

IEEE Std C37.90.2™-2004

(Revision of
IEEE Std C37.90.2-1995)

C37.90.2™

IEEE Standard for Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

IEEE Power Engineering Society

Sponsored by the
Power Systems Relaying Committee



3 Park Avenue, New York, NY 10016-5997, USA

17 December 2004

Print: SH95285

PDF: 559-245



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IEEE Standard for Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

Sponsor

Power Systems Relaying Committee
of the
IEEE Power Engineering Society

Approved 1 February 2005

American National Standard Institute

Reaffirmed 25 March 2010

Approved 24 September 2004

IEEE-SA Standards Board

Abstract: Design tests for relays and relay systems that relate to the immunity of this equipment to Radiated Electromagnetic Interference from Transceivers are specified. Field strength, test frequencies, modulation, sweep rates, equipment setup and connection, test procedures, criteria for acceptance, and documentation for test results are described. This standard has been harmonized with IEC standards where consensus could be reached.

Keywords: field strength, keying test, Radiated Electromagnetic Interference, relay, relay systems, step test, sweep test, transceivers

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Print: ISBN 0-7381-4506-8 SH95285
PDF: ISBN 0-7381-4507-6 SS95285

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Introduction

(This introduction is not part of IEEE Std C37.90.2-2004, IEEE Standard for Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers.)

IEEE Standard for Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers was developed and published initially as a Trial Use Standard with an field strength requirement of 10 volts/meter over the frequency range of 25 Mhz. to 1000 Mhz. The Trial Use standard expired after 2 years of publication. Following reviews of inputs received from use of the Trial Use Standard, the final C37.90.2 document was subsequently released with a field strength requirement of 35 volts/meter. This field strength magnitude was established based upon test information received from the Working Group members.

This publication is a revision of the IEEE Std C37.90.2-1995. This revision of IEEE Std C37.90.2 contains changes so it will harmonize more closely with currently published IEC standards whenever possible. The test requirement changes are as described below.

- a) The minimum test frequency of the sweep range has been changed from 25 Mhz to 80 Mhz, which is the same as IEC 60255-22-3 [B1].
- b) The maximum sweep rate was changed from 0.005 octave/sec. to 1.5×10^{-3} decades per second, which is the same as IEC 60255-22-3 [B1].
- c) Added a Spot Frequency test, as specified in IEC 60255-22-3 [B1].

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This standard was prepared by the I18 Working Group of the Relaying Practices Subcommittee of the IEEE Power System Relaying Subcommittee. At the time this standard was approved, the working group had the following members.

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