

“XS” Series

PCB-mount microsize, regulated, high-voltage DC-DC converter



MAKING HIGH VOLTAGE
EASIER!®



Vin: 5Vdc
Vout: 0 to 100V
Pout: 100mW

The “XS” Series extra-small high-voltage power supplies at only 0.08in³ [1.3cc] is the smallest regulated DC-DC high-voltage power supply for bias supplies, APDs and MPPCs that need a bias voltage ranging from 0 to 100V.

- extra-small
- lightweight
- PCB flat mounting
- tight line/load regulation
- output current limit protection
- temperature coefficient < 50ppm/°C
- low ripple (<50mV p. to p.)
- low noise due to metal shielding

Parameters	Specifications
Input voltage Vin (pins 1 & 2)	5Vdc ±0.5Vdc (recommended) maximum: 12Vdc (reverse: -0.2V)
Input current	for 0V output voltage: <1.6mA for 100V, no load: < 3mA at full output voltage, full load: <50mA
HV output Vout (pin 4)	0 to 100V programmable
Polarity	fixed positive or negative
HV setting (pins 3)	via external voltage source 0/2.5V accuracy: ±1% at full scale
Max. output current Iout	1mA nominal
Load voltage regulation	±0.01% of full output voltage for no load to full load
Line voltage regulation	±0.01% of full output voltage over specified input voltage range
Residual ripple	<50mV peak-to-peak – ripple can be reduced to less than 10mV by adding an external 100nF small CMS capacitor
Temperature coefficient	<50ppm/°C
Output HV monitoring	not available on this product
Output reference voltage	not available on this product
HV power ON/OFF	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 has to be grounded to the customer's circuit board

Typical Applications	
▪ Bias Supplies	
▪ Avalanche Photo Diodes (APD)	
▪ Silicon Photomultipliers (SiPM)	
▪ Multi-pixel Photon Counter (MPPC)	

Package Configuration	
Case material	tin steel plate thickness 0.5mm
Case dimensions LxWxH	11 x 11 x 11 mm
Pins	0.63 x 0.63mm square pins, length: >2mm
Weight	5g
Insulation	fully potted in an epoxy resin

Pin Connections	
Line input:	1.Vin
	2.GND
HV setting:	3.control input
HV output:	4.Vout

Ordering Information

0.1XS5-P0.1

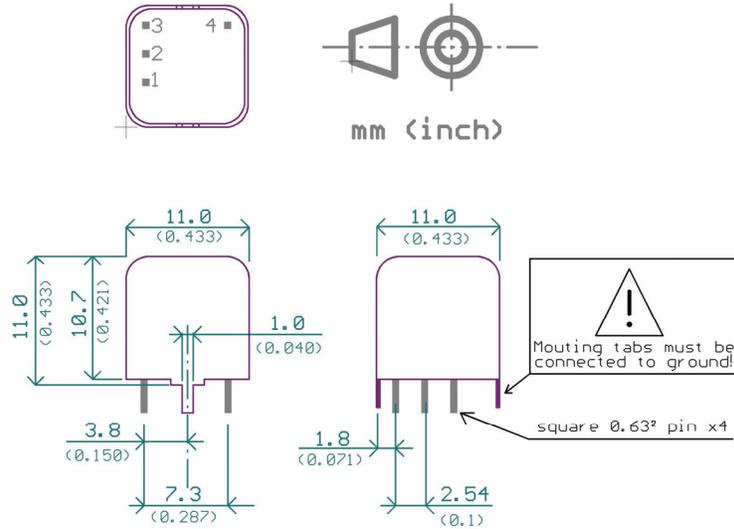
P: positive output voltage
N: negative output voltage

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Mechanical Dimensions



Functional Diagram

