

# ANTREX Electronics

Electronic Components Sourcing Information

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## Product Reference Information

**Part Number:** 2SB1587  
**Manufacturer:** Sanken Electric USA Inc.  
**Package:** TO-3P-3 Full Pack  
**Availability:** Please confirm with sales

**Product Page:**

<https://antrexco.com/product/details/sanken-electric-usa-inc/2sb1587.html>

**Request a Quote:**

[Submit RFQ for this part](#)



Scan for product page

## Contact Information

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Website: <https://antrexco.com>

## Quality & Trust

New & Original Components

Supplier verification and packaging condition review

CoC / RoHS / REACH documents available on request

Secure sourcing support for OEM / EMS projects

**Note:**

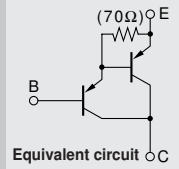
This PDF includes an ANTREX product reference cover page.

The original manufacturer datasheet follows from the next page.

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Darlington

# 2SB1587



**Silicon PNP Epitaxial Planar Transistor** (Complement to type 2SD2438)

**Application :** Audio, Series Regulator and General Purpose

**■Absolute maximum ratings** ( $T_a=25^\circ\text{C}$ )

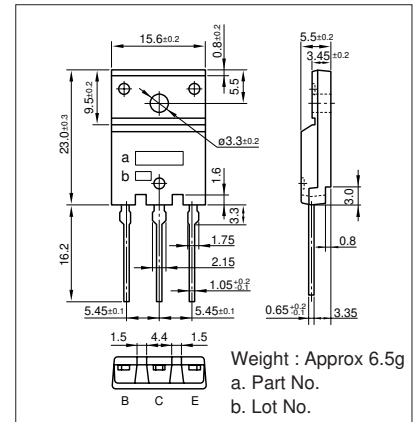
| Symbol    | Ratings                      | Unit             |
|-----------|------------------------------|------------------|
| $V_{CB0}$ | -160                         | V                |
| $V_{CE0}$ | -150                         | V                |
| $V_{EB0}$ | -5                           | V                |
| $I_C$     | -8                           | A                |
| $I_B$     | -1                           | A                |
| $P_C$     | 75( $T_c=25^\circ\text{C}$ ) | W                |
| $T_j$     | 150                          | $^\circ\text{C}$ |
| $T_{stg}$ | -55 to +150                  | $^\circ\text{C}$ |

**■Electrical Characteristics** ( $T_a=25^\circ\text{C}$ )

| Symbol        | Conditions                             | Ratings  | Unit          |
|---------------|----------------------------------------|----------|---------------|
| $I_{CBO}$     | $V_{CB}=-160\text{V}$                  | -100max  | $\mu\text{A}$ |
| $I_{EBO}$     | $V_{EB}=-5\text{V}$                    | -100max  | $\mu\text{A}$ |
| $V_{(BR)CEO}$ | $I_C=-30\text{mA}$                     | -150min  | V             |
| $h_{FE}$      | $V_{CE}=-4\text{V}$ , $I_C=-6\text{A}$ | 5000min* |               |
| $V_{CE(sat)}$ | $I_C=-6\text{A}$ , $I_B=-6\text{mA}$   | -2.5max  | V             |
| $V_{BE(sat)}$ | $I_C=-6\text{A}$ , $I_B=-6\text{mA}$   | -3.0max  | V             |
| $f_T$         | $V_{CE}=-12\text{V}$ , $I_E=1\text{A}$ | 65typ    | MHz           |
| $C_{OB}$      | $V_{CB}=-10\text{V}$ , $f=1\text{MHz}$ | 160typ   | pF            |

\* $h_{FE}$  Rank  $\bar{O}$ (5000 to 12000), P(6500 to 20000), Y(15000 to 30000)

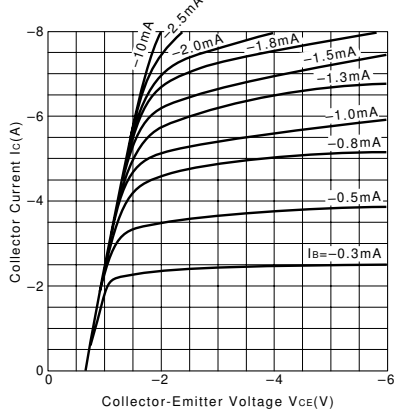
**External Dimensions FM100(TO3PF)**



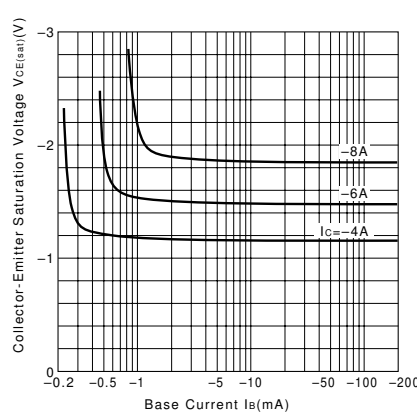
**■Typical Switching Characteristics (Common Emitter)**

