

# SHINDENGEN

## Schottky Rectifiers (SBD)

Single

# D1FP3

## 30V 2A

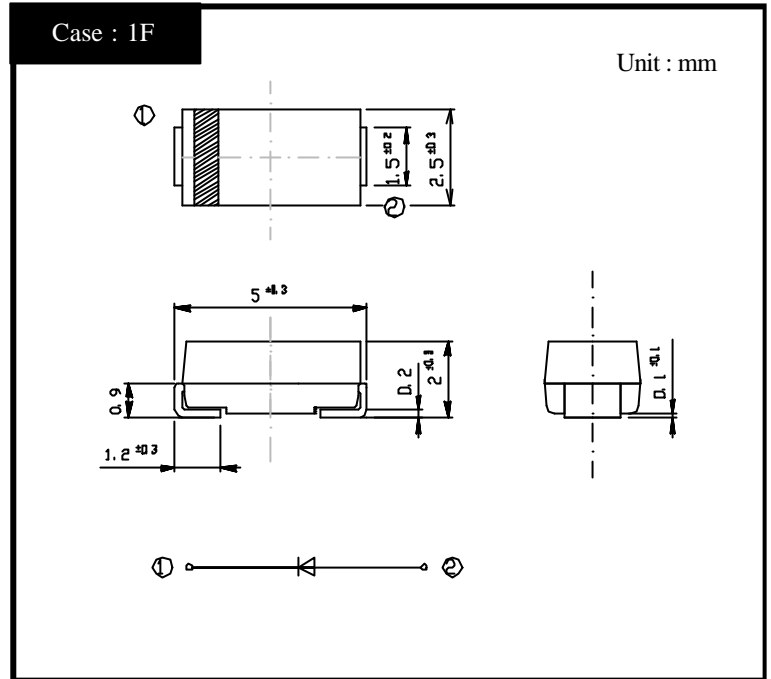
### FEATURES

Small SMT  
Super low  $V_F=0.4V$

### APPLICATION

Reversed Battery Connection Protection  
DC OR output  
DC/DC converter  
Mobile telephone, personal computer

### OUTLINE DIMENSIONS



### RATINGS

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

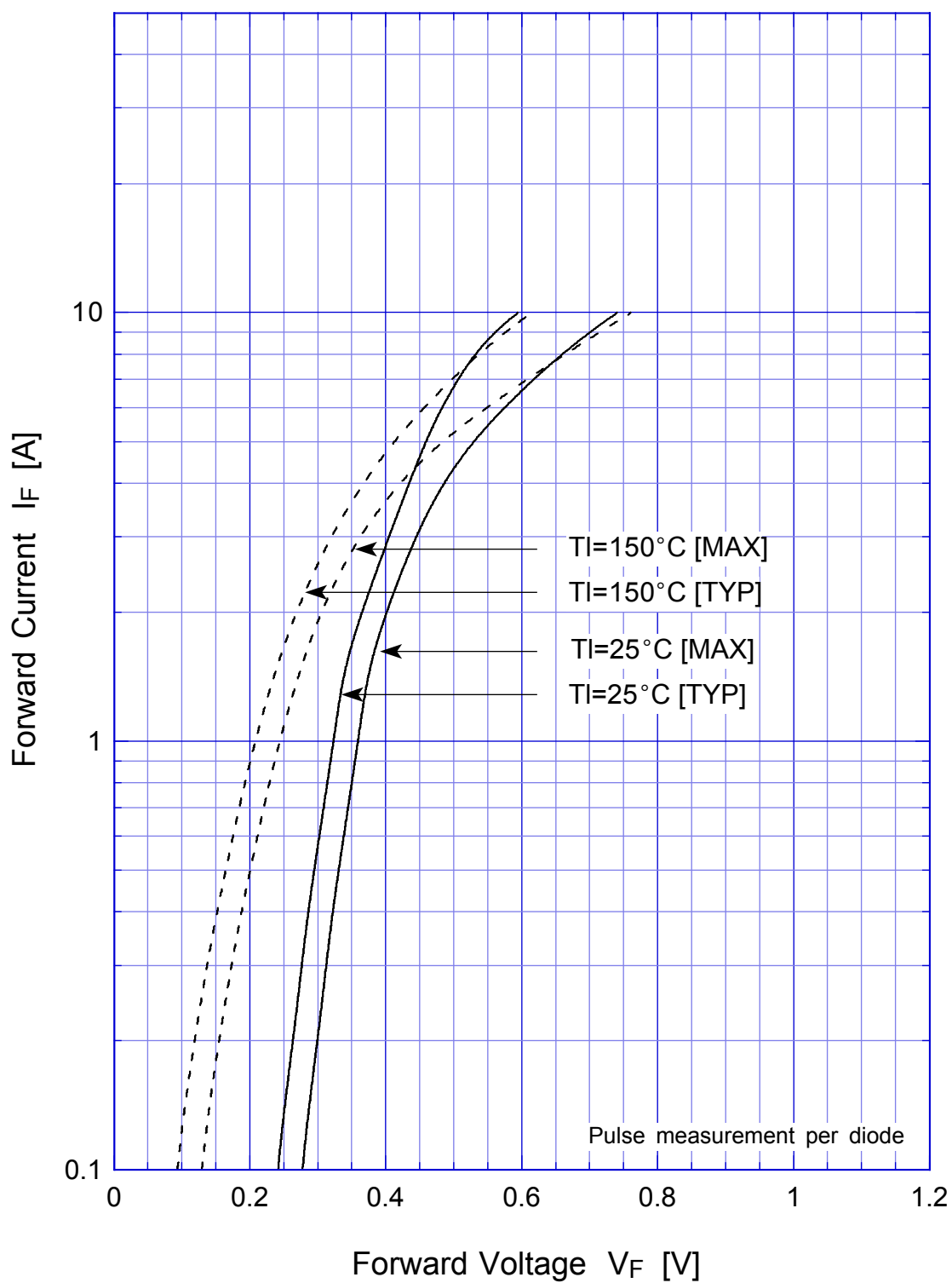
| Item                                  | Symbol     | Conditions  | Ratings   | Unit |
|---------------------------------------|------------|---|-----------|------|
| Storage Temperature                   | $T_{stg}$  |   | -55 ~ 125 |      |
| Operating Junction Temperature        | $T_j$      |   | 125       |      |
| 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, $T_I=98$                            | 2.0       | A    |
| Peak Surge Forward Current            | $I_{FSM}$  | 50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=25$ | 60        | A    |

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

| Item                 | Symbol   | Conditions   | Ratings  | Unit |
|----------------------|----------|--|----------|------|
| Forward Voltage      | $V_F$    | $I_F=0.8A$ , Pulse measurement                             | Max.0.35 | V    |
|                      |          | $I_F=2A$ , Pulse measurement                               | Max.0.40 | V    |
| Reverse Current      | $I_R$    | $V_R=V_{RM}$ , Pulse measurement                           | Max.4.5  | mA   |
| Junction Capacitance | $C_j$    | $f=1MHz$ , $V_R=10V$                                       | Typ.130  | pF   |
| Thermal Resistance   | $\theta$ | $\theta_{jl}$ junction to lead                             | Max.23   | /W   |
|                      |          | $\theta_{ja}$ junction to ambient On alumina substrate     | Max.108  |      |
|                      |          | $\theta_{ja}$ junction to ambient On glass-epoxy substrate | Max.157  |      |

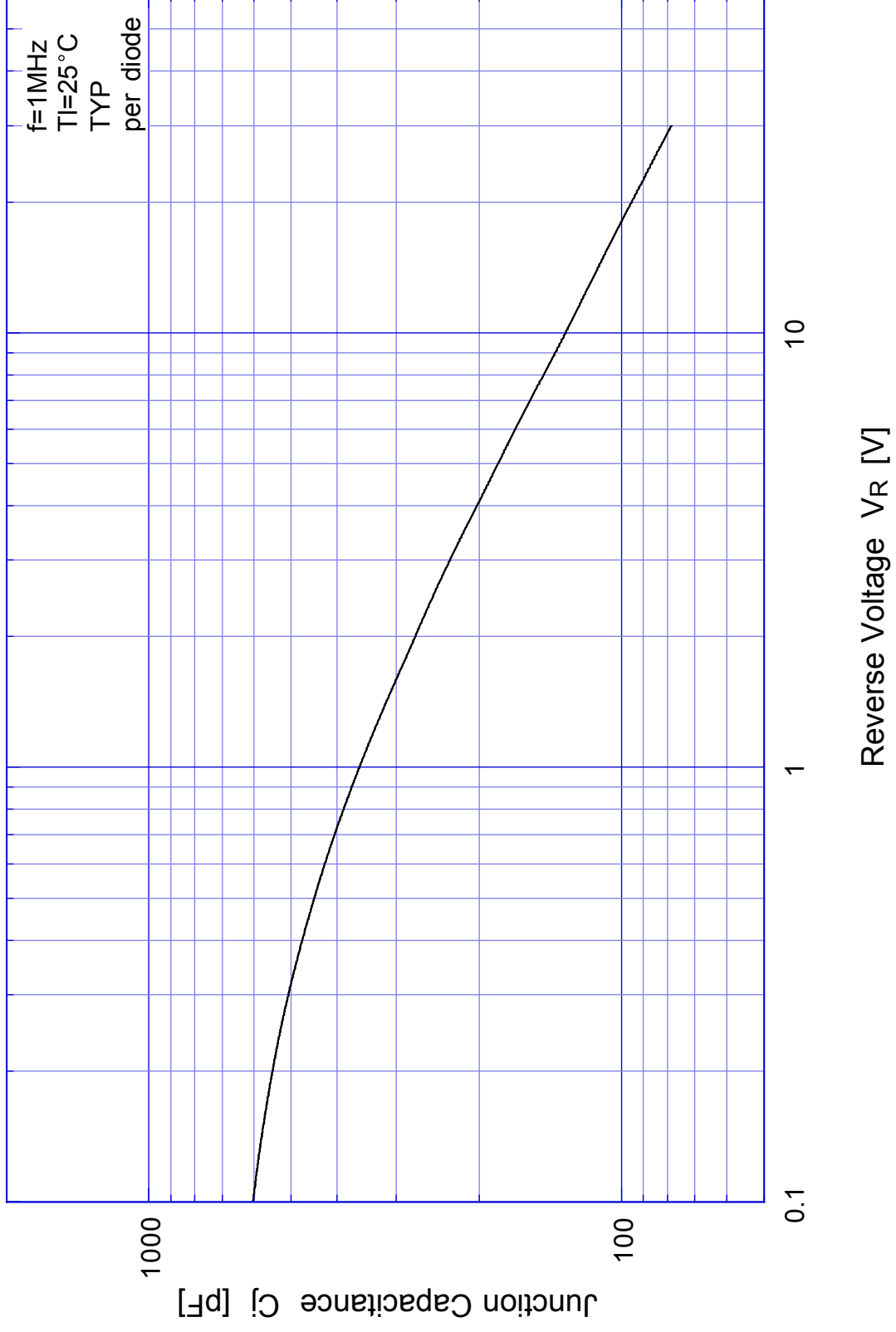
