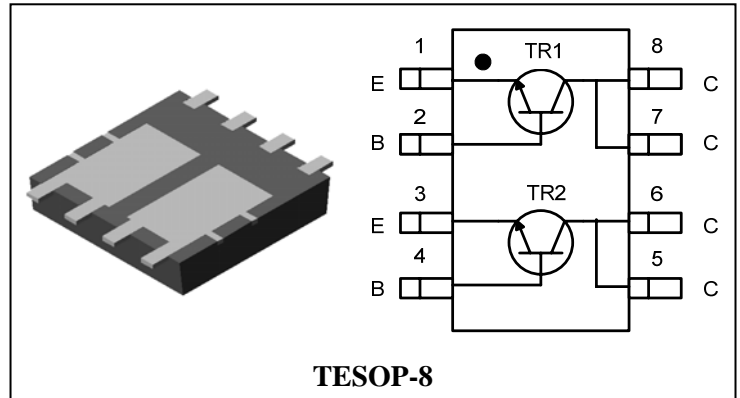


## Descriptions

- General purpose amplifier
- Recommended for LED Drive Application

## Features

- Thermally Enhanced Power PKG
- Low saturation:  $V_{CE(sat)} = 0.5V$  Max
- 2 NPN chips in TESOP-8 Package



## Ordering Information

Type NO.	Marking	Package Code
SUT121G	SUT121□	TESOP-8

□ : Year & Week Code

## Absolute maximum ratings(TR1, TR2)

( $T_a = 25^\circ C$ )

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	120	V
Collector-Emitter voltage	$V_{CEO}$	120	V
Emitter-Base voltage	$V_{EBO}$	6	V
Collector current	$I_C$	1	A(DC)
	$I_{CP}^*$	2	A(Pulse)
Collector power dissipation	$P_C(T_a = 25^\circ C)^{**}$	0.75	W/TOTAL
		0.55	W/ELEMENT
	$P_C(T_c = 25^\circ C)$	7.5	W/TOTAL
Junction temperature	$T_J$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55~150	$^\circ C$

\* : Single pulse,  $t_p = 300 \mu s$

\*\* : Each terminal mounted on a recommended solder land

## Electrical Characteristics(TR1, TR2)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	$BV_{CBO}$	$I_C = 100 \mu A, I_E = 0$	120	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C = 1 mA, I_B = 0$	120	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E = 100 \mu A, I_C = 0$	6	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 120V, I_E = 0$	-	-	0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$	-	-	0.1	$\mu A$
DC current gain	$h_{FE}^{1)}$	$V_{CE} = 5V, I_C = 30 mA$	200	-	400	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 mA, I_B = 50 mA$	-	-	0.5	V
Base-Emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 mA, I_B = 50 mA$	-	-	1.2	V
Transition frequency	$f_T$	$V_{CE} = 5V, I_C = 50 mA$	-	170	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1 MHz$	-	10	-	pF

Note 1)  $h_{FE}$  Rank : 200~400 only

Electrical Characteristic Curves(TR1, TR2)

