

# SHINDENGEN

## Schottky Rectifiers (SBD)

Dual

# S1ZAS4

## 40V 1.2A

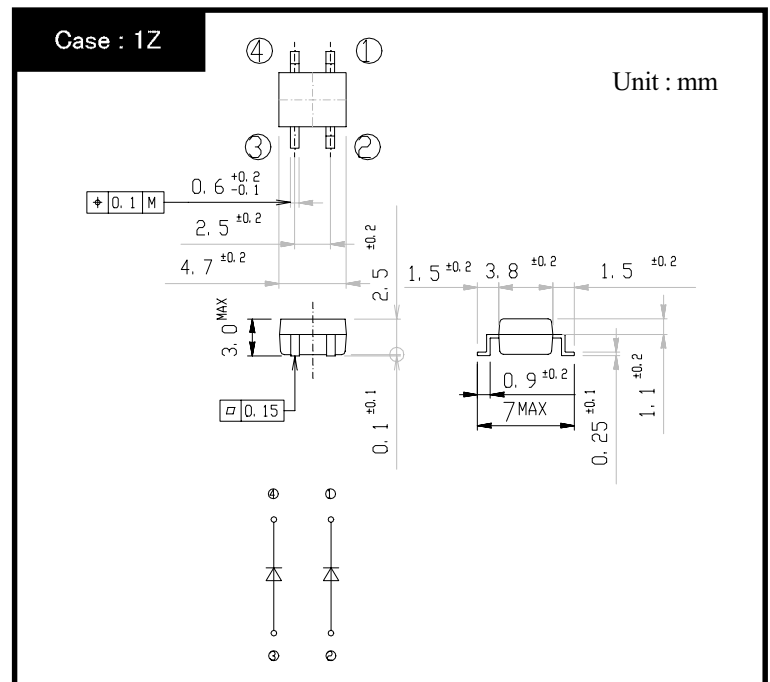
### FEATURES

- SMT
- Tj150°C
- P<sub>RRSM</sub> avalanche guaranteed
- Array

### APPLICATION

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

### OUTLINE DIMENSIONS



### RATINGS

#### ● Absolute Maximum Ratings (If not specified Tl=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, On alumina substrate, 1 element operation, T <sub>a</sub> =49°C	1.2	A
		50Hz sine wave, R-load, On alumina substrate, 2 element operation, T <sub>a</sub> =45°C	0.9*	
		50Hz sine wave, R-load, On glass-epoxy substrate, 1 element operation, T <sub>a</sub> =47°C	1.0	
		50Hz sine wave, R-load, On glass-epoxy substrate, 2 element operation, T <sub>a</sub> =43°C	0.72*	
Peak Surge Forward Current	I <sub>FSM</sub>	50Hz sine wave, Non-repetitive 1 cycle peak value, T <sub>j</sub> =125°C	40	A
Repetitive Peak Surge Reverse Power	P <sub>RRSM</sub>	Pulse width 10 μs, Rating of per diode, T <sub>j</sub> =25°C	160	W

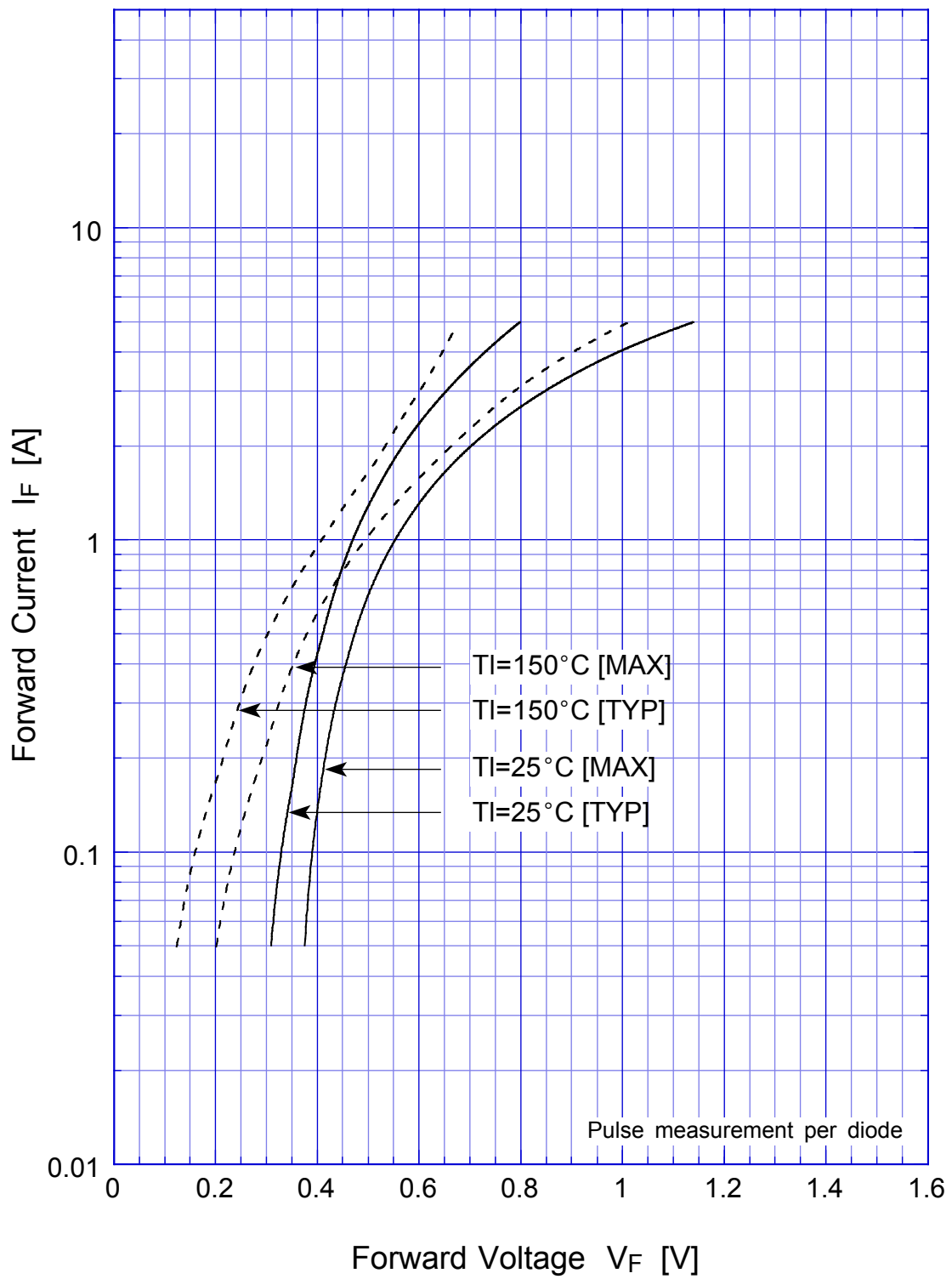
#### ● Electrical Characteristics (If not specified Tl=25°C)

