

DF40PC3

30V 40A

FEATURES

- SMT
- Super low  $V_F=0.4V$
- High current capacity with Small Package

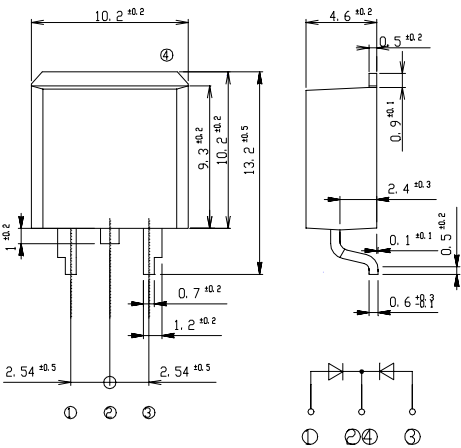
APPLICATION

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

OUTLINE DIMENSIONS

Case : STO-220

Unit : mm



RATINGS

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

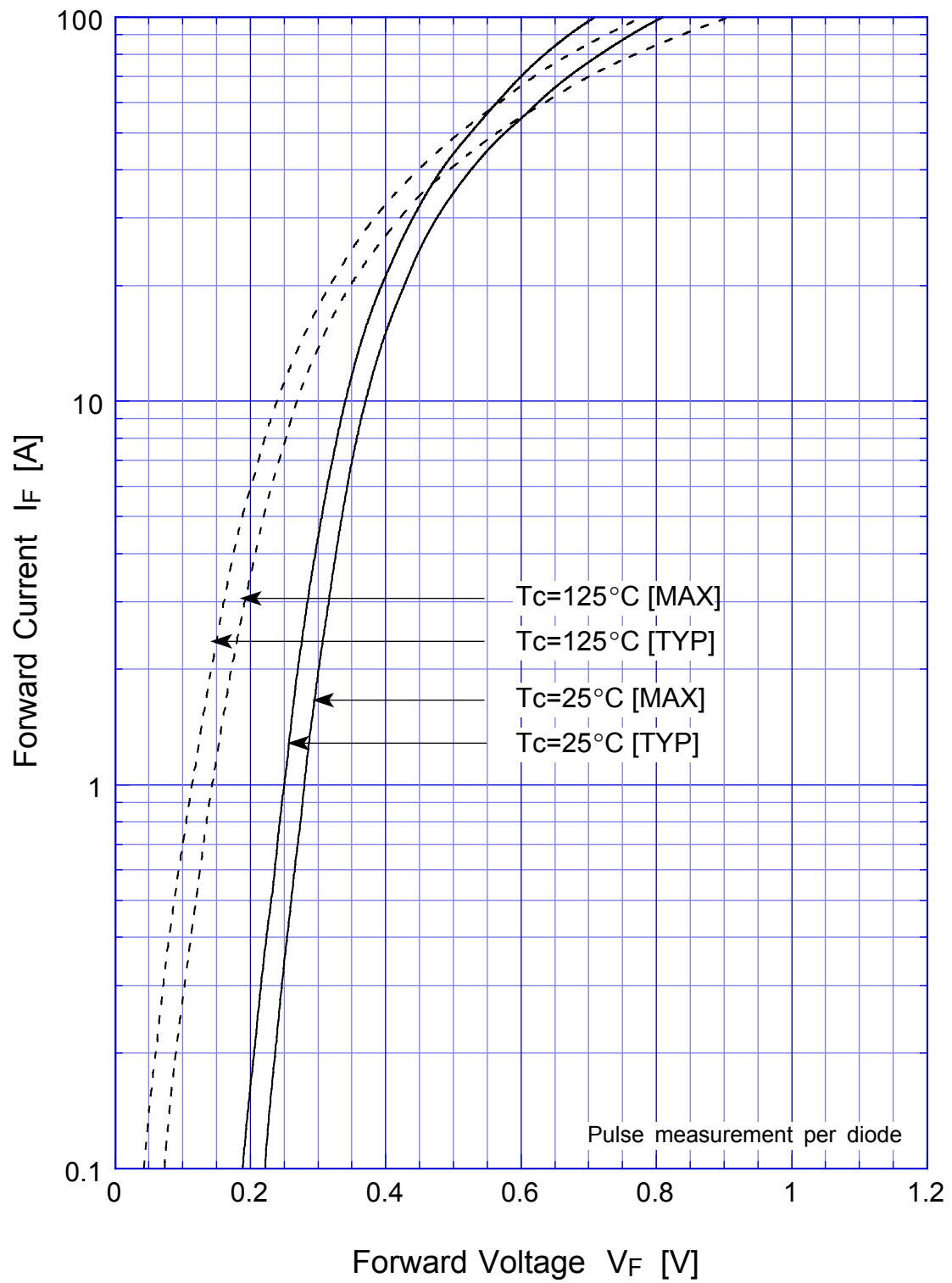
| Item                                  | Symbol     | Conditions                                                                 | Ratings | Unit        |
|---------------------------------------|------------|----------------------------------------------------------------------------|---------|-------------|
| Storage Temperature                   | $T_{stg}$  |                                                                            | -55~125 | $^{\circ}C$ |
| Operating Junction Temperature        | $T_j$      |                                                                            | 125     | $^{\circ}C$ |
| 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 $I_o/2$ , $T_c=105^{\circ}C$ | 40      | A           |
| Peak Surge Forward Current            | $I_{FSM}$  | 50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=25^{\circ}C$       | 350     | A           |

