

REF : RS-03-40067/1/FG/NL

ELECTRICAL SAFETY TEST REPORT

according to the standard : EN 60 950 : 2000

Equipment under test :
**GSM module WAVECOM,
model Q2406X**

Company : WAVECOM

DISTRIBUTION : Mr DESCUSSE

(Company : WAVECOM)

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Applicant's Name: WAVECOM	
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Test specification	
Standard.....:	EN 60 950 : 2000
Procedure deviation	Europeen
Test item description	GSM module
Trademark	WAVECOM
Model and/or type reference	Q2406X
Rating(s)	3,6Vdc
.....:	
Equipment mobility	for building-in
Operating condition.....:	Continuous
Maximum operating temperature (°C).....:	-
Tested for IT power systems	No
IT testing, phase-phase voltage (V) :	-
Class of equipment	Class III
Mass of equipment (kg).....:	< 0,1
Protection against ingress of water	IPX0
Test case verdicts	
Test case does not apply to the test object : N/A	
Test item does meet the requirement	
Test item does not meet the requirement ..: F(ail)	
Date of receipt of test item	
Date(s) of performance of test	

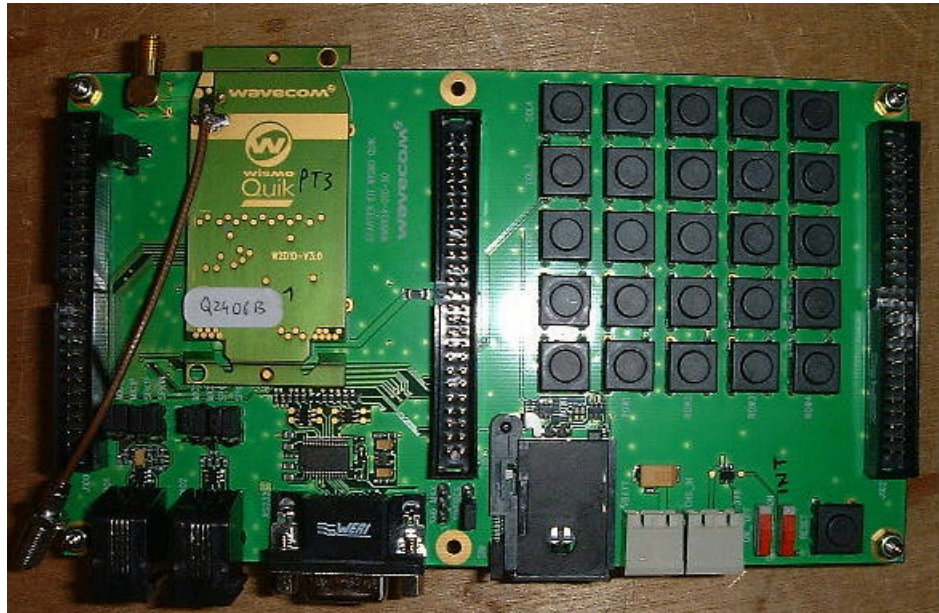
1. INTRODUCTION

This report provides results of electrical safety test performed on the GSM module WAVECOM, model Q2406X.

This GSM module can be sold in under 4 references :

- Q2406A : with 16/2 Flash / SDRAM Memory
- Q2406B : with 32/4 Flash / SDRAM Memory
- Q2406D : with 64/8 Flash / SDRAM Memory
- Q2406E : with 16/2 Flash / SDRAM Memory

GSM module WAVECOM, model Q2406X



2. CONCLUSIONS

The GSM module WAVECOM, model Q2406X complies with requirements of standard EN 60950 : 2000.

