



**Neutron Engineering Inc.**

# **FCC RF EXPOSURE REPORT**

**FCC ID: ZVA02**

**Project No. : 1211C167**  
**Equipment : 300Mbps Wireless USB Adapter**  
**Model : MT-WN813NM**  
**Applicant : TCL Technoly Electronics(Huizhou) Co.,Ltd**  
**Address : Section 19, Zhongkai High-tech Development  
Zone, Huizhou City, Guang Dong Province,  
China,516006**

**According: : FCC Guidelines for Human Exposure IEEE C95.1**

***Neutron Engineering Inc.***

***No.3, Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.***

***TEL : (0769) 8318-3000 FAX : (0769) 8319-6000***



## MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Fixed Antenna

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	Note
1	N/A	N/A	Printed	N/A	-0.21	2.4G
2	N/A	N/A	Printed	N/A	-0.21	2.4G

Note: The EUT incorporates a MIMO function. Physically, the EUT provides two completed transmitters and two receivers (2T2R)

Operating Mode TX Mode	1TX	2TX
802.11b	V (ANT1 or ANT2)	-
802.11g	V (ANT1 or ANT2)	-
802.11n(20MHz)	-	V (ANT1 & ANT2)
802.11n(40MHz)	-	V (ANT1 & ANT2)



## TEST RESULTS

EUT:	300Mbps Wireless USB Adapter	Model Name :	MT-WN813NM
Temperature:	25 °C	Relative Humidity :	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX B MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
-0.21	0.9528	20.10	102.3293	0.01940664	1	Complies
-0.21	0.9528	20.03	100.6932	0.01909635	1	Complies
-0.21	0.9528	19.83	96.1612	0.01823687	1	Complies

EUT:	300Mbps Wireless USB Adapter	Model Name :	MT-WN813NM
Temperature:	25 °C	Relative Humidity :	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX G MODE /CH01, CH06, CH11		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
-0.21	0.9528	18.16	65.4636	0.01241510	1	Complies
-0.21	0.9528	18.32	67.9204	0.01288102	1	Complies
-0.21	0.9528	18.23	66.5273	0.01261683	1	Complies



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EUT:	300Mbps Wireless USB Adapter	Model Name :	MT-WN813NM
Temperature:	25 °C	Relative Humidity :	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-20M MODE /CH01, CH06, CH11 ANT 1+ANT 2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
-0.21	0.9528	18.45	69.9842	0.01327243	1	Complies
-0.21	0.9528	18.21	66.2217	0.01255886	1	Complies
-0.21	0.9528	17.67	58.4790	0.01109048	1	Complies

EUT:	300Mbps Wireless USB Adapter	Model Name :	MT-WN813NM
Temperature:	25 °C	Relative Humidity :	58 %
Pressure:	1010 hPa	Test Voltage :	AC 120V/60Hz
Test Mode :	TX N-40M MODE /CH03, CH06, CH09 ANT 1+ANT 2		

Antenna Gain (dBi)	Antenna Gain (numeric)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density (S) (mW/cm <sup>2</sup> )	Limit of Power Density (S) (mW/cm <sup>2</sup> )	Test Result
-0.21	0.9528	17.85	60.9537	0.01155980	1	Complies
-0.21	0.9528	18.19	65.9174	0.01250116	1	Complies
-0.21	0.9528	18.37	68.7068	0.01303018	1	Complies