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

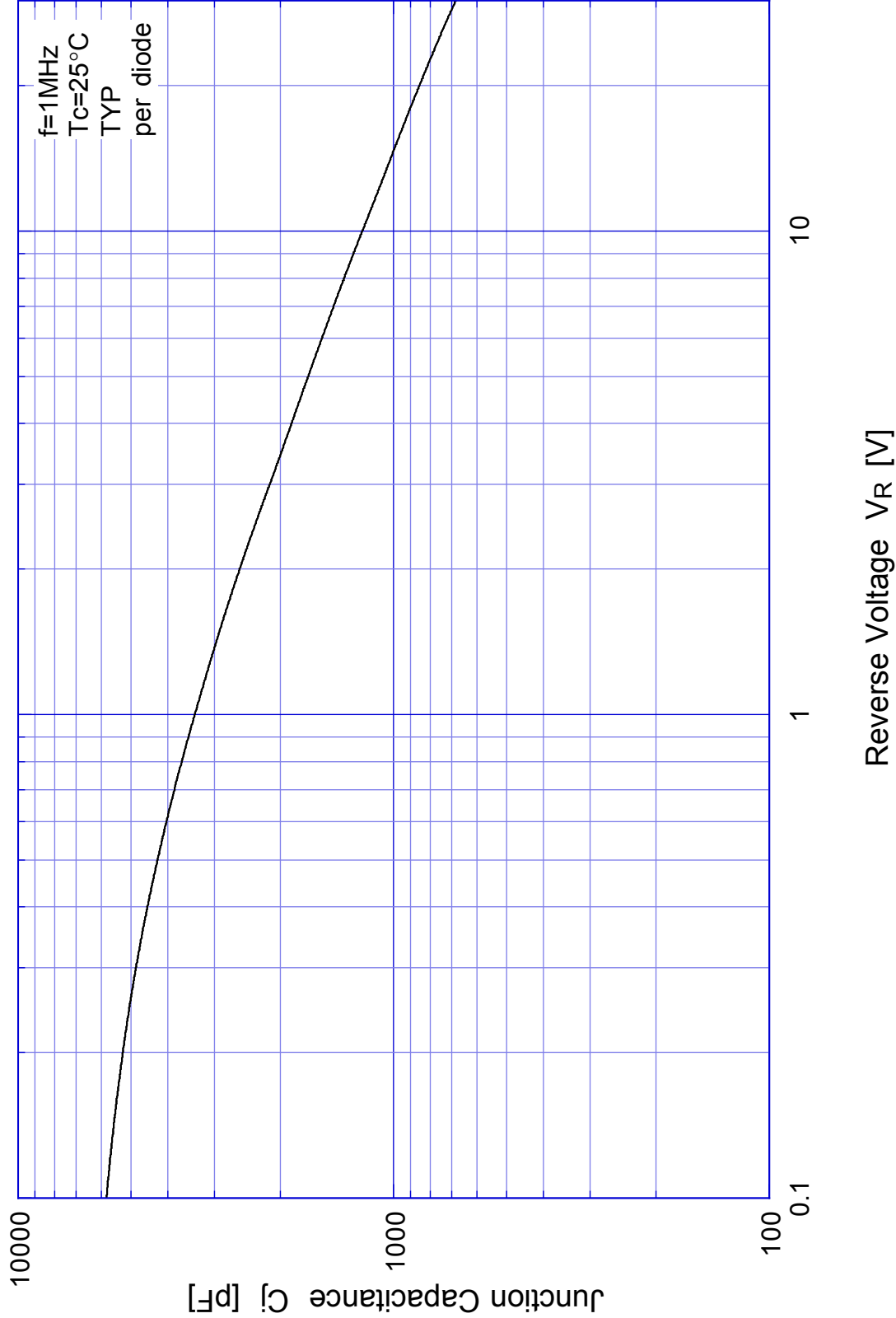
| Item                 | Symbol        | Conditions                                            | Ratings  | Unit          |
|----------------------|---------------|-------------------------------------------------------|----------|---------------|
| Forward Voltage      | $V_F$         | $I_F=15A$ , Pulse measurement, Rating of per diode    | Max.0.4  | V             |
| Reverse Current      | $I_R$         | $V_R=V_{RM}$ , Pulse measurement, Rating of per diode | Max.45   | mA            |
| Junction Capacitance | $C_j$         | $f=1MHz$ , $V_R=10V$ , Rating of per diode            | Typ.1160 | pF            |
| Thermal Resistance   | $\theta_{jc}$ | junction to case                                      | Max.0.8  | $^{\circ}C/W$ |

