

**MODEL : NES-150-15**

**OUTPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 120 mVp-p (Max)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	V1: 50 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 14.25 V~ 16.5 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	17.072V-14.002V/230VAC 17.077V-14.005V/115VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: -1 %~ 1 % (Max)	I/P: 176 VAC / 264 VAC O/P:FULL/ 0 % LOAD Ta:25°C	V1: 0.04 %~ -0.04 %	P
4	LINE REGULATION	V1:-0.5 %~ 0.5 % (Max)	I/P: 176 VAC ~ 264 VAC O/P:FULL LOAD Ta:25°C	V1: -0.04 %~ 0 %	P
5	LOAD REGULATION	V1: -0.5 %~ 0.5 % (Max)	I/P:230 VAC O/P:FULL -MIN LOAD Ta:25°C	V1: -0.04 %~ 0 %	P
6	SET UP TIME	230 VAC/800 ms (Max) 115 VAC/1200 ms (Max)	I/P:230 VAC I/P:115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 347.063 ms 115VAC/ 355.945 ms	P
7	RISE TIME	230 VAC/20 ms (Max) 115 VAC/30 ms (Max)	I/P:230 VAC I/P:115 VAC O/P:FULL LOAD Ta:25°C	230 VAC/ 7.881 ms 115 VAC/ 7.881 ms	P
8	HOLD UP TIME	230 VAC/ 24 ms(TYP) 115 VAC/ 20 ms(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 28.939 ms 115VAC/ 25.405 ms	P
9	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: 0 %	P
10	DYNAMIC LOAD	V1: 1500 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	426 mVp-p	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	180VAC~ 264 VAC	I/P:TESTING O/P:FULL LOAD Ta:25°C	140 V~ 264 V	P
			I/P: LOW-LINE-3V= 177 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	47 HZ ~ 63 HZ NO DAMAGE OSC	I/P: 200 VAC ~ 264 VAC O/P:FULL-MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	83 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	83.95 %	P
4	INPUT CURRENT	230 V/ 2 A(TYP) 115 V/ 3 A(TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 1.428 A/ 230 VAC I = 2.52A/ 115 VAC	P
5	INRUSH CURRENT	230 V/ 45 A(TYP) COLD START	I/P:230 VAC O/P:FULL LOAD Ta:25°C	I = 40.085 A/ 230 VAC	P
6	LEAKAGE CURRENT	< 2 mA/ 240 VAC	I/P:264 VAC O/P:Min LOAD Ta:25°C	L-FG: 1.35 mA N-FG: 1.05 mA	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	110 %~ 150 %	I/P: 230 VAC O/P: TESTING Ta:25°C	132.43 %/ 230 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 17.25V~ 20.25 V	I/P: 230 VAC  O/P: MIN LOAD Ta:25°C	18.4V/ 230 VAC Hiccup Model	P
3	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 264 VAC O/P: Full LOAD Ta:25°C	NO DAMAGE Hiccup Mode	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: 7.26 mA I/P-FG: 6.23 mA O/P-FG: 6.41 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: 14.2 G Ω I/P-FG: 15 G Ω O/P-FG:15.1 G Ω NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C	8 mΩ	P
4	APPROVAL	TUV: Certificate NO : UL: File NO :			

**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 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 INDUSTRY INPUT: 2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
6	SURGE	IEC61000-4-5 INDUSTRY L-N :2KV L,N-PE:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
7	Test by certified Lab & Test Report Prepare				



## M.T.B.F &amp; LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C64 IS THE MOST CRITICAL COMPONENT I/P: 230 VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 38043 HRS I/P: 230 VAC O/P:FULL LOAD Ta= 40 °C LIFE TIME= 20226 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 244K HRS			P

## COMPONENT STRESS TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) <b>Peak Voltage</b>	Q1 Rated 2SK2082 : 900V / 9 A	I/P:High-Line +3V =267 V O/P: (1)Full Load input on/off (2)Output Short Ta:25°C	(1) 748 V (2) 776 V	P
2	Diode <b>Peak Voltage</b>	D60 Rated YG805C10 : 100V / 20 A	I/P:High-Line +3V =267 V O/P: (1)Full Load input on/off (2)Output Short Ta:25°C	(1) 17.6 V (2) 72.8 V	P
3	Clamp Diode <b>Peak Voltage</b>	D1 Rated BYV26E :1K V / 1 A	I/P:High-Line +3V =267 V O/P: (1) Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 692 V	P
4	<b>Input Capacitor Voltage</b>	C5 Rated CAPXON: 330u /200 V 105°C /HP Series	I/P:High-Line +3V =267 V O/P: (1)Full Load input on /Off (2) Min load input on /Off (3) Burn-In 1 Hour Ta:25°C	(1) 190 V (2) 190 V (3) 188 V	P
5	<b>Control IC Voltage Test</b>	U1 Rated NCP1216A : 16 V	I/P:High-Line +3V =267 V O/P: (1) Ouput short (2) O.L.P (3) O.V.P (4) ON LOAD VR 下限 LOW LINE Ta:25°C	(1) 12.9 V (2) 12.8 V (3) 13.1 V (4) 11.0 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2007/4/19	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023