

Evaluation Data

| | |
|----------|--------|
| 품 목 | SMPS |
| 품 명 | RP75-S |
| Rev. No. | A |

CE CB

ORIENT
ELECTRONICS

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RP75-05

Input Current & Efficiency

Specification : 1.4A @ AC110V , 0.85A / 86.5% @ AC220V

| Io | | Vin | AC85V | AC110V | AC220V | AC264V |
|------|-------------------|--------|-------------------|--------|--------|--------|
| | | 0% | Input Current [A] | 0.01A | 0.01A | 0.02A |
| | Efficiency [%] | - | - | - | - | |
| 50% | Input Current [A] | 0.74A | 0.61A | 0.43A | 0.33A | |
| | Efficiency [%] | 86.42% | 87.50% | 87.94% | 87.72% | |
| 100% | Input Current [A] | 1.15A | 1.14A | 0.76A | 0.60A | |
| | Efficiency [%] | 85.89% | 86.00% | 88.50% | 88.61% | |

Line & Load Regulation

Specification : Line Regulation $\pm 25\text{mV}$
Load Regulation $\pm 50\text{mV}$

| Vin | AC85V | AC110V | AC220V | AC264V | Line Regulation [mV] |
|----------------------|-------|--------|--------|--------|----------------------|
| 0% | 5.03V | 5.03V | 5.03V | 5.03V | 0mV |
| 50% | 5.02V | 5.02V | 5.02V | 5.02V | 0mV |
| 100% | 5.01V | 5.00V | 5.00V | 5.00V | 0mV |
| Load Regulation [mV] | 20mV | 20mV | 20mV | 20mV | |

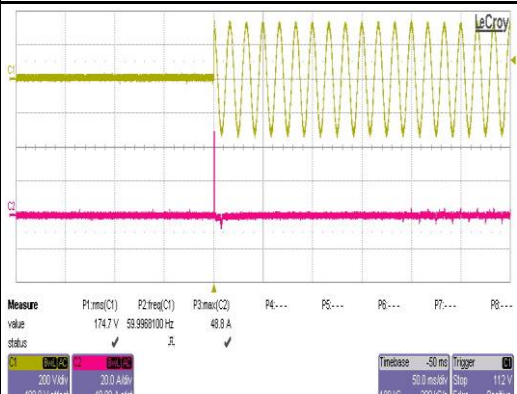
Leakage Current

Specification : 0.75mA

| | 110V | 220V |
|-------------|--------|--------|
| Line L [mA] | 0.13mA | 0.28mA |
| Line N [mA] | 0.12mA | 0.25mA |

Inrush Current

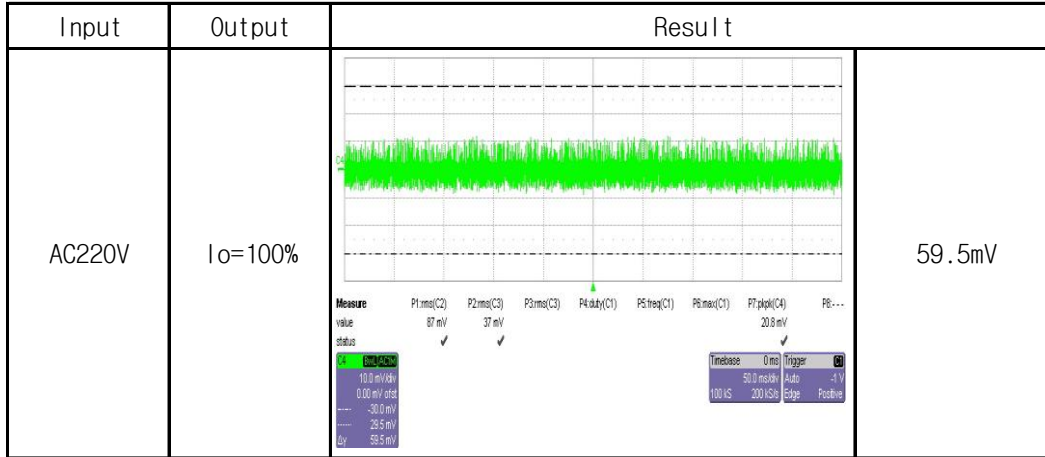
Specification : 65A

| Input | Output | Result |
|--------|---------|---|
| AC220V | Io=100% |  <p>48.8A</p> |

