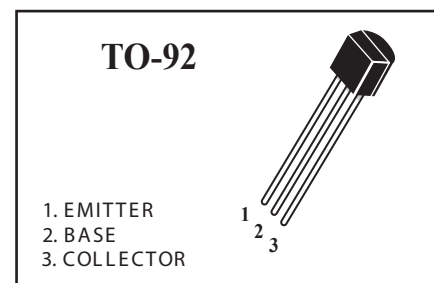


PNP General Purpose Transistors



ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CE0}	-25	Vdc
Collector-Base Voltage	V_{CB0}	-40	Vdc
Emitter-Base Voltage	V_{EB0}	-5.0	Vdc
Collector Current	I_C	-500	mAdc
Total Device Dissipation $T_A=25^{\circ}\text{C}$	P_D	0.625	W
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage, Temperature	T_{stg}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage ($I_C = -0.1 \text{ mAdc}$, $I_E = 0$)	$V_{(BR)CE0}$	-25	-	Vdc
Collector-Base Breakdown Voltage ($I_C = -100 \mu\text{Adc}$, $I_E = 0$)	$V_{(BR)CB0}$	-40	-	Vdc
Emitter-Base Breakdown Voltage ($I_E = -100 \mu\text{Adc}$, $I_C = 0$)	$V_{(BR)EB0}$	-5.0	-	Vdc
Collector Cutoff Current ($V_{CE} = -20 \text{ Vdc}$, $I_B = 0$)	I_{CE0}	-	-0.2	μAdc
Collector Cutoff Current ($V_{CB} = -40 \text{ Vdc}$, $I_E = 0$)	I_{CB0}	-	-0.1	μAdc
Emitter Cutoff Current ($V_{EB} = -3.0 \text{ Vdc}$, $I_C = 0$)	I_{EB0}	-	-0.1	μAdc

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

Characteristics	Symbol	Min	TYP	Max	Unit
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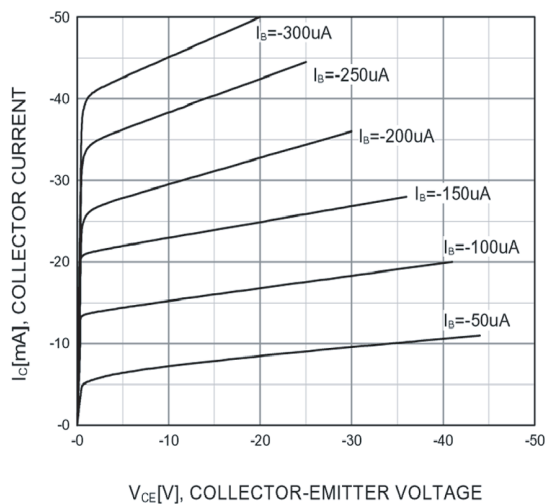
ON CHARACTERISTICS

DC Current Gain ($I_C = -50\text{ mA}$, $V_{CE} = -1.0\text{ Vdc}$)	$h_{FE(1)}$	85	-	300	-
DC Current Gain ($I_C = -500\text{ mA}$, $V_{CE} = 1.0\text{ Vdc}$)	$h_{FE(2)}$	50	-	-	-
Collector-Emitter Saturation Voltage ($I_C = -500\text{ mA}$, $I_B = -50\text{ mA}$)	$V_{CE(sat)}$	-	-	-0.6	Vdc
Base-Emitter Saturation Voltage ($I_C = -500\text{ mA}$, $I_B = -50\text{ mA}$)	$V_{BE(sat)}$	-	-	-1.2	Vdc
Current-Gain-Bandwidth Product ($I_C = -20\text{ mA}$, $V_{CE} = -6.0\text{ Vdc}$, $f = 30\text{ MHz}$)	f_T	150	-	-	MHz

