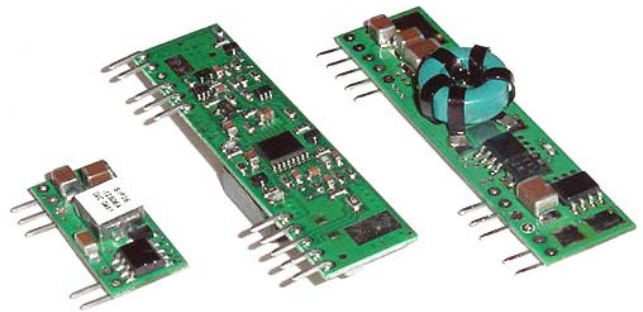


### BSIP10-12W

### BSMT10-12W Series 10A SIP & SMT 12V Input DC-DC Converters

#### Features

- Industry standard pin out
- High efficiency to 95%
- 300KHz switching frequency
- 6.0 – 14 Vdc input range
- 0.75-5.0Vdc wide output range
- Over temperature protection
- Continuous short circuit protection
- Remote On/Off
- Cost efficient open frame design
- UL / cUL 60950 certified



Model Number	Input Voltage	Output Voltage	Output Current	Input Current		% Efficiency
				No Load	Full Load	
BSIP10-12-075W / BSMT10-12-075W	6.0 -14 Vdc	0.75 Vdc	10A	40 mA	762 mA	82
BSIP10-12-120W / BSMT10-12-120W	6.0 -14 Vdc	1.2 Vdc	10A	40 mA	1149 mA	87
BSIP10-12-150W / BSMT10-12-150W	6.0 -14 Vdc	1.5 Vdc	10A	50 mA	1404 mA	89
BSIP10-12-180W / BSMT10-12-180W	6.0 -14 Vdc	1.8 Vdc	10A	40 mA	1666 mA	90
BSIP10-12-200W / BSMT10-12-200W	6.0 -14 Vdc	2.0 Vdc	10A	60 mA	1832 mA	91
BSIP10-12-250W / BSMT10-12-250W	6.0 -14 Vdc	2.5 Vdc	10A	65 mA	2264 mA	92
BSIP10-12-330W / BSMT10-12-330W	6.0 -14 Vdc	3.3 Vdc	10A	75 mA	2956 mA	93
BSIP10-12-500W / BSMT10-12-500W	6.5 -14 Vdc	5.0 Vdc	10A	95 mA	4386 mA	95

Specifications

Input Specifications:

Input Voltage Range.....12V..... 6.0-14V  
Under voltage lock-out .....power up .....5.0V Typ.  
Power down .....4.0V Typ.  
Input Filter.....Capacitive  
Positive remove on /off control:  
Module On .....Open circuit or =Vin  
Module Off ..... < 0.4Vdc

Output Specifications:

Voltage Accuracy.....+/- 1.5 % max.  
Transient response : 25% step load change .....< 200 u sec.  
Ripple & Noise, 20 MHz BW (note3).....50 mV p-p max.  
5Vo .....75 mV p-p max.  
Temperature Coefficient..... +/- 0.03 % / °C max.  
Short Circuit Protection.....Continuous  
Line Regulation (note1) ..... +/- 0.2 % max.  
Load Regulation (note2) ..... +/- 0.5 % max.  
Capacitive load, low ESR.....8000uF max.  
Sequencing delay time .....20 ms max.  
Sequencing slew rate capability (dVseq/dt) .....0.1-1.0V / ms.  
Tracking accuracy .....power up .....200 mv max.  
Power down .....400 mv max.  
Power good signal asserted logic high ..... Vo = 90% - 110%, nom.

Isolation Resistance.....Non-isolation  
Switching Frequency.....300 KHz, Typ.  
Over temperature protection ..... 130 °C Typ.  
Operating Temperature Range.....-40°C ~ +85°C  
Case Temperature.....100 °C max.  
Power derating curve ..... see fig. 1,2.  
Storage Temperature Range.....-55 °C ~ +125°C

Dimensions:

SIP package: 2.0" x 0.51" x 0.327" (50.8 x 12.95 x 8.3 mm)  
SMT package: 1.3" x 0.53" x 0.346" (33.0 x 13.46 x 8.8 mm)

Structure .....Non-potted with open frame type

Note:

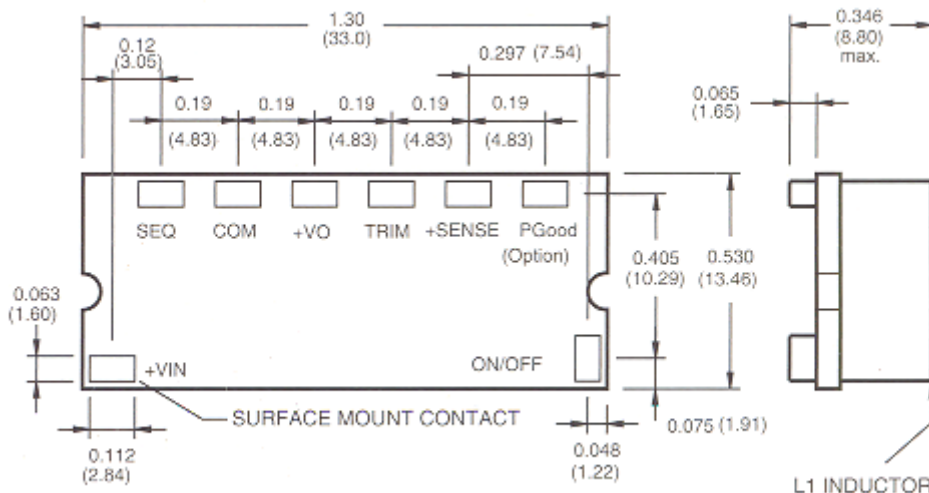
- 1. Measured from high line to low line;
- 2. Measured from full load to zero load;
- 3. Measured with 10uF tantalum capacitor and 1 uF ceramic capacitor across output
- 4. The input terminal recommend to parallel with 100uF capacitor ESR < 100 mohm
- 5. Suffix "N" to the model number with Negative logic remote  
Model On: Open circuit or < 0.4Vdc  
Model Off: > +2.8Vdc to Vin
- 6. Suffix "P" to the model number with Power Good function

