ShinDengen

# D1FT10

## Schottky Barrier Diodes
## 100V, 2A

### Feature

- Small SMD
- Tj=175℃
- Ultra low $I_R$
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

### OUTLINE

**Package (House Name):** 1F
**Package (JEDEC Code):** DO-214AC

### Equivalent circuit


### Absolute Maximum Ratings (unless otherwise specified : Tl=25℃)

| Item | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Storage temperrature | Tstg | | -55 to 175 | ℃ |
| Junction temperature | Tj | | 175 | ℃ |
| Repetitive peak reverse voltage | $V_{RRM}$ | | 100 | V |
| Average forward current | $I_F$(AV) | 50Hz sine wave, Resistance load, Tl=136℃ | 2 | A |
| Average forward current | $I_F$(AV) | 50Hz sine wave, Resistance load, On alumina substrate, Ta=25℃ | 1.74 | A |
| Average forward current | $I_F$(AV) | 50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25℃ | 1.31 | A |
| Surge forward current | $I_{FSM}$ | 50Hz sine wave, Non-repetitive, 1cycle, Peak value, Tj=25℃ | 50 | A |

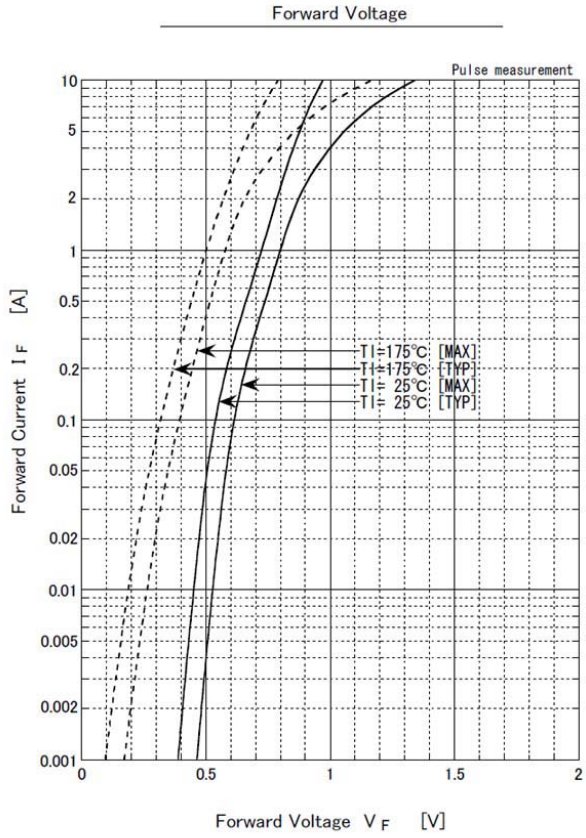
※ :See the original Specifications

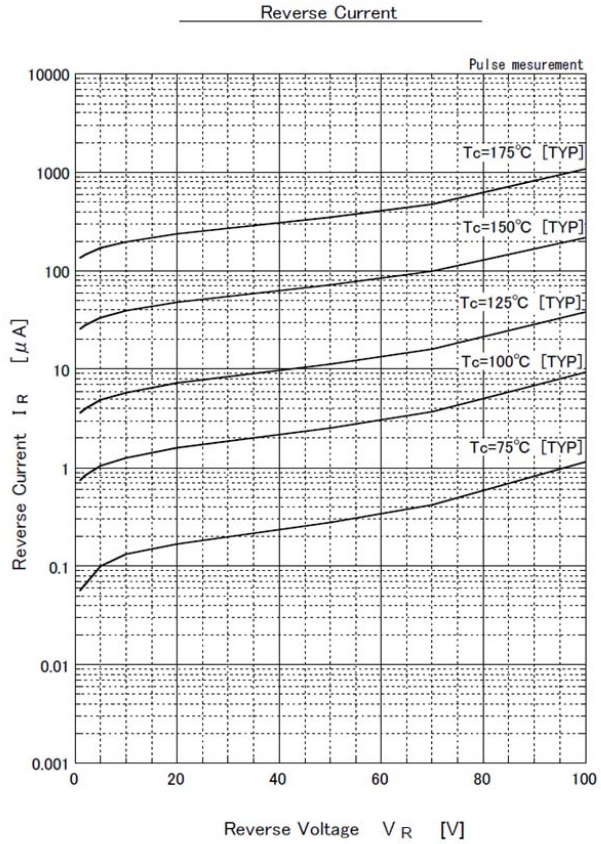
## Electrical Characteristics (unless otherwise specified : Tl=25℃)

