

D1FT10

Schottky Barrier Diodes 100V, 2A

Feature

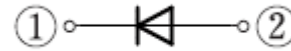
- Small SMD
- $T_j=175^{\circ}\text{C}$
- Ultra low I_R
- Based on AEC-Q101
- Pb free terminal
- RoHS:Yes

OUTLINE

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



Equivalent circuit



Absolute Maximum Ratings (unless otherwise specified : $T_l=25^{\circ}\text{C}$)

| Item | Symbol | Conditions | Ratings | Unit |
|---------------------------------|-----------|---|------------|--------------------|
| Storage temperature | T_{stg} | | -55 to 175 | $^{\circ}\text{C}$ |
| Junction temperature | T_j | | 175 | $^{\circ}\text{C}$ |
| Repetitive peak reverse voltage | V_{RRM} | | 100 | V |
| Average forward current | $I_F(AV)$ | 50Hz sine wave, Resistance load, $T_l=136^{\circ}\text{C}$ | 2 | A |
| Average forward current | $I_F(AV)$ | 50Hz sine wave, Resistance load, On alumina substrate, $T_a=25^{\circ}\text{C}$ | 1.74 | A |
| Average forward current | $I_F(AV)$ | 50Hz sine wave, Resistance load, On glass-epoxy substrate, $T_a=25^{\circ}\text{C}$ | 1.31 | A |
| Surge forward current | I_{FSM} | 50Hz sine wave, Non-repetitive, 1 cycle, Peak value, $T_j=25^{\circ}\text{C}$ | 50 | A |

