

# Evaluation Data

품 목	SMPS
품 명	RP35-DW
Rev. No.	A

**CE CB**

**O:ORIENT**  
ELE<sup>C</sup> ELECTRONICS

경기도 성남시 중원구 갈마치로 322

TEL : (031) 737-0200

FAX : (031) 737-0279

# CONTENTS

---

## 1. RP35-BDW

- . Input Current & Efficiency
- . Line & Load Regulation
- . Leakage Current
- . Inrush Current
- . Ripple & Noise
- . Turn on Time
- . Hold up Time
- . Electro Magnetic Compatibility

## 2. RP35-BHW

## 3. RP35-DDW

## 4. RP35-EEW

# RP35-BDW

## Input Current & Efficiency

Specification : 0.8A / 79% @ AC110V , 0.55A / 79% @ AC220V

I <sub>o</sub>		V <sub>in</sub>	AV85V	AC110V	AC220V	AC264V
		0%	Input Current [A]		0.029	0.034
Efficiency [%]			-	-	-	-
50%	Input Current [A]		0.430	0.359	0.233	0.213
	Efficiency [%]		79.5%	80.2%	77.7%	75.1%
100%	Input Current [A]		0.674	0.679	0.423	0.377
	Efficiency [%]		78.7%	79.8%	80.9%	79.4%

## Line & Load Regulation

Specification : Line Regulation Ch1. ±25mV / Ch2. ±180mV

Load Regulation Ch1. ±25mV / Ch2. ±360mV

V <sub>in</sub>			AC85V	AC110V	AC220V	AC264V	Line Regulation [mV]
		0%	CH1		5.01	5.01	5.01
CH2			12.09	12.09	12.05	12.06	40
50%	CH1		5.00	5.00	5.01	5.01	10
	CH2		11.94	11.93	11.92	11.92	20
100%	CH1		5.00	5.00	5.00	5.00	0
	CH2		12.07	12.01	12.05	12.05	60
Load Regulation [mV]	CH1		10	10	10	10	-
	CH2		150	160	130	140	

## Leakage Current

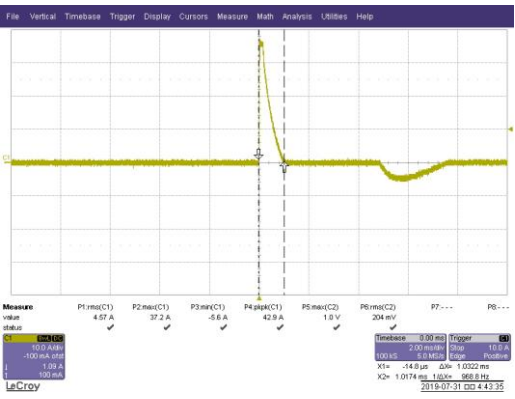
Specification : 2mA

	110V	220V
Line L [mA]	0.22mA	0.41mA
Line N [mA]	0.22mA	0.42mA

# RP35-BDW

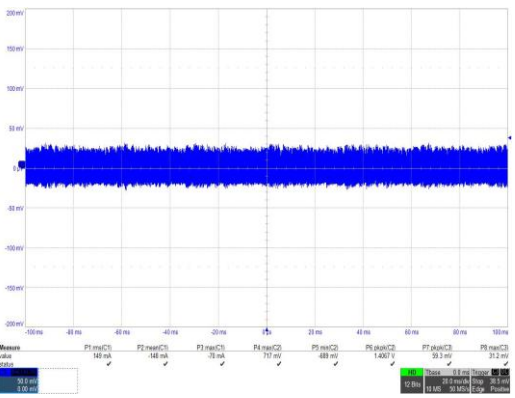
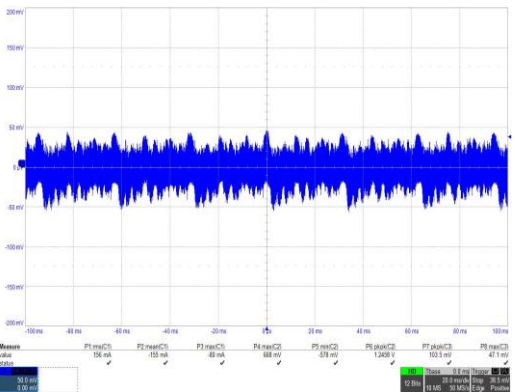
## Inrush Current

