

# SHINDENGEN

## Super Fast Recovery Rectifiers

Single

# D1FL20U

## 200V 1.1A

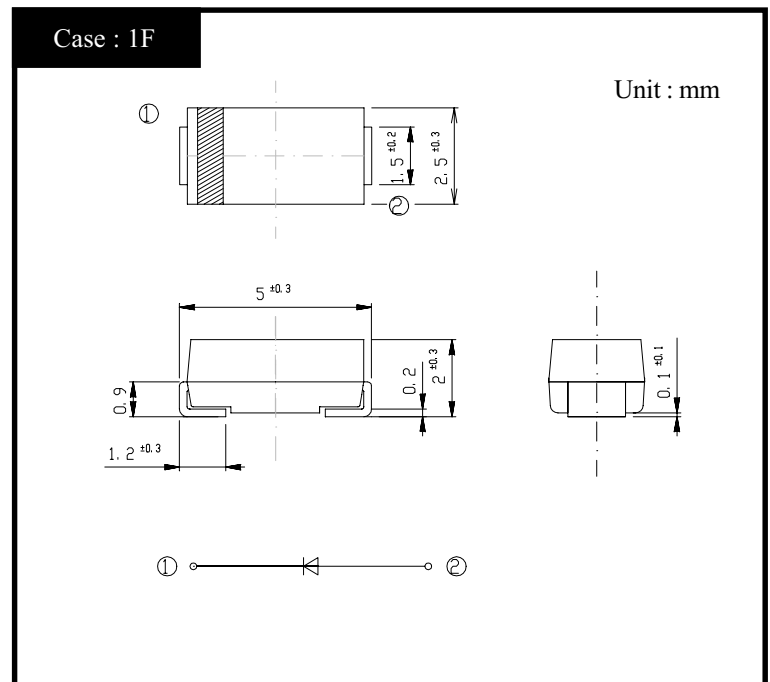
### FEATURES

- Small SMT
- Low noise
- trr35ns

### APPLICATION

- Switching power supply
- DC/DC converter
- Free Wheel
- Home Appliances, Office Equipment
- Telecommunication, Factory Automation

### OUTLINE DIMENSIONS



### RATINGS

- Absolute Maximum Ratings (If not specified  $T_I=25^{\circ}\text{C}$ )

