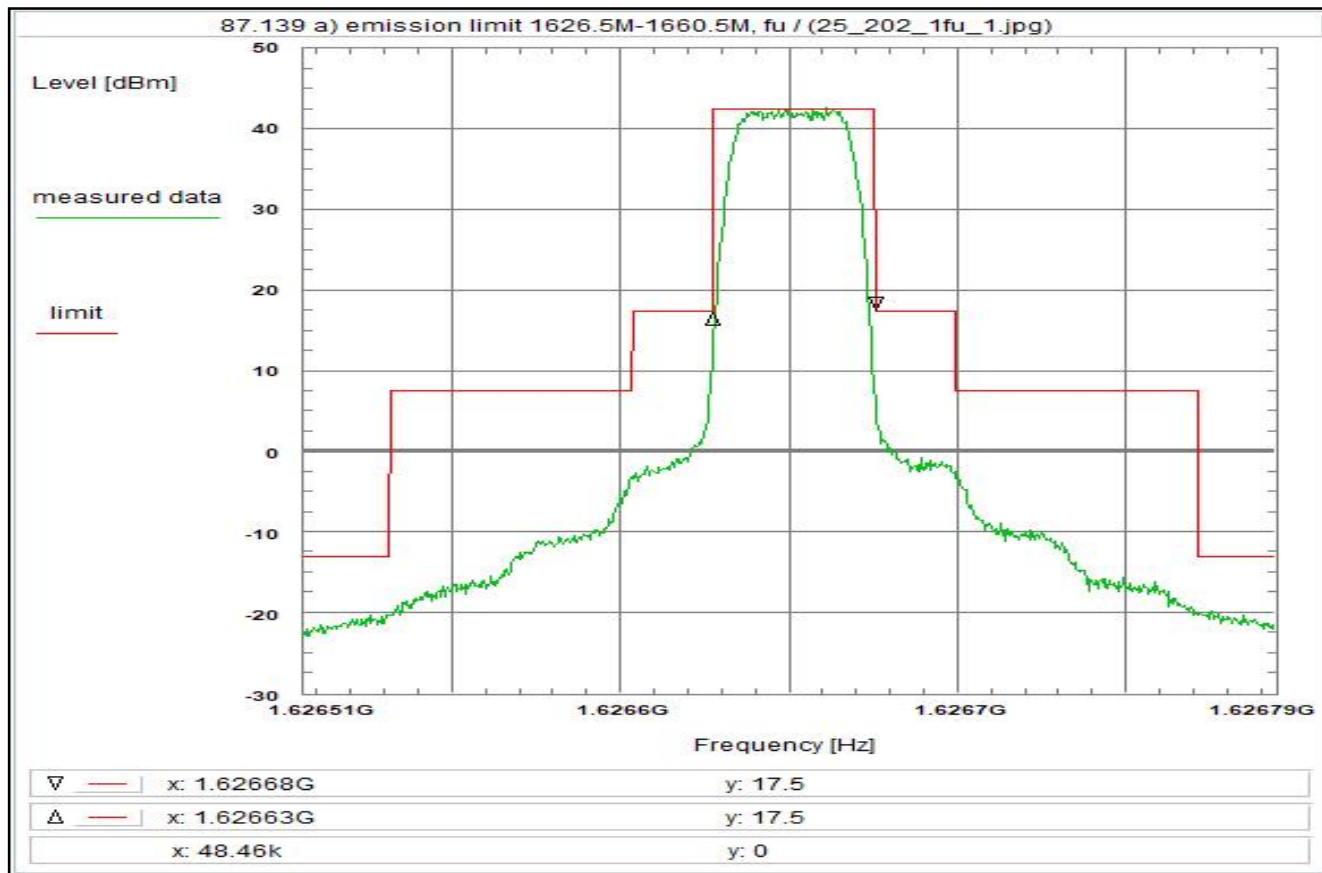


Plot No. 91



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 ACD, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 10:52:00

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626506 GHz

Stop frequency: 1.626794 GHz

Center frequency: 1.62665 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 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

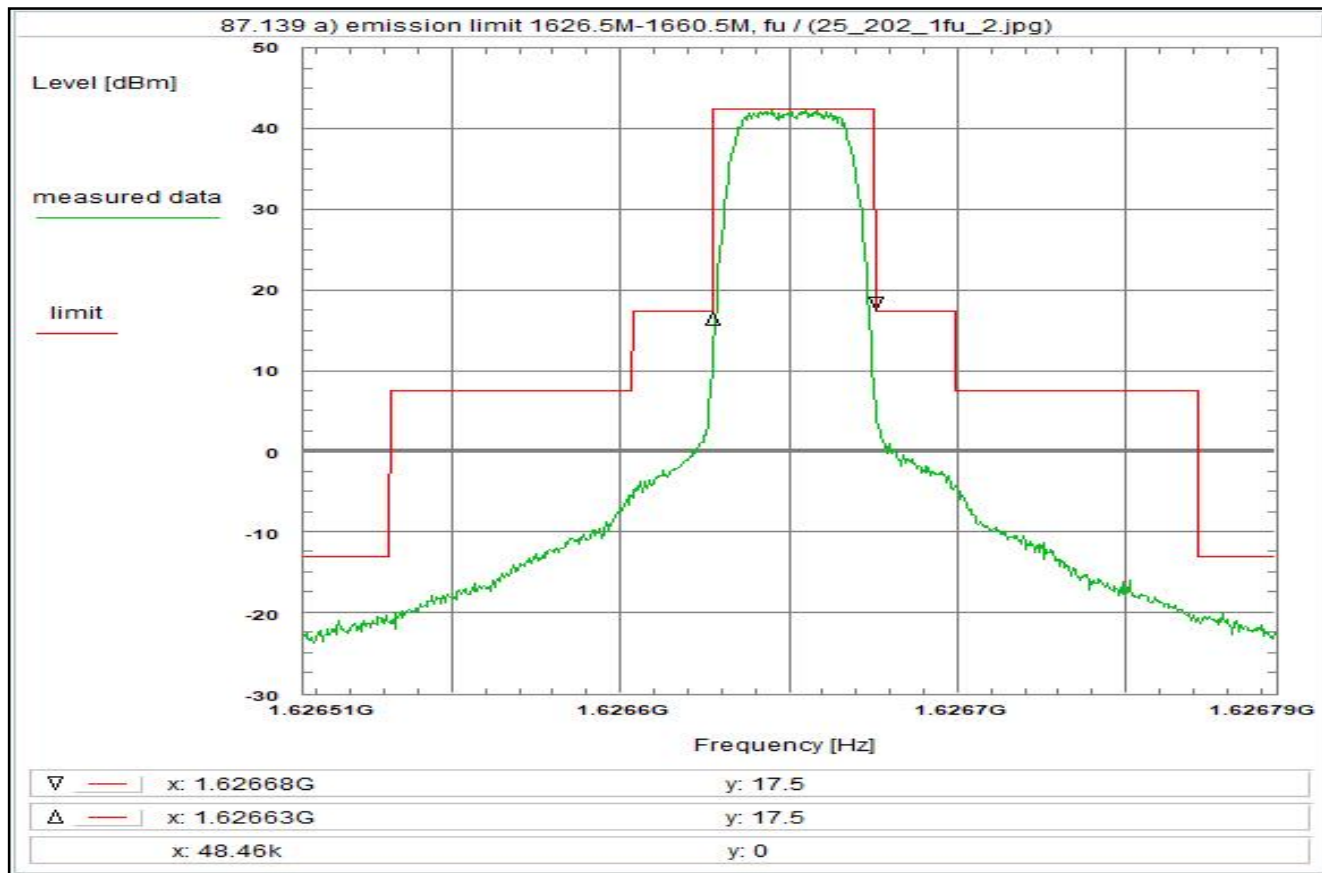
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 92



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 ACD, R520T1XD

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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 10:53:43

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626506 GHz

Stop frequency: 1.626794 GHz

Center frequency: 1.62665 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

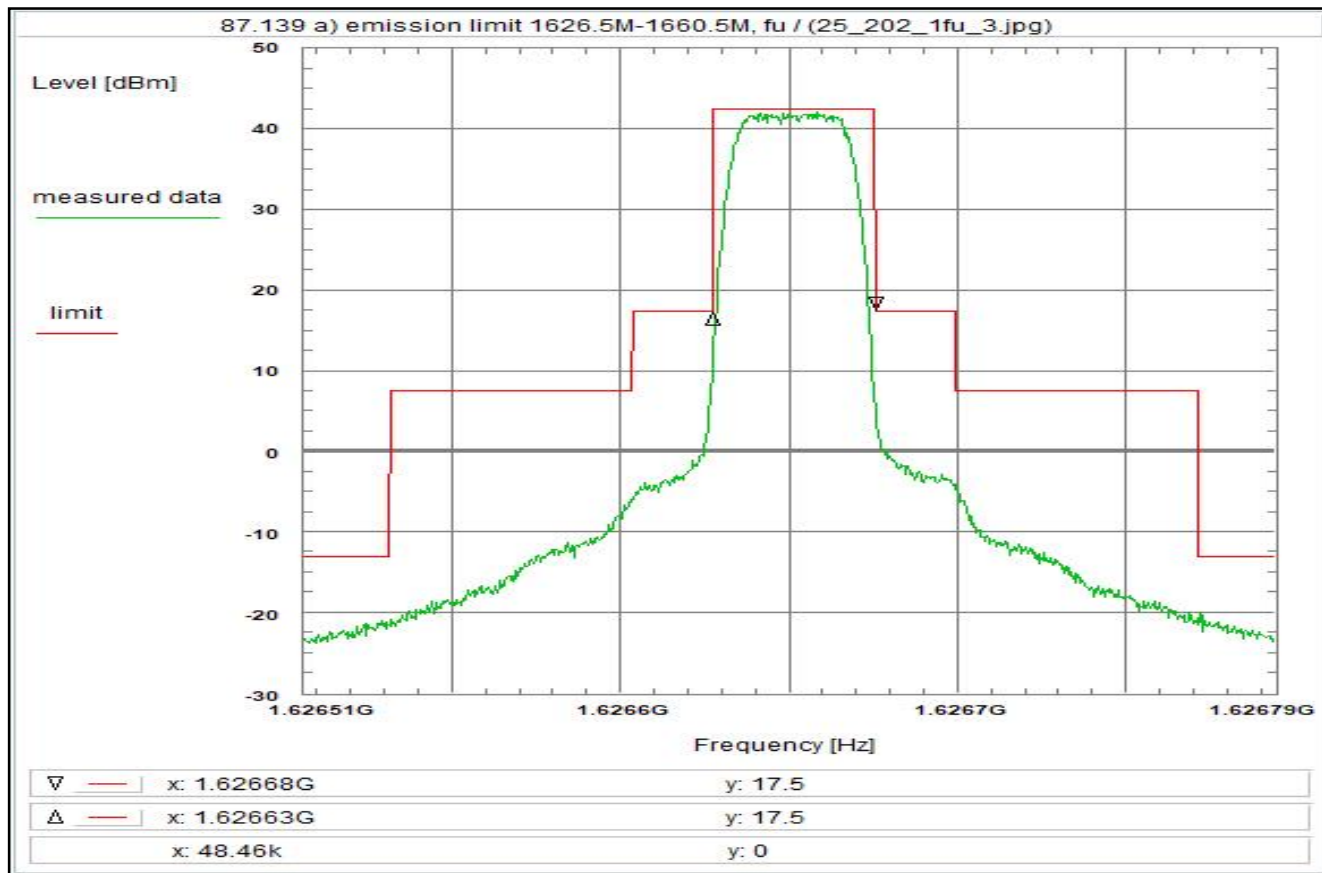
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 93



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 10:54:37

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626506 GHz

Stop frequency: 1.626794 GHz

Center frequency: 1.62665 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

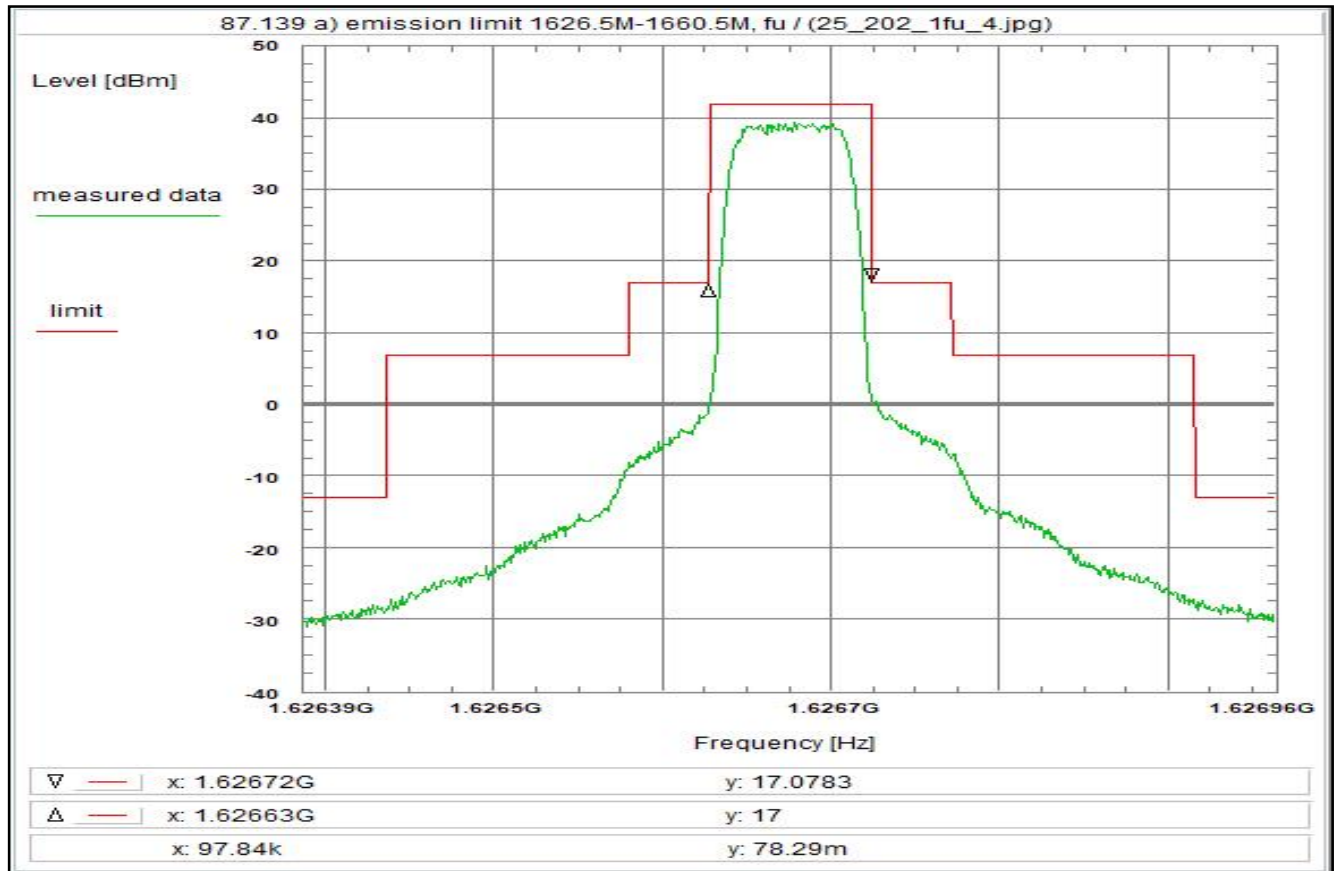
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 94



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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, Power Splitter, R001, U311, U312

Remark:

Test result: Test passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 11:02:26

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626387 GHz

Stop frequency: 1.626963 GHz

Center frequency: 1.626675 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 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

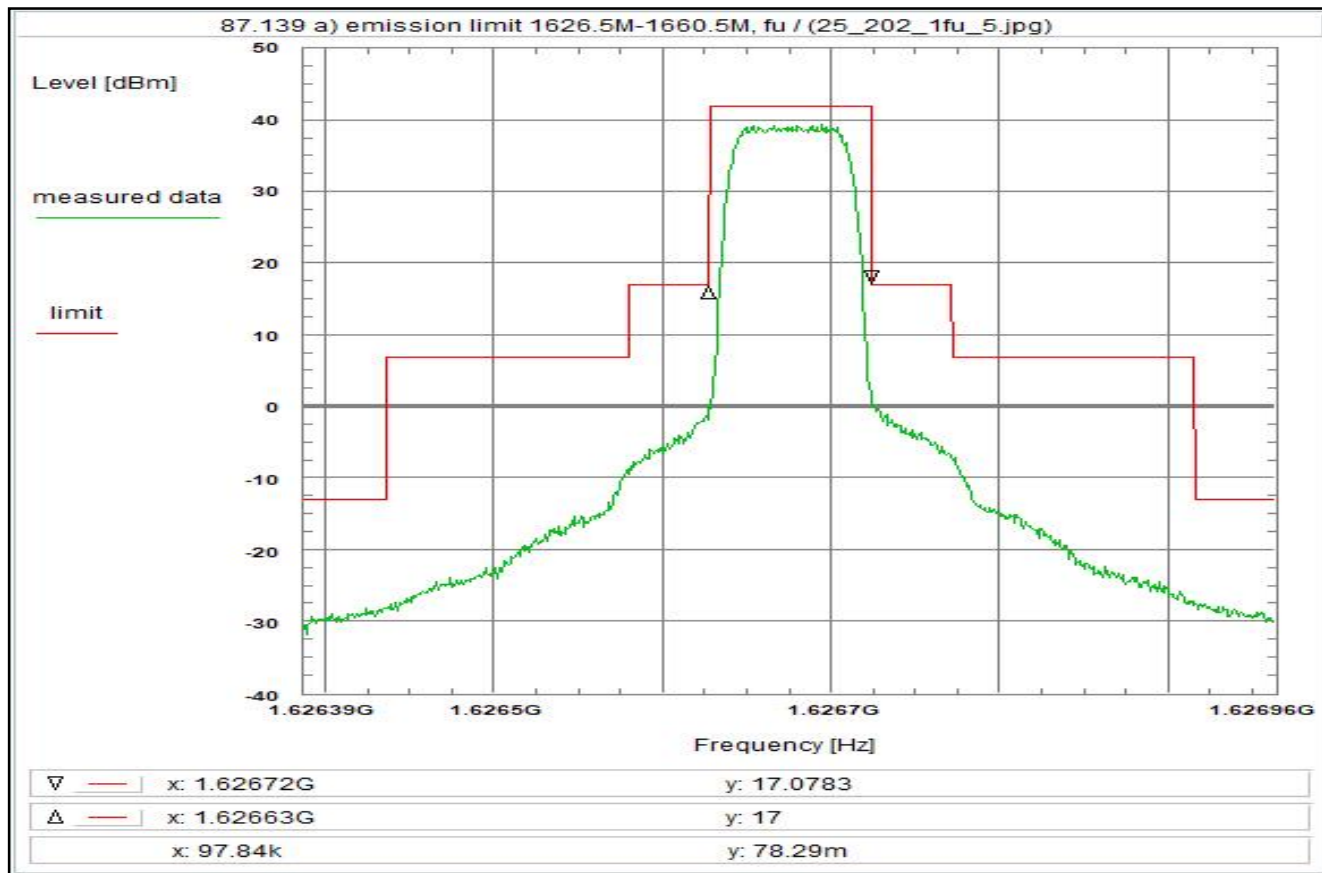
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 95



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 11:04:32

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626387 GHz

Stop frequency: 1.626963 GHz

Center frequency: 1.626675 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 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

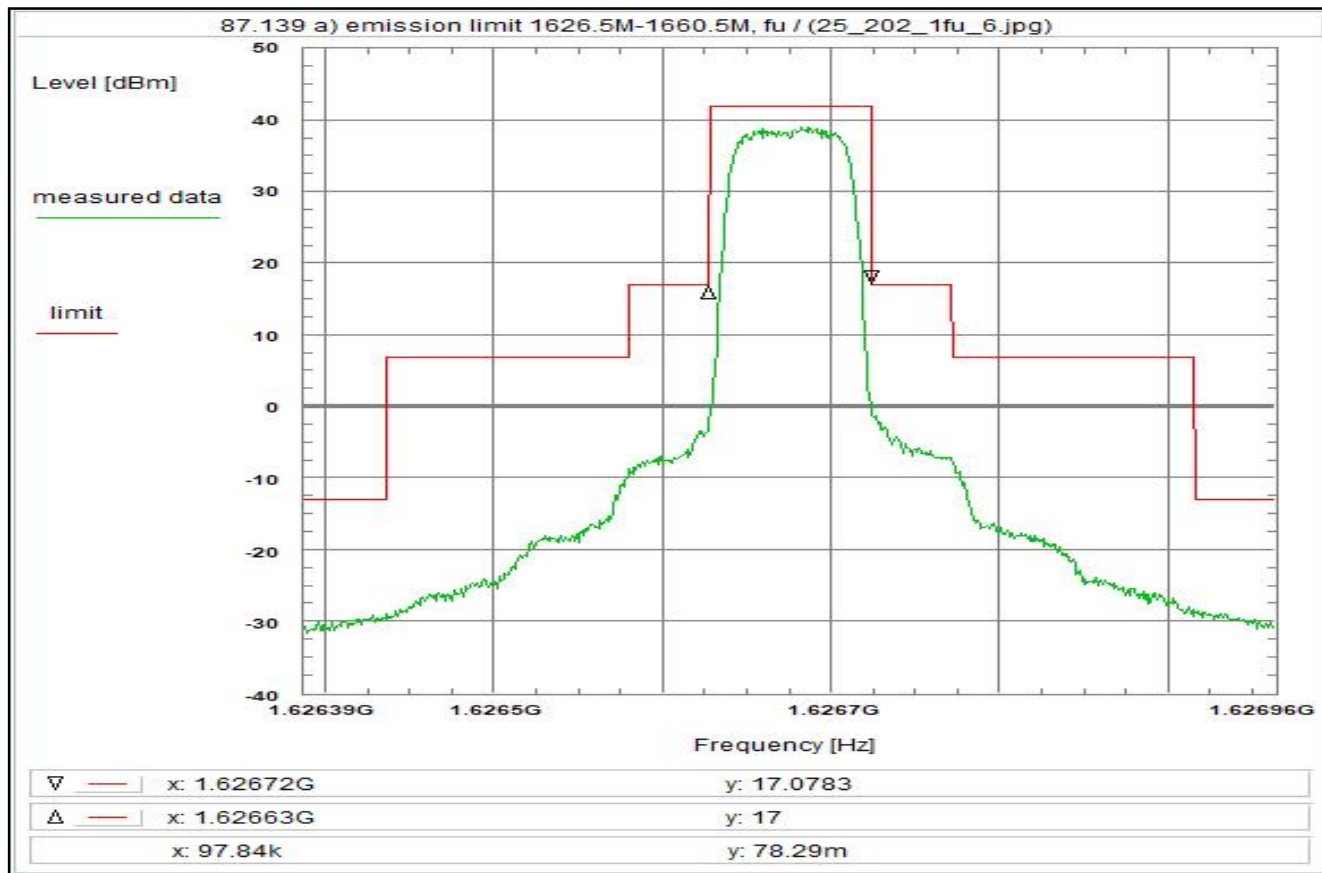
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 96



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 11:10:06

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626387 GHz

Stop frequency: 1.626963 GHz

Center frequency: 1.626675 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 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

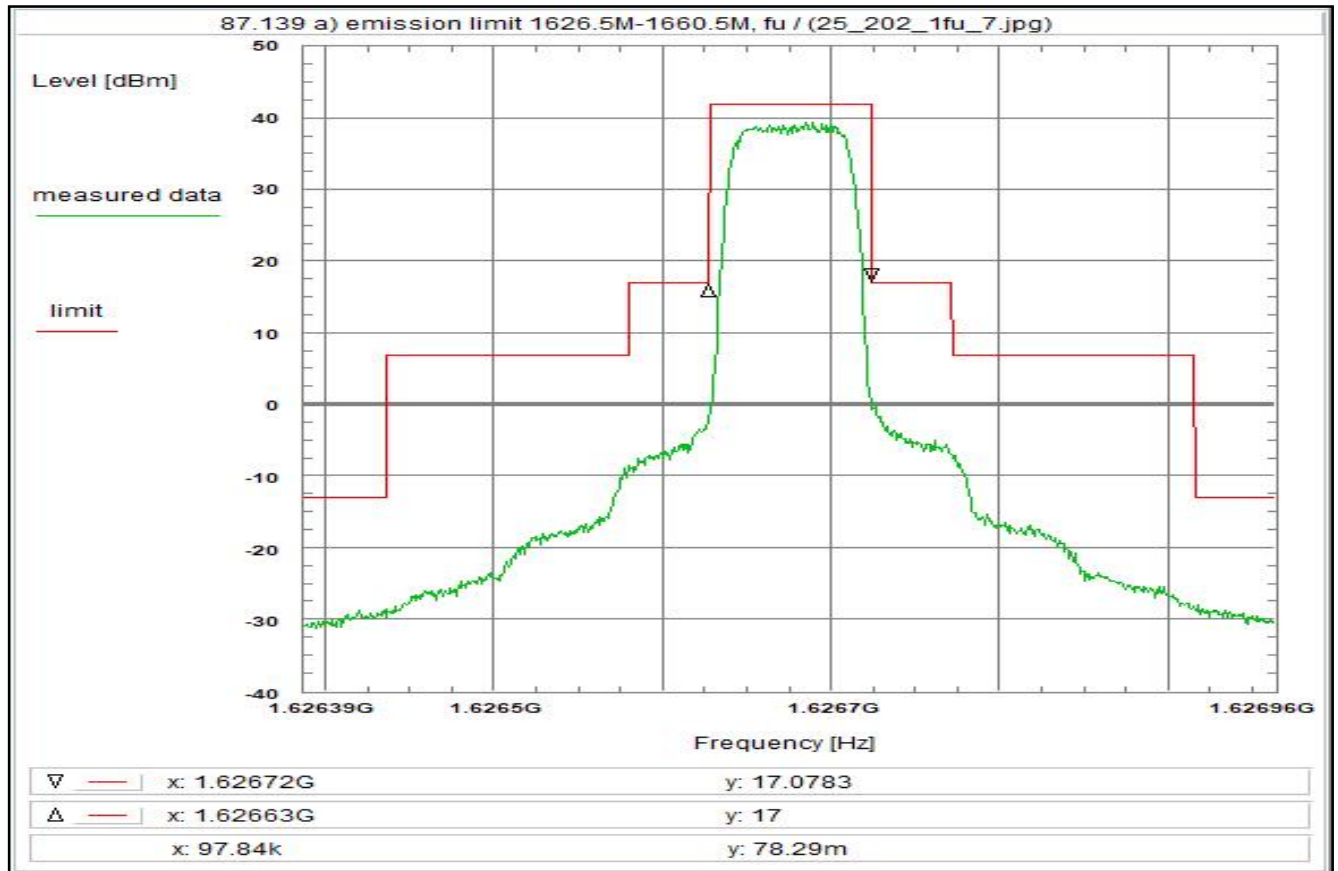
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 97



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 11:10:50

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626387 GHz

Stop frequency: 1.626963 GHz

Center frequency: 1.626675 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 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

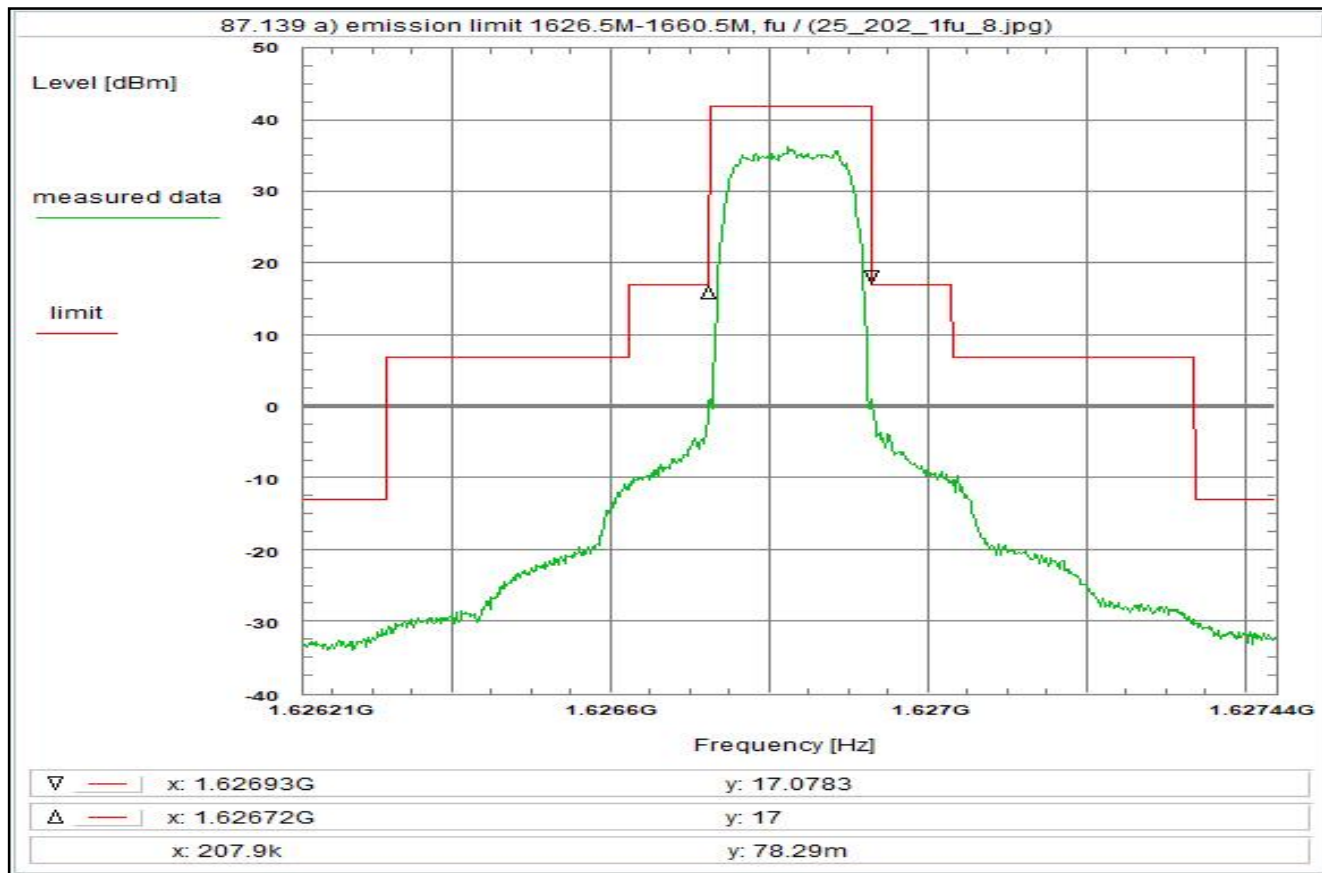
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 98



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 11:13:19

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626213 GHz

Stop frequency: 1.627437 GHz

Center frequency: 1.626825 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

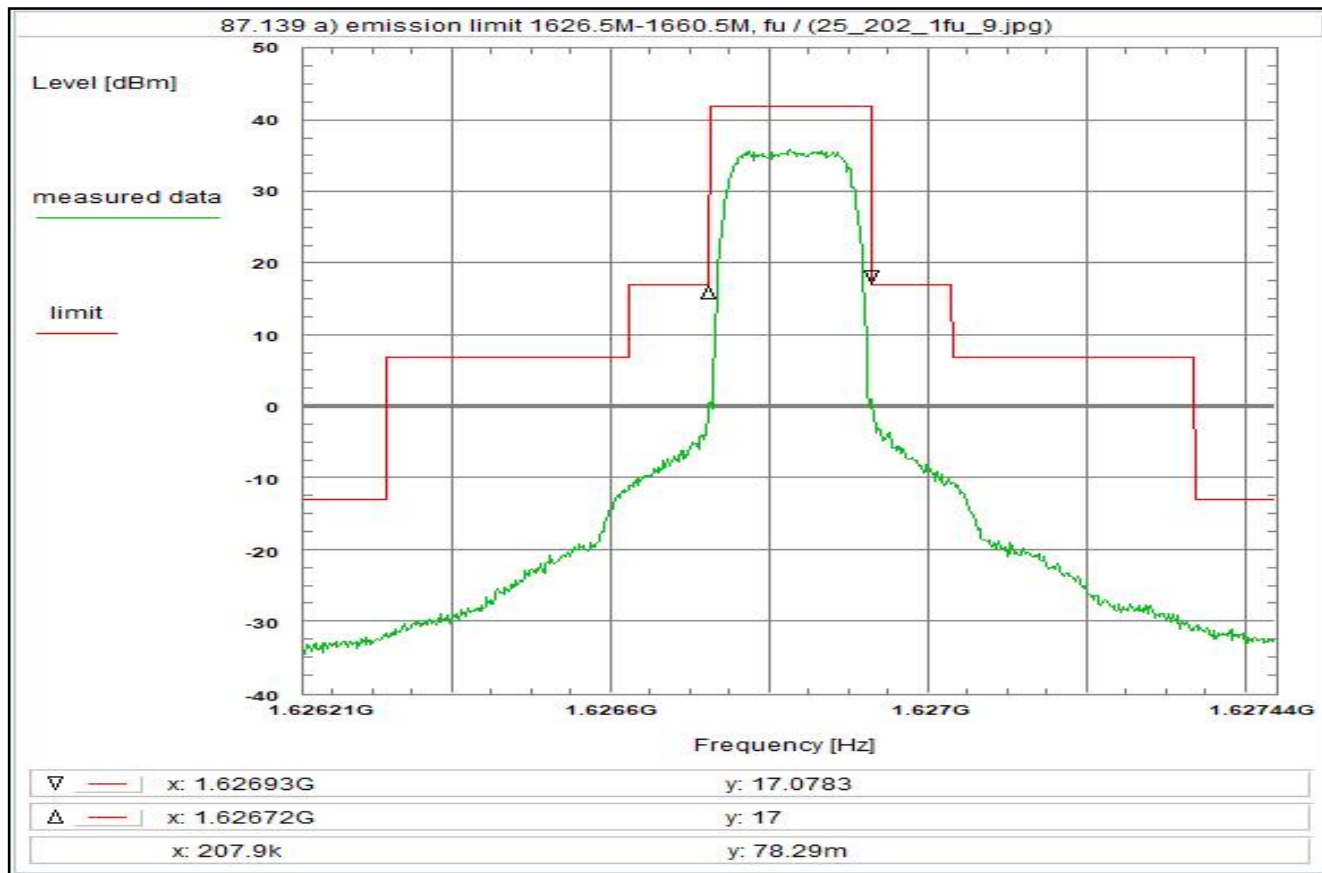
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 99



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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, R001, U312, U311, Power Splitter

Remark:

Test result: Test passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 11:16:28

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626213 GHz

Stop frequency: 1.627437 GHz

Center frequency: 1.626825 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

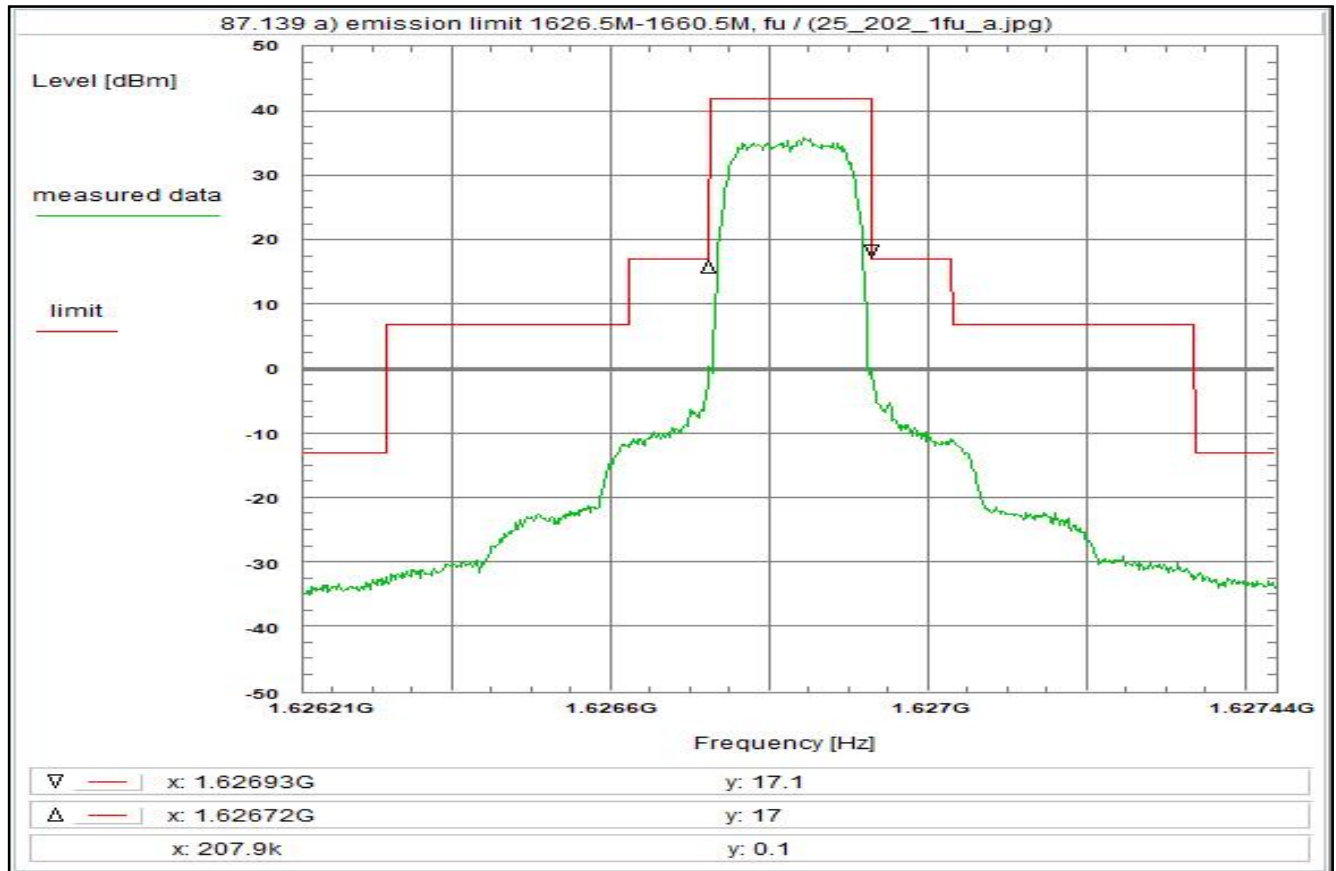
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 100



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 ACD, R5T4.5QD

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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 11:17:26

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626213 GHz

Stop frequency: 1.627437 GHz

Center frequency: 1.626825 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

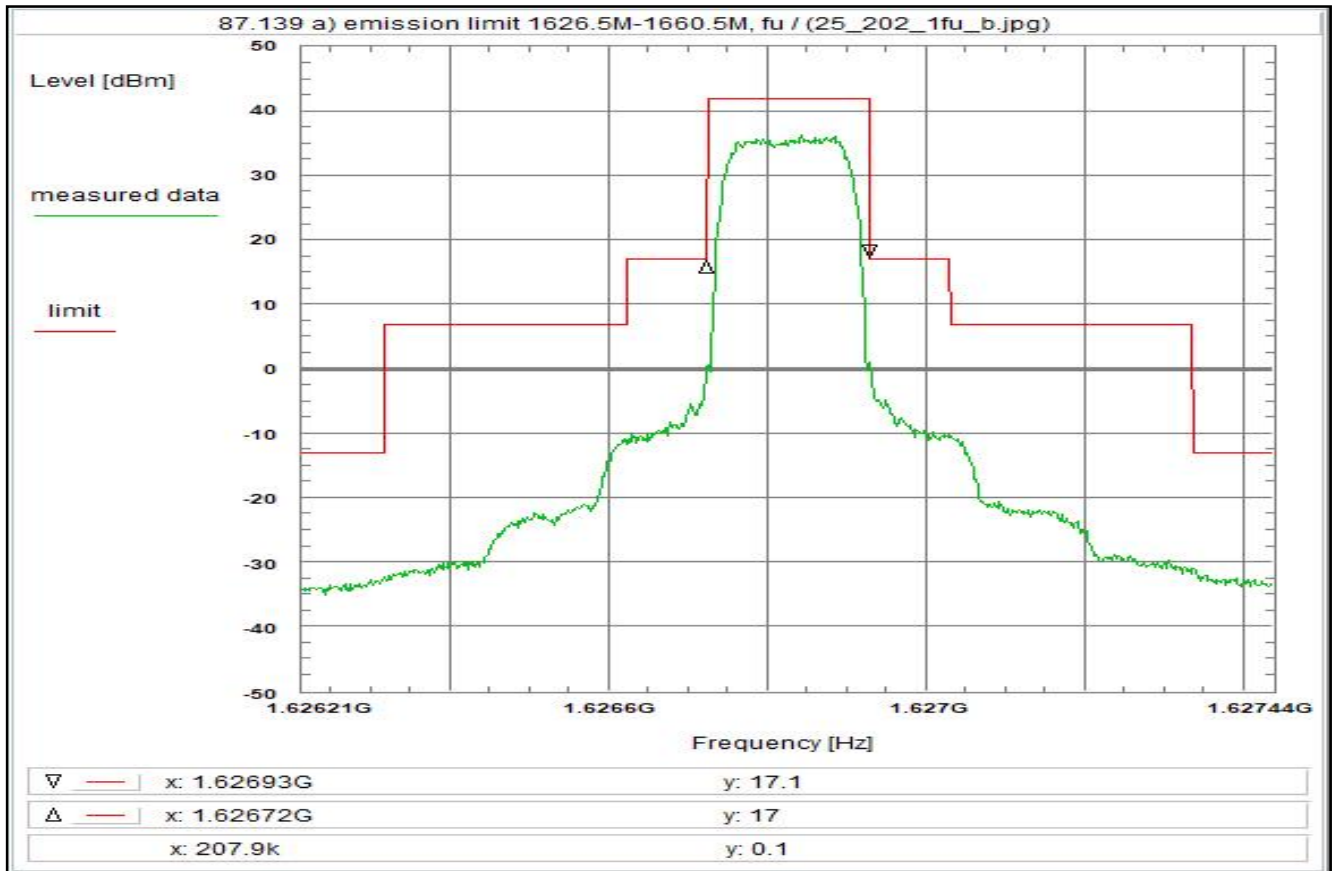
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 101



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 11:18:20

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626213 GHz

Stop frequency: 1.627437 GHz

Center frequency: 1.626825 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

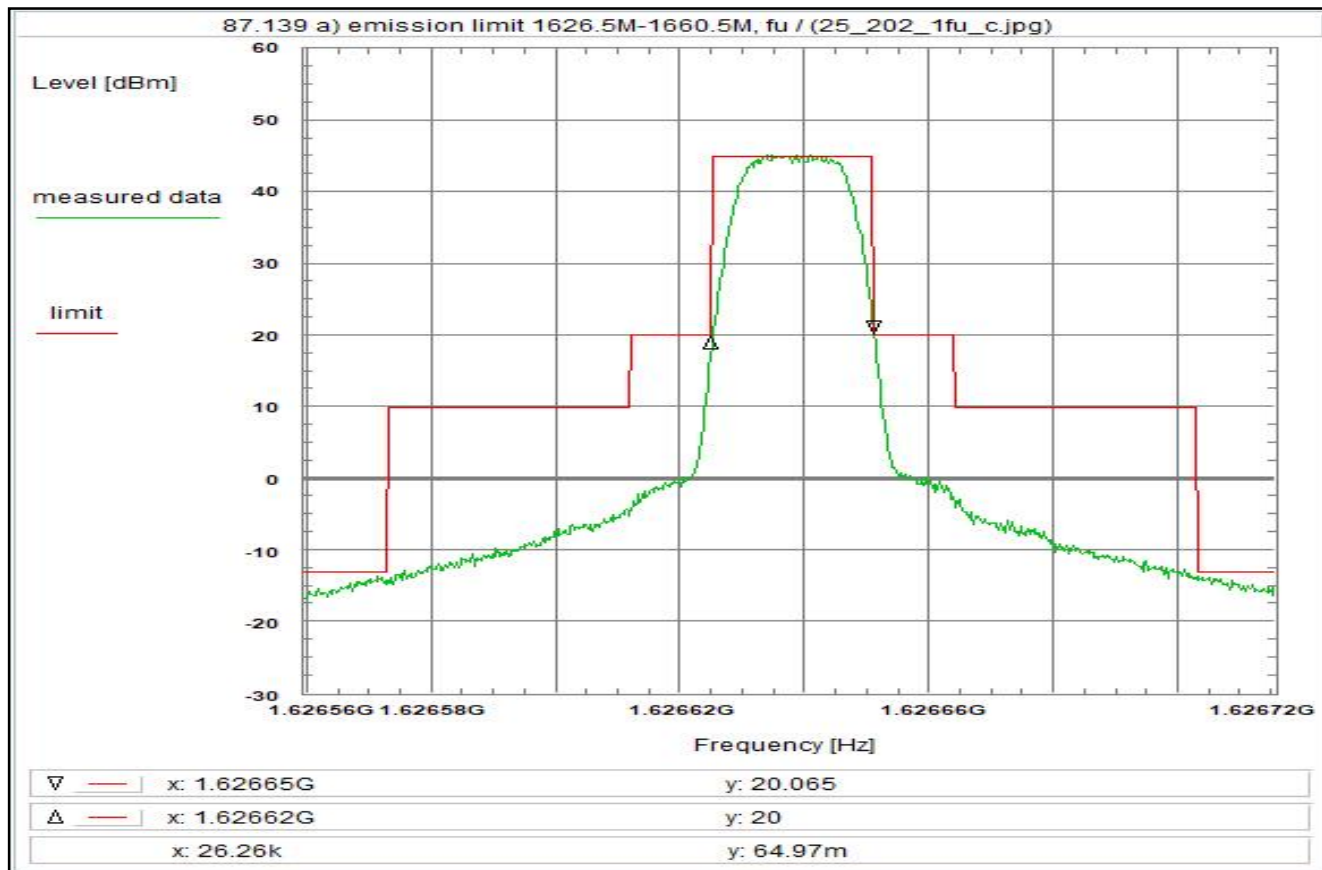
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 102



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 ACD, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 11:20:50

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6265595 GHz

Stop frequency: 1.6267155 GHz

Center frequency: 1.6266375 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 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

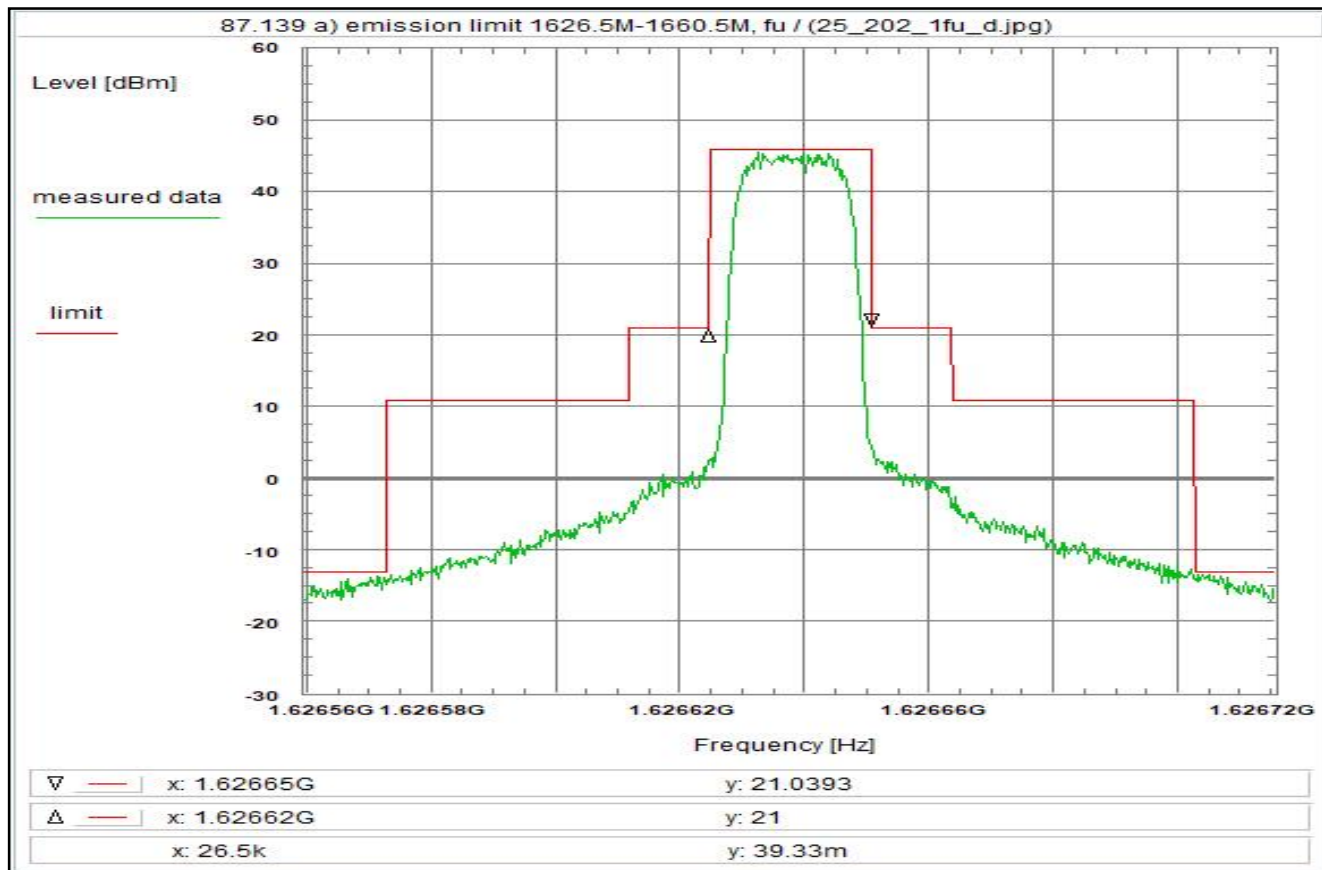
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 103



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:07:57

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6265595 GHz

Stop frequency: 1.6267155 GHz

Center frequency: 1.6266375 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

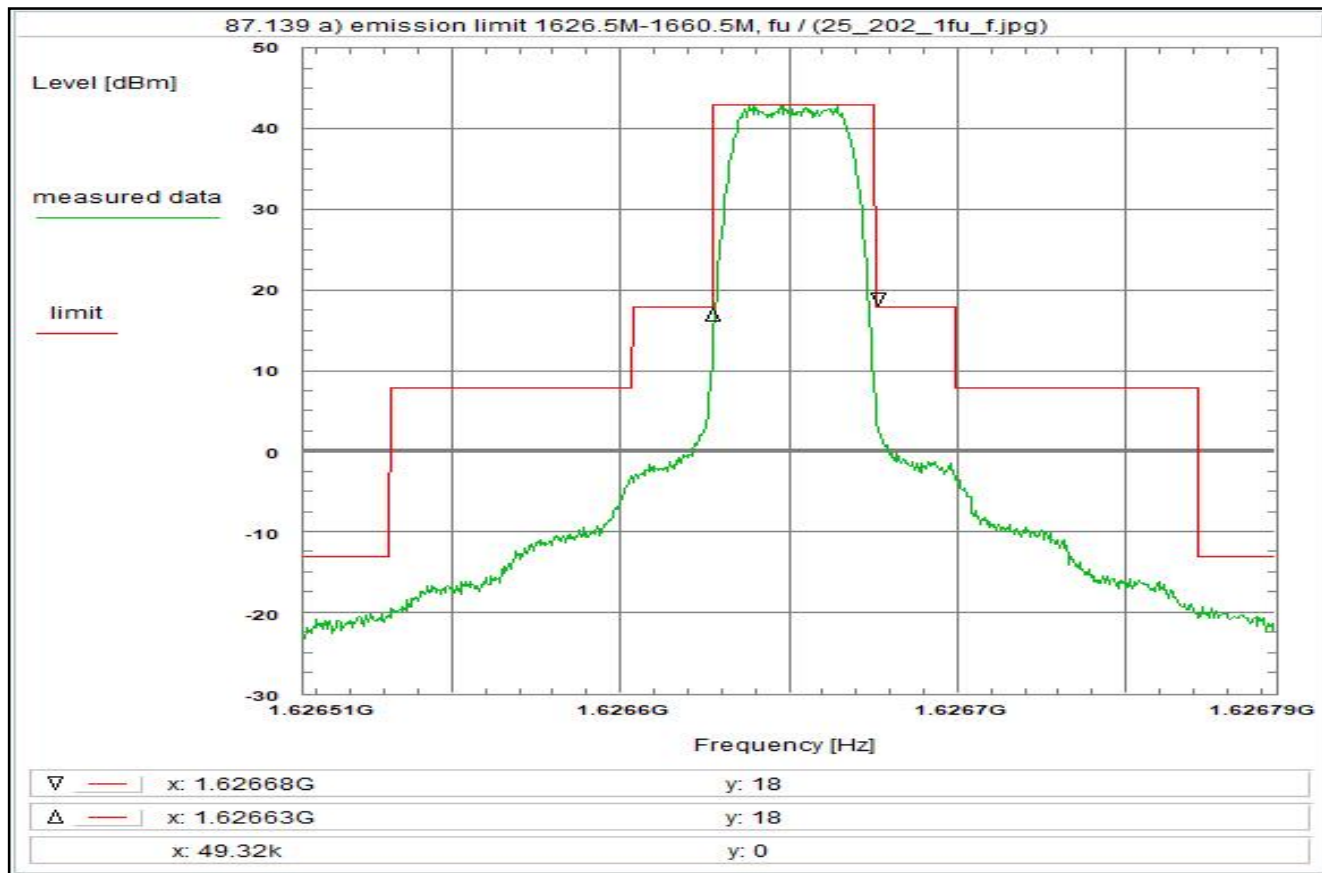
TOTAL CORRECTION: + 54.8 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 104



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:15:01

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626506 GHz

Stop frequency: 1.626794 GHz

Center frequency: 1.62665 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 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

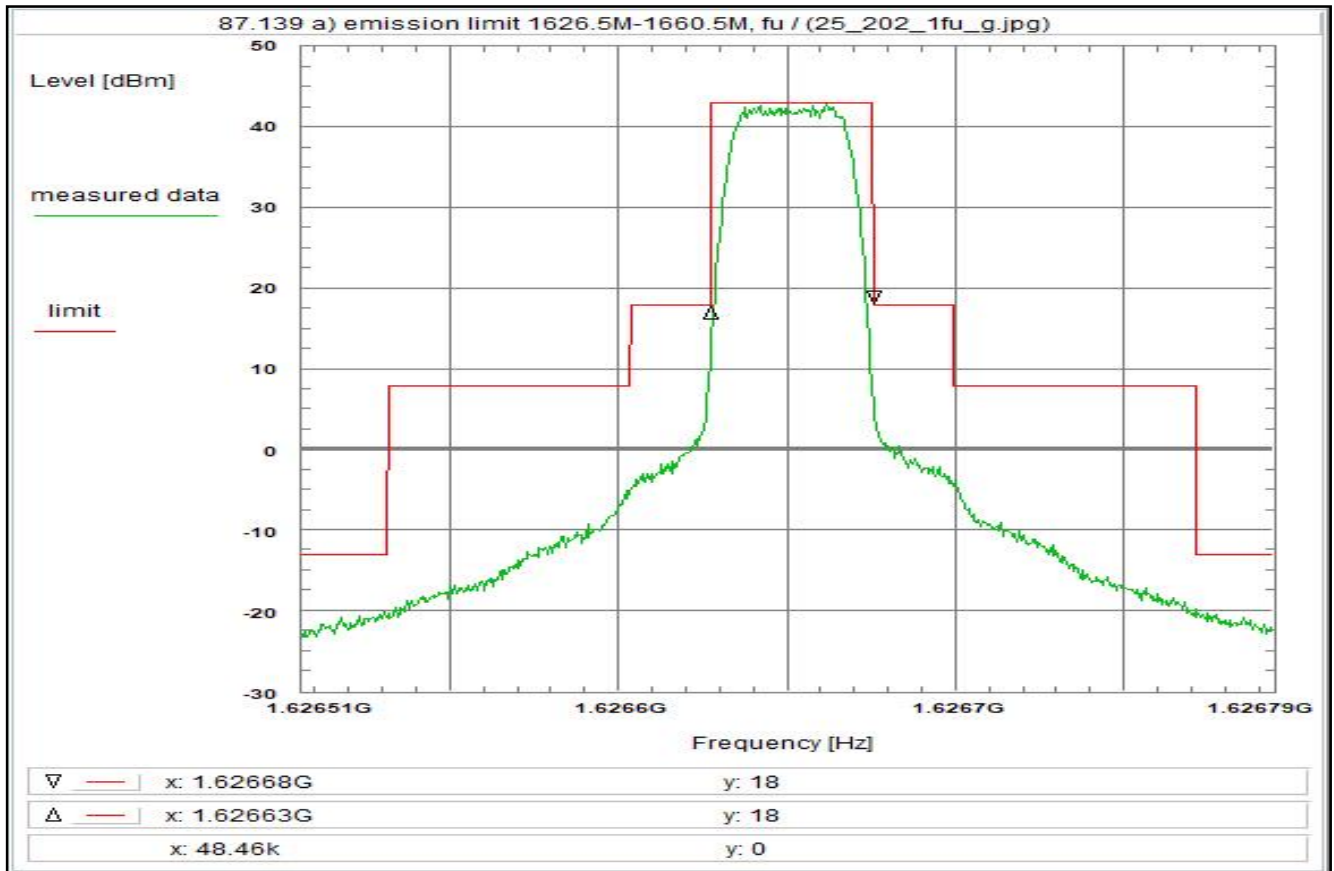
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 105



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:16:13

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626506 GHz

Stop frequency: 1.626794 GHz

Center frequency: 1.62665 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

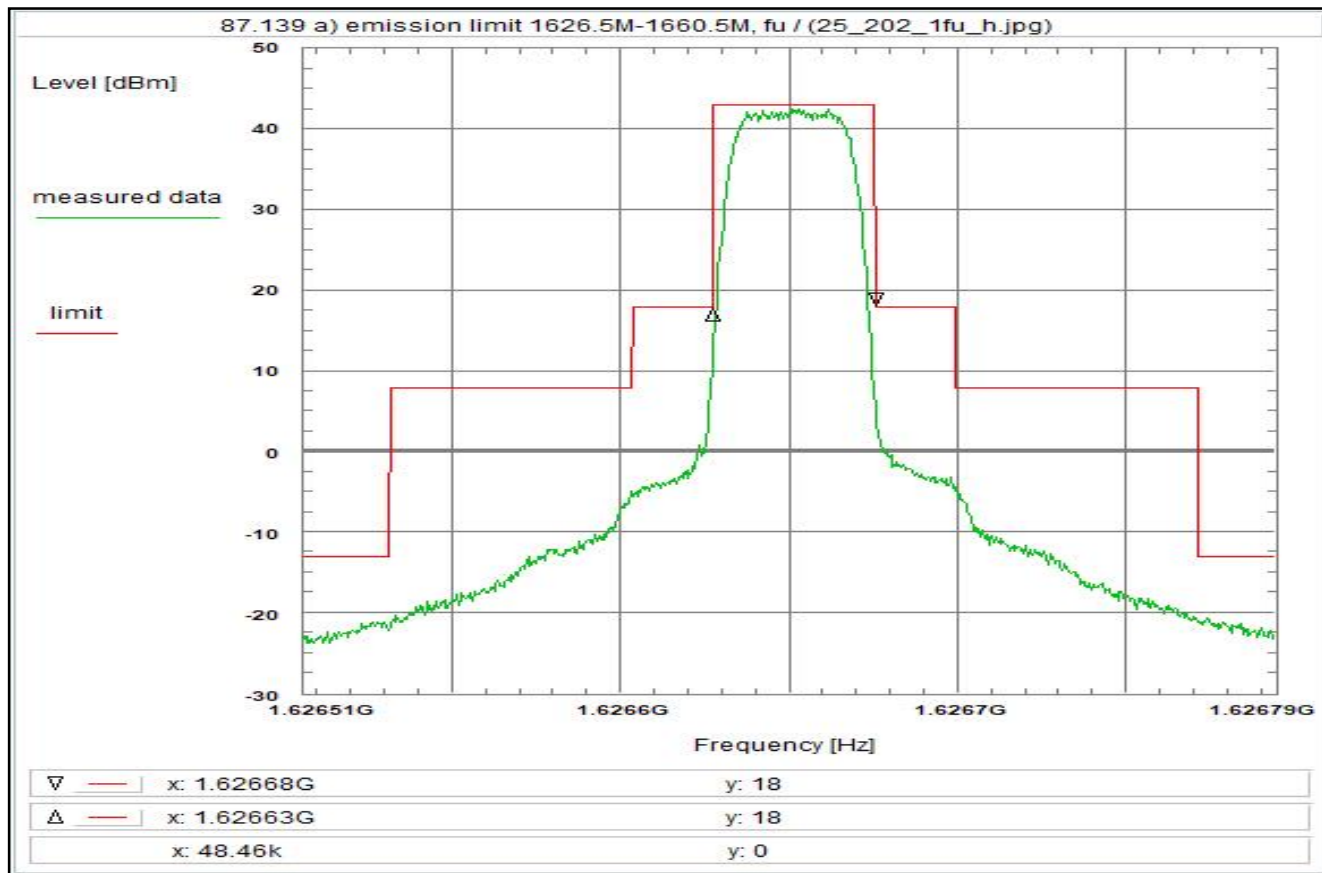
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 106



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:17:16

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626506 GHz

Stop frequency: 1.626794 GHz

Center frequency: 1.62665 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

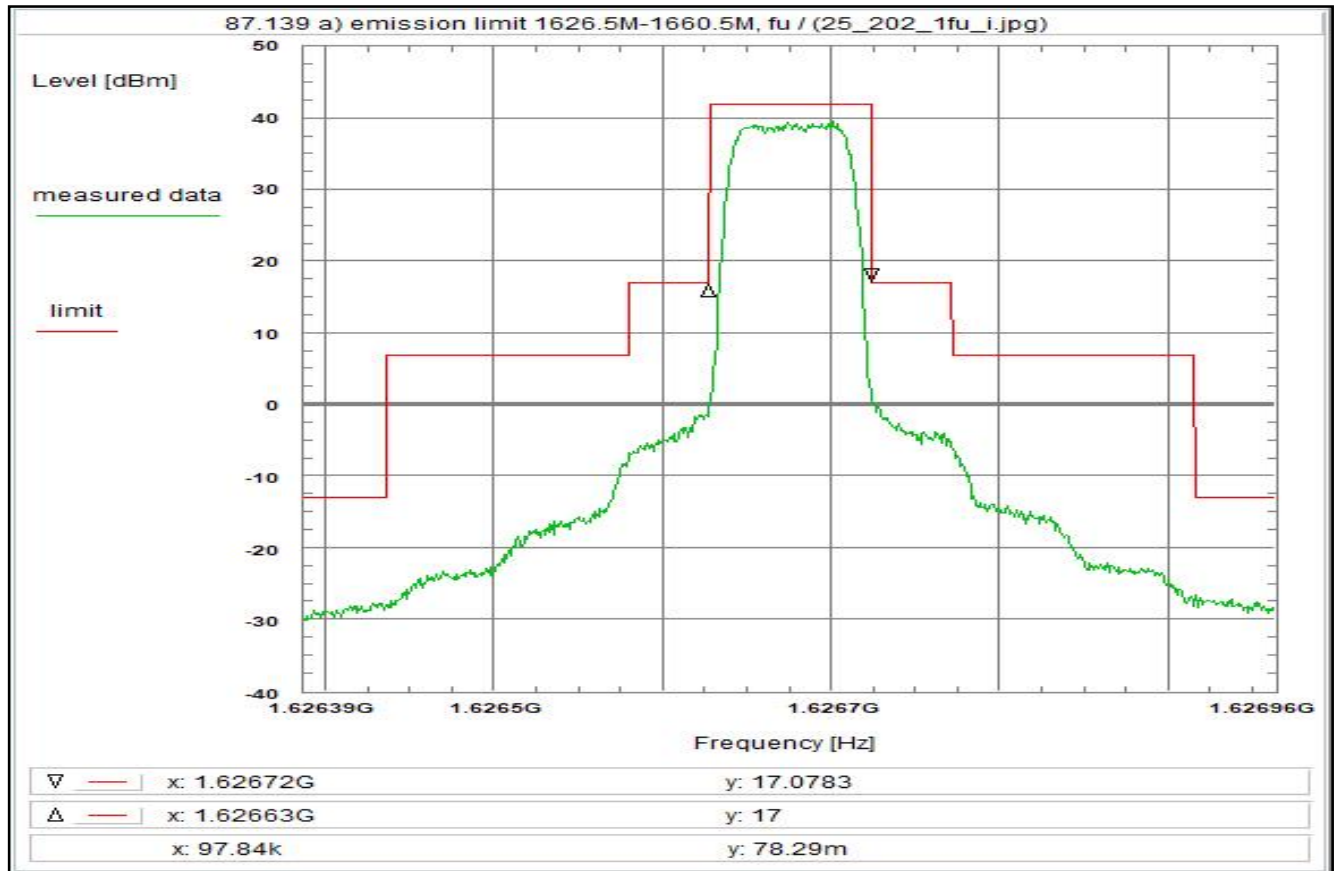
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 107



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:18:52

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626387 GHz

Stop frequency: 1.626963 GHz

Center frequency: 1.626675 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 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

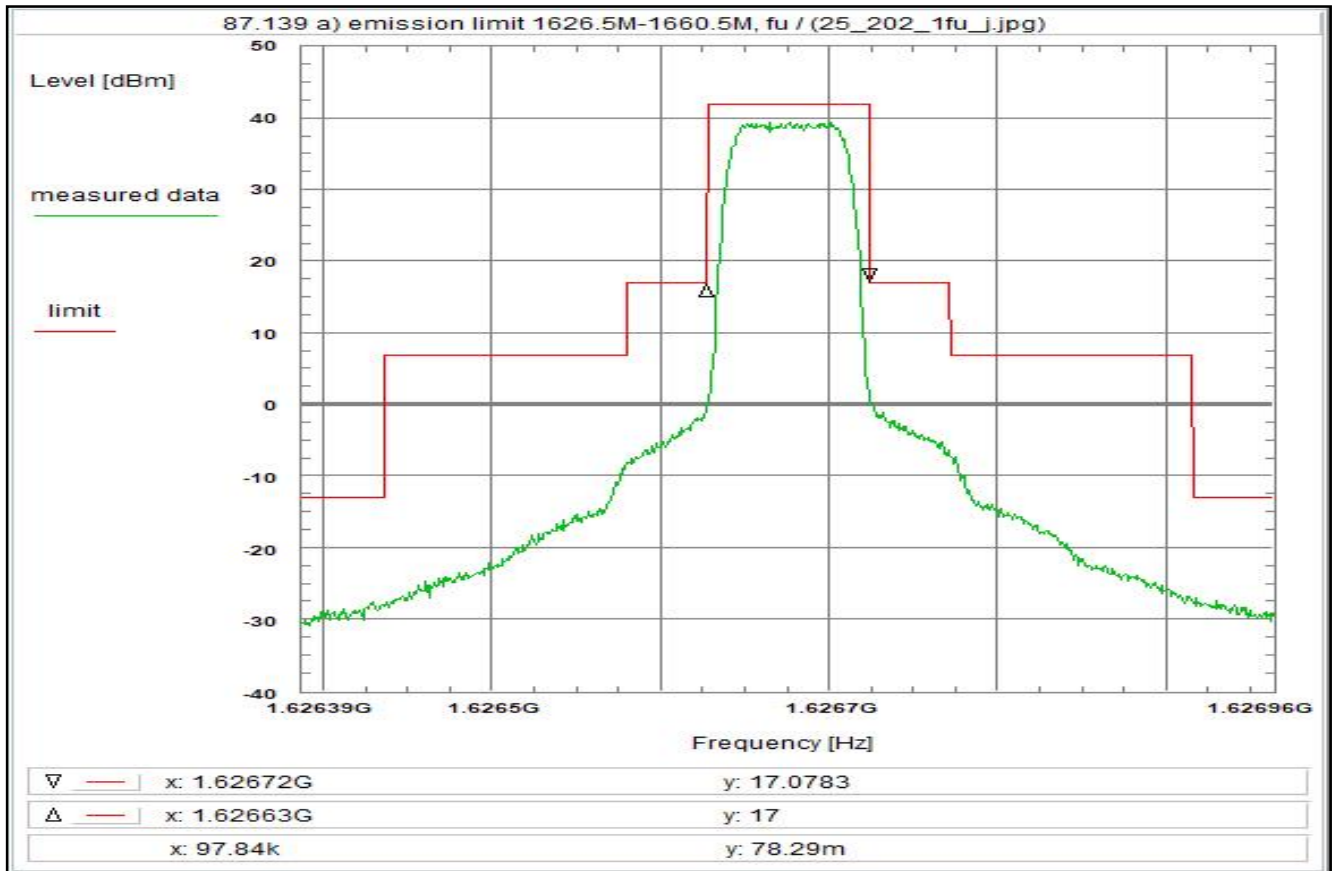
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 108



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4
 A700S Class 6 HDR PIESD, R520T2XD

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 12:20:00
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626387 GHz
 Stop frequency: 1.626963 GHz
 Center frequency: 1.626675 GHz
 Frequency span: 576 kHz
 Resolution-BW: 3 kHz
 Video-BW: 10 kHz
 Input attenuation: 30 dB
 Trace-Mode: Clear Write
 Detector-Mode: AVG

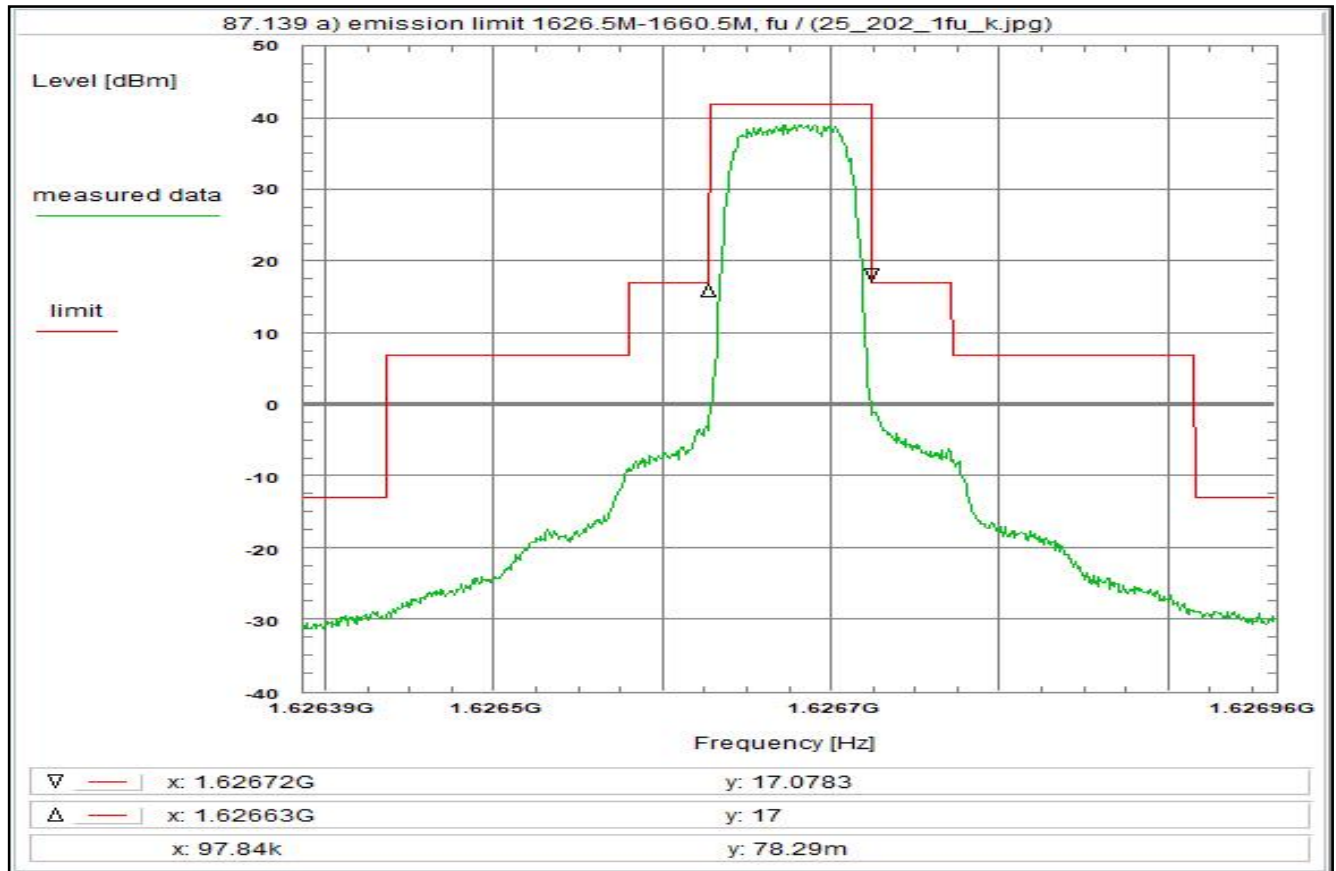
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 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 lower edge of the band (fu)
 Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 109



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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: Tue 30/Jun/2020 12:20:44
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626387 GHz
 Stop frequency: 1.626963 GHz
 Center frequency: 1.626675 GHz
 Frequency span: 576 kHz
 Resolution-BW: 3 kHz
 Video-BW: 10 kHz
 Input attenuation: 30 dB
 Trace-Mode: Clear Write
 Detector-Mode: AVG

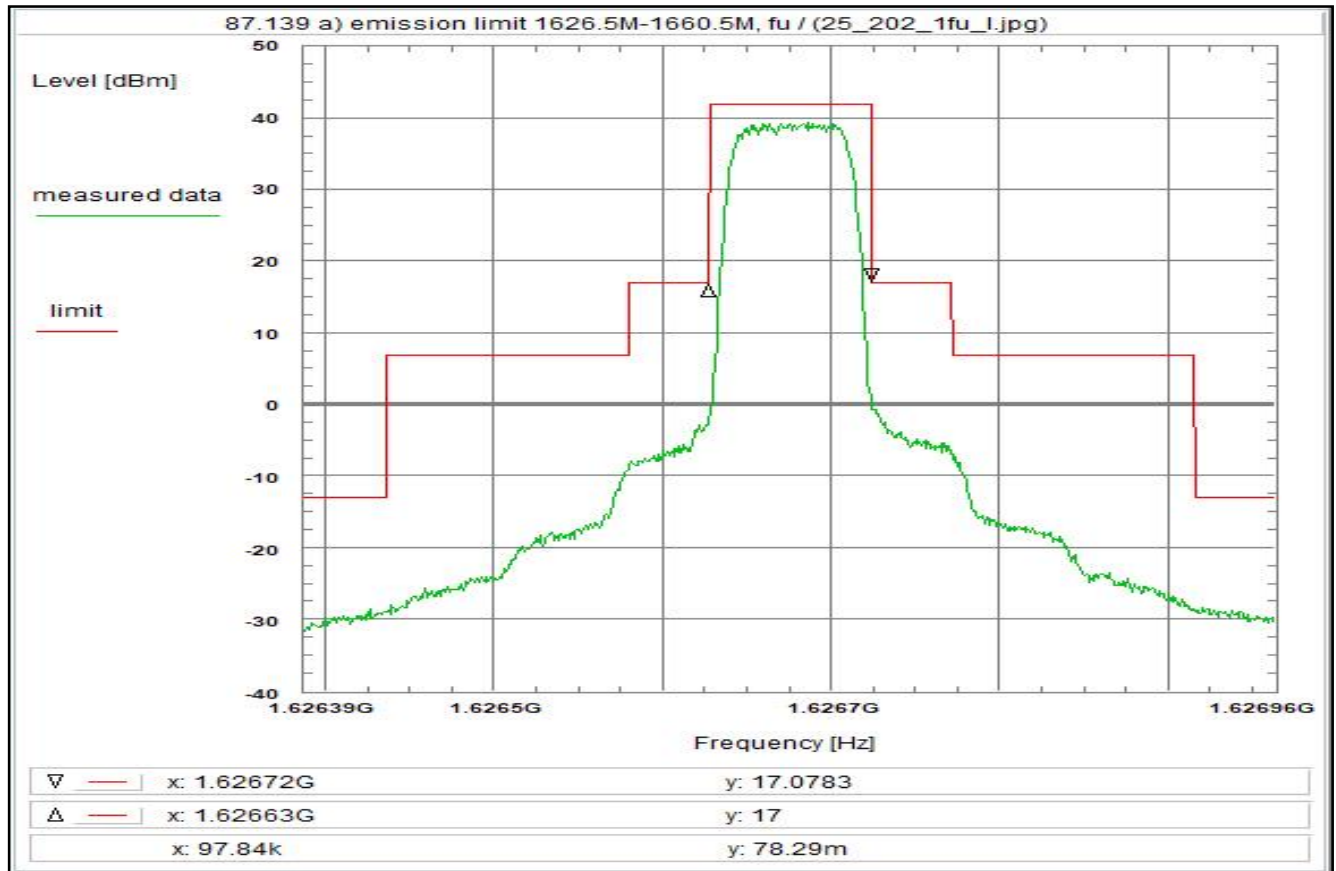
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 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 lower edge of the band (fu)
 Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 110



