

FCC RF EXPOSURE REPORT

FCC ID: 2AFG6-RK3399

Project No. : 1703C059
Equipment : Android Module
Model : RK3399
Applicant : Guangzhou Shirui Electronics Co.,Ltd
Address : 192 Kezhu Road, Scienteck Park, Guangzhou
Economic & Technology Development District,
Guangzhou,Guangdong,China

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

For 2.4G:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Dipole	N/A	2.55	N/A

For 5G:

Ant.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Dipole	N/A	4.03	N/A

TEST RESULTS

BT:

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX Mode _1Mbps		

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
2.55	1.7989	2.43	1.7498	0.00062654	1	Complies
2.55	1.7989	2.31	1.7022	0.00060947	1	Complies
2.55	1.7989	1.53	1.4223	0.00050927	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX Mode _3Mbps		

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
2.55	1.7989	4.37	2.7353	0.00097938	1	Complies
2.55	1.7989	4.50	2.8184	0.00100914	1	Complies
2.55	1.7989	3.91	2.4604	0.00088095	1	Complies

LE:

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	CH00, CH19 , CH39 - 1Mbps		

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
2.55	1.7989	4.40	2.7542	0.00098617	1	Complies
2.55	1.7989	4.92	3.1046	0.00111160	1	Complies
2.55	1.7989	3.59	2.2856	0.00081837	1	Complies

2.4G WIFI:

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX B Mode_CH01/06/11		

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
2.55	1.7989	14.63	29.0402	0.01039801	1	Complies
2.55	1.7989	14.82	30.3389	0.01086301	1	Complies
2.55	1.7989	14.92	31.0456	0.01111605	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX G Mode_CH01/06/11		

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
2.55	1.7989	12.12	16.2930	0.00583378	1	Complies
2.55	1.7989	13.62	23.0144	0.00824044	1	Complies
2.55	1.7989	13.74	23.6592	0.00847131	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	55 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX N20 Mode_CH01/06/11		

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
2.55	1.7989	10.92	12.3595	0.00442538	1	Complies
2.55	1.7989	13.81	24.0436	0.00860895	1	Complies
2.55	1.7989	14.03	25.2930	0.00905629	1	Complies

UNII-1:

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-1/TX A Mode		

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
4.03	2.5293	12.52	17.8649	0.00899395	1	Complies
4.03	2.5293	14.37	27.3527	0.01377052	1	Complies
4.03	2.5293	13.29	21.3304	0.01073867	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-1/TX N20 Mode		

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
4.03	2.5293	12.32	17.0608	0.00858915	1	Complies
4.03	2.5293	14.59	28.7740	0.01448606	1	Complies
4.03	2.5293	13.53	22.5424	0.01134881	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-1/TX N40 Mode		

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
4.03	2.5293	8.84	7.6560	0.00385434	1	Complies
4.03	2.5293	10.54	11.3240	0.00570099	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-1/TX AC20 Mode		

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
4.03	2.5293	10.27	10.6414	0.00535735	1	Complies
4.03	2.5293	12.17	16.4816	0.00829756	1	Complies
4.03	2.5293	11.69	14.7571	0.00742934	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-1/TX AC40 Mode		

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
4.03	2.5293	8.82	7.6208	0.00383663	1	Complies
4.03	2.5293	10.58	11.4288	0.00575374	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-1/TX AC80 Mode		

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
4.03	2.5293	10.64	11.5878	0.00583378	1	Complies

UNII-3:

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-3/ TX A Mode		

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
4.03	2.5293	12.79	19.0108	0.00957085	1	Complies
4.03	2.5293	12.78	18.9671	0.00954883	1	Complies
4.03	2.5293	12.09	16.1808	0.00814611	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-3/TX N20 Mode		

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
4.03	2.5293	12.71	18.6638	0.00939616	1	Complies
4.03	2.5293	12.54	17.9473	0.00903546	1	Complies
4.03	2.5293	11.47	14.0281	0.00706237	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-3/ TX N40 Mode		

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
4.03	2.5293	10.77	11.9399	0.00601105	1	Complies
4.03	2.5293	11.00	12.5893	0.00633797	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-3/ TX AC20 Mode		

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
4.03	2.5293	11.50	14.1254	0.00711132	1	Complies
4.03	2.5293	11.61	14.4877	0.00729374	1	Complies
4.03	2.5293	11.09	12.8529	0.00647069	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-3/ TX AC40 Mode		

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
4.03	2.5293	10.39	10.9396	0.00550745	1	Complies
4.03	2.5293	10.63	11.5611	0.00582037	1	Complies

EUT:	Android Module	Model Name :	RK3399
Temperature:	25 °C	Relative Humidity:	60 %
Test Voltage :	AC 120V/60Hz		
Test Mode :	UNII-3/ TX N40 Mode		

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
4.03	2.5293	10.25	10.5925	0.00533274	1	Complies

Note: the calculated distance is 20 cm.