

S1ZAS4

40V 1.2A

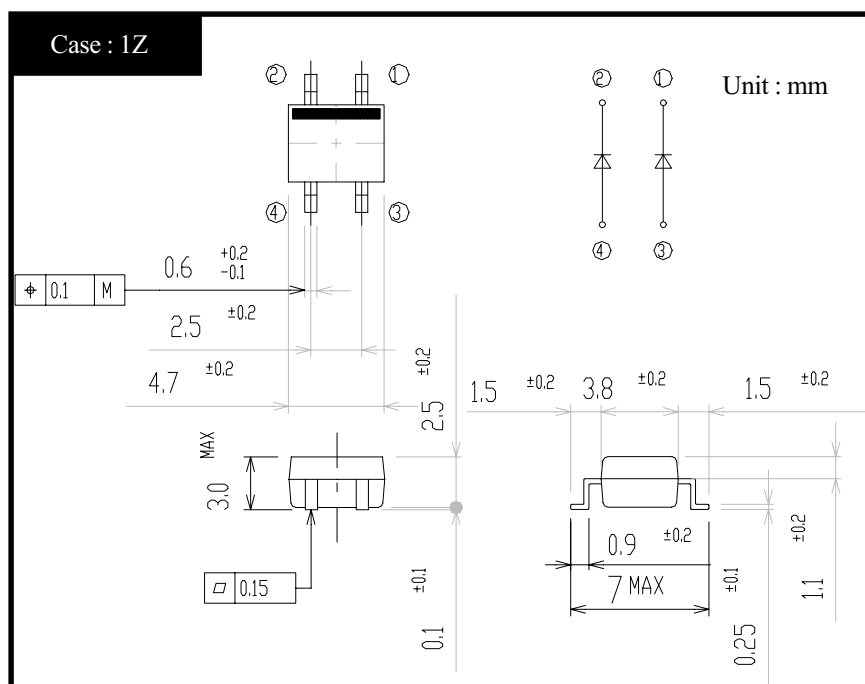
FEATURES

- SMT
- $T_j 150^{\circ}\text{C}$
- P_{RRSM} avalanche guaranteed
- Array

APPLICATION

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

OUTLINE DIMENSIONS



RATINGS

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

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T_{stg}		$-40 \sim 150$	$^{\circ}\text{C}$
Operating Junction Temperature	T_j		150	$^{\circ}\text{C}$
Maximum Reverse Voltage	V_{RM}		40	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	45	V
Average Rectified Forward Current	I_O	50Hz sine wave, R-load, On alumina substrate, 1 element operation, $T_a=49^{\circ}\text{C}$	1.2	A
		50Hz sine wave, R-load, On alumina substrate, 2 element operation, $T_a=45^{\circ}\text{C}$	0.9*	
		50Hz sine wave, R-load, On glass-epoxy substrate, 1 element operation, $T_a=47^{\circ}\text{C}$	1.0	
		50Hz sine wave, R-load, On glass-epoxy substrate, 2 element operation, $T_a=43^{\circ}\text{C}$	0.72*	
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=125^{\circ}\text{C}$	40	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width $10 \mu\text{s}$, Rating of per diode, $T_j=25^{\circ}\text{C}$	160	W

