



# Test Report: XDR-120E-36

---

120W AC/DC Economical Ultra Slim Industrial DIN Rail  
Power

## ■ DESIGN VERIFY TEST

Output Function Test

Input Function Test

Protection Function Test

Control Function Test

Component Stress Test

## ■ SAFETY & E.M.C. TEST

Safety Test

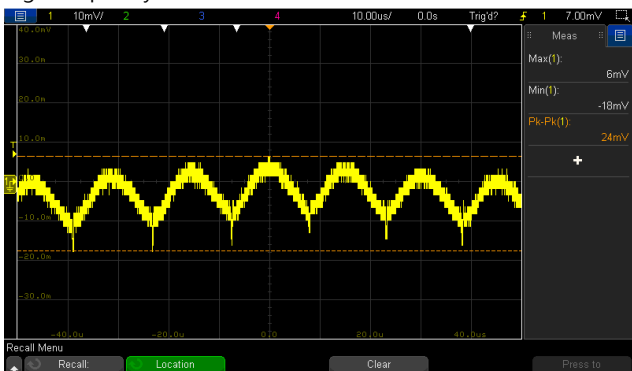
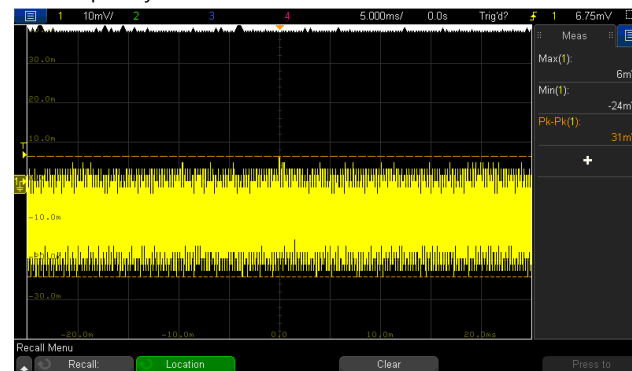
E.M.C. Test

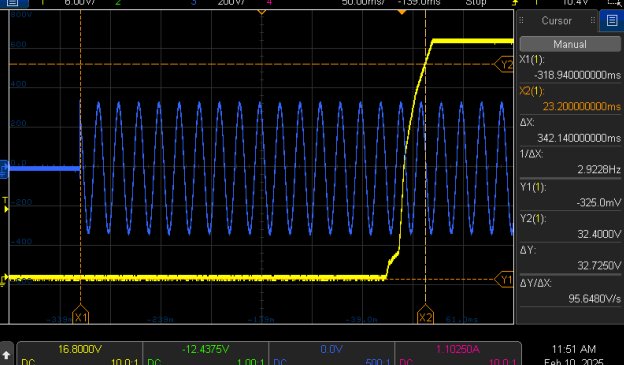
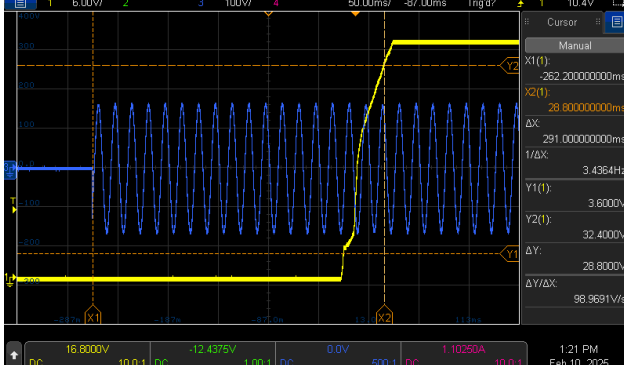
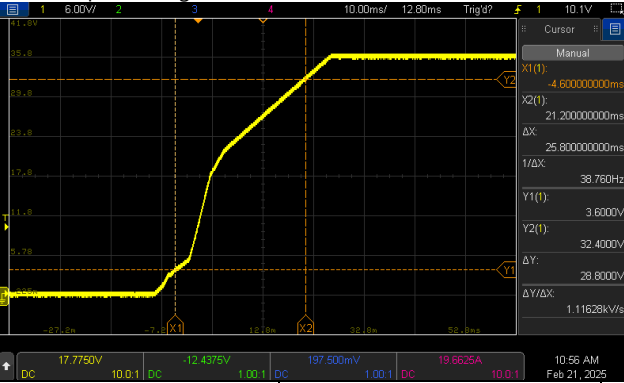
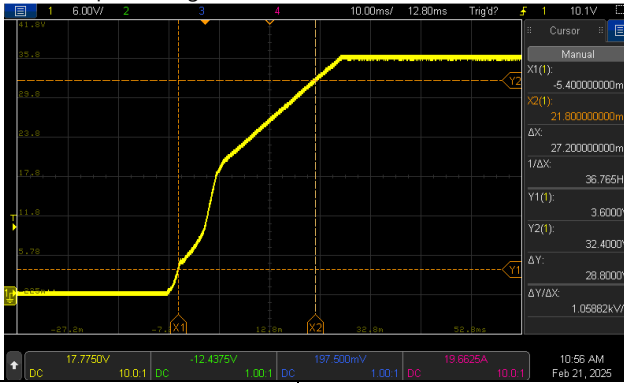
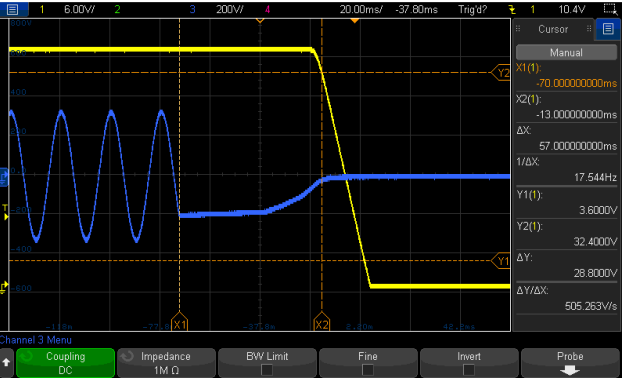
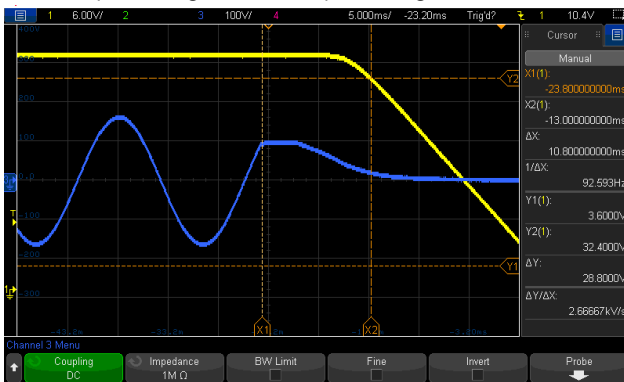
## ■ RELIABILITY TEST

