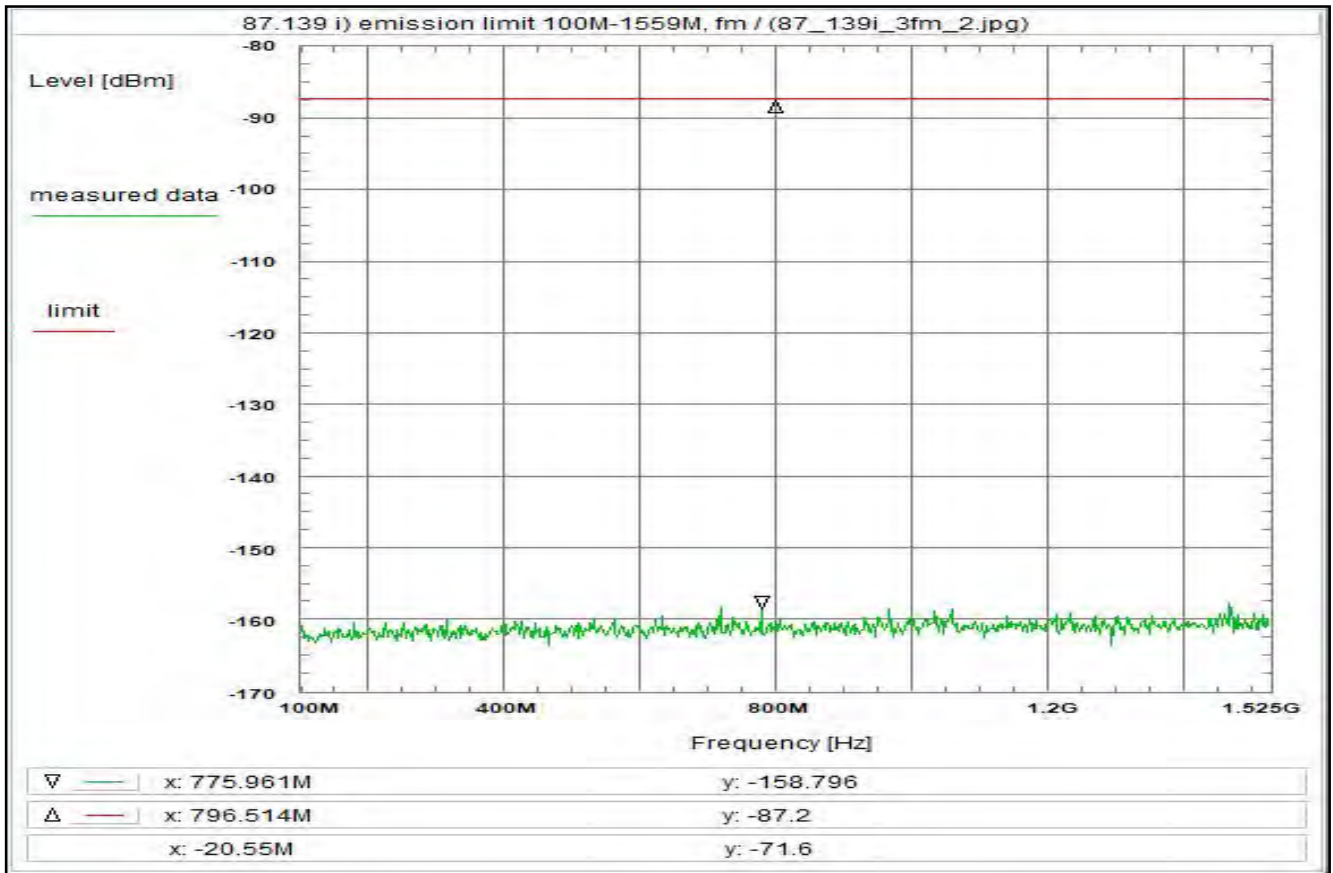
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 203



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2: BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 16:55:51  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 100 MHz  
Stop frequency: 1.524999 GHz  
Center frequency: 812.4995 MHz  
Frequency span: 1.424999 GHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

Correction:

Directional coupler (DPLX)	- 80.0 dB
Coaxial cable (C220)	+ 0.6 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
additional attenuation	+ 0.0 dB
(BNC0)	+ 10.1 dB
<b>TOTAL CORRECTION:</b>	<b>- -68.1 dB</b>

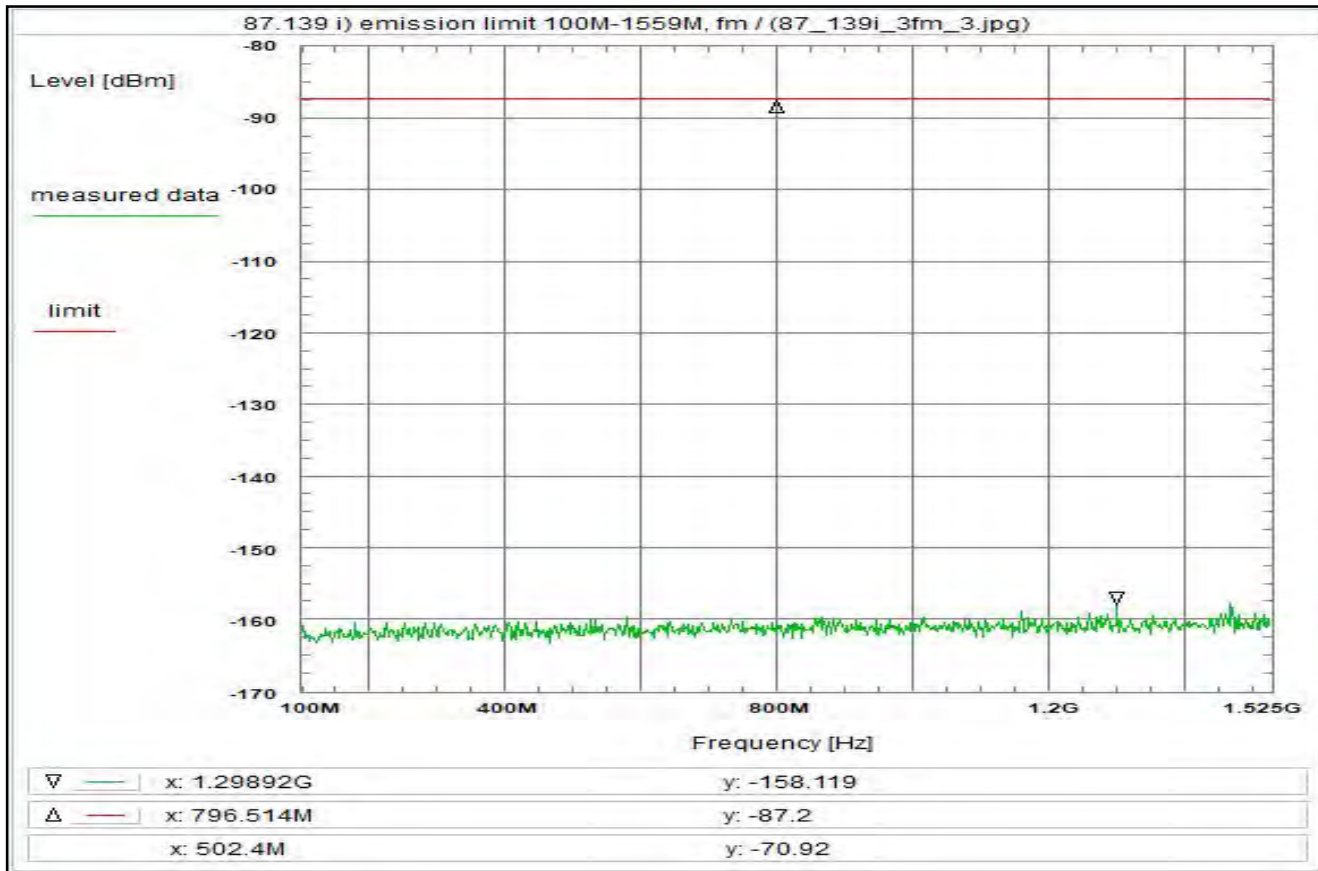
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 204



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2 BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 16:58:07  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 100 MHz  
Stop frequency: 1.524999 GHz  
Center frequency: 812.4995 MHz  
Frequency span: 1.424999 GHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

Correction:

Directional coupler (DPLX)	- 80.0 dB
Coaxial cable (C220)	+ 0.6 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
additional attenuation	+ 0.0 dB
(BNC0)	+ 10.1 dB
<b>TOTAL CORRECTION:</b>	<b>- -68.1 dB</b>

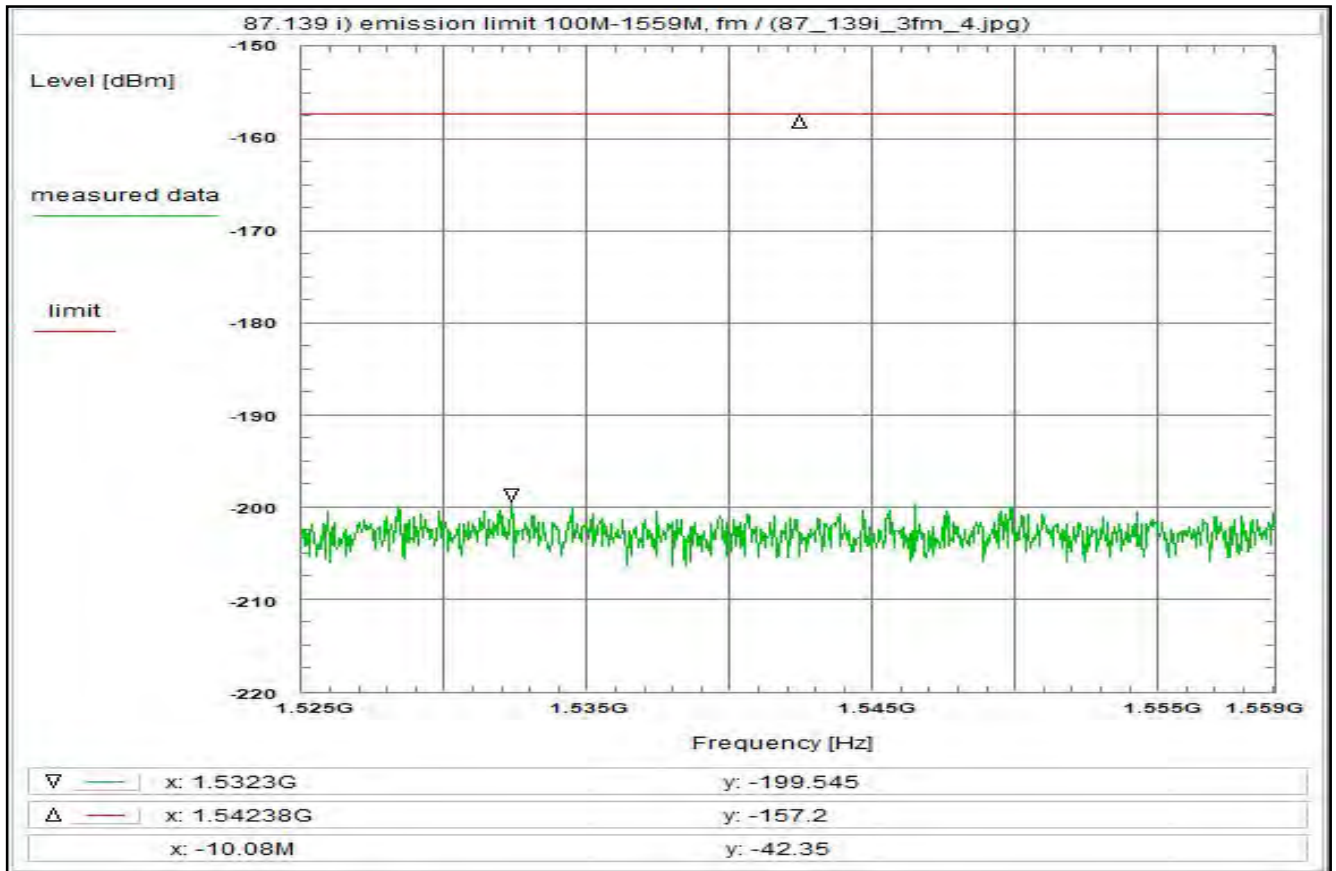
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 205



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2 BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 16:59:24  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.525 GHz  
Stop frequency: 1.559 GHz  
Center frequency: 1.542 GHz  
Frequency span: 34 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

Correction:

Directional coupler (DPLX)	-	120.0 dB	
Coaxial cable (C220)	+	0.9 dB	
DUT-Antenna	+	0.0 dBi	
Test antenna	+	0.0 dB	
BW correction factor (3k -> 4k)	+	1.2 dB	
Atten. between HPA and feedhorn	-	0.0 dB	
additional attenuation	+	0.0 dB	
(BNC0)	+	10.2 dB	
<b>TOTAL CORRECTION:</b>	-	<b>-107.7</b>	<b>dB</b>

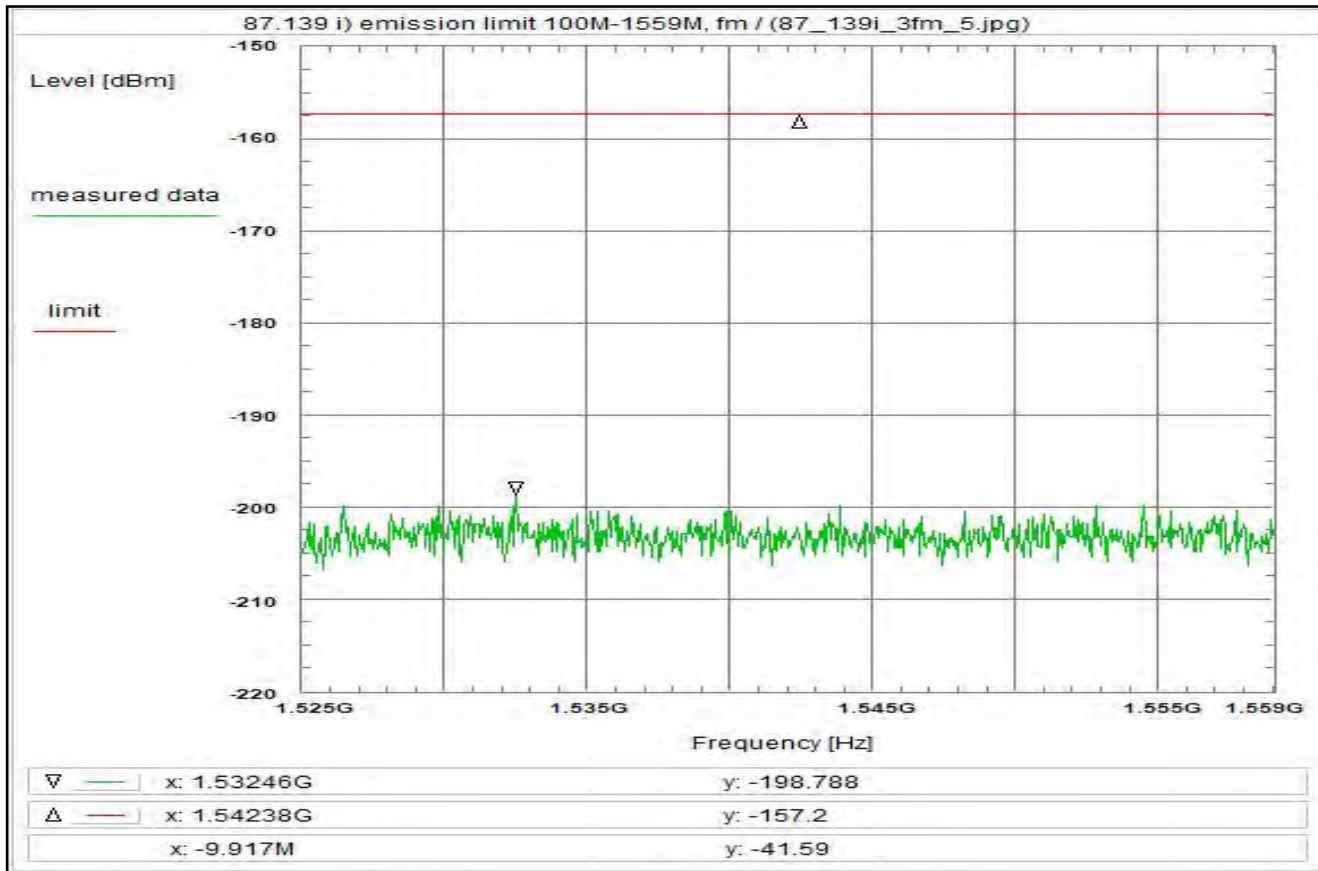
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 206



**Subclause:** 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

**Limit:**  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

**Operating condition of DUT:**  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T4.5XD

**Test setup:**  
see test report chapter 7.2 setup 1.1hij

**Test equipment:**  
see test report chapter 7.2 BNC0, C220, R001

**Remark:**

**Test result: Test passed**

**Environment condition:**  
Date & Time: Thu 04/Jun/2020 16:59:50  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

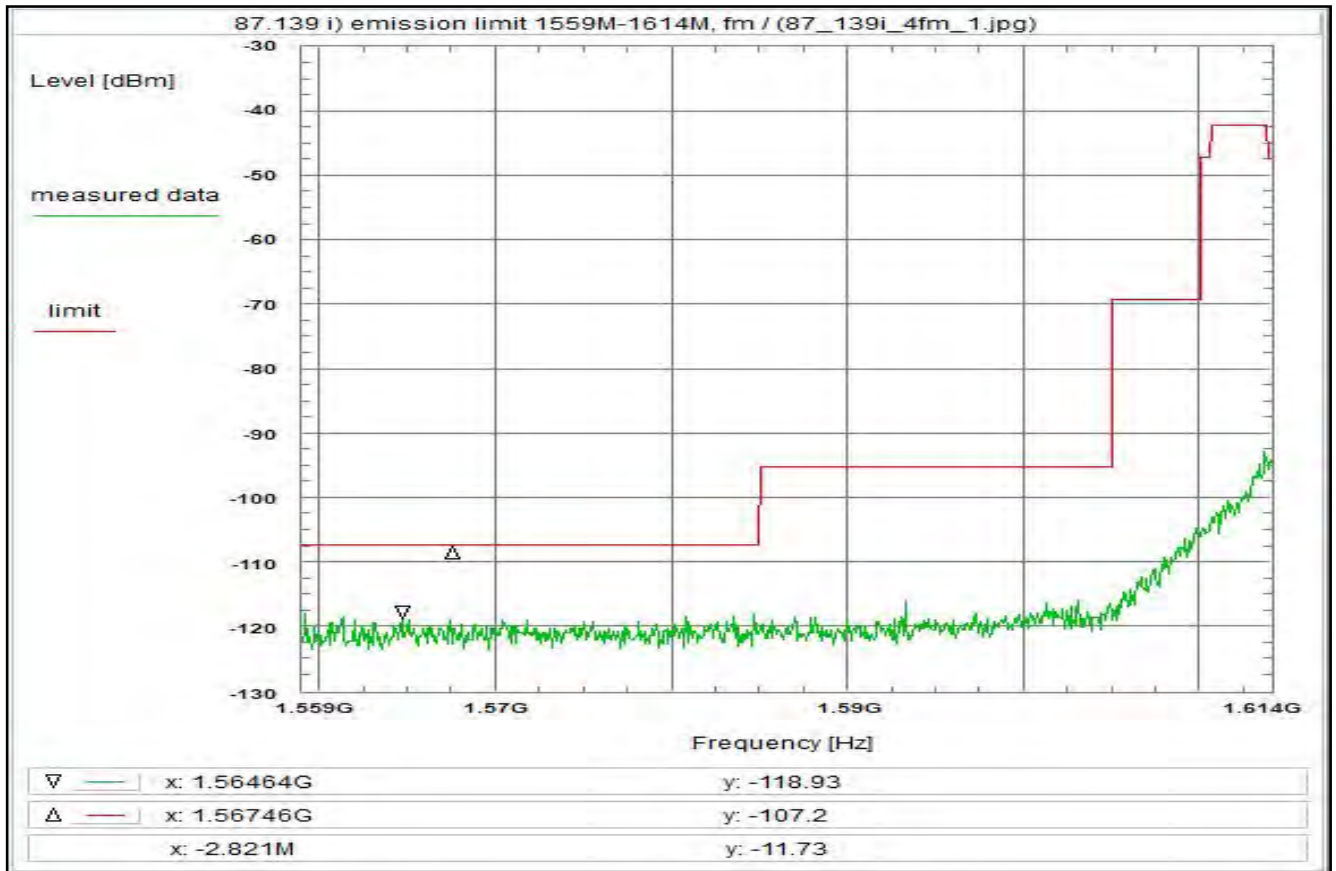
**Setup of measurement equipment:**  
Start frequency: 1.525 GHz  
Stop frequency: 1.559 GHz  
Center frequency: 1.542 GHz  
Frequency span: 34 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

**Correction:**  
Directional coupler (DPLX) - 120.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
Test antenna + 0.0 dB  
BW correction factor (3k -> 4k) + 1.2 dB  
Atten. between HPA and feedhorn - 0.0 dB  
additional attenuation + 0.0 dB  
(BNC0) + 10.2 dB  
TOTAL CORRECTION: - 107.7 dB

**Remarks:**  
Carrier-on state / Carrier in the middle of the band (fm)  
**For EIRP calculation:**  
'worst-case' = maximum antenna gain



Plot No. 207



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1higj

Test equipment:  
see test report chapter 7.2 BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 16:45:03  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.559 GHz  
Stop frequency: 1.614 GHz  
Center frequency: 1.5865 GHz  
Frequency span: 55 MHz  
Resolution-BW: 1 kHz  
Video-BW: 3 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

Correction:

Directional coupler (DPLX)	- 62.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (1k -> 1M)	+ 30.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
additional attenuation	+ 0.0 dB
(BNCo)	+ 12.6 dB
<b>TOTAL CORRECTION:</b>	<b>- 18.5 dB</b>

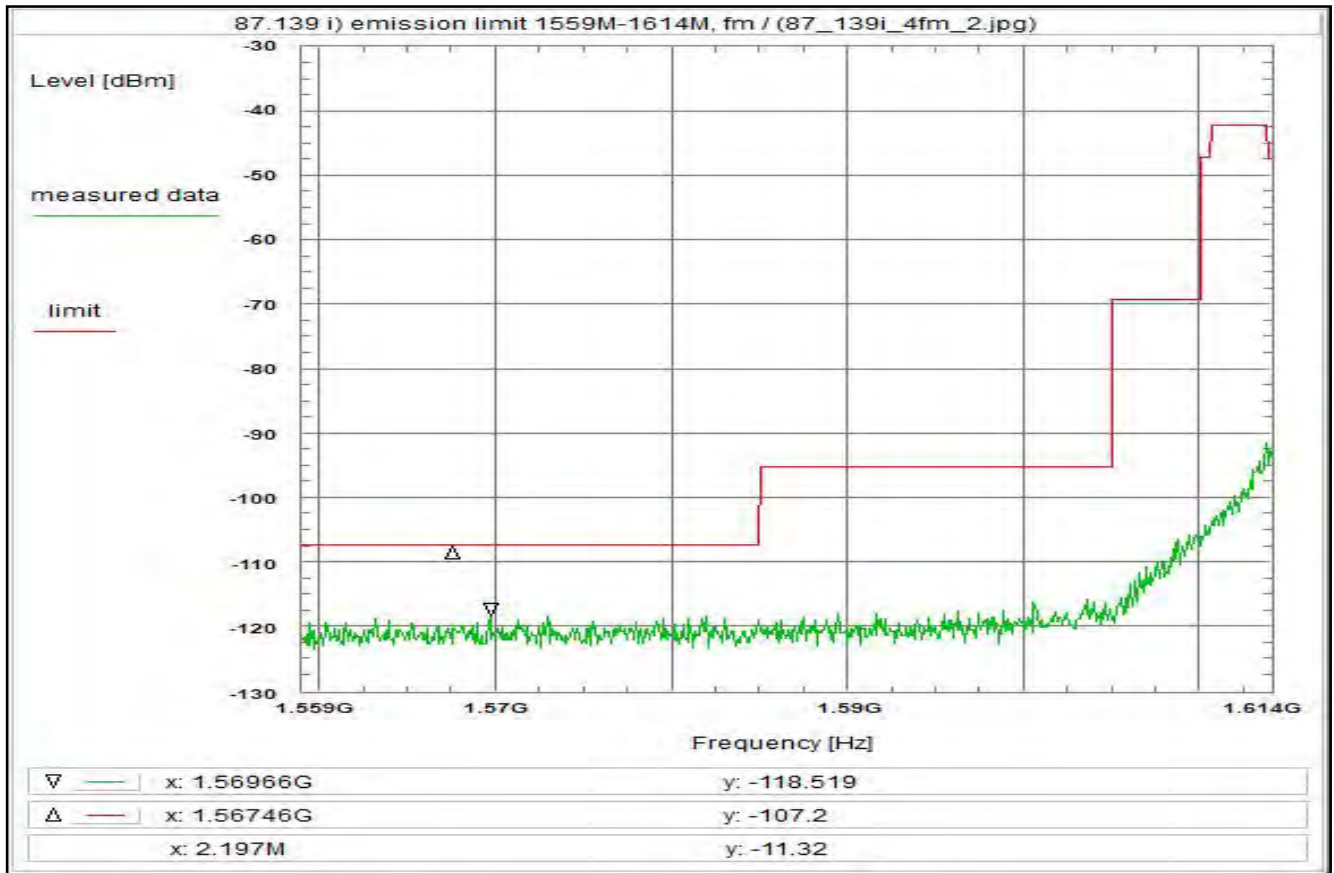
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 208



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1higj

Test equipment:  
see test report chapter 7.2 BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 16:46:57  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.559 GHz  
Stop frequency: 1.614 GHz  
Center frequency: 1.5865 GHz  
Frequency span: 55 MHz  
Resolution-BW: 1 kHz  
Video-BW: 3 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

Correction:

Directional coupler (DPLX)	- 62.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 0.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (1k -> 1M)	+ 30.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
additional attenuation	+ 0.0 dB
(BNC0)	+ 12.6 dB
<b>TOTAL CORRECTION:</b>	<b>- 18.5 dB</b>

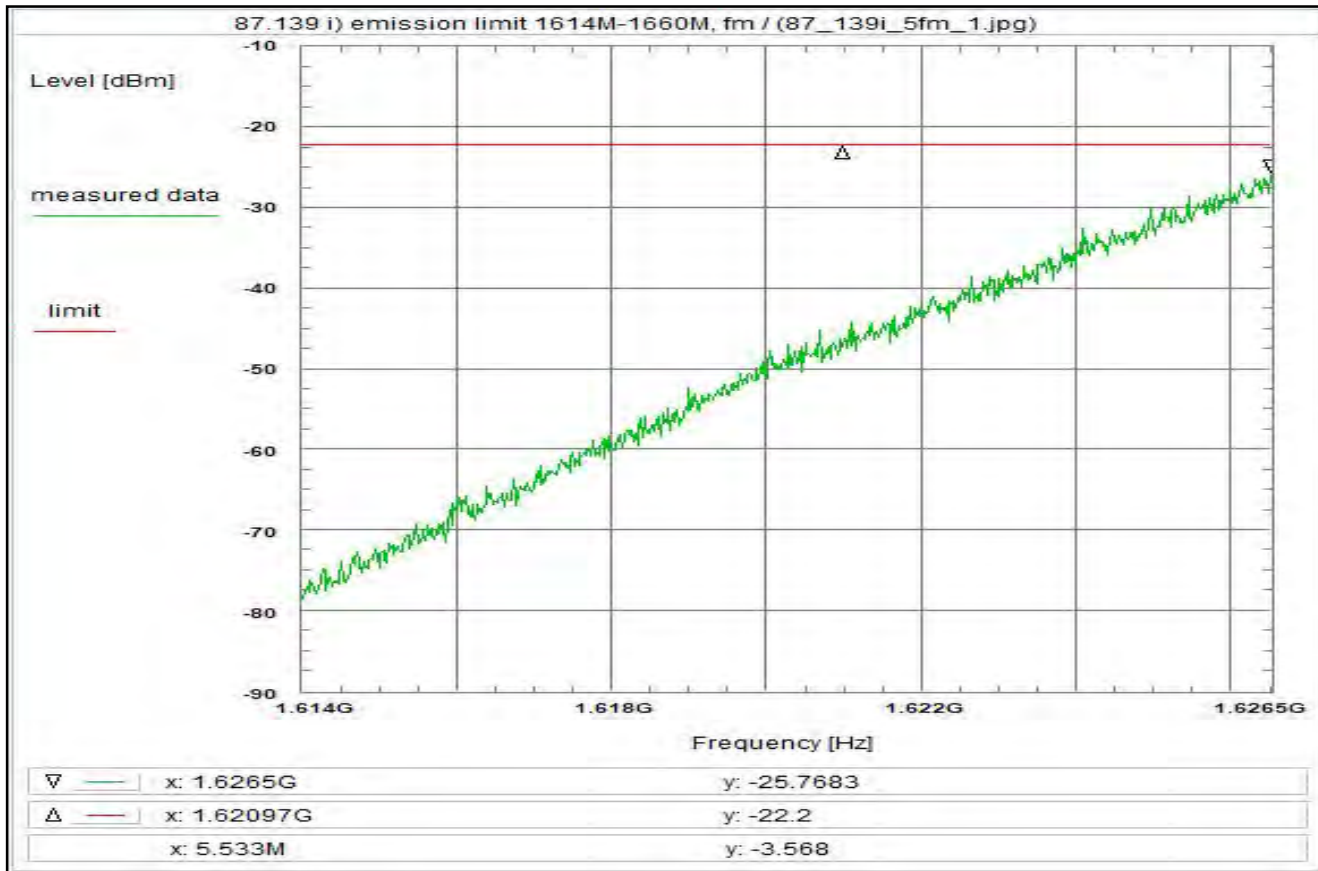
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 209



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2 BNC0, C220, R001

Remark:

**Test result: Test passed**

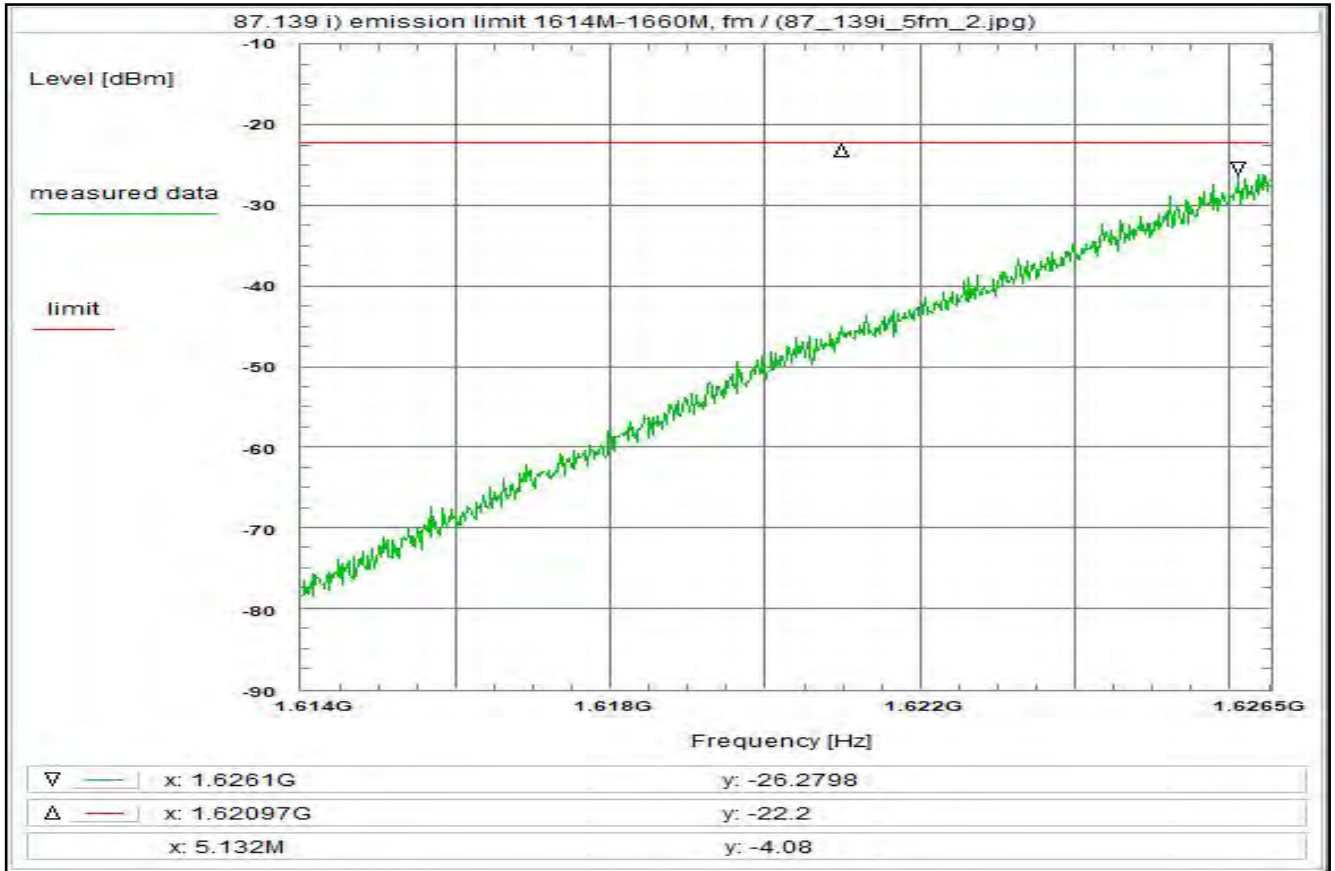
Environment condition:  
Date & Time: Thu 04/Jun/2020 15:35:40  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:  
Start frequency: 1.614 GHz  
Stop frequency: 1.6265 GHz  
Center frequency: 1.62025 GHz  
Frequency span: 12.5 MHz  
Resolution-BW: 500 Hz  
Video-BW: 2 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

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 (3k -> 4k) + 1.2 dB  
Atten. between HPA and feedhorn - 0.0 dB  
additional attenuation + 0.0 dB  
(BNC0) + 64.9 dB  
TOTAL CORRECTION: + 67.0 dB

Remarks:  
Carrier-on state / Carrier in the middle of the band (fm)  
For EIRP calculation:  
'worst-case' = maximum antenna gain

Plot No. 210



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2 BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 15:36:35  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.614 GHz  
Stop frequency: 1.6265 GHz  
Center frequency: 1.62025 GHz  
Frequency span: 12.5 MHz  
Resolution-BW: 500 Hz  
Video-BW: 2 kHz  
Input attenuation: 0 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

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 (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
additional attenuation	+ 0.0 dB
(BNC0)	+ 64.9 dB
<b>TOTAL CORRECTION:</b>	<b>+ 67.0 dB</b>

