

**SOT-89 Plastic-Encapsulate Transistors****2SB1440** TRANSISTOR (PNP)**FEATURES**

- Low collector-emitter saturation voltage $V_{CE(sat)}$
- For low-frequency output amplification
- Complementary to 2SD2185

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

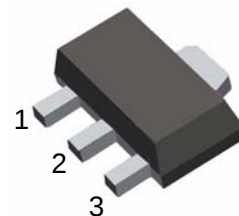
Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current -Continuous	-2	A
P_C	Collector Power Dissipation	500	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

SOT-89

1. BASE

2. COLLECTOR

3. EMITTER

**ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}\text{C}$ unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}$, $I_E=0$	-50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}$, $I_B=0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}$, $I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-50\text{V}$, $I_E=0$			-1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}$, $I_C=0$			-1	μA
DC current gain	h_{FE1}	$V_{CE}=-2\text{V}$, $I_C=-200\text{mA}$	120		340	
	h_{FE2}	$V_{CE}=-2\text{V}$, $I_C=-1\text{A}$	60			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-1\text{A}$, $I_B=-50\text{mA}$			-0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-1\text{A}$, $I_B=-50\text{mA}$			-1.2	V
Transition frequency	f_T	$V_{CE}=-10\text{V}$, $I_C=50\text{mA}$, $f=200\text{MHz}$		80		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $I_E=0$, $f=1\text{MHz}$			60	pF

CLASSIFICATION OF h_{FE1}

Rank	R	S
Range	120-240	170-340
Marking	1L	

Typical Characteristics

2SB1440

