SHINDENGEN

Schottky Rectifiers (SBD)

Dual

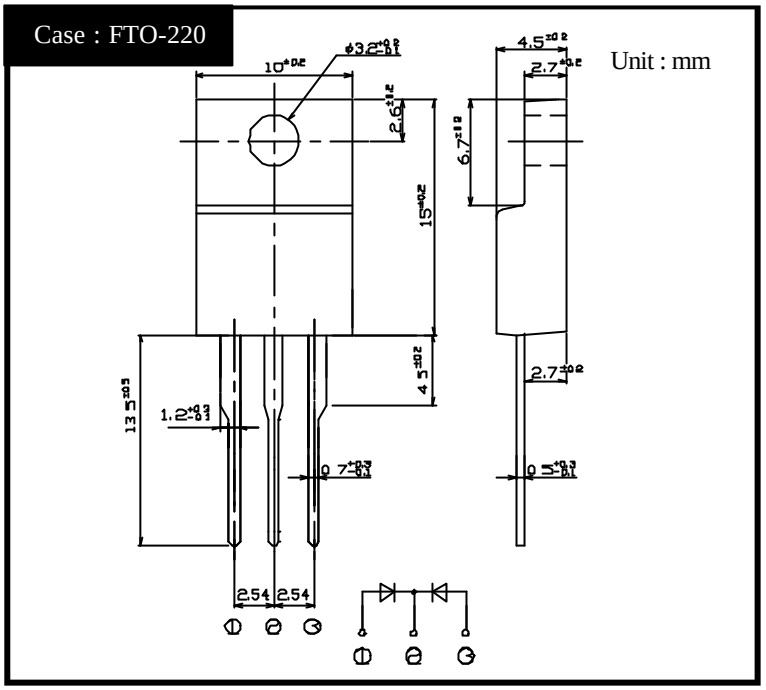
SF20SC4

40V 20A

OUTLINE DIMENSIONS

Case : FTO-220

Unit : mm



FEATURES

- Tj150℃
