

# SHINDENGEN

## Schottky Rectifiers (SBD)

Dual

# DE5SC6M

## 60V 5A

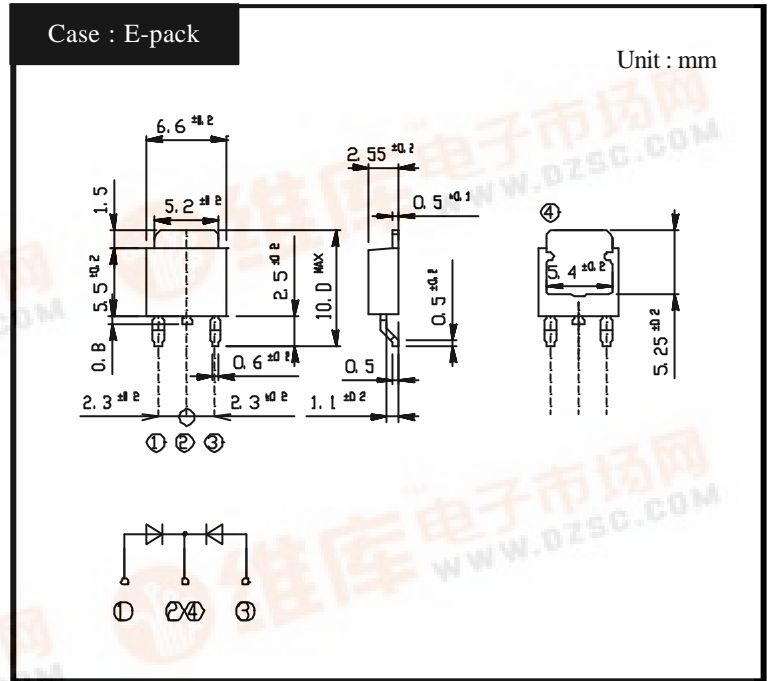
### FEATURES

- SMT
- Tj150
- PRRSM 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 Tc=25 )

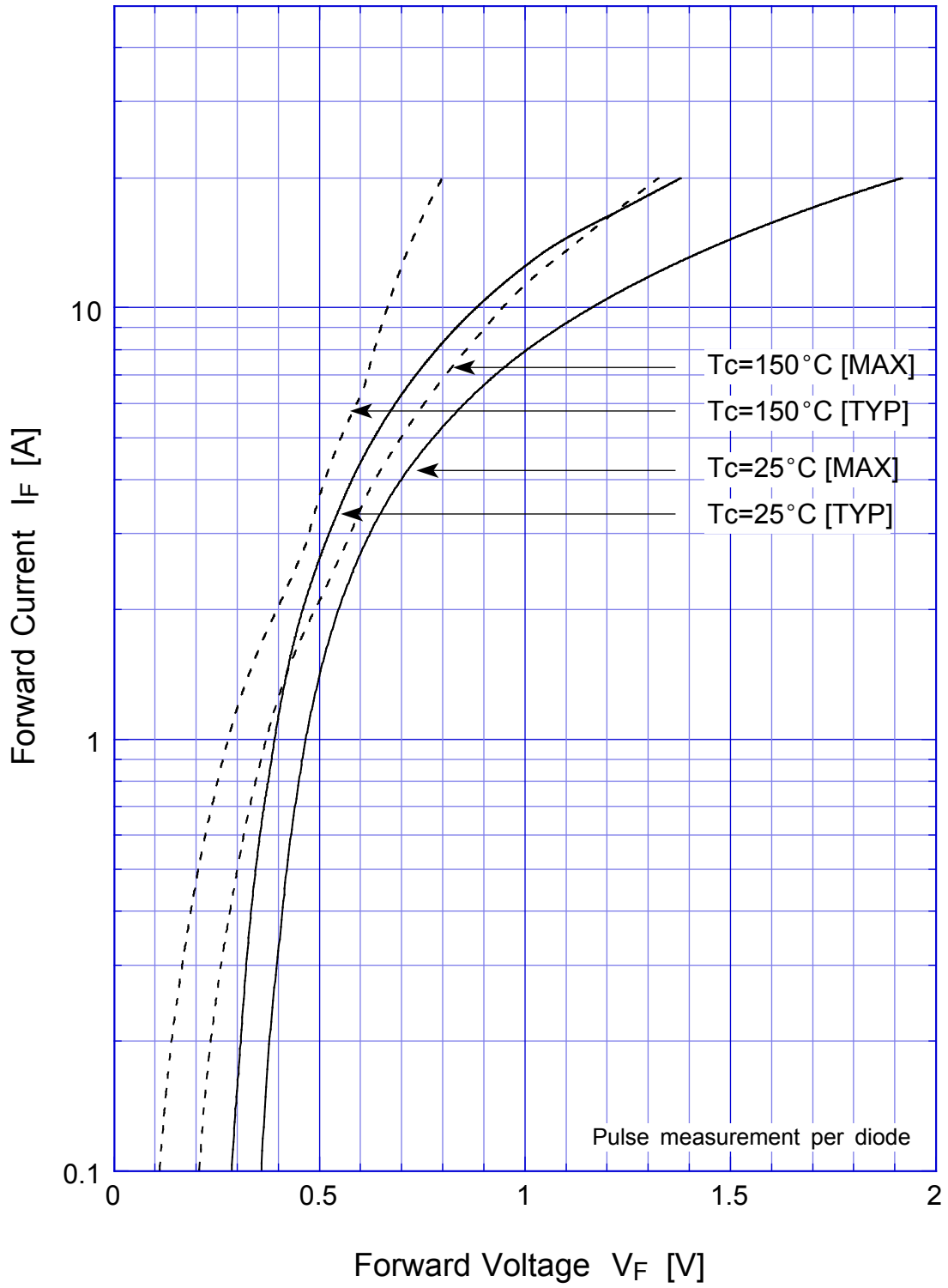
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-40 ~ 150	
Operating Junction Temperature	Tj		150	
Maximum Reverse Voltage	V <sub>RM</sub>		60	V
Repetitive Peak Surge Reverse Voltage	V <sub>RRSM</sub>	Pulse width 0.5ms, duty 1/40	65	V
Average Rectified Forward Current	I <sub>O</sub>	50Hz sine wave, R-load, Rating for each diode I <sub>O</sub> /2, Ta=42, On alumina substrate	2.5	A
Peak Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle peak value, Tj=125	5	A
Repetitive Peak Surge Reverse Power	PRRSM	Pulse width 10 μs, Rating of per diode, Tj=25	80	A
			330	W

