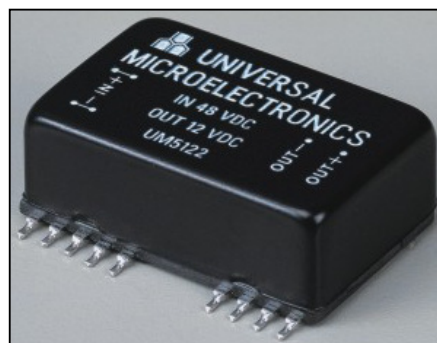


UM5100 SERIES



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
- ◆ RoHS compliant



SPECIFICATIONS

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

RoHS STATUS

The UM5100 series products are lead-free and comply with the requirements in the European RoHS directive 2002/95/EC, but the heat resistance of the moulded package do not comply with lead-free reflow soldering processes temperature profiles according to IPC/JEDEC J STD 020C.

INPUT SPECIFICATIONS

Input Voltage Range, 12V	9-18V
24V	18-36V
48V	36-75V
Input Filter	Pi Type

OUTPUT SPECIFICATIONS

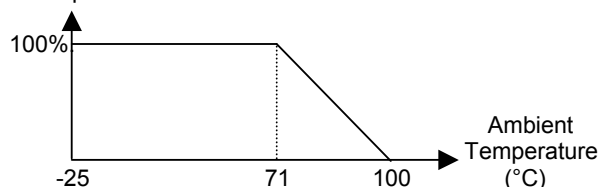
Voltage Accuracy	±2.0% max.
Voltage Balance Dual Output at Full Load	±1% max.
Transient response	
Single, 25% Step Load Change	<500 u sec.
Dual, FL-1/2FL, ±1% Error Band (Dual Outputs Loaded Equally)	<500 u sec.
Ripple and Noise, 20MHz BW ¹	
3.3V, 5V	50mVp-p max.
12V, 15V	100mVp-p max.
Temperature Coefficient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

GENERAL SPECIFICATIONS

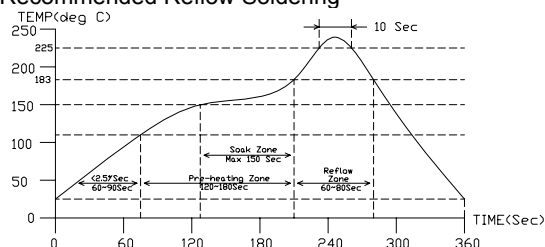
Efficiency	See Table
Isolation Voltage	1500 VDC min.
Isolation Resistance	10 ⁸ Ohms min.
Switching Frequency	400 KHz typ.
Operating Temperature Range ⁴ ,	
Ambient, None Derating	-25°C to +71°C
Cooling	Free Air Convection
Storage Temperature Range	-40°C to +100°C
Case Material	Black-Coated Copper
With 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



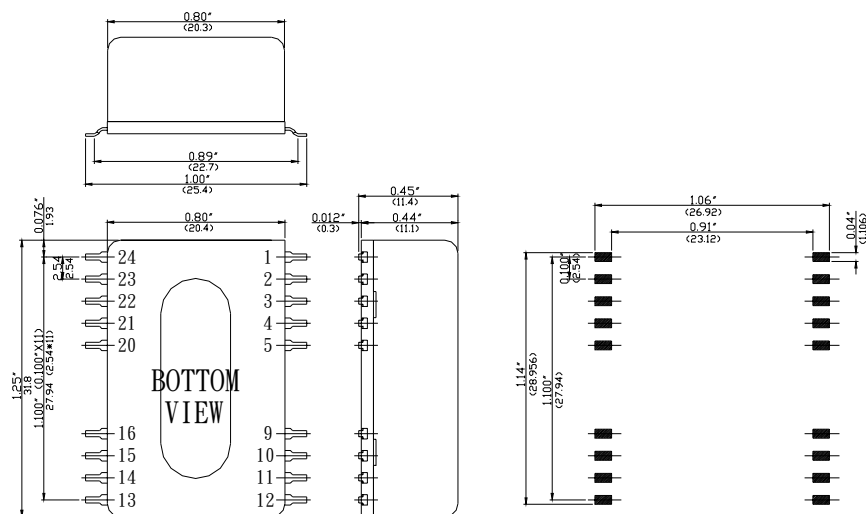
**UNIVERSAL
MICROELECTRONICS**

3,27TH RD., TAICHUNG INDUSTRIAL PARK,
TAICHUNG, TAIWAN, R.O.C.
TEL: 886-4-23590096 FAX: 886-4-23590129

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 Connections		
Pin	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)



**UNIVERSAL
MICROELECTRONICS**

3,27TH RD., TAICHUNG INDUSTRIAL PARK,
TAICHUNG, TAIWAN, R.O.C.
TEL: 886-4-23590096 FAX: 886-4-23590129