- 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

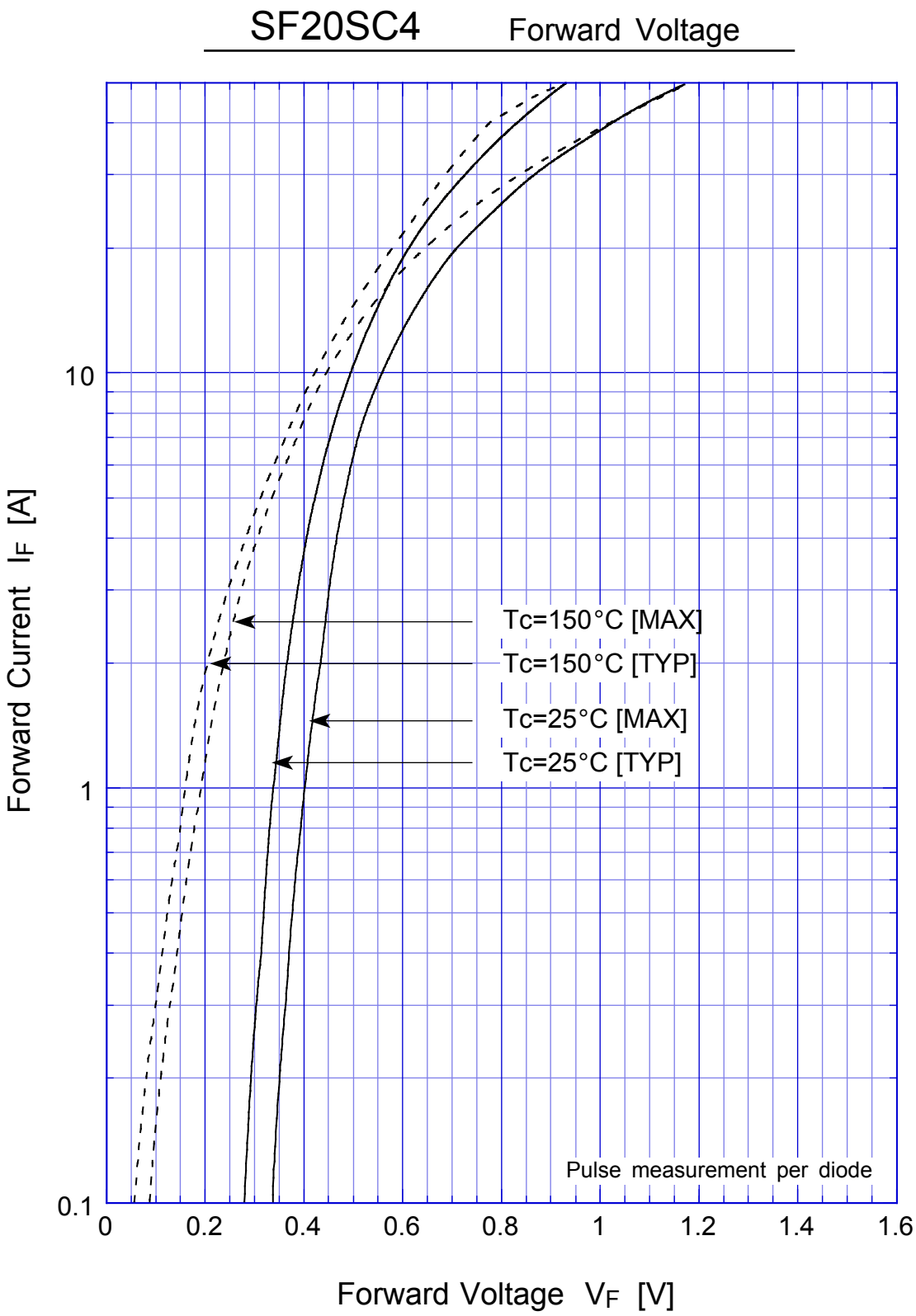
RATINGS

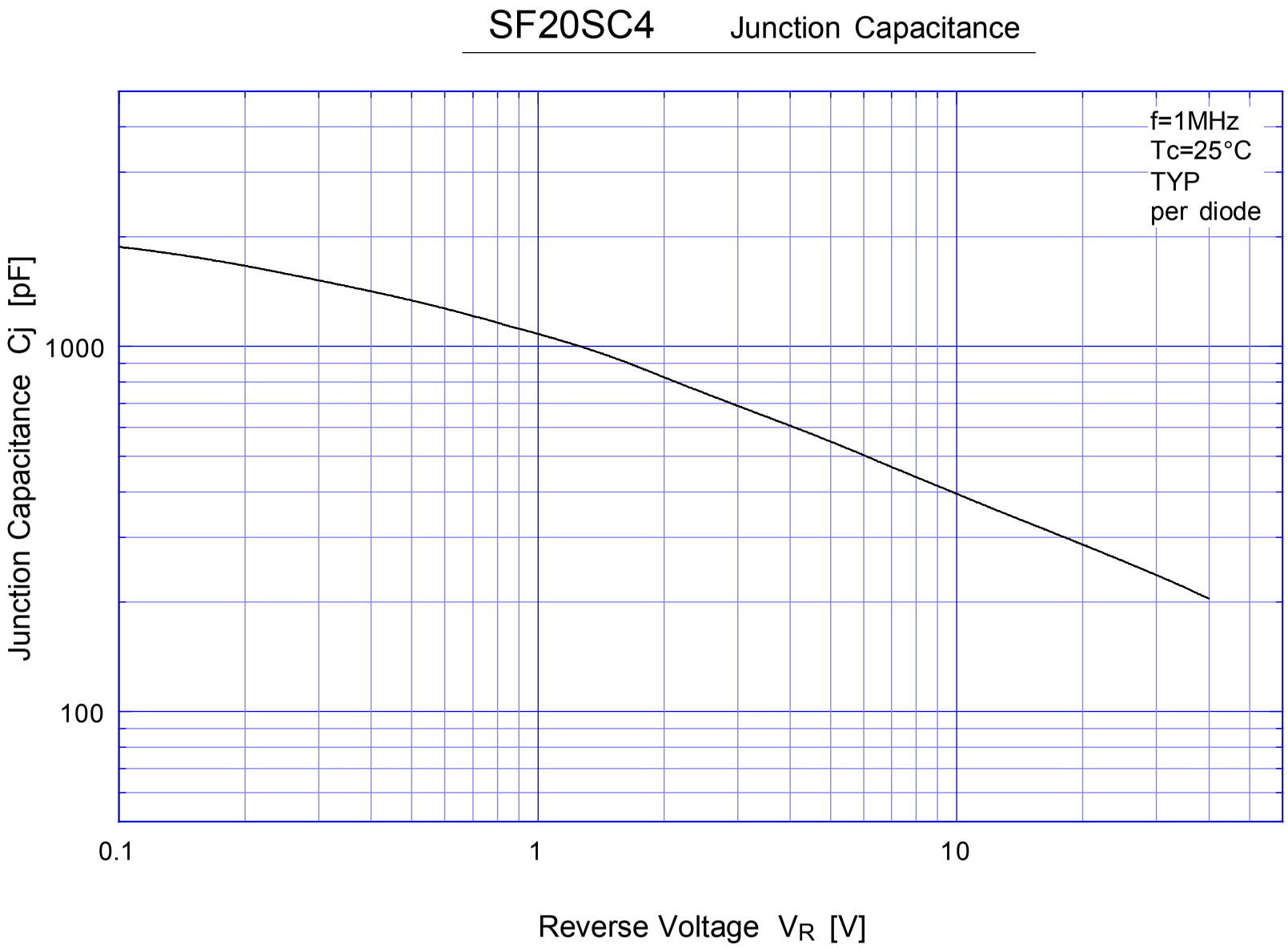
●Absolute Maximum Ratings (If not specified Tc=25℃)

