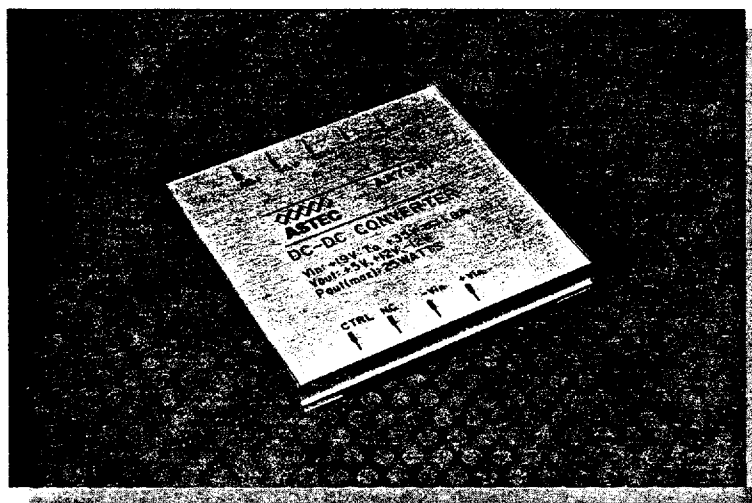


T-57-11

The AA78/79 Series is an economical series of high efficiency, hybrid DC/DC converters that accept a wide range of input voltages and provide all of the standard output voltages. The isolated, floating outputs can be referenced positive or negative or connected in series for higher output voltages. These converters offer the latest in MOSFET and surface mount hybrid technology.



Special Features

- Low profile (0.4 inches)
- High power density (6.5 watts per cubic inch)
- 400 KHz switching frequency
- Adjustable output
- Overcurrent protection
- High efficiency (80% typical)
- Isolated outputs (500 Vdc)
- Remote on/off control
- PCB mounting
- Keyed connectors
- UL/CSA approval

The AA78/79 Series features efficiencies of 80%, an MTBF in excess of 1,000,000 hours, output voltage trim, and a remote inhibit. The substrate on which the components are mounted is fixed to the top cover, ensuring low thermal resistance and efficient cooling. All this is provided in a 3.0 x 3.0 x 0.4 inch low profile package, making these converters ideally suited for 0.75 inch card spacing. Applications include telecommunications equipment using microprocessors, digital circuitry, or analog circuitry operating off central office supplies or batteries.

Electrical Specifications

Input

Voltage range	35 - 63, 19 - 35
Input surge max	75 Vdc
Input filtering	LC
Reflected ripple	< 100 mA p-p

Output

Voltage tolerance	± 3%
Ripple and noise	+5 V 100 mV p-p ± 12 V 240 mV p-p ± 15 V 300 mV p-p
Short circuit protection	Continuous, auto restart
Temperature coefficient	0.02% / °C max

General

Regulation:

Line & Load*	± 2% on main output ± 10% aux. output ± 5% max excursion returns to < 1% within 400 µsec
Transient response	

Efficiency	78% (typ)
I/O isolation	500 Vdc
Insulation resistance	> 20 Mohm
Switching frequency	400 kHz

Environmental

Operating temperature range:
0°C to 85°C

Storage temperature:
-40°C to +85°C

Cooling:
Free air convection

Notes

* Minimum load 10% of full load except zero on 5 V single output models.

Maximum capacitive load, no limit except 470 µF on AA7812A, AA7942A.

Specifications subject to change without notice.

Safety

UL UL1950 (File #E132002)
CSA CSA22.2-1402B (File #LR82814C)

DC/DC
Converters
25 to 40 Watts
AA78/79 Series



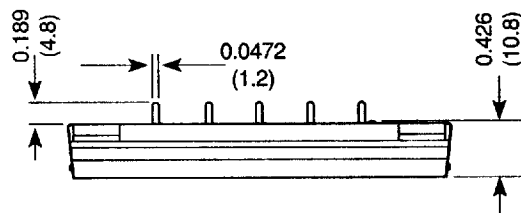
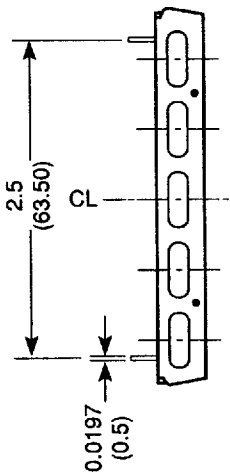
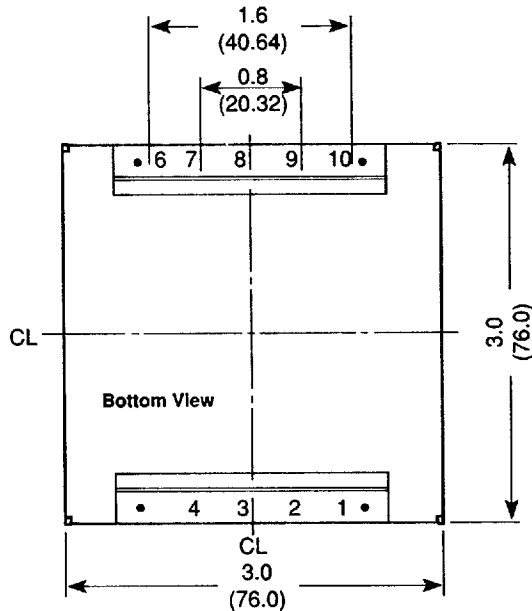
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Ordering Information

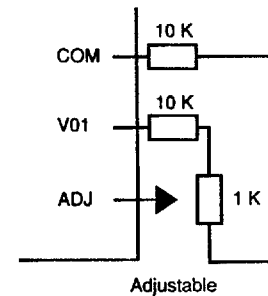
	Input Voltage	Output Voltage	Output Current	Model Number
Single	19 - 35 V	5 V	8 A	AA7942A
	19 - 35 V	15 V	2 A	AA7946A
	35 - 63 V	5 V	8 A	AA7812A
	35 - 63 V	15 V	2 A	AA7816A
Dual	19 - 35 V	± 12 V	2.5 A / 2 A	AA7944A
	35 - 63 V	± 12 V	2.5 A / 2 A	AA7814A
Triple	19 - 35 V	5 V, ± 12 V	5 A, ± 1 A	AA7941A
	19 - 35 V	5 V, ± 15 V	5 A, ± 0.8 A	AA7945A
	35 - 63 V	5 V, ± 12 V	5 A, ± 1 A	AA7811A
	35 - 63 V	5 V, ± 15 V	5 A, ± 0.8 A	AA7815A

Drawings



Output Adjust

- Output 1 can be adjusted by a maximum of $\pm 10\%$. Outputs 2 and 3 will track Output 1.



Notes

- Units may be flow soldered but should not be immersed in cleaning agents.
- All dimensions are in inches and (mm).
- Remote on/off control is applied referenced to -Vin. TTL low or connection to -Vin inhibits unit. Floating or TTL high enables unit.
- All specifications are typical at nominal input, full load, 25°C ambient unless otherwise noted.
- Maximum operating case temperature 85°C.
- MTBF (MIL-HDBK-217E, component stress method): 911K hours @ 25°C ambient and 779K hours @ 40°C ambient.

Pin Assignments

Single Output

Pin 1	On/off
Pin 2	No connect
Pin 3	+Vin
Pin 4	-Vin
Pin 6	No connect
Pin 7	No connect
Pin 8	Output common
Pin 9	+5 V output
Pin 10	Output adjust

Dual Output

Pin 1	On/off
Pin 2	No connect
Pin 3	+Vin
Pin 4	-Vin
Pin 6	-12 V or -15 V
Pin 7	No connect
Pin 8	Output common
Pin 9	+12 V or +15 V
Pin 10	Output adjust

Triple Output

Pin 1	On/off
Pin 2	No connect
Pin 3	+Vin
Pin 4	-Vin
Pin 6	-12 V or -15 V
Pin 7	+12 V or +15 V
Pin 8	Output common
Pin 9	+5 V output
Pin 10	Output adjust