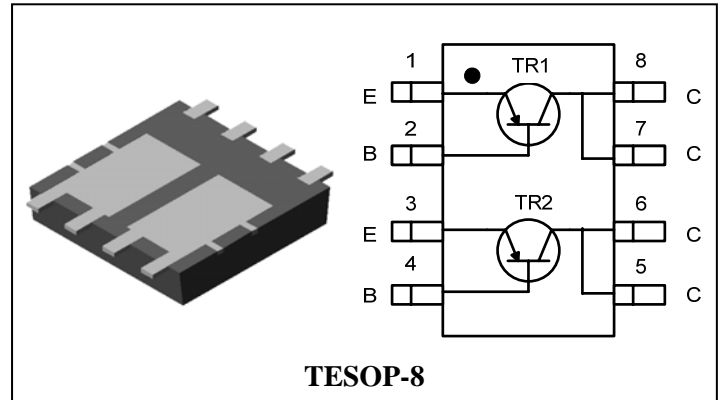


Descriptions

- General purpose amplifier
- Recommended for LED Drive Application

Features

- Thermally Enhanced Power PKG
- Low saturation voltage: $V_{CE(sat)} = -0.15V$ Typ.
@ $I_C = -1A$, $I_B = -50mA$
- Large collector current capacity: $I_C = -2A$
- 2 PNP chips in TESOP-8 Package



Ordering Information

Type NO.	Marking	Package Code
SUTP052G	SUTP052□	TESOP-8

□ : Year & Week Code

Absolute maximum ratings(TR1, TR2)

($T_a = 25^\circ C$)

Characteristic	Symbol	Ratings	Unit
Collector-base voltage	V_{CBO}	-50	V
Collector-emitter voltage	V_{CEO}	-50	V
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-2	A(DC)
	I_{CP}^*	-4	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-emitter breakdown voltage		BV_{CEO}	$I_C = -1\text{mA}, I_B = 0$	-50	-	-	V
Collector cut-off current		I_{CBO}	$V_{CB} = -50\text{V}, I_E = 0$	-	-	-0.1	μA
Emitter cut-off current		I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$	-	-	-0.1	μA
DC current gain		$h_{FE}^{1)}$	$V_{CE} = -2\text{V}, I_C = -0.5\text{A}^*$	120	-	240	
		h_{FE}	$V_{CE} = -2\text{V}, I_C = -1.5\text{A}^*$	40	-	-	
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C = -1\text{A}, I_B = -0.05\text{A}^*$	-	-	-0.35	V
Base-emitter saturation voltage		$V_{BE(sat)}$	$I_C = -1\text{A}, I_B = -0.05\text{A}^*$	-	-	-1.2	V
Transition frequency		f_T	$V_{CE} = -2\text{V}, I_C = -0.05\text{A}$	-	215	-	MHz
Collector output capacitance		C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$	-	24	-	pF
Switching Time	Turn-on Time	t_{on}		-	100	-	nS
	Storage Time	t_{stg}		-	300	-	
	Fall Time	t_f		-	50	-	

Note 1) h_{FE} Rank : 120~240 only

*: Pulse test : $t_p \leq 300\mu\text{s}$, Duty cycle $\leq 2\%$

Electrical Characteristic Curves(TR1, TR2)

