



# Test Report : GP50x13D

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AC-DC Triple Output Industrial Adaptor

## ■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

## ■ SAFETY TEST

Safety Test

## ■ RELIABILITY TEST

Environment Test

Other test

**DESIGN VERIFY TEST**
**OUTPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1 : 50mVp-p (Max) V2 : 150mVp-p (Max) V3 : 100mVp-p (Max)	I/P:230VAC O/P:FULL LOAD Ta:25°C	V1 : 30 mVp-p V2 : 70 mVp-p V3 : 55 mVp-p	P
2	VOLTAGE TOLERANCE	V1 : -5% ~ +5% (Max) V2 : -3% ~ +3% (Max) V3 : -5% ~ +8% (Max)	I/P:90VAC~264VAC O/P:FULL-MIN. LOAD Ta:25°C	V1 : -3.06% ~ +2.58% V2 : -0.32% ~ +1.80% V3 : -4.82% ~ +7.91%	P
3	LINE REGULATION	V1 : -1% ~ +1% (Max) V2 : -1% ~ +1% (Max) V3 : -1% ~ +1% (Max)	I/P:90VAC ~264VAC O/P:FULL LOAD Ta:25°C	V1 : -0.03% ~ +0.02% V2 : -0.16% ~ +0.39% V3 : -0.20% ~ +0.57%	P
4	LOAD REGULATION	V1 : -5% ~ +5% (Max) V2 : -3% ~ +3% (Max) V3 : -5% ~ +5% (Max)	I/P:230VAC O/P:FULL ~MIN LOAD Ta:25°C	V1 : -2.36% ~ +1.63% V2 : -0.72% ~ +0.63% V3 : -0.42% ~ +0.15%	P
5	SET UP TIME	1000 mS	I/P:230VAC O/P:FULL LOAD Ta:25°C	604.5 mS	P
6	RISE TIME	50 mS	I/P:230VAC O/P:FULL LOAD Ta:25°C	23.5 mS	P
7	HOLD UP TIME	16 mS (Min)	I/P:115VAC O/P:FULL LOAD Ta:25°C	17.2 mS	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	VOLTAGE RANGE	90VAC ~ 264VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	60.5V ~ 264V	P
2	FREQUENCY RANGE	50HZ - 60HZ (Typ) NO DAMAGE OSC	I/P: 100VAC ~ 240VAC O/P:FULL-MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	84%	I/P:230VAC O/P:FULL LOAD Ta:25°C	85.98 %	P
4	AVERAGE EFFICIENCY	86.0% ( LEVEL VI) 86.0% ( Version 5)	I/P:115/230VAC O/P:25%、50%、75%、100% LOAD Ta:25°C	86.05 % (115VAC) 86.05 % (230VAC)	P
5	AC CURRENT	1.6A (Max)	I/P: 100VAC O/P:FULL LOAD Ta:25°C	1.022 A	P
6	NO LOAD POWER CONSUMPTION	< 0.3W (Max)	I/P:230VAC O/P: NO LOAD Ta:25°C	0.23 W	P

7	INRUSH CURRENT	< 45A COLD START	I/P:230VAC O/P:FULL LOAD Ta:25°C	44.7 A	P
8	LEAKAGE CURRENT	< 0.75mA	I/P:240VAC O/P:Min LOAD Ta:25°C	L-FG: 0.176mA N-FG: 0.175mA	P

## PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	120%~200%	I/P:230VAC O/P:TESTING Ta:25°C	134% HICCUP MODE RESET : AUTO RECOVER	P
2	OVER VOLTAGE PROTECTION	YES	I/P:230VAC O/P:MIN LOAD Ta:25°C	Clamp by ZENER diode	P
3	SHORT PROTECTION	SHORT OUTPUT 1 HOUR NO DAMAGE	I/P:264VAC O/P:FULL LOAD Ta:25°C	NO DAMAGE HICCUP MODE RESET AUTO RECOVER	P

## ■ SAFETY TEST

### SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P:4242 VDC/min I/P-FG:2121 VDC/min	I/P-O/P:4242 VDC/min Ta:25°C	I/P-O/P: 0.03uA I/P-FG: 0.03uA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG:500VDC>100MΩ	I/P-O/P:500 VDC Ta:25°C	I/P-O/P>100MΩ I/P-FG>100MΩ NO DAMAGE	P

## RELIABILITY TEST

### ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	1. ROOM AMBIENT BURN-IN : 4HRS I/P:230VAC O/P:100% LOAD Ta=25°C 2. HI AMBIENT BURN-IN : 16HRS I/P:230VAC O/P:100% LOAD Ta=40°C 3. HI AMBIENT BURN-IN : 16HRS I/P:230VAC O/P: 50% LOAD Ta=65°C			P
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOURS	I/P : 230VAC O/P : 100% LOAD Ta= -20°C	TEST : OK	P

### OTHER

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C18 IS THE MOST CRITICAL COMPONENT I/P:230 VAC O/P:100% LOAD Ta=25°C LIFE TIME= 63776HRS I/P:230 VAC O/P:100% LOAD Ta=40°C LIFE TIME= 54186HRS			P
2	MTBF	MIL-KDBK-217F NOTICES 2 PARTS COUNT TOTAL FAILURE RATE : 3.426442 M.T.B.F : 291847 HRS			P

TEST RESULT	TESTER	APPROVAL
PASS	PETER CHENG	VINCENT ZENG