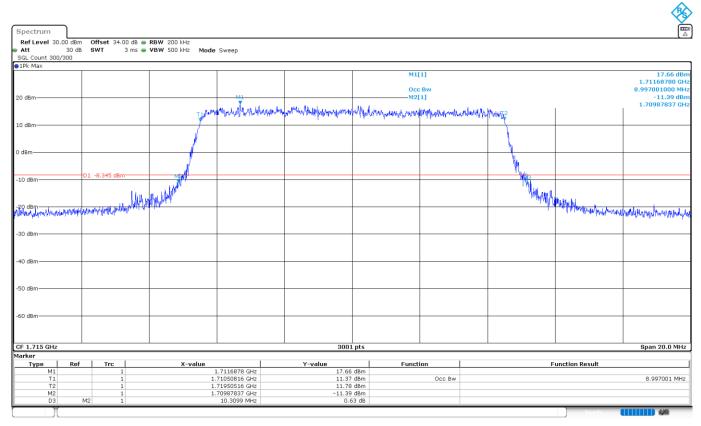
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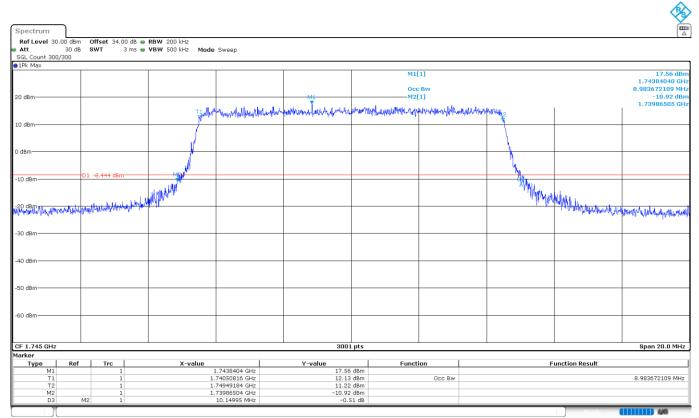


LTE Cat 1bis Band 66. BW=10 MHz. QPSK. RB Size 6.

Low Channel:



Middle Channel:

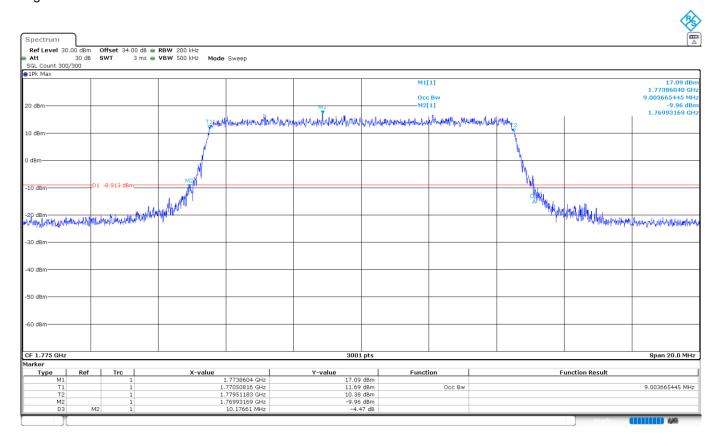


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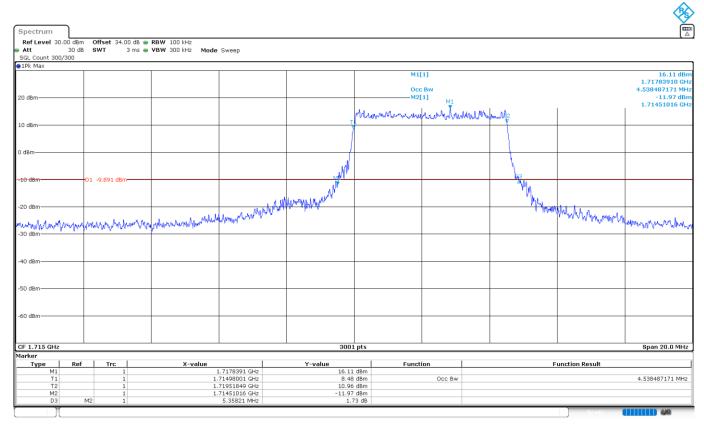


High Channel:



LTE Cat 1bis Band 66. BW=10 MHz. 16QAM. RB Size 5.

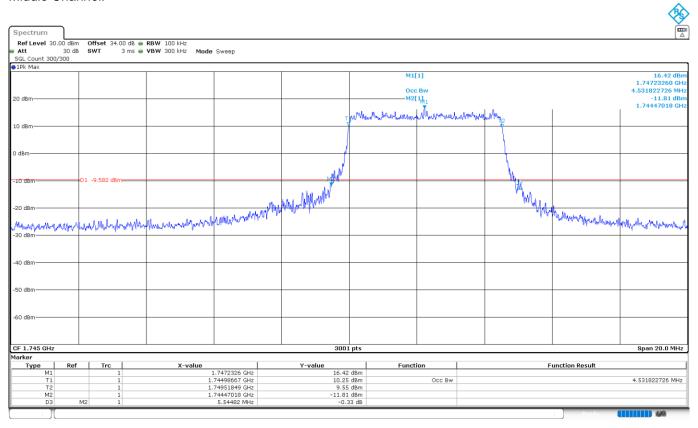
Low Channel:



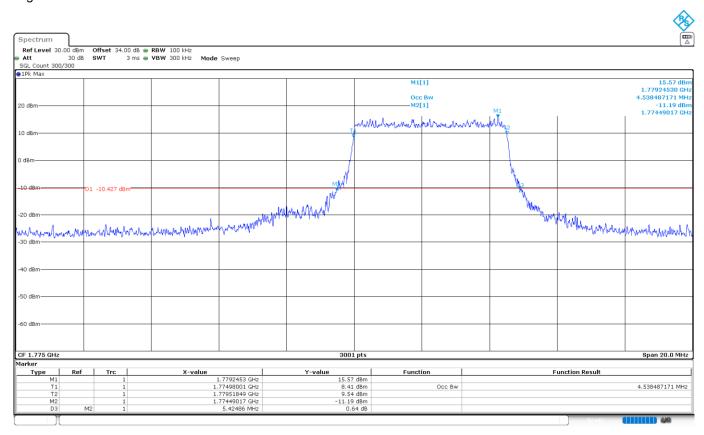
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Middle Channel:



High Channel:



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LTE Cat 1bis Band 66. BW=15 MHz. QPSK. RB Size 6.

| Channel | Low | Middle High | |
|-------------------------------|-----------------|-----------------|-----------------|
| 99% Occupied Bandwidth (MHz) | 13.455514828000 | 13.435521493000 | 13.435521493000 |
| -26 dBc Bandwidth (MHz) | 14.865040000000 | 15.034990000000 | 14.955010000000 |
| Measurement uncertainty (kHz) | | <±3.75 | |

LTE Cat 1bis Band 66. BW=15 MHz. 16QAM. RB Size 5.