Electrical Characteristics (If not specified Tc=25 )

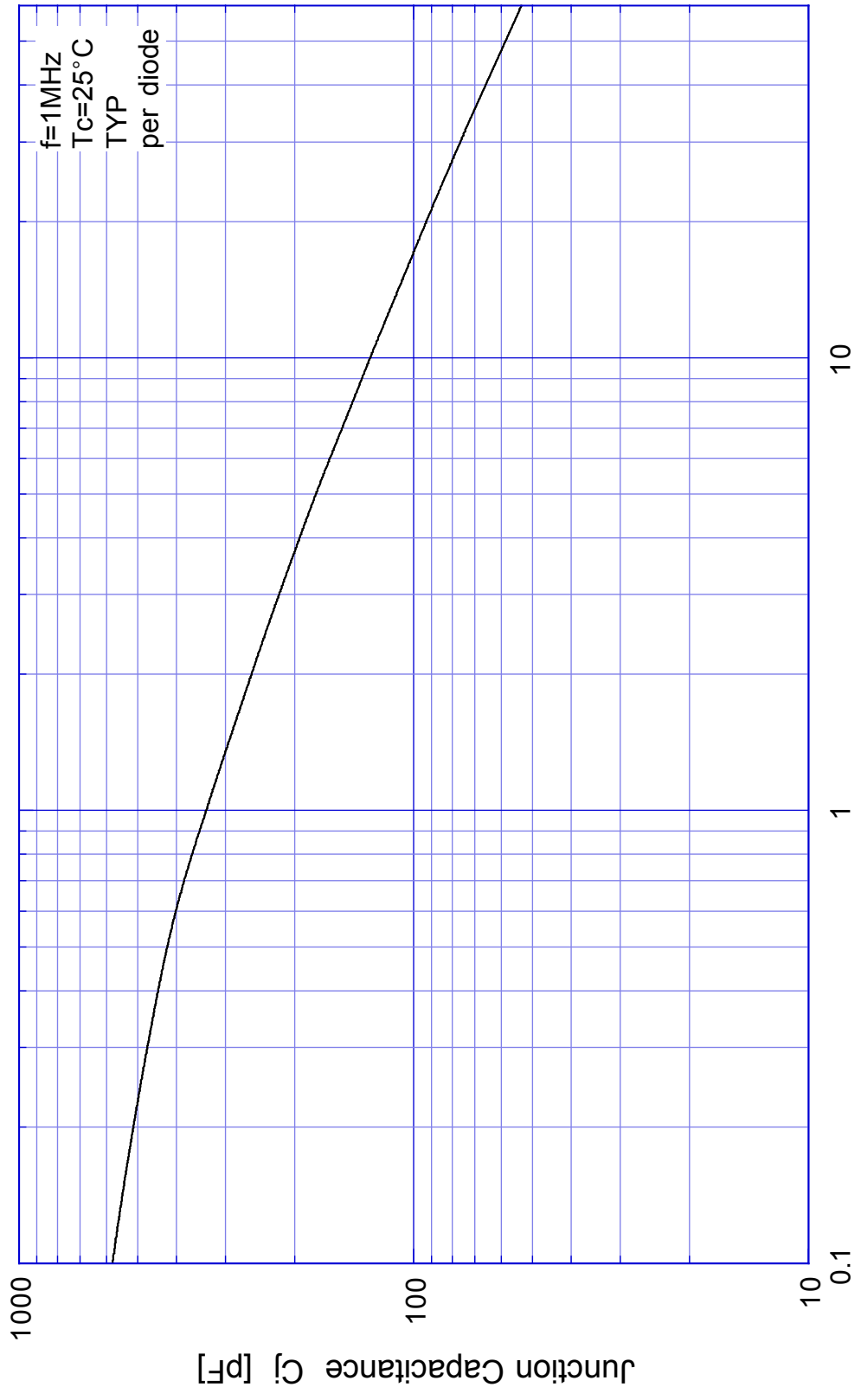
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =2.5A, Pulse measurement, Rating of per diode	Max.0.58	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =V <sub>RM</sub> , Pulse measurement, Rating of per diode	Max.2.5	mA
Junction Capacitance	C <sub>j</sub>	f=1MHz, V <sub>R</sub> =10V, Rating of per diode	Typ.130	pF
Thermal Resistance	j <sub>c</sub>	junction to case	Max.12	/W
	j <sub>a</sub>	junction to ambient	Max.55	



