

MODEL : DR-100-15

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 120 mVp-p (Max)	I/P: 230VAC O/P:FULL LOAD Ta:25°C	V1: 57 mVp-p (Max)	p
2	OUTPUT VOLTAGE ADJUST RANGE	CH1: 15 V~ 18V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	14.71 V~ 19.18 V/ 230 VAC 14.71 V~ 19.18 V/ 115 VAC	p
3	OUTPUT VOLTAGE TOLERANCE	V1: 1 %- -1 % (Max)	I/P: 88 VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.21 %- -0.21 %	p
4	LINE REGULATION	V1: 1 %- -1 % (Max)	I/P: 88VAC ~ 264 VAC O/P:FULL LOAD Ta:25°C	V1: 0.21 %- -0.21 %	p
5	LOAD REGULATION	V1: 1 %- -1 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0.21 %- -0.21 %	p
6	SET UP TIME	230VAC: 2700 ms (Max) 115 VAC: 2700 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 2231 ms 115VAC/ 2231 ms	p
7	RISE TIME	230VAC: 80 ms (Max) 115VAC: 80 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 3 ms 115VAC/ 3 ms	p
8	HOLD UP TIME	230VAC: 50 ms (TYP) 115VAC: 18 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 85 ms 115VAC/ 18.05 ms	p
9	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: <5 %	p
10	DYNAMIC LOAD	V1: 1500 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	507 mVp-p	p

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	88VAC~264 VAC)	I/P:TESTING O/P:FULL LOAD Ta:25°C	68 V~264V	p
			I/P: LOW-LINE-3V= 85 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: 88 VAC ~ 264 VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK	p
3	EFFICIENCY	87 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	88.7%	p
4	INPUT CURRENT	230V/ 1.6 A (TYP) 115V/ 3 A (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 0.99 A/ 230 VAC I = 1.47 A/ 115 VAC	p
5	INRUSH CURRENT	230V/ 45 A (TYP) 115V/ 30 A (TYP) COLD START	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 35 A/ 230 VAC I = 17 A/ 115 VAC	p
6	NO LOAD POWER CONSUMPTION	<1W	I/P: 240 VAC O/P:NO LOAD Ta:25°C	0.9 W	p

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	105 %~ 135 %	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25°C	124 %/ 230 VAC 122 %/ 115 VAC Constant Current Limiting	P
2	OVER VOLTAGE PROTECTION	CH1: 19 V~ 23 V	I/P: 230 VAC I/P: 115 VAC O/P:MIN LOAD Ta:25°C	20.6 V/ 230 VAC 20.6 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 Constant Current Limiting	p
4	OVER TEMPERATURE PROTECTION	SPEC: RTH2: 90 ± 15°C O.T.P. NO DAMAGE	I/P: 230 VAC O/P:FULL LOAD	O.T.P. Active Shunt down Re-power ON	p

