

# SHINDENGEN

## Schottky Rectifiers (SBD)

Dual

# S10SC4M

## 40V 10A

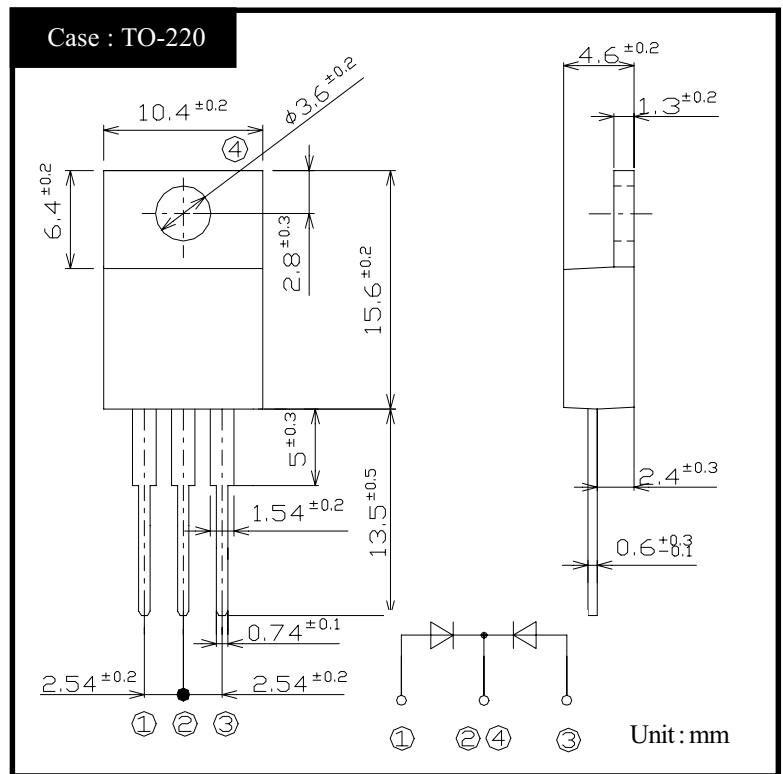
### FEATURES

- $T_j 150^{\circ}\text{C}$
- $P_{RRSM}$  avalanche guaranteed

### APPLICATION

- Switching power supply
- DC/DC converter
- Home Appliances, Office Equipment
- Telecommunication