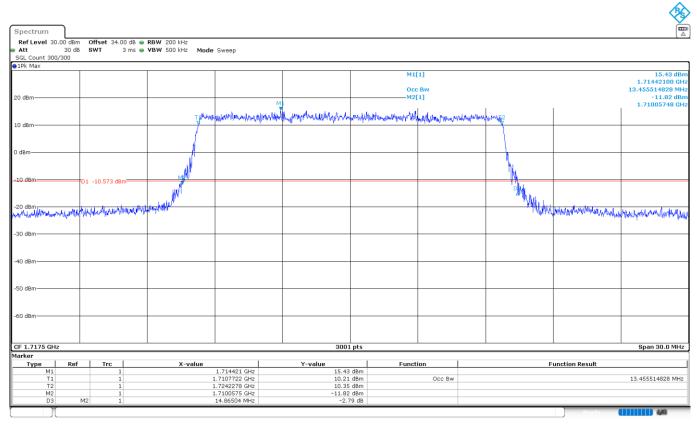
| Channel | Low | Middle | High |
|-------------------------------|----------------|----------------|----------------|
| 99% Occupied Bandwidth (MHz) | 4.558480506000 | 4.568477174000 | 4.538487171000 |
| -26 dBc Bandwidth (MHz) | 5.658110000000 | 5.628120000000 | 5.778070000000 |
| Measurement uncertainty (kHz) | | <±3.75 | |

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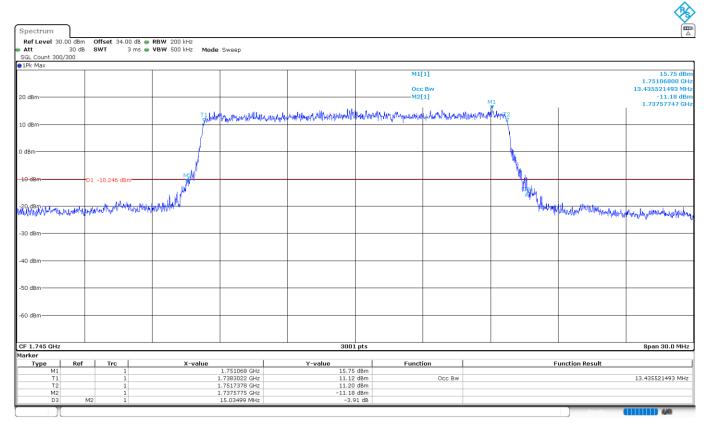


LTE Cat 1bis Band 66. BW=15 MHz. QPSK. RB Size 6.

Low Channel:



Middle Channel:



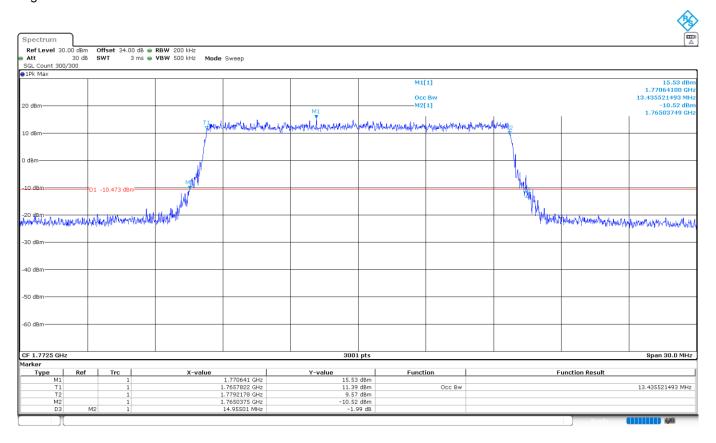
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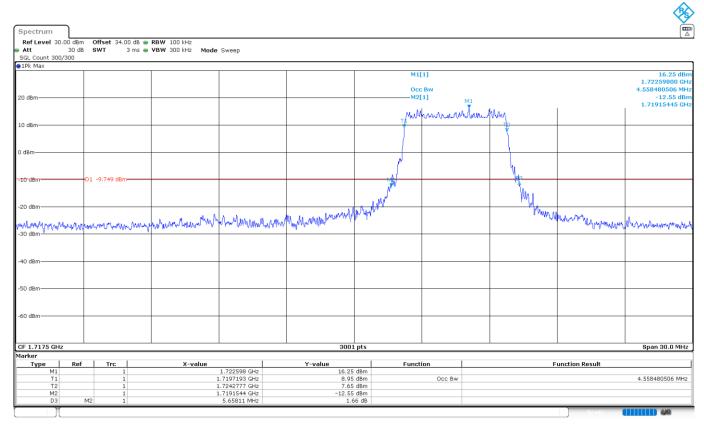


High Channel:



LTE Cat 1bis Band 66. BW=15 MHz. 16QAM. RB Size 5.

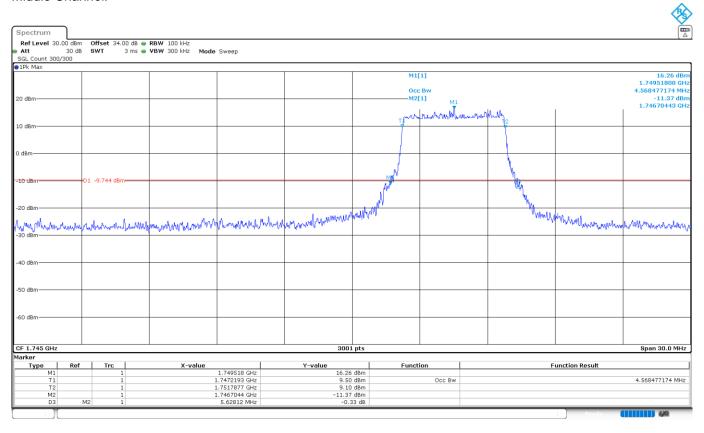
Low Channel:



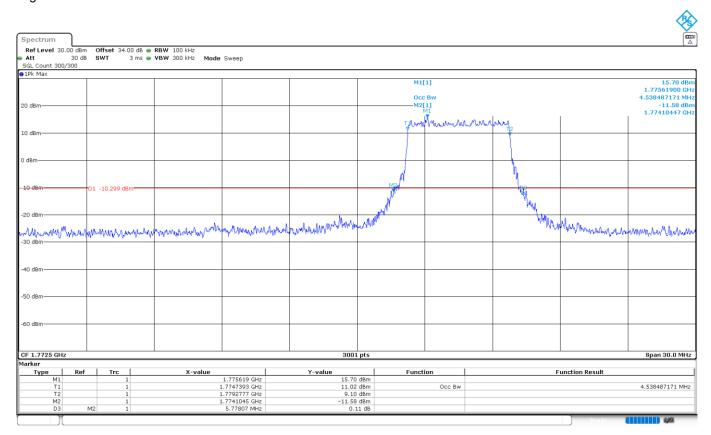
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Middle Channel:



High Channel:



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LTE Cat 1bis Band 66. BW=20 MHz. QPSK. RB Size 6.

| Channel | Low | Middle | High |
|-------------------------------|-----------------|-----------------|-----------------|
| 99% Occupied Bandwidth (MHz) | 17.967344219000 | 17,887370876000 | 17,940686438000 |
| -26 dBc Bandwidth (MHz) | 19.753400000000 | 19,753400000000 | 20,046700000000 |
| Measurement uncertainty (kHz) | | <±3.75 | |

LTE Cat 1bis Band 66. BW=20 MHz. 16QAM. RB Size 5.

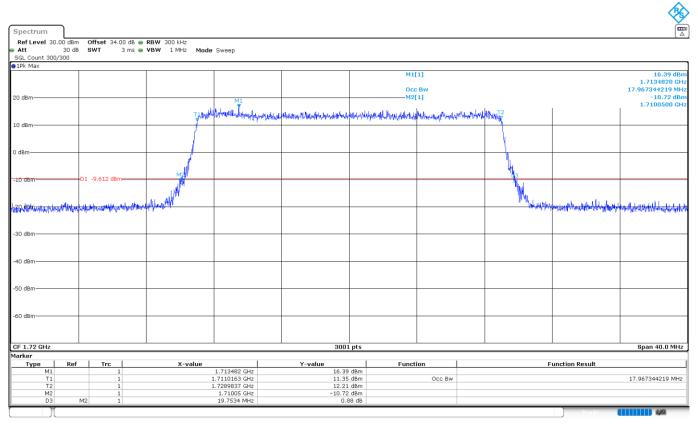
| Channel | Low | Middle | High |
|-------------------------------|----------------|----------------|----------------|
| 99% Occupied Bandwidth (MHz) | 4.545151616000 | 4.571809397000 | 4.545151616000 |
| -26 dBc Bandwidth (MHz) | 6.131300000000 | 6.038000000000 | 5.824700000000 |
| Measurement uncertainty (kHz) | | <±3.75 | |



