#### Composite Transistors

Panasonic

# NP0J1A3

### Silicon PNP epitaxial planar type

#### For digital circuits

#### Features

- SSS-Mini type 6-pin package, reduction of the mounting area and assembly cost by half
- Maximum package height (0.4 mm) contributes to develop thinner equipments

#### Basic Part Number

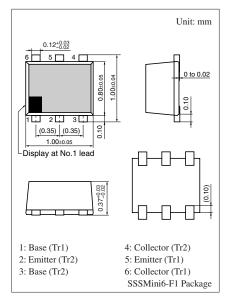
• UNR11A3  $\times$  2

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

Parameter	Symbol	Rating	Unit				
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	-50	V				
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	-50	V				
Collector current	I <sub>C</sub>	-80	mA				
Total power dissipation *	P <sub>T</sub>	125	mW				
Junction temperature	Tj	125	°C				
Storage temperature	T <sub>stg</sub>	-55 to +125	°C				

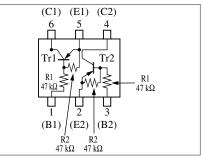
Note) \*: Measuring on substrate at 17 mm  $\times$  10 mm  $\times$  1 mm

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



#### Marking Symbol: 1L

#### Internal Connection

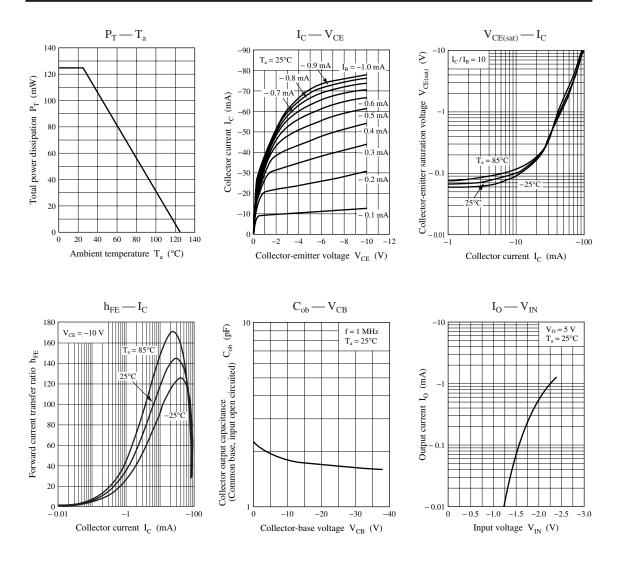


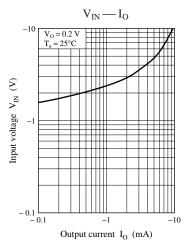
Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	V <sub>CBO</sub>	$I_{\rm C} = -10 \ \mu A, \ I_{\rm E} = 0$	-50			V
Collector-emitter voltage (Base open)	V <sub>CEO</sub>	$I_{\rm C} = -2 \text{ mA}, I_{\rm B} = 0$	-50			V
Collector-base cutoff current (Emitter open)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

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

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