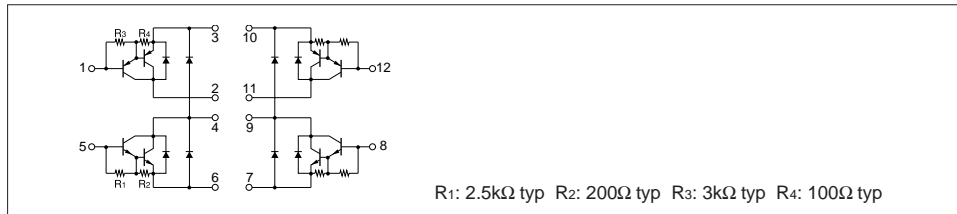


Absolute maximum ratings

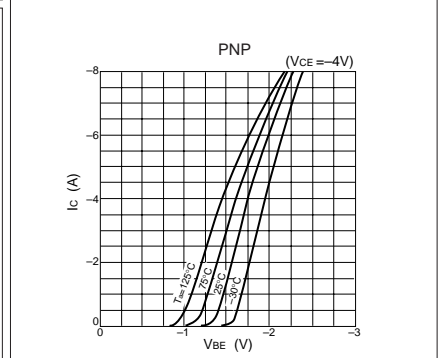
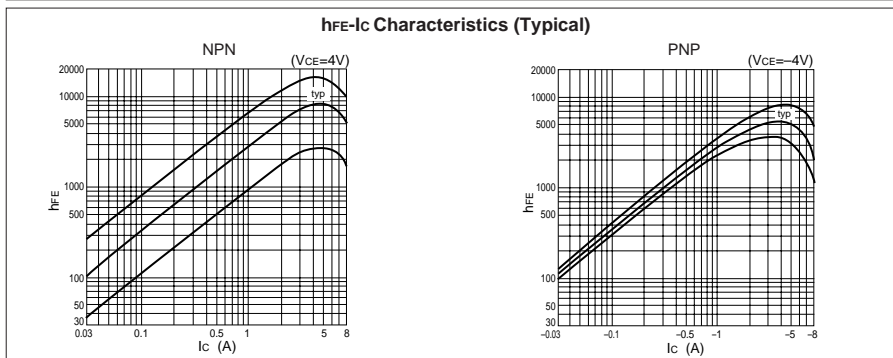
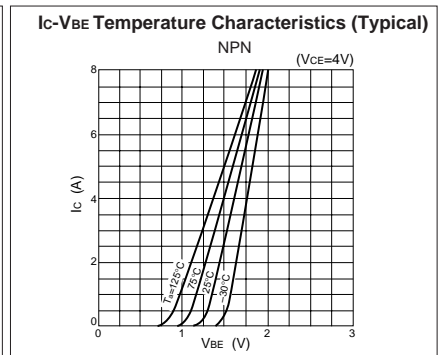
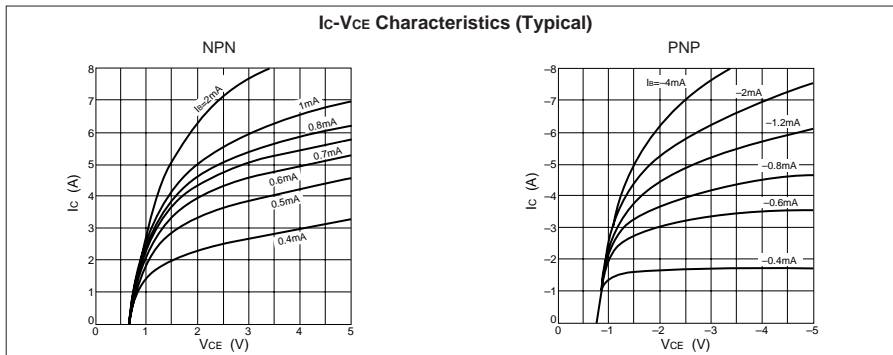
($T_a=25^\circ\text{C}$)

| Symbol | Specification | | Unit |
|----------------|---|--|--------------------|
| | NPN | PNP | |
| V_{CBO} | 100 | -100 | V |
| V_{CEO} | 100 | -100 | V |
| V_{EBO} | 6 | -6 | V |
| I_c | 5 | -5 | A |
| I_{CP} | 8 ($PW \leq 1\text{ms}, D_u \leq 50\%$) | -8 ($PW \leq 1\text{ms}, D_u \leq 50\%$) | A |
| I_B | 0.5 | -0.5 | A |
| I_F | 5 ($PW \leq 0.5\text{ms}, D_u \leq 25\%$) | | A |
| I_{FSM} | 8 ($PW \leq 10\text{ms}, \text{single}$) | | A |
| V_R | 120 | | V |
| P_T | 5 ($T_a=25^\circ\text{C}$) | | W |
| | 25 ($T_c=25^\circ\text{C}$) | | |
| V_{ISO} | 1000 (Between fin and lead pin, AC) | | V_{rms} |
| T_j | 150 | | $^\circ\text{C}$ |
| T_{stg} | -40 to +150 | | $^\circ\text{C}$ |
| θ_{j-c} | 5 | | $^\circ\text{C/W}$ |

Equivalent circuit diagram



Characteristic curves



Electrical characteristics

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

| Symbol | NPN | | | | | PNP | | | | |
|---------------|---------------|-----|-----|---------------|-----------------------------------|---------------|-----|------|---------------|-------------------------------------|
| | Specification | | | Unit | Conditions | Specification | | | Unit | Conditions |
| | min | typ | max | | | min | typ | max | | |
| I_{CBO} | | | 10 | μA | $V_{CB}=100\text{V}$ | | | -10 | μA | $V_{CB}=-100\text{V}$ |
| I_{EBO} | | | 10 | mA | $V_{EB}=6\text{V}$ | | | -10 | mA | $V_{EB}=-6\text{V}$ |
| V_{CEO} | 100 | | | V | $I_C=10\text{mA}$ | -100 | | | V | $I_C=-10\text{mA}$ |
| h_{FE} | 1000 | | | | $V_{CE}=4\text{V}, I_C=3\text{A}$ | 1000 | | | | $V_{CE}=-4\text{V}, I_C=-3\text{A}$ |
| $V_{CE(sat)}$ | | | 1.5 | V | $I_C=3\text{A}, I_B=6\text{mA}$ | | | -1.5 | V | $I_C=-3\text{A}, I_B=-6\text{mA}$ |

Diode for flyback voltage absorption

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

| Symbol | Specification | | | Unit | Conditions |
|--------|---------------|-----|-----|---------------|---------------------|
| | min | typ | max | | |
| V_R | 120 | | | V | $I_R=10\mu\text{A}$ |
| V_F | | | 1.2 | V | $I_F=1\text{A}$ |
| I_R | | | 10 | μA | $V_R=100\text{V}$ |

Characteristic curves

