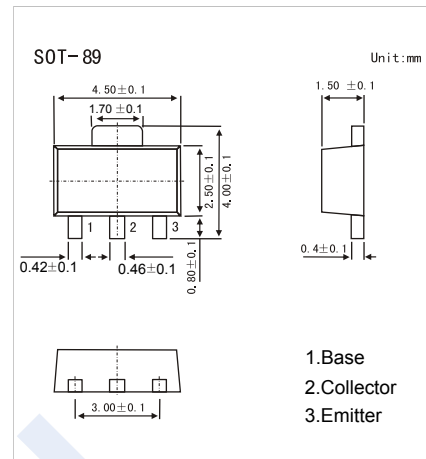


## NPN Transistors

### 2SC5209-HF

#### ■ Features

- High  $h_{FE}$  :  $h_{FE}=600$  to 1800
- High breakdown voltage
- Small package for mounting
- Complementary to 2SA1944-HF
- Pb-Free Package May be Available. The G-Suffix Denotes a Pb-Free Lead Finish



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	50	V
Collector - Emitter Voltage	$V_{CE0}$	50	
Emitter - Base Voltage	$V_{EB0}$	6	
Collector Current - Continuous	$I_C$	1	A
Collector Current - Pulse	$I_{CP}$	2	
Collector Power Dissipation	$P_C$	500	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = 100 \mu\text{A}$ , $I_E = 0$	50			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = 1 \text{ mA}$ , $R_{BE} = \infty$	50			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}$ , $I_C = 0$	6			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = 40\text{V}$ , $I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 5\text{V}$ , $I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500\text{mA}$ , $I_B = 10\text{mA}$		0.15	0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500\text{mA}$ , $I_B = 10\text{mA}$			1.2	
DC current gain	$h_{FE}$	$V_{CE} = 6\text{V}$ , $I_C = 100\text{mA}$	600		1800	
Collector output capacitance	$C_{ob}$	$V_{CB} = 10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		12		pF
Transition frequency	$f_T$	$V_{CE} = 10\text{V}$ , $I_E = -10\text{mA}$		130		MHz

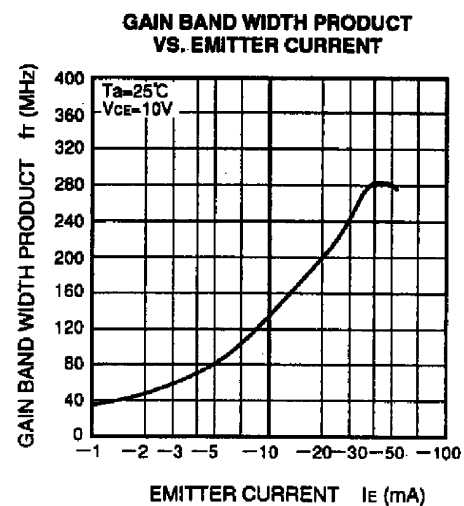
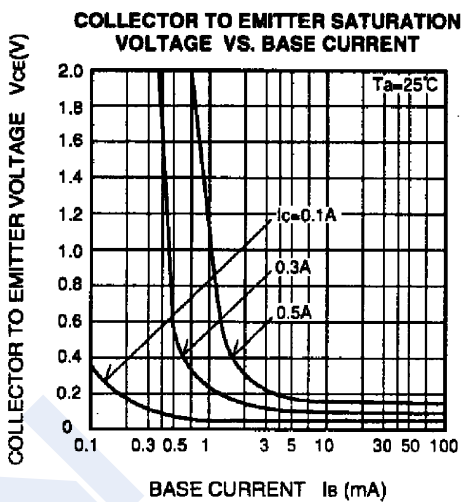
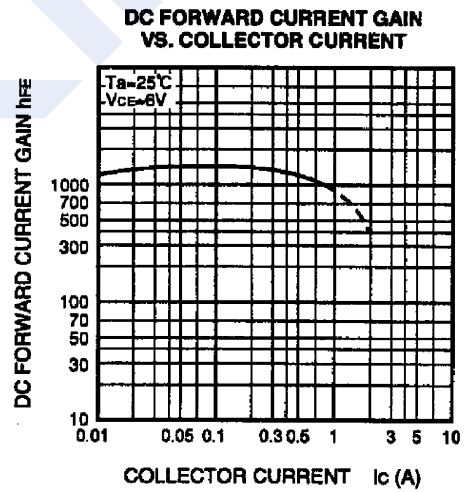
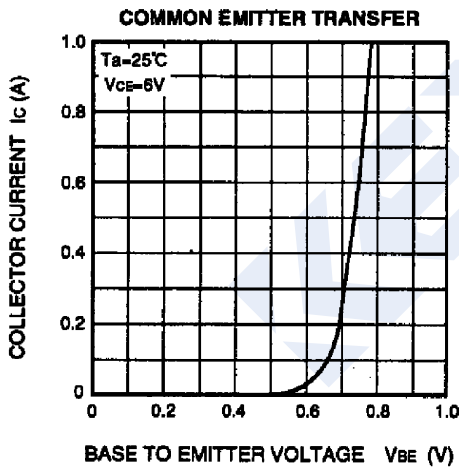
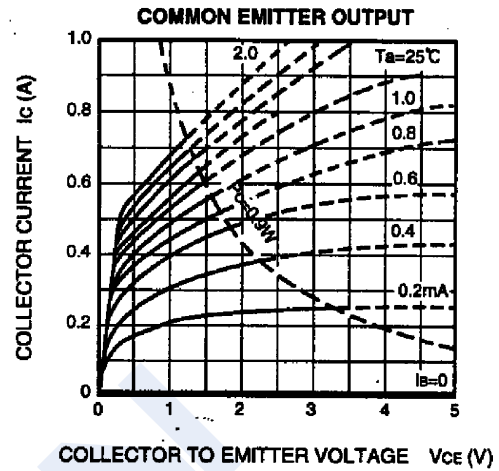
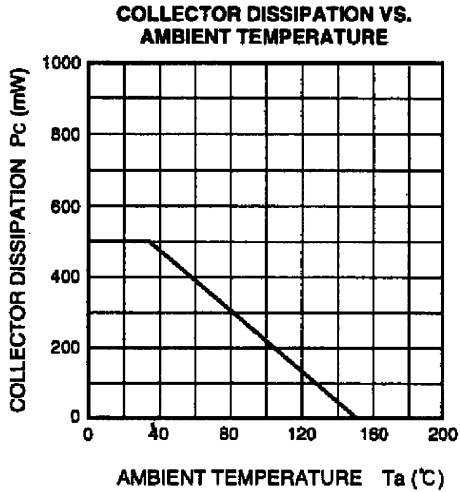
#### ■ Classification of $h_{FE}$

Type	2SC5209- H-HF	2SC5209- J-HF
Range	600-1200	900-1800
Marking	RH <sub>F</sub>	RJ <sub>F</sub>

### NPN Transistors

### 2SC5209-HF

■ Typical Characteristics



## NPN Transistors

## 2SC5209-HF

## ■ Typical Characteristics

