# imall

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Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





Transistors with Built-in Resistor DRC3123J0L

## DRC3123J0L Silicon NPN epitaxial planar type

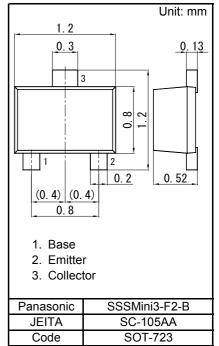
For digital circuits Complementary to DRA3123J DRC9123J in SSSMini3 type package

#### Features

- Low collector-emitter saturation voltage Vce(sat)
- Halogen-free / RoHS compliant (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)
- Marking Symbol: N4

#### Packaging

Embossed type (Thermo-compression sealing) : 10 000 pcs / reel (standard)



	Internal Connection						
/							
	R <sub>2</sub>		oE				
	Desistance	DA	0.0	1.0			
	Resistance	R1	2.2	kΩ			
	value	R2	47	kΩ			

#### ■ Absolute Maximum Ratings Ta = 25 °C

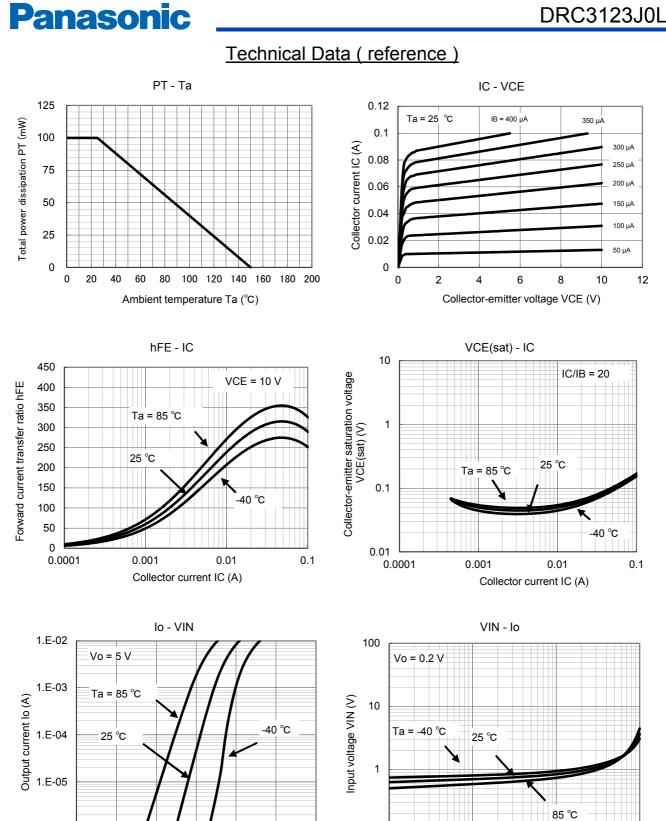
Parameter	Symbol	Rating	Unit	
Collector-base voltage (Emitter open)	VCBO	50	V	
Collector-emitter voltage (Base open)	VCEO	50	V	
Collector current	IC	100	mA	
Total power dissipation	PT	100	mW	
Junction temperature	Tj	150	°C	
Operating ambient temperature	Topr	-40 to +85	°C	
Storage temperature	Tstg	-55 to +150	°C	

Electrical Characteristics	Ta = 25 °C ± 3 °C
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Parameter	Symbol	Conditions	Min	Тур	Max	Unit
Collector-base voltage (Emitter open)	VCBO	IC = 10 μA, IE = 0	50			V
Collector-emitter voltage (Base open)	VCEO	IC = 2 mA, IB = 0	50			V
Collector-base cutoff current (Emitter open)	ICBO	VCB = 50 V, IE = 0			0.1	μA
Collector-emitter cutoff current (Base open)	ICEO	VCE = 50 V, IB = 0			0.5	μA
Emitter-base cutoff current (Collector open)	IEBO	VEB = 6 V, IC = 0			0.2	mA
Forward current transfer ratio	hFE	VCE = 10 V, IC = 5 mA	80			-
Collector-emitter saturation voltage	VCE(sat)	IC = 10 mA, IB = 0.5 mA			0.25	V
Input voltage	Vi(on)	VCE = 0.2 V, IC = 5 mA	1.2			V
liiput voltage	Vi(off)	VCE = 5 V, IC = 100 µA			0.4	V
Input resistance	R1		-30%	2.2	+30%	kΩ
Resistance ratio	R1/R2		0.037	0.047	0.057	-
		•	•			

Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

Transistors with Built-in Resistor DRC3123J0L



0.1

0.0001

0.001

Output current lo (A)

1.2

1

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0.1

0.01

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1.E-06

0

0.2

0.4

0.6

Input voltage VIN (V)

0.8



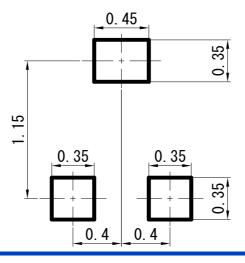
SSSMini3-F2-B

Transistors with Built-in Resistor DRC3123J0L

Unit: mm

## $1.20 \pm 0.05$ **0. 13**<sup>+0. 05</sup> 0. 2 0<u>. 30<sup>+0.05</sup></u> 3 $0.80\pm0.05$ $1.20\pm0.05$ ີ່ເບີ 2 1 **0. 20**<sup>+0. 05</sup> -0. 02 $0.20\pm0.05$ (0.4) (0.4) $0.80 \pm 0.05$ (5°) 27) $52\pm0.03$ ġ o' 0 to 0.05

Land Pattern (Reference) (Unit: mm)



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