

# **UM2100 SERIES**

## 2 Watt DC-DC Converters

- ◆ 24-Pin Dip Package
  - ◆ High Efficiency(up to 80%)
  - ◆ Regulated Outputs
  - ◆ Pi Input Filter
  - ◆ 3000 VDC Isolation
  - ◆ Continuous Short Circuit Protection
  - ◆ Conductive EMI Meets CISPR22 Class B

## 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 .....	$\pm 2.0\%$ max.
Voltage Balance (Dual) <sup>1</sup> .....	$\pm 2.0\%$ max.
Ripple and Noise, 20MHz BW .....	60mV P-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**

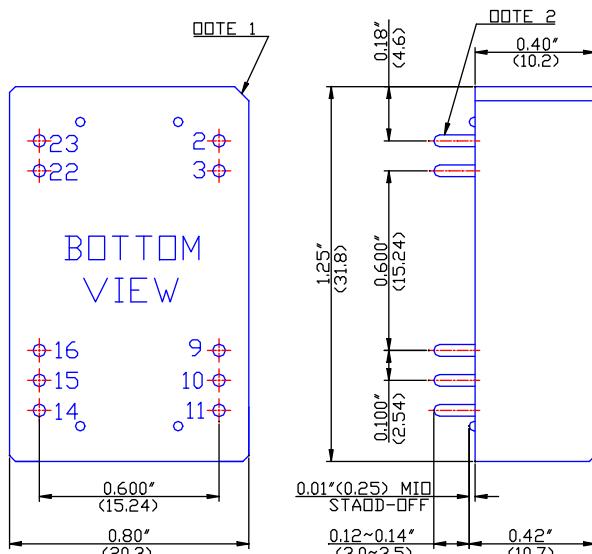
Efficiency .....	See Table
Isolation Voltage .....	3000 VDC min.
Isolation Resistance .....	10 <sup>8</sup> Ohms min.
Switching Frequency .....	150KHz-850KHz (Depending on Loading)
Operating Temperature Range	
Ambient, None Derating .....	-25°C to +71°C
Cooling .....	Free Air Convection
Storage Temperature 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
Weight .....	15g

## **NOTES:**

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

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		CASE	EFFICIENCY
				NO LOAD	FULL LOAD		
UM2101	5 VDC	5 VDC	400 mA	110 mA	635 mA	A	63%
UM2102		12 VDC	160 mA	100 mA	550 mA		70%
UM2103		15 VDC	130 mA	110 mA	570 mA		68%
UM2104		± 5 VDC	± 200 mA	115 mA	665 mA		60%
UM2105		± 12 VDC	± 80 mA	130 mA	640 mA		60%
UM2106		± 15 VDC	± 65 mA	140 mA	640 mA		60%
UM2107		9 VDC	250 mA	105 mA	680 mA		66%
UM2111	12 VDC	5 VDC	400 mA	50 mA	230 mA	A	72%
UM2112		12 VDC	160 mA	50 mA	215 mA		75%
UM2113		15 VDC	130 mA	50 mA	215 mA		75%
UM2114		± 5 VDC	± 200 mA	65 mA	250 mA		67%
UM2115		± 12 VDC	± 80 mA	70 mA	245 mA		65%
UM2116		± 15 VDC	± 65 mA	80 mA	240 mA		67%
UM2117		9 VDC	250 mA	50 mA	250 mA		75%
UM2121	24 VDC	5 VDC	400 mA	30 mA	115 mA	A	73%
UM2122		12 VDC	160 mA	30 mA	105 mA		78%
UM2123		15 VDC	130 mA	30 mA	105 mA		78%
UM2124		± 5 VDC	± 200 mA	35 mA	135 mA		72%
UM2125		± 12 VDC	± 80 mA	35 mA	115 mA		70%
UM2126		± 15 VDC	± 65 mA	35 mA	115 mA		70%
UM2117		9 VDC	250 mA	30 mA	120 mA		78%
UM2131	48 VDC	5 VDC	400 mA	5 mA	55 mA	A	75%
UM2132		12 VDC	160 mA	10 mA	50 mA		80%
UM2133		15 VDC	130 mA	10 mA	50 mA		80%
UM2134		± 5 VDC	± 200 mA	15 mA	57 mA		73%
UM2135		± 12 VDC	± 80 mA	15 mA	57 mA		70%
UM2136		± 15 VDC	± 65 mA	15 mA	56 mA		72%

CASE A



PIN CONNECTIONS			
Pin	Single Output	Dual Output Common <sup>1</sup>	Dual Output Separated <sup>2</sup>
2	-V Input	-V Input	-V Input
3	-V Input	-V Input	-V Input
9	NC*	Common	+V2 Output
10	NC*	NC*	-V2 Output
11	NC*	-V Output	-V2 Output
14	+V Output	+V Output	+V1 Output
15	NC*	NC*	NC*
16	-V Output	Common	-V1 Output
22	+ V Input	+ V Input	+ V Input
23	+ V Input	+ V Input	+ V Input

\*NC(No Connection)

NOTES:1. ± 5V output models with common output with separated output. suffix a "S" to the model number.

± 12V, 15V output models with separated output. with common output, suffix a "C" to the model number.

All dimensions in inches(mm)

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

Note 2:Pin size is  $0.020 \pm 0.005$  inch(0.5mm)dia.or  $0.020 \times 0.012$  inch

Note 3:Tolerance .xx =± 0.02

.xxx =± 0.010

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