

# WDD15 SERIES



DC - DC CONVERTER  
12 ~ 15W SINGLE & DUAL OUTPUT

## FEATURES

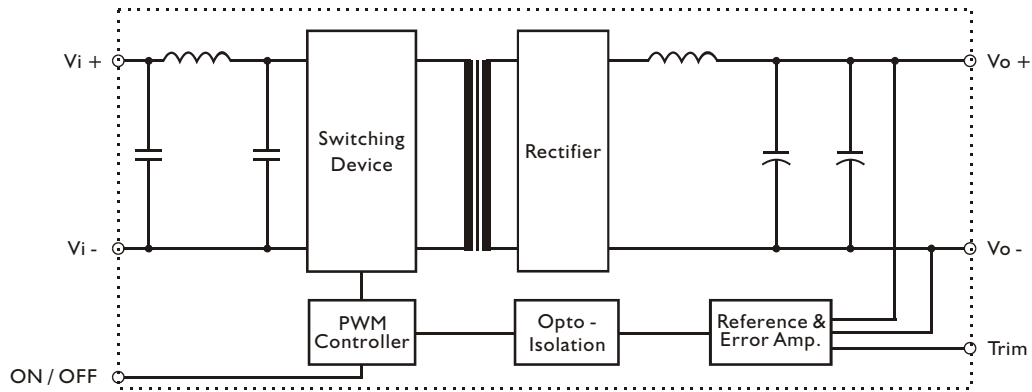
- LOW COST
- 4:1 WIDE INPUT RANGE
- I/O ISOLATION
- INPUT Pi FILTER
- SHORT CIRCUIT PROTECTION
- HIGH PERFORMANCE
- 2 YEARS WARRANTY

## MODEL LIST

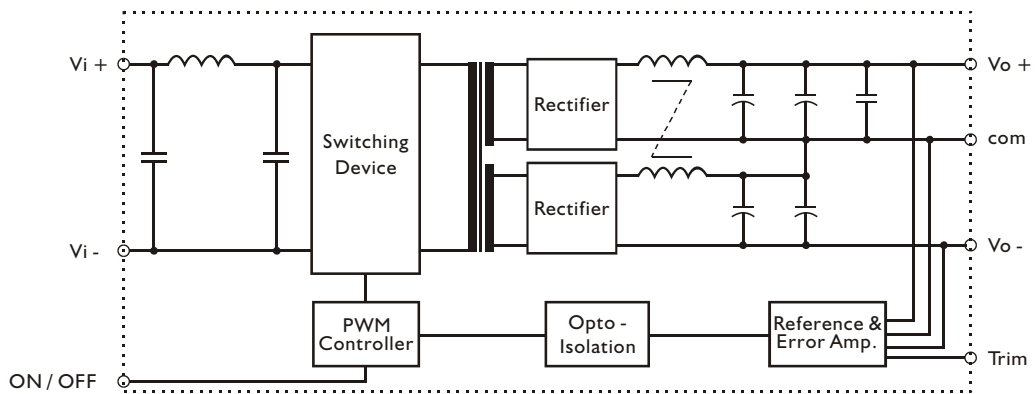
MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (typ.)	EFF. (min.)
<b>Single Output Models</b>						
WDD15 - 03S4	10~36 VDC	12 WATTS	+3.3 VDC	3600 mA	80%	77%
WDD15 - 05S4	10~36 VDC	15 WATTS	+ 5 VDC	3000 mA	81%	79%
WDD15 - 12S4	10~36 VDC	15 WATTS	+ 12 VDC	1250 mA	83%	81%
WDD15 - 15S4	10~36 VDC	15 WATTS	+ 15 VDC	1000 mA	83%	81%
WDD15 - 03S5	18~72 VDC	12 WATTS	+3.3 VDC	3600 mA	80%	77%
WDD15 - 05S5	18~72 VDC	15 WATTS	+ 5 VDC	3000 mA	81%	79%
WDD15 - 12S5	18~72 VDC	15 WATTS	+ 12 VDC	1250 mA	84%	82%
WDD15 - 15S5	18~72 VDC	15 WATTS	+ 15 VDC	1000 mA	82%	80%
<b>Dual Output Models</b>						
WDD15 - 12D4	10~36 VDC	15 WATTS	± 12 VDC	± 630 mA	82%	80%
WDD15 - 15D4	10~36 VDC	15 WATTS	± 15 VDC	± 500 mA	81%	79%
WDD15 - 12D5	18~72 VDC	15 WATTS	± 12 VDC	± 630 mA	82%	80%
WDD15 - 15D5	18~72 VDC	15 WATTS	± 15 VDC	± 500 mA	81%	79%

