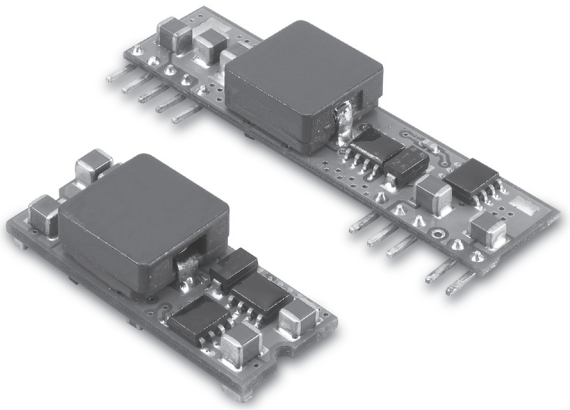
Description:

- Industry Standard Pin out
- High Efficiency to 94%
- 300KHz Switching Frequency
- 9.0 -14VDC 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/C-UL60950 Certified



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT NO LOAD	INPUT CURRENT FULL LOAD	%EFF
SIP16-12S05A	9.0-14 VDC	0.75VDC	16A	40mA	1299mA	77
	9.0-14 VDC	1.2VDC	16A	50mA	1928mA	83
	9.0-14 VDC	1.5VDC	16A	50mA	2326mA	86
	9.0-14 VDC	1.8VDC	16A	60mA	2727mA	88
	9.0-14 VDC	2.0VDC	16A	60mA	2996mA	89
SMT16-12S05A	9.0-14 VDC	2.5VDC	16A	65mA	3704mA	90
	9.0-14 VDC	3.3VDC	16A	75mA	4783mA	92
	9.0-14VDC	5.0VDC	16A	75mA	7092mA	94

NOTE : 1. Nominal Input Voltage 12VDC

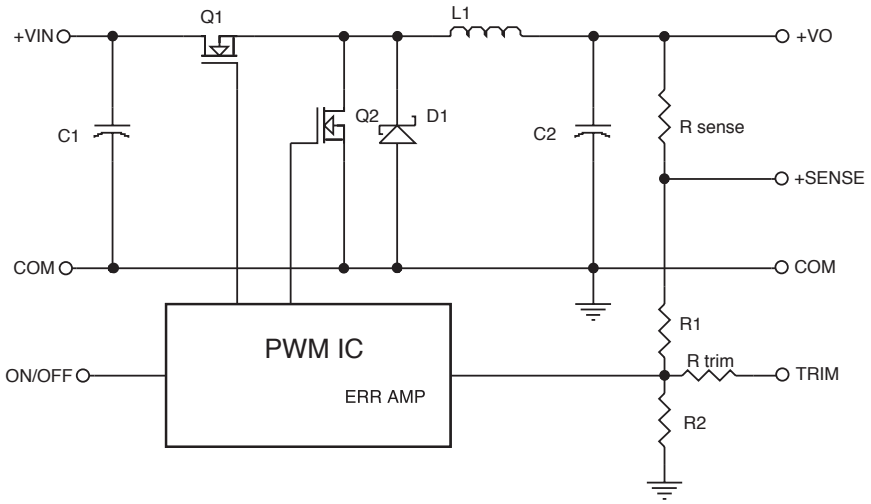


Figure 1. Simplified Schematic

Vo,set (V)	Rtrim (KΩ)
0.75	Open
1.2	22.33
1.5	13.0
1.8	9.0
2.0	7.4
2.5	5.0
3.3	3.12
5.0	1.47

Table 1. External Resistor Value for programming output voltage

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 Type.....Capacitive
Positive Remote on/off Control :
Module ON.....Open Circuit or = Vin
Module OFF.....< 0.4 VDC

OUTPUT SPECIFICATIONS:

Voltage Accuracy.....±1.5% max.
Transient Response :25% Step Load Change.....<200µ sec.
Ripple and Noise, 20MHz BW Note3.....30mV rms max.
75mV pk-pk 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.....8000µF max.
External Trim Adj. Range (see Table1).....Vo=0.75-5.0Vdc

GENERAL SPECIFICATIONS:

Efficiency.....See Table
Isolation Voltage.....Non-isolation

Switching Frequency .....300KHz Typ.
Over Temperature Protection .....130˚C Typ.
Operating Ambient Temperature Range.....-40˚C to +85˚C
Power Derating Curve .....see Figure 2,3
Storage Temperature Range .....-55˚C to +125˚C
Dimensions:
SIP Package: 2 x 0.512 x 0.327 inches (50.8 x 13.0 x 8.3 mm)
SMT Package: 1.3 x 0.53 x 0.366 inches (33.0 x 13.46x 9.30 mm)
Structure.....Non-potted With Open Frame Type
Weight.....10g

NOTE:

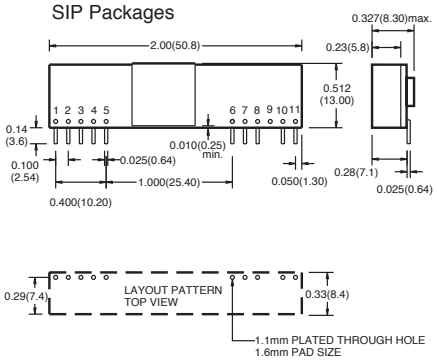
1. Measured From High Line to Low Line, Vo,set=3.3Vdc
2. Measured From Full Load to Zero Load, Vo,set=3.3Vdc
3. The output noise is measured with 10uf tantalum capacitor and 1uf ceramic capacitor across output.
4. The Input Terminal Recommend to Parallel With 100uF Capacitor ESR<100mΩ to Reduce The Input Ripple Voltage
5. Suffix "N" to the Model Number with Negative Logic Remote on/off
Model ON.....Open Circuit or < 0.4VDC
Module OFF.....>+2.8VDC to Vin

Mechanical Specification

All Dimensions are In Inches(mm)

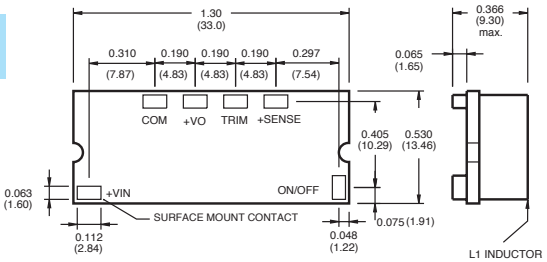
Tolerances : .XX±.02 in(.X±.5), unless otherwise noted
.XXX±.010 in (.XX±.25)

SIP Packages



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

SMT Packages
BOTTOM VIEW OF BOARD



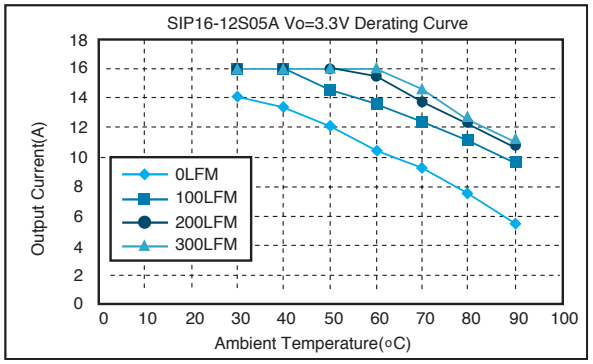


Figure 2. Typical Power De-rating for 12V IN

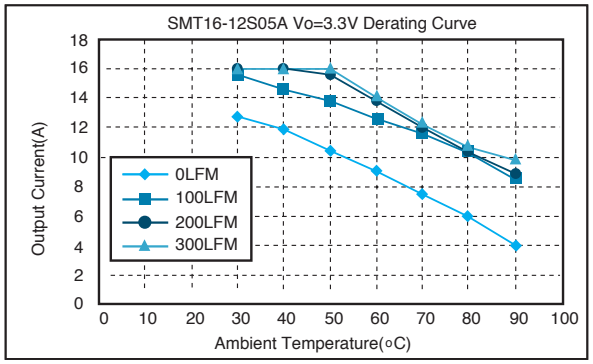


Figure 3. Typical Power De-rating for 12V IN