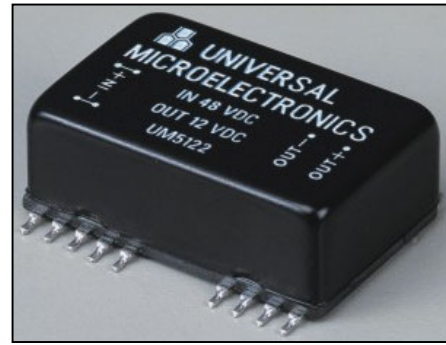


# UM5100 SERIES

## 5-7.5 Watt SMD DC-DC Converters

- ◆ Surface Mount Isolated DC-DC Converter
- ◆ High Efficiency
- ◆ 2:1 Input Range
- ◆ Pi Input Filter
- ◆ 1500 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
48V .....	36-75V
Input Filter .....	Pi Type

#### OUTPUT SPECIFICATIONS

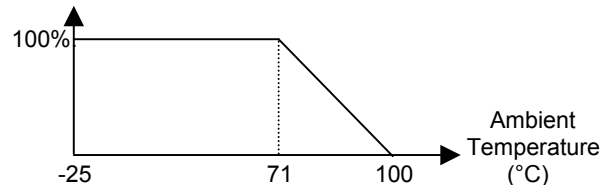
Voltage Accuracy .....	±2.0% max.
Voltage Balance Dual Output at Full Load .....	±1% max.
Transient response	
Single, 25% Step Load Change .....	<500 u sec.
Dual, FL-1/2FL, ±1% Error Band (Dual Outputs Loaded Equally) .....	<500 u sec.
Ripple and Noise, 20MHz BW <sup>1</sup>	
3.3V, 5V .....	50mVp-p max.
12V, 15V .....	100mVp-p max.
Temperature Coefficient .....	±0.05%/°C
Short Circuit Protection .....	Continuous
Line Regulation <sup>2</sup> .....	±0.5%
Load Regulation <sup>3</sup> .....	±1.0%

### GENERAL SPECIFICATIONS

Efficiency .....	See Table
Isolation Voltage .....	1500 VDC min.
Isolation Resistance .....	10 <sup>8</sup> Ohms min.
Switching Frequency .....	400 KHz typ.
Operating Temperature Range <sup>4</sup> ,	
Ambient, None Derating .....	-25°C to +71°C
Cooling .....	Free Air Convection
Storage Temperature Range .....	-40°C to +100°C
Case Material .....	Black-Coated Copper With Non-Conductive Base
Dimensions .....	1.25*0.8*0.45 inches (31.8*20.3*11.4mm)
Weight .....	18g

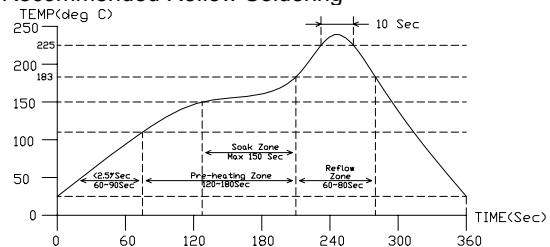
### NOTES

1. Measured with 1uF ceramic capacitor connect to the output pins.
2. Measured from high line to low line.
3. Measured from full load to 10% load, dual outputs loaded equally.
4. Output Power



5. The converter required a minimum 10% loading on the output. Operation below 10% load conditions will not damage these devices. However they may not meet all listed spec.

#### 6. Recommended Reflow Soldering



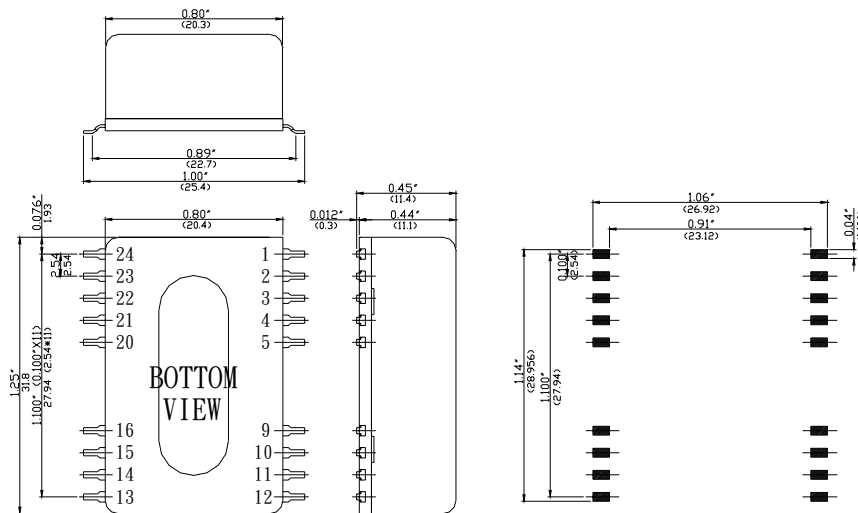
**UMEC  
INTERNATIONAL**

2539 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		
UM5109	12 VDC	3.3 VDC	1500 mA	45 mA	565 mA	A	73%
UM5111	24 VDC	5 VDC	1500 mA	30 mA	406 mA	A	77%
UM5112	24 VDC	12 VDC	625 mA	30 mA	390 mA	A	80%
UM5113	24 VDC	15 VDC	500 mA	30 mA	390 mA	A	80%
UM5116	24 VDC	± 15 VDC	± 250 mA	30 mA	390 mA	A	80%
UM5119	24 VDC	3.3 VDC	1500 mA	30 mA	279 mA	A	74%
UM5121	48 VDC	5 VDC	1500 mA	20 mA	197 mA	A	79%
UM5122	48 VDC	12 VDC	625 mA	20 mA	191 mA	A	82%
UM5123	48 VDC	15 VDC	500 mA	20 mA	191 mA	A	82%
UM5129	48 VDC	3.3 VDC	1500 mA	20 mA	139 mA	A	74%

NOTE: Other output voltage can be supported upon request.

CASE A



Recommended Pad Position & Dimension

All dimensions in inches (mm).

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

Note 2: Tolerance .xx =±0.04"  
.xxx=±0.010"

Pin	Pin Connections	
	Single Output	Dual Output
1	NC*	NC*
2	-V Input	-V Input
3	-V Input	-V Input
4	NC*	NC*
5	NC*	NC*
9	NC*	Common
10	NC*	NC*
11	NC*	-V Output
12	NC*	NC*
13	NC*	NC*
14	+V Output	+V Output
15	NC*	NC*
16	-V Output	Common
20	NC*	NC*
21	NC*	NC*
22	+V Input	+V Input
23	+V Input	+V Input
24	NC*	NC*

\* NC (No Connection)



**UMEC  
INTERNATIONAL**

2539 W. 237TH STREET, SUITE A,  
TORRANCE, CA 90505  
TEL: (310) 326-7072 FAX: (310) 326-7058