

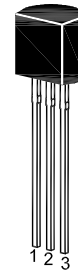
# 2SC2310

## NPN Silicon Epitaxial Planar Transistor

low frequency, low noise amplifier.

The transistor is subdivided into two groups B and C according to its DC current gain.

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



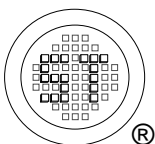
1. Emitter 2. Collector 3. Base  
TO-92 Plastic Package

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	55	V
Collector Emitter Voltage	$V_{CEO}$	50	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	100	mA
Emitter Current	$-I_E$	100	mA
Power Dissipation	$P_{tot}$	200	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 $V_{CE} = 12\text{ V}$ , $I_C = 2\text{ mA}$	Current Gain Group B	$h_{FE}$	100	-	200	-
	Current Gain Group C	$h_{FE}$	160	-	320	-
Collector Base Cutoff Current at $V_{CB} = 18\text{ V}$	$I_{CBO}$	-	-	500	nA	
Emitter Base Cutoff Current at $V_{EB} = 2\text{ V}$	$I_{EBO}$	-	-	500	nA	
Collector Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{CBO}$	55	-	-	V	
Collector Emitter Breakdown Voltage at $I_C = 1\text{ mA}$	$V_{CEO}$	50	-	-	V	
Emitter Base Breakdown Voltage at $I_C = 10\text{ }\mu\text{A}$	$V_{EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $I_C = 10\text{ mA}$ , $I_B = 1\text{ mA}$	$V_{CE(sat)}$	-	-	0.2	V	
Base Emitter Voltage at $I_C = 2\text{ mA}$ , $V_{CE} = 12\text{ V}$	$V_{BE}$	-	-	0.75	V	
Transition Frequency at $V_{CE} = 12\text{ V}$ , $I_C = 2\text{ mA}$	$f_T$	-	230	-	MHz	
Collector Output Capacitance at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{ob}$	-	-	3.5	pF	



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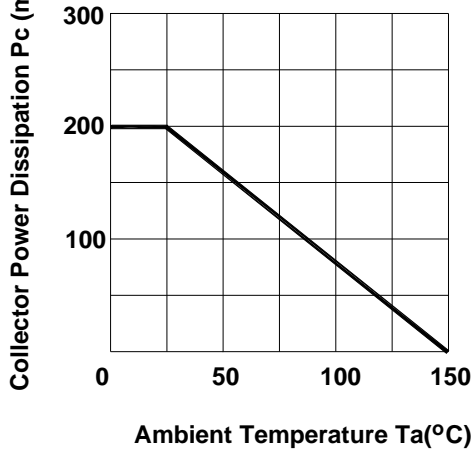
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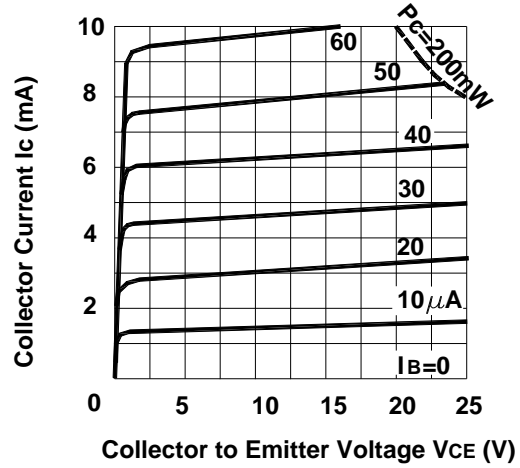
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Dated: 19/08/2016 Rev: 02

