TEST REPORT

References and Address					
Report number	102494499MKS-001	Original Issue Date:	4-Mar-2016	Revised:	None
Regulation	**REQUIREMENTS FOR STANDBY MODE, OFF MODE, AND NETWORKED STANDBY ACCORDING TO THE EC REGULATION 1275/2008 AS AMENDED BY REGULATION (EU) 801/2013** Part of underlying framework Directive 2009/125/EC, (replacing 2005/32/EC), of the European Parliament and of the Council with regard to ecodesign requirements for standby and off mode electric power consumption of electrical and electronic household and office equipment.				
Standard(s)	BS EN 50564: 2011				
Applicant	**Energy Saving Trust**				
Address	21 Dartmouth Street, London, SW1H 9BP				
Country	UK				
Contact	Stewart Muir				
Phone	020 7227 0374				
Email	stewart.muir@est.org.uk				
Product Description					
Sample code	**EST01**				
Type of appliance	Networked Soundbar				
Intended use	The product covered by this report is a household, indoor use, networked soundbar.				
Brand name	Sonos				
Type (model no.)	Playbar				
Serial number	1512 5C-AA-FD-1D-76-97-7				
Receipt condition	Production				
Sample receipt date	29/02/2016				
Test date	02/03/2016				
Input power requirements /ratings	100 - 240 Va.c., 50/60 Hz, 2 A				
Markets	European Union				
Notes	Primarily for use with a TV via optical lead, but other sources can stream music to this device. Wired Ethernet required to set up the device under certain conditions. WiFi required to set up the device under certain conditions and in order to use a mobile app.				

Summary of Test Results

The sample had no Standby mode.
The sample had no Off mode.
The maximum power consumption in networked standby was 5.84 W and the maximum time to auto power-down to networked standby was after 2 minutes 5 second(s) of inactivity.

These results are not in compliance with the Jan 2015 and Jan 2017 requirements of the EC regulation 1275/2008, due to issues with documentation and the inability to deactivate the wireless network port.

Standard and Environmental Conditions		
Standard applied	BS EN 50564: 2011	
Voltage/freq. and fluctuation of power source	230 Va.c. ±1%, 50 Hz ±1%	
Crest factor of the voltage waveform	1.42	
VTHD of power source (%)	0.03	
Ambient temp. (ºC)	22.5	
Air flow (m/s)	<0.1	
Illuminance level (lx)	N/A	
Power meter	Yokogawa WT210	Inventory number: E10726
Calibration	Calibration date:	Calibration due date:
	08-Jul-2015	08-Jul-2016
Source of information to establish product mode(s)	Instructions for use	
Technical justification in case of excluded mode(s)	The source should be the manufacturer's technical file, but this exerpt is taken from the manual: "Due to the high network availability requirements of the SonosNet mesh network, Sonos players do not have a standby or off mode other than removing the power cord from the AC mains."	
Set-up and circuits used for electrical testing	Refer to APPENDIX I	

Measurement Conditions			
Product mode	WiFi Auto power-down to networked standby (refer to EC regulation 1275/2008)		
Method used	Sampling method (clause 5.3.2 of EN 50564: 2011 standard)		
Description of the product mode	The sample was initially set up as per the instructions using a wired Ethernet connection to a router and a wireless connection and the sample was configured using an IOS app on a mobile phone (also in a further installation, following a factory reset, setup without Ethernet connected). The Ethernet port was then disconnected (these could not be deactivated).The sample was then configured with music streaming to the sample from a secondary device (mobile phone app) via the WiFi network. The music was stopped and after approx 2 minutes the sample automatically went into networked standby mode.		
Data for method 5.3.2	**Sampling Interval (s)**	**Total duration of measurements (hh:mm:ss)**	**Stability period (hh:mm:ss)**
	0.25	00:10:00	00:05:00
Notes	The sample can be reactivated using the secondary device, via the WiFi network.		
Product mode	Ethernet Auto power-down to networked standby (refer to EC regulation 1275/2008)		
Method used	Sampling method (clause 5.3.2 of EN 50564: 2011 standard)		
Description of the product mode	The sample was configured with music streaming to the sample from a secondary device (mobile phone app) via the wired network. The wireless network port could not be deactivated. The music was stopped and after approx 2 minutes the sample automatically went into networked standby mode.		
Data for method 5.3.2	**Sampling Interval (s)**	**Total duration of measurements (hh:mm:ss)**	**Stability period (hh:mm:ss)**
	0.25	00:10:00	00:05:00
Notes	The sample can be reactivated using the secondary device, via the wired network.		
Measurements of power are made with an uncertainty of less than or equal to 0.187 W at the 95% confidence level.			

