

## Description

- Medium power amplifier

## Features

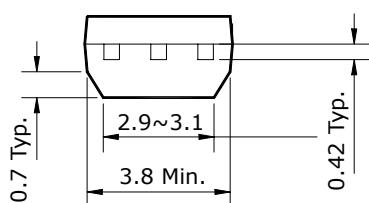
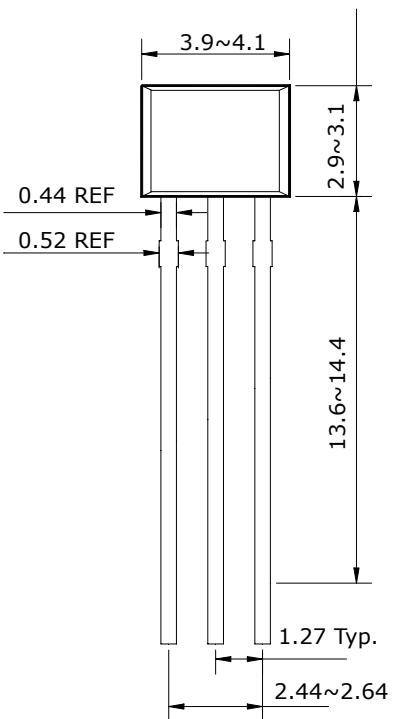
- Large collector current :  $I_C=500\text{mA}$
- Low collector saturation voltage enabling low-voltage operation
- Complementary pair with 2SA1979M

## Ordering Information

Type NO.	Marking	Package Code
2SC5342M	5342	TO-92M

## Outline Dimensions

unit : mm



### PIN Connections

1. Emitter
2. Collector
3. Base

**Absolute maximum ratings**

(Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V <sub>CBO</sub>	40	V
Collector-Emitter voltage	V <sub>CEO</sub>	32	V
Emitter-Base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	500	mA
Collector dissipation	P <sub>C</sub>	400	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55~150	°C

**Electrical Characteristics**

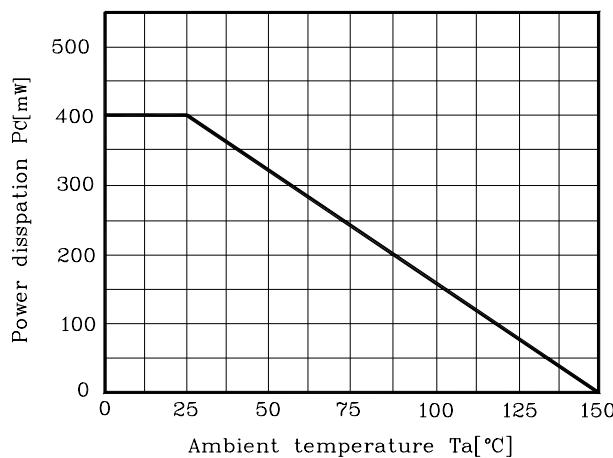
(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV <sub>CBO</sub>	I <sub>C</sub> =100μA, I <sub>E</sub> =0	40	-	-	V
Collector-Emitter breakdown voltage	BV <sub>CEO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	32	-	-	V
Emitter-Base breakdown voltage	BV <sub>EBO</sub>	I <sub>E</sub> =10μA, I <sub>C</sub> =0	5	-	-	V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =40V, I <sub>E</sub> =0	-	-	0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0	-	-	0.1	μA
DC current gain	h <sub>FE</sub> <sup>*</sup>	V <sub>CE</sub> =1V, I <sub>C</sub> =100mA	70	-	240	-
Collector-Emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA	-		0.25	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =6V, I <sub>E</sub> =-20mA	-	300	-	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =6V, I <sub>E</sub> =0, f=1MHz	-	7.0	-	pF

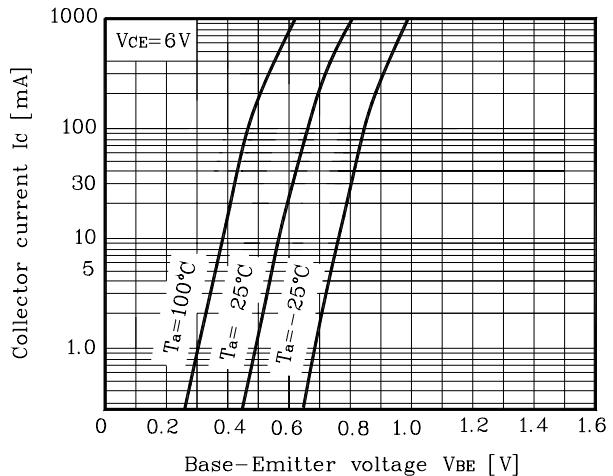
\* : h<sub>FE</sub> Rank / O : 70~140, Y : 120~240

## Electrical Characteristic Curves

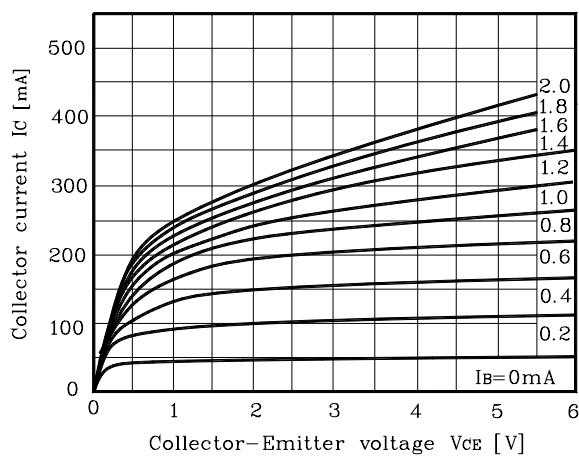
**Fig. 1  $P_c$  -  $T_a$**



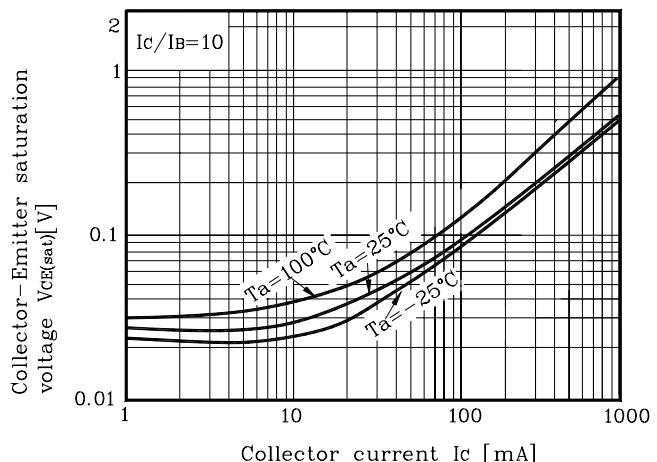
**Fig. 2  $I_C$  -  $V_{BE}$**



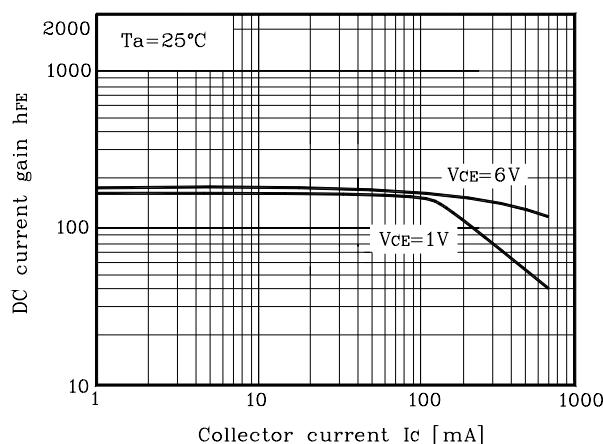
**Fig. 3  $I_C$  -  $V_{CE}$**



**Fig. 4  $V_{CE(SAT)}$  -  $I_C$**



**Fig. 5  $h_{FE}$  -  $I_C$**



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