

Transistors with Built-in Resistor DRC3143E0L

DRC3143E0L Silicon NPN epitaxial planar type

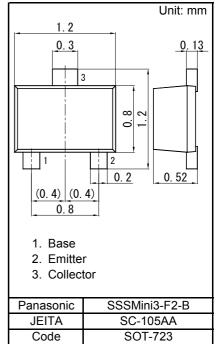
For digital circuits Complementary to DRA3143E DRC9143E in SSSMini3 type package

Features

- Low collector-emitter saturation voltage Vce(sat)
- Halogen-free / RoHS compliant (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)
- Marking Symbol: N5

Packaging

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



i c	-				
_	Internal Connection				
/		┍┼╱	oC		
	R ₂		oE		
	Resistance		4 7	ko	
	Resistance	R1	4.7	kΩ	
	value	R2	4.7	kΩ	

Absolute Maximum	Ratings	Ta = 25 °C
	ruungo	10 20 0

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	С°
Operating ambient temperature	Topr	-40 to +85	С°
Storage temperature	Tstg	-55 to +150	°C

Electrical Characteristics	Ta = 25 °C ± 3 °C
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\blacksquare Electrical Granaciensities $Ta = 23 \text{ G} \pm 3 \text{ G}$						
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			2.0	mA
Forward current transfer ratio	hFE	VCE = 10 V, IC = 5 mA	20			-
Collector-emitter saturation voltage	VCE(sat)	IC = 10 mA, IB = 0.5 mA			0.25	V
Innut voltago	Vi(on)	VCE = 0.2 V, IC = 5 mA	1.9			V
Input voltage	Vi(off)	VCE = 5 V, IC = 100 µA			0.8	V
Input resistance	R1		-30%	4.7	+30%	kΩ
Resistance ratio	R1/R2		0.8	1.0	1.2	-

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

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550 µA

500 µA

450 μA 400 μA

350 µA

300 µA

250 µA

200 µA

12

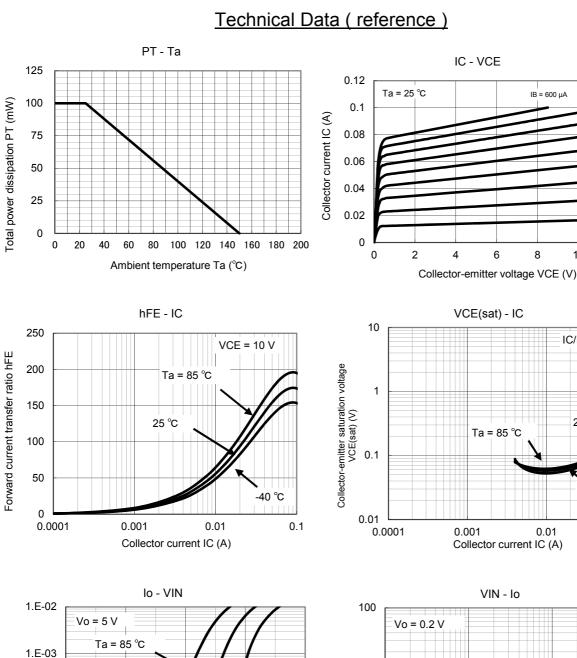
10

IC/IB = 20

25 °C

-40 °C

0.1



-40 °C

2

1.5

Input voltage VIN (V)

10

1

0.1

0.0001

Ta = -40 °C

25 °C

0.001

85 °C

Output current Io (A)

0.01



0.1

Established : 2009-10-27 Revised : 2014-03-26

25 °C

0.5

1

Input voltage VIN (V)

Output current lo (A)

1.E-04

1.E-05

1.E-06

0



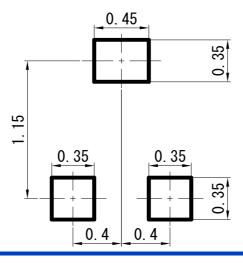
SSSMini3-F2-B

Transistors with Built-in Resistor DRC3143E0L

Unit: mm

1.20 ± 0.05 **0. 13**^{+0. 05} 0. 2 0<u>. 30^{+0.05}</u> 3 0.80 ± 0.05 1.20 ± 0.05 ີ່ເບີ 2 1 **0. 20**^{+0. 05} -0. 02 0.20 ± 0.05 (0.4) (0.4) 0.80 ± 0.05 (5°) 27) 52 ± 0.03 ġ o' 0 to 0.05

Land Pattern (Reference) (Unit: mm)



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