Neutron Engineering Inc.

FCC RF EXPOSURE REPORT

FCC ID: VW7SR550N

Project No.	**:1306C189**
Equipment	**:802.11n VDSL2 Bonding Gateway**
Model	**:SR550n**
Applicant	**:SmartRG Inc.**
Address	**:501 SE Columbia Shores Boulevard, Suite 500 Vancouver, Washington, 98661 USA**
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.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	MAG.LAYERS	MSA-2715-2G4C1	Integral	N/A	3.12	TX/RX
2	MAG.LAYERS	MSA-2715-2G4C1	Integral	N/A	3.12	TX/RX

Note: The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R) , all transmit signals are completely uncorrelated, then,**Direction gain = G_{ANT}**, that is Directional gain=3.12.

TEST RESULTS

EUT：	802.11n VDSL2 Bonding Gateway	Model Name ：	SR550n
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 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^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3.12	2.0512	28.87	770.9035	0.31473886	1	Complies
3.12	2.0512	28.96	787.0458	0.32132933	1	Complies
3.12	2.0512	28.92	779.8301	0.31838337	1	Complies

EUT：	802.11n VDSL2 Bonding Gateway	Model Name ：	SR550n
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 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^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3.12	2.0512	29.62	916.2205	0.37406784	1	Complies
3.12	2.0512	29.74	941.8896	0.38454783	1	Complies
3.12	2.0512	29.65	922.5714	0.37666075	1	Complies

EUT：	802.11n VDSL2 Bonding Gateway	Model Name ：	SR550n
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX N-20M MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3.12	2.0512	29.73	939.7233	0.38366340	1	Complies
3.12	2.0512	29.70	933.2543	0.38102228	1	Complies
3.12	2.0512	29.61	914.1132	0.37320751	1	Complies

EUT：	802.11n VDSL2 Bonding Gateway	Model Name ：	SR550n
Temperature：	24 ℃	Relative Humidity：	60 %
Pressure：	1016 hPa	Test Voltage ：	AC 120V/60Hz
Test Mode ：	TX N-40M MODE /CH03, CH06, CH09		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
3.12	2.0512	29.79	952.7962	0.38900069	1	Complies
3.12	2.0512	29.70	933.2543	0.38102228	1	Complies
3.12	2.0512	29.69	931.1079	0.38014595	1	Complies

The calculated distance is 20cm