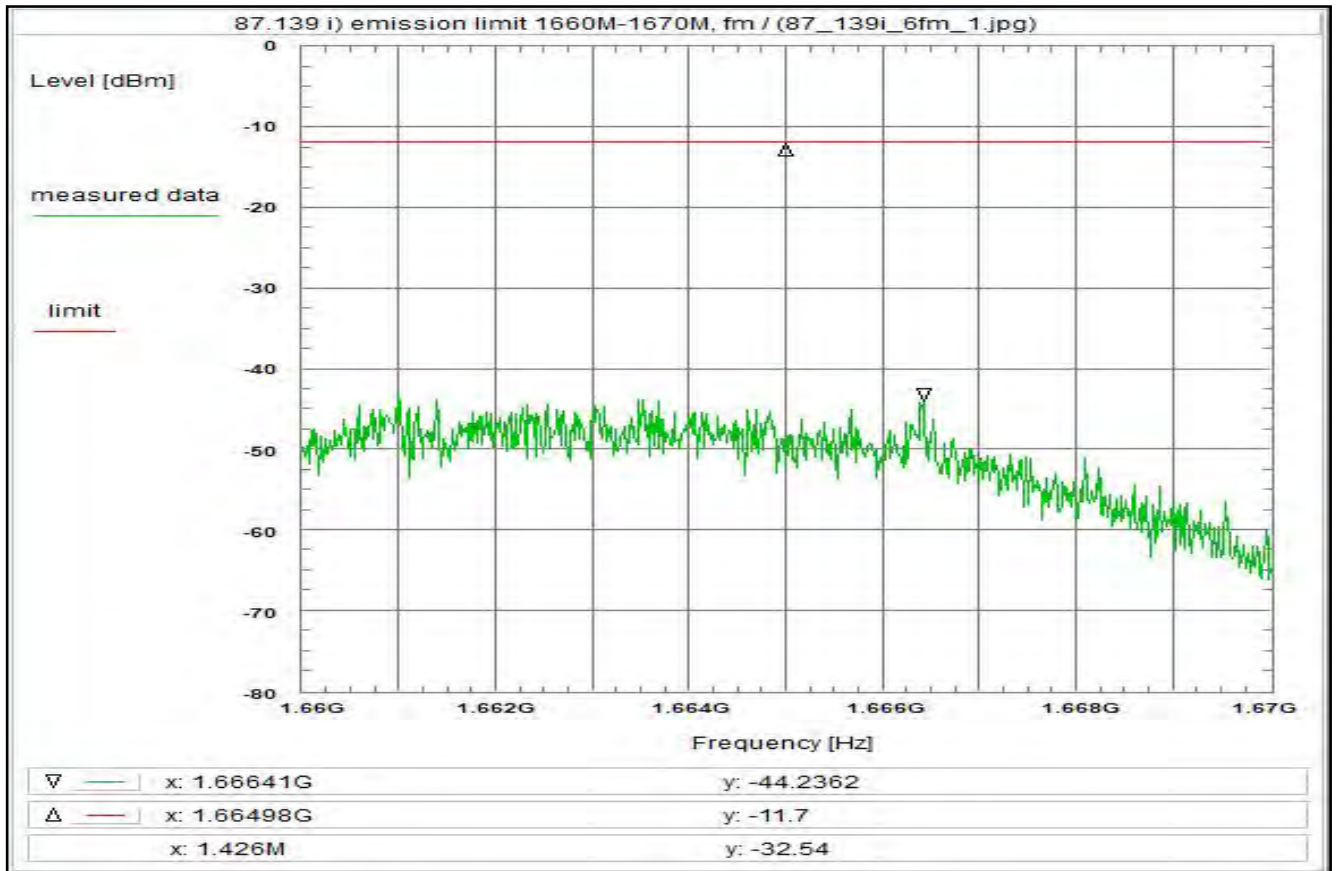
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 211



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2 BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 14:49:32  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.66 GHz  
Stop frequency: 1.67 GHz  
Center frequency: 1.665 GHz  
Frequency span: 10 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 10 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

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 (3k -> 20k)	+ 8.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
additional attenuation	+ 0.0 dB
(BNC0)	+ 26.8 dB
<b>TOTAL CORRECTION:</b>	<b>+ 35.9 dB</b>

Remarks:

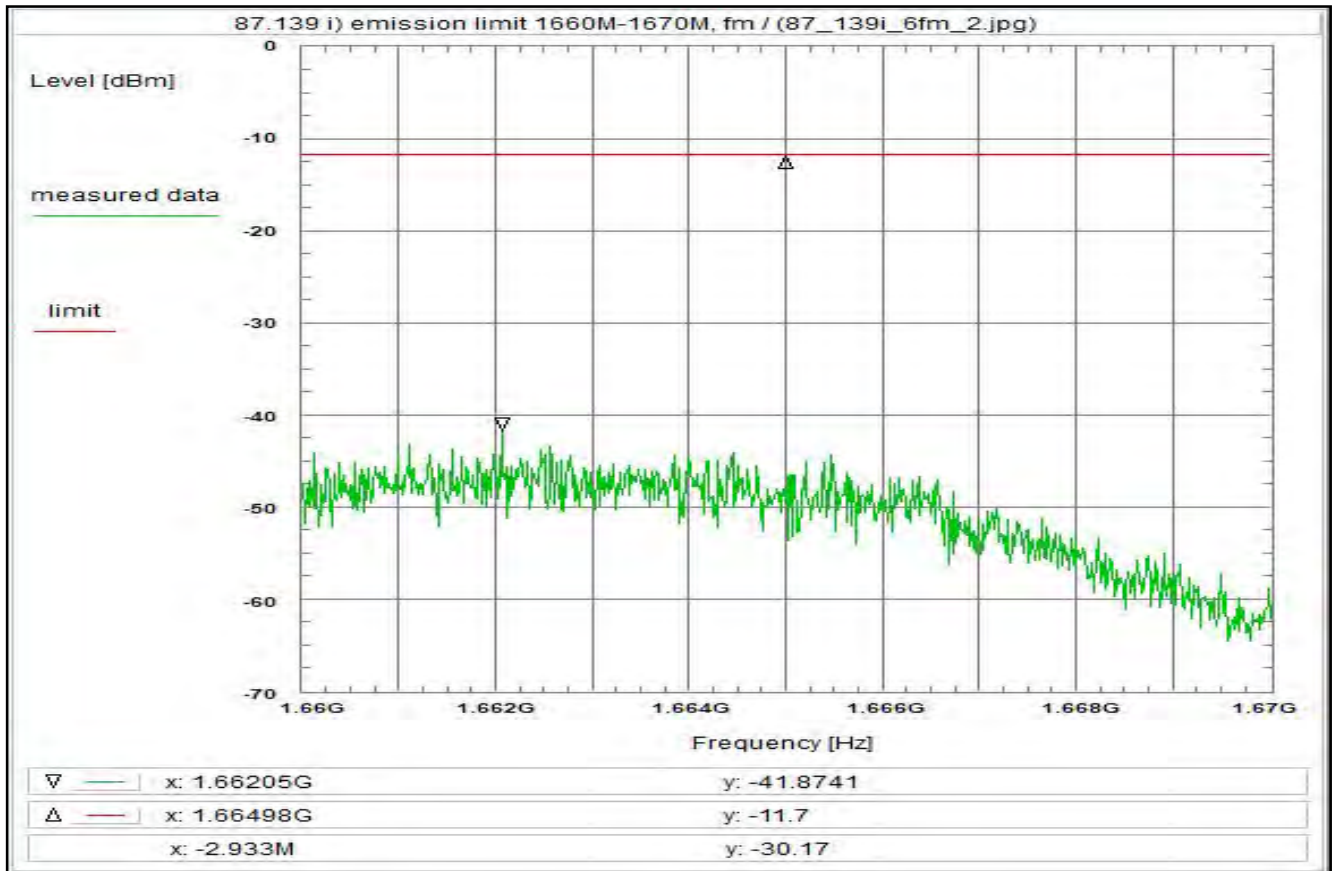
Carrier-on state / Carrier in the middle of the band (fm)

For EIRP calculation:

'worst-case' = maximum antenna gain



Plot No. 212



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2 BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 14:50:33  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.66 GHz  
Stop frequency: 1.67 GHz  
Center frequency: 1.665 GHz  
Frequency span: 10 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 10 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

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 (3k -> 20k)	+ 8.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
additional attenuation	+ 0.0 dB
(BNC0)	+ 26.8 dB
<b>TOTAL CORRECTION:</b>	<b>+ 35.9 dB</b>

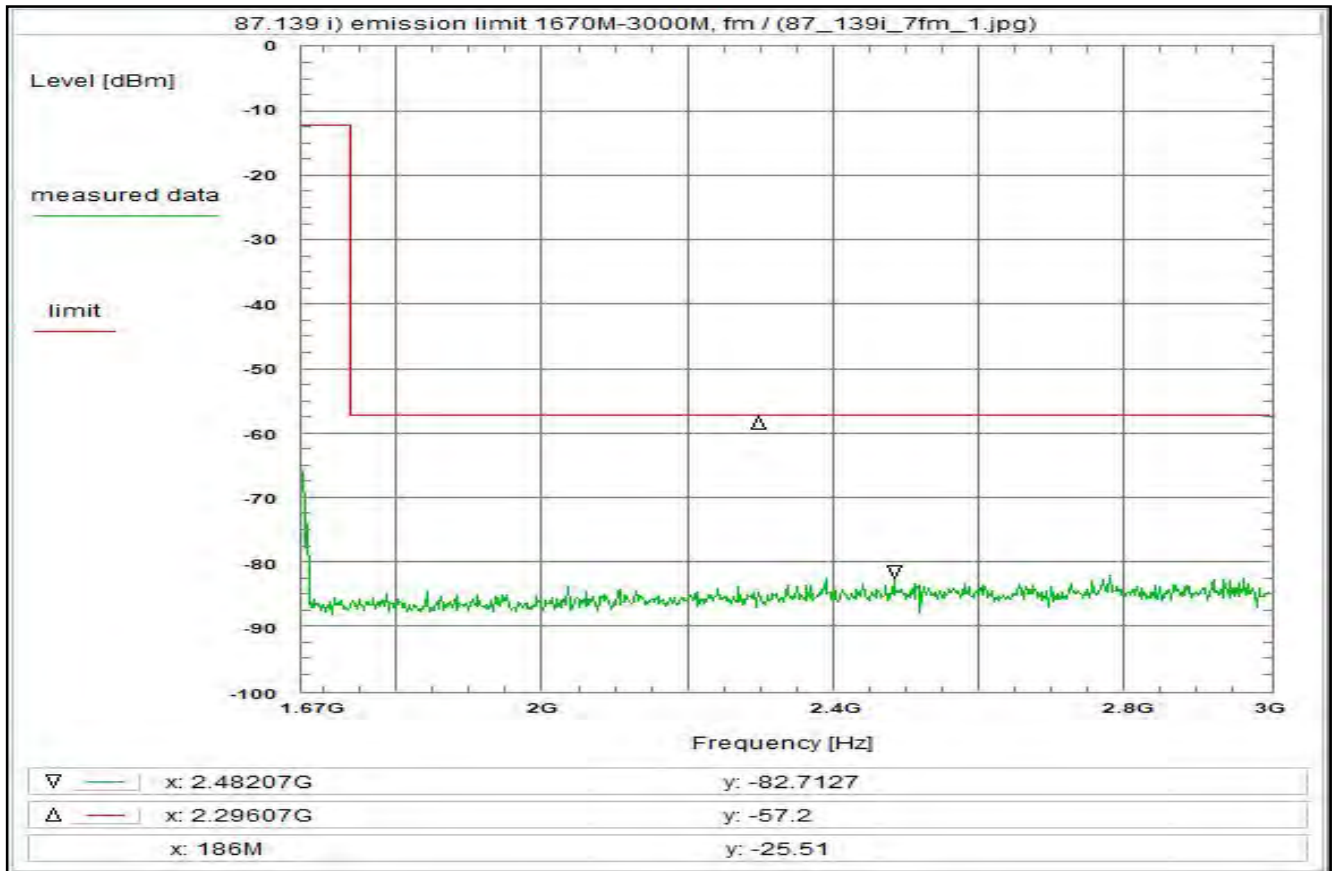
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 213



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2: BNC0, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 14:44:15  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.67 GHz  
Stop frequency: 3 GHz  
Center frequency: 2.335 GHz  
Frequency span: 1.33 GHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 10 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 1.1 dB  
DUT-Antenna + 0.0 dB  
Test antenna + 0.0 dB  
BW correction factor (3k -> 4k) + 1.2 dB  
Atten. between HPA and feedhorn - 0.0 dB  
additional attenuation + 0.0 dB  
(BNC0) + 10.2 dB  
TOTAL CORRECTION: + 12.5 dB

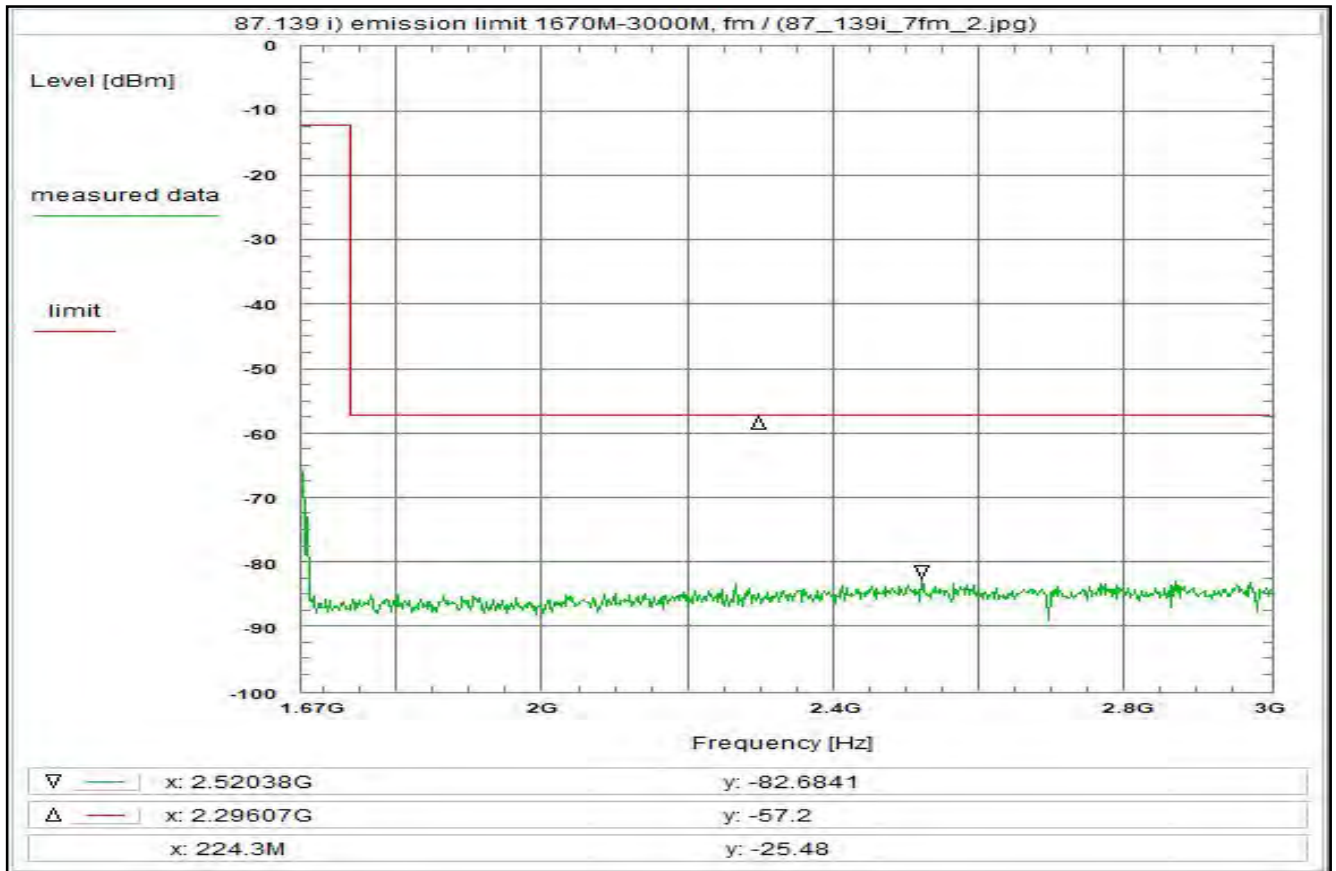
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 214



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T4.5XD

Test setup:  
see test report chapter 7.2 setup 1.1hij

Test equipment:  
see test report chapter 7.2: BNCo, C220, R001

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 04/Jun/2020 14:46:51  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.67 GHz  
Stop frequency: 3 GHz  
Center frequency: 2.335 GHz  
Frequency span: 1.33 GHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 10 dB  
Trace-Mode: Clear Write  
Detector-Mode: Normal

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 1.1 dB  
DUT-Antenna + 0.0 dBi  
Test antenna + 0.0 dB  
BW correction factor (3k -> 4k) + 1.2 dB  
Atten. between HPA and feedhorn - 0.0 dB  
additional attenuation + 0.0 dB  
(BNCo) + 10.2 dB  
TOTAL CORRECTION: + 12.5 dB

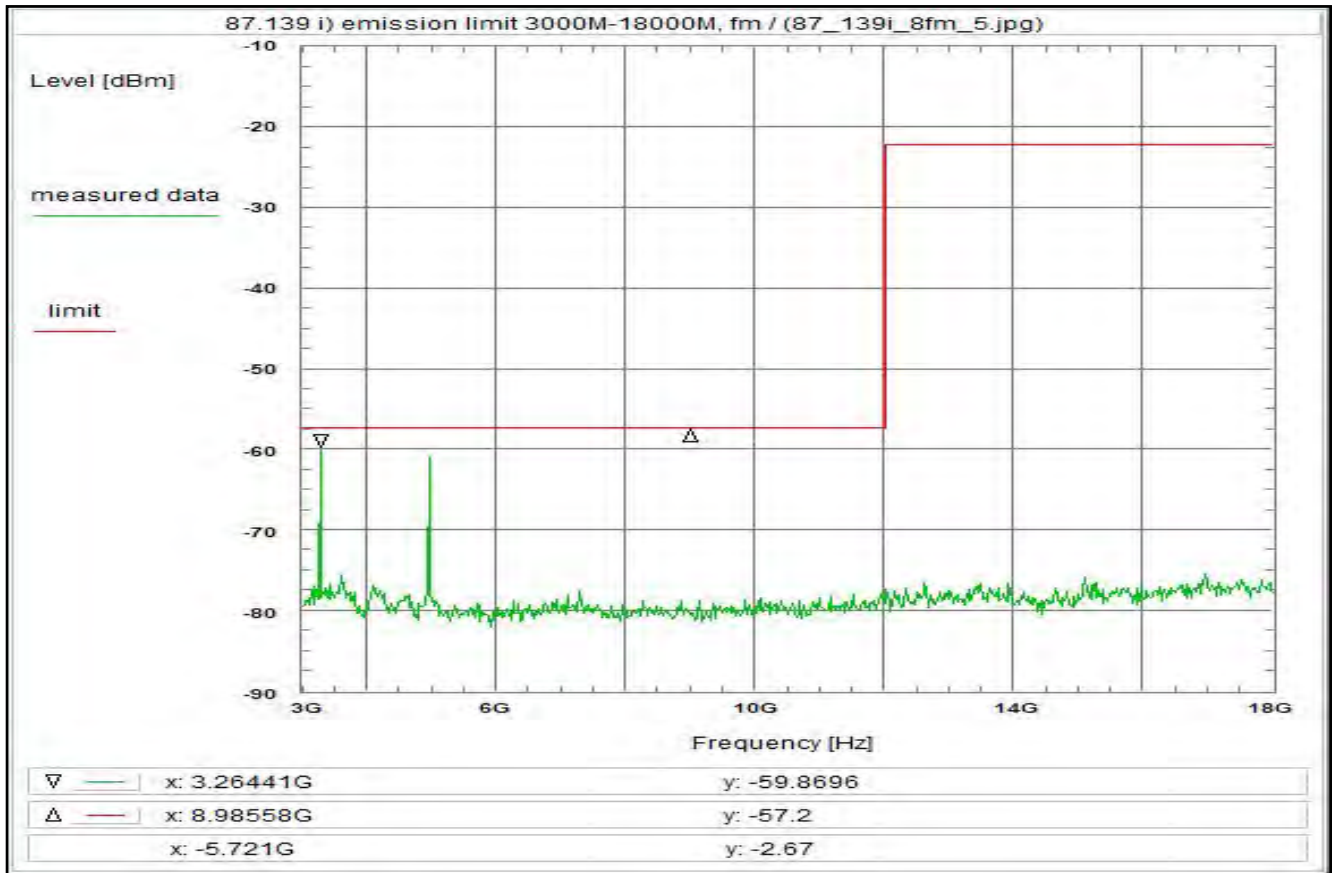
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 215



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R20T4.5XD

Test setup:

see test report chapter 7.2 setup 1.1hij

Test equipment:

see test report chapter 7.2: C220, R001, U312, HPF

Remark:

**Test result:** Test passed

Environment condition:

Date & Time: Mon 29/Jun/2020 15:36:32  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 3 GHz  
Stop frequency: 18 GHz  
Center frequency: 10.5 GHz  
Frequency span: 15 GHz  
Resolution-BW: 10 kHz  
Video-BW: 30 kHz  
Input attenuation: 5 dB  
Trace-Mode: Clear Write  
Detector-Mode: Pos Peak

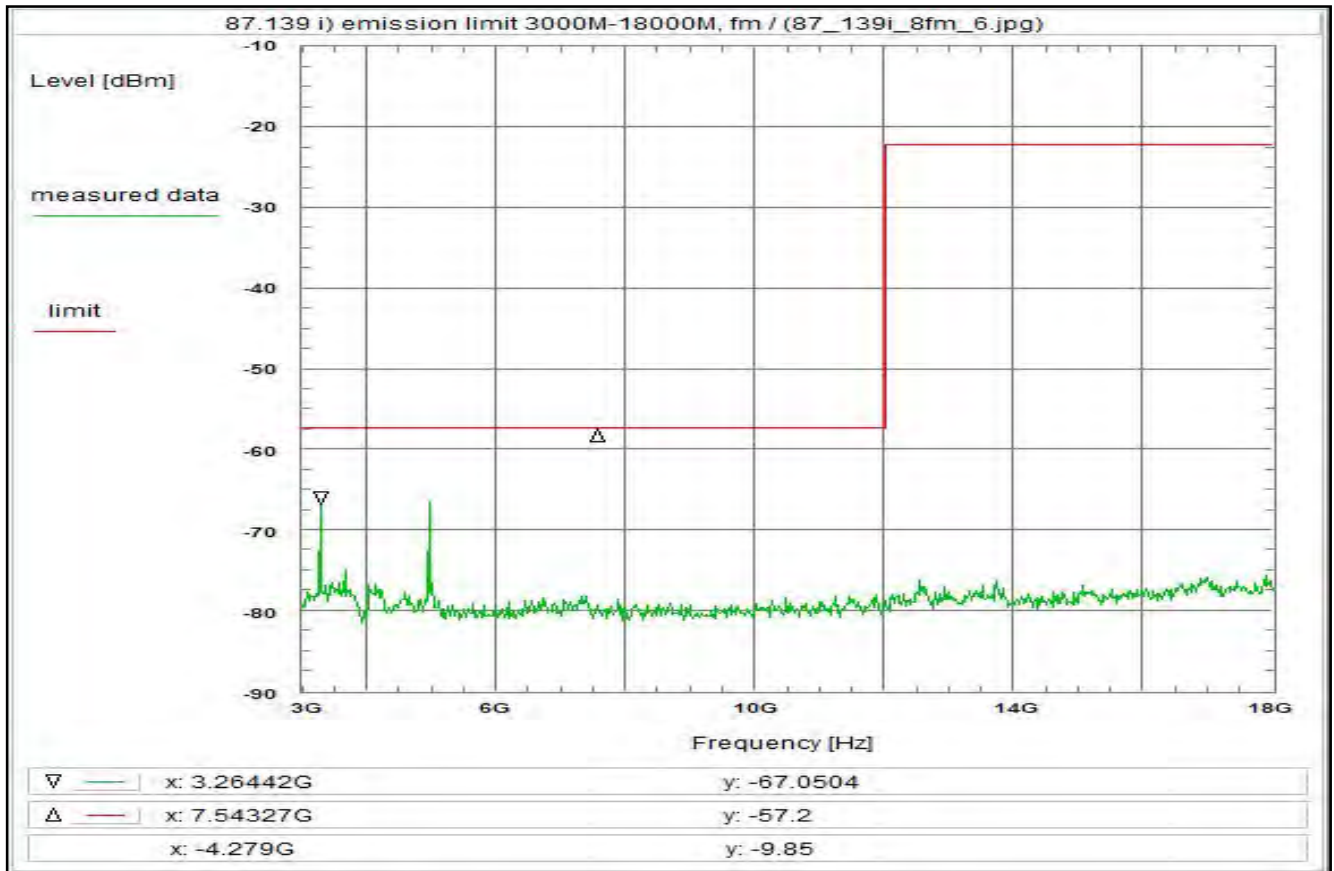
Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 2.3 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  
(HPF) + 20.6 dB  
TOTAL CORRECTION: + 18.9 dB

Remarks:

Carrier-on state / Carrier in the middle of the band (fm)  
For EIRP calculation:  
'worst-case' = maximum antenna gain

Plot No. 216



**Subclause:** 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fm)

**Limit:**

**Limit according to 87.139 a):**

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

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

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

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, see test report chapter 5.4  
A700S Class 6 ACD, R2014.5XD

**Test setup:**

see test report chapter 7.2 setup 1.1higj

**Test equipment:**

see test report chapter 7.2: C220, R001, U312, HPF

Remark:

**Test result:** Test passed

**Environment condition:**

Date & Time: Mon 29/Jun/2020 15:42:23  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

**Setup of measurement equipment:**

Start frequency: 3 GHz  
Stop frequency: 18 GHz  
Center frequency: 10.5 GHz  
Frequency span: 15 GHz  
Resolution-BW: 10 kHz  
Video-BW: 30 kHz  
Input attenuation: 5 dB  
Trace-Mode: Max-Hold  
Detector-Mode: Pos Peak

**Correction:**

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 2.3 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  
(HPF) + 20.6 dB  
TOTAL CORRECTION: + 18.9 dB

**Remarks:**

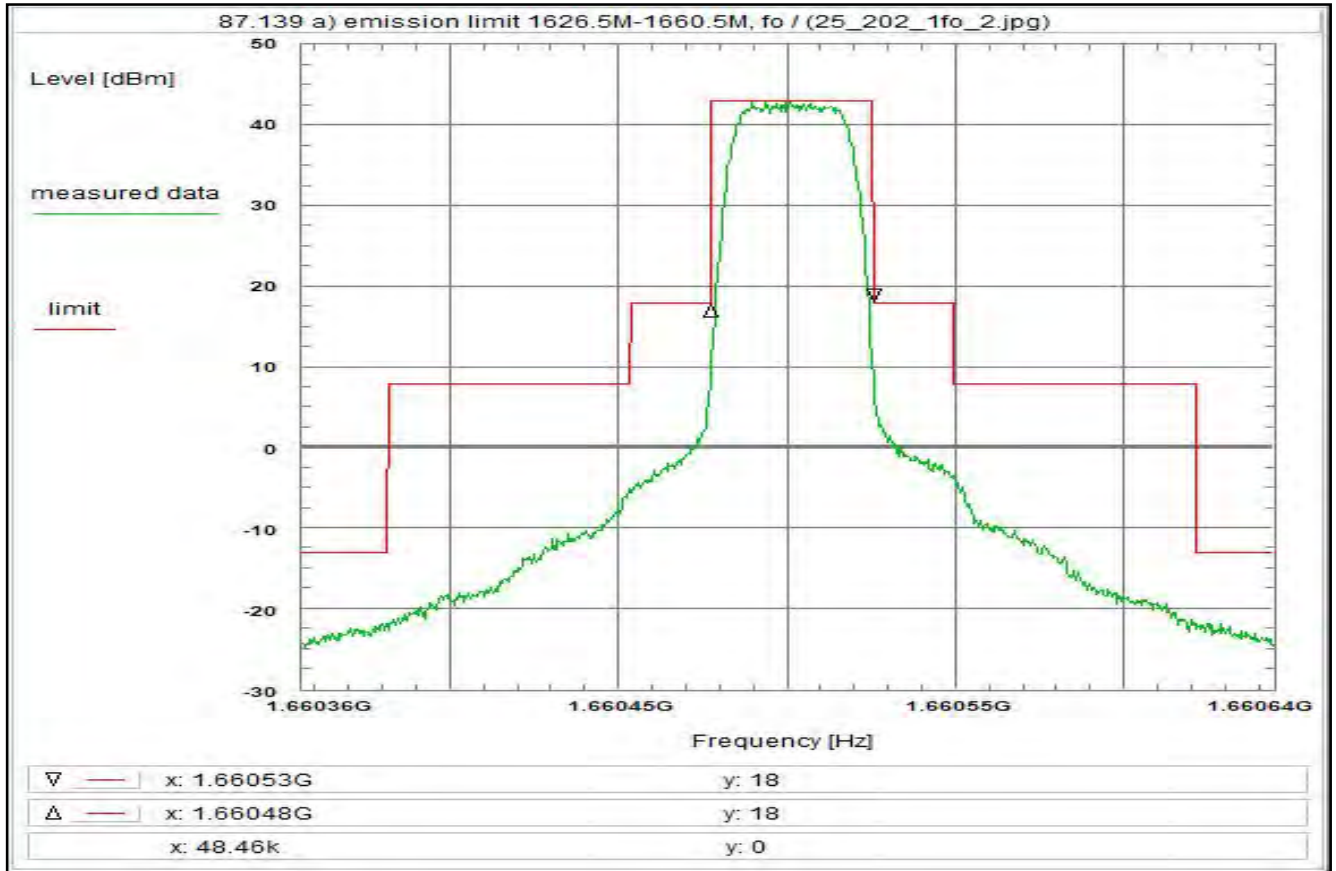
Carrier-on state / Carrier in the middle of the band (fm)

**For EIRP calculation:**

'worst-case' = maximum antenna gain



Plot No. 217



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R20T1XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:31:20  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660356 GHz  
Stop frequency: 1.660644 GHz  
Center frequency: 1.6605 GHz  
Frequency span: 288 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

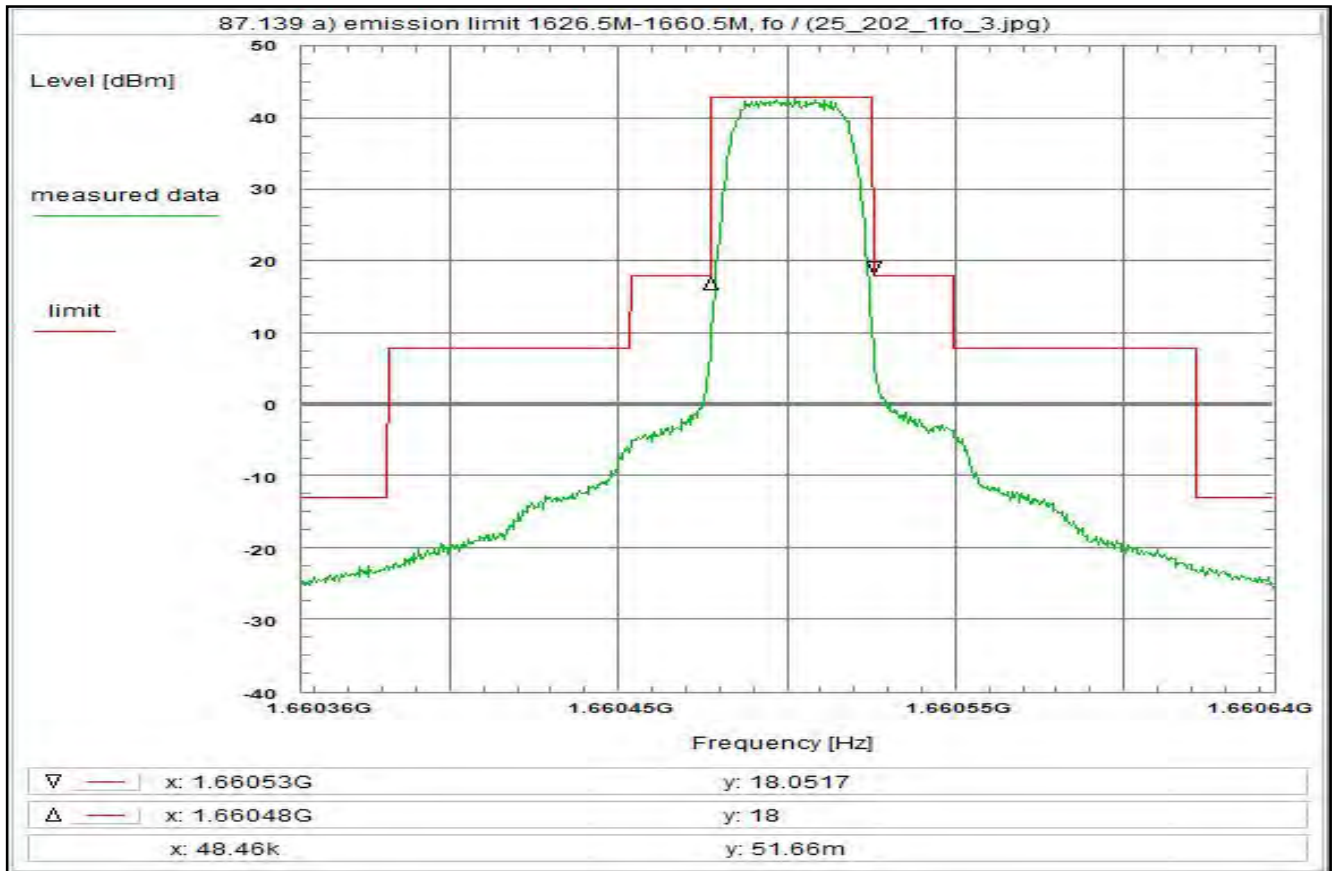
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 218



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R20T1QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:32:54  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660356 GHz  
Stop frequency: 1.660644 GHz  
Center frequency: 1.6605 GHz  
Frequency span: 288 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