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT																																																																											
1	TEMPERATURE RISE TEST	MODEL : DR-100-24 1. ROOM AMBIENT BURN-IN : 2.5HRS I/P: 230VAC O/P: FULL LOAD Ta= 32.5°C 2. HIGH AMBIENT BURN-IN : 2.5 HRS I/P: 230VAC O/P: FULL LOAD Ta= 45.4°C																																																																														
				<table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>P/N</th> <th>ROOM AMBIENT Ta= 32.5°C</th> <th>HIGH AMBIENT Ta= 45.4°C</th> </tr> </thead> <tbody> <tr><td>1</td><td>U1</td><td>TEA1552</td><td>76.4°C</td><td>88.5°C</td></tr> <tr><td>2</td><td>C5</td><td>220U/400V 105°C HU</td><td>59.9°C</td><td>72.0°C</td></tr> <tr><td>3</td><td>BD1</td><td>US4K80 4A/800V</td><td>73.8°C</td><td>86.1°C</td></tr> <tr><td>4</td><td>LF1</td><td>TR-781</td><td>76.3°C</td><td>88.8°C</td></tr> <tr><td>5</td><td>Q1</td><td>SPA11N65C3 11A/730V</td><td>77.0°C</td><td>89.8°C</td></tr> <tr><td>6</td><td>T1 COIL</td><td>TF-1617</td><td>80.1°C</td><td>92.0°C</td></tr> <tr><td>7</td><td>D2</td><td>1N4007GP 1A/1KV</td><td>86.6°C</td><td>98.5°C</td></tr> <tr><td>8</td><td>C52</td><td>47U/35V 105°C ZLH</td><td>75.9°C</td><td>88.2°C</td></tr> <tr><td>9</td><td>L100</td><td>TR-624</td><td>65.7°C</td><td>78.6°C</td></tr> <tr><td>10</td><td>C108</td><td>680U/35V 105°C ZLH</td><td>64.7°C</td><td>77.5°C</td></tr> <tr><td>11</td><td>Q101</td><td>IRF3415 43A/150V</td><td>73.3°C</td><td>86.6°C</td></tr> <tr><td>12</td><td>PCB</td><td>TI 與 D2 間</td><td>83.6°C</td><td>96.0°C</td></tr> <tr><td>13</td><td>RTH2</td><td>220KΩ 1%</td><td>74.7°C</td><td>87.0°C</td></tr> <tr><td>14</td><td>內 TA</td><td>U2 上方</td><td>72.7°C</td><td>85.8°C</td></tr> </tbody> </table>	NO	Position	P/N	ROOM AMBIENT Ta= 32.5°C	HIGH AMBIENT Ta= 45.4°C	1	U1	TEA1552	76.4°C	88.5°C	2	C5	220U/400V 105°C HU	59.9°C	72.0°C	3	BD1	US4K80 4A/800V	73.8°C	86.1°C	4	LF1	TR-781	76.3°C	88.8°C	5	Q1	SPA11N65C3 11A/730V	77.0°C	89.8°C	6	T1 COIL	TF-1617	80.1°C	92.0°C	7	D2	1N4007GP 1A/1KV	86.6°C	98.5°C	8	C52	47U/35V 105°C ZLH	75.9°C	88.2°C	9	L100	TR-624	65.7°C	78.6°C	10	C108	680U/35V 105°C ZLH	64.7°C	77.5°C	11	Q101	IRF3415 43A/150V	73.3°C	86.6°C	12	PCB	TI 與 D2 間	83.6°C	96.0°C	13	RTH2	220KΩ 1%	74.7°C	87.0°C	14	內 TA	U2 上方	72.7°C	85.8°C	p
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P: 230 VAC O/P: 120 % LOAD Ta:25°C	TEST : OK	P																																																																											
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 230 VAC O/P: 100 % LOAD Ta= -20 °C	TEST : OK	P																																																																											
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 °C NO DAMAGE	I/P: 272 VAC O/P:FULL LOAD Ta= 50 °C HUMIDITY= 95 %R.H	TEST : OK	P																																																																											
5	TEMPERATURE COEFFICIENT	± 0.03 %(0-50°C)	I/P: 230 VAC O/P:FULL LOAD	± 0.013 %(0-50°C)	P																																																																											
6	VIBRATION TEST	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°C		TEST : OK	p																																																																											

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 3 KVAC/min	I/P-O/P: 3.6 KVAC/min Ta:25°C	I/P-O/P: 2.47 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ	I/P-O/P: 500 VDC Ta:25°C	I/P-O/P: 30 GΩ NO DAMAGE	P
3	APPROVAL	TUV: Certificate NO : R50113593 UL: File NO : E183223			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 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 & LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	DR-100-24 : SUPPOSE C108 IS THE MOST CRITICAL COMPONENT I/P: 230VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 330738 HRS I/P: 230VAC O/P:FULL LOAD Ta= 50 °C LIFE TIME= 58875 HRS			p
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE:486K HRS			p

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) Peak Voltage	Q1 Rated SPA11N65C3 11A/730V	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 728 V (2) 712 V (3) 726 V	P
2	Diode Peak Voltage	Q101 Rated STP75NF75 80A/75V	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 59 V (2) 59 V (3) 49 V	P
3	Clamp Diode Peak Voltage	D2 Rated 1N4007GP:1A/1KV	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 410 V (2) 400 V	P
4	Input Capacitor Voltage	C5 Rated 220u/400V 105°C	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°C	(1) 370 V (2) 374 V (3) 374 V	p
5	Control IC Voltage Test	U1 Rated TEA1552 : 20V	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°C	(1) 17.9 V (2) 15.9 V (30) 17.9 V	p

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
20075/9	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2007/6/21	PRODUCT SAMPLE W0705E66	PASS	VINCENT TSENG	MAX LIN
2007/9/27	PRODUCT SAMPLE W0709A02	PASS	VINCENT TSENG	MAX LIN
2008/4/17	PRODUCT SAMPLE W0802C04	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023