

**Descriptions**

- Complex type bipolar transistor

**Features**

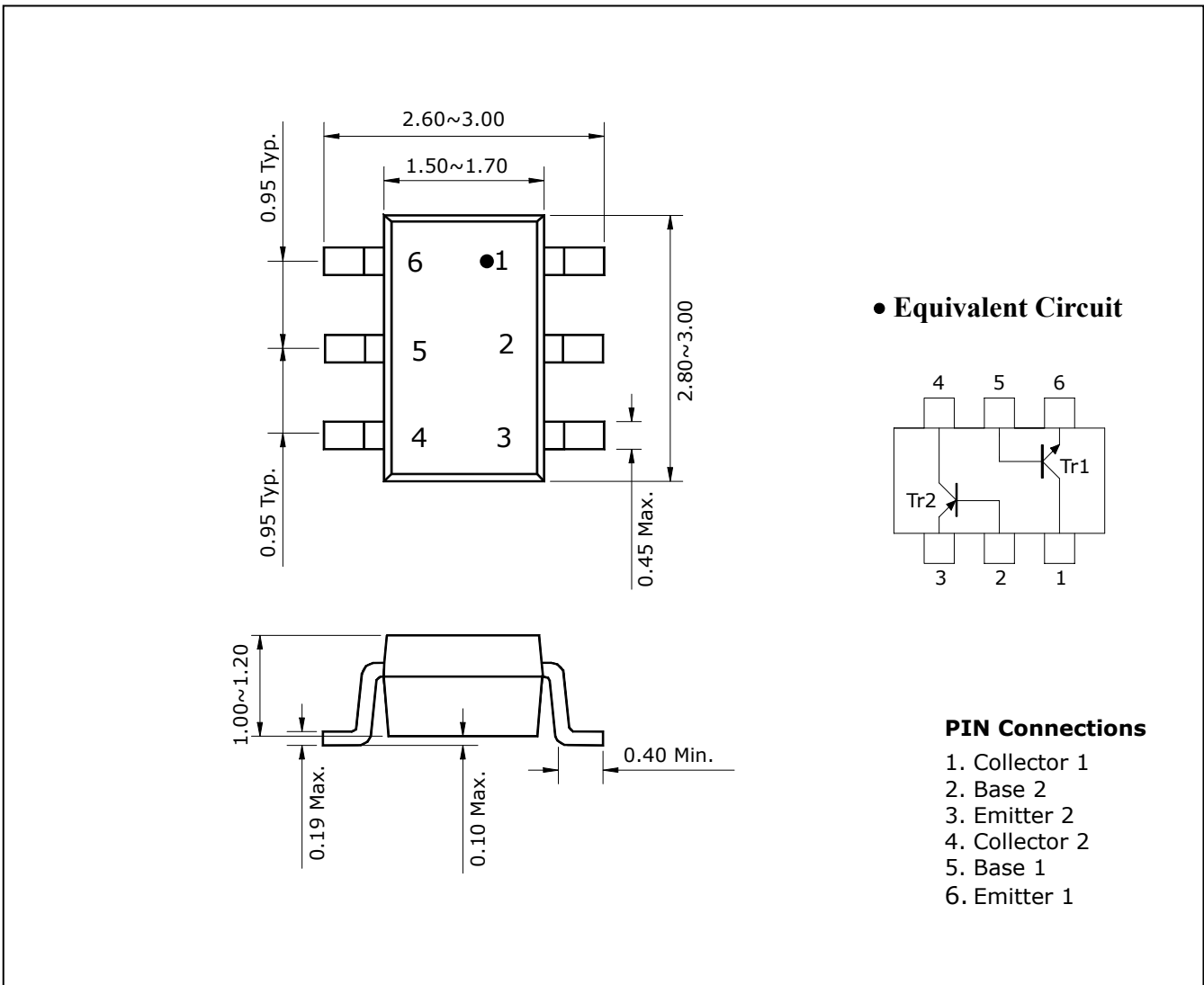
- Reduce quantity of parts and mounting cost
- High collector power dissipation :  $P_C=300\text{mW}(\text{Max.})$
- Both 2SA1980 chip and 2SC5343 chip in SOT-26 Package

