

DF10SC4M

40V 10A

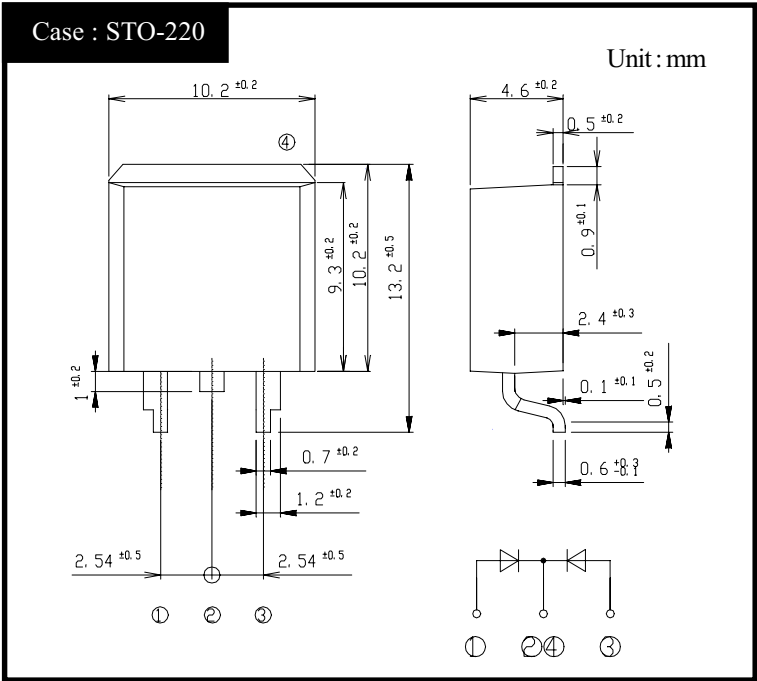
FEATURES

- SMT
- $T_j 150^{\circ}\text{C}$
- P_{RRSM} avalanche guaranteed
- High current capacity with Small Package

APPLICATION

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

OUTLINE DIMENSIONS



RATINGS

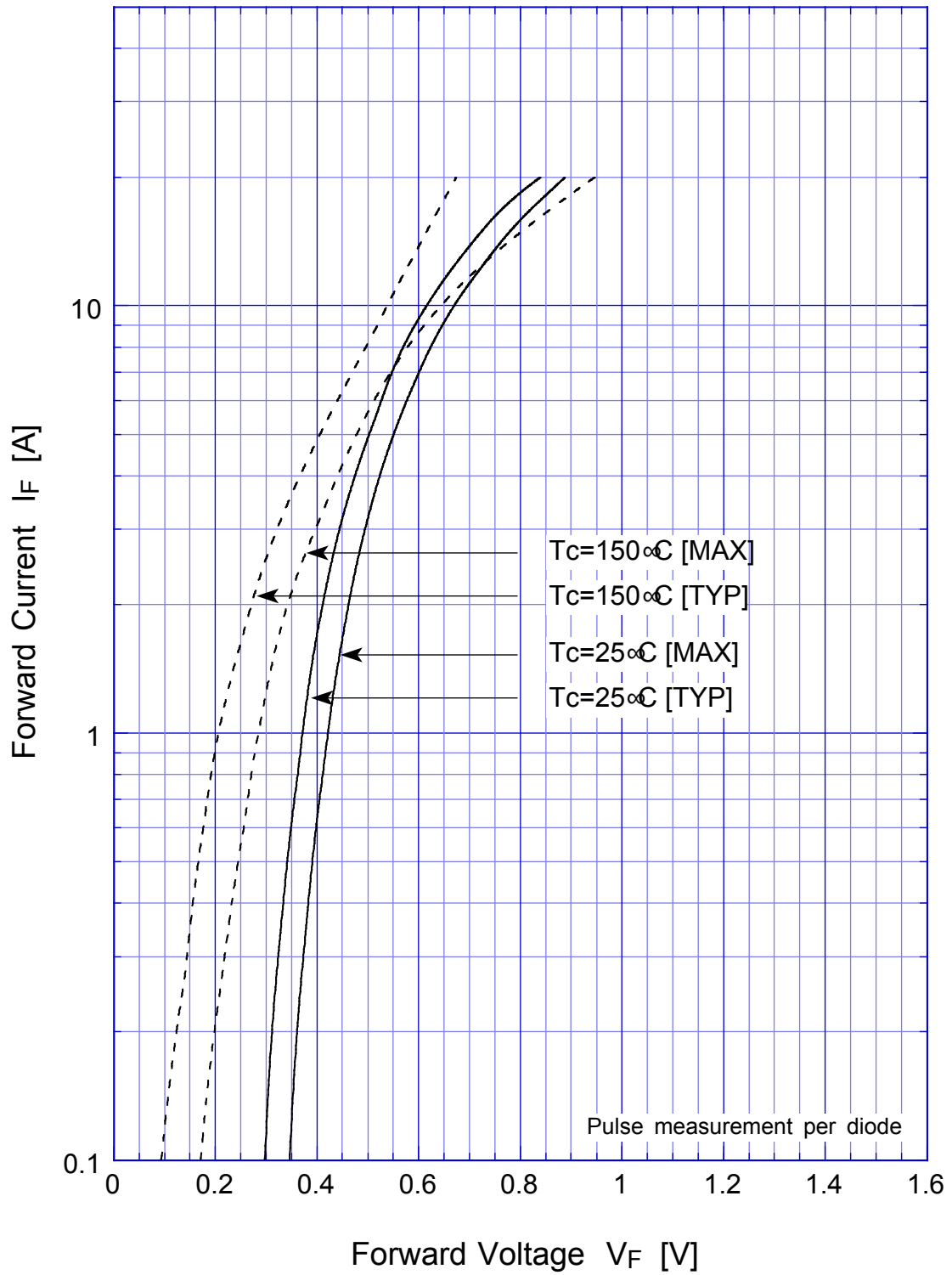
● Absolute Maximum Ratings (If not specified $T_c=25^{\circ}\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T_{stg}		$-55 \sim 150$	$^{\circ}\text{C}$
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, Rating for each diode $I_o/2$, With heatsink, $T_c=125^{\circ}\text{C}$	10	A
		50Hz sine wave, R-load, Rating for each diode $I_o/2$, On Al-Cu substrate, $T_a=33^{\circ}\text{C}$	6.8	
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=125^{\circ}\text{C}$	100	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width $10 \mu\text{s}$, Rating of per diode, $T_j=25^{\circ}\text{C}$	330	W

