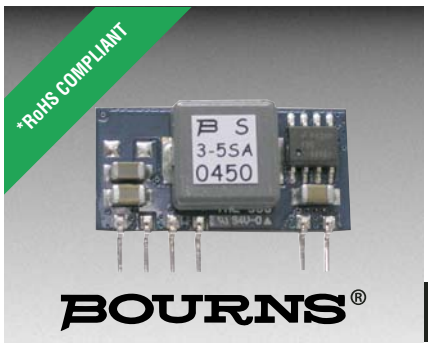


Features

- 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: Standard / -P Option					
Low or Open = On / Off			0.4	V_{dc}	10 µA max.
High = Off / On	2.4		V_{in}	V_{dc}	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; ($\Delta i/\Delta t$ = 2.5 A/µs; 25 °C)		130 25		mV µs	1 µF ceramic//10 µF tantalum capacitors
50 % to 100 % Load or 100 % to 50 % Load; ($\Delta i/\Delta t$ = 2.5 A/µs; 25 °C)		50 50		mV µs	2 x 150 µF polymer Capacitors
GENERAL					
MTBF		10,000		kHrs	
Operating Temperature	-40		+85	°C	
Storage Temperature	-55		+125	°C	
Switching Frequency		300		kHz	
Efficiency (V_{in} = 5.0 V_{dc}, T_A= 25 °C, Full Load)		81.0		%	$V_{o,set}$ = 0.75 V_{dc}
		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.

Output Voltage Programming

Via external trim resistor between Trim and GND:

$$Rtrim = \left[\frac{21.07}{V_O - 0.7525} - 5.11\right] k\Omega$$

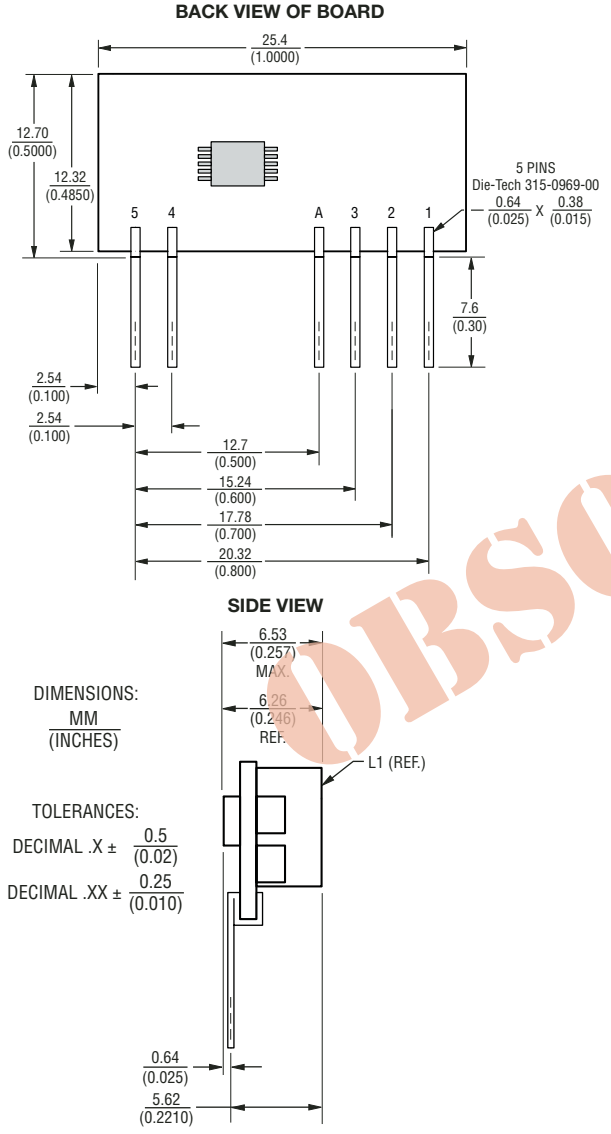
Via application of external voltage between Trim and GND:

$$Vtrim = (0.7 - 0.1698 \times \{Vo - 0.7525\})$$

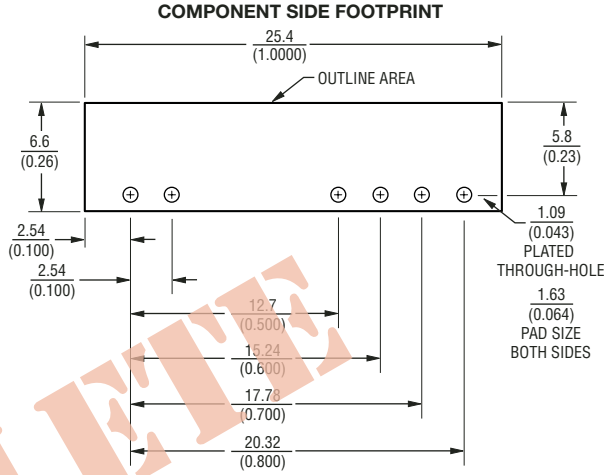
SXT6A-3-5SA SIP Non-Isolated Power Module

BOURNS®

Product Dimensions



Recommended Hole Pattern



Pinout Detail

PIN	FUNCTION
1	VOUT
2	TRIM
3	GND
A	SEQ
4	VIN
5	ON/OFF

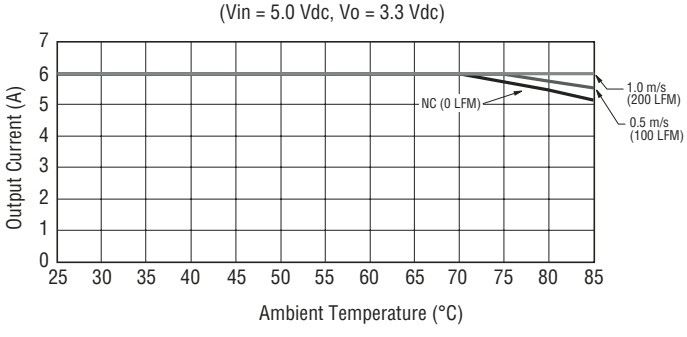
How to Order

S X T 6A - 3 - 5 S A (-P)

- Configuration
  - S = SIP
- Internal Identifier
- Identifies Sequencing Pin Function
- Output Current (Amps)
- Input Voltage (V)
- Outputs
  - S = Single
- Output Voltage (V)*
  - A = Adjustable
- Optional Positive On/Off Logic

Fixed output voltage parts and optional features available; contact factory.

Derating Output Current vs. Local Ambient Temp & Airflow



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