



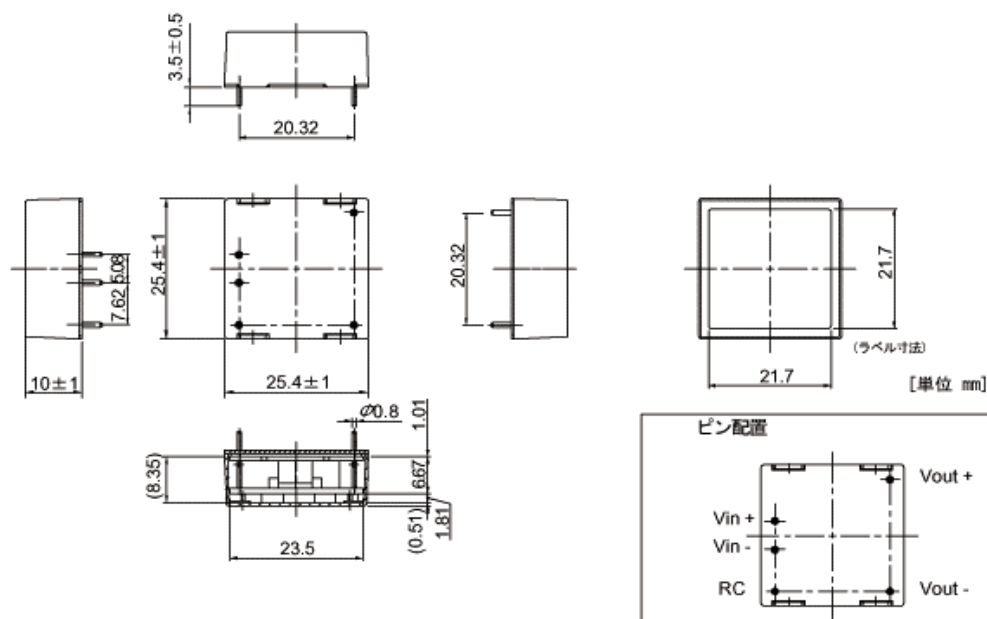
## Features

- Ultra compact size : 25.4x25.4x10.2mm
- Remote On/Off
- Primary-Secondary Isolation Voltage DC2200V(AC 1500V)

## Models

Type	MODEL	Input Voltage(V)	Output Voltage(V)	Output Current(A)	Dimension (W x H x D mm)
15W	MSS15-2403	24V(18V~36V)	3.3	0~3.5	25.4 x 10 x 25.4 (1.0 x 0.4 x 1 inches)
	MSS15-2405		5	0~3.0	
	MSS15-2412		12	0~1.25	
	MSS15-2415		15	0~1.0	
	MSS15-4803	48V(36V~75V)	3.3	0~3.5	
	MSS15-4805		5	0~3.0	
	MSS15-4812		12	0~1.25	
	MSS15-4815		15	0~1.0	

## External View



## Specification

### Specification MSS15 24V Input Model

	Model		MSS15-2403	MSS15-2405	MSS15-2412	MSS15-2415
Input Specification	Input Range		24V (18~36V)			
	Voltage	V	3	5	12	15
	Current	A	0~3.5	0~3.0	0~1.25	0~1.0
	Efficiency	%	84	86	86	85
	Start-Up time		20mS typ			
Output Specification	Output voltage set accuracy		±5%			
	Ripple & Noise * 1	mV	200	200	150	150
	Input Regulation	mV	20	20	20	20
	Load Regulation(10~100%Load)	mV	25	25	25	25
	Temperature Coefficiency	mV	0.02%/°C max			
	Drift	mV	(0.5%+15mV)max / 8H(1hour later)			
	Over Current Protection		Works Over 105% of rating and recovers automatically. Over current protection protects the unit from short-circuit and over-current condition of less than 20sec. Leaving short circuit or using under over-current cause the unit to malfunction.			
Others	Dimension	mm	25.4 x 10.0 x 25.4 (W x H x D)			
	Weight	g	12			

\*1 Please refer to "Measuring method of Ripple and Noise" in Operation manual as for measuring method.

