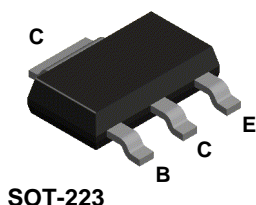


BCP53



PNP General Purpose Amplifier

This device is designed for general purpose medium power amplifiers and switching circuits requiring collector currents to 1.0 A. Sourced from Process 78. See BCP52 for characteristics.

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V _{CEO}	Collector-Emitter Voltage	80	V
V _{CB0}	Collector-Base Voltage	100	V
V _{EBO}	Emitter-Base Voltage	5.0	V
I _C	Collector Current - Continuous	1.2	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
		BCP53	
P _D	Total Device Dissipation	1.5	W
	Derate above 25°C	12	mW/°C
R _{θJA}	Thermal Resistance, Junction to Ambient	83.3	°C/W

PNP General Purpose Amplifier

(continued)

BCP53

Electrical Characteristics

TA = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
OFF CHARACTERISTICS					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 10 \text{ mA}, I_B = 0$	80		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	$I_C = 100 \text{ } \mu\text{A}, I_E = 0$	100		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	$I_E = 10 \text{ } \mu\text{A}, I_C = 0$	5.0		V
I_{CBO}	Collector-Cutoff Current	$V_{CB} = 30 \text{ V}, I_E = 0$ $V_{CB} = 30 \text{ V}, I_E = 0, T_A = 125^\circ\text{C}$		100 10	nA μA
I_{EBO}	Emitter-Cutoff Current	$V_{EB} = 5.0 \text{ V}, I_C = 0$		10	μA
ON CHARACTERISTICS					
h_{FE}	DC Current Gain	$I_C = 5.0 \text{ mA}, V_{CE} = 2.0 \text{ V}$ $I_C = 150 \text{ mA}, V_{CE} = 2.0 \text{ V}$ $I_C = 500 \text{ mA}, V_{CE} = 2.0 \text{ V}$	25 40 25	250	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$		0.5	V
$V_{BE(on)}$	Base-Emitter On Voltage	$I_C = 500 \text{ mA}, V_{CE} = 2.0 \text{ V}$		1.0	V

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FACT Quiet Series™	QS™	
FAST®	Quiet Series™	
FASTr™	SuperSOT™-3	
GTO™	SuperSOT™-6	

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PRODUCT STATUS DEFINITIONS

Definition of Terms

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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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