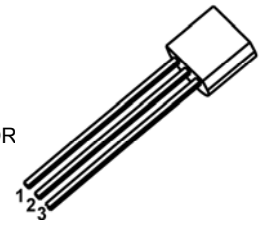
JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-92 Plastic-Encapsulate Transistors

TO – 92

1. EMITTER
2. COLLECTOR
3. BASE



2SD2152 TRANSISTOR (NPN)

FEATURES

- High DC Current Gain
- Low Saturation Medium Current Application

MAXIMUM RATINGS (T_a=25℃ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	22	V
V_{CEO}	Collector-Emitter Voltage	22	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	3	A
P_C	Collector Power Dissipation	700	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	178	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55~+150	℃

ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

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

CLASSIFICATION OF h_{FE}

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