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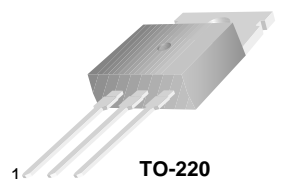
January 2010

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.



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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