

UNREGULATED 2.25 WATT DUAL-IN-LINE DC/DC CONVERTER

LP02U

FEATURES

- 24-PIN DIP PACKAGE
- INTERNAL FILTERING
- LOW OUTPUT NOISE
- TEMPERATURE RANGE: -25°C TO +70°C
- SURFACE MOUNT CONSTRUCTION

APPLICATIONS

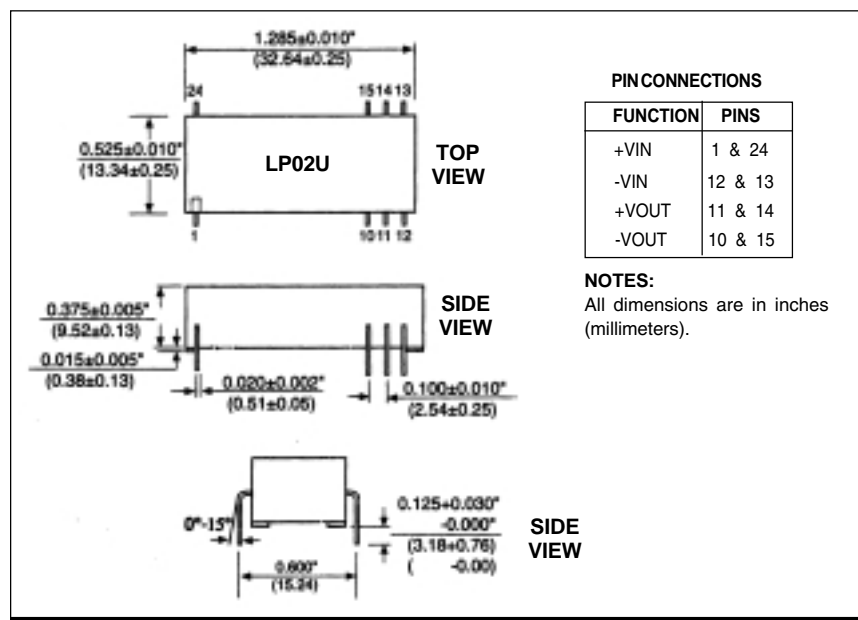
- ETHERNET ADAPTER CARDS
- CHEAPERNET LOCAL AREA NETWORKS (LANs)

DESCRIPTION

The LP02U Series is designed specifically for low-cost Local Area Network applications. It provides isolated power for LAN transceiver devices. The product operates from either 5 or 12 volts input voltage and supplies an isolated -9 volts output.

The LP02U Series is housed in an industry standard 24-pin dual-in-line (DIP) package to permit upgrading of existing systems. A 100kHz push-pull oscillator is used in the input stage, complementing the units high efficiency and low noise characteristics.

MECHANICAL PACKAGE/PINOUT "K"



The LP02U Series offers the user a cost effective solution without sacrificing reliability. A highly automated manufacturing process is employed in which all components are surface mounted and reflow-soldered, eliminating any hand-soldering during construction. This dramatically reduces unit variation and improves reliability.

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ELECTRICAL SPECIFICATIONS

Specifications typical at T_A = +25°C, nominal input voltage, rated output current unless otherwise specified.

| Model | Nominal Input Voltage (Vdc) | Rated Output Voltage (Vdc) | Rated Output Current (mA) | Input Current | | Efficiency (%) |
|------------|-----------------------------|----------------------------|---------------------------|---------------|-----------------|----------------|
| | | | | No Load (mA) | Rated Load (mA) | |
| LP02U05S09 | 5 | 9 | 250 | 50 | 568 | 80 |
| LP02U12S09 | 12 | 9 | 250 | 30 | 240 | 77 |

NOTE: Other input to output voltage options may be available. Please consult factory.

COMMON SPECIFICATIONS

Specifications typical at T_A = +25°C, nominal input voltage, rated output current unless otherwise specified.

| PARAMETER | CONDITIONS | MIN | TYP | MAX | UNITS |
|---------------------------------|--|--------------|---------|--------------|------------------------------------|
| INPUT | | | | | |
| Voltage Range | LP02U05S09 LP02U12S09 | 4.75 11.4 | 5 12 | 5.25 12.6 | V _{DC} V _{DC} |
| Voltage Rise Time | | | | | |
| ISOLATION | | | | | |
| Rated Voltage | 60Hz, 10 Seconds | 500 | | | V _{rms} |
| Test Voltage | | 500 | | | V _{pk} |
| Resistance | | | 1 | | GW |
| Capacitance | | | 30 | | pF |
| OUTPUT | | | | | |
| Rated Power | I _{LOAD} =200mA BW = DC to 10MHz BW =DC to 2MHz High Line to Low Line 25mA≤I _{LOAD} ≤200mA | | 2.25 | | W |
| Voltage Setpoint Accuracy | | | ±3 | | % |
| Ripple & Noise | | | 30 | | mVp-p |
| | | | 3 | | mV _{rms} |
| Line Regulation | | | 1.15 | | %/% |
| Load Regulation | | | ±10 | | % |
| GENERAL | | | | | |
| Switching Frequency | Circuit Stress Method T _A = +25°C T _A = +70°C | | 100 | | KHz |
| Package Weight | | | 6 | | g |
| MTTF per MIL-HDBK-217, Rev. E * | | | 3.0 | | MHr |
| Ground Benign | | | 700 | | KHr |
| TEMPERATURE | | | | | |
| Specification | | -25 | +25 | +70 | °C |
| Operation | | -55 | | +85 | °C |
| Storage | | -55 | | +100 | °C |

ABSOLUTE MAXIMUM RATINGS

| | |
|---|----------|
| Output Short-Circuit Duration..... | 1 second |
| Internal Power Dissipation | 1W |
| Lead Temperature (soldering, 10 seconds max)..... | +300°C |

ORDERING INFORMATION

LP02U

xyzz

K

/H

Device Family

Indicates Lan Enabled 2 Watt Regulated Unit

Model Number

Selected from Table of Electrical Characteristics

Where:

xx = Input Voltage

y = Number of Outputs (Single "S")

zz = Output Voltage

Package Option

Screening Option

LOAD PERFORMANCE CURVE

