

**(2:1) Wide Voltage Range Input, Regulated High Voltage Output Module  
(0.1-10W)**
**GR Series GRBxxxx D-xW-A/B**
**Generalization**

Sunyuan GRB Series power modules adopt the advanced DC-DC conversion and pressor technology, the unique vacuum insulation and encapsulation technical design, the metal shield case, which have the following characteristics: moisture-proof, shockproof, high efficiency, low noise, low temperature drift, anti-EMC electro-magnetic interference, etc. The modules are widely used in mine exploration, metallurgy, optical control technology, medical equipment, physical and chemical experimental analysis, etc.

Voltage Input: 4.5-9VDC, 9-18VDC, 18-36VDC Standard (2: 1) wide voltage range input.

Output power consumption: 2-10W.

Voltage output: 80VDC, 100VDC, 110VDC, 150VDC, 200VDC, 250VDC, have OTP, OCP, UVL, SCP poly-protection functions.

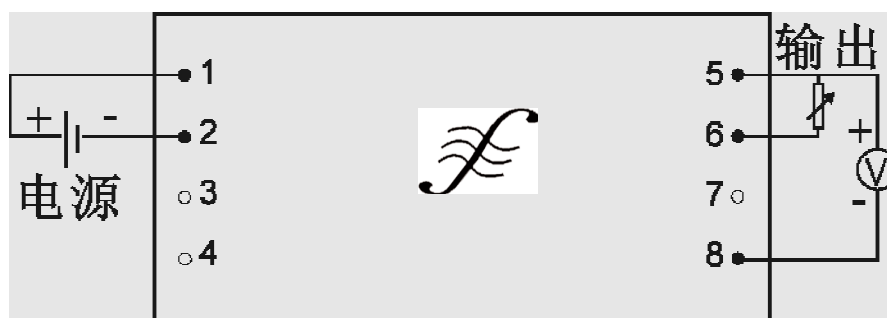
**Technical Parameter**

<b>Output Specifications:</b>		
<b>Technical Specifications</b>	<b>Technical Parameter</b>	<b>Testing Conditions</b>
Voltage Stability Accuracy	3.0%max	1%-100% load range
Voltage Regulation	0.5%max	full load
Load Regulation	±0.5%type.	0%-100% load range
	±1.0%max (No load to full load)	
Ripple and Noise	≤150mVp-p,max	20MHzband width
Dynamic Response Speed	≤150us	25% load-full load
Response Time	500ms	
<b>Input Specifications:</b>		
Input Voltage Range	(12VDC) 9 - 18VDC	
	(24VDC) 18 - 36VDC	
Linear Speed Rate	0.5%	low end- high end
<b>General Specifications:</b>		
Switch Frequency	150KHZ	Typical Value
Conversion Efficiency	See Model Selection Guide	
Isolation Voltage	Non-isolated	
Average Non-failure Interval Time	50000 hours	
Temperature Coefficient	0.02%/°C	
<b>Environment Characteristics:</b>		
Operating Temperature	-40°C - +85°C	
Storage Humidity	-55°C - +125°C	
Relative Humidity	10% - 90%	
Cooling Mode	free air	

