

Evaluation Data

품 목	SMPS
품 명	RP200-S
Rev. No.	A

CE CB

ORIENT
ELECTRONICS

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RP200-05

Input Current & Efficiency

Specification : 4.0A @ AC110V , 2.2A / 87% @ AC220V

I _o		V _{in}						
		AC100V	AC110V	AC120V	AC200V	AC220V	AC240V	
0%	Input Current [A]	0.088	0.054	0.062	0.090	0.095	0.095	
	Efficiency [%]	-	-	-	-	-	-	
50%	Input Current [A]	2.320	2.120	2.010	1.280	1.190	1.100	
	Efficiency [%]	85.84%	85.56%	83.33%	85.84%	83.85%	80.78%	
100%	Input Current [A]	3.630	3.770	3.340	2.410	2.070	1.860	
	Efficiency [%]	83.95%	85.07%	84.82%	84.82%	86.39%	85.40%	

Line & Load Regulation

Specification : Line Regulation ±25mV

Load Regulation ±100mV

V _{in}	AC100V	AC110V	AC120V	AC200V	AC220V	AC240V	Line Regulation [mV]
0%	5.020	5.023	5.020	5.020	5.020	5.020	3mV
50%	4.982	5.015	5.018	4.982	5.015	5.018	36mV
100%	4.957	4.969	4.999	4.957	4.983	5.004	47mV
Load Regulation [mV]	45mV	54mV	21mV	63mV	37mV	16mV	

* Under no load condition, the value of line regulation is stable at the range of 100-120VAC and 200-240VAC.

