

Size: 1.81in x 1.01in x 0.61in
(46mm x 25.7mm x 15.50mm)

FEATURES

- Input Voltage Range of 10.8~132VDC
- Low Ripple
- Non-Isolated & Regulated Single Output
- RoHS Compliant
- 3 Years Warranty
- Over Current and Short Circuit Protection
- 0-600V Continuous Output with Linear Adjustable Function
- Meets CE & RE Without External Components

APPLICATIONS

- Industrial Robotics
- Ultrasonoscope
- Photomultiplier Tubes
- Avalanche Photodiodes
- Solid State Detectors
- EO Lenses
- Piezo Devices
- Capacitor Charging Fields

DESCRIPTION

The RBA1P2 series of DC/DC converters offers 1.2 watts of output power in a very compact 1.81” x 1.01” x 0.61” package. This series provides 0-600V continuous output with linear adjustable function with a fixed input voltage. In addition to its low ripple, the RBA1P2 series features over current and short circuit protection, and RoHS compliance. This series meets CE and RE EMI specifications without any external components. Please contact factory for order details.

MODEL SELECTION TABLE

Model Number	Input Voltage		Output Voltage		Output Current		Output Power
	Nominal Range	Max.	Nominal	Range	Min Load	Max Load	
RBA1P2-12S600	12VDC (10.8~13.2VDC)	15VDC	600VDC	0-600VDC	0mA	2mA	1.2 Watts

SPECIFICATIONS

All specifications are based on 25°C, Humidity <75%RH, Nominal Input/Output Voltage, and Rated Output Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage Range	Nominal	10.8	12	13.2	VDC
	Maximum			15	
Input Current	No Load, Nominal Input & Output Voltage			60	mA
Starting Voltage				10.8	VDC
Input Under-Voltage Protection	Starting Voltage			10.8	VDC
	Shutdown Voltage	7.8			
Input Filter		Pi Filter			
Hot Plug		Unavailable			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Adjustment Point Accuracy			±1	±2	%
Line Regulation	Input Voltage Range		±0.05	±0.1	%
Load Regulation	0%-100% Load		±0.05	±0.1	%
Output Power		See Table			
Output Current		See Table			
Ripple			15	30	mVp-p
Starting Time	Nominal Input & Output Voltage, Constant Resistance Load			120	mS
Time Coefficient	Nominal Input & Output Voltage, Full Load, works for 8 hours after preheating for 30 minutes			±0.05	%/hour
Temperature Coefficient	Nominal Output Voltage & Full Load			±0.01	%/ºC
PROTECTION					
Short Circuit Protection	Input Voltage Range	Continuous, Self-Recovery			
Over Current Protection	Input Voltage Range	110		200	%Io
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature		-40		+85	ºC
Storage Temperature		-55		+125	ºC
Storage Humidity	Non-Condensing	5		95	%RH
Pin Welding Resistance Temperature	Welding spot is 1.5mm away from the casing, 10 seconds			+300	ºC
Cooling Method		Free Air Convection			
MTBF	MIL-HDBK-217@25ºC	1000			K hours

SPECIFICATIONS

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SPECIFICATION	TEST CONDITIONS		Min	Typ	Max	Unit
GENERAL SPECIFICATIONS						
Switching Frequency	PWM Mode			95		KHz
PHYSICAL SPECIFICATIONS						
Weight				1.13oz (32g) typ.		
Dimensions (L x W x H)				1.81in x 1.01in x 0.61in (46mm x 25.7mm x 15.50mm)		
Case Material				Black Flame-Retardant & Heat-Proof Plastic (UL94 V-0)		
SAFETY CHARACTERISTICS						
EMI(1)	CE	CISPR/EN55022				Class A
	RE	CISPR/EN5522				Class B

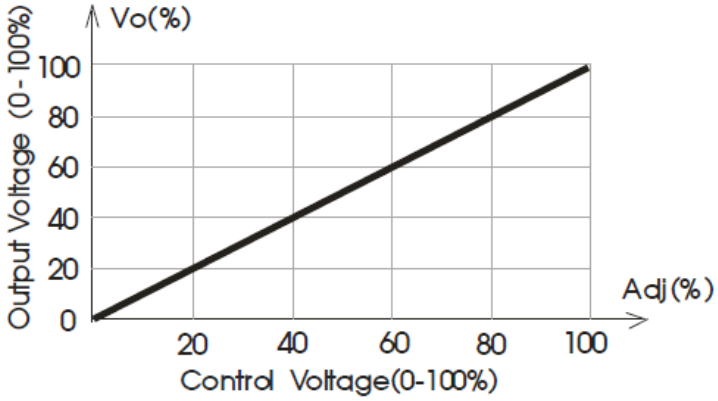
NOTES

1. Meets without external components.
2. Customization available.

**Due to advances in technology, specifications subject to change without notice.*

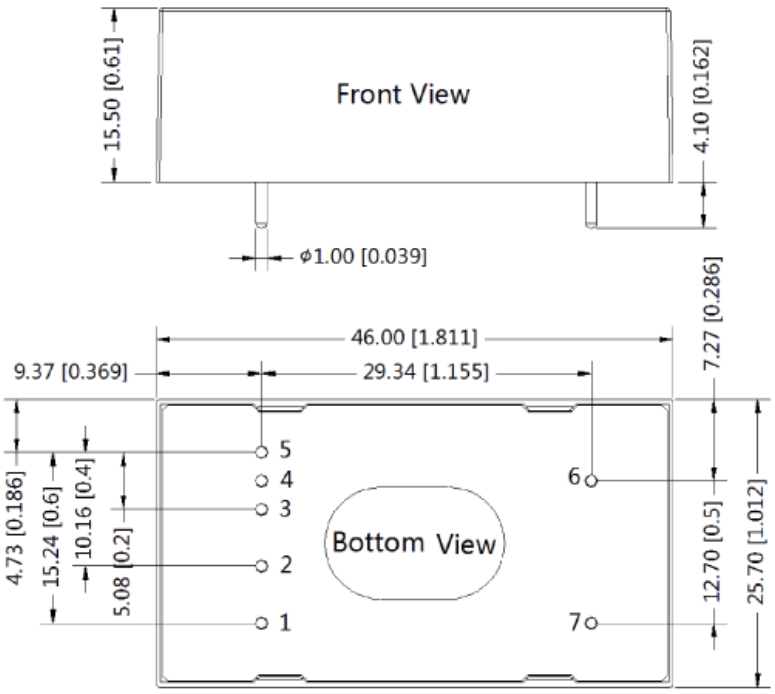
CHARACTERISTIC CURVES

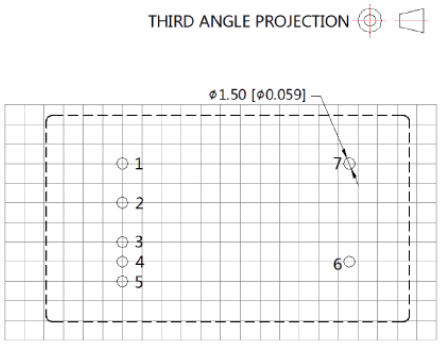
Output Voltage-Control Voltage Relation Curve



Note: 100% Vo=602VDC Typ.
100% Adj=2.5VDC Typ.

MECHANICAL DRAWINGS





Note: Grid 2.54*2.54mm

Pin-Out

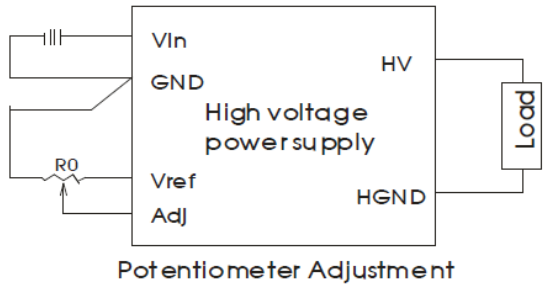
Pin	Function
1	Vin
2	GND
3	No Pin
4	Adj
5	Vref
6	HV
7	GND

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

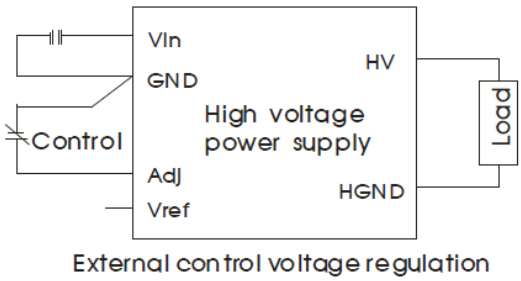
DESIGN REFERENCE

1. Typical Application

Output voltage can be programmed by external voltage or pontentiometer.



Potentiometer Adjustment



External control voltage regulation

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

Output Votlage External Programming

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001-2008 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

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