

of the accredited test laboratory

TÜV Nr.:M/FG-15/138

Applicant:

Lautsprecher Teufel GmbH

Budapester Strasse 44

10787 Berlin - Germany

Tested Product:

WIFI Module

FCC-ID:

2ADQS-STREAM800

IC-ID:

N/A

Manufacturer:

StreamUnlimited Engineering GmbH

High Tech Campus Vienna Gutheil-Schoder-Gasse 10 1102 Wien - Austria

Output power /

7,6 mW cond.

power supply:

5 VDC

field strength:

Frequency range:

5180 - 5825 MHz Channel separation:

20 MHz

with gaps

Standard:

FCC: 47 CFR Part 15 (October 1, 2014 edition)

TUV Austria Services GmbH Test laboratory for EMC

Supervisor of EMC-laboratory:

g. Wilhelm Seier

Copy Nbr.:

checked by

Ing. Michael Emminger

File: 15-138.doc/27.03.2015

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27.03.2015

The results of this test report only refer to the provided equipment.

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Fachbereich: Prüfstelle für Nachrichtentechnik / **EMV**

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Notified Body 0408 IC 2932K-1

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Firmenbuchgericht/ -nummer: Wien / FN 288476 f

Bankverbindungen: UC BA 52949 001 066 **IBAN** AT1312000529490010 **BIC BKAUATWW** RZB 001-04.093.282 AT1531000001040932 **BIC RZBAATWW**

LIST OF MEASUREMENTS

The complete list of measurements called for in 47 CFR 15 is given below.

SUBCLAUSE	PARAMETER TO BE MEASURED	PAGE
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Ambient temperature: 24°C Relative humidity: 25%

TEST OBJECT DATA

General EUT Description

This WIFI module is using either 2.4 GHz Frequencies or 5 GHz. This test report is only for the 5 GHz part. See additional test report for 2.4 GHz measurement results.

- 2.1033 (c) Technical description
- 2.1033 (4) Type of emission:

802.11 standards – Channel bandwidths 20 MHz and 40 MHz (aggregation of 2 non-overlapping OFDM channels) – Channel spacing 20 / 40 MHz respectively.

2.1033 (5) Frequency range:

5180 till 5240 MHz; 5260 till 5320 MHz; 5500 till 5700 MHz and 5745 till 5825 MHz (channel center frequencies) in 20 MHz steps resulting in 24 Channels of 20 MHz bandwidth 5190 till 5230 MHz; 5270 till 5310 MHz; 5510 till 5670 MHz and 5755 till 5795 MHz (channel center frequencies) in 40 MHz steps resulting in 11 Channels of 40 MHz bandwidth

- 2.1033 (6) Power range and Controls: The maximum peak output power is 7,6 mW and there is no power regulation.
- 2.1033 (7) Maximum output power rating: 7,6 mW.
- 2.1033 (8) DC Voltage and Current: 5 V DC

maximum current consumption: 200 mA)

- RSS-135 This standard does not apply to:
 - 1.1.(a) a receiver that scans radio frequencies for the purpose of enabling its associated transmitter to avoid transmitting in an occupied frequency but which does not have the capability of decoding the message (e.g. converting it to audio voice) contained in the radio signal

Tests were performed on 11th, 12th and 27th February 2015.

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Ambient temperature: 24°C Relative humidity: 25%

Number of channels and channel spacing

§ 2.1033

Conducted Measurement

Rated output power: 7,6 mW

There are 24 Channels used starting at 5170 till 5825 MHz (with gaps) each separated by 20 MHz channel spacing with a maximum bandwidth of 20 MHz.

Two channels spaced by 20 MHz can be used simultaneously to give a RF-Bandwidth of 40 MHz, resulting in 11 different channels with 40 MHz bandwidth and center frequencies of 5180 till 5795 MHz each separated by 40 MHz channel spacing.

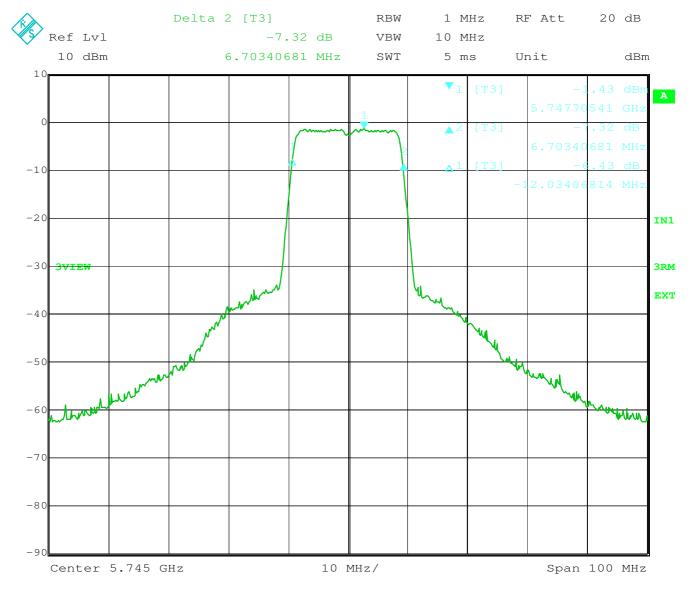
Test Equipment used: N/A

Form: FCC15.DOT/1. 1. 2002 Page 4 of 103 File: 15-138.doc/27.03.2015

6dB Bandwidth § 15.407(e)

Conducted Measurement

Rated output power: 7,6 mW Channel 149 (5745 MHz center frequency)



Date: 12.FEB.2015 16:19:08

6dB Bandwidth: 18,737 MHz

LIMIT SUBCLAUSE 15.407(e)

Frequency range 5725 – 5850 MHz	6 dB Bandwidth at least 500 kHz
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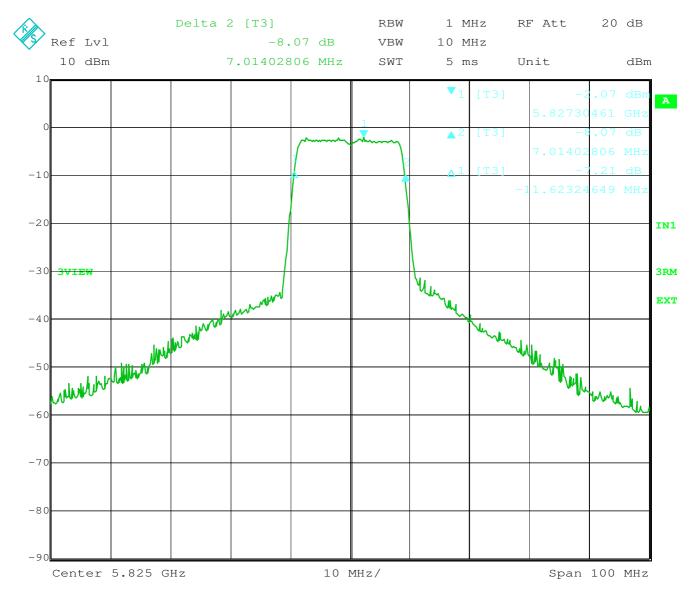
Test Equipment used: NT-207

Form: FCC15.DOT/1. 1. 2002 Page 5 of 103 File: 15-138.doc/27.03.2015

6dB Bandwidth § 15.407(e)

Conducted Measurement

Rated output power: 7,6 mW Channel 165 (5825 MHz center frequency)



Date: 12.FEB.2015 16:23:04

6dB Bandwidth: 18,637 MHz

LIMIT SUBCLAUSE 15.407(e)

Frequency range 5725 – 5850 MHz	6 dB Bandwidth at least 500 kHz
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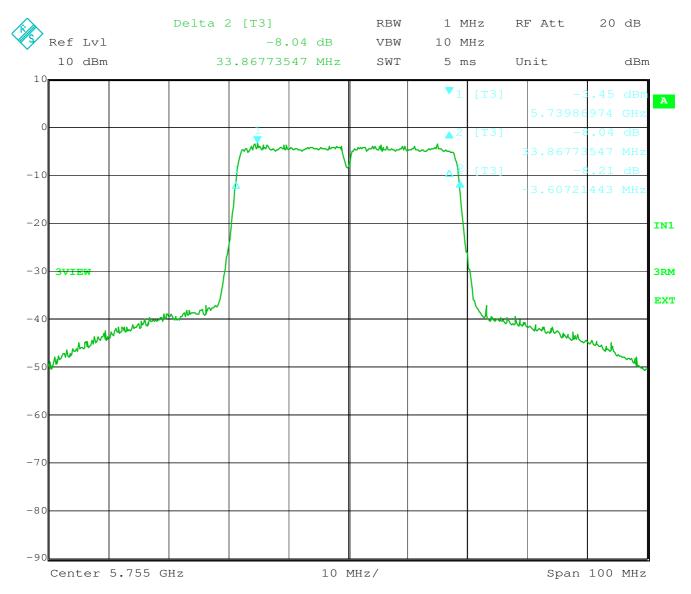
Test Equipment used: NT-207

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6dB Bandwidth § 15.407(e)

Conducted Measurement

Rated output power: 7,6 mW Channel 149-153 (5755 MHz center frequency)



Date: 12.FEB.2015 16:28:38

6dB Bandwidth: 37,475 MHz

LIMIT SUBCLAUSE 15.407(e)

Frequency range 5725 – 5850 MHz	6 dB Bandwidth at least 500 kHz
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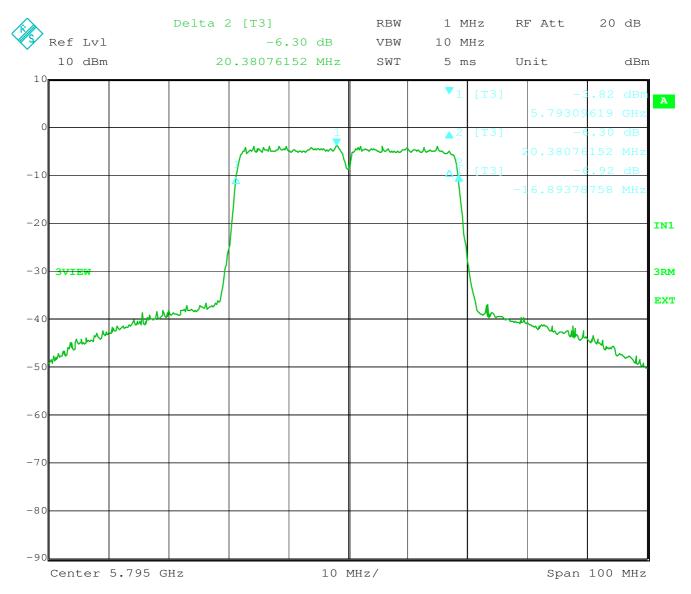
Test Equipment used: NT-207

Form: FCC15.DOT/1. 1. 2002 Page 7 of 103 File: 15-138.doc/27.03.2015

6dB Bandwidth § 15.407(e)

Conducted Measurement

Rated output power: 7,6 mW Channel 157-161 (5795 MHz center frequency)



Date: 12.FEB.2015 16:24:46

6dB Bandwidth: 37,274 MHz

LIMIT SUBCLAUSE 15.407(e)

Frequency range 5725 – 5850 MHz	6 dB Bandwidth at least 500 kHz
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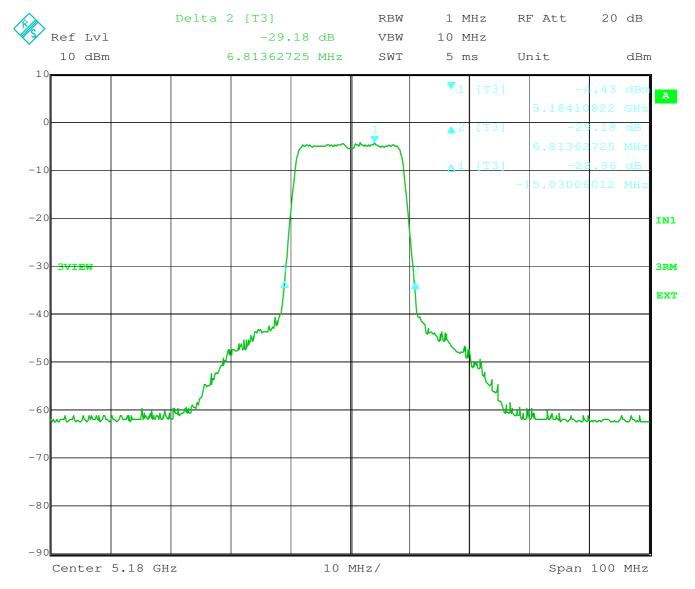
Test Equipment used: NT-207

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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 36 (5180 MHz center frequency)



Date: 12.FEB.2015 15:06:33

26dB Bandwidth: 21,844 MHz

LIMIT SUBCLAUSE 15.407

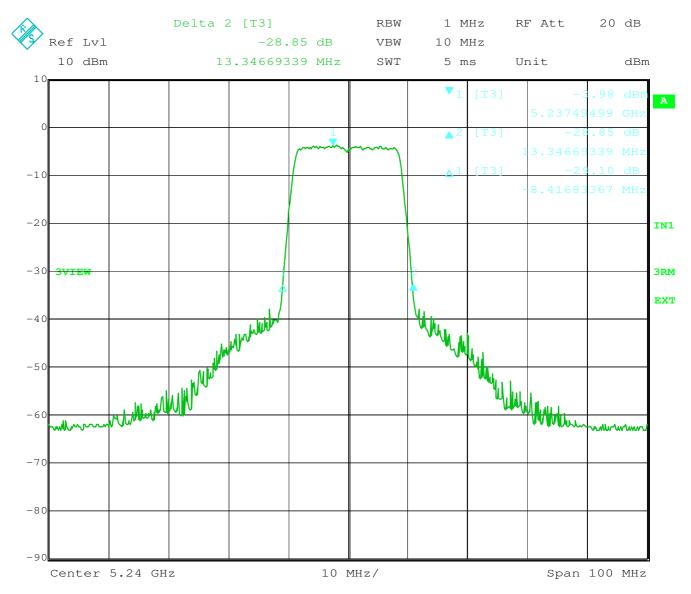
Test Equipment used: NT-207

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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 48 (5240 MHz center frequency)



Date: 12.FEB.2015 15:08:32

26dB Bandwidth: 21,763 MHz

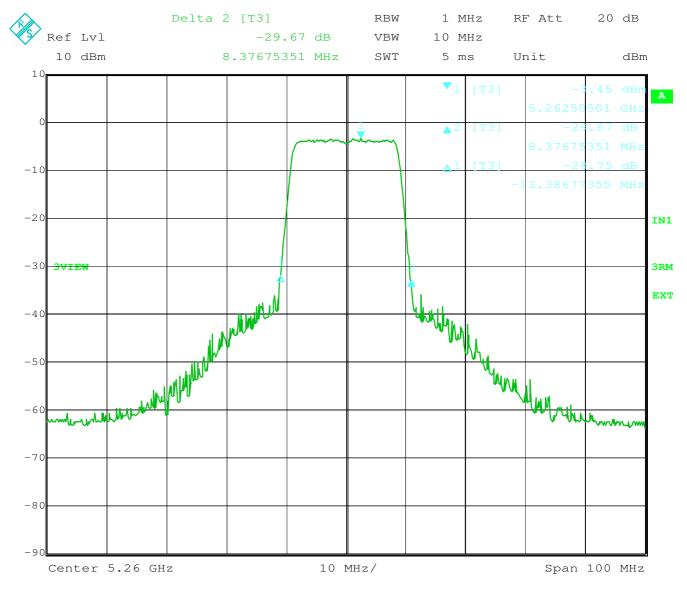
LIMIT SUBCLAUSE 15.407

Frequency ranges: 5150 - 5250; 5250 - 5350; 5470 - 5650; 5725 - 5850 MHz	26 dB Bandwidth fully inside permitted frequency ranges
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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 52 (5260 MHz center frequency)



Date: 12.FEB.2015 15:12:00

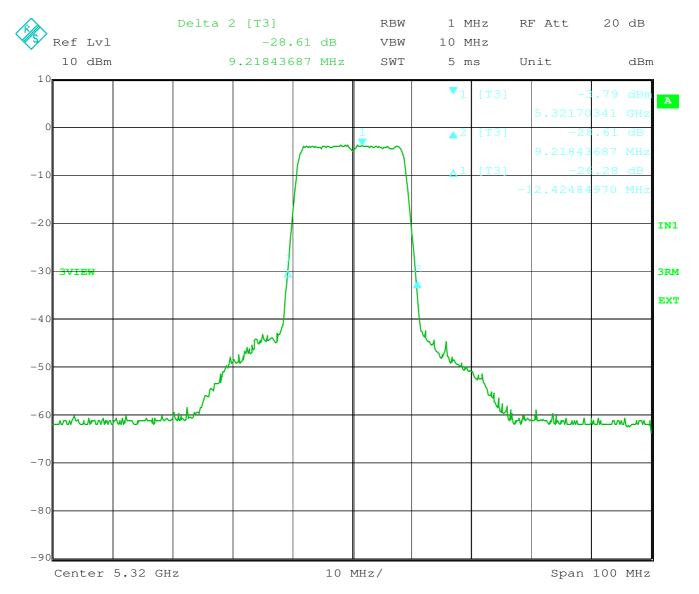
26dB Bandwidth: 21,764 MHz

LIMIT SUBCLAUSE 15.407

26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 64 (5320 MHz center frequency)



Date: 12.FEB.2015 16:12:52

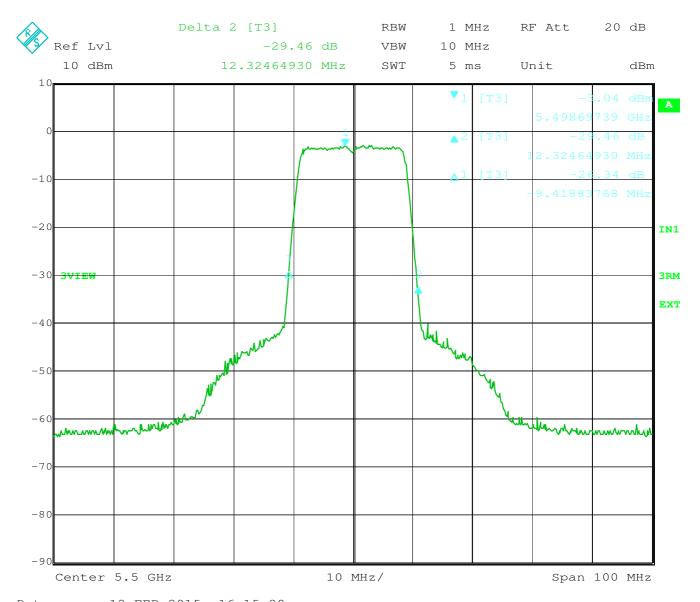
26dB Bandwidth: 21,644 MHz

LIMIT SUBCLAUSE 15.407

26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 100 (5500 MHz center frequency)



