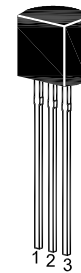


# ST 2SA539

## 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.



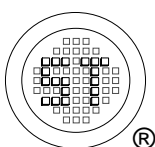
1. Emitter 2. Base 3. Collector  
TO-92 Plastic Package

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

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	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 150	$^\circ\text{C}$

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

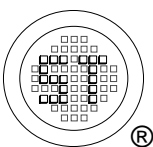
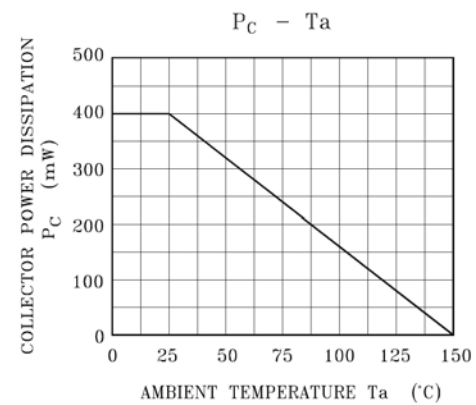
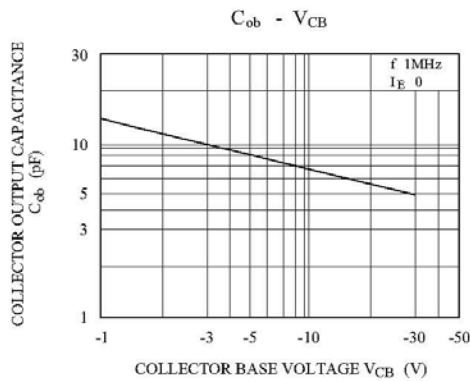
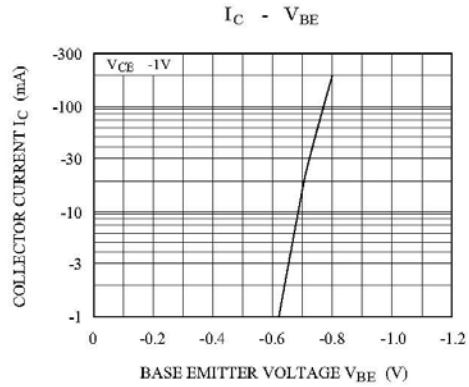
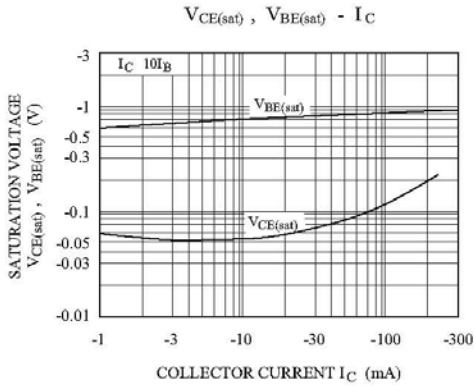
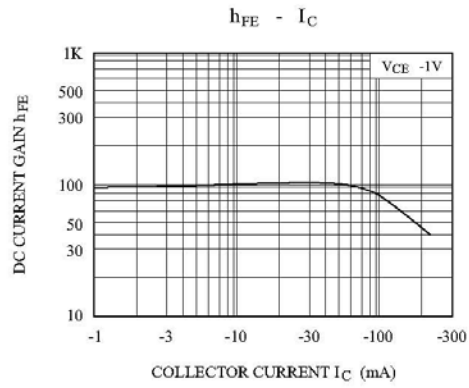
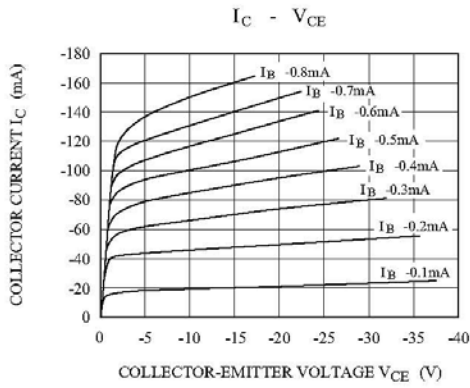
Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $-V_{CE} = 1\text{ V}$ , $-I_C = 50\text{ mA}$	Current Gain Group O	$h_{FE}$	70	-	140	-
	Y	$h_{FE}$	120	-	240	-
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	60	-	-	V	
Collector Emitter Breakdown Voltage at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



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