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Transistors with Built-in Resistor

#### DRC9144V0L

### DRC9144V0L

**Panasonic** 

### Silicon NPN epitaxial planar type

For digital circuits
Complementary to DRA9144V
DRC5144V in SSMini3 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: NJ

#### ■ Packaging

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

■ 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

#### Unit: mm 1.6 0, 13 0.26 92 0 0.7 (0.5) (0.5) 1.0 1. Base 2. Emitter 3. Collector SSMini3-F3-B Panasonic JEITA SC-89 Code SOT-490

#### 

#### ■ Electrical Characteristics Ta = 25 °C ± 3 °C

Established: 2009-10-22

Revised

: 2014-02-27

Symbol	Conditions	Min	Тур	Max	Unit
VCBO	IC = 10 μA, IE = 0	50			V
VCEO	IC = 2 mA, IB = 0	50			V
ICBO	VCB = 50 V, IE = 0			0.1	μΑ
ICEO	VCE = 50 V, IB = 0			0.5	μΑ
IEBO	VEB = 6 V, IC = 0			0.2	mA
hFE	VCE = 10 V, IC = 5 mA	30			1
VCE(sat)	IC = 10 mA, IB = 0.5 mA			0.25	V
Vi(on)	VCE = 0.2 V, IC = 5 mA	6.3			V
Vi(off)	VCE = 5 V, IC = 100 μA			1.9	V
R1		-30%	47	+30%	kΩ
R1/R2		3.7	4.7	5.7	-
	VCBO VCEO ICBO ICEO IEBO hFE VCE(sat) Vi(on) Vi(off) R1	VCBO IC = 10 μA, IE = 0  VCEO IC = 2 mA, IB = 0  ICBO VCB = 50 V, IE = 0  ICEO VCE = 50 V, IB = 0  IEBO VEB = 6 V, IC = 0  hFE VCE = 10 V, IC = 5 mA  VCE(sat) IC = 10 mA, IB = 0.5 mA  Vi(on) VCE = 0.2 V, IC = 5 mA  Vi(off) VCE = 5 V, IC = 100 μA  R1	VCBO         IC = 10 μA, IE = 0         50           VCEO         IC = 2 mA, IB = 0         50           ICBO         VCB = 50 V, IE = 0         50           ICEO         VCE = 50 V, IB = 0         50           IEBO         VEB = 6 V, IC = 0         50           NFE         VCE = 10 V, IC = 5 mA         30           VCE(sat)         IC = 10 mA, IB = 0.5 mA         6.3           Vi(off)         VCE = 5 V, IC = 100 μA         6.3           R1         -30%	VCBO         IC = 10 μA, IE = 0         50           VCEO         IC = 2 mA, IB = 0         50           ICBO         VCB = 50 V, IE = 0         50           ICEO         VCE = 50 V, IB = 0         50           IEBO         VEB = 6 V, IC = 0         50           hFE         VCE = 10 V, IC = 5 mA         30           VCE(sat)         IC = 10 mA, IB = 0.5 mA         6.3           Vi(off)         VCE = 5 V, IC = 100 μA         6.3           R1         -30%         47	VCBO         IC = 10 μA, IE = 0         50           VCEO         IC = 2 mA, IB = 0         50           ICBO         VCB = 50 V, IE = 0         0.1           ICEO         VCE = 50 V, IB = 0         0.5           IEBO         VEB = 6 V, IC = 0         0.2           hFE         VCE = 10 V, IC = 5 mA         30           VCE(sat)         IC = 10 mA, IB = 0.5 mA         0.25           Vi(on)         VCE = 0.2 V, IC = 5 mA         6.3           Vi(off)         VCE = 5 V, IC = 100 μA         1.9           R1         -30%         47         +30%

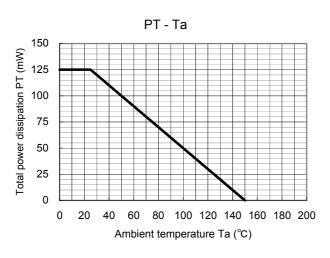
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

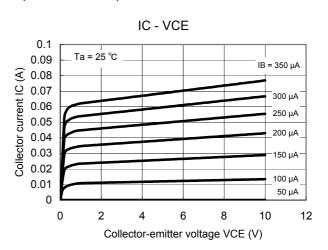
## **Panasonic**

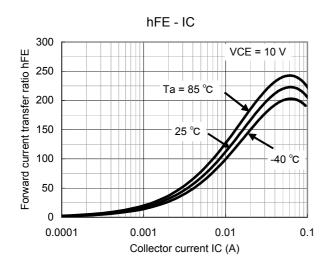
Transistors with Built-in Resistor

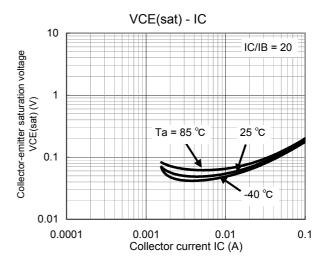
DRC9144V0L

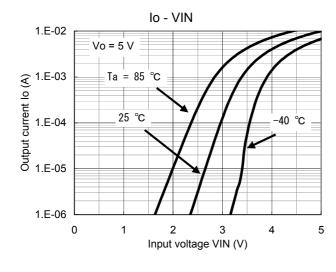
### Technical Data (reference)

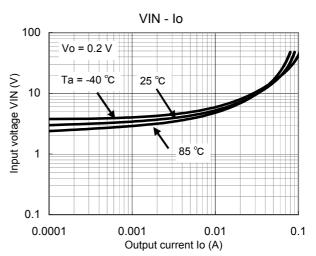










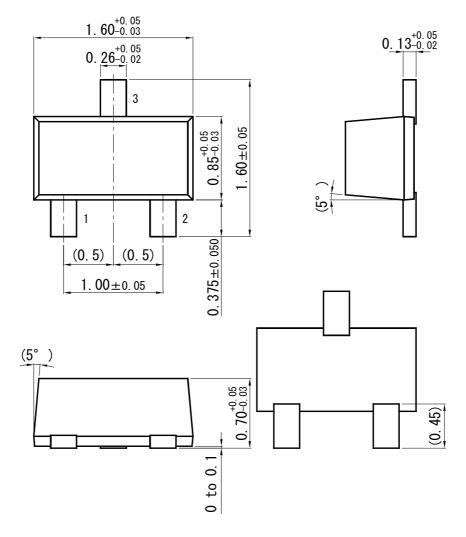


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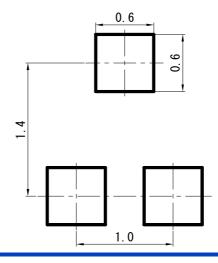
## **Panasonic**

SSMini3-F3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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