# - Check Test Methodology for simple Set- Top boxes Energy Label & Ecodesign -

**Work Package 5: Mobilisation of testing opportunities**
**Deliverables: D5.3**

## Guidelines and procedures on how to perform simplified 'check testing' operations for simple Set- Top boxes

**Version 3.0 – May 2015**

## Contents

## A OBJECTIVES

MarketWatch is looking to check test and evaluate the likelihood that a simple Set-Top box will fail full compliance testing with this simplified and cost effective check test methodology. The Project will be seeking advice on various performance and documentation aspects of the products. It is also envisaged that assistance may be required with queries that have relevance to the testing carried out and/or have a technical bias.

## B REPORT REQUIREMENTS

The lab report should be in English and consist of 2 parts:

- Text part (incl. Summary): detailed description of the investigations and measurements; the enumeration of the paragraphs matches the numeration of the result table which corresponds to the numeration of the check test programme
- Table part with results and detailed comments tabulated in a Microsoft Excel file

## C FURTHER INFORMATION

The Test Body should inform the Client of any faults with the samples or other unexpected problems that arise during testing as soon as is feasibly possible.

## D TEST CONDITIONS

After delivery to the Testing Body the test samples have to be unpacked and will be checked if they work properly. Any relevant settings at the initial setup should be noted. The laboratory measurements should be carried out at an ambient temperature between 23°C +/- 5°C
The A.C. power source should be 230Va.c. +/- 1%.

## 1. GENERAL

The information as set below needs to be recorded from the product, packaging and manuals before any measurements are taken.

### 1.1. Brand

As identified on the sample.

### 1.2. Type

Model name(s) as identified on the sample.

### 1.3 Identification

- Serial number as identified on the sample
- Product Type (SSTB without any additional features, SSTB with integrated hard drive, SSTB with second tuner, SSTB with HD decoding function)
- Software/firmware version supplied
- Software/firmware version tested (if an update becomes available during testing)
- Hard-off switch available
- Is the device smart enabled

### 1.4 Product Information

Note whether the following information are provided in the user manual that is delivered with the product and review the information,

- Full instruction manual present
- Quick start type guide present
- Note type of instruction manual or quick start guide e.g. paper, CD etc
- Detail the power saving options and any claims made by the manufacturer
- Availability of automatic power down function
- Default time after which the power management function, or similar function, has switched the equipment into the applicable low power mode or condition
- Sequence of events to reach the mode where the equipment automatically changes modes
- Digital status Display

## 2 Check Test Methodology

The check test methodology has two steps and needs to be performed in the same order as described below.

### 2.1 Step 1: Documentation check

The formal compliance of each product should be checked before any technical measurements are taken. Manufacturers need to provide the following documentation according to EC 107/2009;

- Power consumption in standby mode in Watts
- Power consumption in active mode in Watt

### 2.2 Step 2: Technical measurements

The following technical measurements should be taken in the following order and all devices must be set up as instructed in the user manual and cycled from on to standby mode(s) and then to off mode prior to measuring, rather than connecting power and measuring while assuming the mode is standby. The same is

true for the Power management function measurement. Recommend logging over five minutes as instantaneous measurements may not give a true indication.

### 2.2.1 Power Consumption in active mode

The device should be switched on and allowed to settle for 10 minutes. The highest data rate off-air channel should be tuned to (usually the one of the main national channels with the highest data rate and in HD if available).
Measure the consumption in Watts over 1 minute. The measured and claimed power consumption should be noted in the lab report.
Active mode power consumption must be less than or equal to 5,00W or 11,00W if it contains a hard disk or 6,00W if it has a second tuner or can decode HD signals.

### 2.2.2 Power consumption in standby mode

The Power consumption in standby mode should only be determined if the results for the test aspects 2.2.1 Power consumption in on-mode/ active mode are compliant with the regulations.

Confirm the presence of a standby mode.
The device should be switched to standby mode and allowed to settle for 10 minutes. Please note the name of the setting/mode used. Measure the consumption in Watts over 1 minute and note the measured and claimed power consumption in the lab report.
Standby-mode must be less than or equal to 0.50W or less than or equal to 1.00W if there is an information or status display function in standby.

### 2.2.3 Automatic Power Down (APD)

The Automatic Power Down function should only be determined if the results for the test aspects 2.2.1 Power consumption in on-mode/ active mode and 2.2.2 power consumption in standby mode are compliant with the regulations.

Confirm that menu settings reflect the existence of an APD function and that it is enabled by default. If the activation time is stated, note the default setting.
In the on-mode condition, make a channel change via the remote control. When the channel change is complete, measure the elapsed time to the sample automatically switching to a low power mode (must be less than or equal to three hours) and confirm that a warning message is displayed two minutes prior to this APD function.