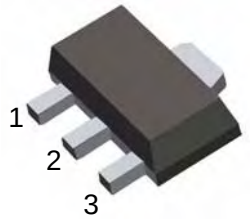
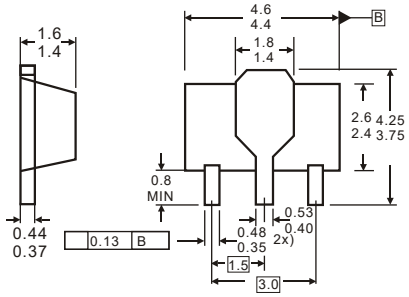
2SB1440

SOT-89 Bipolar Transistor(PNP)



1. BASE
2. COLLECTOR
3. EMITTER

SOT-89



Dimensions in inches and (millimeters)

Features

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

MAXIMUM RATINGS (T_A=25℃ 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	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

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

CLASSIFICATION OF h_{FE1}

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

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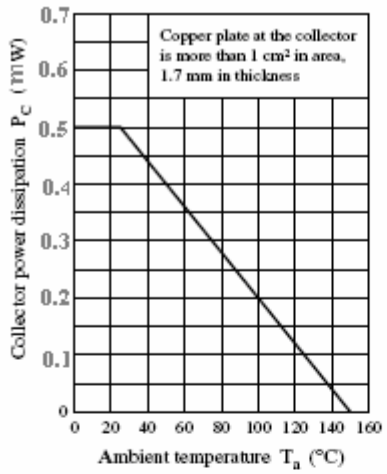
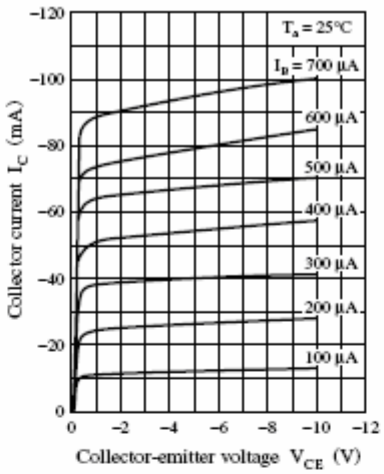
Typical Characteristics

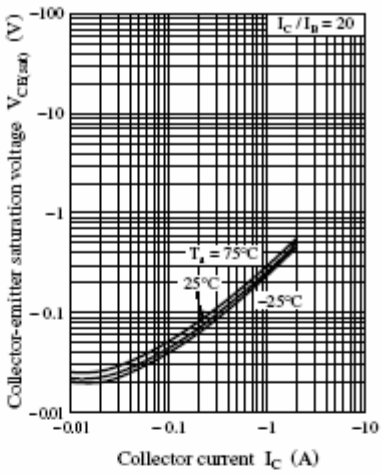
P_C — T_a



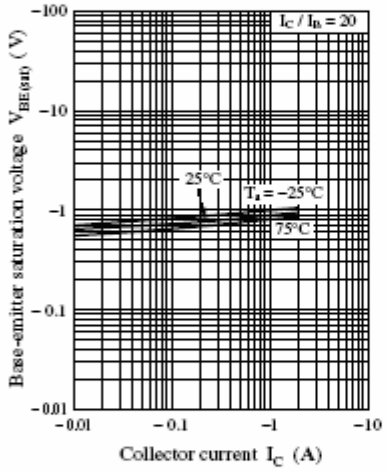
I_C — V_{CE}



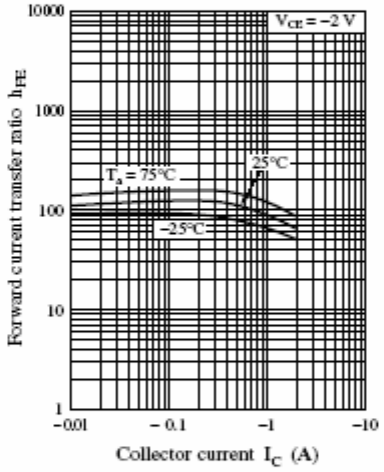
$V_{CE(sat)}$ — I_C



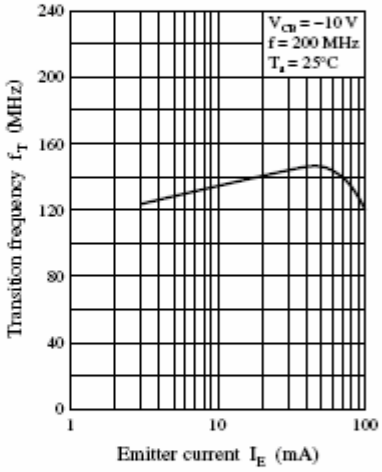
$V_{BE(sat)}$ — I_C



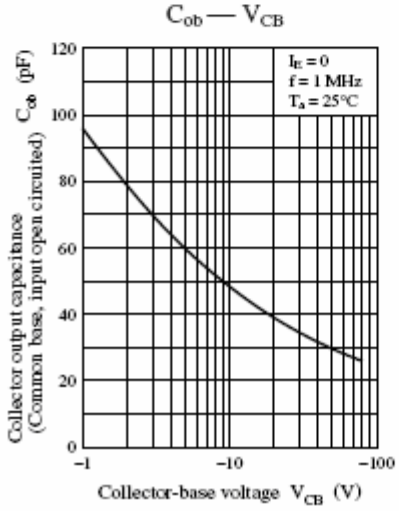
h_{FE} — I_C



f_T — I_E



C_{ob} — V_{CB}



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