



Neutron Engineering Inc.

FCC RF EXPOSURE REPORT

FCC ID: QISHG552E

Project No. : 1305C069
Equipment : Home Gateway
Model Name : HG552e; HG552f;HG552f-11
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:

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

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.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
0	Huawei Technologies Co.,Ltd	N/A	PCB onboard	N/A	2	TX/RX
1	Huawei Technologies Co.,Ltd	N/A	PCB onboard	N/A	2	TX/RX

Note:

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

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



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TEST RESULTS

EUT:	Home Gateway	Model Name :	HG552e
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX B MODE /CH01, CH06, CH11		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
17.72	59.1562	0.01617895	1	Complies
17.71	59.0201	0.01614174	1	Complies
17.98	62.8058	0.01717712	1	Complies

EUT:	Home Gateway	Model Name :	HG552e
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX G MODE /CH01, CH06, CH11		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
17.96	62.5173	0.01709820	1	Complies
17.86	61.0942	0.01670900	1	Complies
17.92	61.9441	0.01694144	1	Complies

EUT:	Home Gateway	Model Name :	HG552e
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 - 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
14.92	31.0456	0.00849083	1	Complies
14.97	31.4051	0.00858915	1	Complies
14.94	31.1889	0.00853003	1	Complies



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EUT:	Home Gateway	Model Name :	HG552e
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 - 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
14.98	31.4775	0.00860895	1	Complies
14.92	31.0456	0.00849083	1	Complies
14.98	31.4775	0.00860895	1	Complies

EUT:	Home Gateway	Model Name :	HG552e
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 – ANT0+ 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
17.96	62.5173	0.01709820	1	Complies
17.96	62.5173	0.01709820	1	Complies
17.92	61.9441	0.01694144	1	Complies

EUT:	Home Gateway	Model Name :	HG552e
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09 - 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
14.95	31.2608	0.00854969	1	Complies
14.92	31.0456	0.00849083	1	Complies
14.96	31.3329	0.00856940	1	Complies



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EUT:	Home Gateway	Model Name :	HG552e
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09 - 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
14.85	30.5492	0.00835508	1	Complies
14.87	30.6902	0.00839364	1	Complies
14.97	31.4051	0.00858915	1	Complies

EUT:	Home Gateway	Model Name :	HG552e
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09 - ANT 1+ANT 2		

Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Test Result
17.91	61.8016	0.01690248	1	Complies
17.91	61.8016	0.01690248	1	Complies
17.98	62.8058	0.01717712	1	Complies