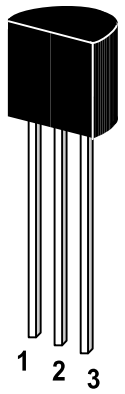
ST 78L24

3-Terminal positive voltage regulator

24V

- 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°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 °C)

	Symbol	Value	Unit
Input Voltage	V_{IN}	40	V
Power Dissipation	P_{tot}	800	mW
Operating Temperaturee	T_{opr}	-30~75	°C
Storage Temperature Range	T_s	-55~150	°C

G S P FORM A IS AVAILABLE

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SEMTECH ELECTRONICS LTD.
(Subsidiary of Semtech International Holdings Limited, acompany listed on the Hong Kong Stock Exchange, Stock Code: 724)

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Dated : 07/12/2002

Electrical Characteristics
(Unless otherwise specified, V_{IN}=33V, I_{OUT}=40mA, C_{IN}=0.33μF, C_{OUT}=0.1μF, T_j=25°C)

		Symbol	Test Condition	Min.	Typ.	Max.	Unit
Output Voltage		V_{OUT}		23	24	25	V
Input Regulation		Reg. line	27.5V≤V_{IN}≤38V	-	35	350	mV
			28V≤V_{IN}≤38V	-	30	300	
Load Regulation		Reg. load	1.0mA≤I_{OUT}≤100mA	-	40	200	mV
			1.0mA≤I_{OUT}≤40mA	-	20	100	
Output Voltage		V_{OUT}	27.5V≤V_{IN}≤38V 1.0mA≤I_{OUT}≤40mA	22.8	-	25.2	V
		V_{OUT}	V_{IN}=33V, 1.0mA≤I_{OUT}≤70mA	22.8	-	25.2	V
Quiescent Current		I_B		-	3.5	6.5	mA
Quiescent Current Change	With line	ΔI_B	28V≤V_{IN}≤38V	-	-	1.5	mA
	With load		1.0mA≤I_{OUT}≤40mA	-	-	0.1	
Output Noise Voltage		V_{NO}	Ta=25°C, 10Hz≤f≤100KHz	-	200	-	μV
Ripple Rejection		RR	f=120Hz, 29V≤V_{IN}≤39V,T_j=25°C	31	35	-	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	-	-2	-	mV/°C

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