



RF Exposure Evaluation Declaration

FCC ID: TK4WPJ342

APPLICANT: Compex Systems Pte Ltd

Application Type: Certification

Product: WIRELESS ACCESS POINT

Model No.: WPJ342LV, WPJ342HV, MML342LV, MML342HV,
MMJ342LV, MMJ342HV, MMS342LV, MMS342HV

Brand Name: COMPEX

FCC Classification: Unlicensed National Information Infrastructure (UNII)

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The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date
1407RSU04208	Rev. 01	Initial report	08-28-2014
1407RSU04208	Rev. 02	Modify some channel output power	09-12-2014

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	WIRELESS ACCESS POINT
Model No.	WPJ342LV, WPJ342HV, MML342LV, MML342HV, MMJ342LV, MMJ342HV, MMS342LV, MMS342HV
Power Type	POE input
Frequency Range	802.11a/n: 5150 ~ 5250MHz 5725 ~ 5850MHz
Type of Modulation	802.11a/n: OFDM
Maximum Output Power	802.11a: 23.79dBm 802.11n-HT20: 25.68dBm 802.11n-HT40: 25.38dBm
Adapter	Power Over Ethernet (Gigabit) Model: HS36-2401250US Input: 100-240V ~ 50/60Hz 1.0A Output: +24V ~ 1.25A

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

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)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $Pd = (P_{out} * G) / (4 * \pi * r^2)$

Where

Pd = 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

Pd is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.2. Test Result of RF Exposure Evaluation

Product	WIRELESS ACCESS POINT
Test Item	RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 15dBi for 5.2GHz and 25dBi for 5.8GHz in logarithm scale.

For 5G UNII Band:

Test Mode	Frequency Band (MHz)	Maximum Average Output Power (dBm)	Limit of Power Density S(mW/cm ²)	Safety Distance (cm)
802.11a	5180 ~ 5240	23.29	1	23.17
	5745 ~ 5825	23.79	1	77.61
802.11n-HT20	5180 ~ 5240	25.45	1	29.71
	5745 ~ 5825	25.68	1	96.47
802.11n-HT40	5190 ~ 5230	25.38	1	29.47
	5755 ~ 5795	22.61	1	67.75

CONCLUSION:

The Safety Distance of this equipment was 96.47 cm.

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