MODEL：SE-350-7.5

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 150 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	V1: 56 mVp-p (Max)	PASS
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 6V ~ 9V	I/P: 230 VAC I/P:115 VAC O/P:MIN LOAD Ta:25℃	5.745V~9.312V/230VAC 5.746V~9.312V//115VAC	PASS
3	OUTPUT VOLTAGE TOLERANCE	V1: -2 %~ +2 % (Max)	I/P: 180VAC / 264 VAC O/P:FULL/ 0% LOAD Ta:25℃	V1: -0.59%~ +1.04 %	PASS
4	LINE REGULATION	V1: -0.5 %~ +0.5 % (Max)	I/P: 180 VAC ~ 264VAC O/P:FULL LOAD Ta:25℃	V1: -0.008 %~ 0.005 %	PASS
5	LOAD REGULATION	V1: -2 %~ +2 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25℃	V1: -0.59 %~ 0.57 %	PASS
6	SET UP TIME	230VAC/ 1000 ms (Max) 115VAC/ 1000 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230 VAC/ 105.993 ms 115 VAC/ 85.178 ms	PASS
7	RISE TIME	230VAC/ 50 ms (Max) 115VAC/ 50 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230 VAC/5.95ms 115 VAC/5.9ms	PASS
8	HOLD TIME	230VAC/ 20 ms (Typ) 115VAC/ 16 ms (Typ)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230 VAC/26.281ms 115 VAC/20.492ms	PASS
9	OVER/UNDERSHOOT TEST	< ±5 %	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	TEST: ±2.116 %	PASS
10	DYNAMIC LOAD	V1: 1500 mVp-p	I/P: 230 VAC O/P: (1)FULL /Min LOAD 90%DUTY/1KHZ (2)FULL /Min LOAD 50%DUTY/120HZ Ta:25℃	(1) 334 mVp-p (2) 514 mVp-p	PASS

INPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	180 VAC ~ 264 VAC	I/P:TESTING O/P:FULL LOAD Ta:25℃	180 V~ 264 V	PASS
			(1)I/P: LOW-LINE-3V= 177 V HIGH-LINE+15%= 300 V O/P:FULL/MIN LOAD ON: 30 Sec . OFF: 30 Sec 10MIN (2) I/P:230VAC ON: 0.5 Sec . OFF: 0.5 Sec 20MIN (AC POWER ON/OFF NO DAMAGE)	TEST: (1) OK (2) OK	
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE OSC	I/P: 180 VAC ~264 VAC O/P:FULL~MIN LOAD Ta:25℃	TEST: OK	PASS
3	EFFICIENCY	80 % (Typ)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	81.59 %	PASS
4	INPUT CURRENT	230 V/ 4 A (Typ) 115 V/ 7 A (Typ)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	I =3.466A/ 230VAC I =5.938A/ 115VAC	PASS
5	INRUSH CURRENT	230 V/ 60 A 115 V/ 40 A COLD START	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	I =43.218 A/ 230VAC I =33.625 A/ 115VAC	PASS

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105%~ 135 % RATED OUTPUT POWER	I/P: 264 VAC I/P: 230 VAC I/P: 180 VAC O/P:TESTING Ta:25℃	118 %/264VAC 118 %/ 230VAC 118 %/ 180 VAC Constant Current Limiting	PASS
2	OVER VOLTAGE PROTECTION	CH1: 9.4 V~ 11.25 V	I/P: 264 VAC I/P: 230 VAC I/P: 180 VAC O/P:MIN LOAD Ta:25℃	10.01 V/264VAC 10.05 V/ 230VAC 10.02 V/ 180VAC Shut off o/p voltage, Re- power ON to recover	PASS
3	OVER TEMPERATURE PROTECTION	SPEC: TSW1= 85 ℃ ±5 ℃ O.T.P. NO DAMAGE	I/P: 230 VAC O/P:FULL LOAD	81.8 ℃/ 230 VAC O.T.P. Active Shut down o/p voltage，recovers automatically after temperature goes down	PASS
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 264 VAC O/P: FULL LOAD Ta:25℃	NO DAMAGE Constant Current Limiting	PASS

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	FAN ON/OFF CONTROL	≥ 50 ℃ FAN ON ≤ 45 ℃ FAN OFF	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	52.7 ℃ FAN ON 44.0 ℃ FAN OFF	PASS

ENVIRONMENT TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	MODEL： SE-350-5 1. ROOM AMBIENT BURN-IN： 2 HRS I/P: 230 VAC O/P: 100% LOAD Ta= 14.9 ℃ 2. HIGH AMBIENT BURN-IN： 2 HRS I/P: 230 VAC O/P: 100% LOAD Ta= 51.7 ℃			PASS
2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P: 230 VAC O/P: 115.2% LOAD Ta:25℃	TEST： OK	PASS
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 264 VAC/180 VAC O/P: 100% LOAD Ta= -20 ℃	TEST： OK	PASS
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 ℃ NO DAMAGE	I/P: 272 VAC O/P:FULL LOAD Ta= 50 ℃ HUMIDITY= 95 %R.H	TEST： OK	PASS
5	TEMPERATURE COEFFICIENT	± 0.03 %(0~50℃)	I/P: 230 VAC O/P:FULL LOAD	± 0.005 %(0~50℃)	PASS
6	STORAGE TEMPERATURE TEST	1. Thermal shock Temperature： -40℃~ +90℃ 2. Temperature change rate ：25℃ / MIN 3. Dwell time low and high temperature ： 30 MIN/EACH 4. Total test cycle：5 CYCLE 5. Input/Output condition： STATIC		TEST： OK	PASS

NO	Position	P/N	ROOM AMBIENT Ta= 14.9℃	HIGH AMBIENT Ta= 51.7 ℃
1	LF1	LF-203	26.3℃	58.8℃
2	BD1	KBJ1008G	44.9℃	72.3℃
3	C6	680u/200V	36.1℃	64.7℃
4	Q1	FMH07N90E	63.2℃	97.0℃
5	T1	TF6313	59.2℃	85.0℃
6	U1	TL3845P	51.5℃	79.8℃
7	L100	TR6074	48.4℃	76.6℃
8	D100	S60SC4MT	90.1℃	119.3℃
9	RG1	L7812CV	44.8℃	74.9℃
10	C150	47u/63V	27.7℃	58.8℃
11	C106	4700u/10V KY	43.8℃	68.1℃
12	Q2	FMH07N90E	63.9℃	98.9℃
13	U100	OP HA17358B	40.3℃	68.8℃
14	D15	BYV26EGP	60.1℃	81.8℃
15	RTH2	10KΩ 4Φ 1%	45.6℃	74.1℃

7.	THERMAL SHOCK TEST	1. Thermal shock Temperature： - 25 ℃~ + 55 ℃ 2. Temperature change rate ：25℃ / MIN 3. Dwell time low and high temperature ： 30 MIN/EACH 4. Total test cycle：10 CYCLE 5. Input/Output condition： 230VAC/Full Load 58SEC ON/2SEC OFF	TEST： OK	PASS
8	VIBRATION TEST	1 Carton & 1 Set (1) Waveform: Sine Wave (2) Frequency:10~500Hz (3) Sweep Time:10min/sweep cycle (4) Acceleration:3G (5) Test Time:1 hour in each axis (X.Y.Z) (6) Ta:25℃	TEST： OK	PASS
9	CAPACITOR LIFE CYCLE	SUPPOSE C106 IS THE MOST CRITICAL COMPONENT (1) I/P: 230 VAC O/P:FULL LOAD Ta= 25 ℃ LIFE TIME= 321636 HRS (2) I/P: 230 VAC O/P:FULL LOAD Ta= 50 ℃ LIFE TIME= 135210 HRS (3) I/P: 230 VAC O/P:75% LOAD Ta= 50 ℃ LIFE TIME= 147967 HRS (4) I/P: 230 VAC O/P:50% LOAD Ta= 50 ℃ LIFE TIME= 184750 HRS		PASS
10	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 234.3K HRS		PASS
11	DMTBF/Accelerated Life Test	Demonstration Mean Time Between Failure(Expected Life) : 20,000 hours @ Ta 50℃		PASS

SAFETY TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-FG: 1.5 KVAC/min I/P-O/P: 3.0 KVAC/min O/P-FG: 0.5 KVAC/min EN 60950	I/P-FG: 1.8 KVA©C/min I/P-O/P: 3.6 KVAC/min O/P-FG: 0.6 KVAC/min Ta:25℃	I/P-FG: 3.872 mA I/P-O/P: 3.992 mA O/P-FG: 5.02 mA NO DAMAGE	PASS
2	ISOLATION RESISTANCE	I/P-FG: 500VDC>100MΩ I/P-O/P:500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-FG: 500 VDC I/P-O/P: 500 VDC O/P-FG: 500 VDC Ta:25℃	I/P-FG: ＞9999 MΩ I/P-O/P: ＞9999 MΩ O/P-FG: ＞9999 MΩ NO DAMAGE	PASS
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ EN 60950	40 A / 2 min Ta:25℃	3 mΩ	PASS
4	LEAKAGE CURRENT	< 3.5 mA / 240VAC EN 60950	I/P: 264 VAC O/P:NO LOAD Ta:25℃	L-FG: 0.8294 mA N-FG: 0.8111 mA	PASS

E.M.C TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	E.S.D	EN61000-4-2 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25℃	CRITERIA A	PASS
2	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25℃	CRITERIA A	PASS
3	SURGE	IEC61000-4-5 LIGHT INDUSTRY L-N :1KV L,N-PE:2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25℃	CRITERIA A	PASS

COMPONENT STRESS TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) **Peak Voltage**	Q 1 Rated FMH07N90E : 900 V 7 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2)Output Short (3)Dynamic Load 50% Load/ Min. Load 90%Duty/1KHz (4)Dynamic Load Full Load/ Min. Load 90%Duty/1KHz Ta:25℃	(1) 868 V (2) 844 V (3) 796 V (4) 828 V	PASS
2	Diode **Peak Voltage**	D 100 Rated SBL3060PT : 60 V 25 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2)Output Short (3)Dynamic Load 50% Load/ Min. Load 90%Duty/1KHz (4)Dynamic Load Full Load/ Min. Load 90%Duty/1KHz Ta:25℃	(1) 57.6 V (2) 47.2 V (3) 48.0 V (4) 50.4 V	PASS
3	**Control IC Voltage Test**	U 1 Rated TL3845P : 30 V	I/P:High-Line +3V =267 V O/P: (1) Output Short (2)O.L.P (3)O.V.P (4)NO LOAD VR 下限 LOW LINE Ta:25℃	(1) 16.4 V (2) 16.6 V (3) 14.0 V (4) 14.2 V	PASS

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SAMPLE	TESTER	APPROVAL
PRODUCT SAMPLE	FRANK	WANGDE