



Neutron Engineering Inc.

FCC RF EXPOSURE REPORT

FCC ID: ZQO-DWPCIE83

Project No. : 1107C138
Equipment : Half-size mini-PCle digital wireless audio module
Model : DWPCIE83
Applicant : STANDARD MICROSYSTEMS CORPORATION
Address : 3930, EAST RAY ROAD SUITE 200, PHOENIX,
IArizona, United States
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:

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

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

Ant.	Brand name	Model Name	Antenna Type	Connector	Gain (dBi)	
A	WNC	WNC_ANT_WIMAX_3 D-2_2300-5 850MHz	PIFA	U.FL	3.65	2.4G
B						
A					5.21	5.8G
B						

TEST RESULTS

2.4G Frequency range: 2412/ 2438 /2464MHz

EUT:	Half-size mini-PCle digital wireless audio module	Model Name :	DWPCle83
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX MODE 2412/ 2438 /2464MHz (Normal Power mode-Antenna A)		

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
3.65	2.3174	17.5600	57.0164	0.02629967	1	Complies
3.65	2.3174	16.9900	50.0035	0.02306484	1	Complies
3.65	2.3174	17.0400	50.5825	0.02333191	1	Complies



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Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX MODE 2412/ 2438 /2464MHz (Low Power mode-Antenna A)		

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
3.65	2.3174	10.3100	10.7399	0.00495394	1	Complies
3.65	2.3174	9.6100	9.1411	0.00421648	1	Complies
3.65	2.3174	9.6800	9.2897	0.00428500	1	Complies

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Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX MODE 2412/ 2438 /2464MHz (Normal Power mode-Antenna B)		

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
3.65	2.3174	17.56	57.0164	0.02629967	1	Complies
3.65	2.3174	17.03	50.4661	0.02327825	1	Complies
3.65	2.3174	17.04	50.5825	0.02333191	1	Complies

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Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX MODE 2412/ 2438 /2464MHz (Low Power mode-Antenna B)		

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
3.65	2.3174	10.04	10.0925	0.00465533	1	Complies
3.65	2.3174	9.52	8.9536	0.00413000	1	Complies
3.65	2.3174	9.61	9.1411	0.00421648	1	Complies



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5.8G Frequency range: 5736/5762/5814MHz

EUT:	Half-size mini-PCle digital wireless audio module	Model Name :	DWPCle83
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX MODE 5736/5762/5814MHz(Normal Power mode -Antenna A)		

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
5.21	3.3189	12.7300	18.7499	0.01238655	1	Complies
5.21	3.3189	13.2500	21.1349	0.01396209	1	Complies
5.21	3.3189	13.5000	22.3872	0.01478939	1	Complies

EUT:	Half-size mini-PCle digital wireless audio module	Model Name :	DWPCle83
Temperature:	25 °C	Relative Humidity:	60 %
Pressure:	1012 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX MODE 5736/5762/5814MHz(Normal Power mode -Antenna B)		

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
5.21	3.3189	12.8400	19.2309	0.01270429	1	Complies
5.21	3.3189	13.3700	21.7270	0.01435325	1	Complies
5.21	3.3189	13.6100	22.9615	0.01516877	1	Complies