

2SD1850

Silicon NPN Triple-Diffused Planar Type

Horizontal Deflection Output

■ Features

- High breakdown voltage, high reliability
- High speed switching
- Wide area of safety operation (ASO)
- "Full Pack" package for simplified mounting on a heat sink with one screw

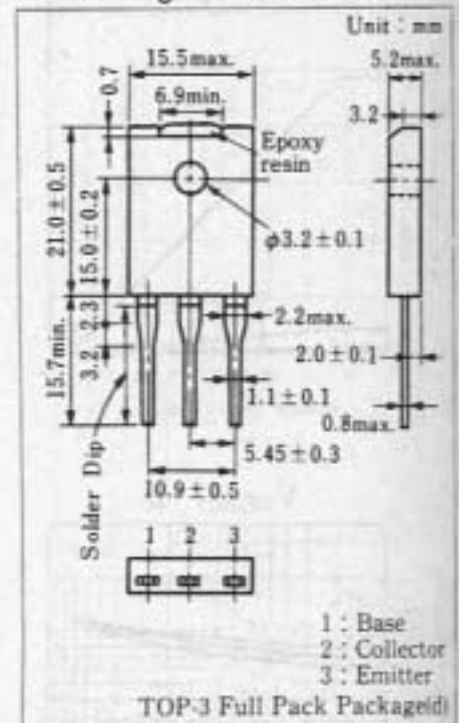
■ Absolute Maximum Ratings (T_c=25°C)

| Item | Symbol | Value | Unit | |
|-----------------------------|------------------|-----------------------|------|---|
| Collector-base voltage | V _{CB0} | 1500 | V | |
| Collector-emitter voltage | V _{CES} | 1500 | V | |
| | V _{CEO} | 700 | V | |
| Emitter-base voltage | V _{EBO} | 7 | V | |
| Peak collector current | I _{CP} | 20 | A | |
| Collector current | I _C | 7 | A | |
| Base current | I _B | 3 | A | |
| Collector power dissipation | P _C | T _C = 25°C | 120 | W |
| | | T _A = 25°C | 3 | |
| Junction temperature | T _J | 150 | °C | |
| Storage temperature | T _{stg} | -55 ~ +150 | °C | |

■ Electrical Characteristics (T_c=25°C)

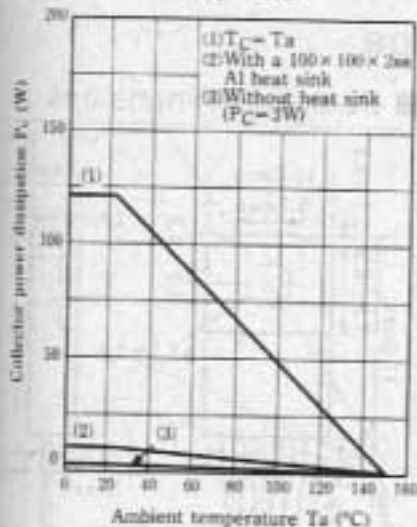
| Item | Symbol | Condition | min. | typ. | max. | Unit |
|--------------------------------------|----------------------|--|------|------|------|------|
| Collector cutoff current | I _{CB0} | V _{CB} = 1000V, I _E = 0 | | | 10 | μA |
| | | V _{CB} = 1500V, I _E = 0 | | | 1 | mA |
| Emitter-base voltage | V _{EBO} | I _E = 1mA, I _C = 0 | | 7 | | V |
| DC current gain | h _{FE1} | V _{CE} = 5V, I _C = 1A | 5 | | 25 | |
| | h _{FE2} | V _{CE} = 5V, I _C = 6A | 4.5 | | | |
| Collector-emitter saturation voltage | V _{CE(sat)} | I _C = 6A, I _B = 1.5A | | | 8 | V |
| Base-emitter saturation voltage | V _{BE(sat)} | I _C = 6A, I _B = 1.5A | | | 1.5 | V |
| Transition frequency | f _T | V _{CE} = 10V, I _C = 1A, f = 0.5MHz | | 2 | | MHz |
| Storage time (L load) | t _{stg} | I _C = 6A, I _{B1} = 1.5A | | | 11 | μs |
| Collector current fall time (L load) | t _f | I _{B2} = -1.5A, L _{break} = 5μH | | | 0.8 | μs |
| Storage time (R load) | t _{stg} | I _C = 6A, I _{B1} = 1.5A | | 1.5 | | μs |
| Collector current fall time (R load) | t _f | I _{B2} = -3A, V _{CC} = 200V | | 0.2 | | μs |

