60 WATT
SINGLE & DUAL OUTPUT

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

FEATURES

- 4:1 Wide Input Voltage Range
- Low Profile Package (3.94" x 2.76" x 0.75")
- Efficiency to 85% @ FL
- 3.3/5.0 Vdc Output
- Over-Voltage Protection
- Inhibit/Sync Input
- 6-Sided Shielding
- Internal π Filter

MWA60, MWB60 Series

Specifications

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

INPUT
Voltage Range.....See Table
Input Filter.....Pi Network

OUTPUT
Voltage Accuracy.....±2.0% max.
Line Regulation: Single Output.....±0.5%, max.
Dual Output.....±1.0%, max.
Load Regulation: Single Output.....±0.5%, max.
Dual Output.....±1.0%, max.
Ripple Noise (20 MHz BW).....1.0% p-p max.
Temperature Coefficient (at FL).....±0.02%/°C max.
Transient Response, 25% load step.....< 250ms

REMOTE ON/OFF CONTROL
Control Voltage Reference to Negative (-) Input
Compatability.....CMOS, TTL
On Control.....4.8V min. or Open
Off Control.....0.4V max. or Short

GENERAL
Efficiency.....80-85% max.
Isolation Voltage.....1600 Vdc min.
Isolation Resistance.....1000MOhms
Switching Frequency.....200KHz typ.
Protection.....Over Current Protection
.....Continuous Short Circuit Protection

ENVIRONMENTAL
Operating Temperature Range.....-25 to +71°C
Storage Temperature Range.....-55 to +125°C
Cooling.....Free Air Convection
EMI/RFI.....Six-Sided Continuous Shield

PHYSICAL
Case Material.....Nickel-coated Copper w/ Non-Conductive Base
Dimensions.....3.94" x 2.76" x 0.75" (100.076 x 70.104 x 19.05mm)

Selection Guide *(Continued)*

	Input Voltage Nominal (Range) (Vdc) *	Output Voltage (Vdc)	Output Current (mA)	Efficiency %	Model Number	Case	
SINGLE OUTPUT VOLTAGE	12 (9-18)	3.3	15000	78	MWA60-12S33	R	
		5	12000	81	MWA60-12S5	R	
		12	5000	82	MWA60-12S12	R	
		15	4000	82	MWA60-12S15	R	
	24 (18-36)	3.3	15000	79	MWA60-24S33	R	
		5	12000	83	MWA60-24S5	R	
		12	5000	84	MWA60-24S12	R	
		15	4000	84	MWA60-24S15	R	
	48 (36-72)	3.3	15000	80	MWA60-48S33	R	
		5	12000	84	MWA60-48S5	R	
		12	5000	85	MWA60-48S12	R	
		15	4000	85	MWA60-48S15	R	
DUAL OUTPUTS	12 (9-18)	±5	+10000 / -2000	81	MWA60-12-5	R	
		±12	±2500	82	MWA60-12-12	R	
		±15	±2000	82	MWA60-12-15	R	
		3.3 / 5.0	600 / 600	79	MWA60-12D33/5	R	
	24 (18-36)	±5	+10000 / -2000	83	MWA60-24-5	R	
		±12	±2500	84	MWA60-24-12	R	
		±15	±2000	84	MWA60-24-15	R	
		3.3 / 5.0	600 / 600	80	MWA60-24D33/5	R	
	48 (36-72)	±5	+10000 / -2000	84	MWA60-48-5	R	
		±12	±2500	85	MWA60-48-12	R	
		±15	±2000	85	MWA60-48-15	R	
		3.3 / 5.0	600 / 600	81	MWA60-48D33/5	R	

***NOTE**

For 4:1 Input Voltage, use prefix “MWB60” in place of “MWA60” in model number.

For 9-36Vdc Input, use “24” after “-60”.

For 20-72Vdc Input, use “48” after “-60”.

(See next page for diagram)

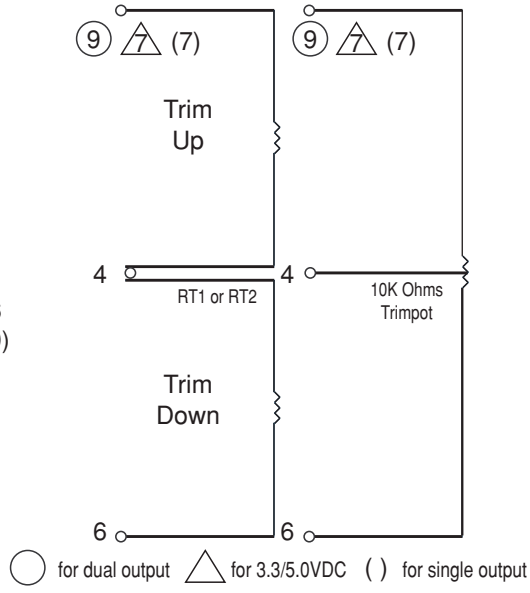
Mechanical Specifications *(Continued)*

I/O Connections			
Pin	SINGLE	DUAL	3.3Vdc / 5.0Vdc
1	+Vin	+Vin	+Vin
2	-Vin	-Vin	-Vin
3	On/Off	On/Off	On/Off
4	Trim	Trim	Trim
5	+Vout	+Vout	+3.3Vdc
6	+Vout	+Vout	+3.3Vdc
7	Ground	Ground	Ground
8	Ground	Ground	Ground
9	No Pin	-Vout	+5.0Vdc
10	No Pin	-Vout	+5.0Vdc

Connections for single output models without sensing or external trimming: For proper operation, externally connect Pin 5 (+Trim Down) to Pin 8 (+Vout and Pin 7 (-Trim Up) to Pin 9 (-Vout).

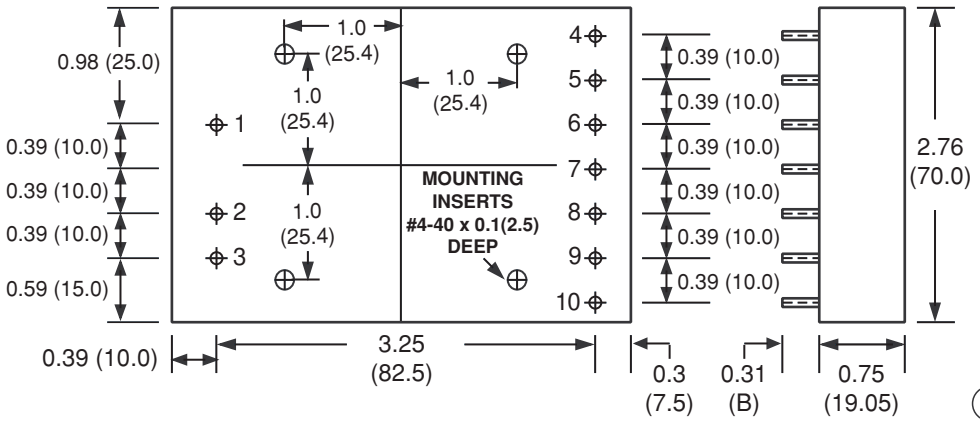
External Output Trimming

Output may optionally be externally trimmed (10%) a fixed resistor or an estimate trimpot as shown.



CASE R

BOTTOM VIEW



All Dimensions are in inches (mm)