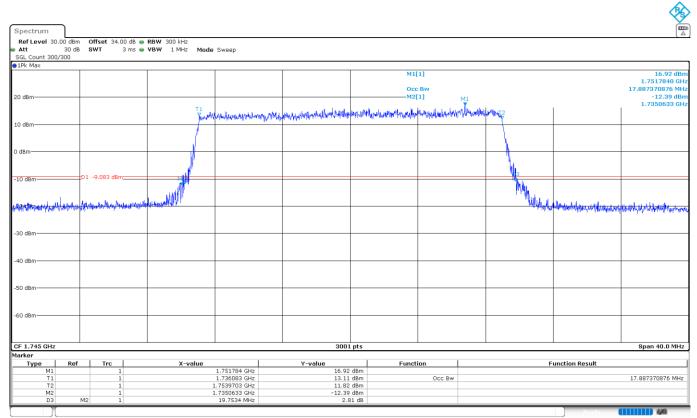
DEKRA

LTE Cat 1bis Band 66. BW=20 MHz. QPSK. RB Size 6.

Low Channel:



Middle Channel:

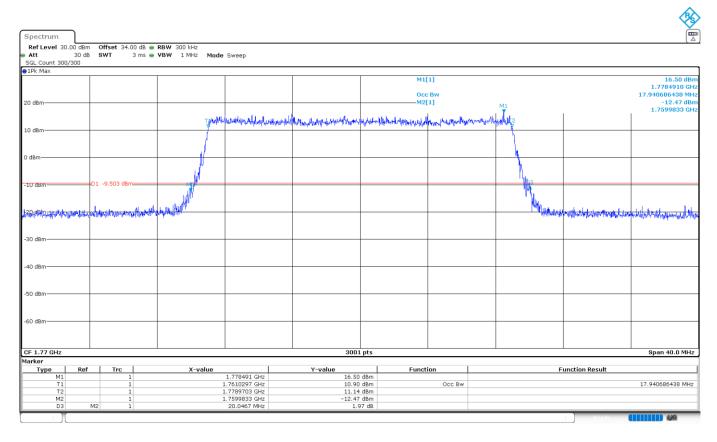


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C.I.F. A29507456

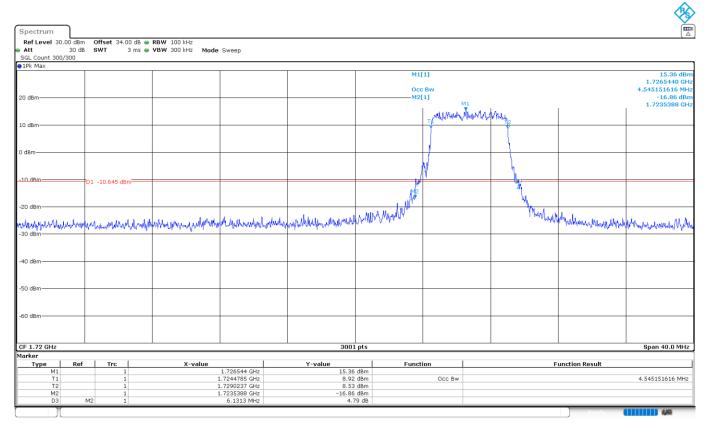


High Channel:



LTE Cat 1bis Band 66. BW=20 MHz. 16QAM. RB Size 5.

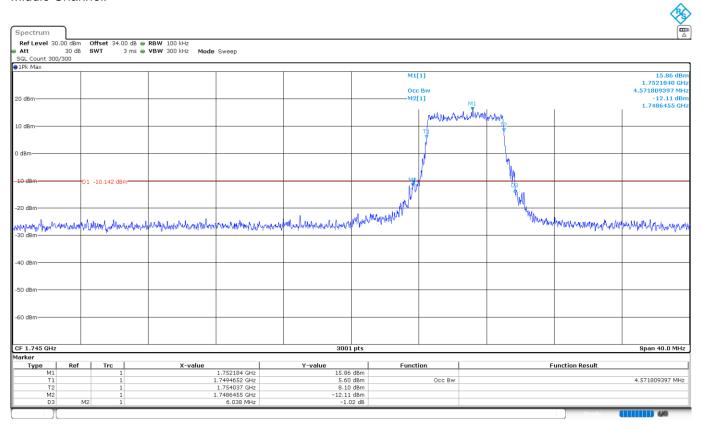
Low Channel:



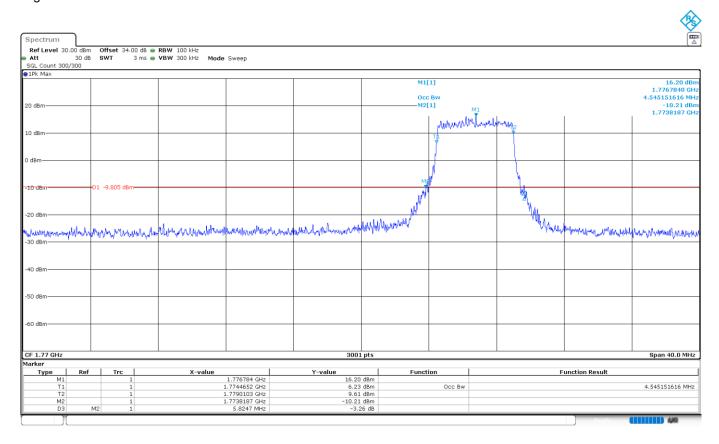
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Middle Channel:



High Channel:



DEKRA

Spurious Emissions at Antenna Terminals

Limits

1. LTE Cat 1bis Band 12. FCC §27.53 (g) / RSS-130 Clause 4.7.

FCC §27. 53 (g):

For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

RSS-130 Clause 4.7:

4.7.1 General unwanted emissions limits

The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least 43 + 10 log10 p (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

2. LTE Cat 1bis Band 13. FCC §27.53 (c) / RSS-130 Clause 4.7.

FCC §27.53 (c):

On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB. Compliance is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

On all frequencies between 763-775 MHz and 793-805 MHz. by a factor not less than $65 + 10 \log (P) dB$ in a $6.25 \, \text{kHz}$ band segment. for mobile and portable stations. Compliance is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a $6.25 \, \text{kHz}$ segment.

RSS-130 Clause 4.7:

4.7.1 General unwanted emissions limits:

The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least 43 + 10 log10 p (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

4.7.2 Additional unwanted emissions limits:

In addition to the limit outlined in section 4.7.1 above, equipment operating in the frequency bands 746-756 MHz and 777-787 MHz shall also comply with the following restrictions:

- a. the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least:
 - i. 76 + 10 log10 p (watts), dB, for base and fixed equipment and
 - ii. 65 + 10 log10 p (watts), dB, for mobile and portable equipment

b. the e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW/MHz for wideband signal and -80 dBW for discrete emission with bandwidth less than 700 Hz.

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3. LTE Cat 1bis Band 41. FCC §27.53 (m) (4) (6) / RSS-199 Clause 5.5:

FCC §27.53 (m) (4) (6):

- (m) For BRS and EBS stations, the power of any emissions outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below. If a licensee has multiple contiguous channels, out-of-band emissions shall be measured from the upper and lower edges of the contiguous channels.
 - (4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.
 - (6) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

RSS-199 Clause 5.5:

4.7.1 General unwanted emissions limits:

4. LTE Cat 1bis Band 66. FCC §27.53 (h) / RSS-139 5.6.

FCC §27.53 (h) / RSS-139 5.6:

Unwanted emissions shall be measured in terms of average values.

