



TEST REPORT

MODEL NAME : UP20S12WQ

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1. DESIGN VERIFY TEST

1-1. INPUT FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
VOLTAGE RANGE	90~277VAC	I/P: testing O/P:full load Ta:25 °C	test ok	P
FREQUENCY RANGE	47~63Hz no damage osc	I/P:90~277VAC O/P:full~min. load Ta:25 °C	test ok	P
EFFICIENCY	81% typ.	I/P:220VAC O/P:full load Ta:25 °C	81.2%	P
AC CURRENT	0.39A/115VAC typ. 0.26A/230VAC typ.	I/P:115VAC I/P:230VAC O/P:full load Ta:25 °C	0.391A/115VAC 0.265A/230VAC	P
INRUSH CURRENT	70A typ. cold start	I/P:230VAC O/P:full load Ta:25 °C	38.4A	P

1-2. OUTPUT FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
RIPPLE&NOISE	220mVp-p max.	I/P:115VAC I/P:230VAC O/P:full load Ta:25 °C	84mVp-p/115VAC 76mVp-p/230VAC	P
VOLTAGE TOLERANCE	12V± 3%	I/P:200VAC/240VAC O/P:full/min. load Ta:25 °C	±0.04%	P
LINE REGULATION	12V± 1%	I/P:200~240VAC O/P:full load Ta:25 °C	± 0%	P
LOAD REGULATION	12V± 2%	I/P:220VAC O/P:full~min. load Ta:25 °C	± 0.04%	P

SETUP TIME	300ms/115VAC max. 300ms/230VAC max.	I/P:115VAC I/P:230VAC O/P:full load Ta:25 °C	976ms/115VAC 396ms/230VAC	P
RISE TIME	100ms/115VAC max. 100ms/230VAC max.	I/P:115VAC I/P:230VAC O/P:full load Ta:25	68.6ms/115VAC 69.2ms/230VAC	P
HOLD UP TIME	15ms/115VAC typ. 70ms/230VAC typ.	I/P:115VAC I/P:230VAC O/P:full load Ta:25	17.2ms/115VAC 74ms/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:277VAC O/P:full load Ta:25 °C	no damage, recovers automatically after fault removed	P
OVER LOAD PROTECTION	110% min.	I/P:115VAC I/P:230VAC O/P:testing Ta:25 °C	121%/115VAC 124%/230VAC recovers automatically after fault removed	P
OVER VOLTAGE PROTECTION	115% min	I/P:115VAC I/P:230VAC O/P:min. load Ta:25 °C	132%/115VAC 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-O/P:3KVAC/1min Ta:25 °C	I/P-O/P:2.0mA no damage	P
ISOLATION RESISTANCE	I/O-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
STORAGE TEMP. TEST	no damage	1.thermal shock temp.: -40~+75°C 2.test time low & high temp.:30min/each 3.total cycle:5cycle 4.input/output condition:static	test ok	P