RP75-05

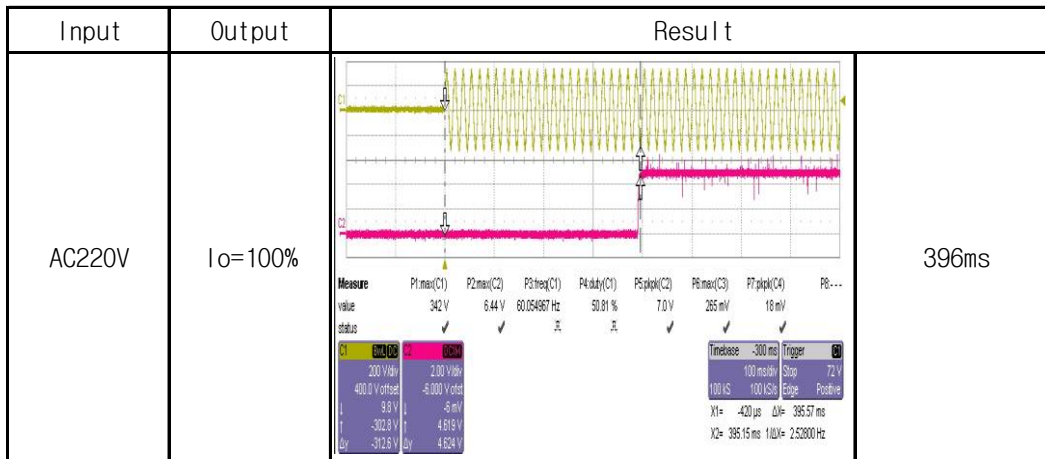
Ripple & Noise

Specification : 100mV



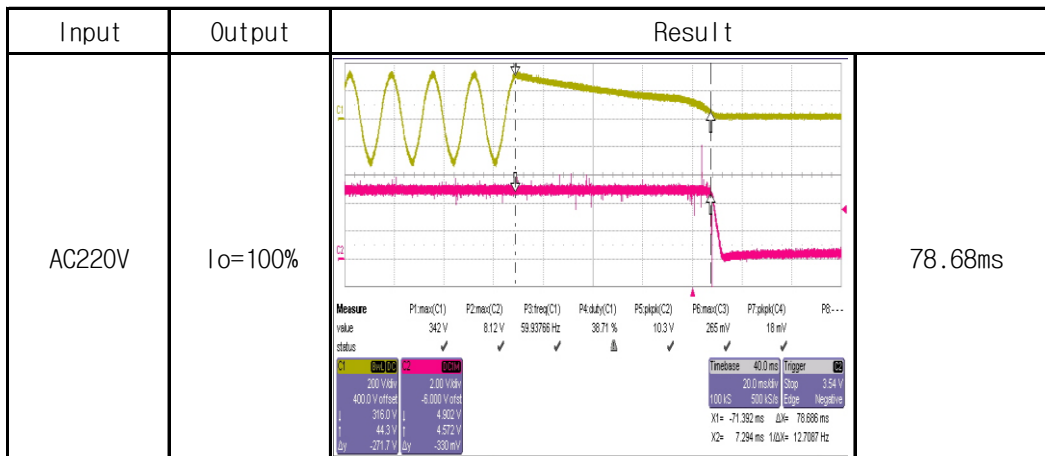
Turn on Time

Specification : 500ms



Hold up Time

Specification : 30ms



RP75-05

Electro Magnetic Compatibility

| Item | Standard | Tset Condition | Result |
|-------------------------------|-------------|---|--------------|
| EMI (Conduction/Radiation) | EN55032 | AC230V, 50Hz, Full Load | Class B Pass |
| Harmonic Current | EN61000-3-2 | AC230V, 50Hz, Full Load | Class A Pass |
| Electrostatic Discharge | EN61000-4-2 | AC230V, 50Hz, Full Load Ari : 8kV, Contact : 4kV | Criteria A |
| Electrical Fast Transient | EN61000-4-4 | AC230V, 50Hz, Full Load 2kV | Criteria A |
| Surge | EN61000-4-5 | AC230V, 50Hz, Full Load Line-Line : 2kV Line-PE : 4kV | Criteria A |