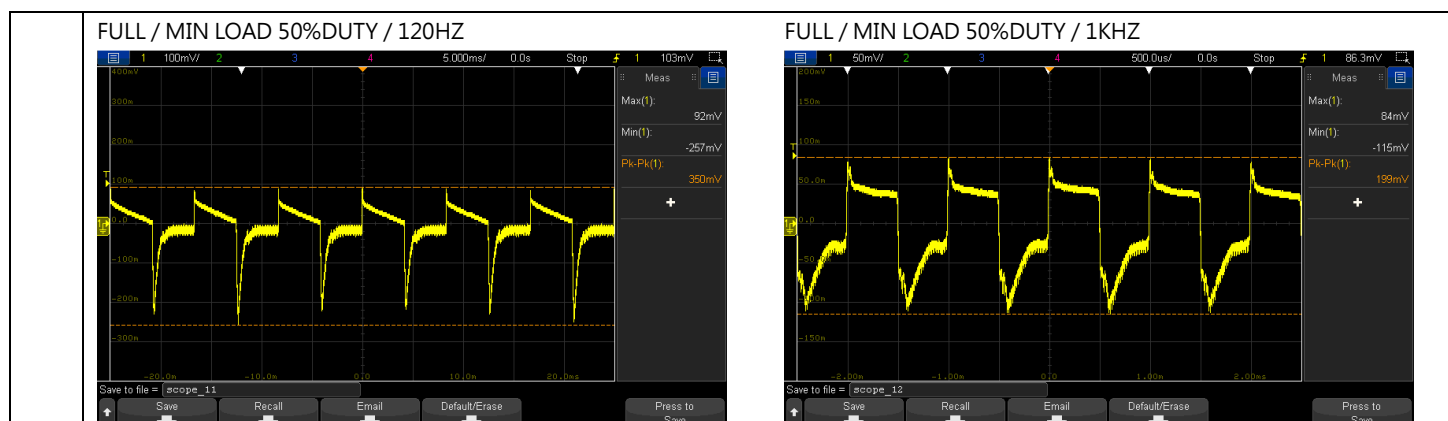
ENVIRONMENT TEST

## DESIGN VERIFY TEST

### OUTPUT FUNCTION TEST

| NO                                                                                                                                                                                                                                                             | TEST ITEM                   | SPECIFICATION                  | TEST CONDITION                                                             | RESULT                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|--------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------|
| 1                                                                                                                                                                                                                                                              | OUTPUT VOLTAGE ADJUST RANGE | CH1: 36V~42V                   | I/P : 230 VAC<br>I/P : 115 VAC<br>O/P : MIN LOAD<br>Ta : 25°C              | 34.591V~43.363V/230VAC<br>34.594V~43.363V/115VAC        |
| 2                                                                                                                                                                                                                                                              | OUTPUT VOLTAGE TOLERANCE    | V1: -1% ~ +1%                  | I/P: 85VAC~ 264VAC<br>O/P:FULL~ MIN. LOAD<br>Ta:25°C                       | V1: -0.02% ~0.03%                                       |
| 3                                                                                                                                                                                                                                                              | LINE REGULATION             | V1: -0.5% ~ +0.5%              | I/P: 85VAC~ 264VAC<br>O/P:FULL LOAD<br>Ta:25°C                             | V1: 0% ~0.02%                                           |
| 4                                                                                                                                                                                                                                                              | LOAD REGULATION             | V1: -1% ~ +1%                  | I/P: 230VAC<br>O/P:FULL ~MIN LOAD<br>Ta:25°C                               | V1: -0.02% ~0.03%                                       |
| 5                                                                                                                                                                                                                                                              | OVER/UNDERSHOOT TEST        | <±5%                           | I/P: 230VAC<br>O/P:FULL LOAD / NO LOAD<br>Ta:25°C                          | 0.64% →FULL LOAD<br>1.11% →NO LOAD                      |
| 6                                                                                                                                                                                                                                                              | RIPPLE & NOISE (Max)        | V1: 150mVp-p                   | I/P:230VAC<br>O/P:FULL LOAD<br>Ta:25°C                                     | V1: 24mVp-p / high frequency<br>31mVp-p / low frequency |
| <div> <div> <p>high frequency :</p>  </div> <div> <p>low frequency :</p>  </div> </div> |                             |                                |                                                                            |                                                         |
| 7                                                                                                                                                                                                                                                              | SET UP TIME (Max)           | 230VAC/1200ms<br>115VAC/2500ms | I/P : 230 VAC<br>I/P : 115 VAC<br>O/P : FULL LOAD<br>Ta : 25°C             | 230VAC/ 342.1ms<br>115VAC/ 291.0ms                      |
| INPUT=230VAC/50HZ @ FULL LOAD<br>CH1: Output Voltage CH3: AC Input Voltage                                                                                                                                                                                     |                             |                                | INPUT=115VAC/60HZ @ FULL LOAD<br>CH1: Output Voltage CH3: AC Input Voltage |                                                         |

