

Industrial Technology Research Institute

Electronics Research & Service Organization Bldg. 17, 195-4 Sec. 4, Chung Hsing Rd., Chutung,Hsinchu, 310 Taiwan,Republic Of China TEL : 886-3-5917069 FAX : 886-3-5825720 FCC ID : PY3WG600 Report No. : 510-9112-058F Page <u>1</u> of <u>2</u>

9. RF EXPOSURE EVALUATION

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	Electric Field	Magnetic Field	Power Density	A vorago Timo	
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm^2)	Average Time	
(A) Limits for Occupational / Control Exposures					
300-1,500			F/300	6	
1,500-100,000			5	6	
(B) Limits for General Population / Uncontrol Exposures					
300-1,500			F/1500	6	
1,500-100,000			1	30	

9.1 FRIIS FORMULA

Friis transmission formula : $Pd = (Pout*G)/(4*pi*r^2)$

Where

 $Pd = power density in mW/cm^2$

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

Pd id the limit of MPE, 1 mW/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.

9.2 EUT OPERATING CONDITION

A software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.



Industrial Technology Research Institute

Electronics Research & Service Organization Bldg. 17, 195-4 Sec. 4, Chung Hsing Rd., Chutung,Hsinchu, 310 Taiwan,Republic Of China TEL : 886-3-5917069 FAX : 886-3-5825720 FCC ID : PY3WG600 Report No. : 510-9112-058F Page ______ of _____

9.3 TEST RESULT OF RF EXPOSURE EVALUATION

- Test Item : RF Exposure Evaluation Data
- Test Mode : Normal Operation

9.3.1 ANTENNA GAIN

Antenna Gain : The maximum Gain measured in fully anechoic chamber is 2dBi linear scale.

9.3.2 OUTPUT POWER INTO ANTENNA & RF EXPOSURE EVALUATION DISTANCE

Channel	Channel Frequency (MHz)	Output Power to Antenna	Minimum Allowable
		(dBm)	Distance ® From Skin(cm)
CH1	2412.00	17.46	2.650911
CH6	2437.00	17.38	2.626607
CH11	2462.00	17.35	2.617550