

# D1FT4A

## Schottky Barrier Diodes

40V, 3A

### Feature

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

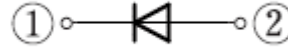
### OUTLINE

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            | $T_j$     |   | -55 to 175 | $^{\circ}\text{C}$ |
| Repetitive peak reverse voltage | $V_{RRM}$ |   | 40         | V                  |
| Average forward current         | $I_F(AV)$ | 50Hz sine wave, Resistance load, $T_l=127^{\circ}\text{C}$                            | 3          | A                  |
| Average forward current         | $I_F(AV)$ | 50Hz sine wave, Resistance load, On alumina substrate, $T_a=25^{\circ}\text{C}$ ※     | 2.2        | A                  |
| Average forward current         | $I_F(AV)$ | 50Hz sine wave, Resistance load, On glass-epoxy substrate, $T_a=25^{\circ}\text{C}$ ※ | 1.6        | A                  |
| Surge forward current           | $I_{FSM}$ | 50Hz sine wave, Non-repetitive, 1 cycle, Peak value, $T_j=25^{\circ}\text{C}$         | 90         | A                  |

※ : See the original Specifications

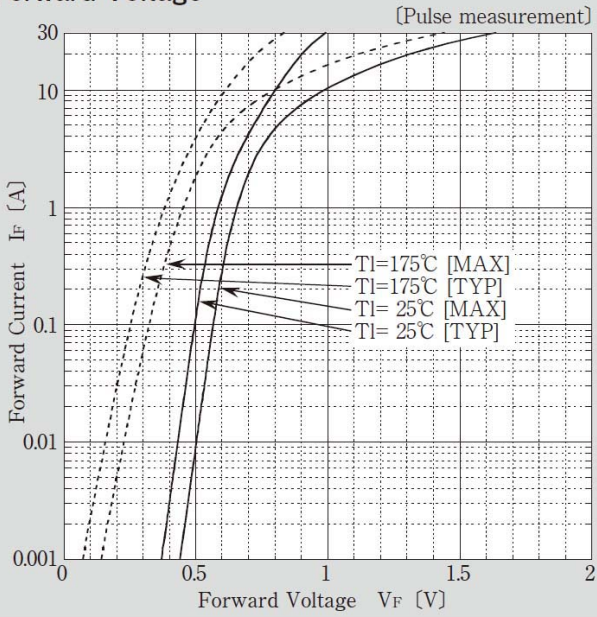
**Electrical Characteristics** (unless otherwise specified : Tl=25°C)

| Item               | Symbol        | Conditions                                      | Ratings |     |       | Unit |
|--------------------|---------------|---|---------|-----|-------|------|
|                    |               |   | MIN     | TYP | MAX   |      |
| Forward voltage    | $V_F$         | $I_F=3A$ , Pulse measurement                    |         |     | 0.74  | V    |
| Forward voltage    | $V_F$         | $I_F=1A$ , Pulse measurement                    |         |     | 0.66  | V    |
| Reverse current    | $I_R$         | $V_R=40V$ , Pulse measurement                   |         |     | 0.008 | mA   |
| Total capacitance  | $C_t$         | $f=1MHz$ , $V_R=10V$                            |         | 93  |       | pF   |
| Thermal resistance | $R_{th(j-l)}$ | Junction to lead                                |         |     | 23    | °C/W |
| Thermal resistance | $R_{th(j-a)}$ | Junction to ambient, On alumina substrate ※     |         |     | 108   | °C/W |
| Thermal resistance | $R_{th(j-a)}$ | Junction to ambient, On glass-epoxy substrate ※ |         |     | 157   | °C/W |