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Forward Voltage

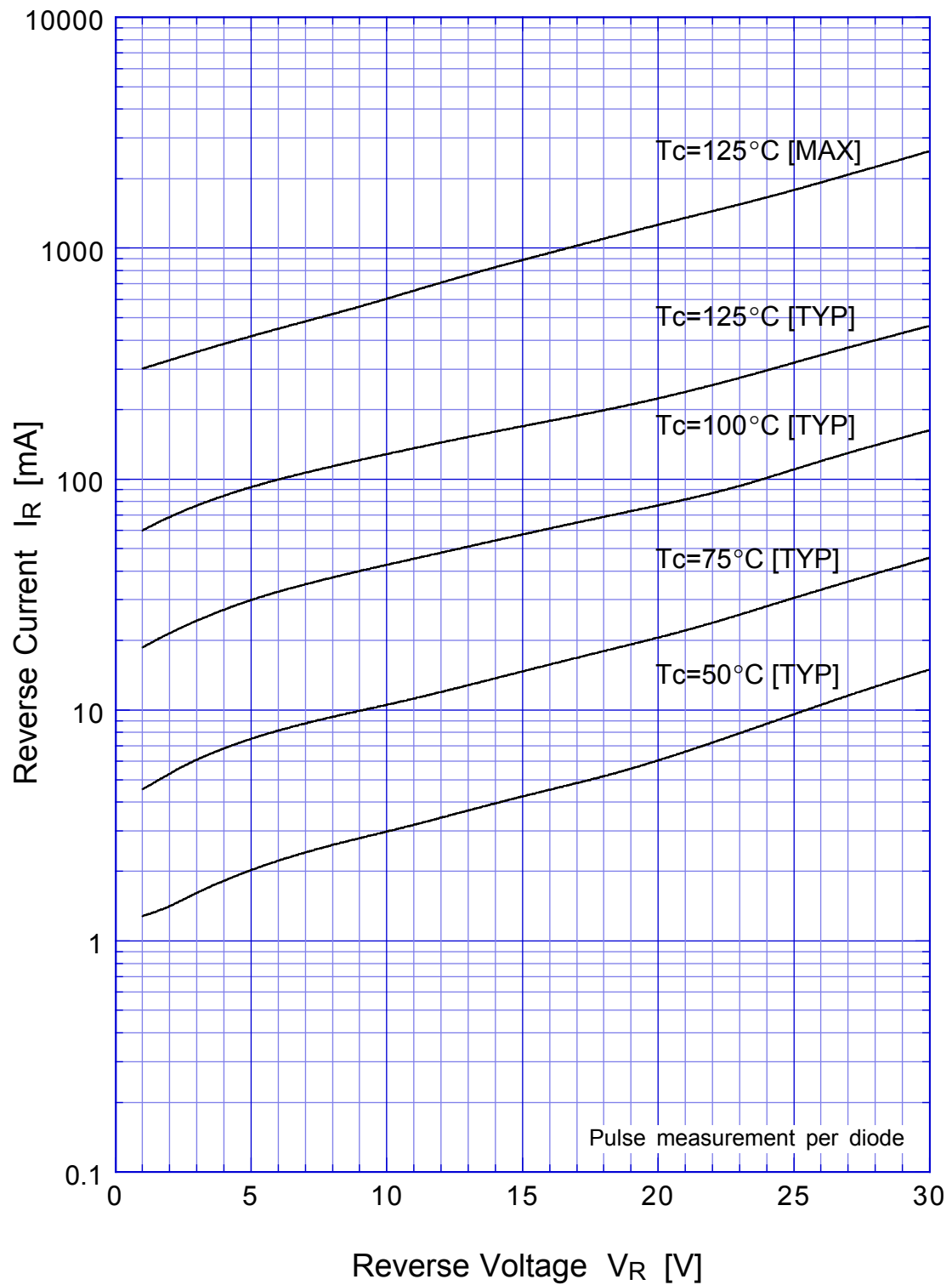


# DF40PC3 Junction Capacitance

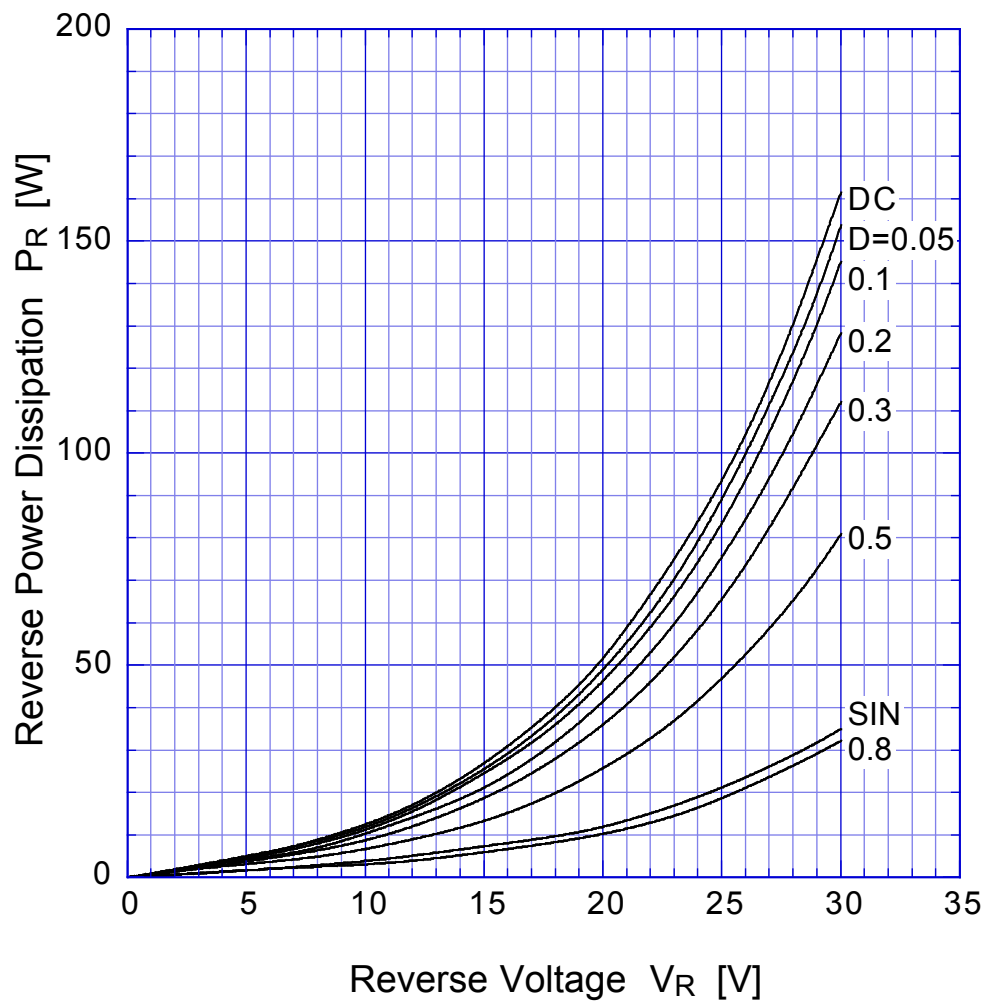


