

W3 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 W5 Family of high efficiency DC/DC converters offer power levels of up to 3 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.

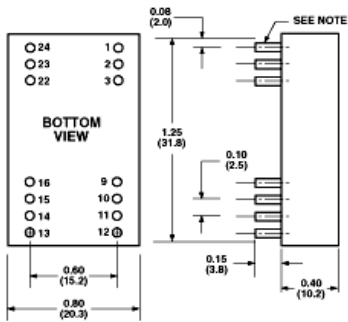
Specifications & Features Summary

- Regulated Outputs
- -25°C to +71°C ambient operation
- Continuous Short-circuit protection
- up to 3KV, 10MΩ input-to-output isolation
- Pi Input Filter
- 2:1 Input Range
- THROUGH-HOLE PACKAGES AVAILABLE (add suffix "T" to the part number)
- 5-sided metal shield
- 100KHz Switching Frequency
- No airflow or heatsink required
- Voltage Accuracy ± 2%
- Delivers up to 5W in 1"x1.25"x0.45" package with Industry-Standard SMD Pinouts



Model Num	V _{In}	V _{Out}	I _{Out}	I _{No Load}	I _{Full Load}	Eff	Case	SPECIFICATIONS	
W3-12S5	9-18 VDC	5.0 VDC	600.0 mA	7.5 mA	545.0 mA	76%	T	Input Specifications	
W3-12S12	9-18 VDC	12.0 VDC	250.0 mA	7.5 mA	585.0 mA	80%	T	Input Voltage Range	
W3-12S15	9-18 VDC	15.0 VDC	200.0 mA	7.5 mA	625.0 mA	80%	T	12V-----9-18V	
W3-12D12	9-18 VDC	±12.0 VDC	±125.0 mA	12.0 mA	575.0 mA	80%	T	24V-----18-36V	
W3-12D15	9-18 VDC	±15.0 VDC	±100.0 mA	12.0 mA	590.0 mA	80%	T	48V-----36-72V	
W3-12D5	9-18 VDC	±5.0 VDC	±300.0 mA	12.0 mA	545.0 mA	76%	T	Input Filter	
W3-12S3.3	9-18 VDC	3.3 VDC	600.0 mA	7.5 mA	393.0 mA	70%	T	Pi Type	
W3-24S5	18-36 VDC	5.0 VDC	600.0 mA	5.0 mA	265.0 mA	78%	T	Output Specifications	
W3-24S12	18-36 VDC	12.0 VDC	250.0 mA	5.0 mA	285.0 mA	82%	T	Voltage Accuracy	
W3-24S15	18-36 VDC	15.0 VDC	200.0 mA	5.0 mA	305.0 mA	82%	T	+/-2.0% max.	
W3-24D12	18-36 VDC	±12.0 VDC	±125.0 mA	7.5 mA	285.0 mA	81%	T	Voltage Balance(Dual)	
W3-24D15	18-36 VDC	±15.0 VDC	±100.0 mA	7.5 mA	295.0 mA	81%	T	+/-1.0% / max.	
W3-24D5	18-36 VDC	±5.0 VDC	±300.0 mA	7.5 mA	265.0 mA	78%	T	Temperature Coefficient	
W3-24S3.3	18-36 VDC	3.3 VDC	600.0 mA	5.0 mA	197.0 mA	70%	T	+/-0.05% / °C	
W3-48S5	36-72 VDC	5.0 VDC	600.0 mA	2.0 mA	133.0 mA	78%	T	3.3V / 5V-----100mV p-p max.	
W3-48S12	36-72 VDC	12.0 VDC	250.0 mA	2.0 mA	145.0 mA	81%	T	12V / 15V-----1% p-p max.	
W3-48S15	36-72 VDC	15.0 VDC	200.0 mA	2.0 mA	154.0 mA	81%	T	Short Circuit Protection	
W3-48D12	36-72 VDC	±12.0 VDC	±125.0 mA	3.0 mA	142.0 mA	81%	T	Continuous	
W3-48D15	36-72 VDC	±15.0 VDC	±100.0 mA	3.0 mA	147.0 mA	81%	T	Line Regulation, Single/Dual ¹	
W3-48D5	36-72 VDC	±5.0 VDC	±300.0 mA	3.0 mA	133.0 mA	78%	T	+/-0.5%	
W3-48S3.3	36-72 VDC	3.3 VDC	600.0 mA	2.0 mA	98.0 mA	70%	T	Load Regulation, Single ²	
								+/-0.5%	
								Dual ³	
								+/-1.0%	
								Efficiency	
								Isolation Resistance	
								10 ⁹ ohms	
								Switching Frequency	
								100KHz, min	
								Operating Temperature Range	
								-25°C to +71°C	
								Case Temperature(Plastic case)	
								95°C max.	
								(Copper case)	
								100°C max.	
								Cooling	
								Free-Air Convection	
								Storage Temperature Range	
								-40°C to +100°C	
								Dimensions	
								1.25X0.8X0.4 Inches	
								(31.8X20.3X10.2mm)	
								Isolation Voltage	
								500VDC min	
								Standard Models	
								3K VDC min ⁴	
								Suffix"H" Models	
								Case Material	
								Standard Models	
								Non-Conductive Black Plastic	
								Suffix"M" Models ⁵	
								Black Coated Copper with Non-Conductive Base	
								Notes	
								1. Measured From High Line to Low Line	
								2. Measured From Full Load to 10% Load	
								3. Measured From Full Load to 1/4 Load	
								4. Non-Conductive Black Plastic Only	
								5. Suffix"HM" 1.5K VDC Instead of 3K VDC Isolation	

NOTE: Pin Size is 0.02" Inch (0.5mm) DIA or .020 x .014 Inch
 All Dimensions In Inches (mm)



PIN CONNECTION					
Pin	500 VDC		Pin	(1.5K & 3K) VDC	
	Single Output	Dual Output		Single Output	Dual Output
1	+V Input	+V Input	1	NP	NP
2	NC	-V Output	2	-V Input	-V Input
3	NC	Common	3	-V Input	-V Input
9	NP	NP	9	NC	Common
10	-V Output	Common	10	NC	NC
11	+V Output	+V Output	11	NC	-V Output
12	-V Input	-V Input	12	NP	NP
13	-V Input	-V Input	13	NP	NP
14	+V Output	+V Output	14	+V Output	+V Output
15	-V Output	Common	15	NC	NC
16	NP	NP	16	-V Output	Common
22	NC	Common	22	+V Input	+V Input
23	NC	-V Output	23	+V Input	+V Input
24	+V Input	+V Input	24	NP	NP

*NP-NO PIN *TP-TEST POINT
 *NC-NO CONNECTION WITH PIN *GO-GROUND

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.