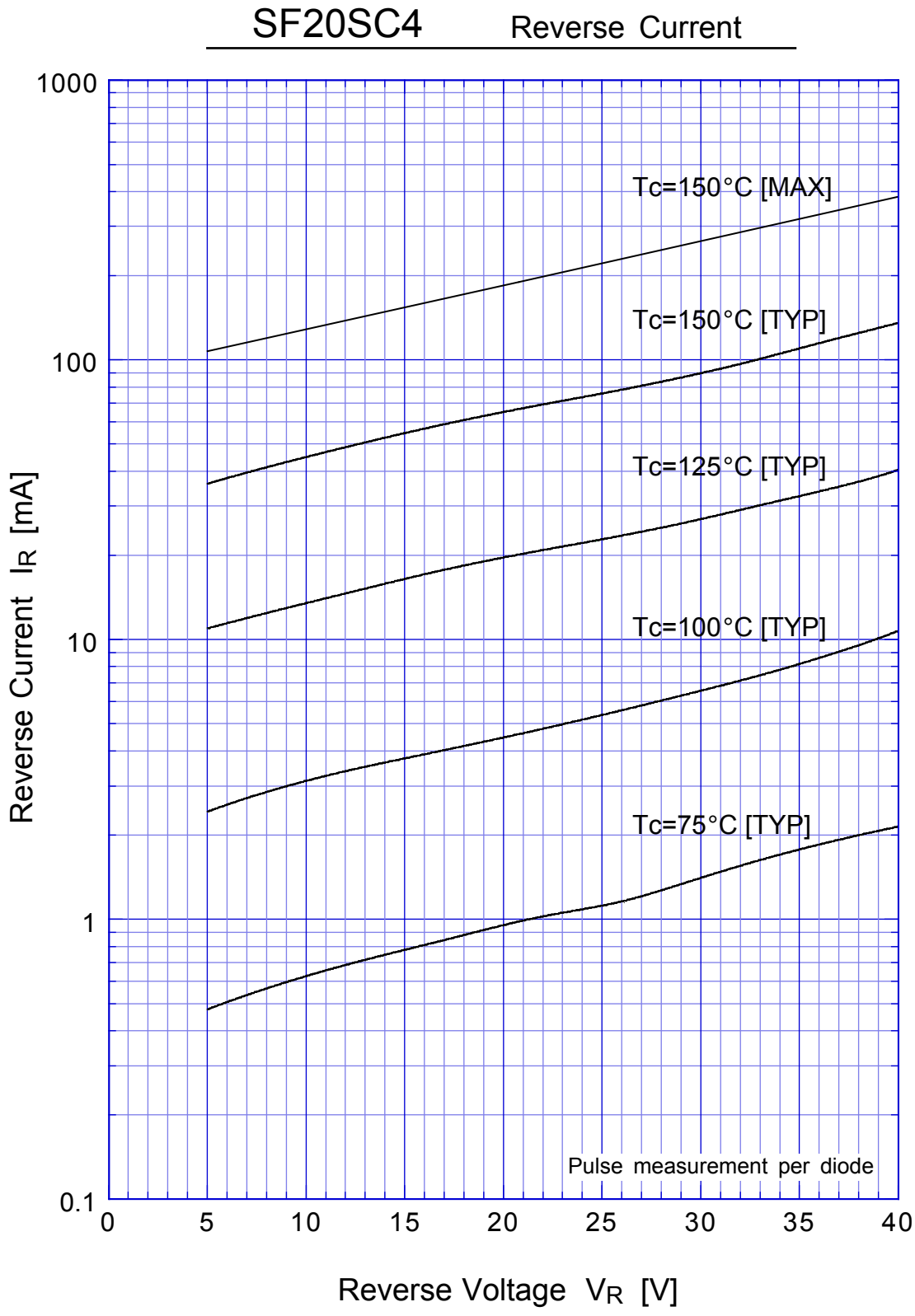
Item	Symbol	Conditions	Ratings	Unit
Storage Temperature	Tstg		-55～150	℃
Operating Junction Temperature	Tj		150	℃
Maximum Reverse Voltage	V_{RM}		40	V
Repetitive Peak Surge Reverse Voltage	V_{RRSM}	Pulse width 0.5ms, duty 1/40	45	V
Average Rectified Forward Current	I_O	50Hz sine wave, R-load, Rating for each diode Io/2, Tc=117℃	20	A
Peak Surge Forward Current	I_{FSM}	50Hz sine wave, Non-repetitive 1 cycle peak value, Rating of per diode, Tj=25℃	230	A
Repetitive Peak Surge Reverse Power	P_{RRSM}	Pulse width 10μs, Rating of per diode, Tj=25℃	660	W
Dielectric Strength	Vdis	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 Tc=25℃)