RP75-12

Input Current & Efficiency

Specification : 1.4A @ AC110V , 0.85A / 89% @ AC220V

| Io | | Vin | AC85V | AC110V | AC220V | AC264V |
|------|-------------------|--------|-------------------|--------|--------|--------|
| | | 0% | Input Current [A] | 0.01A | 0.01A | 0.02A |
| | Efficiency [%] | - | - | - | - | |
| 50% | Input Current [A] | 0.89A | 0.74A | 0.45A | 0.40A | |
| | Efficiency [%] | 86.68% | 87.32% | 88.17% | 87.89% | |
| 100% | Input Current [A] | 1.34A | 1.33A | 0.83A | 0.73A | |
| | Efficiency [%] | 85.92% | 87.37% | 89.16% | 89.09% | |

Line & Load Regulation

Specification : Line Regulation $\pm 60\text{mV}$
Load Regulation $\pm 60\text{mV}$

| Vin | AC85V | AC110V | AC220V | AC264V | Line Regulation [mV] |
|----------------------|--------|--------|--------|--------|----------------------|
| 0% | 12.00V | 12.00V | 12.00V | 12.00V | 0mV |
| 50% | 12.00V | 12.00V | 12.00V | 12.00V | 0mV |
| 100% | 12.00V | 12.00V | 12.00V | 12.00V | 0mV |
| Load Regulation [mV] | 0mV | 0mV | 0mV | 0mV | |

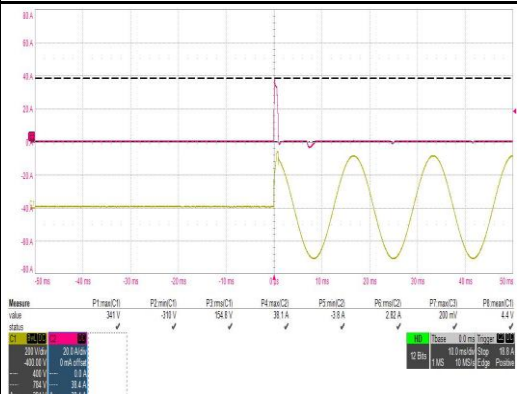
Leakage Current

Specification : 0.75mA

| | 110V | 220V |
|-------------|--------|--------|
| Line L [mA] | 0.15mA | 0.29mA |
| Line N [mA] | 0.15mA | 0.26mA |

Inrush Current

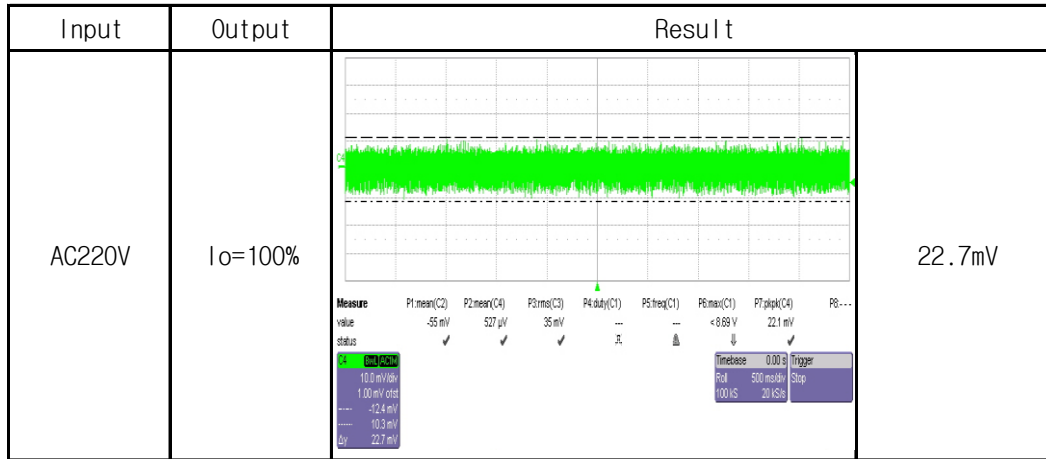
Specification : 65A

| Input | Output | Result |
|--------|---------|---|
| AC220V | Io=100% |  <p>38.4A</p> |

