

# XP05554

## Silicon NPN epitaxial planer transistor

For high speed switching

### ■ Features

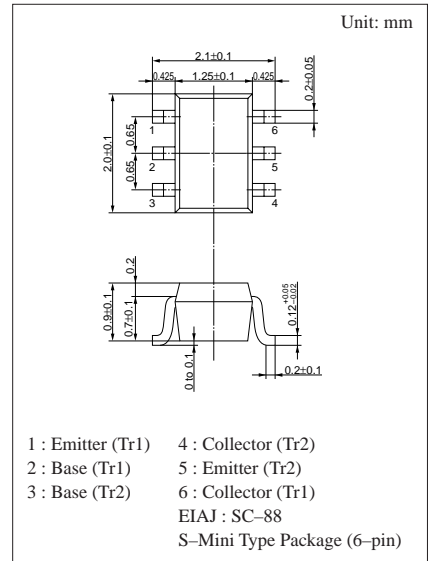
- For high speed switching.
- Low collector to emitter saturation voltage  $V_{CE(sat)}$ .
- Two elements incorporated into one package.

### ■ Basic Part Number of Element

- 2SC3757 × 2 elements

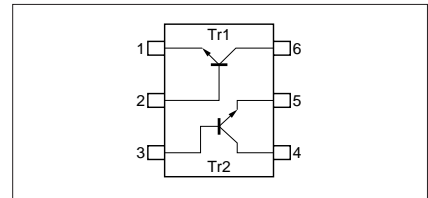
### ■ Absolute Maximum Ratings (Ta=25°C)

	Parameter	Symbol	Rated	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	°C
	Storage temperature	$T_{sig}$	-55 to +150	°C



