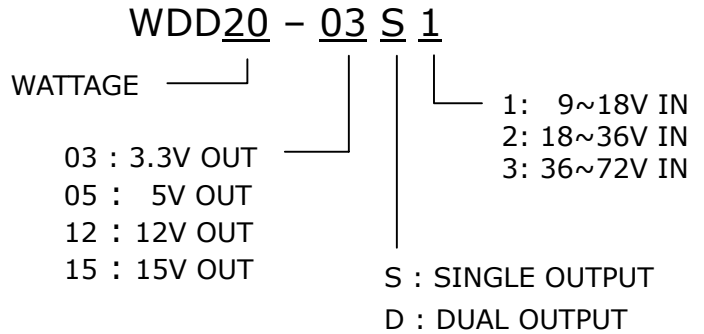


# WDD20 SERIES

# DC-DC CONVERTER 15 ~ 20W



## MODEL LIST

MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (TYP.)	EFF. (MIN.)	CASE
<b>Single Output Models</b>							
WDD20 - 03S1	9~18 VDC	15 WATTS	+3.3 VDC	4500 mA	80%	77%	FF
WDD20 - 05S1	9~18 VDC	20 WATTS	+ 5 VDC	4000 mA	83%	81%	FF
WDD20 - 12S1	9~18 VDC	20 WATTS	+ 12 VDC	1670 mA	86%	84%	FF
WDD20 - 15S1	9~18 VDC	20 WATTS	+ 15 VDC	1330 mA	87%	85%	FF
WDD20 - 03S2	18~36 VDC	15 WATTS	+3.3 VDC	4500 mA	80%	78%	FF
WDD20 - 05S2	18~36 VDC	20 WATTS	+ 5 VDC	4000 mA	85%	83%	FF
WDD20 - 12S2	18~36 VDC	20 WATTS	+ 12 VDC	1670 mA	86%	84%	FF
WDD20 - 15S2	18~36 VDC	20 WATTS	+ 15 VDC	1330 mA	88%	86%	FF
WDD20 - 03S3	36~72 VDC	15 WATTS	+3.3 VDC	4500 mA	80%	78%	FF
WDD20 - 05S3	36~72 VDC	20 WATTS	+ 5 VDC	4000 mA	85%	83%	FF
WDD20 - 12S3	36~72 VDC	20 WATTS	+ 12 VDC	1670 mA	87%	85%	FF
WDD20 - 15S3	36~72 VDC	20 WATTS	+ 15 VDC	1330 mA	88%	86%	FF
<b>Dual Output Models</b>							
WDD20 - 12D1	9~18 VDC	20 WATTS	± 12 VDC	± 830 mA	85%	83%	FF
WDD20 - 15D1	9~18 VDC	20 WATTS	± 15 VDC	± 670 mA	87%	85%	FF
WDD20 - 12D2	18~36 VDC	20 WATTS	± 12 VDC	± 830 mA	87%	85%	FF
WDD20 - 15D2	18~36 VDC	20 WATTS	± 15 VDC	± 670 mA	88%	86%	FF
WDD20 - 12D3	36~72 VDC	20 WATTS	± 12 VDC	± 830 mA	87%	85%	FF
WDD20 - 15D3	36~72 VDC	20 WATTS	± 15 VDC	± 670 mA	89%	87%	FF

## FEATURES

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

## DESCRIPTION

THE WDD20 SERIES ARE 15 WATTS AND 20 WATTS SINGLE & DUAL OUTPUT DC/DC CONVERTERS, 2:1 WIDE INPUT RANGE WITH I/O ISOLATION AND SHORT CIRCUIT PROTECTION FEATURES MAKES IT SUITABLE USED ON VARIABLE APPLICATIONS WITH LOW COST. ALL WDD20 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: ..... 180KHz
- \* 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.: ..... 277,000Hrs 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: ..... 9 ~ 18VDC for 12V  
18 ~ 36VDC for 24V  
36 ~ 72VDC for 48V
- \* Input filter: ..... Pi type
- \* No load input current: ..... 20mA for 12V in  
15mA for 24V in  
10mA for 48V in
- \* Max. Input voltage: ..... 20VDC for 12V in  
40VDC for 24V in  
75VDC for 48V in
- \* Startup voltage: ..... 8.5VDC for 12V in  
15VDC 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
- \* Ripple & noise: ..... 150mV (max.)
- \* Efficiency: ..... Up to 89%, see model list
- \* Voltage trim range: .....  $V_{out} \times 10\%$   
 $V_{out} \times 5\%$  for 3.3  $V_{out}$
- \* 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

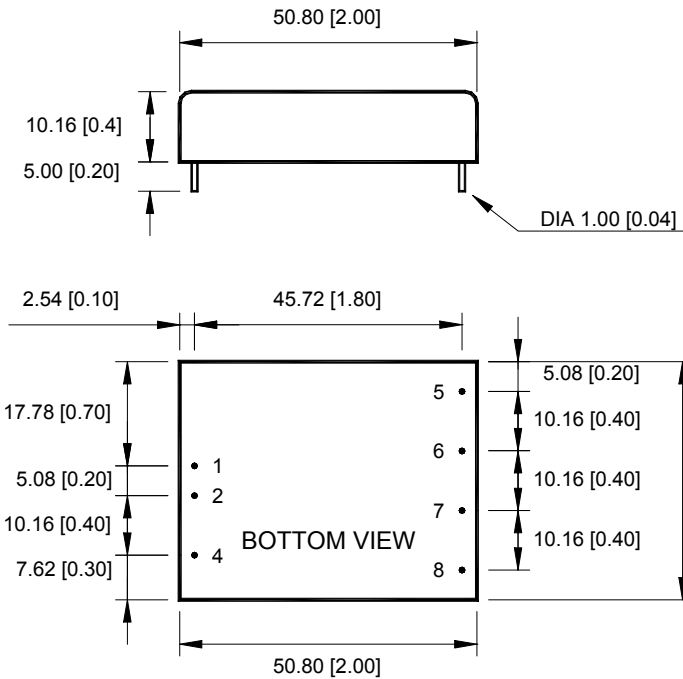


# WDD20 SERIES

# DC-DC CONVERTER 15 ~ 20W

## MECHANISM & PIN CONFIGURATION

mm [inch]



## PHYSICAL CHARACTERISTICS

CASE SIZE	50.8 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]

