

2SC4153

Silicon NPN Triple Diffused Planar Transistor (Switching Transistor)

Application : Humidifier, DC-DC Converter, and General Purpose

Absolute maximum ratings (Ta=25°C)

| Symbol | 2SC4153 | Unit |
|--------|-------------|------|
| Vcbo | 200 | V |
| Vceo | 120 | V |
| Vebo | 8 | V |
| Ic | 7(Pulse 14) | A |
| Ib | 3 | A |
| Pc | 30(Tc=25°C) | W |
| Tj | 150 | °C |
| Tstg | -55 to +150 | °C |

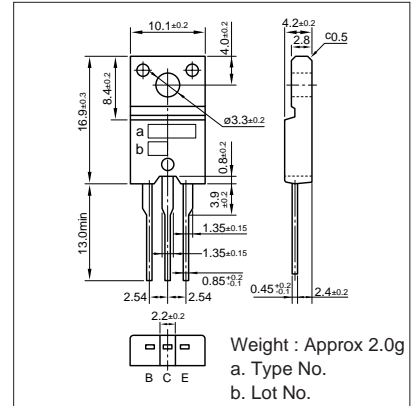
Electrical Characteristics (Ta=25°C)

| Symbol | Conditions | 2SC4153 | Unit |
|----------|-------------------|-----------|------|
| Icbo | Vcb=200V | 100max | μA |
| Iebo | VEB=8V | 100max | μA |
| V(BR)CEO | Ic=50mA | 120min | V |
| hFE | VCE=4V, Ic=3A | 70 to 220 | |
| VCE(sat) | Ic=3A, Ib=0.3A | 0.5max | V |
| VBE(sat) | Ic=3A, Ib=0.3A | 1.2max | V |
| fT | VCE=12V, IE=-0.5A | 30typ | MHz |
| COB | Vcb=10V, f=1MHz | 110typ | pF |

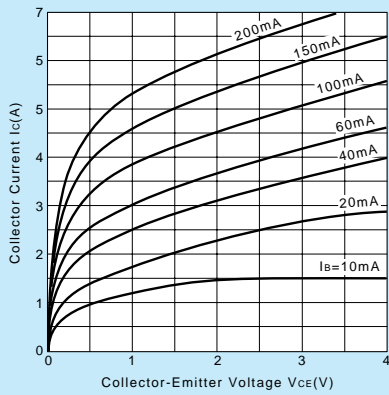
Typical Switching Characteristics (Common Emitter)

| VCC (V) | RL (Ω) | Ic (A) | VBB1 (V) | VBB2 (V) | Ib1 (A) | Ib2 (A) | ton (μs) | tstg (μs) | tf (μs) |
|---------|--------|--------|----------|----------|---------|---------|----------|-----------|---------|
| 50 | 16.7 | 3 | 10 | -5 | 0.3 | -0.6 | 0.5max | 3max | 0.5max |

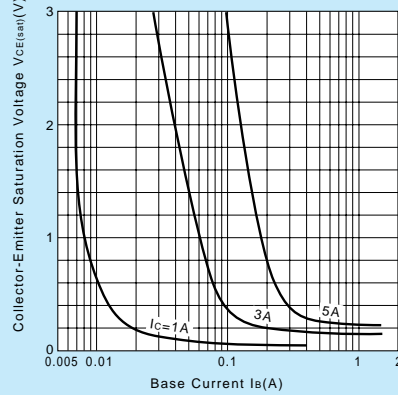
External Dimensions FM20(TO220F)



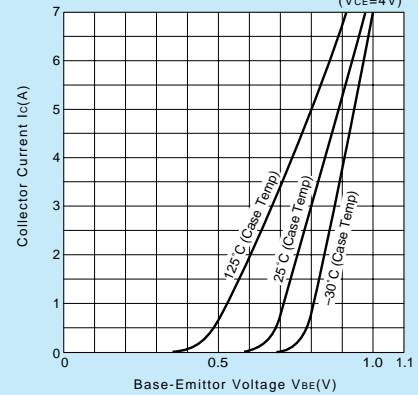
Ic-VCE Characteristics (Typical)



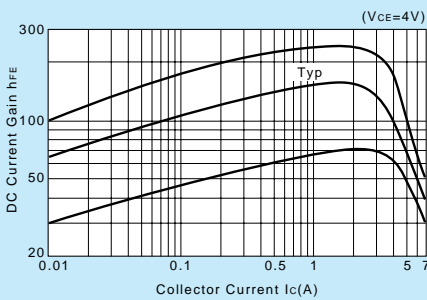
VCE(sat)-Ib Characteristics (Typical)



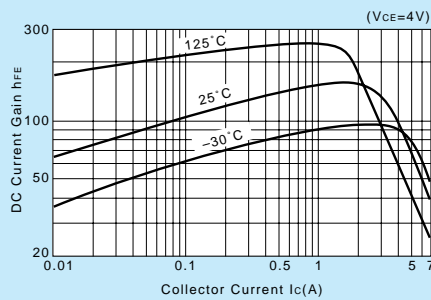
Ic-VBE Temperature Characteristics (Typical)



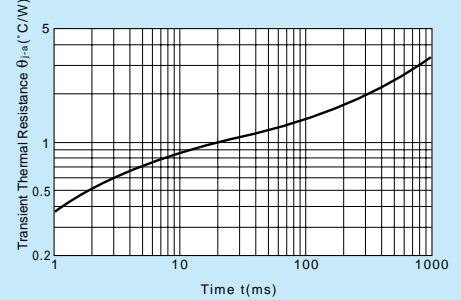
hFE-Ic Characteristics (Typical)



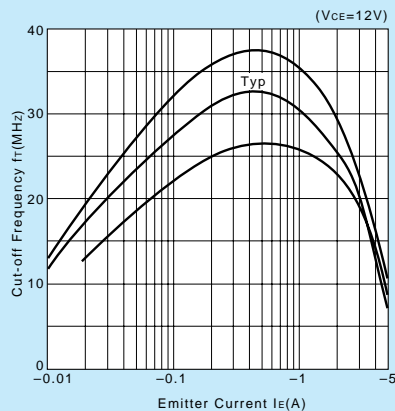
hFE-Ic Temperature Characteristics (Typical)



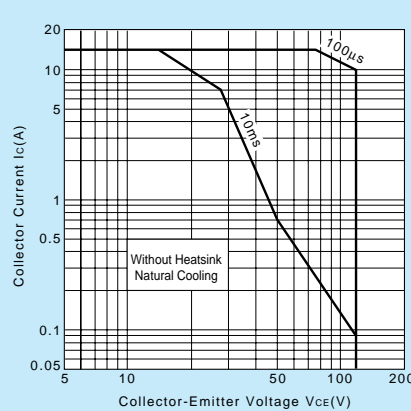
θj-a-t Characteristics



fT-IE Characteristics (Typical)



Safe Operating Area (Single Pulse)



Pc-Ta Derating

