

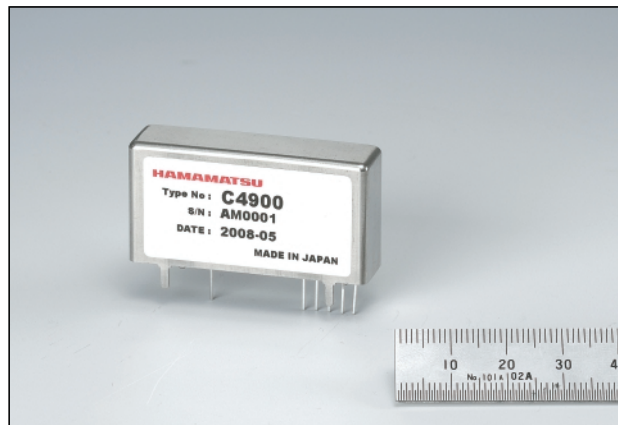
The C4900 series is an on-board type high voltage power supply, with a design that aims at providing both "compactness and high performance".

The newly developed circuit achieves high performance and low power consumption. The C4900 series in addition provides enhanced protective functions yet is offered at lower costs.

The C4900 and -01 are designed for negative output, while the C4900-50 and -51 have positive output.

## FEATURES

- Low Ripple / Noise
- Very compact and lightweight
- High stability
- Low power consumption
- Quick response
- Ample protective functions



## SPECIFICATIONS

Parameter		C4900	C4900-01	C4900-50	C4900-51	Unit	
Input Voltage Range		+15 ± 1	+12 ± 0.5	+15 ± 1	+12 ± 0.5	V	
Input Current <sup>(A)</sup>	with no load	Typ. 14	15	14	15	mA	
	with full load	Typ. 90	95	90	95		
Variable Output Voltage Range		0 to -1250		0 to +1250		V	
Specification Guaranteed Output Voltage Range		-200 to -1250		+200 to +1250		V	
Output Current	Max.	0.6	0.5	0.6	0.5	mA	
Line Regulation Against ±1 V or ±0.5 V Input Change <sup>(A)(B)</sup>	Typ.	±0.01				%	
Load Regulation Against 0 % to 100 % Load Change <sup>(A)</sup>	Typ.	±0.01				%	
Ripple / Noise (p-p) <sup>(A)(B)</sup>	Typ.	0.003				%	
Output Voltage Control	By external controlling voltage (0 V to +5 V) or external potentiometer (50 kΩ ±2.5 kΩ)						
Controlling Voltage Input Impedance	Typ.	80				kΩ	
Reference Voltage Output	Typ.	+5.13 (with 50 kΩ external potentiometer)				V	
Output Voltage Setting (Absolute Value)	Typ.	[(Controlling Voltage × 250) ± 0.5 %] ± 3				V	
Output Voltage Rise Time (0 % → 99 %) <sup>(A)(B)</sup>	Typ.	50				ms	
Temperature Coefficient <sup>(A)(B)</sup>	Typ.	±0.01				% / °C	
Operating Ambient Temperature <sup>(A)(B)</sup>	0 to +50						°C
Operating Ambient Humidity <sup>(C)</sup>	Below 80 %			Below 80 % <sup>(D)</sup>			—
Storage Temperature	-20 to +70						°C
Storage Humidity <sup>(C)</sup>	Below 80 %						—
Weight	31						g
Protective Functions	Units protected against reversed power input, reversed / excessive controlling voltage input, continuous overloading / short circuit in output						—

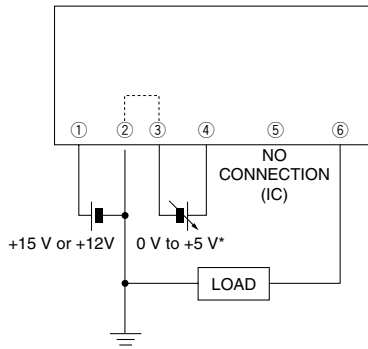
**NOTE:** (A)At maximum output voltage. (B)At maximum output current. (C)No condensation.

(D)At 0 °C to +40 °C. Please contact our sales office if the operating ambient temperature is expected to be higher than +40 °C.