# DE5SC6M Forward Voltage



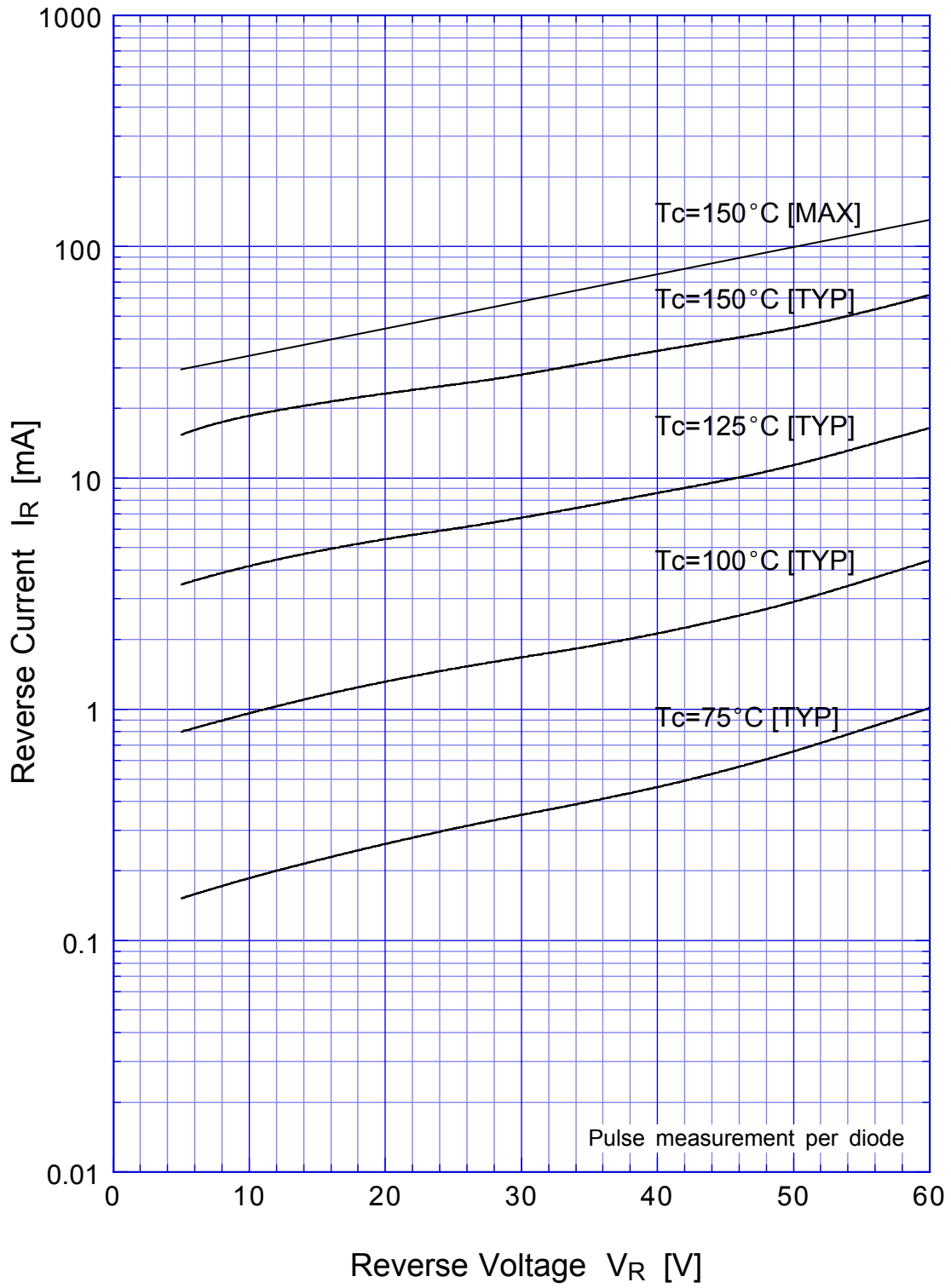
# DE5SC6M Junction