Test and Verification Results (Sample Code = EST01)			
REQUIREMENTS OF COMMISSION REGULATION 1275/2008			
Regulation Clause	**Ecodesign Requirements, 2nd Stage (Applicable from 07/01/2013)**	**Result / Remark**	**Verdict**
2a)	Power consumption in 'off mode': Power consumption of equipment in any off mode condition shall not exceed 0.60 W.	The product had no Off mode	N/A
2b)	Power consumption in 'standby mode(s)': The power consumption of equipment in any condition providing only a reactivation function, or providing only a reactivation function and a mere indication of enabled reactivation function, shall not exceed 0.60 W.	The product had no Standby mode	N/A
2b)	The power consumption of equipment in any condition providing only information or status display, or providing only a combination of reactivation function and information or status display shall not exceed 1.10 W.	N/A	N/A
2c)	Availability of off mode and/or standby mode: Equipment shall, except where this is inappropriate for the intended use, provide off mode and/or standby mode, and/or another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source. - Characteristics of equipment relevant for assessing conformity with the requirements if applicable. - Time taken to automatically reach standby, or off mode, or another condition which does not exceed the applicable power consumption requirements. - If applicable, the technical justification shall be provided that the requirements are inappropriate for the intended use of equipment.	The product had no Standby mode The product had no Off mode	Modes not appropriate (claimed in the manual). Technical file not reviewed.

Test and Verification Results (Sample Code = EST01)			
REQUIREMENTS OF COMMISSION REGULATION 1275/2008			
Regulation Clause	**Ecodesign Requirements, 2nd Stage (Applicable from 07/01/2013)**	**Result / Remark**	**Verdict**
2d)	**Power management for all equipment other than networked equipment:** Equipment shall, unless inappropriate for the intended use, offer a power management function or a similar function. When equipment is not providing the main function, and other energy-using product(s) are not dependent on its functions, the power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into: — Standby mode, or — Off mode, or — Another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source. The power management function shall be activated. — Characteristics of equipment relevant for assessing conformity with the requirements if applicable. — Time taken to automatically reach standby, or off mode, or another condition which does not exceed the applicable power consumption requirements. — if applicable, the technical justification shall be provided that the requirements are inappropriate for the intended use of equipment.	N/A - Networked equipment	N/A

Test and Verification Results (Sample Code = EST01)			
REQUIREMENTS OF COMMISSION REGULATION 1275/2008			
Regulation Clause	**Ecodesign Requirements, 3rd Stage (Applicable from 01/01/2015)**	**Result / Remark**	**Verdict**
3d)	Power management for all Networked equipment other than HiNA equipment: When all network ports are deactivated: Equipment shall, unless inappropriate for the intended use, offer a power management function or a similar function. When equipment is not providing the main function, and other energy-using product(s) are not dependent on its functions, the power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into: – standby mode, or – off mode, or – another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source. (0.60 W). (W)	N/A (HiNA claimed)	N/A
	and when all network ports are deactivated.: The power management function shall be activated.	N/A (HiNA claimed)	N/A

Regulation Clause	Network Port 1 - WiFi (Position N/A)	Result / Remark	Verdict
3a)	Possibility of deactivating wireless network connection(s): Any networked equipment that can be connected to a wireless network shall offer the user the possibility to deactivate the wireless network connection(s). This requirement does not apply to products which rely on a single wireless network connection for intended use and have no wired network connection.	n	Fail
3b)	Power management for networked equipment: Equipment shall, unless inappropriate for the intended use, offer a power management function or a similar function. When equipment is not providing a main function, and other energy-using product(s) are not dependent on its functions, the power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into a condition having networked standby. The default period of time after which the power management function, or a similar function, switches the equipment automatically into a condition providing networked standby shall not exceed 20 minutes.	Automatically goes into a low power mode after 2 minutes 5 second(s) of inactivity, consuming 5.78 W	Pass
	In a condition providing networked standby, the power management function may switch equipment automatically into standby mode or off mode or another condition which does not exceed the applicable power consumption requirements for standby and/or off mode. (0.60 W (W))	N/A	N/A
	The power management function, or a similar function, shall be available for all network ports of the networked equipment. The power management function, or a similar function, shall be activated, unless all network ports are deactivated. In that latter case the power management function, or a similar function, shall be activated if any of the network ports is activated.	y	Pass
3c)	Networked equipment that has one or more standby modes shall comply with the requirements for these standby mode(s) when all network ports are deactivated (0.60 W (W))	The product had no Standby mode	N/A
3e)	Power consumption in a condition providing networked standby: The power consumption of HiNA equipment or equipment with HiNA functionality in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function shall not exceed 13.20 W. The power consumption of other networked equipment in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function, shall not exceed 6.60 W. (W)	5.78	Pass