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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: Tue 30/Jun/2020 12:23:54
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626387 GHz
 Stop frequency: 1.626963 GHz
 Center frequency: 1.626675 GHz
 Frequency span: 576 kHz
 Resolution-BW: 3 kHz
 Video-BW: 10 kHz
 Input attenuation: 30 dB
 Trace-Mode: Clear Write
 Detector-Mode: AVG

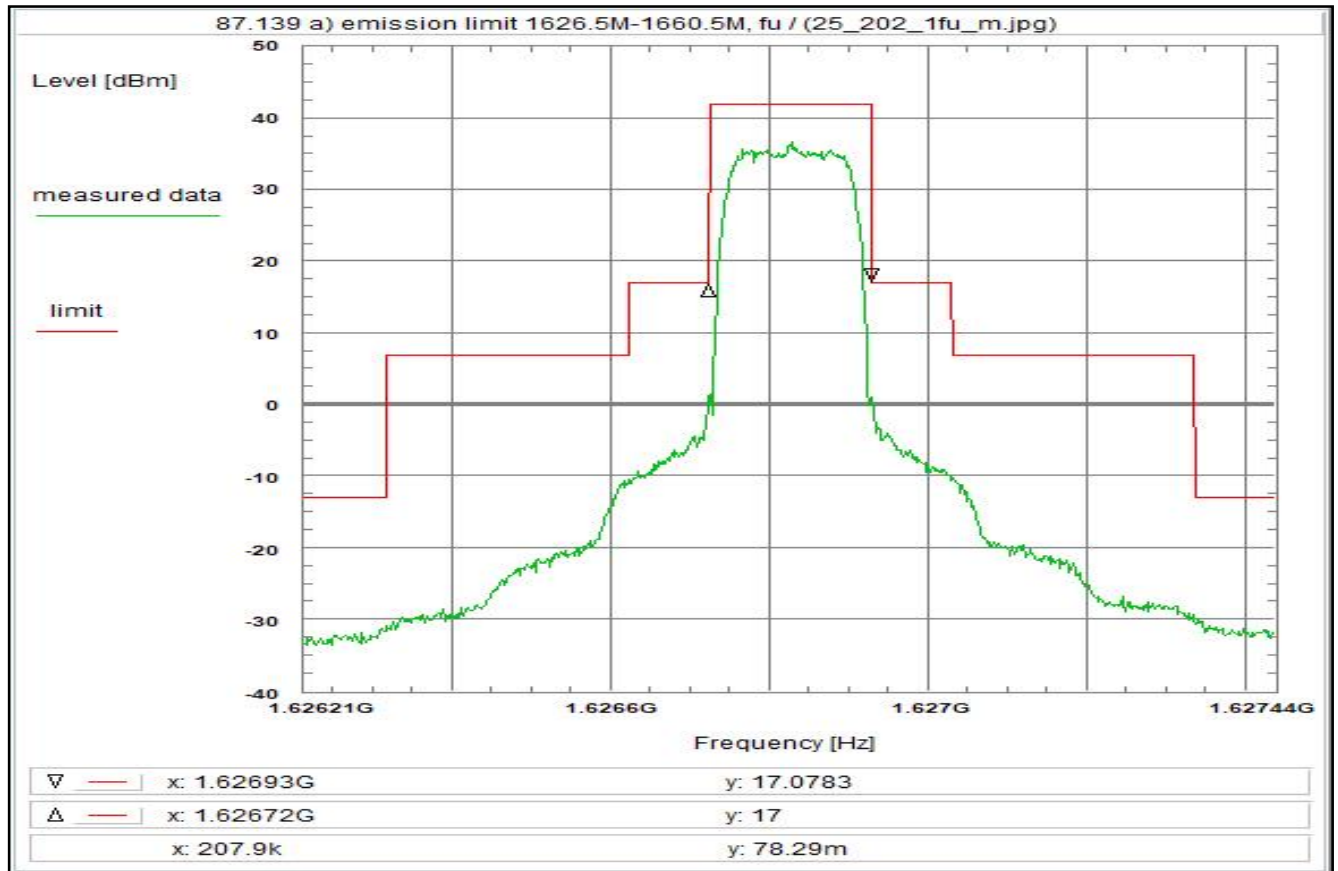
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 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 lower edge of the band (fu)
 Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 111



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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: Tue 30/Jun/2020 12:27:18
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626213 GHz
 Stop frequency: 1.627437 GHz
 Center frequency: 1.626825 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

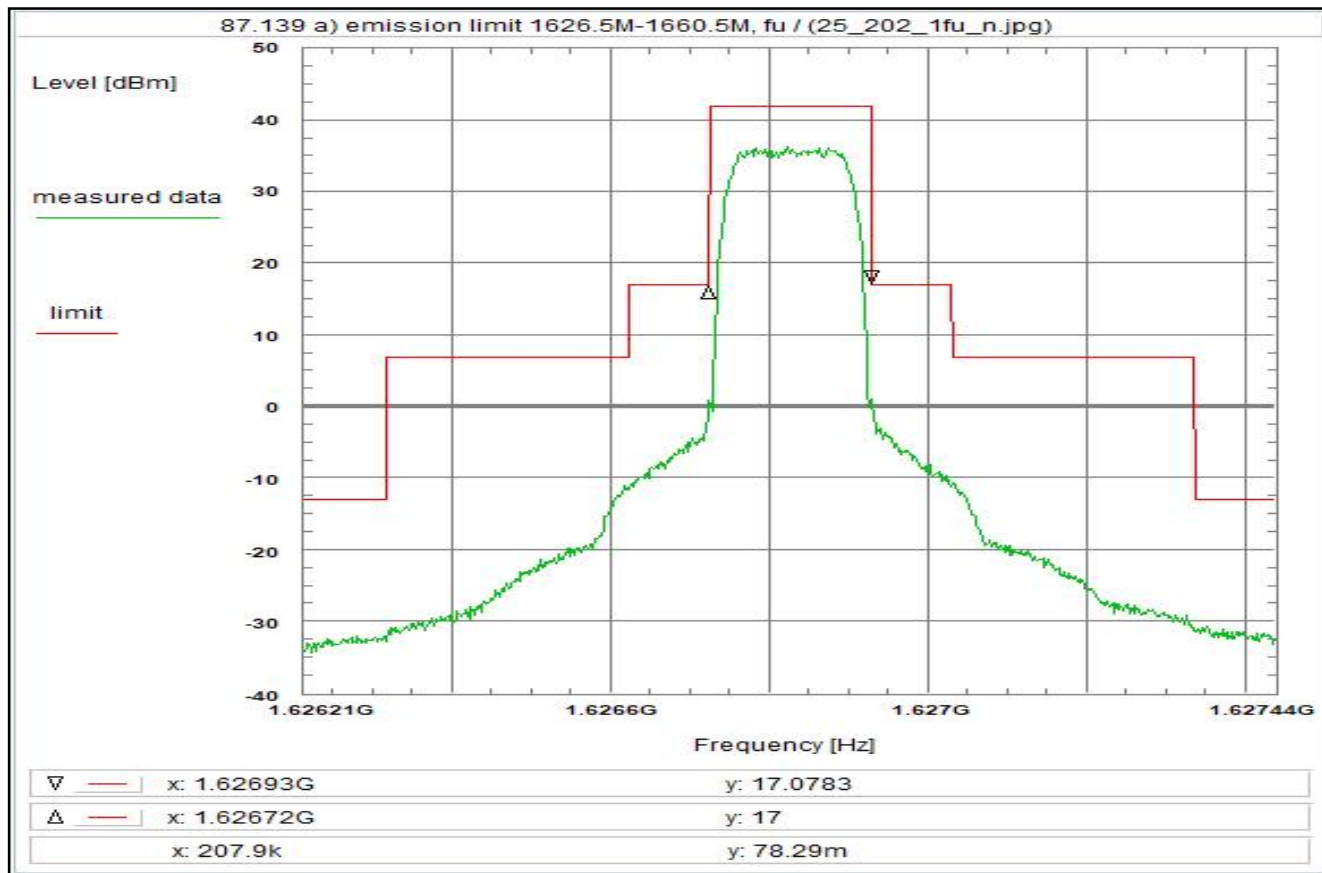
Correction:

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 lower edge of the band (fu)
 Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 112



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:28:20

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626213 GHz

Stop frequency: 1.627437 GHz

Center frequency: 1.626825 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

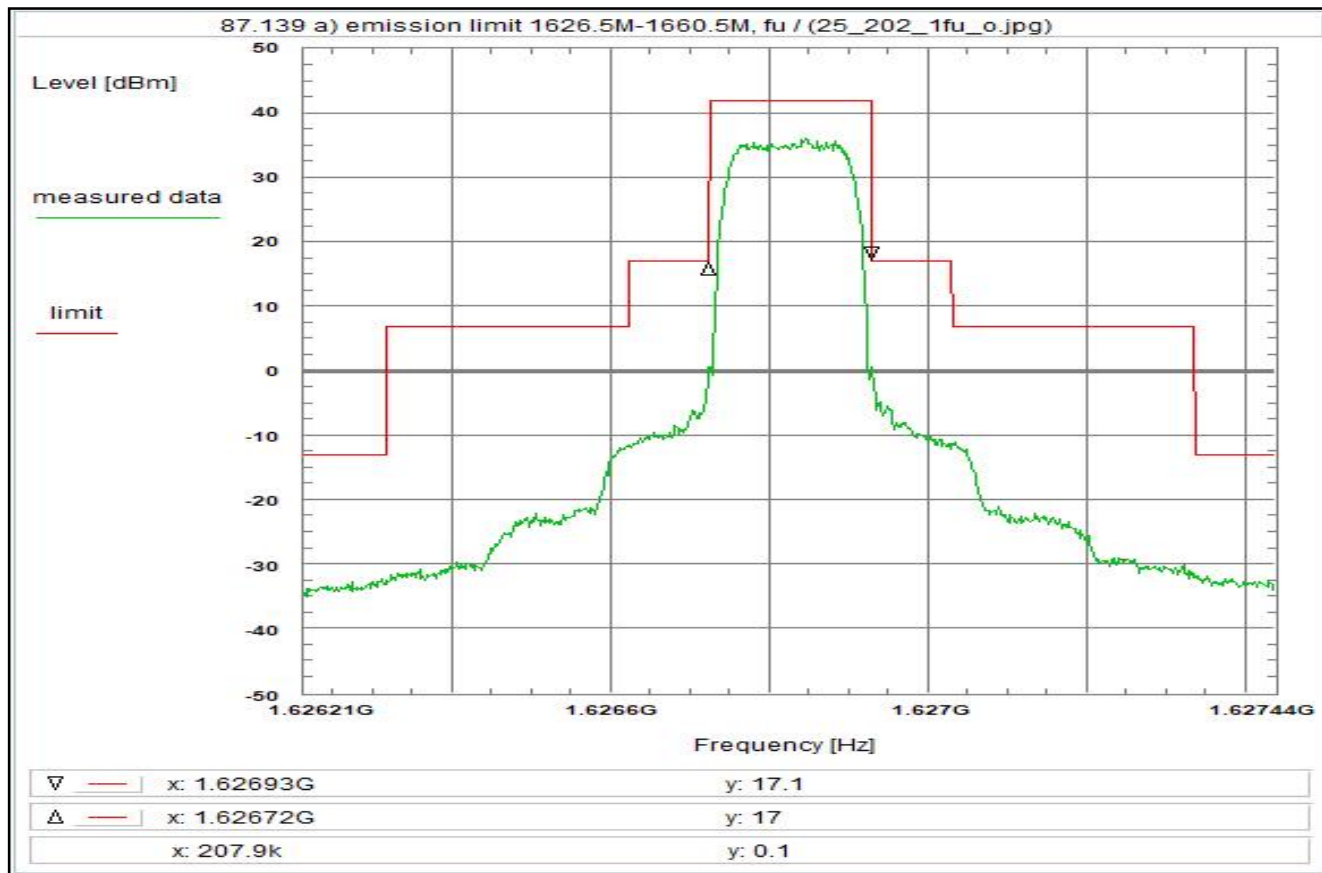
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 113



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 HDR PIESD, R5T4.5QD

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 12:29:12

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626213 GHz

Stop frequency: 1.627437 GHz

Center frequency: 1.626825 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

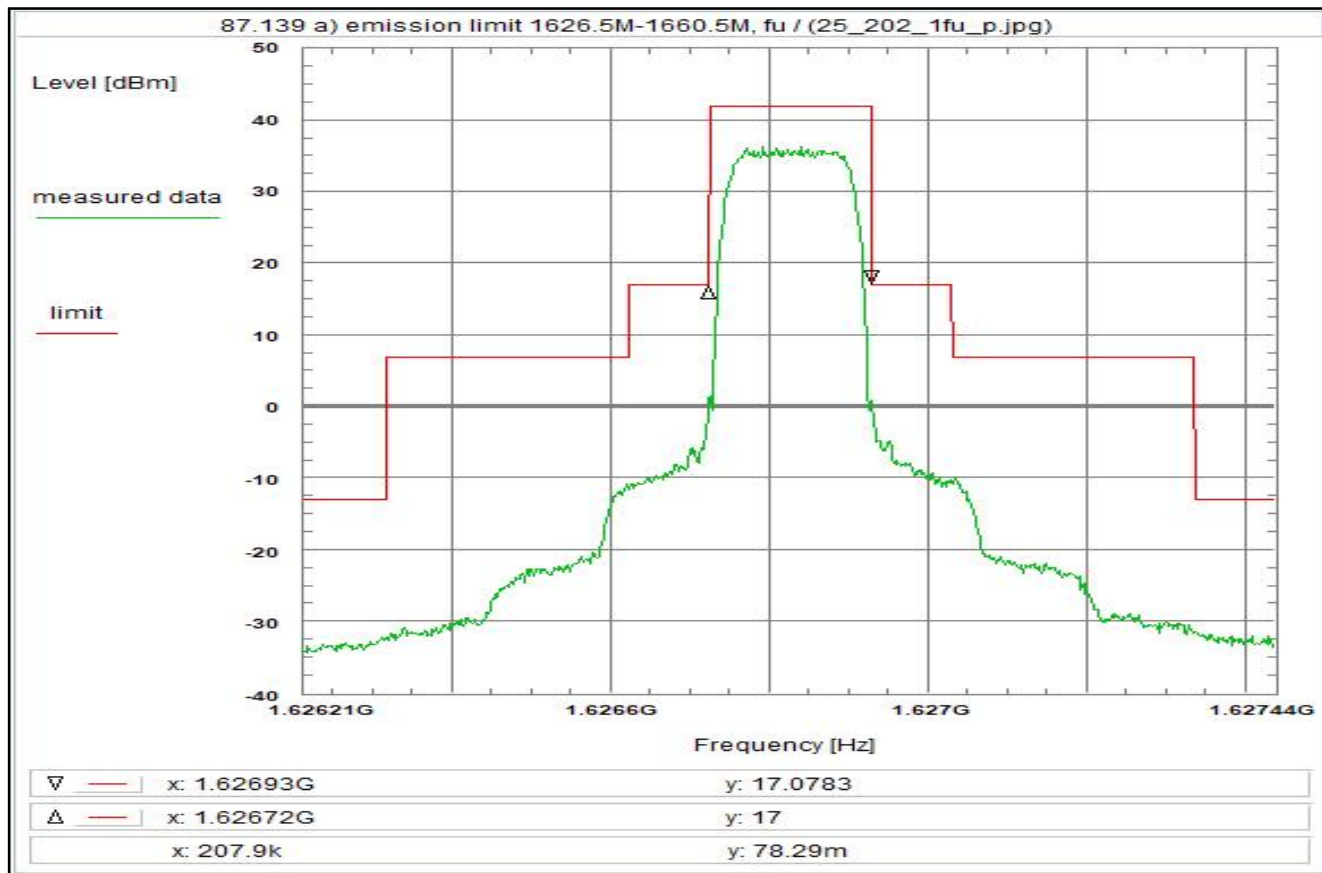
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 114



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 HDR PIESD, 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 12:32:17

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626213 GHz

Stop frequency: 1.627437 GHz

Center frequency: 1.626825 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

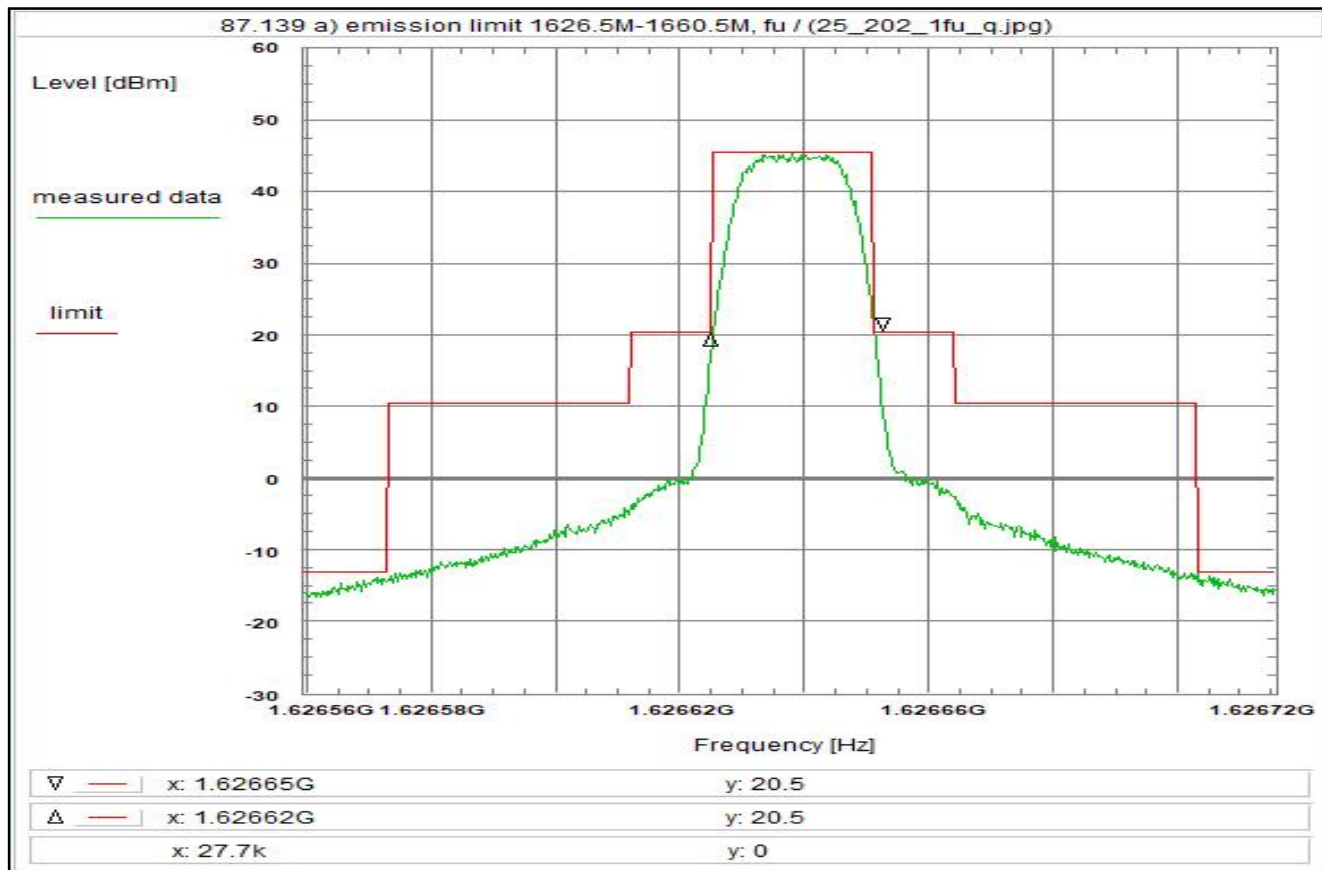
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 115



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:37:39

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6265595 GHz

Stop frequency: 1.6267155 GHz

Center frequency: 1.6266375 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

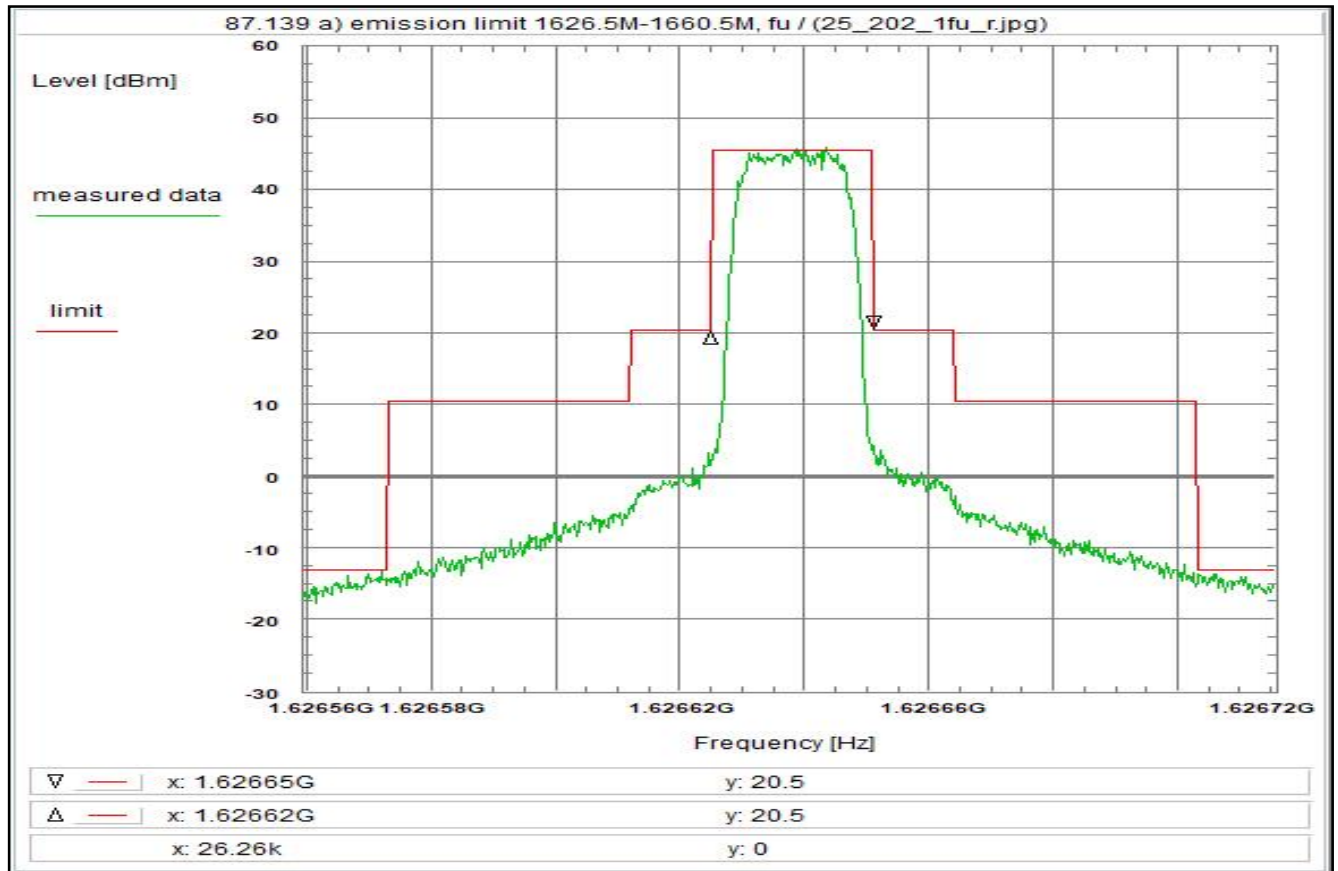
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 116



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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, Power Splitter, R001, U311, U312

Remark:

Test result: Test passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:38:40

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6265595 GHz

Stop frequency: 1.6267155 GHz

Center frequency: 1.6266375 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 dBi

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

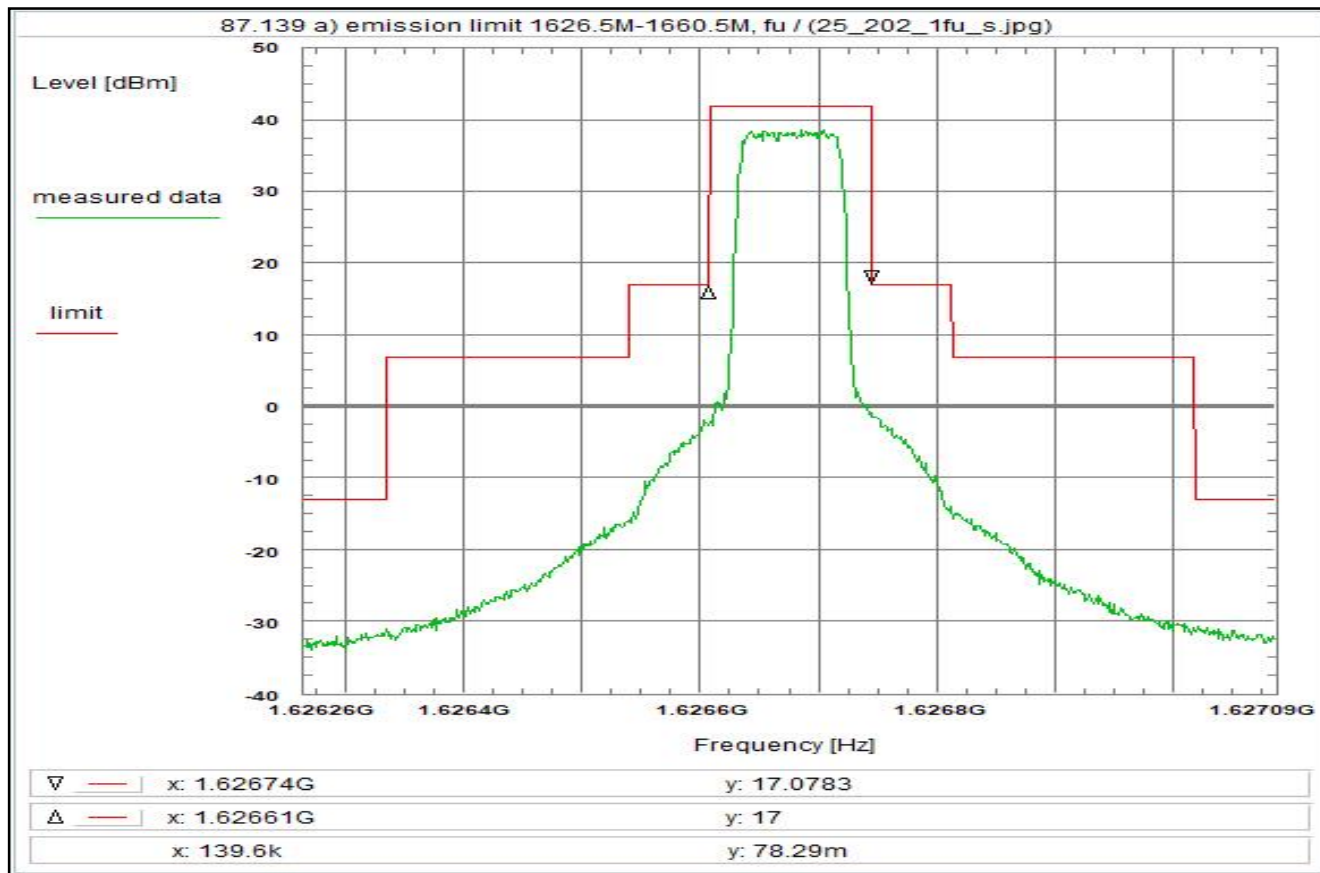
TOTAL CORRECTION: + 54.8 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 117



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:40:27

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626264 GHz

Stop frequency: 1.627086 GHz

Center frequency: 1.626675 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

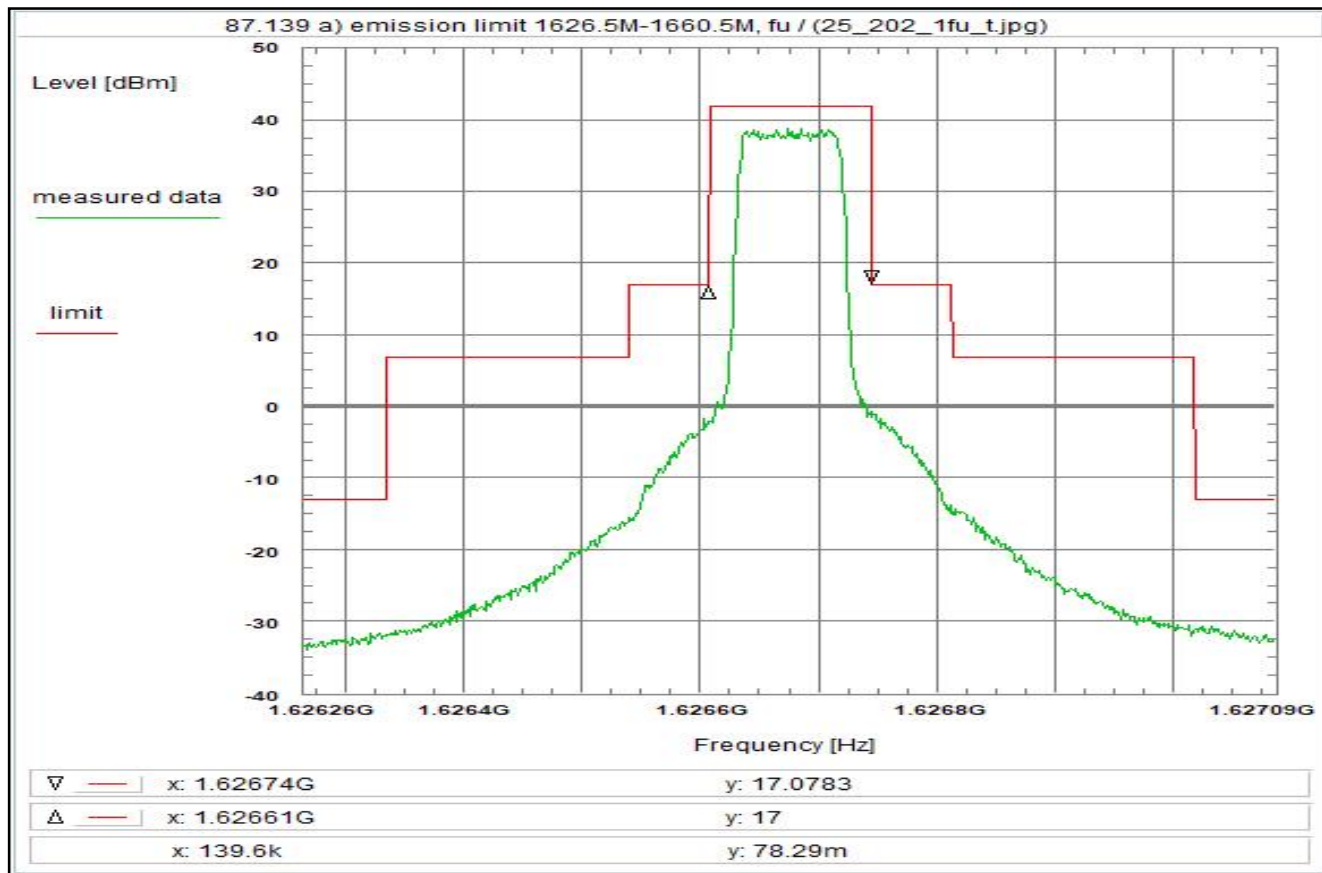
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 118



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:43:14

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626264 GHz

Stop frequency: 1.627086 GHz

Center frequency: 1.626675 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

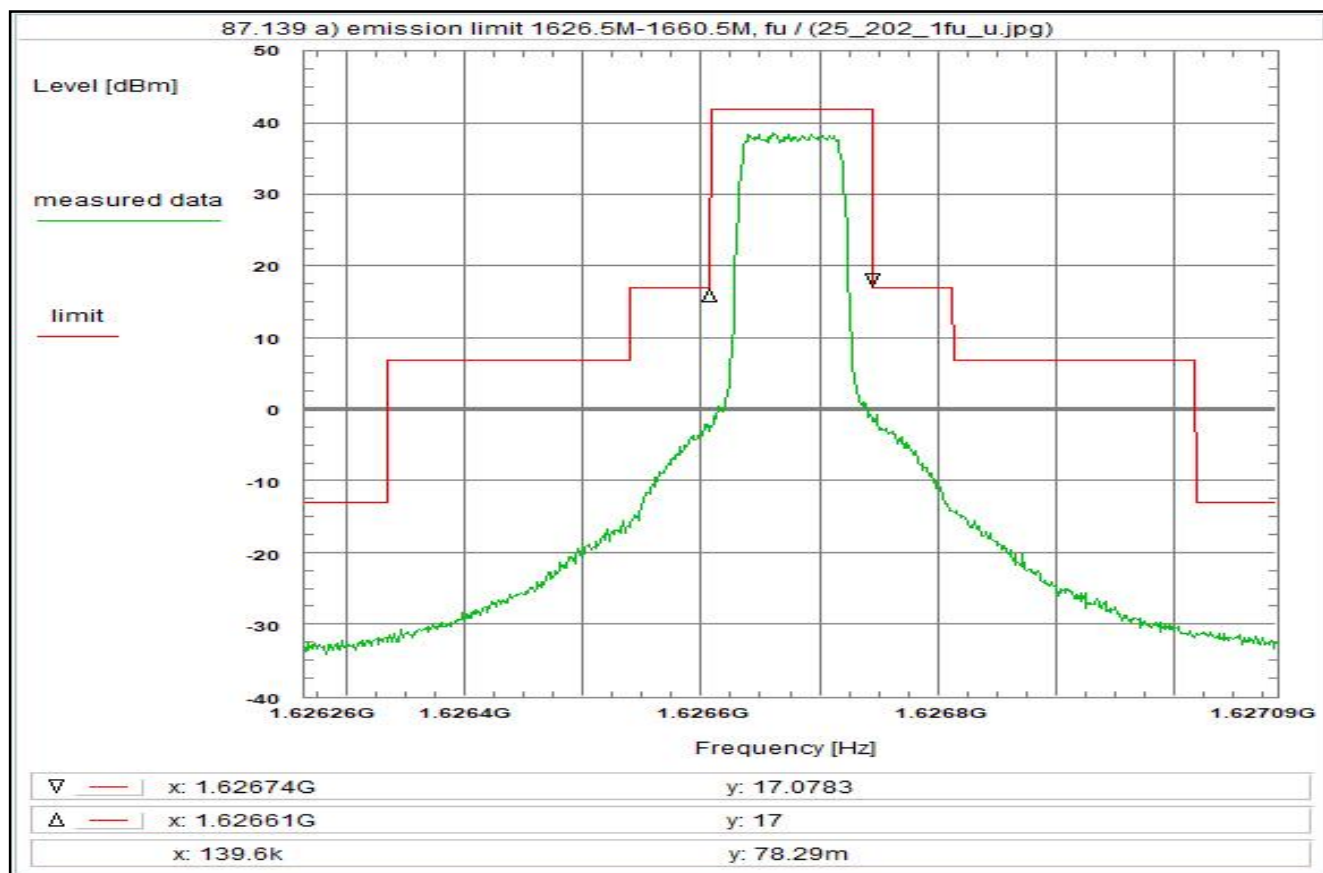
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 119



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4
 A700S Class 6 HDR PIEDS, 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 12:44:33
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626264 GHz
 Stop frequency: 1.627086 GHz
 Center frequency: 1.626675 GHz
 Frequency span: 822 kHz
 Resolution-BW: 3 kHz
 Video-BW: 10 kHz
 Input attenuation: 30 dB
 Trace-Mode: Clear Write
 Detector-Mode: AVG

