

XP01554 (XP1554)

Silicon NPN epitaxial planar type

For high-speed switching

■ Features

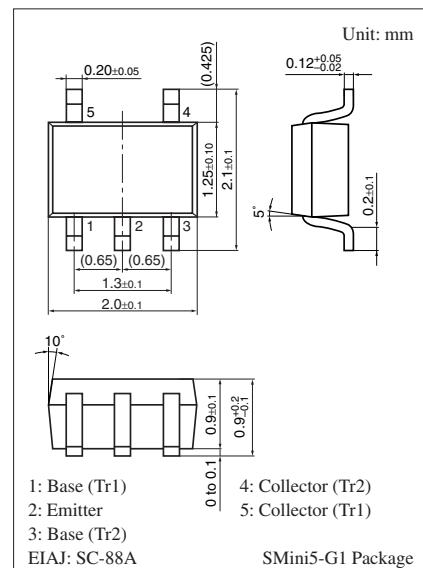
- Two elements incorporated into one package (Emitter-coupled transistors)
- Reduction of the mounting area and assembly cost by one half
- Low collector-emitter saturation voltage $V_{CE(sat)}$

■ Basic Part Number

- 2SC3757 \times 2

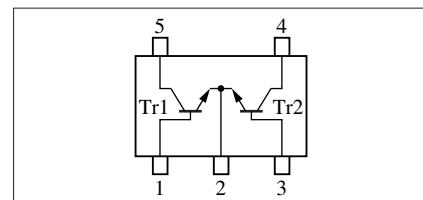
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	40	V
Collector-emitter voltage (E-B short)	V_{CEO}	40	V
Emitter-base voltage (Collector open)	V_{CBO}	5	V
Collector current	I_C	100	mA
Peak collector current	I_{CP}	300	mA
Total power dissipation	P_T	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol: EU

Internal Connection

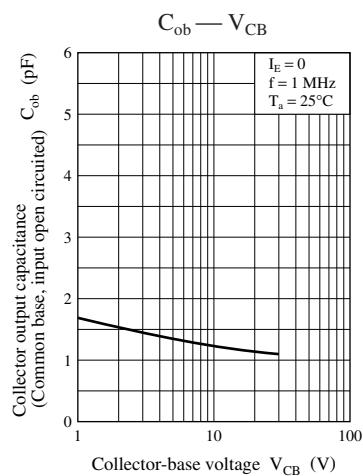
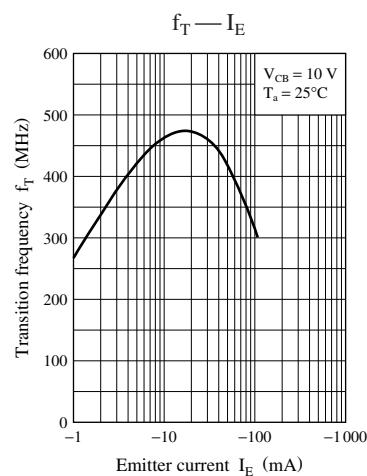
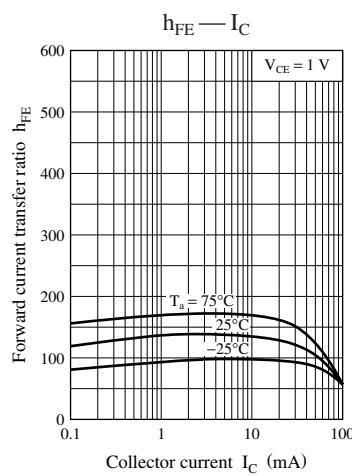
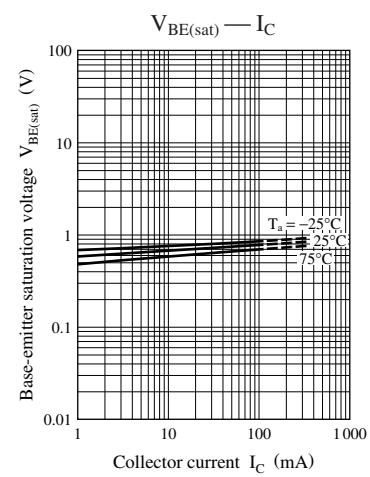
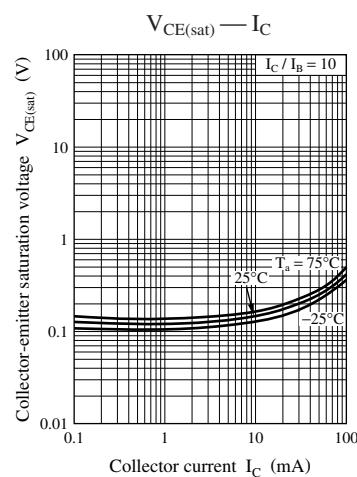
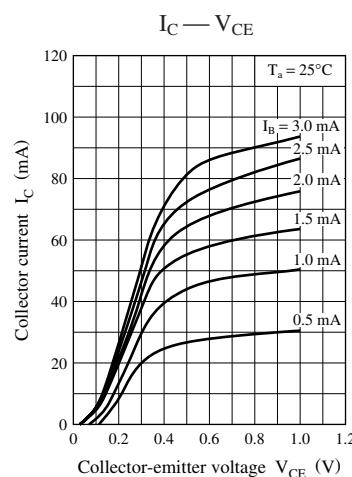
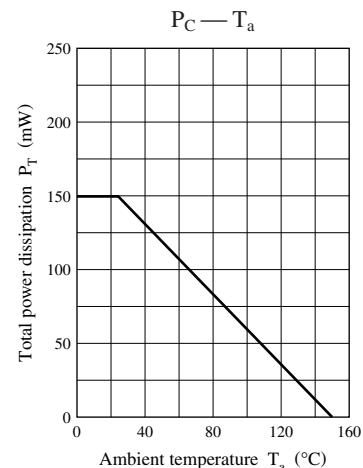
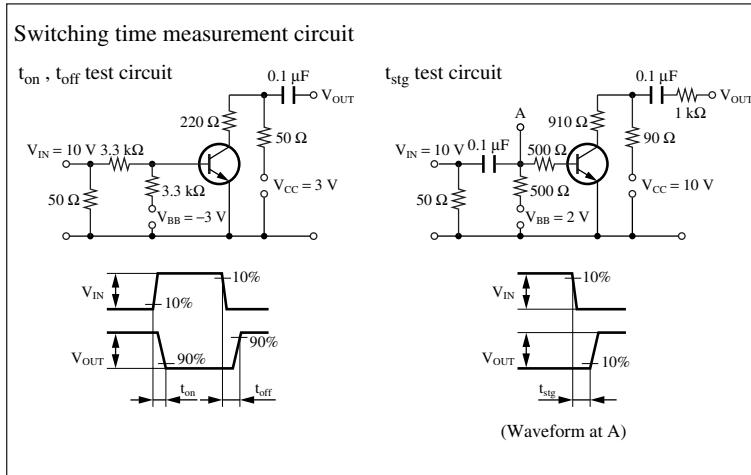


■ Electrical Characteristics $T_a = 25^\circ\text{C} \pm 3^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = 15 \text{ V}$, $I_E = 0$			0.1	μA
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = 4 \text{ V}$, $I_C = 0$			0.1	μA
Forward current transfer ratio	h_{FE}	$V_{CE} = 1 \text{ V}$, $I_C = 10 \text{ mA}$	60		200	—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10 \text{ mA}$, $I_B = 1 \text{ mA}$		0.17	0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10 \text{ mA}$, $I_B = 1 \text{ mA}$			1.0	V
Transition frequency	f_T	$V_{CB} = 10 \text{ V}$, $I_E = -10 \text{ mA}$, $f = 200 \text{ MHz}$		450		MHz
Collector output capacitance (Common base, input open circuited)	C_{ob}	$V_{CB} = 10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		2	6	pF
Turn-on time	t_{on}	Refer to the switching time measurement circuit		17		ns
Turn-off time	t_{off}			17		ns
Storage time	t_{stg}			10		ns

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

Note) The part number in the parenthesis shows conventional part number.



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