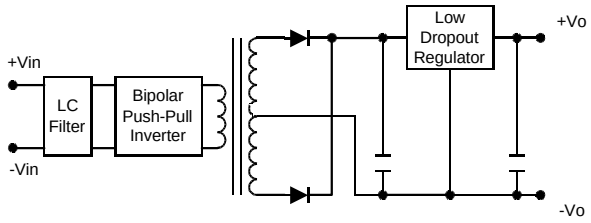
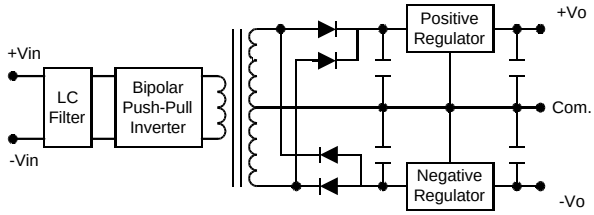
TOTAL POWER INT'L

S2D00R Series 2 ~ 3 Watt High/In Isolation DIP DC/DC Converters
Single & Dual Output

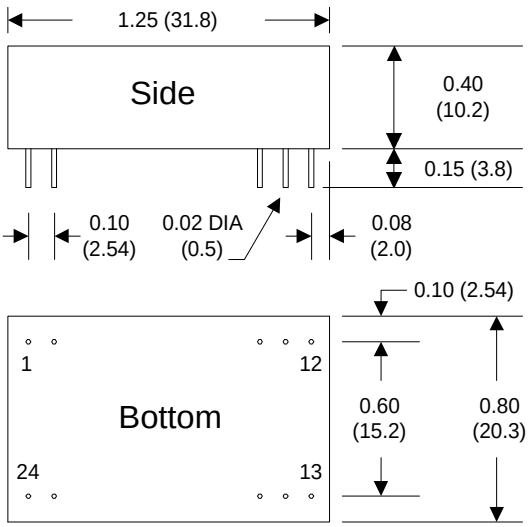
Key Features

- I / O Isolation 3000VDC
- Regulated Outputs
- Low Cost
- Short Circuit Protected
- MTBF > 800,000 Hours





Mechanical Configuration



All dimensions typical in inches (mm). Tolerance= +/- 0.01 (+/- 0.25)

Pin Connections

Pin	Single Output	Dual Output
1,2	+Input	+Input
10,11	NC	Common
12	−Output	NC
13	+Output	−Output
14	NC	NC
15	NC	+Onput
23,24	−Input	−Input
NC:No Connection.		

Physical Characteristics

Case Size	31.8×20.3×10.2 mm 1.25×0.8×0.4 inches
Case Material	Non−Conductive Black Plastic
Weight	12g

TOTAL POWER INT'L Tel: 877-646-0900 Fax: 978-453-7395
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Absolute Maximum Ratings

Exceeding these values can damage the module.These are not continuous operating ratings.

Parameter		Min.	Max.	Unit.
Input Surge Voltage (1000 mS)	5VDC Input Models	−0.7	7.5	VDC
	12VDC Input Models	−0.7	15	VDC
	24VDC Input Models	−0.7	30	VDC
	48VDC Input Models	−0.7	55	VDC
Internal Power Dissipation		−−−	3000	mW

Environmental Specifications

Parameter	Conditions	Min.	Typ.	Max.	Unit
Operating Temperature		−25	−−−	+71	℃
Storage Temperature		−40	−−−	+125	℃
Humidity		−−−	−−−	95	%
Cooling	Free−Air Convection				

Model Selection Guide

Model Number	Input voltage VDC	Output Voltage VDC	Output Current mA (Max.)	Output Current mA (Min.)	Input Current Max. Load mA (Typ.)	Input Current No Load mA (Typ.)	Reflected Ripple Current mA (Typ.)	Efficiency % (Typ.)
S2D01R	5 (4.75 ~ 5.25)	5	400	0	666	100	70	60
S2D02R		12	165		628			63
S2D03R		15	133		633			63
S2D04R		±12	±83		642			62
S2D05R		±15	±66		639			62
S2D06R	12 (10.8 ~13.2)	5	400	0	277	50	30	60
S2D07R		12	165		262			63
S2D08R		15	200		397			63
S2D09R		±12	±83		268			62
S2D10R		±15	±100		403			62
S2D11R	24 (21.6~26.4)	5	400	0	138	25	15	60
S2D12R		12	165		131			63
S2D13R		15	200		198			63
S2D14R		±12	±83		134			62
S2D15R		±15	±100		202			62
S2D16R	48 (43.2~52.8)	5	400	0	69	15	10	60
S2D17R		12	165		66			63
S2D18R		15	200		99			63
S2D19R		±12	±83		67			62
S2D20R		±15	±100		101			62

Specifications typical at Ta=+25] ,resistive load,nominal input voltage,rated output current unless otherwise noted.

