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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 11313.202-2018

**Radio-frequency connectors - Part 202: Electrical test methods
- Insertion loss**

射频连接器 第202部分：电气试验方法 插入损耗

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Foreword

GB/T 11313 "RF Connector" part of the electrical test method is planned to be released
The following sections.

--- Part.201. Electrical test methods - Reflection coefficient and voltage standing wave ratio

--- Part 202. Electrical test methods, insertion loss

--- Part 203. Electrical test methods for shielding efficiency

--- Part 204. Electrical test methods - Resistance to radio frequency This part is part 202 of
GB/T 11313. This part is drafted in accordance with the rules given in GB/T 1.1-2009.

Please note that some of the contents of this document may involve patents. The issuing organization of this document is not responsible for identifying these patents. This part was proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This part is under the jurisdiction of the National High-Tech Cable and Connector Standardization Technical Committee for Electronic Equipment (SAC/TC190). This section drafted by: China Electronics Technology Standardization Institute, AVIC Fujitec Technology Co., Ltd., Tongding Internet Information Co., Ltd. Limited. The main drafters of this section. Wu Zhengping, Wu Xiangwen, Yu Zhi'an. RF connector Part 202. Electrical test methods, insertion loss

1 Scope

GB/T 11313.202-2018 is the Chinese national standard on radio-frequency connectors - part 202: electrical test methods - insertion loss, in the field of telecommunications and audio-video engineering. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 17 September 2018 by the State Administration for Market Regulation; Standardization

Administration of China, and has been in force since 1 January 2019. Classification: ICS 33.120.10, CCS L27. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This part of GB/T 11313 specifies the test method for insertion loss of RF connectors. This section applies to the RF connector of the cable (hereinafter referred to as the cable connector) and the microstrip RF connector (hereinafter referred to as the microstrip connection). And RF connector adapters (hereinafter referred to as adapters), etc., also applicable to multi-channel RF coaxial connectors and hybrid connectors RF channel testing.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article. Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 11313.1 RF connectors - Part 1. General specifications and test methods (IEC 61169-1.1998, IDT)

3 Terms and definitions

The following terms and definitions as defined in GB/T 11313.1 apply to this document.

3.1 Insertion loss insertionloss The power loss generated when the device under test is connected to the transmission system. The insertion loss of the RF connector is expressed by equation (1). $IL = -10 \lg \frac{P_2}{P_1}$ In the formula. IL

--- insertion loss in decibels (dB); P_1

--- the input power of the signal source to the RF connector, in watts (W); P_2

--- The output power that the signal source transmits to the load through the RF connector, in watts (W).

4.1.1 Method

1 The cable connector shall be a pre-selected cable with an accurate and uniform characteristic impedance, one end connected to the connector under test and the other end connected A connector that mates with the connector under test. The length of the cable should be long enough that the loss of the connector is negligible. In the test sample The cable length is defined as the distance between the ends of the cable media after the cable is stripped. The attenuation of the cable is calculated using equation (2). $\alpha = \frac{IL}{L}$ (2)