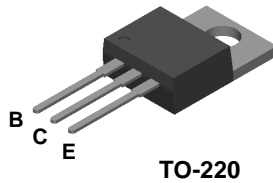
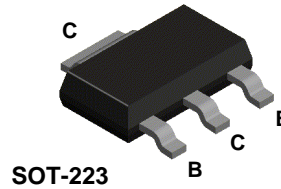


D45C11



NZT45C11



PNP Current Driver Transistor

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

Absolute Maximum Ratings* TA = 25°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	°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 TA = 25°C unless otherwise noted

Symbol	Characteristic	Max		Units
		D45C11	*NZT45C11	
P _D	Total Device Dissipation Derate above 25°C	60	1.2	W
		480	9.7	mW/°C
R _{θJC}	Thermal Resistance, Junction to Case	2.1		°C/W
R _{θJA}	Thermal Resistance, Junction to Ambient	62.5	103	°C/W

*Device mounted on FR-4 PCB 36 mm X 18 mm X 1.5 mm; mounting pad for the collector lead min. 6 cm².

PNP Current Driver
(continued)

D45C11 / NZT45C11

Electrical Characteristics

TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 100 \text{ mA}, I_B = 0$	60		V
I_{CES}	Collector-Cutoff Current	$V_{CB} = 90 \text{ V}, I_E = 0$		10	μA
I_{EBO}	Emitter-Cutoff Current	$V_{EB} = 5.0 \text{ V}, I_C = 0$		100	μA
ON CHARACTERISTICS					
h_{FE}	DC Current Gain	$I_C = 0.2 \text{ A}, V_{CE} = 1.0 \text{ V}$ $I_C = 1.0 \text{ A}, V_{CE} = 1.0 \text{ V}$	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 On Voltage	$I_C = 1.0 \text{ A}, I_B = 100 \text{ mA}$		1.3	V
SMALL SIGNAL CHARACTERISTICS					
f_T	Current Gain - Bandwidth Product	$I_C = 20 \text{ mA}, V_{CE} = 4.0 \text{ V}$	32		MHz

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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