

## Power Transistor (–50V, –3A)

## 2SA1797

## ●Features

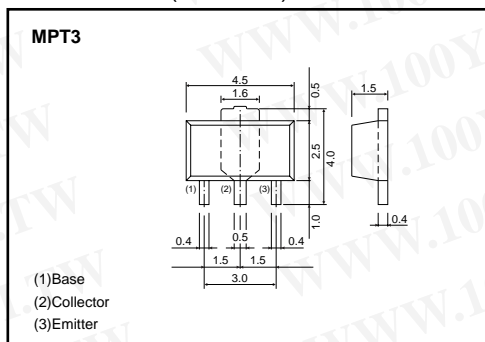
- 1) Low saturation voltage.  
 $V_{CE(sat)} = -0.35V$  (Max.) at  $I_C / I_B = -1A / 50mA$ .
- 2) Excellent DC current gain characteristics.
- 3) Complements the 2SC4672.

## ●Packaging specifications

Type	2SA1797
Package	MPT3
$h_{FE}$	PQ
Marking *	AG
Code	T100
Basic ordering unit (pieces)	1000

\*Denotes  $h_{FE}$ 

## ●Dimensions (Unit : mm)



## ●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	–50	V
Collector-emitter voltage	$V_{CEO}$	–50	V
Emitter-base voltage	$V_{EBO}$	–6	V
Collector current	$I_C$ *1	–3	A (DC)
		–6	A (Pulse)
Collector power dissipation	2SA1797 $P_C$ *2	0.5	W
		2	
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	–55 to +150	°C

\*1 Single pulse,  $P_w=10ms$ 

\*2 When mounted on a 40×40×0.7mm ceramic board.

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## ●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	–50	–	–	V	$I_C = -50\mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	–50	–	–	V	$I_C = -1mA$
Emitter-base breakdown voltage	$BV_{EBO}$	–6	–	–	V	$I_E = -50\mu A$
Collector cutoff current	$I_{CBO}$	–	–	–0.1	$\mu A$	$V_{CB} = -50V$
Emitter cutoff current	$I_{EBO}$	–	–	–0.1	$\mu A$	$V_{EB} = -5V$
Collector-emitter saturation voltage	$V_{CE(sat)}$ *	–	–0.15	–0.35	V	$I_C/I_B = -1A/-50mA$
DC current transfer ratio	$h_{FE1}$ *	82	–	270	–	$V_{CE}/I_C = -2V/-0.5A$
	$h_{FE2}$ *	45	–	–	–	$V_{CE}/I_C = -2V/-1.5A$
Transition frequency	$f_T$ *	–	200	–	MHz	$V_{CE} = -2V, I_E = 0.5A, f = 100MHz$
Output capacitance	$C_{ob}$	–	36	–	pF	$V_{CB} = -10V, I_E = 0A, f = 1MHz$

\* Measured using pulse current

## ● Electrical characteristic curves

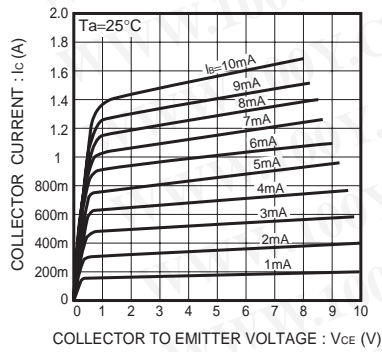


Fig.1 Grounded Emitter Output Characteristics

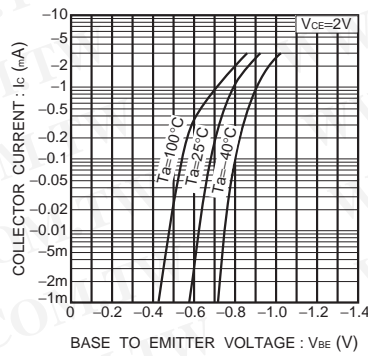


Fig.2 Grounded Emitter Propagation Characteristics

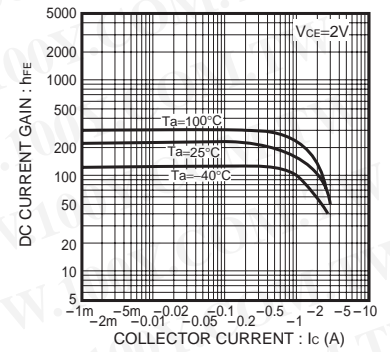


Fig.3 DC Current Gain vs. Collector Current

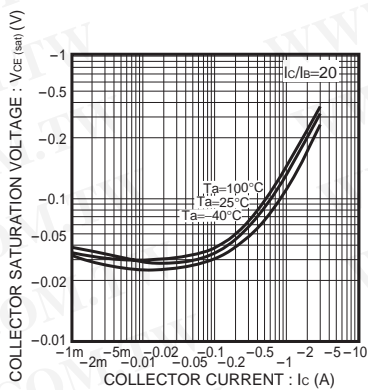


Fig.4 Collector-Emitter Saturation Voltage vs. Collector Current

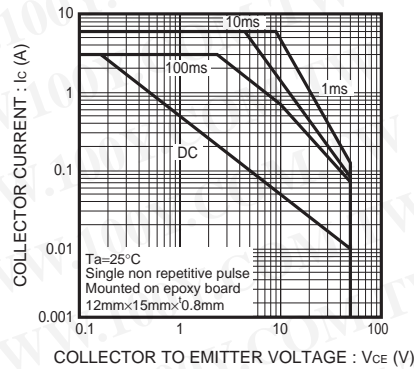


Fig.5 Safe Operating Area

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