



SOT-23 Plastic-Encapsulate Transistors

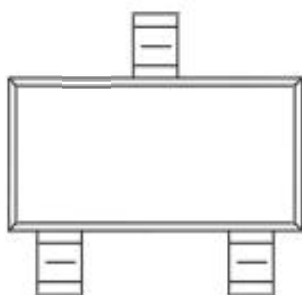
BC856

BC857

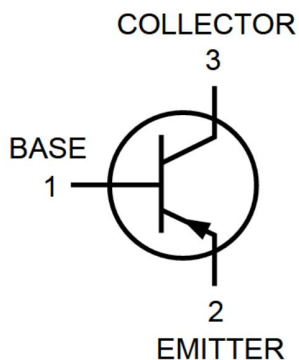
BC858

TRANSISTOR (PNP)

MARKING:

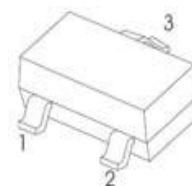


Equivalent Circuit:



SOT-23

- 1.BASE
- 2.EMITTER
- 3.COLLECTOR



FEATURES:

- ※ Ideally suited for automatic insertion
- ※ For switching and AF amplifier applications

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|--------|----------|------|
| Collector-Base Voltage | VCBO | -80 | V |
| BC856 | | -50 | |
| BC857 | | -30 | |
| Collector-Base Voltage | VCEO | -65 | V |
| BC856 | | -45 | |
| BC857 | | -30 | |
| Collector-Base Voltage | VEBO | -5 | V |
| Collector Current | IC | -0.1 | A |
| Collector Power Dissipation | PC | 200 | mW |
| Thermal Resistance From Junction To Ambient | ROJA | 625 | °C/W |
| Junction Temperature | Tj | 150 | °C |
| Storage Temperature | Tstg | -65~+150 | °C |

DEVICE MARKING:

BC856A=3A; BC856B=3B

BC857A=3E; BC857B=3F; BC857C=3G

BC858A=3J; BC858B=3K; BC858C=3L

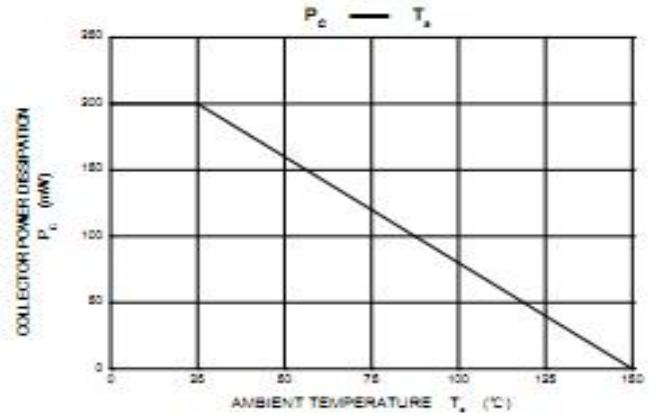
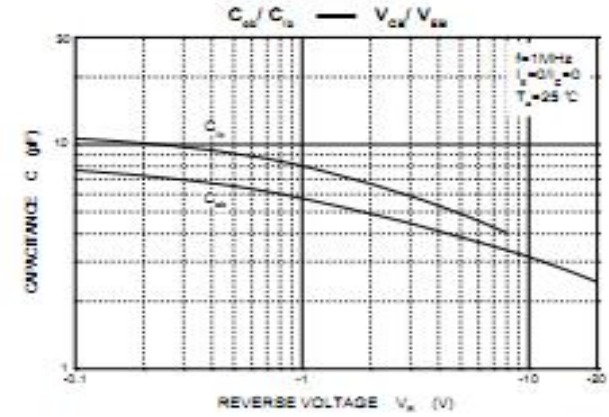
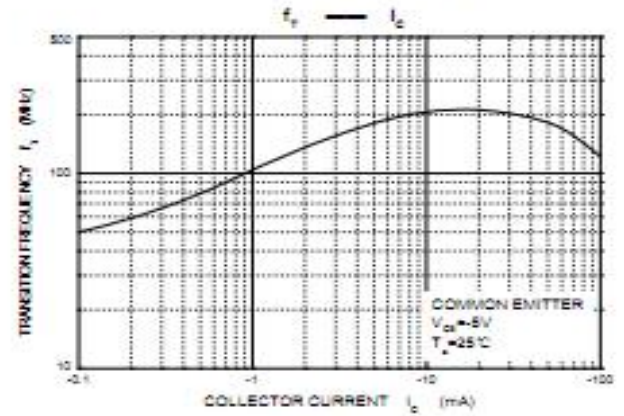
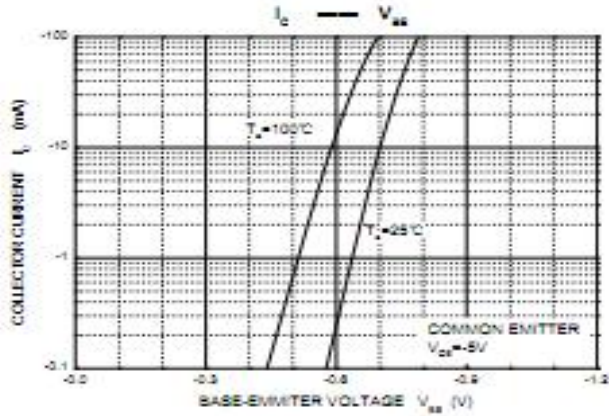
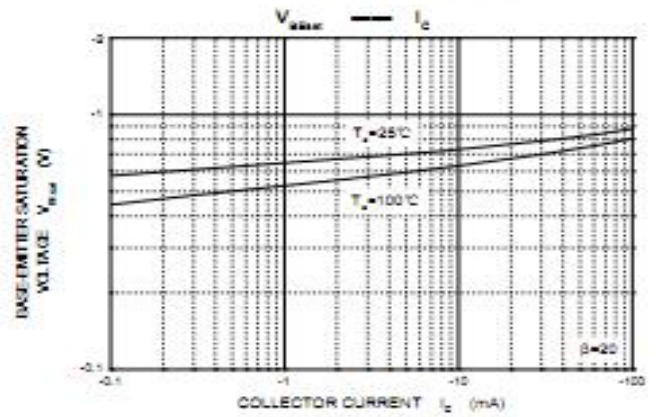
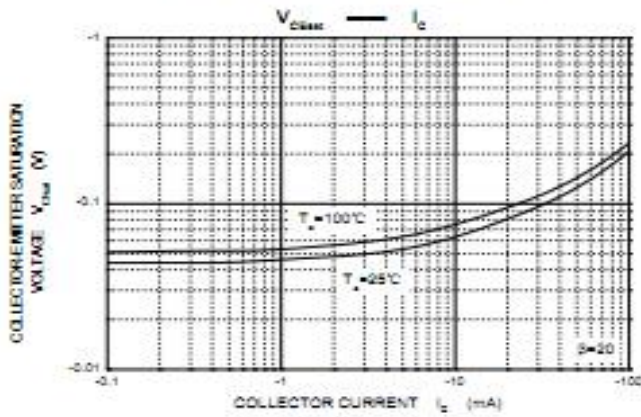
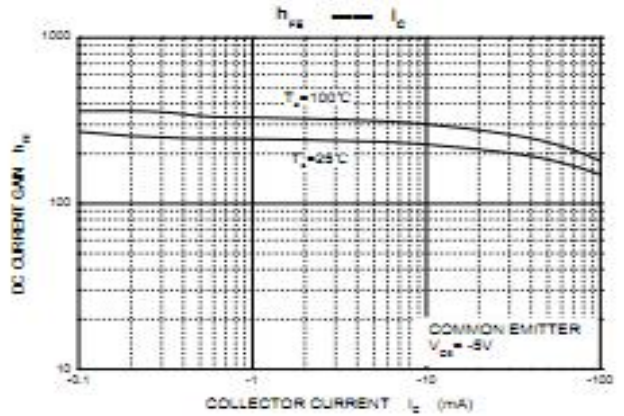
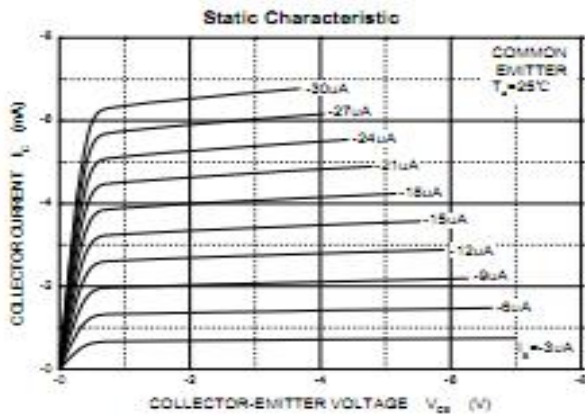


ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|---|----------|--|--|-----|-------------------|------|
| Collector-base breakdown voltage BC856 BC857 BC858 | V(BR)CBO | IC= -10μA, IE=0 | -80 -50 -30 | | | V |
| Collector-emitter breakdown voltage BC856 BC857 BC858 | V(BR)CEO | IC= -10mA, IB=0 | -65 -45 -30 | | | V |
| Emitter-base breakdown voltage | V(BR)EBO | IE=-1μA, IC=0 | -5 | | | V |
| Collector cut-off current BC856 BC857 BC858 | ICBO | VCB=-70 V , IE=0 VCB=-50 V , IE=0 VCB=-30 V , IE=0 | | | -0.1 | μA |
| Emitter cut-off current | IEBO | VEB=-5V , IC=0 | | | -0.1 | μA |
| DC current gain BC856A; 845A; 858A BC856B; 857B; 858B BC857C; BC858C | hFE | VCE=-5V, IC= -2mA | 125 220 420 | | 250 475 800 | |
| Collector-emitter saturation voltage | VCE(sat) | IC=-100 mA, IB= -5mA | | | -0.5 | V |
| Base-emitter saturation voltage | VBE(sat) | IC=-100 mA, IB= -5mA | | | -1.1 | V |
| Transition frequency | fT | VCE=-5V, IC= -10mA f=100MHz | 100 | | | MHz |
| Collector Current Capacitance | Cob | VCE=-10V, f=1MHz | | | 4.5 | pF |

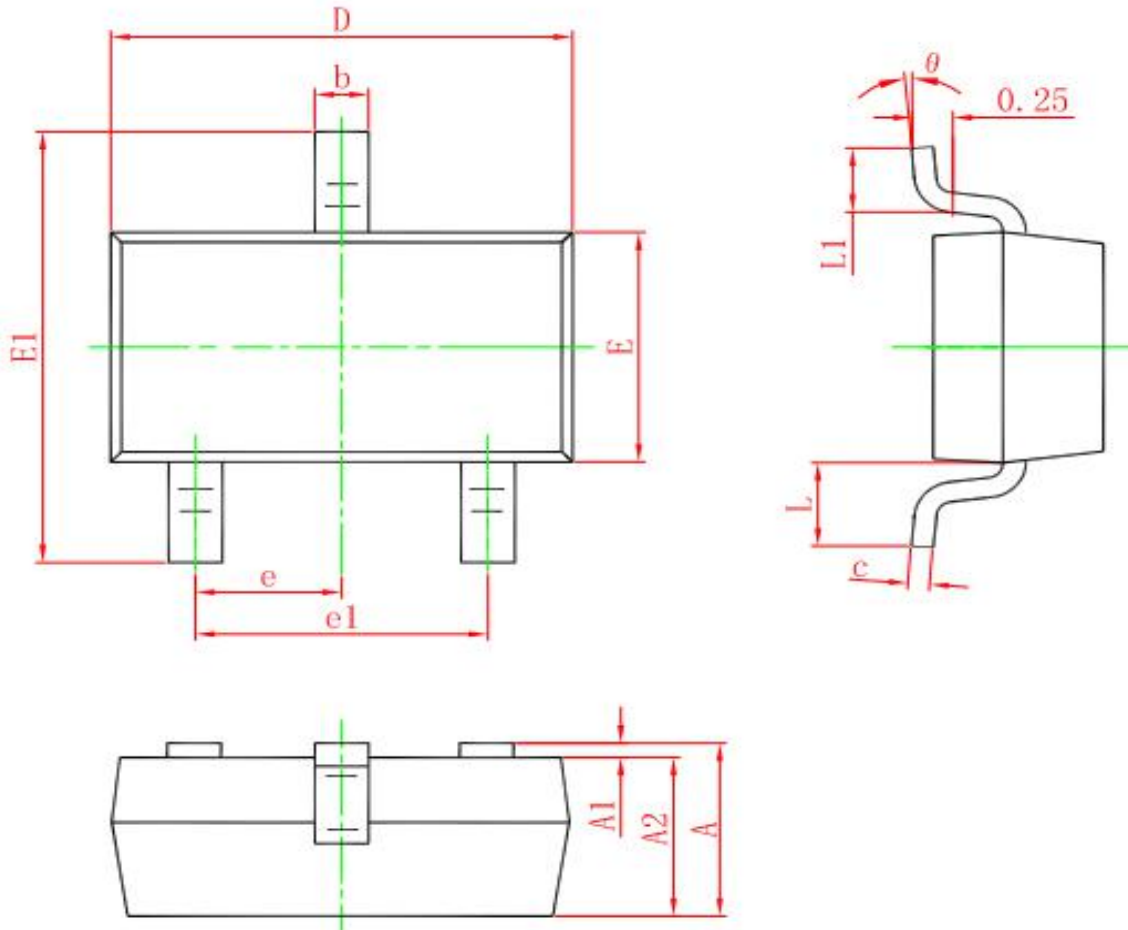


TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS





SOT-23 PACKAGE OUTLINE DIMENSIONS



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP. | | 0.037 TYP. | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF. | | 0.022 REF. | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |