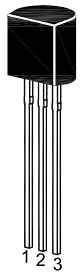
ST 2SA733

PNP 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 NPN transistor 2SC945 is recommended.
On special request, these transistors can be manufactured in different pin configurations.



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

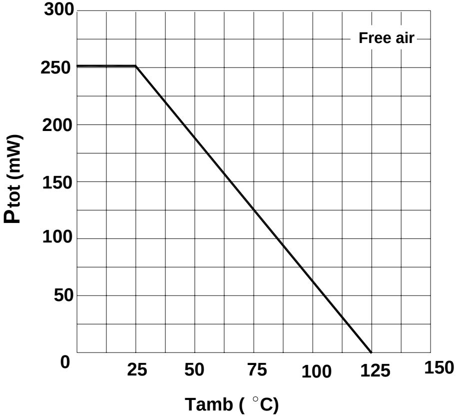
Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	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	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

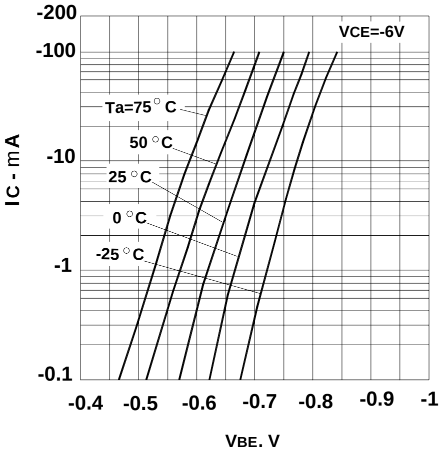
Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 6 V, $-I_C$ = 1 mA 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 Cutoff Current at $-V_{CB}$ = 60 V	$-I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $-V_{EB}$ = 5 V	$-I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage at $-I_C$ = 100 µA	$-V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 10 mA	$-V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 10 µA	$-V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 100 mA, $-I_B$ = 10 mA	$-V_{CE(sat)}$	-	-	0.3	V
Base Emitter On Voltage at $-V_{CE}$ = 6 V, $-I_C$ = 1 mA	$-V_{BE(on)}$	0.5	-	0.8	V
Gain Bandwidth Product at $-V_{CE}$ = 6 V, $-I_C$ = 10 mA	f_T	50	-	-	MHz
Collector Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz	C_{ob}	-	2.8	-	pF

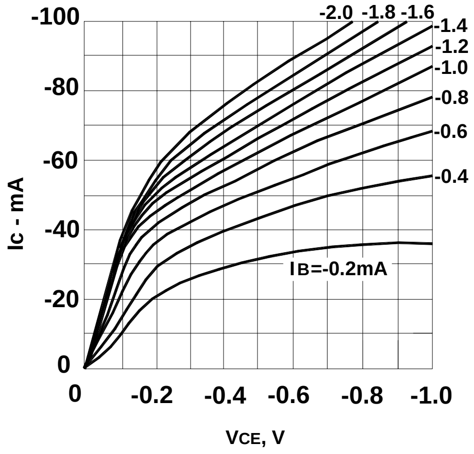
Total power dissipation
vs. ambient temperature



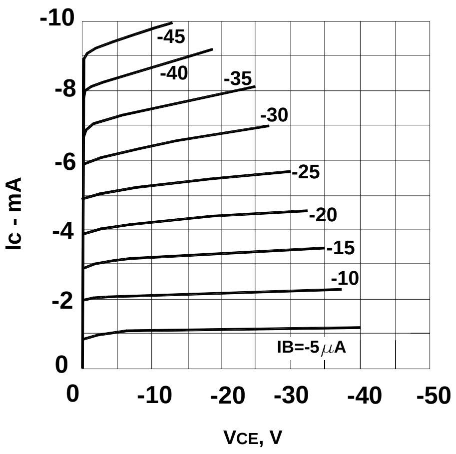
IC - VBE



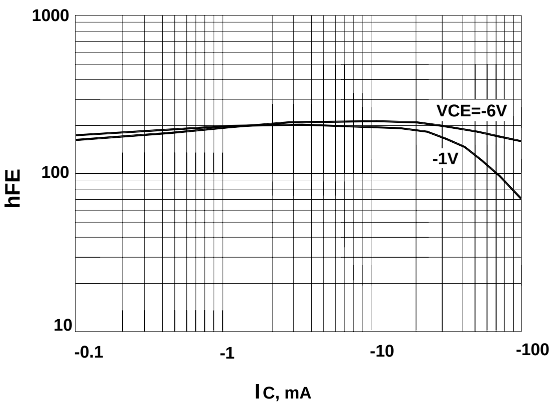
Collector current vs.
collector emitter voltage



