

D30FD60K

Fast Recovery Diodes

600V, 30A

Feature

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

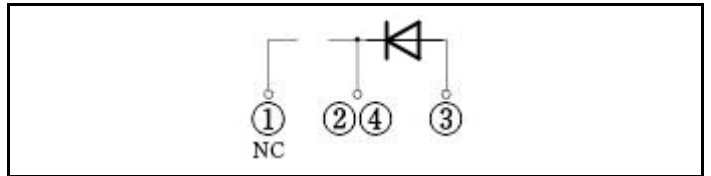
OUTLINE

Package (House Name): FD

Package (JEITA Code): SC-83 similar



Equivalent circuit



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

| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------------|--------------------|--|------------|------|
| Storage temperature | T _{stg} | | -55 to 150 | °C |
| Junction temperature | T _j | | 150 | °C |
| Repetitive peak reverse voltage | V _{RRM} | | 600 | V |
| Average forward current | I _{F(AV)} | 50Hz sine wave, Resistance load, With heatsink, T _c =102°C | 30 | A |
| Surge forward current | I _{FSM} | 50Hz sine wave, Non-repetitive 1 cycle, Peak value, T _j =25°C | 300 | A |
| Surge forward current | I _{FSM1} | t _p =1ms, Non-repetitive, T _j =25°C | 948 | A |

※ :See the original Specifications

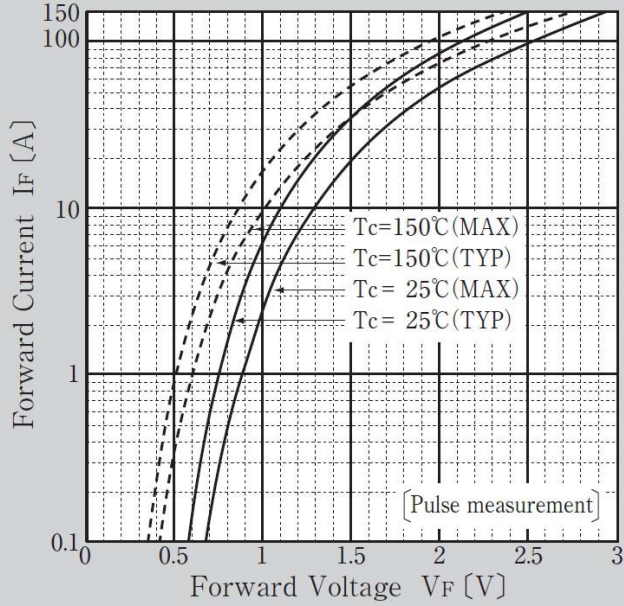
Electrical Characteristics (unless otherwise specified : Tc=25°C)

| Item | Symbol | Conditions | Ratings | | | Unit |
|-----------------------|----------------------|---|---------|-----|-----|------|
| | | | MIN | TYP | MAX | |
| Forward voltage | V _F | I _F =30A, Pulse measurement | | | 1.7 | V |
| Reverse current | I _R | V _R =600V, Pulse measurement | | | 10 | μA |
| Reverse recovery time | t _{rr} | I _F =0.5A, I _R =1A, 0.25I _R | | | 95 | ns |
| Reverse recovery time | t _{rr} | I _F =1.0A, V _R =30V, di/dt=-50A/μs, 0.25I _R | | | 72 | ns |
| Reverse recovery time | t _{rr} | I _F =1.0A, V _R =420V, di/dt=-50A/μs, 0.25I _R | | | 84 | ns |
| Total capacitance | C _t | f=1MHz, V _R =10V | | 105 | | pF |
| Thermal resistance | R _{th(j-c)} | Junction to case, With heatsink | | | 0.8 | °C/W |
| Thermal resistance | R _{th(j-a)} | Junction to ambient | | | 65 | °C/W |

