

U15 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 U15 Family of high efficiency DC/DC converters offer power levels of up to 15 Watt. With ultra-wide input voltage range and single and multi-outputs, these converters provide versatility without sacrificing the board space. All models feature an input Pi filter and continuous 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.

Specifications & Features Summary

- 500Vdc minimum, 10MΩ input-to-output isolation
- No airflow or heatsink required
- Enclosed six-sided metal shield construction for low EMI/RFI
- Efficiency to 82%
- 4:1 Input Range
- Pi Input Filter
- Continuous Short Circuit Protection
- Remote On/Off Control
- Delivers up to 15W in 2"x2" package with Industry-Standard Pinouts

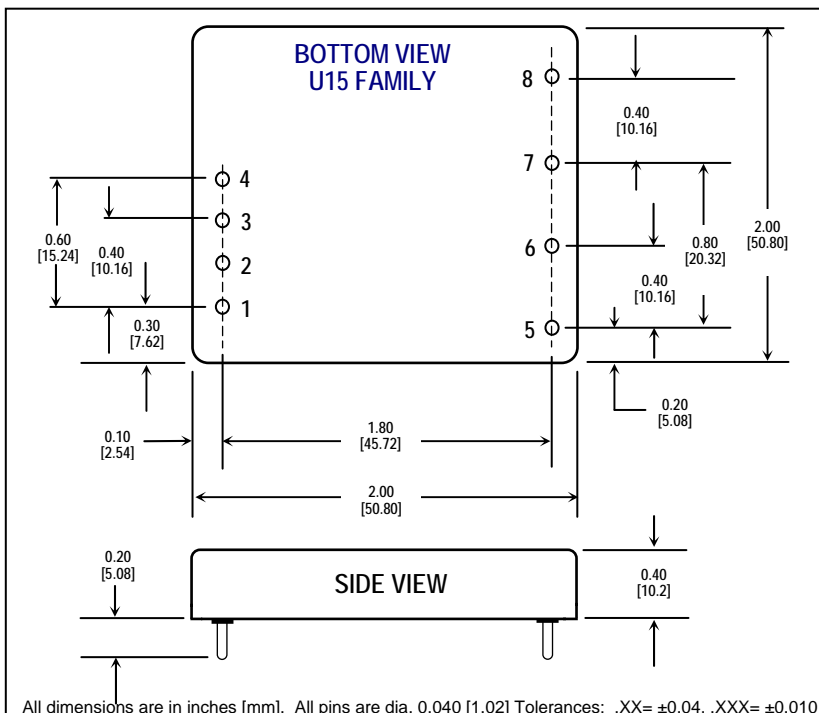


Model Num	V _{in}	V _{out}	I _{out}	I _{No Load}	I _{Full Load}	Eff	Case
U15-12S5	9-36 VDC	5.0 VDC	3.0A	15.0 mA	810.0 mA	77%	W2530
U15-12S12	9-36 VDC	12.0 VDC	1.25A	15.0 mA	780.0 mA	80%	W2530
U15-12S15	9-36 VDC	15.0 VDC	1.0A	15.0 mA	780.0 mA	80%	W2530
U15-12D5	9-36 VDC	±5.0 VDC	±1.5A	20.0 mA	810.0 mA	77%	W2530
U15-12D12	9-36 VDC	±12.0 VDC	±0.625A	20.0 mA	780.0 mA	80%	W2530
U15-12D15	9-36 VDC	±15.0 VDC	±0.5A	20.0 mA	780.0 mA	80%	W2530
U15-12T5-12	9-36 VDC	±12.0/5.0 VDC	±0.31A/1.5A	20.0 mA	780.0 mA	80%	W2530
U15-12T5-15	9-36 VDC	±15.0/5.0 VDC	±0.25A/1.5A	20.0 mA	780.0 mA	80%	W2530
U15-12S3.3	9-36 VDC	3.3 VDC	3.0A	15.0 mA	545.0 mA	76%	W2530
U15-48S5	18-72 VDC	5.0 VDC	3.0A	10.0 mA	410.0 mA	77%	W2530
U15-48S12	18-72 VDC	12.0 VDC	1.25A	10.0 mA	390.0 mA	80%	W2530
U15-48S15	18-72 VDC	15.0 VDC	1.0A	10.0 mA	390.0 mA	80%	W2530
U15-48D5	18-72 VDC	±5.0 VDC	±1.5A	15.0 mA	400.0 mA	79%	W2530
U15-48D12	18-72 VDC	±12.0 VDC	±0.625A	15.0 mA	380.0 mA	82%	W2530
U15-48D15	18-72 VDC	±15.0 VDC	±0.5A	15.0 mA	380.0 mA	82%	W2530
U15-48T5-12	18-72 VDC	±12.0/5.0 VDC	±0.31A/1.5A	15.0 mA	380.0 mA	82%	W2530
U15-48T5-15	18-72 VDC	±15.0/5.0 VDC	±0.25A/1.5A	15.0 mA	380.0 mA	82%	W2530
U15-48S3.3	18-72 VDC	3.3 VDC	3.0A	10.0 mA	270.0 mA	76%	W2530

