



Features

- SIP (Single In-line Package)
- Output voltage programmable from 0.75 Vdc to 3.6 Vdc via external resistor
- 6 A output current
- Up to 96 % efficiency
- Small size, low profile
- Cost-efficient
- Low output ripple and noise
- High reliability
- Remote on/off
- Output overcurrent protection (non-latching)
- Sequencing function

SXT6A-3-5SA SIP Non-Isolated Power Module

Description

Bourns® SXT6A-3-5SA is a non-isolated DC-DC converter offering designers a cost and space-efficient solution with standard features such as sequencing, remote on/off, precisely regulated programmable output voltage and overcurrent protection.

Specifications

Parameter	Min.	Nom.	Max.	Units	Notes
INPUT					
Voltage	2.4		5.5	V _{dc}	V _{in} (min) = V _O + 0.5 V, V _O > 1.9 V
Current			6.0	A _{dc}	
Remote ON/OFF:					
Low or Open =	Standard	-P Option		V _{dc}	10 µA max.
High =	On	Off	0.4	V _{in}	1 mA max.
OUTPUT					
Voltage Adjustment Range	0.75		3.63	V _{dc}	
Current	0.0		6.0	A _{dc}	
Voltage Setpoint Accuracy	-2.0		2.0	% V _{O,set}	
Line Regulation		0.3		% V _{O,set}	
Load Regulation		0.4		% V _{O,set}	
Temperature Regulation		0.4		% V _{O,set}	
Ripple (pk-pk) (20 MHz Bandwidth)		40	50	mVpk-pk	1 µF ceramic//10 µF tantalum capacitors
Ripple (rms)		10	15	mVrms	1 µF ceramic//10 µF tantalum capacitors
Dynamic Load Response:					
50 % to 100 % Load or 100 % to 50 % Load; (Δi/Δt = 2.5 A/µs; 25 °C)		130		mV	1 µF ceramic//10 µF tantalum capacitors
		25		µs	
50 % to 100 % Load or 100 % to 50 % Load; (Δi/Δt = 2.5 A/µs; 25 °C)		50		mV	2 x 150 µF polymer Capacitors
		50		µs	
GENERAL					
MTBF		10,000		kHrs	
Operating Temperature	-40		+85	°C	
Storage Temperature	-55		+125	°C	
Switching Frequency		300		kHz	
Efficiency		81.0		%	V _{O,set} = 0.75 V _{dc}
(V _{in} = 5.0 V _{dc} ; T _A = 25 °C, Full Load)		87.0		%	V _{O,set} = 1.2 V _{dc}
		89.0		%	V _{O,set} = 1.5 V _{dc}
		90.0		%	V _{O,set} = 1.8 V _{dc}
		93.0		%	V _{O,set} = 2.5 V _{dc}
		95.0		%	V _{O,set} = 3.3 V _{dc}

Applications

- Intermediate Bus architecture
- Distributed power applications
- Workstations and servers
- Telecom equipment
- Enterprise networks including LANs/WANs
- Latest generation ICs (DSP, FPGA, ASIC) and microprocessor powered applications

*RoHS Directive 2002/95/EC Jan 27 2003 including Annex.
Specifications are subject to change without notice.
Customers should verify device performance in their specific applications.

