

Declaration of Electromagnetic Field Health Compliance for RRU3203 (LTE band 12)

To whom it may concern,

As to the product **RRU3203** made by Huawei Technologies Co., Ltd., we declare that it complies with the Basic restrictions/Reference levels for electric, magnetic and electromagnetic fields as specified in following standards(s):

Nr.	Standard
1	47CFR FCC Part 1 (10-1-12 Edition)
2	RSS-102 (Issue4, March 2010)

The compliance is demonstrated based on the following calculation model assessment:

- The power density according to far-field model is:

$$S = \frac{P \times G_{(\theta, \phi)}}{4 \times \pi \times R^2}$$

Where:

P = input power of the antenna.

G = antenna gain relative to an isotropic antenna.

θ, ϕ = elevation and azimuth angles.

R = distance from the antenna to the point of investigation.

- For single or multiple RF sources, the calculated power density should comply with following:

$$\sum_i \frac{S_i}{S_{Limit, i}} \leq 1$$

Where:

S_i = the power density when the f is i .

$S_{Limit, i}$ = the reference level requirement for power density when f is i .

- The calculation of the power density or safe distance is:

NOTE 1: The RF exposure evaluation is base on the far-field and the radiation exposure is over-estimated.

NOTE 2: The maximum output power level is taken into account as a worst case for the purpose of the calculation of power density or safe distance.

NOTE 3: The minimum antenna feed cable loss (assumed no cable loss) is taken into account as a worst case for the purpose of the calculation of power density or safe distance.

NOTE 4: The maximum antenna radiation exposure orientation and maximum antenna gain is taken into account as a worst case for the purpose of the calculation of power density or safe distance.

RF Source	Calculation
RF Source #1	$f = 729.25$ to 744.75 MHz

RF Source	Calculation
	$S_{Limit,i} = 4.86 \text{ W/m}^2$ $P = 80 \text{ W} (= 49.0 \text{ dBm, measured max})$ $G_{(\theta,\phi)} = 12.589 (= 11 \text{ dBi})$ $\theta, \phi = \text{The worst condition is considered, i.e. the max } G \text{ is used.}$ $S_i = \frac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2} = 80.14 / R^2 \text{ W/m}^2$ $\frac{S_i}{S_{Limit,i}} = 16.48 / R^2$
RF Source(s) Combination	$\sum_i \frac{S_i}{S_{Limit,i}} = 16.48 / R^2 \leq 1$ $R \geq 4.06 \text{ m (the minimum Safe Distance)}$

Person responsible for making this declaration:

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