Date: 12.FEB.2015 16:15:20

26dB Bandwidth: 21,744 MHz

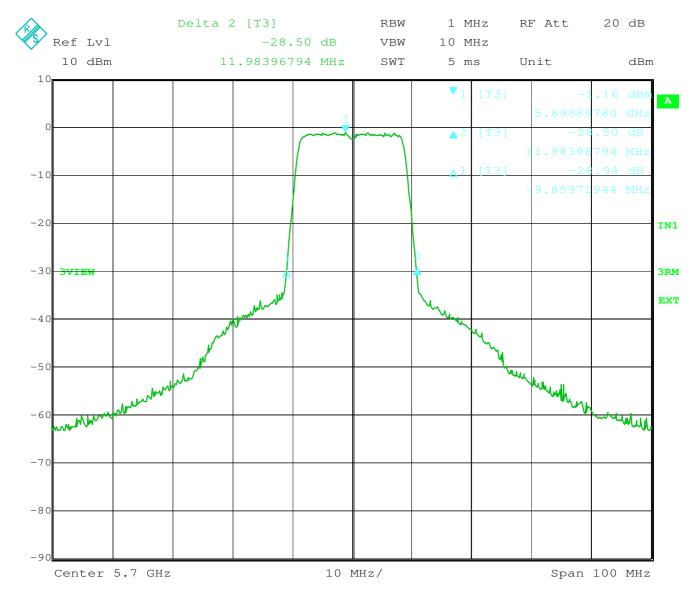
LIMIT SUBCLAUSE 15.407

Frequency ranges: 5150 – 5250; 5250 – 5350; 5470 – 5650; 5725 – 5850 MHz	26 dB Bandwidth fully inside permitted frequency ranges
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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 140 (5700 MHz center frequency)



Date: 12.FEB.2015 16:17:21

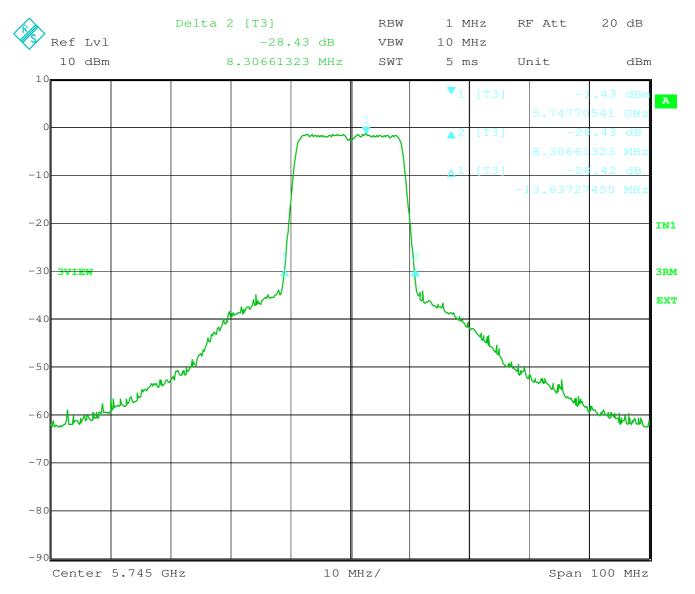
26dB Bandwidth: 21,844 MHz

LIMIT SUBCLAUSE 15.407

26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 149 (5745 MHz center frequency)



Date: 12.FEB.2015 16:19:28

26dB Bandwidth: 21,944 MHz

LIMIT SUBCLAUSE 15.407

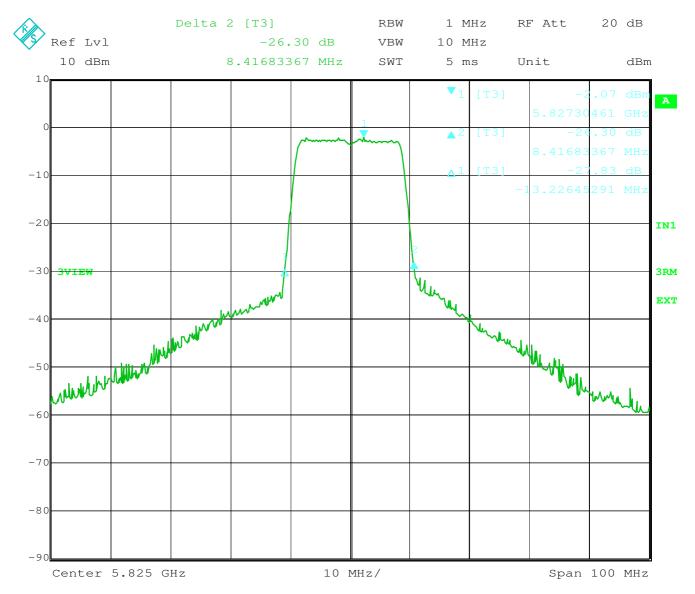
Test Equipment used: NT-207

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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 165 (5825 MHz center frequency)



Date: 12.FEB.2015 16:23:24

26dB Bandwidth: 21,644 MHz

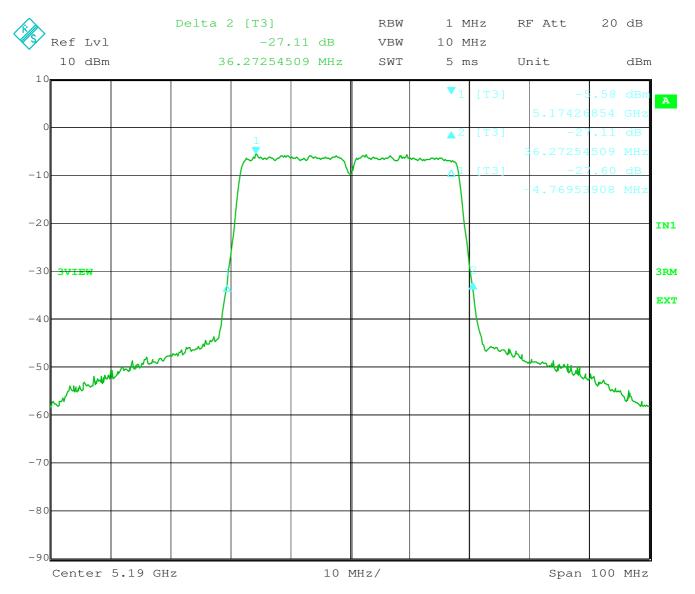
LIMIT SUBCLAUSE 15.407

Frequency ranges: 5150 – 5250; 5250 – 5350; 5470 – 5650; 5725 – 5850 MHz	26 dB Bandwidth fully inside permitted frequency ranges
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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 36-40 (5190 MHz center frequency)



Date: 12.FEB.2015 16:40:54

26dB Bandwidth: 41,042 MHz

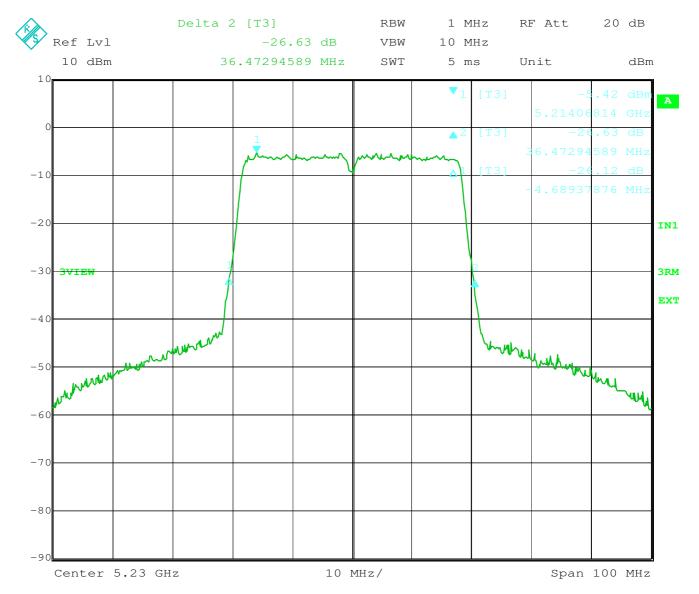
LIMIT SUBCLAUSE 15.407

Frequency ranges: 5150 – 5250; 5250 – 5350; 5470 – 5650; 5725 – 5850 MHz	26 dB Bandwidth fully inside permitted frequency ranges
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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 44-48 (5230 MHz center frequency)



Date: 12.FEB.2015 16:38:33

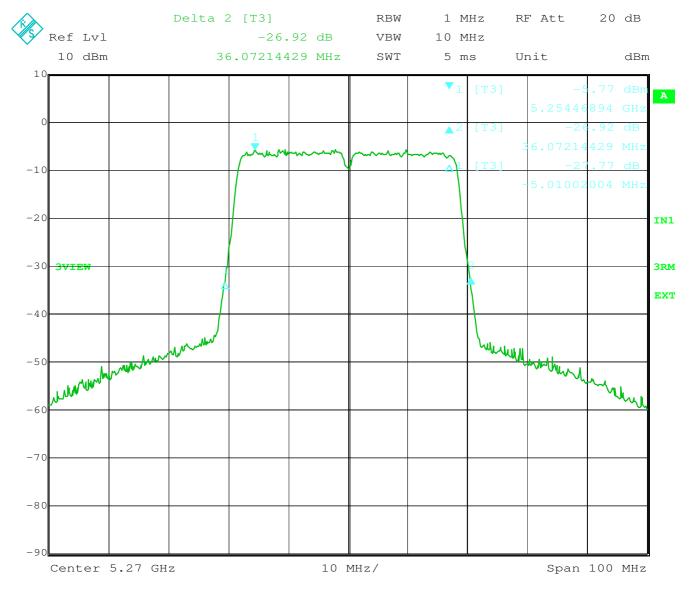
26dB Bandwidth: 41,162 MHz

LIMIT SUBCLAUSE 15.407

26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 52-56 (5270 MHz center frequency)



Date: 12.FEB.2015 16:36:43

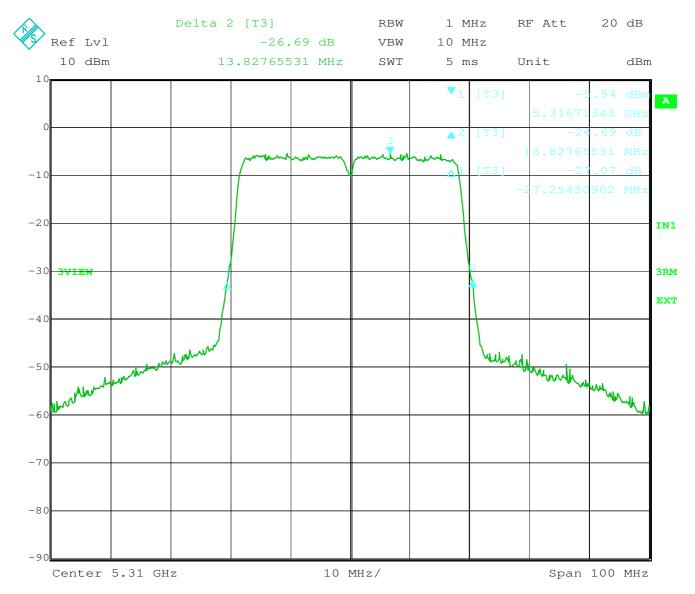
26dB Bandwidth: 41,082 MHz

LIMIT SUBCLAUSE 15.407

26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 60-64 (5310 MHz center frequency)



Date: 12.FEB.2015 16:34:58

26dB Bandwidth: 41,082 MHz

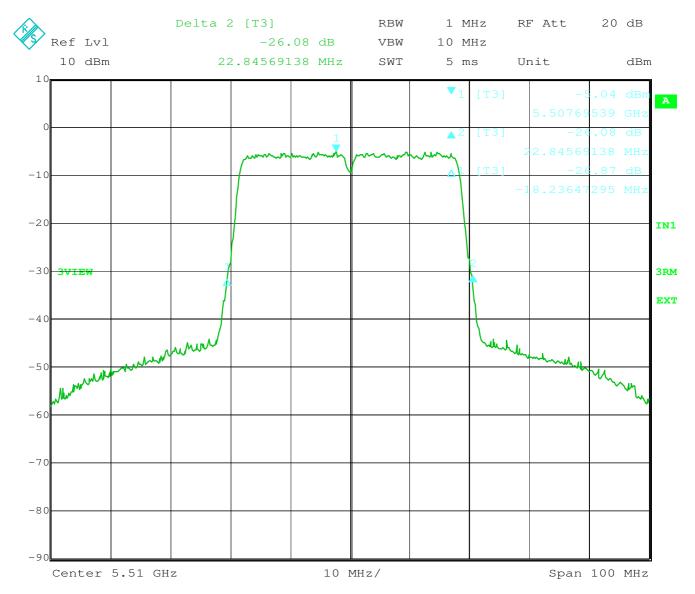
LIMIT SUBCLAUSE 15.407

Frequency ranges: 5150 – 5250; 5250 – 5350; 5470 – 5650; 5725 – 5850 MHz	26 dB Bandwidth fully inside permitted frequency ranges
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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 100-104 (5510 MHz center frequency)



Date: 12.FEB.2015 16:32:58

26dB Bandwidth: 41,082 MHz

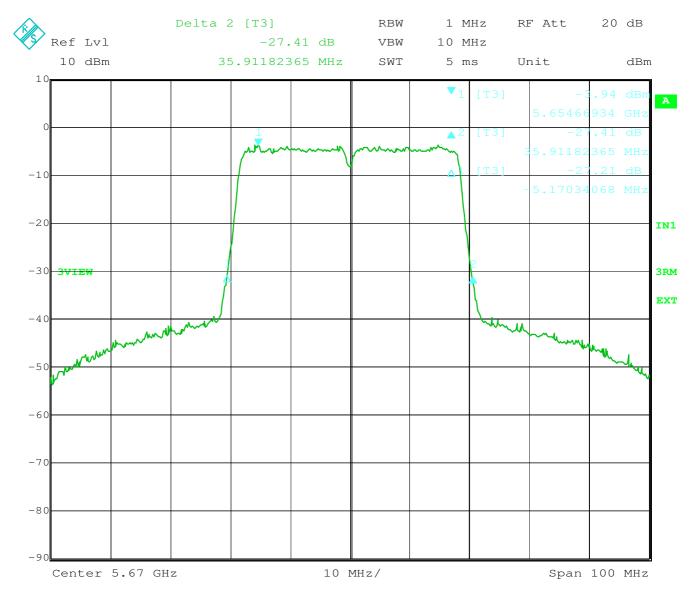
LIMIT SUBCLAUSE 15.407

Frequency ranges: 5150 – 5250; 5250 – 5350; 5470 – 5650; 5725 – 5850 MHz	26 dB Bandwidth fully inside permitted frequency ranges
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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 132-136 (5670 MHz center frequency)



Date: 12.FEB.2015 16:31:22

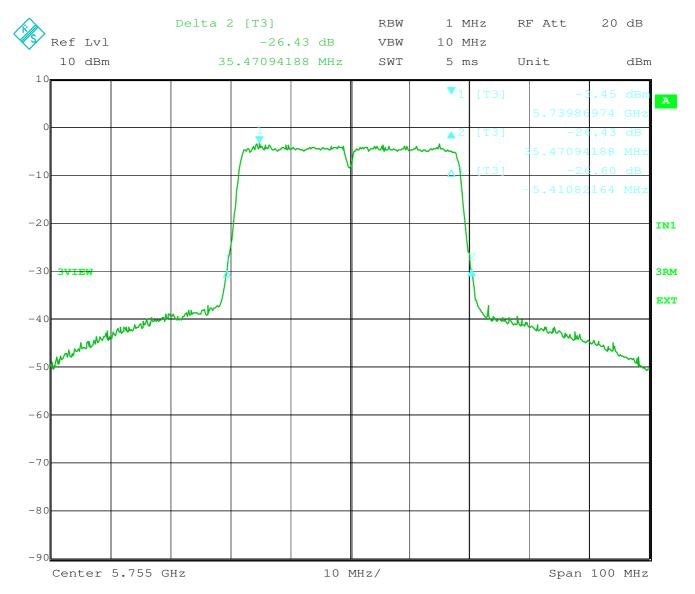
26dB Bandwidth: 41,082 MHz

LIMIT SUBCLAUSE 15.407

26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 149-153 (5755 MHz center frequency)



Date: 12.FEB.2015 16:29:05

26dB Bandwidth: 40,882 MHz

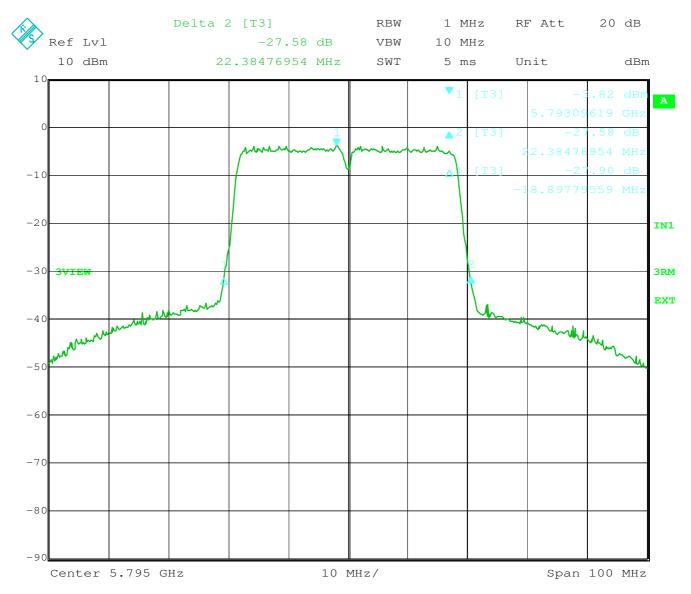
LIMIT SUBCLAUSE 15.407

Frequency ranges: 5150 – 5250; 5250 – 5350; 5470 – 5650; 5725 – 5850 MHz	26 dB Bandwidth fully inside permitted frequency ranges
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26dB Bandwidth § 15.407

Conducted Measurement

Rated output power: 7,6 mW Channel 157-165 (5795 MHz center frequency)



Date: 12.FEB.2015 16:25:23

26dB Bandwidth: 41,283 MHz

LIMIT SUBCLAUSE 15.407

Frequency ranges: 5150 – 5250; 5250 – 5350; 5470 – 5650; 5725 – 5850 MHz	26 dB Bandwidth fully inside permitted frequency ranges
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Ambient temperature: 24°C Relative humidity: 25%

Maximum Conducted Output Power

§ 15.407(a)(1)(iv)

Conducted Measurement

Rated output power: 7,6 mW

Test conditions		Transmitter power (mW)	
		5180 (5190) MHz	5240 (5230) MHz
T _{nom} (24)°C	OFDM – 20 MHz	4,68	4,68
	OFDM – 40 MHz	4,57	4,57
Measurement uncert	tainty	± 0,7	5 dB

LIMIT SUBCLAUSE 15.407(a)(1)(iv)

For mobile and portable client	250 mW provided the maximum
devices in the 5.15-5.25 GHz band	antenna gain does not exceed 6 dBi