**Model Selection Guide:**

Product Model	Input Volt. (VDC)		Output Volt. (VDC)	Output Current (mA)	Efficiency (%)
	Nominal Value	Input Range			
GRB12110D-2W5-A	12.0	9.0~18.0	110	23	83
GRB12150D-2W-A	12.0	9.0~18.0	150	14	83
GRB12250D-2W-A	12.0	9.0~18.0	250	8	85
GRB24110D-2W-A	24.0	18.0~36.0	110	18	83
GRB24250D-2W-A	24.0	18.0~36.0	150	8	86
GRB12110D-3W-A	12.0	9.0~18.0	110	27	83
GRB12150D-3W-A	12.0	9.0~18.0	150	20	83
GRB12250D-3W-A	12.0	9.0~18.0	250	12	85
GRB24110D-3W-A	24.0	18.0~36.0	110	27	82
GRB24150D-3W-A	24.0	18.0~36.0	150	20	83
GRB24250D-3W-A	24.0	18.0~36.0	250	12	85
GRB12150D-5W-A	12.0	9.0~18.0	150	34	85
GRB12250D-5W-A	12.0	9.0~18.0	250	20	86
GRB24110D-5W-B	24.0	18.0~36.0	110	45	85
GRB24150D-5W-B	24.0	18.0~36.0	150	34	87
GRB24250D-5W-B	24.0	18.0~36.0	250	20	88
GRB12150D-2W-B	12.0	9.0~18.0	150	14	83
GRB12250D-2W-B	12.0	9.0~18.0	250	8	85
GRB24110D-2W-B	24.0	18.0~36.0	110	18	83
GRB24250D-2W-B	24.0	18.0~36.0	150	8	86
GRB12110D-3W-B	12.0	9.0~18.0	110	27	83
GRB12150D-3W-B	12.0	9.0~18.0	150	20	83
GRB12250D-3W-B	12.0	9.0~18.0	250	12	85
GRB24110D-3W-B	24.0	18.0~36.0	110	27	82
GRB24150D-3W-B	24.0	18.0~36.0	150	20	83
GRB24250D-3W-B	24.0	18.0~36.0	250	12	85
GRB12150D-5W-B	12.0	9.0~18.0	150	34	85
GRB12250D-5W-B	12.0	9.0~18.0	250	20	86
GRB24110D-5W-B	24.0	18.0~36.0	110	45	85
GRB24150D-5W-B	24.0	18.0~36.0	150	34	87

GRB24250D-5W-B	24.0	18.0~36.0	250	20	88
GRB12110D-6W-B	12.0	9.0~18.0	110	55	83
GRB12150D-6W-B	12.0	9.0~18.0	150	40	83
GRB12250D-6W-B	12.0	9.0~18.0	250	25	80
GRB24110D-6W-B	24.0	18.0~36.0	110	55	83
GRB24150D-6W-B	24.0	18.0~36.0	150	40	83
GRB24250D-6W-B	24.0	18.0~36.0	250	25	83
GRB12100D-8W-B	12.0	9.0~18.0	100	80	83
GRB12150D-8W-B	12.0	9.0~18.0	150	50	80
GRB12250D-8W-B	12.0	9.0~18.0	250	30	82
GRB24100D-8W-B	24.0	18.0~36.0	100	80	83
GRB12250D-10W-B	12.0	9.0~18.0	250	40	85
GRB12100D-10W-B	12.0	9.0~18.0	100	100	80
GRB12150D-10W-B	12.0	9.0~18.0	150	67	82
GRB24100D-10W-B	24.0	18.0~36.0	100	100	82
GRB24150D-10W-B	24.0	18.0~36.0	150	67	83
GRB24250D-10W-B	24.0	18.0~36.0	250	40	85



**GRBXXXX- B B Model Connection Diagram (bottom view)**

#### Examples of Model Selection

**E.g.1:** Input Volt.: 9-18VDC; Output Volt.:110VDC; Output Power Consumption: 2.5W

A model dimension: 25.4 \* 25.4 \* 10.14 (mm)