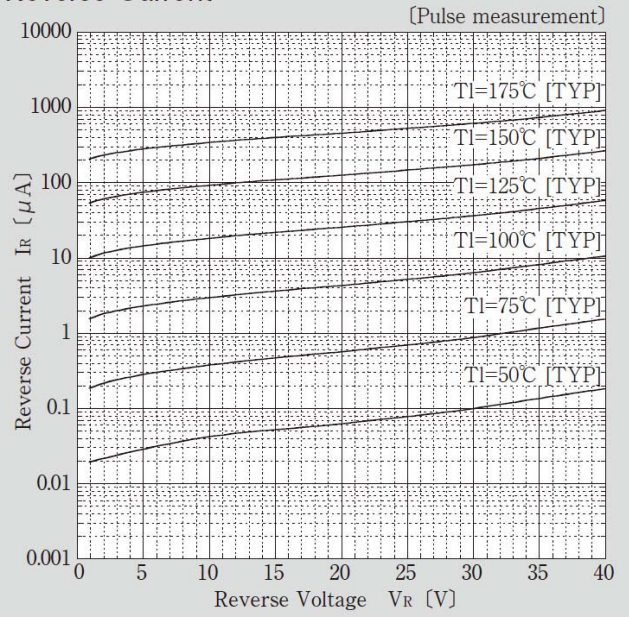
※ :See the original Specifications

# CHARACTERISTIC DIAGRAMS

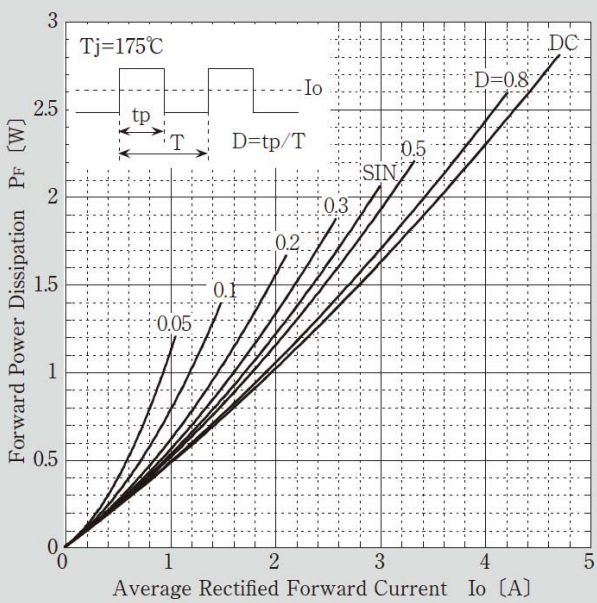
### Forward Voltage



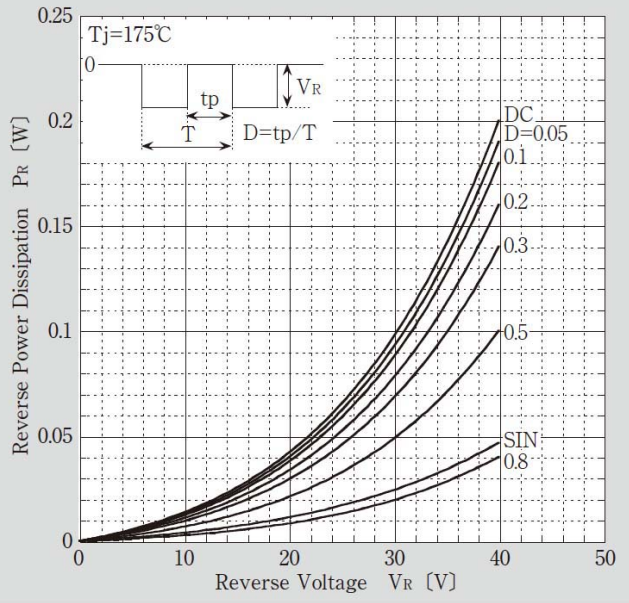
