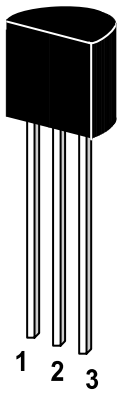
ST 2SC1815

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

The transistor is subdivided into four groups, O, Y, G and L, according to its DC current gain. As complementary type the PNP transistor ST 2SA1015 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 °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
Base Current	I_B	50	mA
Power Dissipation	P_{tot}	400	mW
Junction Temperature	T_j	125	°C
Storage Temperature Range	T_S	-55 to +150	°C

Characteristics at T_{amb} = 25 °C

Parameter			Symbol	Min.	Typ.	Max.	Unit
DC Current Gain							
at V_{CE}=6V, I_C=2mA	Current Gain Group	O	h_{FE}	70	-	140	-
		Y	h_{FE}	120	-	240	-
		G	h_{FE}	200	-	400	-
		L	h_{FE}	350	-	700	-
at V_{CE}=6V, I_C=150mA			h_{FE}	25	-	-	-
Collector Saturation Voltage at I_C=100mA, I_B=10mA			$V_{CE(sat)}$	-	-	0.25	V
Base Saturation Voltage at I_C=100mA, I_B=10mA			$V_{BE(sat)}$	-	-	1	V
Collector Cutoff Current							
at V_{CB}=60V			I_{CBO}	-	-	0.1	µA
at V_{EB}=5V			I_{EBO}	-	-	0.1	µA
Gain Bandwidth Product at V_{CE}=10V, I_C=1mA			f_T	80	-	-	MHz
Output Capacitance at V_{CB}=10V, f=1MHz			C_{OB}	-	2	3	pF
Noise Figure at V_{CE}=6V, I_C=0.1mA, f=1KHz, R_G=10KΩ			NF	-	1	1	dB

SEMTECH ELECTRONICS LTD.
(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)

Dated : 02/12/2005

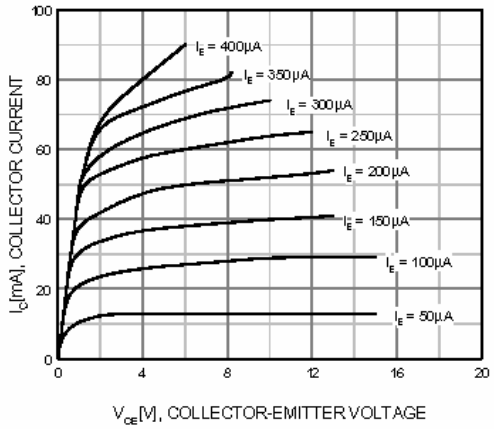


Figure 1. Static Characteristic

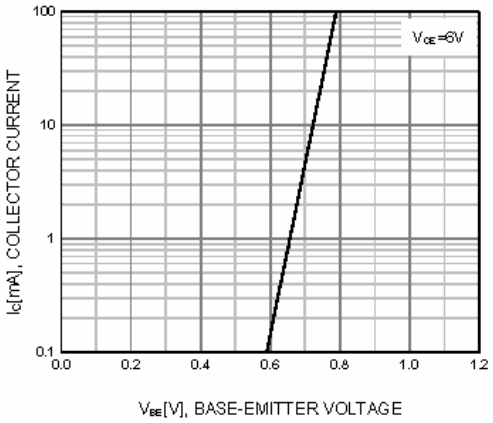


Figure 2. Transfer Characteristic

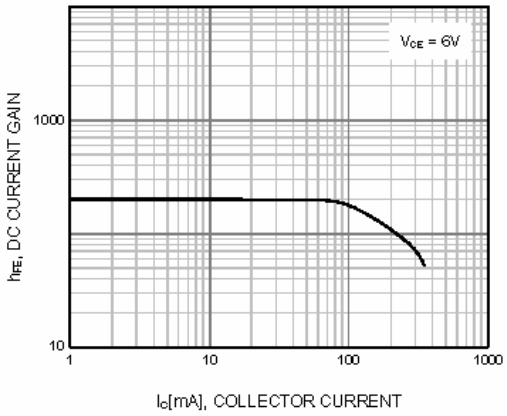


Figure 3. DC current Gain

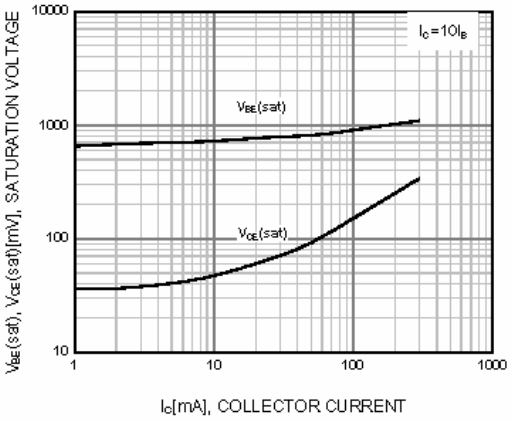


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

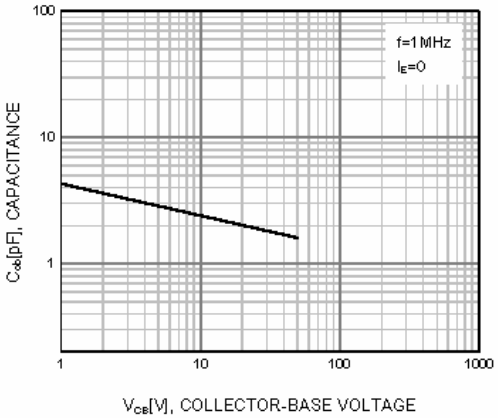


Figure 5. Output Capacitance

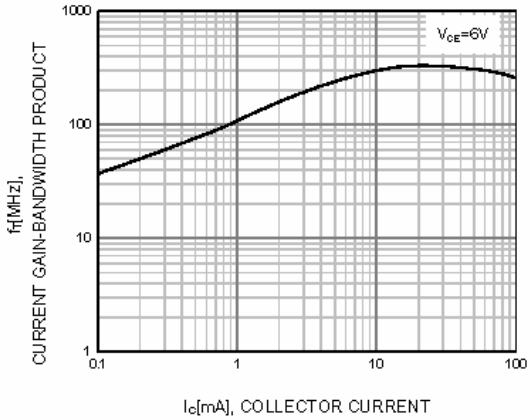


Figure 6. Current Gain Bandwidth Product