Corresponding Product Model No: **GRB12110D-2W5-A**

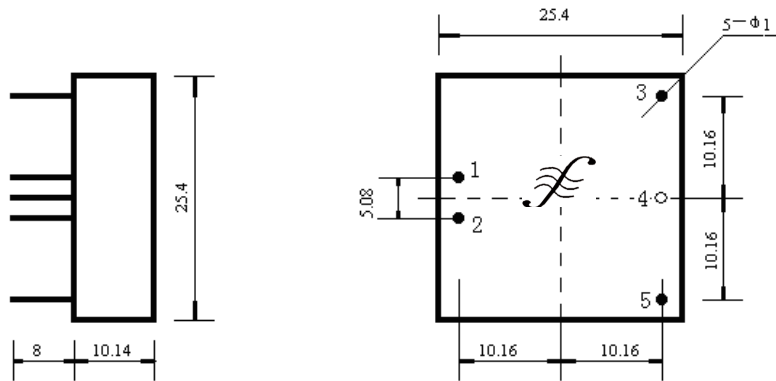
**E.g. 2:** Input Volt.: 18-36VDC; Output Volt.:150VDC; Output Power Consumption: 5W

B model dimension: 50.8 \* 25.4 \* 10.14 (mm)

Corresponding Product Model No: **GRB24150D-5W-B**

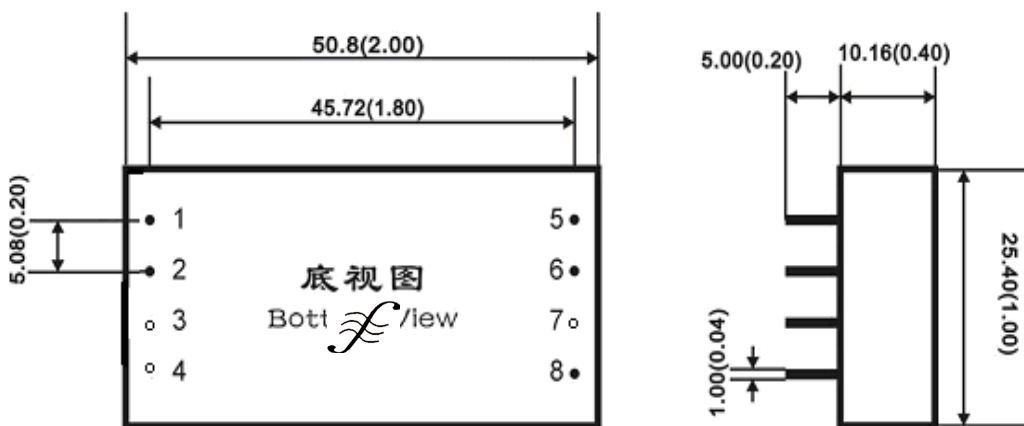
#### Dimension and Pin Definition

(1) A Model Dimension: 25.4x25.4x10.14 ; Unit: mm A Model Product No. : **GRBXXXXD-A** (bottom view)



PIN	A Model PIN Definition	
	1	+Vin
2	GND	Input GND
3	+Vout	Output+
4	NC	Null
5	GND	Output GND

(2) B Model Dimension: 50.8x25.4x10.14 Unit: mm B Model Product No.: **GRBXXXXD-B** (bottom view)



PIN	B Model PIN Definition				
	1	+Vin	Input +	5	+Vout
2	GND	Input GND	6	ADJ	Adjustment
3	REM	REM	7	NC	Null
4	GND	GND	8	GND	Output GND

Note: The specifications of this product is subject to changes without prior notice

- For B model products (Dimension: 50.8mm x 25.4mm x 10.14mm), PIN3 can be changed into control terminal. Then PIN 3 must be set to 5V voltage, PIN 4 to the ground of 5V power supply, in that case, modules have normal output. Otherwise, without 5V voltage, the output voltage equals input voltage. PIN6 is voltage regulating terminal, add a 200K potentiometer between PIN6 and PIN5 to adjust output voltage, the adjusting range is  $\pm 15V$  (When placing orders, user should mark out the model which has been adjusted and regulated).
- When using in the products of which the output voltage is higher than 80V, user should add a 47UF filter capacitor (the value of pressure endurance of filter capacitor must meet the safety requirements).
- Power module input has no reverse connection protection, in the process of connection, the polarity must be correct, otherwise, it may cause unreparable damage.
- Our company can design and manufacture the high-voltage output power module based on technical parameter from customers.