

CHEROKEE INTERNATIONAL, INC.

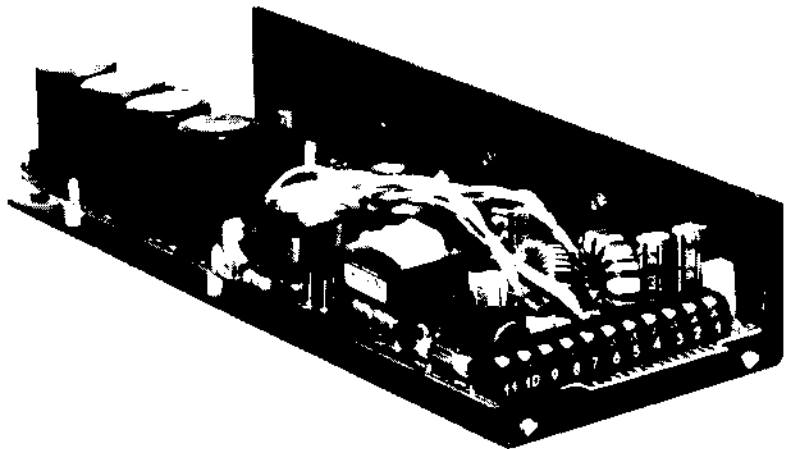
QX2 SERIES Multiple Output Switching Power Supplies

Trouble-free, Reliable, Economical and On-time....
for the Careful OEM

FEATURES

- UL Recognized, CSA Certification in process
- Designed to meet IEC 380 and VDE 0806 board spacing and high pot
- 90-132/180-264 VAC, 47-440 Hz input
- Output 5 quasi-regulated, all other outputs fully regulated
- All EMI standards met with economical external filter
- 0° - 50°C operating ambient with convection cooling only
- AC input safety provisions:
 - surge protected
 - brown-out protected
 - EMI filtered
- DC outputs safety provisions:
 - overload protected
 - overvoltage protected
 - reverse voltage protected
- Remote/internal sensing on Output 1
- Plug relocation for 115/230 VAC selection
- Available options include:
 - remote on/off control
 - power fail output signal
 - thermal shutdown control
 - Safety/EMI shield cover

250/275 WATTS
UP TO 5 OUTPUTS



AVAILABLE OUTPUTS

Standard Output Voltage Combination	Volts	Output 1		Output 2			Output 3			Output 4			Output 5		
		Rated Amp	Peak Amp	Volts	Rated Amp	Peak Amp	Volts	Rated Amp	Peak Amp	Volts	Rated Amp	Peak Amp	Volts	Rated Amp	Peak Amp
A	5	25	30	+12	5.0	6.5	-12	5.0	6.5	—	—	—	24	7	10
B	5	25	30	+12	5.0	6.5	-12	4.5	6.0	-5	.5	1	24	7	10
C	5	25	30	+12	5.0	6.5	-12	5.0	6.5	—	—	—	12	10	15
D	5	25	30	+12	5.0	6.5	-12	4.5	6.0	-5	.5	1	12	10	15
E	5	25	30	+12	5.0	6.5	-5	3.0	4.5	—	—	—	24	7	10
F	5	25	30	+12	5.0	6.5	-5	3.0	4.5	-12	.5	1	24	7	10
FX	+5	10	15	-12	5.0	6.5	—	—	—	—	—	—	+24	7	10
I	5	25	30	+15	5.0	6.5	-15	5.0	6.5	—	—	—	24	7	10
K	5	25	30	+12	5.0	6.5	-5	3.0	4.5	—	—	—	12	10	15
L	5	25	30	+12	5.0	6.5	-5	3.0	4.5	-12	.5	1	12	10	15
M	5	10	15	—	—	—	-12	4.5	6.0	-5	.5	1	24	7	10
O	5	25	30	+12	8.0	10.0	-12	5.0	6.5	—	—	—	24	7	10
Q	5	25	30	+12	5.0	6.5	-12	5.0	6.5	—	—	—	5	10	15
R	5	25	30	12	5.0	6.5	—	—	—	—	—	—	12	10	15
T	5	25	30	+12	8.0	10.0	-12	4.5	6.0	-5	.5	1	24	7	10
U	5	25	30	5	5.0	6.5	—	—	—	—	—	—	24	7	10

Total (sum) of rated DC output power, maximum:
 Convection cooling only 250 W
 Forced-air cooling (100 ft./min.) 275 W
 Peak power (10 sec) 300 W

