

Absolute maximum ratings

($T_a=25^\circ\text{C}$)

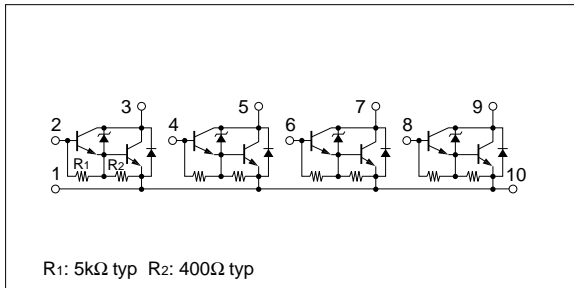
| Symbol | Ratings | Unit |
|-----------|-------------------------------|------------------|
| V_{CB0} | 100±15 | V |
| V_{CE0} | 100±15 | V |
| V_{EB0} | 6 | V |
| I_c | 1 | A |
| I_{cP} | 2.5 (PW≤1ms, $D_u\leq 25\%$) | A |
| I_B | 0.5 | A |
| P_T | 4 ($T_a=25^\circ\text{C}$) | W |
| | 16 ($T_c=25^\circ\text{C}$) | |
| T_j | 150 | $^\circ\text{C}$ |
| T_{stg} | -40 to +150 | $^\circ\text{C}$ |

Electrical characteristics

($T_a=25^\circ\text{C}$)

| symbol | Specification | | | Unit | Conditions |
|---------------|---------------|------|-------|---------------|--|
| | min | typ | max | | |
| I_{CB0} | | | 10 | μA | $V_{CB}=85\text{V}$ |
| I_{EB0} | | | 3 | mA | $V_{EB}=6\text{V}$ |
| V_{CE0} | 85 | 100 | 115 | V | $I_c=1\text{mA}$ |
| h_{FE} | 2000 | 5000 | 10000 | | $V_{CE}=4\text{V}$, $I_c=0.5\text{A}$ |
| $V_{CE(sat)}$ | | 1.0 | 1.5 | V | $I_c=0.5\text{A}$, $I_B=1\text{mA}$ |
| $V_{BE(sat)}$ | | 1.6 | 2.2 | V | |
| V_{FEC} | | 1.4 | 1.8 | V | $I_{FEC}=0.5\text{A}$ |
| t_{on} | | 0.5 | | μs | $V_{CC}\doteq 30\text{V}$, |
| t_{stg} | | 2.5 | | μs | $I_c=0.5\text{A}$, |
| t_f | | 1.0 | | μs | $I_{B1}=-I_{B2}=1\text{mA}$ |
| f_T | | 50 | | MHz | $V_{CE}=12\text{V}$, $I_E=-0.1\text{A}$ |
| C_{ob} | | 14 | | pF | $V_{CE}=10\text{V}$, $f=1\text{MHz}$ |

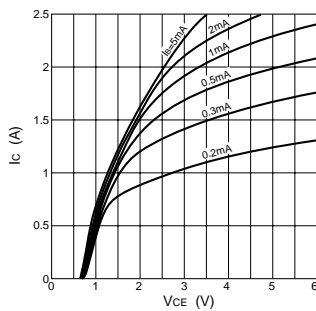
Equivalent circuit diagram



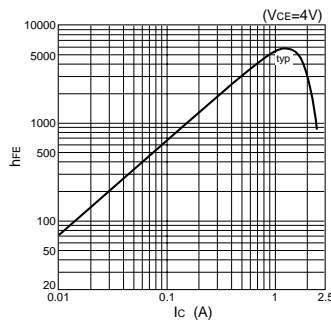
R1: 5kΩ typ R2: 400Ω typ

Characteristic curves

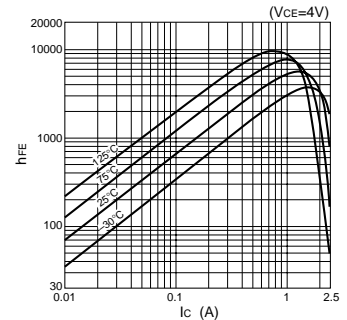
I_c - V_{CE} Characteristics (Typical)



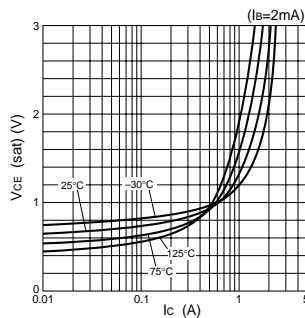
h_{FE} - I_c Characteristics (Typical)



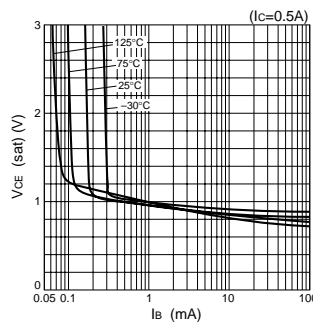
h_{FE} - I_c Temperature Characteristics (Typical)



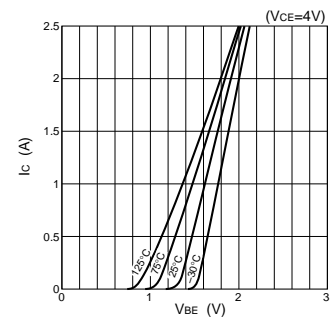
$V_{CE(sat)}$ - I_c Temperature Characteristics (Typical)



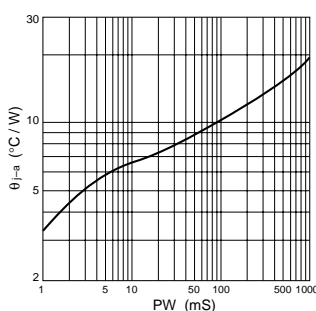
$V_{CE(sat)}$ - I_B Temperature Characteristics (Typical)



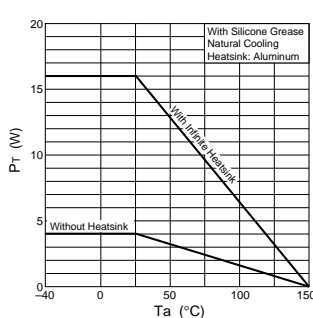
I_c - V_{BE} Temperature Characteristics (Typical)



θ_{j-a} -PW Characteristics



P_T - T_a Characteristics



Safe Operating Area (SOA)

