

UM3000 SERIES

Green Product
RoHS

9-20Watt DC-DC Converter

- ◆ Synchronous Rectifier Topology
- ◆ Surface Mount Technology
- ◆ Remote On/Off Control
- ◆ Efficiency to 88%
- ◆ Standard 2"×1" Package and Pinout
- ◆ Over Temperature Protection
- ◆ RoHS Compliant



SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range, 12V Nominal.....	9-18VDC
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 1.5-2.5V	±0.5% typ. ±1% max.
3.3V-15V	±0.5% max.
Dual	±0.5% typ. ±2.0% max.
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.
2.5V	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 ⁴	120°C typ.
Minimum Load ⁵	10% Full Load

GENERAL SPECIFICATIONS

Isolation Voltage (Input to Output)	1500VDC
Isolation Resistance	100 Mohm



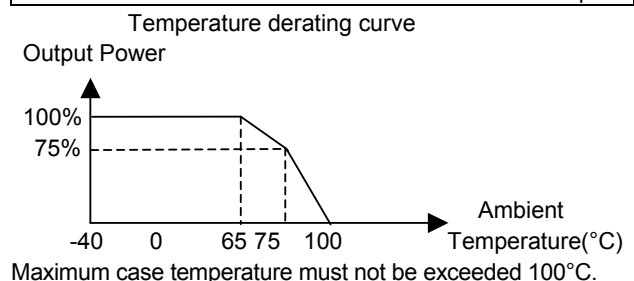
**UNIVERSAL
MICROELECTRONICS**

Switching Frequency	400 KHz typ.
Transient Response	
(100% to 50% full load at ±1% error band)	≤500us
Case Material	Black Coated Copper With Non-conductive Base
Operating Temperature Range,	
Ambient, 20W, None Derating	-40°C to +65°C
Cooling	Free Air Convection
Storage Temperature	-40°C to +105°C

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 1 uF ceramic cap. connected to the output pins.
4. Non-latching shutdown protection.
5. This converter require a minimum 10% loading on the output to maintain specified regulation operation under minimum 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.: UM3021N.

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



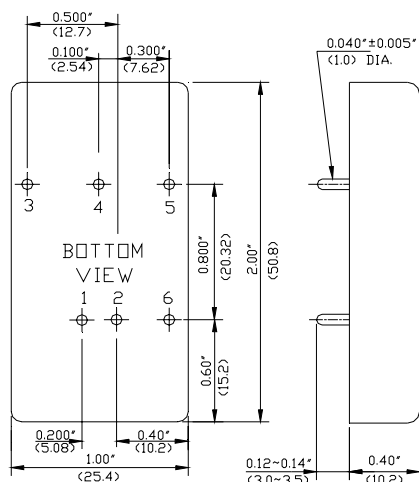
3,27TH RD., TAICHUNG INDUSTRIAL PARK,
TAICHUNG, TAIWAN, R.O.C.
TEL: 886-4-23590096 FAX: 886-4-23590129

MODEL NUMBER	INPUT RANGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	Maximum Capacitive Load(uF)	CASE
				NO LOAD	FULL LOAD			
UM3001	9-18VDC (12VDC)	5 VDC	4000 mA	120 mA	1916 mA	87	6800	B
UM3002		3.3 VDC	4250 mA		1359 mA	86	6800	
UM3003		2.5 VDC	6000 mA		1470 mA	85	6800	
UM3004		12 VDC	1670 mA		1942 mA	86	1000	
UM3005		15 VDC	1340 mA		1947mA	86	1000	
UM3006		±5VDC	±2000 mA		1916 mA	87	1000	
UM3007		±12VDC	±835 mA		1898 mA	88	330	
UM3008		±15VDC	±670 mA		1903 mA	88	330	
UM3009		1.5VDC	6000 mA		926 mA	81	6800	
UM3011	18-36 VDC (24VDC)	5 VDC	4000 mA	80 mA	947 mA	88	6800	B
UM3012		3.3 VDC	4250 mA		672 mA	87	6800	
UM3013		2.5 VDC	6000 mA		727 mA	86	6800	
UM3014		12 VDC	1670 mA		960 mA	87	1000	
UM3015		15 VDC	1340 mA		963 mA	87	1000	
UM3016		±5VDC	±2000 mA		947 mA	88	1000	
UM3017		±12VDC	±835 mA		938 mA	89	330	
UM3018		±15VDC	±670 mA		941 mA	89	330	
UM3019		1.5VDC	6000 mA		457 mA	82	6800	
UM3021	36-75 VDC (48VDC)	5 VDC	4000 mA	40 mA	474 mA	88	6800	B
UM3022		3.3 VDC	4250 mA		336 mA	87	6800	
UM3023		2.5 VDC	6000 mA		363 mA	86	6800	
UM3024		12 VDC	1670 mA		480 mA	87	1000	
UM3025		15 VDC	1340 mA		481 mA	87	1000	
UM3026		±5VDC	±2000 mA		474 mA	88	1000	
UM3027		±12VDC	±835 mA		469 mA	89	330	
UM3028		±15VDC	±670 mA		471 mA	89	330	
UM3029		1.5VDC	6000 mA		229 mA	82	6800	

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

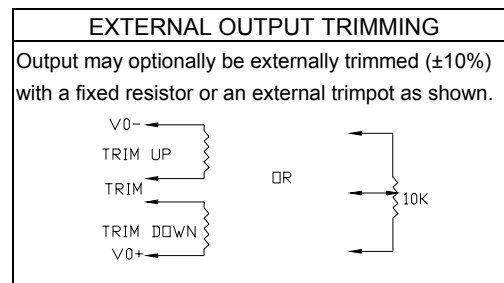
2.Maximum capacitive load across the output ports should not be over indicated values.

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	+Output	+Output
4	TRIM	COM
5	-Output	-Output
6	Remote On/Off Control	



**UNIVERSAL
MICROELECTRONICS**

3,27TH RD., TAICHUNG INDUSTRIAL PARK,
TAICHUNG, TAIWAN, R.O.C.
TEL: 886-4-23590096 FAX: 886-4-23590129