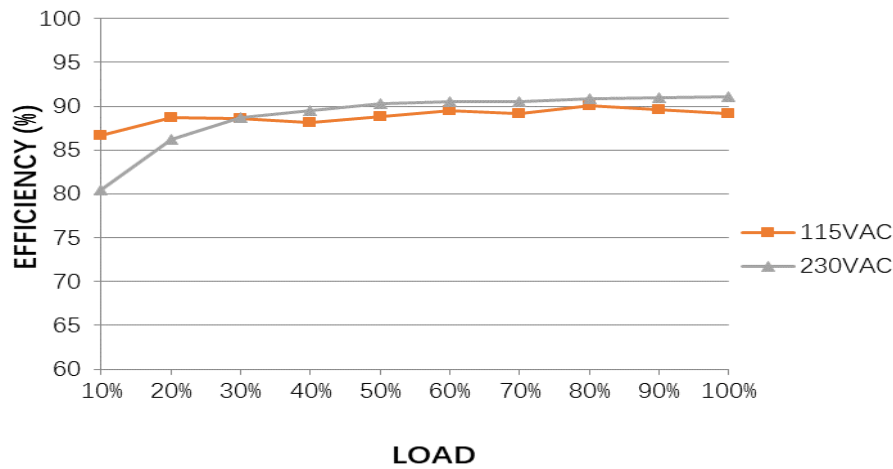
|                                                                            |                                                                                     |                                                                                      |                                                                                                           |                                  |
|----------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------|
|                                                                            |    |    |                                                                                                           |                                  |
| 8                                                                          | RISE TIME (Max)                                                                     | 230VAC/60ms<br>115VAC/60ms                                                           | I/P : 230 VAC<br>I/P : 115 VAC<br>O/P : FULL LOAD<br>Ta : 25°C                                            | 230VAC/ 25.8ms<br>115VAC/ 27.2ms |
| INPUT=230VAC/50HZ @ FULL LOAD<br>CH1: Output Voltage                       |                                                                                     | INPUT=115VAC/60HZ @ FULL LOAD<br>CH1: Output Voltage                                 |                                                                                                           |                                  |
|                                                                            |   |   |                                                                                                           |                                  |
| 9                                                                          | HOLD UP TIME (Typ.)                                                                 | 230VAC/ 16ms<br>115VAC/ 8ms                                                          | I/P : 230 VAC<br>I/P : 115 VAC<br>O/P : FULL LOAD<br>Ta : 25°C                                            | 230VAC/ 57.0ms<br>115VAC/10.8ms  |
| INPUT=230VAC/50HZ @ FULL LOAD<br>CH1: Output Voltage CH3: AC Input Voltage |                                                                                     | INPUT=115VAC/60HZ @ FULL LOAD<br>CH1: Output Voltage CH3: AC Input Voltage           |                                                                                                           |                                  |
|                                                                            |  |  |                                                                                                           |                                  |
| 10                                                                         | DYNAMIC LOAD                                                                        | V1: 3600mVp-p                                                                        | I/P: 230VAC<br>O/P:<br>(1) FULL/ MIN LOAD 50%DUTY / 120HZ<br>(2) FULL/ MIN LOAD 50%DUTY / 1KHZ<br>Ta:25°C | 350mVp-p<br>199mVp-p             |



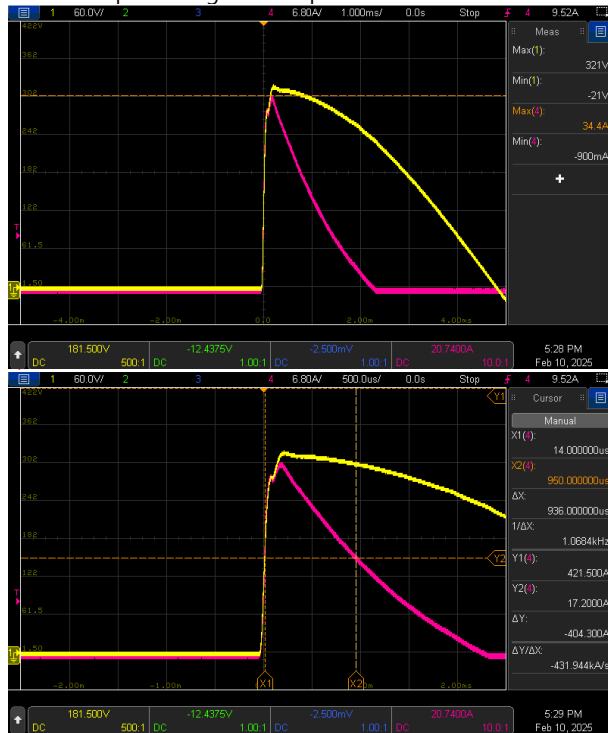
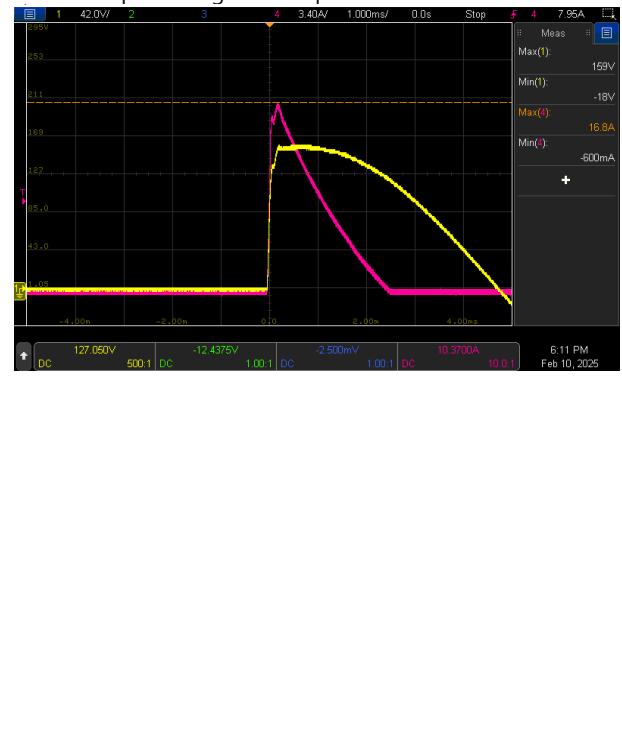
## INPUT FUNCTION TEST