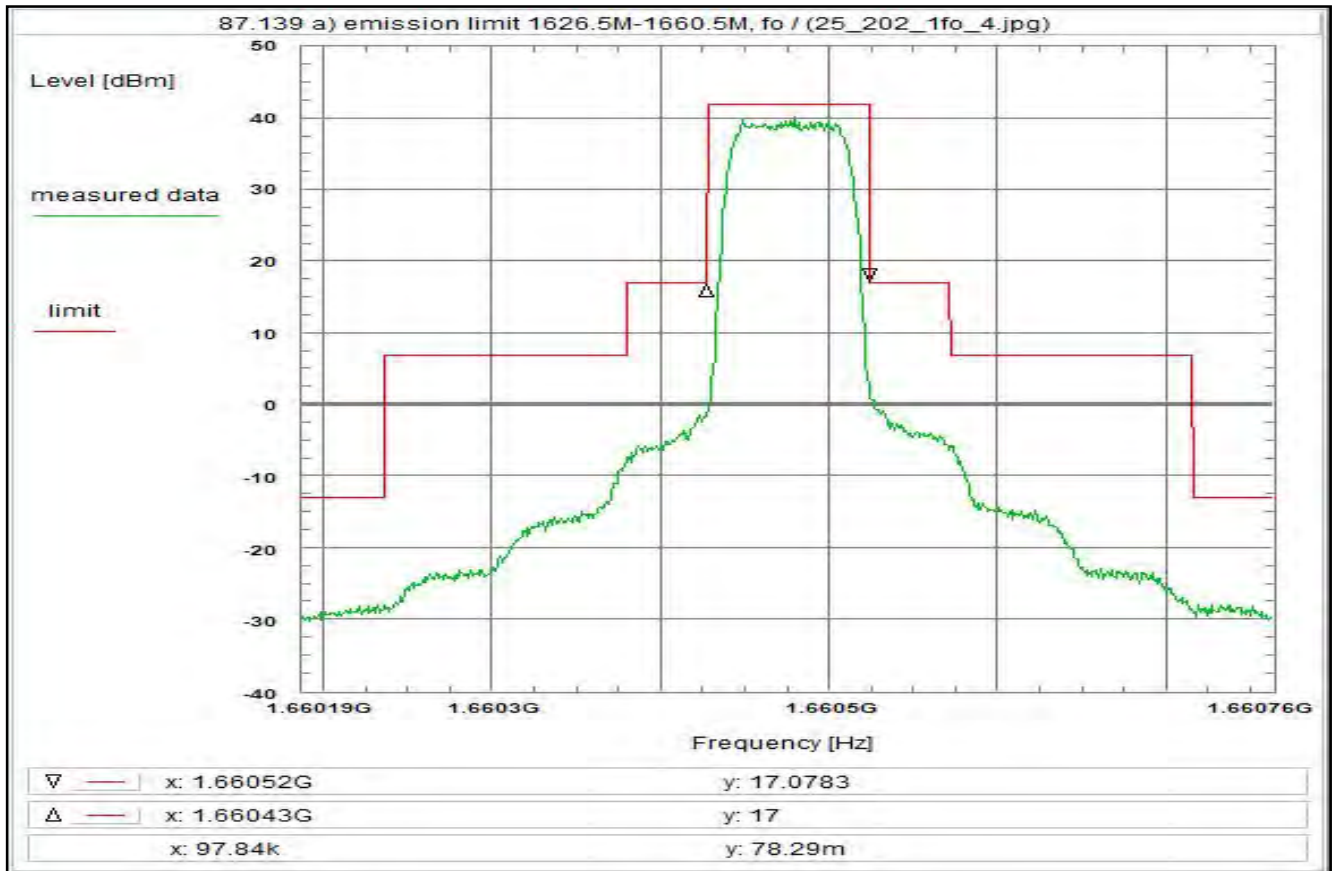
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 219



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R5T2XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:34:59  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660187 GHz  
Stop frequency: 1.660763 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 576 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

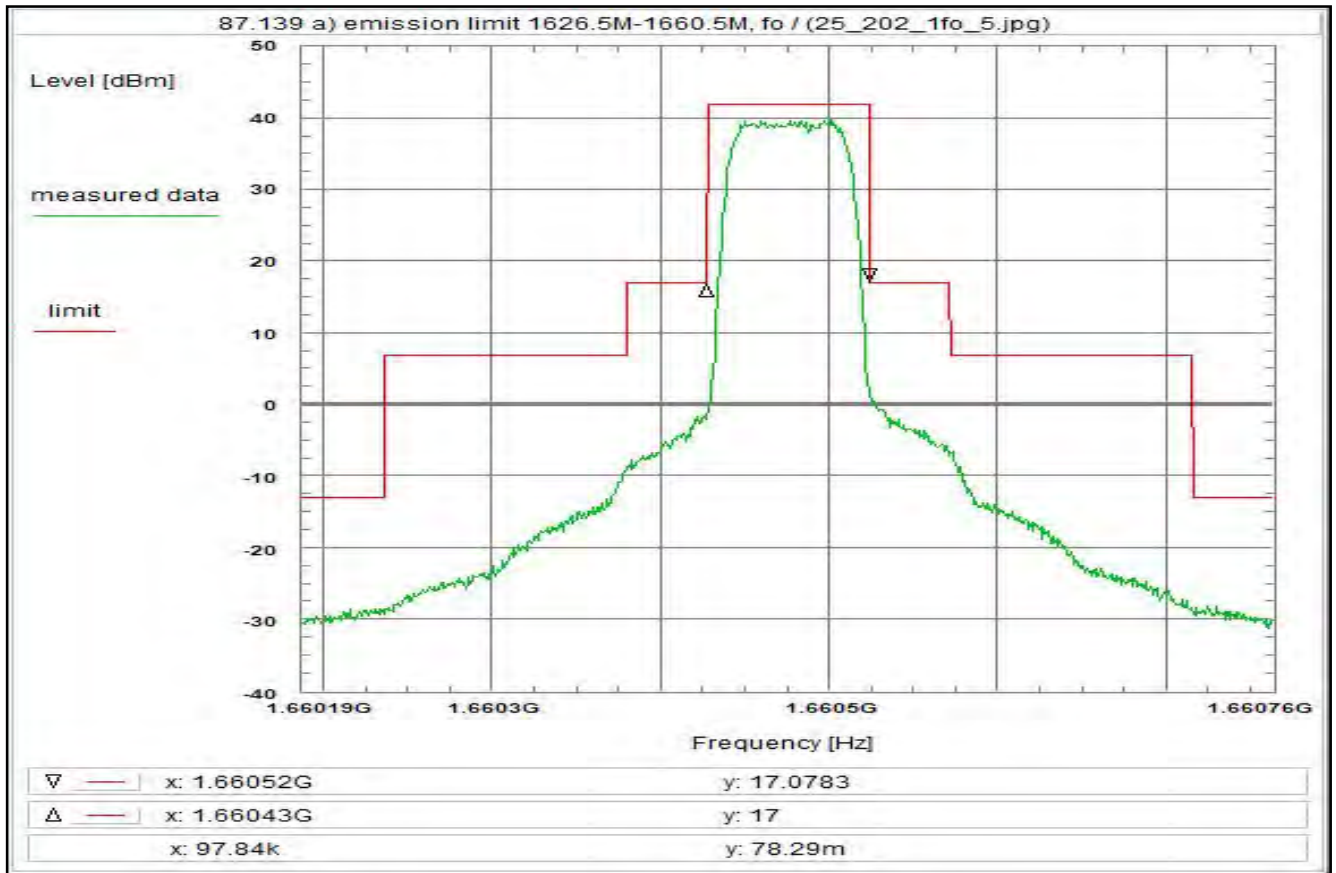
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 220



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R20T2XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:36:07  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660187 GHz  
Stop frequency: 1.660763 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 576 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

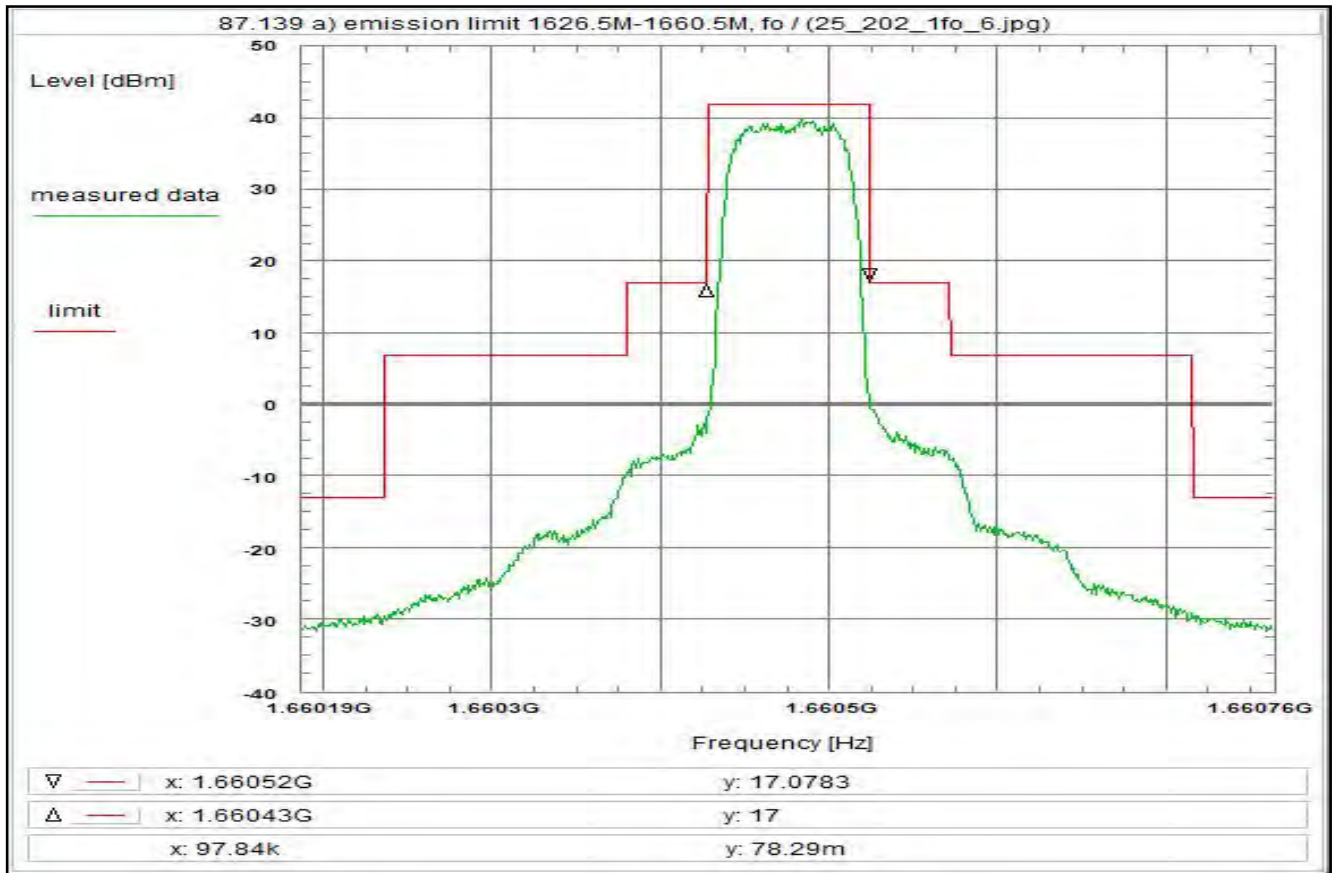
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 221



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R5T2QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:39:30  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660187 GHz  
Stop frequency: 1.660763 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 576 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

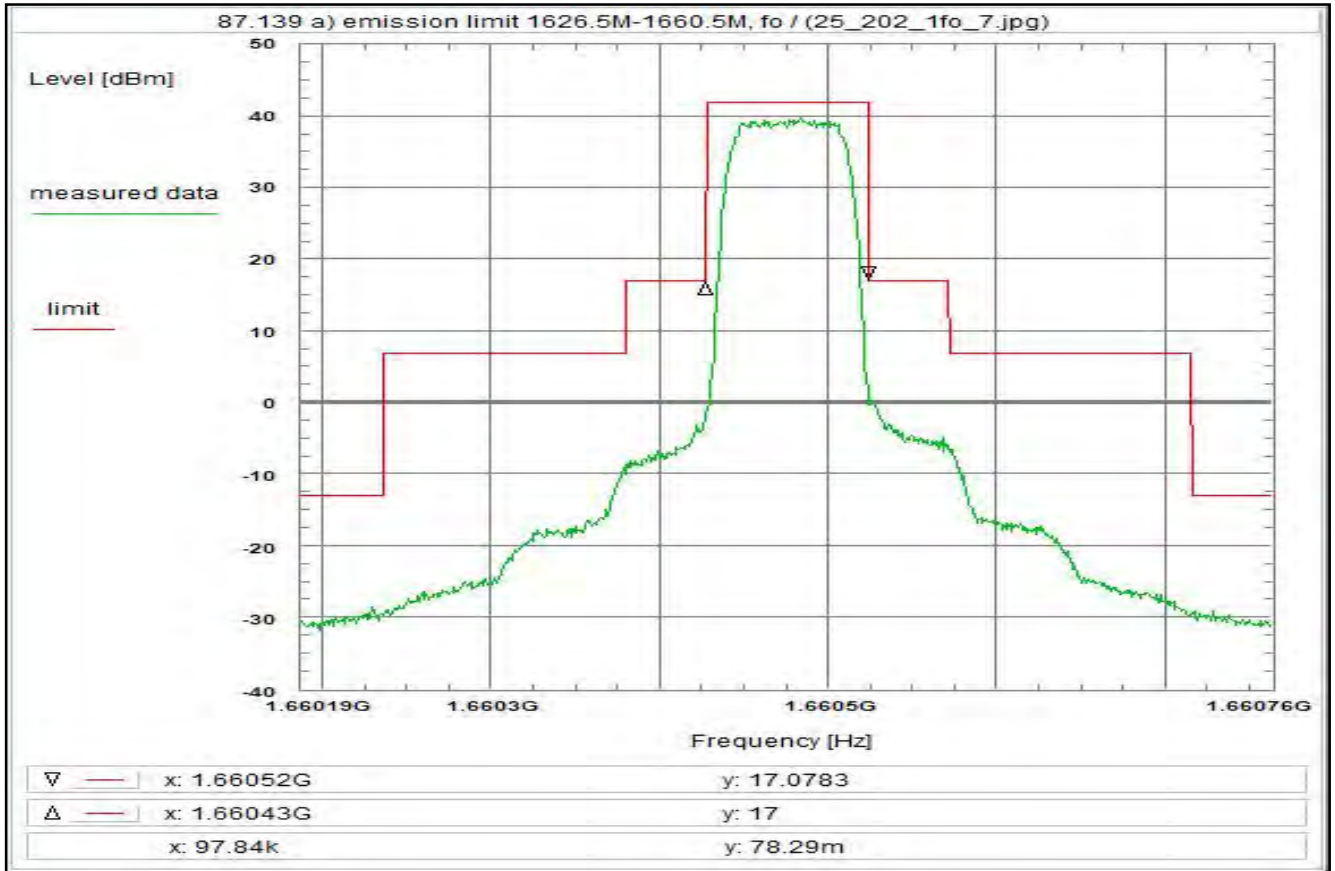
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth



Plot No. 222



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R20T2QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:41:07  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660187 GHz  
Stop frequency: 1.660763 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 576 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

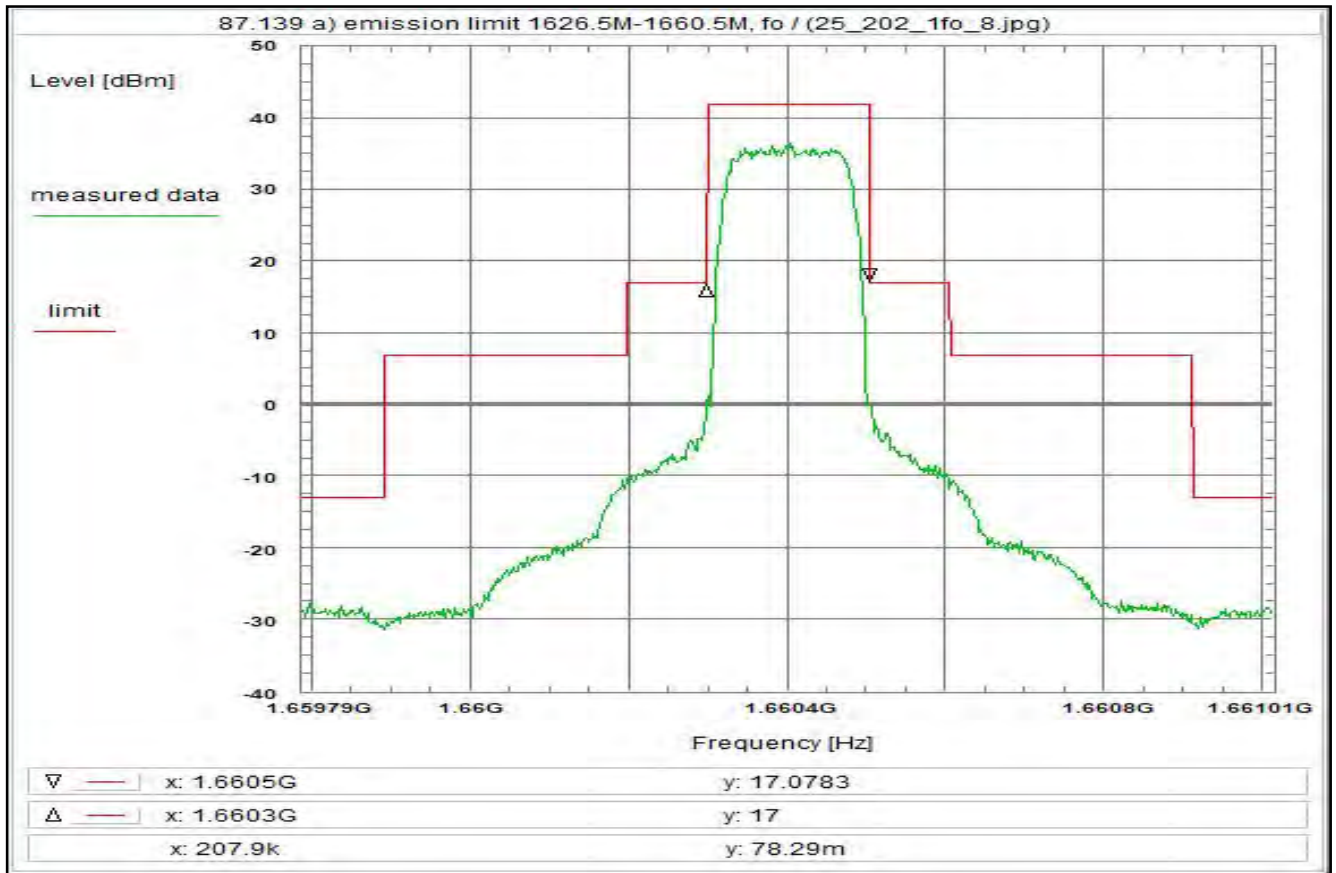
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 223



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R5T4.5XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:44:35  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659788 GHz  
Stop frequency: 1.661012 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.224 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

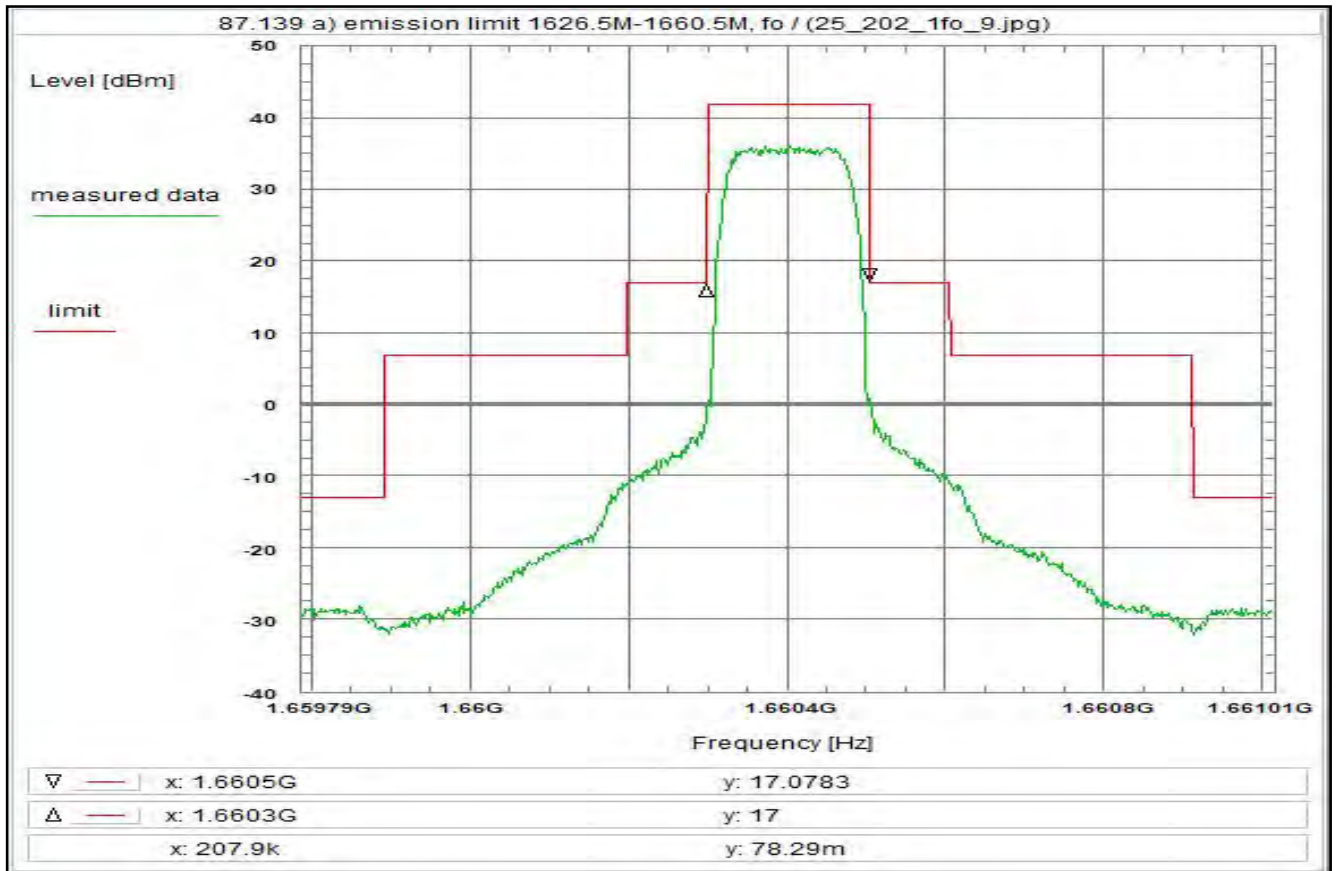
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 224



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R20T4.5XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:46:59  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659788 GHz  
Stop frequency: 1.661012 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.224 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

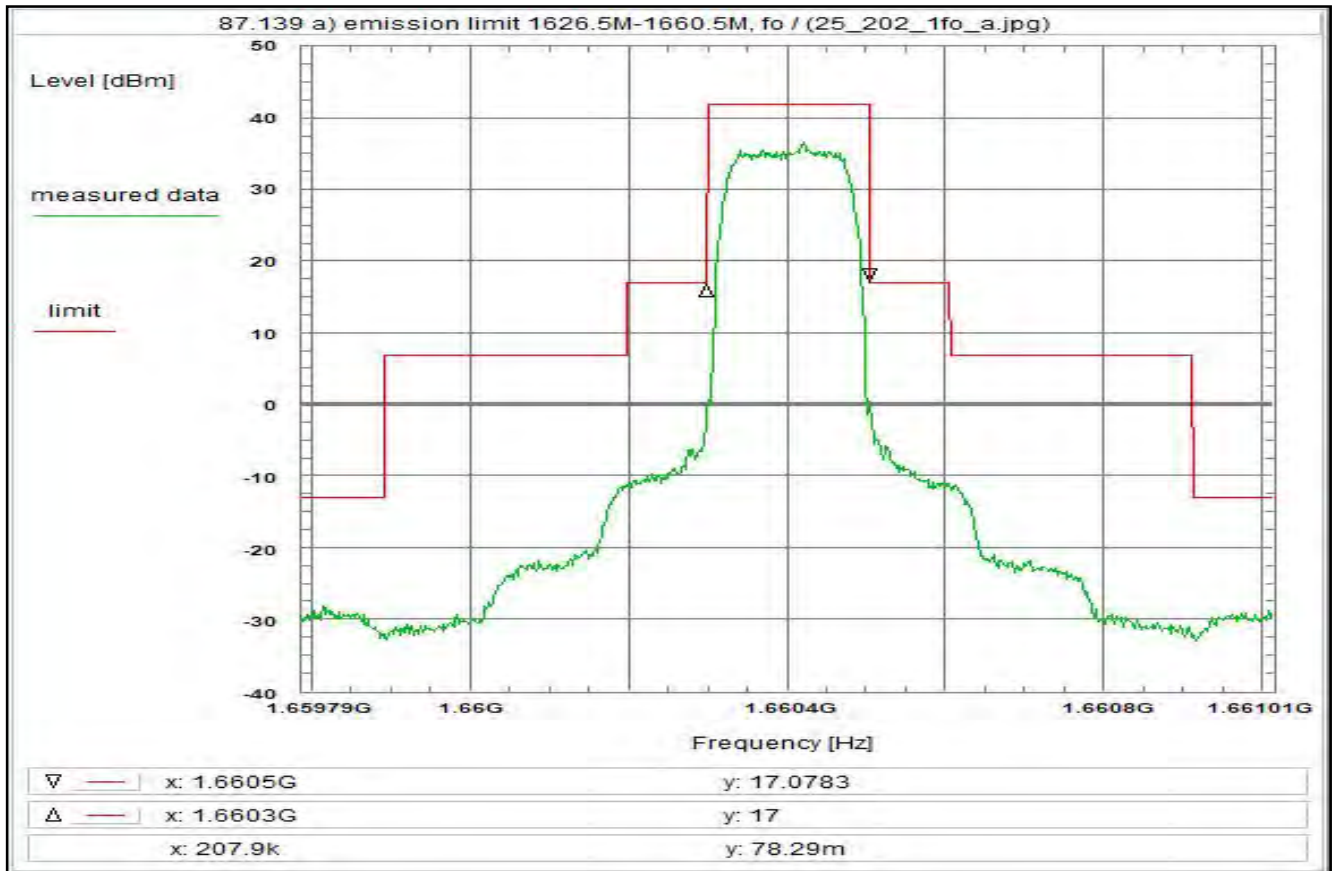
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 225



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R5T4.5XQD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:48:29  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659788 GHz  
Stop frequency: 1.661012 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.224 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

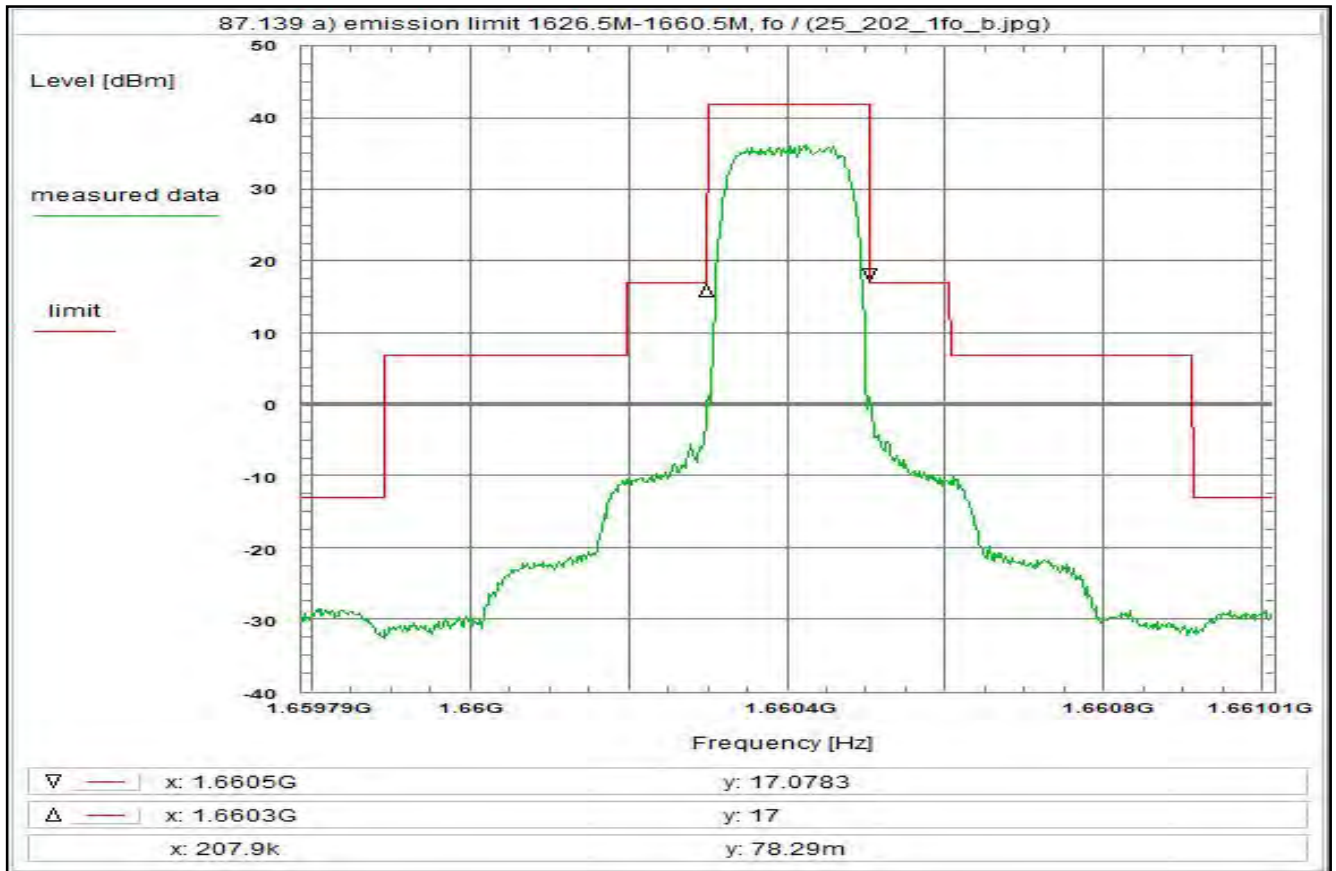
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 226



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R20T4.5QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:50:09  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659788 GHz  
Stop frequency: 1.661012 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.224 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

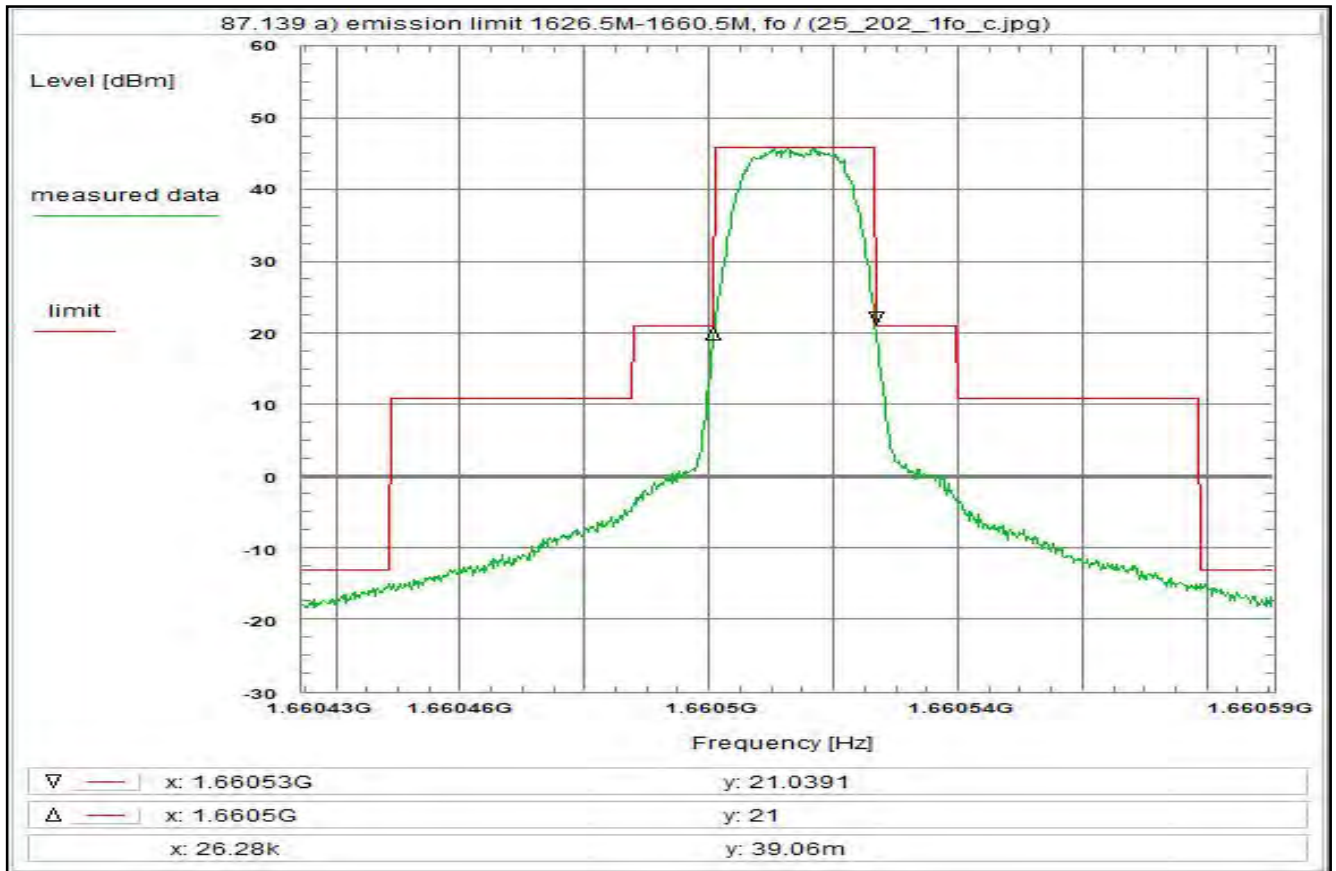
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth



Plot No. 227



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R20T405QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:52:03  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6604345 GHz  
Stop frequency: 1.6605905 GHz  
Center frequency: 1.6605125 GHz  
Frequency span: 156 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

