

D1NK100

Fast Recovery Diodes
1000V, 1A

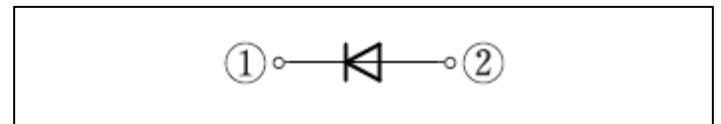
Feature

- High Voltage
- Low Noise
- Pb free terminal
- RoHS:Yes

OUTLINE



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : Tl=25°C)

| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------------|--------------------|---|------------|------|
| Storage temperature | Tstg | | -55 to 150 | °C |
| Junction temperature | Tj | | -55 to 150 | °C |
| Repetitive peak reverse voltage | V _{RRM} | | 1000 | V |
| Average forward current | I _{F(AV)} | 50Hz sine wave, Resistance load, On glass-epoxy substrate, Tl=127°C ※ | 1 | A |
| Average forward current | I _{F(AV)} | 50Hz sine wave, Resistance load, On glass-epoxy substrate, Ta=25°C ※ | 0.6 | A |
| Surge forward current | I _{FSM} | 50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25°C | 30 | A |
| Surge forward current | I _{FSM1} | tp=1ms, Sine wave, Non-repetitive, Peak value, Tj=25°C | 55 | A |

※ :See the original Specifications

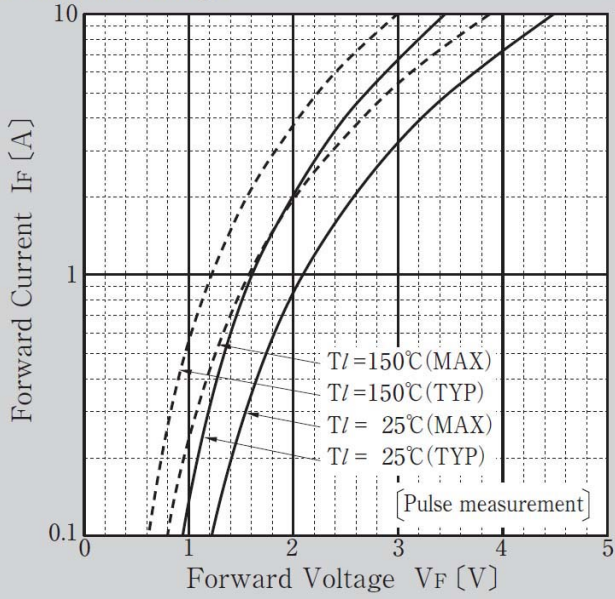
Electrical Characteristics (unless otherwise specified : Tl=25°C)

| Item | Symbol | Conditions | Ratings | | | Unit |
|-----------------------|----------|---|---------|-----|-----|---------|
| | | | MIN | TYP | MAX | |
| Forward voltage | V_F | IF=1A, Pulse measurement | | | 2.1 | V |
| Reverse current | I_R | VR=1000V, Pulse measurement | | | 10 | μ A |
| Reverse recovery time | trr | IF=0.5A, IR=1.0A, 0.25IR | | | 75 | ns |
| Reverse recovery time | trr | IF=1A, VR=400V, di/dt=-50A/ μ s, 0.25IR | | | 85 | ns |
| Total capacitance | Ct | f=1MHz, VR=10V | | 7.5 | | pF |
| Thermal resistance | Rth(j-l) | Junction to lead, On glass-epoxy substrate ※ | | | 10 | °C/W |
| Thermal resistance | Rth(j-a) | Junction to ambient, On glass-epoxy substrate ※ | | | 113 | °C/W |

