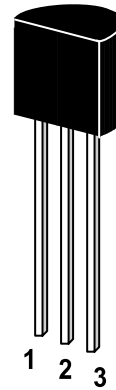


# ST 2SC1815

**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

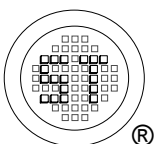
TO-92 Plastic Package  
Weight approx. 0.19g

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

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	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_S$	-55 to +150	$^\circ\text{C}$

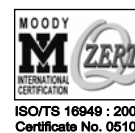
## Characteristics at $T_{amb} = 25^\circ\text{C}$

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



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Dated : 02/12/2005

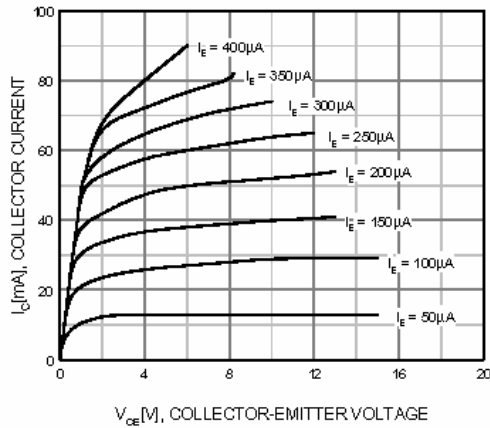


Figure 1. Static Characteristic

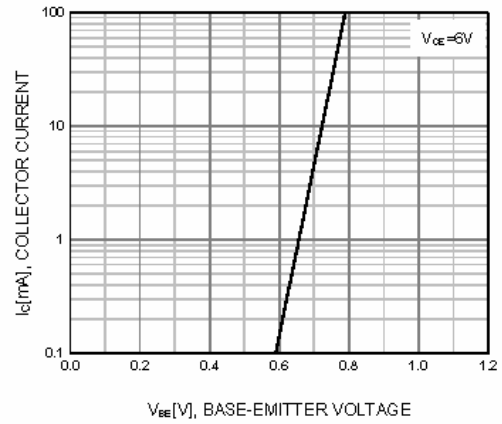


Figure 2. Transfer Characteristic

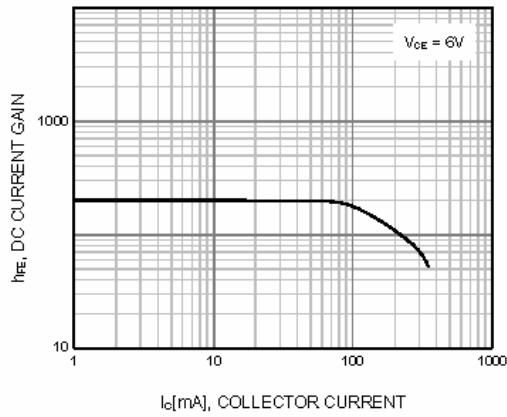


Figure 3. DC current Gain

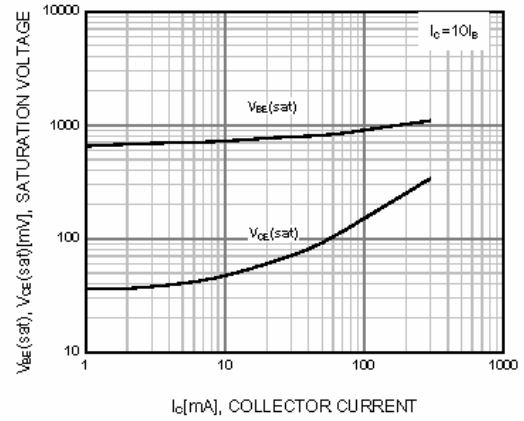


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

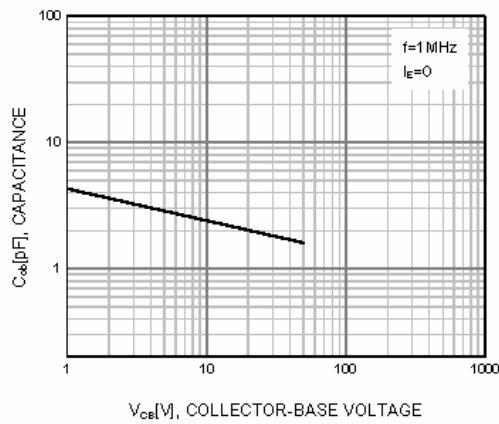


Figure 5. Output Capacitance

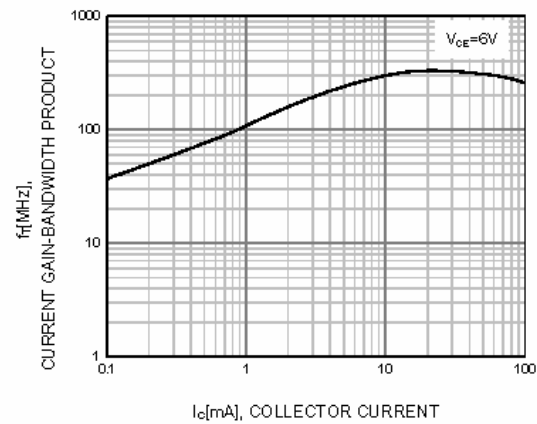
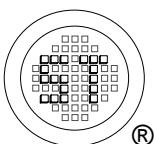
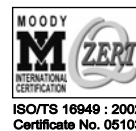


Figure 6. Current Gain Bandwidth Product



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