

# SUT507EF

#### Epitaxial planar NPN silicon transistor

### **Description**

• Complex type bipolar transistor

#### **Feature**

- Very small package save PCB area
- Reduce quantity of parts and mounting cost
- Two 2SC5343 chips in SOT-563F package

# D. I. COTTACE

Package: SOT-563F

## **Ordering Information**

Type NO.	Marking	Package Code
SUT507EF	6X□	SOT-563F

□ : Year & Week Code

## **Equivalent circuit & PIN Connections**

#### • Equivalent Circuit

# 3 2 1 Tr2 •

#### **PIN Connections**

- 1. Emitter 1
- 2. Emitter 2
- 3. Base 2
- 4. Collector 2
- 5. Base 1
- 6. Collector 1

## Absolute Maximum Ratings [Tr1, Tr2]

(Ta=25°C)

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Characteristic	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	60	V
Collector-emitter voltage	V <sub>CEO</sub>	50	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_{C}$	150	mA
Collector power dissipation	P <sub>C</sub> **	150	mW
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55~150	°C

\*: Total rating

KSD-T5U001-001

# SUT507EF

# **Electrical Characteristics** [Tr1,Tr2]

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Тур.	Max.	Unit
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	50	-	-	V
Collector cut-off current	$I_{CBO}$	V <sub>CB</sub> =60V, I <sub>E</sub> =0	-	-	0.1	μΑ
Emitter cut-off current	$I_{EBO}$	$V_{EB}$ =5V, $I_{C}$ =0	-	-	0.1	μΑ
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =6V, I <sub>C</sub> =2mA	120	-	400	1
Collector-emitter saturation voltage	$V_{CE(sat)}$	I <sub>C</sub> =100mA, I <sub>B</sub> =10mA	-	-	0.25	V
Base-emitter voltage	$V_{BE}$	V <sub>CE</sub> =6V, I <sub>C</sub> =2mA	-	0.65	-	V
Transition frequency	f⊤	V <sub>CE</sub> =10V, I <sub>C</sub> =10mA	-	200	-	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz	-	2	-	pF

KSD-T5U001-001 2

## **Electrical Characteristic Curves**

#### [Tr1, Tr2]

Fig. 1  $I_C$  - $V_{BE}$ 

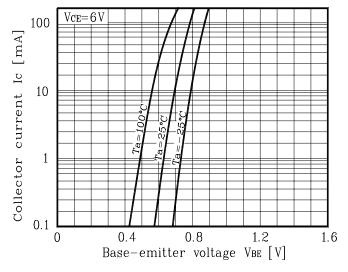


Fig. 3  $h_{\text{FE}}$ - $I_{\text{C}}$ 

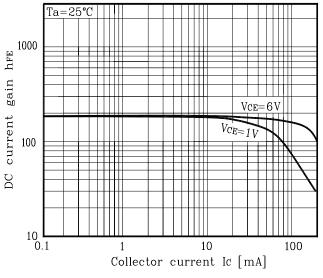


Fig. 5  $h_{FE}$  -  $I_{C}$ 

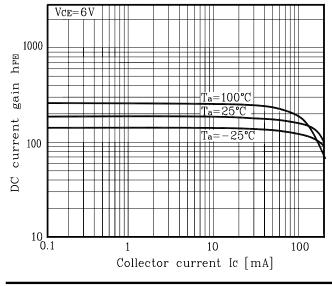


Fig. 2  $I_C$  - $V_{CE}$ 

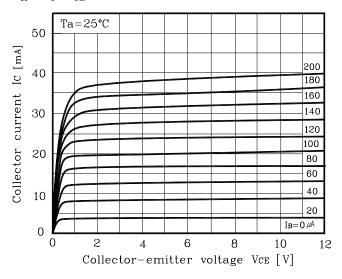
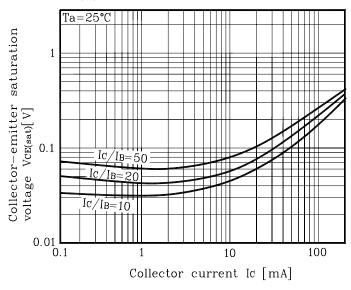
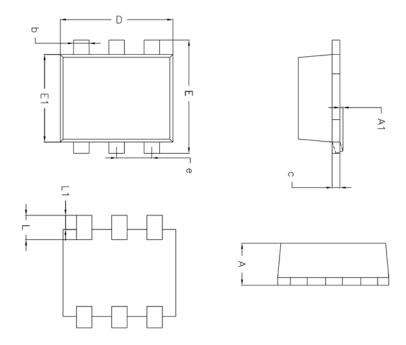


Fig. 4  $V_{CE(sat)}$ - $I_{C}$ 



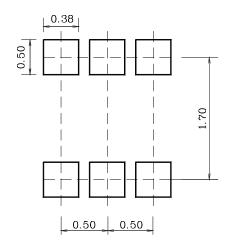
KSD-T5U001-001 3

# **Outline Dimension**



SYMBOL	MILLIMETERS			
	MINIMUM	NOMINAL	MAXIMUM	NOTE
Α	0.53	0.58	0.62	
A1	0.00	_	0.10	
A2	_	_	_	
b	0.15	0.20	0.30	
С	0.10	0.11	0.18	
D	1.50	1.60	1.70	
E	1.50	1.60	1.70	
E1	1.10	1.20	1.30	
е	0.50 BSC			
L	0.25	0.35	0.45	
L1	0.13	0.20	0.27	

## \* Recommend PCB solder land [Unit: mm]



## SUT507EF

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KSD-T5U001-001 5