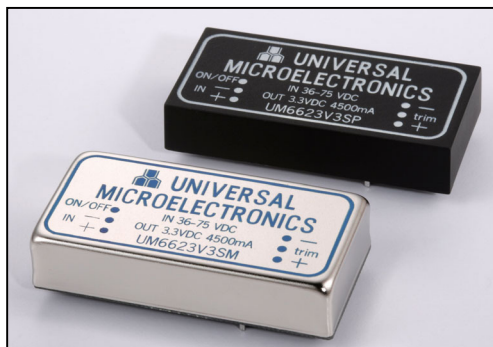


UM6600 SERIES

7.5-15Watt DC-DC Converter

- ◆ Remote On/Off Control
- ◆ Low cost; High Efficiency
- ◆ Standard 2"x1" Package and Pinouts
- ◆ Over Temperature Protection
- ◆ Continuous Short Circuit Protection
- ◆ Safety Approval Pending



SPECIFICATIONS

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

INPUT SPECIFICATIONS

| | |
|----------------------------------|------------|
| Input Voltage Range, 12V Nominal | 10-18VDC |
| 24V Nominal | 18-36VDC |
| 48V Nominal | 36-75VDC |
| Input Undervoltage Shutdown, 12V | 8VDC typ. |
| 24V | 16VDC typ. |
| 48V | 33VDC typ. |
| Input Filter | Pi Network |

OUTPUT SPECIFICATIONS

| | |
|--|-----------------------|
| Voltage Accuracy | ±1% max. |
| External Trim Adj. Range | ±10% |
| Line Regulation ¹ | ±0.5% max. |
| Load Regulation ² , Single 1.5-3.3V | ±0.5% typ. ±1% max. |
| 5.0V-15V | ±0.5% max. |
| Dual | ±0.5% typ. ±2.0% max. |
| Transient Response | |
| (100% to 50% full load at ±1% error band) | ≤500us |
| Ripple and Noise, 20MHz-BW ³ | ≤25 mV RMS max. |
| | 100 mV P-P max. |
| Temperature Coefficient | ±0.02%/°C max. |
| Overvoltage Protection Trip Point | |
| 1.5V | 2.0V typ. |
| 2.0V | 2.8V typ. |
| 2.5V | 3.3V typ. |
| 3.3V | 4.3V typ. |
| 5V | 6.2V typ. |
| 12V | 15V typ. |
| 15V | 18V typ. |

Short Circuit Protection Continuous
 Over Temperature Shutdown Point⁴ 110°C typ.
 Minimum Load⁵ No Minimum Load Required

GENERAL SPECIFICATIONS

| | |
|--|------------------------------|
| Isolation Voltage (Input to Output) | 1500VDC |
| Isolation Resistance | 100 Mohm |
| Switching Frequency | 330 KHz typ. |
| Operating Temperature Range, | |
| Ambient, 15W, None Derating ⁶ | -40°C to +50/60°C |
| With Derating | to +100°C |
| Cooling | Free Air Convection |
| Storage Temperature | -40°C to +105°C |
| Case Temperature | 110°C max. |
| EMI/RFI (Metal Packages) | Five-Sided Continuous Shield |

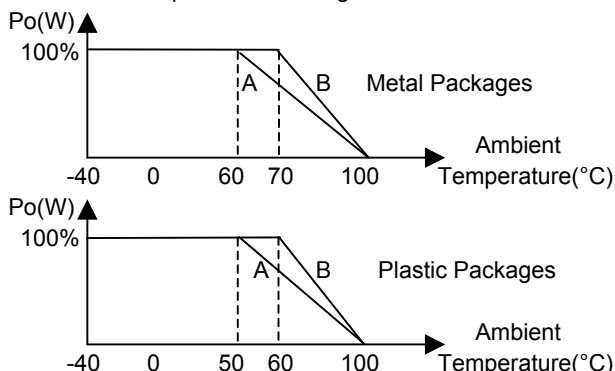
| | |
|--------------------------------|--|
| Dimensions, M | 2*1*0.45 inches (50.8*25.4*11.4mm) |
| P | 2*1*0.38 inches (50.8*25.4*9.70mm) |
| Case Material ⁷ , M | Black-Coated Copper with Non-conductive Base |
| P | Non-conductive Black Plastic |
| Weight | 30g |

NOTES

1. Measure from high line to low line.
2. Measure Single: from full load to 1/4 load, Dual: load balanced from full load to 1/4 load.
3. Measure with 1uF ceramic cap. connected to the output pins.
4. Defined as case temperature and 3~5°C recovery hysteresis ;Non-latching shutdown protection,.
5. This converter can operating at no load condition but 10% loading on the output is preferred to maintain specified regulation operation. under no load conditions will not damage these devices,. However they may not meet all listed specification.
6. Operating temperature range without derating is model and packages dependent.
7. Optional suffix for plastic or metal packages.
8. Standard product is active high, active low remote On/Off option is available, to order suffix a "N" to the model number e.g.: UM6625V0SPN.

| REMOTE ON/OFF CONTROL | |
|-----------------------|----------------------------|
| Logic Compatibility | CMOS or Open Collector TTL |
| Converter ON | >+2.5Vdc or open circuit |
| Converter OFF | <+0.8Vdc or jump to pin2 |
| Control common | pin2 |

Temperature derating curve



A : For 12V input voltage models

B : For 24V and 48V input voltage models

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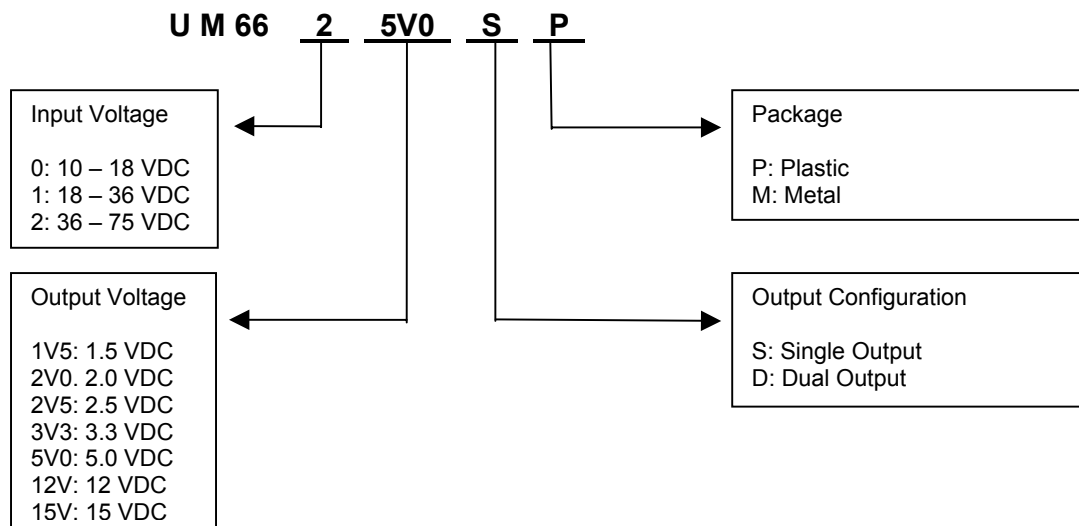
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| MODEL NUMBER | INPUT RANGE | OUTPUT VOLTAGE | OUTPUT CURRENT | INPUT CURRENT | | % EFF | Maximum Capacitive Load(uF) | Case | Package |
|--------------|----------------------|----------------|----------------|---------------|-----------|-------|-----------------------------|------|---------|
| | | | | NO LOAD | FULL LOAD | | | | |
| UM6601V5S | 10-18VDC (12VDC) | 1.5 VDC | 5000 mA | 35 mA | 880 mA | 71 | 10000 | B | P,M |
| UM6602V0S | | 2.0 VDC | 5000 mA | | 1100 mA | 76 | 10000 | | |
| UM6602V5S | | 2.5 VDC | 5000 mA | | 1336 mA | 78 | 10000 | | |
| UM6603V3S | | 3.3 VDC | 4500 mA | | 1530 mA | 81 | 10000 | | |
| UM6605V0S | | 5.0 VDC | 3000 mA | | 1506 mA | 83 | 10000 | | |
| UM66012VS | | 12 VDC | 1250 mA | | 1455 mA | 86 | 3000 | | |
| UM66015VS | | 15 VDC | 1000 mA | | 1455 mA | 86 | 2000 | | |
| UM66012VD | | ±12VDC | ± 625 mA | | 1455 mA | 86 | ± 1500 | | |
| UM66015VD | | ±15VDC | ± 500 mA | | 1455 mA | 86 | ± 1000 | | |
| UM6611V5S | 18-36 VDC (24VDC) | 1.5 VDC | 5000 mA | 35 mA | 435 mA | 72 | 10000 | B | P,M |
| UM6612V0S | | 2.0 VDC | 5000 mA | | 542 mA | 77 | 10000 | | |
| UM6612V5S | | 2.5 VDC | 5000 mA | | 660 mA | 79 | 10000 | | |
| UM6613V3S | | 3.3 VDC | 4500 mA | | 755 mA | 82 | 10000 | | |
| UM6615V0S | | 5.0 VDC | 3000 mA | | 744 mA | 84 | 10000 | | |
| UM66112VS | | 12 VDC | 1250 mA | | 719 mA | 87 | 3000 | | |
| UM66115VS | | 15 VDC | 1000 mA | | 719 mA | 87 | 2000 | | |
| UM66112VD | | ±12VDC | ± 625 mA | | 719 mA | 87 | ± 1500 | | |
| UM66115VD | | ±15VDC | ± 500 mA | | 718 mA | 87 | ± 1000 | | |
| UM6621V5S | 36-75 VDC (48VDC) | 1.5 VDC | 5000 mA | 35 mA | 215 mA | 73 | 10000 | B | P,M |
| UM6622V0S | | 2.0 VDC | 5000 mA | | 268 mA | 78 | 10000 | | |
| UM6622V5S | | 2.5 VDC | 5000 mA | | 326 mA | 80 | 10000 | | |
| UM6623V3S | | 3.3 VDC | 4500 mA | | 373 mA | 83 | 10000 | | |
| UM6625V0S | | 5.0 VDC | 3000 mA | | 368 mA | 85 | 10000 | | |
| UM66212VS | | 12 VDC | 1250 mA | | 360 mA | 87 | 3000 | | |
| UM66215VS | | 15 VDC | 1000 mA | | 360 mA | 87 | 2000 | | |
| UM66212VD | | ±12VDC | ± 625 mA | | 360 mA | 87 | ± 1500 | | |
| UM66215VD | | ±15VDC | ± 500 mA | | 360 mA | 87 | ± 1000 | | |

