



TEST REPORT

MODEL NAME : UPF200S24MH

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1. DESIGN VERIFY TEST

1-1. INPUT FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
VOLTAGE RANGE	90~305VAC	I/P: testing O/P:full load Ta:25 °C	test ok	P
FREQUENCY RANGE	47~63Hz no damage osc	I/P:90~305VAC O/P:full~min. load Ta:25 °C	test ok	P
POWER FACTOR	0.9 min.	I/P:115VAC I/P:230VAC O/P:full load	PF=0.99/115VAC PF=0.98/230VAC	P
EFFICIENCY	93% typ.	I/P:230VAC O/P:full load Ta:25 °C	93.7%	P
AC CURRENT	1.9A/115VAC typ. 0.95A/230VAC typ.	I/P:115VAC I/P:230VAC O/P:full load Ta:25 °C	1.85A/115VAC 0.91A/230VAC	P
INRUSH CURRENT	60A typ. cold start	I/P:230VAC O/P:full load Ta:25 °C	52A	P
LEAKAGE CURRENT	2.5mA max.	I/P:230VAC O/P:min. load Ta:25 °C	0.5mA	P

1-2. OUTPUT FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
VOLTAGE Tolerance	24V/±3%	I/P:230VAC O/P:CV mode Ta:25 °C No variable resistance	test ok	P
RIPPLE&NOISE	300mVp-p max.	I/P:230VAC O/P:full load Ta:25 °C	180mV p.p	P
LINE REGULATION	24V±1%	I/P:90~305VAC O/P:full load Ta:25 °C	±0.02%	P

LOAD REGULATION	24V±2%	I/P:230VAC O/P:full load Ta:25 °C	±0.45%	
SETUP TIME	3000ms/115VAC max. 3000ms/230VAC max.	I/P:115VAC I/P:230VAC O/P:full load Ta:25 °C	928ms/115VAC 448ms/230VAC	P
RISE TIME	100ms/115VAC max. 100ms/230VAC max.	I/P:115VAC I/P:230VAC O/P:full load Ta:25	48ms/115VAC 48ms/230VAC	P
HOLD UP TIME	15ms/115VAC typ. 15ms/230VAC typ.	I/P:115VAC I/P:230VAC O/P:full load Ta:25	18.5ms/115VAC 17ms/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:305VAC 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	113%/115VAC 113%/230VAC recovers automatically after fault removed	P	
OVER VOLTAGE PROTECTION	110~140%	I/P:115VAC I/P:230VAC O/P:min. load Ta:25 °C	126%/115VAC 126%/230VAC recovers automatically after fault removed	P	
OVER TEMP. PROTECTION	temp. sensor: 85±10 °C damage	no	I/P:230VAC O/P:full load	O.T.P active, automatically after fault removed	P

2. SAFETY & EMC TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC/1min<10mA I/P-F/G:2KVAC/1min<10mA O/P-F/G:1.5KVAC/1min<10mA	I/P-O/P:3.75KVAC/1min I/P-F/G:2KVAC/1min O/P-F/G:1.5KVAC/1min Ta:25 °C	I/P-O/P:3.9mA I/P-F/G:2.9mA O/P-F/G:2.6mA 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 °C	I/P-O/P: ∞ I/P-F/G: ∞ O/P-F/G: ∞ no damage	P
SURGE	IEC61000-4-5 industry L-N:2KV L,N-PE:4KV	I/P:230VAC/50Hz O/P:full load Ta:25 °C	criteria A	P

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:-40 °C	test ok	P
STORAGE TEMP. TEST	no damage	1.thermal shock temp.: -40~+80°C 2.test time low & high temp.:30min/each 3.total cycle:5cycle 4.input/output condition:static	test ok	P
HIGH VOLT. HIGH TEMP. HIGH HUMI. TEST	no damage after 12hour	I/P:305VAC O/P:full load Ta:70 °C HUMI.:95%RH	test ok	P
THERMAL SHOCK TEST	no damage	1.thermal shock temp.: -40~+70°C 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:12min./sweep cycle 4.acceleration:5G 5.test time:72min. in each(X,Y,Z) 6.Ta:25 °C	test ok	P