

# SHINDENGEN

## Schottky Rectifiers (SBD)

Dual

# DF30SC3ML

## 30V 30A

### FEATURES

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

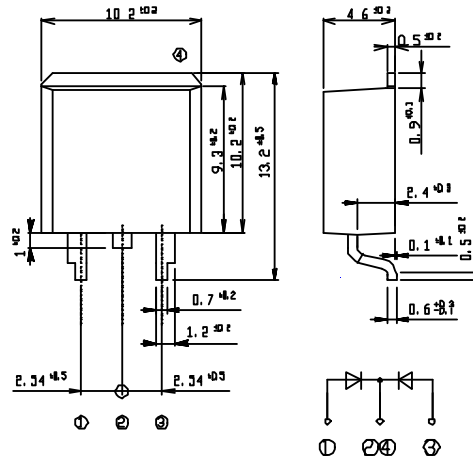
### APPLICATION

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

### OUTLINE DIMENSIONS

Case : STO-220

Unit : mm



### RATINGS

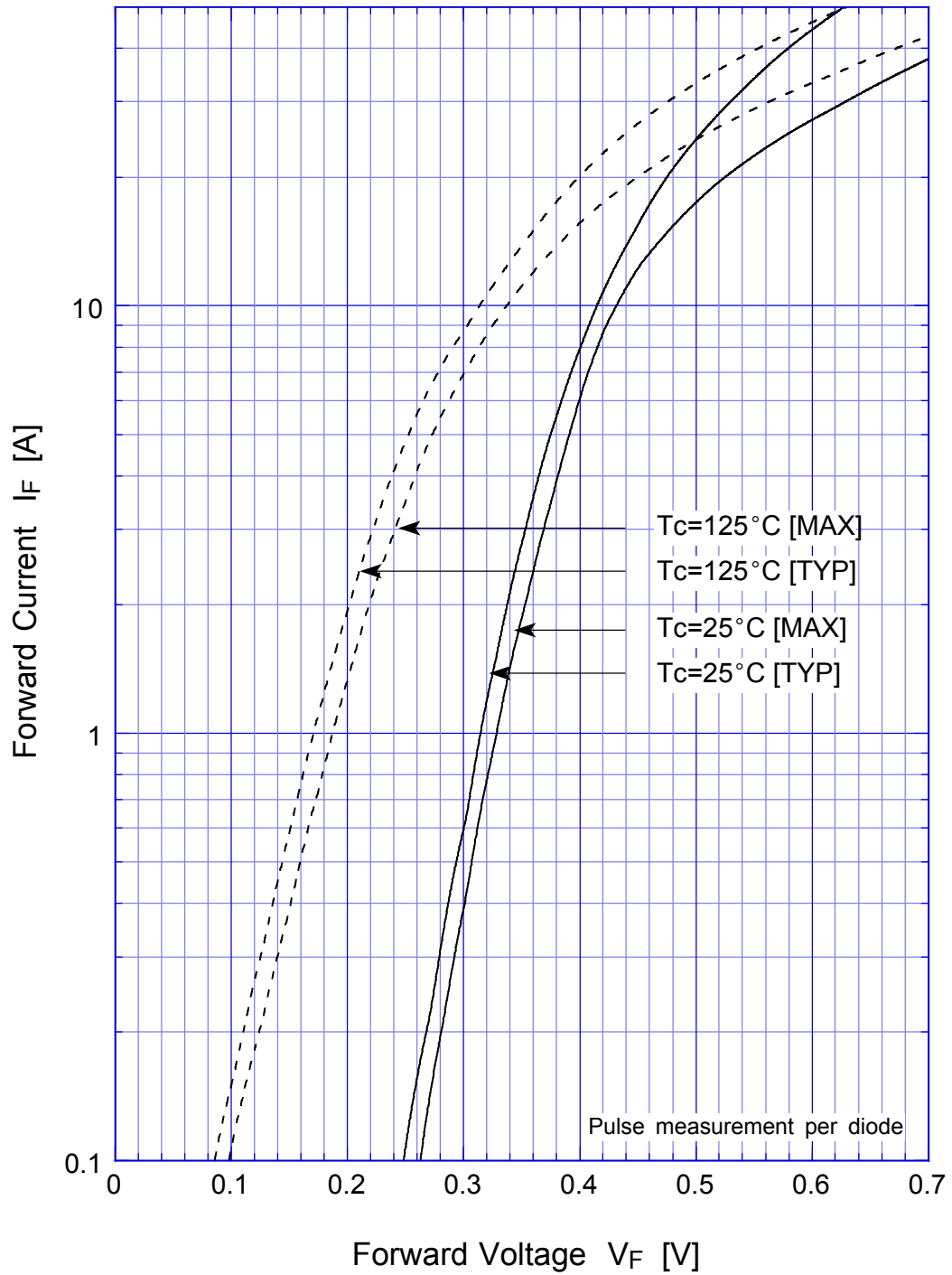
Absolute Maximum Ratings (If not specified  $T_c=25$  )

