

**4.5.) Frequency tolerance (voltage variation)****§ 25.202d and SRSP-101 Clause 4.3**

LIMIT: 0,001%

SUBCLAUSE 25.202(d)

| Tuned Frequency | Modem | Symbol Rate | AC power                  |           |           | Limit | Result |
|-----------------|-------|-------------|---------------------------|-----------|-----------|-------|--------|
|                 |       |             | 97,75 V                   | 115 V     | 132,25 V  |       |        |
| GHz             |       | Msym/s      | peak frequency error in % |           |           | %     |        |
| 29,995          | iQ800 | Unmodulated | -0,000177                 | -0,000177 | -0,000177 | 0,001 | PASS   |
| 29,950          | LSDR  | 5           | 0,000037                  | 0,000027  | -0,000036 | 0,001 | PASS   |

| Tuned Frequency | Modem | Symbol Rate | DC power                  |           |           | Limit | Result |
|-----------------|-------|-------------|---------------------------|-----------|-----------|-------|--------|
|                 |       |             | 23,8 V                    | 28 V      | 32,2 V    |       |        |
| GHz             |       | Msym/s      | peak frequency error in % |           |           | %     |        |
| 29,995          | iQ800 | Unmodulated | -0,000178                 | -0,000177 | -0,000177 | 0,001 | PASS   |
| 29,950          | LSDR  | 5           | 0,000000                  | 0,000001  | 0,000030  | 0,001 | PASS   |

Test Equipment used: EMV-205; NT-216

Remarks: Preliminary measurements showed, that the relative frequency error does neither rely on the operating frequency, nor on the modulation scheme or symbol rate. Therefore, measurements during temperature and voltage variations were performed only at the highest frequency with lowest available symbol rate, or even unmodulated in the case of iQ800.

**4.6.) Frequency tolerance (temperature variation)****§ 25.202d and SRSP-101 Clause 4.3**

LIMIT: 0,001%

SUBCLAUSE 25.202(d)

iQ 800 - Tuned frequency = 29,995 GHz, unmodulated 115V AC powered

| Temperature | peak frequency error | Limit | Result |
|-------------|----------------------|-------|--------|
| °C          | %                    | %     |        |
| -30         | -0,000112            | 0,001 | PASS   |
| -20         | -0,000128            | 0,001 | PASS   |
| -10         | -0,000141            | 0,001 | PASS   |
| 0           | -0,000157            | 0,001 | PASS   |
| 10          | -0,000170            | 0,001 | PASS   |
| 20          | -0,000175            | 0,001 | PASS   |
| 30          | -0,000181            | 0,001 | PASS   |
| 40          | -0,000183            | 0,001 | PASS   |
| 50          | -0,000181            | 0,001 | PASS   |

iQ 800 - Tuned frequency = 29,995 GHz, unmodulated 28 DC powered

| Temperature | peak frequency error | Limit | Result |
|-------------|----------------------|-------|--------|
| °C          | %                    | %     |        |
| -30         | -0,000109            | 0,001 | PASS   |
| -20         | -0,000127            | 0,001 | PASS   |
| -10         | -0,000143            | 0,001 | PASS   |
| 0           | -0,000152            | 0,001 | PASS   |
| 10          | -0,000167            | 0,001 | PASS   |
| 20          | -0,000178            | 0,001 | PASS   |
| 30          | -0,000181            | 0,001 | PASS   |
| 40          | -0,000183            | 0,001 | PASS   |
| 50          | -0,000181            | 0,001 | PASS   |

Test Equipment used: M-1200; EMV-205; NT-216

**Frequency tolerance (temperature variation)****§ 25.202d and SRSP-101 Clause 4.3**

LIMIT: 0,001%

SUBCLAUSE 25.202(d)

LSDR - Tuned frequency = 29,995 GHz, 5 MSym/s 115V AC powered

| Temperature | peak frequency error | Limit | Result |
|-------------|----------------------|-------|--------|
| °C          | %                    | %     |        |
| -30         | -0,000029            | 0,001 | PASS   |
| -20         | -0,000002            | 0,001 | PASS   |
| -10         | -0,000099            | 0,001 | PASS   |
| 0           | 0,000015             | 0,001 | PASS   |
| 10          | -0,000044            | 0,001 | PASS   |
| 20          | -0,000034            | 0,001 | PASS   |
| 30          | 0,000049             | 0,001 | PASS   |
| 40          | -0,000135            | 0,001 | PASS   |
| 50          | 0,000035             | 0,001 | PASS   |

LSDR - Tuned frequency = 29,995 GHz, 5 MSym/s 28 DC powered

| Temperature | peak frequency error | Limit | Result |
|-------------|----------------------|-------|--------|
| °C          | %                    | %     |        |
| -30         | -0,000121            | 0,001 | PASS   |
| -20         | -0,000003            | 0,001 | PASS   |
| -10         | -0,000114            | 0,001 | PASS   |
| 0           | 0,000011             | 0,001 | PASS   |
| 10          | -0,000031            | 0,001 | PASS   |
| 20          | -0,000057            | 0,001 | PASS   |
| 30          | 0,000065             | 0,001 | PASS   |
| 40          | -0,000130            | 0,001 | PASS   |
| 50          | 0,000042             | 0,001 | PASS   |

Test Equipment used: M-1200; EMV-205; NT-216

**4.7.) Off Axis EIRP Emissions density within the band****§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

iQ800 LHCP

| Tuned Frequency<br>GHz | Modulation | Symbol Rate<br>Msym/s | Recorded Measurement<br>dBW/MHz |
|------------------------|------------|-----------------------|---------------------------------|
| 29,005                 | BPSK       | 0,54                  | 33,6                            |
| 29,005                 | QPSK       | 0,54                  | 33,5                            |
| 29,005                 | 8PSK       | 0,54                  | 34,1                            |
| 29,505                 | BPSK       | 0,54                  | 33,8                            |
| 29,505                 | QPSK       | 0,54                  | 33,6                            |
| 29,505                 | 8PSK       | 0,54                  | 33,9                            |
| 29,995                 | BPSK       | 0,54                  | 32,8                            |
| 29,995                 | QPSK       | 0,54                  | 32,9                            |
| 29,995                 | 8PSK       | 0,54                  | 31,1                            |
| 29,005                 | BPSK       | 7,5                   | 34,4                            |
| 29,005                 | QPSK       | 7,5                   | 34,3                            |
| 29,005                 | 8PSK       | 7,5                   | 33,9                            |
| 29,505                 | BPSK       | 7,5                   | 35,1                            |
| 29,505                 | QPSK       | 7,5                   | 34,8                            |
| 29,505                 | 8PSK       | 7,5                   | 34,2                            |
| 29,995                 | BPSK       | 7,5                   | 34,3                            |
| 29,995                 | QPSK       | 7,5                   | 35,0                            |
| 29,995                 | 8PSK       | 7,5                   | 33,6                            |

Measurements were performed on-axis and calculations performed for the off-axis values, by using the antenna pattern. The worst case values for which those calculations were performed, are highlighted.

**Off Axis EIRP Emissions density within the band****§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

iQ800 RHCP

| Tuned Frequency | Modulation | Symbol Rate | Recorded Measurement |
|-----------------|------------|-------------|----------------------|
| GHz             |            | Msym/s      | dBW/MHz              |
| 29,005          | BPSK       | 0,54        | 33,0                 |
| 29,005          | QPSK       | 0,54        | 33,0                 |
| 29,005          | 8PSK       | 0,54        | 32,6                 |
| 29,505          | BPSK       | 0,54        | 32,1                 |
| 29,505          | QPSK       | 0,54        | 31,9                 |
| 29,505          | 8PSK       | 0,54        | 32,7                 |
| 29,995          | BPSK       | 0,54        | 29,7                 |
| 29,995          | QPSK       | 0,54        | 31,6                 |
| 29,995          | 8PSK       | 0,54        | 31,1                 |
| 29,005          | BPSK       | 7,5         | 34,5                 |
| 29,005          | QPSK       | 7,5         | 33,7                 |
| 29,005          | 8PSK       | 7,5         | 33,4                 |
| 29,505          | BPSK       | 7,5         | 34,4                 |
| 29,505          | QPSK       | 7,5         | 34,4                 |
| 29,505          | 8PSK       | 7,5         | 34,3                 |
| 29,995          | BPSK       | 7,5         | 33,4                 |
| 29,995          | QPSK       | 7,5         | 33,0                 |
| 29,995          | 8PSK       | 7,5         | 33,1                 |

Measurements were performed on-axis and calculations performed for the off-axis values, by using the antenna pattern. The worst case values for which those calculations were performed, are highlighted.

**Off Axis EIRP Emissions density within the band****§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

LSDR LHCP

| Tuned Frequency<br>GHz | Modulation | Symbol Rate<br>Msym/s | Recorded Measurement<br>dBW/MHz |
|------------------------|------------|-----------------------|---------------------------------|
| 27,55                  | BPSK       | 5                     | 32,9                            |
| 27,55                  | QPSK       | 5                     | 33,0                            |
| 27,55                  | 8PSK       | 5                     | 33,8                            |
| 28,75                  | BPSK       | 5                     | 34,6                            |
| 28,75                  | QPSK       | 5                     | 34,4                            |
| 28,75                  | 8PSK       | 5                     | 34,6                            |
| 29,95                  | BPSK       | 5                     | 33,9                            |
| 29,95                  | QPSK       | 5                     | 34,2                            |
| 29,95                  | 8PSK       | 5                     | 34,0                            |
| 27,55                  | BPSK       | 80                    | 29,7                            |
| 27,55                  | QPSK       | 80                    | 29,8                            |
| 27,55                  | 8PSK       | 80                    | 30,1                            |
| 28,75                  | BPSK       | 80                    | 30,1                            |
| 28,75                  | QPSK       | 80                    | 30,6                            |
| 28,75                  | 8PSK       | 80                    | 30,3                            |
| 29,95                  | BPSK       | 80                    | 29,7                            |
| 29,95                  | QPSK       | 80                    | 30,3                            |
| 29,95                  | 8PSK       | 80                    | 30,3                            |

Measurements were performed on-axis and calculations performed for the off-axis values, by using the antenna pattern. The worst case values for which those calculations were performed, are highlighted.

**Off Axis EIRP Emissions density within the band****§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

LSDR RHCP

| Tuned Frequency<br>GHz | Modulation | Symbol Rate<br>Msym/s | Recorded Measurement<br>dBW/MHz |
|------------------------|------------|-----------------------|---------------------------------|
| 27,55                  | BPSK       | 5                     | <b>33,2</b>                     |
| 27,55                  | QPSK       | 5                     | 33,0                            |
| 27,55                  | 8PSK       | 5                     | 32,8                            |
| 28,75                  | BPSK       | 5                     | 33,7                            |
| 28,75                  | QPSK       | 5                     | <b>33,8</b>                     |
| 28,75                  | 8PSK       | 5                     | 33,5                            |
| 29,95                  | BPSK       | 5                     | 33,1                            |
| 29,95                  | QPSK       | 5                     | 32,5                            |
| 29,95                  | 8PSK       | 5                     | <b>33,1</b>                     |
| 27,55                  | BPSK       | 80                    | 28,4                            |
| 27,55                  | QPSK       | 80                    | 29,0                            |
| 27,55                  | 8PSK       | 80                    | 29,2                            |
| 28,75                  | BPSK       | 80                    | 29,0                            |
| 28,75                  | QPSK       | 80                    | 29,3                            |
| 28,75                  | 8PSK       | 80                    | 29,3                            |
| 29,95                  | BPSK       | 80                    | 28,5                            |
| 29,95                  | QPSK       | 80                    | 28,4                            |
| 29,95                  | 8PSK       | 80                    | 28,6                            |

Measurements were performed on-axis and calculations performed for the off-axis values, by using the antenna pattern. The worst case values for which those calculations were performed, are highlighted.

