



20 WATT SINGLE, DUAL & TRIPLE OUTPUT



**Regulated, Wide Input (2:1 + 4:1)
DC/DC Converters**

FEATURES

- **2:1, 4:1 Wide Input Voltage Range**
- **3.3Vdc Outputs**
- **Low Profile Package (2.0" x 1.6" x 0.40")**
- **High Efficiency**
- **Short Circuit & Over-Voltage Protection**
- **Six-Sided Shielding**
- **Epoxy Encapsulated**
- **Single, Dual, Triple Output**

MWA20, MWB20 Series

Specifications

All specifications are typical at nominal input, full load, and 25°C , unless otherwise noted.

INPUT

Input Voltages.....	Voltage Range
12 Vdc.....	9-18 Vdc
24 Vdc.....	18-36 Vdc
48 Vdc.....	36-72 Vdc
Input Filter.....	Pi Network

OUTPUT

Voltage Accuracy.....	±2% max.
External Trim Adjustment Range.....	±10% min.
Line Regulation	±0.1%
Load Regulation.....	±1.0% (Single), ±5.0% (Dual)
Ripple Noise (20 MHz BW).....	75mV p-p max.
Temperature Coefficient (at FL).....	±0.02%/°C

REMOTE ON/OFF CONTROL

On Control.....	4.8V min. or Open
Off Control.....	4V max. or Short

GENERAL

Efficiency.....	81-83%, see Table
Isolation Voltage.....	1600 Vdc min.
Isolation Resistance.....	1000MOhms
Switching Frequency.....	300KHz typ.
Short Circuit Protection.....	Continuous

ENVIRONMENTAL

Operating Temperature Range.....	-25 to +71°C
Storage Temperature Range.....	-55 to +105°C
Cooling	Free Air Convection
EMI/RFI.....	Six-Sided Continuous Shield

PHYSICAL

Case Material.....	Nickel Coated Copper with Non-Conductive Base
Dimensions.....	2.00" x 1.60" x 0.40" (50.8 x 40.6 x 10.2 mm)

Selection Guide

(Continued)

	Input Voltage Nominal (Range) (Vdc)	Output Voltage (Vdc)	Output Current (mA)	Efficiency %	Model Number	Case			
2:1 INPUT VOLTAGE RANGE	12 (9-18)	3.3	4000	77	MWA20-12S33	M	SINGLE OUTPUT VOLTAGE		
		5	4000	81	MWA20-12S5	M			
		12	1670	83	MWA20-12S12	M			
		15	1330	83	MWA20-12S15	M			
	24 (18-36)	3.3	4000	78	MWA20-24S33	M			
		5	4000	81	MWA20-24S5	M			
		12	1670	83	MWA20-24S12	M			
		15	1330	83	MWA20-24S15	M			
	48 (36-72)	3.3	4000	79	MWA20-48S33	M			
		5	4000	81	MWA20-48S5	M			
		12	1670	83	MWA20-48S12	M			
		15	1330	83	MWA20-48S15	M			
2:1 INPUT VOLTAGE RANGE	12 (9-18)	±5	±2000	81	MWA20-12-5	M	DUAL OUTPUT VOLTAGE		
		±12	±833	83	MWA20-12-12	M			
		±15	±666	83	MWA20-12-15	M			
	24 (18-36)	±5	±2000	81	MWA20-24-5	M			
		±12	±833	83	MWA20-24-12	M			
		±15	±666	83	MWA20-24-15	M			
	48 (36-72)	±5	±2000	81	MWA20-48-5	M			
		±12	±833	83	MWA20-48-12	M			
		±15	±666	83	MWA20-48-15	M			
	2:1 INPUT VOLTAGE RANGE	12 (9-18)	3.3/±12	3000/±300	78	MWA20-12S33-12		M	TRIPLE OUTPUTS
			3.3/±15	3000/±250	78	MWA20-12S33-15		M	
			5/±12	2000/±300	80	MWA20-12S5-12		M	
5/±15			2000/±250	80	MWA20-12S5-15	M			
24 (18-36)		3.3/±12	3000/±300	79	MWA20-24S33-12	M			
		3.3/±15	3000/±250	79	MWA20-24S33-15	M			
		5/±12	2000/±300	81	MWA20-24S5-12	M			
		5/±15	2000/±250	81	MWA20-24S5-15	M			
48 (36-72)		3.3/±12	3000/±300	80	MWA20-48S33-12	M			
		3.3/±15	3000/±250	80	MWA20-48S33-15	M			
		5/±12	2000/±300	82	MWA20-48S5-12	M			
		5/±15	2000/±250	82	MWA20-48S5-15	M			
4:1 INPUT VOLTAGE RANGE	24 (9-36V)	5	4000mA	79	MWB20-24S5	M	DUAL OUTPUT		
		12	1670mA	81	MWB20-24S12	M			
		15	1330	81	MWB20-24S15	M			
	48 (18-72)	5	4000	80	MWB20-48S5	M			
		12	1670	81	MWB20-48S12	M			
		15	1333	81	MWB20-48S15	M			
	24 (9-36)	±5	±2000	79	MWB20-24-5	M			
		±12	±833	81	MWB20-24-12	M			
		±15	±666	82	MWB20-24-15	M			
	48 (18-72)	±5	±2000	79	MWB20-48-5	M			
		±12	±833	83	MWB20-48-12	M			
		±15	±666	84	MWB20-48-15	M			



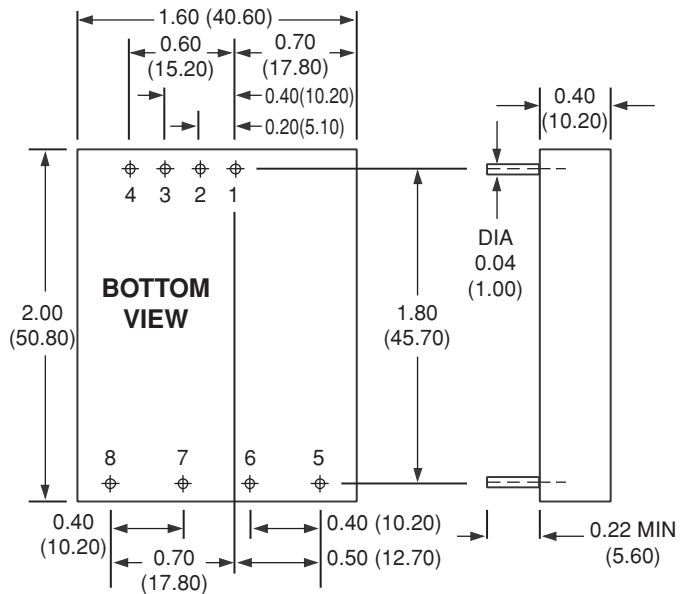
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Mechanical Specifications

(Continued)

I/O Connections			
Pin	SINGLE	DUAL	TRIPLE
1	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin
3	No Pin	No Pin	No Pin
4	On/Off	On/Off	Ctrl
5	No Pin	+Vout	+Aux Out
6	+Vout	Common	+5V/+3.3V
7	Common	-Vout	-Vout
8	Trim	Trim	Trim



All Dimensions are in inches (mm)



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