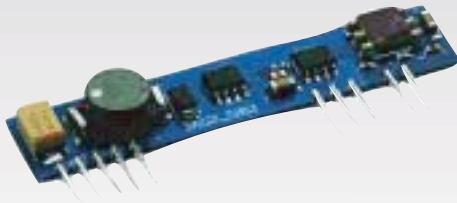


Description

The SC6A is a low-cost, 6-amp, non-isolated DC-DC converter designed for applications that do not require the full-feature set of the S6A Series. The SIP form factor and high power density combine to minimize the board area required for power. It uses an industry-standard pin-out, but also has a much lower height; only 0.48 inches. Using Bourns Switch Power's proprietary V²™ architecture, the SC6A provides ultrafast transient response, improved line and load regulation, and very high efficiency.



Features

- Low Cost
- 6-amp Output Current
- 90 % Efficiency
- Industry-standard Pin-out
- Low 0.5 " Profile
- Remote Sense
- Trim Function
- Short-circuit Protection with auto-restart
- Fast Transient Response
- High-temperature Operation
- Non-isolated Output
- 60 W/in³ Power Density

Patents 5,770,940
5,978,195

Common Specifications

	Min	Nom	Max	Units	Notes
Input					
Voltage	4.5	5	5.5	Vdc	4.75 V _{in} startup
Current		5		A	
Output					
Current			6	A	
Voltage Setpoint Accuracy			±2	%V _{nom}	
Voltage Trim Range	-7		+7	%V _{nom}	
Line Regulation		±0.1		%V _{nom}	
Load Regulation		±0.3		%V _{nom}	±0.2 % w/o remote sense
Dynamic Response					
0 to 6 A load		200		mV	Δi/Δt = 3 A/μs
6 to 0 A load		19		μs	
6 to 0 A load		200		mV	Δi/Δt = 3 A/μs
6 to 0 A load		19		μs	
Temperature Regulation			±0.02	%V _{out} /°C	
General					
MTBF		1,000		k Hrs	Bellcore TR332, 25 °C
Operating Temperature	-25		85	°C	
Storage Temperature	-40		125	°C	
Switching Frequency		500		kHz	



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Electrical Specifications

	Nominal Input (V)	Output Voltage (V)	Output Current (A)	Noise (mV pp) max	Efficiency (%) typ
SC6A-5S3.3	5	3.3	6	100	90
SC6A-5S2.6	5	2.6	6	100	90
SC6A-5S2.5	5	2.5	6	100	90
SC6A-5S1.9	5	1.9	6	100	88
SC6A-5S1.8	5	1.8	6	100	88
SC6A-5S1.5	5	1.5	6	100	87
SC6A-5S1.3	5	1.3	6	100	

Don't see the voltage you need? Any voltage between 1.3 V and 3.5 V can be requested.

Standard Options

Add option designators to the end of the part number. Example; SC6A-5S3.3-B

Option	Description
B	No Remote Sense option removes sense pin
N	Adds Enable and OCP

