

# 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 |
|----------------------|---------------|----------------|----------------|----------------|-------------|-------------|------|
| Single Output Models |               |                |                |                |             |             |      |
| 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   |
| Dual Output Models   |               |                |                |                |             |             |      |
| 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.



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### 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



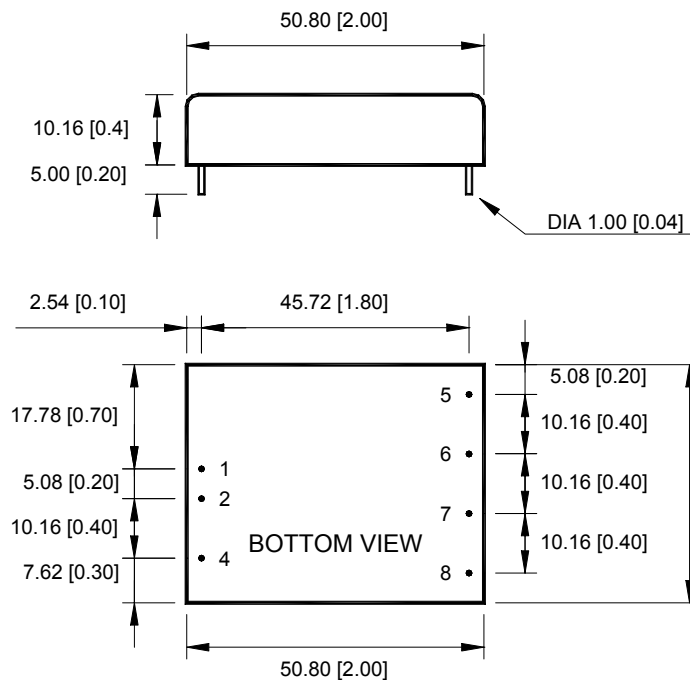
# WDD15 SERIES

# DC-DC CONVERTER

## 12 ~ 15W

## MECHANISM & PIN CONFIGURATION

mm [inch]



## PHYSICAL CHARACTERISTICS

|               |                                             |
|---------------|---------------------------------------------|
| CASE SIZE     | 50.7 x 40.6 x 10.2mm<br>2 x 1.6 x 0.4inches |
| CASE MATERIAL | Metal                                       |
| WEIGHT        | 60 g                                        |

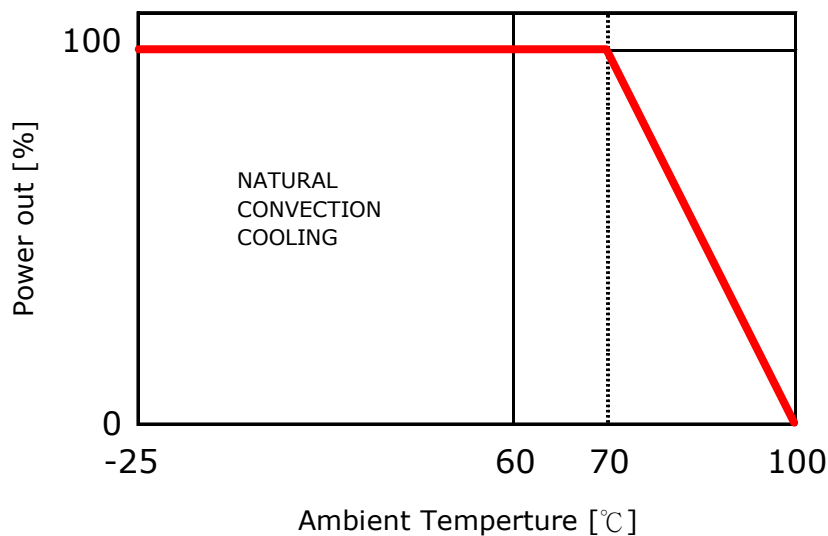
## PIN ASSIGNMENT

| 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]



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