

FCC / TIMCO

Reference: JOB #:735G1

Dear Mr. Baschin,

Regarding the questions from TIMCO related to HW 8612 I give the following explanation.

Q1

Right, in the report is not include a special graph showing that the restricted band at 2.483 GHz is not violated.

In future reports should provide such measurement.

For today we can derive the compliance from other measurements by calculation, example antenna 1.

Facts:

All measurements are PEAK measurements

Max.radiated carrier power on channel 47 is about 19 dBm (18,42 dBm, see page 64 of 131)
 $P_1 = 19 \text{ dBm}$

Conducted carrier power is about 16 dBm (15,51 dBm) on channel 47. (subclause 15. Text part).

Real antenna gain calculated is about 3dB (19 – 16) on channel 47.
 $G = 3 \text{ dBi}$, numerical : $G = 2$.

Conducted measurement of Band-edge Compliance on channel 47 shows a decrease of about 65 dB from carrier maximum to point of intersection with frequency $F_1 = 2.4835 \text{ GHz}$. (page 129 od 131)
 $\Delta P = 65 \text{ dB}$

So we have a radiated power $P_2 = -46 \text{ dBm}$ at the upper band limit.
 $P_2 = -46 \text{ dBm}$; numerical $P_2 = 0.025 \mu\text{W}$

$d = 10\text{m}$ for 10m OATS.

With the formula $E = \sqrt{30 \times P \times G} / d$ we will determine the fieldstrength.

$E = 122,4 \mu\text{V/m} = 41,7 \text{ dB}\mu\text{V/m}$

This value is far from the limit so that this requirement is fulfilled even with consideration of inaccuracy

Q2

The mentioned sheet (page 107 of 131) shows the carrier with an inexact frequency information. This inaccuracy is caused by the low sample rate of the spectrum analyzer and the fact that the test engineer knows this signal as carrier.

For the right frequency distance to band edge and restricted band please refer to the results of Carrier Power Measurement, Band-edge Compliance and the calculation above.

Best regards

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