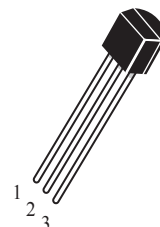


NPN Transistors

 Lead(Pb)-Free

TO-92

1. EMITTER
2. BASE
3. COLLECTOR



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Rating	Symbol	2N5551	Unit
Collector-Emitter Voltage	V _{CEO}	160	V _{dc}
Collector-Base Voltage	V _{CBO}	180	V _{dc}
Emitter-Base Voltage	V _{EBO}	6.0	V _{dc}
Collector Current	I _C	600	mA _{dc}
Total Device Dissipation T _A =25°C	P _D	0.625	W
Junction Temperature	T _j	150	°C
Storage, Temperature	T _{stg}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I _C = 1.0 mA _{dc} , I _B =0)	V _{(BR)CEO}	160	-	V _{dc}
Collector-Base Breakdown Voltage (I _C = 100 μA _{dc} , I _E =0)	V _{(BR)CBO}	180	-	V _{dc}
Emitter-Base Breakdown Voltage (I _E = 10 μA _{dc} , I _C =0)	V _{(BR)EBO}	6.0	-	V _{dc}
Collector Cutoff Current (V _{CB} =120 V _{dc} , I _E =0)	I _{CBO}	-	0.05	μA _{dc}
Emitter Cutoff Current (V _{EB} = 4.0 V _{dc} , I _C =0)	I _{EBO}	-	0.05	μA _{dc}

2N5551**ELECTRICAL CHARACTERISTICS** ($T_A=25^{\circ}\text{C}$ unless otherwise noted) (Continued)

Characteristics	Symbol	Min	TYP	Max	Unit
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ON CHARACTERISTICS

DC Current Gain ($I_C=1.0\text{ mA dc}, V_{CE}=5.0\text{ V dc}$)	$h_{FE} (1)$	80	-	-	-
DC Current Gain ($I_C=10\text{ mA dc}, V_{CE}=5.0\text{ V dc}$)	$h_{FE} (2)$	80	-	250	-
($I_C=50\text{ mA dc}, V_{CE}=5.0\text{ V dc}$)	$h_{FE} (3)$	50	-	-	-
Collector-Emitter Saturation Voltage ($I_C=50\text{ mA dc}, I_B=5.0\text{ mA dc}$)	$V_{CE(sat)}$	-	-	0.5	Vdc
Base-Emitter Saturation Voltage ($I_C=50\text{ mA dc}, I_B=5.0\text{ mA dc}$)	$V_{BE(sat)}$	-	-	1.0	Vdc
Current-Gain-Bandwidth Product ($I_C=10\text{ mA dc}, V_{CE}=5.0\text{ V dc}, f=30\text{ MHz}$)	f_T	100	-	-	MHz

