# D15FR60LA

## Fast Recovery Diodes
## 600V, 15A

### Feature

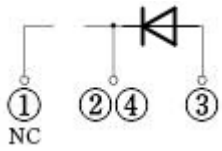
- SMD
- High Voltage
- High Recovery Speed
- Low Noise
- Based on AEC-Q101
- Low $V_F$
- Pb free terminal
- RoHS:Yes

### OUTLINE

**Package (House Name):** FR
**Package (JEDEC Code):** TO-252AA similar



### Equivalent circuit




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

| Item | Symbol | Conditions | Ratings | Unit |
|---|---|---|---|---|
| Storage temperrature | Tstg | | -55 to 150 | ℃ |
| Junction temperature | Tj | | -55 to 150 | ℃ |
| Repetitive peak reverse voltage | $V_{RRM}$ | | 600 | V |
| Average forward current | $I_F$(AV) | 50Hz sine wave, Resistance load, Tc=95℃ ※ | 15 | A |
| Surge forward current | $I_{FSM}$ | 50Hz sine wave, Non-repetitive 1 cycle, Peak value, Tj=25℃ | 220 | A |
| Surge forward current | $I_{FSM1}$ | tp=1ms, Sine wave, Non-repetitive, Peak value, Tj=25℃ | 450 | A |

※ :See the original Specifications

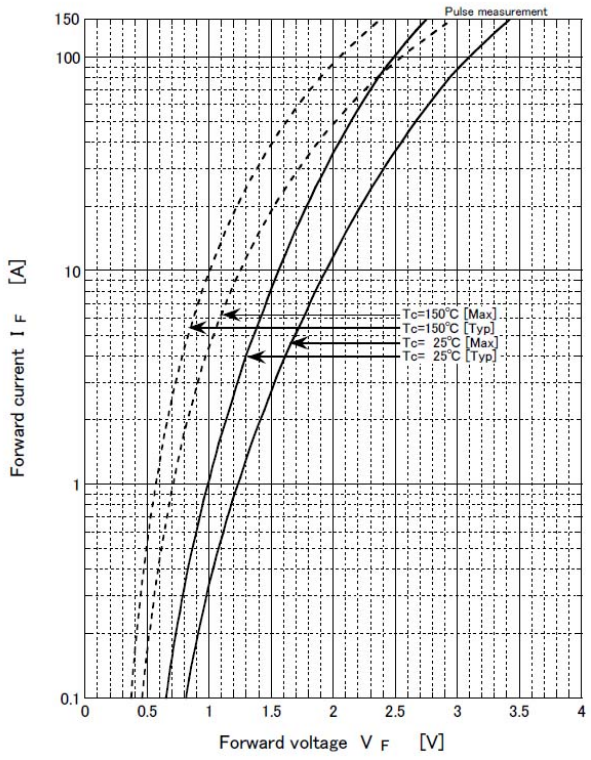
## Electrical Characteristics (unless otherwise specified : Tc=25℃)

| Item | Symbol | Conditions | Ratings | | | Unit |
|---|---|---|---|---|---|---|
| | | | MIN | TYP | MAX | |
| Forward voltage | $V_F$ | IF=15A, Pulse measurement | | | 2.1 | V |
| Reverse current | $I_R$ | VR=600V, Pulse measurement | | | 10 | μA |
| Reverse recovery time | trr | IF=0.5A, IR=1.0A, 0.25IR | | | 30 | ns |
| Total capacitance | Ct | f=1MHz, VR=10V | | 81 | | pF |
| Thermal resistance | Rth(j-c) | Junction to case, With heatsink ※ | | | 1.8 | ℃/W |

