



# SUPERWORLD ELECTRONICS

## SW3R UWSM Series – 3W Ultra-Wide Input Single & Dual SMD DC-DC Converter



RoHS Compliant



### FEATURES

- Industry std 24-pin SMD package
- Ultra-Wide Input Range 18-75 Vdc
- Single & Dual 1500Vdc Isolated Outputs
- Operating Temp Range  $-40^{\circ}\text{C}$  to  $100^{\circ}\text{C}$
- High Efficiencies to 85%
- Continuous Short Circuit Protection
- Undervoltage Lock-out
- Metal Casing
- 2 Year Warranty
- Internal Input and Output Filtering

### SW3R UWSM PRODUCT RANGE

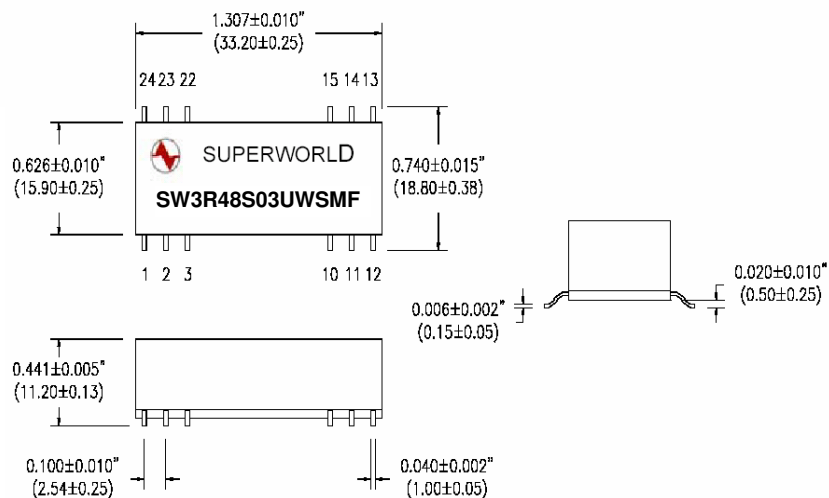
Model	Vin (Vdc)	Vout (Vdc)	Iout (mA)	Iin (rated) (mA)	Eff. (%)
SW3R48S03UWSMF	18-75	3.3	909	330	76
SW3R48S05UWSMF	18-75	5	600	300	80
SW3R48S09UWSMF	18-75	9	333	300	82
SW3R48S12UWSMF	18-75	12	250	300	83
SW3R48S15UWSMF	18-75	15	200	270	85
SW3R48D03UWSMF	18-75	$\pm 3.3$	$\pm 454$	167	74
SW3R48D05UWSMF	18-75	$\pm 5$	$\pm 300$	150	78
SW3R48D09UWSMF	18-75	$\pm 9$	$\pm 167$	150	80
SW3R48D12UWSMF	18-75	$\pm 12$	$\pm 125$	150	82
SW3R48D15UWSMF	18-75	$\pm 15$	$\pm 100$	137	84

### DESCRIPTION

The SW3R UWSM Series is a 1500Vdc isolated range of single and dual output 3W DC-DC converters, designed with a 4:1 input voltage range and ideal for use in a whole variety of telecoms, industrial and distributed power applications. In an industry standard surface mount packages (33 x 16 x 11 mm), the SW3R UWSM is fully encapsulated in a non-flammable plastic case (meeting UL 94V-0) and is designed to meet EN60950 and UL1950 safety standards. Continuous SC protection and UVLO are some of the many SW3R UWSM features.

### MECHANICAL SPECIFICATION

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



SW3R UWSM INPUT SPECIFICATIONS					
PARAMETER	CONDITIONS	MIN	TYPICAL	MAX	UNITS
Input Current (No Load)	All models		20		mA
Voltage Range		18		75	Vdc
Transient Input Voltage (1msec)				100	Vdc
Undervoltage Lockout	On Off	16		17.5	Vdc
Reflected Ripple Current			35		mAp-p

SW3R UWSM 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 Iout			3.6	W
Output Overvoltage Clamp				120	% Vout
Temperature Coefficient		± 0.008			%/ °C
Short Circuit Protection				1	second

SW3R UWSM 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

Refer to Medium Power Application Note 1 for additional Performance Curves & Data

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