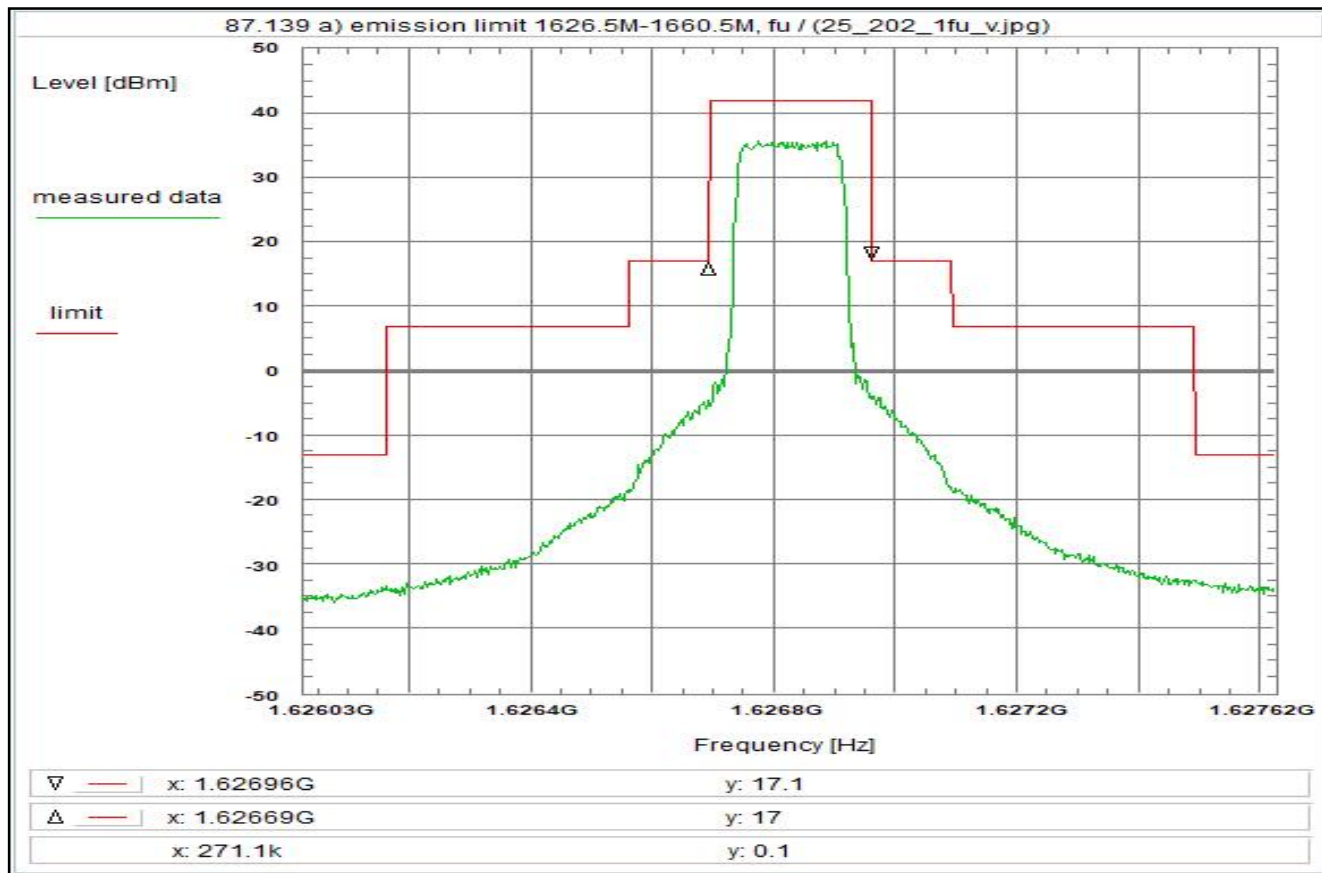
Correction:

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 lower edge of the band (fu)
 Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 120



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:49:06

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626027 GHz

Stop frequency: 1.627623 GHz

Center frequency: 1.626825 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

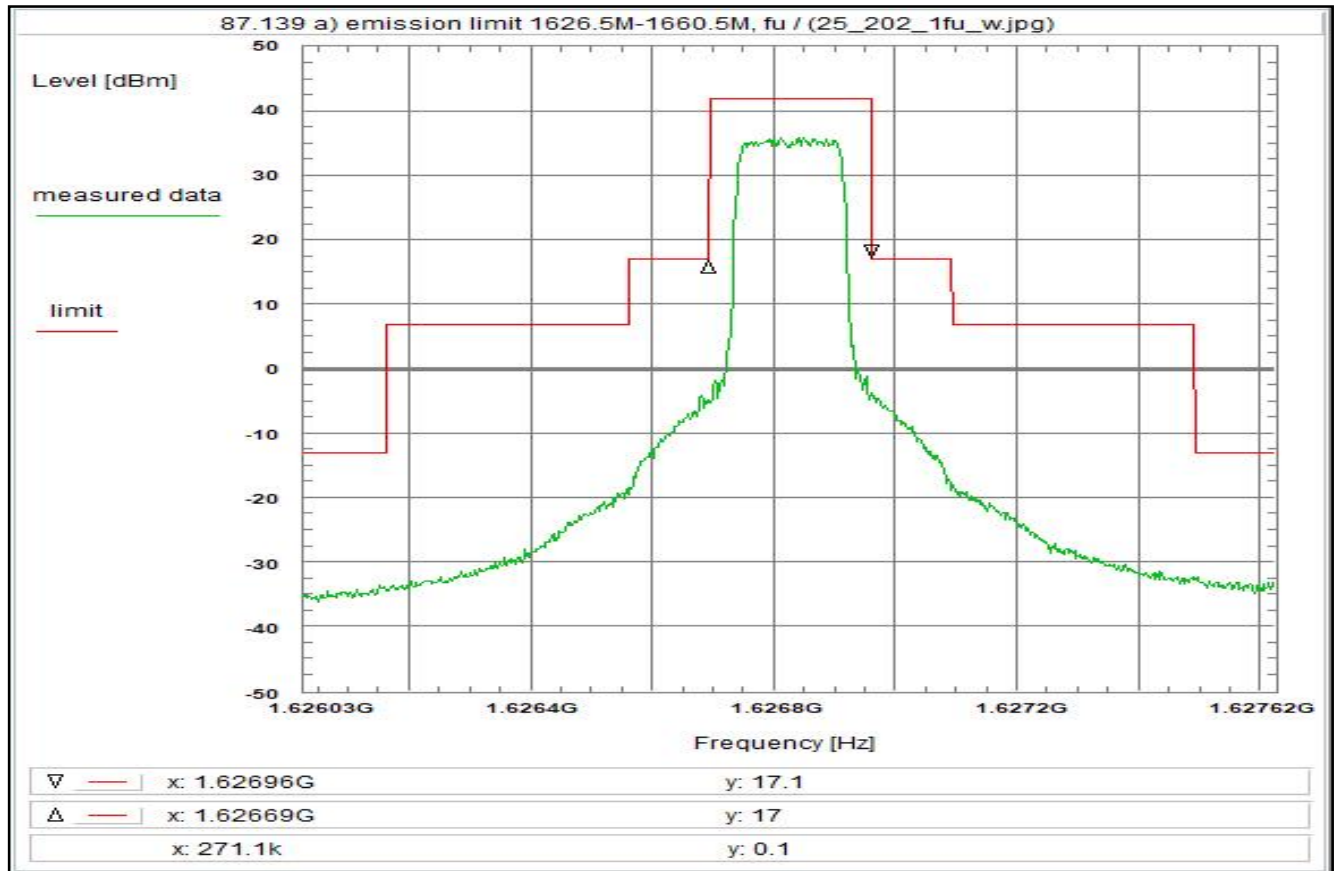
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 121



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 12:50:33

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626027 GHz

Stop frequency: 1.627623 GHz

Center frequency: 1.626825 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

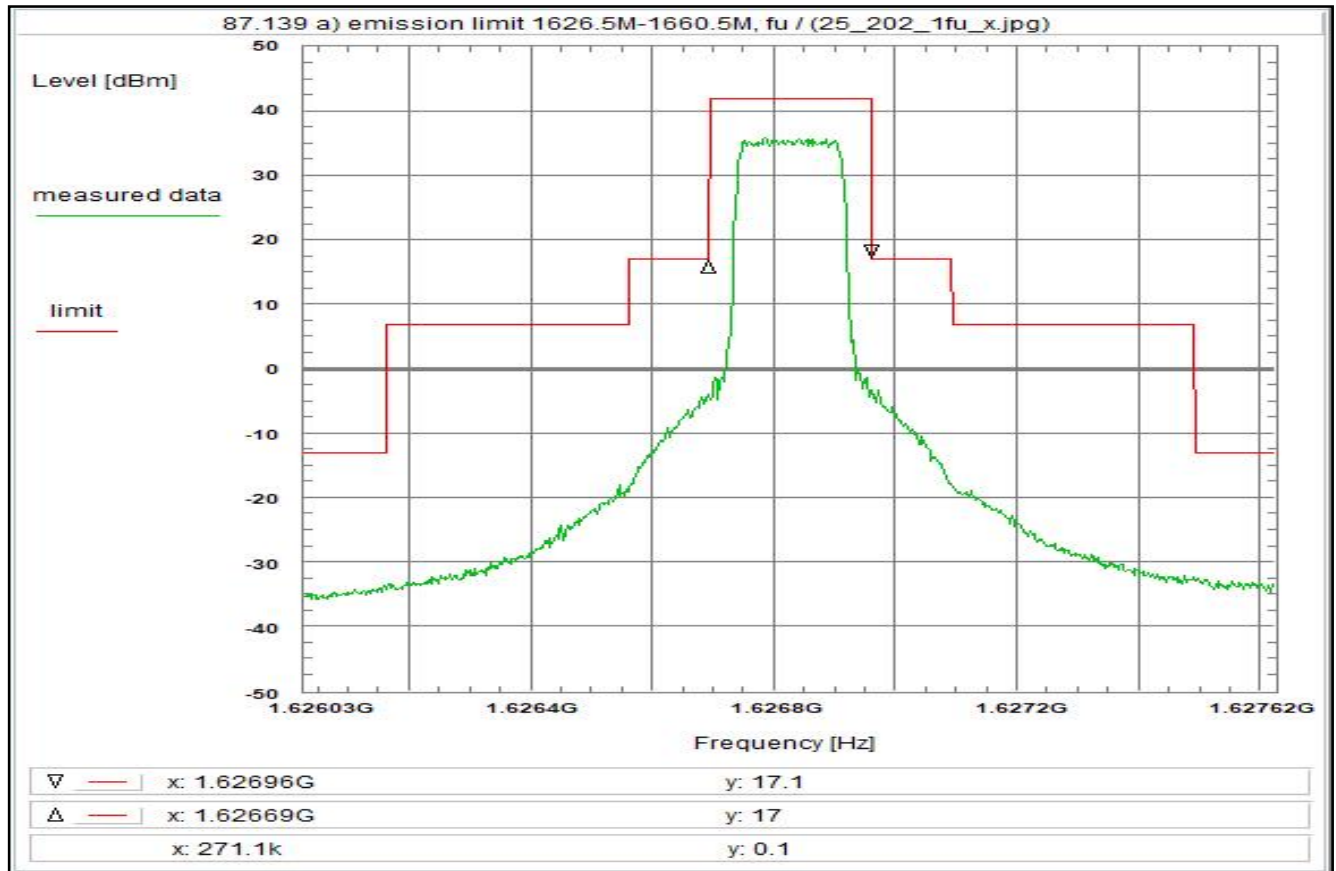
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 122



Subclause: 87.139 a) Frequencies, frequency tolerance and emission limitations
 Emission limitations
 Modulated rf-carrier at the lower edge of the band (fu)

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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 30/Jun/2020 12:52:10

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626027 GHz

Stop frequency: 1.627623 GHz

Center frequency: 1.626825 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

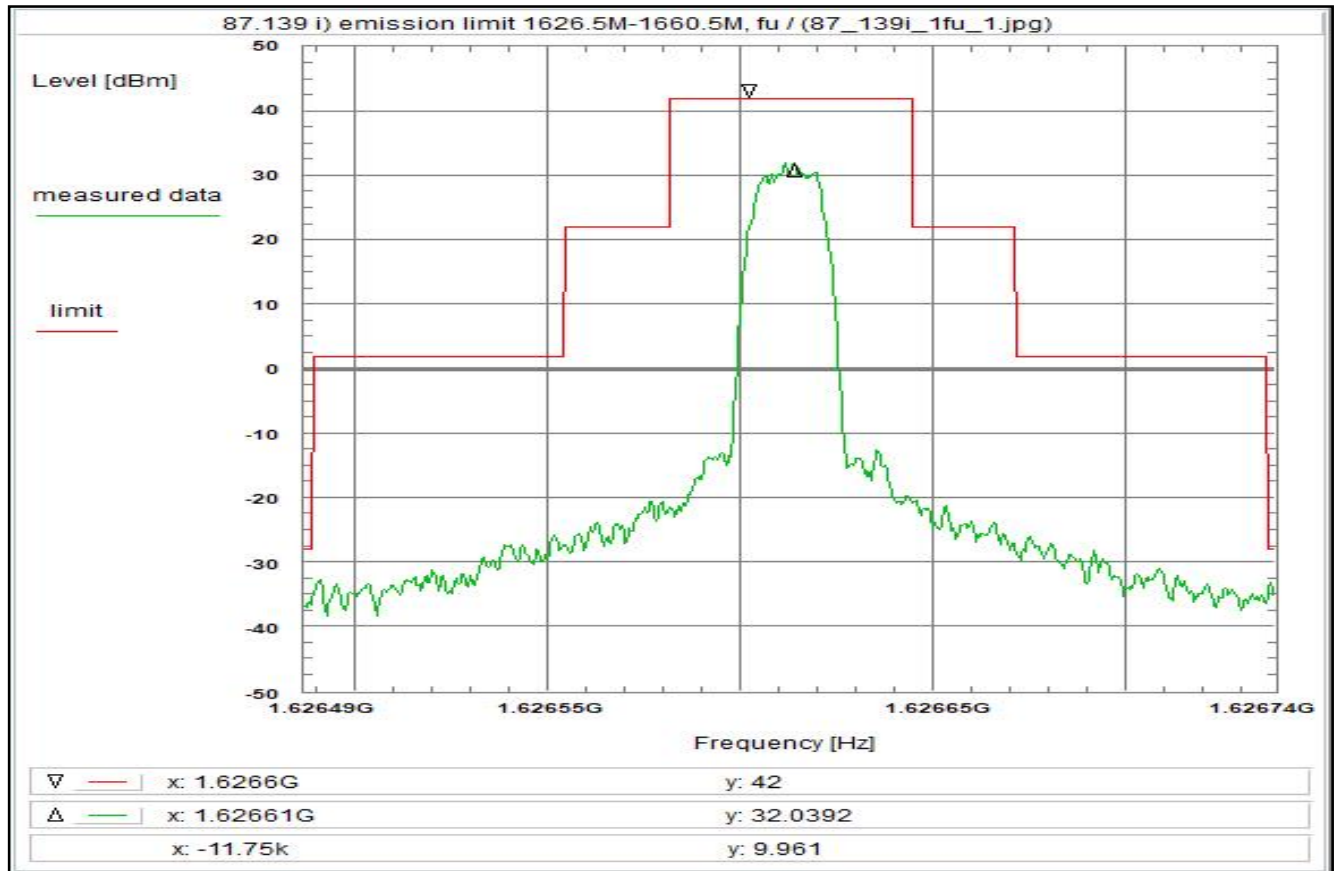
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 123



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

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 ksym/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 15:12:38
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6264865 GHz
 Stop frequency: 1.6267385 GHz
 Center frequency: 1.6266125 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

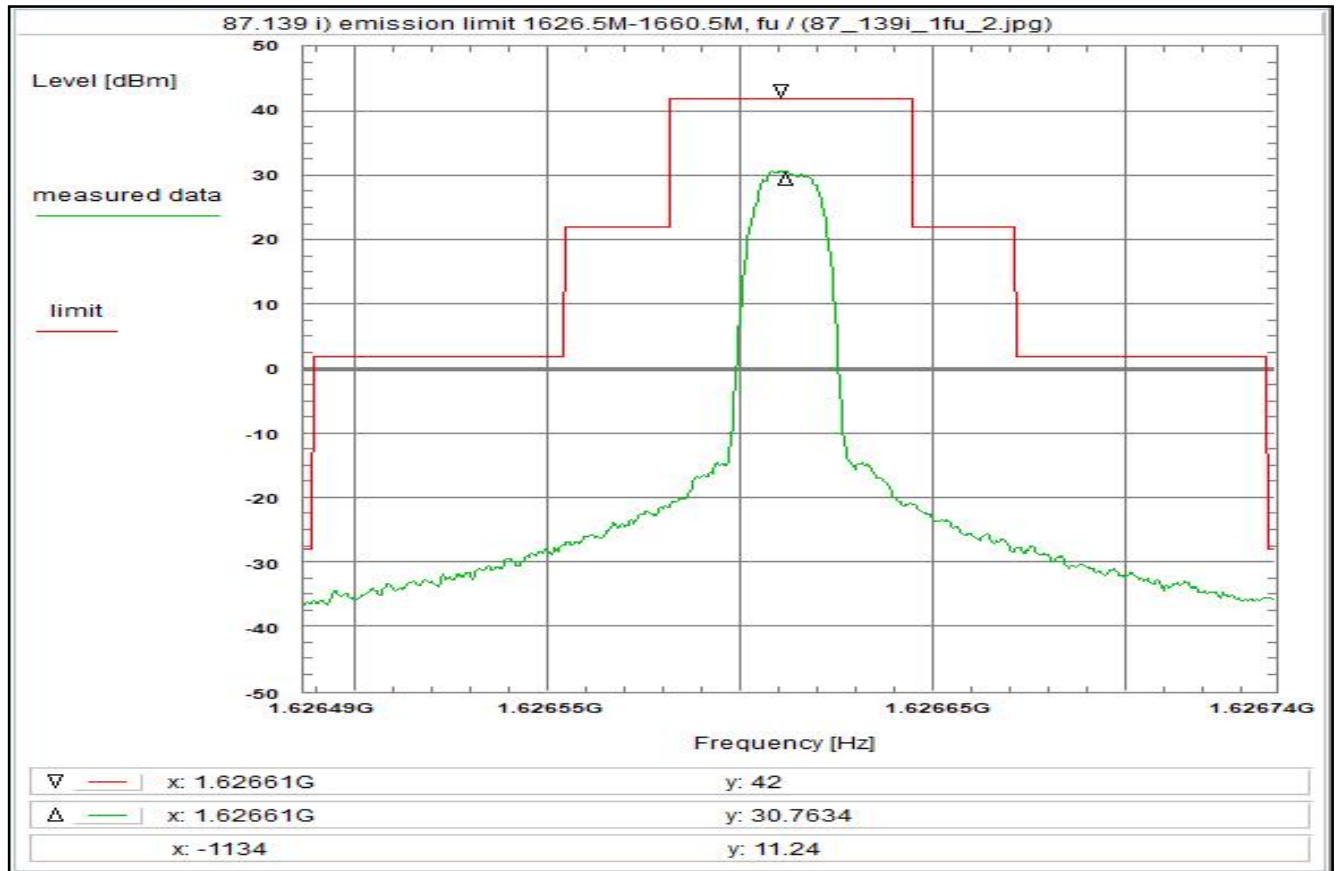
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 124



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

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 15:16:24
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6264865 GHz
 Stop frequency: 1.6267385 GHz
 Center frequency: 1.6266125 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

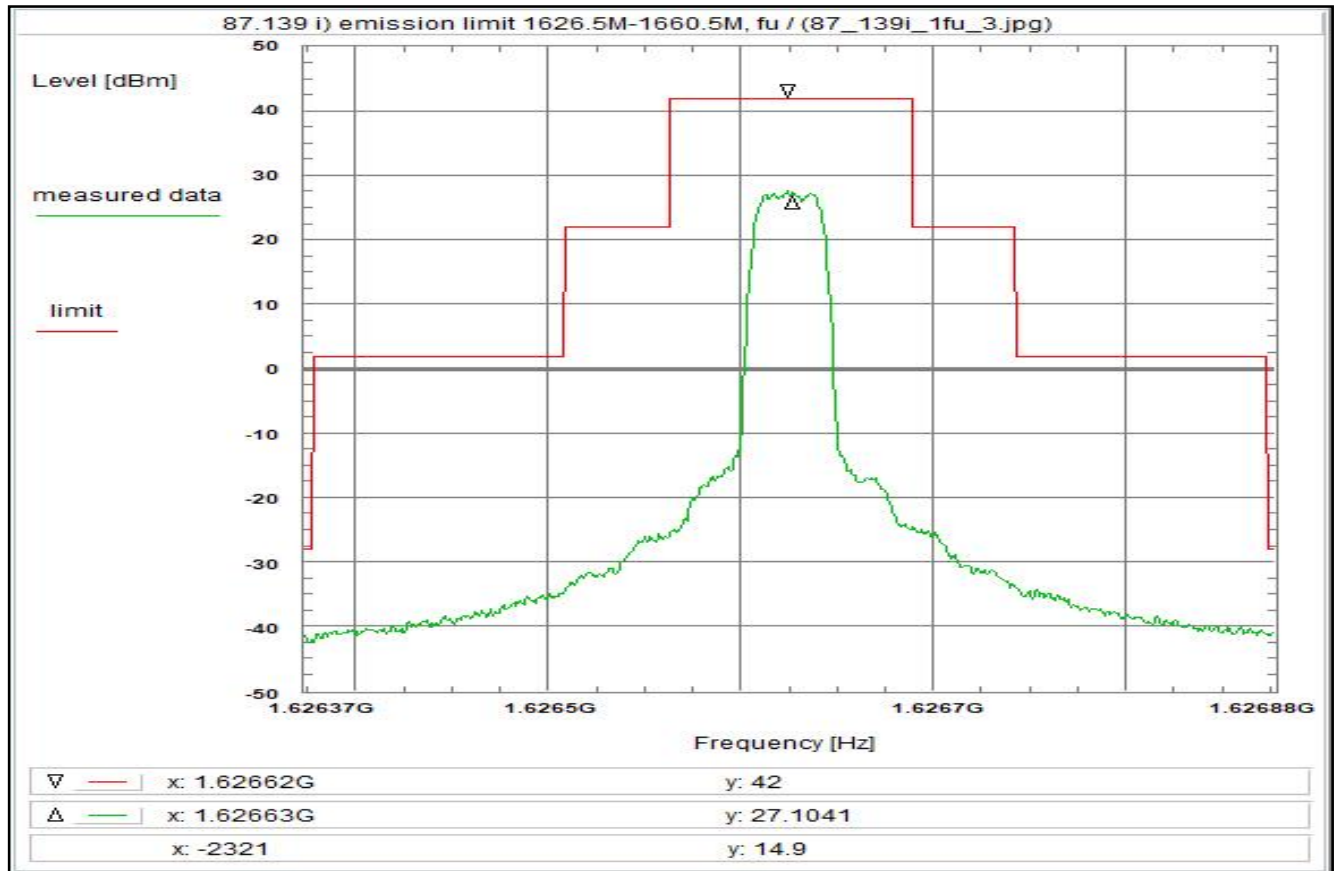
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 125



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

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 15:18:38
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626373 GHz
 Stop frequency: 1.626877 GHz
 Center frequency: 1.626625 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

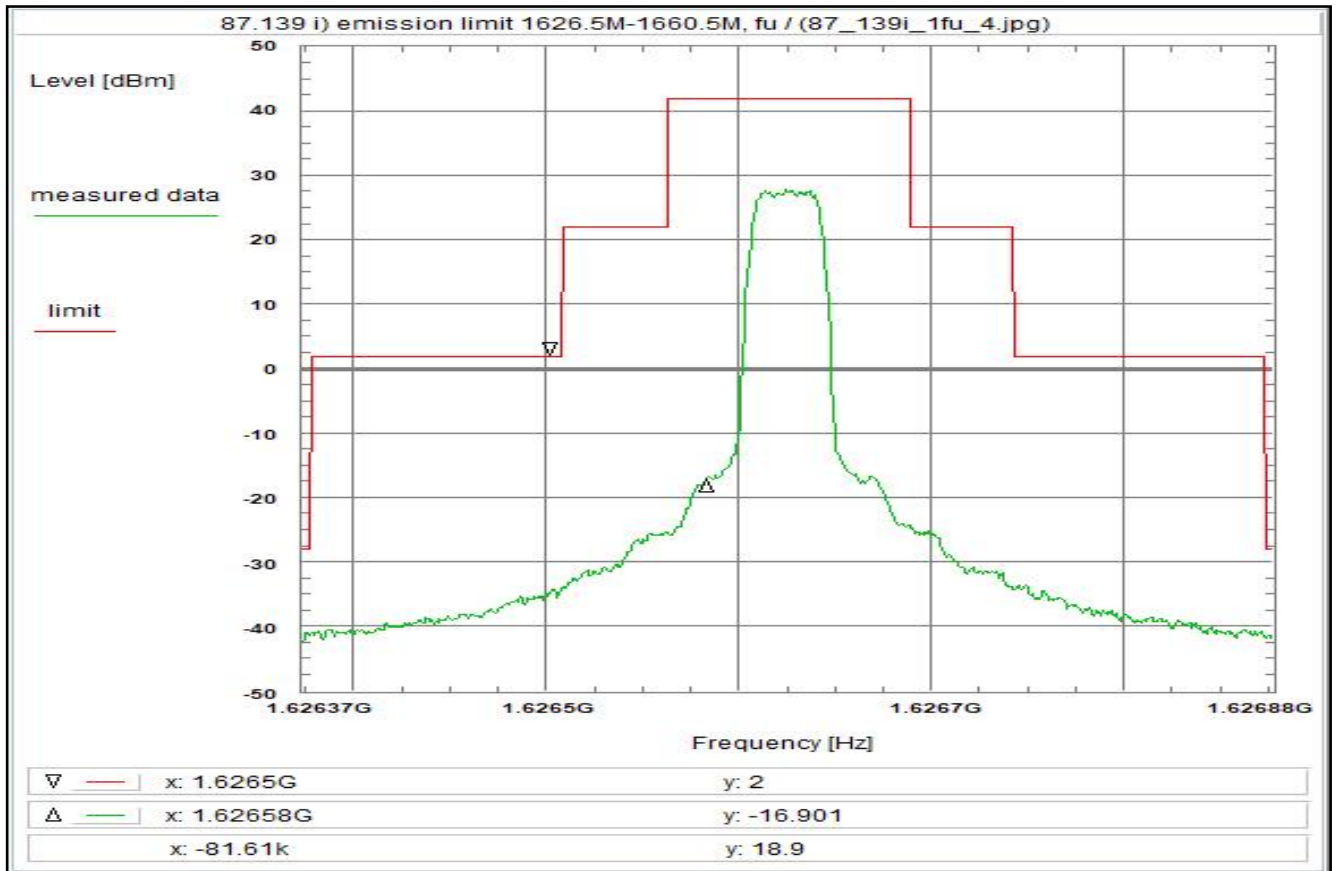
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 126



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

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 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 15:25:56
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626373 GHz
 Stop frequency: 1.626877 GHz
 Center frequency: 1.626625 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

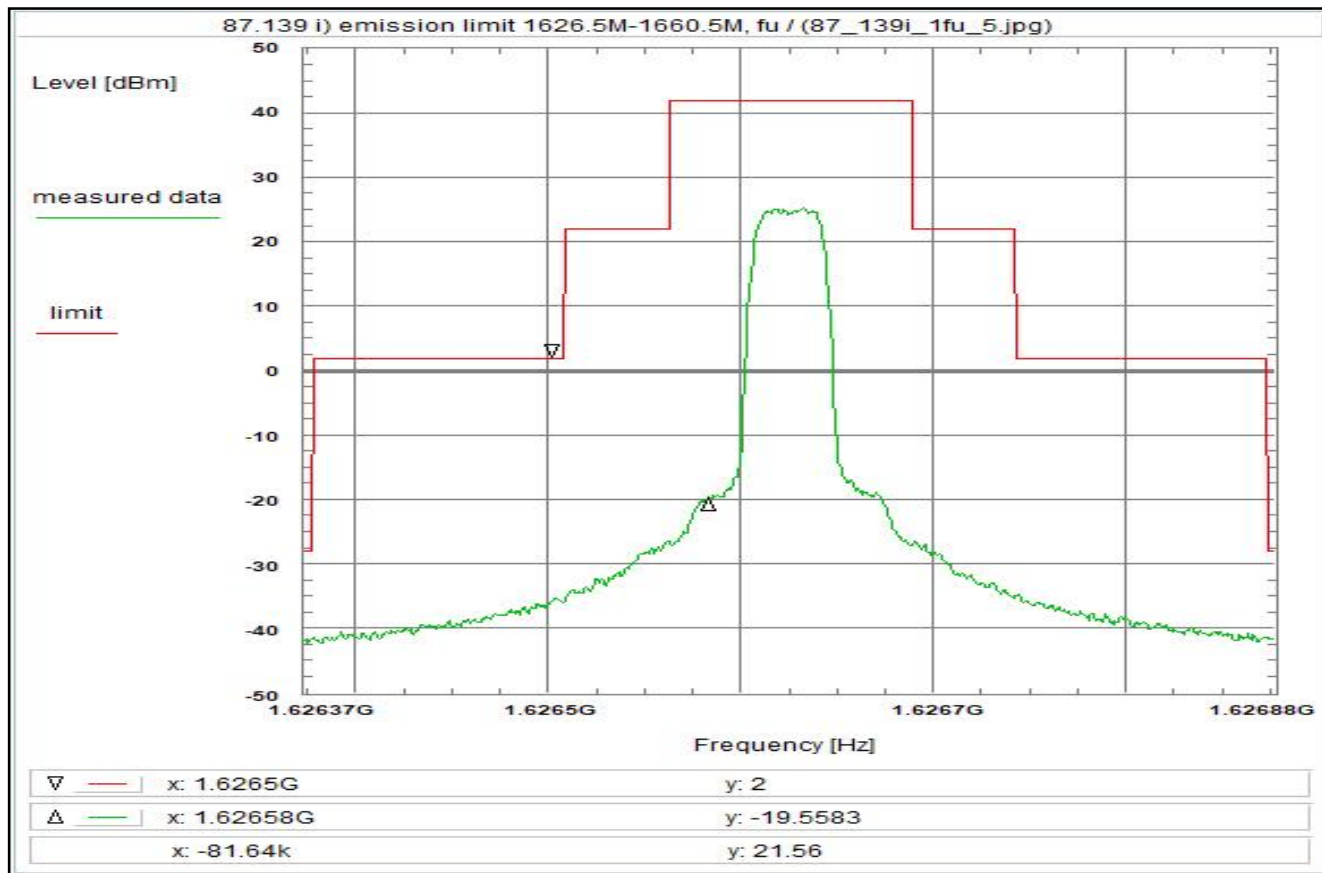
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 127



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

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 15:27:28
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626373 GHz
 Stop frequency: 1.626877 GHz
 Center frequency: 1.626625 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

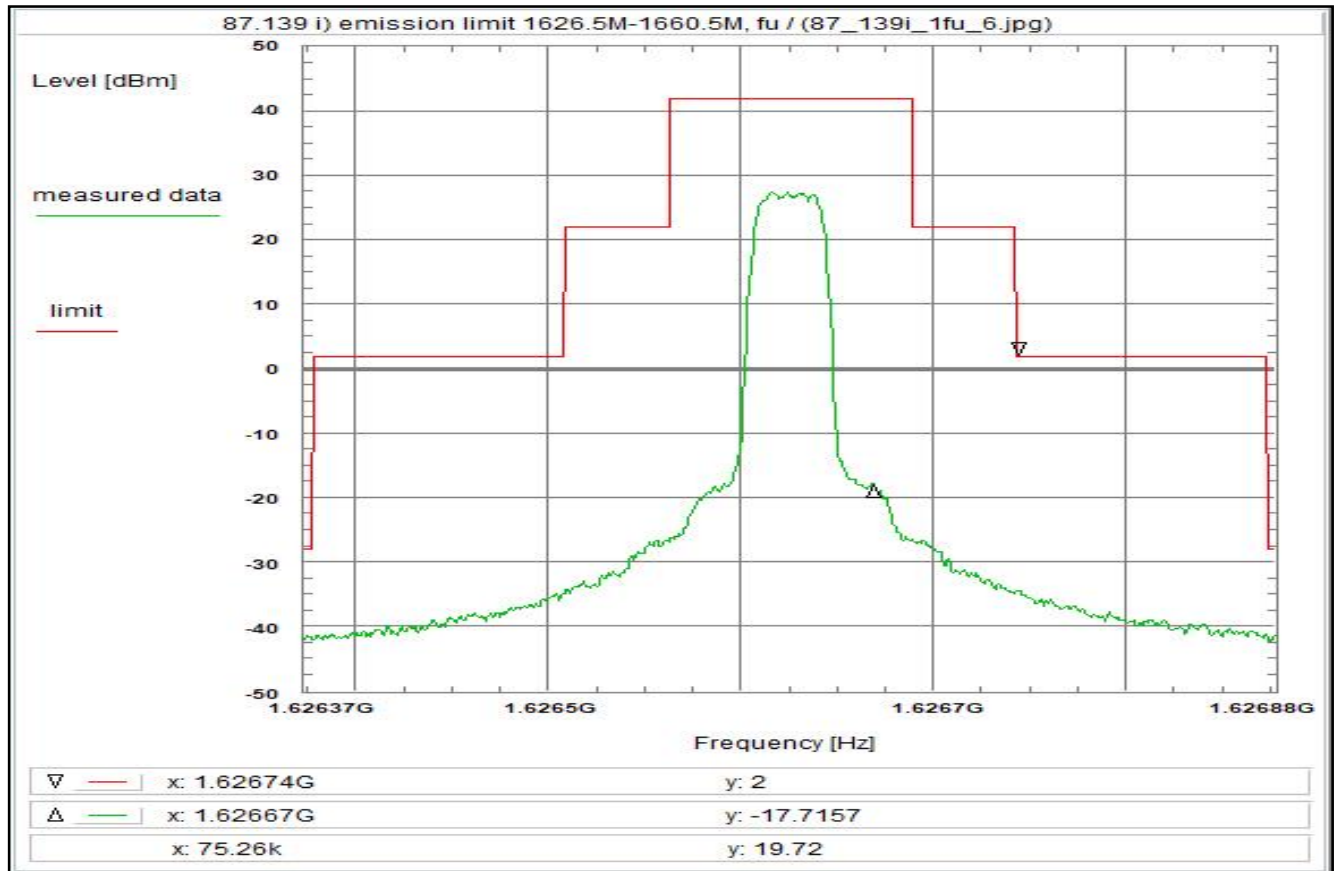
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 128



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

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, 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 15:32:21
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626373 GHz
 Stop frequency: 1.626877 GHz
 Center frequency: 1.626625 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

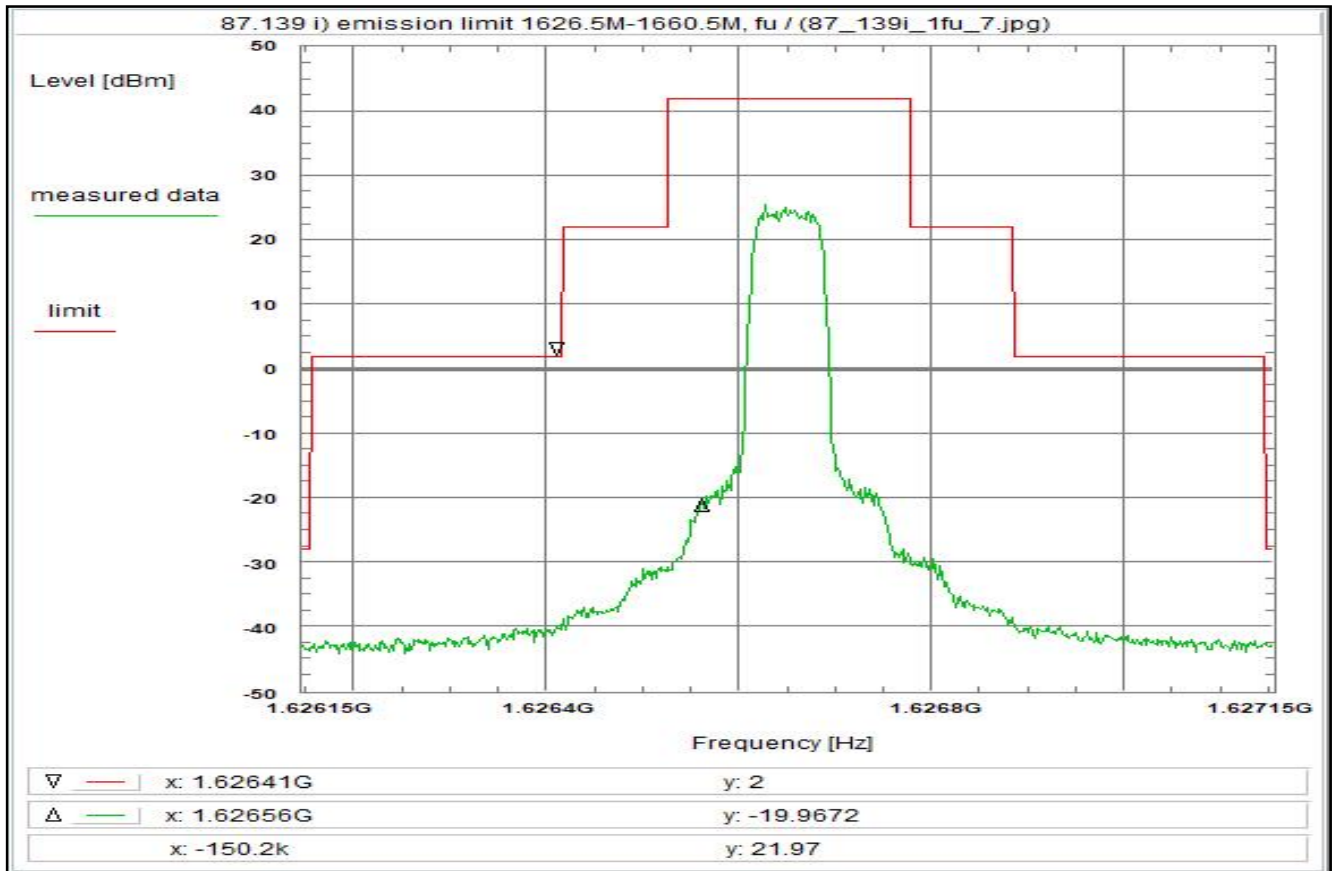
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 129



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

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 15:34:56
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626146 GHz
 Stop frequency: 1.627154 GHz
 Center frequency: 1.62665 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