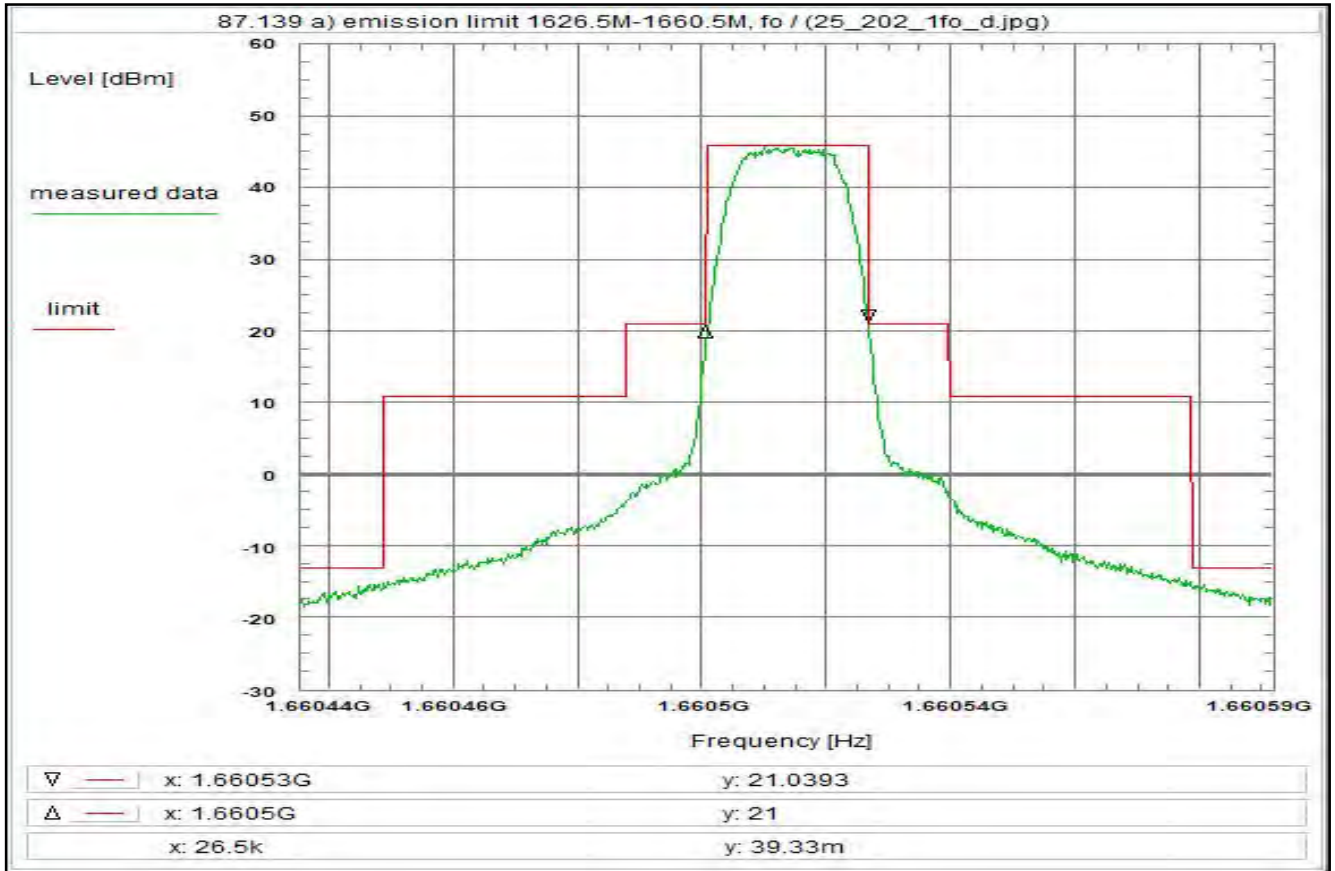
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 228



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 ACD, R20T405QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Tue 30/Jun/2020 11:54:23  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6604355 GHz  
Stop frequency: 1.6605915 GHz  
Center frequency: 1.6605135 GHz  
Frequency span: 156 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

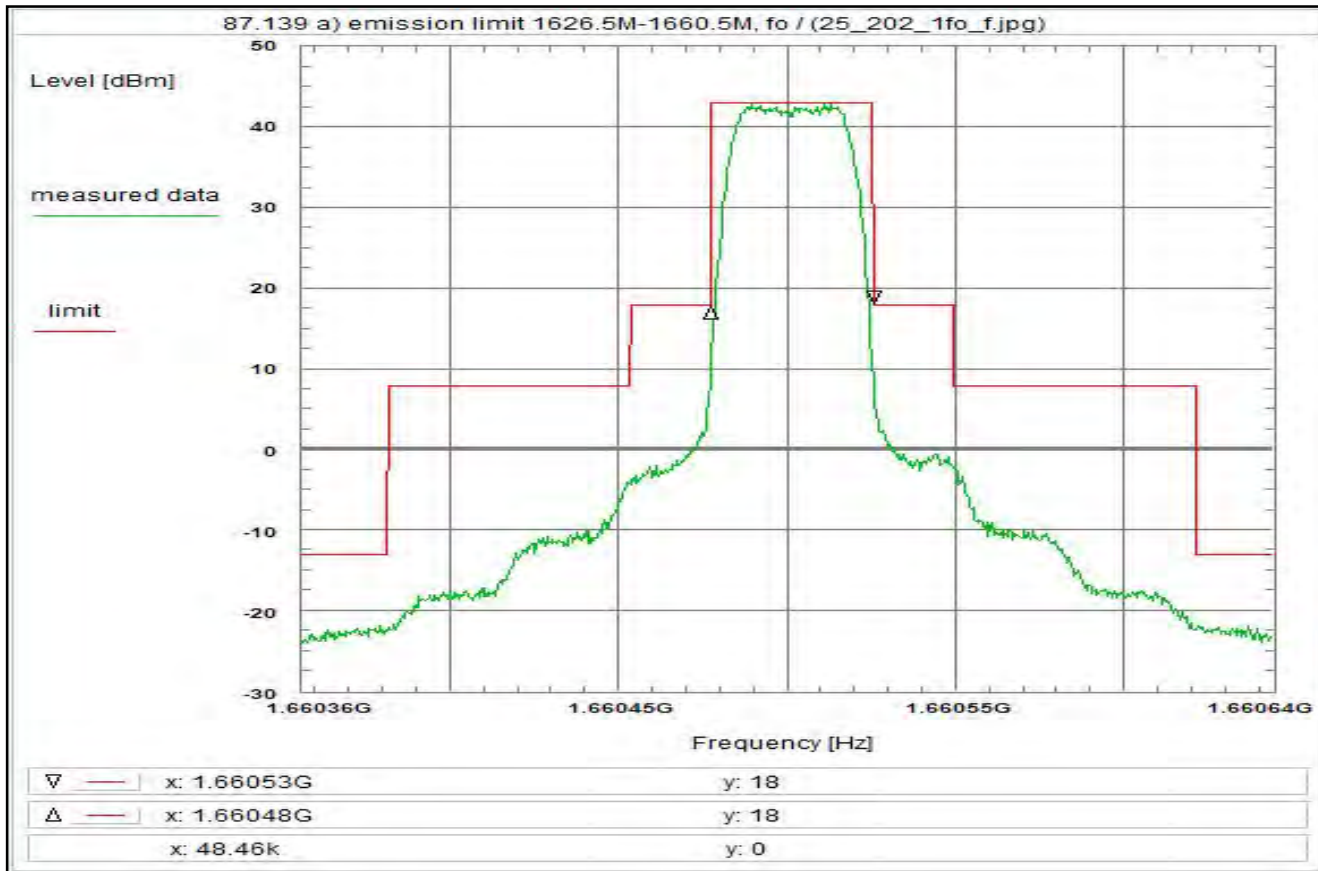
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 229



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R5T1XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:05:46  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660356 GHz  
Stop frequency: 1.660644 GHz  
Center frequency: 1.6605 GHz  
Frequency span: 288 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

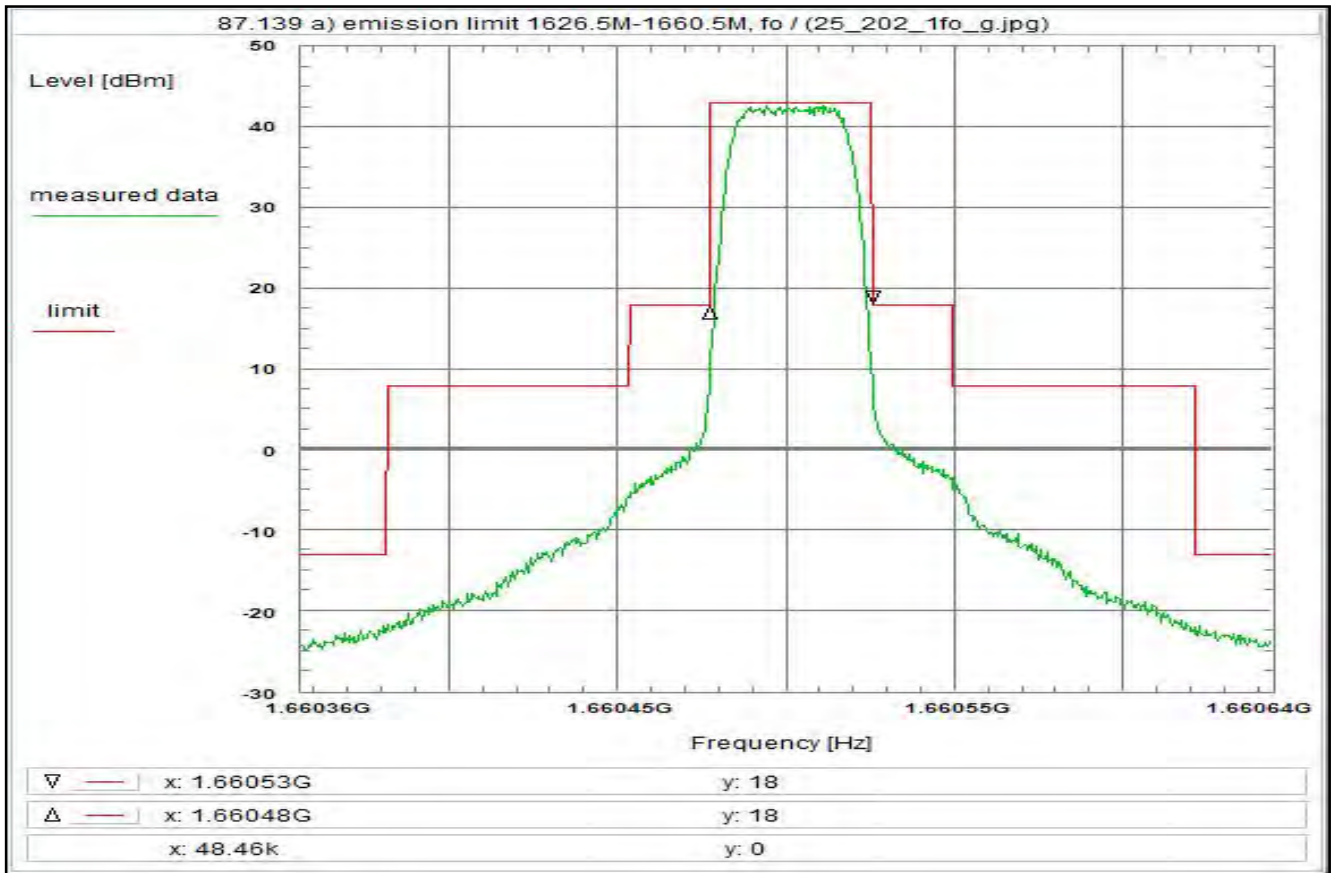
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 230



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T1XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:06:38  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660356 GHz  
Stop frequency: 1.660644 GHz  
Center frequency: 1.6605 GHz  
Frequency span: 288 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

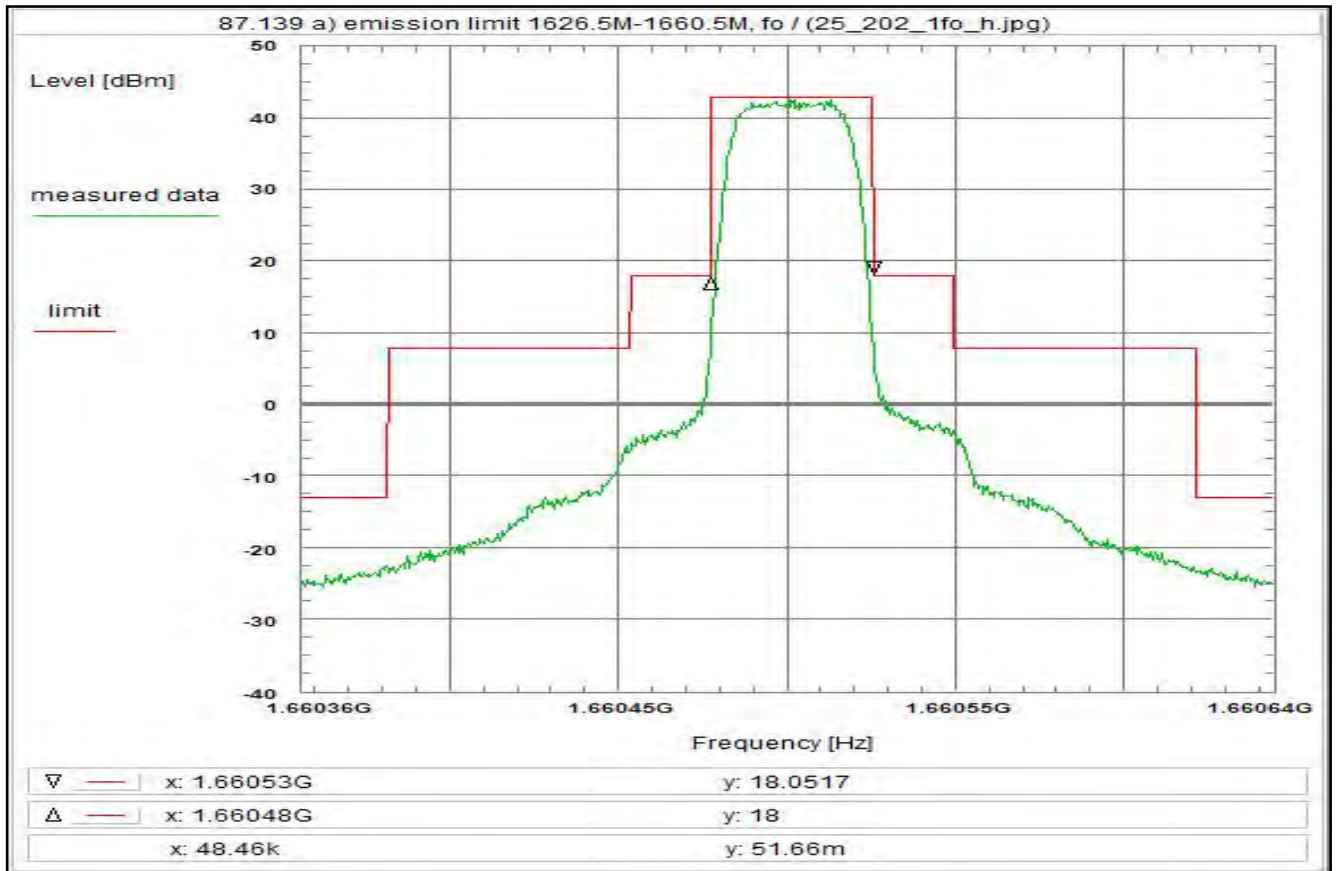
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 231



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T1QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:07:23  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660356 GHz  
Stop frequency: 1.660644 GHz  
Center frequency: 1.6605 GHz  
Frequency span: 288 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

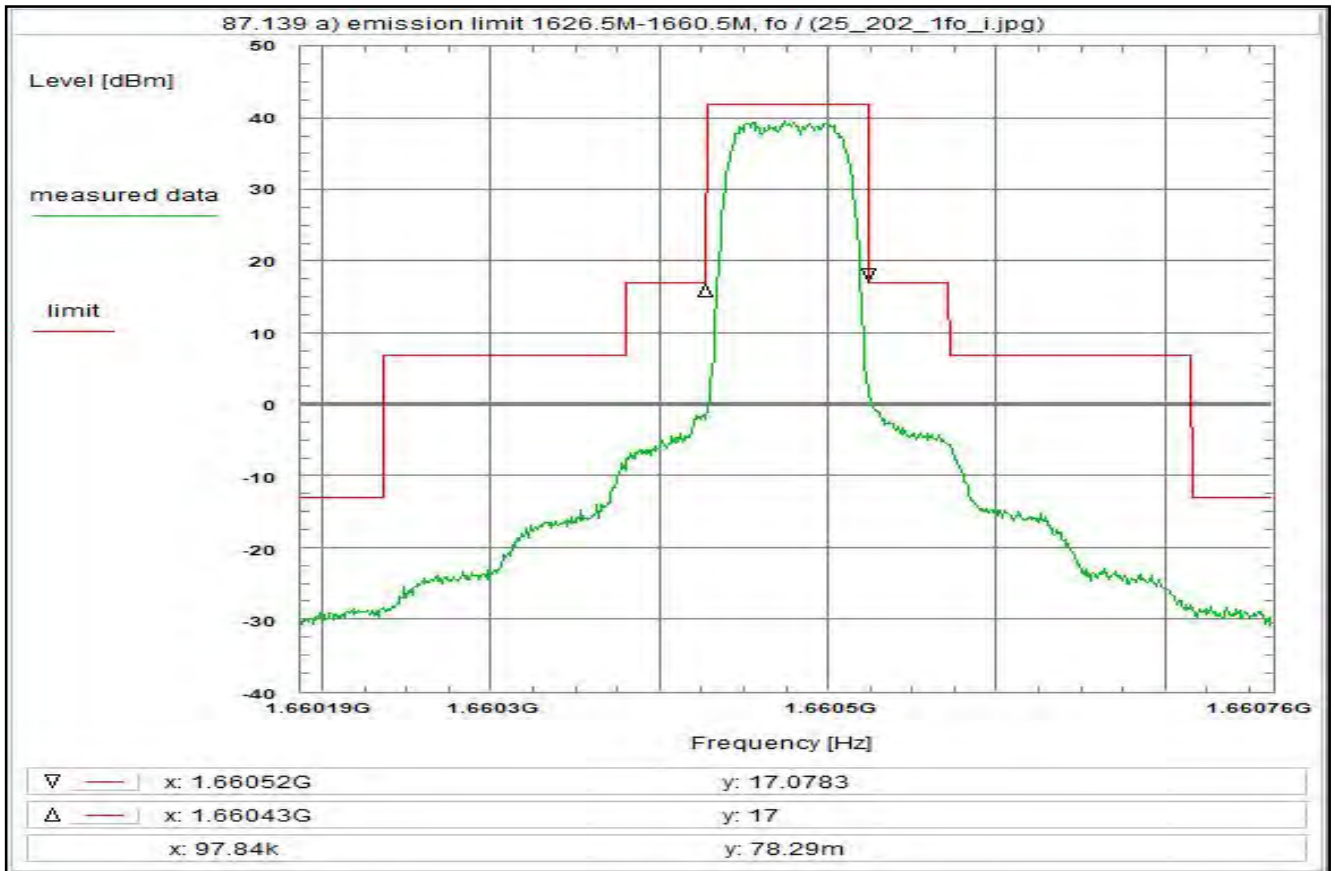
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth



Plot No. 232



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R5T2XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:13:14  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660187 GHz  
Stop frequency: 1.660763 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 576 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

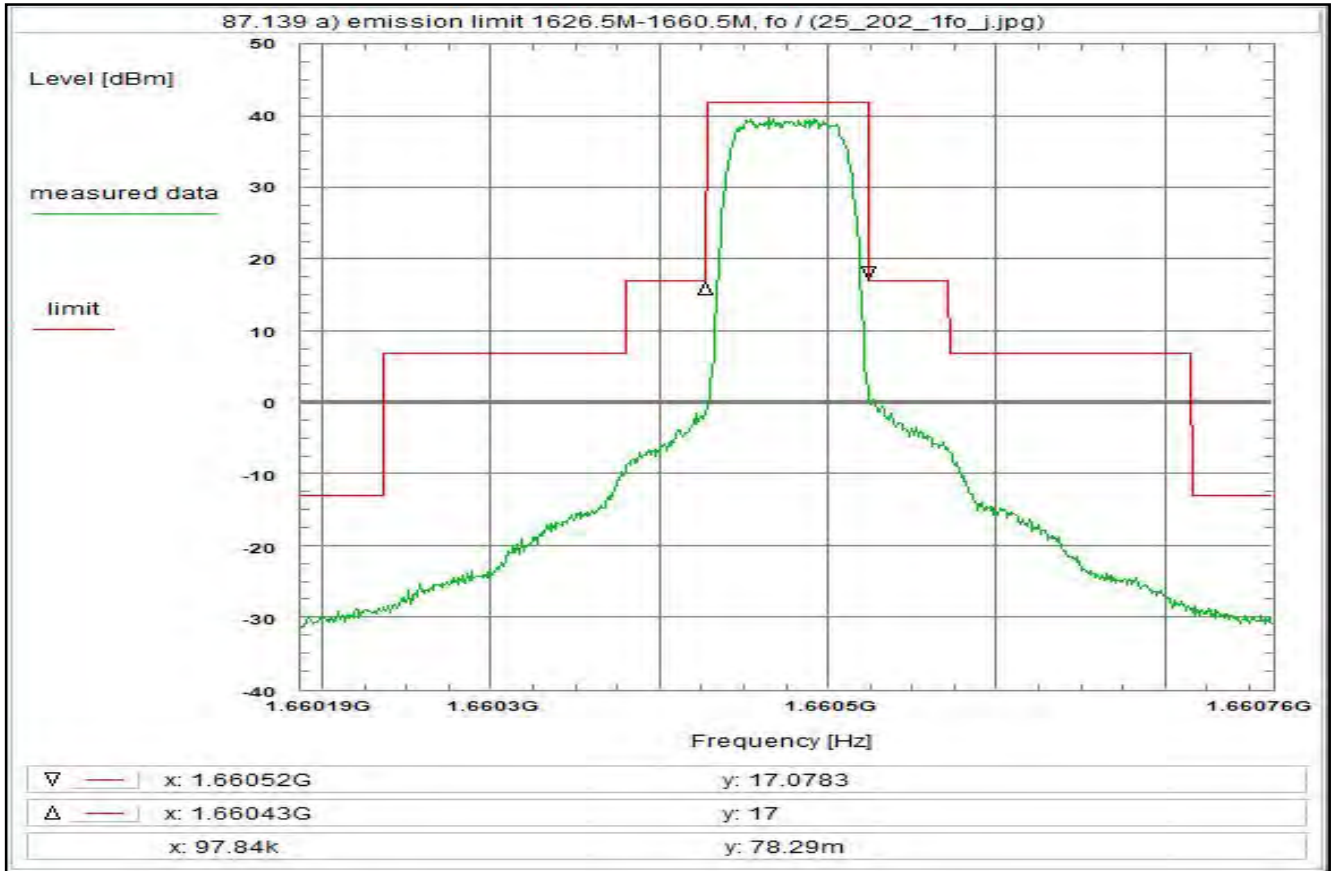
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 233



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T2XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:14:46  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660187 GHz  
Stop frequency: 1.660763 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 576 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

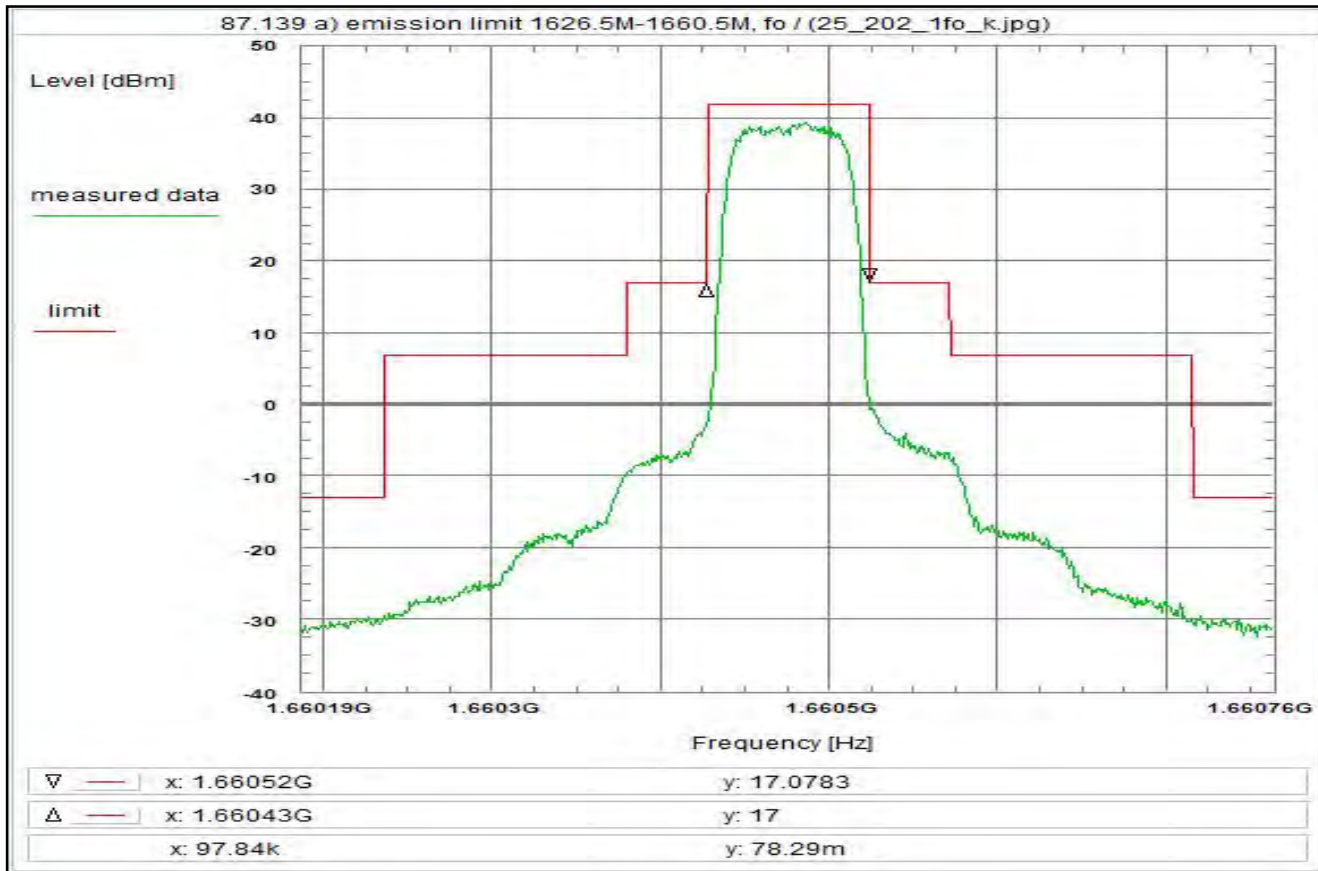
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 234



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R5T2QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:21:21  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660187 GHz  
Stop frequency: 1.660763 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 576 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

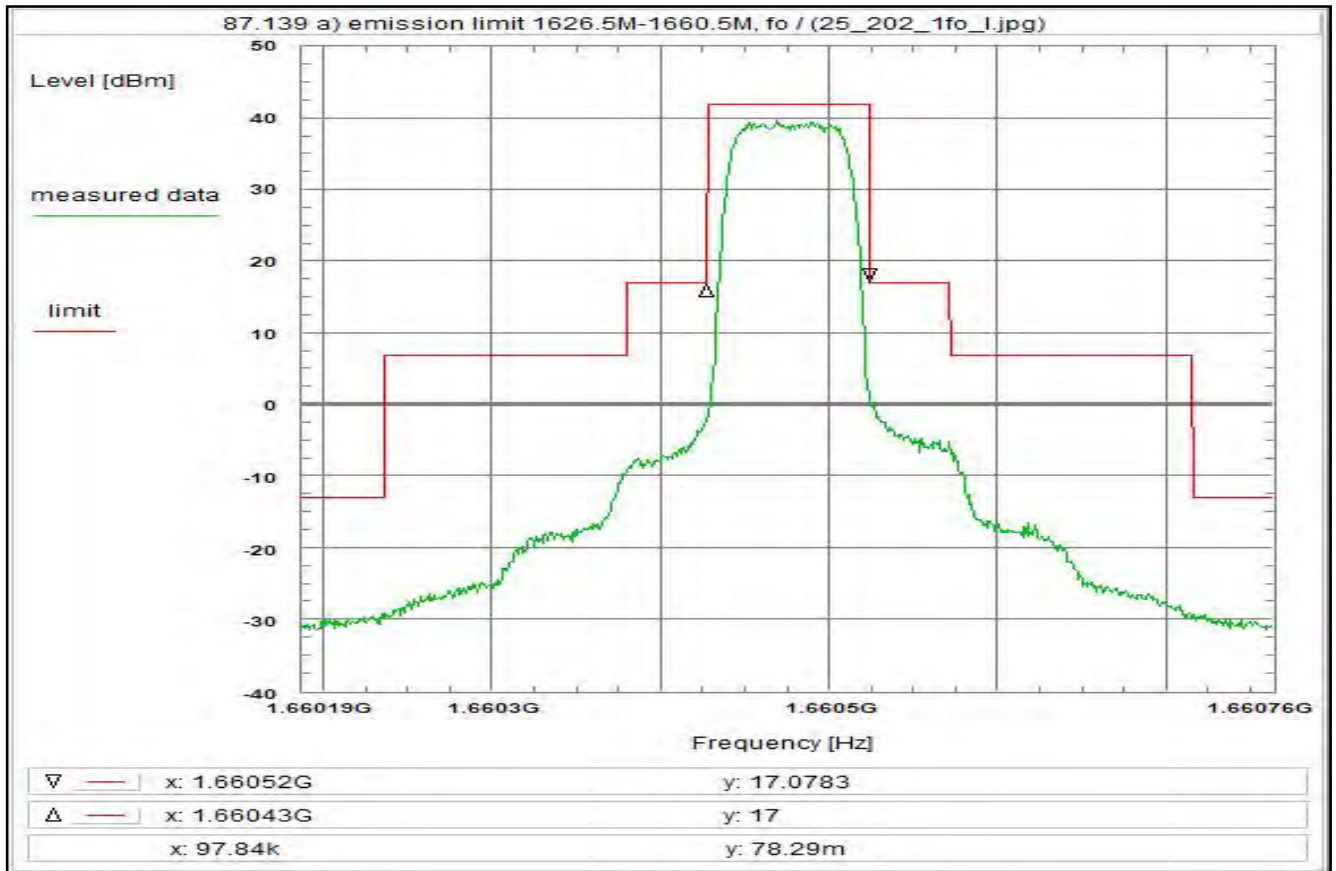
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 235



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T2QD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:22:27  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660187 GHz  
Stop frequency: 1.660763 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 576 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

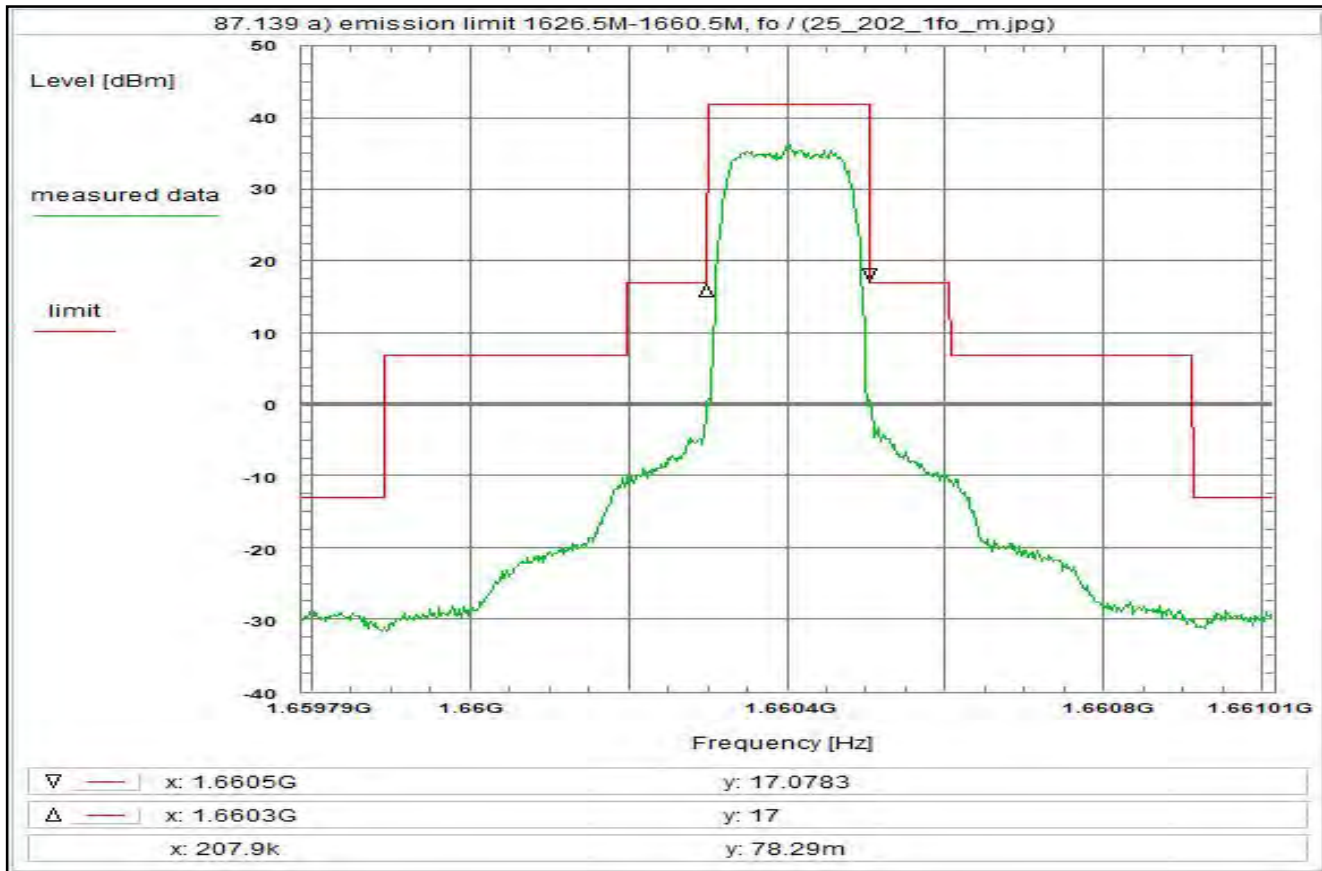
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 236



**Subclause:** 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R5T4.5XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:25:16  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659788 GHz  
Stop frequency: 1.661012 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.224 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