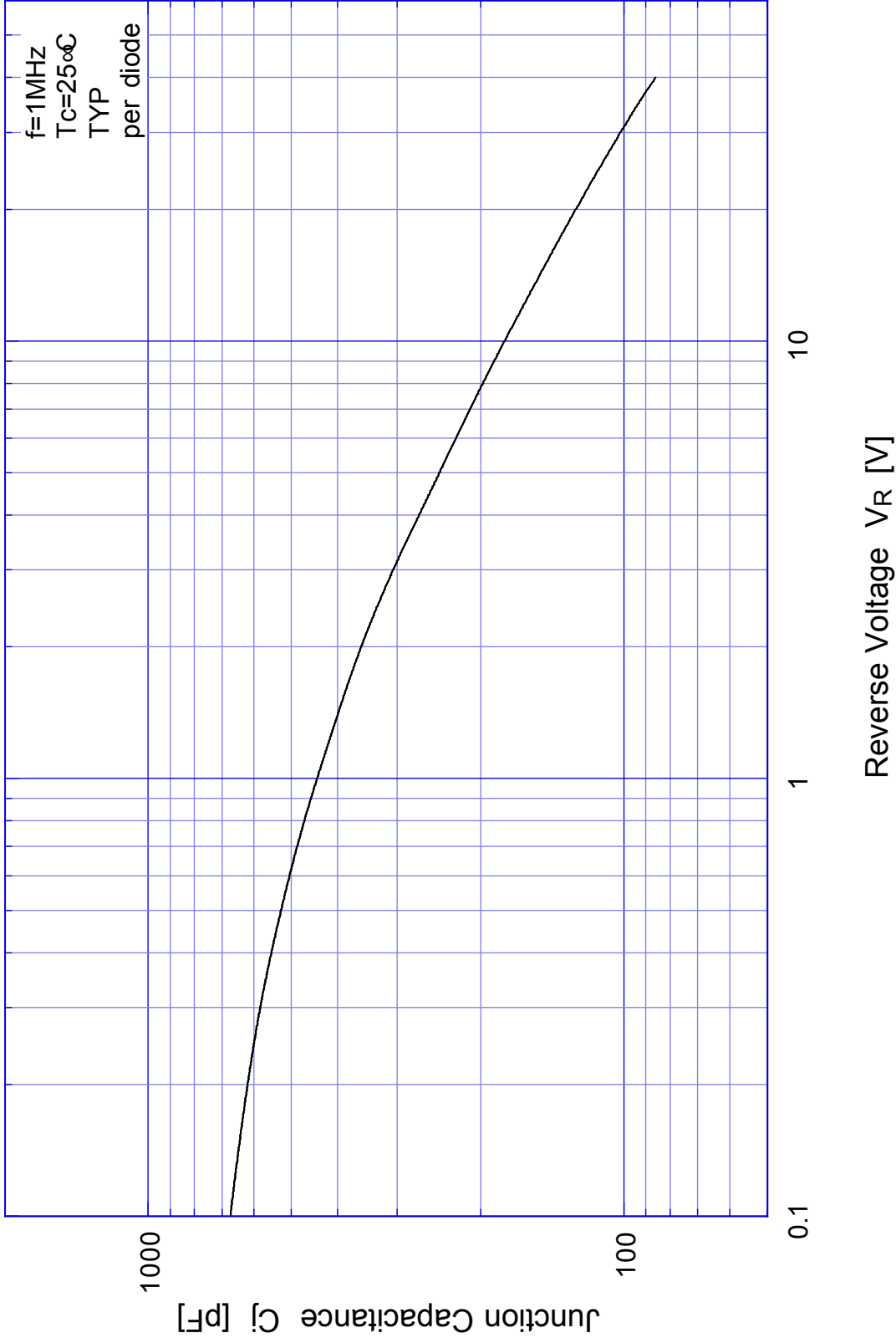
● Electrical Characteristics (If not specified $T_c=25^{\circ}\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	$I_F=5\text{A}$, 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.3.5	mA
Junction Capacitance	C_j	$f=1\text{MHz}$, $V_R=10\text{V}$, Rating of per diode	Typ.180	pF
Thermal Resistance	θ_{jc}	junction to case	Max.3	$^{\circ}\text{C/W}$
	θ_{ja}	junction to ambient, On Al-Cu substrate	Max.25	