### Specification MSS15 48V Input Model

	Model		MSS15-4803	MSS15-4805	MSS15-4812	MSS15-4815
Input Specification	Input Range		48V (36~75V)			
	Voltage	V	3	5	12	15
	Current	A	0~3.5	0~3.0	0~1.25	0~1.0
	Efficiency	%	85	87	87	86
	Start-Up time		30mS typ			
Output Specification	Ripple & Noise * 1	mV	200	200	150	150
	Input Regulation	mV	20	20	20	20
	Load Regulation(10- 100%負荷)	mV	25	25	25	25
	Temperature Coefficient	mV	0.02%/°C max			
	Drift	mV	(0.5%+15mV)max / 8H(1hour later)			
	Over Current Protection		Works Over 105% of rating and recovers automatically. Over current protection protects the unit from short-circuit and over-current condition of less than 20sec. Leaving short circuit or using under over-current cause the unit to malfunction.			
Others	Dimension	mm	25.4 x 10.0 x 25.4 (W x H x D)			
	Weight	g	12			

\*1 Please refer to "Measuring method of Ripple and Noise" in Operation manual as for measuring method.

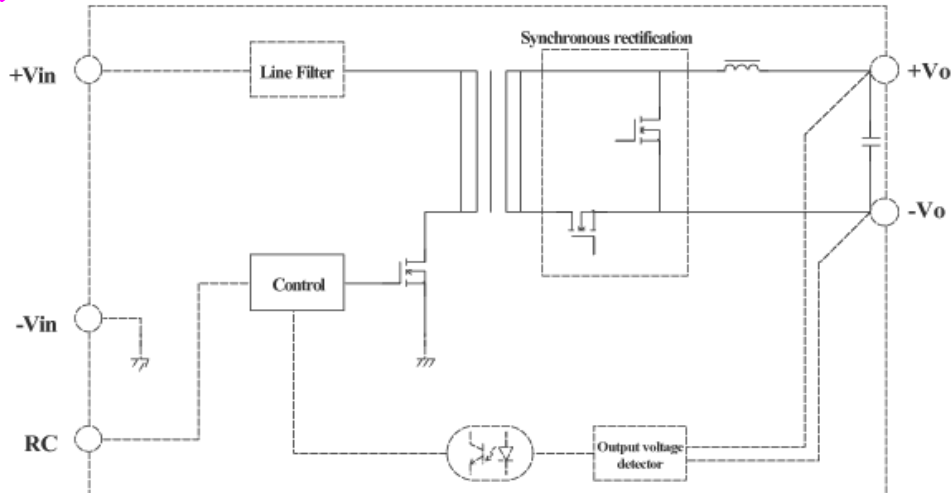
### General Specification

Input Voltage Range	24V Model(18~36V), 48V Model(36V~75V)	
Temperature	Operating Temperature	-20 - 60°C※
	Storage Temperature	-20 - 85°C
Humidity	Operating Temperature	20 - 85%
	Storage Temperature	condensation
Isolation Voltage (Room temperature and Humidity)	Primary-Secondary DC500V	More than 100MΩ
	Primary-Case DC500V	More than 100MΩ
	Secondary-Case DC500V	More than 100MΩ
Withstand Voltage	Primary-Secondary faradic current 10mA	2200V
	Primary-Case faradic current 10mA	500V
	Secondary-Case faradic current 10mA	500V
Vibration	10 - 55Hz 0.5mm 3axis 30minute each	
Impact	20G(3axis each)	
Cooling Method	Naturally	
EMI	FCC Part15 EN55022 VCCI(B)	

※Please Refer to the Operation Manual.

## Block Diagram

◇MSS15



## Operation Manual

### 1. Pines Discription

Please refer to their own specifications.

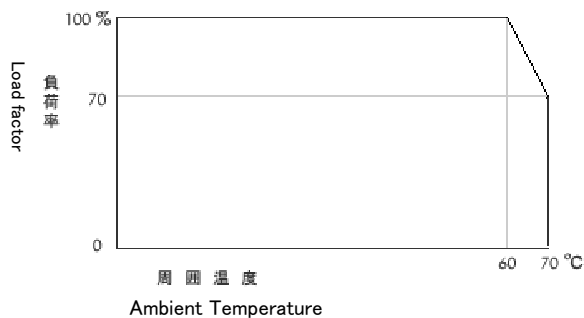
### 2. Over Current Protection

If output current exceeds more 105% than rated output of the power supply, The overcurrent protection will activate and output voltage will drop. The power supply will function normally once the overcurrent condition has been removed.  
 \*Over current protection protects the unit from short-circuit and over-current condition of less than 20sec. Using under over-current cause the unit to malfunction

