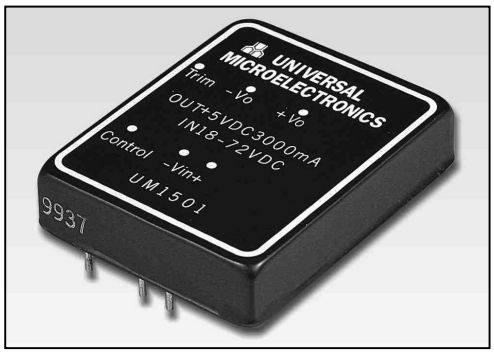
UM1500 SERIES

15 to 20 Watt DC-DC Converters

- **Surface Mount Technology**
- **Efficiency 82%**
- **Wide Input Range**
- **10.2 Watt/Cubic Inch**
- **Remote On/Off Control**
- **Low Profile**



SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range,
15W ..... 48V Nominal, 18-72 VDC
20W ..... 24V Nominal, 18-36 VDC
48V Nominal, 36-72 VDC
Input Filter ..... Pi Network

OUTPUT SPECIFICATIONS

Voltage Accuracy, Single Output .....±1% max.
Dual,+Output ..... ±1% max.
-Output ..... ±2% max.
Triple, 5V ..... ±1% max.
±12V/15V ..... ±3% max.
Voltage Balance, Dual Output at Full Load
..... ±2.0% max.
Transient Response,
Single, Dual , 25% Step Load Change,
±1% Error Band ..... <500u sec.
External Trim Adj. Range ..... +10%
Ripple and Noise , 20MHz BW[1] ..... 15mV RMS max.
75mV P-P max.
Temperature Coefficient ..... ±0.02%/°C max.
Short Circuit Protection ..... Continuous
Overvoltage Protection Trip Point (Zener Clamp Type)
5V 6.8V
12V 15V
15V 18V
Line Regulation[2], Single/Dual Output ..... ±0.5% max.
Triple Output ..... 1% max.
Load Regulation[3],Single Output ..... ±0.5% max.
Dual Output ..... ±1% max.
Triple Output +5V ..... ±1% max.
Auxiliaries ..... ±5% max.

GENERAL SPECIFICATIONS

Remote On/Off Control ..... See Below
Efficiency ..... See Table
Isolation Voltage ..... 500 VDC min.
Isolation Resistance ..... 10^8 ohms min.
Switching Frequency
Single/Dual ..... 330KHz typ.
Triple ..... 200KHz typ.
Operating Temperature Range,
Ambient, 15W,None Derating ..... -40°C to +71°C
20W, None Derating ..... -40°C to +60°C
Cooling ..... Free Air Convection
Storage Temperature Range ..... -55°C to +105°C
Dimensions Case J ..... 2.0x1.6x0.46 Inches
(50.8x40.6x11.7 mm)
Case Material ..... Black Coated Copper With
Non-Conductive Base
Weight 50g

NOTES:

1. Measured with 3.3uF/25V tantalum capacitor across each output for triple output models,0.1uF ceramic capacitor across each output for single and dual output models.
2. Measured from high line to low line.
3. Measured from full load to specified load with all other outputs at rated load: singe: full load to 1/4 load; dual outputs loaded balanced from full load to 1/2 load, triple: full load to 1/10 load.

REMOTE ON/OFF CONTROL
Control Input ..... Pin 1
Control Common ..... Pin 3
Logic Compatibility.....
..... CMOS or Open Collector TTL
Control Voltage.....
On ..... >+2.5 VDC or Open Circuit
Off ..... < +0.8 VDC or Jumper to Pin 3
Converter Shutdown Idle Current ..... 10 mA

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