# COMPACT HIGH VOLTAGE POWER SUPPLY C4900 SERIES

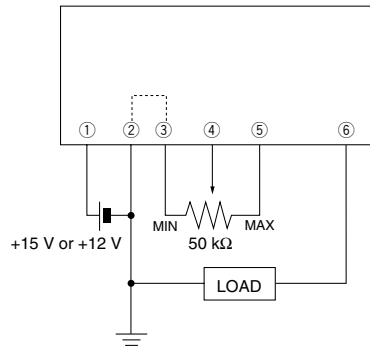
Figure 1: Connection Diagrams

## ● OUTPUT VOLTAGE CONTROL BY EXTERNAL VOLTAGE



\*The instability in the external controlling voltage should be minimised as it directly affects the output voltage quality.

## ● OUTPUT VOLTAGE CONTROL BY EXTERNAL POTENTIOMETER



### PIN ASSIGNMENT

- ① +15 V or +12 V IN
- ② GND 1 (Input/Output GND)
- ③ GND 2 (Controlling Voltage GND)
- ④ HV ADJ (Controlling Voltage Input)
- ⑤ Vref OUT (Reference Voltage Output: 5.13V Typ.)
- ⑥ HV OUT

- The housing is internally connected to pin ②.
- Pins ② and ③ are internally connected.

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Figure 2: Output Voltage Controlling Characteristic

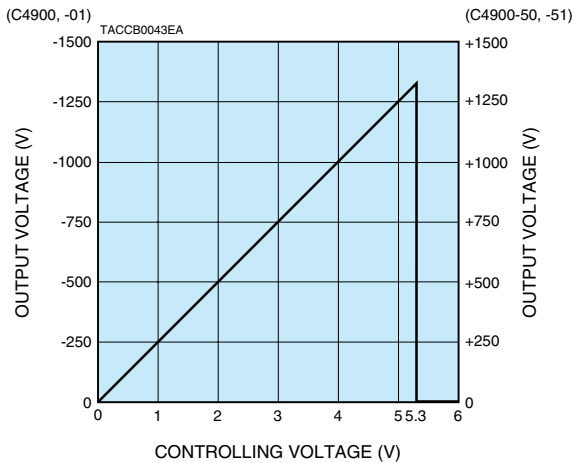
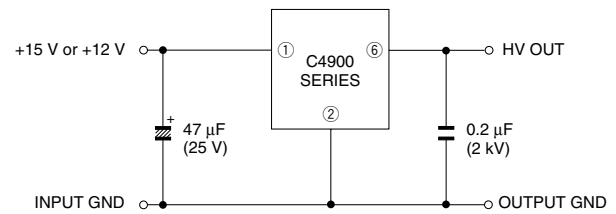


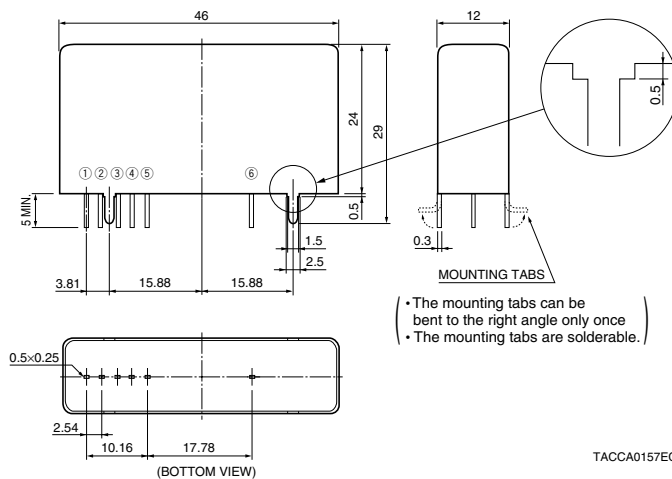
Figure 3: Example of Ripple / Noise Reduction Circuit



\* The ripple / noise can be halved by adding capacitors as illustrated above.

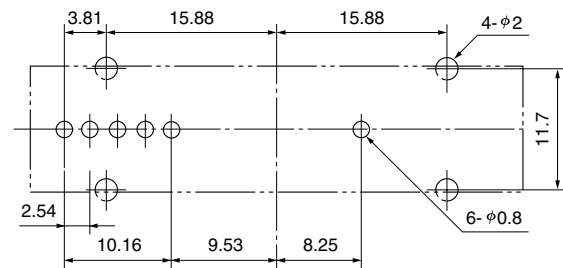
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Figure 4: Dimensional Outline (Unit: mm)



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### Drilling Data for PC Board (Soldering Face)



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\* PATENT: USA No.5548502, 5568343 JAPAN: No.2758552, 2784136 EUROPE: No.641066, 649222

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