



**New Era Electronics**  
A division of New Era Group Inc.

The Power . . . The Vision

October 1987

**78H12A  
12 VOLT 5 AMP  
VOLTAGE REGULATOR**

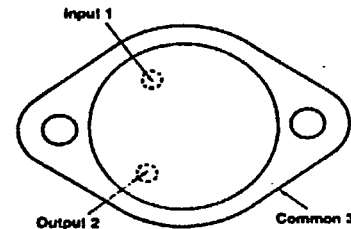
**DESCRIPTION**

The 78H12A positive 3 terminal fixed linear voltage regulator is capable of delivering a continuous load current in excess of 5 amperes at a nominal regulated output voltage of 12 volts. The 78H12A has built-in protection features such as output short circuit current limiting, thermal overload and safe operating area protection. If external conditions exceed the 78H12A'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 2 lead hermetic TO-204MA package, (formerly called TO-3), provides up to 50 watts of internal power dissipation.

**FEATURES**

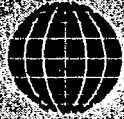
- 5.0 A Output Current
- Internal Current and Thermal Overload Protection
- Internal Short Circuit Protection
- Low Dropout Voltage (typically 2.3V @ 5.0A)
- 50 W Power Dissipation
- Metal 2 lead TO-204MA type package

Connection Diagram  
TO-204 Type Package (Top View)



**PRODUCT FAMILY**

PART NUMBER	OUTPUT VOLTAGE	DESCRIPTION
78H12ASC	12.0 Volts	Commercial Temp
78H12ASM	12.0 Volts	Military Temp
78H12ASP	12.0 Volts	Military Process

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 **TYPICAL ELECTRICAL CHARACTERISTICS** $T_J = 25^\circ\text{C}$ ,  $V_{in} = 17\text{V}$ ,  $I_{out} = 2.0\text{A}$  unless otherwise specified

Line Regulation	$0.2\% \times V_{out}$	$V_{in} = V_{out} + 3\text{V}$ to $V_{in} = V_{out} + 20\text{V}$
Load Regulation	$0.2\% \times V_{out}$	.01 to 5.0 A
Short Circuit Current Limit	7.0A peak	
Thermal Resistance Junction to Case	$1.8^\circ\text{C/W}$	

**ABSOLUTE MAXIMUM RATINGS**

Input Voltage	40V
Input to Output Differential, Output Short Circuited	35V
Internal Power Dissipation	50W @ $25^\circ\text{C}$ case
Operating Junction Temperature:	

78H12ASC (commercial)	$0^\circ\text{C}$ to $150^\circ\text{C}$
78H12ASM (mil temp)	$-55^\circ\text{C}$ to $150^\circ\text{C}$
78H12ASP (mil process)	$-55^\circ\text{C}$ to $150^\circ\text{C}$

Storage Temperature Range	$-55^\circ\text{C}$ to $150^\circ\text{C}$
Pin Temp (soldering 60 sec)	$300^\circ\text{C}$

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