

S5 SERIES DC/DC MODULES

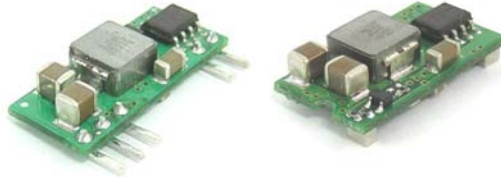
Applications

- Servers, Switches and Data Storage
- Wireless Communications
- Distributed Power Architecture
- Semiconductor Test Equipment
- Networking Gear
- Data Communications
- Telecommunications
- Industrial / Medical

The S5 Family of high efficiency non-isolated DC/DC converters offer power levels of up to 25 Watt, while also providing ultra-wide input voltage range for 3.3Vin and 5Vin, as well, as 12Vin. These converters provide versatility without sacrificing the board space. All models feature an input filter and regulated outputs. The open-frame construction facilitates maximum power delivered with the highest efficiency of up to 92%. All converters combine creative design practices with highly derated power devices to achieve very high reliability, high performance and low cost solution to systems designers.

Specifications & Features Summary

- Industry Standard SIP and SMT Pinout
- High Efficiency to 92%
- 300KHz Switching Frequency
- Stable at all Loads
- Over Temperature Protection
- Adjustable Output Range
- Continuous Short Circuit Protection
- Remote ON/OFF
- UL/C-UL 60950 Certification Pending
- Add Suffix "T" for Through-Hole Model
- Add Suffix "N" for Negative Logic Control Version



MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	SIZE
				NO LOAD	FULL LOAD		
S5-5S3.3	3.0-5.5VDC	0.75-3.63VDC	5 A	Various	Various	Various	SIP/SMT
S5-12S5	8.3-14VDC	0.75-5.0 VDC	5 A	Various	Various	Various	SIP/SMT

Typical at Ta = +25 °C under nominal input voltages of 3.3V, 5V and 12VDC, unless noted. The information and specifications contained in this brief are believed to be accurate and reliable at the time of publication. Specifications are subject to change without notice. Refer to product specification sheet for performance characteristics and application guidelines.

Consult factory for hundreds of other available input/output voltage configurations.

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. To reduce the input ripple voltage, parallel the Input Terminals with 47uF Capacitor and 10uF Ceramic
5. Negative Logic Remote on/off:
 Module ON: Open Circuit or < 0.4VDC
 Module OFF: 2.8VDC to Vin

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	5.00
3.3	3.12
5.0	1.47

Table 1. External Resistor Values for programming output voltage

INPUT SPECIFICATIONS :	
Input Voltage Range 5V (12V)	3.0 – 5.5V (8.3 – 14.0V)
Positive Logic Remote on/off Control: Module ON Module OFF	Open Circuit or = Vin <0.4Vdc
Under Voltage Lock-out (12Vin) Power up Power down	8.0V typ. 7.9V typ.
Input Filter Type	Capacitive
OUTPUT SPECIFICATIONS :	
Voltage Accuracy	±1.5% max.
Transient Response: 25% Step Load Change	<200u sec.
Ripple and Noise 20MHz BW Note3 (5Vo)	20mV rms, 50mV pk-pk max. 45mVrms, 75Vpk-pk max.
Temperature Coefficient	±0.03%/°C max.
Short Circuit Protection	Continuous
Line Regulation, Note1	±0.2% max.
Load Regulation, Note2	±0.5% max.
Capacitive Load	Low ESR 3000uF max.
GENERAL SPECIFICATIONS :	
Efficiency	See App Notes
Isolation Voltage	Non-Isolated
Operating Ambient Temp. Range	-40°C to +85°C
Derating	See App Notes
Storage Temperature Range	-55°C to +125°C
Dimensions (SIP)	0.9"x0.4"x0.22" (22.9x10.16x5.6mm)
Dimensions (SMT)	0.8"x0.45"x0.24" (20.3x11.43x6.09mm)
Case Material	Non-potted Open Frame