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 $I_O/2$ , $T_c=119$	30	A
Peak Surge Forward Current	$I_{FSM}$	50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=25$	350	A
Repetitive Peak Surge Reverse Power	$P_{RRSM}$	Pulse width 10 $\mu$ s, Rating of per diode, $T_j=25$	1000	W

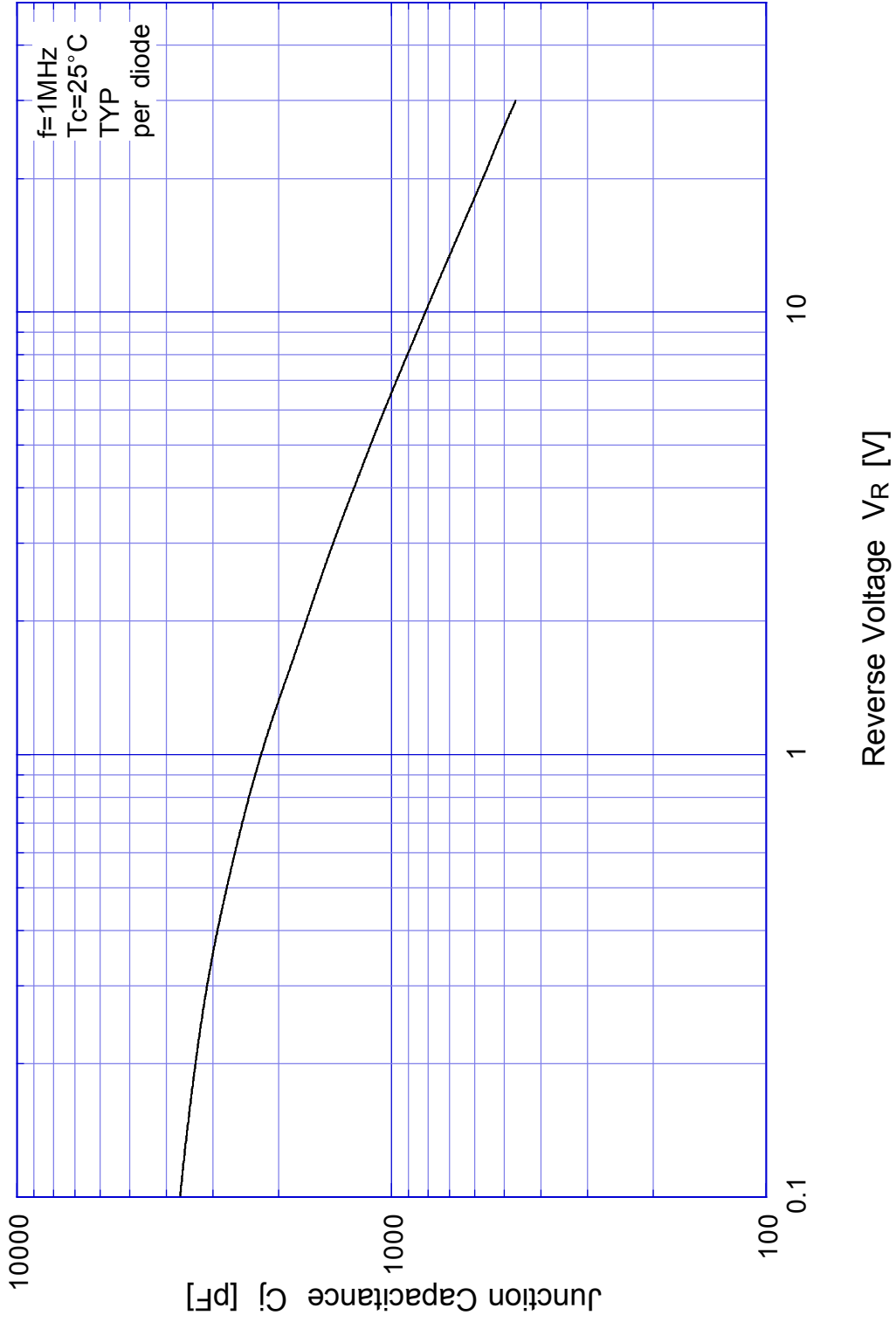
Electrical Characteristics (If not specified  $T_c=25$  )