RP75-12

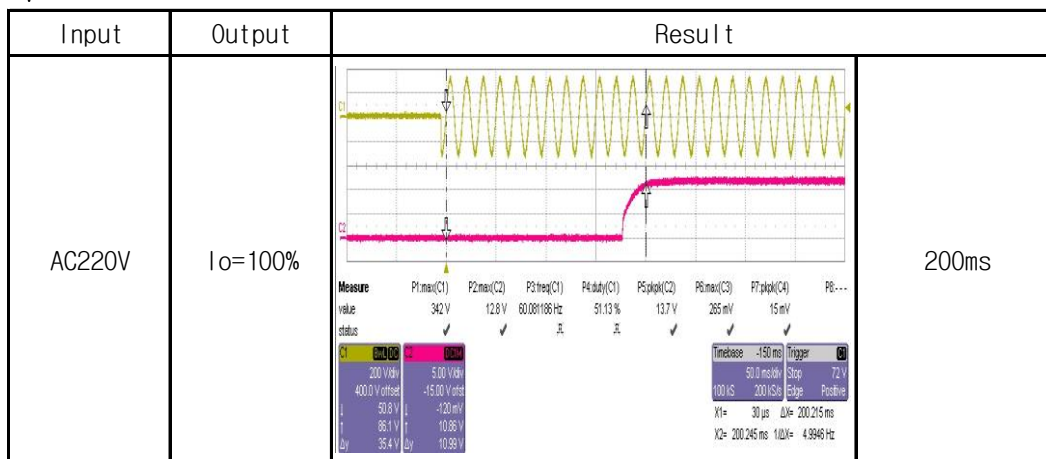
Ripple & Noise

Specification : 120mV



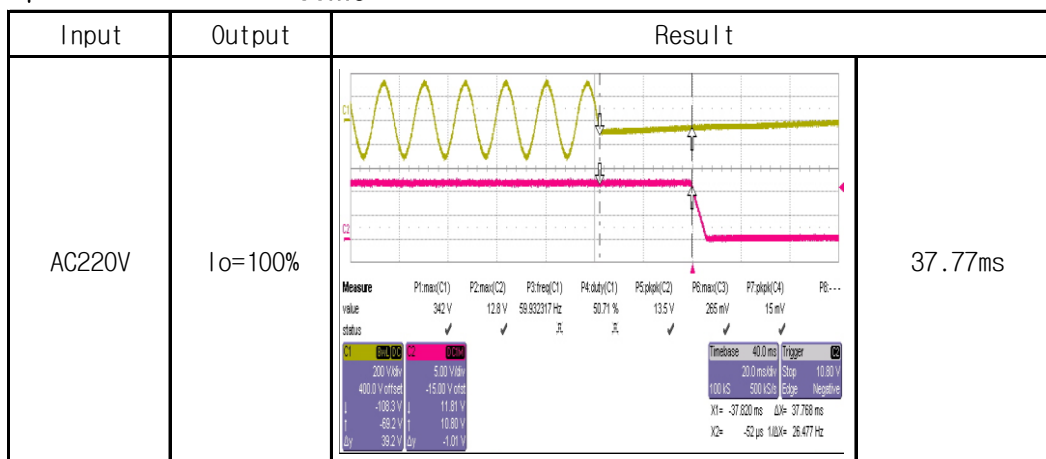
Turn on Time

Specification : 500ms



Hold up Time

Specification : 30ms



RP75-12

Electro Magnetic Compatibility

| Item | Standard | Tset Condition | Result |
|-------------------------------|-------------|---|--------------|
| EMI (Conduction/Radiation) | EN55032 | AC230V, 50Hz, Full Load | Class B Pass |
| Harmonic Current | EN61000-3-2 | AC230V, 50Hz, Full Load | Class A Pass |
| Electrostatic Discharge | EN61000-4-2 | AC230V, 50Hz, Full Load Ari : 8kV, Contact : 4kV | Criteria A |
| Electrical Fast Transient | EN61000-4-4 | AC230V, 50Hz, Full Load 2kV | Criteria A |
| Surge | EN61000-4-5 | AC230V, 50Hz, Full Load Line-Line : 2kV Line-PE : 4kV | Criteria A |

