

# SHINDENGEN

## Schottky Rectifiers (SBD)

Dual

# DE10SC3L

## 30V 10A

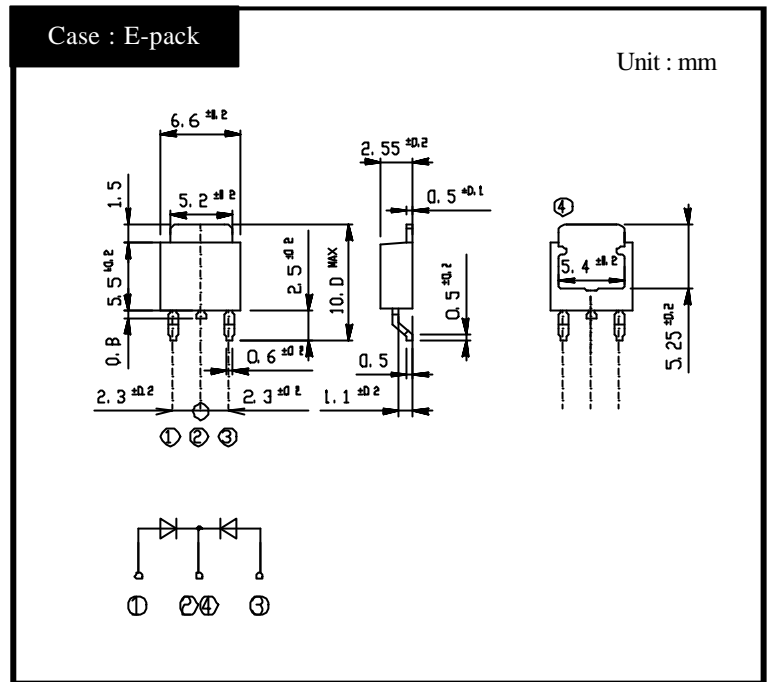
### FEATURES

- SMT
- Tj150
- Low  $V_F=0.45V$
- $P_{RRSM}$  avalanche guaranteed
- High current capacity with Small Package