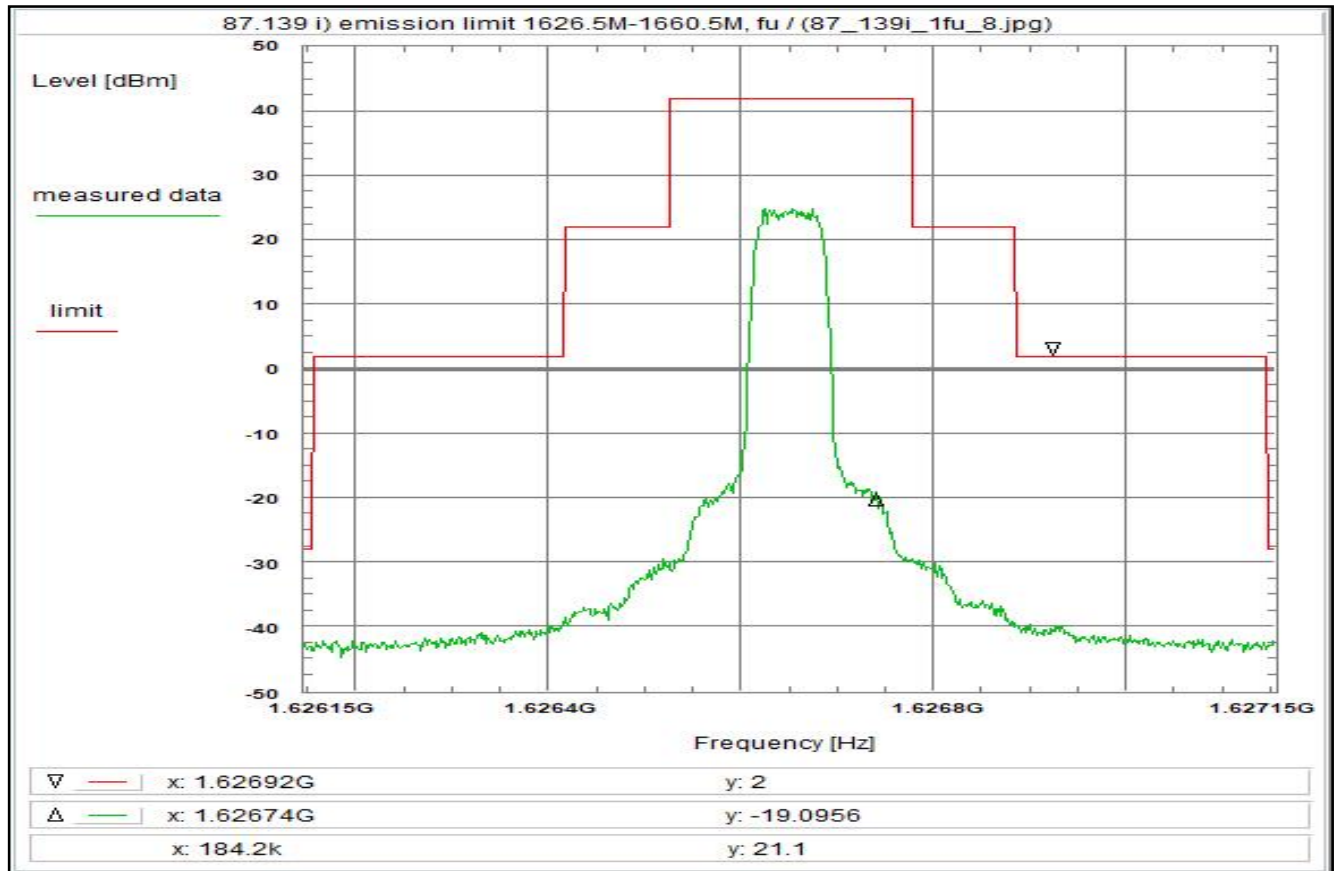
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 130



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

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 15:41:39
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626146 GHz
 Stop frequency: 1.627154 GHz
 Center frequency: 1.62665 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

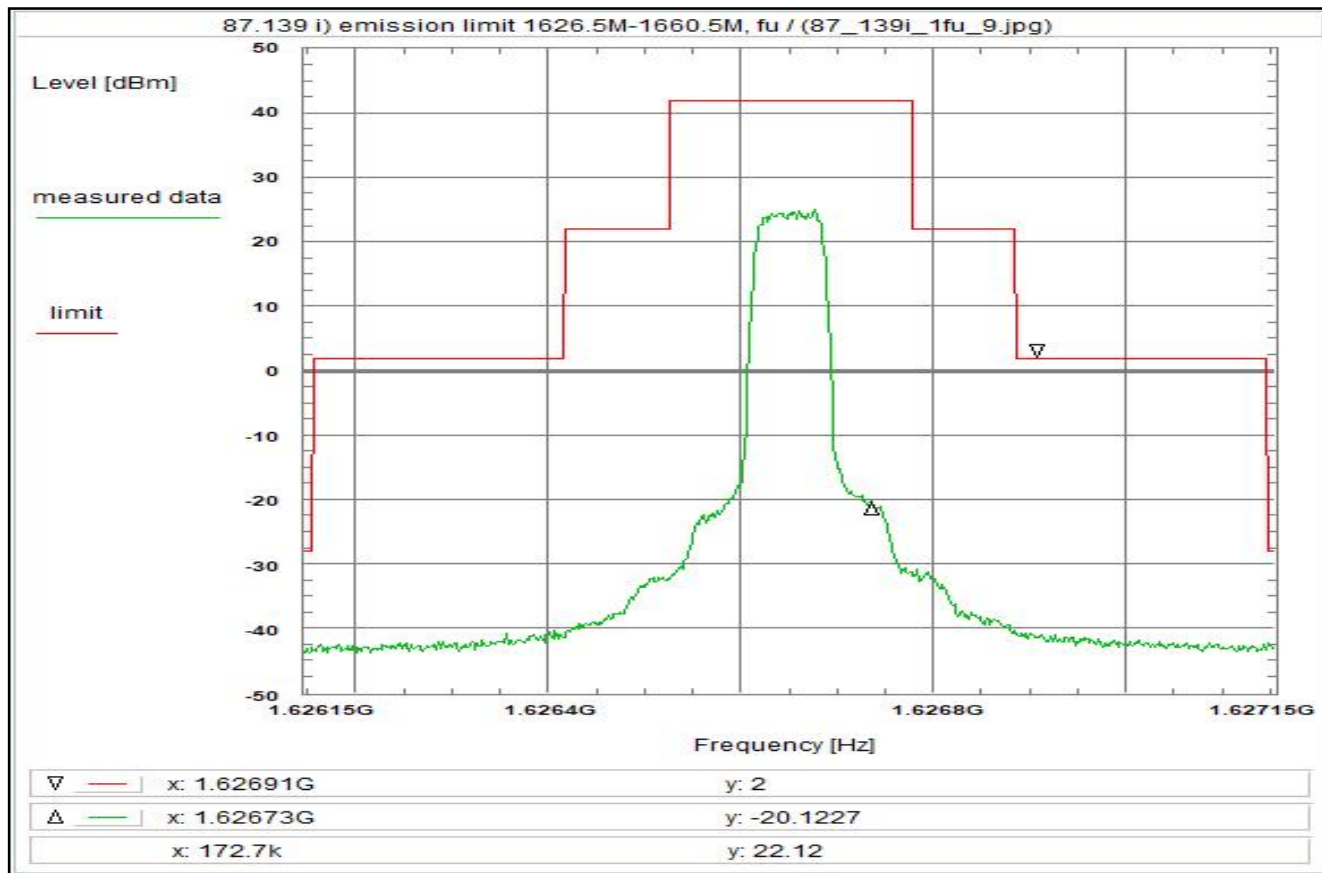
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 131



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

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 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 15:48:38
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626146 GHz
 Stop frequency: 1.627154 GHz
 Center frequency: 1.62665 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

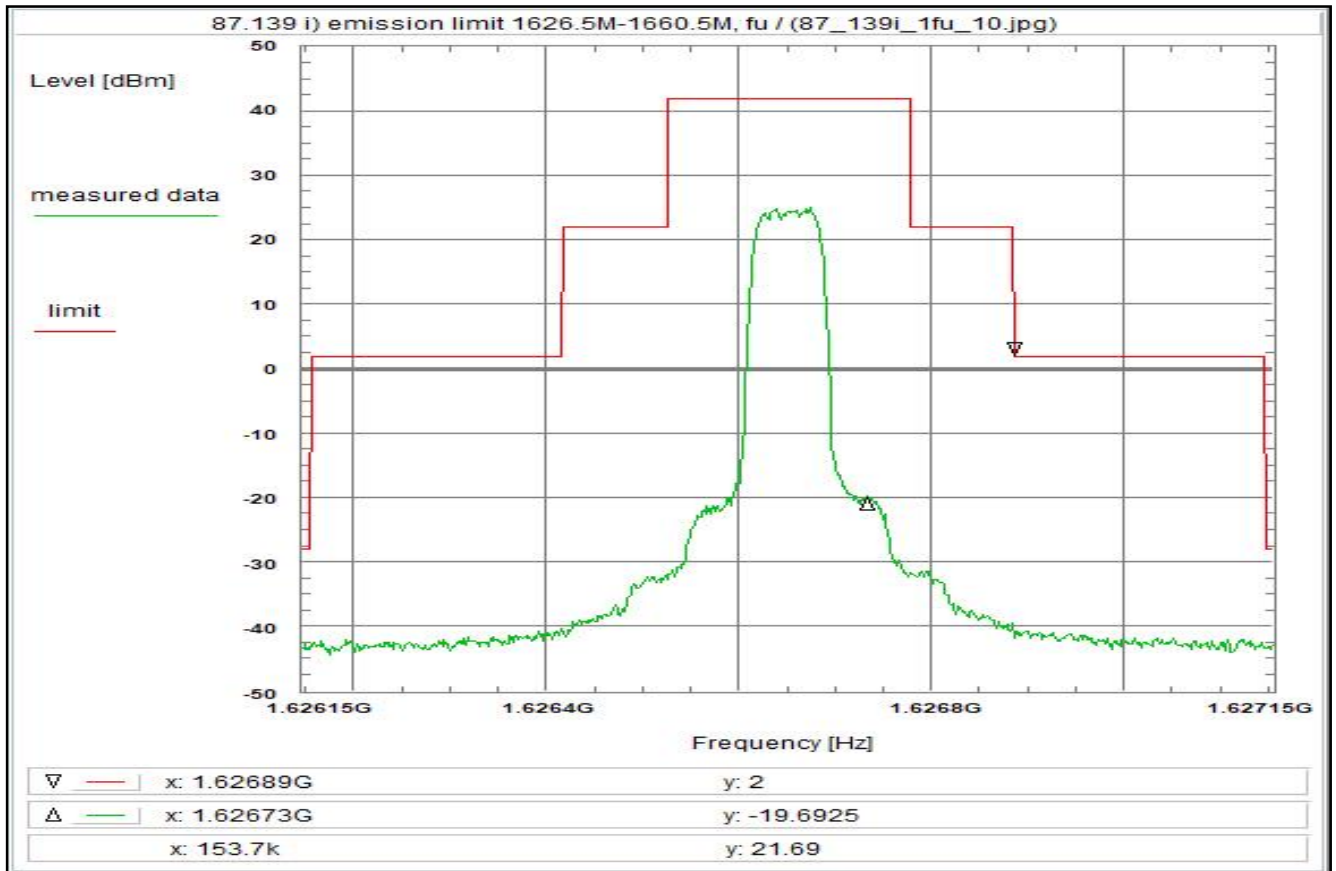
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 132



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

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/R20T2XQD, 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 15:53:21
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.626146 GHz
 Stop frequency: 1.627154 GHz
 Center frequency: 1.62665 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

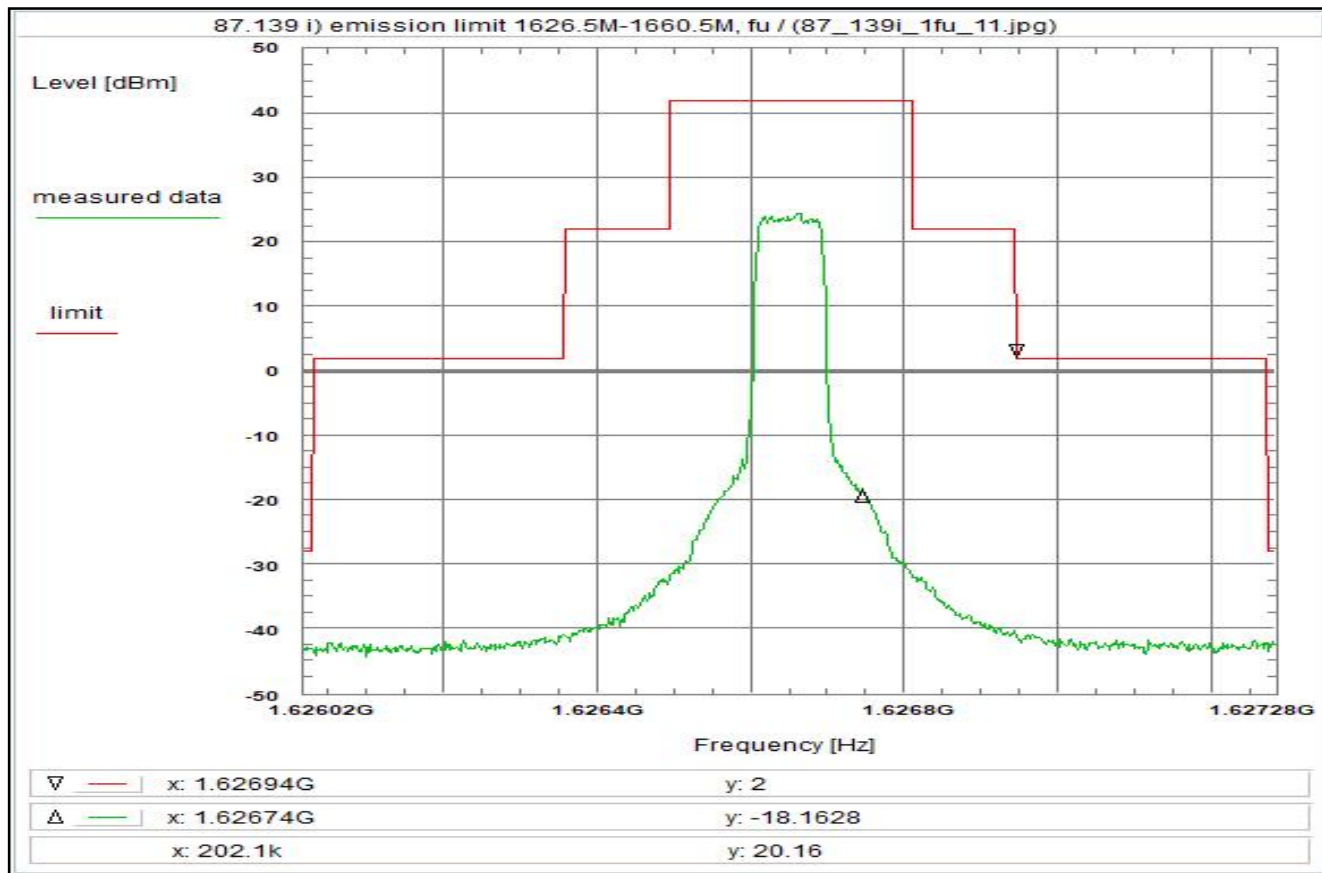
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 133



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

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, FR80T2.5X16, 84 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 15:57:05
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.62602 GHz
 Stop frequency: 1.62728 GHz
 Center frequency: 1.62665 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

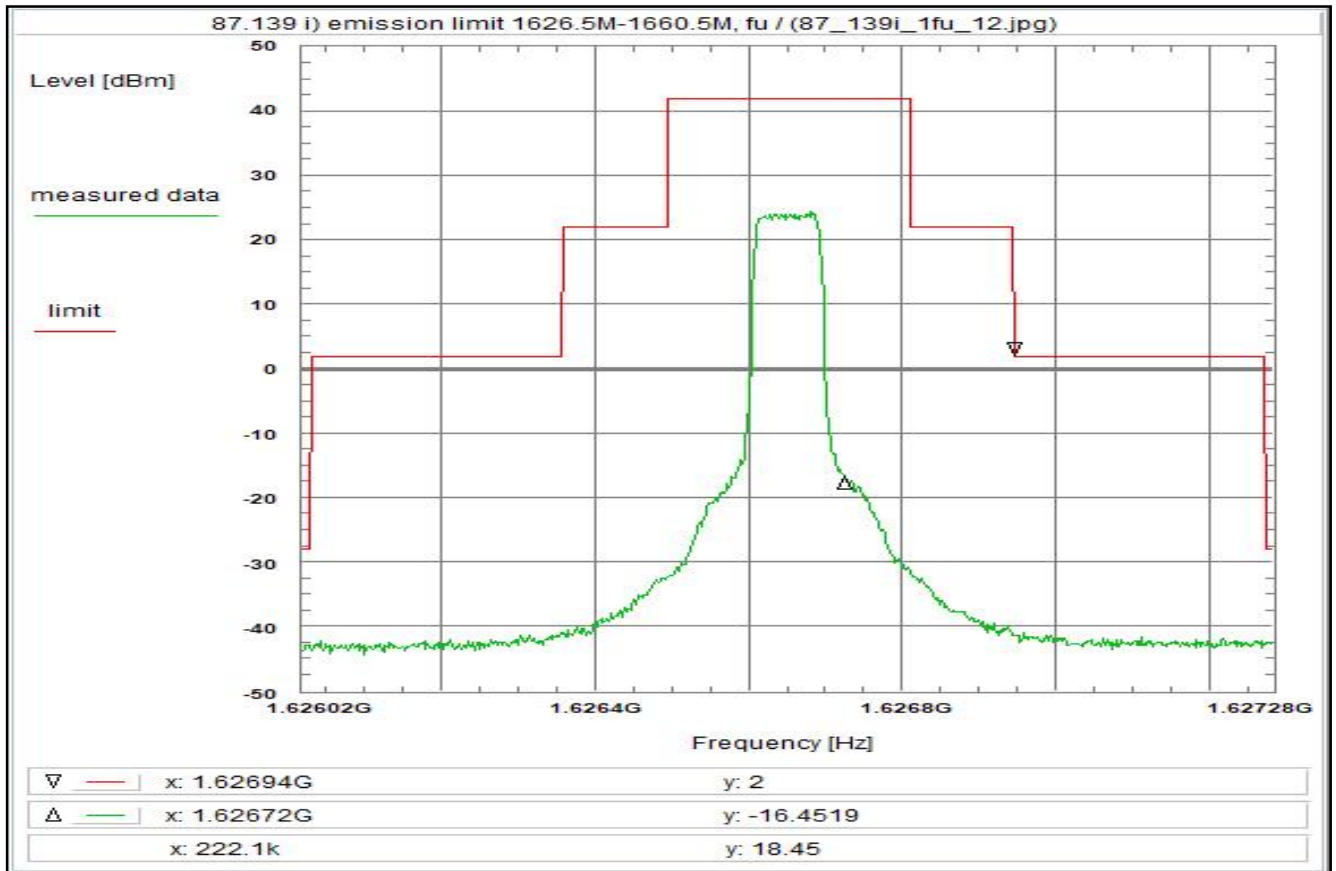
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 134



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

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, FR80T2.5X32, 84 ksym/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 16:03:29
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.62602 GHz
 Stop frequency: 1.62728 GHz
 Center frequency: 1.62665 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

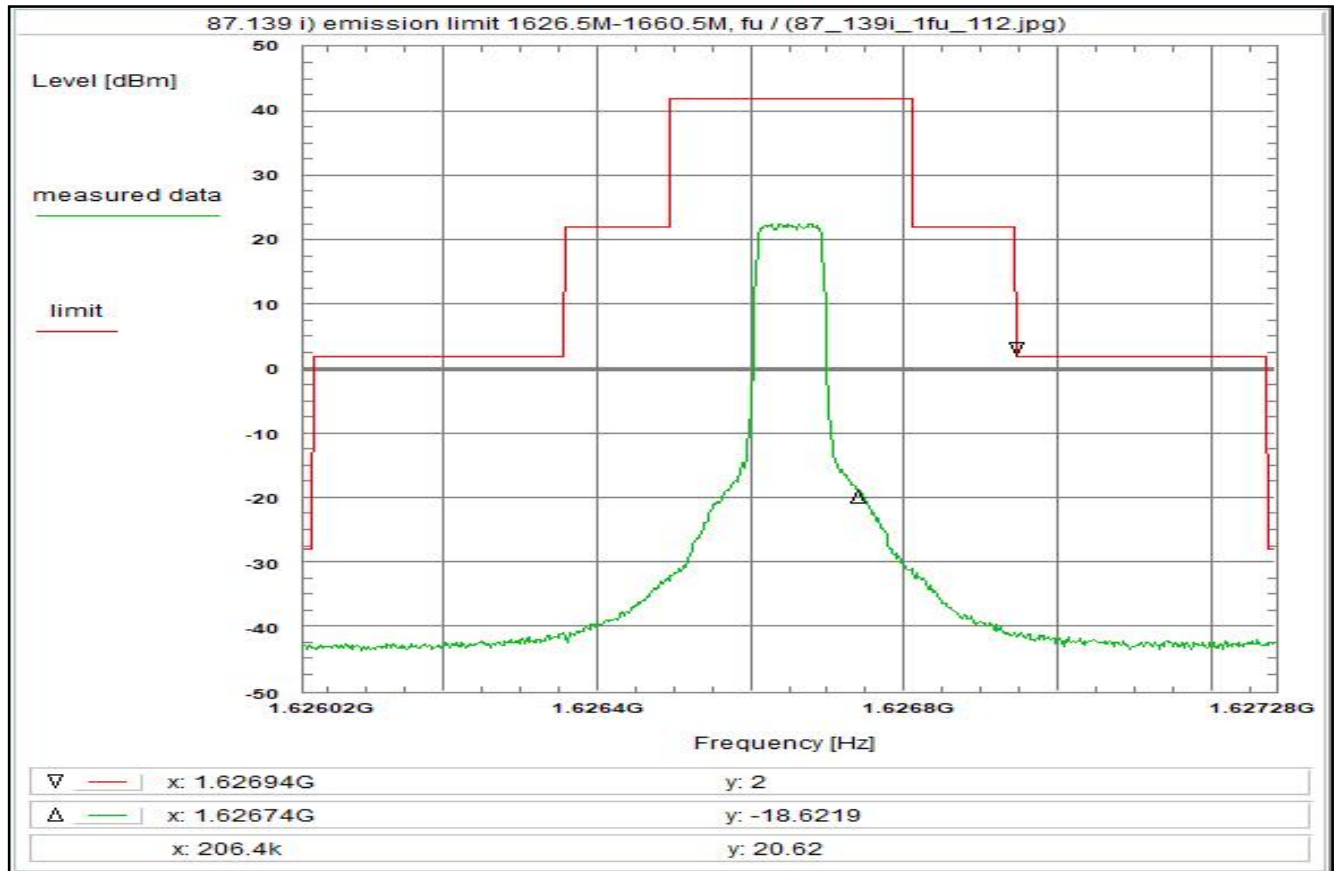
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 135



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

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, 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 16:01:56
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.62602 GHz
 Stop frequency: 1.62728 GHz
 Center frequency: 1.62665 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

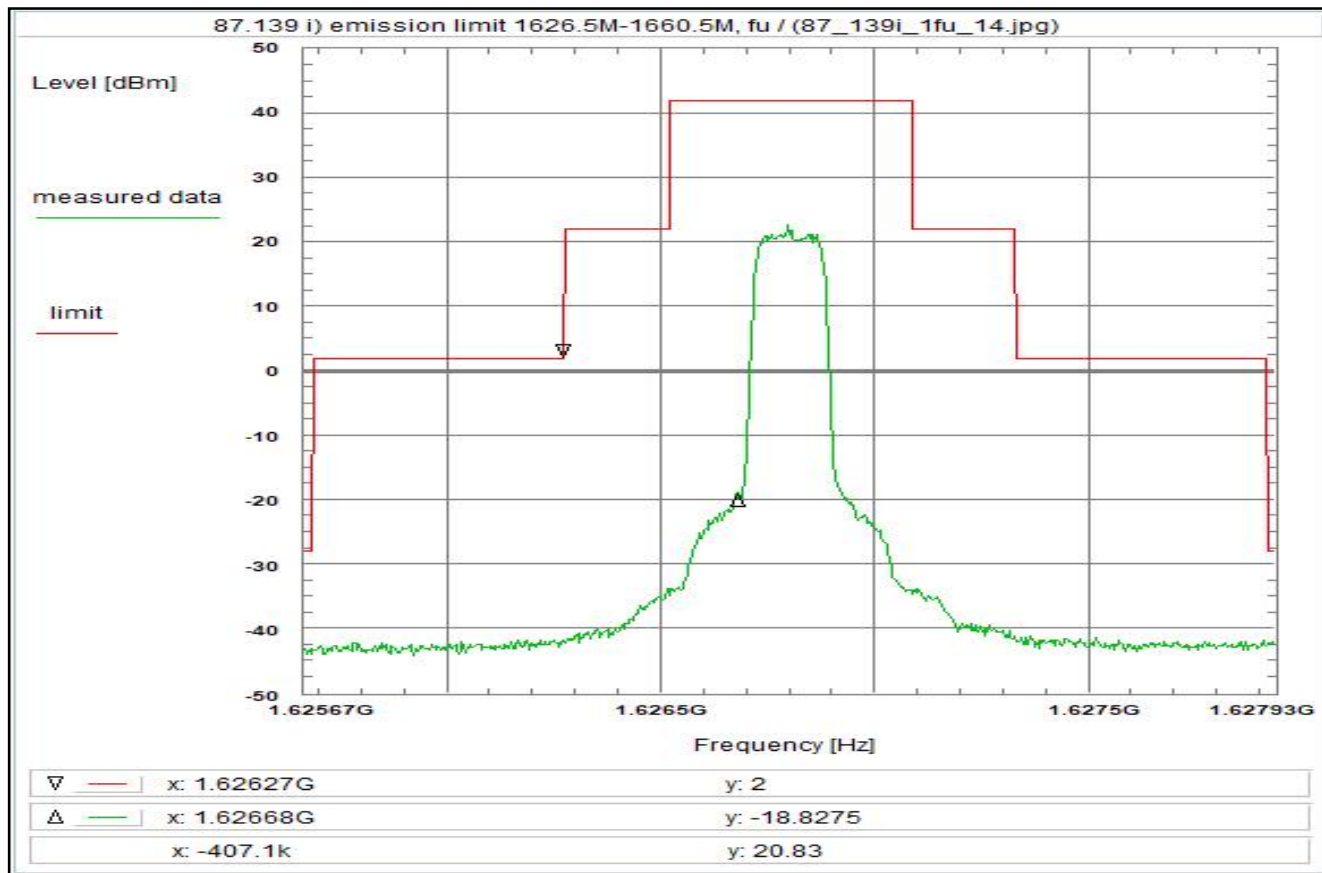
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 136



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

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 16:09:41
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.625666 GHz
 Stop frequency: 1.627934 GHz
 Center frequency: 1.6268 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

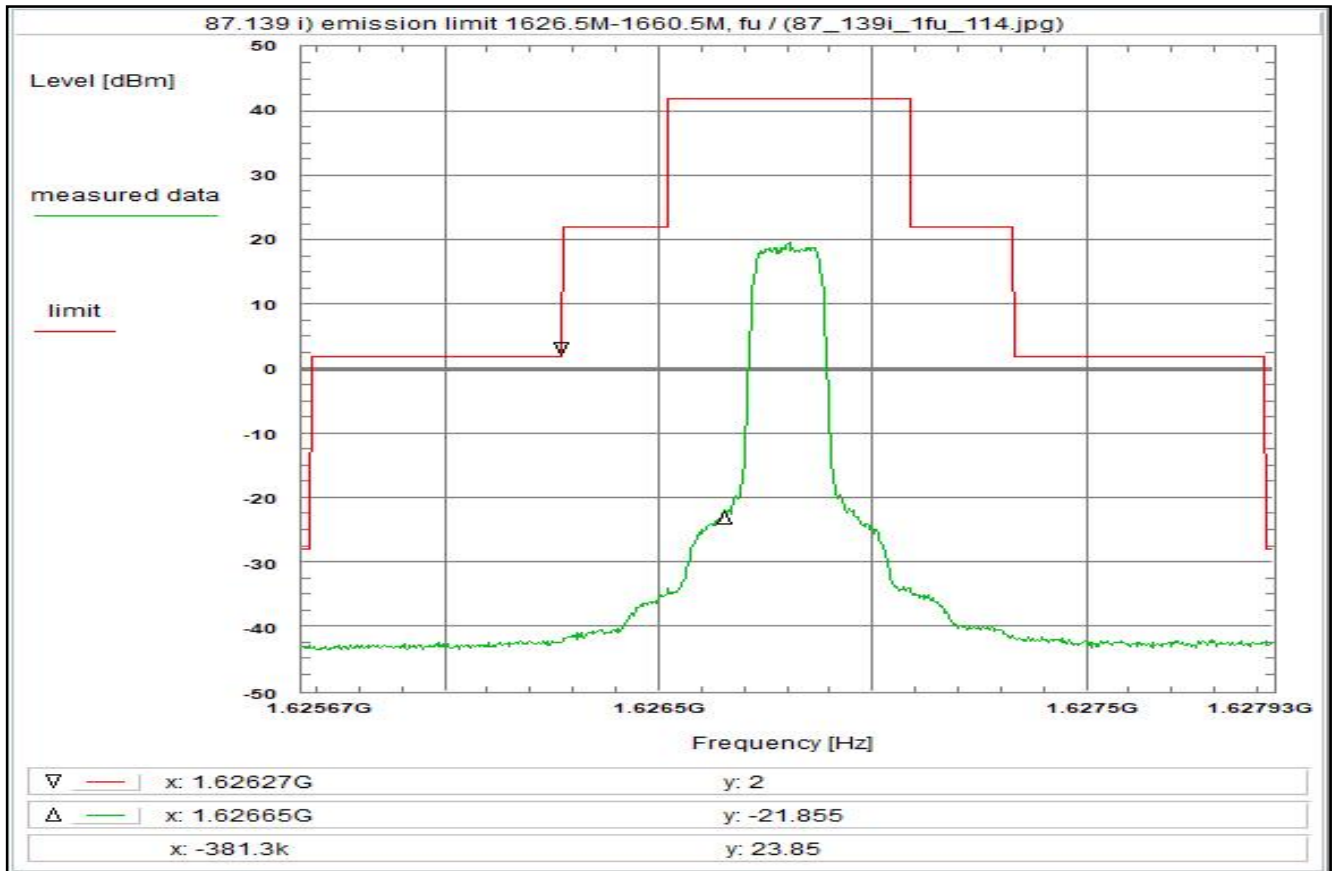
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 137



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

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 16:11:42
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.625666 GHz
 Stop frequency: 1.627934 GHz
 Center frequency: 1.6268 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

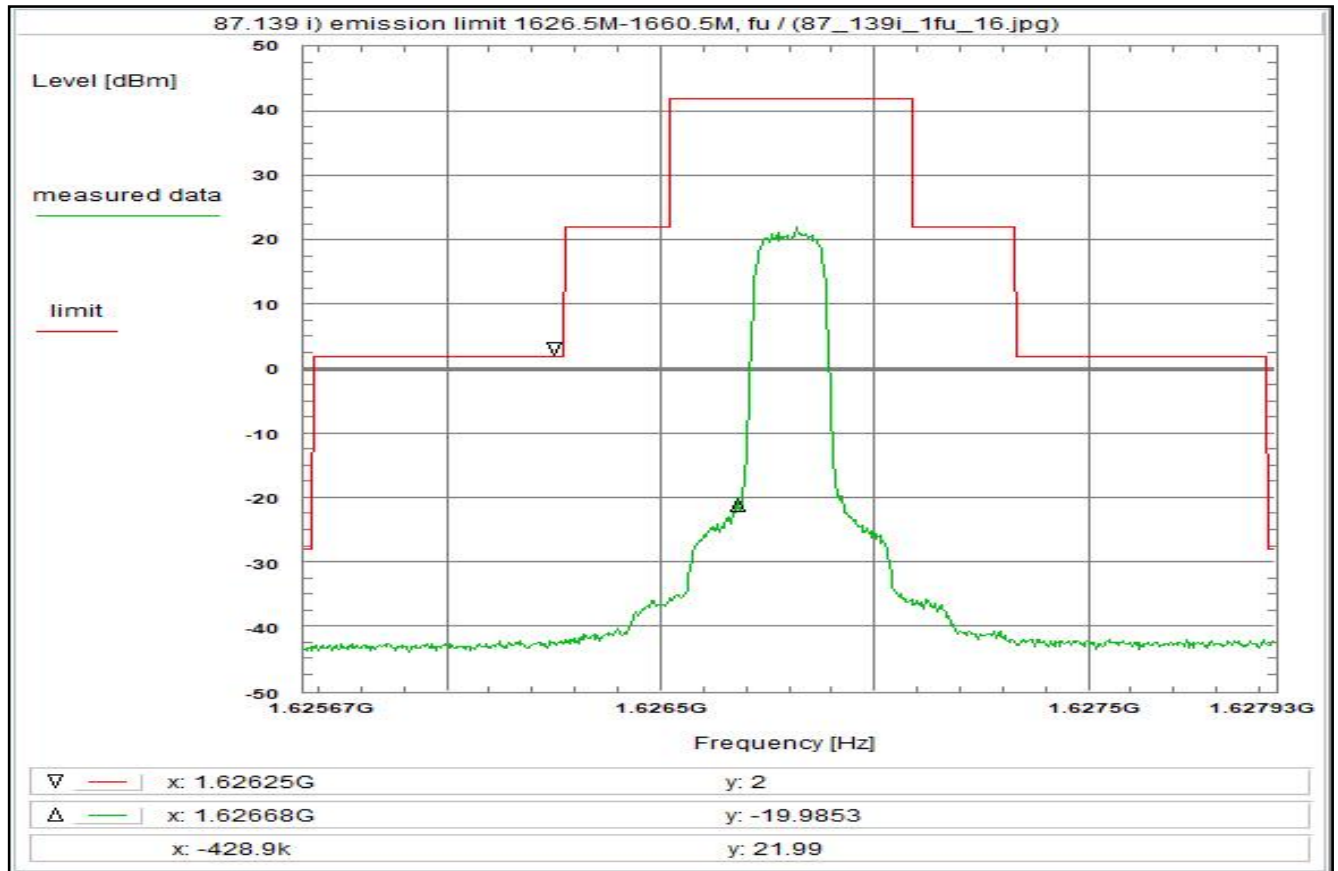
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 138



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

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 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 16:17:59
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.625666 GHz
 Stop frequency: 1.627934 GHz
 Center frequency: 1.6268 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

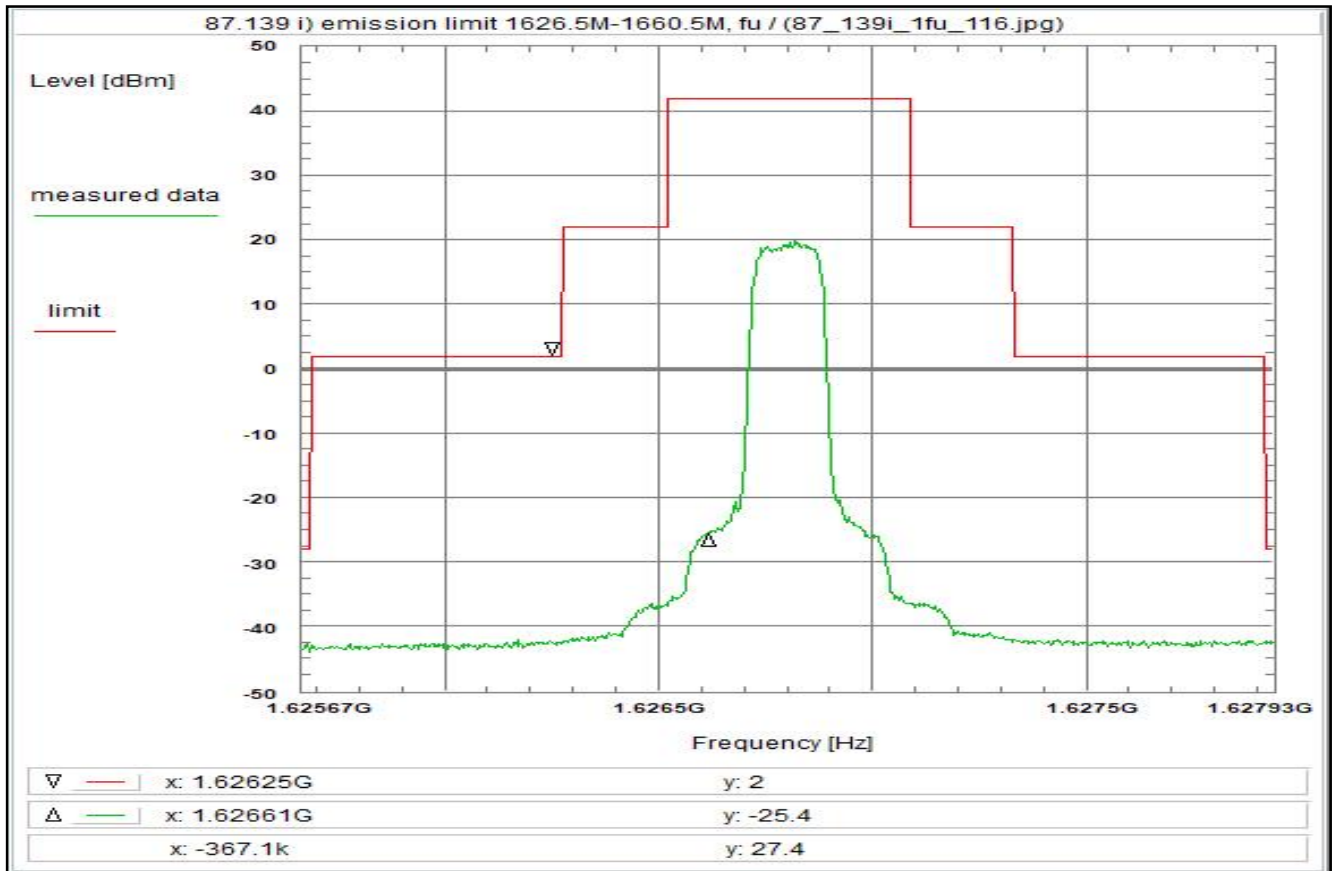
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 139



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

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 16:19:51
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.625666 GHz
 Stop frequency: 1.627934 GHz
 Center frequency: 1.6268 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

