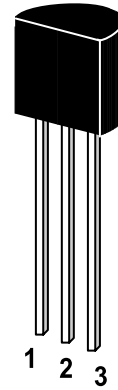


PNP Silicon Epitaxial Planar Transistor

for switching and amplifier applications. Especially suitable for AF-driver stages and low power output stages.

The transistor is subdivided into four groups, B, C, D and E, according to its DC current gain. As complementary type the NPN transistor ST 8050 is recommended.

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



1. Emitter 2. Base 3. Collector

TO-92 Plastic Package
Weight approx. 0.19g

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

	Symbol	Value	Unit
Collector Emitter Voltage	$-V_{CEO}$	25	V
Collector Base Voltage	$-V_{CBO}$	40	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	800	mA
Peak Collector Current	$-I_{CM}$	1	A
Base Current	$-I_B$	100	mA
Power Dissipation	P_{tot}	625 ¹⁾	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_S	-55 to +150	$^\circ\text{C}$

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

Characteristics at $T_{amb}=25\text{ }^{\circ}\text{C}$

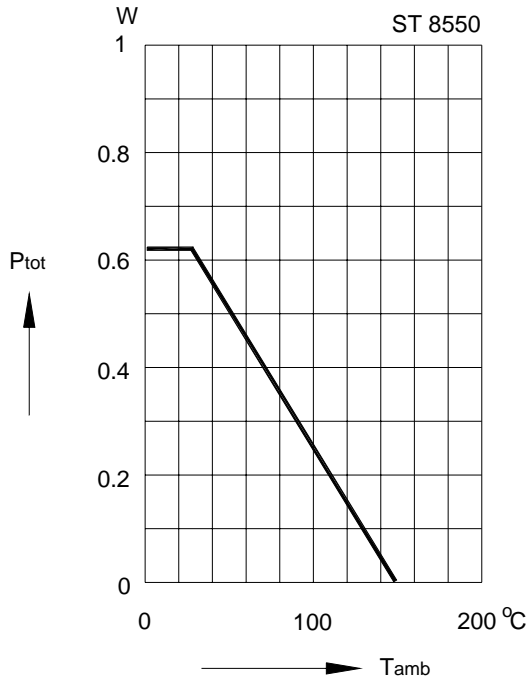
	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain						
at $-V_{CE}=1\text{V}$, $-I_C=100\text{mA}$	ST 8550B	h_{FE}	70	-	120	-
	ST 8550C	h_{FE}	120	-	200	-
	ST 8550D	h_{FE}	160	-	300	-
	ST 8550E	h_{FE}	300	-	380	-
at $-V_{CE}=1\text{V}$, $-I_C=350\text{mA}$		h_{FE}	60	-	-	-
Collector Cutoff Current						
at $-V_{CB}=35\text{V}$	I_{CBO}	-	-	100	nA	
Collector Saturation Voltage						
at $-I_C=500\text{mA}$, $-I_B=50\text{mA}$	$V_{CE(sat)}$	-	-	0.5	V	
Base Saturation Voltage						
at $-I_C=500\text{mA}$, $-I_B=50\text{mA}$	$V_{BE(sat)}$	-	-	1.2	V	
Collector Emitter Breakdown Voltage						
at $-I_C=2\text{mA}$	$V_{(BR)CEO}$	25	-	-	V	
Collector Base Breakdown Voltage						
at $-I_C=10\mu\text{A}$	$V_{(BR)CBO}$	40	-	-	V	
Emitter Base Breakdown Voltage						
at $-I_E=100\mu\text{A}$	$V_{(BR)EBO}$	6	-	-	V	
Gain Bandwidth Product						
at $-V_{CE}=5\text{V}$, $-I_C=10\text{mA}$, $f=50\text{MHz}$	f_T	-	100	-	MHz	
Collector Base Capacitance						
at $-V_{CB}=10\text{V}$, $f=1\text{MHz}$	C_{CBO}	-	12	-	pF	
Thermal Resistance Junction to Ambient	R_{thA}	-	-	200 ¹⁾	K/W	