### OUTLINE DIMENSIONS



### RATINGS

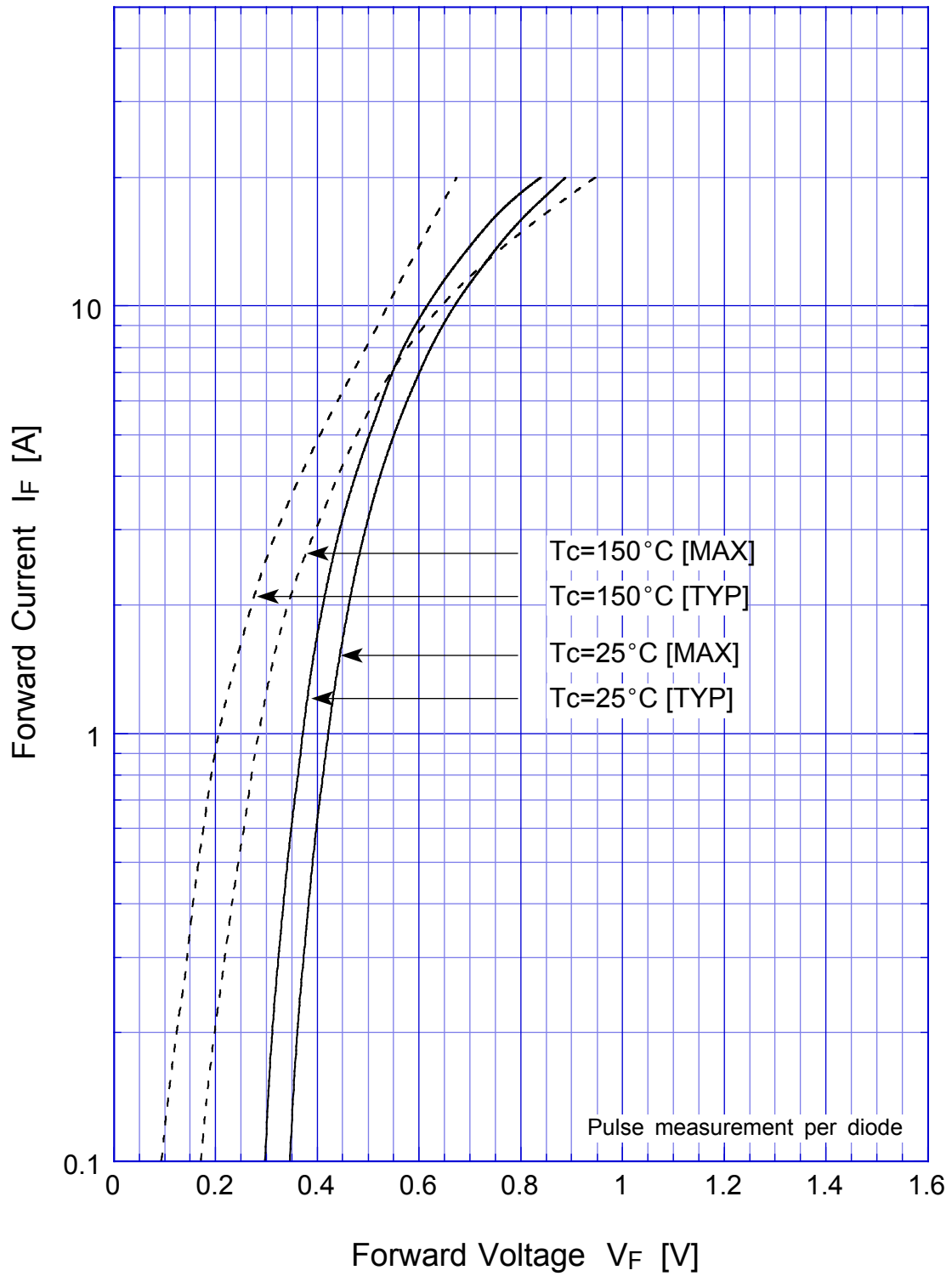
#### ● Absolute Maximum Ratings (If not specified $T_c=25^{\circ}\text{C}$ )

| Item                                  | Symbol     | Conditions  | Ratings | Unit               |
|---------------------------------------|------------|---|---------|--------------------|
| Storage Temperature                   | $T_{stg}$  |   | -40~150 | $^{\circ}\text{C}$ |
| Operating Junction Temperature        | $T_j$      |   | 150     | $^{\circ}\text{C}$ |
| Maximum Reverse Voltage               | $V_{RM}$   |   | 40      | V                  |
| Repetitive Peak Surge Reverse Voltage | $V_{RRSM}$ | Pulse width 0.5ms, duty 1/40  | 45      | V                  |
| Average Rectified Forward Current     | $I_O$      | 50Hz sine wave, R-load, Rating for each diode $I_o/2$ , $T_c=125^{\circ}\text{C}$ | 10      | A                  |
| Peak Surge Forward Current            | $I_{FSM}$  | 50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=125^{\circ}\text{C}$      | 100     | A                  |
| Repetitive Peak Surge Reverse Power   | $P_{RRSM}$ | Pulse width 10 $\mu$ s, Rating of per diode, $T_j=25^{\circ}\text{C}$             | 330     | W                  |
| Mounting Torque                       | TOR        | (Recommended torque:0.3N·m)   | 0.5     | N·m                |

