

# WDD15 SERIES

# DC-DC CONVERTER 12 ~ 15W



WDD15 - 03 S 4

WATTAGE

03 : 3.3V OUT

05 : 5V OUT

12 : 12V OUT

15 : 15V OUT

4: 10~36V IN

5: 18~72V IN

S : SINGLE OUTPUT

D : DUAL OUTPUT

## MODEL LIST

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

## FEATURES

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

## DESCRIPTION

THE WDD15 SERIES ARE 12 WATTS AND 15 WATTS SINGLE & DUAL OUTPUT DC/DC CONVERTERS, 4:1 WIDE INPUT RANGE WITH I/O ISOLATION AND SHORT CIRCUIT PROTECTION FEATURES MAKES IT SUITABLE USED ON VARIABLE APPLICATIONS WITH LOW COST. ALL WDD15 MODELS CONTAIN PI INPUT FILTER TO MINIMIZE REFLECTED RIPPLE & NOISE. ALL MODELS ARE PACKAGED IN 2" x 1.6" x 0.4" BLACK COATED METAL CASE, AND PCB MOUNTABLE DIRECTLY.



## SPECIFICATION

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

### GENERAL SPECIFICATION

- \* Switching frequency: ..... 230KHz
- \* Isolation voltage: ..... 1,500VDC
- \* Isolation resistance: ..... 100M  $\Omega$ (min.)
- \* Operating ambient temperature: ..... -25 to +71°C
- \* Storage temperature: ..... -40 to +100°C
- \* Max. Case temperature: ..... 100°C
- \* M.T.B.F.: ..... 277,400Hrs at @ GF40, according to MIL-HDBK-217F
- \* Cooling: ..... Free air convection
- \* Temperature coefficient: .....  $\pm 0.02\%$  / °C
- \* Dimension: ..... 50.8 x 40.6 x 10.2mm

### INPUT SPECIFICATIONS

- \* Input voltage range / frequency: ..... 10 ~ 36VDC for 24V  
18 ~ 72VDC for 48V
- \* Input filter: ..... Pi type
- \* No load input current: ..... 15mA for 24V in  
10mA for 48V in
- \* Max. Input voltage: ..... 40VDC for 24V in  
75VDC for 48V in
- \* Startup voltage: ..... 9.5VDC for 24V in  
33VDC for 48V in

### OUTPUT SPECIFICATIONS

- \* Output voltage accuracy: .....  $\pm 2\%$  at  $V_{o\_nom}$
- \* Minimum load: ..... No load for single output models  
 $\pm 10\%$  at  $V_{o\_nom}$  for dual output models
- \* Line regulation: .....  $\pm 1\%$  at  $V_{o\_nom}$
- \* Load regulation: .....  $\pm 2\%$  at  $V_{o\_nom}$  for single output models  
 $\pm 5\%$  at  $V_{o\_nom}$  for dual output models
- \* Efficiency: ..... Up to 84%, see model list
- \* Voltage trim range: .....  $V_{out} \times 10\%$
- \* Derating: ..... See table 1
- \* Case material: ..... Metal

### CONTROL AND PROTECTION

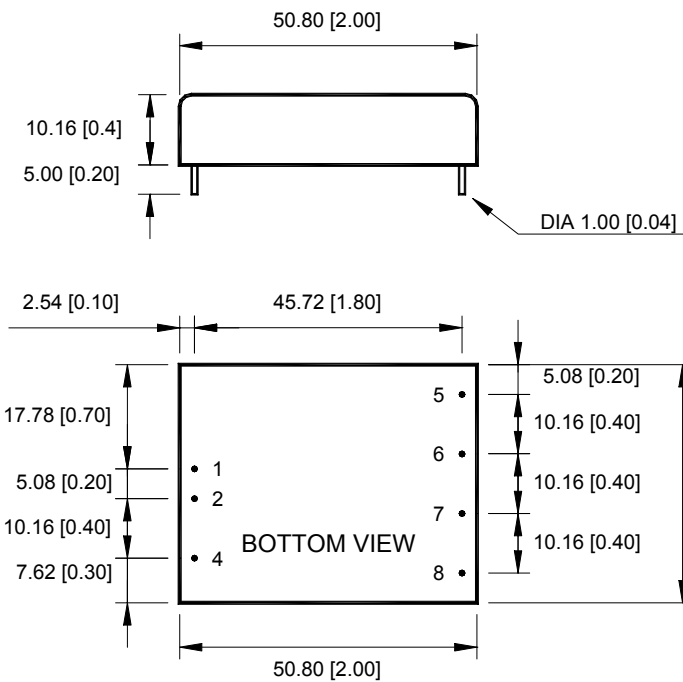
- \* Remote on/off: ..... ON : open or 8 ~ 10VDC  
OFF : -0.3 ~ 2VDC
- \* Input reversed: ..... Shunt diode use external fuse
- \* Output short circuit: ..... Continuous

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## MECHANISM & PIN CONFIGURATION

mm [inch]



## PHYSICAL CHARACTERISTICS

CASE SIZE	50.7 x 40.6 x 10.2mm 2 x 1.6 x 0.4inches
CASE MATERIAL	Metal
WEIGHT	60 g

## PIN ASSIGMENT

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:

[TABLE 1]

