

HKTA 2001
Issue 12
Mar 2012

**COMPLIANCE TEST SPECIFICATION -
SAFETY AND ELECTRICAL PROTECTION
REQUIREMENTS FOR SUBSCRIBER
TELECOMMUNICATIONS EQUIPMENT**



**TELECOMMUNICATIONS AUTHORITY
HONG KONG**

Foreword

1. This specification is issued pursuant to Section 32D of the Telecommunications Ordinance (Cap. 106). This specification stipulates the safety and electrical protection requirements to be met by subscriber telecommunications equipment.
2. At present, OFTA operates a **Hong Kong Telecommunications Equipment Evaluation and Certification** (“HKTEC”) scheme. Details of the scheme can be found in the Information Note I421. Under the scheme, suppliers or manufacturers may apply for certification of their subscriber equipment against the specifications prescribed by the TA. For the purpose of certification, subscriber equipment shall comply with the safety requirements set out in this specification, among other technical requirements
3. Technical requirements other than safety and electrical protection are given in the HKTA series specifications issued by the TA. The HKTA specifications and information notes issued by the TA can be downloaded from OFTA’s website at <http://www.ofta.gov.hk>. Enquiries about this specification may be directed to:

Senior Telecommunications Engineer (Standards),
Office of the Telecommunications Authority,
29/F, Wu Chung House,
213 Queen’s Road East ,
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4. The TA reserves the right to revise the contents of this specification without prior notice. Amendments or re-issues of this specification may not be distributed automatically to equipment manufacturers/suppliers and it will be the responsibility of the manufacturers/suppliers to ensure that their equipment conform to the latest requirements.

Amendment Table¹

<u>Item</u>	<u>Issue No.</u>	<u>Paragraph</u>	<u>Description</u>
1.	Issue 08 5/98	2. Safety Requirement Point (a)	EN 60950 is adopted and the three standards BS 6301, BS 7002 and BS 415 are removed.
2.	Issue 08 5/98	2. Safety Requirement Point (b)	"Electrical Product (Safety) Regulation" is adopted and the "Plugs and Adapters (Safety) Regulation" is removed.
3.	Issue 09 12/02	2.2 Radiation Protection	The safety requirement on radiation protection is added.
4.	Issue 10 11/07	2.1 Electrical Protection	UL 60950 is adopted and UL 1950 is removed. UL 1642 is adopted.
5.	Issue 10 11/07	Title	Title is amended to remove reference to connection to the public telecommunications networks
6.	Issue 11 05/10	2.2 Radiation Protection	IEC 62209-1 and EN 62209-1 are adopted.
7.	Issue 11 05/10	2.1 Electrical Protection	Update the reference to international standards.
8.	Issue 12 03/12	2.2 Radiation Protection	Update reference number of IEEE Std C95.1. Remove EN 50361. Add IEC 62209-2 and EN 62209-2. Update reference number and title of IEEE Std C95.3.
9.	Issue 12 03/12	3 How to obtain specifications and regulation	Update source for Electrical Products (Safety) Regulation.

¹Amendment history before Issue 7 of HKTA 2001 is not available

1. **PRINCIPLE OF PROTECTION**

In order to safeguard operating personnel, users and plant, it is essential to prevent the transmission of excessive voltages from subscriber equipment and to limit the human exposure to radio frequency electromagnetic fields in case the subscriber equipment is a hand-held mobile station for connection to the public mobile radiocommunications networks.

2. **SAFETY REQUIREMENTS**

2.1 **Electrical Protection**

2.1.1 The subscriber equipment shall comply with specification (i), (ii) or (iii) below. For lithium batteries of subscriber equipment, they shall comply with specification (i), (ii), (iii) or (iv) below.

- (i) IEC 60950-1 –"Information Technology Equipment – Safety – Part 1: General requirements" issued by International Electrotechnical Commission (IEC)
- (ii) EN 60950-1 –"Information Technology Equipment – Safety – Part 1: General requirements" issued by European Committee for Electrotechnical Standardization (CENELEC)
- (iii) UL 60950-1 –"Information Technology Equipment – Safety – Part 1: General requirements" issued by Underwriters Laboratories Inc.
- (iv) UL 1642 –"Lithium Batteries" issued by Underwriters Laboratories Inc.

2.1.2 The subscriber equipment shall also comply with the following regulation:

Electrical Products (Safety) Regulation of the Electricity Ordinance (Cap. 406), Hong Kong Law

2.2. **Radiation Protection**

2.2.1 From 1 April 2003 onwards, subscriber equipment which is a hand-held mobile station for connection to the public mobile radiocommunications networks shall meet the radiation protection requirements stipulated in this clause. For subscriber equipment certified or type approved by OFTA before 1 April 2003, compliance with the requirements stipulated in this clause is not compulsory.

2.2.2 The subscriber equipment shall comply with the Specific Absorption Rate (SAR) limits for general public exposure specified in:-

“Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic, and Electromagnetic Fields (up to 300GHz)” issued by International Commission on Non-Ionizing Radiation Protection (ICNIRP)

or

IEEE Std C95.1 “IEEE Standard for Safety Levels with respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3kHz to 300 GHz” issued by Institute of Electrical and Electronics Engineers (IEEE)

2.2.3 Reference Test Method

To demonstrate the compliance with the SAR limits, assessment method should be made reference to:-

IEC 62209-1 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)” issued by International Electrotechnical Commission (IEC)

or

EN 62209-1 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures -- Part 1: Procedure to determine the specific absorption rate (SAR) for hand-held devices used in close proximity to the ear (frequency range of 300 MHz to 3 GHz)” issued by European Committee for Electrotechnical Standardization (CENELEC)

or

IEC 62209-2 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)” issued by International Electrotechnical Commission (IEC)

or

EN 62209-2 “Human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices - Human models, instrumentation, and procedures - Part 2: Procedure to determine the specific absorption rate (SAR) for wireless communication devices used in close proximity to the human body (frequency range of 30 MHz to 6 GHz)” issued by European Committee for Electrotechnical Standardization (CENELEC)

or

IEEE Std C95.3 “IEEE Recommended Practice for Measurements and Computations of Radio Frequency Electromagnetic Fields With Respect to Human Exposure to Such Fields, 100 kHz–300 GHz” issued by IEEE

or

Other measurement practices issued by relevant organisations which are acceptable to the TA.

3. **HOW TO OBTAIN SPECIFICATIONS AND REGULATION**

- 3.1 Copies of specifications can be obtained from relevant organisations or can be purchased from the following :

Product Standards Information Bureau (PSIB),
Innovation and Technology Commission,
36/F Immigration Tower,
7 Gloucester Road,
Wanchai, Hong Kong.

Tel No. : +852 2829 4820

Fax No. : +852 2824 1302

- 3.2 Electrical Products (Safety) Regulation can be downloaded from the following:
<http://www.elegislation.gov.hk>

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