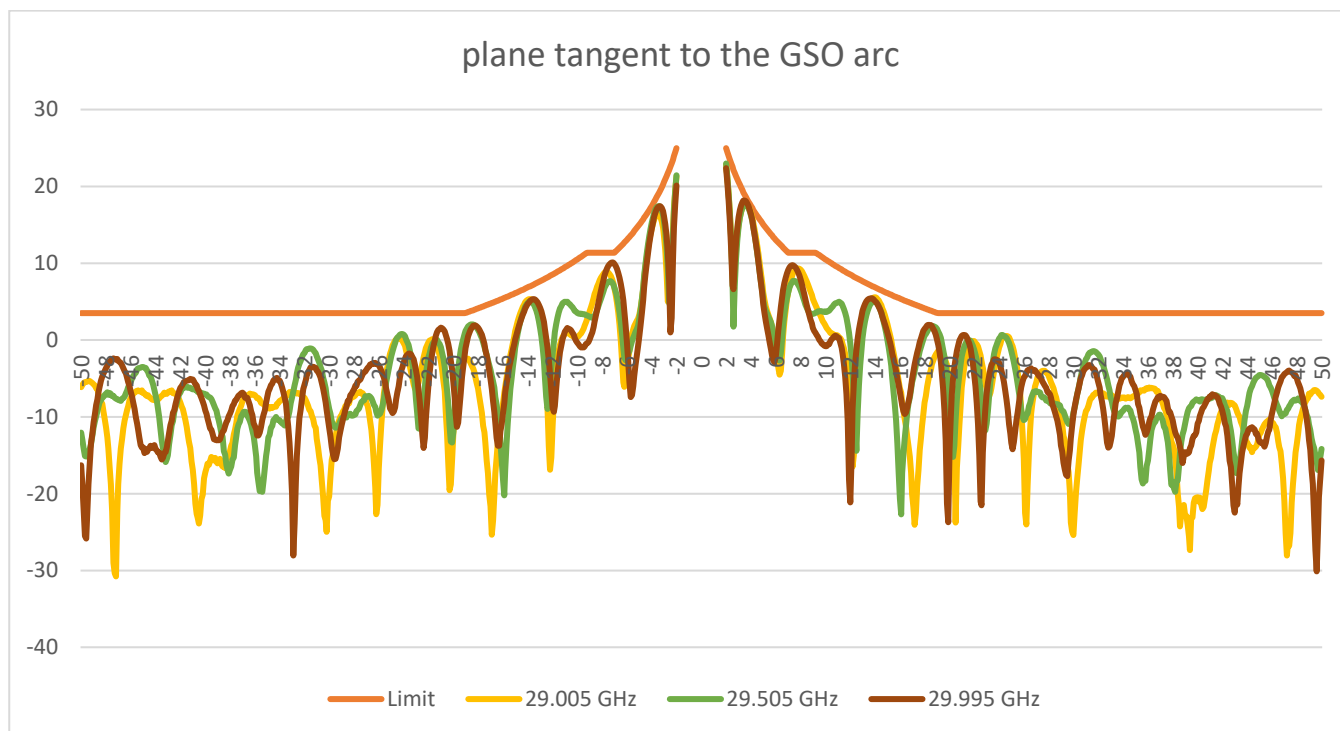
## Off Axis EIRP Emissions density within the band

§ 25.218 and SRSP-101 Clause 4.5

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

iQ800 LHCP



Limit § 25.218:

Minimum margin to Limit: 0,50 dB

(1) For co-polarized transmissions in the plane tangent to the GSO arc:

| 32.5-25log( $\theta$ ) | dBW/MHz | for | $2.0^\circ \leq \theta \leq 7^\circ$ .    |
|------------------------|---------|-----|-------------------------------------------|
| 11.5                   | dBW/MHz | for | $7^\circ \leq \theta \leq 9.2^\circ$ .    |
| 35.5-25log( $\theta$ ) | dBW/MHz | for | $9.2^\circ \leq \theta \leq 19.1^\circ$ . |
| 3.5                    | dBW/MHz | for | $19.1^\circ < \theta \leq 180^\circ$ .    |

Limit SRSP-101 Clause 4.5:

i. For co-polarized signals, the e.i.r.p. density emitted from an ESIM in any direction within  $\pm 3^\circ$  of the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density     | Off-axis angle, $\phi$                 |
|------------------------------|----------------------------------------|
| 32.5 - 25 log $\phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$          |
| 11.37 dBW/MHz                | $7^\circ \leq \phi < 9.23^\circ$       |
| 35.5 - 25 log $\phi$ dBW/MHz | $9.23^\circ \leq \phi < 19.05^\circ$   |
| 3.5 dBW/MHz                  | $19.05^\circ \leq \phi \leq 180^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

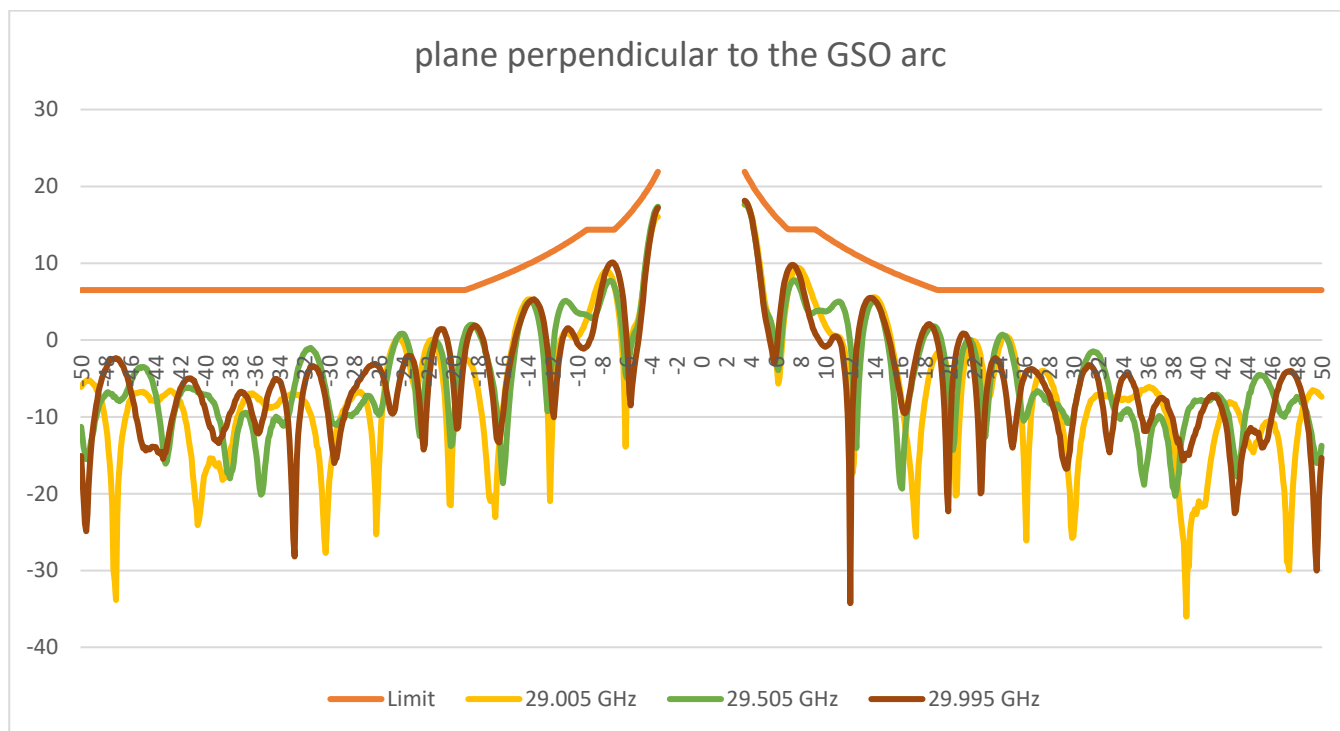
Grundvorlage / Basic Template: FM-TAGMBH-KBS-0100b Grundvorlage Prüfbericht akkreditiert-DE-EN, Rev. 04

**Off Axis EIRP Emissions density within the band****§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

iQ800 LHCP



Limit § 25.218:

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

|                        |         |     |                                        |
|------------------------|---------|-----|----------------------------------------|
| 35.5-25log( $\theta$ ) | dBW/MHz | for | $3.5^\circ \leq \theta \leq 7^\circ$ . |
| 14.4                   | dBW/MHz | for | $7^\circ < \theta \leq 9.2^\circ$ .    |
| 38.5-25log( $\theta$ ) | dBW/MHz | for | $9.2^\circ < \theta \leq 19.1^\circ$ . |
| 6.5                    | dBW/MHz | for | $19.1^\circ < \theta \leq 180^\circ$ . |

Limit SRSP-101 Clause 4.5:

ii. For co-polarized signals, the e.i.r.p. density emitted from an ESIM for all directions other than within  $\pm 3^\circ$  of the GSO arc shall not exceed the following values:

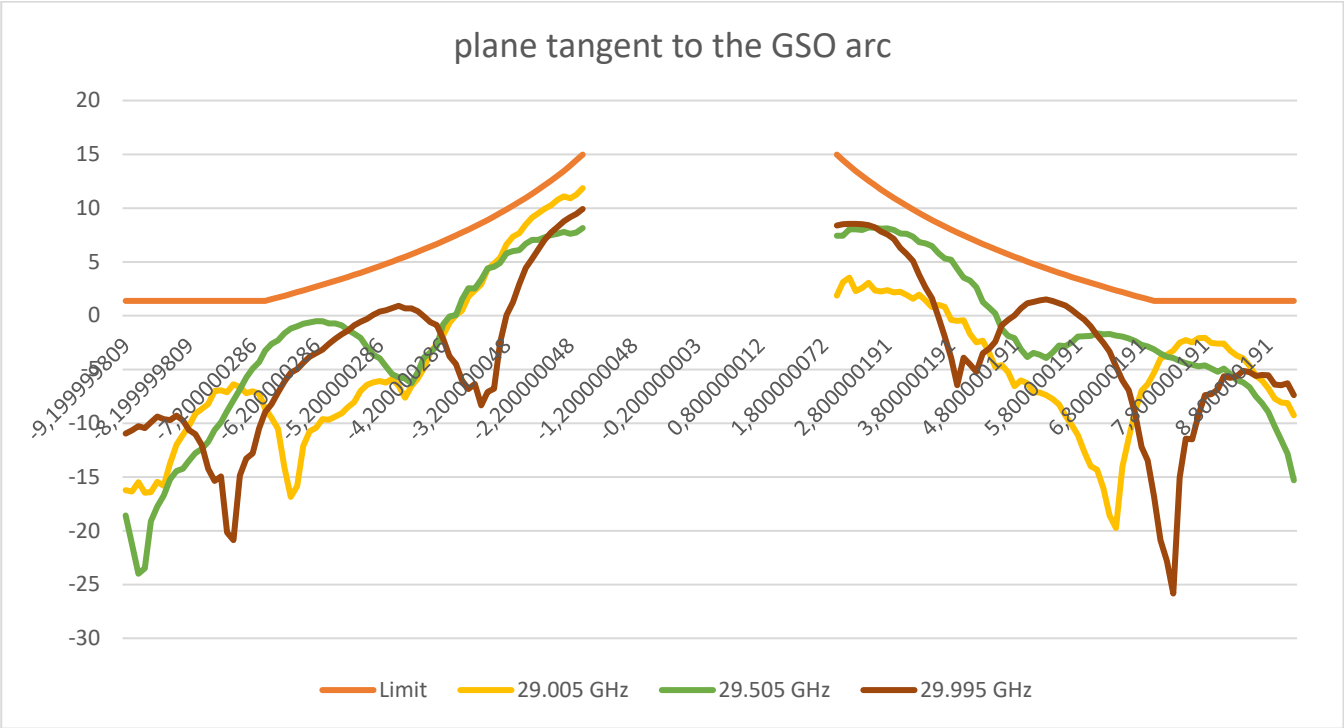
| Maximum e.i.r.p. density     | Off-axis angle, $\phi$                 |
|------------------------------|----------------------------------------|
| 35.5 - 25 log $\phi$ dBW/MHz | $3.5^\circ \leq \phi < 7^\circ$        |
| 14.37 dBW/MHz                | $7^\circ \leq \phi < 9.23^\circ$       |
| 38.5 - 25 log $\phi$ dBW/MHz | $9.23^\circ \leq \phi < 19.05^\circ$   |
| 6.5 dBW/MHz                  | $19.05^\circ \leq \phi \leq 180^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

**Off Axis EIRP Emissions density within the band**

**§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement  
Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205  
iQ800 LHCP



Limit § 25.218:

|                                                                                                                          |         |     |                                       |
|--------------------------------------------------------------------------------------------------------------------------|---------|-----|---------------------------------------|
| (4) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc: |         |     |                                       |
| 22.5-25log( $\theta$ )                                                                                                   | dBW/MHz | for | $2.0^\circ < \theta \leq 7.0^\circ$ . |

Limit SRSP-101 Clause 4.5:

iii. For cross-polarized signals, the e.i.r.p. density emitted from an ESIM in all directions relative to the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density      | Off-axis angle, $\phi$              |
|-------------------------------|-------------------------------------|
| $22.5 - 25 \log \phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$       |
| 1.37 dBW/MHz                  | $7^\circ \leq \phi \leq 9.23^\circ$ |

