



### **Description**

• Medium power amplifier

#### **Features**

- Large collector current :  $I_C = -500 \text{mA}$
- Low collector saturation voltage enabling low-voltage operation :  $V_{CE(sat)} = -0.25 \text{ Max}$ .
- Complementary pair with 2SC5342N

### **Ordering Information**

Type NO.	Marking	Package Code	ode	
2SA1979N	A1979	TO-92N		

# **Outline Dimensions** unit: mm 2.25 Max. 4.20~4.40 0.52 Max 0.90 Max 1.27 Typ 0.40 Max. 1 2 3 3.55 Typ **PIN Connections** 1. Emitter 2. Collector 3. Base

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# **Absolute Maximum Ratings**

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	-40	V
Collector-emitter voltage	$V_{CEO}$	-32	V
Emitter-base voltage	$V_{EBO}$	-5	V
Collector current	$I_{C}$	-500	mA
Collector power dissipation	$P_{C}$	400	mW
Junction temperature	T <sub>1</sub>	150	°C
Storage temperature range	$T_{stg}$	-55~150	°C

# **Electrical Characteristics**

Ta=25°C

Characteristic	Symbol	<b>Test Condition</b>	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	$I_C$ =-1mA, $I_B$ =0	-32	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}$ =-40V, $I_{E}$ =0	-	-	-0.1	μΑ
Emitter cut-off current	$I_{EBO}$	$V_{EB}$ =-5V, $I_C$ =0	-	-	-0.1	μА
DC current gain	h <sub>FE</sub> *	V <sub>CE</sub> =-1V, I <sub>C</sub> =-100mA	70	-	240	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C$ =-100mA, $I_B$ =-10mA	11.	-	-0.25	V
Base-emitter voltage	$V_{BE}$	V <sub>CE</sub> =-1V, I <sub>C</sub> =-100mA	-	-0.75	-1.0	V
Transition frequency	$f_T$	$V_{CE}$ =-6V, $I_{C}$ =-20mA	-	200	1	MHz
Collector output capacitance	C <sub>ob</sub>	$V_{CB}$ =-6V, $I_E$ =0, f=1MHz	-	7.5	-	pF

<sup>\* :</sup>  $h_{FE}$  rank / O : 70~140, Y : 120~240

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### **Electrical Characteristic Curves**

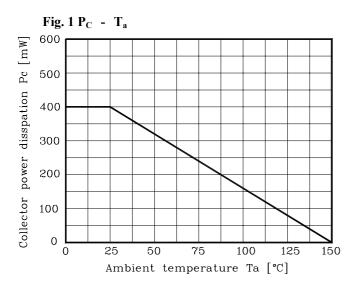


Fig. 3 I  $_{\text{C}}$  -  $\,\,V_{\text{CE}}$ 

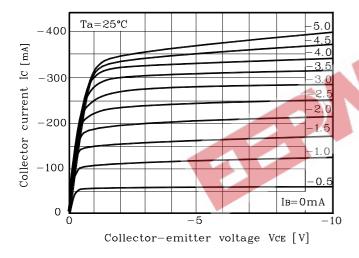


Fig. 5  $h_{FE}$  -  $I_{C}$ 

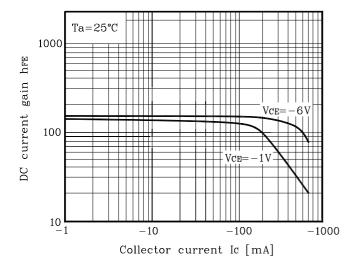


Fig. 2  $I_C$  -  $V_{BE}$ 

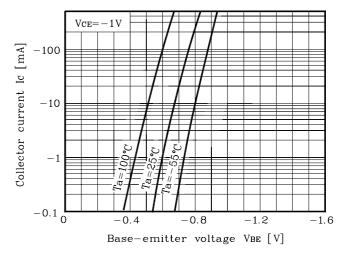


Fig. 4  $V_{CE(sat)}$  -  $I_{C}$ 

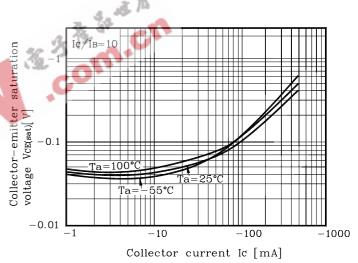
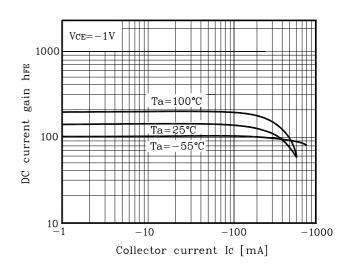


Fig. 6  $h_{FE}$  -  $I_C$ 



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