

# CHEROKEE INTERNATIONAL, INC.

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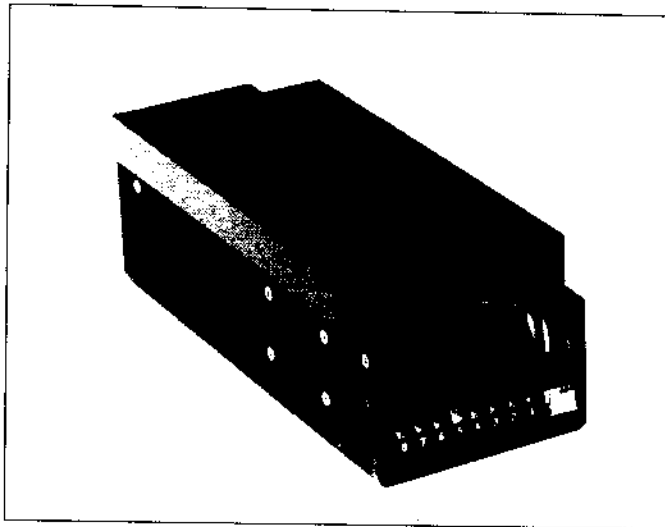
## PRODUCT SPECIFICATION

DC to DC

### QP5 Series

Multiple Output Switching Power Supplies

#### Features



- \* UL Recognized to UL 1012 and 478+
- \* CSA Certified to C 22.2 No. 220 - M1986 and EB1 402+
- \* TUV Licensed to IEC 380 and 950 and VDE 0806 Class 1 SELV+
- \* Fully compliant with FCC and VDE (Level A) standards for EMI
- \* All outputs fully regulated
- \* Accommodates high-peak disk drive requirements
- \* 0° - 50°C operating ambient

- \* DC input provisions:
  - 42-60 VDC
  - transient input voltage protected
  - input surge current limited
- \* DC output provisions:
  - complete overload protected
  - overvoltage protected
  - reverse voltage protected
  - remote/internal sensing for output 1
  - low noise outputs

**300 Watts Up to 3 Outputs**

#### Available Outputs

| Standard Output Voltage Combination | Output 1 |            |           | Output 2 |            |           | Output 3 |            |           |
|-------------------------------------|----------|------------|-----------|----------|------------|-----------|----------|------------|-----------|
|                                     | Volts    | Rated Amps | Peak Amps | Volts    | Rated Amps | Peak Amps | Volts    | Rated Amps | Peak Amps |
| A                                   | 5        | 50.0       | 55.0      | 12       | 2.5        | 3.0       | 12       | 6.0        | 10.0      |
| B                                   | 5        | 50.0       | 55.0      | 12       | 4.0        | 6.0       | 12       | 4.0        | 6.0       |
| C                                   | 5        | 50.0       | 55.0      | 5        | 2.5        | 3.0       | 12       | 6.0        | 10.0      |
| D                                   | 5        | 50.0       | 55.0      | 5        | 4.0        | 6.0       | 12       | 4.0        | 6.0       |
| E                                   | 5        | 50.0       | 55.0      | 24       | 2.5        | 3.0       | 12       | 6.0        | 10.0      |
| F                                   | 5        | 50.0       | 55.0      | 24       | 4.0        | 6.0       | 12       | 4.0        | 6.0       |
| G                                   | 5        | 50.0       | 55.0      | 12       | 2.5        | 3.0       | 24       | 6.0        | 10.0      |

Total (sum) of rated DC output power, maximum: 300 Watts

- \* Other output combinations are also available, consult factory
- \* All outputs have independent returns

