



TEST REPORT

MODEL NAME : UP40S12W2(V1)M

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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	84% typ.	I/P:220VAC O/P:full load Ta:25 °C	84.2%	P
AC CURRENT	0.35A/220VAC typ.	I/P:220VAC O/P:full load Ta:25 °C	0.35A/220VAC	P
INRUSH CURRENT	40A typ. cold start	I/P:220VAC O/P:full load Ta:25 °C	36A	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	110mVp-p max.	P
VOLTAGE ADJ. RANGE	12V ± 5%	I/P:220VAC O/P:min. load Ta:25 °C	11~13V/220VAC	P
VOLTAGE TOLERANCE	12V ± 3%	I/P:180VAC/264VAC O/P:full/min. load Ta:25 °C	± 0.63%	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	± 0.63%	P

SETUP TIME	3000ms/220VAC max.	I/P:220VAC O/P:full load Ta:25 °C	570ms/220VAC	P
RISE TIME	100ms/220VAC max.	I/P:220VAC O/P:full load Ta:25	44ms/220VAC	P
HOLD UP TIME	50ms/220VAC typ.	I/P:220VAC O/P:full load Ta:25	48.4ms/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	115~140%	I/P:220VAC O/P:min. load Ta:25 °C	120% recovers automatically after fault removed	P
OVER TEMP. PROTECTION	temp. sensor:85±10 °C no damage	I/P:220VAC O/P:full load	O.T.P active, 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:1.5KAC/1min<10mA O/P-F/G:0.5KAV/1min<10mA	I/P-O/P:3KVAC/1min I/P-F/G:1.5KAC/1min O/P-F/G:0.5KAC/1min Ta:25 °C	I/P-O/P:1.8mA I/P-F/G:2.2mA O/P-F/G:0.3mA no damage	P

ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-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:∞ I/P-F/G:∞ O/P-F/G:∞ no damage	P
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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