

# UNR91AMG

## Silicon PNP epitaxial planar type

For digital circuits

■ Features

- Optimum for high-density mounting and downsizing of the equipment
- Contribute to low power consumption

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

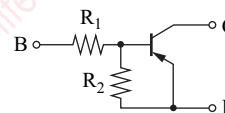
Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	-50	V
Collector-emitter voltage (Base open)	$V_{CEO}$	-50	V
Collector current	$I_C$	-80	mA
Total power dissipation	$P_T$	125	mW
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +125	$^\circ\text{C}$

■ Package

- Code  
SSMini3-F3
- Pin Name  
1: Base  
2: Emitter  
3: Collector

■ Marking Symbol: EF

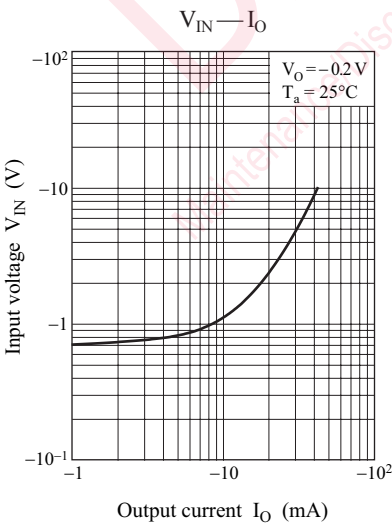
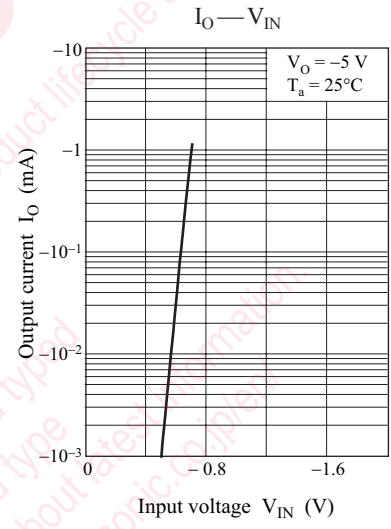
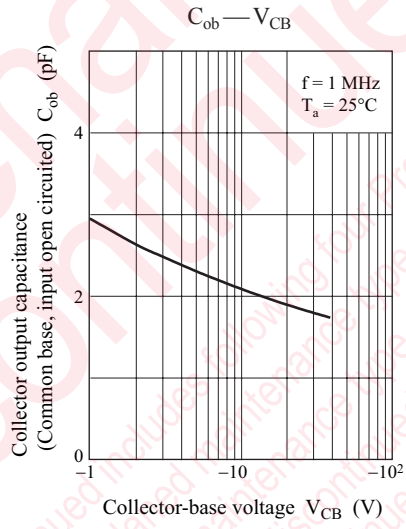
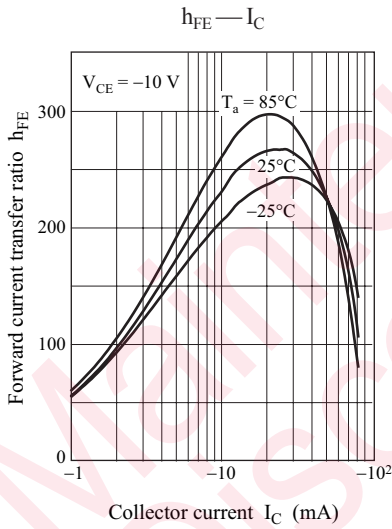
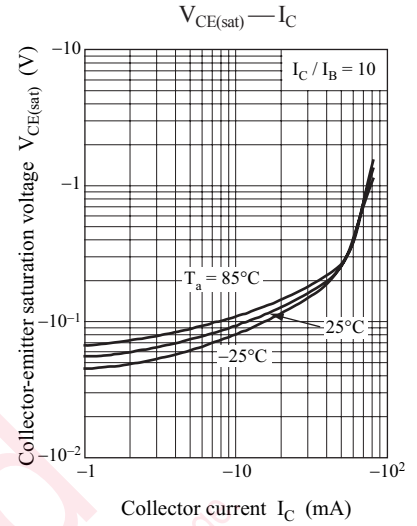
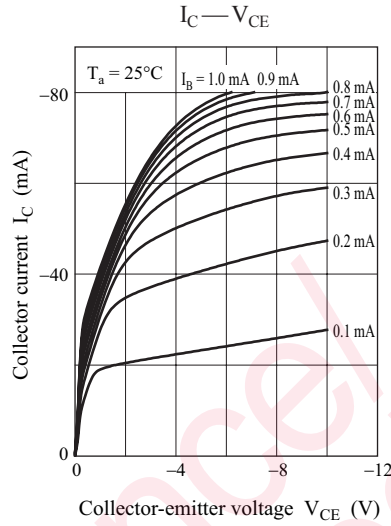
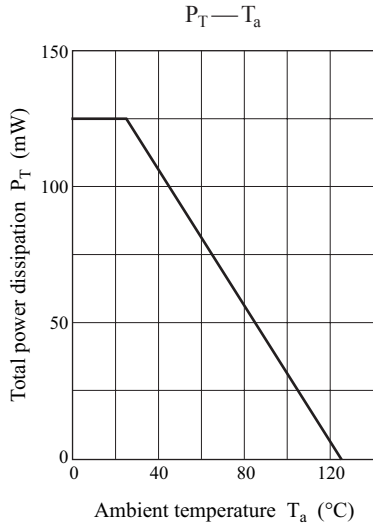
■ Internal Connection



