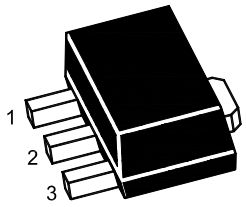
SOT-89 Encapsulate Three Terminal Voltage Regulators

78L18U Three-terminal positive voltage regulator



1.OUT 2.GND 3.IN

SOT-89 Plastic Package

FEATURES

Maximum output current

$I_{OM:}$ 0.1 A

Output voltage

V_O: 18 V

Continuous total dissipation

P_D: 0.5 W

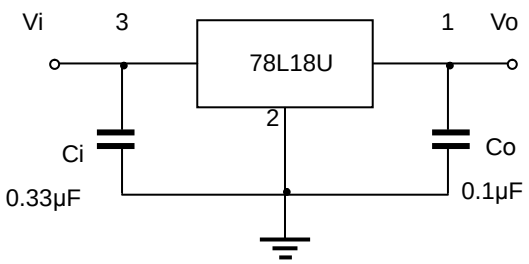
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

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

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE(Vi=26V,Io=40mA,Ci=0.33μF,Co=0.1μF, unless otherwise specified)

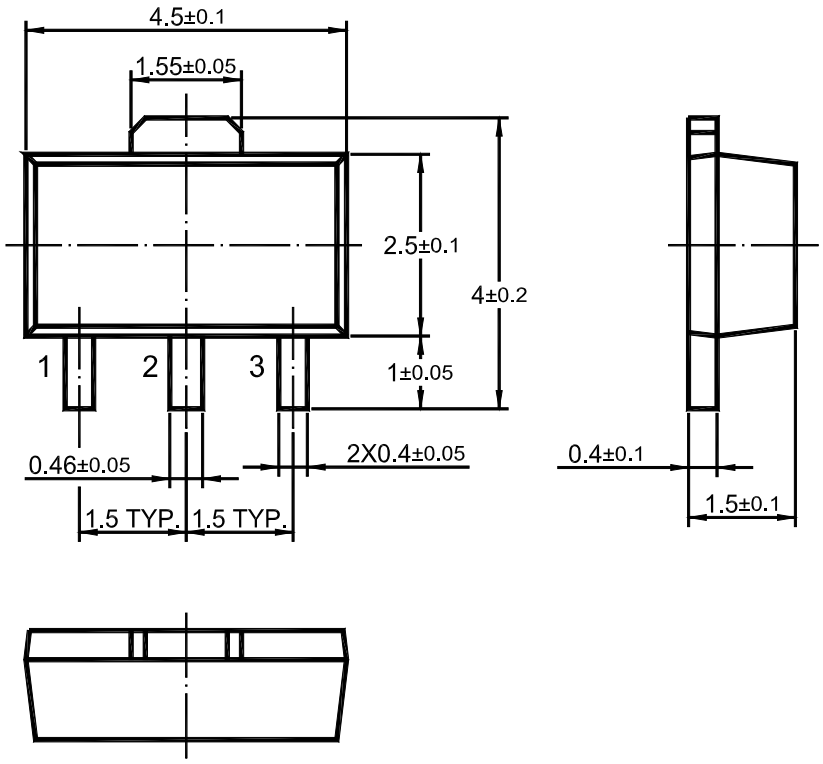
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Output voltage	Vo		25℃	17.3	18	18.7	V
		20.5V≤V_i≤33V, Io=1mA-40mA	0-125℃	17.1	18	18.9	V
		V_i=26V, Io=1mA-70mA		17.1	18	18.9	V
Load Regulation	△Vo	Io=1mA-100mA, V_i=26V	25℃		27	180	mV
		Io=1mA-40mA, V_i=26V	25℃		19	90	mV
Line regulation	△Vo	20.5V≤Vi≤33V,Io=40mA	25℃		70	360	mV
		22V≤Vi≤33V, Io=40mA	25℃		64	300	mV
Quiescent Current	Iq		25℃		4.7	6.5	mA
Quiescent Current Change	△Iq	22V≤Vi≤33V, Io=40mA	0-125℃			1.5	mA
	△Iq	1mA≤I_O≤40mA, Vi=26V	0-125℃			0.1	mA
Output Noise Voltage	V_N	10Hz≤f≤100KHz	25℃		89		μV
Ripple Rejection	RR	21.5V≤Vi≤31.5V,f=120Hz	0-125℃	32	36		dB
Dropout Voltage	Vd	T_j=25℃	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.

SOT-89 PACKAGE OUTLINE



Dimensions in mm