

# SHINDENGEN

## Schottky Rectifiers (SBD)

Single

# DE5S4M

## 40V 5A

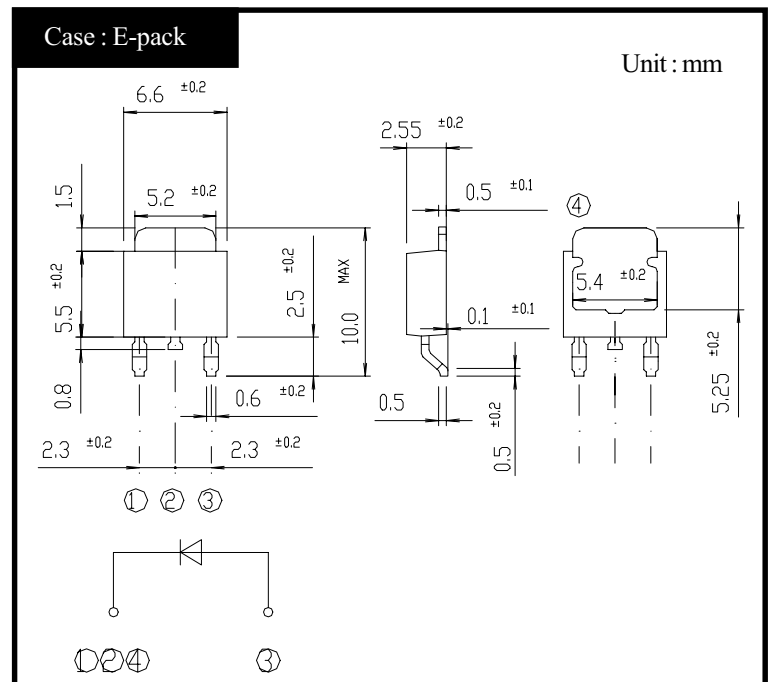
### FEATURES

- SMT
- Tj150°C
- P<sub>RRSM</sub> 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<sub>c</sub>=25°C)

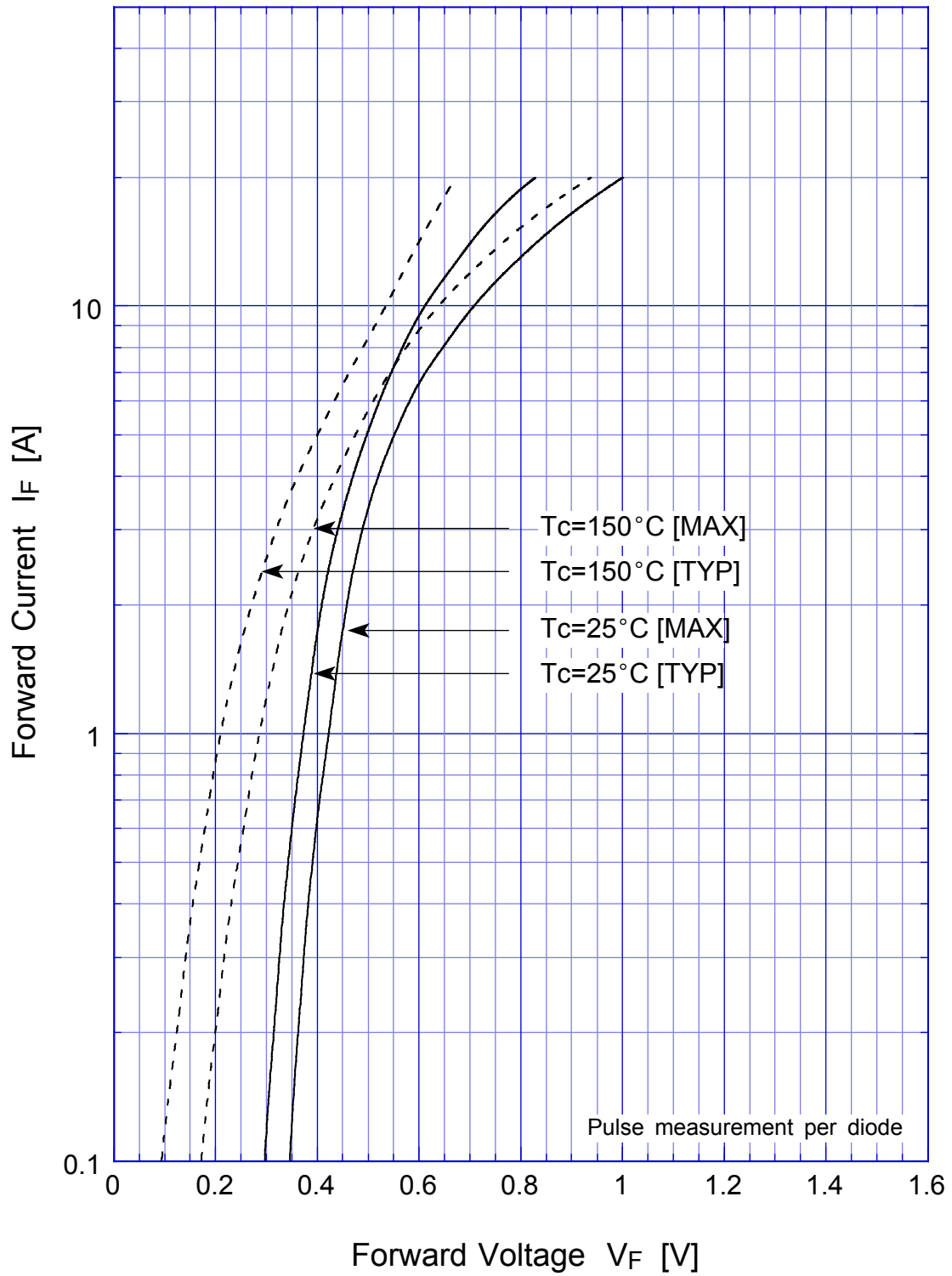
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T <sub>stg</sub>		-40~150	°C
Operating Junction Temperature	T <sub>j</sub>		150	°C
Maximum Reverse Voltage	V <sub>RM</sub>		40	V
Repetitive Peak Surge Reverse Voltage	V <sub>RRSM</sub>	Pulse width 0.5ms, duty 1/40	45	V
Average Rectified Forward Current	I <sub>O</sub>	50Hz sine wave, R-load With heatsink T <sub>c</sub> =101°C	5.0	A
		50Hz sine wave, R-load Without heatsink T <sub>a</sub> =25°C	3.1	
Peak Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle peak value, T <sub>j</sub> ≦125°C	80	A
Repetitive Peak Surge Reverse Power	P <sub>RRSM</sub>	Pulse width 10 μs, T <sub>j</sub> =25°C	330	W