3. TEST REPORT EN 60 950 : 2000

Copy of marking plate



EN 60 950			
Clause	Requirement - Test	Result	Verdict
1	GENERAL		-
1.5	Components		N/A
1.6	Power interface		N/A
1.7	Marking and instructions		-
1.7.1	Power rating		-
	Rated voltage(s) or voltage range(s) (V)	Class III equipment	N/A
	Symbol for nature of supply for d.c.		N/A
	Rated frequency or frequency range (Hz)	Class III equipment	N/A
	Rated current (A)	Class III equipment	N/A
	Manufacturer's name/Trademark	WAVECOM	P
	Type/model	Q2406X	P
	Symbol of Class II	Class III equipment	N/A
	Other symbols	No symbols	N/A
	Certification marks	No certification marks	N/A
1.7.2	Safety instructions		P
1.7.3	Short duty cycles	Continuous cycle	N/A
1.7.4	Supply voltage adjustment	Class III equipment	N/A
1.7.5	Power outlets on the equipment	Class III equipment	N/A
1.7.6	Fuse identification	No fuses	N/A
1.7.7	Wiring terminals		N/A
1.7.7.1	Protective earthing and bonding terminals	Class III equipment	N/A
1.7.7.2	Terminal for a.c. mains supply conductors	Class III equipment	N/A
1.7.8	Controls and indicators		-
1.7.8.1	Identification, location and marking		N/A
1.7.8.2	Colours		N/A
1.7.8.3	Symbols according to IEC 60417.....		N/A
1.7.8.4	Markings using figures		N/A
1.7.9	Isolation of multiple power sources	Class III equipment	N/A
1.7.10	IT power system	Class III equipment	N/A
1.7.11	Thermostats and other regulating devices	No thermostats	N/A
1.7.12	Language	English	P
1.7.13	Durability		P
1.7.14	Removable parts		N/A
1.7.15	Replaceable batteries	No batteries	N/A
	Language		-
1.7.16	Operator access with a tool.....		N/A
1.7.17	Equipment for restricted access locations		N/A

EN 60 950			
Clause	Requirement - Test	Result	Verdict
2	PROTECTION FROM HAZARDS		-
2.1	Protection from electric shock and energy hazards		N/A
2.1.1	Protection in OPERATOR access areas	Equipment intended for building-in	N/A
2.1.1.1	Access to energized parts		N/A
	Test by inspection		N/A
	Test with test finger		N/A
	Test with test pin		N/A
	Test with test probe		N/A
2.1.1.2	Battery compartments.....	No batteries	N/A
2.1.1.3	Access to ELV wiring	Class III equipment	N/A
	Working voltage (V); distance (mm) through insulation		-
2.1.1.4	Access to hazardous voltage circuit wiring	Class III equipment	N/A
2.1.1.5	Energy hazards		N/A
2.1.1.6	Manual controls	No manual controls	N/A
2.1.1.7	Discharge of capacitors in the primary circuit	Class III equipment	N/A
	Time-constant (s); measured voltage (V).....		-
2.1.2	Protection in service access areas		N/A
2.1.3	Protection in restricted access locations		N/A
2.2	SELV circuits		-
2.2.1	General requirements		P
2.2.2	Voltages under normal conditions (V).....	3,6 Vdc	P
2.2.3	Voltages under fault conditions (V).....	3,6 Vdc	P
2.2.3.1	Separation by double or reinforced insulation (method 1)		N/A
2.2.3.2	Separation by earthed screen (method 2)		N/A
2.2.3.3	Protection by earthing of the SELV circuit (method 3)		N/A
2.2.4	Connection of SELV circuits to other circuits.....		N/A
2.3	TNV circuits		N/A
2.4	Limited current circuits		N/A
2.5	Limited power sources		N/A

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Clause	Requirement - Test	Result	Verdict
2.6	Provisions for earthing and bonding		N/A
2.7	Overcurrent and earth fault protection in primary circuits		N/A
2.8	Safety interlocks		N/A
2.9	Electrical insulation		N/A
2.10	Clearances, creepage distances and distances through insulation		N/A
3	WIRING, CONNECTIONS AND SUPPLY		-
3.1	General		N/A
3.2	Connection to a.c. mains supplies		N/A
3.3	Wiring terminals for connection of external conductors		N/A
3.4	Disconnection from the a.c. mains supply		N/A
3.5	Interconnection of equipment		-
3.5.1	General requirements		P
3.5.2	Types of interconnection circuits.....:	SELV circuit only	P
3.5.3	ELV circuits as interconnection circuits		N/A