Regulation Clause	Network Port 2 - Ethernet (Rear)	Result / Remark	Verdict
3a)	Possibility of deactivating wireless network connection(s): Any networked equipment that can be connected to a wireless network shall offer the user the possibility to deactivate the wireless network connection(s). This requirement does not apply to products which rely on a single wireless network connection for intended use and have no wired network connection.	N/A	N/A
3b)	Power management for networked equipment: Equipment shall, unless inappropriate for the intended use, offer a power management function or a similar function. When equipment is not providing a main function, and other energy-using product(s) are not dependent on its functions, the power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into a condition having networked standby. The default period of time after which the power management function, or a similar function, switches the equipment automatically into a condition providing networked standby shall not exceed 20 minutes.	Automatically goes into a low power mode after 2 minutes 5 second(s) of inactivity, consuming 5.84 W	Pass
	In a condition providing networked standby, the power management function may switch equipment automatically into standby mode or off mode or another condition which does not exceed the applicable power consumption requirements for standby and/or off mode. (0.60 W. (W))	N/A	N/A
	The power management function, or a similar function, shall be available for all network ports of the networked equipment. The power management function, or a similar function, shall be activated, unless all network ports are deactivated. In that latter case the power management function, or a similar function, shall be activated if any of the network ports is activated.	y	Pass
3e)	Power consumption in a condition providing networked standby: The power consumption of HiNA equipment or equipment with HiNA functionality in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function shall not exceed 13.20 W. The power consumption of other networked equipment in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function, shall not exceed 6.60 W. (W)	5.84	Pass

Test and Verification Results (Sample Code = EST01)			
REQUIREMENTS OF COMMISSION REGULATION 1275/2008			
Regulation Clause	**Product information requirements, 3rd Stage (Applicable from 01/01/2015)**	**Result / Remark**	**Verdict**
7)	As of 1 January 2015, the following information for networked equipment shall be visibly displayed on manufacturers' freely accessible websites:		
a)	For each standby and/or off mode and the condition providing networked standby into which the equipment is switched by the power management function or similar function: • the power consumption data in Watt rounded to the first decimal place,	Standby and off N/A. Provided for Networked standby.	Pass
	• the period of time after which the power management function, or a similar function, switches the equipment automatically into standby and/or off mode and/or the condition providing networked standby	Provided	Pass
7b)	The power consumption of the product in networked standby if all wired network ports are connected and all wireless network ports are activated;	Provided where WiFi and one Ethernet port is connected. Not provided if **all** Ethernet ports are connected.	Fail
	The power consumption of the product in networked standby if all wired network ports are connected and all wireless network ports are activated shall also be included in the user manual.	Not provided (As above)	Fail
7c)	Guidance on how to activate and deactivate wireless network ports.	Excert from manual - "***Can I disable the WiFi on any of my Sonos components?*** *No. The WiFi must remain active at all times to ensure proper operation. "* Information not provided.	Fail
	Guidance on how to activate and deactivate wireless network ports shall also be included in the user manual.	Not provided (As above)	Fail

Test and Verification Results (Sample Code = EST01)			
REQUIREMENTS OF COMMISSION REGULATION 1275/2008			
Regulation Clause	**Ecodesign Requirements, 4th Stage (Applicable from 01/01/2017)**	**Result / Remark**	**Verdict**
4b)	Power management for all Networked equipment other than HiNA equipment: When all wired network ports are disconnected and when all wireless network ports are deactivated: Equipment shall, unless inappropriate for the intended use, offer a power management function or a similar function. When equipment is not providing the main function, and other energy-using product(s) are not dependent on its functions, the power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into: – standby mode, or – off mode, or – another condition which does not exceed the applicable power consumption requirements for off mode and/or standby mode when the equipment is connected to the mains power source. (0.60 W). (W)	N/A (HiNA claimed)	N/A
	and when all network ports are deactivated.: The power management function shall be activated.	N/A (HiNA claimed)	N/A

