CHINA BASE INTERNATIONAL

SOT-23

BC856-BC860

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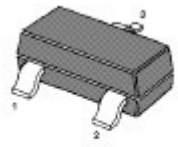
PNP Silicon Epitaxial Transistor

for switching and amplifier applications



1.BASE 2.EMITTER 3.COLLECTOR

SOT-23 Plastic Package

Absolute Maximum Ratings (T_a = 25 °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	°C
Storage Temperature Range		T_{stg}	- 65 to + 150	°C

MARKING CODE

TYPE	856A	856B	856C	857A	857B	857C	858A	858B	858C
MARKING	3A	3B	3C	3E	3F	3G	3J	3K	3L
TYPE	859A	859B	859C	860A	860B	860C			
MARKING	4A	4B	4C	4E	4F	4G			

Characteristics at T_a = 25 °C

Parameter			Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 5 V, $-I_C$ = 2 mA	Current Gain Group	A B C	h_{FE} h_{FE} h_{FE}	110 200 420	220 450 800	- - -
Collector Base Cutoff Current at $-V_{CB}$ = 30 V			$-I_{CBO}$	-	15	nA
Collector Base Breakdown Voltage at $-I_C$ = 10 μA	BC856 BC857, BC860 BC858, BC859		$-V_{(BR)CBO}$ $-V_{(BR)CBO}$ $-V_{(BR)CBO}$	80 50 30	- - -	V V V
Collector Emitter Breakdown Voltage at $-I_C$ = 10 μA	BC856 BC857, BC860 BC858, BC859		$-V_{(BR)CES}$ $-V_{(BR)CES}$ $-V_{(BR)CES}$	80 50 30	- - -	V V V
Collector Emitter Breakdown Voltage at $-I_C$ = 10 mA	BC856 BC857, BC860 BC858, BC859		$-V_{(BR)CEO}$ $-V_{(BR)CEO}$ $-V_{(BR)CEO}$	65 45 30	- - -	V V V
Emitter Base Breakdown Voltage at $-I_E$ = 1 μA			$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 10 mA, $-I_B$ = 0.5 mA at $-I_C$ = 100 mA, $-I_B$ = 5 mA			$-V_{CE(sat)}$ $-V_{CE(sat)}$	- -	0.3 0.65	V V
Base Emitter On Voltage at $-I_C$ = 2 mA, $-V_{CE}$ = 5 V at $-I_C$ = 10 mA, $-V_{CE}$ = 5 V			$-V_{BE(on)}$ $-V_{BE(on)}$	0.6 -	0.75 0.82	V V
Current Gain Bandwidth Product at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA, f = 100 MHz			f_T	100	-	MHz
Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz			C_{ob}	-	6	pF
Noise Figure at $-I_C$ = 200 μA, $-V_{CE}$ = 5 V, R_G = 2 KΩ, f = 1 KHz at $-I_C$ = 200 μA, $-V_{CE}$ = 5 V, R_G = 2 KΩ, f = 30 ~15 KHz	BC856, BC857, BC858 BC859, BC860 BC859 BC860		NF	- - - -	10 4 4 2	dB

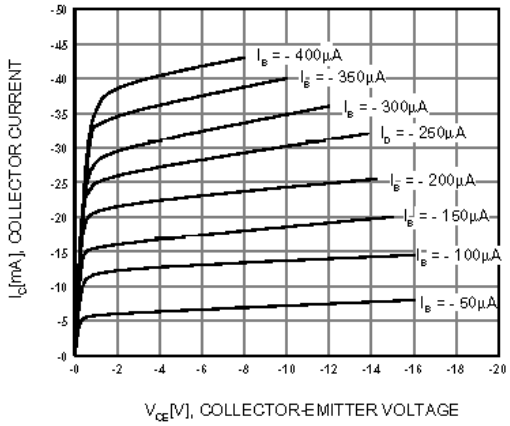


Figure 1. Static Characteristic

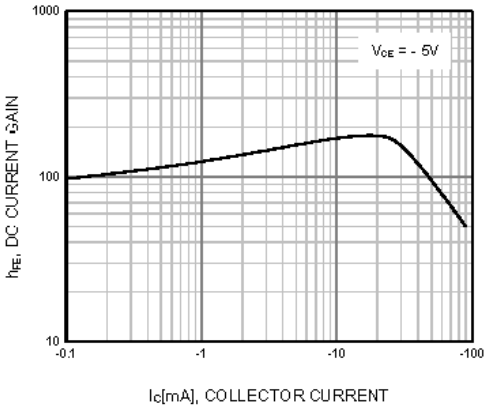


Figure 2. DC current Gain

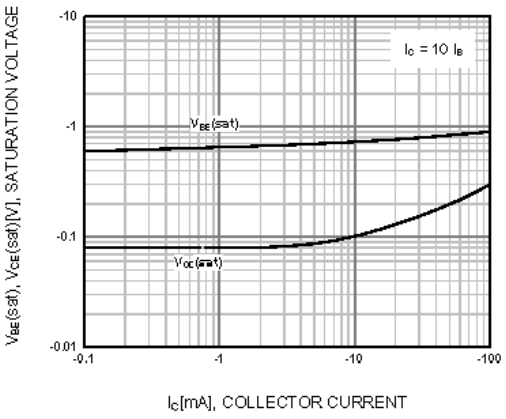


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

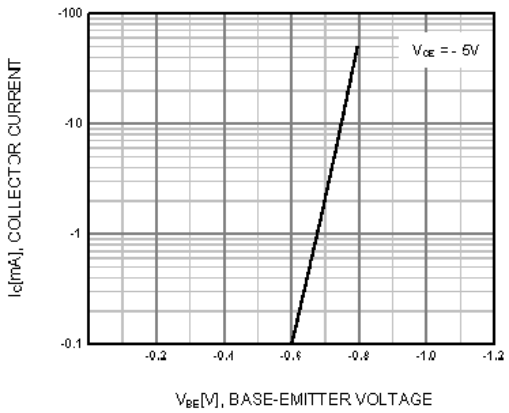


Figure 4. Base-Emitter On Voltage

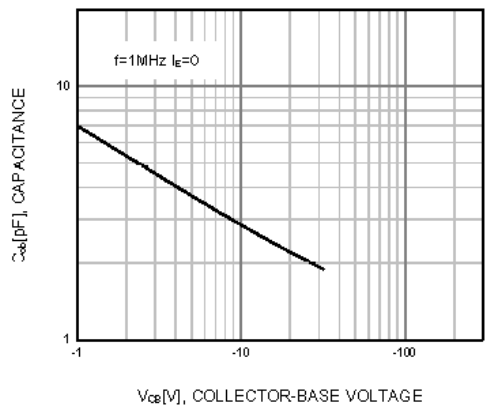


Figure 5. Collector Output Capacitance

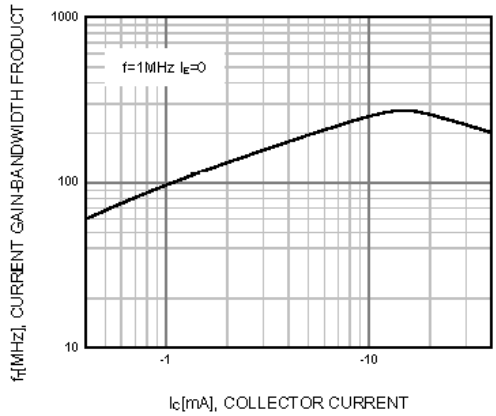


Figure 6. Current Gain Bandwidth Product