### APPLICATION

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

### OUTLINE DIMENSIONS



### RATINGS

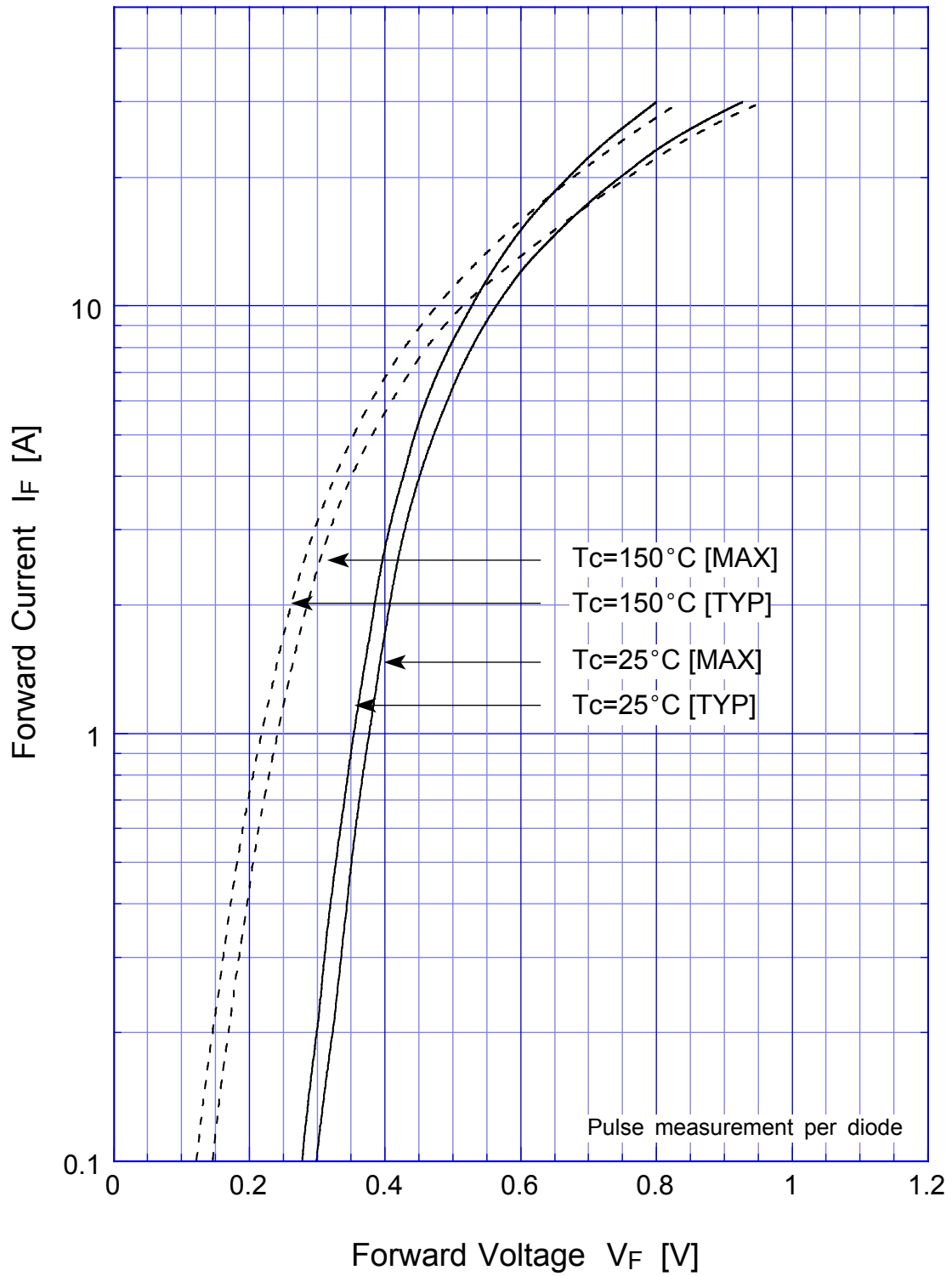
Absolute Maximum Ratings (If not specified  $T_c=25$  )

