

TEST REPORT

IEC 60950

Safety of information technology equipment

Report reference No : 703416-01

Tested by Samsung
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Testing laboratory

Testing Laboratory Name : **Intertek Semko AB**

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Testing location : CBTL CCATL SMT TMP

Intertek Semko Approved SMT Lab:

SAMSUNG Electronics Co., Ltd.

CS Management Center,

#416 Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do,
443-742 KOREA

Client

Applicant's Name : **SAMSUNG ELECTRONICS CO., LTD.**

Address : **Safety Standard Part, CS Center**
#416, Maetan 3-Dong, Yeongtong-Gu, Suwon-Si, Gyeonggi-Do,

..... : 443-742 KOREA

Test specification

Standard : IEC 60950, 3rd Edition (1999)

Test procedure : CB-scheme

Procedure deviation : CB Group differences and National differences for the CENELEC Countries and **for China.**
(Malaysia and Argentina which do not have any national differences have also been checked and considered)

Non-standard test method : N.A.


Test Report Form

Test Report Form No. : I950__F/00-03

Master TRF : dated 00-02

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Test item	
Test item description	Digital Video Recorder
Trademark	
Model and/or type reference	SHR-20***, SHR-21***, SHR-50***, SHR- 51***, SHR-C5*** (The "****" in model numbering may be any character or blank)
Rating(s)	AC 100-230V, 4-2 A, 50/60 Hz, Class I
Modification to test report ref. No. 519061-01	
Modification of appliances.....	-Addition of new models SHR-50***, SHR- 51***, SHR-C5*** -Addition of National differences for China
Clauses Concerned	Cl. 1.7

General product information:	
Models which are covered by the scope of this test report are as follows:	
<u>Part 1</u> : SHR-2042P (4ch)	<u>General</u> : This model is considered basic model. This model is the Digital Video Recorder.
<u>Part 2</u> : SHR-2041P (4ch)	<u>General</u> : This model is similar to model SHR-2042P (Part 1), except for SELV circuitry.
<u>Part 3</u> : SHR-2160P (16ch)	<u>General</u> : This model is similar to model SHR-2041P (Part 2), except for SELV circuitry.
<u>Part 4</u> : SHR-2162P (16ch)	<u>General</u> : This model is similar to model SHR-2042P (Part 1), except for SELV circuitry.
<u>Part 5</u> : SHR-2080P (8ch)	<u>General</u> : This model is similar to model SHR-2041P (Part 2), except for SELV circuitry (input and Output Channel is 8 and no CD-RW)
<u>Part 6</u> : SHR-2082P (8ch)	<u>General</u> : This model is similar to model SHR-2042P (Part 1), except for SELV circuitry circuitry (input and Output Channel is 8).
<u>Part 7</u> : SHR-5082P/N (8ch)	<u>General</u> : This model is similar to model SHR-2042P (Part 1), except for SELV circuitry (8 channel video, 4 channel audio and DVD_RW)
<u>Part 8</u> : SHR-5162P/N (16ch)	<u>General</u> : This model is similar to model SHR-2042P (Part 1), except for SELV circuitry circuitry (16 channel video, 4 channel audio and DVD_RW)
<u>Part 9</u> : SHR-C5041P (4ch)	<u>General</u> : This model is similar to model SHR-2041P (Part 2), except for SELV circuitry (4 channel video, 4 channel audio and DVD_RW)



Copy of marking plate and summary of test results (information/comments):

