

## TO-92 Plastic-Encapsulate Transistors

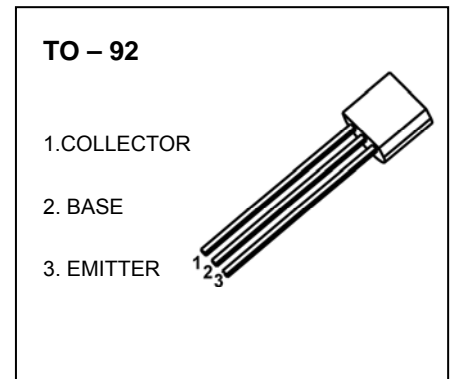
### BF370 TRANSISTOR (NPN)

#### FEATURES

- Low Saturation Medium Current Application
- High Transition Frequency

#### MAXIMUM RATINGS ( $T_a=25^{\circ}\text{C}$ unless otherwise noted)

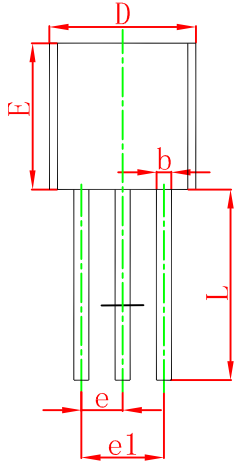
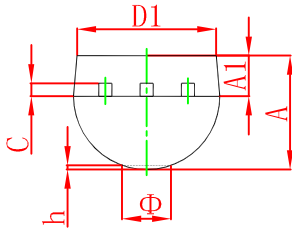
Symbol	Parameter	Value	Unit
$V_{CB0}$	Collector-Base Voltage	40	V
$V_{CEO}$	Collector-Emitter Voltage	15	V
$V_{EBO}$	Emitter-Base Voltage	4.5	V
$I_C$	Collector Current	0.1	A
$P_C$	Collector Power Dissipation	500	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	$^{\circ}\text{C}/\text{W}$
$T_J$	Junction Temperature	150	$^{\circ}\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^{\circ}\text{C}$



#### ELECTRICAL CHARACTERISTICS ( $T_a=25^{\circ}\text{C}$ unless otherwise specified)

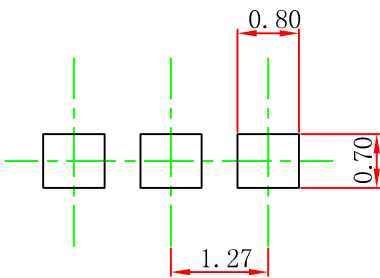
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
<b>Collector-base breakdown voltage</b>	$V_{(BR)CBO}$	$I_C = 0.1\text{mA}, I_E = 0$	40			V
<b>Collector-emitter breakdown voltage</b>	$V_{(BR)CEO}$	$I_C = 1\text{mA}, I_B = 0$	15			V
<b>Emitter-base breakdown voltage</b>	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}, I_C = 0$	4.5			V
<b>Collector cut-off current</b>	$I_{CBO}$	$V_{CB} = 20\text{V}, I_E = 0$			0.4	$\mu\text{A}$
<b>Emitter cut-off current</b>	$I_{EBO}$	$V_{EB} = 2\text{V}, I_C = 0$			0.1	$\mu\text{A}$
<b>DC current gain</b>	$h_{FE}$	$V_{CE} = 1\text{V}, I_C = 10\text{mA}$	40		200	
<b>Collector-emitter saturation voltage</b>	$V_{CE(sat)}$	$I_C = 15\text{mA}, I_B = 1.5\text{mA}$			0.2	V
<b>Base-emitter saturation voltage</b>	$V_{BE(sat)}$	$I_C = 15\text{mA}, I_B = 1.5\text{mA}$			1.2	V
<b>Transition frequency</b>	$f_T$	$V_{CE} = 10\text{V}, I_C = 10\text{mA}, f = 100\text{MHz}$	500			MHz

## TO-92 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	3.300	3.700	0.130	0.146
A1	1.100	1.400	0.043	0.055
b	0.380	0.550	0.015	0.022
c	0.360	0.510	0.014	0.020
D	4.300	4.700	0.169	0.185
D1	3.430		0.135	
E	4.300	4.700	0.169	0.185
e	1.270 TYP		0.050 TYP	
e1	2.440	2.640	0.096	0.104
L	14.100	14.500	0.555	0.571
Φ		1.600		0.063
h	0.000	0.380	0.000	0.015

