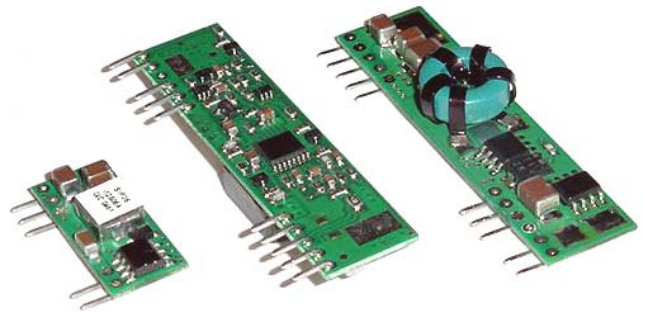


### BSIP16-12W

### BSMT16-12W Series 16A SIP & SMT 12V Input DC-DC Converters

#### Features

- Industry standard pin out
- High efficiency to 94%
- 300KHz switching frequency
- 6.0 – 14 Vdc input range
- 0.75-5.0 Vdc wide output range
- Over temperature protection
- Continuous short circuit protection
- Remote On/Off
- Cost efficient open frame design
- UL / cUL 60950 certified
- Output voltage Sequencing (Tracking)
- Power Good Signal



Model Number	Input Voltage	Output Voltage	Output Current	Input Current		% Efficiency
				No Load	Full Load	
BSIP16-12-075W / BSMT16-12-075W	6.0 -14 Vdc	0.75 Vdc	16A	40 mA	1250 mA	80
BSIP16-12-120W / BSMT16-12-120W	6.0 -14 Vdc	1.2 Vdc	16A	40 mA	1882 mA	85
BSIP16-12-150W / BSMT16-12-150W	6.0 -14 Vdc	1.5 Vdc	16A	50 mA	2273 mA	88
BSIP16-12-180W / BSMT16-12-180W	6.0 -14 Vdc	1.8 Vdc	16A	60 mA	2697 mA	89
BSIP16-12-200W / BSMT16-12-200W	6.0 -14 Vdc	2.0 Vdc	16A	60 mA	2963 mA	90
BSIP16-12-250W / BSMT16-12-250W	6.0 -14 Vdc	2.5 Vdc	16A	65 mA	3663 mA	91
BSIP16-12-330W / BSMT16-12-330W	6.0 -14 Vdc	3.3 Vdc	16A	75 mA	4731 mA	93
BSIP16-12-500W / BSMT16-12-500W	6.5 -14 Vdc	5.0 Vdc	16A	95 mA	7092 mA	94

**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:

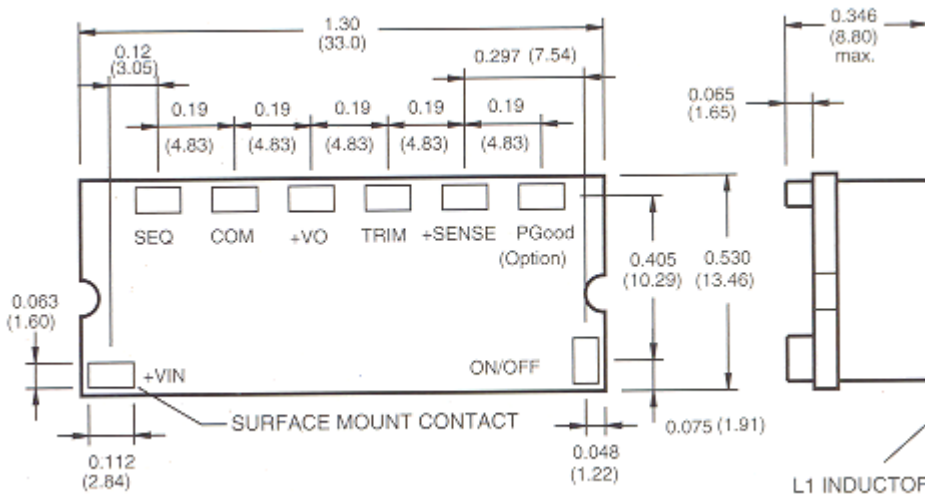
1. Measured from high line to low line;
2. Measured from full load to zero load;
3. Measured with 10uF tantalum capacitor and 1 uF ceramic capacitor across output
4. The input terminal recommend to parallel with 100uF capacitor ESR < 100 mohm
5. Suffix "N" to the model number with Negative logic remote  
 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:**

