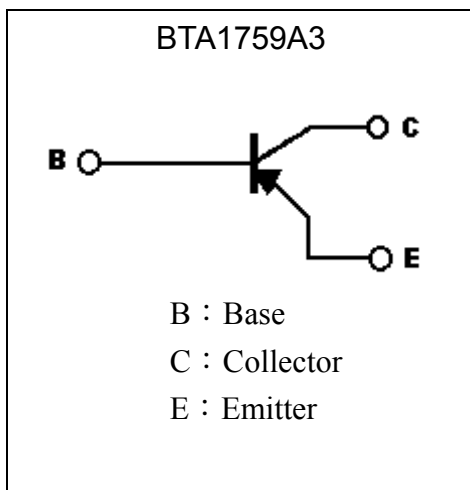
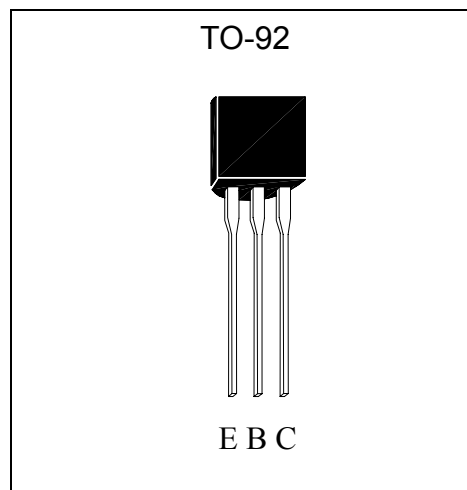


High Voltage PNP Epitaxial Planar Transistor

BTA1759A3

Description

- High breakdown voltage. ($BV_{CEO} = -400V$)
- Low saturation voltage, typical $V_{CE(sat)} = -0.2V$ at $I_C / I_B = -20mA / -2mA$.
- Wide SOA (safe operation area).
- Complementary to BTC4505A3.

Symbol

Outline

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

| Parameter | Symbol | Limits | Unit |
|---------------------------|-----------|----------|------------|
| Collector-Base Voltage | V_{CBO} | -400 | V |
| Collector-Emitter Voltage | V_{CEO} | -400 | V |
| Emitter-Base Voltage | V_{EBO} | -7 | V |
| Collector Current | I_C | -300 | mA |
| Power Dissipation | P_d | 625 | mW |
| Junction Temperature | T_j | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | -55~+150 | $^\circ C$ |

**Characteristics (Ta=25°C)**

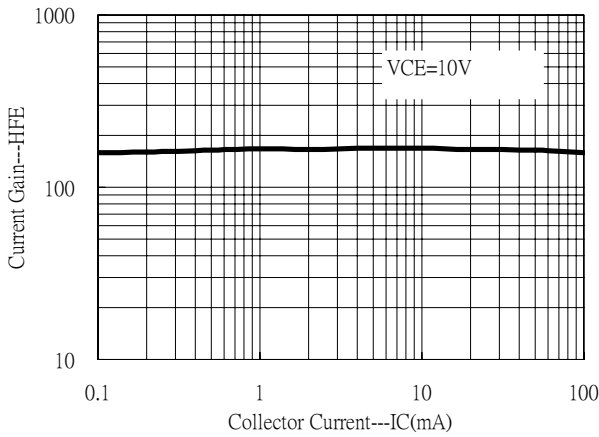
| Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|-----------------|------|-------|------|---------|----------------------------------|
| BV_{CBO} | -400 | - | - | V | $I_C=-50\mu A$ |
| BV_{CEO} | -400 | - | - | V | $I_C=-1mA$ |
| BV_{EBO} | -7 | - | - | V | $I_E=-50\mu A$ |
| I_{CBO} | - | - | -10 | μA | $V_{CB}=-400V$ |
| I_{CER} | - | - | -20 | nA | $V_{CE}=-300V, R_{EB}=4k\Omega$ |
| I_{EBO} | - | - | -10 | μA | $V_{EB}=-6V$ |
| * $V_{CE(sat)}$ | - | -0.08 | -0.5 | V | $I_C=-20mA, I_B=-2mA$ |
| * $V_{BE(sat)}$ | - | - | -1.2 | V | $I_C=-20mA, I_B=-2mA$ |
| * h_{FE} | 100 | - | 270 | - | $V_{CE}=-10V, I_C=-10mA$ |
| f_T | - | 12 | - | MHz | $V_{CE}=-10V, I_C=-10mA, f=5MHz$ |
| Cob | - | 13 | - | pF | $V_{CB}=-10V, f=1MHz$ |

