



RF EXPOSURE REPORT

REPORT NO.: SA110728E04

MODEL NO.: Pismo335, Surf series, AP series, Air series,
Mesh Connector series, MAX series

FCC ID: U8G-P1220

APPLICANT: Pismo Labs Technology Limited

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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
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1. CERTIFICATION

PRODUCT: Pepwave Wireless Product
BRAND NAME: Pepwave
MODEL NO.: Pismo335, Surf series, AP series, Air series,
Mesh Connector series, MAX series
TEST SAMPLE: R&D SAMPLE
APPLICANT: Pismo Labs Technology Limited
STANDARDS: FCC Part 2 (Section 2.1091)
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (Model: Pismo335) 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 :  , **DATE:** Aug 31, 2011
(Claire Kuan, Specialist)

APPROVED BY :  , **DATE:** Aug 31, 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	Antenna Connector	For 2.4~2.5GHz Gain (dBi)	For 5.15~5.35GHz Gain (dBi)	For 5.35~5.875GHz Gain (dBi)
Chain(0)	Omni Directional (Dipole)	RP SMA Plug	3	5.5	6
Chain(1)			3	5.5	6

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

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

For 15.247(2.4GHz):

802.11b:

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	317.7	6	20	0.252	1.00

Directional gain = gain of antenna element + 10 log (# of TX antenna elements)
Effective Legacy Gain (dBi) = 6

802.11g:

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	463.8	6	20	0.367	1.00

Directional gain = gain of antenna element + 10 log (# of TX antenna elements)
Effective Legacy Gain (dBi) = 6

802.11n(20MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2412-2462	491.5	3	20	0.195	1.00

802.11n(40MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
2422-2452	219.4	3	20	0.087	1.00

For 15.247(5GHz):

802.11a:

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5745 ~ 5825	386.8	9	20	0.611	1.00

Directional gain = gain of antenna element + 10 log (# of TX antenna elements)
 Effective Legacy Gain (dBi) = 9

802.11n(20MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5745 ~ 5825	386.8	6	20	0.306	1.00

802.11n(40MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5755 ~ 5795	386.1	6	20	0.306	1.00

**For 15.407(5GHz):
802.11a:**

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5180 ~ 5240	15.8	8.5	20	0.022	1.00

Directional gain = gain of antenna element + 10 log (# of TX antenna elements)
Effective Legacy Gain (dBi) = 8.5

802.11n(20MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5180 ~ 5240	28.9	5.5	20	0.020	1.00

802.11n(40MHz):

FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/ cm ²)	LIMIT (mW/cm ²)
5190 ~ 5230	46.4	5.5	20	0.033	1.00

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