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =1A, Pulse measurement, Rating of per diode	Max.0.55	V
Reverse Current	I <sub>R</sub>	V <sub>R</sub> =V <sub>RM</sub> , Pulse measurement, Rating of per diode	Max.1	mA
Junction Capacitance	C <sub>j</sub>	f=1MHz, V <sub>R</sub> =10V, Rating of per diode	Typ.65	pF
Thermal Resistance	θ <sub>jl</sub>	junction to lead	Max.25	°C/W
		θ <sub>ja</sub>	junction to ambient, On alumina substrate, 1 element operation	
	junction to ambient, On alumina substrate, 2 element operation		Max.140*	
	junction to ambient, On glass-epoxy substrate, 1 element operation		Max.120	
	junction to ambient, On glass-epoxy substrate, 2 element operation		Max.186*	

\* : Rating of per diode

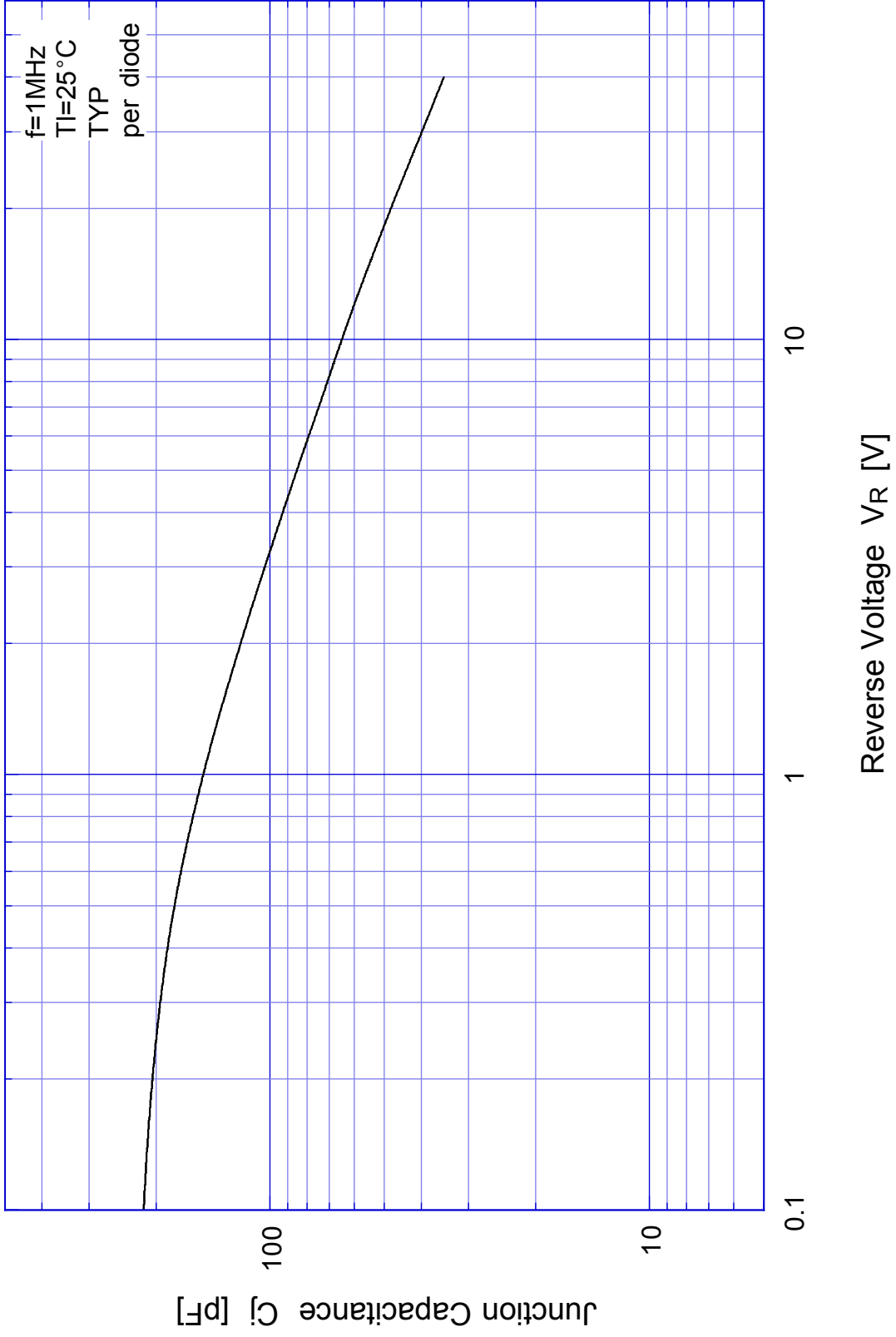
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## Forward Voltage



