

# LAN-1 SERIES

## 1 to 2 Watt LAN DC-DC Converters

- ◆ Cheapernet Application
- ◆ 24-Pin DIP Package
- ◆ Full Power to +71°C
- ◆ Pi Input Filter
- ◆ 5 or 12 VDC Input

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### SPECIFICATIONS

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

### INPUT SPECIFICATIONS

Input Voltage .....5 or 12 VDC  
Input Voltage Range ..... ± 10%  
Input Filter ..... Pi Network

### OUTPUT SPECIFICATIONS

Output Voltage ..... 9 VDC  
..... +10 VDC  
..... +5 DVC  
Voltage Accuracy,9 VDC ..... ± 5% max.  
10 VDC .....± 4% max.  
5 VDC..... ± 2% max.  
Ripple and Noise, 20MHz BW,  
9 VDC..... 100mV P-P max.  
10 VDC.....300mV P-P max.  
5 VDC.....300mV P-P max.  
Short Circuit Protection ..... Short Time  
Line Regulation  
Regulated Models ..... ± 0.3%  
Unregulated Models<sup>1</sup> ..... ± 1.2%  
Load Regulation  
Regulated Models<sup>2</sup> ..... ± 0.5%  
Unregulated Models<sup>3</sup>,UM251NR ..... ± 8%  
All Other Models .....± 6%

### GENERAL SPECIFICATIONS

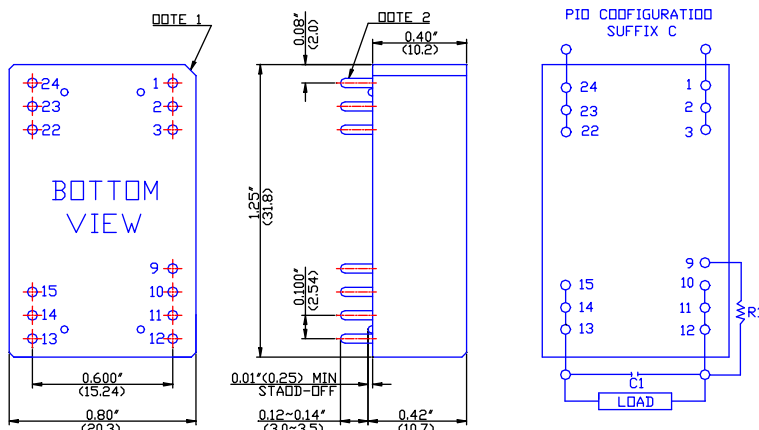
Efficiency,  
Regulated Models ..... 50%  
Unregulated Models ..... 70%  
Switching Frequency ..... 20 KHz min.  
Isolation Voltage ..... 500 VDC min.  
Operating Temperature Range  
Ambient, None Derating ..... -25°C to +71°C  
Cooling ..... Free Air Convection  
Storage Temperature Range ..... -40°C to +85°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

1. Per 1% change in input voltage.
2. For a load change from 60mA to 140mA.
3. For a load change from 100% full load to 40% full load.

MODEL NUMBER	INPUT VOLTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	INPUT CURRENT		PIN CONN.	CASE
				NO LOAD	FULL LOAD		
REGULATED							
UM251	5 VDC	9 VDC	140mA	120mA	525mA	C	A
UM271	12 VDC	9 VDC	140mA	45mA	205mA	C	A
UNREGULATED							
UM251NR	5 VDC	9VDC	250mA	100mA	615mA	A	A
UM255NR	5 VDC	10/5 VDC	100/80mA	110mA	385mA	B	A
UM271NR	12VDC	9 VDC	250mA	40mA	265mA	A	A

CASE A



All dimensions in inches(mm)  
 Note 1: Cut-corner marking for PinNo.1  
 Note 2: Pin size is 0.020± 0.005 (0.5mm)dia.  
 Or 0.020\*0.012 inch  
 Note 3: Tolerance .xx =± 0.02  
 .xxx =± 0.010

Pin	A	B	C
1	+V Input	+V Input	+V Input
2	NC*	V Common	+V Input
3	NC*	+5V Output	+V Input
9	No Pin	No Pin	Resistor*
10	-V Output	V0 Common	+V Output
11	+V Output	+10V Output	+V Output
12	-V Input	-V Input	+V Output
13	-V Input	-V Input	-V Output
14	+V Output	+10V Output	-V Output
15	-V Output	V0 Common	-V Output
22	NC*	+5V Output	-V Input
23	NC*	V0 Common	-V Input
24	+V Input	+V Input	-V Input

\*External Resistor R1.

C1=10.0µF 25V Tantalum Capacitor  
 R1=100Ω

C1 will improve output noise performance. It is not required for converter operation. Pin 9 provides a preregulated output voltage, (Regulated units only, UM251, UM271) which used as shown above provides for a full load output current of 140mA, when load current is less than 60mA output voltage will rise and for no load condition it rise to approximately 13 volts.

\*NC: No connection.