



# TEST REPORT

MODEL NAME : UP200S24W2(V1)

1. DESIGN VERIFY TEST
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**1. DESIGN VERIFY TEST**

**1-1. INPUT FUNCTION TEST**

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
VOLTAGE RANGE	180~264VAC	I/P: testing O/P:full load Ta:25 °C	test ok	P
FREQUENCY RANGE	47~63Hz no damage osc	I/P:180~264VAC O/P:full~min. load Ta:25 °C	test ok	P
EFFICIENCY	88% typ.	I/P:220VAC O/P:full load Ta:25 °C	87.2%	P
AC CURRENT	1.44A/220VAC typ.	I/P:220VAC O/P:full load Ta:25 °C	1.5A/220VAC	P
INRUSH CURRENT	70A typ. cold start	I/P:220VAC O/P:full load Ta:25 °C	75A	P
LEAKAGE CURRENT	2.5mA max.	I/P:230VAC O/P:min. load Ta:25 °C	2.2mA	P

**1-2. OUTPUT FUNCTION TEST**

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
RIPPLE&NOISE	290mVp-p max.	I/P:220VAC O/P:full load Ta:25 °C	140mV	P
VOLTAGE ADJ. RANGE	24V ± 5%	I/P:220VAC O/P:min. load Ta:25 °C	22.5~25.5V/220VAC	P
VOLTAGE TOLERANCE	24V ± 3%	I/P:180VAC/264VAC O/P:full/min. load Ta:25 °C	± 0.83%	P
LINE REGULATION	24V ± 1%	I/P:180~264VAC O/P:full load Ta:25 °C	± 0.08%	P

<b>LOAD REGULATION</b>	24V± 2%	I/P:220VAC O/P:full-min. load Ta:25 °C	± 0.75%	<b>P</b>
<b>SETUP TIME</b>	3000ms/220VAC max.	I/P:220VAC O/P:full load Ta:25 °C	530ms/220VAC	<b>P</b>
<b>RISE TIME</b>	100ms/220VAC max.	I/P:220VAC O/P:full load Ta:25	35.2ms/220VAC	<b>P</b>
<b>HOLD UP TIME</b>	15ms/220VAC typ.	I/P:220VAC O/P:full load Ta:25	13ms/220VAC	<b>P</b>

**1-3. PROTECTION FUNCTION TEST**

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
<b>SHORT PROTECTION</b>	short every output 1 hour no damage	I/P:240VAC O/P:full load Ta:25 °C	no damage, recovers automatically after fault removed	<b>P</b>
<b>OVER LOAD PROTECTION</b>	110% min.	I/P:220VAC O/P:testing Ta:25 °C	130% recovers automatically after fault removed	<b>P</b>
<b>OVER VOLTAGE PROTECTION</b>	115~140%	I/P:220VAC O/P:min. load Ta:25 °C	130% recovers automatically after fault removed	<b>P</b>
<b>OVER TEMP. PROTECTION</b>	temp. sensor:95±10 °C no damage	I/P:100VAC O/P:full load	O.T.P active, recovers automatically after fault removed	<b>P</b>

**2. SAFETY TEST**

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
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<b>WITHSTAND VOLTAGE</b>	I/P-O/P:3KVAC/1min<10mA I/P-F/G:1.5KVAC/1min<10mA O/P-F/G:0.5KVAC/1min<10mA	I/P-O/P:3KVAC/1min I/P-F/G:1.5KVAC/1min O/P-F/G:0.5KVAC/1min Ta:25℃	I/P-O/P:4.6mA I/P-F/G:3.3mA O/P-F/G:1.3mA no damage	<b>P</b>
<b>ISOLATION RESISTANCE</b>	I/O-O/P:500VDC>100MΩ I/O-F/G:500VDC>100MΩ O/P-F/G:500VDC>100MΩ	I/P-O/P:500VDC I/P-F/G:500VDC O/P-F/G:500VDC Ta:25℃	I/P-O/P:1000MΩ I/P-F/G:1000MΩ O/P-F/G:∞ no damage	<b>P</b>

### 3. RELIABILITY TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
<b>LOW TEMP. TURN ON TEST</b>	turn on after 2hour	I/P:220VAC O/P:full load Ta:-40℃	test ok	<b>P</b>
<b>STORAGE TEMP. TEST</b>	no damage	1.thermal shock temp.: -40~+75℃ 2.test time low & high temp.:30min/each 3.total cycle:5cycle 4.input/output condition:static	test ok	<b>P</b>
<b>THERMAL SHOCK TEST</b>	no damage	1.thermal shock temp.: -20~+50℃ 2.test time low & high temp.:30min/each 3.total cycle:10cycle 4.input/output condition: 220VAC 75% load, AC on/off test (turn on 58sec,turn off 2sec)	test ok	<b>P</b>
<b>VIBRATION TEST</b>	no damage	1.CATON&1SET 1.wave form:sine wave 2.frequency:10~500Hz 3.sweep time:10min./sweep cycle 4.acceleration:2G 5.test time:60min. in each(X,Y,Z) 6.Ta:25℃	test ok	<b>P</b>