Test Equipment used: NT-204; NT-229; NT233/1a

Form: FCC15.DOT/1. 1. 2002 Page 25 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

Maximum Conducted Output Power

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW

Test conditions		Transmitter power (mW)	
		5260 (5270) MHz	5320 (5310) MHz
T _{nom} (24)°C	OFDM – 20 MHz	5,25	4,79
	OFDM – 40 MHz	5,01	4,79
Measurement uncerta	ainty	± 0,7	5 dB

LIMIT SUBCLAUSE 15.407(a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands	the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz
	the 20 db emission bandwidth in meganenz

Test Equipment used: NT-204; NT-229; NT233/1a

Form: FCC15.DOT/1. 1. 2002 Page 26 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

Maximum Conducted Output Power

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW

Test conditions		Transmitter power (mW)	
		5500 (5510) MHz	5700 (5670) MHz
T _{nom} (24)°C	OFDM – 20 MHz	5,50	7,59
	OFDM – 40 MHz	5,50	6,92
Measurement uncerta	ainty	± 0,7	5 dB

LIMIT SUBCLAUSE 15.407(a)(2)

ser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz

Test Equipment used: NT-204; NT-229; NT233/1a

Form: FCC15.DOT/1. 1. 2002 Page 27 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

Maximum Conducted Output Power

§ 15.407(a)(3)

Conducted Measurement

Rated output power: 7,6 mW

Test conditions		Transmitter power (mW)	
		5745 (5755) MHz	5825 (5795) MHz
T _{nom} (24)°C	OFDM – 20 MHz	7,24	6,17
	OFDM – 40 MHz	6,92	6,31
Measurement uncerta	ainty	<u>+</u> 0,7	5 dB

LIMIT SUBCLAUSE 15.407(a)(3)

For the band 5.725-5.85 GHz	1 W provided the maximum
	antenna gain does not exceed 6 dBi

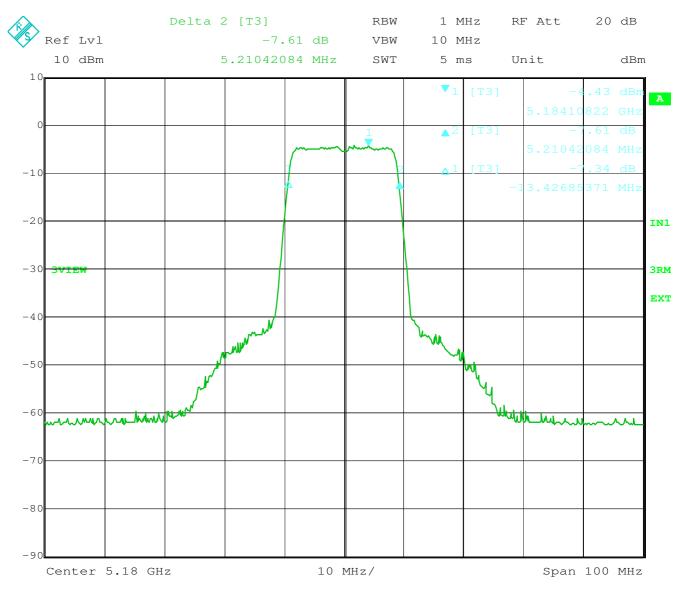
Test Equipment used: NT-204; NT-229; NT233/1a

Maximum Power spectral density (conducted)

§ 15.407(a)(1)(iv)

Conducted Measurement

Rated output power: 7,6 mW Channel 36 (5180 MHz center frequency)



Date: 12.FEB.2015 15:05:41

Power Spectral density: -4,43 dBm @ 5184,108 MHz

LIMIT SUBCLAUSE 15.407(a)(1)(iv)

For mobile and portable client devices in the 5.15-5.25	the maximum power spectral density shall not exceed
GHz band	11 dBm in any 1 megahertz band

Test Equipment used: NT-207

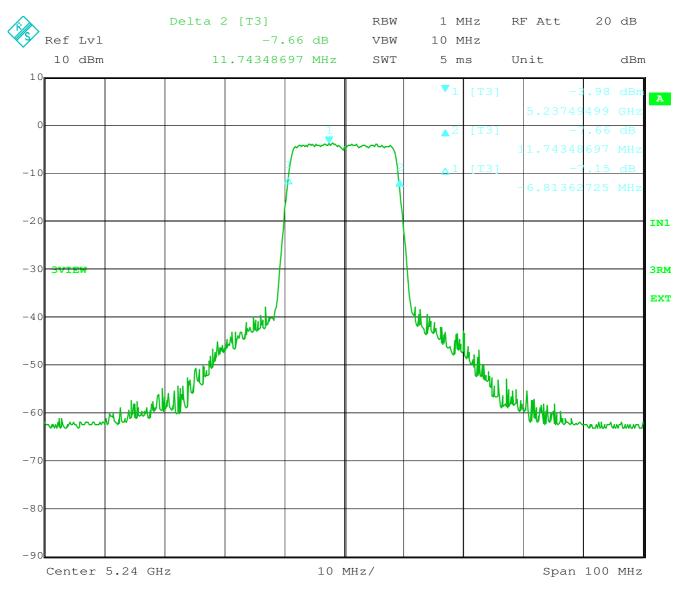
Form: FCC15.DOT/1. 1. 2002 Page 29 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(1)(iv)

Conducted Measurement

Rated output power: 7,6 mW Channel 48 (5240 MHz center frequency)



Date: 12.FEB.2015 15:08:09

Power Spectral density: -3,98 dBm @ 5237,495 MHz

LIMIT SUBCLAUSE 15.407(a)(1)(iv)

For mobile and portable client devices in the 5.15-5.25	the maximum power spectral density shall not exceed
GHz band	11 dBm in any 1 megahertz band

Test Equipment used: NT-207

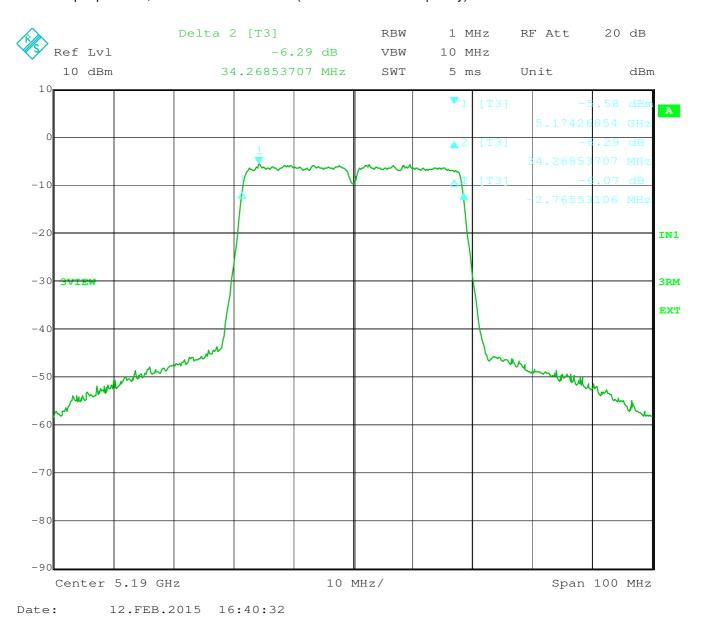
Form: FCC15.DOT/1. 1. 2002 Page 30 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(1)(iv)

Conducted Measurement

Rated output power: 7,6 mW Channel 36-40 (5190 MHz center frequency)



Power Spectral density: -5,58 dBm @ 5174,269 MHz

LIMIT SUBCLAUSE 15.407(a)(1)(iv)

For mobile and portable client devices in the 5.15-5.25 GHz band	the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band
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Test Equipment used: NT-207

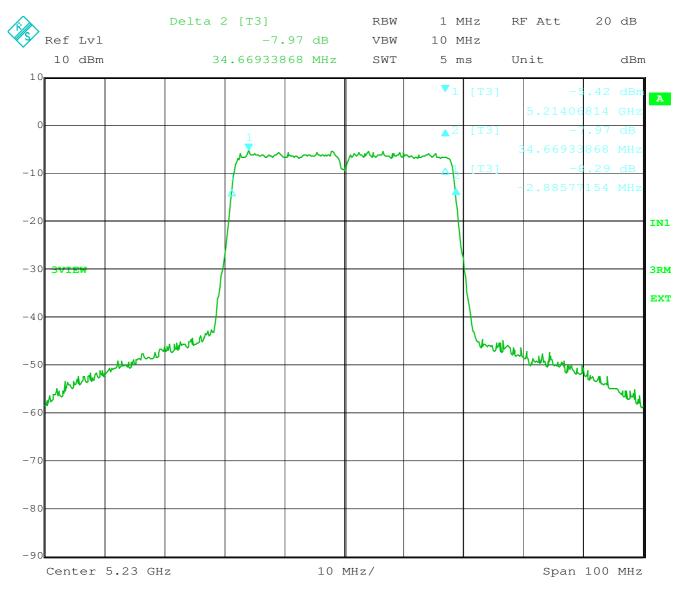
Form: FCC15.DOT/1. 1. 2002 Page 31 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(1)(iv)

Conducted Measurement

Rated output power: 7,6 mW Channel 44-48 (5230 MHz center frequency)



Date: 12.FEB.2015 16:38:04

Power Spectral density: -5,42 dBm @ 5214,068 MHz

LIMIT SUBCLAUSE 15.407(a)(1)(iv)

For mobile and portable client devices in the 5.15-5.25 GHz band	the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band
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Test Equipment used: NT-207

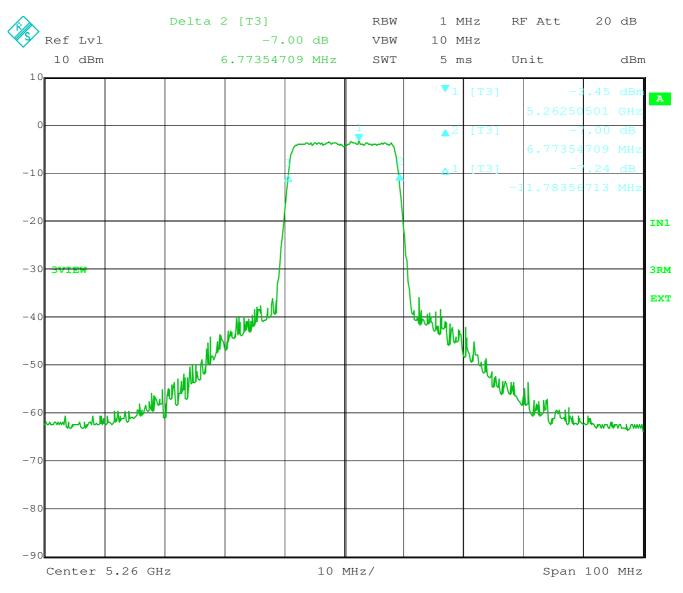
Form: FCC15.DOT/1. 1. 2002 Page 32 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW Channel 52 (5260 MHz center frequency)



Date: 12.FEB.2015 15:10:19

Power Spectral density: -3,45 dBm @ 5262,505 MHz

LIMIT SUBCLAUSE 15.407(a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands	the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band
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Test Equipment used: NT-207

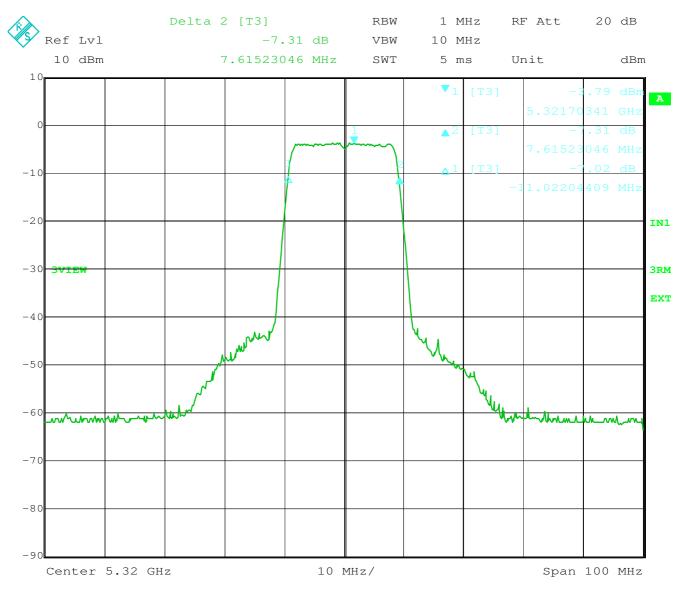
Form: FCC15.DOT/1. 1. 2002 Page 33 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW Channel 64 (5320 MHz center frequency)



Date: 12.FEB.2015 16:12:26

Power Spectral density: -3,79 dBm @ 5321,703 MHz

LIMIT SUBCLAUSE 15.407(a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands	the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band
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Test Equipment used: NT-207

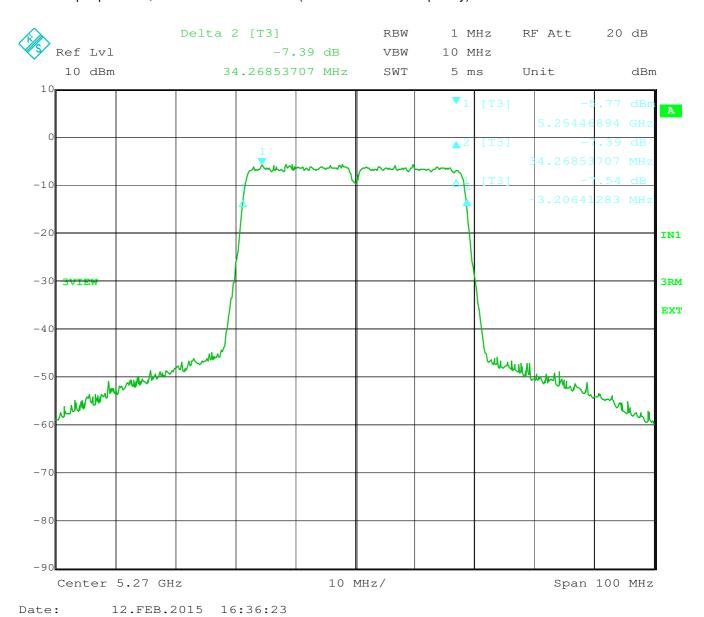
Form: FCC15.DOT/1. 1. 2002 Page 34 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW Channel 52-56 (5270 MHz center frequency)



Power Spectral density: -5,77 dBm @ 5254,469 MHz

LIMIT SUBCLAUSE 15.407(a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands	the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band
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Test Equipment used: NT-207

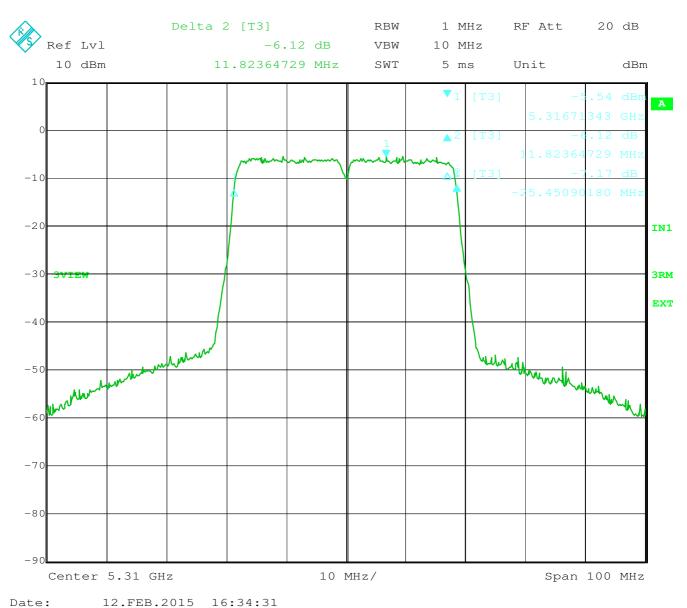
Form: FCC15.DOT/1. 1. 2002 Page 35 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW Channel 60-64 (5310 MHz center frequency)



Jace: 12.FEB.2013 10:34:31

Power Spectral density: -5-54 dBm @ 5316,713 MHz

LIMIT SUBCLAUSE 15.407(a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands	the maximum power spectral density shall not exceed
	11 dBm in any 1 megahertz band

Test Equipment used: NT-207

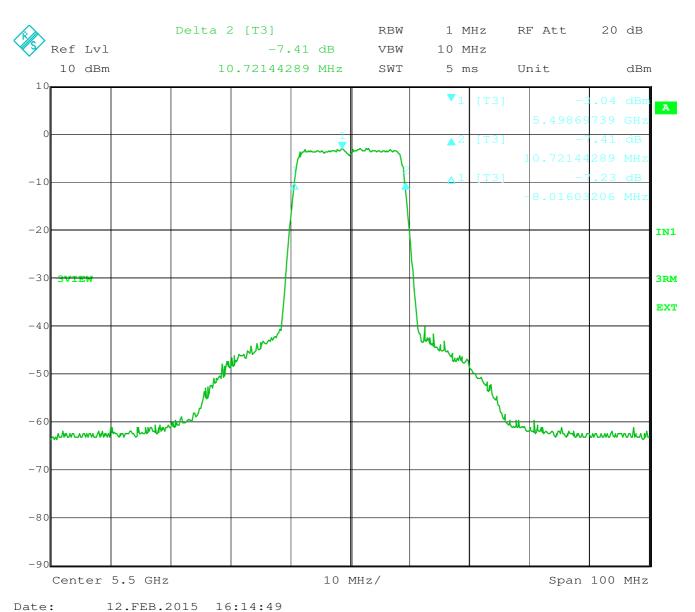
Form: FCC15.DOT/1. 1. 2002 Page 36 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW Channel 100 (5500 MHz center frequency)



Power Spectral density: -3,04 dBm @ 5498,697 MHz

LIMIT SUBCLAUSE 15.407(a)(2)

Test Equipment used: NT-207

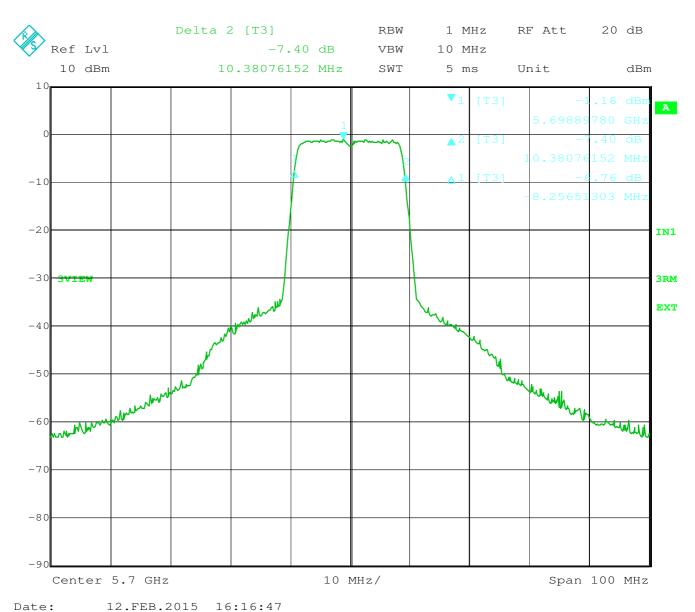
Form: FCC15.DOT/1. 1. 2002 Page 37 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW Channel 140 (5700 MHz center frequency)



