MODEL：NET-50D

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1:80 mVp-p (Max) V2:200 mVp-p (Max) V3:120 mVp-p (Max)	I/P: 230VAC O/P:FULL LOAD Ta:25℃	V1: 12 mVp-p (Max) V2: 12 mVp-p (Max) V3: 12 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 4.75V~ 5.5 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25℃	4.62 V~ 6.06 V/ 230 VAC 4.62 V~ 6.06 V/ 115 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: 2 %~ -2 % (Max) V2: 8 %~ -8 % (Max) V3: 6 %~ -6 % (Max)	I/P: 115 VAC / 264 VAC O/P:FULL/ 40% LOAD Ta:25℃	V1: 0.4 %~ -0.4 % V2: 1.4 %~ -1.4 % V3: 2 %~ -2 %	P
4	LINE REGULATION	V1: 0.5 %~ -0.5 % (Max) V2: 1 %~ -1 % (Max) V3: 1 %~ -1 % (Max)	I/P: 115 VAC ~ 264 VAC O/P:FULL LOAD Ta:25℃	V1: 0.12 %~ -0.12 % V2: 0.6 %~ -0.6 % V3: 0.6 %~ -0.6 %	P
5	LOAD REGULATION	V1: 1.5 %~ -1.5 % (Max) V2: 3 %~ -3 % (Max) V3: 3 %~ -3 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25℃	V1: 0.3 %~ -0.3 % V2: 0.4 %~ -0.4 % V3: 0.7 %~ -0.7 %	P
6	CROSS REGULATION	V1: 1.5 %~ -1.5 % (Max) V2: 3 %~ -3 % (Max) V3: 3 %~ -3 % (Max)	I/P: 230 VAC O/P: Testing O/P 60%LOAD Other O/P 40%LOAD Change Ta:25℃	V1: 0.12 %~ -0.12 % V2: 1 %~ -1 % V3: 1.6 %~ -1.6 %	P
7	SET UP TIME	230VAC: 500 ms (Max) 115 VAC: 1200 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 173 ms 115VAC/ 522 ms	P
8	RISE TIME	230VAC: 30 ms (Max) 115VAC: 30 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 10 ms 115VAC/ 11 ms	P
9	HOLD UP TIME	230VAC: 50 ms (TYP) 115VAC: 10 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	230VAC/ 76 ms 115VAC/ 15 ms	P
10	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	TEST: <5 %	P
11	DYNAMIC LOAD	V1: 1000 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25℃	76 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℃	62 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: 85VAC ~ 264 VAC O/P:FULL~MIN LOAD Ta:25℃	TEST: OK	P
3	EFFICIENCY	80 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25℃	80.8 %	P
4	INPUT CURRENT	230V/ 0.65 A (TYP) 115V/ 1.1 A (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	I = 0.54 A/ 230 VAC I = 0.91 A/ 115 VAC	P
5	INRUSH CURRENT	230V/ 45 A (TYP) COLD START	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25℃	I = 44 A/ 230 VAC	P
6	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P: 254 VAC O/P:Min LOAD Ta:25℃	L-FG: 0.2 mA N-FG: 0.2 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 %~ 150 %	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25℃	133 %/ 230 VAC 130 %/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 5.75 V~ 6.75 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25℃	6.2 V/ 230 VAC 6.2 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℃	NO DAMAGE Hiccup Mode	P

ENVIRONMENT TEST

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>SPECICATION</th><th>TEST CONDITION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>1</td><td>TEMPERATURE RISE TEST</td><td colspan="3">MODEL：NET-50A
1. ROOM AMBIENT BURN-IN：1.5 HRS
I/P: 230VAC O/P: FULL LOAD Ta= 32.1 ℃
2. HIGH AMBIENT BURN-IN：1.5 HRS
I/P: 230VAC O/P: FULL LOAD Ta= 50.8℃</td><td>P</td></tr>
<tr><td colspan="6"><table>
<tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta= 32.1℃</th><th>HIGH AMBIENT Ta= 50.8 ℃</th></tr>
<tr><td>1</td><td>C5</td><td>100U/400V CAPX 85℃</td><td>61.1℃</td><td>75.2℃</td></tr>
<tr><td>2</td><td>BD1</td><td>D3SB60 4A/600V SHI</td><td>67.1℃</td><td>80.0℃</td></tr>
<tr><td>3</td><td>LF1</td><td>LF-133</td><td>59.6℃</td><td>73.3℃</td></tr>
<tr><td>4</td><td>RG1</td><td>7905 1A/5V</td><td>88.7℃</td><td>103.2℃</td></tr>
<tr><td>5</td><td>D1</td><td>HER306 3A/600V REC</td><td>75.9℃</td><td>91.8℃</td></tr>
<tr><td>6</td><td>U1</td><td>1203P</td><td>67.7℃</td><td>83.9℃</td></tr>
<tr><td>7</td><td>Q1</td><td>K2628 6A/600V</td><td>69.1℃</td><td>88.9℃</td></tr>
<tr><td>8</td><td>D200</td><td>SF10SC6 10A/60V SHI</td><td>60.7℃</td><td>77.2℃</td></tr>
<tr><td>9</td><td>T1 COIL</td><td>TF-1017</td><td>86.1℃</td><td>101.0℃</td></tr>
<tr><td>10</td><td>D100</td><td>YG802C04 30A/40V FUJI</td><td>63.5℃</td><td>80.9℃</td></tr>
<tr><td>11</td><td>D300</td><td>SR360 3A/60V</td><td>91.6℃</td><td>105.1℃</td></tr>
<tr><td>12</td><td>C105</td><td>2200U/10V CAPX 105℃</td><td>75.1℃</td><td>90.2℃</td></tr>
<tr><td>13</td><td>C205</td><td>470U/25V CAPX 105℃ GL</td><td>83.9℃</td><td>98.8℃</td></tr>
<tr><td>14</td><td>C305</td><td>2200U/25V CAPX 105℃ KF</td><td>87.4℃</td><td>100.8℃</td></tr>
<tr><td>15</td><td>R105</td><td>33Ω/2W R/MO</td><td>100.8℃</td><td>117.8℃</td></tr>
</table></td></tr>
<tr><td>2</td><td>OVER LOAD BURN-IN TEST</td><td>NO DAMAGE
1 HOUR (MIN)</td><td>I/P: 230 VAC
O/P: 129 % LOAD
Ta:25℃</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>3</td><td>LOW TEMPERATURE
TURN ON TEST</td><td>TURN ON AFTER 2 HOUR</td><td>I/P: 230 VAC
O/P: 100% LOAD
Ta= -20℃</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>4</td><td>HIGH HUMIDITY
HIGH TEMPERATURE
HIGH VOLTAGE
TURN ON TEST</td><td>AFTER 12 HOURS
IN CHAMBER ON
CONTROL 35 ℃
NO DAMAGE</td><td>I/P: 272 VAC
O/P:FULL LOAD
Ta= 35℃
HUMIDITY= 95 %R.H</td><td>TEST：OK</td><td>P</td></tr>
<tr><td>5</td><td>TEMPERATURE
COEFFICIENT</td><td>± 0.03 %(0~45℃)</td><td>I/P: 230 VAC
O/P:FULL LOAD</td><td>± 0.01 %(0~45℃)</td><td>P</td></tr>
<tr><td>6</td><td>VIBRATION TEST</td><td colspan="2">1 Carton & 1 Set
(1) Waveform: Sine Wave
(2) Frequency:10~500Hz
(3) Sweep Time:10min/sweep cycle
(4) Acceleration:2G
(5) Test Time:1 hour in each axis (X.Y.Z)
(6) Ta:25℃</td><td>TEST：OK</td><td>P</td></tr>
</table>

SAFETY TEST

NO	TEST ITEM	SPECICATION	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℃	I/P-O/P: 3.74 mA I/P-FG: 2.9 mA O/P-FG: 2.46 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℃	I/P-O/P: 22 GΩ I/P-FG: 16 GΩ O/P-FG: 30 GΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25℃	5 mΩ	P
4	APPROVAL	TUV: Cerificate NO ： UL: File NO ：E183223			P

E.M.C TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25℃	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25℃	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL LOAD Ta:25℃	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℃	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℃	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℃	CRITERIA A	P
7	Test by certified Lab & Test Report Prepare				

M.T.B.F & LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C105 IS THE MOST CRITICAL COMPONENT I/P: 230VAC O/P:FULL LOAD Ta= 25 ℃ LIFE TIME= 69355 HRS I/P: 230VAC O/P:FULL LOAD Ta= 35 ℃ LIFE TIME= 44493 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 348.4K HRS			P

COMPONENT STRESS TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) **Peak Voltage**	Q1 Rated K2545 : 600V 6A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25℃	(1) 524 V (2) 540 V (3) 526 V	P
2	Diode Peak **Voltage**	D100 Rated YG802C04 : 40V 10A D200 Rated BYQ28X-200 : 200V 10A D300 Rated HER303 : 200V 3A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25℃	(1) 59 V (2) 49.2 V (3) 50 V (1) 186 V (2) 182 V (3) 163 V (1) 190 V (2) 119 V (3) 147 V	P
3	Clamp Diode Peak **Voltage**	D1 Rated HER306 : 600V 3A	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25℃	(1) 526 V (2) 520 V	P
4	**Input Capacitor Voltage**	C5 Rated : 100u /400V/ 85℃	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 (4)Burn in 1hour Ta:25℃	(1) 380 V (2) 372 V (3) 372 V (4) 372 V	P
5	**Control IC Voltage Test**	U1 Rated 1203 : 18V	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) 13.3 V (2) 13.1 V (3) 10.4 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2005/3/28	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2005/7/8	PRODUCT SAMPLE	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023