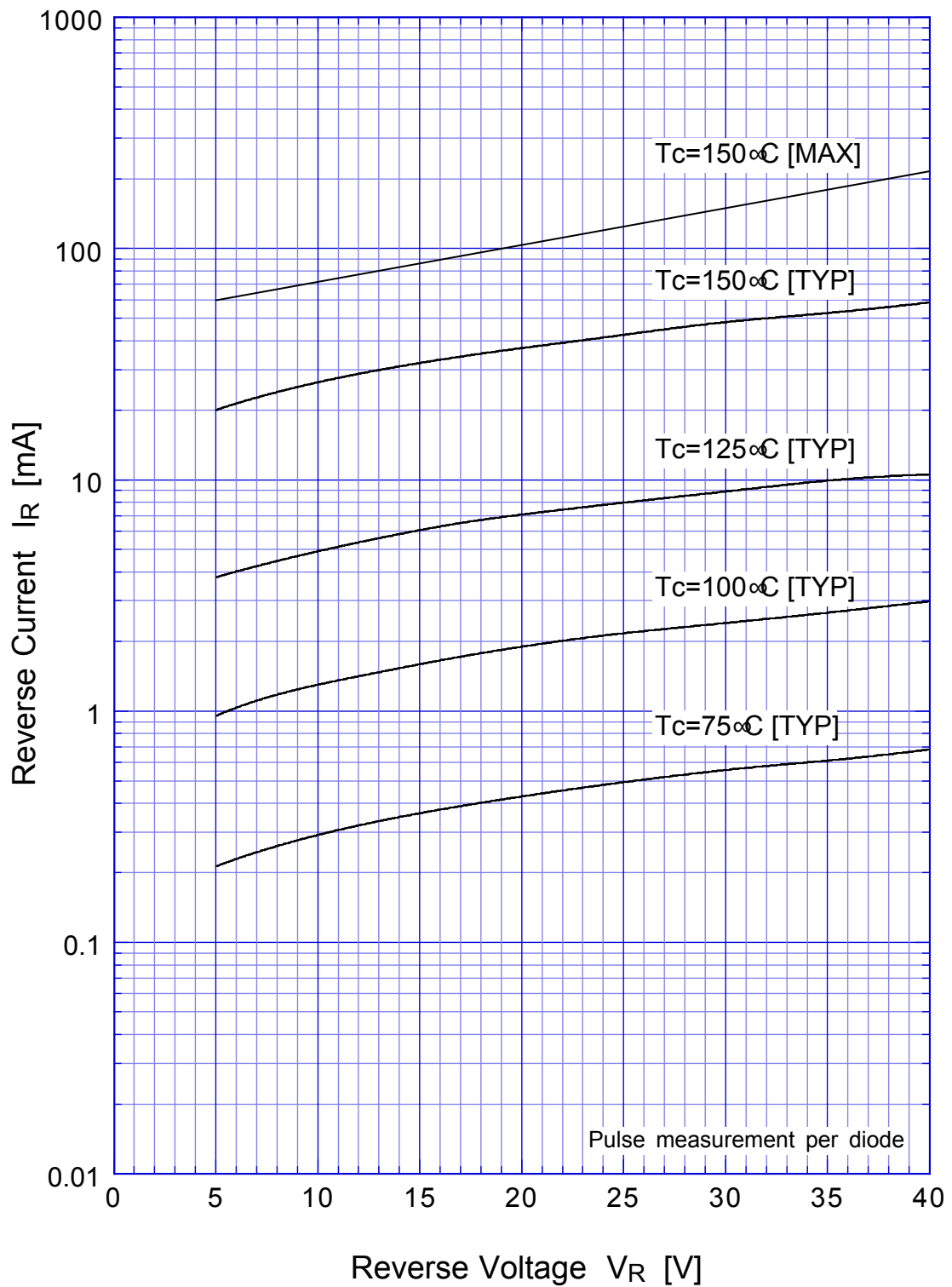
DF10SC4M Forward Voltage



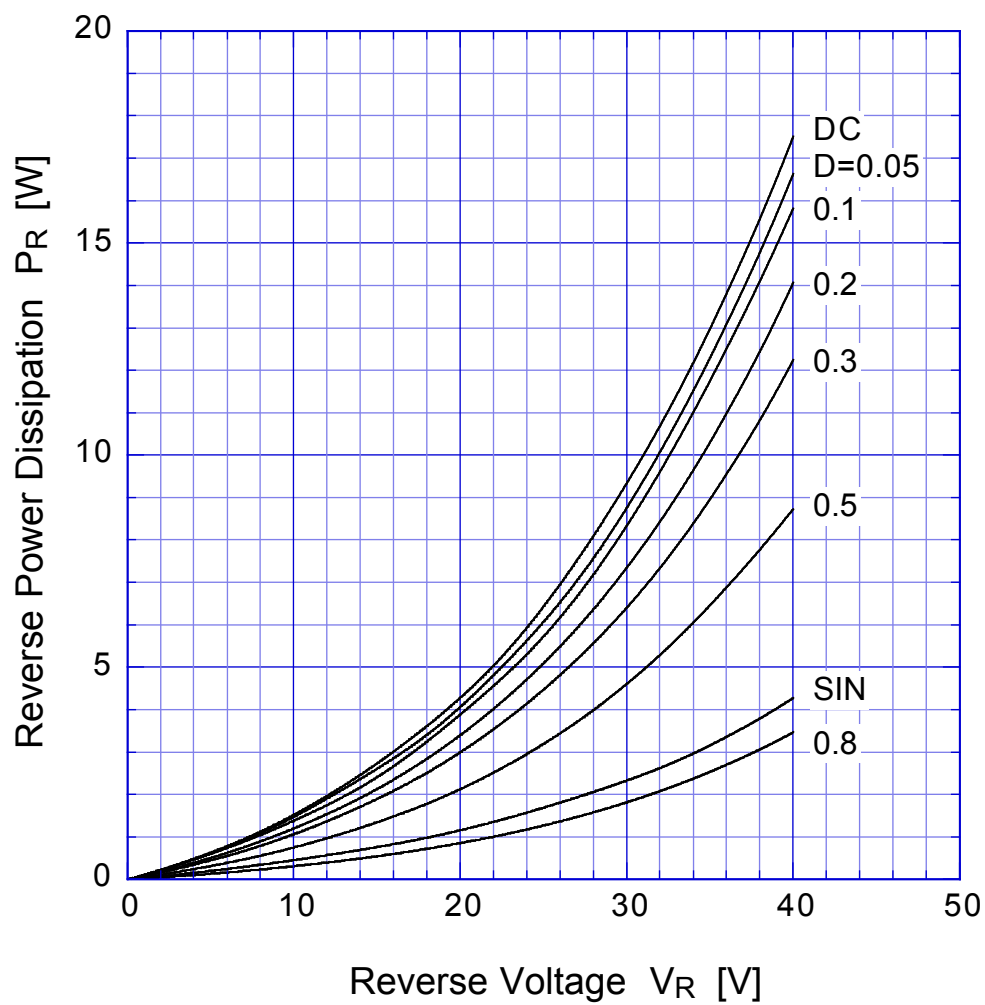
DF10SC4M Junction Capacitance



