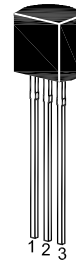


# BC307...BC308

## PNP Silicon Epitaxial Planar Transistor

for switching and amplifier applications



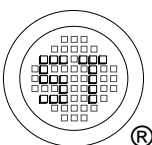
1. Collector 2. Base 3. Emitter  
TO-92 Plastic Package

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

Parameter	Symbol	BC307	BC308	Unit
Collector Base Voltage	$-V_{CB0}$	50	30	V
Collector Emitter Voltage	$-V_{CEO}$	45	25	V
Emitter Base Voltage	$-V_{EBO}$	5		V
Collector Current	$-I_C$	100		mA
Total 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 $-V_{CE} = 5\text{ V}$ , $-I_C = 2\text{ mA}$ Current Gain Group	A	$h_{FE}$	120	220	-
	B	$h_{FE}$	180	460	-
	C	$h_{FE}$	380	800	-
Collector Base Cutoff Current at $-V_{CB} = 50\text{ V}$ at $-V_{CB} = 30\text{ V}$	BC307	$-I_{CB0}$	-	15	nA
	BC308	$-I_{CB0}$	-	15	nA
Collector Emitter Breakdown Voltage at $-I_C = 2\text{ mA}$	BC307	$-V_{(BR)CEO}$	45	-	V
	BC308	$-V_{(BR)CEO}$	25	-	V
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	V	
Collector Emitter Saturation Voltage at $-I_C = 10\text{ mA}$ , $-I_B = 0.5\text{ mA}$ at $-I_C = 100\text{ mA}$ , $-I_B = 5\text{ mA}$	$-V_{CE(sat)}$	-	0.3	V	
	$-V_{CE(sat)}$	-	0.6	V	
Base Emitter On Voltage at $-V_{CE} = 5\text{ V}$ , $-I_C = 2\text{ mA}$	$-V_{BE(on)}$	0.55	0.7	V	
Current Gain Bandwidth Product at $-V_{CE} = 5\text{ V}$ , $-I_C = 10\text{ mA}$ , $f = 100\text{ MHz}$	$f_T$	100	-	MHz	
Collector Base Capacitance at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$	$C_{cb}$	-	6	pF	



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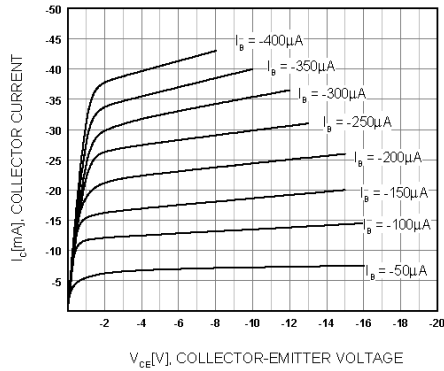


Figure 1. Static Characteristic

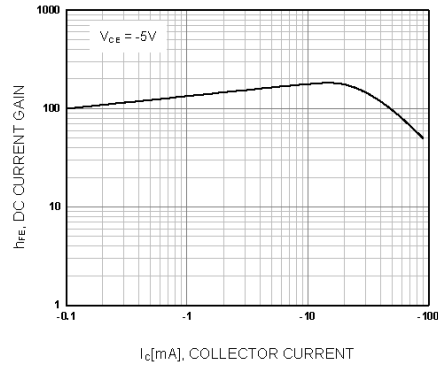


Figure 2. DC current Gain

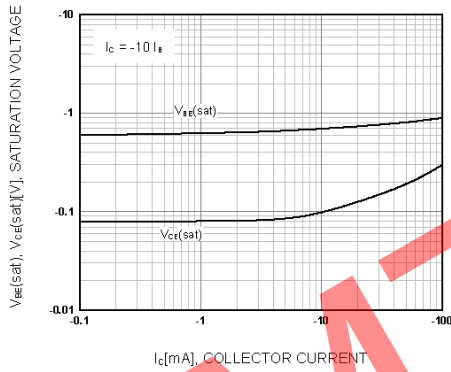


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

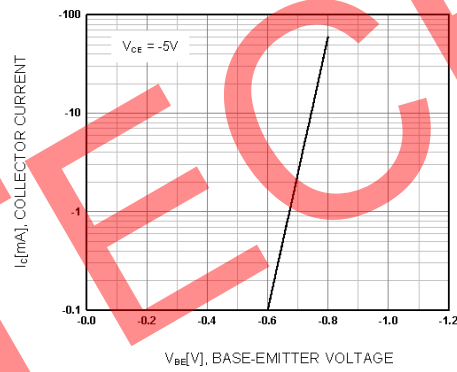


Figure 4. Base-Emitter Capacitance

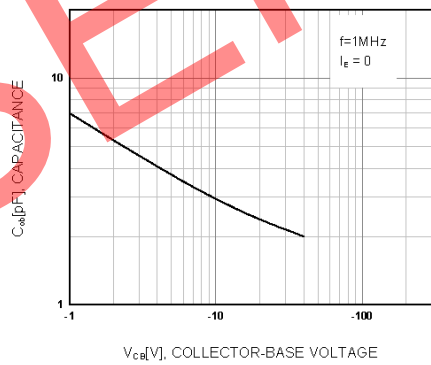


Figure 5. Collector Output Capacitance

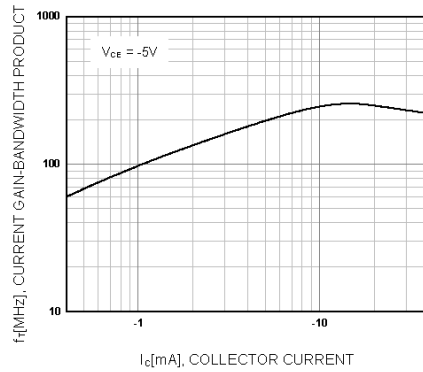


Figure 6. Current Gain Bandwidth Product

