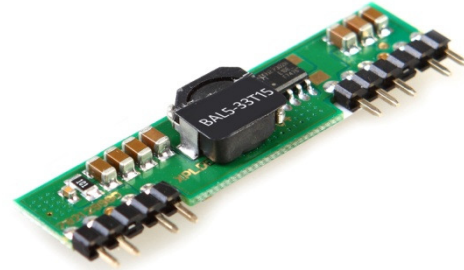


## BAL SERIES, NON-ISOLATED, POL CONVERTERS

### FEATURES:

- ✓ 5 years warranty
- ✓ Output current up to 16A
- ✓ Efficiency up to 95%
- ✓ Under voltage, over current, short circuit protection
- ✓ Operating temperature range -40°C to +85°C
- ✓ Remote on/off



Model	Input voltage (Vdc)	Output voltage (Vdc)	Output current (A)	Output Power (W)	Efficiency Typ.
<b>TRIMABLE</b>					
<b>BAL5-33T15</b>	3.0-5.5	0.8-3.63	15.0	12-54.5	94%
<b>BAL5-33T10</b>	3.0-5.5	0.75-3.63	10.0	7.5-36.3	93%
<b>BAL5-33T16</b>	3.0-5.5	0.75-3.63	16.0	12-58	94%
<b>BAL12-50T2</b>	9.0-14.0	0.75-5.5	2.0	1.5-11	87%
<b>BAL12-50T10</b>	9.0-14.0	0.75-5.5	10.0	7.5-55	90%
<b>BAL12-50T16</b>	9.0-14.0	0.75-5.5	16.0	12-88	92%
<b>UNTRIMABLE</b>					
<b>BAL5-12V6</b>	3.0-5.5	1.2	6.0	7.2	87%
<b>BAL5-12V10</b>	3.0-5.5	1.2	10.0	12	86%
<b>BAL5-15V6</b>	3.0-5.5	1.5	6.0	9	90%
<b>BAL5-15V10</b>	3.0-5.5	1.5	10.0	15	84%
<b>BAL5-18V6</b>	3.0-5.5	1.8	6.0	10.8	92%
<b>BAL5-18V10</b>	3.0-5.5	1.8	10.0	18	91%
<b>BAL5-21V6</b>	3.0-5.5	2.1	6.0	12.6	93%
<b>BAL5-25V6</b>	3.0-5.5	2.5	6.0	15	94%
<b>BAL5-33V10</b>	4.5-5.5	3.3	10.0	33	95%
<b>BAL12-50V10</b>	9.0-14.0	5.0	10.0	50	90%

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

### ELECTRICAL

Input voltage range	5Vdc	3.3-5Vdc
	12Vdc	9.0-14Vdc
Remote control	Positive logic	ON: High level or left open OFF: Low level or grounded
Output current	Input voltage range	2-16A
Output voltage	Adjustable output	0.75-5.5Vdc
	Fixed voltage output	1.2/1.5/1.8/2.1/2.5/3.3/5.0Vdc

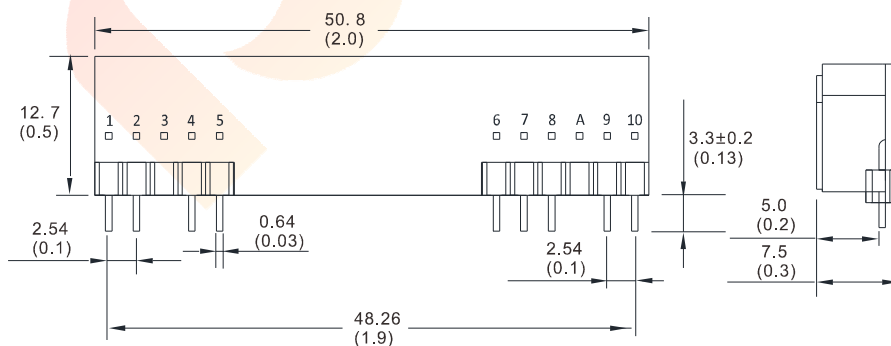
## BAL SERIES, NON-ISOLATED, POL CONVERTERS

