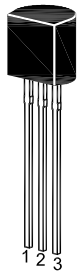
2SA539

PNP Silicon Epitaxial Planar Transistor

for low frequency applications.

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



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

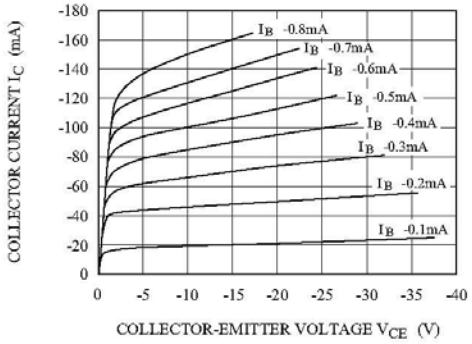
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	45	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	200	mA
Power Dissipation	P_{tot}	400	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

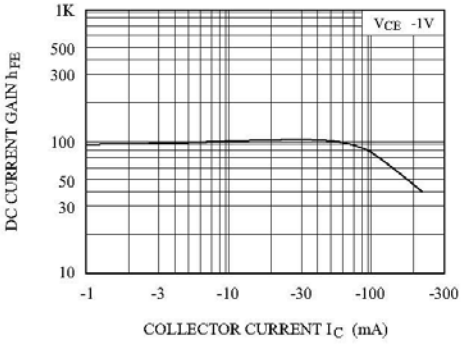
Characteristics at T_a = 25 °C

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 1 V, $-I_C$ = 50 mA	Current Gain Group O Y	h_{FE} h_{FE}	70 120	- -	140 240	- -
Collector Base Breakdown Voltage at $-I_C$ = 100 µA		$-V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 10 mA		$-V_{(BR)CEO}$	45	-	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 10 µA		$-V_{(BR)EBO}$	5	-	-	V
Collector Base Cutoff Current at $-V_{CB}$ = 45 V		$-I_{CBO}$	-	-	0.1	µA
Emitter Base Cutoff Current at $-V_{EB}$ = 3 V		$-I_{EBO}$	-	-	0.1	µA
Collector Emitter Saturation Voltage at $-I_C$ = 150 mA, $-I_B$ = 15 mA		$-V_{CE(sat)}$	-	-	0.5	V
Base Emitter Saturation Voltage at $-I_C$ = 150 mA, $-I_B$ = 15 mA		$-V_{BE(sat)}$	-	-	1.2	V
Base Emitter on Voltage at $-V_{CE}$ = 1 V, $-I_C$ = 10 mA		$-V_{BE(on)}$	0.6	-	0.9	V
Gain Bandwidth Product at $-V_{CE}$ = 10 V, $-I_C$ = 10 mA		f_T	100	-	-	MHz
Collector Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz		C_{ob}	-	6	-	pF

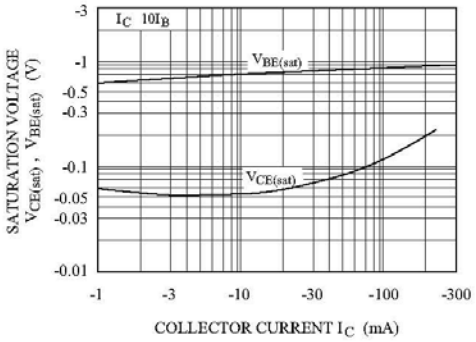
I_C - V_{CE}



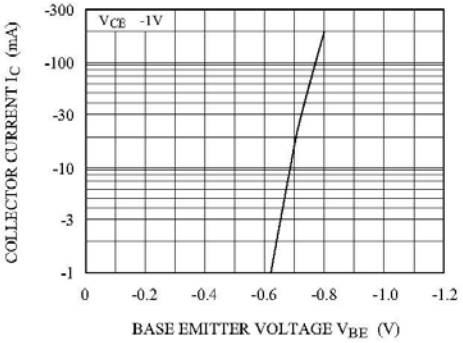
h_{FE} - I_C



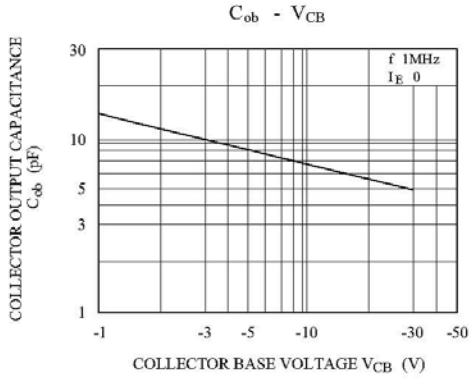
$V_{CE(sat)}$, $V_{BE(sat)}$ - I_C



I_C - V_{BE}



C_{ob} - V_{CB}



P_C – Ta