| NO | TEST ITEM             | SPECIFICATION                  | TEST CONDITION                                                                                                                                                            | RESULT                                                                                                                                                                 |
|----|-----------------------|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | INPUT VOLTAGE RANGE   | 85VAC~264VAC<br>120VDC~ 370VDC | (1) I/P: TESTING<br>O/P: FULL / 75% LOAD<br>(2) I/P: DC TESTING (L: + N: -)<br>O/P: FULL / 75% LOAD<br>(3) I/P: DC TESTING (L: - N: +)<br>O/P: FULL / 75% LOAD<br>Ta:25°C | (1) 81.7V~267V/ FULL LOAD<br>67.5V~267V/ 75% LOAD<br>(2) 95.1Vdc~370Vdc/FULL LOAD<br>95.1Vdc~370dc/75% LOAD<br>(3) 95.1Vdc~370Vdc/FULL LOAD<br>95.1Vdc~370Vdc/75% LOAD |
|    |                       |                                | I/P:<br>HIGH-LINE+15%=300V<br>O/P:FULL/MIN LOAD<br>(PLEASE CHECK DERATING CURVE)<br>ON: 30 Sec OFF: 30 Sec 10MIN<br>( POWER ON/OFF NO DAMAGE )                            | TEST : OK                                                                                                                                                              |
| 2  | INPUT FREQUENCY RANGE | 47HZ ~63 HZ<br>NO DAMAGE       | I/P:85VAC ~264 VAC<br>O/P:FULL~MIN LOAD<br>Ta:25°C                                                                                                                        | TEST : OK                                                                                                                                                              |
| 3  | INPUT CURRENT (Typ.)  | 230V/ 1.3A<br>115V/ 2.25A      | I/P : 230 VAC<br>I/P : 115 VAC<br>O/P : FULL LOAD<br>Ta : 25°C                                                                                                            | I =1.095A/ 230VAC<br>I =1.968A/ 115VAC                                                                                                                                 |
| 4  | LEAKAGE CURRENT       | < 1mA / 240 VAC                | I/P : 240 VAC/60HZ<br>O/P : Min LOAD<br>Ta : 25°C                                                                                                                         | 0.697mA                                                                                                                                                                |
| 5  | NO LOAD CONSUMPTION   | < 1W                           | I/P : 230VAC<br>I/P : 115VAC<br>O/P : NO LOAD<br>Ta : 25°C                                                                                                                | 0.799W/ 230VAC<br>0.463W/ 115VAC                                                                                                                                       |
| 6  | EFFICIENCY(Typ.)      | 91%                            | I/P:230 VAC<br>O/P:FULL LOAD<br>Ta:25°C                                                                                                                                   | 91.09%                                                                                                                                                                 |

EFFICIENCY vs LOAD



|   |                                                            |                                                                |                                                        |
|---|------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|
| 7 | INRUSH CURRENT(Typ.)<br>230V/40A<br>115V/20A<br>COLD START | I/P : 230 VAC<br>I/P : 115 VAC<br>O/P : FULL LOAD<br>Ta : 25°C | I =34.4A/ 230VAC<br>I =16.8A/ 115VAC<br>T50=936us/230V |
|---|------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|

INPUT=230VAC/50HZ @ FULL LOAD  
CH1: AC Input Voltage CH4: Input current

INPUT=115VAC/60HZ @ FULL LOAD  
CH1: AC Input Voltage CH4: Input current


## PROTECTION FUNCTION TEST

| NO | TEST ITEM                   | SPECIFICATION                                                                                                                                                     | TEST CONDITION                                                        | RESULT                                                                                                                                                                            |
|----|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | OVER LOAD PROTECTION        | 105%~130% rated output power<br>Protection type:<br>Constant current limiting without shutdown, recovers automatically after fault condition is removed           | I/P: 264VAC<br>I/P: 230VAC<br>I/P: 100VAC<br>O/P: TESTING<br>Ta: 25°C | 114.71%/ 264VAC<br>114.71%/ 230VAC<br>114.71%/ 100VAC<br>PROTECTION TYPE :<br>Constant current limiting without shutdown, recovers automatically after fault condition is removed |
| 2  | OVER VOLTAGE PROTECTION     | 43V~50V<br>Protection type:<br>Shut down o/p voltage, re-power on to recover                                                                                      | I/P: 264VAC<br>I/P: 85VAC<br>O/P: MIN LOAD<br>Ta: 25°C                | 47.17V/ 264VAC<br>47.25V/ 85VAC<br>PROTECTION TYPE :<br>Shut down o/p voltage, re-power on to recover                                                                             |
| 3  | OVER TEMPERATURE PROTECTION | Protection type:<br>Shut down o/p voltage, recovers automatically after fault condition is removed                                                                | I/P: 264VAC<br>I/P: 85VAC<br>O/P: FULL LOAD                           | O.T.P. Active OK<br>Protection type :<br>Shut down o/p voltage, recovers automatically after fault condition is removed                                                           |
| 4  | SHORT PROTECTION            | SHORT EVERY OUTPUT<br>1 HOUR NO DAMAGE<br>Protection type:<br>Constant current limiting without shutdown, recovers automatically after fault condition is removed | I/P: 264VAC<br>I/P: 85VAC<br>O/P: FULL LOAD<br>Ta: 25°C               | NO DAMAGE OK<br>PROTECTION TYPE :<br>Constant current limiting without shutdown, recovers automatically after fault condition is removed                                          |