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors) of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in table 6.

| Table 6: Unwanted emission limits | | | | |
|----------------------------------------------------------------------|---------------------|--|--|--|
| Offset from the edge of the frequency block or frequency block group | | | | |
| 1 MHz | -13 dBm/(1% of OB*) | | | |
| >1 MHz | -13 dBm/MHz | | | |

^{*}OB is the occupied bandwidth.

In addition to complying with the above limits, equipment operating in the band 2180-2200 MHz may require additional filtering (see SRSP-519).

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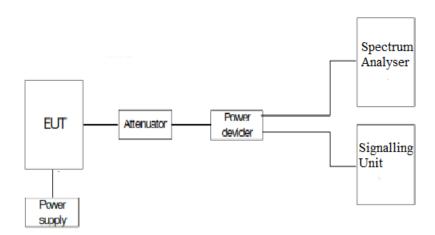
Method

The EUT RF output connector was connected to a spectrum analyser and to the Universal Radio Communication tester R&S CMW500 (selecting maximum transmission power of the EUT and different modes of modulation) using a 50-Ohm attenuator and a power divider.

The reading of the spectrum analyser is corrected with the attenuation loss of connection between output terminal of EUT and input of the spectrum analyser.

The configuration of Resource Blocks and modulation which is the worst case for conducted power was used.

Test Setup



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Results

LTE Cat 1bis Band 12:BW=10 MHz. QPSK. RB Size 1. RB Offset 0.

Low Channel: No spurious frequencies at less than 20 dB below the limit.

Middle Channel: No spurious frequencies at less than 20 dB below the limit.

High Channel: No spurious frequencies at less than 20 dB below the limit

LTE Cat 1bis Band 13: BW=10 MHz. QPSK. RB Size 1. RB Offset 0.

Middle Channel: No spurious frequencies at less than 20 dB below the limit

LTE Cat 1bis Band 41: BW=20 MHz. QPSK. RB Size 1. RB Offset 0.

Low Channel: Spurious frequencies at less than 20 dB below the limit:

| Frequency (MHz) | Emission limitations conducted (dBm) |
|-----------------|--------------------------------------|
| 5168.259 | -33.54 |

Middle Channel: Spurious frequencies at less than 20 dB below the limit:

| Frequency (MHz) | Emission limitations conducted (dBm) |
|-----------------|--------------------------------------|
| 4993.659 | -37.46 |

High Channel: Spurious frequencies at less than 20 dB below the limit:

| Frequency (MHz) | Emission limitations conducted (dBm) |
|-----------------|--------------------------------------|
| 5341 959 | -33 36 |

LTE Cat 1bis Band 66: BW=20 MHz. QPSK. RB Size 1. RB Offset 0.

Low Channel: No spurious frequencies at less than 20 dB below the limit.

Middle Channel: No spurious frequencies at less than 20 dB below the limit.

High Channel: No spurious frequencies at less than 20 dB below the limit.

Measurement uncertainty (dB): <±2.76

Verdict

PASS

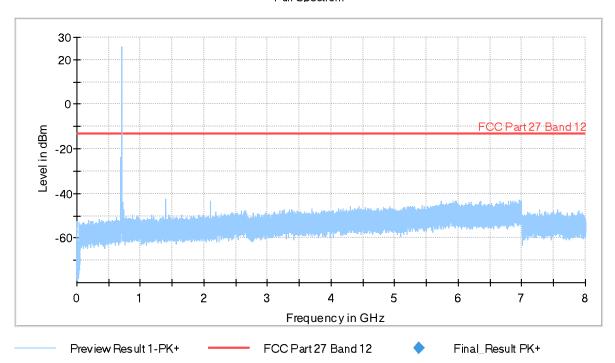


| Subrange | Step Size | Detectors | Bandwidth | Sweep Time | Preamp |
|------------------|------------|-----------|-----------|------------|--------|
| 9 kHz - 150 kHz | 14.1 Hz | PK+ | 300 Hz | Coupled | 0 dB |
| 150 kHz - 30 MHz | 932.812 Hz | PK+ | 10 kHz | Coupled | 0 dB |
| 30 MHz - 1 GHz | 30.312 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| 1 GHz - 2 GHz | 31.25 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| 2 GHz - 3 GHz | 31.25 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| 3 GHz - 4 GHz | 31.25 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| 4 GHz - 5 GHz | 31.25 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| 5 GHz - 6 GHz | 31.25 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| 6 GHz - 7 GHz | 31.25 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| 7 GHz - 8 GHz | 31.25 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| 8 GHz - 9 GHz | 31.25 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| 9 GHz - 10 GHz | 31.25 kHz | PK+ | 100 kHz | Coupled | 0 dB |
| | | | | | |

LTE Cat 1bis Band 12:

Low Channel:

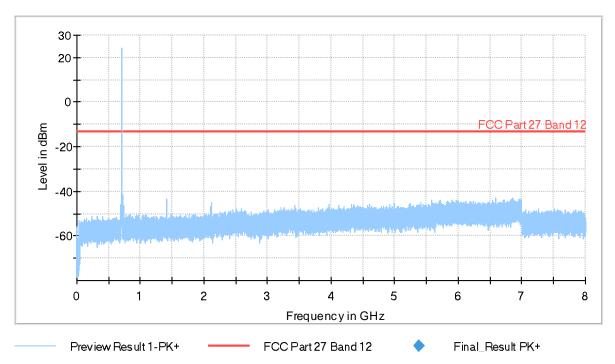
Full Spectrum





Middle Channel:



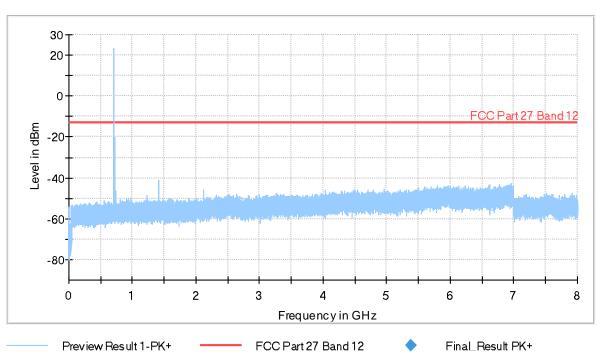


The peak above the limit is the carrier frequency.

The highest peak next to the carrier is the Downlink frequency.

High Channel:

Full Spectrum



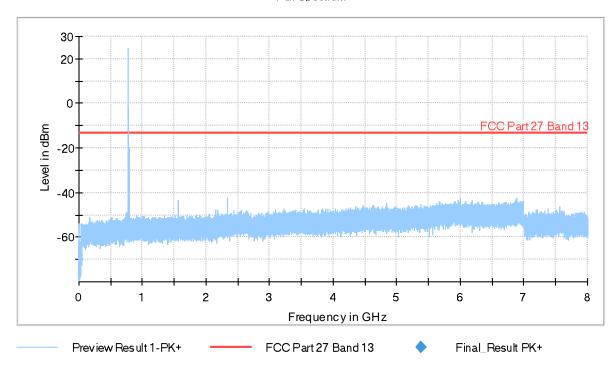


LTE Cat 1bis Band 13:

Middle Channel:

• Frequency range 9 kHz – 8 GHz:

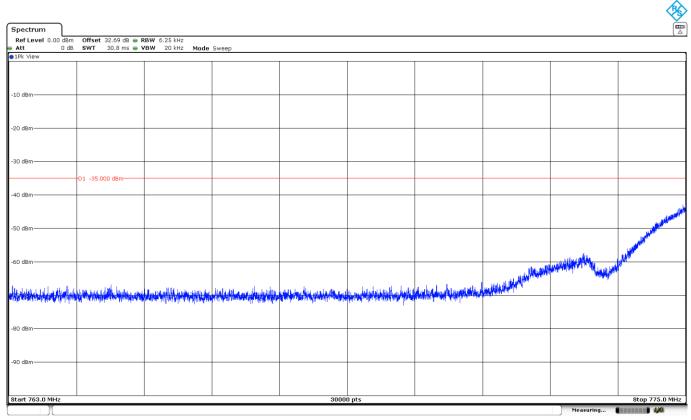
Full Spectrum



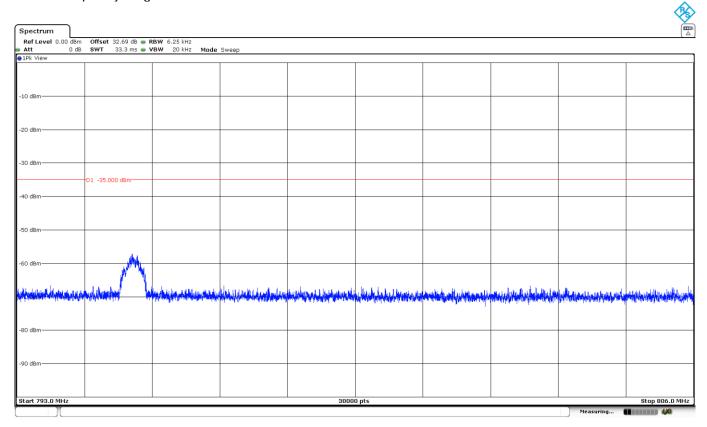
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Frequency range 763 MHz - 775 MHz:

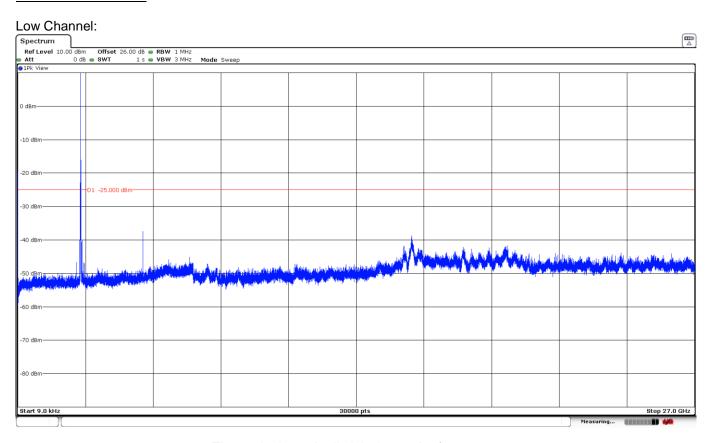


Frequency range 793 MHz – 806 MHz:

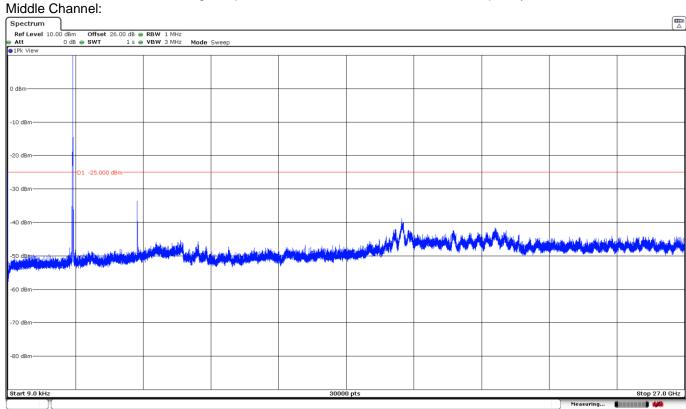




LTE Cat 1bis Band 41:



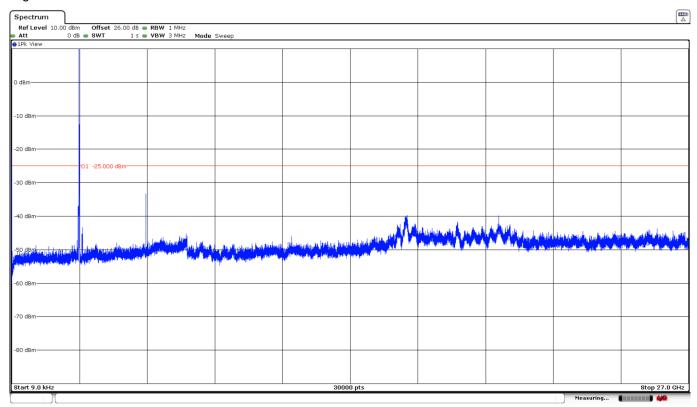
The peak above the limit is the carrier frequency. The highest peak next to the carrier is the Downlink frequency.



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High Channel:

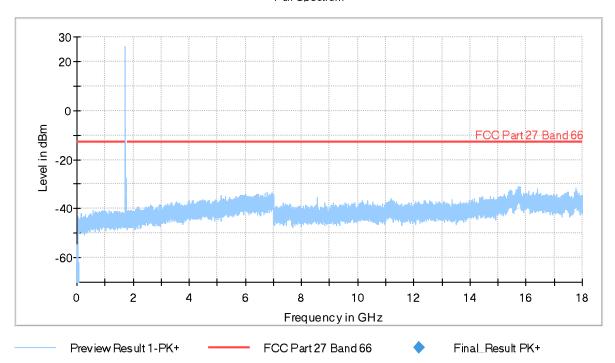




LTE Cat 1bis Band 66:

Low Channel:

Full Spectrum

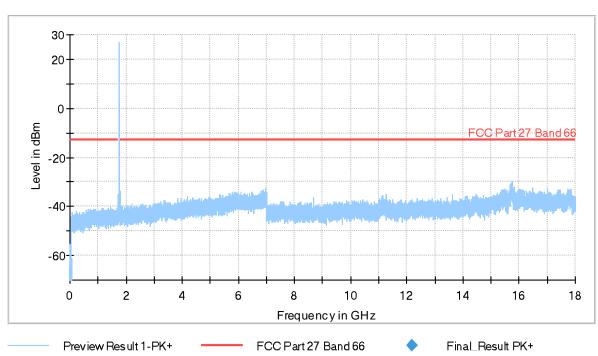


The peak above the limit is the carrier frequency.

The highest peak next to the carrier is the Downlink frequency.

Middle Channel:

Full Spectrum

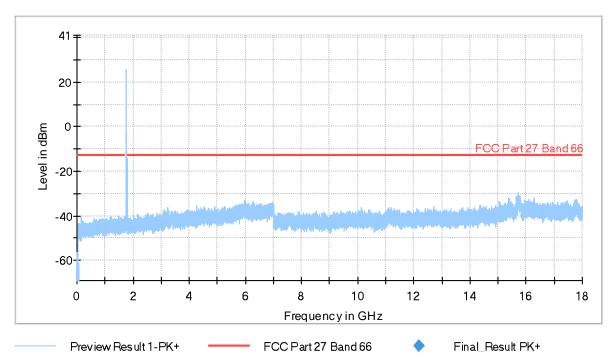


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High Channel:





C.I.F. A29507456



Spurious Emissions at Antenna Terminals at Block Edges

Limits

1. LTE Cat 1bis Band 12. FCC §27.53 (g) / RSS-130 Clause 4.7.

FCC §27. 53 (g):

For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

RSS-130 Clause 4.7:

4.7.1 General unwanted emissions limits

The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least 43 + 10 log10 p (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

2. LTE Cat 1bis Band 13. FCC §27.53 (c) / RSS-130 Clause 4.7.

FCC §27.53 (c):

On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least 43 + 10 log (P) dB. Compliance is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

On all frequencies between 763-775 MHz and 793-805 MHz. by a factor not less than 65 + 10 log (P) dB in a 6.25 kHz band segment. for mobile and portable stations. Compliance is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

RSS-130 Clause 4.7:

4.7.1 General unwanted emissions limits:

The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least 43 + 10 log10 p (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

4.7.2 Additional unwanted emissions limits:

In addition to the limit outlined in section 4.7.1 above, equipment operating in the frequency bands 746-756 MHz and 777-787 MHz shall also comply with the following restrictions:

- a. the power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least:
 - i. 76 + 10 log10 p (watts), dB, for base and fixed equipment and
 - ii. 65 + 10 log10 p (watts), dB, for mobile and portable equipment

b. the e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW/MHz for wideband signal and -80 dBW for discrete emission with bandwidth less than 700 Hz.