SAMSUNG
 MODEL : SHR-2042P
 DIGITAL VIDEO RECORDER
 AC 100-230V~ 50/60Hz
 4-2A

200605 SHR-2042P

 M/C : XXXX S/N : XXXXXXXXXXXXX
 Ethernet Add. : XX-XX-XX-XX-XX-XX
 SAMSUNG ELECTRONICS CO., LTD

 **CAUTION** 
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN KOREA AB68-00081A-01

SAMSUNG
 MODEL : SHR-2041P
 DIGITAL VIDEO RECORDER
 AC 100-230V~ 50/60Hz
 4-2A

200605 SHR-2041P

 M/C : XXXX S/N : XXXXXXXXXXXXX
 Ethernet Add. : XX-XX-XX-XX-XX-XX
 SAMSUNG ELECTRONICS CO., LTD

 **CAUTION** 
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN KOREA AB68-00081A-01

SAMSUNG
 MODEL : SHR-2160P
 DIGITAL VIDEO RECORDER
 AC 100-230V~ 50/60Hz
 4-2A

200506 SHR-2160P

 M/C : XXXX S/N : XXXXXXXXXXXXX
 Ethernet Add. : XX-XX-XX-XX-XX-XX
 SAMSUNG ELECTRONICS CO., LTD

 **CAUTION** 
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN KOREA AB68-00081A-01

SAMSUNG
 MODEL : SHR-2162P
 DIGITAL VIDEO RECORDER
 AC 100-230V~ 50/60Hz
 4-2A

200509 SHR-2162P

 M/C : XXXX S/N : XXXXXXXXXXXXX
 Ethernet Add. : XX-XX-XX-XX-XX-XX
 SAMSUNG ELECTRONICS CO., LTD

 **CAUTION** 
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN KOREA AB68-00081A-01

SAMSUNG
 MODEL : SHR-2080P
 DIGITAL VIDEO RECORDER
 AC 100-230V~ 50/60Hz
 4-2A

200510 SHR-2080P

 S/N : XXXXXXXXXXXXXXXXX
 Ethernet Add. : XX-XX-XX-XX-XX-XX
 SAMSUNG ELECTRONICS CO., LTD

 **CAUTION** 
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN KOREA AB68-00081A-01

SAMSUNG
 MODEL : SHR-2082P
 DIGITAL VIDEO RECORDER
 AC 100-230V~ 50/60Hz
 4-2A

200510 SHR-2082P

 S/N : XXXXXXXXXXXXXXXXX
 Ethernet Add. : XX-XX-XX-XX-XX-XX
 SAMSUNG ELECTRONICS CO., LTD

 **CAUTION** 
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN KOREA AB68-00081A-01



Copy of marking plate and summary of test results (information/comments):

SAMSUNG DIGITAL VIDEO RECORDER
 型番: SHR-5082N
 AC 100-230V 50/60Hz 4-2A Pmax 200W (PSE)
 アクチュエニ
 M/C: SHR-5082N/JPN
 February 2007 S/N: XXXXX XXXXXXXXXX
 Ethernet Add.: XX-XX-XX-XX-XX-XX
 ご注意: 感電事故防止のため、キャビネットを開けしないでください。万一故障した場合は、お買上げの販売店 または SAMSUNG の各サービスステーションへ修理をご依頼ください。
CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN CHINA AB68-00380D

SAMSUNG MODEL: SHR-5082P
 DIGITAL VIDEO RECORDER
 AC 100-230V- 50/60Hz 4-2A
 M/C: SHR-5082P [R]
 February 2007 S/N: XXXXX XXXXXXXXXX
 Ethernet Add.: XX-XX-XX-XX-XX-XX
SAMSUNG ELECTRONICS CO., LTD
CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN CHINA AB68-0081A-01

CE **SAMSUNG** DIGITAL VIDEO RECORDER
 MODEL: SHR-5082P
 AC 100-230V- 50/60Hz 4-2A
SAMSUNG ELECTRONICS CO., LTD
 MADE IN CHINA
 M/C: SHR-5082P/SAU
 February 2007 S/N: XXXXX XXXXXXXXXX
 Ethernet Add.: XX-XX-XX-XX-XX-XX
CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 AB68-00055A

SAMSUNG DIGITAL VIDEO RECORDER
 型番: SHR-5162N
 AC 100-230V 50/60Hz 4-2A Pmax 200W (PSE)
 アクチュエニ
 M/C: SHR-5162N/JPN
 February 2007 S/N: XXXXX XXXXXXXXXX
 Ethernet Add.: XX-XX-XX-XX-XX-XX
 ご注意: 感電事故防止のため、キャビネットを開けしないでください。万一故障した場合は、お買上げの販売店 または SAMSUNG の各サービスステーションへ修理をご依頼ください。
CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN CHINA AB68-00380D

