

FCC RF EXPOSURE REPORT

FCC ID: UIDSBR1750

Project No. : 1410139
Equipment : 802.11ac Wireless Router
Model : TR3300-AC; SBR-AC1750
Applicant : ARRIS Group, Inc.
Address : 3871 Lakefield Drive, Suite 300
Suwanee Georgia 30024 United States

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	Part NO.	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Integral	N/A	2.97	TX/RX
2	N/A	N/A	PIFA	N/A	2.39	TX/RX
3	N/A	N/A	PIFA	N/A	2.75	TX/RX

5G

Ant.	Brand	Part NO.	Antenna Type	Connector	Gain (dBi)	Note
4	N/A	N/A	Integral	N/A	2.97	TX/RX
5	N/A	N/A	PIFA	N/A	2.39	TX/RX
6	N/A	N/A	PIFA	N/A	2.75	TX/RX

TEST RESULTS

2.4G

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
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
2.97	1.9815	24.02	252.3481	0.09952917	1	Complies
2.97	1.9815	25.52	356.4511	0.14058869	1	Complies
2.97	1.9815	23.52	224.9055	0.08870546	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
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
2.97	1.9815	20.26	106.1696	0.04187457	1	Complies
2.97	1.9815	26.53	449.7799	0.17739867	1	Complies
2.97	1.9815	20.57	114.0250	0.04497285	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
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
2.97	1.9815	23.05	201.8366	0.07960684	1	Complies
2.97	1.9815	26.95	495.4502	0.19541161	1	Complies
2.97	1.9815	22.93	196.3360	0.07743733	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
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
2.97	1.9815	22.03	159.5879	0.06294342	1	Complies
2.97	1.9815	22	158.4893	0.06251013	1	Complies
2.97	1.9815	18.22	66.3743	0.02617884	1	Complies

Band 1

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	20.63	115.6112	0.04559848	1	Complies
2.97	1.9815	20.16	103.7528	0.04092139	1	Complies
2.97	1.9815	20.89	122.7439	0.04841170	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	21.59	144.2115	0.05687879	1	Complies
2.97	1.9815	19.71	93.5406	0.03689354	1	Complies
2.97	1.9815	20.43	110.4079	0.04354621	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	17.98	62.8058	0.02477139	1	Complies
2.97	1.9815	21.96	157.0363	0.06193703	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC20 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
2.97	1.9815	20.83	121.0598	0.04774747	1	Complies
2.97	1.9815	19.91	97.9490	0.03863228	1	Complies
2.97	1.9815	21.66	146.5548	0.05780300	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	15.32	34.0408	0.01342612	1	Complies
2.97	1.9815	21.71	148.2518	0.05847233	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	14.18	26.1818	0.01032643	1	Complies

Band 4

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	23.78	238.7811	0.09417820	1	Complies
2.97	1.9815	24.51	282.4880	0.11141672	1	Complies
2.97	1.9815	22.99	199.0673	0.07851459	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	21.95	156.6751	0.06179458	1	Complies
2.97	1.9815	25.46	351.5604	0.13865974	1	Complies
2.97	1.9815	24.56	285.7591	0.11270686	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	19.24	83.9460	0.03310933	1	Complies
2.97	1.9815	25.28	337.2873	0.13303024	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX AC20 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
2.97	1.9815	21.89	154.5254	0.06094672	1	Complies
2.97	1.9815	25.20	331.1311	0.13060216	1	Complies
2.97	1.9815	24.55	285.1018	0.11244765	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	18.69	73.9605	0.02917094	1	Complies
2.97	1.9815	25.01	316.9567	0.12501162	1	Complies

EUT :	802.11ac Wireless Router	Model Name :	TR3300-AC;SBR-A C1750
Temperature:	25 °C	Relative Humidity:	55 %
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
2.97	1.9815	16.73	47.0977	0.01857592	1	Complies

Note: the calculated distance is 20 cm.