

# SHINDENGEN

## Super Fast Recovery Rectifiers

Single

# M1FL20U

## 200V 1.1A

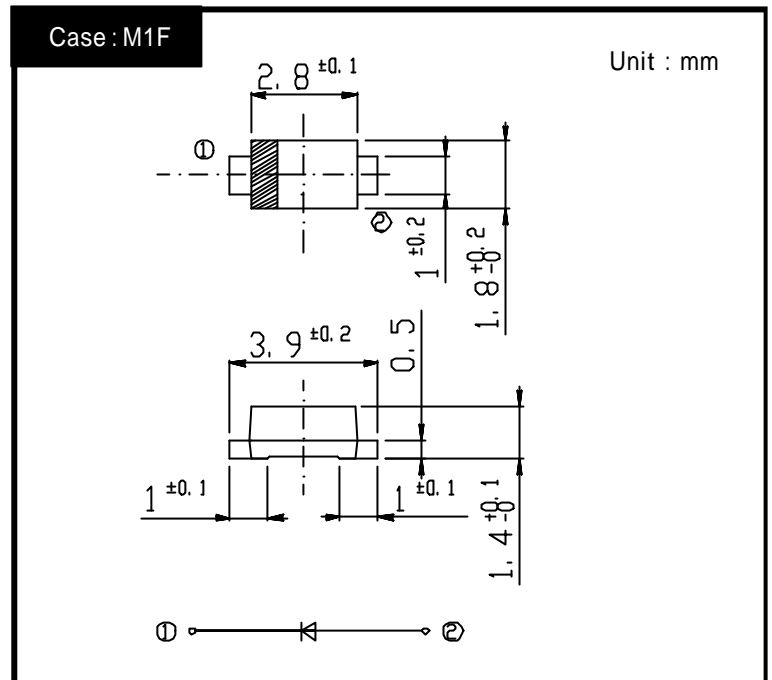
### FEATURES

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 Tl=25 )

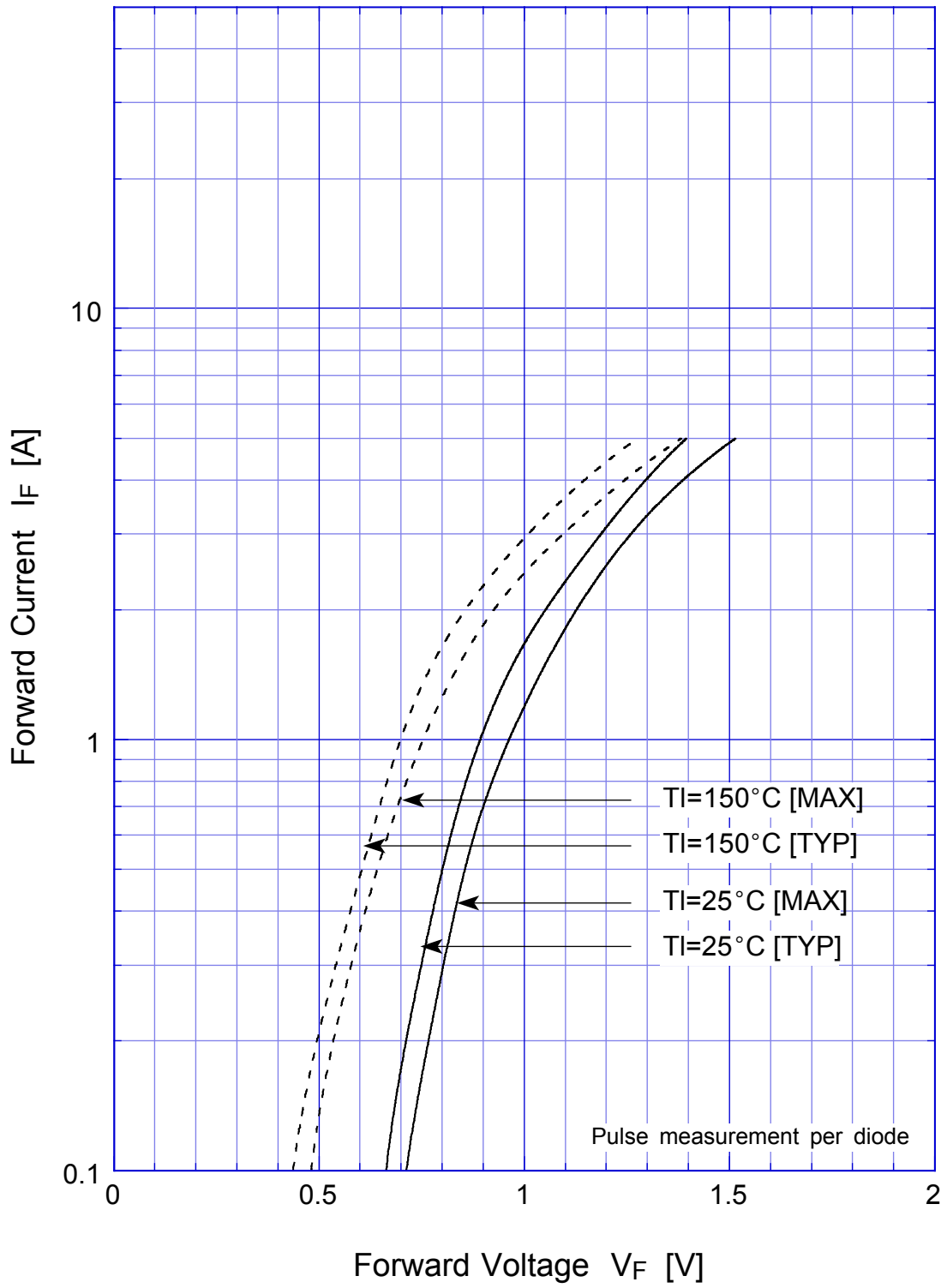
| Item                              | Symbol           | Conditions   | Ratings   | Unit |
|-----------------------------------|------------------|--|-----------|------|
| Storage Temperature               | Tstg             |  | -55 ~ 150 |      |
| Operating Junction Temperature    | Tj               |  | 150       |      |
| Maximum Reverse Voltage           | V <sub>RM</sub>  |  | 200       | V    |
| Average Rectified Forward Current | I <sub>O</sub>   | 50Hz sine wave, R-load, Ta=25 On alumina substrate       | 1.1       | A    |
|                                   |                  | 50Hz sine wave, R-load, Ta=25 On glass-epoxy substrate   | 0.75      |      |
| Peak Surge Forward Current        | I <sub>FSM</sub> | 50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=25 | 30        | A    |