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	$V_F$	$I_F=12.5A$ , 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.10	mA
Junction Capacitance	$C_j$	$f=1MHz$ , $V_R=10V$ , Rating of per diode	Typ.820	pF
Thermal Resistance	$\theta_{jc}$	junction to case	Max.1.6	/W

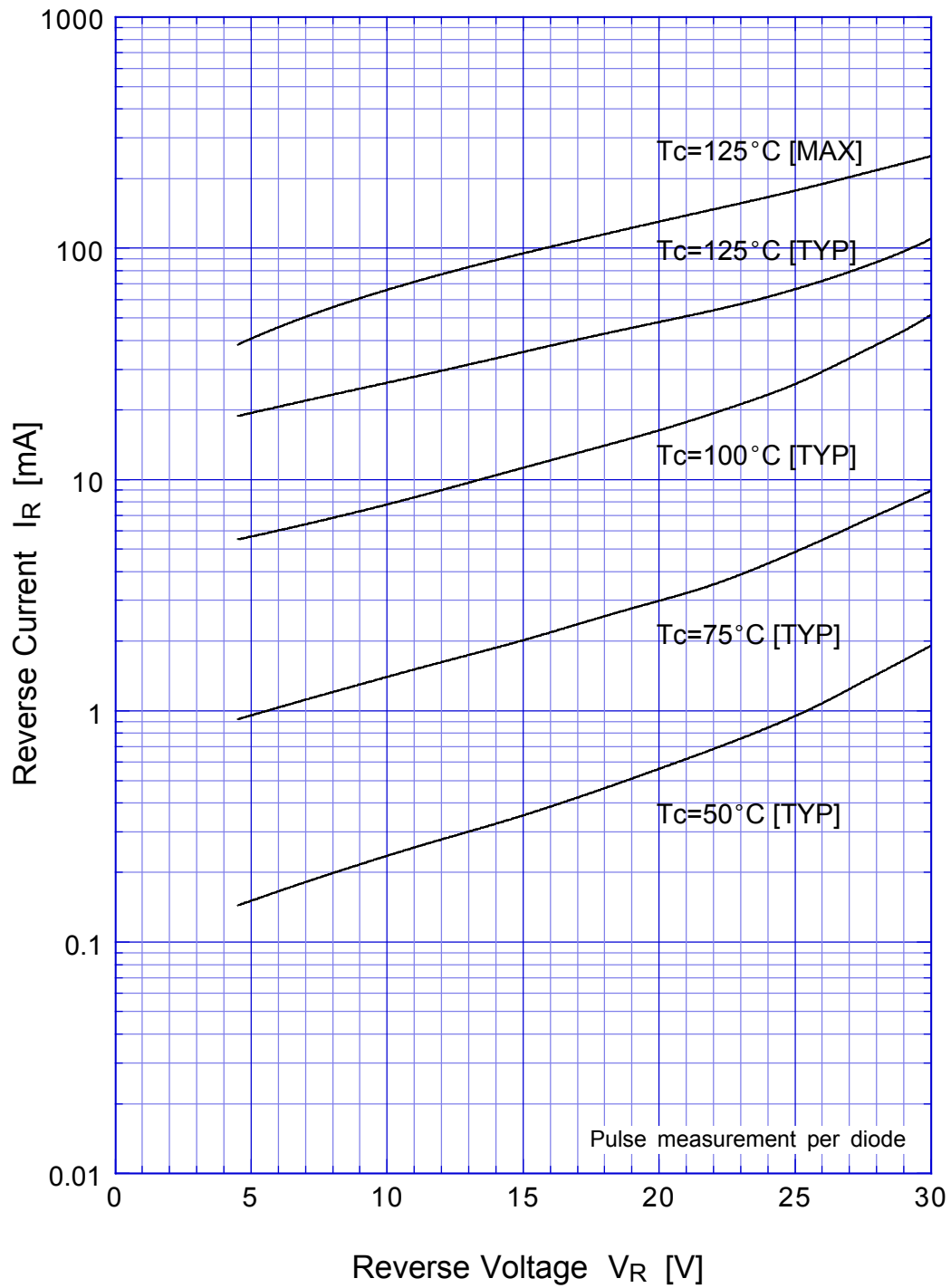
# DF30SC3ML Forward Voltage



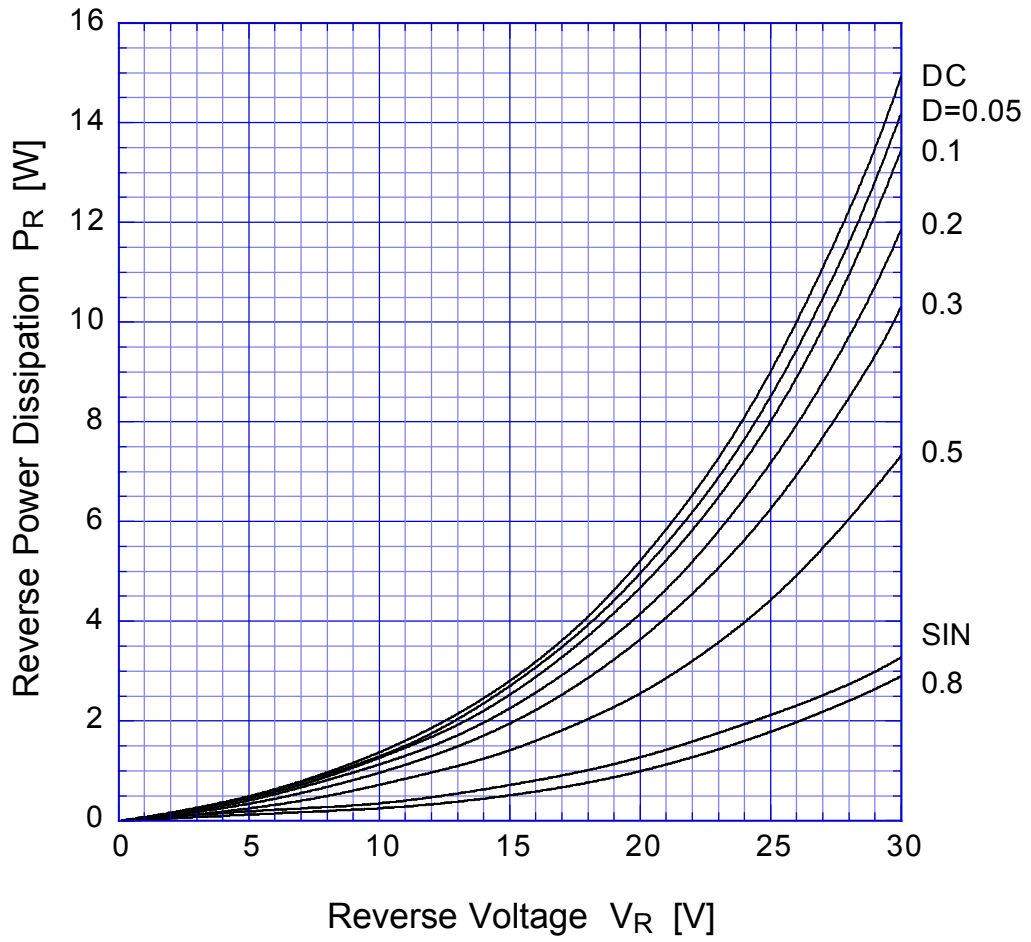
