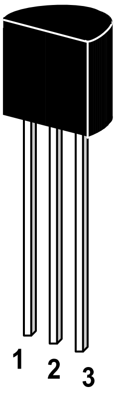
ST 2SC945

NPN Silicon Epitaxial Planar Transistor
for switching and AF amplifier applications.

The transistor is subdivided into five groups, R, O, Y, P and L, according to its DC current gain. As complementary type the PNP transistor ST 2SA733 is recommended.

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



1. Emitter 2. Collector 3. Base

TO-92 Plastic Package
Weight approx. 0.19g

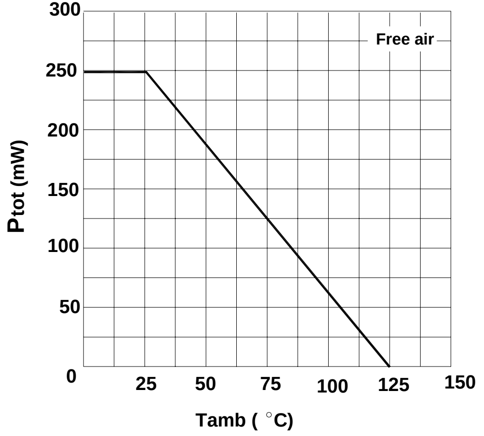
Absolute Maximum Ratings (T_a = 25℃)

	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Power Dissipation	P_{tot}	250	mW
Junction Temperature	T_j	150	^{O}C
Storage Temperature Range	T_S	-55 to +150	^{O}C

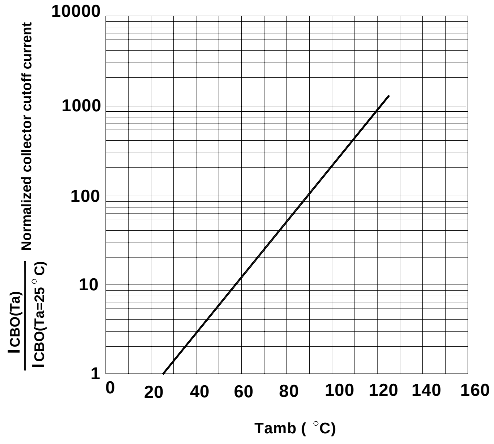
Dated : 22/07/2004

Characteristics at T_{amb}=25 °C

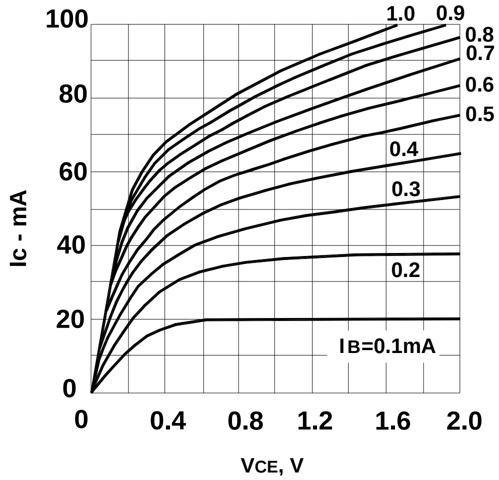
	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE}=6V, I_C=1mA					
Current Gain Group R	h_{FE}	40	-	80	-
O	h_{FE}	70	-	140	-
Y	h_{FE}	120	-	240	-
P	h_{FE}	200	-	400	-
L	h_{FE}	350	-	700	-
Collector Base Breakdown Voltage at I_C=100μA	$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at I_C=10mA	$V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at I_E=10μA	$V_{(BR)EBO}$	5	-	-	V
Collector Cutoff Current at V_{CB}=40V	I_{CBO}	-	-	0.1	μA
Emitter Cutoff Current at V_{EB}=3V	I_{EBO}	-	-	0.1	μA
Collector Saturation Voltage at I_C=100mA, I_B=10mA	$V_{CE(sat)}$	-	0.15	0.3	V
Gain Bandwidth Product at V_{CE}=6V, I_C=10mA	f_T	-	300	-	MHz
Output Capacitance at V_{CB}=6V, f=1MHz	C_{OB}	-	2.5	-	pF
Noise Figure at V_{CE}=6V, I_E=0.5mA at f=1KHz, R_S=500Ω	NF	-	4	-	dB



