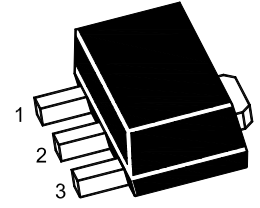


2SA1900U

PNP Silicon Epitaxial Planar Transistor

Medium power transistor



1.Base 2.Collector 3.Emitter
SOT-89 Plastic Package

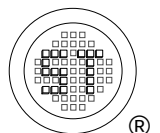
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{\text{CBO}}$	60	V
Collector Emitter Voltage	$-V_{\text{CEO}}$	50	V
Emitter Base Voltage	$-V_{\text{EBO}}$	5	V
Collector Current	$-I_{\text{C}}$	1	A
Collector Current ($P_w = 20 \text{ ms}$)	$-I_{\text{CP}}$	2	A
Collector Power Dissipation	P_{C}	0.5 2 ¹⁾	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to + 150	$^\circ\text{C}$

¹⁾ When mounted on a 40 x 40 x 0.7 mm ceramic board.

Characteristics at $T_a = 25^\circ\text{C}$

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



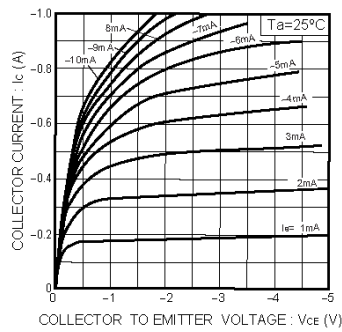


Fig.1 Grounded emitter output characteristics

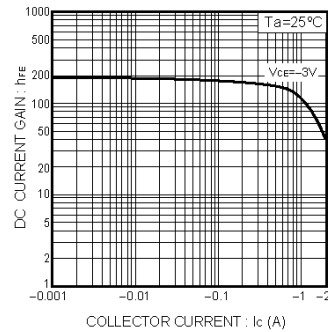


Fig.2 DC current gain
vs. collector current

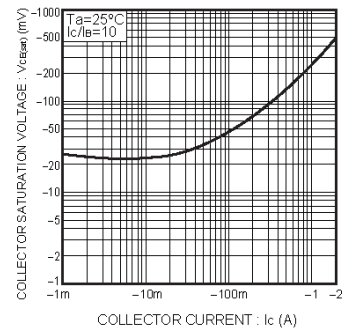


Fig.3 Collector-emitter saturation voltage
vs. collector current

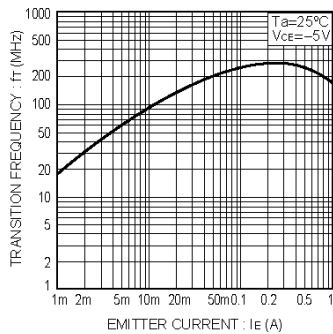


Fig.4 Gain bandwidth product
vs. emitter current

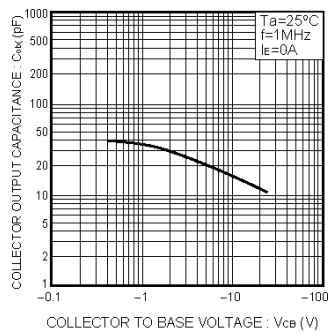


Fig.5 Collector output capacitance
vs. collector-base voltage

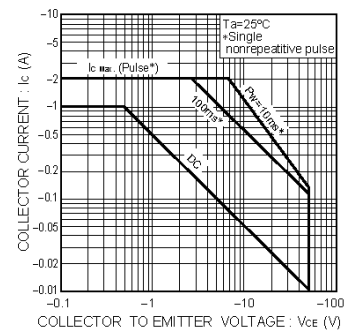
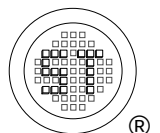
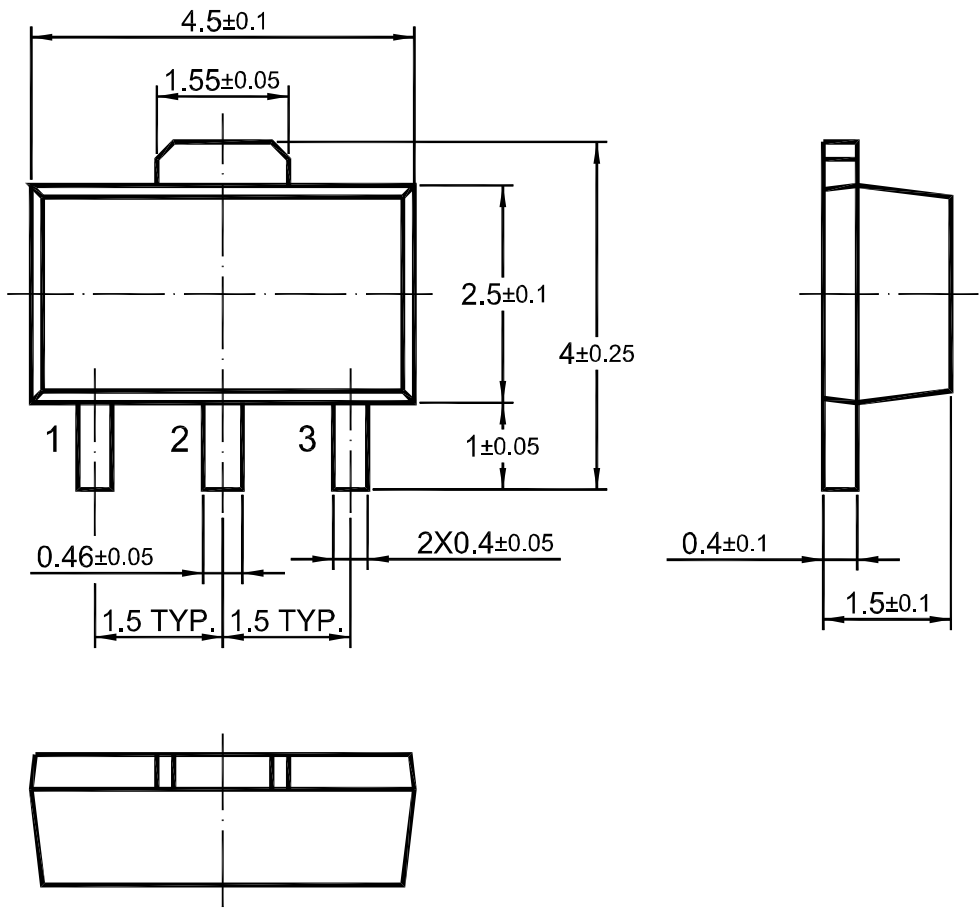


Fig.6 Safe operating area



2SA1900U

SOT-89 PACKAGE OUTLINE



Dimensions in mm