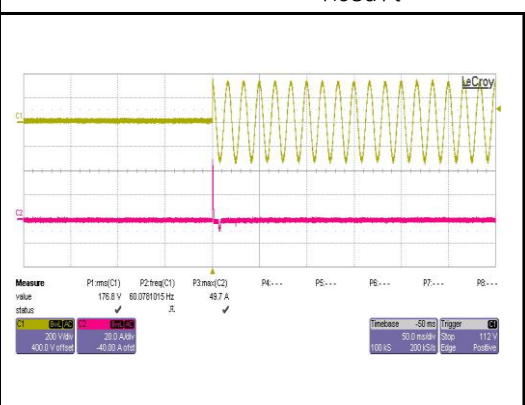
Leakage Current

Specification : 2mA

	110V	220V
Line L [mA]	0.20mA	0.21mA
Line N [mA]	0.20mA	0.21mA

Inrush Current

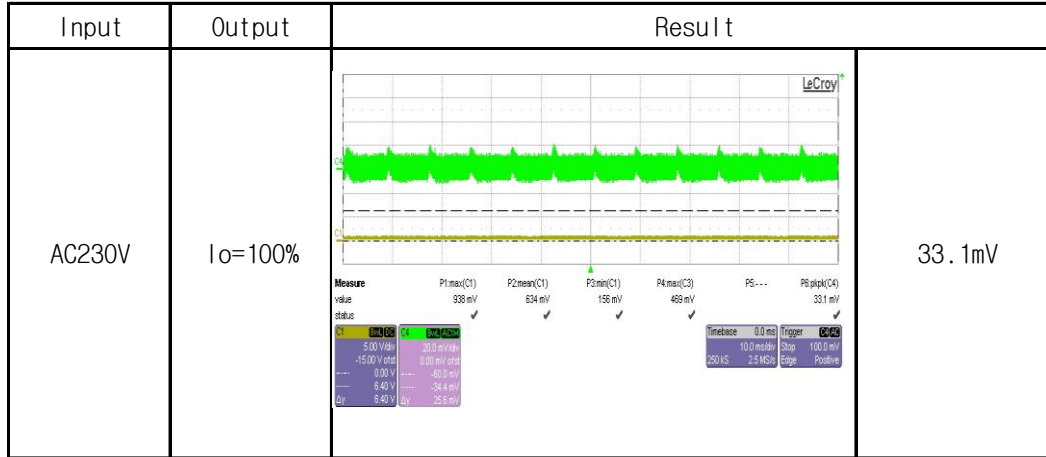
Specification : 60A

Input	Output	Result
AC220V	I _o =100%	 <p>49.7A</p>

RP200-05

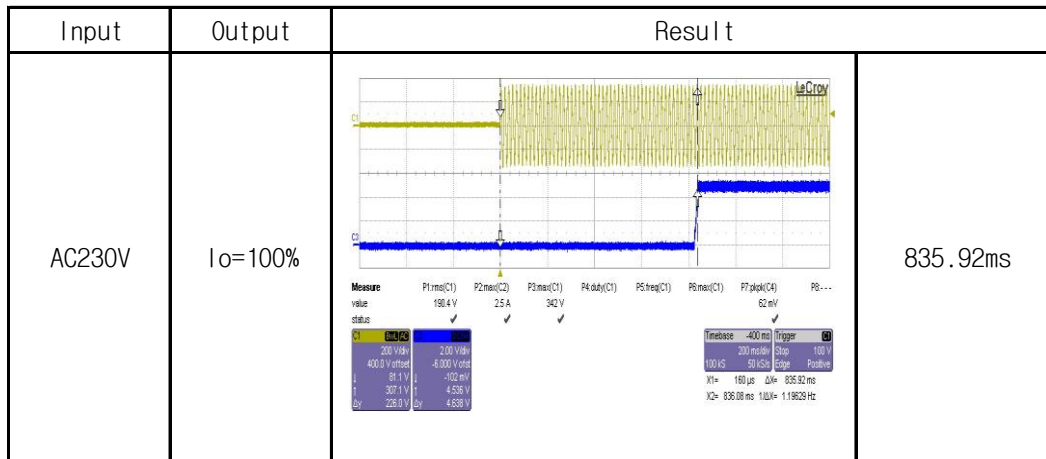
Ripple & Noise

Specification : 150mV



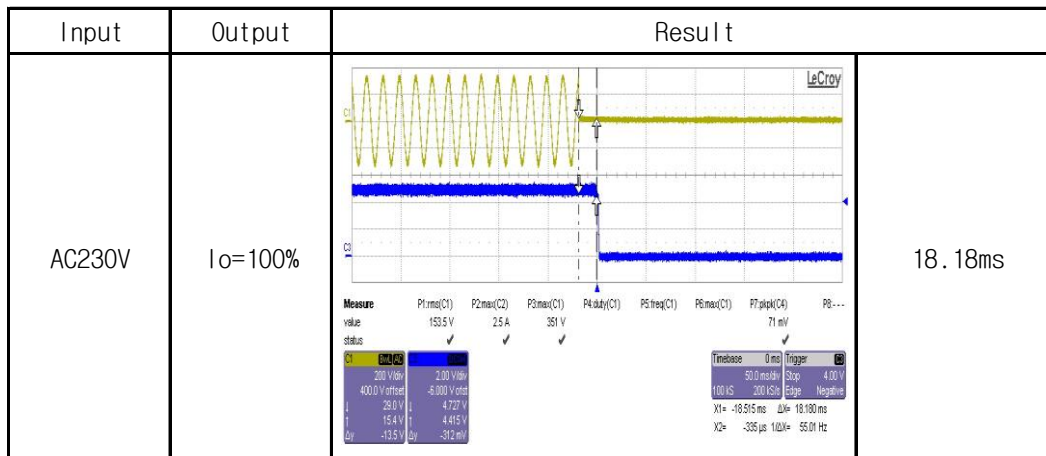
Turn on Time

Specification : 1300ms



Hold up Time

Specification : 16ms



RP200-05

Electro Magnetic Compatibility

Item	Standard	Tset Condition	Result
EMI (Conduction/Radiation)	EN55032	AC230V, 50Hz, Full Load	Class B 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

RP200-12

Input Current & Efficiency

Specification : 4.0A @ AC110V , 2.2A / 91% @ AC220V

Io		Vin	AC100V	AC110V	AC120V	AC200V	AC220V	AC240V
		0%	Input Current [A]	0.100	0.100	0.060	0.080	0.110
	Efficiency [%]	-	-	-	-	-	-	
50%	Input Current [A]	2.240	1.960	1.760	1.270	1.110	1.000	
	Efficiency [%]	90.27%	91.89%	91.64%	92.31%	93.15%	92.39%	
100%	Input Current [A]	3.514	3.580	3.140	2.140	1.990	1.780	
	Efficiency [%]	90.17%	90.27%	90.67%	91.89%	91.89%	91.89%	

Line & Load Regulation

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

Load Regulation $\pm 120\text{mV}$

Vin	AC100V	AC110V	AC120V	AC200V	AC220V	AC240V	Line Regulation [mV]
0%	12.300	12.041	12.042	12.030	12.030	12.040	11mV
50%	12.030	12.032	12.035	12.030	12.031	12.036	6mV
100%	12.030	12.035	12.036	12.032	12.034	12.035	6mV
Load Regulation [mV]	0mV	9mV	7mV	2mV	4mV	5mV	

※ Under no load condition, the value of line regulation is stable at the range of 100-120VAC and 200-240VAC.

