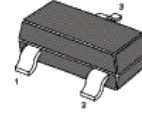


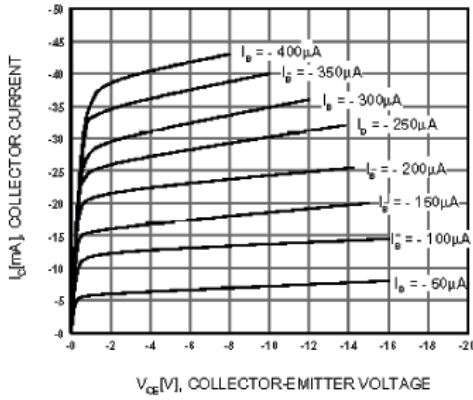
**PNP Silicon Epitaxial Transistor**

for switching and amplifier applications

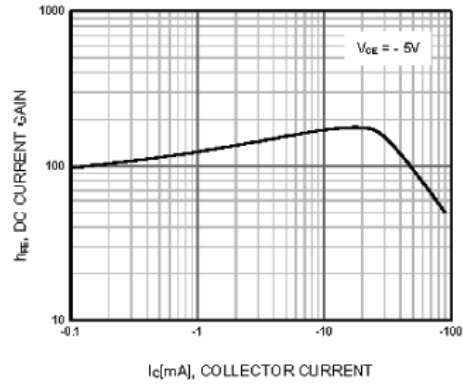

 1.BASE 2.EMITTER 3.COLLECTOR  
 SOT-23 Plastic Package

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

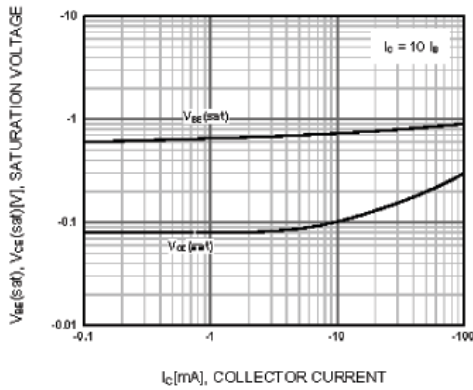
Parameter	Symbol	Value	Unit	
Collector Base Voltage	BC856	$-V_{CBO}$	80	V
	BC857, BC860	$-V_{CBO}$	50	V
	BC858, BC859	$-V_{CBO}$	30	V
Collector Emitter Voltage	BC856	$-V_{CEO}$	65	V
	BC857, BC860	$-V_{CEO}$	45	V
	BC858, BC859	$-V_{CEO}$	30	V
Emitter Base Voltage	$-V_{EBO}$	5	V	
Collector Current	$-I_C$	100	mA	
Peak Collector Current	$-I_{CM}$	200	mA	
Power Dissipation	$P_{tot}$	200	mW	
Junction Temperature	$T_j$	150	$^\circ\text{C}$	
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$	



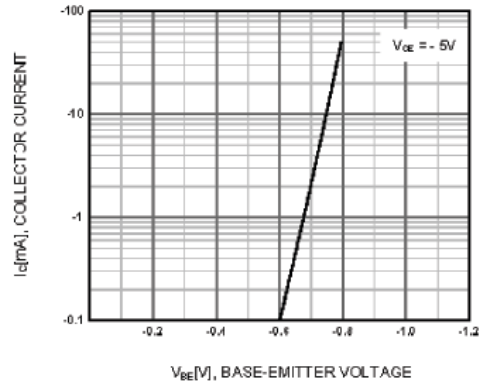
**Figure 1. Static Characteristic**



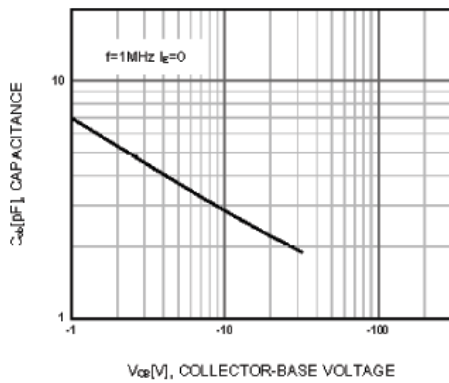
**Figure 2. DC current Gain**



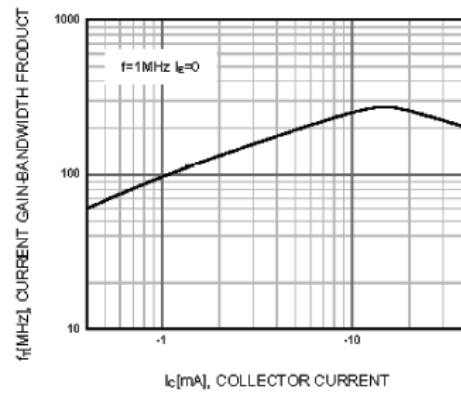
**Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**



**Figure 4. Base-Emitter On Voltage**



**Figure 5. Collector Output Capacitance**



**Figure 6. Current Gain Bandwidth Product**

**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	125	250	-
		B	220	475	-
		C	420	800	-
Collector Base Cutoff Current at $-V_{CB} = 30\text{ V}$		$-I_{CBO}$	-	15	nA
Collector Base Breakdown Voltage at $-I_C = 10\text{ }\mu\text{A}$	BC856	$-V_{(BR)CBO}$	80	-	V
	BC857, BC860	$-V_{(BR)CBO}$	50	-	V
	BC858, BC859	$-V_{(BR)CBO}$	30	-	V
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ }\mu\text{A}$	BC856	$-V_{(BR)CES}$	80	-	V
	BC857, BC860	$-V_{(BR)CES}$	50	-	V
	BC858, BC859	$-V_{(BR)CES}$	30	-	V
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	BC856	$-V_{(BR)CEO}$	65	-	V
	BC857, BC860	$-V_{(BR)CEO}$	45	-	V
	BC858, BC859	$-V_{(BR)CEO}$	30	-	V
Emitter Base Breakdown Voltage at $-I_E = 1\text{ }\mu\text{A}$		$-V_{(BR)EBO}$	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
		$-V_{CE(sat)}$	-	0.65	V
Base Emitter On Voltage at $-I_C = 2\text{ mA}$ , $-V_{CE} = 5\text{ V}$ at $-I_C = 10\text{ mA}$ , $-V_{CE} = 5\text{ V}$		$-V_{BE(on)}$	0.6	0.75	V
		$-V_{BE(on)}$	-	0.82	V
Current Gain Bandwidth Product at $-V_{CE} = 5\text{ V}$ , $-I_C = 10\text{ mA}$ , $f = 100\text{ MHz}$		$f_T$	100	-	MHz
Output Capacitance at $-V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$		$C_{ob}$	-	6	pF
Noise Figure at $-I_C = 200\text{ }\mu\text{A}$ , $-V_{CE} = 5\text{ V}$ , $R_G = 2\text{ K}\Omega$ , $f = 1\text{ KHz}$ at $-I_C = 200\text{ }\mu\text{A}$ , $-V_{CE} = 5\text{ V}$ , $R_G = 2\text{ K}\Omega$ , $f = 30\text{ } \sim 15\text{ KHz}$	BC856, BC857, BC858	NF	-	10	dB
	BC859, BC860		-	4	
	BC859		-	4	
	BC860		-	2	