

TEST REPORT

No. <u>2007TAR008</u>

Product	Elle N3 BLUETOOTH JEWEL
Model	EL03A
Client	T&A Mobile Phones

Telecommunication Metrology Centerof Ministry of Information Industry

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信息产业部通信计量中心 Telecommunication Metrology Center of MII





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	Elle N3 BLUETOOTH JEWEL	Model	FL024
Product		Trade mark	EL03A
Client	T&A Mobile Phones		
Manufacturer		T&A Mobile Phones	
Arrival Date of sample	Apr 02 th , 2007	Carrier of the samples	Ying Kong
Quantity of the samples	1//	Date of product	The State of the State of
Series number	EUT1: 11199000101375	er de de de La desde de de	
Standard(s)	FCC Part 15 (10-1-06 Edit	ion)	
Conclusion	Final Judgment: Pass		Date of issue: 2007-04-26
Comment	The test result relates only	to the tested sam	iples.

Approved by_	经	Reviewed by	Tested by
	(Lu Minniu)	(Sun Xiangqian)	(Zi Xiaogang)

(Lu Minniu - Deputy Director of the laboratory)

1. COMPETENCE AND WARRANTIES

Telecommunication Metrology Center of Ministry of Information Industry(hereinafter TMC) is a test laboratory accredited by DAR (DATech) – Deutschen Akkreditierungs Rat (Deutsche Akkreditierungsstelle Technik), for the tests indicated in the Certificate No. **DAT-P-114/01-01**.

TMC is a test laboratory accredited by CNAL – Accreditation Certificate of China National Accreditation Board for Laboratories, for the tests indicated in the Certificate No. **L0442**.

TMC is FCC listed lab. FCC listed number is 733176.

The test site in TMC is registered in Industry Canada. The IC registration number is 6629.

TMC is a testing laboratory competent to carry out the tests described in this report.

TMC guarantees the reliability of the data presented in this report, which is the result of measurements and tests performed to the item under test on the date and under the conditions stated on the report and is based on the knowledge and technical facilities available at TMC at the time of execution of the test.

TMC is liable to the client for the maintenance by its personnel of the confidentiality of all information related to the item under test and the results of the test.

2. Testing Laboratory

2.1 Testing Location

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Company Name:	Telecommunication Metrology Center of Ministry of Information Industry
Address:	No 52, Huayuan beilu, Haidian District, Beijing, P.R. China
Postal Code:	100083
Tolophono:	00961062202299

Telephone: 00861062303288 Fax: 00861062304793

2.2 Testing Environment

Semi-anechoic chamber (23 meters×17meters×10meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 30 ℃
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Normalised site attenuation (NSA)	< ±3.2 dB, 10 m distance, from 30 to 1000 MHz
Uniformity of field strength	Between 0 and 6 dB, from 26 to 1000 MHz

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Control room did not exceed following limits along the EMC testing:

Temperature	Min. = 15 ℃, Max. = 35 ℃
Relative humidity	Min. =30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Conducted chamber did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω

Fully-anechoic chamber (6.8 meters × 3.08 meters × 3.53 meters) did not exceed following limits along the EMC testing:

Temperature	Min. = 15 °C, Max. = 30 °C
Relative humidity	Min. = 30 %, Max. = 60 %
Shielding effectiveness	> 110 dB
Electrical insulation	> 10 kΩ
Ground system resistance	< 0.5 Ω
Uniformity of field strength	Between 0 and 6 dB, from 26 to 1000 MHz

2.3 Testing Period

Testing Start Date:	Apr 03,2007
Testing End Date:	Apr 26,2007

3. Applicant Information

3.1 Client Information

Name or Company	T&A Mobile Phones
Address/Post	4F, South Building, No.2966, JinKe Road, Zhangjiang High-Tech Park
City	Shanghai
Postal Code	201203
Country	China
Telephone	0086-21-61460883
Fax	0086-21-61460602

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3.2 Manufacture Information

Name or Company	T&A Mobile Phones
Address/Post	4F, South Building, No.2966, JinKe Road, Zhangjiang High-Tech Park
City	Shanghai
Postal Code	201203
Country	China
Telephone	0086-21-61460883
Fax	0086-21-61460602

4. Equipment under Test (EUT) and Ancillary Equipment (AE)

4.1 About EUT

Model	EL03A	
Description Elle N3 BLUETOOTH JEWEL		
FCC ID	RAD062	
Hardware status	PIO	
Software status	v271	
Power supply	Battery or Charger (AC Adaptor)	

4.2 Internal Identification of EUT used during the test

EUT ID	EUT ID SN or IMEI		SW Version
EUT1	11199000101375	PIO	v271

4.3 Photographs of EUT

Photographs of MS Hand Telephone Set and Charger are respectively shown in ANNEX B of this test report.

5. SUMMARY OF TEST RESULTS

Abbreviations used in this clause:	
Р	Pass
NA	Not applicable
F	Fail

Clause	List	Clause in FCC rules	Verdict
1	Radiated Emission	15.109(a)	Р
2	Conducted Emission	15.107(a)	Р

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6. MAIN TEST INSTRUMENTS

NO	Description	TVDE	SERIES	MANUFACTUR	CAL DUE
NO.		TYPE	NUMBER	E	DATE
1	Test Receiver	ESS	847151/015	R&S	2007-10-30
2	Test Receiver	ESI40	831564/002	R&S	2008-2-11
3	BiLog Antenna	3142B	9908-1403	EMCO	2008-1-16
4	BiLog Antenna	VUL9163	9163 175	Schwarzbeck	2009-9-19
5	Signal Generator	SMT06	831285/005	R&S	2006-12-26
6	Signal Generator	SMP04	100070	R&S	2008-4-20
7	LISN	ESH2-Z5	829991/012	R&S	2007-8-13
8	Spectrum Analyzer	E4440A	MY41000262	Agilent	2008-4-18
9	Universal Radio Communication Tester	CMU200	100680	R&S	2007-8-23
10	Dual-Ridge Waveguide Horn Antenna	3115	9906-5827	EMCO	2008-3
11	Dual-Ridge Waveguide Horn Antenna	3116	2663	EMCO	2008-3
12	Dual-Ridge Waveguide Horn Antenna	3116	2661	EMCO	2008-3
13	Climatic chamber	SH-241	92003546	ESPEC	2007-5-15
14	Spectrum Analyzer	FSU26	200030	R&S	2007-6-19
15	Bluetooth Tester	MT8852A	6K0002698	Anritsu	2009-3-19

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ANNEX A MEASUREMENT RESULTS

A.1 Radiated Emission (§15.109(a))

A.1.1 Method of measurement

The field strength of radiated emissions from the unintentional radiator (USB mode of MS) at a distance of 3 meters is tested. The test set-up please refers to Annex C.1.

A.1.2 EUT Operating Mode:

The MS is operating in the USB mode. During the test MS is connected to a laptop via a USB cable. The model of the laptop is IBM T42 2373-M6C, and the serial number of the laptop is 99-FV6P2. The software is used to let the laptop keep on copying data to MS, reading and erasing the data after copy action was finished.

A.1.3 Measurement Limit

Frequency of emission (MHz)	Field strength (microvolts/meter)
30-88	100
88-216	150
216-960	200
Above 960	500

A.1.4 Measurement Results

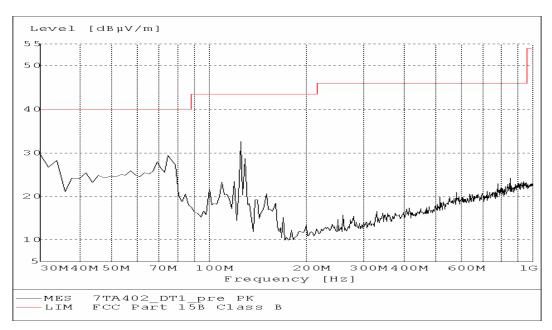


Figure A.1 Radiated Emission from 30MHz to 1GHz

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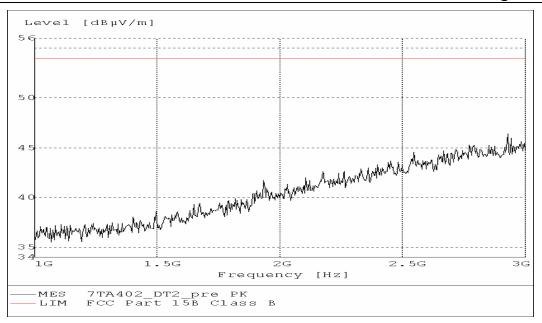


Figure A.2 Radiated Emission from 1GHz to 3GHz

A.2 Conducted Emission (§15.107(a))

A.2.1 Method of measurement

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150kHz to 30MHz shall not exceed the limits. The test set-up please refers to Annex C.2.

