RF EXPOSURE REPORT

REPORT NO.: SA991207D25D

MODEL NO.: PCG-41217L, PCG-4121CL

FCC ID: AK8PCG41217L

ACCORDING: FCC Guidelines for Human Exposure

IEEE C95.1

APPLICANT: SONY Corporation

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ISSUED BY: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

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1. RF EXPOSURE LIMIT

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm^2)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

2. MPE CALCULATION FORMULA

Pd = (Pout*G) / (4*pi*r2)

where

Pd = power density in mW/cm2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

3. CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

4. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FOR WLAN:

MODULATION MODE	FREQUENCY BAND (MHz)	MAX CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
802.11b	2412-2462	18.7	4.75	20	0.0440	1.00
802.11g	2412-2462	23.8	4.75	20	0.1425	1.00
802.11n (20MHz)	2412-2462	24.5	1.74	20	0.0837	1.00
802.11n (40MHz)	2422-2452	24.7	1.74	20	0.0876	1.00
802.11a	5180-5240	15.4	4.49	20	0.0194	1.00
802.11n (20MHz)	5180-5240	15.3	1.48	20	0.0095	1.00
802.11n (40MHz)	5190-5230	15.3	1.48	20	0.0095	1.00
802.11a	5260-5320	15.1	4.49	20	0.0181	1.00
802.11n (20MHz)	5260-5320	15.1	1.48	20	0.0091	1.00
802.11n (40MHz)	5270-5310	15.1	1.48	20	0.0091	1.00
802.11a	5500-5700	15.4	4.49	20	0.0194	1.00
802.11n (20MHz)	5500-5700	15.2	1.48	20	0.0093	1.00
802.11n (40MHz)	5510-5670	15.1	1.48	20	0.0091	1.00
802.11a	5745-5825	21.8	4.39	20	0.0827	1.00
802.11n (20MHz)	5745-5825	23.5	1.38	20	0.0612	1.00
802.11n (40MHz)	5755-5795	23.7	1.38	20	0.0641	1.00

FOR BLUETOOTH:

FREQUENCY BAND (MHz)	MAX POWER (dBm)	MAXIMUM ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm^2)	LIMIT (mW/cm^2)
2402-2480	2.9	-0.01	20	0.0004	1.00

FOR WiMax:

FREQUENCY BAND (MHz)	MAX CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	MPE (mW/cm^2)	LIMIT (mW/cm^2)
2498.5~2687.5	23.38	1.54	0.062	1.00
2501~2685	23.31	1.54	0.061	1.00

CONCULSION:

Both of the modules can transmit simultaneously, the formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

1. WLAN (2.4G) + BLUETOOTH + WiMax =0.1425/1 + 0.0004/1 + 0.062/1 = 0.2049
2. WLAN (5.0G) + BLUETOOTH + WiMax = 0.0827/1 + 0.0004/1 + 0.062/1 = 0.1451

Therefore, the maximum calculation of this situation is 0.2049, which is less than the "1" limit.