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**

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[1] ……………………………….. ± 1.2%
Load Regulation
Regulated Models[2] ……………………………..…… ± 0.5%
Unregulated Models[3],UM251NR ……………………. ± 8%
All Other Models …………………± 6%

GENERAL SPECIFICATIONS

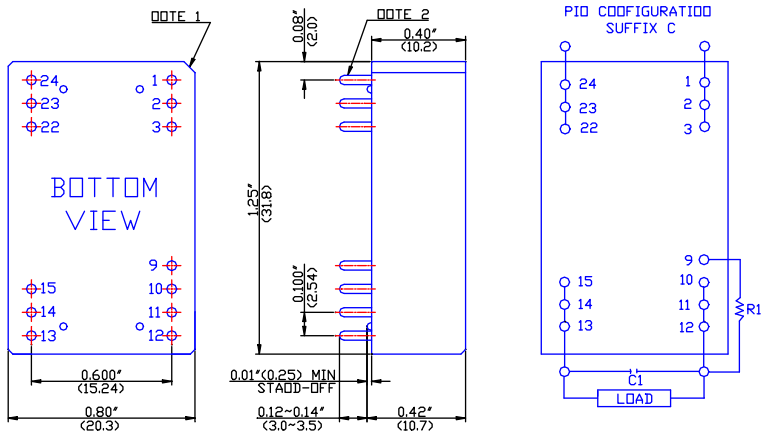
Efficiency,
Regulated Models …… ……..……………..…………… 50%
Unregulated Models …………………………………… 70%
Switching Frequency …………………………… 20 KHz min.
Isolation Voltage ……………………………... 500 VDC min.
Operating Temperature Range
Ambient, None Derating ………………… -25°C to +71°C
Cooling ………………………………… Free Air Convection
Storage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

UNIVERSAL MICROELECTRONICS