



**THE DATASHEET OF
2SC4382**



2SC4381/4382

Silicon NPN Triple Diffused Planar Transistor (Complement to type 2SA1667/1668) Application : TV Vertical Output, Audio Output Driver and General Purpose

Absolute maximum ratings (Ta=25°C)

| Symbol | Ratings | | Unit |
|------------------|--------------------------|---------|------|
| | 2SC4381 | 2SC4382 | |
| V _{CB0} | 150 | 200 | V |
| V _{CE0} | 150 | 200 | V |
| V _{EBO} | 6 | | V |
| I _C | 2 | | A |
| I _B | 1 | | A |
| P _C | 25(T _C =25°C) | | W |
| T _J | 150 | | °C |
| T _{stg} | -55 to +150 | | °C |

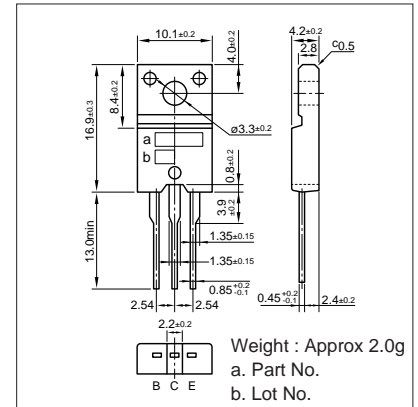
Electrical Characteristics (Ta=25°C)

| Symbol | Conditions | Ratings | | Unit |
|----------------------|---|---------|---------|------|
| | | 2SC4381 | 2SC4382 | |
| I _{CB0} | V _{CB} = | 150 | 200 | μA |
| I _{EBO} | V _{EB} =6V | 10max | | μA |
| V _{(BR)CEO} | I _C =25mA | 150min | 200min | V |
| h _{FE} | V _{CE} =10V, I _C =0.7A | 60min | | |
| V _{CE(sat)} | I _C =0.7A, I _B =0.07A | 1.0max | | V |
| f _T | V _{CE} =12V, I _E =-0.2A | 15typ | | MHz |
| COB | V _{CB} =10V, f=1MHz | 35typ | | pF |

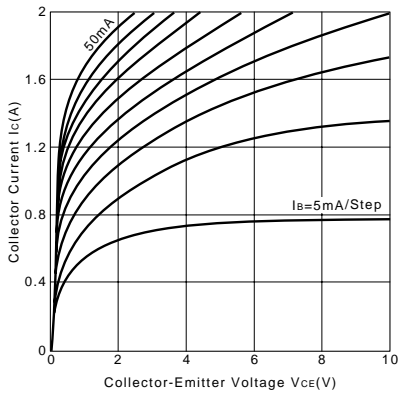
Typical Switching Characteristics (Common Emitter)

| 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 | 1.0typ | 3.0typ | 1.5typ |

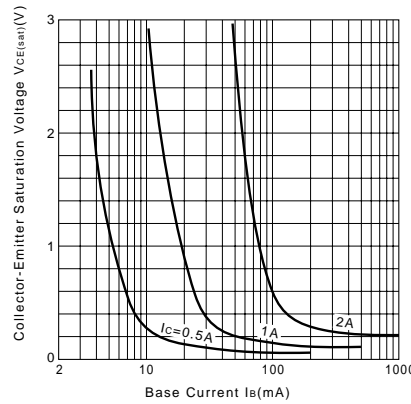
External Dimensions FM20(TO220F)



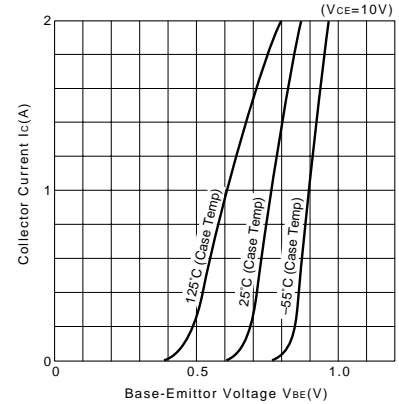
I_C-V_{CE} Characteristics (Typical)



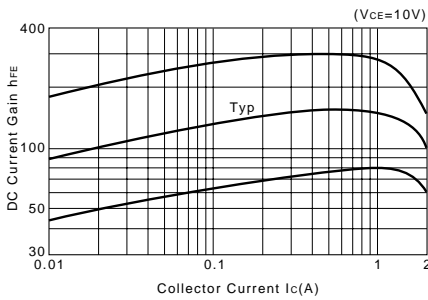
V_{CE(sat)}-I_B Characteristics (Typical)



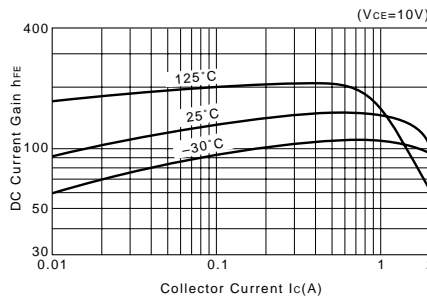
I_C-V_{BE} Temperature Characteristics (Typical)



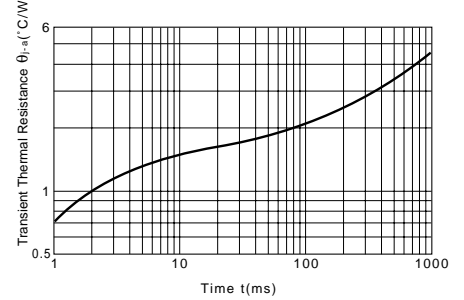
h_{FE}-I_C Characteristics (Typical)



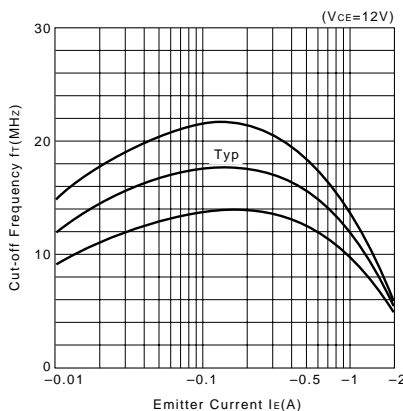
h_{FE}-I_C Temperature Characteristics (Typical)



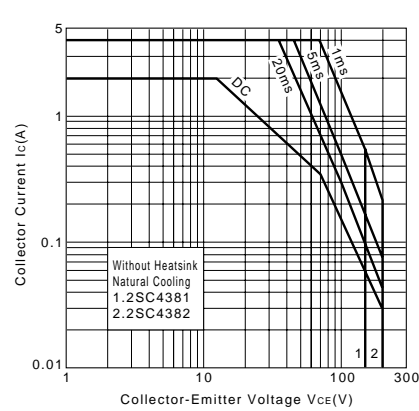
θ_{j-a}-t Characteristics



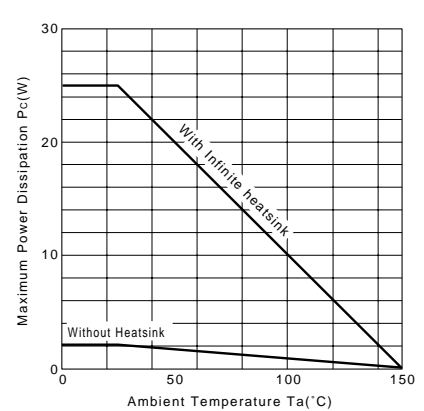
f_T-I_E Characteristics (Typical)



Safe Operating Area (Single Pulse)





P_C-T_a Derating









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