

MODEL : DRT-960-48

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 80 mVp-p (Max)	I/P: 400VAC O/P:FULL LOAD Ta:25°C	V1: 26 mVp-p (Max))	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 48 V~ 55 V	I/P: 400 VAC O/P:MIN LOAD Ta:25°C	40.29 V~ 56.14 V/ 400 VAC 40.29 V~ 56.14 V/ 500 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1: -1 %~ 1 % (Max)	I/P: 340 VAC / 550 VAC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.1 %~ -0.1 %	P
4	LINE REGULATION	V1: -0.5%~ 0.5 % (Max)	I/P: 340 VAC ~ 550 VAC O/P:FULL LOAD Ta:25°C	V1: 0.05 %~ -0.05 %	P
5	LOAD REGULATION	V1: -0.5%~ 0.5 % (Max)	I/P: 400 VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0.05 %~ -0.05 %	P
6	SET UP TIME	400VAC: 200 ms (Max) 500VAC: 200 ms (Max)	I/P: 400 VAC I/P: 500 VAC O/P:FULL LOAD Ta:25°C	400VAC/ 116 ms 500VAC/ 97 ms	P
7	RISE TIME	400VAC: 60 ms (Max) 500VAC: 60 ms (Max)	I/P: 400 VAC I/P: 500 VAC O/P:FULL LOAD Ta:25°C	400VAC/ 43 ms 500VAC/ 37 ms	P
8	HOLD UP TIME	400VAC: 10 ms (TYP) 500VAC: 30 ms (TYP)	I/P: 400 VAC I/P: 500 VAC O/P:FULL LOAD Ta:25°C	400VAC/ 11.8 ms 500VAC/ 33.2 ms	P
9	OVER/UNDERSHOOT TEST	< ±5%	I/P: 400 VAC O/P:FULL LOAD Ta:25°C	TEST: <5 %	P
10	DYNAMIC LOAD	V1: 4800 mVp-p	I/P: 400 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	1105 mVp-p	P

**INPUT FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	340VAC-550 VAC)	I/P:TESTING O/P:FULL LOAD Ta:25°C	315 V-550V	P
			I/P: LOW-LINE-3V= 337 V HIGH-LINE+10V= 560 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: 340 VAC ~ 550 VAC O/P:FULL-MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	92 % (TYP)	I/P: 400 VAC O/P:FULL LOAD Ta:25°C	92.9 %	P
4	INPUT CURRENT	400V/ 2 A (TYP) 500V/ 1.6 A (TYP)	I/P: 400 VAC I/P: 500 VAC O/P:FULL LOAD Ta:25°C	I = 1.91 A/400 VAC I = 1.5 A/ 500 VAC	P
5	INRUSH CURRENT	400V/ 50 A (TYP)  COLD START	I/P: 400 VAC O/P:FULL LOAD Ta:25°C	I = 24 A/400AC	P
6	LEAKAGE CURRENT	< 3.5 mA / 530 VAC	I/P: 530 VAC O/P:Min LOAD Ta:25°C	L1-FG: 0.8 mA L2-FG: 0.8 mA L3-FG: 0.8 mA	P

**PROTECTION FUNCTION TEST**

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105 %- 125 %	I/P: 400 VAC I/P: 500 VAC O/P:TESTING Ta:25°C	111 %/ 400 VAC 111 %/ 500 VAC Constant Current Limiting	P
2	OVER VOLTAGE PROTECTION	CH1: 59 V~ 66 V	I/P: 400 VAC I/P: 500 VAC O/P:MIN LOAD Ta:25°C	65.8 V/ 400 VAC 66 V/ 500 VAC Shunt down Re- power ON	P
3	OVER TEMPERATURE PROTECTION	SPEC: TSW1: 110±5 °C O.T.P. TSW2: 85±5 °C O.T.P. NO DAMAGE	I/P: 400 VAC O/P:FULL LOAD	O.T.P. Active Shut down o/p voltage , recovers automatically after temperature goes down	P
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P: 550 VAC O/P: Full LOAD Ta:25°C	NO DAMAGE Constant Current Limiting, unit will Shut down o/p voltage after 3 sec, Re-power on to recover	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: 4.15 mA I/P-FG: 2.72 mA O/P-FG: 3.42 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 GΩ I/P-FG: 15 GΩ O/P-FG: 11 GΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C	13 mΩ	P
4	APPROVAL	TUV: Certificate NO : R50061104 UL: File NO : E215312/E183223			P

**E.M.C TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A	I/P: 400 VAC/50HZ O/P:FULL LOAD Ta:25°C	PASS	P
2	CONDUCTION	EN55022 EN55011 CLASS B	I/P: 400 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 EN55011 CLASS B	I/P: 400 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: 400 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
5	E.F.T	EN61000-4-4 INDUSTRY INPUT: 2KV	I/P: 400 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: 400 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
7	Test by certified Lab & Test Report Prepare				

**M.T.B.F & LIFE CYCLE CALCULATION**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C 205 IS THE MOST CRITICAL COMPONENT I/P: 400VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 98254 HRS I/P: 400VAC O/P:FULL LOAD Ta= 45 °C LIFE TIME= 47122 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 122.5K HRS			P

**COMPONENT STRESS TEST**

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) <b>Peak Voltage</b>	Q 50 Rated 15NK90Z : 900V 15A	I/P:High-Line +3V = 553 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 788 V (2) 744 V (3) 796 V	P
2	Diode <b>Peak Voltage</b>	D201 Rated PA905C4 : 400 V 20A	I/P:High-Line +3V = 553 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 201 V (2) 208 V (3) 188 V	P
3	<b>Input Capacitor Voltage</b>	C5 Rated : 470u / 420V/ 105°C	I/P:High-Line +3V = 553 V O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25°C	(1) 384 V (2) 392 V (3) 380 V	P
4	<b>Control IC Voltage Test</b>	U102 Rated UCC2895N : 17 V	I/P:High-Line +3V = 553 V O/P: (1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta:25°C	(1) 15.4 V (2) 15.4 V (3) 15.4 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2005/3/2	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2005/6/1	PRODUCT SAMPLE W0504A02	PASS	VINCENT TSENG	MAX LIN
2005/10/6	PRODUCT SAMPLE W0509C02	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023