

FCC ID: T8GP104 IC ID: 6434A-P104

5.2 Emission bandwidth

For test instruments and accessories used see section 6 Part MB.

5.2.1 Description of the test location

Test location: Shielded Room S4

5.2.2 Photo documentation of the test set-up



5.2.3 Applicable standard

According to FCC Part 15, Section 15.247(a)(2):

Systems using digital modulation techniques may operate in the 902 - 928 MHz, 2400 – 2483.5 MHz and 5725 – 5850 MHz bands. The minimum 6 dB bandwidth shall be at least 500 kHz.

5.2.4 Description of Measurement

The bandwidth was measured at an amplitude level reduced from the reference level of a modulated channel by a ratio of -6 dB. The reference level is the level of the highest signal amplitude observed at the transmitter at either the fundamental frequency or the first order modulation products in all typical modes of operation, including the unmodulated carrier, even if atypical. An alternative is to use the bandwidth measurement of the analyser. The cable loss of 1.3 dB @ 2.45 GHz is taken into account.

Spectrum analyser settings:

RBW: 100 kHz, VBW: 300 kHz, Detector: Max peak, Trace Mode: Max hold, Sweep time: Auto

FCC ID: T8GP104 IC ID: 6434A-P104

5.3 Occupied bandwidth

For test instruments and accessories used see section 6 Part MB.

5.3.1 Description of the test location

Test location: Shielded Room S4

5.3.2 Photo documentation of the test set-up



5.3.1 Applicable standard

According to RSS-Gen, 4.6.1:

When an occupied bandwidth value is not specified in the applicable RSS, the transmitted signal bandwidth to be reported is to be its 99 % emission bandwidth, as calculated or measured.

5.3.2 Description of Measurement

The bandwidth was measured with the function “bandwidth measurement” of the spectrum analyser. The EUT is connected via suitable attenuator at the spectrum analyser. The measurement is repeated for every different modulation standard of the EUT and recorded. The cable loss of 1.3 dB @ 2.45 GHz is taken into account.

Spectrum analyser settings:

RBW: 100 kHz, VBW: 300 kHz, Detector: Max peak, Trace Mode: Max hold, Sweep time: Auto

FCC ID: T8GP104 IC ID: 6434A-P104

5.4 Maximum peak conducted output power

For test instruments and accessories used see section 6 Part CPC 3.

5.4.1 Description of the test location

Test location: Shielded Room S4

5.4.2 Photo documentation of the test set-up



5.4.3 Applicable standard

According to FCC Part 15, Section 15.247(b)(3):

For systems using digital modulation in the 2400-2483.5 MHz and 5725 – 5850 MHz bands, the maximum peak output power of the transmitter shall not exceed 1 Watt. The limit is based on transmitting antennas of directional gain that do not exceed 6 dBi.

5.4.4 Description of Measurement

The output power is measured using the spectrum analyzer method according KDB 558074, clause 8.1 option 1. The EUT is set while measuring in TX continuous mode with a duty cycle, $x = 1$. The cable loss of 1.3 dB @ 2.45 GHz is taken into account.

FCC ID: T8GP104 IC ID: 6434A-P104

5.5 Spurious emissions conducted

For test instruments and accessories used see section 6 Part SEC 2 and SEC 3.

5.5.1 Description of the test location

Test location: Shielded Room S4

5.5.2 Photo documentation of the test set-up



5.5.3 Applicable standard

According to FCC Part 15, Section 15.247(d):

In any 100 kHz bandwidth outside the frequency bands 2400 – 2483.50 MHz and 5725 – 5850 MHz, the digitally modulated radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or an radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limit specified in Section 15.209(a) (see Section 15.205(c)).

5.5.4 Description of measurement

The spurious emissions are measured conducted using a spectrum analyser in a test setup following the procedures set out in KDB 558074 for DTS. The transmitter is set to the lowest operating frequency (CH0), the middle (CH7) and to the highest operating frequency (CH15). The frequency spectrum outside from the operating frequency range (2400 - 2483.5 MHz) is scanned for emissions that exceed the defined limit. The measurement is performed at normal test conditions in modulated TX continuous mode. The cable loss of the complete frequency range is taken into account.