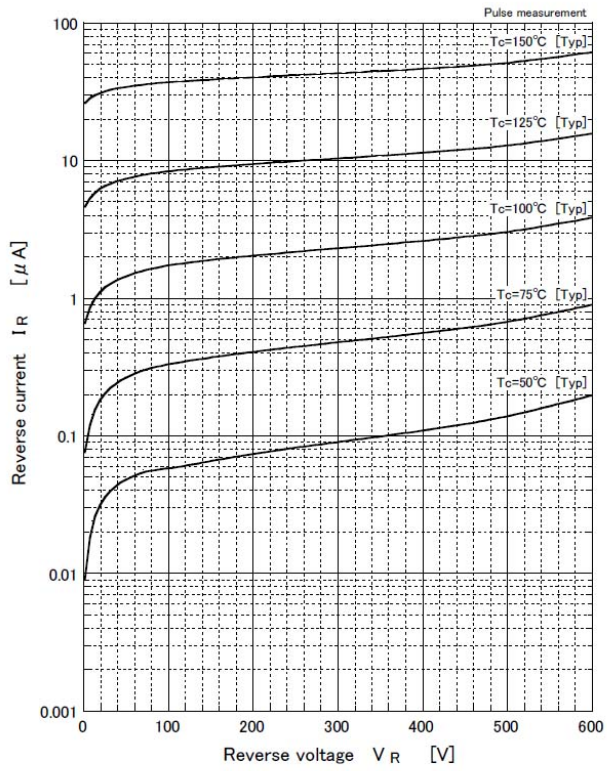
※ :See the original Specifications

## CHARACTERISTIC DIAGRAMS

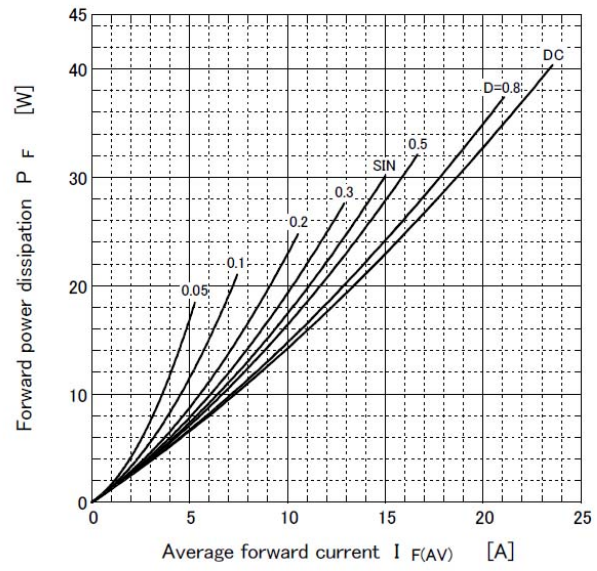
Forward voltage



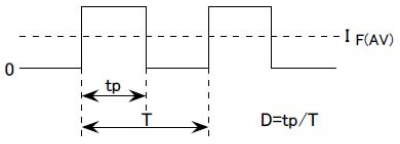

Reverse current



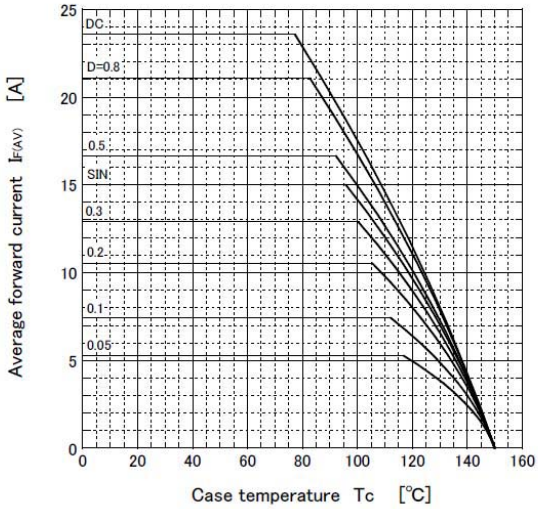

Forward power dissipation



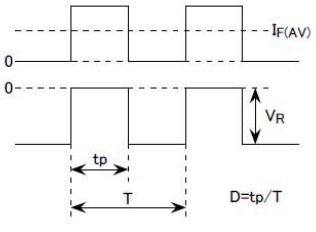

