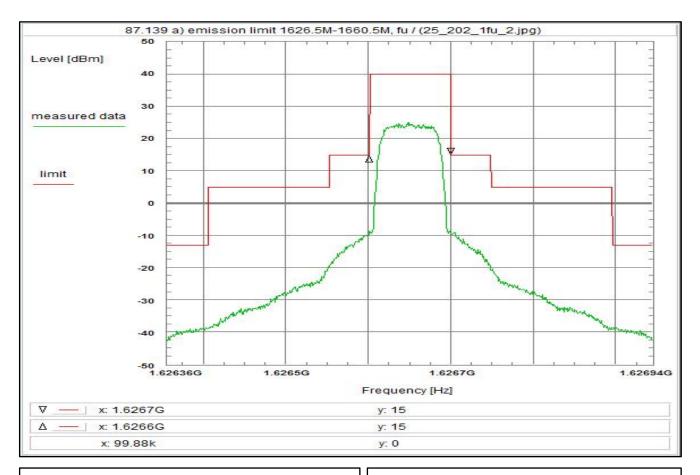


Plot No. 178



Environment condition:

Date & Time:

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+10log(Pmax)dBc/4kHz = -43 dBW The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule.

Test results: see plot (an explicit table was not generated) Operating condition of DUT:

operating condition 1, see test report chapter 6.4 fl, max hold, valid for R5T2XD-R20T2XD-R5T2QD-R20T2QD

see test report chapter 7.2:

Remark:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Test result: Test passed

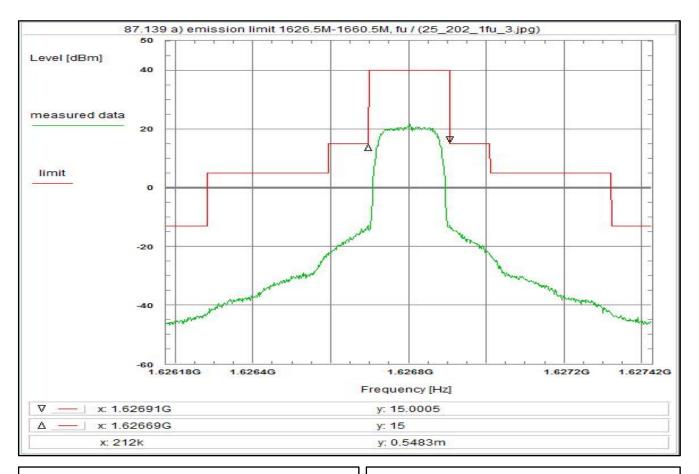
Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1 626356 GHz Start frequency: GHz Stop frequency: 1.626944 Center frequency: 1.62665 Frequency span: Resolution-BW: 588 kHz kHz 3 Video-BW: Input attenuation: 10 dB Trace-Mode: Clear Write Detector-Mode: AVG Correction: (W_RE) 4.5 dB 1.3 dB 11.0 dBi Coaxial cable (C107) DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) 1.2 dB 0.0 dB Atten. between HPA and feedhorn (U330) TOTAL CORRECTION: 31.9 dB 40.9 dB Carrier-on state / Carrier at the lower edge of the band (fu) Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth

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Plot No. 179



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+10log(Pmax)dBc/4kHz = -43 dBW The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule.

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fl, max hold, valid for R5T4.5XD-R20T4.5XD-R5T4.5QD-R20T4.5QD

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

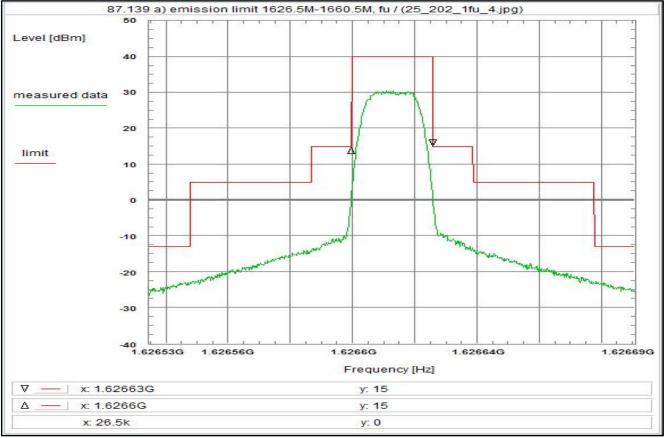
Test result: Test passed

Temperature: 22 Humidity: 55	GmbH, Laboratory RC-SYS °C
Setup of measurement equipment: Start frequency: 1.626176 Stop frequency: 1.627424 Center frequency: 1.6268 Frequency span: 1.248 Resolution-BW: 3 Video-BW: 10 Input attenuation: 10 Trace-Mode: Clear Write Detector-Mode: AVG	GHz GHz MHz kHz kHz
Correction: (W_RE)	11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.9 dB
Carrier-on state / Carrier at the lower edge of Reference limit = 40 dBm / Spectrum mask	, ,

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Plot No. 180

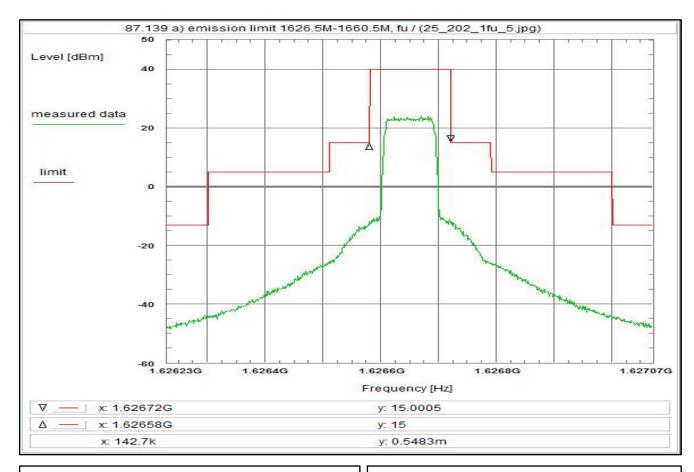


Subclause: 87.139 a)Frequencies, frequency tolerance and emission limitations Emission limitations Modulated rf-carrier at the lower edge of the band (fu) Limit: Limit according to 87.139 a): 50-100% of assigned bw: -25dBc/4kHz 100-250% of assigned bw: -35dBc/4kHz > 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule. Test results: see plot (an explicit table was not generated) Operating condition of DUT: operating condition 1, see test report chapter 6.4 fl, max hold, valid for R20T0.5XD see test report chapter 7.2: <u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330 Remark: Test result: Test passed

Environment condition: Wed 27/Sep/2023 14:05:01 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.6265345 GHz Start frequency: GHz Stop frequency: 1.6266905 Center frequency: 1.6266125 Frequency span: Resolution-BW: 156 kHz kHz 3 Video-BW: Input attenuation: 10 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB 1.3 dB 11.0 dBi Coaxial cable (C107) DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) 1.2 dB 0.0 dB Atten. between HPA and feedhorn (U330) 31.9 dB TOTAL CORRECTION: 40.9 dB Carrier-on state / Carrier at the lower edge of the band (fu) Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth



Plot No. 181



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+10log(Pmax)dBc/4kHz = -43 dBW

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fl, max hold, valid for FR80T2.5X16-FR80T2.5X32-FR80T2.5X64

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

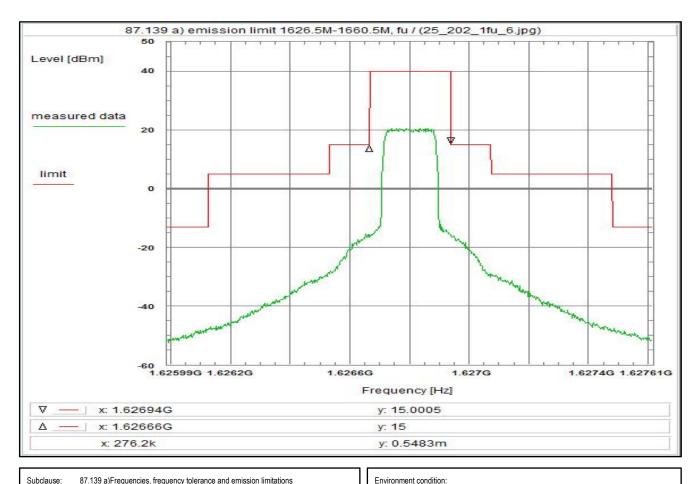
Test result: Test passed

Environment condition: Wed 27/Sep/202 Date & Time: Wed 27/Sep/202 Location: CTC advanced 0 Temperature: 22 Humidity: 55 Voltage: 230	GmbH, Laboratory RC-SYS °C %			
Resolution-BW: 3	GHz GHz kHz kHz kHz			
Correction: (W_RE)	11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.9 dB			
Remarks: Carrier-on state / Carrier at the lower edge of	Remarks: Carrier-on state / Carrier at the lower edge of the band (fu)			
Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth				

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Plot No. 182



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

50-100% of assigned bw: -25dBc/4kHz 100-250% of assigned bw: -35dBc/4kHz > 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW The mean power of emissions shall be attenuated

The mean power of emissions shall be attenuate 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 6.4 fl, max hold, valid for FR80T5X16-FR80T5X32-FR80T5X64

Test setup: see test report chapter 7.2:

Remark:

Test equipment: see test report chapter 7.1-7.2: C107, R001, U330

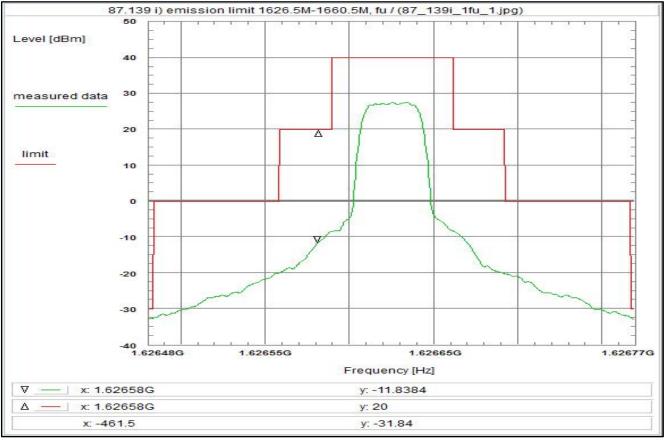
Test result: Test passed

Wed 27/Sep/2023 14:33:05 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1 625987 GHz Start frequency: 1.627613 GHz Stop frequency: Center frequency: Frequency span: Resolution-BW: 1.626 MHz kHz Video-BW: Input attenuation: 10 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB 1.3 dB 11.0 dBi Coaxial cable (C107) DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) 1.2 dB - 0.0 dB Atten. between HPA and feedhorn (U330) 31.9 dB TOTAL CORRECTION: 40.9 dB Carrier-on state / Carrier at the lower edge of the band (fu) Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth

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Plot No. 183



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 6.4
fl, max hold, valid for R5T1XD-R20T1XD-R20T1QD

Test setup:
see test report chapter 7.2:
Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330

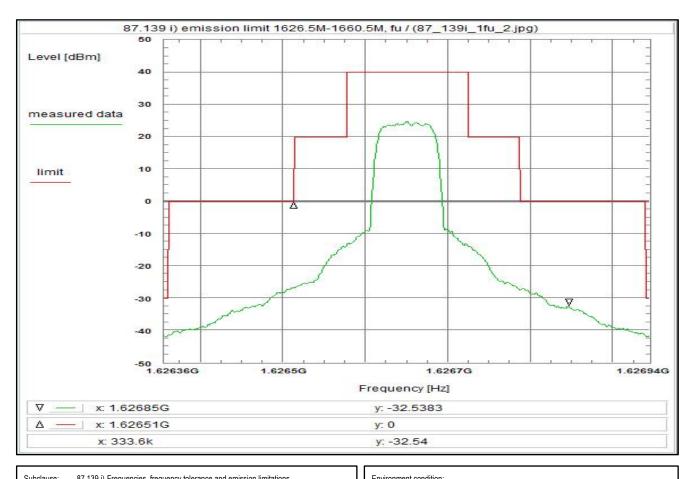
Remark:

Test result: Test passed

Environment condition: Date & Time: Wed 27/Sep/2023 13:55:55 Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.626481 GHz Start frequency: 1.626769 GHz Stop frequency: Center frequency: 1.626625 GHz Frequency span: Resolution-BW: 288 kHz kHz 3 Video-BW: Input attenuation: 10 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB Coaxial cable (C107) + 1.3 dB + 11.0 dBi DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB Atten. between HPA and feedhorn - 0.0 dB + 31.9 dB (U330) 31.9 dB + 40.9 dB TOTAL CORRECTION: Carrier-on state / Carrier at the lower edge of the band (fu) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 184



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Emission limitations Modulated rf-carrier 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 6.4 fl, max hold, valid for R5T2XD-R20T2XD-R5T2QD-R20T2QD

see test report chapter 7.2:

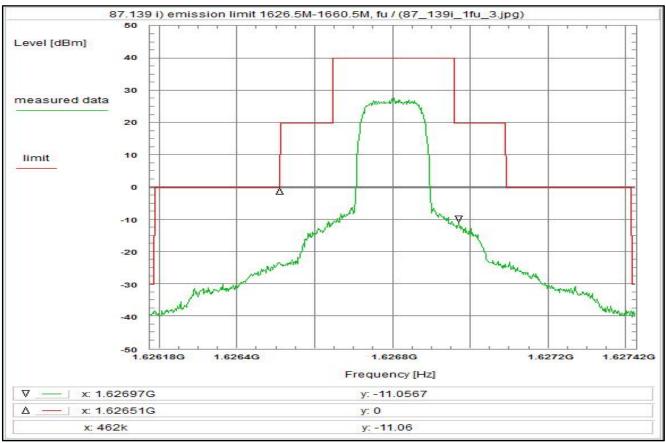
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:				
Date & Time:	Wed 27/Sep/202	23 13:5	58:55	
Location:	CTC advanced (GmbH,	I, Laboratory RC-SYS	
Temperature:	22	°C	•	
Humidity:	55	%		
Voltage:	230	Vac	:	
•				
Setup of measurement e	quipment:			
Start frequency:	1.626356	GHz	Z	
Stop frequency:	1.626944	GHz	Z	
Center frequency:	1.62665	GHz	Z	
Frequency span:	588	kHz		
Resolution-BW:	3	kHz		
Video-BW:	10	Hz		
Input attenuation:	10	dB		
Trace-Mode:	Clear Write			
Detector-Mode:	AVG			
Correction:				
(W_RE)	-	4.5	dB	
Coaxial cable (C107)	+	1.3	dB	
DUT-Antenna (on-axis)	+	11.0) dBi	
Test antenna	+	0.0	dB	
BW correction factor (3k	-> 4k) +	1.2	dB	
Atten. between HPA and	feedhorn -	0.0	dB	
(U330)	+	31.9	9 dB	
TOTAL CORRECTION:	+	40.9	9 dB	
Remarks:				
Carrier-on state / Carrier	at the lower edge	of the b	band (fu)	
For EIRP calculation:				
'worst-case' = maximum	antenna gain			



Plot No. 185



Subclause:

87.139 i) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier 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 6.4
fl, max hold, valid for R5T4.5XD-R20T4.5XD-R5T4.5QD-R20T4.5QD

Test setup:
see test report chapter 7.2:

Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330

Remark:

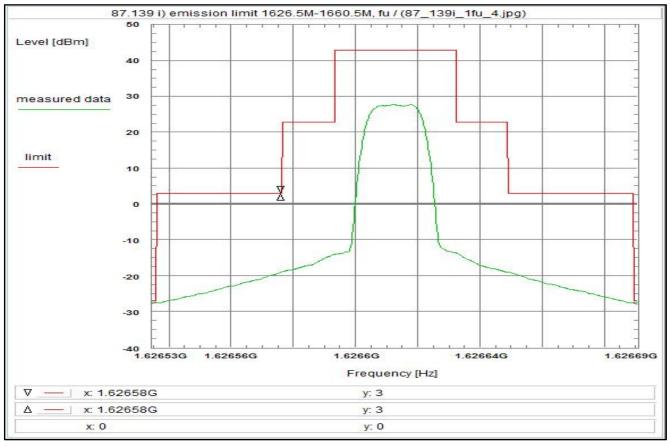
Test result: Test passed

Environment condition: Wed 27/Sep/2023 14:01:07 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1 626176 GHz Start frequency: Stop frequency: 1.627424 GHz Center frequency: 1.6268 Frequency span: Resolution-BW: 1.248 MHz kHz 3 Video-BW: Input attenuation: 10 dB Trace-Mode: Max-Hold Detector-Mode: AVG Correction: (W_RE) 4.5 dB 1.3 dB 11.0 dBi Coaxial cable (C107) DUT-Antenna (on-axis) BW correction factor (3k -> 4k) 1.2 dB - 0.0 dB Atten. between HPA and feedhorn (U330) 31.9 dB + 40.9 dB TOTAL CORRECTION: Carrier-on state / Carrier at the lower edge of the band (fu) For EIRP calculation: worst-case' = maximum antenna gain

