



TESTING CERT #2174.01

Declaration of Compliance for RF Exposure Evaluation

Product Name: HD Video Camera

Product Model: HUAWEI VPC800

Applicant: Huawei Technologies Co., Ltd.

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To whom it may concern,

As to the product(s) involved in this document, we declare that they comply 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.
- 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 .
- 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	= 2400 to 2483.5 MHz
	$S_{Limit,i}$	= 10 W/m ²
	$E_{measured}$	= 0.0061 V/m (=75.74 dBμV/m, measured max E-field value @ 3 m (See relevant RF report))
		= $\frac{\sqrt{30 \times P \times G_{(\theta, \phi)}}}{3}$

	$P \times G_{(\theta, \phi)}$	=	$\frac{(3 \times E_{measured})^2}{30} = \underline{1.125e-5} \text{ W}$
	θ, ϕ	=	The worst condition is considered, i.e. the max G is used.
	R	$\geq$	<u>0.2</u> m (the minimum Safe Distance)
	S_i	$\leq$	$\frac{P \times G_{(\theta, \phi)}}{4 \times \pi \times R^2} = \underline{2.238e-5} \text{ W/m}^2$
	$\frac{S_i}{S_{Limit, i}}$	$\leq$	<u>2.238e-6</u>
RF Sources	Calculation for Simultaneous Transmission Sources		
(Not applicable)	(Not applicable)		
Whole Product	Calculation for Whole Product		
Whole Product	$\frac{S}{S_{Limit}}$	=	<u>2.238e-6</u> (Less than 1, so complied)
	NOTE: The result is the worst case of each individual source and simultaneous transmission sources (if applicable).		

Consequently, beyond the specified distance showed above:

Considering the lower RF field exposure levels and relevant research results collected to date by international organizations, there is no convincing scientific evidence that the RF signals from this product cause adverse effects on human health.

END