## CONTROL FUNCTION TEST

| NO | TEST ITEM             | SPECIFICATION                            | TEST CONDITION                            | RESULT          |
|----|-----------------------|------------------------------------------|-------------------------------------------|-----------------|
| 1  | DC OK CONTACT RATINGS | 30VDC/1A<br>30VAC/0.5A<br>RESISTIVE LOAD | I/P: 230VAC<br>O/P: FULL LOAD<br>Ta: 25°C | TEST: <u>OK</u> |

## COMPONENT STRESS TEST

| NO | TEST ITEM                                                  | SPECIFICATION             | TEST CONDITION                                                                                                          | RESULT                                                           |
|----|------------------------------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| 1  | PWM Transistor<br>( D to S ) or ( C to E )<br>Peak Voltage | Q1<br>Rated :<br>650V/14A | AC ON/OFF<br>I/P: High-Line +3V = 267V<br>VDS:<br>O/P: (1) Full Load<br>(2) Output Short<br>(3) Dynamic Load Full Load/ | VDS:<br>(1) 563V<br>(2) 563V<br>(3) 563V<br>(4) 563V<br>(5) 563V |

|   |                          |                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                          |                                                                           |
|---|--------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
|   |                          |                                                                       | Min. Load 90%Duty/1KHz<br>(4) Dynamic Load Full Load/<br>Min. Load 90%Duty/3KHz<br>(5) Dynamic Load Full Load/<br>Min. Load 90%Duty/5KHz<br>(6) Dynamic Load 100% Load/<br>Min. Load 50%Duty/120Hz<br>(7)0%→400% Load<br>Ta:25°C                                                                                                                                                                                                | (6) 567V<br>(7) 559V                                                                                                                                     |                                                                           |
| 2 | Diode Peak Voltage       | Q100<br>Rated :<br>20A/200V                                           | AC ON/OFF<br>I/P: High-Line +3V =267 V<br><u>VO=Vomax</u><br>O/P: (1)Full Load<br>(2)Output Short<br>(3) Dynamic Load Full Load/<br>Min. Load 90%Duty/1KHz<br>(4) Dynamic Load Full Load/<br>Min. Load 90%Duty/3KHz<br>(5) Dynamic Load Full Load/<br>Min. Load 90%Duty/5KHz<br>(6) Dynamic Load 100% Load/<br>Min. Load 50%Duty/120Hz<br>(7)0%→400% Load.<br>(8).NO LOAD<br><u>VO=Vnormal</u><br>O/P: (1) Full Load<br>Ta:25°C | <u>VO=Vomax</u><br>VDS:<br>(1) 180V<br>(2) 180V<br>(3) 182V<br>(4) 182V<br>(5) 182V<br>(6) 181V<br>(7) 180V<br>(8) 178V<br><u>VO=Vnormal</u><br>(1) 174V |                                                                           |
| 3 | Input Capacitor Voltage  | C5<br>Rated :<br>180μ / 400V                                          | I/P: High-Line +3V =267V<br>O/P: (1)Full Load input on/off<br>(2) Min load input on /Off<br>(3) Full Load /Min load Change<br>(4) Full load continue<br>Ta:25°C                                                                                                                                                                                                                                                                 | (1) 377V<br>(2) 380V<br>(3) 380V<br>(4) 371V                                                                                                             |                                                                           |
| 4 | Control IC Voltage Test  | PWM IC U1<br>Rated :<br>9.5V~ 27V<br><br>IC U107<br>Rated :<br>3V~30V | AC ON/OFF<br>I/P: High-Line +3V =267 V<br>O/P: (1) FULL LOAD<br>(2) Output Short<br>(3) O.L.P<br>(4) O.V.P.<br>(5) NO LOAD VRmin (LOW LINE)<br>Ta:25°C                                                                                                                                                                                                                                                                          | U1<br>(1) 17.8V<br>(2) 17.2V<br>(3) 17.3V<br>(4) 17.3V<br>(5) 17.2V                                                                                      | U107<br>(1) 11.66V<br>(2) 12.19V<br>(3) 11.73V<br>(4) 11.51V<br>(5) 10.7V |
| 5 | Clamp Diode Peak Voltage | D10<br>Rated :<br>620V/1A                                             | AC ON/OFF<br>I/P : High-Line +3V = 267 V<br>O/P : (1) Dynamic Load<br>90%Duty/1KHz<br>(2) Full load continue<br>Ta : 25°C                                                                                                                                                                                                                                                                                                       | (1) 464V<br>(2) 461V                                                                                                                                     |                                                                           |