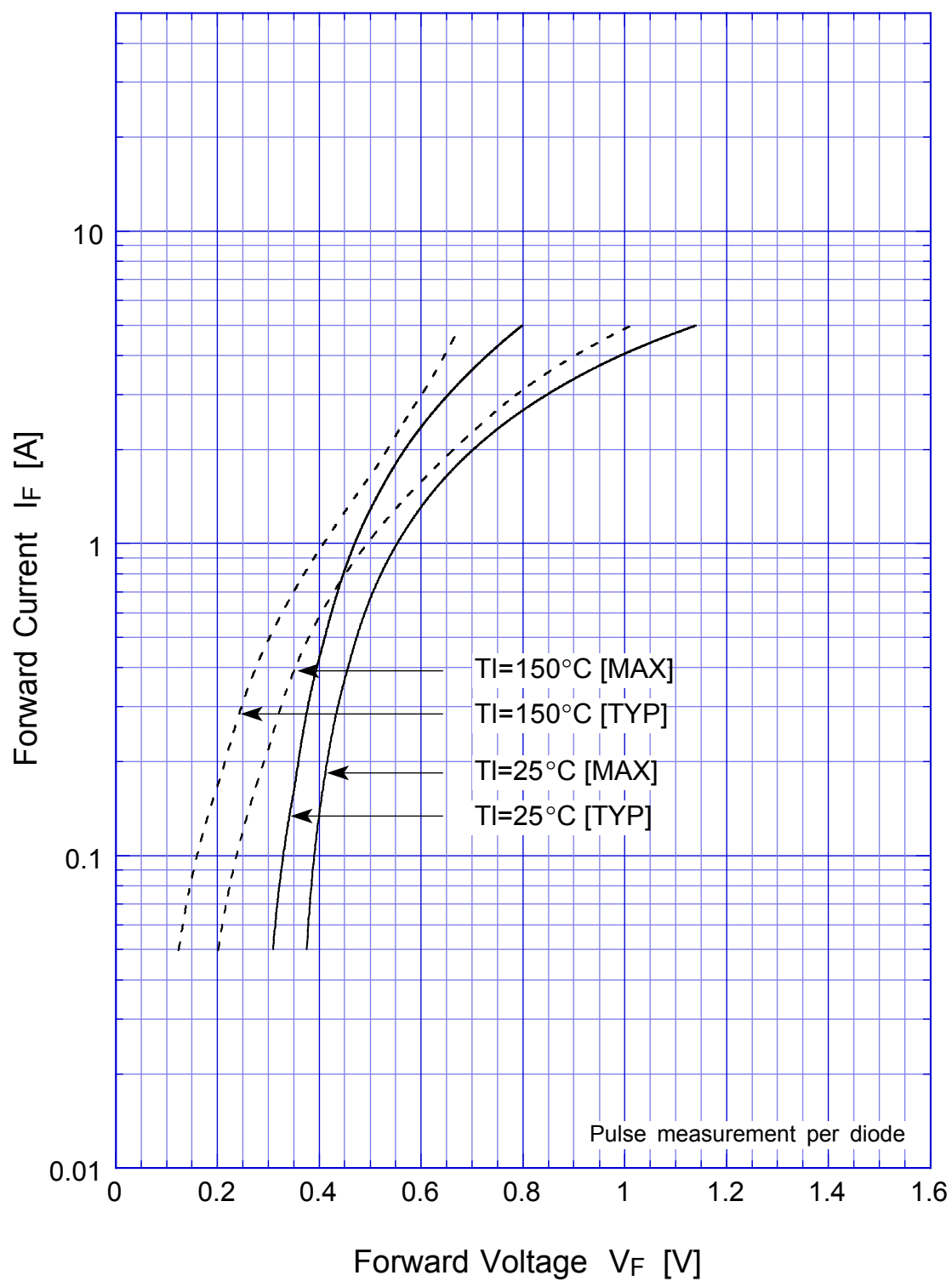
● Electrical Characteristics (If not specified $T_l=25^{\circ}\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	$I_F=1\text{A}$, Pulse measurement, Rating of per diode	Max.0.55	V
Reverse Current	I_R	$V_R=V_{RM}$, Pulse measurement, Rating of per diode	Max.1	mA
Junction Capacitance	C_j	$f=1\text{MHz}$, $V_R=10\text{V}$, Rating of per diode	Typ.65	pF
Thermal Resistance	θ_{jl}	junction to lead	Max.25	$^{\circ}\text{C/W}$
		junction to ambient, On alumina substrate, 1 element operation	Max.93	
	θ_{ja}	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*	

