

ICS 17.220
CCS A 56

JJF

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

JJF 1128-2004

**Calibration Specification for Vector Signal Analyzers
(English Translation)**

Issued on: September 21, 2004

Implemented on: December 21, 2004

**Issued by: The General Administration of Quality Supervision, Inspection
and Quarantine issued, This specification was approved by the General
Administration of Quality Supervision, Inspection and Quarantine on
September 21, 2004, and**

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Vector Signal Analyzer Calibration Specification	

1 Scope

This specification applies to the calibration of various types of vector signal analyzers, as well as to the digital communication integrated tester receiver unit.

Calibration of the points.

2 Citations

"MeasuringWaveformQuality, Code-DomainPower, TimeOfsetandPhaseOfsetofCDMA Signal", IEEE Instrumentation and Measurement Technology Conference, Brussels, Begium, June 4-6, 1996.

"OperationManualofModel89441AVectorSignalGenerator", 1997.

Handbook of Measurement and Testing Technology, Volume 8, Electronics, China Metrology Press, 1997.

3 Terms and definitions

3.1 Intermodulation Distortion. When a composite signal above two frequency components passes nonlinearity After the network, in addition to the original frequency components and their corresponding harmonic components in the output signal, each frequency is generated.

The sum and difference frequency components of the rate component, which are caused by the mutual modulation and the combined frequency components, are called mutual Adjust the distortion.

3.2 Vectordiagram. The number is represented by the corresponding point on the coordinate plane (I/Q plane) the instantaneous value of the modulated vector signal is called a graph (or state diagram), as shown in Figure 1. a plane represents a shape State, each point represents a vector. Different vectors represent a logical quantity of "0" or "1". Due to the nonlinearity of the RF amplifier with noise, interference and fading of the transmission channel, etc., the amplitude and phase of the vector change, so the measured vector the amount is not the same as the reference vector, as shown in Figure 2.

Figure 1 vector coordinate chart Figure 2 error vector

3.3 error vector. equal to the vector difference between the measured vector and the reference vector.

3.4 error vector magnitude (EVM). equal to the magnitude of the error vector. Usually expressed as the percentage of the peak of the reference vector.

3.5 vector magnitude error (vectormagnitudeerror). equal to the amplitude of the measured vector and the amplitude of the reference vector the difference between degrees. Usually expressed as a percentage of the peak of the reference vector.