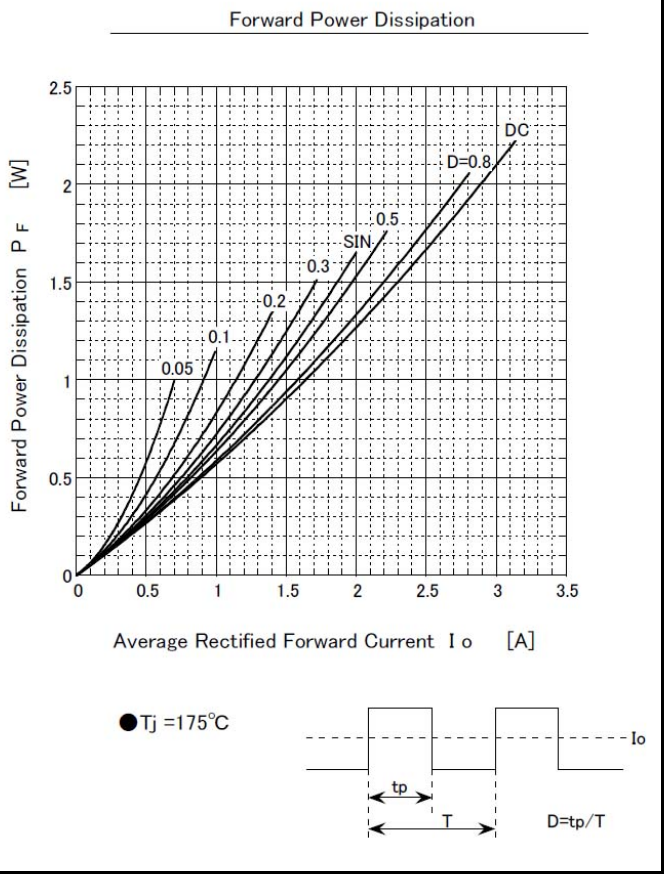
| Item | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | MIN | TYP | MAX | |
| Forward voltage | $V_F$ | IF=2A, Pulse measurement | | | 0.86 | V |
| Forward voltage | $V_F$ | IF=1A, Pulse measurement | | | 0.8 | V |
| Reverse current | $I_R$ | VR=100V, Pulse measurement | | | 0.005 | mA |
| Total capacitance | Ct | f=1MHz, VR=10V | | 40 | | pF |
| Thermal resistance | Rth(j-l) | Junction to lead | | | 23 | ℃/W |
| Thermal resistance | Rth(j-a) | Junction to ambient, On alumina substrate | | | 108 | ℃/W |
| Thermal resistance | Rth(j-a) | Junction to ambient, On glass-epoxy substrate | | | 157 | ℃/W |