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Plot No. 186



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 6.4 fl, max hold, valid for R20T0.5XD

Test setup:
see test report chapter 7.2:

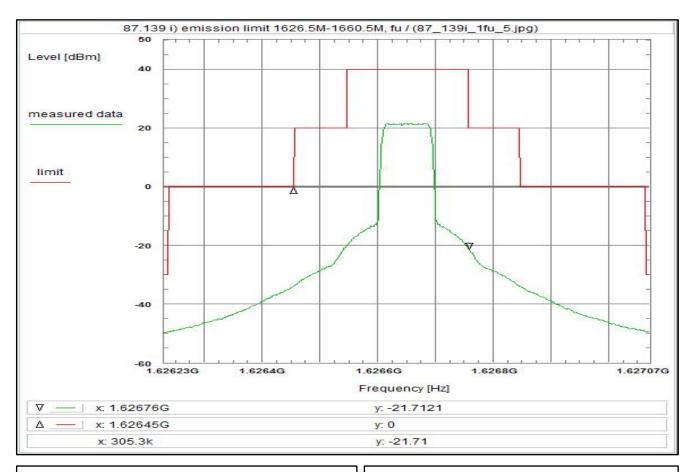
Test equipment:
see test report chapter 7.1-7.2: R001

Environment condition: Wed 27/Sep/2023 14:23:29 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.6265345 GHz Start frequency: Stop frequency: 1.6266905 GHz Center frequency: 1.6266125 Frequency span: Resolution-BW: 156 kHz kHz 3 Video-BW: Input attenuation: 0 dB Clear Write Trace-Mode: Detector-Mode: Neg Peak Correction: (W_RE) 4.5 dB Coaxial cable (C107) + 1.3 dB + 11.0 dBi DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB Atten. between HPA and feedhorn - 0.0 dB + 31.9 dB (U330) 31.9 dB + 40.9 dB TOTAL CORRECTION: Carrier-on state / Carrier at the lower edge of the band (fu) For EIRP calculation: worst-case' = maximum antenna gain

Remark:



Plot No. 187



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 6.4 fl, max hold, valid for FR80T2.5X16-FR80T2.5X32-FR80T2.5X64

see test report chapter 7.2:

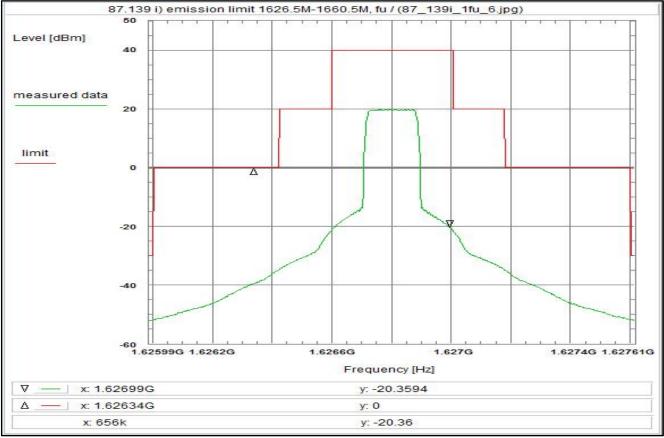
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition: Date & Time: Wed 27/Sep/202 Location: CTC advanced C Temperature: 22 Humidity: 55 Voltage: 230	3 14:27:37 3mbH, Laboratory RC-SYS °C % Vac
Setup of measurement equipment: Start frequency: 1.62623 Stop frequency: 1.62707 Center frequency: 1.62665 Frequency span: 840 Resolution-BW: 3 Video-BW: 1 Input attenuation: 0 Trace-Mode: Clear Write Detector-Mode: Neg Peak	GHz GHz kHz
Correction: (W_RE) Coaxial cable (C107) + DUT-Antenna (on-axis) + Test antenna + BW correction factor (3k -> 4k) + Atten. between HPA and feedhom - (U330) + TOTAL CORRECTION: + Remarks: Carrier-on state / Carrier at the lower edge of	11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.9 dB 40.9 dB
For EIRP calculation: worst-case = maximum antenna gain	or the band (tu)



Plot No. 188



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 6.4 fl, max hold, valid for FR80T5X16-FR80T5X32-FR80T5X64

Test setup: see test report chapter 7.2:

Test equipment: see test report chapter 7.1-7.2: C107, R001, U330

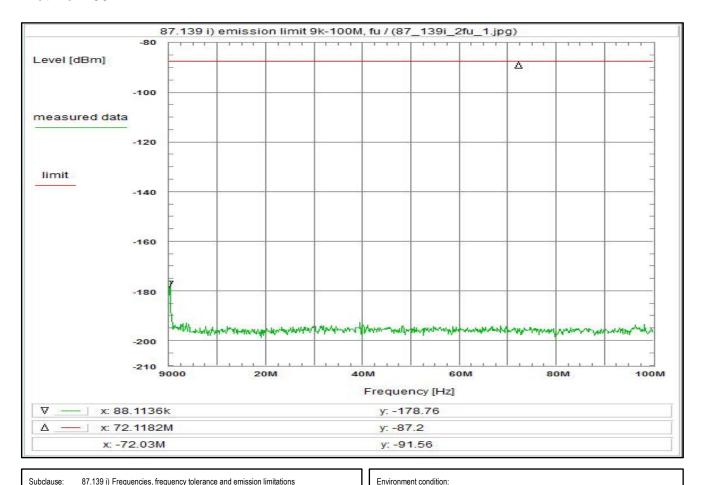
Remark:

Test result: Test passed

Environment condition: Date & Time: Wed 27/Sep/2023 14:33:58 Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1 625987 GHz Start frequency: 1.627613 GHz Stop frequency: Center frequency: Frequency span: Resolution-BW: 1.626 MHz kHz 3 Video-BW: Input attenuation: 10 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB Coaxial cable (C107) + 1.3 dB + 11.0 dBi DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB + 31.9 dB Atten. between HPA and feedhorn (U330) + 40.9 dB TOTAL CORRECTION: Carrier-on state / Carrier at the lower edge of the band (fu) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 189



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

Limit:
Limit according to 87.139(i)(1)

Limit according to 87.139()(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 6.4 fl, max hold, valid for all modulations

Test setup:
see test report chapter 7.2:

 $\frac{\text{Test equipment:}}{\text{see test report chapter 7.1-7.2: C107, R001, U330, W_RE}}$

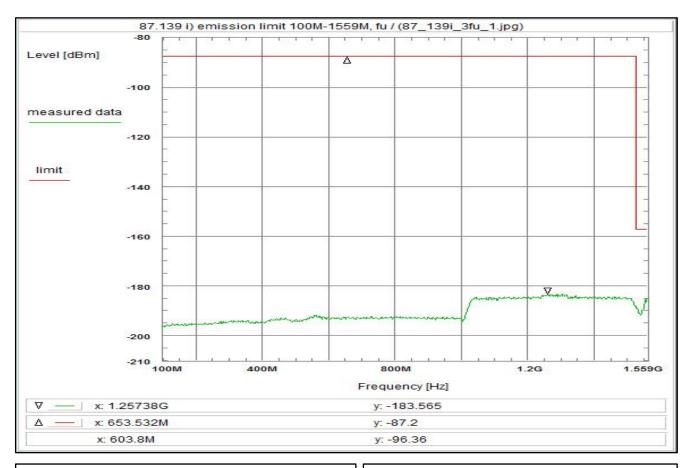
Test result: Test passed

Remark:

Wed 27/Sep/2023 14:41:19 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 9 kHz Start frequency: Stop frequency: 100 MHz Center frequency: 50.0045 MHz Frequency span: Resolution-BW: 99.991 MHz kHz Video-BW: 30 Input attenuation: 0 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 120.0 dB Coaxial cable (C107) + 0.5 dB + 11.0 dBi DUT-Antenna (on-axis) BW correction factor (3k -> 4k) 1.2 dB - 0.0 dB Atten. between HPA and feedhorn (U330) 31.3 dB TOTAL CORRECTION: -76.0 dB Carrier-on state / Carrier at the lower edge of the band (fu) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 190



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Emission limitations

Modulated rf-carrier 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 6.4 fl, valid for all modulations

see test report chapter 7.2:

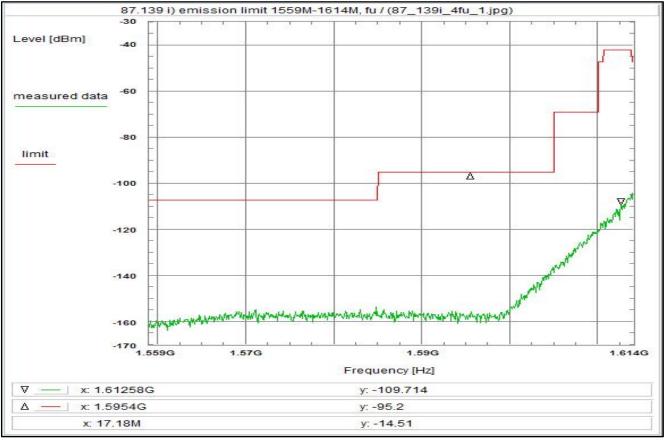
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330, W_RE

Remark:

Temperature: Humidity:		GmbH, Laboratory RC-SYS °C %
Center frequency: 8: Frequency span: 1 Resolution-BW: Video-BW: Input attenuation: Trace-Mode: Clear V	3 30 0	GHz MHz GHz kHz
Correction: (W_RE) Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (3k -> 4k) Atten. between HPA and feedhom (U330) TOTAL CORRECTION:	+ + + + - + -	11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.7 dB
Remarks: Carrier-on state / Carrier at the lower of For EIRP calculation: worst-case' = maximum antenna gair	•	of the band (fu)



Plot No. 191



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 6.4
fl, valid for all modulations

Test setup:
see test report chapter 7.2:

Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330, W_RE

Remark:

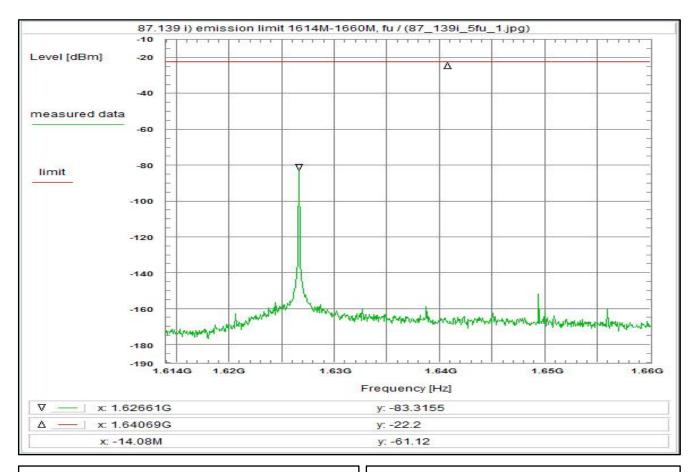
Test result: Test passed

Environment condition: Date & Time: Location: Tue 26/Sep/202 Location: Temperature: Humidity: 55 Voltage: 20 Tue 26/Sep/202 To advanced 55 Voltage: 230	GmbH, Laboratory RC-SYS °C %
Setup of measurement equipment: Start frequency: 1.559 Stop frequency: 1.614 Center frequency: 1.5865 Frequency span: 55 Resolution-BW: 3 Video-BW: 30 Input attenuation: 0 Trace-Mode: Clear Write Detector-Mode: AVG	GHz GHz MHz kHz
Correction: (W_RE)	11.0 dBi 0.0 dB 25.2 dB 0.0 dB 31.9 dB
Remarks: Carrier-on state / Carrier at the lower edge For EIRP calculation: 'worst-case' = maximum antenna gain	of the band (fu)

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Plot No. 192



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 6.4 fl, valid for all modulations

see test report chapter 7.2:

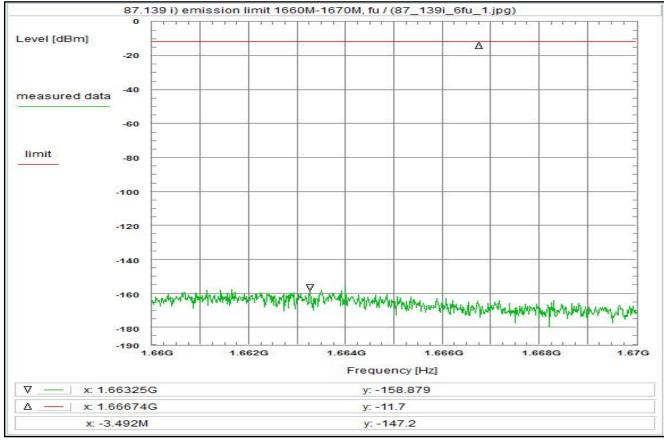
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Temperature: 22 Humidity: 55	GmbH, Laboratory RC-SYS °C
	GHz GHz MHz kHz kHz
Correction: (W_RE) Coaxial cable (C107) +- DUT-Antenna (on-axis) +- Test antenna BW correction factor (3k -> 4k) +- Atten. between HPA and feedhom (U330) +- TOTAL CORRECTION:	11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.9 dB
Remarks: Carrier-on state / Carrier at the lower edge of For EIRP calculation: worst-case = maximum antenna gain	of the band (fu)



Plot No. 193



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 6.4
fl, valid for all modulations

Test setup:
see test report chapter 7.2:

Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330

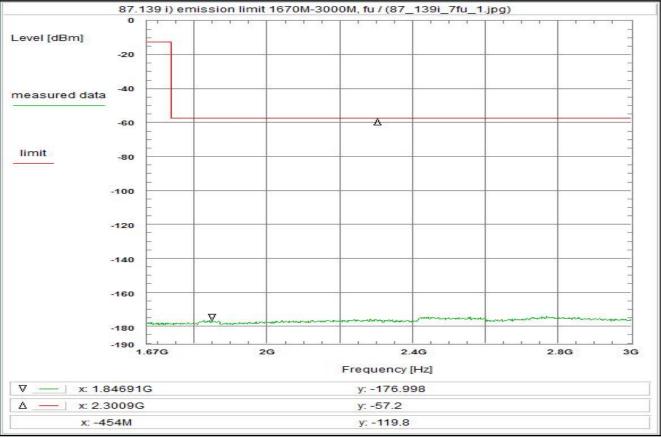
Remark:

Test result: Test passed

Environment condition: Tue 26/Sep/2023 20:59:59 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.66 GHz Start frequency: 1.67 GHz Stop frequency: Center frequency: Frequency span: Resolution-BW: 10 MHz kHz 3 Video-BW: 30 Input attenuation: 0 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 104.1 dB Coaxial cable (C107) 1.4 dB 11.0 dBi DUT-Antenna (on-axis) BW correction factor (3k -> 20k) + 8.2 dB - 0.0 dB + 31.9 dB Atten. between HPA and feedhorn (U330) TOTAL CORRECTION: -51.6 dB Carrier-on state / Carrier at the lower edge of the band (fu) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 194



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations
Emission limitations
Modulated rf-carrier 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 6.4 fl, valid for all modulations

Test setup:
see test report chapter 7.2:

Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330

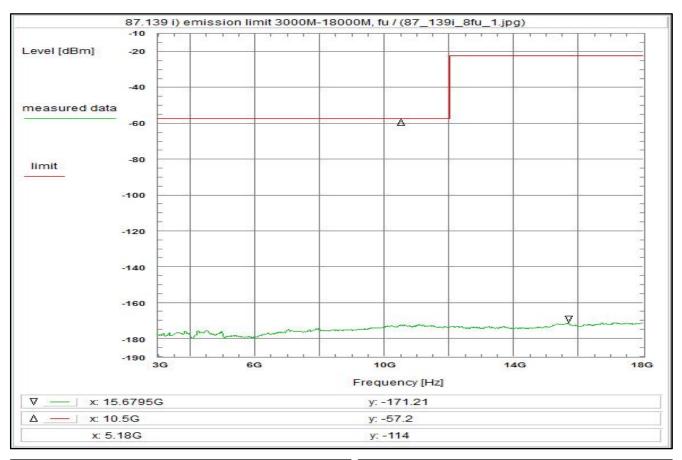
Remark:

Test result: Test passed

Environment condition: Tue 26/Sep/2023 21:01:17 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.67 GHz Start frequency: Stop frequency: 3 GHz Center frequency: 2.335 GHz Frequency span: Resolution-BW: 1.33 GHz kHz Video-BW: 30 Input attenuation: 0 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 104.1 dB Coaxial cable (C107) + 1.5 dB + 11.0 dBi DUT-Antenna (on-axis) BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB + 32.0 dB Atten. between HPA and feedhorn (U330) TOTAL CORRECTION: -58.4 dB Remarks: Carrier-on state / Carrier at the lower edge of the band (fu) For EIRP calculation: 'worst-case' = maximum antenna gain



Plot No. 195



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Emission limitations Modulated rf-carrier 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 6.4 fl, valid for all modulations

see test report chapter 7.2:

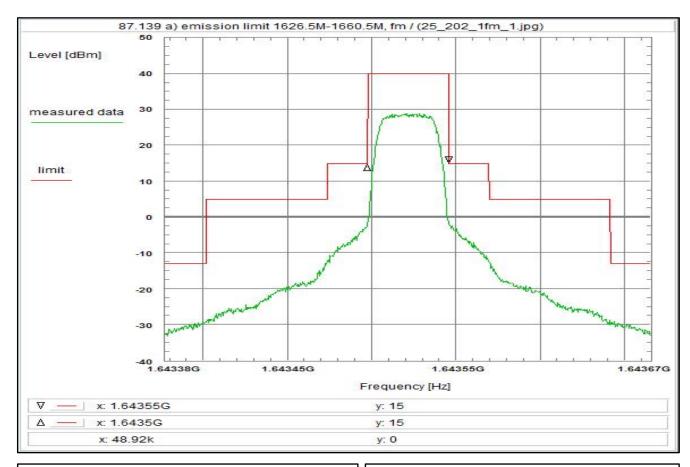
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Temperature: 2 Humidity: 5	ed Gr 22 55	21:00:57 mbH, Laboratory RC-SYS °C % Vac
Center frequency: 10 Frequency span: Resolution-BW:	18 0.5 15 10 00 0 rite	GHz GHz GHz GHz kHz kHz dB
Correction: (W_RE) Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (10k -> 4k) Atten. between HPA and feedhorn (U330) TOTAL CORRECTION:	+ + + + + + + + + + + + + + + + + + + +	104.1 dB 3.3 dB 11.0 dBi 0.0 dB 4.0 dB 0.0 dB 33.4 dB -60.4 dB
Remarks: Carrier-on state / Carrier at the lower ed For EIRP calculation: 'worst-case' = maximum antenna gain	lge of	f the band (fu)



Plot No. 196



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
2 550% of assigned bw: -33+10log(Pmax)dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule.

