

UM3500 SERIES

40 Watts DC-DC Converters

- Synchronous-Rectifier Topology
- Remote On/Off Control
- Continuous Short Circuit Protection
- High Efficiency
- Non-Isolated
- Current Share Function



SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range, 5V 4.75-5.5V
12V 10.4-13.6V
Input Filter Capacitive

OUTPUT SPECIFICATIONS

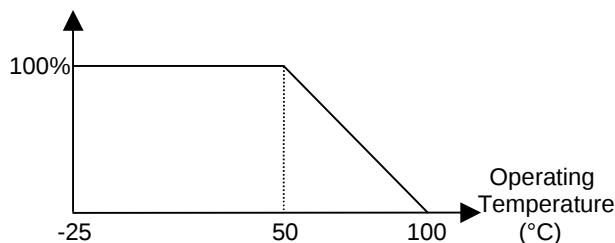
Voltage Accuracy $\pm 2\%$ max.
Transient Response(25% Step Load Change) $< 500 \mu S$
Line Regulation¹ $\pm 0.5\%$ max.
Load Regulation² $\pm 0.7\%$ max.
Ripple and Noise, 20MHz BW³ 75mV P-P max.
Temperature Coefficient $\pm 0.02\%/^{\circ}C$ max.
Short Circuit Protection Continuous Automatic Recovery

GENERAL SPECIFICATIONS

Efficiency See Table
Switching Frequency 200KHz typ.
Operating Temperature Range⁴ $-25^{\circ}C$ to $+100^{\circ}C$
Storage Temperature $-40^{\circ}C$ to $+105^{\circ}C$
Cooling Free Air Convection
Dimensions 2 x 1 x 0.4 inches
(50.8 x 25.4 x 10.2mm)
Case Material Black-Coated Copper with Non-Conductive Base

NOTES:

1. Measure from high line to low line.
2. Measure from full load to 1/2 load.
3. Measured with 1uF ceramic cap. Connected to the output pins.
4. Output Power



Maximum case temperature must not be exceeded 100°C.

5. UM3500 series can be used as parallel connection to provide current share function. The current that each converter delivers will thus be 1/N of the total current, if there are N total converters in parallel. Limitations to this scheme are dependent primarily on matching of the resistances in the converter: mismatch in resistance results in one converter delivering more current than another. When using this current share function, Pin 1(SYNC) and Pin 3(PWM) must be connected to each other or be floating if used as single unit.

REMOTE ON/OFF CONTROL

Logic Compatibility.....	CMOS or Open Collector TTL
Converter ON.....	$> +2.5 VDC$ or Open Circuit
Converter OFF.....	$< +0.8 VDC$ or Short Circuit
Control Common.....	Referenced to Input Minus



**UNIVERSAL
MICROELECTRONICS**

UM3500

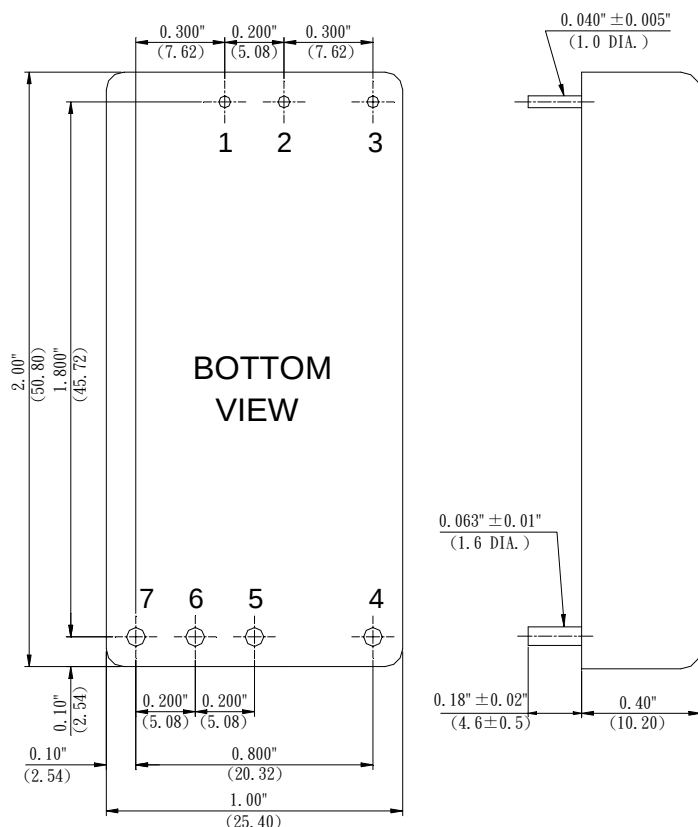
1 of 2

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

REV.1

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		% EFF (min.)	CASE
				NO LOAD	FULL LOAD		
UM3501	5VDC	3.3 VDC	12A	70 mA	9103 mA	87	B
UM3511	12VDC	3.3 VDC	10A	50 mA	3235 mA	85	B

CASE B



PIN CONNECTIONS	
Pin Number	Pin Function
1	SYNC
2	Remote On/Off
3	PWM
4	+Output
5	-Output
6	-Input
7	+Input

All dimensions in inches (mm).

Tolerance .xx = ±0.04

.xxx = ±0.010



**UNIVERSAL
MICROELECTRONICS**

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