# D1FP3

## Forward Voltage



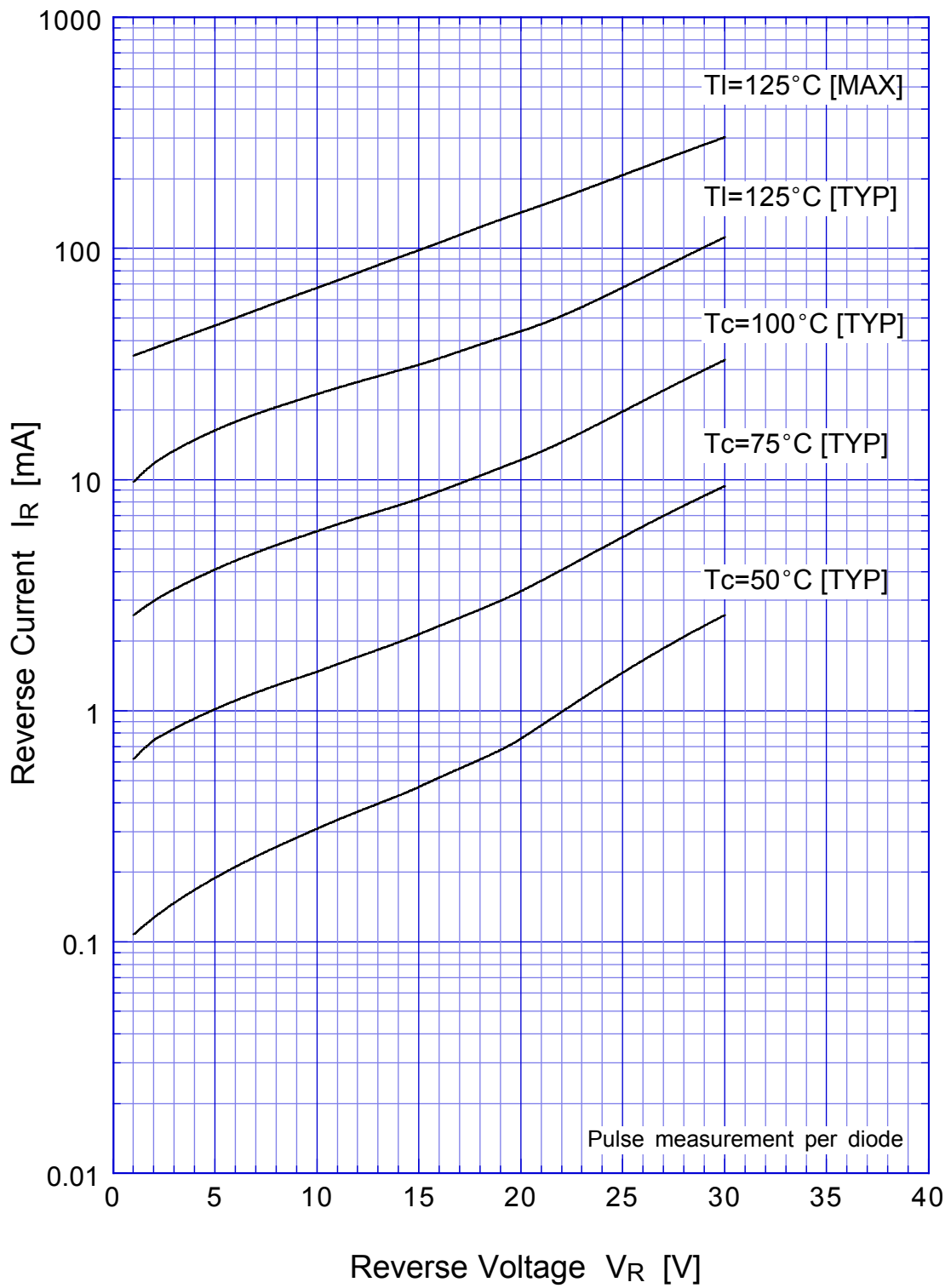
# D1FP3

## Junction Capacitance



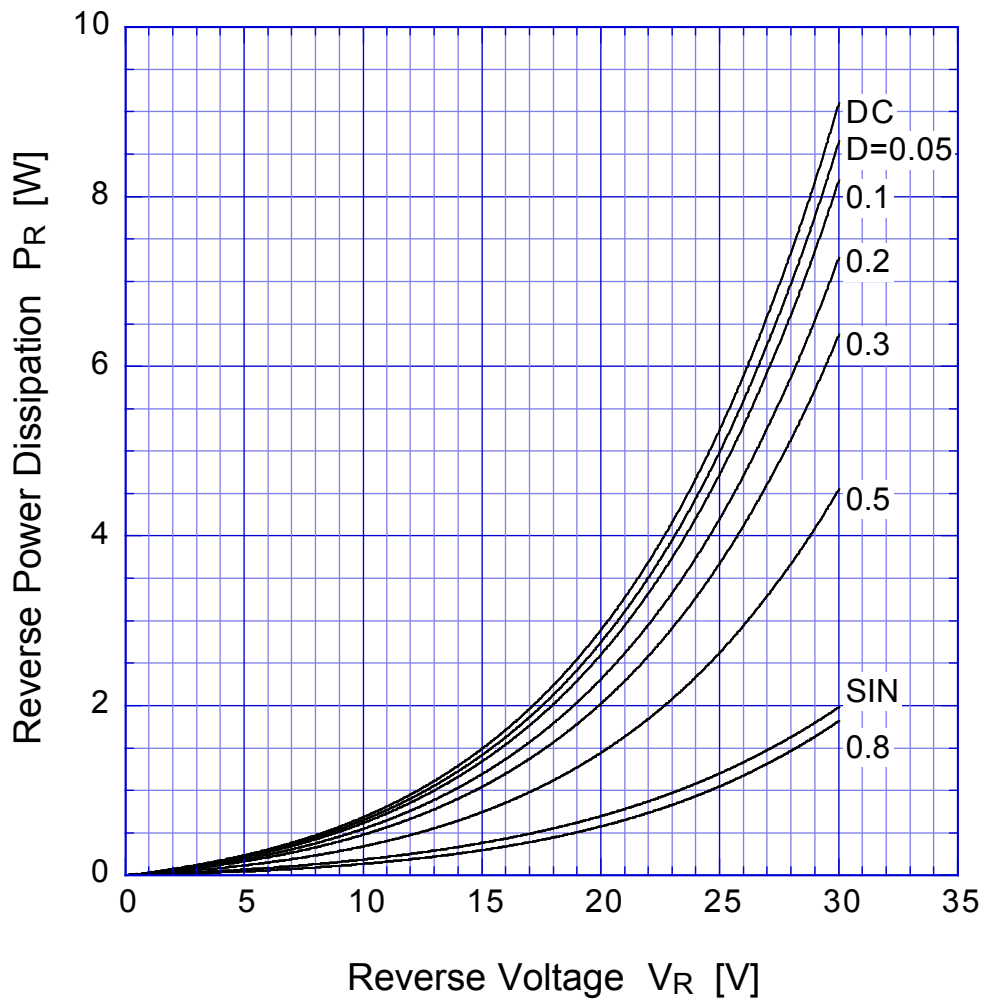
# D1FP3

## Reverse Current

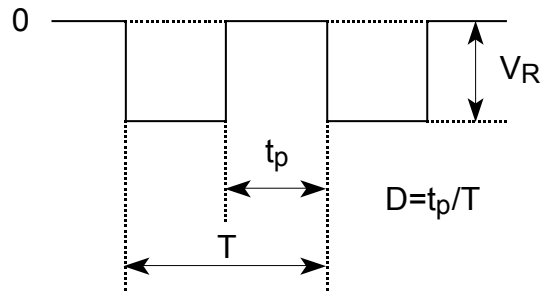


# D1FP3

## Reverse Power Dissipation

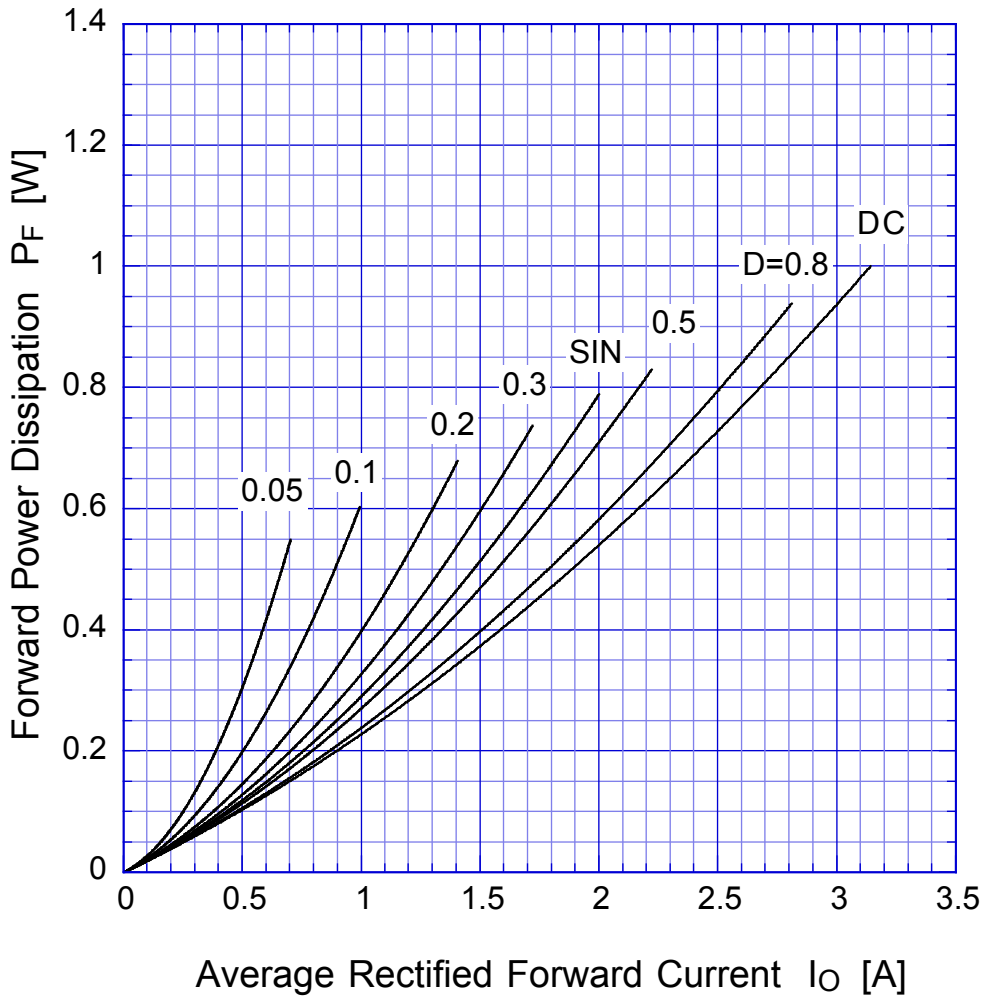


$T_j = 125^\circ\text{C}$

