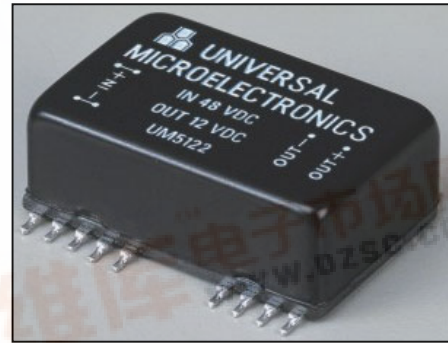


UM5100 SERIES

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

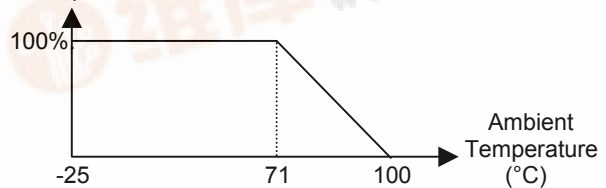
| | |
|--|---------------|
| Voltage Accuracy | ±2.0% max. |
| Voltage Balance Dual Output at Full Load | ±1% max. |
| Transient response | |
| Single, 25% Step Load Change | <500 u sec. |
| Dual, FL-1/2FL, ±1% Error Band (Dual Outputs Loaded Equally) | <500 u sec. |
| Ripple and Noise, 20MHz BW ¹ | |
| 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 |

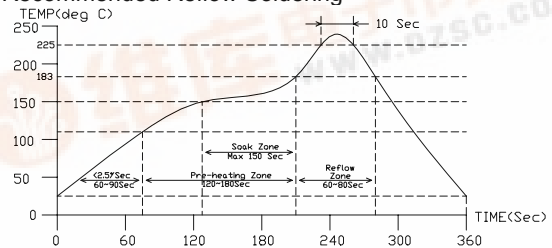
NOTES

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



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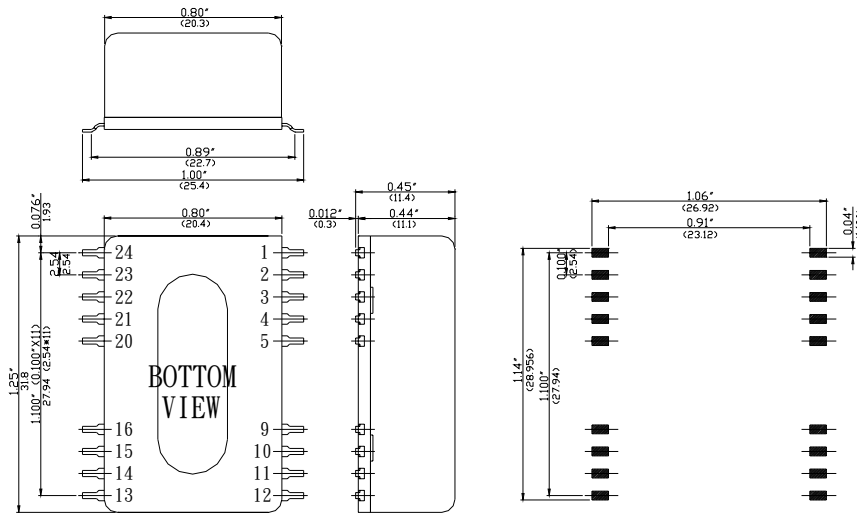
2539 W. 237TH STREET, SUITE A,
TORRANCE, CA 90505
TEL: (310) 326-7072 FAX: (310) 326-7058



| 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 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)



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