

key features

- non-isolated buck converter
- high efficiency topology
- excellent transient response
- optional sense and POK pins
- open frame construction
- voltage trim pin
- vertical or horizontal mounting
- water washable

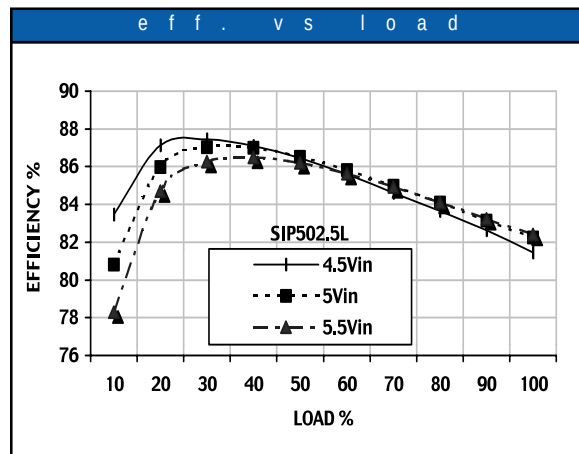
IPD's SIP series of non-isolated converters deliver high efficiency and excellent transient response in the industry standard SIP package. The SIP series has 12 models with output voltages from 1.2 to 3.3V, and up to 6A of output current. The SIE model SIP has power OK and remote sense pins, for added flexibility and improved point of load regulation. The SIP and SIE family are available for vertical or horizontal mounting. The series features over 7 Million hours MTBF, and use 100% surface mount construction for maximum reliability.

technical specifications

input	
voltage range	4.5 - 5.5 VDC
5 VDC nominal	

output	
setpoint accuracy	±1%
line regulation V_{IN} min. - V_{IN} max., I_{OUT} rated	1.0% V_O
load regulation I_{OUT} min. - I_{OUT} max., V_{IN} nom.	1.0% V_O
ripple and noise, DC - 200MHz	50mV pk-pk
remote sense headroom	0.25V
current limit protection type	hiccup
current limit threshold range, % I_O rated	150%
shortcircuit protection type	latching
power good signal (SIE model only), asserts "hi" when V_{OUT} is between following thresholds	
lower sense threshold, % $V_{SETPOINT}$	-16% to -10%
upper sense threshold, % $V_{SETPOINT}$	+10% to +16%
power good signal reference	common ground
V_{OUT} ramp up rate, minimum	0.5V/mS

general	
remote shutdown	negative logic
switching frequency	330 KHz
temperature coefficient	50ppm/°C
ambient operating temperature	0 to +55°C
minimum required airflow	200LFM
storage range	-25 to +120°C
humidity max, non-condensing	95%
vibration, 3 axes, 5 min each	5 g, 10 - 55Hz
MTBF† (Bellcore TR-NWT-000332)	7.1 x 10 ⁶ Hrs.
safety	UL, CSA, EN60950
weight (approx.)	0.25 oz.



notes
† MTBF predictions may vary slightly from model to model.
Specifications typically at 25°C, normal line, and full load - unless otherwise stated.
Specifications subject to change without notice.

models

V _{IN} (volts)	V _{IN} range (volts)	I _{IN} max.* (amps)	V _{OUT} (volts)	I _{OUT} rated (amps)	efficiency typ.**	model
5	4.5 - 5.5	2.3	1.2	6	70%	SIP501.2E
5	4.5 - 5.5	2.7	1.5	6	75%	SIP501.5E
5	4.5 - 5.5	3.1	1.8	6	77%	SIP501.8E
5	4.5 - 5.5	3.5	2.1	6	81%	SIP502.1E
5	4.5 - 5.5	4.0	2.5	6	83%	SIP502.5E
5	4.5 - 5.5	5.1	3.3	6	87%	SIP503.3E
5	4.5 - 5.5	2.3	1.2	6	70%	SIE501.2
5	4.5 - 5.5	2.7	1.5	6	75%	SIE501.5
5	4.5 - 5.5	3.1	1.8	6	77%	SIE501.8
5	4.5 - 5.5	3.5	2.1	6	81%	SIE502.1
5	4.5 - 5.5	4.0	2.5	6	83%	SIE502.5
5	4.5 - 5.5	5.1	3.3	6	87%	SIE503.3

