

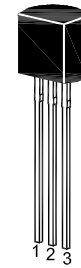
# 2SC3198

## 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.



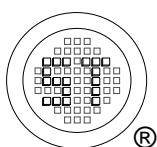
1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

### 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.	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 Base Cutoff Current at $V_{CB} = 60\text{ V}$	$I_{CBO}$	-	100	nA	
Emitter Base Cutoff Current at $V_{EB} = 5\text{ V}$	$I_{EBO}$	-	100	nA	
Collector Emitter Saturation Voltage at $I_C = 100\text{ mA}$ , $I_B = 10\text{ mA}$	$V_{CE(sat)}$	-	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 $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	3.5	pF	



**SEMTECH ELECTRONICS LTD.**



ISO/TS 16949 : 2009  
Certificate No. 180713020



ISO 14001 : 2004  
Certificate No. 7116



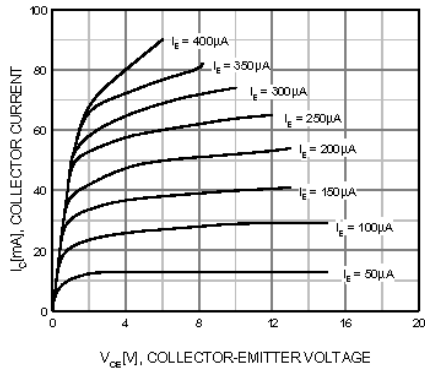
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Certificate No. 80719410



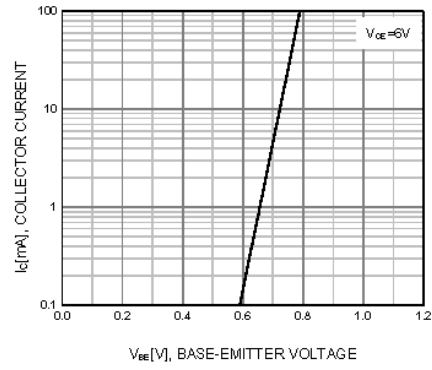
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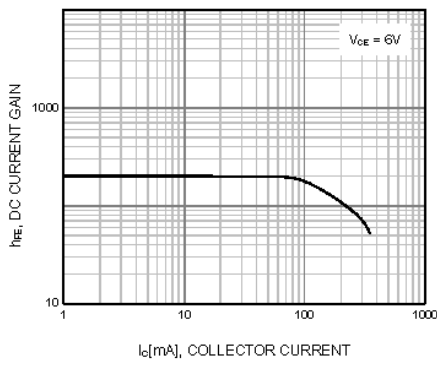
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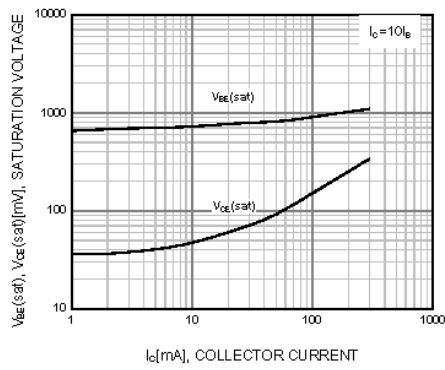
Static Characteristic



Transfer Characteristic



DC current Gain



Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

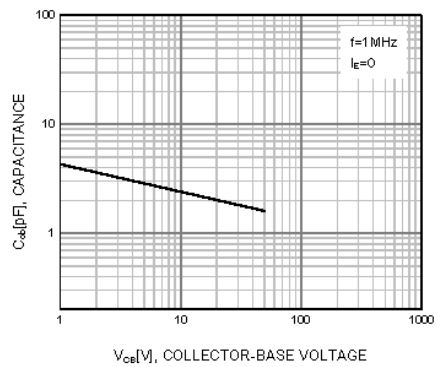


Figure 5. Output Capacitance

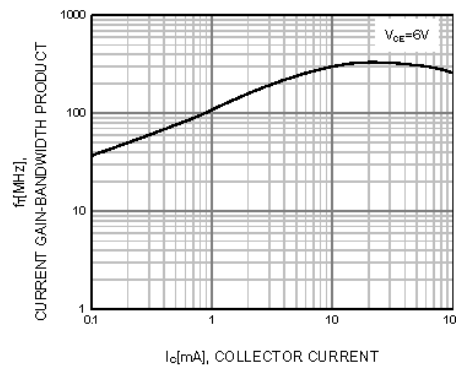


Figure 6. Current Gain Bandwidth Product

