

UNR2154 (UN2154)

Silicon PNP epitaxial planer transistor

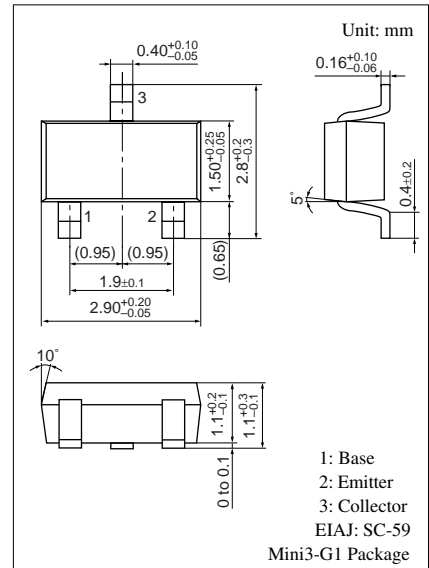
For digital circuits

■ Features

- High forward current transfer ratio h_{FE} .
- Costs can be reduced through downsizing of the equipment and reduction of the number of parts.
- Mini type package, allowing downsizing of the equipment and automatic insertion through tape packing and magazine packing.

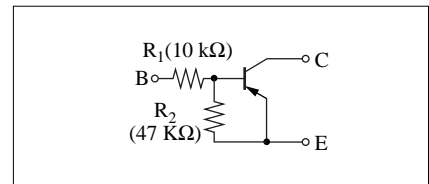
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	-30	V
Collector to emitter voltage	V_{CEO}	-30	V
Collector current	I_C	-100	mA
Total power dissipation	P_T	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



Marking Symbol: EV

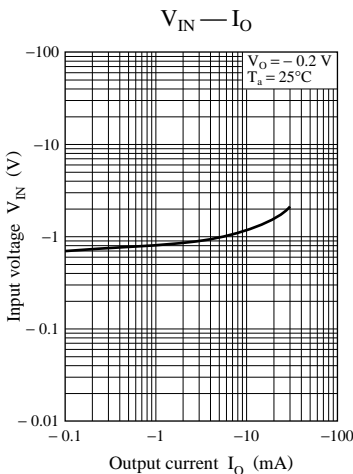
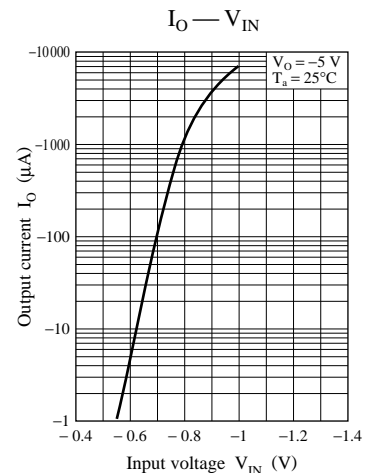
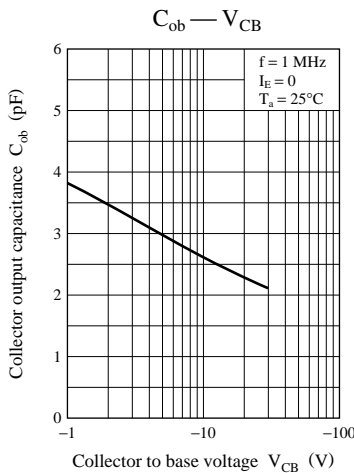
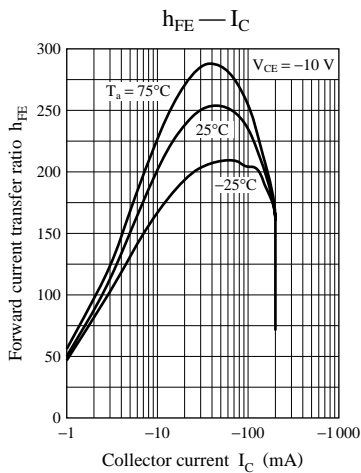
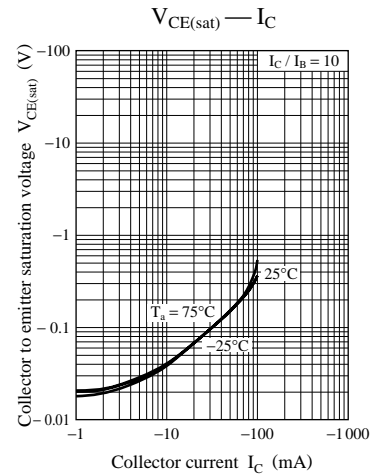
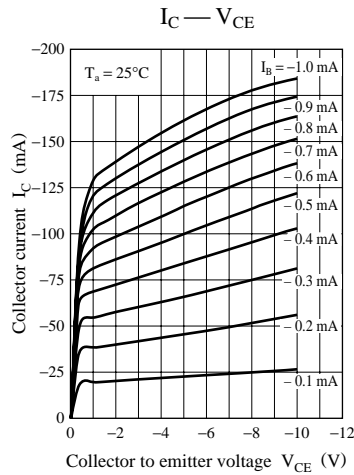
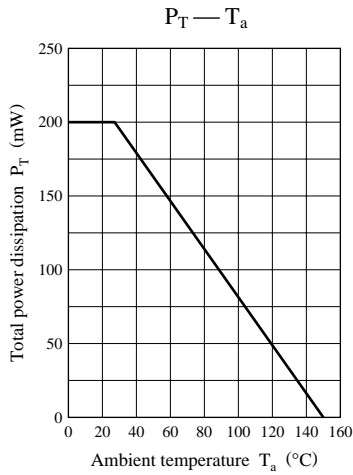
Internal Connection



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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$V_{CB} = -30\text{ V}, I_E = 0$			-0.1	μA
	I_{CEO}	$V_{CE} = -30\text{ V}, I_B = 0$			-0.5	
Emitter cutoff current	I_{EBO}	$V_{EB} = -3\text{ V}, I_C = 0$			-0.1	mA
Collector to base voltage	V_{CBO}	$I_C = -10\ \mu\text{A}, I_E = 0$	-30			V
Collector to emitter voltage	V_{CEO}	$I_C = -2\text{ mA}, I_B = 0$	-30			V
Forward current transfer ratio	h_{FE}	$V_{CE} = -10\text{ V}, I_C = -5\text{ mA}$	80			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50\text{ mA}, I_B = -0.33\text{ mA}$		-0.5	-1.2	V
Output voltage high level	V_{OH}	$V_{CC} = -5\text{ V}, V_B = -0.5\text{ V}, R_L = 1\text{ k}\Omega$	-4.9			V
Output voltage low level	V_{OL}	$V_{CC} = -5\text{ V}, V_B = -2.5\text{ V}, R_L = 1\text{ k}\Omega$			-0.2	V
Transition frequency	f_T	$V_{CB} = -10\text{ V}, I_E = 1\text{ mA}, f = 200\text{ MHz}$		80		MHz
Input resistance	R_1		-30%	10	+30%	kΩ
Resistance ratio	R_1/R_2			0.213		

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



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