



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

GB/T 21021.4-2021

**Intermodulation level measurement for passive RF and
microwave devices - Part 4: Measurement of passive
intermodulation in coaxial cables**

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Foreword

GB/T 21021 "Intermodulation level measurement of passive radio frequency and microwave components" has released the following parts.

---Part 1.General requirements and measurement methods;

---Part 2.Passive intermodulation measurement of coaxial cable assemblies;

---Part 3.Passive intermodulation measurement of coaxial connectors;

---Part 4.Passive intermodulation measurement of coaxial cable.

This part is Part 4 of GB/T 21021.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this part is equivalent to IEC 62037-4.2012 "Intermodulation Level Measurement of Passive Radio Frequency and Microwave Components Part 4"

Sub. Passive Intermodulation Measurement of Coaxial Cable.

The Chinese documents that have a consistent correspondence with the normatively cited international documents in this section are as follows.

---GB/T 21021.1-2021 Intermodulation level measurement of passive radio frequency and microwave components Part 1.General requirements and measurements

Method (IEC 62037-1.2012, IDT);

---GB/T 21021.3-2021 Intermodulation level measurement of passive radio frequency and microwave components Part 3.Coaxial connector

Source intermodulation measurement (IEC 62037-3.2012, IDT).

This section has made the following editorial changes.

---Added the description of d1, d2, d3, and R in Figure 1;

---The description of X, Y, Z, D in Figure 2 has been added.

1 Scope

This part of GB/T 21021 describes the recommended test equipment and test procedures for measuring the passive intermodulation level of coaxial cables, including two

A dynamic test method and a static test method.

All cables are subject to static test and dynamic test of clamped cable loop.

Flexible or semi-flexible cables also need to withstand the dynamic test of bending tools.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article

Pieces. For undated reference documents, the latest version (including all amendments) is applicable to this document.

IEC 62037-1 Intermodulation level measurement of passive radio frequency and microwave components Part 1.General requirements and measurement methods (Passive

RFandmicrowavedevices,intermodulationlevelmeasurement-Part
1.Generalrequirementsand

measuringmethods)

IEC 62037-3 Intermodulation level measurement of passive radio frequency and microwave components Part 3.Passive intermodulation measurement of coaxial connectors

(PassiveRFandmicrowavedevices,intermodulationlevelmeasurement-Part 3.Measurementof
passiveintermodulationincoaxialconnectors)

3 Abbreviations

The following abbreviations apply to this document.

DUT. device under test (deviceundertest)

IM. Intermodulation (intermodulation)

4 Test device

For dynamic tests, suitable test equipment is required. For the clamped cable loop test (see 5.2), it shall be clamped as shown in Figure 1

Move the cable sideways at both ends of the cable movement area. The design of the

clamp should not only firmly clamp the cable at the stress point, but not

The cable is damaged due to squeezing or kinking.

When using a bending tool to perform a movement test on the cable (see 5.3), the cable is bent when passing through the device shown in Figure 2. Total of the device

The body design is shown in Figure 2. See Table 1 and Table 2 for the detailed dimensions of cables of different specifications (and the specified different bending radii).