

**Product Data Sheet** 

# 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

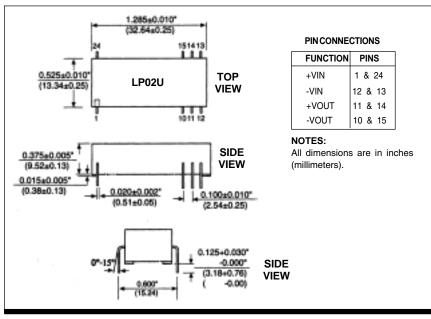
# **APPLICATIONS**

- 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.

# MECHANICAL PACKAGE/PINOUT "K"



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.

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.

Internet: http://www.cdpowerelectronics.com

Power Electronics Division, United States 3400 E Britannia Drive, Tucson, Arizona 85706 Phone: 800.547.2537 Fax: 520.770.9369

# **ELECTRICAL SPECIFICATIONS**

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

	Nominal	Rated	Rated	Input Current			
Model	Input Voltage (VDC)	Output Voltage (VDC)	Output Current (mA)	No Load (mA)	Rated Load (mA)	Efficiency (%)	
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**

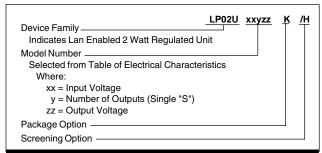
Specifications typical at  $T_A = +25$ °C, nominal input voltage, rated output current unless otherwise specified.

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT					
Voltage Range	LP02U05S09	4.75	5	5.25	VDC
Voltage Dies Time	LP02U12S09	11.4	12	12.6	VDC
Voltage Rise Time					
ISOLATION					
Rated Voltage		500			Vrms
Test Voltage	60Hz, 10 Seconds	500			Vpk
Resistance			1		GW
Capacitance			30		pF
ОИТРИТ					
Rated Power			2.25		l w
Voltage Setpoint Accuracy	I <sub>LOAD</sub> =200mA		±3		%
Ripple & Noise	BW = DC to 10MHz		30		mVp-p
	BW =DC to 2MHz		3		mVrms
Line Regulation	High Line to Low Line		1.15		%/%
Load Regulation	25mA <u>&lt;</u> I <sub>LOAD</sub> <u>&lt;</u> 200mA		±10		%
GENERAL					
Switching Frequency			100		KHz
Package Weight			6		g
MTTF per MIL-HDBK-217, Rev. E *	Circuit Stress Method				
Ground Benign	$T_A = +25^{\circ}C$		3.0		MHr
	T <sub>A</sub> = +70°C		700		KHr
TEMPERATURE					
Specification		-25	+25	+70	°C
Operation		-55		+85	°C
Storage		-55		+100	°C

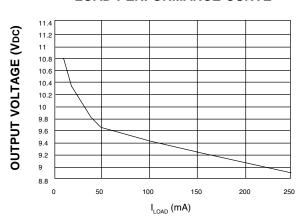
#### **ABSOLUTE MAXUMUM RATINGS**

Output Short-Circuit Duration1 second	
Internal Power Dissipation1W	
Lead Temperature (soldering, 10 seconds max)+300°C	

#### **ORDERING INFORMATION**



## LOAD PERFORMANCE CURVE



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