



MAX LIGHT

MEASUREMENT REPORT

Maximum Permissible Exposure

1. Introduction

In this document, we try to prove the safety of radiation harmfulness to the human body for our product. The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The Gain of the antenna used in this product is measured in a Fully Anechoic Chamber (FAC) calibrated for antenna measurement in MLT, and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis transmission formula is a far field assumption, the calculated result of that is an over-prediction for near field power density. We will take that as the worst case to specify the safety range.

2. Description of EUT

EUT	: Wireless LAN 802.11/b.g
Applicant	: TURBOCOMM TECH. INC. 2F, No., 19-8, San Chong Road, Nan-Kang, Taipei 115 Taiwan ROC
Manufacturer	: TURBOCOMM TECH. INC. No. 369, Sec. 3, Chun Cheng East Road, Wu Chuan Tsun, Ta Yuan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C.
Model No	: WLI303
FCC ID	: N7ZWLI303



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3. Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance with the antenna should be included in users manual. So, this device is classified as Mobile Device.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

4. Friis Formula

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

Where

P_d = power density in mW/cm^2

P_{out} = output pwer 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

5. Test Result:

802.11b

Max RF Power (dBm)	TX Antenna Gain (dBi)	Testing Result (mW/cm^2)	MPE Limit (mW/cm^2)
11.67	2.0	0.0058	1

802.11g

Max RF Power (dBm)	TX Antenna Gain (dBi)	Testing Result (mW/cm^2)	MPE Limit (mW/cm^2)
8.39	2.0	0.0027	1