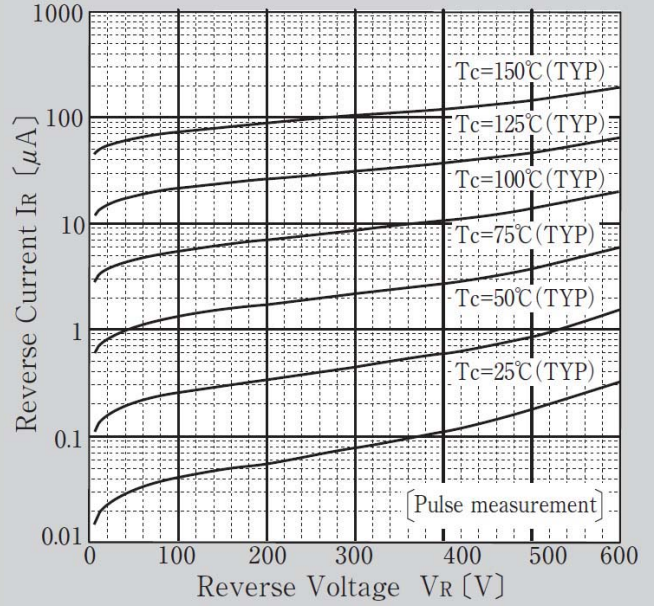
* :See the original Specifications

CHARACTERISTIC DIAGRAMS

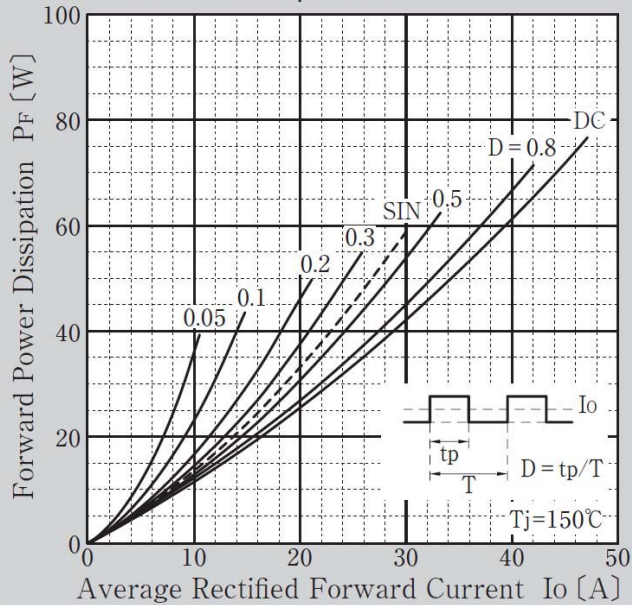
Forward Voltage



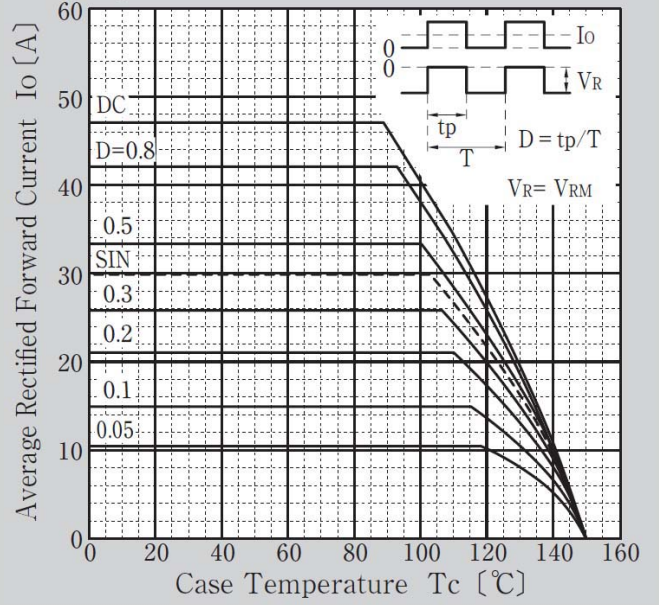
Reverse Current



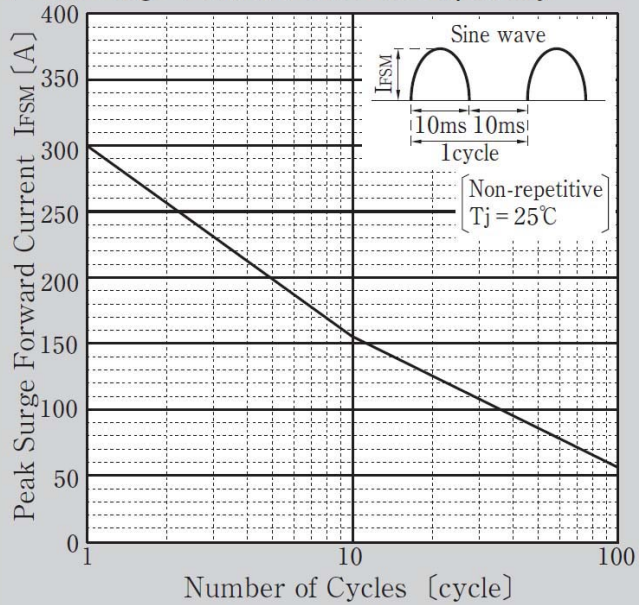
Forward Power Dissipation