#### ● Electrical Characteristics (If not specified T<sub>c</sub>=25°C)

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =5A, Pulse measurement	Max.0.55	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =V <sub>RM</sub> , Pulse measurement	Max.3.5	mA
Junction Capacitance	C <sub>j</sub>	f=1MHz, V <sub>R</sub> =10V	Typ.180	pF
Thermal Resistance	θ <sub>jc</sub>	junction to case	Max.12	°C/W
	θ <sub>ja</sub>	junction to ambient	Max.55	

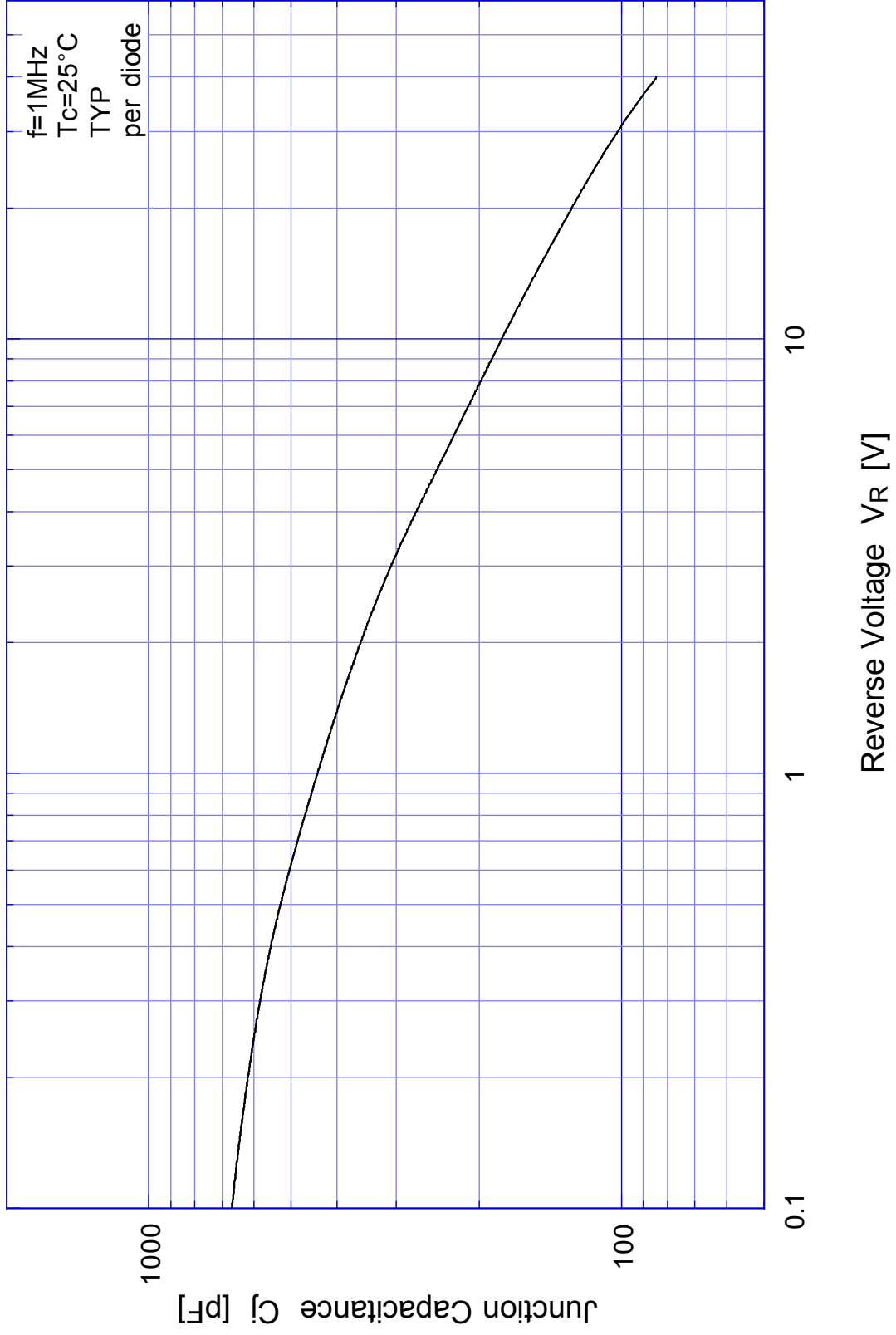
# DE5S4M

## Forward Voltage



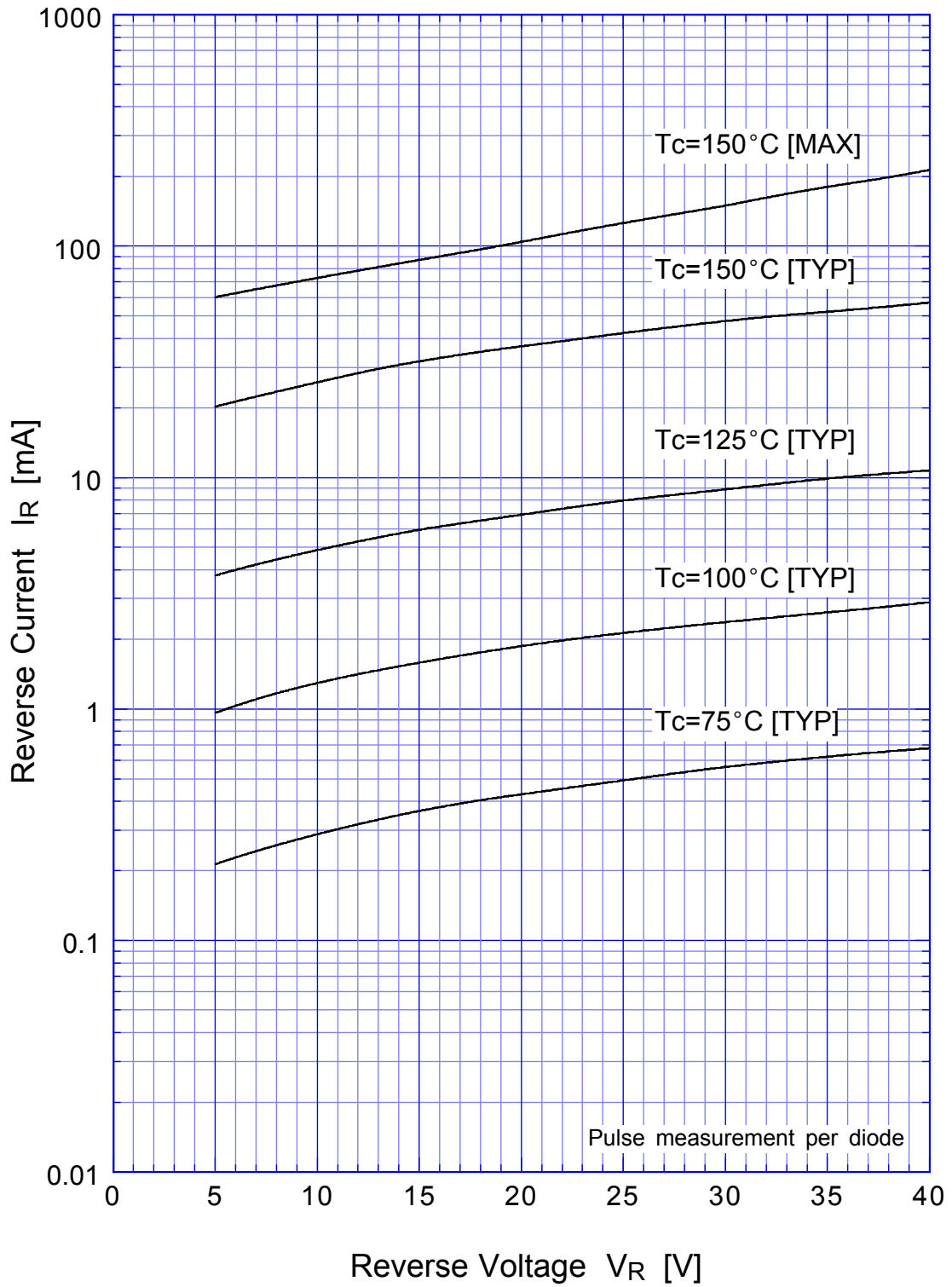
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## Junction Capacitance

