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FAIRCHILD
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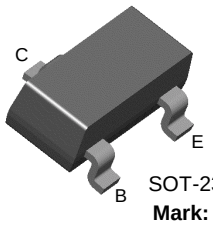
BSS79C

NPN General Purpose Amplifier

- This device is for use as a medium power amplifier and swith requiring collector currents up to 500mA.
- Sourced from process 19.
- See BCW65C for characteristics.



SOT-23
Mark: CF

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

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	40	V
V_{CBO}	Collector-Base Voltage	75	V
V_{EBO}	Emitter-Base Voltage	6.0	V
I_C	Collector Current - Continuous	800	mA
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 ~ +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.

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
Off Characteristics					
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C = 10mA, I_B = 0	75		V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C = 10µA, I_E = 0	40		V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E = 10µA, I_C = 0	6.0		V
I_{CBO}	Collector-Cutoff Current	V_{CB} = 60V V_{CB} = 60V, T_a = 150°C		10 10	nA µA
I_{EBO}	Emitter-Cutoff Current	V_{EB} = 3.0V, I_C = 0		10	nA
On Characteristics *					
h_{FE}	DC Current Gain	I_C = 150mA, V_{CE} = 10V	100	300	
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C = 150mA, I_B = 15mA I_C = 500mA, I_B = 50mA		0.3 1.0	V V
Small Signal Characteristics					
f_T	Current Gain - Bandwidth Product	I_C = 20mA, V_{CE} = 20V, f = 100MHz		250	MHz
C_{CB}	Collector-Base Capacitance	V_{CB} = 10V, I_E = 0, f = 1.0MHz		8.0	pF
Switching Characteristics					
t_d	Delay Time	V_{CC} = 30V, $V_{BE(OFF)}$ = 0.5V, I_C = 150mA, I_{B1} = 15mA		10	ns
t_r	Rise Time			10	ns
t_s	Storage Time	V_{CC} = 30V, I_C = 150mA, I_{B1} = I_{B2} = 15mA		265	ns
t_f	Fall Time			60	ns

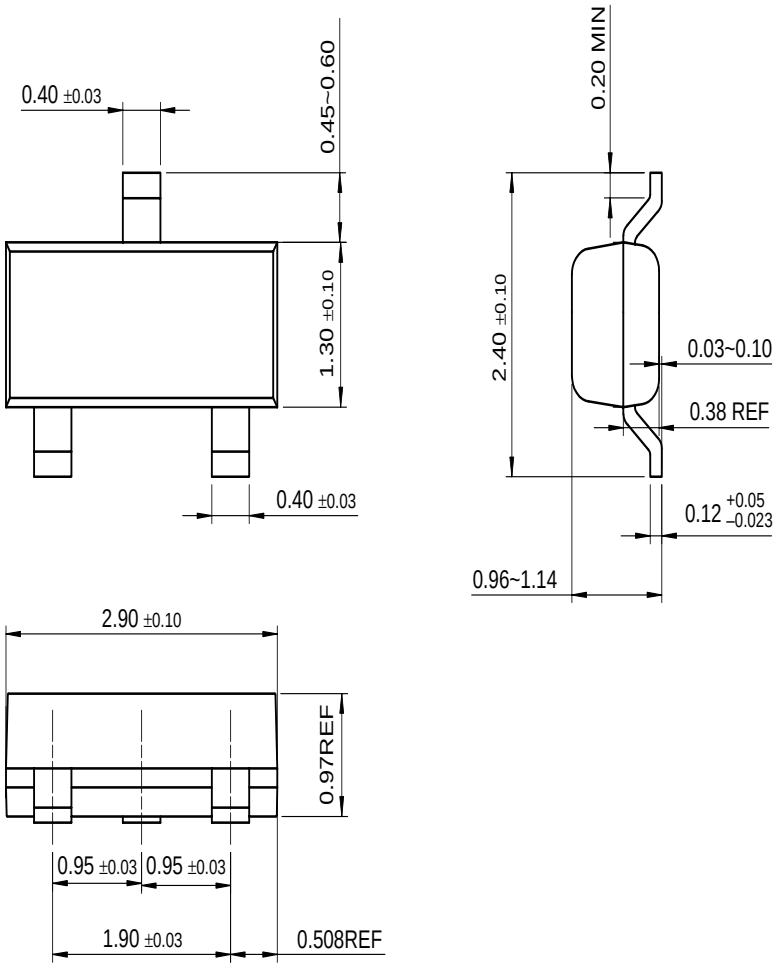
Thermal Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Max.	Units
P_D	Total Device Dissipation Derate above 25°C	350 2.8	mW mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

* Device mounted on FR-4 PCB 400mm × 40mm × 1.5mm

Package Dimensions

SOT-23



Dimensions in Millimeters

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Definition of Terms

Datasheet Identification	Product Status	Definition
Advance Information	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice.
Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.

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