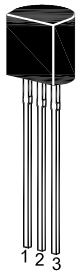
ST 2SA1585

PNP Silicon Epitaxial Planar Transistor

The transistor is subdivided into two groups, Q and R, according to its DC current gain.

On special request, these transistors can be manufactured in different pin configurations.



1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	20	V
Collector Emitter Voltage	$-V_{CEO}$	20	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	2	A
Peak Collector Current (P_W = 10 ms)	$-I_{CP}$	5	A
Power Dissipation	P_{tot}	400	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 2 V, $-I_C$ = 100 mA	Current Gain Group Q R	h_{FE} h_{FE}	120 180	- -	270 390	- -
Collector Base Cutoff Current at $-V_{CB}$ = 20 V		$-I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $-V_{EB}$ = 5 V		$-I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage at $-I_C$ = 50 µA		$-V_{(BR)CBO}$	20	-	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 1 mA		$-V_{(BR)CEO}$	20	-	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 50 µA		$-V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 2 A, $-I_B$ = 0.1 A		$-V_{CE(sat)}$	-	-	0.5	V
Transition Frequency at $-V_{CE}$ = 2 V, I_E = 500 mA, f = 100 MHz		f_T	-	240	-	MHz
Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz		C_{ob}	-	35	-	pF

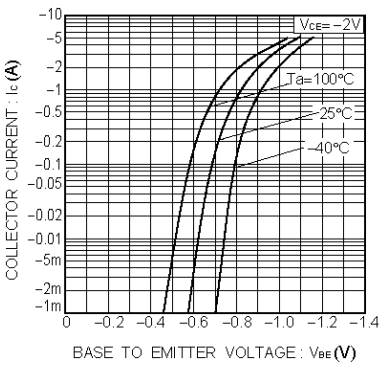


Fig.1 Grounded emitter propagation characteristics

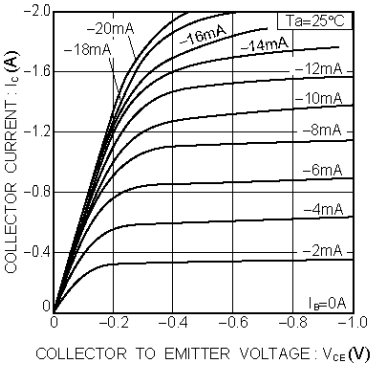


Fig.2 Grounded emitter output characteristics (Ⅰ)

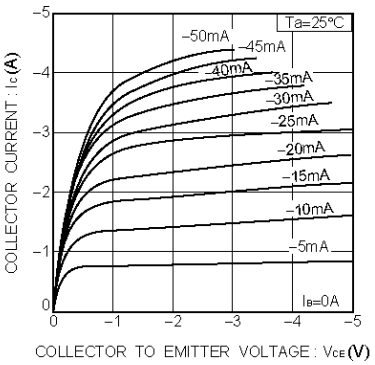


Fig.3 Grounded emitter output characteristics (Ⅱ)

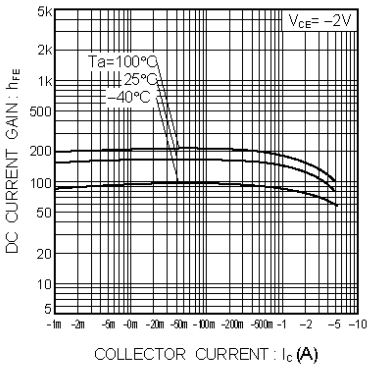


Fig.4 DC current gain vs. collector current

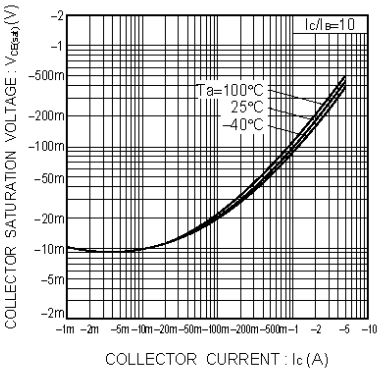


Fig.5 Collector-emitter saturation voltage vs. collector curren (Ⅰ)

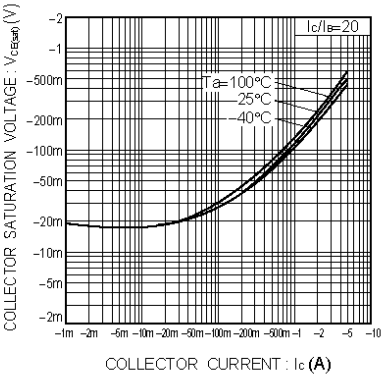


Fig.6 Collector-emitter saturation voltage vs. collector current (Ⅱ)

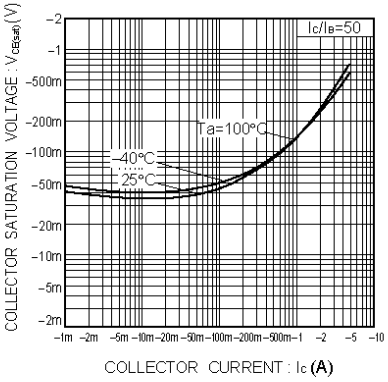


Fig.7 Collector-emitter saturation voltage vs. collector current (Ⅲ)

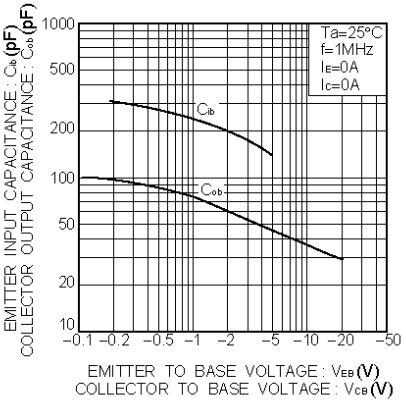


Fig.8 Gain bandwidth product vs. emitter current
Collector output capacitance vs. collector-base voltage

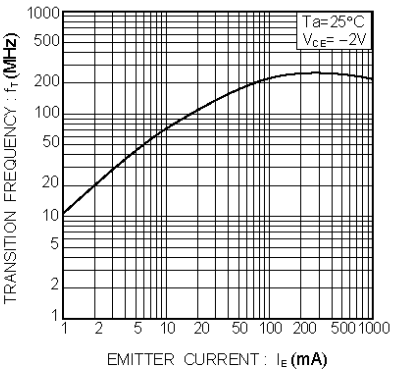


Fig.9 Emitter input capacitance vs. emitter base voltage