Fig. 1 $P_C - T_a$

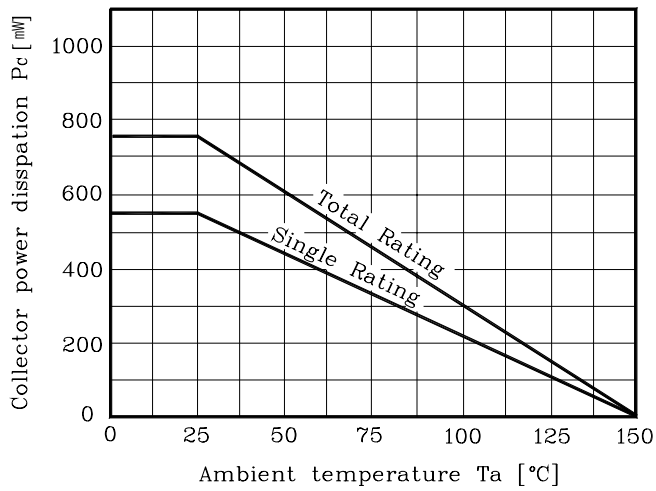


Fig. 2 $I_C - V_{BE}$

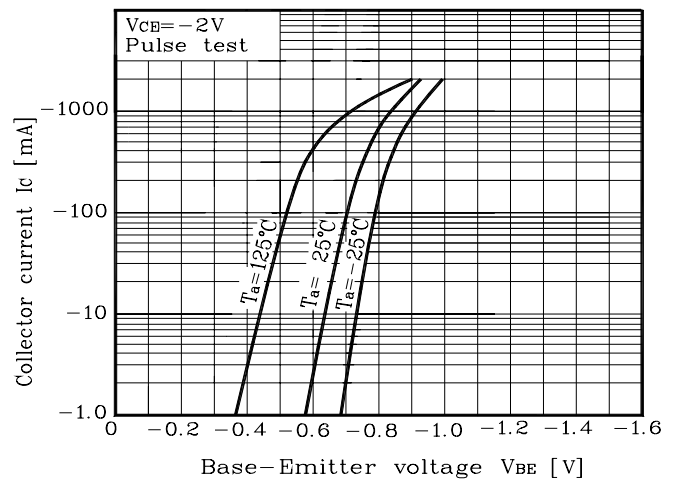


Fig. 3 $I_C - V_{CE}$

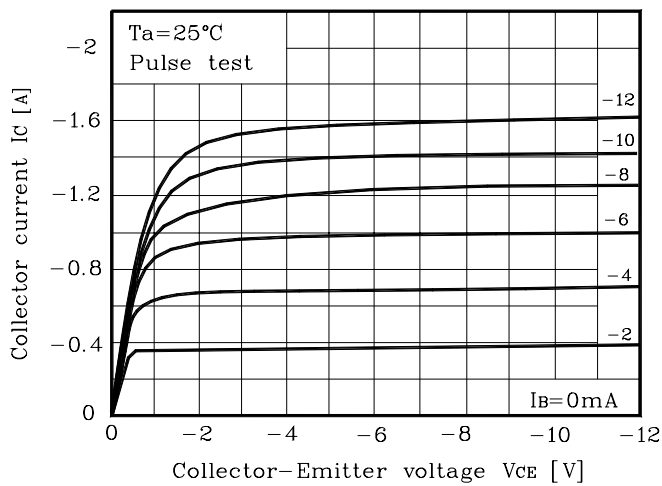


Fig. 4 $h_{FE} - I_C$

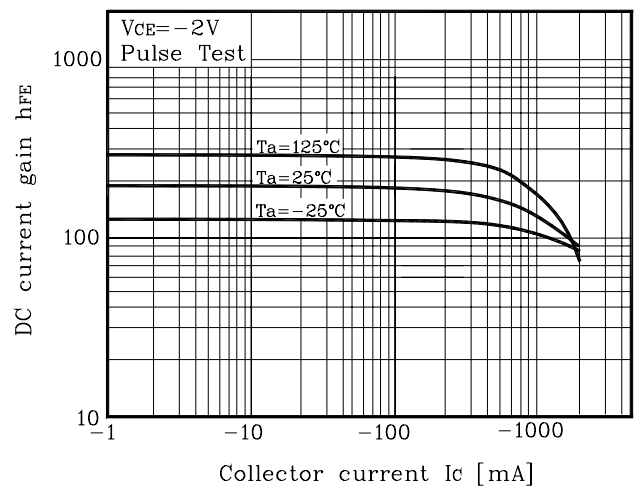


Fig. 5 $V_{CE(sat)} - I_C$

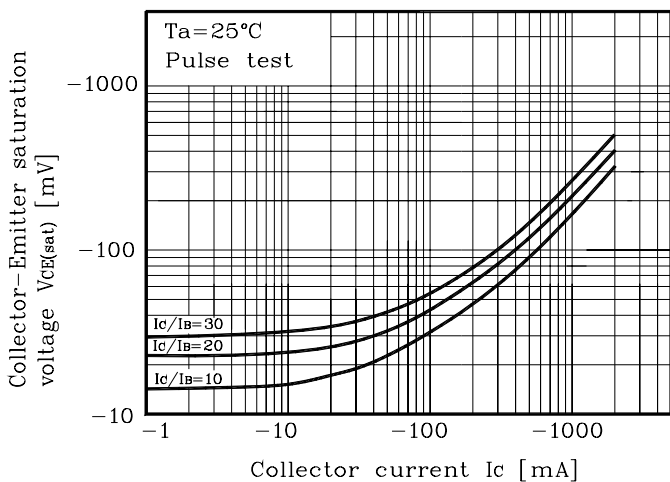