**Ordering Information**

Type NO.	Marking	Package Code
SUT462N	3X	SOT-26

**Outline Dimensions**

unit : mm



## Absolute Maximum Ratings [Tr1, Tr2]

(Ta=25°C)

Characteristic	Symbol	Rating		Unit
		Tr1	Tr2	
Collector-base voltage	$V_{CBO}$	60	-50	V
Collector-emitter voltage	$V_{CEO}$	50	-50	V
Emitter-base voltage	$V_{EBO}$	5	-5	V
Collector current	$I_C$	150	-150	mA
Collector power dissipation	$P_C^*$	300		mW
Junction temperature	$T_J$	150		°C
Storage temperature range	$T_{stg}$	-55~150		°C

\*: Total rating

## Electrical Characteristics [Tr1]

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C=1mA, I_B=0$	50	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$	-	-	0.1	μA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$	-	-	0.1	μA
DC current gain	$h_{FE}$	$V_{CE}=6V, I_C=2mA$	120	-	400	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$	-	-	0.25	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=6V, I_C=2mA$	-	0.65	-	V
Transition frequency	$f_T$	$V_{CE}=10V, I_C=10mA$	-	200	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$	-	2	-	pF

## Electrical Characteristics [Tr2]

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	$BV_{CEO}$	$I_C=-1mA, I_B=0$	-50	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-50V, I_E=0$	-	-	-0.1	μA
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-5V, I_C=0$	-	-	-0.1	μA
DC current gain	$h_{FE}$	$V_{CE}=-6V, I_C=-2mA$	120	-	400	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100mA, I_B=-10mA$	-	-	-0.3	V
Base-emitter voltage	$V_{BE}$	$V_{CE}=-6V, I_C=-2mA$	-	-0.65	-	V
Transition frequency	$f_T$	$V_{CE}=-10V, I_C=-10mA$	-	200	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10V, I_E=0, f=1MHz$	-	4	-	pF

# Electrical Characteristic Curves

[Tr1]

