

# UMEC International Corporation

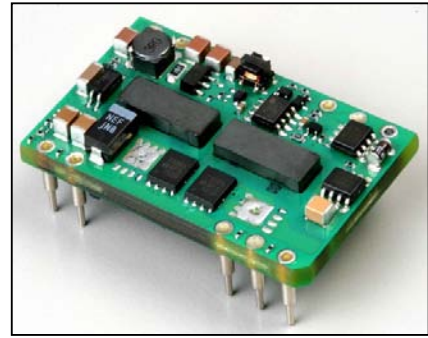
## UM6800 SERIES

### 18-33 Watt DC-DC Converters

- ◆ 2:1 Input Range
- ◆ 18-33 W Isolated Output Power
- ◆ High-Density
- ◆ Open-Frame
- ◆ RoHS Compliant



preliminary



### SPECIFICATIONS

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

#### INPUT SPECIFICATIONS

Input Voltage Range, 48V .....	36-75V
Input Voltage peak/surge.....	100V/100ms max.
Input Filter .....	Pi Network
Input Turn-On Voltage.....	34 VDC typ.
Input Undervoltage Shutdown.....	32 VDC typ.

#### OUTPUT SPECIFICATIONS

Voltage Accuracy <sup>1</sup> .....	±2%max.
External Trim Adj. Range .....	±10%
Transient Response <sup>2</sup>	
Single, 25% step Load Change .....	<500u sec.
Short Circuit Protection .....	Continuous
Line Regulation <sup>3</sup> .....	±0.5% max.
Load Regulation <sup>4</sup> .....	±1.0% max.
Ripple and Noise, 20MHz BW <sup>5</sup> .....	100mV p-p max.
Overvoltage Protection <sup>6</sup> , 1.5V .....	2.5V typ.
1.8V .....	2.8V typ.
2.5V .....	3.6V typ.
3.3V .....	4.3V typ.

#### GENERAL SPECIFICATIONS

Efficiency .....	See Table
Isolation Voltage .....	1500 VDC min.
Switch Frequency .....	330kHz typ.
Isolation Resistance <sup>7</sup> .....	10 <sup>9</sup> Ohms min.
Over temperature shutdown point <sup>8,9</sup> .....	115°C typ.
Operation Temperature <sup>9</sup> .....	-40°C to +105°C
Storage Temperature Range .....	-55°C to +125°C
EMI/RFI Conducted <sup>10</sup> .....	EN55022 Level A/B
Dimensions .....	1.86*1.16*0.35 inches (47.2*29.5*9 mm)
Weight .....	30g

#### APPLICATIONS

- Distributed Power Architectures
- Intermediate Bus Architectures
- Telecommunication Equipment
- Datacommunication Equipment
- Workstation, Servers
- Battery Power Systems

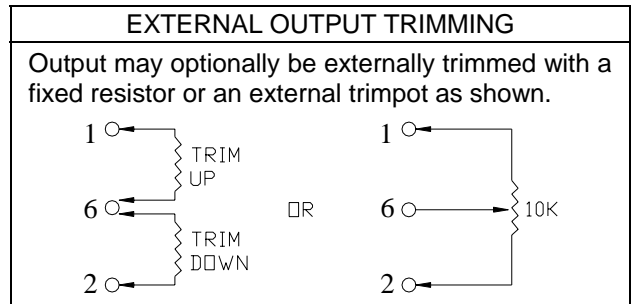


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### NOTE

1. Defined at the static output regulation at 25°C, including initial setting accuracy, Line voltage within stated limits and load current within stated limits.
2. di/dt= 100mA/1uS, Tc= 25°C; load change= 0.5Io max. to 0.75 Io max. and 0.75 Io max. to 0.5 Io max.
3. Measured from high line to low line.
4. Measured from full load to 1/4 load.
5. Measured with 4.7uF ceramic Cap. and 10uF tantalum Cap. cross to output.
6. The converter will automatically restart after the overvoltage protection status be removed.
7. Measured with 500 VDC.
8. Non-latching shutdown protection with 5°C restart hysteresis.
9. Defined as the highest temperature measured at any one of the specified temperature hotspot checkpoints.
10. Test with external Input filter. Please refer to application note of UM6800 series
11. Standard product is active high, active low remote On/Off option is available, to order suffix a "N" to the model number e.g.: UM6823V3SN.

