

S20SC4M

40V 20A

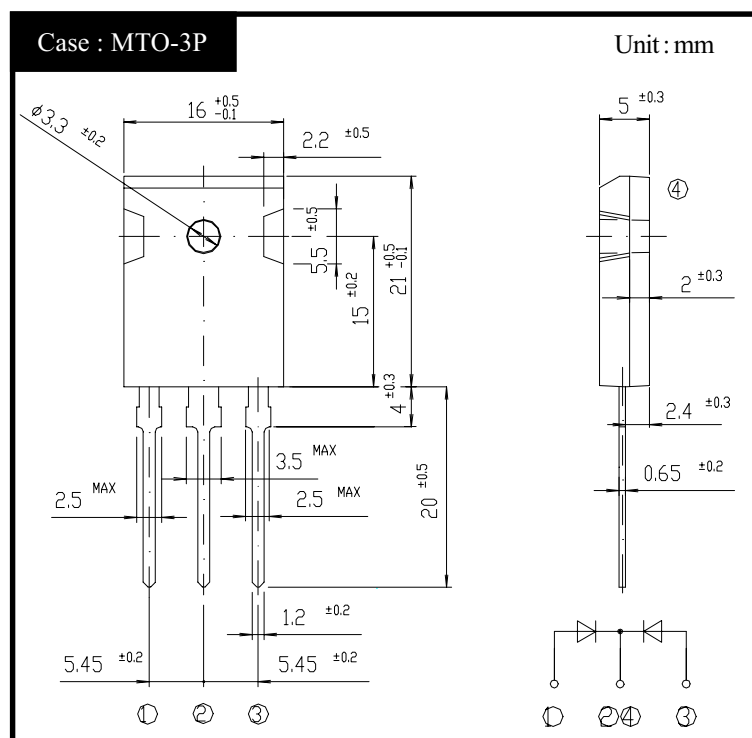
FEATURES

- $T_j 150^{\circ}\text{C}$
- P_{RRSM} avalanche guaranteed
- Small θ_{jc}
- High current capacity