A.2.2 EUT Operating Mode:

The MS is operating in the USB mode. During the test MS is connected to a laptop via a USB cable. The model of the laptop is IBM T42 2373-M6C, and the serial number of the laptop is 99-FV6P2. The software is used to let the laptop keep on copying data to MS, reading and erasing the data after copy action was finished.

A.2.3 Measurement Limit

Frequency of emission (MHz)	Conducted limit (dBµV)			
	Quasi-peak	Average		
0.15-0.5	66 to 56*	56 to 46*		
0.5-5	56	46		
5-30	60	50		
*Decreases with the logarithm of the frequency				

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A.2.4 Measurement Results

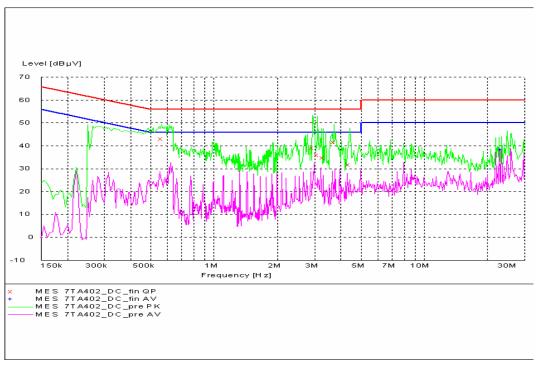


Figure A.3 Conducted Emission

MEASUREMENT RESULT: "7TA402_DC_fin QP"

Frequency	Level	Transd	Limit	Margin	Line	PE
MHz	dΒμV	dB	dΒμV	dB		
0.560000	43.10	10.1	56	12.9	N	GND
2.931808	39.10	10.1	56	16.9	N	GND
3.099983	36.00	10.1	56	20.0	N	FLO
3.304026	34.80	10.1	56	21.2	N	GND
3.693950	41.60	10.1	56	14.4	L1	GND
4.401723	31.70	10.2	56	24.3	N	FLO

MEASUREMENT RESULT: "7TA402_DC_fin AV"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Line	PE
23.274153	38.40	10.3	50	11.6	N	GND

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ANNEX B PHOTOGRAPH OF EUT

External Photo



Mobile Phone



Mobile Phone

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Mobile Phone



Mobile Phone

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Charger (AC/DC Adapter)



USB Cable

Internal Photo



Mobile phone Disassembly

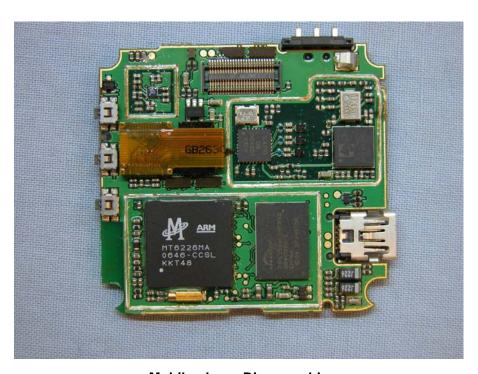


Mobile phone Disassembly

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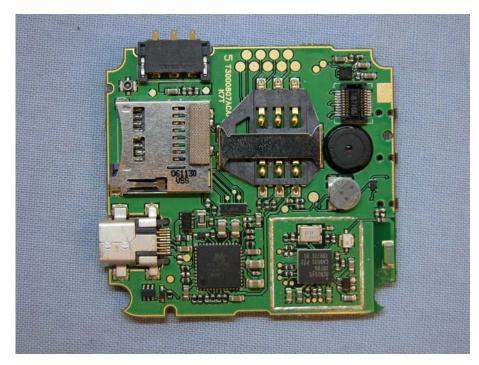


Mobile phone Disassembly



Mobile phone Disassembly

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Mobile phone Disassembly



Mobile phone Disassembly

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Mobile phone Disassembly

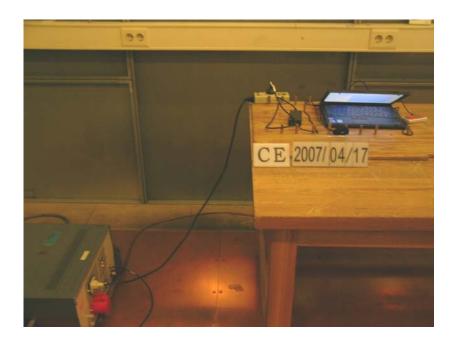


Mobile phone Disassembly

ANNEX C TEST LAYOUT



Pic C.1 Radiated Emission



Pic C.2 Conducted Emission
END OF REPORT BODY