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4 fm, max hold, valid for R5T1XD-R20T1XD-R20T1QD

Test setup:
see test report chapter 7.2:

Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330, W_RE

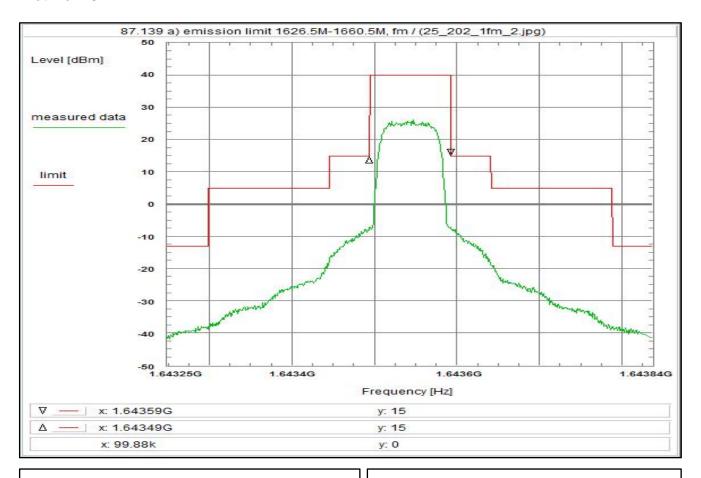
Remark:

Test result: Test passed

Environment condition: Wed 27/Sep/2023 14:53:02 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.64337725 GHz Start frequency: 1.64366525 GHz Stop frequency: Center frequency: 1.64352125 Frequency span: Resolution-BW: 288 kHz kHz 3 Video-BW: Input attenuation: 10 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB 1.3 dB 11.0 dBi Coaxial cable (C107) DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) 1.2 dB - 0.0 dB Atten. between HPA and feedhorn (U330) 31.9 dB TOTAL CORRECTION: 40.9 dB Carrier-on state / Carrier in the middle of the band (fm) Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth



Plot No. 197



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+10log(Pmax)dBc/4kHz = -43 dBW

The mean power of emissions shall be attenuated

below the mean output power of the transmitter in accordance with the above schedule.

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fm, max hold, valid for R5T2XD-R20T2XD-R5T2QD-R20T2QD

see test report chapter 7.2:

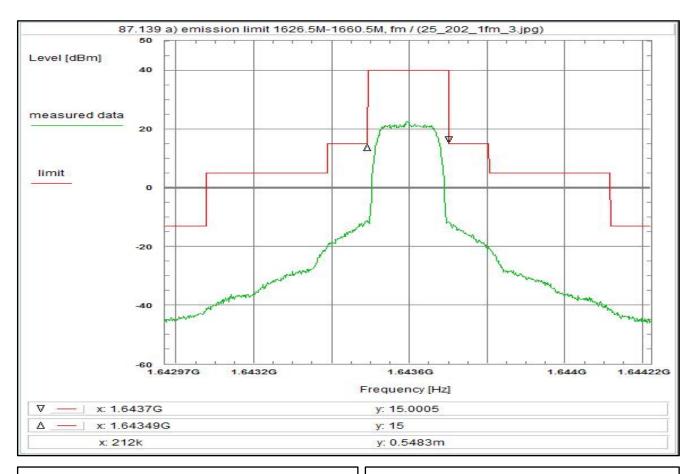
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:			
Date & Time:	Wed 27/Sep/202	23 14:5	6:21
Location:	CTC advanced (GmbH,	Laboratory RC-SYS
Temperature:	22		
Humidity:	55		
Voltage:	230	Vac	
Setup of measurement e			
Start frequency:	1.6432485		
Stop frequency:	1.6438365		
Center frequency:	1.6435425		
Frequency span:		kHz	
Resolution-BW:	3	kHz	
Video-BW:		kHz	
Input attenuation:	15	dB	
Detector-Mode:	AVG		
Correction: (W_RE) Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (3k Atten. between HPA and (U330) TOTAL CORRECTION: Remarks: Carrier-on state / Carrier Reference limit = 40 dBm	feedhorn - + + in the middle of the	11.0 0.0 1.2 0.0 31.9 40.9	dB dBi dB dB dB dB
(W_RE) Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (3k Atten. between HPA and (U330) TOTAL CORRECTION: Remarks: Carrier-on state / Carrier	+ + + + + + + + + + + + + + + + + + +	1.3 11.0 0.0 1.2 0.0 31.9 40.9	dB dBi dB dB dB dB dB



Plot No. 198



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+10log(Pmax)dBc/4kHz = -43 dBW The mean power of emissions shall be attenuated

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

below the mean output power of the transmitter in accordance with the above schedule.

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, max hold, valid for R5T4.5XD-R20T4.5XD-R5T4.5QD-R20T4.5QD

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

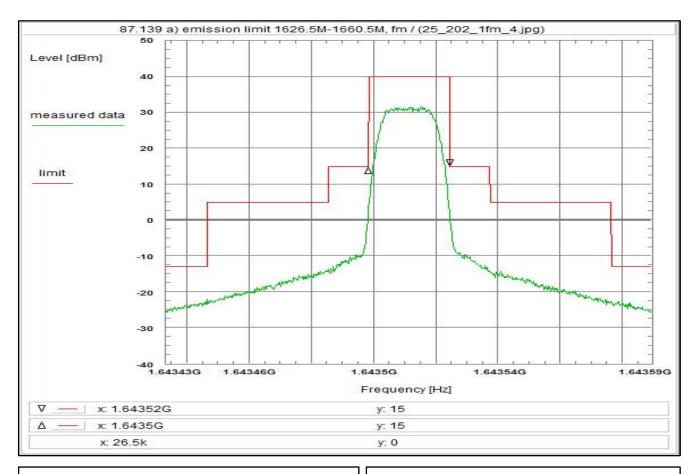
Test result: Test passed

Environment condition: Date & Time: Wed 27/Sep/2023 14:57:37	atory RC-SYS			
Setup of measurement equipment: Start frequency: 1.642971 GHz Stop frequency: 1.644219 GHz Center frequency: 1.643595 GHz Frequency span: 1.248 MHz Resolution-BW: 3 kHz Video-BW: 10 kHz Input attenuation: 15 dB Trace-Mode: Clear Write Detector-Mode: AVG				
Correction: (W_RE)				
Remarks: Carrier-on state / Carrier in the middle of the band (fm)				
Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth				

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Plot No. 199



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+10log(Pmax)dBc/4kHz = -43 dBW

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, max hold, valid for R20T0.5XD

see test report chapter 7.2:

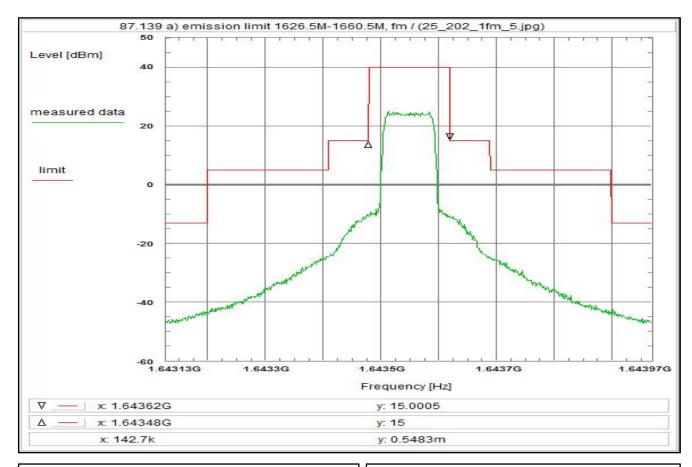
<u>Test equipment:</u> see test report chapter 7.1-7.2: R001

Remark:

Environment condition: Date & Time: Wed 27/Sep/202 Location: CTC advanced C Temperature: 22 Humidity: 55 Voltage: 230	GmbH, Laboratory RC-SYS °C %			
Resolution-BW: 3	GHz GHz kHz kHz kHz			
DUT-Antenna (on-axis) + Test antenna +	1.2 dB 0.0 dB 31.9 dB			
Remarks: Carrier-on state / Carrier in the middle of the band (fm)				
Reference limit = 40 dBm / Spectrum mask	referenced to necessary bandwidth			



Plot No. 200



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+10log(Pmax)dBc/4kHz = -43 dBW

The mean power of emissions shall be attenuated

below the mean output power of the transmitter in accordance with the above schedule.

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, max hold, valid for FR80T2.5X16-FR80T2.5X32-FR80T2.5X64

see test report chapter 7.2:

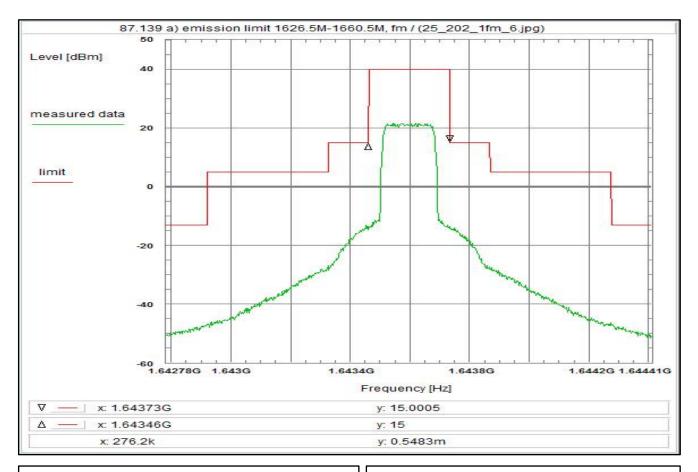
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Location: Temperature: Humidity:	22 55	nbH, Laboratory RC-SYS °C %	
Voltage: Setup of measurement equ Start frequency: Stop frequency: Center frequency: Frequency span: Resolution-BW: Video-BW: Input attenuation: Trace-Mode:	1.6431275 1.6439675 1.6435475 840 3 10 15 Clear Write	GHz GHz GHz	
Detector-Mode: Correction: (W, RE) Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (3k -> Atten. between HPA and fe (U330) TOTAL CORRECTION:	4k) +	4.5 dB 1.3 dB 11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.9 dB	
Remarks: Carrier-on state / Carrier in the middle of the band (fm) Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth			



Plot No. 201



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+10log(Pmax)dBc/4kHz = -43 dBW

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

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fm, max hold, valid for FR80T5X16-FR80T5X32-FR80T5X64

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

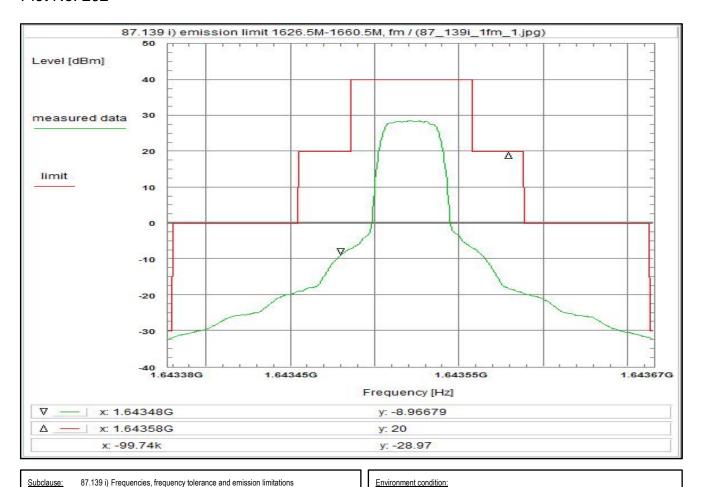
Test result: Test passed

Environment condition:	SmbH, Laboratory RC-SYS °C %			
Setup of measurement equipment: Start frequency: 1.642782 Stop frequency: 1.644408 Center frequency: 1.643595 Frequency span: 1.626 Resolution-BW: 3 Video-BW: 10 Input attenuation: 15 Trace-Mode: Clear Write Detector-Mode: AVG	GHz GHz MHz kHz kHz			
Correction: (W_RE) - Coaxial cable (C107) + DUT-Antenna (on-axis) + Test antenna + BW correction factor (3k -> 4k) + Atten. between HPA and feedhom - (U330) + TOTAL CORRECTION: +	11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.9 dB 40.9 dB			
Carrier-on state / Carrier in the middle of the band (fm) Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth				

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Plot No. 202



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Emission limitations Modulated rf-carrier in the middle of the band (fm) Limit: Limit according to 87.139(i)(1)
The mean power of emissions shall be attenuated

below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fm, max hold, valid for R5T1XD-R20T1XD-R20T1QD

see test report chapter 7.2:

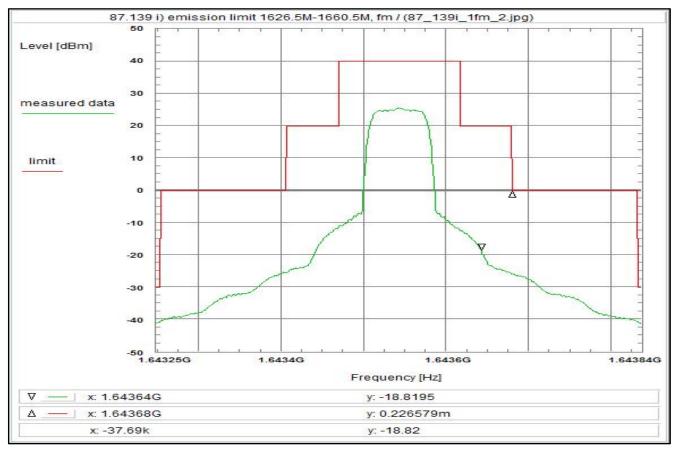
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Date & Time: Location: Temperature:	22	GmbH, °C	4:22 Laboratory RC-SYS
Humidity:	55	%	
Voltage:	230	Vac	
Setup of measurement eq	uipment:	011	
Start frequency: Stop frequency:	1.64337725 1.64366525		
Center frequency:	1.64352125		
Frequency span:		kHz	
Resolution-BW:	3	kHz	
Video-BW:	1	Hz	
Input attenuation:	10	dB	
Trace-Mode:	Clear Write		
Detector-Mode:	AVG		
Correction:			10
(W_RE) Coaxial cable (C107)	-	4.5 1.3	
DUT-Antenna (on-axis)	+		
Test antenna	+		dB
BW correction factor (3k -			
Atten. between HPA and		0.0	dB
(U330)	+		
TOTAL CORRECTION:	+	40.9	dB
Remarks: Carrier-on state / Carrier in For EIRP calculation: 'worst-case' = maximum		e band	(fm)



Plot No. 203



Environment condition:

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

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

Test results:
see plot (an explicit table was not generated)
Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fm, max hold, valid for R5T2XD-R20T2XD-R5T2QD-R20T2QD

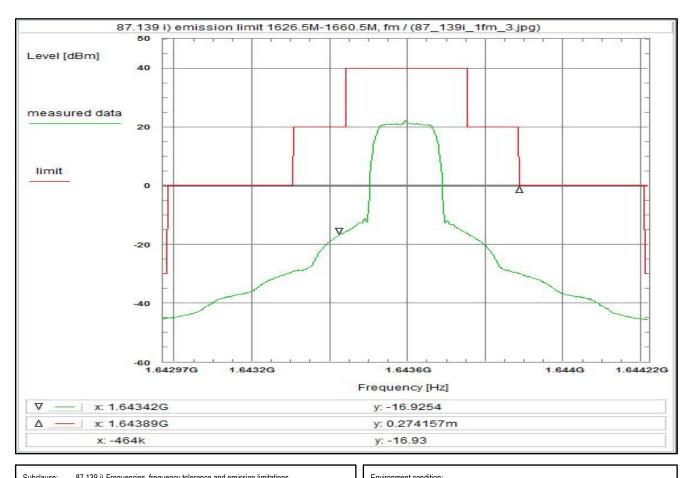
Test setup:
see test report chapter 7.2:
Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330

Wed 27/Sep/2023 14:55:40 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.6432485 GHz Start frequency: 1.6438365 GHz Stop frequency: Center frequency: 1.6435425 Frequency span: Resolution-BW: 588 kHz kHz 3 Video-BW: Input attenuation: 15 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB Coaxial cable (C107) + 1.3 dB + 11.0 dBi DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB Atten. between HPA and feedhorn + 31.9 dB (U330) + 40.9 dB TOTAL CORRECTION: Carrier-on state / Carrier in the middle of the band (fm) For EIRP calculation: worst-case' = maximum antenna gain

Remark:



Plot No. 204



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

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, max hold, valid for R5T4.5XD-R20T4.5XD-R5T4.5QD-R20T4.5QD

see test report chapter 7.2:

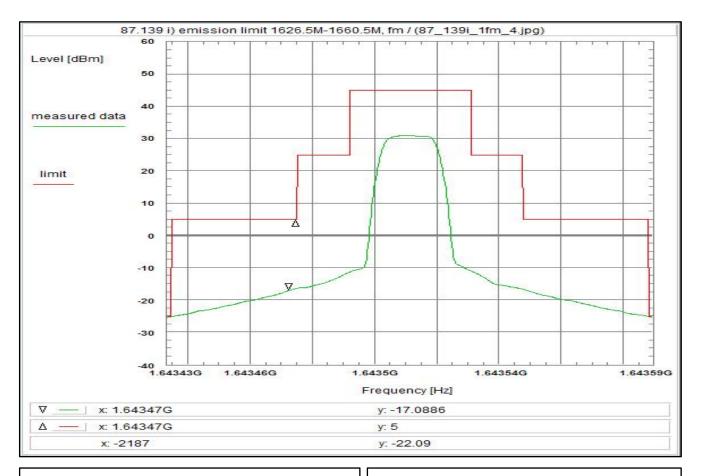
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:				
Date & Time:	Wed 27/Sep/202	23 14:5	58:20	
Location:	CTC advanced GmbH, Laboratory RC-SYS			
Temperature:	22	°C	•	
Humidity:	55	%		
Voltage:	230	Vac		
· ·				
Setup of measurement e	auipment:			
Start frequency:	1.642971	GHz	1	
Stop frequency:	1.644219	GHz	1	
Center frequency:	1.643595	GHz	•	
Frequency span:	1.248			
Resolution-BW:	3	kHz		
Video-BW:	1	Hz		
Input attenuation:	15	dB		
Trace-Mode:	Clear Write			
Detector-Mode:	AVG			
Dottottor mode.				
Correction:				
(W RE)	_	4.5	dB	
Coaxial cable (C107)	+			
DUT-Antenna (on-axis)	+		dBi	
Test antenna	+	'		
BW correction factor (3k				
Atten. between HPA and				
(U330)	+			
TOTAL CORRECTION:				
TOTAL CONTRECTION.		10.0	us.	
Remarks:				
Carrier-on state / Carrier	in the middle of the	e hand	d (fm)	
For EIRP calculation:			- ()	
'worst-case' = maximum	antenna gain			
Wordt dado Maximum	antonna gani			



Plot No. 205



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

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, max hold, valid for R20T0.5XD

see test report chapter 7.2:

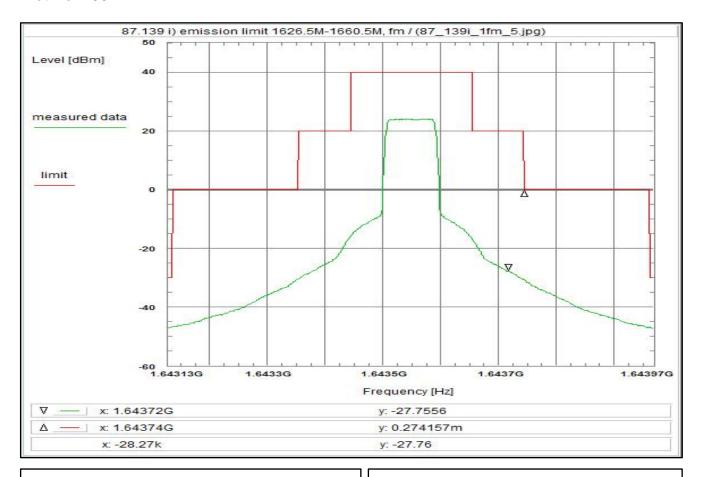
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:				
Date & Time:	Wed 27/Sep/202	23 15:0)1:51	
Location:	CTC advanced GmbH, Laboratory RC-SYS			
Temperature:	22	°C	•	
Humidity:	55	%		
Voltage:	230	Vac		
_				
Setup of measurement eq	uipment:			
Start frequency:	1.64343325	GHz		
Stop frequency:	1.64358925	GHz		
Center frequency:	1.64351125	GHz		
Frequency span:	156	kHz		
Resolution-BW:	3	kHz		
Video-BW:	1	Hz		
Input attenuation:	15	dB		
Trace-Mode:	Clear Write			
Detector-Mode:	AVG			
Correction:				
(W RE)	-	4.5	dB	
Coaxial cable (C107)	+	1.3	dB	
DUT-Antenna (on-axis)	+	11.0	dBi	
Test antenna `	+	0.0	dB	
BW correction factor (3k -	> 4k) +	1.2	dB	
Atten. between HPA and t		0.0	dB	
(U330)	+	31.9	dB	
TOTAL CORRECTION:	+	40.9	dB	
Remarks:				
Carrier-on state / Carrier i	n the middle of the	e band	(fm)	
For EIRP calculation:			· /	
'worst-case' = maximum	antenna gain			
	3.			



Plot No. 206



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

Limit: Limit according to 87.139(i)(1)

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 6.4 fm, max hold, valid for FR80T2.5X16-FR80T2.5X32-FR80T2.5X64

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

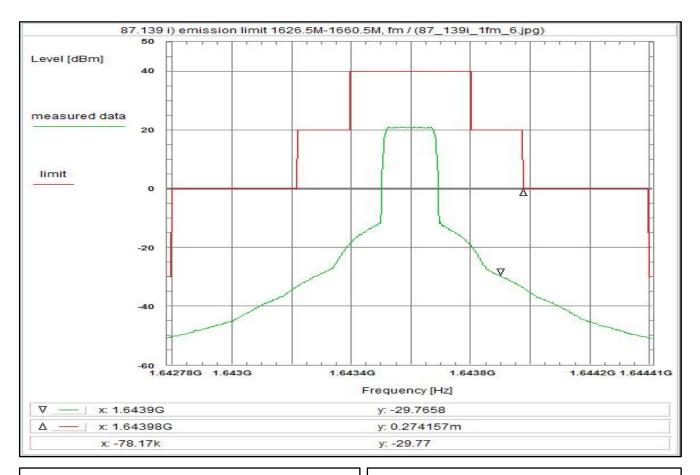
Remark:

Test result: Test passed

Environment condition: Wed 27/Sep/2023 15:11:10 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.6431275 GHz Start frequency: 1.6439675 GHz Stop frequency: Center frequency: 1.6435475 GHz Frequency span: Resolution-BW: 840 kHz kHz 3 Video-BW: Input attenuation: 15 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB Coaxial cable (C107) 1.3 dB 11.0 dBi DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB Atten. between HPA and feedhorn (U330) 31.9 dB + 40.9 dB TOTAL CORRECTION: Carrier-on state / Carrier in the middle of the band (fm) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 207



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

Limit: Limit according to 87.139(i)(1)

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 6.4 fm, max hold, valid for FR80T5X16-FR80T5X32-FR80T5X64

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

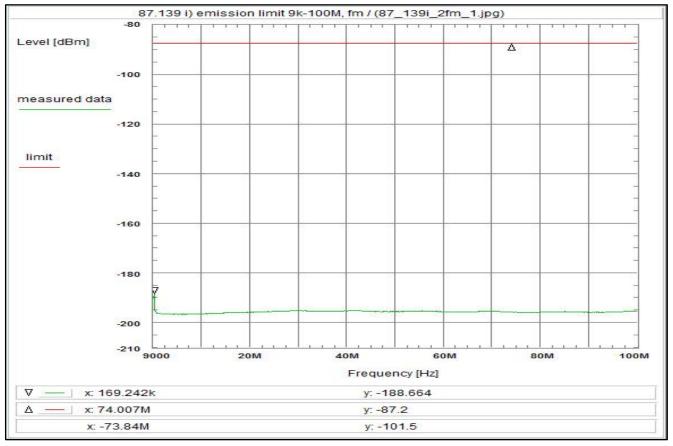
Remark:

Test result: Test passed

Environment condition: Wed 27/Sep/2023 15:14:48 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.642782 GHz Start frequency: 1.644408 GHz Stop frequency: Center frequency: 1.643595 Frequency span: Resolution-BW: 1.626 MHz 3 kHz Video-BW: Input attenuation: 15 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) - 4.5 dB Coaxial cable (C107) + 1.3 dB + 11.0 dBi DUT-Antenna (on-axis) BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB + 31.9 dB Atten. between HPA and feedhorn (U330) + 40.9 dB TOTAL CORRECTION: Carrier-on state / Carrier in the middle of the band (fm) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 208



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

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

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

Operating condition of DUT:
operating condition of DUT:
operating condition 1, see test report chapter 6.4
fm, valid for all modulations

Test setup:
see test report chapter 7.2:

Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330, W_RE

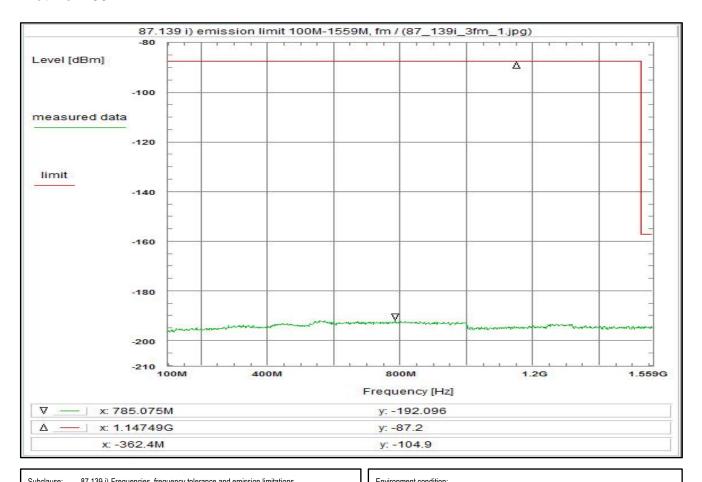
Remark:

Test result: Test passed

Environment condition: Wed 27/Sep/2023 12:29:55 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 9 kHz Start frequency: Stop frequency: 100 MHz Center frequency: 50.0045 MHz Frequency span: Resolution-BW: 99.991 MHz kHz Video-BW: 30 Input attenuation: 0 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 120.0 dB Coaxial cable (C107) + 0.5 dB + 11.0 dBi DUT-Antenna (on-axis) BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB + 31.3 dB Atten. between HPA and feedhorn (U330) 31.3 dB TOTAL CORRECTION: -76.0 dB Carrier-on state / Carrier in the middle of the band (fm) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 209



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Emission limitations

Modulated rf-carrier in the middle of the band (fm)

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, valid for all modulations

see test report chapter 7.2:

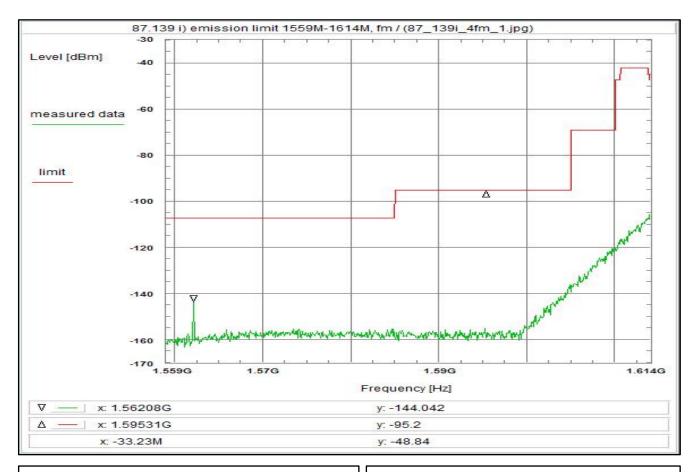
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:				
Date & Time:	Wed 27/Sep/202	23 12:31	1:22	
Location:	CTC advanced (GmbH,	Laboratory RC-SYS	
Temperature:	22	°C	,	
Humidity:	55	%		
Voltage:	230	Vac		
,				
Setup of measurement equ	ipment:			
Start frequency:	100	MHz		
Stop frequency:	1.559	GHz		
Center frequency:	829.5	MHz		
Frequency span:	1.459	GHz		
Resolution-BW:	3	kHz		
Video-BW:	30	kHz		
Input attenuation:	0	dB		
Trace-Mode:	Clear Write			
Detector-Mode:	AVG			
Correction:				
(W_RE)	-	120.0	dB	
Coaxial cable (C107)	+	0.9	dB	
DUT-Antenna (on-axis)	+	11.0	dBi	
Test antenna	+	0.0	dB	
BW correction factor (3k ->	4k) +	1.2	dB	
Atten. between HPA and fe	edhorn -		dB	
(U330)	+	31.7	dB	
TOTAL CORRECTION:	-	-75.2	dB	
Remarks:			(f.)	
Carrier-on state / Carrier in	the middle of the	e band	(fm)	
For EIRP calculation:				
'worst-case' = maximum a	ntenna gain			



Plot No. 210



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

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, valid for all modulations

see test report chapter 7.2:

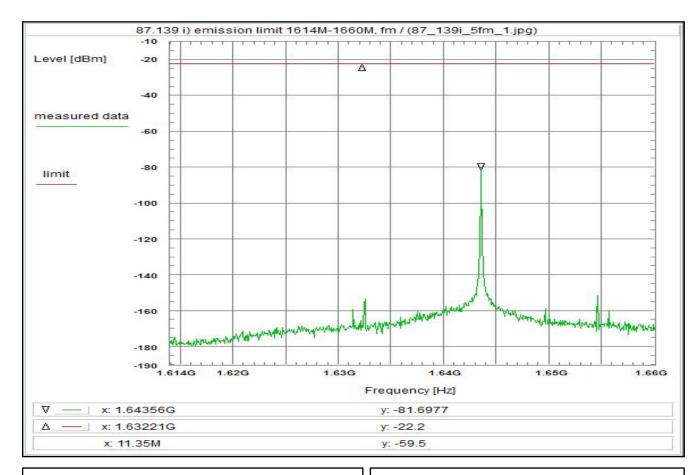
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330, W_RE

Remark:

Environment condition:				
Date & Time:	Wed 27/Sep/202	23 12:33	3:35	
Location:	CTC advanced (GmbH,	Laboratory RC-SYS	
Temperature:	22	°C	•	
Humidity:	55	%		
Voltage:	230	Vac		
· ·				
Setup of measurement ed				
Start frequency:	1.559			
Stop frequency:	1.614			
Center frequency:	1.5865	GHz		
Frequency span:	55	MHz		
Resolution-BW:	3	kHz		
Video-BW:	30	kHz		
Input attenuation:	0	dB		
Trace-Mode:	Clear Write			
Detector-Mode:	AVG			
Correction:				
(W_RE)	-	104.1		
Coaxial cable (C107)	+		dB	
DUT-Antenna (on-axis)	+	11.0	dBi	
Test antenna	+		dB	
BW correction factor (3k -		25.2	dB	
Atten. between HPA and	feedhorn -	0.0	dB	
(U330)	+	31.9	dB	
TOTAL CORRECTION:	-	-34.7	dB	
Remarks:				
Carrier-on state / Carrier	in the middle of the	e band	(fm)	
For EIRP calculation:				
'worst-case' = maximum	antenna gain			