APPLICATION

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

OUTLINE DIMENSIONS



RATINGS

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

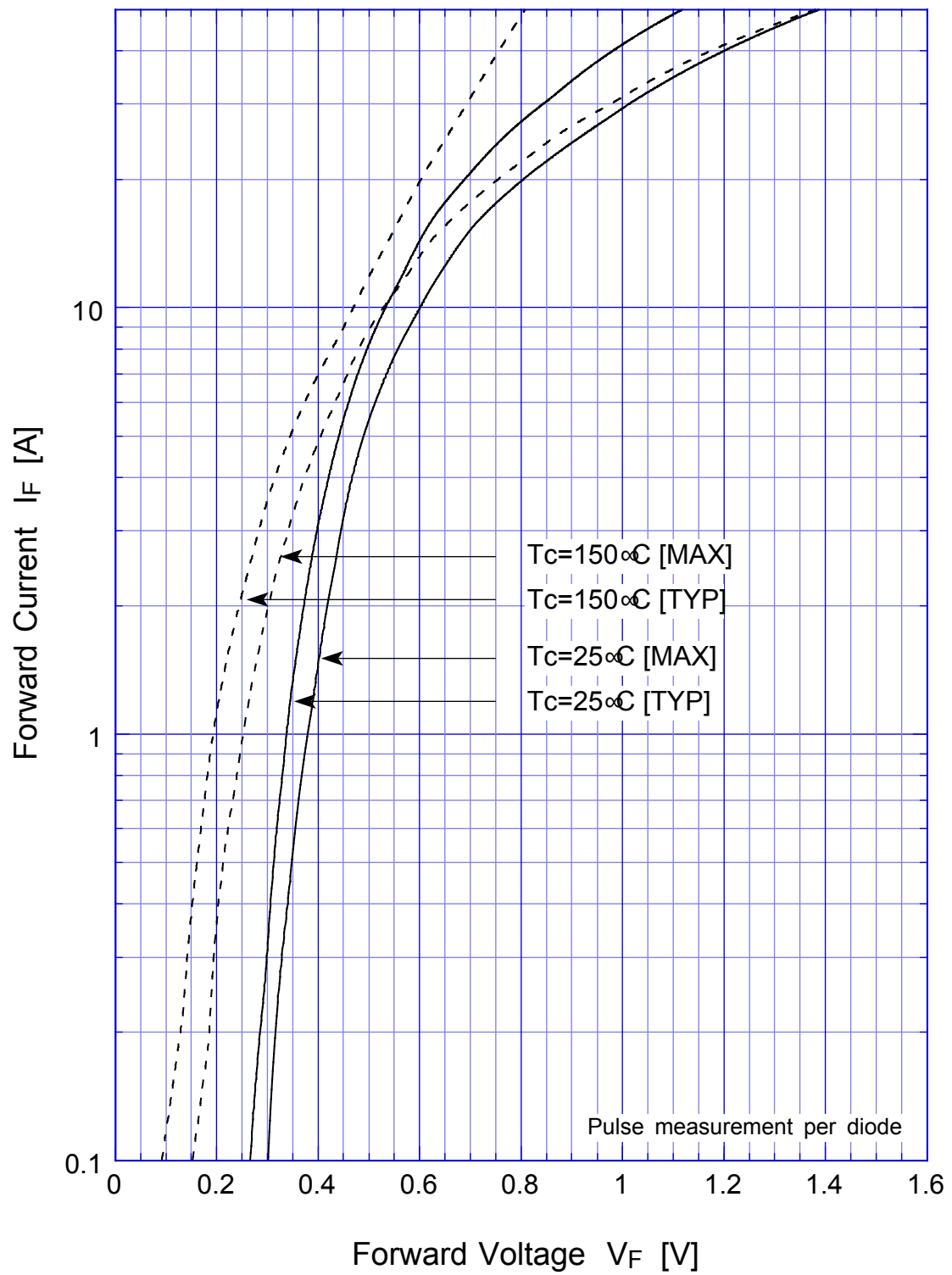
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	T_{stg}		$-40 \sim 150$	$^{\circ}\text{C}$
Operating Junction Temperature	T_j		150	$^{\circ}\text{C}$
Maximum Reverse Voltage	V_{RM}		40	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	45	V
Average Rectified Forward Current	I_o	50Hz sine wave, R-load, Rating for each diode $I_o/2$, $T_c=129^{\circ}\text{C}$	20	A
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=125^{\circ}\text{C}$	170	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width 10μs, Rating of per diode, $T_j=25^{\circ}\text{C}$	660	W
Mounting Torque	TOR	(Recommended torque: $0.5\text{N}\cdot\text{m}$)	0.8	$\text{N}\cdot\text{m}$

