

SF20SC4

40V 20A

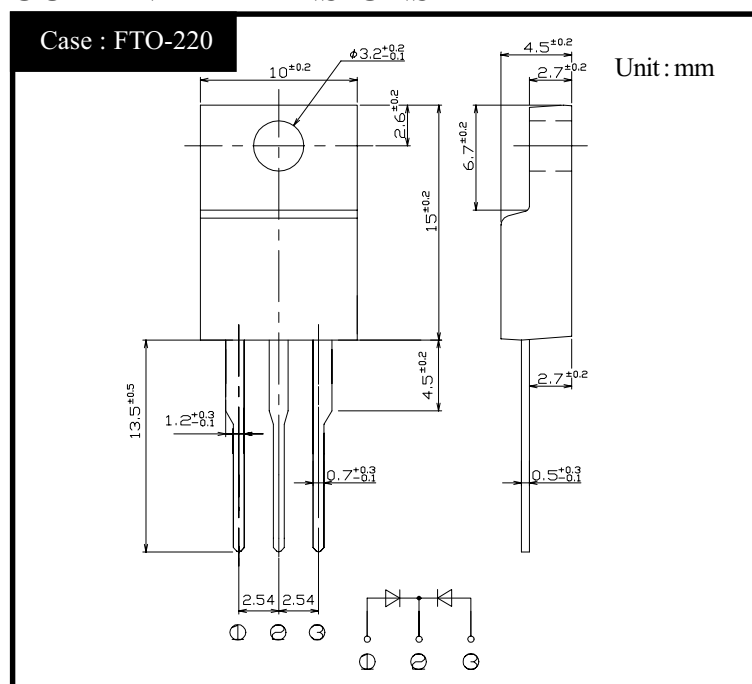
FEATURES

- $T_j 150^{\circ}\text{C}$
- P_{RRSM} avalanche guaranteed
- Fully Isolated Molding
- High current capacity with Small Package
- Dielectric strength 2kV guaranteed

