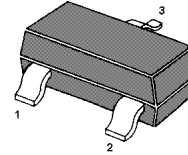


BC856...BC860

PNP Silicon Epitaxial Transistor

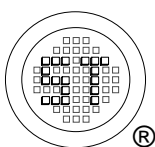
for switching and amplifier applications



1. Base 2. Emitter 3. Collector
SOT-23 Plastic Package

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

| 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 | $^\circ\text{C}$ | |



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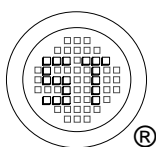


Dated: 08/08/2012 Rev: 01

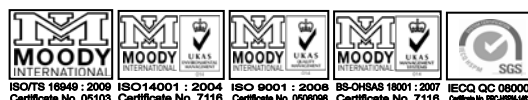
BC856...BC860

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} | 125 | 250 | - |
| | B | h_{FE} | 220 | 475 | - |
| | C | h_{FE} | 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 $-V_{CE} = 5\text{ V}$, $-I_C = 2\text{ mA}$ at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$ | $-V_{BE(on)}$ | 0.6 | 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 | |
| Collector Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$ | C_{ob} | - | 6 | pF | |



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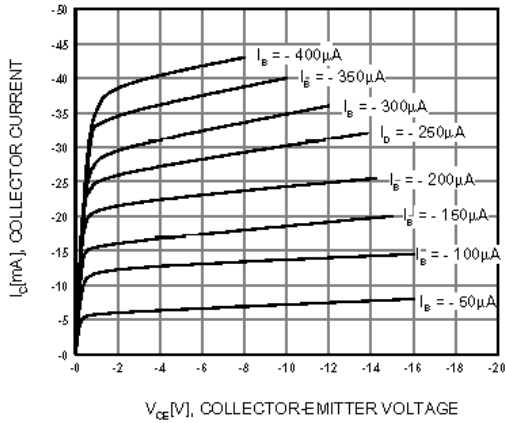


Figure 1. Static Characteristic

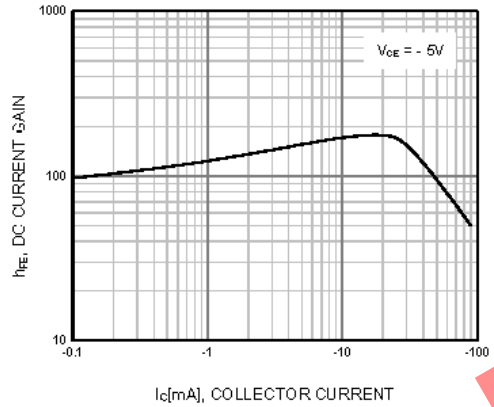


Figure 2. DC current Gain

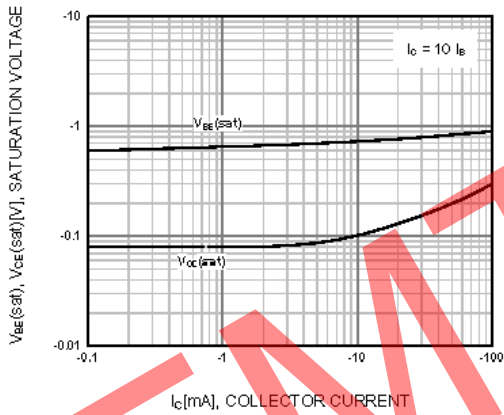


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

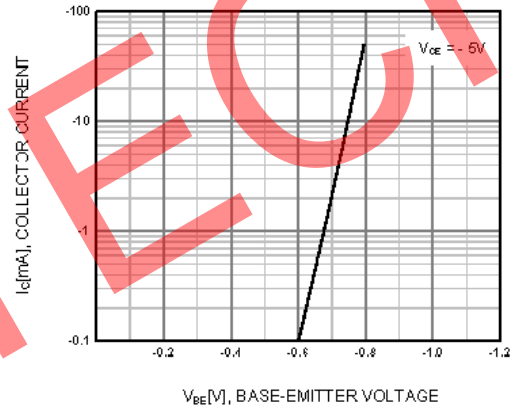


Figure 4. Base-Emitter On Voltage

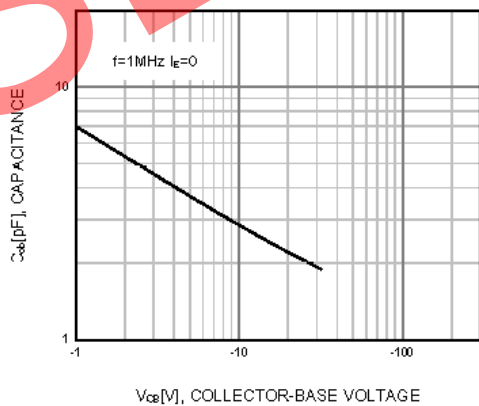


Figure 5. Collector Output Capacitance

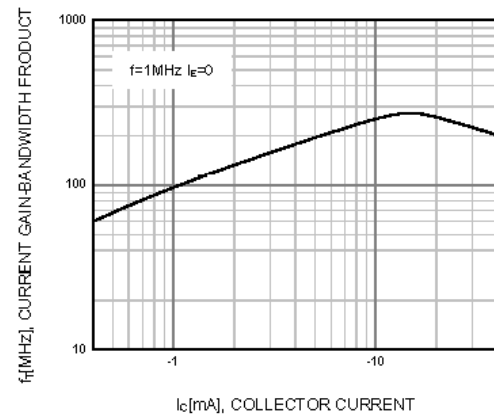


Figure 6. Current Gain Bandwidth Product

