

SF20SC6

60V 20A

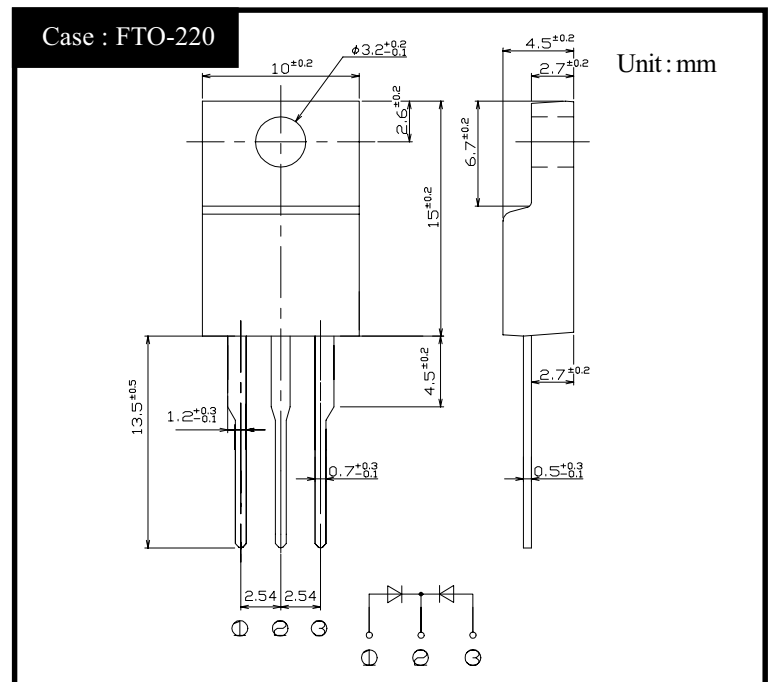
FEATURES

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

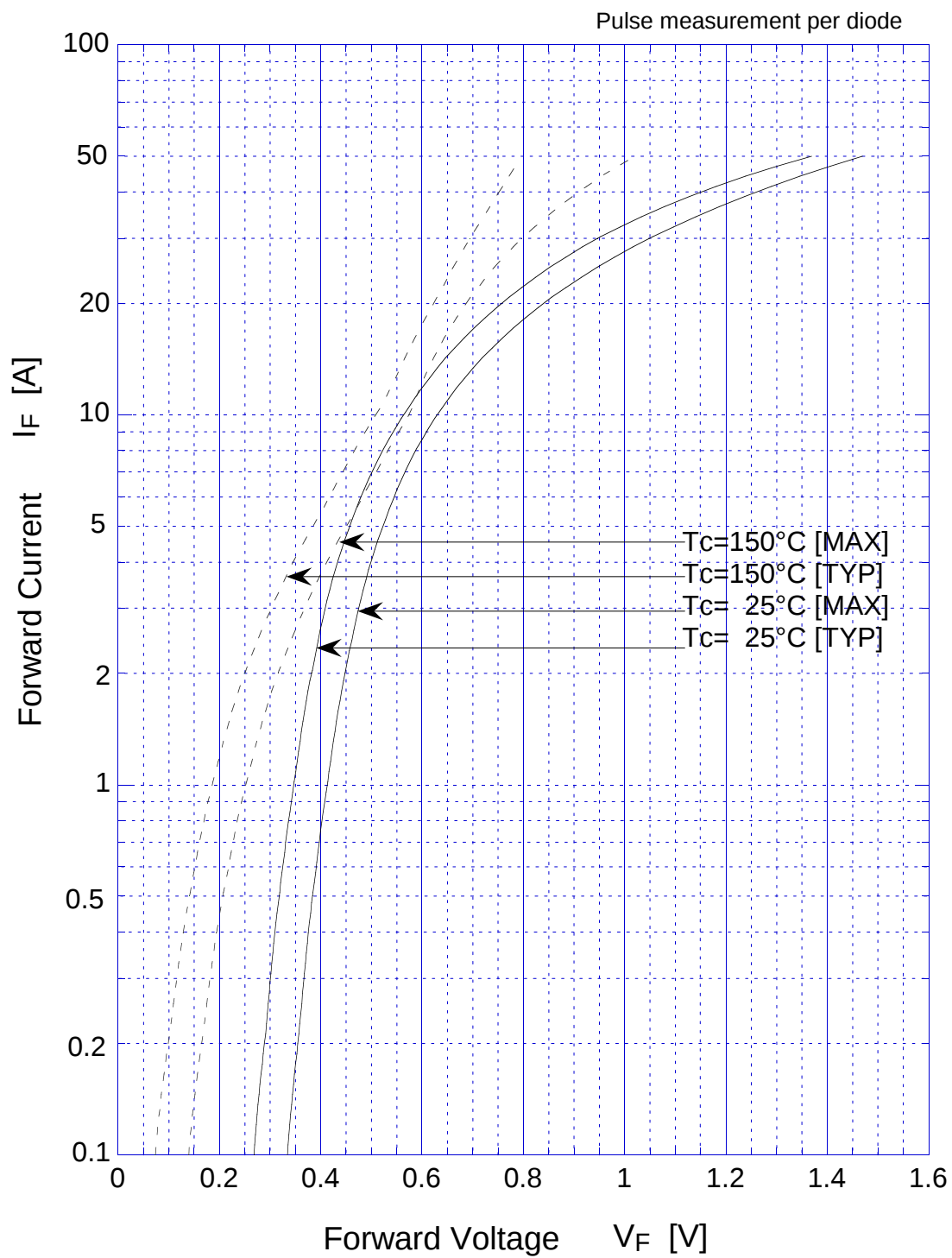
● Absolute Maximum Ratings (If not specified, $T_c=25^{\circ}\text{C}$)

