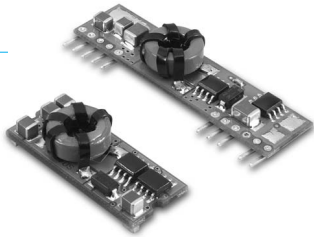


SIP&SMT15-05

15 AMP SIP&SMT PACKAGES DC-DC CONVERTERS

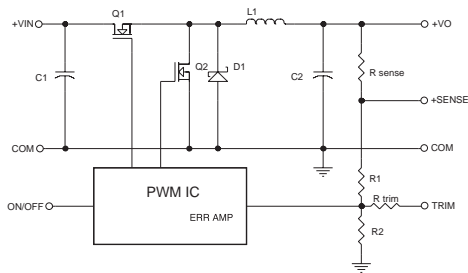
Features

- Industry Standard Pin out
- High Efficiency to 94%
- 300KHz Switching Frequency
- 3.0 - 5.5VDC Input Range
- 0.9 - 3.63VDC Wide Output Range
- Over Temperature Protection
- Continuous Short Circuit Protection
- Remote ON/OFF
- Cost Efficient Open Frame Design
- UL/C-UL60950 Certified



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT NO LOAD	INPUT CURRENT FULL LOAD	%EFF
SIP15-05S33A	3.0 - 5.5 VDC	1.0VDC	15 A	60mA	3.658A	82
	3.0 - 5.5 VDC	1.2VDC	15 A	60mA	4.286A	84
SMT15-05S33A	3.0 - 5.5 VDC	1.5VDC	15 A	60mA	5.172A	87
	3.0 - 5.5 VDC	1.8VDC	15 A	70mA	6.136A	88
	3.0 - 5.5 VDC	2.0VDC	15 A	70mA	6.742A	89
SMT15-05S33A	3.0 - 5.5 VDC	2.5VDC	15 A	70mA	8.152A	92
	4.5 - 5.5 VDC	3.3VDC	15 A	70mA	10.532A	94

NOTE : 1. Nominal Input Voltage 5.0VDC



Vo,set (V)	Rtrim (KΩ)
0.90	135.36
1.00	79.17
1.20	41.71
1.50	22.98
1.80	14.96
2.00	11.75
2.50	6.93
3.30	3.15
3.63	2.20

Table 1. External Resistor Values for programming output voltage

Figure 1. Simplified Schematic

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....Vo, set ≤ Vin-0.5VDC.....5V.....3.0 - 5.5V
 Power up.....2.8V Typ.
 Under Voltage Lock-out.....Power down.....2.7V 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 25% Step Load Change.....<200µ sec.
 Ripple and Noise, 20MHz BW Note3.....20mV rms max.
 50mV pk-pk max.
 Temperature Coefficient.....±0.03%/C max.
 Short Circuit Protection.....Continuous
 Line Regulation, Note1.....SIP15-05S33A ± 0.2% max.
 SMT15-05S33A ± 0.4% max.
 Load Regulation, Note2.....± 0.5% max.
 Capacitive Load, Low ESR.....10000µF max.
 External Trim Adj. Range (see Table1).....Vo=0.9-3.63Vdc

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: 2 x 0.5 x 0.335 inches (50.8 x 12.7 x 8.5 mm)
 SMT Package: 1.3 x 0.53 x 0.366 inches (33.0 x 13.46 x 9.30 mm)
 Structure.....Non-potted With Open Frame Type
 Weight.....6.8g

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 10µF tantalum capacitor and 1µF ceramic capacitor across output.
4. The Input Terminal Recommendation to Parallel With 100µF Capacitor ESR<20mΩ 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)
 Tolerances : X0X.02 in(X.5), unless otherwise noted
 XXXX.010 in (XXX.25)

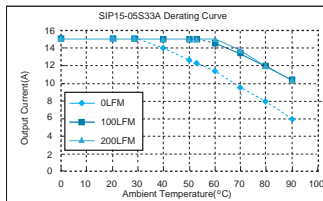
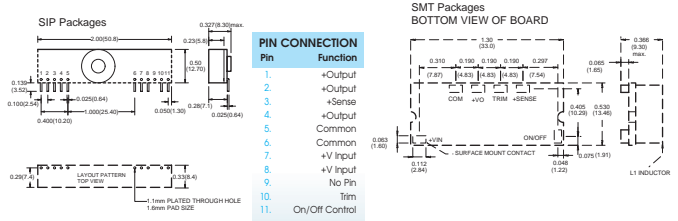


Figure 2. Typical Power De-rating for 5V IN

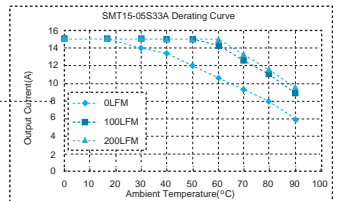


Figure 3. Typical Power De-rating for 5V IN

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