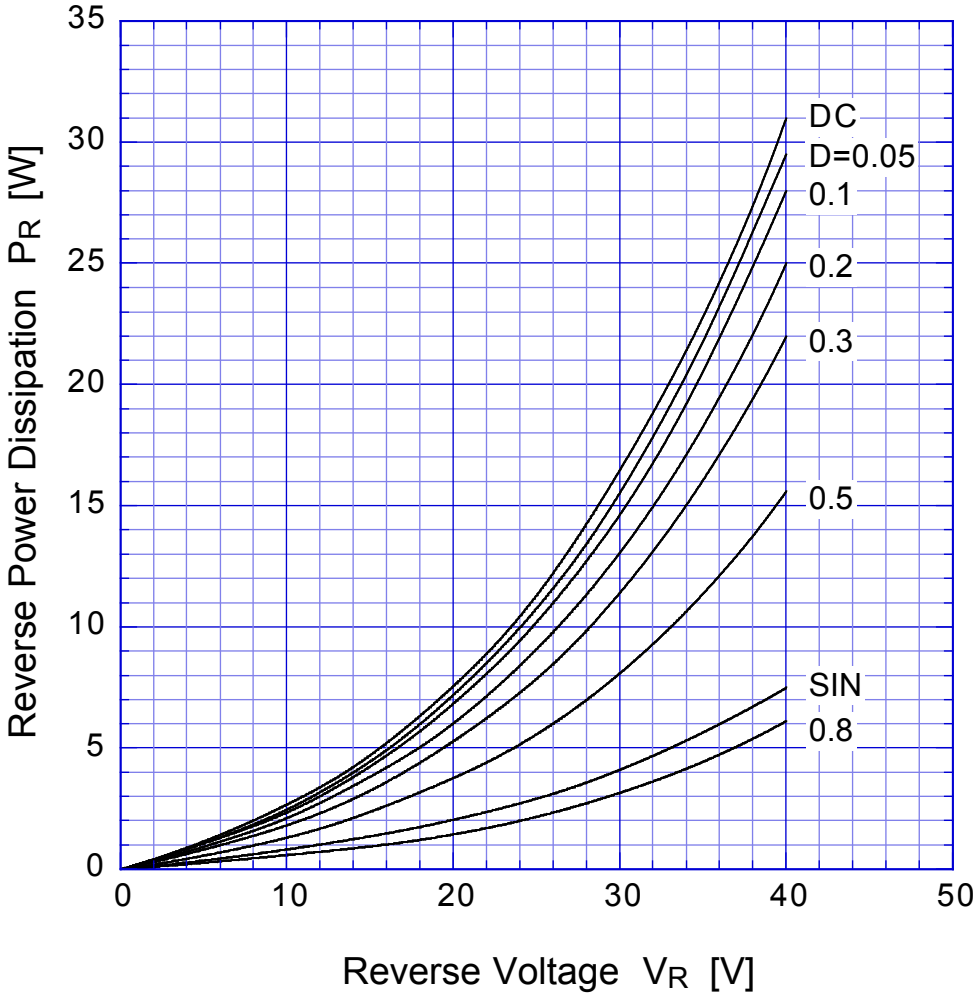
Item	Symbol	Conditions	Ratings	Unit
Forward Voltage	V_F	I_F=10A, Pulse measurement, Rating of per diode	Max.0.55	V
Reverse Current	I_R	V_R=V_{RM}, Pulse measurement, Rating of per diode	Max.7.5	mA
Junction Capacitance	Cj	f=1MHz, V_R=10V, Rating of per diode	Typ.390	pF
Thermal Resistance	θjc	junction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