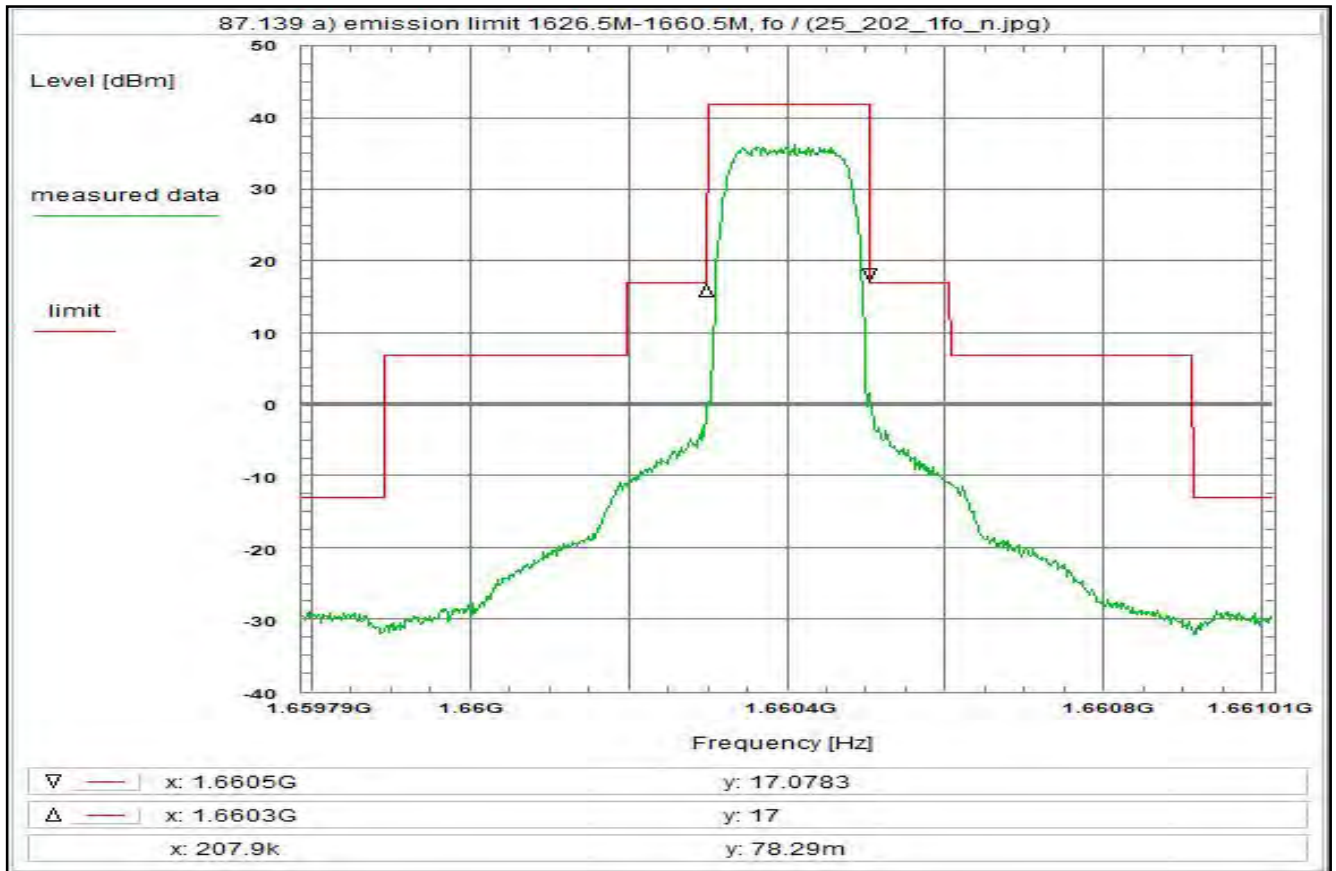
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth



Plot No. 237



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T4.5XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:27:52  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659788 GHz  
Stop frequency: 1.661012 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.224 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

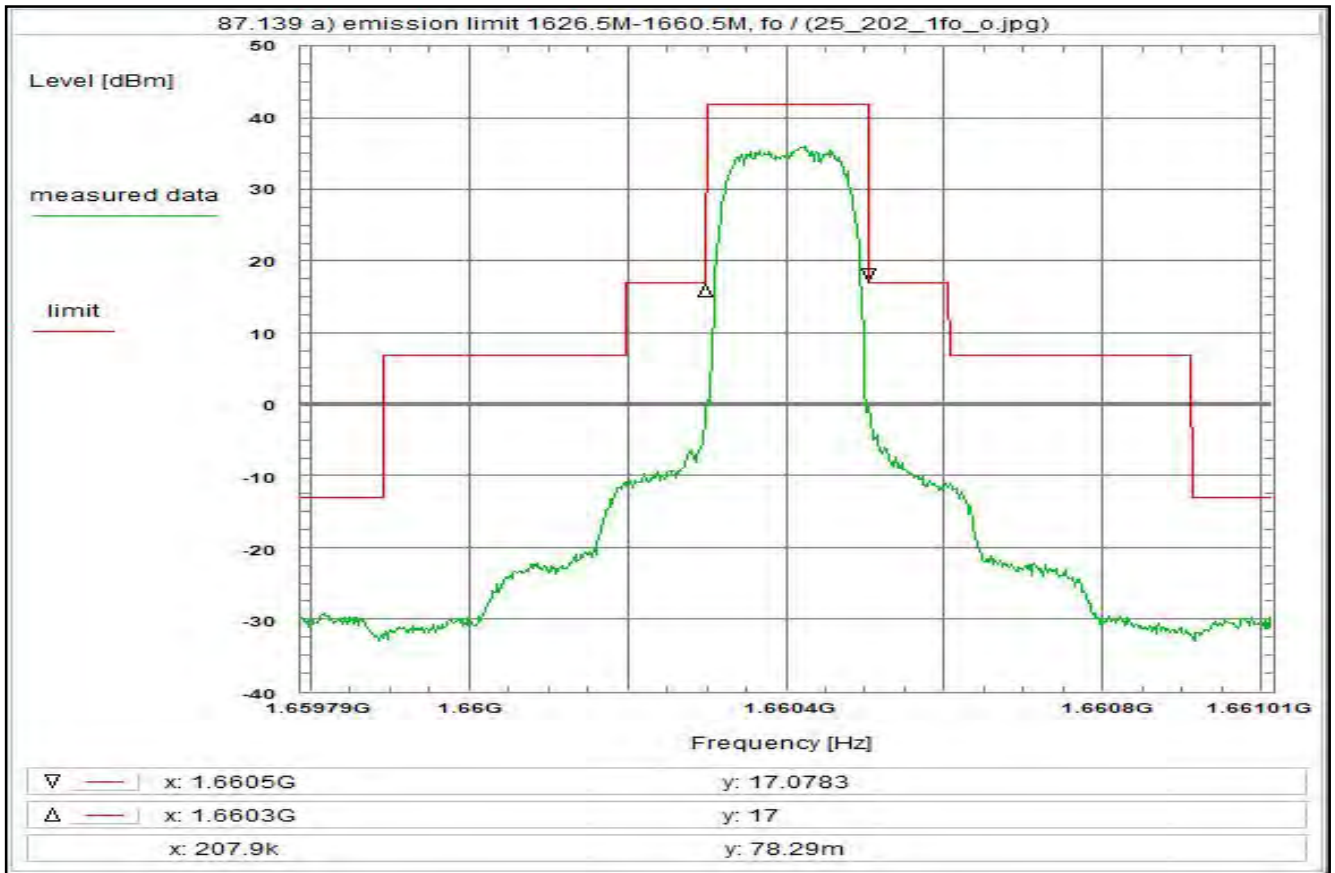
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 238



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R5T4.5XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:29:39  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659788 GHz  
Stop frequency: 1.661012 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.224 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

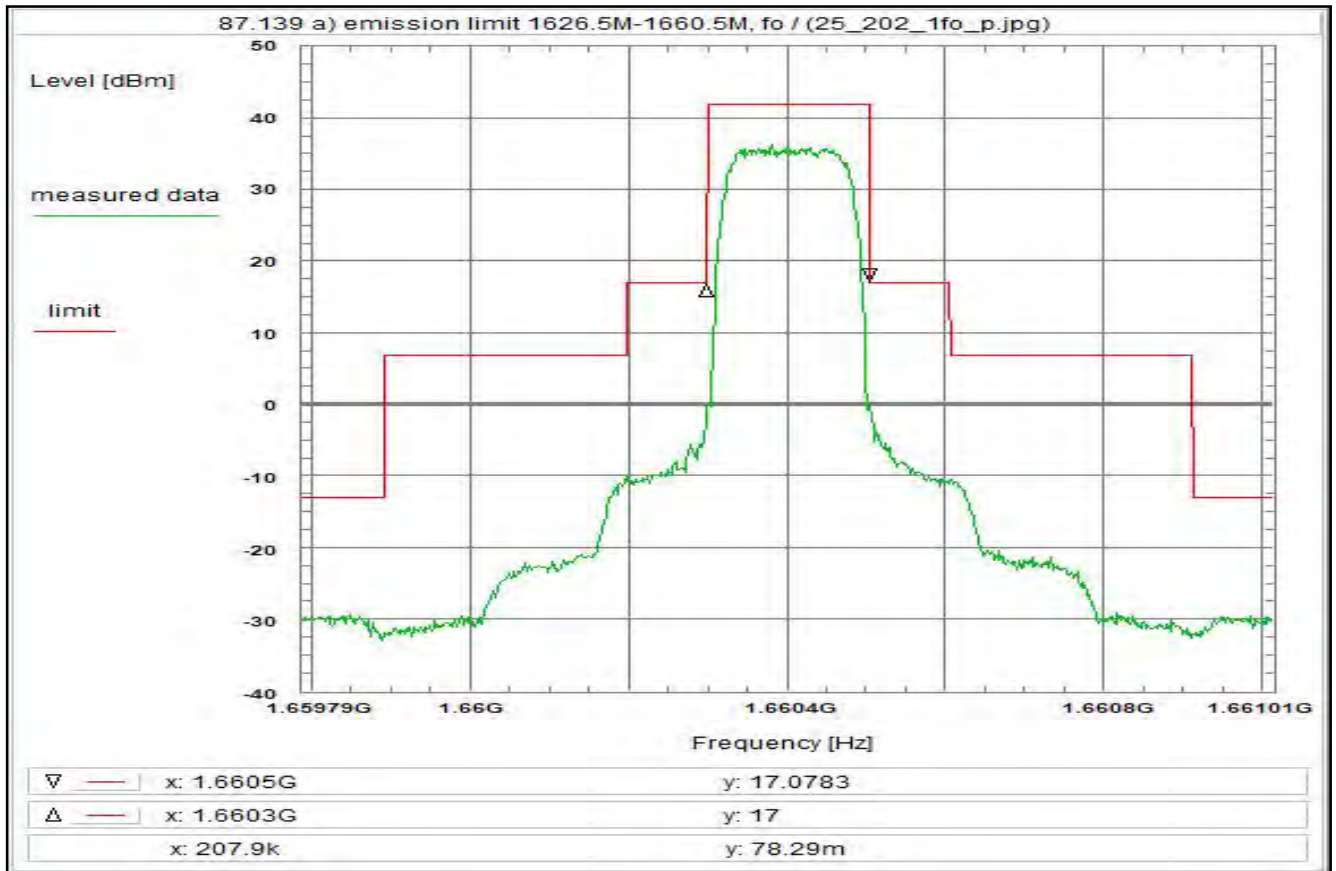
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 239



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T4.5XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:31:40  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659788 GHz  
Stop frequency: 1.661012 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.224 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

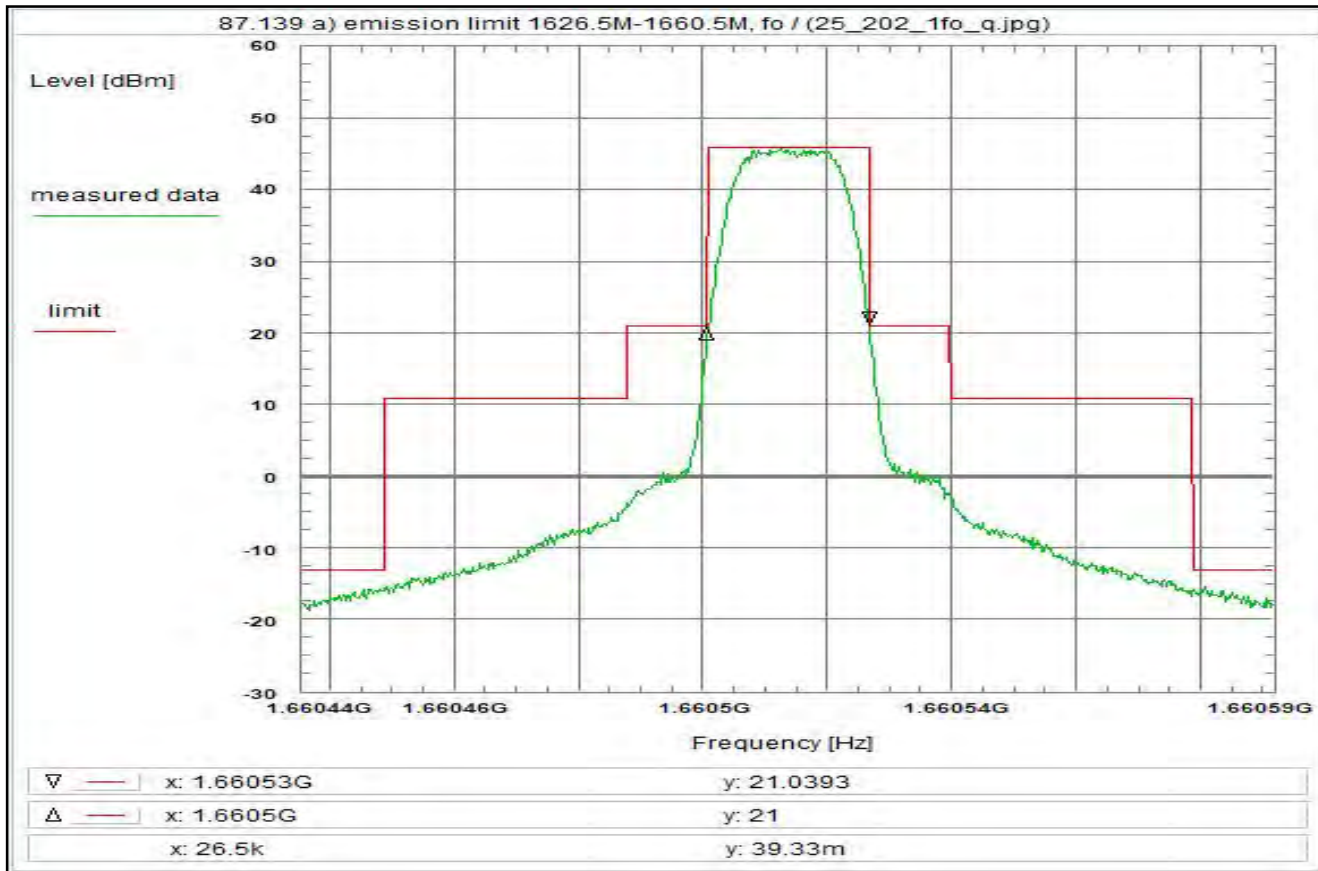
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 240



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T05XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:35:14  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6604355 GHz  
Stop frequency: 1.6605915 GHz  
Center frequency: 1.6605135 GHz  
Frequency span: 156 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

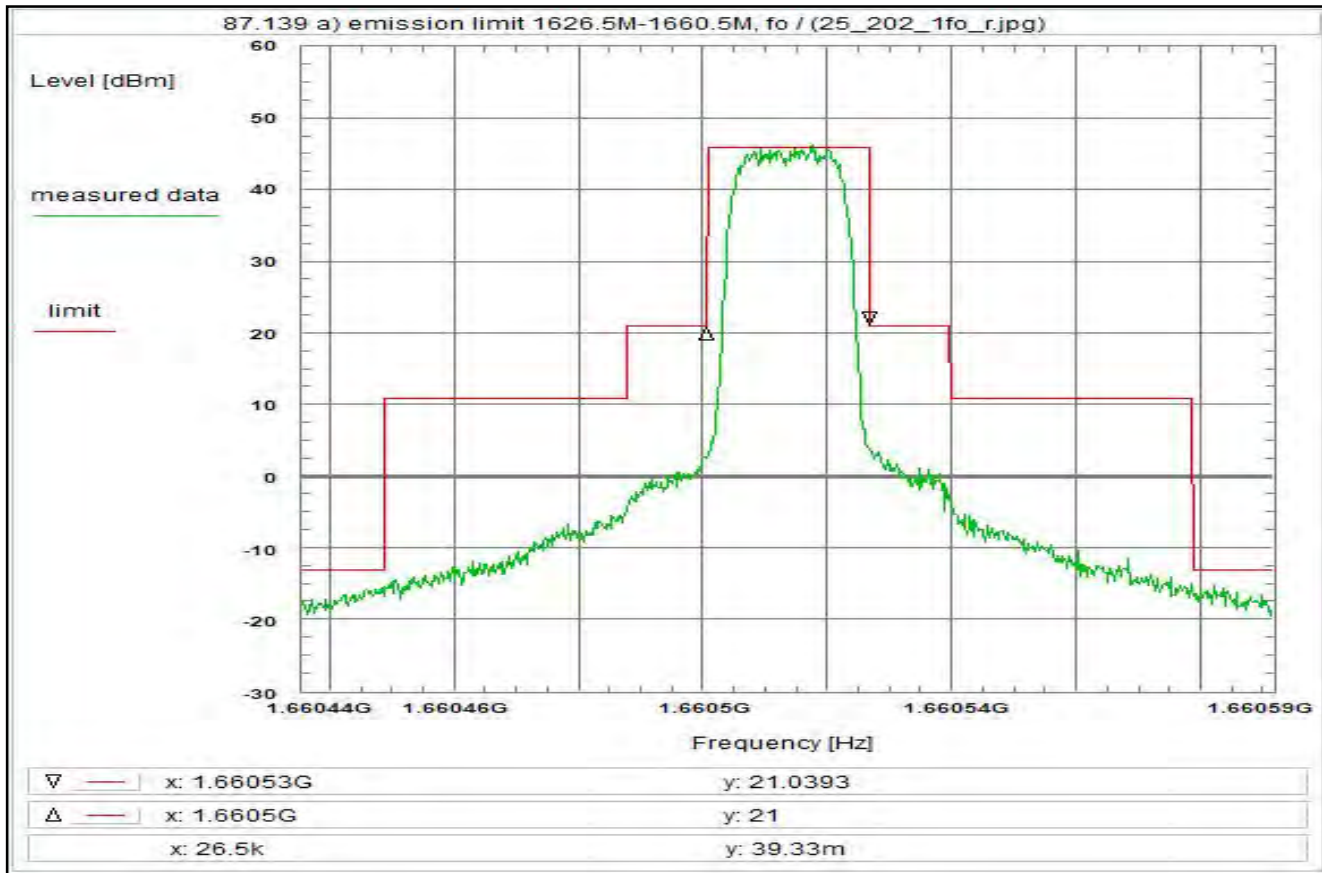
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 241



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, R20T05XD

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:36:47  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6604355 GHz  
Stop frequency: 1.6605915 GHz  
Center frequency: 1.6605135 GHz  
Frequency span: 156 kHz  
Resolution-BW: 1 kHz  
Video-BW: 3 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

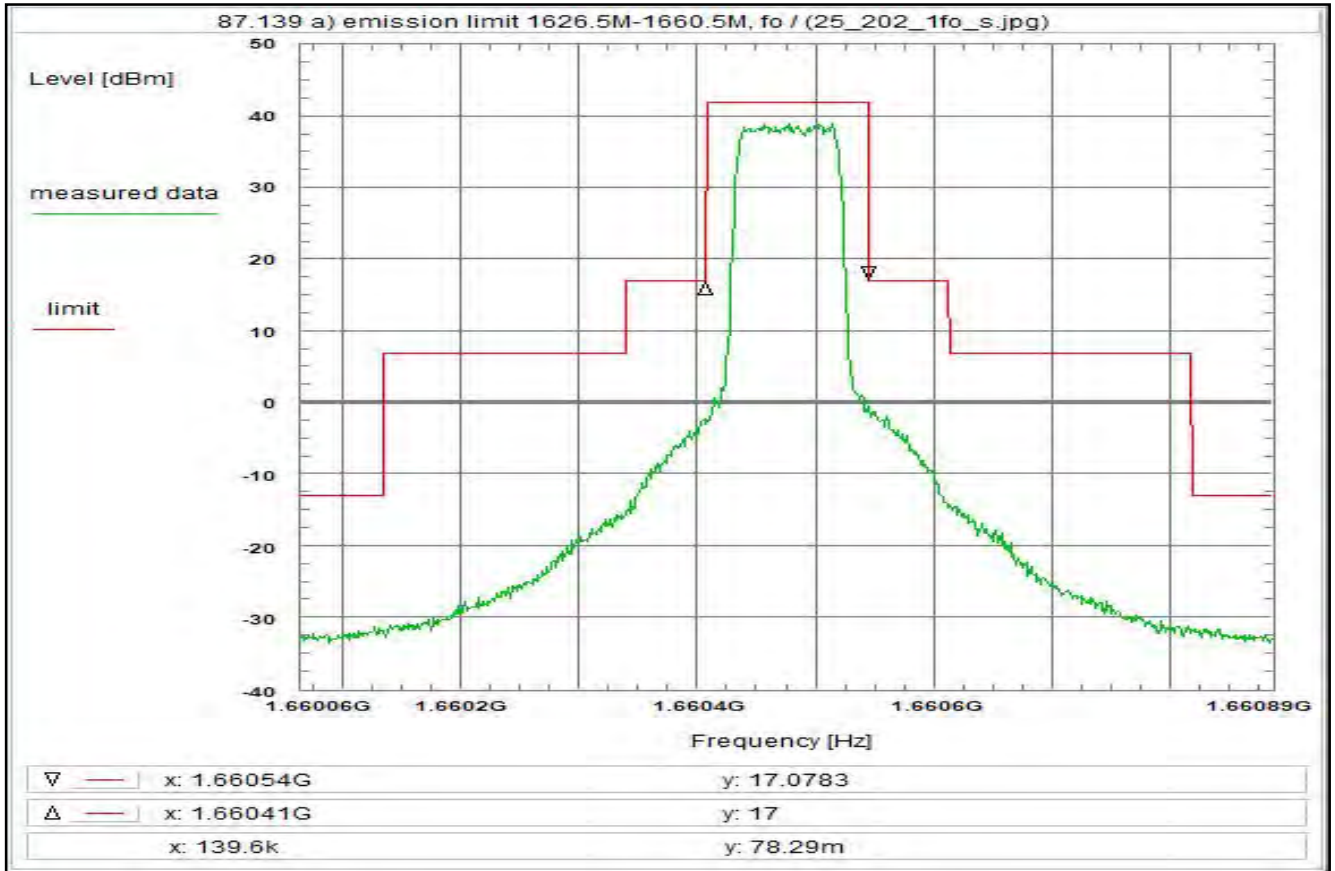
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (1k -> 4k)	+ 6.0 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 54.8 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth



Plot No. 242



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T2.5X16

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:38:56  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660064 GHz  
Stop frequency: 1.660886 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 822 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

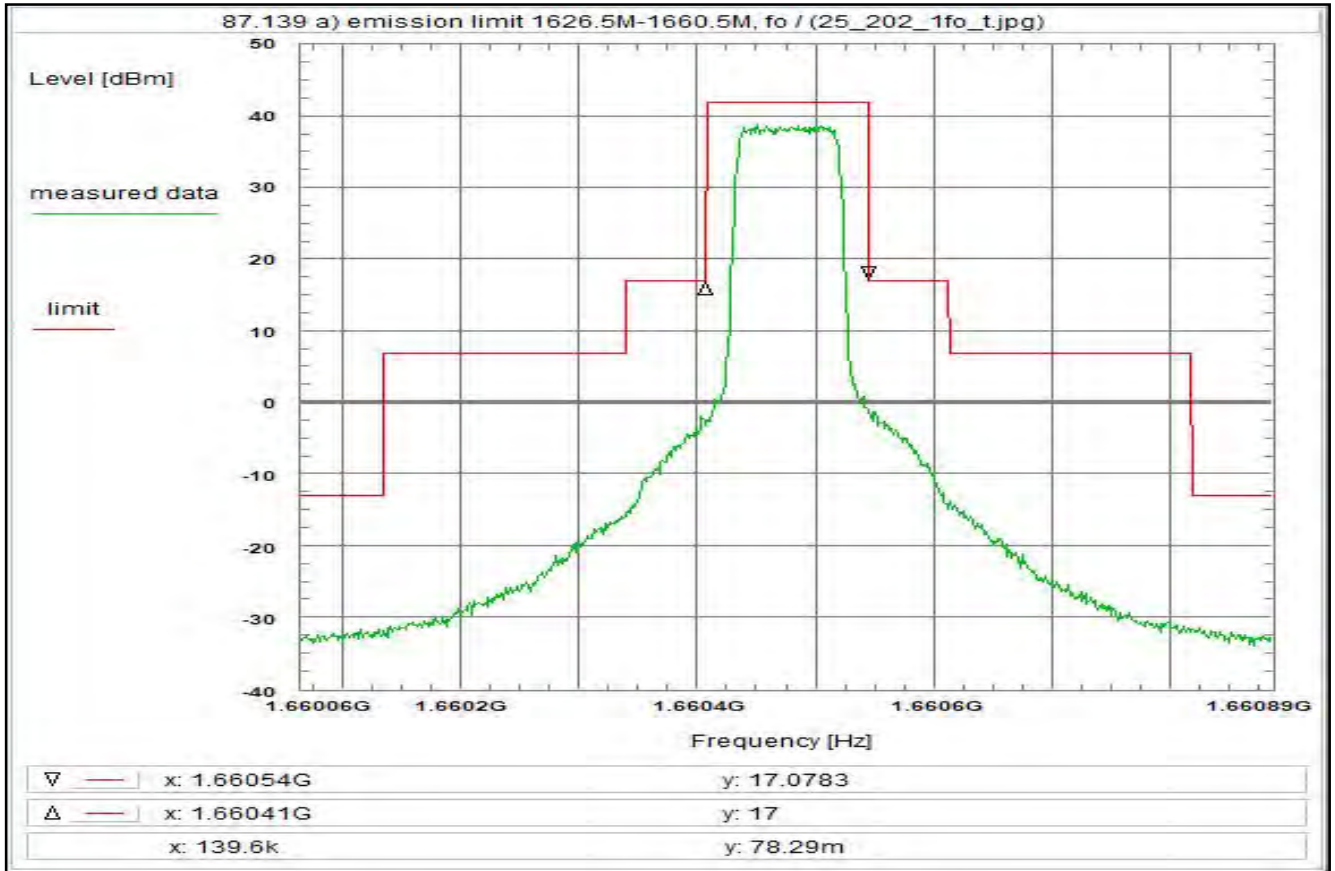
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 243



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T2.5X32

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:39:50  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660064 GHz  
Stop frequency: 1.660886 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 822 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

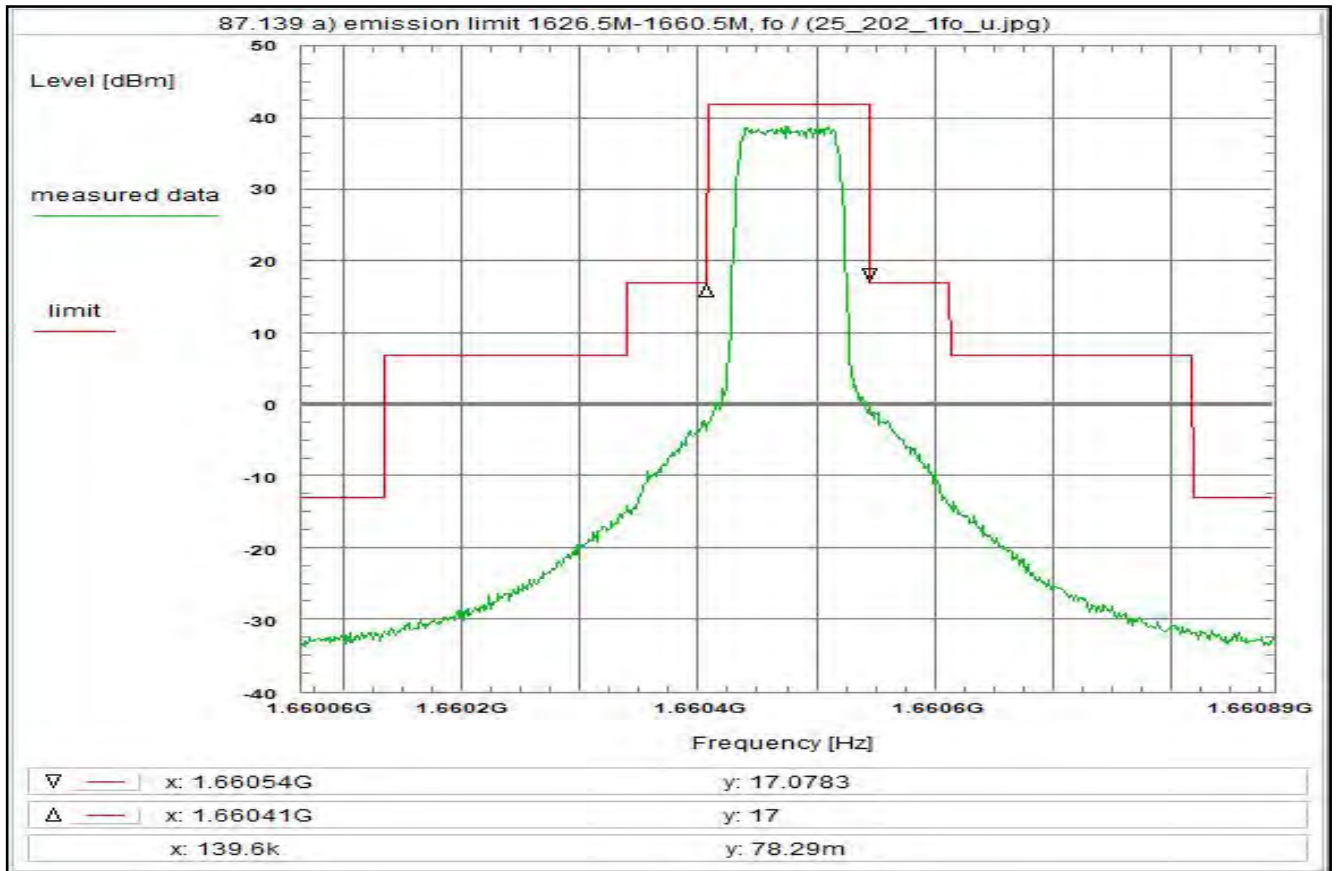
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 244



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T2.5X64

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:42:05  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660064 GHz  
Stop frequency: 1.660886 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 822 kHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

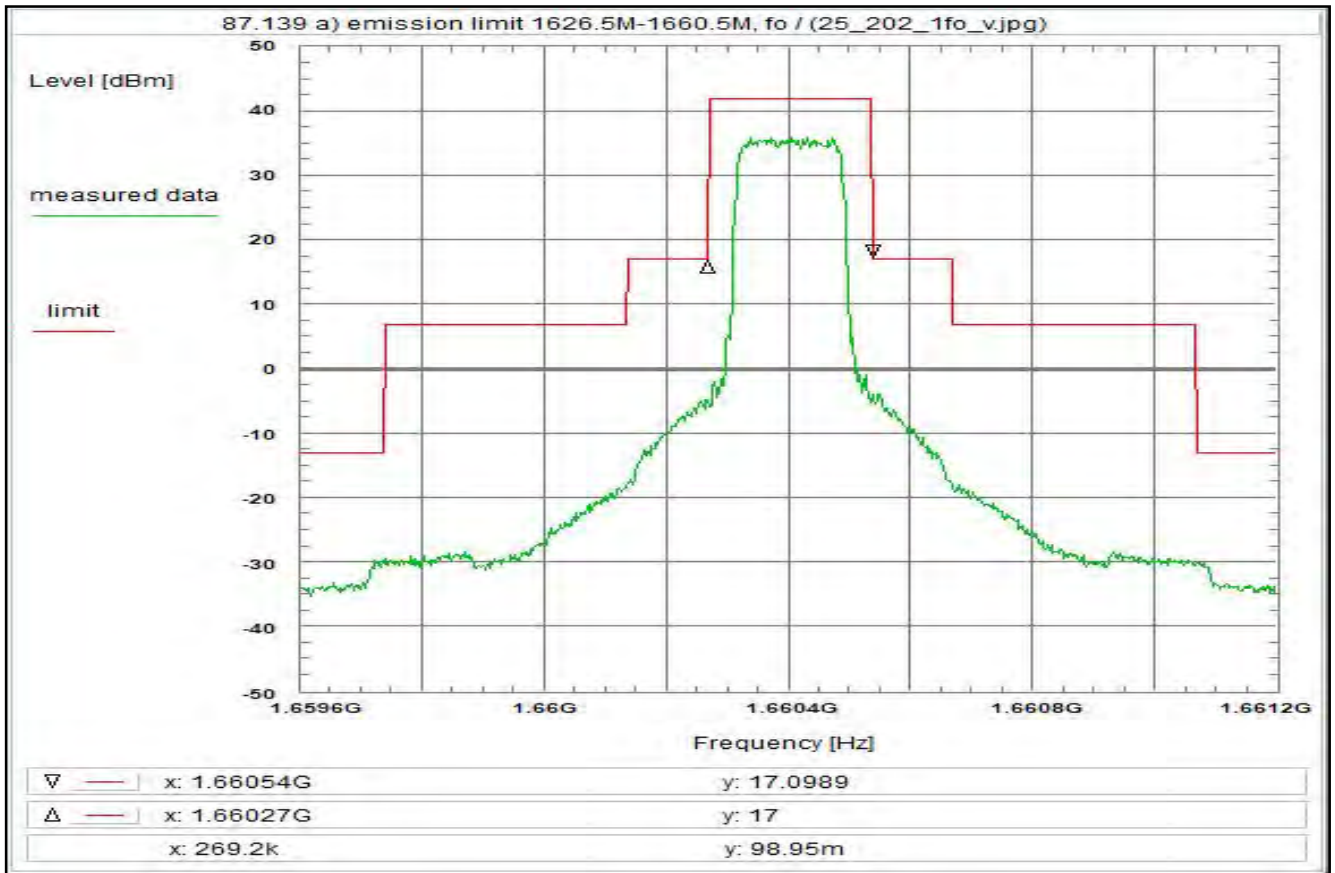
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dB
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 245



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T5X16

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:45:16  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659602 GHz  
Stop frequency: 1.661198 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.596 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

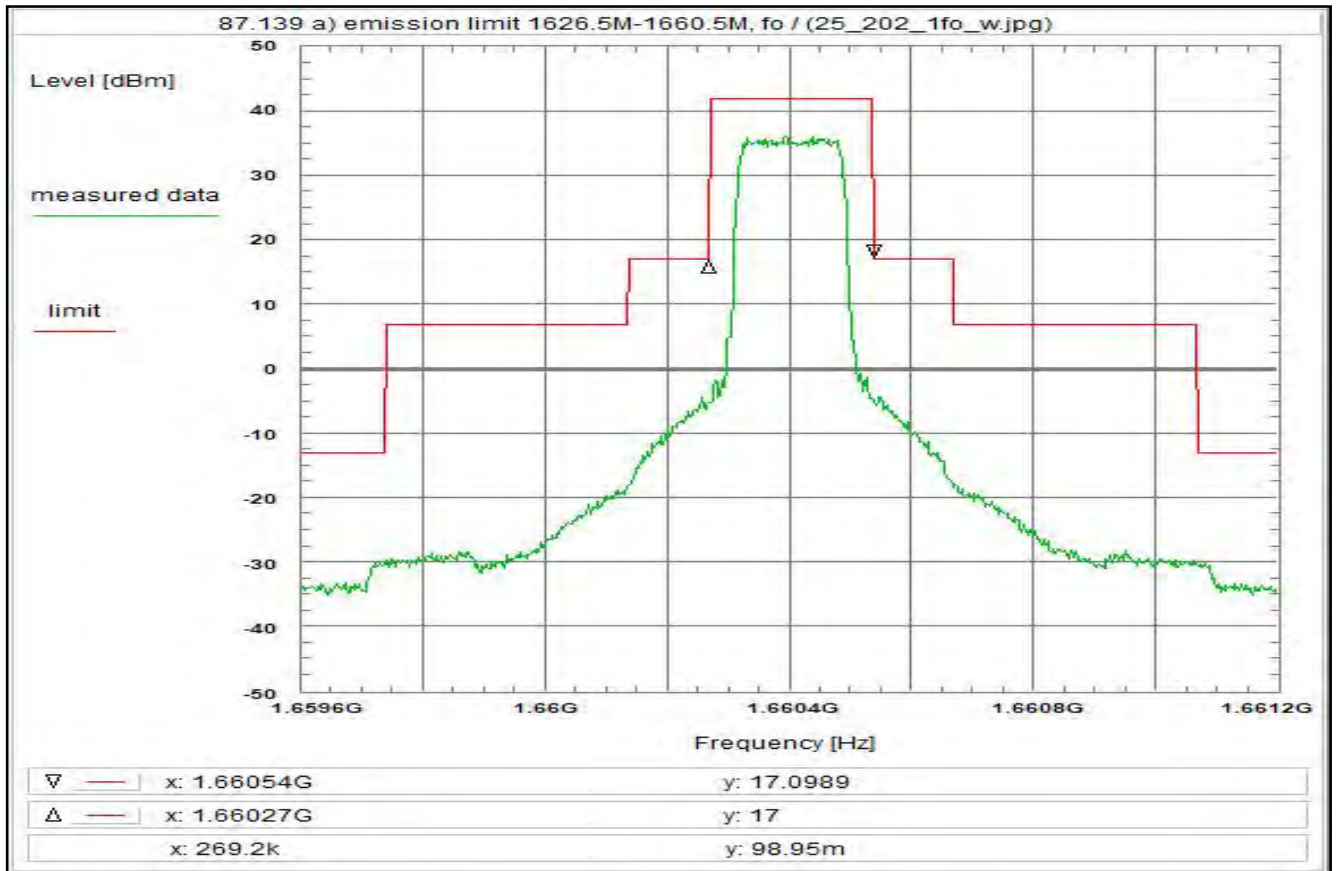
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 246



