

Micro APD Series (μ APD Series)

PCB mount, ultra compact, regulated high voltage DC/DC converter



- Pout: 100mWatt
- Output voltage: from 0 to 100Vdc
- Input voltage 5Vdc or 12Vdc
- Output proportional to input
- Short circuit protection
- Low ripple
- No minimum load
- 11 x 11 x 11mm



Features

The smallest regulated DC-DC power supply for APDs which require a bias voltage up to 100V

Low ripple (<25mVpp)	Low noise due to metal shielding	Tightline/load regulation
Miniature and lightweight	PCB mount, through holes	Dimension: 11x11x11mm
Excellent TC: 15ppm/°C	Excellent Load stability: 20% no load/full load	Output short-circuit protected
RoHS compliant product	Potted in an UL resin	

Parameters	Specifications
Input voltage V_{in} (pins 1 & 2)	5Vdc \pm 0.5Vdc or 12Vdc (reverse: -0.2V)
Input current	For 0Vdc output voltage: <1.6mA For 100Vdc, no load: < 3mA At full output voltage, full load: <50mA
HV output V_{out} (pin 4)	0 to 100Vdc programmable
Polarity	Fixed positive or negative
HV setting (pin 3)	Via external voltage source 0/2.5Vdc \pm 0.1% accuracy at full scale full scall (do not exceed 2.5Vdc).
Max. output current I_{out}	1mA nominal
Load voltage regulation	\pm 0,01 % of full output voltage for no load to full load.
Line voltage regulation	\pm 0,01 % of full output voltage over specified input voltage range
Residual ripple	<25mV peak-to-peak - ripple can be reduced to less than 5mVp-p by adding an external 100nF/100V X7R 0805 SMD ceramic capacitor, or to less than 2mVp-p by adding an external 100nF/200V polyester capacitor.
Temperature coefficient	<15ppm/°C
Output HV monitoring	Not available on this product
Output reference voltage	Not available on this product
Operating temperature	Not available on this product
Operating temperature	-10°C to + 50°C
Storage temperature	-10°C to + 70°C
Safeguards	Output current internally limited Soft start feature: the start is guaranteed without overshoot.
Shielding	The case must be grounded to the customer's circuit board.



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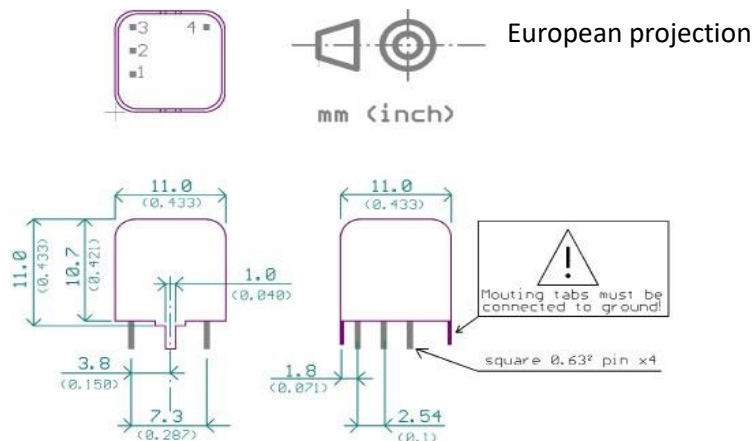
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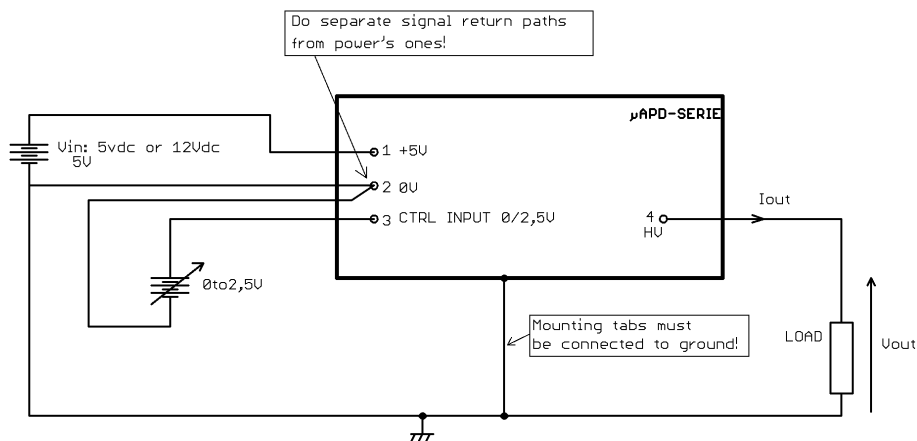
Pin function

Input	#1: Supply V_{in} #2: 0V supply GND
HV setting	#3: Control input 0V to 2.5Vdc
HV output	#4: V_{out}

Mechanical details (not to scale) - All dimensions in inch



Functional diagram



How to order

Former part name system	Current part name system	Output polarity	Input voltage
μ 5P101102	μ 5P0.1-0.1	Positive	5V
μ 5N101102	μ 5N0.1-0.1	Negative	5V
μ 12P5P101102	μ 12P0.1-0.1	Positive	12V
μ 12N101102	μ 12N0.1-0.1	Negative	12V



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