

MC79L05AC

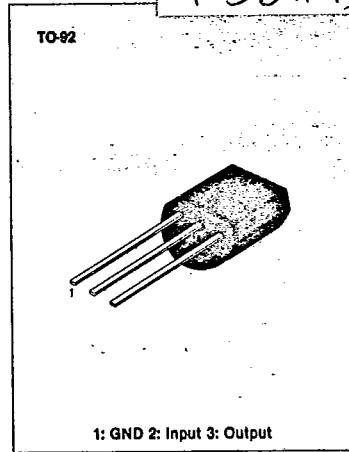
LINEAR INTEGRATED CIRCUIT

3-TERMINAL NEGATIVE VOLTAGE REGULATOR

The MC79L05AC employs internal current limiting and thermal-shutdown, making them essentially indestructible.

FEATURES

- Output Current Up To 100mA
- No External Components
- Internal Thermal Over Load Protection
- Internal Short Circuit Current Limiting



ORDERING INFORMATION

Device	Package	Operating Temperature
MC79L05ACZ	TO-92	0 ~ 125°C

BLOCK DIAGRAM

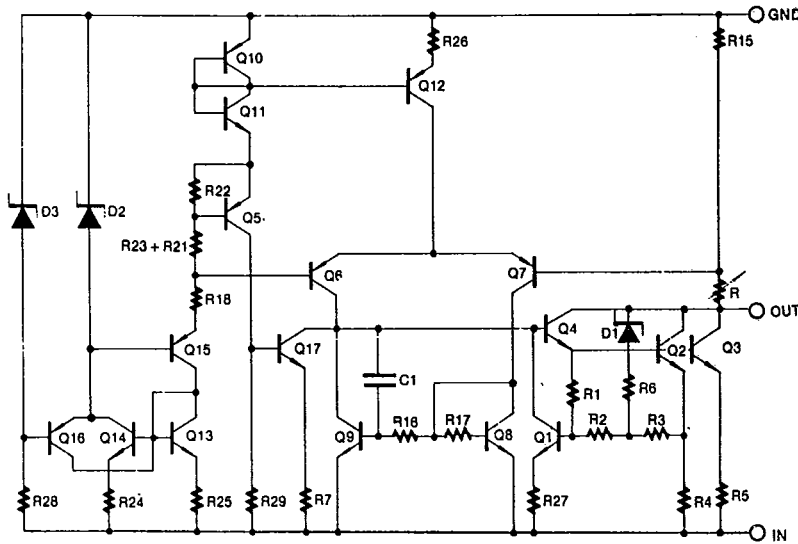


Fig. 1

## MC79L05AC

## LINEAR INTEGRATED CIRCUIT

T-58-11-13

## ABSOLUTE MAXIMUM RATINGS (Ta = 25°C, unless otherwise specified)

Characteristic	Symbol	Value	Unit
Input Voltage	$V_i$	-30	V
Operating Temperature Range	$T_{opr}$	0 ~ +125	°C
Storage Temperature Range	$T_{stg}$	-65 ~ +150	°C

## MC79L05AC ELECTRICAL CHARACTERISTICS

(VIN = -10V, IO = 40mA, 0°C ≤ Tj ≤ 125°C, CIN = 0.33μF, COUT = 0.1μF, unless otherwise specified.) (Note)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$T_j = 25^\circ\text{C}$	-4.8	-5.0	-5.2	V
Line Regulation	$\Delta V_o$	$T_j = 25^\circ\text{C}$	$-7.0\text{V} \geq V_i \geq -20\text{V}$	15	150	mV
			$-8.0\text{V} \geq V_i \geq -20\text{V}$		100	
Load Regulation	$\Delta V_o$	$T_j = 25^\circ\text{C}$	$1.0\text{mA} \leq I_o \leq 100\text{mA}$	20	60	mV
			$1.0\text{mA} \leq I_o \leq 40\text{mA}$	10	30	
Output Voltage	$V_o$	$-7.0 \geq V_i \geq -20\text{V}, 1.0\text{mA} \leq I_o \leq 40\text{mA}$	-4.75		-5.25	V
		$V_i = -10\text{V}, 1.0\text{mA} \leq I_o \leq 70\text{mA}$	-4.75		-5.25	
Quiescent Current	$I_d$	$T_j = +25^\circ\text{C}$		2.0	6.0	mA
		$T_j = +125^\circ\text{C}$			5.5	
Quiescent Current Change	With Line	$I_d$	$-8\text{V} \geq V_i \geq -20\text{V}$ $1.0\text{mA} \leq I_o \leq 40\text{mA}$		1.5	mA
	With Load				0.1	
Output Noise Voltage	$V_N$	$T_a = 25^\circ\text{C}, 10\text{Hz} \leq f \leq 100\text{KHz}$		30		μV
Ripple Rejection	RR	$f = 120\text{Hz}, -8.0 \geq V_i \geq -18\text{V}$ $T_j = 25^\circ\text{C}$	41	60		dB
Dropout Voltage	$V_D$	$T_j = 25^\circ\text{C}$		1.7		V

\* Load and line regulation are specified at constant junction temperature. Change in  $V_o$  due to heating effects must be taken into account separately. Pulse testing with low duty is used.