

FCC RF EXPOSURE REPORT

FCC ID: RYK-WSDB104GNIBT

Project No. : 1708083
Equipment : 802.11b/g/n WiFi+BT IOT Module
Model : WSDB-104GNI(BT)
Series Model : N/A
Applicant : SparkLAN Communications, Inc.
Address : 8F.,No.257,Sec.2,Tiding-Blvd.,Neihu
District,Taipei City 11493,Taiwan (R.O.C.)

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:

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

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:

Group 1:

Ant.	Brand	Model	Type	Connector	Gain (dBi)
0	Long Cheng	FDE_ACBSMA_BGP	Dipole	RP-SMA	3.67

Group 2:

Ant.	Brand	Model	Type	Connector	Gain (dBi)
0	N/A	N/A	PCB	N/A	-5.01

CACULATION:

Bluetooth EDR:

Test Mode :	TX Mode _1Mbps
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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
3.67	2.3281	3	1.9953	0.00092459	1	Complies

Test Mode :	TX Mode _3Mbps
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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
3.67	2.3281	1	1.2589	0.00058338	1	Complies

Bluetooth LE:

Test Mode :	CH00, CH19 , CH39
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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
3.67	2.3281	1	1.2589	0.00058338	1	Complies

2.4G:

Test Mode :	TX B Mode Total / CH01, CH06, CH11
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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
3.67	2.3281	15	31.6228	0.01465380	1	Complies

Test Mode :	TX G Mode Total / CH01, CH06, CH11
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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
3.67	2.3281	22	158.4893	0.07344299	1	Complies

Test Mode :	TX N-20M Mode Total / CH01, CH06, CH11
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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
3.67	2.3281	22	158.4893	0.07344299	1	Complies

Note: the calculated distance is 20 cm.