

Low V_{CE} (sat)

2SA1567

Silicon PNP Epitaxial Planar Transistor (Complement to type 2SC4064)

Application : DC Motor Driver, Chopper Regulator and General Purpose

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

| Symbol | 2SA1567 | Unit |
|-----------|------------------------------|------------------|
| V_{CBO} | -50 | V |
| V_{CEO} | -50 | V |
| V_{EBO} | -6 | V |
| I_c | -12 | A |
| I_B | -3 | A |
| P_c | 35($T_c=25^\circ\text{C}$) | W |
| T_j | 150 | $^\circ\text{C}$ |
| T_{stg} | -55 to +150 | $^\circ\text{C}$ |

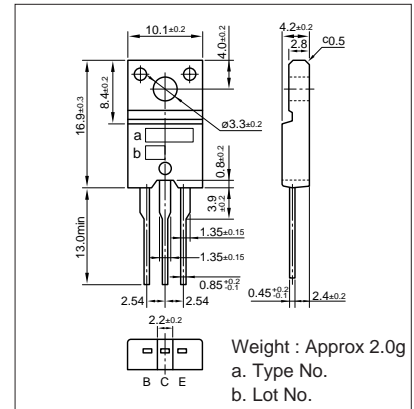
Electrical Characteristics ($T_a=25^\circ\text{C}$)

| Symbol | Conditions | 2SA1567 | Unit |
|---------------|---------------------------------------|----------|---------------|
| I_{CBO} | $V_{CB}=-50\text{V}$ | -100max | μA |
| I_{EBO} | $V_{EB}=-6\text{V}$ | -100max | μA |
| $V_{(BR)CEO}$ | $I_c=-25\text{mA}$ | -50min | V |
| h_{FE} | $V_{CE}=-1\text{V}, I_c=-6\text{A}$ | 50min | |
| $V_{CE(sat)}$ | $I_c=-6\text{A}, I_B=-0.3\text{A}$ | -0.35max | V |
| f_r | $V_{CE}=-12\text{V}, I_E=0.5\text{A}$ | 40typ | MHz |
| COB | $V_{CB}=-10\text{V}, f=1\text{MHz}$ | 330typ | pF |

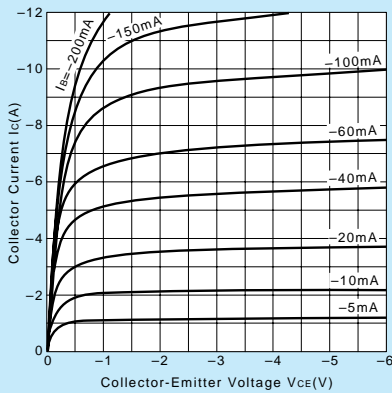
Typical Switching Characteristics (Common Emitter)

| V_{CC} (V) | R_L (Ω) | I_c (A) | V_{BB1} (V) | V_{BB2} (V) | I_{B1} (mA) | I_{B2} (mA) | t_{on} (μs) | t_{stg} (μs) | t_f (μs) |
|--------------|--------------------|-----------|---------------|---------------|---------------|---------------|----------------------------|-----------------------------|-------------------------|
| -24 | 4 | -6 | -10 | 5 | -120 | 120 | 0.4typ | 0.4typ | 0.2typ |

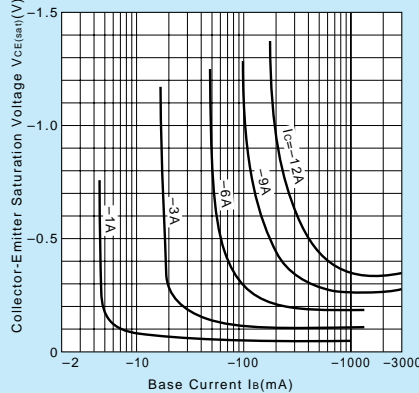
External Dimensions FM20 (TO220F)



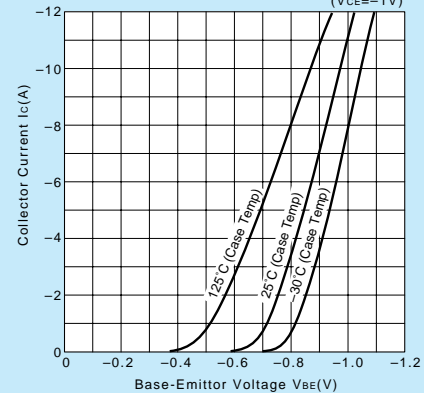
I_c-V_{CE} Characteristics (Typical)



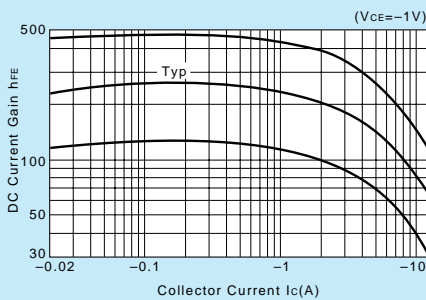
$V_{CE(sat)}-I_B$ Characteristics (Typical)



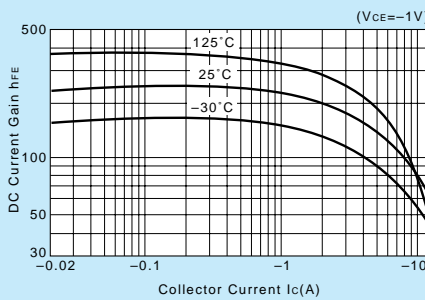
I_c-V_{BE} Temperature Characteristics (Typical)



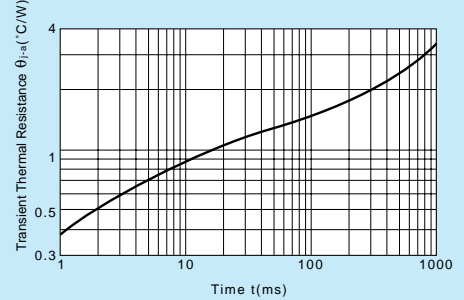
$h_{FE}-I_c$ Characteristics (Typical)



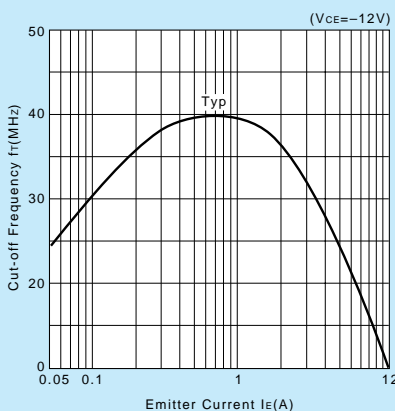
$h_{FE}-I_c$ Temperature Characteristics (Typical)



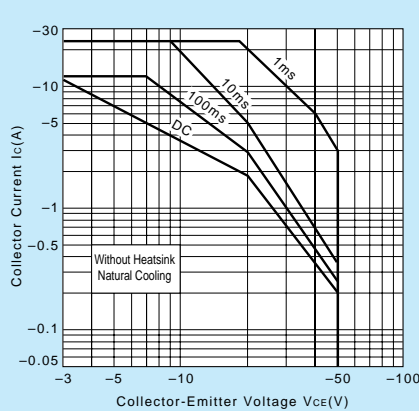
$\theta_{j-a}-t$ Characteristics



f_T-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_c-T_a Derating