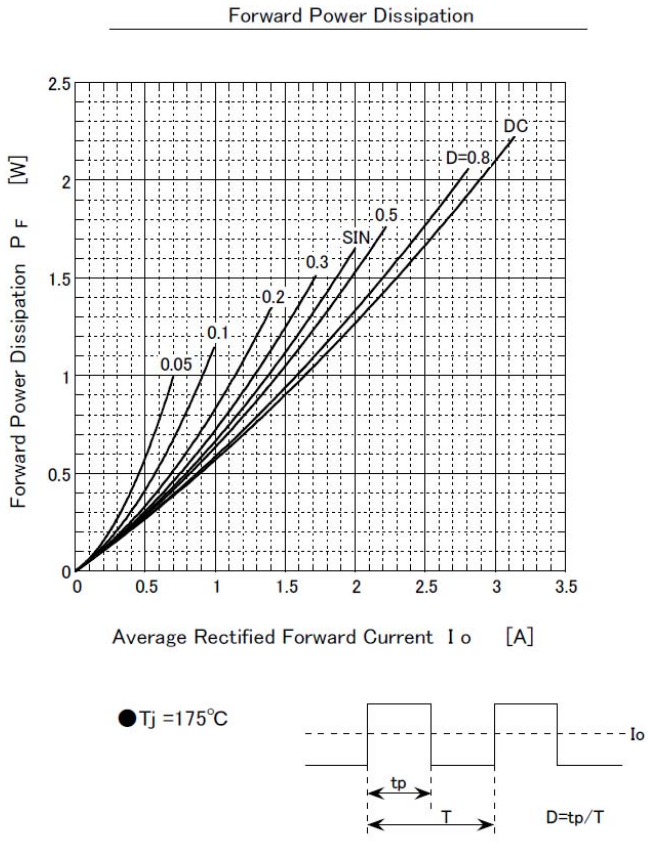
※ :See the original Specifications

## CHARACTERISTIC DIAGRAMS

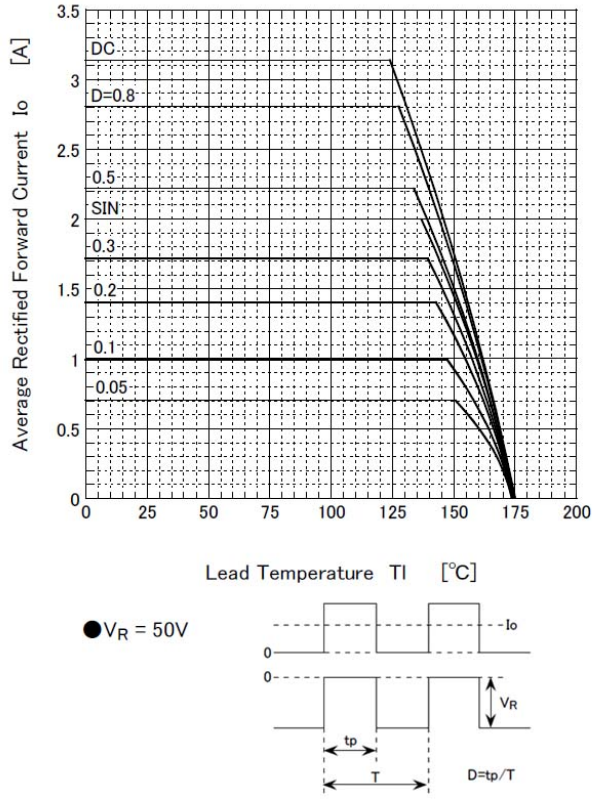


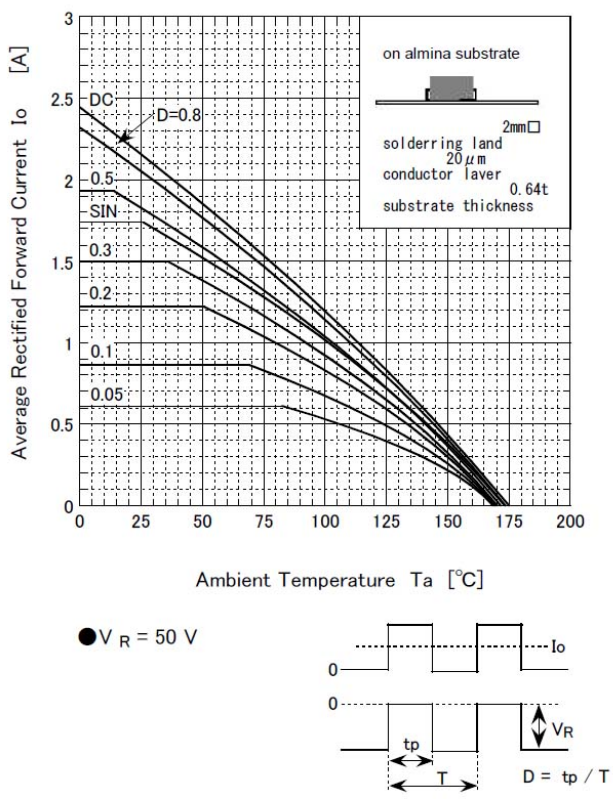



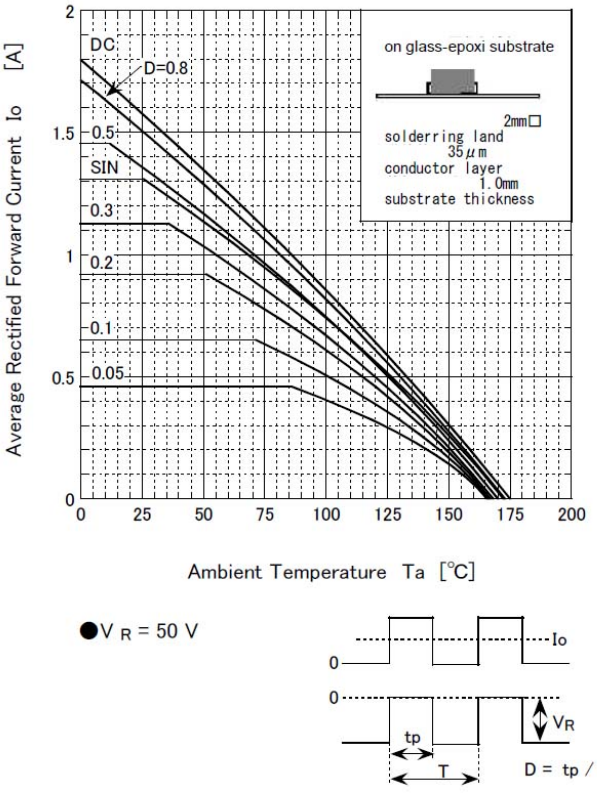
