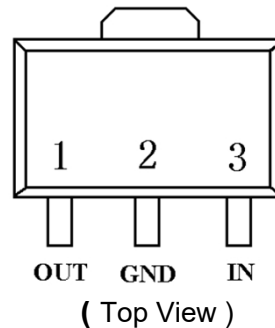




## Features Pin Connection

- Maximum Output Current: 200mA
- Output Voltage is 6.0V
- Internal Thermal Overload Protection
- Internal Short Circuit Current Limiting
- Continuous Total Dissipation 0.5W
- 78S06 is available in SOT-89 package

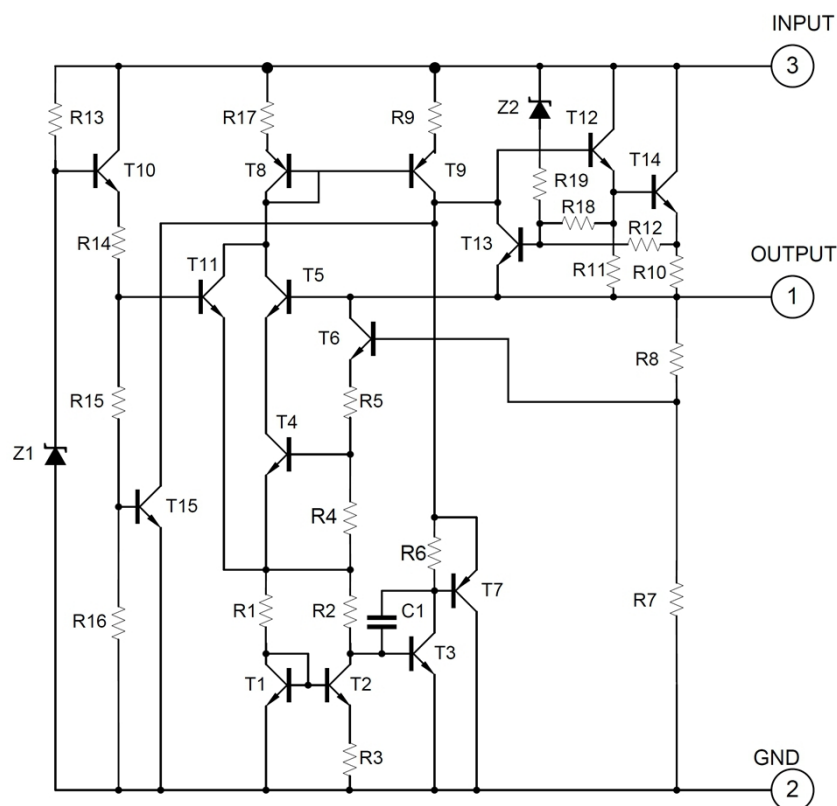
## Pin Connection



## Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Value	Units
Input Voltage	$V_i$	36	V
Operating Temperature Range	$T_{opr}$	-30~ +125	°C
Storage Temperature Range	$T_{stg}$	-55 ~ +150	°C

## Block Diagram



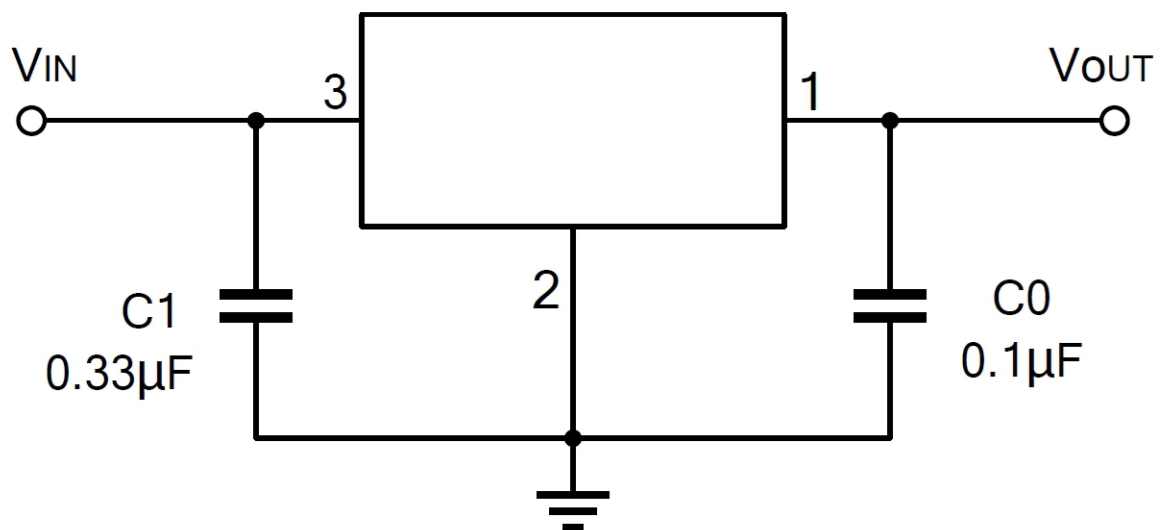


## Electrical Characteristics

(unless otherwise noted,  $V_i=11V$ ,  $I_o=40mA$ ,  $0^{\circ}C < T_j < 125^{\circ}C$ ,  $C_i=0.33\mu F$ ,  $C_o=0.1\mu F$  )

