

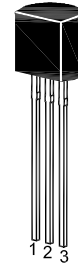
ST 2SC3198

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.

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



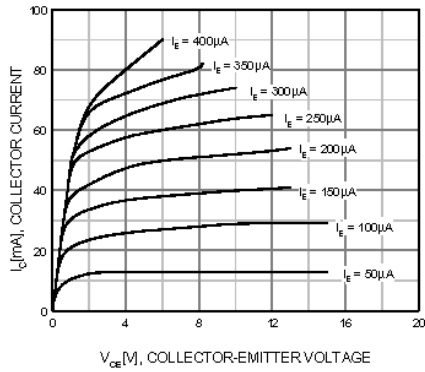
1. Emitter 2. Collector 3. Base
TO-92 Plastic Package

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

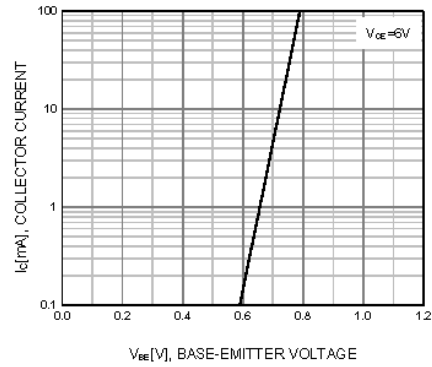
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Base Current	I_B	50	mA
Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

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

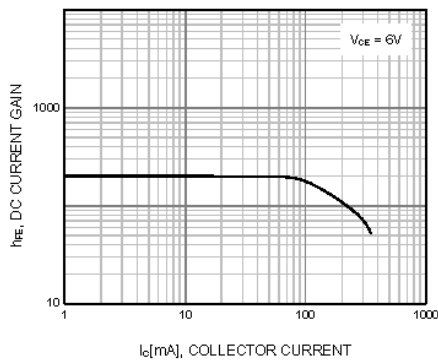
Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE} = 6\text{ V}$, $I_C = 2\text{ mA}$ Current Gain Group	O	h_{FE}	70	-	140	-
	Y	h_{FE}	120	-	240	-
	G	h_{FE}	200	-	400	-
	L	h_{FE}	350	-	700	-
at $V_{CE} = 6\text{ V}$, $I_C = 150\text{ mA}$	h_{FE}	25	100	-	-	
Collector Base Cutoff Current at $V_{CB} = 60\text{ V}$	I_{CBO}	-	-	0.1	μA	
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	I_{EBO}	-	-	0.1	μA	
Collector Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$	$V_{CE(sat)}$	-	0.1	0.25	V	
Base Emitter Saturation Voltage at $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$	$V_{BE(sat)}$	-	-	1	V	
Transition Frequency at $V_{CE} = 10\text{ V}$, $I_C = 1\text{ mA}$	f_T	80	-	-	MHz	
Collector Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	2	3.5	pF	
Base Intrinsic Resistance at $V_{CB} = 10\text{ V}$, $I_C = 1\text{ mA}$, $f = 30\text{ MHz}$	$R_{bb'}$	-	50	-	Ω	
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	10	dB	



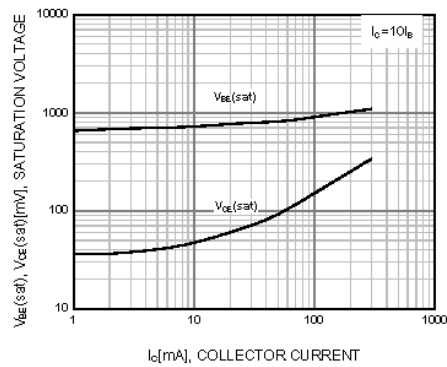
Static Characteristic



Transfer Characteristic



DC current Gain



Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

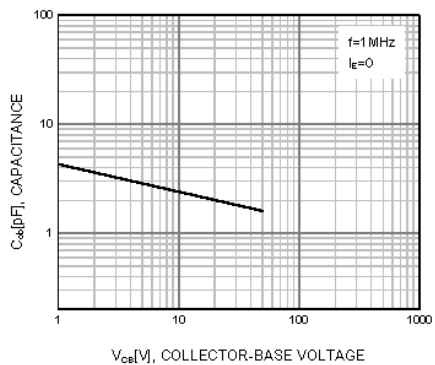


Figure 5. Output Capacitance

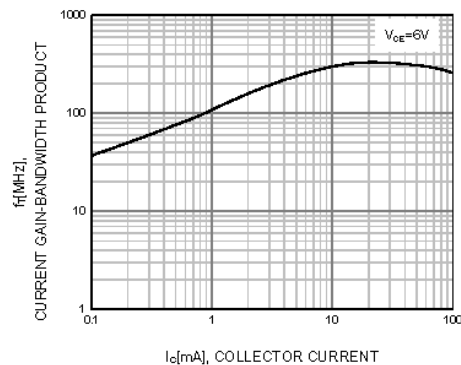


Figure 6. Current Gain Bandwidth Product

