



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

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MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

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

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 TX Mode	1TX	2TX
	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 :	Band 1/TX A Mode/CH36, CH40, CH48		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
13.95	24.8313	0.01009138	1	Complies
13.74	23.6592	0.00961502	1	Complies
13.30	21.3796	0.00868861	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 1/TX N20 Mode/CH36, CH40, CH48-ANT 0		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
11.65	14.6218	0.00594224	1	Complies
11.52	14.1906	0.00576701	1	Complies
11.02	12.6474	0.00513985	1	Complies

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Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 1/TX N20 Mode/CH36, CH40, CH48-ANT 1		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
11.90	15.4882	0.00629434	1	Complies
11.79	15.1008	0.00613692	1	Complies
11.92	15.5597	0.00632340	1	Complies



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Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	Band 1/ TX N20 Mode /CH36, CH40, CH48 -ANT 0+ANT 1		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
14.79	30.1301	0.01224476	1	Complies
14.67	29.3089	0.01191106	1	Complies
14.50	28.1838	0.01145382	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 1/TX N40 Mode/CH38, CH46 -ANT 0		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
9.98	9.9541	0.00404530	1	Complies
11.51	14.1579	0.00575374	1	Complies



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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 1/TX N40 Mode/CH38, CH46-ANT 1		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
10.66	11.6413	0.00473097	1	Complies
11.95	15.6675	0.00636723	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 1/TX N40 Mode/CH38, CH46 -ANT 0+ANT 1		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
13.34	21.5774	0.00876901	1	Complies
14.75	29.8538	0.01213250	1	Complies