

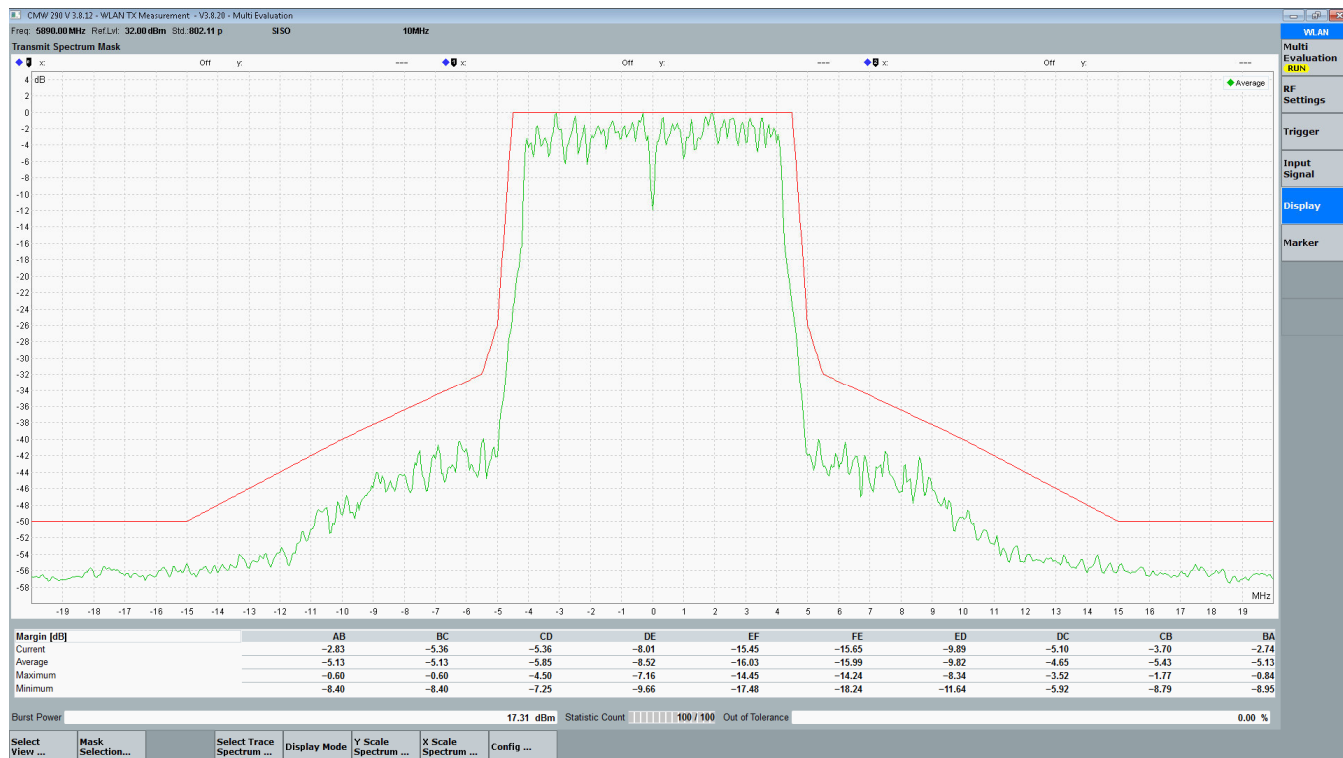
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 27 dBm eirp (conducted measurement)

Measured Antenna: Sectar 1, Channel 0 – data rate 27 MBps

Transmitter operating – 5890 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

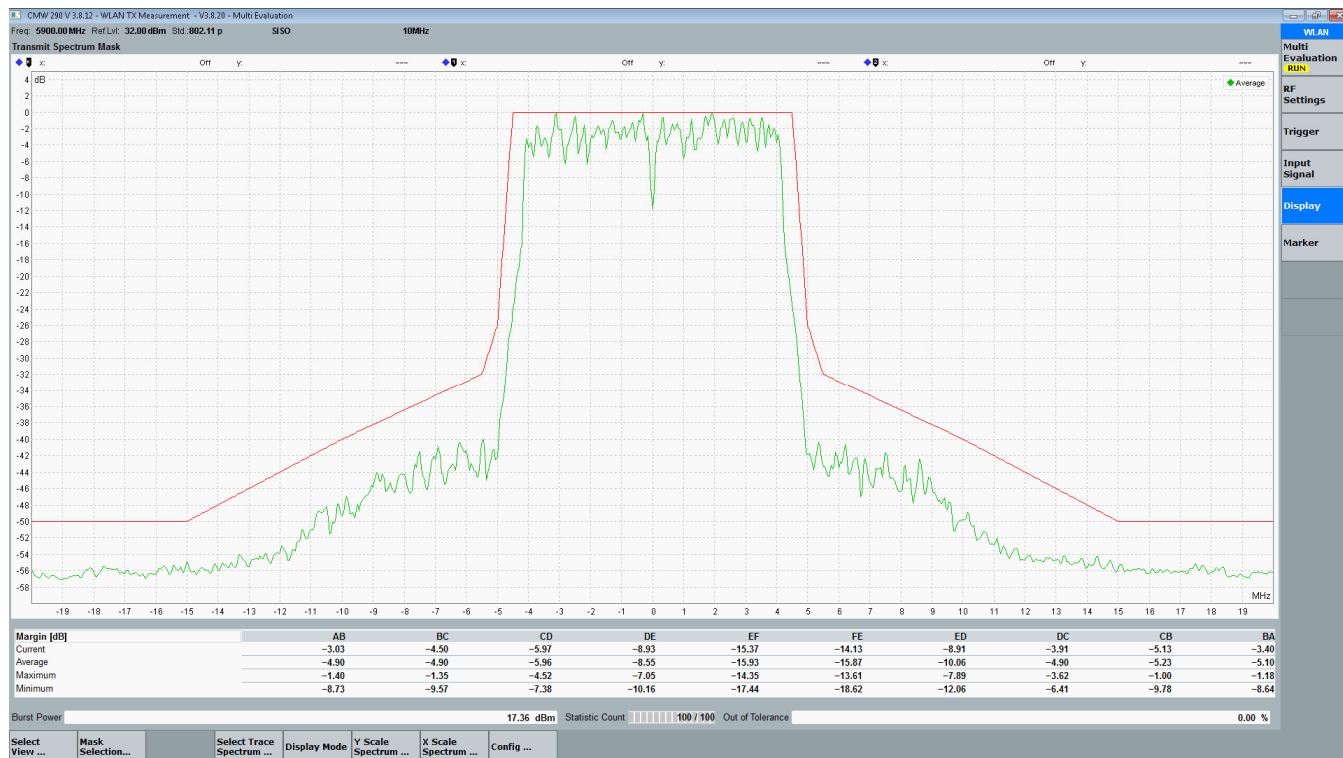
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 23 dBm eirp (conducted measurement)

Measured Antenna: Sectar 1, Channel 0 – data rate 27 MBps

Transmitter operating – 5900 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

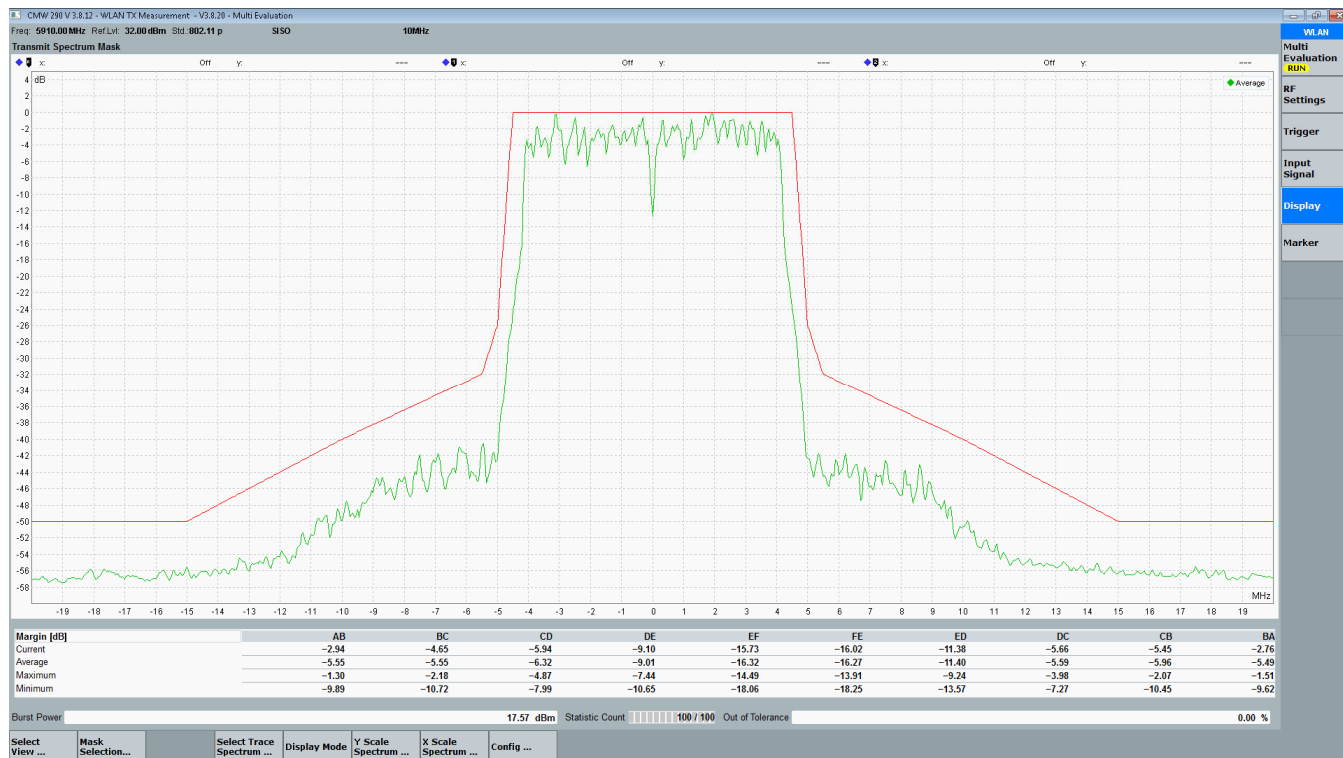
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 23 dBm eirp (conducted measurement)

Measured Antenna: Sectar 1, Channel 0 – data rate 27 MBps

Transmitter operating – 5910 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

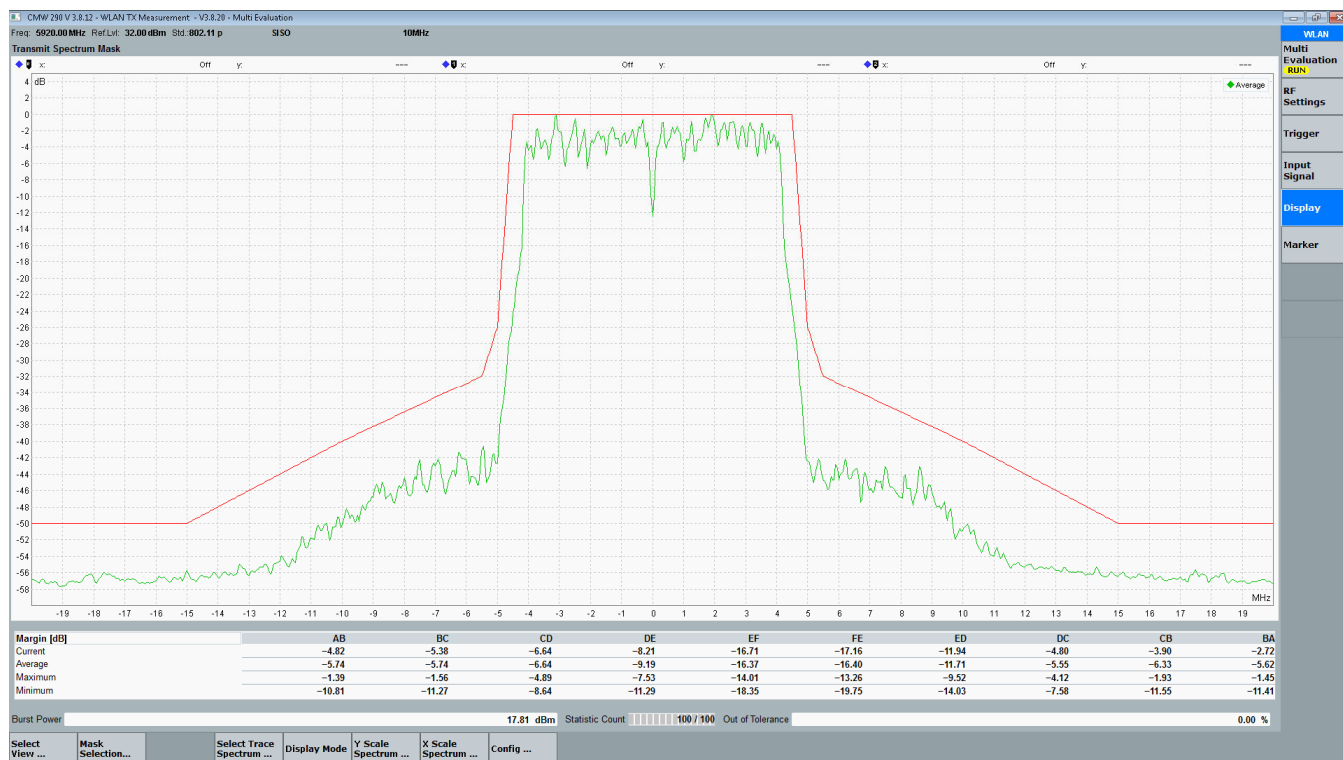
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 27 dBm eirp (conducted measurement)

Measured Antenna: Sectar 1, Channel 0 – data rate 27 MBps

Transmitter operating – 5920 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

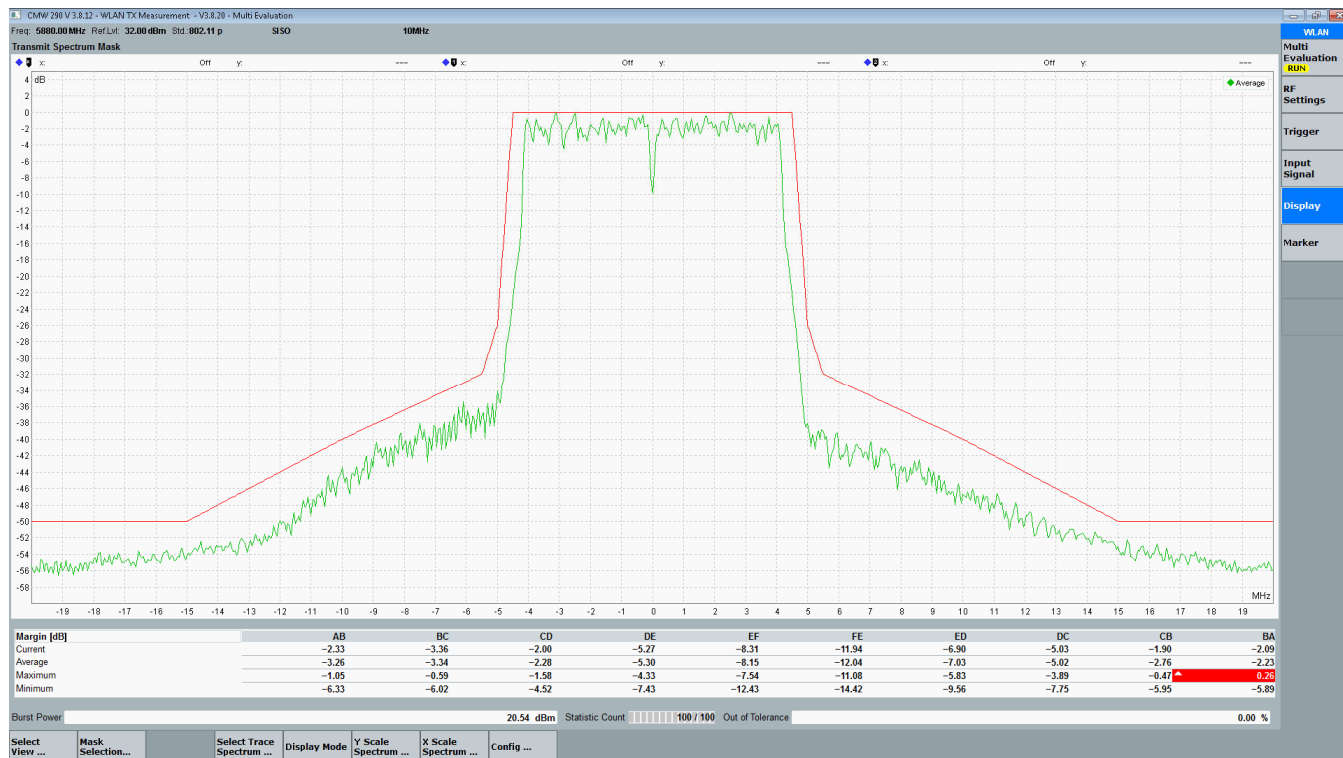
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 27 dBm eirp (conducted measurement)

Measured Antenna: Sectar 1, Channel 1 – data rate 27 MBps

Transmitter operating – 5880 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

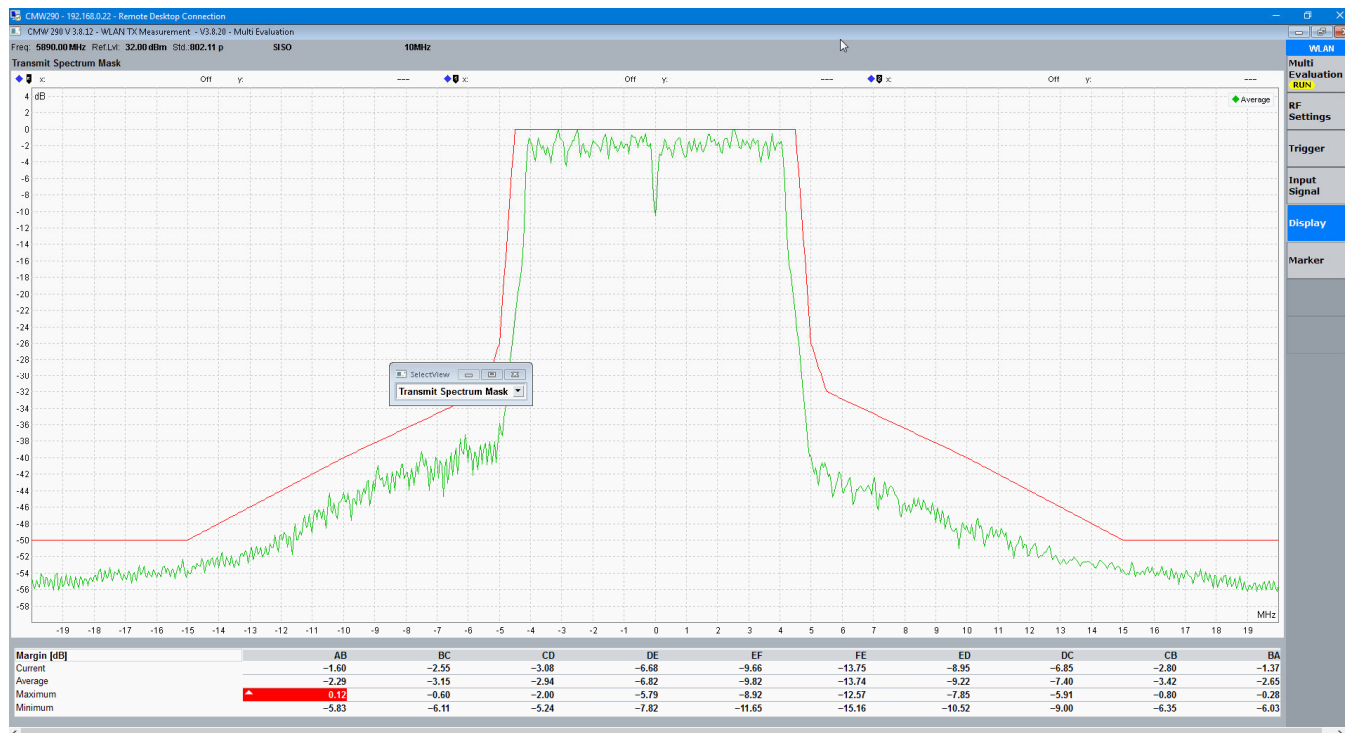
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 27 dBm eirp (conducted measurement)

Measured Antenna: Sectar 1, Channel 1 – data rate 27 MBps

Transmitter operating – 5890 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

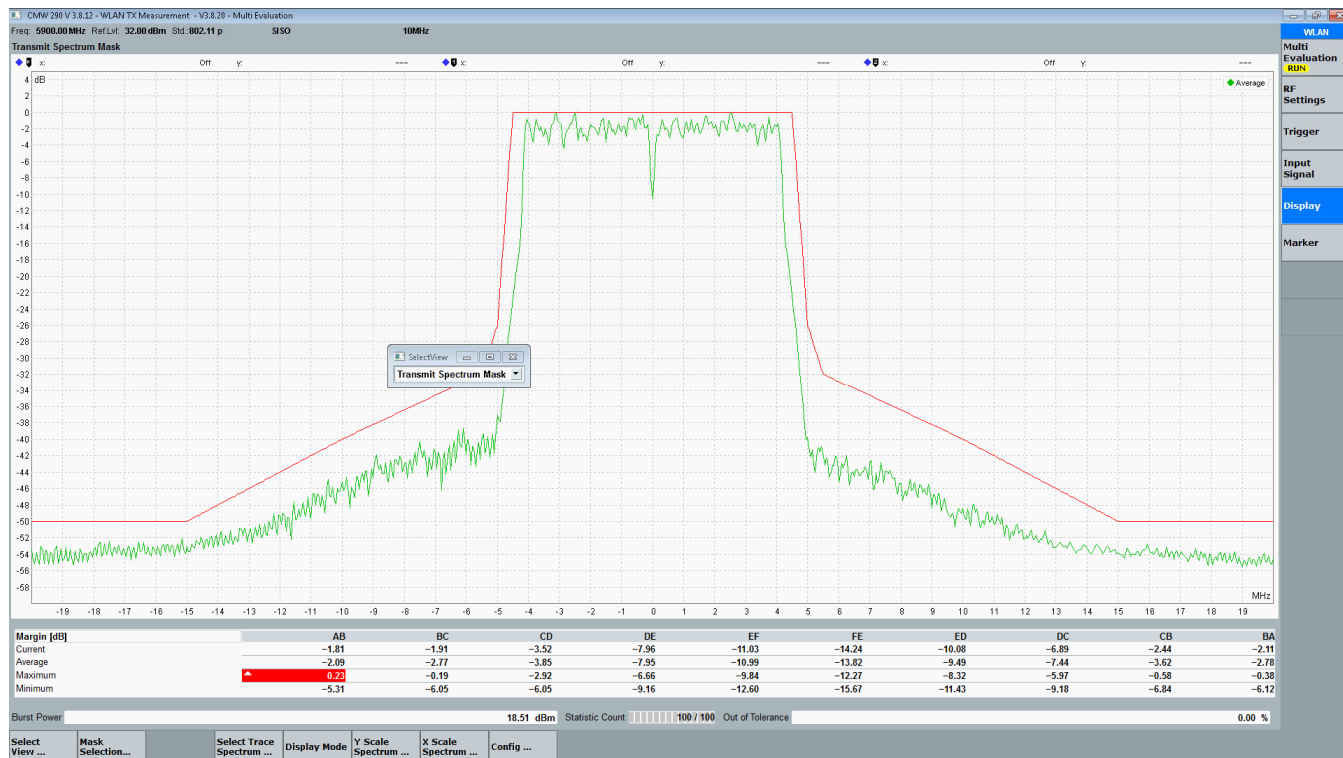
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 23 dBm eirp (conducted measurement)

Measured Antenna: Sectar 1, Channel 1 – data rate 27 MBps

Transmitter operating – 5900 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

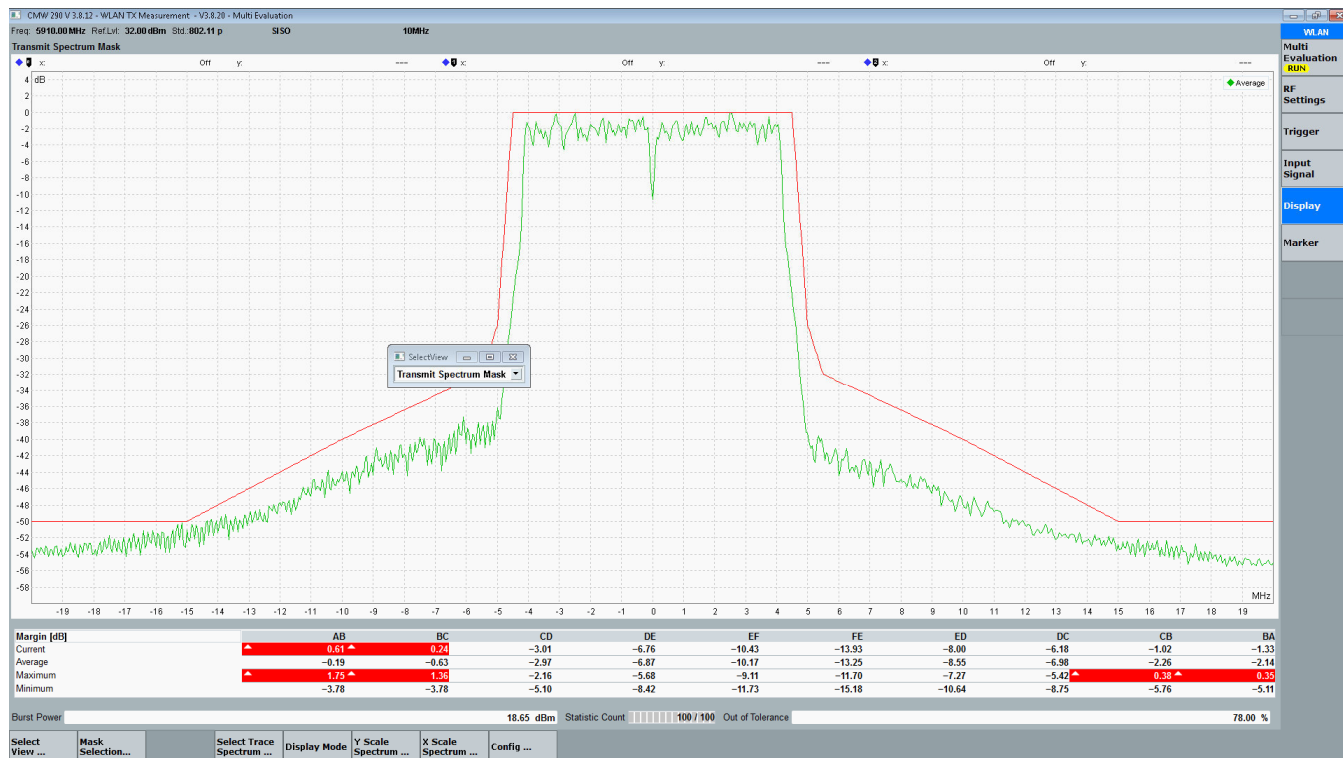
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 23 dBm eirp (conducted measurement)

Measured Antenna: Sectar 1, Channel 1 – data rate 27 MBps

Transmitter operating – 5910 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

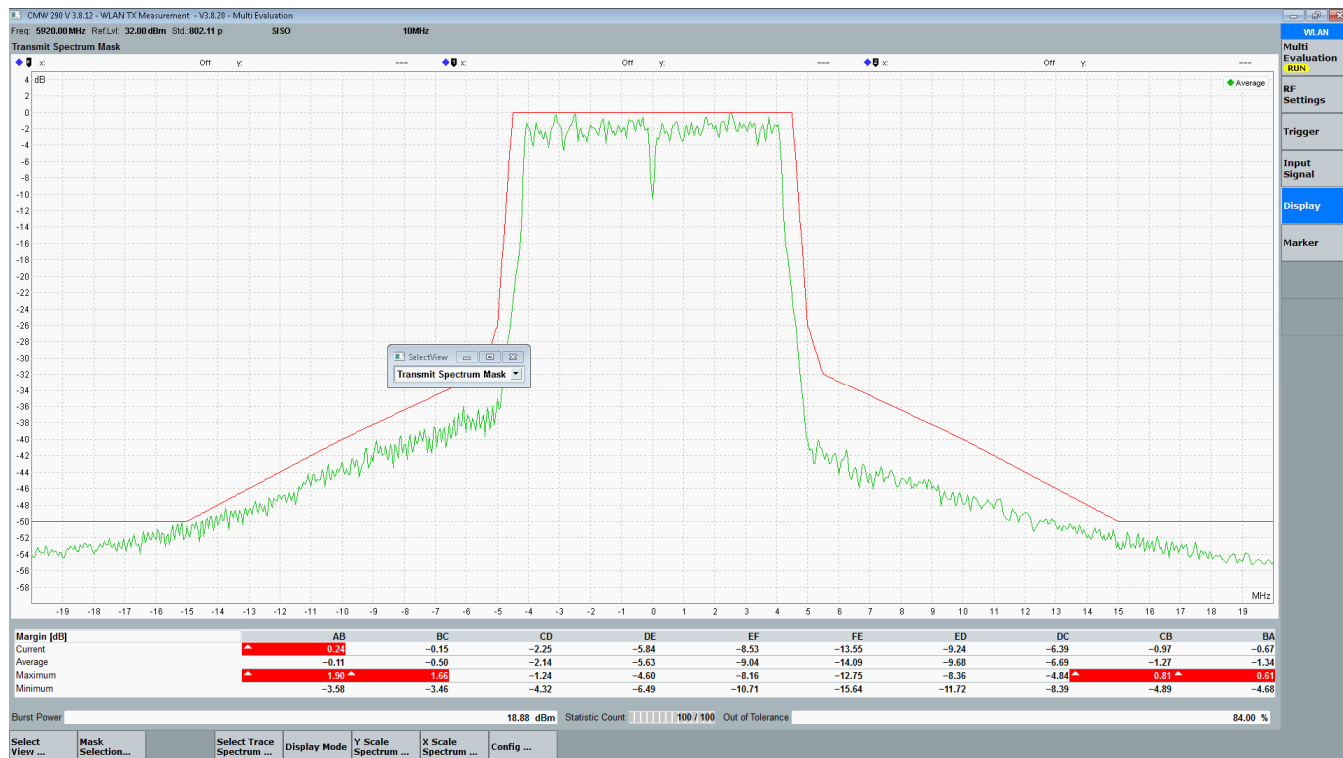
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 27 dBm eirp (conducted measurement)

Measured Antenna: Seson 1, Channel 1 – data rate 27 MBps

Transmitter operating – 5920 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

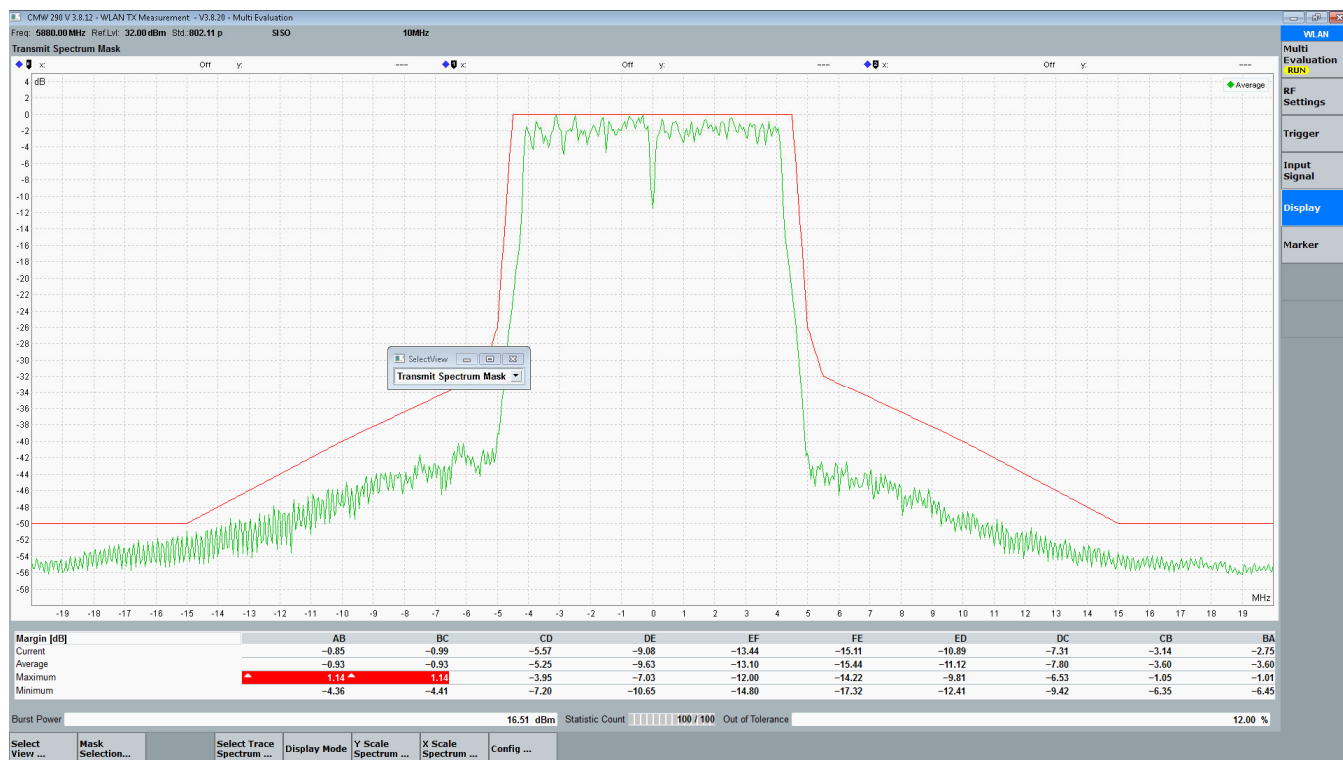
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 27 dBm eirp (conducted measurement)

Measured Antenna: Seson 2, Channel 0 – data rate 27 MBps

Transmitter operating – 5880 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

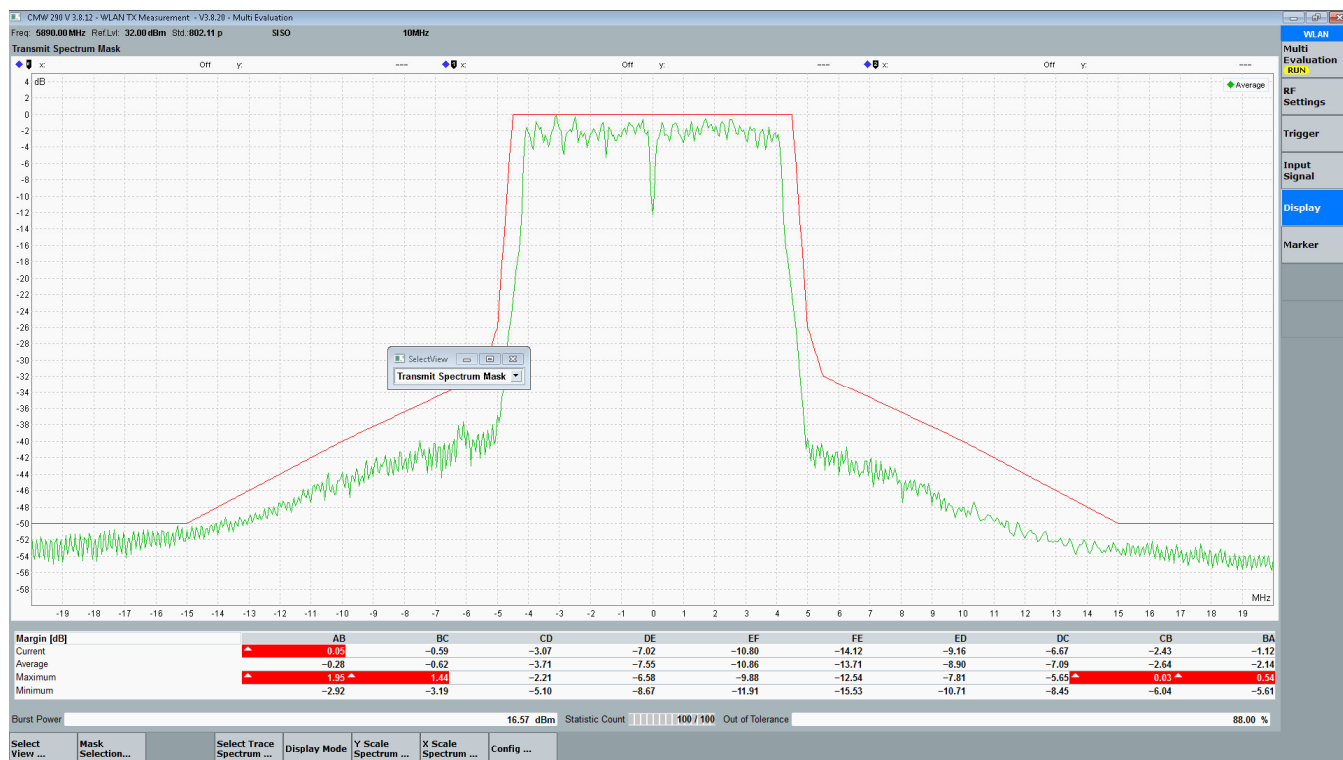
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 27 dBm eirp (conducted measurement)

Measured Antenna: Seson 2, Channel 0 – data rate 27 MBps

Transmitter operating – 5890 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

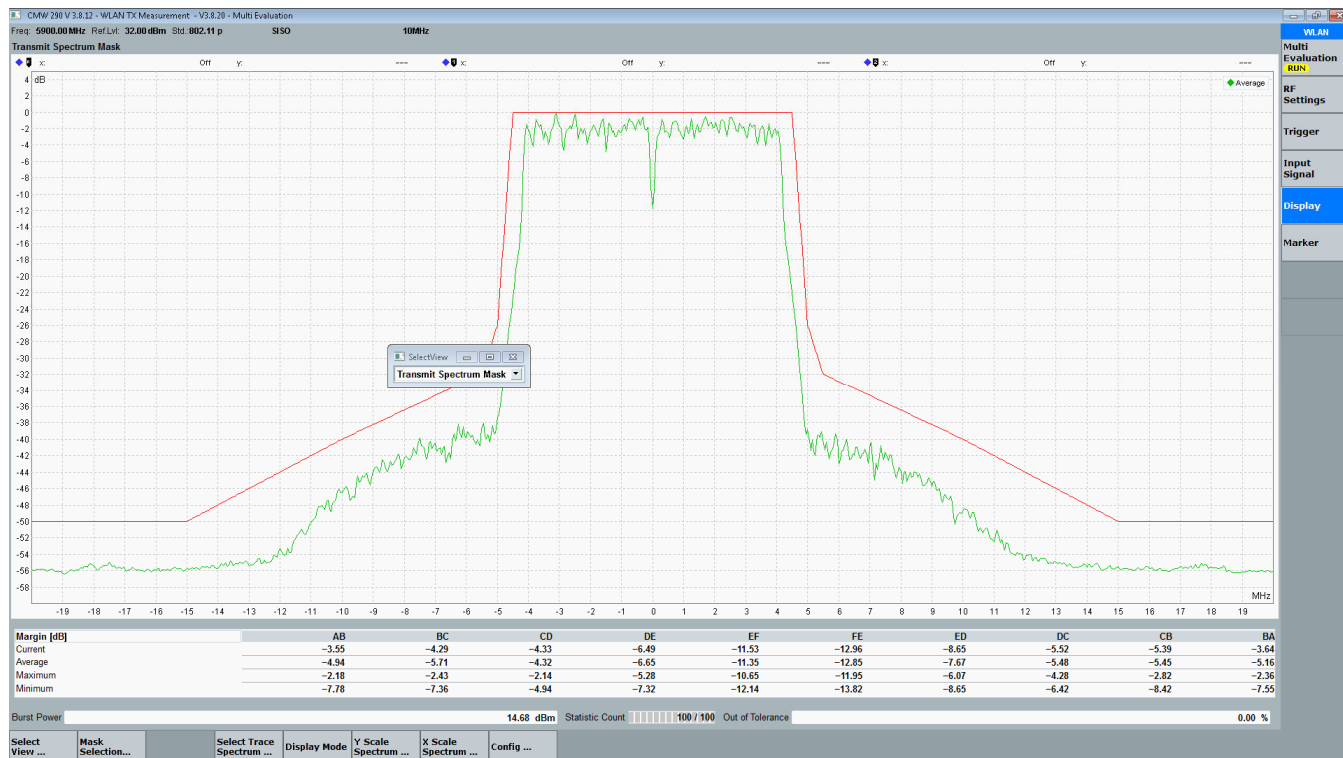
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 23 dBm eirp (conducted measurement)

