

# UM200NR SERIES

## 1 to 1.5 Watt DC-DC Converters

- ◆ 24-Pin DIP Package
- ◆ 70% Efficiency
- ◆ Unregulated Outputs
- ◆ Pi Input Filter
- ◆ 500 VDC Isolation

### SPECIFICATIONS

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

### INPUT SPECIFICATIONS

Input Voltage Range ..... ± 10%  
Input Filter ..... Pi Network

### OUTPUT SPECIFICATIONS

Voltage Accuracy ..... ± 3.0% max.  
Ripple and Noise<sup>1</sup>, 20MHz BW ..... 100mV P-P max.  
Short Circuit Protection ..... Short Time  
Line Regulation<sup>2</sup> ..... ± 1.2%  
Load Regulation<sup>3</sup>, UM201NR ..... ± 8%  
All Other Models ..... ± 6%

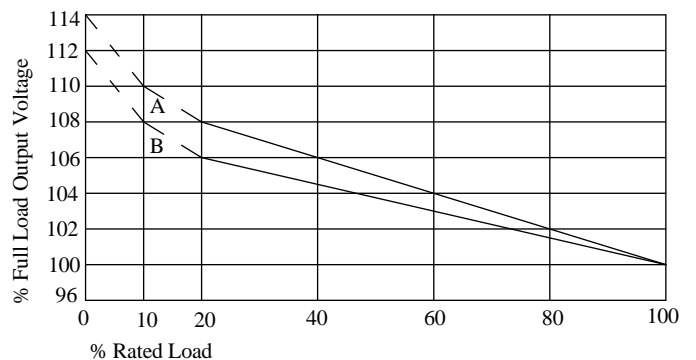
### GENERAL SPECIFICATIONS

Efficiency ..... 60-80%  
Isolation Voltage ..... 500 VDC min.  
Isolation Capacitance ..... 80pF  
Isolation Resistance ..... 10<sup>8</sup> Ohms min.  
Switching Frequency ..... 20KHz min.  
Operating Temperature Range,  
Ambient, None Derating ..... -25°C to +71°C  
Cooling ..... Free Air Convection  
Storage Temperature Range ..... -40°C to +100°C  
Dimensions ..... 1.25\*0.8\*0.4 inches  
(31.8\*20.3\*10.2mm)  
Case Material ..... Non-Conductive Black Plastic  
UL94V-0  
Weight ..... 15g

### NOTES:

- 15uF 35V, tantalum capacitor across each output.
- Line regulation is per 1.0% change in input voltage.
- Load regulation is for load change from 100% to 20% see graph of load regulation.

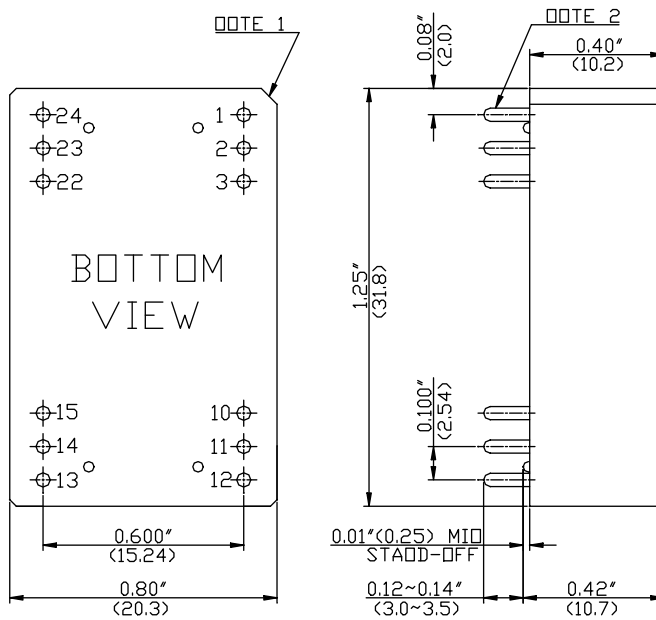
Typical Load Regulation



Line A-UM201 NR  
Line B-All other models

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		CASE
				NO LOAD	FULL LOAD	
UM201NR	5 VDC	5 VDC	220 mA	115 mA	345 mA	A
UM203NR		12 VDC	125 mA	115 mA	450 mA	
UM205NR		15 VDC	100 mA	115 mA	450 mA	
UM207NR		± 12 VDC	± 62 mA	115 mA	450 mA	
UM209NR		± 15 VDC	± 50 mA	115 mA	450 mA	
UM211NR	12 VDC	5 VDC	220 mA	45 mA	125 mA	A
UM213NR		12 VDC	125 mA	45 mA	170 mA	
UM215NR		15 VDC	100 mA	45 mA	170 mA	
UM217NR		± 12 VDC	± 62 mA	45 mA	170 mA	
UM219NR		± 15 VDC	± 50 mA	45 mA	170 mA	

CASE A



PIN CONNECTIONS		
Pin	Single Output	Dual Output
1	+V Input	+V Input
2	NC*	-V Output
3	NC*	Common
10	-V Output	Common
11	+V Output	+V Output
12	- V Input	- V Input
13	-V Input	-V Input
14	+V Output	+V Output
15	-V Output	Common
22	NC*	Common
23	NC*	-V Output
24	+V Input	+V Input

\*NC(No Connection)on single output models.

All dimensions in inches(mm)  
 Note 1:Cut-corner marking for Pin No.1  
 Note 2:Pin size is 0.020± 0.005 inch(0.5mm)dia.  
 or 0.020\*0.012 inch  
 Note 3:Tolerance .xx =± 0.02  
 .xxx =± 0.010