

# 2SA1982

## Silicon PNP epitaxial planar type

For low-frequency high breakdown voltage amplification  
Complementary to 2SC5346

### ■ Features

- Satisfactory forward current transfer ratio  $h_{FE}$  collector current  $I_C$  characteristics
- High collector to emitter voltage  $V_{CEO}$
- Small collector output capacitance  $C_{ob}$
- Makes up a complementary pair with 2SC2631, which is optimum for the pre-driver stage of a 20 W to 40 W output amplifier

### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	$V_{CBO}$	-150	V
Collector to emitter voltage	$V_{CEO}$	-150	V
Emitter to base voltage	$V_{EBO}$	-5	V
Peak collector current	$I_{CP}$	-100	mA
Collector current	$I_C$	-50	mA
Collector power dissipation *	$P_C$	1	W
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

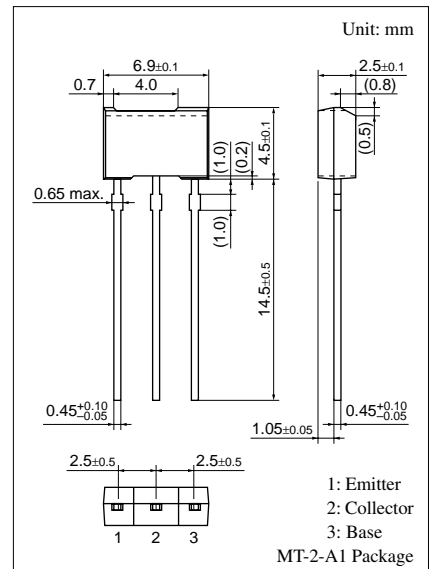
Note) \*: Printed circuit board: Copper foil area of 1 cm<sup>2</sup> or more, and the board thickness of 1.7 mm for the collector portion

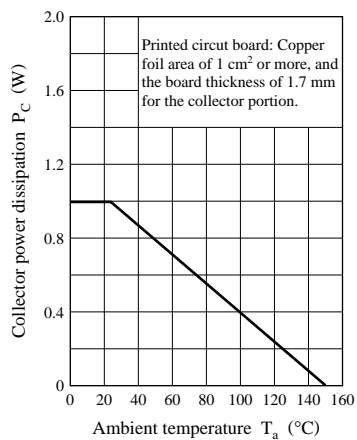
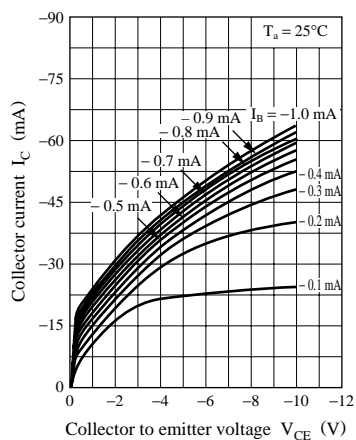
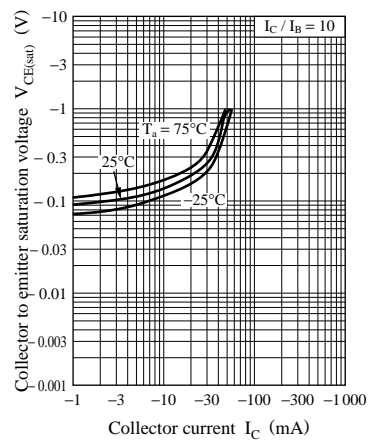
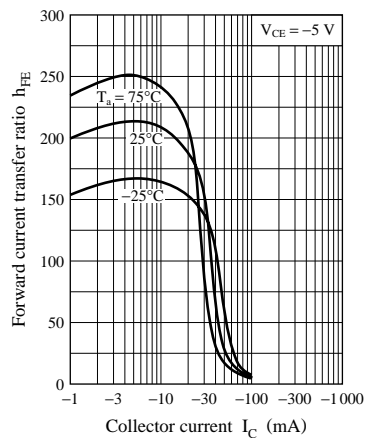
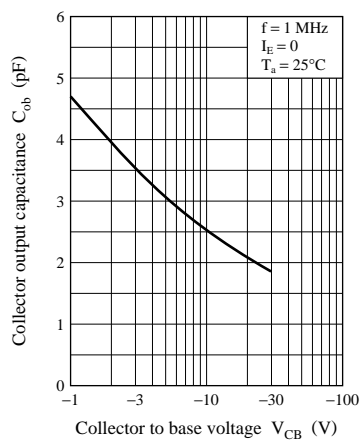
### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = -100\text{ V}, I_E = 0$			-1	$\mu\text{A}$
Collector to emitter voltage	$V_{CEO}$	$I_C = -0.1\text{ mA}, I_B = 0$	-150			V
Emitter to base voltage	$V_{EBO}$	$I_E = -10\text{ }\mu\text{A}, I_C = 0$	-5			V
Forward current transfer ratio *	$h_{FE}$	$V_{CE} = -5\text{ V}, I_C = -10\text{ mA}$	130		330	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -30\text{ mA}, I_B = -3\text{ mA}$			-1	V
Noise voltage	NV	$V_{CE} = -10\text{ V}, I_C = -1\text{ mA}, G_v = 80\text{ dB}$ $R_g = 100\text{ k}\Omega$ , Function = FLAT		150	300	mV
Transition frequency	$f_T$	$V_{CB} = -10\text{ V}, I_E = 10\text{ mA}, f = 200\text{ MHz}$		200		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = -10\text{ V}, I_E = 0, f = 1\text{ MHz}$			5	pF

Note) \*:  $h_{FE}$  Rank classification

Rank	R	S
$h_{FE}$	130 to 220	185 to 330



$P_C - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $h_{FE} - I_C$  $C_{ob} - V_{CB}$ 

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