RP75-24

Input Current & Efficiency

Specification : 1.4A @ AC110V , 0.85A / 90% @ AC220V

| I _o | | V _{in} | AC85V | AC110V | AC220V | AC264V |
|----------------|-------------------|-----------------|-------------------|--------|--------|--------|
| | | 0% | Input Current [A] | | 0.01A | 0.01A |
| Efficiency [%] | | | - | - | - | - |
| 50% | Input Current [A] | | 0.91A | 0.73A | 0.46A | 0.41A |
| | Efficiency [%] | | 87.73% | 88.15% | 89.80% | 89.70% |
| 100% | Input Current [A] | | 1.41A | 1.40A | 0.84A | 0.73A |
| | Efficiency [%] | | 86.26% | 87.01% | 89.72% | 89.72% |

Line & Load Regulation

Specification : Line Regulation $\pm 120\text{mV}$
Load Regulation $\pm 120\text{mV}$

| V _{in} | AC85V | AC110V | AC220V | AC264V | Line Regulation [mV] |
|----------------------|--------|--------|--------|--------|----------------------|
| 0% | 23.99V | 23.99V | 23.99V | 23.99V | 0mV |
| 50% | 24.00V | 24.00V | 24.00V | 24.00V | 0mV |
| 100% | 24.00V | 24.00V | 24.00V | 24.00V | 0mV |
| Load Regulation [mV] | 10mV | 10mV | 10mV | 10mV | |


Leakage Current

Specification : 0.75mA

| | 110V | 220V |
|-------------|--------|--------|
| Line L [mA] | 0.15mA | 0.30mA |
| Line N [mA] | 0.14mA | 0.28mA |

Inrush Current

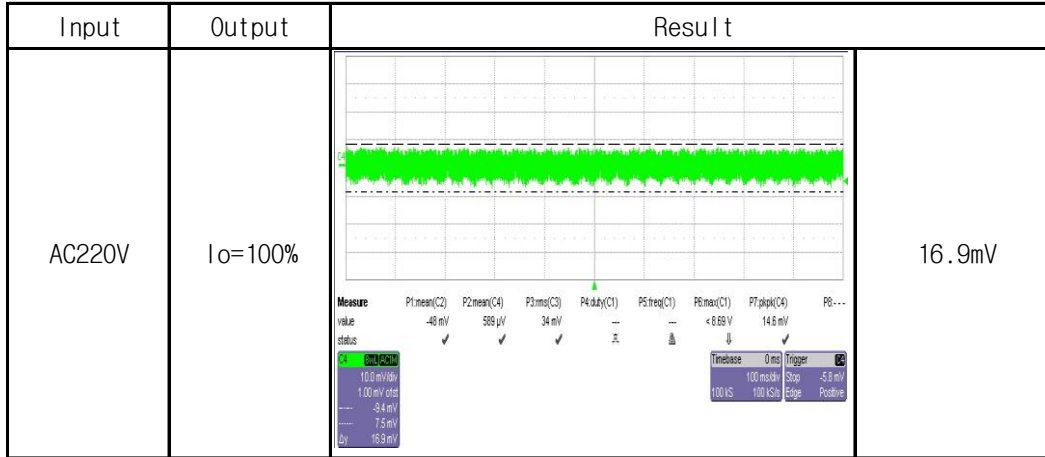
Specification : 65A

| Input | Output | Result |
|--------|----------------------|--|
| AC220V | I _o =100% |  |

