

2SC3858

Silicon NPN Triple Diffused Planar Transistor (Complement to type 2SA1494)

Application : Audio and General Purpose

Absolute maximum ratings (Ta=25°C)

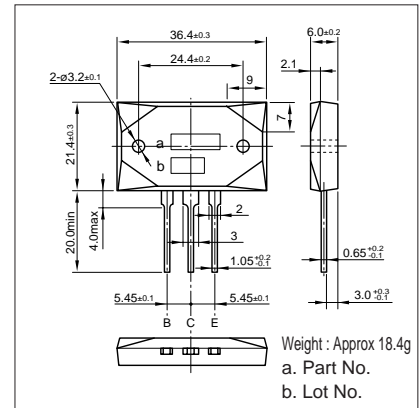
| Symbol | Ratings | Unit |
|------------------|---------------------------|------|
| V _{CB0} | 200 | V |
| V _{CE0} | 200 | V |
| V _{EB0} | 6 | V |
| I _C | 17 | A |
| I _B | 5 | A |
| P _C | 200(T _C =25°C) | W |
| T _J | 150 | °C |
| T _{stg} | -55 to +150 | °C |

Electrical Characteristics (Ta=25°C)

| Symbol | Conditions | Ratings | Unit |
|----------------------|---|---------|------|
| I _{CB0} | V _{CB} =200V | 100max | μA |
| I _{EB0} | V _{EB} =6V | 100max | μA |
| V _{(BR)CEO} | I _C =50mA | 200min | V |
| h _{FE} | V _{CE} =4V, I _C =8A | 50min* | |
| V _{CE(sat)} | I _C =10A, I _B =1A | 2.5max | V |
| f _T | V _{CE} =12V, I _E =-1A | 20typ | MHz |
| COB | V _{CB} =10V, f=1MHz | 300typ | pF |

*h_{FE} Rank Y(50 to 100), P(70 to 140), G(90 to 180)

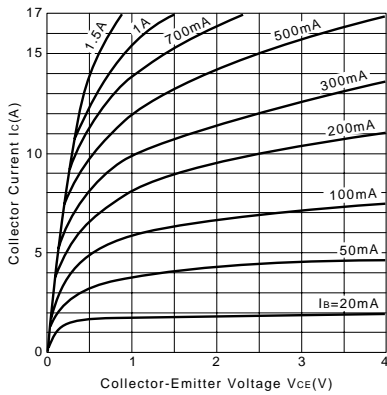
External Dimensions MT-200



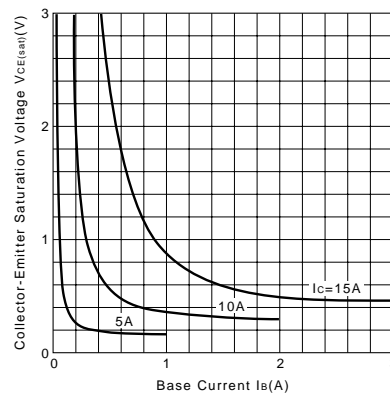
Typical Switching Characteristics (Common Emitter)

| V _{CC} (V) | R _L (Ω) | I _C (A) | V _{BB1} (V) | V _{BB2} (V) | I _{B1} (A) | I _{B2} (A) | t _{on} (μs) | t _{stg} (μs) | t _f (μs) |
|---------------------|--------------------|--------------------|----------------------|----------------------|---------------------|---------------------|----------------------|-----------------------|---------------------|
| 40 | 4 | 10 | 10 | -5 | 1 | -1 | 0.5typ | 1.8typ | 0.6typ |

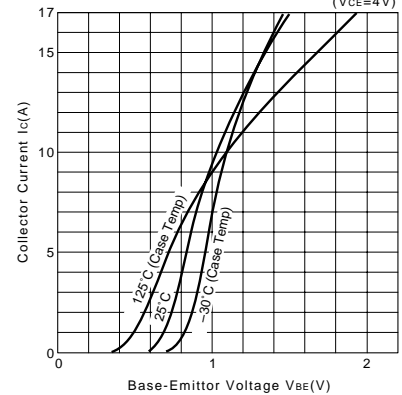
I_C-V_{CE} Characteristics (Typical)



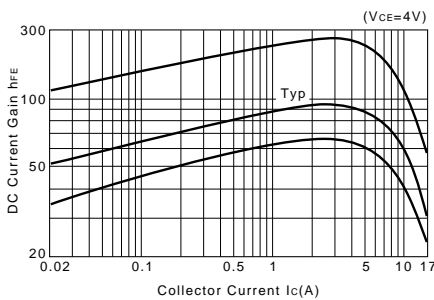
V_{CE(sat)}-I_B Characteristics (Typical)



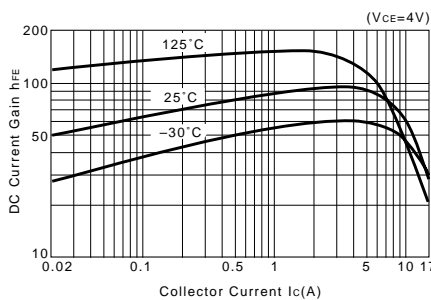
I_C-V_{BE} Temperature Characteristics (Typical)



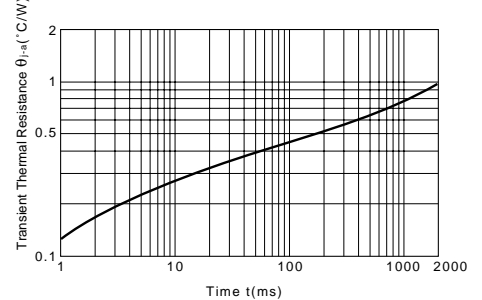
h_{FE}-I_C Characteristics (Typical)



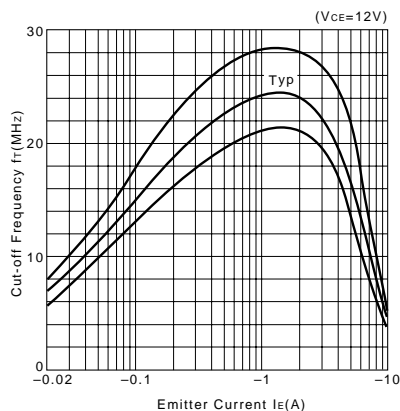
h_{FE}-I_C Temperature Characteristics (Typical)



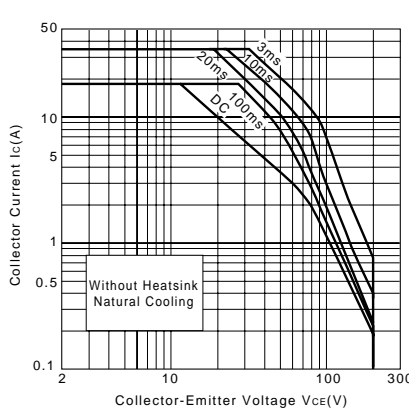
θ_{J-a}-t Characteristics



f_T-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_C-T_a Derating