Fig. 1  $I_C - V_{BE}$

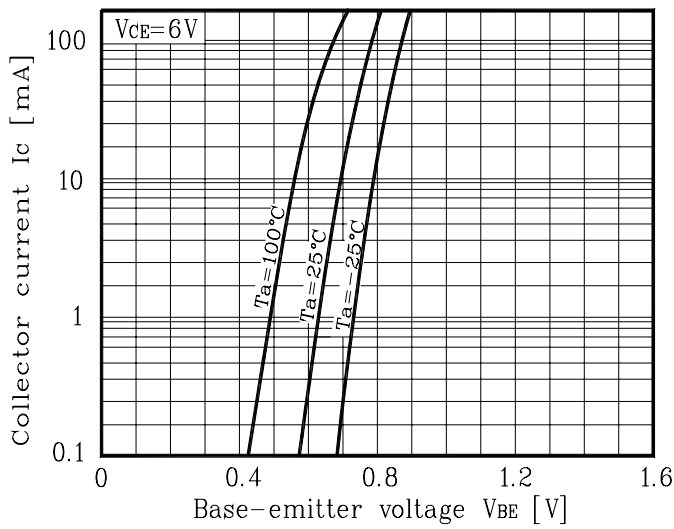


Fig. 3  $h_{FE} - I_C$

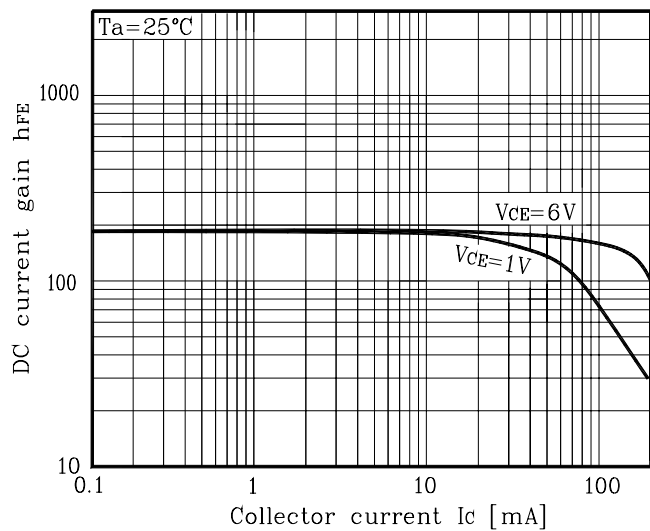


Fig. 2  $I_C - V_{CE}$

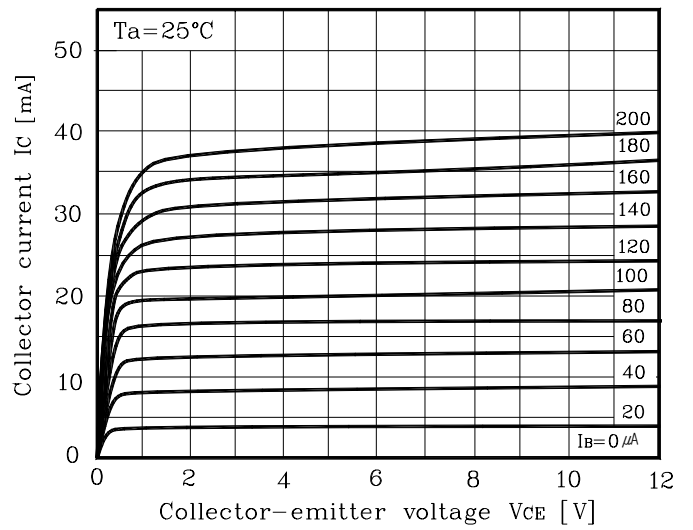
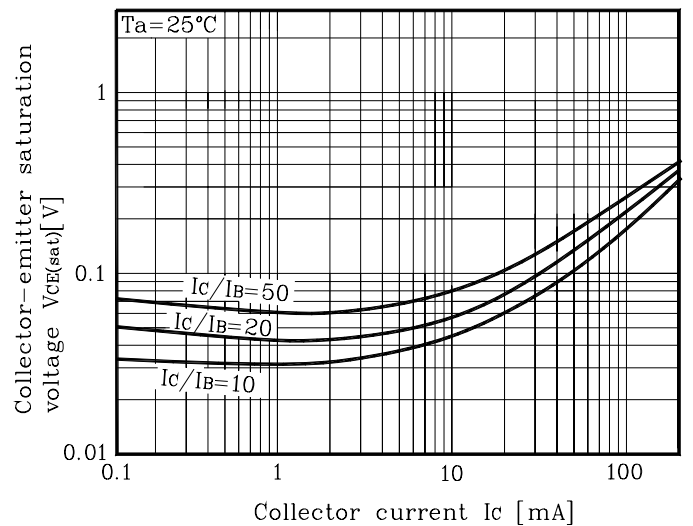


Fig. 4  $V_{CE(sat)} - I_C$



[Tr2]

