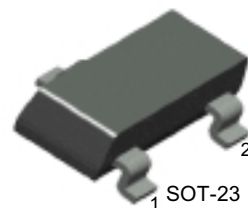


## BC807/BC808

### 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 $T_a=25^\circ\text{C}$ 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 Dissipation	-310	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{STG}$	Storage Temperature	-65 ~ 150	$^\circ\text{C}$

#### Electrical Characteristics $T_a=25^\circ\text{C}$ unless otherwise noted

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

**$h_{FE}$  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

# Typical Characteristics

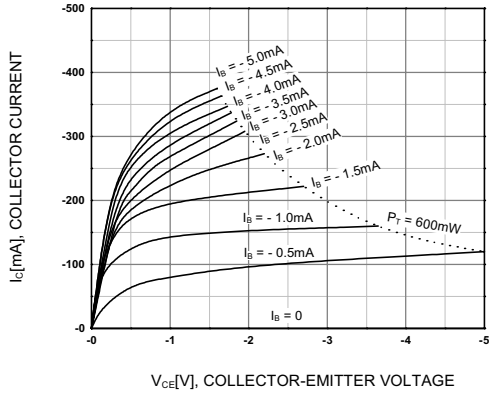


Figure 1. Static Characteristic

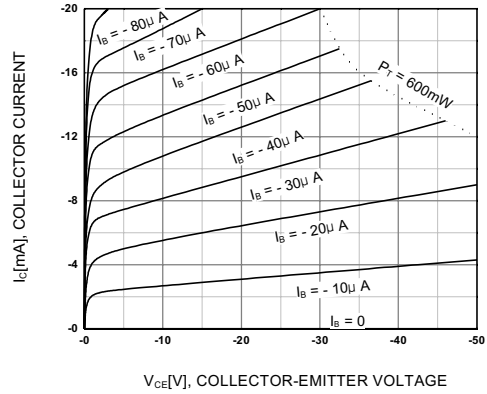


Figure 2. Static Characteristic

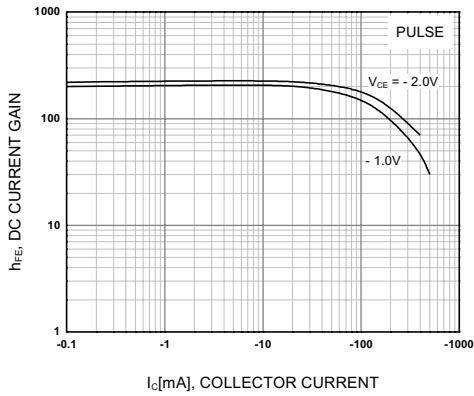


Figure 3. DC current Gain

