

2SA1859/1859A

Silicon PNP Epitaxial Planar Transistor (Complement to type 2SC4883/A)

Application : Audio Output Driver and TV Velocity-modulation

Absolute maximum ratings (Ta=25°C)

| Symbol | 2SA1859 | 2SA1859A | Unit |
|------------------|--------------------------|----------|------|
| V _{CBO} | -150 | -180 | V |
| V _{CEO} | -150 | -180 | V |
| V _{EB0} | -6 | | V |
| I _C | -2 | | A |
| I _B | -1 | | A |
| P _C | 20(T _C =25°C) | | W |
| T _j | 150 | | °C |
| T _{stg} | -55 to +150 | | °C |

Electrical Characteristics

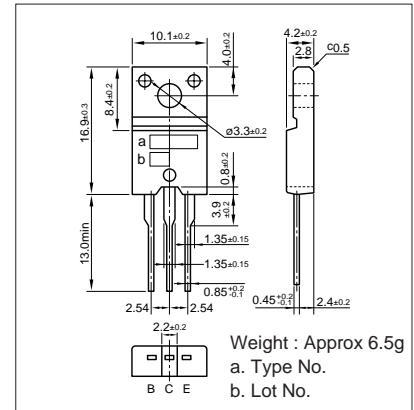
(Ta=25°C)

| Symbol | Conditions | 2SA1859 | 2SA1859A | Unit |
|----------------------|--|-----------|----------|------|
| I _{CBO} | V _{CB} = | -10max | | μA |
| V _{CEO} | I _C =-10mA | -150min | -180min | V |
| I _{EB0} | V _{EB} =-6V | -10max | | μA |
| V _{(BR)CEO} | I _C =-10mA | -150min | -180min | V |
| h _{FE} | V _{CE} =-10V, I _C =-0.7A | 60 to 240 | | |
| V _{CE(sat)} | I _C =-0.7A, I _B =-70mA | -1.0max | | V |
| f _r | V _{CE} =-12V, I _E =0.7A | 60typ | | MHz |
| COB | V _{CB} =-10V, f=1MHz | 30typ | | pF |

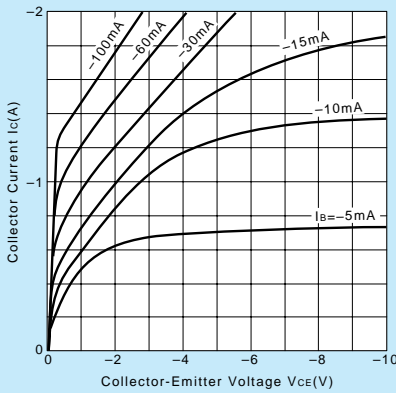
Typical Switching Characteristics (Common Emitter)

| 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) |
|---------------------|--------------------|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-----------------------|---------------------|
| -20 | 20 | -1 | -10 | 5 | -100 | 100 | 0.5typ | 1.0typ | 0.5typ |

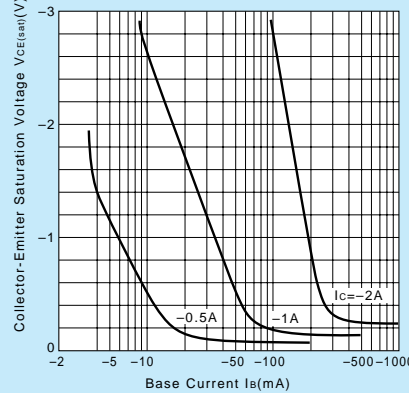
External Dimensions FM20(TO220F)



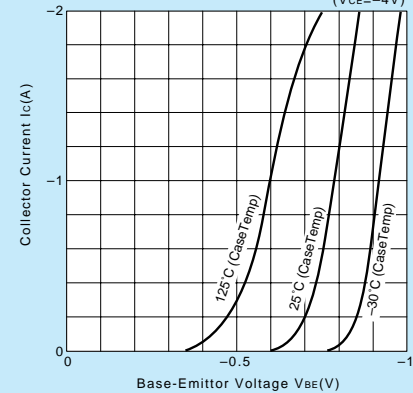
I_C-V_{CE} Characteristics (Typical)



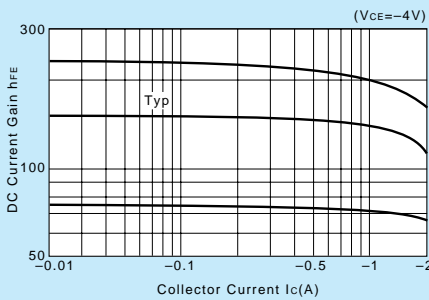
V_{CE(sat)}-I_B Characteristics (Typical)



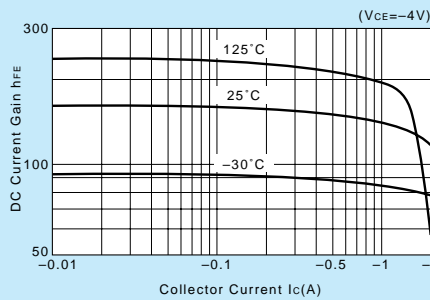
I_C-V_{BE} Temperature Characteristics (Typical)



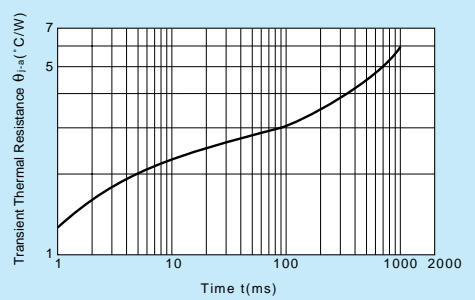
h_{FE}-I_C Characteristics (Typical)



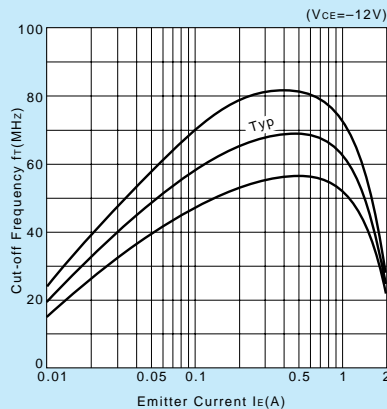
h_{FE}-I_C Temperature Characteristics (Typical)



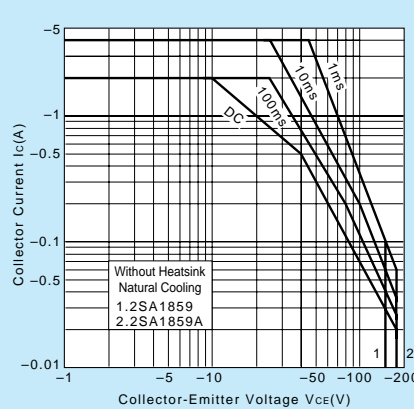
θ_{j-a}-t Characteristics



f_r-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_C-T_a Derating