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

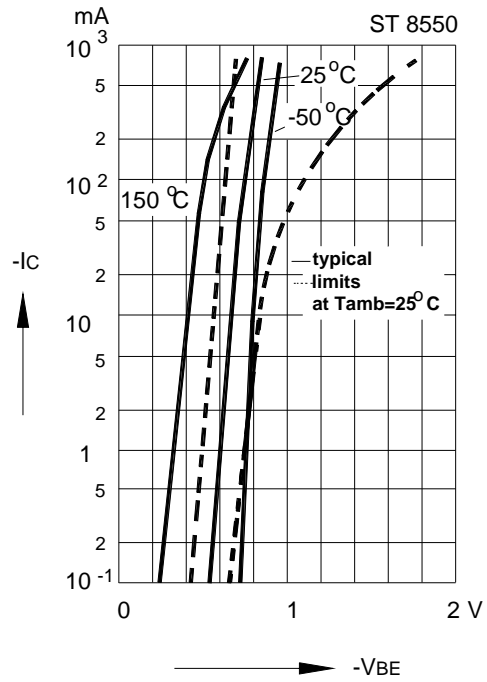


Admissible power dissipation versus ambient temperature

Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

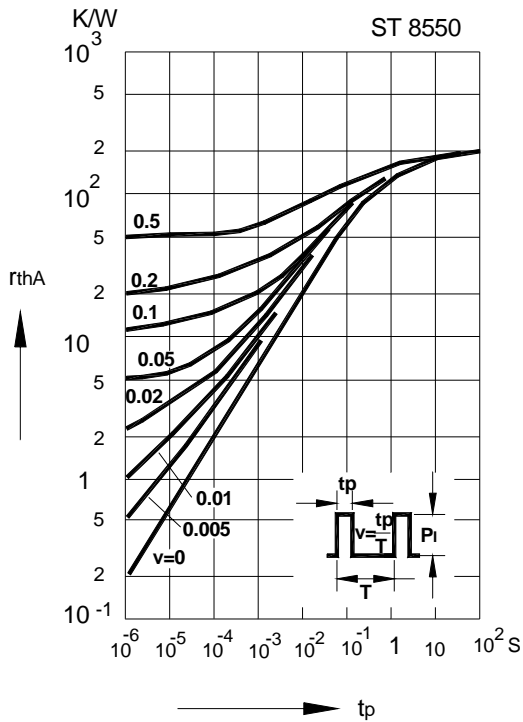


Collector current versus base emitter voltage

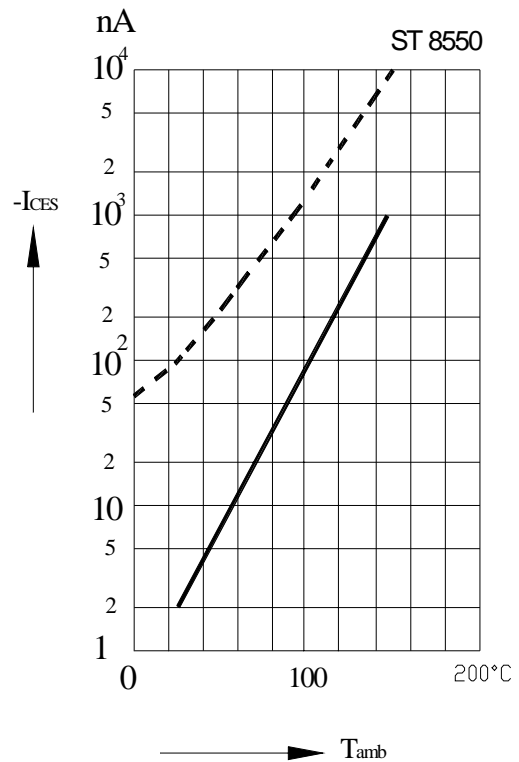


Pulse thermal resistance versus pulse duration

Valid provided that leads are kept at ambient temperature at a distance of 2 mm from case

