UM6600 SERIES

7.5-15Watt DC-DC Converter

- ♦ **Remote On/Off Control**
- ♦ **Low cost; High Efficiency**
- ♦ **Standard 2"×1" 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 Point[4] .....110°C typ.
Minimum Load[5] ..... No Minimum Load Required

GENERAL SPECIFICATIONS

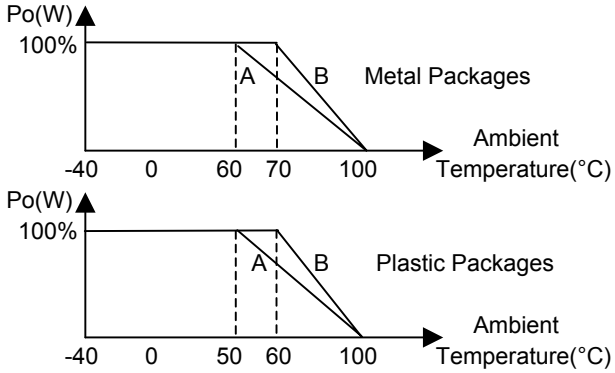
Isolation Voltage(Input to Output) 1500VDC
Isolation Resistance ..... 100 Mohm
Switching Frequency ..... 330 KHz typ.
Operating Temperature Range,
Ambient, 15W, None Derating[6] ..... -40°C to +50/60°C
With Derating ..... to +100°C
Cooling ..... Free Air Convection
Storage Temperature ..... -40°C to +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