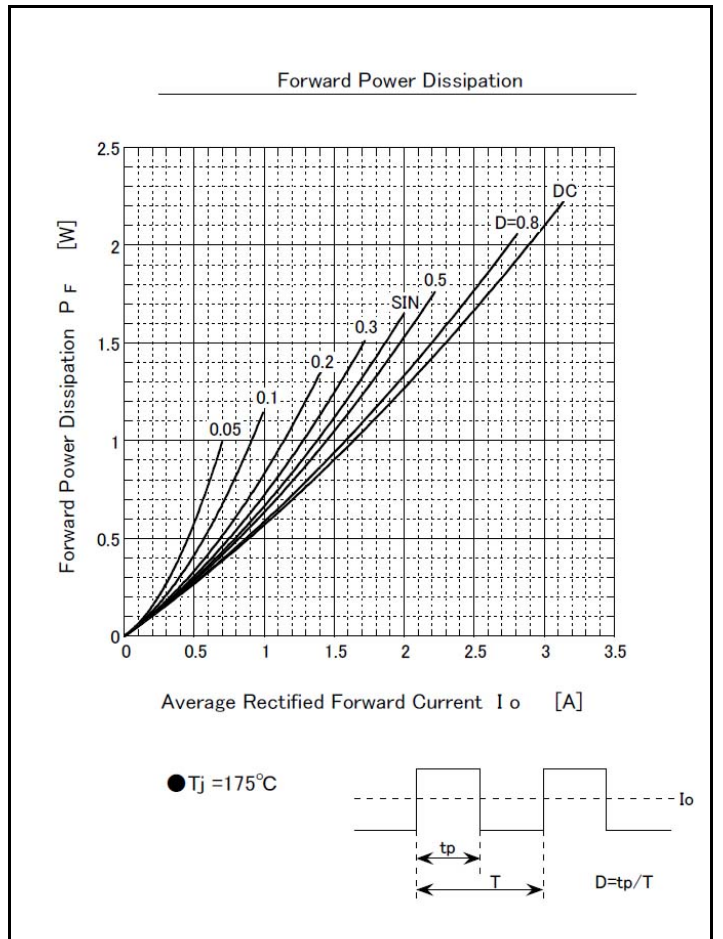
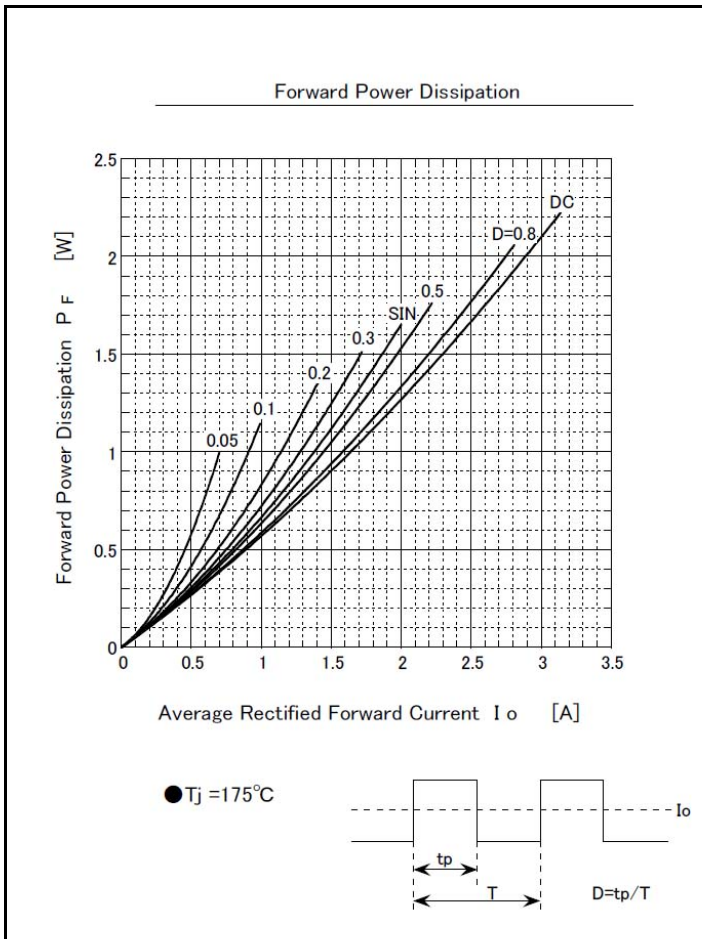
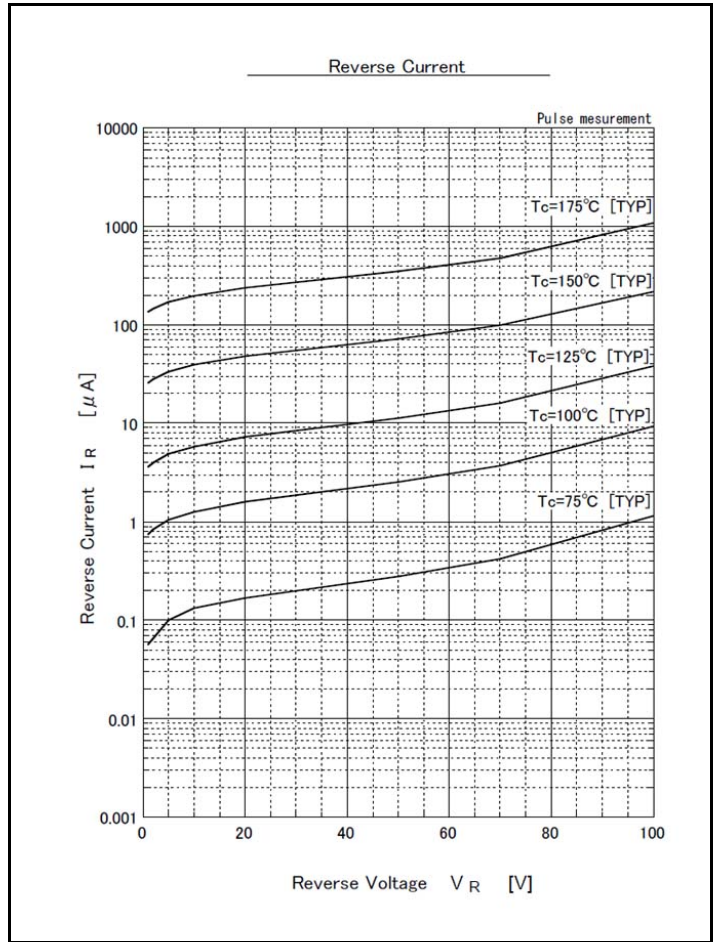
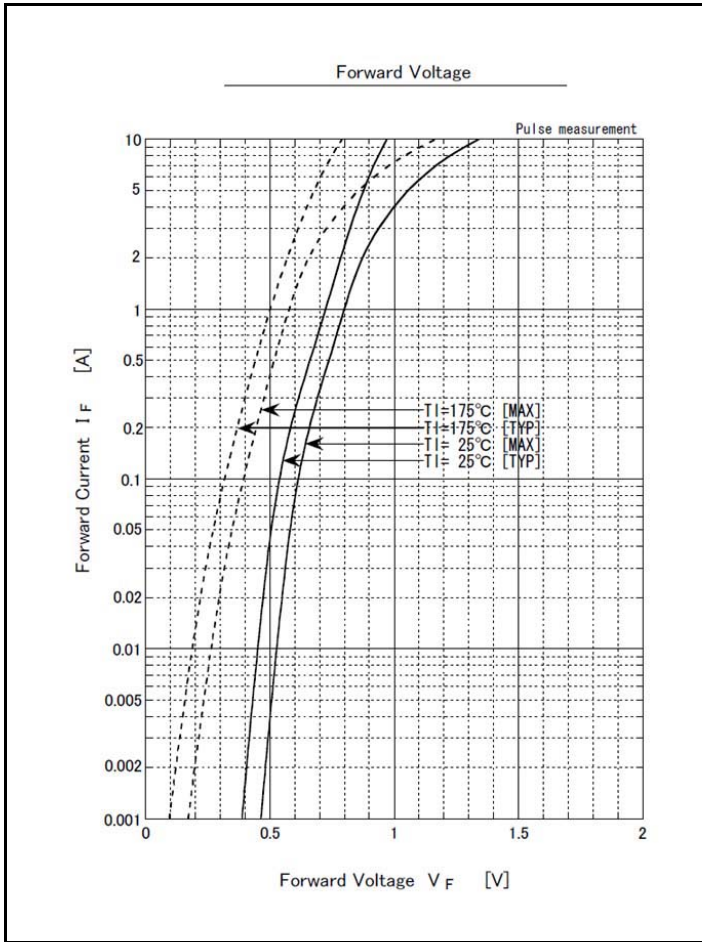
* : See the original Specifications