# DF30SC3ML Junction Capacitance



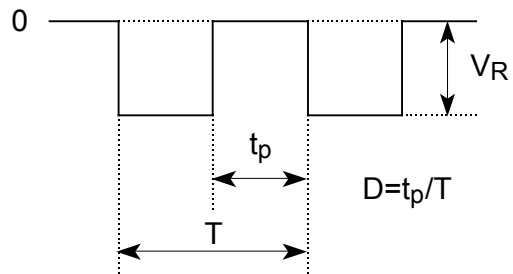
# DF30SC3ML Reverse Current



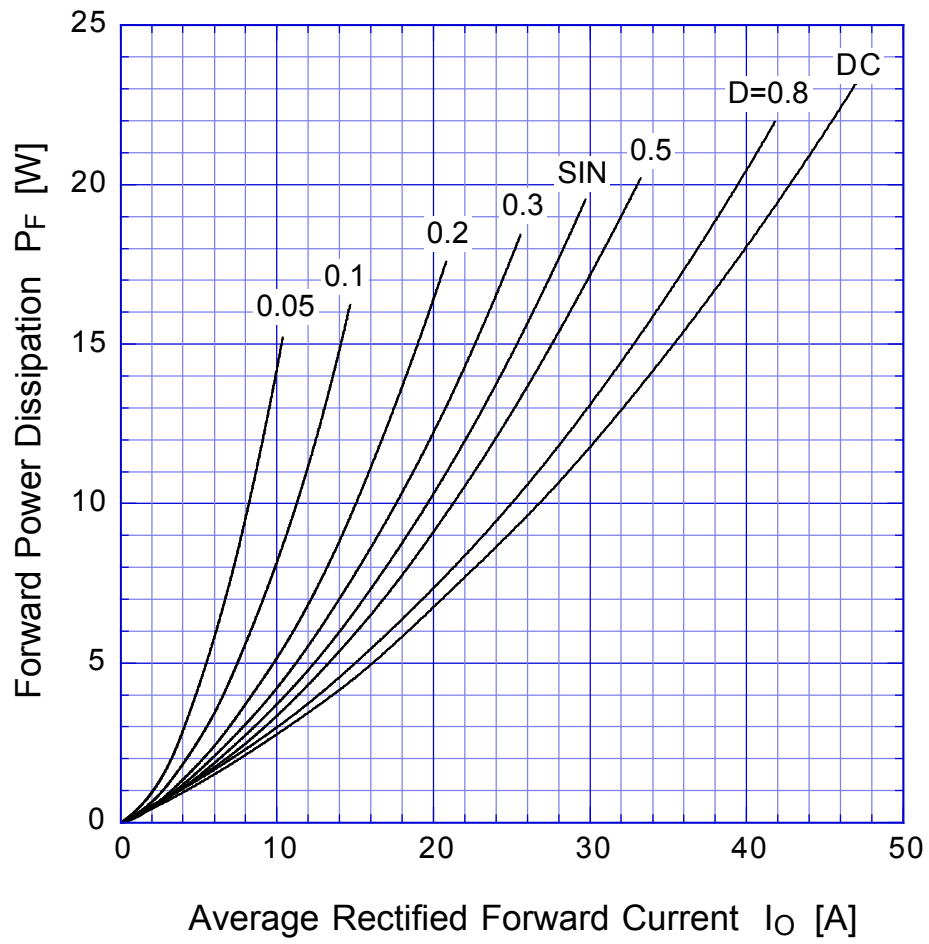
# DF30SC3ML Reverse Power Dissipation



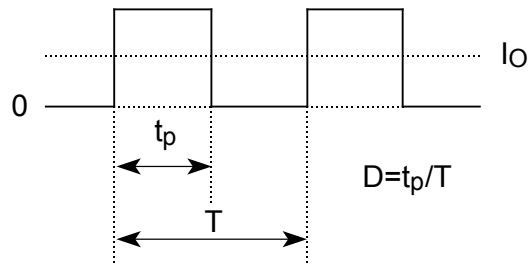
$T_j = T_{jmax}$



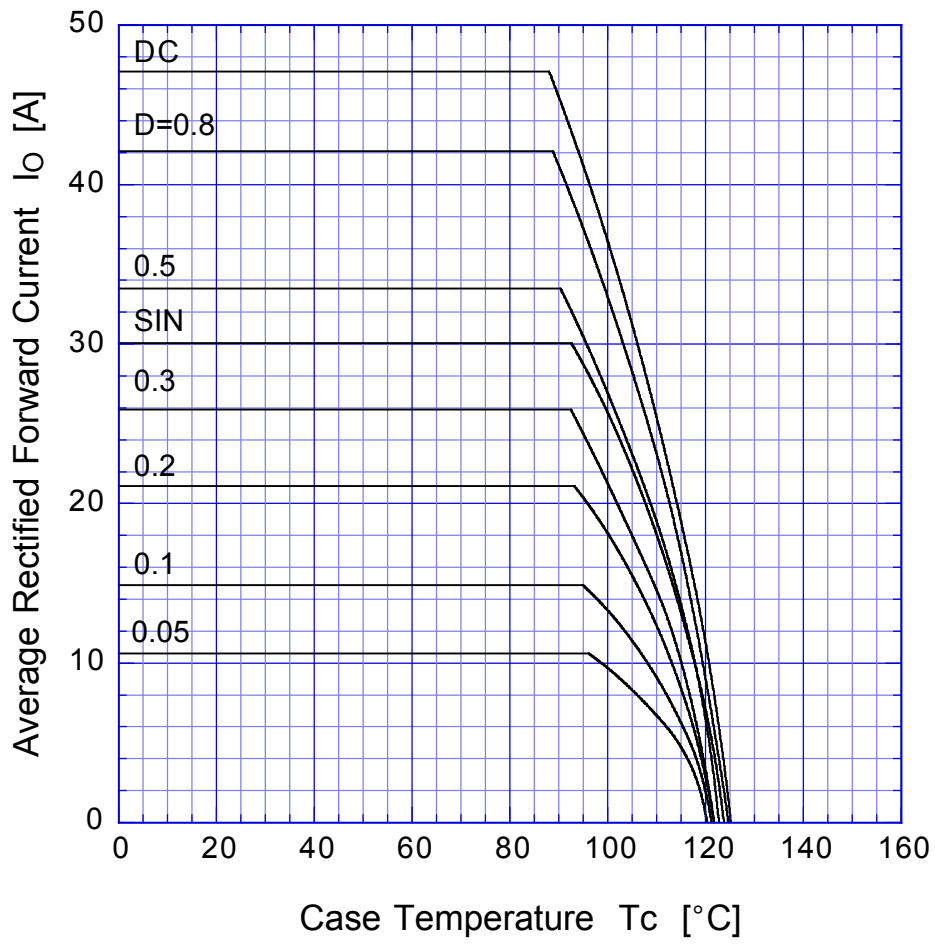
## DF30SC3ML Forward Power Dissipation



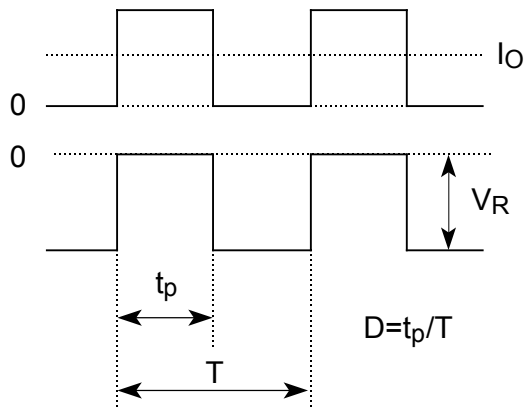
$T_j = T_{jmax}$



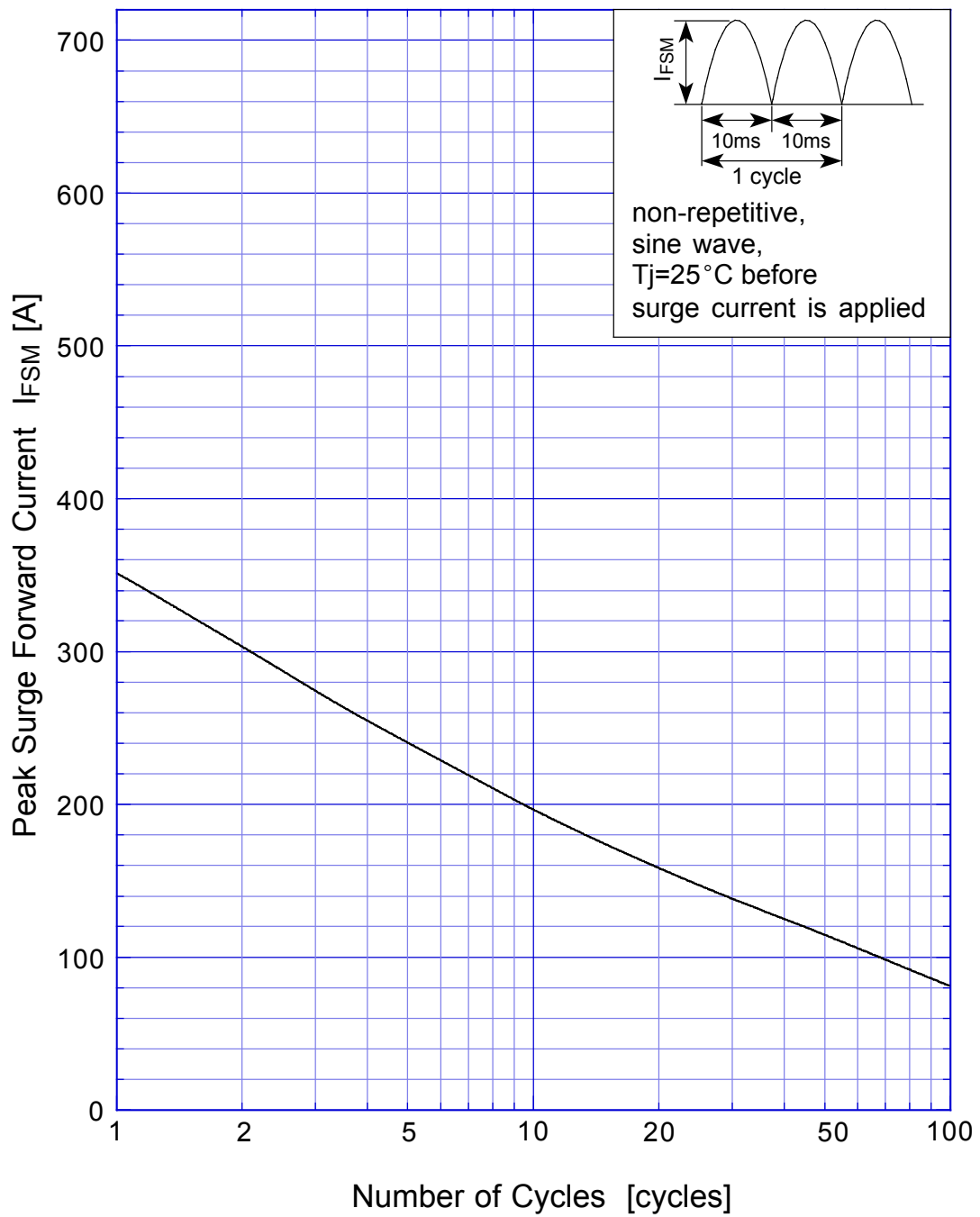
# DF30SC3ML Derating Curve



$$V_R = V_{RM}/2$$

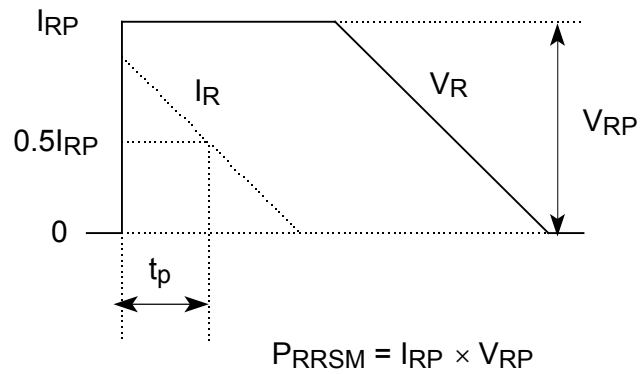
