

W15C 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 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 |



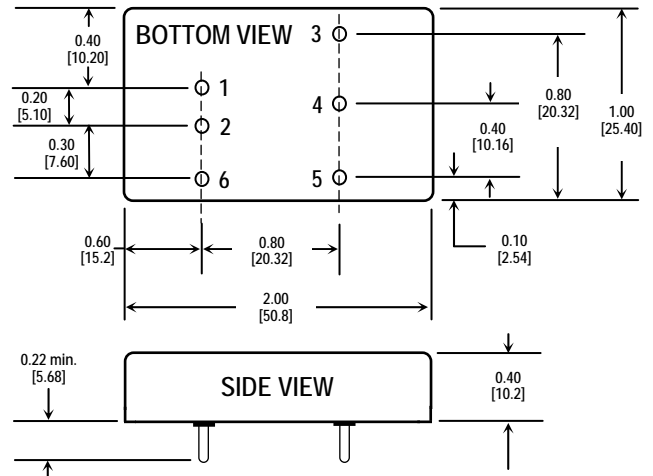
Specifications & Features Summary

- 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(ngle) | W15C D(ual) |
|-------|--------------------|--------------------|
| 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 ¹ Single Dual/Output | +/-0.2% max. |
| Load Regulation ² Single Dual/Output | +/-1.0% max |
| General Specifications | |
| Efficiency | See Table |
| Isolation Voltage | 500VDC |
| Isolation Resistance | 10 ⁹ 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 : |
| Logic Compatibility | 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.