RP75-24

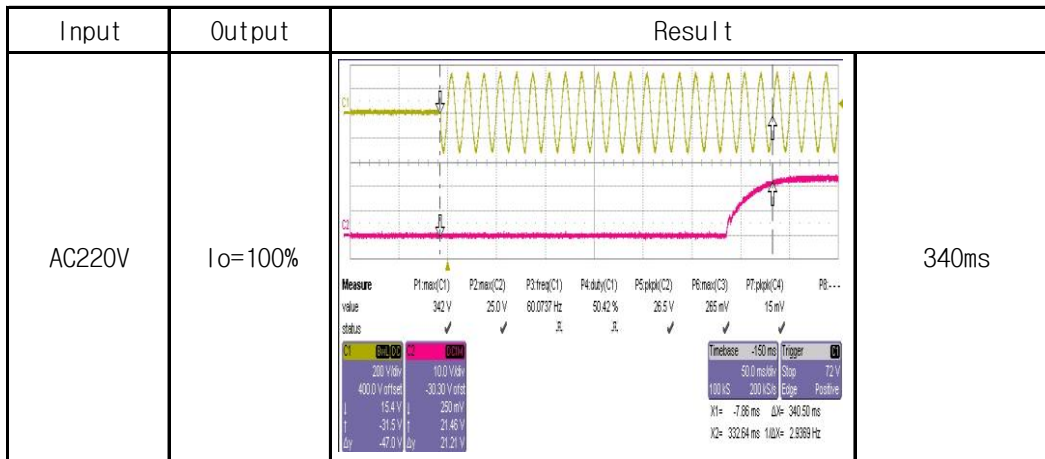
Ripple & Noise

Specification : 150mV



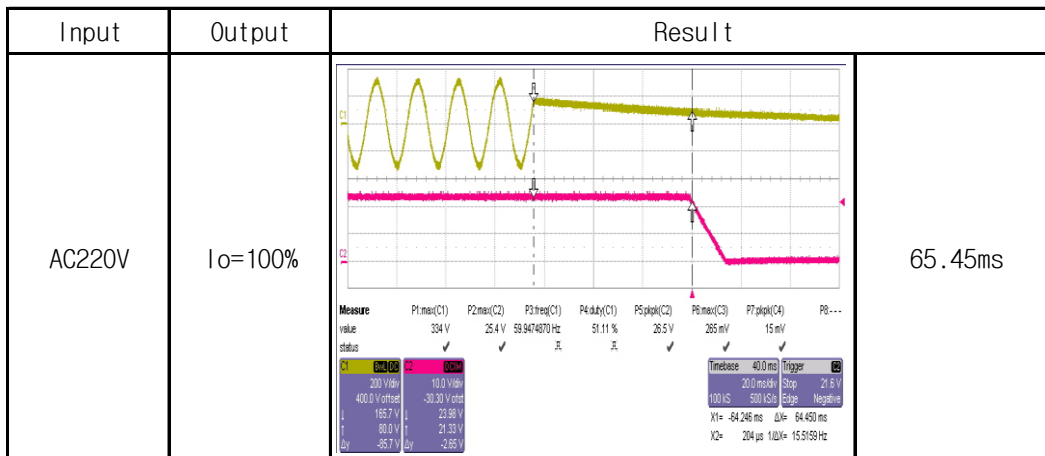
Turn on Time

Specification : 500ms



Hold up Time

Specification : 30ms



RP75-24

Electro Magnetic Compatibility

| Item | Standard | Tset Condition | Result |
|-------------------------------|-------------|---|--------------|
| EMI (Conduction/Radiation) | EN55032 | AC230V, 50Hz, Full Load | Class B Pass |
| Harmonic Current | EN61000-3-2 | AC230V, 50Hz, Full Load | Class A Pass |
| Electrostatic Discharge | EN61000-4-2 | AC230V, 50Hz, Full Load Ari : 8kV, Contact : 4kV | Criteria A |
| Electrical Fast Transient | EN61000-4-4 | AC230V, 50Hz, Full Load 2kV | Criteria A |
| Surge | EN61000-4-5 | AC230V, 50Hz, Full Load Line-Line : 2kV Line-PE : 4kV | Criteria A |

RP75-48

Input Current & Efficiency

Specification : 1.4A @ AC110V , 0.85A / 91.5% @ AC220V

| Io | | Vin | AC85V | AC110V | AC220V | AC264V |
|------|-------------------|--------|-------------------|--------|--------|--------|
| | | 0% | Input Current [A] | 0.01A | 0.01A | 0.02A |
| | Efficiency [%] | - | - | - | - | |
| 50% | Input Current [A] | 0.90A | 0.77A | 0.47A | 0.41A | |
| | Efficiency [%] | 87.99% | 89.34% | 90.20% | 90.06% | |
| 100% | Input Current [A] | 1.37A | 1.39A | 0.86A | 0.75A | |
| | Efficiency [%] | 87.15% | 88.77% | 91.00% | 90.87% | |

Line & Load Regulation

Specification : Line Regulation $\pm 240\text{mV}$
Load Regulation $\pm 240\text{mV}$

| Vin | AC85V | AC110V | AC220V | AC264V | Line Regulation [mV] |
|----------------------|--------|--------|--------|--------|----------------------|
| 0% | 48.00V | 48.00V | 48.00V | 48.00V | 0mV |
| 50% | 48.01V | 48.01V | 48.01V | 48.01V | 0mV |
| 100% | 48.01V | 48.01V | 48.01V | 48.01V | 0mV |
| Load Regulation [mV] | 10mV | 10mV | 10mV | 10mV | |