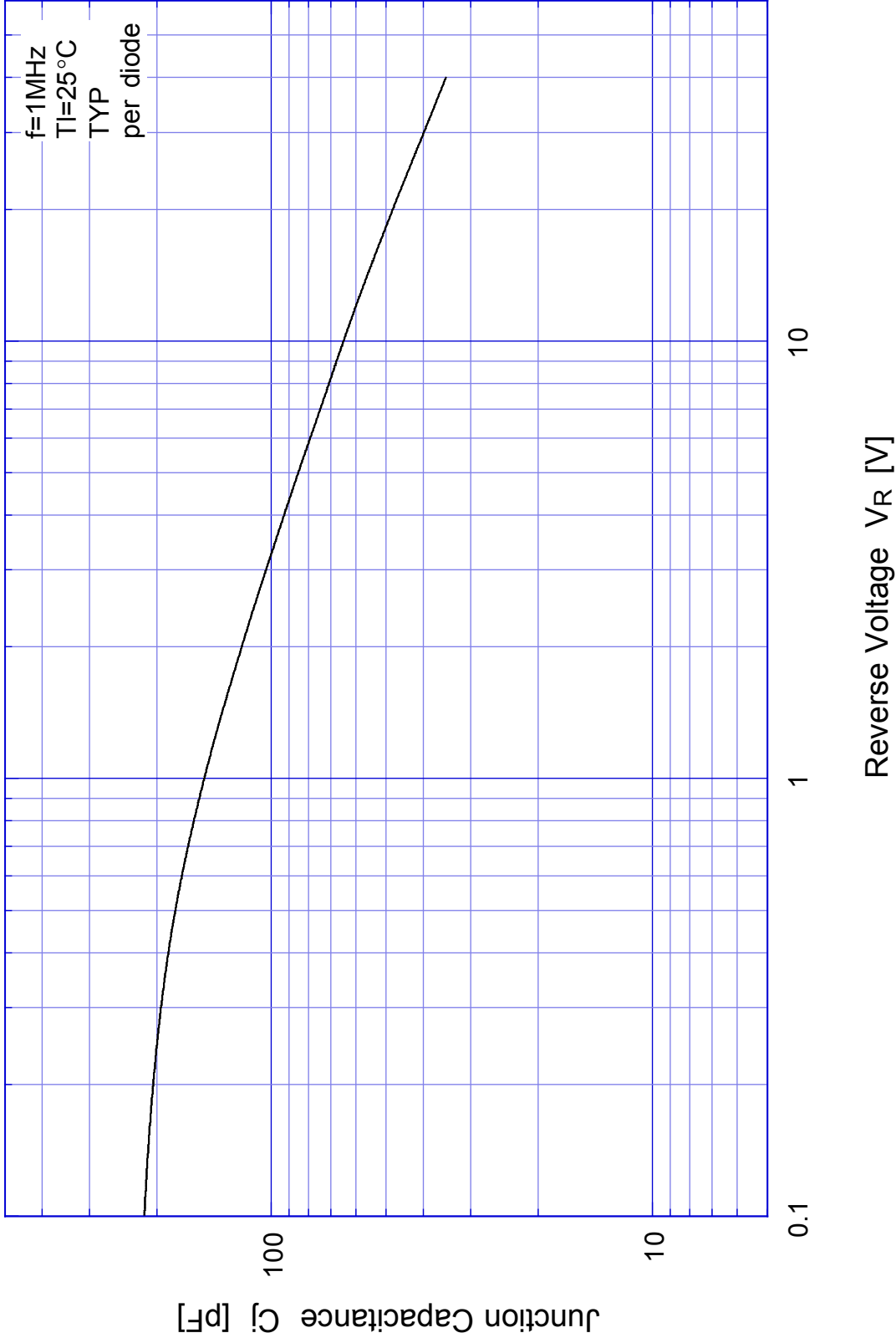
* : Rating of per diode

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Forward Voltage

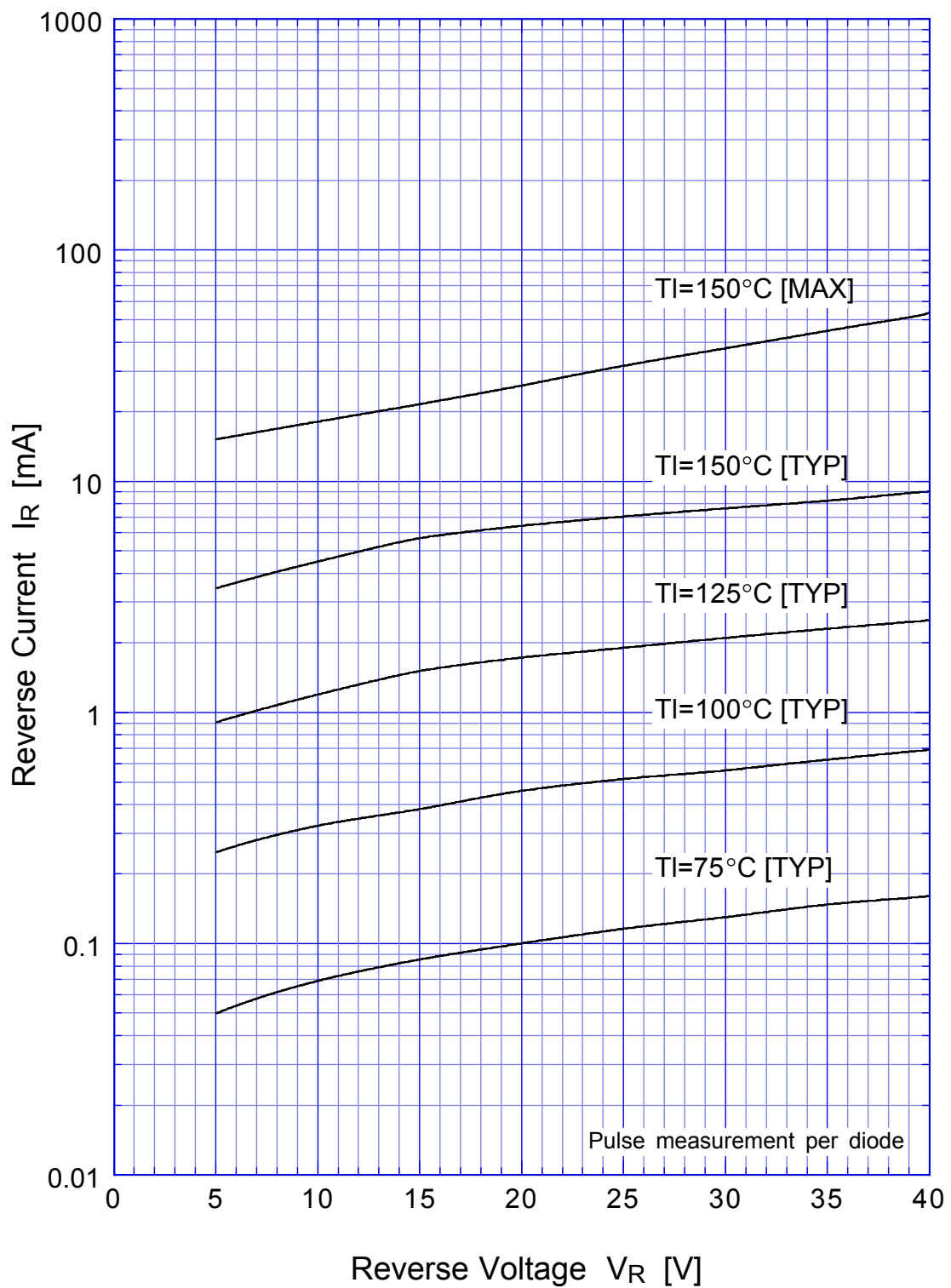