Electrical Characteristics (If not specified Tl=25 )

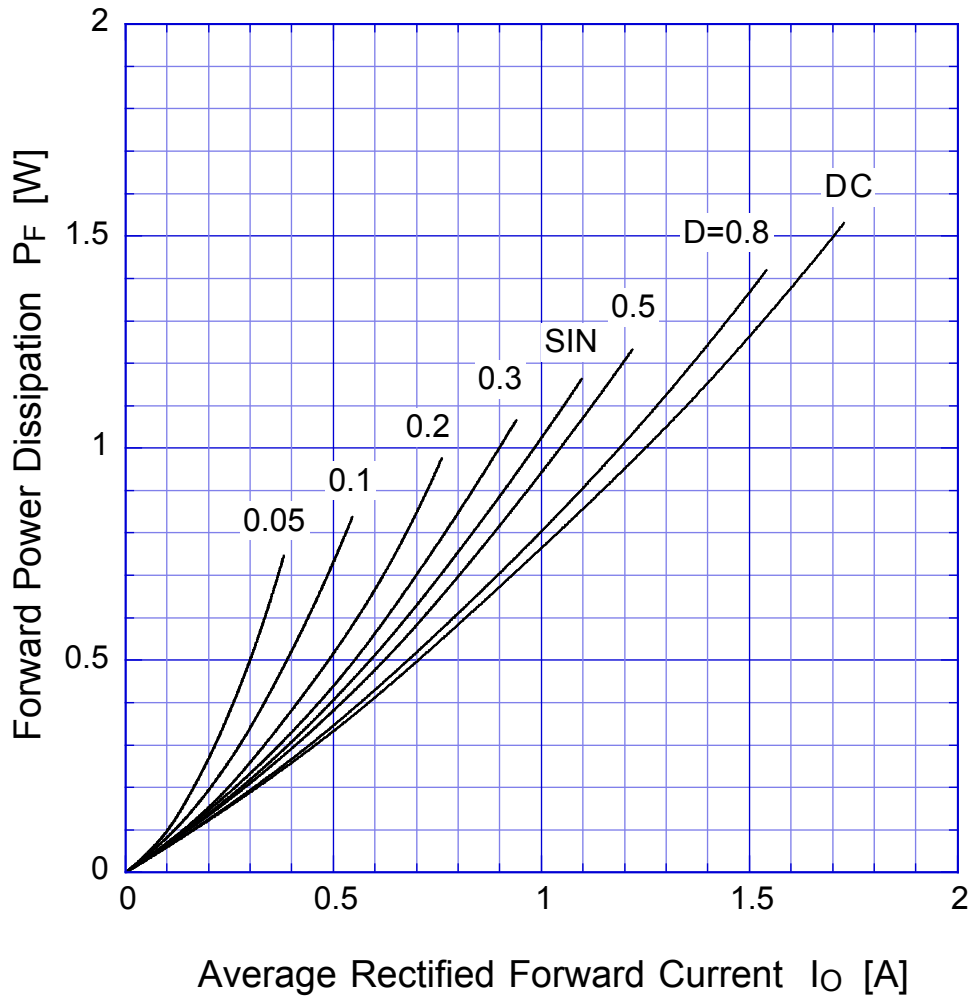
| Item                  | Symbol         | Conditions                                   | Ratings  | Unit |
|-----------------------|----------------|--|----------|------|
| Forward Voltage       | V <sub>F</sub> | I <sub>F</sub> =1.1A, Pulse measurement      | Max.0.98 | V    |
| Reverse Current       | I <sub>R</sub> | V <sub>R</sub> =200V, Pulse measurement      | Max.10   | μA   |
| Reverse Recovery Time | trr            | I <sub>F</sub> =0.5A, I <sub>R</sub> =1A     | Max.35   | ns   |
|                       |                | junction to lead                             | Max.20   |      |
| Thermal Resistance    | ja             | junction to ambient On alumina substrate     | Max.108  | /W   |
|                       |                | junction to ambient On glass-epoxy substrate | Max.186  |      |