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Input Specifications

Parameter	Model	Min.	Typ.	Max.	Unit
Input Voltage Range	5V Input Models	4.75	5	5.25	VDC
	12V Input Models	10.8	12	13.2	
	24V Input Models	21.6	24	26.4	
	48V Input Models	43.2	48	52.8	
Reverse Polarity Input Current	All Models	---	---	0.5	A
Short Circuit Input Power		---	---	2500	mW
Input Filter		Pi Filter			

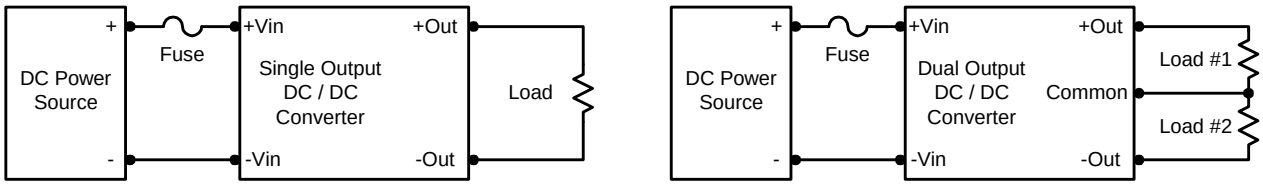
Output Specifications

Parameter	Conditions	Min.	Typ.	Max.	Unit
Output Voltage Accuracy		---	±2.0	±4.0	%
Output Voltage Balance	Dual Output Balance Load	---	±1.0	±3.0	%
Line Regulation	Vin=Min. to Max.	---	±0.2	±0.5	%
Load Regulation	Io=10% to 100%	---	±0.2	±0.5	%
Ripple & Noise (20MHz)		---	40	50	mV P-P
Ripple & Noise (20MHz)	Over Line,Load & Temp.	---	---	75	mV P-P
Ripple & Noise (20MHz)		---	---	5	mV rms.
Over Load		120	---	---	%
Transient Recovery Time	50% Load Step Change	---	---	50	uS
Transient Response Deviation		---	---	±6	%
Temperature Coefficient		---	±0.01	±0.02	%/°C
Output Short Circuit	Continuous				

General Specification

Parameter	Conditions	Min.	Typ.	Max.	Unit
Isolation Voltage	60 Seconds	3000	---	---	VDC
Isolation Resistance	500VDC	1000	---	---	MΩ
Isolation Capacitance	100KHz,1V	---	50	100	pF
Switching Frequency		40	80	---	kHz

Typical Applications



Input Fuse Selection Guide

5V Input Models	12V Input Models	24V Input Models	48V Input Models
1000mA Slow – Blow Type	750mA Slow – Blow Type	350mA Slow – Blow Type	135mA Slow – Blow Type

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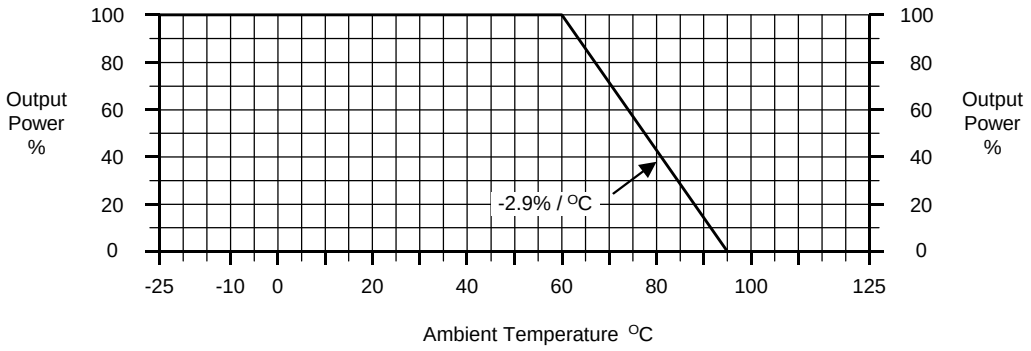
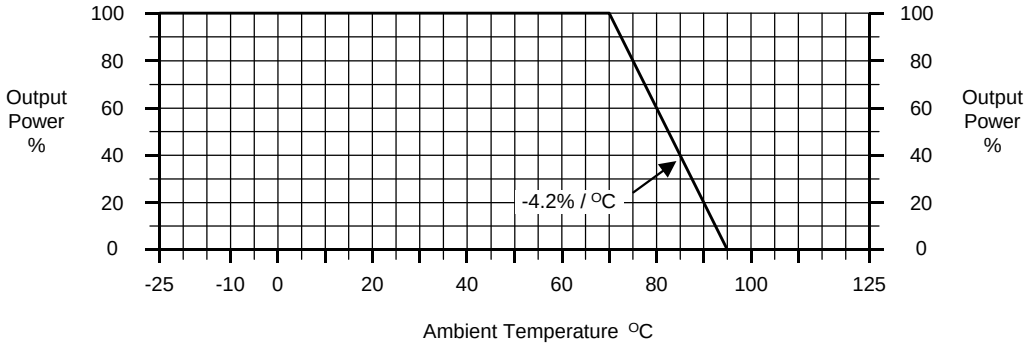
Derating Curve

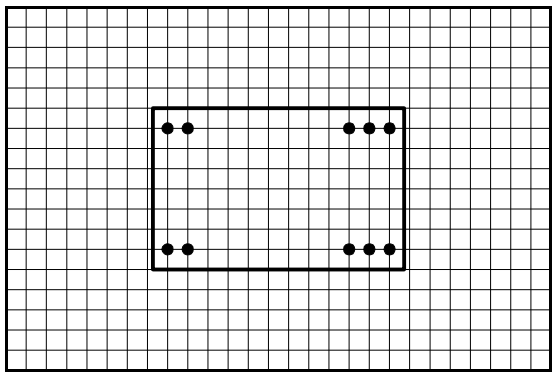
Dual Output



Single Output



Connecting Pin Patterns
(2.54 mm / 0.1 inch grids)



NOTE:

1. *Specifications typical at Ta=+25] ,resistive load,nominal input voltage,rated output current unless otherwise noted.*
2. *Transient recovery time is measured to within 1% error band for a step change in output load of 50% to 100%.*
3. *Other input and output voltage may be available,Please contact factory.*
4. *Specifications subject to change without notice.*