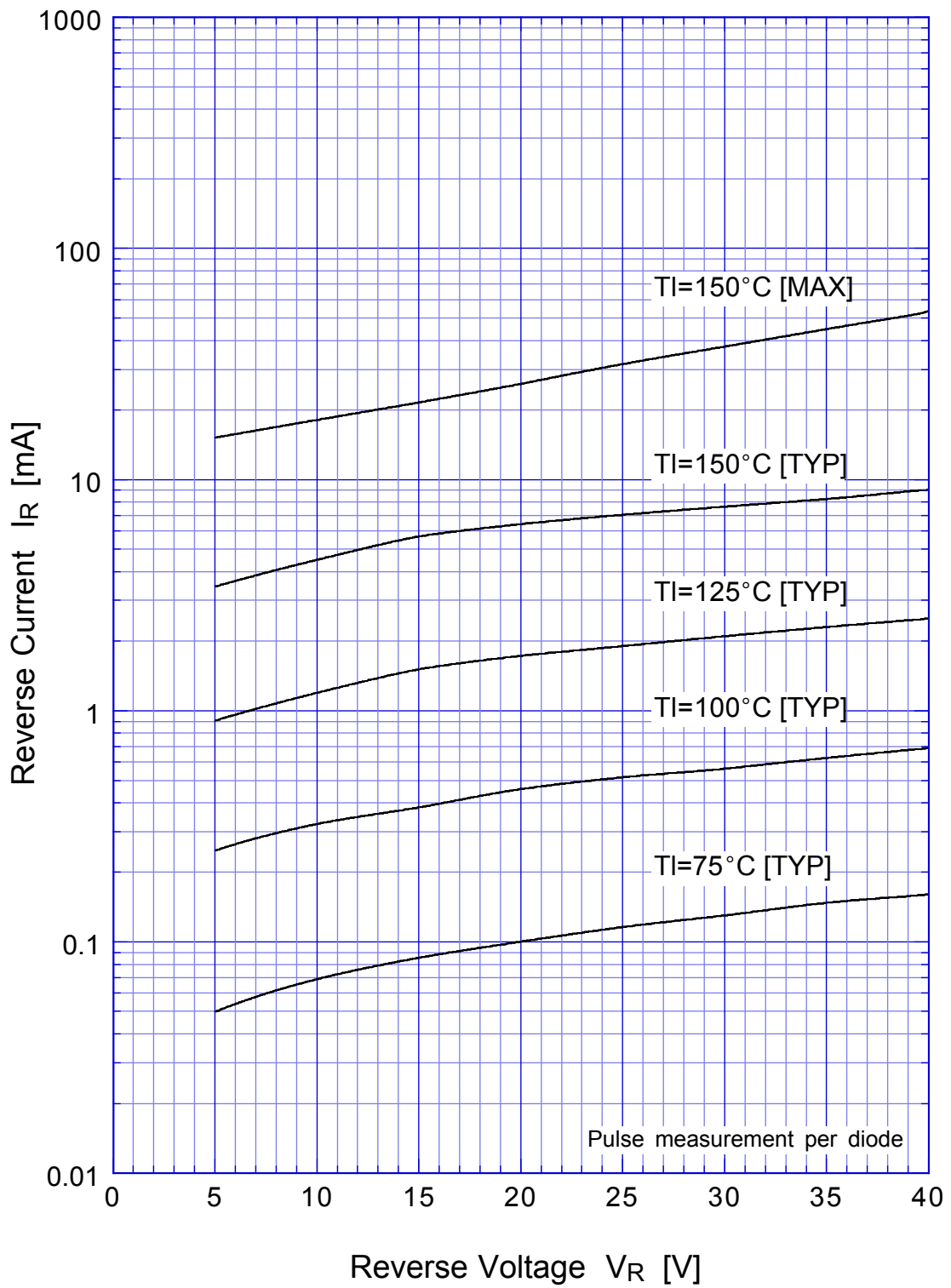
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## Junction Capacitance



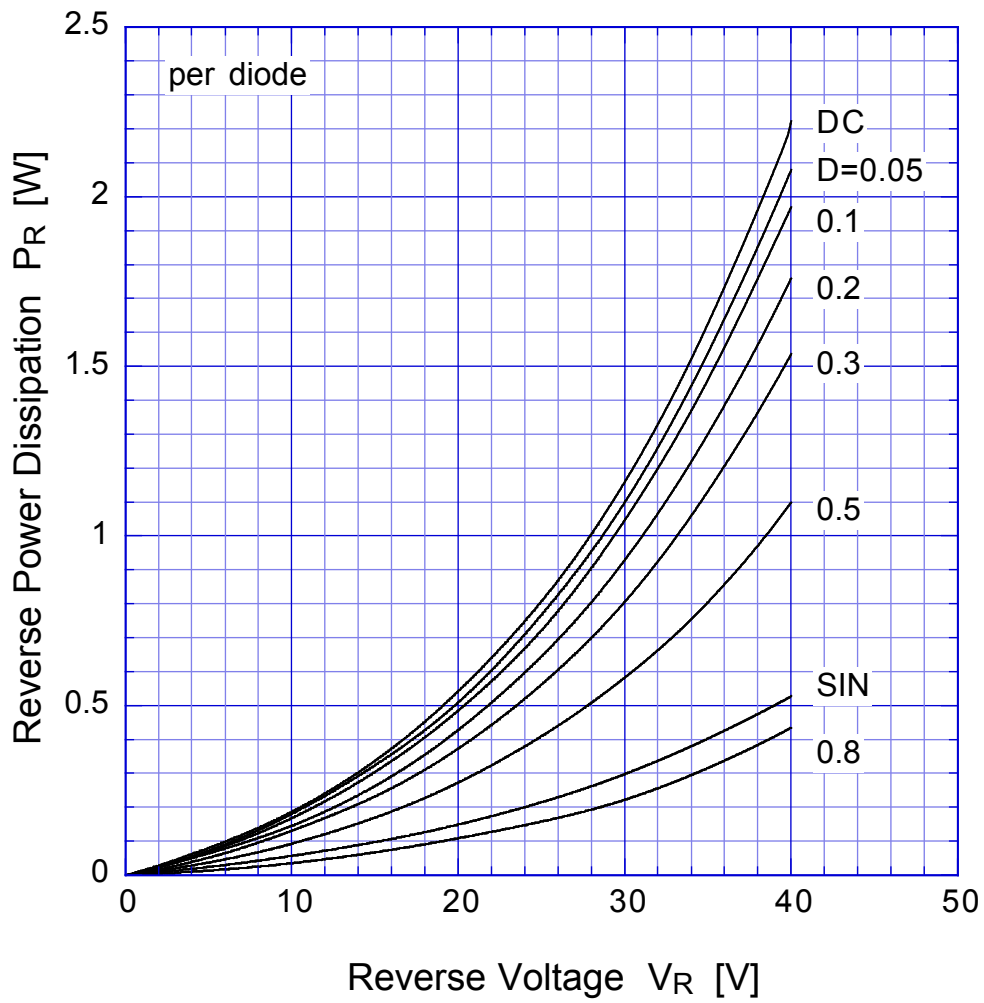
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## Reverse Current