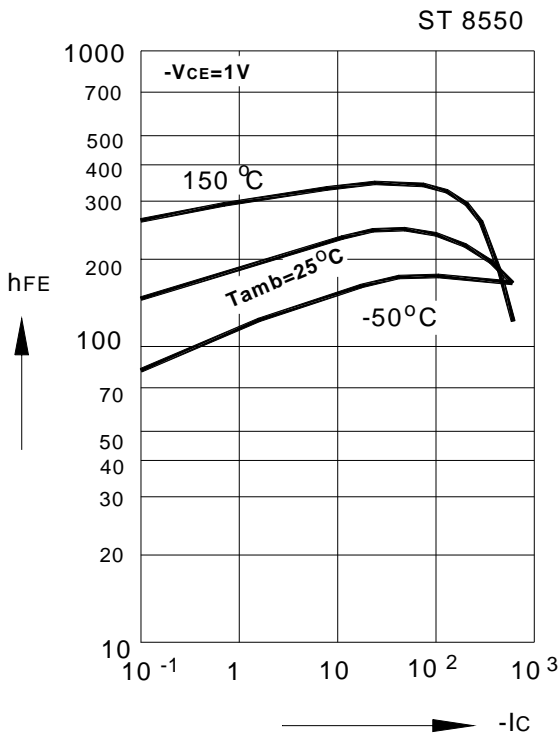


Collector cutoff current versus ambient temperature

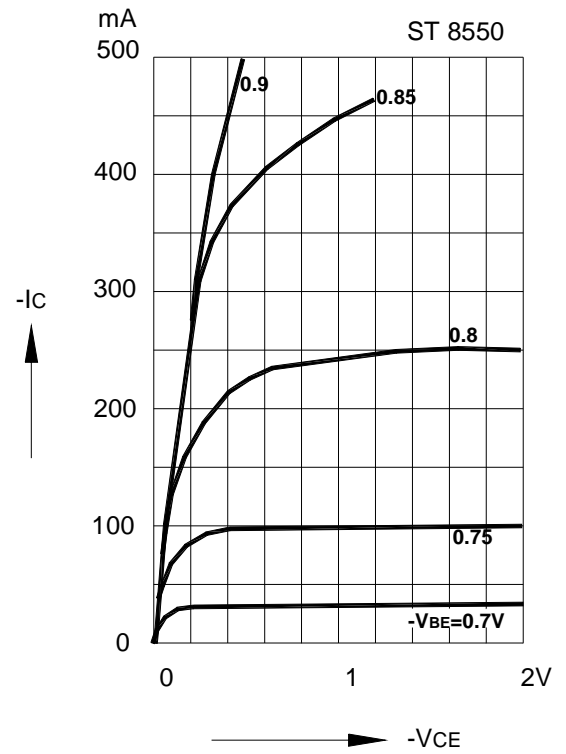




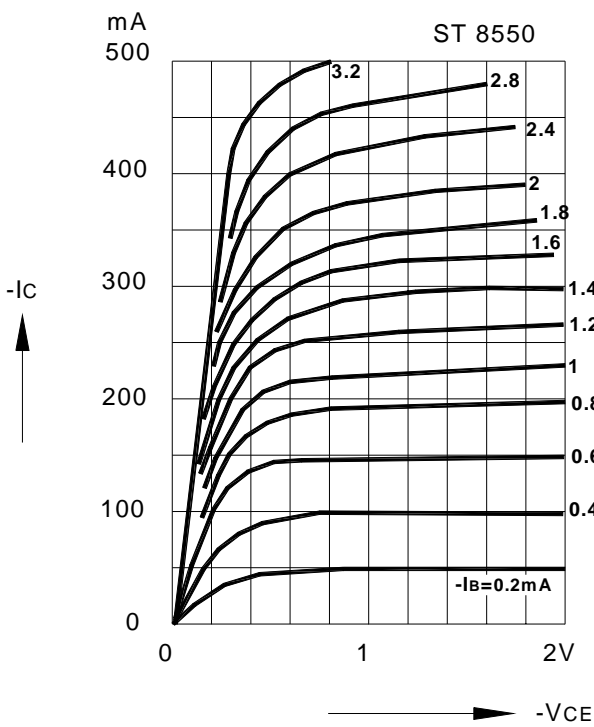
DC current gain versus collector current



