



TEST REPORT

MODEL NAME : UP20S12W2(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	82% typ.	I/P:220VAC O/P:full load Ta:25 °C	82.7%	P
AC CURRENT	0.18A/220VAC typ.	I/P:220VAC O/P:full load Ta:25 °C	0.185A/220VAC	P
INRUSH CURRENT	70A typ. cold start	I/P:220VAC O/P:full load Ta:25 °C	72.8A	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	120mVp-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	604ms/220VAC	P
RISE TIME	100ms/220VAC max.	I/P:220VAC O/P:full load Ta:25	15.9ms/220VAC	P

HOLD UP TIME	30ms/220VAC typ.	I/P:220VAC O/P:full load Ta:25	27.4ms/220VAC	P
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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:3.8mA 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℃	test ok	P
STORAGE TEMP. TEST	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	P
THERMAL SHOCK TEST	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	P
VIBRATION TEST	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	P