SF20SC4
Forward Voltage
Forward Current IF [A]
10
1
0.1
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
Forward Voltage VF [V]
Tc=150°C [MAX]
Tc=150°C [TYP]
Tc=25°C [MAX]
Tc=25°C [TYP]
Pulse measurement per diode

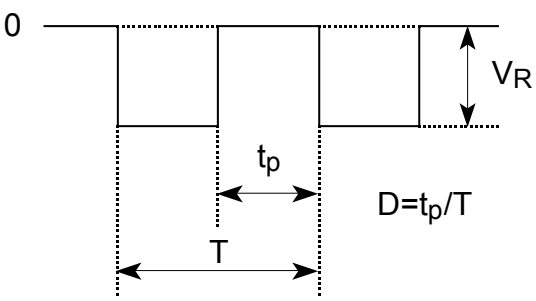

SF20SC4
Junction Capacitance
f=1MHz
Tc=25°C
TYP
per diode
Junction Capacitance Cj [pF]
1000
100
0.1
1
10
Reverse Voltage VR [V]


SF20SC4
Reverse Current
1000
100
10
1
0.1
Reverse Current IR [mA]
Tc=150°C [MAX]
Tc=150°C [TYP]
Tc=125°C [TYP]
Tc=100°C [TYP]
Tc=75°C [TYP]
Pulse measurement per diode
0
5
10
15
20
25
30
35
40
Reverse Voltage VR [V]

