International Telecommunication Union

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

K.44

Amendment 2

(12/2015)

SERIES K: PROTECTION AGAINST INTERFERENCE

Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents – Basic Recommendation

Amendment 2

Recommendation ITU-T K.44 (2012) – Amendment 2

ITU-T

International Telecommunication Union

Recommendation ITU-T K.44

Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents – Basic Recommendation

Amendment 2

Summary

Amendment 2 to Recommendation ITU-T K.44 (2012) introduces changes to the following clauses:

- 3.1 Definitions
- 3.2 Abbreviations and acronyms
- A.3 Test generators

History

Edition	Recommendation	Approval	Study Group	Unique ID*
1.0	ITU-T K.44	2000-02-25	5	11.1002/1000/4907
2.0	ITU-T K.44	2003-07-29	5	11.1002/1000/6496
3.0	ITU-T K.44	2008-04-13	5	11.1002/1000/9403
4.0	ITU-T K.44	2011-11-13	5	11.1002/1000/11422
5.0	ITU-T K.44	2012-05-29	5	11.1002/1000/11629
5.1	ITU-T K.44 (2012) Cor. 1	2013-03-16	5	11.1002/1000/11902
5.2	ITU-T K.44 (2012) Amd. 1	2015-04-22	5	11.1002/1000/12406
5.3	ITU-T K.44 (2012) Amd. 2	2015-12-14	5	11.1002/1000/12679

* To access the Recommendation, type the URL http://handle.itu.int/ in the address field of your web browser, followed by the Recommendation's unique ID. For example, http://handle.itu.int/11.1002/1000/11830-en.

FOREWORD

The International Telecommunication Union (ITU) is the United Nations specialized agency in the field of telecommunications, information and communication technologies (ICTs). The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of ITU. ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Assembly (WTSA), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSA Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

Compliance with this Recommendation is voluntary. However, the Recommendation may contain certain mandatory provisions (to ensure, e.g., interoperability or applicability) and compliance with the Recommendation is achieved when all of these mandatory provisions are met. The words "shall" or some other obligatory language such as "must" and the negative equivalents are used to express requirements. The use of such words does not suggest that compliance with the Recommendation is required of any party.

INTELLECTUAL PROPERTY RIGHTS

ITU draws attention to the possibility that the practice or implementation of this Recommendation may involve the use of a claimed Intellectual Property Right. ITU takes no position concerning the evidence, validity or applicability of claimed Intellectual Property Rights, whether asserted by ITU members or others outside of the Recommendation development process.

As of the date of approval of this Recommendation, ITU had not received notice of intellectual property, protected by patents, which may be required to implement this Recommendation. However, implementers are cautioned that this may not represent the latest information and are therefore strongly urged to consult the TSB patent database at http://www.itu.int/ITU-T/ipr/.

Table of Contents

Recommendation ITU-T K.44

Resistibility tests for telecommunication equipment exposed to overvoltages and overcurrents – Basic Recommendation

Amendment 2

1) Clause 3.1 Definitions

Replace:

3.1.23 remote power feed: A remote power feed is a power feed provided by symmetric signal pairs or inner conductors of coaxial circuits simultaneously used for signal transmission. An example of a remote power feed is a remote feed telecommunication (RFT). Remote power feeds complying with the requirements for a TNV circuit are not classified as a remote power feed. The requirements for a TNV circuit are provided in [b-IEC 60950-1], a dedicated power feed (dpf) is defined in clause 3.1.7, and an RFT is defined in [b-ITU-T K.50].

With:

3.1.23 remote power feed: A remote power feed is a power feed provided by symmetric signal pairs or inner conductors of coaxial circuits simultaneously used for signal transmission. Remote power feeds complying with the requirements for a TNV circuit are not classified as a remote power feed. The requirements for a TNV circuit are provided in [b-IEC 60950-1] and a dedicated power feed (dpf) is defined in clause 3.1.7.

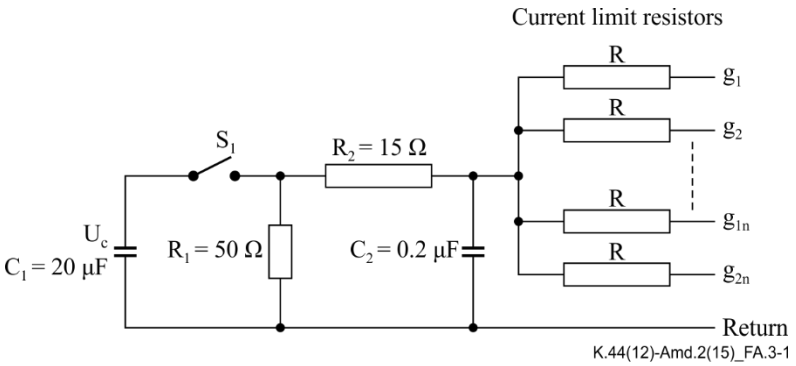
2) Clause 3.2 Abbreviations and acronyms