Derating Curve



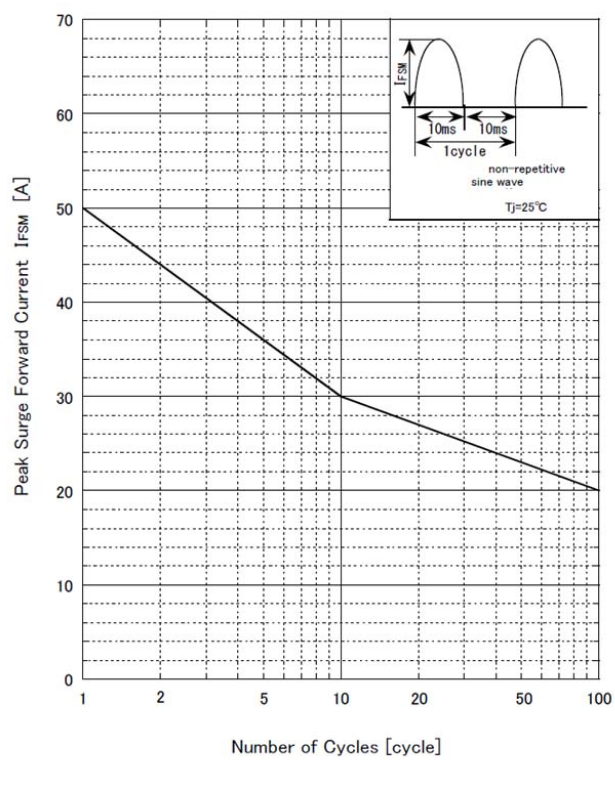

Derating Curve



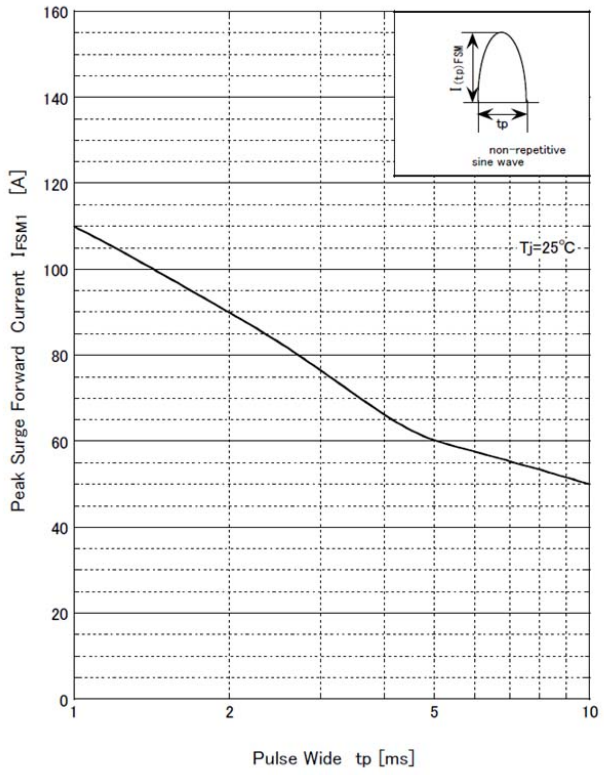

Derating Curve



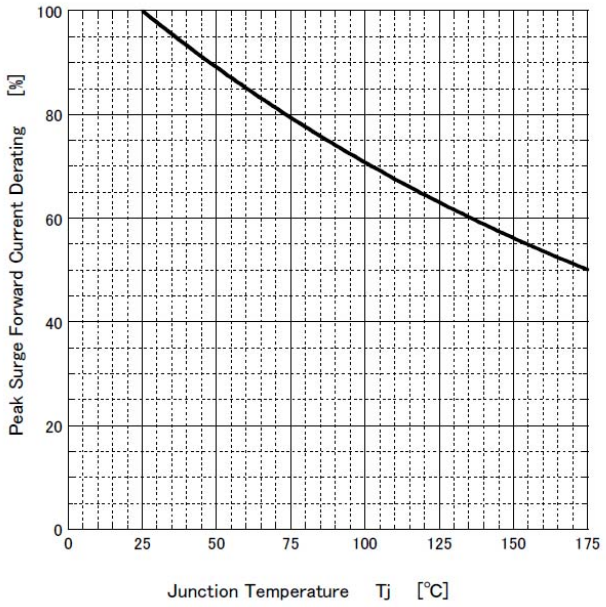

Peak Surge Forward Capability



