

## BAS SERIES, 1/16 BRICK, UP TO 60W

### FEATURES:

- ✓ 5 years warranty
- ✓ Output current up to 30A
- ✓ 1500Vdc isolation voltage
- ✓ Wide (2:1) input voltage range
- ✓ Efficiency up to 91%
- ✓ Operating temperature range -40°C to +85°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. |
|-------------|---------------------|----------------------|--------------------|-----------------|
| BAS48-12V30 | 48(36~72)           | 1.2                  | 30.0               | 83%             |
| BAS48-18V25 |                     | 1.8                  | 25.0               | 83%             |
| BAS48-33V15 |                     | 3.3                  | 15.0               | 89%             |
| BAS48-33V10 |                     | 3.3                  | 10.0               | 89%             |
| BAS48-33V20 |                     | 3.3                  | 20.0               | 89%             |
| BAS48-50V6  |                     | 5.0                  | 6.0                | 91%             |
| BAS48-50V12 |                     | 5.0                  | 12.0               | 89%             |

### Notes:

1. Other input and output models may available on request;
2. You may request the models for different packages: Through hole package and SMT package; for SMT package, plus "SMT" in the suffix, e.g. BAS48-12V30SMT.

### ELECTRICAL

|  |                             |   |
|--|-----------------------------|---|
| Input voltage range                        | 48Vdc                       | 36-72Vdc  |
| Remote control                             | Negative logic              | ON: Low level or grounded<br>OFF: High level or close |
|  | Positive logic              | OFF: Low level or grounded<br>ON: High level or open  |
| Output power                               | Input voltage range         | 33-66W  |
| Output voltage                             | Single output               | 1.2/1.8/3.3/5.0Vdc                                    |
| Output voltage adjustable                  | Positive 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             |

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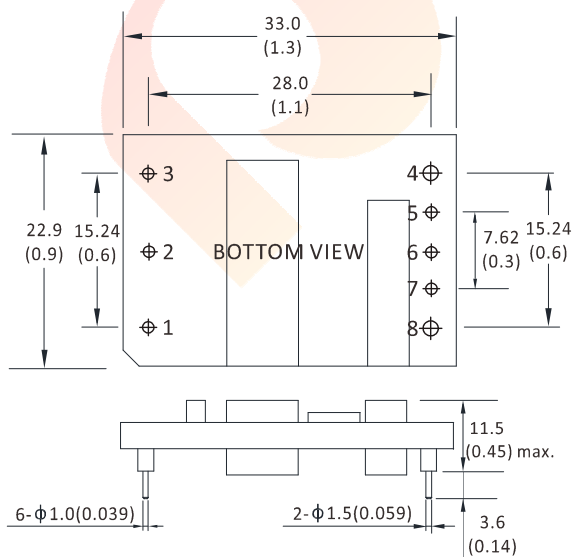
### ELECTRICAL

|                             |                                 |   |
|-----------------------------|---------------------------------|---|
| Ripple and noise            | Parallel test, 20MHz wide range | 75mVp-p max.                                  |
| Isolation voltage           | Input to output                 | 1500Vdc                                       |
| Isolation resistance        | ---                             | 10MΩ  |
| Safety                      | ---                             | IEC-60950-1, UL-60950-1<br>EN-60950-1, GB4943 |
| Temperature coefficient     | ---                             | 300ppm  |
| Operating temperature range | Auxiliary heat sink             | -40°C to +85°C                                |
| Storage temperature range   | ---                             | -40°C to +125°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 / SMT                            |
| MTBF                        | Bellcore TR-332, 25°C           | 2x10 <sup>6</sup> Hrs                         |

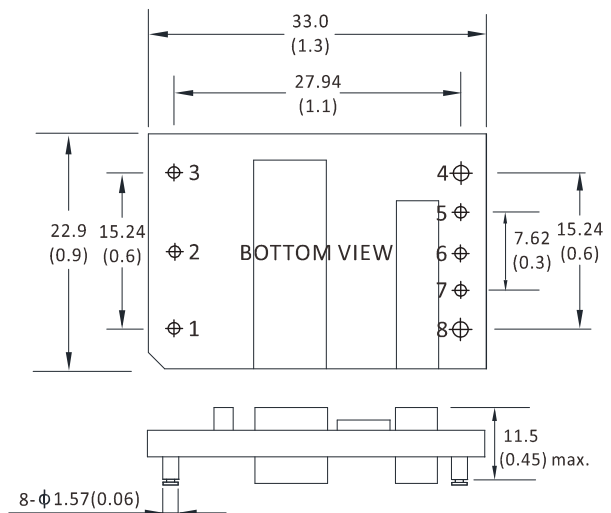
**Notes: Unless otherwise specified, all the parameters of the test conditions are as follows: ambient temperature 25°C, the nominal input voltage, pure resistive nominal load.**