### Reverse Current



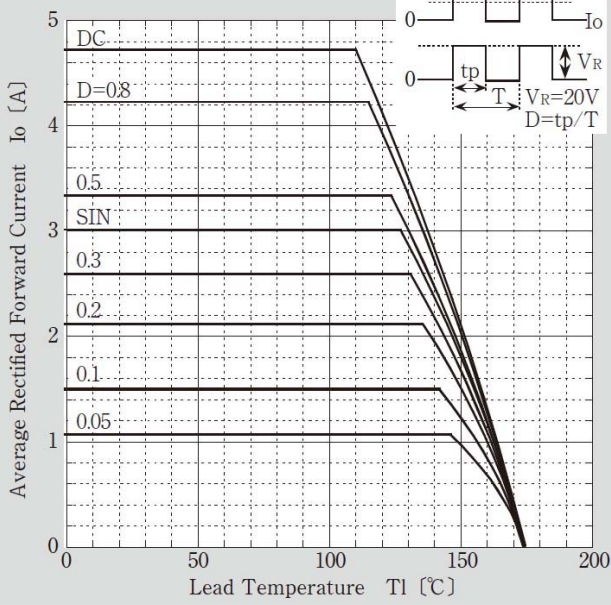
### Forward Power Dissipation



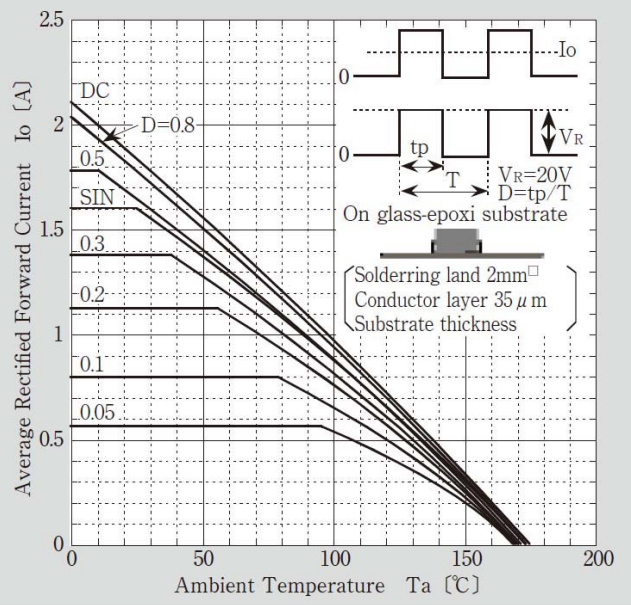
### Reverse Power Dissipation



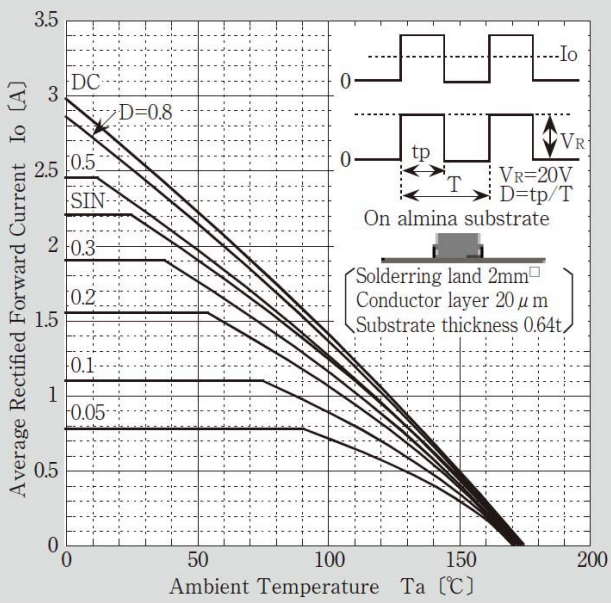
### Derating Curve



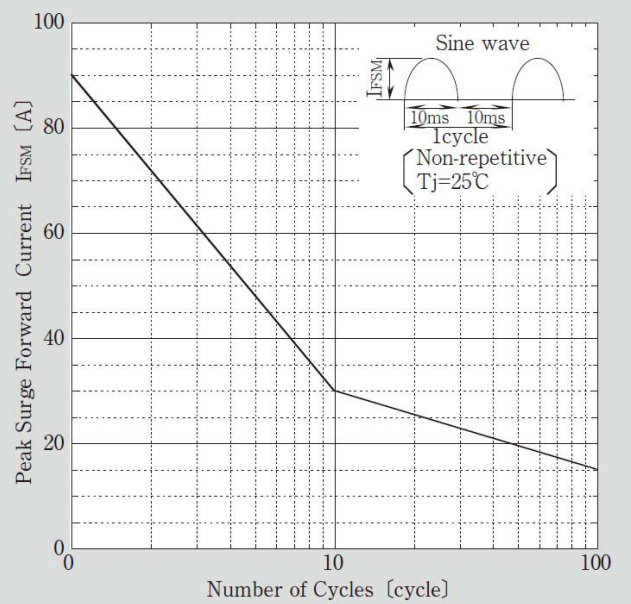
### Derating Curve



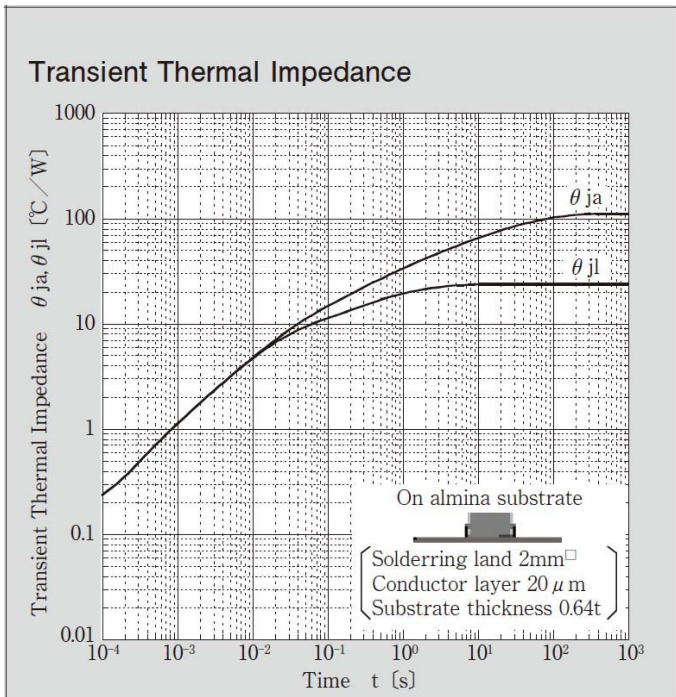
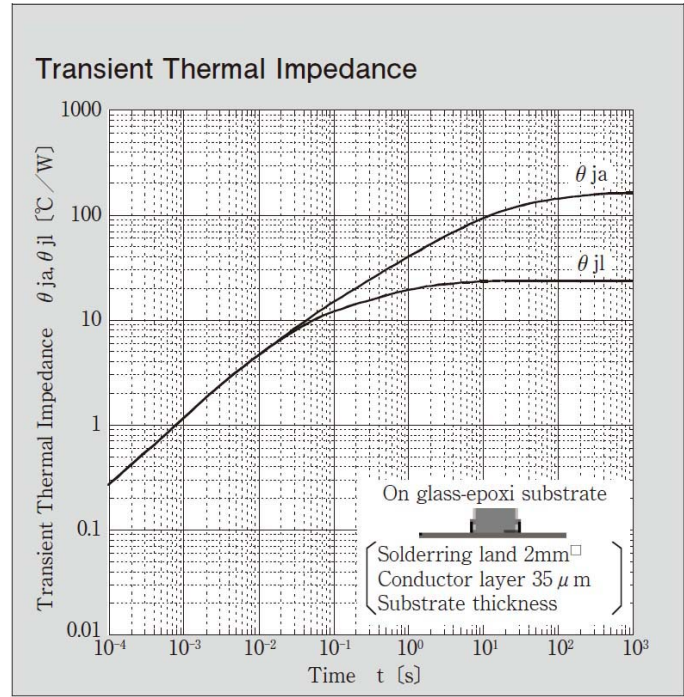
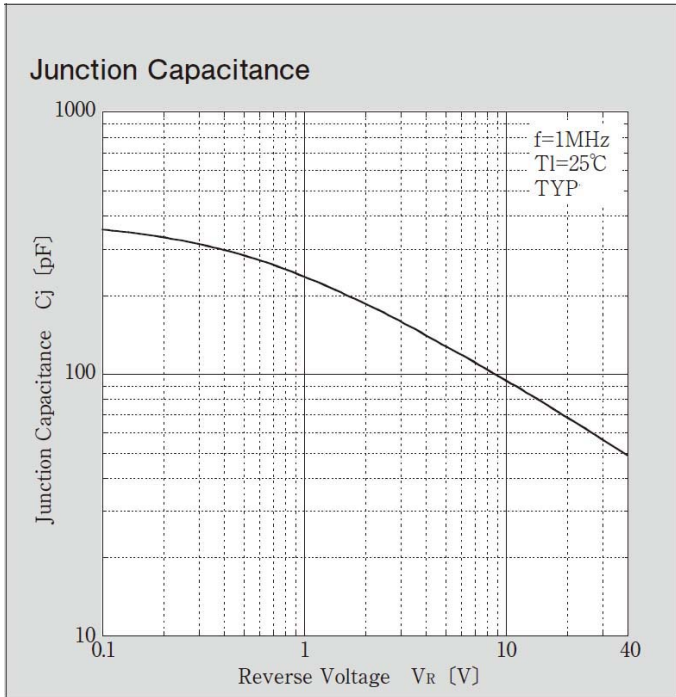
### Derating Curve



### Peak Surge Forward Capability

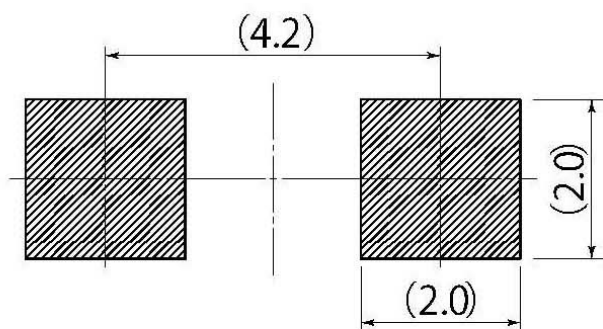
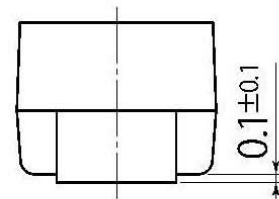
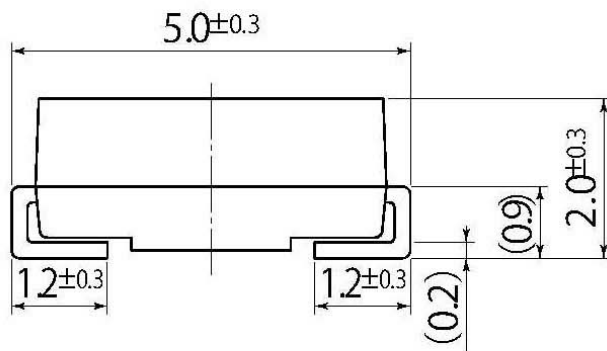
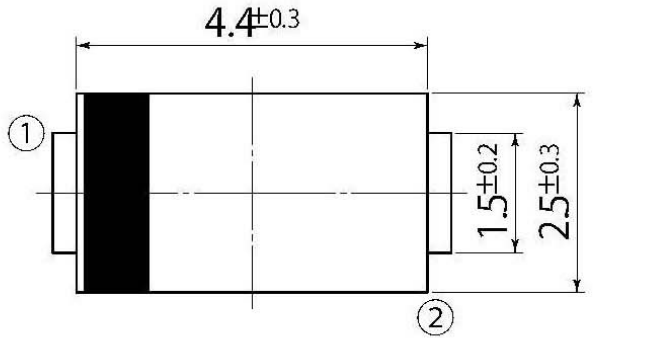






B3

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



Referential Soldering Pad

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