Specification : 45A

Input	Output	Result
AC220V	$I_o=100\%$	 <p>39.4A</p>

## Ripple & Noise

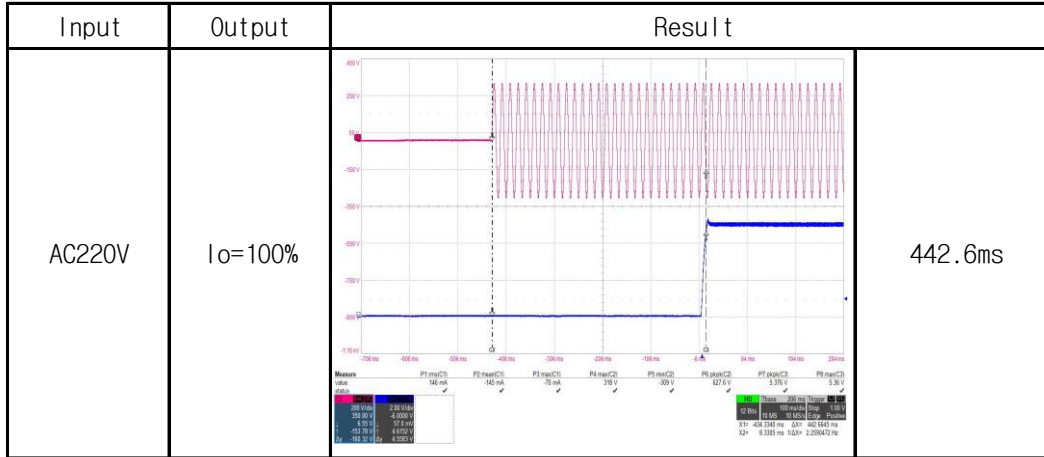
Specification : Ch1. 80mV / Ch2. 120mV

Input	Output	Result
AC220V	$I_o=100\%$	 <p>CH1: 59.3mV</p>
AC220V	$I_o=100\%$	 <p>CH2: 103.5mV</p>

# RP35-BDW

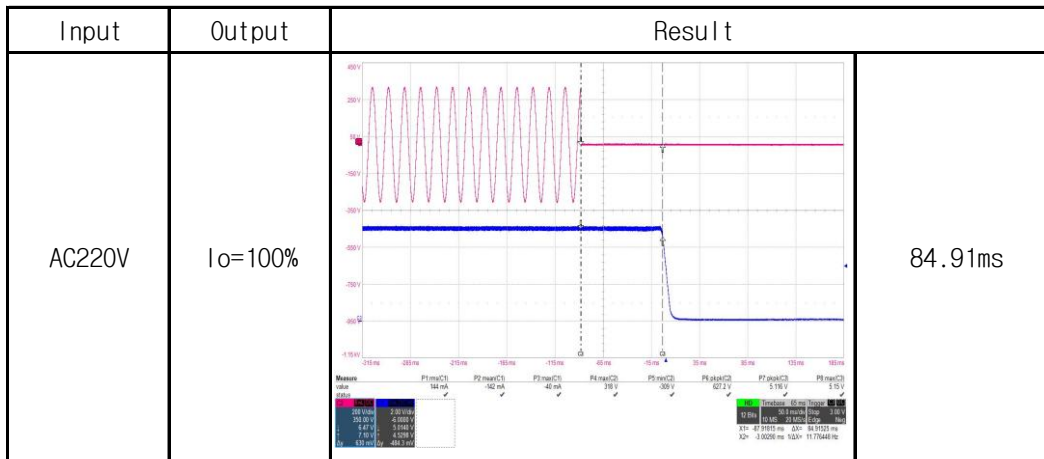
## Turn on Time

Specification : 500ms



## Hold up Time

Specification : 80ms



## 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

# RP35-BHW

## Input Current & Efficiency

Specification : 0.8A / 80% @ AC110V , 0.55A / 80% @ AC220V

I <sub>o</sub>		V <sub>in</sub>	AV85V	AC110V	AC220V	AC264V
		0%	Input Current [A]		0.026	0.031
Efficiency [%]			-	-	-	-
50%	Input Current [A]		0.430	0.363	0.242	0.222
	Efficiency [%]		81.4%	80.9%	76.1%	72.8%
100%	Input Current [A]		0.669	0.674	0.423	0.376
	Efficiency [%]		80.3%	81.3%	81.7%	80.3%

## Line & Load Regulation

Specification : Line Regulation Ch1. ±25mV / Ch2. ±240mV

Load Regulation Ch1. ±25mV / Ch2. ±480mV

V <sub>in</sub>			AC85V	AC110V	AC220V	AC264V	Line Regulation [mV]
		0%	CH1		5.00	5.00	5.00
CH2			24.11	24.11	24.07	24.10	40
50%	CH1		4.99	4.99	4.99	5.00	10
	CH2		24.20	24.19	24.12	24.13	80
100%	CH1		4.99	4.99	4.99	4.99	0
	CH2		24.34	24.37	24.25	24.22	150
Load Regulation [mV]	CH1		10	10	10	10	-
	CH2		230	260	180	120	

