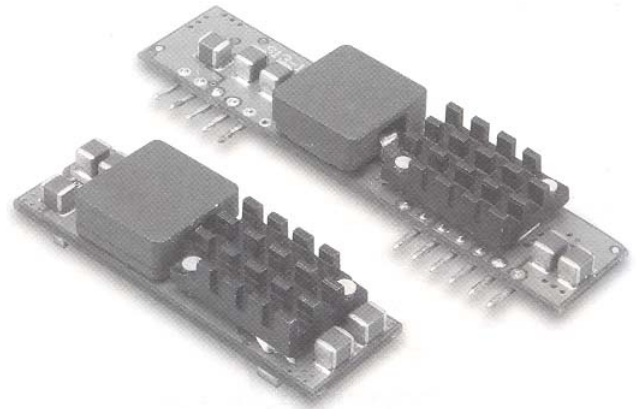


BSIP20-12W

BSMT20-12W Series 20A 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	
BSIP20-12-075W / BSMT20-12-075W	6.0 -14 Vdc	0.75 Vdc	20A	40 mA	1603 mA	78
BSIP20-12-120W / BSMT20-12-120W	6.0 -14 Vdc	1.2 Vdc	20A	50 mA	2381 mA	84
BSIP20-12-150W / BSMT20-12-150W	6.0 -14 Vdc	1.5 Vdc	20A	50 mA	2874 mA	87
BSIP20-12-180W / BSMT20-12-180W	6.0 -14 Vdc	1.8 Vdc	20A	50 mA	3409 mA	88
BSIP20-12-200W / BSMT20-12-200W	6.0 -14 Vdc	2.0 Vdc	20A	60 mA	3745 mA	89
BSIP20-12-250W / BSMT20-12-250W	6.0 -14 Vdc	2.5 Vdc	20A	65 mA	4630 mA	90
BSIP20-12-330W / BSMT20-12-330W	6.0 -14 Vdc	3.3 Vdc	20A	75 mA	5978 mA	92
BSIP20-12-500W / BSMT20-12-500W	6.5 -14 Vdc	5.0 Vdc	20A	95 mA	8865 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.	

General Specifications:

Efficiency.....	see table
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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 0.512" 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 13.46 x 9.3 mm)

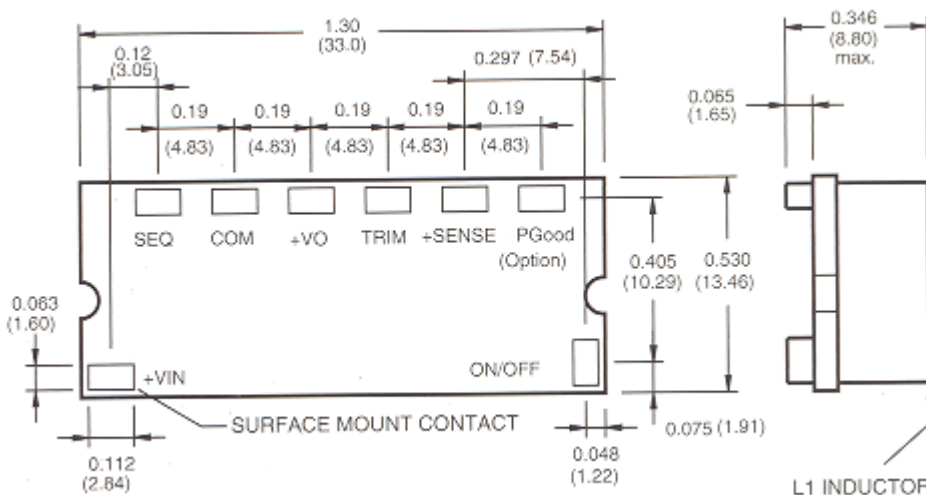
Structure

Note:

