

**GRB Series** GRBxxxxD-xW 2W~10W (2:1) High volt. Non-isolated & Regulated output

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.

**Input Volt.****12, 24 VDC Standard ( 2 : 1 )****Output Volt.****100, 110, 150, 250 VDC**

Other specifications required, please inquire us for details.

**Technical Parameters**

All the parameters below are tested at TA=25° C, nominal input voltage, rated output current.

**Input Parameters**

Volt. Range 12VDC: 9~18 VDC 24VDC: 18~36 VDC  
 Linear speed rate 0.5% (low end- high end)

**Isolation Parameters**

Rated Isolation Volt. Non-isolated

**Output Parameters**

Voltage stability accuracy 3 %, max.  
 Voltage regulation 0.5 %, max.  
 Load regulation ±0.5%, type, ±1.0%, max  
 ( 20 MHz BW) Ripple&Noise ≤150mV p-p, max.  
 Dynamic Response Speed ≤150us, 25% load-full load  
 Response Time 500ms, max.  
 Temperature index 0,02 % / °C

**General Parameters**

Efficiency 75% to 90 %  
 Switching Frequency 300 KHz, type.

**Environmental Parameters**

Operating Temp. (environmental) - 40° C to + 85° C  
 Storage Temp. - 55° C to + 125 °C  
 Relative humidity 10 %~90 %  
 Colling method Natural Free-air

**Dimension**

DIP Package size  
 2W~ 5W: 25.40 x 25.40 x10.14 mm  
 1.00 x 1.00 x 0.40 inch  
 10W: 50.80 x25.40 x10.14 mm  
 0.46 x 0.28 x 0.40 inch

**External Package Material**

Non-conductive flame-retardant black plastics

**Typical Product List:**

(The parameters below are collected at 8 hours full-load aging test.)

Model No.	Input Volt.Vin(VDC)		Output Volt. Vout(VDC)	Output Current (max.mA)	Efficiency Full load (%TYPE)
	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

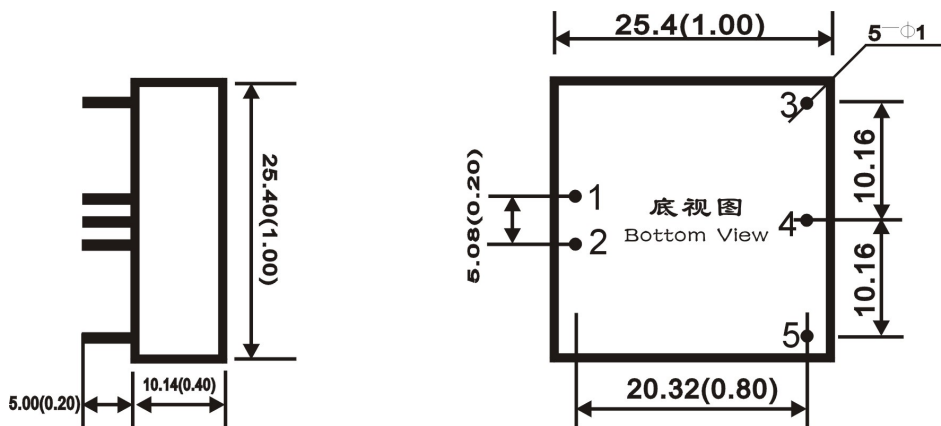


Model No.	Input Volt.Vin(VDC)		Output Volt. Vout(VDC)	Output Current (max.mA)	Efficiency Full load (%TYPE)
	Nominal Value	Input Range			
GRB12110D-3W-A	12.0	9.0~18.0	110	27	83
GRB12150D-3W-A	12.0	9.0~18.0	150	20	83
GRB12250D-3W-A	12.0	9.0~18.0	250	12	85
GRB24110D-3W-A	24.0	18.0~36.0	110	27	82
GRB24150D-3W-A	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



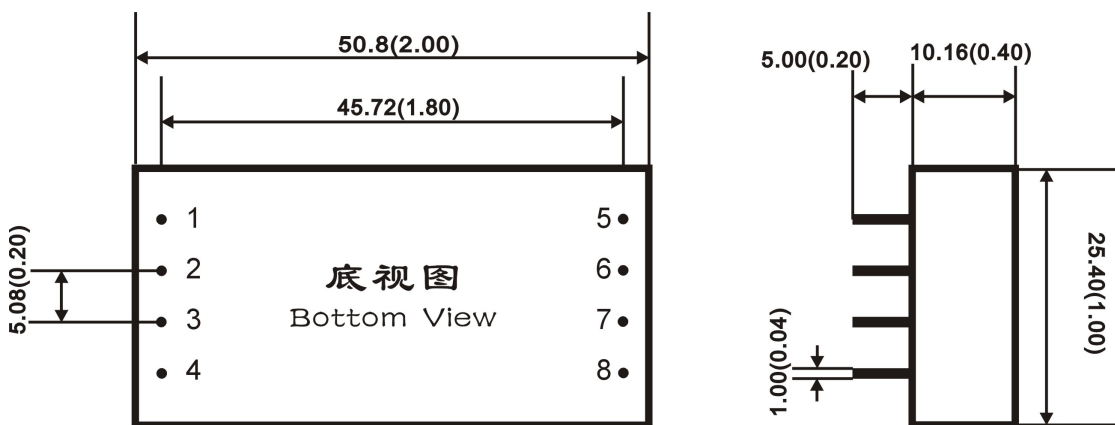
External Dimension and PIN Definition

GRB 2~5W Series Dimension : 25.4x25.4x10.14 mm A Model Product No. : GRBxxxxD-A (bottom view)



Pin	Function		
1	+	Vin	Input +
2	-	Vin	Input -
3	+	Vout	Output +
4			NC
5	-	Vout	Output -

GRB 10W Series Dimension : 50.8x25.4x10.14 mm B Model Product No. : GRBxxxxD-B (bottom view)



Pin	Function						
1	+	Vin	Input +	5	+	Vout	Output +
2	-	Vin	Input -	6		ADJ	Adjustment
3		REM	REM	7		NC	NC
4	-	Vin	Input -	8	-	Vout	Output -

\* Note: the product design and specification are subject to change without notice.



## Examples of Model Selection



GRBxxxxD-xW-B B Model Connection Diagram (bottom view)

1. 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).
2. 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 ).
3. Power module input has no reverse connection protection, in the process of connection, the polarity must be correct, otherwise, it may cause unreparable damage.
4. Our company can design and manufacture the high-voltage output power module based on technical parameter from customers.