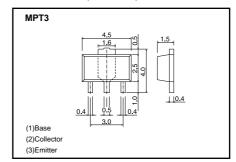
# Medium power transistor (-50V, -1A) 2SA1900

#### Features

- 1) Low saturation voltage, typically  $V_{\text{CE(sat)}} = -0.15 \text{V}$  at  $I_{\text{C}}/$  $I_B = -500 mA / -50 mA$
- 2) P<sub>C</sub>=2W (on 40×40×0.7mm ceramic board)
- 3) Complements the 2SC5053

## ●Dimensions (Unit: mm)



## Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	Vсво	-60	V
Collector-emitter voltage	VCEO	-50	V
Emitter- base voltage	VEBO	-5	V
Collector current	I-	-1	A
	lc lc	-2	A (Pulse) *1
Collector power dissipation	Pc	0.5	W
	PC	2	W *2
Collector power dissipation	tj	150	°C
Storage temperature	tstg	-55 to +150	°C

# ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions
Collector-base breakdown voltage	ВУсво	-60	-	-	V	Ic=-50μA
Collector-emitter breakdown voltage	BVceo	-50	-	-	V	Ic=-1mA
Emitter-base breakdown voltage	ВУево	-5	-	-	V	Iε=-50μA
Collector cutoff current	Ісво	_	_	-0.1	μΑ	V <sub>CB</sub> =-40V
Emitter cutoff current	ІЕВО	_	_	-0.1	μΑ	V <sub>EB</sub> =-4V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	_	_	-0.4	V	Ic/IB=-500mA/-50mA
DC current transfer ratio	hfe	120	-	270	-	Vce/lc=-3V/-0.5A
Transition frequency	f⊤	_	150	-	MHz	Vce=-5V , Ie=50mA , f=100MHz
Output capacitance	Cob	-	20	-	pF	Vcb=-10V , IE=0A , f=1MHz

### ●Packaging specifications and hFE

Туре	2SA1900
Package	MPT3
h <sub>FE</sub>	Q
Marking	AL *
Code	T100
Basic ordering unit (pleces)	1000

<sup>\*</sup> Denotes her

<sup>\*1</sup> Pw=20ms, Duty=1/2 \*2 When mounted on a  $40\times40\times0.7$ mm seramic board.

#### •Electric characteristics curves

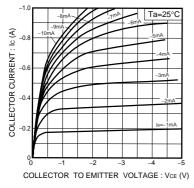


Fig.1 Grounded emitter output characteristics

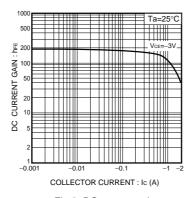


Fig.2 DC current gain vs. collector current

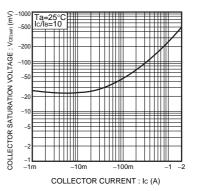


Fig.3 Collector-emitter saturation voltage vs.collector current

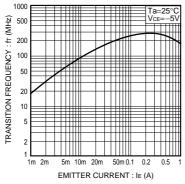


Fig.4 Gain bandwith product vs. emitter current

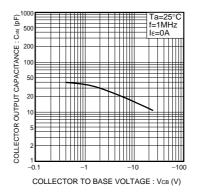


Fig.5 Collector output capacitance vs. collector-base voltage

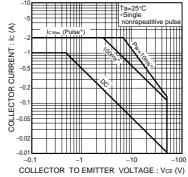


Fig.6 Safe operating area

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