

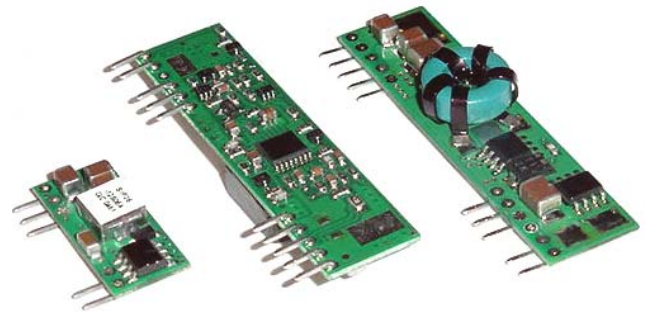
BSIP16-12

BSMT16-12 Series

16A SIP & SMT 12V Input DC-DC Converters

Features

- Industry standard pin out
- High efficiency to 94%
- 300KHz switching frequency
- 9.0 – 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	
BSIP16-12-075 / BSMT16-12-075	9.0 -14 Vdc	0.75 Vdc	16A	40 mA	1299 mA	77
BSIP16-12-120 / BSMT16-12-120	9.0 -14 Vdc	1.2 Vdc	16A	50 mA	1928 mA	83
BSIP16-12-150 / BSMT16-12-150	9.0 -14 Vdc	1.5 Vdc	16A	50 mA	2326 mA	86
BSIP16-12-180 / BSMT16-12-180	9.0 -14 Vdc	1.8 Vdc	16A	60 mA	2727 mA	88
BSIP16-12-200 / BSMT16-12-200	9.0 -14 Vdc	2.0 Vdc	16A	60 mA	2996 mA	89
BSIP16-12-250 / BSMT16-12-250	9.0 -14 Vdc	2.5 Vdc	16A	65 mA	3704 mA	90
BSIP16-12-330 / BSMT16-12-330	9.0 -14 Vdc	3.3 Vdc	16A	75 mA	4783 mA	92
BSIP16-12-500 / BSMT16-12-500	9.0 -14 Vdc	5.0 Vdc	16A	75 mA	7092 mA	94

Specifications

Input Specifications:

Input Voltage Range.....	12V.....	9.0-14V
Under voltage lock-out	power up	8.0V Typ.
	Power down	7.7V 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.

General Specifications:

Efficiency.....	see table
Isolation Resistance.....	Non-isolation

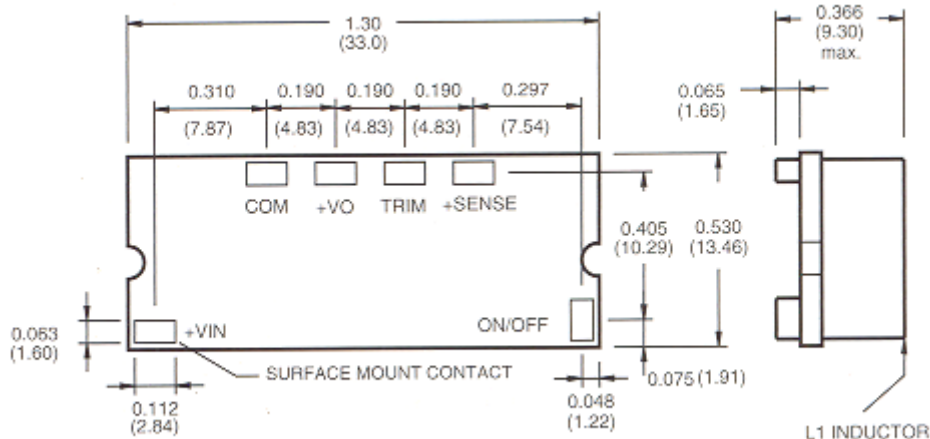
Switching Frequency.....	300 KHz, Typ.
Over temperature protection	130 °C Typ.
Operating Temperature Range.....	-40°C ~ +85°C
Power derating curve	see fig. 1,2.
Storage Temperature Range.....	-55 °C ~ +125°C
Dimensions:	
SIP package: 2.0" x 0.512" x 0.327" (50.8 x 13.0 x 8.3 mm)	
SMT package: 1.3" x 0.53" x 0.366" (33.0 x 12.46 x 9.3 mm)	
Structure	Non-potted with open frame type

Note:

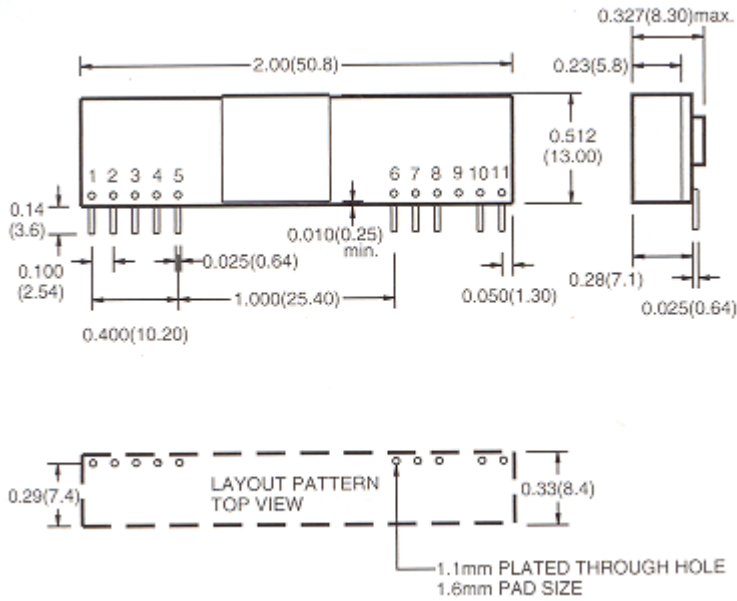
1. Measured from high line to low line;
2. Measured from full load to zero load;
3. Measured with 10uF tantalum capacitor and 1 uF ceramic capacitor across output
4. The input terminal recommend to parallel with 100uF capacitor ESR < 100 mohm
5. Suffix "N" to the model number with Negative logic remote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

Outline Information and Pin-out

SMT Outline information



SIP Outline Inforamtion



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	Common
7	+ V Input
8	+ V Input
9	No Pin
10	Trim
11	On / Off Control

Temperature Typical Derating Curve

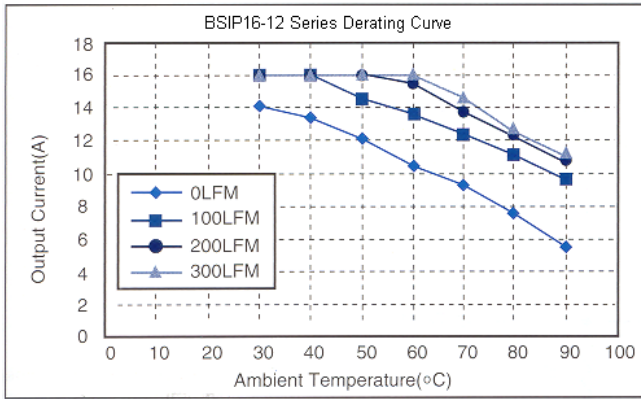


Fig 1.: Typical Derating Curve of BSIP16-12 series

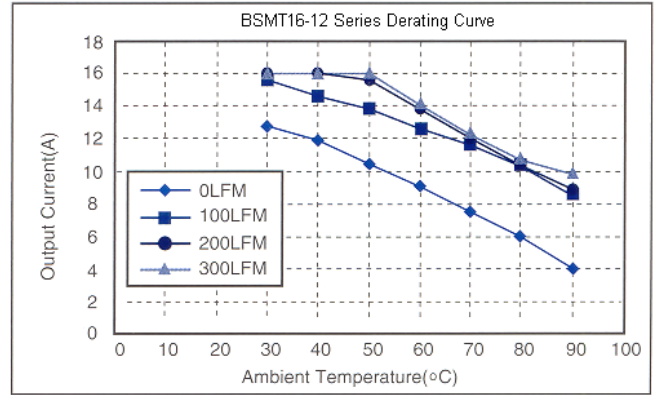
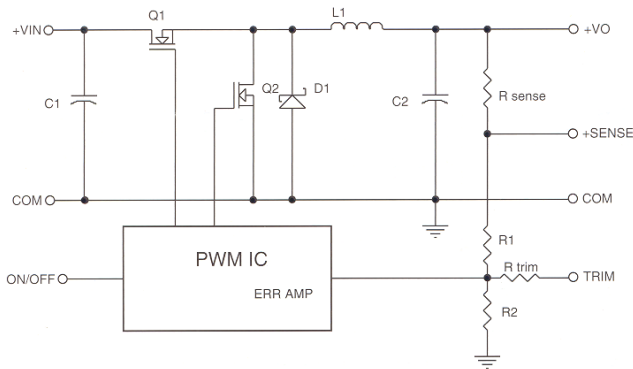


Fig 2.: Typical Derating Curve of BSMT16-12 series

Trim Resistor Values



Vo (set) (V)	Rtrim (Kohm)
0.75	Open
1.2	22.33
1.5	13.0
1.8	9.0
2	7.4
2.5	5.0
3.3	3.12
3.63	1.47

Fig 3.: Simplified Schematic

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.