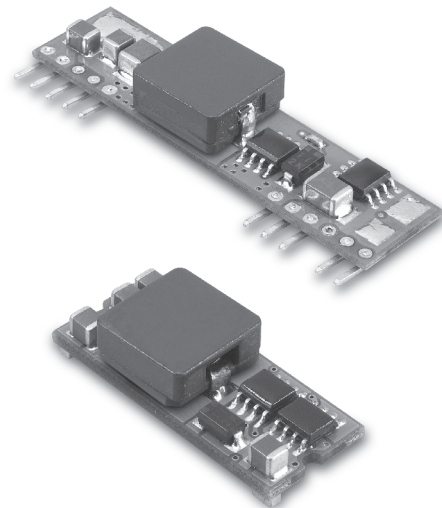


SIP SMT15-05

S E R I E S

15 AMP POL CONVERTERS



Features

- Non-Isolated POL Converter
- SIP / SMT Package
- Output Current 15AMP
- Input Voltage Range 3-5.5VDC
- Output Voltage Range 0.9-3.63VDC
- 300KHz Switching Frequency
- High Efficiency to 94%
- Over Temperature Protection
- Continuous Short Circuit Protection
- Remote On/Off Control
- UL/c-UL 60950 Certified

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.
				NO LOAD	FULL LOAD	
SIP 15-05S33A	3.0-5.5 VDC	1.0VDC	15 A	60mA	3.658A	82
	3.0-5.5 VDC	1.2VDC	15 A	60mA	4.286A	84
	3.0-5.5 VDC	1.5VDC	15 A	60mA	5.172A	87
SMT15-05S33A	3.0-5.5 VDC	1.8VDC	15 A	70mA	6.136A	88
	3.0-5.5 VDC	2.0VDC	15 A	70mA	6.742A	89
	3.0-5.5 VDC	2.5VDC	15 A	70mA	8.152A	92
	4.5-5.5 VDC	3.3VDC	15 A	70mA	10.532A	94

NOTE: 1. Nominal Input Voltage 5 VDC

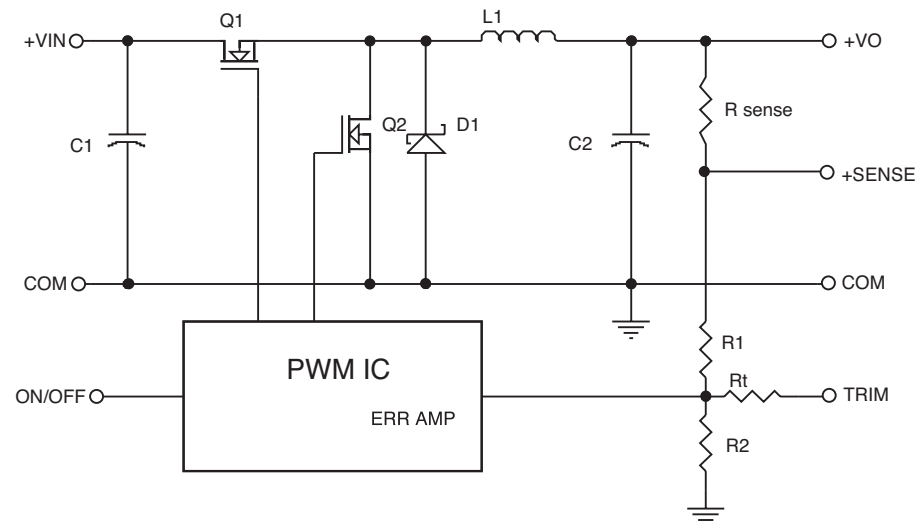


Figure 1. Simplified Schematic

Vo, set (V)	Rtrim (KΩ)
0.90	135.36
1.00	79.17
1.20	41.71
1.50	22.98
1.80	14.96
2.00	11.75
2.50	6.93
3.30	3.15
3.63	2.20

Table 1. External Resistor Values for programming output voltage

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range..... $V_{o, set} \leq V_{in} - 0.5VDC$5V.....3.0 – 5.5V
Under Voltage Lock-outPower up2.8V Typ.
Power down.....2.7V Typ.
Input Filter Type.....Capacitive
Positive Remote on/off Control :
Module ON.....Open Circuit or = V_{in}
Module OFF.....< 0.4 Vdc

OUTPUT SPECIFICATIONS:

Voltage Accuracy..... $\pm 1.5\%$ max.
Transient Response :25% Step Load Change.....<200 μ sec.
Ripple and Noise, 20MHz BW³.....20mV rms max.
50mV pk-pk max.
Temperature Coefficient..... $\pm 0.03\%/^{\circ}C$ max.
Short Circuit Protection.....Continuous
Line Regulation¹.....SIP15-05S33A..... $\pm 0.2\%$ max.
SMT15-05S33A..... $\pm 0.4\%$ max.
Load Regulation²..... $\pm 0.5\%$ max.
Capacitive Load, Low ESR.....10000 μ F max.
External Trim Adj. Range (see Table1)..... $V_o = 0.9-3.63VDC$

GENERAL SPECIFICATIONS:

Efficiency.....See Table
Isolation Voltage.....Non-isolation
Switching Frequency300KHz Typ.
Over Temperature Protection120 $^{\circ}C$ Typ.
Operating Ambient Temperature Range.....-40 $^{\circ}C$ to +85 $^{\circ}C$
Power Derating Curvesee Figure 2,3
Storage Temperature Range-55 $^{\circ}C$ to +125 $^{\circ}C$
Dimensions:
SIP Package : 2.00 x 0.50 x 0.327 inches (50.8 x 12.7 x 8.50 mm)
SMT Package: 1.30 x 0.53 x 0.366 inches (33.0 x 13.46 x 9.30 mm)
Structure.....Non-potted With Open Frame Type
Weight.....6.8g

SIP15-05S33A Derating Curve

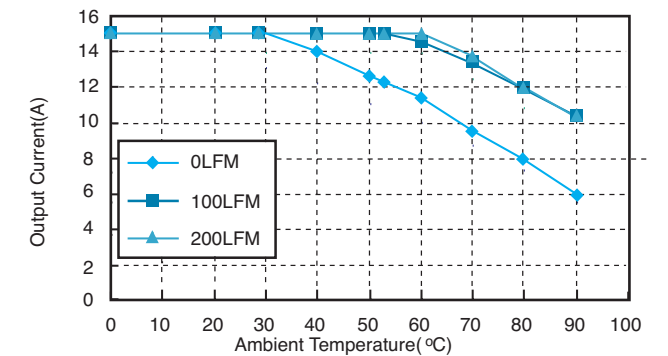


Figure 2. Typical Power De-rating for 5V IN

SMT15-05S33A Derating Curve

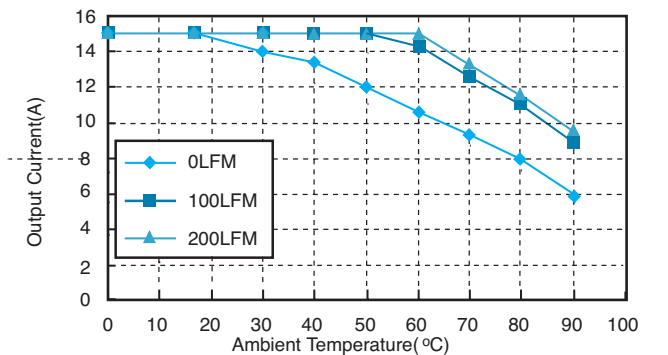


Figure 3. Typical Power De-rating for 5V IN

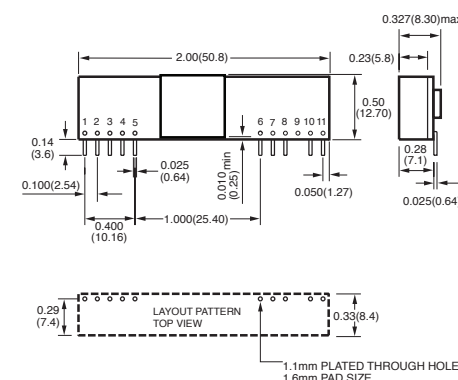
NOTE:

1. Measured From High Line to Low Line, $V_{o, set} = 1.8Vdc$
2. Measured From Full Load to Zero Load, $V_{o, set} = 3.3Vdc$
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<20mΩ 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

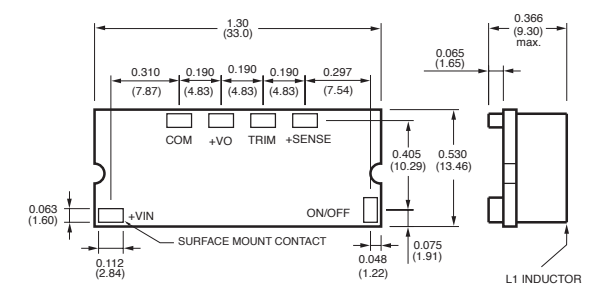
All Dimensions In Inches(mm)
Tolerance Inches: x.xx= ± 0.02 , x.xxx= ± 0.010
Millimeters: x.x= ± 0.5 , x.xx= ± 0.25

SIP Packages



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



All Specifications Typical At Nominal Line, Full Load and 25 $^{\circ}C$ Unless Otherwise Noted.