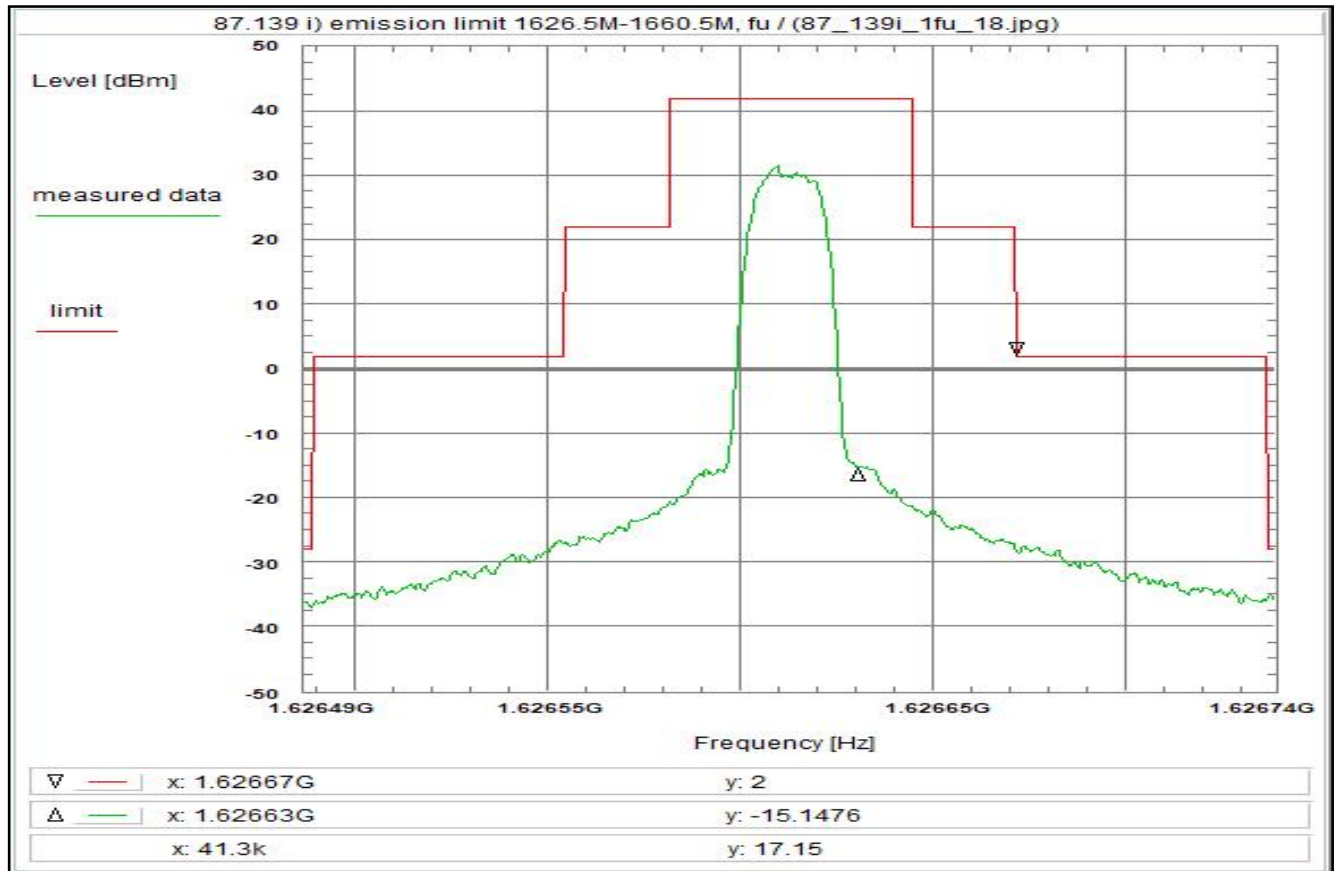
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 140



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

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 16:28:14
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6264865 GHz
 Stop frequency: 1.6267385 GHz
 Center frequency: 1.6266125 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

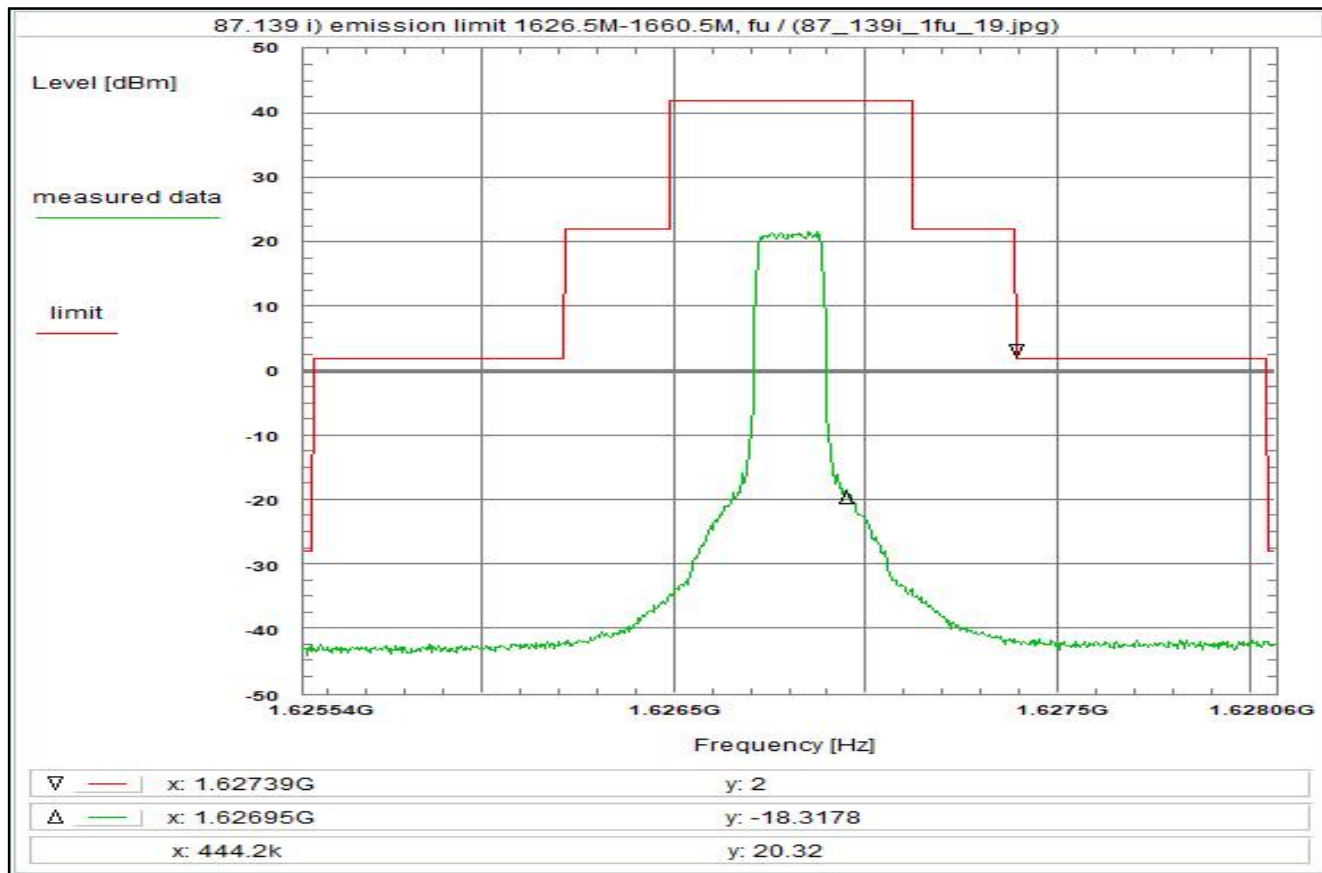
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 141



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

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 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 16:30:52
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.62554 GHz
 Stop frequency: 1.62806 GHz
 Center frequency: 1.6268 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

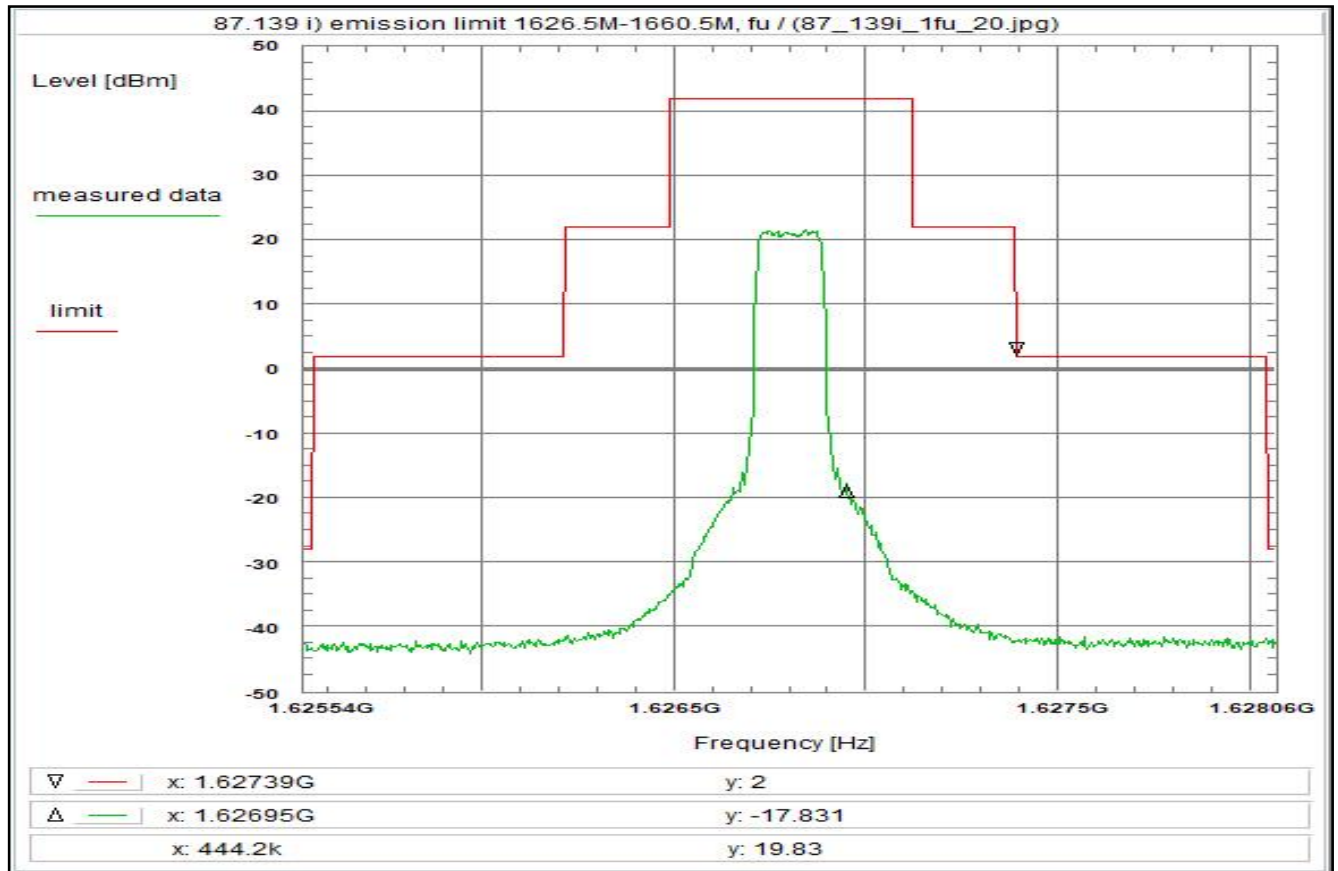
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 142



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

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 ksym/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 16:36:03
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.62554 GHz
 Stop frequency: 1.62806 GHz
 Center frequency: 1.6268 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

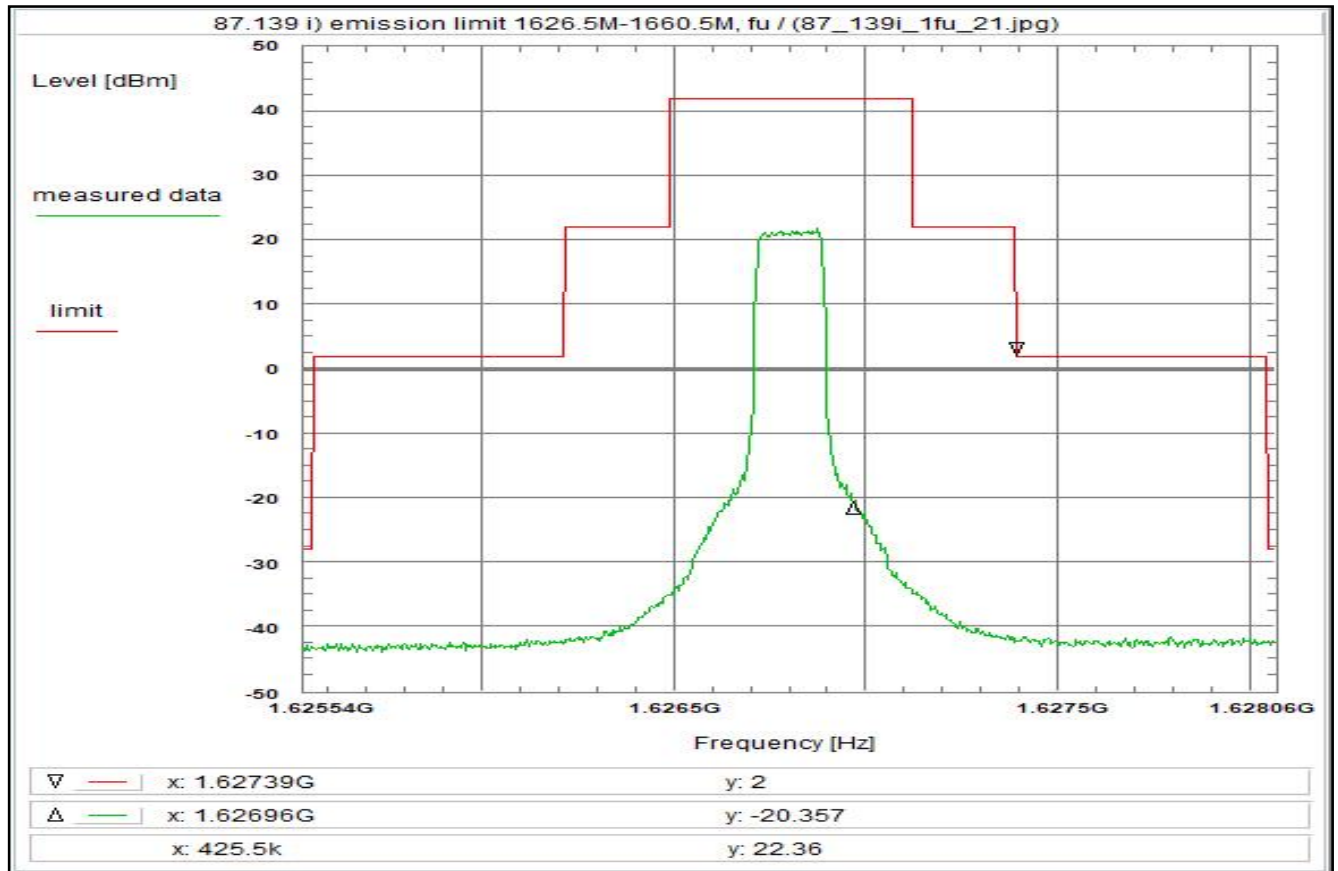
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 143



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

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 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 16:37:08
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.62554 GHz
 Stop frequency: 1.62806 GHz
 Center frequency: 1.6268 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

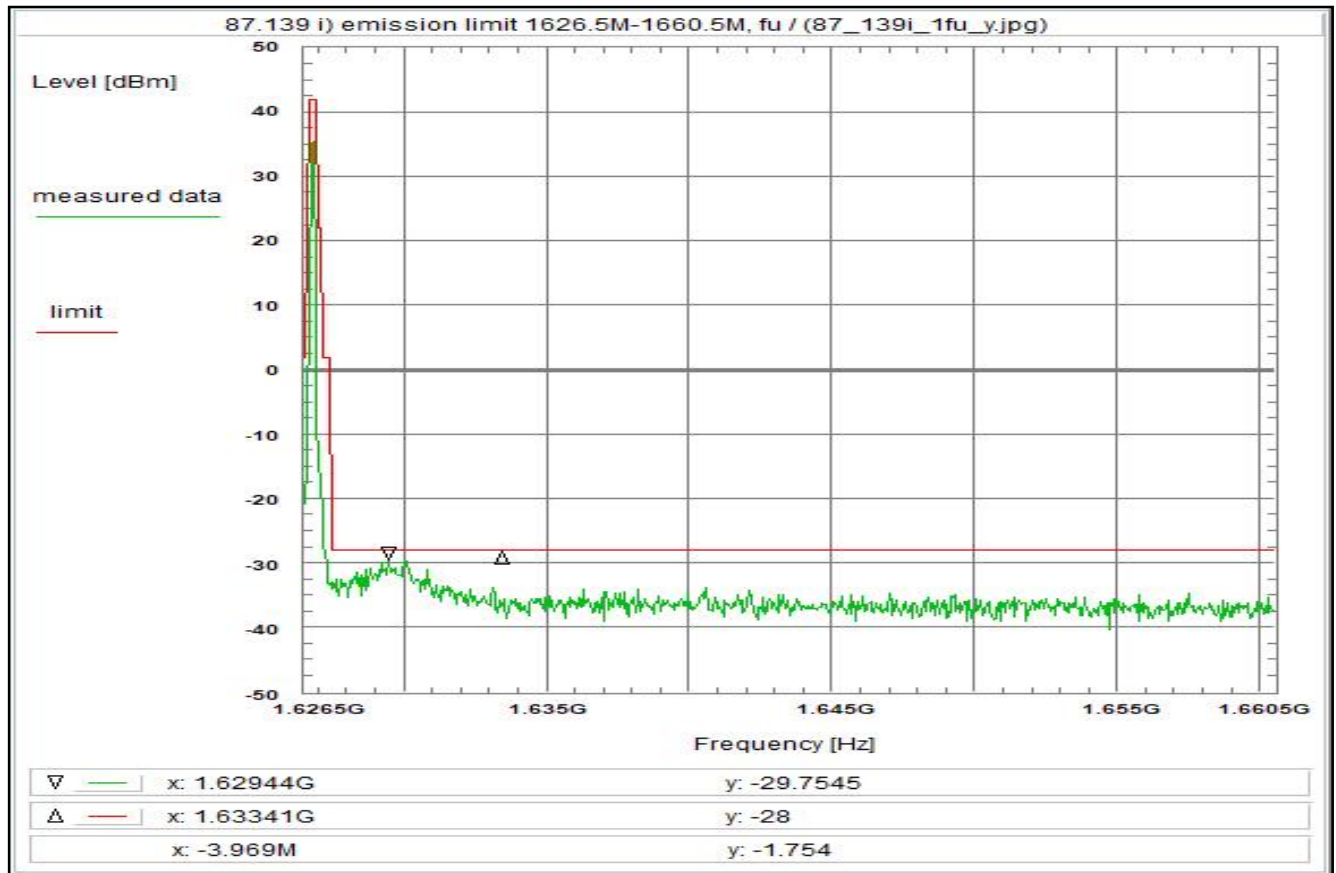
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 144



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

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 Class 6 ACD 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 11:21:27
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6265 GHz
 Stop frequency: 1.6605 GHz
 Center frequency: 1.6435 GHz
 Frequency span: 34 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

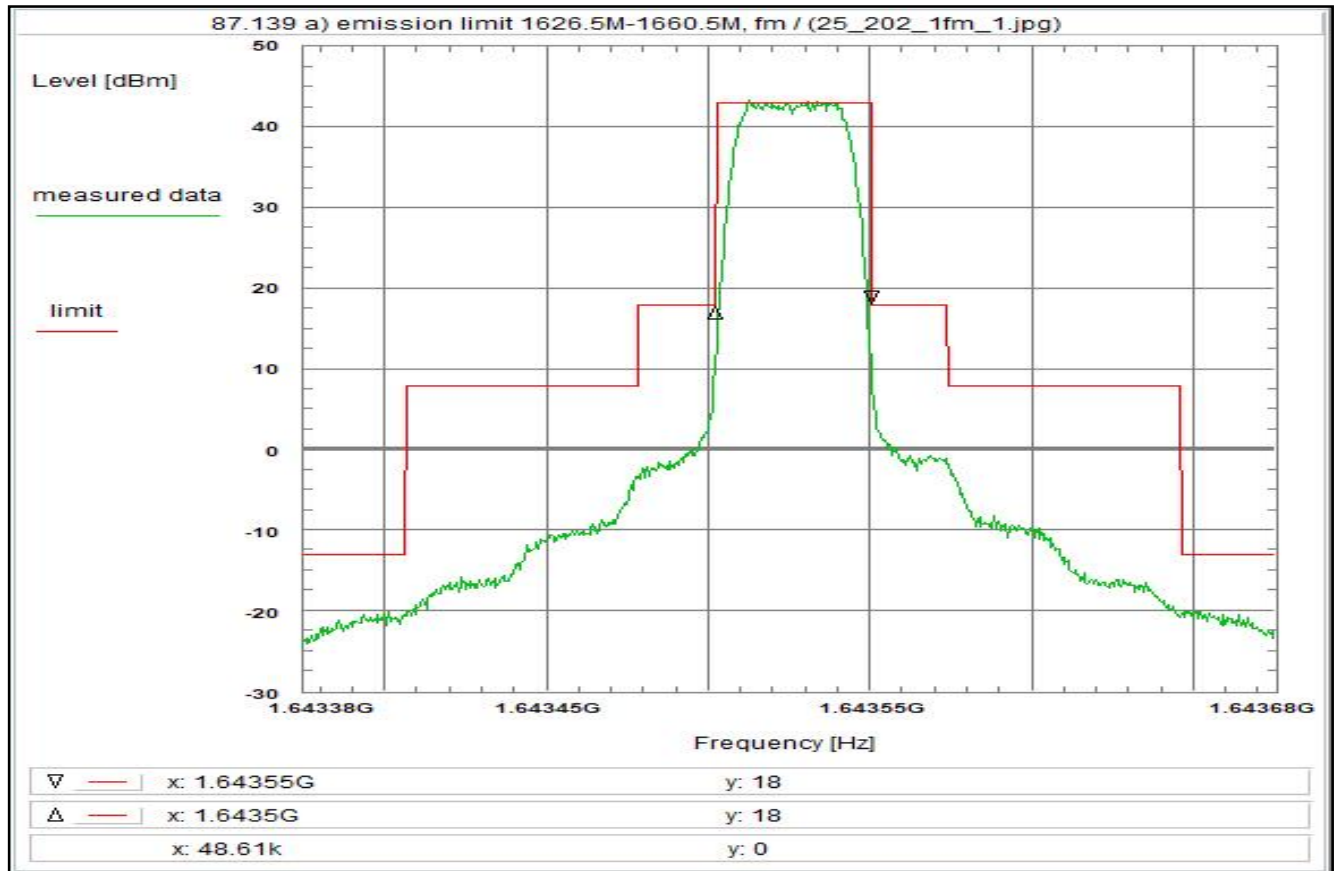
Remarks:

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

For EIRP calculation:

'worst-case' = maximum antenna gain

Plot No. 145



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 ACD, 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 passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:15:50

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643375 GHz

Stop frequency: 1.643675 GHz

Center frequency: 1.643525 GHz

Frequency span: 300 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

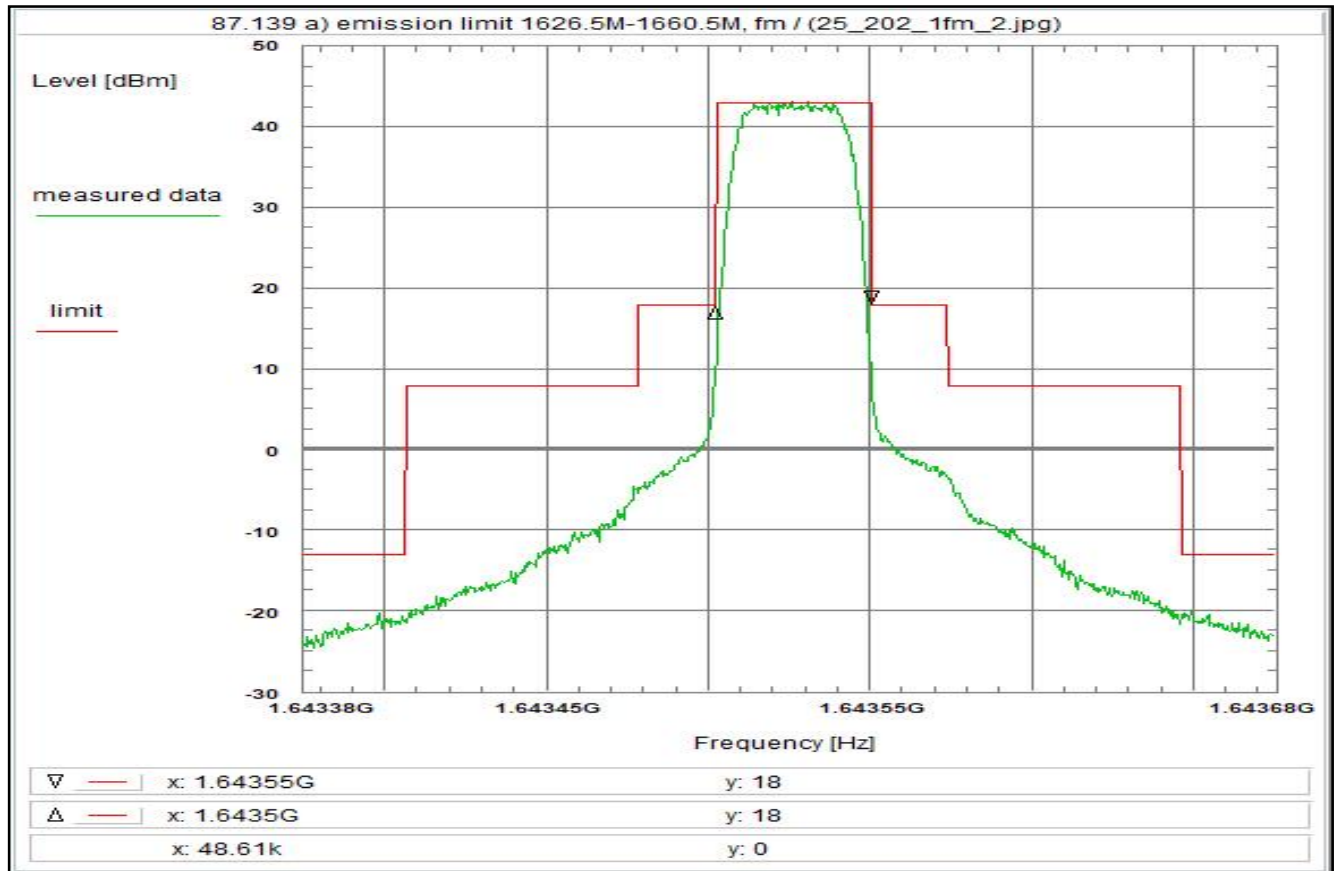
TOTAL CORRECTION: + 50.0 dB

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. 146



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:22:14

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643375 GHz

Stop frequency: 1.643675 GHz

Center frequency: 1.643525 GHz

Frequency span: 300 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

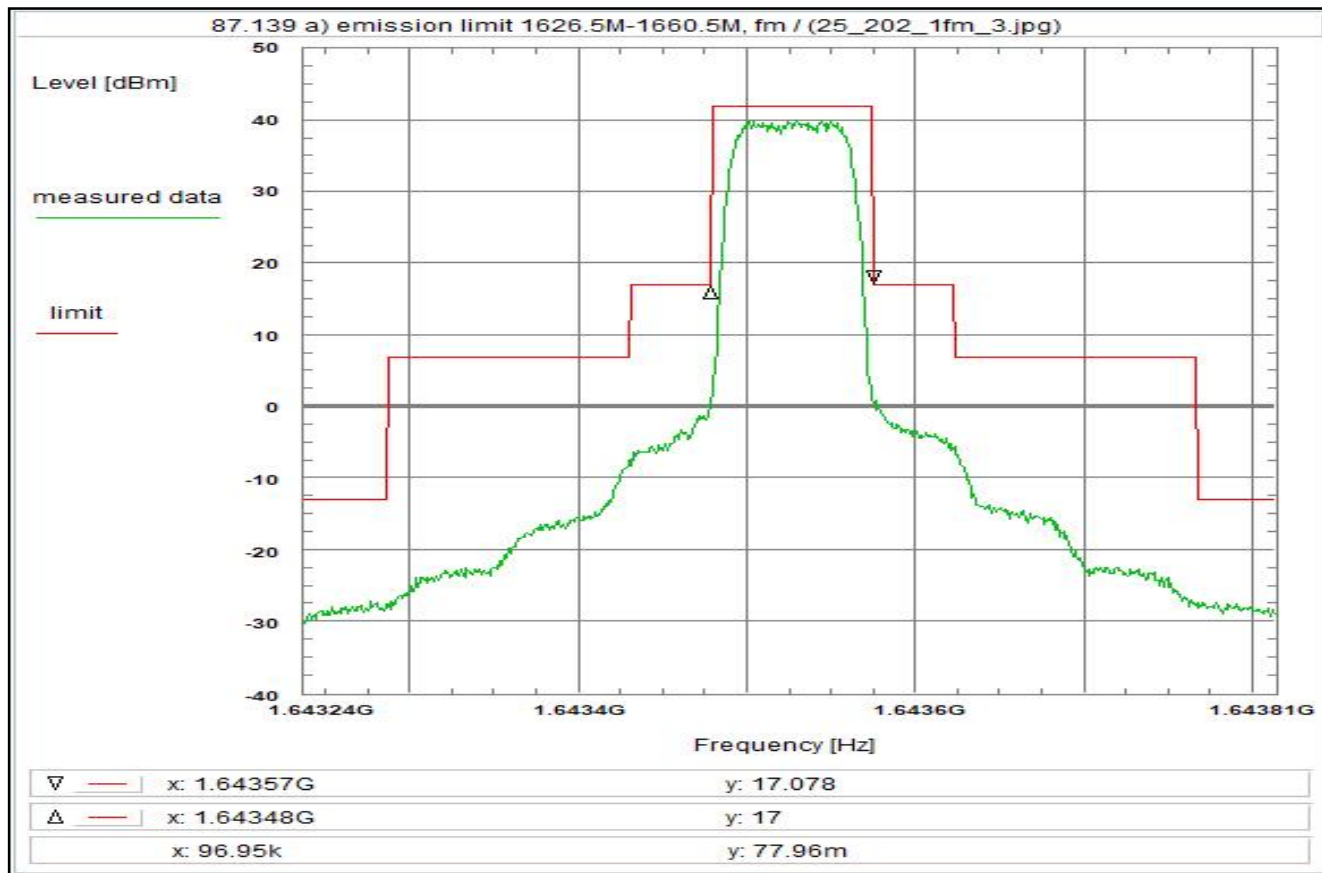
TOTAL CORRECTION: + 50.0 dB

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. 147



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:25:23

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643237 GHz

Stop frequency: 1.643813 GHz

Center frequency: 1.643525 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 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

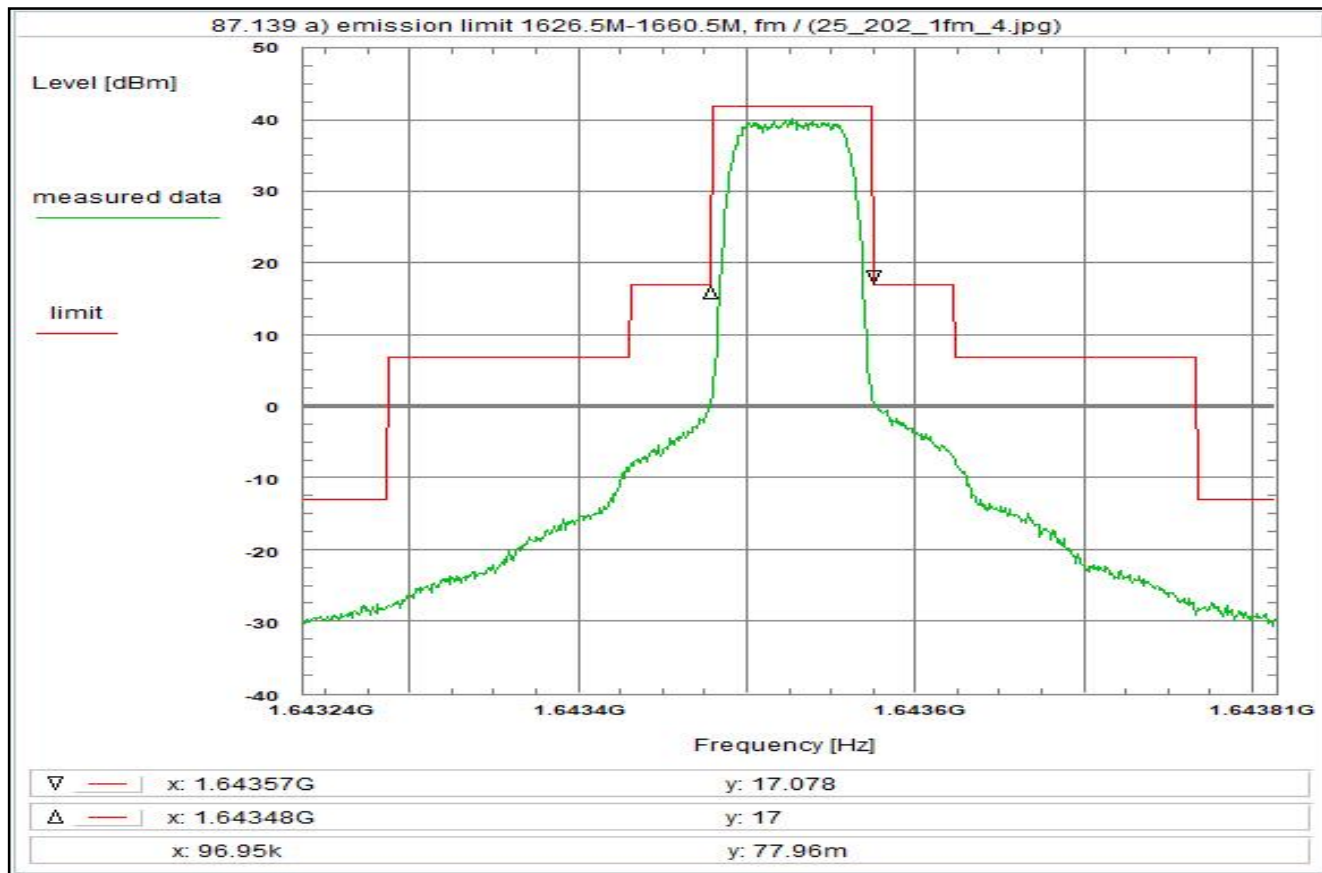
TOTAL CORRECTION: + 50.0 dB

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. 148



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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, R001, U311, U312

Remark:

Test result: Test passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:28:27

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643237 GHz

Stop frequency: 1.643813 GHz

Center frequency: 1.643525 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 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

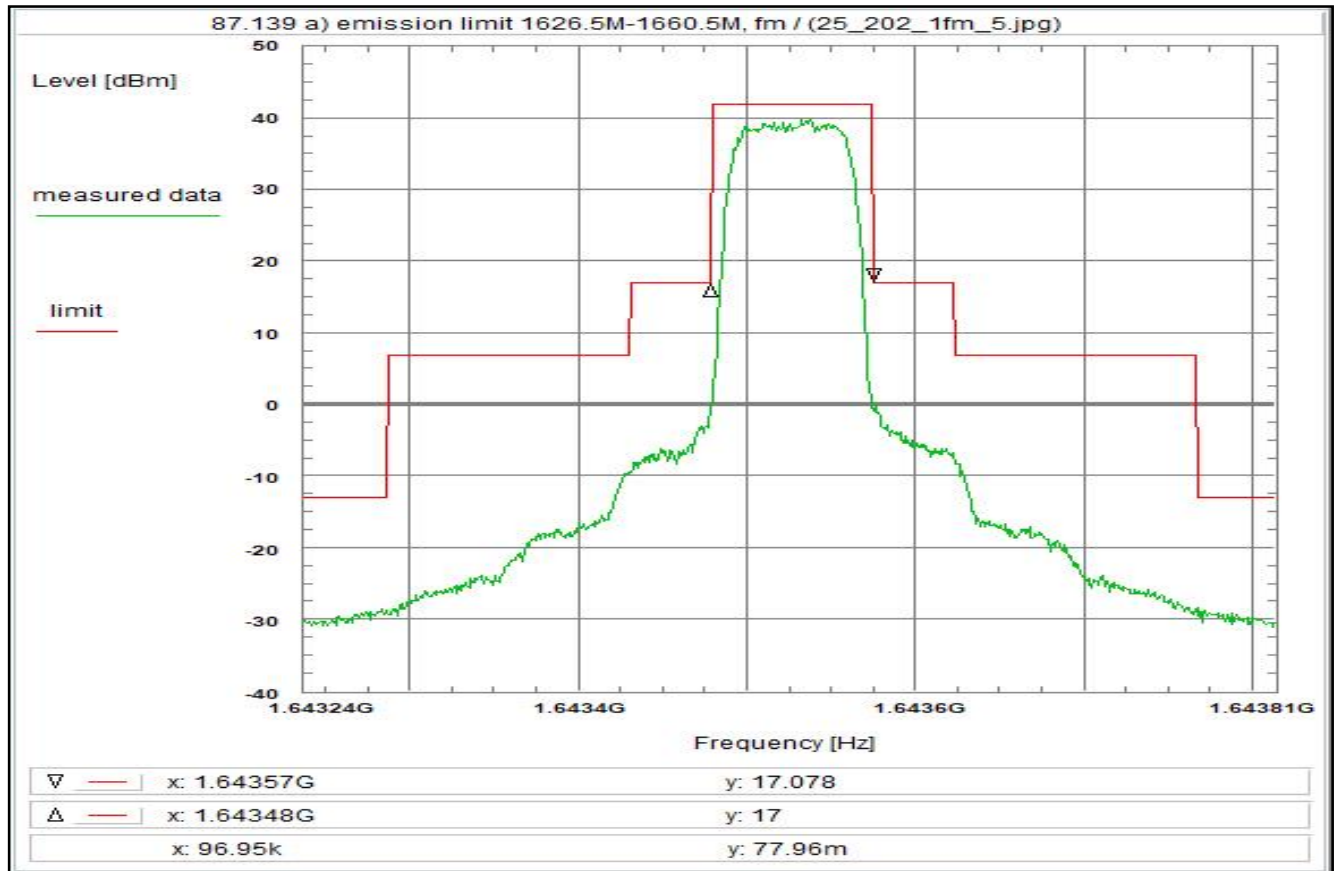
TOTAL CORRECTION: + 50.0 dB

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. 149



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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, R001, U312, U311, Power Splitter

