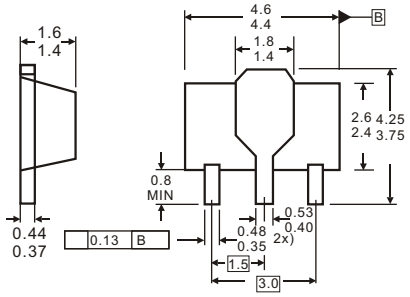
2SD2150

SOT-89 Transistor(NPN)

RoHS COMPLIANT

1. BASE
2. COLLECTOR
3. EMITTER

SOT-89



Dimensions in inches and (millimeters)

Features

- ✧ Excellent current-to-gain characteristics
- ✧ Low collector saturation voltage $V_{CE(sat)}$
  $V_{CE(sat)}$=0.5V(max) for I_C/I_B=2A/0.1A

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	20	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	3	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 =50uA, I_E=0	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C =1mA, I_B=0	20			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=50μA, I_C=0	6			V
Collector cut-off current	I_{CBO}	V_{CB}=30V, I_E=0			0.1	μA
Emitter cut-off current	I_{EBO}	V_{EB}=5V, I_C=0			0.1	μA
DC current gain	h_{FE} *	V_{CE}=2V, I_C=100mA	180		560	
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	I_C=2A, I_B=100mA			0.5	V
Transition frequency	f_T*	V_{CE}=2V,I_C=500mA f=100MHz		290		MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz		25		pF

***Pulse test: t_p≤300μS, δ≤0.02.**

CLASSIFICATION OF h_{FE}

Rank	R	S
Range	180-390	270-560
Marking	CFR	CFS

Typical Characteristics

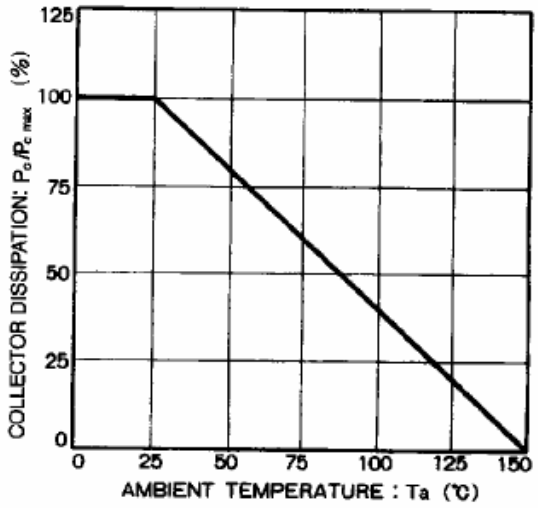


Figure 1

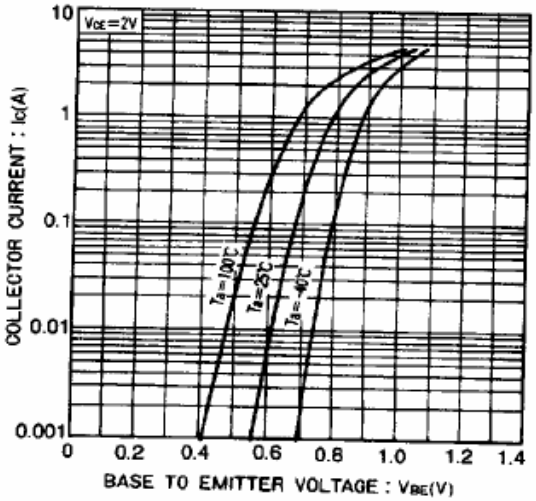


Figure 2

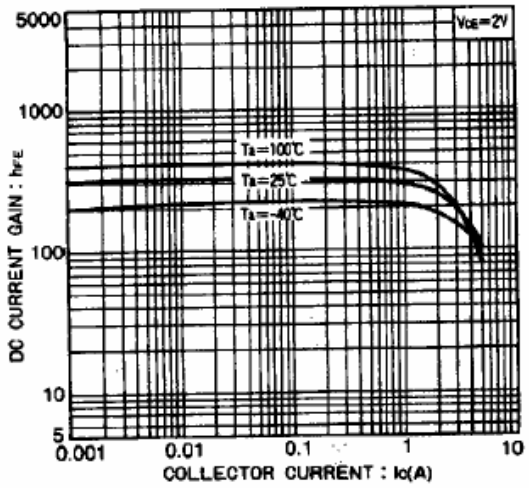


Figure 3

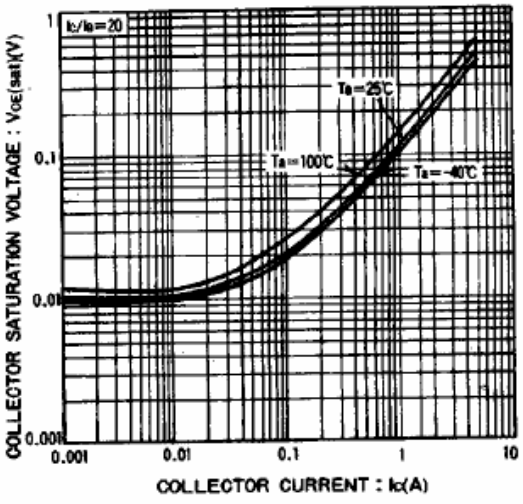


Figure 4