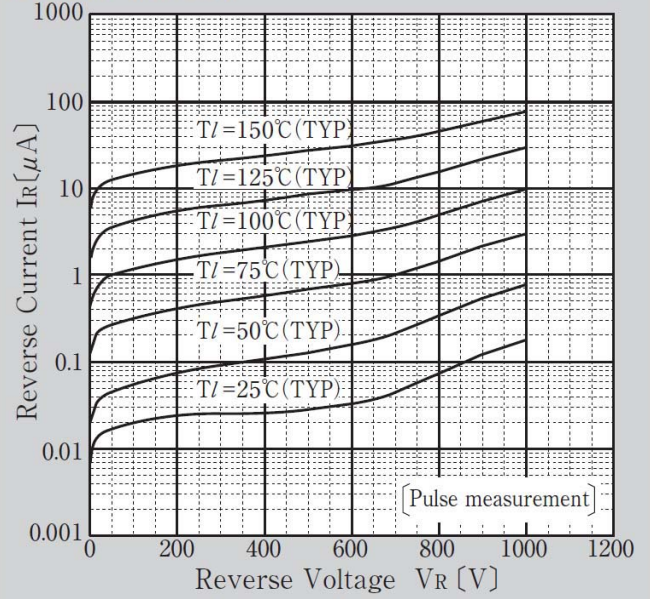
※ :See the original Specifications

CHARACTERISTIC DIAGRAMS

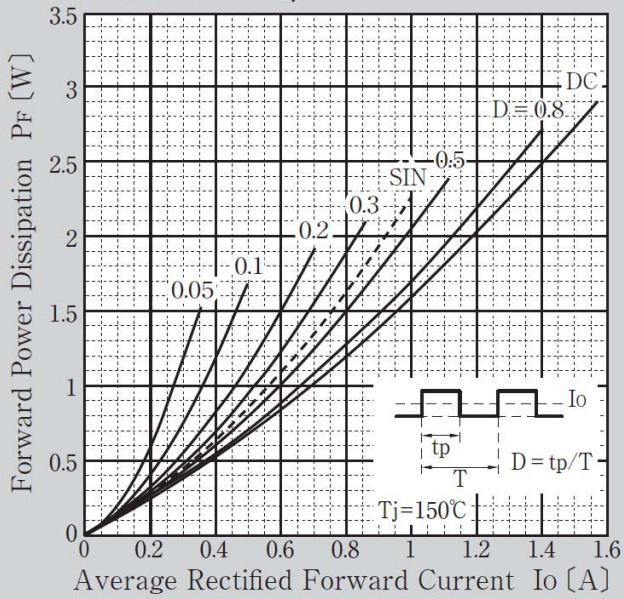
Forward Voltage



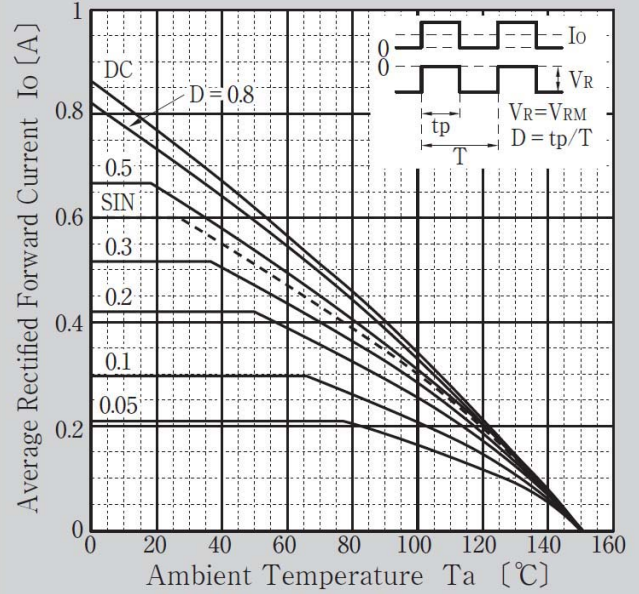
Reverse Current



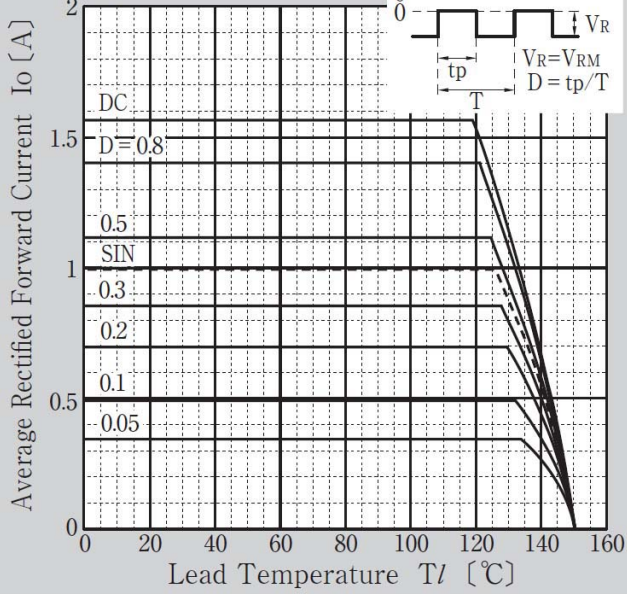
Forward Power Dissipation



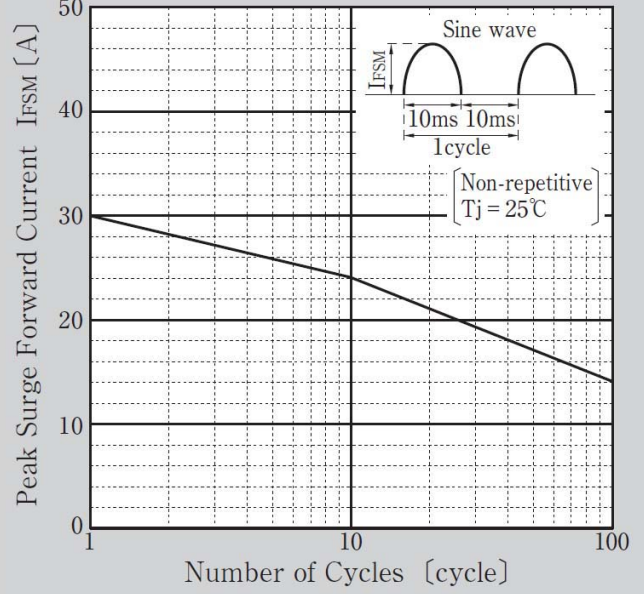
Derating Curve



