

RF EXPOSURE REPORT

REPORT NO.: SA110505E05 R1

MODEL NO.: AR4100

FCC ID: PPD-AR4100

ACCORDING: FCC Guidelines for Human Exposure
IEEE C95.1

APPLICANT: Qualcomm Atheros, Inc.

ADDRESS: 1700 Technology Drive, San Jose, CA 95110

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

LAB ADDRESS: No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,
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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA110505E05	Original release	June 10, 2011
SA110505E05 R1	Modified the brand name & model name of antenna.	June 15, 2011

1.CERTIFICATION

PRODUCT: Single Band 1x1 802.11bgn SiP
BRAND NAME: Atheros
MODEL NO.: AR4100
TEST SAMPLE: R&D SAMPLE
APPLICANT: Qualcomm Atheros, Inc.
STANDARDS: IEEE C95.1

The above equipment (Model: AR4100) has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Midoli Peng, **DATE:** June 15, 2011
(Midoli Peng, Specialist)

APPROVED BY : May Chen, **DATE:** June 15, 2011
(May Chen, Deputy Manager)

2. 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

3.MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

4.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**.

Antenna information:

No.	Brand	Model	Gain(dBi) (included cable loss)	Antenna Type	Connector	Cable Loss(dB)	Cable Length
1	WNC	81.EBJ15.005	3.62	PIFA	IPEX	1.15	300mm
2	TAIYO YUDEN	AF216M245001-T	1.8	Chip	NA.	NA.	NA.
3	Murata	GJM0335C1ER5BB01D	2	PCB	NA.	NA.	NA.

5. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	251.2	3.62	20	0.115	1.00

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