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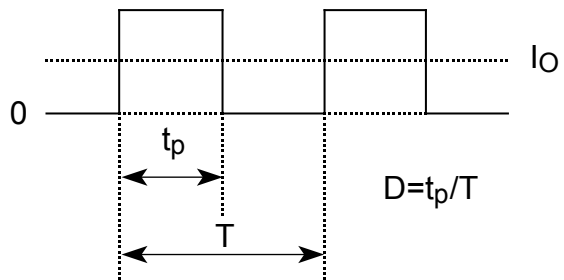
## Forward Voltage



# M1FL20U Forward Power Dissipation

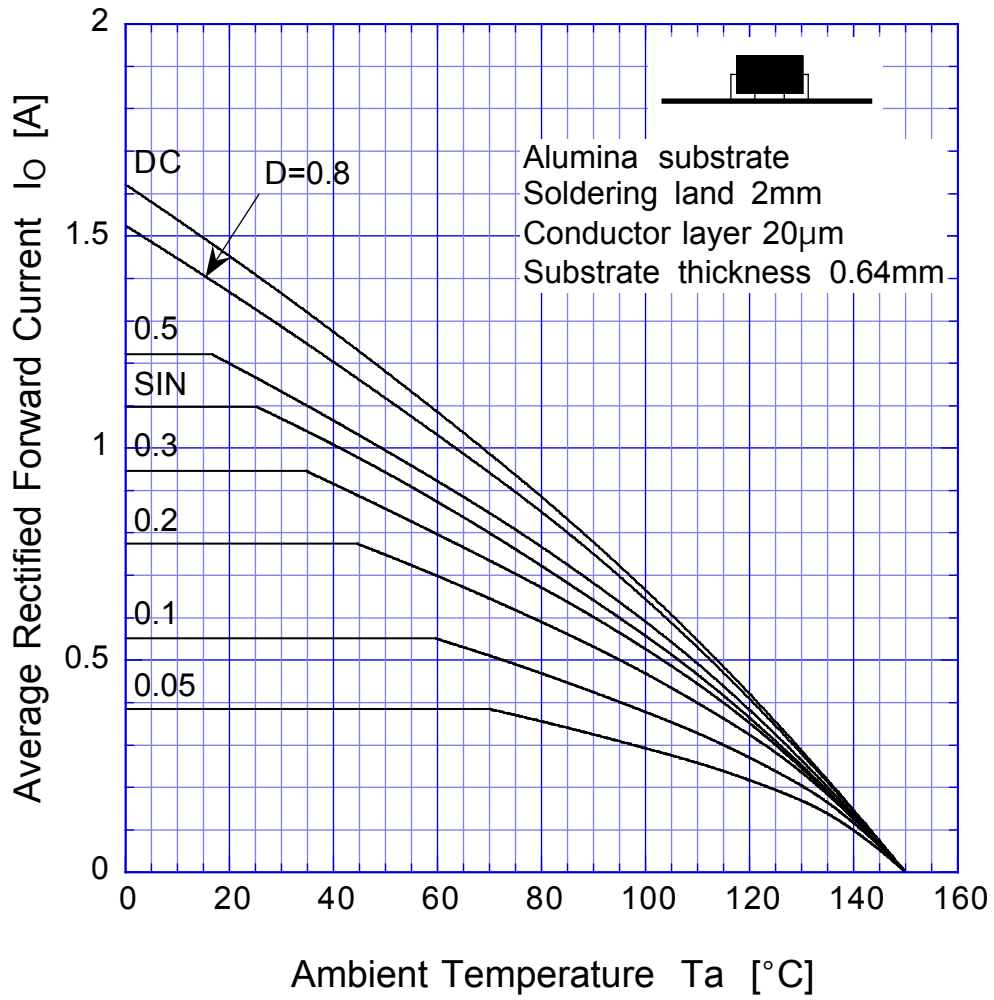


$T_j = 150^\circ\text{C}$



# M1FL20U

# Derating Curve

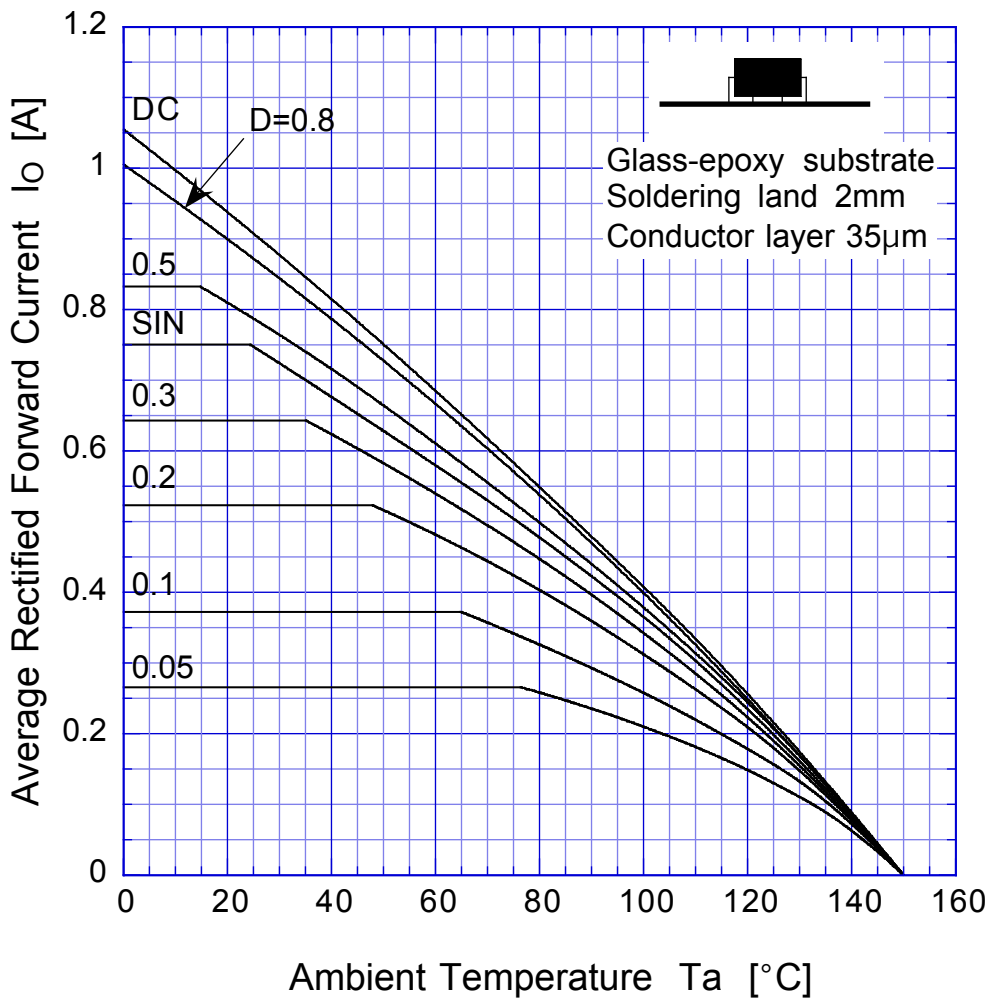


$$V_R = V_{RM}$$