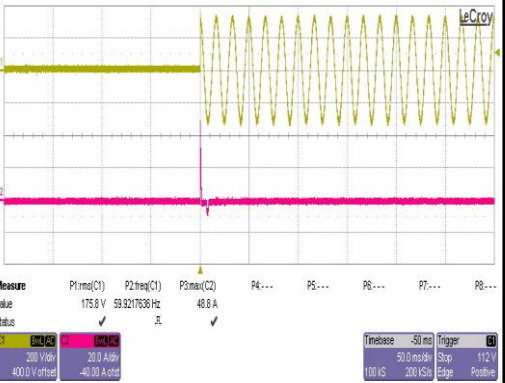
Leakage Current

Specification : 2mA

	110V	220V
Line L [mA]	0.20mA	0.57mA
Line N [mA]	0.40mA	0.58mA

Inrush Current

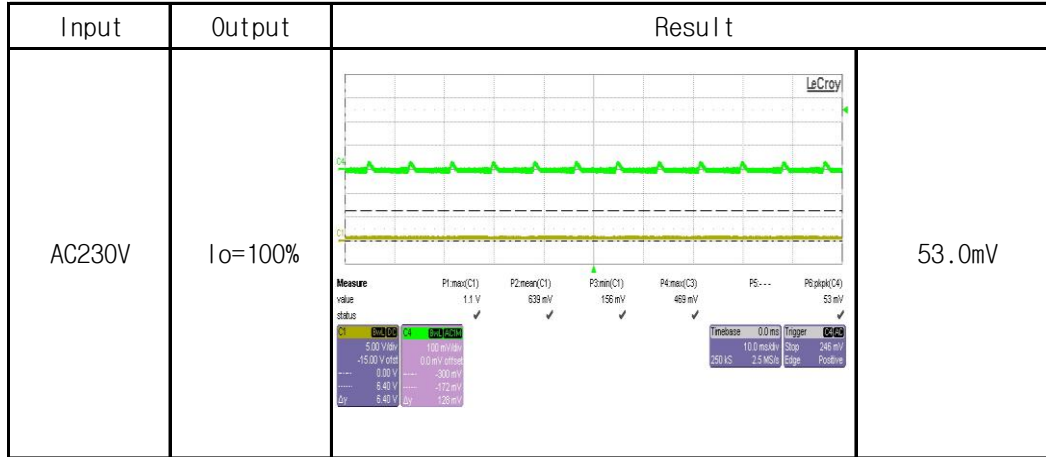
Specification : 60A

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

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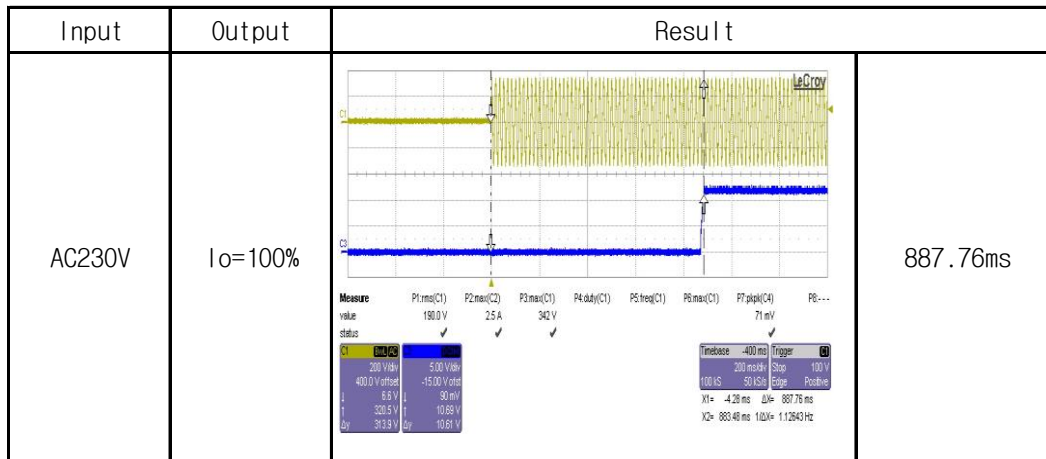
Ripple & Noise