■ Package Dimensions

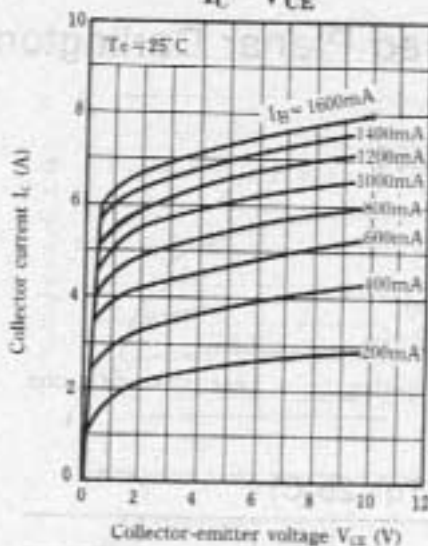


www.DataSheet4U.com

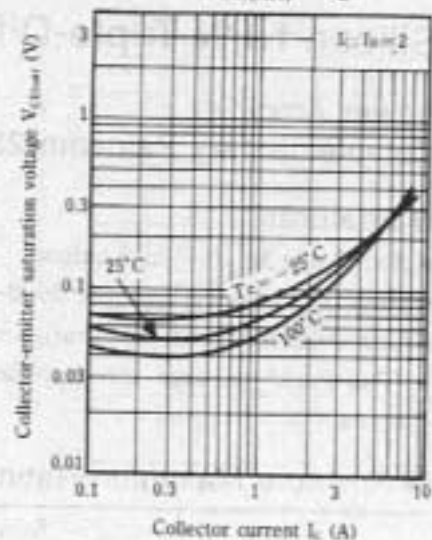
$P_C - T_a$



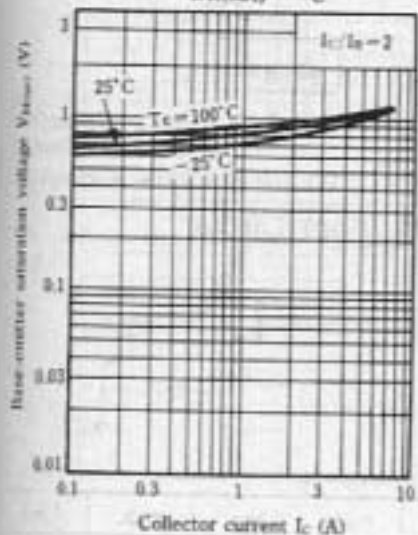
$I_C - V_{CE}$



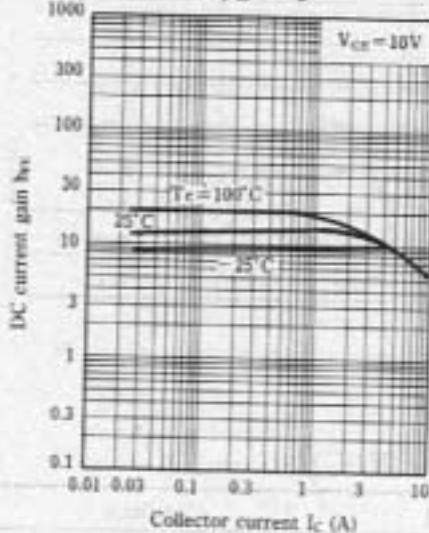
$V_{CE(sat)} - I_C$



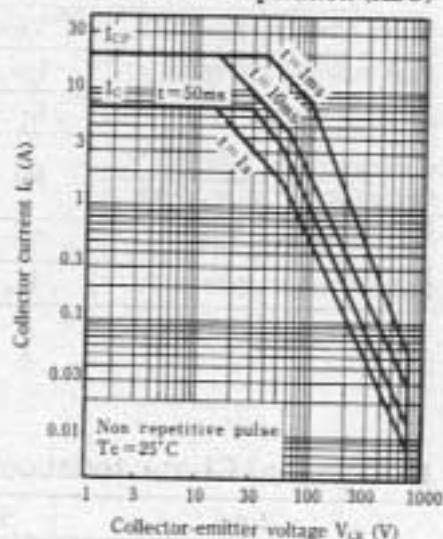
$V_{BE(sat)} - I_C$



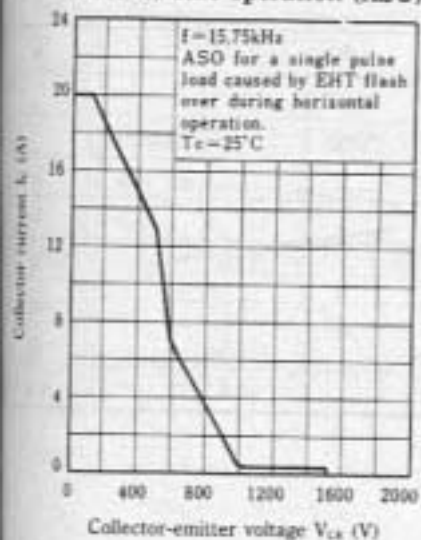
$h_{FE} - I_C$



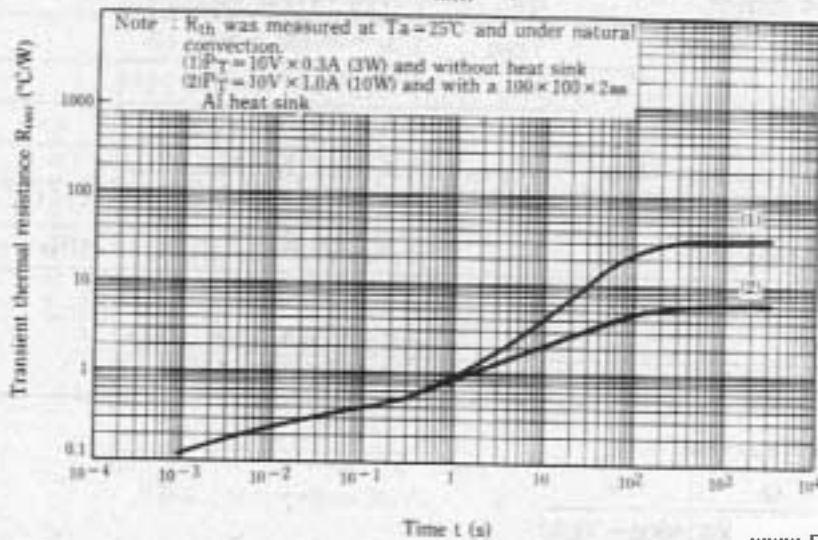
Area of safe operation (ASO)



Area of safe operation (ASO)



$R_{th(t)} - t$



www.DataSheet4U.com