imall

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Transistors with Built-in Resistor DRC9143T0L

DRC9143T0L Silicon NPN epitaxial planar type

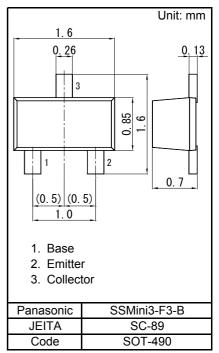
For digital circuits Complementary to DRA9143T DRC5143T in SSMini3 type package

Features

- · High forward current transfer ratio hFE with excellent linearit
- · Low collector-emitter saturation voltage Vce(sat)
- Halogen-free / RoHS compliant
 (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)
- Marking Symbol: NA

Packaging

Embossed type (Thermo-compression sealing): 3 000 pcs / reel (standard)



_	Internal Connection							
V	Bo-		∘C ∘E					
	Resistance value	R1	4.7	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	125	mW	
Junction temperature	Tj	150	°C	
Operating ambient temperature	Topr	-40 to +85	°C	
Storage temperature	Tstg	-55 to +150	°C	

Electrical Characteristics Ta = $25 \circ C \pm 3 \circ C$

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			0.01	mA
Forward current transfer ratio	hFE	VCE = 10 V, IC = 5 mA	160		460	-
Collector-emitter saturation voltage	VCE(sat)	,			0.25	V
Input voltage	Vi(on)	VCE = 0.2 V, IC = 5 mA	1.0			V
input voitage	Vi(off)	VCE = 5 V, IC = 100 µA			0.4	V
Input resistance	R1		-30%	4.7	+30%	kΩ

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

Transistors with Built-in Resistor **DRC9143T0L**

IB = 350 µA

300 µA

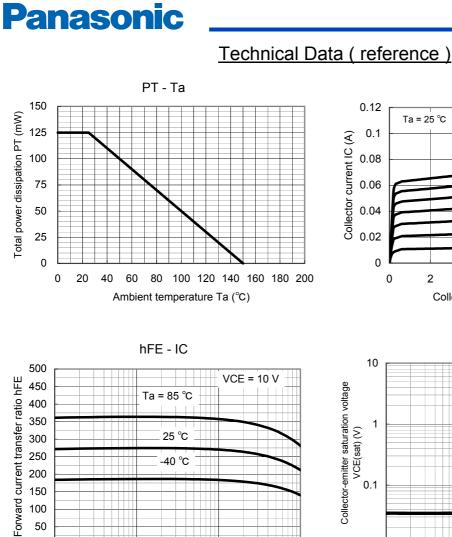
250 µA 200 µA

150 µA 100 µA

50 µA

12

10



Ta = 85 °C

25 °C

-40 °C

Collector current IC (A)

0.01

0.001

400 350

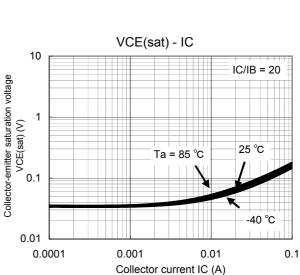
300 250

200

150 100 50

0

0.0001



2

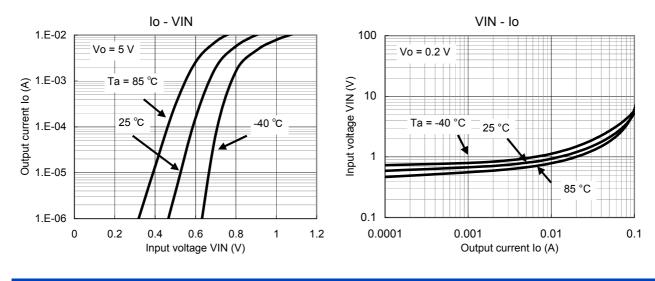
4

6

Collector-emitter voltage VCE (V)

8

IC - VCE



0.1

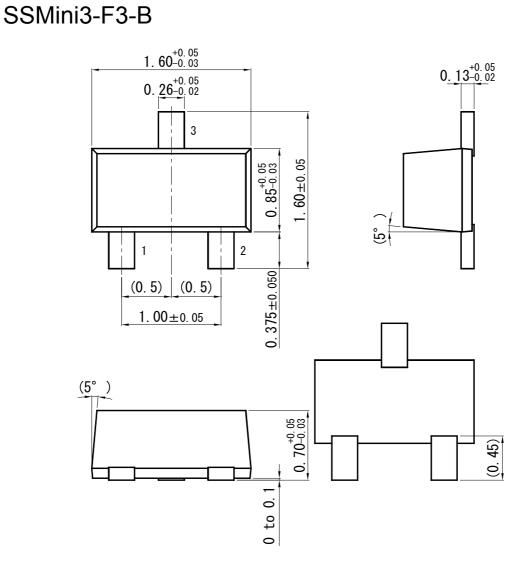
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Established : 2009-10-22 : 2014-02-27 Revised

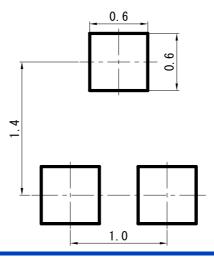


Transistors with Built-in Resistor DRC9143T0L

Unit: mm



Land Pattern (Reference) (Unit: mm)



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Established : 2009-10-22 Revised : 2014-02-27

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