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DEKRA

3. LTE Cat 1bis Band 7, 38, 41. FCC §27.53 (m) (4) (6) / RSS-199 Clause 5.5:

FCC §27.53 (m) (4) (6):

- (m) For BRS and EBS stations, the power of any emissions outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts in accordance with the standards below. If a licensee has multiple contiguous channels, out-of-band emissions shall be measured from the upper and lower edges of the contiguous channels.
 - (4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.
 - (6) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

RSS-199 Clause 5.5:

4.7.1 General unwanted emissions limits:

4. LTE Cat 1bis Band 4, 66. FCC §27.53 (h) / RSS-139 5.6.

FCC §27.53 (h) / RSS-139 5.6:

Unwanted emissions shall be measured in terms of average values.

For all equipment, the TRP or total conducted power (sum of conducted power across all antenna connectors) of the unwanted emissions outside the frequency block or frequency block group shall not exceed the limits shown in table 6.

| Table 6: Unwanted emission limits | | | | |
|----------------------------------------------------------------------|---------------------|--|--|--|
| Offset from the edge of the frequency block or frequency block group | | | | |
| 1 MHz | -13 dBm/(1% of OB*) | | | |
| >1 MHz | -13 dBm/MHz | | | |

^{*}OB is the occupied bandwidth.

In addition to complying with the above limits, equipment operating in the band 2180-2200 MHz may require additional filtering (see SRSP-519).

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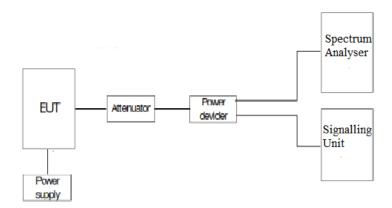


Method

The EUT RF output connector was connected to a spectrum analyser and to the Universal Radio Communication tester R&S CMW500 (selecting maximum transmission power of the EUT and different modes of modulation) using a 50-Ohm attenuator and a power splitter.

The reading of the spectrum analyser is corrected with the attenuation loss of connection between output terminal of EUT and input of the spectrum analyser.

Test Setup



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Results

LTE Cat 1bis Band 4:

Preliminary measurements determined QPSK. BW=5 MHz as the worst-case modulation in terms of band edge results. The next results are for this worst-case configuration.

Low Block Edge.

Note: Low Block Edge for LTE Cat 1bis Band 4 is the same as for LTE Cat 1bis Band 66.

High Block Edge.

| | RB=1. | RB=1. | RB=1. | RB=1. | RB=1. | RB=1. |
|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|
| LTE Cat 1bis Band | Offset=Max. | Offset=Max. | Offset=Max. | Offset=Max. | Offset=Max. | Offset=Max. |
| 4. QPSK: | BW = 1.4 | BW = 3 | BW = 5 | BW = 10 | BW = 15 | BW = 20 |
| | MHz | MHz | MHz | MHz | MHz | MHz |
| Maximum measured | | | | | | |
| level at High Block | -22.8 | -21.56 | -20.67 | -23.15 | -25.55 | -28.99 |
| Edge at antenna port | -22.0 | -21.50 | -20.07 | -23.15 | -25.55 | -20.99 |
| (dBm) | | | | | | |

| LTE Cat 1bis Band 4. QPSK: | RB=ALL. Offset=0. BW = 1.4 MHz | RB=AII. Offset=0. BW = 3 MHz | RB = AII. Offset = 0. BW = 5 MHz | RB = AII. Offset = 0. BW = 10 MHz | RB = All. Offset = 0. BW = 15 MHz | RB = All. Offset = 0. BW = 20 MHz |
|-------------------------------------------------------------------------------|-----------------------------------------|---------------------------------------|-------------------------------------------|--------------------------------------------|--------------------------------------------|--------------------------------------------|
| Maximum measured level at <u>High Block</u> <u>Edge</u> at antenna port (dBm) | -29.43 | -24.9 | -25.56 | -26.47 | -28.32 | -31.56 |

Measurement uncertainty: <±2.76 dB

Verdict

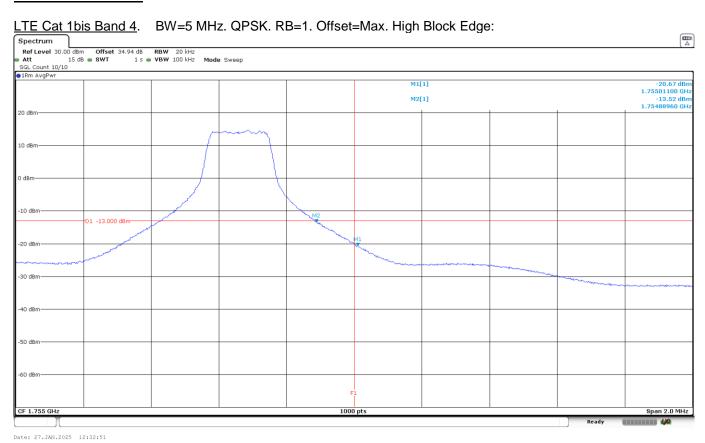
PASS

The plots below are for the worst case configuration specified before.

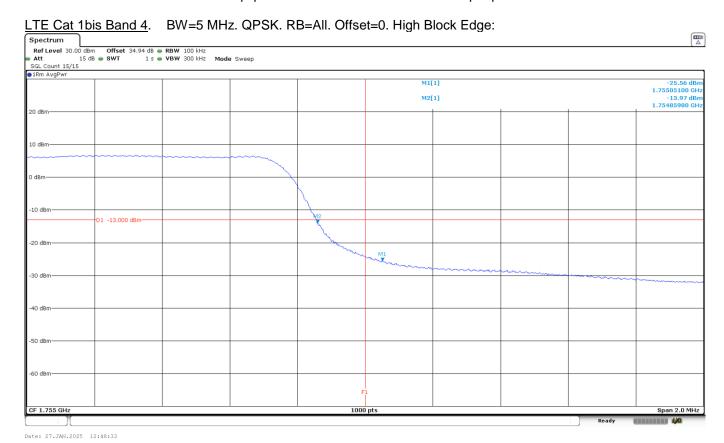
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LTE Cat 1bis Band 4:



The equipment transmits at the maximum output power



The equipment transmits at the maximum output power

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LTE Cat 1bis Band 7:

Preliminary measurements determined QPSK. BW=10 MHz as the worst-case modulation in terms of band edge results. The next results are for this worst-case configuration.