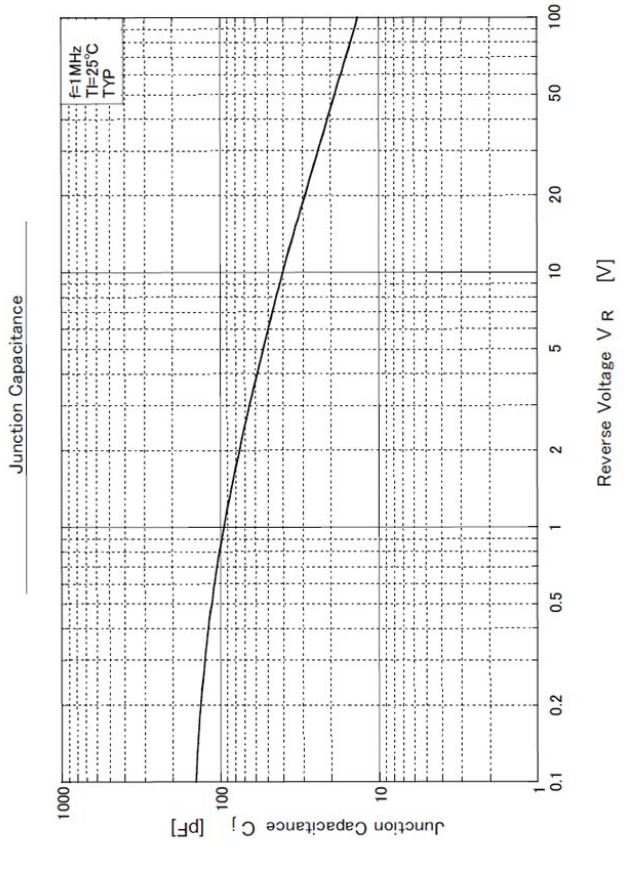
Peak Surge Forward Capability



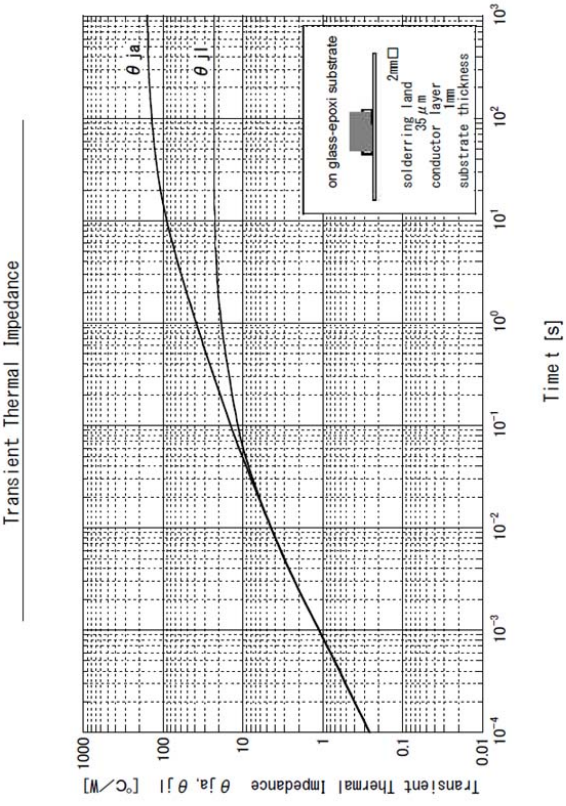

Peak Surge Forward Current Derating
vs Junction Temperature

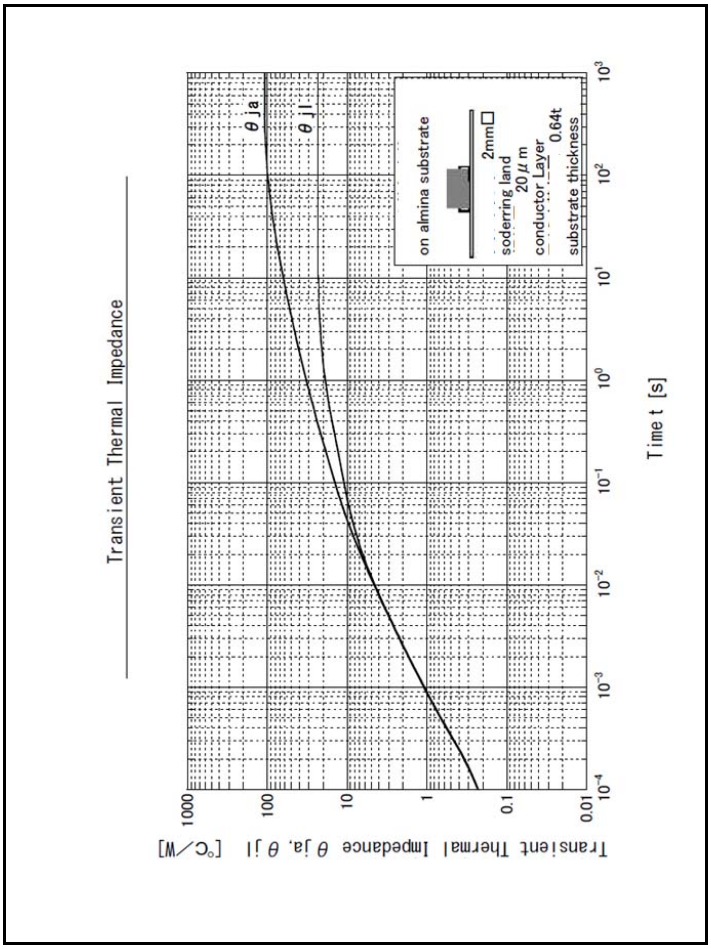



Junction Capacitance




Transient Thermal Impedance




Transient Thermal Impedance
θ ja
θ jl
on almina substrate
2mm□
soldering land
20μm
conductor Layer
0.64t
substrate thickness
Transient Thermal Impedance θ ja, θ jl [℃/W]
Time t [s]

