

**TO-92L Bipolar Transistor 双极型三极管**

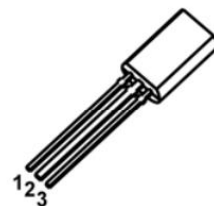
**TO-92L**

■ **Features 特点**

**NPN Low Saturation Voltage 低饱和压降**

■ **Absolute Maximum Ratings 最大额定值**

- 1. EMITTER
- 2. COLLECTOR
- 3. BASE



Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Collector-Base Voltage 集电极基极电压	$V_{CBO}$	60	V
Collector-Emitter Voltage 集电极发射极电压	$V_{CEO}$	50	V
Emitter-Base Voltage 发射极基极电压	$V_{EBO}$	5	V
Collector Current 集电极电流	$I_C$	1000	mA
Power dissipation 耗散功率	$P_C(T_a=25^\circ\text{C})$	750	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	167	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature 结温和储藏温度	$T_J, T_{stg}$	-55to+150 $^\circ\text{C}$	

■ **Device Marking 产品打标**

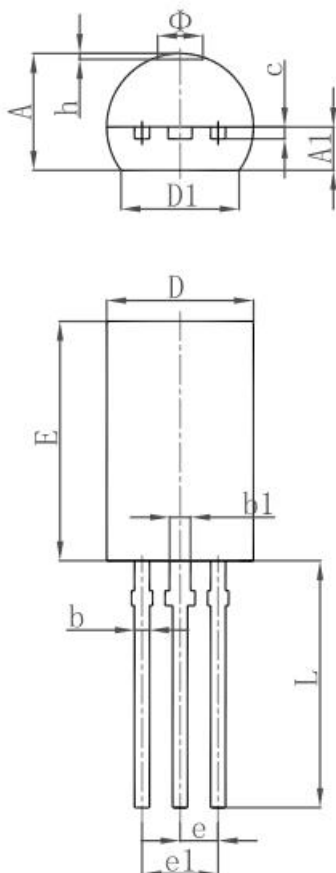
$H_{FE}(1)$	85-170(Q)	120-240(R)	170-340(S)
Mark	C1384		

■ **Electrical Characteristics** 电特性

( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

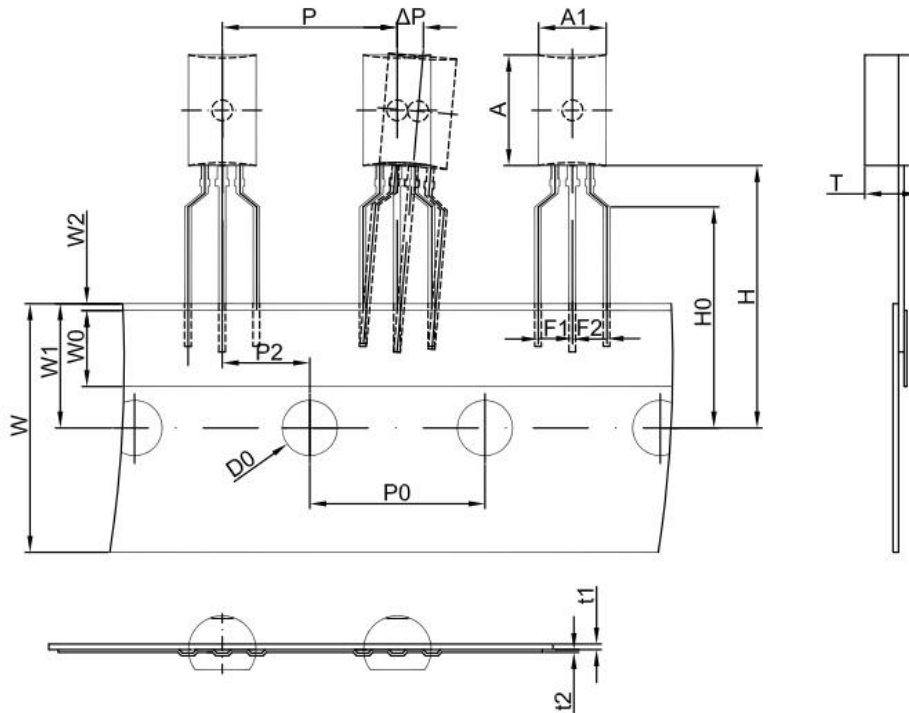
Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压( $I_C=10\mu\text{A}$ , $I_E=0$ )	$BV_{CBO}$	60	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压( $I_C=2\text{mA}$ , $I_B=0$ )	$BV_{CEO}$	50	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压( $I_E=10\mu\text{A}$ , $I_C=0$ )	$BV_{EBO}$	5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流( $V_{CB}=20\text{V}$ , $I_E=0$ )	$I_{CBO}$	—	—	0.1	$\mu\text{A}$
DC Current Gain 直流电流增益( $V_{CE}=10\text{V}$ , $I_C=500\text{mA}$ )	$H_{FE(1)}$	85	—	340	
DC Current Gain 直流电流增益( $V_{CE}=5\text{V}$ , $I_C=1\text{A}$ )	$H_{FE(2)}$	50	—	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降( $I_C=500\text{mA}$ , $I_B=50\text{mA}$ )	$V_{CE(sat)}$	—	—	0.4	V
Base-Emitter Saturation Voltage 基极发射极饱和压降( $I_C=500\text{mA}$ , $I_B=50\text{mA}$ )	$V_{BE(sat)}$	—	—	1.2	V
Transition Frequency 特征频率( $V_{CE}=10\text{V}$ , $I_C=50\text{mA}$ )	$f_T$	—	200	—	MHz

■Dimension 外形封装尺寸

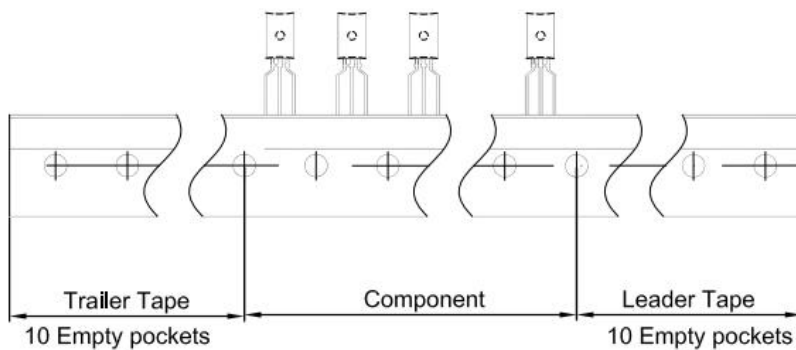


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	3.750	4.050	0.148	0.159
A1	1.280	1.580	0.050	0.062
b	0.380	0.550	0.015	0.022
b1	0.620	0.780	0.024	0.031
c	0.350	0.450	0.014	0.018
D	4.750	5.050	0.187	0.199
D1	4.000		0.157	
E	7.850	8.150	0.309	0.321
e	1.270 TYP.		0.050 TYP.	
e1	2.440	2.640	0.096	0.104
L	13.800	14.200	0.543	0.559
$\Phi$		1.600		0.063
h	0.000	0.300	0.000	0.012

■ Package Taping Dimension 包装编带尺寸



Dimiensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.9	8.0	3.9	12.7	12.7	6.35	2.5	2.5	18.0
W0	W1	W2	H	H0	D0	t1	t2	ΔP
6.0	9.0	1.0	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92L	2000 pcs	333×203×42	20,000 pcs	493×400×264