Fig. 1  $P_C - T_a$

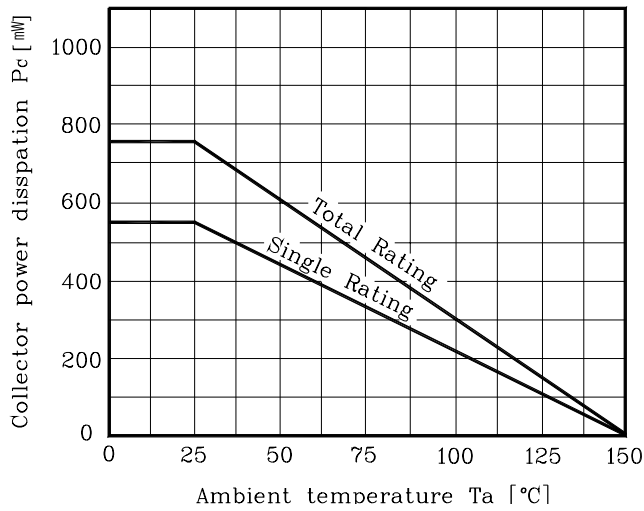


Fig. 2  $I_C - V_{BE}$

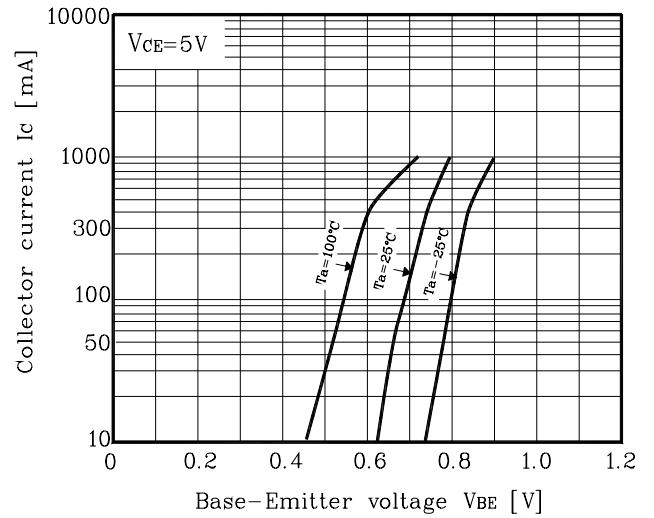


Fig. 3  $V_{CE(sat)} - I_C$

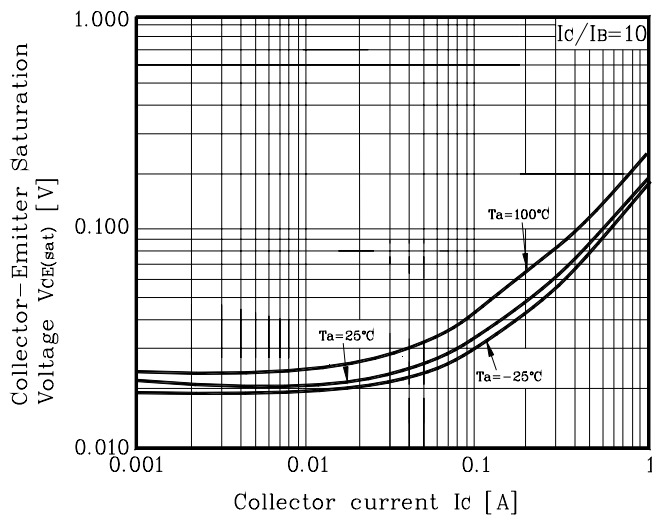


