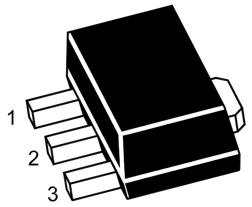
ST 2SA1900U

PNP Silicon Epitaxial Planar Transistor

Medium power transistor



1.Base 2.Collector 3.Emitter

SOT-89 Plastic Package

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	60	V
Collector Emitter Voltage	$-V_{CEO}$	50	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	1	A
Collector Current (Pw = 20 ms)	$-I_{CP}$	2	A
Collector Power Dissipation	P_C	0.5 2 [1)]	W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	- 55 to + 150	°C

[1)] When mounted on a 40 X 40 X 0.7 mm ceramic board.

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 3 V, $-I_C$ = 500 mA	h_{FE}	120	-	270	-
Collector Base Cutoff Current at $-V_{CB}$ = 40 V	$-I_{CBO}$	-	-	100	nA
Emitter Base Cutoff Current at $-V_{EB}$ = 4 V	$-I_{EBO}$	-	-	100	nA
Collector Base Breakdown Voltage at $-I_C$ = 50 µA	$-V_{(BR)CBO}$	60	-	-	V
Collector Emitter Breakdown Voltage at $-I_C$ = 1 mA	$-V_{(BR)CEO}$	50	-	-	V
Emitter Base Breakdown Voltage at $-I_E$ = 50 µA	$-V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at $-I_C$ = 500 mA, $-I_B$ = 50 mA	$-V_{CE(sat)}$	-	-	0.4	V
Transition Frequency at $-V_{CE}$ = 5 V, I_E = 50 mA, f = 100 MHz	f_T	-	150	-	MHz
Collector Output Capacitance at $-V_{CB}$ = 10 V, f = 1 MHz	C_{ob}	-	20	-	pF

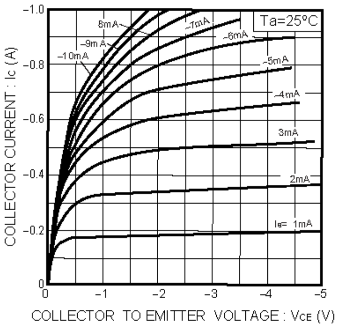


Fig.1 Grounded emitter output characteristics

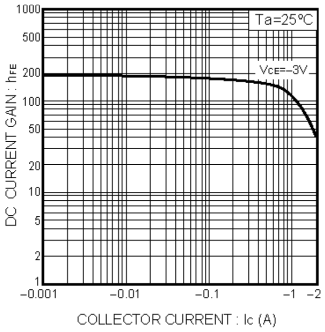


Fig.2 DC current gain vs. collector current

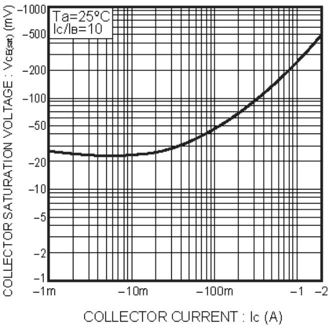


Fig.3 Collector-emitter saturation voltage vs.collector current

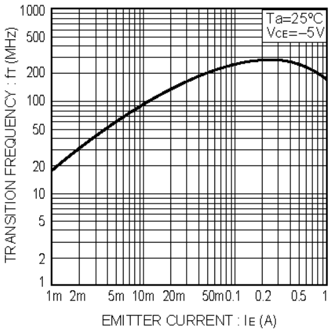


Fig.4 Gain bandwith product vs. emitter current

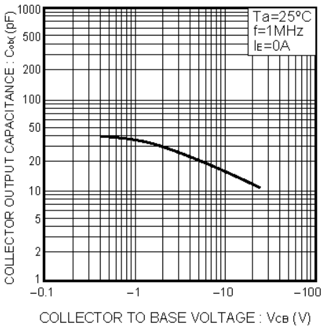


Fig.5 Collector output capacitance vs. collector-base voltage

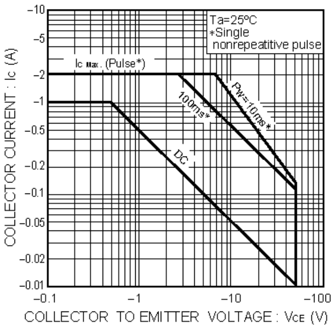
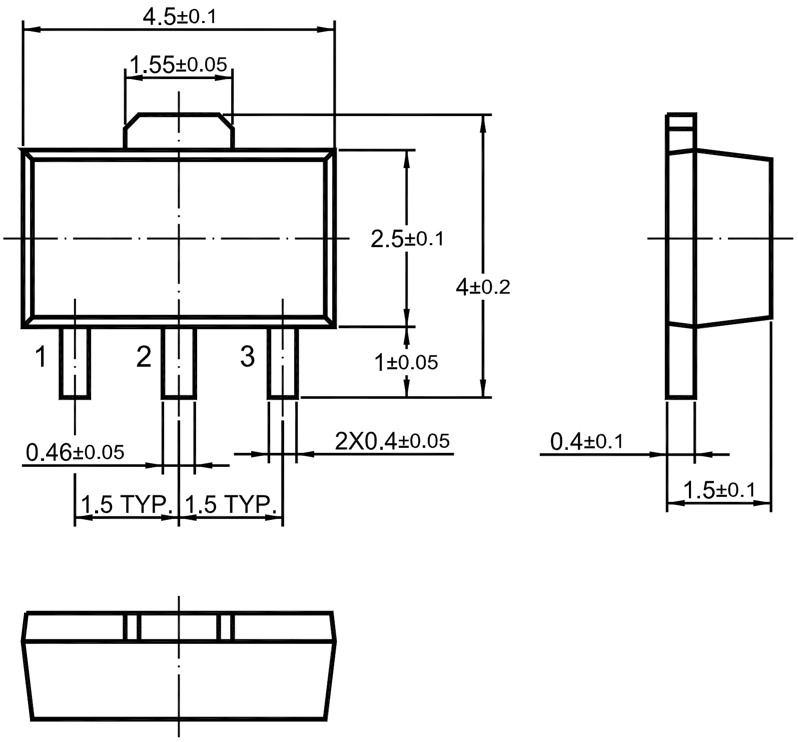


Fig.6 Safe operating area

SOT-89 PACKAGE OUTLINE



Dimensions in mm