

# W7 SERIES DC/DC MODULES

## Applications

- Servers, Switches and Data Storage
- Wireless Communications
- Distributed Power Architecture
- Semiconductor Test Equipment
- Networking Gear
- Data Communications
- Telecommunications
- Industrial / Medical

The W7 Family of high efficiency DC/DC converters offer power levels of up to 7 Watt, which exceeds that of other sub-bricks with the same package, while also providing Surface Mount Processable construction. With a wide input voltage range and single and multi-outputs, these converters provide versatility without sacrificing the board space. All models feature an input filter, continuous short circuit protection and regulated outputs. The fully enclosed, encapsulated construction facilitates maximum power delivered with the highest efficiency of up to 83%. All converters combine creative design practices with highly derated power devices to achieve very high reliability, high performance and low cost solution to systems designers.

## Specifications & Features Summary

- No minimum load required
- Regulated Outputs
- -25°C to +71°C ambient operation
- Continuous Short-circuit protection
- 1500V, 10MΩ input-to-output isolation
- PI Input Filter
- Voltage Accuracy ± 2%
- 2:1 Input Range
- 5-sided metal shield
- 270 – 330KHz Switching Frequency
- Input Undervoltage Lockout
- Output Overvoltage Protection
- Output Current Limiting
- No airflow or heatsink required
- Delivers up to 7.5W in 1"x1.25"x0.45" package with Industry-Standard SMD Pinouts
- THROUGH-HOLE PACKAGES AVAILABLE (add suffix "T" to the part number)



Model Number	Vin Range	Output		Input Current		Eff (%)	Regulation Line/Load	Startup delay Typ (ms)	Overshoot Typ (%)	Rise time Typ (ms)	Hold Time Typ (us)	Recovery Typ (us)	Dynamic Response	Output Ripple/Noise
		Voltage	Current	No Load	Full Load									
W7-12S5	9-18Vdc	5VDC	1500mA	25mA	801mA	78	±0.2/1.1%	0.4	5	0.2	100	300	2%	50mVp-p
W7-12S12		12VDC	625mA	25mA	762mA	82	±0.2/0.2%	2.2	2	2	100	300	2%	50mVp-p
W7-12S15		15VDC	500mA	25mA	762mA	82	±0.2/0.1%	2.5	2	2.3	100	300	2%	50mVp-p
W7-12D5		±5VDC	±750mA	30mA	791mA	79	±0.2/0.5%	1.7	4	1.5	100	300	2%	60mVp-p
W7-12D12		±12VDC	±310mA	30mA	753mA	83	±0.2/0.1%	5	2	4.5	100	300	2%	60mVp-p
W7-12D15		±15VDC	±250mA	30mA	753mA	83	±0.2/0.1%	10	2	6	100	300	2%	60mVp-p
W7-12S3.3		3.3VDC	1500mA	25mA	557mA	74	±0.2/1.1%	0.5	10	0.4	100	300	2%	50mVp-p
W7-24S5	18-36Vdc	5VDC	1500mA	20mA	396mA	79	±0.2/1.1%	15	5	0.2	100	300	2%	50mVp-p
W7-24S12		12VDC	625mA	20mA	381mA	82	±0.2/0.2%	20	2	2	100	300	2%	50mVp-p
W7-24S15		15VDC	500mA	20mA	381mA	82	±0.2/0.1%	20	2	2.3	100	300	2%	50mVp-p
W7-24D5		±5VDC	±750mA	25mA	386mA	81	±0.2/0.5%	20	4	1.5	100	300	2%	60mVp-p
W7-24D12		±12VDC	±310mA	25mA	377mA	83	±0.2/0.1%	20	2	4.5	100	300	2%	60mVp-p
W7-24D15		±15VDC	±250mA	25mA	377mA	83	±0.2/0.1%	25	2	6	100	300	2%	60mVp-p
W7-24S3.3		3.3VDC	1500mA	20mA	271mA	76	±0.2/1.1%	20	10	0.4	100	300	2%	50mVp-p
W7-48S5	36-72Vdc	5VDC	1500mA	10mA	195mA	80	±0.2/1.1%	15	5	0.2	200	300	2%	50mVp-p
W7-48S12		12VDC	625mA	10mA	190mA	82	±0.2/0.2%	20	2	2	200	300	2%	50mVp-p
W7-48S15		15VDC	500mA	10mA	190mA	82	±0.2/0.1%	20	2	2.3	200	300	2%	50mVp-p
W7-48D5		±5VDC	±750mA	15mA	193mA	81	±0.2/0.5%	20	4	1.5	200	300	2%	60mVp-p
W7-48D12		±12VDC	±310mA	15mA	188mA	83	±0.2/0.1%	20	2	4.5	200	300	2%	60mVp-p
W7-48D15		±15VDC	±250mA	15mA	188mA	83	±0.2/0.1%	25	2	6	200	300	2%	60mVp-p
W7-48S3.3		3.3VDC	1500mA	10mA	136mA	76	±0.2/1.1%	20	10	0.4	200	300	2%	50mVp-p

Typical at Ta = +25 °C under nominal input voltages of 12V, 24V and 48VDC, unless noted. The information and specifications contained in this brief are believed to be accurate and reliable at the time of publication. Specifications are subject to change without notice. Refer to product specification sheet for performance characteristics and application guidelines.

**Consult factory for hundreds of other available input/output voltage configurations.**

### Single Output Typical Connection

### Dual Output Typical Connections

### Recommended Land Pattern

### Through-Hole Mechanical Drawing

### Recommended Reflow Profile

### Derating Curve

All Dimensions in inches (mm); tolerance \*xx = ± 0.02, \*xxx = ± 0.010  
 Pin size is 0.020" (0.5mm) DIA or 0.020" x 0.014"