Remove the entry for RFT:

~~RFT Remote Feed Telecommunication~~

3) Figure A.3-1 in clause A.3, Test generators

Replace Figure A.3-1 with the figure below:



NOTE 1 – The 10/700 open-circuit voltage waveshape shall have a front time of 10 µs ±3 µs and a time to half value from virtual zero of 700 µs ±144 µs.

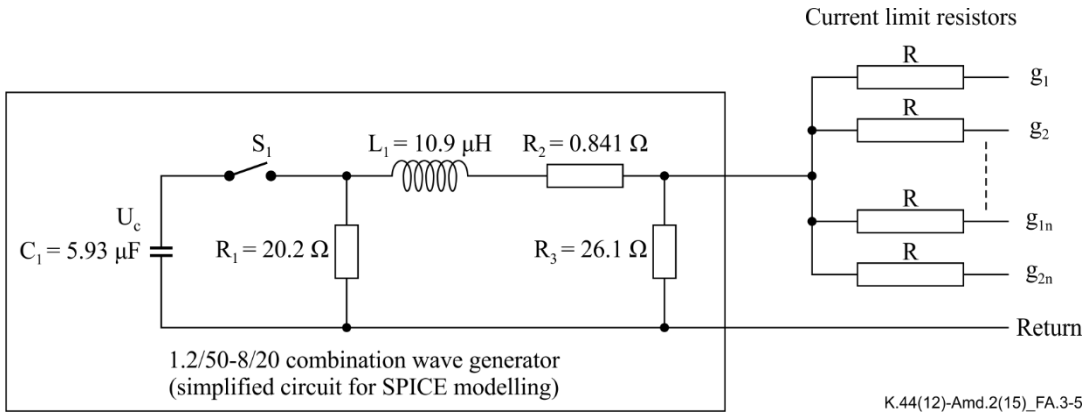
NOTE 2 – The 5/320 short-circuit current waveshape in a single output of R = 25 Ω connected to the generator return shall have a front time of 5 µs ±1.0 µs and a time to half value from virtual zero of 320 µs ±64 µs.

NOTE 3 – In Figure A.3-1 all resistors shall have a ±5 % tolerance and all capacitors a ±10 % tolerance.

Figure A.3-1 – 10/700 µs voltage surge generator

4) Figure A.3-5 in clause A.3, Test generators

Replace Figure A.3-5 with the figure below:



NOTE 1 – The 1.2/50 open-circuit voltage waveshape shall be according to [IEC 60060-1] having a front time of 1.2 µs ± 30% and a time to half value from virtual zero of 50 µs ± 20%.

NOTE 2 – The 8/20 short-circuit current waveshape shall be according to [IEC 62475] having a front time of 8 µs ± 20% and a time to half value from virtual zero of 20 µs ± 20%. The opposite polarity current undershoot shall not exceed 30% of the peak current.

NOTE 3 – The ratio of peak open-circuit voltage to short-circuit current R_i shall be 2 Ω ± 10%.

Figure A.3-5 – Combination wave generator

SERIES OF ITU-T RECOMMENDATIONS

Series A	Organization of the work of ITU-T
Series D	General tariff principles
Series E	Overall network operation, telephone service, service operation and human factors
Series F	Non-telephone telecommunication services
Series G	Transmission systems and media, digital systems and networks
Series H	Audiovisual and multimedia systems
Series I	Integrated services digital network
Series J	Cable networks and transmission of television, sound programme and other multimedia signals
Series K	**Protection against interference**
Series L	Environment and ICTs, climate change, e-waste, energy efficiency; construction, installation and protection of cables and other elements of outside plant
Series M	Telecommunication management, including TMN and network maintenance
Series N	Maintenance: international sound programme and television transmission circuits
Series O	Specifications of measuring equipment
Series P	Terminals and subjective and objective assessment methods
Series Q	Switching and signalling
Series R	Telegraph transmission
Series S	Telegraph services terminal equipment
Series T	Terminals for telematic services
Series U	Telegraph switching
Series V	Data communication over the telephone network
Series X	Data networks, open system communications and security
Series Y	Global information infrastructure, Internet protocol aspects, next-generation networks, Internet of Things and smart cities
Series Z	Languages and general software aspects for telecommunication systems

Printed in Switzerland
Geneva, 2016