| $V_{CC}$<br>(V) | $R_L$<br>( $\Omega$ ) | $I_C$<br>(A) | $V_{BB1}$<br>(V) | $V_{BB2}$<br>(V) | $I_{B1}$<br>(mA) | $I_{B2}$<br>(mA) | $t_{on}$<br>( $\mu\text{s}$ ) | $t_{stg}$<br>( $\mu\text{s}$ ) | $t_f$<br>( $\mu\text{s}$ ) |
|-----------------|-----------------------|--------------|------------------|------------------|------------------|------------------|-------------------------------|--------------------------------|----------------------------|
| -60             | 10                    | -6           | -10              | 5                | -6               | 6                | 0.7typ                        | 3.6typ                         | 0.9typ                     |

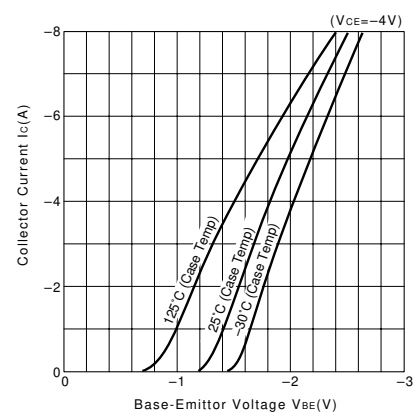
**$I_C-V_{CE}$  Characteristics (Typical)**



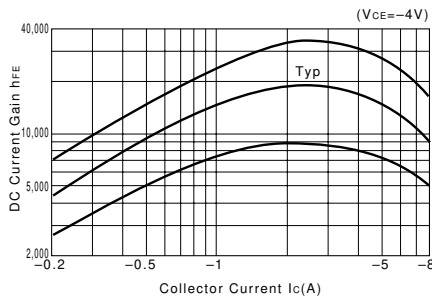
**$V_{CE(sat)}-I_B$  Characteristics (Typical)**



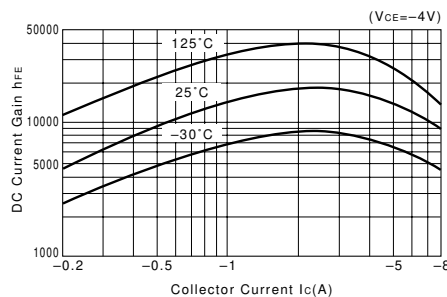
**$I_C-V_{BE}$  Temperature Characteristics (Typical)**



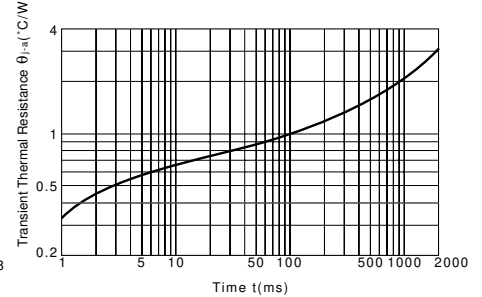
**$h_{FE}-I_C$  Characteristics (Typical)**



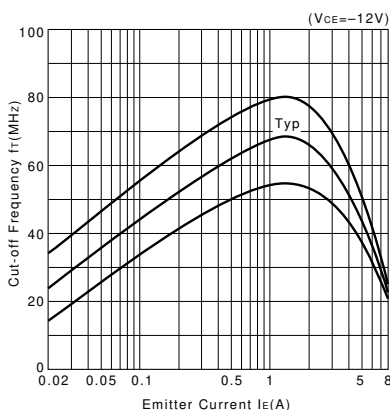
**$h_{FE}-I_C$  Temperature Characteristics (Typical)**



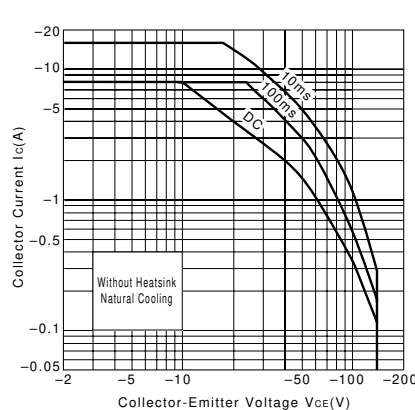
**$\theta_{JA}-t$  Characteristics**



**$f_T-I_E$  Characteristics (Typical)**



**Safe Operating Area (Single Pulse)**



**$P_C-T_a$  Derating**

