Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

Fairchild Semiconductor
BC183C

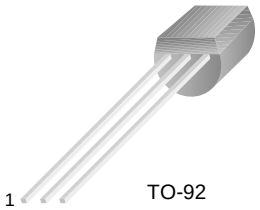
For any questions, you can email us directly:
sales@integrated-circuit.com

FAIRCHILD SEMICONDUCTOR®

June 2007

BC183C

NPN General Purpose Amplifer



1

TO-92

1. Collector 2. Base 3. Emitter

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	45	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current (DC)	100	mA
P_C	Collector Dissipation (T_a=25°C)	350	mW
T_{STG} , T_J	Storage Junction Temperature Range	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Conditions	Min.	Max	Units
BV_{CBO}	Collector-Base Voltage	I_C = 10μA	45		V
BV_{CEO}	Collector-Emitter Voltage	I_C = 2mA	30		V
BV_{EBO}	Emitter-Base Voltage	I_E = 100μA	6		V
I_{CBO}	Collector Cut-off Current	V_{CB} = 30V		15	nA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 4V		15	nA
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 10μA V_{CE} = 5V, I_C = 2.0mA V_{CE} = 5V, I_C = 100mA	40 120 80	800	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 10mA, I_B = 0.5mA I_C = 100mA, I_B = 5.0mA		0.25 0.6	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 100mA, I_B = 5mA		1.2	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE} = 5V, I_C = 2mA	0.55	0.7	V
C_{OB}	Output Capacitance	V_{CE} = 10V, f = 1.0MHz		5	pF
f_T	Current gain Bandwidth Product	V_{CE} = 5V, I_C = 10mA	150		MHz
h_{fe}	Small Signal Current Gain	V_{CE} = 5V, I_C = 2mA f = 1KHz	450	900	
NF	Noise Figure	V_{CE} = 5V, I_C = 200mA R_G = 2KΩ, f = 1KHz		10	dB

