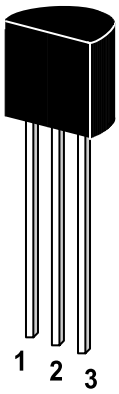
ST 78L13

3-Terminal positive voltage regulator

13V

- Suitable for TTL, DTL, HTL, C-MOS, Power Supply
- Internal Short-Circuit Current Limiting
- Internal Thermal Overload Protection
- Maximum Output Current of 150mA (Tj=25^{o}C)
- Available in the Plastic TO-92 Package



1. Output 2. Common 3. Input

TO-92 Plastic Package
Weight approx. 0.19g

Absolute Maximum Ratings (T_a = 25 ^{o}C)

	Symbol	Rating	Unit
Input Voltage	V_{IN}	35	V
Power Dissipation	P_{tot}	800	mW
Operating Temperature	T_{opr}	-30~75	°C
Storage Temperature Range	T_s	-55~150	°C

Electrical Characteristics
(Unless otherwise specified, V_{IN}=21V, I_{OUT}=40mA, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_j=25°C)

		Symbol	Test Condition	Min.	Typ.	Max.	Uunit
Output Voltage		V_{OUT}		12.45	13	13.55	V
Input Regulation		Reg. line	16V≤V_{IN}≤28V	-	125	270	mV
			17V≤V_{IN}≤28V	-	105	225	
Load Regulation		Reg. load	1.0mA≤I_{OUT}≤100mA	-	22	120	mV
			1.0mA≤I_{OUT}≤40mA	-	11	60	
Output Voltage		V_{OUT}	16V≤V_{IN}≤28V 1.0mA≤I_{OUT}≤40mA	12.54	-	13.86	V
		V_{OUT}	V_{IN}=21V 1.0mA≤I_{OUT}≤70mA	12.54	-	13.86	V
Quiescent Current		I_B		-	3.2	6.5	mA
Quiescent Current Change	With line	ΔI_B	17V≤V_{IN}≤28V	-	-	1.5	mA
	With load		1.0mA≤I_{OUT}≤40mA	-	-	0.1	
Output Noise Voltage		V_{NO}	Ta=25°C, 10Hz≤f≤100KHz	-	90	-	μV
Ripple Rejection		RR	f=100Hz, 17V≤V_{IN}≤27V,T_j=25°C	34	41	-	dB
Dropout Voltage		$\lvert V_{IN}-V_{OUT}\rvert$	T_j=25°C	-	1.7	-	V
Average Temperature Coefficient of Output Voltage		TC_{VO}	I_{OUT}=5mA	-	1.2	-	mV/°C