Measured Antenna: Sectar 2, Channel 0 – data rate 27 MBps

Transmitter operating – 5900 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

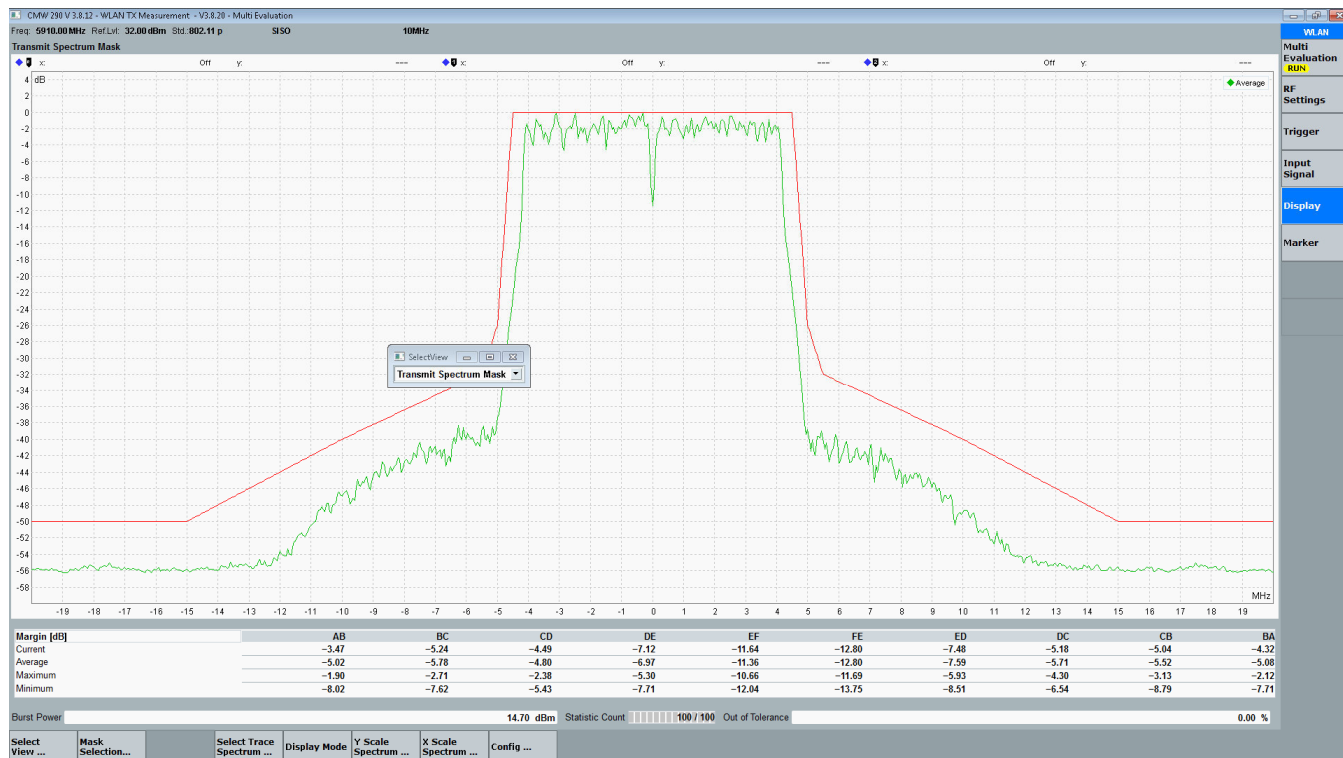
## Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6

Rated output power 23 dBm eirp (conducted measurement)

Measured Antenna: Seson 2, Channel 0 – data rate 27 MBps

Transmitter operating – 5910 MHz

Modulated



## LIMITS SUBCLAUSE 8.10.6

See page 47.

TEST EQUIPMENT USED: EMV-205

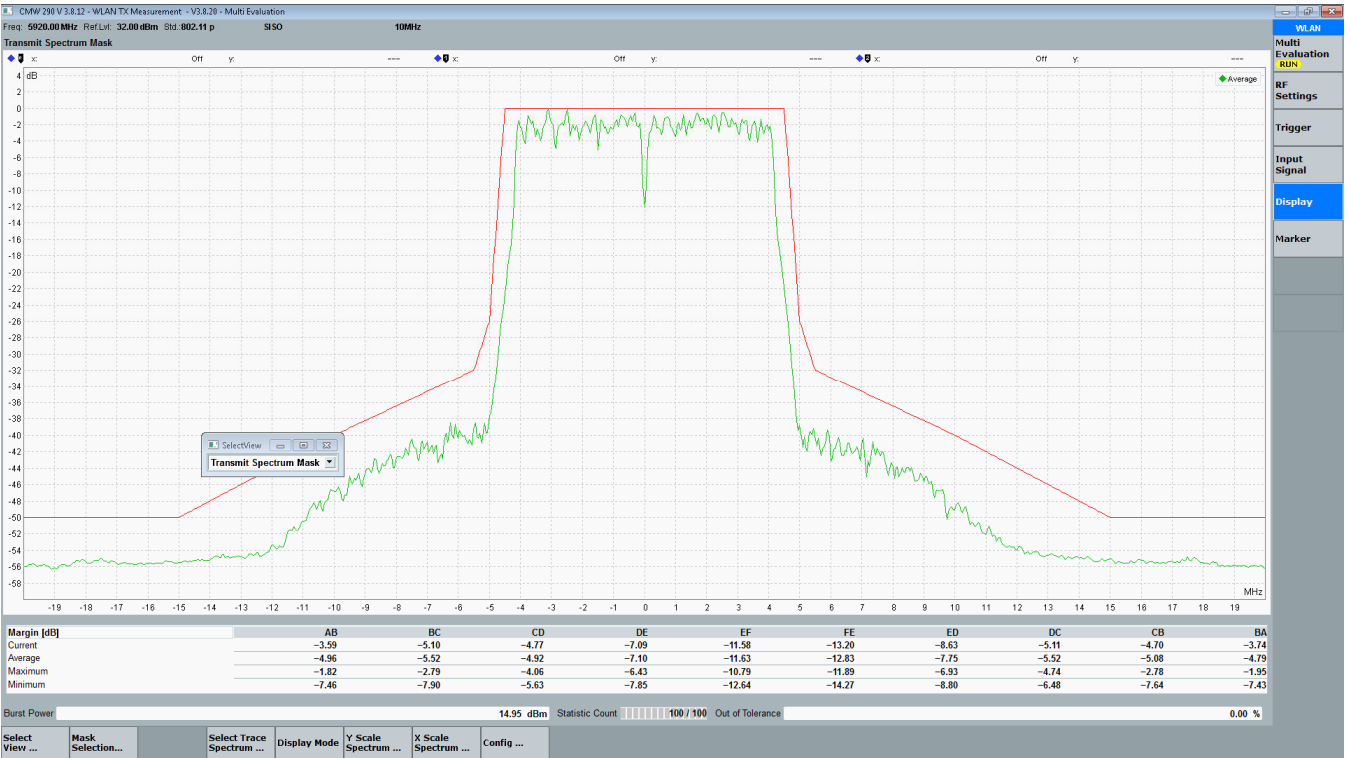
**Transmitter spectrum mask within the 5 GHz ITS frequency band for 10 MHz channels SUBCLAUSE 8.10.6**

Rated output power 27 dBm eirp (conducted measurement)

Measured Antenna: Sectar 2, Channel 0 – data rate 27 MBps

Transmitter operating – 5920 MHz

Modulated



**LIMITS SUBCLAUSE 8.10.6**

See page 47.

TEST EQUIPMENT USED: EMV-205

#### 4.5 Receiver spurious emissions

#### SUBCLAUSE 15.209

##### LIMITS

##### SUBCLAUSE 15.209

| Frequency<br>(MHz) | Field strength<br>(microvolts/meter) | Measurement distance<br>(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                                |

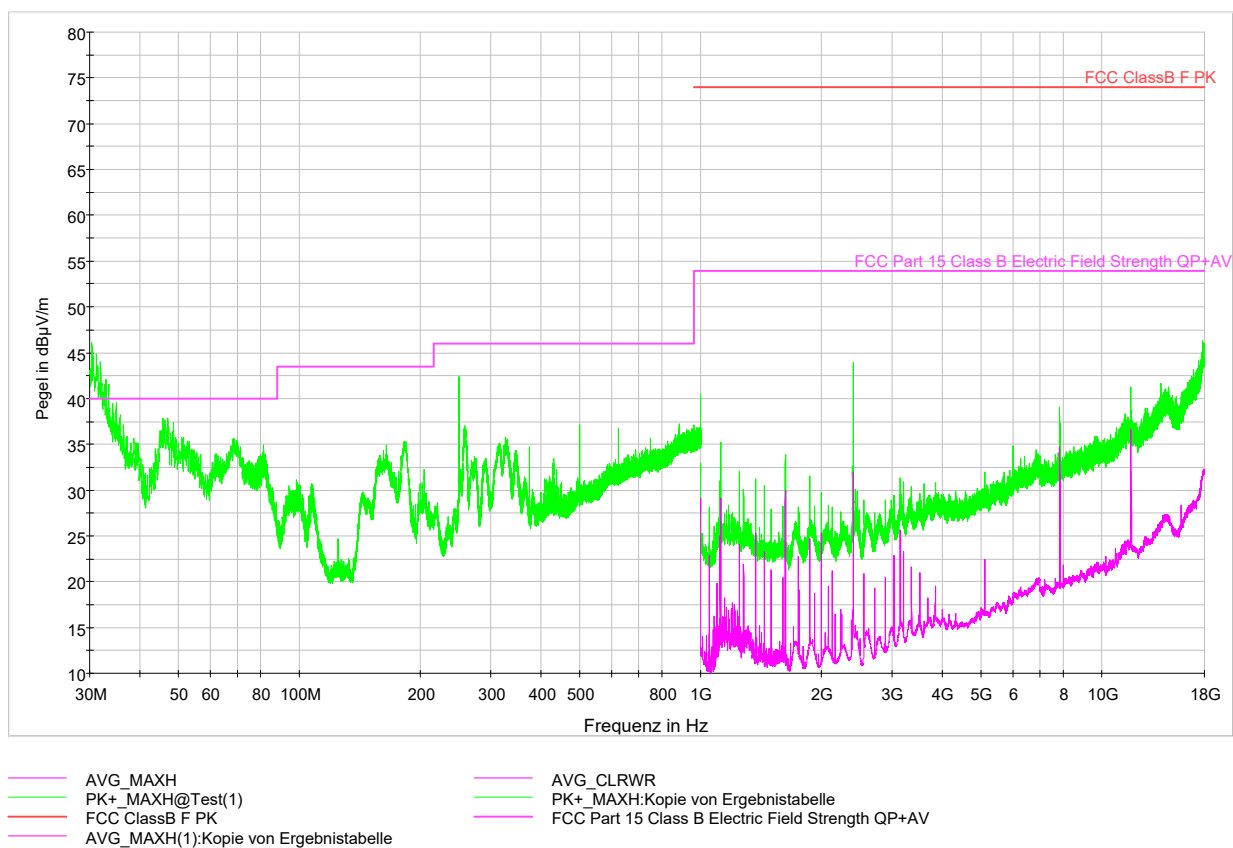
## Receiver spurious emissions

## SUBCLAUSE 15.209

radiated measurement

Measured Antenna: Sector 1 receiving on 5880 MHz, Sector 2 receiving on 5900 MHz

Receivers operating



| Frequency [MHz] | Final Result QP [dBµV/m] |
|-----------------|--------------------------|
| 30,18           | 38,5                     |

### LIMITS

### SUBCLAUSE 15.209

See page 78.

TEST EQUIPMENT USED: EMV-100; EMV-101; EMV-102; EMV-103; EMV-110; EMV-111; EMV-112; EMV-200; EMV-202

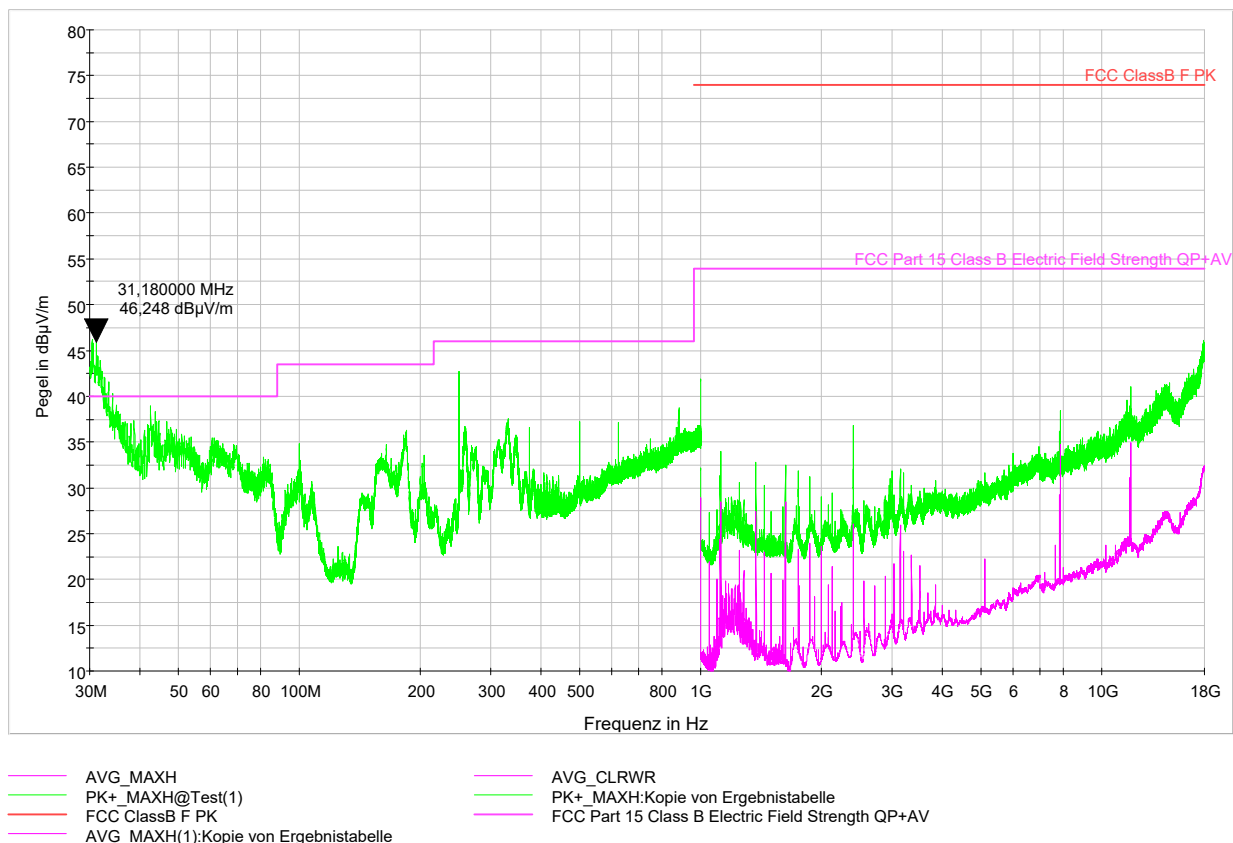
## Receiver spurious emissions

## SUBCLAUSE 15.209

radiated measurement

Measured Antenna: Sector 1 receiving on 5890 MHz, Sector 2 receiving on 5910 MHz

Receivers operating



| Frequency [MHz] | Final Result QP [dBµV/m] |
|-----------------|--------------------------|
| 30,43           | 38,4                     |
| 42,64           | 37,5                     |

### LIMITS

### SUBCLAUSE 15.209

See page 78.

TEST EQUIPMENT USED: EMV-100; EMV-101; EMV-102; EMV-103; EMV-110; EMV-111; EMV-112; EMV-200; EMV-202

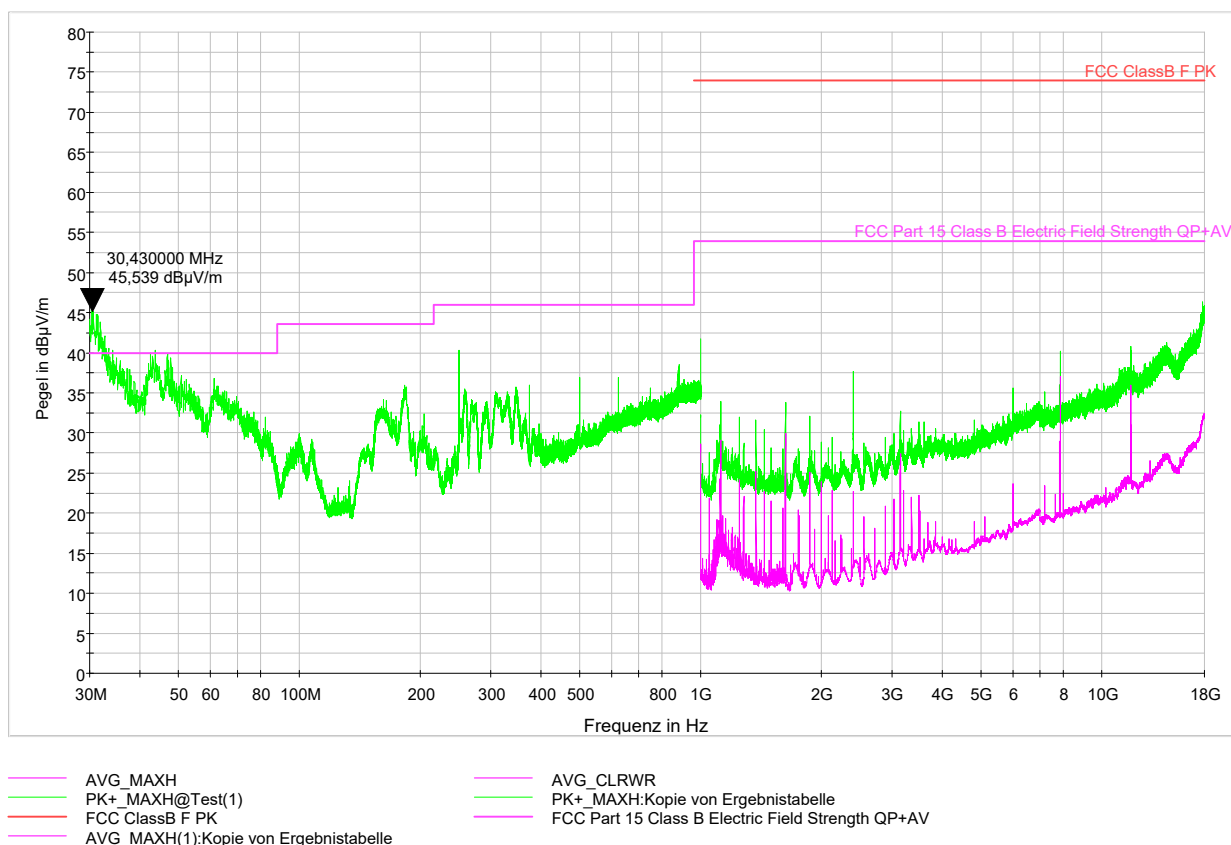
## Receiver spurious emissions

## SUBCLAUSE 15.209

radiated measurement

Measured Antenna: Sector 1 receiving on 5900 MHz, Sector 2 receiving on 5920 MHz

Receivers operating



| Frequency [MHz] | Final Result QP [dBµV/m] |
|-----------------|--------------------------|
| 30,4            | 38,7                     |
| 41,53           | 35,6                     |

### LIMITS

### SUBCLAUSE 15.209

See page 78.

TEST EQUIPMENT USED: EMV-100; EMV-101; EMV-102; EMV-103; EMV-110; EMV-111; EMV-112; EMV-200; EMV-202

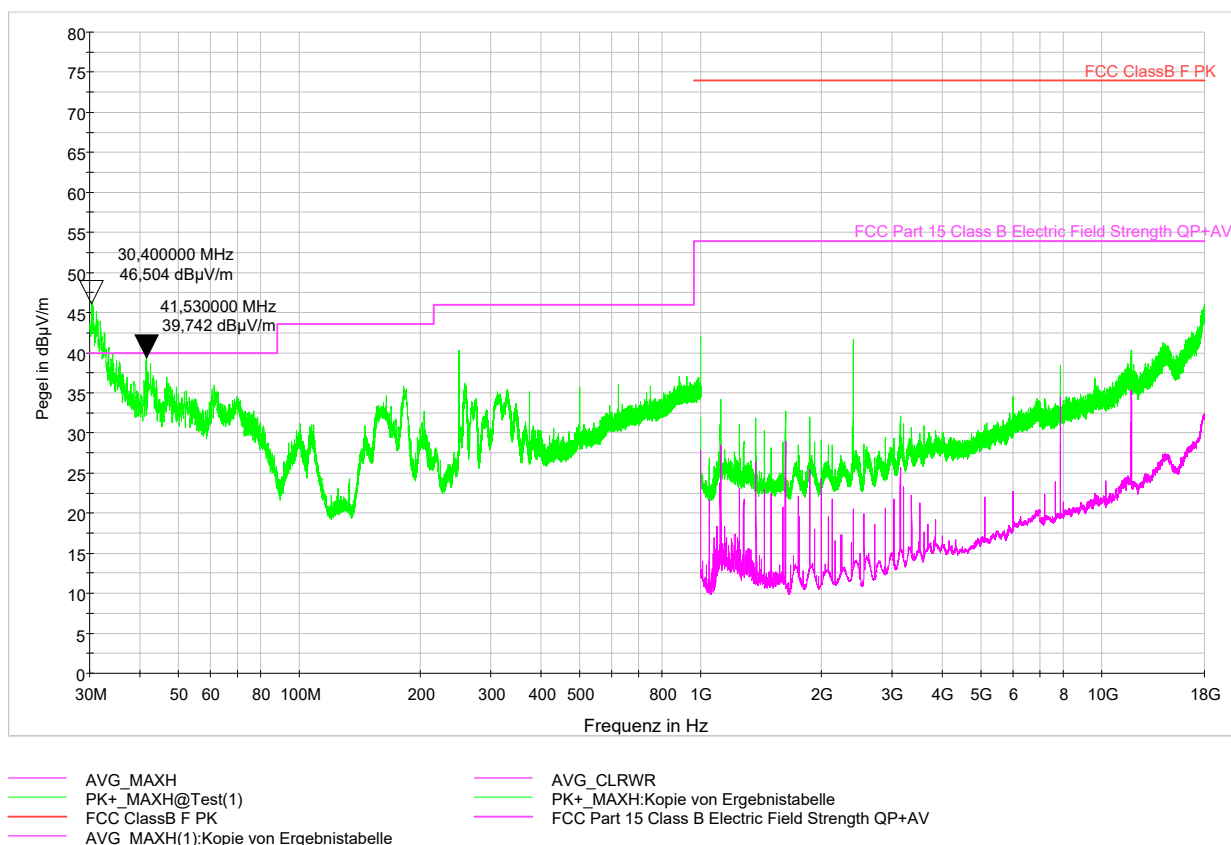
## Receiver spurious emissions

## SUBCLAUSE 15.209

radiated measurement

Measured Antenna: Section 1 receiving on 5910 MHz, Section 2 receiving on 5880 MHz

Receivers operating



| Frequency [MHz] | Final Result QP [dBµV/m] |
|-----------------|--------------------------|
| 30,4            | 38,7                     |
| 41,53           | 35,6                     |

### LIMITS

### SUBCLAUSE 15.209

See page 78.

TEST EQUIPMENT USED: EMV-100; EMV-101; EMV-102; EMV-103; EMV-110; EMV-111; EMV-112; EMV-200; EMV-202

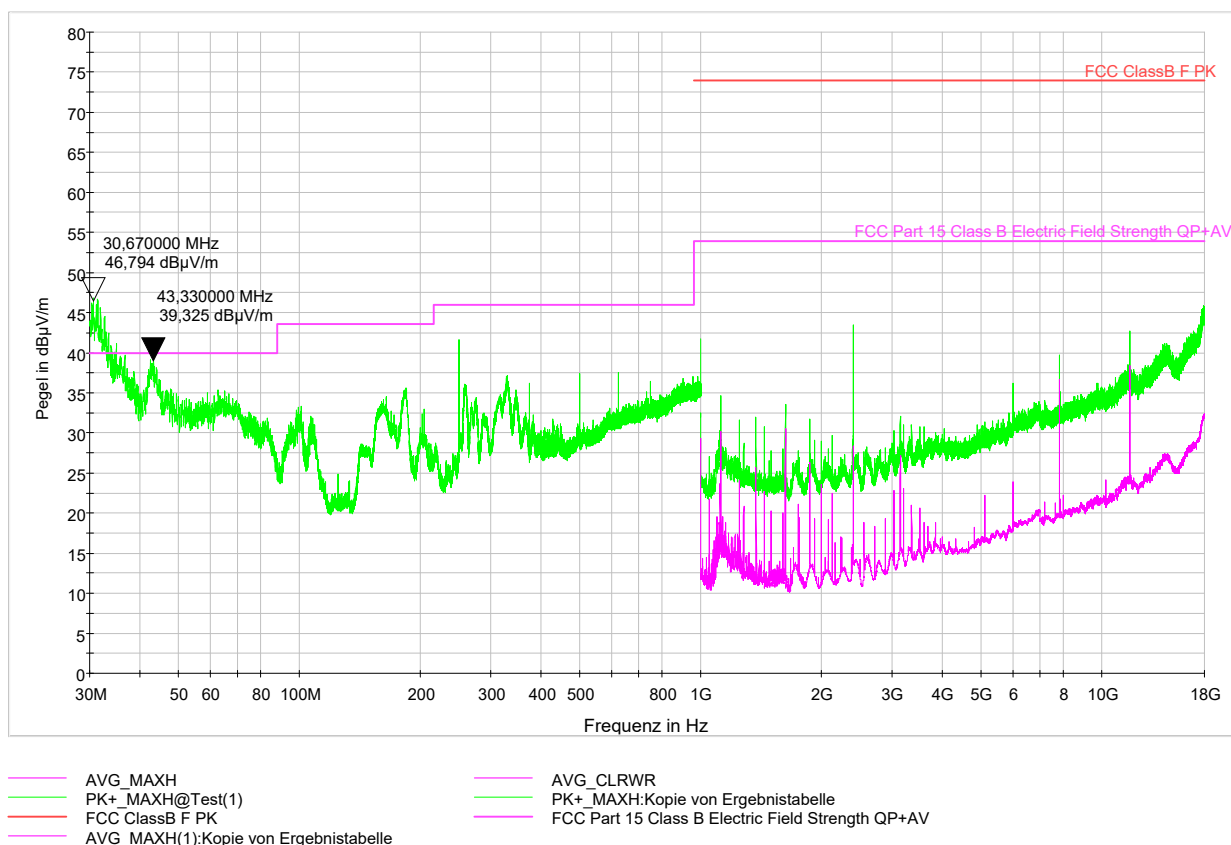
## Receiver spurious emissions

## SUBCLAUSE 15.209

radiated measurement

Measured Antenna: Sector 1 receiving on 5920 MHz, Sector 2 receiving on 5890 MHz

Receivers operating



| Frequency [MHz] | Final Result QP [dBµV/m] |
|-----------------|--------------------------|
| 30,67           | 38,9                     |
| 43,33           | 34,56                    |

### LIMITS

### SUBCLAUSE 15.209

See page 78.

TEST EQUIPMENT USED: EMV-100; EMV-101; EMV-102; EMV-103; EMV-110; EMV-111; EMV-112; EMV-200; EMV-202

#### 4.6 Receiver selectivity

#### SUBCLAUSE 8.11.2

Conducted measurement

Adjacent channel rejection – higher adjacent channel

Measured Antenna: Sectar 1, Channel 0

| Test conditions         | Adjacent channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|---------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                              | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                       |          | 51       | 47       | 49       | 51       | 50       |
| BPSK 3/4                |                                       |          | 49       | 47       | 48       | 50       | 49       |
| QPSK 1/2                |                                       |          | 48       | 46       | 47       | 49       | 48       |
| QPSK 3/4                |                                       |          | 46       | 44       | 45       | 47       | 45       |
| 16-QAM 1/2              |                                       |          | 43       | 40       | 41       | 43       | 42       |
| 16-QAM 3/4              |                                       |          | 40       | 38       | 39       | 40       | 38       |
| 64-QAM 2/3              |                                       |          | 36       | 34       | 35       | 35       | 35       |
| 64-QAM 3/4              |                                       |          | 35       | 33       | 33       | 34       | 34       |
| Measurement uncertainty | ± 1 dB                                |          |          |          |          |          |          |

#### LIMIT

#### SUBCLAUSE 8.11.2

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.2

Conducted measurement

Adjacent channel rejection – lower adjacent channel

Measured Antenna: Sectar 1, Channel 0

| Test conditions         | Adjacent channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|---------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                              | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                       |          | 52       | 48       | 50       | 52       | 49       |
| BPSK 3/4                |                                       |          | 50       | 48       | 49       | 51       | 48       |
| QPSK 1/2                |                                       |          | 49       | 47       | 49       | 50       | 48       |
| QPSK 3/4                |                                       |          | 47       | 45       | 46       | 48       | 45       |
| 16-QAM 1/2              |                                       |          | 44       | 41       | 43       | 44       | 42       |
| 16-QAM 3/4              |                                       |          | 41       | 39       | 40       | 41       | 38       |
| 64-QAM 2/3              |                                       |          | 37       | 35       | 36       | 36       | 35       |
| 64-QAM 3/4              |                                       |          | 35       | 34       | 35       | 35       | 34       |
| Measurement uncertainty | ± 1 dB                                |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.2

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.2

Conducted measurement

Adjacent channel rejection – higher adjacent channel

Measured Antenna: Sectar 1, Channel 1

| Test conditions         | Adjacent channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|---------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                              | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                       |          | 50       | 48       | 49       | 51       | 49       |
| BPSK 3/4                |                                       |          | 49       | 47       | 49       | 50       | 48       |
| QPSK 1/2                |                                       |          | 48       | 48       | 50       | 49       | 47       |
| QPSK 3/4                |                                       |          | 46       | 45       | 46       | 47       | 45       |
| 16-QAM 1/2              |                                       |          | 43       | 41       | 42       | 43       | 42       |
| 16-QAM 3/4              |                                       |          | 40       | 39       | 39       | 40       | 38       |
| 64-QAM 2/3              |                                       |          | 35       | 35       | 35       | 35       | 35       |
| 64-QAM 3/4              |                                       |          | 34       | 34       | 34       | 34       | 34       |
| Measurement uncertainty | ± 1 dB                                |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.2

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.2

Conducted measurement

Adjacent channel rejection – lower adjacent channel

Measured Antenna: Sectar 1, Channel 1

| Test conditions         | Adjacent channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|---------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                              | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                       |          | 50       | 48       | 49       | 51       | 49       |
| BPSK 3/4                |                                       |          | 50       | 48       | 49       | 51       | 49       |
| QPSK 1/2                |                                       |          | 49       | 48       | 50       | 50       | 48       |
| QPSK 3/4                |                                       |          | 47       | 45       | 46       | 48       | 46       |
| 16-QAM 1/2              |                                       |          | 44       | 41       | 42       | 44       | 42       |
| 16-QAM 3/4              |                                       |          | 40       | 39       | 39       | 41       | 39       |
| 64-QAM 2/3              |                                       |          | 36       | 35       | 35       | 36       | 35       |
| 64-QAM 3/4              |                                       |          | 35       | 34       | 34       | 35       | 35       |
| Measurement uncertainty | ± 1 dB                                |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.2

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.2

Conducted measurement

Adjacent channel rejection – higher adjacent channel

Measured Antenna: Seson 2, Channel 0

| Test conditions         | Adjacent channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|---------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                              | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                       |          | 50       | 48       | 50       | 49       | 49       |
| BPSK 3/4                |                                       |          | 49       | 47       | 49       | 48       | 49       |
| QPSK 1/2                |                                       |          | 49       | 47       | 48       | 47       | 49       |
| QPSK 3/4                |                                       |          | 46       | 44       | 46       | 45       | 46       |
| 16-QAM 1/2              |                                       |          | 43       | 41       | 42       | 45       | 43       |
| 16-QAM 3/4              |                                       |          | 41       | 39       | 40       | 39       | 40       |
| 64-QAM 2/3              |                                       |          | 37       | 35       | 36       | 35       | 36       |
| 64-QAM 3/4              |                                       |          | 35       | 33       | 35       | 34       | 34       |
| Measurement uncertainty | ± 1 dB                                |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.2

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.2

Conducted measurement

Adjacent channel rejection – lower adjacent channel

Measured Antenna: Seson 2, Channel 0

| Test conditions         | Adjacent channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|---------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                              | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                       |          | 50       | 48       | 50       | 49       | 49       |
| BPSK 3/4                |                                       |          | 50       | 48       | 50       | 48       | 48       |
| QPSK 1/2                |                                       |          | 50       | 47       | 49       | 48       | 48       |
| QPSK 3/4                |                                       |          | 47       | 45       | 46       | 45       | 45       |
| 16-QAM 1/2              |                                       |          | 44       | 42       | 43       | 46       | 42       |
| 16-QAM 3/4              |                                       |          | 42       | 40       | 41       | 40       | 40       |
| 64-QAM 2/3              |                                       |          | 38       | 36       | 37       | 36       | 36       |
| 64-QAM 3/4              |                                       |          | 36       | 34       | 35       | 34       | 34       |
| Measurement uncertainty | ± 1 dB                                |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.2

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

#### 4.7 Receiver selectivity

#### SUBCLAUSE 8.11.3

Conducted measurement

Alternate channel rejection – higher alternate channel

Measured Antenna: Seson 1, Channel 0

| Test conditions         | Alternate channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|----------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                               | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                        |          | 56       | 53       | 54       | 57       | 56       |
| BPSK 3/4                |                                        |          | 54       | 52       | 54       | 56       | 55       |
| QPSK 1/2                |                                        |          | 53       | 51       | 53       | 55       | 54       |
| QPSK 3/4                |                                        |          | 51       | 49       | 50       | 53       | 52       |
| 16-QAM 1/2              |                                        |          | 48       | 45       | 47       | 49       | 49       |
| 16-QAM 3/4              |                                        |          | 45       | 43       | 44       | 47       | 46       |
| 64-QAM 2/3              |                                        |          | 41       | 39       | 40       | 42       | 42       |
| 64-QAM 3/4              |                                        |          | 40       | 38       | 39       | 41       | 41       |
| Measurement uncertainty | ± 1 dB                                 |          |          |          |          |          |          |

LIMIT

SUBCLAUSE 8.11.3

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.3

Conducted measurement

Alternate channel rejection – lower alternate channel

Measured Antenna: Sectar 1, Channel 0

| Test conditions         | Alternate channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|----------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                               | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                        |          | 57       | 55       | 56       | 57       | 55       |
| BPSK 3/4                |                                        |          | 56       | 54       | 55       | 57       | 55       |
| QPSK 1/2                |                                        |          | 55       | 53       | 54       | 56       | 54       |
| QPSK 3/4                |                                        |          | 53       | 51       | 52       | 53       | 51       |
| 16-QAM 1/2              |                                        |          | 50       | 47       | 48       | 50       | 48       |
| 16-QAM 3/4              |                                        |          | 47       | 45       | 46       | 47       | 45       |
| 64-QAM 2/3              |                                        |          | 43       | 41       | 42       | 43       | 41       |
| 64-QAM 3/4              |                                        |          | 42       | 40       | 40       | 42       | 40       |
| Measurement uncertainty | ± 1 dB                                 |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.3

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

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Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.3

Conducted measurement

Alternate channel rejection – higher alternate channel

Measured Antenna: Sectar 1, Channel 1

| Test conditions         | Alternate channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|----------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                               | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                        |          | 56       | 54       | 54       | 56       | 55       |
| BPSK 3/4                |                                        |          | 55       | 53       | 53       | 55       | 54       |
| QPSK 1/2                |                                        |          | 54       | 54       | 54       | 54       | 53       |
| QPSK 3/4                |                                        |          | 52       | 50       | 50       | 52       | 51       |
| 16-QAM 1/2              |                                        |          | 48       | 46       | 46       | 48       | 48       |
| 16-QAM 3/4              |                                        |          | 45       | 44       | 44       | 46       | 45       |
| 64-QAM 2/3              |                                        |          | 41       | 40       | 40       | 41       | 41       |
| 64-QAM 3/4              |                                        |          | 40       | 39       | 39       | 40       | 40       |
| Measurement uncertainty | ± 1 dB                                 |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.3

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbits/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|-----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                     | -85                         | 18                                | 34                                          |
| 4.5                   | -84                         | 17                                | 33                                          |
| 6                     | -82                         | 16                                | 32                                          |
| 9                     | -80                         | 15                                | 31                                          |
| 12                    | -77                         | 13                                | 29                                          |
| 18                    | -70                         | 11                                | 27                                          |
| 24                    | -69                         | 8                                 | 24                                          |
| 27                    | -67                         | 4                                 | 20                                          |

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Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.3

Conducted measurement

Alternate channel rejection – lower alternate channel

Measured Antenna: Sectar 1, Channel 1

| Test conditions         | Alternate channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|----------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                               | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                        |          | 56       | 55       | 55       | 57       | 56       |
| BPSK 3/4                |                                        |          | 56       | 54       | 54       | 56       | 55       |
| QPSK 1/2                |                                        |          | 55       | 55       | 56       | 55       | 54       |
| QPSK 3/4                |                                        |          | 52       | 51       | 51       | 53       | 52       |
| 16-QAM 1/2              |                                        |          | 49       | 47       | 47       | 50       | 49       |
| 16-QAM 3/4              |                                        |          | 46       | 45       | 45       | 46       | 45       |
| 64-QAM 2/3              |                                        |          | 42       | 41       | 41       | 42       | 42       |
| 64-QAM 3/4              |                                        |          | 41       | 39       | 40       | 40       | 40       |
| Measurement uncertainty | ± 1 dB                                 |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.3

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

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Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.3

Conducted measurement

Alternate channel rejection – higher alternate channel

Measured Antenna: Seson 2, Channel 0

| Test conditions         | Alternate channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|----------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                               | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                        |          | 55       | 53       | 55       | 56       | 56       |
| BPSK 3/4                |                                        |          | 54       | 52       | 54       | 55       | 56       |
| QPSK 1/2                |                                        |          | 54       | 52       | 54       | 54       | 55       |
| QPSK 3/4                |                                        |          | 51       | 50       | 51       | 52       | 53       |
| 16-QAM 1/2              |                                        |          | 48       | 46       | 47       | 50       | 49       |
| 16-QAM 3/4              |                                        |          | 46       | 44       | 45       | 45       | 46       |
| 64-QAM 2/3              |                                        |          | 42       | 40       | 41       | 41       | 43       |
| 64-QAM 3/4              |                                        |          | 40       | 39       | 40       | 40       | 42       |
| Measurement uncertainty | ± 1 dB                                 |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.3

