

# SEMICONDUCTOR CIRCUITS General Purpose, Economy DC/DC Converters

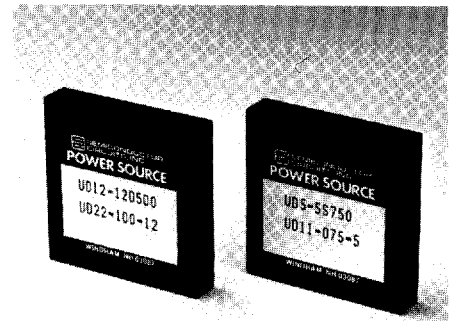
UD

- EFFICIENCY TO 85%
- MTBF EXCEEDS 150,000 HOURS
- OUTPUTS SHORT CIRCUIT PROTECTED

The UD Series are compact, economy-priced single and dual output DC/DC converters. These units contain no output regulator, but efficient design affords ample regulation for many analog and digital applications. Otherwise this family boasts the same excellent features of the RD and RA Series described elsewhere within these pages.

All UD models offer easy to use built-in quality features. These include a high performance Pi input filter which minimizes input reflected ripple and an advanced design which reduces output noise. For reliability, all outputs are short-circuit protected, while efficiency to 85% promotes cooler operation and MTBFs in excess of 150,000 hours.

Input-to-output isolation and dual output tracking provide versatility and round out a combination of features usually found in converters costing far more.



### Ordering Information

Input Voltage Range (Vdc)	Output Voltage (Vdc)	Output Current (mA)	Pkg. (Fig. 1)	New Model Number	Old Model Number
4.5-5.5	5V	750	B	UD11-075-5	UD5-5S750
4.5-5.5	12V	600	B	UD12-060-5	UD5-12S600
4.5-5.5	+12V/ -5V	+300/ -100	B	UD24-040-5	UD5722
4.5-5.5	±12V	±300	B	UD22-060-5	UD5-12D300
		±400	C	UD22-080-5	UD5-12D400
10.8-13.2	±12V	±500	B	UD22-100-12	UD12-12D500
		±650	C	UD22-130-12	UD12-12D650
4.5-5.5	±15V	±300	B	UD23-060-5	UD5-15D300
		±400	C	UD23-080-5	UD5-15D400
10.8-13.2	±15V	±500	B	UD23-100-12	UD12-15D500
		±650	C	UD23-130-12	UD12-15D650

\*Other versions available, please consult factory.  
 Socket Information: Standard UD, use socket P/N #100038  
 For socket dimensional information refer to page 23  
 NOTE: Dual output units may be run unbalanced provided maximum rated output power is not exceeded. Example: ±12 V ±650 mA may be used as single 12 V 1300 mA. Use dual output pin connections.

### General Specifications

**Input Reflected Ripple**  
 <1% Vin (max)

**Output Voltage Tolerance**  
 ±3% at specified Vin and F.L.

**Regulation**  
 Line: 1%/Vin (Typ.)  
 Load: See load curve

**Ripple and Noise**  
 30mV RMS

**Operating Temperature Range**  
 -25°C to +71°C (No Derating)

**Storage Temperature Range**  
 -40°C to +85°C

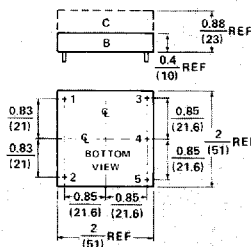
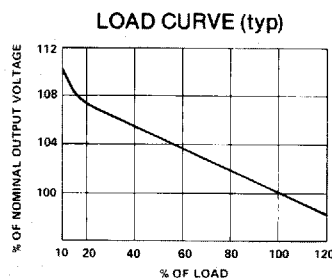
**Efficiency**  
 65-85% (at nominal line, full load)

**I/O Isolation**  
 Voltage: 300Vdc  
 Resistance: 100 Megohms

**Oscillator Frequency Range**  
 6-20 KHz

**Output Protection**  
 Short-Circuit Protected

### Dimensions and Connections



### Connections

#### Single Outputs

- PIN 1 +Vdc in
- 2 -Vdc in
- 3 +Vdc out
- 4 Do Not Connect
- 5 -Vdc out

#### Dual Outputs

- PIN 1 +Vdc in
- 2 -Vdc in
- 3 +Vdc out
- 4 Common out
- 5 -Vdc out

- NOTES:  
 1. Five Pins 0.040 (1.0) Dia. x 0.20 (5.1) Lg. Min.  
 2. All dimensions are in Inches and (mm).

APPLICATION NOTES:  
 Same as μD Series Application Notes 2 and 3 in following pages.

Specifications Subject to Change Without Notice.

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