

UNR5154G

Silicon PNP epitaxial planar type

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
- S-Mini type package, allowing automatic insertion through tape packing and magazine packing

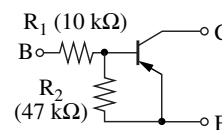
■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	V_{CBO}	-30	V
Collector-emitter voltage (Base open)	V_{CEO}	-30	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	$^\circ\text{C}$

■ Package

- Code
SMini3-F2
- Marking Symbol: EV
- Pin Name
1: Base
2: Emitter
3: Collector

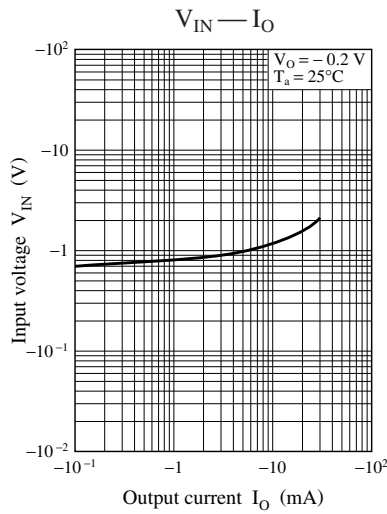
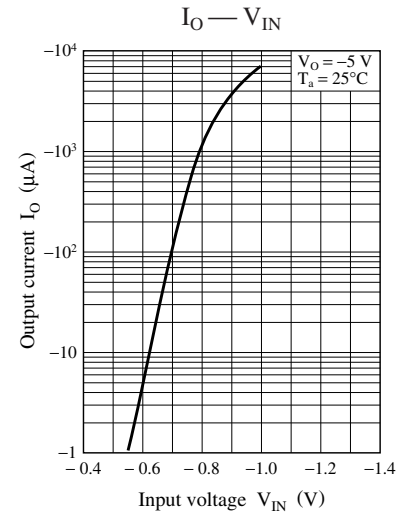
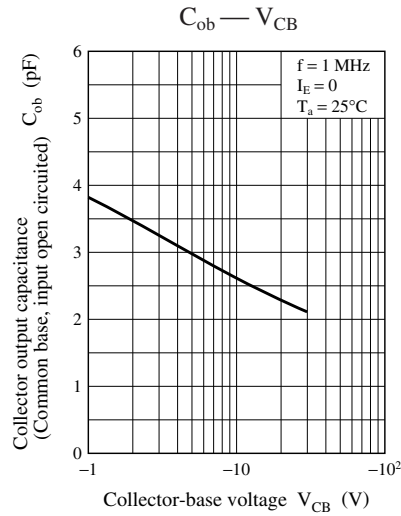
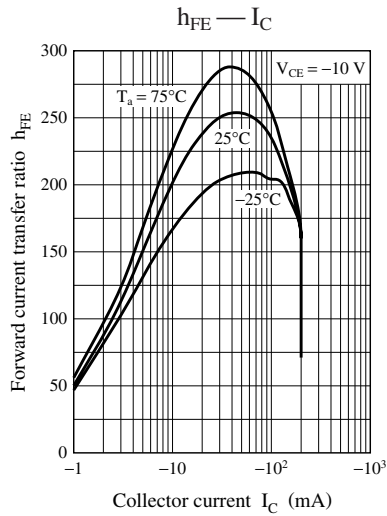
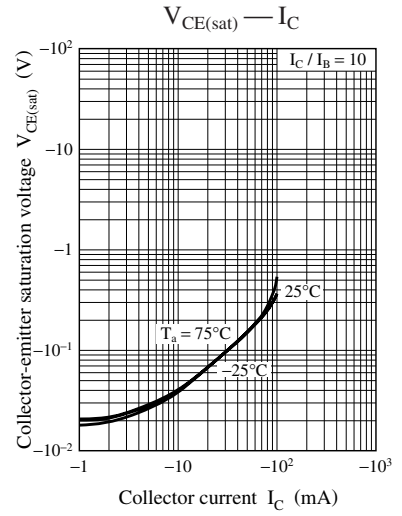
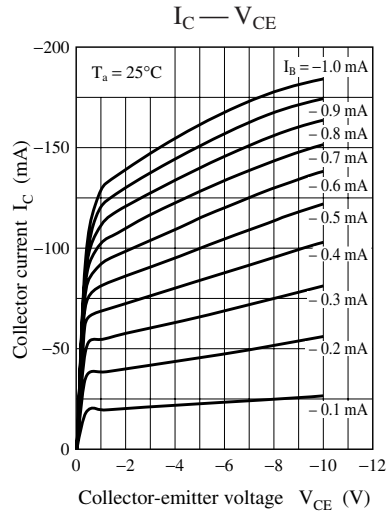
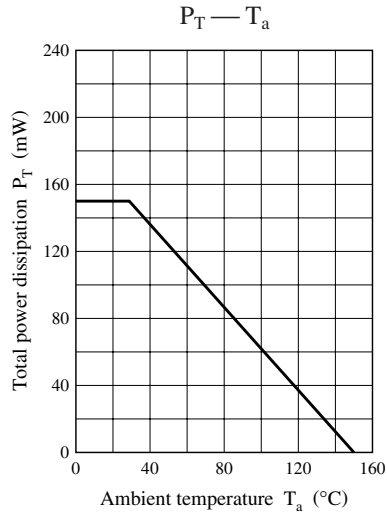
■ Internal Connection