Typical at Ta= +25 °C under nominal line voltage and 75% 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.

The output voltage can be trimmed (±10%) using an external resistor. To trim the output up (down) connect a resistor between pins 5 and 6 (7). A 10KΩ trim pot can also be used to make the output variable. Connect the wiper to pin 5 and make the other connections to pins 6 and 7.

Consult factory for hundreds of other input / output voltage configurations



SPECIFICATIONS	
Input Specifications	
Input Voltage Range	12V-----9-36V 48V-----18-72V
Input Filter	Pi Type
Output Specifications	
Voltage Accuracy	
Single Output	+/-1.0% max.
Dual +Output	+/-1.0% max.
-Output	+/-3.0% max.
Triple, 5V	+/-2.0% max.
12V / 15V	+/-3.0% max.
Voltage Balance(Dual)	+/-1.0% max.
Transient Response:	
Single, 25% Step Load Change	<500u sec.
Dual, FL-1/2L +/- 1% Error Band	<500u sec.
External Trim Adj. Range	+/-10%
Ripple and Noise, 20MHz BW	10mV RMS. Max. 75mV p-p max.
Temperature Coefficient	+/-0.02% / °C
Short Circuit Protection	Continuous
Line Regulation, Single/Dual	+/-0.2% max.
Triple	+/-1.0% max.
Load Regulation, Single/Dual	+/-1.0% max.
Triple	+/-5.0% max.
General Specifications	
Efficiency	Up to 82%
Isolation Voltage	500 VDC min
Isolation Resistance	10 ⁹ ohms
Switching Frequency	300KHz, min
Case Grounding	Connected to Output Common
Operating Temperature Range	-25°C to +71°C
Case Temperature	100°C max.
Cooling	Free-Air Convection
Storage Temperature Range	-55°C to +105°C
EMI / RFI	Six Sided Continuous Shield
Dimensions	2X2X0.4 Inches (50.8X50.8X10.2mm)
Case Material	Black Coated Copper w/Non-Conductive Base
Notes:	1. Measured From High Line to Low Line 2. Measured From Full Load to 1/4 Load

REMOTE ON/OFF CONTROL

Logic Compatibility	CMOS or Open Collector TTL
EC-On	>+5.5Vdc or Open Circuit
EC-Off	<1.8Vdc
Shutdown Idle Current	10mA
Input Resistance	100K ohms (Ein 0 Vdc to 9 Vdc)
Control Common	Referenced to Input Minus

Pin #	S(ingle)	D(ual)	T(riple)	Triple Output Loading Table (1)		
				Voltage	Amperes	
				Min. (2)	Nom.	
1	On/Off	On/Off	On/Off			
2	No Pin	No Pin	No Pin			
3	Vin -	Vin -	Vin -			
4	Vin +	Vin +	Vin +			
5	Trim	Trim	- Aux. Out	+12(15) or -12(15)	0.10	0.31(0.25)
6	Vout -	Vout -	No Pin			
7	Vout +	Common	+5Vout	+5	0.25	1.5
8	No Pin	Vout +	+ Aux. Out	+12(15) or -12(15)	0.10	0.31(0.25)

Maximum total power from all outputs is limited to 15 watts, but no output should be allowed to exceed its maximum current. Minimum current on each output is required to maintain specified regulation.