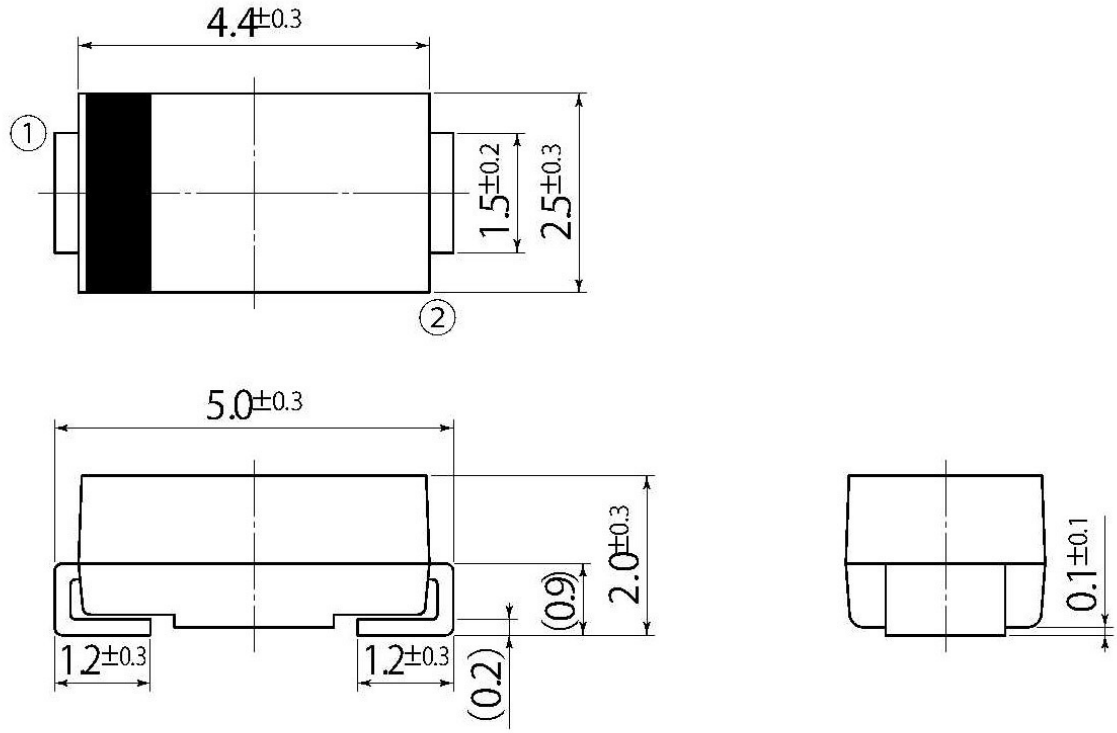
## Outline Dimensions

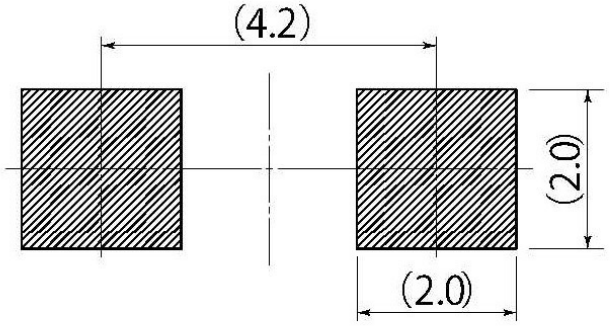
unit:mm

scale: 10/1

B3

| JEDEC Code | DO-214AC |
|---|---|
| JEITA Code | – |
| House Name | 1F |




Referential Soldering Pad

• Optimize soldering pad to the board design and soldering condition.

## Notes

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