S1ZAS4 Junction Capacitance



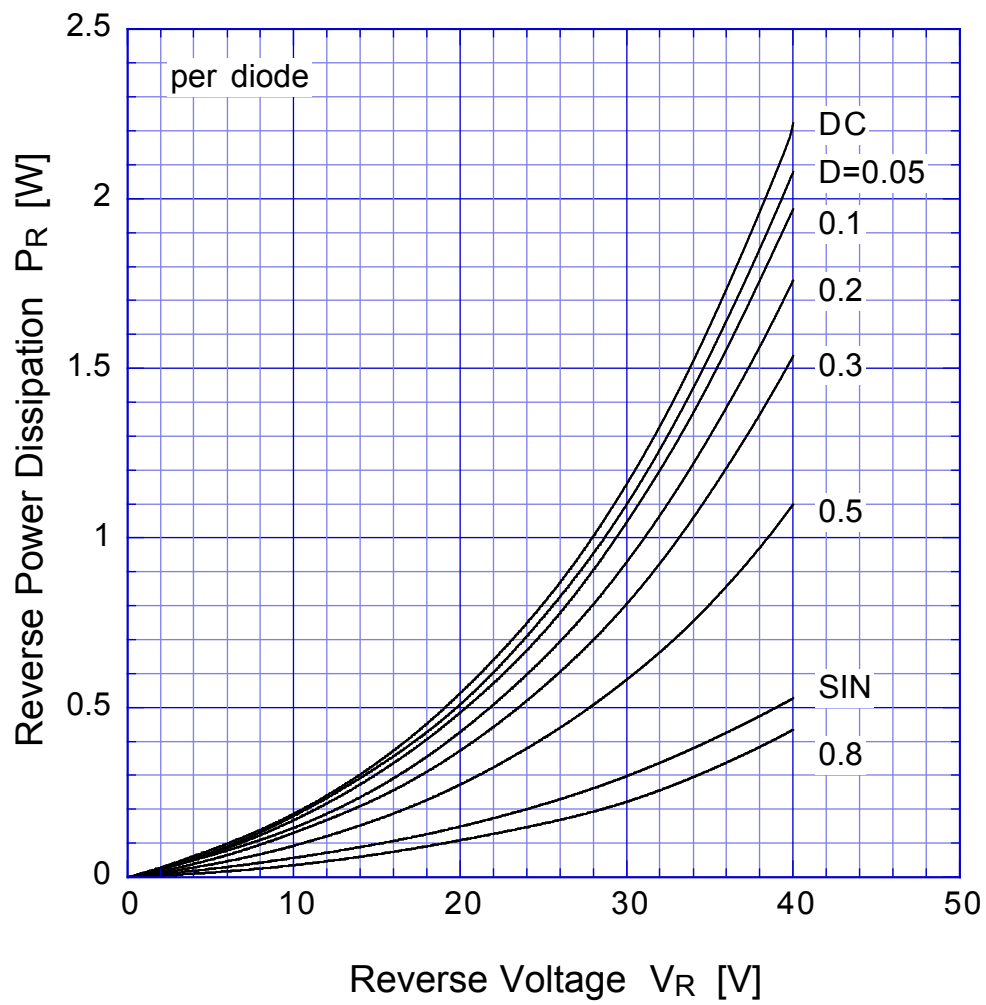
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Reverse Current

