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# DRC3115E0L

Silicon NPN epitaxial planar type

For digital circuits

Complementary to DRA3115E

DRC9115E in SSSMini3 type package

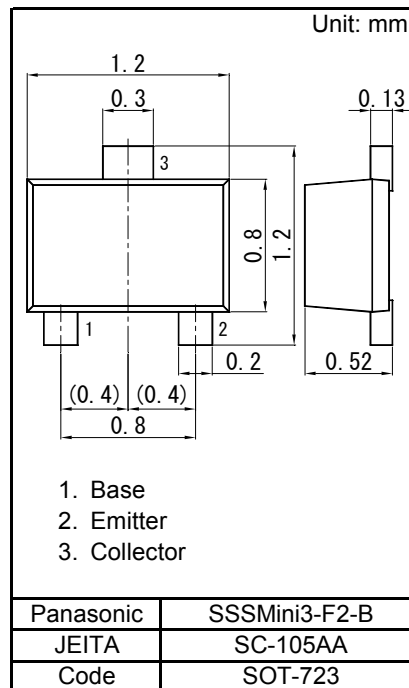
■ Features

- Low collector-emitter saturation voltage  $V_{ce(sat)}$
- Halogen-free / RoHS compliant  
 (EU RoHS / UL-94 V-0 / MSL:Level 1 compliant)