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}		60	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	65	V
Average Rectified Forward Current	I_o	50Hz sine wave, R-load, Rating for each diode $I_o/2$, $T_c=118^{\circ}\text{C}$	20	A
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, $T_j=25^{\circ}\text{C}$	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

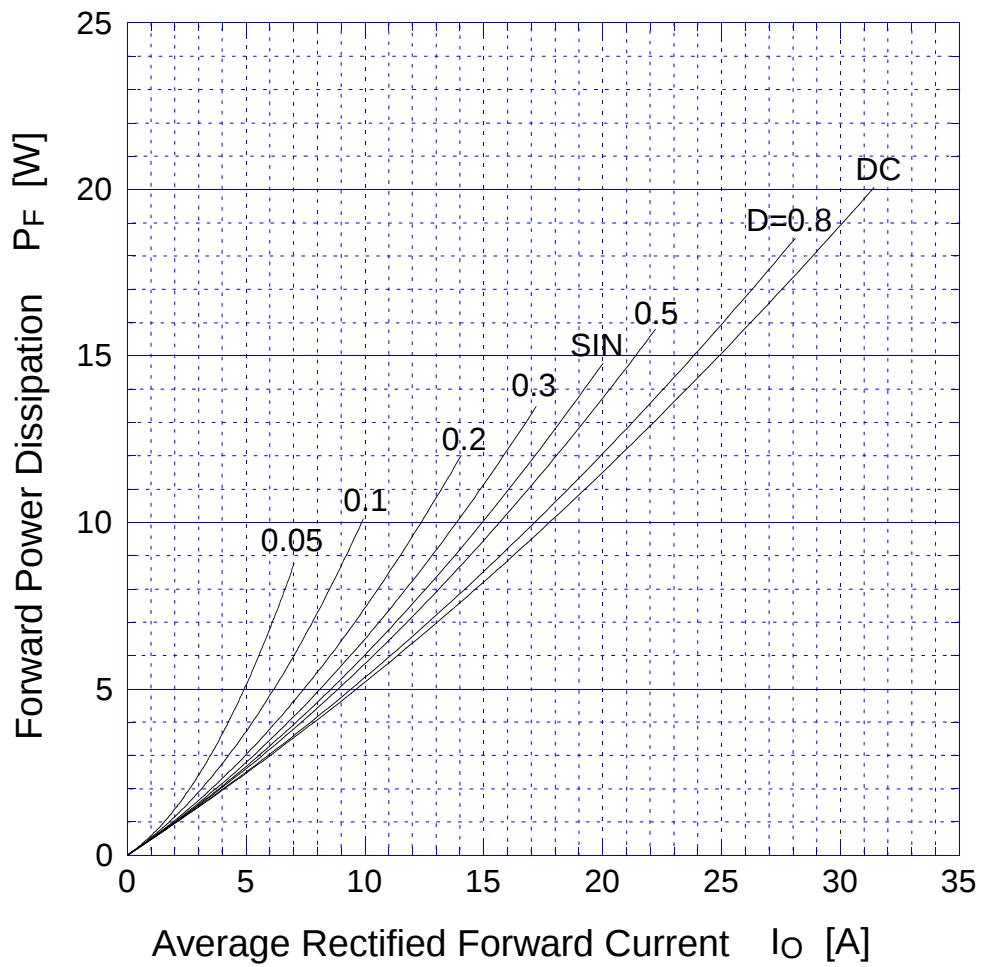
● Electrical Characteristics (If not specified, $T_c=25^{\circ}\text{C}$)

Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	$I_F=10\text{A}$, Pulse measurement, Rating of per diode	Max.0.63	V
Reverse Current	I_R	$V_R=V_{RM}$, Pulse measurement, Rating of per diode	Max.8	mA
Junction Capacitance	C_j	$f=1\text{MHz}$, $V_R=10\text{V}$ Rating of per diode	Typ.370	pF
Thermal Resistance	θ_{jc}	junction to case	Max.1.8	$^{\circ}\text{C/W}$
	θ_{jf}	junction to heatsink	Max.4.3	
	θ_{cf}	case to heatsink	Max.2.5	

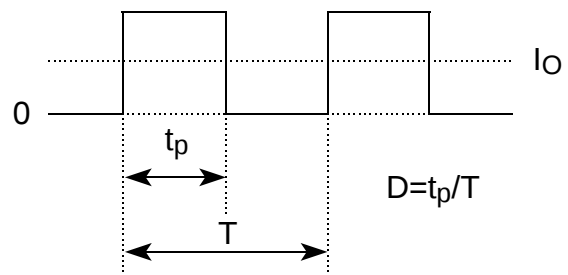
SF20SC6 Forward Voltage



SF20SC6 Forward Power Dissipation

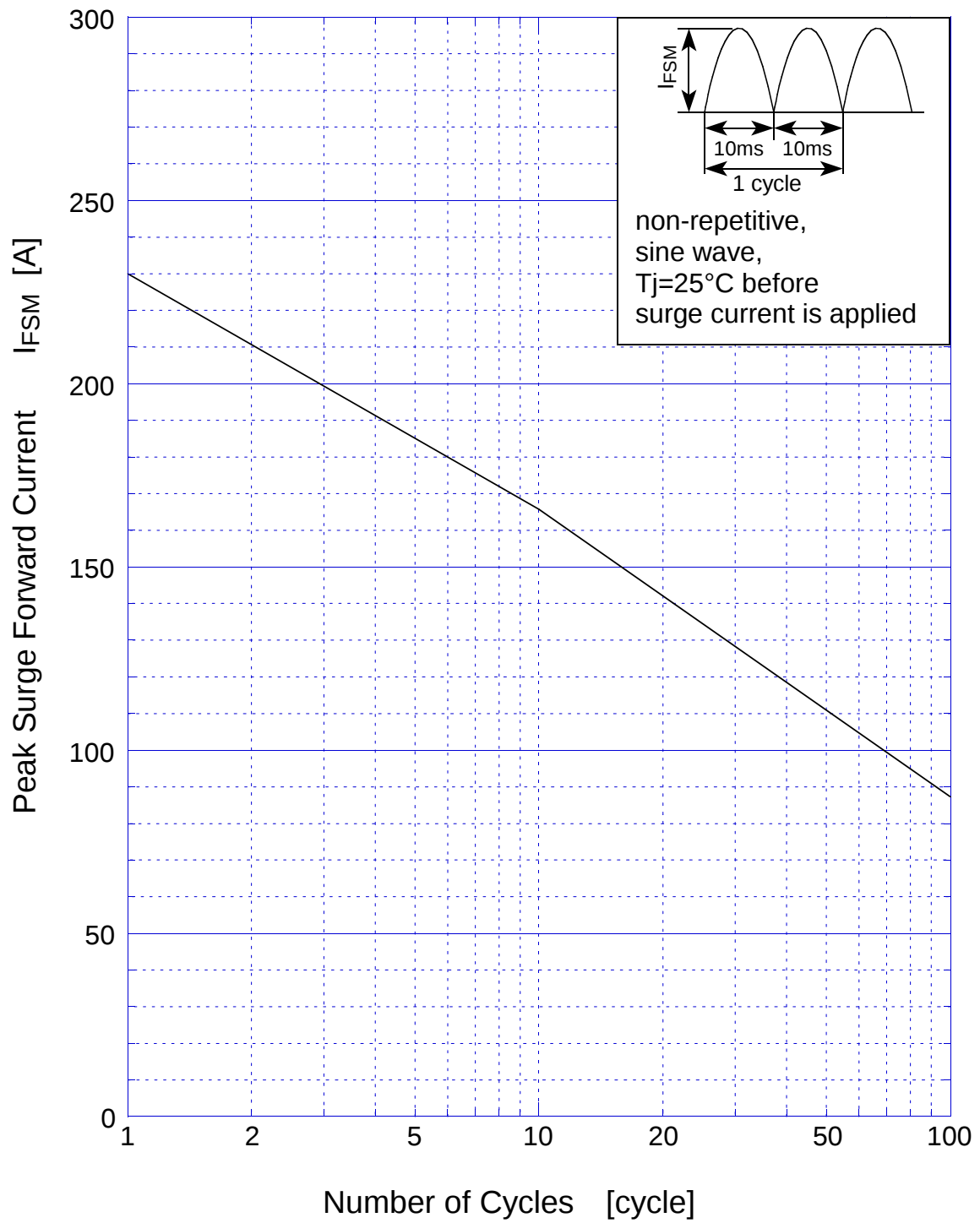


$T_j = 150^\circ\text{C}$

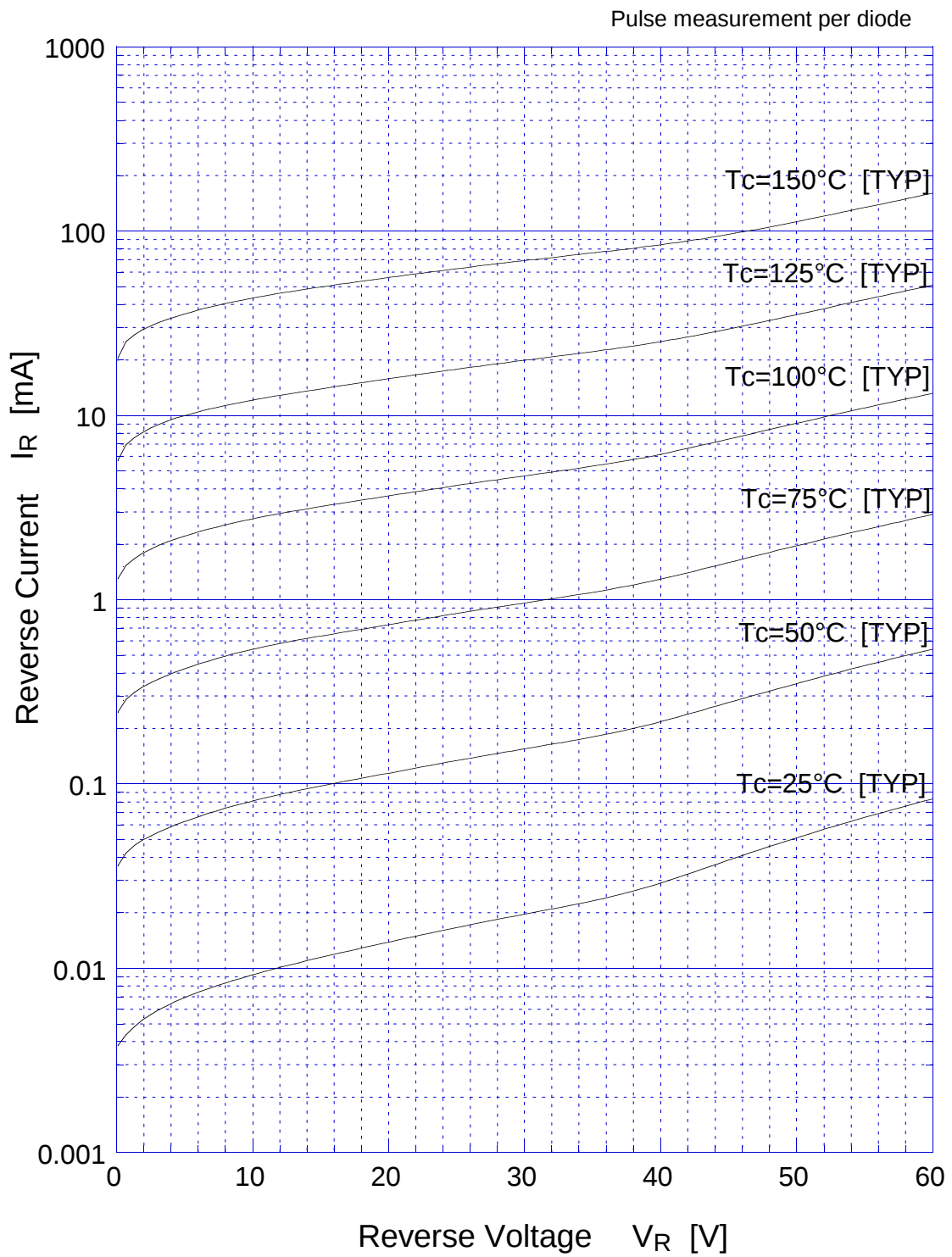


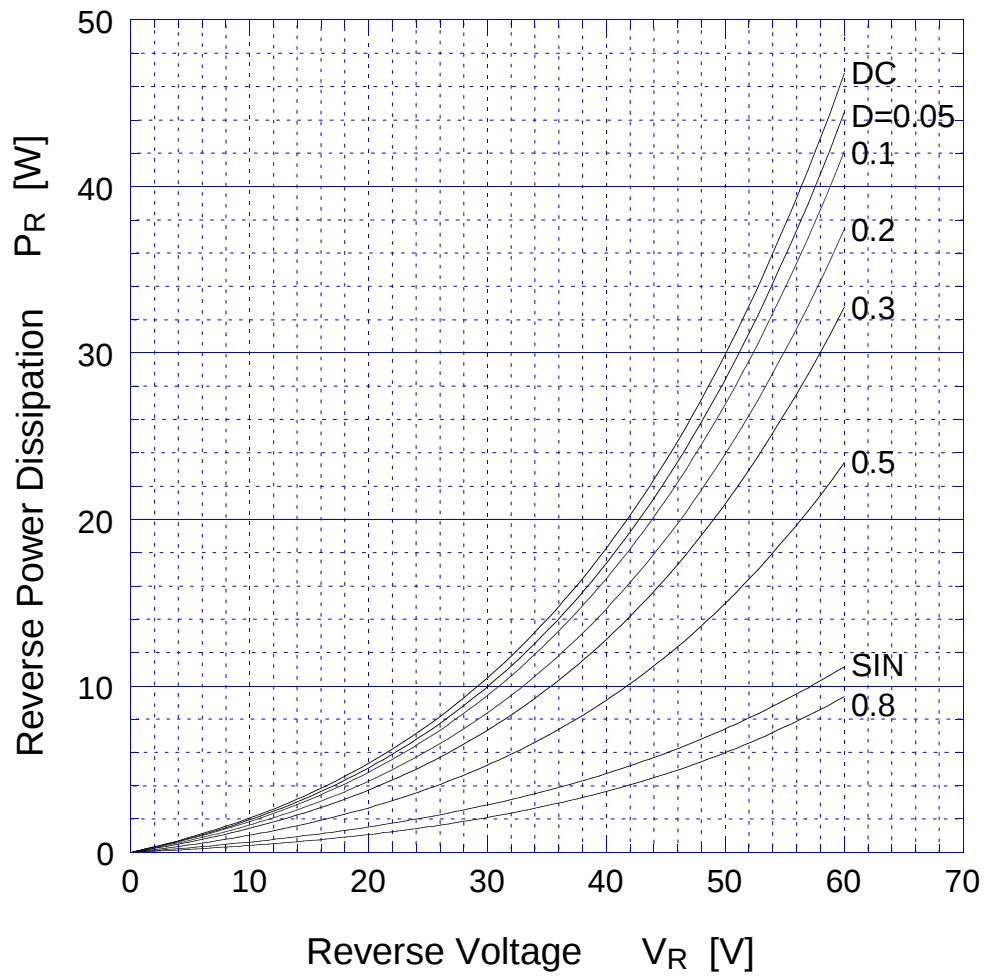
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Peak Surge Forward Capability

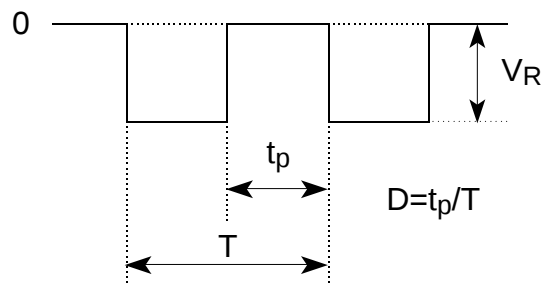


SF20SC6 Reverse Current

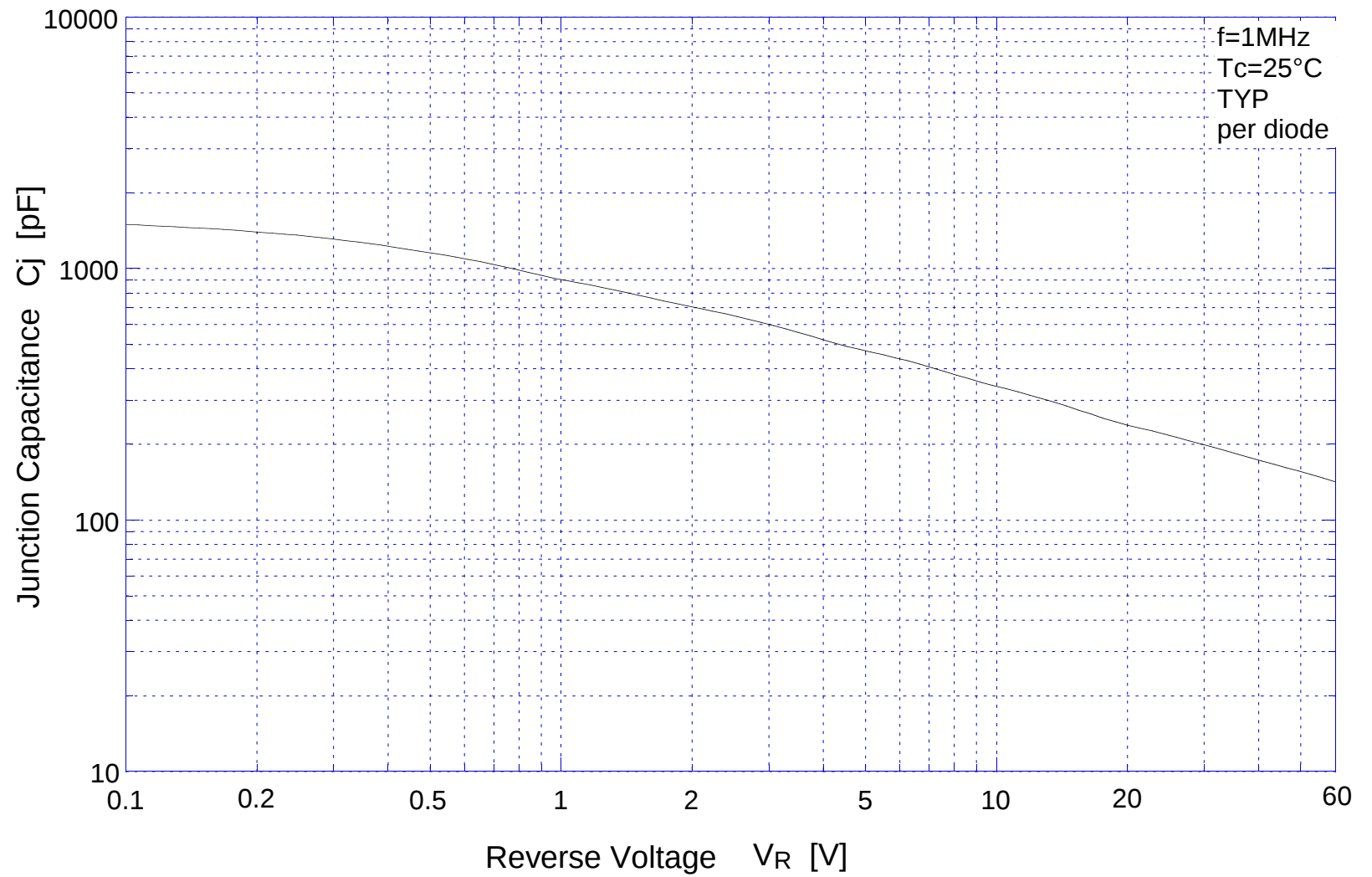




$T_j = 150^\circ\text{C}$

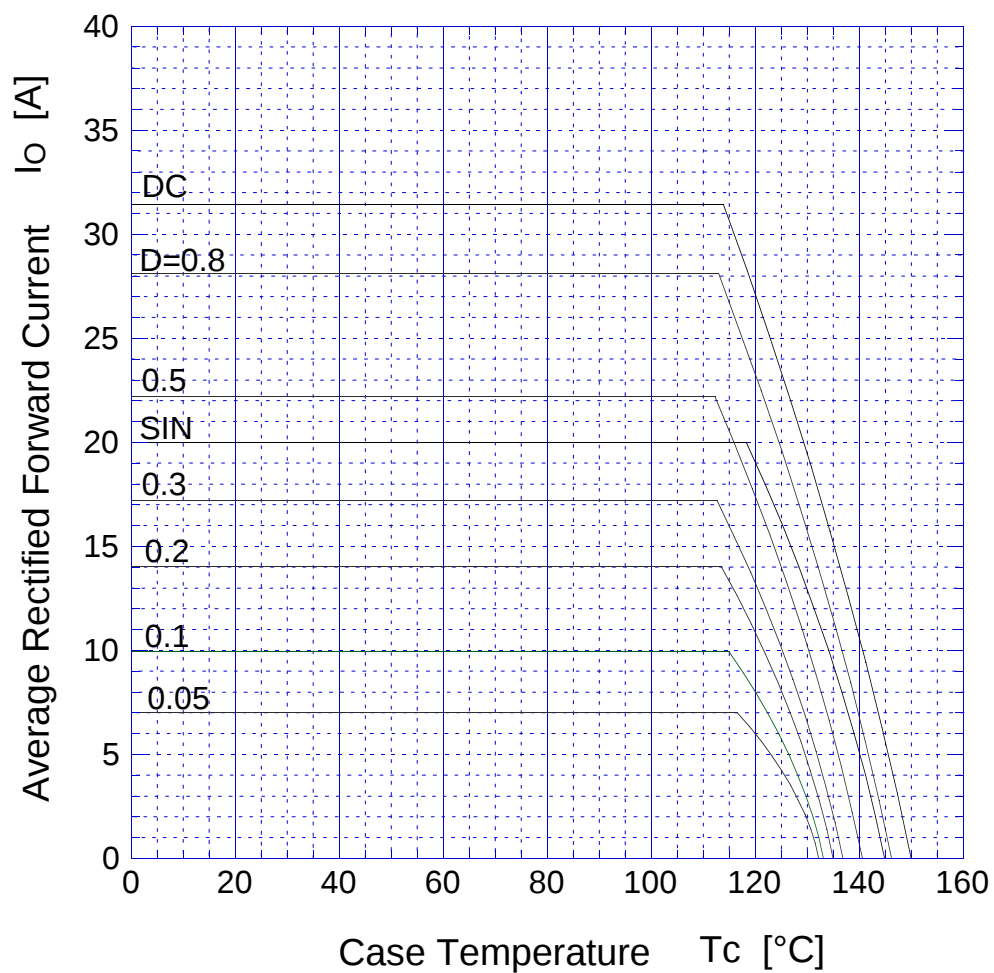


SF20SC6 Junction Capacitance

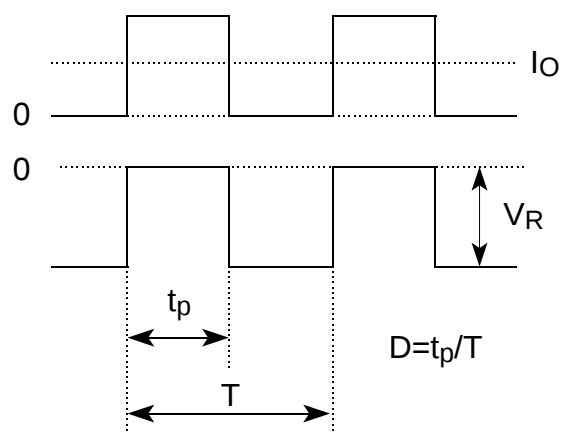


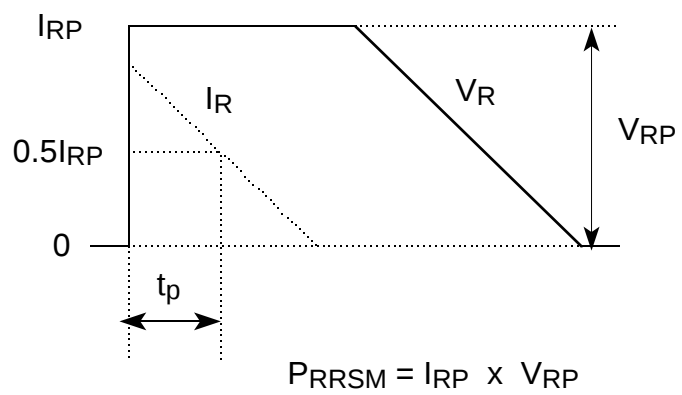
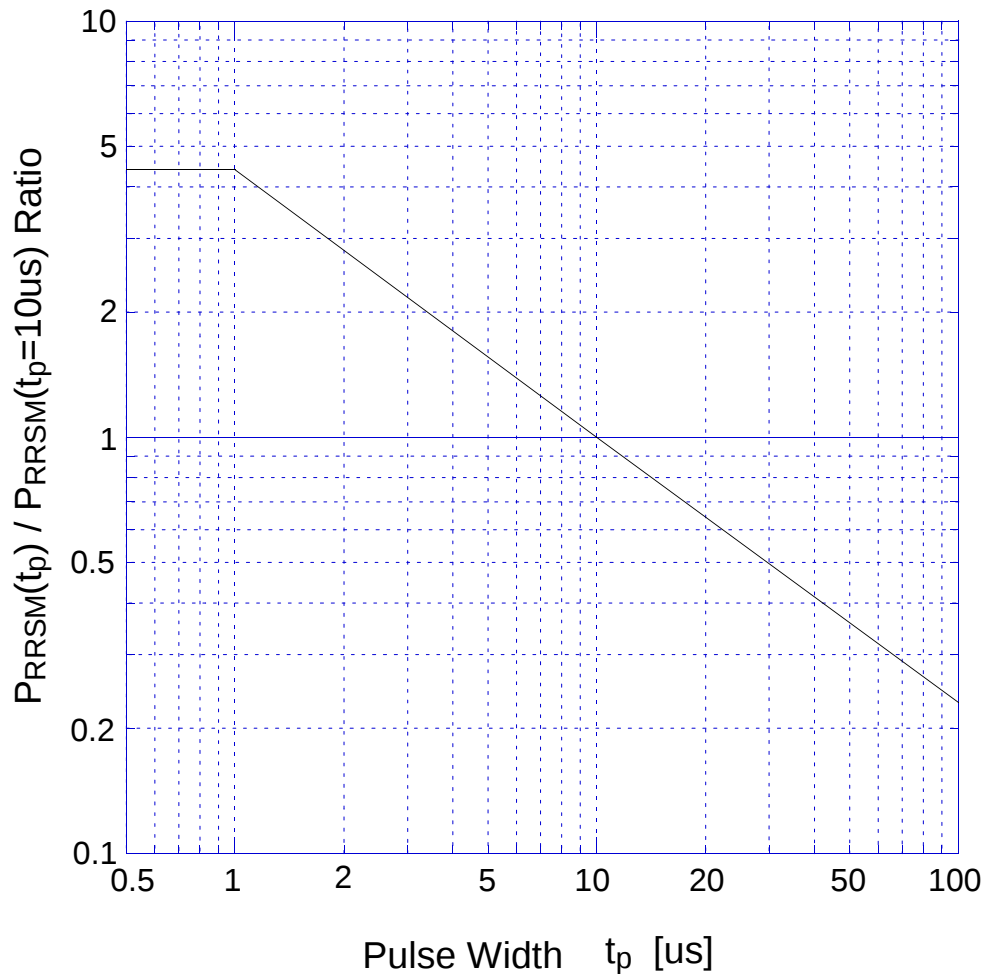
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Derating Curve



$V_R = 30V$





SF20SC6 Repetitive Surge Reverse Power Derating Curve