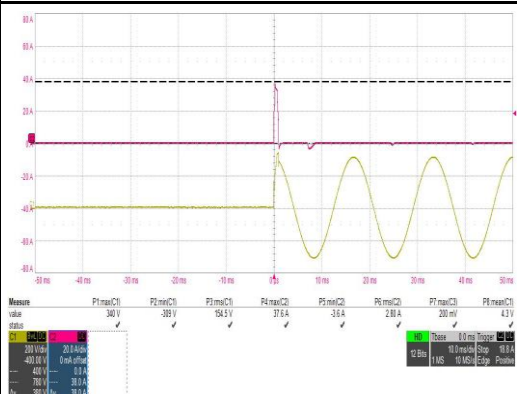
Leakage Current

Specification : 0.75mA

| | 110V | 220V |
|-------------|--------|--------|
| Line L [mA] | 0.19mA | 0.31mA |
| Line N [mA] | 0.18mA | 0.30mA |

Inrush Current

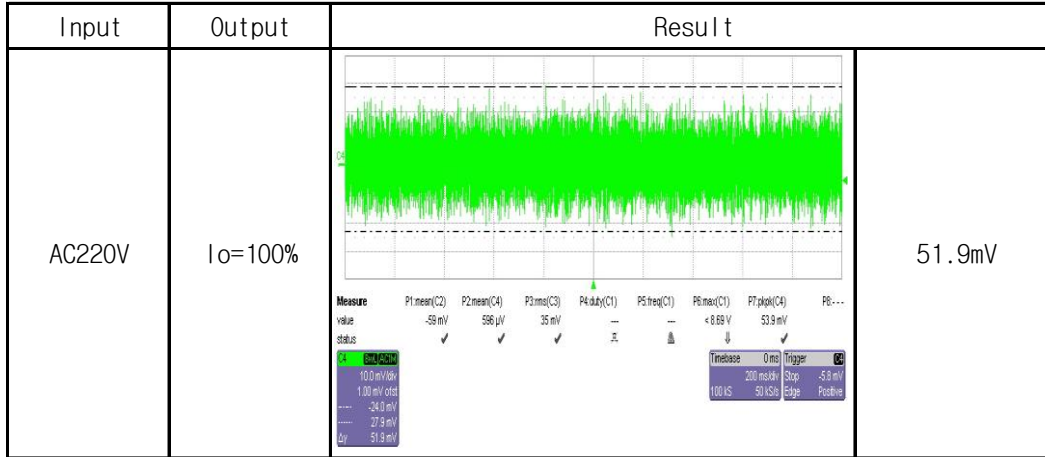
Specification : 65A

| Input | Output | Result | | | | | | | | | | | | | | | | | | |
|---------|------------|--|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------|-----|------|--------|-------|--------|-------|-------|-----|
| AC220V | Io=100% |  <table border="1"> <thead> <tr> <th>Measure</th> <th>P1 max(C1)</th> <th>P2 max(C1)</th> <th>P3 max(C1)</th> <th>P4 max(C2)</th> <th>P5 max(C2)</th> <th>P6 max(C2)</th> <th>P7 max(C1)</th> <th>P8 max(C1)</th> </tr> </thead> <tbody> <tr> <td>value</td> <td>38V</td> <td>-38V</td> <td>154.1V</td> <td>37.6A</td> <td>-37.6A</td> <td>2.88A</td> <td>200mV</td> <td>43V</td> </tr> </tbody> </table> <p>38.0A</p> | Measure | P1 max(C1) | P2 max(C1) | P3 max(C1) | P4 max(C2) | P5 max(C2) | P6 max(C2) | P7 max(C1) | P8 max(C1) | value | 38V | -38V | 154.1V | 37.6A | -37.6A | 2.88A | 200mV | 43V |
| Measure | P1 max(C1) | P2 max(C1) | P3 max(C1) | P4 max(C2) | P5 max(C2) | P6 max(C2) | P7 max(C1) | P8 max(C1) | | | | | | | | | | | | |
| value | 38V | -38V | 154.1V | 37.6A | -37.6A | 2.88A | 200mV | 43V | | | | | | | | | | | | |

