

# UMEC International Corporation

## UM6700 SERIES

### 12-30Watt DC-DC Converter

- ◆ Synchronous Rectifier Topology
- ◆ Remote On/Off Control
- ◆ Efficiency to 90%
- ◆ Standard 2"×1" Package
- ◆ Over Temperature 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, 24V Nominal	18-36VDC
48V Nominal	36-75VDC
Input Undervoltage Shutdown, 24V	16VDC typ.
48V	32VDC typ.
Input Filter	Pi Network

#### OUTPUT SPECIFICATIONS

Voltage Accuracy	±1% max.
External Trim Adj. Range	±10%
Line Regulation <sup>1</sup>	±0.5% max.
Load Regulation <sup>2</sup> , Single 1.5-2.5V	±0.5% typ. ±1% max.
3.3V-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 <sup>3</sup>	≤25 mV RMS max.
	100 mV P-P max.
Temperature Coefficient	±0.02%/°C max.
Overvoltage Protection Trip Point (Zener Clamp Type)	
1.5V	2.0V typ.
2.5V	3.3V typ.
3.3V	4.3V typ.
5V	6.8V typ.
12V	15V typ.
15V	18V typ.
Short Circuit Protection	Continuous
Over Temperature Shutdown Point <sup>4</sup>	105°C typ.
Minimum Load <sup>5</sup>	No Minimum Load Required.

### GENERAL SPECIFICATIONS

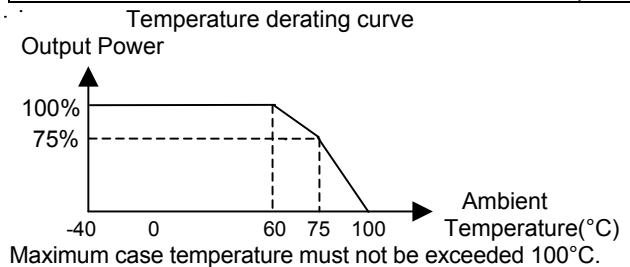
Isolation Voltage(Input to Output)	1500VDC
Isolation Resistance	100 Mohm
Switching Frequency	350 KHz typ.
Operating Temperature Range,	
Ambient, 30W, None Derating	-40°C to +60°C.
With Derating	to +100°C.
Cooling	Free Air Convection
Storage Temperature	-40°C to +105°C
EMI/RFI	Five-Sided Continuous Shield.
Dimensions	2*1*0.45 inches
	(50.8*25.4*11.4mm)
Case Material	Black Coated Copper With
	Non-Conductive Base
Weight	30g

#### NOTES:

1. Measure from high line to low line.
2. Single: from full load to 1/4 load.  
Dual: load balanced from full load to 1/2 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. Standard product is active high, active low remote On/Off option is available, to order suffix a "N" to the model number e.g.: UM6723V3SN.

#### 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



UMEC International Corporation  
2570 West 237th Street, Suite B  
Torrance, California 90505

www.umecintl.com  
Tel: 310-326-7072  
Fax: 310-326-7058

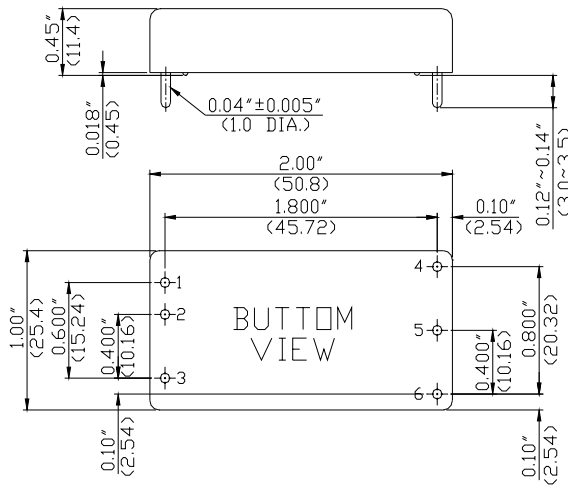
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MODEL NUMBER	INPUT RANGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	Maximum Capacitive Load(uF)	CASE
				NO LOAD	FULL LOAD			
UM6711V5S	18-36 VDC (24VDC)	1.5 VDC	8000 mA	60 mA	595 mA	84	10000	B
UM6712V0S		2.0 VDC	8000 mA	65 mA	784 mA	85	10000	
UM6712V5S		2.5 VDC	8000 mA	70 mA	967 mA	86	10000	
UM6713V3S		3.3 VDC	8000 mA	70 mA	1250 mA	89	10000	
UM6715V0S		5.0 VDC	6000 mA	75 mA	1390 mA	90	10000	
UM67112VS		12 VDC	2080 mA	20 mA	1196 mA	87	3000	
UM67115VS		15 VDC	1666 mA	20 mA	1196 mA	87	2000	
UM67112VD		±12VDC	±1040 mA	20 mA	1196 mA	87	±1500	
UM67115VD	±15VDC	± 833 mA	20 mA	1196 mA	87	±1000		
UM6721V5S	36-75 VDC (48VDC)	1.5 VDC	8000 mA	35 mA	298 mA	84	10000	B
UM6722V0S		2.0 VDC	8000 mA	35 mA	392 mA	85	10000	
UM6722V5S		2.5 VDC	8000 mA	35 mA	484 mA	86	10000	
UM6723V3S		3.3 VDC	8000 mA	35 mA	625 mA	89	10000	
UM6725V0S		5.0 VDC	6000 mA	35 mA	695 mA	90	10000	
UM67212VS		12 VDC	2080 mA	20 mA	598 mA	87	3000	
UM67215VS		15 VDC	1666 mA	20 mA	598 mA	87	2000	
UM67212VD		±12VDC	±1040 mA	20 mA	598 mA	87	±1500	
UM67215VD	±15VDC	± 833 mA	20 mA	598 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.

## CASE B



All dimensions in inches (mm).

Tolerance .xx= ±0.04"

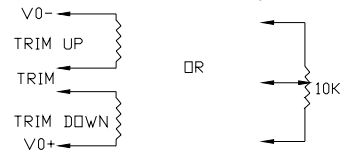
.xxx=±0.010"

## PIN CONNECTIONS

PIN NUMBER	PIN FUNCTION	
	Single	Dual
1	+Input	+Input
2	-Input	-Input
3	On/Off Control	
4	+Output	+Output
5	-Output	COM
6	Trim	-Output

## EXTERNAL OUTPUT TRIMMING (SINGLE OUTPUT ONLY)

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



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