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

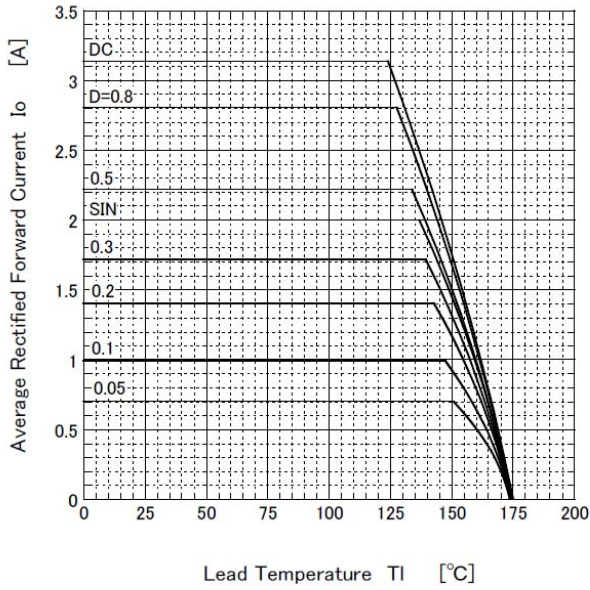
| Item | Symbol | Conditions | Ratings | | | Unit |
|--------------------|----------|---|---------|-----|-------|------|
| | | | MIN | TYP | MAX | |
| Forward voltage | V_F | IF=2A, Pulse measurement | | | 0.86 | V |
| Forward voltage | V_F | IF=1A, Pulse measurement | | | 0.8 | V |
| Reverse current | 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 | °C/W |
| Thermal resistance | Rth(j-a) | Junction to ambient, On alumina substrate | | | 108 | °C/W |
| Thermal resistance | Rth(j-a) | Junction to ambient, On glass-epoxy substrate | | | 157 | °C/W |