Capacitance



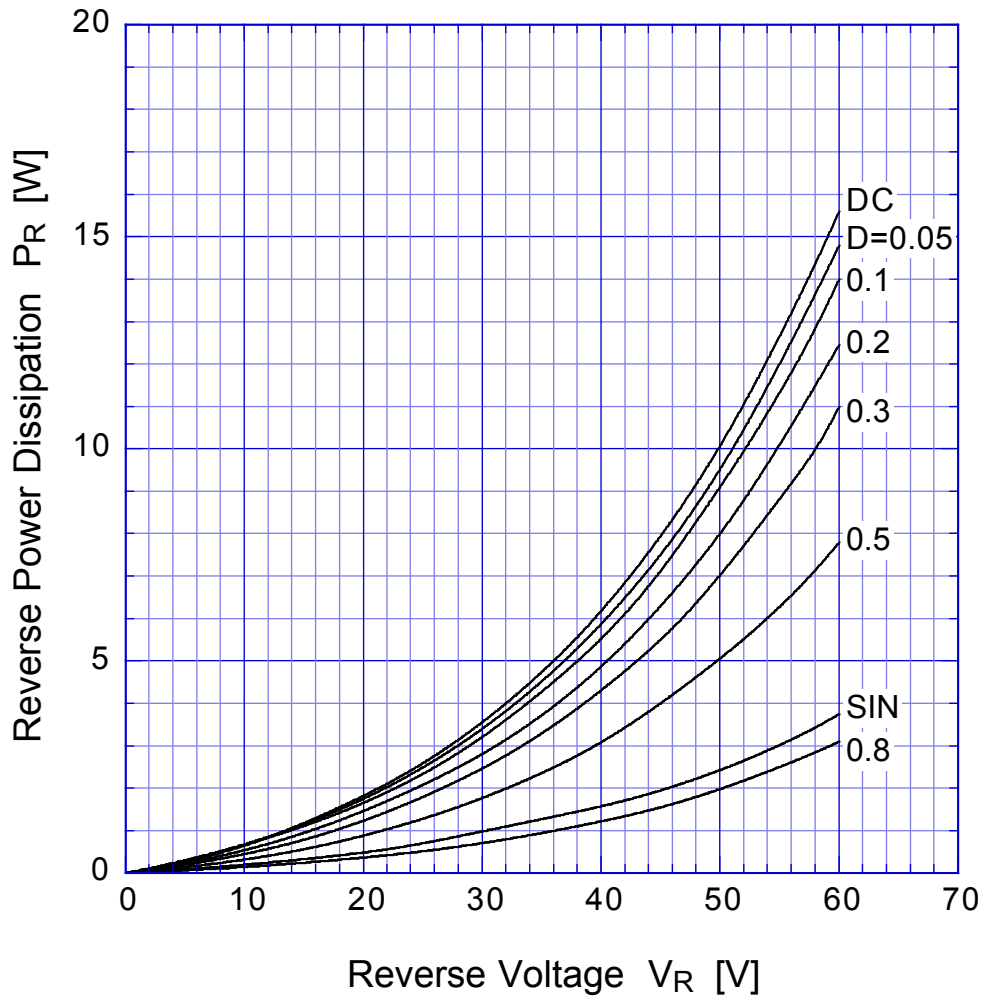
Reverse Voltage  $V_R$  [V]

f=1MHz  
Tc=25°C  
TYP  
per diode

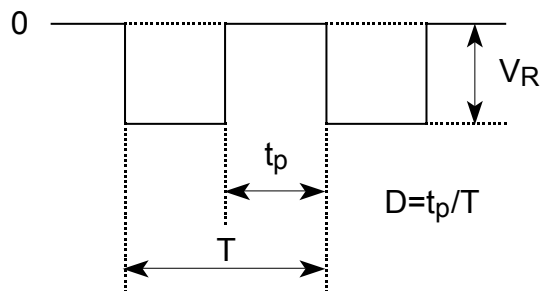
# DE5SC6M Reverse Current



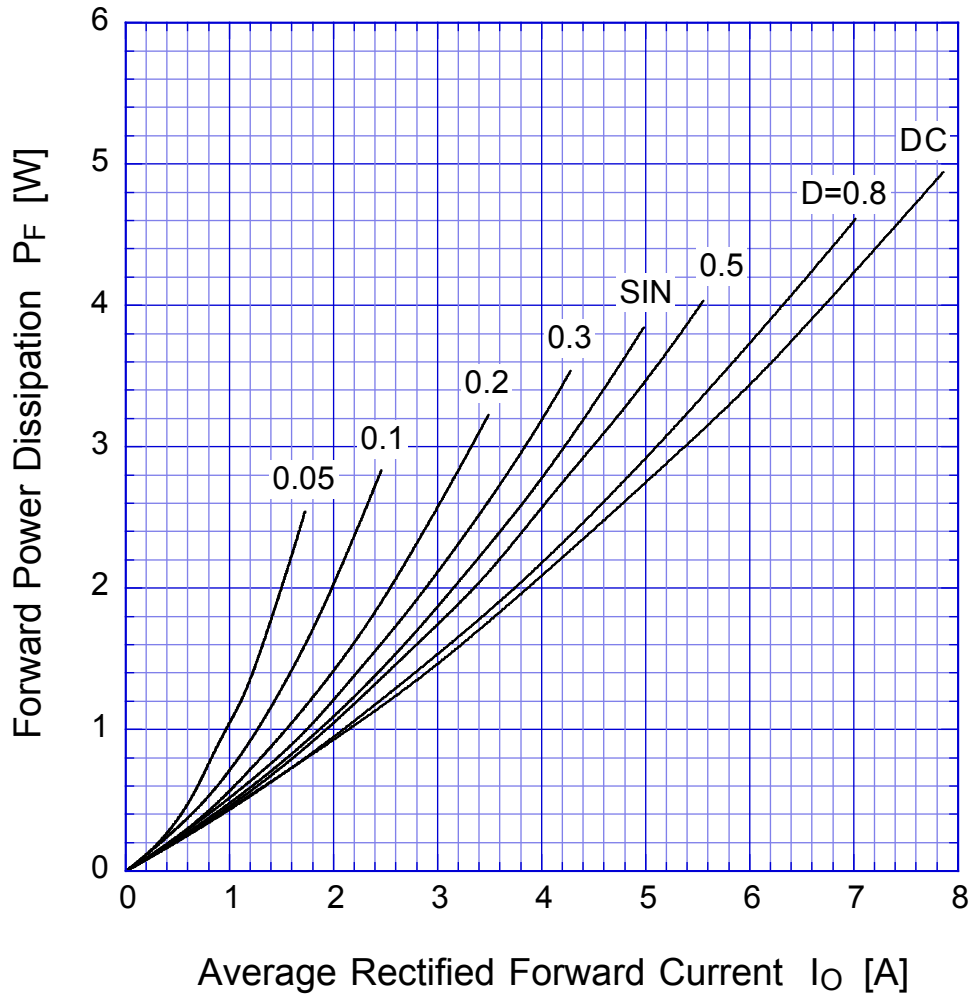
## DE5SC6M Reverse Power Dissipation



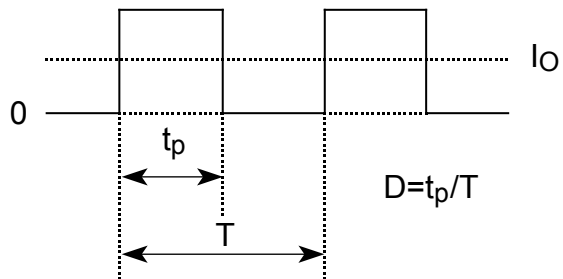