* I_{IN} max. at V_{IN} min., I_{OUT} rated

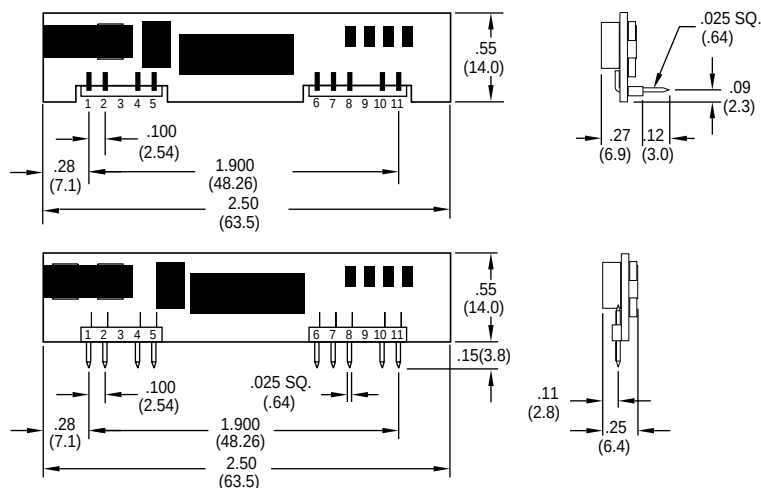
** at nominal V_{IN}, rated output

note: for right angle pins, add suffix "R" to model number

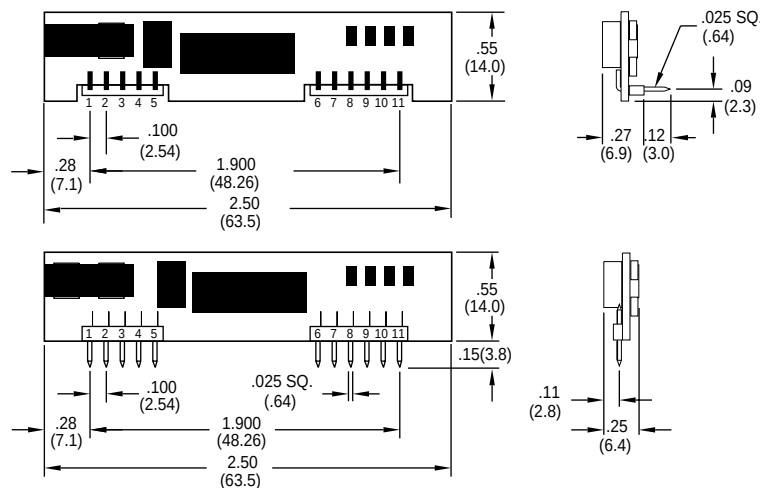
specifications are subject to change without notice.

mechanical drawing

SIP MODEL



SIE MODEL



thermal impedance	
natural convection	24.4 °C/W
100 LFM	18.3 °C/W
200 LFM	15.0 °C/W
300 LFM	11.1 °C/W
400 LFM	7.9 °C/W

Thermal impedance data is dependant on many environmental factors. The exact thermal performance should be validated for specific application.

pin	function
1	+ V _{OUT}
2	+ V _{OUT}
3	sense (SIE)
4	+V _{OUT}
5	ground
6	ground
7	+ V _{IN}
8	+ V _{IN}
9	Pwr OK (SIE)
10	trim
11	enable

tolerances (unless otherwise speci-)	
Inches	(Millimeters)
.XX ± .020	.X ± 0.5
.XXX ± .010	.XX ± .25
Pin:	
± .002	± .05