* :See the original Specifications

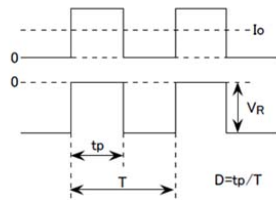
CHARACTERISTIC DIAGRAMS



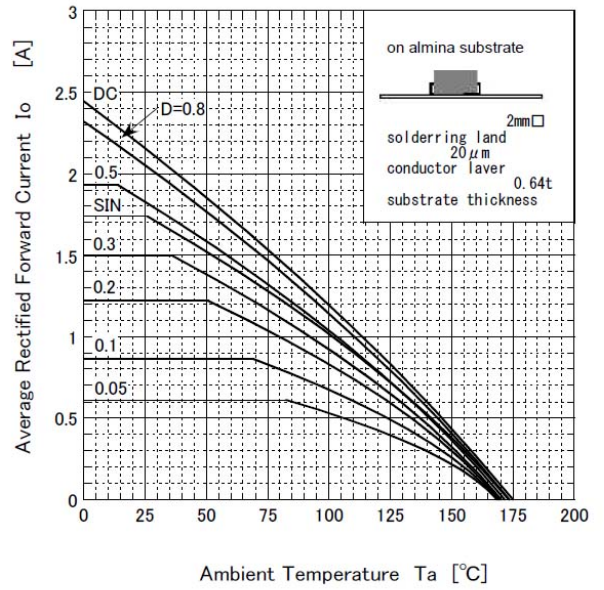
Derating Curve



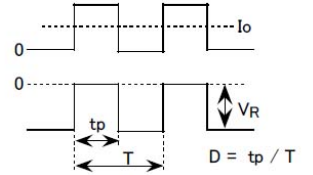
● $V_R = 50V$



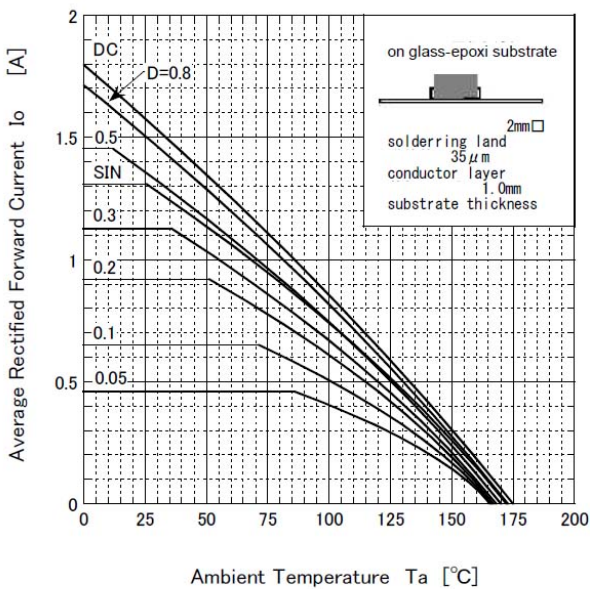
Derating Curve



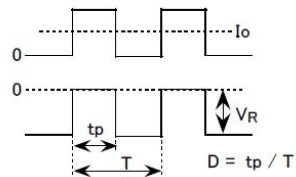
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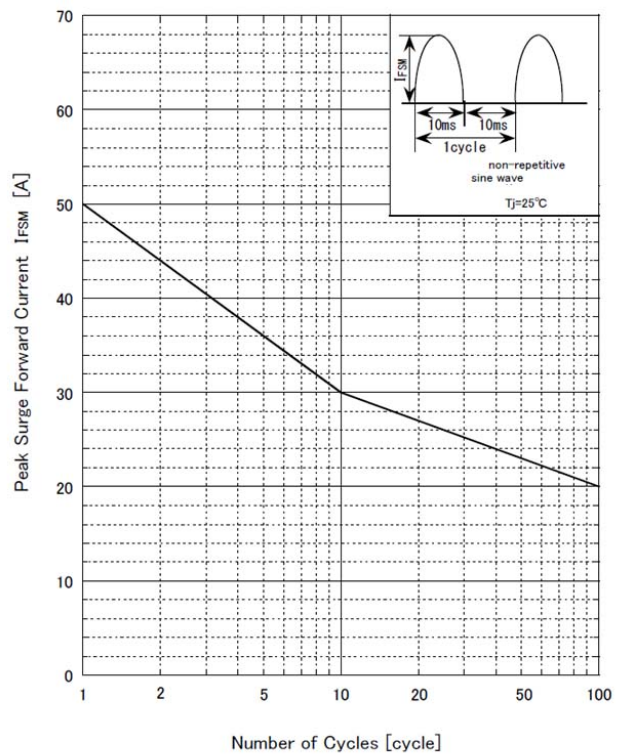
Derating Curve