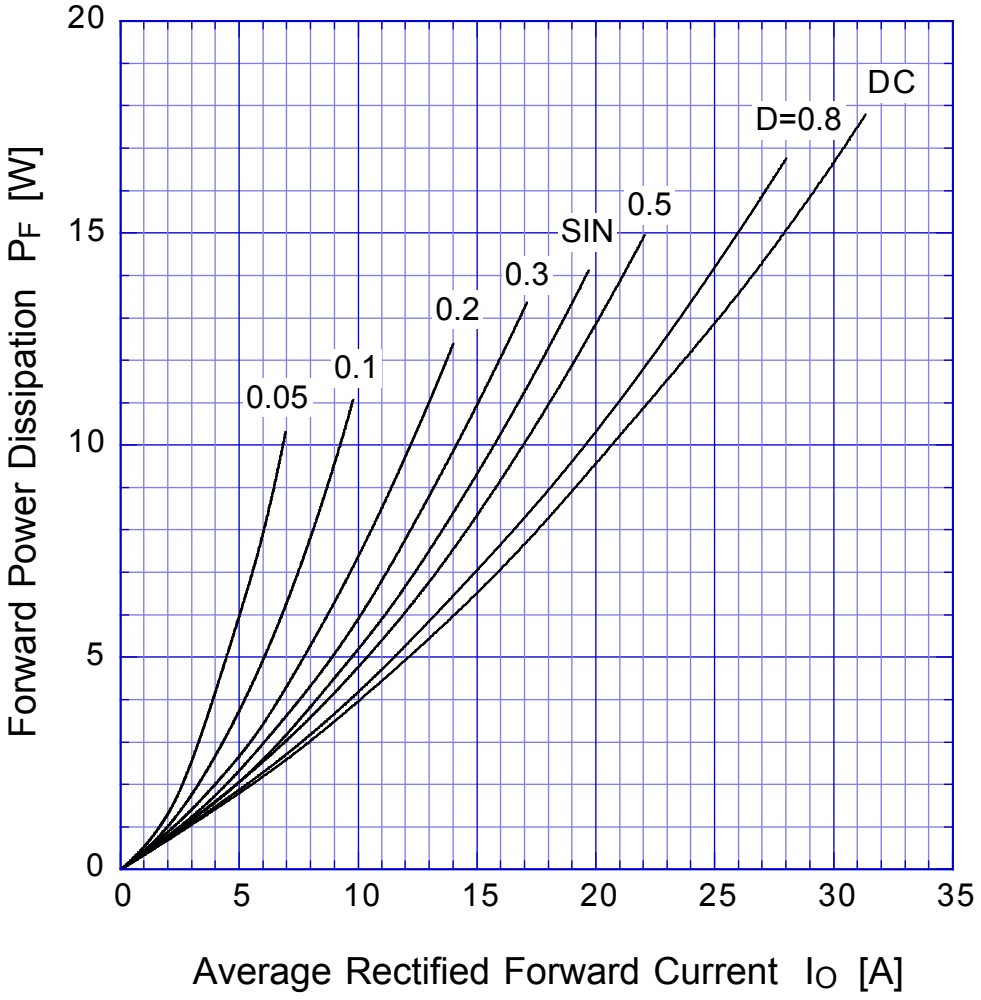
SF20SC4 Reverse Power Dissipation



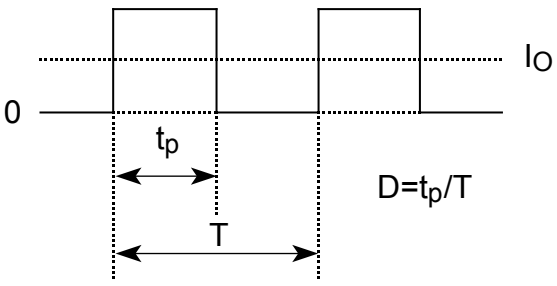
Tj = 150°C



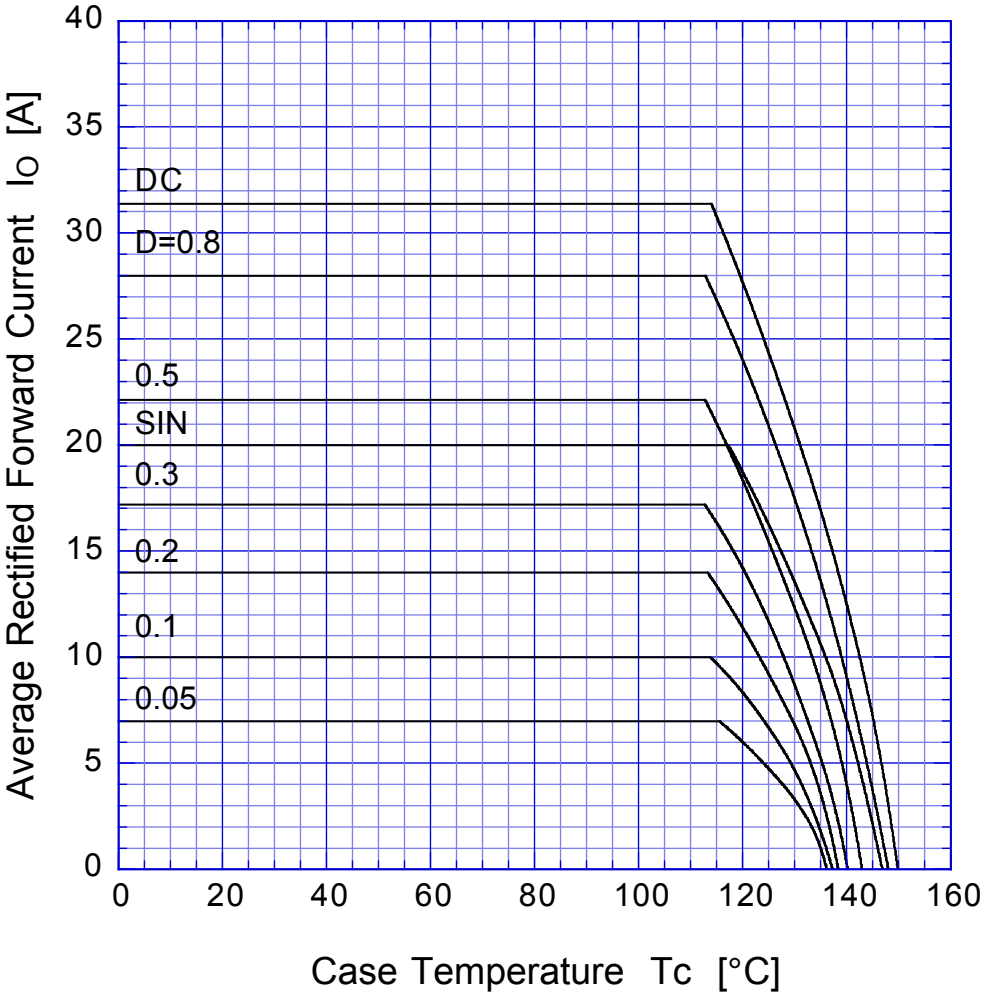