●Tj =150℃




Derating curve



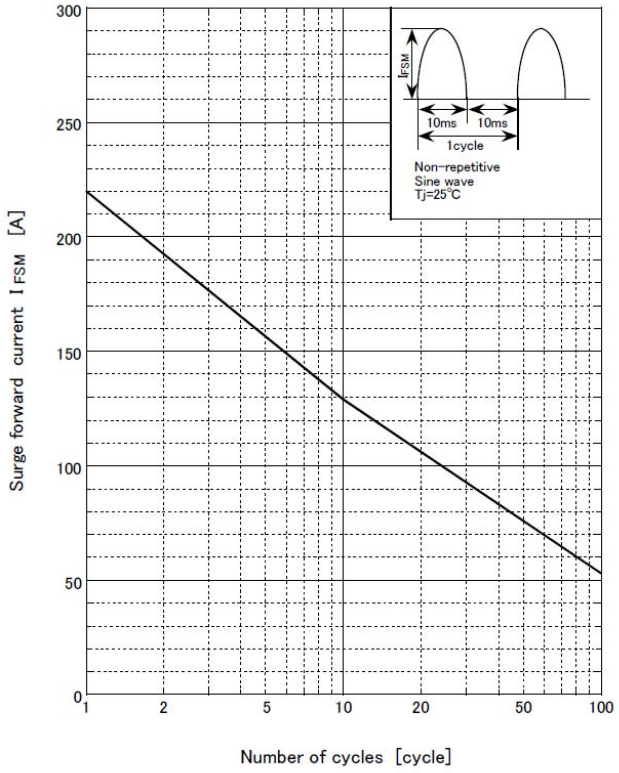

●$V_R$ = 600V
R-load
With heatsink



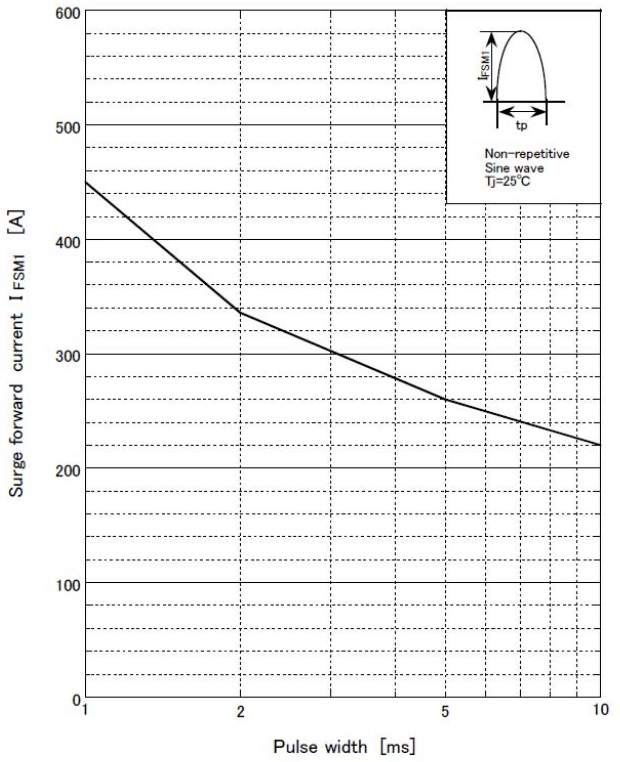

●Substrate detail

| | |
|---|---|
| Type | Alumina |
| Size | 1 inch² |
| Thickness | 0.64mm |
| Conductor thickness | 20μm |
| Pattern area | 65mm² |

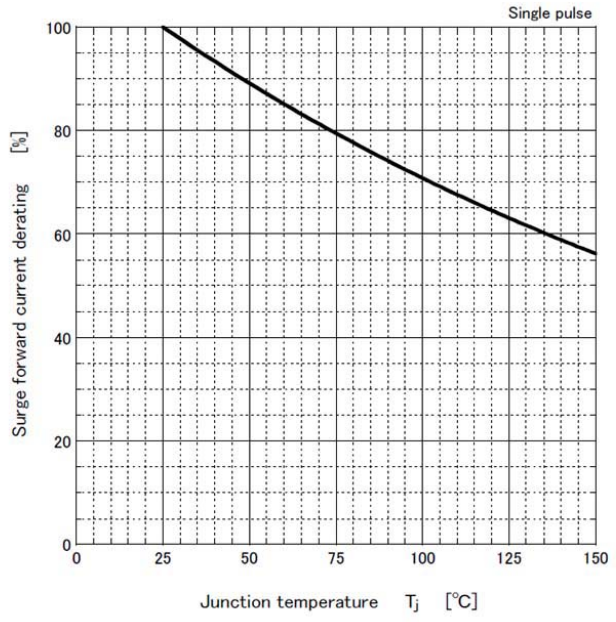
Surge forward current capability

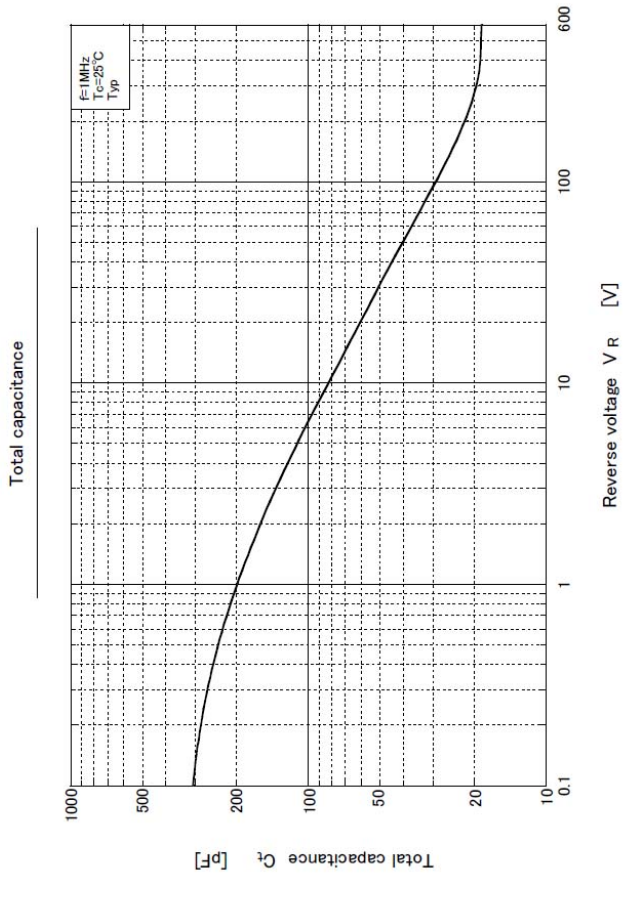


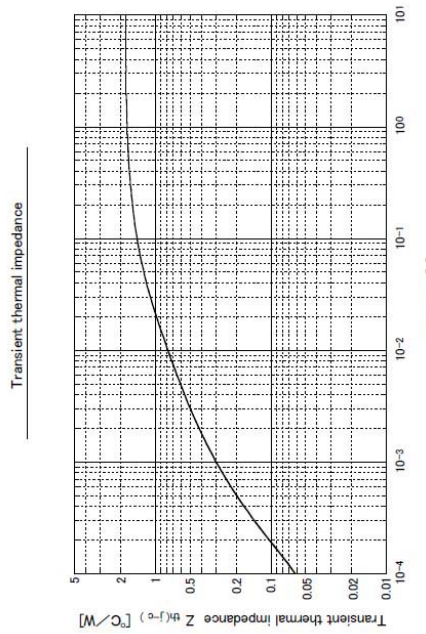

Surge forward current capability




Surge forward current derating
vs Junction temperature



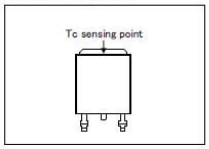






●Substrate detail

| | |
|---|---|
| Type | Alumina |
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●Tc sensing point



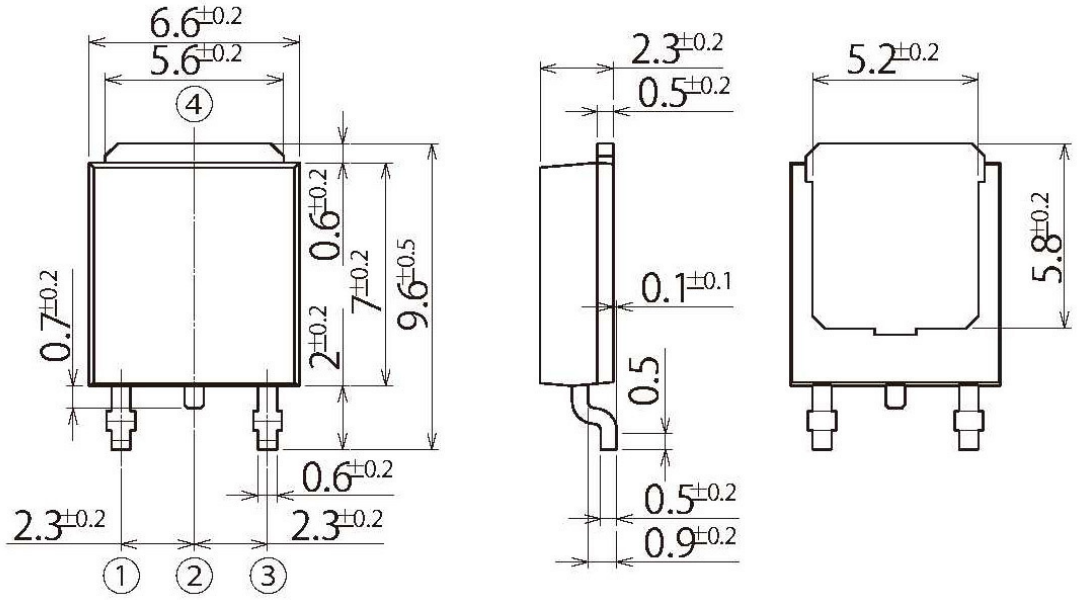
## Outline Dimensions

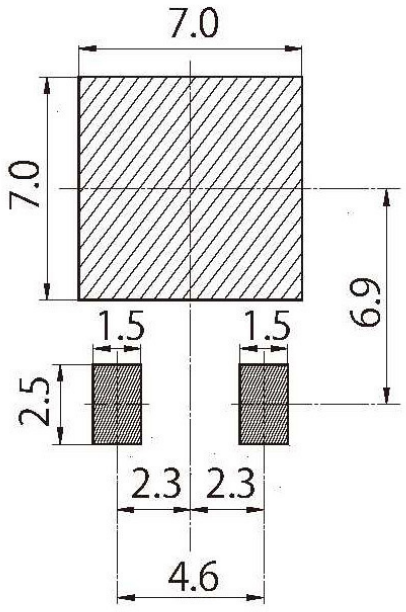
unit:mm

scale: 4/1

G5

| | |
|---|---|
| JEDEC Code | TO-252AA similar |
| JEITA Code | – |
| House Name | FR |




Referential Soldering Pad

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

## Notes

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