#### ● Electrical Characteristics (If not specified $T_c=25^{\circ}\text{C}$ )

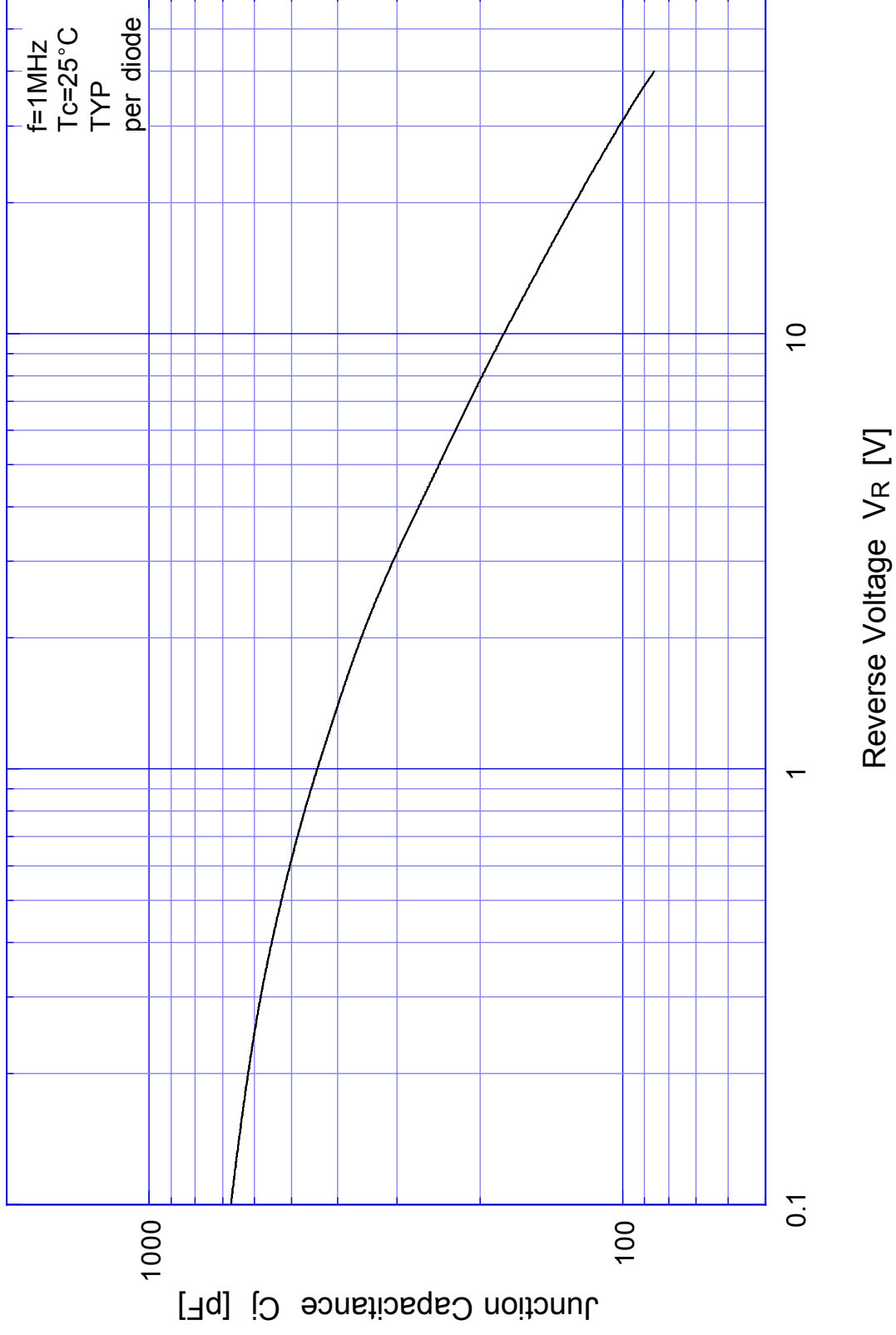
| Item                 | Symbol        | Conditions   | Ratings  | Unit                        |
|----------------------|---------------|--|----------|-----------------------------|
| Forward Voltage      | $V_F$         | $I_F=5\text{A}$ , Pulse measurement, Rating of per diode | Max.0.55 | V                           |
| Reverse Current      | $I_R$         | $V_R=V_{RM}$ , Pulse measurement, Rating of per diode    | Max.3.5  | mA                          |
| Junction Capacitance | $C_j$         | $f=1\text{MHz}$ , $V_R=10\text{V}$ , Rating of per diode | Typ.180  | pF                          |
| Thermal Resistance   | $\theta_{jc}$ | junction to case   | Max.3.0  | $^{\circ}\text{C}/\text{W}$ |