APPLICATION

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

OUTLINE DIMENSIONS



RATINGS

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

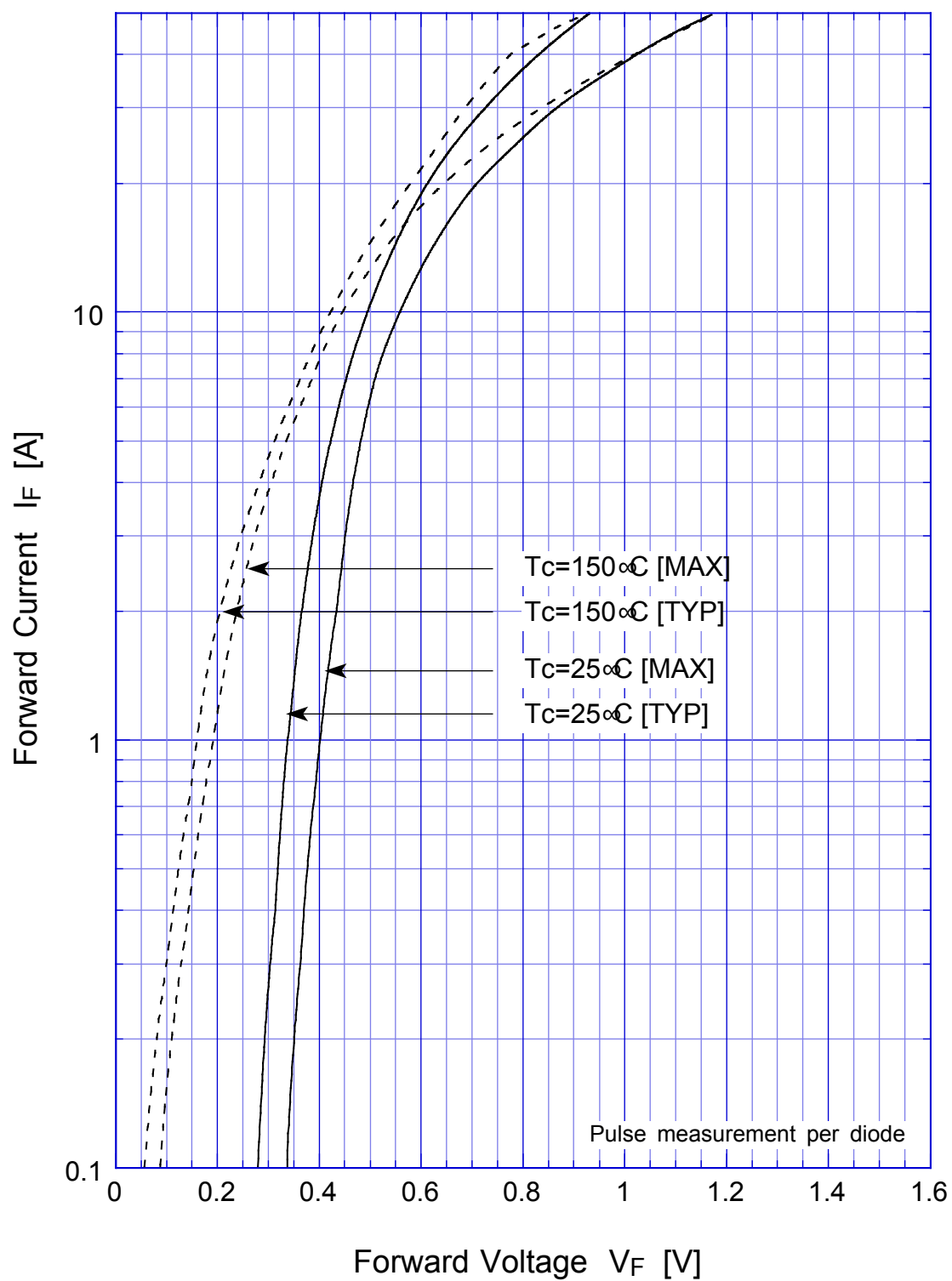
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T_{stg}		-55~150	$^{\circ}\text{C}$
Operating Junction Temperature	T_j		150	$^{\circ}\text{C}$
Maximum Reverse Voltage	V_{RM}		40	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	45	V
Average Rectified Forward Current	I_o	50Hz sine wave, R-load, Rating for each diode $I_o/2$, $T_c=117^{\circ}\text{C}$	20	A
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Rating of per diode, $T_j=25^{\circ}\text{C}$	230	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width 10 μ s, Rating of per diode, $T_j=25^{\circ}\text{C}$	660	W
Dielectric Strength	V_{dis}	Terminals to case, AC 1 minute	2	kV
Mounting Torque	TOR	(Recommended torque: 0.3N·m)	0.5	N·m

