



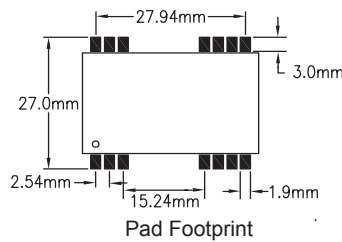
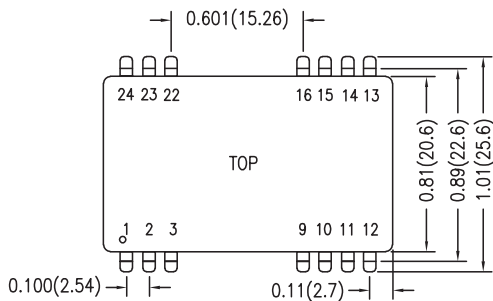
- Efficiency up to 85%
- 1500VDC Isolation
- MTBF > 1,000,000 Hours
- 2:1 Input
- Short Circuit Protection
- Remote On/Off
- CSA60950 Approved
- RoHS Compliant



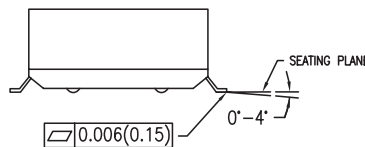
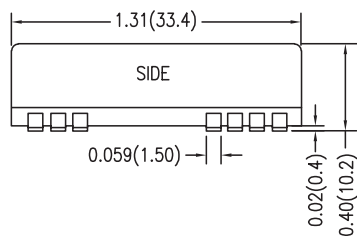
5 Watt SMZ Single and Dual Series



Model Number	Voltage			Current				Reflected Ripple	Under Voltage Shutdown	Input Overvoltage (1000ms)	Efficiency	Capacitive Load
	Input		Output	Input		Output						
	Nom. (VDC)	Range (VDC)	(VDC)	@ No Load (mA)	@ Max Load (mA)	Min (mA)	Max (mA)					
SMZ5H12S3R3	12	9-18	3.3	45	434	120	1200	25	8	25	76	680 µF
SMZ5H12S5	12	9-18	5	45	521	100	1000	25	8	25	80	680 µF
SMZ5H12S12	12	9-18	12	45	502	41.7	417	25	8	25	83	680 µF
SMZ5H12S15	12	9-18	15	45	502	33.3	333	25	8	25	83	680 µF
SMZ5H12D5	12	9-18	±5	45	521	±50	±500	25	8	25	80	100 µF
SMZ5H12D12	12	9-18	±12	45	501	±20.8	±208	25	8	25	83	100 µF
SMZ5H12D15	12	9-18	±15	45	503	±16.7	±167	25	8	25	83	100 µF
SMZ5H24S3R3	24	18-36	3.3	15	212	120	1200	15	17	50	78	680 µF
SMZ5H24S5	24	18-36	5	15	254	100	1000	15	17	50	82	680 µF
SMZ5H24S12	24	18-36	12	15	245	41.7	417	15	17	50	85	680 µF
SMZ5H24S15	24	18-36	15	15	245	33.3	333	15	17	50	85	680 µF
SMZ5H24D5	24	18-36	±5	15	254	±50	±500	15	17	50	82	100 µF
SMZ5H24D12	24	18-36	±12	15	245	±20.8	±208	15	17	50	85	100 µF
SMZ5H24D15	24	18-36	±15	15	246	±16.7	±167	15	17	50	85	100 µF
SMZ5H48S3R3	48	36-75	3.3	6	106	120	1200	10	34	100	78	680 µF
SMZ5H48S5	48	36-75	5	6	127	100	1000	10	34	100	82	680 µF
SMZ5H48S12	48	36-75	12	6	123	41.7	417	10	34	100	85	680 µF
SMZ5H48S15	48	36-75	15	6	122	33.3	333	10	34	100	85	680 µF
SMZ5H48D5	48	36-75	±5	6	127	±50	±500	10	34	100	82	100 µF
SMZ5H48D12	48	36-75	±12	6	122	±20.8	±208	10	34	100	85	100 µF
SMZ5H48D15	48	36-75	±15	6	123	±16.7	±167	10	34	100	85	100 µF



Pin	Single	Dual
1	Remote On/Off	Remote On/Off
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Common
10	NC	NC
11	NC	-Vout
12	NC	NC
13	NC	NC
14	+Vout	+Vout
15	NC	NC
16	-Vout	Common
22	+Vin	+Vin
23	+Vin	+Vin
24	NC	NC



Dimensions are inches (mm) unless noted

Tolerance:	Inches	Millimeters
	X.XX ±0.01	X.X ±0.25
	X.XXX ±0.005	X.XX ±0.13
Pin	±0.002	±0.05



See Model Selection Table for Model Specific Parameters

Input Parameters	Min	Typ	Max	Units
Reverse Polarity Input Current			1	A
Short Circuit Input Power		1000	3000	mW
Switching Frequency	200	260	350	kHz
Input Filter	Pi Filter			
Output Parameters	Min	Typ	Max	Units
Output Voltage Accuracy		±0.5	±1.0	%
Output Voltage Balance Dual Output, Balanced Loads		±0.5	±2.0	%
Load Regulation I _o = 20% to 100%		±0.3	±1.0	%
Line Regulation Vin=Min. to Max.		±0.1	±0.3	%
Ripple & Noise (20MHz)		50	85	mV P-P
Ripple & Noise (20 MHz) Over Line, Load & Temp			100	mV P-P
Ripple & Noise (20 MHz)			15	mV RMS
Over Power Protection	115	140	165	%
Transient Recovery Time 25% Load Step Change		250	500	µs
Transient Response Deviation, 25% Load Step Change		±2	±6	%
Temperature Coefficient		±0.01	±0.02	% / °C
Short Circuit Protection	Continuous			
General Specifications	Min	Typ	Max	Units
Isolation Voltage, 60 seconds	1500			VDC
Isolation Resistance 500VDC	1000			Mohms
Isolation Capacitance, 100kHz, 1V		650	750	pF
Operating Temperature (Ambient)	-40		+71	°C
Storage Temperature	-40		+125	°C
Humidity			95	%
MTBF MIL-HDBK-217F @25°C, Ground Benign	1000			K Hours
Moisture Sensitivity Level (MSL)	IPC/JEDEC J-STD-20 LEVEL 2			
Lead Free Solder Process	IPC/JEDEC J-STD-020C peak temp. 245C/10 sec			
Cooling	Free-Air Convection			
Case Size	1.31 x 0.81 x 0.40 inches 33.4 x 20.6 x 10.2 mm			
Case Material	Non-Conductive Black Plastic (UL94V-0)			
Weight	14g			
Agency Approval	CSA60950 Approved			

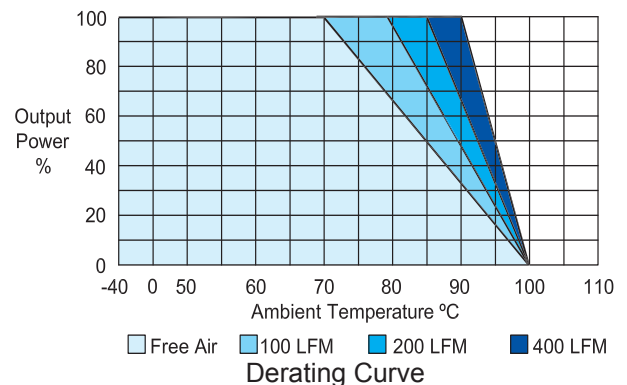
Input Fuse Selection Table	
12V Input	1500 mA Slow-Blow
24V Input	700 mA Slow-Blow
48V Input	350 mA Slow-Blow

External fusing should be used for system protection due to a catastrophic failure. See ConTech website for Fusing Application Notes to determine the correct fuse.

Remote On/Off	Min	Typ	Max	Units
Supply On	2.5 to 5.5VDC or Open Circuit			VDC
Supply Off	-0.7		0.8	VDC
Device Standby Input Current			10	mA
Control Input Current (on) Vin=Min. to Max.			-200	µA
Control Input Current (off) Vin=Min. to Max.			-300	µA
Control Common	Referenced to Negative Logic			

Notes:

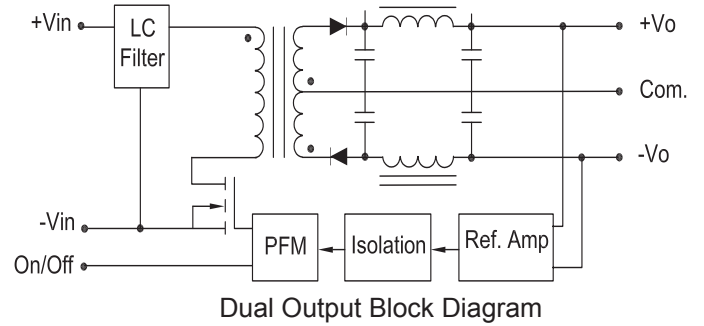
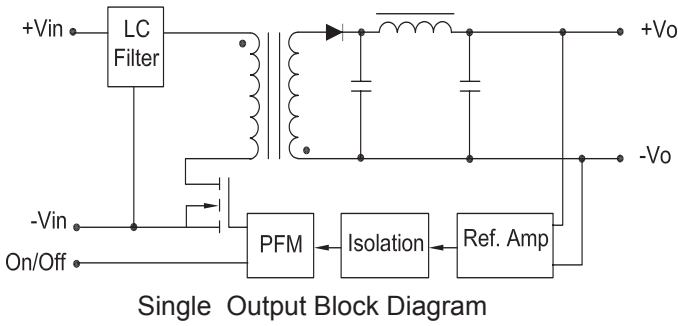
- Specifications typical at Ta=+25°C, resistive load, nominal input voltage, full rated output current unless otherwise noted.
- Transient recovery time is measured to within 1% error band for a step change in output load 75% to 100%.
- ConTech power converters require a minimum output loading to maintain specified regulation. Operation under no-load conditions will not damage these modules; however, they may not meet all specifications listed.
- The series has a limitation of a maximum connected capacitance at the output. The power module may be operated in current limiting mode during start-up, affecting the ramp-up and the startup time.
- When measuring peak-to-peak output noise, use a Cout 0.47µF ceramic capacitor. Scope measurement should be made by using a BNC socket, measurement bandwidth is 0-20MHz. Position the load between 2" and 2.5" from the converter.
- Water washability - ConTech DC/DC converters are designed to withstand most solder/wash processes. Careful attention should be used when assessing the applicability in your specific manufacturing process. Converters are not hermetically sealed.
- See ConTech website for Definition of Terms, Application Notes, and Test Setups and Parameters. www.ConTech-us.com/appnotes.html.
- Specifications subject to change without notice.
- See ConTech website www.ConTech-us.com/pdf/rohs.pdf for RoHS Statement.



To avoid exceeding the maximum temperature rating of the components inside the power module, the case temperature must be kept below 90°C.

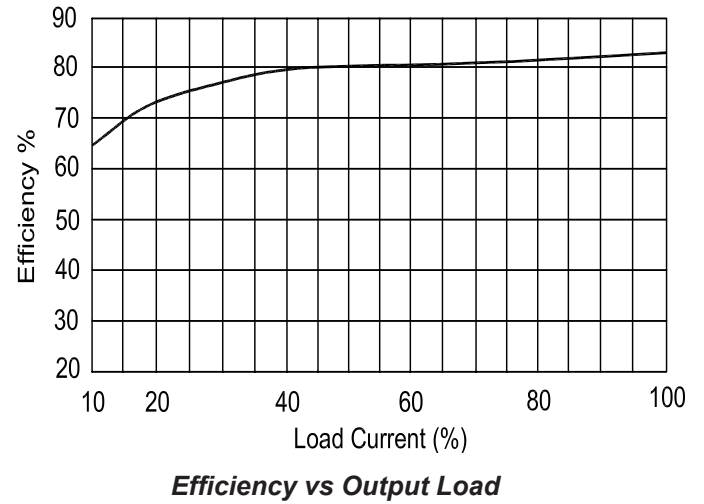
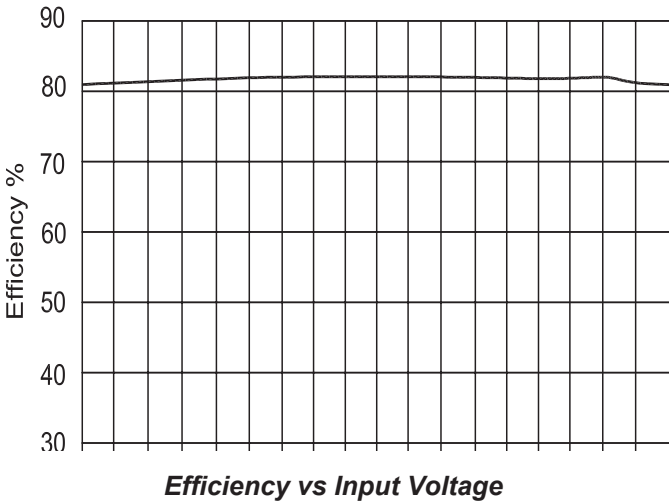


Block Diagrams



Efficiency Curves

Single Output



Dual Output