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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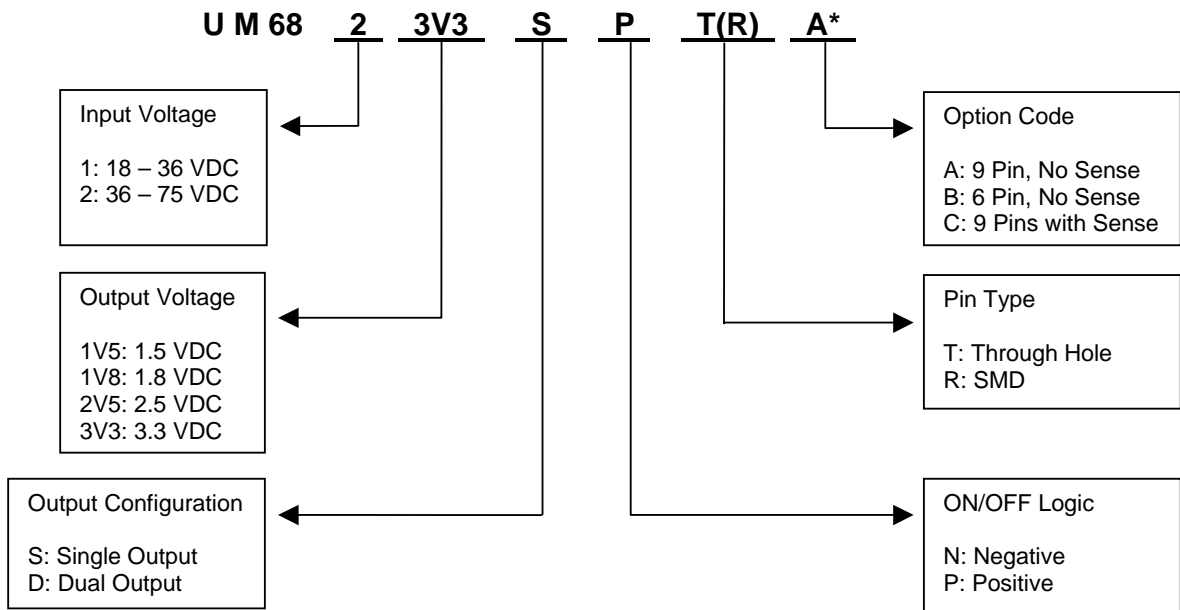
MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT FULL LOAD	TYPICAL EFFICIENCY	Maximum Capacitive Load(uF)
UM6821V5SPT(R)A	48 VDC	1.5 VDC	12 A	431 mA	87%	10000
UM6821V8SPT(R)A		1.8 VDC	12 A	511 mA	88%	10000
UM6822V5SPT(R)A		2.5 VDC	10 A	585 mA	89%	10000
UM6823V3SPT(R)A		3.3 VDC	10 A	764 mA	90%	10000

NOTE: 1. Other output voltage can be supported upon request.

2. Maximum capacitive load across the output ports should not be over indicated values.

## PART NUMBERING SYSTEM

The part numbering system for UMEC DC-DC converters follow the format shown in the example below.



\* OPTION CODE A INCLUDES 9 PINS. PINS 4, 5, AND 9 HAVE NO CONNECTION.  
 OPTION CODE B EXCLUDES PIN 4, 5, AND 9 (TOTAL 6 PINS).  
 OPTION CODE C FEATURES 9 PINS WITH SENSE FUNCTION.

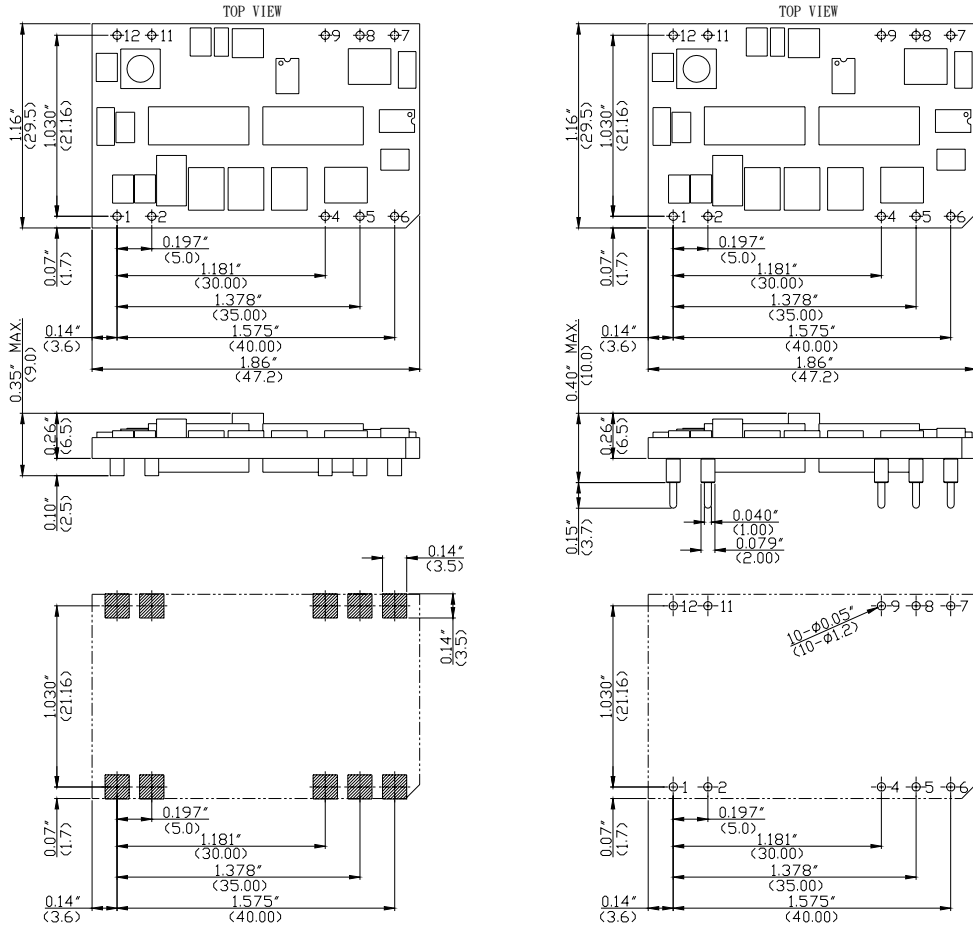


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## OUTLINE DIMENSIONS



Pin Connections	
Pin	Function
1	+Vout
2	-Vout
4	+Vsense (Option)
5	-Vsense (Option)
6	Trim
7	No Pin
8	ON/OFF
9	No Connection
11	-Vin
12	+Vin

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

**NOTE:**

If remote sensing not utilized, output sense pin must be jumped to respective output power pins, for normal operation connect Pin No.1 to Pin No.4 and Pin No.2 to Pin No.5.



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