

MFC6030

POSITIVE VOLTAGE REGULATOR

Advance Information

VOLTAGE REGULATOR

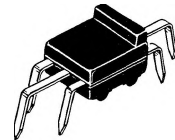
- Excellent Line and Load Regulation
- Current-Limit Feature Available
- Economical Six Lead Package
- Industrial Quality

VOLTAGE REGULATOR

Silicon Monolithic
Functional Circuit

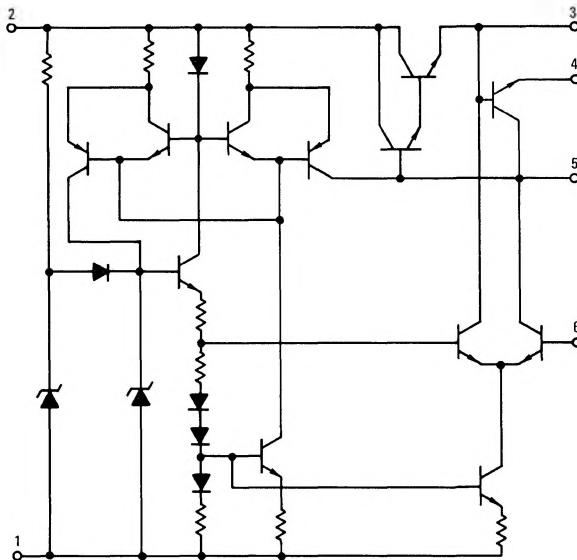
MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Input Voltage	V^+	38	Volts
Maximum Load Current	$I_L(\max)$	200	mA
Power Dissipation Derate above $T_A = +25^\circ\text{C}$	P_D	1.0 10	Watt mW/ $^\circ\text{C}$
Operating Temperature Range	T_A	-10 to +75	$^\circ\text{C}$



CASE 643A
PLASTIC PACKAGE

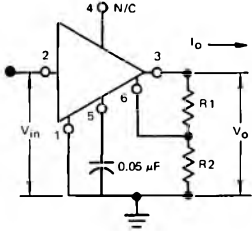
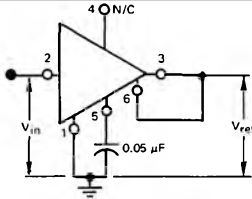
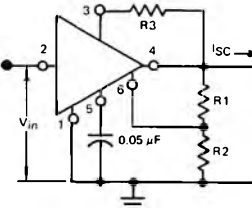
CIRCUIT SCHEMATIC



See Packaging Information Section for outline dimensions.

MFC6030 (continued)

ELECTRICAL CHARACTERISTICS (T_A = +25°C unless otherwise noted)

Circuit	Characteristic	Symbol	Min	Typ	Max	Unit
 <p style="text-align: center;"> $\frac{V_o}{R1 + R2} = 2.0 \text{ mA min}$ $\frac{V_o}{V_{ref}} = \frac{R1 + R2}{R2}$ </p>	Load Regulation	Regload	—	—	0.2	%
	$V_{in} = 30 \text{ Volts, Pin 2}$ $V_o, \text{ Pin 3}$ $\Delta I_o = 50 \text{ to } 100 \text{ mA}$ $\frac{(V_{o1} - V_{o2})}{V_{o1}} \times 100 = \% V_o$					
	Line Regulation	Regline	—	—	0.03	% / Volt
	$V_{in1} = 12 \text{ Volts, Pin 2}$ $V_{in2} = 30 \text{ Volts, Pin 2}$ $V_o = 7.5 \text{ Volts, Pin 3}$ $\frac{\Delta V_o \times 100}{\Delta V_{in} \times V_o} = \% V_o / \Delta V_{in}$					
Temperature Coefficient	TC	-3.0	—	+3.0	mV/°C	
$V_{in} = 30 \text{ Volts, Pin 2}$ $I_o = 10 \text{ mA}$ $V_o = 10 \text{ Volts, Pin 3}$ $\Delta T_A = 0^\circ\text{C to } 50^\circ\text{C}$ $\frac{V_{o1} - V_{o2}}{T_{A1} - T_{A2}} = TC$						
	Input Voltage Range	V _{in}	9.0	—	35	Vdc
	Input-Output Voltage Differential	V _{in} - V _o	3.0	—	—	Vdc
	Reference Voltage	V _{ref}	3.8	—	4.8	Vdc
$V_{in} = 10 \text{ Volts, Pin 2}$ $I_o = 10 \text{ mA}$ $V_{ref} \text{ Pin 6}$ $V_{ref} \text{ Pin 1}$						
	Short-Circuit Current	I _{SC}	—	±5.0	—	% / I _{SC}
	$I_{SC} = \frac{0.7}{R3}$					
	R3 Usable Range	R3	3.5	—	6.8 k	ohms