## Leakage Current

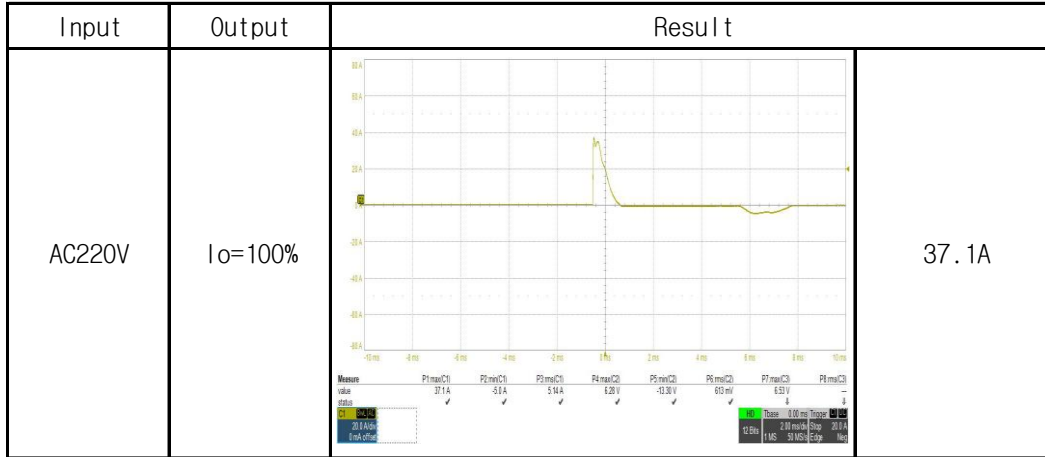
Specification : 2mA

	110V	220V
Line L [mA]	0.24mA	0.39mA
Line N [mA]	0.23mA	0.39mA

# RP35-BHW

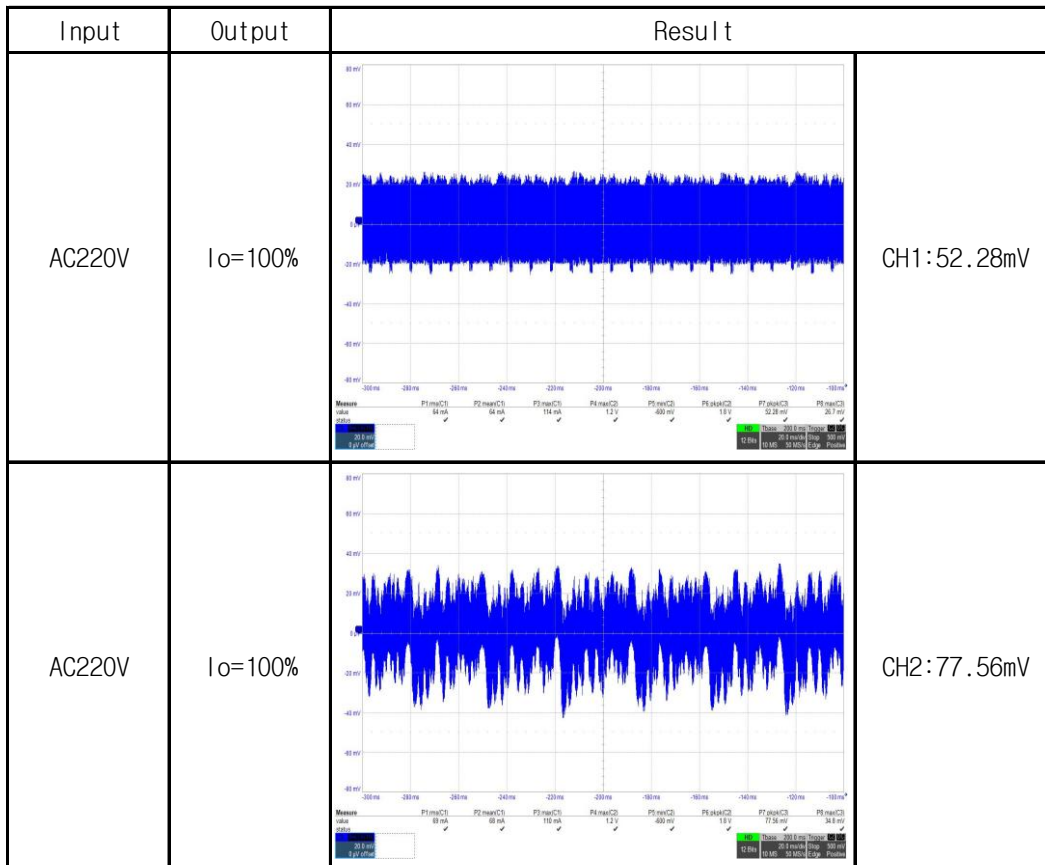
## Inrush Current

Specification : 45A



## Ripple & Noise

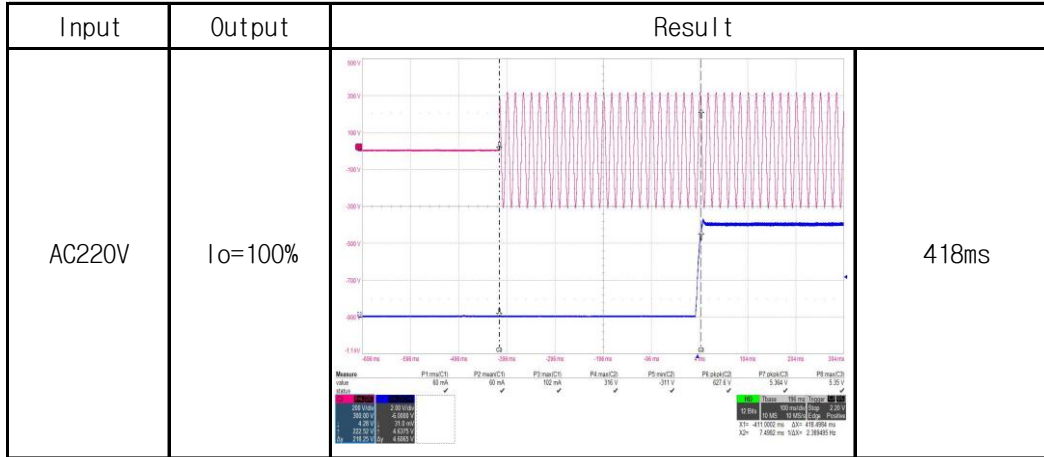
Specification : Ch1. 80mV / Ch2. 120mV



# RP35-BHW

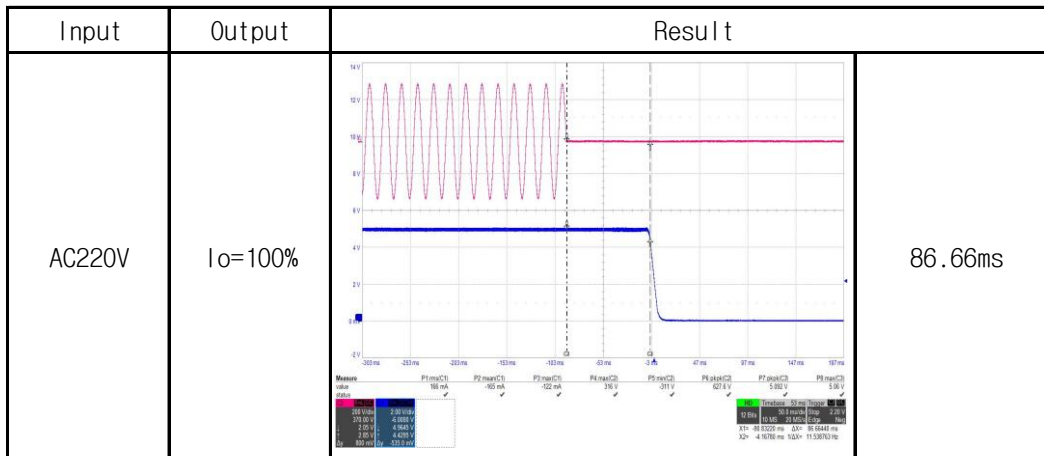
## Turn on Time

Specification : 500ms



## Hold up Time

Specification : 80ms



## 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



# RP35-DDW

## Input Current & Efficiency

Specification : 0.8A / 80% @ AC110V , 0.55A / 80% @ AC220V

I <sub>o</sub>		V <sub>in</sub>	AV85V	AC110V	AC220V	AC264V
		0%	Input Current [A]		0.027	0.032
Efficiency [%]			-	-	-	-
50%	Input Current [A]		0.450	0.375	0.245	0.222
	Efficiency [%]		82.0%	82.4%	79.2%	77.1%
100%	Input Current [A]		0.694	0.696	0.437	0.386
	Efficiency [%]		81.2%	82.4%	82.9%	82.0%