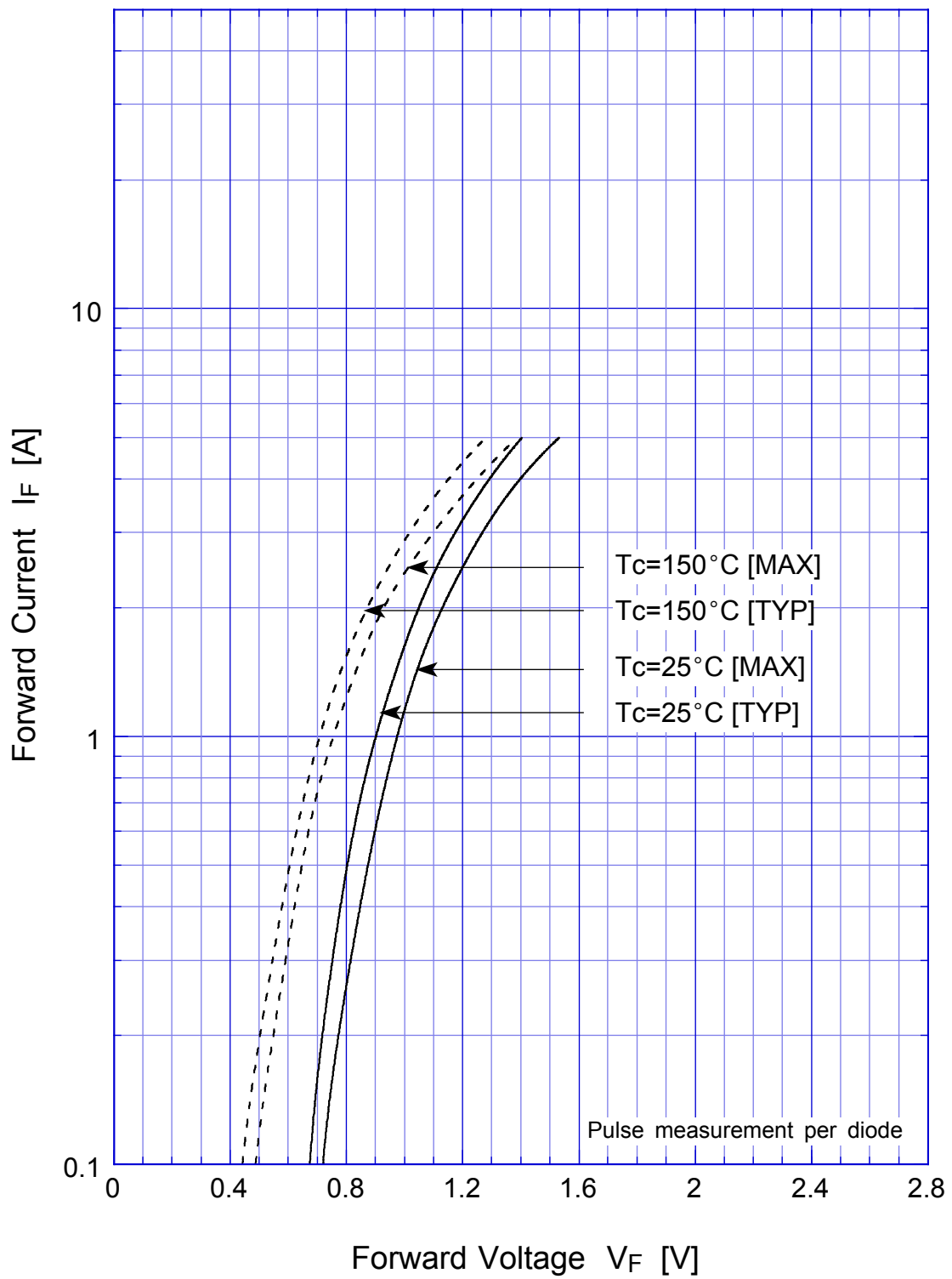
| Item                              | Symbol    | Conditions  | Ratings | Unit               |
|-----------------------------------|-----------|---|---------|--------------------|
| Storage Temperature               | $T_{stg}$ |   | -55~150 | $^{\circ}\text{C}$ |
| Operating Junction Temperature    | $T_j$     |   | 150     | $^{\circ}\text{C}$ |
| Maximum Reverse Voltage           | $V_{RM}$  |   | 200     | V                  |
| Average Rectified Forward Current | $I_o$     | 50Hz sine wave, R-load, $T_a=25^{\circ}\text{C}$ On alumina substrate       | 1.1     | A                  |
|                                   |           | 50Hz sine wave, R-load, $T_a=25^{\circ}\text{C}$ On glass-epoxy substrate   | 0.84    |                    |
| Peak Surge Forward Current        | $I_{FSM}$ | 50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=25^{\circ}\text{C}$ | 20      | A                  |

- Electrical Characteristics (If not specified  $T_I=25^{\circ}\text{C}$ )

