

**Features**

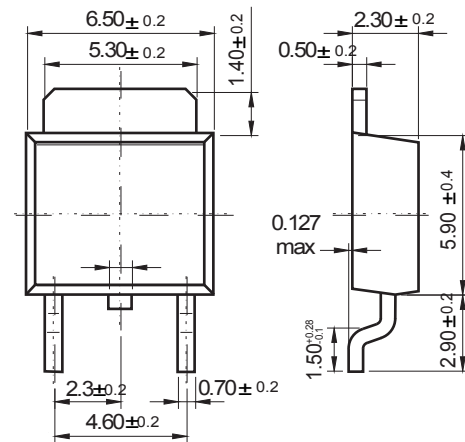
- Output Current up to 1.0A
- Output Voltages of 5V
- Thermal Overload Protection
- Short Circuit Protection
- Output Transistor Safe Operating area (SOA)Protection

**Description**

The 78M05 three-terminal positive regulators are available in the TO-252 package with several fixed output voltages making it useful in a wide range of applications.

**TO-252**

Unit: mm



Dimensions in inches and (millimeters)

**Absolute Maximum Ratings**

Parameter	Symbol	Value	Unit
Input Voltage	$V_{IN}$	35	V
Out put Voltage	$V_O$	5	V
Continuous total dissipation	$P_D$	1.25	W
Operating Temperature Range	$T_{OPR}$	0 ~ + 125	°C
Storage Temperature Range	$T_{STG}$	-55 ~ + 150	°C

# 78M05

## Electrical Characteristics

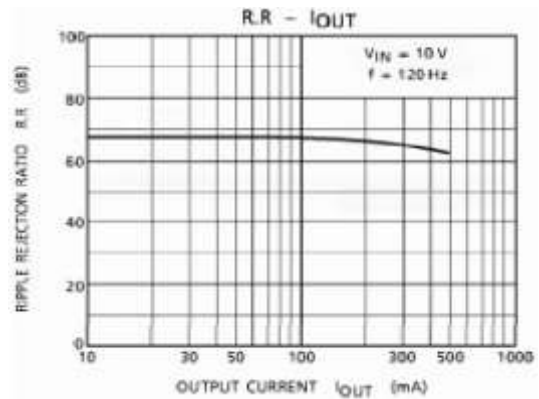
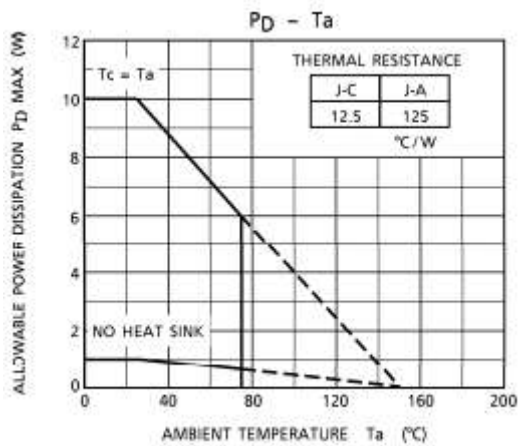
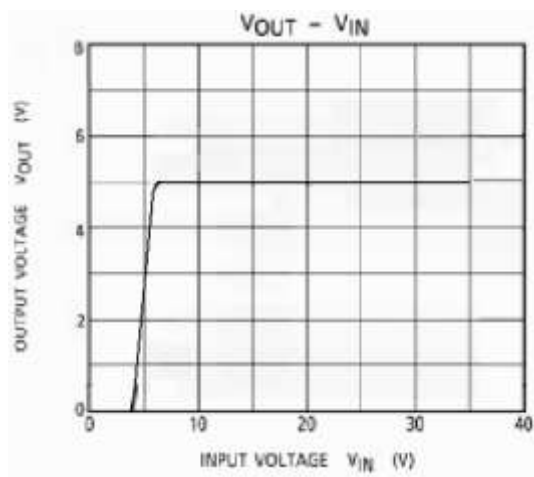
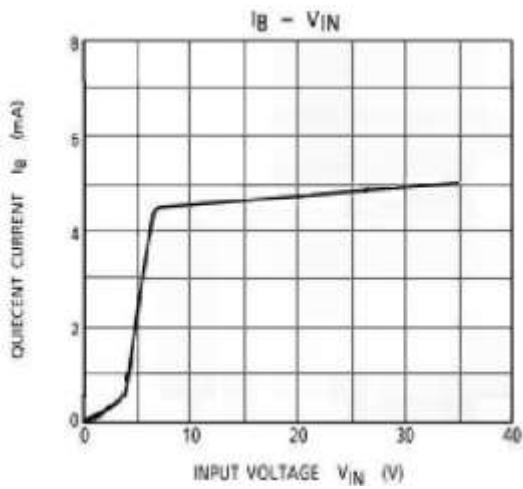
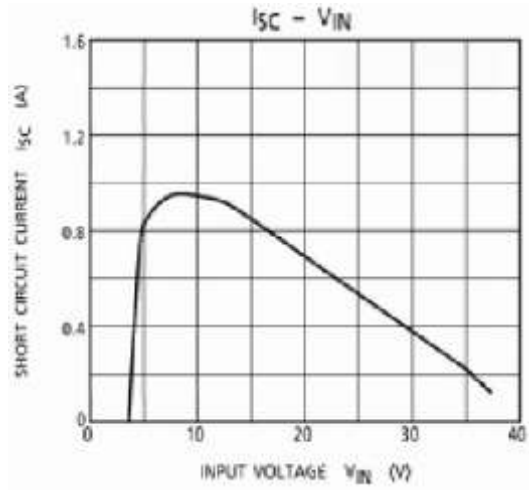
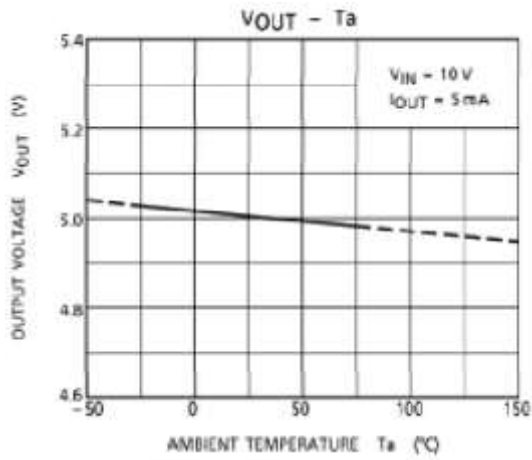
(Refer to the test circuits,  $I_o=750\text{mA}$ ,  $V_i=10\text{V}$ ,  $C_i = 0.33\mu\text{F}$ ,  $C_o=0.1\mu\text{F}$  unless otherwise specified)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
		$T_j = 25^\circ\text{C}$	4.8		5.2	
Output Voltage	$V_o$	$V_i = 7 \sim 20\text{V}$ $I_o = 5 \sim 1\text{A}$	4.75	5	5.25	V
Line Regulation	$\Delta V_o$	$T_j = 25^\circ\text{C}$	$V_i = 7 \sim 25\text{V}$		120	mV
			$V_i = 8 \sim 22\text{V}$		60	
Load Regulation	$\Delta V_o$	$T_j = 25^\circ\text{C}$	$I_o = 5\text{mA} \sim 1\text{A}$		120	mV
			$I_o = 0.25\text{a} \sim 0.75\text{A}$		60	
Quiescent Current	$I_q$	$T_j = 25^\circ\text{C}$			8	mA
Quiescent Current Change	$\Delta I_q$	$I_o = 5\text{mA} \sim 1\text{A}$ $V_i = 7 \sim 25\text{V}$			0.5	mA
					1.2	
Output Voltage Drift	$\Delta V/\Delta T$	$I_o = 5\text{mA}$ $T_j = 0 \text{ to } +125^\circ\text{C}$		-0.8		mV/°C
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$		40		$\mu\text{V}$
Ripple Rejection	RR	$f = 120\text{Hz}$ , $I_o = 300\text{mA}$ $V_i = 8 \text{ to } 18\text{V}$	60			dB
Dropout Voltage	$V_D$	$T_j = +25^\circ\text{C}$ , $I_o = 1\text{A}$		2		V
Short Circuit Current	$I_{SC}$	$T_j = +25^\circ\text{C}$ , $V_i = 35\text{V}$		300		mA
Peak Current	$I_{PK}$			1.50		A