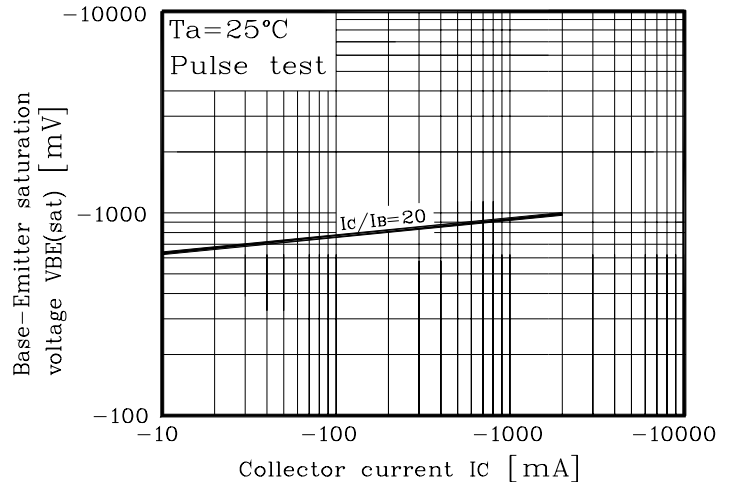


Fig. 6 $V_{BE(sat)} - I_C$



Electrical Characteristic Curves(TR1, TR2)

Fig. 7 $C_{ob} - V_{CB}$

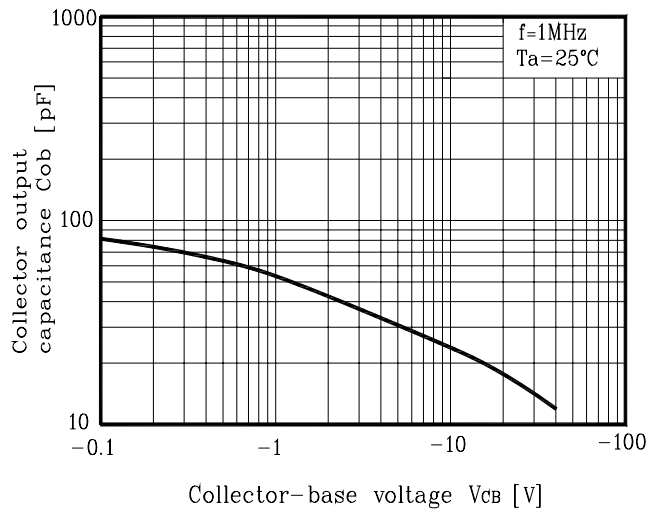
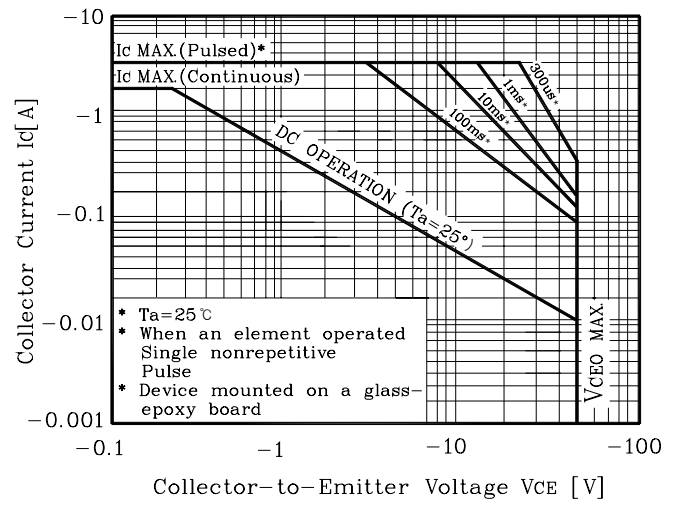


Fig. 8 Safe Operating Area



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