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Interface Practices Subcommittee

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Measurement Procedure for Noise Power Ratio

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140 Philips Road
Exton, PA 19341

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1. Introduction

1.1. Executive Summary

Test procedure for Noise power ratio of active equipment.

1.2. Scope

This procedure defines a method of measurement for Noise Power Ratio (NPR) of active Cable Telecommunications equipment. It is intended for measurement of 75-ohm devices having type "F" or 5/8-24 KS connectors. See SCTE 96 2008 Cable Telecommunications Testing Guidelines for a discussion of proper testing techniques.

This procedure uses a spectrum analyzer to measure the noise power in a narrow frequency band. Other means of measurement such as a narrow band filter followed by a power meter may be used as long as the results can be shown to correlate to this method.

1.3. Benefits

A uniform procedure to measure the noise power ratio of active equipment

1.4. Intended Audience

Equipment manufacturers

1.5. Areas for Further Investigation or to be Added in Future Versions

None

2. Normative References

The following documents contain provisions, which, through reference in this text, constitute provisions of this document. At the time of Subcommittee approval, the editions indicated were valid. All documents are subject to revision; and while parties to any agreement based on this document are encouraged to investigate the possibility of applying the most recent editions of the documents listed below, they are reminded that newer editions of those documents might not be compatible with the referenced version.

2.1. SCTE References

- No normative references are applicable.

2.2. Standards from Other Organizations

- No normative references are applicable.

2.3. Published Materials

- No normative references are applicable.

3. Informative References

The following documents might provide valuable information to the reader but are not required when complying with this document.

3.1. SCTE References

- [SCTE 96] SCTE 96 2013, Cable Telecommunications Testing Guidelines

3.2. Standards from Other Organizations

- No informative references are applicable.

3.3. Published Materials

- No informative references are applicable.

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5. Definitions

Noise Power Ratio (NPR) Test	A test method that examines the amount of noise and intermodulation distortion in a channel. A test signal, comprised of flat Gaussian noise band limited to the frequency range of interest and with a narrow band (channel) of the noise deleted by a notch filter or other means, is injected into the Device Under Test (DUT). The NPR is measured at the output of the DUT as the test signal is swept across a power range. See Figure 1 for an example of an NPR test signal.
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