## Line & Load Regulation

Specification : Line Regulation Ch1. ±60mV / Ch2. ±60mV

Load Regulation Ch1. ±360mV / Ch2. ±360mV

V <sub>in</sub>			AC85V	AC110V	AC220V	AC264V	Line Regulation [mV]
		0%	CH1		12.03	12.03	12.03
CH2			12.09	12.08	12.07	12.07	20
50%	CH1		12.03	12.03	12.03	12.03	0
	CH2		12.17	12.16	12.13	12.13	40
100%	CH1		12.03	12.03	12.03	12.03	0
	CH2		12.17	12.17	12.16	12.15	20
Load Regulation [mV]	CH1		0	0	0	0	-
	CH2		80	90	90	80	

## Leakage Current

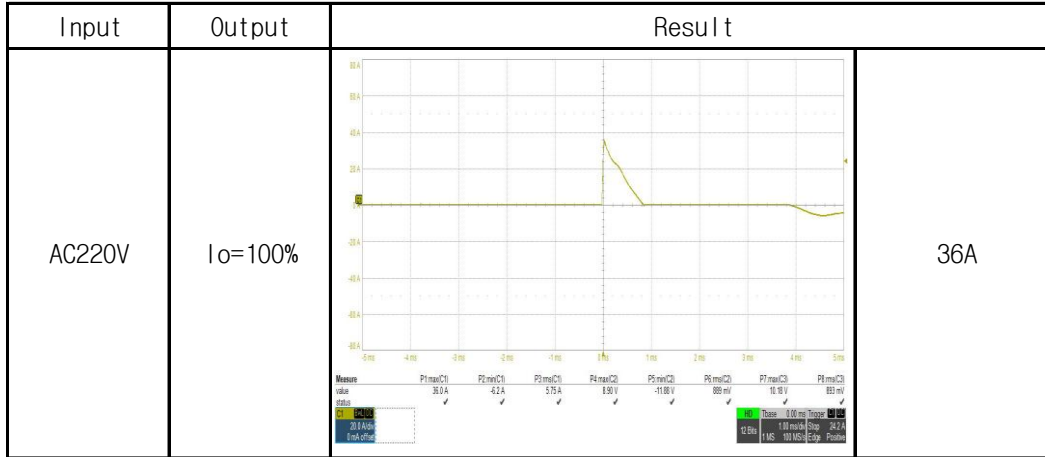
Specification : 2mA

	110V	220V
Line L [mA]	0.21mA	0.37mA
Line N [mA]	0.21mA	0.38mA

# RP35-DDW

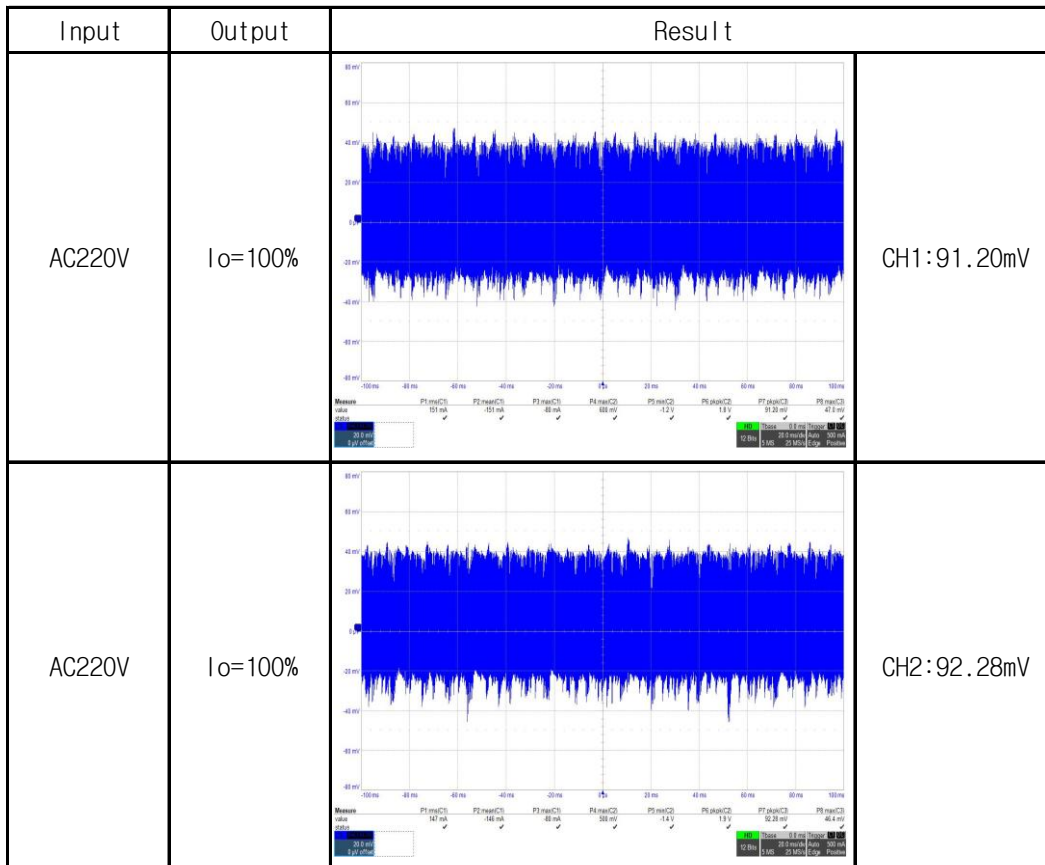
## Inrush Current

Specification : 45A