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

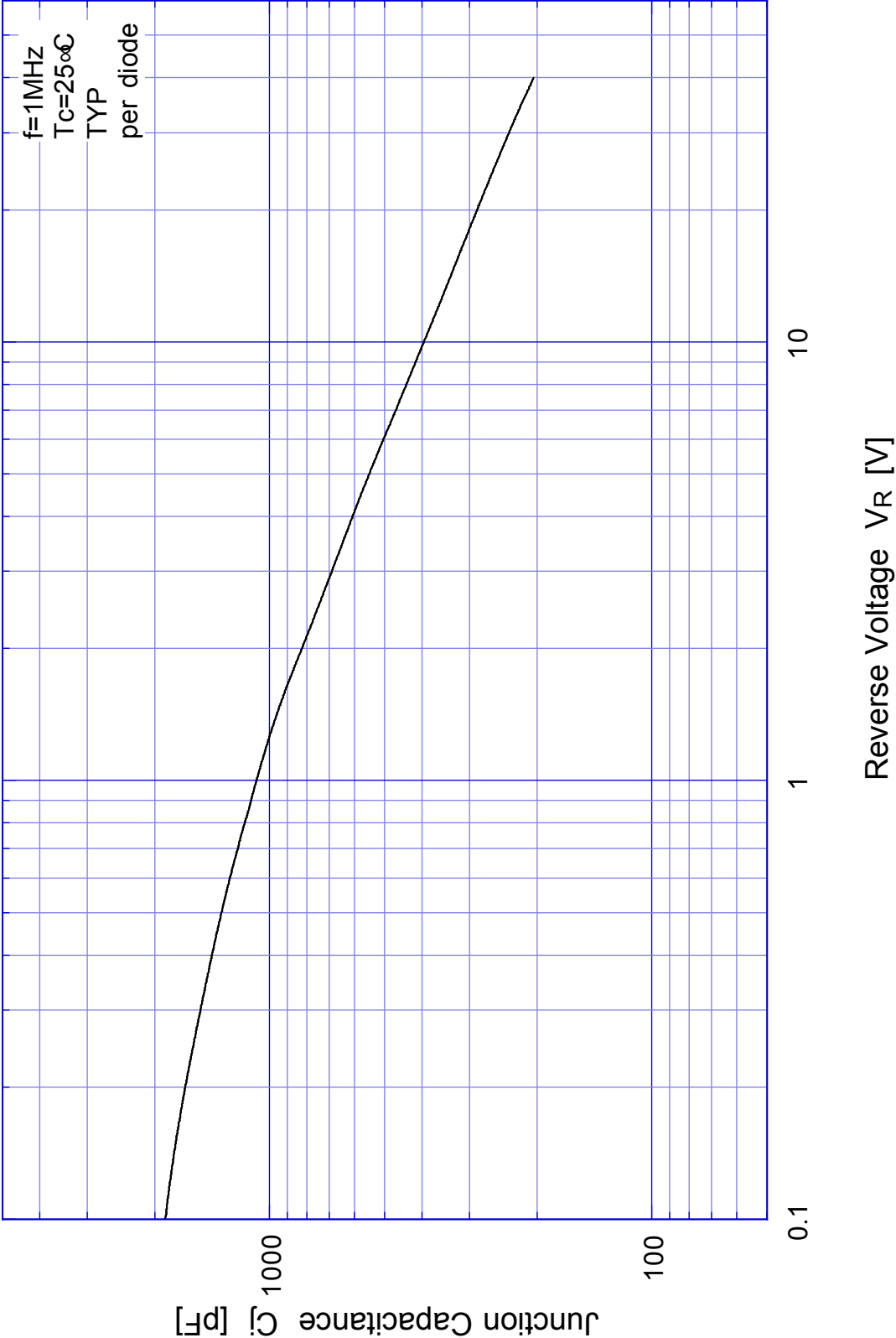
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	$I_F=10\text{A}$, Pulse measurement, Rating of per diode	Max.0.55	V
Reverse Current	I_R	$V_R=V_{RM}$, Pulse measurement, Rating of per diode	Max.7.5	mA
Junction Capacitance	C_j	$f=1\text{MHz}$, $V_R=10\text{V}$, Rating of per diode	Typ.390	pF
Thermal Resistance	θ_{jc}	junction to case	Max.2.0	$^{\circ}\text{C/W}$

