

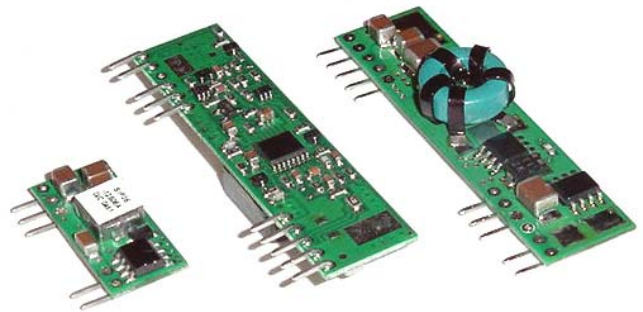
BSIP05-12

BSMT05-12 Series

5A SIP & SMT 12V Input DC-DC Converters

Features

- Industry standard pin out
- High efficiency to 92%
- 300KHz switching frequency
- 8.3 – 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	
BSIP05-12-075 / BSMT05-12-075	8.3 -14 Vdc	0.75 Vdc	5A	20 mA	428 mA	73
BSIP05-12-120 / BSMT05-12-120	8.3 -14 Vdc	1.2 Vdc	5A	25 mA	625 mA	80
BSIP05-12-150 / BSMT05-12-150	8.3 -14 Vdc	1.5 Vdc	5A	25 mA	726 mA	82
BSIP05-12-180 / BSMT05-12-180	8.3 -14 Vdc	1.8 Vdc	5A	30 mA	893 mA	84
BSIP05-12-200 / BSMT05-12-200	8.3 -14 Vdc	2.0 Vdc	5A	30 mA	980 mA	85
BSIP05-12-250 / BSMT05-12-250	8.3 -14 Vdc	2.5 Vdc	5A	35 mA	1197 mA	87
BSIP05-12-330 / BSMT05-12-330	8.3 -14 Vdc	3.3 Vdc	5A	45 mA	1545 mA	89
BSIP05-12-500 / BSMT05-12-500	8.3 -14 Vdc	5.0 Vdc	5A	50 mA	2264 mA	92

Specifications

Input Specifications:

Input Voltage Range.....12V..... 8.3-14V
Under voltage lock-outpower up8.0V Typ.
Power down7.9V Typ.
Input Filter.....Capacitive
Positive remove on /off control:
Module OnOpen 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.
5Vo75 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.....3000uF max.

General Specifications:

Efficiency.....see table
Isolation Resistance.....Non-isolation
Switching Frequency.....300 KHz, Typ.

Over temperature protection 120 °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: 0.9" x 0.4" x 0.22" (22.9 x 10.16 x 5.6 mm)
SMT package: 0.8" x 0.45" x 0.24" (20.3 x 11.43 x 6.09 mm)

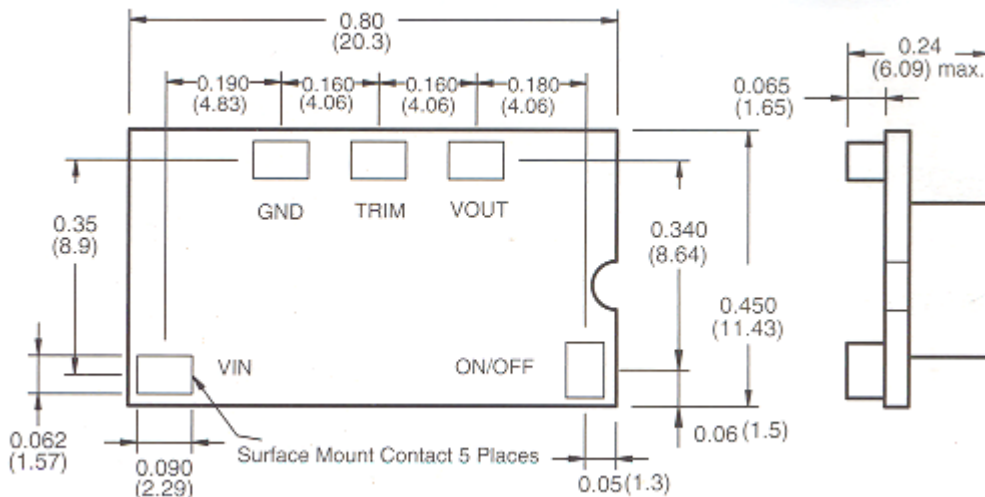
StructureNon-potted with open frame type

Note:

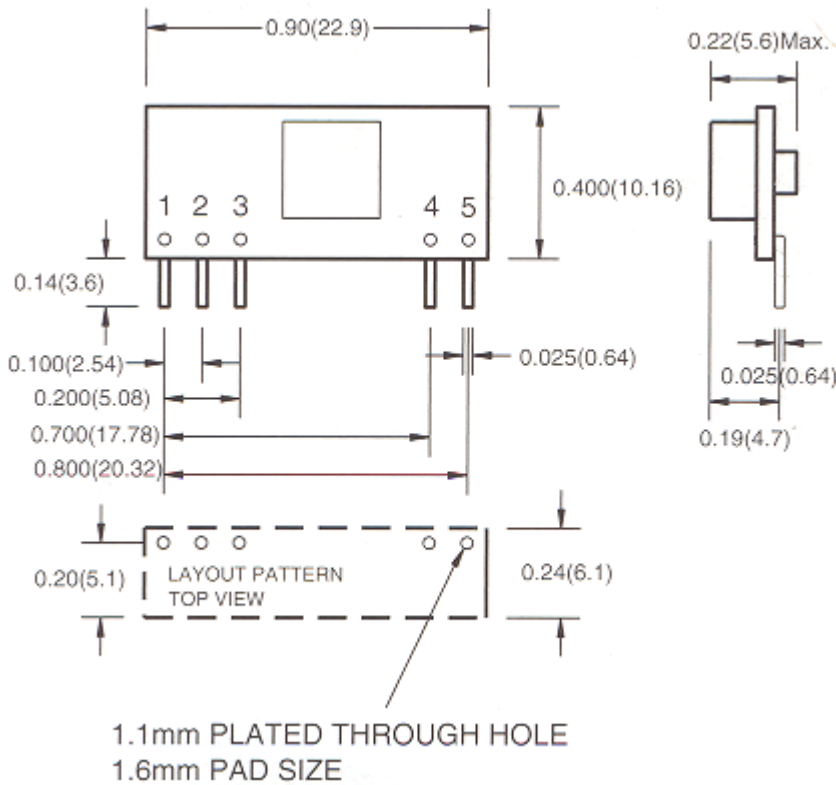
1. Measured from high line to low line;
2. Measured from full load to zero load;
3. Measured with 10uF tantalum capacitor and 1 uF ceramic capacitor across output
4. The input terminal recommend to parallel with 47uF capacitor and 10uF ceramic capacitor cross input
5. Suffix "N" to the model number with 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	Trim
3	Common
4	+ V Input
5	On / Off

Temperature Typical Derating Curve

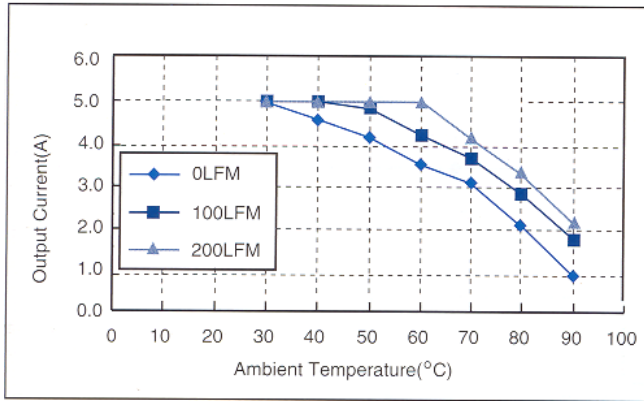


Fig 1.: Typical Derating Curve of BSIP05-12 series

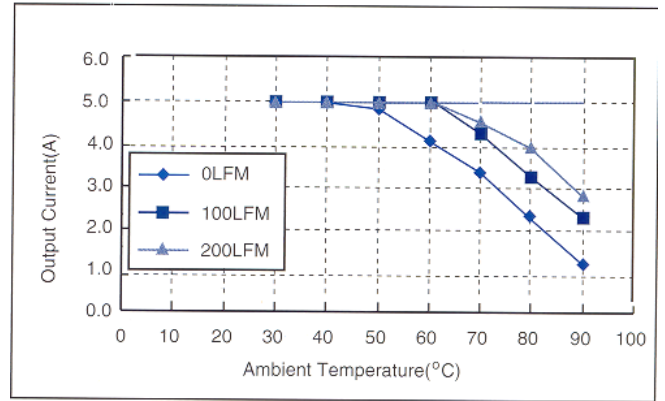
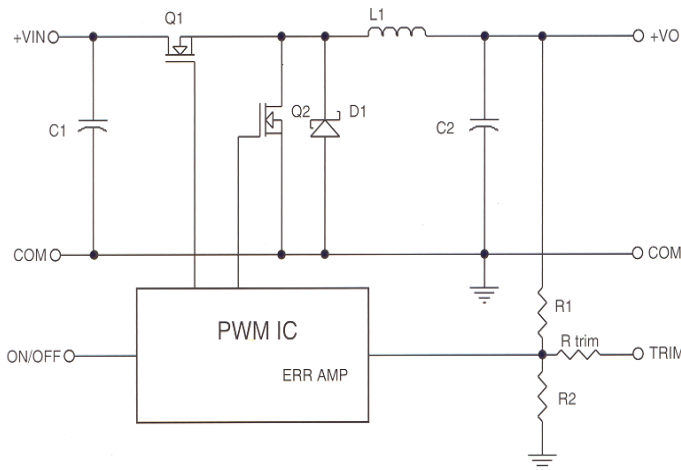


Fig 2.: Typical Derating Curve of BSMT05-12 series

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.