

ICS 17.220
CCS L85



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

GB/T 12179-2013

Replacing GB 12280-1990

General specification for noise generator

噪声发生器通用规范

Issued on: December 31, 2013

Implemented on: July 15, 2014

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine of the People's Republic of China;
Standardization Administration of China**

Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions

Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules. This standard replaces GB/T 12179-1990 "Noise generator General technical conditions" and GB/T 12280-1990 "noise generator test Test Methods. " Compared with GB/T 12179-1990 and GB/T 12280-1990, the main changes are as follows:

- Original two standards into one standard;
- Delete the original standard and reference standard is no longer used in the existing terms and definitions, and the content of some of the terms modify;
- Remove the "excess noise ratio test test noise generator and a gas discharge stability of the amount of" "power consumption test" to Sum Test methods (see GB/T 12280-1990);
- Added "output excess noise ratio Uncertainty Measurement and Analysis," "excess noise output change amount" compared with the temperature "ultra-noise ratio with the drive output Voltage variation "" output "requirements analysis and test methods (see 4.10,5.12);
- Updated the "Security" "environmental compatibility", "Transport Packaging", "Electromagnetic Compatibility" "reliability" of the requirements and test methods (see Chapter 4, Chapter 5);
- Update "Quality inspection rules" in the part (see Chapter 6). Please note that some of the content of this document may involve patents. Release mechanism of the present document does not assume responsibility for the identification of these patents. The standard proposed by the Ministry of Industry and Information Technology of the People's Republic of China. This standard by the National Standardization Technical Committee Electronic Measuring Instruments (SAC/TC153) centralized. This standard was drafted. China Electronics Technology Group Institute for Standardization 41st Institute of Industry and Information Technology Ministry of Electronics Industry Study hospital. The main drafters of this standard. Marching Song Qinge, Sui Wei, Huang Yinghua, Zhang Wei, Cao Ling. This standard replaces the standards previously issued as follows:
 - GB/T 12179-1990;

--- GB/T 12280-1990. General specification noise generator

1 Scope

GB/T 12179-2013 is the Chinese national standard on general specification for noise generator, in the field of metrology and measurement. 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 31 December 2013 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 15 July 2014. Classification: ICS 17.220, CCS L85. 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 standard specifies the terms and definitions noise generator, general technical requirements, test methods, inspection rules, packaging and transport and so on. This standard applies to all types of general-purpose noise generator.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 191-2008 Packaging - Pictorial signs

GB/T 6587-2012 General specification for electronic measuring instruments

3 Terms and Definitions

The following terms and definitions for use in the present document.

3.1 Noise noise Disrupt or interfere with the useful signal disturbance, it makes disturbed or distorted to make it through the signal transmitted over the network.

Note. A common noise is generated by superposition of a large number of short pulses of random processes, noise power distribution in line with the laws of probability theory, statistical methods can feed Processing.

3.2 Thermal noise thermalnoise Conductor in certain thermodynamic state arising in random electrical fluctuation. It is composed of irregular conductor free electron thermal transport Movement caused by its size depends on the thermodynamic state of the object, approximately evenly distributed throughout the RF and microwave frequencies, the load into the match funding With power is directly proportional to the bandwidth of the band.

3.3 Owned by noise power available noise power Noise generator can be transmitted to the maximum power load.

3.4 Funded by the noise power spectral density spectral density for available noise power Owned by units of the noise power within the bandwidth.

3.5 Noise temperature noise temperature When the noise generator generates the same noise power which the physical temperature of the resistor. Expressed in Kelvin (K).

3.6 Standard noise temperature reference noise temperature 290K noise temperature, usually represented by T_0 .