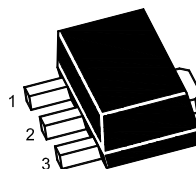


### PNP Silicon Epitaxial Planar Transistor

Low frequency transistor



1.Base 2.Collector 3.Emitter  
SOT-89 Plastic Package

#### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	30	V
Collector Emitter Voltage	$-V_{CEO}$	20	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current - DC	$-I_C$	5	A
Collector Current - Pulse <sup>1)</sup>	$-I_{CP}$	10	A
Collector Power Dissipation	$P_C$	0.5 2 <sup>2)</sup>	W
Junction Temperature	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

<sup>1)</sup> Single pulse,  $P_W = 10\text{ ms}$ .

<sup>2)</sup> When mounted on a 40 X 40 X 0.7 mm ceramic board.

#### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 2\text{ V}$ , $-I_C = 500\text{ mA}$ Current Gain Group	P $h_{FE}$	82	-	180	-
	Q $h_{FE}$	120	-	270	-
	R $h_{FE}$	180	-	390	-
Collector Base Cutoff Current at $-V_{CB} = 20\text{ V}$	$-I_{CBO}$	-	-	500	nA
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	500	nA
Collector Base Breakdown Voltage at $-I_C = 50\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	20	-	-	V
Emitter Base Breakdown Voltage at $-I_E = 50\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage at $-I_C = 4\text{ A}$ , $-I_B = 100\text{ mA}$	$-V_{CE(sat)}$	-	-	1	V
Transition Frequency at $-V_{CE} = 6\text{ V}$ , $I_E = 50\text{ mA}$ , $f = 100\text{ MHz}$	$f_T$	-	120	-	MHz
Output Capacitance at $-V_{CB} = 20\text{ V}$ , $I_E = 0$ , $f = 1\text{ MHz}$	$C_{ob}$	-	60	-	pF

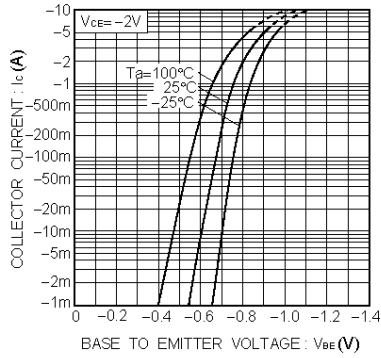


Fig.1 Grounded emitter propagation characteristics

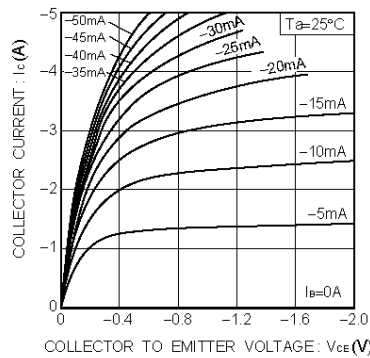


Fig.2 Grounded emitter output characteristics

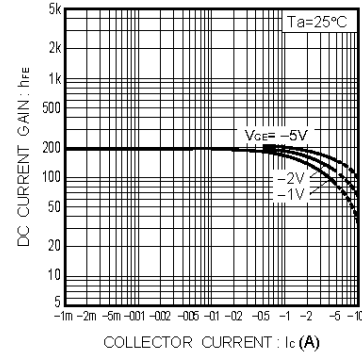


Fig.3 DC current gain vs. collector current ( I )

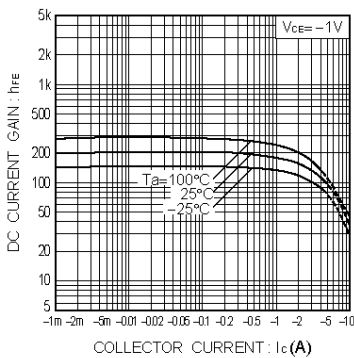


Fig.4 DC current gain vs. collector current (II)

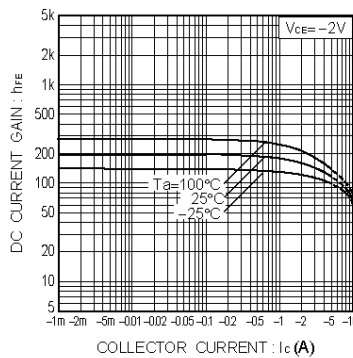


Fig.5 DC current gain vs. collector current (III)

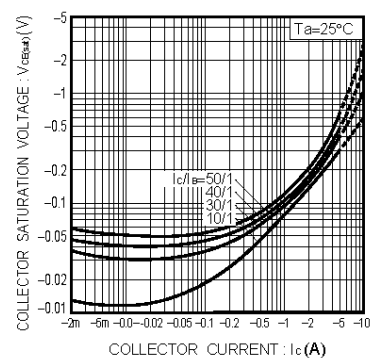


Fig.6 Collector-emitter saturation voltage vs. collector current ( I )

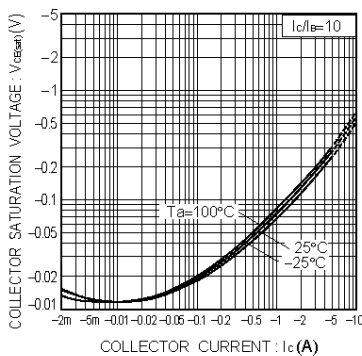


Fig.7 Collector-emitter saturation voltage vs. collector current ( II )

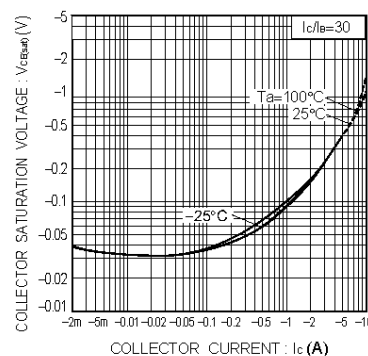


Fig.8 Collector-emitter saturation voltage vs. collector current ( III )

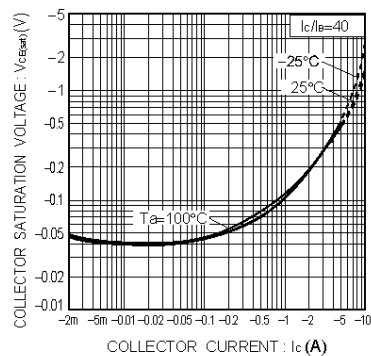


Fig.9 Collector-emitter saturation voltage vs. collector current ( IV )