
VARIANT TEST REPORT

Report No.: SRTC2022-9004(F)-22030905(A)

Product Name: LTE/WCDMA/GSM(GPRS) Multi-Mode Digital Mobile Phone

Product Model: Z2335CC

Marketing Name: Consumer Cellular Link2

Applicant: ZTE Corporation.

Manufacturer: ZTE Corporation.

Specification: FCC Part 24E, Part 22H, Part 2

FCC ID: SRQ-Z2335CC

The State Radio_monitoring_center Testing Center (SRTC)
15th Building, No.30 Shixing Street, Shijingshan District, Beijing, P.R.China

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1. GENERAL INFORMATION

1.1 Notes of the test report

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1.2 Information about the testing laboratory

Company:	The State Radio_monitoring_center Testing Center (SRTC)
Address:	15th Building, No.30 Shixing Street, Shijingshan District, P.R.China
City:	Beijing
Country or Region:	P.R.China
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1.3 Applicant's details

Company:	ZTE Corporation.
Address:	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China
City:	Shenzhen
Country or Region:	China
Contacted person:	Gong Yu
Tel:	021-68895397
Fax:	---
Email:	gongyu@zte.com.cn

1.4 Manufacturer's details

Company:	ZTE Corporation.
Address:	ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park, Nanshan District, Shenzhen, Guangdong, P.R.China
City:	Shenzhen
Country or Region:	China
Contacted person:	Gong Yu
Tel:	021-68895397
Fax:	---
Email:	gongyu@zte.com.cn

1.5 Test Environment

Date of Receipt of test sample at SRTC:	2022-03-09
Testing Start Date:	2022-03-11
Testing End Date:	2022-03-18

Environmental Data:	Temperature (°C)	Humidity (%)
Ambient:	25	30
Maximum Extreme:	55	---
Minimum Extreme:	-10	---

Normal Supply Voltage (V d.c.):	3.8
Maximum Extreme Supply Voltage (V d.c.):	4.2
Minimum Extreme Supply Voltage (V d.c.):	3.6

2 DESCRIPTION OF THE DEVICE UNDER TEST

2.1 Final Equipment Build Status

Frequency Range:	GSM850:Tx:824~849MHz Rx:869~894MHz PCS1900:Tx:1850~1910MHz Rx:1930~1990MHz WCDMA Band II:Tx:1852.4~1907.6MHz Rx:1932.4~1987.6MHz WCDMA Band IV:Tx:1712.4~1752.6MHz Rx:2112.4~2152.6MHz WCDMA Band V:Tx:826.4~846.6MHz Rx:871.4~891.6MHz LTE Band 2: Tx:1850~1910MHz Rx:1930~1990MHz LTE Band 4: Tx:1710~1755MHz Rx:2110~2155MHz LTE Band 5: Tx:824~849 MHz Rx:869 ~894MHz LTE Band 12: Tx:699~716MHz Rx:729~746MHz LTE Band 25: Tx:1850.7~1914.3MHz Rx:1930.7~1962.5MHz LTE Band 41: Tx:2498.5~2687.5MHz Rx:2498.5~2687.5MHz LTE Band 66: Tx:1710.7~1779.3MHz Rx:2110.7~2179.3MHz LTE Band 71: Tx:665.5~695.5MHz Rx:619.5~649.5MHz Bluetooth/BLE: 2.402GHz~2.480GHz
Antenna Type:	Fixed Internal Antenna
Antenna Gain:	GSM850: -5.0dBi/PCS1900: 2.5dBi W2: 2dBi/W4:2.5dBi/W5:-5.0dBi LTE Band2:2.0dBi LTE Band4:2.5dBi LTE Band5:-4.0dBi LTE Band12:-2.0dBi LTE Band 25:2.0dBi LTE Band 41: -2.5dBi LTE Band 66:2.5dBi LTE Band 71:-3.0dBi Bluetooth/BLE:1.5dBi
Power Supply:	Battery or Charger
Hardware Version:	Z2335CCHW1.0
Software Version:	Z2335CCV1.0.0B01

2.2 Support Equipment

The following support equipment was used to exercise the DUT during testing:

Equipment:	Battery
Manufacturer:	Jiada Energy Technolog Co.,Ltd
Model Number:	Li3816T43P4h604550

3 REFERENCE SPECIFICATION

Specification	Version	Title
FCC Part2	2021	Frequency allocations and radio treaty matters; general rules and regulations
FCC Part22	2021	Public mobile services
FCC Part24	2021	Personal communications services
ANSI C63.26	2015	American national standard for compliance testing of transmitters used in licensed radio services
KDB 971168 D01	April 9, 2018	Measurement guidance for certification of licensed digital transmitters
TIA-603-E-2016	March 2016	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards

4 KEY TO NOTES AND RESULT CODES

The following are the definition of the test result.