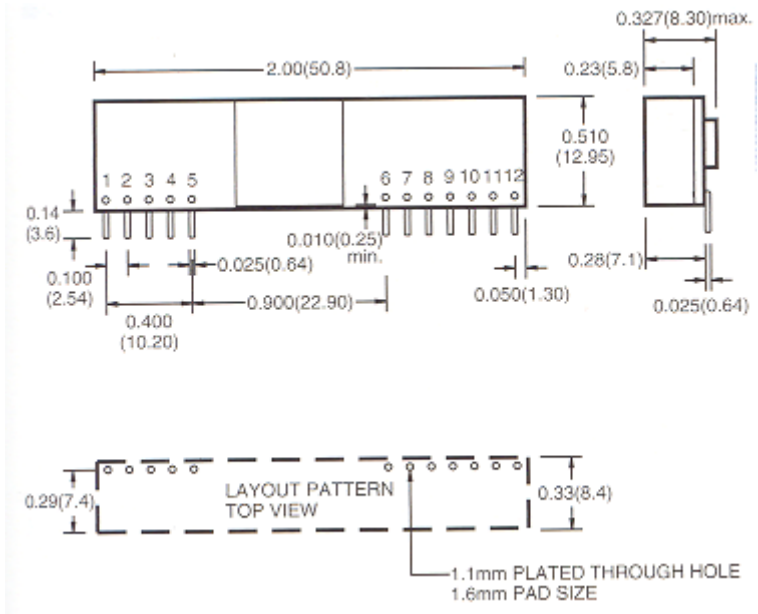
Efficiency.....see table

**Outline Information and Pin-out**

**SMT Outline information**



SIP Outline 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	No pin / PGood
7	Common
8	+ V Input
9	+ V Input
10	Sequency
11	Trim
12	On / Off Control

Temperature Typical Derating Curve

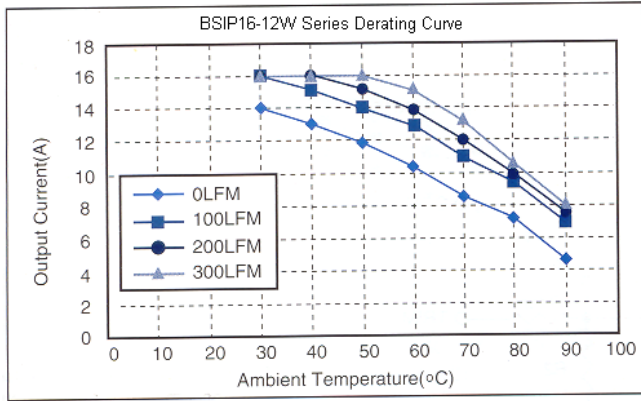


Fig 1.: Typical Derating Curve of BSIP16-12W series

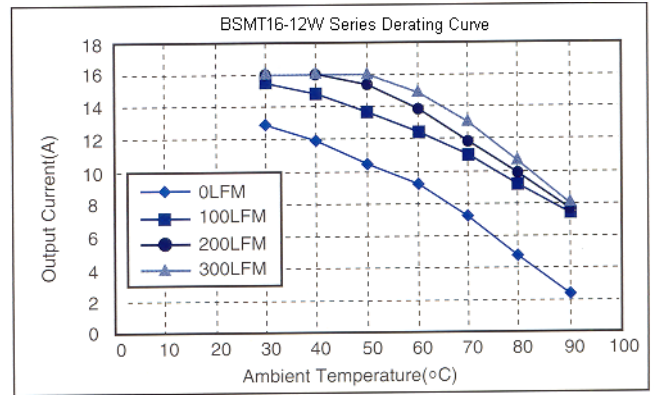


Fig 2.: Typical Derating Curve of BSMT16-12W series

Trim Resistor Values

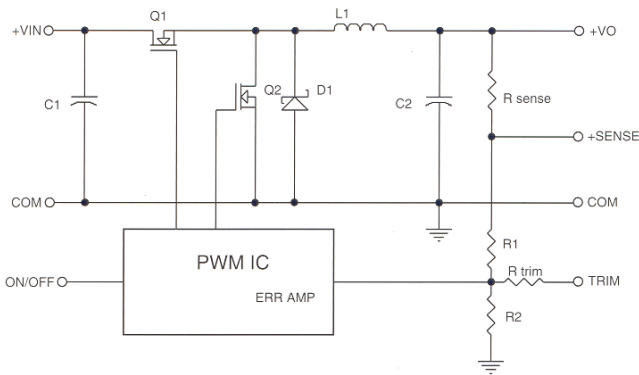


Fig 3.: Simplified Schematic

Vo (set) (V)	Rtrim (Kohm)
0.7525	Open
1.2	22.46
1.5	13.05
1.8	9.024
2	7.417
2.5	5.009
3.3	3.122
5	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.