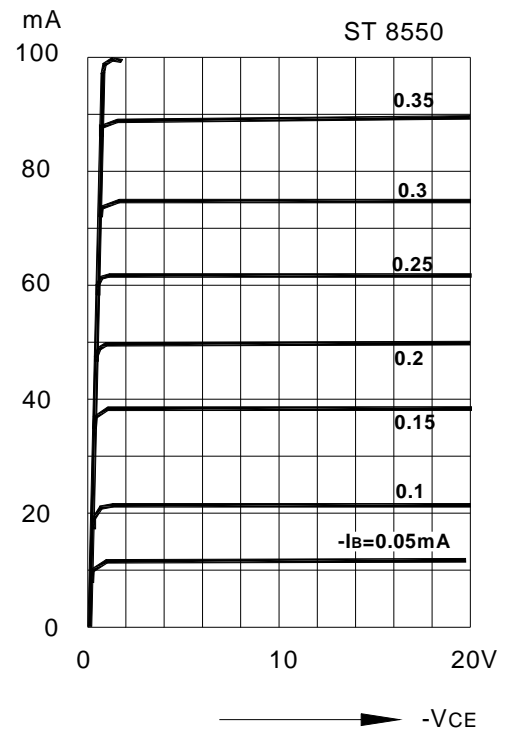
Common emitter collector characteristics



Common emitter collector characteristics

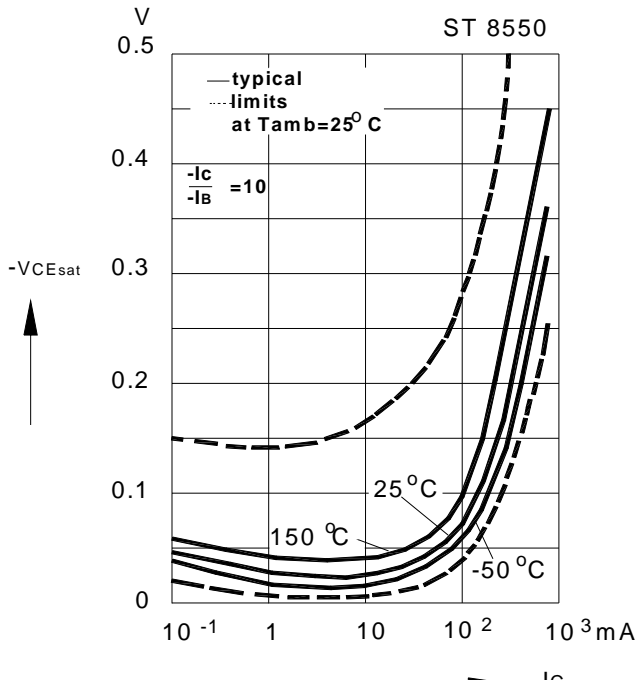


Common emitter collector characteristics

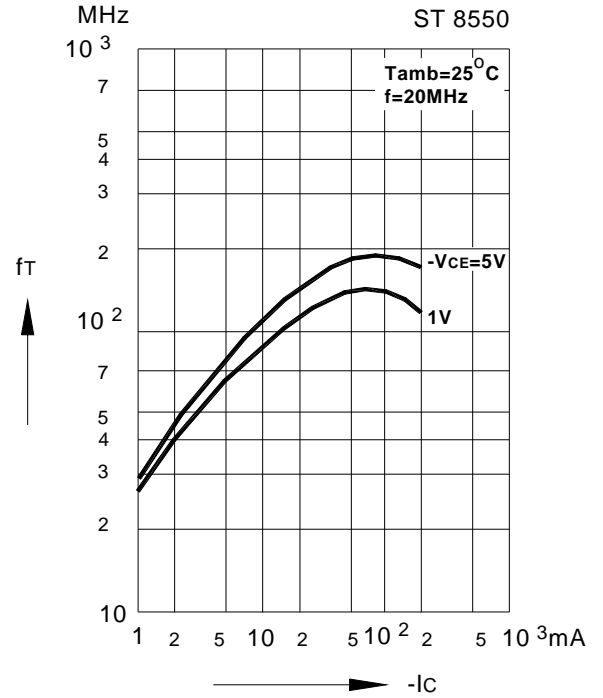




Collector saturation voltage versus collector current



Gain bandwidth product versus collector current



Base saturation voltage versus collector current

