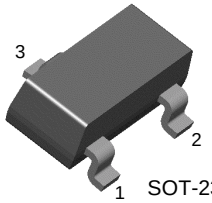
FAIRCHILD SEMICONDUCTOR®

BC807/BC808

Switching and Amplifier Applications

- Suitable for AF-Driver stages and low power output stages
- Complement to BC817/BC818



SOT-23

1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings T_a=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CES}	Collector-Emitter Voltage		
	: BC807	-50	V
	: BC808	-30	V
V_{CEO}	Collector-Emitter Voltage		
	: BC807	-45	V
	: BC808	-25	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current (DC)	-800	mA
P_C	Collector Power Dissipation	-310	mW
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-65 ~ 150	°C

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C= -10mA, I_B=0				
	: BC807		-45			V
	: BC808		-25			V
BV_{CES}	Collector-Emitter Breakdown Voltage	I_C= -0.1mA, V_{BE}=0				
	: BC807		-50			V
	: BC808		-30			V
BV_{EBO}	Emitter-Base Breakdown Voltage	I_E= -0.1mA, I_C=0	-5			V
I_{CES}	Collector Cut-off Current	V_{CE}= -25V, V_{BE}=0			-100	nA
I_{EBO}	Emitter Cut-off Current	V_{EB}= -4V, I_C=0			-100	nA
h_{FE1}	DC Current Gain	V_{CE}= -1V, I_C= -100mA	100		630	
h_{FE2}		V_{CE}= -1V, I_C= -300mA	60			
V_{CE} (sat)	Collector-Emitter Saturation Voltage	I_C= -500mA, I_B= -50mA			-0.7	V
V_{BE} (on)	Base-Emitter On Voltage	V_{CE}= -1V, I_C= -300mA			-1.2	V
f_T	Current Gain Bandwidth Product	V_{CE}= -5V, I_C= -10mA f=50MHz		100		MHz
C_{ob}	Output Capacitance	V_{CB}= -10V, f=1MHz			12	pF

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h_{FE} Classification

Classification	16	25	40
h_{FE1}	100 ~ 250	160 ~ 400	250 ~ 630
h_{FE2}	60-	100-	170-

