

RF EXPOSURE REPORT

Product: WCDMA Module

Model Name: MW3650

FCC ID: SRQ-MW3650

Applicant: ZTE Corporation

Address: ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,
Nanshan District, Shenzhen, Guangdong, P.R.China

Manufacturer: ZTE Corporation

Address: ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,
Nanshan District, Shenzhen, Guangdong, P.R.China

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Report No.: SA160908W001

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Test Date: Sep. 09, 2016 ~ Sep. 17, 2016

Issued Date: Sep. 18, 2016

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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA160908W001	Original release	Sep. 18, 2016



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1 CERTIFICATION

PRODUCT: WCDMA Module
BRAND NAME: ZTE
MODEL NAME: MW3650
APPLICANT: ZTE Corporation
TESTED: Sep. 09, 2016 ~ Sep. 17, 2016
TEST SAMPLE: Identical Prototype
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment has been tested by **Bureau Veritas Shenzhen Co., Ltd. Dongguan Branch** and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

PREPARED BY : Yuqiang Yin, **DATE:** Sep. 18, 2016
(Yuqiang Yin/ Engineer)

APPROVED BY : Bill Yao, **DATE:** Sep. 18, 2016
(Bill Yao / Manager)

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	WCDMA Module	
MODEL NAME	MW3650	
NOMINAL VOLTAGE	3.8Vdc (host equipment)	
OPERATING TEMPERATURE RANGE	-35 ~ 75°C	
MODULATION TYPE	GSM/GPRS/EDGE	GMSK, 8PSK
	WCDMA	BPSK/QPSK
OPERATING FREQUENCY	GSM/GPRS/EDGE	824.2MHz ~ 848.8MHz (FOR GSM 850) 1850.2MHz ~ 1909.8MHz (FOR PCS 1900)
	WCDMA	1852.4MHz ~ 1907.6MHz (FOR WCDMA 1900) 826.4MHz ~ 846.6MHz (FOR WCDMA 850)
ANTENNA TYPE	Other Antenna	
ANTENNA GAIN	1.3dBi gain For GSM 850 / WCDMA 850 1.6dBi gain For PCS 1900 / WCDMA 1900	
HW VERSION	MW3650MB_B	
SW VERSION	BD_MW3650V1.0.0B01	
I/O PORTS	Refer to user's manual	

NOTE:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
2. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

3 RF EXPOSURE

3.1 LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE (MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY (mW/cm ²)	AVERAGE TIME (minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

3.2 MPE CALCULATION FORMULA

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = 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

3.3 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Module Approval**.



3.4 CONDUCTED POWER

Band	GSM850		
Channel	128	190	251
Frequency (MHz)	824.2	836.6	848.8
GPRS 8	32.08	32.35	32.64
GPRS 10	32.06	32.32	32.61
EDGE 8 (MCS9)	28.09	28.35	28.64
EDGE 10 (MCS9)	28.07	28.33	28.62
EDGE 11 (MCS9)	28.03	28.29	28.58
EDGE 12 (MCS9)	27.47	27.73	28.02

Band	GSM1900		
Channel	512	661	810
Frequency (MHz)	1850.2	1880.0	1909.8
GPRS 8	29.70	29.81	30.16
GPRS 10	29.68	29.78	30.12
EDGE 8 (MCS9)	25.71	25.81	26.15
EDGE 10 (MCS9)	25.69	25.79	26.13
EDGE 11 (MCS9)	25.65	25.75	26.09
EDGE 12 (MCS9)	25.09	25.19	25.53

Band	WCDMA V		
Channel	4132	4182	4233
Frequency (MHz)	826.4	836.4	846.6
RMC 12.2K	22.11	22.30	22.08
HSPA			
HSDPA Subtest-1	22.10	22.29	22.07
HSDPA Subtest-2	22.08	22.27	22.05
HSDPA Subtest-3	22.05	22.24	22.02
HSDPA Subtest-4	22.03	22.22	22.00

Band	WCDMA II		
Channel	9262	9400	9538
Frequency (MHz)	1852.4	1880.0	1907.6
RMC 12.2K	22.01	22.46	22.38
HSPA			
HSDPA Subtest-1	22.00	22.45	22.37
HSDPA Subtest-2	21.98	22.43	22.35
HSDPA Subtest-3	21.95	22.40	22.32
HSDPA Subtest-4	21.93	22.38	22.30

3.5 CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

GSM

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Conducted Time Average Power (dBm)	E.I.R.P Power (mW)/8	Power Density (mW/cm ²)	limit (mW/cm ²)	PASS / FAIL
GSM850	848.8	GPRS12	1.3	32.64	309.678	0.062	0.57	PASS
PCS1900	1909.8	GPRS12	1.6	30.16	187.461	0.037	1.00	PASS

WCDMA

Band	Frequency (MHz)	Operating Mode	Antenna Gain (dBi)	Conducted Time Average Power (dBm)	E.I.R.P Power (mW)	Power Density (mW/cm ²)	limit (mW/cm ²)	PASS / FAIL
WCDMA V	836.4	GPRS12	1.3	22.30	229.087	0.046	0.56	PASS
WCDMA II	1880	GPRS12	1.6	22.46	254.683	0.051	1.00	PASS