

MODEL : PM-15-24

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1: 240 mVp-p (Max)	I/P: 230VAC O/P:FULL LOAD Ta:25°C	V1: 29 mVp-p (Max)	P
2	OUTPUT VOLTAGE TOLERANCE	V1: 2 %~ -2 % (Max)	I/P:115 VAC / 264 VAC O/P:FULL/ MIN LOAD Ta:25°C	V1: 0.2 %~ -0.2 %	P
3	LINE REGULATION	V1: 0.5%~ -0.5 % (Max)	I/P:115 VAC ~ 264 VAC O/P:FULL LOAD Ta:25°C	V1: 0.03 %~ -0.03 %	P
4	LOAD REGULATION	V1: 0.5 %~ -0.5 % (Max)	I/P: 230 VAC O/P:FULL ~MIN LOAD Ta:25°C	V1: 0.15 %~ -0.15 %	P
5	SET UP TIME	230VAC: 1000 ms (Max) 115 VAC: 1000 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 588 ms 115VAC/ 340 ms	P
6	RISE TIME	230VAC: 20 ms (Max) 115VAC: 20 ms (Max)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 8.2 ms 115VAC/ 7.3 ms	P
7	HOLD UP TIME	230VAC: 100 ms (TYP) 115VAC: 24 ms (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	230VAC/ 134 ms 115VAC/ 28 ms	P
8	OVER/UNDERSHOOT TEST	< ±5%	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	TEST: <5 %	P
9	DYNAMIC LOAD	V1: 2400 mVp-p	I/P: 230 VAC O/P:FULL /Min LOAD 90%DUTY/1KHZ Ta:25°C	245 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°C	50 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 ~440 HZ NO DAMAGE OSC	I/P: 85 VAC ~ 264 VAC O/P:FULL~MIN LOAD Ta:25°C	TEST: OK	P
3	EFFICIENCY	81 % (TYP)	I/P: 230 VAC O/P:FULL LOAD Ta:25°C	83.8%	P
4	INPUT CURRENT	230V/ 0.2 A (TYP) 115V/ 0.35 A (TYP)	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 0.18 A/ 230 VAC I = 0.28 A/ 115 VAC	P
5	INRUSH CURRENT	230V/ 50 A (TYP) 115V/ 30 A(TYP) COLD START	I/P: 230 VAC I/P: 115 VAC O/P:FULL LOAD Ta:25°C	I = 34 A/ 230 VAC I = 18 A/ 115 VAC	P
6	LEAKAGE CURRENT	<80uA /264 VAC for touch leakage current	I/P: 264 VAC O/P:Min LOAD Ta:25°C	L-V+ : 68 uA L-V-: 68 uA N-V+: 68 uA N-V-: 68 uA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	Above 105 %	I/P: 230 VAC I/P: 115 VAC O/P:TESTING Ta:25°C	151 %/ 230 VAC 152 %/ 115 VAC Hiccup Mode	P
2	OVER VOLTAGE PROTECTION	CH1: 27.6V~ 32.4V	O/P:MIN LOAD Ta:25°C	30.5V / 60mA Shut off	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

CONTROL FUNCTION TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	No load power consumption	<0.5W	I/P: 240 VAC O/P:NO LOAD	0.43 W/ 240 VAC	p