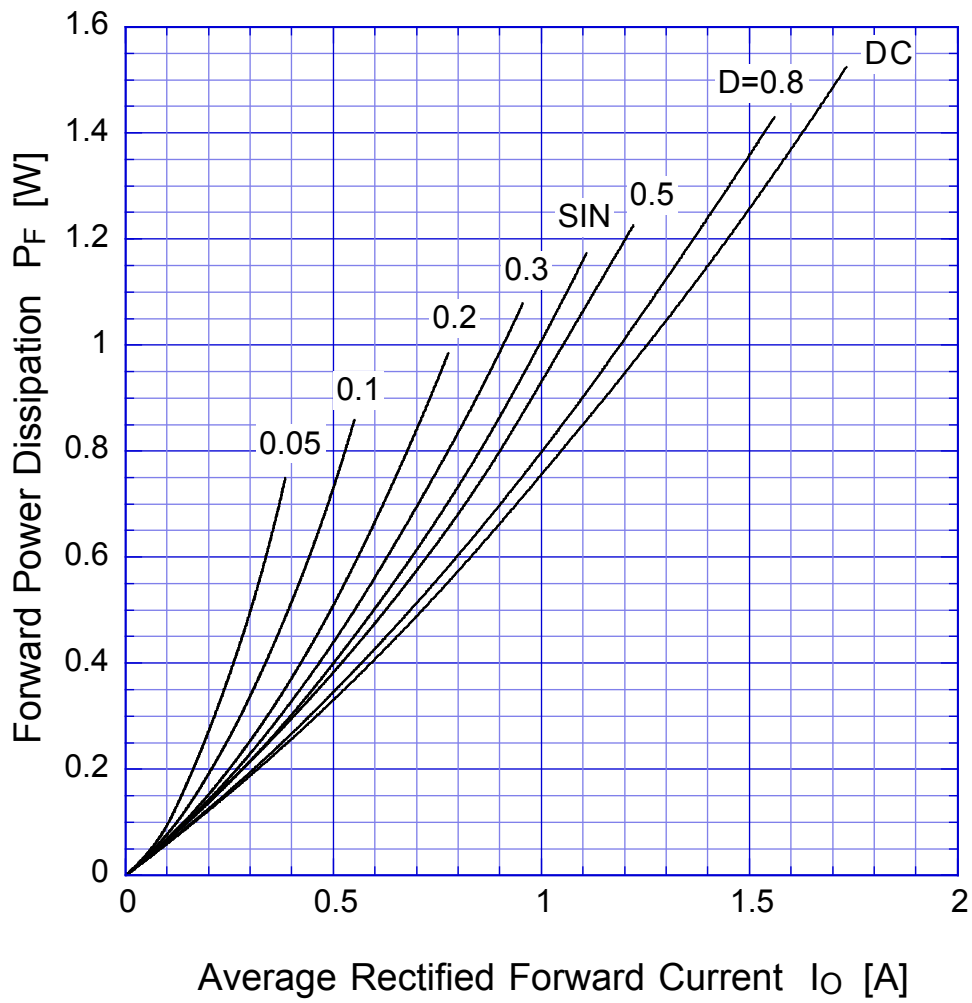
| Item                  | Symbol        | Conditions                                    | Ratings  | Unit                        |
|-----------------------|---------------|---|----------|-----------------------------|
| Forward Voltage       | $V_F$         | $I_F=1.1\text{A}$ , Pulse measurement         | Max.0.98 | V                           |
| Reverse Current       | $I_R$         | $V_R=V_{RM}$ , Pulse measurement              | Max.10   | $\mu\text{A}$               |
| Reverse Recovery Time | $t_{rr}$      | $I_F=0.5\text{A}$ , $I_R=1\text{A}$           | Max.35   | ns                          |
| Thermal Resistance    | $\theta_{jl}$ | junction to lead                              | Max.23   | $^{\circ}\text{C}/\text{W}$ |
|                       | $\theta_{ja}$ | junction to ambient, On alumina substrate     | Max.108  |                             |
|                       |               | junction to ambient, On glass-epoxy substrate | Max.157  |                             |

