

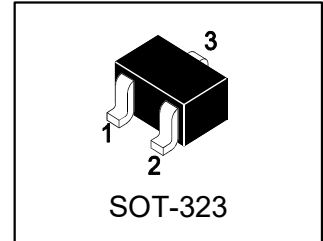
BC817-25W

S-BC817-25W

General Purpose Transistors NPN Silicon

1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.

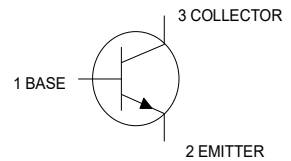


2. DEVICE MARKING AND ORDERING INFORMATION

| Device | Marking | Shipping |
|-----------|---------|----------------|
| BC817-25W | 6B | 3000/Tape&Reel |

3. MAXIMUM RATINGS(Ta = 25°C)

| Parameter | Symbol | Limits | Unit |
|--------------------------------|------------------|--------|-----------------|
| Collector–Emitter Voltage | V _{CEO} | 45 | V _{dc} |
| Collector–Base Voltage | V _{CBO} | 50 | V _{dc} |
| Emitter–Base Voltage | V _{EB0} | 5 | V _{dc} |
| Collector Current — Continuous | I _C | 500 | mAdc |



4. THERMAL CHARACTERISTICS

| Parameter | Symbol | Limits | Unit |
|---|-----------------------------------|------------|-------------|
| Total Device Dissipation, FR-5 Board (Note 1) @ TA = 25°C Derate above 25°C | PD | 150 1.2 | mW mW/°C |
| Thermal Resistance, Junction–to–Ambient(Note 1) | R _{θJA} | 833 | °C/W |
| Junction and Storage temperature | T _J , T _{stg} | -55~+150 | °C |

1. FR-5 = 1.0×0.75×0.062 in.

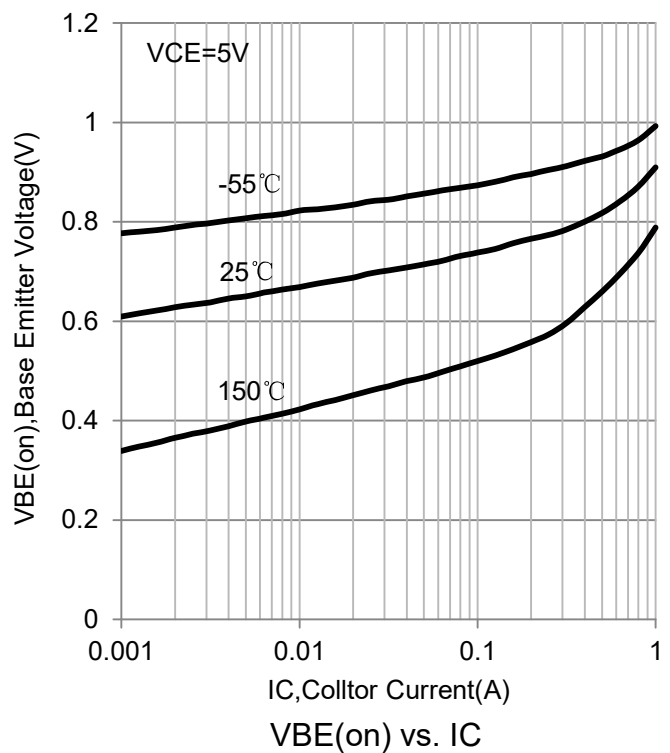
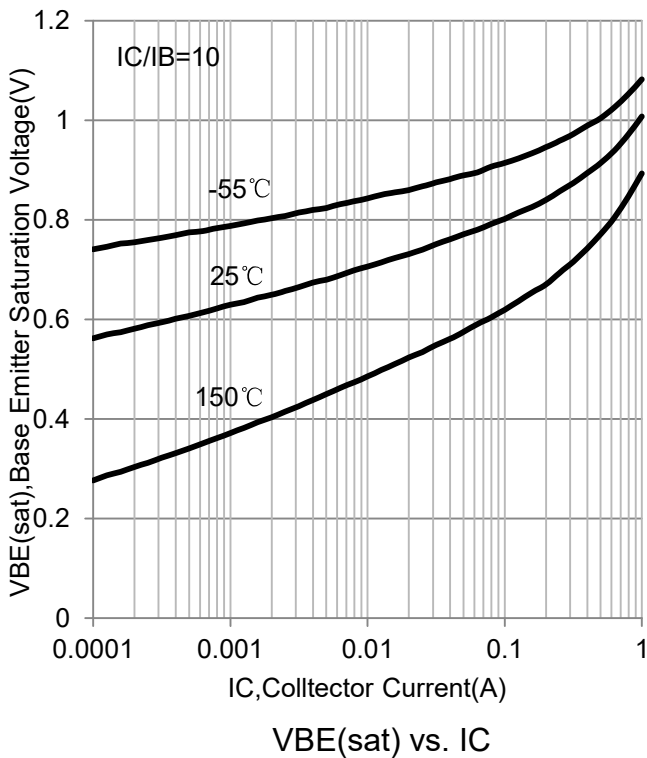
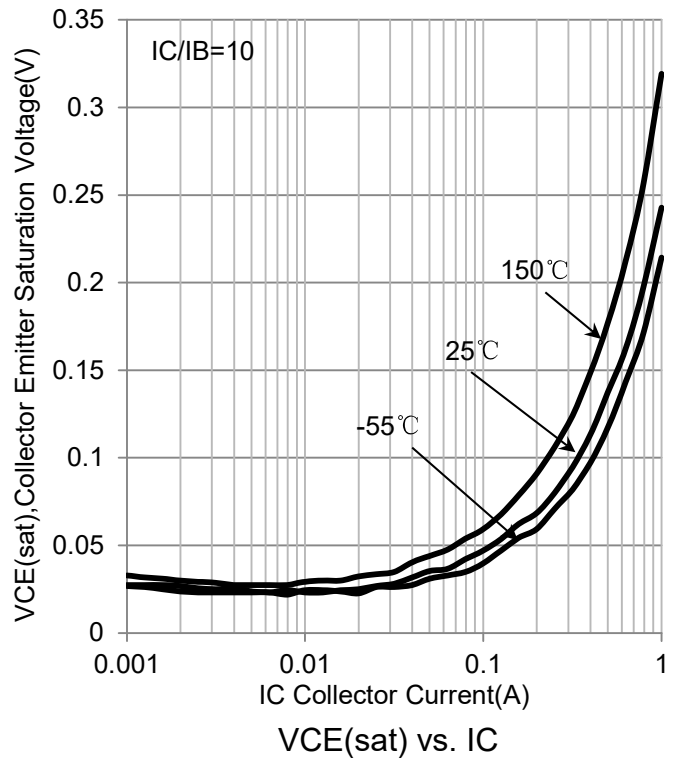
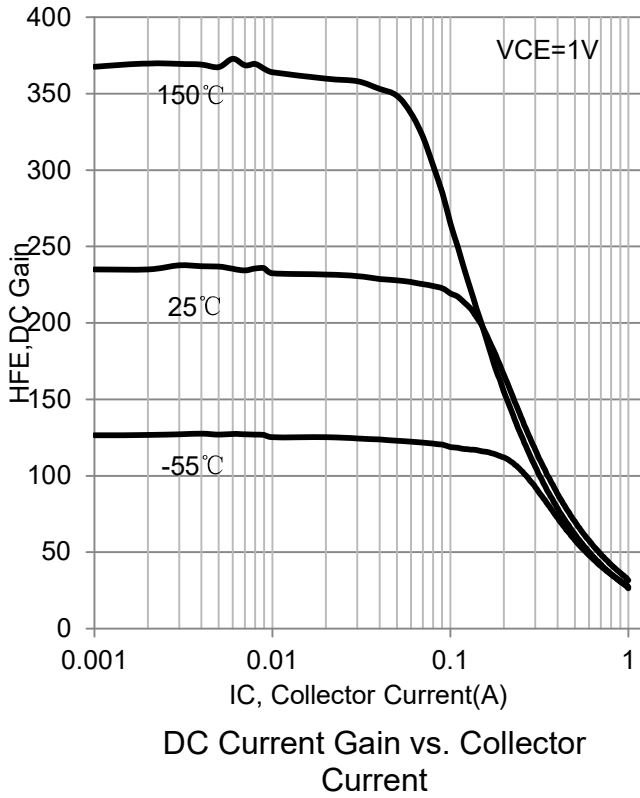


