



TEST REPORT

MODEL NAME : UPF60S12MC

1. DESIGN VERIFY TEST
 - 1-1. INPUT FUNCTION TEST
 - 1-2. OUTPUT FUNCTION TEST
 - 1-3. PROTECTION FUNCTION TEST
2. SAFETY&EMC TEST
3. RELIABILITY TEST

1. DESIGN VERIFY TEST

1-1. INPUT FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
VOLTAGE RANGE	108~305VAC	I/P: testing O/P:full load Ta:25 °C	test ok	P
FREQUENCY RANGE	47~63Hz no damage osc	I/P:108~305VAC O/P:full~min. load Ta:25 °C	test ok	P
POWER FACTOR	0.9 min.	I/P:120VAC/60Hz I/P:230VAC/60Hz I/P:277VAC/60Hz O/P:full load	PF=0.99/120VAC PF=0.98/230VAC PF=0.96/277VAC	P
EFFICIENCY	91% typ.	I/P:230VAC I/P:277VAC O/P:full load Ta:25 °C	90.3%/230VAC 90.4%/277VAC	P
AC CURRENT	0.6A/120VAC typ. 0.4A/230VAC typ. 0.3A/277VAC typ.	I/P:120VAC I/P:230VAC I/P:277VAC O/P:full load Ta:25 °C	0.56A/120VAC 0.29A/230VAC 0.25A/277VAC	P
INRUSH CURRENT	40A typ. cold start	I/P:120VAC I/P:230VAC I/P:277VAC O/P:full load Ta:25 °C	14.2A/120VAC 22.2A/230VAC 38.2A/277VAC	P

1-2. OUTPUT FUNCTION TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
RIPPLE&NOISE	600mVp-p max.	I/P:120VAC I/P:230VAC I/P:277VAC O/P:full load Ta:25 °C	280mV p.p/120VAC 280mV p.p/230VAC 272mV p.p/230VAC	P
SETUP TIME	3000ms/120VAC max. 3000ms/230VAC max. 3000ms/277VAC max.	I/P:120VAC I/P:230VAC I/P:277VAC O/P:full load Ta:25 °C	33ms/120VAC 36.8ms/230VAC 25.4ms/277VAC	P

RISE TIME	100ms/120VAC max. 100ms/230VAC max. 100ms/277VAC max.	I/P:120VAC I/P:230VAC I/P:277VAC O/P:full load Ta:25	15.8ms/120VAC 20.4ms/230VAC 18ms/277VAC	P
HOLD UP TIME	10ms/120VAC typ. 10ms/230VAC typ. 10ms/277VAC typ.	I/P:120VAC I/P:230VAC I/P:277VAC O/P:full load Ta:25	10ms/120VAC 9.4ms/230VAC 9.8ms/277VAC	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 VOLTAGE PROTECTION	115~150%	I/P:120VAC I/P:230VAC I/P:277VAC O/P:min. load Ta:25 °C	145%/120VAC 145%/230VAC 145%/277VAC recovers automatically after fault removed	P

2. SAFETY & EMC TEST

TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
WITHSTAND VOLTAGE	I/P-O/P:1.6KVAC/1min<10mA	I/P-O/P:1.6KVAC/1min Ta:25 °C	I/P-O/P:0.5mA 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:230VAC O/P:full load Ta:30°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:277VAC O/P:full load Ta:50°C HUMI.:95%RH	test ok	P
THERMAL SHOCK TEST	no damage	1.thermal shock temp.: -30~+50°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