

UNR5174

Silicon PNP epitaxial planar transistor

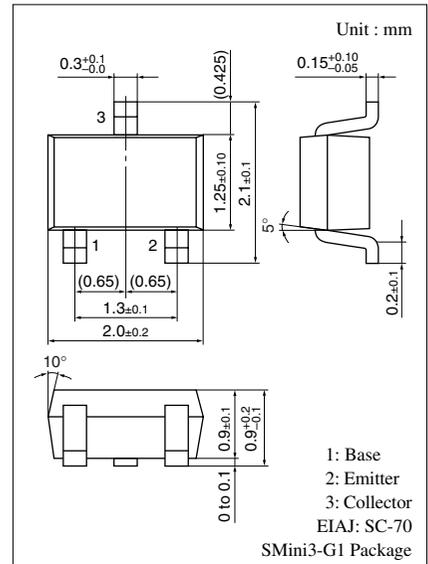
For digital circuits

■ 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

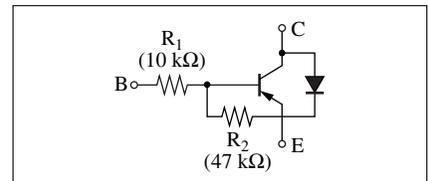
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector to base voltage	V_{CBO}	-50	V
Collector to emitter voltage	V_{CEO}	-50	V
Collector current	I_C	-100	mA
Total power dissipation	P_T	150	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$



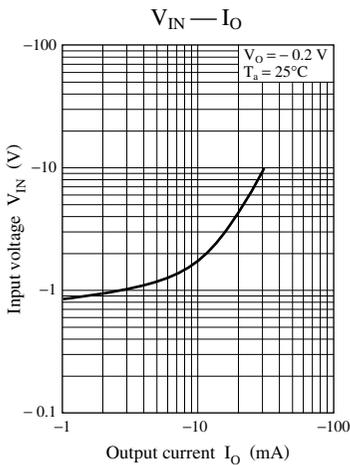
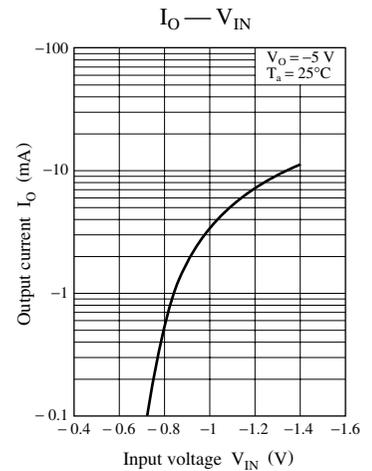
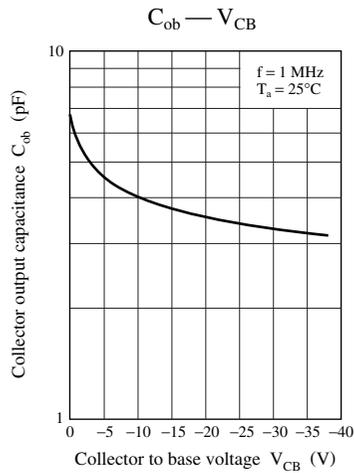
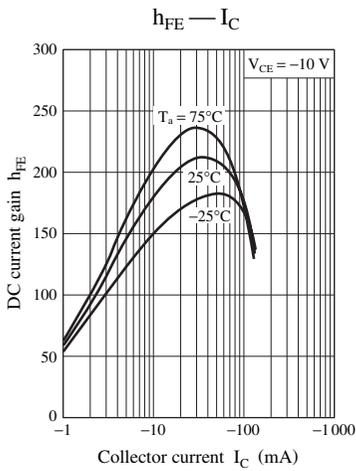
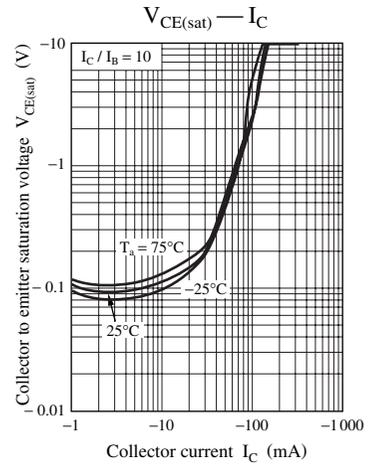
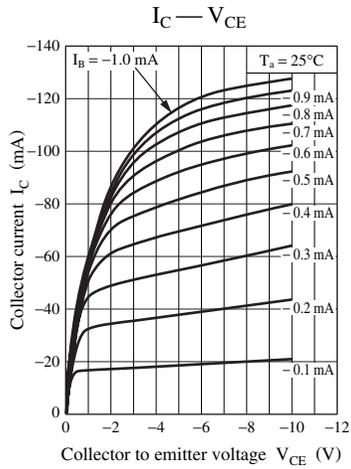
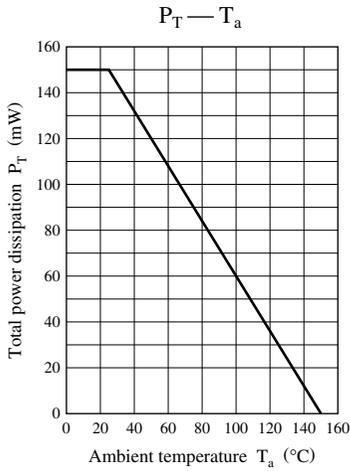
Marking Symbol: 7P

Internal Connection



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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector to base voltage	V_{CBO}	$I_C = -10 \mu\text{A}, I_E = 0$	-50			V
Collector to emitter voltage	V_{CEO}	$I_C = -2 \text{ mA}, I_B = 0$	-50			V
Collector cutoff current	I_{CBO}	$V_{CB} = -50 \text{ V}, I_E = 0$			-0.1	μA
	I_{CEO}	$V_{CE} = -50 \text{ V}, I_B = 0$			-0.5	
Emitter cutoff current	I_{EBO}	$V_{EB} = -6 \text{ V}, I_C = 0$			-0.2	mA
DC current gain	h_{FE}	$V_{CE} = -10 \text{ V}, I_C = -5 \text{ mA}$	80			
Collector to emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 \text{ mA}, I_B = -0.3 \text{ mA}$			-0.25	V
High-level output voltage	V_{OH}	$V_{CC} = -5 \text{ V}, V_B = -0.5 \text{ V}, R_L = 1 \text{ k}\Omega$	-4.9			V
Low-level output voltage	V_{OL}	$V_{CC} = -5 \text{ V}, V_B = -2.5 \text{ V}, R_L = 1 \text{ k}\Omega$			-0.2	V
Input resistance	R_1		-30%	10	+30%	kΩ
Resistance ratio	R_1 / R_2		0.17	0.21	0.25	
Forward voltage (DC)	V_F	$I_F = 100 \text{ mA}$		0.95	1.2	V
Gain bandwidth product	f_T	$V_{CB} = -10 \text{ V}, I_E = 1 \text{ mA}, f = 200 \text{ MHz}$		80		MHz



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