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

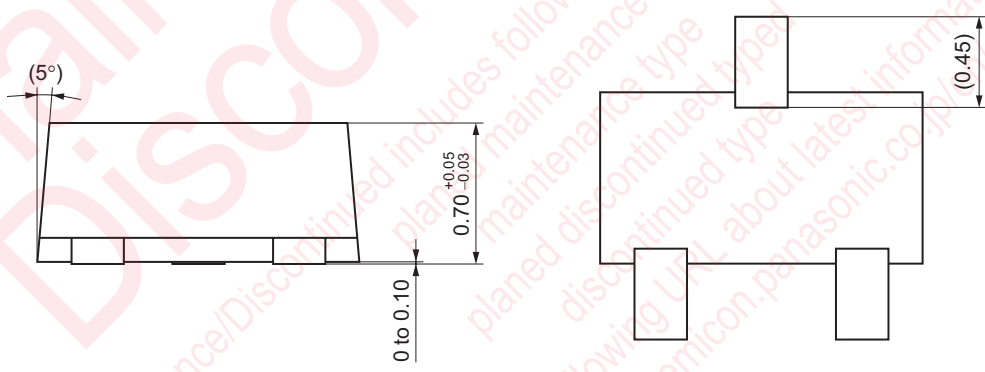
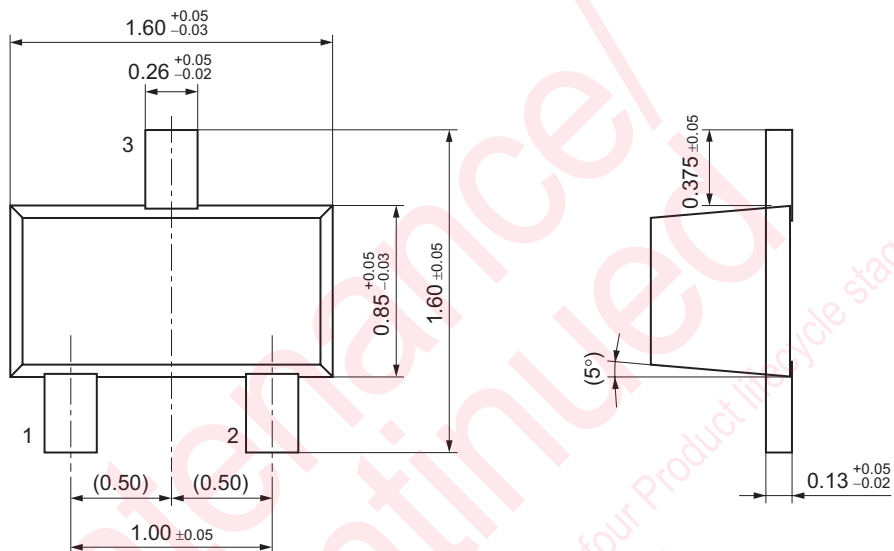
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = -10 \mu\text{A}, I_E = 0$	-50			V
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = -2 \text{mA}, I_B = 0$	-50			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = -50 \text{V}, I_E = 0$			-0.1	$\mu\text{A}$
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = -50 \text{V}, I_B = 0$			-0.5	$\mu\text{A}$
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = -6 \text{V}, I_C = 0$			-0.2	mA
Forward current transfer ratio	$h_{FE}$	$V_{CE} = -10 \text{V}, I_C = -5 \text{mA}$	80			—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 \text{mA}, I_B = -0.3 \text{mA}$			-0.25	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
Input resistance	$R_1$		-30%	2.2	+30%	$\text{k}\Omega$
Resistance ratio	$R_1 / R_2$			0.047		—
Transition frequency	$f_T$	$V_{CB} = -10 \text{V}, I_E = 1 \text{mA}, f = 200 \text{MHz}$		80		MHz

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



SSMini3-F3

Unit: mm



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