Code	Meaning
PASS	Test result shows that the requirements of the relevant specification have been met.
FAIL	Test result shows that the requirements of the relevant specification have not been met.
NT	Normal Temperature
NV	Nominal voltage
HV	High voltage
LV	Low voltage




5 RESULT SUMMARY

No.	Test case	FCC reference	Verdict
1	RF Power Output	2.1046	Pass

Notes:

1. This is a variant report for Z2335CC. The new chip component is pin to pin compatible (approximately the same area as chip of PCB) and no change in radio parameters has occurred. Therefore, only the worst case of RF Power Output was verified for the differences. All the rest tests were performed in the original report: SRTC2020-9004(F)-20060201.

2. Chip Change Description includes detailed information about the changes between the devices.

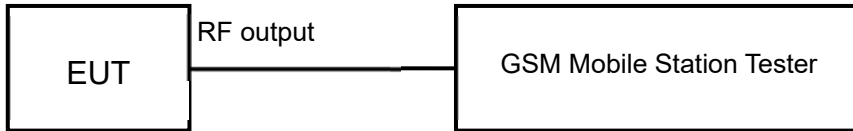
This Test Report Is Issued by: Mr. Peng Zhen 	Checked by: Mr. Li Bin 
Tested by: Mr. Zhao Yue 	Issued date: 20220318

6 TEST RESULT

6.1 RF Power Output

Rule Part(s)
FCC Part 2.1046

Test Setup:



Test procedure:

After a radio link has been established between EUT and Tester, the output power of the cell signal of the testing equipment will be decreased until the output power of the EUT reach a maximum value. Then the test data can be read at the tester screen. The loss between RF output port of the EUT and the input port of the tester will be taken into consideration. The measurement will be conducted at three channels (Low, Middle and High channels)

Limits: No specific conduct power requirements in part 2.1046.

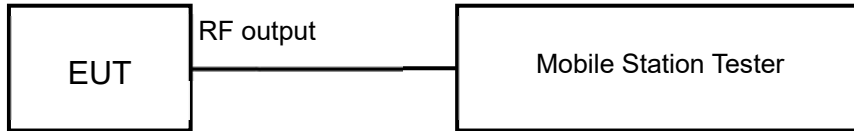
Test result:

The test results are shown in Appendix A.

6.2 Effective Radiated Power and Effective Isotropic Radiated Power

Rule Part(s)
FCC Part 22.913(a)(5)/Part 24.232(c)

Test setup:



Test procedure:
KDB 971168 D01 v03r01 – Section 5.6

Test Settings

Subclause 5.2.5.5 of ANSI C63.26-2015 is applicable, along with the following provisions. For personal/portable radios utilizing an integral antenna, the factor LC is typically negligible. However, in a fixed station transmit system that utilizes a long cable run between the transmitter and the transmitting antenna, this factor can be significant. The minimum cable loss should be used in this equation.

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured is:

$$\text{ERP/EIRP} = \text{PMeas} - \text{LC} + \text{GT}$$

Where:

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as PMeas, typically dBW or dBm)

PMeas = measured transmitter output power or PSD, in dBW or dBm

LC = signal attenuation in the connecting cable between the transmitter and antenna in dB

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP)

Limits for GSM850:

Operation Mode	Power Step	E.R.P. (dBm)
GSM	5	≤38.45
GPRS	3	≤38.45
EDGE	6	≤38.45

Limits for PCS1900:

Operation Mode	Power Step	E.I.R.P. (dBm)
GSM	0	≤33
GPRS	3	≤33
EDGE	5	≤33

Test result:

The test results are shown in Appendix A.

7 MEASUREMENT UNCERTAINTIES

Items	Uncertainty
RF Power Output	0.6 dB
Effective Radiated Power and Effective Isotropic Radiated Power	0.6 dB

8 TEST EQUIPMENTS

No.	Name/Model	Manufacturer	S/N	Calibration Date	Calibration Due Date
1	Mobile Station Tester / MT8820C	Anritsu	6201300660	2021.06.21	2022.06.20
2	Radio Communication Station / CMW500	R&S	161702	2021.06.21	2022.06.20
3	Spectrum Analyzer / FSV40	R&S	101065	2021.06.21	2022.06.20
4	Spectrum Analyzer / N9020A	Agilent	MY48010771	2021.05.18	2022.05.17
5	Power Divider / 11667A	HP	19632	2021.06.21	2022.06.20
6	DC Power Supply / E3645A	Agilent	MY40000741	2021.04.22	2022.04.21
7	Temperature chamber / SH241	ESPEC	92013758	2021.06.21	2022.06.20

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

1. RF Power Output

PCS1900

GSM Measured Power:

Carrier frequency (MHz)	Channel No.	RF Power Output (dBm)
1850.2	512	30.00
1880	661	30.02
1909.8	810	29.93

GPRS Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
1850.2	512	4Down1Up	30.01
1880	661	4Down1Up	29.93
1909.8	810	4Down1Up	29.87
1850.2	512	3Down2Up	26.79
1880	661	3Down2Up	27.14
1909.8	810	3Down2Up	26.68
1850.2	512	2Down3Up	25.07
1880	661	2Down3Up	25.42
1909.8	810	2Down3Up	24.99
1850.2	512	1Down4Up	23.64
1880	661	1Down4Up	23.75
1909.8	810	1Down4Up	23.31

EGPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	RF Power Output (dBm)
1850.2	512	4Down1Up	26.01
1880	661	4Down1Up	25.83
1909.8	810	4Down1Up	25.66
1850.2	512	3Down2Up	23.30
1880	661	3Down2Up	23.14
1909.8	810	3Down2Up	22.99
1850.2	512	2Down3Up	21.60
1880	661	2Down3Up	21.46
1909.8	810	2Down3Up	21.95
1850.2	512	1Down4Up	20.64
1880	661	1Down4Up	20.23
1909.8	810	1Down4Up	20.05

2. Effective Radiated Power and Effective Isotropic Radiated Power PCS1900

GSM Measured Power:

Carrier frequency (MHz)	Channel No.	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
1850.2	512	30.00	32.50	1.778
1880	661	30.02	32.52	1.786
1909.8	810	29.93	32.43	1.750

GPRS Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
1850.2	512	4Down1Up	30.01	32.51	1.782
1880	661	4Down1Up	29.93	32.43	1.750
1909.8	810	4Down1Up	29.87	32.37	1.726
1850.2	512	3Down2Up	26.79	29.29	0.849
1880	661	3Down2Up	27.14	29.64	0.920
1909.8	810	3Down2Up	26.68	29.18	0.828
1850.2	512	2Down3Up	25.07	27.57	0.571
1880	661	2Down3Up	25.42	27.92	0.619
1909.8	810	2Down3Up	24.99	27.49	0.561
1850.2	512	1Down4Up	23.64	26.14	0.411
1880	661	1Down4Up	23.75	26.25	0.422
1909.8	810	1Down4Up	23.31	25.81	0.381

EGPRS (8PSK) Measured Power:

Carrier frequency (MHz)	Channel No.	TX Mode	Conducted Power (dBm)	ERP/EIRP (dBm)	ERP/EIRP (W)
1850.2	512	4Down1Up	26.01	28.51	0.710
1880	661	4Down1Up	25.83	28.33	0.681
1909.8	810	4Down1Up	25.66	28.16	0.655
1850.2	512	3Down2Up	23.30	25.80	0.380
1880	661	3Down2Up	23.14	25.64	0.366
1909.8	810	3Down2Up	22.99	25.49	0.354
1850.2	512	2Down3Up	21.60	24.10	0.257
1880	661	2Down3Up	21.46	23.96	0.249
1909.8	810	2Down3Up	21.95	24.45	0.279
1850.2	512	1Down4Up	20.64	23.14	0.206
1880	661	1Down4Up	20.23	22.73	0.187
1909.8	810	1Down4Up	20.05	22.55	0.180

---End of Test Report---