# DF40PC3

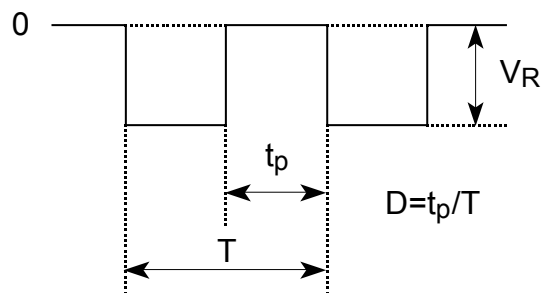
## Reverse Current



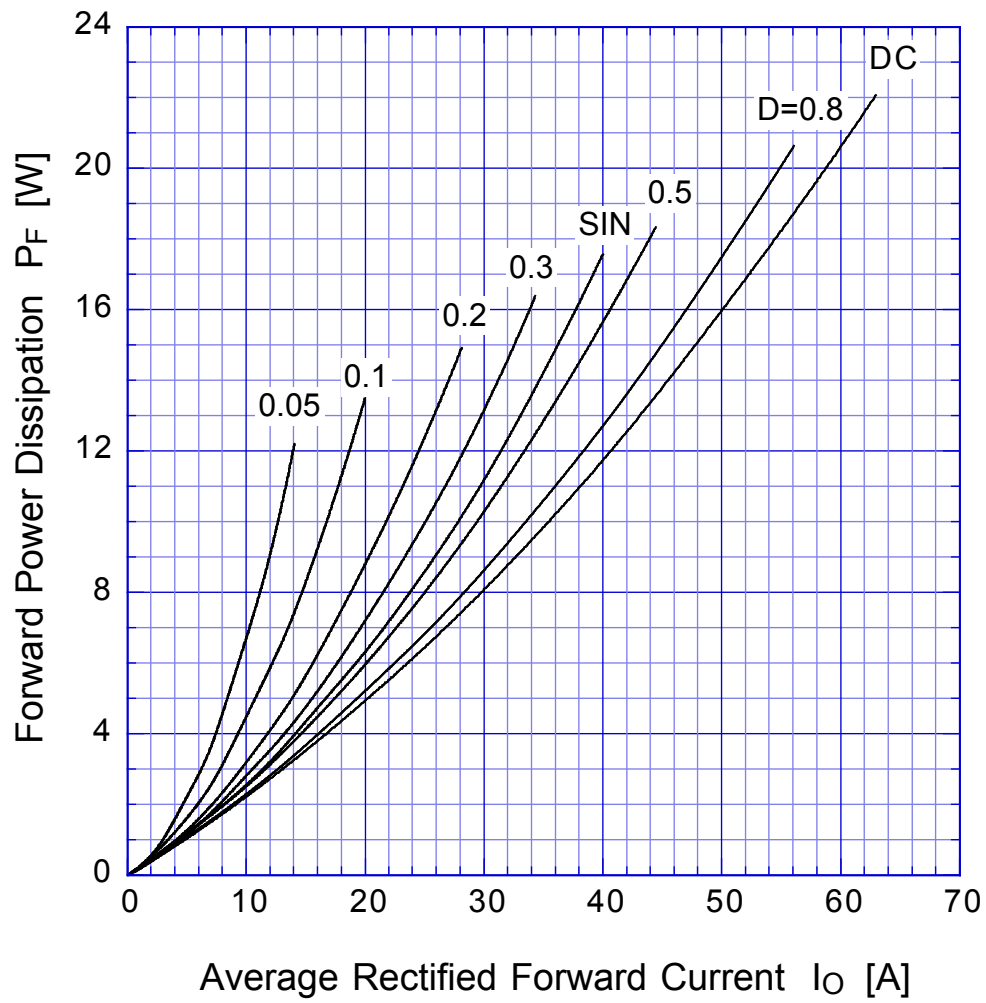
## DF40PC3 Reverse Power