

DRC2152Z0L

# Panasonic

DRC2152Z0L

## Silicon NPN epitaxial planar type

## For digital circuits

Complementary to DRA2152Z

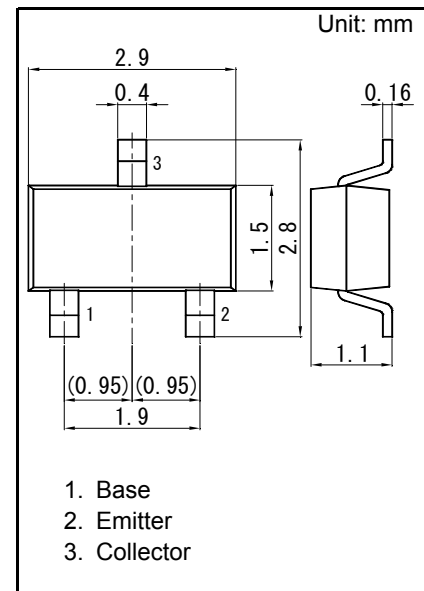
## ■ Features

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

■ Marking Symbol: N0

## ■ Packaging

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

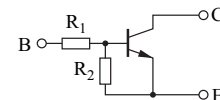


|           |                 |
|-----------|-----------------|
| Panasonic | Mini3-G3-B      |
| JEITA     | SC-59A          |
| Code      | TO-236AA/SOT-23 |

■ 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     | 200         | mW   |
| Junction temperature                  | Tj     | 150         | °C   |
| Operating ambient temperature         | Topr   | -40 to +85  | °C   |
| Storage temperature                   | Tstg   | -55 to +150 | °C   |