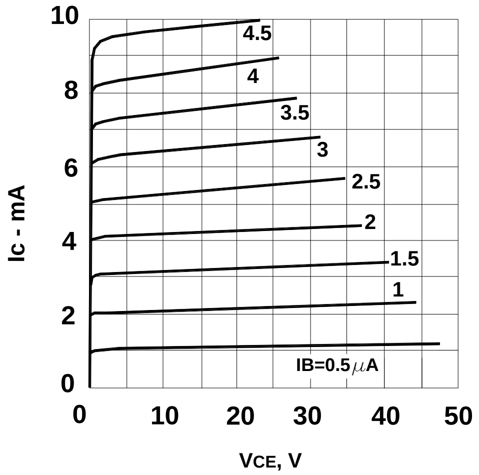
Total power dissipation vs. ambient temperature



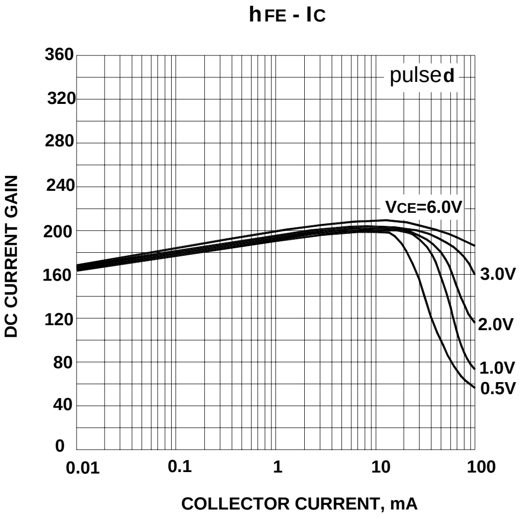
Normalized collector cutoff current vs. ambient temperature

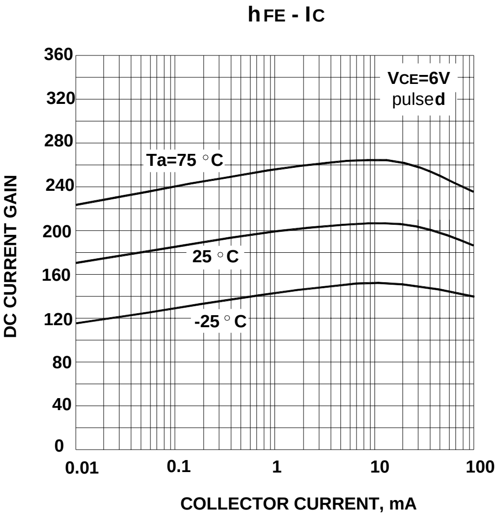


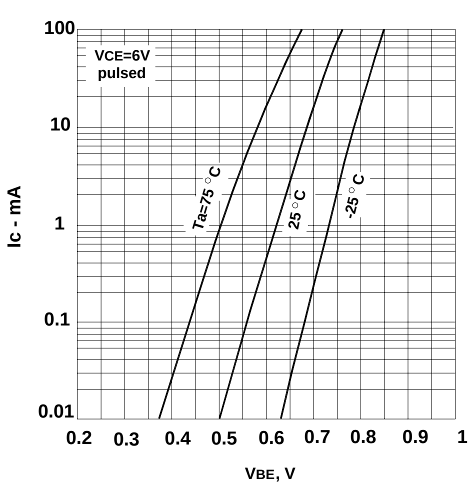
Collector current vs. collector emitter voltage

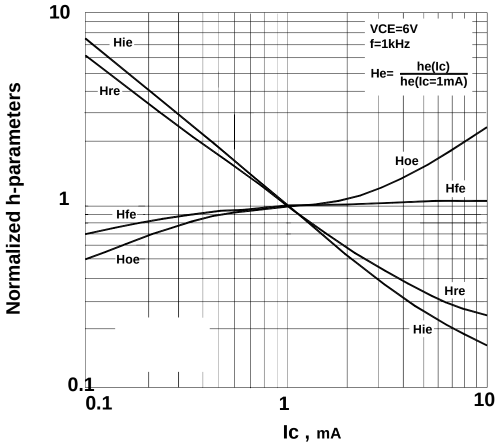


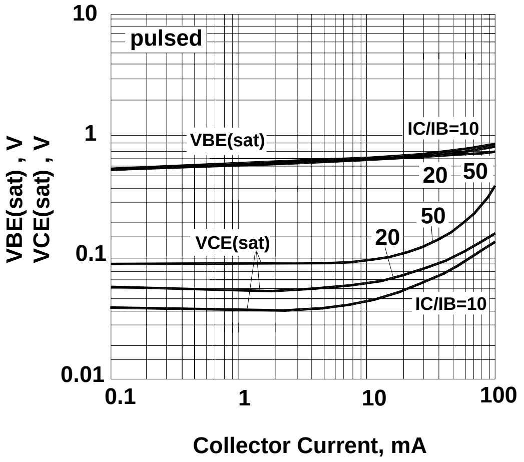
Collector current vs. collector emitter voltage