Power Spectral density: -1,16 dBm @ 5698,897 MHz

LIMIT SUBCLAUSE 15.407(a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands	the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band
--	--

Test Equipment used: NT-207

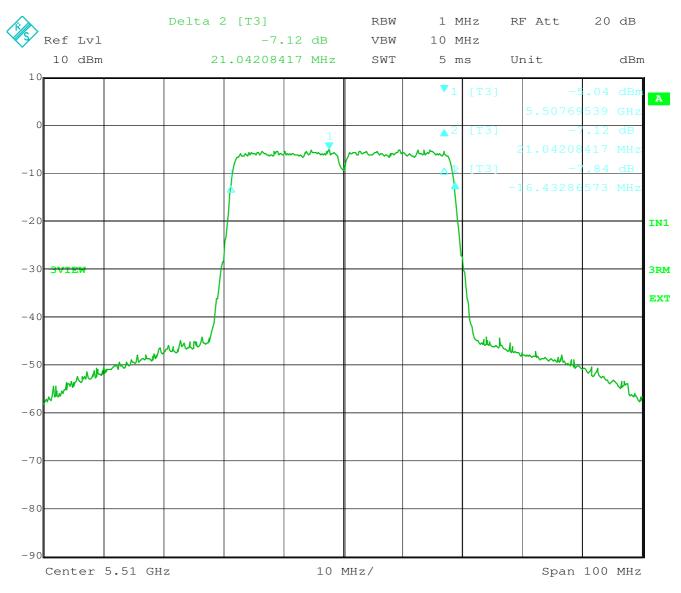
Form: FCC15.DOT/1. 1. 2002 Page 38 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW Channel 100-104 (5510 MHz center frequency)



Date: 12.FEB.2015 16:32:38

Power Spectral density: -5,04 dBm @ 5507,695 MHz

LIMIT SUBCLAUSE 15.407(a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands	the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band
	i i ubili ili aliy i illegalletiz ballu

Test Equipment used: NT-207

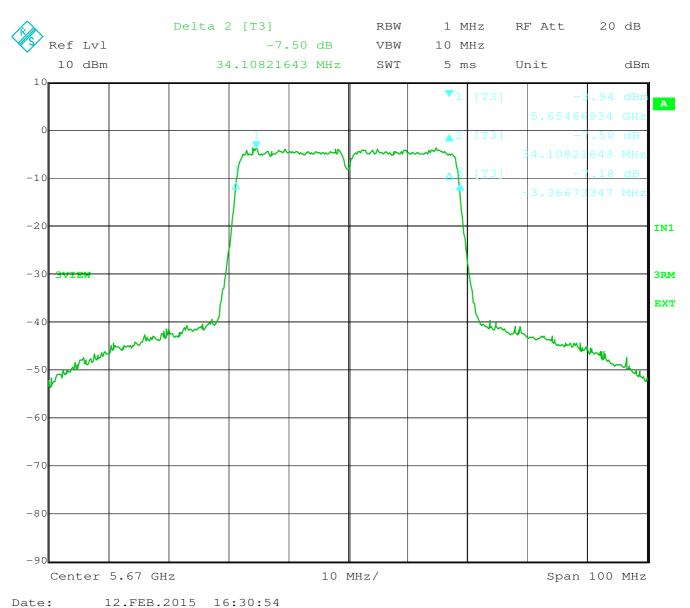
Form: FCC15.DOT/1. 1. 2002 Page 39 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(2)

Conducted Measurement

Rated output power: 7,6 mW Channel 132-136 (5670 MHz center frequency)



Date: 12.FEB.2013 10:30:34

Power Spectral density: -3,94 dBm @ 5654,669 MHz

LIMIT SUBCLAUSE 15.407(a)(2)

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands	the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band
	i i ubili ili aliy i illegalletiz ballu

Test Equipment used: NT-207

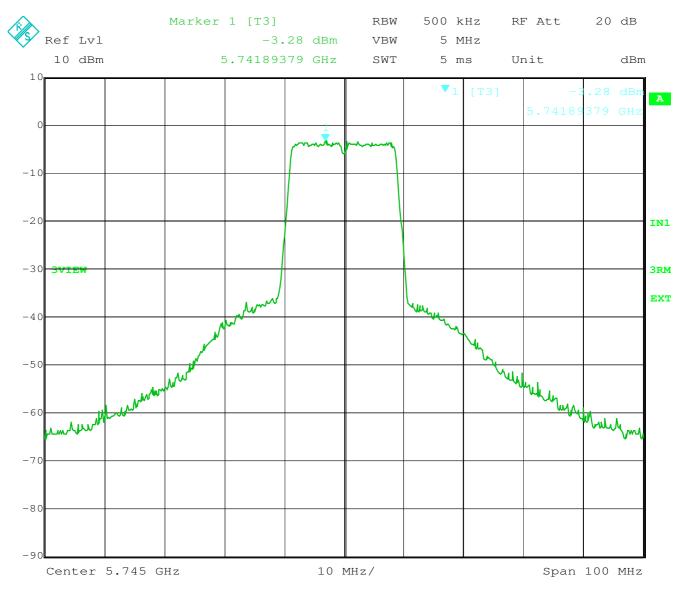
Form: FCC15.DOT/1. 1. 2002 Page 40 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(3)

Conducted Measurement

Rated output power: 7,6 mW Channel 149 (5745 MHz center frequency)



Date: 12.FEB.2015 16:20:22

Power Spectral density: -3,28 dBm @ 5741,894 MHz

LIMIT SUBCLAUSE 15.407(a)(3)

For the band 5.725-5.85 GHz the maximum power spectral density shall not exceed a graph of t
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Test Equipment used: NT-207

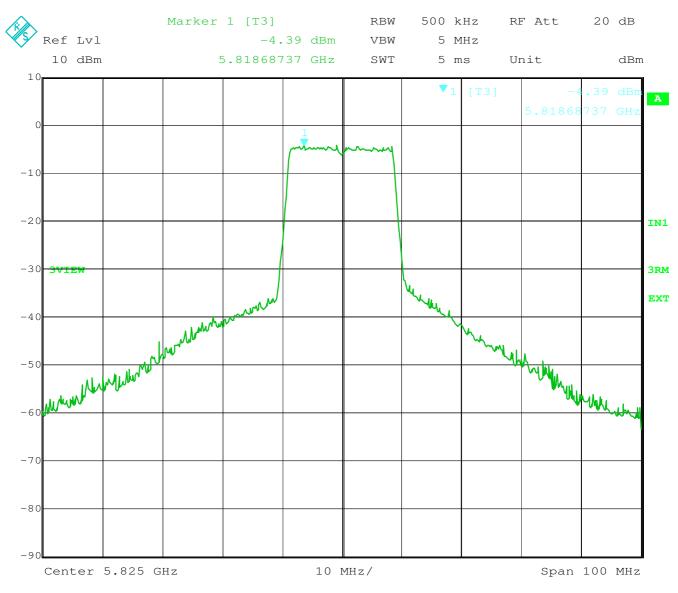
Form: FCC15.DOT/1. 1. 2002 Page 41 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(3)

Conducted Measurement

Rated output power: 7,6 mW Channel 165 (5825 MHz center frequency)



Date: 12.FEB.2015 16:22:30

Power Spectral density: -4,39 dBm @ 5818,687 MHz

LIMIT SUBCLAUSE 15.407(a)(3)

For the band 5.725-5.85 GHz	the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band
-----------------------------	--

Test Equipment used: NT-207

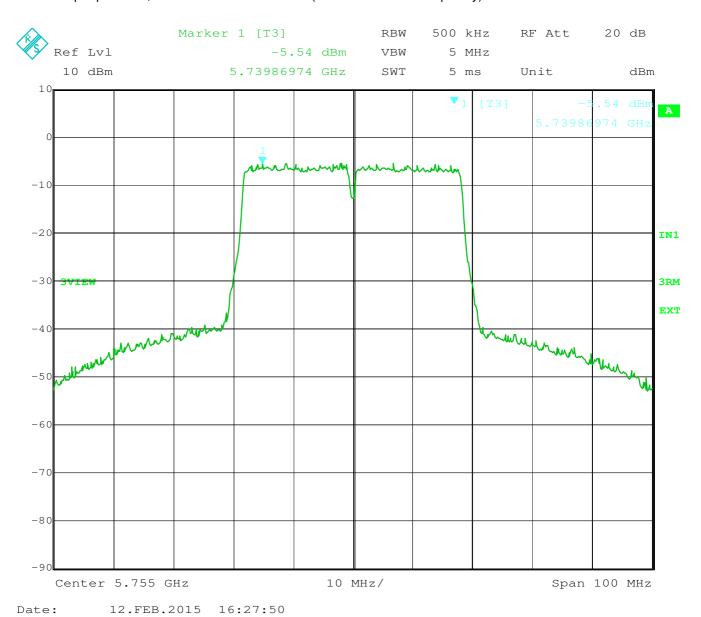
Form: FCC15.DOT/1. 1. 2002 Page 42 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(3)

Conducted Measurement

Rated output power: 7,6 mW Channel 149-153 (5755 MHz center frequency)



Power Spectral density: -5,54 dBm @ 5739,870 MHz

LIMIT SUBCLAUSE 15.407(a)(3)

For the band 5.725-5.85 GHz the maximum power spectral density shall not exceed a graph of t
--

Test Equipment used: NT-207

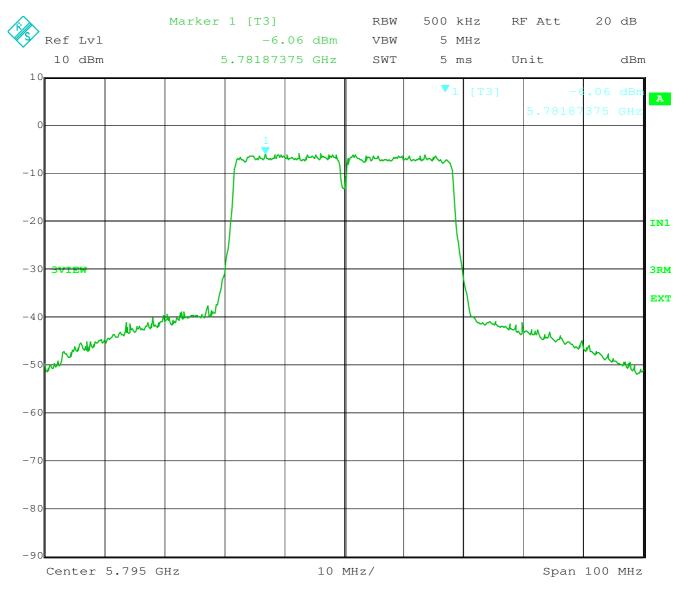
Form: FCC15.DOT/1. 1. 2002 Page 43 of 103 File: 15-138.doc/27.03.2015

Maximum Power spectral density (conducted)

§ 15.407(a)(3)

Conducted Measurement

Rated output power: 7,6 mW Channel 157-161 (5795 MHz center frequency)



Date: 12.FEB.2015 16:26:10

Power Spectral density: -6,06 dBm @ 5781,874 MHz

LIMIT SUBCLAUSE 15.407(a)(3)

For the band 5.725-5.85 GHz the maximum power spectral density shall not exceed a graph of t
--

Test Equipment used: NT-207

Ambient temperature: 24°C Relative humidity: 25%

Undesirable Emission Limits

§ 15.407(b)

Conducted measurement

Setup: CH 36: 5180 MHz

Ref Lvl	Marker		31 dBm		1 N 10 N		F Att	20	dB
10 dBm	6	.904547		SWT			nit		dBm
10 dB Offse	:t				▼2	[T3]	-49 6.90454		dBm A
0	1 Y				▼ 1	[T3]	-2	.16	dBm
-10							5.15210	822	GHz
-20									IN
-30 -3MAX									3RI
									EX
-40	2								
-50		م <u>م</u> م	·	~ rv~~	Mun		h	M	w
-60 M									
-70									
-80									
-90									
Center 13.250)5 GHz		2.649	9 GHz/		S	Span 26.	499	GHz

27.FEB.2015 13:13:11

Date:

LIMIT SUBCLAUSE 15.407(b)(1) - A8.5

1 5	ions outside of the 5.15-5.35 GHz band shall of exceed an e.i.r.p. of -27 dBm/MHz.
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Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 45 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

Undesirable Emission Limits

§ 15.407(b)

Conducted measurement

Setup: CH 48: 5240 MHz

Ref Lvl	Marker		08 dBm		1 N 10 N		F Att	20	dB
10 dBm	1	6.957651		SWT			nit		dBm
10 dB Offset					v ₂	[T3]	-51 6.95765	1.08	A
0	1 Y				▼1	[T3]	-2	.21	dBm
-10							5.20521	242	GHz
-20									IN
-30 -3MAX									3R
									EX
-40									
-50	2								
~			10 M D 0		Monus	L	lunn	M	m
-60 m	<u> </u>						VV-00 (VV-0)	V	
-70									
-80									
-90 Center 13.250	5 GHz		2.649	9 GHz/	<u> </u>		Span 26.	499	GHz

27.FEB.2015 13:11:57

Date:

LIMIT SUBCLAUSE 15.407(b)(1) - A8.5

For transmitters operating in the 5.15-5.25 GHz band	All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.
--	--

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 46 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

Undesirable Emission Limits

§ 15.407(b)

Conducted measurement

Setup: CH 36-40: 5190 MHz

Ref Lvl	Marker		17 dBm	RBW VBW	1 N 10 N		F Att	20	dB
10 dBm	6	.904547		SWT			nit		dBm
10 dB Offse	t				▼2	[T3]	-49 6.90454		dBm A
0	1				▼1	[T3]	— Z	.40	dBm
-10							5.15210	822	GHz
-20									INI
-30 -3MAX									3RM
									EX
-40	2								
-50		^ ^	V^M/1 M	,,,,,	Mun	~~~	hme	m	mn
-60 mm				Ť				•	
-70									
-80									
-90									
Center 13.250	5 GHz		2.649	9 GHz/			Span 26.	499	GHz

27.FEB.2015 13:14:04

Date:

LIMIT SUBCLAUSE 15.407(b)(1) - A8.5

1 5	ions outside of the 5.15-5.35 GHz band shall of exceed an e.i.r.p. of -27 dBm/MHz.
-----	--

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 47 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

Undesirable Emission Limits

§ 15.407(b)

Conducted measurement

Setup: CH 44-48: 5230 MHz

Ref Lvl	Marker		79 dBm	RBW VBW	1 N 10 N		F Att	20	dB
10 dBm	(5.957651	30 GHz	SWT	150 n	ns U	nit		dBm
10 dB Offset					▼ 2	[T3]	-48	.79	dBm
0	l						6.95765		GHz
7	ĺ				V 1	[T3]	5.20521	242	dBm GHz
-10									
-20									IN1
-30 3MAX									3RM
									EXT
-40									
	<u>2</u>								
-50	Y								
		٨			Know	^	Λ	m	MM
-60	~ L~	~~~	····			\sim	Venns	000	
W									
-70									
-80									
-90 Center 13.2505	GHz		2.649	9 GHz/	I	;	Span 26.	499	GHz

Date: 27.FEB.2015 13:14:52

LIMIT SUBCLAUSE 15.407(b)(1) – A8.5

1 5	ions outside of the 5.15-5.35 GHz band shall of exceed an e.i.r.p. of -27 dBm/MHz.
-----	--

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 48 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

Undesirable Emission Limits

§ 15.407(b)