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

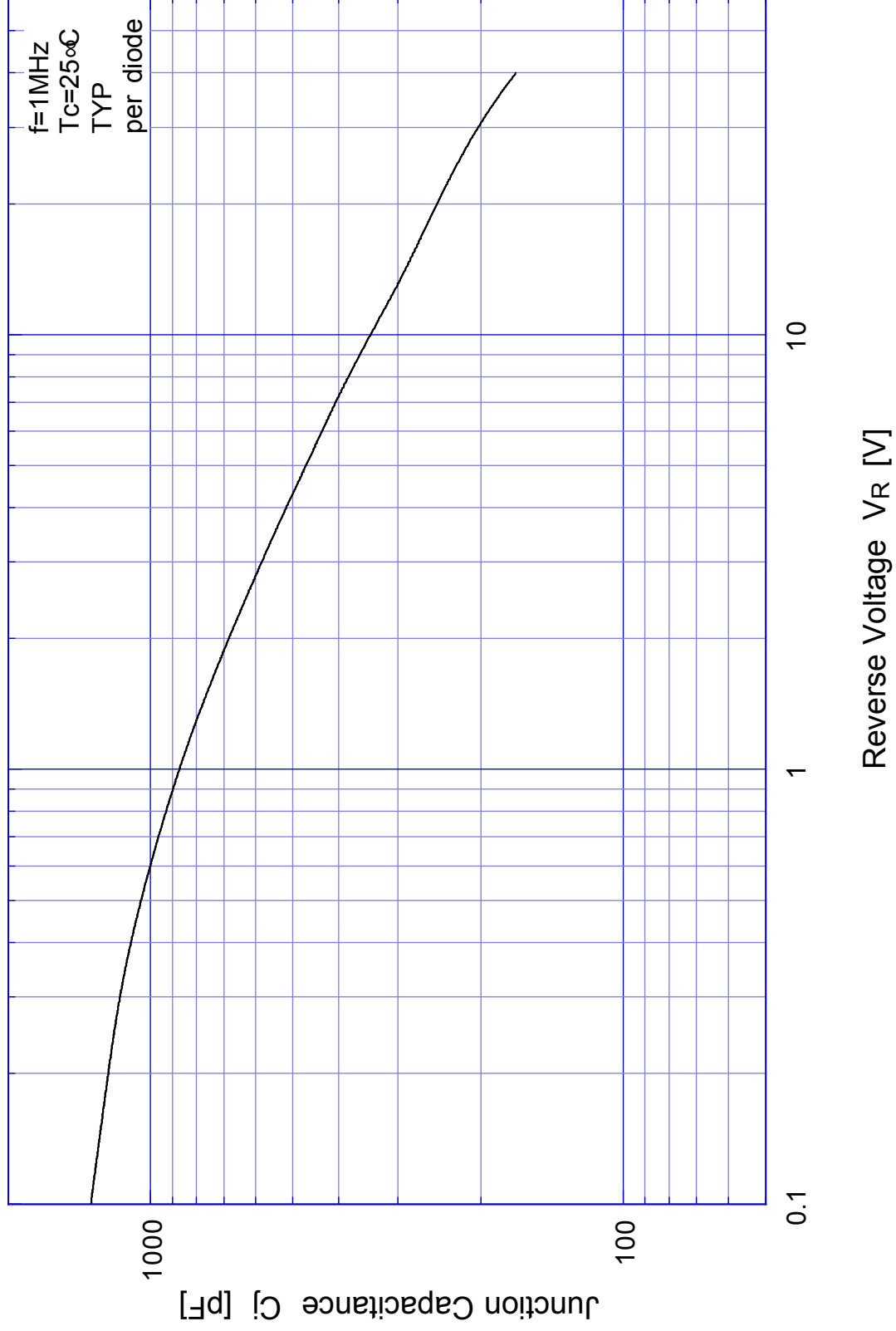
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_{F1}	$I_F=7.5\text{A}$, Pulse measurement, Rating of per diode	Max 0.55	V
	V_{F2}	$I_F=10\text{A}$, Pulse measurement, Rating of per diode	Max 0.59	V
Reverse Current	I_R	$V_R=V_{RM}$, Pulse measurement, Rating of per diode	Max 5	mA
Junction Capacitance	C_j	$f=1\text{MHz}$, $V_R=10\text{V}$, Rating of per diode	Typ 340	pF
Thermal Resistance	θ_{jc}	junction to case	Max 1.2	$^{\circ}\text{C/W}$

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Forward Voltage

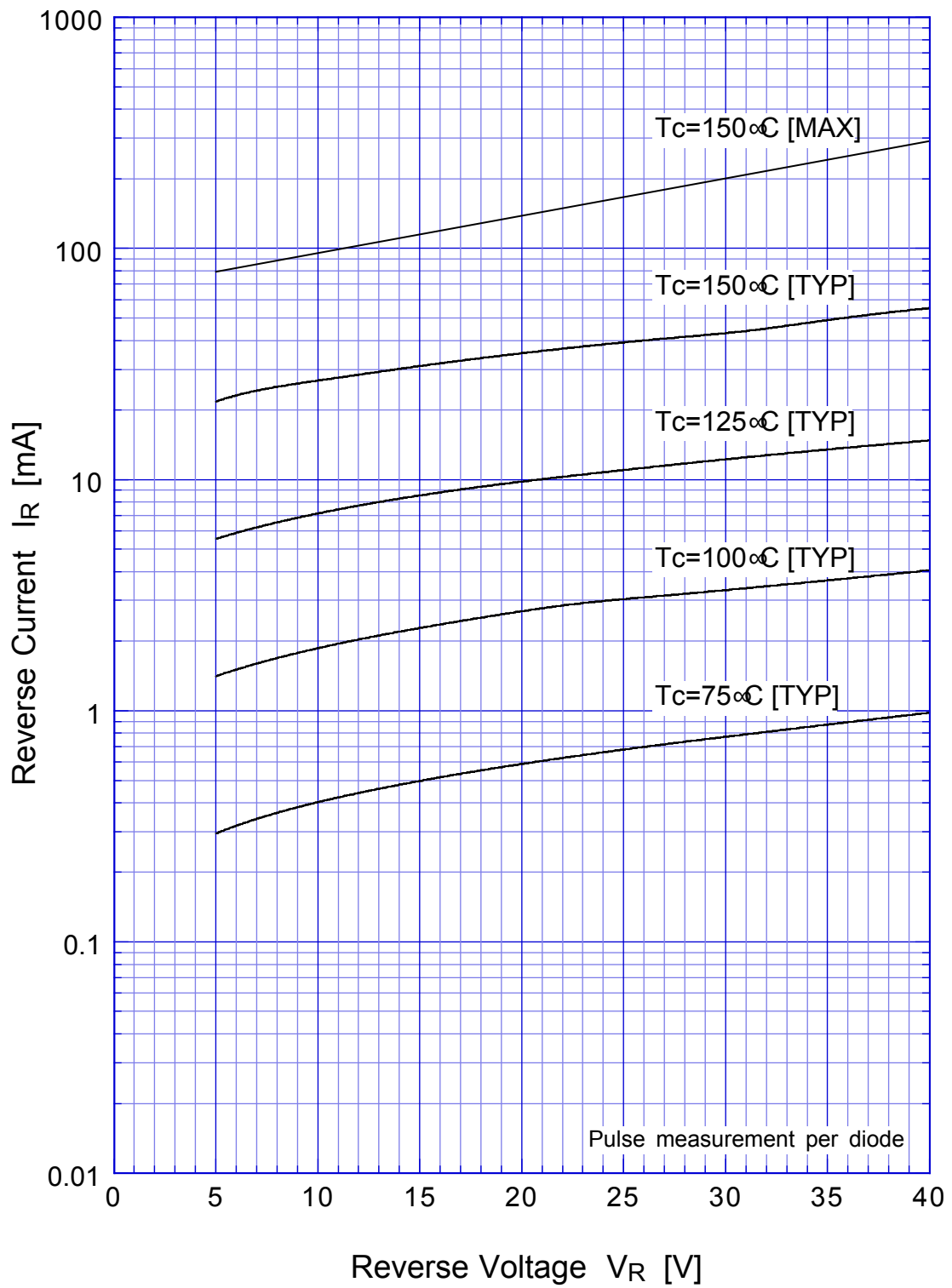


S20SC4M Junction Capacitance