# S10SC4M Forward Voltage

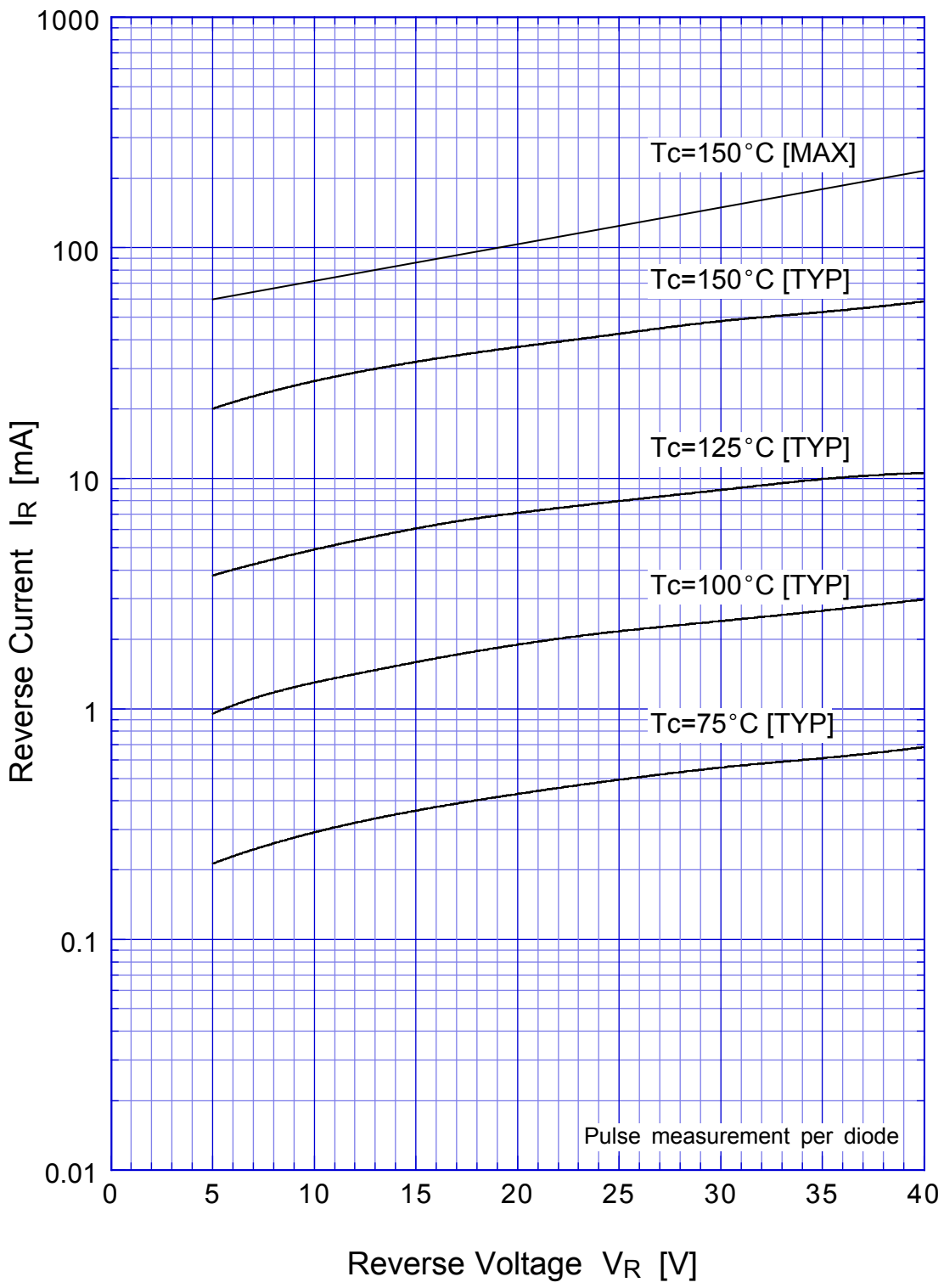


# S10SC4M

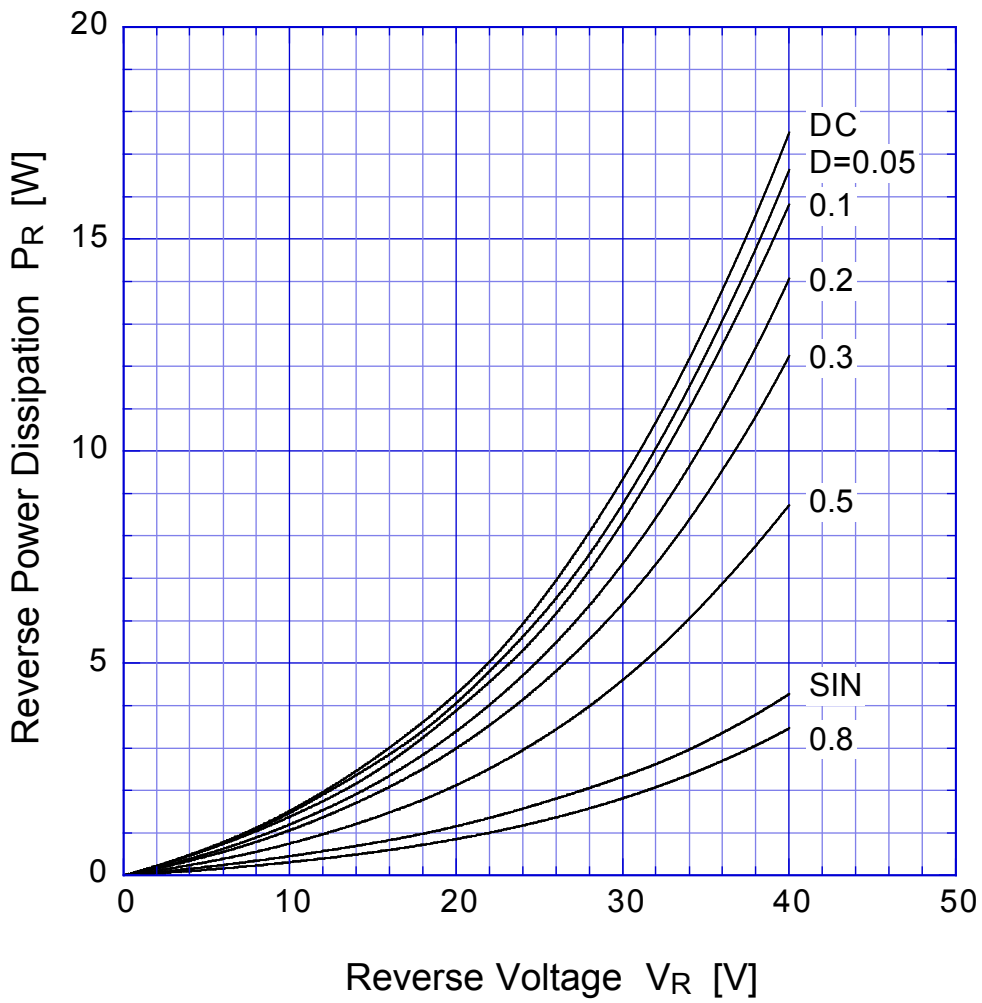
## Junction Capacitance