Specification : 150mV



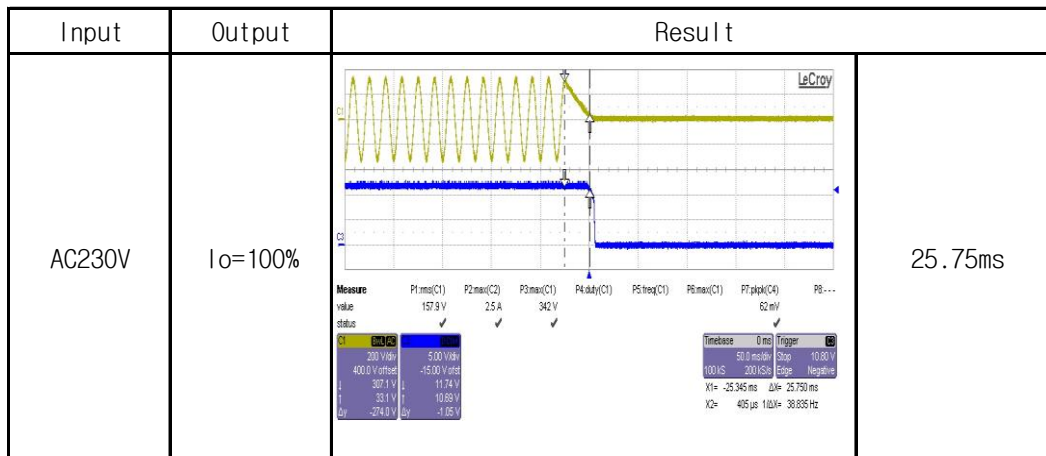
Turn on Time

Specification : 1300ms



Hold up Time

Specification : 16ms



RP200-12

Electro Magnetic Compatibility

Item	Standard	Tset Condition	Result
EMI (Conduction/Radiation)	EN55032	AC230V, 50Hz, Full Load	Class B 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

RP200-24

Input Current & Efficiency

Specification : 4.0A @ AC110V , 2.2A / 91% @ AC220V

I _o		V _{in}						
		AC100V	AC110V	AC120V	AC200V	AC220V	AC240V	
0%	Input Current [A]	0.080	0.090	0.060	0.090	0.110	0.120	
	Efficiency [%]	-	-	-	-	-	-	
50%	Input Current [A]	2.340	2.040	1.840	1.310	1.160	1.040	
	Efficiency [%]	89.49%	90.72%	91.03%	91.83%	92.63%	91.83%	
100%	Input Current [A]	3.940	3.740	3.290	2.370	2.080	1.850	
	Efficiency [%]	88.93%	90.26%	89.87%	89.49%	91.43%	91.03%	

Line & Load Regulation

Specification : Line Regulation ±120mV

Load Regulation ±120mV

V _{in}	AC100V	AC110V	AC120V	AC200V	AC220V	AC240V	Line Regulation [mV]
0%	23.970	23.990	23.970	23.970	23.980	23.990	20mV
50%	23.960	23.990	24.000	23.980	23.950	24.000	50mV
100%	23.940	24.010	24.020	23.910	24.020	24.020	80mV
Load Regulation [mV]	30mV	20mV	50mV	70mV	70mV	30mV	

※ Under no load condition, the value of line regulation is stable at the range of 100-120VAC and 200-240VAC.