## ■ SAFETY& E.M.C. TEST

### SAFETY TEST

| NO | TEST ITEM            | SPECIFICATION                                                                                   | TEST CONDITION                                                                                              | RESULT                                                                                               |
|----|----------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 1  | WITHSTAND VOLTAGE    | I/P-O/P: 4 K VAC/min<br>I/P-FG : 2 K VAC/min<br>O/P-FG: 1.5 KVAC/min<br>O/P-DC OK: 0.5 KVAC/min | I/P-O/P: 4.4 KVAC/min<br>I/P-FG: 2.4 KVAC/min<br>O/P-FG: 1.8 KVAC/min<br>O/P-DC OK: 0.6 KVAC/min<br>Ta:25°C | I/P - O/P: 6.58 mA<br>I/P - F G : 8.18 mA<br>O/P - F G : 4.83 mA<br>O/P-DC OK: 0.006 mA<br>NO DAMAGE |
| 2  | ISOLATION RESISTANCE | I/P-O/P: 500 VDC>100MΩ<br>O/P-FG: 500 VDC>100MΩ<br>I/P - F G : 500 VDC >100MΩ                   | I/P-O/P: 600 VDC<br>I/P - F G : 600 VDC<br>O/P-FG: 600 VDC<br>Ta:25°C                                       | I/P - O/P: 10 GΩ<br>I/P - F G : 10 GΩ<br>O/P - F G : 10 GΩ<br>NO DAMAGE                              |
| 3  | GROUNDING CONTINUITY | FG(PE) TO CHASSIS<br>OR TRACE < 100 mΩ                                                          | 40A / 2min<br>Ta:25°C                                                                                       | 11 mΩ                                                                                                |

### E.M.C TEST

| NO | TEST ITEM                                                                                                                         | SPECIFICATION                                                               | TEST CONDITION                                           | RESULT                        |
|----|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------|
| 1  | HARMONIC                                                                                                                          | BS EN/EN61000-3-2<br>CLASS A                                                | I/P:230VAC/50HZ<br>O/P:FULL LOAD<br>Ta:25°C              | PASS                          |
| 2  | CONDUCTION                                                                                                                        | BS EN/EN55032 (CISPR32) /<br>BS EN/EN61204-3 /<br>CNS15936<br>CLASS B       | I/P : 230 VAC (50HZ)<br>O/P : FULL/50% LOAD<br>Ta : 25°C | PASS<br>Test by certified Lab |
| 3  | RADIATION                                                                                                                         | BS EN/EN55032 (CISPR32) /<br>BS EN/EN61204-3 /<br>CNS15936<br>CLASS B       | I/P : 230 VAC (50HZ)<br>O/P : FULL LOAD<br>Ta : 25°C     | PASS<br>Test by certified Lab |
| 4  | E.S.D                                                                                                                             | BS EN/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                    |
| 5  | E.F.T                                                                                                                             | BS EN/EN61000-4-4<br>INDUSTRY<br>INPUT : 2KV                                | I/P : 230 VAC/50HZ<br>O/P : FULL LOAD<br>Ta : 25°C       | CRITERIA A                    |
| 6  | SURGE                                                                                                                             | BS EN/EN61000-4-5<br>INDUSTRY<br>Line-Line : 2KV<br>Line-Line-Chassis : 4KV | I/P : 230 VAC/50HZ<br>O/P : FULL LOAD<br>Ta : 25°C       | CRITERIA A                    |
| 7  | Test by certified Lab & Test Report Prepare<br>Any contradictions of the test results, please refer to the latest EMC test report |                                                                             |                                                          |                               |