$T_j = 150^\circ\text{C}$



# DE5SC6M Forward Power Dissipation

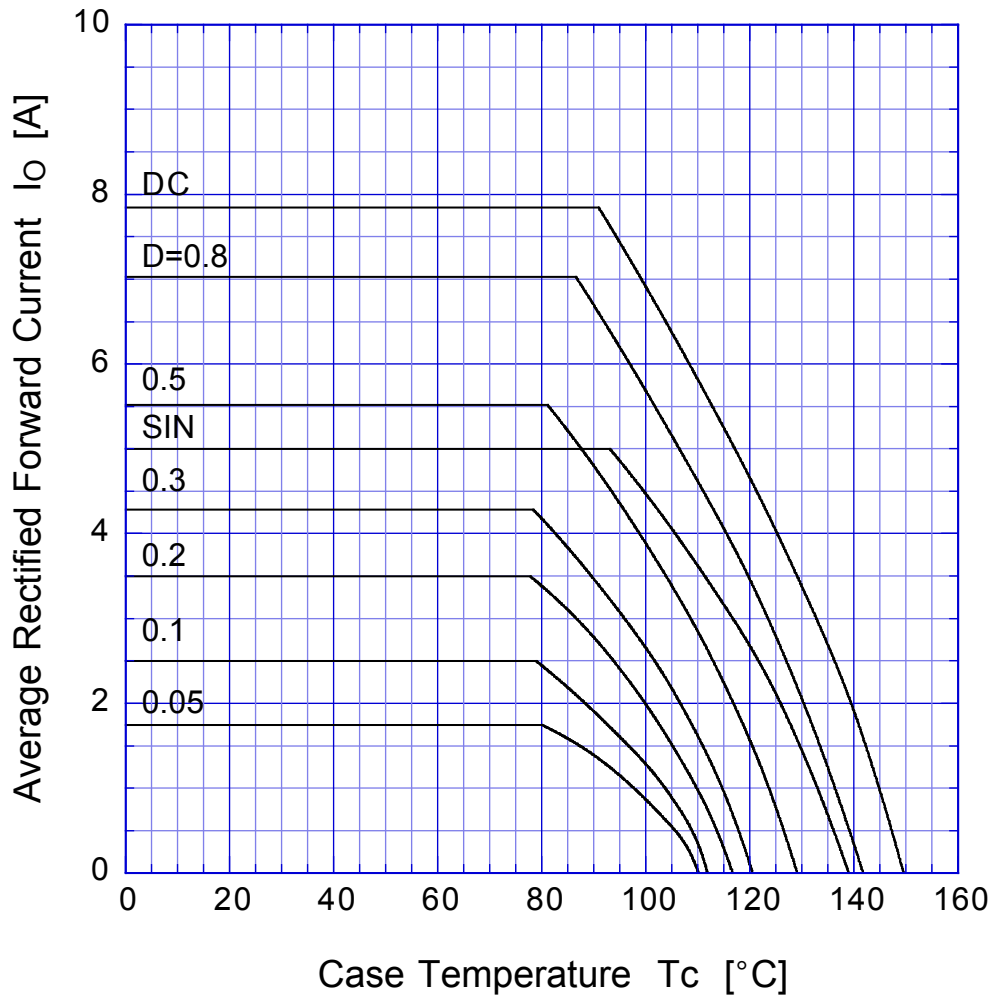


$T_j = 150^\circ\text{C}$

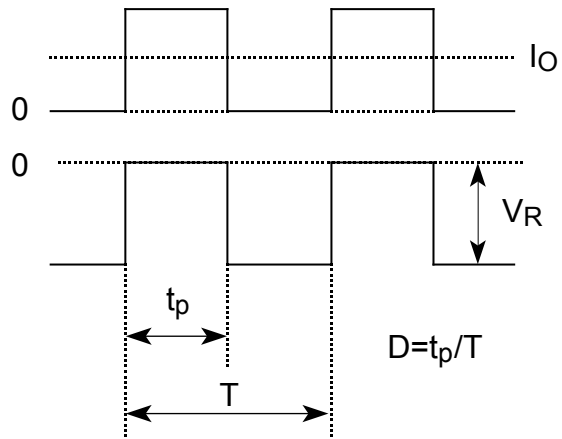


# DE5SC6M

# Derating Curve

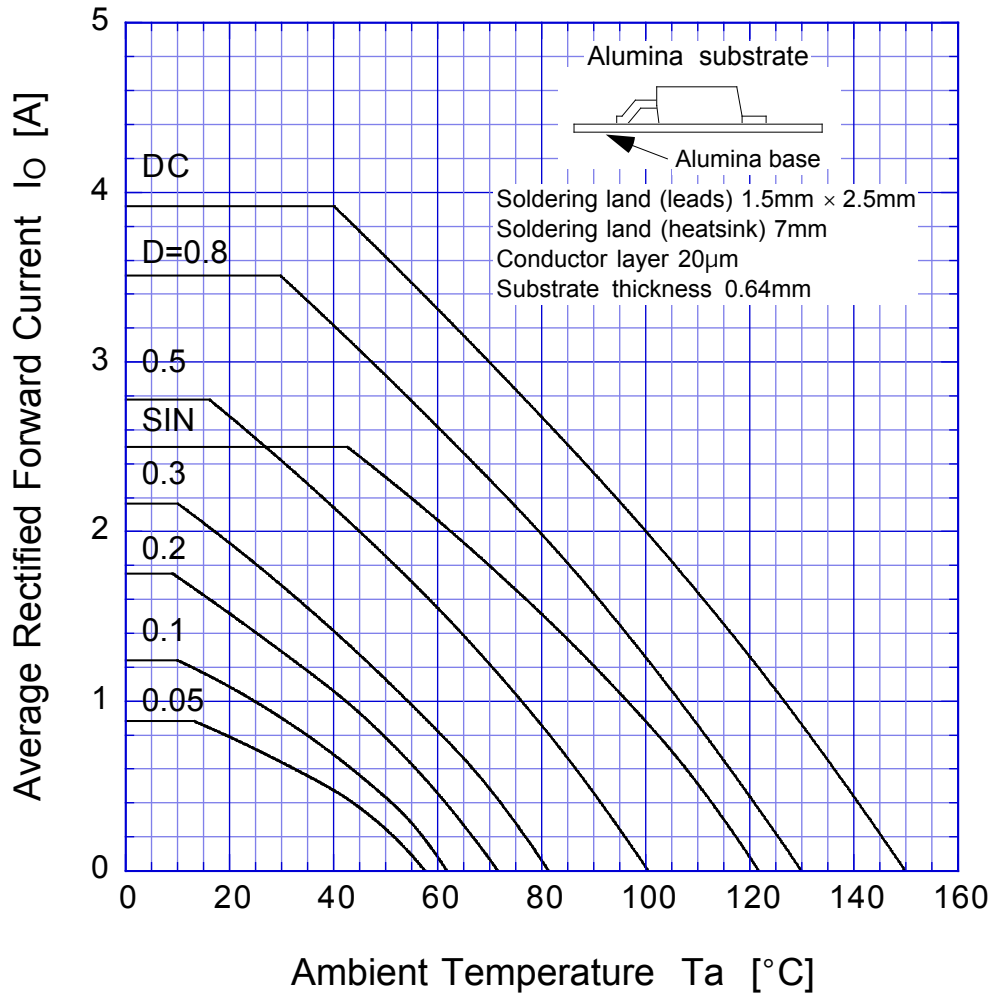


$V_R = 30V$

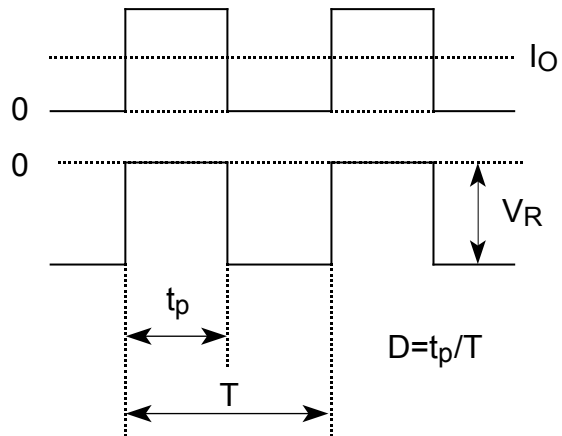


# DE5SC6M

# Derating Curve

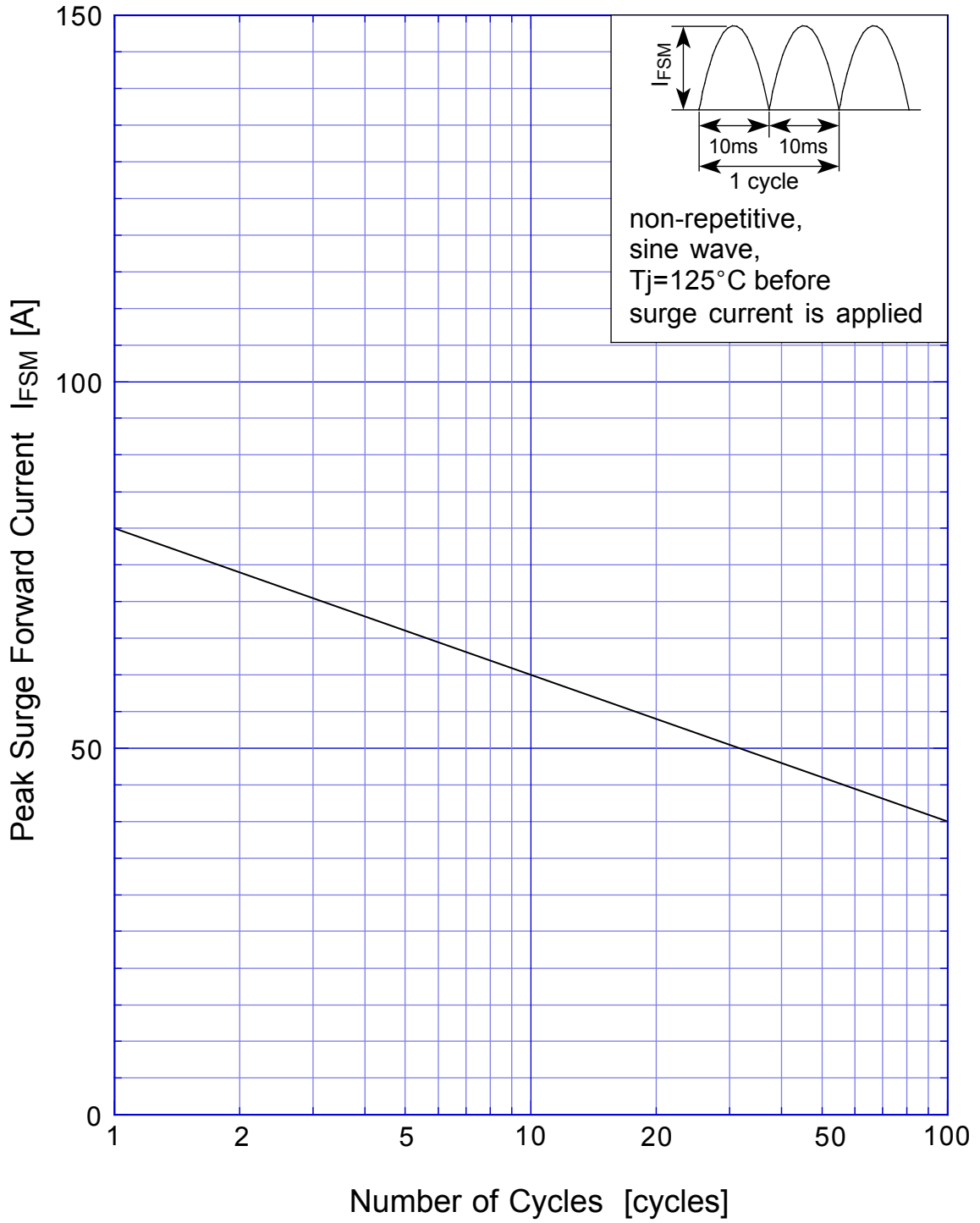


$V_R = 20V$

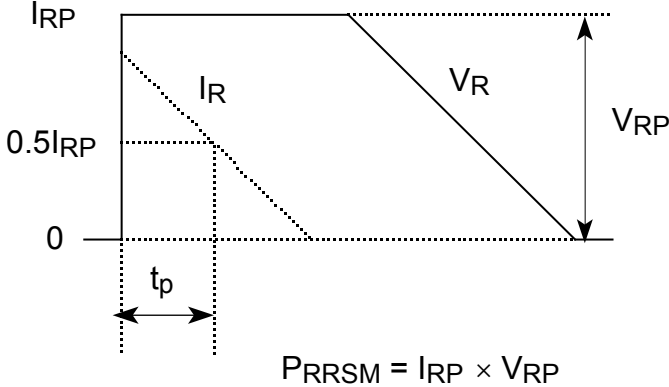