Fig. 1  $I_C - V_{BE}$

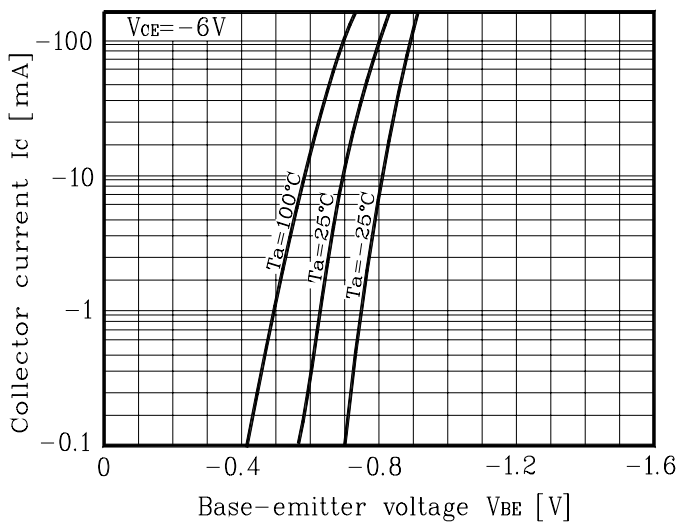
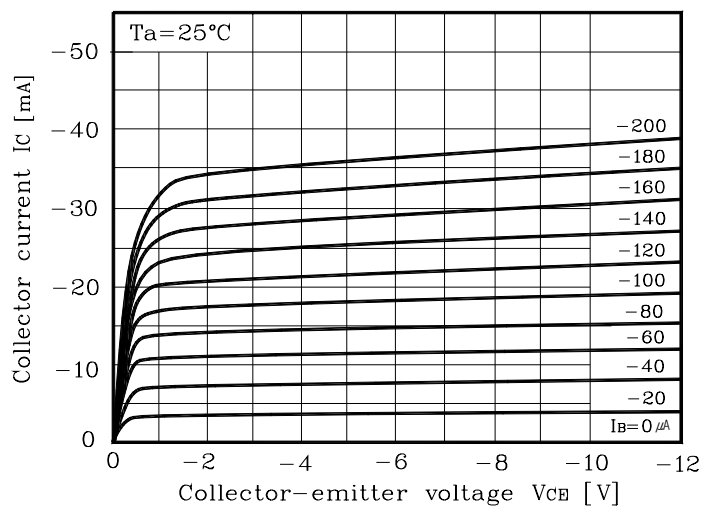
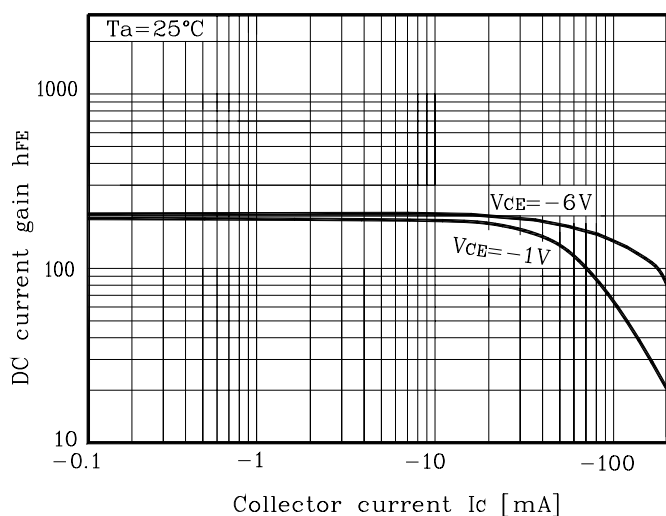
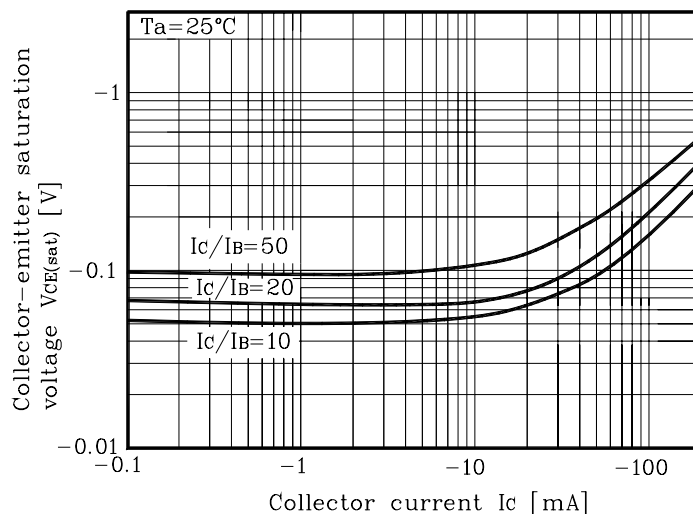


Fig. 2  $I_C - V_{CE}$



## Electrical Characteristic Curves

Fig. 3  $h_{FE}-I_C$ Fig. 4  $V_{CE(sat)}-I_C$ 

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