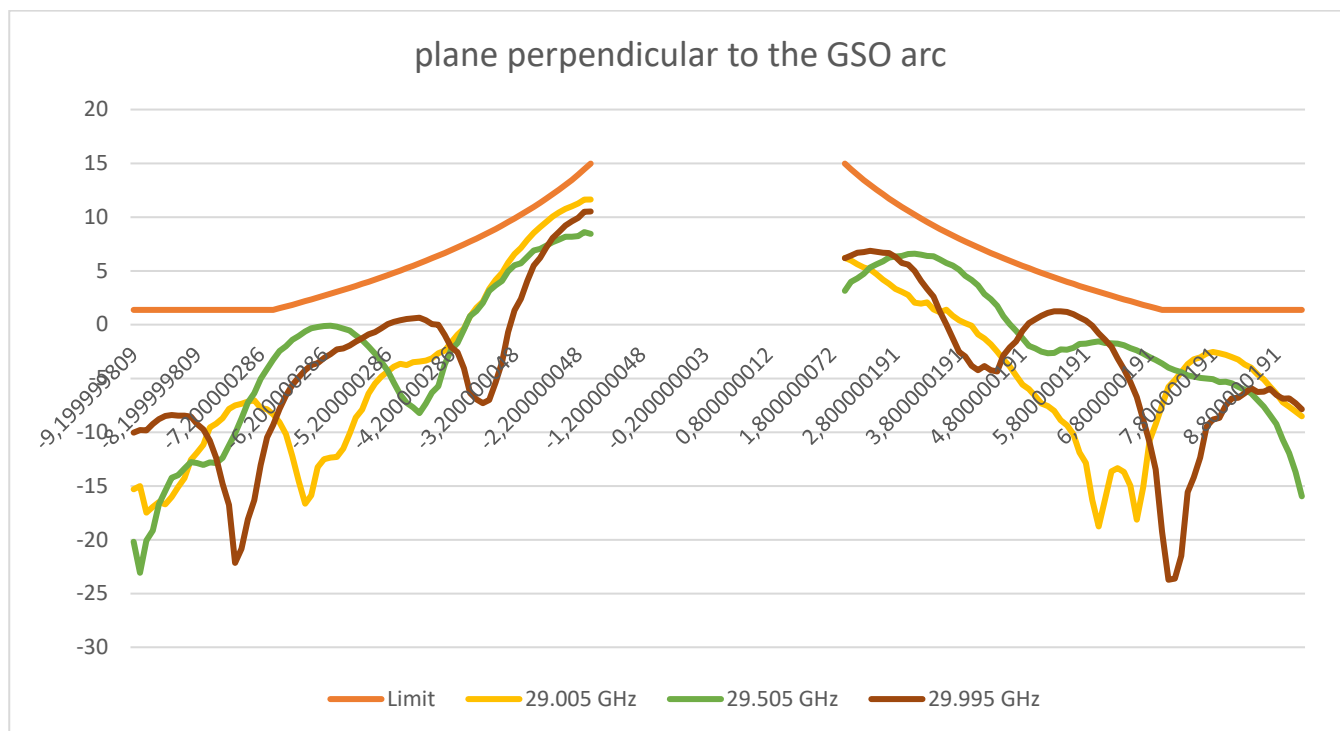
Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

**Off Axis EIRP Emissions density within the band****§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

iQ800 LHCP



Limit § 25.218:

- (4) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc:

22.5-25log( $\theta$ )

dBW/MHz

for

 $2.0^\circ < \theta \leq 7.0^\circ$ 

Limit SRSP-101 Clause 4.5:

iii. For cross-polarized signals, the e.i.r.p. density emitted from an ESIM in all directions relative to the GSO arc shall not exceed the following values:

**Maximum e.i.r.p. density****Off-axis angle,  $\phi$** 22.5 - 25 log  $\phi$  dBW/MHz $2^\circ \leq \phi < 7^\circ$ 

1.37 dBW/MHz

 $7^\circ \leq \phi \leq 9.23^\circ$ 

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

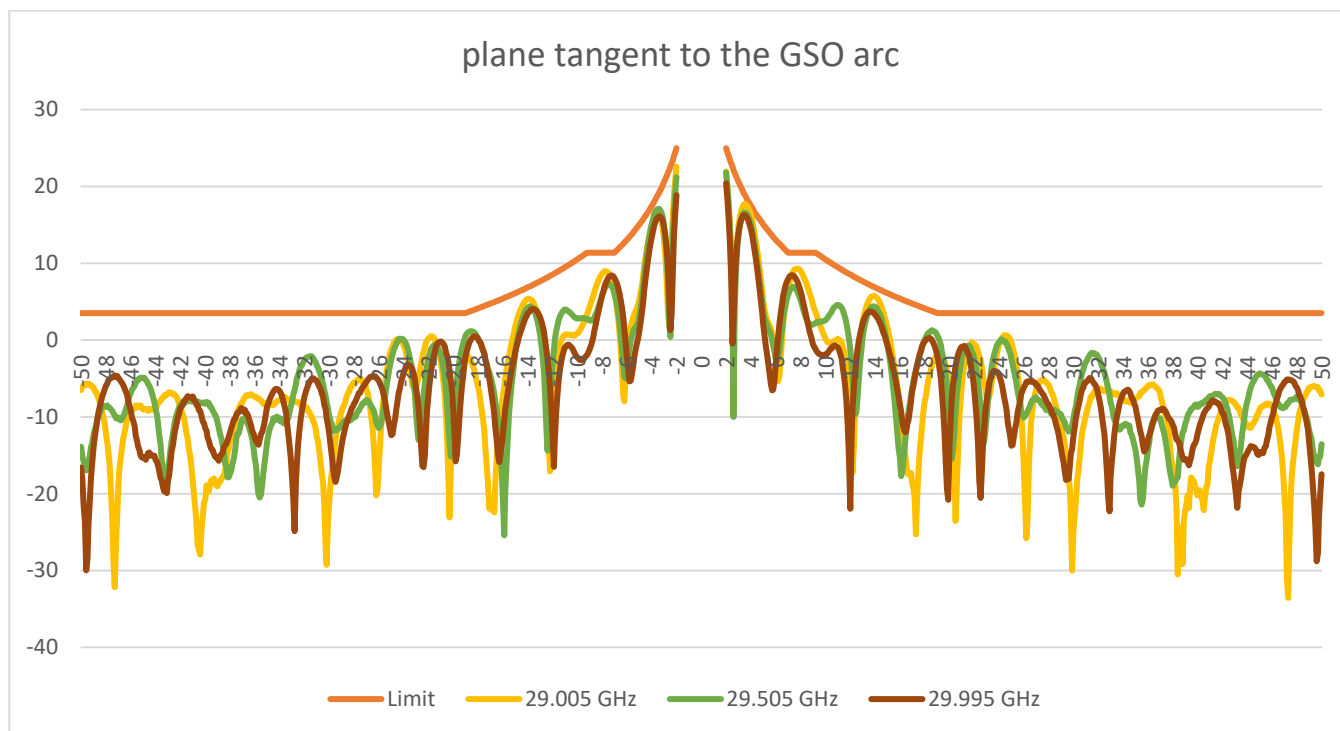
## Off Axis EIRP Emissions density within the band

§ 25.218 and SRSP-101 Clause 4.5

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

iQ800 RHCP



Limit § 25.218:

Minimum margin to Limit: 0,80 dB

(1) For co-polarized transmissions in the plane tangent to the GSO arc:

| 32.5-25log( $\theta$ ) | dBW/MHz | for | $2.0^\circ \leq \theta \leq 7^\circ$ .    |
|------------------------|---------|-----|-------------------------------------------|
| 11.5                   | dBW/MHz | for | $7^\circ \leq \theta \leq 9.2^\circ$ .    |
| 35.5-25log( $\theta$ ) | dBW/MHz | for | $9.2^\circ \leq \theta \leq 19.1^\circ$ . |
| 3.5                    | dBW/MHz | for | $19.1^\circ < \theta \leq 180^\circ$ .    |

Limit SRSP-101 Clause 4.5:

i. For co-polarized signals, the e.i.r.p. density emitted from an ESIM in any direction within  $\pm 3^\circ$  of the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density     | Off-axis angle, $\phi$                 |
|------------------------------|----------------------------------------|
| 32.5 - 25 log $\phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$          |
| 11.37 dBW/MHz                | $7^\circ \leq \phi < 9.23^\circ$       |
| 35.5 - 25 log $\phi$ dBW/MHz | $9.23^\circ \leq \phi < 19.05^\circ$   |
| 3.5 dBW/MHz                  | $19.05^\circ \leq \phi \leq 180^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

Grundvorlage / Basic Template: FM-TAGMBH-KBS-0100b Grundvorlage Prüfbericht akkreditiert-DE-EN, Rev. 04

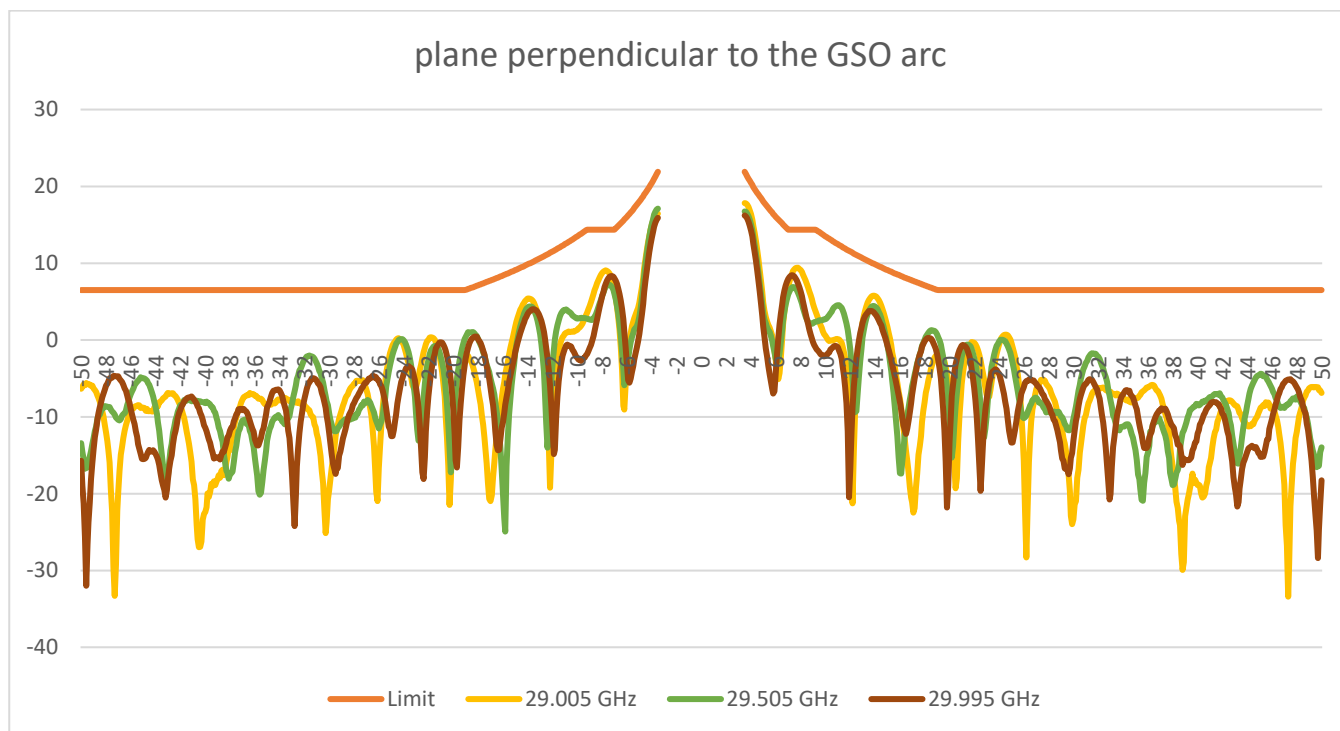
## Off Axis EIRP Emissions density within the band

## § 25.218 and SRSP-101 Clause 4.5

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

iQ800 RHCP



Limit § 25.218:

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

|                        |         |     |                                        |
|------------------------|---------|-----|----------------------------------------|
| 35.5-25log( $\theta$ ) | dBW/MHz | for | $3.5^\circ \leq \theta \leq 7^\circ$ . |
| 14.4                   | dBW/MHz | for | $7^\circ < \theta \leq 9.2^\circ$ .    |
| 38.5-25log( $\theta$ ) | dBW/MHz | for | $9.2^\circ < \theta \leq 19.1^\circ$ . |
| 6.5                    | dBW/MHz | for | $19.1^\circ < \theta \leq 180^\circ$ . |

Limit SRSP-101 Clause 4.5:

ii. For co-polarized signals, the e.i.r.p. density emitted from an ESIM for all directions other than within  $\pm 3^\circ$  of the GSO arc shall not exceed the following values:

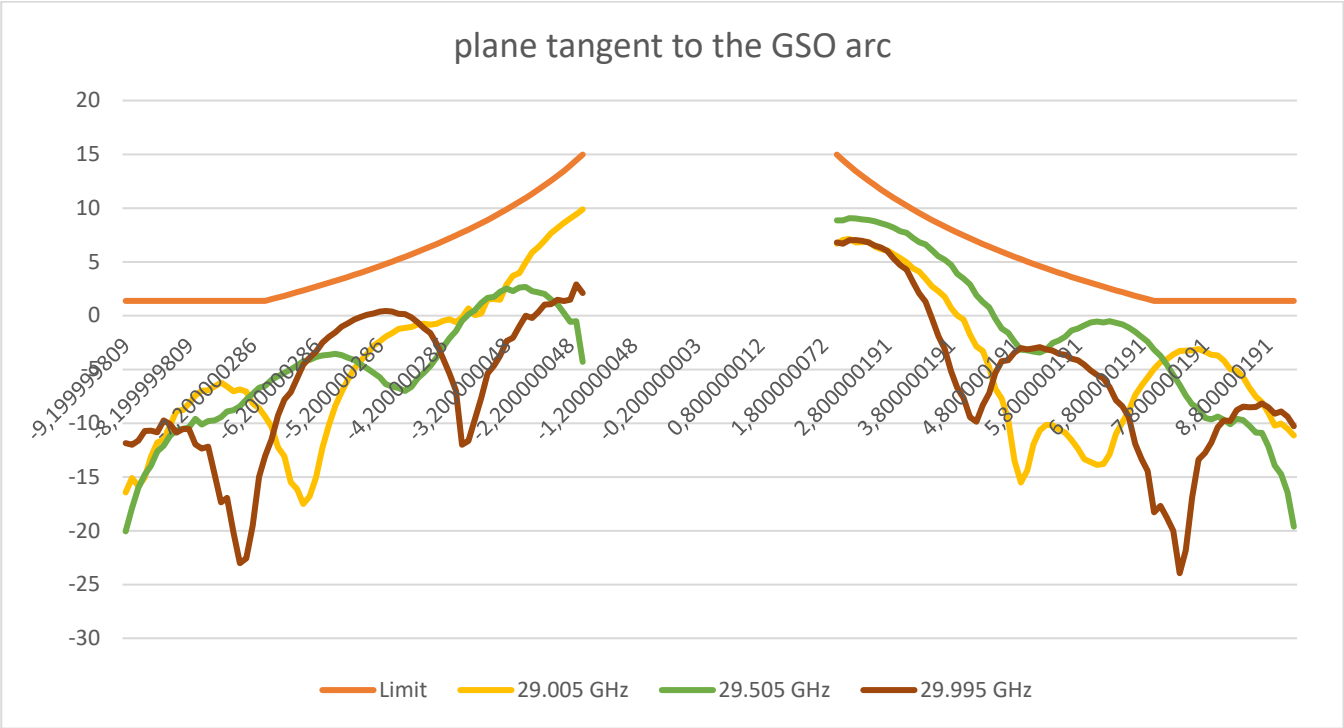
| Maximum e.i.r.p. density     | Off-axis angle, $\phi$                 |
|------------------------------|----------------------------------------|
| 35.5 - 25 log $\phi$ dBW/MHz | $3.5^\circ \leq \phi < 7^\circ$        |
| 14.37 dBW/MHz                | $7^\circ \leq \phi < 9.23^\circ$       |
| 38.5 - 25 log $\phi$ dBW/MHz | $9.23^\circ \leq \phi < 19.05^\circ$   |
| 6.5 dBW/MHz                  | $19.05^\circ \leq \phi \leq 180^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

Off Axis EIRP Emissions density within the band

§ 25.218 and SRSP-101 Clause 4.5

Radiated Measurement  
Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205  
iQ800 RHCP



Limit § 25.218:

|                                                                                                                          |         |     |                                     |
|--------------------------------------------------------------------------------------------------------------------------|---------|-----|-------------------------------------|
| (4) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc: |         |     |                                     |
| 22.5-25log( $\theta$ )                                                                                                   | dBW/MHz | for | $2.0^\circ < \theta \leq 7.0^\circ$ |

Limit SRSP-101 Clause 4.5:

iii. For cross-polarized signals, the e.i.r.p. density emitted from an ESIM in all directions relative to the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density      | Off-axis angle, $\phi$              |
|-------------------------------|-------------------------------------|
| $22.5 - 25 \log \phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$       |
| 1.37 dBW/MHz                  | $7^\circ \leq \phi \leq 9.23^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

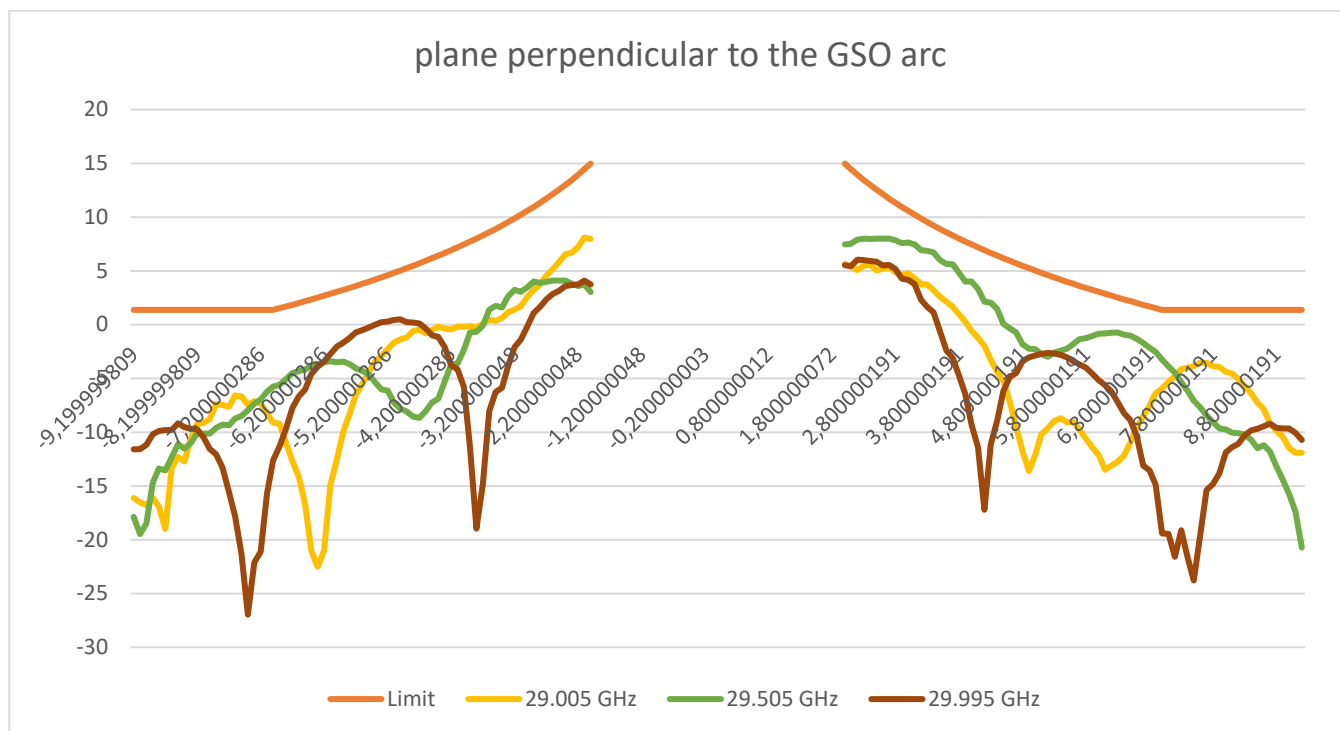
## Off Axis EIRP Emissions density within the band

## § 25.218 and SRSP-101 Clause 4.5

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

iQ800 RHCP



Limit § 25.218:

- (4) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc:

22.5-25log( $\theta$ )

dBW/MHz

for

 $2.0^\circ < \theta \leq 7.0^\circ$ 

Limit SRSP-101 Clause 4.5:

iii. For cross-polarized signals, the e.i.r.p. density emitted from an ESIM in all directions relative to the GSO arc shall not exceed the following values:

Maximum e.i.r.p. density

Off-axis angle,  $\phi$ 22.5 - 25 log  $\phi$  dBW/MHz $2^\circ \leq \phi < 7^\circ$ 

1.37 dBW/MHz

 $7^\circ \leq \phi \leq 9.23^\circ$ 

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

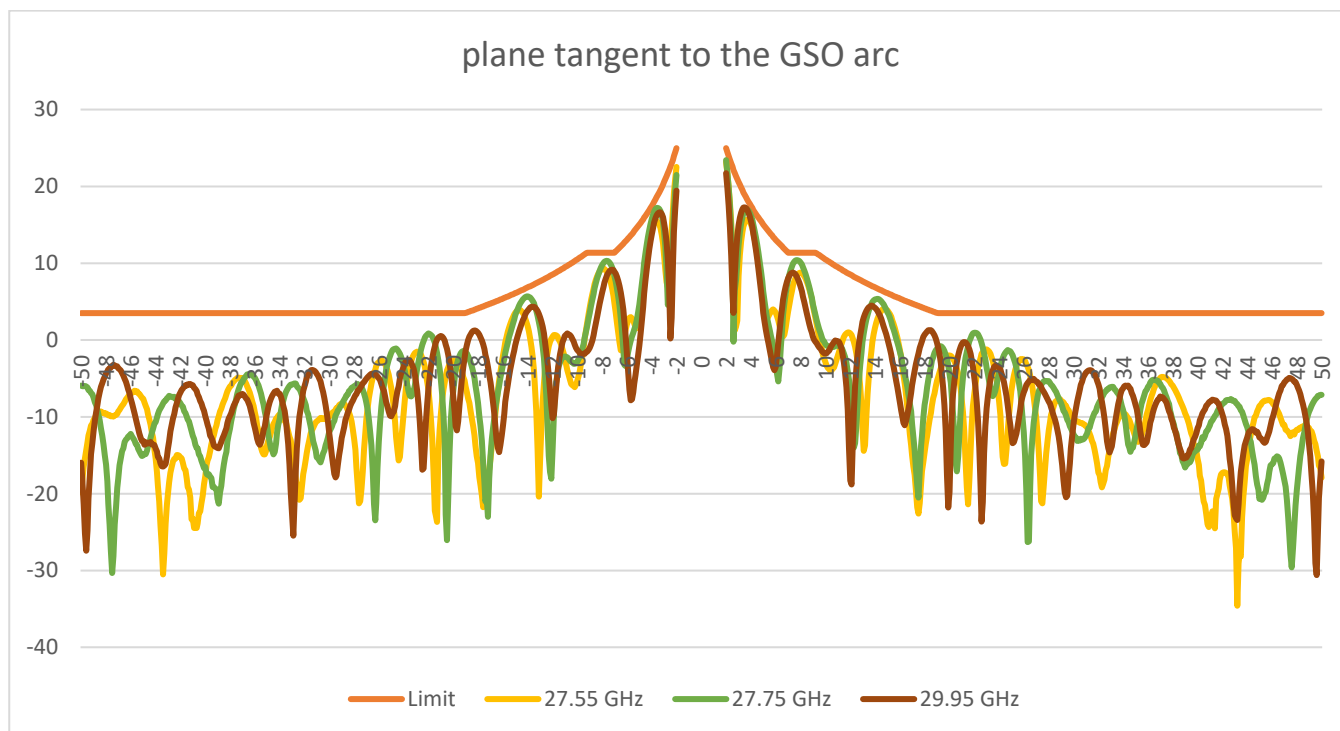
## Off Axis EIRP Emissions density within the band

§ 25.218 and SRSP-101 Clause 4.5

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

LSDR LHCP



Limit § 25.218:

Minimum margin to Limit: 0,99 dB

(1) For co-polarized transmissions in the plane tangent to the GSO arc:

|                        |         |     |                                           |
|------------------------|---------|-----|-------------------------------------------|
| 32.5-25log( $\theta$ ) | dBW/MHz | for | $2.0^\circ \leq \theta \leq 7^\circ$ .    |
| 11.5                   | dBW/MHz | for | $7^\circ \leq \theta \leq 9.2^\circ$ .    |
| 35.5-25log( $\theta$ ) | dBW/MHz | for | $9.2^\circ \leq \theta \leq 19.1^\circ$ . |
| 3.5                    | dBW/MHz | for | $19.1^\circ < \theta \leq 180^\circ$ .    |

