

UM3000 SERIES

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



SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range 24V Nominal, 18-36 VDC
 48V Nominal, 36-75 VDC
 Input Filter Pi Network

OUTPUT SPECIFICATIONS

Voltage Accuracy ±1% max.
 External Trim Adj. Range ±10%
 Line Regulation¹ ±0.5% max.
 Load Regulation² ±0.5% max.
 Ripple and Noise , 20MHz-BW³ ≤25 mV RMS max.
 100 mV P-P max.
 Temperature Coefficient ±0.02%/°C max.
 Overvoltage Protection Trip Point (Zener Clamping Type)
 2.5V 4.3V typ.
 3.3V 4.3V typ.
 5V 6.8V typ.
 12V 15V typ.
 Short Circuit Protection Continuous
 Over Temperature Shutdown Point⁴ 120°C typ.
 Minimum Load⁵ 10% Full Load

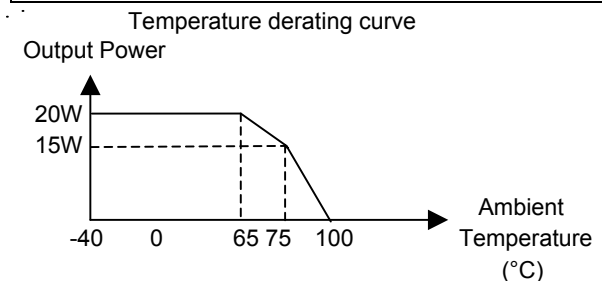
GENERAL SPECIFICATIONS

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

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



Maximum case temperature must not be exceeded 100°C.

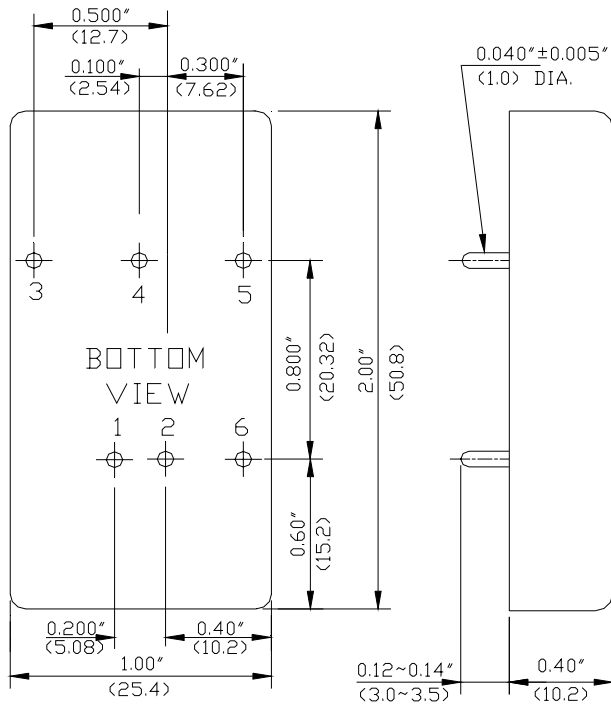


2539 W. 237TH STREET, SUITE A,
 TORRANCE, CA 90505
 TEL: (310) 326-7072 FAX: (310) 326-7058

MODEL NUMBER	INPUT RANGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF	REGULATION		CASE
				NO LOAD	FULL LOAD		LINE	LOAD	
UM3011	18-36 VDC	5 VDC	4000 mA	80 mA	947 mA	88	0.5%	0.5%	B
UM3012		3.3 VDC	4250 mA	80 mA	671 mA	87	0.5%	0.5%	
UM3013		2.5 VDC	5000 mA	80 mA	605 mA	86	0.5%	0.5%	
UM3021	36-75 VDC	5 VDC	4000 mA	40 mA	474 mA	88	0.5%	0.5%	B
UM3022		3.3 VDC	4250 mA	40 mA	336 mA	87	0.5%	0.5%	
UM3023		2.5 VDC	5000 mA	40 mA	302 mA	86	0.5%	0.5%	
UM3024		12 VDC	1660 mA	40 mA	477 mA	87	0.5%	0.5%	

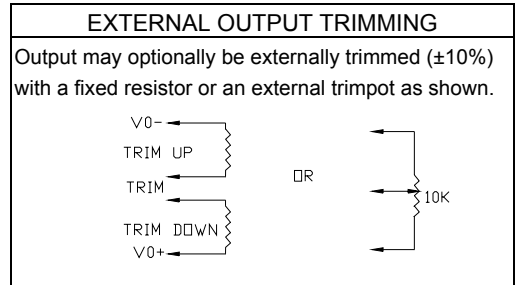
NOTE: Other output voltage can be supported upon request.

CASE B



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

PIN CONNECTIONS	
PIN NUMBER	PIN FUNCTION
1	+Input
2	-Input
3	+Output
4	Trim
5	-Output
6	Control



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