

2SA1909

Silicon PNP Epitaxial Planar Transistor (Complement to type 2SC5101)

Application : Audio and General Purpose

■ Absolute maximum ratings (Ta=25°C)

| Symbol | Ratings | Unit |
|------------------|--------------------------|------|
| V _{CB0} | -140 | V |
| V _{CE0} | -140 | V |
| V _{EB0} | -6 | V |
| I _C | -10 | A |
| I _B | -4 | A |
| P _C | 80(T _C =25°C) | W |
| T _J | 150 | °C |
| T _{stg} | -55 to +150 | °C |

■ Electrical Characteristics (Ta=25°C)

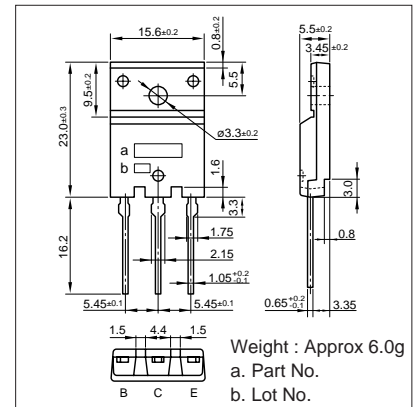
| Symbol | Conditions | Ratings | Unit |
|----------------------|---|---------|------|
| I _{CB0} | V _{CB} =-140V | -10max | μA |
| I _{EB0} | V _{EB} =-6V | -10max | μA |
| V _{(BR)CEO} | I _C =-50mA | -140min | V |
| h _{FE} | V _{CE} =-4V, I _C =-3A | 50min* | |
| V _{CE(sat)} | I _C =-5A, I _B =-0.5A | -0.5max | V |
| f _T | V _{CE} =-12V, I _E =0.5A | 20typ | MHz |
| COB | V _{CB} =-10V, f=1MHz | 400typ | pF |

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

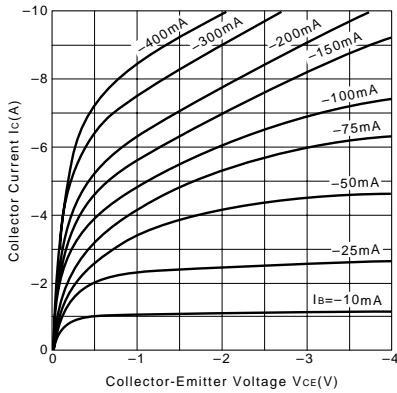
■ Typical Switching Characteristics (Common Emitter)

| 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) |
|---------------------|--------------------|--------------------|----------------------|----------------------|---------------------|---------------------|----------------------|-----------------------|---------------------|
| -60 | 12 | -5 | -10 | 5 | -0.5 | 0.5 | 0.17typ | 1.86typ | 0.27typ |

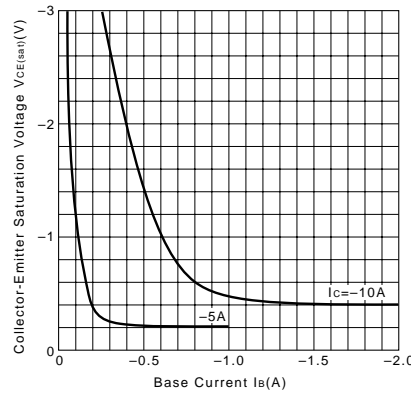
External Dimensions FM100(TO3PF)



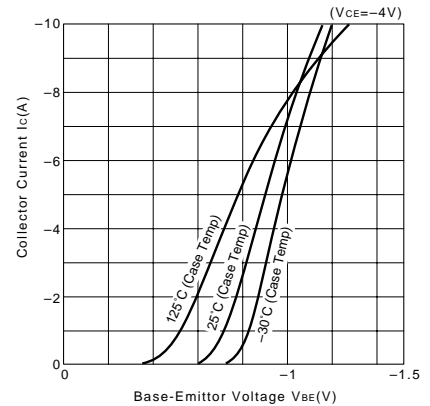
I_C-V_{CE} Characteristics (Typical)



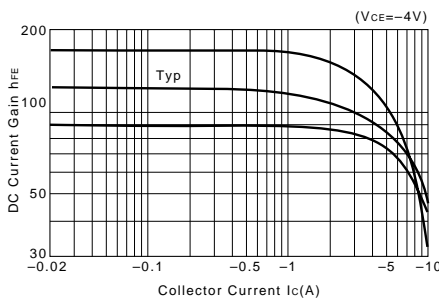
V_{CE(sat)}-I_B Characteristics (Typical)



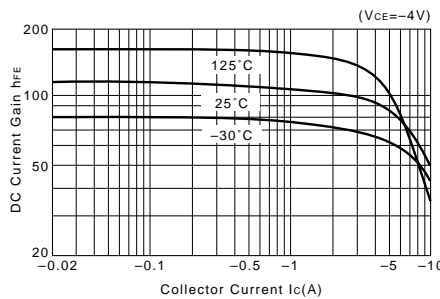
I_C-V_{BE} Temperature Characteristics (Typical)



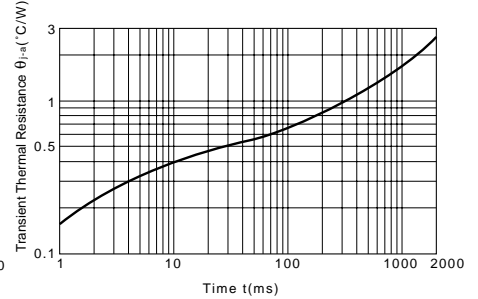
h_{FE}-I_C Characteristics (Typical)



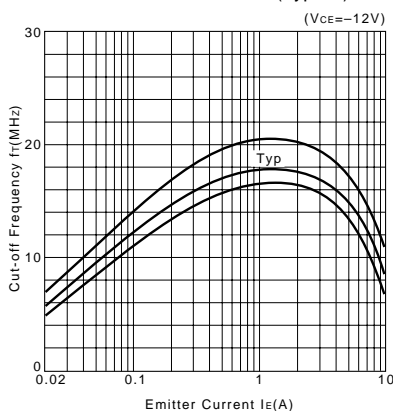
h_{FE}-I_C Temperature Characteristics (Typical)



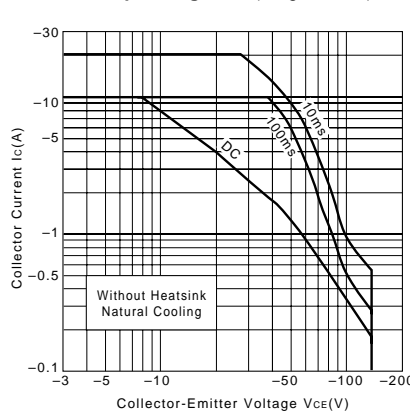
θ_{j-a}-t Characteristics



f_T-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_C-T_a Derating