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Forward Voltage

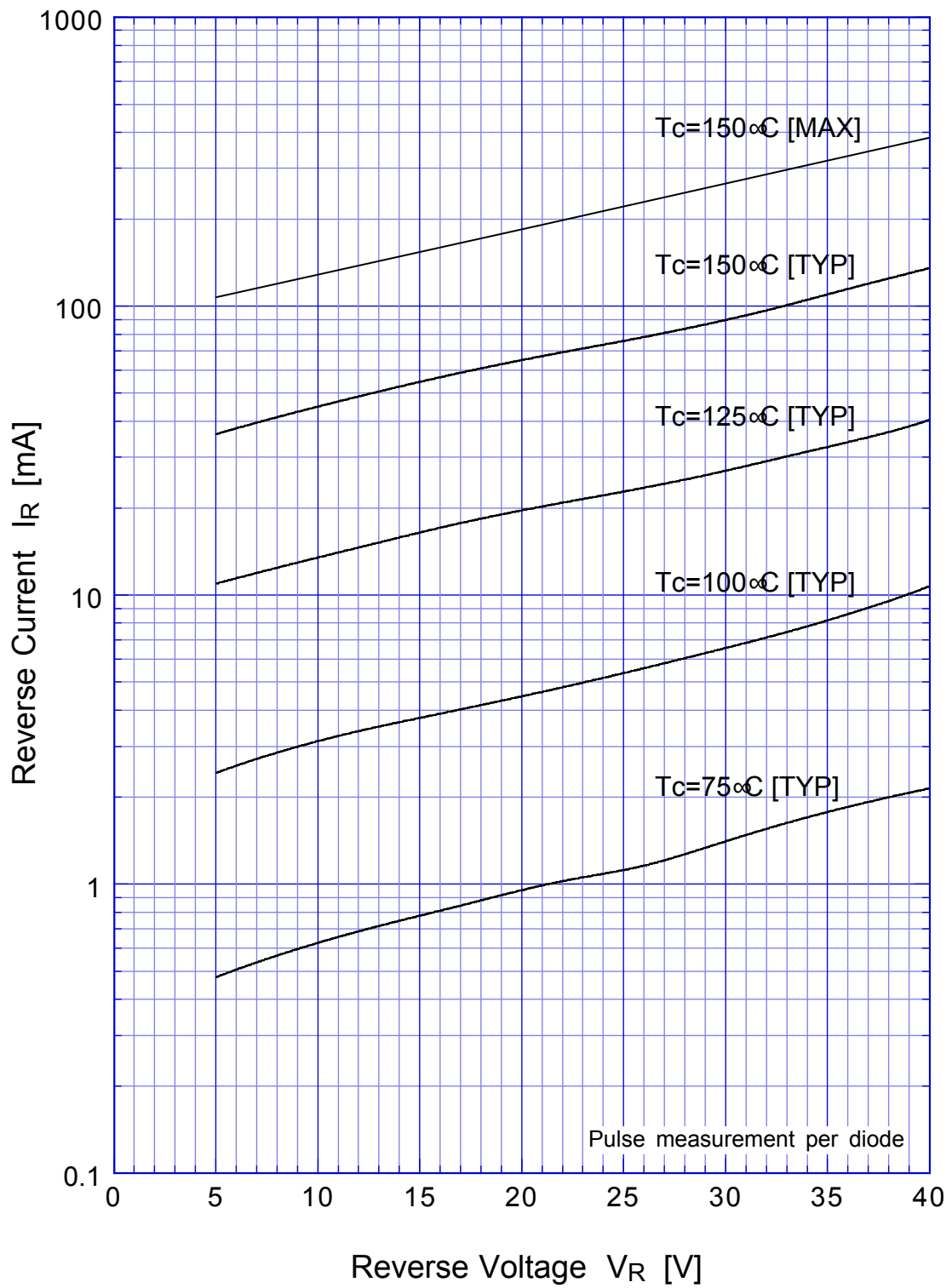


SF20SC4 Junction Capacitance