Conducted measurement

Setup: CH 52: 5260 MHz

Ref Lvl	Marker		25 dBm		1 N 10 N		F Att	20	dB
10 dBm	-	7.010755		SWT			nit		dBm
10 dB Offset					v ₂	[T3]	-51 7.01075	.25	dBm A
0	1				<u>▼</u> 1	[T3]	-2	.09	dBm
-10							5.25831	.663	GHz
-20									INI
-30 -3MAX									3RI
									EX
-40									
-50	2								
	~~~	ار ما الما الما الما الما الما الما الما	~~~~		hum		M., mA	m	MN
-60									
-70									
-80									
-90 Center 13.2505	GHz	l	2.649	9 GHz/	<u>I</u>		Span 26.	499	GHz

LIMIT S

Date:

# SUBCLAUSE 15.407(b)(2) - A8.5

For transmitters operating in the 5.25-5.35 GHz band
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Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

27.FEB.2015 13:11:11

Form: FCC15.DOT/1. 1. 2002 Page 49 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 64: 5320 MHz

Ref Lvl	Marker 2		72 dBm	RBW VBW	1 M		F Att	20	dB
10 dBm	7	.063859		SWT	150 m		nit		dBm
10 dB Offset	=				<b>▼</b> 2	[T3]	-49	.72	dBm A
0	<del> </del>				<b>▼</b> 1	[T3]	7.06385 -1	.37	dBm
							5.31142	084	GHz
-10									
-20									IN1
-30 <del>3MAX</del>									3RM
-40									EXT
	2								
-50	T T								
, N		H. N	M222	^~	Munn		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	M	MM
-60									
-70									
-80									$\dashv$
-90									
Center 13.250	5 GHz		2.649	9 GHz/		S	Span 26.	499	GHz

27.FEB.2015 13:10:16

Date:

#### LIMIT SUBCLAUSE 15.407(b)(2) - A8.5

For transmitters operating in the 5.25-5.35 GHz band All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.	For transmitters operating in the 5.25-5.35 GHz band	All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.
---------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------	----------------------------------------------------------------------------------------------

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 50 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 52-56: 5270 MHz

Ref Lvl	Marker		59 dBm		1 N 10 N		F Att	20	dВ
10 dBm	7	.010755	51 GHz	SWT	150 n	ns U	nit		dBm
10 dB Offset					<b>▼</b> 2	[T3]	-51	.59	dBm A
0	- V				<b>▼</b> 1	[T3]	7.01075	551 .87	GHz dBm
							5.25831	663	GHz
-10									
-20									IN1
-30 <b>3MAX</b>									3RM
									EXT
-40									
	2								
-50	1, M	,	14040		Mun		Luna	m	m
-60	w 0/0			~~			***************************************		
-70									
-80									
-90									
Center 13.2505	GHz		2.649	9 GHz/	_		Span 26.	499	GHz

27.FEB.2015 13:16:15

Date:

#### LIMIT SUBCLAUSE 15.407(b)(2) - A8.5

For transmitters operating in the 5.25-5.35 GHz band All e	emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.
------------------------------------------------------------	------------------------------------------------------------------------------------------

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 51 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 60-64: 5310 MHz

Ref Lvl	Marker	-49.		RBW VBW	1 M	IHz	F Att	20	
10 dBm	,	7.063859	7/2 GHZ	SWT	150 m	is Ui	nit		dBm
10 dB Offset					<b>v</b> ₂	[T3]	-49	.86	dBm A
							7.06385	972	
0	7				<b>▼</b> 1	[T3]	-2	.70	dBm
							5.31142	084	GHz
-10									
-20									IN1
-30 <b>3MAX</b>									3RM
									EXT
-40									EXT
5.0	2								
-50	W	~~~	·		Kny		hum	wh	m
		Ŷ							
-70									
-80									
-90									
Center 13.2505	GHz		2.6499	9 GHz/		S	Span 26.	499	GHz

LIMIT SUBCLAUSE 15.407(b)(2) – A8.5

27.FEB.2015 13:17:10

Date:

For transmitters operating in the 5.25-5.35 GHz band All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.	For transmitters operating in the 5.25-5.35 GHz band	All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.
---------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------	----------------------------------------------------------------------------------------------

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 52 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 100: 5500 MHz

Ref Lvl	Marker		74 dBm		1 M		F Att	20	dB
10 dBm	16	5.091575		SWT			nit		dBm
10 dB Offset					▼2	[T3]	-53 16.09157	.74	dBm A
0	<u>1</u> Y				▼1	[T3]	-1	.31	dBm
-10							5.47073	347	GHz
-20									IN1
-30 <del>3MAX</del>									3RM
									EXT
-40									$\dashv$
-50					2				
	Lyl			,,,,,,	Lunar	\\	h	MA	m
-60							V0C- Q-0		
-70									
-80									
-90 Center 13.2505	GHz		2.649	9 GHz/			Span 26.	499	GHz

LIMIT

Date:

# SUBCLAUSE 15.407(b)(3) - A8.5

For transmitters operating in the 5.47-5.725 GHz band	All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.
-------------------------------------------------------	-----------------------------------------------------------------------------------------------

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

27.FEB.2015 13:09:18

Form: FCC15.DOT/1. 1. 2002 Page 53 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 140: 5700 MHz

Ref Lvl	Marker		74 dBm		1 M		F Att	20	dB
10 dBm	16	.091575		SWT			nit		dBm
10 dB Offset					<b>▼</b> 2	[T3]	-53		dBm A
0	1				<b>▼</b> 1	[T3]	6.09157 -0	.25	dBm
-10							5.68315	030	GHz
-20									IN1
-30 <del>-3MAX</del>									3RM
									EXT
-40									
-50					2				
				nun	Munn		Λ	m	WN
-60 m						V			
-70									
-80									
-90 Center 13.2505	GHz		2.649	9 GHz/		5	Span 26.	499	GHz

Date: 27.FEB.2015 13:08:33

# LIMIT SUBCLAUSE 15.407(b)(3) – A8.5

For transmitters operating in the 5.47-5.725 GHz band	All emissions outside of the 5.47-5.725 GHz band shall not exceed an e.i.r.p. of –27 dBm/MHz.
-------------------------------------------------------	-----------------------------------------------------------------------------------------------

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 54 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 100-104: 5510 MHz

	Marker				1 M		F Att	20	dB
Ref Lvl 10 dBm	1.6	-53. 091575.		VBW SWT	10 M 150 m		nit		dBm
10 dBm	10	.091373	15 G112	SWI	150 11			1	QDIII
10 dB Offse	et				<b>v</b> ₂	[T3]	-53	.74	dBm
							16.09157	515	
0	Ÿ				V ₁	[T3]	-3	.17	dBm
							5.47073	347	GHz
-10									
-20									
-30 <del>3MAX</del>									_
-30 <del>3MAX</del>									3
									F
-40									
-50					2				
					X				LB.
-60	$\sqrt{\sqrt{\sqrt{N}}}$		<i>س</i> مر		many	~~~	lum	W	M
**************************************		•							
<b>"</b>									
-70									
-80									
-90									
Center 13.25	05 GHz		2.649	9 GHz/			Span 26.	499	GHz

Date: 27.FEB.2015 13:18:02

# LIMIT SUBCLAUSE 15.407(b)(3) – A8.5

For transmitters operating in the 5.47-5.725 GHz band	All emissions outside of the 5.47-5.725 GHz band shall
	not exceed an e.i.r.p. of -27 dBm/MHz.

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 55 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 132-136: 5670 MHz

	Marker				1 M		F Att	20 dB	5
Ref Lvl	1.			VBW	10 M			10	
10 dBm	Τ.(	6.091575	015 GHZ	SWT	150 m	is U	nit	dB	m
10 dB Offse	et l				<b>v</b> ₂	[T3]	-53	.74 dB	m
							16.09157	515 GH:	z
0	<del>1</del> ▼				▼1	[T3]	-2	.90 dB	m
							5.63004	609 GH:	z
-10									-
-20									_
20									I
-30 <del>-3MAX</del>									3
									E
-40									4
5.0									
-50					2				
	July 1		1		Manus	٨ــ٨	Λ	mul	V
-60 <b>MANAN M</b>	<del> </del>	~~~				~~~	T Union	0000	-
-70									
-80									1
-90									

Date: 27.FEB.2015 13:18:52

# LIMIT SUBCLAUSE 15.407(b)(3) – A8.5

For transmitters operating in the 5.47-5.725 GHz band	All emissions outside of the 5.47-5.725 GHz band shall
	not exceed an e.i.r.p. of -27 dBm/MHz.

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

Form: FCC15.DOT/1. 1. 2002 Page 56 of 103 File: 15-138.doc/27.03.2015

Ambient temperature: 24°C Relative humidity: 25%

### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 149: 5745 MHz

\$\frac{\frac{\frac{1}{3}}{3}}{3}\$	Ref Lvl		Marker	-53.		VBW	1 M	IHz	F Att		
10 ₁	10 dBm		16	5.091575	515 GHz	SWT	150 m	ns U	nit		dBm
10	10 dB	Offset					<b>▼</b> 2	[T3]	-53	.74	dBm A
0			1					1	6.09157	515	
0			Ĭ				V ₁	[T3]	-(		dBm
									5.73625	451	GHz
-10											
-20											IN1
-30	- 3MAX										3RM
											EXT
-40											
-50							2				
							Munum		A		M.
-60	~~~~~	المراب	"il	man	ww		1 100000		hame	M	
	ممر مر										
-70											
-80											
-90											
	Center	13.2505	GHz		2.649	9 GHz/		5	Span 26.	499	GHz

Date: 27.FEB.2015 13:07:42

# LIMIT SUBCLAUSE 15.407(b)(4) – A8.5

For transmitters operating in the 5.725-5.85 GHz band	All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall
	not exceed an e.i.r.p. of –27 dBm/MHz.

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

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### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 165: 5825 MHz

\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Ref L 10 d			М	arker 11					RBW VBW SWT	10	) M	IHz	F Att		dB dBm
10			Offset				70021		3112			<b>7</b> 2	ı	-54 1.63082	. 44	dBm
0				Y	<u> </u>						•	1	[T3]	-1 5.78935	.26 872	
-10 -20																IN
-30	-3MAX															ЗГ
-40																EX
-50				_				2			۸					
-60	سسرمم	~	سهمامه	<i>,</i> ~	<u>~~Lu</u>	~~	<u>~~</u>	<u>~/</u>	<u>~~</u>		/\w	<u>~~~</u>	~~~	<u> </u>	wh	<i>J</i> v,7 ∨
-70																
-80 -90																
	Start	. 1	MHz					2.	6499	9 GHz/				Stop 2	6.5	GHz

# LIMIT

Date:

# SUBCLAUSE 15.407(b)(4) - A8.5

For transmitters operating in the 5.725-5.85 GHz band below the band edge shall not exceed an e.i.r.p. of -17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall not exceed an e.i.r.p. of -27 dBm/MHz.
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

27.FEB.2015 13:06:45

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### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 149-153: 5755 MHz

(k) S	Ref Lvl	-	Marker	-53.		VBW	1 M 10 M	IHz	F Att		
10	10 dBm	1	16	5.091575	15 GHz	SWT	150 m	ns U	nit		dBm
10	10 dE	Offset					<b>▼</b> 2	[T3]	-53	.74	dBm A
0			1					1	16.09157	515	
0			Ĭ				V ₁	[T3]	-1	.16	
									5.73625	451	GHz
-10											
-20											IN1
-30	-3MAX										3RM
											EXT
-40											
-50							2				
					1		<b>X</b>				۸
-60	A 4/	سـر ا	~~~ <u>~</u>	~~~~	when		Mun	~~~	<u> </u>	m	W
	~~ ^{/~~}										
-70											
. 0											1
-80											
3.0											
-90											
	Center	13.2505	GHz		2.649	9 GHz/	1		Span 26.	499	GHz

Date: 27.FEB.2015 13:20:11

# LIMIT SUBCLAUSE 15.407(b)(4) – A8.5

For transmitters operating in the 5.725-5.85 GHz band	All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall
	not exceed an e.i.r.p. of –27 dBm/MHz.

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

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### **Undesirable Emission Limits**

§ 15.407(b)

Conducted measurement

Setup: CH 157-161: 5795 MHz

Ref Lvl	Marker 2 [T3] -53.74 dBm		1 MH 10 MH		20 dB
10 dBm	16.09157515 GHz	SWT	150 ms	Unit	dBm
10 dB Offset	1		<b>v</b> ₂	[T3] -5.	3.74 dBm 7515 GHz
0			▼1	[Т3] —	0.72 dBm 5872 GHz
-10					
-20					IN
-30 <del>3MAX</del>					3RI
-40					EX
-50		2	,		
-60	Maynam		man.		mm
-70					
-80					
-90 Center 13.2505	5 GHz 2.6499	GHz/		Span 26	.499 GHz

Date: 27.FEB.2015 13:20:59

# LIMIT SUBCLAUSE 15.407(b)(4) – A8.5

For transmitters operating in the 5.725-5.85 GHz band	All emissions within the frequency range from the band edge to 10 MHz above or below the band edge shall not exceed an e.i.r.p. of −17 dBm/MHz; for frequencies 10 MHz or greater above or below the band edge, emissions shall
	not exceed an e.i.r.p. of –27 dBm/MHz.

Although the measurement above stops at 26,5 GHz, all emissions have been measured up to the tenth harmonics.

Test Equipment used: NT-207; NT-211; NT-214; NT-218

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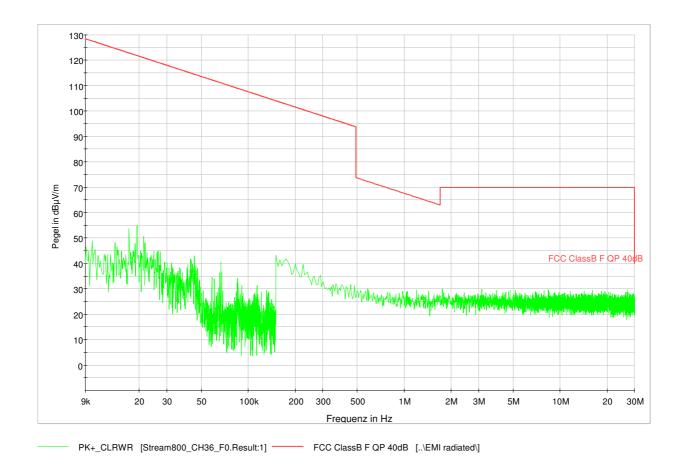
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 36: 5180 MHz



Worst case emission: 54,9 dB $\mu$ V/m @ 19,3 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

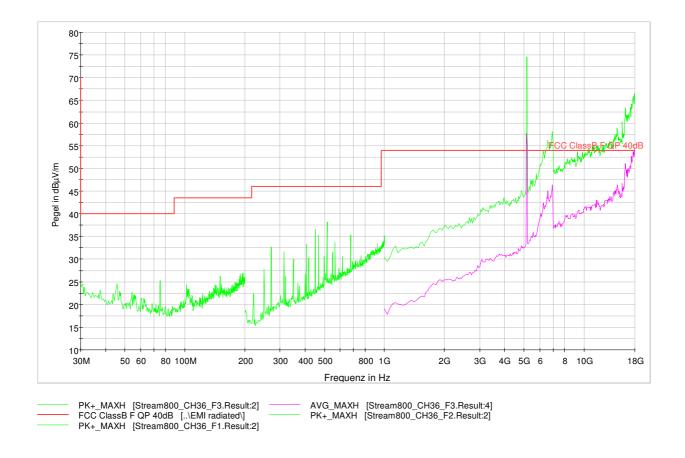
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 36: 5180 MHz



Worst case emission: 38,2 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

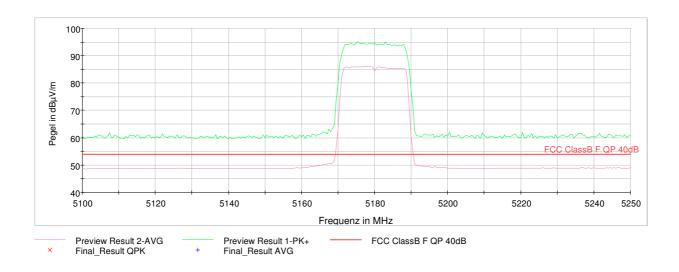
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### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 36: 5180 MHz



# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edge of the nearest restricted band: 5150 MHz.

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

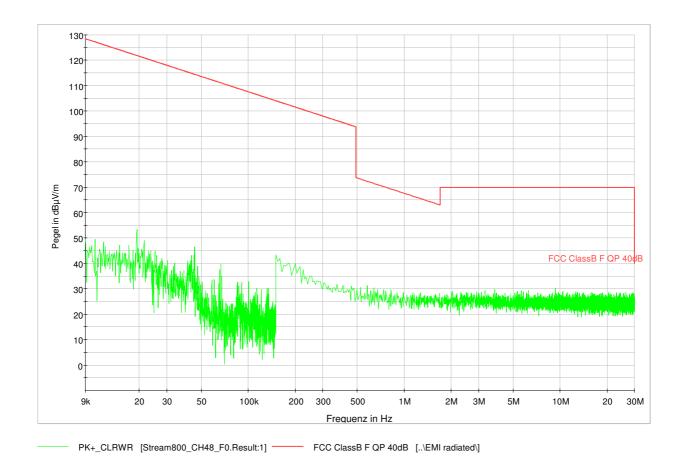
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 48: 5240 MHz



Worst case emission: 53,3 dB $\mu$ V/m @ 19,3 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

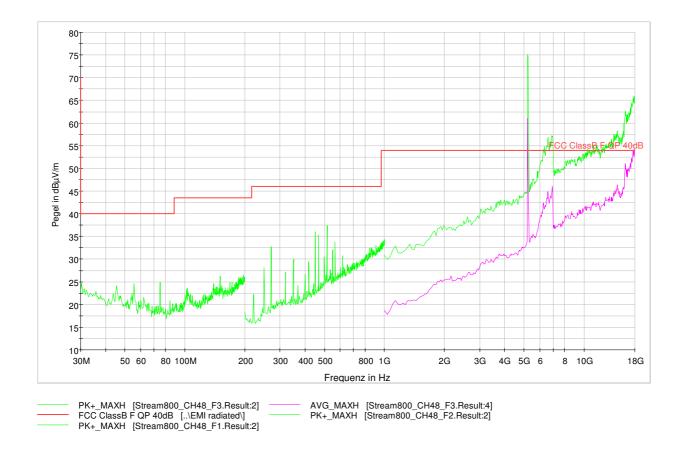
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 48: 5240 MHz



Worst case emission: 37,4 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

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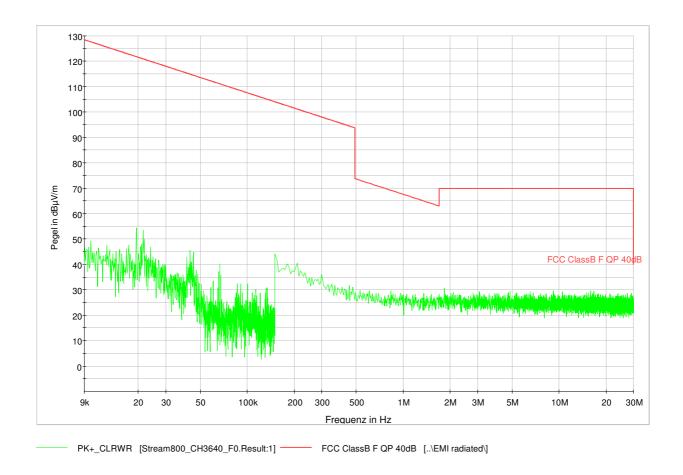
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 36-40: 5190 MHz



Worst case emission: 54,4 dB $\mu$ V/m @ 19,5 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

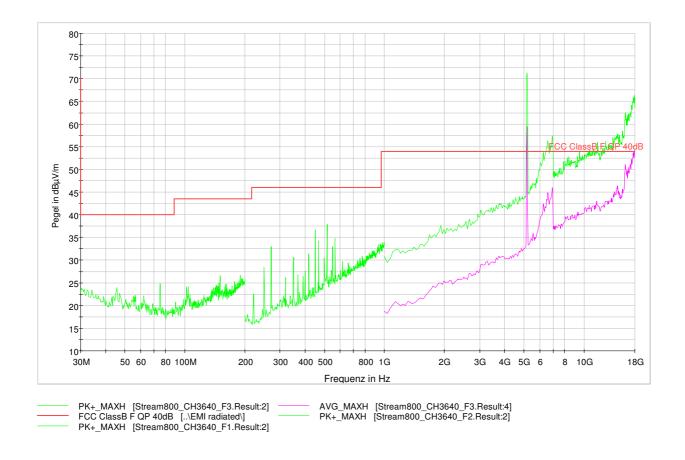
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 36-40: 5190 MHz



Worst case emission: 37,8 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

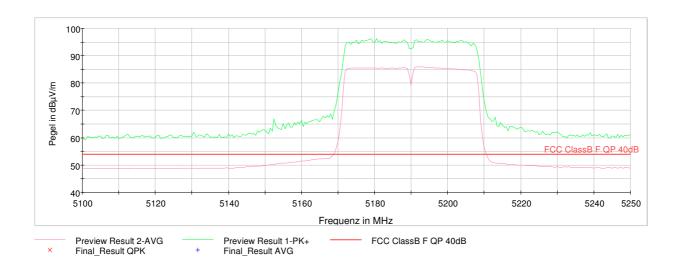
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### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 36-40: 5190 MHz



# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edge of the nearest restricted band: 5150 MHz.

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

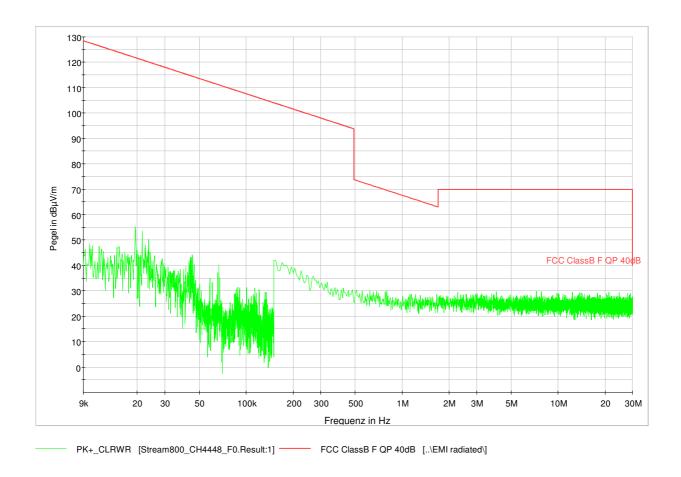
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 44-48: 5230 MHz



Worst case emission: 55,1 dB $\mu$ V/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

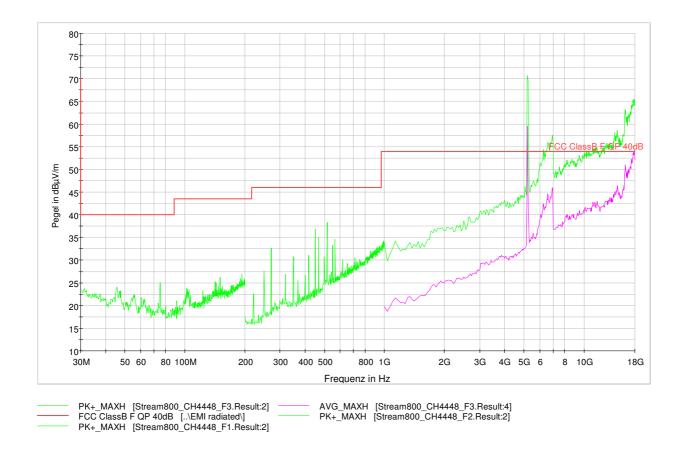
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 44-48: 5230 MHz



Worst case emission: 38,3 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

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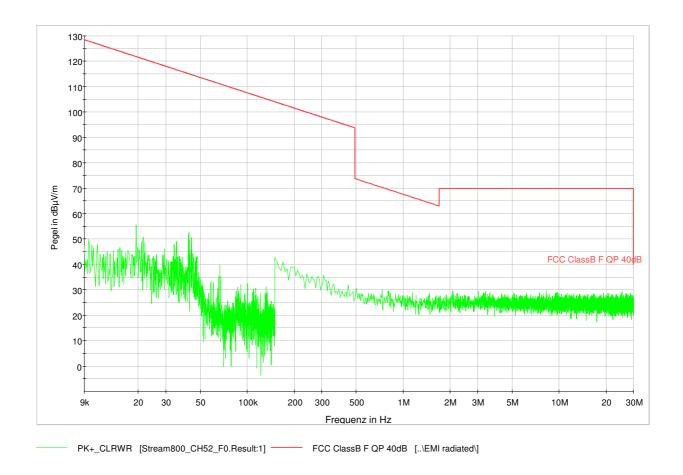
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 52: 5260 MHz



Worst case emission: 55,6 dB $\mu$ V/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

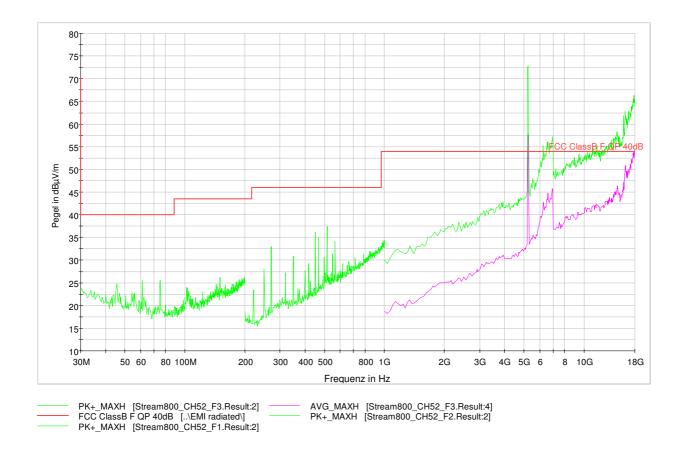
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 52: 5260 MHz



Worst case emission: 37,4 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

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Test Report Reference: M/FG-15/138

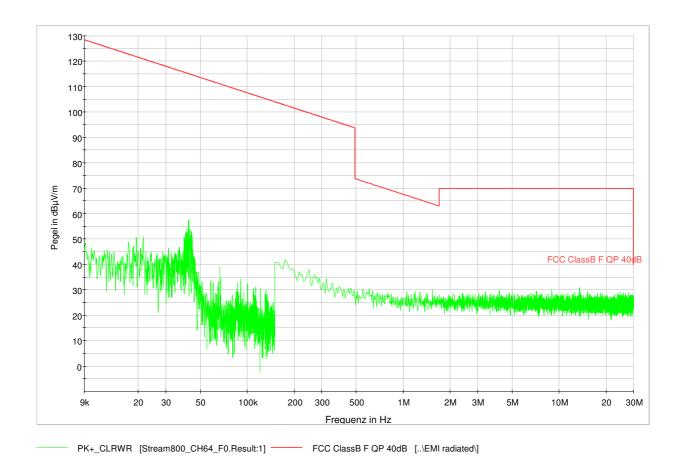
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 64: 5320 MHz



Worst case emission: 57,6 dB $\mu$ V/m @ 42,2 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

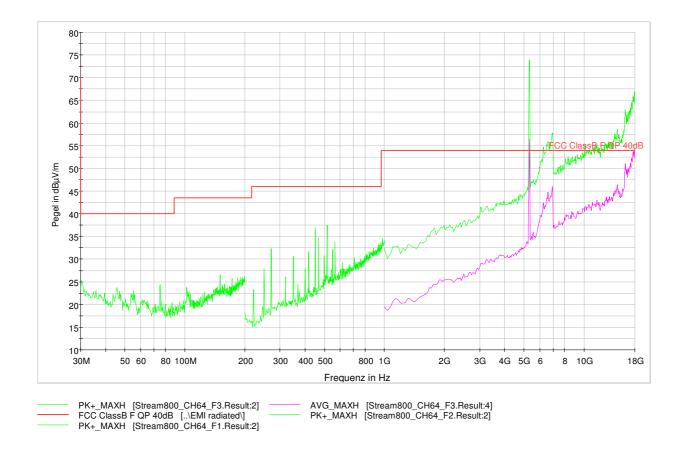
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 64: 5320 MHz



Worst case emission: 37,6 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

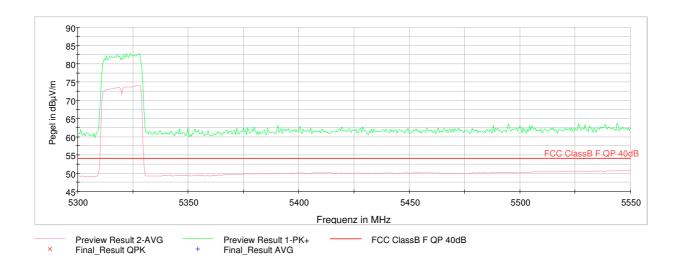
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 64: 5320 MHz



# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edge of the nearest restricted band: 5350 MHz.

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Test Report Reference: M/FG-15/138

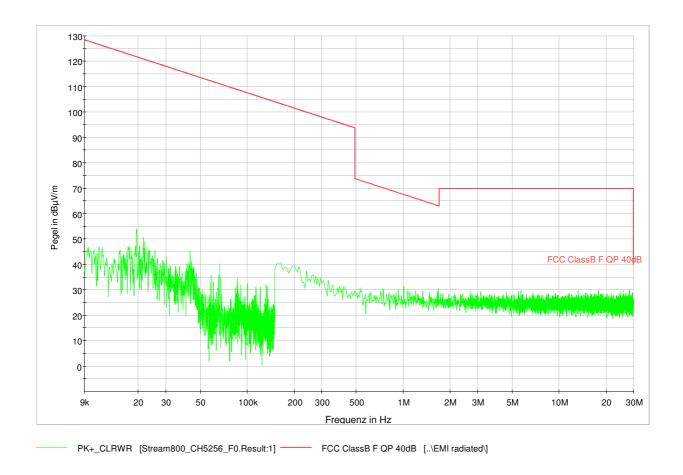
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 52-56: 5270 MHz



Worst case emission: 53,8 dB $\mu$ V/m @ 19,5 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

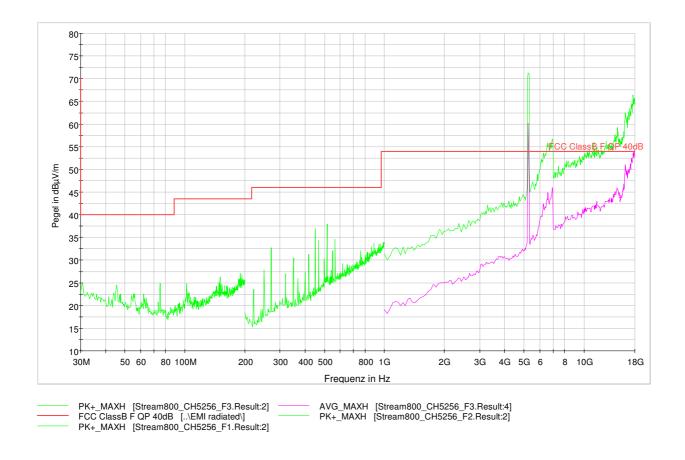
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 52-56: 5270 MHz



Worst case emission: 38,0 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

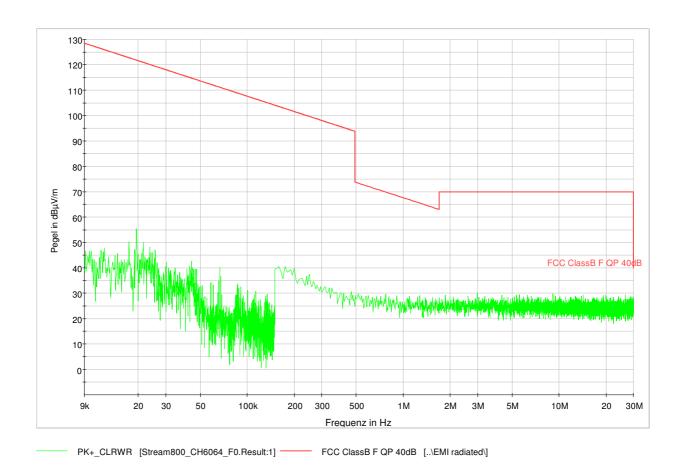
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 60-64: 5310 MHz



Worst case emission: 55,6 dBµV/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

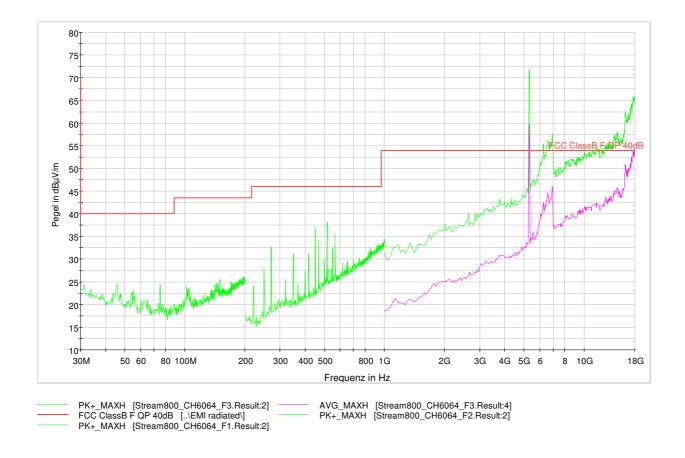
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 60-64: 5310 MHz



Worst case emission: 38,1 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

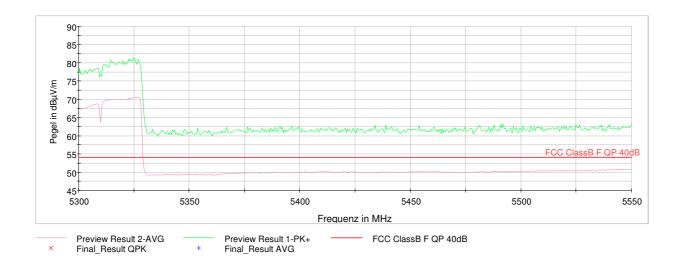
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 60-64: 5310 MHz



# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edge of the nearest restricted band: 5350 MHz.

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Test Report Reference: M/FG-15/138

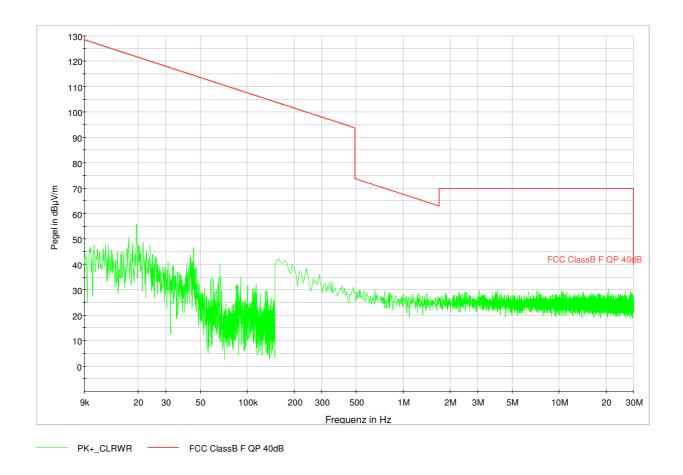
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 100: 5500 MHz



Worst case emission: 55,8 dB $\mu$ V/m @ 19,5 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

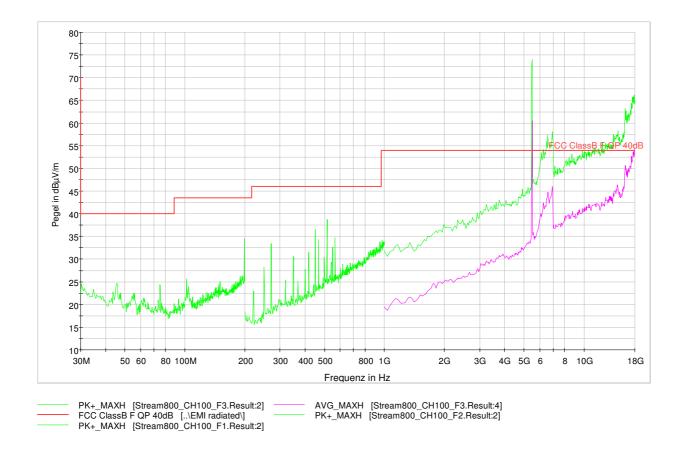
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 100: 5500 MHz



Worst case emission: 38,7 dBμV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

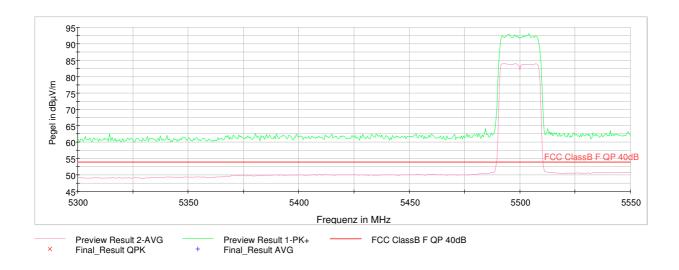
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 100: 5500 MHz



# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edge of the nearest restricted band: 5460 MHz.

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Test Report Reference: M/FG-15/138

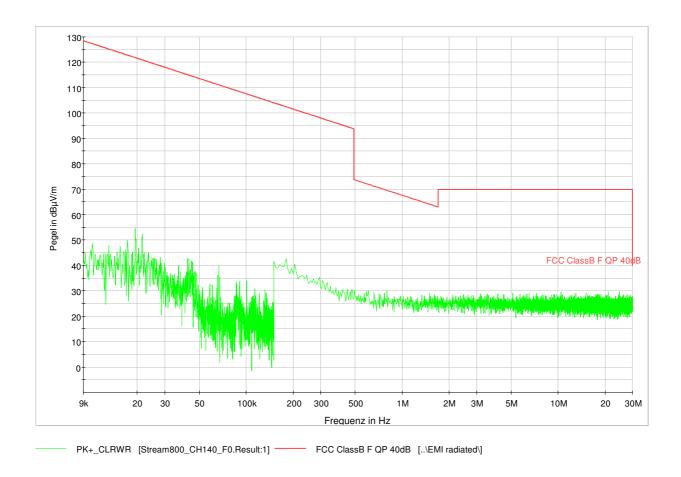
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 140: 5700 MHz



Worst case emission: 54,5 dB $\mu$ V/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

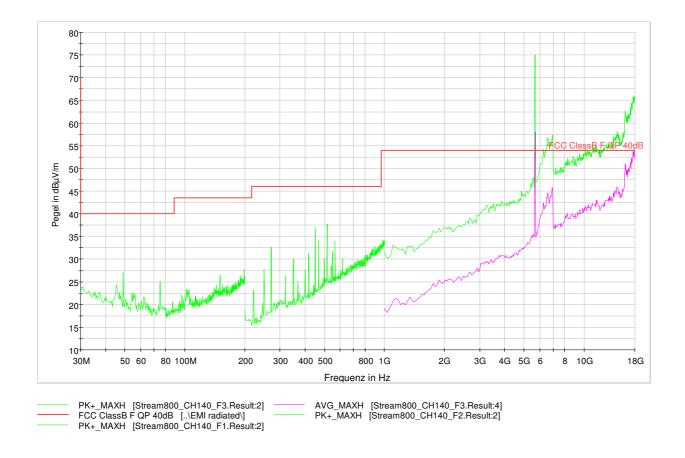
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 140: 5700 MHz



Worst case emission: 37,8 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

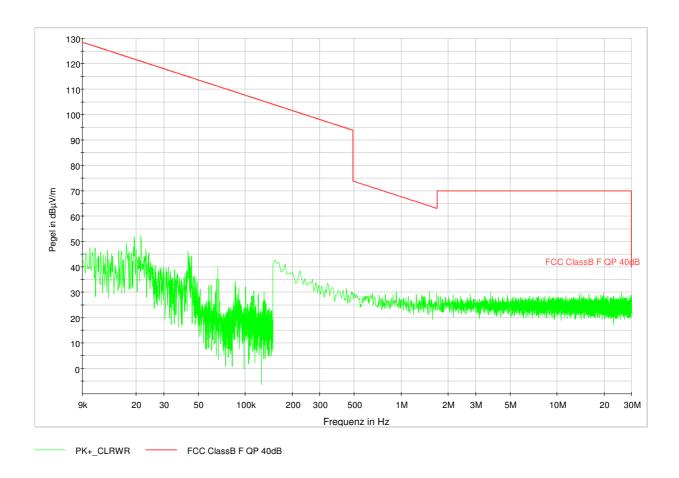
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 100-104: 5510 MHz



Worst case emission: 52,3 dBµV/m @ 21,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

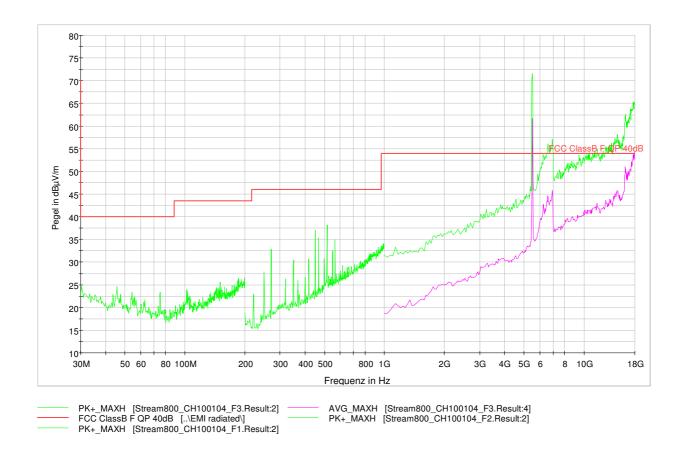
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 100-104: 5510 MHz



Worst case emission: 38,2 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

#### LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

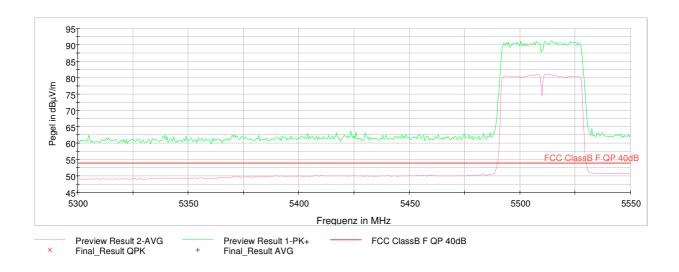
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line): Band Edge requirement

Setup: CH 100-104: 5510 MHz



# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Band edge of the nearest restricted band: 5460 MHz.

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-139; NT-207

Test Report Reference: M/FG-15/138

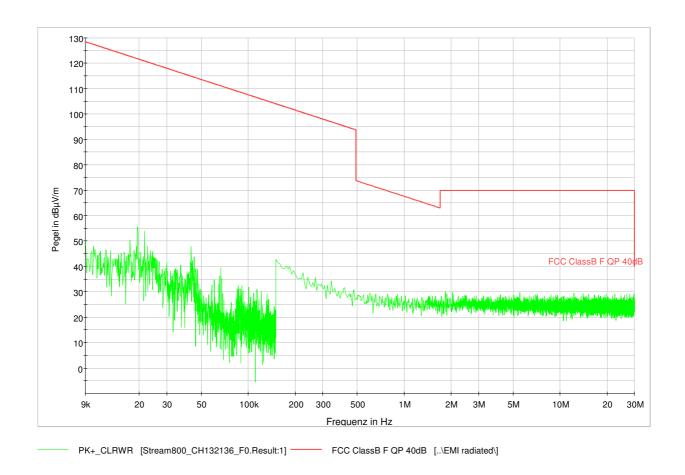
Ambient temperature: 24°C Relative humidity: 25%

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 132-136: 5670 MHz



Worst case emission: 55,5 dB $\mu$ V/m @ 19,5 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