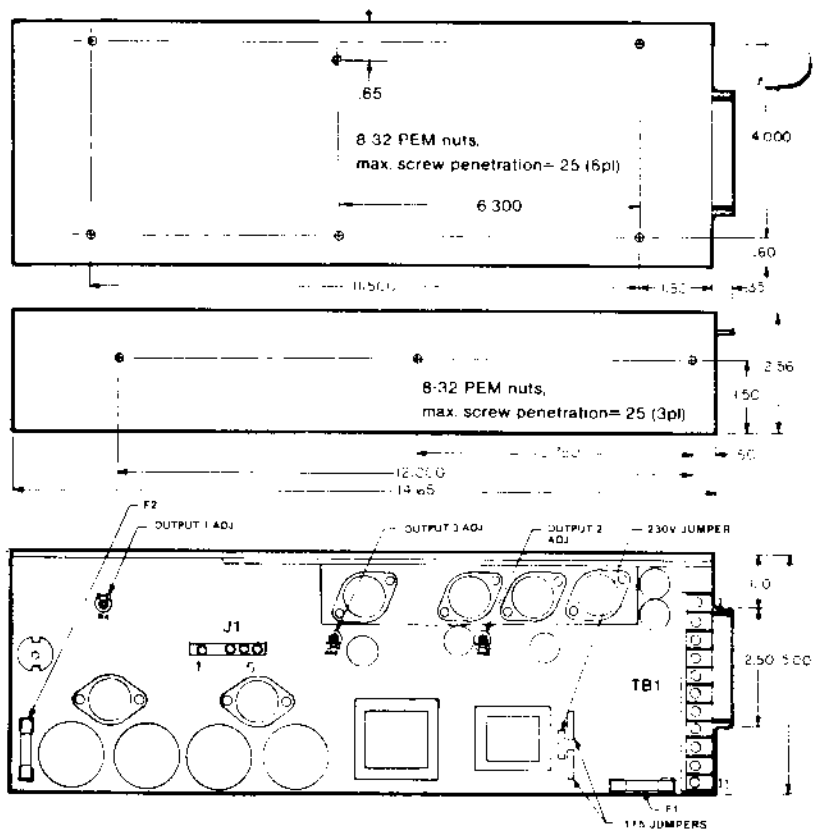
- Other output combinations are also available; consult factory
- Output 1 and 5 have independent returns; Outputs 2, 3 and 4 share a common return
- Combination FX commons Output 1 return, Output 5 return and Output 2 thereby providing a -12V output at the Output 2 return.

SPECIFICATIONS

AC Input	Nominal: 115/230 VAC, 47-440 Hz Range: 90-132/180-264 VAC; jumper plug selectable
DC Outputs	Nominal: See AVAILABLE OUTPUTS table Range: Output 1 adjustable from -5% through overvoltage trip; Output 2 and Output 3 adjustable $\pm 5\%$, Output 4 is fixed $\pm 4\%$; Output 5 tracks Output 1
Regulation	Line: $\pm 0.25\%$, all outputs, full AC Input range Load: $\pm 0.25\%$ Output 1, $\pm 1\%$ Outputs 2-4; Output 1 $\geq 10\%$ loading, Outputs 2-4 zero to rated load For quasi-regulated Output 5; Load regulation: $\pm 2\%$ for 20-100% loading Cross regulation: $\pm 5\%$, for 20-100% loading of Output 1 Centering: $\pm 3\%$ for given Outputs 1 and 5 loading
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	$\pm 0.02\%/^{\circ}\text{C}$, all outputs
Temperature Range	Operating: 0° to 50°C at rated output power; derate linearly to 50% power at 70°C Storage: -55°C to 85°C
Efficiency	75% typical
Overload Protection	Output 1 and Output 5: current limited by primary current level Output 2-Output 4: current limited by post regulator characteristics
Overvoltage Protection	Output 1: output level exceeding $6.25\text{V} \pm 5\%$ causes shutdown (AC Input removal for restart) Output 2-Output 4: post regulators have preregulated inputs Output 5: intrinsically limited by turns ratio to Output 1
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 Surge	35A Pk, cold start
Fusing	AC Input: 4A/2A, 3AG 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"
Power Fail*	Power applied: Output "lo" until all outputs are in regulation Power lost: After one cycle ride-through (16 msec) output goes "lo" 4 msec minimum before loss of regulation
Thermal Shutdown*	Heat-sink-mounted thermal switch acts equivalently to Remote On/Off
Weight	4 lbs, 6 oz

*Options

OUTLINE/MOUNTING/INTERFACE



Terminal Block (TB 1)

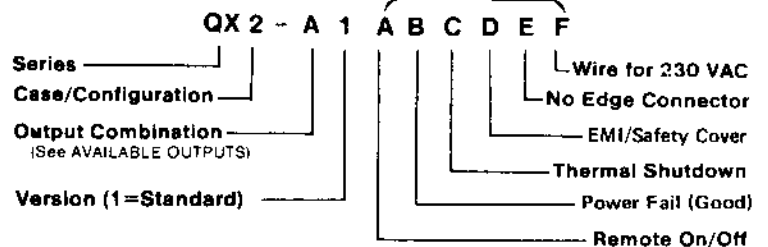
- 1 Output 1 (+)
- 2 Output 1 Rtn
- 3 Output 5 (+)
- 4 Output 5 Rtn
- 5 Output 2 (+)
- 6 Output 3 (-)
- 7 Output 4 (-)
- 8 Outputs 2, 3 and 4 Rtn
- 9 Frame Gnd
- 10 AC Input
- 11 AC Input

AMP MTA-156 Locking Header (J1)

- 1 Remote On/Off
- 2 Key
- 3 Remote Output 1 Sense (+)
- 4 Remote Output 1 Sense (-)
- 5 Power Fail

ORDERING INFORMATION

OPTIONS*



*List all OPTIONS selected

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

CHEROKEE INTERNATIONAL, INC.

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IRVINE, CALIFORNIA 92718, U.S.A.

(714) 951-9679 • TWX 510-101-0493