Low Block Edge.

| LTE Cat 1bis Band 8. QPSK: | RB=1. | RB=1. | RB=1. | RB=1. |
|------------------------------------------------------------------------------|------------|-------------|-------------|-------------|
| | Offset=0. | Offset=0. | Offset=0. | Offset=0. |
| | BW = 5 MHz | BW = 10 MHz | BW = 15 MHz | BW = 20 MHz |
| Maximum measured level at <u>Low</u> <u>Block Edge</u> at antenna port (dBm) | -15.28 | -14.45 | -15.52 | -16.81 |

| LTE Cat 1bis Band 8. QPSK: | RB = All. | RB = All. | RB = All. | RB = All. |
|------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|
| | Offset = 0. | Offset = 0. | Offset = 0. | Offset = 0. |
| | BW = 5 MHz | BW = 10 MHz | BW = 15 MHz | BW = 20 MHz |
| Maximum measured level at <u>Low</u> <u>Block Edge</u> at antenna port (dBm) | -22.1 | -26.83 | -30.7 | -31.23 |

High Block Edge.

| | RB=1. | RB=1. | RB=1. | RB=1. |
|-------------------------------------------------------------------------------|-------------|-------------|-------------|-------------|
| LTE Cat 1bis Band 8. QPSK: | Offset=Max. | Offset=Max. | Offset=Max. | Offset=Max. |
| | BW = 5 MHz | BW = 10 MHz | BW = 15 MHz | BW = 20 MHz |
| Maximum measured level at <u>High</u> <u>Block Edge</u> at antenna port (dBm) | -15.46 | -14.24 | -14.56 | -17 |

| | RB = All. | RB = All. | RB = All. | RB = All. |
|-----------------------------------------------------------------|----------------|-------------|----------------|-------------|
| LTE Cat 1bis Band 8. QPSK: | Offset $= 0$. | Offset = 0. | Offset $= 0$. | Offset = 0. |
| | BW = 5 MHz | BW = 10 MHz | BW = 15 MHz | BW = 20 MHz |
| Maximum measured level at High Block Edge at antenna port (dBm) | -24.18 | -27.16 | -27.51 | -27.71 |

Measurement uncertainty: <±2.76 dB

Verdict

PASS

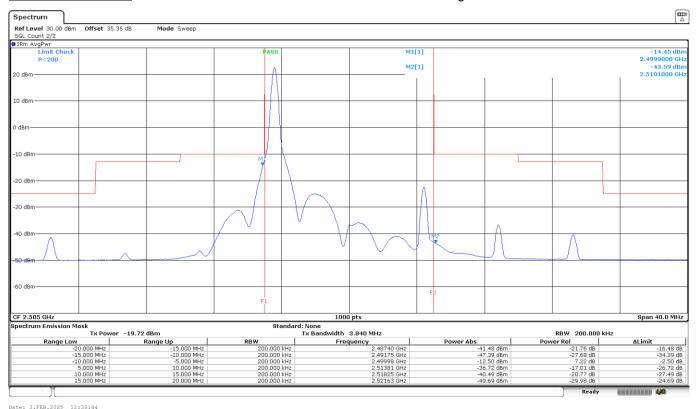
The plots below are for the worst case configuration specified before.



LTE Cat 1bis Band 7:

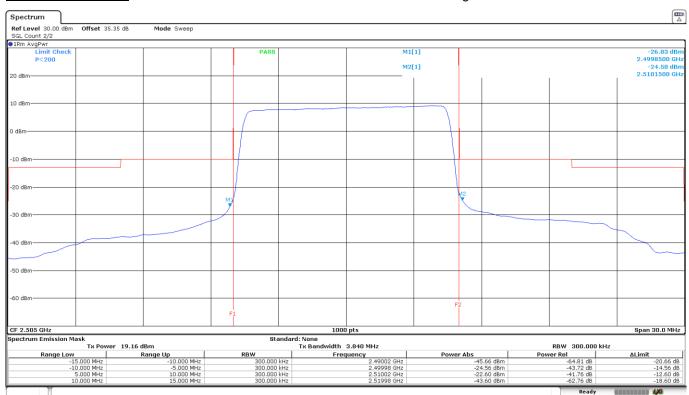
Date: 3.FEB.2025 12:32:23

LTE Cat 1bis Band 7. BW=10 MHz. QPSK. RB=1. Offset=0. Low Block Edge:



The equipment transmits at the maximum output power

LTE Cat 1bis Band 7. BW=10 MHz. QPSK. RB=All. Offset=0. Low Block Edge:

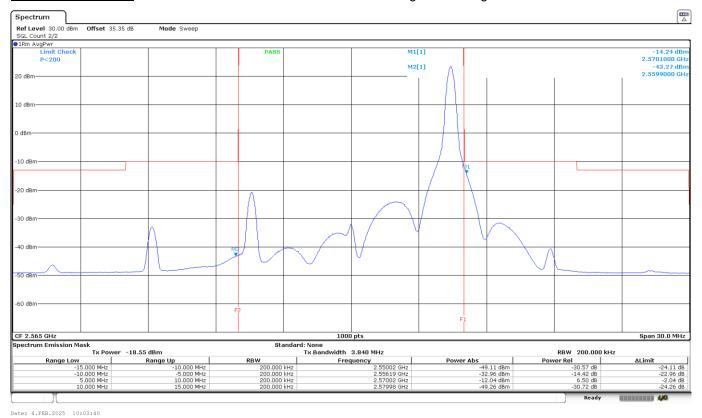


The equipment transmits at the maximum output power

Date: 4.FEB.2025 09:57:06

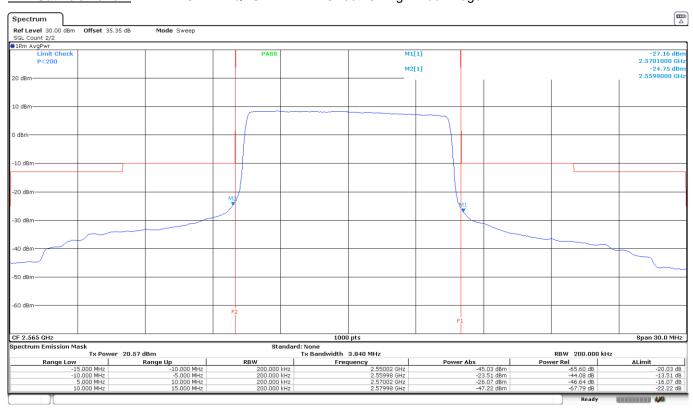


LTE Cat 1bis Band 7. BW=10 MHz. QPSK. RB=1. Offset=Max. High Block Edge:



The equipment transmits at the maximum output power

LTE Cat 1bis Band 7. BW=10 MHz. QPSK. RB=All. Offset=0. High Block Edge:



The equipment transmits at the maximum output power

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LTE Cat 1bis Band 12:

Preliminary measurements determined QPSK. BW=10 MHz as the worst-case modulation in terms of band edge results. The next results are for this worst-case configuration.

Low Block Edge.

| LTE Cat 1bis Band 12. QPSK: | RB=1. | RB=1. | RB=1. | RB=1. |
|------------------------------------------------------------------------------|--------------|-------------|-------------|-------------|
| | Offset = 0. | Offset = 0. | Offset = 0. | Offset = 0. |
| | BW = 1.4 MHz | BW = 3 MHz | BW = 5 MHz | BW = 10 MHz |
| Maximum measured level at <u>Low</u> <u>Block Edge</u> at antenna port (dBm) | -46.64 | -32.21 | -26.9 | -34.22 |

| LTE Cat 1bis Band 12. QPSK: | RB = All. | RB = All. | RB = All. | RB = All. |
|---------------------------------------------------------------------------------|--------------|-------------|-------------|-------------|
| | Offset = 0. | Offset = 0. | Offset = 0. | Offset = 0. |
| | BW = 1.4 MHz | BW = 3 MHz | BW = 5 MHz | BW = 10 MHz |
| Maximum measured level at <u>Low</u> <u>Block Edge</u> at antenna port (dBm) | -37.11 | -30.38 | -29.75 | -34.7 |

High Block Edge.

| | RB=1. | RB=1. | RB=1. | RB=1. |
|-------------------------------------------------------------------------------|--------------|-------------|-------------|-------------|
| LTE Cat 1bis Band 12. QPSK: | Offset=Max. | Offset=Max. | Offset=Max. | Offset=Max. |
| | BW = 1.4 MHz | BW = 3 MHz | BW = 5 MHz | BW = 10 MHz |
| Maximum measured level at <u>High</u> <u>Block Edge</u> at antenna port (dBm) | -21.85 | -17.74 | -18.23 | -17.56 |

| LTE Cat 1bis Band 12. QPSK: | RB = All. | RB = All. | RB = All. | RB = All. |
|-------------------------------------------------------------------------------|--------------|-------------|-------------|-------------|
| | Offset = 0. | Offset = 0. | Offset = 0. | Offset = 0. |
| | BW = 1.4 MHz | BW = 3 MHz | BW = 5 MHz | BW = 10 MHz |
| Maximum measured level at <u>High</u> <u>Block Edge</u> at antenna port (dBm) | -26.37 | -26.23 | -26.84 | -31 |