# D1FL20U

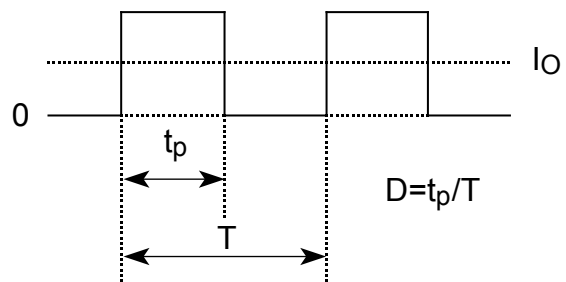
## Forward Voltage



# D1FL20U Forward Power Dissipation

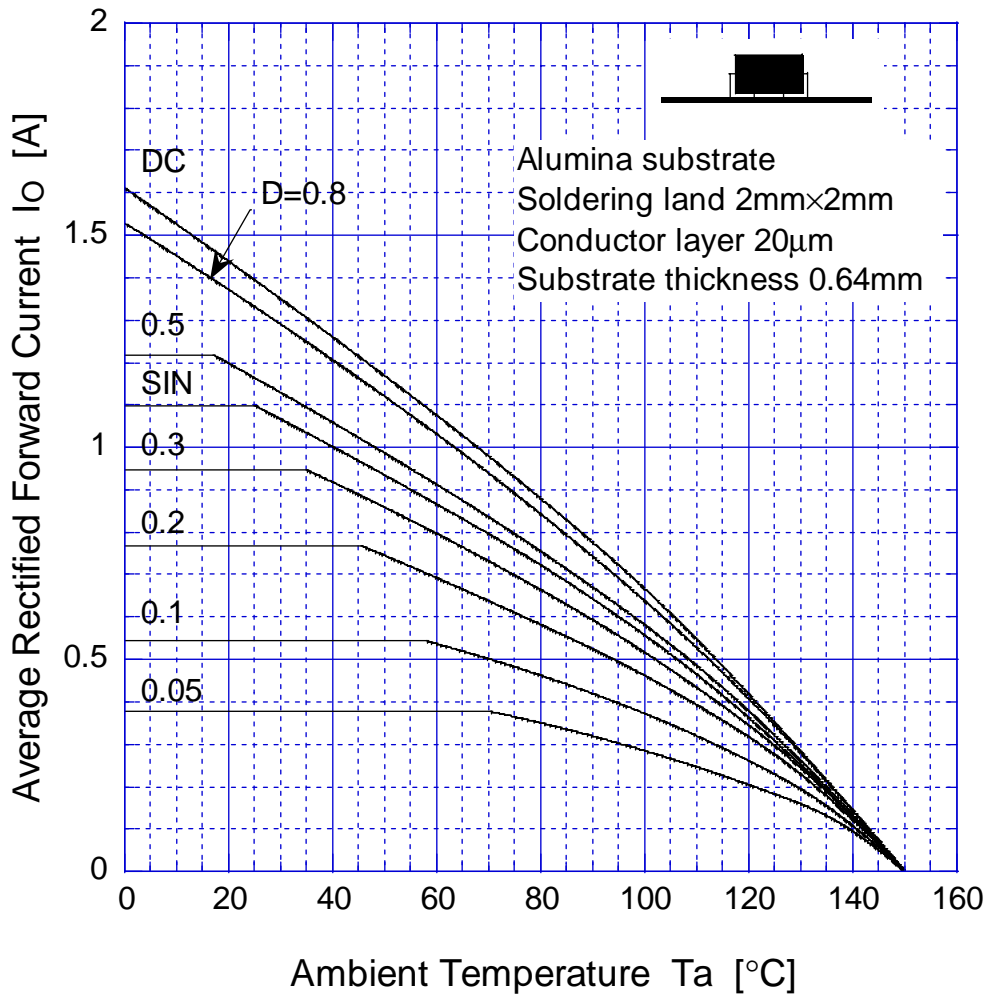


$T_j = T_{jmax}$

