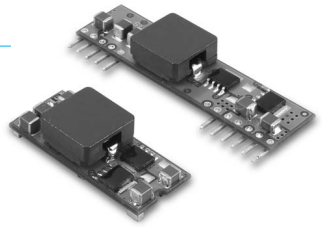
S E R I E S

SIPSMT16W-12

16 AMP SIP&SMT PACKAGES DC-DC CONVERTERS



Features

- Industry Standard Pin out
- High Efficiency to 94%
- 300KHz Switching Frequency
- 6.0 –14VDC Wide Input Range
- 0.75 – 5.0VDC Wide Output Range
- Over Temperature Protection
- Continuous Short Circuit Protection
- Remote ON/OFF
- Cost Efficient Open Frame Design
- UL/C-UL60950 Certified
- Output Voltage Sequencing (Tracking)
- Power Good Signal

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT NO LOAD	INPUT CURRENT FULL LOAD	%EFF
SIP16W-12S05A	6.0-14 VDC	0.7525VDC	16A	40mA	1250mA	80
	6.0-14 VDC	1.2VDC	16A	40mA	1882mA	85
	6.0-14 VDC	1.5VDC	16A	50mA	2273mA	88
	6.0-14 VDC	1.8VDC	16A	60mA	2697mA	89
	6.0-14 VDC	2.0VDC	16A	60mA	2963mA	90
SMT16W-12S05A	6.0-14 VDC	2.5VDC	16A	65mA	3663mA	91
	6.0-14 VDC	3.3VDC	16A	75mA	4731mA	93
	6.5-14VDC	5.0VDC	16A	95mA	7092mA	94

NOTE : 1. Nominal Input Voltage 12VDC

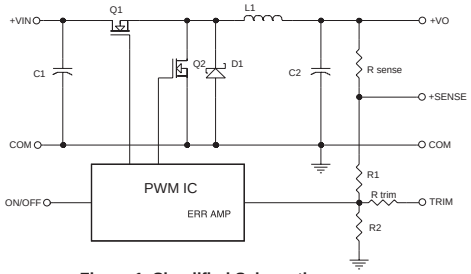


Figure 1. Simplified Schematic

Vo,set (V)	Rtrim (KΩ)
0.7525	Open
1.2	22.46
1.5	13.05
1.8	9.024
2.0	7.417
2.5	5.009
3.3	3.122
5.0	1.472

Table 1. External Resistor Values for programming output voltage

RSG. ELECTRONIC COMPONENTS
RSG Electronic Components GmbH ▪ Sprendlinger Landstr. 115 ▪ D-63069 Offenbach/Germany
Tel. +49 69 984047-0 ▪ Fax +49 69 984047-77 ▪ info@rsg-electronic.de ▪ www.rsg-electronic.de
Änderungen vorbehalten / subject to change without notice

Specifications

INPUT SPECIFICATIONS:

Input Voltage Range.....12V.....6.0 – 14.0V
12V .....6.5 – 14.0V
Under Voltage Lock-out .....Power up .....5.0V Typ.
Power down.....4.0V 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.....30mV rms max.
75mV pk-pk max.
Temperature Coefficient.....±0.03%/C max.
Short Circuit Protection.....Continuous
Line Regulation, Note1.....± 0.2% max.
Load Regulation, Note2.....± 0.5% max.
External Trim Adj. Range (see Table1).....Vo=0.75-5.0Vdc
Sequencing Slew Rate Capability (dV=o/dt).....0.1-1.0V/msec
Sequencing Delay Time.....10msec min.
Tracking Accuracty.....Power up.....200mV max.
Power down.....400mV max.
Capacitive Load, Low ESR.....8000µF max.
Power Good Signal Asserted Logic High.....Vo=90%-100%Vo,nom

GENERAL SPECIFICATIONS:

Efficiency.....See Table
Isolation Voltage.....Non-isolation

Switching Frequency .....300KHz Typ.
Over Temperature Protection .....130˚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 0.51 x 0.327 inches (50.8 x 12.95 x 8.3 mm)
SMT Package: 1.3 x 0.53 x 0.346 inches (33.0 x 13.46x 8.8 mm)
Structure.....Non-potted With Open Frame Type
Weight.....8.5g

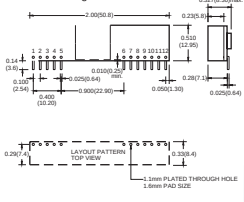
NOTE:

1. Measured From High Line to Low Line, Vo,set=3.3Vdc
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 fo Vin
6. Suffix "P" to the Model Number with Power Good function.

Mechanical Specification

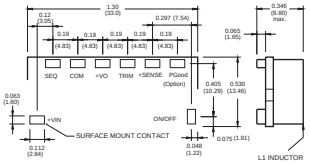
All Dimensions are in Inches(mm)
Tolerances : .XX±.02 in(.X±.5), unless otherwise noted
.XXX±.010 in (.XX±.25)

SIP Packages



PIN CONNECTION Pin	Function
1.	+Output
2.	+Output
3.	+Sense
4.	+Output
5.	Common
6.	N0 Pin / PGood
7.	Common
8.	+V Input
9.	+V Input
10.	Sequency
11.	Trim
12.	On/Off Control

SMT Packages
BOTTOM VIEW OF BOARD



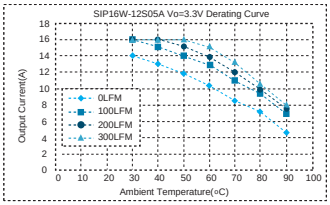


Figure 2. Typical Power De-rating for 12V IN

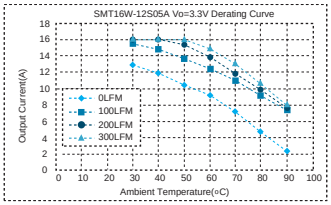


Figure 3. Typical Power De-rating for 12V IN

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

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