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$T_j=25^{\circ}C$	5.76	6.0	6.24	V
		$8V \leq V_i \leq 21V$ $I_o=5mA \sim 150mA$	5.70	6.0	6.30	
Load Regulation	$\Delta V_o$	$T_j=25^{\circ}C, I_o=1mA \sim 200mA$		30	100	mV
		$T_j=25^{\circ}C, I_o=1mA \sim 40mA$		10	50	
Line Regulation	$\Delta V_o$	$8V \leq V_i \leq 21V, T_j=25^{\circ}C$		11	60	mV
		$9V \leq V_i \leq 21V, T_j=25^{\circ}C$		5	30	
Quiescent Current	$I_q$	$T_j=25^{\circ}C$		3.8	6	mA
Quiescent Current Change	$\Delta I_q$	$8V \leq V_i \leq 21V, I_o=40mA$			1.5	mA
		$5mA \leq V_i \leq 150mA$			0.1	
Output noise Voltage	$V_N$	$10Hz \leq f \leq 100kHz$		42	200	$\mu V$
Dropout Voltage	$V_d$	$T_j=25^{\circ}C$		1.7		V
Ripple Rejection	RR	$8V \leq V_i \leq 21V, f=120Hz,$ $T_j=25^{\circ}C$	41	49		dB

## Application Circuit



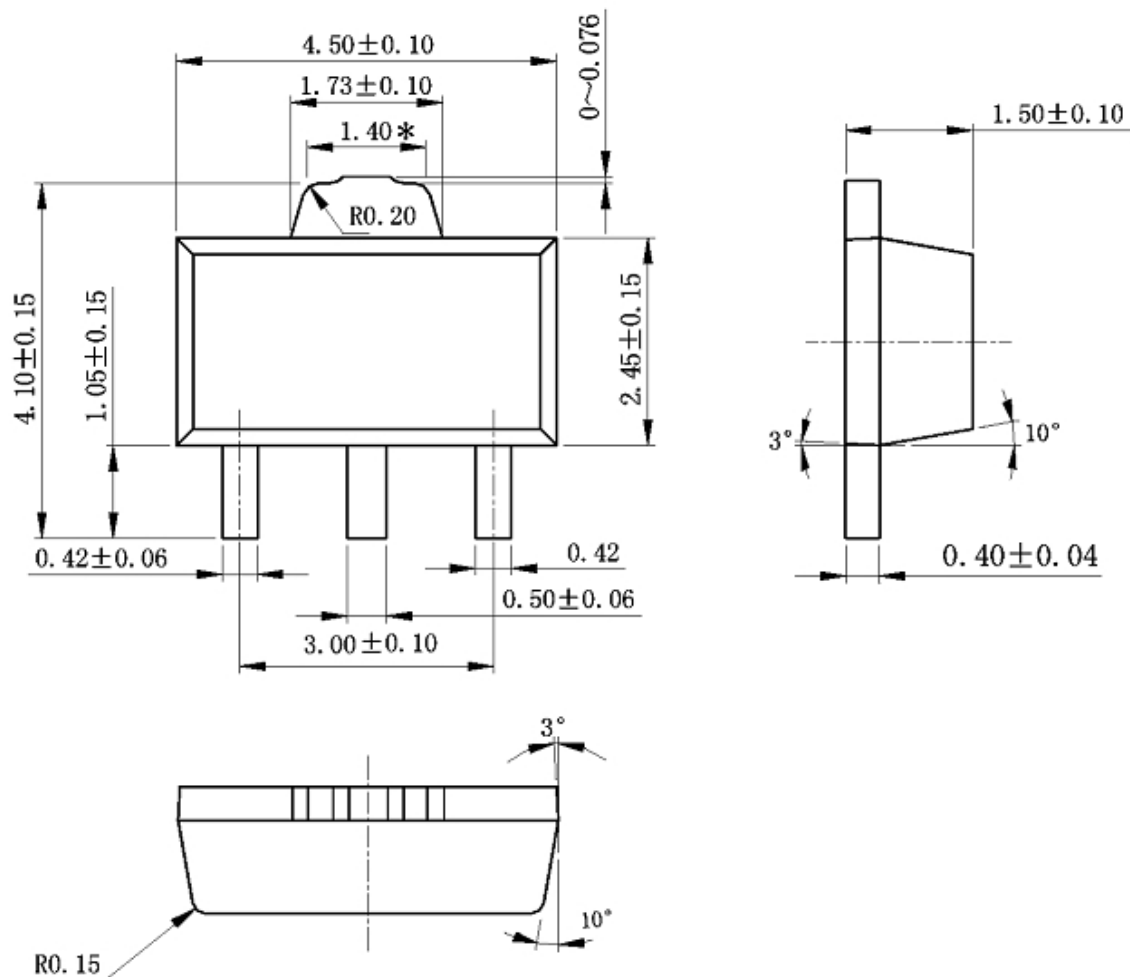
\*Bypass capacitors are recommended for optimum stability and transient response and should be located as close as Possible to the regulators.



## Outline Drawing

SOT-89

Unit: mm





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