## Ripple & Noise

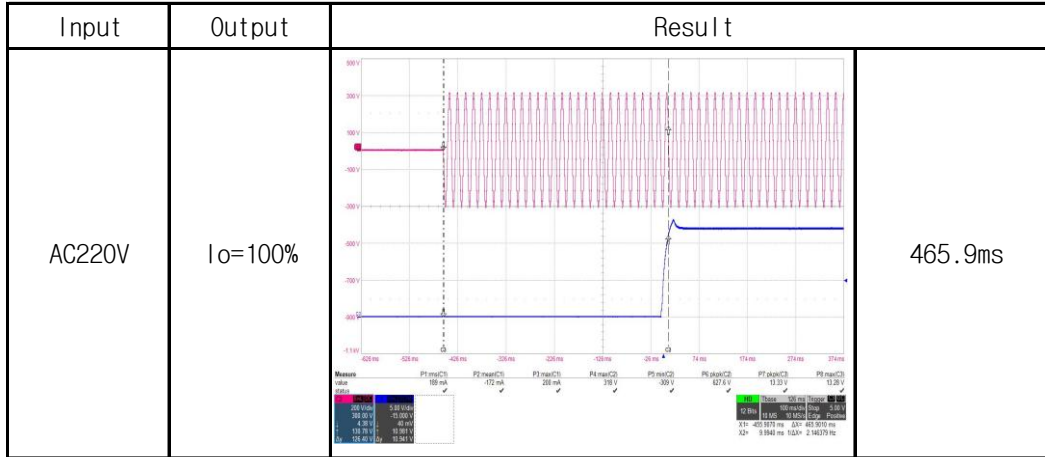
Specification : Ch1. 120mV / Ch2. 120mV



# RP35-DDW

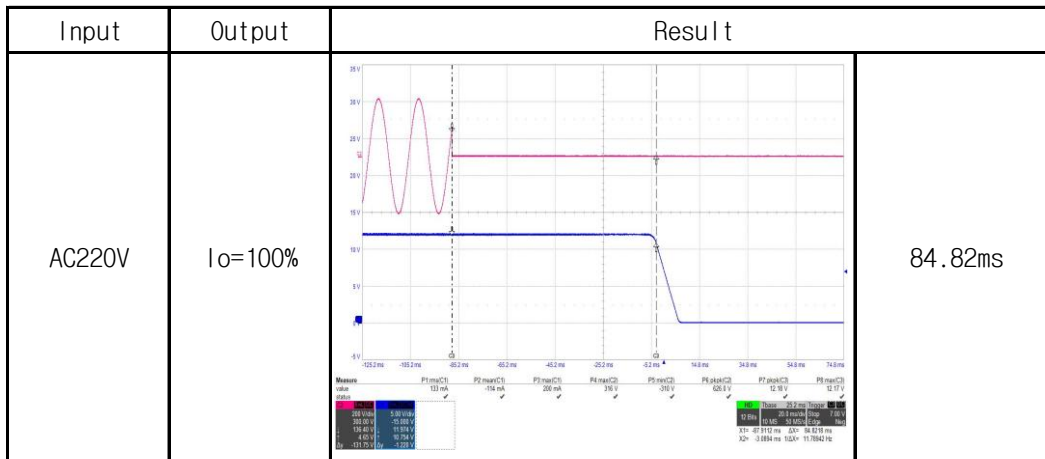
## Turn on Time

Specification : 500ms



## Hold up Time

Specification : 80ms



## 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

# RP35-EEW

## Input Current & Efficiency

Specification : 0.8A / 80% @ AC110V , 0.55A / 80% @ AC220V

I <sub>o</sub>		V <sub>in</sub>	AV85V	AC110V	AC220V	AC264V
		0%	Input Current [A]		0.027	0.033
Efficiency [%]			-	-	-	-
50%	Input Current [A]		0.446	0.371	0.243	0.222
	Efficiency [%]		83.3%	84.3%	80.6%	77.8%
100%	Input Current [A]		0.687	0.691	0.435	0.388
	Efficiency [%]		82.9%	84.0%	84.2%	82.9%