## ■ RELIABILITY TEST

### ENVIRONMENT TEST

| NO | TEST ITEM             | SPECIFICATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TEST CONDITION          | RESULT |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
|----|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------|----|----------|-------------------------|-------------------------|---|----|--------|--------|---|---------|------|--------|---|---------|--------|--------|---|-----|--------|--------|---|------|--------|------|---|------|--------|--------|---|----|--------|--------|---|------|--------|--------|---|------|--------|--------|----|-----|--------|--------|----|------|--------|--------|----|------|--------|--------|----|-----|--------|--------|----|-----|--------|------|----|-------|--------|--------|----|------|--------|--------|----|-----|--------|--------|----|-----|--------|--------|----|------|--------|--------|----|------|--------|--------|----|------|--------|--------|----|------|--------|--------|----|----|--------|--------|----|------|--------|------|----|----|--------|--------|----|----|--------|--------|----|-----|--------|--------|----|------|--------|--------|----|------|--------|------|----|-----|--------|--------|----|----|------|--------|----|-----|--------|--------|----|----|--------|--------|
| 1  | TEMPERATURE RISE TEST | MODEL : XDR-120E-36<br>1. ROOM AMBIENT BURN-IN : 2 HRS<br>I/P : 230VAC O/P : FULL LOAD Ta= 25.0 °C<br>2. HIGH AMBIENT BURN-IN : 2 HRS<br>I/P : 230VAC O/P : FULL LOAD Ta= 50.6 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                         |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
|    |                       | <table><tr><th>NO</th><th>Position</th><th>ROOM AMBIENT Ta= 25.0°C</th><th>HIGH AMBIENT Ta= 50.6°C</th></tr><tr><td>1</td><td>R6</td><td>64.2°C</td><td>82.7°C</td></tr><tr><td>2</td><td>T1 Coil</td><td>63°C</td><td>86.3°C</td></tr><tr><td>3</td><td>T1 Core</td><td>50.2°C</td><td>74.4°C</td></tr><tr><td>4</td><td>C35</td><td>53.7°C</td><td>78.1°C</td></tr><tr><td>5</td><td>RTH3</td><td>56.1°C</td><td>80°C</td></tr><tr><td>6</td><td>C118</td><td>62.2°C</td><td>85.5°C</td></tr><tr><td>7</td><td>U1</td><td>50.8°C</td><td>75.5°C</td></tr><tr><td>8</td><td>J110</td><td>61.8°C</td><td>85.5°C</td></tr><tr><td>9</td><td>Q200</td><td>57.9°C</td><td>81.9°C</td></tr><tr><td>10</td><td>D14</td><td>49.5°C</td><td>74.1°C</td></tr><tr><td>11</td><td>D102</td><td>63.3°C</td><td>85.9°C</td></tr><tr><td>12</td><td>ZNR1</td><td>41.2°C</td><td>67.8°C</td></tr><tr><td>13</td><td>LF1</td><td>43.7°C</td><td>69.8°C</td></tr><tr><td>14</td><td>RY1</td><td>49.3°C</td><td>74°C</td></tr><tr><td>15</td><td>LF100</td><td>49.6°C</td><td>74.5°C</td></tr><tr><td>16</td><td>C115</td><td>46.4°C</td><td>71.2°C</td></tr><tr><td>17</td><td>D10</td><td>60.1°C</td><td>82.7°C</td></tr><tr><td>18</td><td>R12</td><td>68.3°C</td><td>91.1°C</td></tr><tr><td>19</td><td>C105</td><td>59.9°C</td><td>83.8°C</td></tr><tr><td>20</td><td>C108</td><td>52.8°C</td><td>77.5°C</td></tr><tr><td>21</td><td>Q101</td><td>63.1°C</td><td>86.7°C</td></tr><tr><td>22</td><td>Q100</td><td>60.9°C</td><td>84.6°C</td></tr><tr><td>23</td><td>U2</td><td>49.9°C</td><td>74.2°C</td></tr><tr><td>24</td><td>U107</td><td>51.5°C</td><td>76°C</td></tr><tr><td>25</td><td>Q2</td><td>64.8°C</td><td>87.4°C</td></tr><tr><td>26</td><td>C1</td><td>40.5°C</td><td>67.2°C</td></tr><tr><td>27</td><td>LF2</td><td>51.6°C</td><td>76.7°C</td></tr><tr><td>28</td><td>RTH1</td><td>70.1°C</td><td>86.3°C</td></tr><tr><td>29</td><td>RTH2</td><td>78.2°C</td><td>92°C</td></tr><tr><td>30</td><td>BD1</td><td>48.6°C</td><td>73.1°C</td></tr><tr><td>31</td><td>C5</td><td>48°C</td><td>72.9°C</td></tr><tr><td>32</td><td>R50</td><td>59.4°C</td><td>83.8°C</td></tr><tr><td>33</td><td>Q1</td><td>58.4°C</td><td>84.3°C</td></tr></table> |                         |        | NO | Position | ROOM AMBIENT Ta= 25.0°C | HIGH AMBIENT Ta= 50.6°C | 1 | R6 | 64.2°C | 82.7°C | 2 | T1 Coil | 63°C | 86.3°C | 3 | T1 Core | 50.2°C | 74.4°C | 4 | C35 | 53.7°C | 78.1°C | 5 | RTH3 | 56.1°C | 80°C | 6 | C118 | 62.2°C | 85.5°C | 7 | U1 | 50.8°C | 75.5°C | 8 | J110 | 61.8°C | 85.5°C | 9 | Q200 | 57.9°C | 81.9°C | 10 | D14 | 49.5°C | 74.1°C | 11 | D102 | 63.3°C | 85.9°C | 12 | ZNR1 | 41.2°C | 67.8°C | 13 | LF1 | 43.7°C | 69.8°C | 14 | RY1 | 49.3°C | 74°C | 15 | LF100 | 49.6°C | 74.5°C | 16 | C115 | 46.4°C | 71.2°C | 17 | D10 | 60.1°C | 82.7°C | 18 | R12 | 68.3°C | 91.1°C | 19 | C105 | 59.9°C | 83.8°C | 20 | C108 | 52.8°C | 77.5°C | 21 | Q101 | 63.1°C | 86.7°C | 22 | Q100 | 60.9°C | 84.6°C | 23 | U2 | 49.9°C | 74.2°C | 24 | U107 | 51.5°C | 76°C | 25 | Q2 | 64.8°C | 87.4°C | 26 | C1 | 40.5°C | 67.2°C | 27 | LF2 | 51.6°C | 76.7°C | 28 | RTH1 | 70.1°C | 86.3°C | 29 | RTH2 | 78.2°C | 92°C | 30 | BD1 | 48.6°C | 73.1°C | 31 | C5 | 48°C | 72.9°C | 32 | R50 | 59.4°C | 83.8°C | 33 | Q1 | 58.4°C | 84.3°C |
| NO | Position              | ROOM AMBIENT Ta= 25.0°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | HIGH AMBIENT Ta= 50.6°C |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 1  | R6                    | 64.2°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 82.7°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 2  | T1 Coil               | 63°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 86.3°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 3  | T1 Core               | 50.2°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 74.4°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 4  | C35                   | 53.7°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 78.1°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 5  | RTH3                  | 56.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 80°C                    |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 6  | C118                  | 62.2°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 85.5°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 7  | U1                    | 50.8°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 75.5°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 8  | J110                  | 61.8°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 85.5°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 9  | Q200                  | 57.9°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 81.9°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 10 | D14                   | 49.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 74.1°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 11 | D102                  | 63.3°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 85.9°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 12 | ZNR1                  | 41.2°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 67.8°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 13 | LF1                   | 43.7°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 69.8°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 14 | RY1                   | 49.3°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 74°C                    |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 15 | LF100                 | 49.6°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 74.5°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 16 | C115                  | 46.4°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 71.2°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 17 | D10                   | 60.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 82.7°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 18 | R12                   | 68.3°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 91.1°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 19 | C105                  | 59.9°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 83.8°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 20 | C108                  | 52.8°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 77.5°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 21 | Q101                  | 63.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 86.7°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 22 | Q100                  | 60.9°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 84.6°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 23 | U2                    | 49.9°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 74.2°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 24 | U107                  | 51.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 76°C                    |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 25 | Q2                    | 64.8°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 87.4°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 26 | C1                    | 40.5°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 67.2°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 27 | LF2                   | 51.6°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 76.7°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 28 | RTH1                  | 70.1°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 86.3°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 29 | RTH2                  | 78.2°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 92°C                    |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 30 | BD1                   | 48.6°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 73.1°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 31 | C5                    | 48°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 72.9°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 32 | R50                   | 59.4°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 83.8°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |
| 33 | Q1                    | 58.4°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 84.3°C                  |        |    |          |                         |                         |   |    |        |        |   |         |      |        |   |         |        |        |   |     |        |        |   |      |        |      |   |      |        |        |   |    |        |        |   |      |        |        |   |      |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |     |        |        |    |     |        |      |    |       |        |        |    |      |        |        |    |     |        |        |    |     |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |      |        |        |    |    |        |        |    |      |        |      |    |    |        |        |    |    |        |        |    |     |        |        |    |      |        |        |    |      |        |      |    |     |        |        |    |    |      |        |    |     |        |        |    |    |        |        |