5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

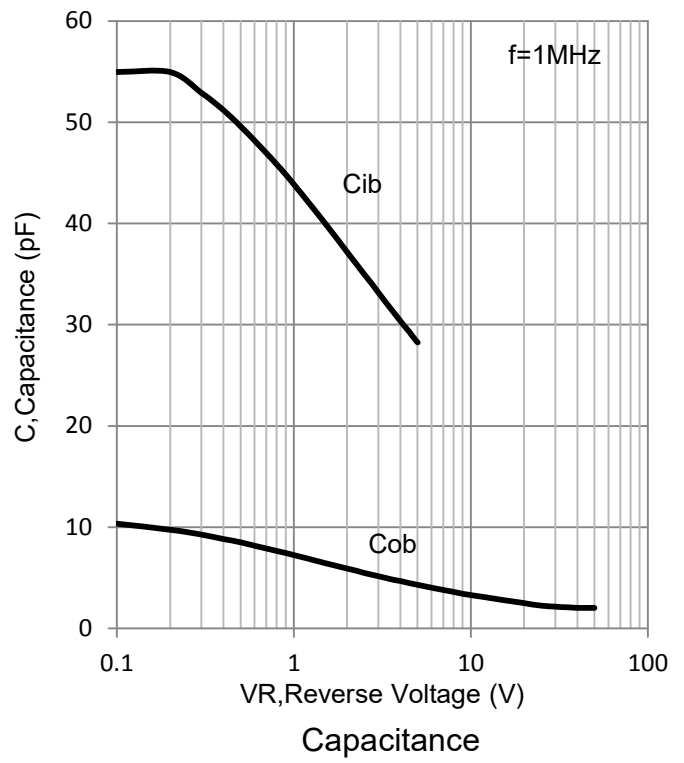
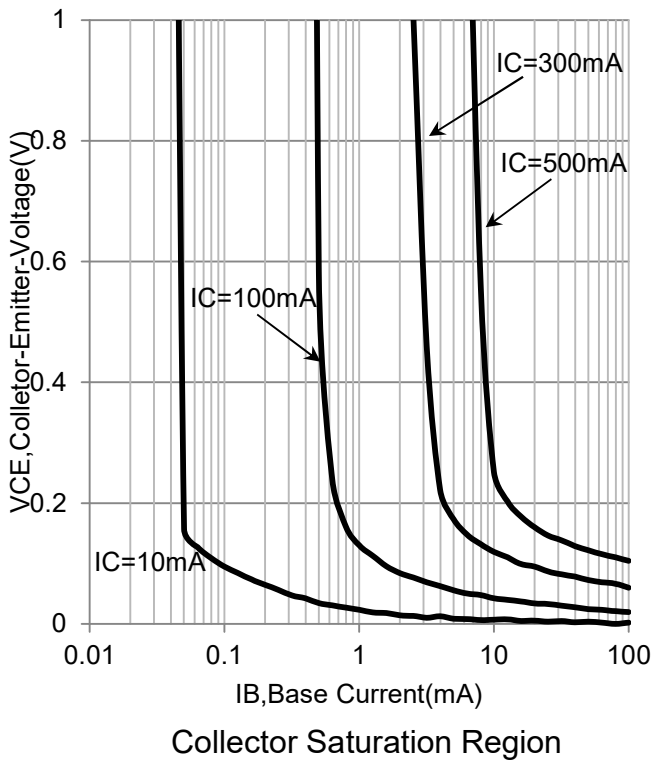
| Characteristic | Symbol | Min. | Typ. | Max. | Unit |
|--|----------|--------|--------|----------|----------|
| Collector–Emitter Breakdown Voltage (IC = 10 mAdc, IB = 0) | VBR(CEO) | 45 | - | - | V |
| Collector–Base Breakdown Voltage (IC = 10 μAdc, IE = 0) | VBR(CBO) | 50 | - | - | V |
| Emitter–Base Breakdown Voltage (IE = 1.0 μAdc, IC = 0) | VBR(EBO) | 5 | - | - | V |
| Collector Cutoff Current (VCB = 20 Vdc) (VCB = 20 Vdc, TA=150°C) | ICBO | - - | - - | 100 5 | nA μA |
| DC Current Gain (IC = 100 mAdc, VCE = 1.0 Vdc) | HFE | 160 | - | 400 | |
| Collector–Emitter Saturation Voltage (IC = 500 mAdc, IB = 50 mAdc) | VCE(sat) | - | - | 0.7 | V |
| Base–Emitter Saturation Voltage (IC = 500 mAdc, VCE = 1.0 Vdc) | VBE(sat) | - | - | 1.2 | V |
| Current–Gain — Bandwidth Product (IC = 10mAdc, VCE= 5Vdc, f = 100MHz) | fT | 100 | - | - | MHz |
| Output Capacitance (VCB = 10 Vdc, IE = 0, f = 1.0 MHz) | Cob | - | 10 | - | pF |



6. ELECTRICAL CHARACTERISTICS CURVE



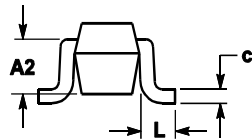
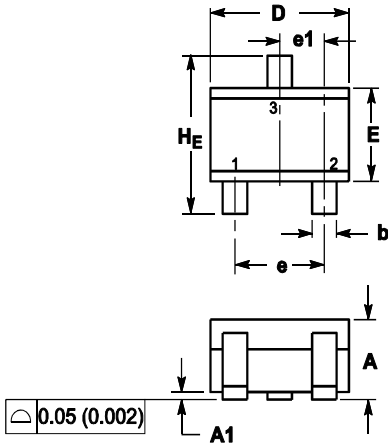
6. ELECTRICAL CHARACTERISTICS CURVES(Con.)



7. OUTLINE AND DIMENSIONS

Notes:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.
4. DIMENSIONS D AND E DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.



| DIM | MILLIMETERS | | | INCHES | | |
|-----|-------------|------|------|----------|-------|-------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | 0.80 | 0.90 | 1.00 | 0.032 | 0.035 | 0.039 |
| A1 | 0.00 | 0.05 | 0.10 | 0.000 | 0.002 | 0.004 |
| A2 | 0.70REF | | | 0.028REF | | |
| b | 0.30 | 0.35 | 0.40 | 0.012 | 0.014 | 0.016 |
| c | 0.10 | 0.18 | 0.25 | 0.004 | 0.007 | 0.010 |
| D | 1.80 | 2.10 | 2.20 | 0.071 | 0.083 | 0.087 |
| E | 1.15 | 1.24 | 1.35 | 0.045 | 0.049 | 0.053 |
| e | 1.20 | 1.30 | 1.40 | 0.047 | 0.051 | 0.055 |
| e1 | 0.65REF | | | 0.026REF | | |
| L | 0.20 | 0.38 | 0.56 | 0.008 | 0.015 | 0.022 |
| HE | 2.00 | 2.10 | 2.40 | 0.079 | 0.083 | 0.095 |

8. SOLDERING FOOTPRINT

