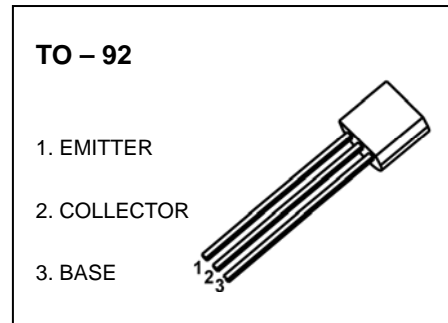
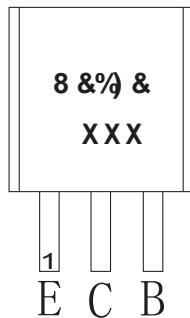


## 2SD2152 TRANSISTOR (NPN)

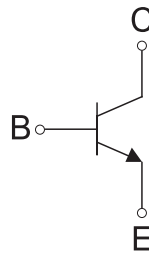
### FEATURES

- High DC Current Gain
- Low Saturation Medium Current Application

### MARKING



### Equivalent Circuit



### ORDERING INFORMATION

Part Number	Package	Packing Method	Pack Quantity
2SD2152	TO-92	Bulk	1000pcs/Bag

### MAXIMUM RATINGS (T<sub>a</sub>=25°C unless otherwise noted)

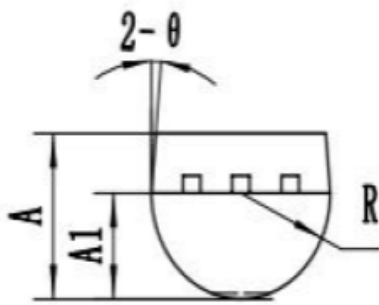
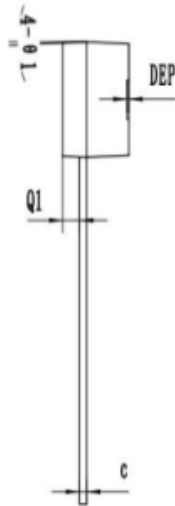
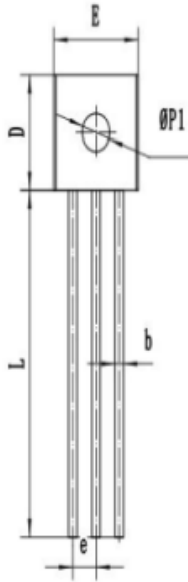
Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	22	V
V <sub>CEO</sub>	Collector-Emitter Voltage	22	V
V <sub>EBO</sub>	Emitter-Base Voltage	6	V
I <sub>C</sub>	Collector Current	3	A
P <sub>C</sub>	Collector Power Dissipation	700	mW
R <sub>θJA</sub>	Thermal Resistance From Junction To Ambient	178	°C/W
T <sub>J</sub> , T <sub>stg</sub>	Operation Junction and Storage Temperature Range	-55~+150	°C

$T_a=25\text{ }^\circ\text{C}$  unless otherwise specified

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=0.05\text{mA}, I_E=0$	22			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	22			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=0.01\text{mA}, I_C=0$	6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=20\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5\text{V}, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE}=2\text{V}, I_C=0.15\text{mA}$	130			
	$h_{FE(2)}$	$V_{CE}=2\text{V}, I_C=100\text{mA}$	180		950	
	$h_{FE(3)}$	$V_{CE}=2\text{V}, I_C=500\text{mA}$	180			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2000\text{mA}, I_B=100\text{mA}$			0.4	V
Transition frequency	$f_T$	$V_{CE}=6\text{V}, I_C=50\text{mA}, f=30\text{MHz}$	150			MHz