Fig. 4  $I_C - V_{CE}$

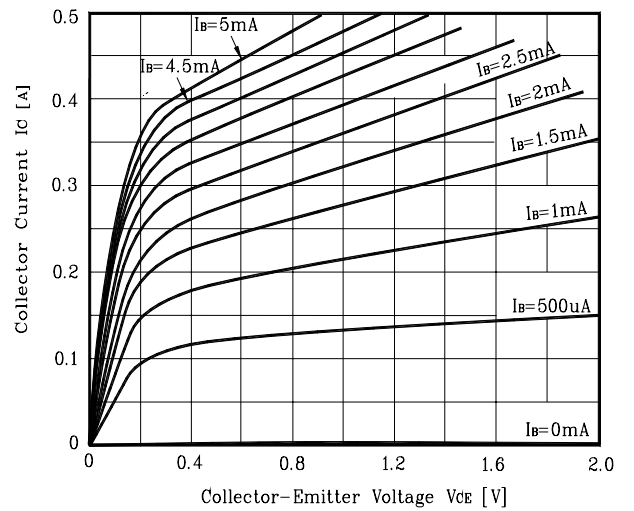


Fig. 5  $I_C - V_{CE}$

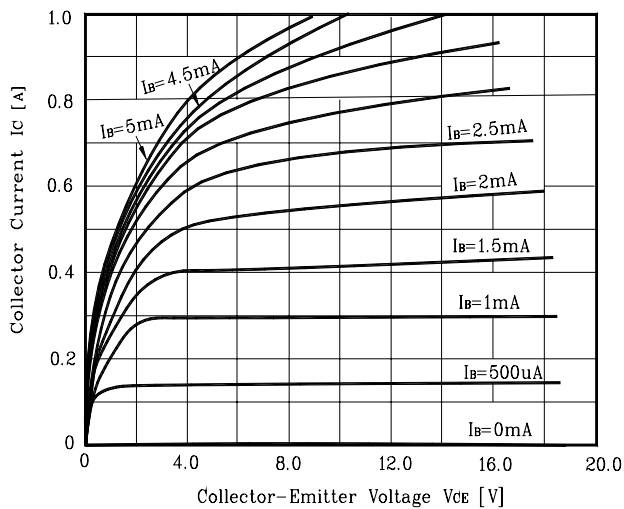
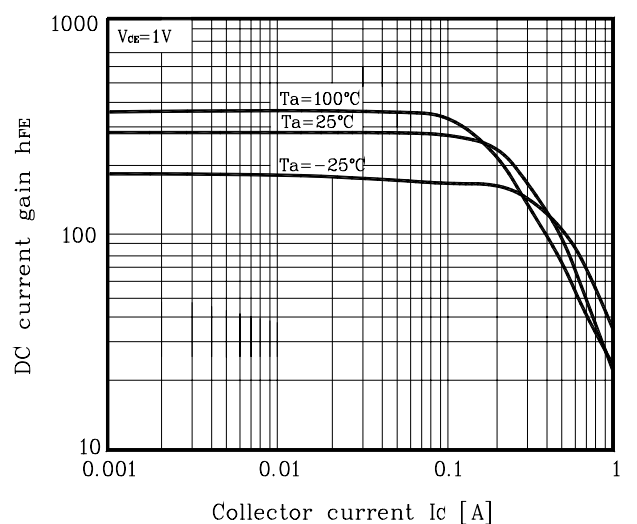


Fig. 6  $h_{FE} - I_C$



Electrical Characteristic Curves

Fig. 7  $h_{FE}-I_C$

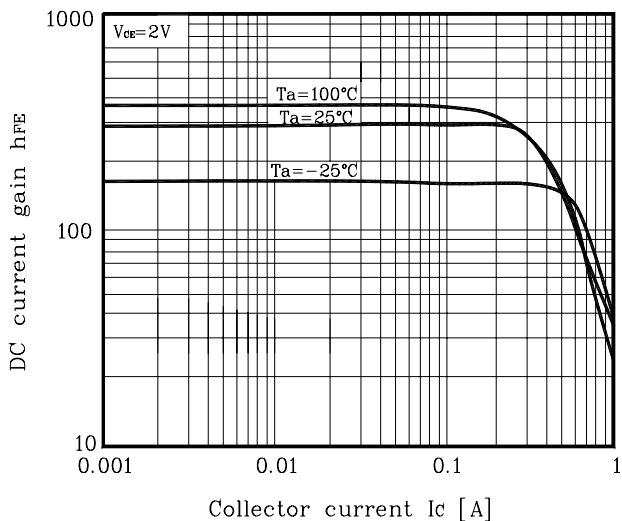


Fig. 8  $h_{FE}-I_C$

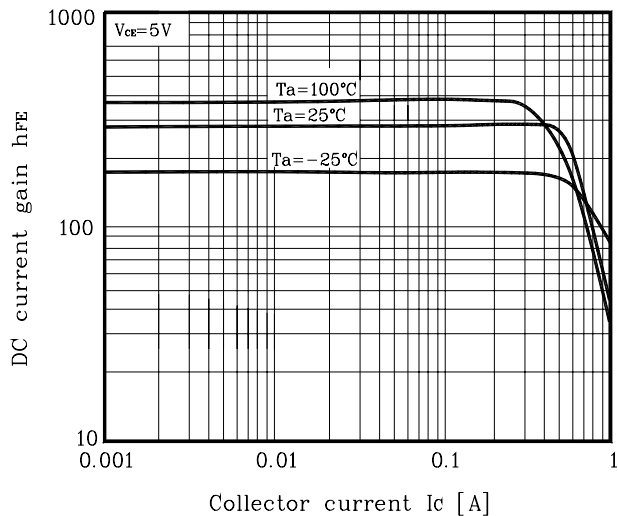


Fig. 9  $h_{FE}-I_C$

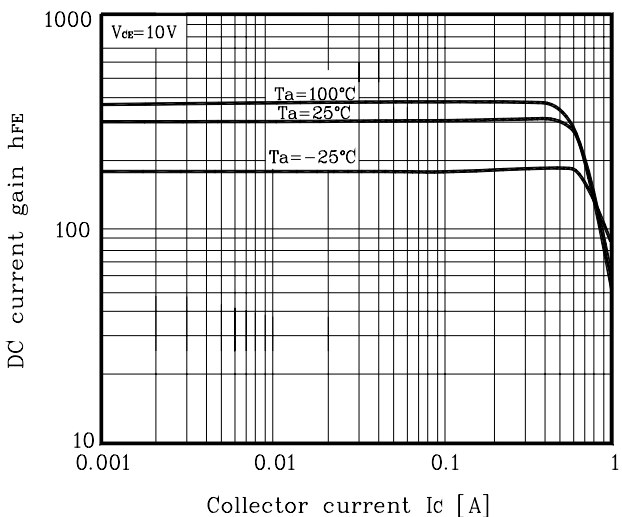


Fig. 10  $C_{ob} - V_{CB}$

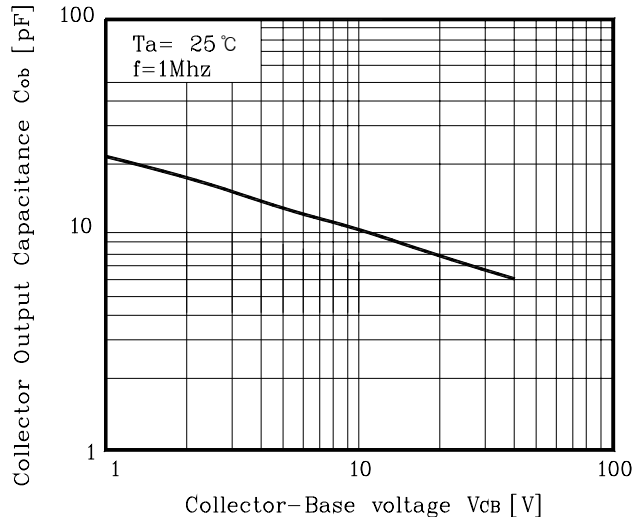


Fig. 11  $f_T - I_C$

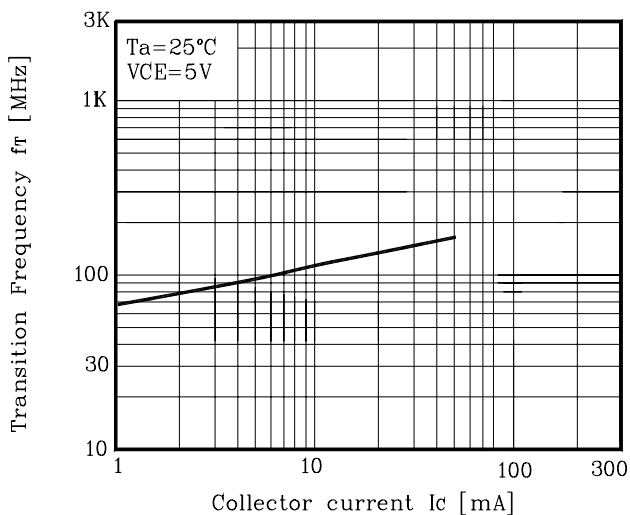
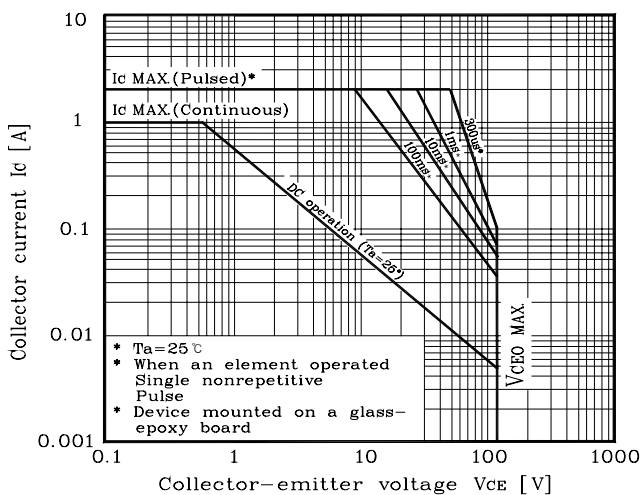
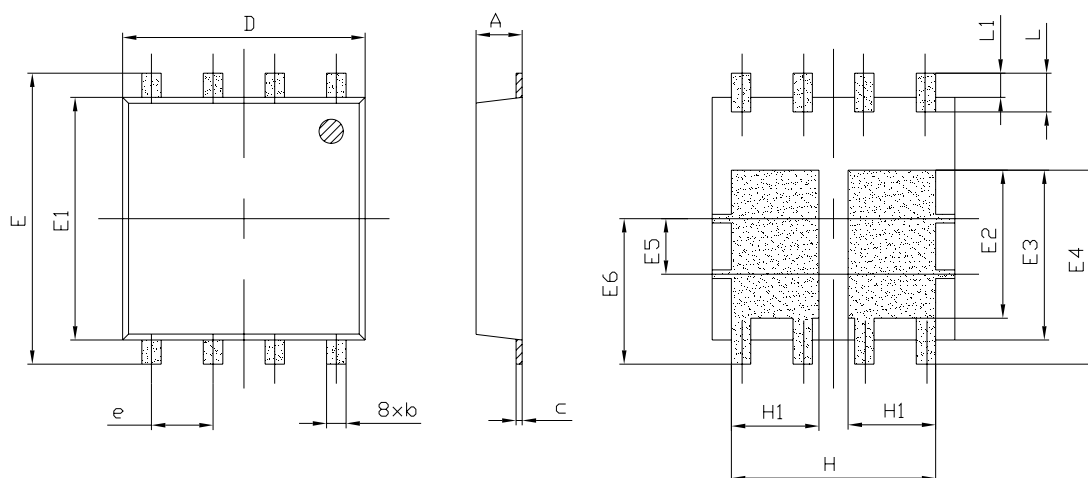


Fig. 12 Safe operating Area

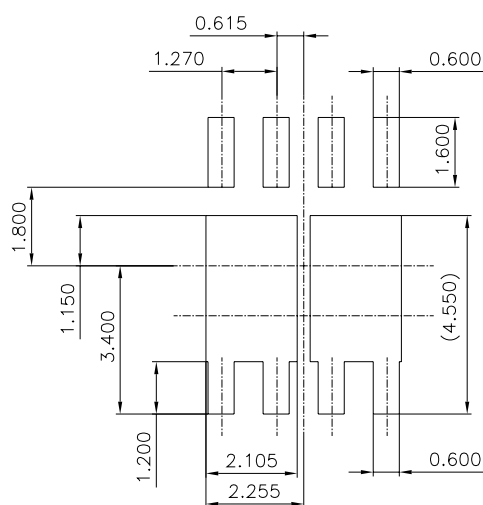


## Outline Dimension



SYMBOL	MILLIMETER(mm)			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.900	0.950	1.000	
b	0.350	0.400	0.500	
c	0.077	0.127	0.157	
D	4.900	5.000	5.100	
E	5.850	6.000	6.150	
E1	4.900	5.000	5.100	
E2	2.850	3.050	3.250	
E3	3.300	3.500	3.700	
E4	3.800	4.000	4.200	
E5	1.145 TYP			
E6	3.000 TYP			
e	1.270 TYP			
H	4.210 TYP			
H1	1.805 TYP			
L	0.650	0.800	0.950	
L1	0.350	0.500	0.650	

※Recommend PCB solder land [Unit: mm]



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