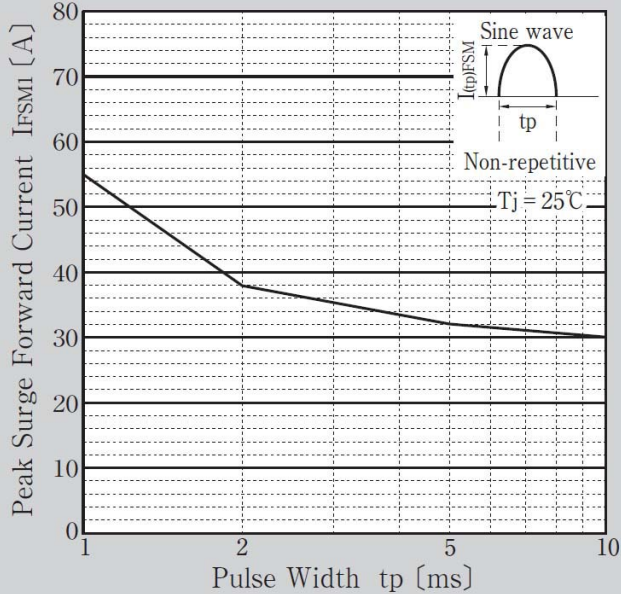
Derating Curve



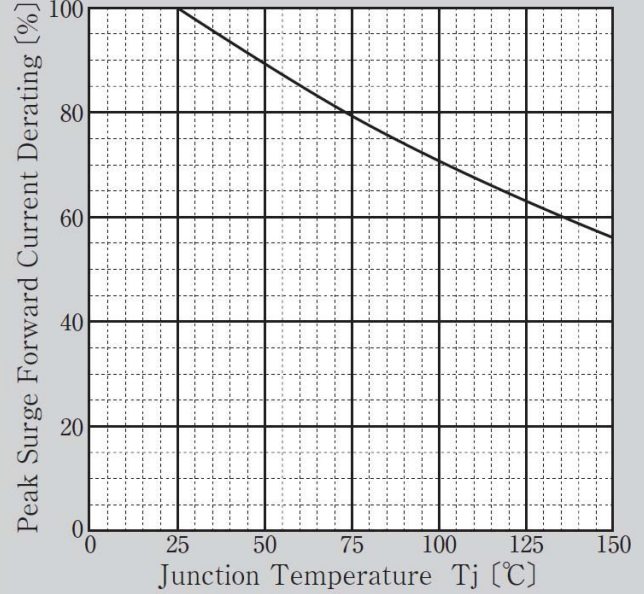
Peak Surge Forward Current Capability



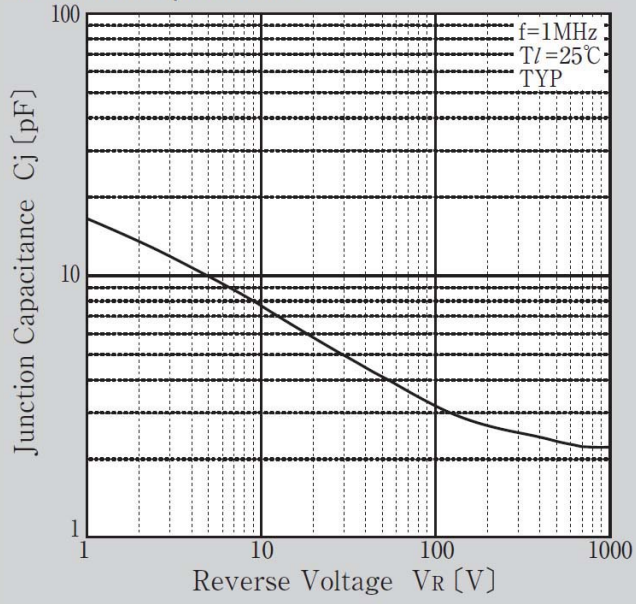
Peak Surge Forward Current Capability



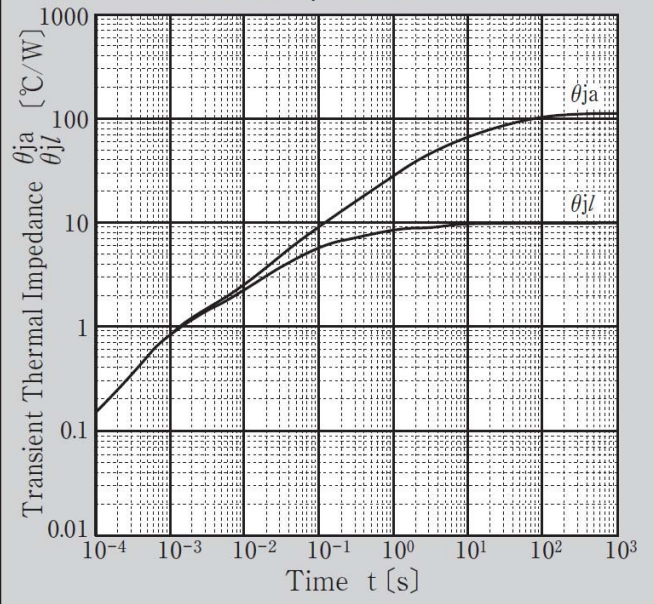
Peak Surge Forward Current Derating vs Junction Temperature



Junction Capacitance



Transient Thermal Impedance



