Declaration of Electromagnetic Field Health Compliance

To whom it may concern,

As to the product **pRRU3901** 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)
2	RSS-102 (Issue4, March 2010)

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.

θ, ϕ = 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.

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.

AWS Band:

RF Source	Calculation		
RF Source #1	f	=	2110 to 2155 MHz
	$S_{Limit,i}$	=	10 W/m^2
	P	=	0.316 W (=25 dBm) (rated power: 23dBm, tolerance: +/-2dB)
	$G_{(\theta,\phi)}$	=	2.51 (= 4 dBi) (Integrated antenna)
	$EIRP = P \times G_{(\theta,\phi)}$	=	0.79316 W
	θ, ϕ	=	The worst condition is considered, i.e. the max G is used.
	R	≥	0.25 m
	S_i	≤	$\dfrac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2}$ = 1.01 W/m^2
	$\dfrac{S_i}{S_{Limit,i}}$	≤	0.101

RF Source	Calculation		
RF Source #1	f	=	2110 to 2155 MHz
	$S_{Limit,i}$	=	10 W/m^2
	P	=	0.316 W (=25 dBm) (rated power: 23dBm, tolerance: +/-2dB)
	$G_{(\theta,\phi)}$	=	11.22 (= 10.5 dBi) (External antenna)
	$EIRP = P \times G_{(\theta,\phi)}$	=	3.54552 W
	θ, ϕ	=	The worst condition is considered, i.e. the max G is used.
	R	≥	0.25 m
	S_i	≤	$\dfrac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2}$ = 4.51 W/m^2
	$\dfrac{S_i}{S_{Limit,i}}$	≤	0.451

PCS Band:

RF Source	Calculation		
RF Source #1	f	=	1930 to 1990 MHz
	$S_{Limit,i}$	=	10 W/m^2
	P	=	0.316 W (=25 dBm) (rated power: 23dBm, tolerance: +/-2dB)
	$G_{(\theta,\phi)}$	=	2.51 (= 4 dBi) (Integrated antenna)

RF Source	Calculation		
	$EIRP = P \times G_{(\theta,\phi)}$	$=$	0.79316 W
	θ, ϕ	$=$	The worst condition is considered, i.e. the max G is used.
	R	$\geq$	0.25 m
	S_i	$\leq$	$\dfrac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2} = 1.01$ W/m^2
	$\dfrac{S_i}{S_{Limit,i}}$	$\leq$	0.101

RF Source	Calculation		
	f	$=$	1930 to 1990 MHz
	$S_{Limit,i}$	$=$	10 W/m^2
	P	$=$	0.316 W (=25 dBm) (rated power: 23dBm, tolerance: +/-2dB)
	$G_{(\theta,\phi)}$	$=$	11.22 (= 10.5 dBi) (External antenna)
RF Source #1	$EIRP = P \times G_{(\theta,\phi)}$	$=$	3.54552 W
	θ, ϕ	$=$	The worst condition is considered, i.e. the max G is used.
	R	$\geq$	0.25 m
	S_i	$\leq$	$\dfrac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2} = 4.51$ W/m^2
	$\dfrac{S_i}{S_{Limit,i}}$	$\leq$	0.451

The product has different kinds of combinations, and the calculated results of these combinations are as below:

Integrated antenna:

AWS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	$\leq$	0.101 (Less than 1, so complied)
PCS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	$\leq$	0.101 (Less than 1, so complied)
AWS Band & PCS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	$\leq$	0.202 (Less than 1, so complied)
AWS Band & AWS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	$\leq$	0.202 (Less than 1, so complied)

PCS Band & PCS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	≤	0.202 (Less than 1, so complied)

External antenna:

AWS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	≤	0.451 (Less than 1, so complied)
PCS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	≤	0.451 (Less than 1, so complied)
AWS Band & PCS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	≤	0.902 (Less than 1, so complied)
AWS Band & AWS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	≤	0.902 (Less than 1, so complied)
PCS Band & PCS Band	$\sum_i \dfrac{S_i}{S_{Limit,i}}$	≤	0.902 (Less than 1, so complied)

Calculated safe distance: 0.25 m

Person responsible for making this declaration:

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June 25, 2014