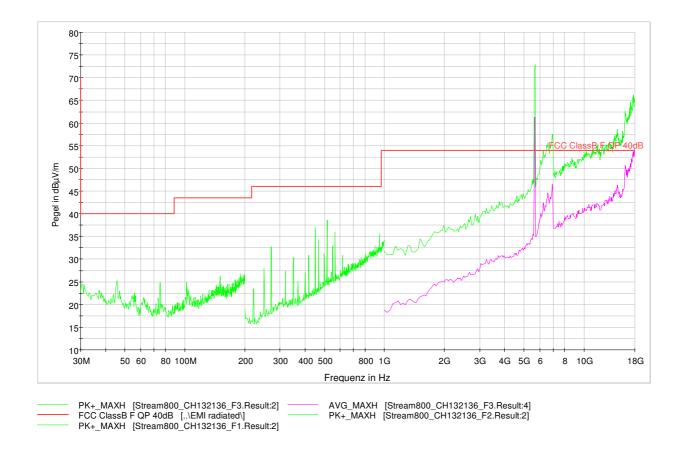
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 132-136: 5670 MHz



Worst case emission: 38,7 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

#### LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

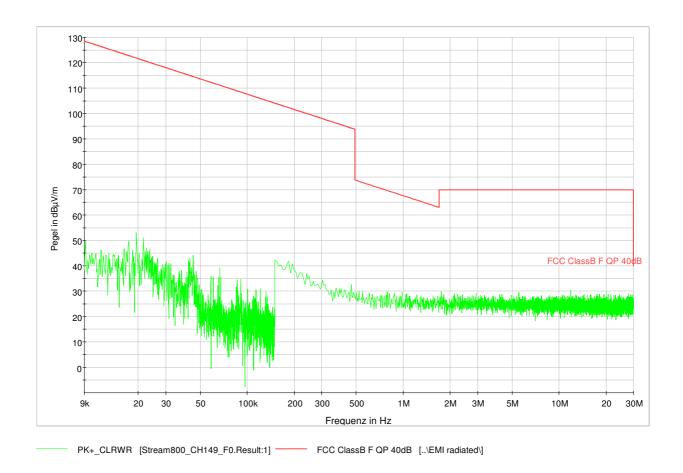
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 149: 5745 MHz



Worst case emission: 53,1 dBµV/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

#### LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

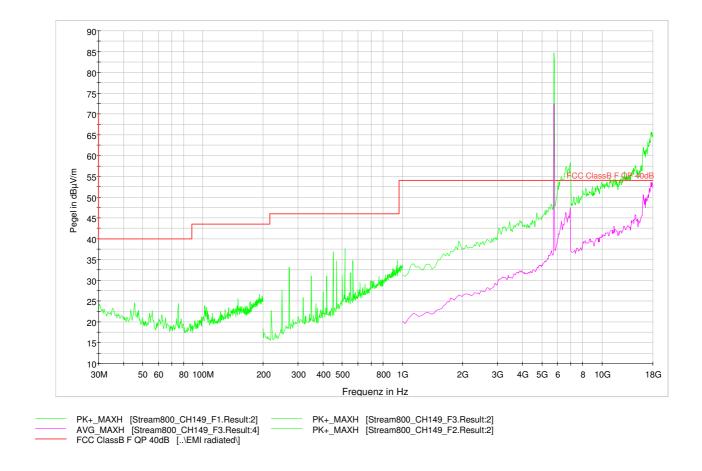
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 149: 5745 MHz



Worst case emission: 37,6 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

#### LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

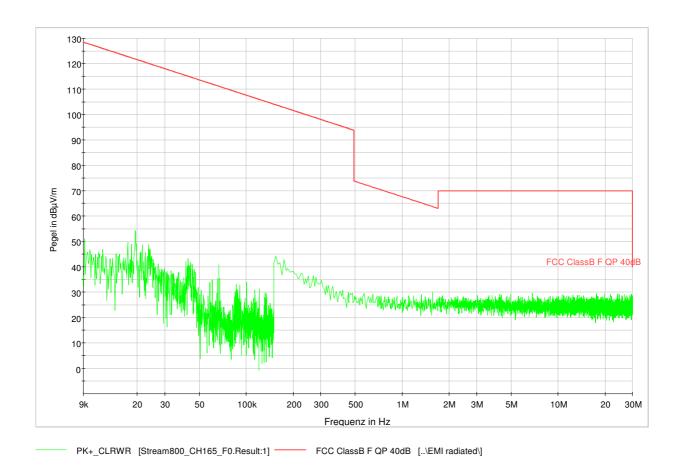
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 165: 5825 MHz



Worst case emission: 54,3 dBµV/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

#### LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

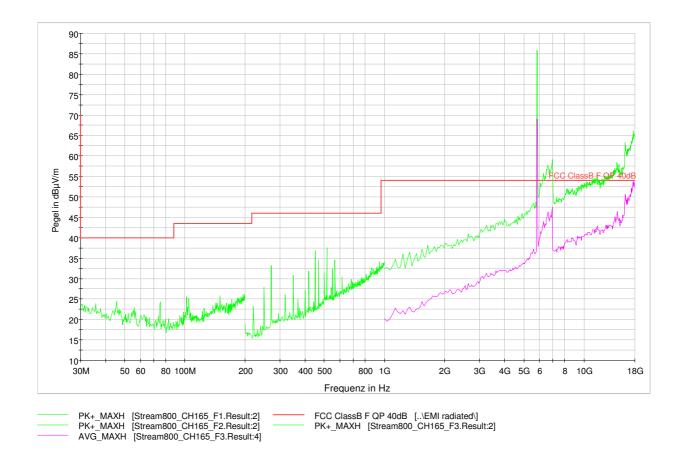
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 165: 5825 MHz



Worst case emission: 37,6 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

#### LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

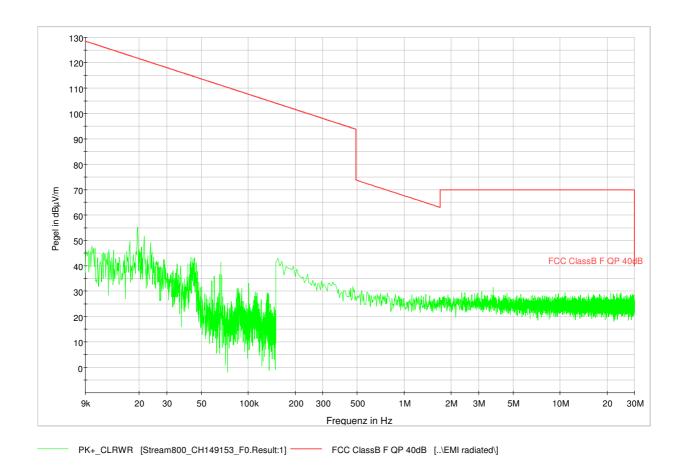
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 149-153: 5755 MHz



Worst case emission: 55,2 dBµV/m @ 19,5 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

#### LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

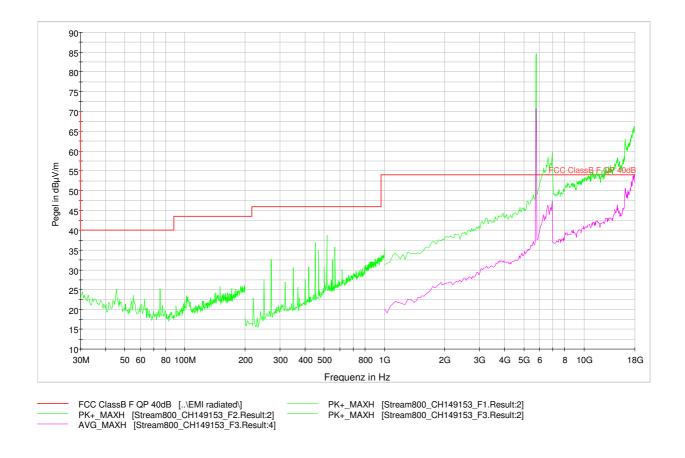
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 149-153: 5755 MHz



Worst case emission: 38,7 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

#### LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

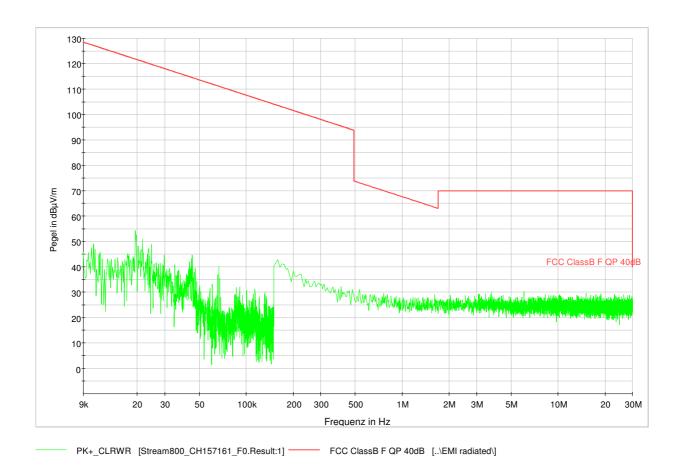
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#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector:

Setup: CH 157-161: 5795 MHz



Worst case emission: 54,4 dBµV/m @ 19,4 kHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load.

#### LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-122; NT-207

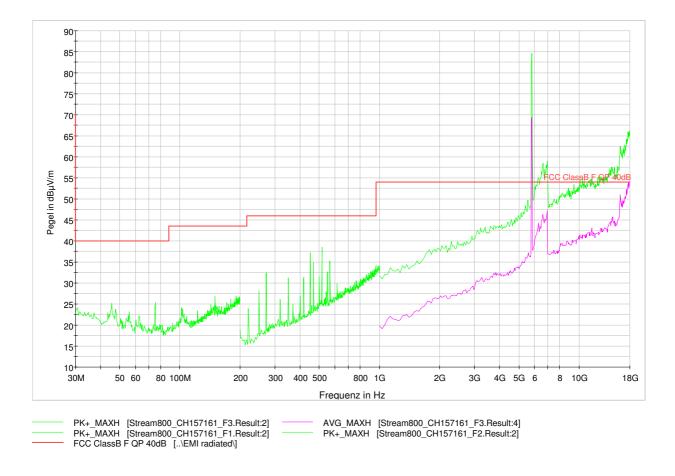
Form: FCC15.DOT/1. 1. 2002 Page 97 of 103 File: 15-138.doc/27.03.2015

#### **Emissions in restriced bands**

§ 15.209(a)

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 157-161: 5795 MHz



Worst case emission: 38,6 dBµV/m @ 515,8 MHz

Remark: As the highest spurious conducted emission was measured as to be -48 dBm in 1 MHz Bandwidth, all radiated measurements (except Band edges) were made with RF connector terminated with 50 ohm load. Although the measurement above ends at 18 GHz, all measurements were performed up to the thenth harmonics of the transmitter frequency.

# LIMIT SUBCLAUSE 15.209(a)

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100**	3
88-216	150**	3
216-960	200**	3
Above 960	500	3

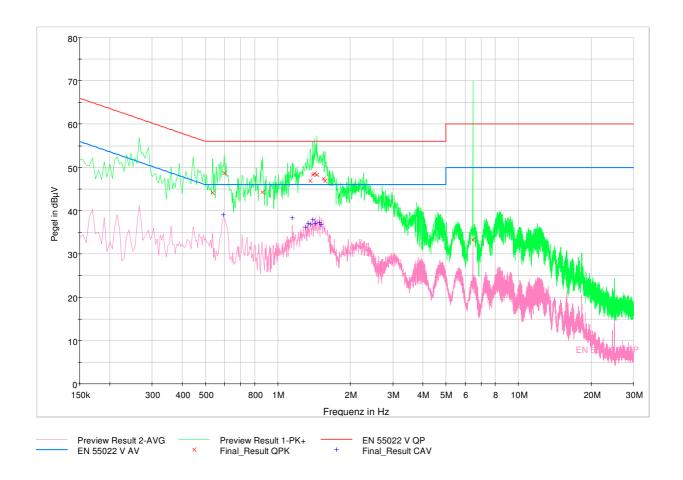
Test Equipment used: NT-100; NT-110; NT-111; NT-112; NT-126; NT-129; NT-131; NT-139; NT-207; NT-211; NT-214; NT-218; NT-337

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Conducted Limits § 15.207

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 36: 5180 MHz



# LIMIT SUBCLAUSE 15.207(a)

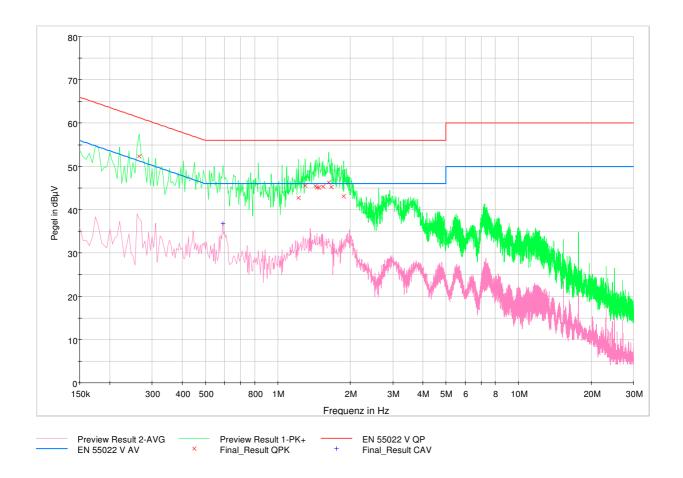
	Conducted limit (dBμV)		
Frequency of emission (MHz)	Quasi-peak	Average	
0.15-0.5	66 to 56*	56 to 46*	
0.5-5	56	46	
5-30	60	50	

^{*}Decreases with the logarithm of the frequency.

Conducted Limits § 15.207

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 64: 5320 MHz



# LIMIT SUBCLAUSE 15.207(a)

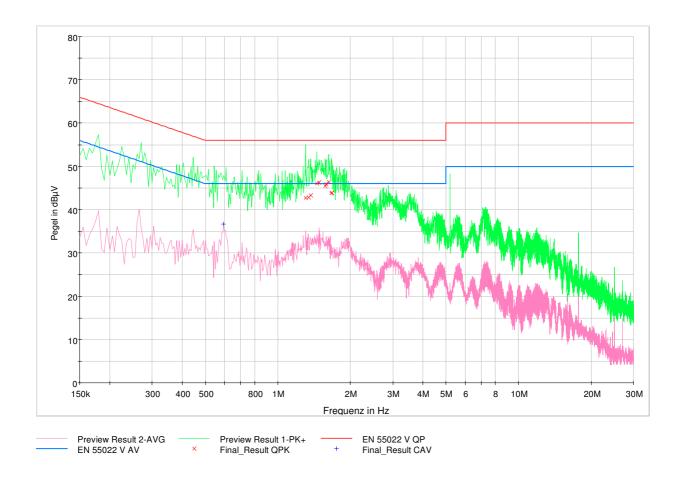
	Conducted limit (dBμV)		
Frequency of emission (MHz)	Quasi-peak	Average	
0.15-0.5	66 to 56*	56 to 46*	
0.5-5	56	46	
5-30	60	50	

^{*}Decreases with the logarithm of the frequency.

# Conducted Limits § 15.207

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 100: 5500 MHz



# LIMIT SUBCLAUSE 15.207(a)

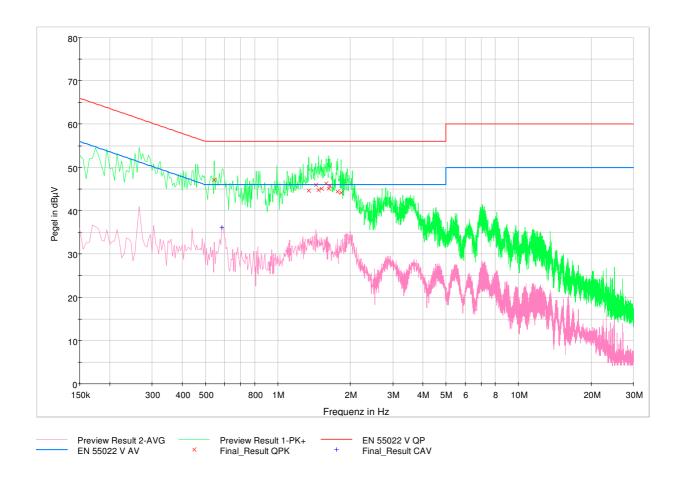
	Conducted limit (dBμV)		
Frequency of emission (MHz)	Quasi-peak	Average	
0.15-0.5	66 to 56*	56 to 46*	
0.5-5	56	46	
5-30	60	50	

^{*}Decreases with the logarithm of the frequency.

Conducted Limits § 15.207

Measurement with Peak-Detector (green line) and Average detector (magenta line):

Setup: CH 165: 5825 MHz



# LIMIT SUBCLAUSE 15.207(a)

	Conducted limit (dBμV)		
Frequency of emission (MHz)	Quasi-peak	Average	
0.15-0.5	66 to 56*	56 to 46*	
0.5-5	56	46	
5-30	60	50	

^{*}Decreases with the logarithm of the frequency.

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Ambient temperature: 24°C Relative humidity: 25%

# **Maximum permissible Exposure**

§2.1091

A mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons.

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# Appendix 1 Test equipment used



Anechoic Chamber with 3m measurement distance	NT-100		Spectrumanalyzer – FSP7 9 kHz – 7 GHz	NT-200
Stripline according to ISO 11452-5	NT-108		ESCI - Test receiver 9 kHz - 7 GHz	NT-203/1
MA4000 - Antenna mast 1 - 4 m height	NT-110/1		ESI26 – Test receiver 20 Hz – 26,5 GHz	NT-207
DS - Turntable 0 - 400 ° Azimuth	NT-111/1		Digital Radio Tester CTS55	NT-208
CO3000 Controller Mast+Turntable	NT-112/1		Noise-gen., ITU-R 559-2 20 Hz – 20 kHz	NT-209
HUF-Z3 - Log. Per. Antenna 200 - 1000 MHz	NT-121		CMTA - Radiocommunication analyzer ; 0,1 - 1000 MHz	NT-210
HFH-Z2 - Loop Antenna 9 kHz - 30 MHz	NT-122		3271 - Spectrum analyzer 100 Hz - 26,5 GHz	NT-211
HFH-Z6 - Rod Antenna 9 kHz - 30 MHz	NT-123		Digital Radio Tester Aeroflex 3920	NT-212/1
3121C - Dipole Antenna 28 - 1000 MHz	NT-124		Mixer M28HW 26,5 GHz - 40 GHz	NT-214
3115 - Horn Antenna 1 - 18 GHz (immunity)	NT-125		RubiSource T&M Timing reference	NT-216
3116 - Horn Antenna 18 - 40 GHz	NT-126		Radiocommunicationanalyzer SWR 1180 MD	NT-217
SAS-200/543 - Bicon. Antenna 20 MHz - 300 MHz	NT-127		Mixer M19HWD 40 GHz – 60 GHz	NT-218
AT-1080 - Log. Per. Antenna 80 - 1000 MHz	NT-128		Mixer M12HWD 60 GHz – 90 GHz	NT-219
HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-129		DSO9104 Digital scope	NT-220/1
HK-116 - bicon. Antenna 20 MHz - 300 MHz	NT-130		TPS 2014 Digital scope	NT-222
3146 - Log. Per. Antenna 200 – 1000 MHz	NT-131		Artificial Ear according to IEC 60318	NT-224
Loop Antenna H-Field	NT-132		1 kHz Sound calibrator	NT-225
Horn Antenna 500 MHz - 2900 MHz	NT-133		B10 - Harmonics and flicker analyzer	NT-232
Horn Antenna 500 MHz - 6000 MHz	NT-133/1		ARS 16/3 – Harmonics- flicker analyzer	NT-232/1
Log. per. Antenna 800 MHz - 2500 MHz	NT-134		SRM-3000 Spectrumanalyzer	NT-233
Log. per. Antenna 800 MHz - 2500 MHz	NT-135		SRM-3006 Spectrumanalyzer	NT-233/1a
BiConiLog Antenna 26 MHz – 2000 MHz	NT-137		E-field probe SRM 75 MHz – 3 GHz	NT-234
Conical Dipol Antenna PCD8250	NT-138		Field Meter NBM-500 incl. E- and H-Field probes	NT-240a-d
HF 906 - Horn Antenna 1 - 18 GHz (emission)	NT-139		Hall-Teslameter ETM-1	NT-241
HZ-1 Antenna tripod	NT-150		EFA-3 H-field- / E-field probe	NT-243
BN 1500 Antenna tripod	NT-151		Field Meter EMR-200 100 kHz – 3 GHz	NT-244
Ant. tripod for EN61000-4-3 Model TP1000A	NT-156		E-field probe 100 kHz – 3 GHz	NT-245
Power quality analyzer Fluke 1760 (complete set)	NT-160 - NT-173		H-field probe 300 kHz – 30 MHz	NT-246
	measurement distance Stripline according to ISO 11452-5 MA4000 - Antenna mast 1 - 4 m height DS - Turntable 0 - 400 ° Azimuth CO3000 Controller Mast+Turntable HUF-Z3 - Log. Per. Antenna 200 - 1000 MHz HFH-Z2 - Loop Antenna 9 kHz - 30 MHz HFH-Z6 - Rod Antenna 9 kHz - 30 MHz 3121C - Dipole Antenna 28 - 1000 MHz 3115 - Horn Antenna 1 - 18 GHz (immunity) 3116 - Horn Antenna 18 - 40 GHz SAS-200/543 - Bicon. Antenna 20 MHz - 300 MHz AT-1080 - Log. Per. Antenna 20 MHz - 300 MHz HK-116 - bicon. Antenna 20 MHz - 300 MHz HK-116 - bicon. Antenna 20 MHz - 300 MHz Log. Per. Antenna 20 MHz - 300 MHz HK-116 - boicon. Antenna 20 MHz - 300 MHz HK-116 - boicon. Antenna 20 MHz - 300 MHz HK-116 - boicon. Antenna 20 MHz - 300 MHz S146 - Log. Per. Antenna 200 - 1000 MHz Loop Antenna H-Field Horn Antenna 500 MHz - 2900 MHz Log. per. Antenna 800 MHz - 2500 MHz Log. per. Antenna 1 - 18 GHz (emission) HZ-1 Antenna tripod BN 1500 Antenna tripod Ant. tripod for EN61000-4-3 Model TP1000A Power quality analyzer	measurement distance         NT-108           Stripline         NT-108           according to ISO 11452-5         MA4000 - Antenna mast         NT-110/1           1 - 4 m height         NT-110/1           DS - Turntable         NT-111/1           0 - 400° Azimuth         NT-112/1           CO3000 Controller         NT-112/1           Mast+Turntable         NT-112/1           HUF-23 - Log. Per. Antenna         NT-121           200 - 1000 MHz         NT-121           HFH-Z2 - Loop Antenna         NT-122           9 kHz - 30 MHz         NT-123           15 - Ford Antenna         NT-123           15 - Horn Antenna         NT-124           28 - 1000 MHz         NT-125           1 - 18 GHz (immunity)         NT-126           28 - 40 GHz         SAS-200/543 - Bicon. Antenna         NT-127           20 MHz - 300 MHz         NT-128           30 - 1000 MHz         NT-128         NT-129           20 MHz - 300 MHz         NT-129         NT-130           20 MHz - 300 MHz         