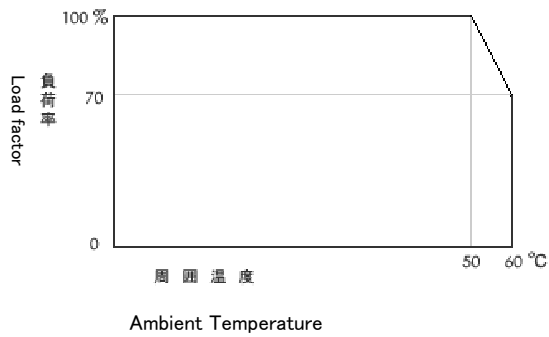
### 3. Operation Temperature and Output Capability

The range of temperature over which a power supply can be operated safely is critical to the overall life of the power supply. Operate the power supply in safe ambient condition by considering the necessary convection or forced air cooling requirement.

MSS15-2403, MSS15-2405, MSS15-4803, MSS4805

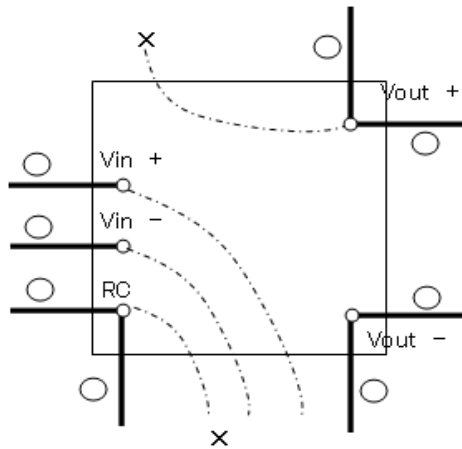


MSS15-2412, MSS15-2415, MSS15-4812, MSS4815



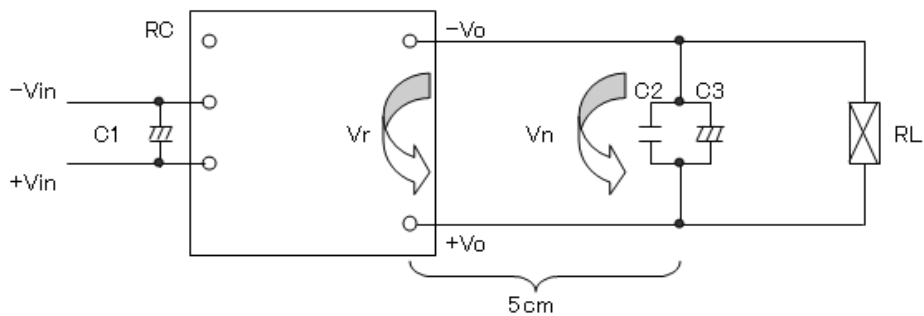
#### 4. Pattern Layout

If patterns are put under the power supply unit, it can be caused of increasing conduction noise and cut-down of efficiency. Please put patten away from the power supply unit. If DC output pattern put under the power supply unit, It may makes output noise larger. Please put patten away from the power supply unit.



#### 5. Measuring method of Ripple and Noise

Measurement condition



Vr: Testing point of output voltage, output regulation.

Vn: Testing point of ripple/noise (using bayonet probe).

C1: 33uF electrolytic capacitor

C2: 1uF film capacitor

C3: 10uF electrolytic capacitor

\* In using, Please connect about 33uF electrolytic capacitor to the input terminal.

**Remote On/Off**

ON : RC Pin Open

OFF: RC Pin — -Vin Pin Short

( 25°C)

**6.Soldering**

Dip 240°C~255°C ((within five seconds)

Hand solder 350±10°C (within three seconds)

**7.Handling Instruction**

Using too large of capacitor (10,000  $\mu$ F) on your load may prevent the power supply from providing the rated output voltage. Please consider load capacitance in your application.

**8.Warrantly**

KAGA Components offers a 3 year warranty and we will repair or replace the power supply at no charge to the customer, provided the power supply has not been determined damaged or defective as a direct result of misuse or mishandling by the user.

**9.Others**

These power supplies are our standard products and designed for general purpose applications. They are not designed for use in life support systems, equipment used in hazardous environments, or nuclear control systems.