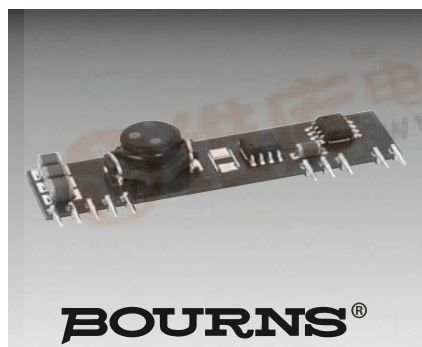




Features

- Low output ripple
- 10 amp output current
- 92 % efficiency
- Low 0.5 " profile
- Power good
- Remote sense
- Adjustable Vout
- Short-circuit protection with auto-restart
- Fast transient response
- High-temperature operation
- Remote enable
- Output precharge capability

SLN10A-5SA Series – Power Module

General Information

The SLN10A adds a new meaning to low cost DC-DC converters. This non-isolated SIP uses a 5 V input to provide 10 Amps of output current at voltages ranging from 0.8 V to 2.5 V. The SLN10A output is adjustable by the user to provide any voltage within its range. Its extra low 0.8 V output will power even the latest in ASICs, microprocessors, and DSPs.

The SLN10A has an industry standard pin-out, is 2 inches long, and only 0.5 inches high. Its total footprint is a space saving 0.75 in². Features include Enable/Disable, output voltage trim, remote sense, short circuit protection with auto-restart, fast transient response, and high temperature operation. The SLN10A is one of the most cost-effective DC-DC converters available.

Input Specifications

Voltage	4.5 VDC Min.
	5 VDC Nom.
	5.5 VDC Max.
Current	10 A Nom.
Remote Enable	
High = Disable	2.4 VDC Min.
Low = Enable	
	0.4 VDC max. (open = enable)
Enable/Disable Current	250 μ A Nom.

Output Specifications

Current	0 to 10 A
Current Limit	11 to 18 A
Voltage Setpoint Accuracy	±1 %Vnom (nominal)
.....	±2 %Vnom (max.)
optional	±0.5 %Vnom (nominal)
.....	±1 %Vnom (max.)
Line Regulation	±0.1 %Vnom
Load Regulation	±0.2 % Vnom
Ripple.....	20 mV pp
Dynamic Response	
50 to 100 % load.....	40 mV Nom.
	20 µs Nom.
100 to 50 % load.....	40 mV Nom.
	20 µs Nom.
Temperature Regulation	
.....	±0.02 %Vout/°C Max.

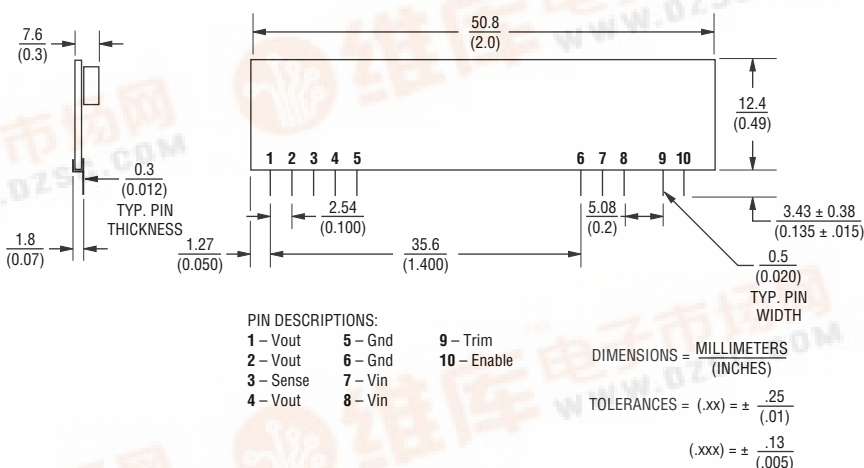
General Specifications

MBTF2,000 kHrs Nom.
(80 % load, 25 °C)
Operating Temperature.....-40 to +100 °C
Storage Temperature.....-55 to +125 °C
Switching Frequency.....300 kHz Nom.

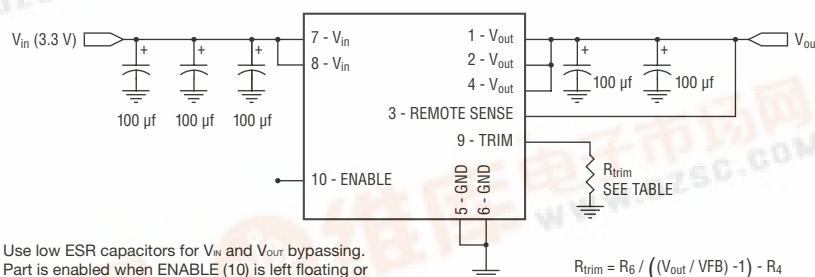
Standard Options

	Nominal Input (V)	Input Voltage (V)	Output Voltage (V)	Output Current (A)	Ripple Max. (mV pp)	Efficiency Typ. (%)
SLN10A-5SA	5	4.5 to 5.5	0.8 to 3.5	10	40	90

Product Dimensions



Product Schematic



1. Use low ESR capacitors for V_{IN} and V_{OUT} bypassing.
2. Part is enabled when ENABLE (10) is left floating or grounded.
3. Apply 2.4 to 5 VDC to ENABLE (10) to disable (shut down) the part.
4. Use the table above to determine an R_{TRIM} resistor for the desired voltage.
5. To get an intermediate voltage between 0.800 V and 3.500 V, use the equation at right.

$$R_{\text{trim}} = R_6 / (V_{\text{out}} / V_{\text{FB}} - 1) - R_4$$

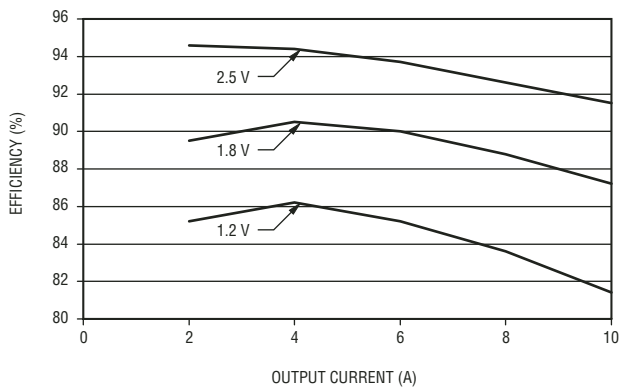
WHERE $R_4 = 23.7\text{K Ohms}$
 $R_6 = 80.6\text{K Ohms}$
 $V_{\text{FB}} = 0.800\text{ VDC}$

V_{OUT}	R_{TRIM} (kΩ)
3.5	0.182
3.0	5.62
2.5	14.3
2.0	30.1
1.5	68.1
1.0	301
0.8	open

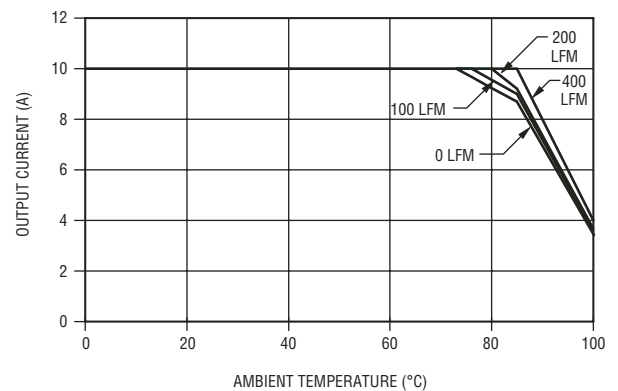
SLN10A-5SA Series – Power Module

BOURNS®

Efficiency Curve



Temperature Derating



How to Order

S LN 10A - 5 S A

Configuration _____
 Internal Identifier _____
 Current/Power (Amps) _____
 Input Voltage (Volts) _____
 Outputs _____
 S = Single
 Output Voltage (V) _____
 A = Adjustable



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