Limit SRSP-101 Clause 4.5:

i. For co-polarized signals, the e.i.r.p. density emitted from an ESIM in any direction within  $\pm 3^\circ$  of the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density      | Off-axis angle, $\phi$                 |
|-------------------------------|----------------------------------------|
| $32.5 - 25 \log \phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$          |
| 11.37 dBW/MHz                 | $7^\circ \leq \phi < 9.23^\circ$       |
| $35.5 - 25 \log \phi$ dBW/MHz | $9.23^\circ \leq \phi < 19.05^\circ$   |
| 3.5 dBW/MHz                   | $19.05^\circ \leq \phi \leq 180^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

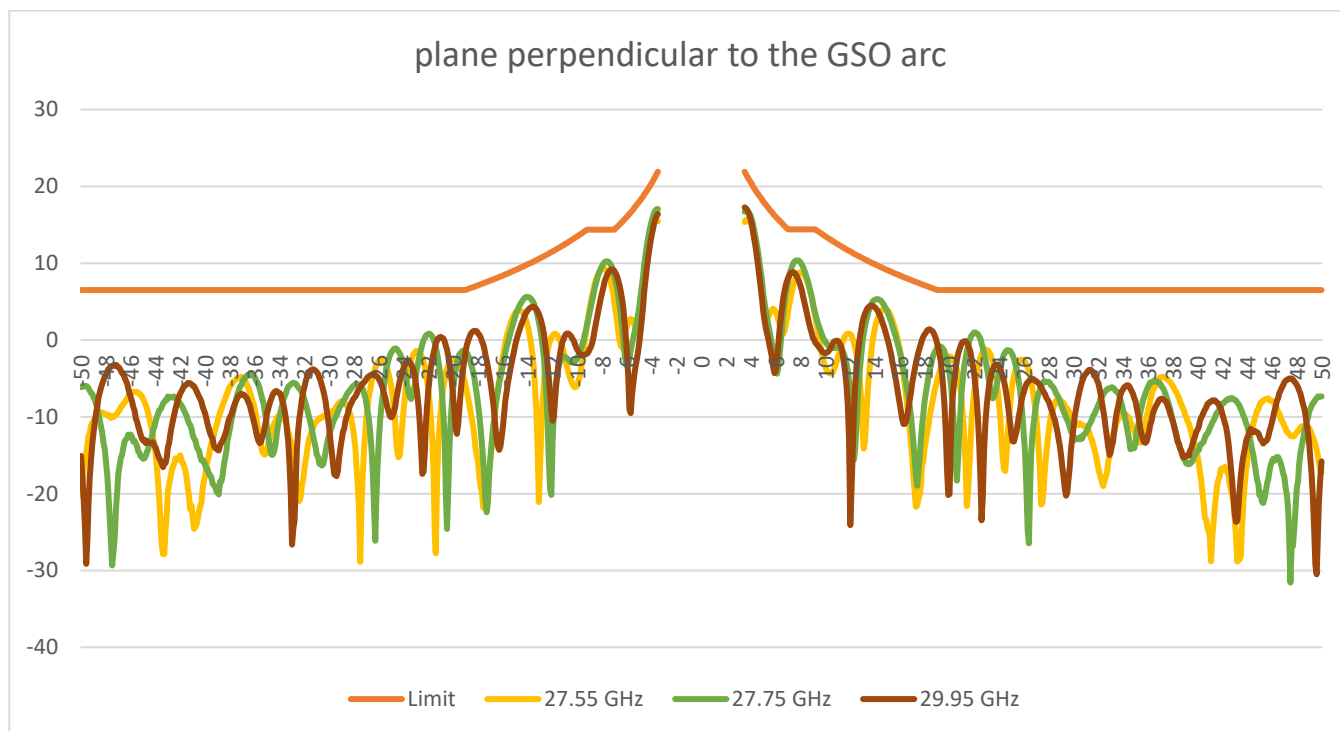
Grundvorlage / Basic Template: FM-TAGMBH-KBS-0100b Grundvorlage Prüfbericht akkreditiert-DE-EN, Rev. 04

**Off Axis EIRP Emissions density within the band****§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

LSDR LHCP



Limit § 25.218:

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

|                        |         |     |                                        |
|------------------------|---------|-----|----------------------------------------|
| 35.5-25log( $\theta$ ) | dBW/MHz | for | $3.5^\circ \leq \theta \leq 7^\circ$ . |
| 14.4                   | dBW/MHz | for | $7^\circ < \theta \leq 9.2^\circ$ .    |
| 38.5-25log( $\theta$ ) | dBW/MHz | for | $9.2^\circ < \theta \leq 19.1^\circ$ . |
| 6.5                    | dBW/MHz | for | $19.1^\circ < \theta \leq 180^\circ$ . |

Limit SRSP-101 Clause 4.5:

ii. For co-polarized signals, the e.i.r.p. density emitted from an ESIM for all directions other than within  $\pm 3^\circ$  of the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density     | Off-axis angle, $\phi$                 |
|------------------------------|----------------------------------------|
| 35.5 - 25 log $\phi$ dBW/MHz | $3.5^\circ \leq \phi < 7^\circ$        |
| 14.37 dBW/MHz                | $7^\circ \leq \phi < 9.23^\circ$       |
| 38.5 - 25 log $\phi$ dBW/MHz | $9.23^\circ \leq \phi < 19.05^\circ$   |
| 6.5 dBW/MHz                  | $19.05^\circ \leq \phi \leq 180^\circ$ |

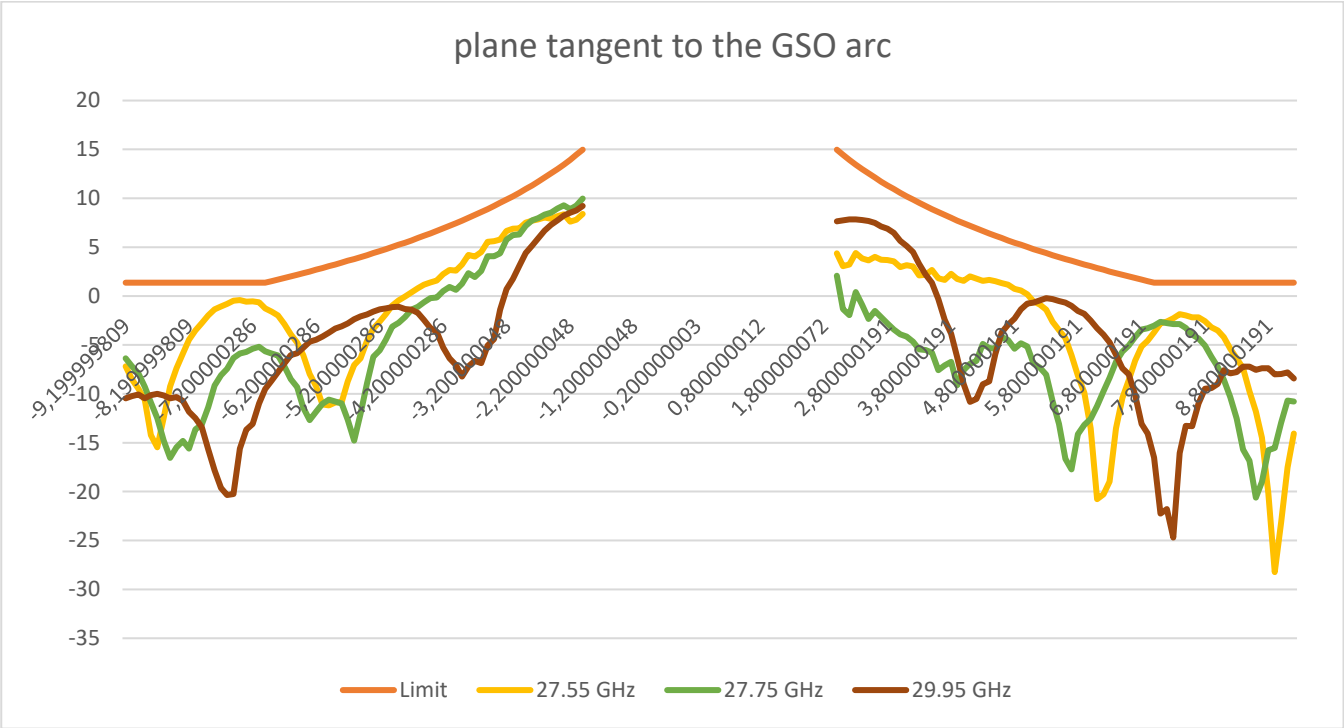
Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

Off Axis EIRP Emissions density within the band

§ 25.218 and SRSP-101 Clause 4.5

Radiated Measurement  
Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

LSDR LHCP



Limit § 25.218:

|                                                                                                                          |         |     |                                       |
|--------------------------------------------------------------------------------------------------------------------------|---------|-----|---------------------------------------|
| (4) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc: |         |     |                                       |
| 22.5-25log( $\theta$ )                                                                                                   | dBW/MHz | for | $2.0^\circ < \theta \leq 7.0^\circ$ . |

Limit SRSP-101 Clause 4.5:

iii. For cross-polarized signals, the e.i.r.p. density emitted from an ESIM in all directions relative to the GSO arc shall not exceed the following values:

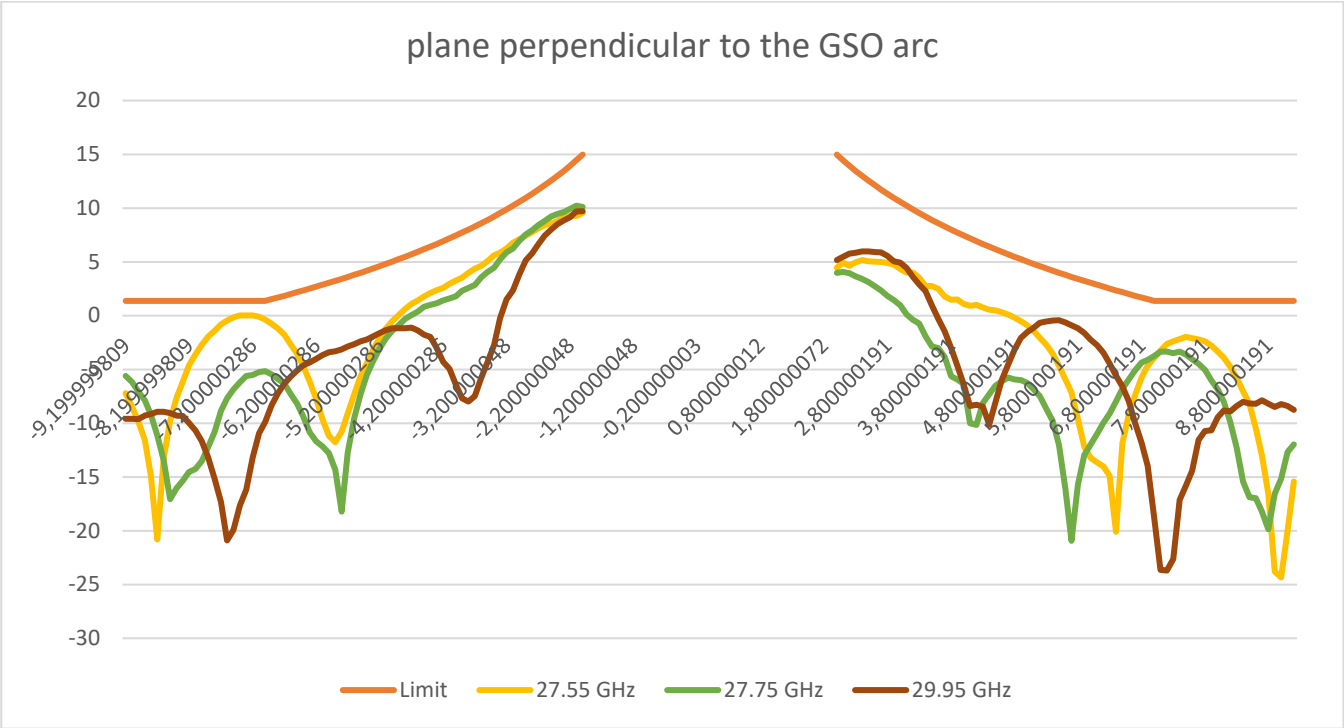
| Maximum e.i.r.p. density     | Off-axis angle, $\phi$              |
|------------------------------|-------------------------------------|
| 22.5 - 25 log $\phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$       |
| 1.37 dBW/MHz                 | $7^\circ \leq \phi \leq 9.23^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

**Off Axis EIRP Emissions density within the band**

**§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement  
Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205  
LSDR LHCP



