

UNR2154 (UN2154)

Silicon PNP epitaxial planer transistor

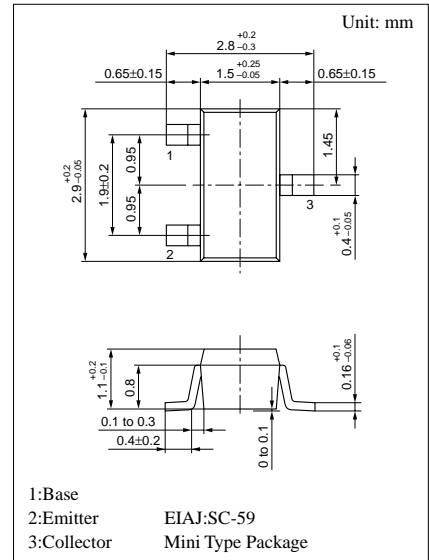
For digital circuits

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.

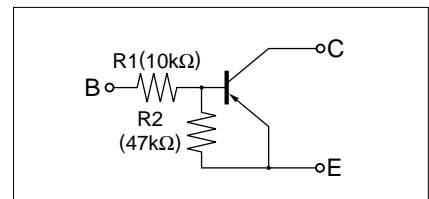
Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Ratings	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	°C
Storage temperature	T_{stg}	-55 to +150	°C



Marking Symbol: EV

Internal Connection

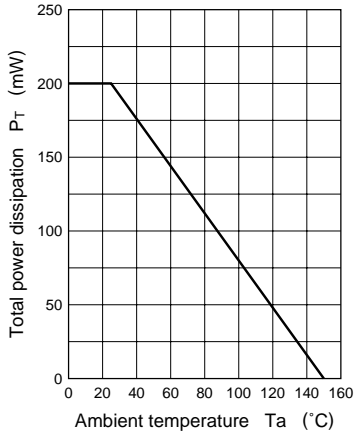


Electrical Characteristics (Ta=25°C)

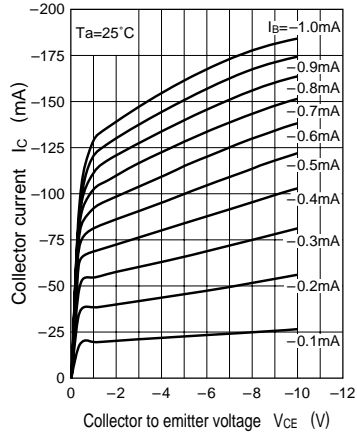
Parameter	Symbol	Conditions	min	typ	max	Unit
Collector to base voltage	V_{CBO}	$I_C = -10\mu A, I_E = 0$	-30			V
Collector to emitter voltage	V_{CEO}	$I_C = -2mA, I_B = 0$	-30			V
Collector cutoff current	I_{CBO}	$V_{CB} = -30V, I_E = 0$			-0.1	μA
	I_{CEO}	$V_{CE} = -30V, I_B = 0$			-0.5	μA
Emitter cutoff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

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

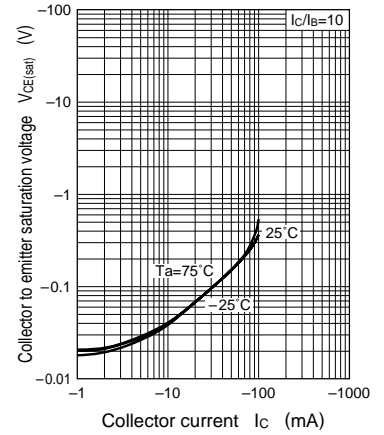
$P_T - T_a$



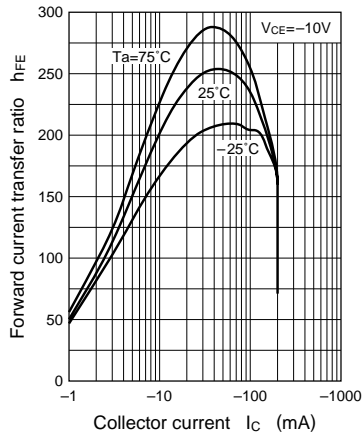
$I_C - V_{CE}$



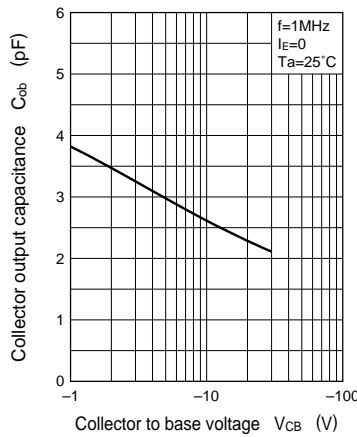
$V_{CE(sat)} - I_C$



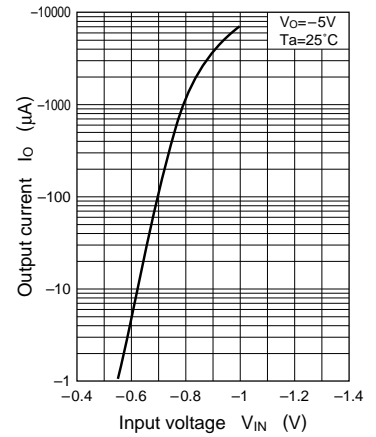
$h_{FE} - I_C$



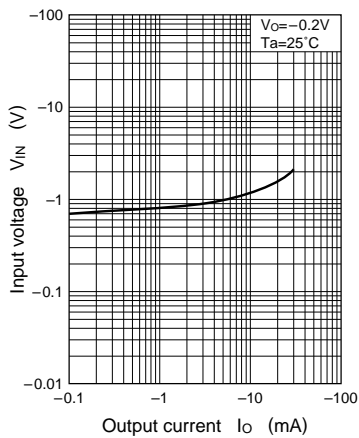
$C_{ob} - V_{CB}$



$I_O - V_{IN}$



$V_{IN} - I_O$



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