Remark:

Test result: Test passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:34:27

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643237 GHz

Stop frequency: 1.643813 GHz

Center frequency: 1.643525 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 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

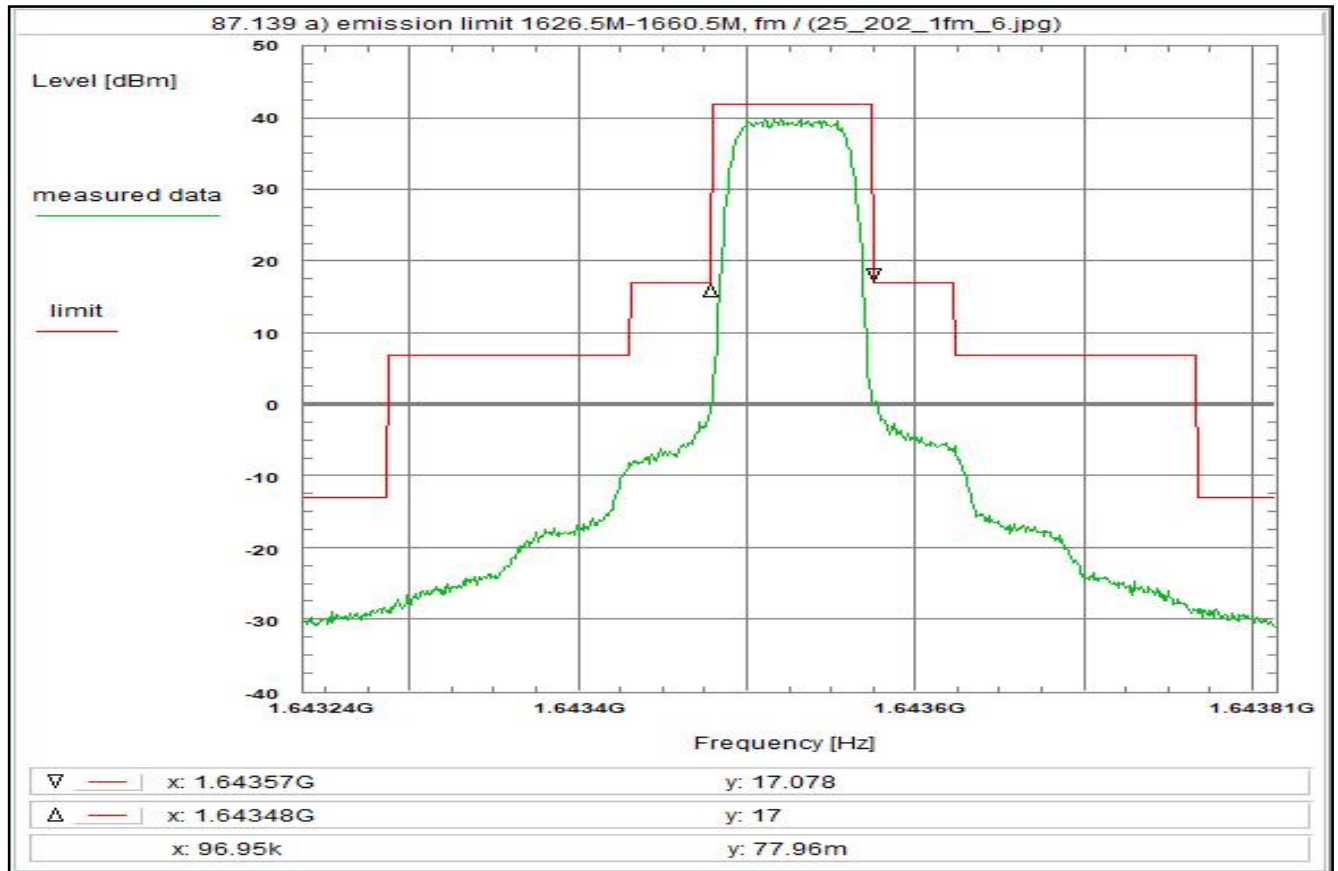
TOTAL CORRECTION: + 50.0 dB

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. 150



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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, R001, U312, U311, Power Splitter

Remark:

Test result: Test passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:43:03

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643237 GHz

Stop frequency: 1.643813 GHz

Center frequency: 1.643525 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 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

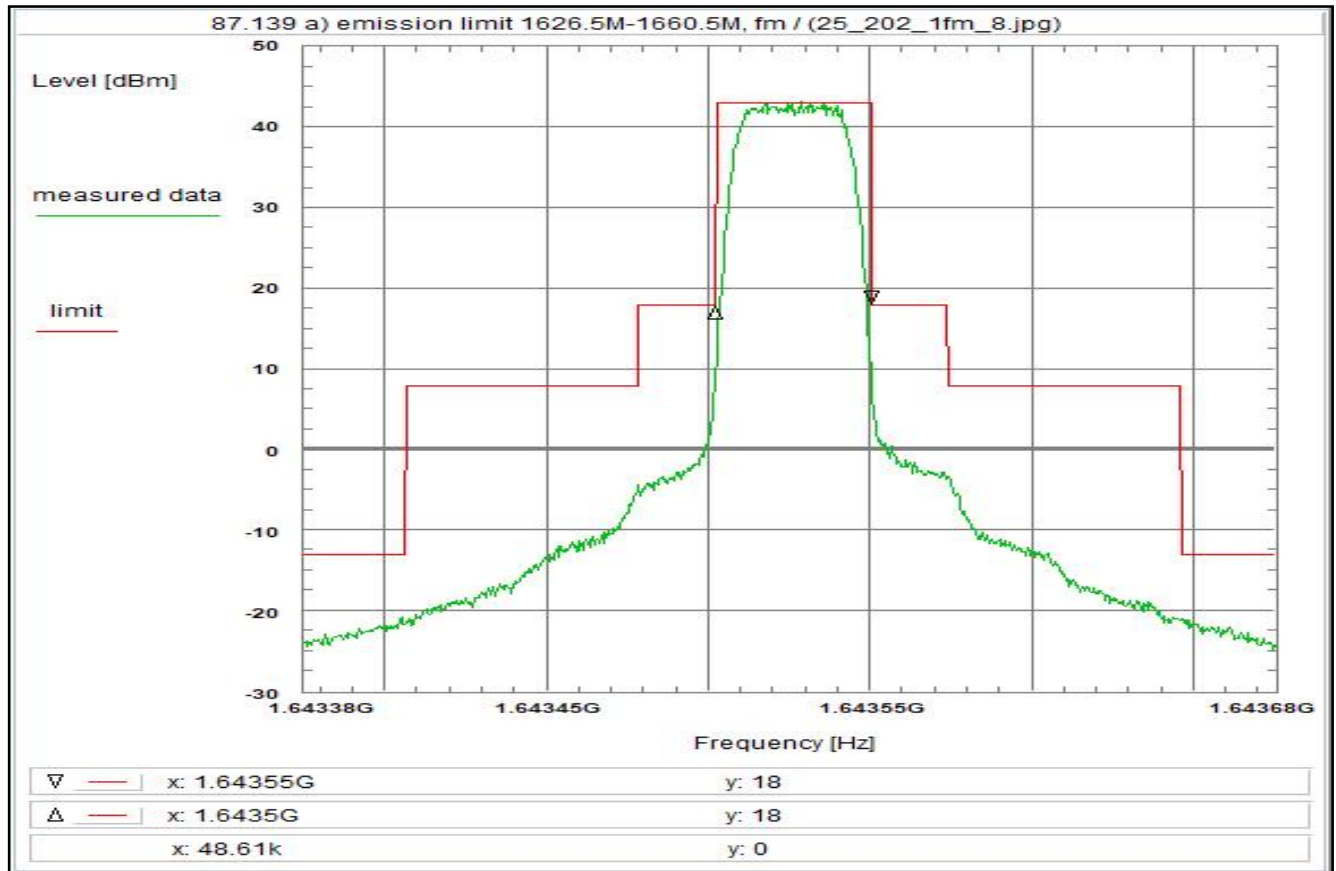
TOTAL CORRECTION: + 50.0 dB

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. 151



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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, R001, U312, U311, Power Splitter

Remark:

Test result: Test passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:44:25

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643375 GHz

Stop frequency: 1.643675 GHz

Center frequency: 1.643525 GHz

Frequency span: 300 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

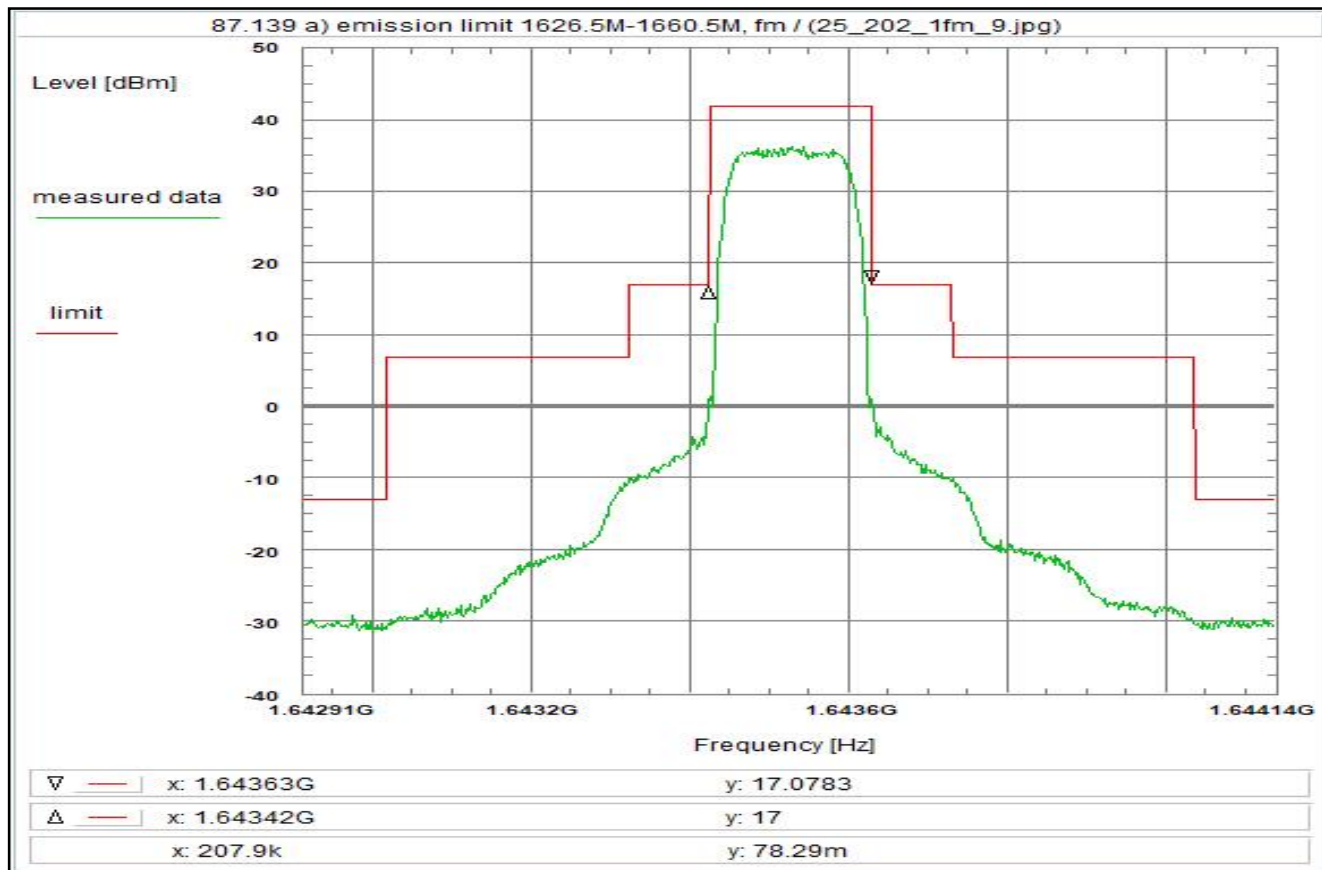
TOTAL CORRECTION: + 50.0 dB

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. 152



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:46:16

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642913 GHz

Stop frequency: 1.644137 GHz

Center frequency: 1.643525 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

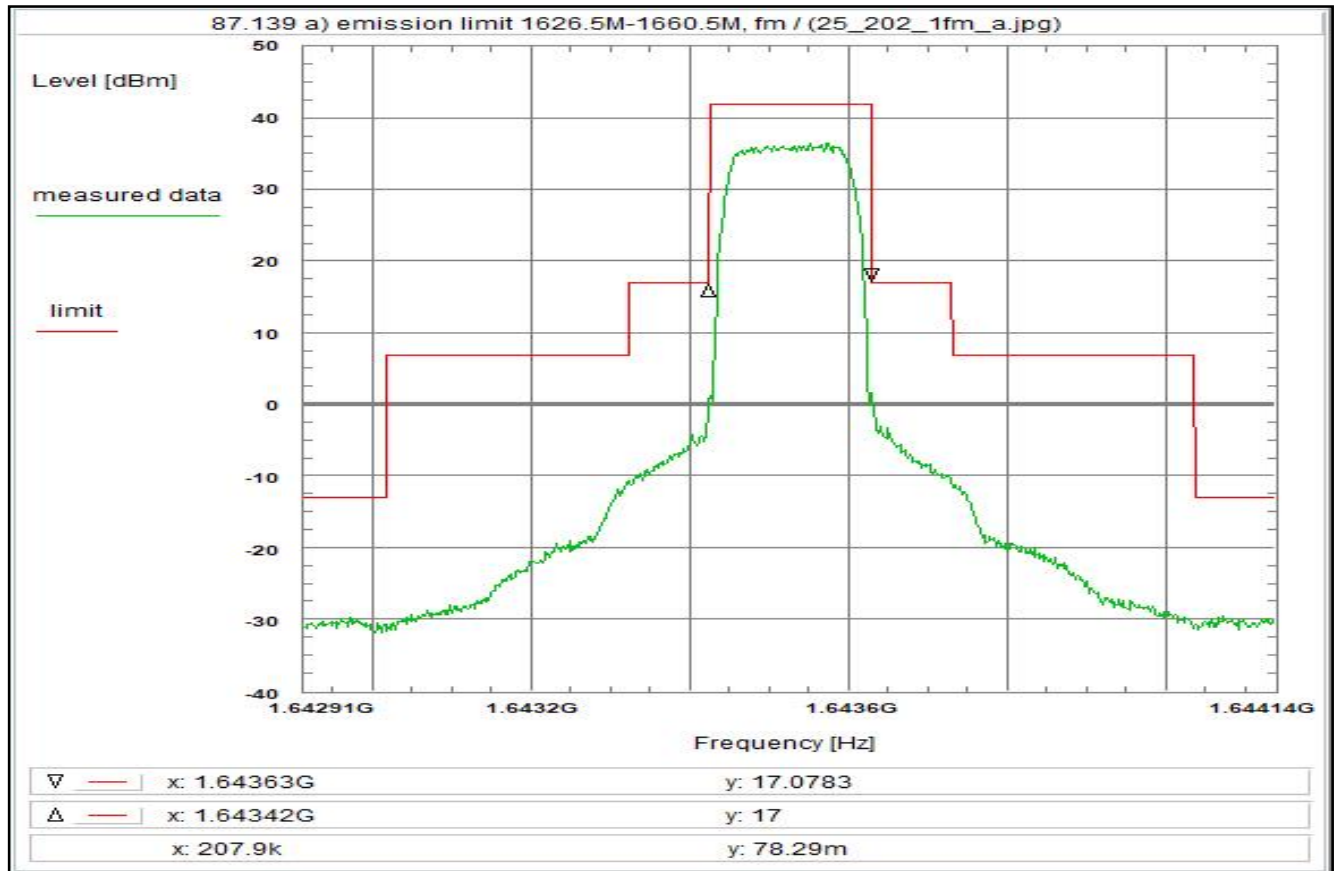
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 153



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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: Mon 29/Jun/2020 16:47:13

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642913 GHz

Stop frequency: 1.644137 GHz

Center frequency: 1.643525 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

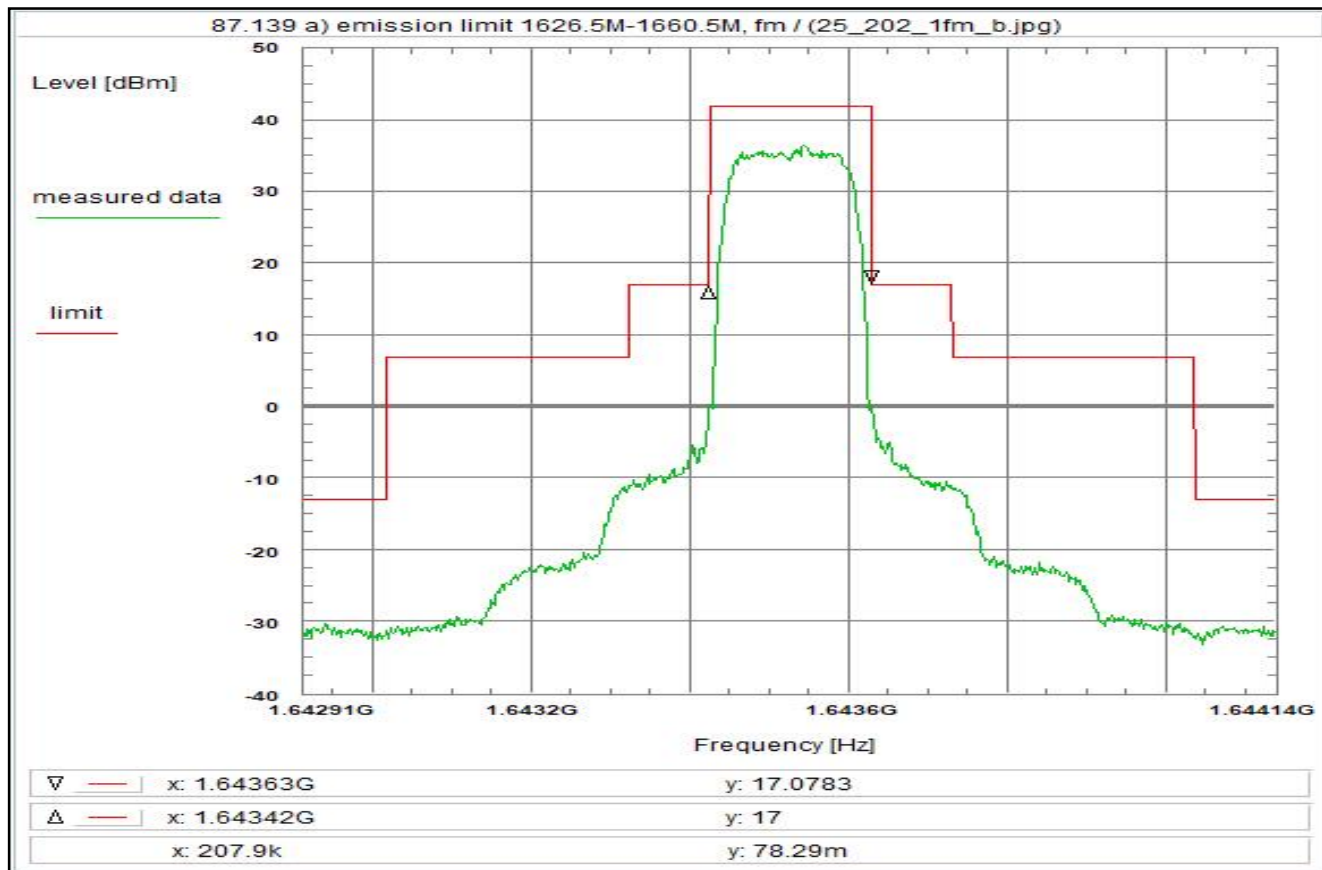
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 154



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 ACD, R5T4.5QD

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 passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:48:29

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642913 GHz

Stop frequency: 1.644137 GHz

Center frequency: 1.643525 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

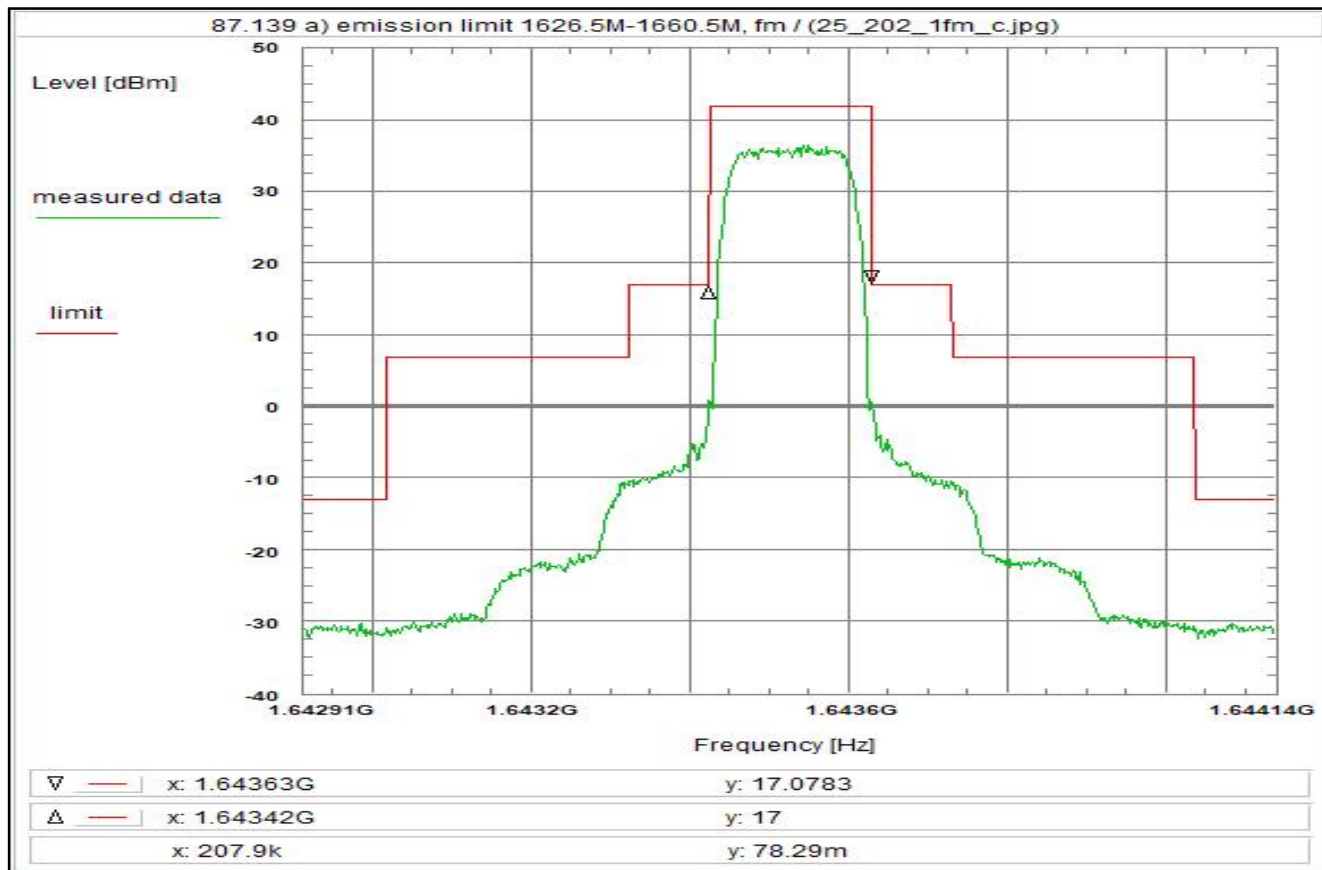
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 155



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:49:38

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642913 GHz

Stop frequency: 1.644137 GHz

Center frequency: 1.643525 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

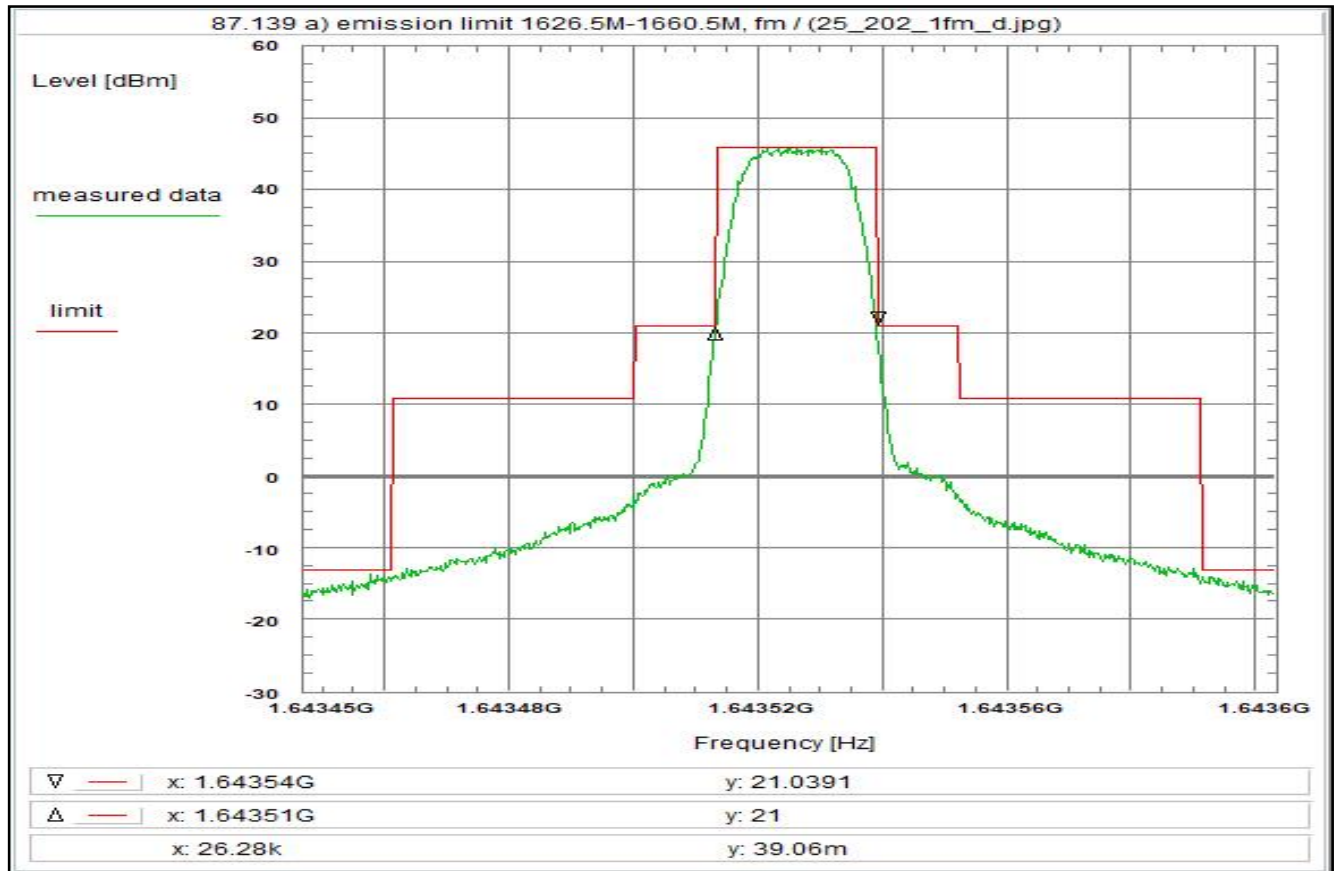
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 156



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 ACD, 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 passedEnvironment condition:

Date & Time: Mon 29/Jun/2020 16:51:07

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643447 GHz

Stop frequency: 1.643603 GHz

Center frequency: 1.643525 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 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

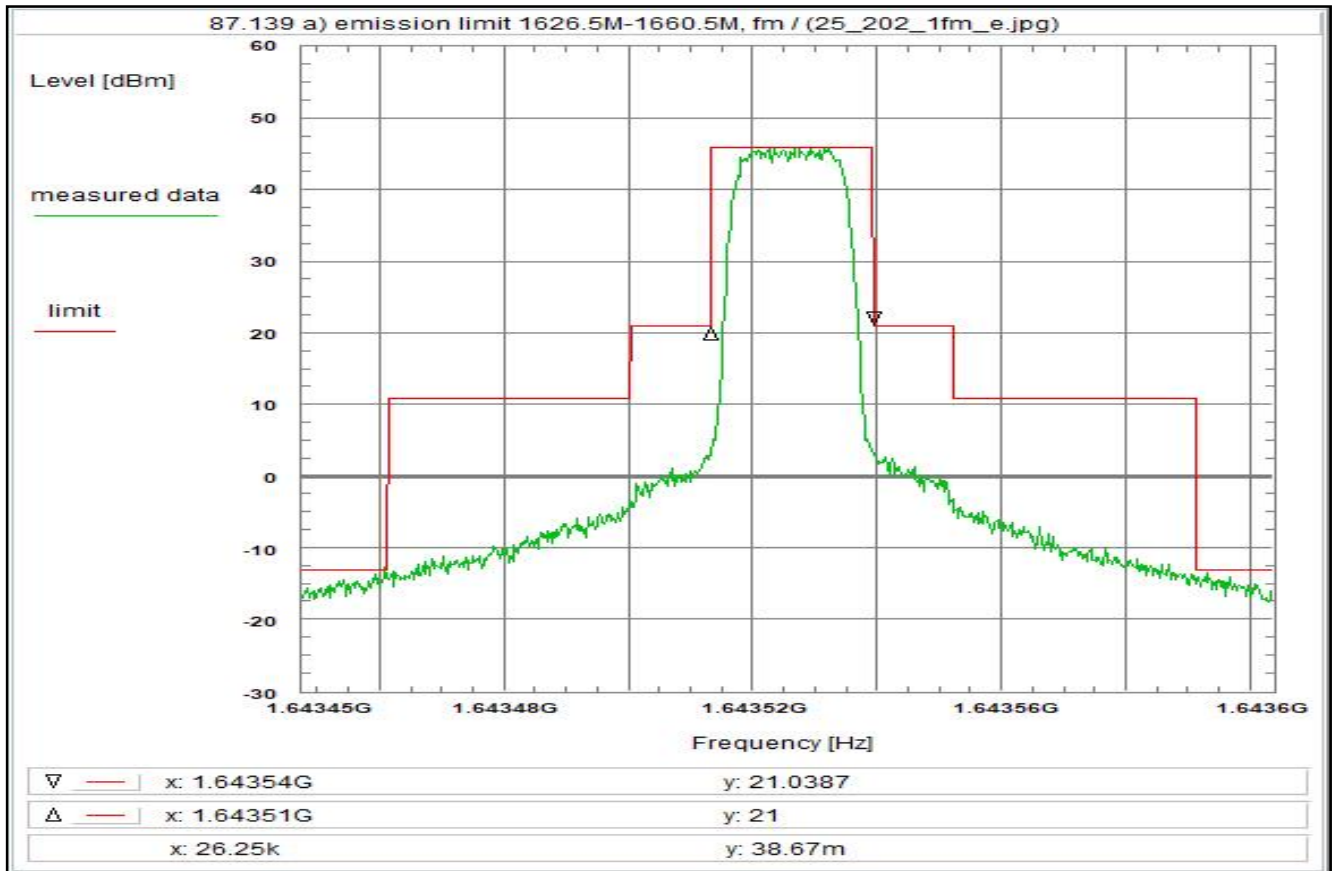
TOTAL CORRECTION: + 50.0 dB

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. 157



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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, U311, U312, Power Splitter

Remark:

Test result: Test passed

Environment condition:

Date & Time: Tue 30/Jun/2020 12:05:32

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.6434475 GHz

Stop frequency: 1.6436035 GHz

Center frequency: 1.6435255 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 dBi

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

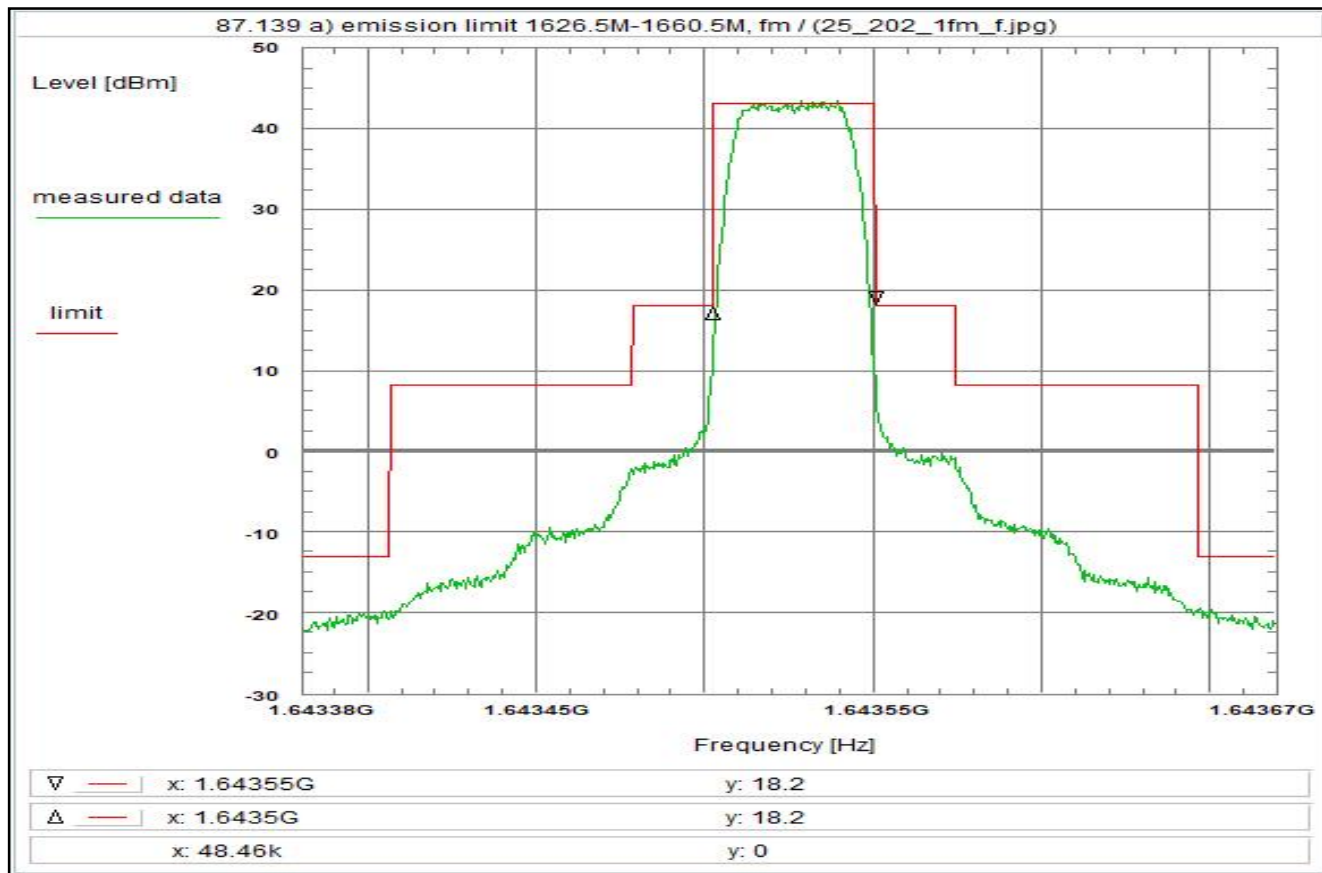
TOTAL CORRECTION: + 54.8 dB

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. 158



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 14:31:35

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643381 GHz

Stop frequency: 1.643669 GHz

Center frequency: 1.643525 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 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

