

SUT464M

Epitaxial planar PNP/NPN silicon transistor

Descriptions

• Complex type bipolar transistor

Features

- Reduce quantity of parts and mounting cost
- High collector power dissipation : P_C=300mW(Max.)
- Both 2SA1980 chip and 2SC5343 chip in SOT-25 package

Package: SOT-25

Ordering Information

Type NO.	Marking	Package Code
SUT464M	X4 □	SOT-25

□: Year & Week Code

Equivalent circuit & PIN Connections

• Equivalent Circuit	
3 4 5	PIN Connections
Tr2 Tr1	1. Collector 1 2. Collector 2 3. Base 2 4. Emitter 1,2 5. Base 1

Absolute Maximum Ratings [Tr1, Tr2]

(Ta=25°C)

Characteristic	Symbol	Rating		Unit	
Characteristic		Tr1	Tr2	Omt	
Collector-base voltage	V_{CBO}	-50	60	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	Tı	150		°C	
Storage temperature range	T_{stg}	-55~150		°C	

*: Total rating

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Electrical Characteristics [Tr1]

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Тур.	Max.	Unit
Collector-emitter breakdown voltage	BV _{CEO}	$I_C=-1$ mA, $I_B=0$	-50	1	ı	V
Collector cut-off current	I_{CBO}	V _{CB} =-50V, I _E =0	ı	ı	-0.1	μА
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V$, $I_{C} = 0$	1	1	-0.1	μА
DC current gain	h _{FE}	V_{CE} =-6V, I_{C} =-2mA	120	ı	400	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	I _C =-100mA, I _B =-10mA	ı	ı	-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	ı	MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz		4	ı	pF

Electrical Characteristics [Tr2]

(Ta=25°C)

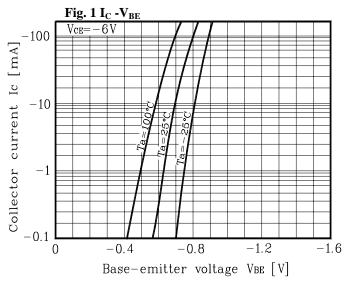
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Characteristic	Symbol	Test Condition	Min.	Тур.	Max.	Unit
Collector-emitter breakdown voltage	BV _{CEO}	$I_C=1$ mA, $I_B=0$	50	1	ı	V
Collector cut-off current	I_{CBO}	V _{CB} =60V, I _E =0	1	1	0.1	μА
Emitter cut-off current	I_{EBO}	V _{EB} =5V, I _C =0	1	1	0.1	μА
DC current gain	h _{FE}	V _{CE} =6V, I _C =2mA	120	ı	400	-
Collector-emitter saturation voltage	$V_{\text{CE(sat)}}$	I _C =100mA, I _B =10mA	ı	ı	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	- 1	200		MHz
Collector output capacitance	C _{ob}	V_{CB} =10V, I_{E} =0, f=1MHz	- 1	2	ı	pF

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Electrical Characteristic Curves

[Tr1]



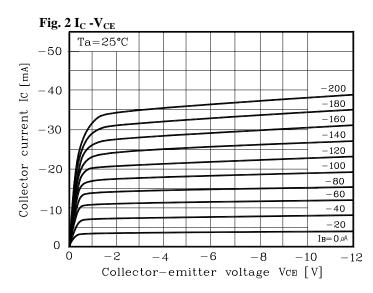


Fig. 3 h_{FE} - I_{C}

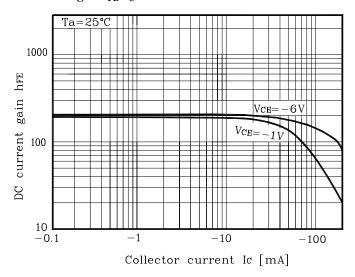
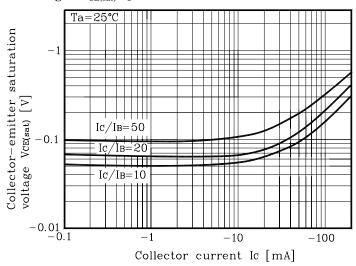


Fig. 4 $V_{\text{CE(sat)}}$ - I_{C}



[Tr2]

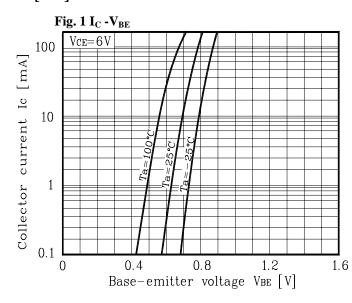
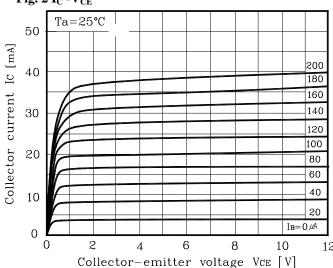


Fig. 2 I_C - V_{CE}



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Electrical Characteristic Curves

Fig. 3 h_{FE} - I_{C}

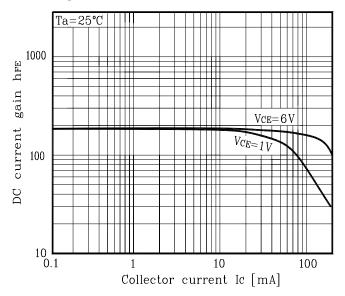
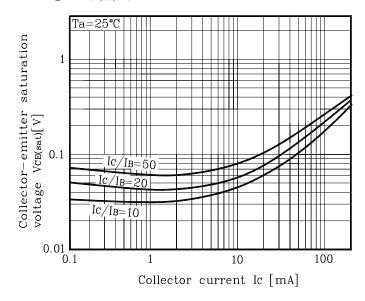
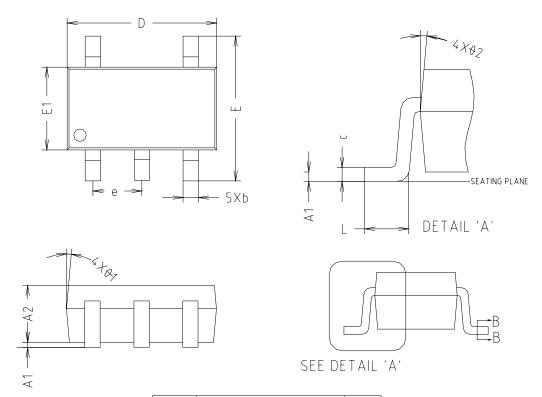


Fig. 4 $V_{CE(sat)}$ - I_C

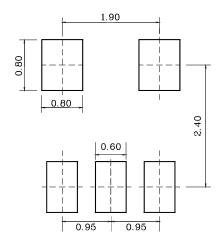


SOT-25 Outline Dimension(mm)



SYMBOL MILLIMETERS				NOTE
	MINIMUM	NOMINAL	MAXIMUM	1,012
Α1	0.000	0.050	0.100	
Α2	1.000	1.100	1.200	
С	0.110	0.150	0.190	
c1	0.085	0.125	0.165	
D	2.800	2.900	3.000	
E	2.600	2.800	3.000	
E1	1.500	1.600	1.700	
е	0.930	0.950	0.970	
L	0.400	-	-	
0 1		5° REF		
0 2		5° REF		

* Recommend PCB solder land [Unit: mm]



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