Transistors with Built-in Resistor

DRC3123J0L

Panasonic

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

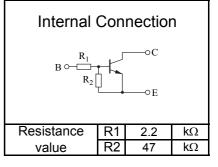
Packaging

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

■ 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 |

Unit: mm <u>1.</u>2 0.3 0. 13 0. 2 0. 52 (0.4) (0.4) 0.8 1. Base 2. Emitter 3. Collector Panasonic SSSMini3-F2-B JEITA SC-105AA Code SOT-723



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

Established: 2009-10-27

: 2014-03-25

Revised

| 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 | μA |
| ICEO | VCE = 50 V, IB = 0 | | | 0.5 | μA |
| IEBO | VEB = 6 V, IC = 0 | | | 0.2 | mA |
| hFE | VCE = 10 V, IC = 5 mA | 80 | | | - |
| VCE(sat) | IC = 10 mA, IB = 0.5 mA | | | 0.25 | V |
| Vi(on) | VCE = 0.2 V, IC = 5 mA | 1.2 | | | V |
| Vi(off) | VCE = 5 V, IC = 100 μA | | | 0.4 | V |
| R1 | | -30% | 2.2 | +30% | kΩ |
| R1/R2 | | 0.037 | 0.047 | 0.057 | - |
| | 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 80 VCE(sat) IC = 10 mA, IB = 0.5 mA 1.2 Vi(off) VCE = 5 V, IC = 100 μA 1.2 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 80 VCE(sat) IC = 10 mA, IB = 0.5 mA 1.2 Vi(off) VCE = 5 V, IC = 100 μA 1.2 R1 -30% 2.2 | 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 80 VCE(sat) IC = 10 mA, IB = 0.5 mA 0.25 Vi(on) VCE = 0.2 V, IC = 5 mA 1.2 Vi(off) VCE = 5 V, IC = 100 μA 0.4 R1 -30% 2.2 +30% |

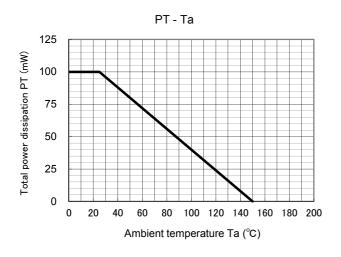
Note) 1. Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 Measuring methods for transistors.

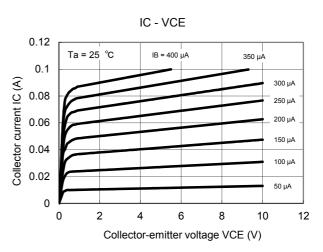
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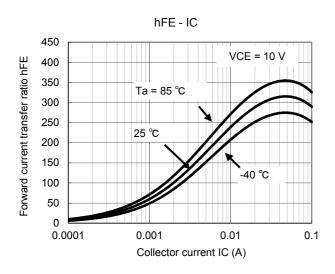
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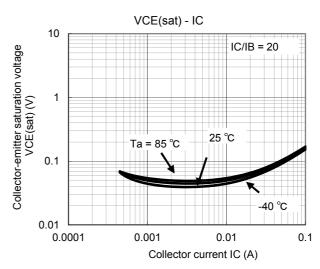
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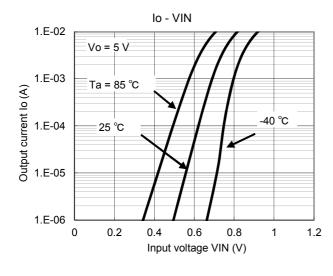
Technical Data (reference)

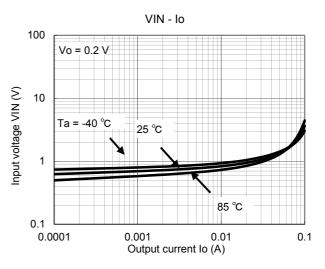












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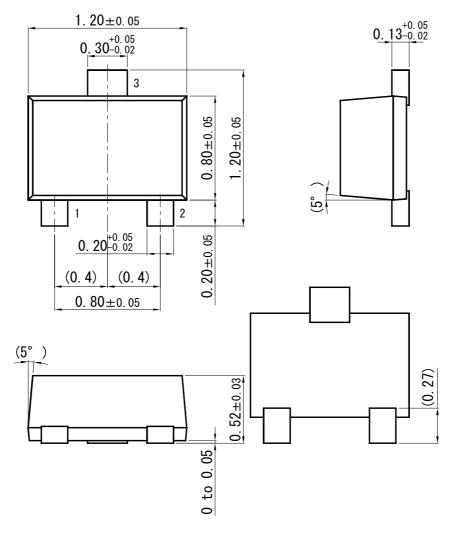
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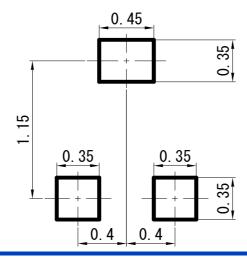
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SSSMini3-F2-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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