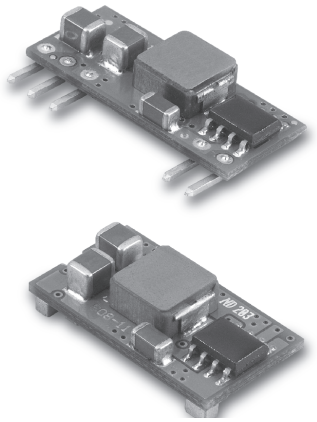
DC DC

Part Num

SIPSMT05-05 SERIES

5 AMP POL CONVERTERS



Features:

- Non-Isolated POL Converter
- SIP / SMT Package
- Output Current 5AMP
- Input Voltage Range 3.0-5.5VDC
- Output Voltage Range 0.75-3.63VDC
- High Efficiency to 94%
- Over Temperature Protection
- Continuous Short Circuit Protection
- Remote On/Off Control
- UL/C-UL 60950 Certified

Electrical Characteristics:

MODEL Number	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		%EFF.
				NO LOAD	FULL LOAD	
S I P 05-05S33A	3.0 –5.5 VDC	0.75VDC	5 A	25mA	949mA	79
	3.0 –5.5 VDC	1.2VDC	5 A	30mA	1412mA	85
	3.0 –5.5 VDC	1.5VDC	5 A	30mA	1724mA	87
SMT05-05S33A	3.0 –5.5 VDC	1.8VDC	5 A	35mA	2022mA	89
	3.0 –5.5 VDC	2.0VDC	5 A	35mA	2222mA	90
	3.0 –5.5 VDC	2.5VDC	5 A	35mA	2217mA	92
	4.5 –5.5 VDC	3.3VDC	5 A	35mA	3511mA	94

NOTE: 1. Nominal Input Voltage 5 VDC

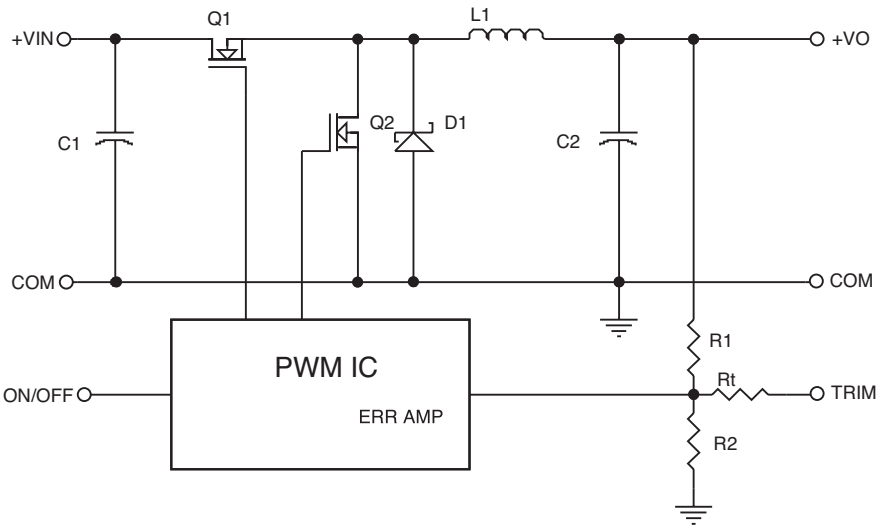


Figure 1. Simplified Schematic

Vo, set (V)	*Rtrim (KΩ)*
0.75	Open
1.2	41.71
1.5	22.98
1.8	14.96
2.0	11.75
2.5	6.93
3.3	3.15
3.63	2.20

Table 1. External Resistor Values for programming output voltage

Specification

INPUT SPECIFICATIONS:

Input Voltage Range.....Vo,set ≤ Vin-0.5VDC.....5V..... 3.0 – 5.5V
Under Voltage Lock-out .....Power up .....2.0V Typ.
Power down.....1.9V 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 BW3.....20mV rms max.
50mV pk-pk max.
Temperature Coefficient.....±0.03%/C max.
Short Circuit Protection.....Continuous
Line Regulation1.....± 0.4% max.
Load Regulation2..... .....± 0.5% max.
Capacitive Load, Low ESR..... ..... 3000µF max.
External Trim Adj. Range (see Table1).....Vo=0.75-3.63VDC

GENERAL SPECIFICATIONS:

Efficiency.....See Table
Isolation Voltage.....Non-isolation
Switching Frequency .....300KHz Typ.
Over Temperature Protection .....120˚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: 0.90 x 0.400 x 0.22 inches (22.9 x 10.16 x 5.6 mm)
SMT Package: 0.80 x 0.450 x 0.24 inches (20.3 x 11.43x 6.09 mm)
Structure.....Non-potted With Open Frame Type
Weight.....2.3g

SIP05-05S33A (Vo=3.3V) Derating Curve

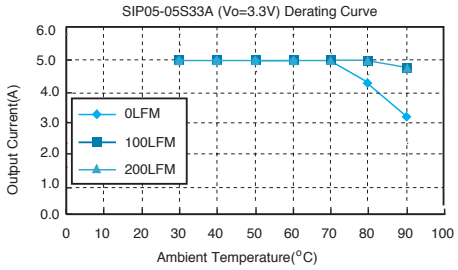


Figure 2. Typical Power De-rating for 5V IN 3.3Vout

SMT05-05S33A (Vo=3.3V) Derating Curve

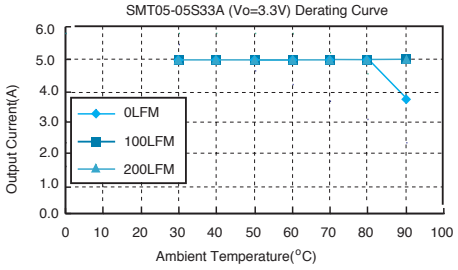


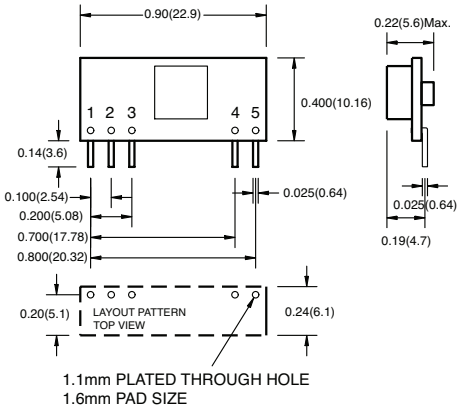
Figure 3. Typical Power De-rating for 5V IN 3.3Vout

NOTE:
1. Measured From High Line to Low Line, Vo,set=1.8Vdc
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

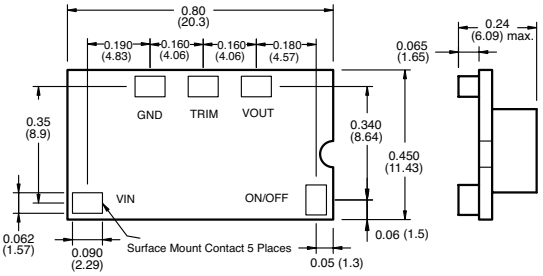
All Dimensions In Inches(mm)
Tolerance Inches: x.xx= ±0.02, x.xxx= ±0.010
Millimeters: x.x= ±0.5, x.xx= ±0.25

SIP Packages



PIN CONNECTION	
Pin	*Function*
1	+Output
2	Trim
3	Common
4	+V Input
5	On/Off

SMT Packages
BOTTOM VIEW OF BOARD



All Specifications Typical At Nominal Line, Full Load, and 25˚C Unless Otherwise Noted

Data sheets are subject to change without notice