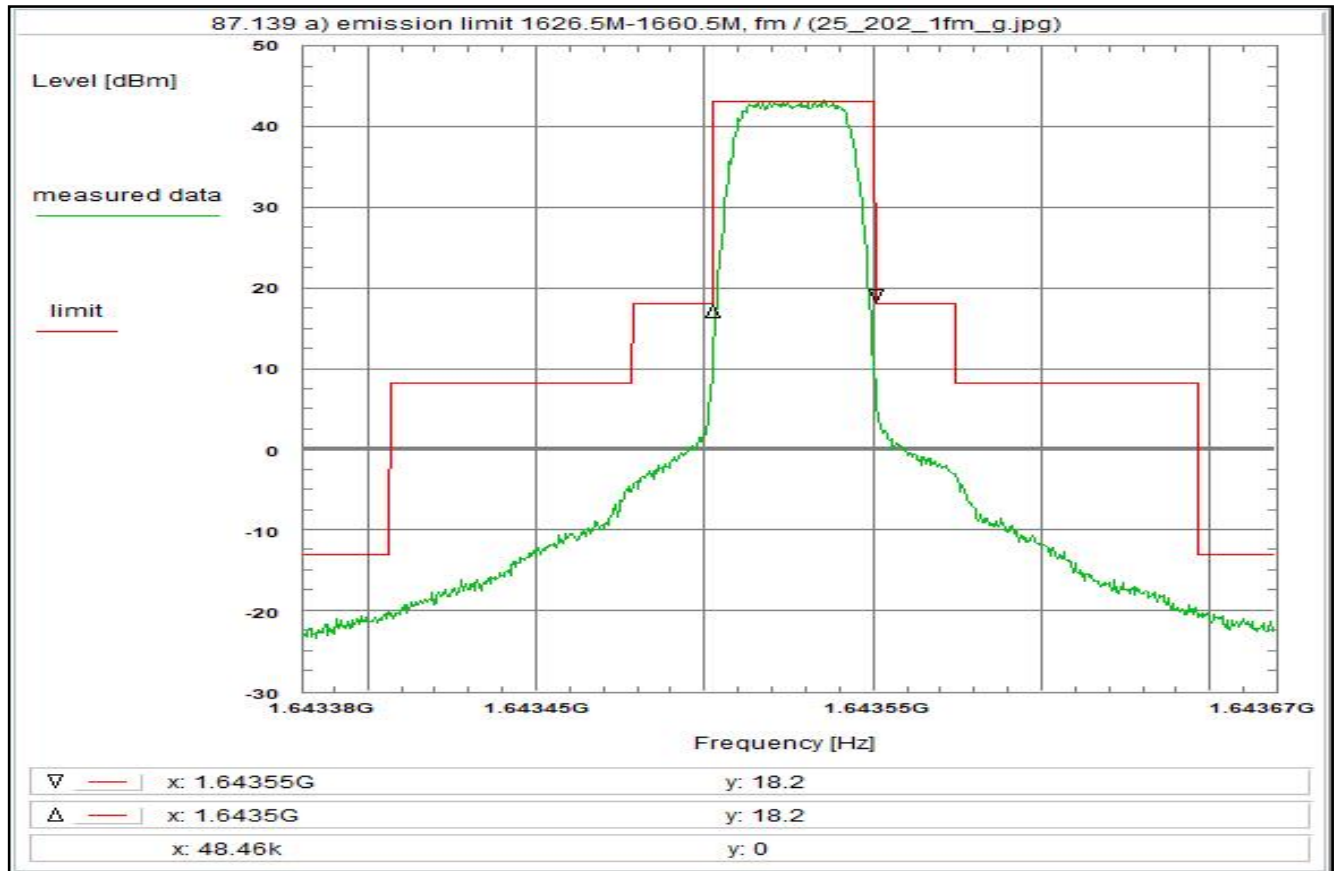
TOTAL CORRECTION: + 50.0 dB

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. 159



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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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: Tue 30/Jun/2020 14:34:26
 Location: CTC advanced GmbH, Laboratory RC-SYS
 Temperature: 22 °C
 Humidity: 55 %
 Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643381 GHz
 Stop frequency: 1.643669 GHz
 Center frequency: 1.643525 GHz
 Frequency span: 288 kHz
 Resolution-BW: 3 kHz
 Video-BW: 10 kHz
 Input attenuation: 30 dB
 Trace-Mode: Clear Write
 Detector-Mode: AVG

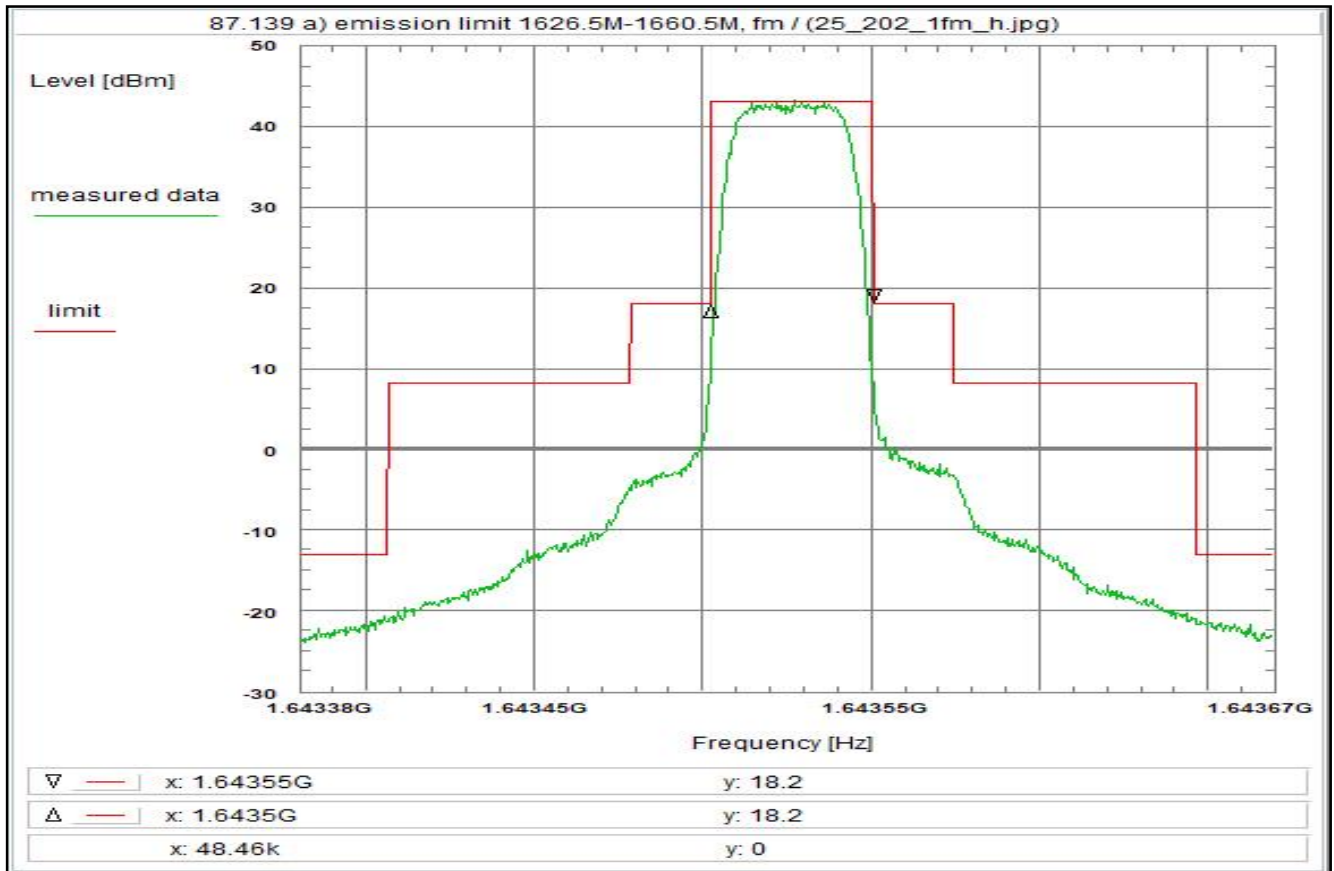
Correction:

Directional coupler	+ 0.0 dB
Coaxial cable (C220)	+ 0.9 dB
DUT-Antenna	+ 12.0 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. 160



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 14:35:15

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643381 GHz

Stop frequency: 1.643669 GHz

Center frequency: 1.643525 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 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

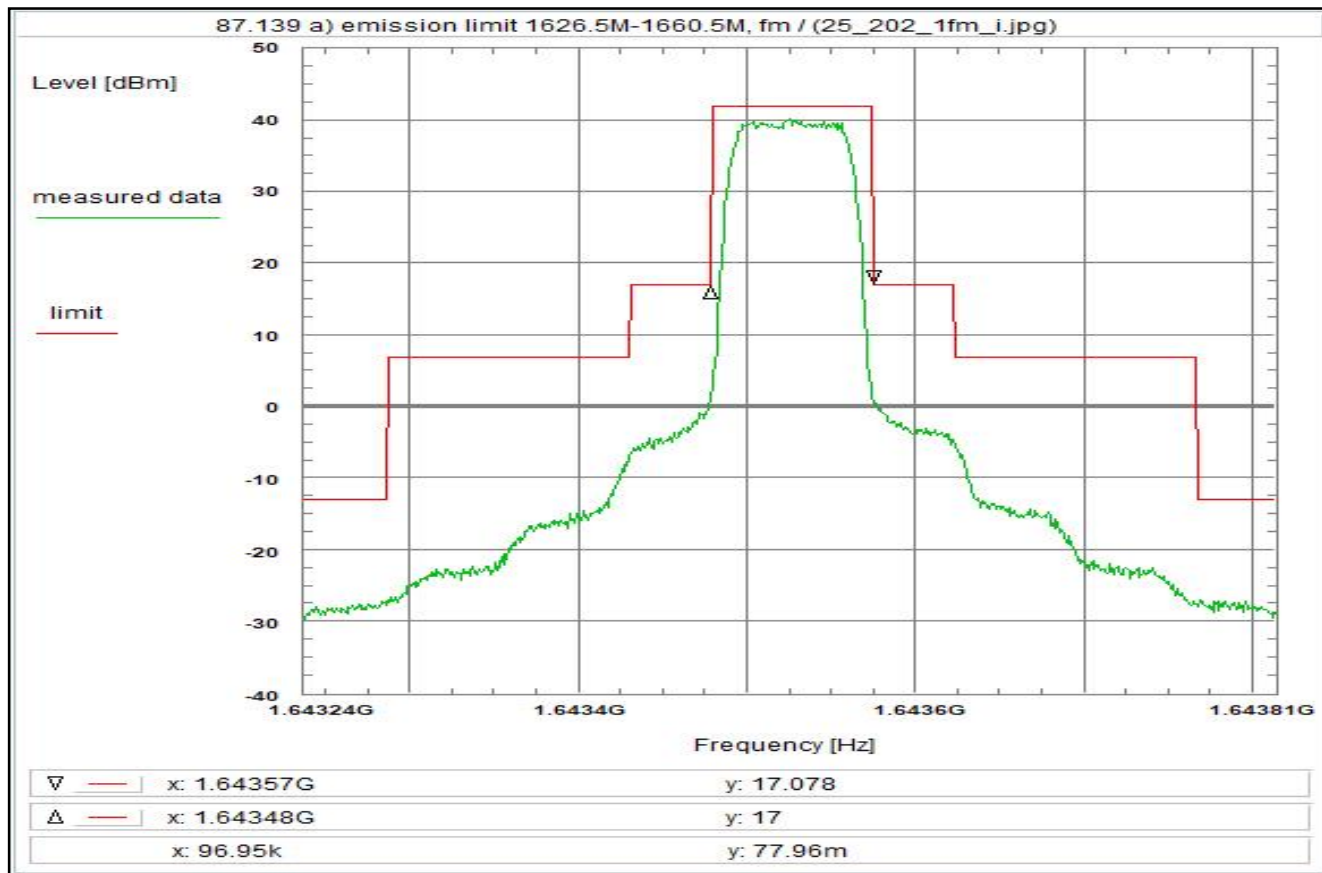
TOTAL CORRECTION: + 50.0 dB

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. 161



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 14:41:49

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643237 GHz

Stop frequency: 1.643813 GHz

Center frequency: 1.643525 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 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

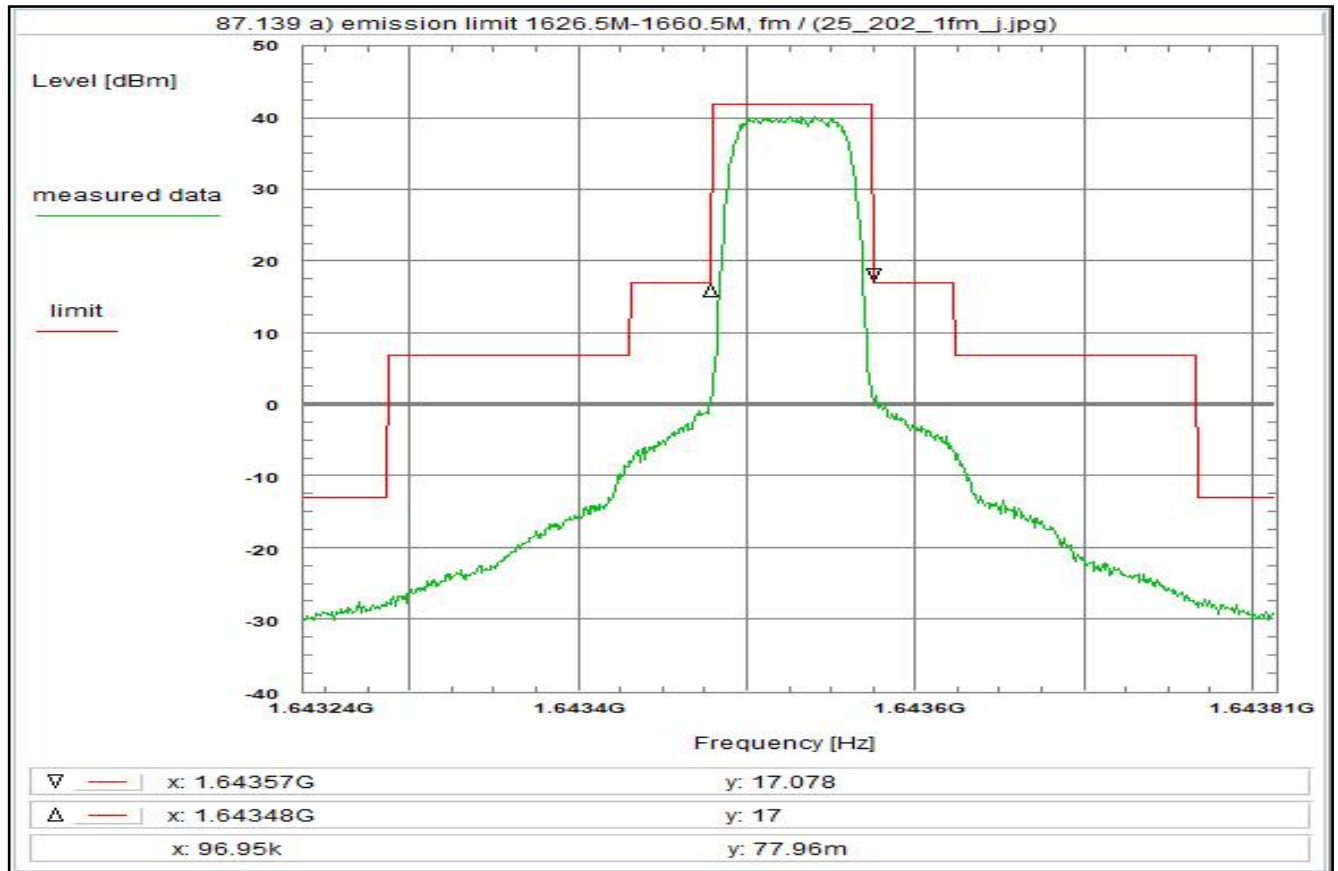
TOTAL CORRECTION: + 50.0 dB

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. 162



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 14:43:16

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643237 GHz

Stop frequency: 1.643813 GHz

Center frequency: 1.643525 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 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

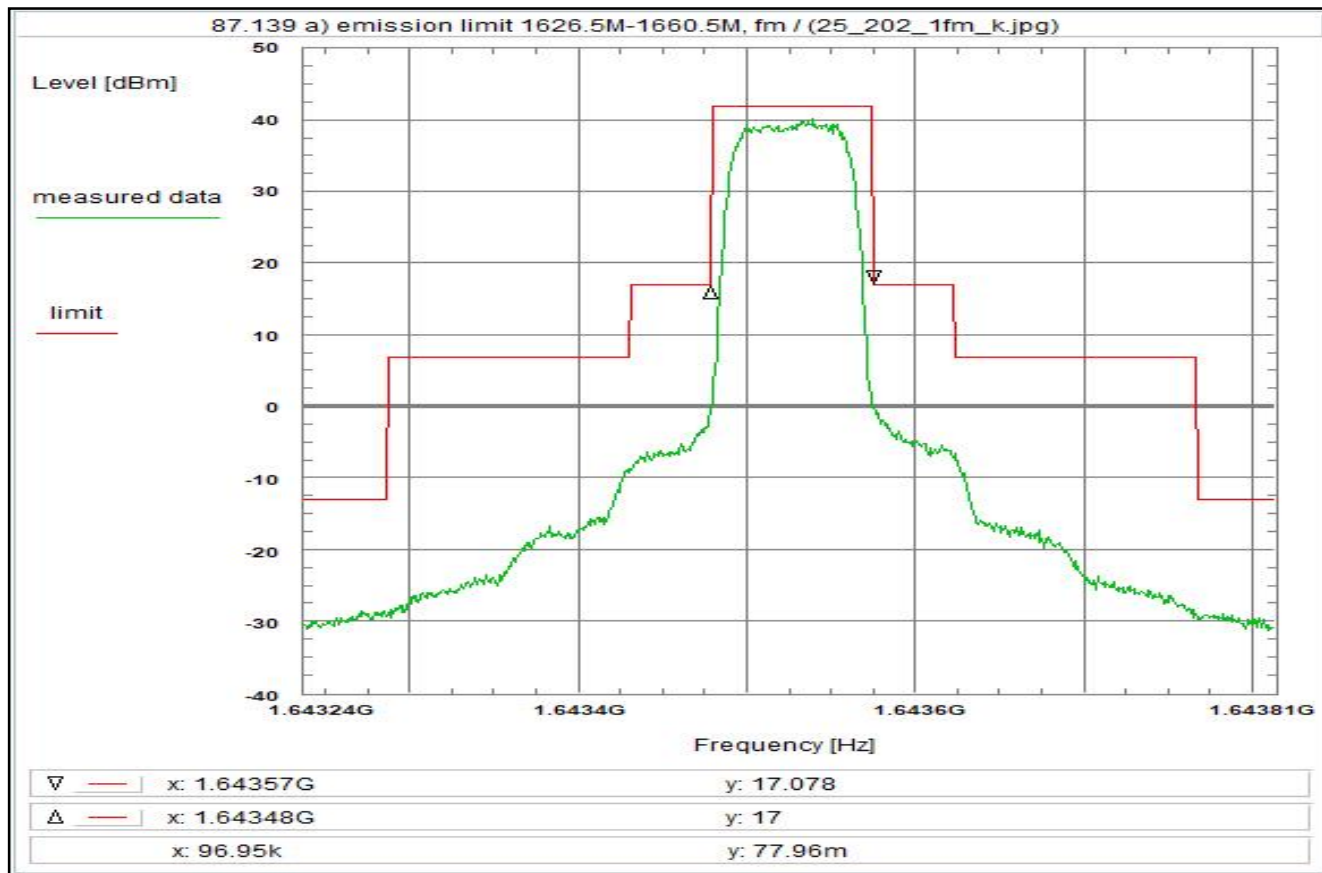
TOTAL CORRECTION: + 50.0 dB

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. 163



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 14:45:55

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643237 GHz

Stop frequency: 1.643813 GHz

Center frequency: 1.643525 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 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

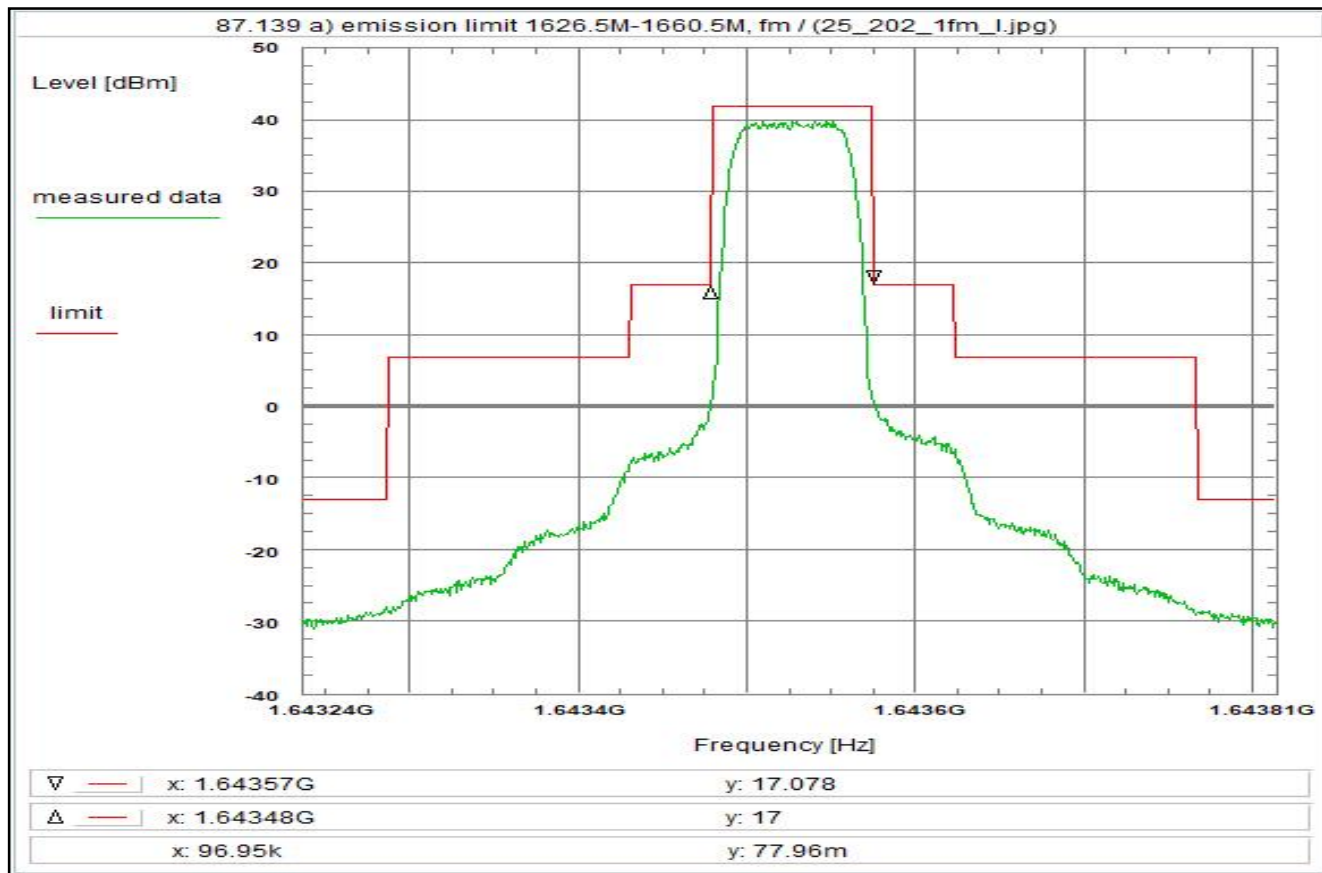
TOTAL CORRECTION: + 50.0 dB

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. 164



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 14:49:23

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.643237 GHz

Stop frequency: 1.643813 GHz

Center frequency: 1.643525 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 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

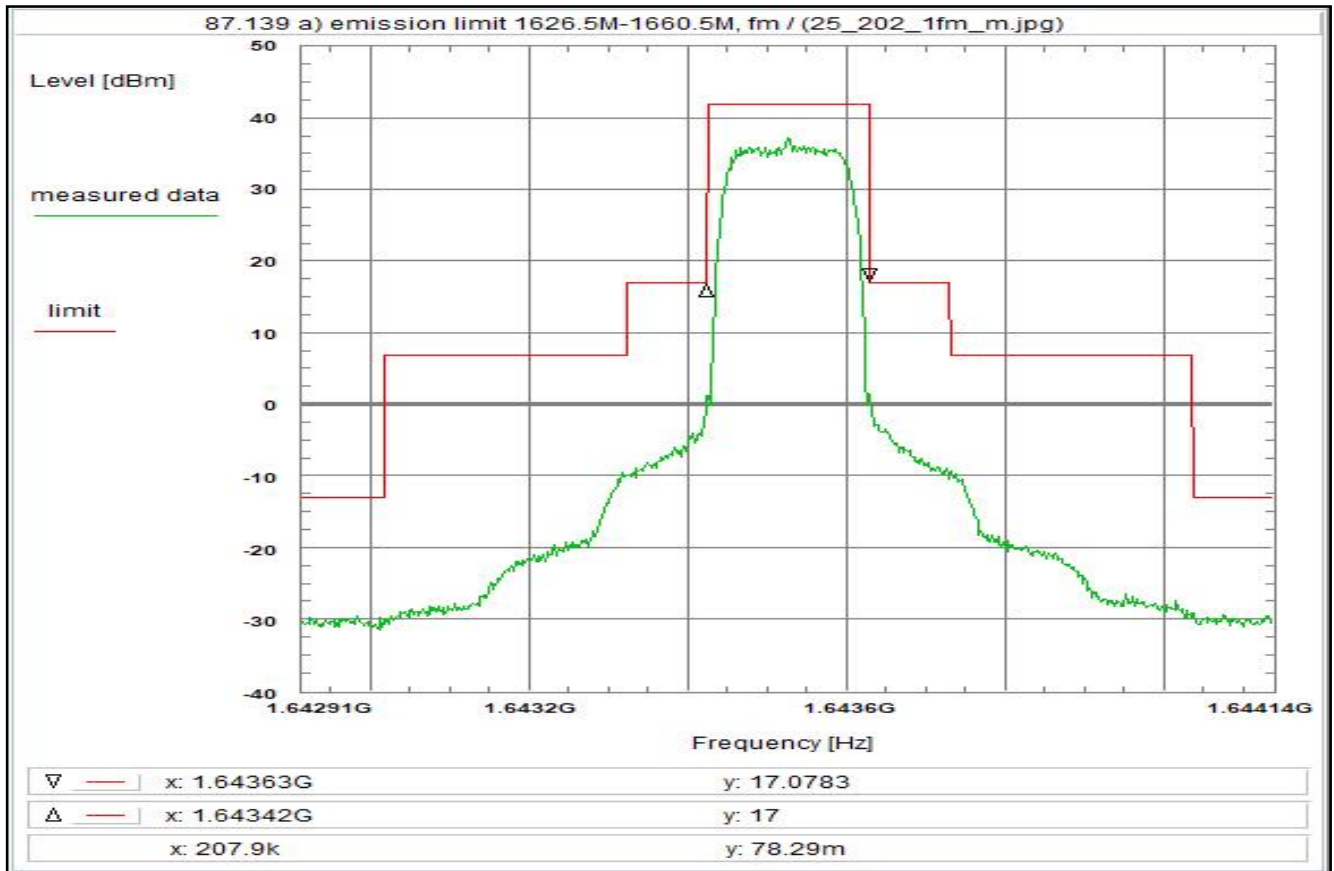
TOTAL CORRECTION: + 50.0 dB

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. 165



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, 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: Tue 30/Jun/2020 14:56:57

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642913 GHz

Stop frequency: 1.644137 GHz

Center frequency: 1.643525 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

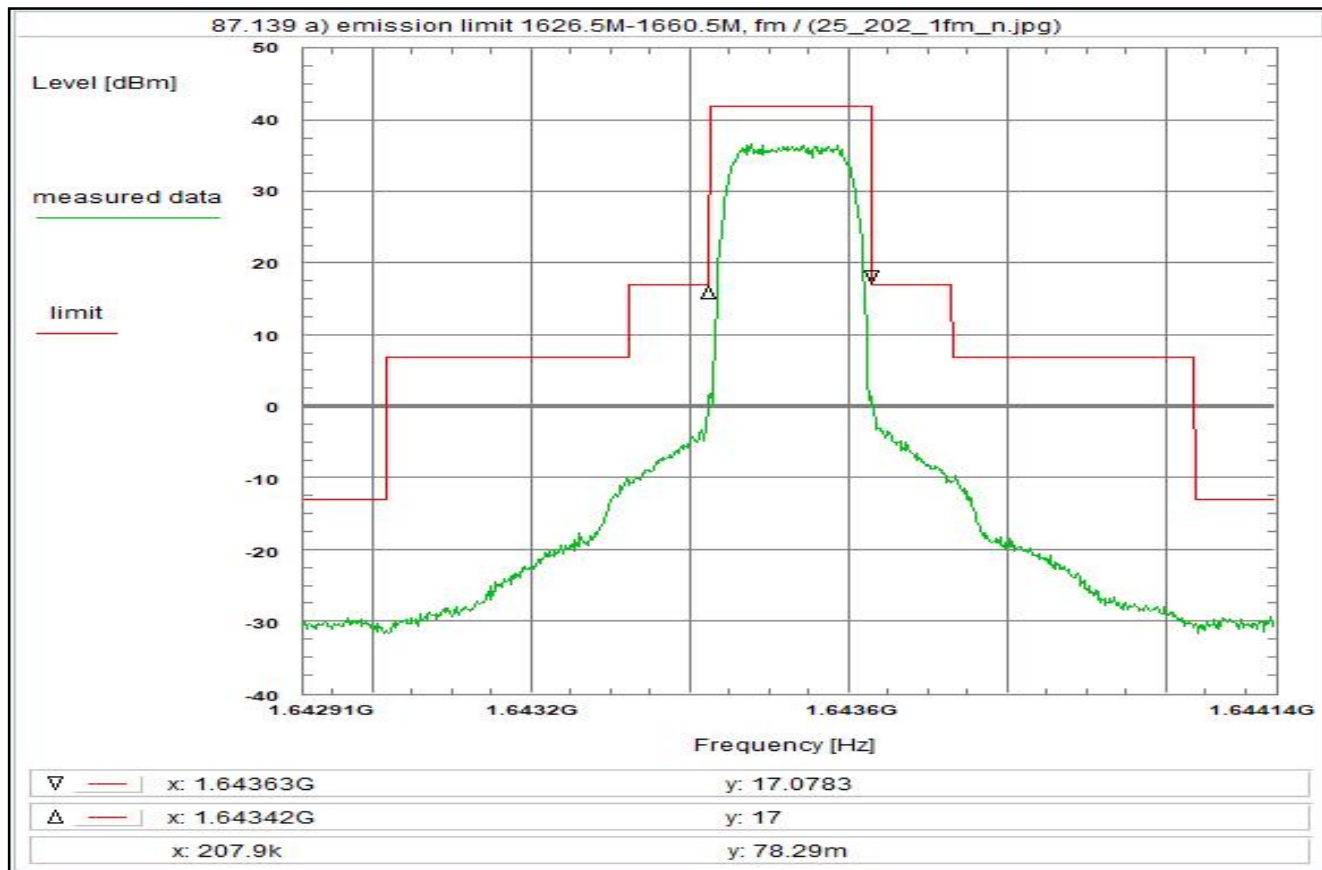
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 166



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 HDR PIESD, R520T4.5XD

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 15:01:45

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642913 GHz

Stop frequency: 1.644137 GHz

Center frequency: 1.643525 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 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

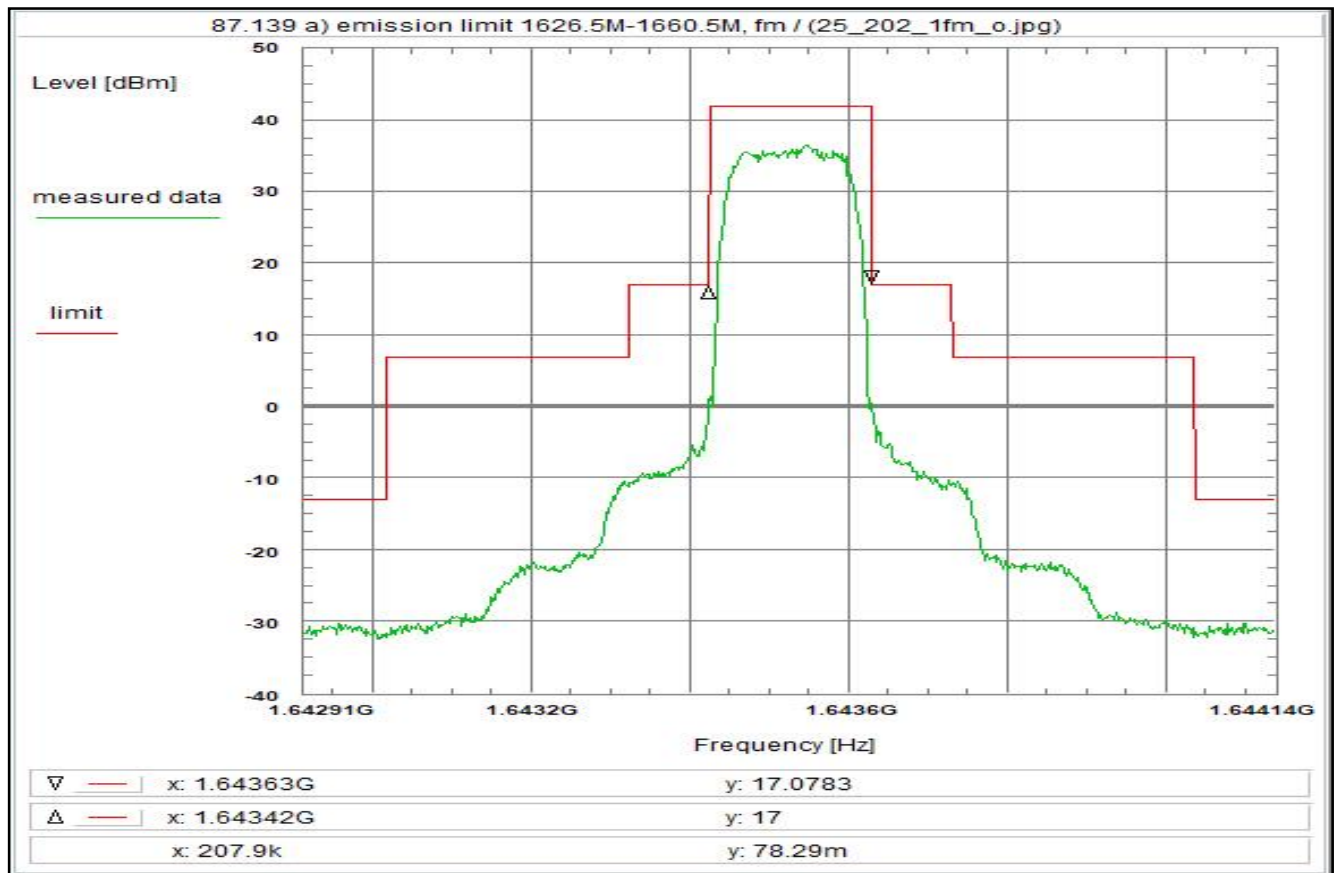
TOTAL CORRECTION: + 50.0 dB

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. 167



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

The mean power of emissions shall be attenuated

below the mean output power of the transmitter

in accordance with the above schedule.

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 HDR PIESD, R5T4.5QD

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 15:03:14

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642913 GHz

Stop frequency: 1.644137 GHz

Center frequency: 1.643525 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

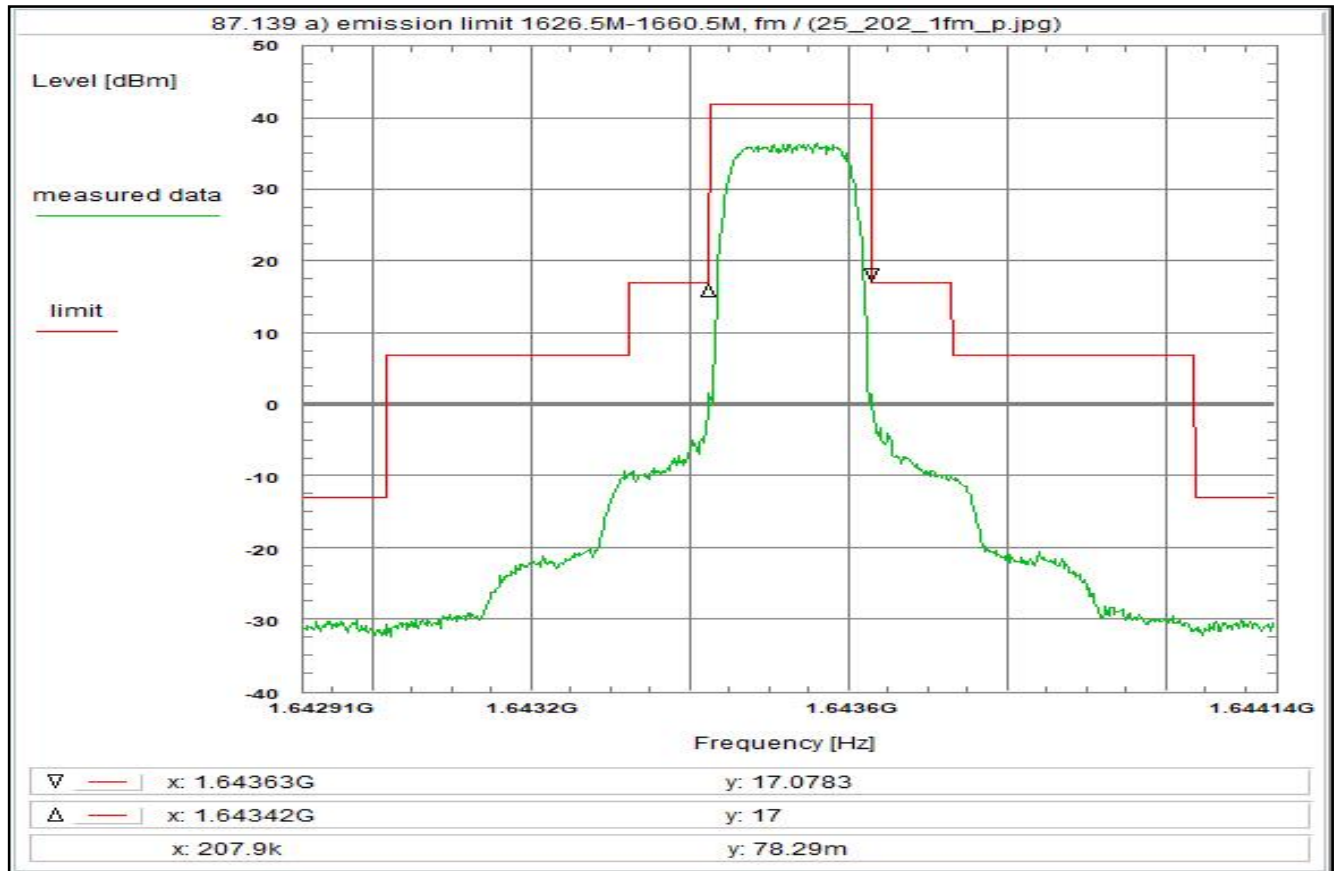
TOTAL CORRECTION: + 50.0 dB

Remarks:

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

Reference of limit = 42 dBm, spectrum mask referenced to necessary bandwidth

Plot No. 168



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: $-43 + 10 \log(P_{max}) \text{ dBc/4kHz} = -43 \text{ dBW}$

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 5.4

A700S Class 6 HDR PIESD, 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 passedEnvironment condition:

Date & Time: Tue 30/Jun/2020 15:04:41

Location: CTC advanced GmbH, Laboratory RC-SYS

Temperature: 22 °C

Humidity: 55 %

Voltage: 115 Vac / 400 Hz

Setup of measurement equipment:

Start frequency: 1.642913 GHz

Stop frequency: 1.644137 GHz

Center frequency: 1.643525 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 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