Dissipation



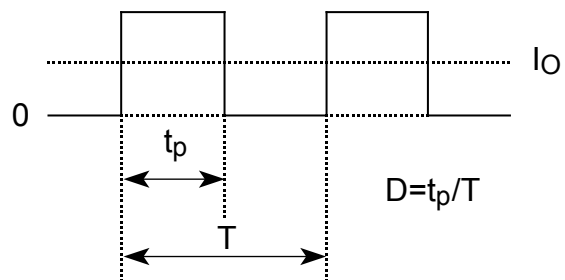
$T_j = 125^\circ\text{C}$



## DF40PC3 Forward Power Dissipation

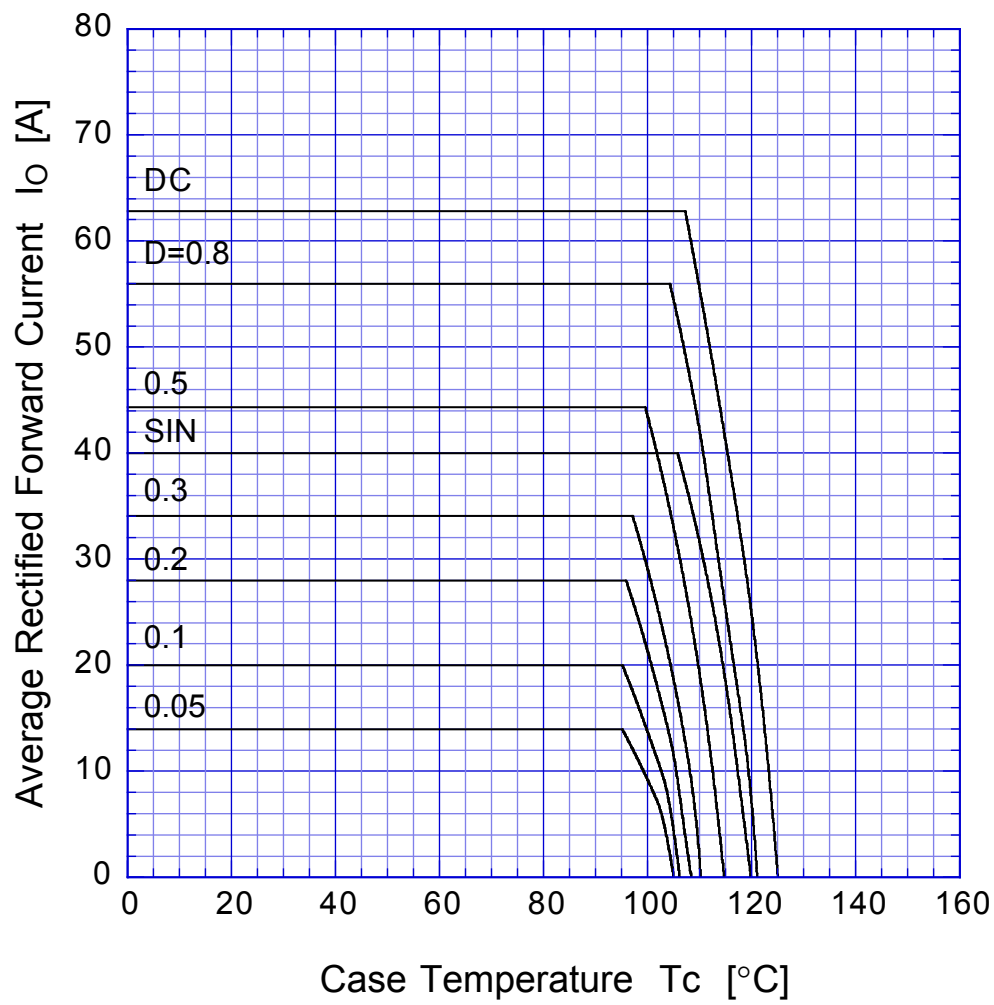


$T_j = 125^\circ\text{C}$

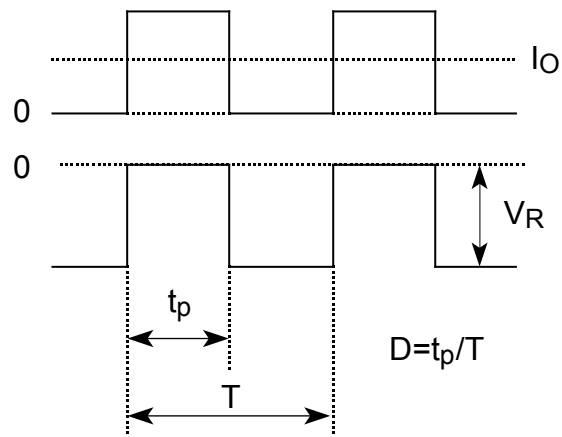


# DF40PC3

## Derating Curve



$V_R = 15V$



# DF40PC3

## Peak Surge Forward Capability

