



# TEST REPORT

MODEL NAME : UP10S12W2(V1)

1. DESIGN VERIFY TEST
  - 1-1. INPUT FUNCTION TEST
  - 1-2. OUTPUT FUNCTION TEST
  - 1-3. PROTECTION FUNCTION TEST
2. SAFETY TEST
3. RELIABILITY TEST

**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	81% typ.	I/P:220VAC O/P:full load Ta:25 °C	81.8%	P
AC CURRENT	0.1A/220VAC typ.	I/P:220VAC O/P:full load Ta:25 °C	0.105A/220VAC	P
INRUSH CURRENT	45A typ. cold start	I/P:220VAC O/P:full load Ta:25 °C	43.2A	P

**1-2. OUTPUT FUNCTION TEST**

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
RIPPLE&NOISE	220mVp-p max.	I/P:220VAC O/P:full load Ta:25 °C	82mVp-p max.	P
VOLTAGE TOLERANCE	12V± 3%	I/P:180VAC/264VAC O/P:full/min. load Ta:25 °C	± 0.6%	P
LINE REGULATION	12V± 1%	I/P:180~264VAC O/P:full load Ta:25 °C	± 0.1%	P
LOAD REGULATION	12V± 2%	I/P:220VAC O/P:full~min. load Ta:25 °C	± 0.1%	P
SETUP TIME	3000ms/220VAC max.	I/P:220VAC O/P:full load Ta:25 °C	612ms/220VAC	P
RISE TIME	100ms/220VAC max.	I/P:220VAC O/P:full load Ta:25	21ms/220VAC	P
HOLD UP TIME	25ms/220VAC typ.	I/P:220VAC O/P:full load Ta:25	31.8ms/220VAC	P

**1-3. PROTECTION FUNCTION TEST**

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
SHORT PROTECTION	short every output 1 hour no damage	I/P:240VAC O/P:full load Ta:25 °C	no damage, recovers automatically after fault removed	P
OVER LOAD PROTECTION	110% min.	I/P:220VAC O/P:testing Ta:25 °C	130% recovers automatically after fault removed	P
OVER VOLTAGE PROTECTION	110% min.	I/P:220VAC O/P:min. load Ta:25 °C	recovers automatically after fault removed	P

**2. SAFETY TEST**

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
WITHSTAND VOLTAGE	I/P-O/P:3KVAC/1min<10mA	I/P-O/P:3KVAC/1min Ta:25 °C	I/P-O/P:4.3mA no damage	P
ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P:500VDC Ta:25 °C	I/P-O/P:∞ no damage	P

**3. RELIABILITY TEST**

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
LOW TEMP. TURN ON TEST	turn on after 2hour	I/P:220VAC O/P:full load Ta:-40 °C	test ok	P

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<b>STORAGE TEMP. TEST</b>	no damage	1.thermal shock temp.: $-40\sim+75^{\circ}\text{C}$ 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.: $-20\sim+50^{\circ}\text{C}$ 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: $25^{\circ}\text{C}$	test ok	<b>P</b>