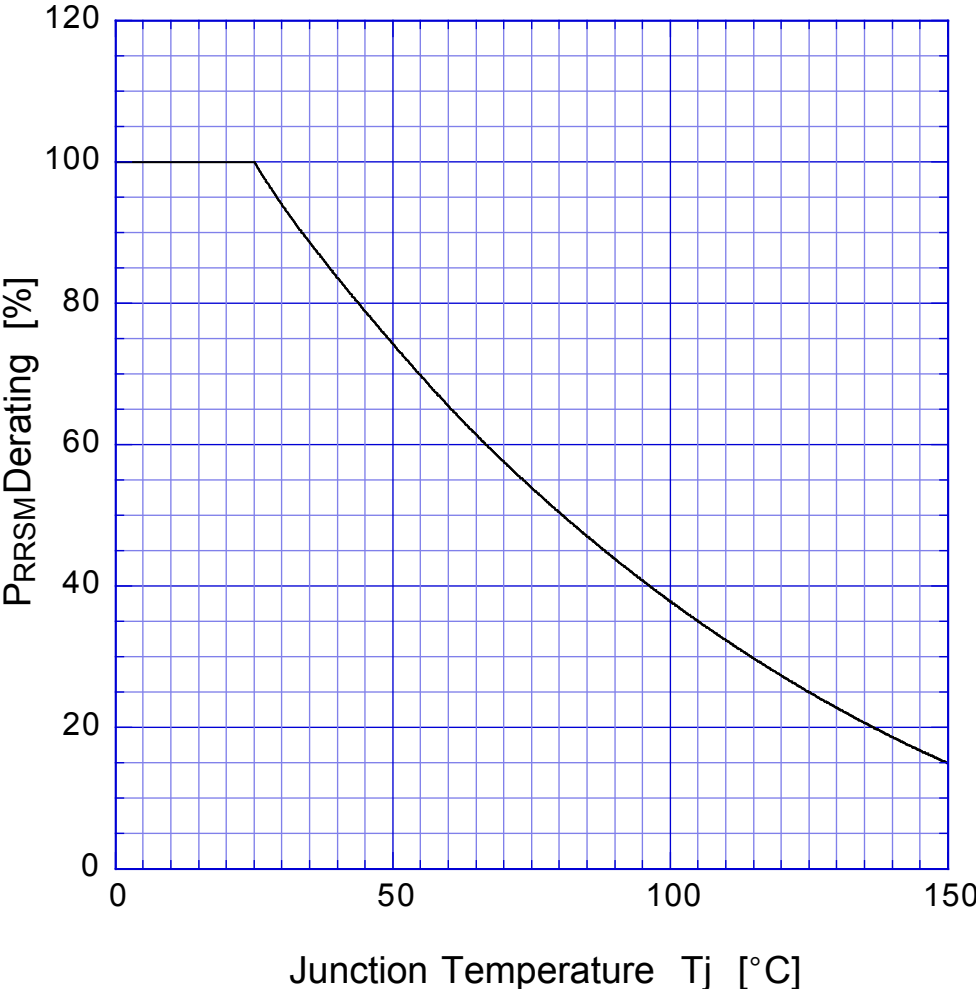




# DE5SC6M Peak Surge Forward Capability



# SBD Repetitive Surge Reverse Power Derating Curve



# SBD

## Repetitive Surge Reverse Power Capability

