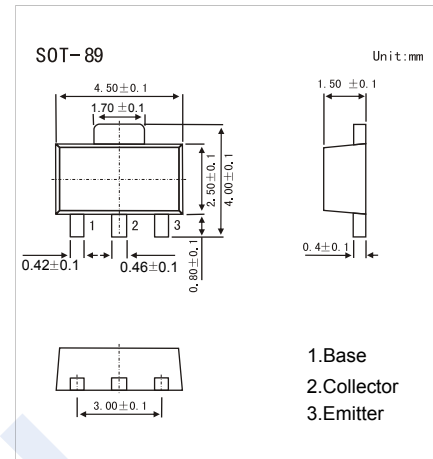


PNP Transistors

2SB1599-HF

■ Features

- Low collector to emitter saturation voltage $V_{CE(sat)}$.
- Complementary to 2SD2457-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_{CBO}	-50	V
Collector - Emitter Voltage	V_{CEO}	-40	
Emitter - Base Voltage	V_{EBO}	-5	
Base Current	I_B	-0.6	A
Collector Current - Pulse	I_{CP}	-3	
Collector Power Dissipation	P_C	1	W
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}	$I_C = -1 \text{ mA}, I_E = 0$	-50			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = -10 \text{ mA}, I_B = 0$	-40			
Emitter - base breakdown voltage	V_{EBO}	$I_E = -1 \text{ mA}, I_C = 0$	-5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -50\text{V}, I_E = 0$			-1	μA
Collector-emitter cut-off current	I_{CEO}	$V_{CE} = -40\text{V}, I_B = 0$			-10	
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$			-0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -1.5 \text{ A}, I_B = -150 \text{ mA}$		-0.4	-1	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -2 \text{ A}, I_B = -200 \text{ mA}$			-1.5	
DC current gain	h_{FE}	$V_{CE} = -5\text{V}, I_C = -1 \text{ A}$	50		220	
Collector output capacitance	C_{ob}	$V_{CB} = -5\text{V}, I_E = 0, f = 1\text{MHz}$		70		pF
Transition frequency	f_T	$V_{CE} = -5\text{V}, I_E = 500 \text{ mA}, f = 200\text{MHz}$		150		MHz

■ Classification of h_{FE}

Type	2SB1599-P-HF	2SB1599-Q-HF	2SB1599-R-HF
Range	50-100	80-160	100-220
Marking	1XP _F	1XQ _F	1XR _F

PNP Transistors

2SB1599-HF

■ Typical Characteristics