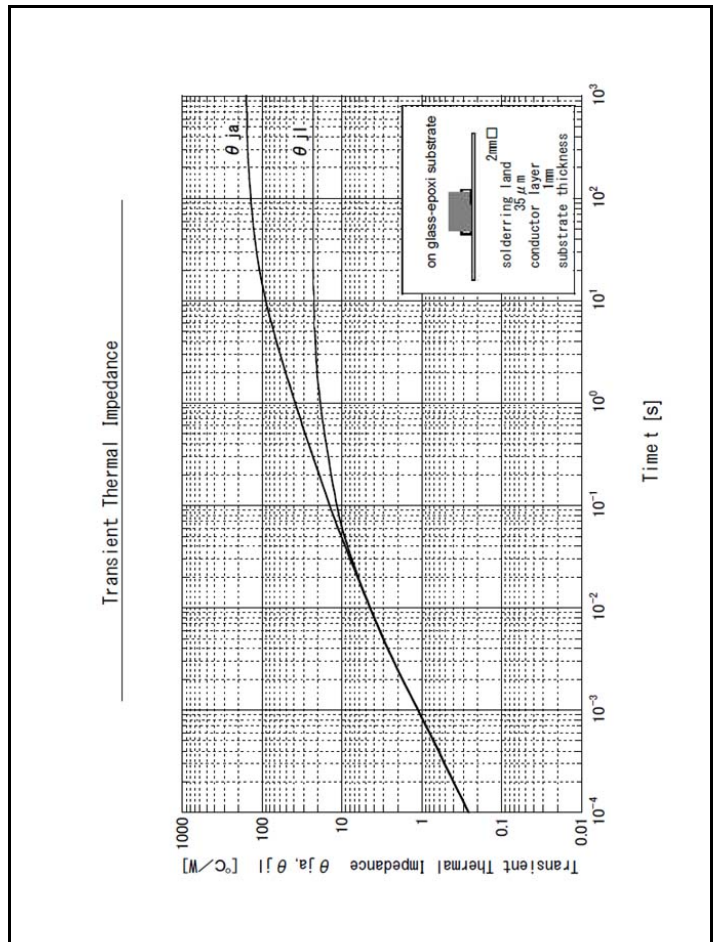
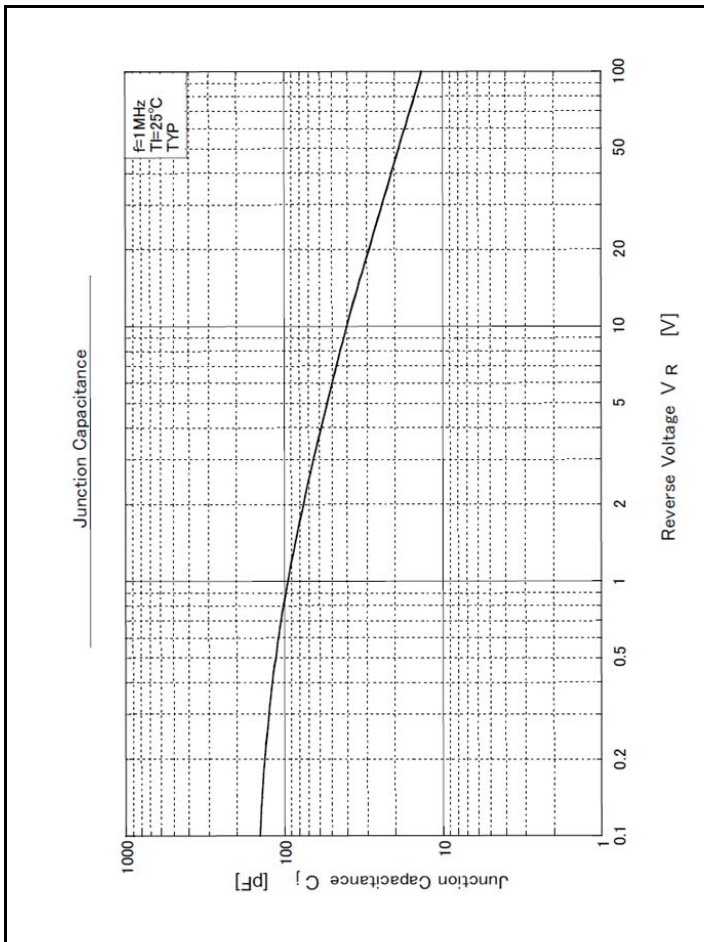
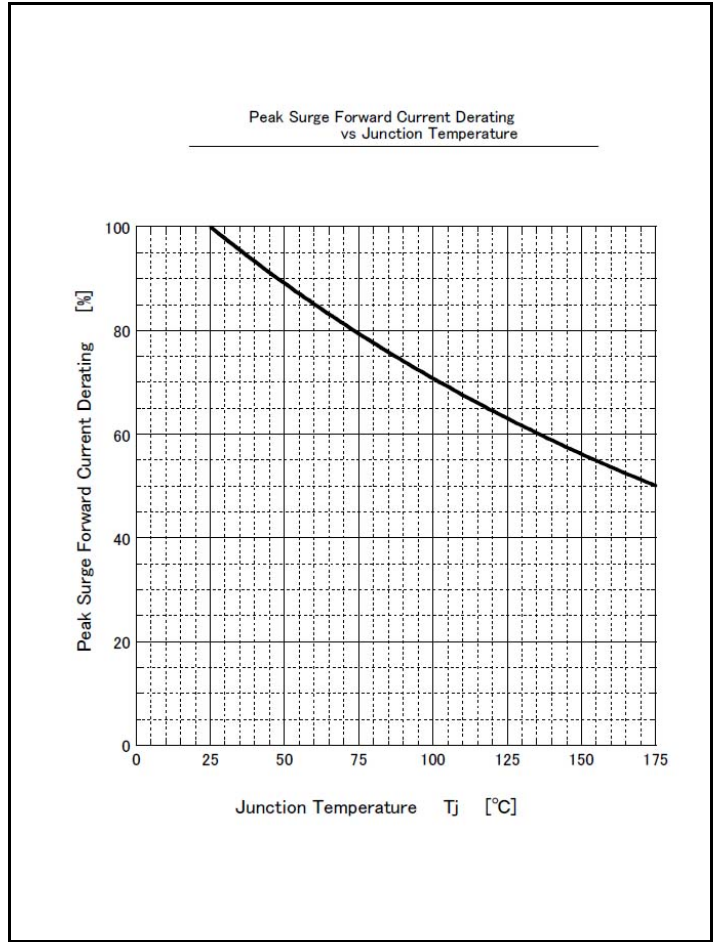
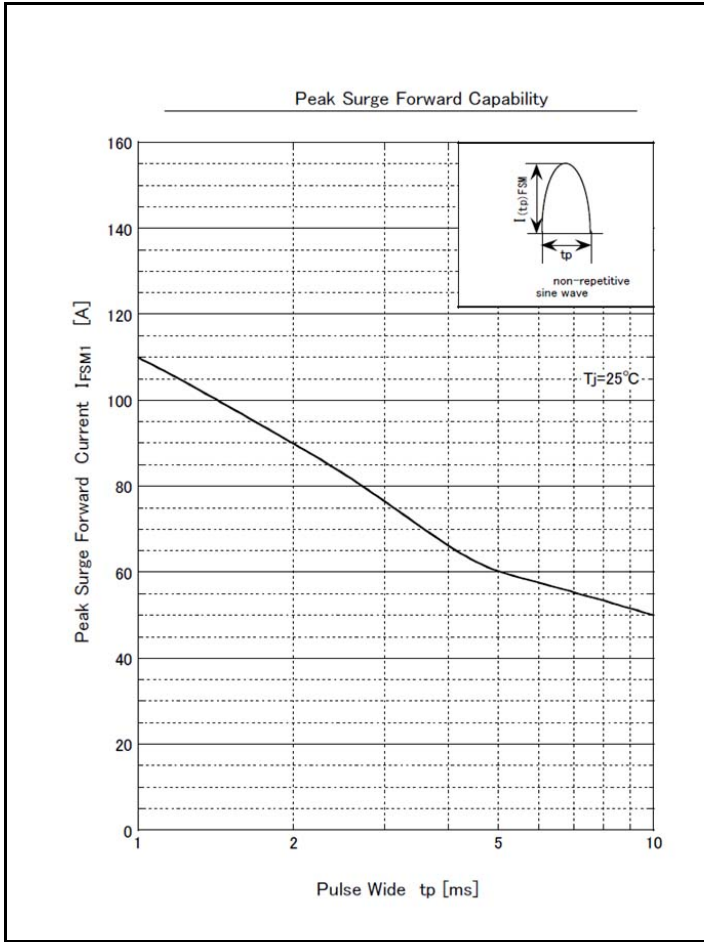


