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**PERFORMANCE SPECIFICATION FOR  
RADIO EQUIPMENT  
OPERATING IN THE 920 – 925 MHz BAND  
FOR THE PROVISION OF PUBLIC  
TELECOMMUNICATIONS SERVICES**



## **FOREWORD**

1. This specification is prescribed under section 32D of the Telecommunications Ordinance (Cap 106) (“the Ordinance”) to set out the technical and evaluation requirements for radio equipment operating in the 920 – 925 MHz band for the provision of public telecommunications services. Radio equipment falling into the scope of this specification shall meet the stipulated requirements.
2. Under the Ordinance, the possession or use of any radiocommunications apparatus or any apparatus emitting radio frequency energy must be covered by an appropriate licence issued by the Communications Authority (CA) with the exception of those specifically exempted from licensing under the Ordinance, such as those covered by the Telecommunications (Telecommunications Apparatus)(Exemption from Licensing) Order.
3. At present, the Office of the Communications Authority (OFCA) operates a Hong Kong Telecommunications Equipment Evaluation and Certification (HKTEC) Scheme. Details of the HKTEC Scheme can be found in the information note OFCA I 421. Under the Scheme, suppliers or manufacturers of the radiocommunications apparatus may apply for certification of their apparatus against this specification. The application procedures for certification of radiocommunications apparatus can be found in the information note OFCA I 401. A prescribed label may be affixed to the certified equipment. Details of the labelling arrangement can be found in the Standardisation Guide HKCA 3211.
4. The CA may amend any part of this specification as and when it deems necessary.
5. In case of doubt about the interpretation of this specification, the methods of carrying out the test and the validity of statements made by the equipment manufacturers or suppliers about the equipment, the decision of the CA shall be final.
6. The HKCA specifications and information notes issued by the CA can be downloaded from OFCA’s website at <http://www.ofca.gov.hk>. Enquiries about this specification may be directed to:

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Standards Section  
Office of the Communications Authority  
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213 Queen’s Road East  
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## AMENDMENT HISTORY

Item	Issue No.	Paragraph	Descriptions
1.	Issue 1 December 2017	All	First release

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## **1. SCOPE OF SPECIFICATION**

This specification sets out the minimum performance requirements for radio equipment operating in the 920 – 925 MHz band for the provision of public telecommunications services (hereafter referred to as “the equipment”).

## **2. ELECTRICAL SAFETY REQUIREMENTS**

If the equipment is for connection to the public telecommunications networks, it shall comply with the electrical safety requirements set out in HKCA 2001 “Compliance Test Specification - Safety and Electrical Protection Requirements for Subscriber Telecommunications Equipment” issued by the Communications Authority (CA).

## **3. RADIATION PROTECTION**

3.1 The equipment shall comply with the exposure limits specified in:

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

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

3.2 Reference Test Method

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

ANSI/IEEE C95.3 “IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields – RF and Microwave” issued by American National Standards Institute (ANSI) / Institute of Electrical and Electronics Engineers (IEEE), or

other measurement methods issued by relevant organisations which are acceptable to the CA.

## **4. TECHNICAL REQUIREMENTS**

4.1 The equipment shall operate in the frequency band 920 – 925 MHz and meet the technical requirement according to the Code of Federal Regulations (USA); Title 47 Telecommunication; Chapter 1 Federal Communications Commission, Part 15 Radio Frequency Devices; Section 15.247.

4.2 The equipment shall use frequency hopping spread spectrum modulation.

- 4.3 The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.
- 4.4 The peak transmitter power shall not exceed 1W and the equivalent isotropically radiated power (EIRP) from the equipment shall not exceed 4W.
- 4.5 If transmitting antenna of directional gain greater than 6 dBi are used, the peak transmit power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.
- 4.6 The spurious emission level of the equipment shall not exceed 10  $\mu$ W outside the frequency band in which the fundamental frequencies are located.

## **5. EVALUATION REQUIREMENTS**

Compliance of the equipment with the technical requirements shall be evaluated in accordance with the procedures specified in the standard given in clause 4.1 above.

## **6. REFERENCE**

Code of Federal Regulations (USA); Title 47 Telecommunication; Chapter 1 Federal Communications Commission, Part 15 Radio Frequency Devices; Section 15.247

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

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

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