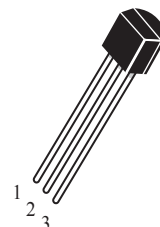


## PNP General Purpose Transistors

**(Pb)** 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 <sub>CEO</sub>	-25	Vdc
Collector-Base Voltage	V <sub>CBO</sub>	-40	Vdc
Emitter-Base Voltage	V <sub>EBO</sub>	-5	Vdc
Collector Current	I <sub>C</sub>	-500	mAdc
Total Device Dissipation T <sub>A</sub> =25°C	PCM	0.625	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage, Temperature	T <sub>stg</sub>	-55 to +150	°C

### ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min	Max	Unit
Collector-Emitter Breakdown Voltage (I <sub>C</sub> = -1.0 mAdc, I <sub>B</sub> =0)	V <sub>(BR)CEO</sub>	-25	-	Vdc
Collector-Base Breakdown Voltage (I <sub>C</sub> = -100 uAdc, I <sub>E</sub> =0)	V <sub>(BR)CBO</sub>	-40	-	Vdc
Emitter-Base Breakdown Voltage (I <sub>E</sub> = -100 uAdc, I <sub>C</sub> =0)	V <sub>(BR)EBO</sub>	-5	-	Vdc
Collector Cutoff Current (V <sub>CE</sub> = -20 Vdc, I <sub>B</sub> =0)	I <sub>CE0</sub>	-	-0.1	uAdc
Collector Cutoff Current (V <sub>CB</sub> = -40 Vdc, I <sub>E</sub> =0)	I <sub>CBO</sub>	-	-0.1	uAdc
Emitter Cutoff Current (V <sub>EB</sub> = -5.0V dc, I <sub>C</sub> =0)	I <sub>EBO</sub>	-	-0.1	uAdc

**S9012** **WEITRON****Electrical Characteristics** ( $T_A=25^\circ\text{C}$  unless otherwise noted) (Continued)

Characteristics	Symbol	Min	Max	Unit
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**On Characteristics**

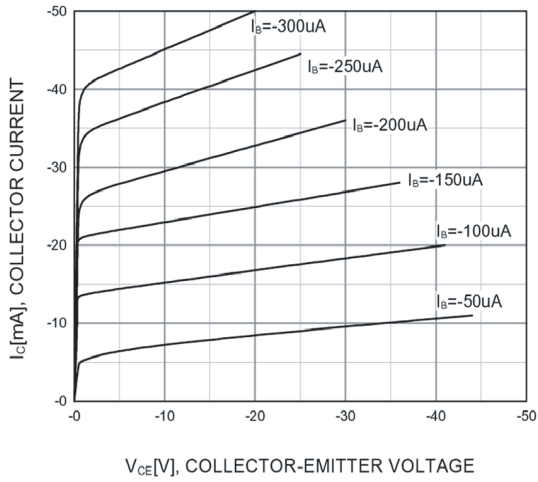
<b>DC Current Gain</b> ( $I_C = -50\text{ mA dc}$ , $V_{CE} = -1\text{ V dc}$ ) ( $I_C = -500\text{ mA dc}$ , $V_{CE} = -1\text{ V dc}$ )	$h_{FE(1)}$ $h_{FE(2)}$	64 40	300 -	-
<b>Collector-Emitter Saturation Voltage</b> ( $I_C = 500\text{ mA dc}$ , $I_B = -50\text{ mA dc}$ )	$V_{CE(sat)}$	-	-0.6	Vdc
<b>Base-Emitter Saturation Voltage</b> ( $I_C = 500\text{ mA dc}$ , $I_B = -50\text{ mA dc}$ )	$V_{BE(sat)}$	-	-1.2	Vdc
<b>Transition frequency</b>	$f_T$	150	-	MHz