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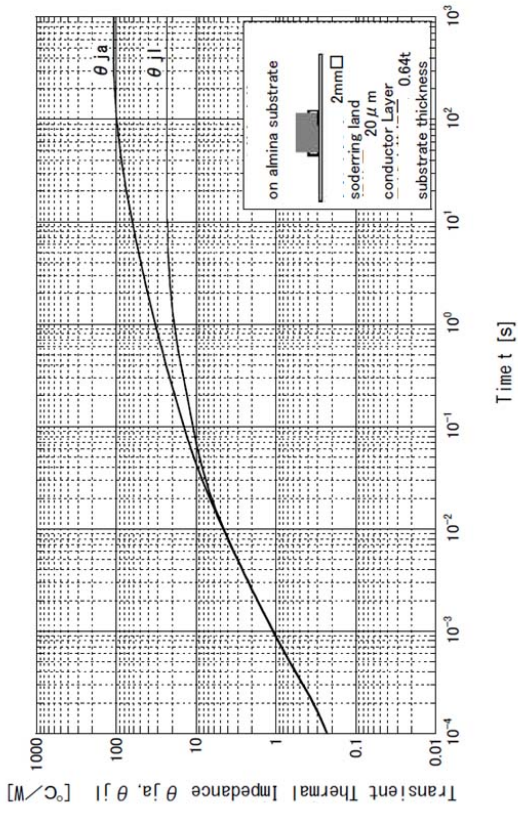


Peak Surge Forward Capability



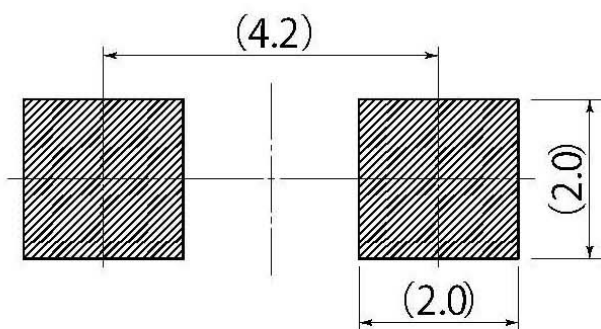
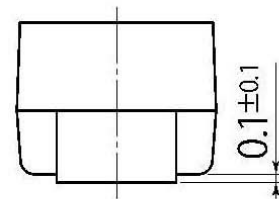
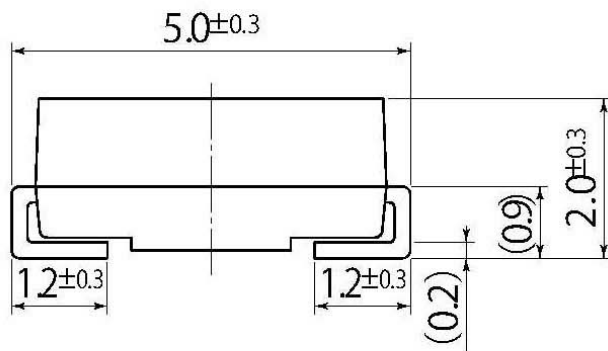
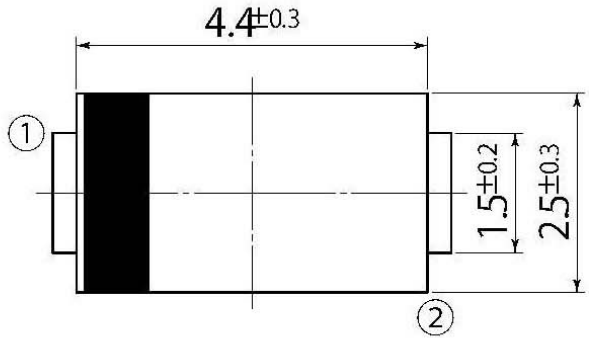


Transient Thermal Impedance



B3

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



Referential Soldering Pad

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