UM2900 SERIES

40 – 50 Watt DC/DC Converters

- **2:1 Input Range**
- **40-50 W Isolated Output**
- **High-Density**
- **Remote on/off Control**
- **Design meet EN60950**

SPECIFICATIONS

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

INPUT SPECIFICATIONS

Input Voltage Range, 24V 18-36V
48V 36-72V
Input Filter ..... Pi Network

OUTPUT SPECIFICATIONS

Voltage Accuracy[1], Single Output ..... ±2%max.
Triple Output +5V ..... ±2%max.
Auxiliaries ..... ±5% max.
Transient Response[2]
Single,25% step Load Change ..... <500u sec.
External Trim Adj. Range ..... +10%
Short Circuit Protection ..... Continuous
Line Regulation[3] Single Output..... ±0.5% max.
Triple Output +5V ..... ±0.5% max.
Load Regulation[4] Single Output ..... ±1% max.
Triple Output +5V ..... ±2% max.
Ripple and Noise, 20MHz BW[5], +5V ..... 100mV p-p max.
Auxiliaries ..... 200mV p-p max.

GENERAL SPECIFICATIONS

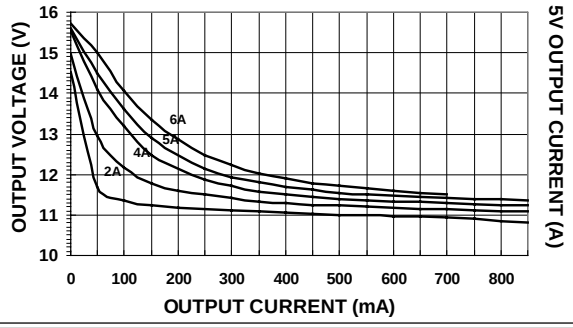
Efficiency ..... See Table
Isolation Voltage, Input/Output 1500VDC
Input/Case 1500VDC
Switch Frequency 250KHz
Isolation Resistance ..... 10^8 Ohms min.
Case Grounding ..... Capacity Coupled to Input
Storage Temperature Range ..... -40°C to +105°C
EMI/RFI ..... Five-Sided Continuous Shield
Dimensions ..... 2.2*2.2*0.5 inches
(55.88*55.88*12.7 mm)
Case Material ..... Black Coated metal
Weight 80g

NOTE

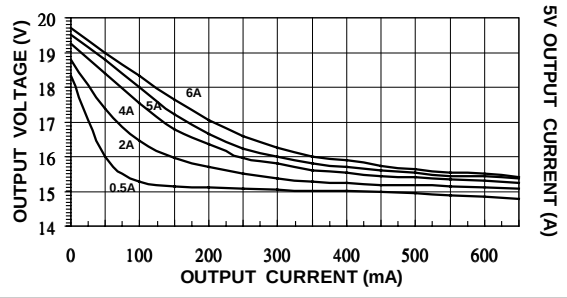
1. Defined at the static output regulation at 25°C,including initial setting accuracy, Line voltage within stated limits and load current within stated limits.
2. di/dt=0.1A/1uS ,Tc=25°C;load change=0.5 Io max. to 0.75 Io max. and 0.75 Io max. to 0.5 Io max.
3. Measured from high line to low line.
4. Single : from full load to 1/4 load, Triple: from full load to 1/2 load with all other outputs at rated load.
5. Measured with 0.1uF ceramic Cap. cross to each output. 10uF/25V Tantalum Cap to Auxiliaries output.
6. This converter require a minimum 10% loading on their primary output and 10% loading on each auxiliary output to maintain specified regulation. Operation under no-load conditions will not damage these devices; however they may not meet all listed specifications.
7. For triple outputs, common pins (5 and 8) should be connected externally.
8. Output V1 must return to common 1 and output V2 and V3 to common 2 and 3 respectively in order to meet noise and regulation specifications.

REMOTE ON/OFF CONTROL
Logic Compatibility ..... CMOS or Open Collector TTL
Ec-ON ..... > +2.5 VDC or Open Circuit
Ec-OFF,..... < 0.8 VDC
Shutdown Idle Current 10mA
Control Common ..... Referenced to Input Minus

Auxiliary Load Regulation Of UM29X7



Auxilary Load Regulation Of UM29X8



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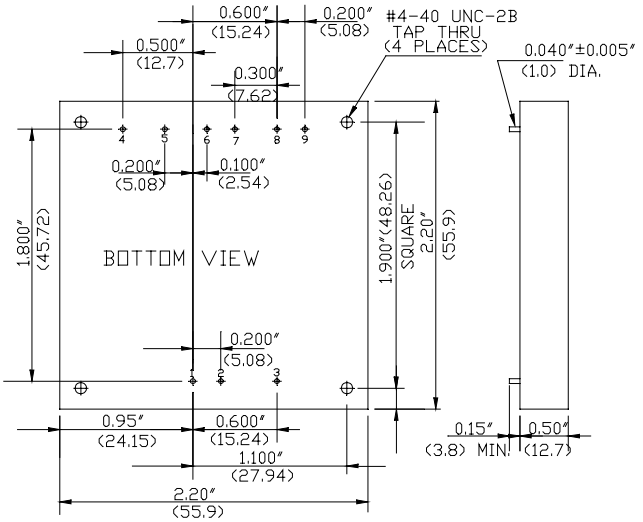
MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT FULL LOAD	MAXIMUM OUTPUT WATT	TYPICAL EFFICIENCY	CASE
UM2901	24 VDC	5 VDC	8000 mA	2110 mA	40W	80%	N
UM2907		+5/±12 VDC	6000/±830 mA	2080 mA	40W	80%	
UM2908		+5/±15 VDC	6000/±660 mA	2080 mA	40W	80%	
UM2911	48 VDC	5 VDC	8000 mA	1024 mA	40W	81%	N
UM2912		12 VDC	4160 mA	1240 mA	50W	84%	
UM2913		15VDC	3330 mA	1240 mA	50W	84%	
UM2917		+5/±12 VDC	6000/±830 mA	1040 mA	40W	81%	
UM2918		+5/±15 VDC	6000/±660 mA	1040 mA	40W	81%	
UM2919		3.3 VDC	10000 mA	890 mA	33W	77%	

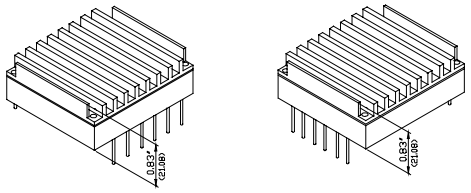
CASE N



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

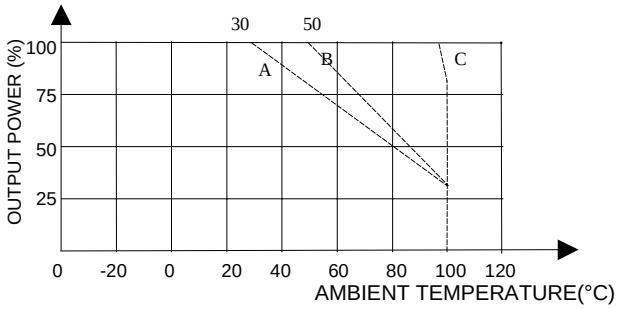
Pin Connections		
Pin	Single	Triple
1	+Vin	+Vin
2	-Vin	-Vin
3	Remote ON/OFF Control	
4	NO Pin	+Aux. Out
5	NO Pin	Common2,3
6	NO Pin	-Aux. Out
7	+Vout	+5 Vout
8	-Vout	Common1
9	Trim	Trim

To order the optional heatsink, add the suffix "X" or "Y" to the model number



TOP MOUNTED-X TOP MOUNTED-Y

Power Derating Curve with Top-Mouted Heatsink



A: Natural convection cooling without additional heatsink.
B: Natural convection cooling with additional heatsink.
C: Maximum case temperature under any condition.

EXTERNAL OUTPUT TRIMMING

Output may optionally be externally trimmed (+10%)with a fixed resister or an external trimpot as shown

The auxiliary output voltages vary proportionally with +5V output adjustment

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