

W2530 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 W2530 Family of high efficiency DC/DC converters offer power levels of up to 30 Watt, which exceeds that of other bricks with the same Industry-Standard Pinouts, while providing smaller footprints. 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 Pi filter 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.

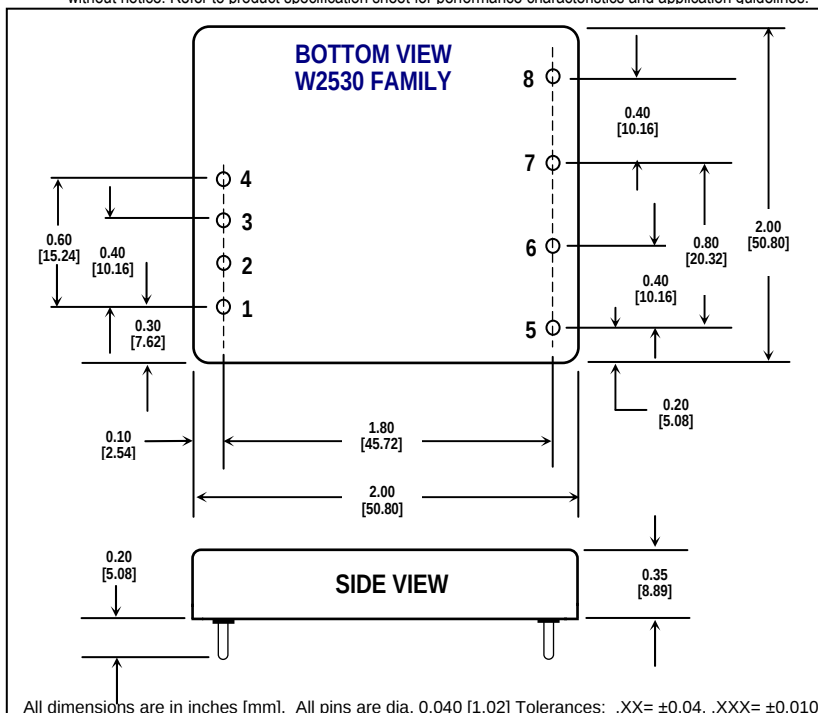
Specifications & Features Summary

- 500V, 10MΩ input-to-output isolation
- No airflow or heatsink required
- Enclosed six-sided metal shield construction for low EMI/RFI
- Efficiency to 85%
- 2:1 Input Range
- Pi Input Filter
- Continuous Short Circuit Protection
- Remote On/Off Control
- Delivers up to 30W in 2"x2" package with Industry-Standard Pinouts



Model Num	V _{in}	V _{out}	I _{out}	I _{no Load}	I _{Full Load}	Eff	Case
W2530-12S5	9-18 VDC	5.0 VDC	5.0A	30.0 mA	2675.0 mA	78%	W2530
W2530-12S12	9-18 VDC	12.0 VDC	2.5A	30.0 mA	3050.0 mA	82%	W2530
W2530-12S15	9-18 VDC	15.0 VDC	2.0A	30.0 mA	3050.0 mA	82%	W2530
W2530-12D5	9-18 VDC	±5.0 VDC	±2.5A	35.0 mA	2675.0 mA	78%	W2530
W2530-12D12	9-18 VDC	±12.0 VDC	±1.25A	35.0 mA	3050.0 mA	82%	W2530
W2530-12D15	9-18 VDC	±15.0 VDC	±1.0A	35.0 mA	3050.0 mA	82%	W2530
W2530-12T5-12	9-18 VDC	±12.0/5.0 VDC	±0.31A/3.5A	35.0 mA	2640.0 mA	79%	W2530
W2530-12T5-15	9-18 VDC	±15.0/5.0 VDC	±0.25A/3.5A	35.0 mA	2640.0 mA	79%	W2530
W2530-12S3.3	9-18 VDC	3.3 VDC	5.0A	30.0 mA	1860.0 mA	74%	W2530
W2530-24S5	18-36 VDC	5.0 VDC	5.0A	30.0 mA	1336.0 mA	79%	W2530
W2530-24S12	18-36 VDC	12.0 VDC	2.5A	30.0 mA	1525.0 mA	82%	W2530
W2530-24S15	18-36 VDC	15.0 VDC	2.0A	30.0 mA	1525.0 mA	82%	W2530
W2530-24D5	18-36 VDC	±5.0 VDC	±2.5A	30.0 mA	1336.0 mA	79%	W2530
W2530-24D12	18-36 VDC	±12.0 VDC	±1.25A	30.0 mA	1470.0 mA	85%	W2530
W2530-24D15	18-36 VDC	±15.0 VDC	±1.0A	30.0 mA	1470.0 mA	85%	W2530
W2530-24T5-12	18-36 VDC	±12.0/5.0 VDC	±0.31A/3.5A	30.0 mA	1320.0 mA	80%	W2530
W2530-24T5-15	18-36 VDC	±15.0/5.0 VDC	±0.25A/3.5A	30.0 mA	1320.0 mA	80%	W2530
W2530-24S3.3	18-36 VDC	3.3 VDC	5.0A	30.0 mA	920.0 mA	75%	W2530
W2530-48S5	36-72 VDC	5.0 VDC	5.0A	20.0 mA	660.0 mA	79%	W2530
W2530-48S12	36-72 VDC	12.0 VDC	2.5A	20.0 mA	765.0 mA	82%	W2530
W2530-48S15	36-72 VDC	15.0 VDC	2.0A	20.0 mA	765.0 mA	82%	W2530
W2530-48D5	36-72 VDC	±5.0 VDC	±2.5A	25.0 mA	660.0 mA	79%	W2530
W2530-48D12	36-72 VDC	±12.0 VDC	±1.25A	25.0 mA	735.0 mA	85%	W2530
W2530-48D15	36-72 VDC	±15.0 VDC	±1.0A	25.0 mA	735.0 mA	85%	W2530
W2530-48T5-12	36-72 VDC	±12.0/5.0 VDC	±0.31A/3.5A	25.0 mA	655.0 mA	80%	W2530
W2530-48T5-15	36-72 VDC	±15.0/5.0 VDC	±0.25A/3.5A	25.0 mA	655.0 mA	80%	W2530
W2530-48S3.3	36-72 VDC	3.3 VDC	5.0A	20.0 mA	460.0 mA	75%	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.



SPECIFICATIONS	
Input Specifications	
Input Voltage Range	12V-----9-18V 24V-----18-36V 48V-----36-72V
Input Filter	Pi Type
Output Specifications	
Voltage Accuracy	
Single Output	+/-2.0% max.
Dual+Output	+/-2.0% max.
-Output	+/-3.0% max.
Triple, 5V	+/-2.0% max.
12V / 15V	+/-5.0% 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	+/-0.5% max.
Triple	+/-1.0% max.
Load Regulation, Single/Dual	+/-1.0% max.
Triple	+/-5.0% max.
General Specifications	
Efficiency	Up to 85%
Isolation Voltage	500 VDC min
Isolation Resistance	10 ⁹ ohms
Switching Frequency	300KHz. min
Case Grounding	Capacity Coupled to Input
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

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.

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

Full output power is available at ambient temperatures of -25C to +60C with no airflow. Above +60C output power linearly derates to 0% at +100C.

Consult factory for hundreds of other input / output voltage configurations

Triple Output Loading Table (1)						
Pin #	S(ingle)	D(ual)	T(riple)	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 -	Common			
7	Vout +	Common	+5Vout	+5	0.50	
8	No Pin	Vout +	+ Aux. Out	+12(15) or -12(15)	0.10	0.31(0.25)