Plot No. 211



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

Limit: Limit according to 87.139(i)(1)

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, valid for all modulations

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

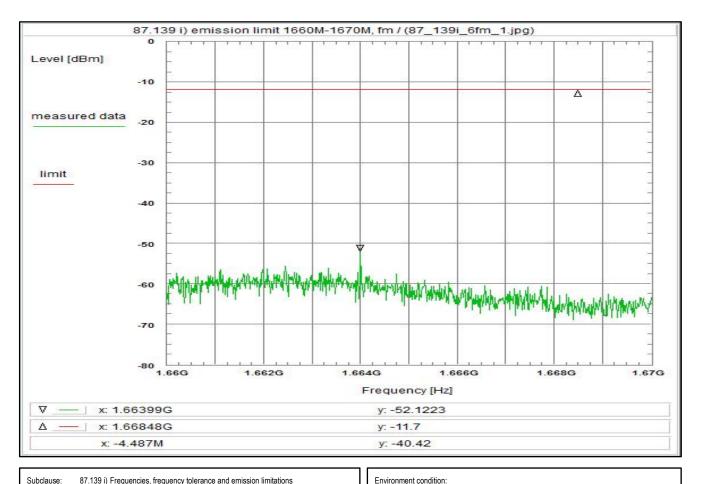
Test result: Test passed

Environment condition: Wed 27/Sep/2023 12:35:25 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.614 GHz Start frequency: 1.66 GHz Stop frequency: Center frequency: Frequency span: Resolution-BW: 46 MHz kHz 3 Video-BW: 30 Input attenuation: 0 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 104.1 dB Coaxial cable (C107) 1.3 dB 11.0 dBi DUT-Antenna (on-axis) BW correction factor (3k -> 4k) 1.2 dB - 0.0 dB Atten. between HPA and feedhorn (U330) 31.9 dB TOTAL CORRECTION: -58.7 dB Carrier-on state / Carrier in the middle of the band (fm) For EIRP calculation: worst-case' = maximum antenna gain

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Plot No. 212



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

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, valid for all modulations

see test report chapter 7.2:

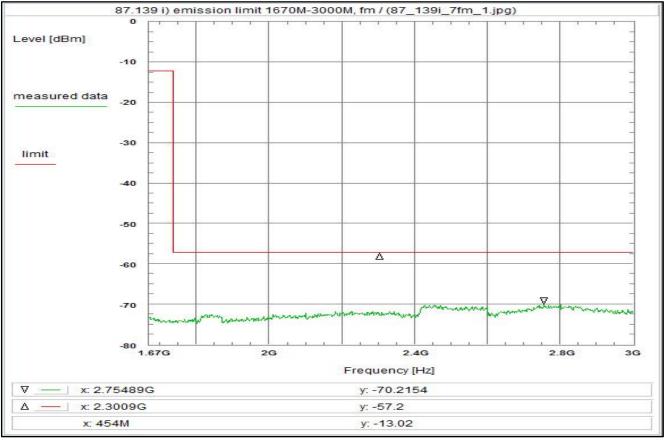
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:				
Date & Time:	Wed 27/Sep			
Location:				, Laboratory RC-SYS
Temperature:			°C	
Humidity:		55	%	
Voltage:	2	30	Vac	
Setup of measurement equ				
Start frequency:		66		
Stop frequency:		67		
Center frequency:	1.6	65		
Frequency span:		10		
Resolution-BW:		3	kHz	
Video-BW:		30		
Input attenuation:		0	dB	
Trace-Mode:	Clear W			
Detector-Mode:	A'	/G		
Correction:				_
Direction coupler		-	0.0	
Coaxial cable (C107)		+		
DUT-Antenna (on-axis)		+		
Test antenna		+	0.0	
BW correction factor (3k ->		+		
Atten. between HPA and for	eedhorn	-		
(U330)		+	0	
TOTAL CORRECTION:		+	52.5	i dB
Remarks:	0	e 11.		176-7
Carrier-on state / Carrier in	the middle o	of the	band	d (m)
For EIRP calculation:				
'worst-case' = maximum a	ntenna gain			



Plot No. 213



Subclause:

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

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

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4 fm, valid for all modulations

Test setup:
see test report chapter 7.2:

Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330

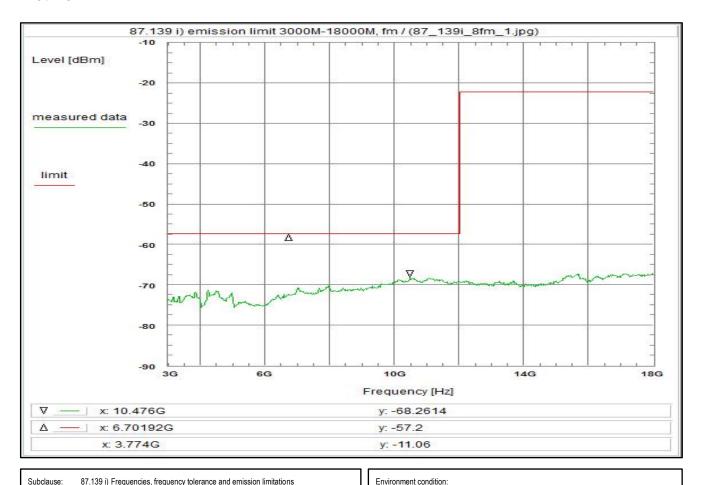
Remark:

Test result: Test passed

Environment condition: Wed 27/Sep/2023 12:37:07 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.67 GHz Start frequency: Stop frequency: 3 GHz Center frequency: 2.335 GHz Frequency span: Resolution-BW: 1.33 GHz kHz Video-BW: 30 Input attenuation: 0 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: Direction coupler 0.0 dB Coaxial cable (C107) 1.5 dB 11.0 dBi DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB Atten. between HPA and feedhorn - 0.0 dB (U330) 32.0 dB TOTAL CORRECTION: 45.7 dB Carrier-on state / Carrier in the middle of the band (fm) For EIRP calculation:
'worst-case' = maximum antenna gain



Plot No. 214



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Emission limitations

Modulated rf-carrier in the middle of the band (fm)

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fm, valid for all modulations

see test report chapter 7.2:

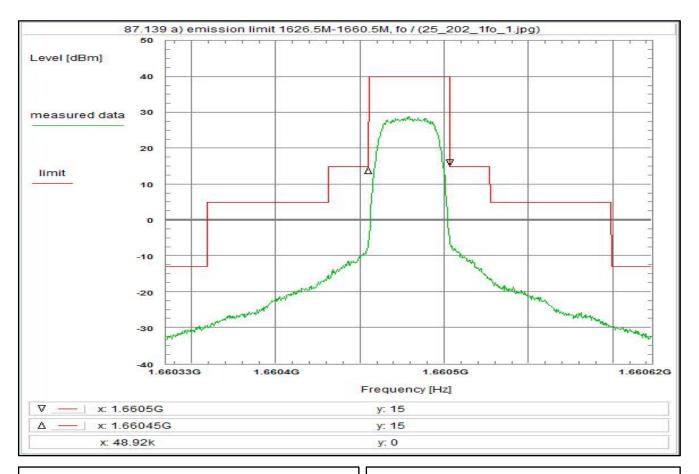
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:	W 07/0	/000	2 42.2	27.52
Date & Time: Location:	Wed 27/S			
	CTC adva	ncea c		I, Laboratory RC-SYS
Temperature:		55		
Humidity:		230		
Voltage:		230	vac	
Setup of measurement eq	uinment.			
Start frequency:	шрттетт.	3	GHz	7
Stop frequency:		18		
Center frequency:		10.5		
Frequency span:		15		
Resolution-BW:		10		
Video-BW:		100		
Input attenuation:		0	dB	
Trace-Mode:	Clear	-	ub	
Detector-Mode:		AVG		
Dolootoi modo.		,,,,		
Correction:				
Direction coupler		-	0.0	dB
Coaxial cable (C107)		+	3.3	dB
DUT-Antenna (on-axis)		+	11.0) dBi
Test antenna		+	0.0	dB
BW correction factor (10k	-> 4k)	-	4.0	dB
Atten. between HPA and f		-	0.0	dB
(U330)		+	33.4	4 dB
TOTAL CORRECTION:		+	43.7	7 dB
Remarks:				
Carrier-on state / Carrier in	the middle	e of the	band	d (fm)
For EIRP calculation:				
'worst-case' = maximum a	antenna gai	in		



Plot No. 215



Subclause: 87.139 a)Frequencies, frequency tolerance and emission limitations Emission limitations Modulated rf-carrier in the middle of the band (fo) Limit: Limit according to 87.139 a): 50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz > 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW The mean power of emissions shall be attenuated

below the mean output power of the transmitter in accordance with the above schedule.

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fh, max hold, valid for R5T1XD-R20T1XD-R20T1QD

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

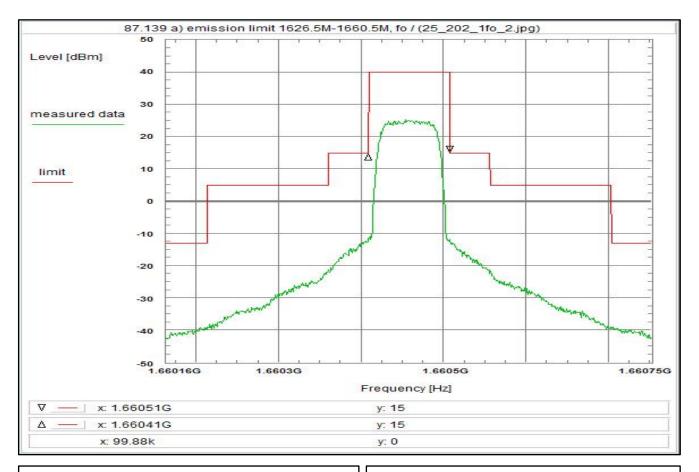
Test result: Test passed

Environment condition: Date & Time: Wed 27/Sep/202 Location: CTC advanced C Temperature: 22 Humidity: 55 Voltage: 230	GmbH, Laboratory RC-SYS °C %
Setup of measurement equipment: Start frequency: 1.66033475 Stop frequency: 1.66062275 Center frequency: 1.66047875 Frequency span: 288 Resolution-BW: 3 Video-BW: 10 Input attenuation: 15 Trace-Mode: Clear Write Detector-Mode: AVG	GHz GHz kHz kHz kHz
Correction: (W_RE)	11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.9 dB 41.0 dB
Carrier-on state / Carrier at the upper edge Reference limit = 40 dBm / Spectrum mask	· /

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Plot No. 216



Subclause: 87.139 a)Frequencies, frequency tolerance and emission limitations Emission limitations Modulated rf-carrier in the middle of the band (fo) Limit: Limit according to 87.139 a): 50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz > 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fh, max hold, valid for R5T2XD-R20T2XD-R5T2QD-R20T2QD

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

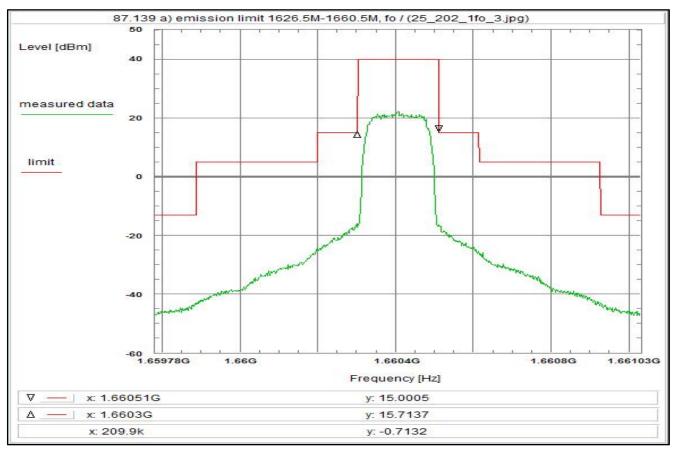
Test result: Test passed

Environment condition: Date & Time: Wed 27/Sep/202 Location: CTC advanced (Temperature: 22 Humidity: 55 Voltage: 230	GmbH, Laboratory RC-SYS °C %
Setup of measurement equipment: Start frequency: 1.6601635 Stop frequency: 1.6607515 Center frequency: 1.6604575 Frequency span: 588 Resolution-BW: 3 Video-BW: 10 Input attenuation: 15 Trace-Mode: Clear Write Detector-Mode: AVG	GHz GHz kHz
DUT-Antenna (on-axis) + Test antenna + BW correction factor (3k -> 4k) + Atten. between HPA and feedhom (U330) + TOTAL CORRECTION: +	4.5 dB 1.4 dB 11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.9 dB 41.0 dB
Remarks: Carrier-on state / Carrier at the upper edge Reference limit = 40 dBm / Spectrum mask	` ,

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Plot No. 217



Environment condition:

Subclause:

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

Limit:
Limit according to 87.139 a):
50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule.

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

Operating condition of DUT:
operating condition of DUT:
operating condition 1, see test report chapter 6.4
fh, max hold, valid for RST4.5XD-R20T4.5XD-R5T4.5QD-R20T4.5QD

Test setup:
see test report chapter 7.2:

Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330

Remark:

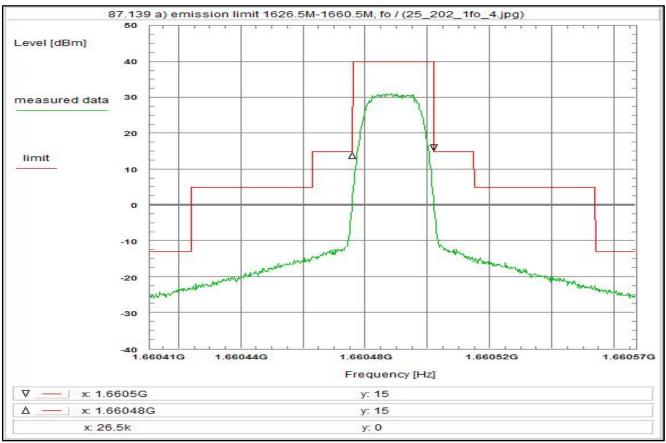
Test result: Test passed

Wed 27/Sep/2023 15:28:50 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.659781 GHz Start frequency: GHz Stop frequency: 1.661029 Center frequency: 1.660405 Frequency span: Resolution-BW: 1.248 MHz kHz Video-BW: 10 Input attenuation: 15 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB 1.4 dB Coaxial cable (C107) DUT-Antenna (on-axis) 11.0 dBi 0.0 dB BW correction factor (3k -> 4k) 1.2 dB 0.0 dB Atten. between HPA and feedhorn (U330) 31.9 dB TOTAL CORRECTION: 41.0 dB Carrier-on state / Carrier at the upper edge of the band (fo) Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth

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Plot No. 218



Subclause:

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

Limit:
Limit according to 87.139 a):
50-100% of assigned bw: -25dBc/4kHz
100-250% of assigned bw: -35dBc/4kHz
> 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the above schedule.