**Classification Of  $h_{FE(1)}$** 

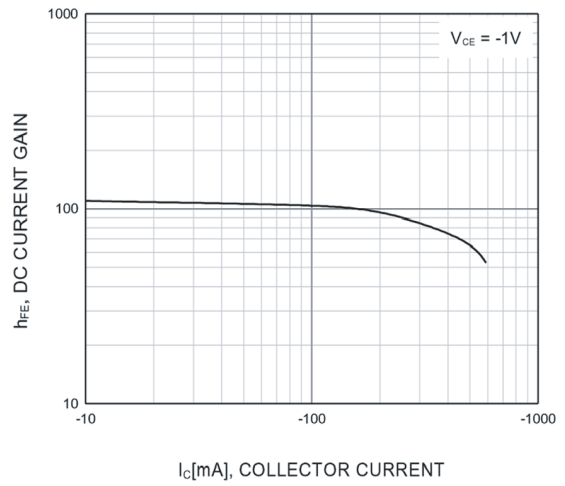
Rank	D	E	F	G	H	I
<b>Range</b>	64-91	78-112	96-135	112-166	144-202	190-300

**WEITRON**<http://www.weitron.com.tw>

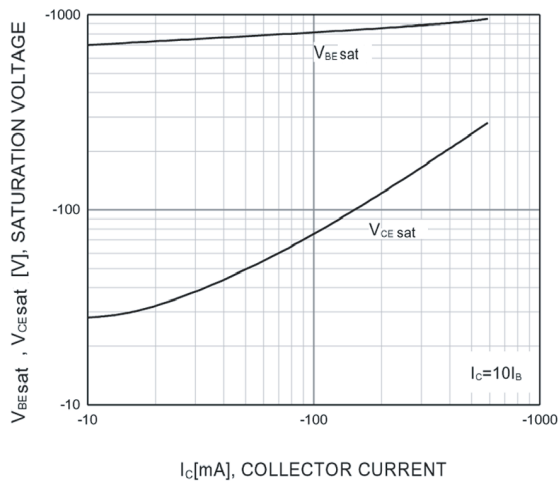
## Typical Characteristics



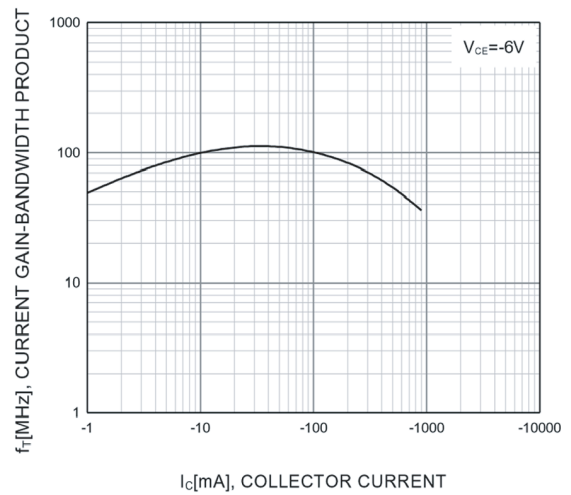
**Static Characteristic**



**DC current Gain**



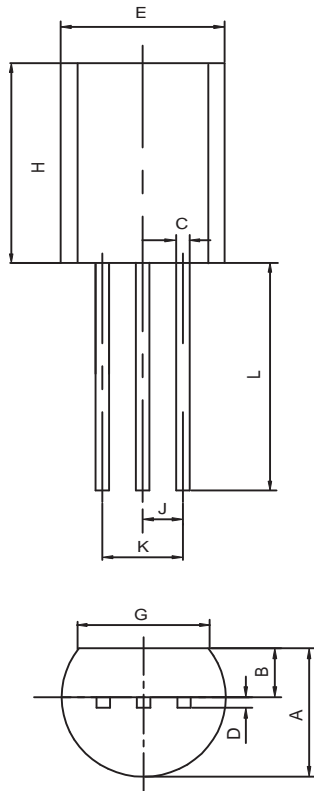
**Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**



**Current Gain Bandwidth Product**

## TO-92 Outline Dimensions

unit:mm



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