

# CEA Standard

## Set-top Box (STB) Power Measurement

CEA-2043

June 2013



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(Formulated under the cognizance of the CEA **R4 Video Systems Committee.**)

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## FOREWORD

This standard was developed under the auspices of the Consumer Electronics Association (CEA) R4 Video Systems Committee. It supersedes CEA-2013-A, *Digital STB Background Power Consumption*, and CEA-2022, *Digital STB Active Power Consumption Measurement*.

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## CONTENTS

<b>1 Scope</b> .....	<b>1</b>
<b>2 References</b> .....	<b>1</b>
<b>3 Compliance Notation</b> .....	<b>2</b>
<b>4 Definitions</b> .....	<b>2</b>
<b>5 Symbols and Abbreviations</b> .....	<b>4</b>
<b>6 Power Modes</b> .....	<b>4</b>
<b>7 Measurement Criteria</b> .....	<b>4</b>
<b>7.1 General</b> .....	<b>4</b>
<b>7.2 Measurement Accuracy</b> .....	<b>4</b>
<b>7.3 Test room</b> .....	<b>5</b>
<b>7.4 Test voltage</b> .....	<b>5</b>
<b>7.5 Test Equipment</b> .....	<b>5</b>
<b>8 Test Procedures</b> .....	<b>6</b>
<b>8.1 General</b> .....	<b>6</b>
<b>8.2 ON Mode Test Procedures</b> .....	<b>8</b>
<b>8.3 SLEEP Mode Test Procedures</b> .....	<b>9</b>
<b>8.4 OFF Mode Test Procedure</b> .....	<b>10</b>
<b>8.5 Power Mode Transition Test Procedures</b> .....	<b>10</b>
<b>9 Test Parameters Summary</b> .....	<b>12</b>
<b>Annex A (Informative) - Using CEA-2043 with ENERGY STAR STB Programs</b> .....	<b>13</b>
<b>Annex B (Informative) - CEA-2043 to IEC-62087 Parameter Map</b> .....	<b>15</b>
<b>Annex C (Informative) - Measuring Power Consumption of Satellite STBs</b> .....	<b>16</b>
<b>Annex D (Informative) – Concurrent Testing and Recommended Tests</b> .....	<b>17</b>
<b>Annex E (Informative) – CEA-2043 Tester Information Template</b> .....	<b>19</b>

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## Set-top Box (STB) Power Measurement

### 1 Scope

This standard defines procedures for measuring Set-top Box power consumption. CEA-2043: *Set-top Box (STB) Power Measurement* standard supersedes CEA-2013-A: *Digital STB Background Power Consumption* and CEA-2022: *Digital STB Active Power Consumption Measurement* standards. CEA-2043 includes procedures for measuring power consumption for a broad variety of STB types and features, and therefore not all test procedures are applicable to all STBs. The entity specifying the use of CEA-2043 for STB power measurement is expected to select which procedures are required for the STB being tested and is expected to define predetermined testing parameters required by the test procedures chosen.

Several informative annexes are included:

- Annex A maps CEA-2043 measurement parameters to the US EPA ENERGY STAR® Program Requirements for Set-top Boxes,
- Annex B maps CEA-2043 measurement parameters to IEC 62087:2011 *Method of Measurement for the Power Consumption of Audio, Video, and Related Equipment*,
- Annex C provides a method for measuring Satellite STB power consumption when the satellite STB under test is also providing power to the satellite reception equipment (e.g. LNBs), and
- Annex D provides an example of a concurrent testing scenario and a recommended tests and testing parameters for common STB types.
- Annex E provides a Tester Information Template to assist in specifying the use of CEA-2043

### 2 References

#### 2.1 Informative References

The following standards contain provisions that, through reference in this text, constitute informative provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed here.

#### 2.1.1 Informative Reference List

**2.1.1.1** ENERGY STAR® Program Requirements for Set-top Boxes, Version 3.0

**2.1.1.2** ENERGY STAR® Program Requirements for Set-top Boxes, Version 4.0

**2.1.1.3** ANSI/SCTE 28 (2007) Host-POD Interface Standard

**2.1.1.4** ANSI/SCTE 55-1 (2009) Digital Broadband Delivery System: Out of Band Transport Part 1: Mode A

**2.1.1.5** ANSI/SCTE 55-2 (2008) Digital Broadband Delivery System: Out of Band Transport Part 2: Mode B

**2.1.1.6** IEC 62301 Ed. 2.0 (2011) - Household electrical appliances – Measurement of standby power

**2.1.1.7** IEC 62087:2011 Method of Measurement for the Power Consumption of Audio, Video, and Related Equipment

**2.1.1.8** CSA C380-11 (2011) - Test procedure for the measurement of energy consumption of set-top boxes (STBs)