



**Neutron Engineering Inc.**

# **FCC RF EXPOSURE REPORT**

**FCC ID: QISHG232F**

**Project No. : 1212C315**  
**Equipment : 300Mbps Wireless Router**  
**Model : HG232f**  
**Applicant : Huawei Technologies Co., Ltd.**  
**Address : Bantian, Longgang District, Shenzhen China**

**According: : FCC Guidelines for Human Exposure IEEE C95.1**

***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

Table for Filed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
0	Tongyu	TT-2403-W1	Dipole	N/A	2.0	TX/RX
1	Tongyu	TT-2403-W1	Dipole	N/A	2.0	TX/RX

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

Operating Mode	1TX	2TX
TX Mode		
802.11b	V (ANT0 or ANT1)	-
802.11g	V (ANT0 or ANT1)	-
802.11n(20MHz)	-	V (ANT0 & ANT1)
802.11n(40MHz)	-	V (ANT0 & ANT1)



## TEST RESULTS

EUT:	300Mbps Wireless Router	Model Name :	HG232f
Temperature:	25 °C	Relative Humidity :	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX B MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	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
2	1.5849	12.35	17.1791	0.00541939	1	Complies
2	1.5849	13.43	22.0293	0.00694945	1	Complies
2	1.5849	12.06	16.0694	0.00506933	1	Complies

EUT:	300Mbps Wireless Router	Model Name :	HG232f
Temperature:	25 °C	Relative Humidity :	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX G MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	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
2	1.5849	15.76	37.6704	0.01188366	1	Complies
2	1.5849	14.92	31.0456	0.00979378	1	Complies
2	1.5849	13.83	24.1546	0.00761992	1	Complies



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EUT:	300Mbps Wireless Router	Model Name :	HG232f
Temperature:	25 °C	Relative Humidity :	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 ANT 0+ANT 1		

Antenna Gain (dBi)	Antenna Gain (numeric)	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
2	1.5849	14.40	27.5423	0.00868861	1	Complies
2	1.5849	14.47	27.9898	0.00882979	1	Complies
2	1.5849	14.24	26.5461	0.00837434	1	Complies

EUT:	300Mbps Wireless Router	Model Name :	HG232f
Temperature:	25 °C	Relative Humidity :	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09 ANT 0+ANT 1		

Antenna Gain (dBi)	Antenna Gain (numeric)	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
2	1.5849	15.60	36.3078	0.01145382	1	Complies
2	1.5849	15.26	33.5738	0.01059133	1	Complies
2	1.5849	15.29	33.8065	0.01066474	1	Complies