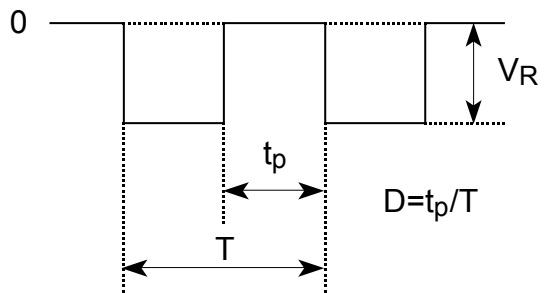
# S10SC4M Reverse Current



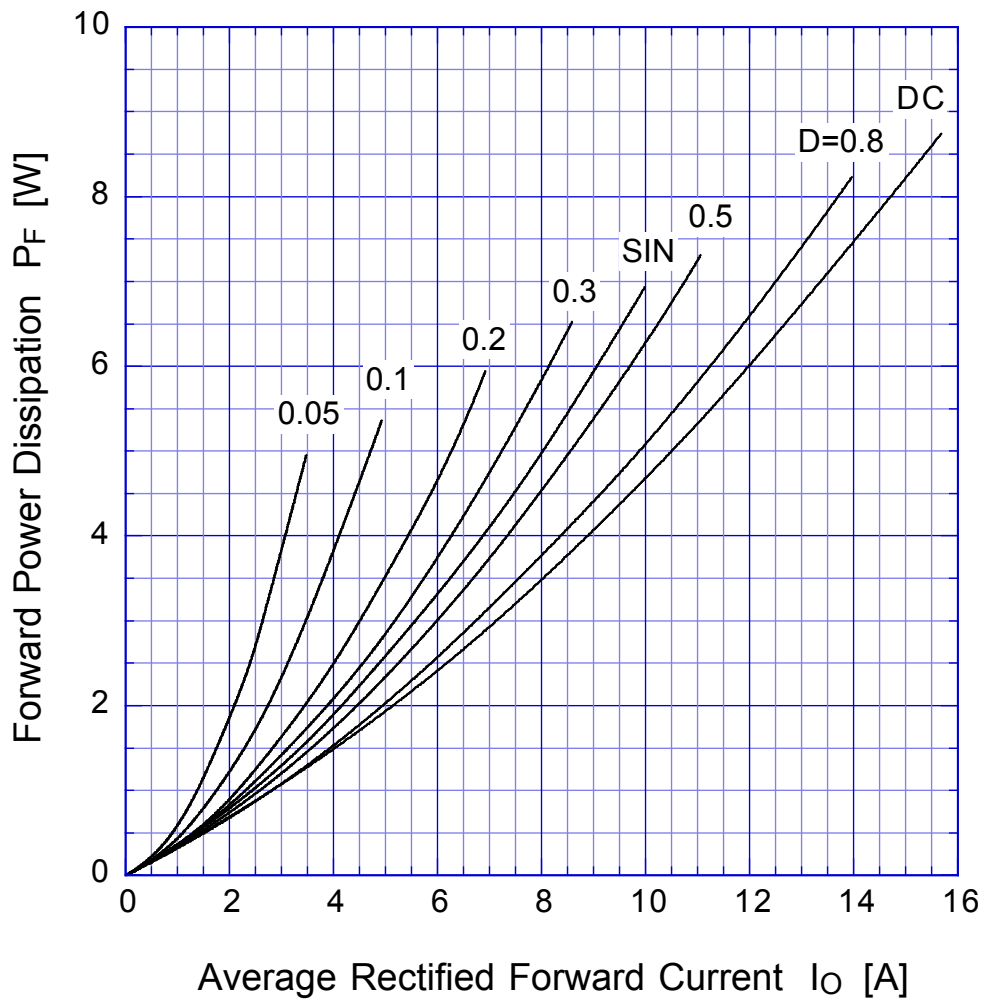
# S10SC4M Reverse Power Dissipation