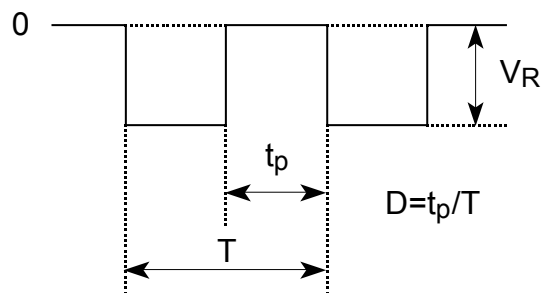


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Reverse Power Dissipation

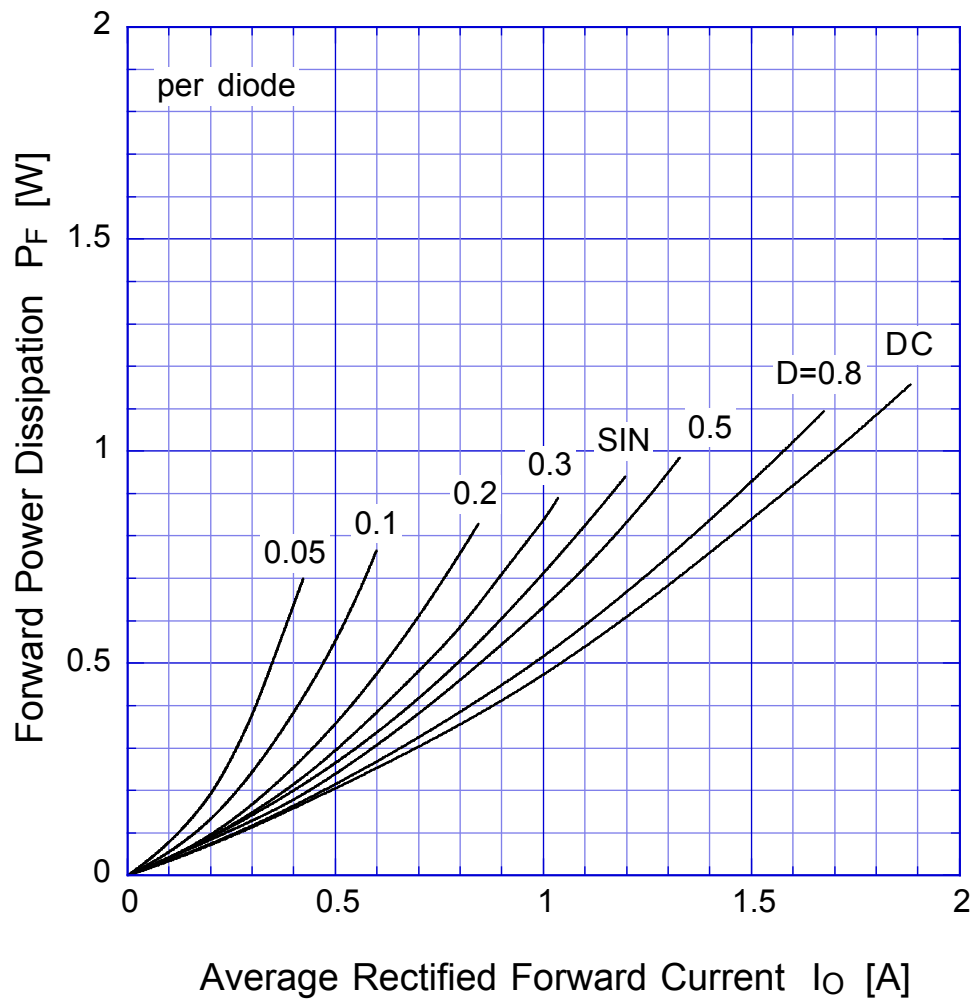


$T_j = 150^\circ\text{C}$

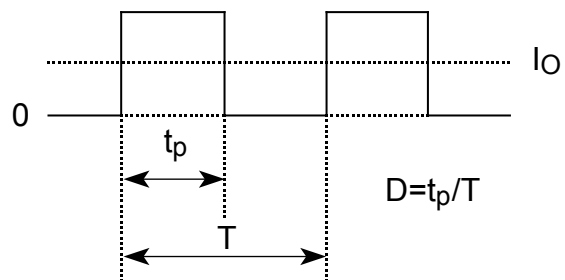


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Forward Power Dissipation

