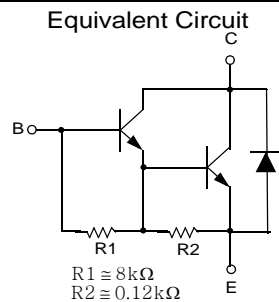
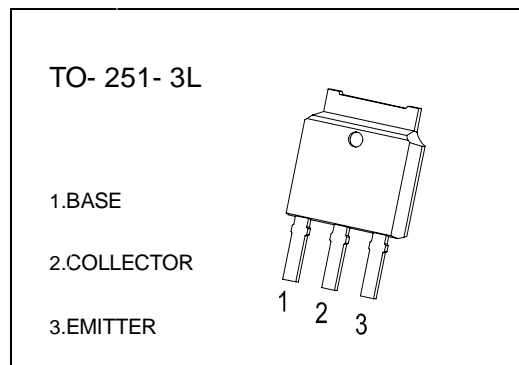


MJD122I NPN Silicon Darlington Transistor

FEATURES

- High DC Current Gain
- Electrically Similar to Popular TIP122
- Built-in a Damper Diode at E- C

We declare that the material of product compliance with RoHS requirements.



MAXIMUM RATINGS ($T_a=25^\circ\text{C}$ unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|----------------|----------------------------------|---------|------------------|
| V_{CB0} | Collector- Base Voltage | 100 | V |
| V_{CE0} | Collector- Emitter Voltage | 100 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_c | Collector Current - Continuous | 8 | A |
| P_c | Collector Dissipation | 1.5 | W |
| T_J, T_{stg} | Junction and Storage Temperature | -55-150 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|----------------|---|------|-----|-------|---------------|
| Collector-base breakdown voltage | $V_{(BR)CB0}$ | $I_c=1\text{mA}, I_E=0$ | 100 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CE0}$ | $I_c=30\text{mA}, I_B=0$ | 100 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=3\text{mA}, I_C=0$ | 5 | | | V |
| Collector cut-off current | I_{CB0} | $V_{CB}=100\text{V}, I_E=0$ | | | 10 | μA |
| Collector-emitter cut-off current | I_{CE0} | $V_{CE}=50\text{V}, I_E=0$ | | | 10 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=5\text{V}, I_C=0$ | | | 2 | mA |
| DC current gain | $h_{FE(2)}$ | $V_{CE}=4\text{V}, I_C=4\text{A}$ | 1000 | | 12000 | |
| | $h_{FE(3)}$ | $V_{CE}=4\text{V}, I_C=8\text{A}$ | 100 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)1}$ | $I_C=4\text{A}, I_B=16\text{mA}$ | | | 2 | V |
| | $V_{CE(sat)2}$ | $I_C=8\text{A}, I_B=80\text{mA}$ | | | 4 | V |
| Base-emitter saturation voltage | $V_{BE(sat)}$ | $I_C=8\text{A}, I_B=80\text{mA}$ | | | 4.5 | V |
| Base-emitter voltage* | V_{BE} | $V_{CE}=4\text{V}, I_C=4\text{A}$ | | | 2.8 | V |
| Collector output capacitance | C_{ob} | $V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ | | | 200 | pF |

Typical Characteristics

