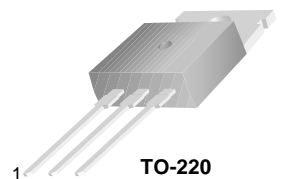


D45C11

PNP Current Driver Transistor

Features

- This device is designed for power amplifier, regulator and switching circuits where speed is important.
- Sourced from Process 5P.
- NZT751 for characteristics.



TO-220
1. Base 2. Collector 3. Emitter

Absolute Maximum Ratings* $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|----------------|--|-------------|------------------|
| V_{CEO} | Collector-Emitter Voltage | -80 | V |
| I_C | Collector Current - Continuous | -4.0 | A |
| T_J, T_{STG} | Operating and Storage Junction Temperature Range | -55 to +150 | $^\circ\text{C}$ |

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:

- 1) These ratings are based on a maximum junction temperature of 150 degrees C.
- 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Max. | Units |
|-----------------|---|-----------|---------------------------------|
| P_D | Total Device Dissipation Derate above 25°C | 60 480 | W $\text{mW}/^\circ\text{C}$ |
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case | 2.1 | $^\circ\text{C}/\text{W}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient | 62.5 | $^\circ\text{C}/\text{W}$ |







Electrical Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Test Condition | Min. | Max. | Units |
|-------------------------------------|--------------------------------------|--|----------|------|---------------|
| Off Characteristics | | | | | |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C = -100\text{mA}, I_B = 0$ | -80 | | V |
| I_{CES} | Collector-Cutoff Current | $V_{CE} = -90\text{V}, I_E = 0$ | | -10 | μA |
| I_{EBO} | Emitter-Cutoff Current | $V_{EB} = -5.0\text{V}, I_B = 0$ | | -100 | μA |
| On Characteristics | | | | | |
| h_{FE} | DC Current Gain | $V_{CE} = -1.0\text{V}, I_C = -0.2\text{A}$ $V_{CE} = -1.0\text{V}, I_C = -1.0\text{A}$ | 40 20 | 120 | |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -1.0\text{A}, I_B = -50\text{mA}$ | | -0.5 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C = -1.0\text{A}, I_B = -100\text{mA}$ | | -1.3 | V |
| Small Signal Characteristics | | | | | |
| C_{ob} | Output Capacitance | $V_{CB} = -10\text{V}, f = 1.0\text{MHz}$ | | 125 | pF |
| f_T | Current Gain - Bandwidth Product | $I_C = -20\text{mA}, V_{CE} = -4.0\text{V}$ | 32 | | MHz |



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|--------------------------|-----------------------|---|
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