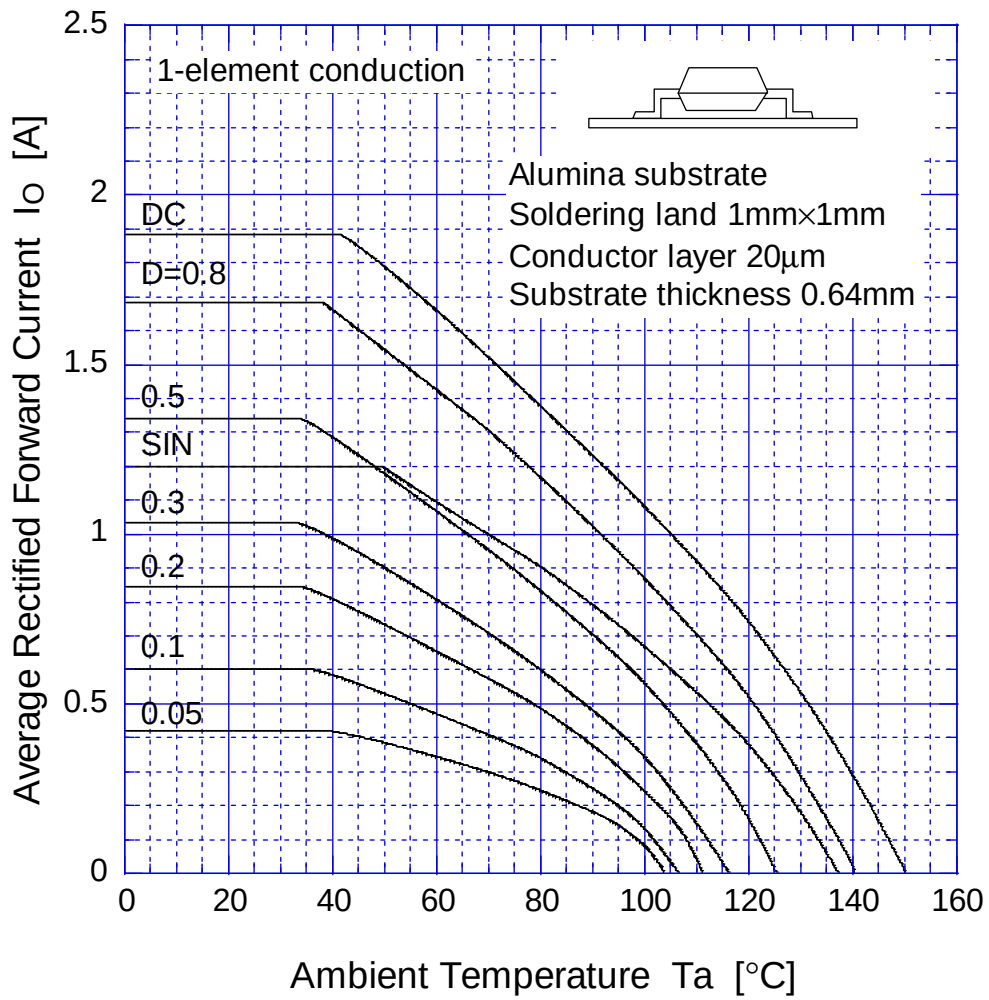


$T_j = 150^\circ\text{C}$

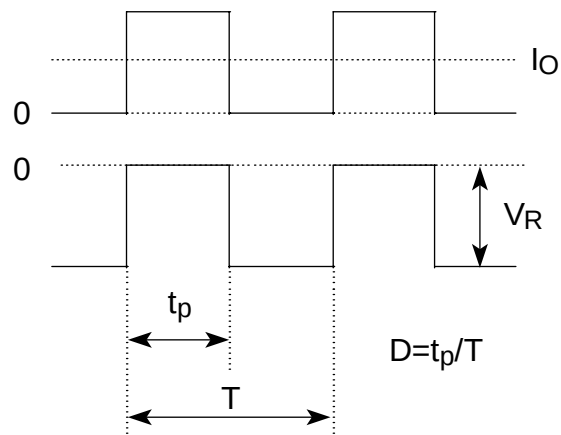


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Derating Curve

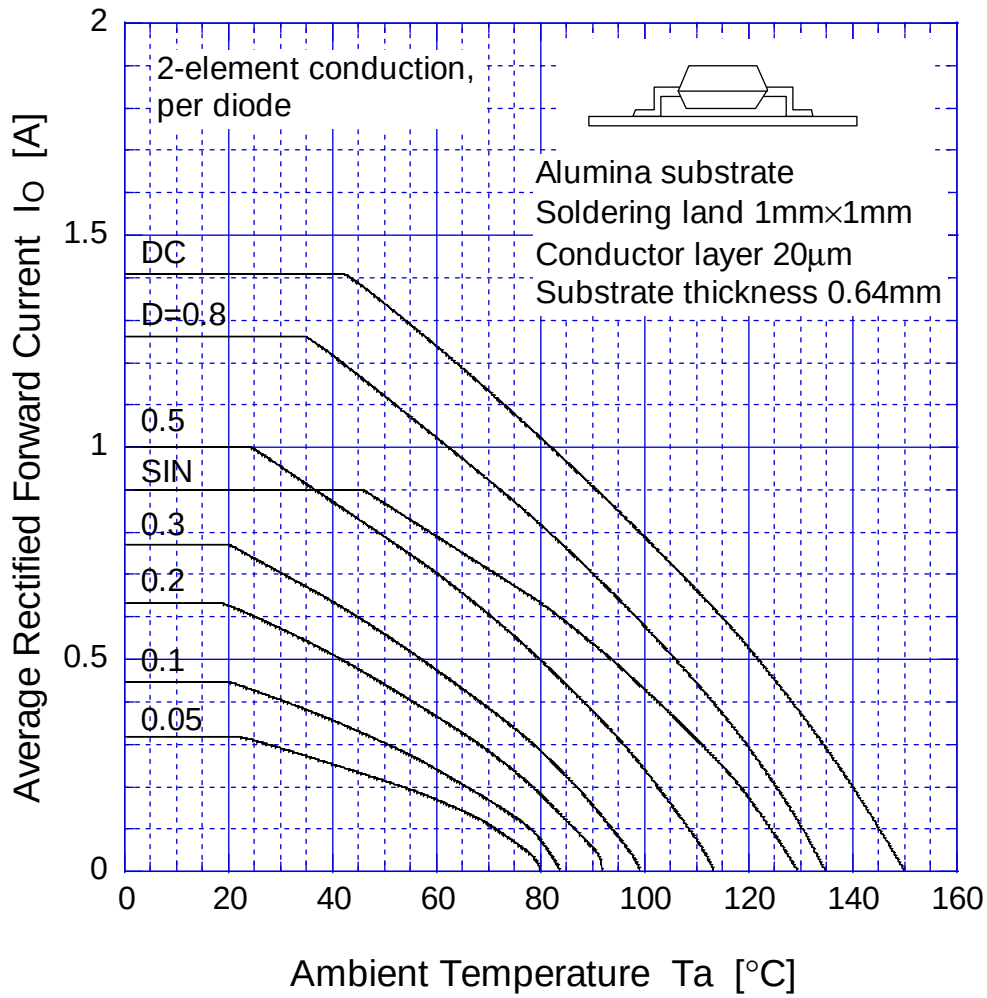


$V_R = 20V$

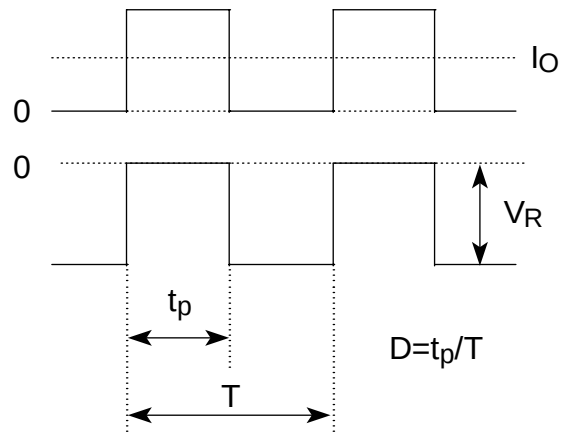