Spectrum analyser search setting:

RBW: 100 kHz, VBW: 300 kHz, Detector: Max peak, Trace Mode: Max hold, Sweep time: Auto

FCC ID: T8GP104 IC ID: 6434A-P104

5.6 Band edge compliance

For test instruments and accessories used see section 6 Part MB.

5.6.1 Description of the test location

Test location: Shielded Room S4

5.6.2 Photo documentation of the test set-up



5.6.3 Applicable standard

According to FCC Part 15C, Section 15.247(d):

In any 100 kHz bandwidth outside the frequency bands 2400 – 2483.5 MHz and 5725 – 5850 MHz, the digitally modulated radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or an radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required.

5.6.4 Description of Measurement

A spectrum analyser is connected to the output of the transmitter via a suitable attenuator while EUT was operating in transmit mode at the assigned frequency according Publication Number 913591, 03/26/2007.

Spectrum analyser settings:

RBW: 100 kHz, VBW: 300 kHz, Detector: Max peak, Trace Mode: Max hold, Sweep time: Auto

FCC ID: T8GP104 IC ID: 6434A-P104

5.7 Radiated emissions in restricted bands

For test instruments and accessories used see section 6 Part SER 2, SER 3.

5.7.1 Description of the test location

Test location: OATS 1
Test location: Anechoic chamber 1
Test distance: 3 m

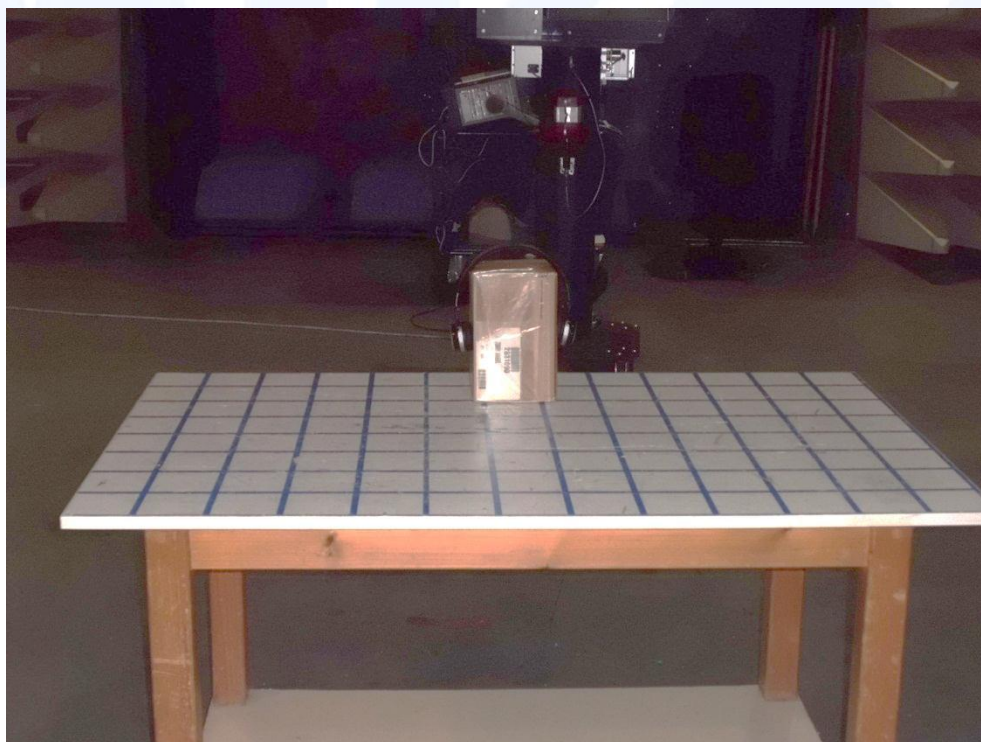
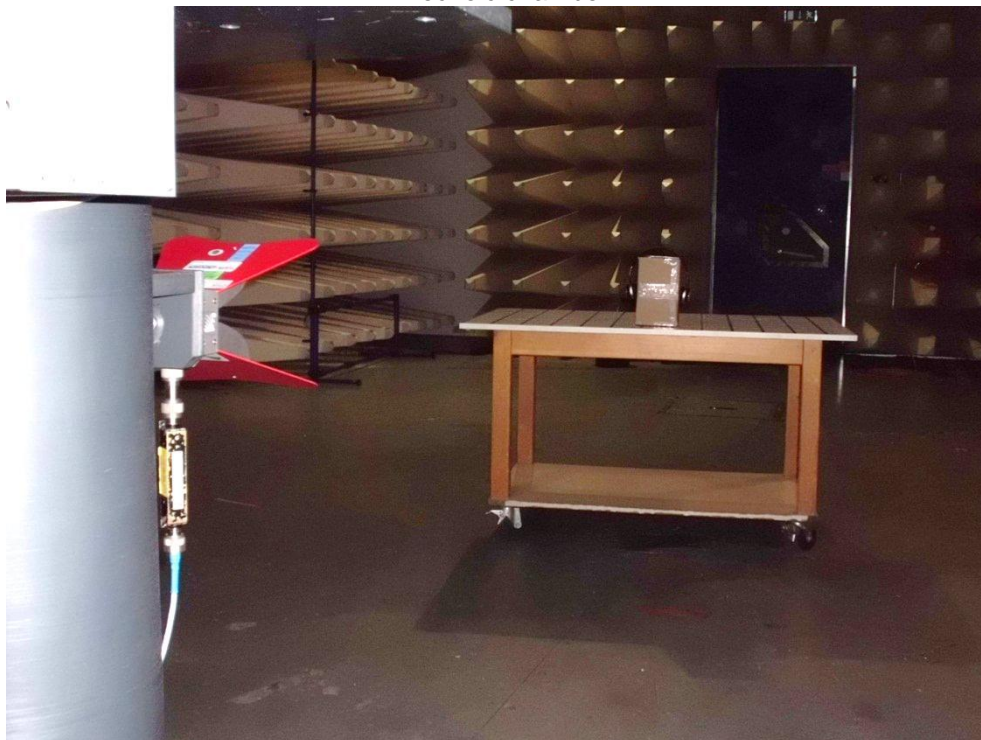