## Line & Load Regulation

Specification : Line Regulation Ch1. ±75mV / Ch2. ±75mV

Load Regulation Ch1. ±450mV / Ch2. ±450mV

V <sub>in</sub>			AC85V	AC110V	AC220V	AC264V	Line Regulation [mV]
		0%	CH1		15.07	15.07	15.07
CH2			15.28	15.28	15.24	15.25	40
50%	CH1		15.07	15.07	15.08	15.08	10
	CH2		15.21	15.21	15.20	15.19	20
100%	CH1		15.07	15.07	15.08	15.09	20
	CH2		15.22	15.22	15.23	15.24	20
Load Regulation [mV]	CH1		0	0	10	20	-
	CH2		70	70	40	60	

## Leakage Current

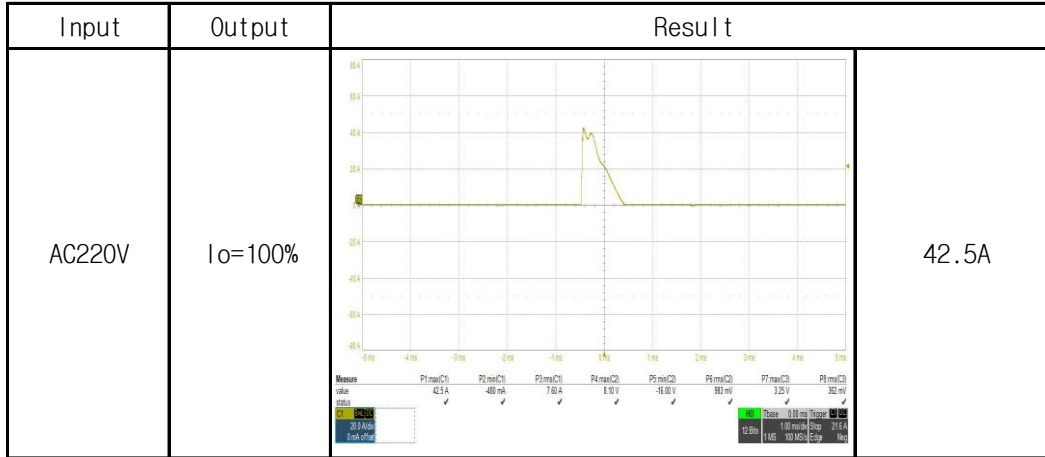