| Item                                  | Symbol     | Conditions  | Ratings   | Unit |
|---------------------------------------|------------|---|-----------|------|
| Storage Temperature                   | $T_{stg}$  |   | -55 ~ 150 |      |
| Operating Junction Temperature        | $T_j$      |   | 150       |      |
| Maximum Reverse Voltage               | $V_{RM}$   |   | 30        | V    |
| Repetitive Peak Surge Reverse Voltage | $V_{RRSM}$ | Pulse width 0.5ms, duty 1/40                                      | 35        | V    |
| Average Rectified Forward Current     | $I_o$      | 50Hz sine wave, R-load, Rating for each diode $I_o/2$ , $T_c=124$ | 10        | A    |
| Peak Surge Forward Current            | $I_{FSM}$  | 50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=25$       | 100       | A    |
| Repetitive Peak Surge Reverse Power   | $P_{RRSM}$ | Pulse width 10 $\mu$ s, Rating of per diode, $T_j=25$             | 330       | W    |

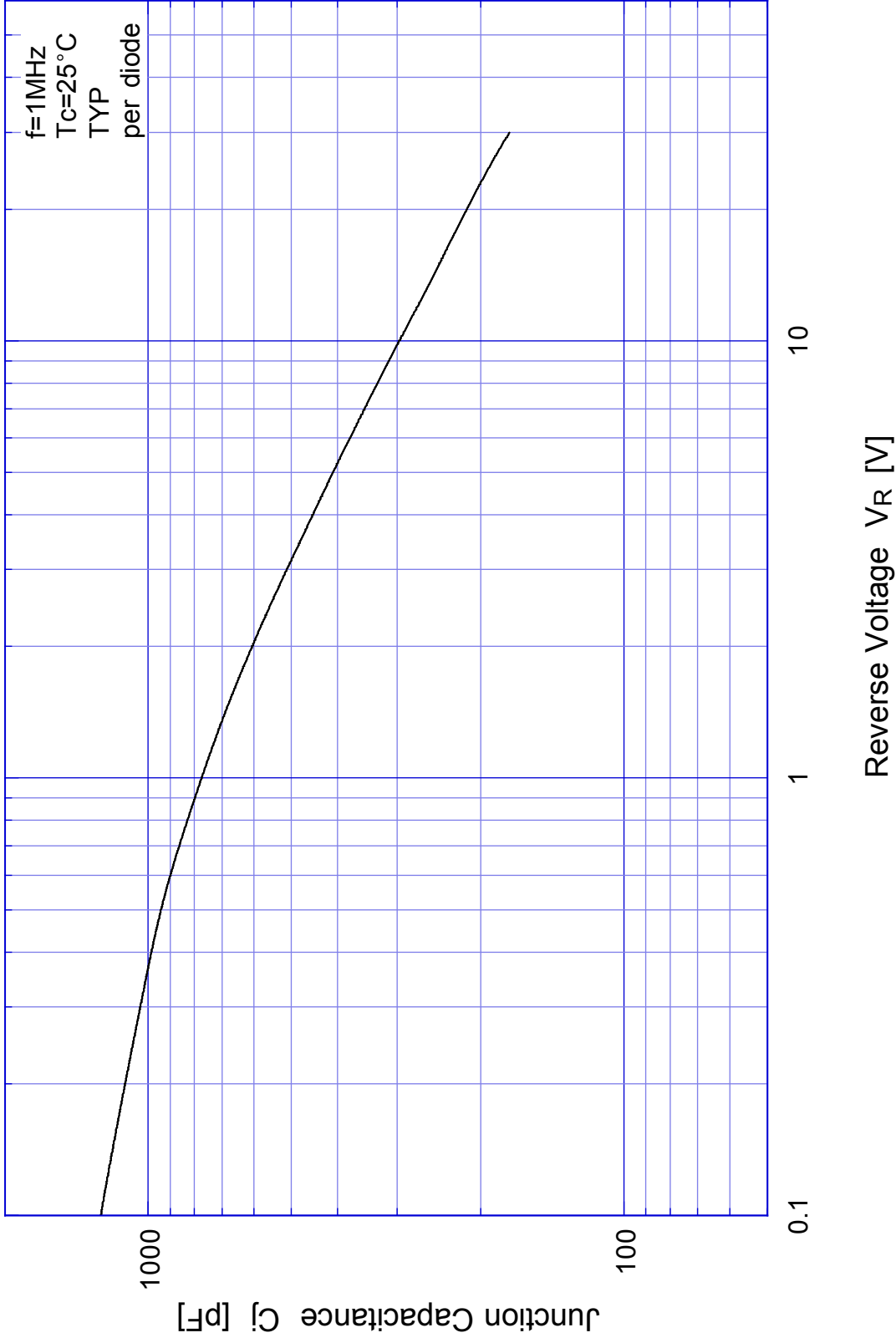
Electrical Characteristics (If not specified  $T_c=25$  )

| Item                 | Symbol     | Conditions  | Ratings  | Unit |
|----------------------|------------|---|----------|------|
| Forward Voltage      | $V_F$      | $I_F=4A$ , Pulse measurement, Rating of per diode     | Max.0.45 | V    |
| Reverse Current      | $I_R$      | $V_R=V_{RM}$ , Pulse measurement, Rating of per diode | Max.5.0  | mA   |
| Junction Capacitance | $C_j$      | $f=1MHz$ , $V_R=10V$ , Rating of per diode            | Typ.290  | pF   |
| Thermal Resistance   | $\theta_c$ | junction to case                                      | Max.4.0  | /W   |