### CIRCUIT SCHEMATIC

• Block diagram for WDD15 series with single output



• Block diagram for WDD15 series with dual output



### SPECIFICATION

All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

#### GENERAL

Characteristics	Conditions	min.	typ.	max.	unit
Switching frequency	Vi nom, Io nom		230		KHz
Isolation voltage	Input / Output	1,500			VDC
Isolation resistance	Input / Output, @ 500VDC	100			MΩ
Ambient temperature	Vi nom, 3.3V & 5V output models	-25		+ 60	°C
	Io nom 12V, 15V & dual output models	-25		+ 71	°C
Case temperature	Operating at Vi nom, Io nom			+ 100	°C
Derating	Vi nom	See derating curve			% / °C
Storage temperature	Non operational	-40		+ 100	°C
M.T.B.F.	According to MIL-HDBK-217F, GF40		277,400		Hrs
Dimension	L40.6 x W50.8 x H10.2				mm
Cooling	Free air convection				
Case material	Metal				

#### INPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Input voltage range	Ta min ... Ta max, Io nom	10	24	36	VDC
		18	48	72	VDC
No load input current	Vi nom, Io = 0	24V models		15	mA
		48V models		10	mA
Input voltage w/o damage	Io nom	24V models		40	VDC
		48V models		75	VDC
Startup voltage	Io nom	24V models	9.5		VDC
		48V models	33		VDC
Input filter	Pi type				

#### OUTPUT SPECIFICATIONS

Characteristics	Conditions	min.	typ.	max.	unit
Output voltage accuracy	Vi nom, Io nom			± 2	%
Minimum load	Vi nom single output models	0			%
	Vi nom dual output models (each output)	10			%
Line regulation	Io nom, Vi min ... Vi max			± 1	%
Load regulation	Vi nom, Io 0 ... Io nom, single output models			± 2	%
	Vi nom, Io min ... Io nom, dual output models			± 5	%
Transient recovery time	Vi nom, Io 0 ... 1/2 Io nom		500		μs
Temperature coefficient	Vi nom, Io nom			± 0.02	% / °C
Ripple & noise	Vi nom, Io nom, 3.3V & 5V output models			100	mV
	BW = 20MHz 12V, 15V & dual			150	mV
Voltage trim range	Vi nom	3.3V output models	± 5		%
		5V, 12V, 15V & dual	± 10		%
Efficiency	Vi nom, Io nom, Po / Pi	Up to 84%, See model list			

### SPECIFICATION

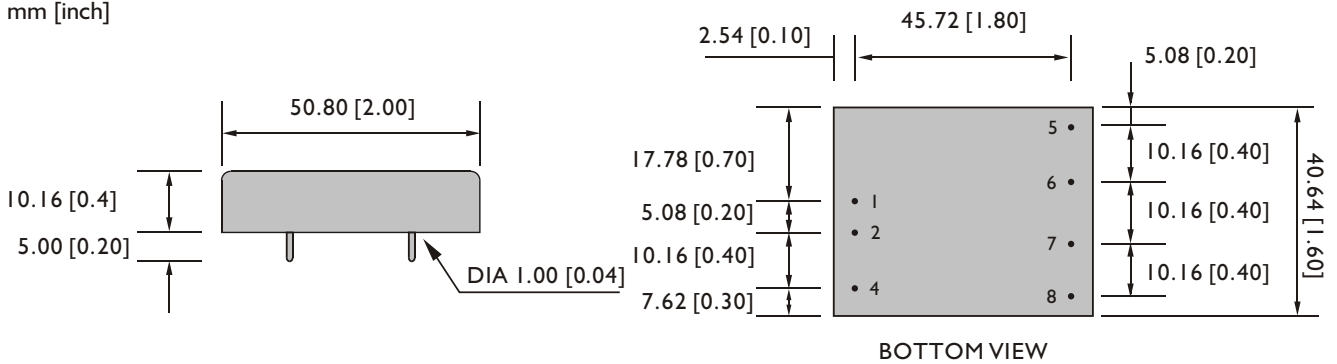
All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

#### CONTROL AND PROTECTION

Remote ON / OFF	ON: opened or 8 ~ 10VDC applied, reference to input GND OFF: -0.3 ~ 2VDC applied, reference to input GND
Input reversed	Shunt diode built in, external fuse recommended
Output short circuit	Continuous

### MECHANISM & PIN CONFIGURATION

mm [inch]



### PHYSICAL CHARACTERISTICS

CASE SIZE	40.6 x 50.8 x 10.2 mm 1.6 x 2 x 0.4 inches
CASE MATERIAL	Metal
WEIGHT	60 g

### PIN ASSIGNMENT

#### GENERAL

PIN NO.	1	2	4	5	6	7	8
SINGLE	Vi+	Vi-	S. D.	NO PIN	Vo+	Vo-	Trim
DUAL	Vi+	Vi-	S. D.	Vo+	com	Vo-	Trim

S.D. : REMOTE ON / OFF

### DERATING