General Specifications:

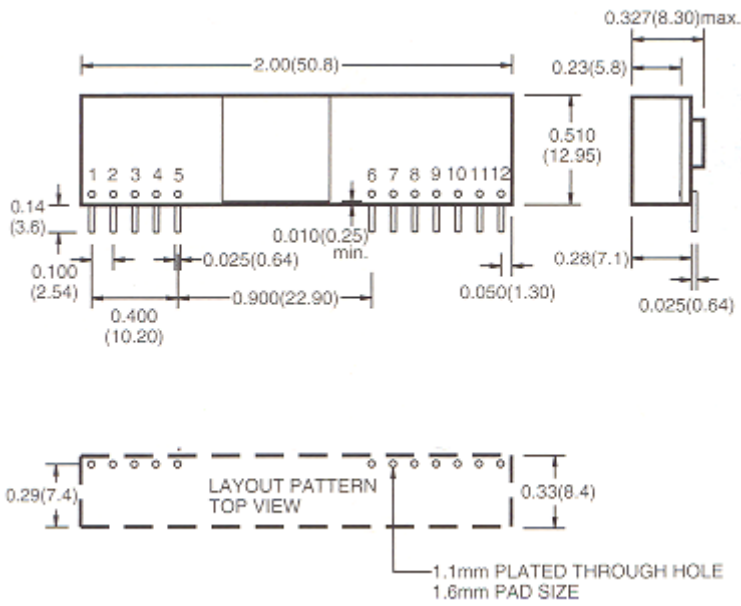
Efficiency.....see table

Outline Information and Pin-out

SMT Outline information



**SIP Outline Informantion**



Dimensions are in Inches (millimeters)  
 Tolerances: .XX ± 0.2" (.X ± 0.5), unless otherwise noted  
 .XXX ± 0.01" (.XX ± 0.25)

PIN CONNECTION	
Pin	Function
1	+ Output
2	+ Output
3	+ Sense
4	+ Output
5	Common
6	No pin / PGood
7	Common
8	+ V Input
9	+ V Input
10	Squency
11	Trim
12	On / Off Control

Temperature Typical Derating Curve

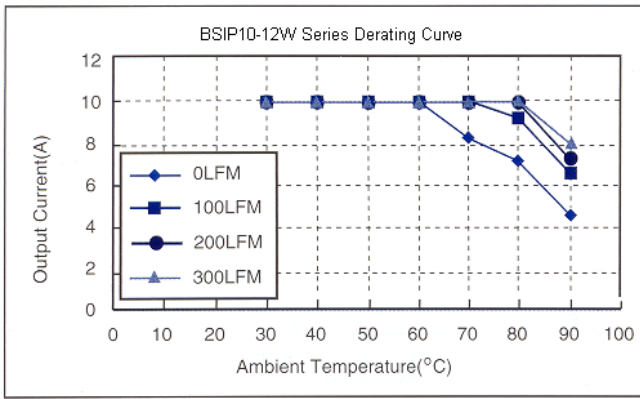


Fig 1.: Typical Derating Curve of BSIP10-12W series

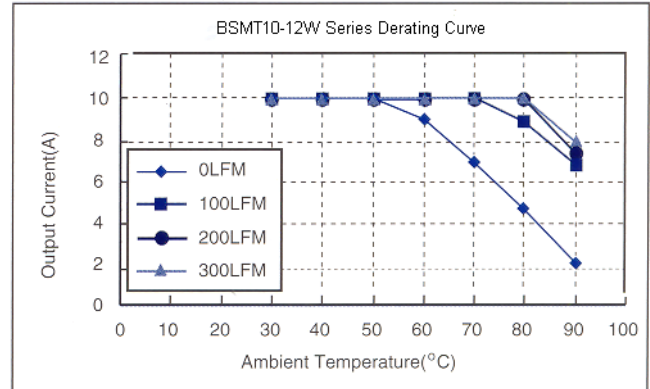


Fig 2.: Typical Derating Curve of BSMT10-12W series

Trim Resistor Values

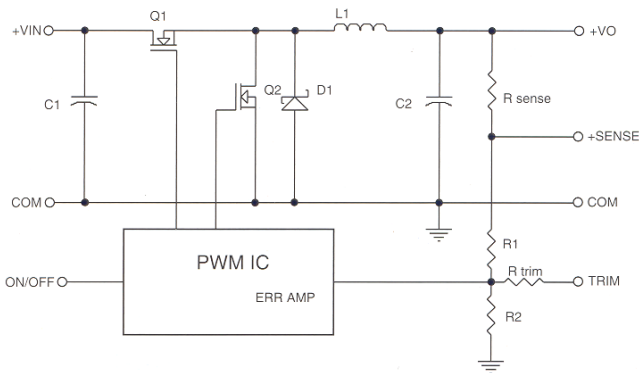


Fig 3.: Simplified Schematic

Vo (set) (V)	Rtrim (Kohm)
0.75	Open
1.2	22.46
1.5	13.05
1.8	9.024
2	7.417
2.5	5.009
3.3	3.122
3.63	1.472

The information and specifications contained in this brief are believed to be accurate and reliable at the time of publication. Specifications are subject to change without notice. Refer to product specification sheet for performance characteristics and application guidelines.