

# W15C SERIES DC/DC MODULES

## Applications

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

The W15C Families of high efficiency DC/DC converters offer power levels of up to 15 Watt, which exceeds that of other bricks with the same Industry-Standard Pinouts, while providing much smaller footprints. With a wide input voltage range and single and multi-outputs, ranging from 3.3 to ±15 Volts, these converters provide versatility without sacrificing the board space. All models feature an input filter, input undervoltage lockout, output current limiting and short circuit protection. The fully enclosed, encapsulated construction achieves very efficient heat transfer with no hot spots. 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.

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF.	CASE
				NO LOAD	FULL LOAD		
W15C-12S5	9-18VDC	5 VDC	3000mA	20mA	1582mA	79	W15C
W15C-12S5.1	9-18VDC	5.1 VDC	2940mA	20mA	1582mA	79	W15C
W15C-12S12	9-18VDC	12 VDC	1250mA	20mA	1524mA	82	W15C
W15C-12S15	9-18VDC	15 VDC	1000mA	20mA	1524mA	82	W15C
W15C-12D12	9-18VDC	±12 VDC	±625mA	30mA	1506mA	83	W15C
W15C-12D15	9-18VDC	±15 VDC	±500mA	30mA	1506mA	83	W15C
W15C-12D5	9-18VDC	±5 VDC	±1500mA	30mA	1543mA	81	W15C
W15C-12D5.1	9-18VDC	±5.1 VDC	1470mA	30mA	1543mA	81	W15C
W15C-12S3.3	9-18VDC	3.3 VDC	3000mA	20mA	1086mA	76	W15C
W15C-24S5	18-36VDC	5 VDC	3000mA	20mA	780mA	80	W15C
W15C-24S5.1	18-36VDC	5.1 VDC	2940mA	20mA	780mA	80	W15C
W15C-24S12	18-36VDC	12 VDC	1250mA	20mA	762mA	82	W15C
W15C-24S15	18-36VDC	15 VDC	1000mA	20mA	762mA	82	W15C
W15C-24D12	18-36VDC	±12 VDC	±625mA	25mA	755mA	83	W15C
W15C-24D15	18-36VDC	±15 VDC	±500mA	25mA	755mA	83	W15C
W15C-24D5	18-36VDC	±5 VDC	±1500mA	25mA	772mA	81	W15C
W15C-24D5.1	18-36VDC	±5.1 VDC	1470mA	25mA	772mA	81	W15C
W15C-24S3.3	18-36VDC	3.3 VDC	3000mA	20mA	543mA	76	W15C
W15C-48S5	36-72VDC	5 VDC	3000mA	15mA	391mA	80	W15C
W15C-48S5.1	36-72VDC	5.1 VDC	2940mA	15mA	391mA	80	W15C
W15C-48S12	36-72VDC	12 VDC	1250mA	15mA	377mA	83	W15C
W15C-48S15	36-72VDC	15 VDC	1000mA	15mA	377mA	83	W15C
W15C-48D12	36-72VDC	±12 VDC	±625mA	20mA	377mA	83	W15C
W15C-48D15	36-72VDC	±15 VDC	±500mA	20mA	377mA	83	W15C
W15C-48D5	36-72VDC	±5 VDC	±1500mA	20mA	381mA	82	W15C
W15C-48D5.1	36-72VDC	±5.1VDC	1470mA	20mA	381mA	82	W15C
W15C-48S3.3	36-72VDC	3.3 VDC	3000mA	15mA	271mA	76	W15C



## Specifications & Features Summary

- 500V, 10MΩ input-to-output isolation
- No airflow or heatsink required
- Efficiency up to 83%
- Six Sided Continuous Shield
- 2:1 Input Range
- Pi Input Filter
- Continuous Short Circuit Protection
- Meets EN55022 Class A, Conducted
- Remote On/Off Option

Pin #	W15C S(single)	W15C D(dual)
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	NP / Trim Option	Common
5	Vout -	Vout -
6	NP / Remote Option	NP / Remote Option

Tolerances
Inches
• XX ±0.040
• XXX ±0.010

### Input Specifications

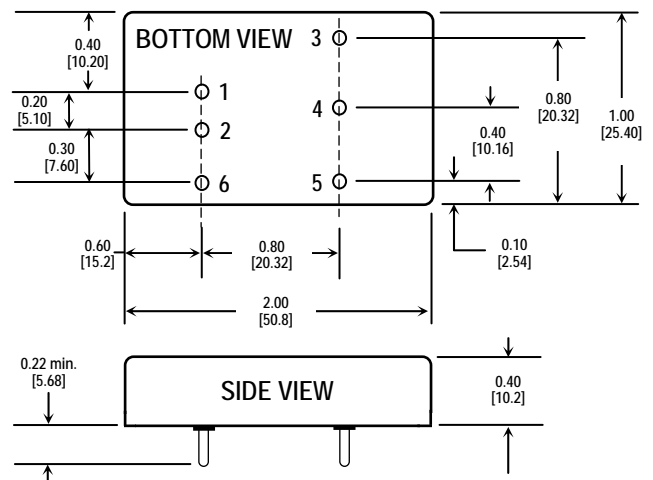
Input Voltage Range	12V-----9-18V 24V-----18-36V 48V-----36-72V
Input Filter	Pi Type

### Output Specifications

Voltage Accuracy Single Output	+/-1.0% max.
Voltage Accuracy Dual+Output	+/-1.0% max.
Voltage Accuracy Dual-Output	+/-1.0% max.
Voltage Balance Dual Output at Full Load	+/-1.0% max.
Transient Response	
Single 25% Step Load Change	<500u sec.
Dual FL. 1/2 +/- 1% Error Band	<500u sec.
Ripple and Noise. 20MHz BW	75mV p-p max.
Temperature Coefficient	+/-0.02% /°C max.
Short Circuit Protection	Continuous
Line Regulation <sup>1</sup> Single Dual/Output	+/-0.2% max.
Load Regulation <sup>2</sup> Single Dual/Output	+/-1.0% max

### General Specifications

Efficiency	See Table
Isolation Voltage	500VDC
Isolation Resistance	10 <sup>9</sup> ohms
Switching Frequency	300KHz min.
Operating Temperature Range	-25°C to +71°C
Case Temperature	100°C max.
Cooling	Free-Air Convection
Storage Temperature Range	-40°C to +100°C
EMI / RFI	Six sided Continuous Shield
Dimensions	2X1X0.4 Inches (50.8 x 25.4 x 10.2 mm)
Case Material	Black Coated Copper with Non-Conductive Base



All dimensions are in inches [mm]  
All pins are dia. 0.040 [1.02]

### Notes:

1. Measured From High Line to Low Line
2. Measured From Full Load to 1/4 Load

### Options:

1. Add Suffix "R" to the Model Number with Remote On/Off Remote On/Off Control : COMS or Open Collector TTL  
Converter-ON >+5.5VDC or Open Collector  
Converter-OFF < 1.8 VDC  
Control Common Referenced to Input Minus
2. Add Suffix "T" to the Model Number for Output voltage adjustable External Trim Adj. Range > ±10%, Single Output Only

Typical at Ta= +25 °C under nominal line voltage and full load conditions, 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.**