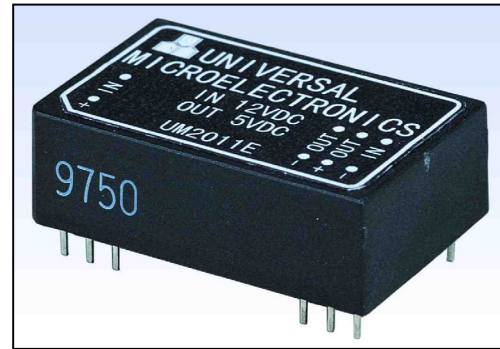


# UM2000E SERIES

## 3.3 - 5 Watt DC/DC Converters

- ◆ 24 Pin Dip Package
- ◆ High Efficiency (up to 80%)
- ◆ Regulated Outputs
- ◆ Pi Input Filter
- ◆ 500 VDC Isolation
- ◆ Continuous Short Circuit Protection



### SPECIFICATIONS

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

### INPUT SPECIFICATIONS

Input Voltage Range, 12V ..... 9-18V  
24V ..... 18-36V  
Input Filter ..... Pi Network

### OUTPUT SPECIFICATIONS

Voltage Accuracy .....  $\pm 2.0\%$  max.  
Ripple and Noise, 20MHz BW<sup>1</sup>, 5V ..... 100mVp-p max.  
3.3V ..... 75mVp-p max.  
Temperature Coefficient .....  $\pm 0.05\%/^{\circ}\text{C}$   
Short Circuit Protection ..... Continuous  
Line Regulation<sup>2</sup> .....  $\pm 0.5\%$   
Load Regulation<sup>3</sup> .....  $\pm 0.5\%$

### GENERAL SPECIFICATIONS

Efficiency ..... See Table  
Isolation Voltage ..... 500 VDC min.  
Isolation Resistance .....  $10^8$  ohms min.  
Switching Frequency ..... 100 KHz min.  
Operating Temperature Range  
Ambient, None Derating .....  $-25^{\circ}\text{C}$  to  $+71^{\circ}\text{C}$   
Cooling ..... Free Air Convection  
Storage Temperature Range .....  $-40^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$   
Dimensions CASE A ..... 1.25\*0.8\*0.4 inches  
(31.8\*20.3\*10.2mm)  
Case Material  
Standard Models ..... Non-Conductive Black Plastic  
UL94V-0  
Weight ..... 15g

### NOTES:

1. Measured with 1uF ceramic capacitor connect to output pins.
2. Measured from high line to low line.
3. Measured from full load to 10% load.
4. This converter require a minimum 10% loading on their output to maintain specified regulation. Operation under no-load conditions will not damage these devices; however they may not meet all listed specifications.



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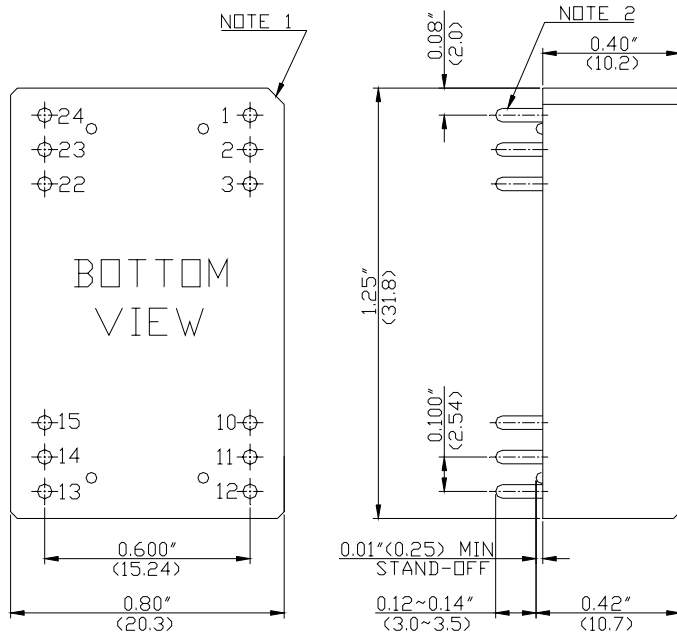
32539 W. 237TH STREET, SUITE A,  
TORRANCE, CA 90505  
TEL: (310) 326-7072 FAX: (310) 326-7058

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		CASE	EFFICIENCY
				NO LOAD	FULL LOAD		
UM2011E	12 VDC	5 VDC	1000 mA	50 mA	535 mA	A	78%
UM2021E	24 VDC	5 VDC	1000 mA	35 mA	260 mA	A	80%
UM2029E	24 VDC	3.3 VDC	1000 mA	35 mA	176 mA	A	77%

MODEL NUMBER	UM2011E UM2021E UM2029E
MAXIMUM <sup>1</sup> CAPACITIVE LOAD (uF)	220

NOTE:1.Maximum capacitive load across the output ports should not be over following indicated values.

CASE A



Pin Connections	
Pin	Single Output
1	+V Input
2	NC*
3	NC*
10	-V Output
11	+V Output
12	-V Input
13	-V Input
14	+V Output
15	-V Output
22	NC*
23	NC*
24	+V Input

\* NC (No Connection)

All dimensions in inches (mm).

Note 1: Cut-corner marking for Pin No.1

Note 2: Pin size is 0.020±0.005 inches (0.5 mm) dia.

Or 0.020\*0.012 inch

Note 3: Tolerance .xx =±0.04"

.xxx=±0.010"



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