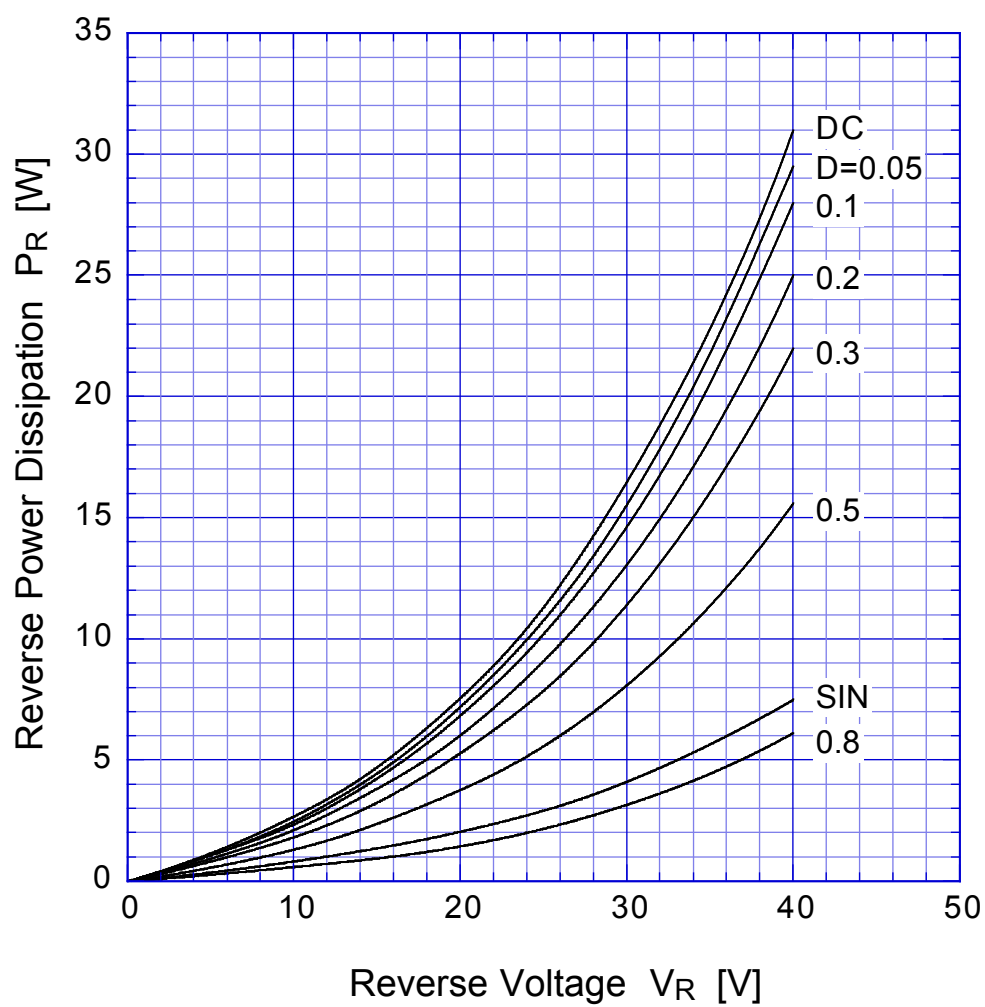


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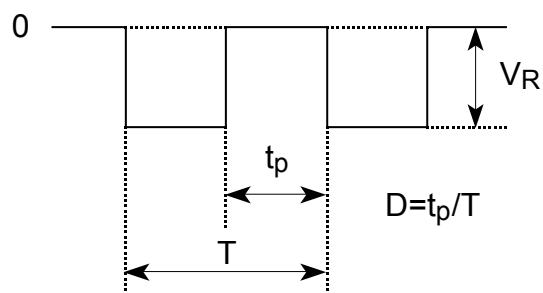
Reverse Current