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T5X32

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:46:04  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659602 GHz  
Stop frequency: 1.661198 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.596 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

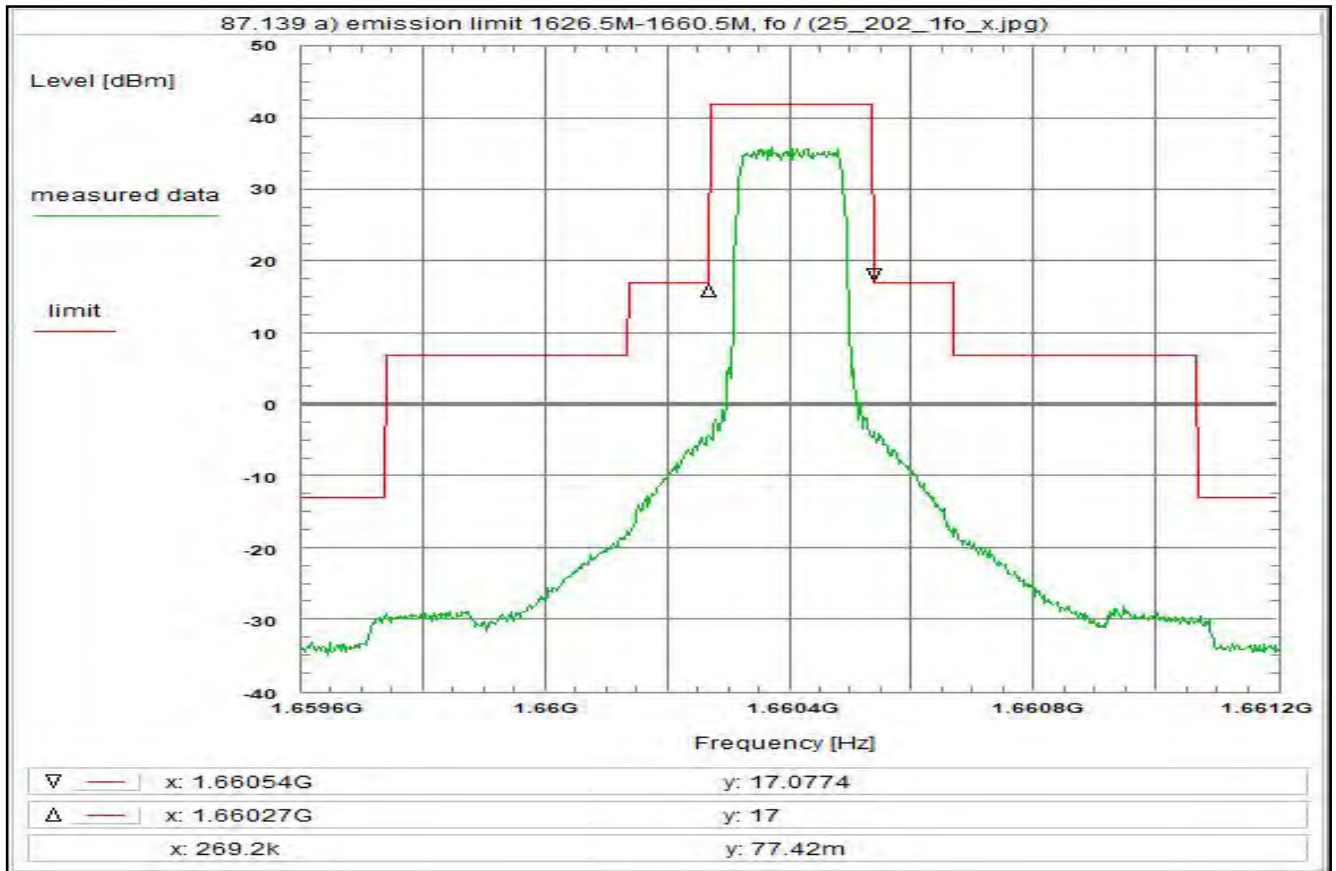
Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth



Plot No. 247



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier in the middle of the band (fo)

Limit:

Limit according to 87.139 a):

50-100% of assigned bw: -25dBc/4kHz  
100-250% of assigned bw: -35dBc/4kHz  
> 250% of assigned bw:  $-43+10\log(P_{max})\text{dBc}/4\text{kHz} = -43\text{ dBW}$   
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, see test report chapter 5.4  
A700S Class 6 HDR PIESD, FR80T5X64

Test setup:

see test report chapter 7.2 setup 1.1hgj

Test equipment:

see test report chapter 7.2: C220, Power Splitter, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Wed 01/Jul/2020 10:49:13  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659602 GHz  
Stop frequency: 1.661198 GHz  
Center frequency: 1.6604 GHz  
Frequency span: 1.596 MHz  
Resolution-BW: 3 kHz  
Video-BW: 10 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

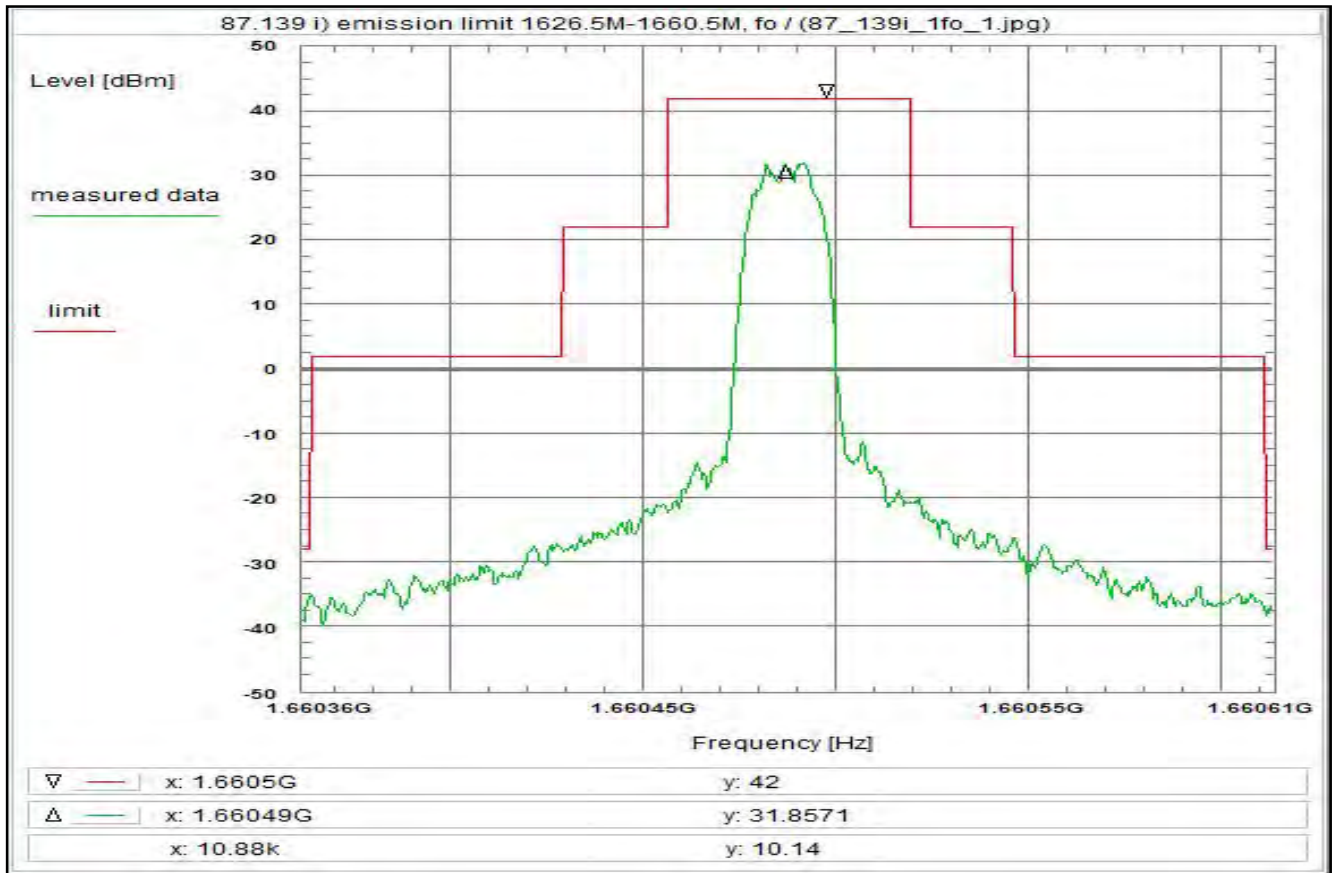
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

Carrier-on state / Carrier at the upper edge of the band (fo)  
Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 248



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T0.5QD, 16.8 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:13:33  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6603615 GHz  
Stop frequency: 1.6606135 GHz  
Center frequency: 1.6604875 GHz  
Frequency span: 252 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dB  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

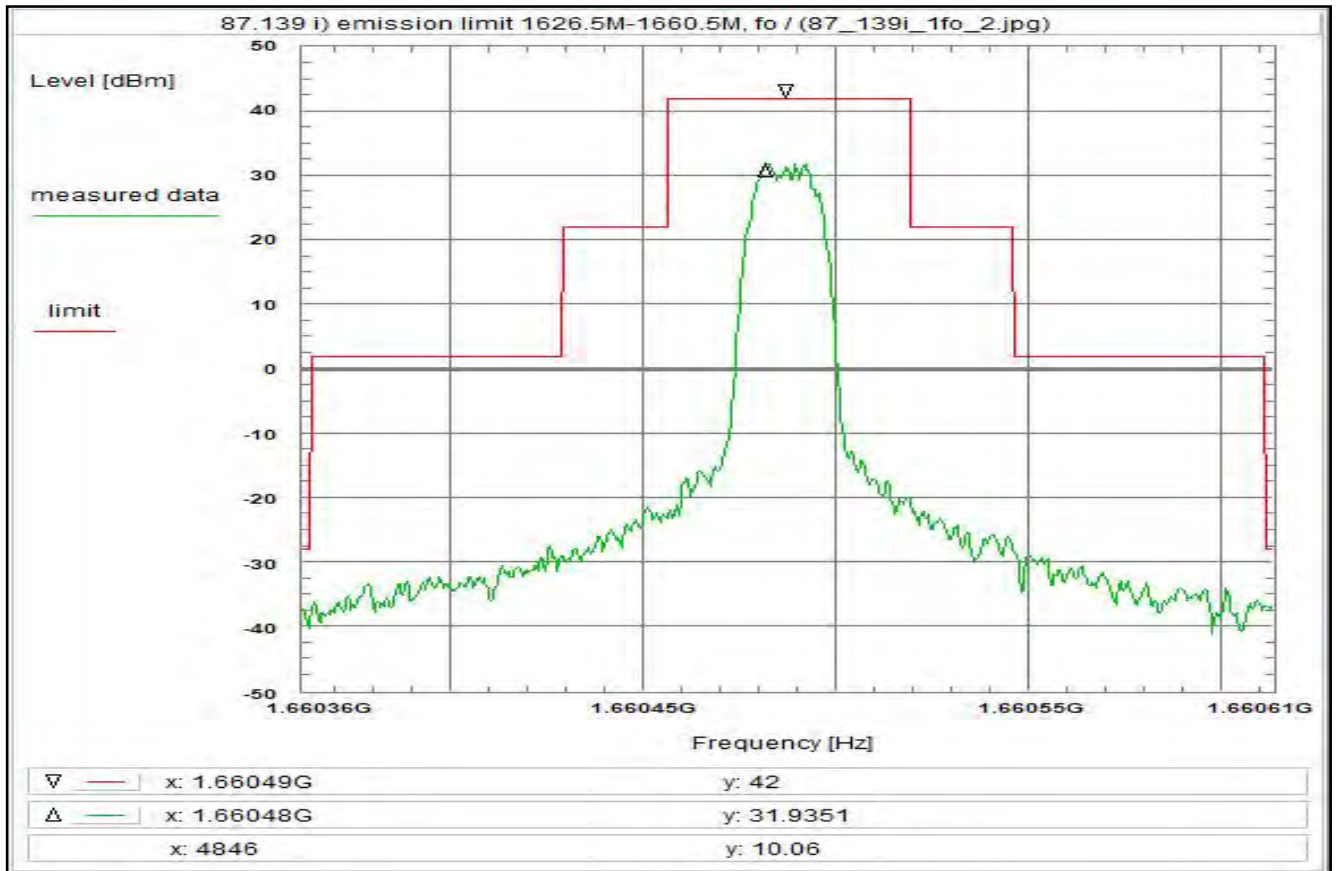
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 249



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T0.5QD, 16.8 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:14:41  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6603615 GHz  
Stop frequency: 1.6606135 GHz  
Center frequency: 1.6604875 GHz  
Frequency span: 252 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

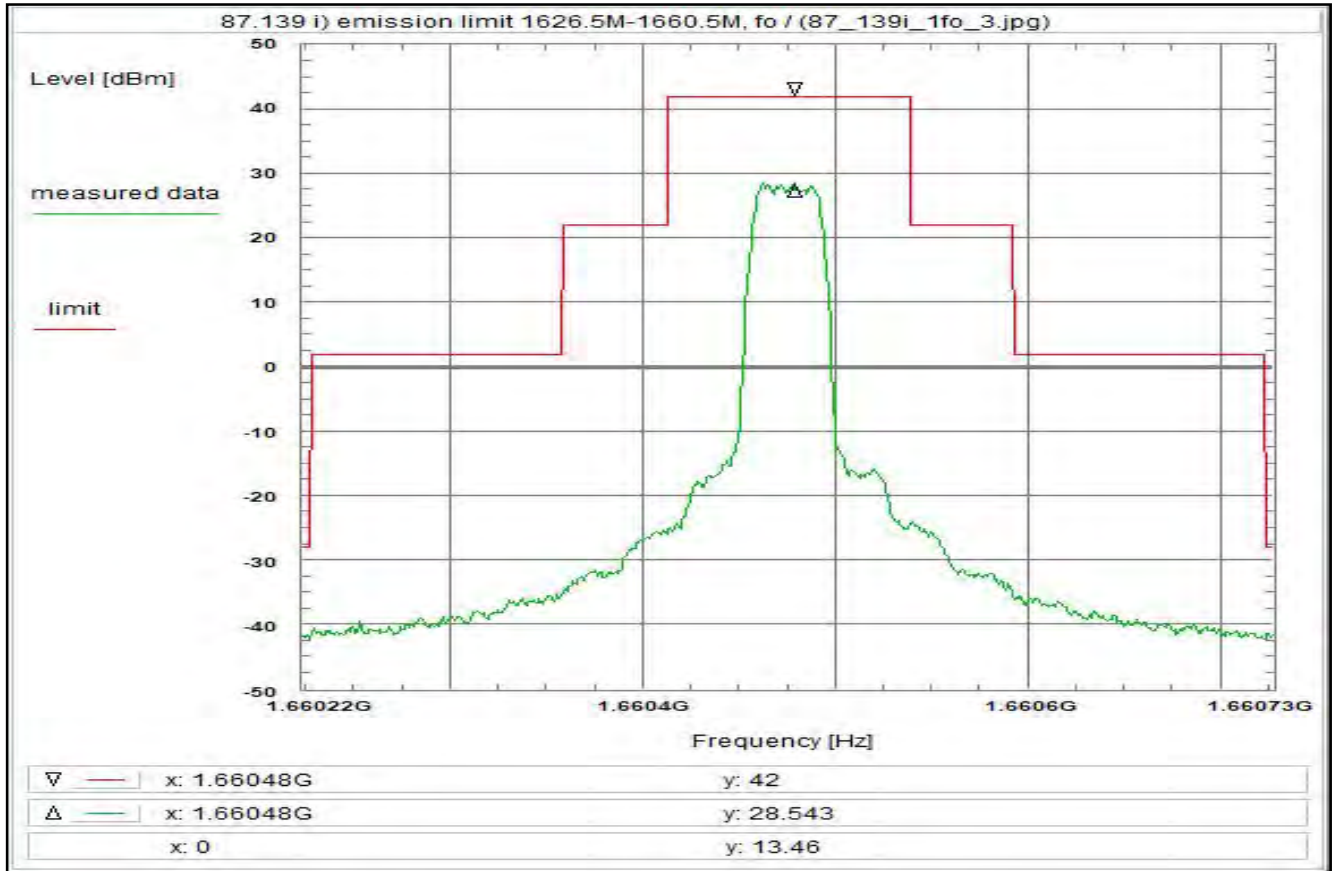
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 250



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T1XD/R20T1XD, 33.6 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:20:17  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660223 GHz  
Stop frequency: 1.660727 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 504 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

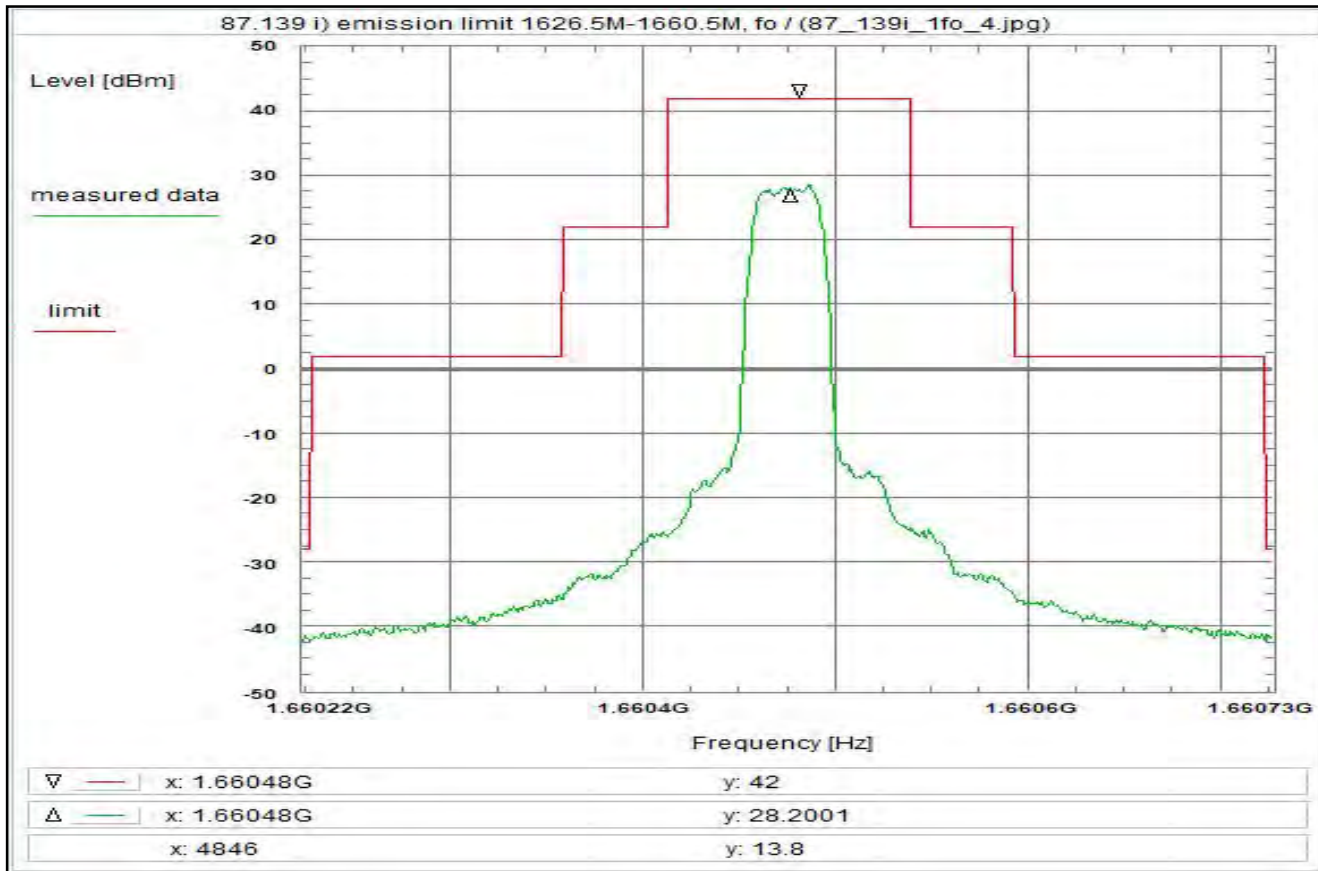
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 251



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T1XD/R20T1XD, 33.6 ksymbols, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:24:26  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660223 GHz  
Stop frequency: 1.660727 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 504 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:

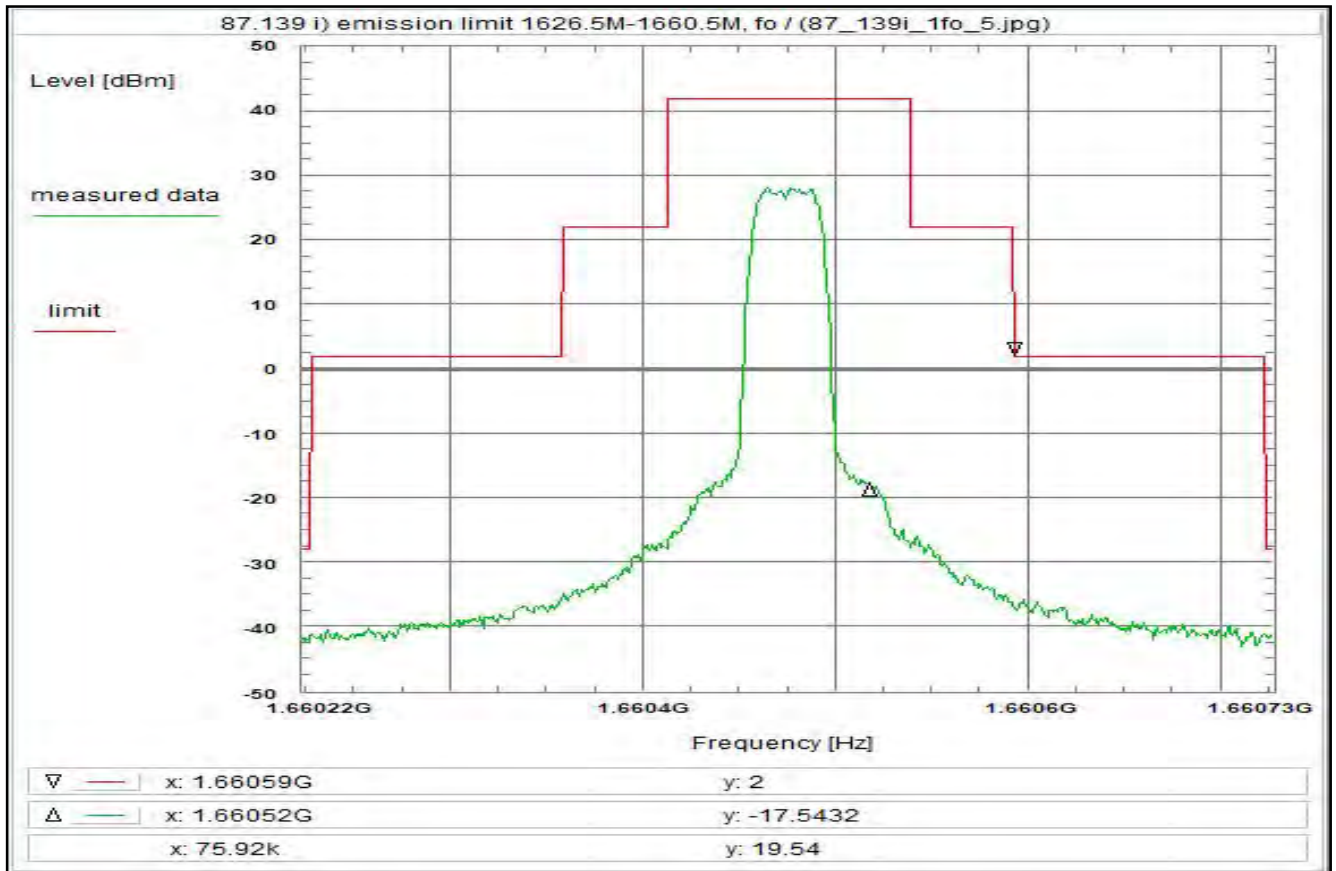
Carrier-on state / Carrier at the upper edge of the band (fo)

For EIRP calculation:

'worst-case' = maximum antenna gain



Plot No. 252



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R20T1QD/R80T1Q, 33.6 ksym/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:28:37  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.660223 GHz  
Stop frequency: 1.660727 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 504 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

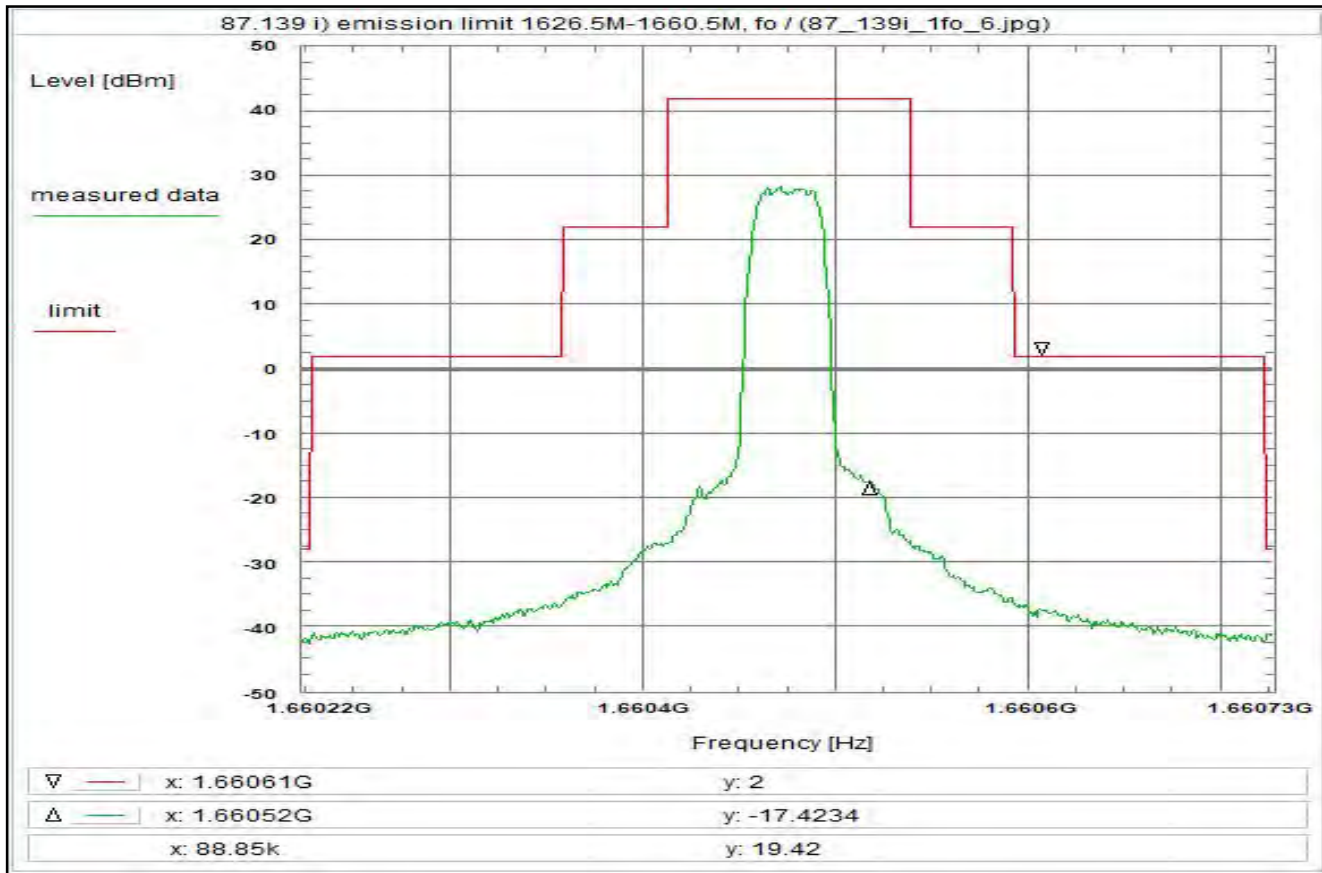
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 253



**Subclause:** 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

**Limit:**  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

**Operating condition of DUT:**  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T1QD/R80T1Q, 33.6 ksym/s, QPSK

**Test setup:**  
see test report chapter 7.2 setup 1.1hgj

**Test equipment:**  
see test report chapter 7.2: C220, R001, U311, U312

**Remark:**

**Test result:** Test passed

**Environment condition:**  
Date & Time: Thu 28/May/2020 15:30:22  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

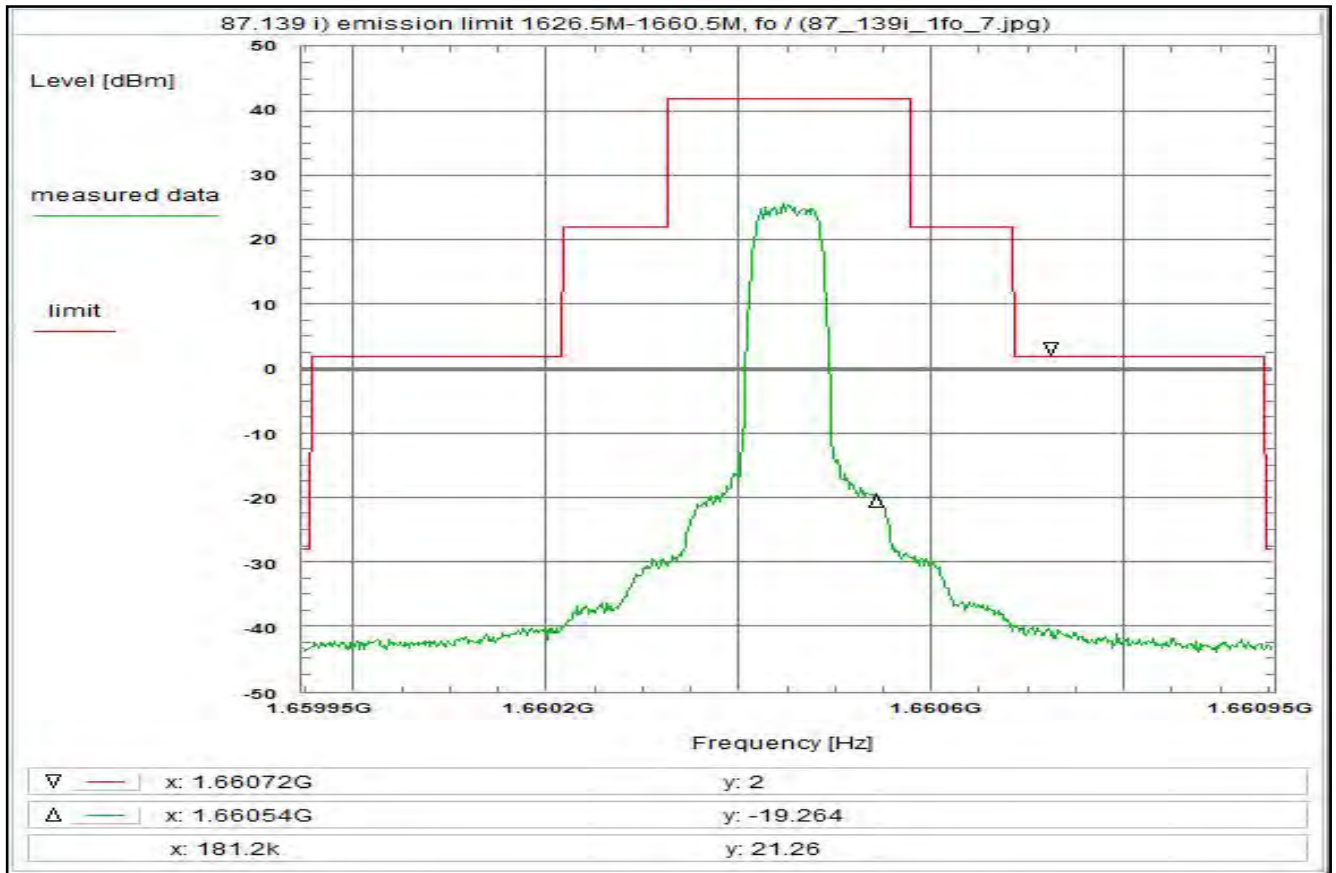
**Setup of measurement equipment:**  
Start frequency: 1.660223 GHz  
Stop frequency: 1.660727 GHz  
Center frequency: 1.660475 GHz  
Frequency span: 504 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

**Correction:**  
Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

**Remarks:**  
Carrier-on state / Carrier at the upper edge of the band (fo)

**For EIRP calculation:**  
'worst-case' = maximum antenna gain

Plot No. 254



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T2XD/R20T2XD, 67.2 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:36:33  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659946 GHz  
Stop frequency: 1.660954 GHz  
Center frequency: 1.66045 GHz  
Frequency span: 1.008 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

