

## Declaration of Compliance for RF Exposure Evaluation

To whom it may concern,

As to the product **RRU3249 (LTE Band12)** made by Huawei Technologies Co., Ltd. as the applicant and Huawei Technologies Co., Ltd. as the manufacturer, we declare that it complies with the following standards(s):

- 47CFR FCC Part 1 & OET Bulletin 65

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

1. 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.
- $\theta, \phi$  = elevation and azimuth angles.
- $R$  = distance from the antenna to the point of investigation.

2. 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  $i$ .
- $f$  = operating frequency.

3. 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 for Individual Source	
RF Source #1	$f$	= 729 to 746 MHz
	$S_{Limit,i}$	= $\frac{729}{150} = 4.86$ W/m <sup>2</sup>

	$P, G_{(\theta,\phi)}$	<input checked="" type="checkbox"/> $P \times G_{(\theta,\phi)}$ : $P^{(*)} = 75.86 \text{ W} (=47.8+1=48.8 \text{ dBm, per port})$ $151.72 \text{ W} \text{ (calculated, two ports)}$ $G_{(\theta,\phi)} = 50.119 (=17 \text{ dBi})$ <hr/> <sup>(*)</sup> : The value is from: <input type="checkbox"/> measured max (See relevant RF report), <input checked="" type="checkbox"/> rated + declared tolerance, <input type="checkbox"/> max allowed by RF standard. And, the transmission duty cycle is: <input type="checkbox"/> ignored, <input checked="" type="checkbox"/> used, that is: _____ % (for mode: _____).
	$\theta, \phi$	= The worst condition is considered, i.e. the max $G$ is used.
	$S_i$	= $\frac{P \times G_{(\theta,\phi)}}{4 \times \pi R^2} = 605.11 / R^2 \text{ W/m}^2$
	$\frac{S_i}{S_{Limit,i}}$	= $110.95 / R^2$
Whole Product	Calculation for Whole Product	
Whole Product	$\frac{S}{S_{Limit}}$	= $124.51 / R^2 \leq 1$
	$R$	$\geq 11.16 \text{ m}$ (the minimum Safe Distance)
	NOTE:	The result is the worst case of each individual source and simultaneous transmission sources (if applicable).

Person responsible for making this declaration:

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