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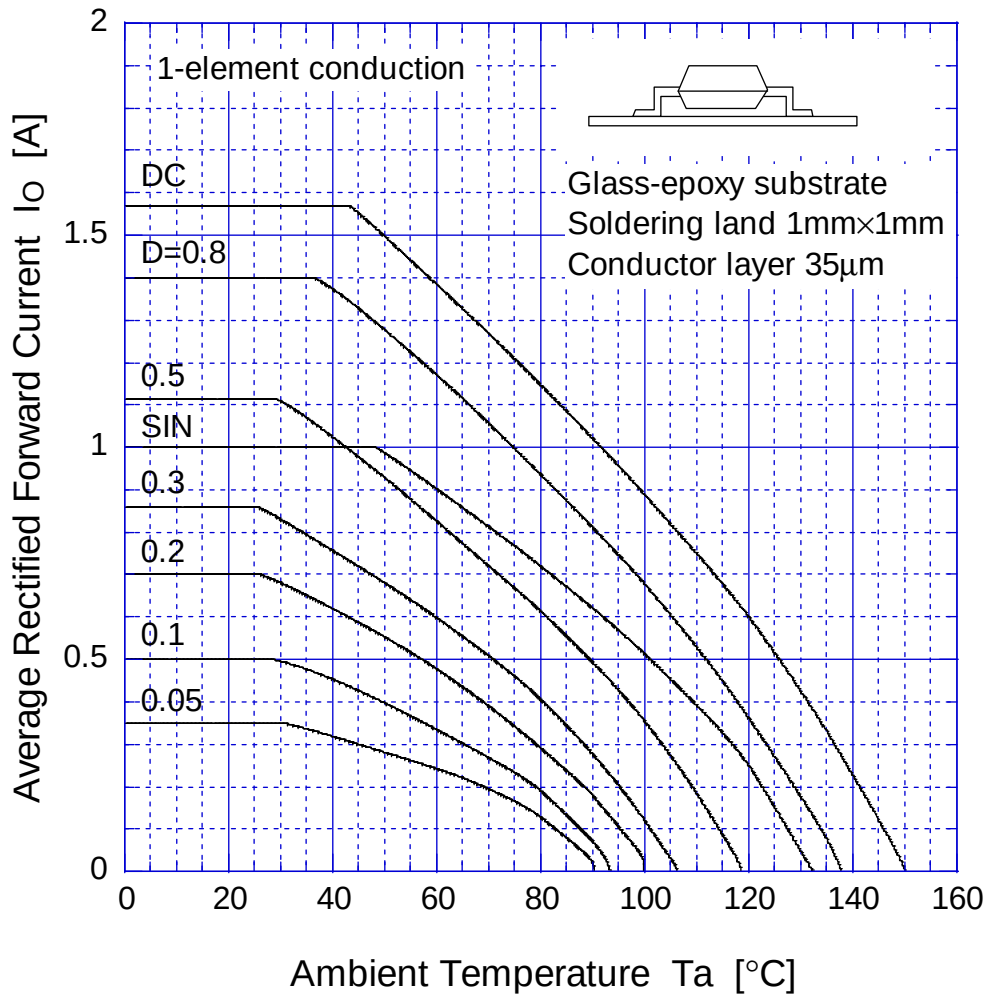


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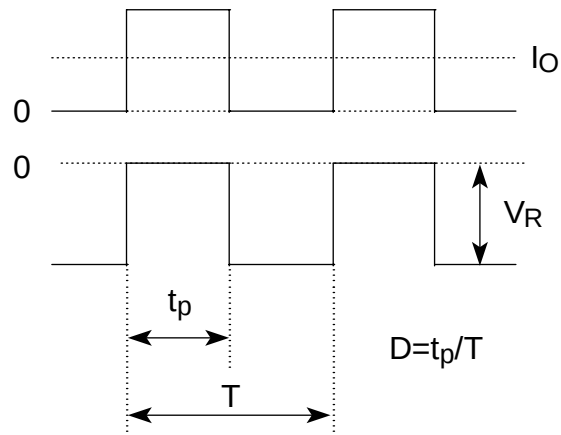


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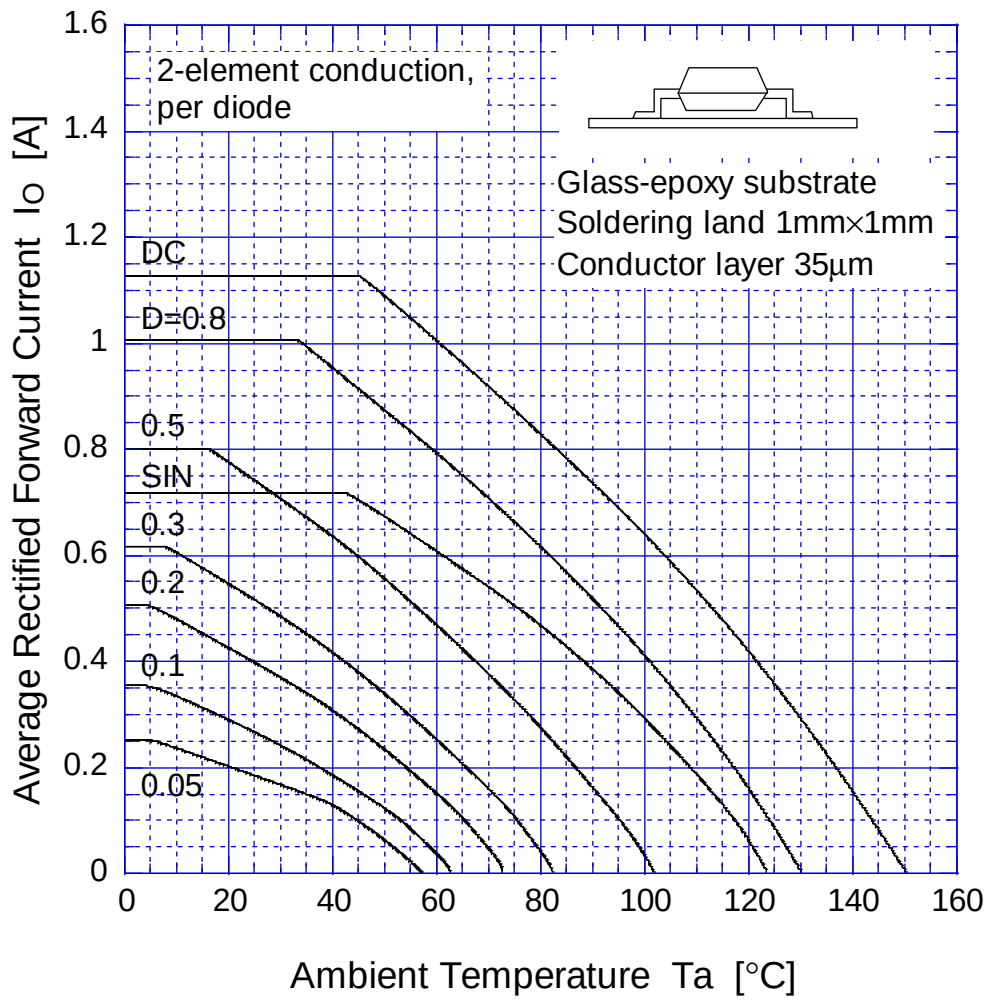