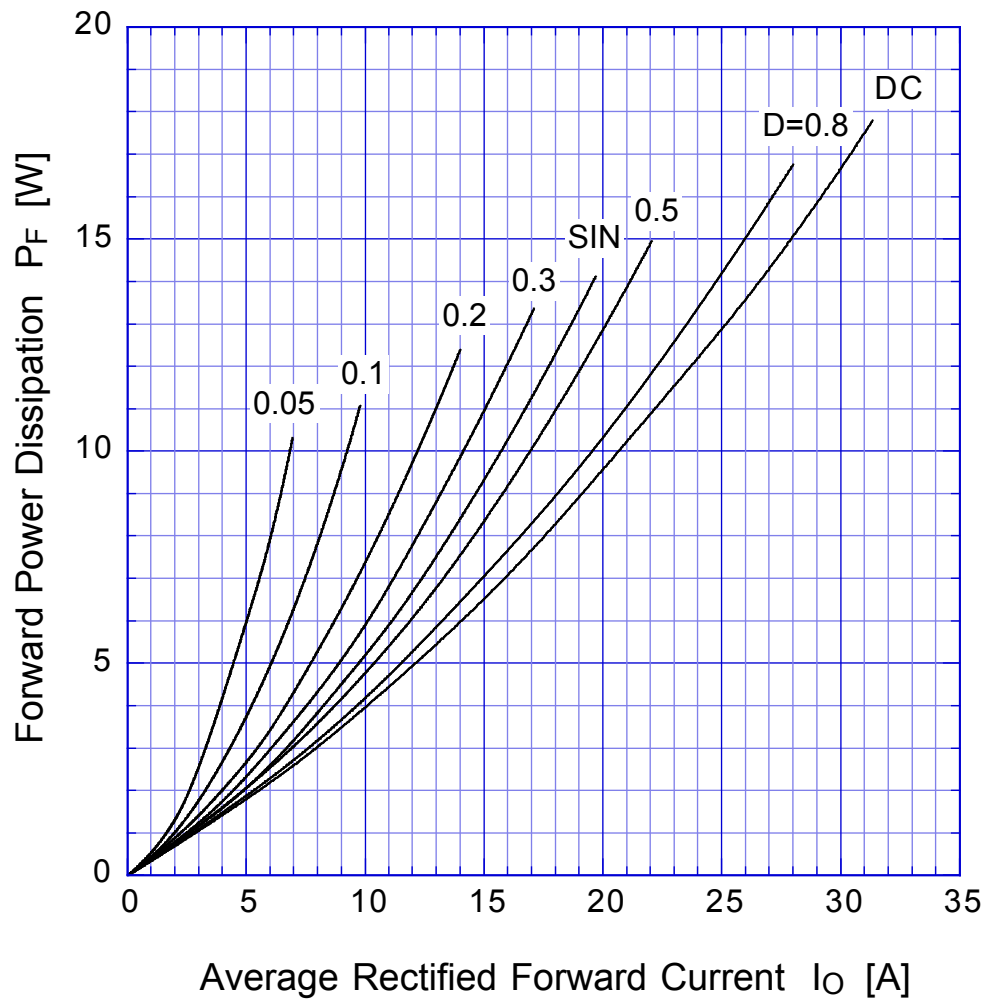
SF20SC4 Reverse Power Dissipation



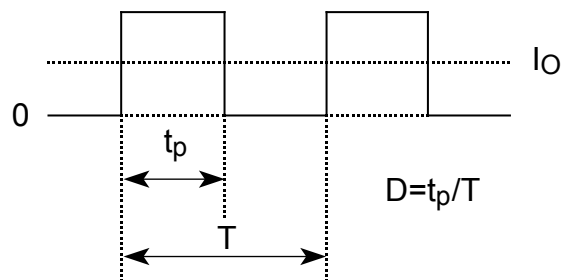
$T_j = 150^\circ\text{C}$



SF20SC4 Forward Power Dissipation