5.7.2 Photo documentation of the test set-up

Open area test site



FCC ID: T8GP104 IC ID: 6434A-P104

Anechoic chamber



According to FCC Part 15, Section 15.205(a):

In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limit specified in Section 15.209(a).

FCC ID: T8GP104 IC ID: 6434A-P104

5.8 Power spectral density

For test instruments and accessories used see section 6 Part CPC 3.

5.8.1 Description of the test location

Test location: Shielded Room S4

5.8.2 Photo documentation of the test set-up



5.8.3 Applicable standard

According to FCC Part 15, Section 15.247(e):

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

5.8.4 Description of Measurement

The measurement is performed using the procedure set out in KDB-558074 clause 9. The power measurement was done using a spectrum analyzer, option 1. The cable loss of 1.3 dB @ 2.45 GHz is taken into account.

Spectrum analyser settings:

RBW: 3 kHz, VBW: 10 kHz, Detector: Max peak, Trace Mode: Max hold, Sweep time: Auto

FCC ID: T8GP104 IC ID: 6434A-P104

5.12 Receiver radiated emissions

For test instruments and accessories used see section 6 Part **SER2** and **SER3**.

5.12.1 Description of the test location

Test location: OATS 1
Test location: Anechoic chamber 1
Test distance: 3 m

5.12.2 Photo documentation of the test set-up

Open area test site



FCC ID: T8GP104 IC ID: 6434A-P104

Anechoic chamber

