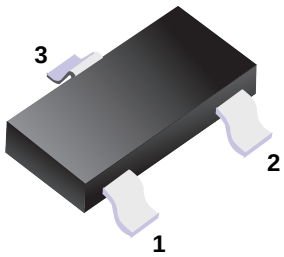
Three-Terminal Positive Voltage Regulator



1.OUT
2.IN
3.GND

SOT-23

Features

- Maximum Output current IO: 0.1A
- Output Voltage VO: 8V
- Continuous Total Dissipation PD: 0.35W (Ta = 25 ℃)

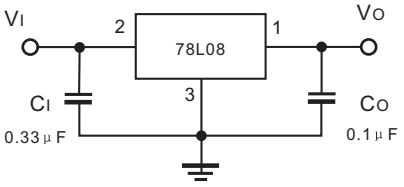
Absolute Maximum Ratings (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Rating	Unit
Input Voltage	V_I	30	**V**
Operating Junction Temperature Range	T_{OPR}	-55~+125	℃
Storage Temperature Range	T_{STG}	-55~+150	℃

Electrical Characteristics (VI=14V, IO=40mA,CI=0.33 F,CO=0.1 F, unless otherwise specified)

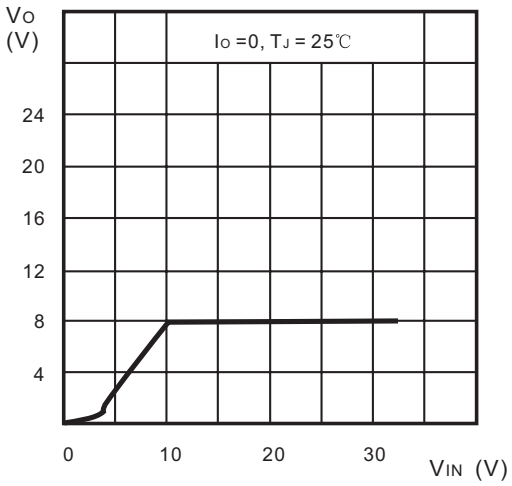
Parameter	Symbol	TestConditions	Min	Typ	Max	Unit
Output Voltage	V_O	TJ = 25℃	7.7	8.0	8.3	**V**
		TJ= 0~125℃, 10.5V≤V1≤23V, Io= 1mA- 40mA	7.6	8.0	8.4	**V**
		TJ= 0~125℃, Io=1mA~ 70mA	7.6	8.0	8.4	**V**
Load Regulation	$\triangle V_O$	TJ= 25℃, Io=1mA~> 100mA	-	18	80	**mV**
		TJ= 25℃, Io=1mA~ 40mA	-	10	40	**mV**
Line Regulation	$\triangle V_O$	TJ= 25℃, 10.5V≤V≤23V	-	42	175	**mV**
		TJ= 25℃, 11V≤V1≤23V	-	36	125	**mV**
Quiescent Current	I_Q	TJ= 25℃	-	4	6	**mA**
Quiescent current Change	$\triangle I_Q$	TJ= 0~125℃, 11V≤V≤23V	-	-	1.5	**mA**
		TJ= 0~125℃, 1mA≤Io≤40mA	-	-	0.1	
Output Noise Voltage	V_N	TJ= 25℃, 10Hz≤f≤100KHz	-	54	-	**μV**
Ripple Rejection	**RR**	TJ= 0~125℃, 13V≤VI≤23V, f= 120Hz	37	46	-	**dB**
Dropout Voltage	V_D	TJ= 25℃	-	1.7	-	**V**