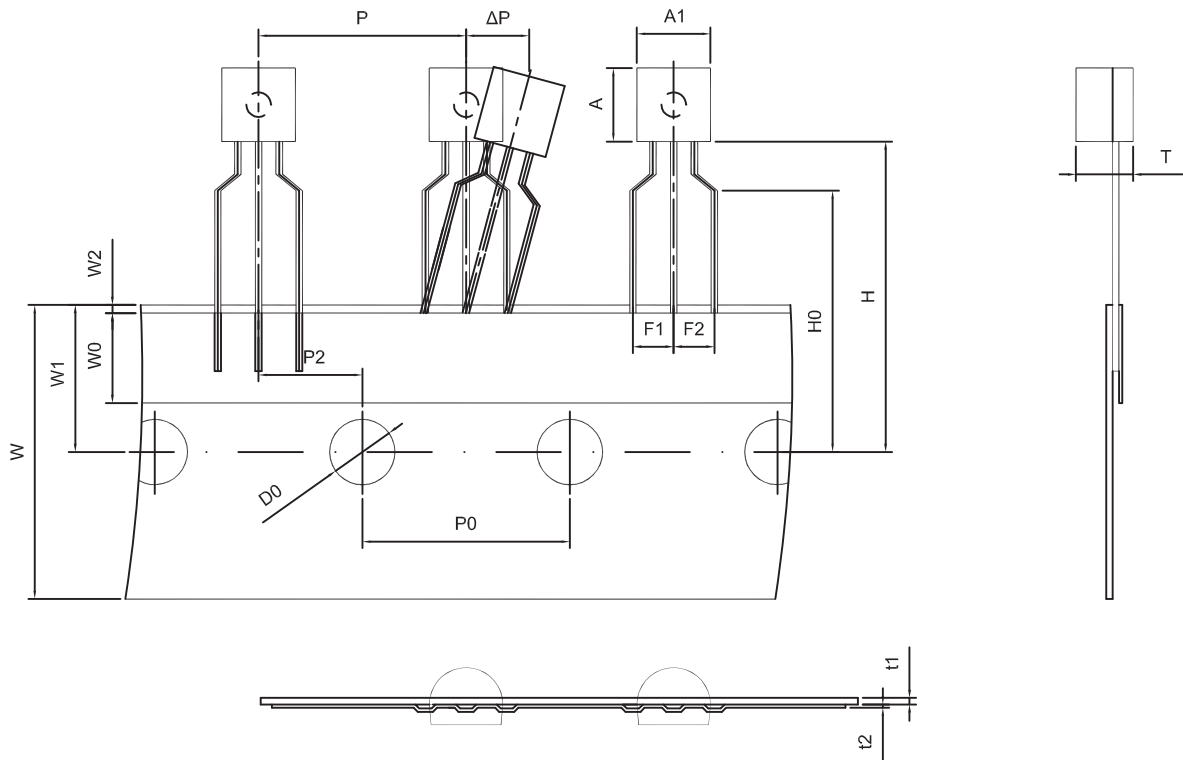
#### CLASSIFICATION OF $h_{FE}$

RANK	Q	R	S	T
RANGE	180-290	270-380	340-560	560-950

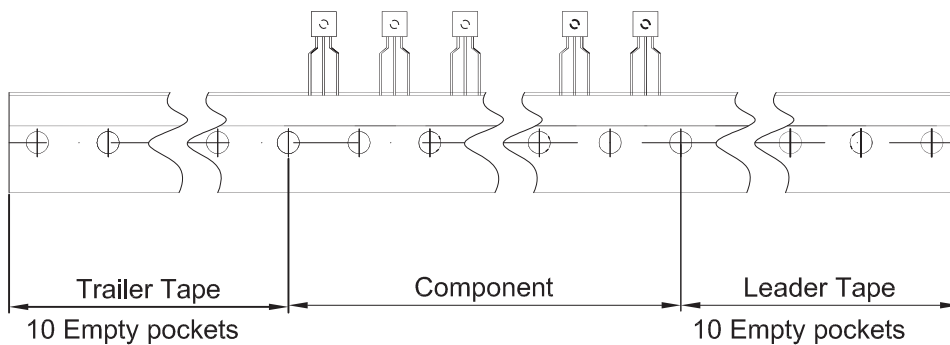


SYMBOL	MM		
	MIN	NOM	MAX
*A	3.00	3.25	3.50
A1	2.20	2.30	2.40
*b	0.40	0.45	0.50
*c	0.25	0.30	0.35
*D	4.50	4.60	4.70
*E	4.50	4.60	4.70
*e	1.22	1.27	1.32
*L	14.00	14.30	14.60
R	2.20	2.30	2.40
Q1	0.85	0.90	0.95
θ	3°	5°	7°
Ø1	1°	3°	5°
ØP1	1.40	1.50	1.60
DEP	0.05	0.10	0.20
带*为检验尺寸			

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