Marking Code

Type	807-16	807-25	807-40	808-16	808-25	808-40
Marking	9FA	9FB	9FC	9GA	9GB	9GC

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Typical Characteristics

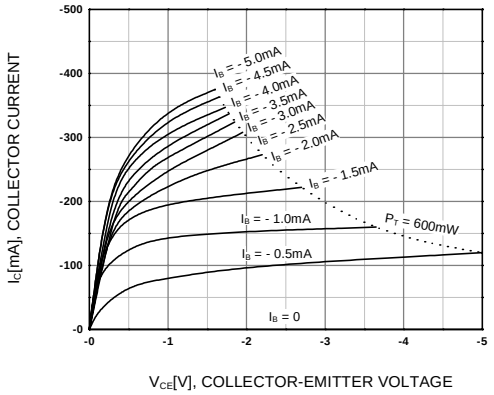

Figure 1. Static Characteristic

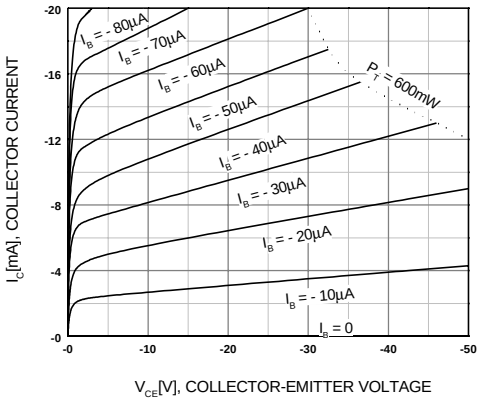

Figure 2. Static Characteristic

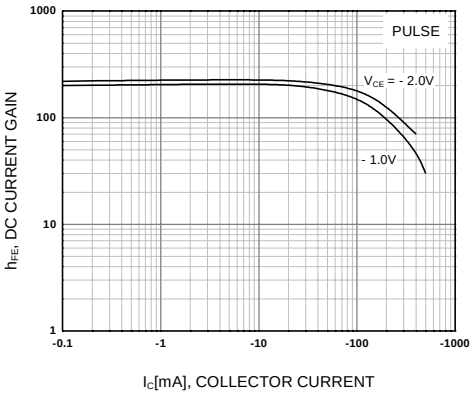

Figure 3. DC current Gain

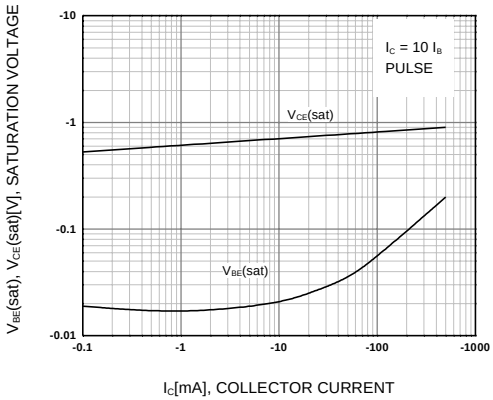

Figure 4. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

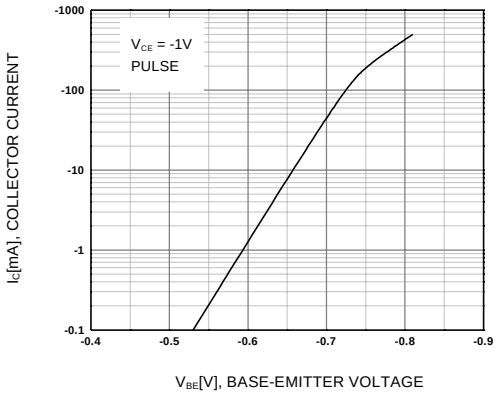

Figure 5. Base-Emitter On Voltage

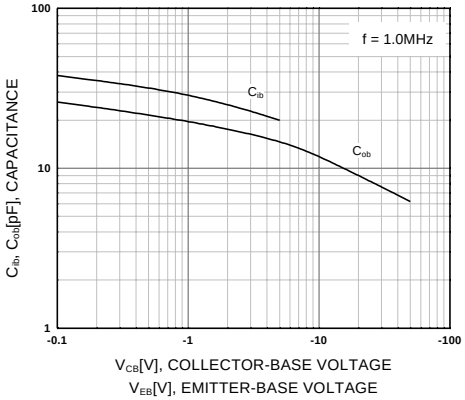

Figure 6. Input Output Capacitance

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Typical Characteristics (Continued)

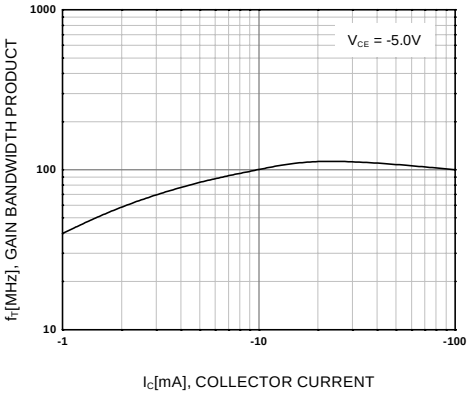

Figure 7. Current Gain Bandwidth Product

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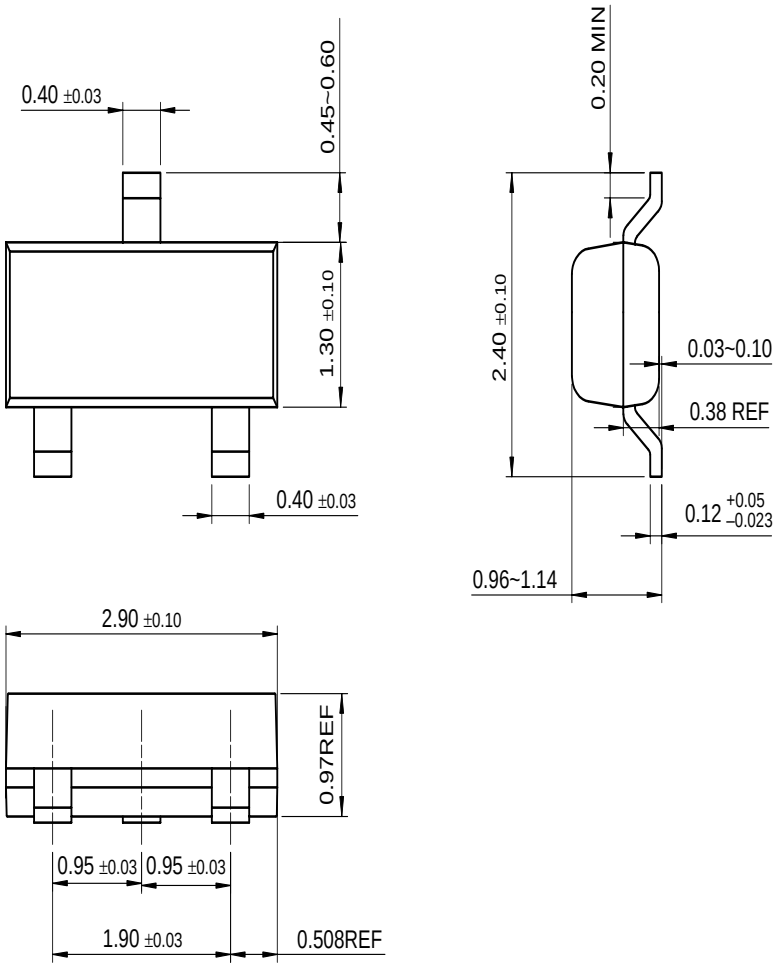
Package Dimensions

SOT-23



Dimensions in Millimeters

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Bottomless™	FAST®	LittleFET™	Power247™	SuperSOT™-3
CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET®
The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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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.

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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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