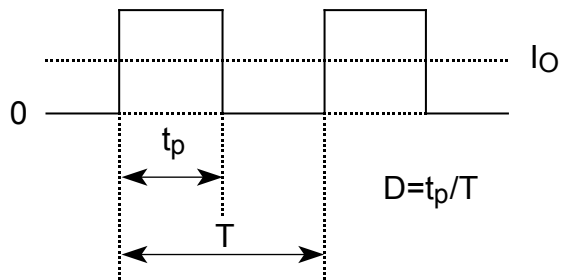


# D1FP3

## Forward Power Dissipation

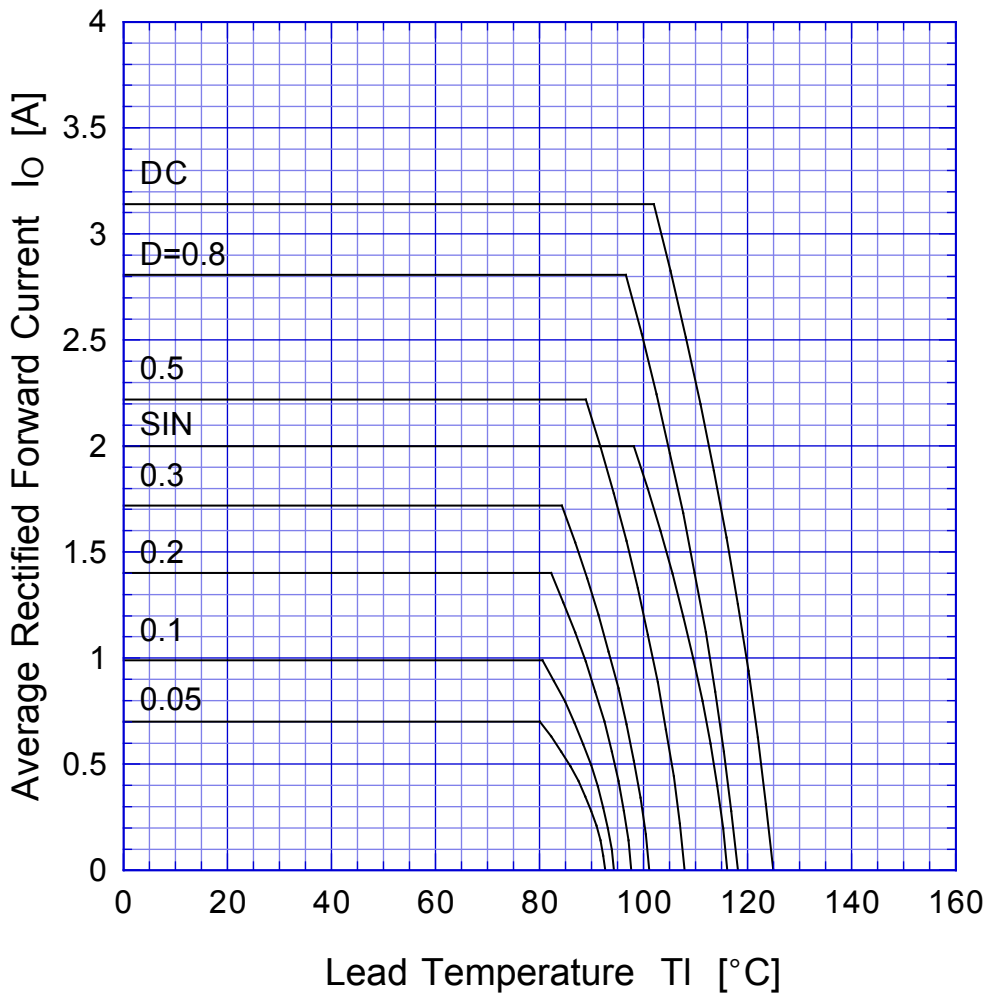


$T_j = 125^\circ\text{C}$



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# Derating Curve



$V_R = 15V$



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## Peak Surge Forward Capability