RP75-48

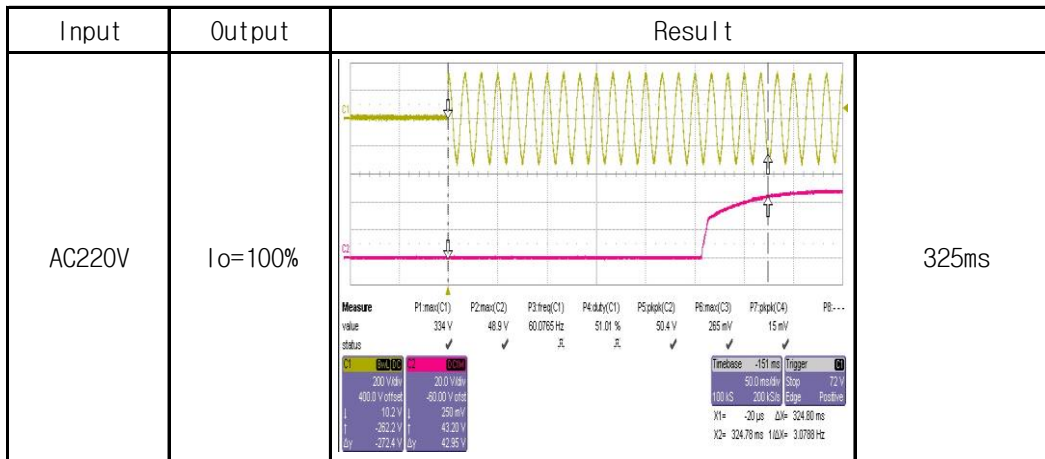
Ripple & Noise

Specification : 200mV



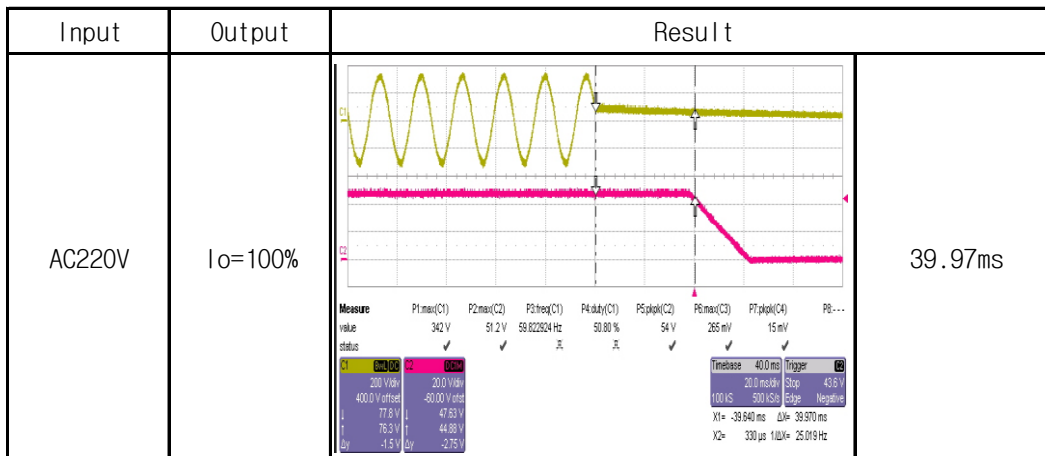
Turn on Time

Specification : 500ms



Hold up Time

Specification : 30ms



RP75-48

Electro Magnetic Compatibility

| Item | Standard | Tset Condition | Result |
|-------------------------------|-------------|---|--------------|
| EMI (Conduction/Radiation) | EN55032 | AC230V, 50Hz, Full Load | Class B Pass |
| Harmonic Current | EN61000-3-2 | AC230V, 50Hz, Full Load | Class A Pass |
| Electrostatic Discharge | EN61000-4-2 | AC230V, 50Hz, Full Load Ari : 8kV, Contact : 4kV | Criteria A |
| Electrical Fast Transient | EN61000-4-4 | AC230V, 50Hz, Full Load 2kV | Criteria A |
| Surge | EN61000-4-5 | AC230V, 50Hz, Full Load Line-Line : 2kV Line-PE : 4kV | Criteria A |