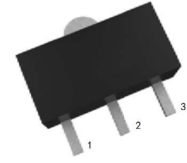


## 3-Terminal Positive Voltage Regulator

### FEATURES

- Maximum Output Current  $I_o$ : 0.15 A
- Maximum Input Voltage  $V_I$ : 35V
- Continuous Total Dissipation  $P_D$ : 0.5 W ( $T_a = 25\text{ }^\circ\text{C}$ )



1: OUT 2: GND 3: IN

SOT-89 PLASTIC PACKAGE

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Rating	Unit
Input Voltage	$V_I$	35	V
Output Current	$I_o$	150	mA
Power Dissipation	$P_{tot}$	500 <sup>1)</sup>	mW
Operating Temperature	$T_{opr}$	- 55 to + 125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to +150	$^\circ\text{C}$

<sup>1)</sup> Device is installed in the heat dissipation good environment

### Electrical Characteristics ( $T_a = 25\text{ }^\circ\text{C}$ ) (Unless otherwise specified, $V_I = 10\text{ V}$ , $I_o = 40\text{ mA}$ , $C_I = 0.33\text{ }\mu\text{F}$ , $C_o = 0.1\text{ }\mu\text{F}$ )

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Voltage	$V_o$	$T_j = 25\text{ }^\circ\text{C}$	4.75	5	5.25	V
		$7\text{ V} \leq V_I \leq 20\text{ V}$ , $1\text{ mA} \leq I_o \leq 40\text{ mA}$	4.65	5	5.35	V
Voltage Regulation	$S_v$	$7\text{ V} \leq V_I \leq 20\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$	--	--	150	mV
		$8\text{ V} \leq V_I \leq 20\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$	--	--	100	
Current Regulation	$S_I$	$1\text{ mA} \leq I_o \leq 100\text{ mA}$ , $T_j = 25\text{ }^\circ\text{C}$	--	--	60	mV
Quiescent Current	$I_Q$	$T_j = 25\text{ }^\circ\text{C}$	--	--	6	mA
Quiescent Current Change	$\Delta I_Q$	$8\text{ V} \leq V_I \leq 20\text{ V}$	--	--	1.5	mA
		$1\text{ mA} \leq I_o \leq 40\text{ mA}$	--	--	0.1	
Ripple Rejection	$S_{rip}$	$f = 120\text{ Hz}$ , $8\text{ V} \leq V_I \leq 18\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$	--	49	--	dB
Dropout Voltage	$V_{Drop}$	$T_j = 25\text{ }^\circ\text{C}$	--	1.7	--	V

## Electrical characteristic curve

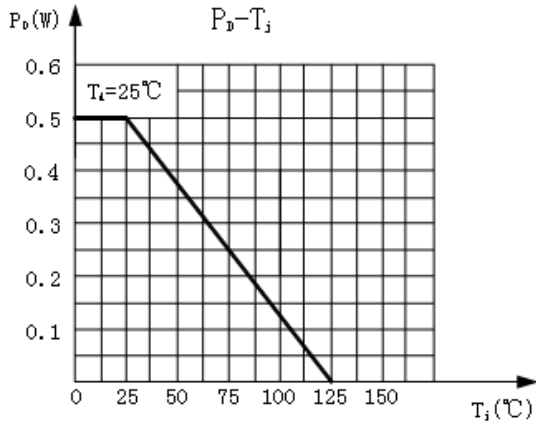


Figure 1: dissipation power relationship with the temperature curve

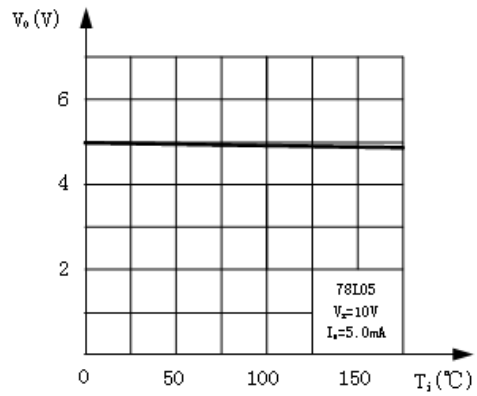
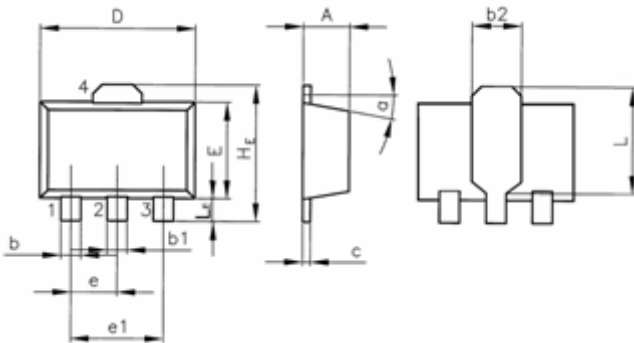


Figure 2 output voltage and junction temperature curve

## Outline Dimension

Unit: mm



	SOT-89		
	min	type	max
A	1.4		1.6
b	0.35		0.55
b1	0.4		0.65
b2		1.6	
c	0.35		0.45
D	4.4		4.6
E	2.35		2.55
e		1.5	
e1		3	
HE		4.15	
L		2.7	
LE		1.0	
$\alpha$		5°	

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