Measurement uncertainty: <±2.76 dB

Verdict

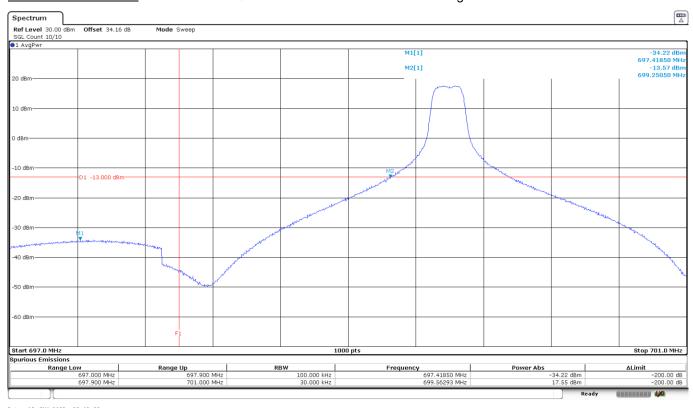
PASS

The plots below are for the worst case configuration specified before.



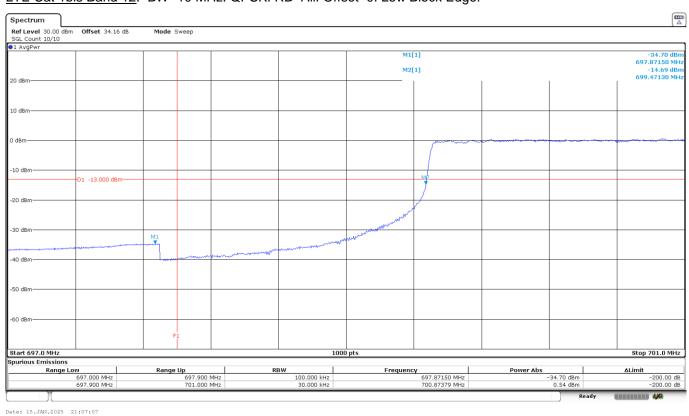
LTE Cat 1bis Band 12:

LTE Cat 1bis Band 12. BW=10 MHz. QPSK. RB=1. Offset=0. Low Block Edge:



The equipment transmits at the maximum output power

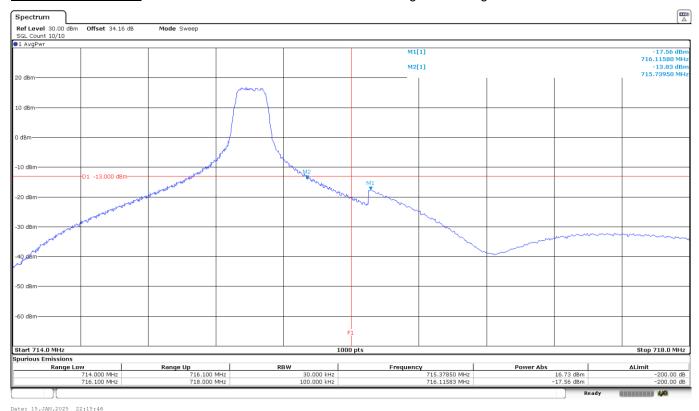
LTE Cat 1bis Band 12. BW=10 MHz. QPSK. RB=All. Offset=0. Low Block Edge:



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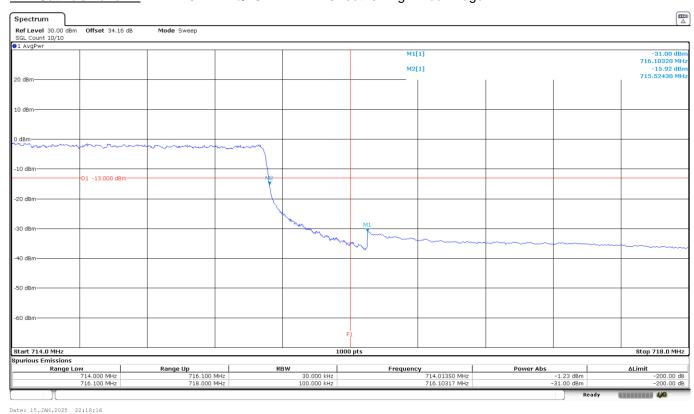


LTE Cat 1bis Band 12. BW=10 MHz. QPSK. RB=1. Offset=Max. High Block Edge:



The equipment transmits at the maximum output power

LTE Cat 1bis Band 12. BW=10 MHz. QPSK. RB=All. Offset=0. High Block Edge:



The equipment transmits at the maximum output power



LTE Cat 1bis Band 13:

Preliminary measurements determined QPSK. BW=10 MHz as the worst-case modulation in terms of band edge results. The next results are for this worst-case configuration.

Low Block Edge.

| LTE Cat 1bis Band 13. QPSK: | RB=1. Offset = 0. BW = 5 MHz | RB=1. Offset = 0. BW = 10 MHz |
|------------------------------------------------------------------------------|------------------------------------|-------------------------------------|
| Maximum measured level at <u>Low</u> <u>Block Edge</u> at antenna port (dBm) | -17.03 | -17.25 |

| LTE Cat 1bis Band 13. QPSK: | RB = All. Offset = 0. BW = 5 MHz | RB = All. Offset = 0. BW = 10 MHz |
|------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------|
| Maximum measured level at <u>Low</u> <u>Block Edge</u> at antenna port (dBm) | -25.26 | -30.06 |

High Block Edge.

| | RB=1. | RB=1. |
|-------------------------------------------------------------------------------|-------------|-------------|
| LTE Cat 1bis Band 13. QPSK: | Offset=Max. | Offset=Max. |
| | BW = 5 MHz | BW = 10 MHz |
| Maximum measured level at <u>High</u> <u>Block Edge</u> at antenna port (dBm) | -16.8 | -16.76 |

| LTE Cat 1bis Band 13. QPSK: | RB = All. Offset = 0. | RB = All. Offset = 0. |
|-------------------------------------------------------------------------------|--------------------------|--------------------------|
| Maximum measured level at <u>High</u> <u>Block Edge</u> at antenna port (dBm) | -25.03 | -29.39 |

Measurement uncertainty: <±2.76 dB

Verdict

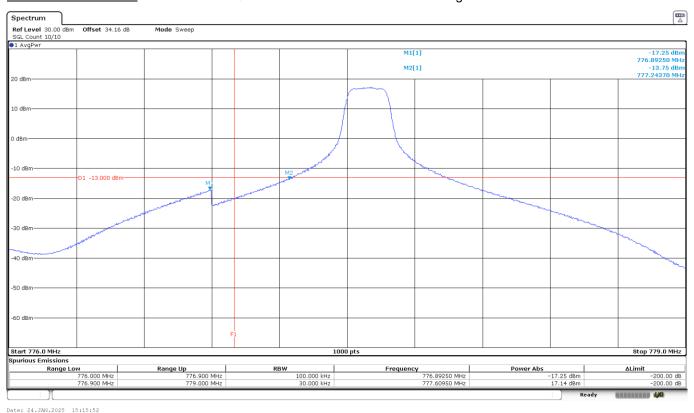
PASS

The plots below are for the worst case configuration specified before.



LTE Cat 1bis Band 13:

LTE Cat 1bis Band 13. BW=10 MHz. QPSK. RB=1. Offset=0. Low Block Edge:



The equipment transmits at the maximum output power

LTE Cat 1bis Band 13. BW=10 MHz. QPSK. RB=All. Offset=0. Low Block Edge:

