

# XP01554 (XP1554)

## Silicon NPN epitaxial planer transistor

For high speed switching

### Features

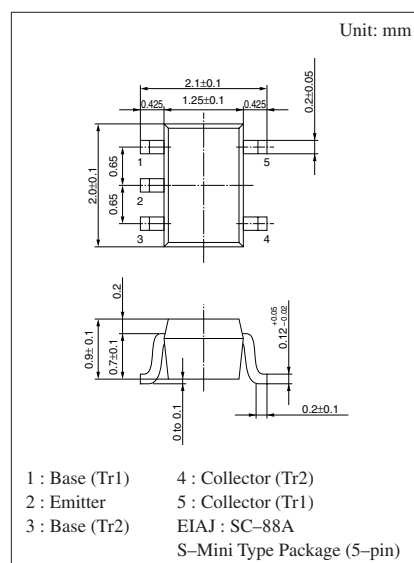
- Two elements incorporated into one package.  
(Emitter-coupled transistors)
- Reduction of the mounting area and assembly cost by one half.
- Low  $V_{CE(sat)}$ .

### Basic Part Number of Element

- 2SC3757  $\times$  2 elements

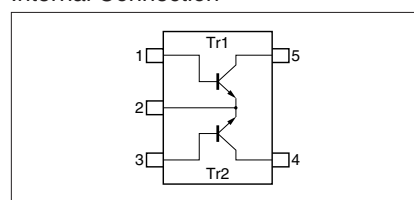
### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ )

	Parameter	Symbol	Ratings	Unit
Rating of element	Collector to base voltage	$V_{CBO}$	40	V
	Collector to emitter voltage	$V_{CES}$	40	V
	Emitter to base voltage	$V_{EBO}$	5	V
	Collector current	$I_C$	100	mA
	Peak collector current	$I_{CP}$	300	mA
Overall	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

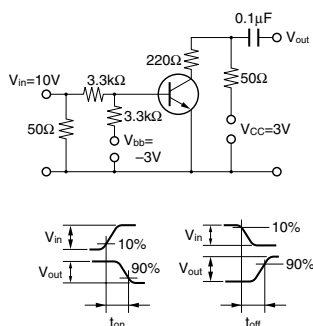
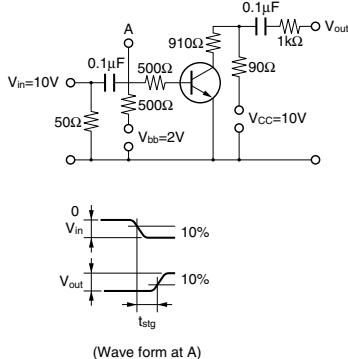
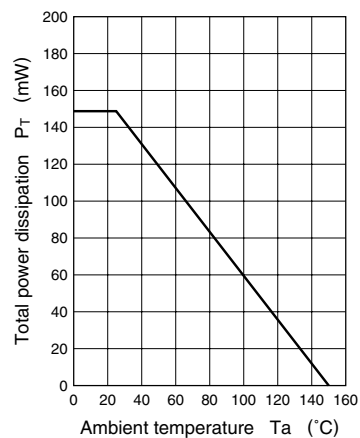
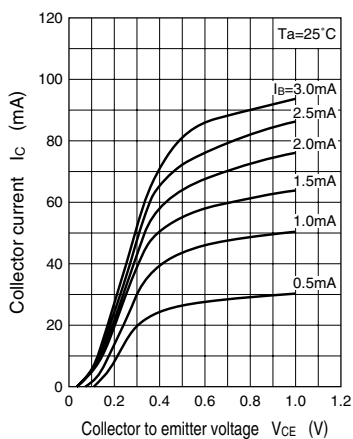
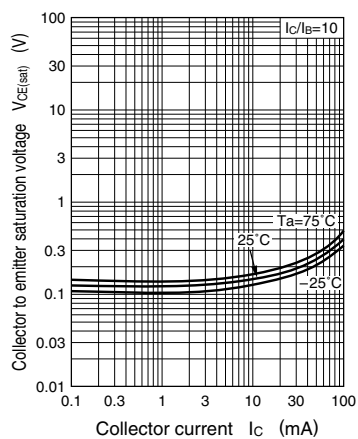
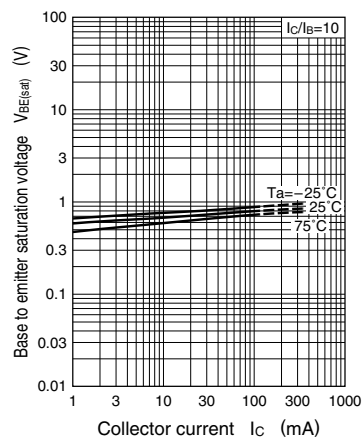
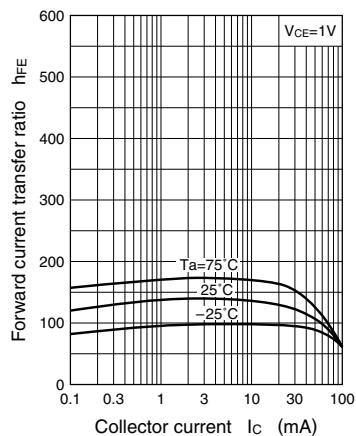
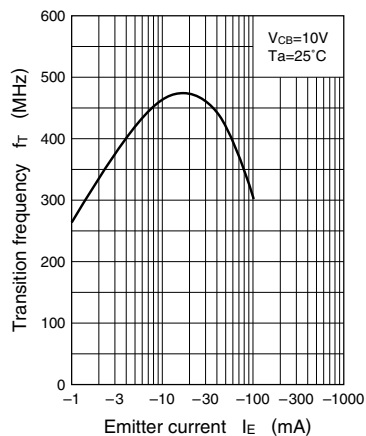
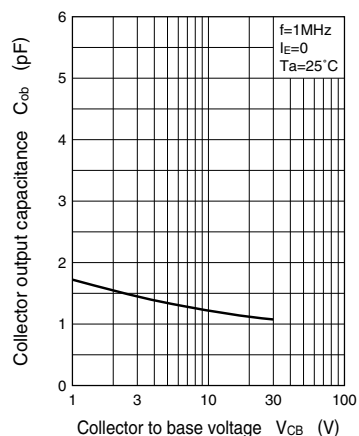
Internal Connection



### Electrical Characteristics ( $T_a=25^\circ\text{C}$ )

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 15\text{V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4\text{V}, I_C = 0$			0.1	$\mu\text{A}$
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 1\text{V}, I_C = 10\text{mA}$	60		200	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}, I_B = 1\text{mA}$		0.17	0.25	V
Base to 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	$C_{ob}$	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$		2	6	pF
Turn-on time	$t_{on}$			17		ns
Turn-off time	$t_{off}$			17		ns
Storage time	$t_{stg}$			10		ns

Note.) The Part number in the Parenthesis shows conventional part number.

$t_{on}, t_{off}$  Test Circuit $t_{stg}$  Test Circuit $P_T - T_a$  $I_C - V_{CE}$  $V_{CE(sat)} - I_C$  $V_{BE(sat)} - I_C$  $h_{FE} - I_C$  $f_T - I_E$  $C_{ob} - V_{CB}$ 

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