



# SUPERWORLD ELECTRONICS

## SW3R W Series – 3W Wide Input Single & Dual Output DC-DC Converter



RoHS Compliant



### FEATURES

- Industry standard E & L packages
- Wide Input Ranges 18-36 & 36-75 Vdc
- Single & Dual 1500Vdc Isolated Outputs
- Operating Temp Range -40°C to 100°C
- High Efficiencies to 85%
- Continuous Short Circuit Protection
- Undervoltage Lock-out
- Metal Casing
- 2 Year Warranty
- Internal Input and Output Filtering

SW3R W PRODUCT RANGE						
Model	Vin (Vdc)	Vout (Vdc)	Iout (mA)	Iin (rated) (mA)	Eff. (%)	
SW3R24S03WF	18-36	3.3	909	165	76	
SW3R24S05WF	18-36	5	600	150	80	
SW3R24S09WF	18-36	9	333	150	82	
SW3R24S12WF	18-36	12	250	150	83	
SW3R24S15WF	18-36	15	200	135	85	
SW3R24D03WF	18-36	± 3.3	± 454	83	74	
SW3R24D05WF	18-36	± 5	± 300	75	78	
SW3R24D09WF	18-36	± 9	± 167	75	80	
SW3R24D12WF	18-36	± 12	± 125	75	82	
SW3R24D15WF	18-36	± 15	± 100	68	84	
SW3R48S03WF	36-75	3.3	909	165	76	
SW3R48S05WF	36-75	5	600	150	80	
SW3R48S09WF	36-75	9	333	150	82	
SW3R48S12WF	36-75	12	250	150	83	
SW3R48S15WF	36-75	15	200	135	85	
SW3R48D03WF	36-75	± 3.3	± 454	83	74	
SW3R48D05WF	36-75	± 5	± 300	75	78	
SW3R48D09WF	36-75	± 9	± 167	75	80	
SW3R48D12WF	36-75	± 12	± 125	75	82	
SW3R48D15WF	36-75	± 15	± 100	68	84	

### DESCRIPTION

The SW3R W Series is a 1500Vdc isolated range of single and dual output 3W DC-DC converters, designed with a 2:1 input voltage range and ideal for use in a whole variety of telecoms, industrial and distributed power applications. Available in industry standard E and L DIP packages (32 x 20 x 9 mm), the SW3R W is fully encapsulated in a metal case and is designed to meet EN60950 and UL1950 safety standards. Continuous SC protection and UVLO are some of the many SW3R W features.

MECHANICAL  
(E Package)

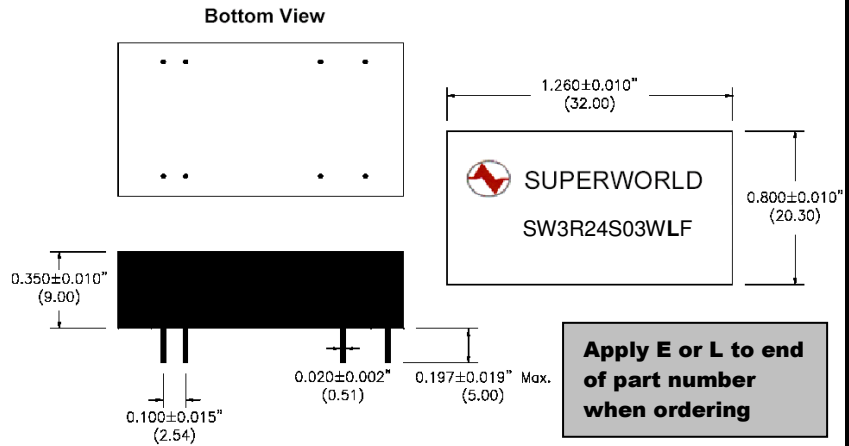
Pin	Singles	Dual
1	+Vin	+Vin
2	NC	-Vout
3	NC	Common
10	-Vout	Common
11	+Vout	+Vout
12	-Vin	-Vin
13	-Vin	-Vin
14	+Vout	+Vout
15	-Vout	Common
22	NC	Common
23	NC	-Vout
24	+Vin	+Vout

Bottom View

Apply E or L to end of part number when ordering

## MECHANICAL (L Package)

Pin	Singles	Dual
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Common
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Common
22	+Vin	+Vin
23	+Vin	+Vin



## SW3R W INPUT SPECIFICATIONS

PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Input Current (No Load)	All models		20		mA
Voltage Range	SW3R24	18	24	36	Vdc
	SW3R48	36	48	75	
Transient Input Voltage (1msec)	SW3R24			50	Vdc
	SW3R48			100	
Undervoltage Lockout (SW3R24)	On			17.5	Vdc
Undervoltage Lockout (SW3R48)	Off	16			
	On			34.5	
	Off	32.5			
Reflected Ripple Current			35		mA <sub>p-p</sub>

## SW3R W OUTPUT SPECIFICATIONS

PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Rated Power	All models			3.0	W
Voltage Setpoint Accuracy				±5	%
Line Regulation	1% change in Vin		±0.5	±2	%
Load Regulation	(10% load to rated load)		±1	±3	%
Ripple & Noise	BW = DC to 20MHz			1%	p-p
Current Limit	120% x I <sub>out</sub>			4.6	W
Output Overvoltage Clamp				120	% V <sub>out</sub>
Temperature Coefficient		±0.008			%/°C
Short Circuit Protection				1	second

## SW3R W GENERAL CHARACTERISTICS

PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Temperature	Temperature (Ambient)	-25		70	°C
	Temperature (Case)	-40		100	°C
	Storage	-40		100	°C
Isolation	Isolation Test Voltage	1500			Vdc
	Resistance	10			GΩ
	Capacitance		20		pF
	Leakage Current		20		μArms
Switching Frequency			150		kHz
MTTF (Ta = 25 °C)	MIL-HDBK-217E		450000		hrs
Weight				20	g

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