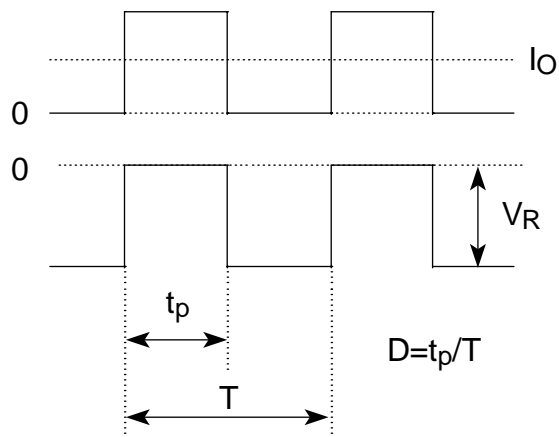


# D1FL20U

# Derating Curve

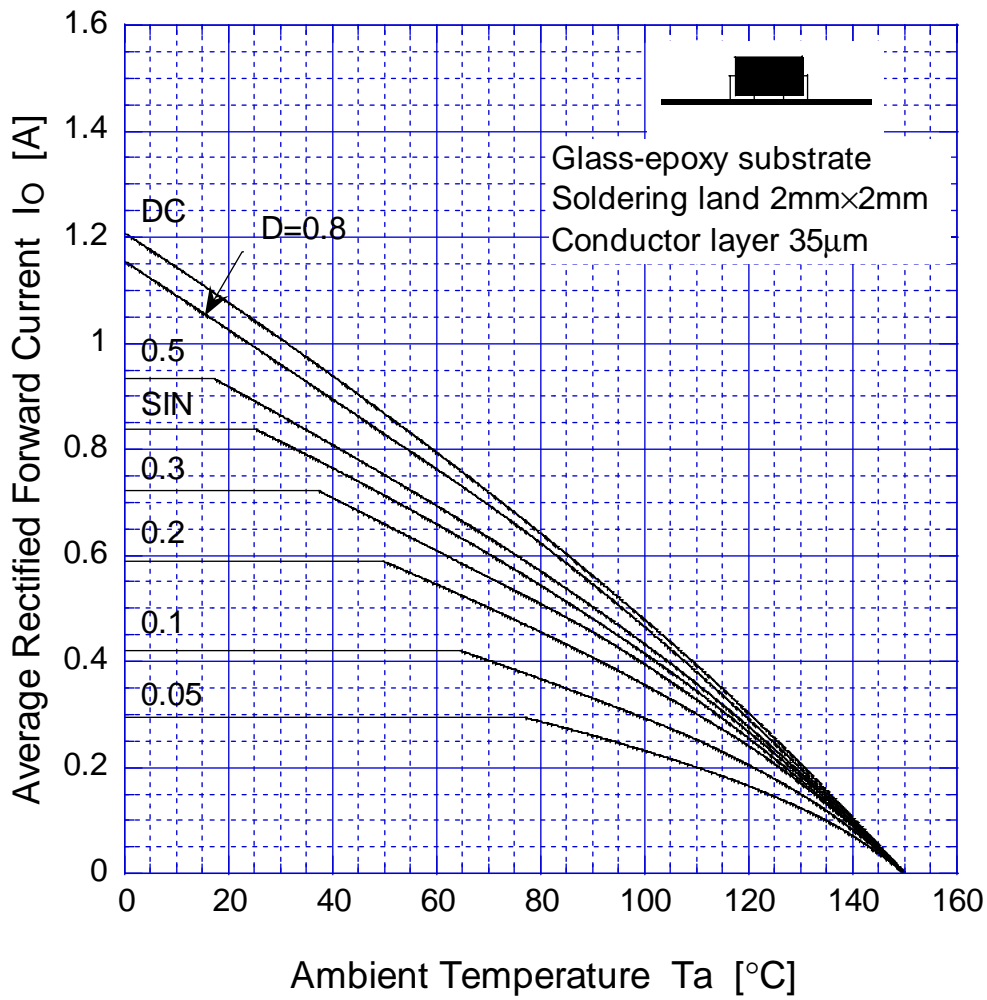


$$V_R = V_{RM}$$

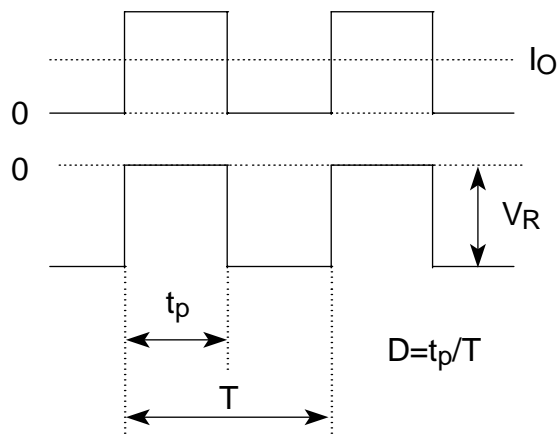


# D1FL20U

# Derating Curve

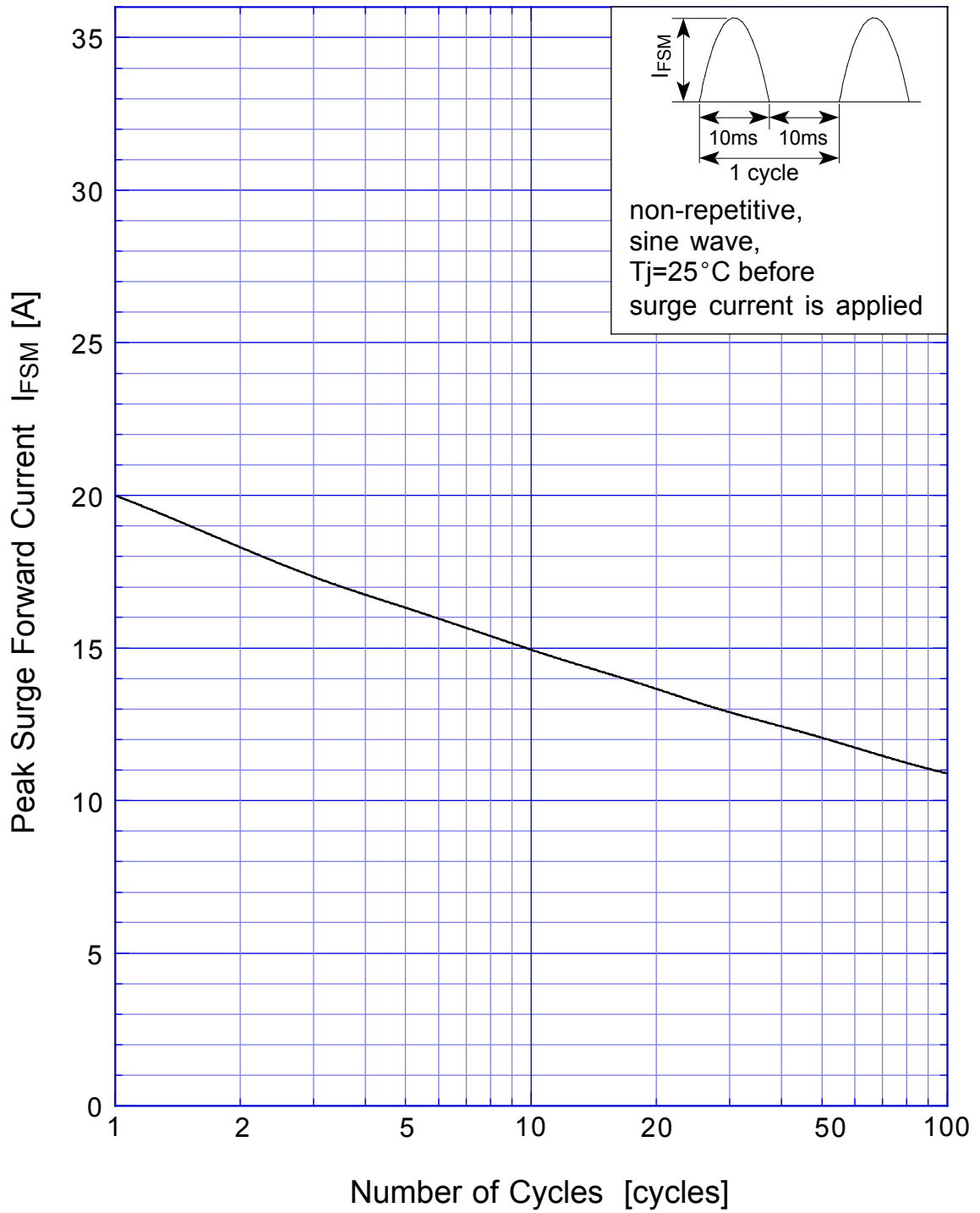


$$V_R = V_{RM}$$



# D1FL20U

## Peak Surge Forward Capability



# D1FL20U Junction Capacitance