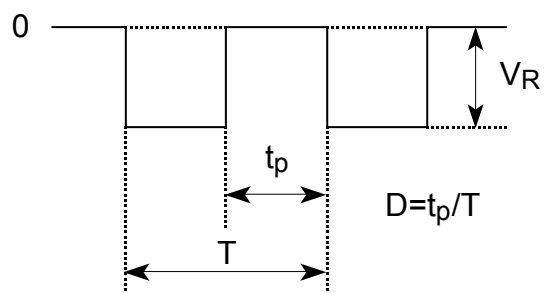
DF10SC4M Reverse Current



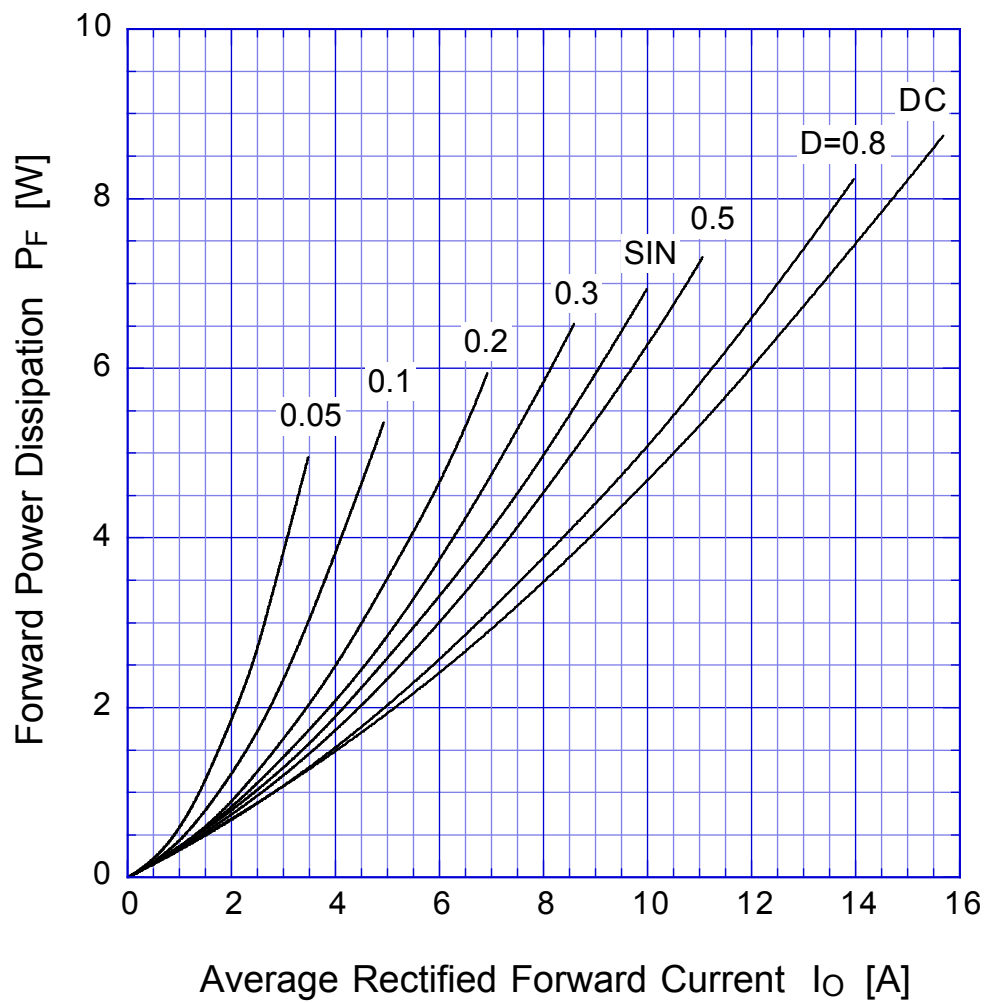
DF10SC4M Reverse Power Dissipation