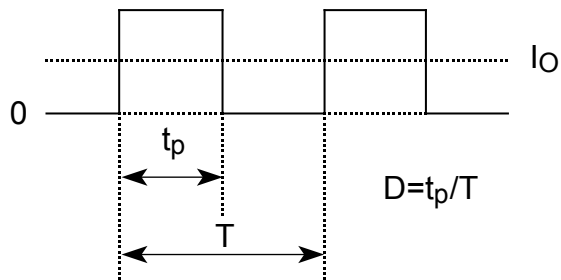
$T_j = 150^\circ\text{C}$



# S10SC4M Forward Power Dissipation

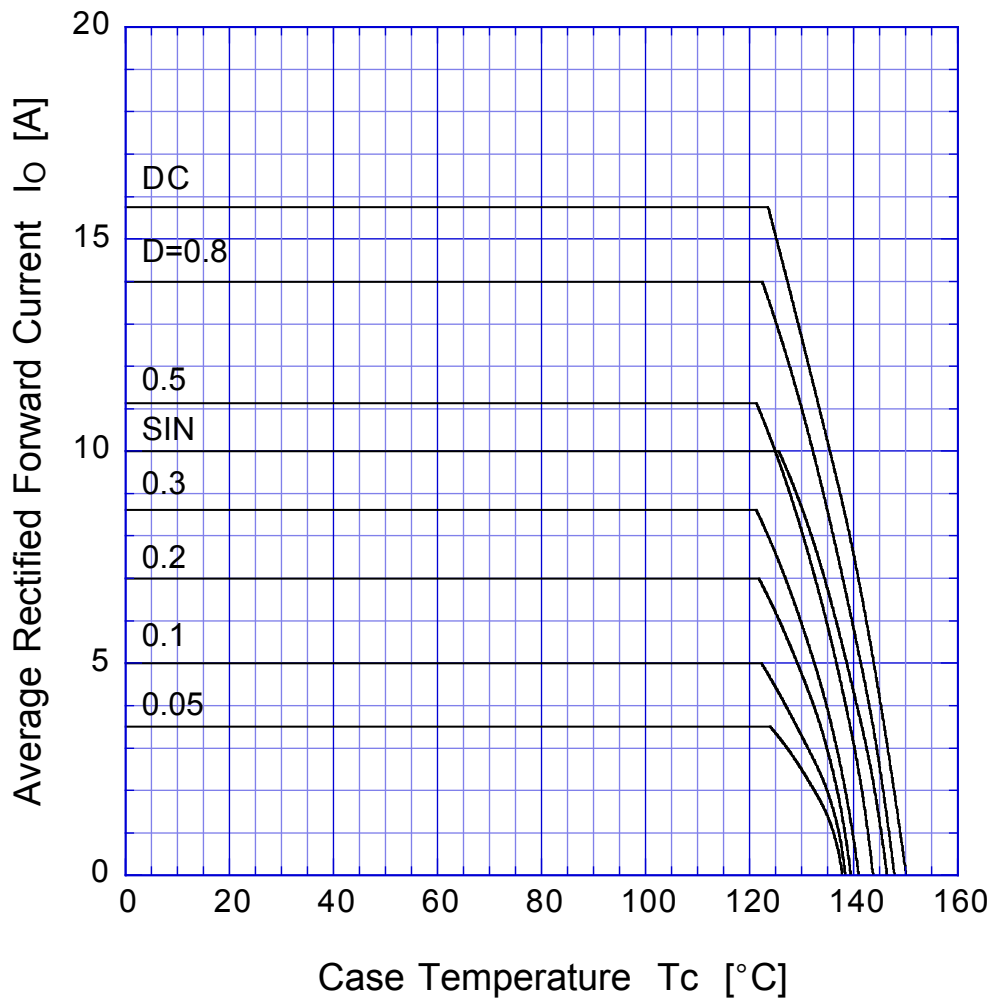