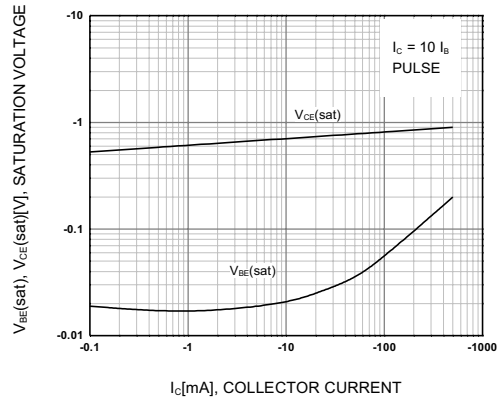


Figure 4. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

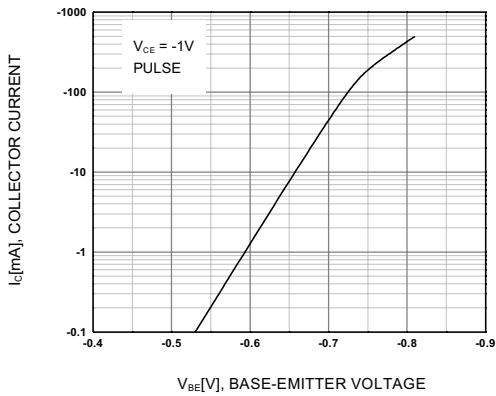


Figure 5. Base-Emitter On Voltage

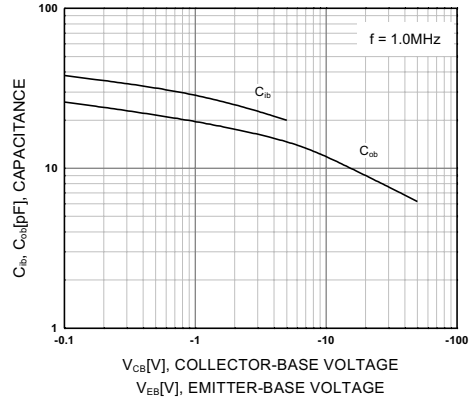


Figure 6. Input Output Capacitance

### Typical Characteristics (Continued)

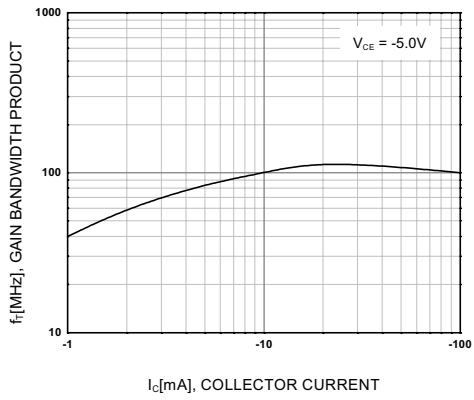
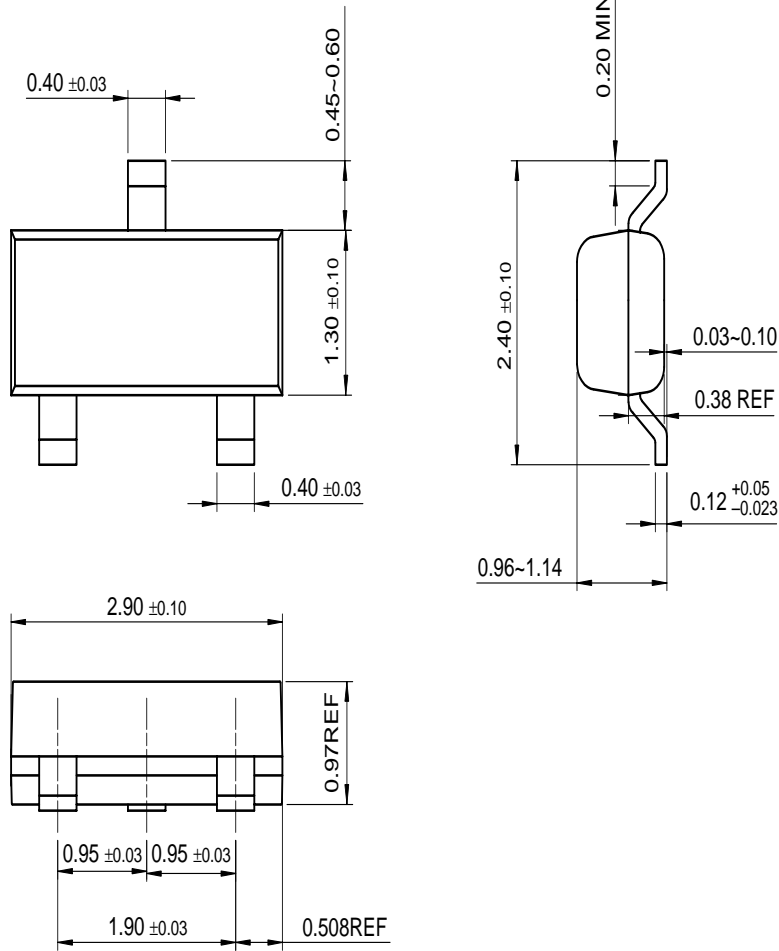


Figure 7. Current Gain Bandwidth Product

# Package Dimensions

## SOT-23



Dimensions in Millimeters

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CoolFET™	MICROWIRE™	TinyLogic™
CROSSVOLT™	POP™	UHC™
E <sup>2</sup> CMOS™	PowerTrench®	VCX™
FACT™	QFET™	
FACT Quiet Series™	QS™	
FAST®	Quiet Series™	
FASTr™	SuperSOT™-3	
GTO™	SuperSOT™-6	

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