Regulation Clause	Network Port 1 - WiFi (Position N/A)	Result / Remark	Verdict
3a)	Possibility of deactivating wireless network connection(s): Any networked equipment that can be connected to a wireless network shall offer the user the possibility to deactivate the wireless network connection(s). This requirement does not apply to products which rely on a single wireless network connection for intended use and have no wired network connection.	n	Fail
3b)	Power management for networked equipment: Equipment shall, unless inappropriate for the intended use, offer a power management function or a similar function. When equipment is not providing a main function, and other energy-using product(s) are not dependent on its functions, the power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into a condition having networked standby. The default period of time after which the power management function, or a similar function, switches the equipment automatically into a condition providing networked standby shall not exceed 20 minutes.	Automatically goes into a low power mode after 2 minutes 5 second(s) of inactivity, consuming 5.78 W	Pass
	In a condition providing networked standby, the power management function may switch equipment automatically into standby mode or off mode or another condition which does not exceed the applicable power consumption requirements for standby and/or off mode. (0.60 W. (W))	N/A	N/A
	The power management function, or a similar function, shall be available for all network ports of the networked equipment. The power management function, or a similar function, shall be activated, unless all network ports are deactivated. In that latter case the power management function, or a similar function, shall be activated if any of the network ports is activated.	y	Pass
4a)	Networked equipment that has one or more standby mode(s) shall comply with the requirements for these standby mode(s) when all wired network ports are disconnected and when all wireless network ports are deactivated. (0.60 W. (W))	The product had no Standby mode	N/A
4c)	Power consumption in a condition providing networked standby: The power consumption of HiNA equipment or equipment with HiNA functionality in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function shall not exceed 8.80 W. The power consumption of other networked equipment in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function, shall not exceed 3.30 W. (W)	5.78	Pass

Regulation Clause	Network Port 2 - Ethernet (Rear)	Result / Remark	Verdict
3a)	Possibility of deactivating wireless network connection(s): Any networked equipment that can be connected to a wireless network shall offer the user the possibility to deactivate the wireless network connection(s). This requirement does not apply to products which rely on a single wireless network connection for intended use and have no wired network connection.	N/A	N/A
3b)	Power management for networked equipment: Equipment shall, unless inappropriate for the intended use, offer a power management function or a similar function. When equipment is not providing a main function, and other energy-using product(s) are not dependent on its functions, the power management function shall switch equipment after the shortest possible period of time appropriate for the intended use of the equipment, automatically into a condition having networked standby. The default period of time after which the power management function, or a similar function, switches the equipment automatically into a condition providing networked standby shall not exceed 20 minutes.	Automatically goes into a low power mode after 2 minutes 5 second(s) of inactivity, consuming 5.84 W	Pass
	In a condition providing networked standby, the power management function may switch equipment automatically into standby mode or off mode or another condition which does not exceed the applicable power consumption requirements for standby and/or off mode. (0.60 W. (W))	N/A	N/A
	The power management function, or a similar function, shall be available for all network ports of the networked equipment. The power management function, or a similar function, shall be activated, unless all network ports are deactivated. In that latter case the power management function, or a similar function, shall be activated if any of the network ports is activated.	y	Pass
4c)	Power consumption in a condition providing networked standby: The power consumption of HiNA equipment or equipment with HiNA functionality in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function shall not exceed 8.80 W. The power consumption of other networked equipment in a condition providing networked standby into which the equipment is switched by the power management function, or a similar function, shall not exceed 3.30 W. (W)	5.84	Pass

Product Photographs

Photo 1 - External view

Photo 2 - Model and serial number

Photo 3 - Rating plate

Critical Components						
Photo =	Item no.[1]	Name	Manufacturer/ trademark[2]	Type / model[2]	Technical data and securement means	Mark(s) of conformity[3]
		None				

NOTES:

1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.

2) “Various“ means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity", can be used.

3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates: a) Unlisted and only visual examination is necessary or b) Marks are not required to be verified.

Authorisation

The results only relate to the item tested

Milton Keynes United Kingdom	Date: 04-Mar-2016	Intertek Testing & Certification Ltd. Electronic Products Department

Laboratory: Intertek Testing & Certification Ltd.		Testing address: Davy Avenue, Knowlhill Milton Keynes, MK5 8NL United Kingdom
Tested by:  Michael Mead Senior Engineer	**Reviewed by:**  Stephen Fernandes Consultant Engineer	**Approved by:**  Caroline Blenkhorn Laboratory Manager - Performance