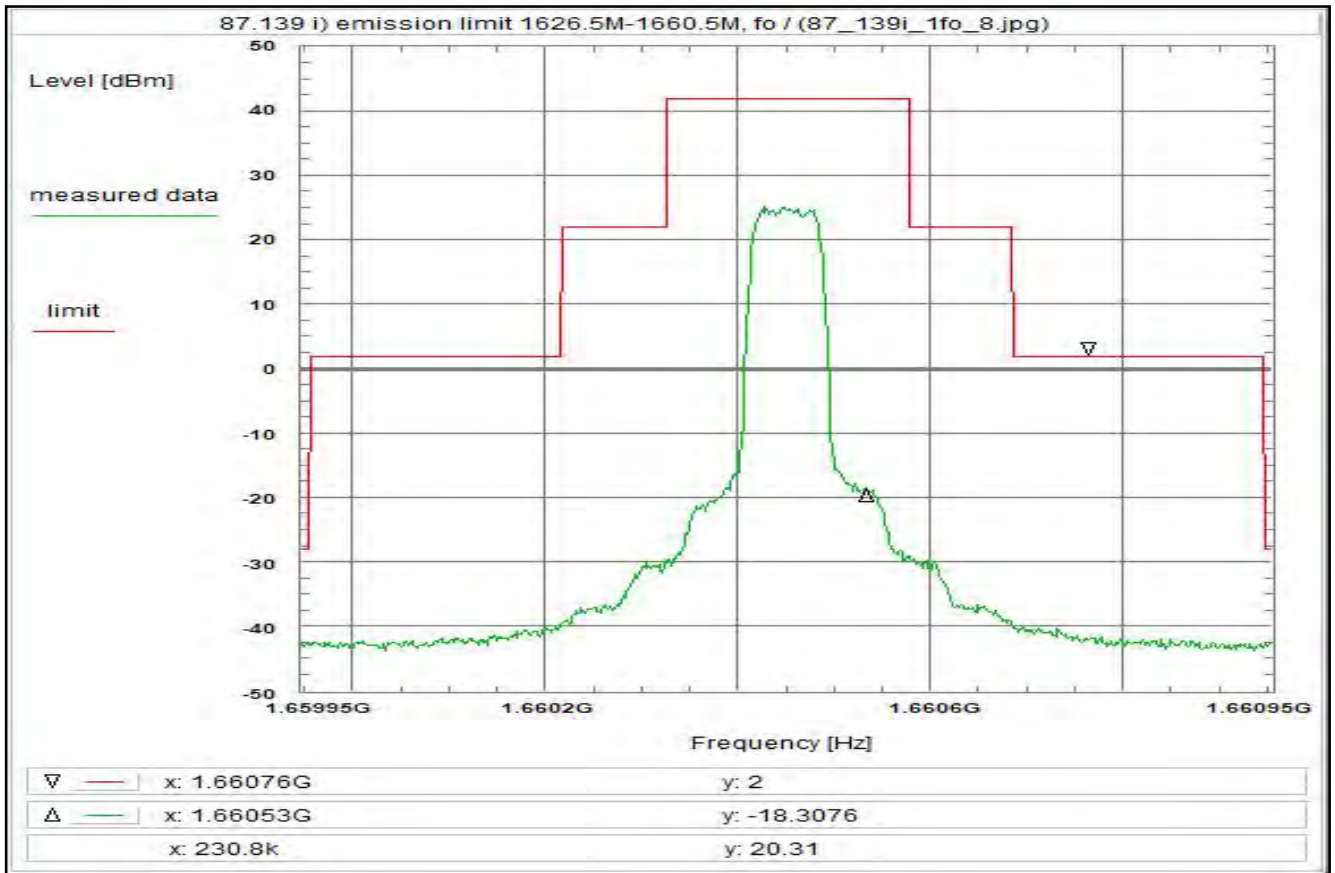
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 255



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T2XD/R20T2XD, 67.2 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:38:13  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659946 GHz  
Stop frequency: 1.660954 GHz  
Center frequency: 1.66045 GHz  
Frequency span: 1.008 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dB  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

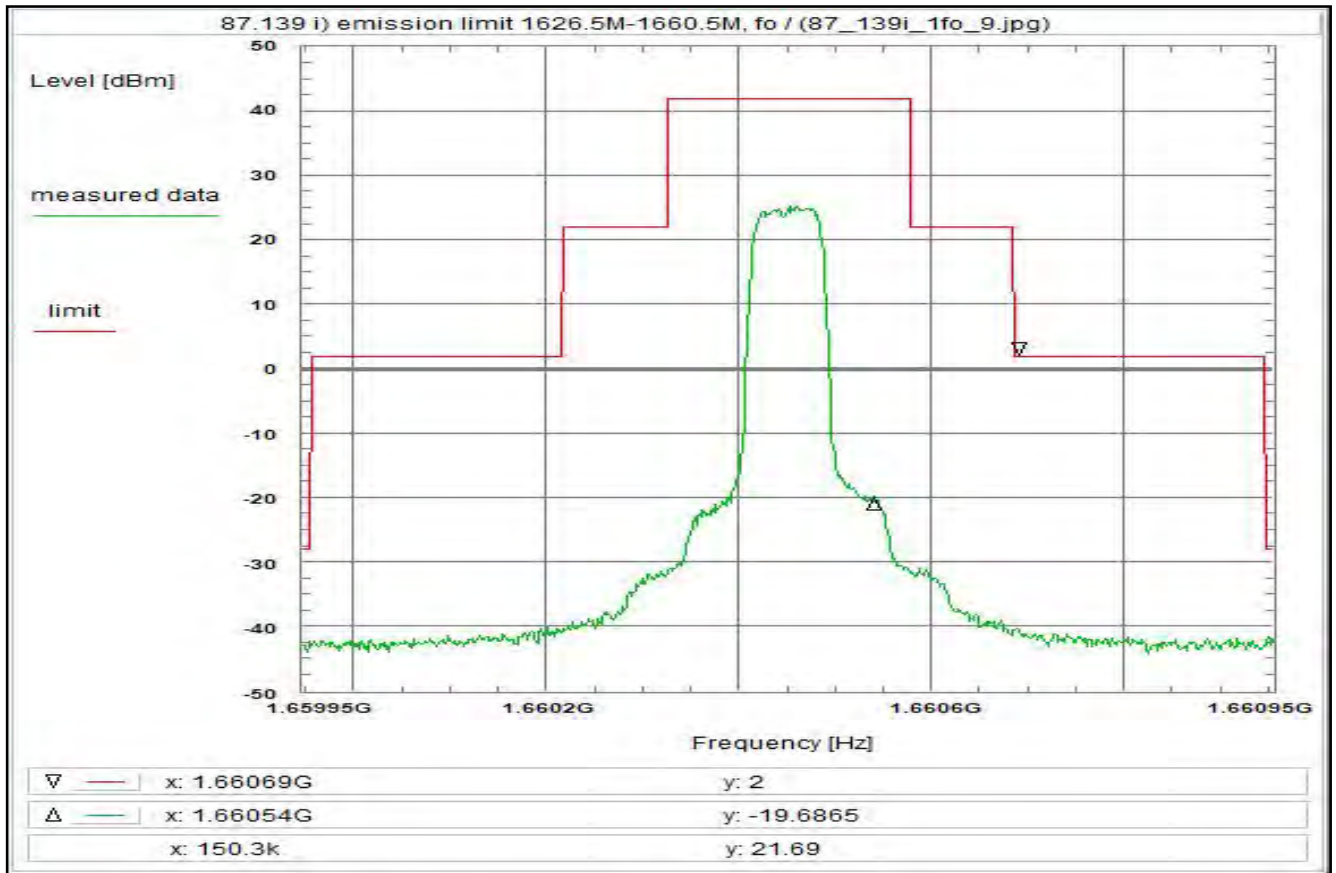
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 256



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T2QD/R20T2XQD, 67.2 ksymbols, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:49:56  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659946 GHz  
Stop frequency: 1.660954 GHz  
Center frequency: 1.66045 GHz  
Frequency span: 1.008 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dB  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:

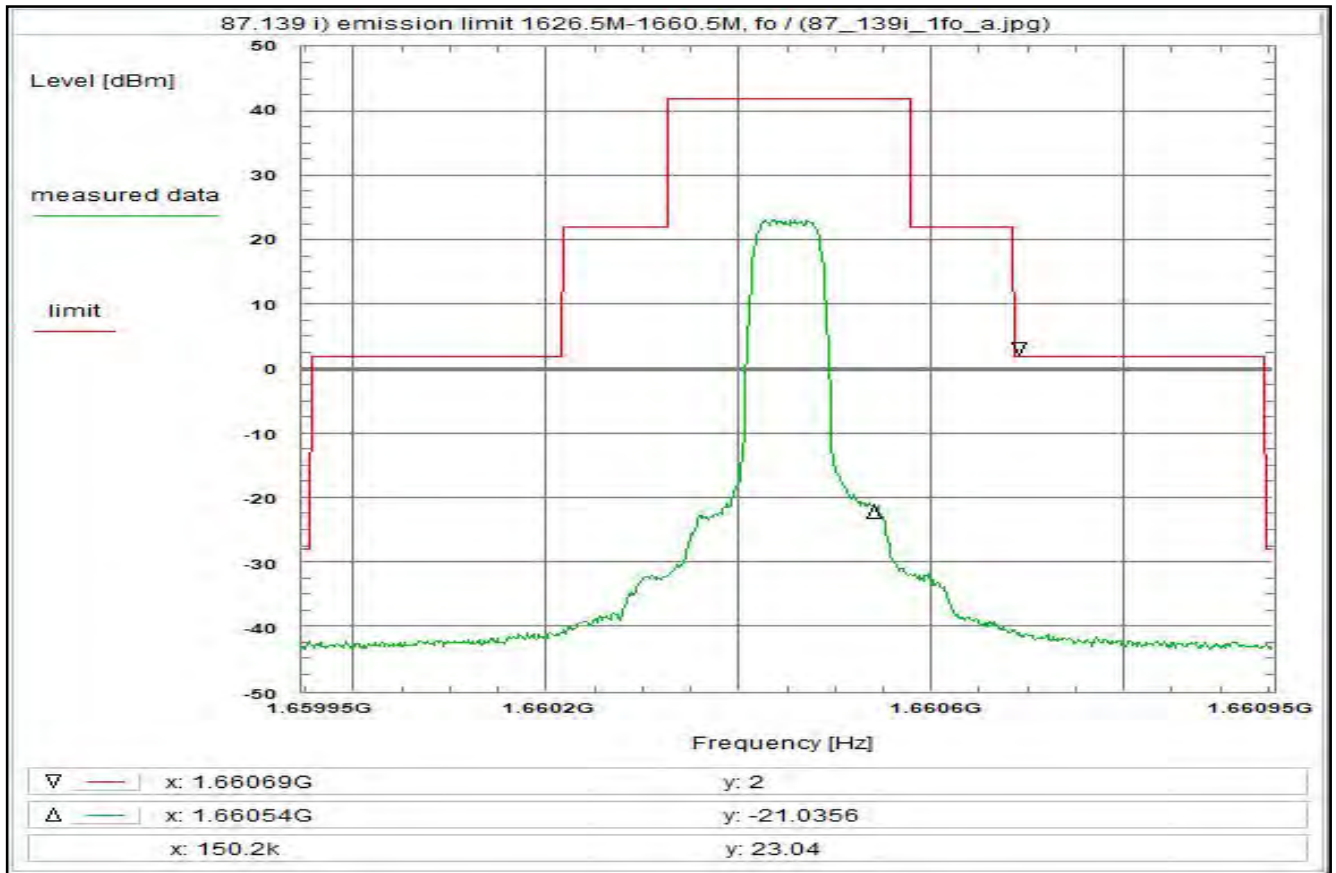
Carrier-on state / Carrier at the upper edge of the band (fo)

For EIRP calculation:

'worst-case' = maximum antenna gain



Plot No. 257



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T2QD/R20T2QD, 67.2 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:52:05  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659946 GHz  
Stop frequency: 1.660954 GHz  
Center frequency: 1.66045 GHz  
Frequency span: 1.008 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

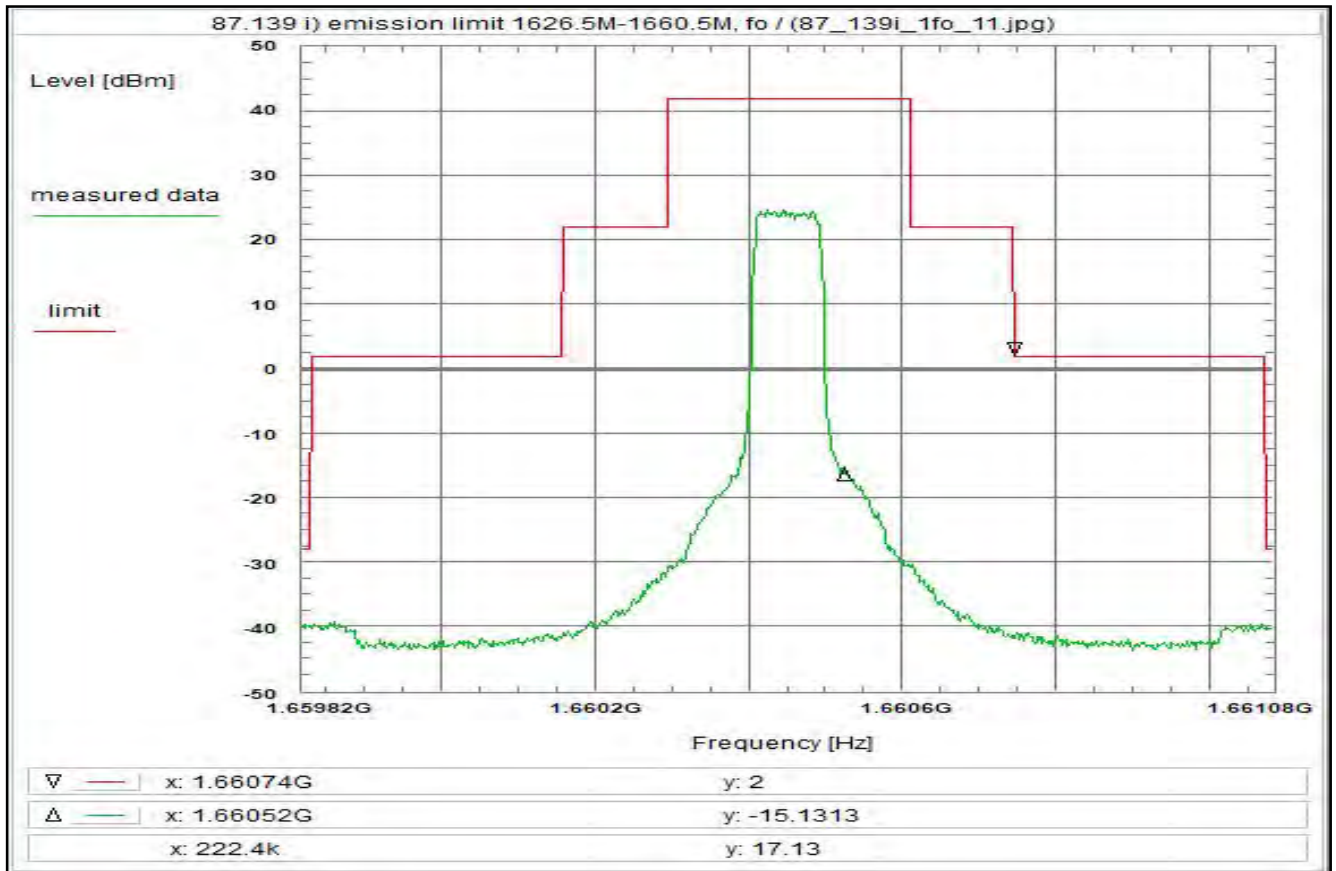
Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:  
Carrier-on state / Carrier at the upper edge of the band (fo)

For EIRP calculation:  
'worst-case' = maximum antenna gain

Plot No. 258



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T2.5X16, 84 ksymbols/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 15:59:07  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.65982 GHz  
Stop frequency: 1.66108 GHz  
Center frequency: 1.66045 GHz  
Frequency span: 1.26 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

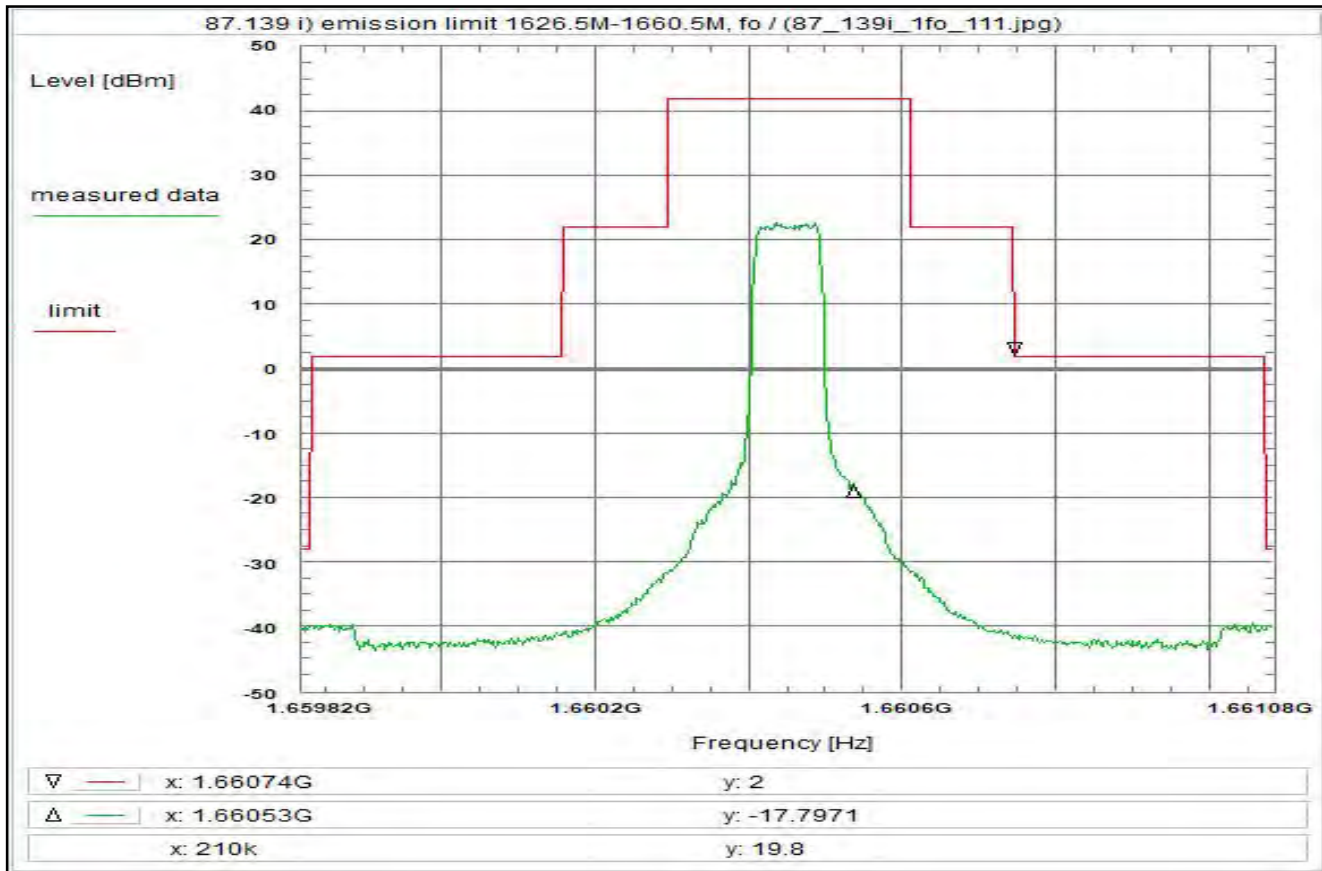
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 259



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T2.5X32, 84 ksymbols/s, 32QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:00:11  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.65982 GHz  
Stop frequency: 1.66108 GHz  
Center frequency: 1.66045 GHz  
Frequency span: 1.26 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

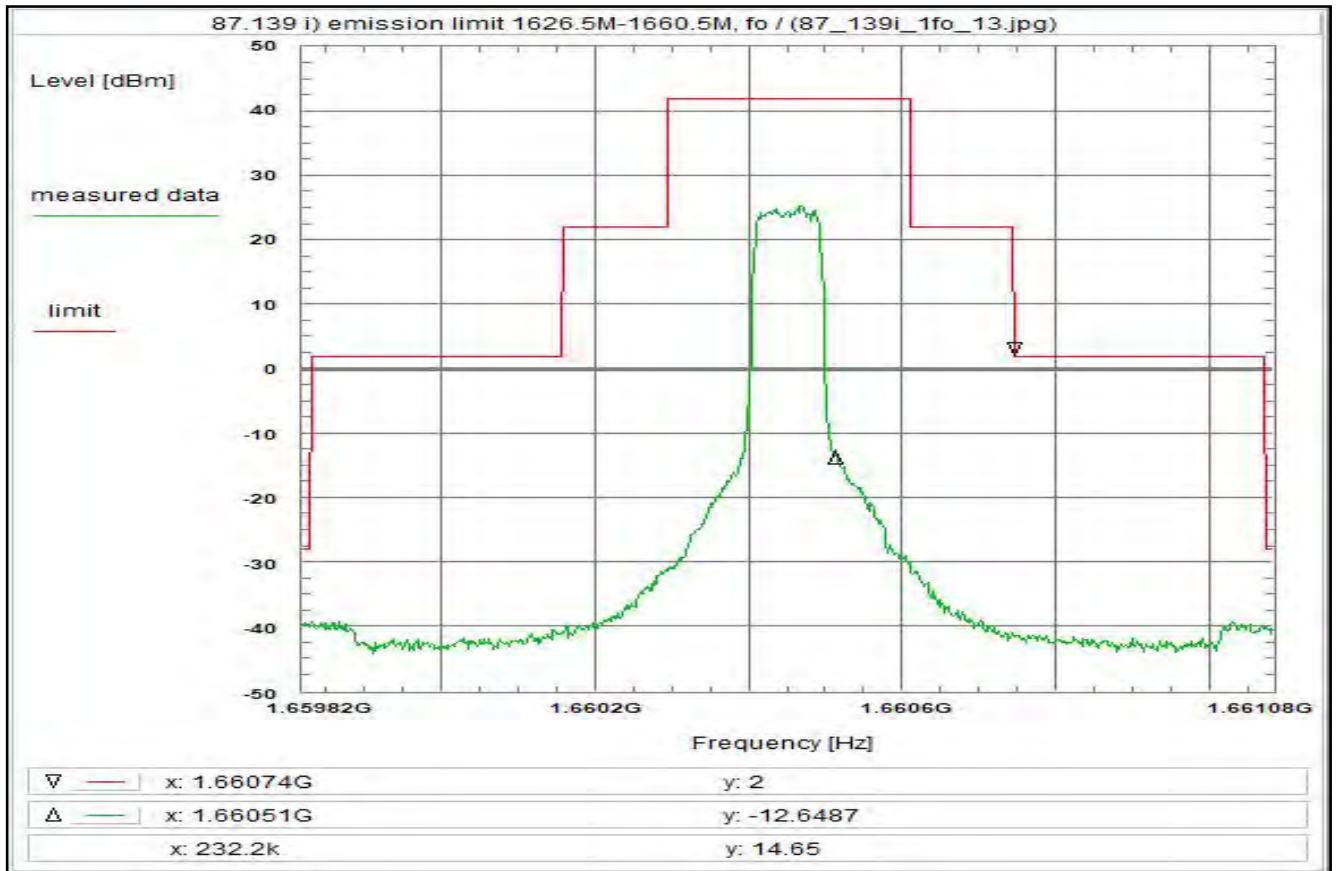
Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:  
Carrier-on state / Carrier at the upper edge of the band (fo)

For EIRP calculation:  
'worst-case' = maximum antenna gain

Plot No. 260



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(j)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T2.5X64, 84 ksymbols/s, 64QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:05:16  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.65982 GHz  
Stop frequency: 1.66108 GHz  
Center frequency: 1.66045 GHz  
Frequency span: 1.26 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

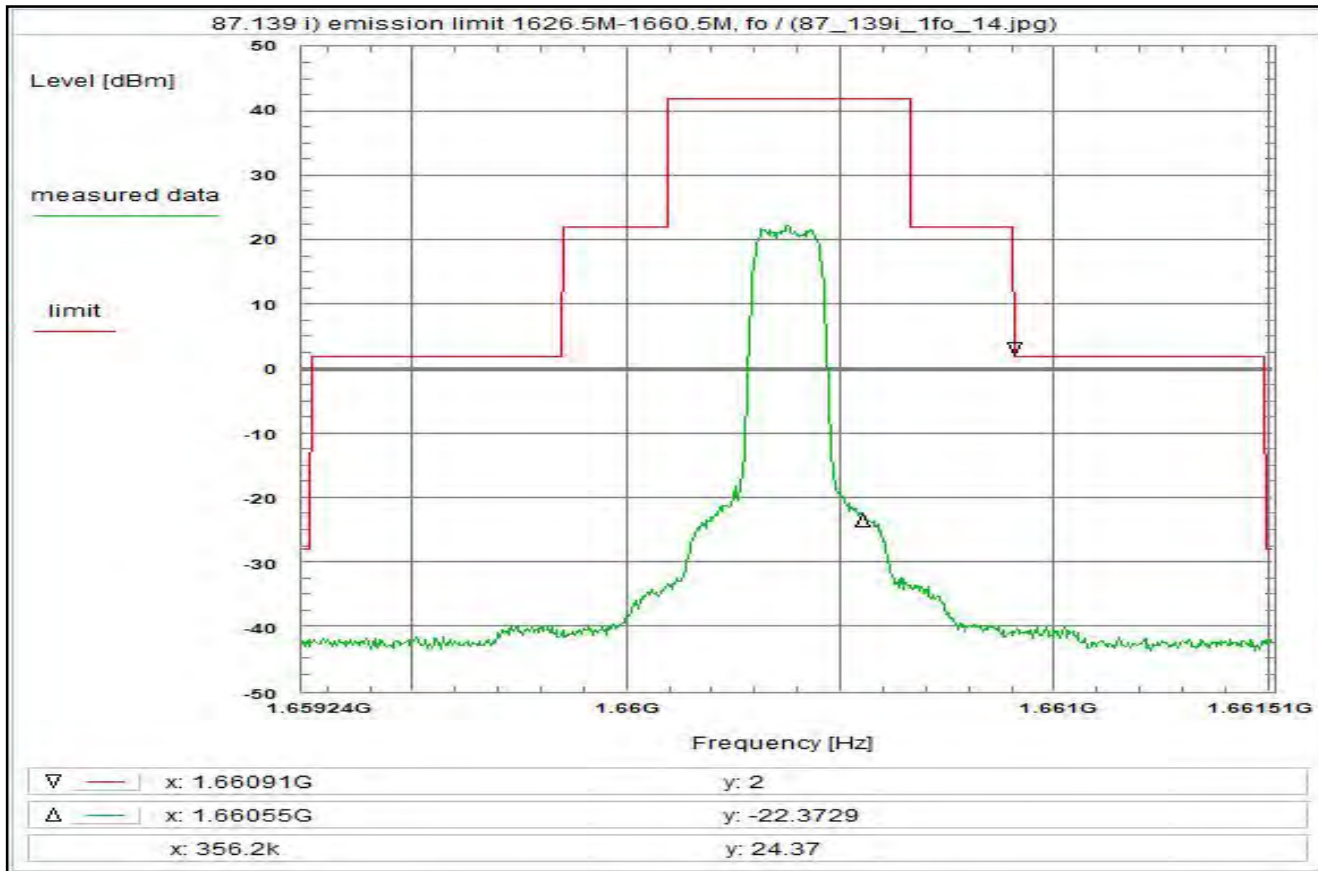
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 261



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T4.5XD/R20T4.5XD, 151.2 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:07:43  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659241 GHz  
Stop frequency: 1.661509 GHz  
Center frequency: 1.660375 GHz  
Frequency span: 2.268 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:

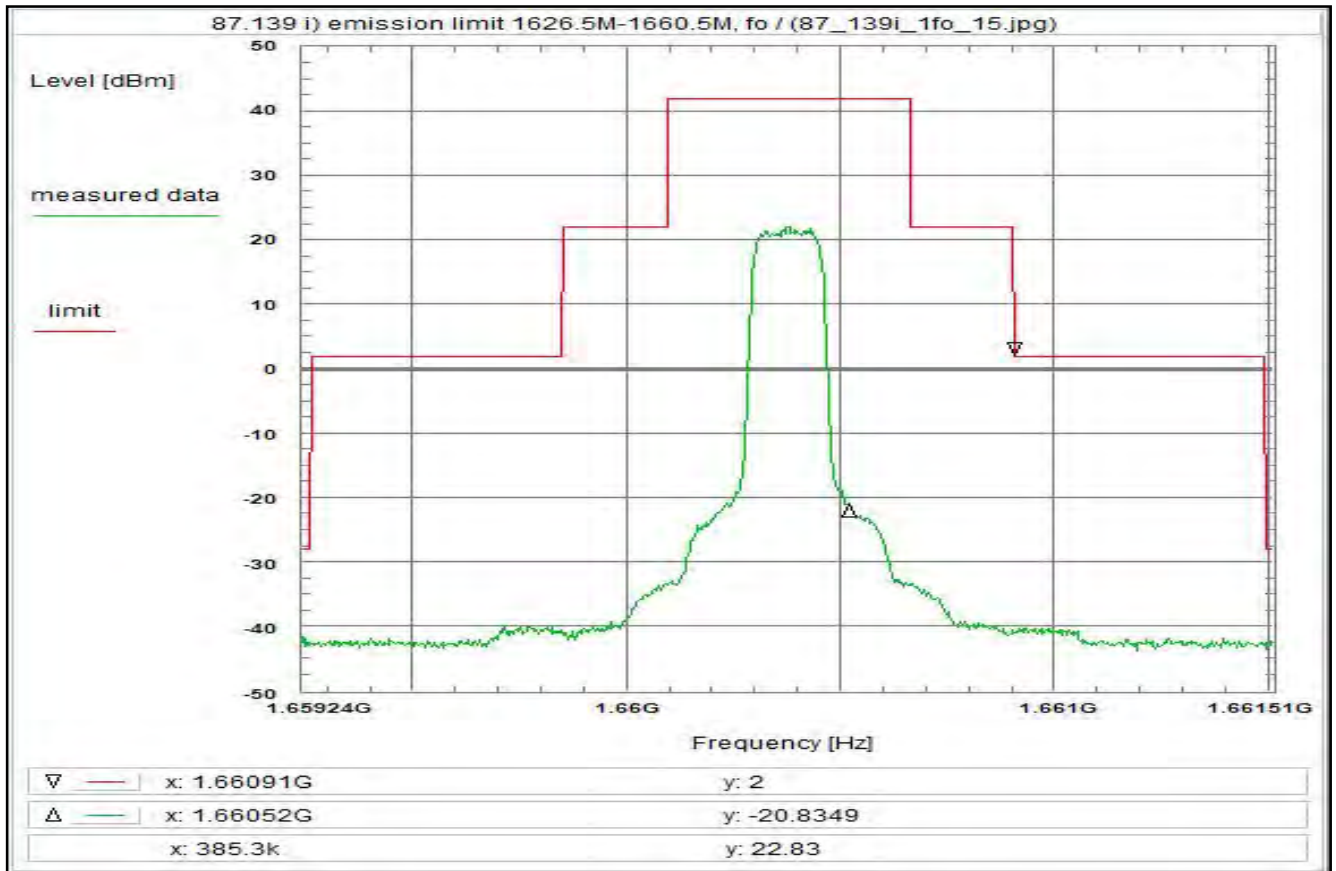
Carrier-on state / Carrier at the upper edge of the band (fo)

For EIRP calculation:

'worst-case' = maximum antenna gain



Plot No. 262



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T4.5XD/R20T4.5XD, 151.2 ksym/s, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:13:29  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659241 GHz  
Stop frequency: 1.661509 GHz  
Center frequency: 1.660375 GHz  
Frequency span: 2.268 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

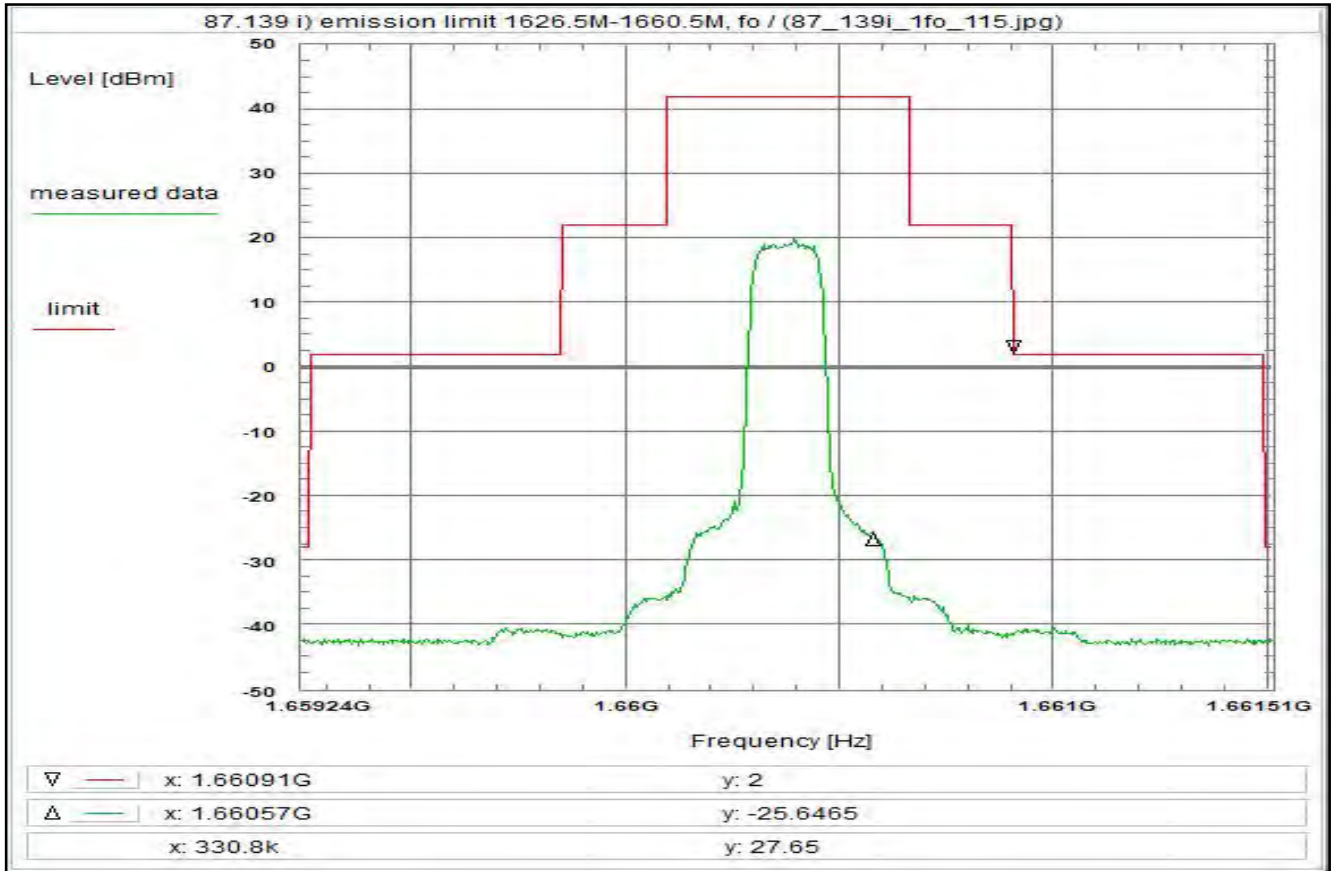
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 263



