


**New Era
Electronics**

A division of New Era Group Inc.

The Power . . . The Vision

October 1987

**78PGA
POSITIVE 10 AMP
VOLTAGE REGULATOR**

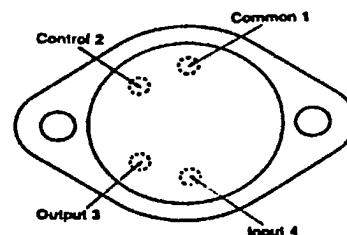
DESCRIPTION

The 78PGA positive 4 terminal fixed linear voltage regulator is capable of delivering a continuous load current in excess of 10 amperes over an output range of 5 to 24 volts. The 78PGA has built-in protection features such as output short circuit current limiting, thermal overload and safe operating area protection. If external conditions exceed the 78PGA's capabilities (see absolute maximums), the device temporarily shuts down protecting itself and the load circuit until the fault is removed. This feature eliminates costly additional protection circuitry as well as overly conservative heat sinks typical of discrete high current voltage regulator designs. The 4 lead hermetic TO-204MA (formerly called TO-3) package provides up to 70 watts of internal power dissipation.

FEATURES

- Output voltage adjustable from 5 to 24 volts
- 10.0 A Output Current
- Internal Current and Thermal Overload Protection
- Internal Short Circuit Protection
- Low Dropout Voltage (typically 2.5V @ 8.0A)
- 70 W Power Dissipation
- Metal 4 lead TO-204MA type package
- Case electrically isolated (floating)

Connection Diagram
TO-204 Type Package (Top View)



PRODUCT FAMILY

PART NUMBER	OUTPUT VOLTAGE	DESCRIPTION
78PGASC	5 to 24 V	Commercial Temp
78PGASM	5 to 24 V	Military Temp
78PGASP	5 to 24 V	Military Process

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78PGA POSITIVE 10 AMP VOLTAGE REGULATOR

TYPICAL ELECTRICAL CHARACTERISTICS

TJ=25° C, Vin=10V, Iout=2.0A unless otherwise specified

Line Regulation	0.2% x Vout	Vin=Vout+3V to Vin=Vout+16V
Load Regulation	0.7% x Vout	.01 to 10.0 amps
Short Circuit Current Limit	14.0Apeak	
Thermal Resistance Junction to Case	1.5° C/W	

ABSOLUTE MAXIMUM RATINGS

Input Voltage	40V
Input to Output Differential, Output Short Circuited	35V
Internal Power Dissipation	70W @ 25° C case
Operating Junction Temperature:	

78PGASC (commercial)	0° C to 150° C
78PGASM (mil temp)	-55° C to 150° C
78PGASP (mil process)	-55° C to 150° C

Storage Temperature Range	-55° C to 150° C
Pin Temp (soldering 60 sec)	300° C

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