Classification of $h_{FE}(1)$

Rank	A	B	C
Range	80-160	120-180	150-250

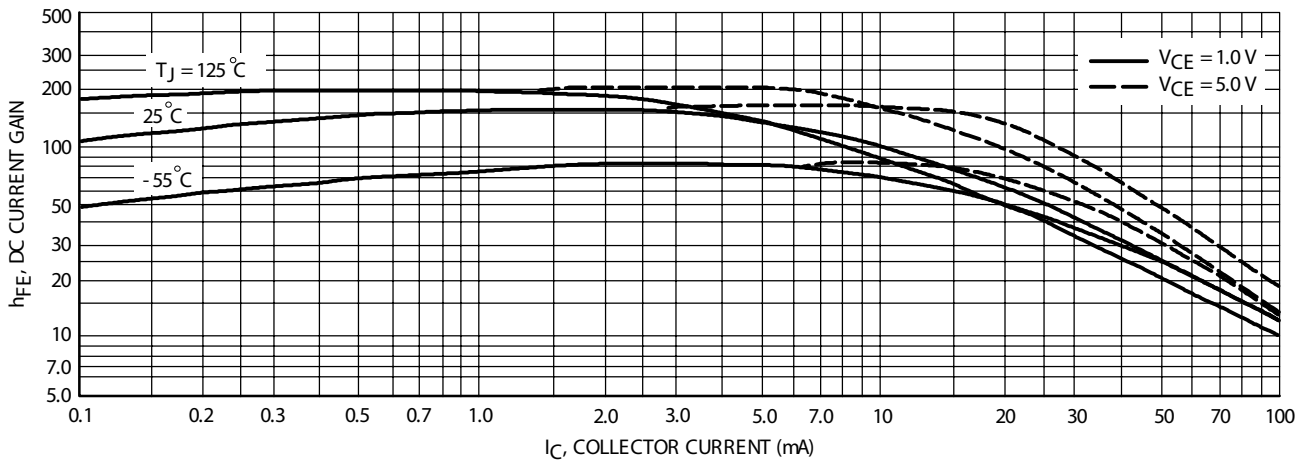


FIG1. DC Current Gain

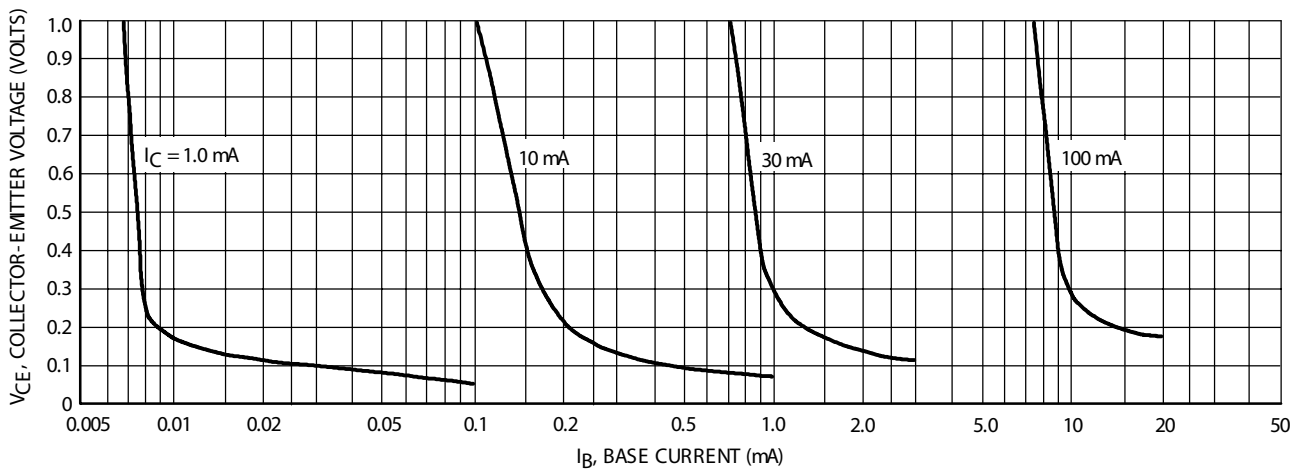
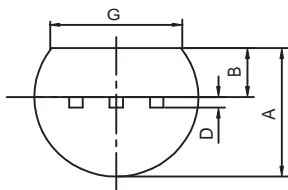
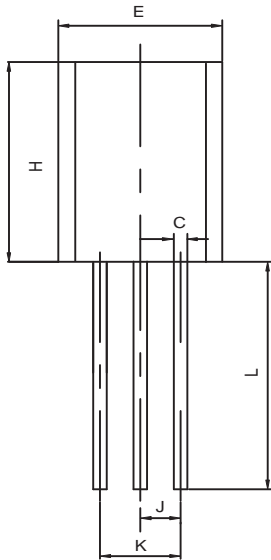


FIG 2. Collector Saturation Region

TO-92 Outline Dimensions

unit:mm



TO-92		
Dim	Min	Max
A	3.30	3.70
B	1.10	1.40
C	0.38	0.55
D	0.36	0.51
E	4.40	4.70
G	3.43	-
H	4.30	4.70
J	1.270TYP	
K	2.44	2.64
L	14.10	14.50