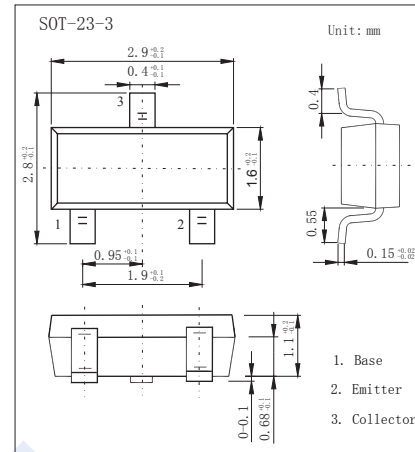


## PNP Transistors

### 2SA1839-HF

#### ■ Features

- Small output capacitance.
- Low collector-to-emitter saturation voltage.
- Low ON resistance.
- 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	$V_{CBO}$	-15	V
Collector - Emitter Voltage	$V_{CEO}$	-10	
Emitter - Base Voltage	$V_{EBO}$	-5	
Collector Current - Continuous	$I_C$	-100	mA
Collector Current - Pulse	$I_{CP}$	-200	
Base Current	$I_B$	-20	
Collector Power Dissipation	$P_C$	250	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	$V_{CBO}$	$I_C = -100 \mu\text{A}, I_E = 0$	-15			V
Collector- emitter breakdown voltage	$V_{CEO}$	$I_C = -1 \text{ mA}, R_{BE} = \infty$	-10			
Emitter - base breakdown voltage	$V_{EBO}$	$I_E = -100 \mu\text{A}, I_C = 0$	-5			
Collector-base cut-off current	$I_{CBO}$	$V_{CB} = -12 \text{ V}, I_E = 0$			-100	nA
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4 \text{ V}, I_C = 0$			-100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$		-0.04	-0.15	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -10 \text{ mA}, I_B = -1 \text{ mA}$		-0.82	-1.1	
DC current gain	$h_{FE}$	$V_{CE} = -2 \text{ V}, I_C = -5 \text{ mA}$	200		600	
On Resistance	$R_{on}$	$I_B = -3 \text{ mA}, f = 1 \text{ MHz}$		3		$\Omega$
Collector output capacitance	$C_{ob}$	$V_{CB} = -10 \text{ V}, I_E = 0, f = 1 \text{ MHz}$		0.9		pF
Transition frequency	$f_T$	$V_{CE} = -5 \text{ V}, I_C = -10 \text{ mA}$		600		MHz