|    |                                                                   |                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                               |                                                                       |
|----|-------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| 2  | OVER LOAD BURN-IN TEST                                            | NO DAMAGE<br>1 HOUR ( MIN )                                                                                                                                                                                                                                             | I/P : 230 VAC<br>O/P : 113 % LOAD<br>Ta : 25°C                                                                                                                                                                                                                                                                | TEST : OK                                                             |
| 3  | LOW TEMPERATURE<br>TURN ON TEST                                   | TURN ON AFTER 2 HOUR                                                                                                                                                                                                                                                    | I/P : 264VAC/100VAC<br>O/P : 100% LOAD<br>Ta= -30 °C                                                                                                                                                                                                                                                          | TEST : OK                                                             |
| 4  | HIGH HUMIDITY<br>HIGH TEMPERATURE<br>HIGH VOLTAGE<br>TURN ON TEST | AFTER 12 HOURS<br>IN CHAMBER ON<br>CONTROL 50 °C/95 %R.H<br>NO DAMAGE                                                                                                                                                                                                   | I/P : 272 VAC<br>O/P : FULL LOAD<br>Ta= 50 °C<br>HUMIDITY= 95 %R.H                                                                                                                                                                                                                                            | TEST : OK                                                             |
| 5  | TEMPERATURE<br>COEFFICIENT                                        | ± 0.03 %/°C(0~50°C)                                                                                                                                                                                                                                                     | I/P : 230 VAC<br>O/P : FULL LOAD                                                                                                                                                                                                                                                                              | ± 0.01 %/°C(0~50°C)                                                   |
| 6  | STORAGE TEMPERATURE<br>TEST                                       | -40~85°C                                                                                                                                                                                                                                                                | 1. Thermal shock Temperature : -45°C~ +90°C<br>2. Temperature change rate : 25°C / MIN<br>3. Dwell time low and high temperature : 30 MIN/EACH<br>4. Total test cycle : 10 CYCLE<br>5. Input/Output condition : STATIC                                                                                        |                                                                       |
| 7  | THERMAL SHOCK TEST                                                | -30~50°C                                                                                                                                                                                                                                                                | 1. Thermal shock Temperature : -35°C~ +55°C<br>2. Temperature change rate : 25°C / MIN<br>3. Dwell time low and high temperature : 30 MIN/EACH<br>4. Total test cycle : 16 CYCLE<br>5. Input/Output condition :<br>15cycle:230V/ FULL LOAD AC ON 3sec/AC OFF 1sec TEST<br>1cycle:230V/ FULL LOAD Burn In Test |                                                                       |
| 8  | VIBRATION TEST                                                    | 10 ~ 500Hz, 2G 10min./1cycle,<br>60min. each along X, Y, Z axes                                                                                                                                                                                                         | 1 Carton & 1 Set<br>(1) Waveform : Sine Wave<br>(2) Frequency : 10~500Hz<br>(3) Sweep Time : 10min/sweep cycle<br>(4) Acceleration : 3G<br>(5) Test Time : 180min in each axis (X.Y.Z)<br>(6) Ta : 25°C                                                                                                       |                                                                       |
| 9  | CAPACITOR<br>LIFE CYCLE                                           | SUPPOSE C105 IS THE MOST CRITICAL COMPONENT<br>(1) I/P : 230VAC O/P : FULL LOAD Ta= 25 °C LIFE TIME<br>(2) I/P : 230VAC O/P : FULL LOAD Ta= 50 °C LIFE TIME<br>(3) I/P : 230VAC O/P : 75% LOAD Ta= 50°C LIFE TIME<br>(4) I/P : 230VAC O/P : 50% LOAD Ta= 51°C LIFE TIME |                                                                                                                                                                                                                                                                                                               | (1) 167540 HRS<br>(2) 33321 HRS<br>(3) 49001.3 HRS<br>(4) 73480.9 HRS |
| 10 | MTBF                                                              | Conducted by Parts Stress Analysis Prediction<br>2223.1K hrs min. Telcordia SR-332 (Bellcore) ; 440.4K hrs min. MIL-HDBK-217F (25°C)                                                                                                                                    |                                                                                                                                                                                                                                                                                                               |                                                                       |
| 11 | Ongoing Reliability Test                                          | I/P : 230VAC O/P : FULL LOAD TA=50°C<br>Demonstration Mean Time Between Failure : 30,000 hours                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                               |                                                                       |

| TEST RESULT | TESTER | REVIEW | APPROVAL |
|-------------|--------|--------|----------|
| PASS        | LIUTT  | LIUTT  | WANGZD   |

2020.10.1 TAG-QA-009