Specification : 2mA

	110V	220V
Line L [mA]	0.24mA	0.40mA
Line N [mA]	0.22mA	0.40mA

# RP35-EEW

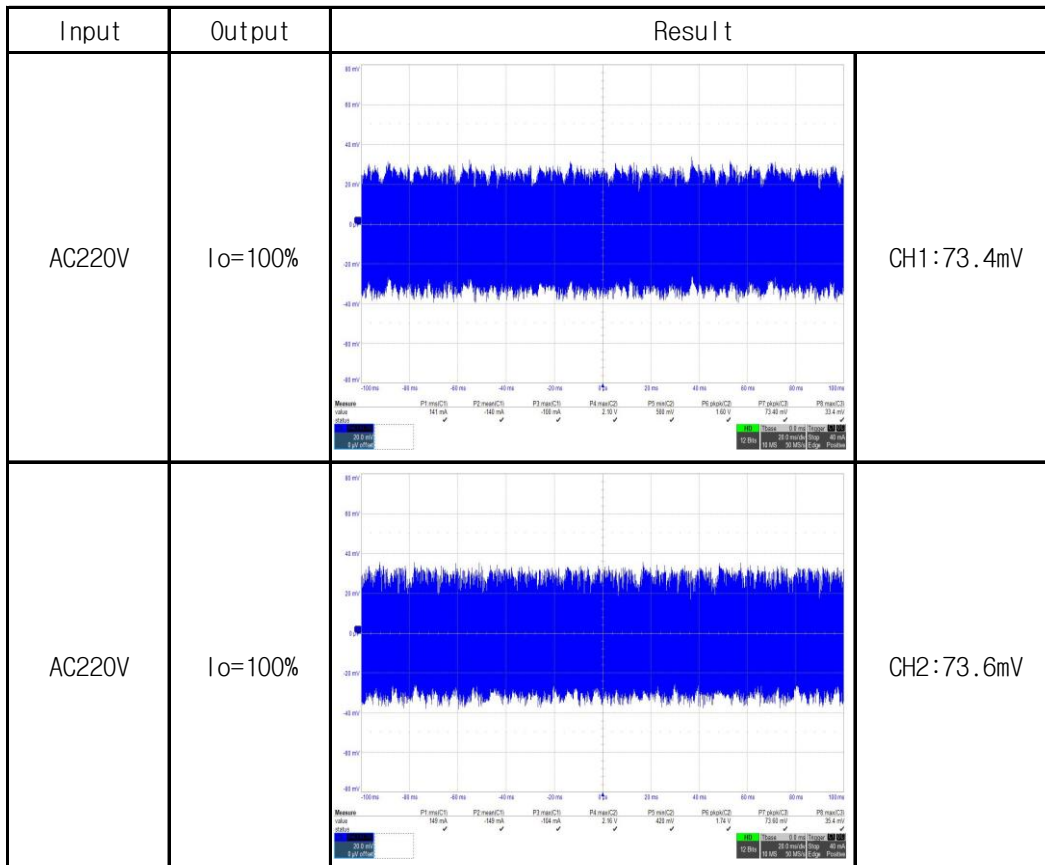
## Inrush Current

Specification : 45A



## Ripple & Noise

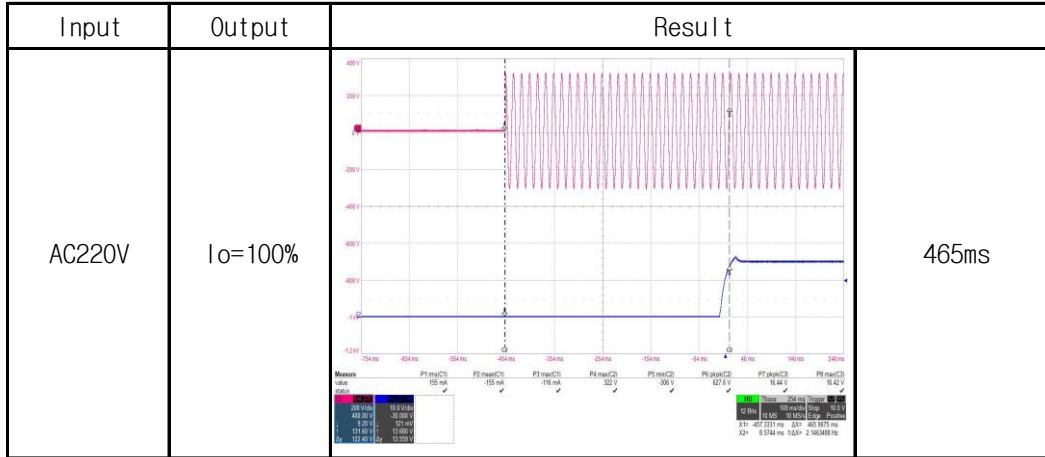
Specification : Ch1. 120mV / Ch2. 120mV



# RP35-EEW

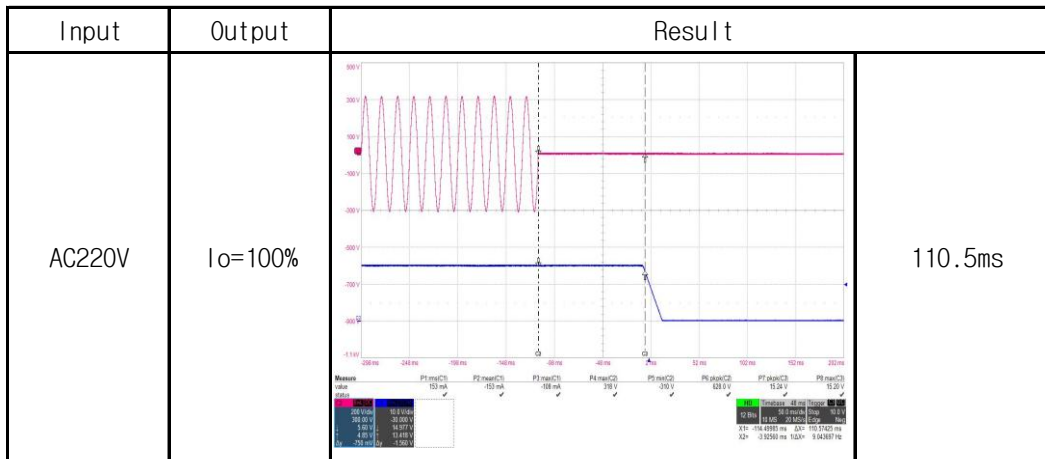
## Turn on Time

Specification : 500ms



## Hold up Time

Specification : 80ms



## 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