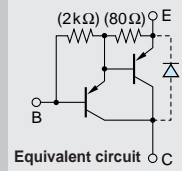


Darlington

2SB1420



Silicon PNP Epitaxial Planar Transistor

Application : Chopper Regulator, DC Motor Driver and General Purpose

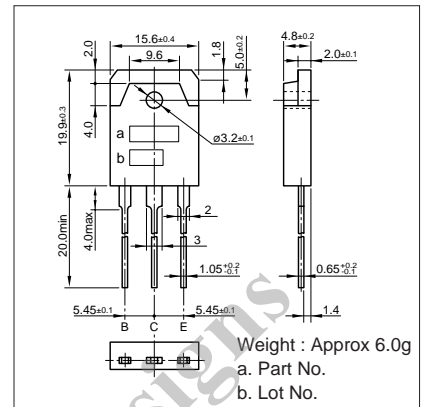
■Absolute maximum ratings (Ta=25°C)

| Symbol | Ratings | Unit |
|------------------|--------------------------|------|
| V _{CB0} | -120 | V |
| V _{CEO} | -120 | V |
| V _{EBO} | -6 | V |
| I _C | -16(Pulse-26) | A |
| I _B | -1 | 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} =-120V | -10max | μA |
| I _{EBO} | V _{EB} =-6V | -10max | mA |
| V(BR) _{CEO} | I _C =-10mA | -120min | V |
| h _{FE} | V _{CE} =-4V, I _C =-8A | 2000min | |
| V _{CE(sat)} | I _C =-8A, I _B =-16mA | -1.5max | V |
| V _{BE(sat)} | I _C =-8A, I _B =-16mA | -2.5max | V |
| f _r | V _{CE} =-12V, I _E =1A | 50typ | MHz |
| COB | V _{CB} =-10V, f=1MHz | 350typ | pF |

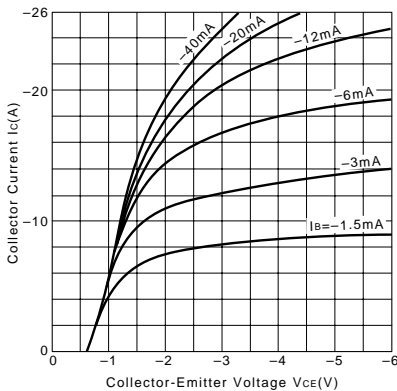
External Dimensions MT-100(TO3P)



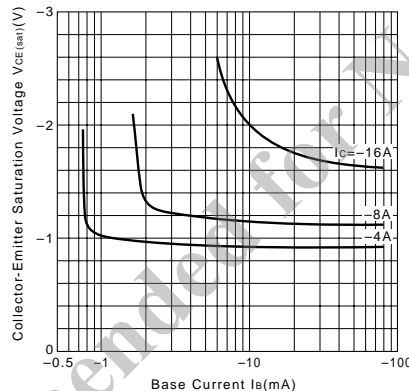
■Typical Switching Characteristics (Common Emitter)

| 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 | 2 | -12 | -10 | 5 | -24 | 24 | 1.0typ | 3.0typ | 1.0typ |

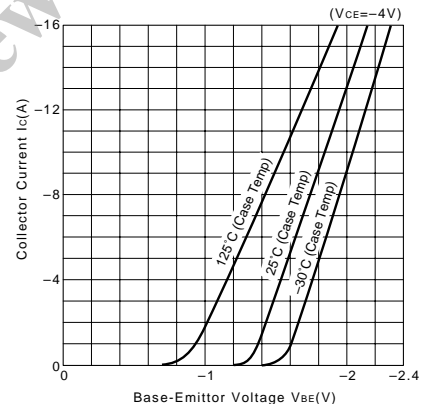
I_C-V_{CE} Characteristics (Typical)



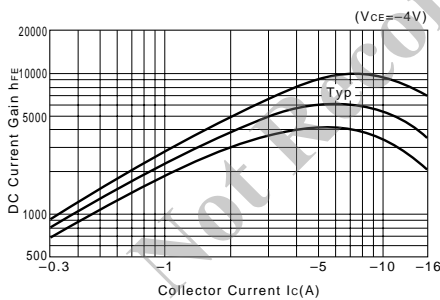
V_{CE(sat)}-I_B Characteristics (Typical)



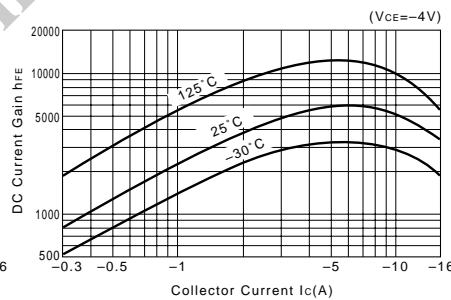
I_C-V_{BE} Temperature Characteristics (Typical)



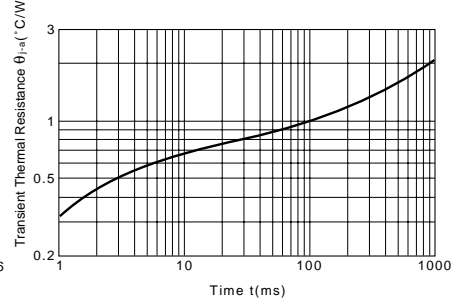
h_{FE}-I_C Characteristics (Typical)



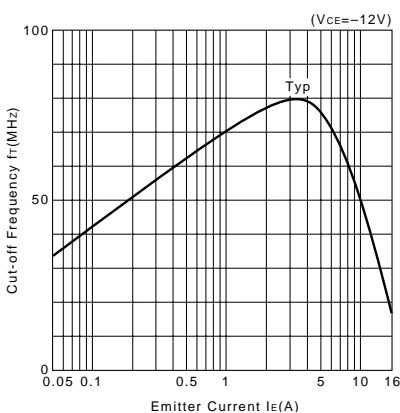
h_{FE}-I_C Temperature Characteristics (Typical)



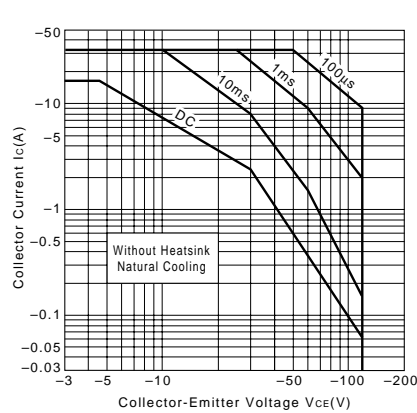
θ_{j-a}-t Characteristics



f_r-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)



P_C-T_a Derating