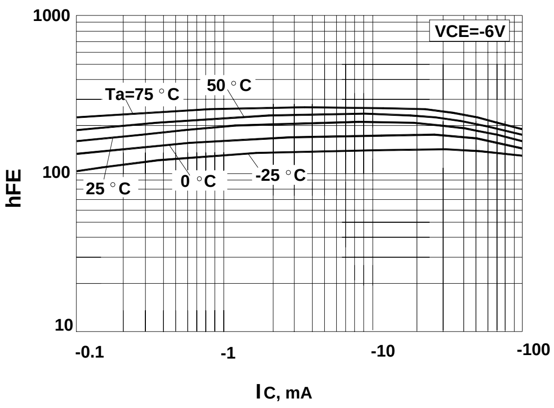
Collector current vs.
collector emitter voltage



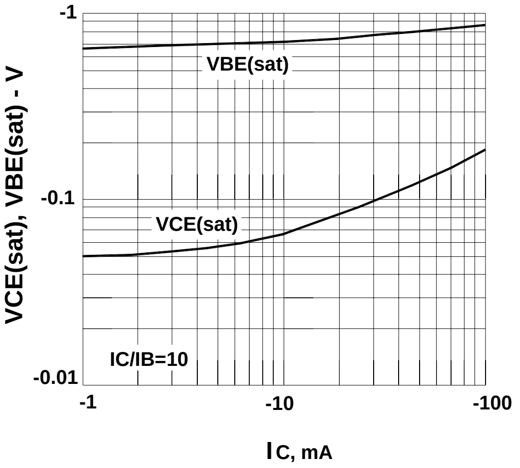
hFE - IC



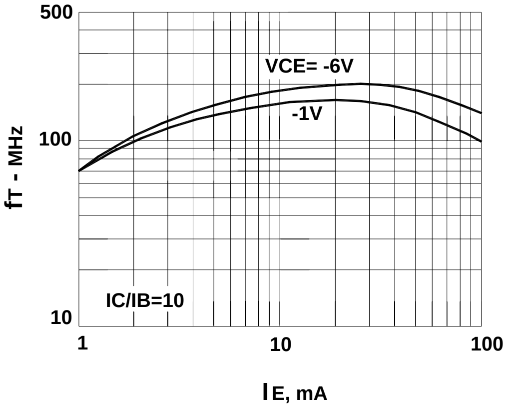
hFE - IC



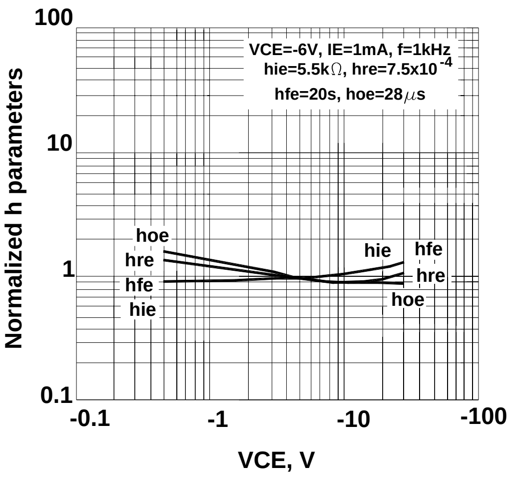
VCE(sat), VBE(sat) - IC



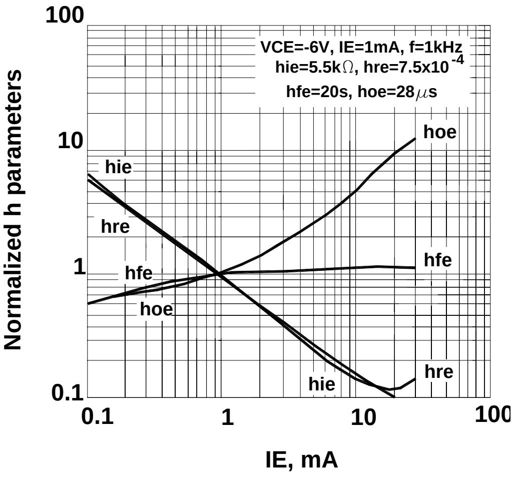
fT - IE



Normalized h-parameters vs. collector emitter voltage



Normalized h-parameters vs. emitter current



Cob - VCB