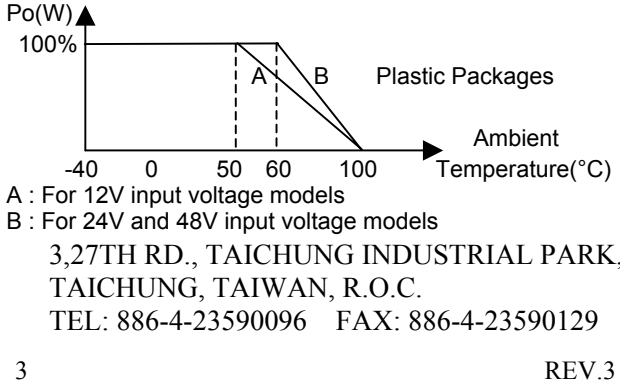
NOTES

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 hysterisis ;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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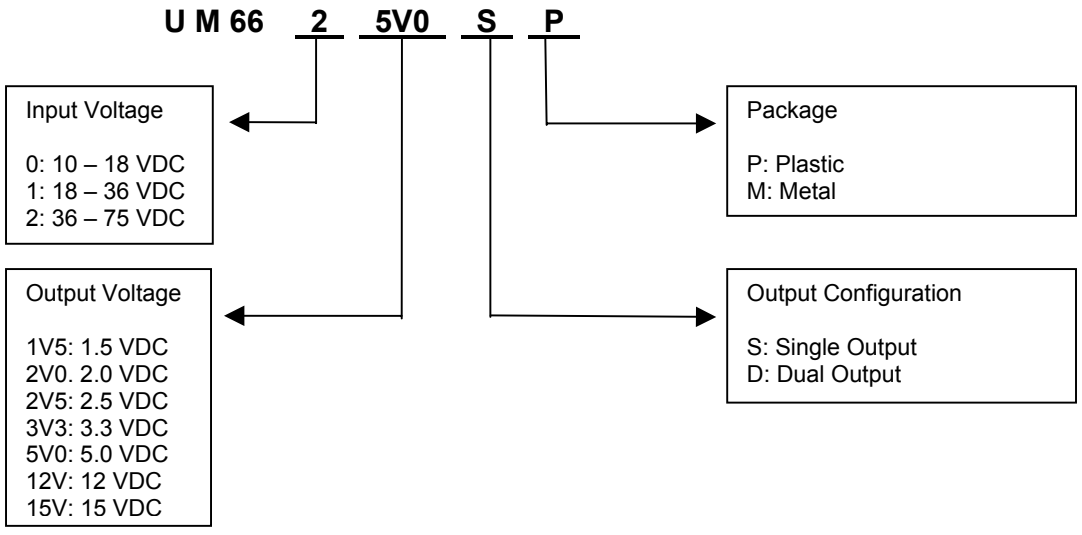
MODEL NUMBER	INPUT RANGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	Maximum Capacitive Load(uF)	Case	Package
				NO LOAD	FULL LOAD				
UM6601V5S	10-18VDC (12VDC)	1.5 VDC	5000 mA	35 mA	880 mA	71	10000	B	P,M
UM6602V0S		2.0 VDC	5000 mA		1100 mA	76	10000		
UM6602V5S		2.5 VDC	5000 mA		1336 mA	78	10000		
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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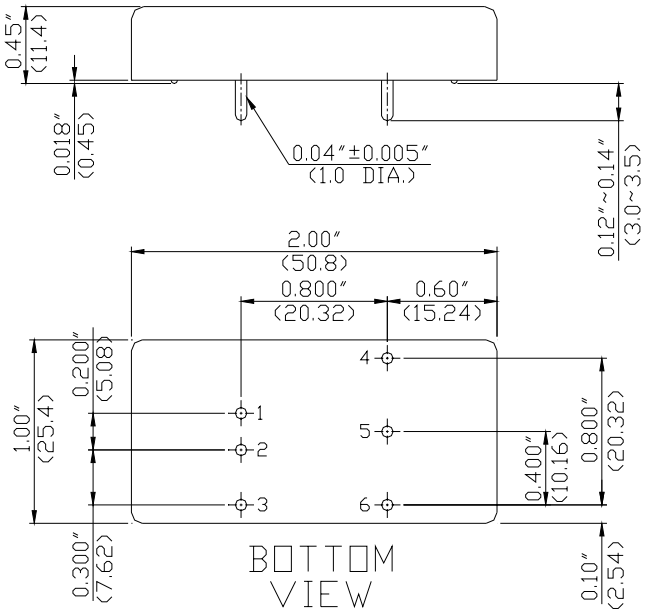
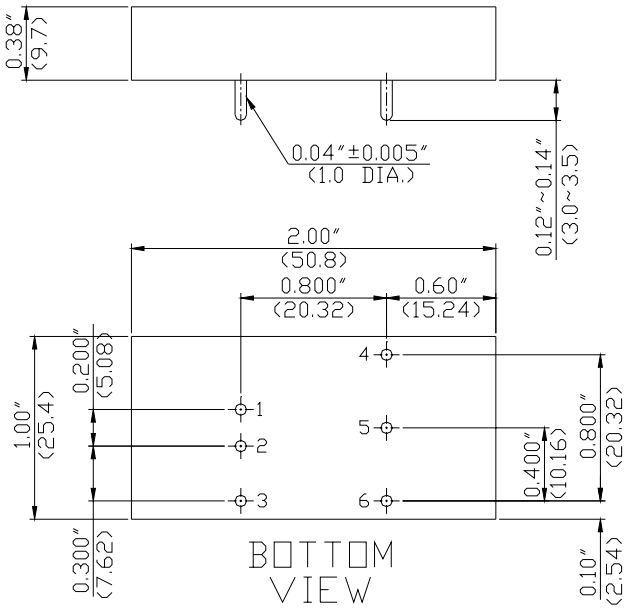
CASE B

Metal Case



Plastic Case

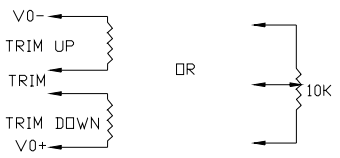


All dimensions in inches (mm).
Tolerance .xx= ±0.04”
.xxx=±0.010”

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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