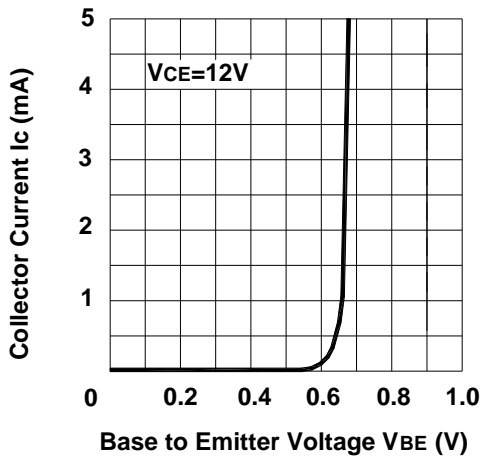
**Maximum Collector Dissipation Curve**



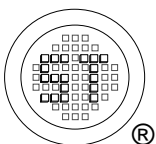
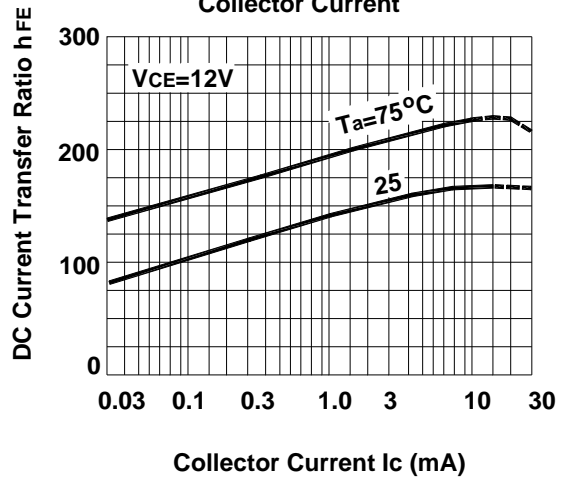
**Typical Output Characteristics**



**Typical Transfer Characteristics**

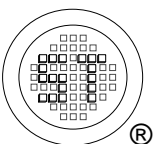
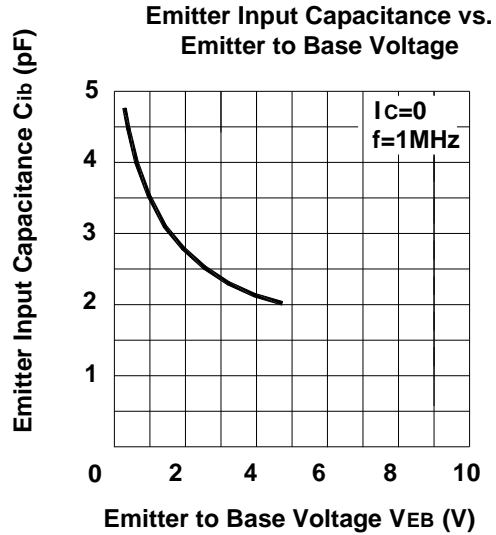
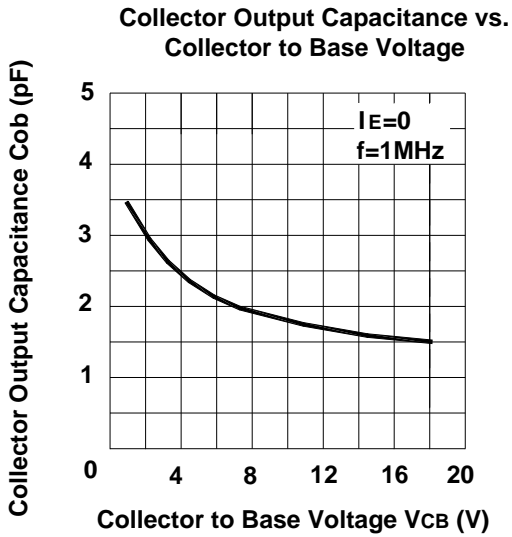
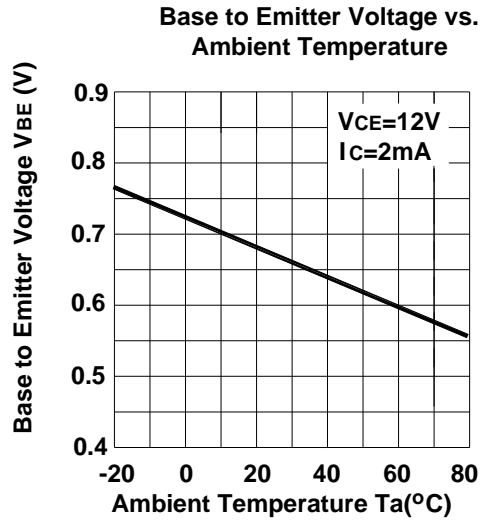
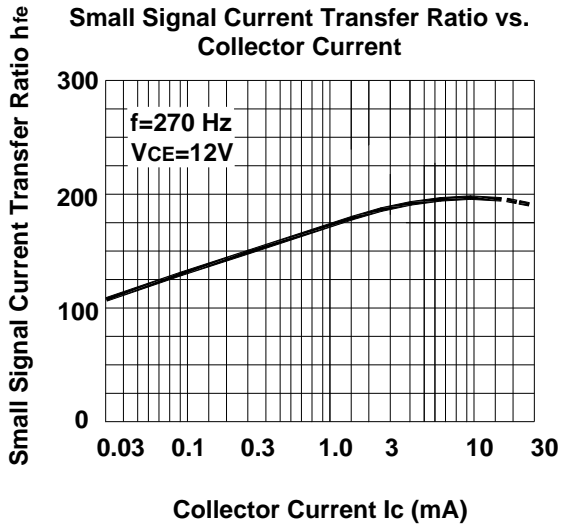


**DC Current Transfer Ratio vs. Collector Current**



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