

FCC RF EXPOSURE REPORT

FCC ID: I38VDSL5038GRV

Project No. : 1502C148
**Equipment : VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH
USB 2.0 HOST**
Model : VDSL5038GRV(AC)
Applicant : AZTECH TECHNOLOGIES PTE LTD.
Address : 31, Ubi Road 1, #09-01, Singapore 408694

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

B T L I N C .

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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

Table for Filed Antenna

2.4G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	Walsin	RFPCA2010-01	Internal	N/A	4.00	TX/RX
2	Walsin	RFPCA2010-01	Internal	N/A	4.00	TX/RX

5G

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	Walsin	RFPCA5010-01	Internal	N/A	4.00	TX/RX
2	Walsin	RFPCA5010-01	Internal	N/A	4.00	TX/RX

TEST RESULTS

2.4G

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	25 °C	Relative Humidity:	55 %
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
4	2.5119	18.9	77.6247	0.03881060	1	Complies
4	2.5119	18.71	74.3019	0.03714928	1	Complies
4	2.5119	18.74	74.8170	0.03740678	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	25 °C	Relative Humidity:	55 %
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
4	2.5119	18.86	76.9130	0.03845478	1	Complies
4	2.5119	23.65	231.7395	0.11586449	1	Complies
4	2.5119	17.75	59.5662	0.02978176	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total /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
4	2.5119	20.24	105.6818	0.05283849	1	Complies
4	2.5119	24.27	267.3006	0.13364428	1	Complies
4	2.5119	24.46	279.2544	0.13962088	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_ Total /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
4	2.5119	18.57	71.9449	0.03597082	1	Complies
4	2.5119	25.52	356.4511	0.17821751	1	Complies
4	2.5119	21.38	137.4042	0.06869899	1	Complies

Band 1

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX A MODE /CH36, CH40, CH48		

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
4	2.5119	16.43	43.9542	0.02197609	1	Complies
4	2.5119	16.25	42.1697	0.02108387	1	Complies
4	2.5119	16.2	41.6869	0.02084253	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total / CH36, CH40, CH48		

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
4	2.5119	16.88	48.7528	0.02437532	1	Complies
4	2.5119	16.88	48.7528	0.02437532	1	Complies
4	2.5119	16.95	49.5450	0.02477139	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_ Total / CH38, CH46		

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
4	2.5119	12.04	15.9956	0.00799743	1	Complies
4	2.5119	17.78	59.9791	0.02998820	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC20 MODE_ Total /CH36, CH40, CH48		

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
4	2.5119	18.33	68.0769	0.03403693	1	Complies
4	2.5119	19.2	83.1764	0.04158631	1	Complies
4	2.5119	19.2	83.1764	0.04158631	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC40 MODE_ Total / CH38, CH46		

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
4	2.5119	16.17	41.4000	0.02069905	1	Complies
4	2.5119	19.69	93.1108	0.04655329	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC80 MODE_ Total / CH42		

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
4	2.5119	15.6	36.3078	0.01815308	1	Complies

Band 4

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX A MODE /CH149, CH157, CH165		

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
4	2.5119	16.47	44.3609	0.02217943	1	Complies
4	2.5119	16.27	42.3643	0.02118119	1	Complies
4	2.5119	16.11	40.8319	0.02041505	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-20M MODE_ Total / CH149, CH157, CH165		

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
4	2.5119	16.96	49.6592	0.02482849	1	Complies
4	2.5119	16.82	48.0839	0.02404088	1	Complies
4	2.5119	16.88	48.7528	0.02437532	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N-40M MODE_ Total / CH151, CH159		

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
4	2.5119	14.78	30.0608	0.01502970	1	Complies
4	2.5119	17.58	57.2796	0.02863851	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC20 MODE_ Total /CH149, CH157, CH165		

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
4	2.5119	19.12	81.6582	0.04082727	1	Complies
4	2.5119	19.09	81.0961	0.04054622	1	Complies
4	2.5119	19.09	81.0961	0.04054622	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC40 MODE_ Total / CH151, CH159		

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
4	2.5119	17.19	52.3600	0.02617884	1	Complies
4	2.5119	18.85	76.7361	0.03836634	1	Complies

EUT :	VDSL2 WIRELESS-AC 4-PORT GATEWAY WITH USB 2.0 HOST	Model Name :	VDSL5038GRV(AC)
Temperature :	28 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC80 MODE_ Total / CH155		

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
4	2.5119	14.24	26.5461	0.01327243	1	Complies

Note: the calculated distance is 20 cm.