■ Marking Symbol: NN

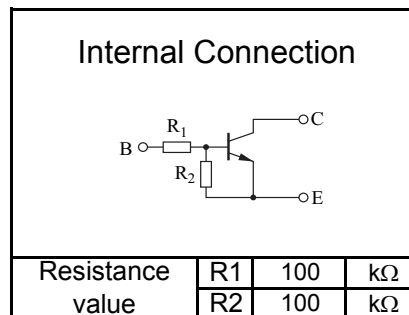
■ Packaging

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



■ Absolute Maximum Ratings  $T_a = 25\text{ }^\circ\text{C}$

| 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   |

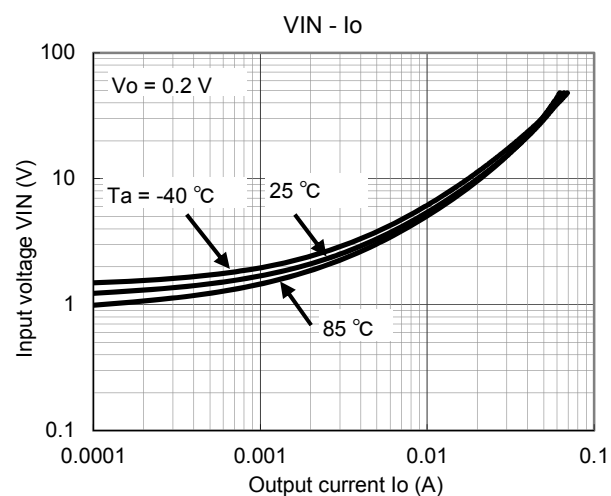
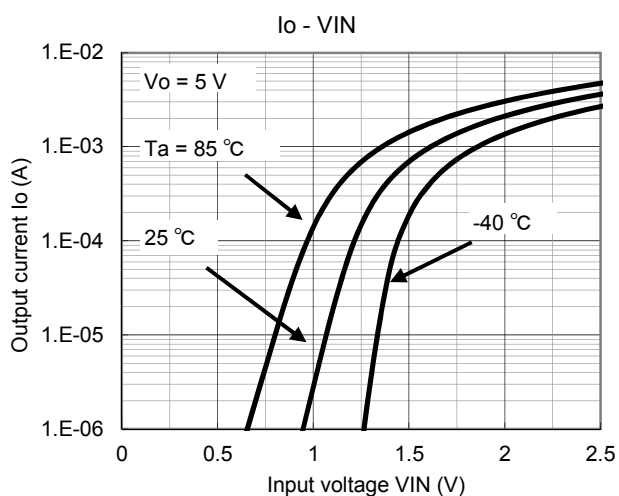
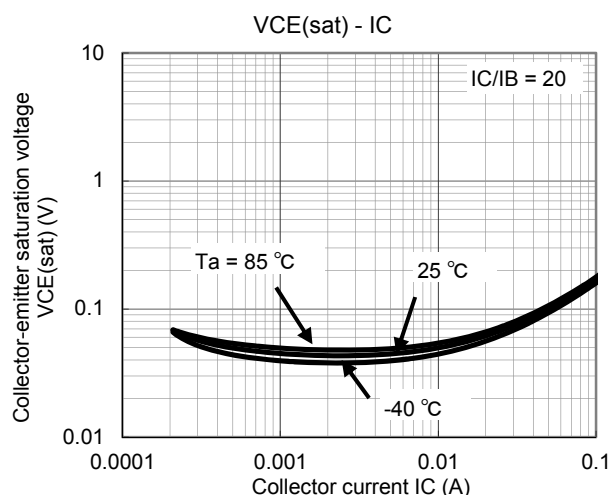
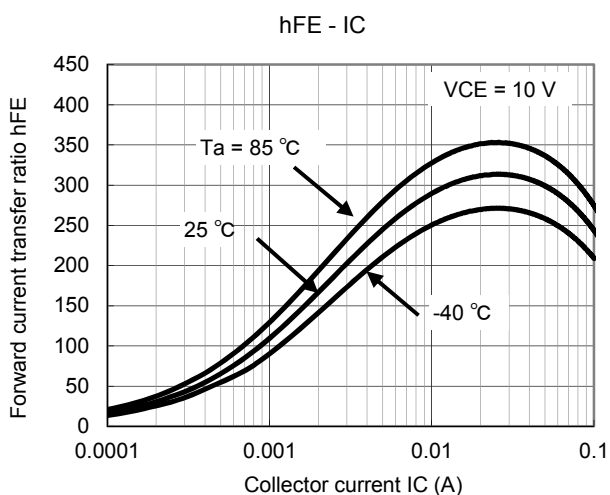
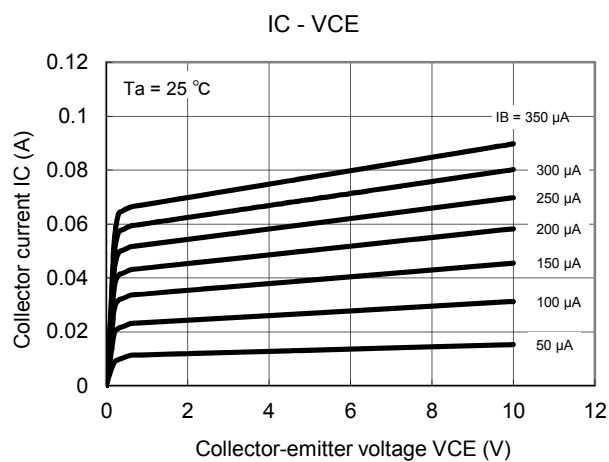
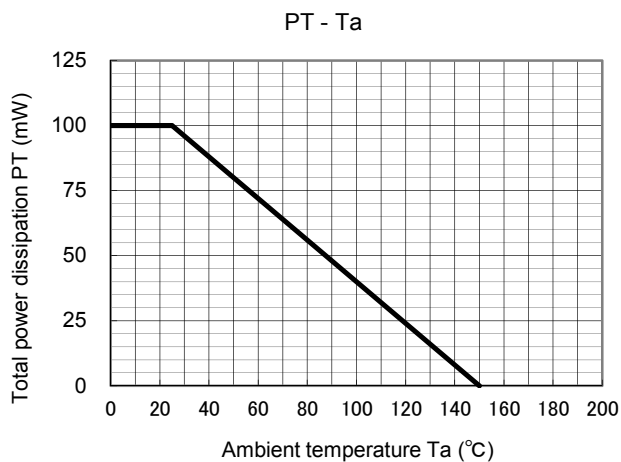


■ Electrical Characteristics  $T_a = 25\text{ }^\circ\text{C} \pm 3\text{ }^\circ\text{C}$

| Parameter                                    | Symbol   | Conditions              | Min  | Typ | 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       |      |     | 0.1  | 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  | 5.7  |     |      | V    |
|  | Vi(off)  | VCE = 5 V, IC = 100 μA  |      |     | 0.8  | V    |
| Input resistance                             | R1       |                         | -30% | 100 | 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.