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

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Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

## Receiver selectivity

## SUBCLAUSE 8.11.3

Conducted measurement

Alternate channel rejection – lower alternate channel

Measured Antenna: Sectar 1, Channel 1

| Test conditions         | Alternate channel rejection ratio (dB) |          |          |          |          |          |          |
|-------------------------|----------------------------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz                               | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                                        |          | 57       | 55       | 56       | 55       | 55       |
| BPSK 3/4                |                                        |          | 57       | 54       | 55       | 55       | 55       |
| QPSK 1/2                |                                        |          | 56       | 54       | 55       | 54       | 54       |
| QPSK 3/4                |                                        |          | 53       | 51       | 52       | 52       | 52       |
| 16-QAM 1/2              |                                        |          | 49       | 47       | 49       | 50       | 49       |
| 16-QAM 3/4              |                                        |          | 48       | 46       | 47       | 46       | 46       |
| 64-QAM 2/3              |                                        |          | 44       | 42       | 43       | 42       | 42       |
| 64-QAM 3/4              |                                        |          | 42       | 40       | 41       | 40       | 41       |
| Measurement uncertainty | ± 1 dB                                 |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.3

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; NT-313/1; EMV-205; NT-429; Second radio as normal source

#### 4.8 Receiver sensitivity

#### SUBCLAUSE 8.11.1

Conducted measurement

Measured Antenna: Sectar 1, Channel 0

| Test conditions         | Sensitivity (dBm) |          |          |          |          |          |          |
|-------------------------|-------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz          | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                   |          | -90      | -89      | -89      | -90      | -91      |
| BPSK 3/4                |                   |          | -89      | -89      | -89      | -90      | -91      |
| QPSK 1/2                |                   |          | -88      | -88      | -88      | -89      | -90      |
| QPSK 3/4                |                   |          | -86      | -85      | -86      | -87      | -88      |
| 16-QAM 1/2              |                   |          | -83      | -82      | -82      | -83      | -84      |
| 16-QAM 3/4              |                   |          | -80      | -80      | -80      | -81      | -82      |
| 64-QAM 2/3              |                   |          | -76      | -75      | -75      | -76      | -78      |
| 64-QAM 3/4              |                   |          | -75      | -74      | -74      | -75      | -76      |
| Measurement uncertainty | ± 1 dB            |          |          |          |          |          |          |

LIMIT

SUBCLAUSE 8.11.1

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; EMV-205; NT-429; Second radio as normal source

## Receiver sensitivity

## SUBCLAUSE 8.11.1

Conducted measurement

Measured Antenna: Sectar 1, Channel 1

| Test conditions         | Sensitivity (dBm) |          |          |          |          |          |          |
|-------------------------|-------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz          | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                   |          | -91      | -90      | -90      | -91      | -92      |
| BPSK 3/4                |                   |          | -90      | -89      | -89      | -90      | -92      |
| QPSK 1/2                |                   |          | -89      | -88      | -88      | -89      | -90      |
| QPSK 3/4                |                   |          | -87      | -86      | -86      | -87      | -88      |
| 16-QAM 1/2              |                   |          | -84      | -83      | -83      | -84      | -85      |
| 16-QAM 3/4              |                   |          | -81      | -80      | -80      | -81      | -82      |
| 64-QAM 2/3              |                   |          | -77      | -76      | -76      | -77      | -78      |
| 64-QAM 3/4              |                   |          | -75      | -75      | -74      | -75      | -77      |
| Measurement uncertainty | ± 1 dB            |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.1

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; EMV-205; NT-429; Second radio as normal source

## Receiver sensitivity

## SUBCLAUSE 8.11.1

Conducted measurement

Measured Antenna: Seson 2, Channel 0

| Test conditions         | Sensitivity (dBm) |          |          |          |          |          |          |
|-------------------------|-------------------|----------|----------|----------|----------|----------|----------|
|                         | 5860 MHz          | 5870 MHz | 5880 MHz | 5890 MHz | 5900 MHz | 5910 MHz | 5920 MHz |
| BPSK 1/2                |                   |          | -89      | -88      | -88      | -89      | -90      |
| BPSK 3/4                |                   |          | -88      | -88      | -88      | -89      | -89      |
| QPSK 1/2                |                   |          | -88      | -87      | -87      | -88      | -89      |
| QPSK 3/4                |                   |          | -85      | -85      | -85      | -86      | -87      |
| 16-QAM 1/2              |                   |          | -82      | -82      | -82      | -82      | -83      |
| 16-QAM 3/4              |                   |          | -79      | -79      | -79      | -80      | -81      |
| 64-QAM 2/3              |                   |          | -75      | -75      | -75      | -76      | -77      |
| 64-QAM 3/4              |                   |          | -74      | -74      | -73      | -72      | -75      |
| Measurement uncertainty | ± 1 dB            |          |          |          |          |          |          |

## LIMIT

## SUBCLAUSE 8.11.1

**TABLE 12 Type 1 Receiver Performance Requirements<sup>A</sup>**

| Data Rate,<br>Mbps/s | Minimum<br>Sensitivity, dBm | Adjacent Channel<br>Rejection, dB | Alternate Adjacent<br>Channel Rejection, dB |
|----------------------|-----------------------------|-----------------------------------|---------------------------------------------|
| 3                    | -85                         | 18                                | 34                                          |
| 4.5                  | -84                         | 17                                | 33                                          |
| 6                    | -82                         | 16                                | 32                                          |
| 9                    | -80                         | 15                                | 31                                          |
| 12                   | -77                         | 13                                | 29                                          |
| 18                   | -70                         | 11                                | 27                                          |
| 24                   | -69                         | 8                                 | 24                                          |
| 27                   | -67                         | 4                                 | 20                                          |

<sup>A</sup> From IEEE 802.11a. Copyright 1999 IEEE. All rights reserved.

Measuring equipment used: EMV-100; EMV-205; NT-429; Second radio as normal source

# Appendix 1

## Test equipment used

|                          |                                                  |          |                          |                                                        |                    |
|--------------------------|--------------------------------------------------|----------|--------------------------|--------------------------------------------------------|--------------------|
| <input type="checkbox"/> | Anechoic Chamber with 3m measurement distance    | NT-100   | <input type="checkbox"/> | Power quality analyzer<br>Fluke 1760 (complete set)    | NT-160 -<br>NT-173 |
| <input type="checkbox"/> | Stripline<br>according to ISO 11452-5            | NT-108   | <input type="checkbox"/> | Spectrumanalyzer – FSP7<br>9 kHz – 7 GHz               | NT-200             |
| <input type="checkbox"/> | MA4000 - Antenna mast<br>1 - 4 m height          | NT-110/1 | <input type="checkbox"/> | ESCI - Test receiver<br>9 kHz - 7 GHz                  | NT-203/1           |
| <input type="checkbox"/> | DS - Turntable<br>0 - 400 ° Azimuth              | NT-111/1 | <input type="checkbox"/> | ESR – Test receiver<br>20 Hz – 26,5 GHz                | NT-207/1           |
| <input type="checkbox"/> | CO3000 Controller<br>Mast+Turntable              | NT-112/1 | <input type="checkbox"/> | Digital Radio Tester<br>CMW500                         | NT-208/1           |
| <input type="checkbox"/> | HUF-Z3 - Log. Per. Antenna<br>200 - 1000 MHz     | NT-121   | <input type="checkbox"/> | Noise-gen., ITU-R 559-2<br>20 Hz – 20 kHz              | NT-209             |
| <input type="checkbox"/> | FMZB1513 - Loop Antenna<br>9 kHz - 30 MHz        | NT-122/1 | <input type="checkbox"/> | CMTA - Radiocommunication<br>analyzer ; 0,1 - 1000 MHz | NT-210             |
| <input type="checkbox"/> | HFH-Z6 - Rod Antenna<br>9 kHz - 30 MHz           | NT-123   | <input type="checkbox"/> | 3271 - Spectrum analyzer<br>100 Hz - 26,5 GHz          | NT-211             |
| <input type="checkbox"/> | 3121C - Dipole Antenna<br>28 - 1000 MHz          | NT-124   | <input type="checkbox"/> | Digital Radio Tester<br>Aeroflex 3920                  | NT-212/1           |
| <input type="checkbox"/> | 3115 - Horn Antenna<br>1 - 18 GHz (immunity)     | NT-125   | <input type="checkbox"/> | Mixer M28HW<br>26,5 GHz - 40 GHz                       | NT-214             |
| <input type="checkbox"/> | 3116 - Horn Antenna<br>18 - 40 GHz               | NT-126   | <input type="checkbox"/> | RubiSource T&M<br>Timing reference                     | NT-216             |
| <input type="checkbox"/> | SAS-200/543 - Bicon. Antenna<br>20 MHz - 300 MHz | NT-127   | <input type="checkbox"/> | Radiocommunicationanalyzer<br>SWR 1180 MD              | NT-217             |
| <input type="checkbox"/> | AT-1080 - Log. Per. Antenna<br>80 - 1000 MHz     | NT-128   | <input type="checkbox"/> | Mixer M19HWD<br>40 GHz – 60 GHz                        | NT-218             |
| <input type="checkbox"/> | HK-116 - bicon. Antenna<br>20 MHz - 300 MHz      | NT-129   | <input type="checkbox"/> | Mixer M12HWD<br>60 GHz – 90 GHz                        | NT-219             |
| <input type="checkbox"/> | HK-116 - bicon. Antenna<br>20 MHz - 300 MHz      | NT-130   | <input type="checkbox"/> | DSO9104<br>Digital scope                               | NT-220/1           |
| <input type="checkbox"/> | 3146 - Log. Per. Antenna<br>200 – 1000 MHz       | NT-131   | <input type="checkbox"/> | TPS 2014<br>Digital scope                              | NT-222             |
| <input type="checkbox"/> | VULB 9163 Trilog Antenna<br>30 – 3000 MHz        | NT-131/1 | <input type="checkbox"/> | Artificial Ear<br>according to IEC 60318               | NT-224             |
| <input type="checkbox"/> | Loop Antenna<br>H-Field                          | NT-132   | <input type="checkbox"/> | 1 kHz Sound calibrator                                 | NT-225             |
| <input type="checkbox"/> | Horn Antenna<br>500 MHz - 2900 MHz               | NT-133   | <input type="checkbox"/> | SRM-3006<br>Spectrumanalyzer                           | NT-233/1a          |
| <input type="checkbox"/> | Horn Antenna<br>500 MHz - 6000 MHz               | NT-133/1 | <input type="checkbox"/> | E-field probe SRM<br>75 MHz – 3 GHz                    | NT-234             |
| <input type="checkbox"/> | Log. per. Antenna<br>800 MHz - 2500 MHz          | NT-134   | <input type="checkbox"/> | Field Meter NBM-500<br>incl. E- and H-Field probes     | NT-240a-e          |
| <input type="checkbox"/> | Log. per. Antenna<br>800 MHz - 2500 MHz          | NT-135   | <input type="checkbox"/> | Magnetometer<br>HP-01                                  | NT-241/1           |
| <input type="checkbox"/> | BiConiLog Antenna<br>26 MHz – 2000 MHz           | NT-137   | <input type="checkbox"/> | EFA-3<br>H-field- / E-field probe                      | NT-243             |
| <input type="checkbox"/> | Conical Dipol Antenna<br>PCD8250                 | NT-138   | <input type="checkbox"/> | EHP-50F<br>H-field- / E-field probe                    | NT-243/1           |
| <input type="checkbox"/> | HF 906 - Horn Antenna<br>1 - 18 GHz (emission)   | NT-139   | <input type="checkbox"/> | Field Meter EMR-200<br>100 kHz – 3 GHz                 | NT-244             |
| <input type="checkbox"/> | HZ-1<br>Antenna tripod                           | NT-150   | <input type="checkbox"/> | E-field probe<br>100 kHz – 3 GHz                       | NT-245             |
| <input type="checkbox"/> | BN 1500<br>Antenna tripod                        | NT-151   | <input type="checkbox"/> | H-field probe<br>300 kHz – 30 MHz                      | NT-246             |
| <input type="checkbox"/> | Ant. tripod for EN61000-4-3<br>Model TP1000A     | NT-156   |                          |                                                        |                    |

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## Appendix 1 (continued)

### Test equipment used

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

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|                          |                                                |          |                          |                                                           |                    |
|--------------------------|------------------------------------------------|----------|--------------------------|-----------------------------------------------------------|--------------------|
| <input type="checkbox"/> | RF-Attenuator 10 dB<br>DC – 18 GHz / 50 W      | NT-417/1 | <input type="checkbox"/> | FCC-801-T4<br>Coupling decoupling network                 | NT-463             |
| <input type="checkbox"/> | RF-Attenuator 6 dB<br>DC – 18 GHz / 50 W       | NT-418   | <input type="checkbox"/> | FCC-801-C1<br>Coupling decoupling network                 | NT-464             |
| <input type="checkbox"/> | RF-Attenuator 3 dB<br>DC – 18 GHz / 50 W       | NT-419   | <input type="checkbox"/> | SW 9605 - Current probe<br>150 kHz – 30 MHz               | NT-465/1           |
| <input type="checkbox"/> | RF-Attenuator 20 dB<br>DC - 1000 MHz / 25 W    | NT-421   | <input type="checkbox"/> | 95242-1 – Current probe<br>1 MHz – 400 MHz                | NT-468             |
| <input type="checkbox"/> | RF-Attenuator 30 dB<br>DC - 1000 MHz / 1 W     | NT-423   | <input type="checkbox"/> | 94106-1L-1 – Current probe<br>100 kHz – 450 MHz           | NT-471             |
| <input type="checkbox"/> | RF-Attenuator<br>30 dB                         | NT-424   | <input type="checkbox"/> | WHKX12-2700-3000-18000<br>3 GHz Highpass filter           | NT-472             |
| <input type="checkbox"/> | RF-Attenuator 6 dB<br>DC - 1000 MHz / 1 W      | NT-425   | <input type="checkbox"/> | WHKX10-3870-4500-18000<br>4,5 GHz Highpass filter         | NT-473             |
| <input type="checkbox"/> | RF-Attenuator 6 dB<br>DC - 1000 MHz / 1 W      | NT-426   | <input type="checkbox"/> | GA 1240 Power amplifier<br>according to EN 61000-4-16     | NT-480             |
| <input type="checkbox"/> | RF-Attenuator<br>6 dB                          | NT-428   | <input type="checkbox"/> | Coupling networks<br>according to EN 61000-4-16           | NT-481 -<br>NT-483 |
| <input type="checkbox"/> | RF-Attenuator<br>0 dB - 81 dB                  | NT-429   | <input type="checkbox"/> | Van der Hoofden Test Head                                 | NT-484             |
| <input type="checkbox"/> | WRU 27 - Band blocking<br>27 MHz               | NT-430   | <input type="checkbox"/> | WRCJV12-5820-5850-5950-5980<br>5,9 GHz Band Reject Filter | NT-490             |
| <input type="checkbox"/> | WHJ450C9 AA - High pass<br>450 MHz             | NT-431   | <input type="checkbox"/> | WHKX10-5670-6300-18000<br>6 GHz Highpass filter           | NT-491             |
| <input type="checkbox"/> | WHJ250C9 AA - High pass<br>250 MHz             | NT-432   | <input type="checkbox"/> | WHK12-935-1000-7000<br>1 GHz Highpass filter              | NT-492             |
| <input type="checkbox"/> | RF-Load<br>150 W                               | NT-433   | <input type="checkbox"/> | EMC Video/Audiosystem                                     | NT-511/1           |
| <input type="checkbox"/> | Impedance transducer<br>1:4 ; 1:9 ; 1:16       | NT-435   | <input type="checkbox"/> | ES-K1 Version 1.71 SP2<br>Test software                   | NT-520             |
| <input type="checkbox"/> | RF-Attenuator DC – 18 GHz<br>6 dB              | NT-436   | <input type="checkbox"/> | EMC32 Version 10.60.20<br>Test software                   | NT-520/1           |
| <input type="checkbox"/> | RF-Attenuator DC – 18 GHz<br>6 dB              | NT-437   | <input type="checkbox"/> | SRM-TS Version 1.3<br>software for SRM-3000               | NT-522             |
| <input type="checkbox"/> | RF-Attenuator DC – 18 GHz<br>10 dB             | NT-438   | <input type="checkbox"/> | SRM-TS Version 1.3.1<br>software for SRM-3006             | NT-522/1           |
| <input type="checkbox"/> | RF-Attenuator DC – 18 GHz<br>20 dB             | NT-439   | <input type="checkbox"/> | Spitzenberger und Spies<br>Test software V4.1             | NT-525             |
| <input type="checkbox"/> | I+P 7780 Directional coupler<br>100 - 2000 MHz | NT-440   | <input type="checkbox"/> | Vertical coupling plane<br>(ESD)                          | NT-531             |
| <input type="checkbox"/> | ESH3-Z2 - Pulse limiter<br>9 kHz - 30 MHz      | NT-441   | <input type="checkbox"/> | Test cable #4<br>for EN 61000-4-6                         | NT-553             |
| <input type="checkbox"/> | Power Divider<br>6 dB/1 W/50 Ohm               | NT-443   | <input type="checkbox"/> | Test cable #3<br>for conducted emission                   | NT-554             |
| <input type="checkbox"/> | Directional coupler<br>0,1 MHz – 70 MHz        | NT-444   | <input type="checkbox"/> | Test cable #5+#6<br>ESD-cable (2x470k)                    | NT-555 +<br>NT-556 |
| <input type="checkbox"/> | Directional coupler<br>0,1 MHz – 70 MHz        | NT-445   | <input type="checkbox"/> | Test cable #8<br>Sucoflex 104EA                           | NT-559             |
| <input type="checkbox"/> | Tube imitations<br>according to EN 55015       | NT-450   | <input type="checkbox"/> | Test cable #9<br>(for outdoor measurements)               | NT-580             |
| <input type="checkbox"/> | FCC-801-M3-16A<br>Coupling decoupling network  | NT-458   | <input type="checkbox"/> | Test cable #10<br>(for outdoor measurements)              | NT-581             |
| <input type="checkbox"/> | FCC-801-M2-50A<br>Coupling decoupling network  | NT-459   | <input type="checkbox"/> | Test cable #13<br>Sucoflex 104PE                          | NT-584             |
| <input type="checkbox"/> | FCC-801-M5-25<br>Coupling decoupling network   | NT-460   | <input type="checkbox"/> | Test cable #21<br>for SRM-3000                            | NT-592             |
| <input type="checkbox"/> | FCC-801-AF10<br>Coupling decoupling network    | NT-461   | <input type="checkbox"/> | Shield chamber                                            | NT-600             |
| <input type="checkbox"/> | FCC-801-S25<br>Coupling decoupling network     | NT-462   | <input type="checkbox"/> | Climatic chamber                                          | M-1200             |

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|                          |                                                     |                     |                          |                                                    |                 |                                         |
|--------------------------|-----------------------------------------------------|---------------------|--------------------------|----------------------------------------------------|-----------------|-----------------------------------------|
| <input type="checkbox"/> | Anechoic Chamber<br>3 m / 5 m measuring distance    | EMV-100             | <input type="checkbox"/> | HF- Amplifier 9 kHz-225 MHz<br>BBL200              | EMV-300/1       | <b>Division:</b><br>Industry & Energy   |
| <input type="checkbox"/> | Turntabel<br>6 m diameter                           | EMV-101             | <input type="checkbox"/> | HF- Amplifier 80 -1000 MHz<br>BBA150               | EMV-301         | Department: FG                          |
| <input type="checkbox"/> | Antenna mast + controller                           | EMV-102+<br>EMV-103 | <input type="checkbox"/> | HF- Amplifier 0,8 - 6 GHz<br>BBA150                | EMV-302         | Test report number:<br>INE-AT/FG-21/126 |
| <input type="checkbox"/> | EMC Video/Audiosystem                               | EMV-104             | <input type="checkbox"/> | High Power Ant. 20-200 MHz<br>HPBA-2510            | EMV-303/1       | Page: 4 of 5                            |
| <input type="checkbox"/> | EMC Software<br>EMC32 Version 10.60.20              | EMV-105             | <input type="checkbox"/> | Log.per Antenna 80-2700 MHz<br>STLP 9128 E special | EMV-304         | Date: 18.08.2021                        |
| <input type="checkbox"/> | Hornantenna 1 – 18 GHz<br>HF 907                    | EMV-110             | <input type="checkbox"/> | Log.per Antenna 0,7 – 9 GHz<br>STLP9149            | EMV-305         |                                         |
| <input type="checkbox"/> | Antennapre.amp. 1 – 18 GHz<br>ERZ-LNA0200-1800-30-2 | EMV-111             | <input type="checkbox"/> | HF- Amplifier 9 kHz-250 MHz<br>BBA150 (low noise)  | EMV-306         |                                         |
| <input type="checkbox"/> | Trilog Antenna 30-3000 MHz<br>VULB9163              | EMV-112             | <input type="checkbox"/> | ISO11451-2 TLS<br>10 kHz – 30 MHz                  | EMV-307         |                                         |
| <input type="checkbox"/> | Monopol 9 kHz – 30 MHz<br>VAMP 9243                 | EMV-113             | <input type="checkbox"/> | Load Dump Generator<br>LD 200N                     | EMV-350         |                                         |
| <input type="checkbox"/> | Antennapre.amp 18 – 40 GHz<br>BBV 9721              | EMV-114             | <input type="checkbox"/> | Ultra Compact Symulator<br>UCS 200N100             | EMV-351         |                                         |
| <input type="checkbox"/> | Hornantenna 200 – 2000 MHz<br>AH-220                | EMV-115             | <input type="checkbox"/> | Automotive Power fail module<br>PFM 200N100.1      | EMV-352         |                                         |
| <input type="checkbox"/> | DC Artificial Network<br>PVDC 8300                  | EMV-150             | <input type="checkbox"/> | Voltage Drop Symulator<br>VDS 200Q100              | EMV-353         |                                         |
| <input type="checkbox"/> | AC Artificial Network<br>NNLK 8121 RC               | EMV-151             | <input type="checkbox"/> | Arb. Generator<br>AutoWave                         | EMV-354         |                                         |
| <input type="checkbox"/> | EMI Receiver<br>ESW44                               | EMV-200/1           | <input type="checkbox"/> | Ultra Compact Symulator<br>UCS 500N7               | EMV-355         |                                         |
| <input type="checkbox"/> | Signalgenerator 9 kHz – 40 GHz<br>N5173B            | EMV-201             | <input type="checkbox"/> | Coupling decoupling network<br>CNI 503B7 / 32 A    | EMV-356         |                                         |
| <input type="checkbox"/> | GPS Frequency normal<br>B-88                        | EMV-202             | <input type="checkbox"/> | Coupling decoupling network<br>CNI 503B7 / 63 A    | EMV-357         |                                         |
| <input type="checkbox"/> | DC Power supply<br>N5745A                           | EMV-203             | <input type="checkbox"/> | Telecom Surge Generator<br>TSurge 7                | EMV-358         |                                         |
| <input type="checkbox"/> | Spektrum Analyzator<br>FSV40                        | EMV-205             | <input type="checkbox"/> | Coupling decoupling network<br>CNI 508N2           | EMV-359         |                                         |
| <input type="checkbox"/> | Thd Multimeter<br>Model 2015                        | EMV-206             | <input type="checkbox"/> | Coupling decoupling network<br>CNV 504N2.2         | EMV-360         |                                         |
| <input type="checkbox"/> | Poweramplifier<br>PAS15000                          | EMV-<br>207/abc     | <input type="checkbox"/> | Immunity generator<br>NSG4060/NSG4060-1            | EMV-361         |                                         |
| <input type="checkbox"/> | Inrush Current Source                               | EMV-<br>208/abc     | <input type="checkbox"/> | Coupling network<br>CDND M316-2                    | EMV-362         |                                         |
| <input type="checkbox"/> | Arb.-generator<br>Sycore                            | EMV-209             | <input type="checkbox"/> | Coupling network<br>CT419-5                        | EMV-363         |                                         |
| <input type="checkbox"/> | Harmonics/Flicker analyzer<br>ARS 16/3              | EMV-210             | <input type="checkbox"/> | ESD Generator<br>NSG 437                           | EMV-364         |                                         |
| <input type="checkbox"/> | Power Supply<br>Regatron AC                         | EMV-214             | <input type="checkbox"/> | Pulse Limiter<br>VTSD 9561-F BNC                   | EMV-405         |                                         |
| <input type="checkbox"/> | Power Supply<br>Regatron DC                         | EMV-215             | <input type="checkbox"/> | Transient emission<br>BSM200N40+BS200N100          | EMV-<br>450+451 |                                         |
| <input type="checkbox"/> | Harmonics/Flicker analyser<br>Zimmer                | EMV-216             | <input type="checkbox"/> | Cap. Coupling Clamp<br>HFK                         | EMV-455         |                                         |
| <input type="checkbox"/> | Flicker Impedanz<br>Newtons4th 753                  | EMV-218             | <input type="checkbox"/> | Mag. Field System<br>MS100N+MC26100+MC2630         | EMV-<br>456-458 |                                         |
| <input type="checkbox"/> | Comemso                                             | EMV-219             |                          |                                                    |                 |                                         |

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### Test equipment used

|                          |                                      |                 |
|--------------------------|--------------------------------------|-----------------|
| <input type="checkbox"/> | Coupling network<br>CDN M2-100A      | EMV-459         |
| <input type="checkbox"/> | Coupling network<br>CDN M3-32A       | EMV-460         |
| <input type="checkbox"/> | Coupling network<br>CDN M5-100A      | EMV-461         |
| <input type="checkbox"/> | Current Clamp<br>CIP 9136A           | EMV-462         |
| <input type="checkbox"/> | DC Artificial Network<br>HV-AN 150   | EMV-<br>464+465 |
| <input type="checkbox"/> | Coupling Clamp<br>EM 101             | EMV-466         |
| <input type="checkbox"/> | Decoupling Clamp<br>FTC 101          | EMV-467         |
| <input type="checkbox"/> | Power attenuator<br>10 dB / 250 Watt | EMV-469/2       |

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