



**Neutron Engineering Inc.**

# **FCC RF EXPOSURE REPORT**

**FCC ID: ACJ-SH-ALL1C**

**Project No.** : 1312C280  
**Equipment** : NETWORK AUDIO CONNECTOR  
**Model** : SC-ALL1C  
**Applicant** : Panasonic Corporation of North America  
**Address** : Two Riverfront Plaza, 9th Floor, Newark, New Jersey, 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.	Manufacturer	Model Name	Antenna Type	Connector	Gain (dBi)
1	N/A	N/A	Internal	N/A	0.8
2	N/A	N/A	Internal	N/A	2.0

Note:

(1) The EUT incorporates a MIMO function. Physically, the EUT provides two completed two transmitters and two receivers (2T2R),

Operating Mode TX Mode	1TX	2TX
	802.11b	V (ANT 1 or ANT 2)
802.11g	V (ANT 1 or ANT 2)	-
802.11n(20MHz)	-	V (ANT 1 + ANT 2)
802.11n(40MHz)	-	V (ANT 1 + ANT 2)



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### TEST RESULTS

EUT:	NETWORK AUDIO CONNECTOR	Model Name	SC-ALLZ1C
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage :	AC 120V/60Hz		
Test Mode :	TX B Mode		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
2	1.5849	16.12	40.9261	0.01291072	1	Complies
2	1.5849	16.05	40.2717	0.01270429	1	Complies
2	1.5849	16.08	40.5509	0.01279235	1	Complies

EUT:	NETWORK AUDIO CONNECTOR	Model Name	SC-ALL1C
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage :	AC120V/60Hz		
Test Mode :	TX G Mode		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
2	1.5849	18.72	74.4732	0.02349364	1	Complies
2	1.5849	19.45	88.1049	0.02779396	1	Complies
2	1.5849	17.6	57.5440	0.01815308	1	Complies

EUT:	NETWORK AUDIO CONNECTOR	Model Name	SC-ALL1C
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage :	AC120V/60Hz		
Test Mode :	TX N-20 Mode-Total		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
2	1.5849	21.23	132.7394	0.04187457	1	Complies
2	1.5849	20.97	125.0259	0.03944122	1	Complies
2	1.5849	18.71	74.3019	0.02343961	1	Complies



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EUT:	NETWORK AUDIO CONNECTOR	Model Name	SC-ALL1C
Temperature:	25 °C	Relative Humidity:	55%
Test Voltage :	AC120V/60Hz		
Test Mode :	TX N-40 Mode-Total		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
2	1.5849	20.52	112.7197	0.03555907	1	Complies
2	1.5849	19.52	89.5365	0.02824557	1	Complies
2	1.5849	18.27	67.1429	0.02118119	1	Complies

Note:the calculation distance is 20cm.