*Pulse Test: Pulse Width $\leq 380\mu s$, Duty Cycle $\leq 2\%$

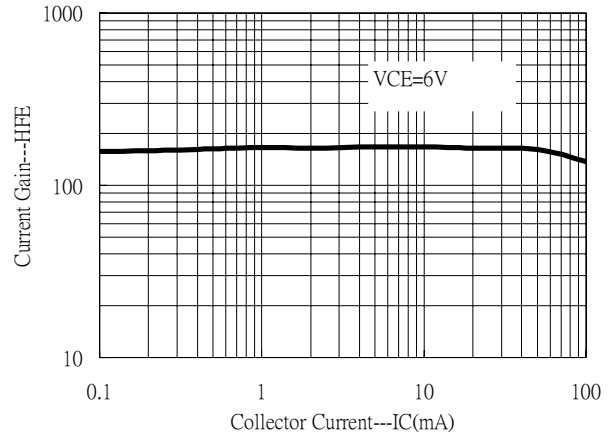


Characteristic Curves

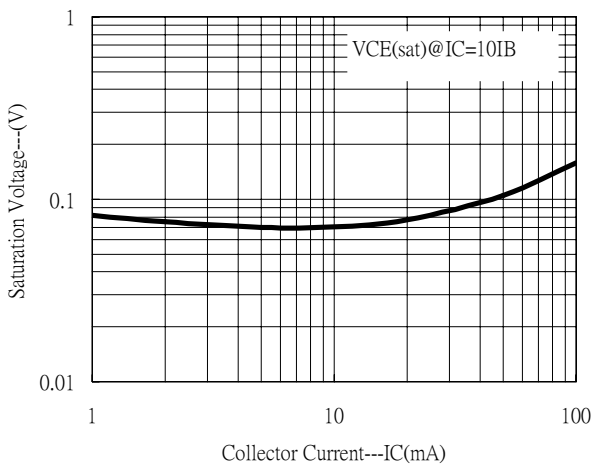
Current Gain vs Collector Current



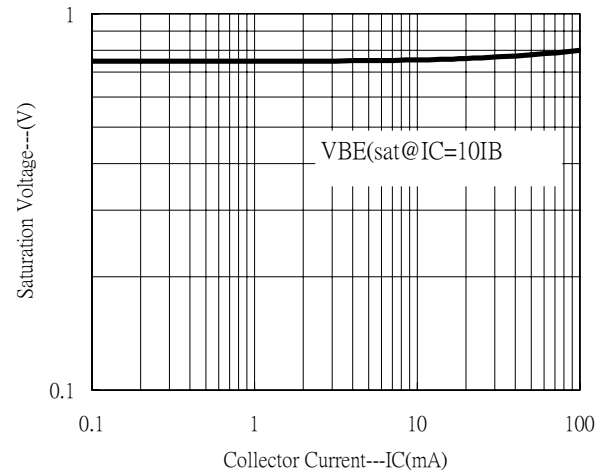
Current Gain vs Collector Current



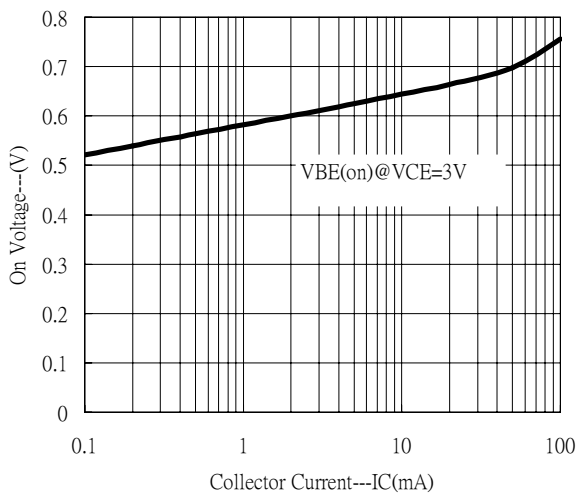
Saturation Voltage vs Collector Current



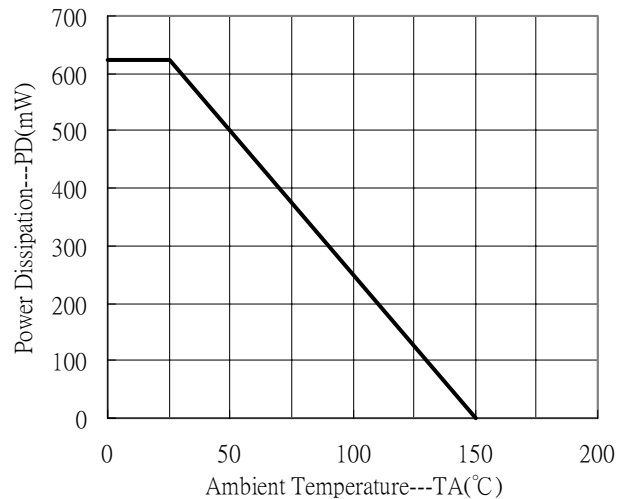
Saturation Voltage vs Collector Current



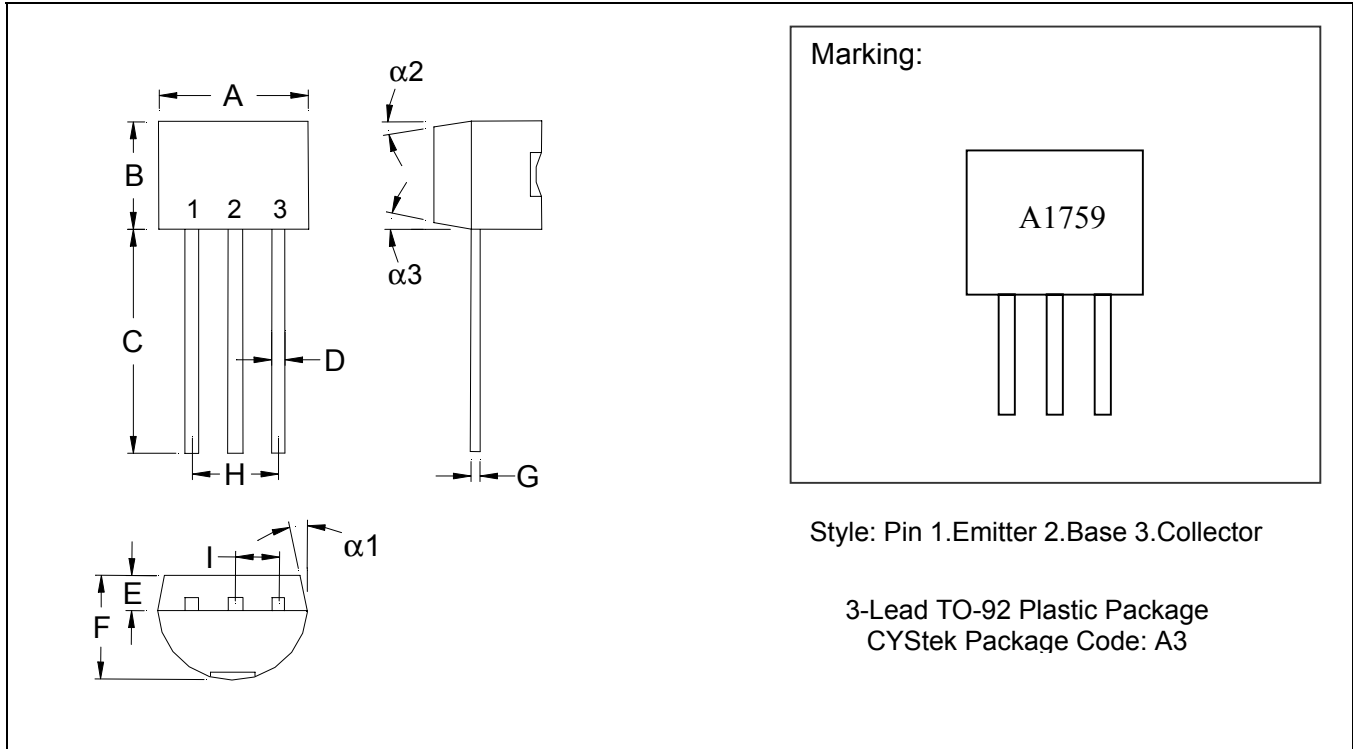
On Voltage vs Collector Current



Power Derating Curve



TO-92 Dimension



*: Typical

| DIM | Inches | | Millimeters | | DIM | Inches | | Millimeters | |
|-----|--------|---------|-------------|-------|------------|--------|---------|-------------|-------|
| | Min. | Max. | Min. | Max. | | Min. | Max. | Min. | Max. |
| A | 0.1704 | 0.1902 | 4.33 | 4.83 | G | 0.0142 | 0.0220 | 0.36 | 0.56 |
| B | 0.1704 | 0.1902 | 4.33 | 4.83 | H | - | *0.1000 | - | *2.54 |
| C | 0.5000 | - | 12.70 | - | I | - | *0.0500 | - | *1.27 |
| D | 0.0142 | 0.0220 | 0.36 | 0.56 | $\alpha 1$ | - | *5° | - | *5° |
| E | - | *0.0500 | - | *1.27 | $\alpha 2$ | - | *2° | - | *2° |
| F | 0.1323 | 0.1480 | 3.36 | 3.76 | $\alpha 3$ | - | *2° | - | *2° |

Notes: 1. Controlling dimension: millimeters.
 2. Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
 3. If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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