



RF EXPOSURE REPORT

REPORT NO.: SA110107E07I

MODEL NO.: F9K1108v1

FCC ID: K7SF9K1108V1

APPLICANT: Belkin International, Inc.

ADDRESS: 12045 East Waterfront Drive, Playa Vista, CA
90094

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

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA110107E01I	Original release	Aug. 29, 2011

1. CERTIFICATION

PRODUCT: Wireless Dual-Band N Router
BRAND NAME: Belkin
MODEL NO.: F9K1108v1
TEST SAMPLE: R&D SAMPLE
APPLICANT: Belkin International, Inc.
STANDARDS: FCC Part 2 (Section 2.1091)
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (Model: F9K1108v1) 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:** Aug. 29, 2011
(Midoli Peng, Specialist)

APPROVED BY : May Chen, **DATE:** Aug. 29, 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**.

5. ANTENNA GAIN

There are two antennas provided to this EUT, please refer to the following table:

Transmitter Circuit	Antenna Type	2.4GHz Gain (dBi)	5 GHz Gain (dBi)
Chain (0)	PCB Printed	4.12	5.21
Chain (1)	PCB Printed	4.44	4.21

The EUT incorporates CDD function with 802.11a, 802.11g.

6. CALCULATION RESULT OF MAXIMUM EIRP

For 15.247(2.4GHz):

FREQUENCY BAND (MHz)	CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	27.8	7.3	20	0.650	1.00

Directional gain = $10 \log \left[\left(10^{G1/20} + 10^{G2/20} \right)^2 / 2 \right]$

Effective Legacy Gain (dBi) = 7.3

The effective legacy gain is 7.3dBi, therefore the limit needs to reduce.

For 15.247(5GHz):

FREQUENCY BAND (MHz)	CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5745-5825	25.8	7.7	20	0.442	1.00

Directional gain = Directional gain = $10 \log \left[\left(10^{G1/20} + 10^{G2/20} \right)^2 / 2 \right]$

Effective Legacy Gain (dBi) = 7.7

The effective legacy gain is 7.7dBi, therefore the limit needs to reduce.

For 15.407(5GHz):

FREQUENCY BAND (MHz)	CONDUCTED POWER (dBm)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5180-5240	16.2	5.21	20	0.028	1.00

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