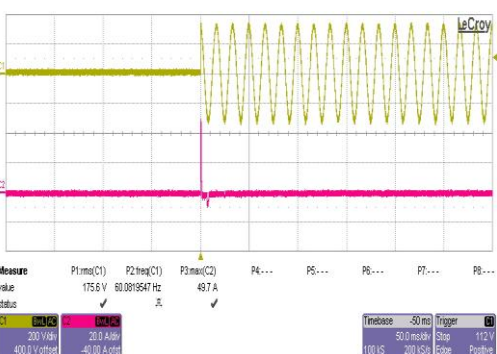
Leakage Current

Specification : 2mA

	110V	220V
Line L [mA]	0.19mA	0.50mA
Line N [mA]	0.35mA	0.52mA

Inrush Current

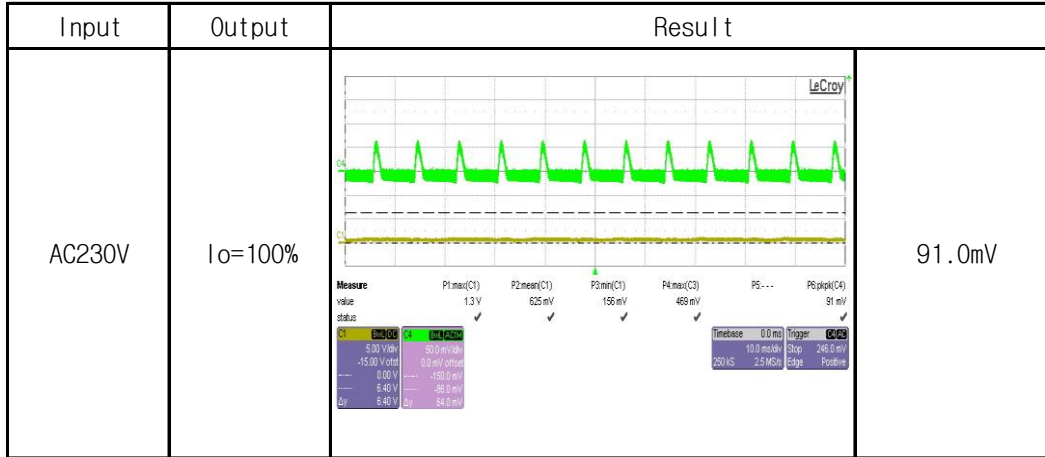
Specification : 60A

Input	Output	Result
AC220V	I _o =100%	 <p>49.7A</p>

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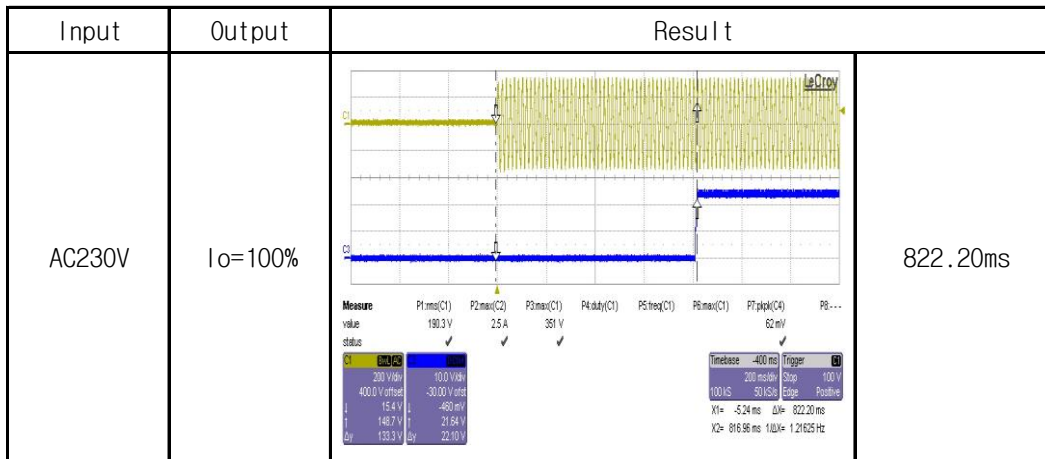
Ripple & Noise

