

Declaration of Electromagnetic Field Health Compliance for RU3832 LTE AWS Band

To whom it may concern,

As to the product **RU3832** 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 (10-1-13 Edition) & OET Bulletin 65
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 .
- f = operating frequency.

- 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
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RF Source #1	f	=	<u>2110</u> to <u>2155</u> MHz
	$S_{Limit,i}$	=	= <u>10</u> W/m ²
	P , $G_{(\theta,\phi)}$	=	$\boxtimes P \times G_{(\theta,\phi)}$: $P^{(*)}$ = <u>67.6</u> W (per port) <u>135.2</u> W (calculated, two ports) $G_{(\theta,\phi)}$ = <u>56.2</u> (= <u>17.5</u> dBi) $(*)$: The value is from: ☐ measured max (See relevant RF report), ☒ rated + declared tolerance, ☐ max allowed by RF standard. And, the transmission duty cycle is: ☒ ignored, ☐ used, that is: _____ % (for mode: _____).
	θ, ϕ	=	The worst condition is considered, i.e. the max G is used.
	S_i	=	$\frac{P \times G_{(\theta,\phi)}}{4 \times \pi} / R^2 = \underline{545.95} / R^2$ W/m ²
	$\frac{S_i}{S_{Limit,i}}$	=	<u>54.6</u> / R^2
RF Sources	Calculation for Simultaneous Transmission Sources		
(Not applicable)	(Not applicable)		
Whole Product	Calculation for Whole Product		
Whole Product	$\frac{S}{S_{Limit}}$	=	<u>54.6</u> / $R^2 \leq 1$
	R	$\geq$	<u>7.39</u> 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:



Li Guo

RF Engineer, EMC Lab

Reliability Laboratory of Huawei Technologies Co., Ltd.

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