# M1FL20U

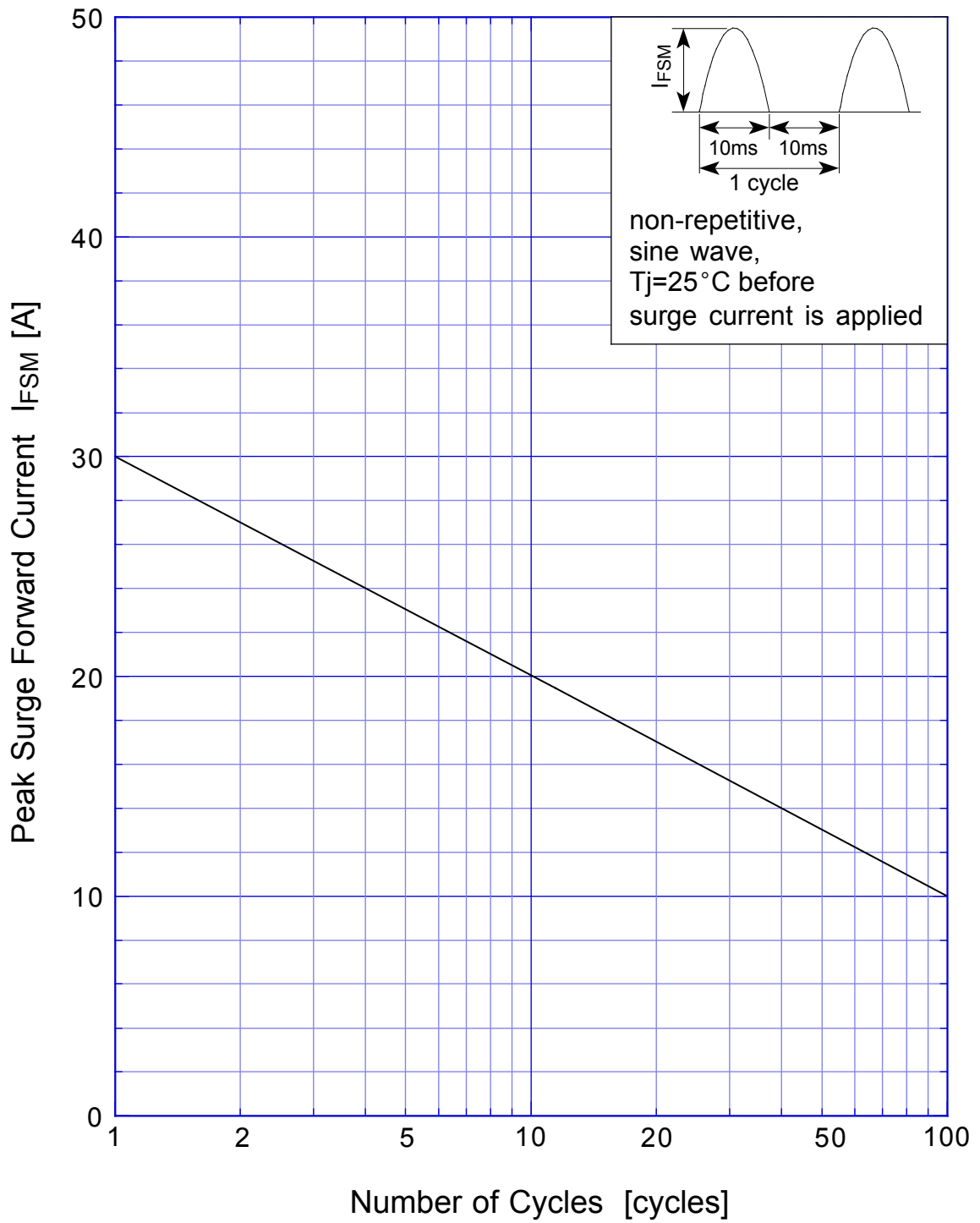
# Derating Curve



$$V_R = V_{RM}$$



# M1FL20U Peak Surge Forward Capability



# M1FL20U Junction Capacitance