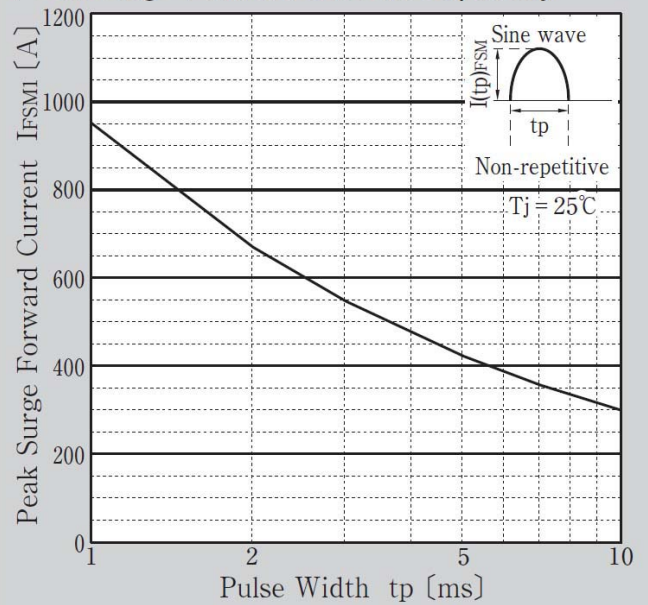
Derating Curve



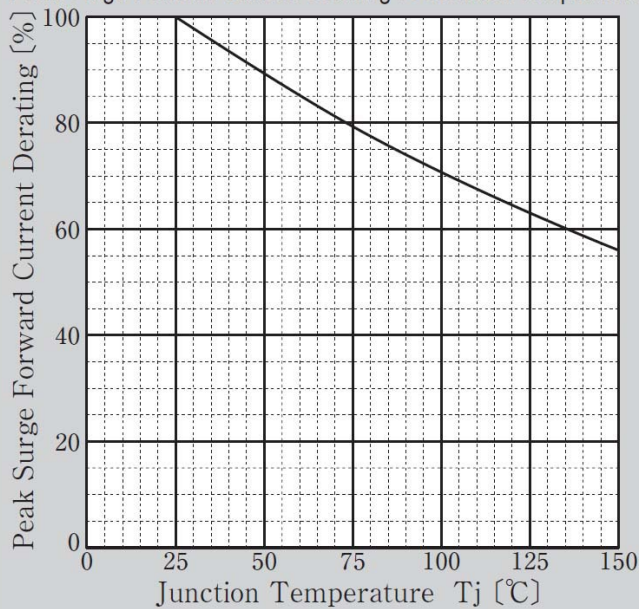
Peak Surge Forward Current Capability



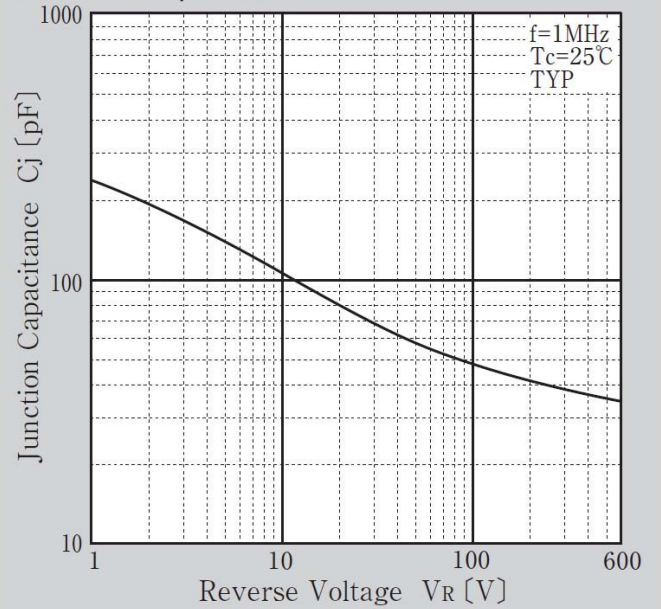
Peak Surge Forward Current Capability



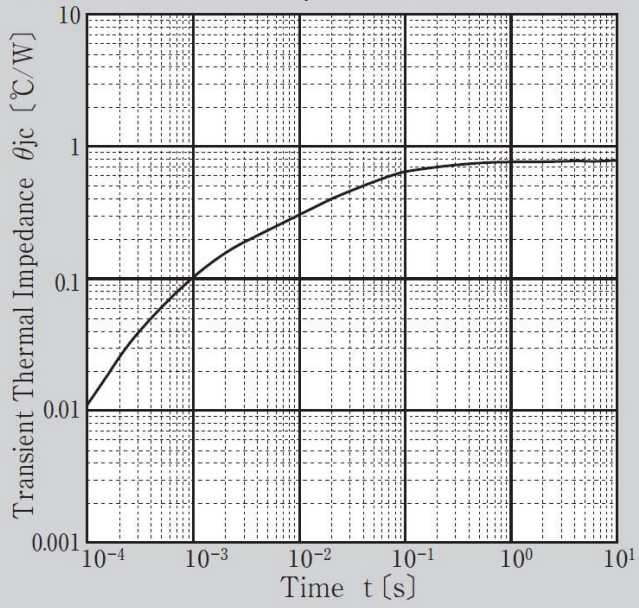
Peak Surge Forward Current Derating vs Junction Temperature



