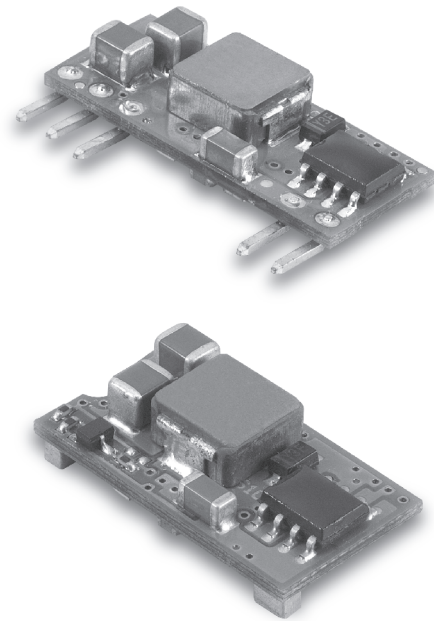


SIP SMT05-12

S E R I E S

5 AMP POL CONVERTERS



Features

- Non-Isolated POL Converter
- SIP / SMT Package
- Output Current 5AMP
- Input Voltage Range 8.3-14VDC
- Output Voltage Range 0.75-5VDC
- High Efficiency to 92%
- 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	
SIP05-12S05A	8.3-14VDC	0.75VDC	5 A	20mA	428mA	73
	8.3-14VDC	1.2VDC	5 A	25mA	625mA	80
	8.3-14VDC	1.5VDC	5 A	25mA	762mA	82
	8.3-14VDC	1.8VDC	5 A	30mA	893mA	84
SMT05-12S05A	8.3-14VDC	2.0VDC	5 A	30mA	980mA	85
	8.3-14VDC	2.5VDC	5 A	35mA	1197mA	87
	8.3-14VDC	3.3VDC	5 A	45mA	1545mA	89
	8.3-14VDC	5.0VDC	5 A	50mA	2264mA	92

NOTE: 1. Nominal Input Voltage 12 VDC

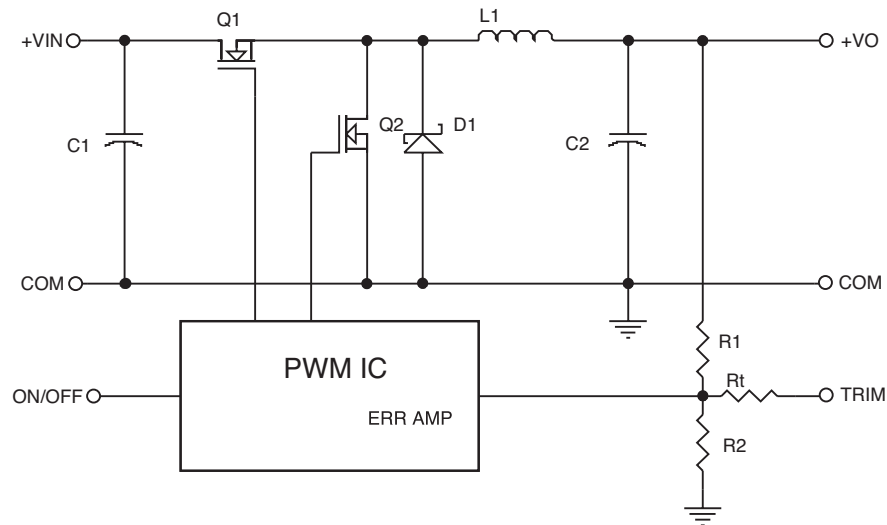


Figure 1. Simplified Schematic

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 Values for programming output voltage

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....12V.....8.3 - 14V
 Under Voltage Lock-outPower up8.0V Typ.
Power down.....7.9V 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 BW².....20mVrms, 50mVpk max.
 Vo=5Vdc.....45mVrms, 75mVpk max.
 Temperature Coefficient.....±0.03%/C max.
 Short Circuit Protection.....Continuous
 Line Regulation¹.....± 0.2% max.
 Load Regulation².....± 0.5% max.
 Capacitive Load, Low ESR.....3000µF max.
 External Trim Adj. Range (see Table1).....Vo=0.75-5.0VDC

GENERAL SPECIFICATIONS:

Efficiency.....See Table
 Isolation Voltage.....Non-isolation
 Switching Frequency300KHz Typ.
 Over Temperature Protection120°C Typ.
 Operating Ambient Temperature Range.....-40°C to +85°C
 Power Derating Curvesee 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

SIP05-12S05A (Vo=3.3V) Derating Curve

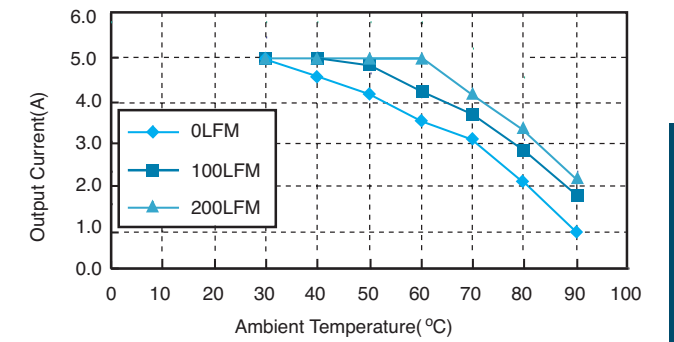


Figure 2. Typical Power De-rating for 12V IN 3.3Vout

SMT05-12S05A (Vo=3.3V) Derating Curve

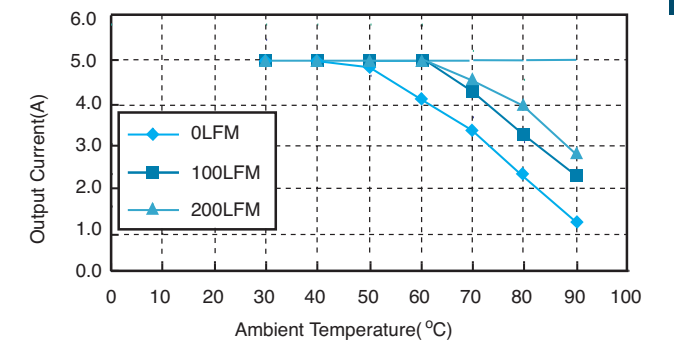


Figure 3. Typical Power De-rating for 12V IN 3.3Vout

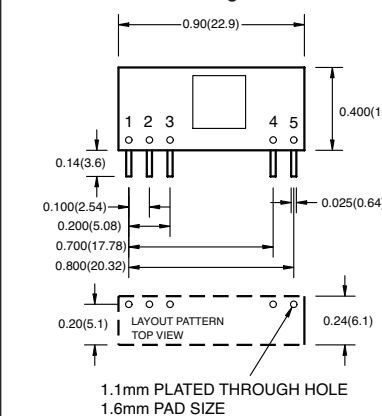
NOTE:

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 100µF Capacitor and 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

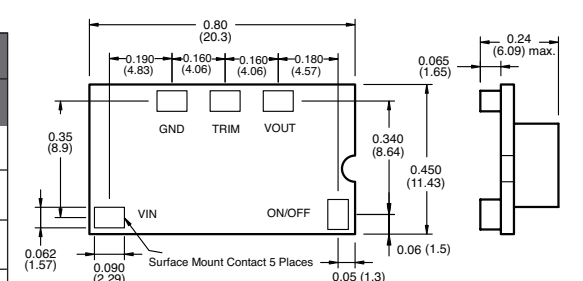
SIP Packages



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.