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

Operating condition of DUT:
operating condition of DUT:
operating condition 1, see test report chapter 6.4
fh, max hold, valid for R20T0.5XD

Test setup:
see test report chapter 7.2:

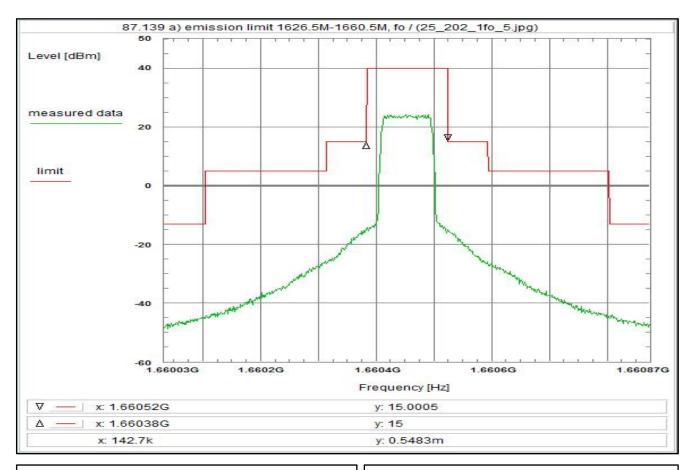
Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition: Wed 27/Sep/2023 15:33:17 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.66041075 GHz Start frequency: GHz Stop frequency: 1.66056675 Center frequency: 1.66048875 Frequency span: Resolution-BW: 156 kHz kHz 3 Video-BW: Input attenuation: 15 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB 1.4 dB 11.0 dBi Coaxial cable (C107) DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) 1.2 dB 0.0 dB Atten. between HPA and feedhorn (U330) 31.9 dB TOTAL CORRECTION: 41.0 dB Carrier-on state / Carrier at the upper edge of the band (fo) Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth



Plot No. 219



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

Limit: Limit according to 87.139 a): 50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz > 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fh, max hold, valid for FR80T2.5X16-FR80T2.5X32-FR80T2.5X64

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

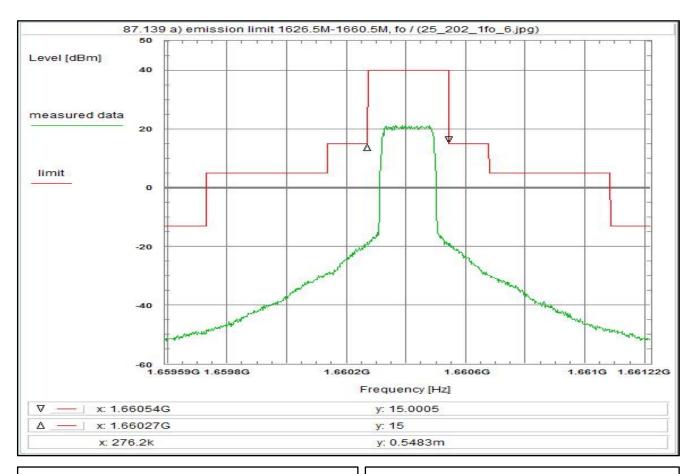
Test result: Test passed

Environment condition: Wed 27/Sep/2023 15:35:22 Location: CTC advanced GmbH, Laboratory RC-SYS Temperature: 22 °C Humidity: 55 % Voltage: 230 Vac		
Setup of measurement equipment: Start frequency: 1.6600325 GHz Stop frequency: 1.6608725 GHz Center frequency: 1.6604525 GHz Frequency span: 840 kHz Resolution-BW: 3 kHz Video-BW: 10 kHz Input attenuation: 15 dB Trace-Mode: Clear Write Detector-Mode: AVG		
Correction: (W_RE) - 4.5 dB Coaxial cable (C107) + 1.4 dB DUT-Antenna (on-axis) + 11.0 dBi Test antenna + 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB Atten. between HPA and feedhorn - 0.0 dB (U330) + 31.9 dB TOTAL CORRECTION: + 41.0 dB		
Reference limit = 40 dBm / Spectrum mask referenced to necessary bandwidth		

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Plot No. 220



Subclause: 87.139 a)Frequencies, frequency tolerance and emission limitations Emission limitations Modulated rf-carrier in the middle of the band (fo) Limit: Limit according to 87.139 a): 50-100% of assigned bw: -25dBc/4kHz

100-250% of assigned bw: -35dBc/4kHz > 250% of assigned bw: -43+10log(Pmax)dBc/4kHz = -43 dBW

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

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fh, max hold, valid for FR80T5X16-FR80T5X32-FR80T5X64

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

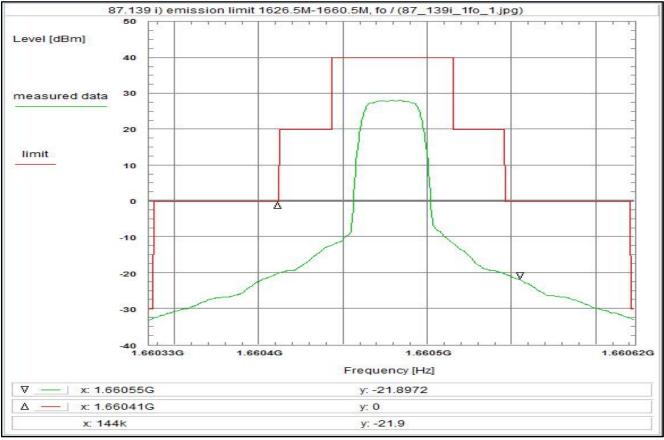
Test result: Test passed

Temperature: 22 Humidity: 55	GmbH, Laboratory RC-SYS °C
Setup of measurement equipment: Start frequency: 1.659592 Stop frequency: 1.661218 Center frequency: 1.660405 Frequency span: 1.626 Resolution-BW: 3 Video-BW: 10 Input attenuation: 15 Trace-Mode: Clear Write Detector-Mode: AVG	GHz GHz MHz kHz kHz
DUT-Antenna (on-axis) + Test antenna +	1.2 dB 0.0 dB 31.9 dB
Remarks: Carrier-on state / Carrier at the upper edge	of the band (fo)
Reference limit = 40 dBm / Spectrum mask	referenced to necessary bandwidth

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Plot No. 221



Subclause:

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

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

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fh, max hold, valid for R5T1XD-R20T1XD-R20T1QD

Test setup:
see test report chapter 7.2:
Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330

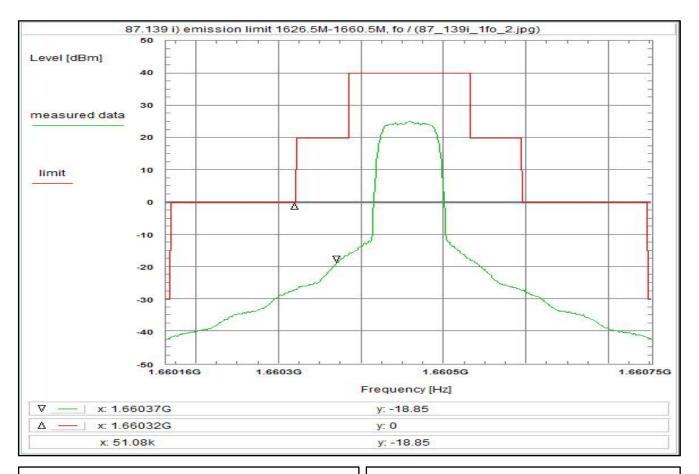
Remark:

Test result: Test passed

Environment condition: Wed 27/Sep/2023 15:18:17 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.66033475 GHz Start frequency: 1.66062275 GHz Stop frequency: Center frequency: 1.66047875 GHz Frequency span: Resolution-BW: 288 kHz kHz 3 Video-BW: Input attenuation: 15 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) - 4.5 dB + 1.4 dB + 11.0 dBi Coaxial cable (C107) DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB + 31.9 dB Atten. between HPA and feedhorn (U330) + 41.0 dB TOTAL CORRECTION: Carrier-on state / Carrier at the upper edge of the band (fo) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 222



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

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fh, max hold, valid for R5T2XD-R20T2XD-R5T2QD-R20T2QD

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

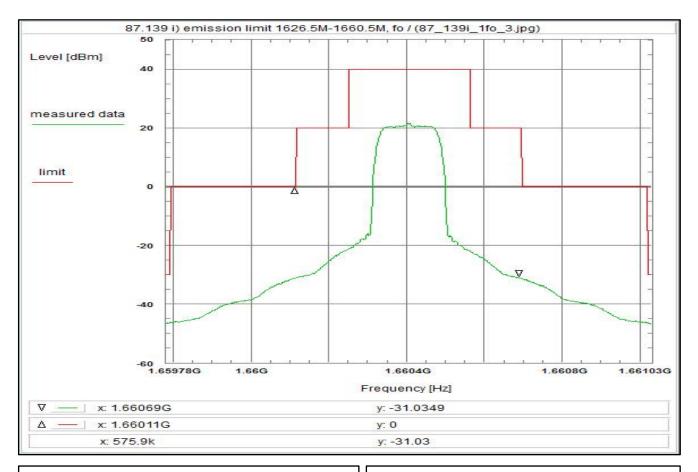
Test result: Test passed

Environment condition:			
Date & Time:	Ned 27/Sep/202	15:19:45	
Location:	CTC advanced (nbH, Laboratory R	C-SYS
Temperature:	22	°C	
Humidity:	55	%	
Voltage:	230	/ac	
Setup of measurement equi			
Start frequency:	1.6601635	GHz	
Stop frequency:	1.6607515		
Center frequency:	1.6604575		
Frequency span:	588	кHz	
Resolution-BW:	3	кHz	
Video-BW:	1	Ηz	
Input attenuation:	15	dB	
Trace-Mode:	Clear Write		
Detector-Mode:	AVG		
Correction:			
(W_RE)	-	4.5 dB	
Coaxial cable (C107)	+	1.4 dB	
DUT-Antenna (on-axis)	+	11.0 dBi	
Test antenna	+	0.0 dB	
BW correction factor (3k ->		1.2 dB	
Atten. between HPA and fee	edhorn -	0.0 dB	
(U330)	+	31.9 dB	
TOTAL CORRECTION:	+	41.0 dB	
Remarks:			
Carrier-on state / Carrier at	the upper edge	the band (fo)	
For EIRP calculation:			
'worst-case' = maximum an	itenna gain		

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Plot No. 223



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

Limit: Limit according to 87.139(i)(1)

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 6.4 fh, max hold, valid for R5T4.5XD-R20T4.5XD-R5T4.5QD-R20T4.5QD

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

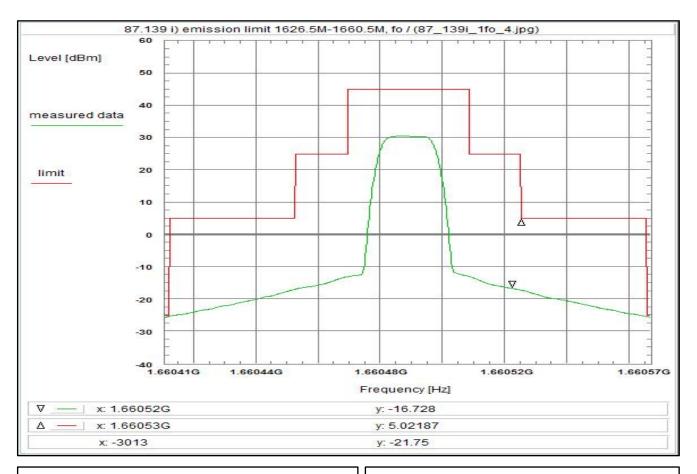
Remark:

Test result: Test passed

Environment condition: Date & Time: Wed 27/Sep/2023 15:29:26 Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.659781 GHz Start frequency: Stop frequency: 1.661029 GHz Center frequency: 1.660405 Frequency span: Resolution-BW: 1.248 MHz kHz 3 Video-BW: Input attenuation: 15 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) 4.5 dB 1.4 dB 11.0 dBi Coaxial cable (C107) DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB Atten. between HPA and feedhorn (U330) 31.9 dB + 41.0 dB TOTAL CORRECTION: Carrier-on state / Carrier at the upper edge of the band (fo) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 224



Subclause:

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

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

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fth, max hold, valid for R20T0.5XD

Test setup:
see test report chapter 7.2:

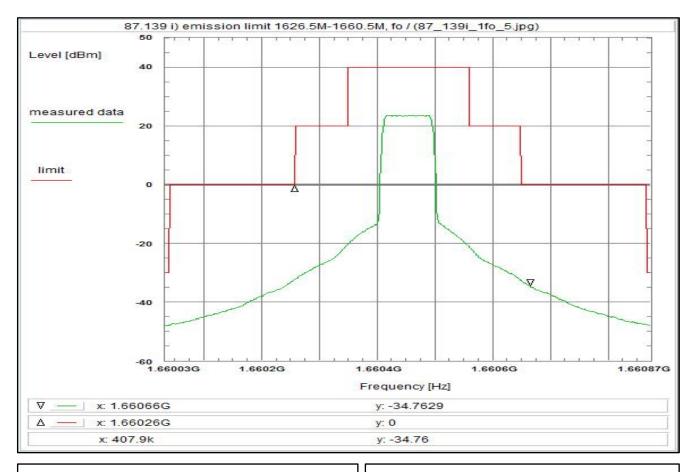
Test equipment:
see lest report chapter 7.1-7.2: C107, R001, U330

Environment condition: Wed 27/Sep/2023 15:31:55 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.66041075 GHz Start frequency: 1.66056675 GHz Stop frequency: Center frequency: 1.66048875 GHz Frequency span: Resolution-BW: 156 kHz kHz 3 Video-BW: Input attenuation: 15 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) - 4.5 dB + 1.4 dB + 11.0 dBi Coaxial cable (C107) DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB + 31.9 dB Atten. between HPA and feedhorn (U330) + 41.0 dB TOTAL CORRECTION: Carrier-on state / Carrier at the upper edge of the band (fo) For EIRP calculation: worst-case' = maximum antenna gain

Remark:



Plot No. 225



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Modulated rf-carrier at the upper edge of the band (fo) Limit: Limit according to 87.139(i)(1)
The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with 87.139(i)(1).

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fh, max hold, valid for FR80T2.5X16-FR80T2.5X32-FR80T2.5X64

see test report chapter 7.2:

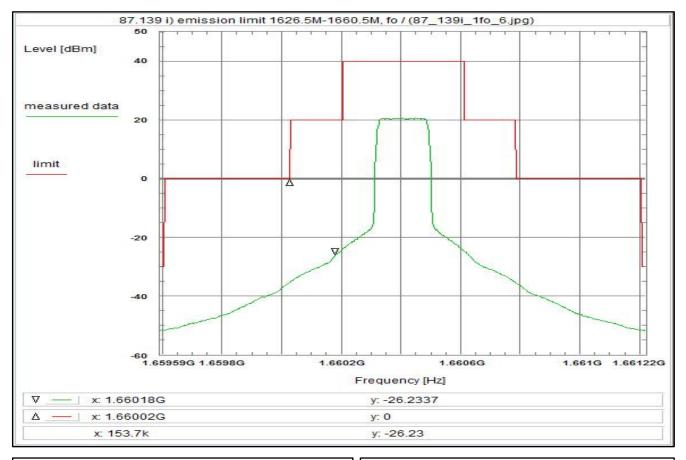
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:			
Date & Time:	Wed 27/Sep/202	3 15:3	:35:59
Location:	CTC advanced (H, Laboratory RC-SYS
Temperature:	22	°C	
Humidity:	55		
Voltage:	230	Vac	
Setup of measurement ed Start frequency: Stop frequency: Center frequency: Frequency span: Resolution-BW: Video-BW: Input attenuation: Trace-Mode: Detector-Mode:	1.6600325 1.6608725 1.6604525 840 3 1 1 5 Clear Write AVG	GHz GHz	z z z
Correction: (W_RE) Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (3k - Atten. between HPA and t (U330) TOTAL CORRECTION:		11.0 0.0 1.2 0.0 31.9	dB 0 dBi dB dB dB dB
Remarks: Carrier-on state / Carrier a For EIRP calculation: 'worst-case' = maximum a	•	of the t	e band (fo)



Plot No. 226



Environment condition:

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

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

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fh, max hold, valid for FR80T5X16-FR80T5X32-FR80T5X64

Test setup:
see test report chapter 7.2:

Date & Time: Wed 27/Sep/2023 15:37:19 Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.659592 GHz Start frequency: 1.661218 GHz Stop frequency: Center frequency: 1.660405 GHz Frequency span: Resolution-BW: 1.626 MHz kHz 3 Video-BW: Input attenuation: 15 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) - 4.5 dB Coaxial cable (C107) + 1.3 dB + 11.0 dBi DUT-Antenna (on-axis) 0.0 dB BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB + 31.9 dB Atten. between HPA and feedhorn (U330) + 40.9 dB TOTAL CORRECTION: Carrier-on state / Carrier at the upper edge of the band (fo) For EIRP calculation: worst-case' = maximum antenna gain

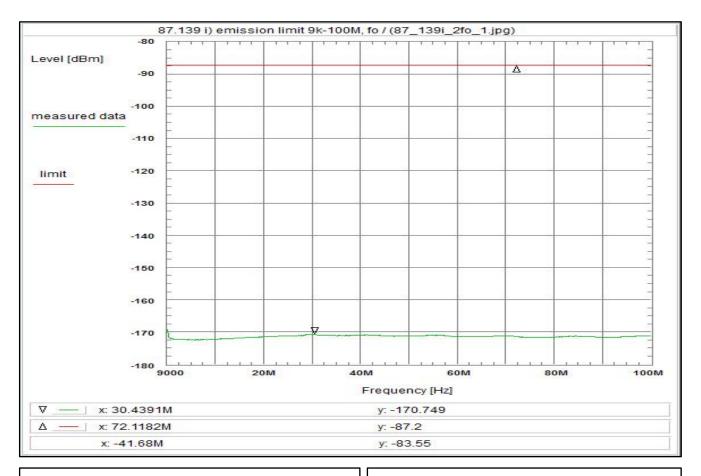
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Test result: Test passed

Remark:



Plot No. 227



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

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4

fh, valid for all modulations

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

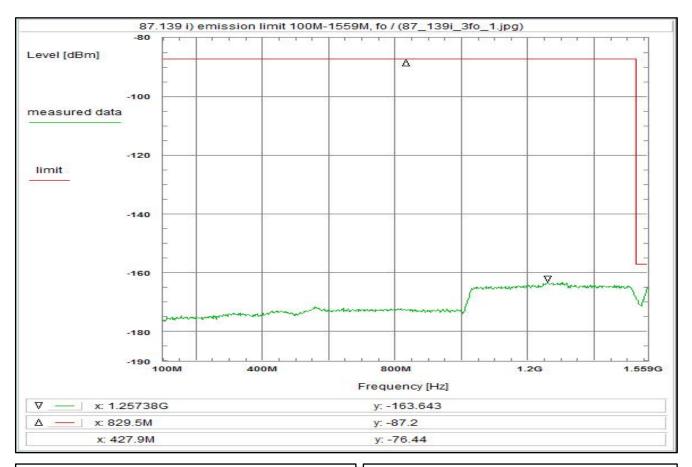
Remark:

Test result: Test passed

Environment condition: Wed 27/Sep/2023 12:56:43 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 9 kHz Start frequency: Stop frequency: 100 MHz Center frequency: 50.0045 MHz Frequency span: Resolution-BW: 99.991 MHz kHz Video-BW: 30 Input attenuation: 20 dB Clear Write Trace-Mode: Detector-Mode: AVG Correction: (W_RE) - 115.7 dB Coaxial cable (C107) + 0.5 dB + 11.0 dBi DUT-Antenna (on-axis) BW correction factor (3k -> 4k) + 1.2 dB - 0.0 dB + 31.3 dB Atten. between HPA and feedhorn (U330) 31.3 dB TOTAL CORRECTION: -71.7 dB Carrier-on state / Carrier at the upper edge of the band (fo) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 228



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Emission limitations

Modulated rf-carrier at the upper edge of the band (fo)

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fh, valid for all modulations

see test report chapter 7.2:

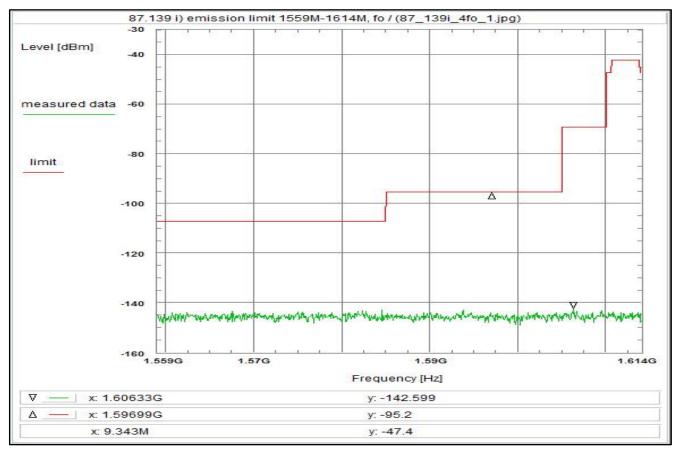
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330, W_RE

Remark:

	22 55	
Center frequency: 8 Frequency span: 1 Resolution-BW: Video-BW: Input attenuation: Trace-Mode: Clear V	100 1.559 329.5 1.459 3 30 20 Write AVG	GHz MHz GHz kHz kHz
Correction: (W_RE) Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (3k -> 4k) Atten. between HPA and feedhorn (U330) TOTAL CORRECTION: Remarks: Carrier-on state / Carrier at the upper	- + + + - + -	11.0 dBi 0.0 dB 1.2 dB 0.0 dB 31.7 dB -70.9 dB
For EIRP calculation: worst-case = maximum antenna gai	in	



Plot No. 229



Subclause:

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

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

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

Operating condition of DUT:
operating condition 1, see test report chapter 6.4
fh, valid for all modulations

Test setup:
see test report chapter 7.2:

Test equipment:
see test report chapter 7.1-7.2: C107, R001, U330, W_RE

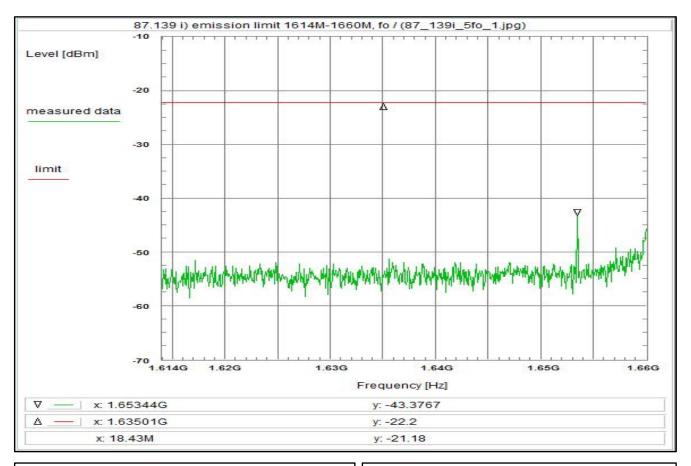
Remark:

Test result: Test passed

Environment condition: Wed 27/Sep/2023 12:53:09 Date & Time: Location: CTC advanced GmbH, Laboratory RC-SYS 22 °C Temperature: Humidity: Voltage: 230 Vac Setup of measurement equipment: 1.559 GHz Start frequency: Stop frequency: 1.614 GHz Center frequency: Frequency span: Resolution-BW: 55 MHz kHz 3 Video-BW: 30 Input attenuation: 20 dB Trace-Mode: Clear Write Detector-Mode: AVG Correction: (W_RE) 115.7 dB Coaxial cable (C107) 1.3 dB 11.0 dBi DUT-Antenna (on-axis) + 0.0 dB + 25.2 dB BW correction factor (3k -> 1M)
Atten. between HPA and feedhorn 0.0 dB (U330) 31.9 dB TOTAL CORRECTION: -46.3 dB Carrier-on state / Carrier at the upper edge of the band (fo) For EIRP calculation: worst-case' = maximum antenna gain



Plot No. 230



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Emission limitations

Modulated rf-carrier at the upper edge of the band (fo)

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fh, valid for all modulations

Test setup:

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

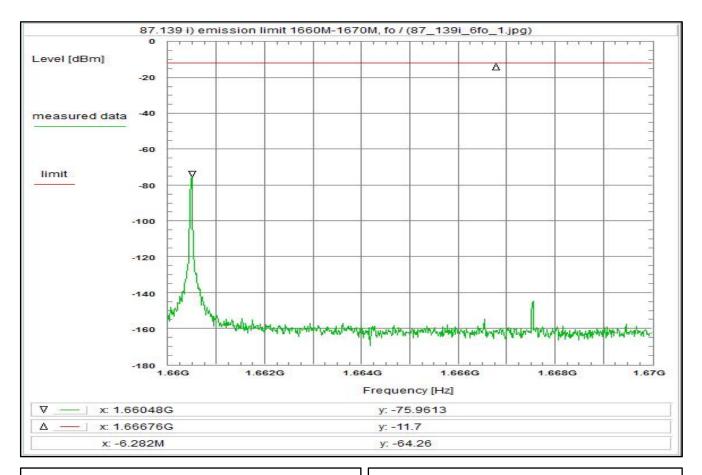
Test result: Test passed

Environment condition:		
	Sep/202	3 12:48:50
Location: CTC adv	anced (SmbH, Laboratory RC-SYS
Temperature:	22	°C
Humidity:	55	%
Voltage:	230	Vac
Setup of measurement equipment:		
Start frequency:	1.614	
Stop frequency:	1.66	
	1.637	
Frequency span:	46	
Resolution-BW:	3	kHz
Video-BW:	30	
Input attenuation:	20	dB
Trace-Mode: Clear	r Write	
Detector-Mode:	AVG	
. .		
Correction:		
Direction coupler	-	***
Coaxial cable (C107)	+	
DUT-Antenna (on-axis)	+	
Test antenna	+	0.0 45
BW correction factor (3k -> 4k)	+	45
Atten. between HPA and feedhorn		0.0 45
(U330)	+	*
TOTAL CORRECTION:	+	45.4 dB
Remarks:		
Carrier-on state / Carrier at the upper	ar adna	of the hand (fo)
For EIRP calculation:	or cage	or the band (10)
'worst-case' = maximum antenna ga	ain	
morot odoo maximum antenna ge	uiii	
İ		

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Plot No. 231



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

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fh, valid for all modulations

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

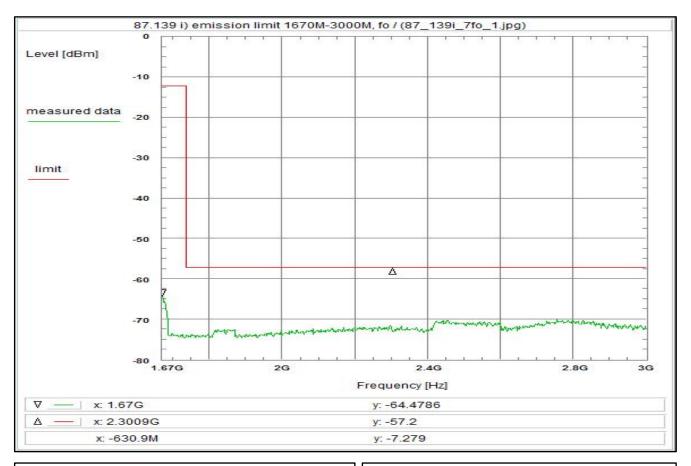
Test result: Test passed

Temperature: Humidity:		imbH, Laboratory RC-SYS °C %
Stop frequency: 1. Center frequency: 1.6 Frequency span: Resolution-BW: Video-BW: Input attenuation: Trace-Mode: Clear Wi	10 3 30 20	GHz GHz MHz kHz
Correction: (W_RE) Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (3k -> 20k) Atten. between HPA and feedhom (U330) TOTAL CORRECTION:	- + + + -	11.0 dBi 0.0 dB 8.2 dB 0.0 dB
Remarks: Carrier-on state / Carrier at the upper energy for EIRP calculation: worst-case' = maximum antenna gain	dge o	of the band (fo)

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Plot No. 232



Subclause: 87.139 i) Frequencies, frequency tolerance and emission limitations Emission limitations

Modulated rf-carrier at the upper edge of the band (fo)

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fh, valid for all modulations

see test report chapter 7.2:

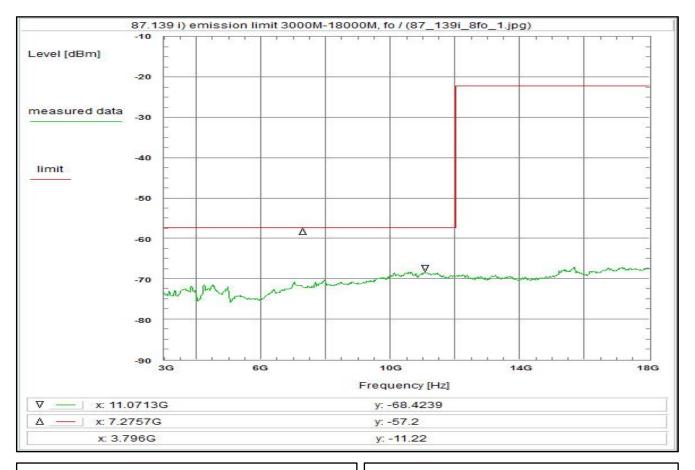
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Temperature: 22 Humidity: 55	GmbH, Laboratory RC-SYS
Center frequency: 2.335 Frequency span: 1.33 Resolution-BW: 3	G GHz GHz GHz GHz KHz KHz KHz KHz GHz GHz KHZ
Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (3k -> 4k) Atten. between HPA and feedhom (U330)	- 0.0 dB - 1.5 dB - 11.0 dBi - 0.0 dB - 1.2 dB - 0.0 dB - 32.0 dB - 32.0 dB
Remarks: Carrier-on state / Carrier at the upper edg For EIRP calculation: 'worst-case' = maximum antenna gain	e of the band (fo)



Plot No. 233



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

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

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

Operating condition of DUT: operating condition 1, see test report chapter 6.4 fh, valid for all modulations

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

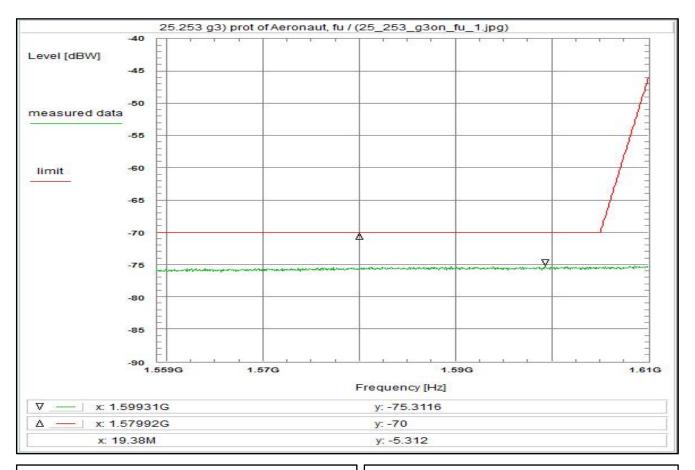
Test result: Test passed

		%
Setup of measurement equipment: Start frequency: Stop frequency: Center frequency: Frequency span: Resolution-BW: Video-BW: Input attenuation: Trace-Mode: Detector-Mode:	15	GHz GHz kHz kHz
Correction: Direction coupler Coaxial cable (C107) DUT-Antenna (on-axis) Test antenna BW correction factor (10k -> 4k) Atten. between HPA and feedhom (U330) TOTAL CORRECTION:	+ + + +	3.3 dB 11.0 dBi 0.0 dB 4.0 dB 0.0 dB 33.4 dB
Remarks: Carrier-on state / Carrier at the upport of the upport of the state / Carrier at the upport of	•	of the band (fo)

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Plot No. 234



 $\underline{Subclause:} \qquad 25.253 \ g)3) \ \ Special requirements for ancillary terrestrial components operating in the 1626.5-1660.5 \ MHz\ / \ 1525-1559 \ MHz\ bands$

Carrier-on state, modulated carrier at the lower edge of the band (fu) Conducted measurement at the antenna-connector

Limit:

Limit according to 25.253 g)3):

1559.0 - 1605.0MHz: 1605.0 - 1610MHz:

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 6.4 fl, valid for all modulations

<u>Test setup:</u> see test report chapter 7.2:

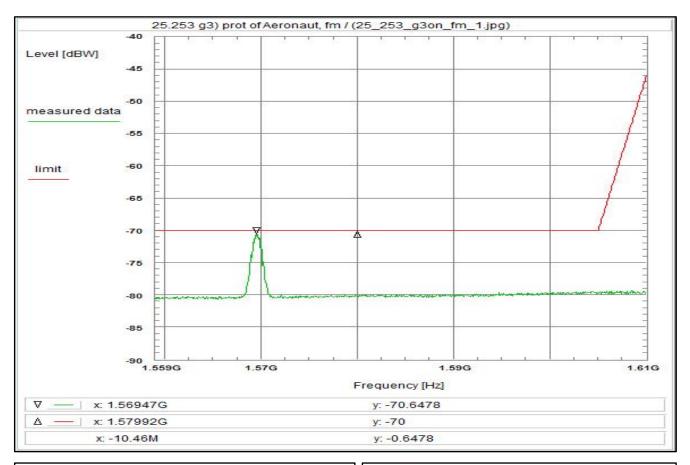
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Temperature: 22 ° Humidity: 55 %	12:21:36 nbH, Laboratory RC-SYS C C Vac		
Stop frequency:	GHz GHz GHz MHz MHz BB		
Coaxial cable (C107)	0.0 dB 1.3 dB 1.0 dBi 1.0 dB 0.0 dB 0.0 dB 0.1.9 dB		
Remarks: Carrier-on state / Carrier at the lower edge of the band (fu) Measurement with 1 MHz resolution/video filter and noise averaging. For EIRP calculation: 'worst-case' = maximum antenna gain			



Plot No. 235



 $\underline{Subclause:} \qquad 25.253 \ g) 3) \ \ Special requirements for ancillary terrestrial components operating in the 1626.5-1660.5 \ MHz\ / \ 1525-1559 \ MHz \ bands$

Carrier-on state, modulated carrier in the middle of the band (fm) Conducted measurement at the antenna-connector

Limit:

Limit according to 25.253 g)3):

1559.0 - 1605.0MHz: 1605.0 - 1610MHz:

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 6.4 fm, valid for all modulations

<u>Test setup:</u> see test report chapter 7.2:

