



SIPSMT10-12 SERIES

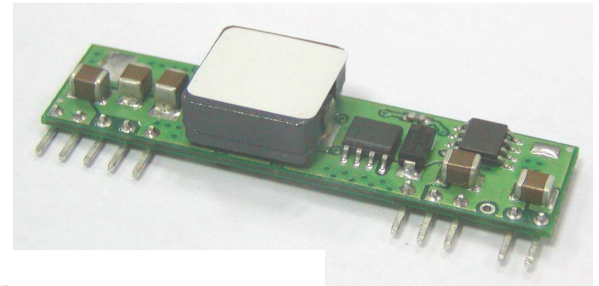
10 AMP

POL CONVERTERS



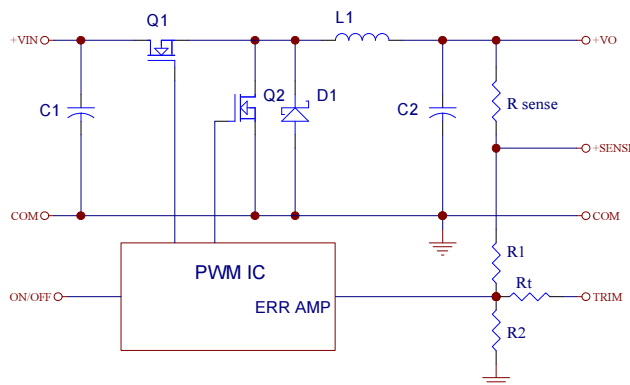
FEATURES

- * Non-isolated POL Converter
- * SIP / SMT Package
- * Output Current 10AMP
- * Input Voltage Range 9.0 – 14VDC
- * 300KHz Switching Frequency
- * High Efficiency to 95%
- * Over Temperature Protection
- * Continuous Short Circuit Protection
- * Remote ON/OFF Control
- * UL/C-UL60950 Certified



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		Efficiency (%)
				NO LOAD	FULL LOAD	
SIP10-12S10 SMT10-12S10	9.0 – 14VDC	1.0VDC	10A	50mA	992mA	84
SIP10-12S12 SMT10-12S12	9.0 – 14VDC	1.2VDC	10A	50mA	1163mA	86
SIP10-12S15 SMT10-12S15	9.0 – 14VDC	1.5VDC	10A	50mA	1404mA	89
SIP10-12S18 SMT10-12S18	9.0 – 14VDC	1.8VDC	10A	60mA	1666mA	90
SIP10-12S20 SMT10-12S20	9.0 – 14VDC	2.0VDC	10A	60mA	1832mA	91
SIP10-12S25 SMT10-12S25	9.0 – 14VDC	2.5VDC	10A	60mA	2264mA	92
SIP10-12S33 SMT10-12S33	9.0 – 14VDC	3.3VDC	10A	70mA	2956mA	93
SIP10-12S05 SMT10-12S05	9.0 – 14VDC	5.0VDC	10A	70mA	4385mA	95
SIP10-12S05A SMT10-12S05A	8.3 – 14VDC	0.75 -5VDC	10A	70mA	2956mA	93%@3.3V

NOTE: Nominal Input Voltage 12VDC



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

Figure 1. Simplified Schematic

SPECIFICATIONS

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

INPUT SPECIFICATIONS:

Input Voltage Range.....	12V	9.0 – 14V
	12V	8.3 – 14V
Under Voltage Lock-out.....	Power up	8.0V typ.
	Power down	7.7V typ.
Input Filter Type		Capacitive
Positive Remote on/off Control:		
Module ON	Open Circuit or =Vin	
Module OFF	<0.4Vdc	

OUTPUT SPECIFICATIONS:

Voltage Accuracy	±1.5% max.
Transient Response: 25% Step Load Change	<200us
Ripple and Noise, 20MHz BW (note 3)	20mVrms max.
	50mVpk-pk max.
Temperature Coefficient	±0.03%/C max.
Short Circuit Protection	Continuous
Line Regulation (note 1)	±0.2% max.
Load Regulation (note 2)	±0.5% max.
Capacitive Load Low ESR	8000uF max.
External Trim Adj. Range	±10%
(SIP/SMT10-12S05)	+5%, -10%
(SIP/SMT10-12S05A)	0.75V – 5.0V
Start up time	7ms typ.

GENERAL SPECIFICATIONS:

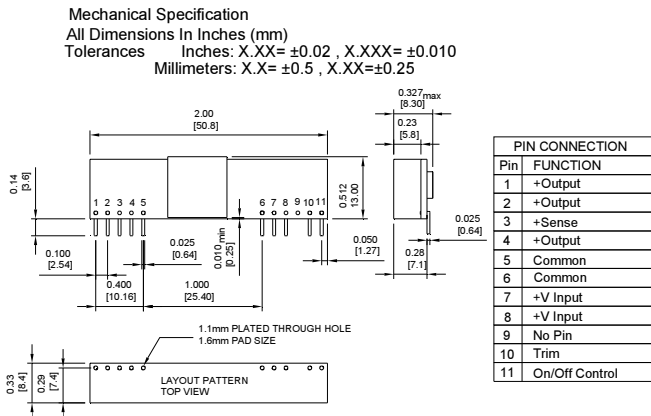
Efficiency	See Table
Isolation Voltage	Non-isolation
Switching Frequency	300KHz typ.
Over Temperature Protection	120°C typ.
Operating Ambient Temperature Range	-40°C to +85°C
Power Derating Curve	see Figure2, 3
Storage Temperature Range	-55°C to +125°C
MTBF	MIL-STD-217F, GB, 25°C, Full Load
	0.98Mhrs typ.
Dimensions: SIP Package:.....	2.00x0.512x0.327inches(50.8x13.00x8.30 mm)
SMT Package:.....	1.30x0.530x0.366 inches (33.0x13.46x9.30 mm)
Structure	Non-potted With Open Frame Type
Weight	10g

NOTE :

1. Measured From High Line to Low Line
2. Measured From Full Load to Zero Load
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

Dimensions:

SIP Packages



SMT Packages

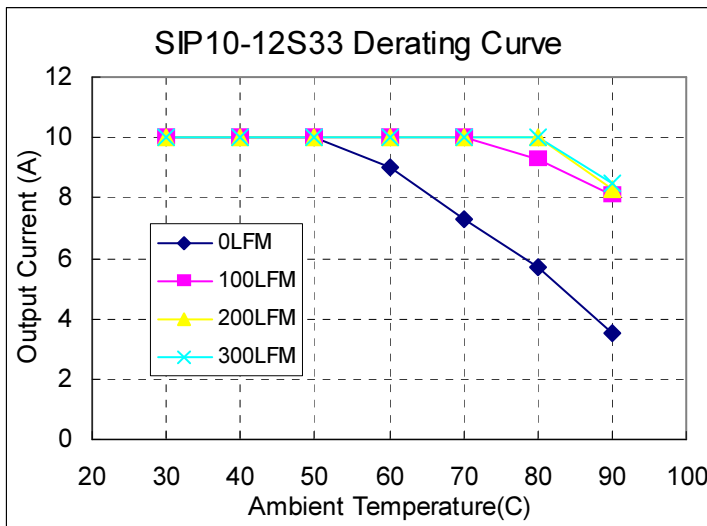
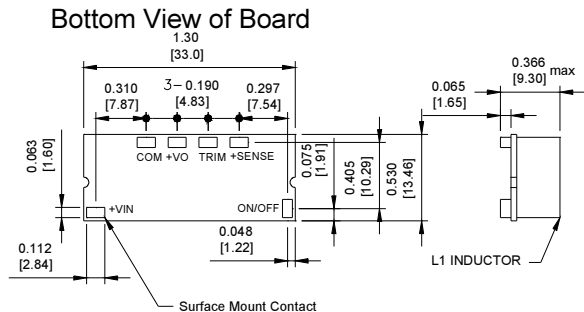


Figure2. Typical Power De-rating for 12V IN

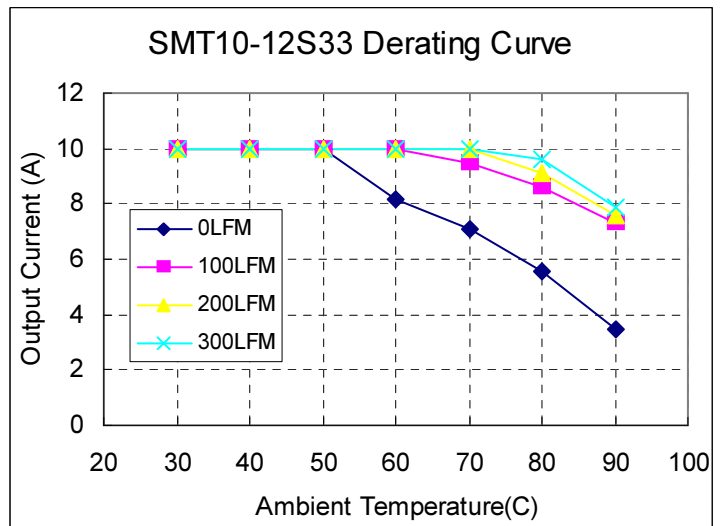


Figure3. Typical Power De-rating for 12V IN