

PNP Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications

These transistors are subdivided into three groups A, B and C according to their current gain.



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

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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	BC556 80	V
BC557, BC560 50			
BC558, BC559 30			
Collector Emitter Voltage	$-V_{CEO}$	BC556 65	V
BC557, BC560 45			
BC558, BC559 30			
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current (DC)	$-I_C$	100	mA
Peak Collector Current	$-I_{CM}$	200	mA
Total Power Dissipation	P_{tot}	500	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 65 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 B C	h_{FE}	110	220	-
			200	450	-
			420	800	-
Collector Base Cutoff Current at $-V_{CB} = 30\text{ V}$	$-I_{CBO}$	-	15	nA	
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	100	nA	
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	BC556 80	-	V	
BC557, BC560 50					
BC558, BC559 30					
Collector Emitter Breakdown Voltage at $-I_C = 2\text{ mA}$	$-V_{(BR)CEO}$	BC556 65	-	V	
BC557, BC560 45					
BC558, BC559 30					
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	V	

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

Parameter	Symbol	Min.	Max.	Unit
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 0.65	V
Base Emitter On Voltage at $-V_{CE} = 5\text{ V}$, $-I_C = 2\text{ mA}$ at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$	$-V_{BE(on)}$	0.55 -	0.75 0.82	V
Transition Frequency 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

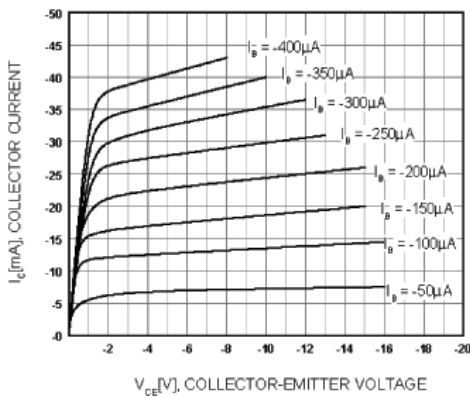


Figure 1. Static Characteristic

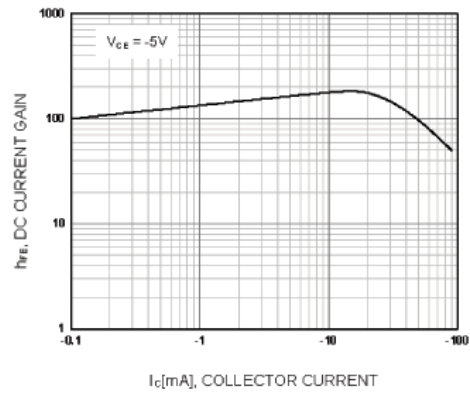
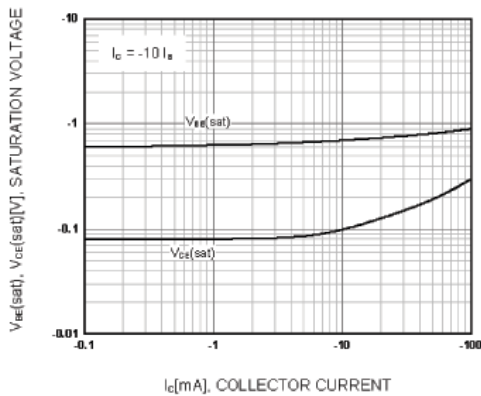


Figure 2. DC current Gain



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

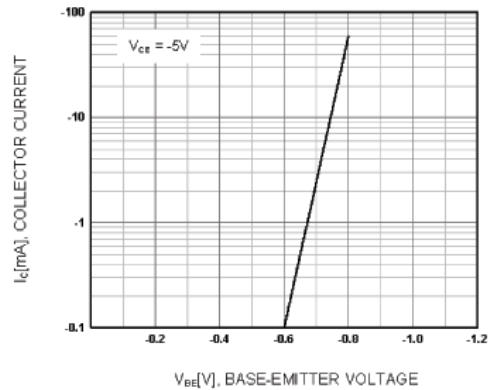


Figure 4. Base-Emitter On Voltage