

DC/DC

3.9 to 12 Watts

Single/Dual Outputs

HUD/HUA Series

- MTBF in excess of 1,000,000 hours
- Pi input filter
- Efficiency 80% (typ)
- Continuous short circuit protection
- Operating temperature range -25°C to +71°C No Derating

The HUD is a cost-effective series of DC/DC converters, offering both single and dual outputs. These unregulated converters offer the latest in MOSFET technology. Featuring efficiencies to 80%, cool operating case temperatures, and a high level of reliability with a MTBF in excess of 1,000,000 hours¹. Additional standard features include continuous short circuit protection, an internal Pi filter, 500 Vdc I/O isolation, up to 12 Watts of output power and operating temperature of -25°C to +71°C with no derating. All this is in a package measuring 2.0" x 2.0" x 0.40" high.

Applications

The HUD Series is ideally suited for many analog and digital applications in process control, microprocessors, telecommunication and automatic test equipment.



Specifications

INPUT

Input Voltage Range	4.0 - 6.0 Vdc
Filtering	PI

OUTPUT

Voltage Tolerance	± 3% @ nom input
Ripple and Noise	30 mV RMS*
Short Circuit Protection	Yes
Temperature Coefficient	0.02%/1°C max.

GENERAL

Regulation: Line/Load	± 1%/V _{in} (typ) Load Curve
Efficiency	80% (typ)
I/O Isolation	500 Vdc
Switching Frequency	40 kHz

ENVIRONMENTAL

Operating Temperature Range	-25°C to +71°C
Storage Temperature Range	-40°C to +105°C
Cooling	Free-air Convection

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1: MTBF is calculated per MIL STD Handbook 217D at 25°C and ground benign.

All specifications are typical at nominal line and full load at 25°C unless otherwise noted.

HUD/HUA Series Ordering Information

ASTEC AMERICA/SEMICON

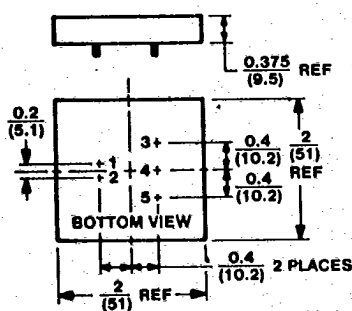
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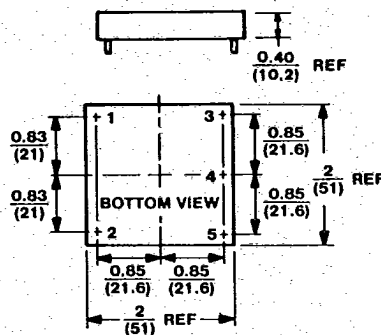
Input Voltage Range VDC	Output Voltage	Output Current	Case 1 Model Number	Case 2 Model Number
4.0-6.0	5 Vdc	750 mA	HUA11-075-5	HUD11-075-5
4.0-6.0	12 Vdc	600 mA	HUA12-060-5	HUD12-060-5
4.0-6.0	12 Vdc	800 mA	HUA12-080-5	HUD12-080-5
4.0-6.0	± 12 Vdc	± 300 mA	HUA22-060-5	HUD22-060-5
4.0-6.0	± 12 Vdc	± 400 mA	HUA22-080-5	HUD22-080-5
4.0-6.0	± 15 Vdc	± 300 mA	HUA23-060-5	HUD23-060-5
4.0-6.0	± 15 Vdc	± 400 mA	HUA23-080-5	HUD23-080-5

T-57-11

Dimensions and Connections



CASE 1



CASE 2

PIN CONNECTIONS

Single Output

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

Dual Output

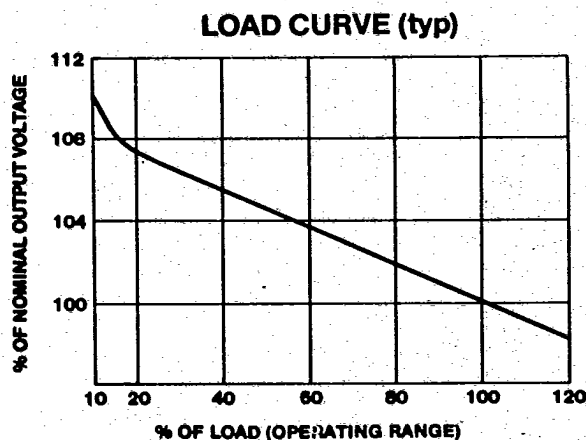
- PIN 1. + Vdc in
2. - Vdc in
3. + Vdc out
4. Common out
5. - Vdc out

NOTES:

- Five Pins 0.040 (1.0) Dia. x 0.20 (5.1) Lg Min.

APPLICATION NOTES:

- IT IS IMPORTANT for both test and usage that each active output be decoupled by connection of a 10 μ F/25 V tantalum capacitor AS CLOSE AS POSSIBLE TO THE LOAD.
- Dual output applications will require 2 capacitors. For realistic readings, noise measurement should be taken across the capacitor(s).



*Measured with 3.3 MF 25V tantalum capacitor across each output.
Specifications subject to change without notice.

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