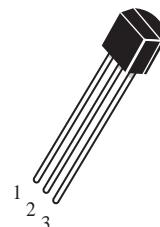


High-Voltage PNP Transistors

 Lead(Pb)-Free

TO-92

1. EMITTER
2. BASE
3. COLLECTOR



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	-400	V _{dc}
Collector-Base Voltage	V _{CBO}	-400	V _{dc}
Emitter-Base Voltage	V _{EBO}	-5.0	V _{dc}
Collector Current	I _C	-200	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}	-400	-	V _{dc}
Collector-Base Breakdown Voltage (I _C = -100 uA _{dc} , I _E =0)	V _{(BR)CBO}	-400	-	V _{dc}
Emitter-Base Breakdown Voltage (I _E = -100 uA _{dc} , I _C =0)	V _{(BR)EBO}	-5.0	-	V _{dc}
Collector Cutoff Current (V _{CE} = -400 V _{dc} , I _B =0)	I _{CE0}	-	-5.0	uA _{dc}
Collector Cutoff Current (V _{CB} = -400 V _{dc} , I _E =0)	I _{CBO}	-	-0.1	uA _{dc}
Emitter Cutoff Current (V _{EB} = -4.0V _{dc} , I _C =0)	I _{EBO}	-	-0.1	uA _{dc}

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted) (Continued)

Characteristics	Symbol	Min	Max	Unit
DC Current Gain ($I_C = -1.0\text{ mAdc}, V_{CE} = -10\text{Vdc}$)	$H_{FE(1)}$	70	-	-
($I_C = -10\text{ mAdc}, V_{CE} = -10\text{Vdc}$)	$H_{FE(2)}$	80	300	-
($I_C = -100\text{ mAdc}, V_{CE} = -10\text{Vdc}$)	$H_{FE(3)}$	60	-	-
Collector-Emitter Saturation Voltage ($I_C = -10\text{ mAdc}, I_B = -1.0\text{ mAdc}$)	$V_{CE(sat)}$	-	-0.2	Vdc
($I_C = -50\text{ mAdc}, I_B = -5.0\text{ mAdc}$)		-	-0.3	
Base-Emitter Saturation Voltage ($I_C = -10\text{ mAdc}, I_B = -1.0\text{ mAdc}$)	$V_{BE(sat)}$	-	-0.75	Vdc
Current-Gain-Bandwidth Product ($I_C = 10\text{ mAdc}, V_{CE} = -20\text{Vdc}, f = 30\text{MHz}$)	f_T	50	-	MHz

Typical Characteristics

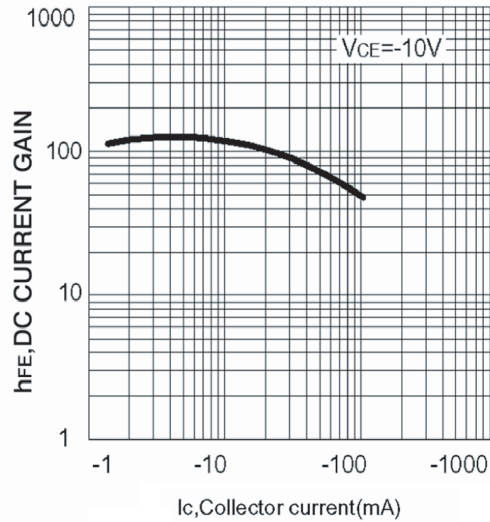


FIG1. DC CURRENT GAIN

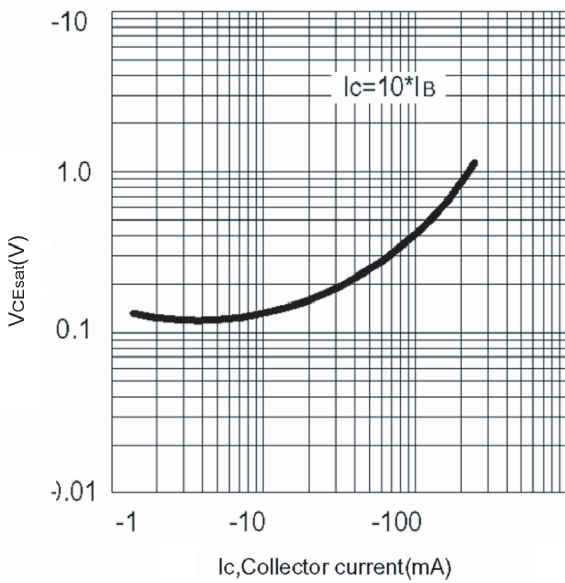


FIG2. COLLECTOR-EMITTER SATURATION VOLTAGE

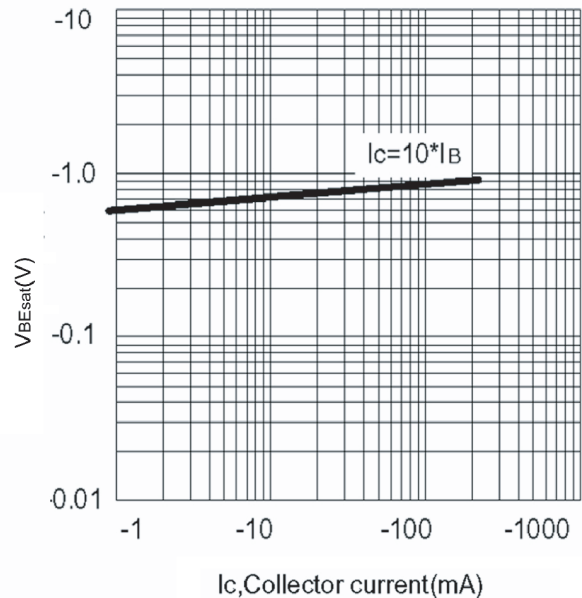
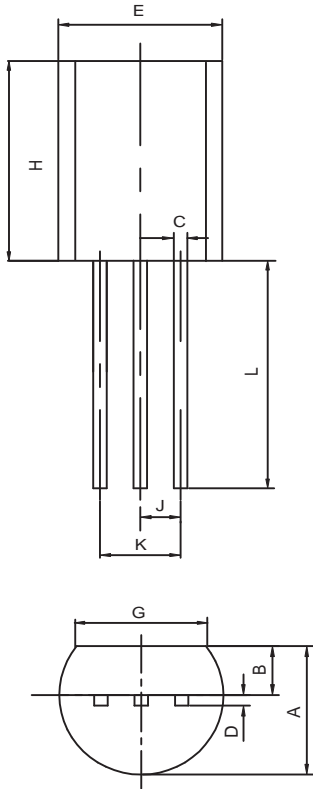


FIG3. BASE-EMITTER SATURATION VOLTAGE

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