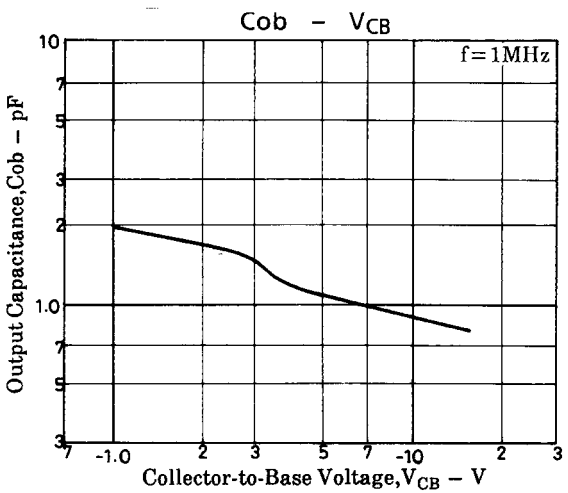
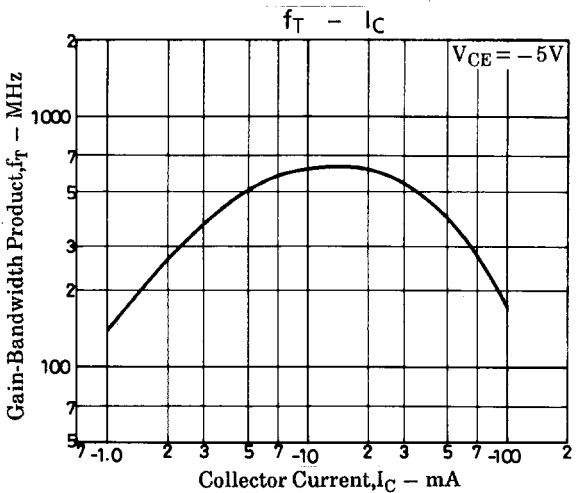
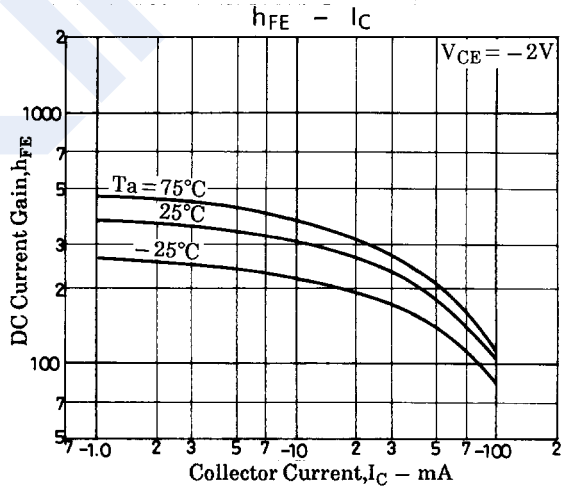
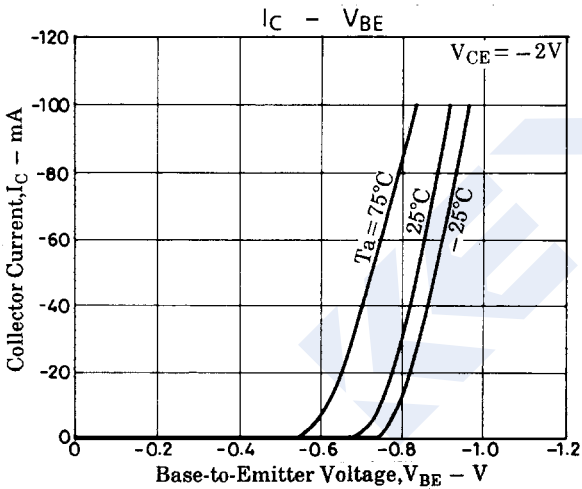
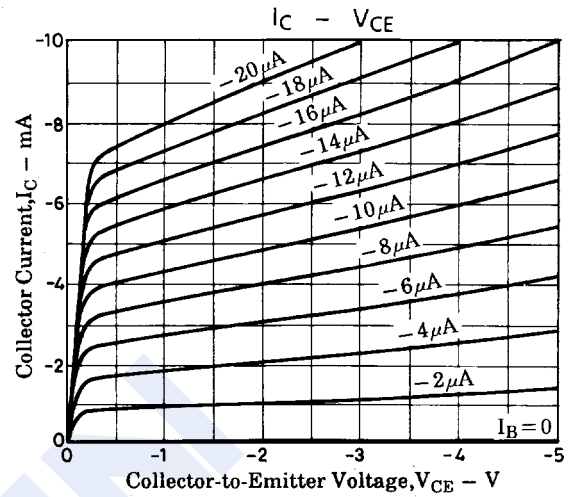
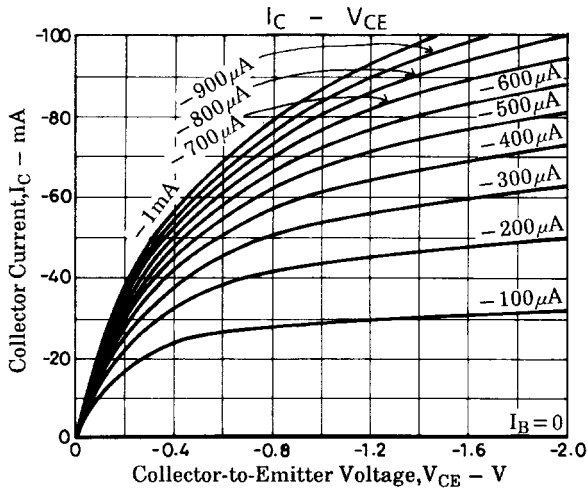
#### ■ Marking

Marking	LS F
---------	------

### PNP Transistors

### 2SA1839-HF

■ Typical Characteristics



### PNP Transistors

### 2SA1839-HF

■ Typical Characteristics

