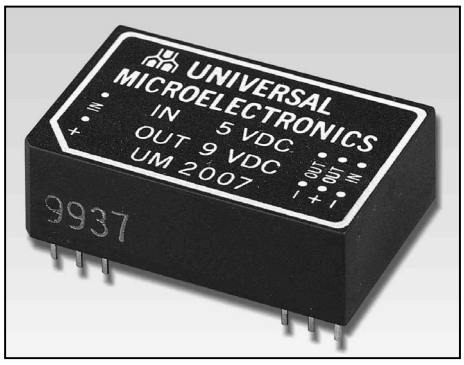
UM2000 SERIES

2 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 ..... 5V 4.5-5.5V
12V 9-18V
24V 18-36V
48V 36-72V
Input Filter ..... Pi Network

OUTPUT SPECIFICATIONS

Voltage Accuracy ..... ±2.0% max.
Voltage Balance (Dual)[1] ..... ±2.0% max.
Ripple and Noise, 20MHz BW ..... 60mV P-P max.
Temperature Coefficient ..... ±0.05%/°C
Short Circuit Protection ..... Continuous
Line Regulation[2] ..... ±0.5%
Load Regulation[3] ..... ±0.5%

GENERAL SPECIFICATIONS

Efficiency ..... See Table
Isolation Voltage ..... 500 VDC min.
Isolation Resistance ..... 10^8 ohms min.
Switching Frequency 150KHz-850KHz
(Depending on Loading)
Operating Temperature Range
Ambient, None Derating ..... -25°C to +71°C
Cooling ..... Free Air Convection
Storage Temperature Range ..... -40°C to +100°C
Humidity ..... 95% R.H. max.
Dimensions CASE A ..... 1.25 x 0.8 x 0.4 inches
(31.8 x 20.3 x 10.2 mm)
Case Material
Standard Models ..... Non-Conductive Black Plastic
UL94V-0

NOTES:

1. For common output models.
2. Measured from high line to low line.
3. Measured from full load to 10% load.

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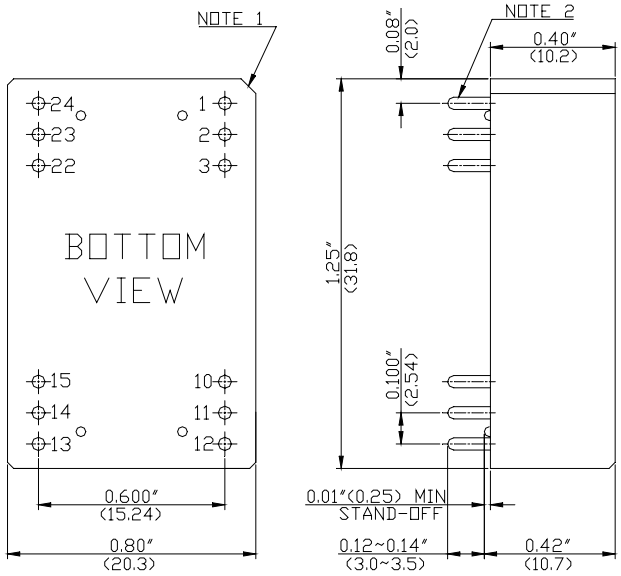
MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		CASE	EFFICIENCY
				NO LOAD	FULL LOAD		
UM2001		5 VDC	400 mA	110 mA	620 mA		65%
UM2002		12 VDC	160 mA	100 mA	550 mA		70%
UM2003		15 VDC	130 mA	110 mA	550 mA		70%
UM2004A	5 VDC	±5 VDC	±150 mA	110 mA	600 mA	A	50%
UM2005		±12 VDC	±80 mA	130 mA	640 mA		60%
UM2006		±15 VDC	±65 mA	140 mA	640 mA		60%
UM2007		9 VDC	250 mA	105 mA	680 mA		66%
UM2011		5 VDC	400 mA	50 mA	230 mA		73%
UM2012		12 VDC	160 mA	50 mA	215 mA		75%
UM2013		15 VDC	130 mA	50 mA	215 mA		75%
UM2014	12 VDC	±5 VDC	±200 mA	50 mA	290 mA	A	57%
UM2015		±12 VDC	±80 mA	70 mA	245 mA		65%
UM2016		±15 VDC	±65 mA	80 mA	240 mA		67%
UM2017		9 VDC	250 mA	50 mA	250 mA		75%
UM2021		5 VDC	400 mA	30 mA	115 mA		75%
UM2022		12 VDC	160 mA	30 mA	105 mA		78%
UM2023		15 VDC	130 mA	30 mA	105 mA		78%
UM2024	24 VDC	±5 VDC	±200 mA	35 mA	135 mA	A	62%
UM2025		±12 VDC	±80 mA	35 mA	115 mA		70%
UM2026		±15 VDC	±65 mA	35 mA	115 mA		70%
UM2027		9 VDC	250 mA	30 mA	120 mA		78%
UM2031		5 VDC	400 mA	5 mA	55 mA		75%
UM2032		12 VDC	160 mA	10 mA	50 mA		80%
UM2033		15 VDC	130 mA	10 mA	50 mA		80%
UM2034	48 VDC	±5 VDC	±200 mA	10 mA	70 mA	A	60%
UM2035		±12 VDC	±80 mA	15 mA	57 mA		70%
UM2036		±15 VDC	±65 mA	15 mA	56 mA		72%
UM2037		9 VDC	250 mA	10 mA	59 mA		80%

CASE A



All dimensions in inches(mm).
Note 1:Cut-corner marking for Pin No.1
Note 2:Pin size is 0.020±0.005 inches (0.5mm) dia.
or 0.020*0.012 inch
Note 3:Tolerance .xx=±0.04”
.xxx=±0.010”

PIN CONNECTIONS			
Pin	Single Output	Dual Output	
		Separated [1]	Common[2]
1	+V Input	+V Input	+V Input
2	NC*	-V2 Output	-V Output
3	NC*	+V2 Output	Common
10	-V Output	-V1 Output	Common
11	+V Output	+V1 Output	+V Output
12	-V Input	-V Input	-V Input
13	-V Input	-V Input	-V Input
14	+V Output	+V1 Output	+V Output
15	-V Output	-V1 Output	Common
22	NC*	+V2 Output	Common
23	NC*	-V2 Output	-V Output
24	+V Input	+V Input	+V Input

*NC (No Connection)
NOTES:1. Dual output models with separated output
2. Dual output models suffix a ”C” to the mode number with common output.

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