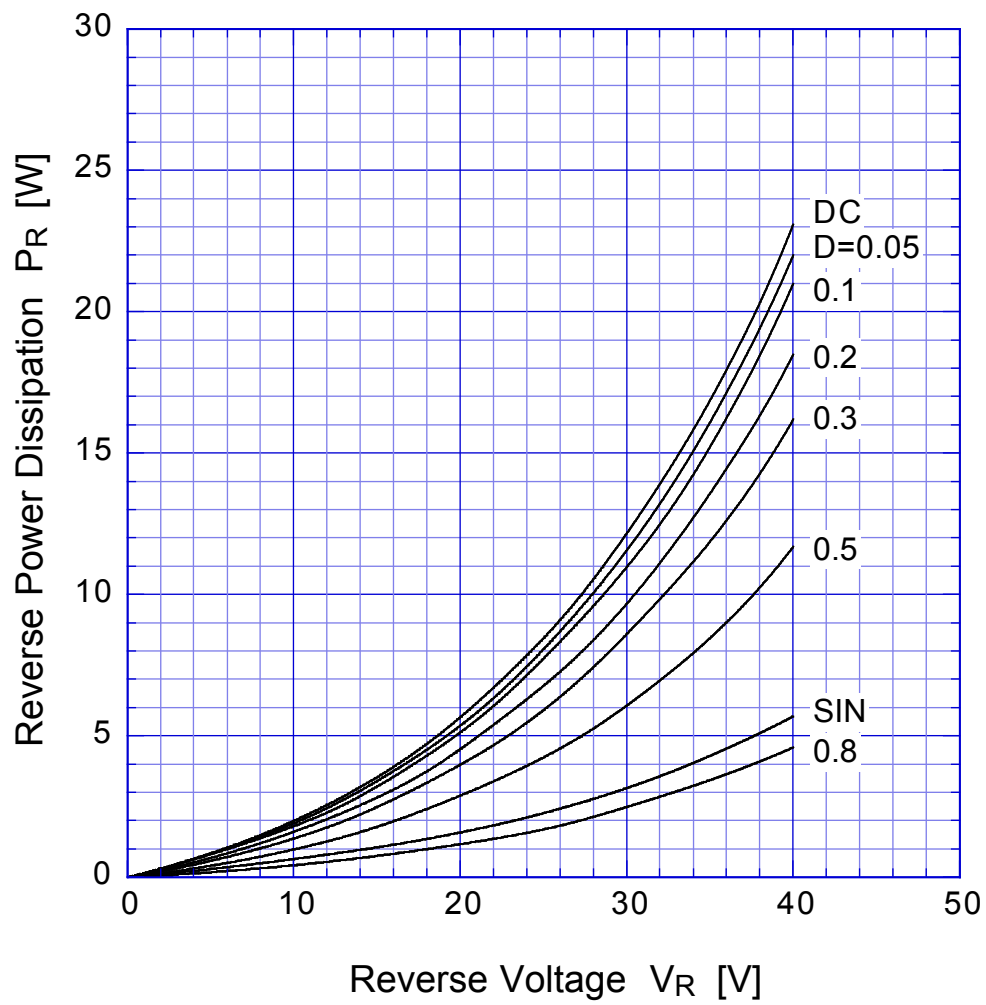


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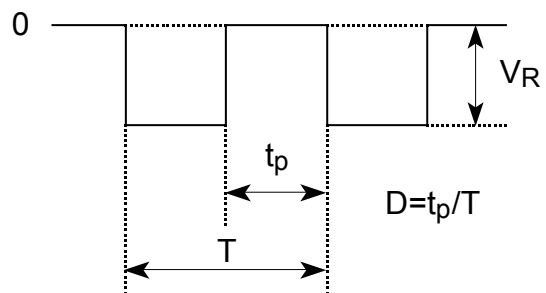
Reverse Current