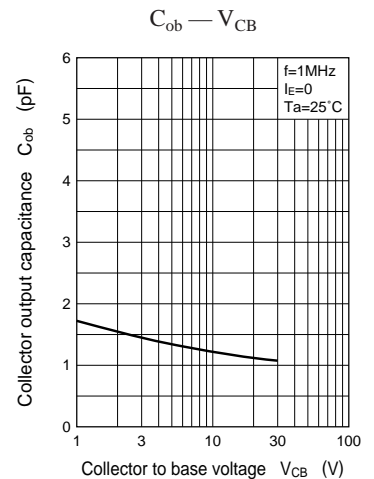
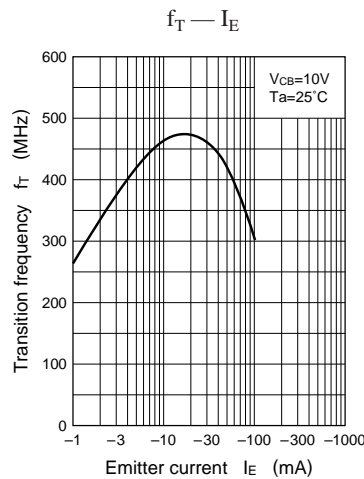
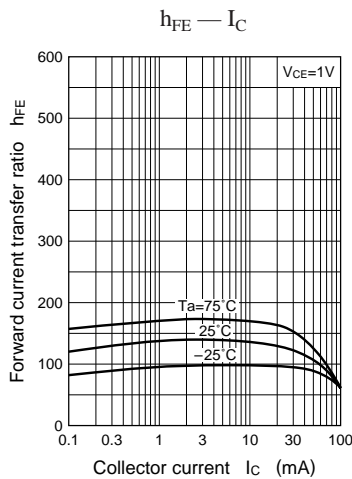
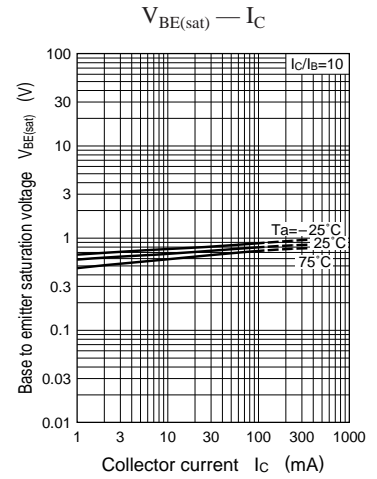
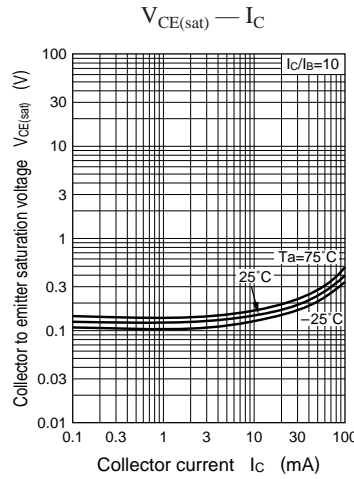
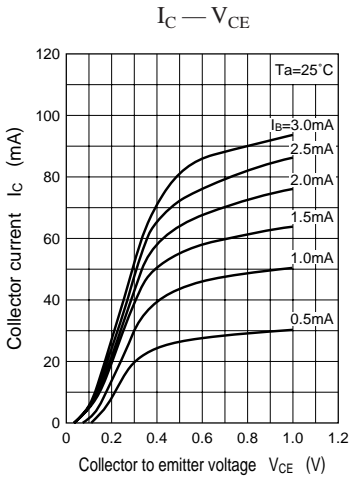
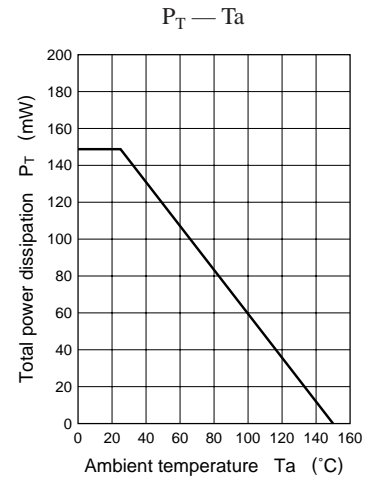
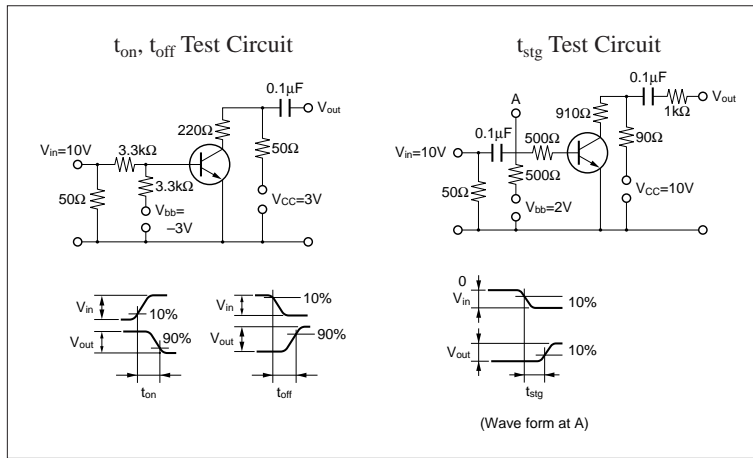
Marking Symbol: HE

Internal Connection



### ■ Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	min	typ	max	Unit
Collector cutoff current	$I_{CBO}$	$V_{CB} = 15V, I_E = 0$			0.1	μA
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$			0.1	μA
Forward current transfer ratio	$h_{FE}$	$V_{CE} = 1V, I_C = 10mA$	90		200	
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10mA, I_B = 1mA$		0.17	0.25	V
Base to emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10mA, I_B = 1mA$			1.0	V
Transition frequency	$f_T$	$V_{CB} = 10V, I_E = -10mA, f = 200MHz$		450		MHz
Collector output capacitance	$C_{ob}$	$V_{CB} = 10V, I_E = 0, f = 1MHz$		2	6	pF
Turn-on time	$t_{on}$			17		ns
Turn-off time	$t_{off}$			17		ns
Storage time	$t_{sig}$			10		ns



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