Limit § 25.218:

|                                                                                                                          |         |     |                                       |
|--------------------------------------------------------------------------------------------------------------------------|---------|-----|---------------------------------------|
| (4) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc: |         |     |                                       |
| 22.5-25log( $\theta$ )                                                                                                   | dBW/MHz | for | $2.0^\circ < \theta \leq 7.0^\circ$ . |

Limit SRSP-101 Clause 4.5:

iii. For cross-polarized signals, the e.i.r.p. density emitted from an ESIM in all directions relative to the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density      | Off-axis angle, $\phi$              |
|-------------------------------|-------------------------------------|
| $22.5 - 25 \log \phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$       |
| 1.37 dBW/MHz                  | $7^\circ \leq \phi \leq 9.23^\circ$ |

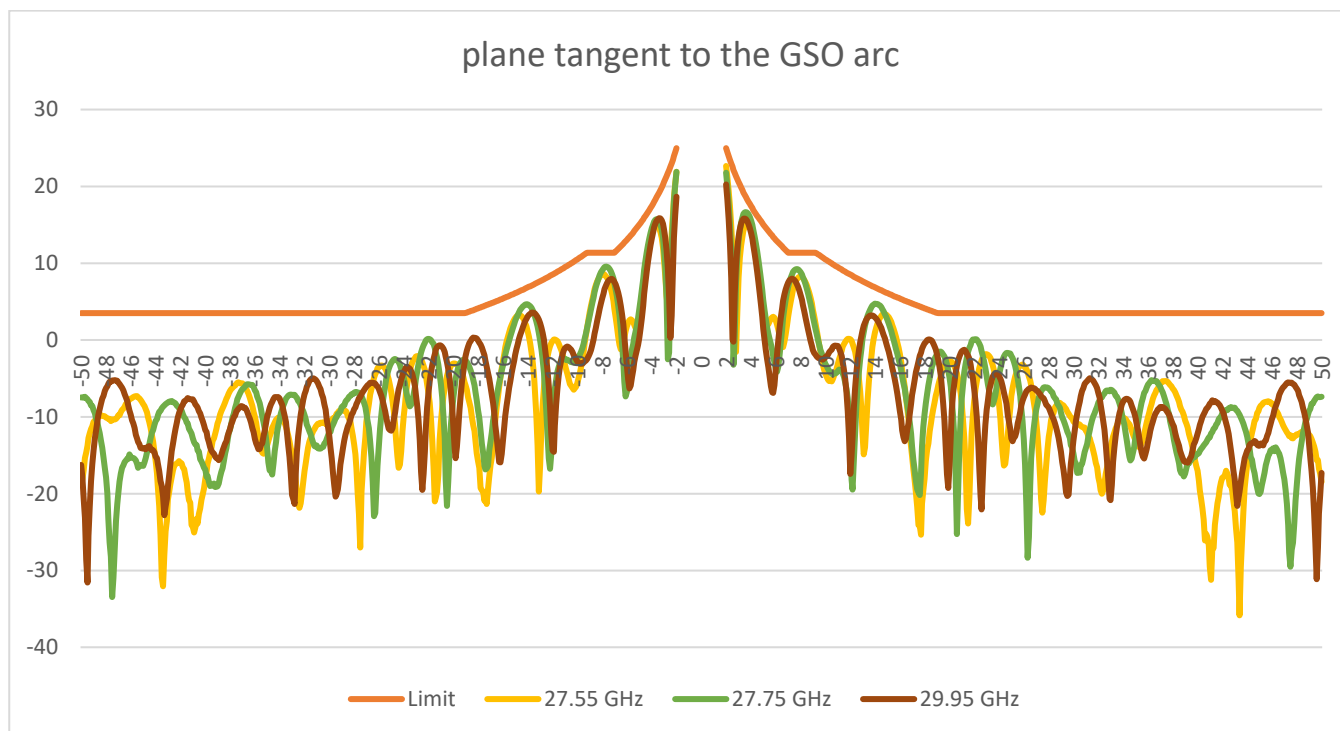
Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

**Off Axis EIRP Emissions density within the band****§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

LSDR RHCP



Limit § 25.218:

Minimum margin to Limit: 1,64 dB

(1) For co-polarized transmissions in the plane tangent to the GSO arc:

|                        |         |     |                                           |
|------------------------|---------|-----|-------------------------------------------|
| 32.5-25log( $\theta$ ) | dBW/MHz | for | $2.0^\circ \leq \theta \leq 7^\circ$ .    |
| 11.5                   | dBW/MHz | for | $7^\circ \leq \theta \leq 9.2^\circ$ .    |
| 35.5-25log( $\theta$ ) | dBW/MHz | for | $9.2^\circ \leq \theta \leq 19.1^\circ$ . |
| 3.5                    | dBW/MHz | for | $19.1^\circ < \theta \leq 180^\circ$ .    |

Limit SRSP-101 Clause 4.5:

i. For co-polarized signals, the e.i.r.p. density emitted from an ESIM in any direction within  $\pm 3^\circ$  of the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density     | Off-axis angle, $\phi$                 |
|------------------------------|----------------------------------------|
| 32.5 - 25 log $\phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$          |
| 11.37 dBW/MHz                | $7^\circ \leq \phi < 9.23^\circ$       |
| 35.5 - 25 log $\phi$ dBW/MHz | $9.23^\circ \leq \phi < 19.05^\circ$   |
| 3.5 dBW/MHz                  | $19.05^\circ \leq \phi \leq 180^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

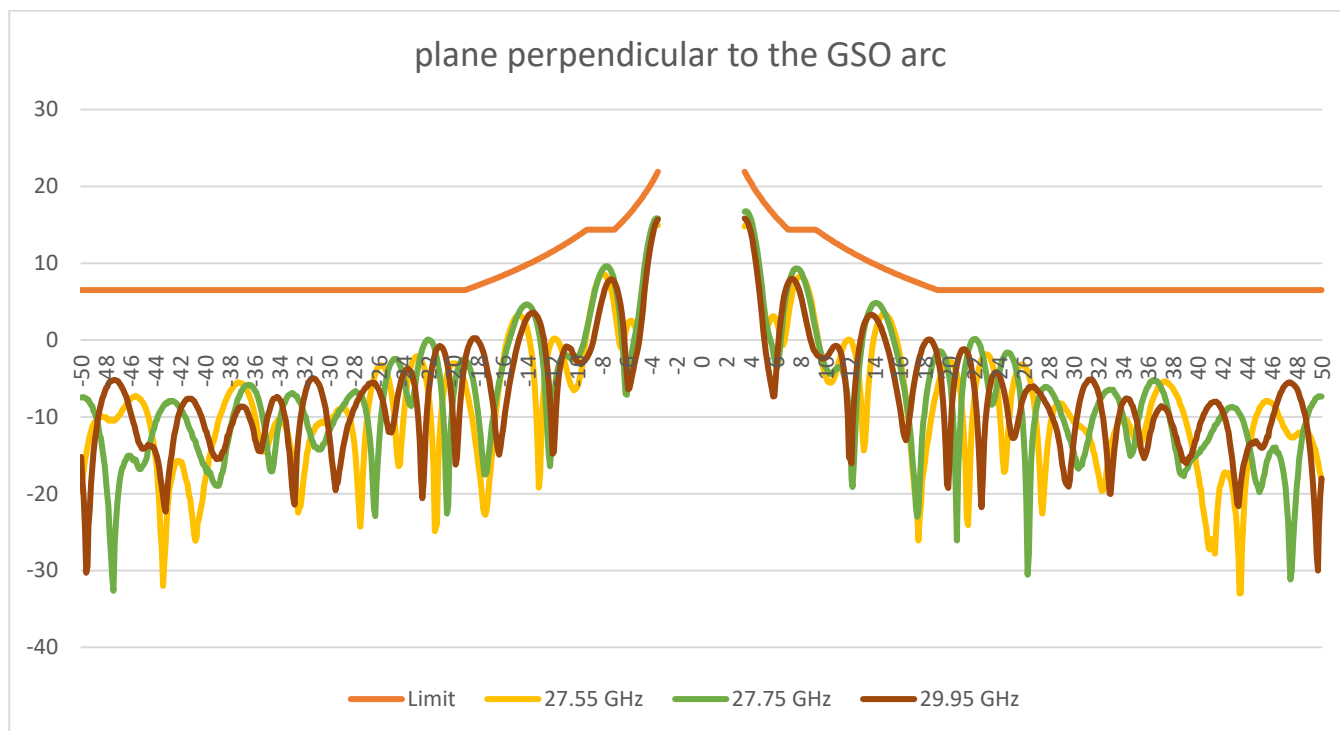
Grundvorlage / Basic Template: FM-TAGMBH-KBS-0100b Grundvorlage Prüfbericht akkreditiert-DE-EN, Rev. 04

**Off Axis EIRP Emissions density within the band****§ 25.218 and SRSP-101 Clause 4.5**

Radiated Measurement

Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

LSDR RHCP



Limit § 25.218:

(2) For co-polarized transmissions in the plane perpendicular to the GSO arc:

|                        |         |     |                                        |
|------------------------|---------|-----|----------------------------------------|
| 35.5-25log( $\theta$ ) | dBW/MHz | for | $3.5^\circ \leq \theta \leq 7^\circ$ . |
| 14.4                   | dBW/MHz | for | $7^\circ < \theta \leq 9.2^\circ$ .    |
| 38.5-25log( $\theta$ ) | dBW/MHz | for | $9.2^\circ < \theta \leq 19.1^\circ$ . |
| 6.5                    | dBW/MHz | for | $19.1^\circ < \theta \leq 180^\circ$ . |

Limit SRSP-101 Clause 4.5:

ii. For co-polarized signals, the e.i.r.p. density emitted from an ESIM for all directions other than within  $\pm 3^\circ$  of the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density     | Off-axis angle, $\phi$                 |
|------------------------------|----------------------------------------|
| 35.5 - 25 log $\phi$ dBW/MHz | $3.5^\circ \leq \phi < 7^\circ$        |
| 14.37 dBW/MHz                | $7^\circ \leq \phi < 9.23^\circ$       |
| 38.5 - 25 log $\phi$ dBW/MHz | $9.23^\circ \leq \phi < 19.05^\circ$   |
| 6.5 dBW/MHz                  | $19.05^\circ \leq \phi \leq 180^\circ$ |

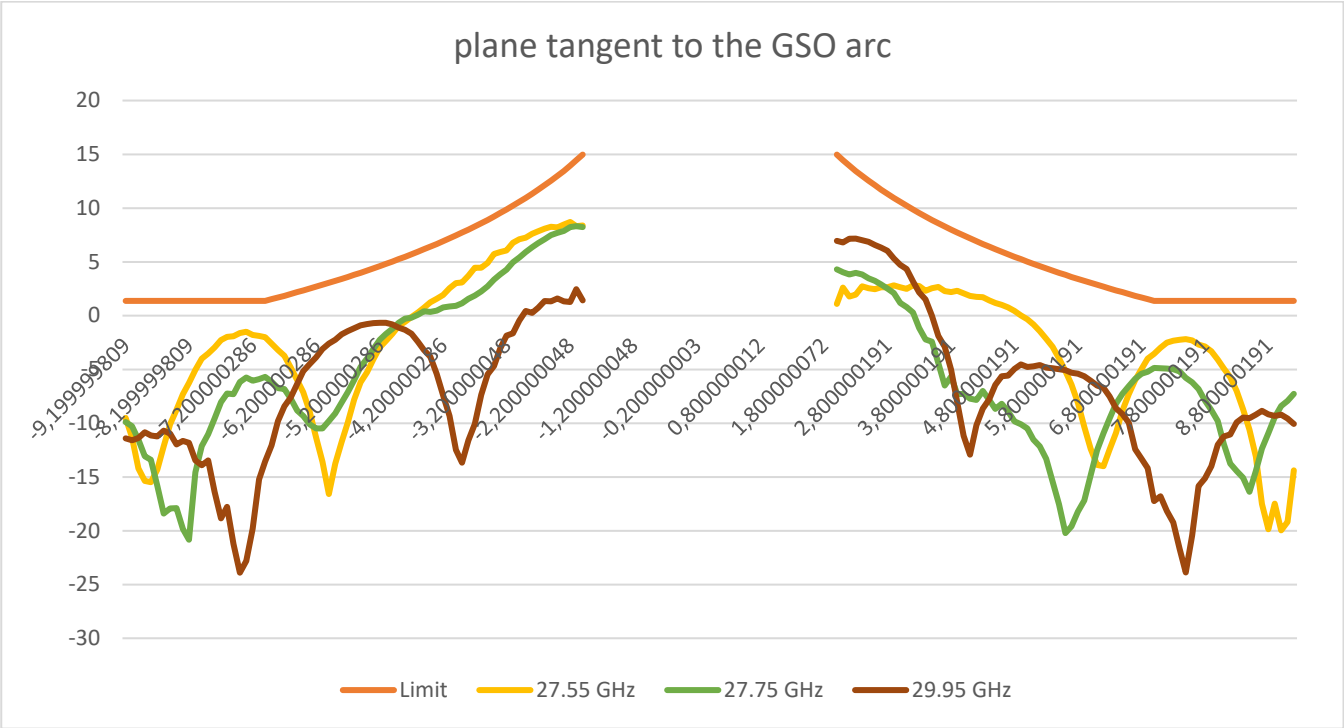
Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

