



## Declaration of Electromagnetic Field Health Compliance for AP7110SN-GN

To whom it may concern,

As to the product **AP7110SN-GN** 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 **(1) 47CFR FCC Part 1 & OET Bulletin 65, and (2) RSS-102**, 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  $i$ .

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.



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RF Source	Calculation
RF Source #1	$f = 2400 \text{ to } 2483.5 \text{ MHz}$
	$S_{Limit,i} = 10 \text{ W/m}^2$
	$P = 0.2944 \text{ W}$ (measured max is 24.69 dBm, duty cycle is 100%)
	$G_{(\theta,\phi)} = 2$ (= 3 dBi)
	$EIRP = P \times G_{(\theta,\phi)} = 0.5888 \text{ W}$ (measured max.)
	$\theta, \phi =$ The worst condition is considered, i.e. the max $G$ is used.
	$R \geq 0.2 \text{ m}$
	$S_i \leq \frac{P \times G_{(\theta,\phi)}}{4 \times \pi \times R^2} = 1.2 \text{ W/m}^2$
$\frac{S_i}{S_{Limit,i}} \leq 0.12$	
RF Source(s) Combination	$\sum_i \frac{S_i}{S_{Limit,i}} \leq 0.12$ (Less than 1, so complied)

Person responsible for making this declaration:

Signature :

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Position/Title : RF Engineer

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