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

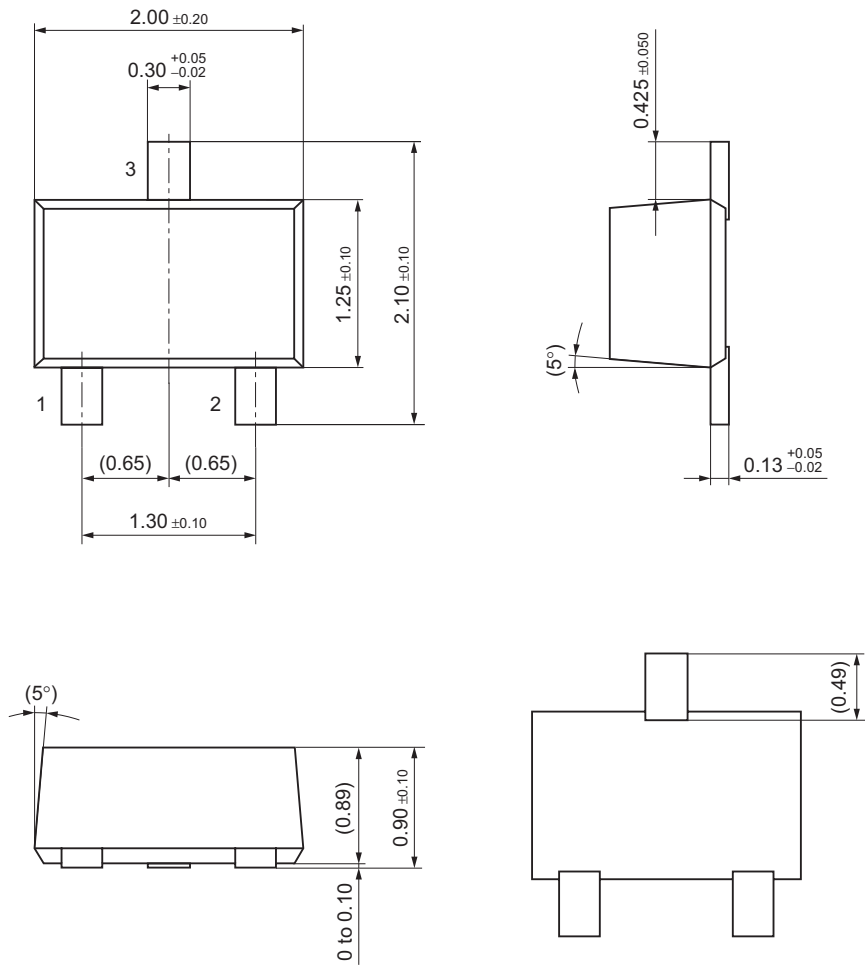
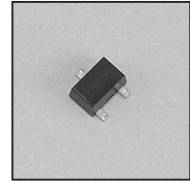
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	V_{CBO}	$I_C = -10 \mu\text{A}$, $I_E = 0$	-30			V
Collector-emitter voltage (Base open)	V_{CEO}	$I_C = -2 \text{ mA}$, $I_B = 0$	-30			V
Collector-base cutoff current (Emitter open)	I_{CBO}	$V_{CB} = -30 \text{ V}$, $I_E = 0$			-0.1	μA
Collector-emitter cutoff current (Base open)	I_{CEO}	$V_{CE} = -30 \text{ V}$, $I_B = 0$			-0.5	
Emitter-base cutoff current (Collector open)	I_{EBO}	$V_{EB} = -3 \text{ V}$, $I_C = 0$			-0.1	mA
Forward current transfer ratio	h_{FE}	$V_{CE} = -10 \text{ V}$, $I_C = -5 \text{ mA}$	80			—
Collector-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%	$\text{k}\Omega$
Resistance ratio	R_1/R_2			0.213		—

Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.



SMini3-F2

Unit: mm



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