



MPE REPORT

Product Name	HSPA+ Module
Model Name	DTL718-W
FCC ID	RHZWDTL718-W
Client	AnyDATA Shanghai Co., Ltd
Manufacture	AnyDATA Shanghai Co., Ltd
Date of issue	August 14, 2013

Approved by

杨伟中

Director

Revised by

凌敏宝

Manager

Performed by

沈辰

Engineer

Test By

Company: TA Technology (Shanghai) Co., Ltd.
Address: No.145, Jintang Rd, Tangzhen Industry Park, Pudong Shanghai, China
Contact: Yang Weizhong
Telephone: +86-021-50791141/2/3
Fax: +86-021-50791141/2/3-8000
Website: <http://www.ta-shanghai.com>
E-mail: yangweizhong@ta-shanghai.com

TA Technology (Shanghai)Co.,Ltd.

Test Report

Report No.: RXC1307-0089MPE01R2

Page 2 of 5

Maximum Permissible Exposure

Type of EUT: HSPA+ Module

FCC ID: RHZWDTL718-W

Manufacturer: AnyDATA Shanghai Co., Ltd

Model: DTL718-W

Maximum conducted output power (measured) and antenna Gain:

Band	Burst Turn up Power(dBm)	/	Maximum Tune up Average Power(dBm)
GSM 850 3Txslots	30	-4.26dB	25.74
GSM 1900 3Txslots	29	-4.26dB	24.74
Note: Division Factors To average the power, the division factor is as follows: 3Txslots = 3 transmit time slots out of 8 time slots => conducted power divided by (8/3) => -4.26 dB			

Band	Time-average maximum tune up procedure (dBm)	Antenna Gain (dBi)
GSM 850	25.74	2.0
GSM 1900	24.74	2.0
WCDMA Band II	23	2.0
WCDMA Band V	23	2.0

According to section 1.1310 of FCC 47 CFR Part 1, limits for maximum permissible exposure (MPE) are as following

TA Technology (Shanghai)Co.,Ltd.

Test Report

Report No.: RXC1307-0089MPE01R2

Page 3 of 5

TABLE 1 – LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

Note1. Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potential for exposure.

Note2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

TA Technology (Shanghai)Co.,Ltd.

Test Report

Report No.: RXC1307-0089MPE01R2

Page 4 of 5

The maximum permissible exposure for 300~1500MHz is $f/1500$, 1500~100,000MHz is 1.0 .So

Band	The maximum permissible exposure
GSM 850	0.55 mW/cm²
GSM 1900	1 mW/cm²
WCDMA Band II	1 mW/cm²
WCDMA Band V	0.55 mW/cm²

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

TA Technology (Shanghai)Co.,Ltd.

Test Report

Report No.: RXC1307-0089MPE01R2

Page 5 of 5

RF Exposure Calculations:

The following information provides the minimum separation distance for the highest gain antenna provided.

This calculation is based on the conducted power, considering maximum power and antenna gain. The formula shown in OET Bulletin 65 is used in the calculation.

Equation from OET Bulletin 65, Edition 97-01 is:

$$S = PG / 4\pi R^2$$

where: S = power density (in appropriate units, e.g. mW/cm²)

P = Time-average maximum tune up procedure (in appropriate units, e.g., mW)

G = the numeric gain of the antenna

R = distance to the center of radiation of the antenna (20 cm = limit for MPE)

So, the numeric gain (G) of the antenna with a gain specified in dB is determined by

Numeric gain (G)=10^(antenna gain/10)=10^(2/10)=1.58 dB

GSM 850 PG = 25.74dBm+ (1.58dB) =27.32dBm=539.51mW

GSM 1900 PG = 24.74dBm+ (1.58dB) =26.32dBm=428.55mW

WCDMA Band II PG = 23dBm+(1.58dB)=24.58dBm= 287.08mW

WCDMA Band V PG = 23dBm+(1.58dB)=24.58dBm= 287.08mW

R =20 cm

π= 3.1416

Solving for S, the power density at 20 cm is

Band	Test Result (mW/cm ²)	Limit Value (mW/cm ²)
GSM 850	0.107	0.55 mW/cm ²
GSM 1900	0.085	1 mW/cm ²
WCDMA Band II	0.057	1 mW/cm ²
WCDMA Band V	0.057	0.55 mW/cm ²

Note: For mobile or fixed location transmitters, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.