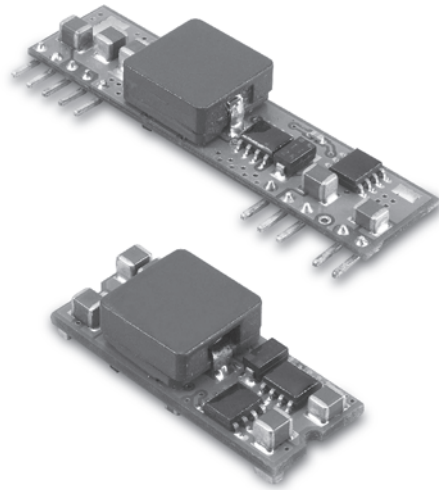


SIP SMT10-12

S E R I E S

10 AMP POL CONVERTERS



Features

- Non-Isolated POL Converter
- SIP / SMT Package
- Output Current 10AMP
- Input Voltage Range 9-14VDC
- 300KHz Switching Frequency
- High Efficiency to 95%
- 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 10-12S10 SMT10-12S10	9.0-14 VDC	1.0 VDC	10 A	50 mA	992 mA	84
SIP 10-12S12 SMT10-12S12	9.0-14 VDC	1.2 VDC	10 A	50 mA	1163 mA	86
SIP 10-12S15 SMT10-12S15	9.0-14 VDC	1.5 VDC	10 A	50 mA	1404 mA	89
SIP 10-12S18 SMT10-12S18	9.0-14 VDC	1.8 VDC	10 A	60 mA	1666 mA	90
SIP 10-12S20 SMT10-12S20	9.0-14 VDC	2.0 VDC	10 A	60 mA	1832 mA	91
SIP 10-12S25 SMT10-12S25	9.0-14 VDC	2.5 VDC	10 A	60 mA	2264 mA	92
SIP 10-12S33 SMT10-12S33	9.0-14 VDC	3.3 VDC	10 A	70 mA	2956 mA	93
SIP 10-12S05 SMT10-12S05	9.0-14 VDC	5.0 VDC	10 A	70 mA	4385 mA	95
SIP 10-12S05A SMT10-12S05A	8.3-14 VDC	0.75-5 VDC	10 A	70 mA	2956 mA	93%@3.3V

NOTE: 1. Nominal Input Voltage 12VDC

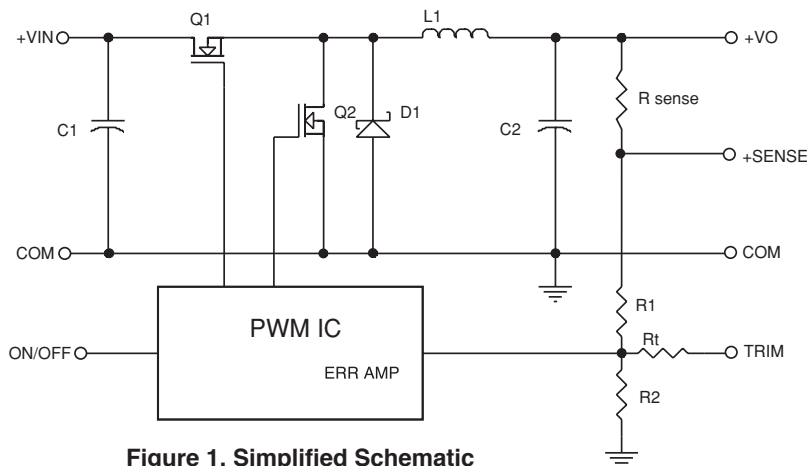


Figure 1. Simplified Schematic

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. Suffix "A" to the model number External Resistor Values for programming output voltage

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....12V.....9.0 – 14V
 12V.....8.3 – 14V
 Under Voltage Lock-outPower up8.0V 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: 50% Step Load Change.....< 200µs
 Ripple and Noise, 20MHz BW³.....20mV RMS max.
 50mV pk-pk max.
 Temperature Coefficient.....±0.03%/°C max.
 Short Circuit Protection.....Continuous
 Line Regulation¹.....± 0.2% max.
 Load Regulation².....± 0.5% max.
 Capacitive Load, Low ESR.....8000µF max.
 External Trim Adj. Range.....±10%
 (SIP/SMT110-12S05).....+5%, -10%
 (SIP/SMT110-12S05A).....0.75V-5.0V
 Start up time7ms typ.

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 Curve see Figure 2,3
 Storage Temperature Range-55°C to +125°C
 MTBF...MIL-STD-217F, GB, 25°C, Full Load.....9800hrs typ.
 Dimensions:
 SIP Package: 2.00x0.512x0.327 inches (50.8x13.0x8.30 mm)
 SMT Package: 1.30x0.530x0.366 inches (33.0x13.46x9.30 mm)
 Structure.....Non-potted With Open Frame Type
 Weight.....10g

SIP10-12S33 Derating Curve

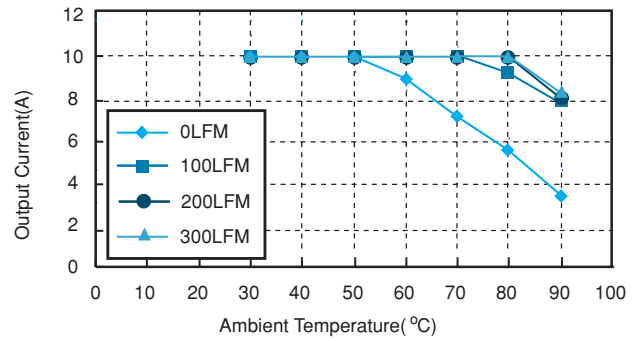


Figure 2. Typical Power Derating for 12Vin

SMT10-12S33 Derating Curve

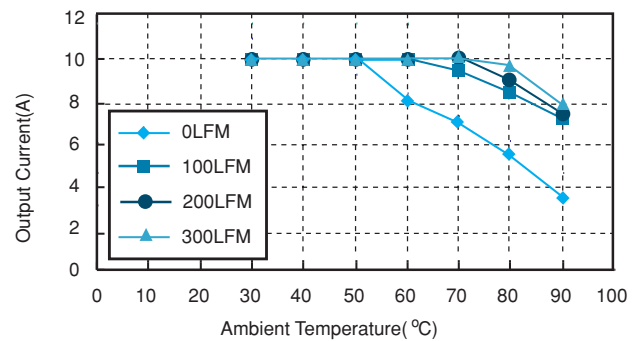


Figure 3. Typical Power Derating for 12Vin

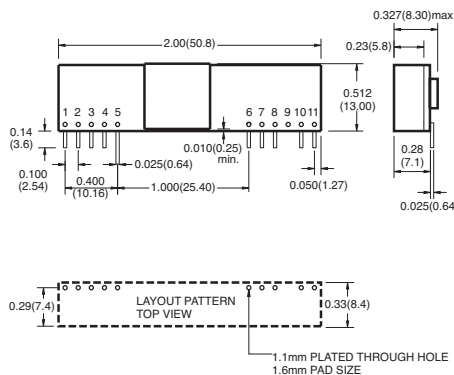
NOTE:

1. Measured From High Line to Low Line.
2. Measured From Full Load to Zero Load.
3. The output noise is measured with 10µF tantalum capacitor and 1µF ceramic capacitor across output.
4. The Input Terminal Recommend to Parallel With 100µF Capacitor ESR<100mΩ to Reduce The Input Ripple Voltage.
5. Suffix "N" to the Model Number with Negative Logic Remote on/off
 Module 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	+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