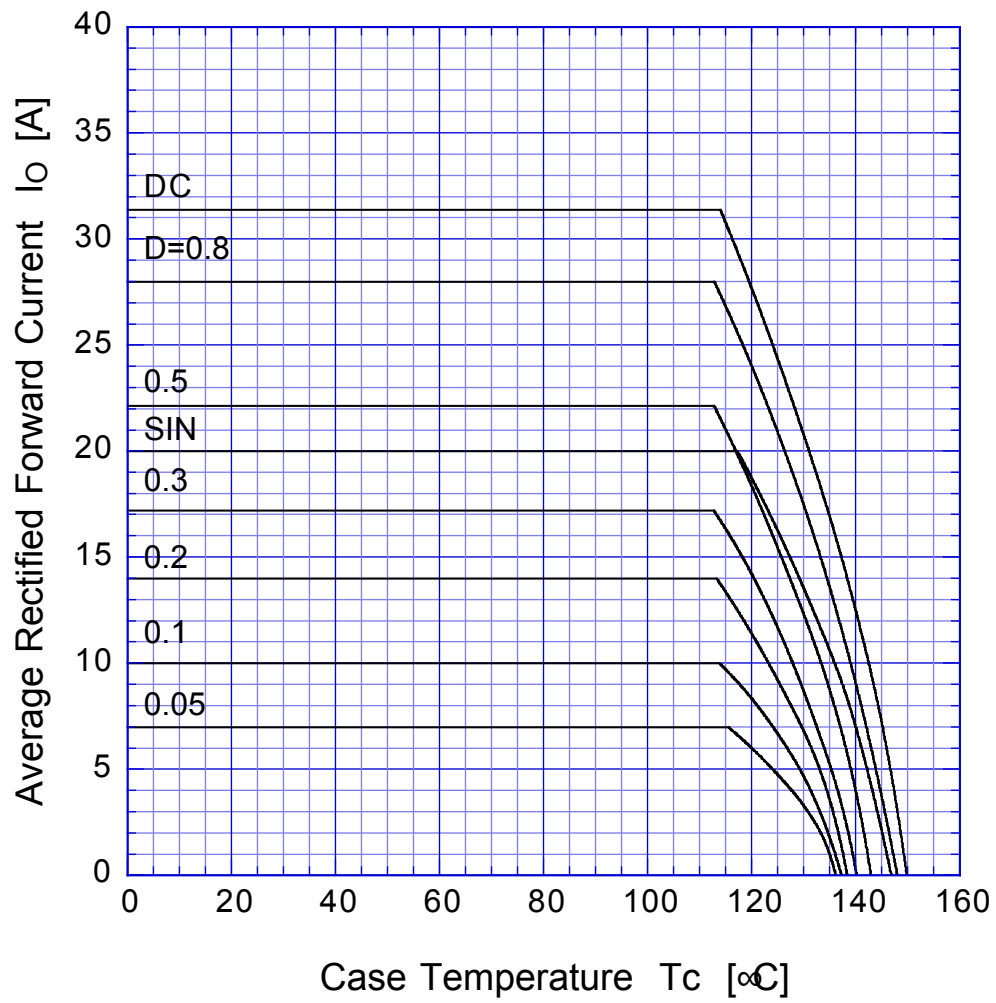


$T_j = 150^\circ\text{C}$

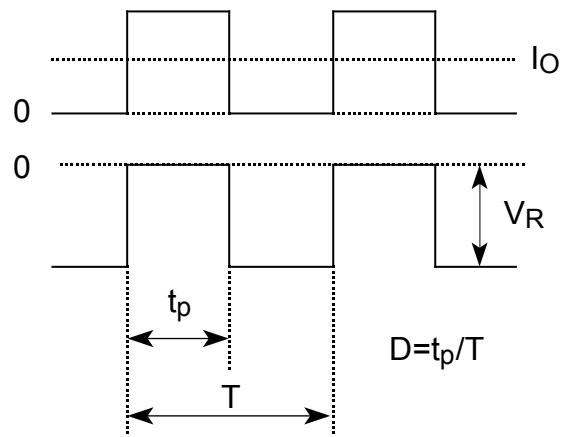


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Derating Curve