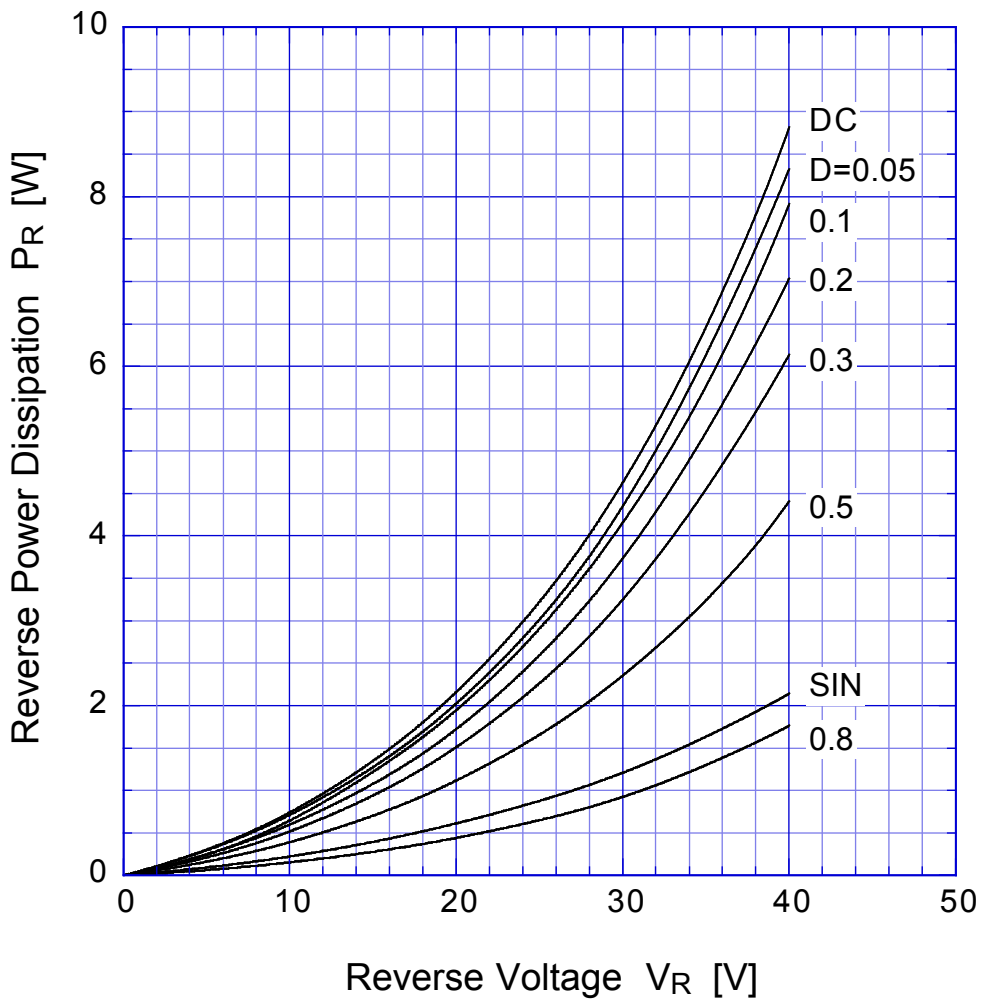


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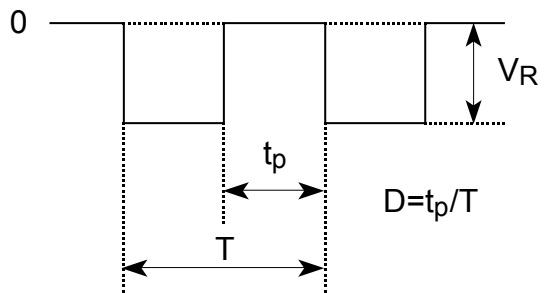
## Reverse Current



