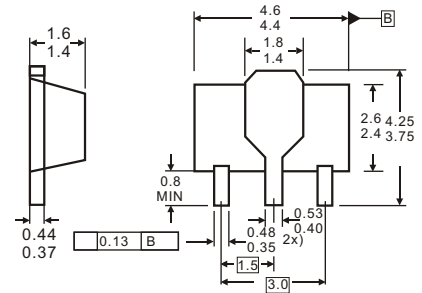


1. BASE
2. COLLECTOR
3. EMITTER

SOT-89



Dimensions in inches and (millimeters)

Features

- ✧ Low saturation voltage, typically $V_{CE(sat)} = 0.1V$ at $I_C/I_B = 1A/50mA$.
- ✧ Excellent DC current gain characteristics.
- ✧ Complements the 2SA1797.

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	2	A
P_C	Collector Power Dissipation	500	mW
T_J	Junction Temperature	150	$^\circ C$
T_{stg}	Storage Temperature	-55-150	$^\circ C$

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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 50\mu A, I_E = 0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1mA, I_B = 0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 50\mu A, I_C = 0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB} = 60V, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			0.1	μA
DC current gain	h_{FE}	$V_{CE} = 2V, I_C = 0.5A$	82		270	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 1A, I_B = 50mA$			0.35	V
Transition frequency	f_T	$V_{CE} = 2V, I_C = 500mA, f = 100MHz$		210		MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 1MHz$		25		pF

CLASSIFICATION OF h_{FE}

Rank	P	Q
Range	82-180	120-270
Marking	DKP	DKQ



Typical Characteristics

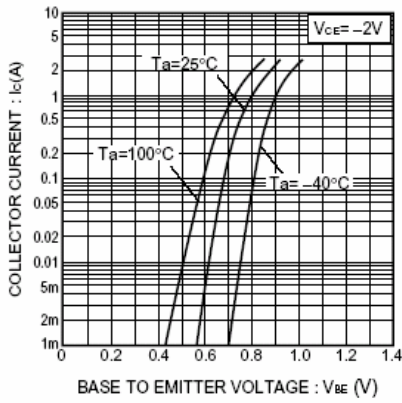


Fig.1 Grounded emitter propagation characteristics

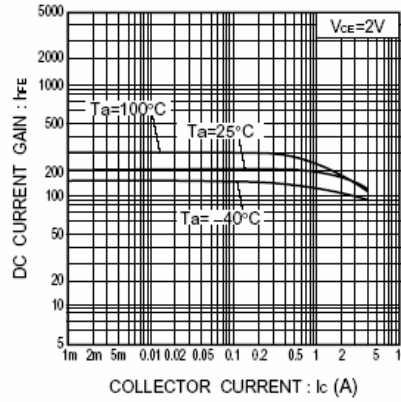


Fig.2 DC current gain vs. collector current

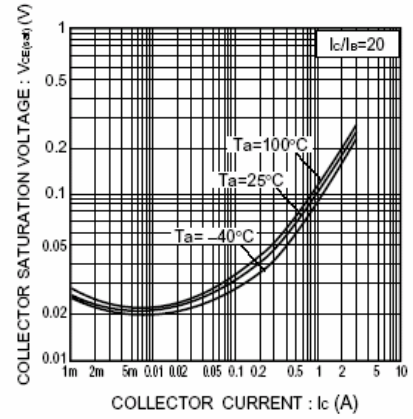


Fig.3 Collector-emitter saturation voltage vs. collector current

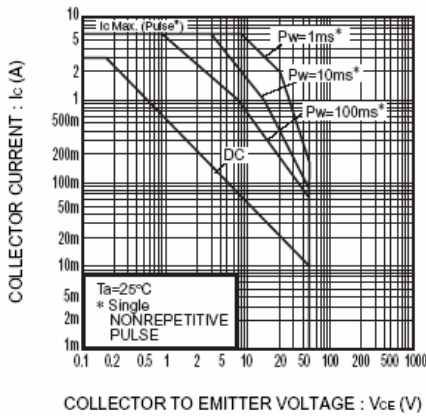


Fig.4 Safe Operating area

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