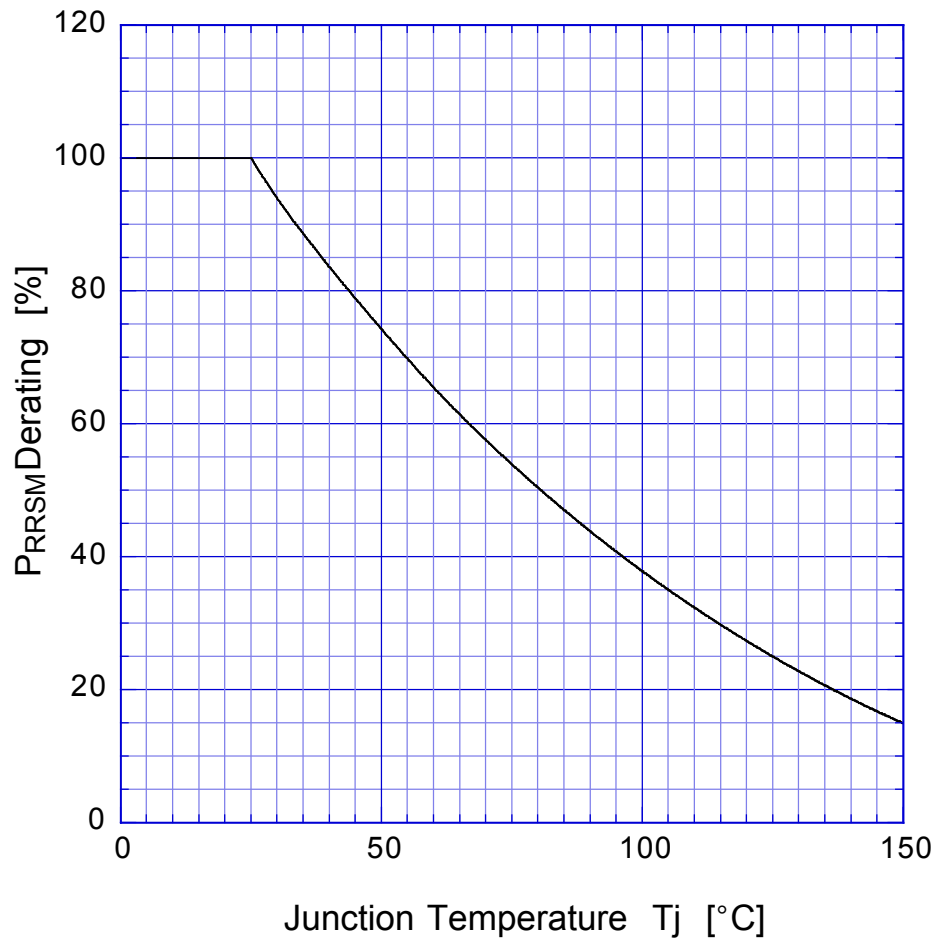


## DF30SC3ML Peak Surge Forward Capability





## SBD Repetitive Surge Reverse Power Derating Curve



# SBD

## Repetitive Surge Reverse Power Capability