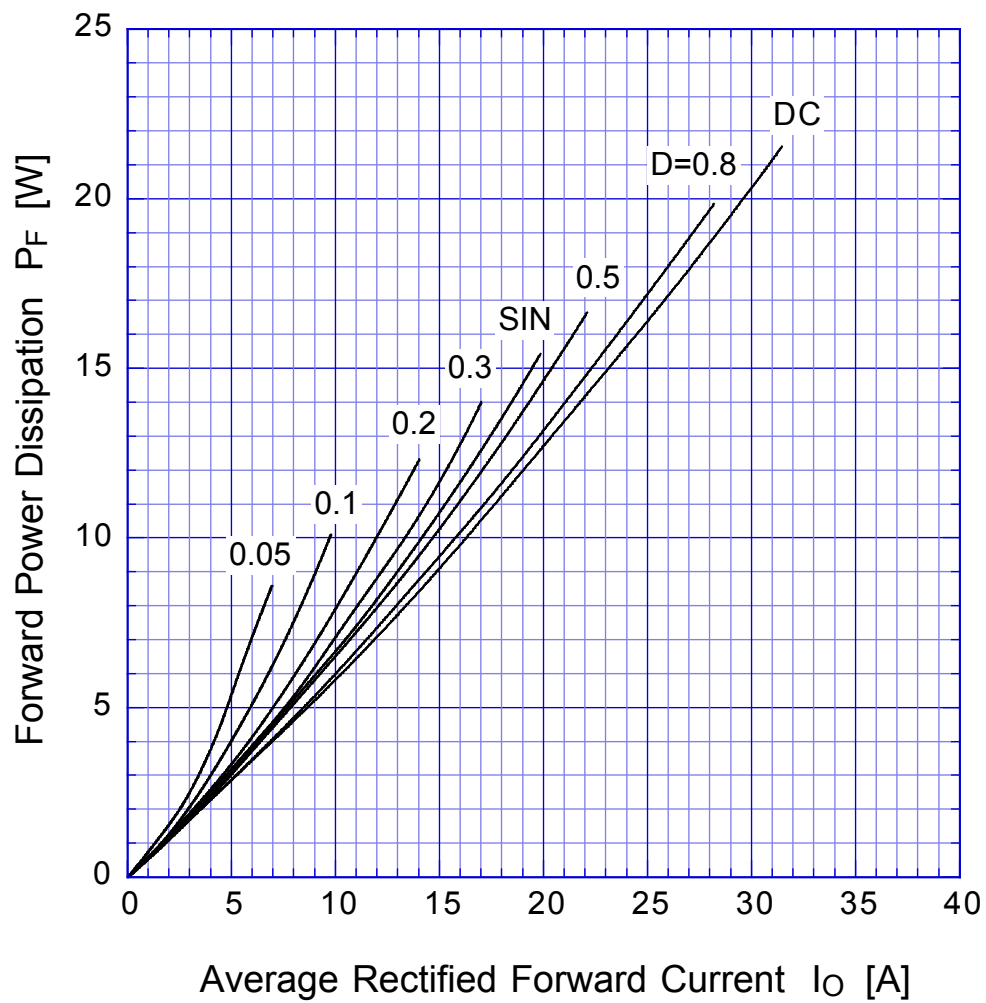
S20SC4M Reverse Power Dissipation



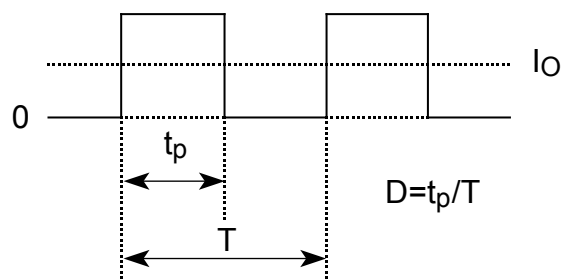
$T_j = 150^\circ\text{C}$