NT-130         NT-130           20 MHz - 300 MHz         NT-130         NT-131           200 - 1000 MHz         NT-133         NT-134           400 - 1000 MHz <t< td=""><td>measurement distance         NT-108         □           Stripline according to ISO 11452-5         NT-108         □           MA4000 - Antenna mast 1 - 4 m height         NT-110/1         □           DS - Turntable 0 - 400 ° Azimuth         NT-111/1         □           CO3000 Controller Mast+Turntable         NT-112/1         □           HUF-23 - Log. Per. Antenna 200 - 1000 MHz         NT-122         □           HFH-22 - Loop Antenna 200 - 1000 MHz         NT-122         □           HFH-26 - Rod Antenna 3 NT-123         □         NT-124         □           9 kHz - 30 MHz         NT-124         □         □           3115 - Horn Antenna 3 NT-125         □         1 - 18 GHz (immunity)         □         NT-125         □           1 - 18 GHz (immunity)         3116 - Horn Antenna NT-126         □         NT-127         □           20 MHz - 300 MHz         NT-127         □         □           AS-200/543 - Bicon. Antenna NT-127         □         □           20 MHz - 300 MHz         NT-128         □           HK-116 - bicon. Antenna NT-129         □         NT-130         □           20 MHz - 300 MHz         NT-130         □         □           3146 - Log. Per. Antenna NT-132         □         NT-1</td><td>Measurement distance         9 kHz − 7 GHz           Stripline according to ISO 11452-5         NT-108         □ SCI - Test receiver 9 kHz − 7 GHz           MA4000 - Antenna mast 1 - 4 m height         NT-110/1         □ ESIZ6 – Test receiver 20 Hz − 26,5 GHz           DS - Turntable 0 - 400 * Azimuth         NT-111/1         □ Digital Radio Tester CTS55           CO3000 Controller Mast-Turntable         NT-112/1         □ Noise-gen, ITU-R 559-2 20 Hz − 20 kHz           Mast-Turntable M</td></t<>	measurement distance         NT-108         □           Stripline according to ISO 11452-5         NT-108         □           MA4000 - Antenna mast 1 - 4 m height         NT-110/1         □           DS - Turntable 0 - 400 ° Azimuth         NT-111/1         □           CO3000 Controller Mast+Turntable         NT-112/1         □           HUF-23 - Log. Per. Antenna 200 - 1000 MHz         NT-122         □           HFH-22 - Loop Antenna 200 - 1000 MHz         NT-122         □           HFH-26 - Rod Antenna 3 NT-123         □         NT-124         □           9 kHz - 30 MHz         NT-124         □         □           3115 - Horn Antenna 3 NT-125         □         1 - 18 GHz (immunity)         □         NT-125         □           1 - 18 GHz (immunity)         3116 - Horn Antenna NT-126         □         NT-127         □           20 MHz - 300 MHz         NT-127         □         □           AS-200/543 - Bicon. Antenna NT-127         □         □           20 MHz - 300 MHz         NT-128         □           HK-116 - bicon. Antenna NT-129         □         NT-130         □           20 MHz - 300 MHz         NT-130         □         □           3146 - Log. Per. Antenna NT-132         □         NT-1	Measurement distance         9 kHz − 7 GHz           Stripline according to ISO 11452-5         NT-108         □ SCI - Test receiver 9 kHz − 7 GHz           MA4000 - Antenna mast 1 - 4 m height         NT-110/1         □ ESIZ6 – Test receiver 20 Hz − 26,5 GHz           DS - Turntable 0 - 400 * Azimuth         NT-111/1         □ Digital Radio Tester CTS55           CO3000 Controller Mast-Turntable         NT-112/1         □ Noise-gen, ITU-R 559-2 20 Hz − 20 kHz           Mast-Turntable M

Division Medical Technology/ Communication Technology/ EMC

Department: FG

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Date: 27.03.2015

Checked by:

# Appendix 1 (continued) Test equipment used



_		NT 0.45		V00 500 M0	NT 200
	E-field probe 3 MHz – 18 GHz	NT-247	Ц	VCS 500-M6 Surge-Generator	NT-326
	H-field probe 27 MHz – 1 GHz	NT-248		Oscillatory Wave Simulator incl. Coupling networks	NT- 328a+b+c
	ELT-400 1 Hz – 400 kHz	NT-249		BTA-250 - RF-Amplifier 9 kHz - 220 MHz / 250 W	NT-330
	MDS 21 - Absorbing clamp 30 - 1000 MHz	NT-250		T82-50 RF-Amplifier 2 GHz – 8 GHz	NT-331
	FCC-203I EM Injection clamp	NT-251		500W1000M7 - RF-Amplifier 80 - 1000 MHz / 500 W	NT-332
	FCC-203I-DCN Ferrite decoupling network	NT-252		AS0102-65R - RF-Amplifier 1 GHz - 2 GHz	NT-333
	PR50 Current Probe	NT-253		APA01 – RF-Amplifier 0,5 GHz – 2,5 GHz	NT-334
	i310s Current Probe	NT-254/1		Preamplifier 1 GHz - 4 GHz	NT-335
	Fluke 87 V True RMS Multimeter	NT-260		Preamplifier for GPS MKU 152 A	NT-336
	Model 2000 Digital Multimeter	NT-261		Preamplifier 100 MHz – 23 GHz	NT-337
	Fluke 87 V Digital Multimeter	NT-262/1		DC Block 10 MHz – 18 GHz Model 8048	NT-338
	ESH2-Z5-U1 Artificial mains network 4x25A	NT-300		2-97201 Electronic load	NT-341
	ESH3-Z5-U1 Artificial mains network 2x10A	NT-301		TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-344
	ESH3-Z6-U1 Artificial mains network 1x100A	NT-302		TSX3510P - Power supply 0-30 V / 0 - 10 A	NT-345
	ESH3-Z6-U1 Artificial mains network 1x100A	NT-302a		VDS 200 Mobil-impuls-generator	NT-350
	PHE 4500/B Power amplifier	NT-304		LD 200 Mobil-impuls-generator	NT-351
	PAS 5000 Power amplifier	NT- 304/1a		MPG 200 Mobil-Impuls-Generators	NT-352
	EZ10 T-Artificial Network	NT-305		EFT 200 Mobil-impuls-generator	NT-353
	SMG - Signal generator 0,1 - 1000 MHz	NT-310		AN 200 S1 Artificial Network	NT-354
	SMA100A - Signal generator 9 kHz - 6 GHz	NT-310/1		FP-EFT 32M 3 ph. Coupling filter (Burst)	NT-400/1
	RefRad Reference generator	NT-312		PHE 4500 - Mains impedance network	NT-401
	SMP 02 Signal generator 10 MHz - 20 GHz	NT-313		IP 6.2 Coupling filter for data lines (Surge)	NT-403
	40 MHz Arbitrary Generator TGA1241	NT-315		TK 9421 High Power Volt. Probe 150 kHz - 30 MHz	NT-409
	Artificial mains network NSLK 8127-PLC	NT-316		ESH2-Z3 - Probe 9 kHz - 30 MHz	NT-410
	Inrush Current Source for PAS 5000	NT-317a		IP 4 - Capacitive clamp (Burst)	NT-411
	Control and measurement device Sycore	NT-318		Highpass-Filter 100 MHz – 3 GHz	NT-412
	PEFT - Burst generator up to 4 kV	NT-320		Highpass-Filter 600 MHz – 4 GHz	NT-413
	ESD 30 System up to 25 kV	NT-321		Highpass-Filter 1250 MHz – 4 GHz	NT-414
	PSURGE 4.1 Surge generator	NT-324		Highpass-Filter 1800 MHz – 16 GHz	NT-415
	IMU4000 Immunity test system	NT-325/1			
	-				

Division Medical Technology/ Communication Technology/ EMC

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# Appendix 1 (continued) Test equipment used



Division Medical

Highpass-Filter	NT-416	FCC-801-S25	NT-462	Division Medical Technology/ Communication
3500 MHz – 18 GHz		Coupling decoupling network		Technology/ EMC
RF-Attenuator 10 dB DC – 18 GHz / 50 W	NT-417	FCC-801-T4 Coupling decoupling network	NT-463	Department: FG
RF-Attenuator 6 dB DC – 18 GHz / 50 W	NT-418	FCC-801-C1 Coupling decoupling network	NT-464	Test report number: M/FG-15/138
RF-Attenuator 3 dB DC – 18 GHz / 50 W	NT-419	F-16A - Current probe 1kHz - 70MHz	NT-465	Page: 3 of 3
RF-Attenuator 20 dB DC - 1000 MHz / 25 W	NT-421	95242-1 – Current probe 1 MHz – 400 MHz	NT-468	Date: 27.03.2015
RF-Attenuator 30 dB DC - 1000 MHz / 1 W	NT-423	94106-1L-1 – Current probe 100 kHz – 450 MHz	NT-471	Checked by:
RF-Attenuator 30 dB	NT-424	GA 1240 Power amplifier according to EN 61000-4-16	NT-480	
RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-425	Coupling networks according to EN 61000-4-16	NT-481 - NT-483	
RF-Attenuator 6 dB DC - 1000 MHz / 1 W	NT-426	Van der Hoofden Test Head	NT-484	
RF-Attenuator 6 dB	NT-428	PC P4 3 GHz Test computer	NT-500	
RF-Attenuator 0 dB - 81 dB	NT-429	PC P4 1700 MHz Notebook	NT-505	
WRU 27 - Band blocking 27 MHz	NT-430	Monitoring camera with Monitor	NT-511	
WHJ450C9 AA - High pass 450 MHz	NT-431	ES-K1 Version 1.71 SP2 Test software	NT-520	
WHJ250C9 AA - High pass 250 MHz	NT-432	EMC32 Version 9.15 Test software	NT-520/1	
RF-Load 150 W	NT-433	SRM-TS Version 1.3 software for SRM-3000	NT-522	
Impedance transducer 1:4; 1:9; 1:16	NT-435	SRM-TS Version 1.3.1 software for SRM-3006	NT-522/1	
RF-Attenuator DC – 18 GHz 6 dB	NT-436	Spitzenberger und Spies Test software V3.4	NT-525	
RF-Attenuator DC – 18 GHz 6 dB	NT-437	Noise power test apparatus according to EN 55014	NT-530	
RF-Attenuator DC – 18 GHz 10 dB	NT-438	Vertical coupling plane (ESD)	NT-531	
RF-Attenuator DC – 18 GHz 20 dB	NT-439	Test cable #4 for EN 61000-4-6	NT-553	
I+P 7780 Directional coupler 100 - 2000 MHz	NT-440	Test cable #3 for conducted emission	NT-554	
ESH3-Z2 - Pulse limiter 9 kHz - 30 MHz	NT-441	Test cable #5+#6 ESD-cable (2x470k)	NT-555 + NT-556	
Power Divider 6 dB/1 W/50 Ohm	NT-443	Test cable #8 Sucoflex 104EA	NT-559	
Directional coupler 0,1 MHz – 70 MHz	NT-444	Test cable #9 (for outdoor measurements)	NT-580	
Directional coupler 0,1 MHz – 70 MHz	NT-445	Test cable #10 (for outdoor measurements)	NT-581	
Tube imitations according to EN 55015	NT-450	Test cable #13 Sucoflex 104PE	NT-584	
FCC-801-M3-16A Coupling decoupling network	NT-458	Test cable #21 for SRM-3000	NT-592	
FCC-801-M2-50A Coupling decoupling network	NT-459	Shield chamber	NT-600	
FCC-801-M5-25 Coupling decoupling network	NT-460	Climatic chamber	M-1200	
FCC-801-AF10 Coupling decoupling network	NT-461			