$T_j = 150^\circ\text{C}$

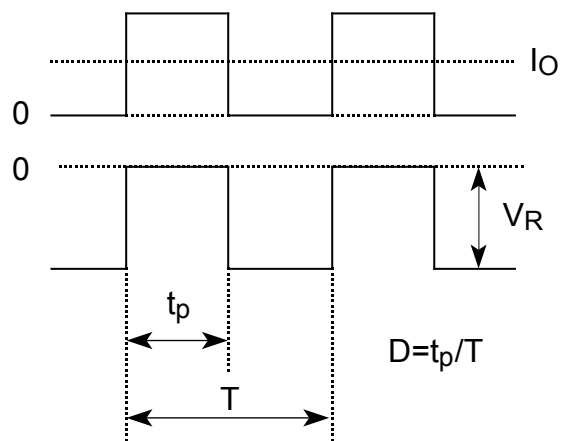


# S10SC4M

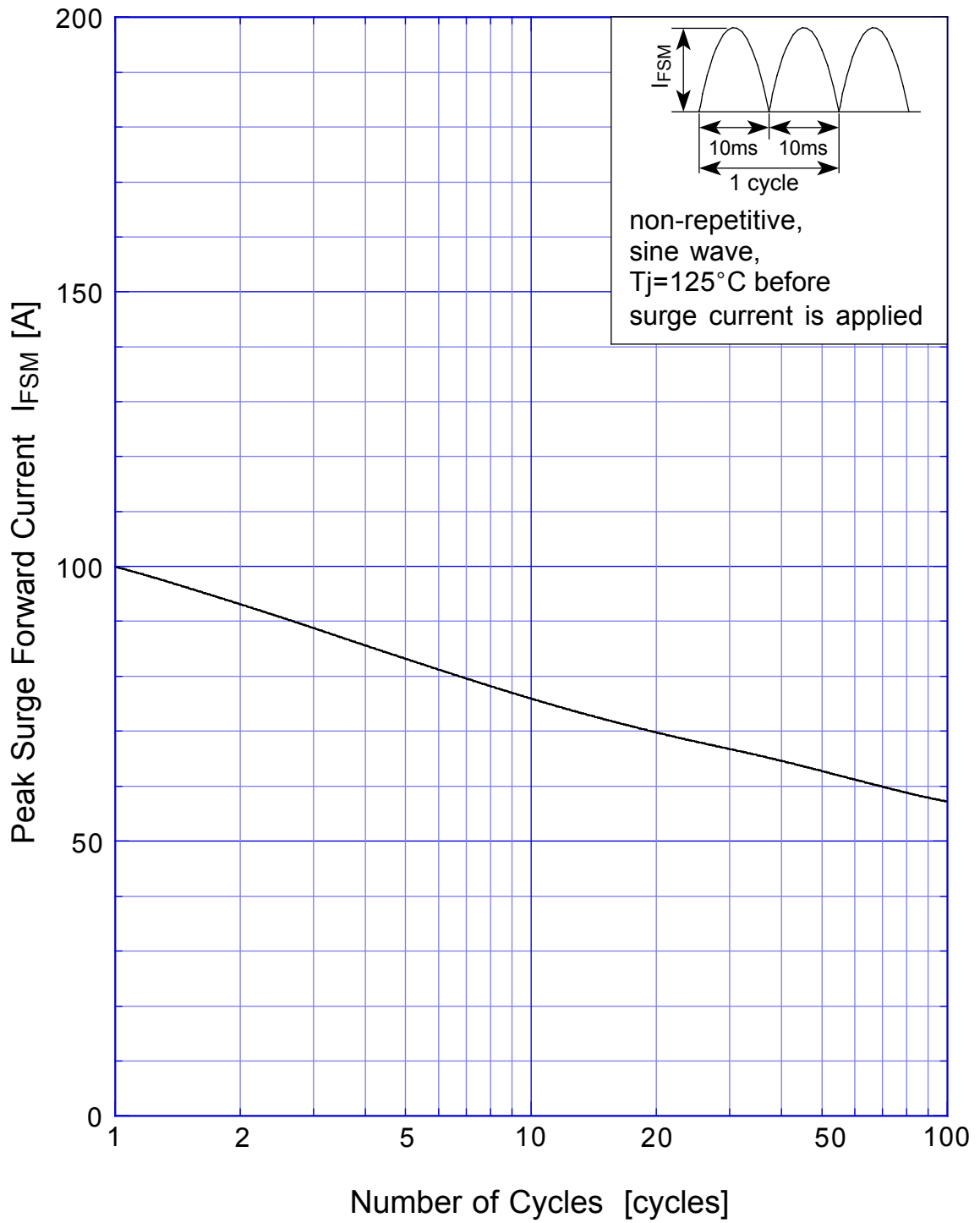
## Derating Curve



$V_R = 20V$



# S10SC4M Peak Surge Forward Capability





# SBD Repetitive Surge Reverse Power Derating Curve



# SBD

## Repetitive Surge Reverse Power Capability

