

# XP04113 (XP4113)

## Silicon PNP epitaxial planar type

For switching/digital circuits

## ■ Features

- Two elements incorporated into one package  
(Transistors with built-in resistor)
- Reduction of the mounting area and assembly cost by one half

## ■ Basic Part Number

- UNR2113 (UN2113)  $\times 2$

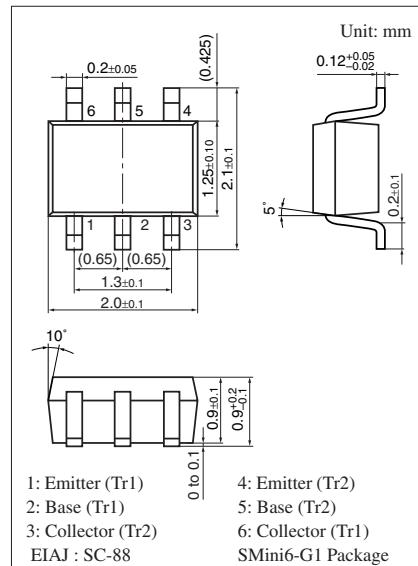
### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	-50	V
Collector-emitter voltage (Base open)	$V_{CEO}$	-50	V
Collector current	$I_C$	-100	mA
Total power dissipation	$P_T$	150	mW
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 to +150	°C

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

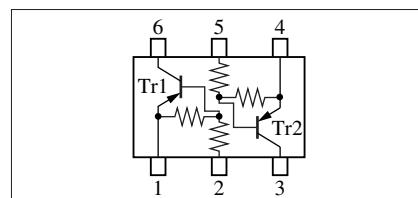
Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage (Emitter open)	$V_{CBO}$	$I_C = -10 \mu A, I_E = 0$	-50			V
Collector-emitter voltage (Base open)	$V_{CEO}$	$I_C = -2 mA, I_B = 0$	-50			V
Collector-base cutoff current (Emitter open)	$I_{CBO}$	$V_{CB} = -50 V, I_E = 0$			-0.1	$\mu A$
Collector-emitter cutoff current (Base open)	$I_{CEO}$	$V_{CE} = -50 V, I_B = 0$			-0.5	$\mu A$
Emitter-base cutoff current (Collector open)	$I_{EBO}$	$V_{EB} = -6 V, I_C = 0$			-0.1	mA
Forward current transfer ratio	$h_{FE}$	$V_{CE} = -10 V, I_C = -5 mA$	80			—
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -10 mA, I_B = -0.3 mA$			-0.25	V
Output voltage high-level	$V_{OH}$	$V_{CC} = -5 V, V_B = -0.5 V, R_L = 1 k\Omega$	-4.9			V
Output voltage low-level	$V_{OL}$	$V_{CC} = -5 V, V_B = -3.5 V, R_L = 1 k\Omega$			-0.2	V
Input resistance	$R_I$		-30%	47	+30%	$k\Omega$
Resistance ratio	$R_I / R_2$		0.8	1.0	1.2	—
Transition frequency	$f_T$	$V_{CB} = -10 V, I_E = 1 mA, f = 200 MHz$		80		MHz

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

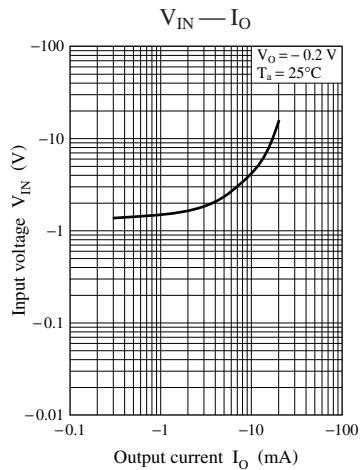
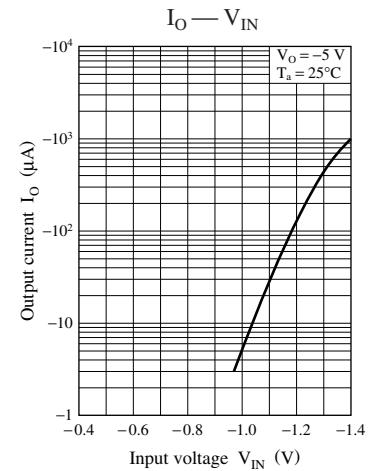
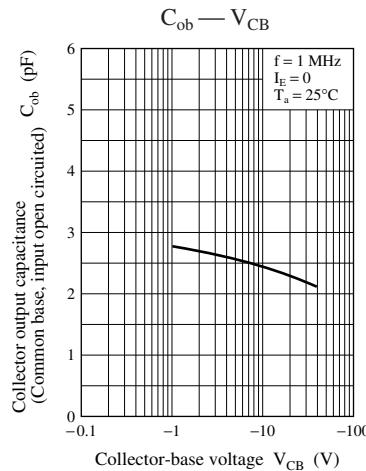
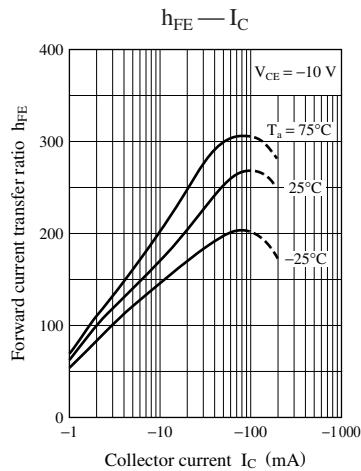
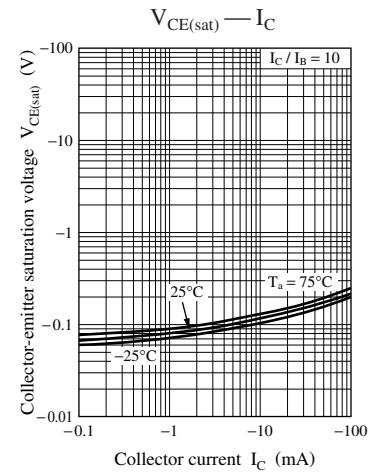
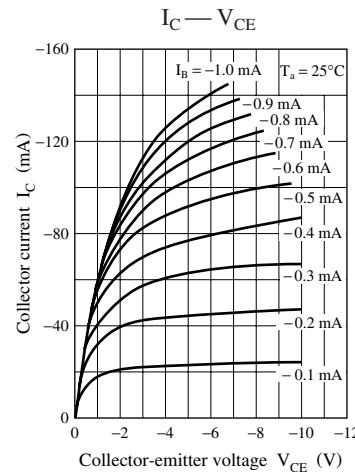
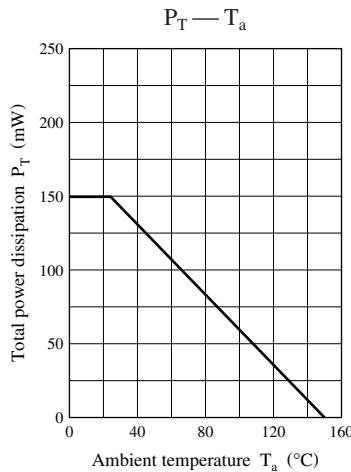


### Marking Symbol: 6S

## Internal Connection



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



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