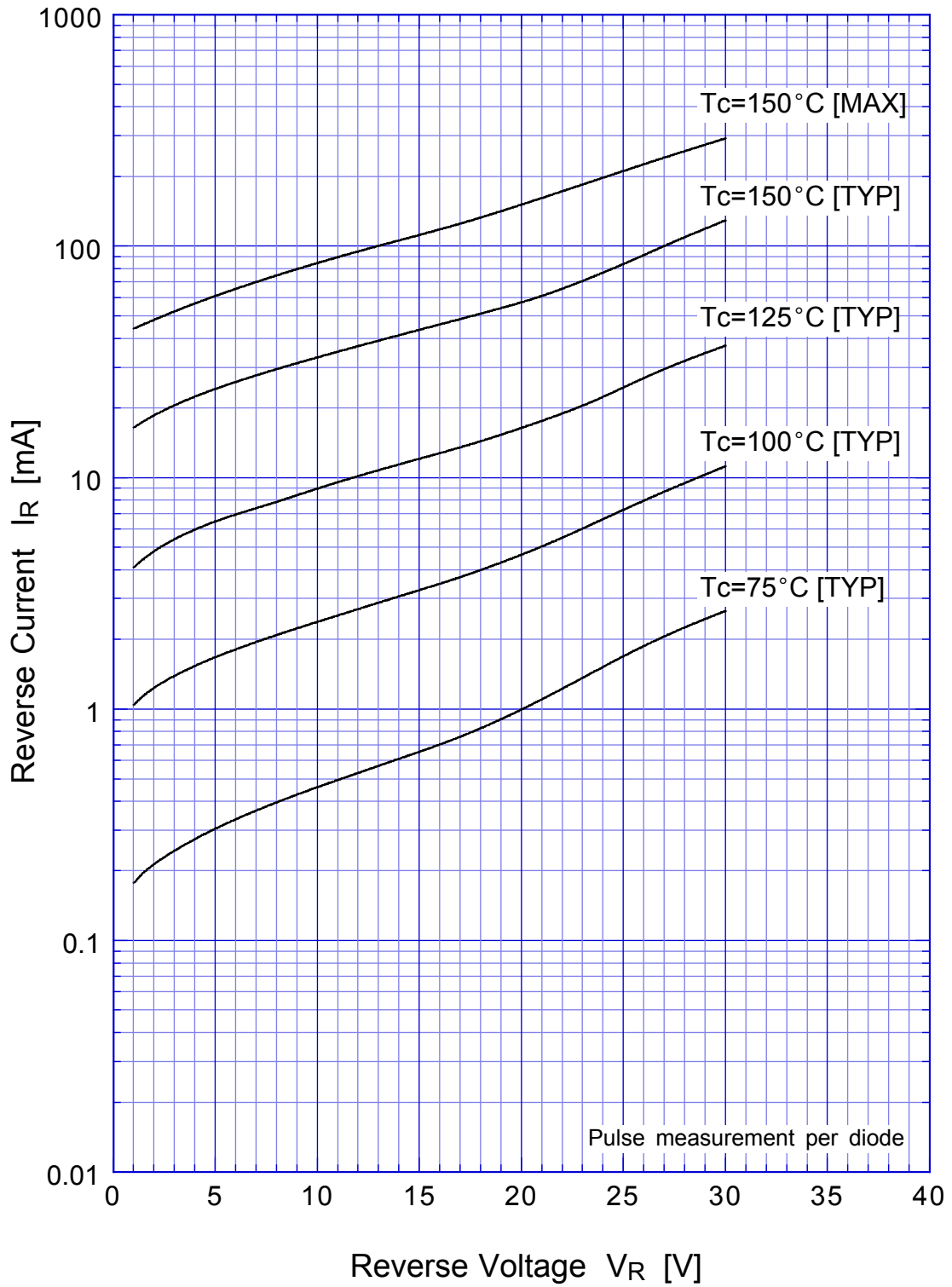
# DE10SC3L Forward Voltage



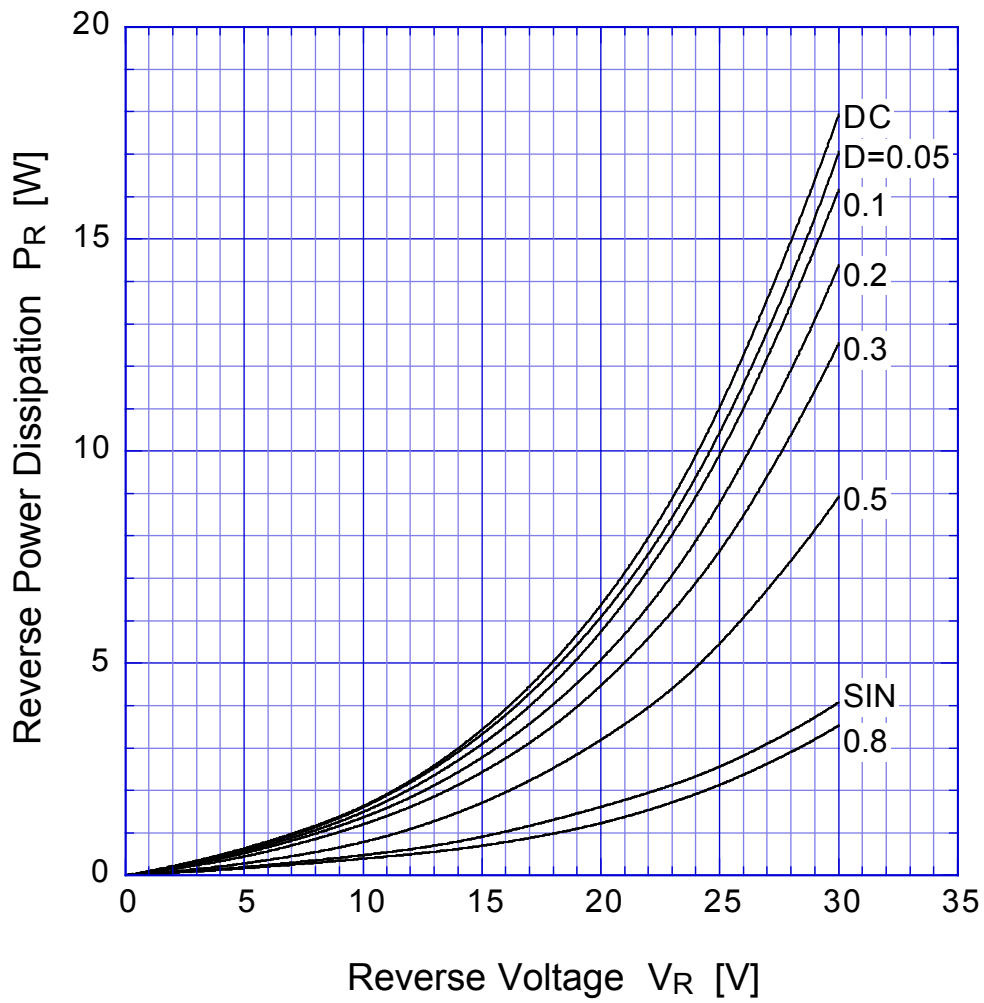
# DE10SC3L Junction Capacitance



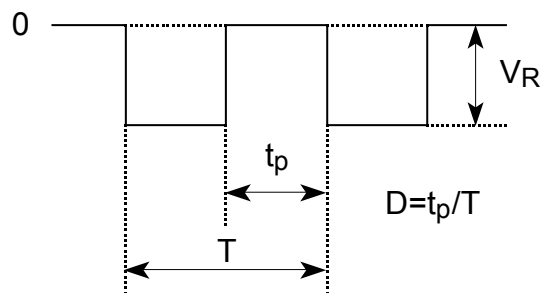
# DE10SC3L Reverse Current



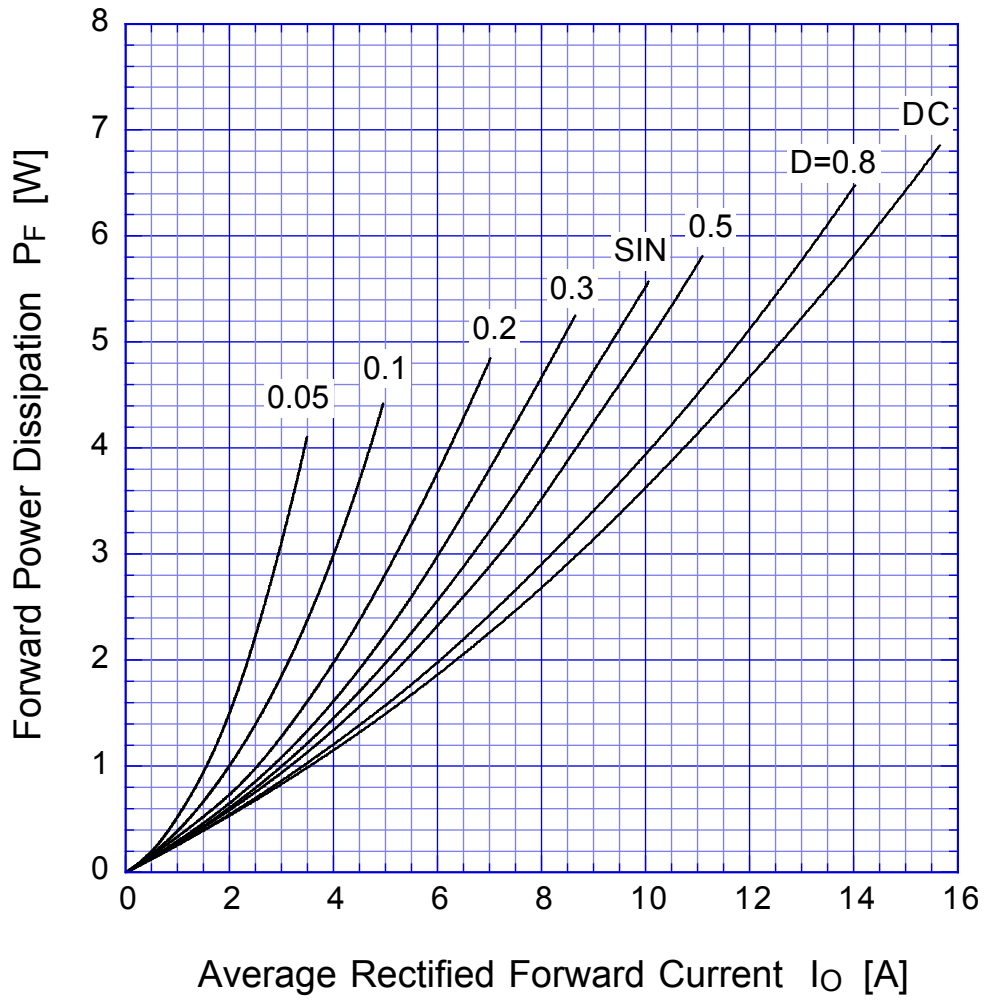
## DE10SC3L Reverse Power Dissipation



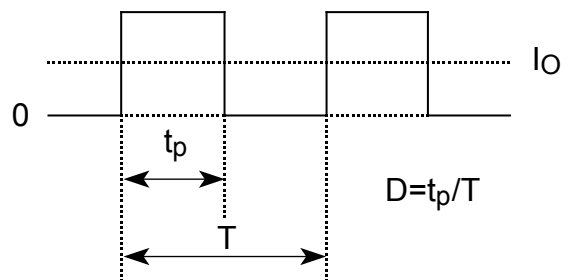
$T_j = 150^\circ\text{C}$



# DE10SC3L Forward Power Dissipation

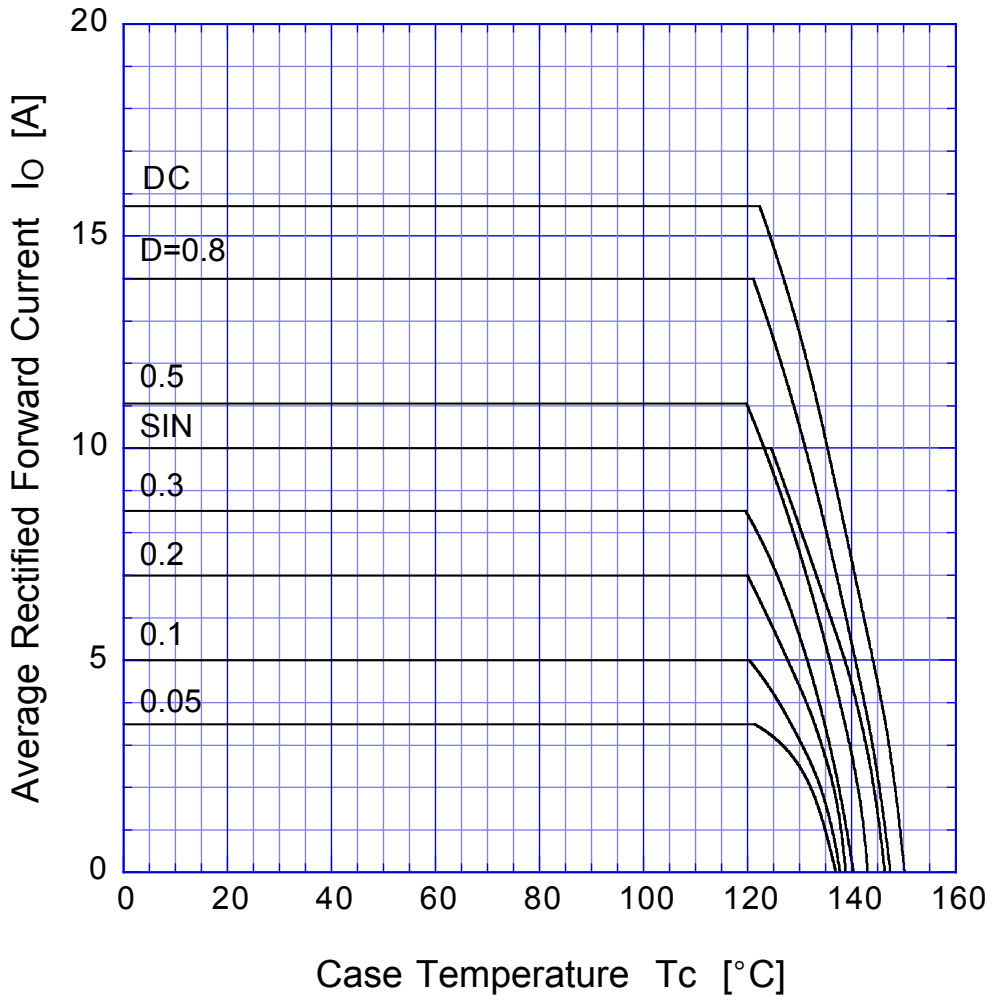


$T_j = 150^\circ\text{C}$



# DE10SC3L

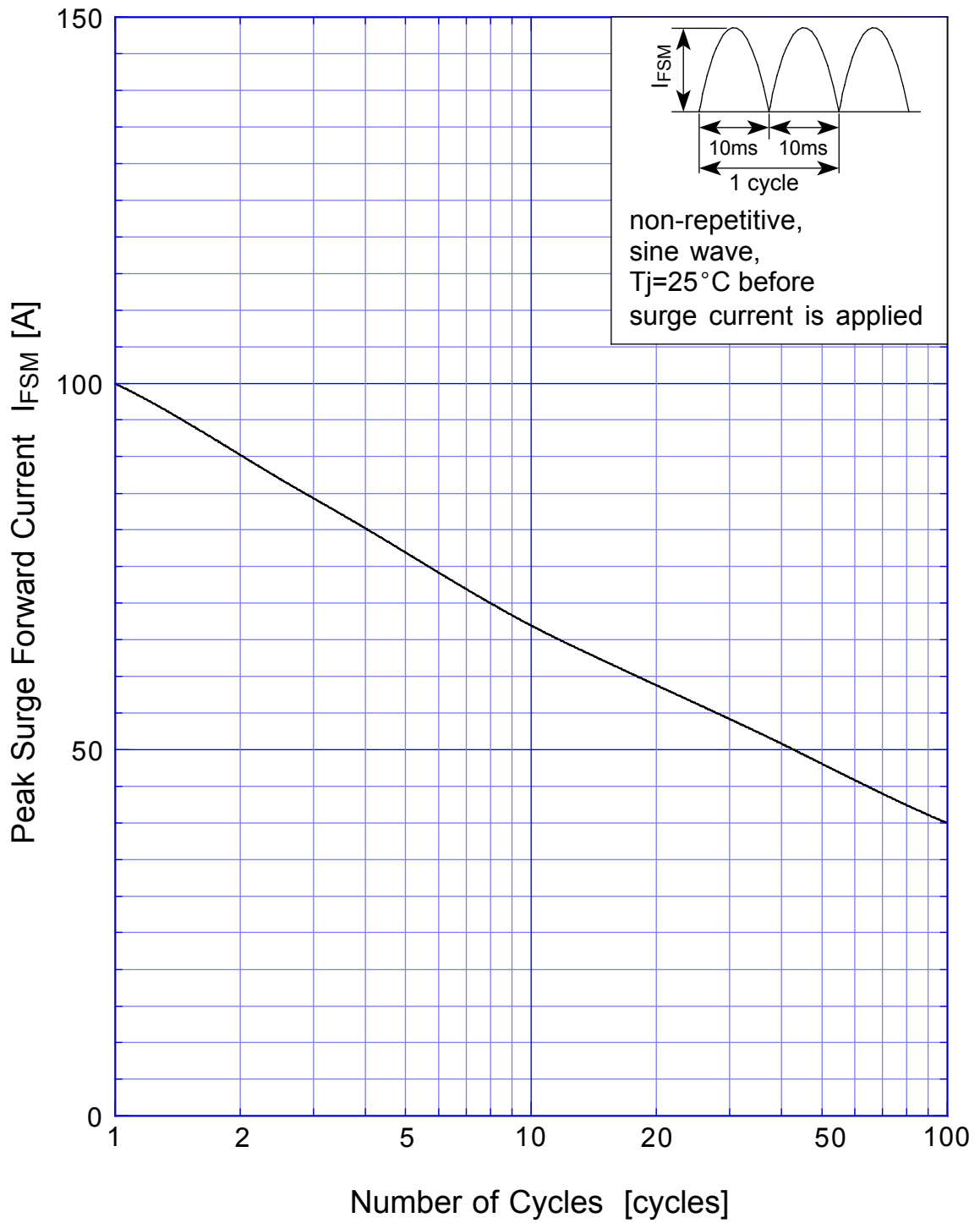
# Derating Curve



$V_R = 15V$

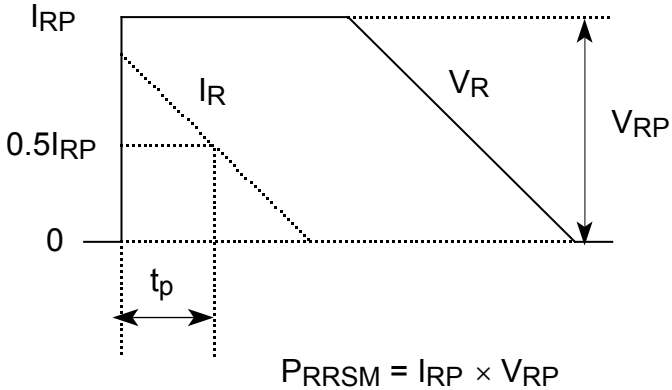
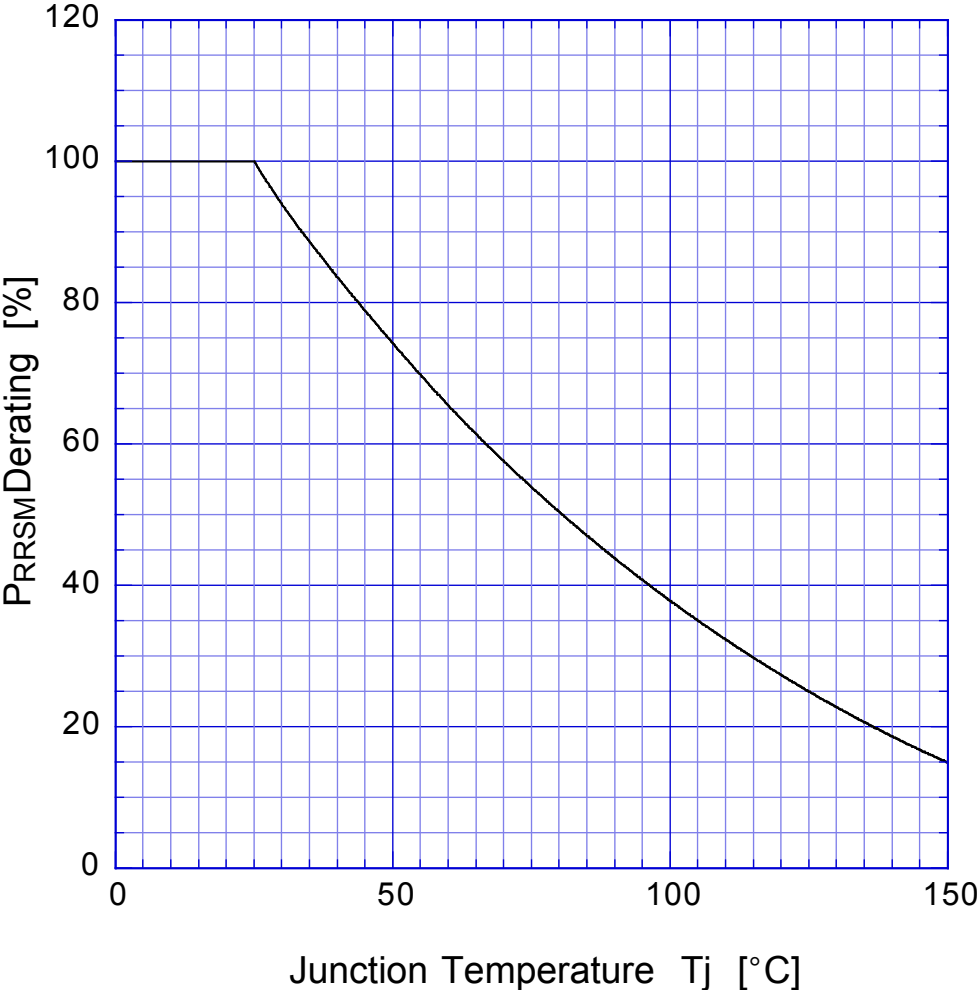


# DE10SC3L Peak Surge Forward Capability





# SBD Repetitive Surge Reverse Power Derating Curve



# SBD

## Repetitive Surge Reverse Power Capability

