



TEST REPORT

MODEL NAME : UP240S24R2

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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	89% typ.	I/P:230VAC O/P:full load Ta:25 °C	89.9%	P
AC CURRENT	2.5A/230VAC typ.	I/P:230VAC O/P:full load Ta:25 °C	2.58A/230VAC	P
INRUSH CURRENT	50A typ. cold start	I/P:230VAC O/P:full load Ta:25 °C	47A	P
LEAKAGE CURRENT	2.5mA max.	I/P:230VAC O/P:min. load Ta:25 °C	0.57mA	P

1-2. OUTPUT FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
RIPPLE&NOISE	290mVp-p max.	I/P:230VAC O/P:full load Ta:25 °C	160mV	P
VOLTAGE ADJ. RANGE	24V± 5%	I/P:230VAC O/P:min. load Ta:25 °C	19.6~27.2/230VAC	P
VOLTAGE TOLERANCE	24V± 3%	I/P:180VAC/264VAC O/P:full/min. load Ta:25 °C	0.8%	P
LINE REGULATION	24V± 1%	I/P:180VAC~264VAC O/P:full load Ta:25 °C	0.2%	P

LOAD REGULATION	24V± 2%	I/P:230VAC O/P:full-min. load Ta:25 °C	0.9%	P
SETUP TIME	3000ms/230VAC max.	I/P:230VAC O/P:full load Ta:25 °C	1230ms/230VAC	P
RISE TIME	100ms/230VAC max.	I/P:230VAC O/P:full load Ta:25	56ms/230VAC	P
HOLD UP TIME	60ms/230VAC typ.	I/P:230VAC O/P:full load Ta:25	62ms/230VAC	P

1-3. PROTECTION FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
SHORT PROTECTION	short every output 1 hour no damage	I/P:264VAC O/P:full load Ta:25 °C	no damage, recovers automatically after fault removed	P
OVER LOAD PROTECTION	110% min.	I/P:230VAC O/P:testing Ta:25 °C	132%/230VAC 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-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 °C	I/P-O/P:4.7mA I/P-F/G:3.1mA O/P-F/G:1.7mA no damage	P

ISOLATION RESISTANCE	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: ∞ 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:230VAC O/P:full load Ta:-20℃	test ok	P
STORAGE TEMP. TEST	no damage	1.thermal shock temp.: -30~+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: 230VAC full 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