### Internal Connection



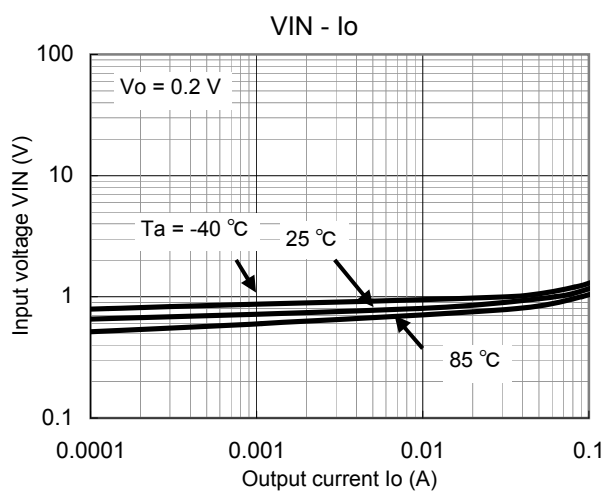
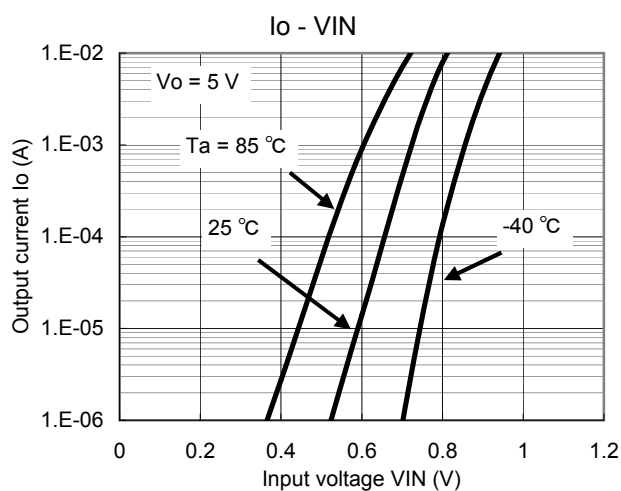
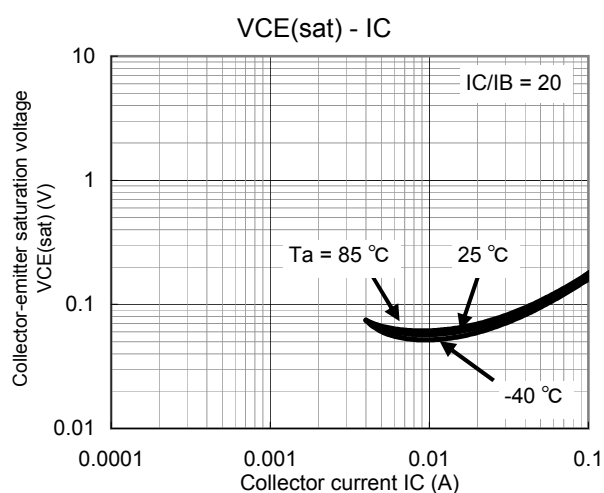
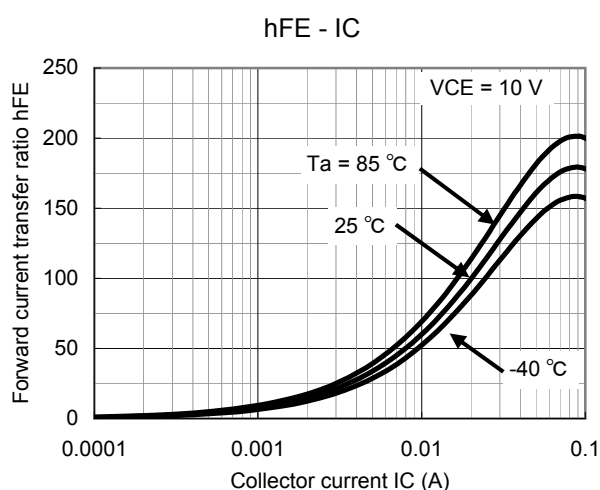
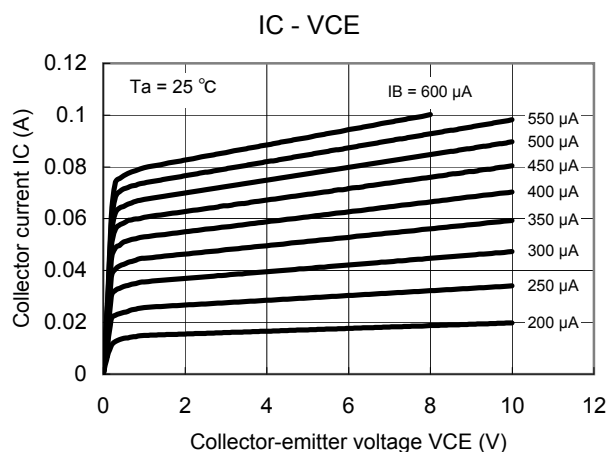
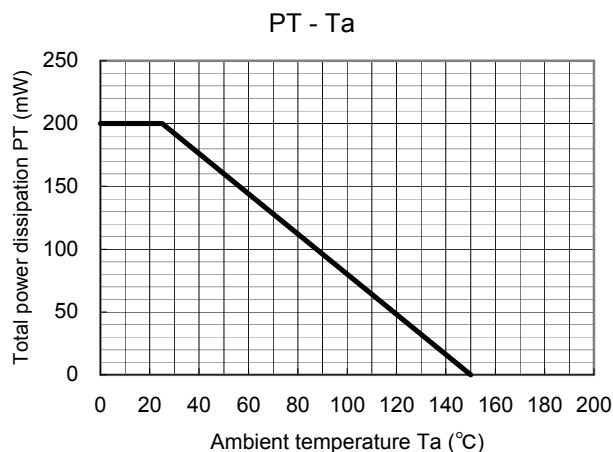
|                     |    |      |    |
|---------------------|----|------|----|
| Resistance<br>value | R1 | 0.51 | kΩ |
|                     | R2 | 5.1  | kΩ |

