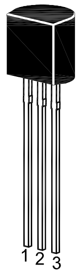
ST 2SC1740

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

The transistor is subdivided into four groups Q, R, S and E. according to its DC current gain.

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}	300	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 Q R S E	h_{FE} h_{FE} h_{FE} h_{FE}	120 180 270 390	- - - -	270 390 560 820	- - - -
Collector Base Cutoff Current at V_{CB} = 60 V	I_{CBO}	-	-	0.1	µA
Emitter Base Cutoff Current at V_{EB} = 5 V	I_{EBO}	-	-	0.1	µA
Collector Base Breakdown Voltage at I_C = 50 µA	$V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at I_C = 1 mA	$V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at I_E = 50 µA	$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at I_C = 50 mA, I_B = 5 mA	$V_{CE(sat)}$	-	-	0.4	V
Gain Bandwidth Product at V_{CE} = 12 V, I_C = 2 mA	f_T	-	180	-	MHz
Output Capacitance at V_{CB} = 12 V, f = 1 MHz	C_{ob}	-	2	3.5	pF

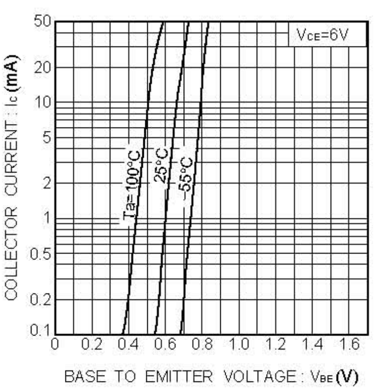


Fig.1 Grounded emitter propagation characteristics

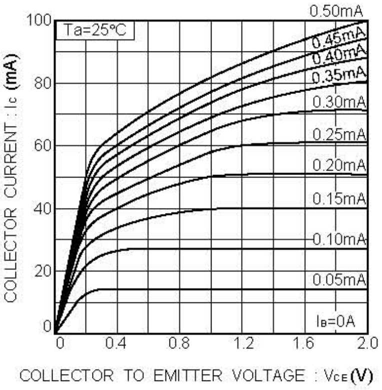


Fig.2 Grounded emitter output characteristics (I)

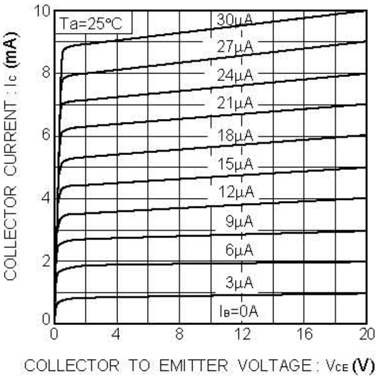


Fig.3 Grounded emitter output characteristics (II)

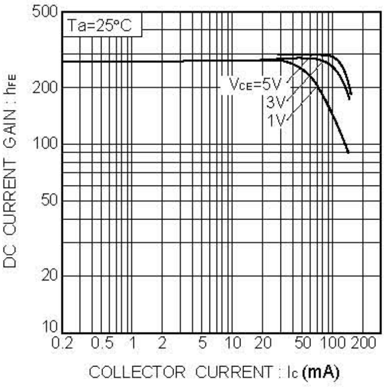


Fig.4 DC current gain vs. collector current (I)

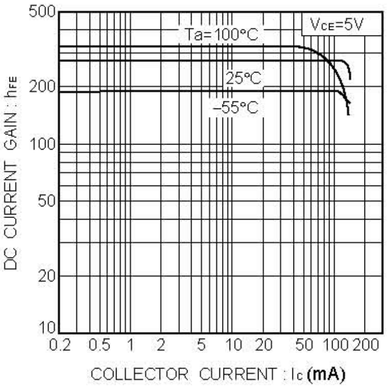


Fig.5 DC current gain vs. collector current (II)

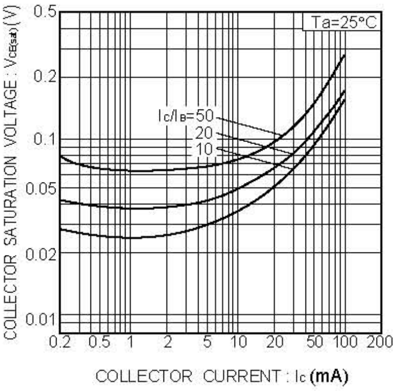


Fig. 6 Collector-emitter saturation voltage vs. collector current

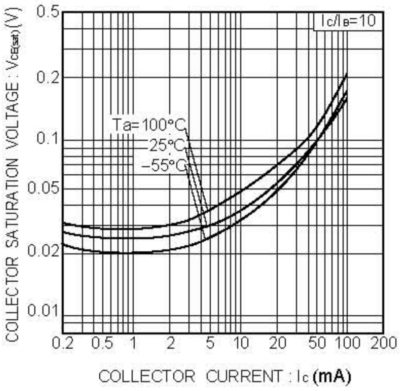


Fig.7 Collector-emitter saturation voltage vs. collector current (I)

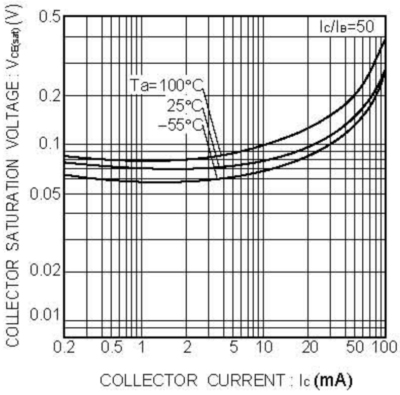


Fig.8 Collector-emitter saturation voltage vs. collector current (II)

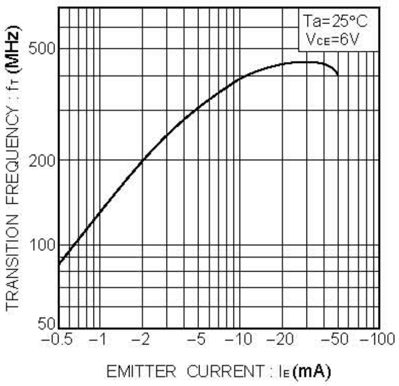


Fig.9 Gain bandwidth product vs. emitter current