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Clause	Requirement - Test	Result	Verdict

4	PHYSICAL REQUIREMENTS		-
4.1	Stability		-
	Angle of 10°	Equipment intended for building-in	N/A
	Test: force (N)		N/A

4.2	Mechanical strength		-
4.2.1	General		N/A
4.2.2	Steady force test, 10 N	Class III equipment	N/A
4.2.3	Steady force test, 30 N	Class III equipment	N/A
4.2.4	Steady force test, 250 N	Class III equipment	N/A
4.2.5	Impact test	Class III equipment	N/A
4.2.6	Drop test	Class III equipment	N/A
4.2.7	Stress relief	Class III equipment	N/A
4.2.8	Cathode ray tubes	No cathode ray tubes	N/A
	Picture tube separately certified.....		N/A
4.2.9	High pressure lamps	No high pressure lamps	N/A
4.2.10	Wall or ceiling mounted equipment; force (N) ..	Equipment intended for building-in	N/A

4.3	Design and construction		-
4.3.1	Edges and corners		P
4.3.2	Handles and manual controls; force (N).....	Class III equipment	N/A
4.3.3	Adjustable controls	No adjustable controls	N/A
4.3.4	Securing of parts		N/A
4.3.5	Connection of plugs and sockets		N/A
4.3.6	Direct plug-in equipment	Class III equipment	N/A
	Torque (Nm)		-
4.3.7	Heating elements in earthed equipment	No heating element	N/A
4.3.8	Batteries	No batteries	N/A
4.3.9	Oil and grease	No oil and grease	N/A
4.3.10	Dust, powders, liquids and gases	No dust, powders, liquids and gases	N/A
4.3.11	Containers for liquids or gases	No liquids or gases	N/A
4.3.12	Flammable liquids.....		N/A
	Quantity of liquid (l).....		N/A
	Flash point (°C).....		N/A
4.3.13	Radiation; type of radiation	No ionising equipment	N/A
	Equipment using lasers		N/A

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Clause	Requirement - Test	Result	Verdict
4.4	Protection against hazardous moving parts		N/A
4.5	Thermal requirements		N/A
4.6	Openings in enclosures		N/A
4.7	Resistance to fire		-
4.7.1	Reducing the risk of ignition and spread of flame		P
4.7.2	Conditions for a fire enclosure		P
4.7.2.1	Parts requiring a fire enclosure	Equipment intended for building-in	N/A
4.7.2.2	Parts not requiring a fire enclosure		N/A
4.7.3	Materials		-
4.7.3.1	General		N/A
4.7.3.2	Materials for fire enclosures	Equipment intended for building-in	N/A
4.7.3.3	Materials for components and other parts outside fire enclosures		N/A
4.7.3.4	Materials for components and other parts inside fire enclosures	(See appended table 4.7)	P
4.7.3.5	Materials for air filter assemblies	No air filter	N/A
4.7.3.6	Materials used in high-voltage components	No high-voltage components	N/A
5	ELECTRICAL REQUIREMENTS AND SIMULATED ABNORMAL CONDITIONS		-
5.1	Touch current and protective conductor current		N/A
5.2	Electric strength		N/A
5.3	Abnormal operating and fault conditions		N/A
6	CONNECTION TO TELECOMMUNICATION NETWORKS		N/A

