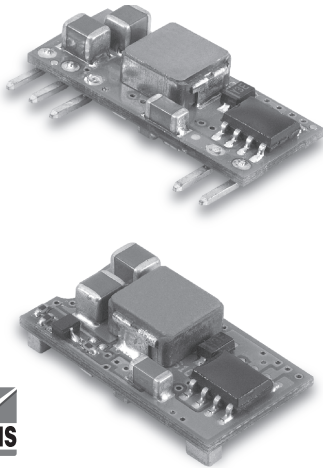


## 5 AMP POL CONVERTERS



### 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

### Electrical Characteristics:

MODEL Number	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		%EFF.
				NO LOAD	FULL LOAD	
SIP 05-12S05A	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

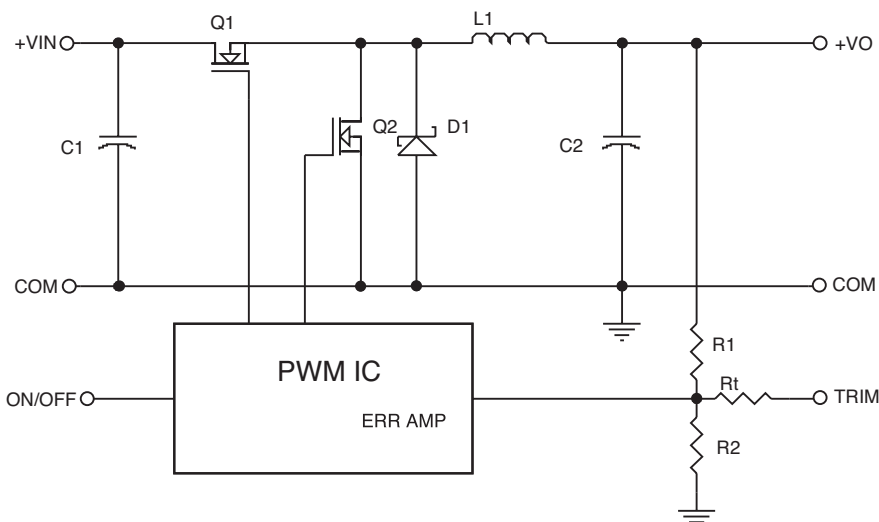


Figure 1. Simplified Schematic

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

## Specification

### INPUT SPECIFICATIONS:

Input Voltage Range.....	12V.....	8.3 - 14V
Under Voltage Lock-out .....	Power up .....	8.0V 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 BW3.....	20mVrms, 50mVpk max.
Vo=5Vdc.....	45mVrms, 75mVpk max.
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=0.75-3.63VDC

### 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

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

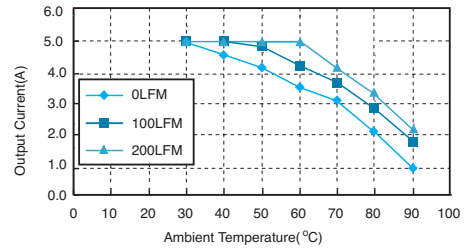


Figure 2. Typical Power De-rating for 12V IN 3.3Vout

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

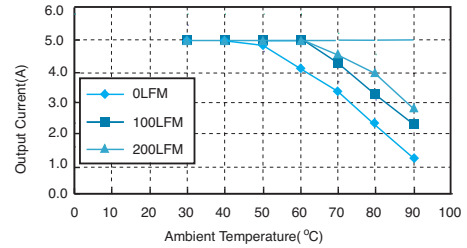


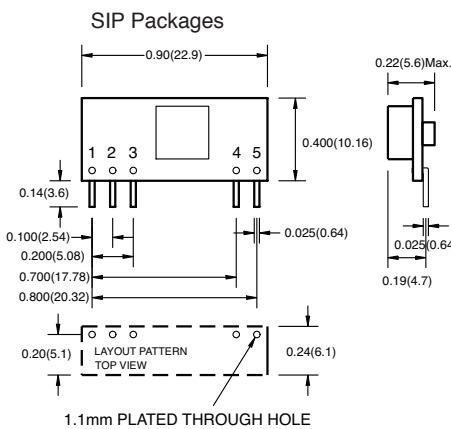
Figure 3. Typical Power De-rating for 12V IN 3.3Vout

### NOTE:

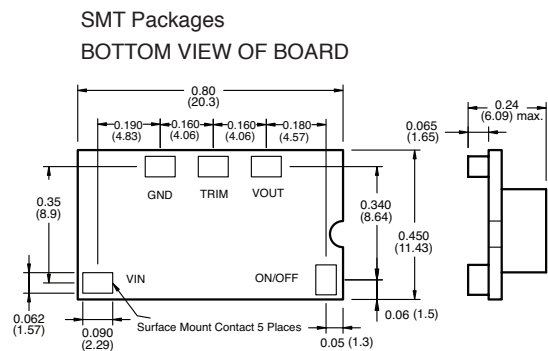
1. Measured From High Line to Low Line, Vo,set=1.8Vdc
2. Measured From Full Load to Zero Load, Vo,set=3.3Vdc
3. The output noise is measured with 10uf tantalum capacitor and 1uf ceramic capacitor across output.
4. The Input Terminal Recommend to Parallel With 100uF Capacitor ESR<100mΩ to Reduce The Input 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



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



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

Data sheets are subject to change without notice