### ELECTRICAL

Voltage setting accuracy	Adjustable output	±3%
	Fixed voltage output	±1%
Output voltage adjustable	TRIM connect with -S	Continuously adjustable
Line regulation	Full load	±0.3%
Load regulation	10%-100% full load	±0.4%
Dynamic response (transient/recovery time)	5%-50%-75% load capability	$\Delta V_o/\Delta t$ : ±5.0%/400 $\mu$ s
Ripple and noise	20MHz BM, full load	100mVp-p max.
Operating frequency	Typical value	300KHz typ.
Temperature coefficient	---	200ppm
Operating temperature range	Auxiliary heat sink	-40°C to +85°C
Storage temperature range	---	-55°C to +125°C
Under voltage protection	---	Yes
Over current protection	---	Yes
Short circuit protection	---	Yes
Relative humidity	---	10%~90%
Packing	---	SIP
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



### CONNECTION

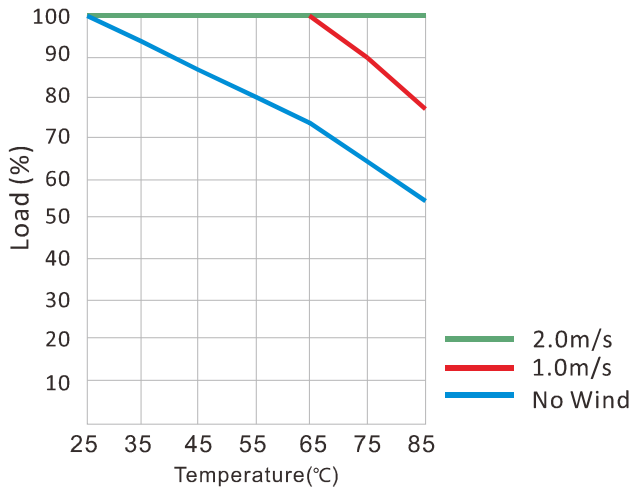
PIN #	SINGLE
1	+Vo
2	+Vo
3	Sense
4	+Vo
5	COM
6	COM
7	+Vin
8	+Vin
A	NC
9	TRIM
10	REM

Note:

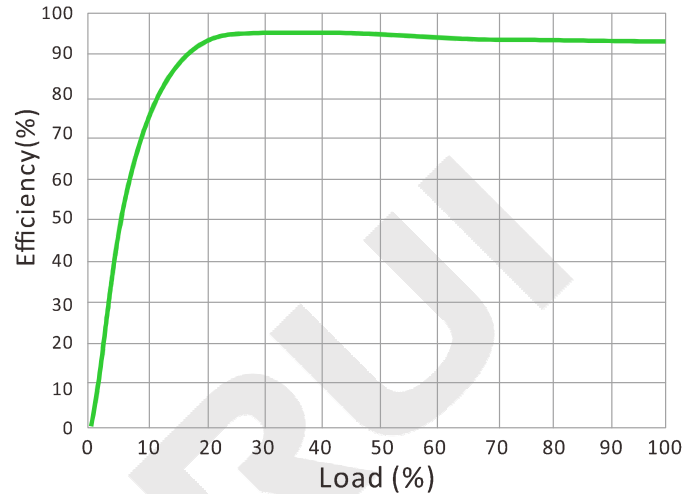
\* Unit is mm(inch).

## BAL SERIES, NON-ISOLATED, POL CONVERTERS

### DERATING CURVE

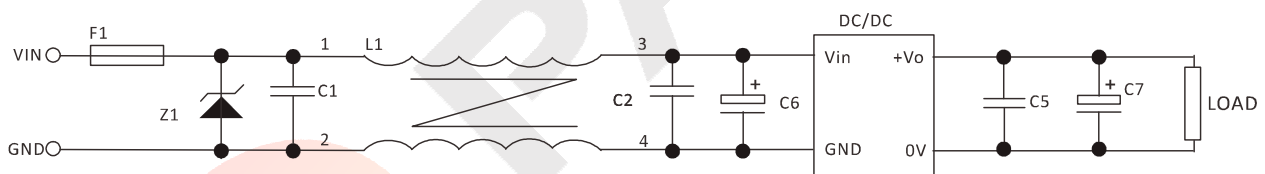


### EFFICIENCY CURVE



## 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.