

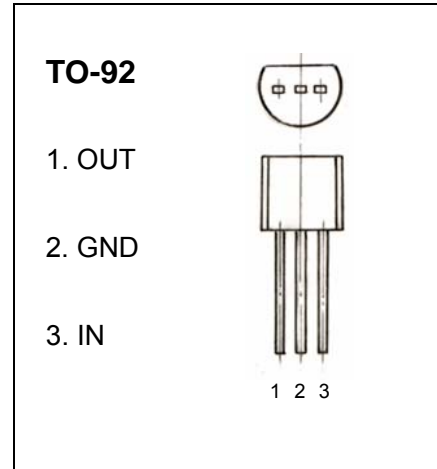


TO-92 Encapsulate Three-terminal Voltage Regulator

78L15 Three-terminal positive voltage regulator

FEATURES

Maximum Output current
 $I_{OM}: 0.1 \text{ A}$
 Output voltage
 $V_O: 15 \text{ V}$



ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

ELECTRICAL CHARACTERISTICS ($V_i=23V, I_o=40mA, 0^\circ C < T_j < 125^\circ C, C_1=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25^\circ C$	14.4	15	15.6	V
		$17.5V \leq V_i \leq 30V, I_o=1mA \sim 40mA$	14.25	15	15.75	V
		$17.5V \leq V_i \leq 30V, I_o=1mA \sim 70mA$	14.25	15	15.75	V (note)
Load Regulation	ΔV_o	$T_j=25^\circ C, I_o=1mA \sim 100mA, V_i=23V$		25	150	mV
		$T_j=25^\circ C, I_o=1mA \sim 40mA, V_i=23V$		15	75	mV
Line regulation	ΔV_o	$17.5V \leq V_i \leq 30V, T_j=25^\circ C, I_o=40mA$		65	300	mV
		$19V \leq V_i \leq 30V, T_j=25^\circ C, I_o=40mA$		58	250	mV
Quiescent Current	I_q			4.6	6.5	mA
Quiescent Current Change	ΔI_q	$19V \leq V_i \leq 30V, I_o=40mA$			1.5	mA
	ΔI_q	$1mA \leq I_o \leq 40mA, V_i=23V$			0.1	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz, T_s=25^\circ C$		82		μV
Ripple Rejection	RR	$18.5V \leq V_i \leq 28.5V, f=120Hz, 25^\circ C \leq T_j \leq 125^\circ C$	34	39		dB
Dropout Voltage	V_d	$T_j=25^\circ C$		1.7		V

TYPICAL APPLICATION

