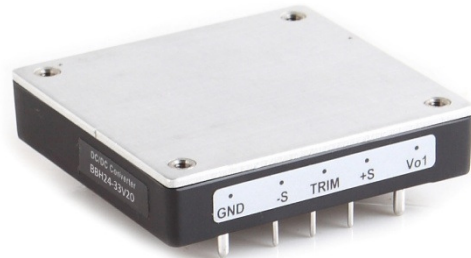


## BBH SERIES, 1/2 BRICK, UP TO 150W

### FEATURES:

- ✓ 5 years warranty
- ✓ 1500Vdc isolation voltage
- ✓ Wide (2:1) input voltage range
- ✓ Efficiency up to 90%
- ✓ Operating temperature range -40°C to +100°C
- ✓ Under voltage, over current, short circuit, over voltage protection
- ✓ Remote on/off
- ✓ Adjustable output voltage



Model	Input voltage (Vdc)	Output voltage (Vdc)	Output current (A)	Efficiency Typ.
BBH24-33V20	24(18~36)	3.3	20.0	85%
BBH24-33V30		3.3	30.0	84%
BBH24-50V10		5.0	10.0	87%
BBH24-50V15		5.0	15.0	88%
BBH24-50V20		5.0	20.0	86%
BBH24-50V30		5.0	30.0	85%
BBH48-33V10	48(36~72)	3.3	10.0	88%
BBH48-33V15		3.3	15.0	88%
BBH48-33V20		3.3	20.0	88%
BBH48-33V30		3.3	30.0	86%
BBH48-33V40		3.3	40.0	83%
BBH48-50V10		5.0	10.0	90%
BBH48-50V15		5.0	15.0	90%
BBH48-50V20		5.0	20.0	90%
BBH48-50V30		5.0	30.0	87%
BBH48-50V3-33V5		5.0, 3.3	3.0, 5.0	84%
BBH48-50V12-30V15		5.0, 3.0	12.0, 15.0	86%
BBH110-50V15		110(66~154)	5.0	15.0
BBH110-50V30	5.0		30.0	87%

Notes: other input and output models may available on request.

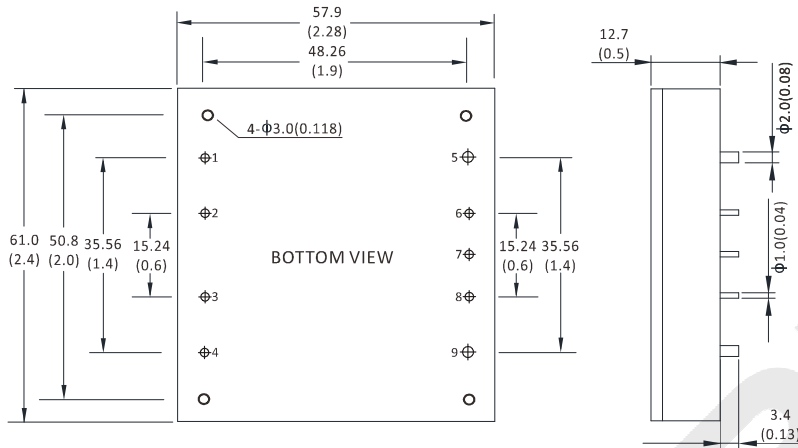
**BBH SERIES, 1/2 BRICK, UP TO 150W**

<b>ELECTRICAL</b>		
Input voltage range	24Vdc	18-36Vdc
	48Vdc	36-72Vdc
	110Vdc	66-154Vdc
Remote control	Positive logic	ON: High level or left open OFF: Low level or grounded
	Negative logic	OFF: High level or left close ON: Low level or grounded
Output power	Input voltage range	33-150W
Output voltage	Single output	3.3/5Vdc
Output voltage accuracy	Input voltage range	±1%
Output voltage adjustable	Negative logic	±10%
Line regulation	Full load	±0.2%
Load regulation	10%-100% full load	±0.5%
Dynamic response (transient/recovery time)	25%-50%-75% load capability	$\Delta V_o/\Delta t$ : ±4.0%/500 $\mu$ s
Ripple and noise	Parallel test, 20MHz wide range	180mVp-p max.
Operating frequency	Typical value	300KHz typ.
Isolation voltage	Input to output	1500Vdc
	Input to case	1050Vdc
	Output to case	500Vdc
Isolation resistance	---	30M $\Omega$
Safety	---	IEC-60950-1, UL-60950-1 EN-60950-1, GB4943
Temperature coefficient	---	200ppm
PCB operating temperature	---	-40°C to +100°C
Storage temperature range	---	-40°C to +105°C
Over temperature protection	Typical	110°C typ.
Under voltage protection	---	Yes
Over current protection	---	Yes
Short circuit protection	---	Yes
Over voltage protection	---	Yes
Relative humidity	---	95% max.
Packing	---	Hole package
MTBF	Bellcore TR-332, 25°C	2x10 <sup>6</sup> Hrs

**Notes: Unless otherwise specified, all the parameters of the test conditions are as follows: ambient temperature 25°C, the nominal input voltage, pure resistive nominal load.**

## BBH SERIES, 1/2 BRICK, UP TO 150W

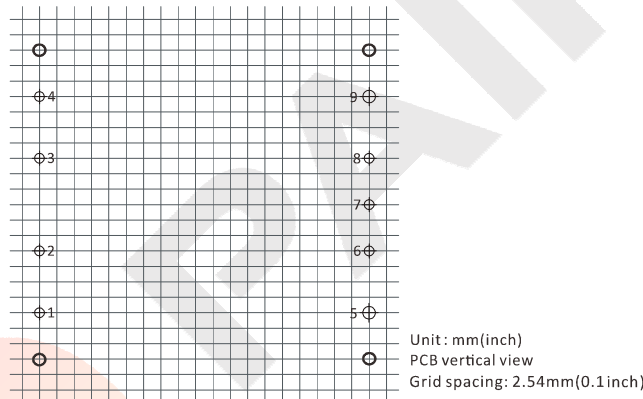
### MECHANICAL



### CONNECTION

PIN #	SINGLE
1	-Vin
2	FG
3	REM
4	+Vin
5	GND
6	-S
7	TRIM
8	+S
9	+Vo

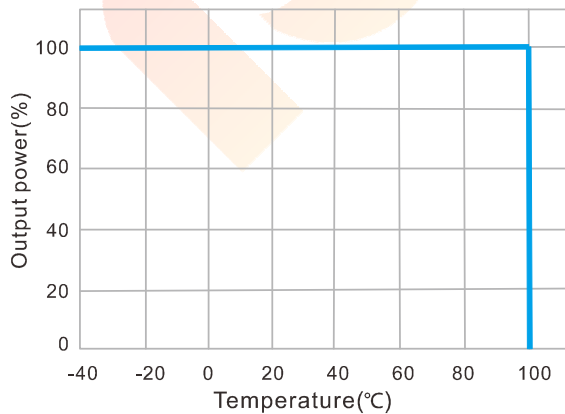
### PCB LAYOUT



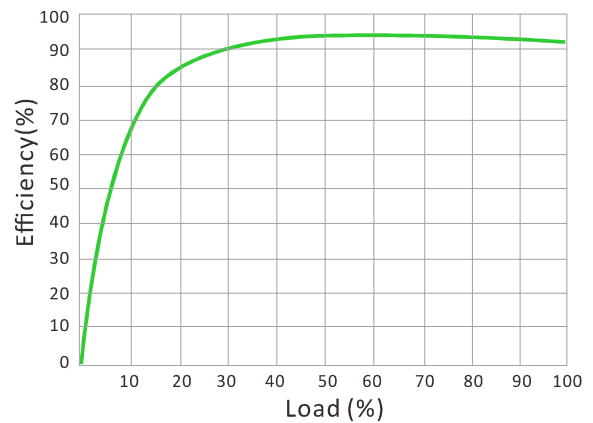
Note:

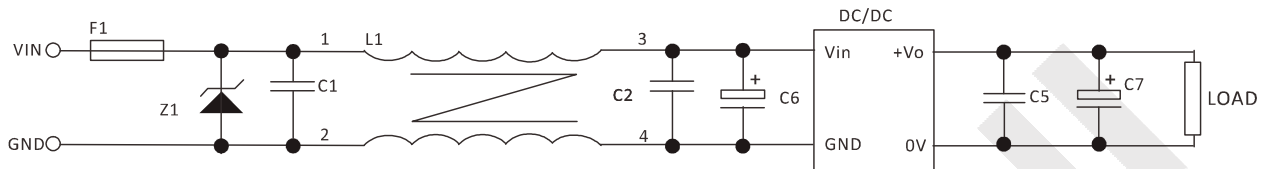
\* Unit is mm(inch).

### DERATING CURVE



### EFFICIENCY CURVE



**BBH SERIES, 1/2 BRICK, UP TO 150W**
**NOTES**
**RECOMMENDED TEST AND APPLICATION CIRCUIT**


1. TVS&FUSE be helpful with over voltage protection and inrush limiting. Recommended FUSE better be 1.5~2times of the rated current .
2. The input filter capacitor C6 could select the aluminum electrolytic capacitors or tantalum capacitors, and the withstand voltage should be greater than the highest input voltage. Recommended capacitor should be between 22 $\mu$ F~100 $\mu$ F.
3. C1,C2 for the input filter capacitor,0.1~1 $\mu$ F high-frequency ceramics capacitor or chip capacitor are recommended. The withstand voltage of output filter C5, C7 should be greater than the highest output voltage. Recommended capacitor of C7 better within 100 $\mu$ F and C5 connected with the chip to reduce the input voltage peak, recommended 0.1~1 $\mu$ F high-frequency ceramics capacitor or chip capacitor.