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Clause	Requirement - Test	Result	Verdict
	<p>SPECIAL NATIONAL CONDITIONS AND NATIONAL DEVIATIONS</p> <p>S = Special National Condition A = National Deviation (A-deviation)</p> <p>C = CENELEC Common Modification F = other information</p>		-
	C: delete all the "country" notes that appear on the following pages of the reference document (IEC 60950:1999): 85, 91, 99, 103, 117, 119, 123, 125, 149, 171, 213, 215, 219, 251, 283, 325, 327, 331, 333 and 407		-
1.2.4.1	S (DK): certain types of Class I appliances...	Class III equipment	N/A
1.5.1	A (CH, SE): add the following: NOTE: Switches containing mercury...	No mercury	N/A
1.5.8	S (NO): due to the IT power system...	Class III equipment	N/A
1.7.2	S (NO): class I pluggable equipment type A	Class III equipment	N/A
	S (SE): if the separation between the mains and SELV terminal...		N/A
	A (DK): supply cords of Class I equipment...		N/A
1.7.5	S (DK): socket-outlets for...		N/A
	A (DK): Class II equipment shall not be...		N/A
1.7.12	A (DE): Directions for use with rules to prevent...		N/A
1.7.15	A (CH): Annex 4.10 of SR 814.013 applies for batteries	No lithium batteries	N/A
	F (ALL): warning texts for lithium batteries		N/A
	Languages.....:		-
2.2.4	S (NO): requirements according to this annex, sub-clauses 1.7.2 and 6.1.2.1 apply		N/A
2.3.2	S (NO): requirements according to this annex, sub-clause 6.1.2.1 apply		N/A
2.3.3	S (NO): requirements according to this annex, sub-clause 6.1.2.1 apply		N/A
2.3.4	S (NO): requirements according to this annex, sub-clauses 1.7.2 and 6.1.2.1 apply		N/A
2.7.1	C: replace the subclause as follows...		-
2.7.2	C: This subclause has been declared 'void'		-
2.10.3.1	S (NO): due to the IT power system...		N/A

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Clause	Requirement - Test	Result	Verdict
3.2.1	S (CH): supply cords of equipment having a rated current not exceeding 10 A...		N/A
	S (DK): supply cords of single-phase equipment...		N/A
	S (ES): supply cords of single-phase equipment...		N/A
	S (GB): apparatus which is fitted with a flexible cable...		N/A
	S (IE): apparatus which is fitted with a flexible cable...		N/A
3.2.3	C: delete note 1, and in table 3A delete the conduit sizes in parentheses		-
	C: replace "60245 IEC 53" by "H05 RR-F",...		-
	S (GB): a power supply cord with conductor of 1,25 mm ² is allowed...		N/A
3.3.4	C: in table 3D, delete the fourth line...		-
	S (GB): the range of conductor sizes of ...		N/A
4.3.6	S (GB): the torque test is performed ...		N/A
	S (IE): direct plug-in equipment is known ...		N/A
4.3.13	C: replace the second compliance paragraph by: For equipment using LEDs or lasers...		-
6.1.2.1	S (NO, SE): add the following text between the first and second paragraph...		N/A
6.1.2.2	S (FI, NO, SE): the exclusions are applicable for permanently connected equipment and pluggable equipment type B only		N/A
G.2	S (NO): due to the IT power distribution...		N/A

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Annex H	C: replace the last paragraph of this annex by: At any point 10 cm from the surface of the operator access area, the dose rate shall not exceed 1 μ Sv/h (0,1 mR/h) (see note). Account is taken of the background level		-
	C: replace the NOTE as follows: NOTE – These values appear in Directive 96/29/Euratom		-
	A (DE): (Regulation on protection against hazards by X-ray, of 8 th January 1987, Article 5 [Operation of X-ray emission source], clauses 1 to 4)...	No X-ray emission source	N/A
Annex P	C: replace the text of this annex by: See Annex ZA		-
Annex Q	C: Add the following notes for the standards indicated...		-
Annex ZA	C: This European standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies. NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.		-

EN 60 950			
Clause	Requirement - Test	Result	Verdict

4.7	TABLE: Flame classes of plastics			P
Parts	Manufacturer, type, flame class	Flame class required	Verdict	
Wiring printed board	UNITECH PRINTED, 0001A, 0001, UL 94V-0 No E97564	V1	P	
	UNIMICRON TECHNOLOGY, 61M, 85M, 1MV, 2MV, 3MV, UL 94V-0 No E49068	V1	P	
	WUS PRINTED CIRCUIT, MV01 to MV12, FR-4 and UL 94V-0 No E69282	V1	P	

□□□ End of report □□□