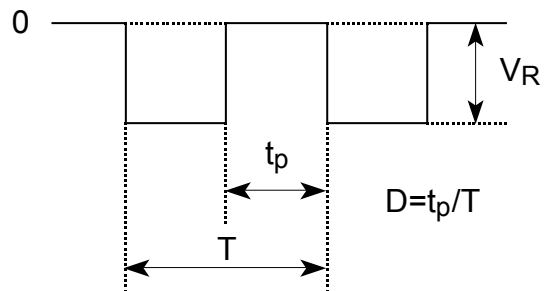


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## Reverse Power Dissipation

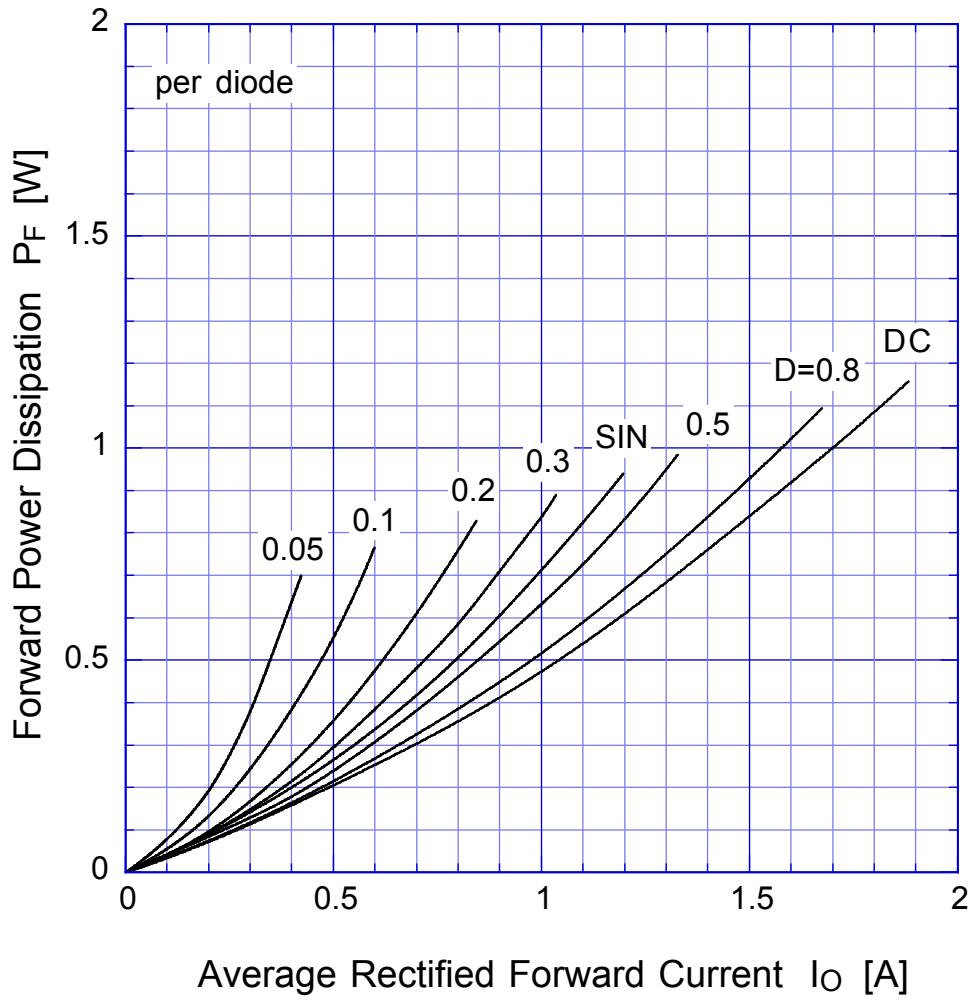


$T_j = 150^\circ\text{C}$

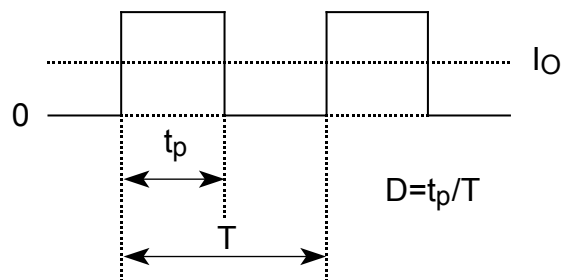


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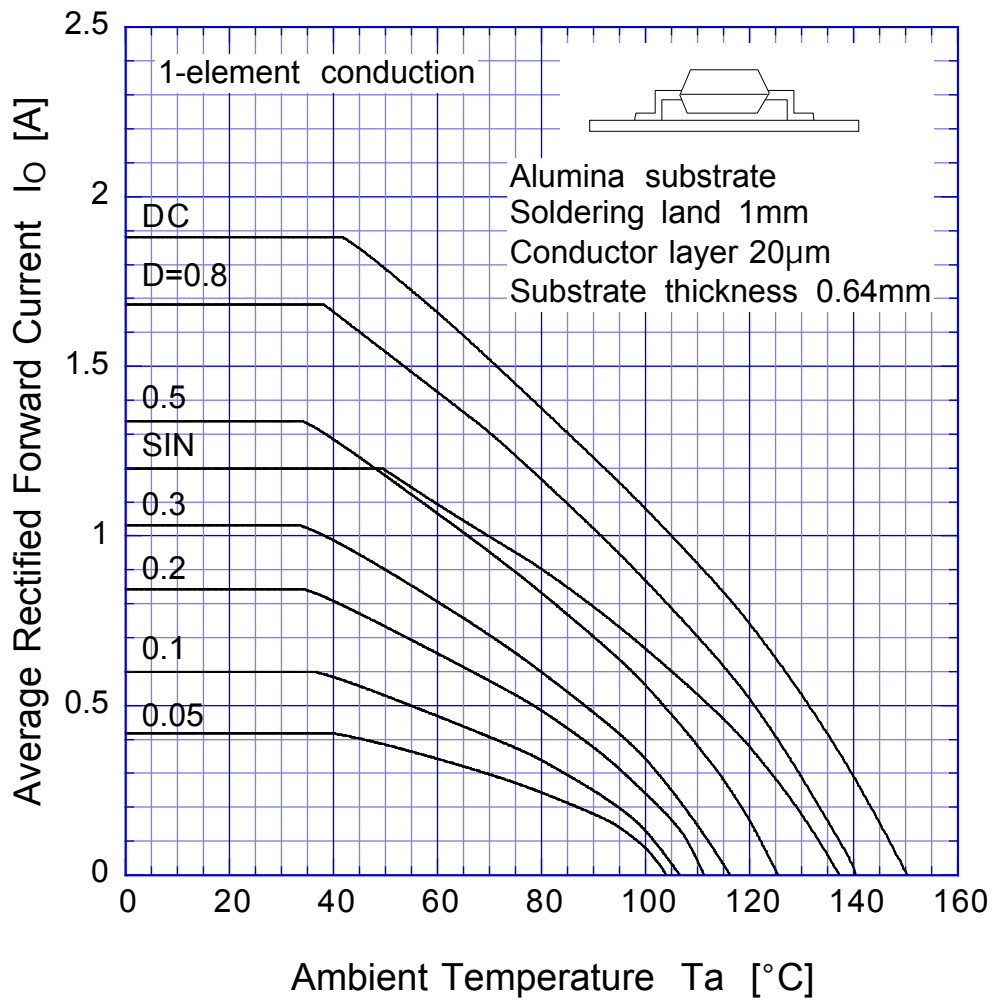


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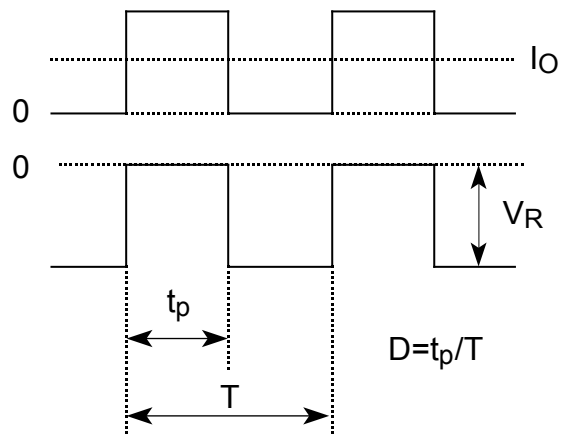


