

## 78L15 Three-terminal positive voltage regulator

### FEATURES

Maximum output current

$I_{OM}$ : 0.1 A

Output voltage

$V_O$ : 15 V

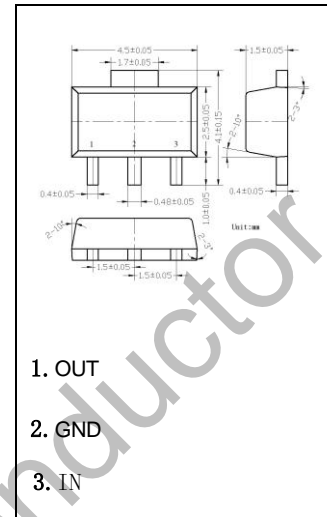
Continuous total dissipation

$P_D$ : 0.5 W

### ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies

Unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Operating Junction Temperature Range	$T_{OPR}$	0~+150	°C
Storage Temperature Range	$T_{STG}$	-55~+150	°C

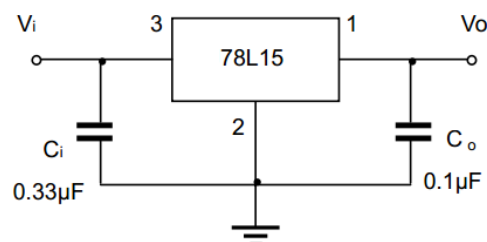


1. OUT
2. GND
3. IN

### ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ( $V_i=23V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	$V_o$	$25^\circ C$	14.4	15	15.6	V
		$17.5V \leq V_i \leq 30V, I_o = 1mA - 40mA$	14.25	15	15.75	V
		$V_i = 23V, I_o = 1mA - 70mA$	14.25	15	15.75	V
Load Regulation	$\Delta V_o$	$I_o = 1mA - 100mA, V_i = 23V$	$25^\circ C$	25	150	mV
		$I_o = 1mA - 40mA, V_i = 23V$	$25^\circ C$	15	75	mV
Line regulation	$\Delta V_o$	$17.5V \leq V_i \leq 30V, I_o = 40mA$	$25^\circ C$	65	300	mV
		$19V \leq V_i \leq 30V, I_o = 40mA$	$25^\circ C$	58	250	mV
Quiescent Current	$I_q$	$25^\circ C$		4.6	6.5	mA
Quiescent Current Change	$\Delta I_q$	$19V \leq V_i \leq 30V, I_o = 40mA$	$0 - 125^\circ C$		1.5	mA
		$1mA \leq I_o \leq 40mA, V_i = 23V$	$0 - 125^\circ C$		0.1	mA
Output Noise Voltage	$V_N$	$10Hz \leq f \leq 100KHz$	$25^\circ C$	82		$\mu V$
Ripple Rejection	RR	$18.5V \leq V_i \leq 28.5V, f = 120Hz$	$0 - 125^\circ C$	34	39	dB
Dropout Voltage	$V_d$	$25^\circ C$		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

# 78L15

