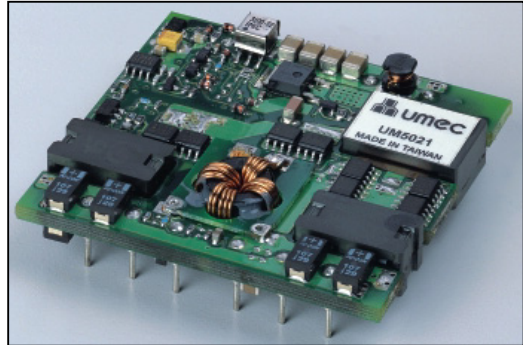


# UMEC International Corporation

## UM5000 SERIES

### 100 Watt DC-DC Dual Output Converters

- ◆ 2:1 Input Range
- ◆ 250 KHz Switching Frequency
- ◆ Short Circuit Protection
- ◆ 5.0V/3.3V Regulated Outputs
- ◆ 100W Output Loadsharing
- ◆ Open Frame
- ◆ Input Under and Overvoltage Shutdown
- ◆ Standard “Half-Brick” Package
- ◆ RoHS Compliant



#### SPECIFICATIONS

All specifications are typical at nominal line,  $I_{O1}=10A$ ,  $I_{O2}=10A$  and 25°C unless otherwise noted.

#### INPUT SPECIFICATIONS

Input Voltage Range, 48V ..... 36-75V  
 Input Filter ..... Pi Network

#### OUTPUT SPECIFICATIONS

Voltage Accuracy .....  $\pm 1\%$  max.  
 External Trim Adj. Range .....  $\pm 10\%$   
 Transient Response<sup>1</sup>,  $\pm 1\%$  Error Band .....  $< 500\mu$  sec.  
 Ripple and Noise, 20MHz BW<sup>2</sup> (Each Output)  
     ..... 200mV p-p max.  
 Over-Voltage Protection ..... Clamp Type  
 Over-Current Protection ..... Hiccup Mode  
 Short Circuit Protection ..... Continuous  
 Line Regulation<sup>3</sup>, Vo1 .....  $\pm 0.5\%$  max.  
     Vo2 .....  $\pm 1.0\%$  max.  
 Load Regulation<sup>4</sup>, Vo1 .....  $\pm 0.5\%$  max.  
     Vo2 .....  $\pm 1.0\%$  max.  
 Output Power<sup>5</sup> ..... 100W max.

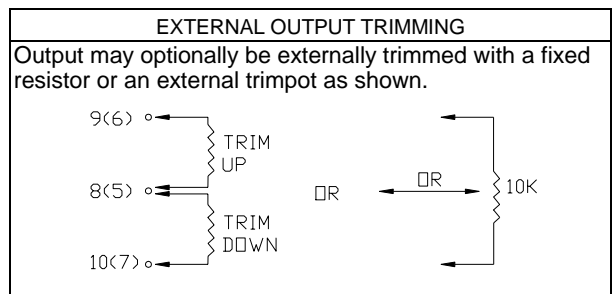
#### GENERAL SPECIFICATIONS

Efficiency<sup>6</sup> ..... 86% typ.  
 Isolation Voltage (I/O) ..... 1500VDC min.  
 Isolation Resistance .....  $10^8$  Ohms min.  
 Switching Frequency ..... 250KHz typ.  
 Operating PCB Temperature Range:  
     ..... -40°C to +120°C  
 Cooling ..... Free Air Convection  
 Storage Temperature Range ..... -55°C to +125°C  
 Temperature Coefficient .....  $\pm 0.03\%/^{\circ}C$   
 Thermal Shutdown Temp.<sup>7</sup> ..... 120°C typ.  
 Active High Remote ON/OFF Control  
 Dimensions ..... 2.4\*2.3\*0.5 inches  
     (61.0\*58.4\*12.7 mm)

#### NOTE

1. di/dt= 0.1A/1uS, Vin= Nominal Line, Tc= 25°C; load change = 0.5 Io max. to 0.75 Io max. and 0.75 Io max. to 0.5 Io max.
2. Measured with 10uF Low ESR tantalum capacitor and 2.2uF ceramic capacitor across output.
3. Measured from high line to low line.
4. Measured from rated load to 1/10 load.
5. Current from either output at maximum value, or from both output to a combined total of 20 Amps.
6. Nominal line,  $I_{O1}=10A$ ,  $I_{O2}=10A$ .
7. Non-latching shutdown protection and automatic recovery.
8. Maximum capacitive load across the output ports should not over following indicated values.
9. This converter required a 10% Io Rated load on the each output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specification.
10. Standard product is active high, active low remote on/off option is available, to order suffix a “N” to the model number e.g. UM5021N.

STANDARD REMOTE ON/OFF CONTROL	
Logic Compatibility.....	CMOS or Open Collector TTL
Ec-ON .....	$> +2.5$ VDC or Open Circuit
Ec-OFF .....	$< 0.8$ VDC
Control Common .....	Referenced to Input Minus



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 Torrance, California 90505 USA

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 Tel: 310-326-7072  
 Fax: 310-326-7058

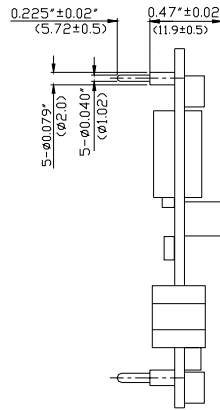
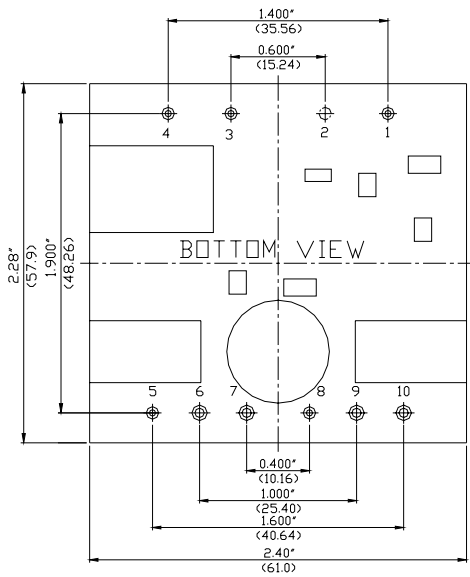
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MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE & RATED CURRENT <sup>7</sup>		OVP	
		Vo1	Vo2	Vo1	Vo2
UM5021	48 VDC	5V/20A	3.3V/20A	6.2 V	4.3 V

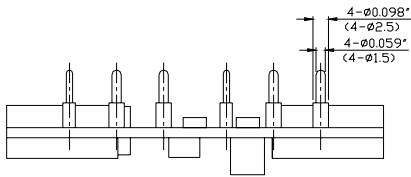
NOTE: Other output voltage can be supported upon request.

MODEL NUMBER	UM5021	
	Vo1	Vo2
MAXIMUM <sup>8</sup> CAPACITIVE LOAD (uF)	5000	5000

## OUTLINE DIMENSIONS



Pin Connections	
Pin	Function
1	-Vin
2	No Pin
3	On/Off
4	+Vin
5	Vo1 Trim
6	Vo1 Return
7	Vo1
8	Vo2 Trim
9	Vo2 Return
10	Vo2



All dimensions in inches (mm)  
Tolerance .xx = ±0.04"  
.xxx = ±0.010"



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