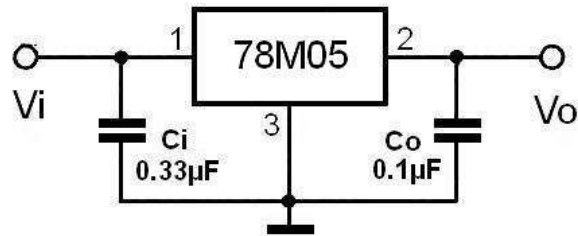
Notes:

\*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.

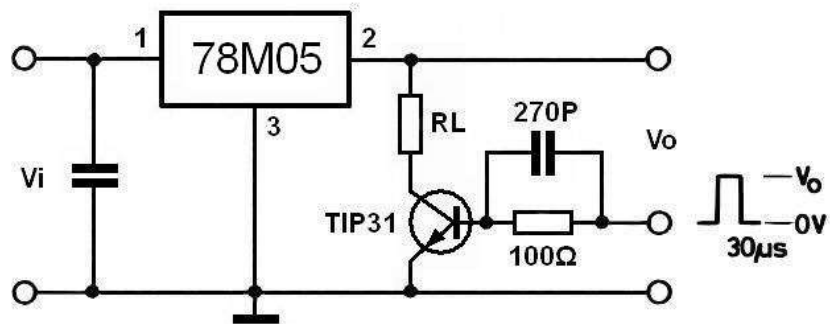
## RATING AND CHARACTERISTIC CURVES (78M05)



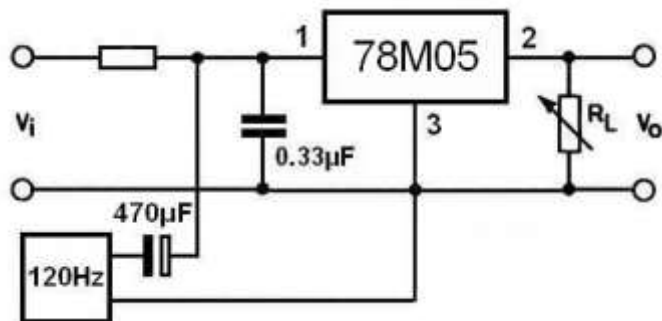
## RATING AND CHARACTERISTIC CURVES (78M05)



**DC Parameter**



**Load Regulation**



**Ripple Rejection**