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

| Parameter                                    | Symbol   | Conditions                  | Min  | Typ  | Max  | Unit       |
|----------------------------------------------|----------|-----------------------------|------|------|------|------------|
| Collector-base voltage (Emitter open)        | VCBO     | IC = 10 $\mu$ A, 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  | $\mu$ A    |
| Collector-emitter cutoff current (Base open) | ICEO     | VCE = 50 V, IB = 0          |      |      | 0.5  | $\mu$ A    |
| 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          |
| Input voltage                                | Vi(on)   | VCE = 0.2 V, IC = 5 mA      | 1.0  |      |      | V          |
|                                              | Vi(off)  | VCE = 5 V, IC = 100 $\mu$ A |      |      | 0.4  | V          |
| Input resistance                             | R1       |                             | -30% | 0.51 | +30% | k $\Omega$ |
| Resistance ratio                             | R1/R2    |                             | 0.08 | 0.10 | 0.12 | -          |

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

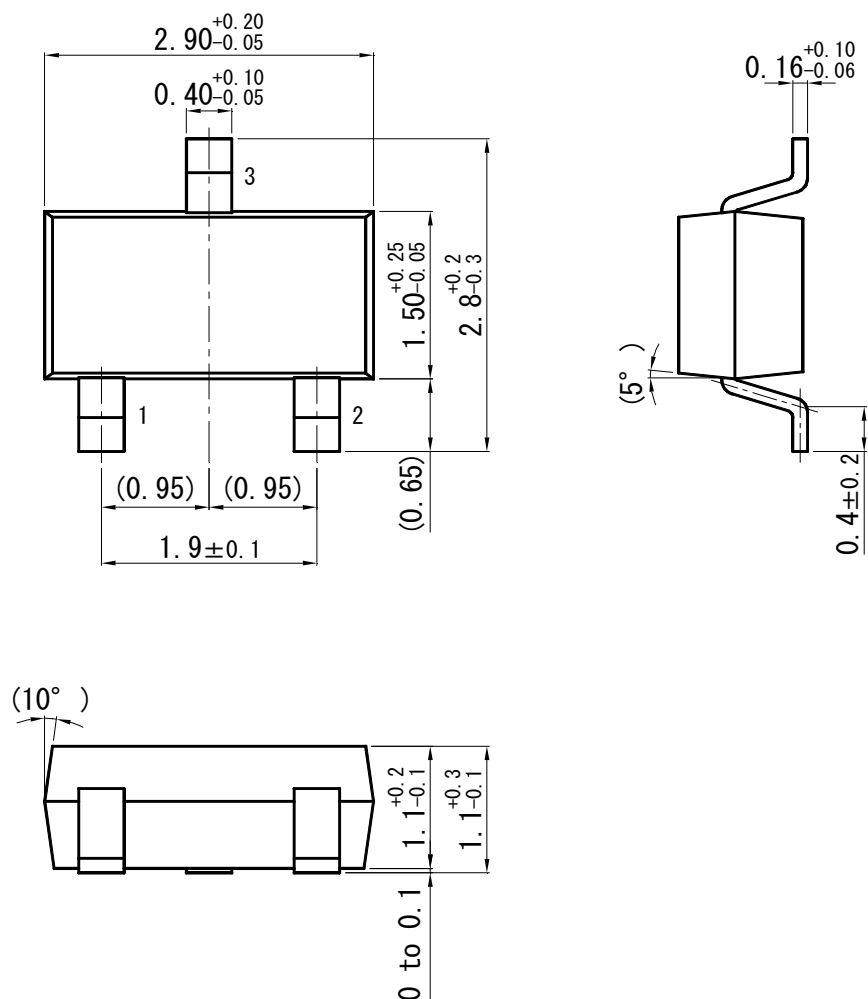
Technical Data ( reference )



**Panasonic**

Mini3-G3-B

Unit: mm



■ Land Pattern (Reference) (Unit: mm)



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