SAMSUNG MODEL: SHR-5162P
 DIGITAL VIDEO RECORDER
 AC 100-230V- 50/60Hz 4-2A
 M/C: SHR-5162P [R]
 February 2007 S/N: XXXXX XXXXXXXXXX
 Ethernet Add.: XX-XX-XX-XX-XX-XX
SAMSUNG ELECTRONICS CO., LTD
CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN CHINA AB68-0081A-01

CE **SAMSUNG** DIGITAL VIDEO RECORDER
 MODEL: SHR-5162P
 AC 100-230V- 50/60Hz 4-2A
SAMSUNG ELECTRONICS CO., LTD
 MADE IN CHINA
 M/C: SHR-5162P/SAU
 February 2007 S/N: XXXXX XXXXXXXXXX
 Ethernet Add.: XX-XX-XX-XX-XX-XX
CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 AB68-00055A


SAMSUNG MODEL: SHR-C5041P
 DIGITAL VIDEO RECORDER
 AC 100-230V- 50/60Hz 4-2A
 M/C: SHR-C5041P [R]
 February 2007 S/N: XXXXX XXXXXXXXXX
 Ethernet Add.: XX-XX-XX-XX-XX-XX
SAMSUNG ELECTRONICS CO., LTD
CAUTION
 RISK OF ELECTRIC SHOCK
 DO NOT OPEN
 MADE IN CHINA AB68-0081A-01

SAMSUNG 实时硬盘录像机
 SHR-C5041P
 AC100-230V~ 50/60Hz 4-2A
 M/C: SHR-C5041P/CHN
 2007.02 S/N: XXXXX XXXXXXXXXX
 Ethernet Add.: XX-XX-XX-XX-XX-XX
 生产厂家: 天津三星电子有限公司
 地址: 天津经济技术开发区第四大街12号
 中国制造
注意
 电击危险 不要打开!
 AB68-00820A

Summary of testing:

Model: SHR-2042P is the digital video recorder and it was tested with maximum conditions.



IEC 60950			
Clause	Requirement - Test	Result	Verdict
1.7	Marking and instructions		P
1.7.1	Power rating		P
	Rated voltage(s) or voltage range(s) (V)	AC 100-230 V	P
	Symbol for nature of supply for d.c.	-	N/A
	Rated frequency or frequency range (Hz)	50/60 Hz	P
	Rated current (A)	4-2 A	P
	Manufacturer's name/Trademark		P
	Type/model	SHR-20***, SHR-21***, SHR-50***, SHR-51***, SHR-C5***	P



IEC 60950			
Clause	Requirement - Test	Result	Verdict

National differences China IEC 60950, 3rd ed.			
			CB Bulletin 107A / CN 04 I

1.	<p>Supply tolerance</p> <p>Item 1.4.5 of IEC60950 stipulates the tolerance of rated voltage is +6% and -10%, while GB4943-2001 makes a specification of tolerance of +10% and -10%.</p>		P
2.	<p>Power rating marking</p> <p>Item 1.7.1 of IEC60950 does not specify concrete figures of markings for supply voltage and frequency, instead, descriptions are given by examples. But the examples do not include China's mains voltage. GB4943-2001 stipulates that:</p> <ul style="list-style-type: none"> ·A single rated voltage shall be expressed as 220V ·When a rated voltage range is given, the range shall cover 220V ·When a variety of rated voltages or rated voltage ranges are given, one of them shall be 220V, and shall be set as 220V when dispatched from the factory ·Rated frequency or rated frequency range shall be 50Hz or include 50Hz ·If a unit is not provided with a means for direct connection to the AC mains supply, it need not be marked with any electrical rating 		P
3.	<p>plate and warning marking in Chinese.</p> <p>Item 1.7.12 of GB4943-2001 stipulates: instructions and equipment markings related to safety shall be in standardized Chinese.</p>		P
4.	<p>Power supply plug</p> <p>According to China's particular standards for power supply plug, it is added in article 3.2.1 of GB4943-2001 that plug connecting equipment with AC mains supply shall be in accordance with requirements of GB1002</p>		N/A

