

WDD20 SERIES

DC-DC CONVERTER 15 ~ 20W



WDD20 - 03 S 1

WATTAGE ——— |
03 : 3.3V OUT ——— |
05 : 5V OUT ——— |
12 : 12V OUT ——— |
15 : 15V OUT ——— |

1: 9~18V IN
2: 18~36V IN
3: 36~72V 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							
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
Dual Output Models							
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.



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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 Ω (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



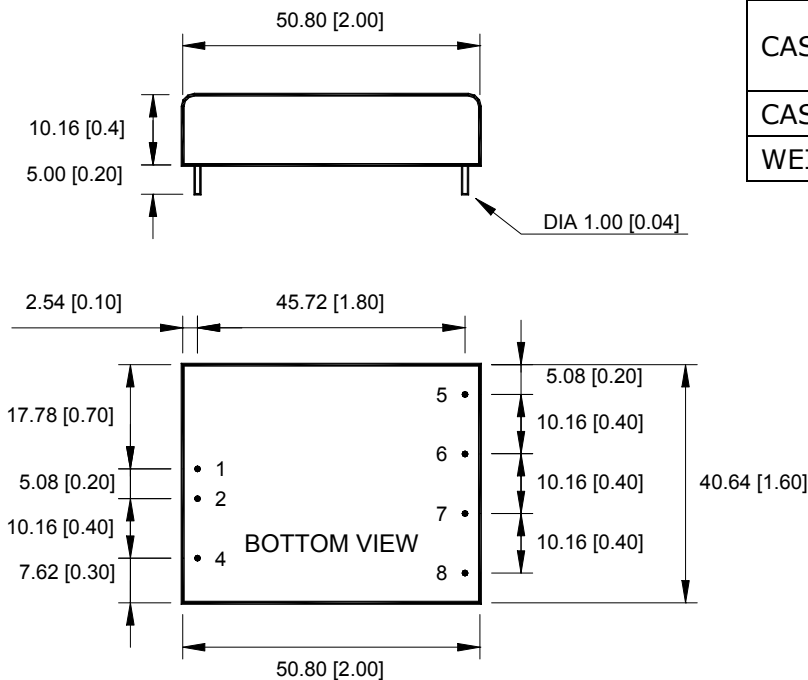
WDD20 SERIES

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 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]