SF20SC4 Forward Power Dissipation



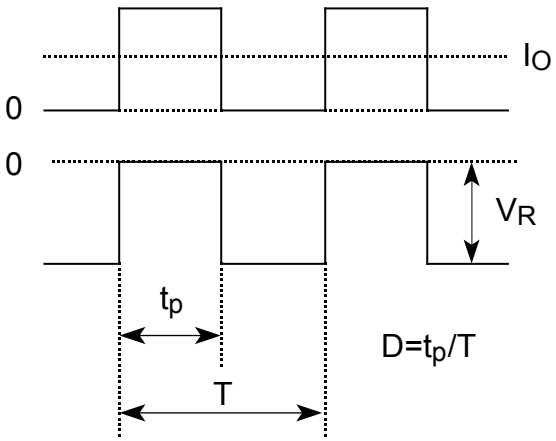
Tj = 150°C



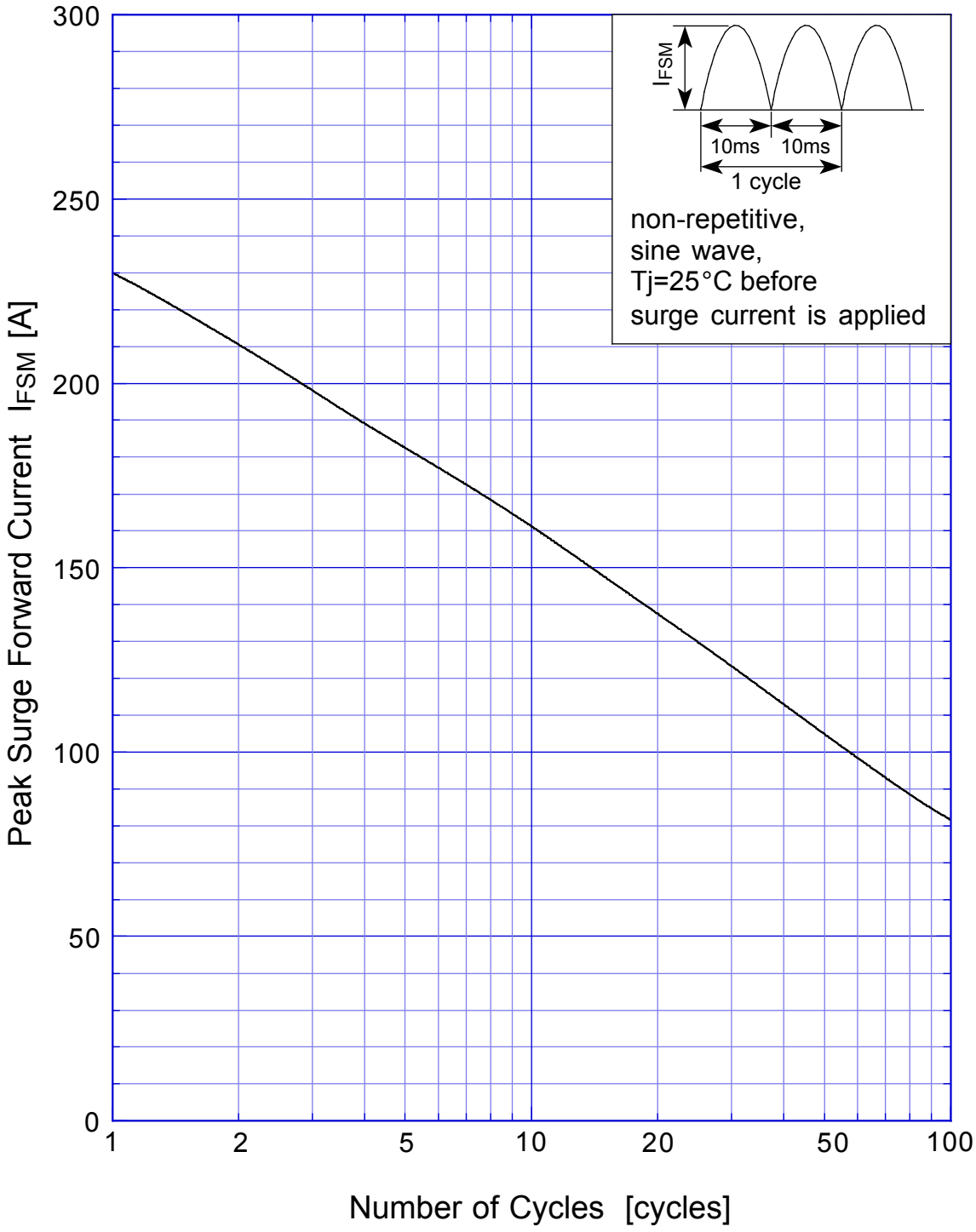
SF20SC4 Derating Curve



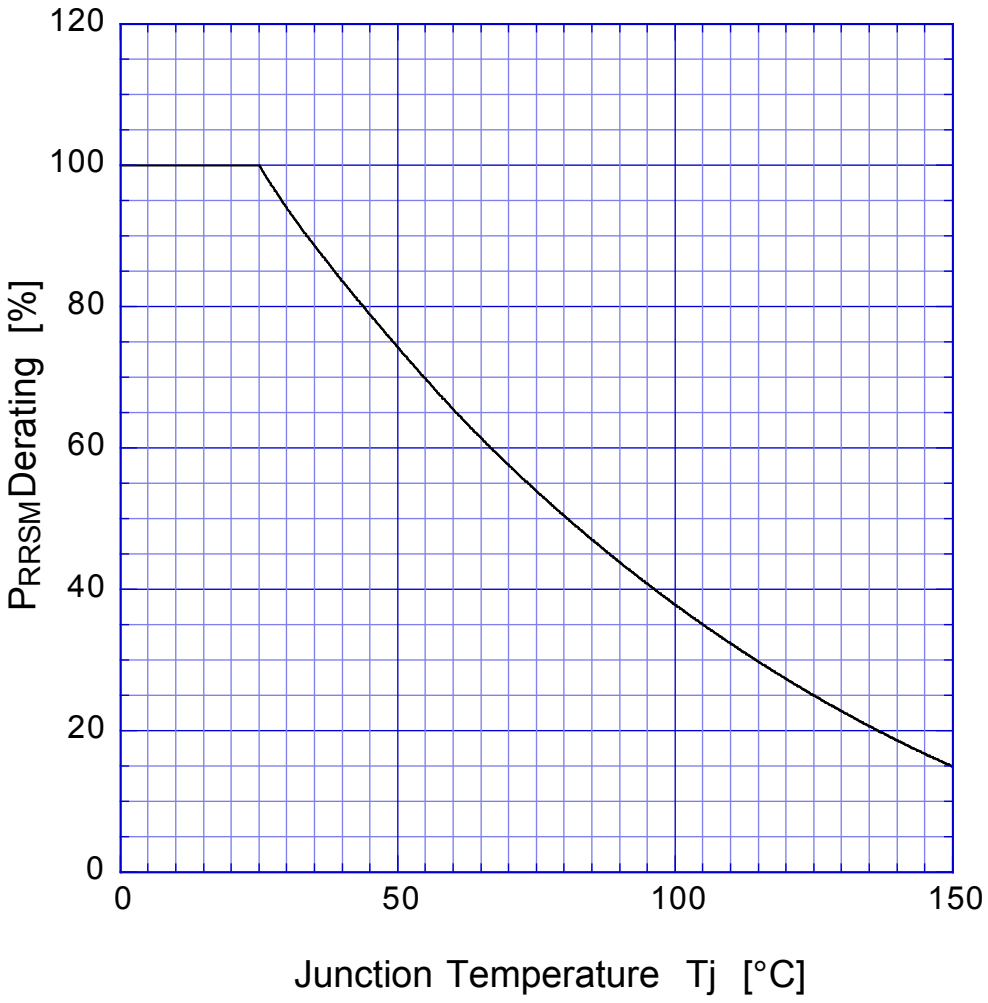
V_R = 20V

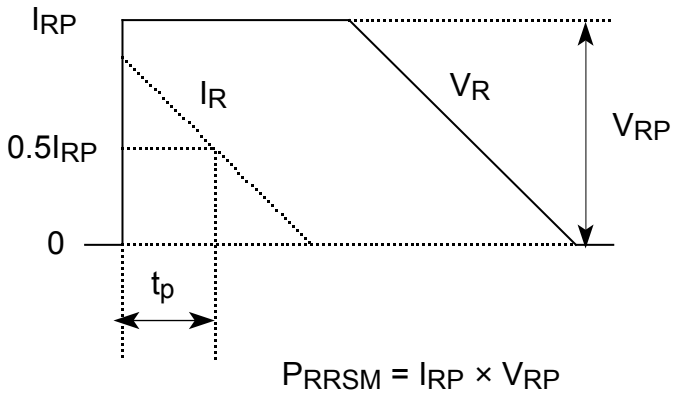


SF20SC4 Peak Surge Forward Capability



SBD Repetitive Surge Reverse Power Derating Curve





SBD Repetitive Surge Reverse Power Capability