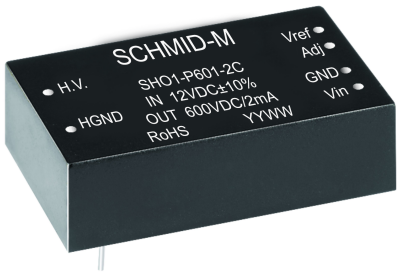
DC/DC Converter
SHO1-P601-2C

1.2W, Fixed input voltage,
non-isolated & regulate single output



FEATURES

- Low ripple
- 0-600V continuous output with linear adjustable function
- Output short circuit, over-current protection
- Operating temperature range: -40℃ to +85℃
- CE meet CISPR22/EN55022 CLASS A, without external components
- RE meet CISPR22/EN55022 CLASS B, without external components

SHO1-P601-2C is 1.2W DC-DC product with fixed input voltage, operating temperature of -40℃ to +85℃, output short circuit protection, over-current protection. Widely used in ultrasonoscope, Photomultiplier Tubes, Avalanche Photodiodes , Solid State Detectors , EO Lenses, Piezo Devices, Capacitor Charging fields.

Selection Guide

Certification	Part No.	Input Voltage (VDC)		Output Voltage(VDC)		Output Current (mA) (Max./Min.)
		Nominal (Range)	Max.	Nominal	Range	
--	SHO1-P601-2C	12 (10.8-13.2)	15	600	0-600	2/0

Input Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Current（no-load）	Nominal input / output voltage	--	--	60	mA
Starting Time	Nominal input / output voltage and constant resistance load	--	--	120	ms
Starting Voltage		--	--	10.8	VDC
Input Under-voltage Protection	Starting voltage	--	--	10.8	
	Shutdown voltage	7.8	--	--	
Input Filter		Pi filter			
Hot Plug		Unavailable			

Output Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Adjustment Point Accuracy	See Fig 1	--	±1	±2	%
Line Regulation	Input voltage range	--	±0.05	±0.1	
Load Regulation	0%-100% load	--	±0.05	±0.1	
Temperature Coefficient	Nominal output voltage & Full load	--	--	±0.01	%/℃
Time Coefficient	Nominal output voltage & Full load, works for 8 hours after preheating for 30 minutes	--	--	±0.05	%/hour
Ripple		--	15	30	mVp-p
Output Over-current Protection	Input voltage range	110	--	200	%Io
Short circuit Protection		Continuous, self-recovery			

General Specifications

Item	Operating Conditions	Min.	Typ.	Max.	Unit
Operating Temperature		-40	--	+85	℃
Storage Temperature		-55	--	+125	
Pin Welding Resistance Temperature	Welding spot is 1.5mm away from the casing, 10 seconds	--	--	+300	
Storage Humidity	Non-condensing	5	--	95	%RH
Switching Frequency	PWM mode	--	95	--	KHz
MTBF	MIL-HDBK-217F@25℃	1000	--	--	K hours

Physical Specifications

Casing Material	Black flame-retardant and heat-proof plastic (UL94 V-0)
Dimension	46.00*25.70*15.50 mm
Weight	32g(Typ.)
Cooling Method	Free air convection

EMC Specifications

EMI	CE	CISPR22/EN55022 CLASS A (without external component)
	RE	CISPR22/EN55022 CLASS B (without external component)

Product Characteristic Curve

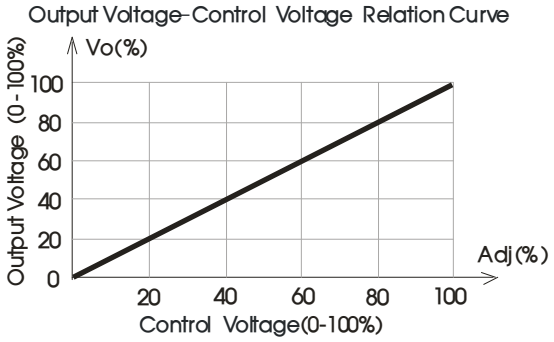


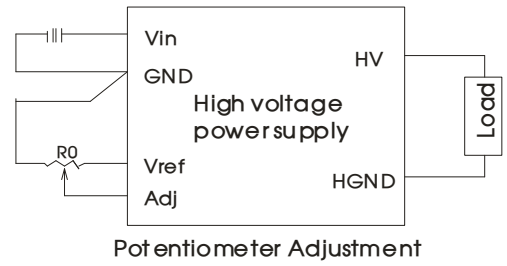
Fig. 1

Notes:100%Vo=602VDC（Typ.），100%Adj=2.5VDC（Typ.）

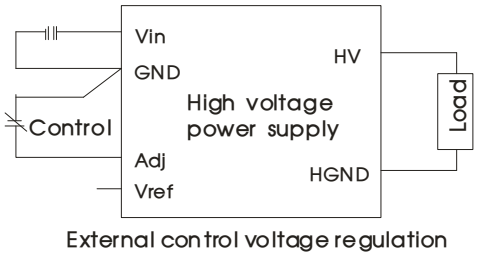
Design Reference

1. Typical application

Output voltage can be programmed by external voltage or potentiometer,See Fig 2



Potentiometer Adjustment



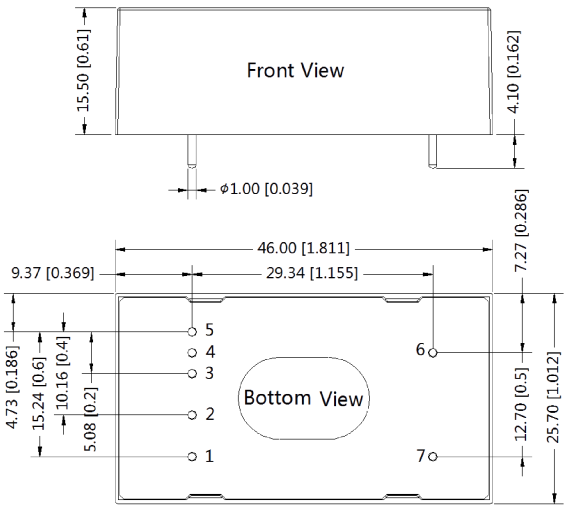
External control voltage regulation

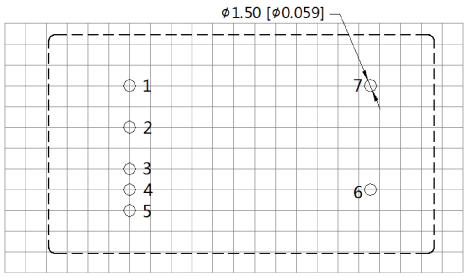
R0	Vref	Control Voltage
10K Adjustable Resistance	2.5VDC	0-2.5VDC

Fig. 2 Output Voltage External Programming

Horizontal Package Dimensions and Recommended Layout

THIRD ANGLE PROJECTION





Note:Grid 2.54*2.54mm

Pin-Out	
Pin	Function
1	Vin
2	GND
3	No pin
4	Adj
5	Vref
6	HV
7	GND

Note:
Unit: mm[inch]
Pin diameter tolerances: ±0.10[±0.004]
General tolerances: ±0.50[±0.020]

Notes:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75%RH with nominal input /output voltage and rated output load;
2. All index testing methods in this datasheet are based on Company's corporate standards;
3. We can provide product customization service, please contact our technicians directly for specific information;
4. Specifications are subject to change without prior notice.