## TO-92 Suggested Pad Layout



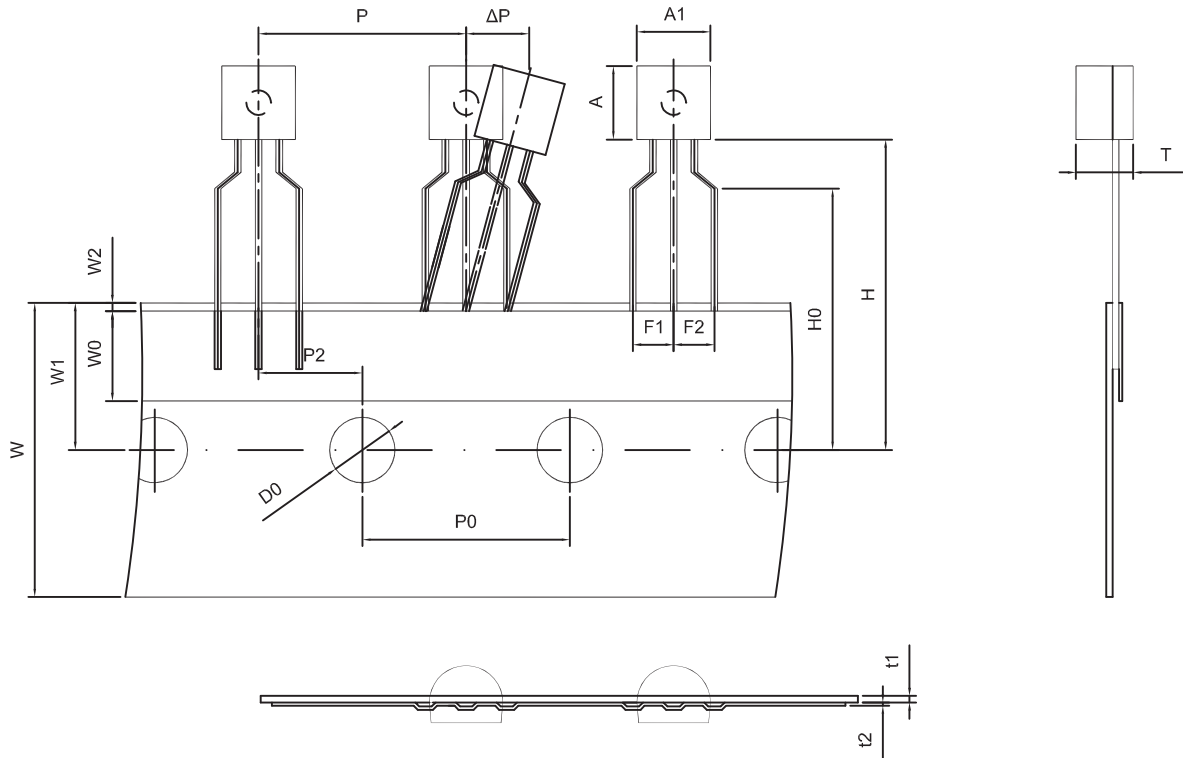
### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purposes only.

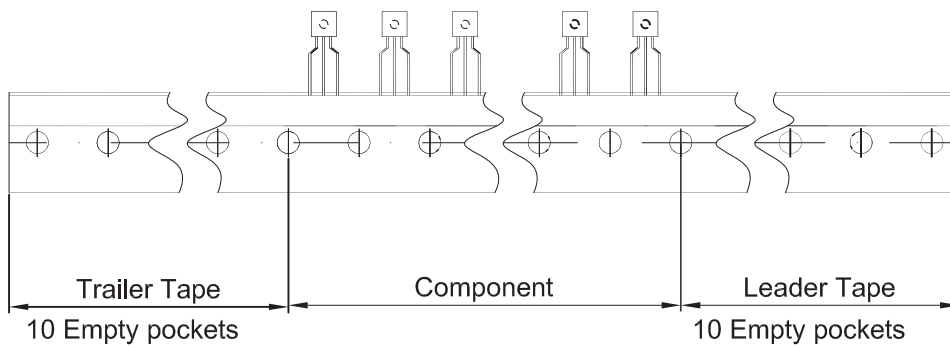
### NOTICE

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TO-92 PACKAGE TAPEING DIMENSION



Dimiensions are in millimeter								
A1	A	T	P	P0	P2	F1	F2	W
4.5	4.5	3.5	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 MAX.	19.0	16.0	4.0	0.4	0.2	0



Package	Box	Box Size(mm)	Carton	Carton Size(mm)
TO-92	2000 pcs	333×162×43	20,000 pcs	350×340×250