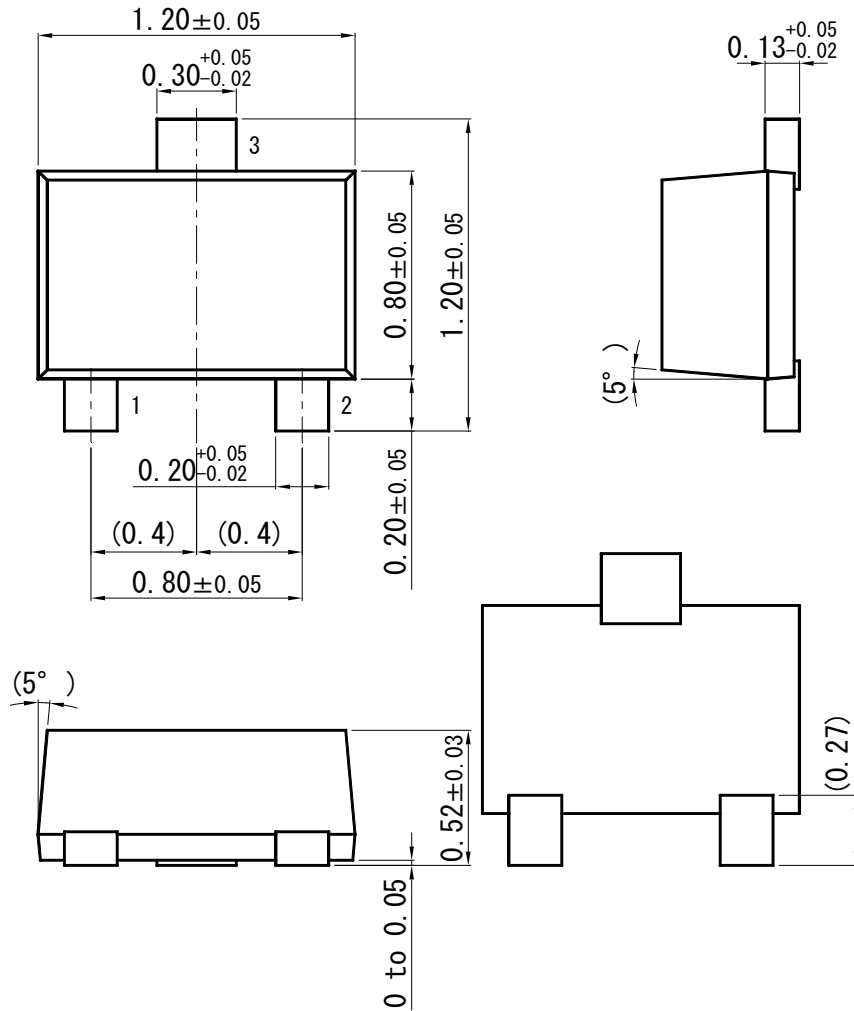
Technical Data ( reference )



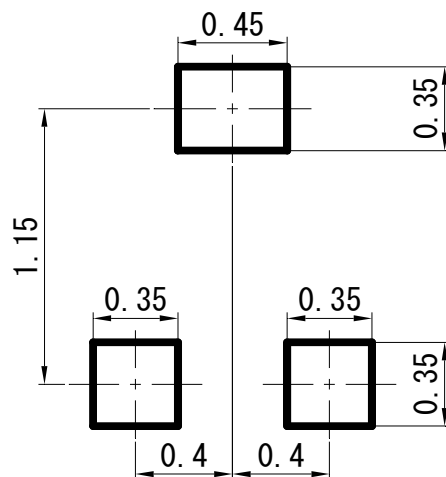


### SSSMini3-F2-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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