NOTE: 1. Other output voltage can be supported upon request.

2. Maximum capacitive load across the output ports should not be over indicated values.

PART NUMBER STRUCTURE

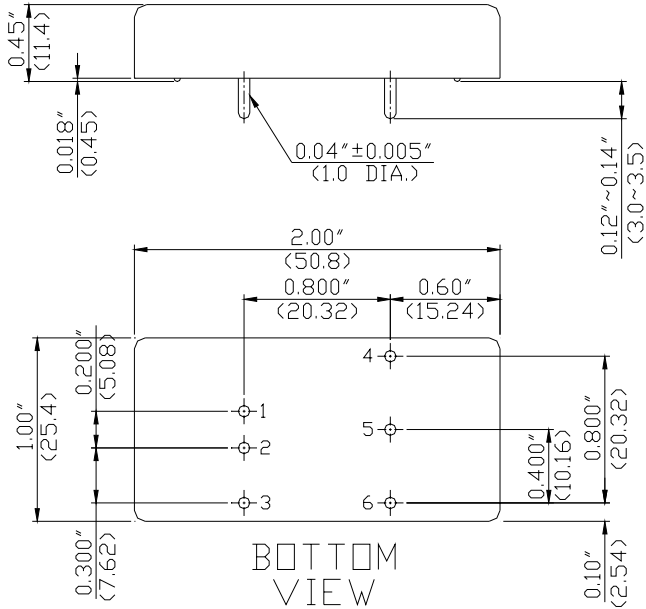


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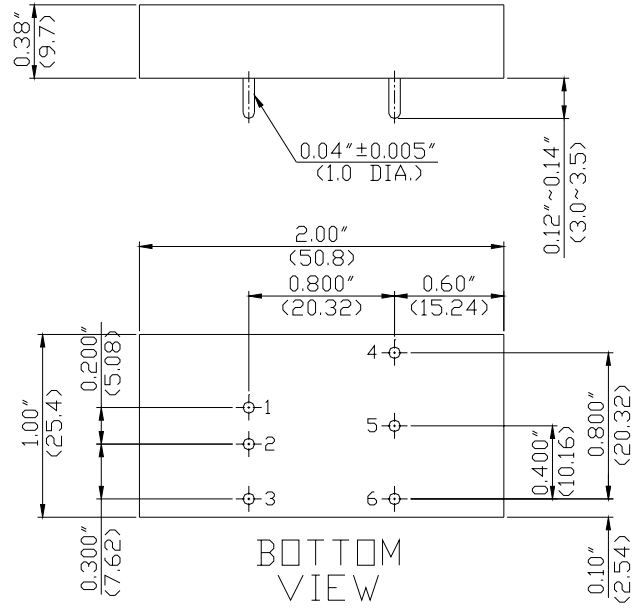
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CASE B

Metal Case



Plastic Case



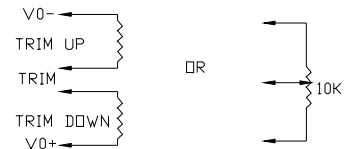
All dimensions in inches (mm).
 Tolerance .xx= ±0.04"
 .xxx=±0.010"

PIN CONNECTIONS

| PIN NUMBER | PIN FUNCTION | |
|------------|----------------|---------|
| | Single | Dual |
| 1 | +Input | +Input |
| 2 | -Input | -Input |
| 3 | On/Off Control | |
| 4 | +Output | +Output |
| 5 | TRIM | Common |
| 6 | -Output | -Output |

EXTERNAL OUTPUT TRIMMING

Output may optionally be externally trimmed (±10%) with a fixed resistor or an external trimpot as shown.



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