Revision History		
Date:	**Reviewer**	**Revision**
None		

APPENDIX I
Test Setup Used

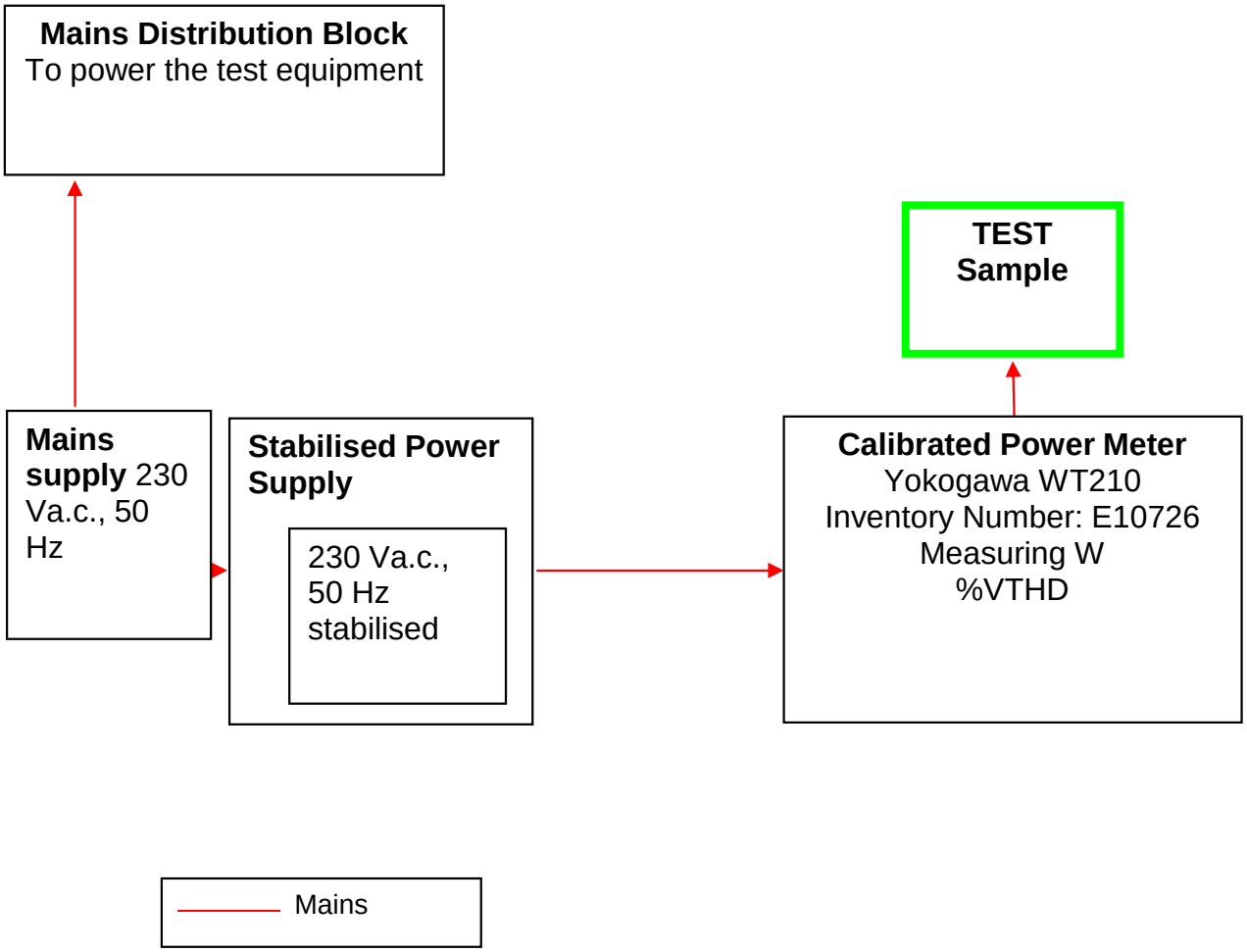

Figure 1: Test Set-up

APPENDIX II

Justification for not having standby and/or off mode and no APD for these modes taken from manual.
Manufacturer's technical file not reviewed.

Europe

Sonos declares that this product herewith complies with the requirements of the EMC Directive 2004/108/EC, Low Voltage Directive 2006/95/EC, Eco-Design Directive 2005/32/EC, RoHS Directive 2011/65/EU and the R&TTE Directive 1999/5/EC when installed and used in accordance with the manufacturer's instructions. A copy of the full Declaration of Conformance may be obtained at ***www.sonos.com/support/policies***.

CE Attention In France, operation is limited to indoor use within the band 5150-5350 MHz.

SonosNet is the propriety wireless mesh network architecture designed to provide robust transmission of high fidelity streaming digital music. All Sonos players within the SonosNet mesh network act as both a client and access point simultaneously. Each Sonos player expands the range of SonosNet mesh network because while each device must be within range of at least one other Sonos player, they do not need to be within range of a central access point. In addition to extending the range between Sonos products, SonosNet can extend the range of other data networking devices within the home, such as Android devices directly connected to SonosNet. Due to the high network availability requirements of the SonosNet mesh network, Sonos players do not have a standby or off mode other than removing the power cord from the AC mains.