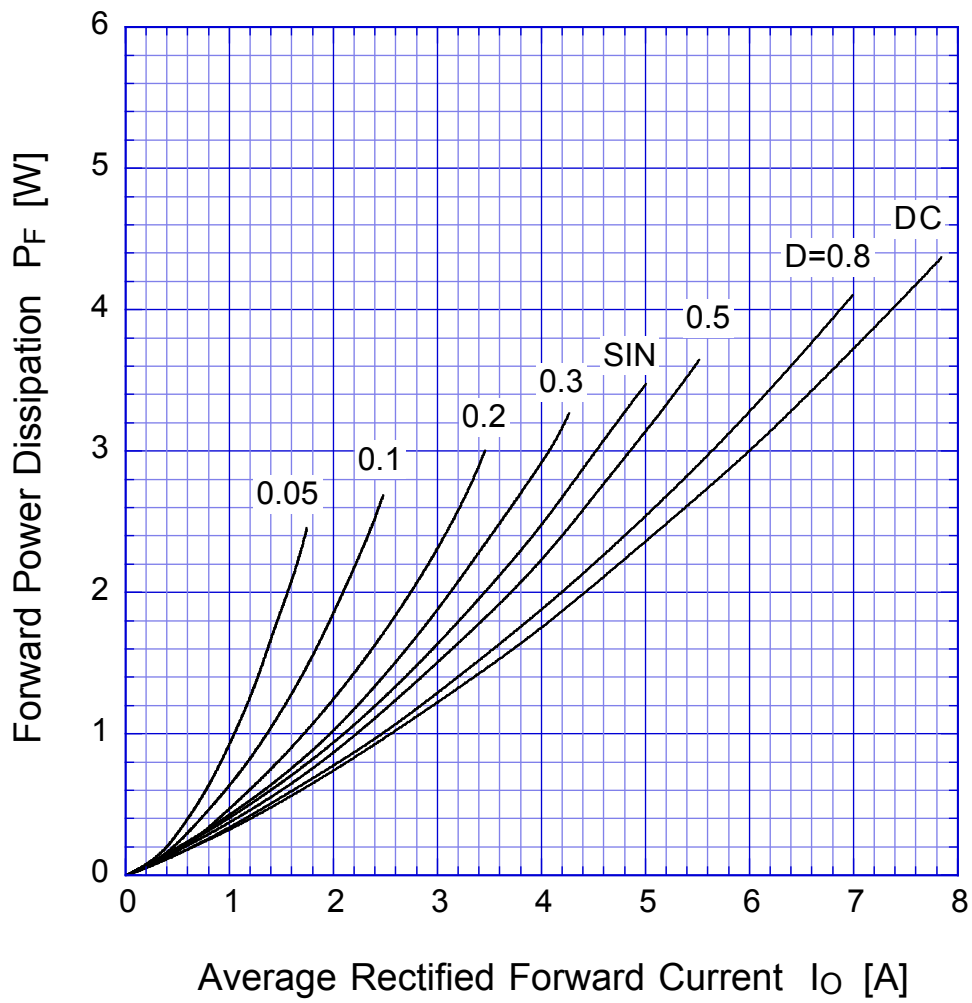
# DE5S4M Reverse Power Dissipation



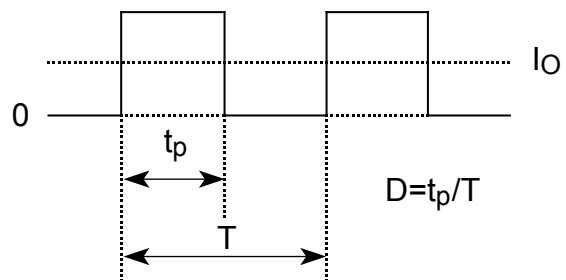
$T_j = 150^\circ\text{C}$



# DE5S4M Forward Power Dissipation

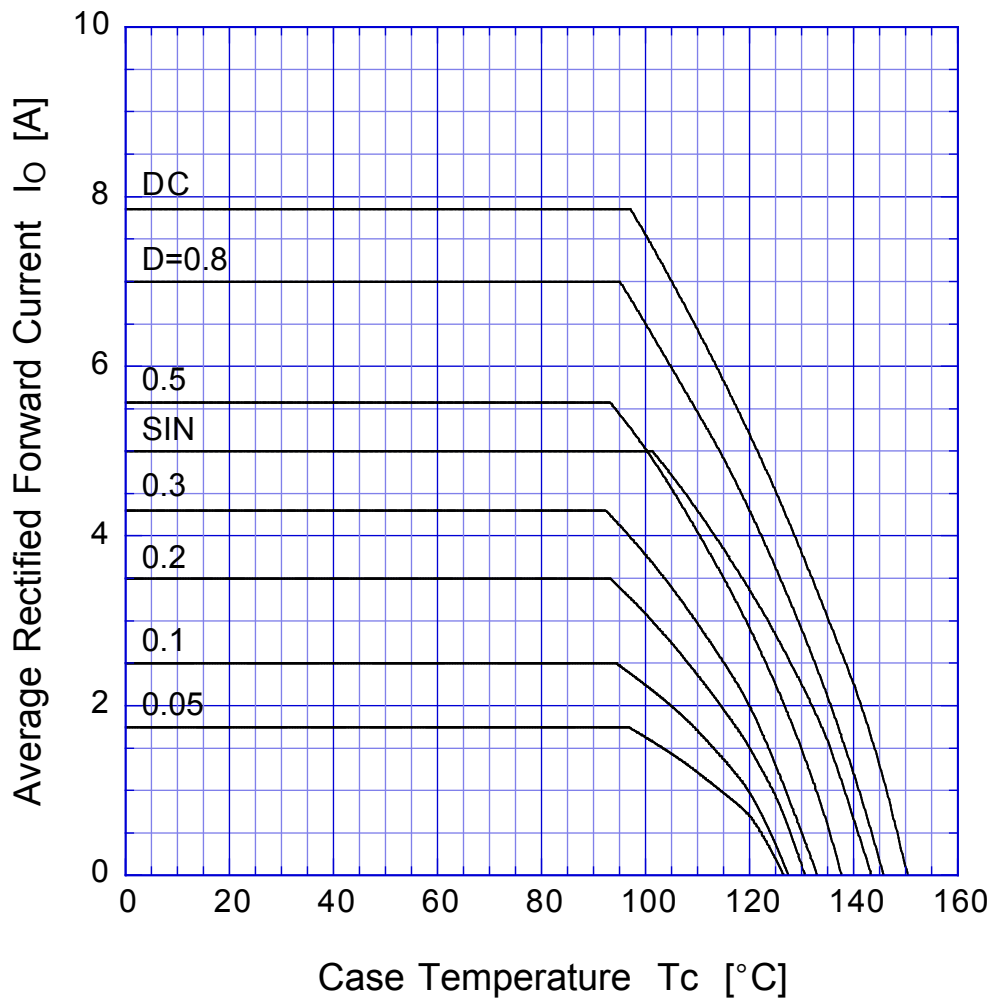


$T_j = 150^\circ\text{C}$



# DE5S4M

# Derating Curve

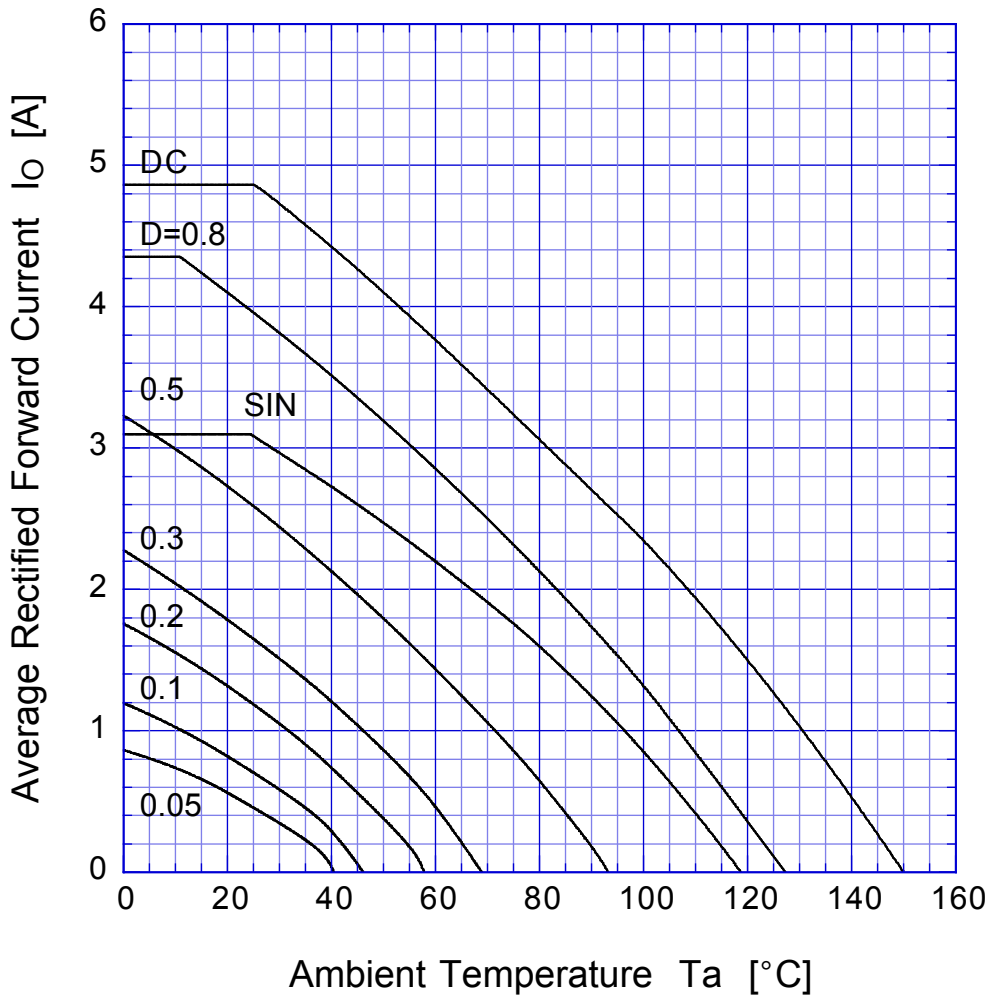


$V_R = 20V$

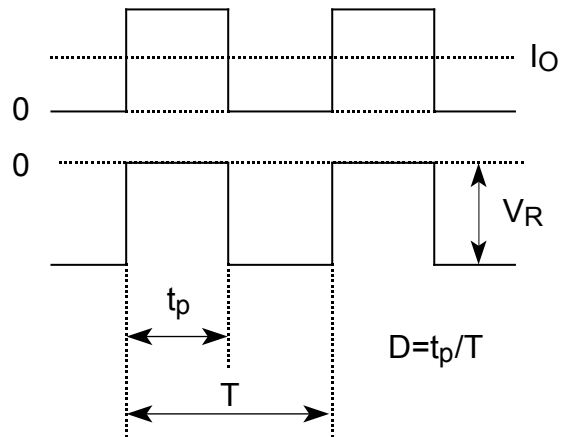


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# Derating Curve



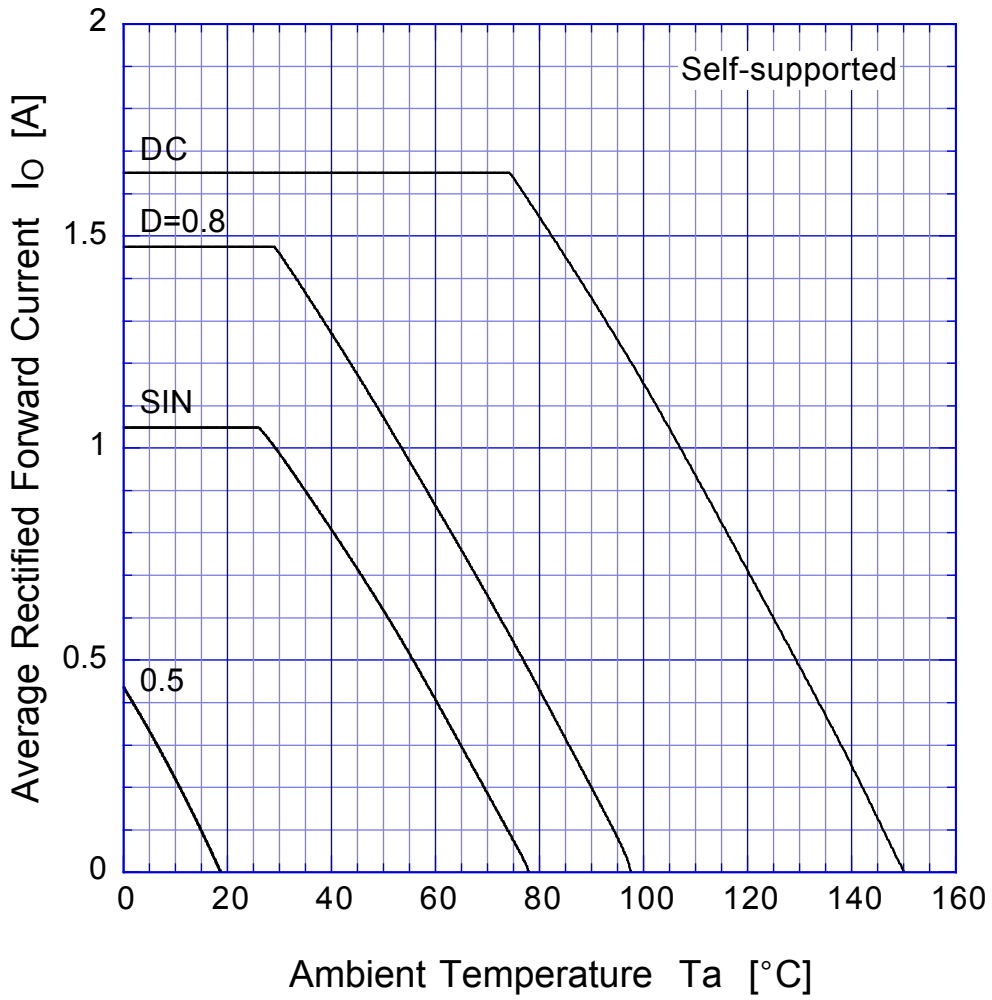
$V_R = 20V$



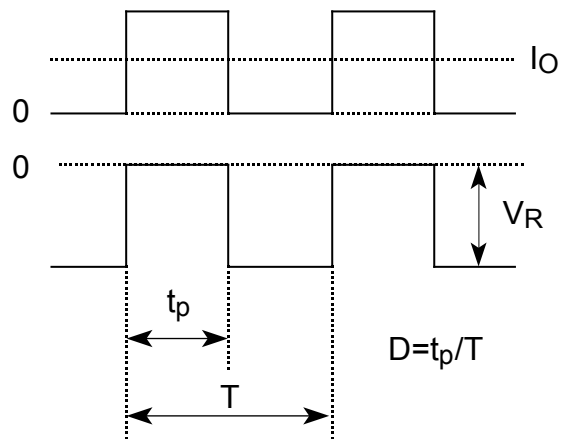


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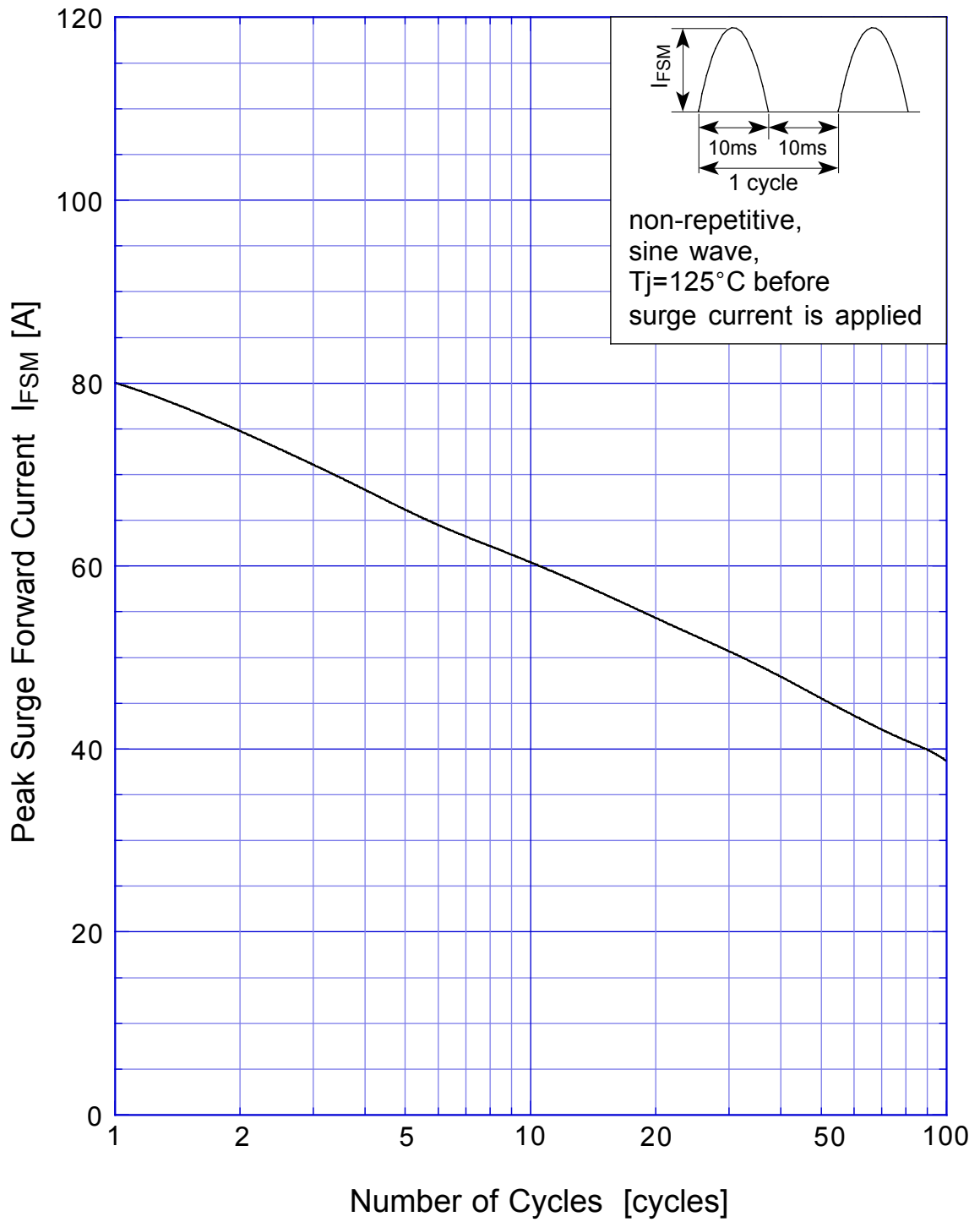


$V_R = 20V$

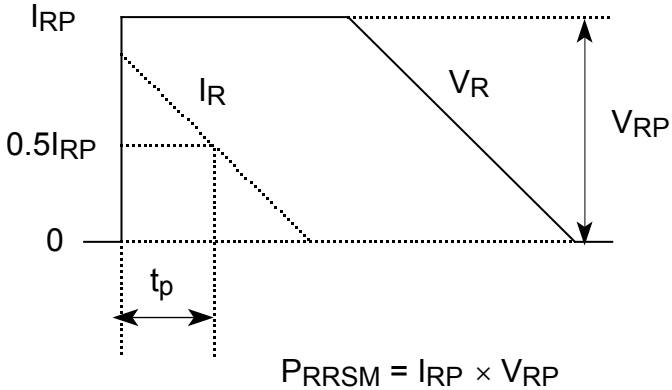
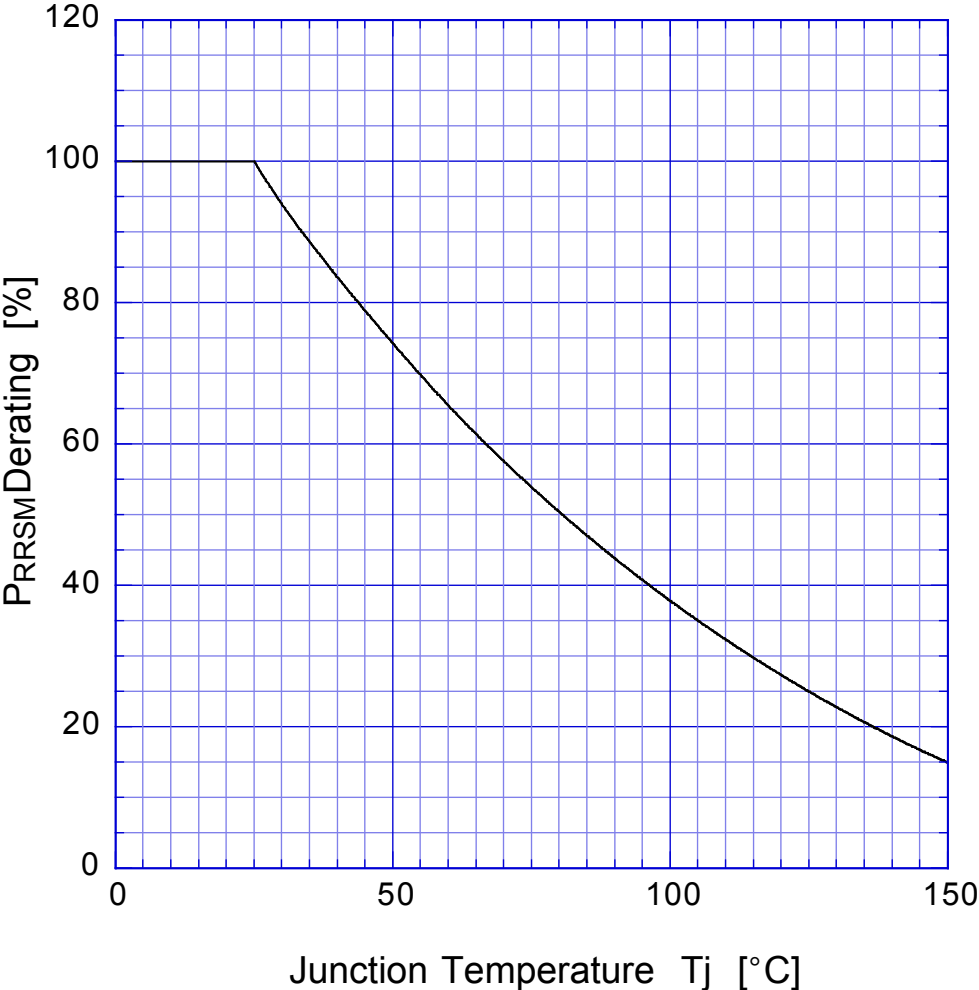


# DE5S4M

## Peak Surge Forward Capability



# SBD Repetitive Surge Reverse Power Derating Curve



# SBD

## Repetitive Surge Reverse Power Capability