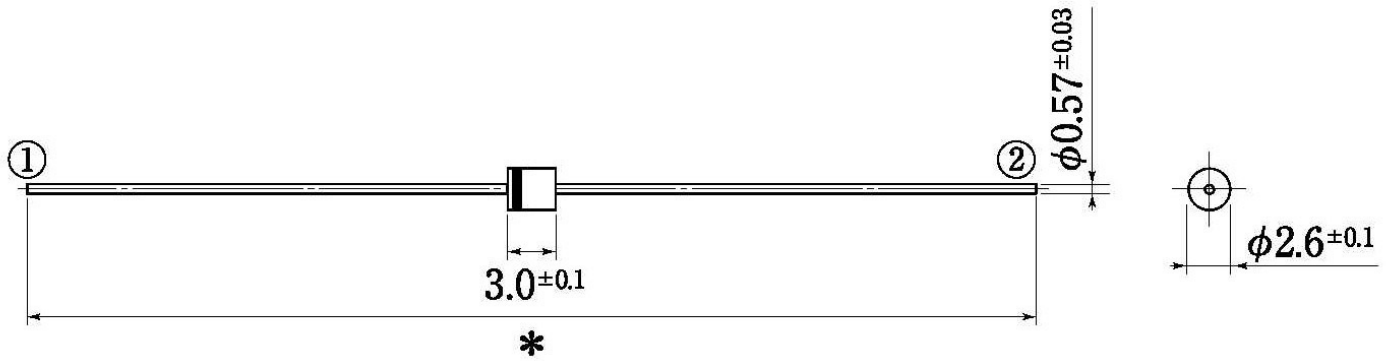
Outline Dimensions

unit:mm

scale: 2/1

A1

| | |
|------------|-------|
| JEDEC Code | — |
| JEITA Code | — |
| House Name | AX057 |



* $\left(\begin{array}{l} 26.0^{+1.5}_{-0.0} \text{ (Spec Code: 5070)} \\ 52.0^{+2.0}_{-1.0} \text{ (Spec Code: 5060)} \end{array} \right)$

Notes

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