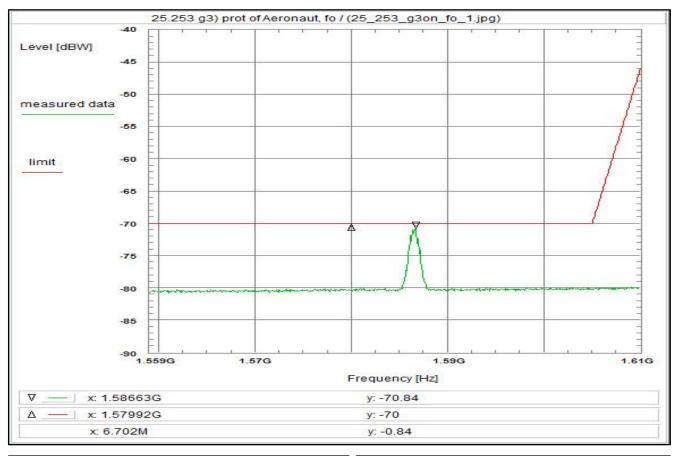
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:		
	7/Sep/202	23 12:39:54
		GmbH, Laboratory RC-SYS
Temperature:	22	
Humidity:	55	%
Voltage:	230	Vac
Setup of measurement equipment	t:	
Start frequency:	1.559	GHz
Stop frequency:	1.61	GHz
Center frequency:	1.5845	GHz
Frequency span:	51	MHz
Resolution-BW:	1	MHz
Video-BW:	10	
Input attenuation:	0	
Trace-Mode: Cle	ear Write	
Detector-Mode:	AVG	
Correction:		
Direction coupler	-	0.0 dB
Coaxial cable (C107)	+	*** *=
DUT-Antenna (on-axis)	+	11.0 02.
Test antenna	+	0.0 45
BW correction factor	+	0.0 45
Atten. between HPA and feedhorr	١ -	
(U330)	+	
TOTAL CORRECTION:	+	44.2 dB
Remarks:		
Carrier-on state / Carrier in the mi		
Measurement with 1 MHz resolution	on/video f	filter and noise averaging.
For EIRP calculation:		
'worst-case' = maximum antenna	gain	



Plot No. 236



 $\underline{Subclause:} \qquad 25.253 \ g)3) \ \ Special requirements for ancillary terrestrial components operating in the 1626.5-1660.5 \ MHz\ / \ 1525-1559 \ MHz\ bands$ Carrier-on state, modulated carrier at the upper edge of the band (fo) Conducted measurement at the antenna-connector

Limit:

Limit according to 25.253 g)3):

1559.0 - 1605.0MHz: 1605.0 - 1610MHz:

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

Test results:

see plot (an explicit table was not generated)

Operating condition of DUT:

operating condition 1, see test report chapter 6.4 fh, valid for all modulations

<u>Test setup:</u> see test report chapter 7.2:

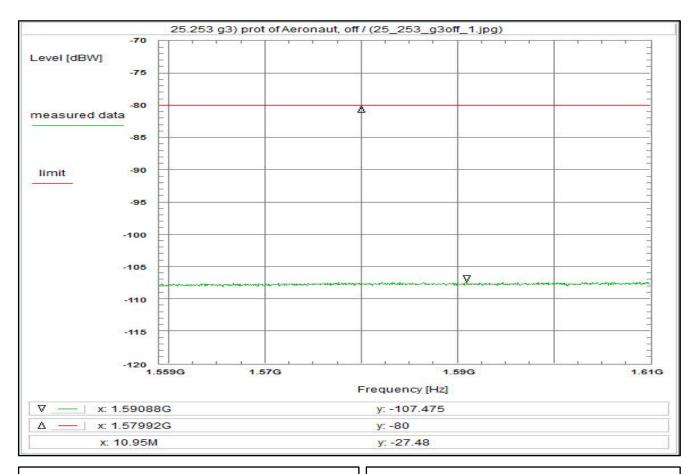
<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001, U330

Remark:

Environment condition:				
	27/Sep/202	2 12.4	14:50	
			, Laboratory RC-SYS	
Temperature:		°C	, Laboratory NO-313	
	55			
Humidity:		% Vac		
Voltage:	230	vac		
Setup of measurement equipme		011		
Start frequency:	1.559			
Stop frequency:	1.61			
Center frequency:	1.5845			
Frequency span:	51			
Resolution-BW:	1	MHz	2	
Video-BW:	10	MHz	!	
Input attenuation:	0	dB		
Trace-Mode: C	lear Write			
Detector-Mode:	AVG			
Correction:				
Direction coupler	-	0.0	dB	
Coaxial cable (C107)	+	1.3	dB	
DUT-Antenna (on-axis)	+			
Test antenna	+			
BW correction factor	+			
Atten, between HPA and feedho				
(U330)	+			
TOTAL CORRECTION:	+			
TOTAL CONNECTION.		77.2	. db	
Remarks:				
Carrier-on state / Carrier at the u	nnor odgo	of the h	hand (fa)	
Measurement with 1 MHz resolution/video filter and noise averaging.				
For EIRP calculation:	:_			
'worst-case' = maximum antenn	a gain			
1				
1				
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1				
1				
1				
I				



Plot No. 237



 $\underline{Subclause:} \qquad 25.253 \ g)3) \ \ Special requirements for ancillary terrestrial components operating in the 1626.5-1660.5 \ MHz\ / \ 1525-1559 \ MHz\ bands$ Carrier-off state, conducted measurement at the antenna-connector

<u>Limit:</u> Limit according to 25.253 g)3): -80dBW/1MHz

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

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

Operating condition of DUT: operating condition 2, see test report chapter 6.4 TX-Off

see test report chapter 7.2:

<u>Test equipment:</u> see test report chapter 7.1-7.2: C107, R001

Remark:

Temperature: 22 Humidity: 55	GmbH, Laboratory RC-SYS °C		
Setup of measurement equipment: Start frequency: 1.559 Stop frequency: 1.61 Center frequency: 1.5845 Frequency span: 51 Resolution-BW: 1 Video-BW: 10 Input attenuation: 0 Trace-Mode: Clear Write Detector-Mode: AVG	GHz GHz MHz MHz MHz		
Correction:	11.0 dBi 0.0 dB 0.0 dB 0.0 dB 0.0 dB 0.0 dB		
Remarks: Carrier-off state. Measurement with 1 MHz resolution filter and noise averaging. For EIRP calculation: 'worst-case' = maximum antenna gain			

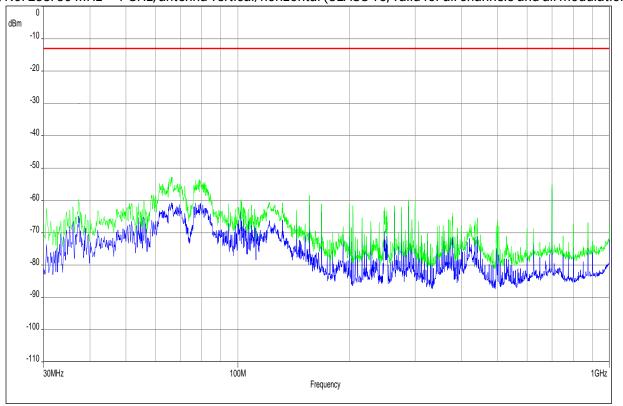


4. Measurement results, Spurious emissions 30MHz - 18 GHz

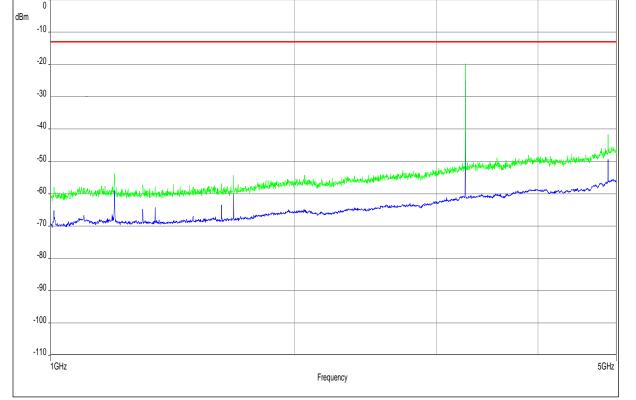
This Chapter 4 consists of 7 pages including this page.







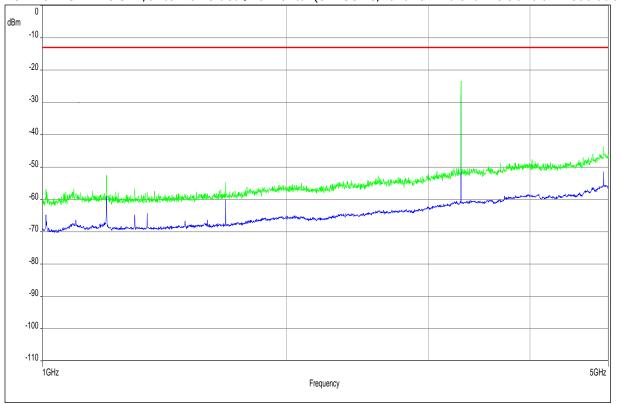
Plot No. 239: 1 GHz – 5 GHz, antenna vertical/horizontal (CLASS 15, valid for low channels and all modulations)



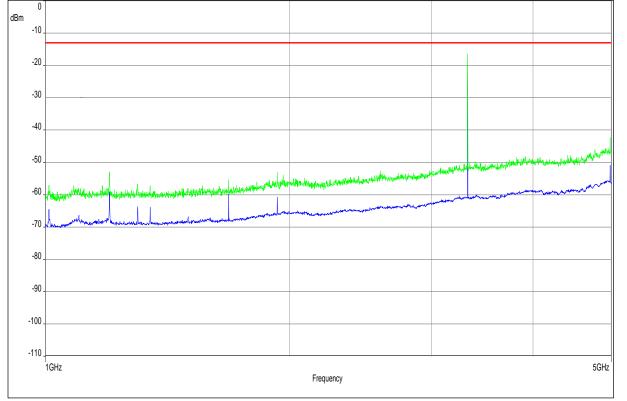
Wanted signal notched with WRCGV14-1616-1626-1661-1671-70SS Band Reject Filter



Plot No. 240: 1 GHz - 5 GHz, antenna vertical/horizontal (CLASS 15, valid for mid channels and all modulations)



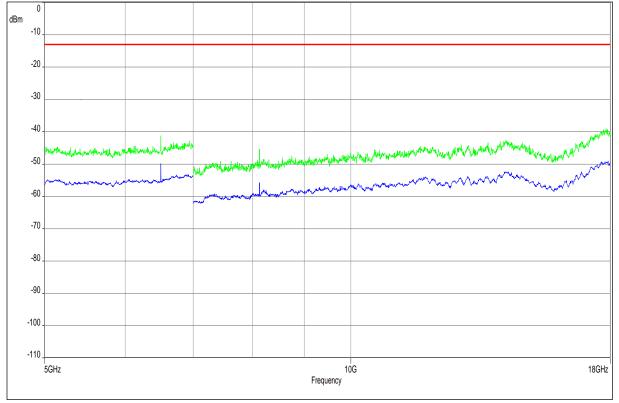
Wanted signal notched with WRCGV14-1616-1626-1661-1671-70SS Band Reject Filter Plot No. 241: 1 GHz – 5 GHz, antenna vertical/horizontal (CLASS 15, valid for high channels and all modulations)



Wanted signal notched with WRCGV14-1616-1626-1661-1671-70SS Band Reject Filter



Plot No. 242: 5 GHz - 18 GHz, antenna vertical/horizontal (CLASS 15, valid for all channels and all modulations)

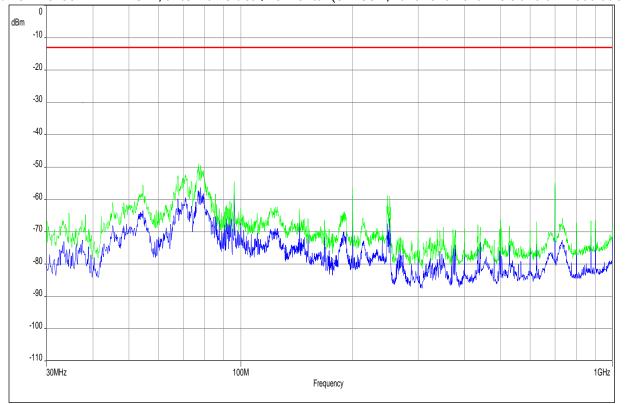


Measurement with a SHC2600/12750-1.5-KK HP filter

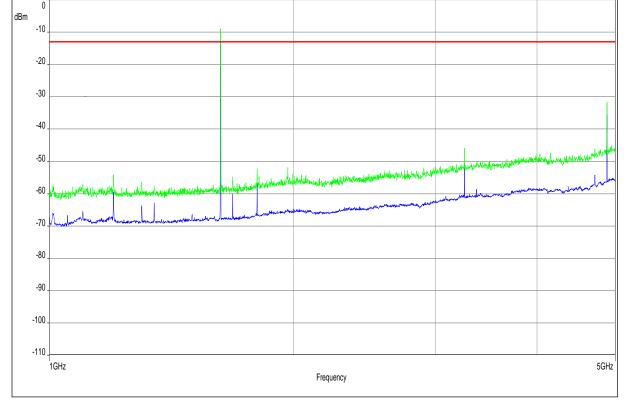
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Plot No. 243: 30 MHz - 1 GHz, antenna vertical/horizontal (CLASS 7, valid for all channels and all modulations)



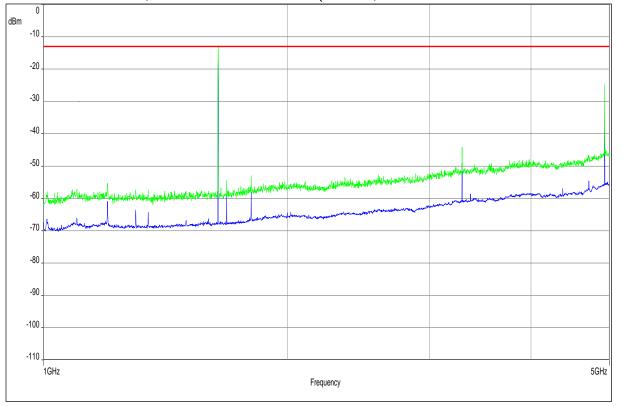
Plot No. 244: 1 GHz – 5 GHz, antenna vertical/horizontal (CLASS 7, valid for low channels and all modulations)



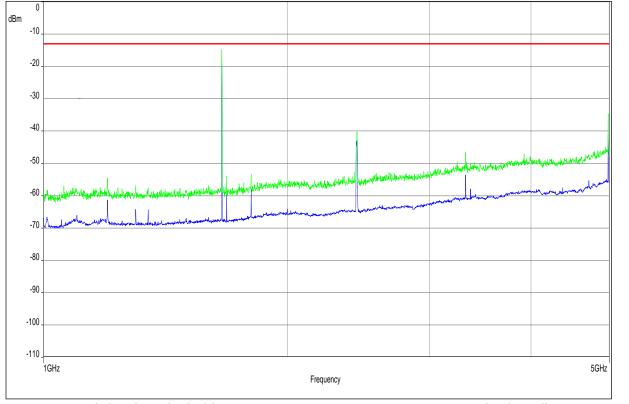
Wanted signal notched with WRCGV14-1616-1626-1661-1671-70SS Band Reject Filter



Plot No. 245: 1 GHz - 5 GHz, antenna vertical/horizontal (CLASS 7, valid for mid channels and all modulations)



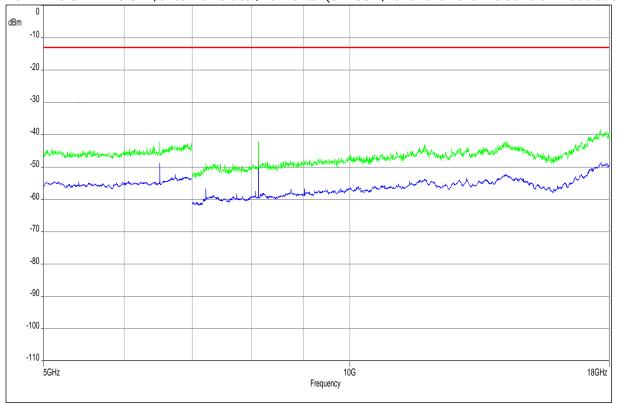
Wanted signal notched with WRCGV14-1616-1626-1661-1671-70SS Band Reject Filter Plot No. 246: 1 GHz – 5 GHz, antenna vertical/horizontal (CLASS 7, valid for high channels and all modulations)



Wanted signal notched with WRCGV14-1616-1626-1661-1671-70SS Band Reject Filter



Plot No. 247: 5 GHz – 18 GHz, antenna vertical/horizontal (CLASS 7, valid for all channels and all modulations)



Measurement with a SHC2600/12750-1.5-KK HP filter

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5. Document history

Version	Applied changes	Date of release
	Initial release - DRAFT	2023-12-21
	Minor changes	2024-02-27

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