Junction Capacitance

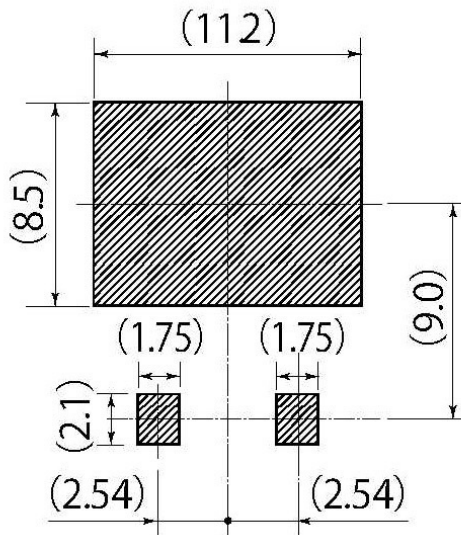
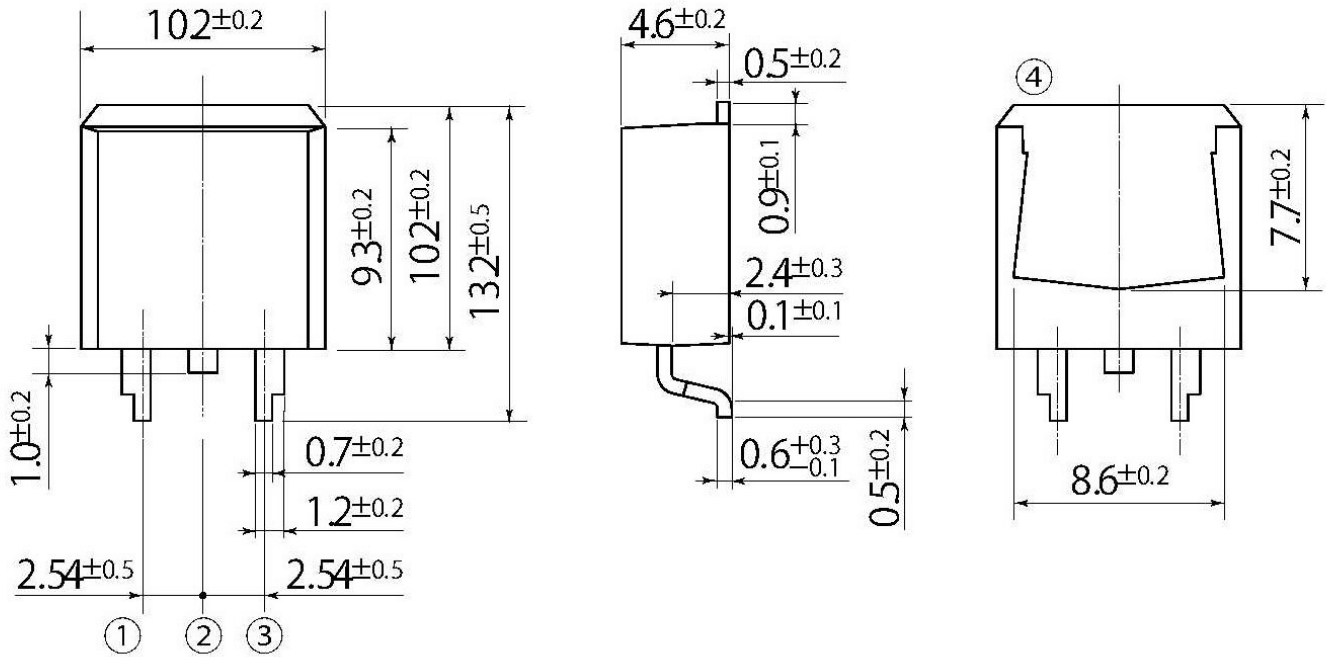


Transient Thermal Impedance



H2

| | |
|------------|---------------|
| JEDEC Code | — |
| JEITA Code | SC-83 similar |
| House Name | FD |



Referential Soldering Pad

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

Notes

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