

## MODEL : RS-75-24

### OUTPUT FUNCTION TEST

| NO | TEST ITEM                      | SPECIFICATION                                 | TEST CONDITION  | RESULT  | VERDICT |
|----|--------------------------------|---|---|---|---------|
| 1  | RIPPLE & NOISE                 | V1: 120 mVp-p (Max)                           | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C                      | V1: 9 mVp-p (Max)                                   | P       |
| 2  | OUTPUT VOLTAGE<br>ADJUST RANGE | CH1: 22V- 27.6 V                              | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:MIN LOAD<br>Ta:25°C       | 21.27V- 29.68 V/ 230VAC<br>21.27V- 29.68 V/ 115 VAC | P       |
| 3  | OUTPUT VOLTAGE<br>TOLERANCE    | V1: 1 %- -1 % (Max)                           | I/P: 115 VAC / 264 VAC<br>O/P:FULL/ MIN LOAD<br>Ta:25°C       | V1: 0.1 %- -0.1 %                                   | P       |
| 4  | LINE REGULATION                | V1: 0.5 %- -0.5 % (Max)                       | I/P: 115 VAC ~ 264 VAC<br>O/P:FULL LOAD<br>Ta:25°C            | V1: 0.03 %- -0.03 %                                 | P       |
| 5  | LOAD REGULATION                | V1: 0.5 %- -0.5 % (Max)                       | I/P: 230 VAC<br>O/P:FULL -MIN LOAD<br>Ta:25°C                 | V1: 0.03 %- -0.03 %                                 | P       |
| 6  | SET UP TIME                    | 230VAC/ 500 ms (Max)<br>115VAC/ 1200 ms (Max) | I/P: 230 VAC<br>I/P:115 VAC<br>O/P:FULL LOAD<br>Ta:25°C       | 230VAC/ 188 ms<br>115VAC/ 102 ms                    | P       |
| 7  | RISE TIME                      | 230VAC/ 30ms (Max)<br>115VAC/ 30ms (Max)      | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:FULL LOAD<br>Ta:25°C      | 230VAC/ 15 ms<br>115VAC/ 13 ms                      | P       |
| 8  | HOLD UP TIME                   | 230VAC/ 50 ms (TYP)<br>115VAC/ 12 ms(TYP)     | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:FULL LOAD<br>Ta:25°C      | 230VAC/ 76 ms<br>115VAC/ 16 ms                      | P       |
| 9  | OVER/UNDERSHOOT TEST           | < ±5%   | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C                      | TEST: <5 %  | P       |
| 10 | DYNAMIC LOAD                   | V1: 2400 mVp-p                                | I/P: 230 VAC<br>O/P:FULL /Min LOAD<br>90%DUTY/1KHZ<br>Ta:25°C | 147 mVp-p   | P       |

## INPUT FUNCTION TEST

| NO | TEST ITEM             | SPECICATION                         | TEST CONDITION   | RESULT                                   | VERDICT |
|----|-----------------------|-------------------------------------|--|--|---------|
| 1  | INPUT VOLTAGE RANGE   | 88VAC~264VAC                        | I/P:TESTING<br>O/P:FULL LOAD<br>Ta:25°C  | 61 V~ 264 V                              | P       |
|    |                       |                                     | I/P:<br>LOW-LINE-3V= 87 V<br>HIGH-LINE+15%=300 V<br>O/P:FULL/MIN LOAD<br>ON: 30 Sec . OFF: 30 Sec 10MIN<br>( AC POWER ON/OFF NO DAMAGE ) | TEST: OK                                 |         |
| 2  | INPUT FREQUENCY RANGE | 47 HZ ~ 63 HZ)<br>NO DAMAGE OSC     | I/P:88VAC ~ 264VAC<br>O/P:FULL-MIN LOAD<br>Ta:25°C   | TEST: OK                                 | P       |
| 3  | EFFICIENCY            | 85 % (TYP)                          | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C   | 86.7 %                                   | P       |
| 4  | INPUT CURRENT         | 230V/1.2 A (TYP)<br>115V/ 2 A (TYP) | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:FULL LOAD<br>Ta:25°C   | I = 0.9 A/ 230 VAC<br>I = 1.4 A/ 115 VAC | P       |
| 5  | INRUSH CURRENT        | 230V/ 40 A (TYP)<br>COLD START      | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C   | I = 28 A/ 230 VAC                        | P       |
| 6  | LEAKAGE CURRENT       | < 2 mA / 240 VAC                    | I/P: 254 VAC<br>O/P:Min LOAD<br>Ta:25°C  | L-FG: 0.3 mA<br>N-FG: 0.3 mA             | P       |

## PROTECTION FUNCTION TEST

| NO | TEST ITEM               | SPECICATION                            | TEST CONDITION  | RESULT  | VERDICT |
|----|-------------------------|--|---|---|---------|
| 1  | OVER LOAD PROTECTION    | 110%~ 150 %                            | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:TESTING<br>Ta:25°C  | 128 %/ 230 VAC<br>130 %/ 115 VAC<br>Hiccup Mode | P       |
| 2  | OVER VOLTAGE PROTECTION | CH1: 27.6 V~ 32.4 V                    | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:MIN LOAD<br>Ta:25°C | 30 V/ 230 VAC<br>30 V/ 115 VAC<br>Hiccup Model  | P       |
| 3  | SHORT PROTECTION        | SHORT EVERY OUTPUT<br>1 HOUR NO DAMAGE | I/P: 264 VAC<br>O/P: FULL LOAD<br>Ta:25°C               | NO DAMAGE<br>Hiccup Mode                        | P       |



### SAFETY TEST

| NO | TEST ITEM            | SPECIFICATION   | TEST CONDITION   | RESULT  | VERDICT |
|----|----------------------|---|--|---|---------|
| 1  | WITHSTAND VOLTAGE    | I/P-O/P: 3 KVAC/min<br>I/P-FG: 1.5 KVAC/min<br>O/P-FG: 0.5 KVAC/min | I/P-O/P: 3.6 KVAC/min<br>I/P-FG: 1.8 KVAC/min<br>O/P-FG: 0.6 KVAC/min<br>Ta:25°C | I/P-O/P: 3.39 mA<br>I/P-FG: 2.88 mA<br>O/P-FG: 1.91 mA<br>NO DAMAGE | P       |
| 2  | ISOLATION RESISTANCE | I/P-O/P:500VDC>100MΩ<br>I/P-FG: 500VDC>100MΩ<br>O/P-FG:500VDC>100MΩ | I/P-O/P: 500 VDC<br>I/P-FG: 500 VDC<br>O/P-FG: 500 VDC<br>Ta:25°C                | I/P-O/P: 11 GΩ<br>I/P-FG: 8 GΩ<br>O/P-FG: 7 GΩ<br>NO DAMAGE         | P       |
| 3  | GROUNDING CONTINUITY | FG(PE) TO CHASSIS<br>OR TRACE < 100 mΩ                              | 40 A / 2min<br>Ta:25°C   | 4 mΩ  | P       |
| 4  | APPROVAL             | TUV: Certificate NO : R50045775<br>UL: File NO : E183223            |  |   | P       |

### E.M.C TEST

| NO | TEST ITEM                                   | SPECIFICATION                                      | TEST CONDITION                                      | RESULT                        | VERDICT |
|----|---|--|---|-------------------------------|---------|
| 1  | HARMONIC                                    | EN61000-3-2<br>CLASS A                             | I/P: 230 VAC/50HZ<br>O/P:FULL LOAD<br>Ta:25°C       | PASS                          | P       |
| 2  | CONDUCTION                                  | EN55022<br>CLASS B                                 | I/P: 230 VAC (50HZ)<br>O/P:FULL/50% LOAD<br>Ta:25°C | PASS<br>Test by certified Lab | P       |
| 3  | RADIATION                                   | EN55022<br>CLASS B                                 | I/P: 230 VAC (50HZ)<br>O/P:FULL LOAD<br>Ta:25°C     | PASS<br>Test by certified Lab | P       |
| 4  | E.S.D                                       | EN61000-4-2<br>INDUSTRY<br>AIR:8KV / Contact:4KV   | I/P: 230 VAC/50HZ<br>O/P:FULL LOAD<br>Ta:25°C       | CRITERIA A                    | P       |
| 5  | E.F.T                                       | EN61000-4-4<br>INDUSTRY<br>INPUT: 2KV              | I/P: 230 VAC/50HZ<br>O/P:FULL LOAD<br>Ta:25°C       | CRITERIA A                    | P       |
| 6  | SURGE                                       | IEC61000-4-5<br>INDUSTRY<br>L-N :2KV<br>L,N-PE:4KV | I/P: 230 VAC/50HZ<br>O/P:FULL LOAD<br>Ta:25°C       | 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 C 58 IS THE MOST CRITICAL COMPONENT<br>I/P: 230 VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 341779 HRS<br>I/P: 230 VAC O/P:FULL LOAD Ta= 50 °C LIFE TIME= 83119HRS |                |        | P       |
| 2  | MTBF                 | MIL-HDBK-217F NOTICES2 PARTS COUNT<br>TOTAL FAILURE RATE: 265K 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 | Q 1 Rated<br>K2628 : 600 V 6 A                | I/P:High-Line +3V = 267 V<br>O/P: (1)Full Load Turn on<br>(2) Full Load<br>(3)Output Short<br>Ta:25°C                                | (1) 410 V<br>(2) 528 V<br>(3) 604 V | P       |
| 2  | Diode Peak Voltage                                 | D 56 Rated<br>BYQ28X-200 : 200 V 10 A         | I/P:High-Line +3V = 267 V<br>O/P: (1)Full Load Turn on<br>(2) Full Load<br>(3)Output Short<br>Ta:25°C                                | (1) 151 V<br>(2) 151 V<br>(3) 155 V | P       |
| 3  | Clamp Diode Peak Voltage                           | D 1 Rated<br>HER306 : 600 V 3 A               | I/P:High-Line +3V = 267 V<br>O/P: (1)Full Load<br>(2) Dynamic Load<br>90%Duty/1KHz<br>Ta:25°C  | (1) 512 V<br>(2) 512 V              | P       |
| 4  | Input Capacitor Voltage                            | C 5 Rated<br>RUBYCON : 150 u / 400 V<br>105°C | I/P:High-Line +3V = 267 V<br>O/P: (1)Full Load Turn on /Off<br>(2) Min load Turn on /Off<br>(3)Full Load /Min load Change<br>Ta:25°C | (1) 370 V<br>(2) 378 V<br>(3) 378 V | P       |
| 5  | Control IC Voltage Test                            | U 1 Rated<br>1203 : 16 V                      | I/P:High-Line +3V = 267 V<br>O/P: (1)Full Load Turn on /Off<br>(2) Min load Turn on /Off<br>(3)Full Load /Min load Change<br>Ta:25°C | (1) 13 V<br>(2) 13 V<br>(3) 11.3 V  | P       |

| DATE       | SAMPLE                    | TEST RESULT | TESTER        | APPROVAL |
|------------|---------------------------|-------------|---------------|----------|
| 2003/12/16 | RD SAMPLE                 | PASS        | VINCENT TSENG | MAX LIN  |
| 2004/6/1   | PRODUCT SAMPLE<br>A403C11 | PASS        | VINCENT TSENG | MAX LIN  |
| 2004/8/16  | PRODUCT SAMPLE<br>A407C09 | PASS        | VINCENT TSENG | MAX LIN  |

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