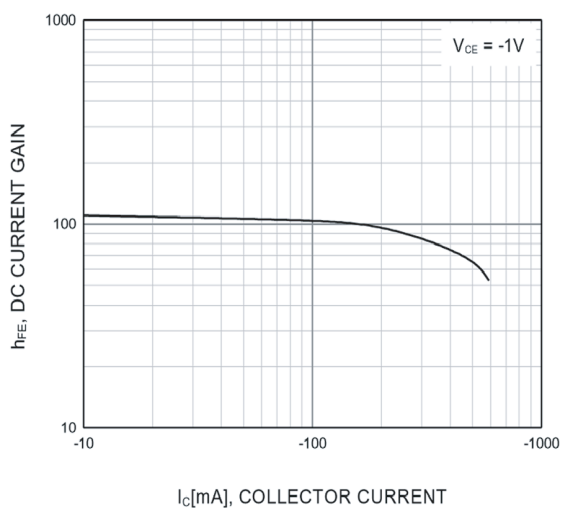
Classification of $h_{FE(1)}$

Rank	B	C	D
Range	85-160	120-200	160-300

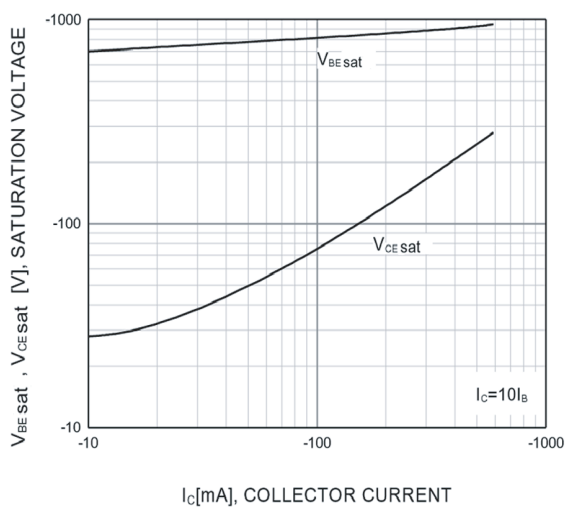
Typical Characteristics



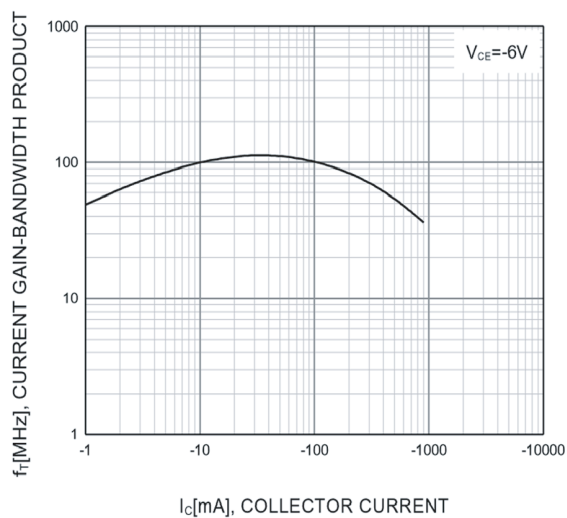
Static Characteristic



DC current Gain



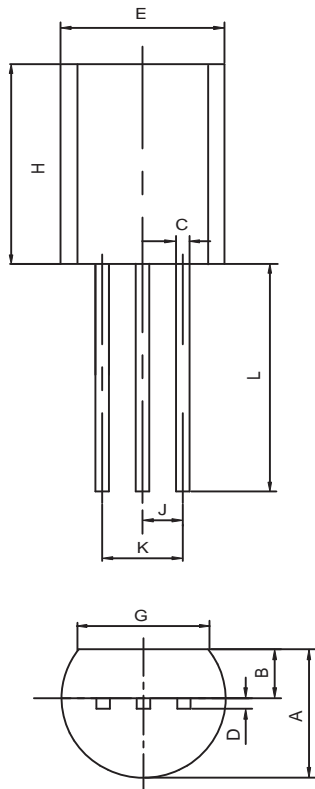
**Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**



Current Gain Bandwidth Product

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