CHEROKEE INTERNATIONAL, INC.

PRODUCT SPECIFICATION

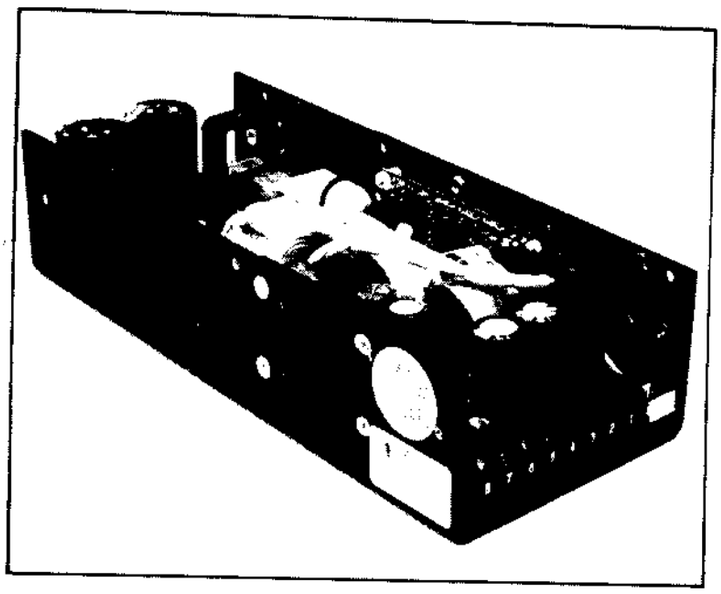
Half Bridge @ 25 KHz

QP2 Series

Multiple Output Switching Power Supplies

Features

- UL Recognized to UL 1012 and 478 ‡
- CSA Certified to C 22.2 No. 220 M1986 and EB1402 ‡
- TUV Licensed to IEC 380 and 950 and VDE 0806 Class 1 SELV †
- Fully compliant with FCC and VDE (Level A) standards for EMI
- 90-132/180-264 VAC, 47-63 Hz
- All outputs fully regulated
- Accommodates high-peak disk drive requirements
- 0° – 50°C operating ambient
- AC input safety provisions:
  - transient input voltage protected – MOV's
  - input surge current limited
  - brown out protected
  - VAC input range jumper selectable
- DC output safety provisions:
  - complete overload protection
  - overvoltage protected
  - reverse voltage protected
  - remote/internal sensing for Output 1
  - low noise outputs



225/250 Watts Up to 3 Outputs

Available Outputs

Standard Output Voltage Combination	Output 1* Volts	Rated Amps	Peak Amps	Output 2 Volts	Rated Amps	Peak Amps	Output 3 Volts	Rated Amps	Peak Amps
A	5	40	45	12	2.5	3	12	6	10
B	5	40	45	12	4.0	6	12	4	6
C	5	40	45	5	2.5	3	12	6	10
D	5	40	45	5	4.0	6	12	4	6
E	5	40	45	24	2.5	3	12	6	10
F	5	40	45	24	4.0	6	12	4	6
G	5	40	45	12	2.5	3	24	6	10
H	5	40	45	5	2.5	3	24	6	10
I	5	40	45	5	4.0	6	24	4	6
J	5	40	45	12	2.5	3	5	6	10
K	5	40	45	24	2.5	3	5	6	10

*Rated Amps = 30A for convection cooling

- Available options include:
  - remote on/off control
  - thermal shutdown control
  - safety/EMI shield cover

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

Convection cooling only	225 Watts
Forced-air cooling (25 CFM)	250 Watts
Peak power (10 sec)	275 Watts

- Other output combinations are also available; consult factory
- All outputs have independent returns standard

‡Most models; consult factory

2841 Dow Ave., Tustin, CA 92680-7211 • (714) 544-6665 • FAX (714) 838-4742 • TWX (714) 510-101-0493

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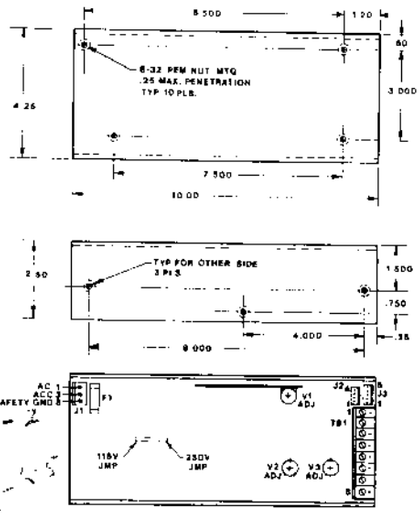
Outline/Mounting/Interface



Ordering Information

Options*

QP 2 – A 1 A C D F R

- Series
- Case/Configuration
- Output Combination (See AVAILABLE OUTPUTS)
- Version (1=Standard)
- Remote On/Off
- Thermal Shutdown
- FMI/Safety Cover
- Wire for 230 VAC
- Reverse Remote On/Off

*List all options selected

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

AC Input Header (J1)
AMP MTA-156 (Locking)
1 AC
2 N.U. (Pin Pulled)
3 ACC
4 N.U. (Pin Pulled)
5 Safety Gnd

Fan Drive/Remote Sense Header (J2)
AMP MTA-100, #640456-4
1 Output 1 Sense (+)
2 Output 3 (+)
3 Output 1 Sense (–)
4 Output 3 Rtn

Control Header (J3)
AMP MTA-100, #640456-5
1 LED Drive Rtn
2 LED Drive (.005A to Output)
3 Not used
4 Remote On/Off Rtn
5 Remote On/Off

DC Output Term. Block (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

Specifications

AC Input	Nominal: 115/230 VAC, 47-63Hz Range: 90-132/180-264 VAC; jumper selectable
DC Output	Nominal: See AVAILABLE OUTPUTS table Range: adjustable ±5%, all outputs
Regulation	Line: ±0.25%, all outputs, full AC Input range Load: ±0.25% for Output 1, ±1% for all other outputs; for ≥10% loading of Output 1 and zero to full loading of other Outputs
Ripple/Noise	Sum: 1% Pk-Pk, all outputs
Overshoot & Undershoot	Deviation: 2% for 25% load change at 5A/usec Response: 200 usec to 1% deviation, all outputs, turn-on or turn-off
Temperature Coefficient	±0.02% / °C, all outputs
Temperature Range	Operation: 0° to 50°C at rated output power derates linearly to 50% power at 70°C Storage: -55°C to 85°C
Efficiency	75% typical
Overload Protection	Output 1: current limited by primary current level Outputs 2 and 3: current limited by post regulator characteristics
Overvoltage Protection	Output 1: output level >6.25V ±5% causes shutdown (AC input removal for restart) Outputs 2 and 3: post regulators have pre-regulated inputs.
Reverse Voltage Protection	Up to 100% of rated current, all outputs
Hold-up Time	20 ms after loss of nominal AC Input, for specified load regulation
In-rush Current	35A Pk, cold start
Fusing	5A/3A, 5MF for 115/230 VAC (F1) DC Primary: 2A, 3AG (F2)
Remote On/Off*	Turn on: open circuit or TTL "hi" Turn off: short to Output 1 return, or TTL "lo" Option "R" is the reverse
Thermal Shutdown*	Heat-sink-mounted thermal switch acts equivalently to Remote On/Off
Fan Drive*	Output 3 voltage provided on separate header (1 Amp max.)
Shock/Vibration	Per MIL-STD-810C Vibration: Method 514.2 Procedures X, XI Shock: Method 516.2, Procedures I, III Shock (Transit): Method 516.2, Procedure II

Specifications are subject to change without notice.

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Rev 11/87