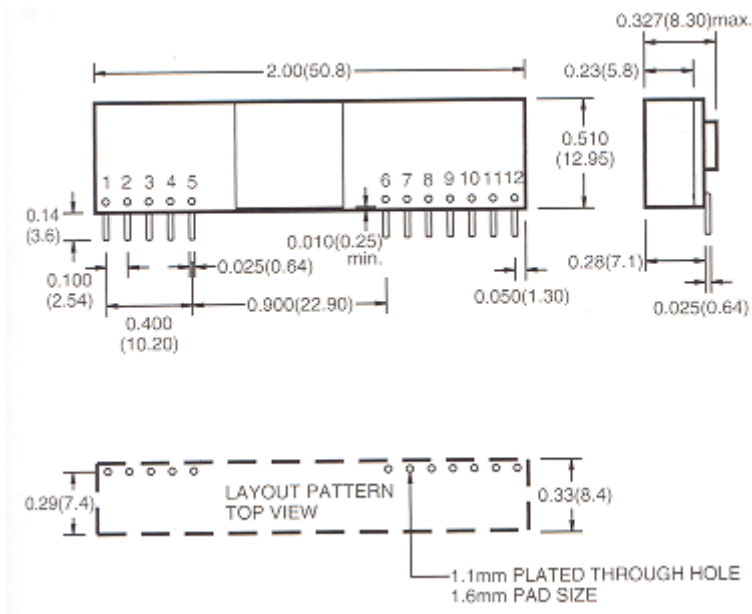
1. Measured from high line to low line;
2. Measured from full load to zero load;
3. Measured with 10uF tantalum capacitor and 1 uF ceramic capacitor across output
4. The input terminal recommend to parallel with 100uF capacitor ESR < 100 mohm
5. Suffix "N" to the model number with Negative logic remote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

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

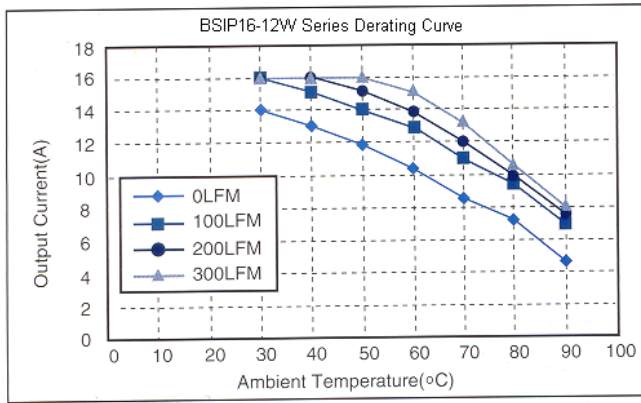


Fig 1.: Typical Derating Curve of BSIP16-12W series

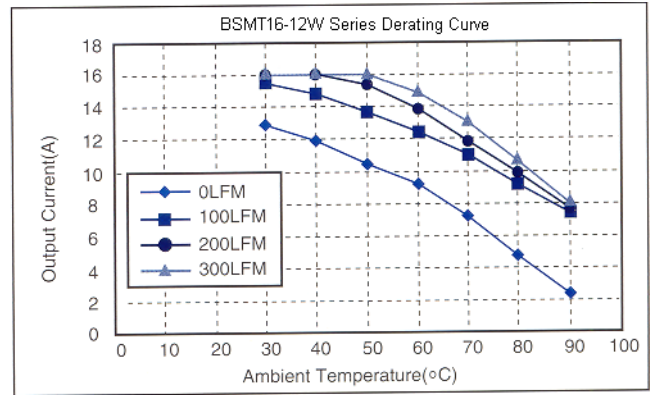


Fig 2.: Typical Derating Curve of BSMT16-12W series

Trim Resistor Values

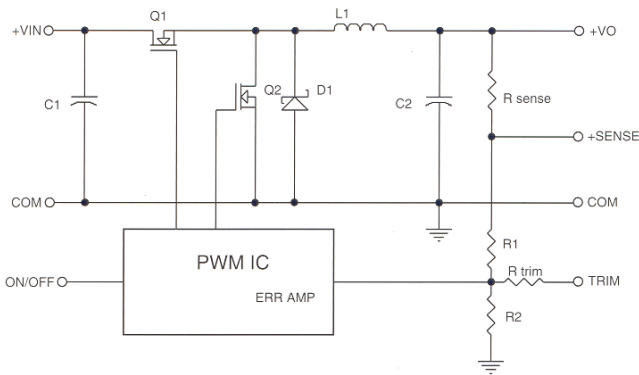


Fig 3.: Simplified Schematic

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.