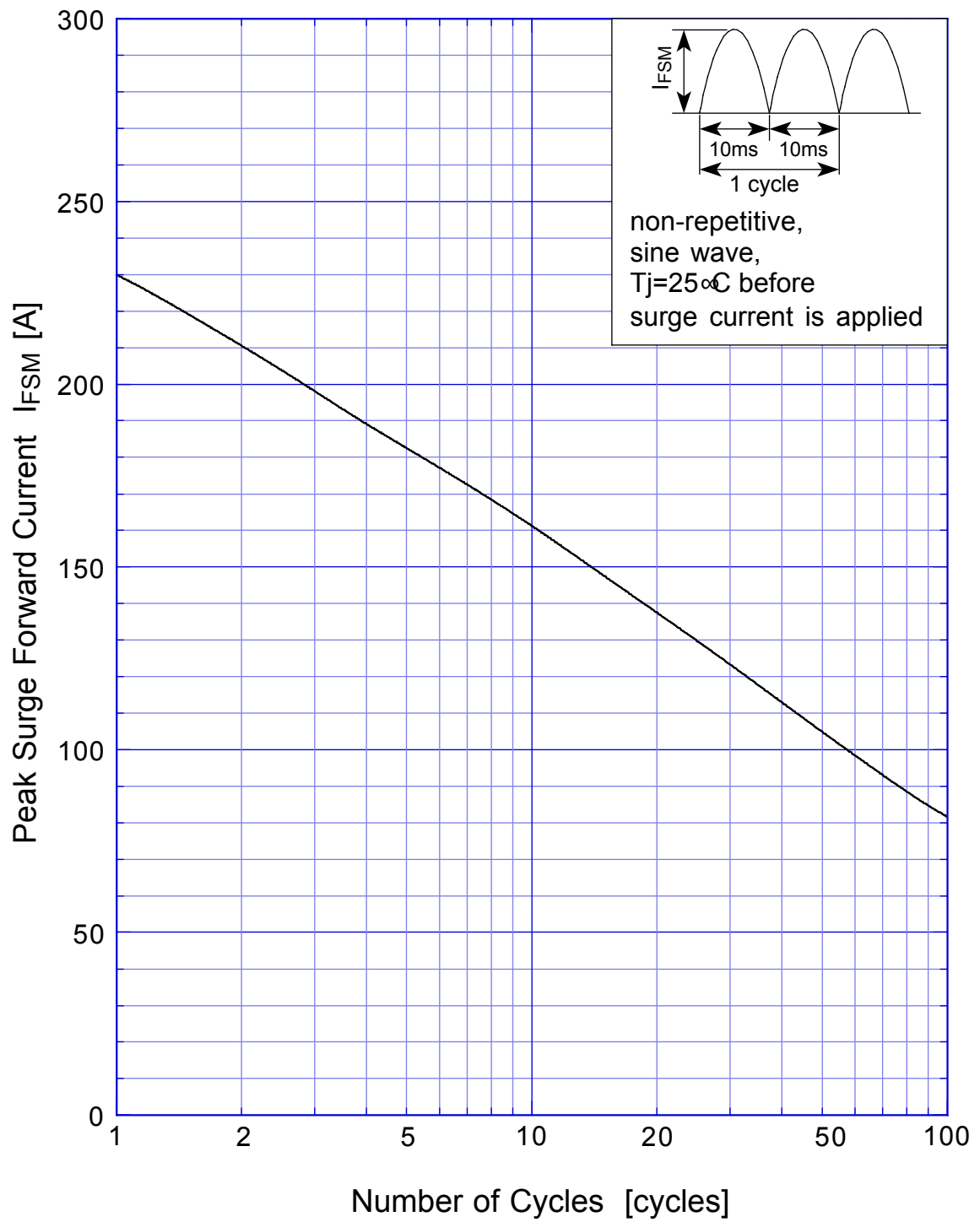


$V_R = 20\text{V}$



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Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve