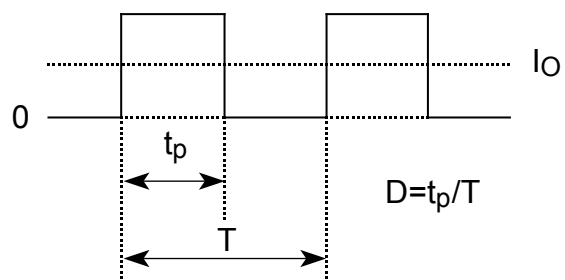
$T_j = 150^\circ\text{C}$



DF10SC4M Forward Power Dissipation

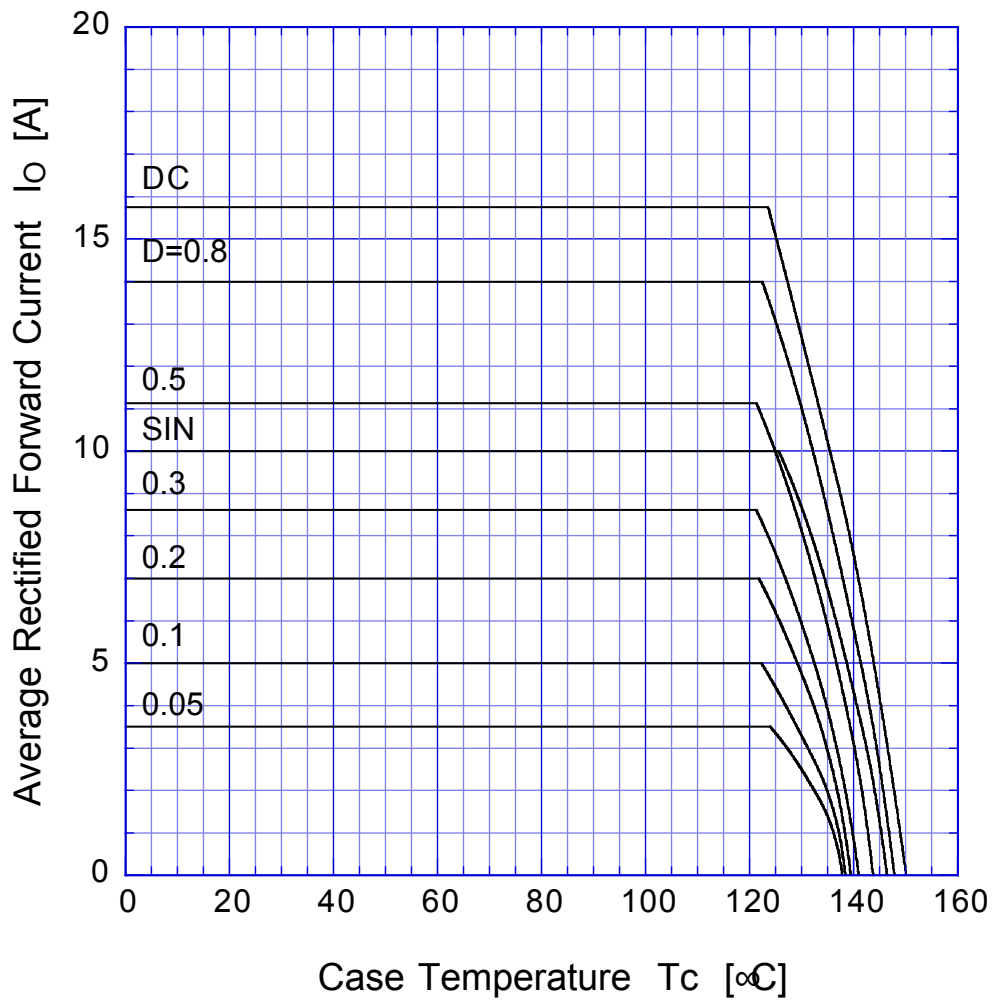


$T_j = 150^\circ\text{C}$

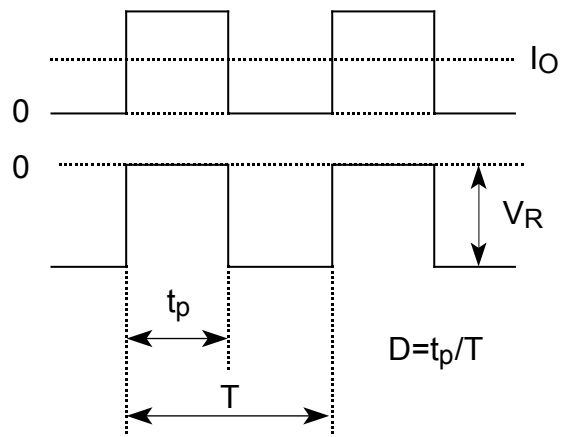


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Derating Curve

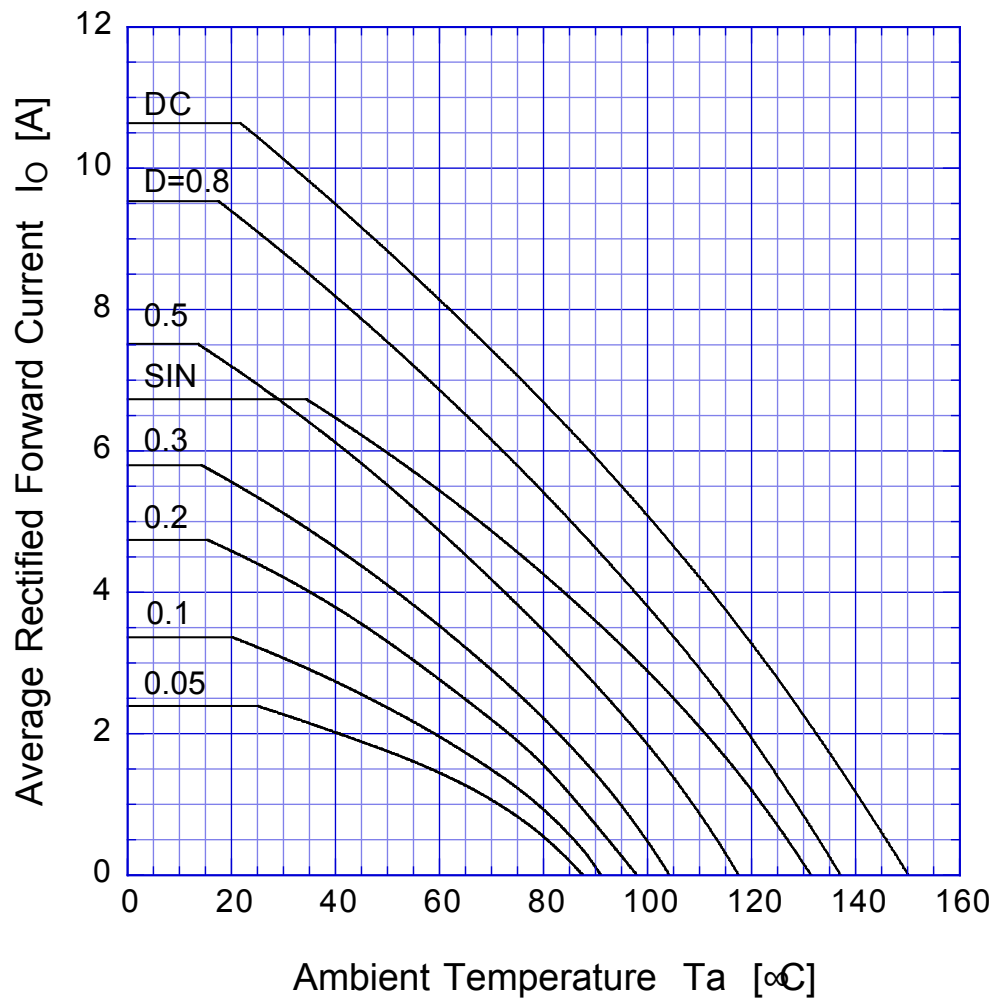


$V_R = 20V$

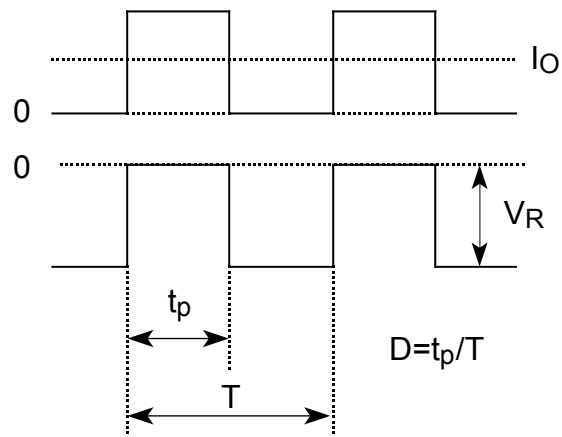


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