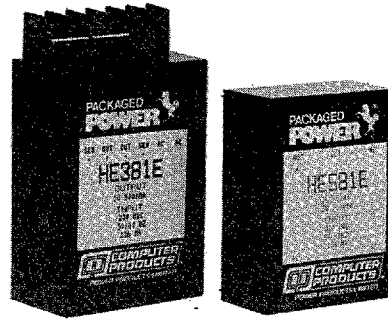


# HE300 and HE500 SERIES

## Single output

Recommended for new design-ins

- 60 to 75% efficiency
- Excellent regulation
- OVP on 5V output
- 115VAC input
- Short circuit protection
- Internal input filter



**2 YEAR WARRANTY**

This series of off-line switching power modules provides 25 Watts of output power at 5, 12 or 15VDC. The HE300 and HE500 series both incorporate a pulse width modulated flyback circuit. Both series operate at over 25kHz and achieve 60 to 75% conversion efficiency with excellent line and load regulation. The HE300 and HE500 Series have a pi network, balun input filter and a continuous six sided shield. All models have overvoltage protection. Other important specifications

include  $\pm 2.0\%$  output voltage accuracy, 100 to 130VAC input voltage range, and 900VAC isolation voltage. In addition, the HE300 Series has remote sensing to compensate for up to 0.3V drop in the load distribution lines. HE300 and HE500 Series power supplies are ideal for general purpose industrial, office and process applications.

### SPECIFICATION

ALL SPECIFICATIONS ARE TYPICAL AT NOMINAL INPUT, FULL LOAD AND 25°C UNLESS OTHERWISE STATED

OUTPUT SPECIFICATIONS		
Voltage accuracy		$\pm 2.0\%$ , max.
Remote sense	HE300 Series HE500 Series	$\leq 0.3V$ Not available
Line regulation	Full range	$\pm 0.05\%$ , max.
Load regulation	NL-FL	$\pm 0.1\%$ max.
Transient response	50% to FL step in 0.1 $\mu$ s	150mV dev., 500 $\mu$ s recovery to 0.5%
Temperature coefficient		$\pm 0.02\%/^{\circ}C$ , max.
Overvoltage protection	SCR crowbar 5V output 12V and 15V outputs	110 to 140% 110 to 150%
Output power limit		110 to 150%
Short circuit protection	Max. ambient 46°C	Continuous automatic recovery
INPUT SPECIFICATIONS		
Input voltage range		100 to 130VAC
Input frequency range		47 to 400Hz
Input filter		Pi network and balun
No load input current	115VAC	0.02A (rms)
Inrush current	115VAC	25A, peak for 1.5ms

GENERAL SPECIFICATIONS		
Efficiency		60 to 75%, typical
Isolation voltage	Input/output, 115VAC Output/ground	900V rms 500V rms
Switching frequency	Fixed	25kHz
Case material		Non-conductive black plastic
Weight	HE300, Case B2 HE500, Case C1	340g (12oz) 460g (16.2oz)
MTBF		115,000 hours
ENVIRONMENTAL SPECIFICATIONS		
Thermal performance	Operating ambient Non-operating amb. Derating, +50°C to +71°C Cooling	-25°C to +71°C -25°C to +85°C 2.5%/°C Free air convection
Relative humidity	Non-condensing	20% to 95% RH

# 25 Watt AC/DC encapsulated modules

OUTPUT VOLTAGE	OUTPUT CURRENT	OVP	REGULATION		RIPPLE AND NOISE (2)	CASE	MODEL NUMBER
			LINE	LOAD (1)			
25 WATT PC-MOUNTABLE (3)							
5VDC	5.0A	Yes	±0.05%	±0.1%	100mV	B2	HE581
12VDC	2.2A	No	±0.05%	±0.1%	100mV	B2	HE583
15VDC	1.8A	No	±0.05%	±0.1%	100mV	B2	HE584
25 WATT CHASSIS-MOUNTABLE (3,4)							
5VDC	5.0A	Yes	±0.05%	±0.1%	100mV	C1	HE381
12VDC	2.2A	No	±0.05%	±0.1%	100mV	C1	HE383
15VDC	1.8A	No	±0.05%	±0.1%	100mV	C1	HE384

**Notes**

- 1 Measured from zero load to full load.
- 2 Figures are peak-to-peak (25MHz bandwidth).
- 3 All PC-mountable versions have case style B2, and all chassis-mountable versions have case style C1.
- 4 All chassis-mountable versions offer remote sense capability.

**Mechanical notes**

- A In the mechanical diagram for case C1, the insert in the top left corner is connected to the internal AC ground. Connecting this point to external AC ground improves input noise filtering. To ensure good electrical connection, use a star washer to cut through any film or paint on the grounded system chassis.

