

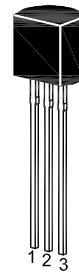
2SC1815

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 2SA1015 is recommended.

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



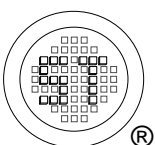
1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

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

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	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

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



SEMTECH ELECTRONICS LTD.



ISO/TS 16949 : 2009
Certificate No. 160713000



ISO14001 : 2004
Certificate No. 7116



ISO 9001 : 2008
Certificate No. 50718410



BS-OHSAS 18001 : 2007
Certificate No. 7116



IECQ QC 080000
Certificate No. PRC-18P4-14834

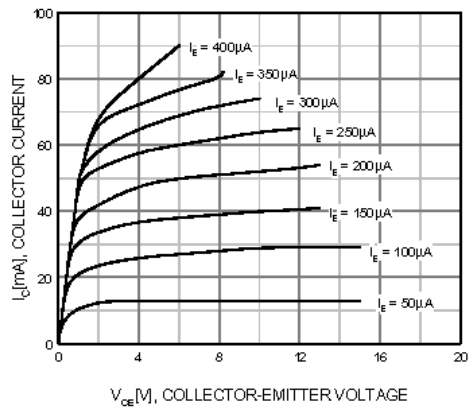


Figure 1. Static Characteristic

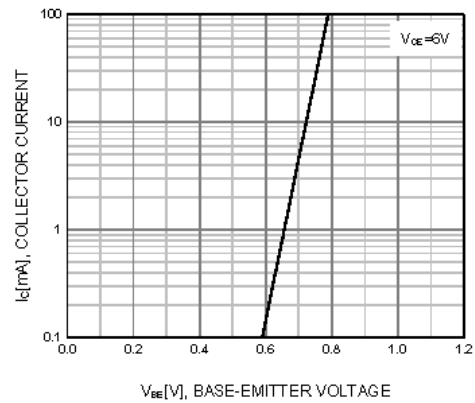


Figure 2. Transfer Characteristic

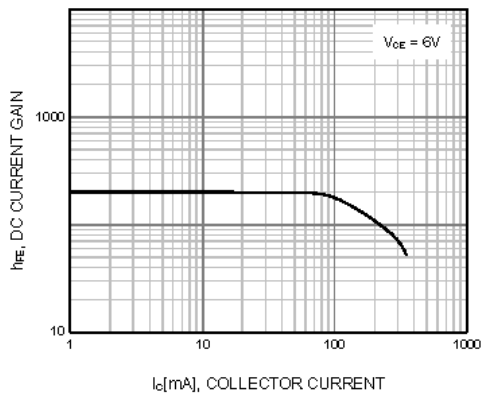


Figure 3. DC current Gain

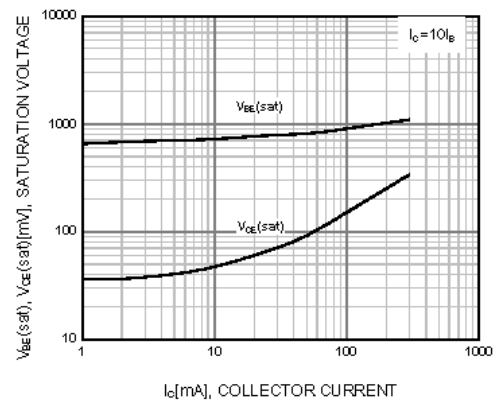


Figure 4. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

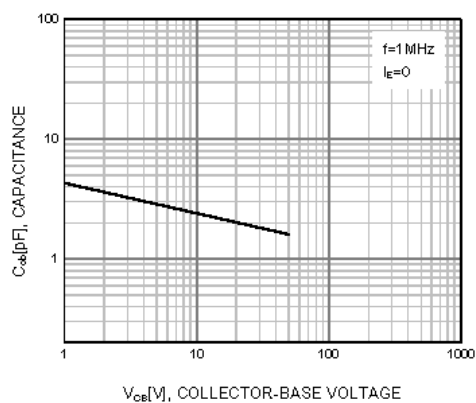


Figure 5. Output Capacitance

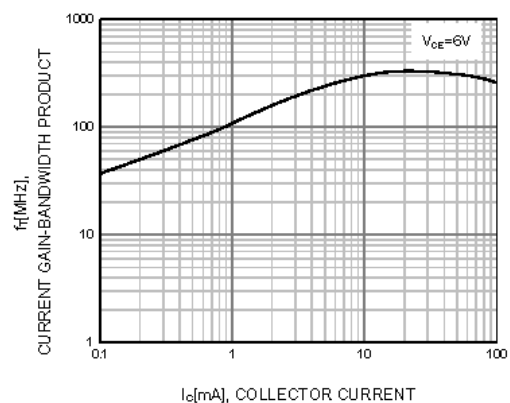


Figure 6. Current Gain Bandwidth Product