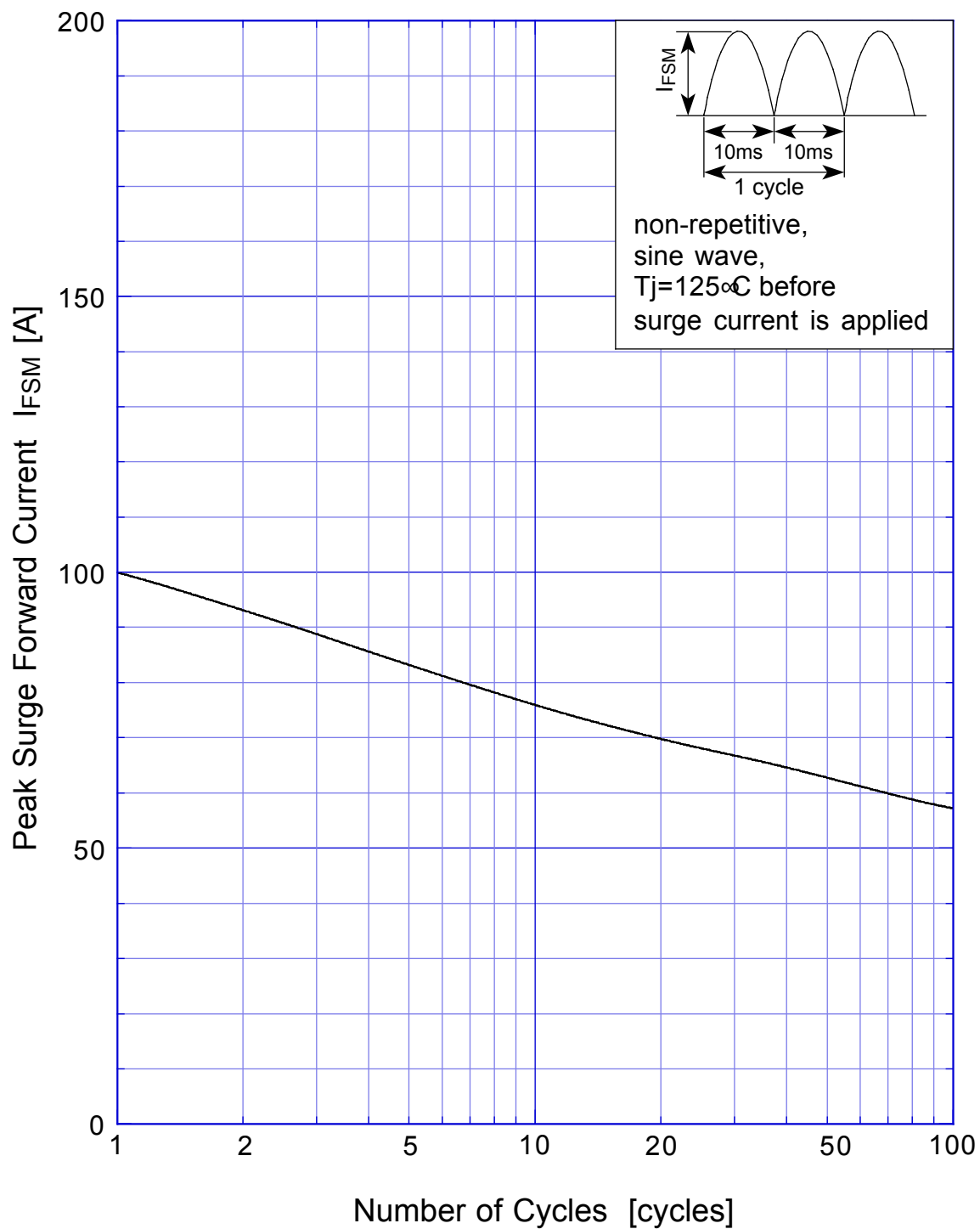
Derating Curve



$V_R = 15V$



DF10SC4M Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve

