



**Neutron Engineering Inc.**

# **FCC RF EXPOSURE REPORT**

**FCC ID: QISWS323**

**Project No. : 1212C062**  
**Equipment : 1)300Mbps Mini Wireless Router;**  
**2)300Mbps Wireless Range Extender**  
**Model Name : WS323**  
**Applicant : Huawei Technologies Co.,Ltd.**  
**Address : Bantian, Longgang District, Shenzhen China**  
**Manufacturer : Huawei Technologies Co.,Ltd.**  
**Address : Administration Building, Huawei Base, Bantian,**  
**Longgang District ,Shenzhen 518129, P.R.China**

**According: : FCC Guidelines for Human Exposure IEEE C92.76**

***Neutron Engineering Inc.***

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## MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
0	HUAWEI	101003WS322A	Integral Antenna	N/A	1.0	5G
1	HUAWEI	111003WS322A	Integral Antenna	N/A	1.0	5G

Note: The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R)

Operating Mode	1TX	2TX
TX Mode		
802.11a	V (ANT 0 or ANT 1)	-
802.11n(20MHz)	-	V (ANT 0 & ANT 1)
802.11n(40MHz)	-	V (ANT 0 & ANT 1)



**TEST RESULTS**

EUT:	300Mbps Mini Wireless Router	Model Name :	WS323
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX A Mode /CH149, CH157, CH165		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
16.44	44.0555	0.01790401	1	Complies
16.90	48.9779	0.01990446	1	Complies
16.89	48.8652	0.01985868	1	Complies

EUT:	300Mbps Mini Wireless Router	Model Name :	WS323
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 4/TX N20 Mode /CH149, CH157, CH165-ANT 0		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
16.92	49.2040	0.01999633	1	Complies
17.35	54.3250	0.02207752	1	Complies
17.51	56.3638	0.02290606	1	Complies

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Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 4/TX N20 Mode /CH149, CH157, CH165-ANT 1		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
16.57	45.3942	0.01844805	1	Complies
16.93	49.3174	0.02004243	1	Complies
17.39	54.8277	0.02228181	1	Complies



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Test Mode :	Band 4/TX N20 Mode /CH149, CH157, CH165 -ANT 0+ANT 1		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
19.76	94.6237	0.03845478	1	Complies
20.16	103.7528	0.04216483	1	Complies
20.46	111.1732	0.04518043	1	Complies

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Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 4/ TX N40 Mode /CH151, CH159-ANT 0		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
17.22	52.7230	0.02142646	1	Complies
16.94	49.4311	0.02008863	1	Complies



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Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 4/ TX N40 Mode /CH151, CH159-ANT 1		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
17.13	51.6416	0.02098700	1	Complies
16.75	47.3151	0.01922872	1	Complies

EUT:	300Mbps Mini Wireless Router	Model Name :	WS323
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 4/ TX N40 Mode /CH151, CH159 -ANT 0+ANT 1		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
20.19	104.4720	0.04245710	1	Complies
19.86	96.8278	0.03935051	1	Complies