Typical Application

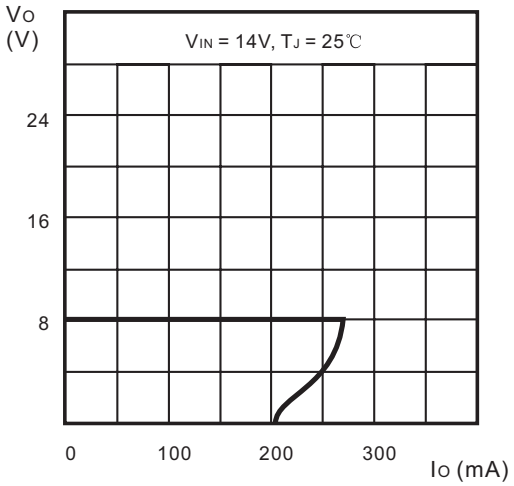


Note:Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

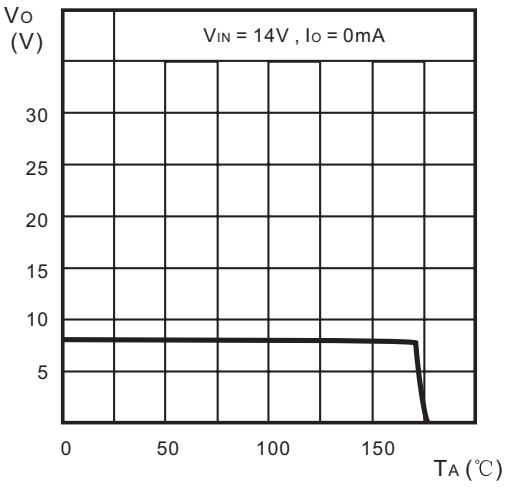
■ Typical Characteristics



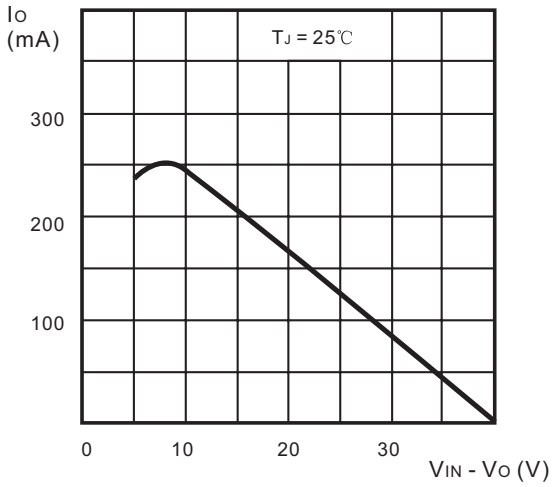
Output Characteristics



Load Characteristics

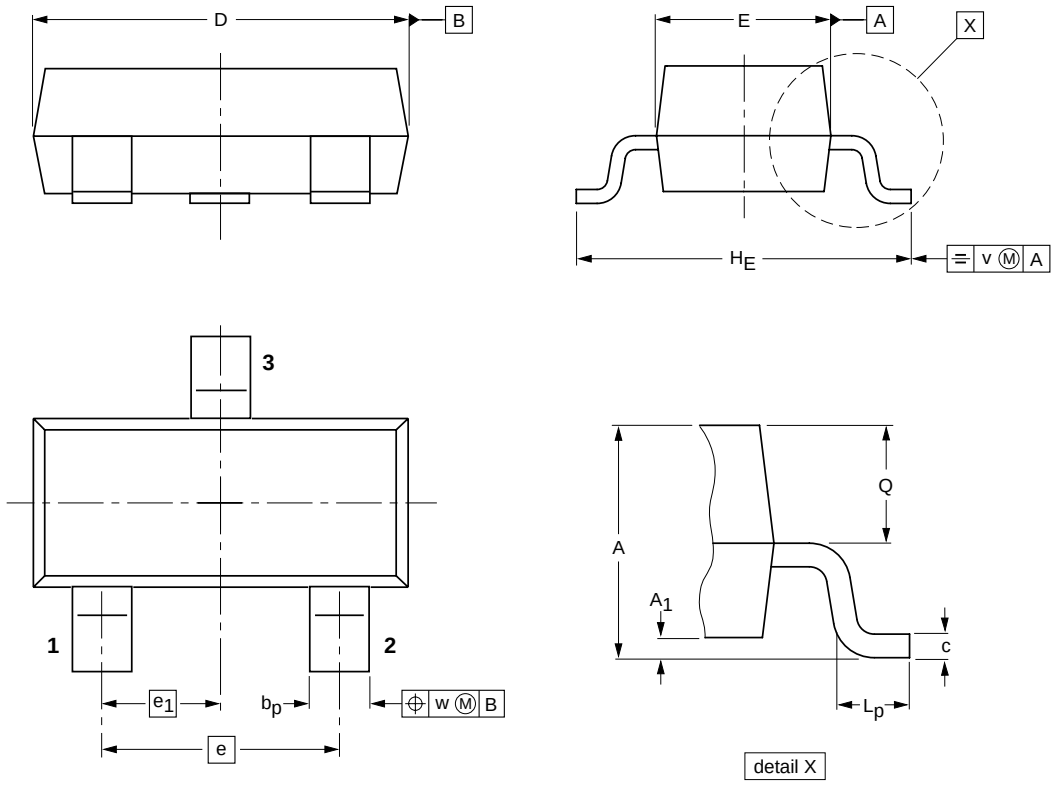


Thermal Shutdown



Short Circuit Output Current

Package Outline SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A_1 max.	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel,7”reel	3000	EIA-481-1