Off Axis EIRP Emissions density within the band

§ 25.218 and SRSP-101 Clause 4.5

Radiated Measurement  
Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205

LSDR RHCP



Limit § 25.218:

|                                                                                                                          |         |     |                                     |
|--------------------------------------------------------------------------------------------------------------------------|---------|-----|-------------------------------------|
| (4) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc: |         |     |                                     |
| 22.5-25log( $\theta$ )                                                                                                   | dBW/MHz | for | $2.0^\circ < \theta \leq 7.0^\circ$ |

Limit SRSP-101 Clause 4.5:

iii. For cross-polarized signals, the e.i.r.p. density emitted from an ESIM in all directions relative to the GSO arc shall not exceed the following values:

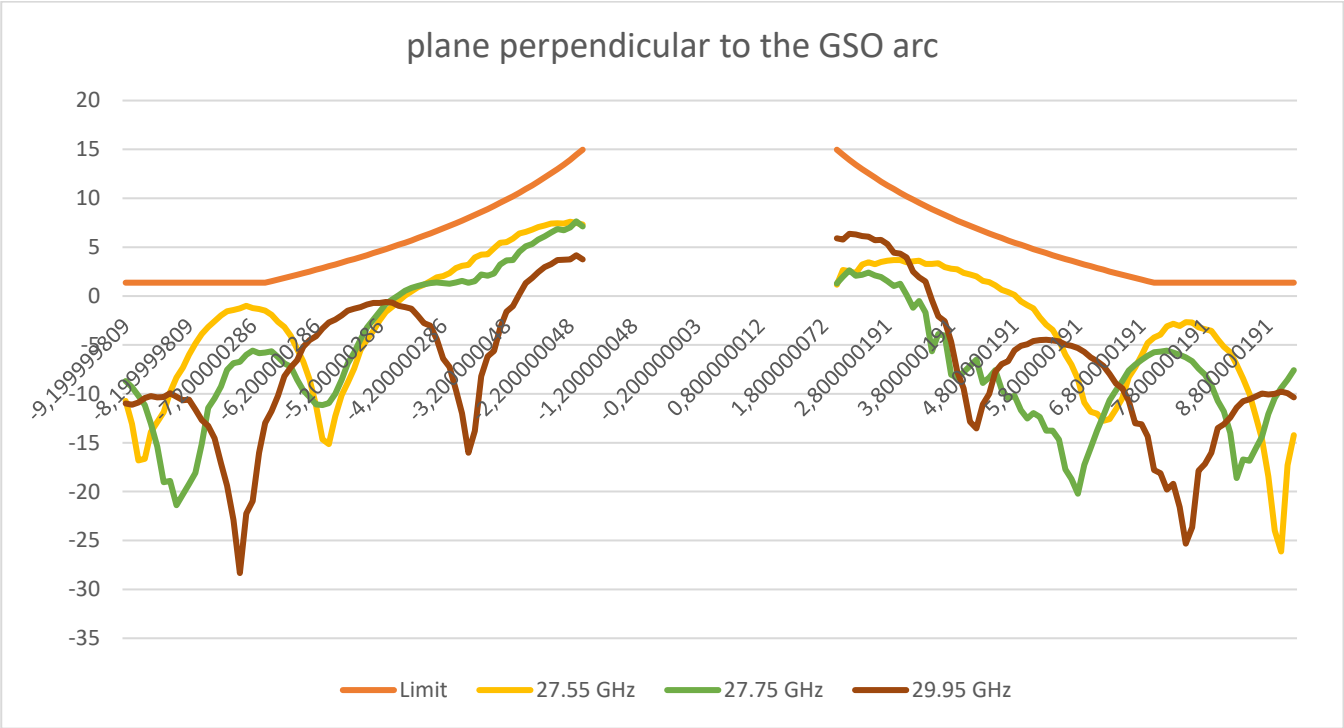
| Maximum e.i.r.p. density     | Off-axis angle, $\phi$              |
|------------------------------|-------------------------------------|
| 22.5 - 25 log $\phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$       |
| 1.37 dBW/MHz                 | $7^\circ \leq \phi \leq 9.23^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

Off Axis EIRP Emissions density within the band

§ 25.218 and SRSP-101 Clause 4.5

Radiated Measurement  
Test Equipment used: NT-100; NT-110/1; NT-111/1; NT-112/1; NT-126; EMV-205  
LSDR RHCP



Limit § 25.218:

|                                                                                                                          |         |     |                                     |
|--------------------------------------------------------------------------------------------------------------------------|---------|-----|-------------------------------------|
| (4) For cross-polarized transmissions in the plane tangent to the GSO arc and in the plane perpendicular to the GSO arc: |         |     |                                     |
| 22.5-25log( $\theta$ )                                                                                                   | dBW/MHz | for | $2.0^\circ < \theta \leq 7.0^\circ$ |

Limit SRSP-101 Clause 4.5:

iii. For cross-polarized signals, the e.i.r.p. density emitted from an ESIM in all directions relative to the GSO arc shall not exceed the following values:

| Maximum e.i.r.p. density      | Off-axis angle, $\phi$              |
|-------------------------------|-------------------------------------|
| $22.5 - 25 \log \phi$ dBW/MHz | $2^\circ \leq \phi < 7^\circ$       |
| 1.37 dBW/MHz                  | $7^\circ \leq \phi \leq 9.23^\circ$ |

Remark: The slightly more stringent SRSP-101 Limit is shown in the graph above.

#### 4.8. RF Exposure

##### Device information:

The device is intended to be mounted on aircraft for satellite communication. It is only intended for professional installation, see user manual and operational description exhibits.

Max radiated power values are taken from Sec. 4.2) of this test report.

The device supports different modulations and frequencies, but simultaneous transmission is not possible.

##### CFR 47 § 1.1310 Radiofrequency radiation exposure limits

##### § 1.1310(d)(3)

At operating frequencies above 6 GHz, the MPE limits listed in Table 1 in paragraph (e)(1) of this section shall be used in all cases to evaluate the environmental impact of human exposure to RF radiation as specified in § 1.1307(b) of this part.

**TABLE 1 TO § 1.1310(e)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)**

| Frequency range (MHz)                                    | Electric field strength (V/m) | Magnetic field strength (A/m) | Power density (mW/cm <sup>2</sup> ) | Averaging time (minutes) |
|----------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------------|--------------------------|
| (i) LIMITS FOR OCCUPATIONAL/CONTROLLED EXPOSURE          |                               |                               |                                     |                          |
| 0.3-3.0                                                  | 614                           | 1.63                          | *(100)                              | ≤6                       |
| 3.0-30                                                   | 1842/f                        | 4.89/f                        | *(900/f <sup>2</sup> )              | <6                       |
| 30-300                                                   | 61.4                          | 0.163                         | 1.0                                 | <6                       |
| 300-1,500                                                |                               |                               | f/300                               | <6                       |
| 1,500-100,000                                            |                               |                               | 5                                   | <6                       |
| (ii) LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE |                               |                               |                                     |                          |
| 0.3-1.34                                                 | 614                           | 1.63                          | *(100)                              | <30                      |
| 1.34-30                                                  | 824/f                         | 2.19/f                        | *(180/f <sup>2</sup> )              | <30                      |
| 30-300                                                   | 27.5                          | 0.073                         | 0.2                                 | <30                      |
| 300-1,500                                                |                               |                               | f/1500                              | <30                      |
| 1,500-100,000                                            |                               |                               | 1.0                                 | <30                      |

*f = frequency in MHz. \* = Plane-wave equivalent power density.*

### § 1.1310(d)(4)

Both the MPE limits listed in Table 1 in paragraph (e)(1) of this section and the SAR limits as set forth in paragraphs (a) through (c) of this section are for continuous exposure, that is, for indefinite time periods. Exposure levels higher than the limits are permitted for shorter exposure times, as long as the average exposure over a period not more than the specified averaging time in Table 1 in paragraph (e)(1) is less than (or equal to) the exposure limits. Detailed information on our policies regarding procedures for evaluating compliance with all of these exposure limits can be found in the most recent edition of FCC's OET Bulletin 65, "Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields," and its supplements, all available at the FCC's internet website: <https://www.fcc.gov/general/oet-bulletins-line>, and in the Office of Engineering and Technology (OET) Laboratory Division Knowledge Database (KDB) (<https://www.fcc.gov/kdb>).

### OET 65, Edition 97-01; August 1997, Section 2: PREDICTION METHODS

Calculations can be made to predict RF field strength and power density levels around typical RF sources. For example, in the case of a single radiating antenna, a prediction for power density in the far-field of the antenna can be made by use of the general Equations (3) or (4) below [for conversion to electric or magnetic field strength see Equation (1) in Section 1]. These equations are generally accurate in the far-field of an antenna but will over-predict power density in the near field, where they could be used for making a "worst case" or conservative prediction.

Eq. 4.:

$$S = \frac{EIRP}{4\pi R^2}$$

Rearranging Eq. 4 to obtain the radius R for a given EIRP and power density  $R = \sqrt{\frac{EIRP}{4\pi S}}$

Calculations for the device under test:

Max. EIRP of all transmissions from Sec. 4.2) is 80.2 dBm for LSDR.

The manufacturer has declared a max. power considering production tolerance and tune-up procedure of 81.5 dBm EIRP or approx. 141.3 kW EIRP, see operational description exhibit.

Duty cycle was not measured. A worst case duty cycle of 100 % is assumed.

Power density for general population/uncontrolled environment is 1.0 mW/cm<sup>2</sup> above 1500 MHz.

Resulting in R = 3352.7 cm or 33.5 m minimum separation distance for general population in line-of-sight between the antenna and the satellite.

For occupational/controlled exposure the applicable power density is 5.0 mW/cm<sup>2</sup>, resulting in a separation distance of 1499.4 cm or 15.0 m.