S20SC4M Forward Power Dissipation

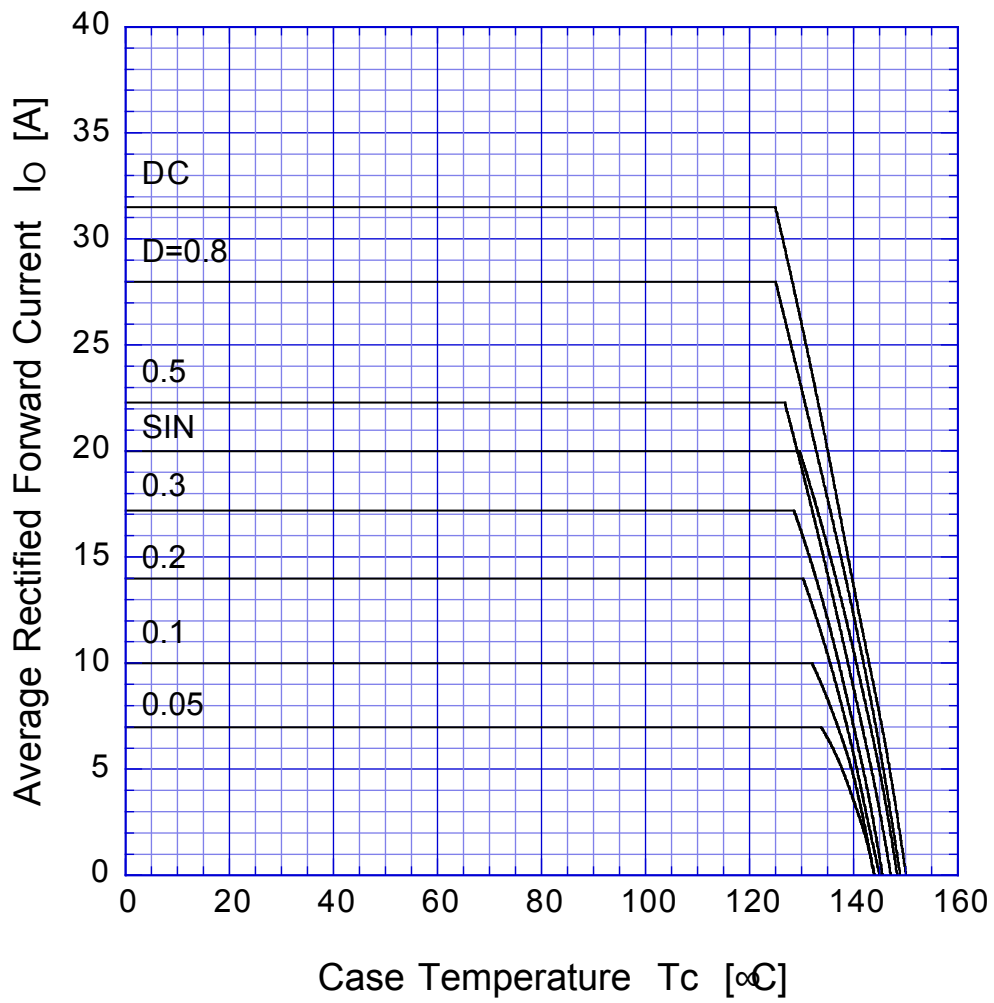


$T_j = 150^\circ\text{C}$

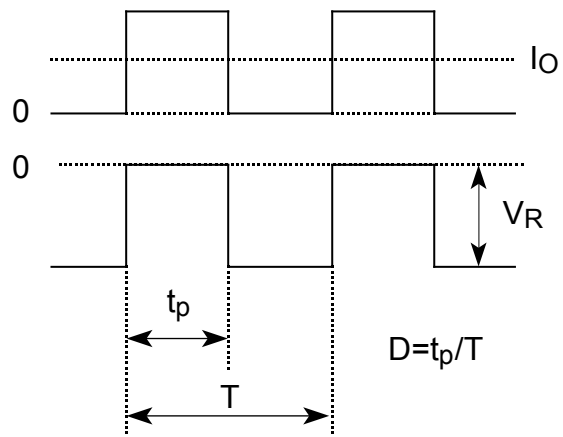


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