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# Derating Curve

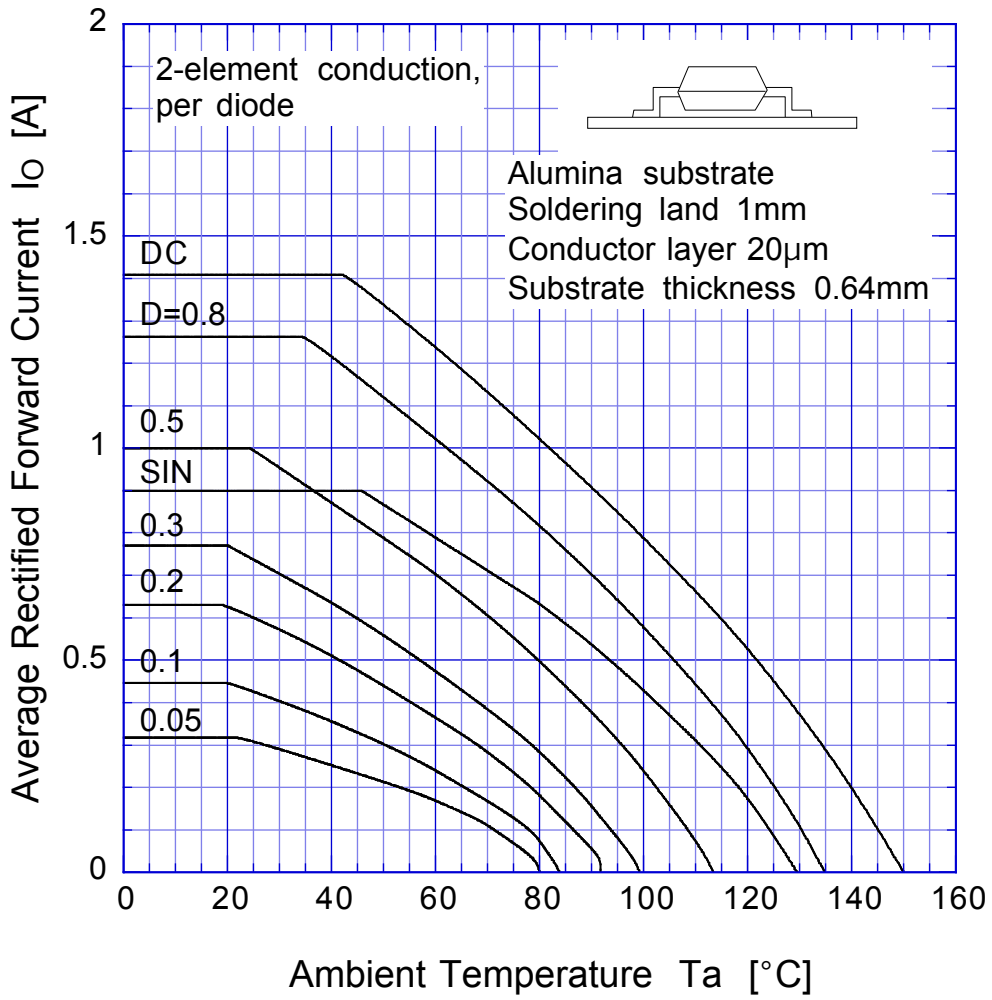


$V_R = 20V$



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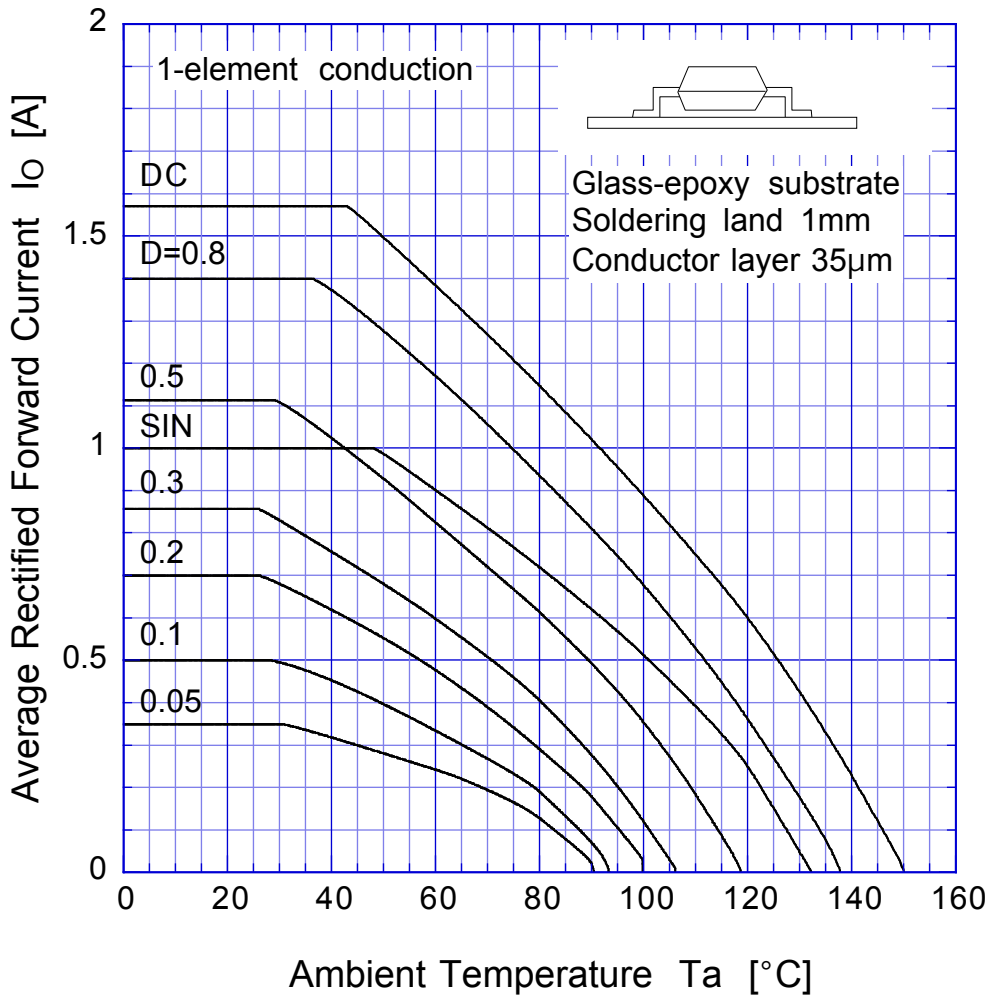


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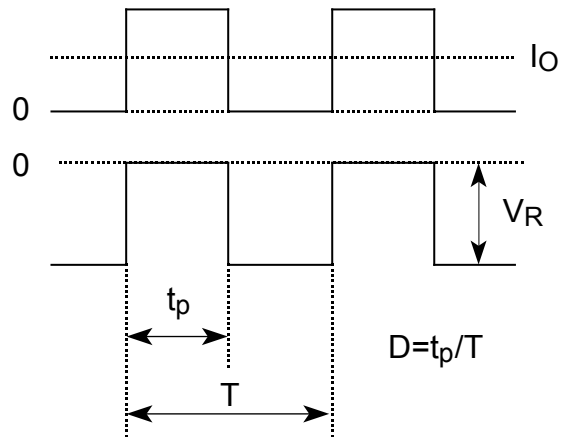


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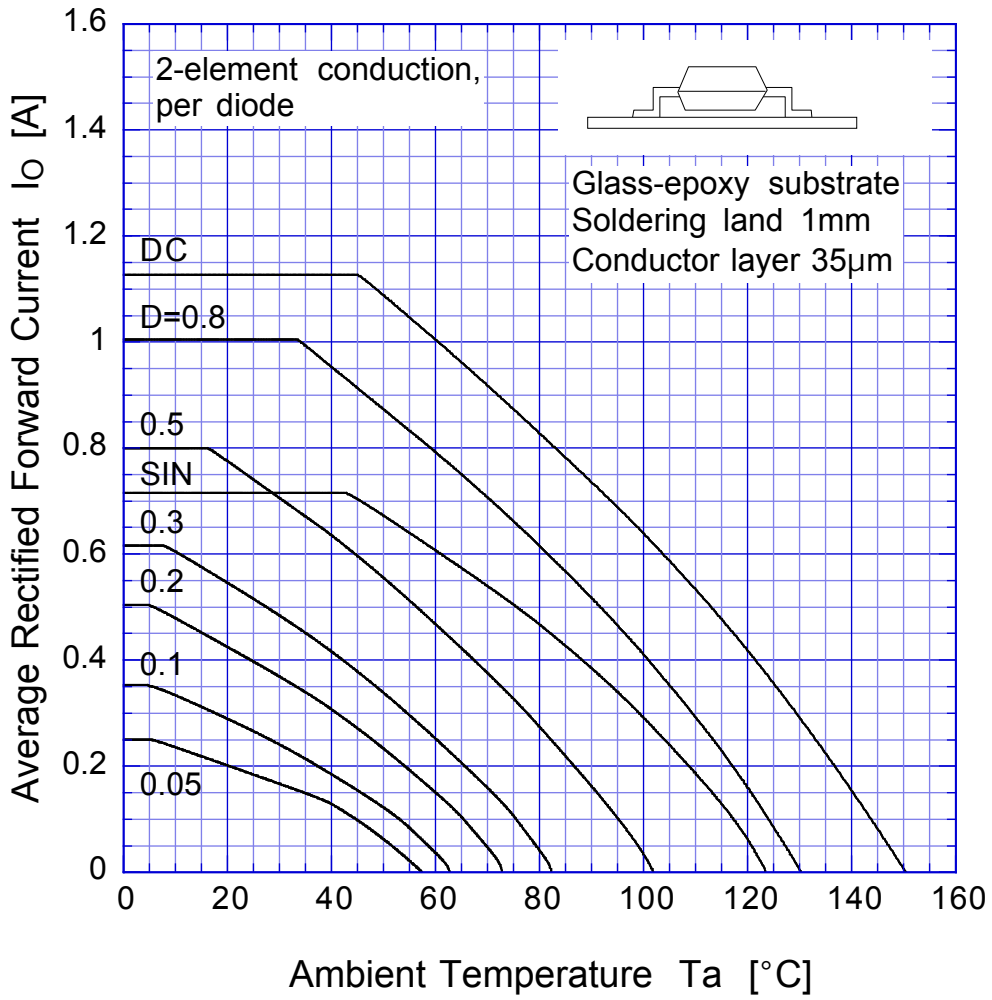


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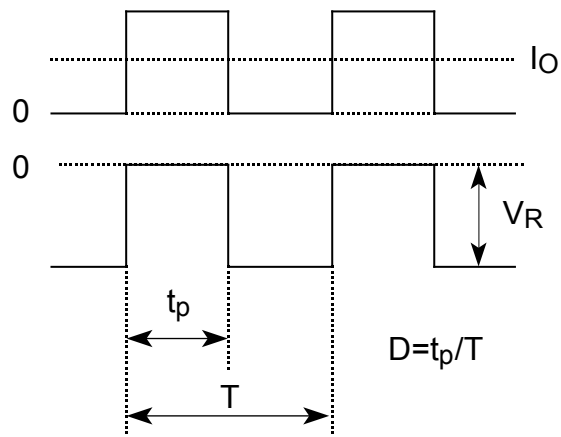


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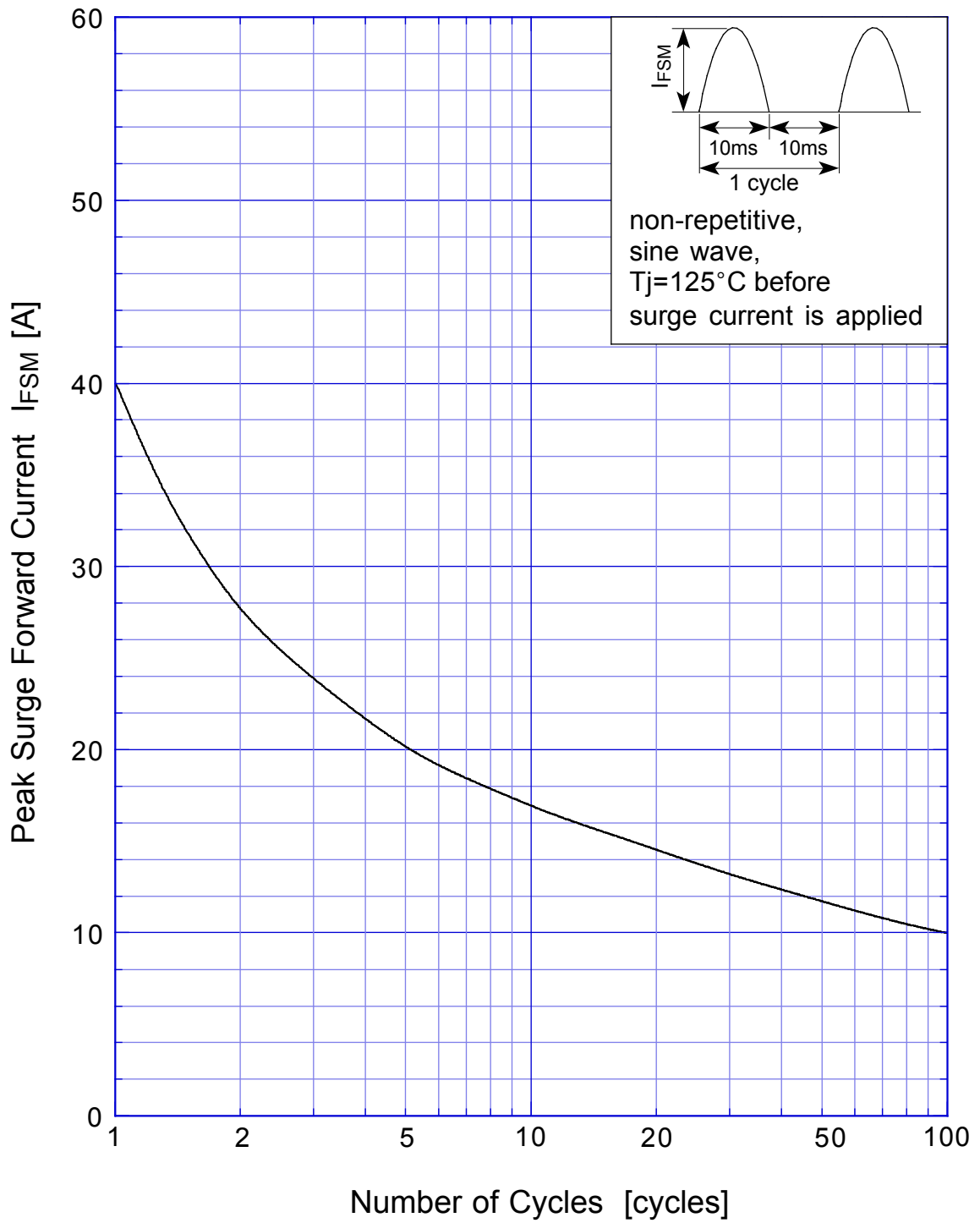


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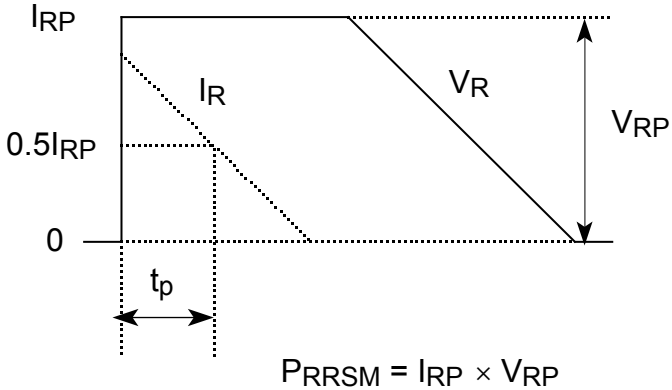
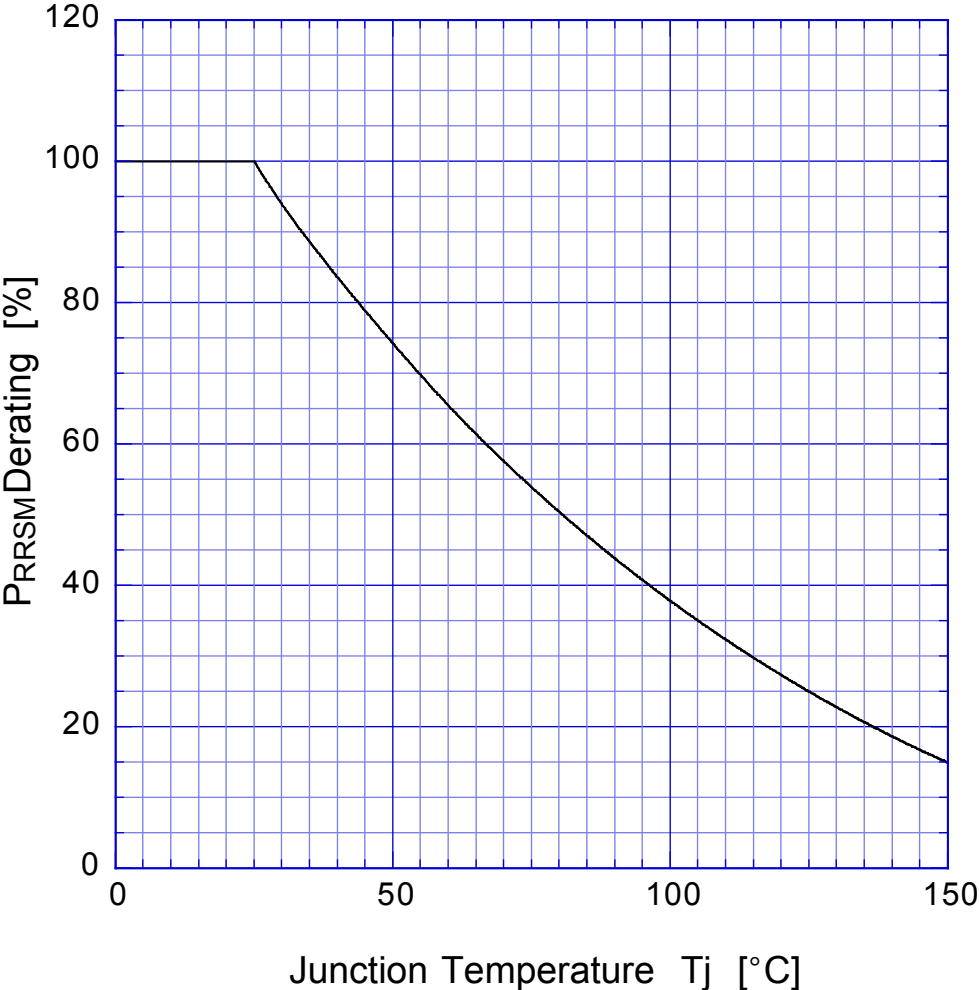


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## Peak Surge Forward Capability



# SBD Repetitive Surge Reverse Power Derating Curve



# SBD

## Repetitive Surge Reverse Power Capability