### MECHANICAL

#### THROUGH HOLE PACKAGE



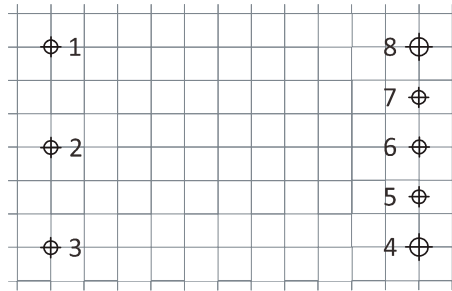
#### SMT PACKAGE



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### MECHANICAL

#### PCB LAYOUT



Unit: mm(inch)  
PCB vertical view  
Grid spacing: 2.54mm(0.1 inch)

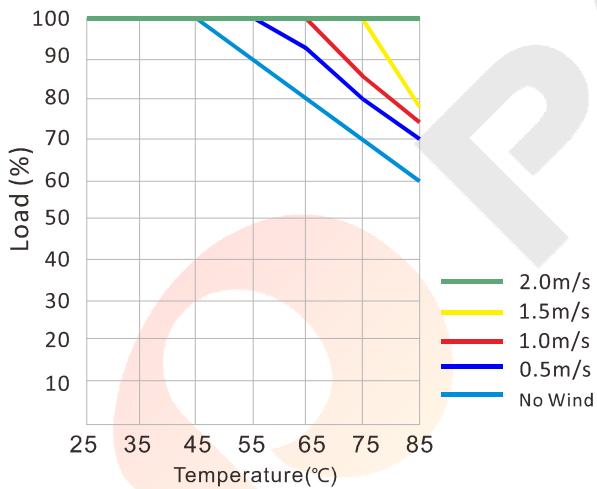
#### CONNECTION

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

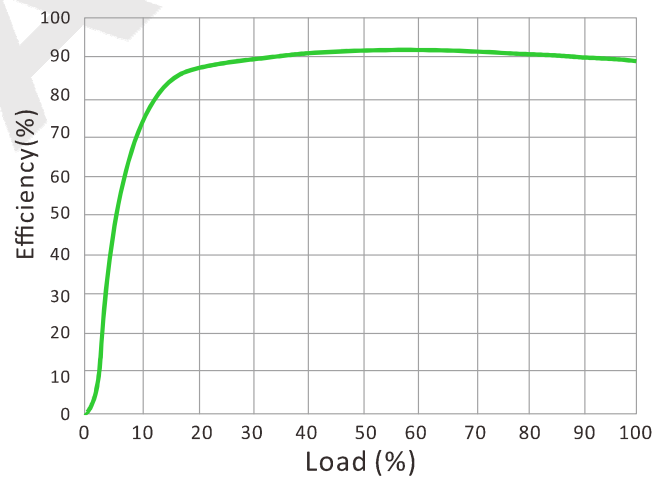
Note:

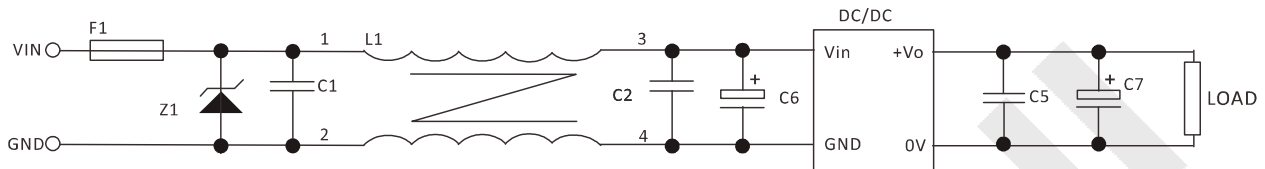
\* Unit is mm(inch).

#### DERATING CURVE



#### EFFICIENCY CURVE



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**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.