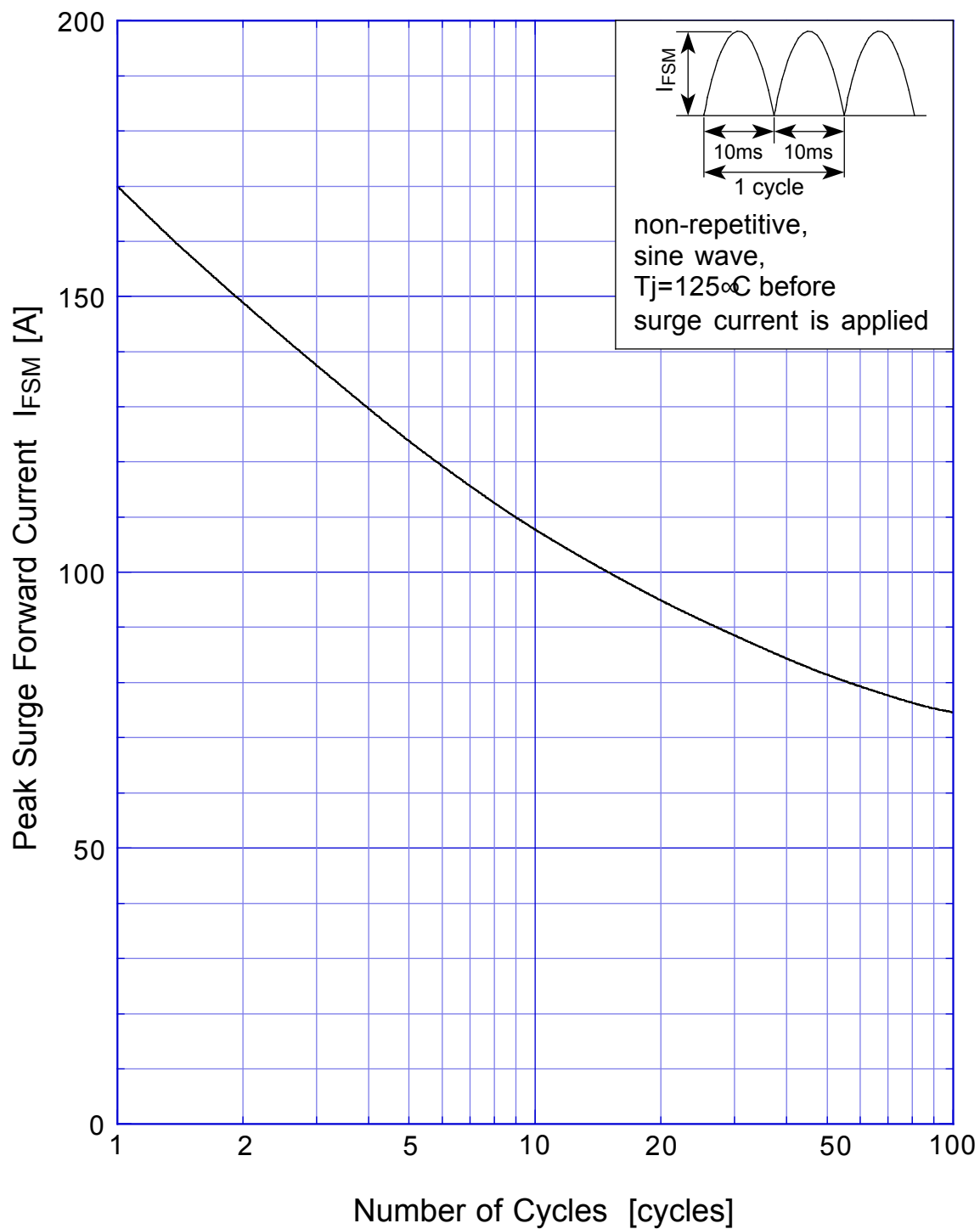
Derating Curve



$V_R = 20V$



S20SC4M Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve

