

MODEL : RSP-1500-15

OUTPUT FUNCTION TEST

| NO | TEST ITEM                   | SPECICATION             | TEST CONDITION  | RESULT   | VERDICT |
|----|-----------------------------|-------------------------|---|--|---------|
| 1  | RIPPLE & NOISE              | V1: 150 mVp-p (Max)     | I/P: 230VAC<br>O/P:FULL LOAD<br>Ta:25°C                       | V1: 30 mVp-p (Max)                                     | P       |
| 2  | OUTPUT VOLTAGE ADJUST RANGE | CH1: 13.5V-16.5 V       | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:MIN LOAD<br>Ta:25°C       | 11.77 V- 17.74 V/ 230 VAC<br>11.77 V- 17.74 V/ 115 VAC | P       |
| 3  | OUTPUT VOLTAGE TOLERANCE    | V1: 1 %- -1 % (Max)     | I/P: 100 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: 100 VAC ~ 264 VAC<br>O/P:FULL LOAD<br>Ta:25°C            | V1: 0.05 %- -0.05 %                                    | 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: 0.1 %- -0.1 %                                      | P       |
| 6  | SET UP TIME                 | 230VAC: 1500 ms (Max)   | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C                      | 230VAC/ 720 ms   | P       |
| 7  | RISE TIME                   | 230VAC: 100 ms (Max)    | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C                      | 230VAC/ 58 ms  | P       |
| 8  | HOLD UP TIME                | 230VAC: 14 ms (TYP)     | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C                      | 230VAC/ 15.6 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: 1500 mVp-p          | I/P: 230 VAC<br>O/P:FULL /Min LOAD<br>90%DUTY/1KHZ<br>Ta:25°C | 350 mVp-p  | P       |

### INPUT FUNCTION TEST

| NO | TEST ITEM             | SPECICATION  | TEST CONDITION   | RESULT                                     | VERDICT |
|----|-----------------------|--|--|--|---------|
| 1  | INPUT VOLTAGE RANGE   | 100VAC-264 VAC                                     | I/P:TESTING<br>O/P:FULL LOAD<br>Ta:25°C  | 88V-264V                                   | P       |
|    |                       |  | I/P:<br>LOW-LINE-3V= 97 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 | 47HZ ~63 HZ<br>NO DAMAGE OSC                       | I/P: 90 VAC ~ 264 VAC<br>O/P:FULL~MIN LOAD<br>Ta:25°C  | TEST: OK                                   | P       |
| 3  | POWER FACTOR          | 0.95 / 230 VAC(TYP)<br>0.98 / 115 VAC(TYP)         | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:FULL LOAD<br>Ta:25°C   | PF= 0.96 / 230 VAC<br>PF= 0.99 / 115 VAC   | P       |
| 4  | EFFICIENCY            | 87 % (TYP)   | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C   | 88.5%                                      | P       |
| 5  | INPUT CURRENT         | 230V/ 8 A (TYP)<br>115V/ 17 A (TYP)                | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:FULL LOAD<br>Ta:25°C   | I = 7.76 A/ 230 VAC<br>I = 15.3 A/ 115 VAC | P       |
| 6  | INRUSH CURRENT        | 230V/ 60 A (TYP)<br>115V/ 30 A (TYP)<br>COLD START | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:FULL LOAD<br>Ta:25°C   | I = 53 A/ 230 VAC<br>I = 27 A/ 115 VAC     | P       |
| 7  | LEAKAGE CURRENT       | < 2 mA / 240 VAC                                   | I/P: 254 VAC<br>O/P:Min LOAD<br>Ta:25°C  | L-FG: 0.9 mA<br>N-FG: 0.9 mA               | P       |

### PROTECTION FUNCTION TEST

| NO | TEST ITEM                   | SPECICATION                                  | TEST CONDITION  | RESULT   | VERDICT |
|----|-----------------------------|--|---|--|---------|
| 1  | OVER LOAD PROTECTION        | 105 %~ 135 %                                 | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:TESTING<br>Ta:25°C  | 120 %/ 230 VAC<br>118 %/ 115 VAC<br>Constant Current Limiting unit will shut down o/p voltage after 5sec<br>Re-power on to recover | P       |
| 2  | OVER VOLTAGE PROTECTION     | CH1: 17 V~ 20.25 V                           | I/P: 230 VAC<br>I/P: 115 VAC<br>O/P:MIN LOAD<br>Ta:25°C | 18.7 V/ 230 VAC<br>18.7 V/ 115 VAC<br>Shunt down Re- power ON  | P       |
| 3  | OVER TEMPERATURE PROTECTION | SPEC:<br>TSW2 : 95 ± 5°C O.T.P.<br>NO DAMAGE | I/P: 264 VAC<br>O/P:FULL LOAD                           | O.T.P. Active<br>Shut down o/p voltage , recovers automatically after temperature goes down  | P       |
| 4  | 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>Constant Current Limiting unit will shut down o/p voltage after 5sec<br>Re-power on to recover                        | P       |

## CONTROL FUNCTION TEST

| NO                                  | TEST ITEM  | SPECIFICATION   | TEST CONDITION                               | RESULT   | VERDICT           |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
|-------------------------------------|--|---|--|--|-------------------|---|--------------|-----------|--|--|--|-----------------|--------------------------------|-------------------------------------|------------|----------|----------|---------|---|
| 1                                   | AUXILIARY POWER (AUX)  | 12V @ 0.1A<br>(Only for Remote ON/OFF control )   | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C     | 12.62 V  | P                 |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| 2                                   | REMOTE CONTROL   | Table1.1 Fig1.2(a)(b)(c)<br>Specification of Remote ON/OFF  | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C     | <table border="1"> <thead> <tr> <th colspan="2">Connection Method</th> <th>Fig1.2(a)</th> <th>Fig1.2(b)</th> <th>Fig1.2(c)</th> </tr> </thead> <tbody> <tr> <td rowspan="2">SW Logic</td> <td>Output on</td> <td>SW Open</td> <td>SW Open</td> <td>SW Close</td> </tr> <tr> <td>Output off</td> <td>SW Close</td> <td>SW Close</td> <td>SW Open</td> </tr> </tbody> </table> | Connection Method |   | Fig1.2(a)    | Fig1.2(b) | Fig1.2(c)  | SW Logic                                 | Output on  | SW Open         | SW Open                        | SW Close                            | Output off | SW Close | SW Close | SW Open | P |
| Connection Method                   |  | Fig1.2(a)   | Fig1.2(b)                                    | Fig1.2(c)  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| SW Logic                            | Output on  | SW Open   | SW Open                                      | SW Close   |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
|                                     | Output off   | SW Close  | SW Close                                     | SW Open  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| 3                                   | ALARM SIGNAL OUTPUT  | <p>Table2.1 Explanation of alarm</p> <table border="1"> <thead> <tr> <th>Pin</th> <th>POK Alarm</th> </tr> </thead> <tbody> <tr> <td>P OK</td> <td rowspan="2">The signal is "LOW"when ther power supply is above 65%of the rated output voltage</td> </tr> <tr> <td>P OK GND</td> </tr> <tr> <td></td> <td>The signal turns to be "HIGH" when ther power supply is under 65%of the rated output voltage</td> </tr> </tbody> </table> | Pin  | POK Alarm  | P OK              | The signal is "LOW"when ther power supply is above 65%of the rated output voltage | P OK GND     |           | The signal turns to be "HIGH" when ther power supply is under 65%of the rated output voltage | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C | <table border="1"> <thead> <tr> <th>Output of alarm</th> </tr> </thead> <tbody> <tr> <td>Good:Low<br/>(0.5V max at 10mA)</td> </tr> <tr> <td>Fail:High or open<br/>(50V 10mA max)</td> </tr> </tbody> </table> | Output of alarm | Good:Low<br>(0.5V max at 10mA) | Fail:High or open<br>(50V 10mA max) | P          |          |          |         |   |
| Pin                                 | POK Alarm  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| P OK                                | The signal is "LOW"when ther power supply is above 65%of the rated output voltage            |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| P OK GND                            |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
|                                     | The signal turns to be "HIGH" when ther power supply is under 65%of the rated output voltage |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| Output of alarm                     |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| Good:Low<br>(0.5V max at 10mA)      |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| Fail:High or open<br>(50V 10mA max) |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| 4                                   | OUTPUT VOLTAGE PROGRAMMABLE(PV)  | Adjustment of output voltage is possible between 75~100% of the rated output by following   | I/P: 230 VAC<br>O/P:NOL LOAD<br>Ta:25°C      | 70%-100%   | P                 |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| 5                                   | CURRENT SHARING  | PSU1-PSU2 < 10%   | I/P: 230 VAC<br>O/P:FULL/50% LOAD<br>Ta:25°C | <table border="1"> <tbody> <tr> <td>O/P:100%</td> </tr> <tr> <td>PSU1: 1776 W</td> </tr> <tr> <td>PSU2: 1736 W</td> </tr> <tr> <td>O/P:50%</td> </tr> <tr> <td>PSU1: 889 W</td> </tr> <tr> <td>PSU2: 853 W</td> </tr> </tbody> </table>  | O/P:100%          | PSU1: 1776 W  | PSU2: 1736 W | O/P:50%   | PSU1: 889 W  | PSU2: 853 W                              | P  |                 |                                |                                     |            |          |          |         |   |
| O/P:100%                            |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| PSU1: 1776 W                        |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| PSU2: 1736 W                        |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| O/P:50%                             |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| PSU1: 889 W                         |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| PSU2: 853 W                         |  |   |  |  |                   |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |
| 6                                   | REMOTE SENSE   | >0.3V   | I/P: 230 VAC<br>O/P:FULL LOAD<br>Ta:25°C     | > 0.3 V  | P                 |   |              |           |  |  |  |                 |                                |                                     |            |          |          |         |   |

## ENVIRONMENT TEST

| NO | TEST ITEM   | SPECIFICATION  | TEST CONDITION  | RESULT  | VERDICT |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
|----|---|--|---|---|---------|----------|-----|--------------------------|----------------------------|---|-----|--------|--------|--------|---|-----|---------------------|--------|--------|---|----|---------------------|--------|--------|---|---------|---------|--------|--------|---|----|----------------------|--------|--------|---|----|---------|--------|--------|---|----|-----------|--------|--------|---|-----------|---------|--------|--------|---|-----------|---------|--------|--------|----|------|---------------------|--------|--------|----|------|---------------------|--------|--------|----|------|--------|--------|--------|----|------|-------------------------|--------|--------|----|------|----------|--------|--------|----|------|--------|--------|---------|---|
| 1  | TEMPERATURE RISE TEST   | MODEL : RSP-1500-24<br>1. ROOM AMBIENT BURN-IN : 2HRS<br>I/P: 230VAC O/P: FULL LOAD Ta= 29 °C<br>2. HIGH AMBIENT BURN-IN : 3 HRS<br>I/P: 230VAC O/P: FULL LOAD Ta= 51.4 °C                   |   |   |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
|    |   |  |   | <table border="1"> <thead> <tr> <th>NO</th> <th>Position</th> <th>P/N</th> <th>ROOM AMBIENT<br/>Ta= 29°C</th> <th>HIGH AMBIENT<br/>Ta= 51.4°C</th> </tr> </thead> <tbody> <tr><td>1</td><td>LF2</td><td>TR-541</td><td>41.7°C</td><td>63.3°C</td></tr> <tr><td>2</td><td>BD2</td><td>GBJ2506 25A/600V LT</td><td>54.0°C</td><td>75.1°C</td></tr> <tr><td>3</td><td>D2</td><td>30ETH06 30A/600V IR</td><td>38.8°C</td><td>58.9°C</td></tr> <tr><td>4</td><td>L1 COIL</td><td>TF-1198</td><td>44.6°C</td><td>65.3°C</td></tr> <tr><td>5</td><td>Q7</td><td>20N60C3 20A/650V INF</td><td>35.4°C</td><td>58.6°C</td></tr> <tr><td>6</td><td>U3</td><td>TOP244P</td><td>51.2°C</td><td>74.2°C</td></tr> <tr><td>7</td><td>U2</td><td>UC3855BDW</td><td>42.5°C</td><td>63.9°C</td></tr> <tr><td>8</td><td>L900 COIL</td><td>TF-1201</td><td>69.4°C</td><td>92.1°C</td></tr> <tr><td>9</td><td>T900 COIL</td><td>TF-1313</td><td>55.7°C</td><td>77.1°C</td></tr> <tr><td>10</td><td>Q901</td><td>24N50 24A/500V FAIR</td><td>65.5°C</td><td>95.4°C</td></tr> <tr><td>11</td><td>D900</td><td>BYC5-600 5A/600V PH</td><td>53.2°C</td><td>76.0°C</td></tr> <tr><td>12</td><td>L102</td><td>TR-593</td><td>42.0°C</td><td>65.8°C</td></tr> <tr><td>13</td><td>C900</td><td>150U/450V RUB 105°C MXG</td><td>44.2°C</td><td>67.8°C</td></tr> <tr><td>14</td><td>U100</td><td>UC2895DW</td><td>41.9°C</td><td>66.1°C</td></tr> <tr><td>15</td><td>TSW2</td><td>ST-105</td><td>67.8°C</td><td>100.7°C</td></tr> </tbody> </table> | NO      | Position | P/N | ROOM AMBIENT<br>Ta= 29°C | HIGH AMBIENT<br>Ta= 51.4°C | 1 | LF2 | TR-541 | 41.7°C | 63.3°C | 2 | BD2 | GBJ2506 25A/600V LT | 54.0°C | 75.1°C | 3 | D2 | 30ETH06 30A/600V IR | 38.8°C | 58.9°C | 4 | L1 COIL | TF-1198 | 44.6°C | 65.3°C | 5 | Q7 | 20N60C3 20A/650V INF | 35.4°C | 58.6°C | 6 | U3 | TOP244P | 51.2°C | 74.2°C | 7 | U2 | UC3855BDW | 42.5°C | 63.9°C | 8 | L900 COIL | TF-1201 | 69.4°C | 92.1°C | 9 | T900 COIL | TF-1313 | 55.7°C | 77.1°C | 10 | Q901 | 24N50 24A/500V FAIR | 65.5°C | 95.4°C | 11 | D900 | BYC5-600 5A/600V PH | 53.2°C | 76.0°C | 12 | L102 | TR-593 | 42.0°C | 65.8°C | 13 | C900 | 150U/450V RUB 105°C MXG | 44.2°C | 67.8°C | 14 | U100 | UC2895DW | 41.9°C | 66.1°C | 15 | TSW2 | ST-105 | 67.8°C | 100.7°C | P |
| NO | Position  | P/N  | ROOM AMBIENT<br>Ta= 29°C  | HIGH AMBIENT<br>Ta= 51.4°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 1  | LF2   | TR-541   | 41.7°C  | 63.3°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 2  | BD2   | GBJ2506 25A/600V LT  | 54.0°C  | 75.1°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 3  | D2  | 30ETH06 30A/600V IR  | 38.8°C  | 58.9°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 4  | L1 COIL   | TF-1198  | 44.6°C  | 65.3°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 5  | Q7  | 20N60C3 20A/650V INF   | 35.4°C  | 58.6°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 6  | U3  | TOP244P  | 51.2°C  | 74.2°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 7  | U2  | UC3855BDW  | 42.5°C  | 63.9°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 8  | L900 COIL   | TF-1201  | 69.4°C  | 92.1°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 9  | T900 COIL   | TF-1313  | 55.7°C  | 77.1°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 10 | Q901  | 24N50 24A/500V FAIR  | 65.5°C  | 95.4°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 11 | D900  | BYC5-600 5A/600V PH  | 53.2°C  | 76.0°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 12 | L102  | TR-593   | 42.0°C  | 65.8°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 13 | C900  | 150U/450V RUB 105°C MXG  | 44.2°C  | 67.8°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 14 | U100  | UC2895DW   | 41.9°C  | 66.1°C  |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 15 | TSW2  | ST-105   | 67.8°C  | 100.7°C   |         |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 2  | OVER LOAD BURN-IN TEST  | NO DAMAGE<br>1 HOUR ( MIN )  | I/P: 230 VAC<br>O/P: 119 % LOAD<br>Ta:25°C                      | TEST : OK   | P       |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 3  | LOW TEMPERATURE<br>TURN ON TEST                                   | TURN ON AFTER 2 HOUR   | I/P: 230 VAC<br>O/P: 100% LOAD<br>Ta= -20°C                     | TEST : OK   | P       |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 4  | HIGH HUMIDITY<br>HIGH TEMPERATURE<br>HIGH VOLTAGE<br>TURN ON TEST | AFTER 12 HOURS<br>IN CHAMBER ON<br>CONTROL 50 °C<br>NO DAMAGE  | I/P: 272 VAC<br>O/P:FULL LOAD<br>Ta= 50 °C<br>HUMIDITY= 95 %R.H | TEST : OK   | P       |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 5  | TEMPERATURE<br>COEFFICIENT  | ± 0.05 %(0-50°C)   | I/P: 230 VAC<br>O/P:FULL LOAD                                   | ± 0.01 %(0-50°C)  | P       |          |     |                          |                            |   |     |        |        |        |   |     |                     |        |        |   |    |                     |        |        |   |         |         |        |        |   |    |                      |        |        |   |    |         |        |        |   |    |           |        |        |   |           |         |        |        |   |           |         |        |        |    |      |                     |        |        |    |      |                     |        |        |    |      |        |        |        |    |      |                         |        |        |    |      |          |        |        |    |      |        |        |         |   |
| 6  | VIBRATION TEST  | 1 Carton & 1 Set<br>(1) Waveform: Sine Wave<br>(2) Frequency:10-500Hz<br>(3) Sweep Time:10min/sweep cycle<br>(4) Acceleration:2G<br>(5) Test Time:1 hour in each axis (X.Y.Z)<br>(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<br>I/P-FG: 2 KVAC/min<br>O/P-FG: 0.5 KVAC/min   | I/P-O/P: 3.6 KVAC/min<br>I/P-FG: 2.4 KVAC/min<br>O/P-FG: 0.6 KVAC/min<br>Ta:25°C | I/P-O/P: 12.68 mA<br>I/P-FG: 9.69 mA<br>O/P-FG: 15.62 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: 1 GΩ<br>I/P-FG: 800 MΩ<br>O/P-FG: 1 GΩ<br>NO DAMAGE          | P       |
| 3  | GROUNDING CONTINUITY | FG(PE) TO CHASSIS<br>OR TRACE < 100 mΩ                              | 40 A / 2min<br>Ta:25°C   | 9 mΩ  | P       |
| 4  | APPROVAL             | TUV: Certificate NO : R50063850<br>UL: File NO : E183223            |  |   | P       |

### E.M.C TEST

| NO | TEST ITEM                                   | SPECIFICATION  | TEST CONDITION                                      | RESULT                        | VERDICT |
|----|---|--|---|-------------------------------|---------|
| 1  | HARMONIC                                    | EN61000-3-2,-3<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 A                                       | 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>LIGHT 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>LIGHT INDUSTRY<br>INPUT: 1KV              | I/P: 230 VAC/50HZ<br>O/P:FULL LOAD<br>Ta:25°C       | CRITERIA A                    | P       |
| 6  | SURGE                                       | IEC61000-4-5<br>LIGHT INDUSTRY<br>L-N :1KV<br>L,N-PE:2KV | 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                   | SPECIFICATION  | TEST CONDITION | RESULT | VERDICT |
|----|-----------------------------|--|----------------|--------|---------|
| 1  | CAPACITOR<br>LIFE CYCLE     | RSP-1500-12 : SUPPOSE C 114 IS THE MOST CRITICAL COMPONENT<br>I/P: 230VAC O/P:FULL LOAD Ta= 25 °C LIFE TIME= 810447 HRS<br>I/P: 230VAC O/P:FULL LOAD Ta= 45 °C LIFE TIME= 294588 HRS |                |        | P       |
| 2  | MTBF                        | Conducted by Parts Stress Analysis Prediction<br>313.1K hrs min. Telcordia SR-332 (Bellcore) ; 116.75K hrs min. MIL-HDBK-217F (25°C)   |                |        | P       |
| 3  | DMTBF/Accelerated Life Test | Demonstration Mean Time Between Failure : Above 50,000 hours @ TA 50°C   |                |        | P       |

### COMPONENT STRESS TEST

| NO | TEST ITEM  | SPECICATION                        | TEST CONDITION   | RESULT   | VERDICT |
|----|--|------------------------------------|--|--|---------|
| 1  | Power Transistor<br>(D to S) or (C to E) <b>Peak Voltage</b>     | Q900 Rated<br>FOA24N50 : 500V 24 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) 394 V<br>(2) 400 V<br>(3) 394 V              | P       |
| 2  | Diode <b>Peak Voltage</b>  | D102 Rated<br>63CPQ100 : 100V 63A  | 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) 55.6 V<br>(2) 72 V<br>(3) 62 V               | P       |
| 3  | <b>Input Capacitor Voltage</b>                                   | C15 Rated<br>: 150 u / 450V/ 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>(4)Burn in 1hour<br>Ta:25°C | (1) 444 V<br>(2) 444 V<br>(3) 406 V<br>(4) 392 V | P       |
| 4  | <b>Control IC Voltage Test</b>                                   | U100 Rated<br>UCC2895W : 18 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) 13.2 V<br>(2) 12.7 V<br>(3) 12.7 V           | P       |
| 5  | PFC Power Transistor<br>(D to S) or (C to E) <b>Peak Voltage</b> | Q1 Rated<br>20N60C3 : 600V 20 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) 408 V<br>(2) 402 V<br>(3) 420 V              | P       |

| DATE      | SAMPLE                     | TEST RESULT | TESTER        | APPROVAL |
|-----------|----------------------------|-------------|---------------|----------|
| 2005/4/19 | RD SAMPLE                  | PASS        | VINCENT TSENG | MAX LIN  |
| 2005/7/29 | PRODUCT SAMPLE<br>W0505A40 | PASS        | VINCENT TSENG | MAX LIN  |
| 2005/9/3  | PRODUCT SAMPLE<br>W0507C27 | PASS        | VINCENT TSENG | MAX LIN  |
| 2005/9/8  | PRODUCT SAMPLE<br>W0508A24 | PASS        | VINCENT TSENG | MAX LIN  |

2003/12/12 A50-F023