# Appendix 1

## Test equipment used

|                                                                        |           |                                                                              |                 |
|------------------------------------------------------------------------|-----------|------------------------------------------------------------------------------|-----------------|
| <input type="checkbox"/> Anechoic Chamber with 3m measurement distance | NT-100    | <input type="checkbox"/> Ant. tripod for EN61000-4-3 Model TP1000A           | NT-156          |
| <input type="checkbox"/> Stripline according to ISO 11452-5            | NT-108    | <input type="checkbox"/> Power quality analyzer Fluke 1760 (complete set)    | NT-160 - NT-173 |
| <input type="checkbox"/> MA4000 - Antenna mast 1 - 4 m height          | NT-110/1  |                                                                              |                 |
| <input type="checkbox"/> DS - Turntable 0 - 400 ° Azimuth              | NT-111/1  | <input type="checkbox"/> ESCI - Test receiver 9 kHz - 7 GHz                  | NT-203/1        |
| <input type="checkbox"/> CO3000 Controller Mast+Turntable              | NT-112/1  | <input type="checkbox"/> ESR – Test receiver 20 Hz – 26,5 GHz                | NT-207/1        |
| <input type="checkbox"/> HUF-Z3 - Log. Per. Antenna 200 - 1000 MHz     | NT-121    | <input type="checkbox"/> Digital Radio Tester CMW500                         | NT-208/1        |
| <input type="checkbox"/> FMZB 1519-60D - Loop Antenna 9 kHz - 30 MHz   | NT-122/2  | <input type="checkbox"/> Noise-gen., ITU-R 559-2 20 Hz – 20 kHz              | NT-209          |
| <input type="checkbox"/> HFH-Z6 - Rod Antenna 9 kHz - 30 MHz           | NT-123    | <input type="checkbox"/> CMTA - Radiocommunication analyzer ; 0,1 - 1000 MHz | NT-210          |
| <input type="checkbox"/> Dipole Antenna VHA9103 30 - 300 MHz           | NT-124/1a | <input type="checkbox"/> 3271 - Spectrum analyzer 100 Hz - 26,5 GHz          | NT-211          |
| <input type="checkbox"/> Dipole Antenna UHA9105 300 - 1000 MHz         | NT-124/1b | <input type="checkbox"/> Digital Radio Tester Aeroflex 3920                  | NT-212/1        |
| <input type="checkbox"/> 3115 - Horn Antenna 1 - 18 GHz (immunity)     | NT-125    | <input type="checkbox"/> Mixer M28HW 26,5 GHz - 40 GHz                       | NT-214          |
| <input type="checkbox"/> 3116 - Horn Antenna 18 - 40 GHz               | NT-126    | <input type="checkbox"/> RubiSource T&M Timing reference                     | NT-216          |
| <input type="checkbox"/> SAS-200/543 - Bicon. Antenna 20 MHz - 300 MHz | NT-127    | <input type="checkbox"/> Radiocommunicationanalyzer SWR 1180 MD              | NT-217          |
| <input type="checkbox"/> AT-1080 - Log. Per. Antenna 80 - 1000 MHz     | NT-128    | <input type="checkbox"/> Mixer FS-Z60 40 GHz – 60 GHz                        | NT-218/1        |
| <input type="checkbox"/> HK-116 - bicon. Antenna 20 MHz - 300 MHz      | NT-129    | <input type="checkbox"/> Mixer FS-Z90 60 GHz – 90 GHz                        | NT-219/1        |
| <input type="checkbox"/> HK-116 - bicon. Antenna 20 MHz - 300 MHz      | NT-130    | <input type="checkbox"/> Rigol MSO8204 Digital scope                         | NT-220/2        |
| <input type="checkbox"/> 3146 - Log. Per. Antenna 200 – 1000 MHz       | NT-131    | <input type="checkbox"/> TPS 2014 Digital scope                              | NT-222          |
| <input type="checkbox"/> VULB 9163 Trilog Antenna 30 – 3000 MHz        | NT-131/1  | <input type="checkbox"/> Artificial Ear according to IEC 60318               | NT-224          |
| <input type="checkbox"/> Loop Antenna H-Field                          | NT-132    | <input type="checkbox"/> 1 kHz Sound calibrator                              | NT-225          |
| <input type="checkbox"/> Horn Antenna 500 MHz - 2900 MHz               | NT-133    | <input type="checkbox"/> SRM-3006 Spectrumanalyzer                           | NT-233/1a       |
| <input type="checkbox"/> Horn Antenna 500 MHz - 6000 MHz               | NT-133/1  | <input type="checkbox"/> E-field probe SRM 75 MHz – 3 GHz                    | NT-234          |
| <input type="checkbox"/> Log. per. Antenna 800 MHz - 2500 MHz          | NT-134    | <input type="checkbox"/> Field Meter NBM-500 incl. E- and H-Field probes     | NT-240a-e       |
| <input type="checkbox"/> Log. per. Antenna 800 MHz - 2500 MHz          | NT-135    | <input type="checkbox"/> Magnetometer HP-01                                  | NT-241/1        |
| <input type="checkbox"/> BiConiLog Antenna 26 MHz – 2000 MHz           | NT-137    | <input type="checkbox"/> EFA-3 H-field- / E-field probe                      | NT-243          |
| <input type="checkbox"/> Conical Dipol Antenna PCD8250                 | NT-138    | <input type="checkbox"/> EHP-50F H-field- / E-field probe                    | NT-243/1        |
| <input type="checkbox"/> HF 906 - Horn Antenna 1 - 18 GHz (emission)   | NT-139    | <input type="checkbox"/> Field Meter EMR-200 100 kHz – 3 GHz                 | NT-244          |
| <input type="checkbox"/> HZ-1 Antenna tripod                           | NT-150    | <input type="checkbox"/> E-field probe 100 kHz – 3 GHz                       | NT-245          |
| <input type="checkbox"/> BN 1500 Antenna tripod                        | NT-151    | <input type="checkbox"/> H-field probe 300 kHz – 30 MHz                      | NT-246          |

**Competence Center:**  
Electrical & Enviromental

Test report number:  
2025-AT-TC-EE-ET-EX-0-  
000218-FG-001

Page: 1 of 5

Date: 06.03.2026

## Appendix 1 (continued)

### Test equipment used

|                                                                                |             |                                                                                 |          |
|--------------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------|----------|
| <input type="checkbox"/> E-field probe<br>3 MHz – 18 GHz                       | NT-247      | <input type="checkbox"/> Prana N-MT 500 - RF-Amplifier<br>80 - 1000 MHz / 500 W | NT-332/1 |
| <input type="checkbox"/> H-field probe<br>27 MHz – 1 GHz                       | NT-248      | <input type="checkbox"/> BBA150 RF-Amplifier<br>1 GHz - 6 GHz                   | NT-333/1 |
| <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"/> CDN EMCL-35<br>EM Injection clamp                     | NT-251/1    | <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"/> SMA100A - Signal generator<br>9 kHz - 6 GHz           | NT-310/1    | <input type="checkbox"/> PHE 4500 - Mains impedance<br>network                  | NT-401   |
| <input type="checkbox"/> RefRad<br>Reference generator                         | NT-312      | <input type="checkbox"/> IP 6.2 Coupling filter for<br>data lines (Surge)       | NT-403   |
| <input type="checkbox"/> SMP 02 Signal generator<br>10 MHz - 20 GHz            | NT-313      | <input type="checkbox"/> TK 9421 High Power Volt. Probe<br>150 kHz - 30 MHz     | NT-409   |
| <input type="checkbox"/> 40 MHz Arbitrary Generator<br>TGA1241                 | NT-315      | <input type="checkbox"/> ESH2-Z3 - Probe<br>9 kHz - 30 MHz                      | NT-410   |
| <input type="checkbox"/> Artificial mains network<br>NSLK 8127-PLC             | NT-316      | <input type="checkbox"/> CN-EFT1000 - Capacitive clamp<br>(Burst)               | NT-411/1 |
| <input type="checkbox"/> PSURGE 4.1<br>Surge generator                         | NT-324      | <input type="checkbox"/> Highpass-Filter<br>100 MHz – 3 GHz                     | NT-412   |
| <input type="checkbox"/> IMU4000<br>Immunity test system                       | NT-325/1a-e | <input type="checkbox"/> Highpass-Filter<br>600 MHz – 4 GHz                     | NT-413   |
| <input type="checkbox"/> VCS 500-M6<br>Surge-Generator                         | NT-326      | <input type="checkbox"/> Highpass-Filter<br>1250 MHz – 4 GHz                    | NT-414   |
| <input type="checkbox"/> Oscillatory Wave Simulator incl.<br>Coupling networks | NT-328a+b+c | <input type="checkbox"/> Highpass-Filter<br>1800 MHz – 16 GHz                   | NT-415   |
| <input type="checkbox"/> BTA-250 - RF-Amplifier<br>9 kHz - 220 MHz / 250 W     | NT-330      |                                                                                 |          |

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|                          |                                               |          |                          |                                                           |                    |
|--------------------------|-----------------------------------------------|----------|--------------------------|-----------------------------------------------------------|--------------------|
| <input type="checkbox"/> | RF-Attenuator 10 dB<br>DC – 18 GHz / 50 W     | NT-417/1 | <input type="checkbox"/> | 95242-1 – Current probe<br>1 MHz – 400 MHz                | NT-468             |
| <input type="checkbox"/> | RF-Attenuator 6 dB<br>DC – 18 GHz / 50 W      | NT-418   | <input type="checkbox"/> | 94106-1L-1 – Current probe<br>100 kHz – 450 MHz           | NT-471             |
| <input type="checkbox"/> | RF-Attenuator 3 dB<br>DC – 18 GHz / 50 W      | NT-419   | <input type="checkbox"/> | WHKX12-2700-3000-18000<br>3 GHz Highpass filter           | NT-472             |
| <input type="checkbox"/> | RF-Attenuator 20 dB<br>DC - 1000 MHz / 25 W   | NT-421   | <input type="checkbox"/> | WHKX10-3870-4500-18000<br>4,5 GHz Highpass filter         | NT-473             |
| <input type="checkbox"/> | RF-Attenuator 30 dB<br>DC - 1000 MHz / 1 W    | NT-423   | <input type="checkbox"/> | CDN S9 USB3.0<br>Coupling decoupling network              | NT-474             |
| <input type="checkbox"/> | RF-Attenuator<br>30 dB                        | NT-424   | <input type="checkbox"/> | CDN S2 XLR3-1<br>Coupling decoupling network              | NT-475             |
| <input type="checkbox"/> | RF-Attenuator 6 dB<br>DC - 1000 MHz / 1 W     | NT-425   | <input type="checkbox"/> | CDN S8 RJ45<br>Coupling decoupling network                | NT-476             |
| <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"/> | EMC32 Version 10.60.20<br>Test software                   | NT-520/1           |
| <input type="checkbox"/> | RF-Attenuator DC – 18 GHz<br>6 dB             | NT-436   | <input type="checkbox"/> | SRM-TS Version 1.3<br>software for SRM-3000               | NT-522             |
| <input type="checkbox"/> | RF-Attenuator DC – 18 GHz<br>6 dB             | NT-437   | <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>10 dB            | NT-438   | <input type="checkbox"/> | Spitzenberger und Spies<br>Test software V4.1             | NT-525             |
| <input type="checkbox"/> | RF-Attenuator DC – 18 GHz<br>20 dB            | NT-439   | <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-T4<br>Coupling decoupling network     | NT-463   | <input type="checkbox"/> | Shield chamber                                            | NT-600             |
| <input type="checkbox"/> | FCC-801-C1<br>Coupling decoupling network     | NT-464   | <input type="checkbox"/> | Climatic chamber                                          | M-1200             |
| <input type="checkbox"/> | SW 9605 - Current probe<br>150 kHz – 30 MHz   | NT-465/1 |                          |                                                           |                    |

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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       |
| <input type="checkbox"/> | Turntabel<br>6 m diameter                        | EMV-101             | <input type="checkbox"/> | HF- Amplifier 80 -1000 MHz<br>BBA150               | EMV-301         |
| <input type="checkbox"/> | Antenna mast + controller                        | EMV-102+<br>EMV-103 | <input type="checkbox"/> | HF- Amplifier 0,8 - 6 GHz<br>BBA150                | EMV-302         |
| <input type="checkbox"/> | EMC Video/Audiosystem                            | EMV-104             | <input type="checkbox"/> | High Power Ant. 20-200 MHz<br>HPBA-2510            | EMV-303/1       |
| <input type="checkbox"/> | EMC Software<br>EMC32 Version 10.6.2             | EMV-105             | <input type="checkbox"/> | High Power Ant. 20-200 MHz<br>S12018-21            | EMV-303/2       |
| <input type="checkbox"/> | Hornantenna 1 – 18 GHz<br>HF 907                 | EMV-110             | <input type="checkbox"/> | Log.per Antenna 80-2700 MHz<br>STLP 9128 E special | EMV-304         |
| <input type="checkbox"/> | Antennapre.amp. 1 – 18 GHz<br>BBV 9718 D         | EMV-111/1           | <input type="checkbox"/> | Log.per Antenna 0,7 – 9 GHz<br>STLP9149            | EMV-305         |
| <input type="checkbox"/> | Trilog Antenna 30-3000 MHz<br>VULB9163           | EMV-112             | <input type="checkbox"/> | HF- Amplifier 9 kHz-250 MHz<br>BBA150 (low noise)  | EMV-306         |
| <input type="checkbox"/> | Monopol 9 kHz – 30 MHz<br>VAMP 9243              | EMV-113             | <input type="checkbox"/> | ISO11451-2 TLS<br>10 kHz – 30 MHz                  | EMV-307         |
| <input type="checkbox"/> | Antennapre.amp 18 – 40 GHz<br>BBV 9721           | EMV-114             | <input type="checkbox"/> | Load Dump Generator<br>LD 200N                     | EMV-350         |
| <input type="checkbox"/> | Hornantenna 200 – 2000 MHz<br>AH-220             | EMV-115             | <input type="checkbox"/> | Ultra Compact Symulator<br>UCS 200N100             | EMV-351         |
| <input type="checkbox"/> | DC Artificial Network<br>PVDC 8300               | EMV-150             | <input type="checkbox"/> | Automotive Power fail module<br>PFM 200N100.1      | EMV-352         |
| <input type="checkbox"/> | AC Artificial Network<br>NNLK 8121 RC            | EMV-151             | <input type="checkbox"/> | Voltage Drop Symulator<br>VDS 200Q100              | EMV-353         |
| <input type="checkbox"/> | AC Artificial Network<br>NNLK 140                | EMV-<br>153a-d      | <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>LBE-1420                 | EMV-202/1           | <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"/> | Power Sensor NRP40S                              | EMV-220             |                          |                                                    |                 |

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|                          |                                      |             |
|--------------------------|--------------------------------------|-------------|
| <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-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   |
| <input type="checkbox"/> | HV AMN<br>NNHV 8123 800A             | EMV-472     |
| <input type="checkbox"/> | HV AMN<br>NNHV 8123 800A             | EMV-473     |