Specification : 200mV



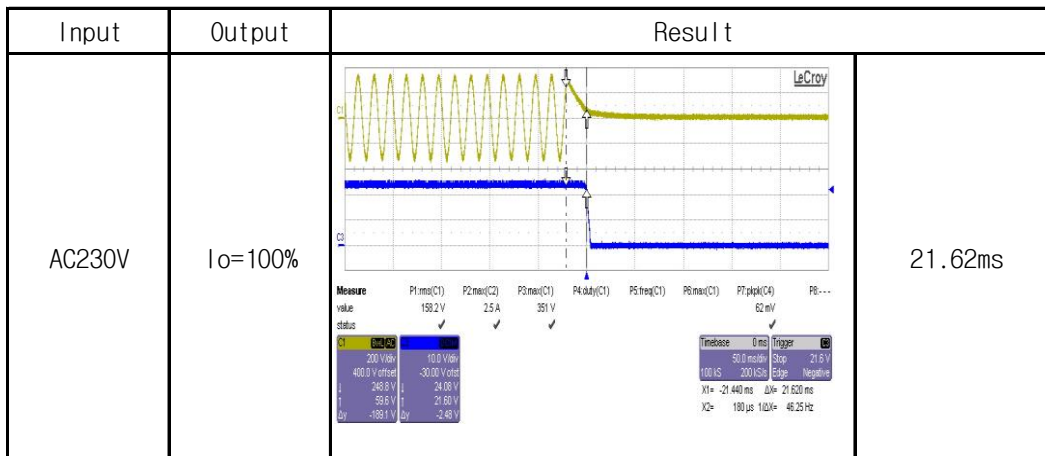
Turn on Time

Specification : 1300ms



Hold up Time

Specification : 16ms



RP200-24

Electro Magnetic Compatibility

Item	Standard	Tset Condition	Result
EMI (Conduction/Radiation)	EN55032	AC230V, 50Hz, Full Load	Class B 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

RP200-48

Input Current & Efficiency

Specification : 4.0A @ AC110V , 2.2A / 92% @ AC220V

		Vin		AC100V	AC110V	AC120V	AC200V	AC220V	AC240V
		Io							
0%	Input Current [A]			0.080	0.090	0.060	0.090	0.100	0.110
	Efficiency [%]			-	-	-	-	-	-
50%	Input Current [A]			2.310	2.000	1.810	1.220	1.080	0.970
	Efficiency [%]			88.74%	90.26%	91.83%	91.03%	91.83%	92.63%
100%	Input Current [A]			3.500	3.670	3.140	2.320	1.980	1.780
	Efficiency [%]			88.00%	89.87%	90.64%	90.26%	92.32%	92.43%

Line & Load Regulation

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

Load Regulation $\pm 240\text{mV}$

Vin	Line Regulation [mV]						Line Regulation [mV]
	AC100V	AC110V	AC120V	AC200V	AC220V	AC240V	
0%	48.023	48.031	48.080	48.018	48.026	48.077	54mV
50%	48.048	48.052	48.063	48.045	48.048	48.063	15mV
100%	48.064	48.077	48.086	48.071	48.074	48.087	23mV
Load Regulation [mV]	41mV	46mV	23mV	53mV	48mV	24mV	

* Under no load condition, the value of line regulation is stable at the range of 100-120VAC and 200-240VAC.

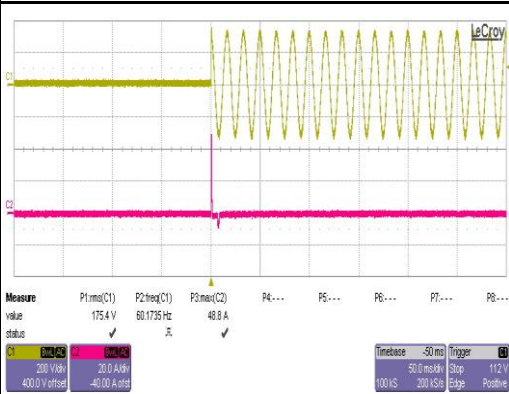
Leakage Current

Specification : 2mA

	110V	220V
Line L [mA]	0.20mA	0.60mA
Line N [mA]	0.45mA	0.61mA

Inrush Current

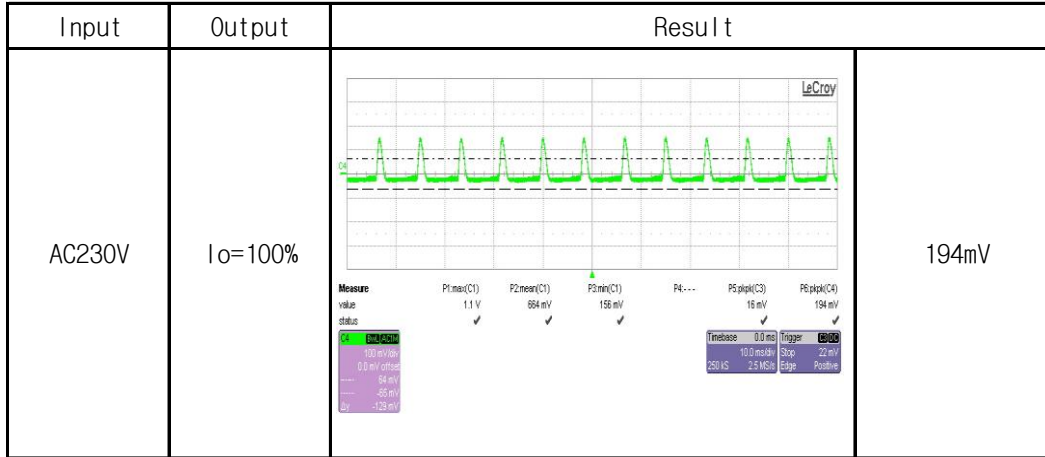
Specification : 60A

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

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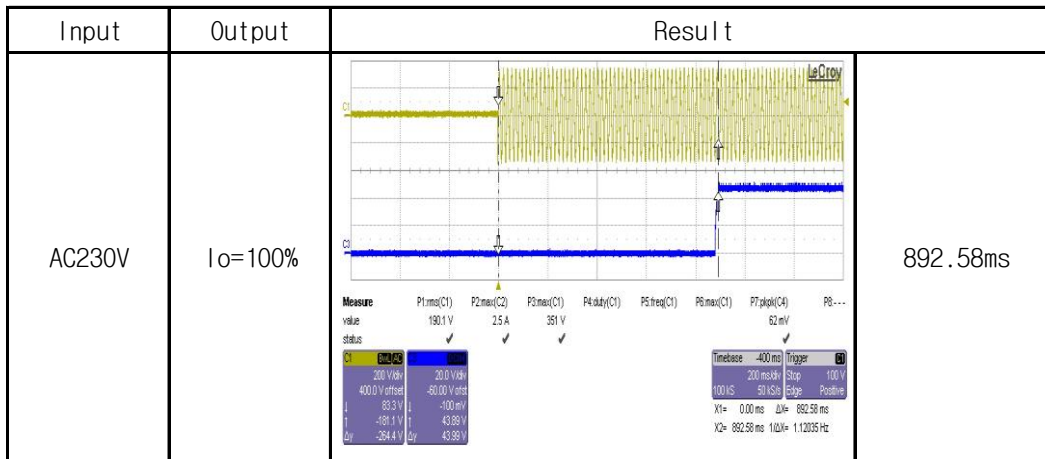
Ripple & Noise

Specification : 250mV



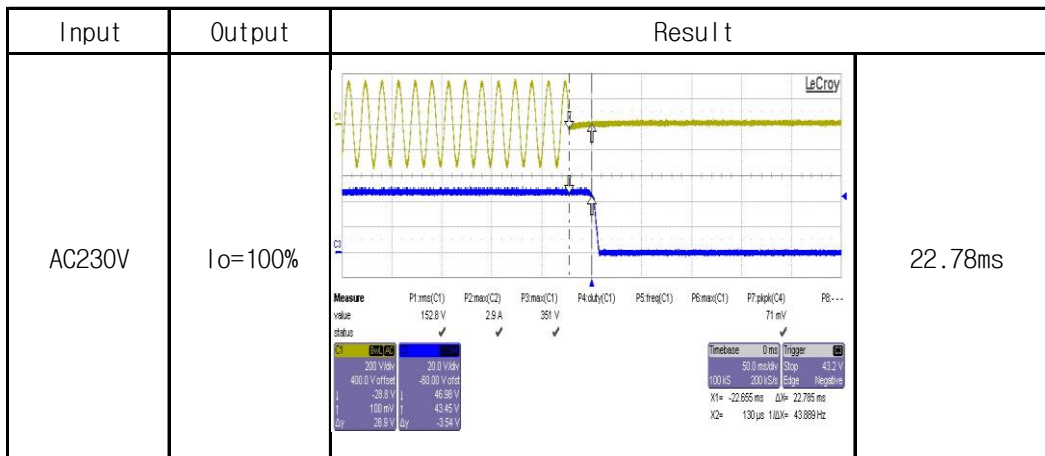
Turn on Time

Specification : 1300ms



Hold up Time

Specification : 16ms



RP200-48

Electro Magnetic Compatibility

Item	Standard	Tset Condition	Result
EMI (Conduction/Radiation)	EN55032	AC230V, 50Hz, Full Load	Class B 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