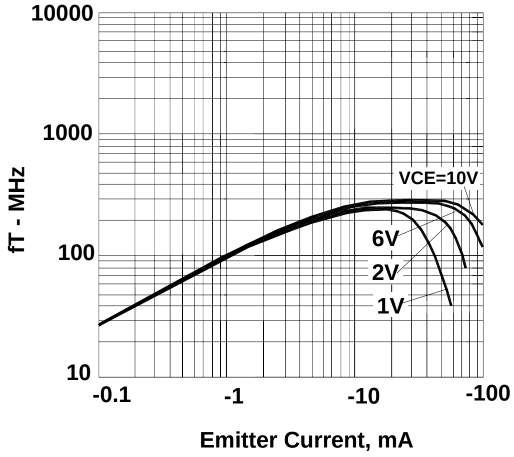


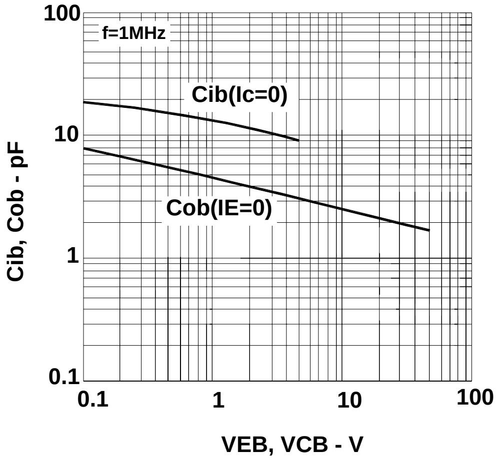


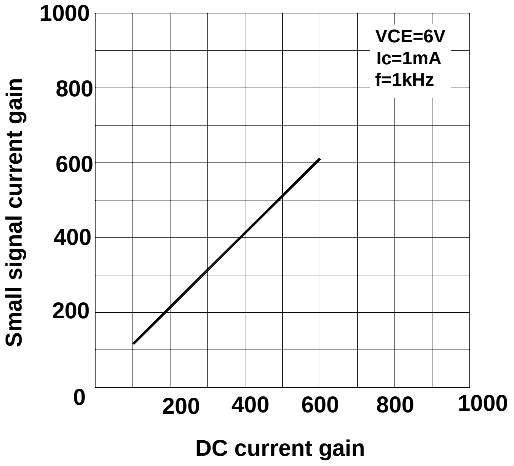

Collector current vs. base emitter voltage


Normalized h-parameters vs. collector current

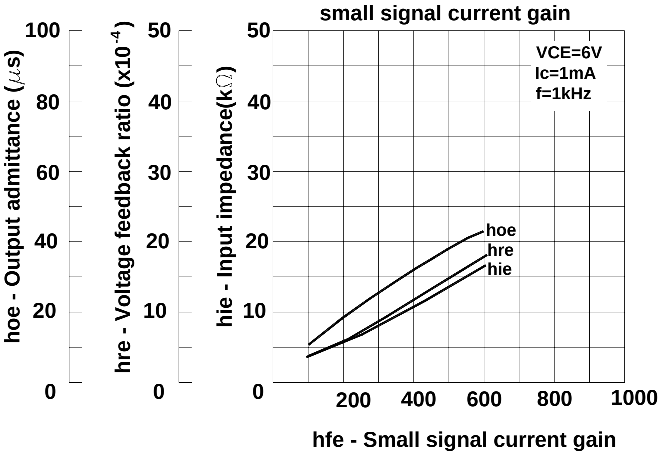

Collector and base saturation voltage vs. collector current


fT - IE


VEB, VCB vs.Cib, Cob


Small signal current gain vs. DC current gain

Input impedance, voltage feedback ratio and output admittance vs. small signal current gain



Normalized h-parameters vs. collector emitter voltage