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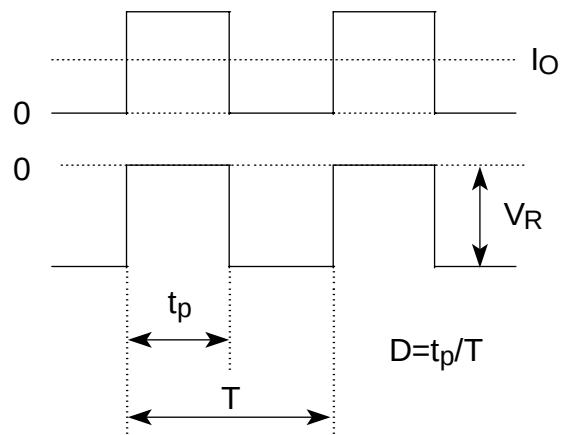


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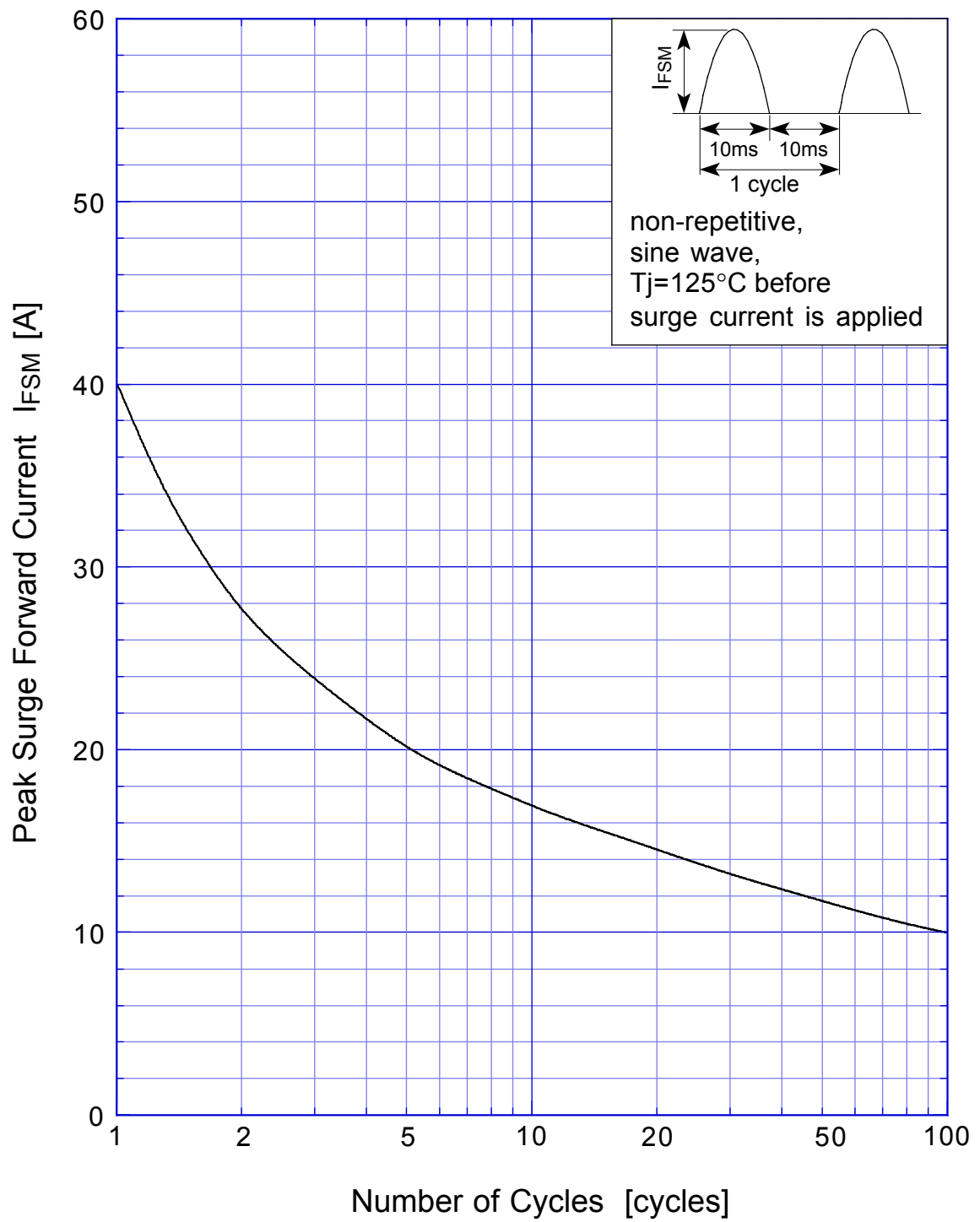


$V_R = 20V$



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Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve

