

MODEL : MD-100X

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 150 mVp-p (Max) V2: 150 mVp-p (Max)	I/P: 230VAC O/P:FULL LOAD Ta:25℃	V1: 12 mVp-p (Max) V2: 10 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 14.2 V~ 16.5 V CH2: 14.2 V~ 16.5 V	I/P: 230 VAC O/P:MIN LOAD Ta:25℃	13.48 V~ 17.04 V/ 230 VAC 13.36 V~ 17 V/ 230 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 2 %~ -2 % (Max) V2: 3 %~ -3 % (Max)	I/P: 85 VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25℃	V1: 0.04 %~ -0.04 % V2: 0.1 %~ -0.1 %	P
4	LINE REGULATION	V1: 0.5 %~ -0.5 % (Max) V2: 1 %~ -1 % (Max)	I/P: 85 VAC ~ 264 VAC O/P:FULL LOAD Ta:25℃	V1: 0.04 %~ -0.04 % V2: 0 %~ 0 %	P
5	LOAD REGULATION	V1: 1 %~ -1 % (Max) V2: 2 %~ -2 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25℃	V1: 0 %~ 0 % V2: 0 %~ 0 %	P
6	CROSS REGULATION	V1: 1 %~ -1 % (Max) V2: 2 %~ -2 % (Max)	I/P: 230 VAC O/P: Testing O/P 60%LOAD Other O/P 40%LOAD Change Ta:25℃	V1: 0 %~ 0 % V2: 0.08 %~ -0.08 %	P
7	SET UP TIME	230VAC: 1500 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 867 ms	P
8	RISE TIME	230VAC: 50 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 9 ms	P
9	HOLD UP TIME	230VAC: 20 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 184 ms	P
10	OVER/UNDERSHOOT TEST	< +5%	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	TEST: <5 %	P
11	DYNAMIC LOAD	V1: 1500 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25℃	335 mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	85VAC~264 VAC)	I/P: TESTING O/P: FULL LOAD Ta: 25°C	35 V~264V	P
			I/P: LOW-LINE-3V= 82 V HIGH-LINE+15%=300 V O/P: FULL/MIN LOAD ON: 30 Sec . OFF: 30 Sec 10MIN (AC POWER ON/OFF NO DAMAGE)	TEST: OK	
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE OSC	I/P: 85 VAC ~ 264 VAC O/P: FULL~MIN LOAD Ta: 25°C	TEST: OK	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	116 %~ 150 %	I/P: 230 VAC I/P: 115 VAC O/P: TESTING Ta: 25°C	139 %/ 230 VAC 139 %/ 115 VAC Shunt down Re-power ON	P
2	OVER VOLTAGE PROTECTION	CH1: 16.6 V~ 22 V CH2: 16.6 V~ 22 V	I/P: 230 VAC I/P: 115 VAC O/P: MIN LOAD Ta: 25°C	CH1: 18.8 V/ 230 VAC 18.8 V/ 115 VAC CH2: 18.5 V/ 230 VAC 18.5 V/ 115 VAC Shunt down Re- power ON	P
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 264 VAC O/P: FULL LOAD Ta: 25°C	NO DAMAGE Shunt down Re-power ON	P

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
3	REMOTE CONTROL	Rc+ / Rc- open or 0V~0.8V POWER ON 4V~12V POWER OFF	I/P: 230 VAC O/P: FULL LOAD Ta: 25°C	open or 0V ~ 2.6V POWER ON 2.7V ~ 12V POWER OFF	P

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 3 KVAC/min I/P-FG: 1.5 KVAC/min O/P-FG: 0.5 KVAC/min	I/P-O/P: 3.6 KVAC/min I/P-FG: 1.8 KVAC/min O/P-FG: 0.6 KVAC/min Ta:25°C	I/P-O/P: 4.16 mA I/P-FG: 3.31 mA O/P-FG: 6.28 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG: 500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C	I/P-O/P: 24 GΩ I/P-FG: 21 GΩ O/P-FG: 11 GΩ NO DAMAGE	P

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab	P
4	E.S.D	EN61000-4-2 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
5	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
6	SURGE	IEC61000-4-5 LIGHT INDUSTRY L-N :1KV L,N-PE:2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
7	Test by certified Lab & Test Report Prepare				

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) Peak Voltage	Q 401 Rated 2SK2651 : 900V 6 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25℃	(1) 692 V (2) 816 V (3) 408 V	P
2	Diode Peak Voltage	D451 Rated F20NC15M : 150V 20A D451 Rated F20NC15M : 150V 20A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25℃	(1) 74 V (2) 72.4 V (3) 0 V (1) 75.2 V (2) 86.4 V (3) 0 V	P
3	Clamp Diode Peak Voltage	D401 Rated HER208 : 1KV 2A	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25℃	(1) 808 V (2) 804 V	P
4	Input Capacitor Voltage	C14 Rated : 330 u / 450V/ 105℃	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25℃	(1) 432 V (2) 432 V (3) 408 V	P
5	Control IC Voltage Test	U 401 Rated 3845 : 30V	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25℃	(1) 13.6 V (2) 13.6 V (3) 13.6 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2004/10/7	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2005/1/10	PRODUCT SAMPLE W0410C39	PASS	VINCENT TSENG	MAX LIN
2005/3/8	PRODUCT SAMPLE W0501E27	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023