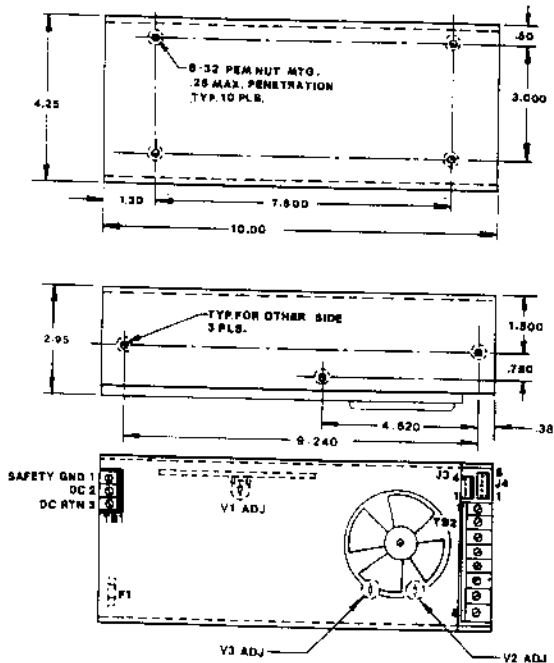
+ Most models; consult factory



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# QP5 Series

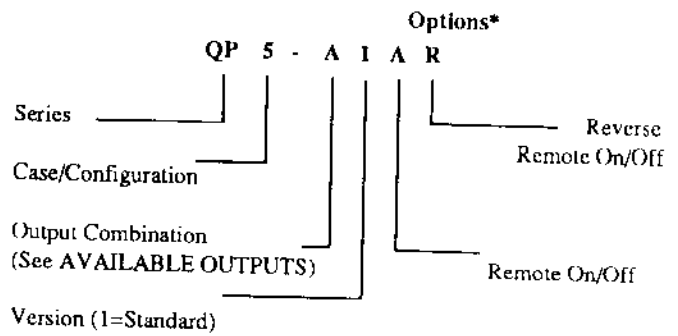
## Outline/Mounting/Interface



**Fan Drive Header (J3)**  
**AMP M7A-100 (Locking)**  
 1 Output 1 Sense (+)  
 2 Output 3 (+)  
 3 Output 1 Sense (-)  
 4 Output 3 Rtn

**Control Header (J4)**  
**AMP M7A-100 (Locking)**  
 1 Control Rtn  
 2 LED Drive (.005 to Output)  
 3 Nu-Pin Pulled  
 4 Remote On/Off Rtn  
 4 Remote On/Off

## Ordering Information



\* List all options selected

All Power Supplies are warranted to be free of defects in materials and workmanship for a period of one year.

**DC Output Term Bloc (TB1)**  
 1 Output 1 (+) 5 Output 2 (+)  
 2 Output 1 (+) 6 Output 2 Rtn  
 3 Output 1 Rtn 7 Output 3 (+)  
 4 Output 1 Rtn 8 Output 3 Rtn

NOTE(J3): To change pins 1 and 3 from Remote Sense to a second fan drive, remove W1 and W3 and install W2 and W4 on power board near J3

## Specifications

|                                   |   |
|-----------------------------------|---|
| <b>AC Input</b>                   | Nominal: 48 VDC<br>Range: 42-60 VDC   |
| <b>DC Outputs</b>                 | Nominal: See AVAILABLE OUTPUTS table<br>Range: Adjustable +/-5% all outputs   |
| <b>Regulation</b>                 | Line: +/-0.25%, all outputs, full AC input range<br>Load: +/-0.25% for Output 1, +/-1% for Outputs 2 and 3; for >=10% loading of Output 1 and zero to full loading of other Outputs |
| <b>Ripple/Noise</b>               | Sum: 1% Pk-Pk, all outputs  |
| <b>Overshoot &amp; Undershoot</b> | Deviation: 2% for 25% load change at 5A/usec<br>Response: 200 usec to 1% deviation, all outputs turn-on or turn-off   |
| <b>Temperature Coefficient</b>    | +/-0.02%/°C, all outputs  |
| <b>Temperature Range</b>          | Operation: 0° to 50°C at rated output power<br>derate linearly to 50% power at 70°C<br>Storage: -55°C to 85°C   |
| <b>Efficiency</b>                 | 75% typical   |
| <b>Overload Protection</b>        | Output 1: current limited by primary current level<br>Outputs 2 and 3: current limited by post regulator characteristics  |

|                                   |  |
|-----------------------------------|--|
| <b>Overvoltage Protection</b>     | Output 1: output level > 6.25V +/-5% causes shutdown (AC input cycle for restart)<br>Outputs 2 and 3: post regulators have preregulated inputs       |
| <b>Reverse Voltage Protection</b> | Up to 100% of rated current all outputs  |
| <b>In-rush Current</b>            | 25A Pk, cold start   |
| <b>Fusing (F-1)</b>               | GMA-15 15A/125V  |
| <b>Remote On/Off*</b>             | Turn on: open circuit or TTL "hi"<br>Turn off: Short to output 1 Return, or TTL "lo"<br>Option "R" is the reverse                                    |
| <b>Thermal Shutdown</b>           | Heat-sink-mounted thermal switch acts equivalently to remote on/off  |
| <b>Shock/Vibration</b>            | Per MIL-STD-810C<br>Vibration: Method 514.2 Procedures X, X1<br>Shock: Method 516.2, Procedures I, III<br>Shock (Transit): Method 516.2 Procedure II |
| <b>Weight</b>                     | 4lb. 11oz.   |

Specifications are subject to change without notice.

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