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 ACD, R5T4.5QD/R20T4.5QD, 151.2 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:15:49  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659241 GHz  
Stop frequency: 1.661509 GHz  
Center frequency: 1.660375 GHz  
Frequency span: 2.268 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

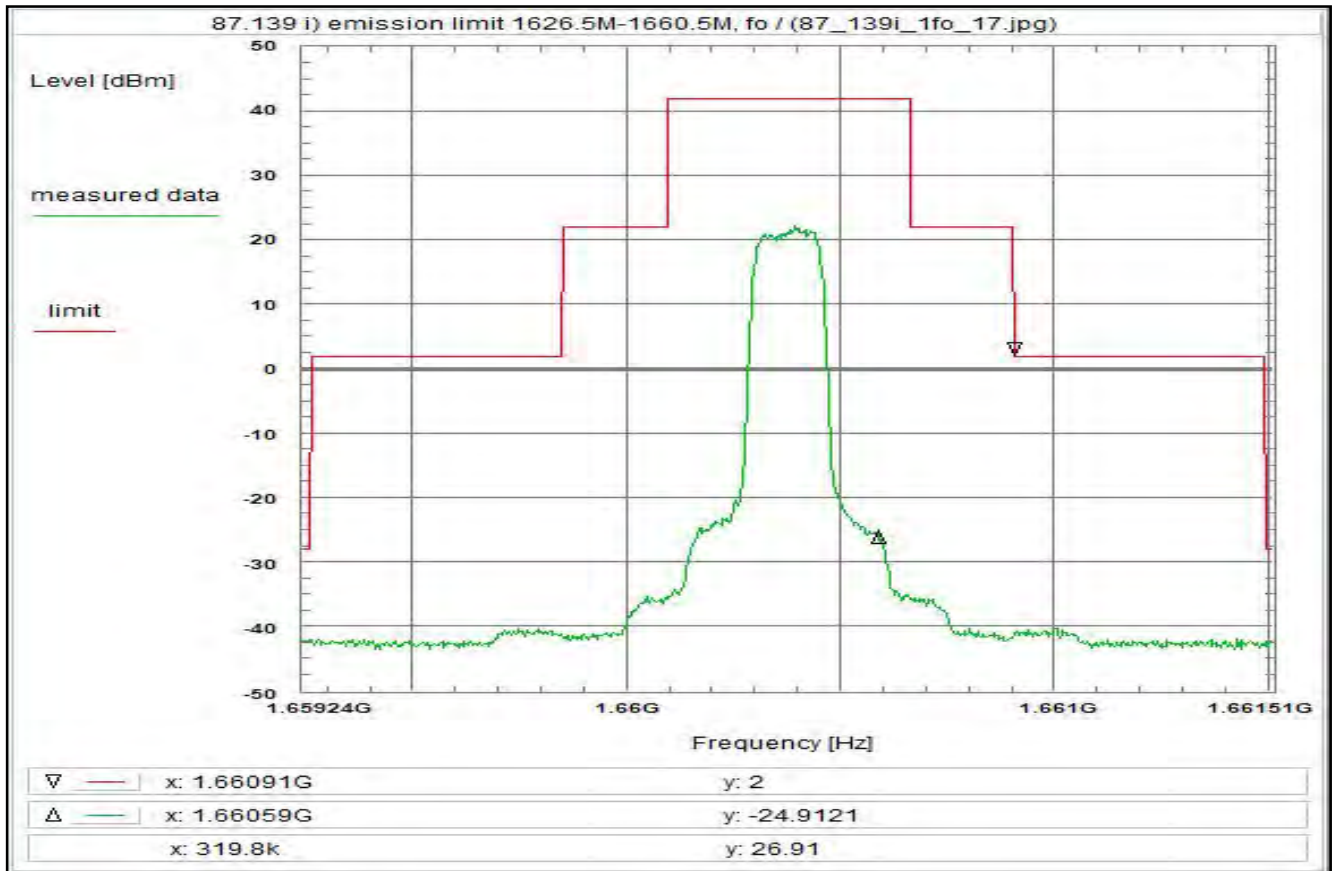
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 264



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R5T4.5QD/R20T4.5QD, 151.2 ksym/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:22:01  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659241 GHz  
Stop frequency: 1.661509 GHz  
Center frequency: 1.660375 GHz  
Frequency span: 2.268 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

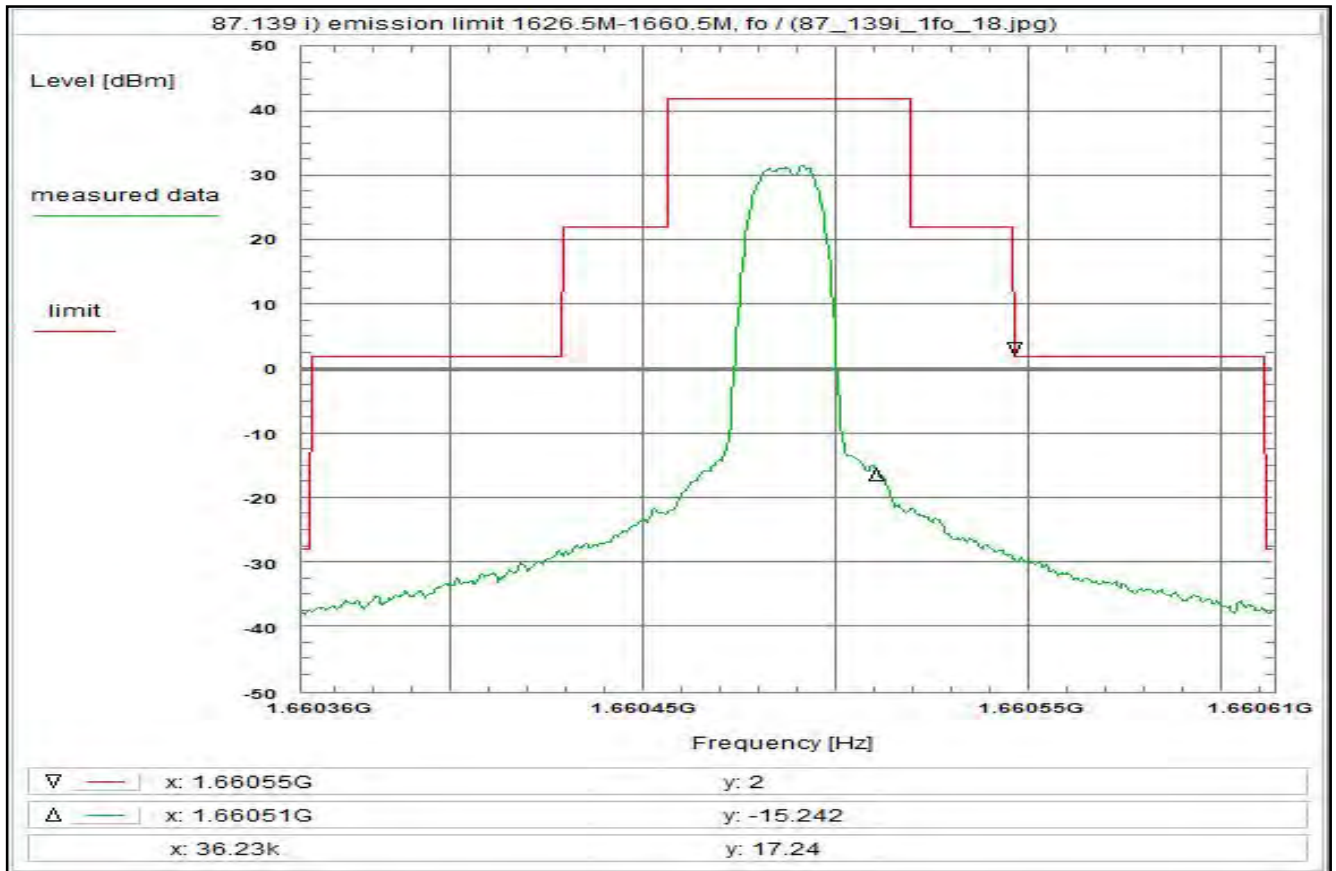
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 265



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, R20T0.5QD, 16.8 ksymbols/s, QPSK

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:26:59  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6603615 GHz  
Stop frequency: 1.6606135 GHz  
Center frequency: 1.6604875 GHz  
Frequency span: 252 kHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

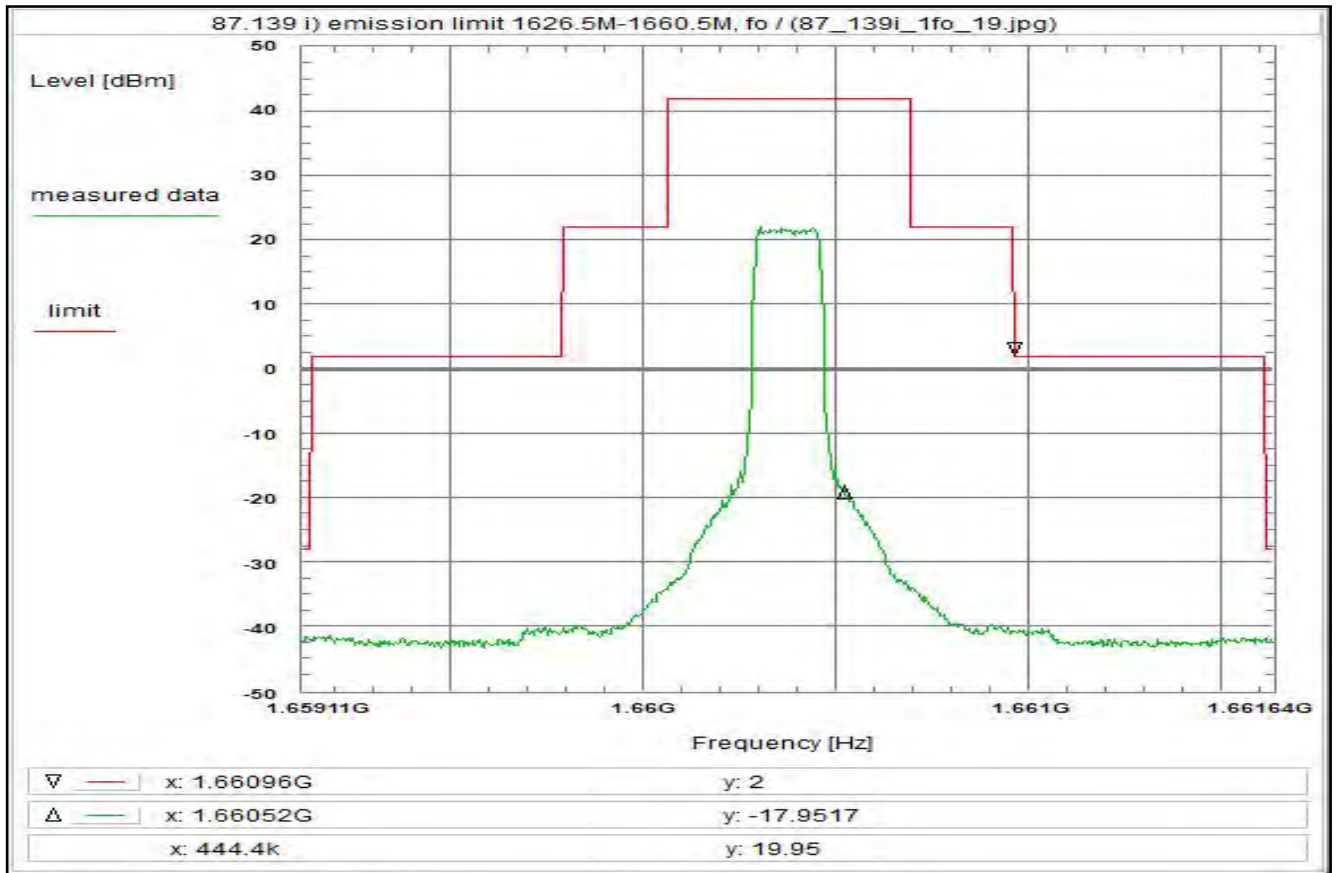
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 266



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T5X16, 168 ksymbols, 16QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:33:03  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659115 GHz  
Stop frequency: 1.661635 GHz  
Center frequency: 1.660375 GHz  
Frequency span: 2.52 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

Remarks:

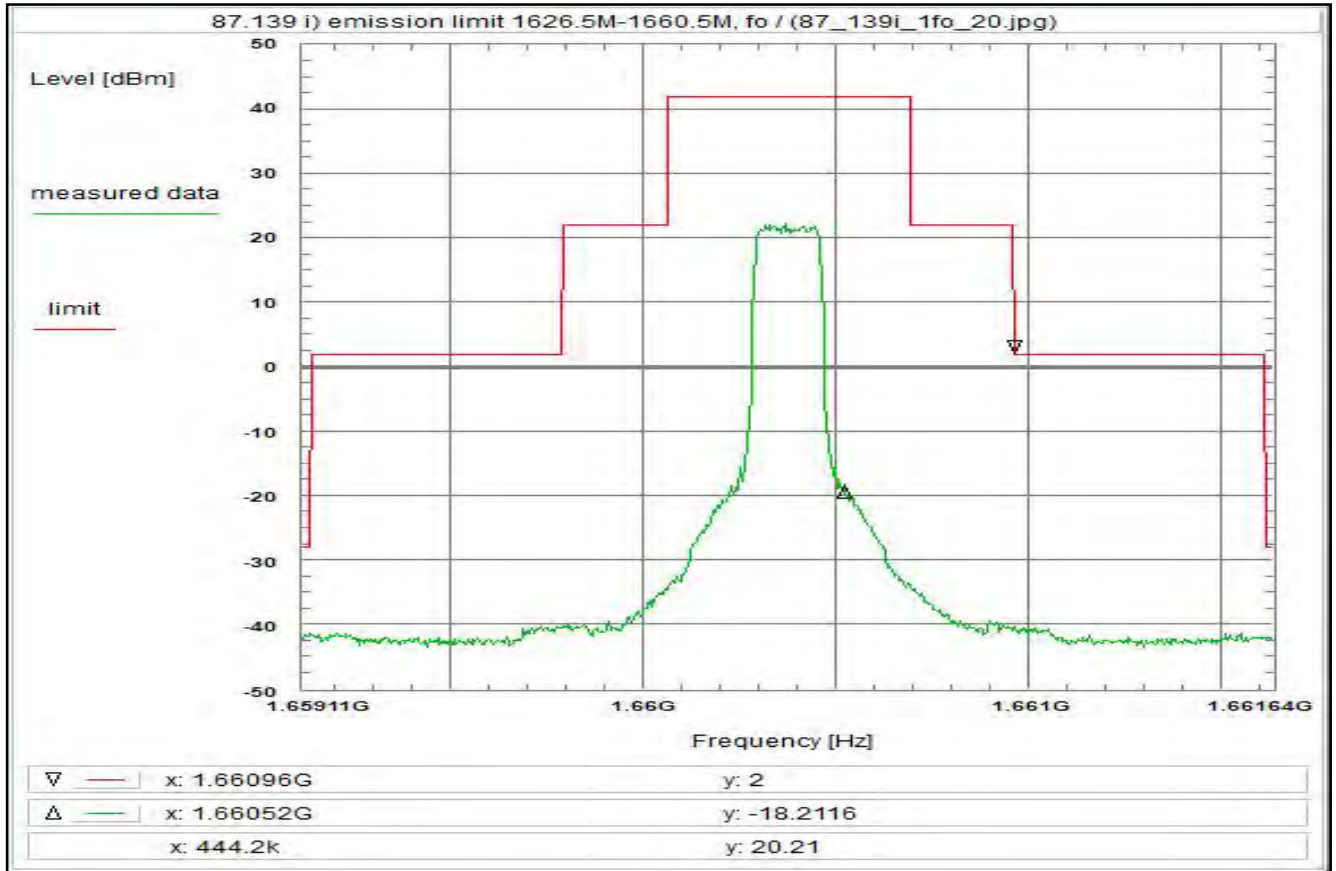
Carrier-on state / Carrier at the upper edge of the band (fo)

For EIRP calculation:

'worst-case' = maximum antenna gain



Plot No. 267



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T5X32, 168 ksymbols, 32QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:34:14  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659115 GHz  
Stop frequency: 1.661635 GHz  
Center frequency: 1.660375 GHz  
Frequency span: 2.52 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

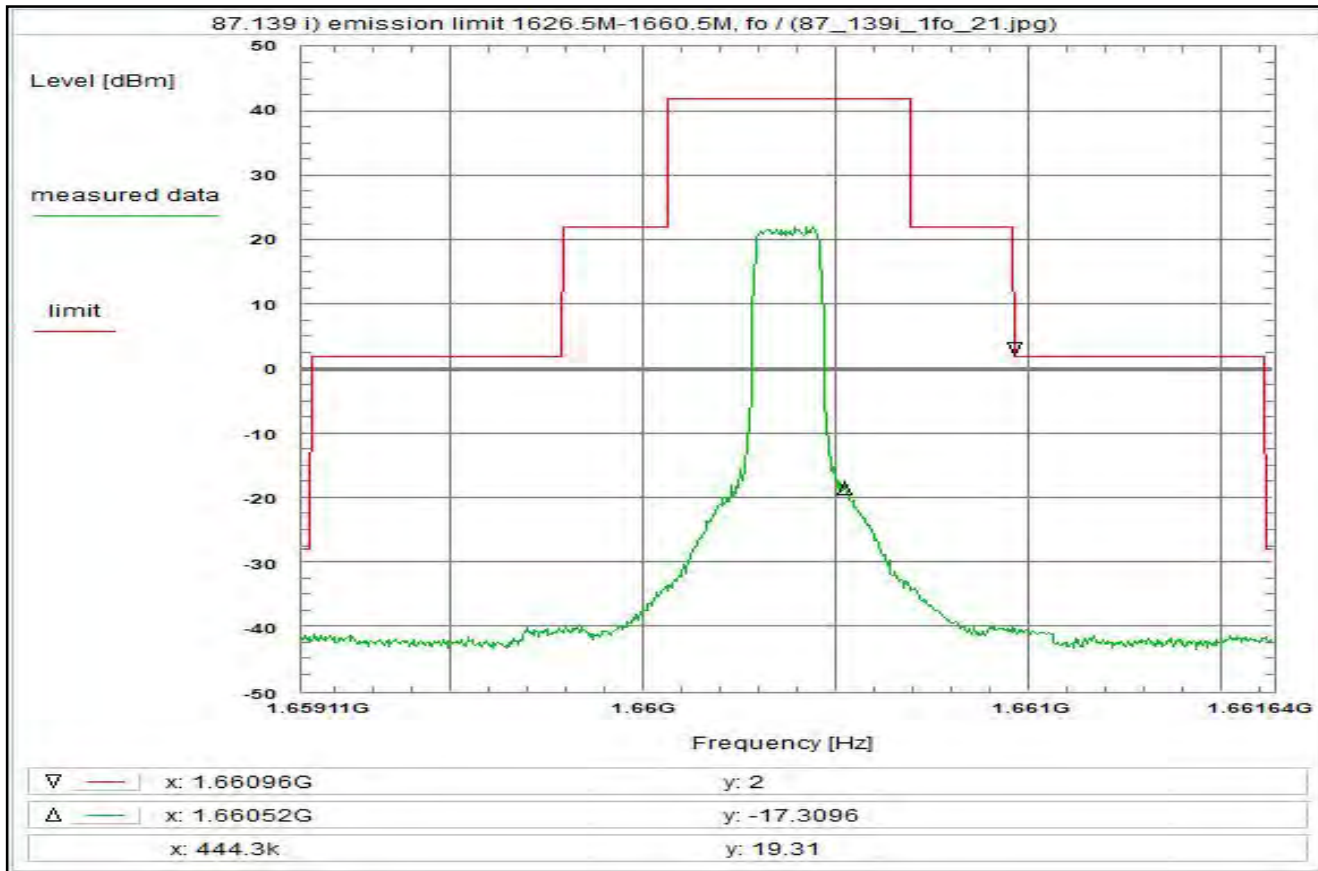
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 268



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
Class 6 HDR PIESD, FR80T5X64, 168 ksym/s, 64QAM

Test setup:  
see test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U311, U312

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 28/May/2020 16:38:44  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.659115 GHz  
Stop frequency: 1.661635 GHz  
Center frequency: 1.660375 GHz  
Frequency span: 2.52 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 45 dB  
Trace-Mode: Average  
Detector-Mode: AVG

Correction:

Directional coupler + 0.0 dB  
Coaxial cable (C220) + 0.9 dB  
DUT-Antenna + 0.0 dBi  
U311+U312 + 29.3 dB  
TOTAL CORRECTION: + 30.2 dB

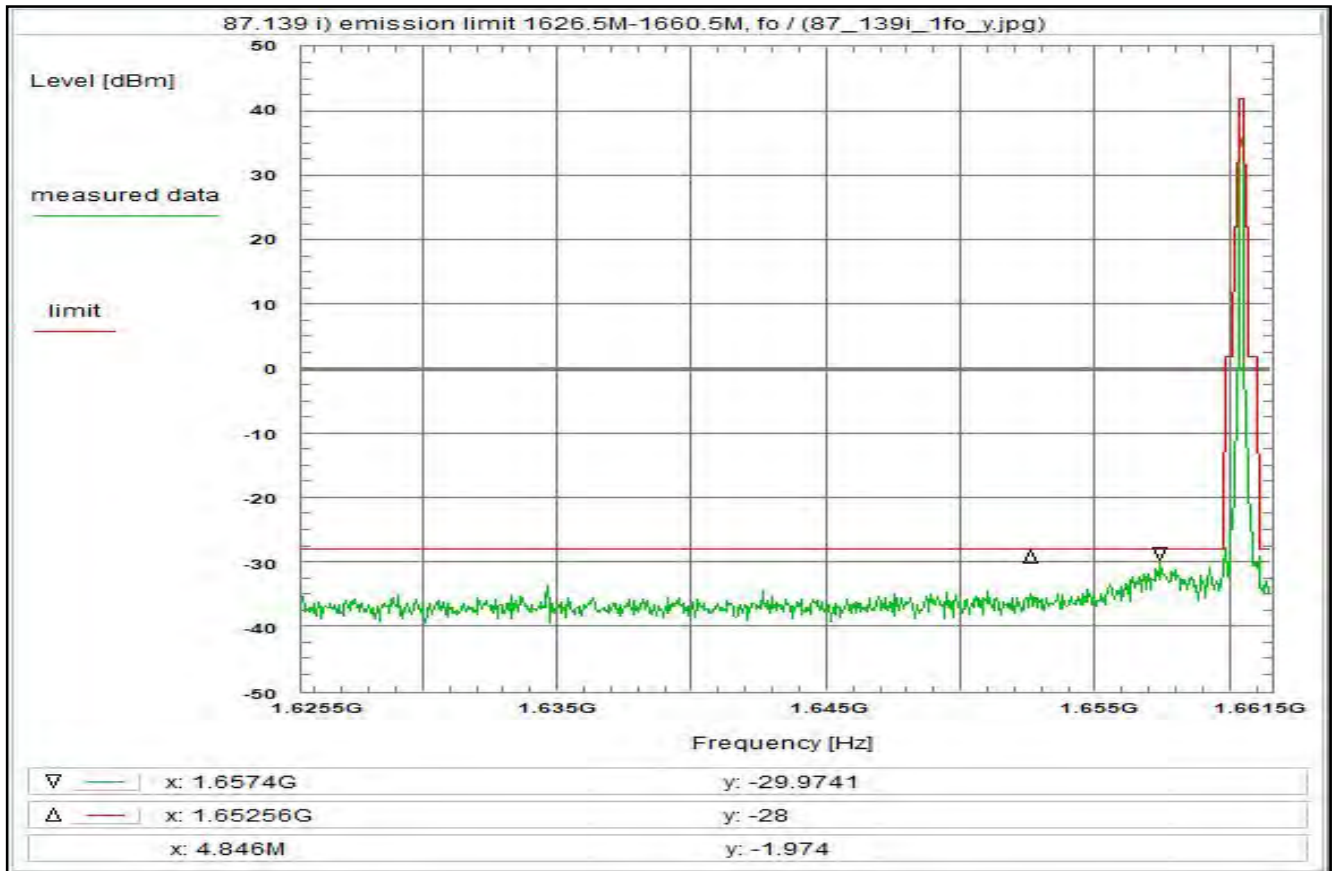
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 269



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations  
Emission limitations  
Modulated rf-carrier at the upper edge of the band (fo)

Limit:  
Limit according to 87.139(i)(1)  
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:  
operating condition 1, see test report chapter 5.4  
A700S worst case modulation, whole band

Test setup:  
test report chapter 7.2 setup 1.1hgj

Test equipment:  
see test report chapter 7.2: C220, R001, U312, U311, Power Splitter

Remark:

**Test result: Test passed**

Environment condition:

Date & Time: Thu 09/Jul/2020 11:29:44  
Location: CTC advanced GmbH, Laboratory RC-SYS  
Temperature: 22 °C  
Humidity: 55 %  
Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6255 GHz  
Stop frequency: 1.6615 GHz  
Center frequency: 1.6435 GHz  
Frequency span: 36 MHz  
Resolution-BW: 3 kHz  
Video-BW: 30 kHz  
Input attenuation: 30 dB  
Trace-Mode: Clear Write  
Detector-Mode: AVG

Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 dBi
Test antenna	+ 0.0 dB
BW correction factor (3k -> 4k)	+ 1.2 dB
Atten. between HPA and feedhorn	- 0.0 dB
Attenuation (U312)	+ 19.5 dB
Attenuation (U311)	+ 9.7 dB
Power Splitter	+ 6.7 dB
TOTAL CORRECTION:	+ 50.0 dB

Remarks:

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

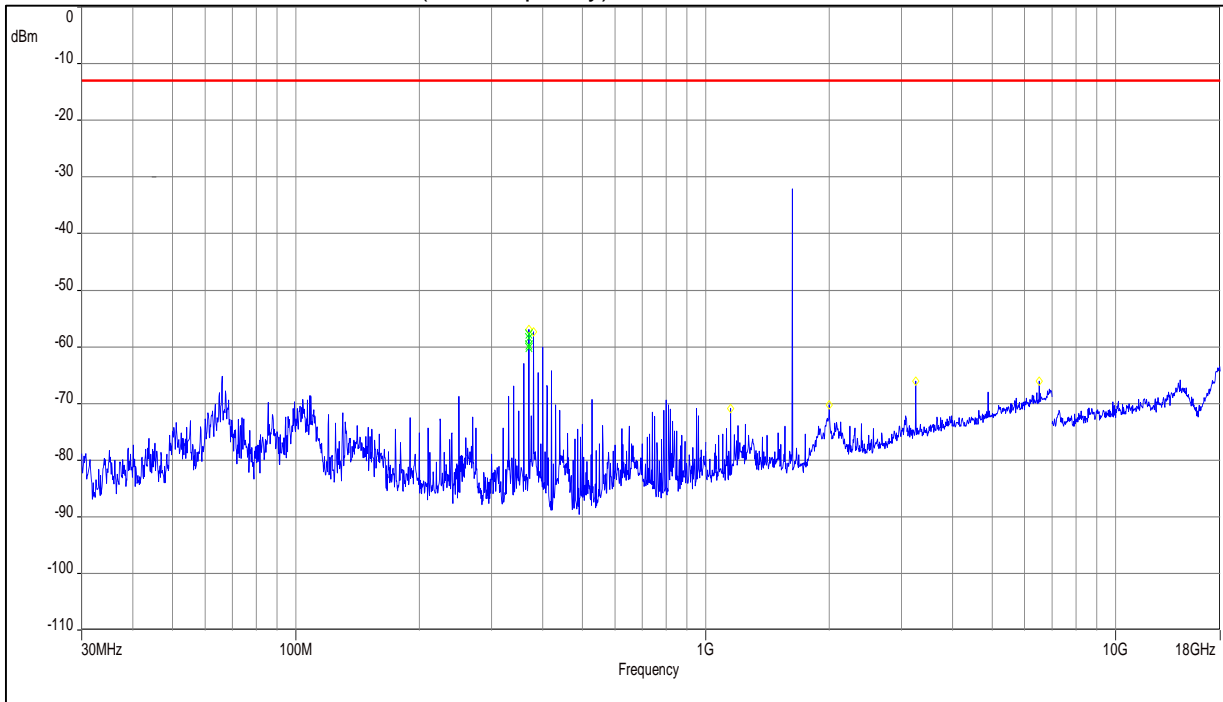
For EIRP calculation:

'worst-case' = maximum antenna gain

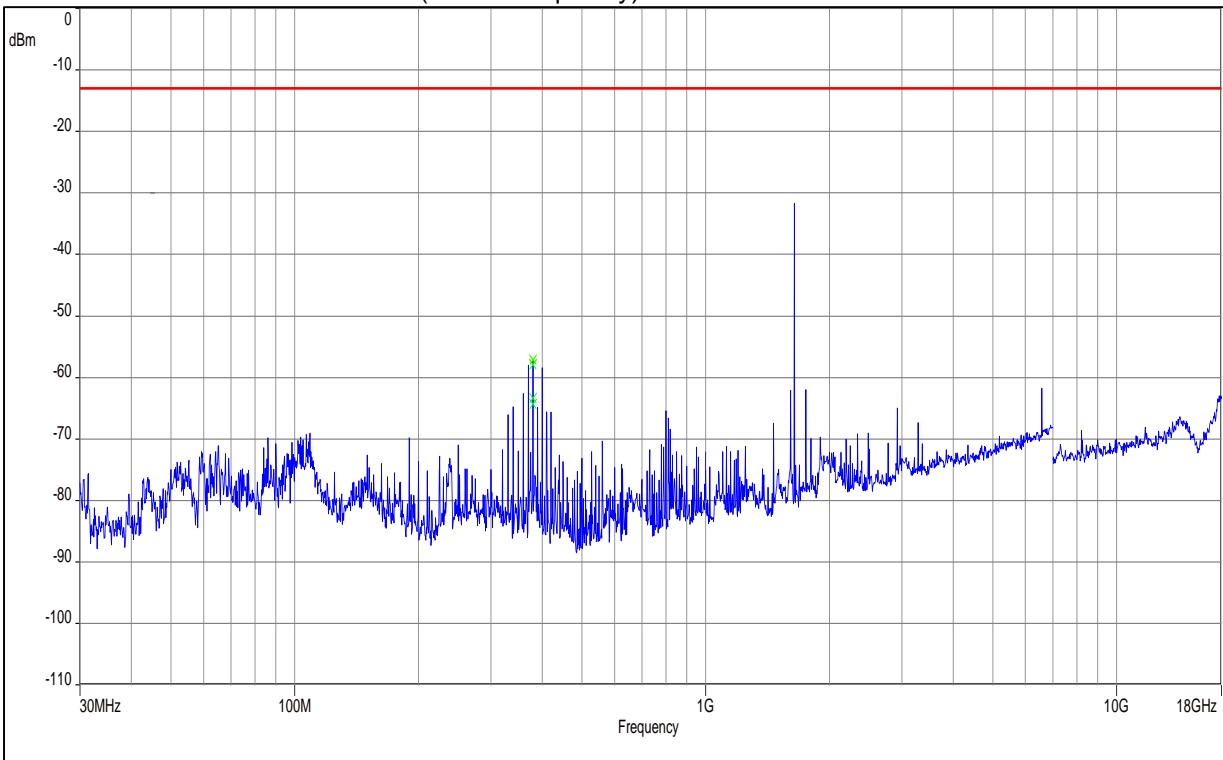
### **3 Measurement results, Spurious emissions 30MHz - 18 GHz**

This Chapter 3 consists of 3 pages including this page.

Plot No. 1: antenna vertical / horizontal (Low frequency)

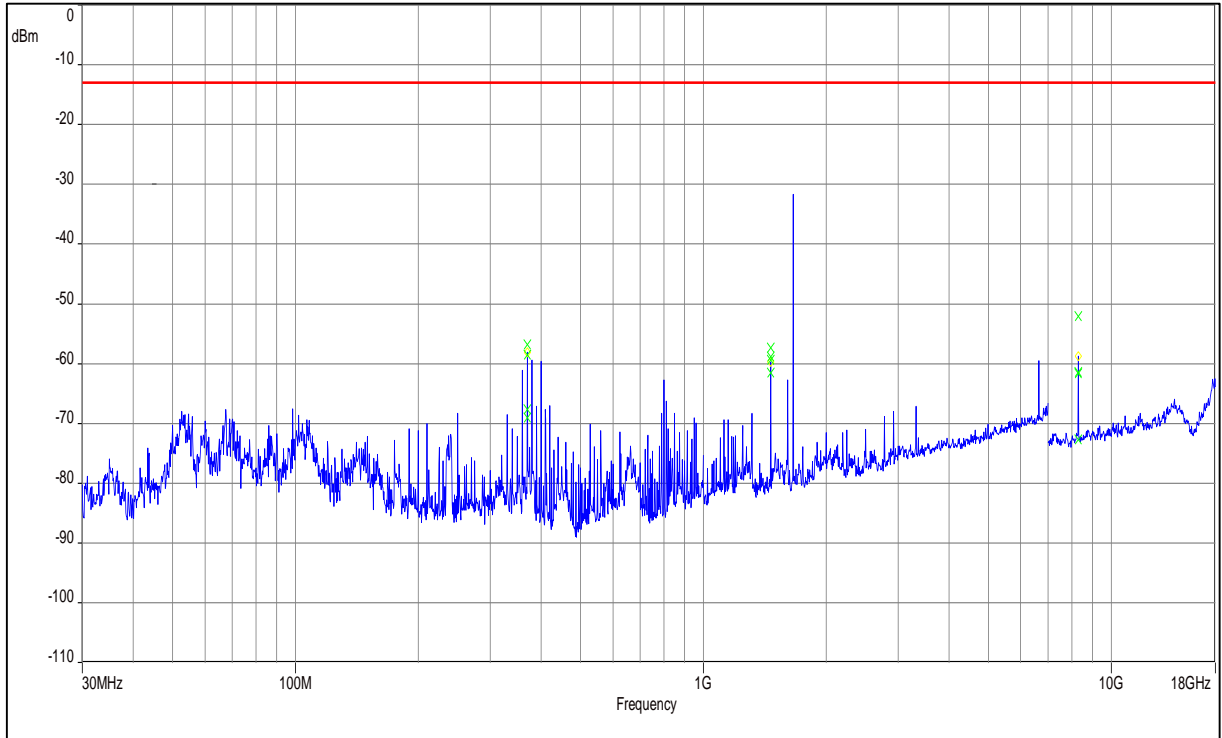


Plot No. 2: antenna vertical / horizontal (Middle frequency)





Plot No. 3: antenna vertical / horizontal (High frequency)



## 4 Measurement results, FCC Part 15B

This Chapter 4 consists of 1 pages including this page.

**Refer to test report 1-9547\_19-02-03.pdf**

## 5 Document history

Version	Applied changes	Date of release
	Initial release - DRAFT	2020-06-26
	Draft version 2	2020-07-03
	final release	2021-04-29