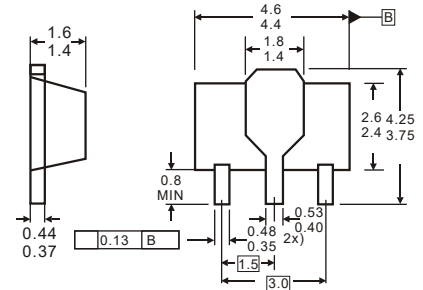


1. BASE
2. COLLECTOR
3. EMITTER

### SOT-89



Dimensions in inches and (millimeters)

### Features

- ✧ Large collector power dissipation  $P_C$
- ✧ Complementary to 2SD874

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-30	V
$V_{CEO}$	Collector-Emitter Voltage	-25	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-1	A
$P_C$	Collector Power Dissipation	500	mW
$T_J$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$

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

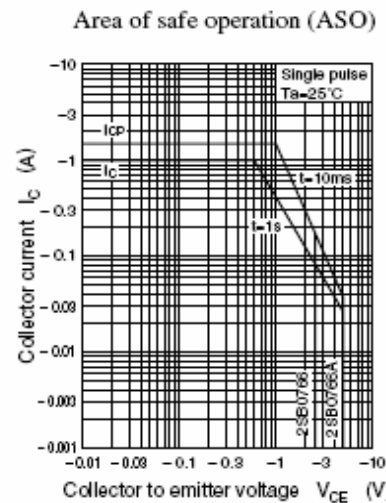
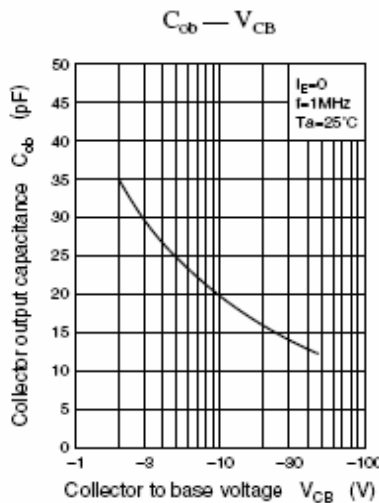
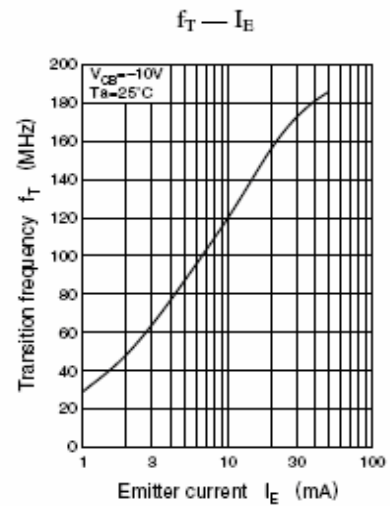
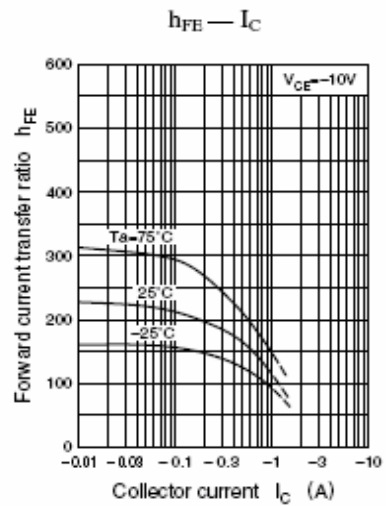
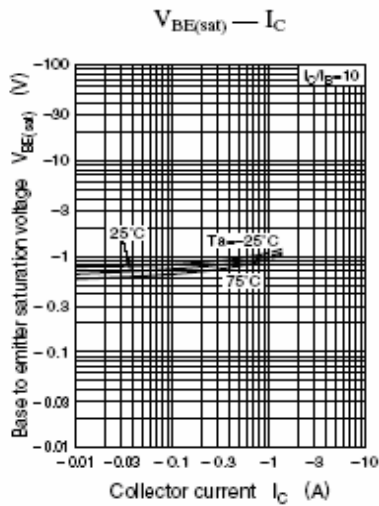
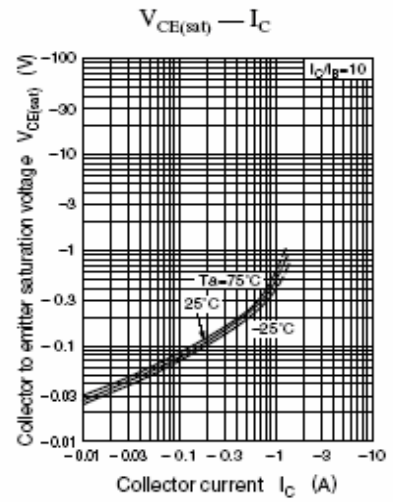
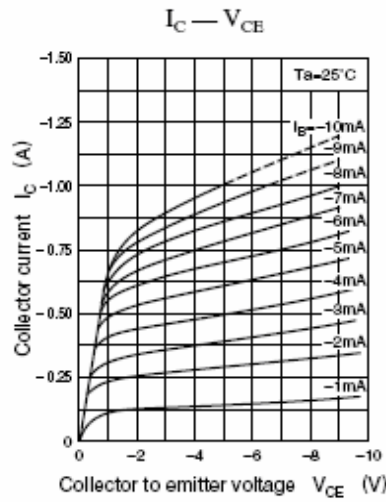
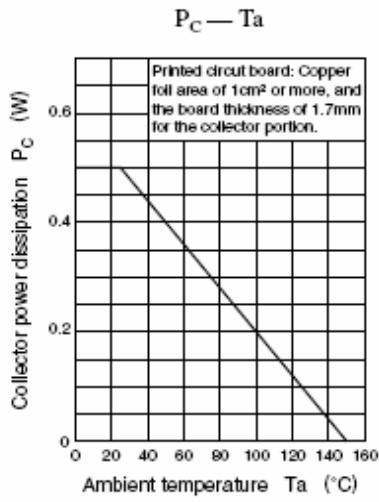
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}$ , $I_E = 0$	-30			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -2\text{mA}$ , $I_B = 0$	-25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}$ , $I_C = 0$	-5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -20\text{V}$ , $I_E = 0$			-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4\text{V}$ , $I_C = 0$			-0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE} = -10\text{V}$ , $I_C = -500\text{mA}$	85		340	
	$h_{FE(2)}$	$V_{CE} = -5\text{V}$ , $I_C = -1\text{A}$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}$ , $I_B = -50\text{mA}$		-0.2	-0.4	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}$ , $I_B = -50\text{mA}$		-0.85	-1.2	V
Transition frequency	$f_T$	$V_{CE} = -10\text{V}$ , $I_C = -50\text{mA}$ , $f = 200\text{MHz}$		200		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$		20	30	pF

### CLASSIFICATION OF $h_{FE(1)}$

Rank	Q	R	S
Range	85-170	120-240	170-340
Marking	AQ	AR	AS



### Typical Characteristics



Package	Reel	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)
SOT -89	1000pcs	7inch	10,000pcs	203×203×195	40,000pcs	438×438×220