Typical Characteristics

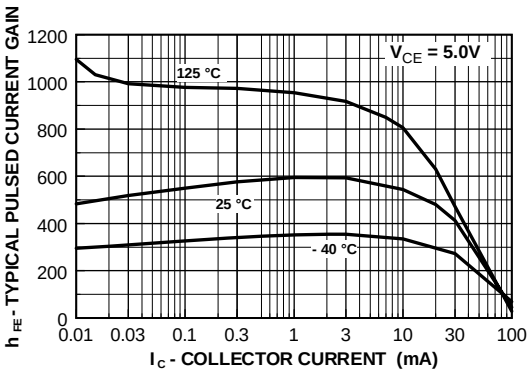


Figure 1. Typical Pulsed Current Gain vs Collector Current

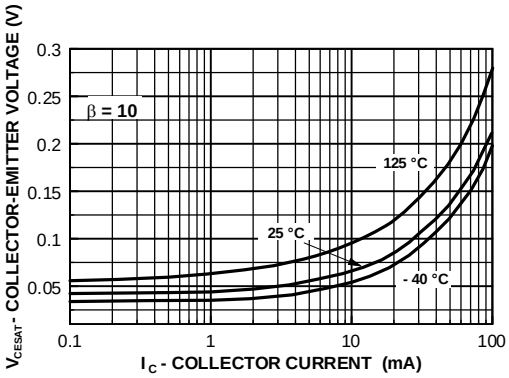


Figure 2. Collector-Emitter Saturation Voltage vs Collector Current

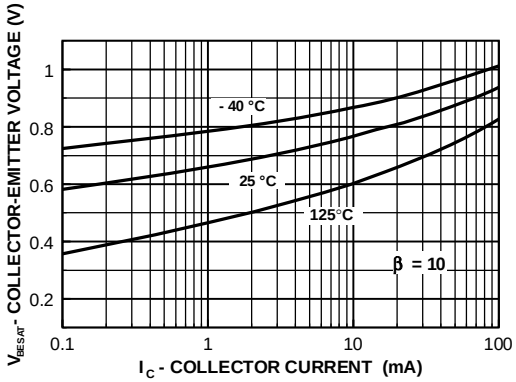


Figure 3. Base-Emitter Saturation Voltage vs Collector Curent

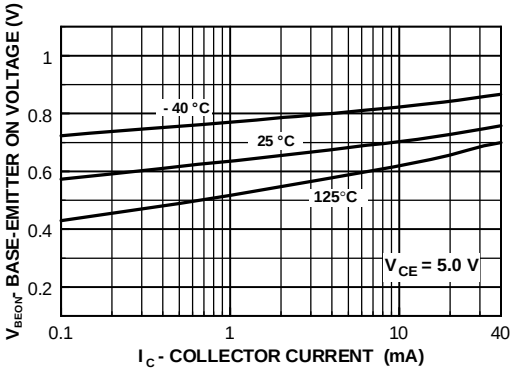


Figure 4. Base-Emitter ON Voltage vs Collector Current

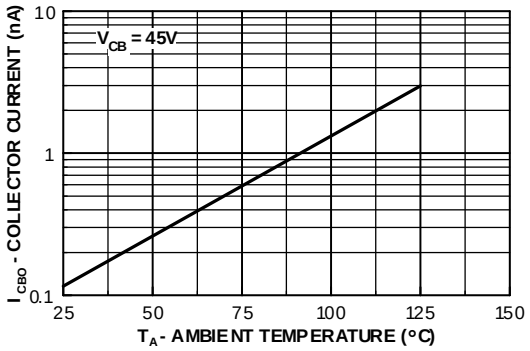


Figure 5. Collector-Cutoff Current vs Ambient Temperature

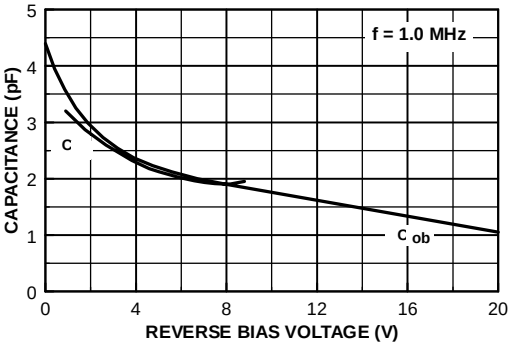


Figure 6. Input and Output Capacitance vs Reverse Bias Voltage

FAIRCHILD SEMICONDUCTOR®

FAIRCHILD SEMICONDUCTOR TRADEMARKS

The following are registered and unregistered trademarks Fairchild Semiconductor owns or is authorized to use and is not intended to be an exhaustive list of all such trademarks.

ACEx™
ActiveArray™
Bottomless™
Build it Now™
CoolFET™
CROSSVOLT™
DOME™
EcoSPARK™
E^{2}CMOS™
EnSigna™
FACT®
FAST®
FASTr™
FPS™
FRFET™
FACT Quiet Series™
GlobalOptoisolator™
GTO™
HiSeC™
I^{2}C™
i-Lo™
ImpliedDisconnect™
IntelliMAX™
ISOPLANAR™
LittleFET™
MICROCOUPLER™
MicroFET™
MicroPak™
MICROWIRE™
MSX™
MSXPro™
OCX™
OCXPro™
OPTOLOGIC®
OPTOPLANAR™
PACMAN™
POP™
Power247™
PowerEdge™
PowerSaver™
PowerTrench®
QFET®
QS™
QT Optoelectronics™
Quiet Series™
RapidConfigure™
RapidConnect™
µSerDes™
ScalarPump™
SILENT SWITCHER®
SMART START™
SPM™
Stealth™
SuperFET™
SuperSOT™-3
SuperSOT™-6
SuperSOT™-8
SyncFET™
TCM™
TinyBoost™
TinyBuck™
TinyPWM™
TinyPower™
TinyLogic®
TINYOPTO™
TruTranslation™
UHC®
UniFET™
VCX™
Wire™
Across the board. Around the world.™
The Power Franchise®
Programmable Active Droop™

DISCLAIMER

FAIRCHILD SEMICONDUCTOR RESERVES THE RIGHT TO MAKE CHANGES WITHOUT FURTHER NOTICE TO ANY PRODUCTS HEREIN TO IMPROVE RELIABILITY, FUNCTION OR DESIGN. FAIRCHILD DOES NOT ASSUME ANY LIABILITY ARISING OUT OF THE APPLICATION OR USE OF ANY PRODUCT OR CIRCUIT DESCRIBED HEREIN;NEITHER DOES IT CONVEY ANY LICENSE UNDER ITS PATENT RIGHTS, NOR THE RIGHTS OF OTHERS. THESE SPECIFICATIONS DO NOT EXPAND THE TERMS OF FAIRCHILD'S WORLDWIDE TERMS AND CONDITIONS, SPECIFICALLY THE WARRANTY THEREIN, WHICH COVERS THESE PRODUCTS.

LIFE SUPPORT POLICY

FAIRCHILD'S PRODUCTS ARE NOT AUTHORIZED FOR USE AS CRITICAL COMPONENTS IN LIFE SUPPORT DEVICES OR SYSTEMS WITHOUT THE EXPRESS WRITTEN APPROVAL OF FAIRCHILD SEMICONDUCTOR CORPORATION.

As used herein:
1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, or (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in significant injury to the user.

2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

PRODUCT STATUS DEFINITIONS

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.

Rev. I23