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT																																																																																
1	TEMPERATURE RISE TEST	MODEL : PM-15-24 1. ROOM AMBIENT BURN-IN : 2 HRS I/P: 230VAC O/P: FULL LOAD Ta= 26.5℃ 2. HIGH AMBIENT BURN-IN : 1.5 HRS I/P: 230VAC O/P: FULL LOAD Ta= 55.8℃ <table><tr><th>NO</th><th>Position</th><th>P/N</th><th>ROOM AMBIENT Ta= 25.9 ℃</th><th>HIGH AMBIENT Ta= 51.6 ℃</th></tr><tr><td>1</td><td>U1</td><td>DM0265RNB FAIR</td><td>63.5℃</td><td>87.4℃</td></tr><tr><td>2</td><td>C36</td><td>47U/50V RUB 105℃ YXF</td><td>54.0℃</td><td>76.9℃</td></tr><tr><td>3</td><td>D1</td><td>BYV26C 1A/600V VIS</td><td>65.9℃</td><td>89.6℃</td></tr><tr><td>4</td><td>ZD1</td><td>P6KE200 PAN</td><td>66.0℃</td><td>91.1℃</td></tr><tr><td>5</td><td>BD1</td><td>KBP208G 2A/800V LT</td><td>56.5℃</td><td>79.5℃</td></tr><tr><td>6</td><td>T1 COIL</td><td>TF-1398 LS</td><td>55.5℃</td><td>77.9℃</td></tr><tr><td>7</td><td>C5</td><td>47U/400V NIC 105℃ PT</td><td>53.0℃</td><td>76.3℃</td></tr><tr><td>8</td><td>LF1</td><td>LF-508 LS</td><td>53.5℃</td><td>76.6℃</td></tr><tr><td>9</td><td>D100</td><td>HER303 3A/200V REC</td><td>56.9℃</td><td>80.1℃</td></tr><tr><td>10</td><td>C105</td><td>100U/50V NCC 105℃ KY</td><td>47.6℃</td><td>71.6℃</td></tr><tr><td>11</td><td>L100</td><td>DR008D</td><td>49.5℃</td><td>73.2℃</td></tr><tr><td>12</td><td>U1</td><td>DM0265RNB FAIR</td><td>63.5℃</td><td>87.4℃</td></tr><tr><td>13</td><td></td><td></td><td></td><td></td></tr><tr><td>14</td><td></td><td></td><td></td><td></td></tr><tr><td>15</td><td></td><td></td><td></td><td></td></tr></table>			NO	Position	P/N	ROOM AMBIENT Ta= 25.9 ℃	HIGH AMBIENT Ta= 51.6 ℃	1	U1	DM0265RNB FAIR	63.5℃	87.4℃	2	C36	47U/50V RUB 105℃ YXF	54.0℃	76.9℃	3	D1	BYV26C 1A/600V VIS	65.9℃	89.6℃	4	ZD1	P6KE200 PAN	66.0℃	91.1℃	5	BD1	KBP208G 2A/800V LT	56.5℃	79.5℃	6	T1 COIL	TF-1398 LS	55.5℃	77.9℃	7	C5	47U/400V NIC 105℃ PT	53.0℃	76.3℃	8	LF1	LF-508 LS	53.5℃	76.6℃	9	D100	HER303 3A/200V REC	56.9℃	80.1℃	10	C105	100U/50V NCC 105℃ KY	47.6℃	71.6℃	11	L100	DR008D	49.5℃	73.2℃	12	U1	DM0265RNB FAIR	63.5℃	87.4℃	13					14					15					P
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2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P: 230 VAC O/P: 127 % LOAD Ta:25℃	TEST : OK	P																																																																																
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 230 VAC O/P: 100 % LOAD Ta= -20 ℃	TEST : OK	P																																																																																
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	P																																																																																
5	TEMPERATURE COEFFICIENT	± 0.03 %(0~50℃)	I/P: 230 VAC O/P:FULL LOAD	± 0.01 %(0~50℃)	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℃		TEST : OK	P																																																																																

SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 4 KVAC/min	I/P-O/P: 4.4 KVAC/min Ta:25°C	I/P-O/P: 0.88 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 : TA 50079957 UL: File NO :			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 EN55011 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL/50% LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 EN55011 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 MEDICAL AIR:8KV / Contact:6KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
5	E.F.T	EN61000-4-4 MEDICAL INPUT: 2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
6	SURGE	IEC61000-4-5 MEDICAL L-N :2KV	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	SUPPOSE C105 IS THE MOST CRITICAL COMPONENT I/P: 230VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 494384 HRS I/P: 230VAC O/P:FULL LOAD Ta= 50 °C LIFE TIME= 126222 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE: 499.7KHRS			P

COMPONENT STRESS TEST

NO	TEST ITEM	SPECICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) Peak Voltage	U1 Rated DM0265RNB : 660 V 1.5A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 590 V (2) 580 V (3) 580 V	P
2	Diode Peak Voltage	D100 Rated C9202 : 200V 10 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load Turn on (2) Full Load (3)Output Short Ta:25°C	(1) 135 V (2) 124 V (3) 142 V	P
3	Clamp Diode Peak Voltage	D1 Rated BYV26C : 600V 1 A	I/P:High-Line +3V = 267 V O/P: (1)Full Load (2) Dynamic Load 90%Duty/1KHz Ta:25°C	(1) 524 V (2) 522 V	P
4	Input Capacitor Voltage	C5 Rated :47u / 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 (4)Burn in 1hour Ta:25°C	(1) 372 V (2) 368 V (3) 372 V (4) 372 V	P
5	Control IC Voltage Test	U1 Rated DM0265RNB : 20 V	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) 14.6 V (2) 13.4 V (3) 14.6 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2005/11/30	RD SAMPLE	PASS	VINCENT TSENG	MAX LIN
2006/4/7	PRODUCT SAMPLE W0601C06	PASS	VINCENT TSENG	MAX LIN

2003/12/12 A50-F023